Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts

February 5, 2018

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

Re: **Notice of Exempt Modification – Facility Modification**
33 Janoski Road, Ashford, Connecticut

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) antennas at the 181-foot level of the existing 192-foot tower at 33 Janoski Road in Ashford, Connecticut (the "Property"). The tower is owned by Crown Atlantic Company LLC ("Crown"). The Council approved Cellco's use of this tower in 2000. Cellco now intends to modify its facility by replacing six (6) of its existing antennas with three (3) model JAHH-65B-R3B, 700 MHz antennas and three (3) model JAHH-65B-R3B, 850 MHz antennas, at the same level on the tower. Cellco also intends to install nine (9) new remote radio heads ("RRHs") and two (2) HYBRIFLEX™ fiber optic antenna cables. Included in Attachment 1 are specifications for Cellco's replacement antennas, RRHs and HYBRIFLEX™ cables.

Please accept this letter as notification pursuant to R.C.S.A. § 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 Ashford's First Selectman, Michael J. Zambo; Michael Gardner, Ashford's Land Use Department Administrator; David H. Martin, the owner of the Property; and Crown, the tower owner.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas and new RRHs will be installed on its existing platform at the 181-foot level of the tower.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

3. The proposed modifications 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 (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included behind Attachment 2.

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

6. The tower and its foundation can support Cellco's proposed facility modifications. *See* Structural Analysis Report included in Attachment 3.

A copy of the parcel map and owner information for the Property is included in Attachment 4. A Certificate of Mailing verifying that this filing was sent to municipal officials and the owner of the Property is included in Attachment 5.

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Michael J. Zambo, First Selectman
Michael Gardner, Land Use Department Administrator
David H. Martin
Crown
Tim Parks

ATTACHMENT 1

Product Specifications

COMMSCOPE®

JAHH-65B-R3B

8-port sector antenna, 2x 698–787, 2x 824-894 and 4x 1695–2360 MHz, 65° HPBW, 3x RET and low bands have diplexers. Internal SBT's on first LB(Port 1) and first HB (Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

Electrical Specifications

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.5	15.8	18.0	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2–14	2–14	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR | Return Loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350	350	350	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.3	14.9	17.6	18.1	18.2	18.5
Gain by all Beam Tilts Tolerance, dB	±0.3	±0.5	±0.6	±0.4	±0.5	±0.6
	2 ° | 14.3	2 ° | 15.0	0 ° | 17.2	0 ° | 17.6	0 ° | 17.7	0 ° | 17.9
Gain by Beam Tilt, average, dBi	8 ° | 14.3	8 ° | 14.9	5 ° | 17.6	5 ° | 18.2	5 ° | 18.3	5 ° | 18.7
	14 ° | 14.3	14 ° | 15.4	10 ° | 17.6	10 ° | 18.2	10 ° | 18.3	10 ° | 18.7
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.4	±4	±2.4	±2.9	±2.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.5	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	18	17	17	18	19	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	26	29	27	29
CPR at Boresight, dB	22	23	20	21	21	24
CPR at Sector, dB	11	12	11	11	11	8

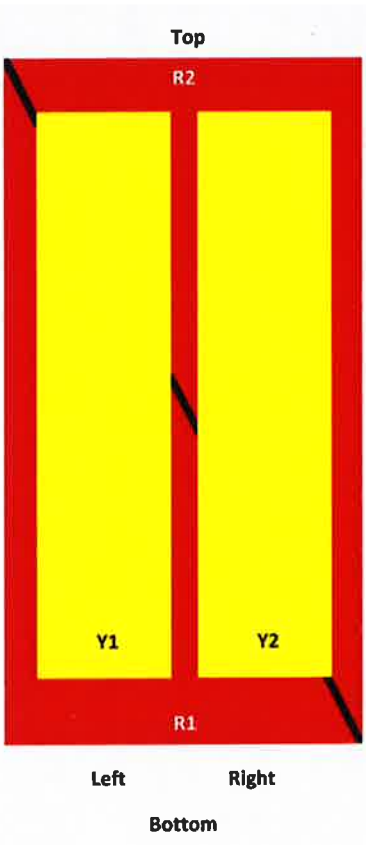
* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, download the whitepaper Time to Raise the Bar on BSAs.

Product Specifications

JAHH-65B-R3B

Array Layout

JAHH-65A-R3B JAHH-65B-R3B JAHH-65C-R3B



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-798	1-2	1	ANxxxxxxxxxxxxxxxx1
R2	824-894	3-4	2	ANxxxxxxxxxxxxxxxx2
Y1	1695-2360	5-6	3	ANxxxxxxxxxxxxxxxx3
Y2	1695-2360	7-8		

View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

General Specifications

Operating Frequency Band	1695 – 2360 MHz | 698 – 787 MHz | 824 – 894 MHz
Antenna Type	Sector
Band	Multiband
Performance Note	Outdoor usage

Mechanical Specifications

RF Connector Quantity, total	8
RF Connector Quantity, low band	4
RF Connector Quantity, high band	4
RF Connector Interface	4.3-10 Female

Product Specifications

JAHH-65B-R3B

Color	Light gray
Grounding Type	RF connector body grounded to reflector and mounting bracket
Radiator Material	Aluminum | Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Location	Bottom
Wind Loading, frontal	746.0 N @ 150 km/h 167.7 lbf @ 150 km/h
Wind Loading, lateral	243.0 N @ 150 km/h 54.6 lbf @ 150 km/h
Wind Loading, rear	776.0 N @ 150 km/h 174.5 lbf @ 150 km/h
Wind Speed, maximum	241 km/h | 150 mph

Dimensions

Length	1828.0 mm | 72.0 in
Width	350.0 mm | 13.8 in
Depth	208.0 mm | 8.2 in
Net Weight, without mounting kit	28.7 kg | 63.3 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 | Port 5
Internal RET	High band (1) | Low band (2)
Power Consumption, idle state, maximum	2 W
Power Consumption, normal conditions, maximum	13 W
Protocol	3GPP/AISG 2.0 (Single RET)
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	2 female | 2 male

Packed Dimensions

Length	1975.0 mm | 77.8 in
Width	456.0 mm | 18.0 in
Depth	357.0 mm | 14.1 in
Shipping Weight	42.0 kg | 92.6 lb

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Product Specifications

JAHH-65B-R3B

Included Products

BSAMNT-1 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

ALCATEL-LUCENT B13 RRH4X30-4R

Alcatel-Lucent B13 Remote Radio Head 4x30-4R is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B13 RRH4x30-4R allows operators to have a compact radio solution to deploy LTE in the 700U band (700 MHz, 3GPP band 13), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.

The Alcatel-Lucent B13 RRH4x30-4R product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity and up to 10MHz instantaneous bandwidth.

The Alcatel-Lucent B13 RRH4x30-4R is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

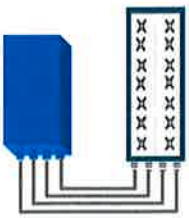
Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 700 MHz band (700U, 3GPP band 13)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- 10MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in 700U band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through MIMO4
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



4x30W with 4T4R
or
2x60W with 2T4R

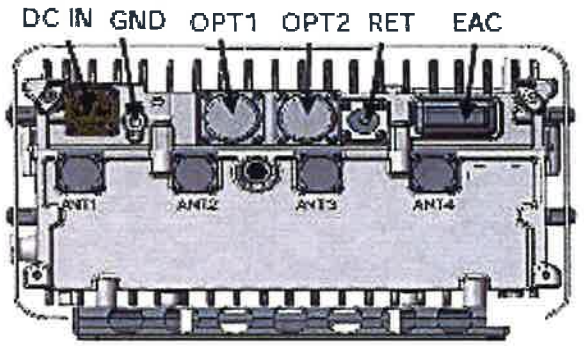
Can be switched between modes via SW w/o site visit

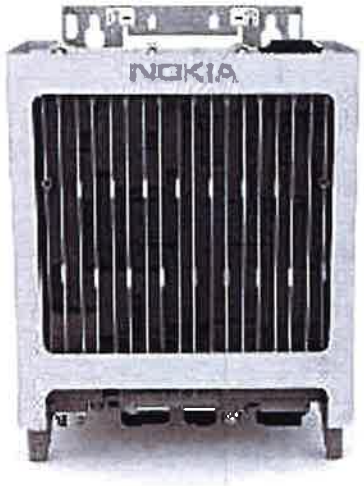
Alcatel·Lucent

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	U700 (C) (3GPP bands 13): DL: 746 - 756 MHz / UL: 777 - 787 MHz
Instantaneous bandwidth - #carriers	10MHz – 1 LTE carrier (in 10MHz occupied bandwidth)
LTE carrier bandwidth	10 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure – RX Diversity scheme	2 dB typ. (<2.5 dB max) – 2 or 4 way Rx diversity
Sizes (HxWxD) in mm (in.) Volume in L Weight in kg (lb) (w/o mounting HW)	550 x 305 x 230 (21.6" x 12.0" x 9") (with solar shield) 38 (with solar shield) 26 (57.2) (with solar shield)
DC voltage range DC power consumption	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption 550W typical @100% RF load (in 2Tx or 4TX mode)
Environmental conditions Wind load (@150km/h or 93mph)	-40°C (-40°F) /+55°C (+131°F) IP65 Frontal:<200N / Lateral :<150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate7, 9.8 Gbps) SFP single mode dual fiber
AISG interfaces	1 AISG2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) – 4 RF Tx & 4 RF Rx monitor ports - 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

AHCA AirScale RRH 4T4R B5 160W

Supported Frequency bands	3GPP band 5
Frequencies	DL 869-894MHz, UL 824-849MHz
Number of TX/RX paths/pipes	4TX/4RX
Instantaneous Bandwidth IBW	25MHz (Full Band)
Occupied Bandwidth OBW	25MHz (Full Band)
Output Power	4T4R @ 40W / 2T4R @ 60W
RF Sharing	LTE, WCDMA, LTE + NB-IoT supported
256 QAM Back Off	No backoff at 40W and 0.8dB at 60W.
Supply Voltage / Voltage Range	DC-48V / -36V to -60V
Typical Power Consumption	365W [50% ETSI Busy Hour Load at 4TX @ 40W]
	529W [100% RF Load at 4 TX @ 40W]
	574W [100% RF Load at 4 TX @ 40W with SBT and AISG ON]
Antenna Ports	4 Ports, 4.3-10+
Optical Ports	2x CPRI 9.8 Gbps
ALD Control Interfaces	AISG3.0 from ANT1,2, 3, 4 and RET (Power supply ANT1 and ANT3)
Other Interfaces	External Alarm MDR-26 Serial connector (4 inputs, 1 Output) DC Circular Power Connector





Operational Temperature Range	-40°C to 55°C (with solar cover)
Dimensions (mm) Height x width x depth	337 x 295 x 165 (radio only) 13.3" x 11.7" x 6.5" 428 x 324 x 208 (with bracket and enclosure) 16.9" x 12.8" x 8.2"
Volume (liters)	16.5
Weight (kg)	16/ 35.3 lb – w/o bracket
Ingress protection class	IP65
Installation options	Pole or Wall, Vertical or Horizontal Book Mount
Surge protection	Class II 5kA

NOKIA

ALCATEL-LUCENT B66A RRH4X45

The Alcatel-Lucent B66a Remote Radio Head 4x45 is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering. Its operational range covers beyond that of B4 (AWS) and B10 (AWS+).

Supporting 2Tx/4Tx MIMO and 2-way/4-way Rx diversity, the Alcatel-Lucent B66a RRH4x45 allows operators to have a compact radio solution to deploy LTE in the 2100 band (3GPP band 4, 10, and 66), providing them with the means to achieve high capacity, high quality, high reliability, large instantaneous bandwidth, and high coverage with minimum site requirements.

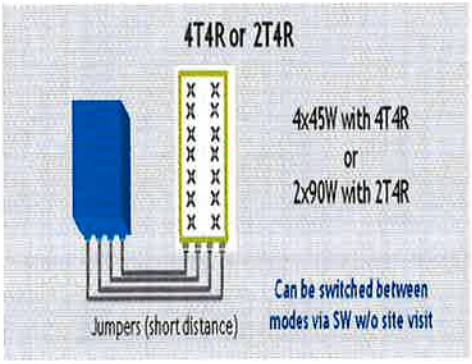
The Alcatel-Lucent B66a RRH4x45 product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x90W or 4x45W RF output power. It also supports 4-way Rx diversity at the 70 MHz instantaneous bandwidth.

The Alcatel-Lucent B66a RRH4x45 is a compact (near zero-footprint) solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

Its compactness and slim design makes the Alcatel-Lucent B66a RRH4x45 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 2110 - 2180 MHz band/DL, 1710-1780MHz/UL (3GPP band 4, 10, and 66a)
- LTE 2Tx or 4Tx MIMO (SW selectable)
- Configuration: 2T2R/2T4R/4T4R
- Output power: Up to 2x90W or 4x45W (SW configurable)
- 70MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports



BENEFITS

- Compact to reduce additional footprint when adding LTE in AWS 1-3 band
- Selection of MIMO configuration (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through 4Tx MIMO
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall

TECHNICAL SPECIFICATIONS

Features & Performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R selectable by SW)
Frequency band	AWS 1-3, B4/B66a DL: 2110-2180 MHz / UL: 1710-1780 MHz
Instantaneous bandwidth - #carriers	70 MHz – 4 LTE MIMO carriers (in 70 MHz occupied bandwidth)
LTE carrier bandwidth	5, 10, 15, 20 MHz
RF output power	2x90W or 4x45W (selectable by SW)
Noise figure – RX Diversity scheme Receiver Sensivity (FRC A1-3)	2 dB typical (<2.5 dB max) – 2 or 4 way Rx diversity -104.5 dBm maximum
Sizes (HxWxD) in mm (in.) Volume in Liters Weight in kg (lb) (w/o mounting HW)	655x299x182 (25.8x11.8x7.2) (with solar shield) 640x290x160 (25.2x11.4x6.3) (without solar shield) 35.5 (with solar shield) 29.7 (without solar shield) 25.8kg (56.8lb) (with solar shield)
DC voltage range DC power consumption	Nominal: -48V, -40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption 750W typical @100% RF load (in 2Tx or 4Tx mode); Add 58W for 2A*29V for AISG
Environmental conditions Wind load (@150km/h or 93mph)	-40°C (-40°F) /+55°C (+131°F) UL50E Type 4 Enclosure 250N (56lb) Frontal/150N (34lb) Lateral
Antenna ports	4 ports 4.3-10 female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate 7, 9.8 Gbps) SFP: SMDF (HW supports also SMSF and MMDF)
AISG interfaces	1 AISG 2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-487 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27 / FCC Part 15 / GR-3178-CORE

Product Data Sheet **HB158-1-08U8-S8J18**

HYBRIFLEX™ RRH Hybrid Feeder Cabling Solution, 1-5/8", Single-Mode Fiber

Product Description

RFS' HYBRIFLEX Remote Radio Head (RRH) hybrid feeder cabling solution combines optical fiber and DC power for RRHs in a single lightweight aluminum corrugated cable, making it the world's most innovative solution for RRH deployments.

It was developed to reduce installation complexity and costs at Cellular sites. HYBRIFLEX allows mobile operators deploying an RRH architecture to standardize the RRH installation process and eliminate the need for and cost of cable grounding. HYBRIFLEX combines optical fiber (multi-mode or single-mode) and power in a single corrugated cable. It eliminates the need for junction boxes and can connect multiple RRHs with a single feeder. Standard RFS CELLFLEX® accessories can be used with HYBRIFLEX cable. Both pre-connectorized and on-site options are available.

Figure 1: HYBRIFLEX Series

Features/Benefits

- Aluminum corrugated armor with outstanding bending characteristics – minimizes installation time and enables mechanical protection and shielding
- Same accessories as 1 5/8" coaxial cable
- Outer conductor grounding – Eliminates typical grounding requirements and saves on installation costs
- Lightweight solution and compact design – Decreases tower loading
- Robust cabling – Eliminates need for expensive cable trays and ducts
- Installation of tight bundled fiber optic cable pairs directly to the RRH – Reduces CAPEX and wind load by eliminating need for interconnection
- Optical fiber and power cables housed in single corrugated cable – Saves CAPEX by standardizing RRH cable installation and reducing installation requirements
- Outdoor polyethylene jacket – Ensures long-lasting cable protection

Technical Specifications

Outer Conductor Armor	Corrugated Aluminum	[mm (in)]	46.5 (1.83)
Jacket:	Polyethylene, PE	[mm (in)]	50.3 (1.98)
UV-Protection	Individual and External Jacket		Yes
Mechanical properties			
Weight, Approximate		[kg/m (lb/ft)]	1.9 (1.30)
Minimum Bending Radius, Single Bending		[mm (in)]	200 (8)
Minimum Bending Radius, Repeated Bending		[mm (in)]	500 (20)
Recommended/Maximum Clamp Spacing		[m (ft)]	1.0 / 1.2 (3.25 / 4.0)
Electrical properties			
DC-Resistance Outer Conductor Armor		[Ω/km (Ω/1000ft)]	068 (0.205)
DC-Resistance Power Cable, 8.4mm²(8AWG)		[Ω/km (Ω/1000ft)]	2.1 (0.307)
Fiber optic cables			
Version			Single-mode OM3
Quantity, Fiber Count			16 (8 pairs)
Core/Clad		[µm]	50/125
Primary Coating (Acrylate)		[µm]	245
Buffer Diameter, Nominal		[µm]	900
Secondary Protection, Jacket, Nominal		[mm (in)]	2.0 (0.08)
Minimum Bending Radius		[mm (in)]	104 (4.1)
Insertion Loss @ wavelength 850nm		dB/km	3.0
Insertion Loss @ wavelength 1310nm		dB/km	1.0
Standards (Meets or exceeds)			UL94-V0, UL1666 RoHS Compliant
DC power cables			
Size (Power)		[mm² (AWG)]	8.4 (8)
Quantity, Wire Count (Power)			16 (8 pairs)
Size (Alarm)		[mm² (AWG)]	0.8 (18)
Quantity, Wire Count (Alarm)			4 (2 pairs)
Type			UV protected
Strands			19
Primary Jacket Diameter, Nominal		[mm (in)]	6.8 (0.27)
Standards (Meets or exceeds)			NFPA 130, ICEA S-95-658 UL Type XHHW-2, UL 44 UL-LS Limited Smoke, UL VW-1 IEEE-383 (1974), IEEE1202/FT4 RoHS Compliant
Environmental			
Installation Temperature		[°C (°F)]	-40 to +65 (-40 to149)
Operation Temperature		[°C (°F)]	-40 to +65 (-40 to149)

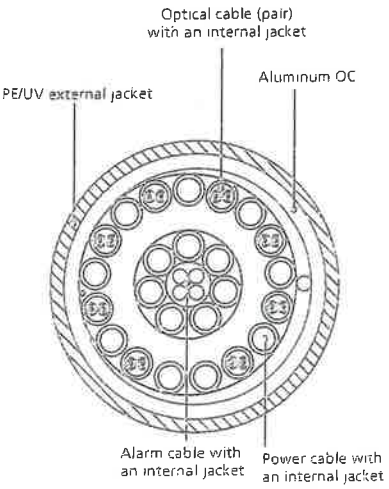


Figure 2: Construction Detail

* This data is provisional and subject to change

ATTACHMENT 2

	General	Power	Density					
Site Name: Westford (Ashford)								
Tower Height: 192'								
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total
*AT&T	2	565	141	880	0.0223	0.5867	0.38%	
*AT&T	2	1077	141	1900	0.0425	1.0000	0.43%	
*AT&T	4	813	141	1900	0.0642	1.0000	0.64%	
*AT&T	1	491	141	880	0.0097	0.5867	0.17%	
*AT&T	1	1313	141	734	0.0259	0.4893	0.53%	
*T-Mobile	1	865	181	700	0.0102	0.4667	0.22%	
*T-Mobile	6	1102	151	1900	0.1131	1.0000	1.13%	
*Nextel	9	100	170	851	0.0120	0.5673	0.21%	
*Sprint	11	122	190	1962.5	0.0143	1.0000	0.14%	
Verizon PCS	**1**	**0**	**181**	**0.0000**	**1970**	**1.0000**	**0.00%**	
Verizon Cellular	**9**	**356**	**181**	**0.0352**	**876**	**0.5793**	**6.07%**	
Verizon Cellular	**1**	**3710**	**181**	**0.0407**	**869**	**0.5793**	**7.03%**	
Verizon AWS	**1**	**7771**	**181**	**0.0853**	**2145**	**1.0000**	**8.53%**	
Verizon 700	**1**	**2063**	**181**	**0.0226**	**746**	**0.4973**	**4.55%**	
								30.0%
* Source: Siting Council								

ATTACHMENT 3

August 02, 2017

Charles McGuirt
Crown Castle
3530 Toringdon Way Suite 300
Charlotte, NC 28277
(704) 405-6607

B+T Group
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630
btwo@btgrp.com

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Verizon Wireless* Co-Locate**	
	Carrier Site Number:	118614
	Carrier Site Name:	Westford CT
Crown Castle Designation:	**Crown Castle BU Number:**	876345
	Crown Castle Site Name:	SKY HILL
	Crown Castle JDE Job Number:	443390
	Crown Castle Work Order Number:	1436252
	Crown Castle Application Number:	394592 Rev. 2
Engineering Firm Designation:	**B+T Group Project Number:**	77921.005.01
Site Data:	**33 Janowski Road, Ashford, Windham County, CT** **Latitude *41° 57' 7.7"*, Longitude *-72° 11' 43.9"*** **192 Foot - Self Support Tower**	

Dear Charles McGuirt,

B+T Group is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 1064291, in accordance with application 394592, revision 2.

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

LC5: Existing + Proposed Equipment **Sufficient Capacity**
Note: See Table 1 and Table 2 for the proposed and existing loading, respectively.

This analysis has been performed in accordance with the 2016 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 130 mph converted to a nominal 3-second gust wind speed of 101 mph per Section 1609.3 and Appendix N as required for use in the TIA-222-G Standard per Exception #5 of Section 1609.1.1. Exposure Category B and Risk Category II were used in this analysis.

All equipment proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

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

Structural analysis prepared by: Brant Lozano, E.I.

Respectfully submitted by: B+T Engineering, Inc
COA: PEC.0001564 Expires: 02/10/2018

8/2/17

Scott S. Vance, P.E.

tnxTower Report - version 7.0.5.1

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 192 ft. Self-Support tower designed by Rohn in December of 1996. The tower was originally designed for a wind speed of 90 mph per TIA/EIA-222-E.

2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of TIA-222-G Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a 3-second gust wind speed of 101 mph with no ice, 50 mph with 1 inch ice thickness and 60 mph under service loads, exposure category B with topographic category 1 and crest height of 0 feet.

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
180.0	181.0	3	Alcatel Lucent	RRH2x60-700	2	1-5/8	--
		3	Alcatel Lucent	RRH4x45-AWS4 B66			
		6	Commscope	JAHH-65B-R3B			
		3	Nokia	BAND 5 AHCA RRH4X40			
		2	Raycap	RC3DC-3315-PF-48			

Table 2 - Existing Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
190.0	192.0	6	Decibel	DB980H90E-M	6	1-5/8	1
	190.0	1	--	Sector Mount [SM 506-3]			
180.0	184.0	1	Symmetricom	58532A	6	1-5/8	1
	181.0	6	Antel	LPA-80080/4CF	1	1/2	
		3	**Rymsa Wireless**	**MG D5-800Tx**	**6**	**1-5/8**	**3**
		3	**Antel**	**BXA-70063/6CF**			
	180.0	**6**	**Rfs Celwave**	**FD9R6004/2C-3L**			
		1	--	Sector Mount [SM 304-3]	--	--	1
170.0	172.0	9	Allgon	7130.16.33.00	9	1-5/8	2
	170.0	1	--	Sector Mount [SM 502-3]			
160.0	160.0	3	Andrew	HBX-6516DS-VTM	6	1-5/8	1
		1	--	Sector Mount [SM 104-3]			
153.0	153.0	2	Commscope	ATBT-BOTTOM-24V	8	7/8	1
		2	Commscope	LNX-6515DS-VTM			
		2	Ems Wireless	RR90-17-02DP			
		2	Ericsson	KRY 112 144/1			
		2	--	Side Arm Mount [SO 301-1]			

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
140.0	141.0	3	Comm.	DTMABP7819VG12A	1 2 12	3/8 3/4 7/8	1
		6	Ericsson	RRUS-11			
		3	Kathrein	800 10121			
		4	Kmw Comm.	AM-X-CD-14-65-00T-RET			
		2	Kmw Comm.	AM-X-CD-16-65-00T-RET			
		3	Powerwave Tech.	7020.00			
		3	Powerwave Tech.	LGP13519			
		1	Raycap	DC6-48-60-18-8F			
	140.0	1	--	Sector Mount [SM 504-3]			
98.0	102.0	1	Symmetricom	58532A	--	--	1
	98.0	1	--	Side Arm Mount [SO 301-1]			
	98.0	--	--	--	1	1/2	3

Notes:
1) Existing Equipment
2) Abandon Equipment, Considered in This Analysis
3) **Equipment To Be Removed, Not Considered in This Analysis**

Table 3 - Design Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
189	189	1	Generic	Mounting Frame	12	2-1/4
		12	Decibel	DB980H90E-M		
170	170	1	Generic	Mounting Frame	12	1-5/8
		12	Swedcom	ALP9212		
150	150	1	Generic	Mounting Frame	12	1-5/8
		12	Swedcom	ALP9212		
80	80	1	Generic	12' Gate Boom	1	7/8
		1	Generic	GPS Antenna		

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
Online Application	Verizon Wireless Co-locate, Rev# 2	394592	CCI Sites
Tower Manufacturer Drawing	Rohn, File No. 34589PH	1631630	CCI Sites
Foundation Drawing	Rohn, File No. 34589PH	1631622	CCI Sites
Geotech Report	FDH, Project No. 07-11436G	2189896	CCI Sites
Antenna Configuration	Crown CAD Package	Date : 07/27/2017	CCI Sites

3.1) Analysis Method

tnxTower (version 7.0.5.1), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) Tower and structures were built in accordance with the manufacturer's specifications.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
4) Mount areas and weights are assumed based on photographs provided.
5) The existing base plate grout was considered in this analysis. Grout must be maintained and inspected periodically, and must be replaced if damaged or cracked. Refer to crown document ENG-BUL-10122, Tower Base Plate Grout Inspection and Classification.

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

4) ANALYSIS RESULTS

Table 5 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	192 - 180	Leg	ROHN 2.5 STD	1	-5.407	63.560	8.5	Pass
T2	180 - 160	Leg	ROHN 2.5 STD	27	-34.635	57.139	60.6	Pass
T3	160 - 140	Leg	ROHN 3 EH	57	-68.112	94.337	72.2	Pass
T4	140 - 120	Leg	ROHN 4 EH	78	-108.055	159.899	67.6	Pass
T5	120 - 100	Leg	ROHN 5 EH	99	-146.288	239.378	61.1	Pass
T6	100 - 80	Leg	ROHN 6 EHS	120	-180.215	244.047	73.8	Pass
T7	80 - 60	Leg	ROHN 6 EH	135	-217.642	303.757	71.7	Pass
T8	60 - 40	Leg	ROHN 8 EHS	150	-253.257	386.354	65.6	Pass
T9	40 - 20	Leg	ROHN 8 EHS	165	-289.182	386.409	74.8	Pass
T10	20 - 0	Leg	ROHN 8 EHS	180	-325.210	386.397	84.2	Pass
T1	192 - 180	Diagonal	L1 3/4x1 3/4x3/16	11	-1.279	8.810	14.5 17.4 (b)	Pass
T2	180 - 160	Diagonal	L2x2x3/16	36	-4.387	7.811	56.2	Pass
T3	160 - 140	Diagonal	L2 1/2x2 1/2x1/4	63	-6.526	12.388	52.7 56.7 (b)	Pass
T4	140 - 120	Diagonal	L2 1/2x2 1/2x1/4	84	-7.868	9.461	83.2	Pass
T5	120 - 100	Diagonal	L3x3x1/4	105	-8.458	13.104	64.5	Pass
T6	100 - 80	Diagonal	L3 1/2x3 1/2x1/4	126	-9.928	14.295	69.5 73.2 (b)	Pass
T7	80 - 60	Diagonal	L4x4x1/4	141	-10.913	18.143	60.2 79.9 (b)	Pass
T8	60 - 40	Diagonal	L4x4x5/16	156	-10.540	18.734	56.3 78.1 (b)	Pass
T9	40 - 20	Diagonal	L4x4x5/16	171	-12.453	16.150	77.1 90.4 (b)	Pass
T10	20 - 0	Diagonal	L4x4x3/8	186	-12.923	16.482	78.4 93.8 (b)	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	192 - 180	Top Girt	L1 3/4x1 3/4x3/16	4	-0.085	3.099	2.7	Pass
T2	180 - 160	Top Girt	L2x2x3/16	28	-0.944	4.694	20.1	Pass
							Summary	
						Leg (T10)	84.2	Pass
						Diagonal (T10)	93.8	Pass
						Top Girt (T2)	20.1	Pass
						Bolt Checks	93.8	Pass
						Rating =	93.8	Pass

Table 6 - Tower Component Stresses vs. Capacity – LC5

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rod	Base	56.4	Pass
1	Base Foundation (Structure)	Base	18.2	Pass
1	Base Foundation (Soil Interaction)	Base	47.8	Pass

Structure Rating (max from all components) =	93.8%

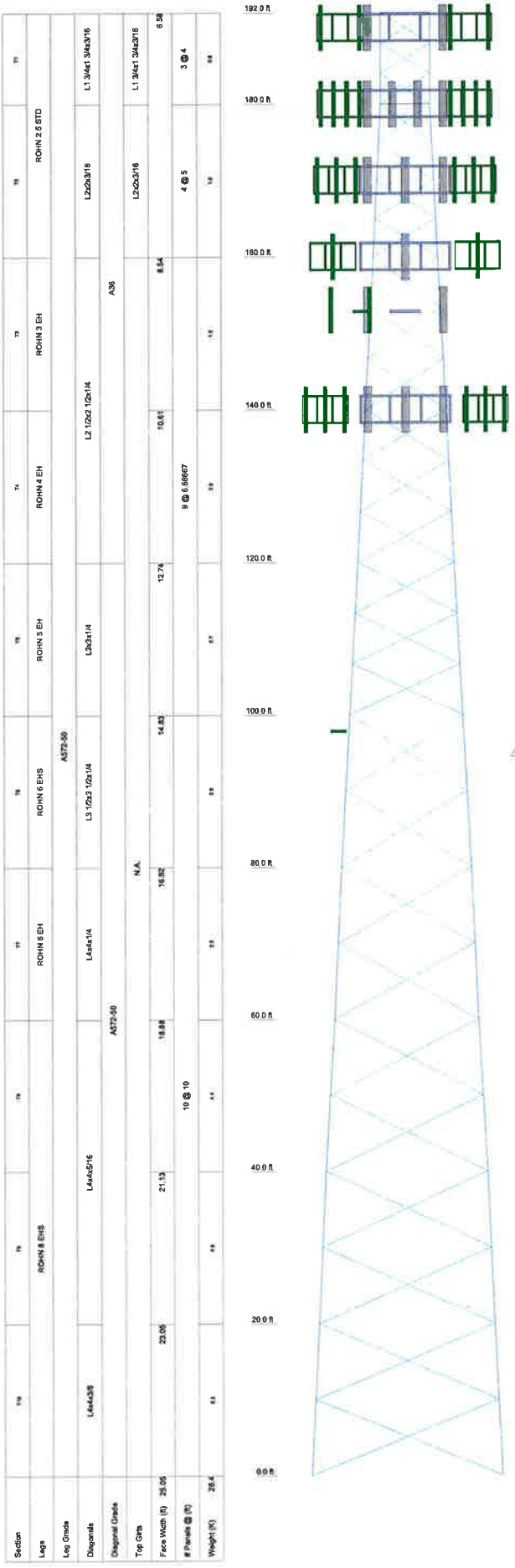
Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.

4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) DB980H90E-M w/ Mount Pipe (E)	190	RR90-17-02DP w/ Mount Pipe (E)	153
(2) DB980H90E-M w/ Mount Pipe (E)	190	RR90-17-02DP w/ Mount Pipe (E)	153
(2) DB980H90E-M w/ Mount Pipe (E)	190	LNX-6515DS-VTM w/ Mount Pipe (E)	153
Sector Mount [SM 506-3] (E-167TIA)	190	LNX-6515DS-VTM w/ Mount Pipe (E)	153
58532A (E-GPS/Photo)	180	KRY 112 144/1 (E)	153
(2) LPA-80080/4CF (E)	180	KRY 112 144/1 (E)	153
(2) LPA-80080/4CF (E)	180	AT&T-BOTTOM-24V (E)	153
(2) LPA-80080/4CF (E)	180	AT&T-BOTTOM-24V (E)	153
(2) JAHH-65B-R3B (P)	180	Side Arm Mount [SO 301-1] (E)	153
(2) JAHH-65B-R3B (P)	180	Side Arm Mount [SO 301-1] (E)	153
(2) JAHH-65B-R3B (P)	180	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe (E)	140
BAND 5 AHCA RRH4X40 (P)	180	(2) AM-X-CD-14-65-00T-RET w/ Mount Pipe (E)	140
BAND 5 AHCA RRH4X40 (P)	180	(2) AM-X-CD-14-65-00T-RET w/ Mount Pipe (E)	140
BAND 5 AHCA RRH4X40 (P)	180	800 10121 w/ Mount Pipe (E)	140
RRH4x45-AWS4 B66 (P)	180	800 10121 w/ Mount Pipe (E)	140
RRH4x45-AWS4 B66 (P)	180	800 10121 w/ Mount Pipe (E)	140
RRH4x45-AWS4 B66 (P)	180	DC6-48-60-18-8F (E)	140
RRH2x60-700 (P)	180	(2) RRUS-11 (E)	140
RRH2x60-700 (P)	180	(2) RRUS-11 (E)	140
RRH2x60-700 (P)	180	(2) RRUS-11 (E)	140
(2) RC3DC-3315-PF-48 (P)	180	7020.00 (E)	140
Sector Mount [SM 304-3] (E-4 M.P./Sector)	180	7020.00 (E)	140
(3) 7130.16.33.00 w/ Mount Pipe (AB)	170	7020.00 (E)	140
(3) 7130.16.33.00 w/ Mount Pipe (AB)	170	LGP13519 (E)	140
(3) 7130.16.33.00 w/ Mount Pipe (AB)	170	LGP13519 (E)	140
Sector Mount [SM 502-3] (AB)	170	LGP13519 (E)	140
HBX-6516DS-VTM w/ Mount Pipe (E)	160	DTMABP7819VG12A (E)	140
HBX-6516DS-VTM w/ Mount Pipe (E)	160	DTMABP7819VG12A (E)	140
HBX-6516DS-VTM w/ Mount Pipe (E)	160	DTMABP7819VG12A (E)	140
6' x 2" Mount Pipe (E-Per photo)	160	Sector Mount [SM 504-3] (E)	140
6' x 2" Mount Pipe (E-Per photo)	160	58532A (E-GPS/Photo)	98
6' x 2" Mount Pipe (E-Per photo)	160	Side Arm Mount [SO 301-1] (E)	98
Sector Mount [SM 104-3] (E)	160		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Windham County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 101 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TOWER RATING: 93.8%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 334 K
SHEAR: 39 K

UPLIFT: -282 K
SHEAR: 33 K

AXIAL 218 K
SHEAR 19 K *MOMENT 2229 kip-ft*

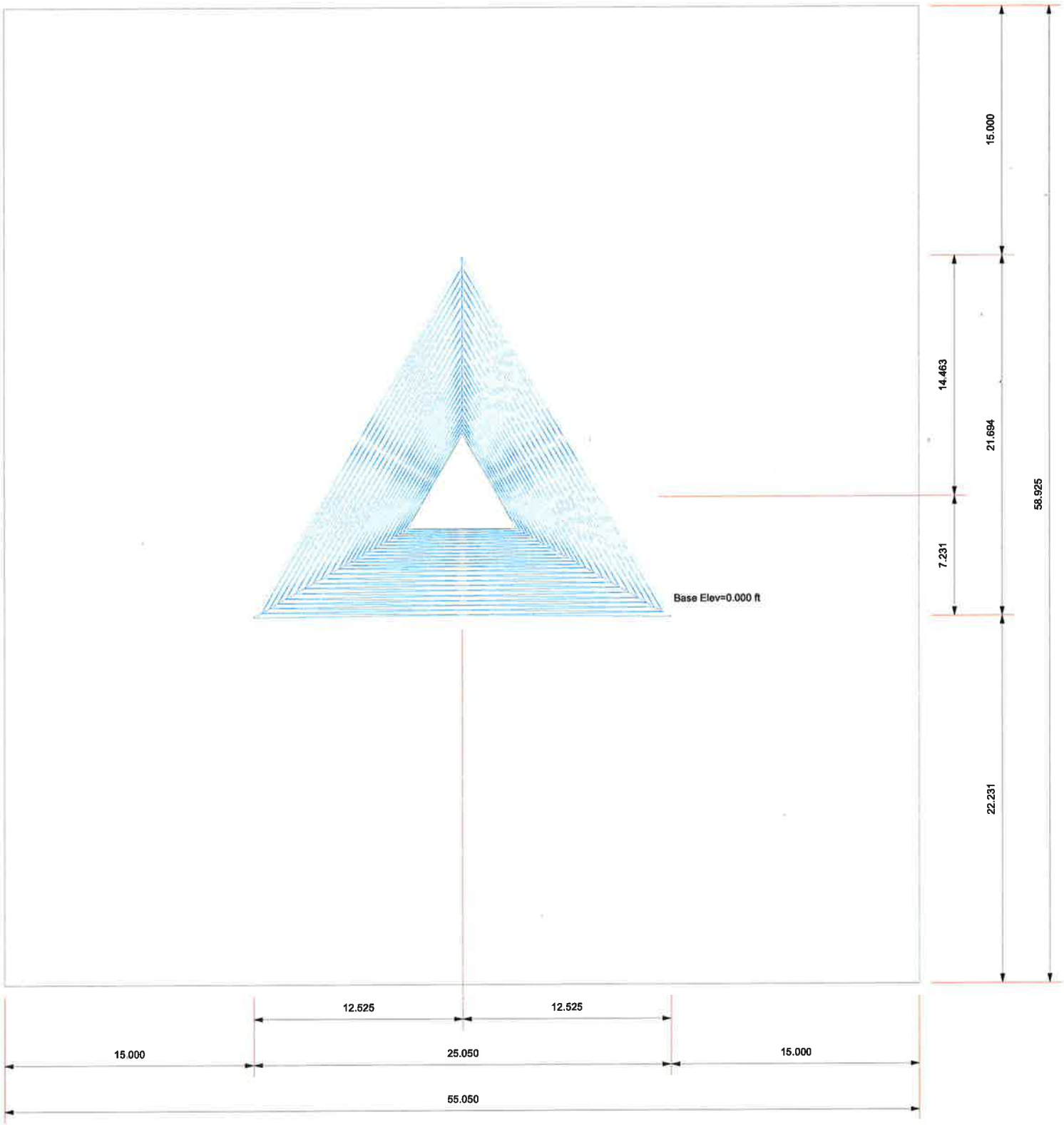
TORQUE 4 kip-ft
50 mph WIND - 1.000 in ICE
AXIAL 64 K
SHEAR 62 K *MOMENT 6787 kip-ft*

TORQUE 14 kip-ft
REACTIONS - 101 mph WIND

B+T GROUP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 295-0265

Job: 77921.005.01 - SKY HILL, CT (BU# 876345
Project:
Client: Crown Castle | Drawn by: Shathanand | App'd:
Code: TIA-222-G | Date: 08/02/17 | Scale: NTS
Path: | Dwg No. E-1

Plot Plan
Total Area - 0.07 Acres



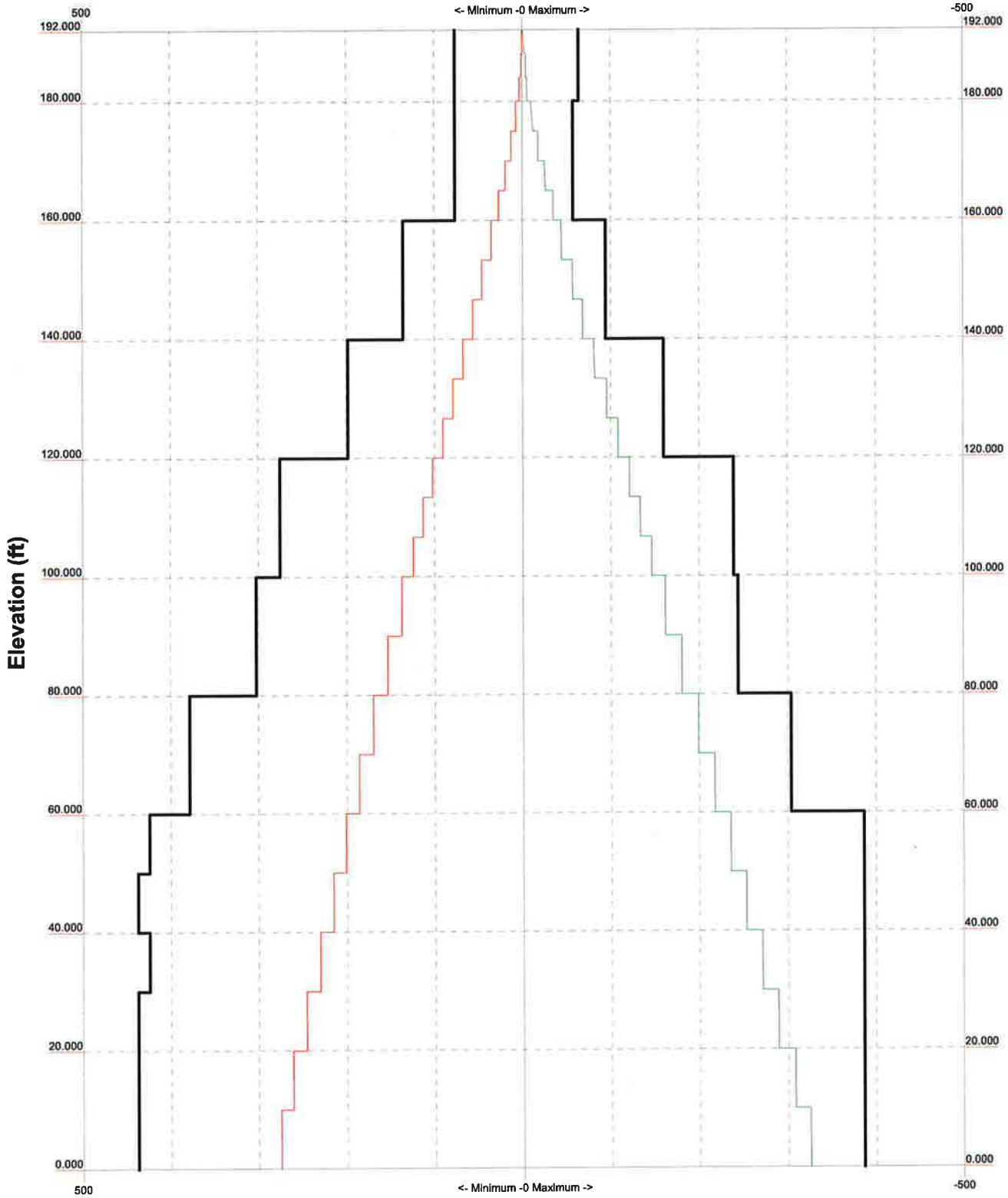
B+T GRP

B+T GROUP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 295-0265

Job: 77921.005.01 - SKY HILL, CT (BU# 876			
Project:			
Client: Crown Castle	Drawn by: Shathanand	App'd:	
Code: TIA-222-G	Date: 08/02/17	Scale: NT	
Path:		Dwg No. E-	

TIA-222-G - 101 mph/50 mph 1.000 in Ice Exposure B

Leg Capacity ——— **Leg Compression (K)**



B+T GROUP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 295-0265

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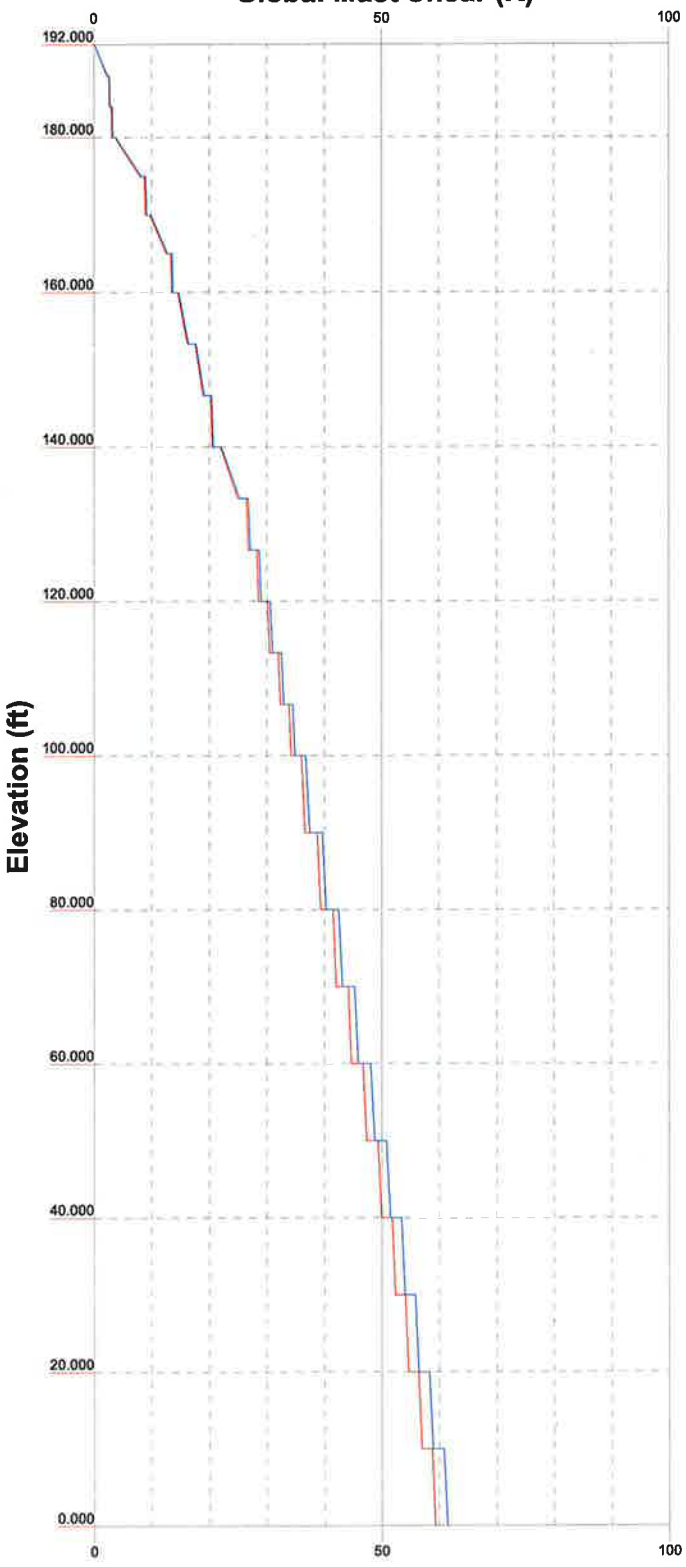
Project:			
Client: Crown Castle	Drawn by: Shathanand	App'd:	
Code: TIA-222-G	Date: 08/02/17	Scale: NT	
Path:		Dwg No. E-	

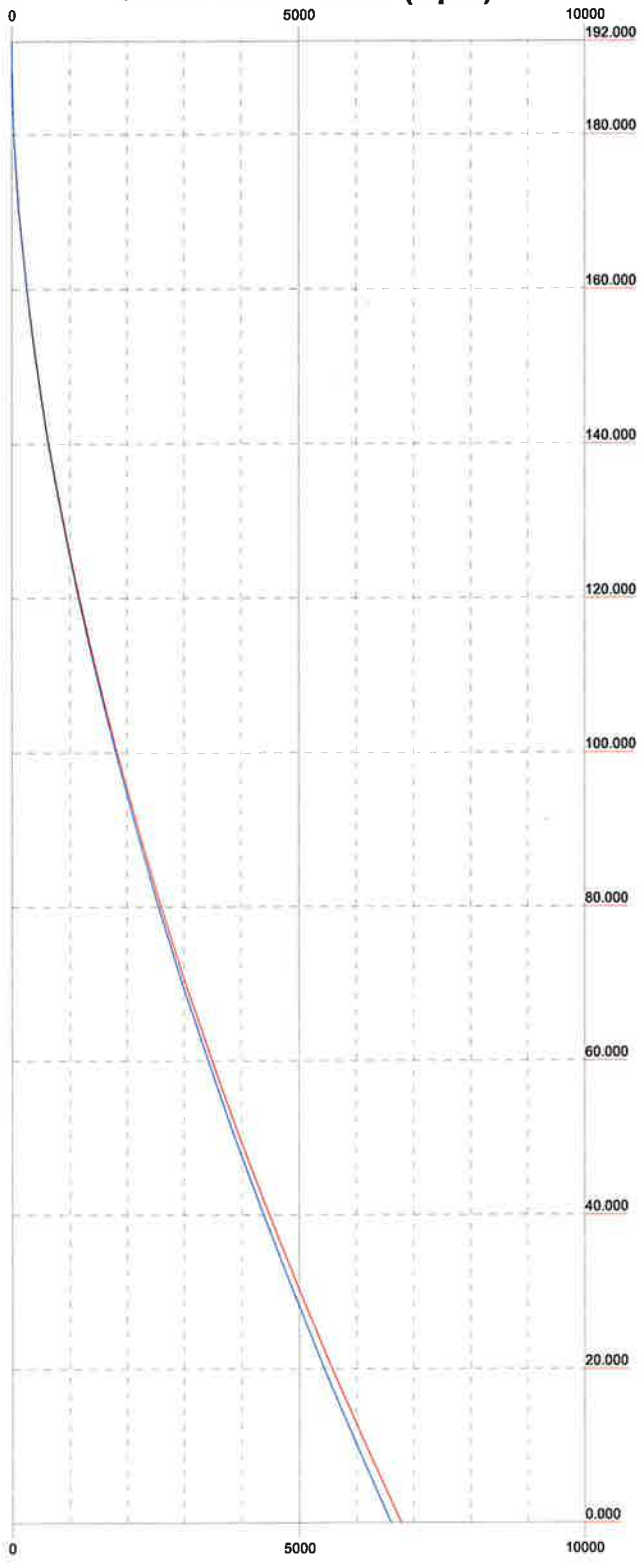
Vx Vz

Mx Mz

Global Mast Shear (K)



Global Mast Moment (kip-ft)

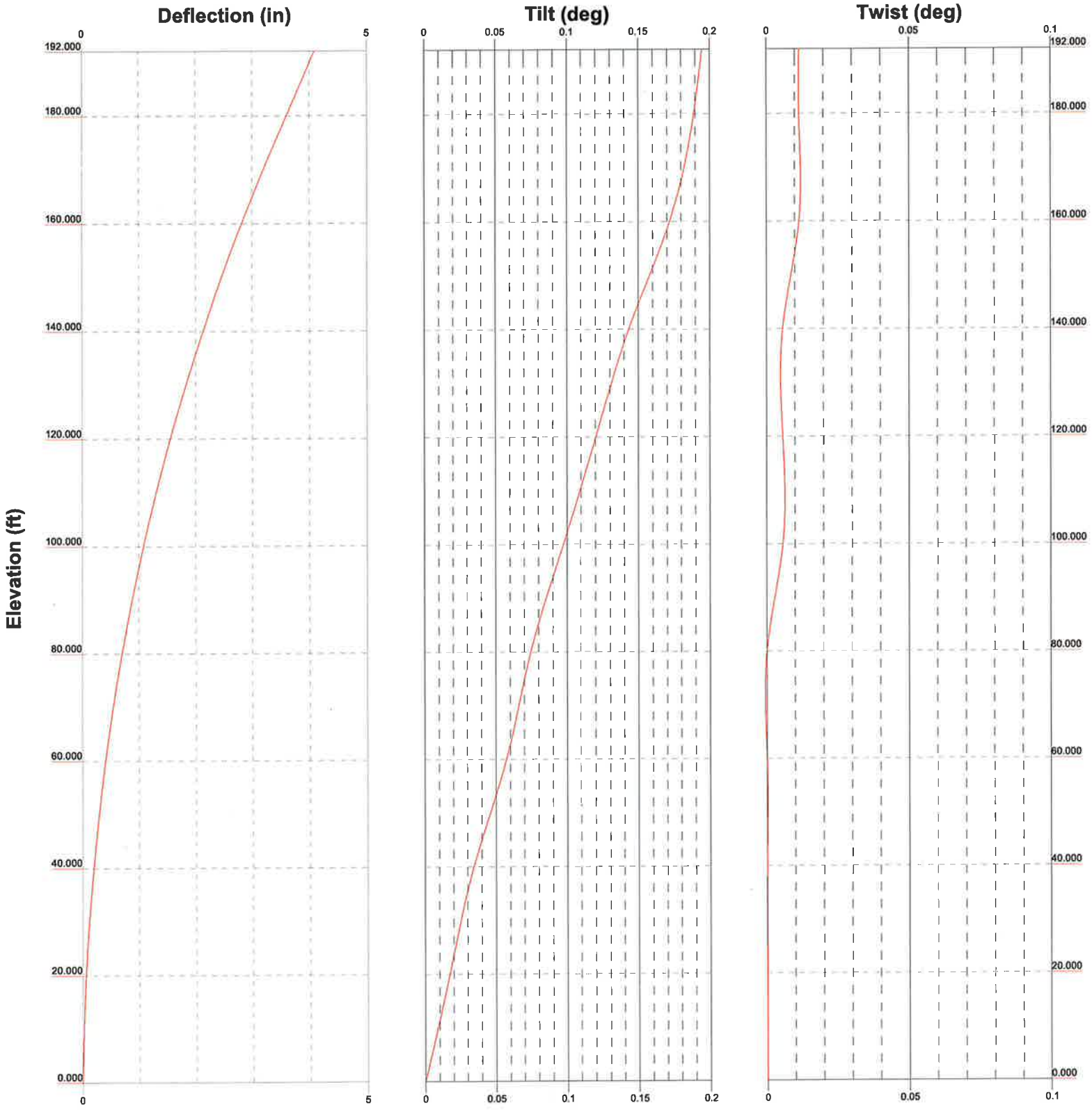


B+T GROUP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 295-0265

Job: 77921.005.01 - SKY HILL, CT (BU# 876			
Project:			
Client: Crown Castle	Drawn by: Shathanand	App'd:	
Code: TIA-222-G	Date: 08/02/17	Scale: NT	
Path:		Dwg No. E-	

TIA-222-G - Service - 60 mph

Maximum Values



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1717 S. Boulder, Suite 300
Tulsa, OK 74119
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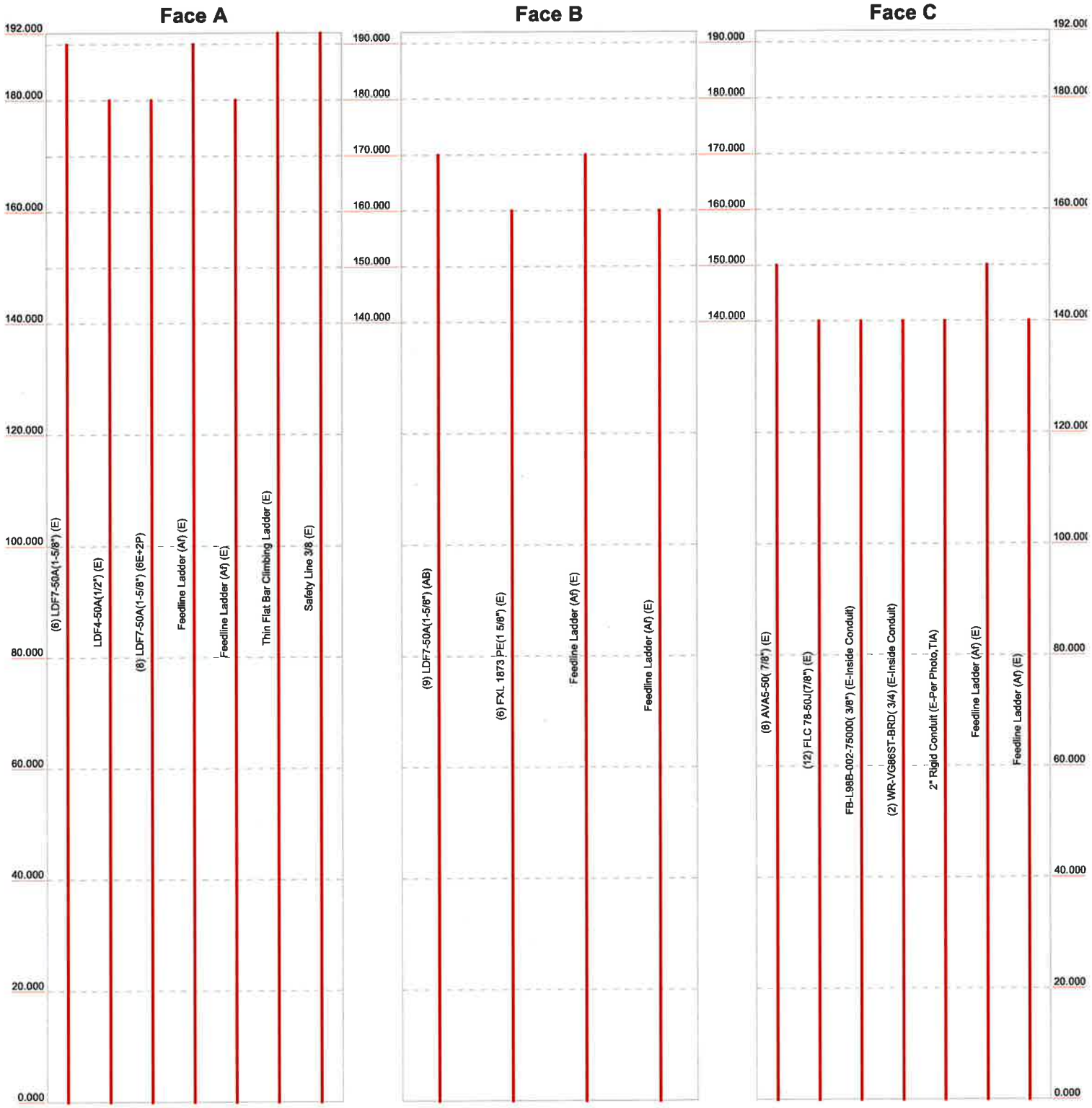
FAX: (918) 295-0265

Job: 77921.005.01 - SKY HILL, CT (BU# 876			
Project:			
Client: Crown Castle	Drawn by: Shathanand	App'd:	
Code: TIA-222-G	Date: 08/02/17	Scale: NT	
Path:		Dwg No. E-	

0' - 192'

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



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Project:			
Client: Crown Castle	Drawn by: Shathanand	App'd:	
Code: TIA-222-G	Date: 08/02/17	Scale: NT	
Path:		Dwg No. E-	

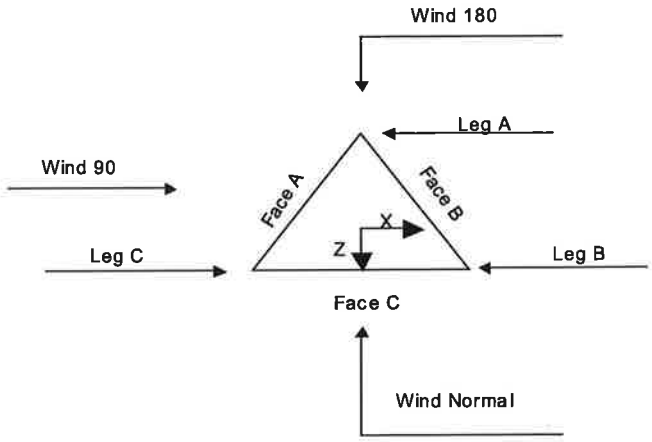
Tower Input Data

The main tower is a 3x free standing tower with an overall height of 192.000 ft above the ground line.
The base of the tower is set at an elevation of 0.000 ft above the ground line.
The face width of the tower is 6.580 ft at the top and 25.050 ft at the base.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in Windham County, Connecticut.
Basic wind speed of 101 mph.
Structure Class II.
Exposure Category B.
Topographic Category 1.
Crest Height 0.000 ft.
Nominal ice thickness of 1.000 in.
Ice thickness is considered to increase with height.
Ice density of 56.000 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50.000 °F.
Deflections calculated using a wind speed of 60 mph.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	192.000-180.000			6.580	1	12.000
T2	180.000-160.000			6.580	1	20.000
T3	160.000-140.000			8.540	1	20.000
T4	140.000-120.000			10.610	1	20.000
T5	120.000-100.000			12.740	1	20.000
T6	100.000-80.000			14.830	1	20.000
T7	80.000-60.000			16.920	1	20.000
T8	60.000-40.000			18.880	1	20.000
T9	40.000-20.000			21.130	1	20.000
T10	20.000-0.000			23.050	1	20.000

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	192.000-180.000	4.000	X Brace	No	No	0.000	0.000
T2	180.000-160.000	5.000	X Brace	No	No	0.000	0.000
T3	160.000-140.000	6.667	X Brace	No	No	0.000	0.000
T4	140.000-120.000	6.667	X Brace	No	No	0.000	0.000
T5	120.000-100.000	6.667	X Brace	No	No	0.000	0.000

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T6	100.000-80.000	10.000	X Brace	No	No	0.000	0.000
T7	80.000-60.000	10.000	X Brace	No	No	0.000	0.000
T8	60.000-40.000	10.000	X Brace	No	No	0.000	0.000
T9	40.000-20.000	10.000	X Brace	No	No	0.000	0.000
T10	20.000-0.000	10.000	X Brace	No	No	0.000	0.000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 192.000-180.000	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T2 180.000-160.000	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T3 160.000-140.000	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T4 140.000-120.000	Pipe	ROHN 4 EH	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T5 120.000-100.000	Pipe	ROHN 5 EH	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A572-50 (50 ksi)
T6 100.000-80.000	Pipe	ROHN 6 EHS	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A572-50 (50 ksi)
T7 80.000-60.000	Pipe	ROHN 6 EH	A572-50 (50 ksi)	Equal Angle	L4x4x1/4	A572-50 (50 ksi)
T8 60.000-40.000	Pipe	ROHN 8 EHS	A572-50 (50 ksi)	Equal Angle	L4x4x5/16	A572-50 (50 ksi)
T9 40.000-20.000	Pipe	ROHN 8 EHS	A572-50 (50 ksi)	Equal Angle	L4x4x5/16	A572-50 (50 ksi)
T10 20.000-0.000	Pipe	ROHN 8 EHS	A572-50 (50 ksi)	Equal Angle	L4x4x3/8	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 192.000-180.000	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T2 180.000-160.000	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft^2	in					in	in	in
T1 192.000-180.000	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T2 180.000-160.000	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T3 160.000-140.000	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T4 140.000-120.000	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T5 120.000-100.000	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T6 100.000-80.000	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T7 80.000-60.000	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T8 60.000-40.000	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T9 40.000-20.000	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T10 20.000-0.000	0.000	0.250	A36 (36 ksi)	1.05	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt

Tower Section Geometry *(cont'd)*

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X	X Brace Diags Y	K Single Diags X	K Single Diags Y	Girts X	Girts Y	Horiz. X	Horiz. Y	Sec. Horiz. X	Sec. Horiz. Y	Inner Brace X	Inner Brace Y
ft															
T1 192.000-180.000	Yes	No	1	1	1	1	1	1	1	1	1	1	1	1	1
T2 180.000-160.000	Yes	No	1	1	1	1	1	1	1	1	1	1	1	1	1
T3 160.000-140.000	Yes	No	1	1	1	1	1	1	1	1	1	1	1	1	1
T4 140.000-120.000	Yes	No	1	1	1	1	1	1	1	1	1	1	1	1	1
T5 120.000-100.000	Yes	No	1	1	1	1	1	1	1	1	1	1	1	1	1
T6 100.000-80.000	Yes	No	1	1	1	1	1	1	1	1	1	1	1	1	1
T7 80.000-60.000	Yes	No	1	1	1	1	1	1	1	1	1	1	1	1	1

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X	X Brace Diags Y	K Single Diags X	K Single Diags Y	Girts X	Girts Y	Horiz. X	Horiz. Y	Sec. Horiz. X	Sec. Horiz. Y	Inner Brace X	Inner Brace Y
T8	Yes	No	1	1	1	1	1	1	1	1	1	1	1	1	1
60.000-40.000				1	1	1	1	1	1	1	1	1	1	1	1
T9	Yes	No	1	1	1	1	1	1	1	1	1	1	1	1	1
40.000-20.000				1	1	1	1	1	1	1	1	1	1	1	1
T10	Yes	No	1	1	1	1	1	1	1	1	1	1	1	1	1
20.000-0.000				1	1	1	1	1	1	1	1	1	1	1	1

[1]*Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.*

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Net Width Deduct in	Leg U	Diagonal Net Width Deduct in	Diagonal U	Top Girt Net Width Deduct in	Top Girt U	Bottom Girt Net Width Deduct in	Bottom Girt U	Mid Girt Net Width Deduct in	Mid Girt U	Long Horizontal Net Width Deduct in	Long Horizontal U	Short Horizontal Net Width Deduct in	Short Horizontal U
T1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
192.000-180.000														
T2	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
180.000-160.000														
T3	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
160.000-140.000														
T4	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
140.000-120.000														
T5	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
120.000-100.000														
T6	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
100.000-80.000														
T7	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
80.000-60.000														
T8	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
60.000-40.000														
T9	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
40.000-20.000														
T10	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
20.000-0.000														

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 192.000-180.000	Flange	0.625 A325N	4	0.625 A325N	1	0.625 A325N	1	0.000 A325N	0	0.625 A325X	0	0.625 A325N	0	0.625 A325X	0
T2 180.000-160.000	Flange	0.625 A325N	4	0.625 A325N	1	0.625 A325N	1	0.000 A325N	0	0.625 A325X	0	0.625 A325N	0	0.625 A325X	0
T3 160.000-140.000	Flange	0.875 A325N	4	0.625 A325N	1	0.625 A325N	0	0.000 A325N	0	0.625 A325X	0	0.625 A325N	0	0.625 A325X	0
T4 140.000-120.000	Flange	1.000 A325N	4	0.625 A325N	1	0.625 A325N	0	0.000 A325N	0	0.625 A325X	0	0.625 A325N	0	0.625 A325X	0
T5 120.000-100.000	Flange	1.000 A325N	6	0.750 A325N	1	0.625 A325N	0	0.000 A325N	0	0.625 A325X	0	0.625 A325N	0	0.625 A325X	0
T6 100.000-80.000	Flange	1.000 A325N	6	0.750 A325N	1	0.625 A325N	0	0.000 A325N	0	0.625 A325X	0	0.625 A325N	0	0.625 A325X	0
T7 80.000-60.000	Flange	1.000 A325N	8	0.750 A325N	1	0.625 A325N	0	0.000 A325N	0	0.625 A325X	0	0.625 A325N	0	0.625 A325X	0
T8 60.000-40.000	Flange	1.000 A325N	8	0.750 A325X	1	0.625 A325N	0	0.000 A325N	0	0.625 A325X	0	0.625 A325N	0	0.625 A325X	0
T9 40.000-20.000	Flange	1.000 A325N	8	0.750 A325X	1	0.625 A325N	0	0.000 A325N	0	0.625 A325X	0	0.625 A325N	0	0.625 A325X	0
T10 20.000-0.000	Flange	1.000 A354-BC	0	0.750 A325X	1	0.625 A325N	0	0.000 A325N	0	0.625 A325X	0	0.625 A325N	0	0.625 A325X	0

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
LDF7-50A(1-5/8") (E) ***** *****	A	No	Ar (CaAa)	190.000 - 0.000	0.000	-0.45	6	6	0.850 0.750	1.980		0.001
LDF4-50A(1/2") (E)	A	No	Ar (CaAa)	180.000 - 0.000	0.000	0.45	1	1	0.850 0.750	0.630		0.000
LDF7-50A(1-5/8") (6E+2P) *****	A	No	Ar (CaAa)	180.000 - 0.000	0.000	0.41	8	8	0.850 0.750	1.980		0.001
LDF7-50A(1-5/8") (AB) *****	B	No	Ar (CaAa)	170.000 - 0.000	0.000	-0.4	9	9	0.850 75.000	1.980		0.001
FXL 1873 PE(1 5/8") (E) *****	B	No	Ar (CaAa)	160.000 - 0.000	-2.000	0.45	6	3	0.850 0.750	1.980		0.000
AVA5-50(7/8")	C	No	Ar (CaAa)	150.000 - 0.000	0.000	0.4	8	8	0.850 0.750	1.102		0.000

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
(E) *****												
FLC 78-50J(7/8") (E)	C	No	Ar (CaAa)	140.000 - 0.000	0.000	-0.45	12	12	0.850 0.750	1.112		0.000
FB-L98B-002-75000(3/8") (E-Inside Conduit)	C	No	Ar (CaAa)	140.000 - 0.000	1.500	-0.46	1	1	0.300	0.000		0.000
WR-VG86ST-BRD(3/4) (E-Inside Conduit)	C	No	Ar (CaAa)	140.000 - 0.000	1.500	-0.47	2	2	0.300	0.000		0.001
2" Rigid Conduit (E-Per Photo,TIA) *****	C	No	Ar (CaAa)	140.000 - 0.000	0.000	-0.405	1	1	2.000	2.000		0.003
Feedline Ladder (Af) (E)	A	No	Af (CaAa)	190.000 - 0.000	0.000	-0.45	1	1	3.000	3.000		0.008
Feedline Ladder (Af) (E) *****	A	No	Af (CaAa)	180.000 - 0.000	0.000	0.41	1	1	3.000	3.000		0.008
Feedline Ladder (Af) (E)	B	No	Af (CaAa)	170.000 - 0.000	0.000	-0.4	1	1	3.000	3.000		0.008
Feedline Ladder (Af) (E) *****	B	No	Af (CaAa)	160.000 - 0.000	-1.000	0.45	1	1	3.000	3.000		0.008
Feedline Ladder (Af) (E)	C	No	Af (CaAa)	150.000 - 0.000	0.000	0.4	1	1	3.000	3.000		0.008
Feedline Ladder (Af) (E) *****	C	No	Af (CaAa)	140.000 - 0.000	0.000	-0.45	1	1	3.000	3.000		0.008
Thin Flat Bar Climbing Ladder (E)	A	No	Af (CaAa)	192.000 - 0.000	-6.000	0.45	1	1	2.000	2.000		0.004
Safety Line 3/8 (E) *****	A	No	Ar (CaAa)	192.000 - 0.000	-6.000	0.45	1	1	0.375	0.375		0.000

Feed Line/Linear Appurtenances - Entered As Area

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

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	192.000-180.000	A	0.000	0.000	21.330	0.000	0.184
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.000
T2	180.000-160.000	A	0.000	0.000	84.117	0.000	0.653
		B	0.000	0.000	22.820	0.000	0.158
		C	0.000	0.000	0.000	0.000	0.000
T3	160.000-140.000	A	0.000	0.000	84.117	0.000	0.653
		B	0.000	0.000	79.400	0.000	0.484
		C	0.000	0.000	13.816	0.000	0.108
T4	140.000-120.000	A	0.000	0.000	84.117	0.000	0.653
		B	0.000	0.000	79.400	0.000	0.484
		C	0.000	0.000	68.320	0.000	0.561
T5	120.000-100.000	A	0.000	0.000	84.117	0.000	0.653
		B	0.000	0.000	79.400	0.000	0.484
		C	0.000	0.000	68.320	0.000	0.561
T6	100.000-80.000	A	0.000	0.000	84.117	0.000	0.653
		B	0.000	0.000	79.400	0.000	0.484
		C	0.000	0.000	68.320	0.000	0.561
T7	80.000-60.000	A	0.000	0.000	84.117	0.000	0.653
		B	0.000	0.000	79.400	0.000	0.484
		C	0.000	0.000	68.320	0.000	0.561
T8	60.000-40.000	A	0.000	0.000	84.117	0.000	0.653
		B	0.000	0.000	79.400	0.000	0.484
		C	0.000	0.000	68.320	0.000	0.561
T9	40.000-20.000	A	0.000	0.000	84.117	0.000	0.653
		B	0.000	0.000	79.400	0.000	0.484
		C	0.000	0.000	68.320	0.000	0.561
T10	20.000-0.000	A	0.000	0.000	84.117	0.000	0.653
		B	0.000	0.000	79.400	0.000	0.484
		C	0.000	0.000	68.320	0.000	0.561

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
T1	192.000-180.000	A	2.378	0.000	0.000	53.048	0.000	1.100
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.000
T2	180.000-160.000	A	2.356	0.000	0.000	198.865	0.000	4.039
		B		0.000	0.000	47.320	0.000	0.968
		C		0.000	0.000	0.000	0.000	0.000
T3	160.000-140.000	A	2.327	0.000	0.000	197.916	0.000	3.987
		B		0.000	0.000	152.291	0.000	3.137
		C		0.000	0.000	34.973	0.000	0.674
T4	140.000-120.000	A	2.294	0.000	0.000	196.847	0.000	3.929
		B		0.000	0.000	151.597	0.000	3.095
		C		0.000	0.000	197.570	0.000	3.615
T5	120.000-100.000	A	2.256	0.000	0.000	195.619	0.000	3.862
		B		0.000	0.000	150.800	0.000	3.048
		C		0.000	0.000	196.233	0.000	3.552
T6	100.000-80.000	A	2.211	0.000	0.000	194.170	0.000	3.785
		B		0.000	0.000	149.860	0.000	2.992
		C		0.000	0.000	194.657	0.000	3.478
T7	80.000-60.000	A	2.156	0.000	0.000	192.398	0.000	3.691

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		0.000	0.000	148.710	0.000	2.924
		C		0.000	0.000	192.729	0.000	3.388
T8	60.000-40.000	A	2.085	0.000	0.000	190.096	0.000	3.571
		B		0.000	0.000	147.216	0.000	2.837
		C		0.000	0.000	190.224	0.000	3.273
T9	40.000-20.000	A	1.981	0.000	0.000	186.750	0.000	3.399
		B		0.000	0.000	145.043	0.000	2.712
		C		0.000	0.000	186.583	0.000	3.109
T10	20.000-0.000	A	1.775	0.000	0.000	180.121	0.000	3.069
		B		0.000	0.000	140.738	0.000	2.470
		C		0.000	0.000	179.370	0.000	2.795

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	192.000-180.000	-4.130	0.949	-2.865	-0.629
T2	180.000-160.000	-2.841	-4.917	-2.347	-5.091
T3	160.000-140.000	-1.028	-3.855	-1.463	-4.439
T4	140.000-120.000	0.721	-1.562	0.718	-1.627
T5	120.000-100.000	0.820	-1.771	0.817	-1.884
T6	100.000-80.000	0.939	-2.024	0.940	-2.197
T7	80.000-60.000	1.037	-2.232	1.032	-2.448
T8	60.000-40.000	1.119	-2.405	1.115	-2.683
T9	40.000-20.000	1.226	-2.632	1.199	-2.941
T10	20.000-0.000	1.323	-2.840	1.251	-3.176

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	1	LDF7-50A(1-5/8")	180.00 - 190.00	0.6000	0.5011
T1	21	Feedline Ladder (Af)	180.00 - 190.00	0.6000	0.5011
T1	30	Thin Flat Bar Climbing Ladder	180.00 - 192.00	0.6000	0.5011
T1	31	Safety Line 3/8	180.00 - 192.00	0.6000	0.5011
T2	1	LDF7-50A(1-5/8")	160.00 - 180.00	0.6000	0.5800
T2	6	LDF4-50A(1/2")	160.00 - 180.00	0.6000	0.5800
T2	7	LDF7-50A(1-5/8")	160.00 - 180.00	0.6000	0.5800
T2	9	LDF7-50A(1-5/8")	160.00 - 170.00	0.6000	0.5800
T2	21	Feedline Ladder (Af)	160.00 - 180.00	0.6000	0.5800
T2	22	Feedline Ladder (Af)	160.00 -	0.6000	0.5800

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T2	24	Feedline Ladder (Af)	180.00 160.00 - 170.00	0.6000	0.5800
T2	30	Thin Flat Bar Climbing Ladder	160.00 - 180.00	0.6000	0.5800
T2	31	Safety Line 3/8	160.00 - 180.00	0.6000	0.5800
T3	1	LDF7-50A(1-5/8")	140.00 - 160.00	0.6000	0.6000
T3	6	LDF4-50A(1/2")	140.00 - 160.00	0.6000	0.6000
T3	7	LDF7-50A(1-5/8")	140.00 - 160.00	0.6000	0.6000
T3	9	LDF7-50A(1-5/8")	140.00 - 160.00	0.6000	0.6000
T3	11	FXL 1873 PE(1 5/8")	140.00 - 160.00	0.6000	0.6000
T3	13	AVA5-50(7/8")	140.00 - 150.00	0.6000	0.6000
T3	21	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T3	22	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T3	24	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T3	25	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T3	27	Feedline Ladder (Af)	140.00 - 150.00	0.6000	0.6000
T3	30	Thin Flat Bar Climbing Ladder	140.00 - 160.00	0.6000	0.6000
T3	31	Safety Line 3/8	140.00 - 160.00	0.6000	0.6000
T4	1	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.6000
T4	6	LDF4-50A(1/2")	120.00 - 140.00	0.6000	0.6000
T4	7	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.6000
T4	9	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.6000
T4	11	FXL 1873 PE(1 5/8")	120.00 - 140.00	0.6000	0.6000
T4	13	AVA5-50(7/8")	120.00 - 140.00	0.6000	0.6000
T4	15	FLC 78-50J(7/8")	120.00 - 140.00	0.6000	0.6000
T4	16	FB-L98B-002-75000(3/8")	120.00 - 140.00	0.6000	0.6000
T4	17	WR-VG86ST-BRD(3/4)	120.00 - 140.00	0.6000	0.6000
T4	19	2" Rigid Conduit	120.00 - 140.00	0.6000	0.6000
T4	21	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.6000
T4	22	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.6000
T4	24	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.6000
T4	25	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.6000
T4	27	Feedline Ladder (Af)	120.00 -	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T4	28	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.6000
T4	30	Thin Flat Bar Climbing Ladder	120.00 - 140.00	0.6000	0.6000
T4	31	Safety Line 3/8	120.00 - 140.00	0.6000	0.6000
T5	1	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.6000
T5	6	LDF4-50A(1/2")	100.00 - 120.00	0.6000	0.6000
T5	7	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.6000
T5	9	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.6000
T5	11	FXL 1873 PE(1 5/8")	100.00 - 120.00	0.6000	0.6000
T5	13	AVA5-50(7/8")	100.00 - 120.00	0.6000	0.6000
T5	15	FLC 78-50J(7/8")	100.00 - 120.00	0.6000	0.6000
T5	16	FB-L98B-002-75000(3/8")	100.00 - 120.00	0.6000	0.6000
T5	17	WR-VG86ST-BRD(3/4)	100.00 - 120.00	0.6000	0.6000
T5	19	2" Rigid Conduit	100.00 - 120.00	0.6000	0.6000
T5	21	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T5	22	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T5	24	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T5	25	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T5	27	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T5	28	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T5	30	Thin Flat Bar Climbing Ladder	100.00 - 120.00	0.6000	0.6000
T5	31	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T6	1	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.6000
T6	6	LDF4-50A(1/2")	80.00 - 100.00	0.6000	0.6000
T6	7	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.6000
T6	9	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.6000
T6	11	FXL 1873 PE(1 5/8")	80.00 - 100.00	0.6000	0.6000
T6	13	AVA5-50(7/8")	80.00 - 100.00	0.6000	0.6000
T6	15	FLC 78-50J(7/8")	80.00 - 100.00	0.6000	0.6000
T6	16	FB-L98B-002-75000(3/8")	80.00 - 100.00	0.6000	0.6000
T6	17	WR-VG86ST-BRD(3/4)	80.00 - 100.00	0.6000	0.6000
T6	19	2" Rigid Conduit	80.00 - 100.00	0.6000	0.6000
T6	21	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T6	22	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T6	24	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T6	25	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T6	27	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T6	28	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T6	30	Thin Flat Bar Climbing Ladder	80.00 - 100.00	0.6000	0.6000
T6	31	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T7	1	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.6000
T7	6	LDF4-50A(1/2")	60.00 - 80.00	0.6000	0.6000
T7	7	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.6000
T7	9	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.6000
T7	11	FXL 1873 PE(1 5/8")	60.00 - 80.00	0.6000	0.6000
T7	13	AVA5-50(7/8")	60.00 - 80.00	0.6000	0.6000
T7	15	FLC 78-50J(7/8")	60.00 - 80.00	0.6000	0.6000
T7	16	FB-L98B-002-75000(3/8")	60.00 - 80.00	0.6000	0.6000
T7	17	WR-VG86ST-BRD(3/4)	60.00 - 80.00	0.6000	0.6000
T7	19	2" Rigid Conduit	60.00 - 80.00	0.6000	0.6000
T7	21	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T7	22	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T7	24	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T7	25	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T7	27	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T7	28	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T7	30	Thin Flat Bar Climbing Ladder	60.00 - 80.00	0.6000	0.6000
T7	31	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T8	1	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T8	6	LDF4-50A(1/2")	40.00 - 60.00	0.6000	0.6000
T8	7	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T8	9	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T8	11	FXL 1873 PE(1 5/8")	40.00 - 60.00	0.6000	0.6000
T8	13	AVA5-50(7/8")	40.00 - 60.00	0.6000	0.6000
T8	15	FLC 78-50J(7/8")	40.00 - 60.00	0.6000	0.6000
T8	16	FB-L98B-002-75000(3/8")	40.00 - 60.00	0.6000	0.6000
T8	17	WR-VG86ST-BRD(3/4)	40.00 - 60.00	0.6000	0.6000
T8	19	2" Rigid Conduit	40.00 - 60.00	0.6000	0.6000
T8	21	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T8	22	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T8	24	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T8	25	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T8	27	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T8	28	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T8	30	Thin Flat Bar Climbing Ladder	40.00 - 60.00	0.6000	0.6000
T8	31	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T9	1	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T9	6	LDF4-50A(1/2")	20.00 - 40.00	0.6000	0.6000
T9	7	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T9	9	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T9	11	FXL 1873 PE(1 5/8")	20.00 - 40.00	0.6000	0.6000
T9	13	AVA5-50(7/8")	20.00 - 40.00	0.6000	0.6000
T9	15	FLC 78-50J(7/8")	20.00 - 40.00	0.6000	0.6000
T9	16	FB-L98B-002-75000(3/8")	20.00 - 40.00	0.6000	0.6000
T9	17	WR-VG86ST-BRD(3/4)	20.00 - 40.00	0.6000	0.6000
T9	19	2" Rigid Conduit	20.00 - 40.00	0.6000	0.6000
T9	21	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T9	22	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T9	24	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T9	25	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T9	27	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T9	28	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T9	30	Thin Flat Bar Climbing Ladder	20.00 - 40.00	0.6000	0.6000
T9	31	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T10	1	LDF7-50A(1-5/8")	0.00 - 20.00	0.6000	0.6000
T10	6	LDF4-50A(1/2")	0.00 - 20.00	0.6000	0.6000
T10	7	LDF7-50A(1-5/8")	0.00 - 20.00	0.6000	0.6000
T10	9	LDF7-50A(1-5/8")	0.00 - 20.00	0.6000	0.6000
T10	11	FXL 1873 PE(1 5/8")	0.00 - 20.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T10	13	AVA5-50(7/8")	0.00 - 20.00	0.6000	0.6000
T10	15	FLC 78-50J(7/8")	0.00 - 20.00	0.6000	0.6000
T10	16	FB-L98B-002-75000(3/8")	0.00 - 20.00	0.6000	0.6000
T10	17	WR-VG86ST-BRD(3/4)	0.00 - 20.00	0.6000	0.6000
T10	19	2" Rigid Conduit	0.00 - 20.00	0.6000	0.6000
T10	21	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T10	22	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T10	24	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T10	25	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T10	27	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T10	28	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T10	30	Thin Flat Bar Climbing Ladder	0.00 - 20.00	0.6000	0.6000
T10	31	Safety Line 3/8	0.00 - 20.00	0.6000	0.6000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) DB980H90E-M w/ Mount Pipe	A	From Leg	4.000	0.000	190.000	No Ice	4.036	3.619	0.030
			0.000			1/2" Ice	4.499	4.481	0.066
(E)			2.000			1" Ice	4.947	5.219	0.109
(2) DB980H90E-M w/ Mount Pipe	B	From Leg	4.000	0.000	190.000	No Ice	4.036	3.619	0.030
			0.000			1/2" Ice	4.499	4.481	0.066
(E)			2.000			1" Ice	4.947	5.219	0.109
(2) DB980H90E-M w/ Mount Pipe	C	From Leg	4.000	0.000	190.000	No Ice	4.036	3.619	0.030
			0.000			1/2" Ice	4.499	4.481	0.066
(E)			2.000			1" Ice	4.947	5.219	0.109
Sector Mount [SM 506-3] (E-16'/TIA)	C	None		0.000	190.000	No Ice	35.470	35.470	1.742
						1/2" Ice	50.600	50.600	2.348
						1" Ice	65.730	65.730	2.953
*****									
58532A (E-GPS/Photo)	A	From Leg	4.000	0.000	180.000	No Ice	0.189	0.189	0.000
			0.000			1/2" Ice	0.248	0.248	0.003
			4.000			1" Ice	0.315	0.315	0.006
(2) LPA-80080/4CF	A	From Leg	4.000	0.000	180.000	No Ice	2.619	5.399	0.012
(E)			0.000			1/2" Ice	2.922	5.726	0.045
			1.000			1" Ice	3.232	6.061	0.083
(2) LPA-80080/4CF	B	From Leg	4.000	0.000	180.000	No Ice	2.619	5.399	0.012
(E)			0.000			1/2" Ice	2.922	5.726	0.045
			1.000			1" Ice	3.232	6.061	0.083
(2) LPA-80080/4CF	C	From Leg	4.000	0.000	180.000	No Ice	2.619	5.399	0.012
(E)			0.000			1/2" Ice	2.922	5.726	0.045
			1.000			1" Ice	3.232	6.061	0.083
(2) JAHH-65B-R3B	A	From Leg	4.000	0.000	180.000	No Ice	9.113	5.983	0.061
(P)			0.000			1/2" Ice	9.579	6.442	0.119
			1.000			1" Ice	10.052	6.909	0.183
(2) JAHH-65B-R3B	B	From Leg	4.000	0.000	180.000	No Ice	9.113	5.983	0.061
(P)			0.000			1/2" Ice	9.579	6.442	0.119
			1.000			1" Ice	10.052	6.909	0.183

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) JAHH-65B-R3B	C	From Leg	4.000	0.000	180.000	No Ice	9.113	5.983	0.061
(P)			0.000			1/2" Ice	9.579	6.442	0.119
			1.000			1" Ice	10.052	6.909	0.183
BAND 5 AHCA RRH4X40	A	From Leg	4.000	0.000	180.000	No Ice	1.313	0.746	0.040
(P)			0.000			1/2" Ice	1.456	0.860	0.052
			1.000			1" Ice	1.607	0.982	0.066
BAND 5 AHCA RRH4X40	B	From Leg	4.000	0.000	180.000	No Ice	1.313	0.746	0.040
(P)			0.000			1/2" Ice	1.456	0.860	0.052
			1.000			1" Ice	1.607	0.982	0.066
BAND 5 AHCA RRH4X40	C	From Leg	4.000	0.000	180.000	No Ice	1.313	0.746	0.040
(P)			0.000			1/2" Ice	1.456	0.860	0.052
			1.000			1" Ice	1.607	0.982	0.066
RRH4x45-AWS4 B66	A	From Leg	4.000	0.000	180.000	No Ice	2.660	1.586	0.064
(P)			0.000			1/2" Ice	2.878	1.769	0.084
			1.000			1" Ice	3.104	1.959	0.108
RRH4x45-AWS4 B66	B	From Leg	4.000	0.000	180.000	No Ice	2.660	1.586	0.064
(P)			0.000			1/2" Ice	2.878	1.769	0.084
			1.000			1" Ice	3.104	1.959	0.108
RRH4x45-AWS4 B66	C	From Leg	4.000	0.000	180.000	No Ice	2.660	1.586	0.064
(P)			0.000			1/2" Ice	2.878	1.769	0.084
			1.000			1" Ice	3.104	1.959	0.108
RRH2x60-700	A	From Leg	4.000	0.000	180.000	No Ice	3.500	1.816	0.060
(P)			0.000			1/2" Ice	3.761	2.052	0.083
			1.000			1" Ice	4.029	2.289	0.109
RRH2x60-700	B	From Leg	4.000	0.000	180.000	No Ice	3.500	1.816	0.060
(P)			0.000			1/2" Ice	3.761	2.052	0.083
			1.000			1" Ice	4.029	2.289	0.109
RRH2x60-700	C	From Leg	4.000	0.000	180.000	No Ice	3.500	1.816	0.060
(P)			0.000			1/2" Ice	3.761	2.052	0.083
			1.000			1" Ice	4.029	2.289	0.109
(2) RC3DC-3315-PF-48	A	From Leg	4.000	0.000	180.000	No Ice	3.012	1.963	0.021
(P)			0.000			1/2" Ice	3.231	2.151	0.048
			1.000			1" Ice	3.457	2.347	0.077
Sector Mount [SM 304-3]	C	None		0.000	180.000	No Ice	44.820	44.820	1.920
(E-4 M.P./Sector)						1/2" Ice	63.480	63.480	2.772
						1" Ice	82.140	82.140	3.624
*****									
(3) 7130.16.33.00 w/ Mount Pipe	A	From Leg	4.000	0.000	170.000	No Ice	5.555	6.584	0.037
			0.000			1/2" Ice	5.968	7.295	0.096
(AB)			2.000			1" Ice	6.382	7.978	0.162
(3) 7130.16.33.00 w/ Mount Pipe	B	From Leg	4.000	0.000	170.000	No Ice	5.555	6.584	0.037
			0.000			1/2" Ice	5.968	7.295	0.096
(AB)			2.000			1" Ice	6.382	7.978	0.162
(3) 7130.16.33.00 w/ Mount Pipe	C	From Leg	4.000	0.000	170.000	No Ice	5.555	6.584	0.037
			0.000			1/2" Ice	5.968	7.295	0.096
(AB)			2.000			1" Ice	6.382	7.978	0.162
Sector Mount [SM 502-3]	C	None		0.000	170.000	No Ice	33.020	33.020	1.673
(AB)						1/2" Ice	47.360	47.360	2.224
						1" Ice	61.700	61.700	2.775
*****									
HBX-6516DS-VTM w/ Mount Pipe	A	From Leg	4.000	0.000	160.000	No Ice	3.598	3.241	0.029
			0.000			1/2" Ice	3.998	3.914	0.062
(E)			0.000			1" Ice	4.389	4.564	0.101
HBX-6516DS-VTM w/ Mount Pipe	B	From Leg	4.000	0.000	160.000	No Ice	3.598	3.241	0.029
			0.000			1/2" Ice	3.998	3.914	0.062
(E)			0.000			1" Ice	4.389	4.564	0.101
HBX-6516DS-VTM w/	C	From Leg	4.000	0.000	160.000	No Ice	3.598	3.241	0.029

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Mount Pipe			0.000			1/2" Ice	3.998	3.914	0.062
(E)			0.000			1" Ice	4.389	4.564	0.101
6' x 2" Mount Pipe	A	From Leg	4.000	0.000	160.000	No Ice	1.425	1.425	0.022
(E-Per photo)			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
6' x 2" Mount Pipe	B	From Leg	4.000	0.000	160.000	No Ice	1.425	1.425	0.022
(E-Per photo)			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
6' x 2" Mount Pipe	C	From Leg	4.000	0.000	160.000	No Ice	1.425	1.425	0.022
(E-Per photo)			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
Sector Mount [SM 104-3]	C	None		0.000	160.000	No Ice	30.020	30.020	0.953
(E)						1/2" Ice	40.480	40.480	1.405
						1" Ice	50.940	50.940	1.857
*****									
RR90-17-02DP w/ Mount	A	From Leg	3.000	0.000	153.000	No Ice	4.593	3.319	0.034
Pipe			0.000			1/2" Ice	5.018	4.089	0.072
(E)			0.000			1" Ice	5.436	4.784	0.115
RR90-17-02DP w/ Mount	C	From Leg	3.000	0.000	153.000	No Ice	4.593	3.319	0.034
Pipe			0.000			1/2" Ice	5.018	4.089	0.072
(E)			0.000			1" Ice	5.436	4.784	0.115
LNX-6515DS-VTM w/	A	From Leg	3.000	0.000	153.000	No Ice	11.683	9.842	0.083
Mount Pipe			0.000			1/2" Ice	12.404	11.366	0.173
(E)			0.000			1" Ice	13.135	12.914	0.273
LNX-6515DS-VTM w/	C	From Leg	3.000	0.000	153.000	No Ice	11.683	9.842	0.083
Mount Pipe			0.000			1/2" Ice	12.404	11.366	0.173
(E)			0.000			1" Ice	13.135	12.914	0.273
KRY 112 144/1	A	From Leg	3.000	0.000	153.000	No Ice	0.350	0.175	0.011
(E)			0.000			1/2" Ice	0.426	0.234	0.014
			0.000			1" Ice	0.509	0.301	0.019
KRY 112 144/1	C	From Leg	3.000	0.000	153.000	No Ice	0.350	0.175	0.011
(E)			0.000			1/2" Ice	0.426	0.234	0.014
			0.000			1" Ice	0.509	0.301	0.019
ATBT-BOTTOM-24V	A	From Leg	3.000	0.000	153.000	No Ice	0.104	0.065	0.003
(E)			0.000			1/2" Ice	0.148	0.102	0.004
			0.000			1" Ice	0.199	0.147	0.006
ATBT-BOTTOM-24V	C	From Leg	3.000	0.000	153.000	No Ice	0.104	0.065	0.003
(E)			0.000			1/2" Ice	0.148	0.102	0.004
			0.000			1" Ice	0.199	0.147	0.006
Side Arm Mount [SO 301-1]	A	From Leg	1.500	0.000	153.000	No Ice	1.000	0.900	0.023
(E)			0.000			1/2" Ice	1.390	1.420	0.033
			0.000			1" Ice	1.780	1.940	0.042
Side Arm Mount [SO 301-1]	C	From Leg	1.500	0.000	153.000	No Ice	1.000	0.900	0.023
(E)			0.000			1/2" Ice	1.390	1.420	0.033
			0.000			1" Ice	1.780	1.940	0.042
*****									
(2)	A	From Leg	4.000	0.000	140.000	No Ice	8.262	6.304	0.074
AM-X-CD-16-65-00T-RET			0.000			1/2" Ice	8.822	7.479	0.139
w/ Mount Pipe			1.000			1" Ice	9.346	8.368	0.212
(E)									
(2)	B	From Leg	4.000	0.000	140.000	No Ice	5.232	4.015	0.035
AM-X-CD-14-65-00T-RET			0.000			1/2" Ice	5.618	4.633	0.080
w/ Mount Pipe			1.000			1" Ice	6.012	5.257	0.131
(E)									
(2)	C	From Leg	4.000	0.000	140.000	No Ice	5.232	4.015	0.035
AM-X-CD-14-65-00T-RET			0.000			1/2" Ice	5.618	4.633	0.080
w/ Mount Pipe			1.000			1" Ice	6.012	5.257	0.131

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(E)									
800 10121 w/ Mount Pipe	A	From Leg	4.000	0.000	140.000	No Ice	5.388	4.600	0.066
(E)			0.000			1/2" Ice	5.813	5.351	0.114
			1.000			1" Ice	6.234	6.046	0.168
800 10121 w/ Mount Pipe	B	From Leg	4.000	0.000	140.000	No Ice	5.388	4.600	0.066
(E)			0.000			1/2" Ice	5.813	5.351	0.114
			1.000			1" Ice	6.234	6.046	0.168
800 10121 w/ Mount Pipe	C	From Leg	4.000	0.000	140.000	No Ice	5.388	4.600	0.066
(E)			0.000			1/2" Ice	5.813	5.351	0.114
			1.000			1" Ice	6.234	6.046	0.168
DC6-48-60-18-8F	A	From Leg	4.000	0.000	140.000	No Ice	0.917	0.917	0.019
(E)			0.000			1/2" Ice	1.458	1.458	0.037
			1.000			1" Ice	1.643	1.643	0.057
(2) RRUS-11	A	From Leg	4.000	0.000	140.000	No Ice	2.784	1.187	0.048
(E)			0.000			1/2" Ice	2.992	1.334	0.068
			1.000			1" Ice	3.207	1.490	0.092
(2) RRUS-11	B	From Leg	4.000	0.000	140.000	No Ice	2.784	1.187	0.048
(E)			0.000			1/2" Ice	2.992	1.334	0.068
			1.000			1" Ice	3.207	1.490	0.092
(2) RRUS-11	C	From Leg	4.000	0.000	140.000	No Ice	2.784	1.187	0.048
(E)			0.000			1/2" Ice	2.992	1.334	0.068
			1.000			1" Ice	3.207	1.490	0.092
7020.00	A	From Leg	4.000	0.000	140.000	No Ice	0.102	0.175	0.002
(E)			0.000			1/2" Ice	0.147	0.239	0.005
			1.000			1" Ice	0.199	0.311	0.009
7020.00	B	From Leg	4.000	0.000	140.000	No Ice	0.102	0.175	0.002
(E)			0.000			1/2" Ice	0.147	0.239	0.005
			1.000			1" Ice	0.199	0.311	0.009
7020.00	C	From Leg	4.000	0.000	140.000	No Ice	0.102	0.175	0.002
(E)			0.000			1/2" Ice	0.147	0.239	0.005
			1.000			1" Ice	0.199	0.311	0.009
LGP13519	A	From Leg	4.000	0.000	140.000	No Ice	0.290	0.181	0.005
(E)			0.000			1/2" Ice	0.362	0.241	0.008
			1.000			1" Ice	0.441	0.310	0.012
LGP13519	B	From Leg	4.000	0.000	140.000	No Ice	0.290	0.181	0.005
(E)			0.000			1/2" Ice	0.362	0.241	0.008
			1.000			1" Ice	0.441	0.310	0.012
LGP13519	C	From Leg	4.000	0.000	140.000	No Ice	0.290	0.181	0.005
(E)			0.000			1/2" Ice	0.362	0.241	0.008
			1.000			1" Ice	0.441	0.310	0.012
DTMABP7819VG12A	A	From Leg	4.000	0.000	140.000	No Ice	0.976	0.339	0.019
(E)			0.000			1/2" Ice	1.100	0.419	0.026
			1.000			1" Ice	1.232	0.510	0.036
DTMABP7819VG12A	B	From Leg	4.000	0.000	140.000	No Ice	0.976	0.339	0.019
(E)			0.000			1/2" Ice	1.100	0.419	0.026
			1.000			1" Ice	1.232	0.510	0.036
DTMABP7819VG12A	C	From Leg	4.000	0.000	140.000	No Ice	0.976	0.339	0.019
(E)			0.000			1/2" Ice	1.100	0.419	0.026
			1.000			1" Ice	1.232	0.510	0.036
Sector Mount [SM 504-3]	C	None		0.000	140.000	No Ice	34.250	34.250	1.708
(E)						1/2" Ice	48.980	48.980	2.286
						1" Ice	63.710	63.710	2.864
*****									
58532A	C	From Leg	3.000	0.000	98.000	No Ice	0.189	0.189	0.000
(E-GPS/Photo)			0.000			1/2" Ice	0.248	0.248	0.003
			4.000			1" Ice	0.315	0.315	0.006
Side Arm Mount [SO 301-1]	C	From Leg	1.500	0.000	98.000	No Ice	1.000	0.900	0.023

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(E)			0.000			1/2" Ice	1.390	1.420	0.033
			0.000			1" Ice	1.780	1.940	0.042
*****									

Load Combinations

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

Comb. No.	Description
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	192 - 180	Leg	Max Tension	23	3.361	-0.056	-0.037
			Max. Compression	35	-5.407	0.044	-0.030
			Max. Mx	20	-0.829	-0.576	0.002
			Max. My	2	-0.634	-0.022	-0.576
			Max. Vy	20	-0.429	0.281	-0.027
			Max. Vx	2	-0.435	-0.006	0.298
		Diagonal	Max Tension	17	1.238	0.000	0.000
			Max. Compression	4	-1.279	0.000	0.000
			Max. Mx	36	0.191	0.030	0.000
			Max. My	16	1.179	0.005	-0.001
			Max. Vy	36	-0.035	0.030	0.000
			Max. Vx	16	-0.000	0.004	-0.001
		Top Girt	Max Tension	22	0.089	0.000	0.000
			Max. Compression	3	-0.085	0.000	0.000
			Max. Mx	26	-0.020	-0.091	0.000
			Max. Vy	26	0.055	0.000	0.000
T2	180 - 160	Leg	Max Tension	23	27.211	-0.093	-0.010
			Max. Compression	2	-34.635	0.113	0.002
			Max. Mx	10	-33.834	0.118	0.010
			Max. My	20	-2.635	-0.015	-0.135
			Max. Vy	14	-1.478	-0.046	-0.007
			Max. Vx	8	1.473	0.009	-0.031
		Diagonal	Max Tension	16	4.447	0.000	0.000
			Max. Compression	16	-4.404	0.000	0.000
			Max. Mx	27	1.338	0.056	0.006
			Max. My	28	-1.516	0.037	0.007
			Max. Vy	27	-0.048	0.056	0.006
			Max. Vx	28	-0.003	0.000	0.000
		Top Girt	Max Tension	3	0.911	0.000	0.000
			Max. Compression	14	-0.944	0.000	0.000
			Max. Mx	26	-0.060	-0.097	0.000
			Max. My	26	-0.056	0.000	0.003
			Max. Vy	26	0.059	0.000	0.000
			Max. Vx	26	0.002	0.000	0.000
T3	160 - 140	Leg	Max Tension	23	56.879	-0.164	-0.007
			Max. Compression	2	-68.112	0.163	-0.004
			Max. Mx	14	33.649	-0.194	-0.029
			Max. My	20	-5.602	-0.003	-0.254
			Max. Vy	14	-0.532	-0.093	-0.003
			Max. Vx	19	-0.549	-0.108	-0.174
		Diagonal	Max Tension	17	6.416	0.000	0.000
			Max. Compression	16	-6.526	0.000	0.000
			Max. Mx	27	1.535	0.104	-0.013
			Max. My	35	1.279	0.102	-0.014
			Max. Vy	37	0.072	0.093	0.013
			Max. Vx	35	0.004	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T4	140 - 120	Leg	Max Tension	23	90.964	-0.227	-0.006
			Max. Compression	2	-108.055	0.364	0.001
			Max. Mx	2	-108.055	0.364	0.001
			Max. My	20	-8.310	0.008	-0.347
			Max. Vy	14	-1.048	-0.168	0.004
			Max. Vx	8	1.030	-0.008	0.053
		Diagonal	Max Tension	16	7.807	0.000	0.000
			Max. Compression	16	-7.868	0.000	0.000
			Max. Mx	27	2.027	0.129	-0.016
			Max. My	35	1.547	0.123	-0.017
			Max. Vy	37	0.086	0.126	0.016
			Max. Vx	35	0.005	0.000	0.000
T5	120 - 100	Leg	Max Tension	23	124.486	-0.341	-0.006
			Max. Compression	2	-146.288	0.767	0.008
			Max. Mx	3	-143.731	0.767	0.008
			Max. My	20	-10.030	-0.002	-0.619
			Max. Vy	19	-0.124	0.766	-0.019
			Max. Vx	8	-0.120	0.001	0.617
		Diagonal	Max Tension	16	8.472	0.000	0.000
			Max. Compression	16	-8.458	0.000	0.000
			Max. Mx	37	1.955	0.180	-0.023
			Max. My	28	-2.735	0.158	0.024
			Max. Vy	37	0.111	0.180	-0.023
			Max. Vx	28	-0.006	0.000	0.000
T6	100 - 80	Leg	Max Tension	7	154.044	-0.631	0.009
			Max. Compression	2	-180.215	0.935	-0.004
			Max. Mx	2	-180.215	0.935	-0.004
			Max. My	20	-10.781	-0.054	-1.031
			Max. Vy	18	-0.138	0.935	-0.014
			Max. Vx	20	-0.154	-0.054	-1.031
		Diagonal	Max Tension	16	9.873	0.000	0.000
			Max. Compression	16	-9.928	0.000	0.000
			Max. Mx	27	2.813	0.288	-0.037
			Max. My	36	2.683	0.282	-0.038
			Max. Vy	37	0.141	0.284	0.037
			Max. Vx	36	0.008	0.000	0.000
T7	80 - 60	Leg	Max Tension	7	186.247	-0.597	0.007
			Max. Compression	2	-217.642	1.264	-0.001
			Max. Mx	2	-217.642	1.264	-0.001
			Max. My	20	-13.685	0.029	-1.020
			Max. Vy	19	-0.171	1.255	-0.021
			Max. Vx	20	0.130	-0.061	-0.827
		Diagonal	Max Tension	16	10.780	0.000	0.000
			Max. Compression	16	-10.913	0.000	0.000
			Max. Mx	27	3.039	0.371	-0.045
			Max. My	36	2.879	0.364	-0.046
			Max. Vy	37	0.170	0.367	0.045
			Max. Vx	36	0.009	0.000	0.000
T8	60 - 40	Leg	Max Tension	7	215.806	-1.356	0.008
			Max. Compression	2	-253.257	1.180	-0.004
			Max. Mx	37	18.992	-2.059	-0.021
			Max. My	4	-14.451	-0.073	-1.282
			Max. Vy	33	0.311	-2.048	0.003
			Max. Vx	20	0.138	-0.070	-1.279
		Diagonal	Max Tension	16	10.535	0.000	0.000
			Max. Compression	16	-10.540	0.000	0.000
			Max. Mx	29	2.791	0.449	0.063
			Max. My	29	-2.491	0.410	0.065
			Max. Vy	29	0.197	0.449	0.063
			Max. Vx	29	-0.011	0.000	0.000
T9	40 - 20	Leg	Max Tension	7	245.608	-1.214	0.009

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	2	-289.182	1.991	-0.002
			Max. Mx	37	20.984	-4.085	-0.009
			Max. My	4	-16.834	-0.118	-1.607
			Max. Vy	33	0.665	-4.068	0.001
			Max. Vx	20	-0.206	-0.115	-1.602
		Diagonal	Max Tension	16	12.189	0.000	0.000
			Max. Compression	16	-12.453	0.000	0.000
			Max. Mx	29	1.818	0.519	-0.056
			Max. My	36	4.424	0.475	-0.062
			Max. Vy	29	0.204	0.477	-0.060
			Max. Vx	36	0.010	0.000	0.000
T10	20 - 0	Leg	Max Tension	7	274.812	-1.271	0.016
			Max. Compression	2	-325.210	0.000	-0.000
			Max. Mx	27	-161.599	4.098	0.006
			Max. My	4	-18.685	-0.190	-2.937
			Max. Vy	33	-0.788	-4.068	0.001
			Max. Vx	20	-0.394	-0.189	-2.927
		Diagonal	Max Tension	16	12.652	0.000	0.000
			Max. Compression	16	-12.923	0.000	0.000
			Max. Mx	29	0.064	0.649	0.065
			Max. My	30	5.872	0.481	0.076
			Max. Vy	29	0.220	0.649	0.065
			Max. Vx	30	-0.011	0.000	0.000

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	18	332.400	33.328	-19.611
	Max. H_x	18	332.400	33.328	-19.611
	Max. H_z	7	-282.000	-28.857	16.987
	Min. Vert	7	-282.000	-28.857	16.987
	Min. H_x	7	-282.000	-28.857	16.987
	Min. H_z	18	332.400	33.328	-19.611
Leg B	Max. Vert	10	331.672	-33.303	-19.538
	Max. H_x	23	-281.459	28.836	16.915
	Max. H_z	23	-281.459	28.836	16.915
	Min. Vert	23	-281.459	28.836	16.915
	Min. H_x	10	331.672	-33.303	-19.538
	Min. H_z	10	331.672	-33.303	-19.538
Leg A	Max. Vert	2	334.174	-0.053	38.737
	Max. H_x	21	16.275	4.816	1.366
	Max. H_z	2	334.174	-0.053	38.737
	Min. Vert	15	-281.634	0.053	-33.513
	Min. H_x	8	22.537	-4.818	1.897
	Min. H_z	15	-281.634	0.053	-33.513

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

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	53.320	0.000	0.000	-15.377	1.117	0.000
1.2 Dead+1.6 Wind 0 deg - No Ice	63.984	0.051	-62.390	-6786.854	-6.439	-2.174
0.9 Dead+1.6 Wind 0 deg - No Ice	47.988	0.051	-62.390	-6782.241	-6.774	-2.174
1.2 Dead+1.6 Wind 30 deg - No Ice	63.984	30.168	-52.335	-5763.174	-3307.398	-8.340
0.9 Dead+1.6 Wind 30 deg - No Ice	47.988	30.168	-52.335	-5758.560	-3307.733	-8.340
1.2 Dead+1.6 Wind 60 deg - No Ice	63.984	50.959	-29.528	-3260.496	-5584.668	-12.574
0.9 Dead+1.6 Wind 60 deg - No Ice	47.988	50.959	-29.528	-3255.883	-5585.003	-12.574
1.2 Dead+1.6 Wind 90 deg - No Ice	63.984	60.247	-0.051	-26.232	-6602.663	-13.692
0.9 Dead+1.6 Wind 90 deg - No Ice	47.988	60.247	-0.051	-21.618	-6602.998	-13.692
1.2 Dead+1.6 Wind 120 deg - No Ice	63.984	53.872	31.150	3359.011	-5834.781	-11.042
0.9 Dead+1.6 Wind 120 deg - No Ice	47.988	53.872	31.150	3363.625	-5835.116	-11.042
1.2 Dead+1.6 Wind 150 deg - No Ice	63.984	30.079	52.284	5718.489	-3293.925	-4.715
0.9 Dead+1.6 Wind 150 deg - No Ice	47.988	30.079	52.284	5723.103	-3294.260	-4.715
1.2 Dead+1.6 Wind 180 deg - No Ice	63.984	-0.051	58.968	6452.161	9.119	2.273
0.9 Dead+1.6 Wind 180 deg - No Ice	47.988	-0.051	58.968	6456.774	8.784	2.273
1.2 Dead+1.6 Wind 210 deg - No Ice	63.984	-30.168	52.335	5726.268	3310.078	8.340
0.9 Dead+1.6 Wind 210 deg - No Ice	47.988	-30.168	52.335	5730.881	3309.743	8.340
1.2 Dead+1.6 Wind 240 deg - No Ice	63.984	-53.923	31.239	3372.485	5845.240	13.126
0.9 Dead+1.6 Wind 240 deg - No Ice	47.988	-53.923	31.239	3377.098	5844.905	13.126
1.2 Dead+1.6 Wind 270 deg - No Ice	63.984	-60.247	0.051	-10.674	6605.343	13.692
0.9 Dead+1.6 Wind 270 deg - No Ice	47.988	-60.247	0.051	-6.061	6605.008	13.692
1.2 Dead+1.6 Wind 300 deg - No Ice	63.984	-50.908	-29.440	-3247.023	5579.569	10.391
0.9 Dead+1.6 Wind 300 deg - No Ice	47.988	-50.908	-29.440	-3242.410	5579.234	10.391
1.2 Dead+1.6 Wind 330 deg - No Ice	63.984	-30.079	-52.284	-5755.395	3296.605	4.715
0.9 Dead+1.6 Wind 330 deg - No Ice	47.988	-30.079	-52.284	-5750.782	3296.270	4.715
1.2 Dead+1.0 Ice+1.0 Temp	218.279	0.000	0.000	-89.901	-18.765	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	218.279	-0.004	-19.087	-2229.062	-18.185	-0.672
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	218.279	9.402	-16.294	-1920.602	-1074.758	-2.674
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	218.279	16.143	-9.321	-1140.673	-1838.249	-3.976
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	218.279	18.810	0.004	-89.321	-2131.756	-4.276
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	218.279	16.526	9.547	980.182	-1870.535	-3.432
1.2 Dead+1.0 Wind 150	218.279	9.409	16.298	1741.380	-1075.762	-1.517

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
deg+1.0 Ice+1.0 Temp 1.2 Dead+1.0 Wind 180	218.279	0.004	18.649	2012.649	-19.344	0.689
deg+1.0 Ice+1.0 Temp 1.2 Dead+1.0 Wind 210	218.279	-9.402	16.294	1740.800	1037.229	2.674
deg+1.0 Ice+1.0 Temp 1.2 Dead+1.0 Wind 240	218.279	-16.522	9.540	979.178	1832.426	4.054
deg+1.0 Ice+1.0 Temp 1.2 Dead+1.0 Wind 270	218.279	-18.810	-0.004	-90.480	2094.226	4.276
deg+1.0 Ice+1.0 Temp 1.2 Dead+1.0 Wind 300	218.279	-16.147	-9.328	-1141.677	1801.299	3.337
deg+1.0 Ice+1.0 Temp 1.2 Dead+1.0 Wind 330	218.279	-9.409	-16.298	-1921.181	1038.233	1.517
deg+1.0 Ice+1.0 Temp Dead+Wind 0 deg - Service	53.320	0.011	-13.761	-1508.261	-0.599	-0.479
Dead+Wind 30 deg - Service	53.320	6.654	-11.543	-1282.471	-728.681	-1.839
Dead+Wind 60 deg - Service	53.320	11.240	-6.513	-730.464	-1230.970	-2.773
Dead+Wind 90 deg - Service	53.320	13.289	-0.011	-17.093	-1455.506	-3.020
Dead+Wind 120 deg - Service	53.320	11.882	6.871	729.579	-1286.137	-2.435
Dead+Wind 150 deg - Service	53.320	6.634	11.532	1250.001	-725.709	-1.040
Dead+Wind 180 deg - Service	53.320	-0.011	13.006	1411.824	2.832	0.501
Dead+Wind 210 deg - Service	53.320	-6.654	11.543	1251.716	730.914	1.839
Dead+Wind 240 deg - Service	53.320	-11.894	6.890	732.550	1290.086	2.895
Dead+Wind 270 deg - Service	53.320	-13.289	0.011	-13.662	1457.739	3.020
Dead+Wind 300 deg - Service	53.320	-11.229	-6.493	-727.492	1231.488	2.292
Dead+Wind 330 deg - Service	53.320	-6.634	-11.532	-1280.755	727.942	1.040

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.000	-53.320	0.000	0.000	53.320	-0.000	0.000%
2	0.051	-63.984	-62.390	-0.051	63.984	62.390	0.000%
3	0.051	-47.988	-62.390	-0.051	47.988	62.390	0.000%
4	30.168	-63.984	-52.335	-30.168	63.984	52.335	0.000%
5	30.168	-47.988	-52.335	-30.168	47.988	52.335	0.000%
6	50.959	-63.984	-29.528	-50.959	63.984	29.528	0.000%
7	50.959	-47.988	-29.528	-50.959	47.988	29.528	0.000%
8	60.247	-63.984	-0.051	-60.247	63.984	0.051	0.000%
9	60.247	-47.988	-0.051	-60.247	47.988	0.051	0.000%
10	53.872	-63.984	31.150	-53.872	63.984	-31.150	0.000%
11	53.872	-47.988	31.150	-53.872	47.988	-31.150	0.000%
12	30.079	-63.984	52.284	-30.079	63.984	-52.284	0.000%
13	30.079	-47.988	52.284	-30.079	47.988	-52.284	0.000%
14	-0.051	-63.984	58.968	0.051	63.984	-58.968	0.000%
15	-0.051	-47.988	58.968	0.051	47.988	-58.968	0.000%
16	-30.168	-63.984	52.335	30.168	63.984	-52.335	0.000%
17	-30.168	-47.988	52.335	30.168	47.988	-52.335	0.000%
18	-53.923	-63.984	31.239	53.923	63.984	-31.239	0.000%
19	-53.923	-47.988	31.239	53.923	47.988	-31.239	0.000%
20	-60.247	-63.984	0.051	60.247	63.984	-0.051	0.000%
21	-60.247	-47.988	0.051	60.247	47.988	-0.051	0.000%
22	-50.908	-63.984	-29.440	50.908	63.984	29.440	0.000%
23	-50.908	-47.988	-29.440	50.908	47.988	29.440	0.000%
24	-30.079	-63.984	-52.284	30.079	63.984	52.284	0.000%
25	-30.079	-47.988	-52.284	30.079	47.988	52.284	0.000%
26	0.000	-218.279	0.000	-0.000	218.279	-0.000	0.000%
27	-0.004	-218.279	-19.087	0.004	218.279	19.087	0.000%

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
28	9.402	-218.279	-16.294	-9.402	218.279	16.294	0.000%
29	16.143	-218.279	-9.321	-16.143	218.279	9.321	0.000%
30	18.810	-218.279	0.004	-18.810	218.279	-0.004	0.000%
31	16.526	-218.279	9.547	-16.526	218.279	-9.547	0.000%
32	9.409	-218.279	16.298	-9.409	218.279	-16.298	0.000%
33	0.004	-218.279	18.649	-0.004	218.279	-18.649	0.000%
34	-9.402	-218.279	16.294	9.402	218.279	-16.294	0.000%
35	-16.522	-218.279	9.540	16.522	218.279	-9.540	0.000%
36	-18.810	-218.279	-0.004	18.810	218.279	0.004	0.000%
37	-16.147	-218.279	-9.328	16.147	218.279	9.328	0.000%
38	-9.409	-218.279	-16.298	9.409	218.279	16.298	0.000%
39	0.011	-53.320	-13.761	-0.011	53.320	13.761	0.000%
40	6.654	-53.320	-11.543	-6.654	53.320	11.543	0.000%
41	11.240	-53.320	-6.513	-11.240	53.320	6.513	0.000%
42	13.289	-53.320	-0.011	-13.289	53.320	0.011	0.000%
43	11.882	-53.320	6.871	-11.882	53.320	-6.871	0.000%
44	6.634	-53.320	11.532	-6.634	53.320	-11.532	0.000%
45	-0.011	-53.320	13.006	0.011	53.320	-13.006	0.000%
46	-6.654	-53.320	11.543	6.654	53.320	-11.543	0.000%
47	-11.894	-53.320	6.890	11.894	53.320	-6.890	0.000%
48	-13.289	-53.320	0.011	13.289	53.320	-0.011	0.000%
49	-11.229	-53.320	-6.493	11.229	53.320	6.493	0.000%
50	-6.634	-53.320	-11.532	6.634	53.320	11.532	0.000%

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	192 - 180	4.088	39	0.193	0.012
T2	180 - 160	3.600	39	0.192	0.012
T3	160 - 140	2.812	39	0.170	0.010
T4	140 - 120	2.134	39	0.143	0.008
T5	120 - 100	1.559	39	0.118	0.005
T6	100 - 80	1.084	39	0.096	0.003
T7	80 - 60	0.705	39	0.074	0.002
T8	60 - 40	0.413	39	0.055	0.002
T9	40 - 20	0.201	39	0.037	0.001
T10	20 - 0	0.060	39	0.019	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190.000	(2) DB980H90E-M w/ Mount Pipe	39	4.007	0.193	0.012	Inf
180.000	58532A	39	3.600	0.192	0.012	418512
170.000	(3) 7130.16.33.00 w/ Mount Pipe	39	3.197	0.183	0.011	66395
160.000	HBX-6516DS-VTM w/ Mount Pipe	39	2.812	0.170	0.010	36405
153.000	RR90-17-02DP w/ Mount Pipe	39	2.562	0.161	0.009	38846
140.000	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	39	2.134	0.143	0.008	49737

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
98.000	58532A	39	1.042	0.094	0.003	49869

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	192 - 180	18.312	2	0.862	0.054
T2	180 - 160	16.136	2	0.854	0.053
T3	160 - 140	12.621	2	0.758	0.045
T4	140 - 120	9.590	2	0.641	0.035
T5	120 - 100	7.013	2	0.529	0.023
T6	100 - 80	4.879	2	0.432	0.015
T7	80 - 60	3.174	2	0.332	0.011
T8	60 - 40	1.860	2	0.245	0.007
T9	40 - 20	0.908	2	0.167	0.004
T10	20 - 0	0.273	2	0.085	0.002

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190.000	(2) DB980H90E-M w/ Mount Pipe	2	17.949	0.862	0.054	362449
180.000	58532A	2	16.136	0.854	0.053	111226
170.000	(3) 7130.16.33.00 w/ Mount Pipe	2	14.339	0.816	0.050	15114
160.000	HBX-6516DS-VTM w/ Mount Pipe	2	12.621	0.758	0.045	8236
153.000	RR90-17-02DP w/ Mount Pipe	2	11.501	0.717	0.042	8803
140.000	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	2	9.590	0.641	0.035	11332
98.000	58532A	2	4.690	0.422	0.015	11142

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	192 - 180	ROHN 2.5 STD	12.000	4.000	50.7 K=1.00	1.704	-5.407	63.560	0.085 [1] ✔
T2	180 - 160	ROHN 2.5 STD	20.032	5.008	63.4 K=1.00	1.704	-34.635	57.139	0.606 [1] ✔
T3	160 - 140	ROHN 3 EH	20.036	6.679	70.5 K=1.00	3.016	-68.112	94.337	0.722 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T4	140 - 120	ROHN 4 EH	20.038	6.679	54.3 K=1.00	4.407	-108.055	159.899	0.676 [1] ✔
T5	120 - 100	ROHN 5 EH	20.036	6.679	43.6 K=1.00	6.112	-146.288	239.378	0.611 [1] ✔
T6	100 - 80	ROHN 6 EHS	20.036	10.018	54.0 K=1.00	6.713	-180.215	244.047	0.738 [1] ✔
T7	80 - 60	ROHN 6 EH	20.032	10.016	54.8 K=1.00	8.405	-217.642	303.757	0.717 [1] ✔
T8	60 - 40	ROHN 8 EHS	20.042	10.021	41.2 K=1.00	9.719	-253.257	386.354	0.656 [1] ✔
T9	40 - 20	ROHN 8 EHS	20.031	10.015	41.2 K=1.00	9.719	-289.182	386.409	0.748 [1] ✔
T10	20 - 0	ROHN 8 EHS	20.033	10.017	41.2 K=1.00	9.719	-325.210	386.397	0.842 [1] ✔

[1] $P_u / \phi P_n$ controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	192 - 180	L1 3/4x1 3/4x3/16	7.700	3.585	125.3 K=1.00	0.621	-1.279	8.810	0.145 [1] ✔
T2	180 - 160	L2x2x3/16	9.686	4.721	143.8 K=1.00	0.715	-4.387	7.811	0.562 [1] ✔
T3	160 - 140	L2 1/2x2 1/2x1/4	12.241	6.028	147.3 K=1.00	1.190	-6.526	12.388	0.527 [1] ✔
T4	140 - 120	L2 1/2x2 1/2x1/4	14.067	6.897	168.6 K=1.00	1.190	-7.868	9.461	0.832 [1] ✔
T5	120 - 100	L3x3x1/4	15.944	7.773	157.6 K=1.00	1.440	-8.458	13.104	0.645 [1] ✔
T6	100 - 80	L3 1/2x3 1/2x1/4	19.209	9.452	163.4 K=1.00	1.690	-9.928	14.295	0.695 [1] ✔
T7	80 - 60	L4x4x1/4	20.935	10.297	155.4 K=1.00	1.940	-10.913	18.143	0.602 [1] ✔
T8	60 - 40	L4x4x5/16	22.872	11.214	170.1 K=1.00	2.400	-10.540	18.734	0.563 [1] ✔
T9	40 - 20	L4x4x5/16	24.688	12.078	183.2 K=1.00	2.400	-12.453	16.150	0.771 [1] ✔
T10	20 - 0	L4x4x3/8	26.510	13.002	198.0 K=1.00	2.860	-12.923	16.482	0.784 [1] ✔

[1] $P_u / \phi P_n$ controls

Top Girt Design Data (Compression)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T1	192 - 180	L1 3/4x1 3/4x3/16	6.580	6.090	212.8 K=1.00	0.621	-0.085	3.099	0.027 [1] ✔
T2	180 - 160	KL/R > 200 (C) - 4 L2x2x3/16	6.580	6.090	185.5 K=1.00	0.715	-0.944	4.694	0.201 [1] ✔

[1] P_u / ϕP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T1	192 - 180	ROHN 2.5 STD	12.000	4.000	50.7	1.704	3.361	76.682	0.044 [1] ✔
T2	180 - 160	ROHN 2.5 STD	20.032	5.008	63.4	1.704	27.211	76.682	0.355 [1] ✔
T3	160 - 140	ROHN 3 EH	20.036	6.679	70.5	3.016	56.879	135.717	0.419 [1] ✔
T4	140 - 120	ROHN 4 EH	20.038	6.679	54.3	4.407	90.964	198.335	0.459 [1] ✔
T5	120 - 100	ROHN 5 EH	20.036	6.679	43.6	6.112	124.486	275.039	0.453 [1] ✔
T6	100 - 80	ROHN 6 EHS	20.036	10.018	54.0	6.713	154.044	302.097	0.510 [1] ✔
T7	80 - 60	ROHN 6 EH	20.032	10.016	54.8	8.405	186.248	378.222	0.492 [1] ✔
T8	60 - 40	ROHN 8 EHS	20.042	10.021	41.2	9.719	215.806	437.369	0.493 [1] ✔
T9	40 - 20	ROHN 8 EHS	20.031	10.015	41.2	9.719	245.608	437.369	0.562 [1] ✔
T10	20 - 0	ROHN 8 EHS	20.033	10.017	41.2	9.719	274.812	437.369	0.628 [1] ✔

[1] P_u / ϕP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T1	192 - 180	L1 3/4x1 3/4x3/16	7.700	3.585	82.9	0.360	1.238	15.675	0.079 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T2	180 - 160	L2x2x3/16	9.686	4.721	94.3	0.431	4.447	18.739	0.237 [1]
T3	160 - 140	L2 1/2x2 1/2x1/4	12.241	6.028	96.0	0.752	6.416	32.707	0.196 [1]
T4	140 - 120	L2 1/2x2 1/2x1/4	14.067	6.897	109.6	0.752	7.807	32.707	0.239 [1]
T5	120 - 100	L3x3x1/4	15.944	7.773	102.0	0.916	8.472	44.652	0.190 [1]
T6	100 - 80	L3 1/2x3 1/2x1/4	19.209	9.452	105.5	1.103	9.873	53.793	0.184 [1]
T7	80 - 60	L4x4x1/4	20.935	10.297	100.1	1.291	10.780	62.933	0.171 [1]
T8	60 - 40	L4x4x5/16	22.872	11.214	109.8	1.595	10.535	77.752	0.135 [1]
T9	40 - 20	L4x4x5/16	24.688	12.078	118.2	1.595	12.189	77.752	0.157 [1]
T10	20 - 0	L4x4x3/8	26.510	13.002	128.2	1.899	12.652	92.572	0.137 [1]

[1] P_u / ϕP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	192 - 180	L1 3/4x1 3/4x3/16	6.580	6.090	141.7	0.360	0.089	15.675	0.006 [1]
T2	180 - 160	L2x2x3/16	6.580	6.090	123.3	0.431	0.911	18.739	0.049 [1]

[1] P_u / ϕP_n controls

Section Capacity Table

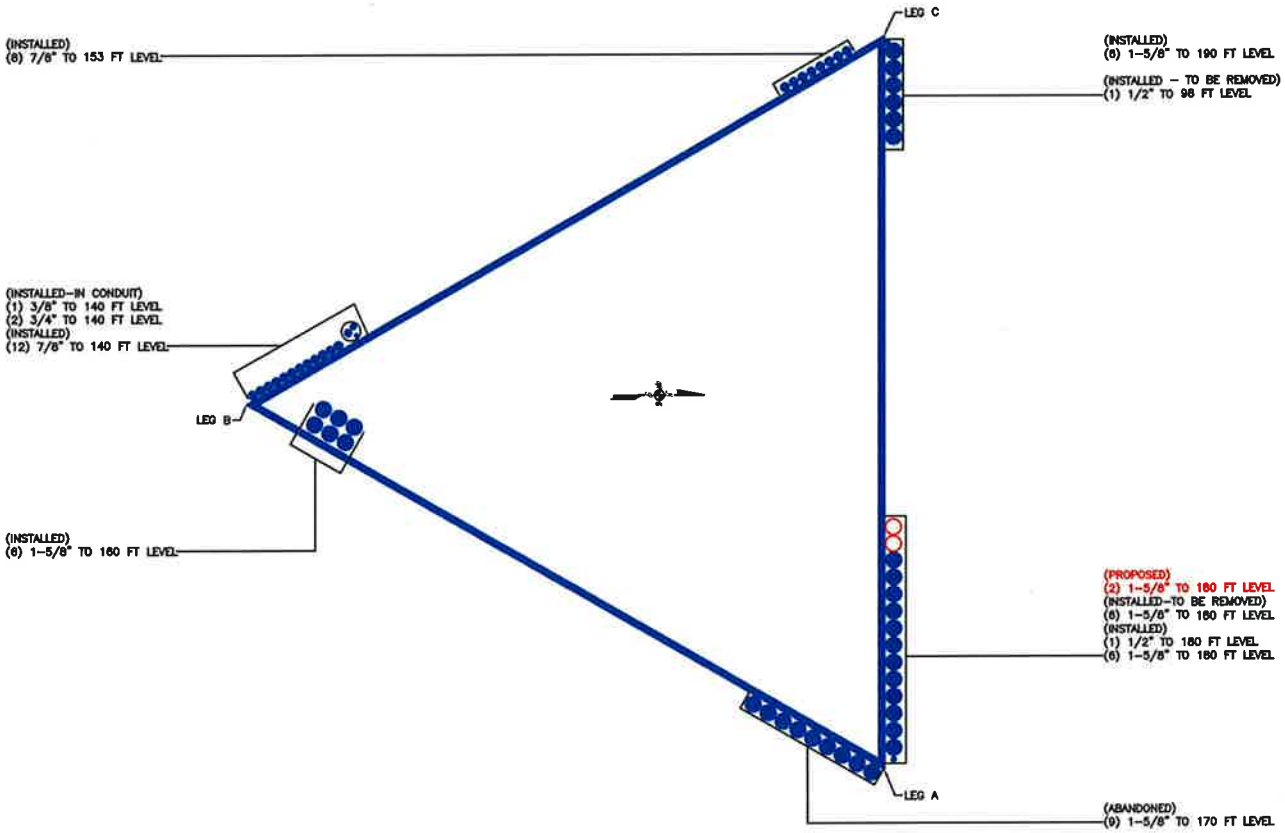
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T1	192 - 180	Leg	ROHN 2.5 STD	1	-5.407	63.560	8.5	Pass
T2	180 - 160	Leg	ROHN 2.5 STD	27	-34.635	57.139	60.6	Pass
T3	160 - 140	Leg	ROHN 3 EH	57	-68.112	94.337	72.2	Pass
T4	140 - 120	Leg	ROHN 4 EH	78	-108.055	159.899	67.6	Pass
T5	120 - 100	Leg	ROHN 5 EH	99	-146.288	239.378	61.1	Pass
T6	100 - 80	Leg	ROHN 6 EHS	120	-180.215	244.047	73.8	Pass
T7	80 - 60	Leg	ROHN 6 EH	135	-217.642	303.757	71.7	Pass
T8	60 - 40	Leg	ROHN 8 EHS	150	-253.257	386.354	65.6	Pass
T9	40 - 20	Leg	ROHN 8 EHS	165	-289.182	386.409	74.8	Pass
T10	20 - 0	Leg	ROHN 8 EHS	180	-325.210	386.397	84.2	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T1	192 - 180	Diagonal	L1 3/4x1 3/4x3/16	11	-1.279	8.810	14.5	Pass
							17.4 (b)	
T2	180 - 160	Diagonal	L2x2x3/16	36	-4.387	7.811	56.2	Pass
T3	160 - 140	Diagonal	L2 1/2x2 1/2x1/4	63	-6.526	12.388	52.7	Pass
							56.7 (b)	
T4	140 - 120	Diagonal	L2 1/2x2 1/2x1/4	84	-7.868	9.461	83.2	Pass
T5	120 - 100	Diagonal	L3x3x1/4	105	-8.458	13.104	64.5	Pass
T6	100 - 80	Diagonal	L3 1/2x3 1/2x1/4	126	-9.928	14.295	69.5	Pass
							73.2 (b)	
T7	80 - 60	Diagonal	L4x4x1/4	141	-10.913	18.143	60.2	Pass
							79.9 (b)	
T8	60 - 40	Diagonal	L4x4x5/16	156	-10.540	18.734	56.3	Pass
							78.1 (b)	
T9	40 - 20	Diagonal	L4x4x5/16	171	-12.453	16.150	77.1	Pass
							90.4 (b)	
T10	20 - 0	Diagonal	L4x4x3/8	186	-12.923	16.482	78.4	Pass
							93.8 (b)	
T1	192 - 180	Top Girt	L1 3/4x1 3/4x3/16	4	-0.085	3.099	2.7	Pass
T2	180 - 160	Top Girt	L2x2x3/16	28	-0.944	4.694	20.1	Pass
							Summary	
						Leg (T10)	84.2	Pass
						Diagonal (T10)	93.8	Pass
						Top Girt (T2)	20.1	Pass
						Bolt Checks	93.8	Pass
						RATING =	**93.8**	**Pass**

Program Version 7.0.5.1

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876345

APPENDIX C

ADDITIONAL CALCULATIONS

Anchor Rod Check for Self Supporting Towers

TIA-222-G, Section 4.9.9 Rev. 6.1.2

CROWN CASTLE

Site Data	
BU#:	876345
Site Name:	SKY HILL, CT
App #:	394592 Revision # 2

Anchor Rod Data		
Qty:	10	
Diam:	1	in
Rod Material:	A354 Gr. BC (1/4 to 2-1/2 incl.)	
Strength (Fu):	125	ksi
Yield (Fy):	109	ksi

* Rod Circle:		in
* e:		in
* # of Rods		1 or 2

Mu= Pu x e:		ft-kips

** Only enter rod circle, offset (e) and number of anchor rods at the extreme fiber to consider if eccentric load due to leg reinforcement exist.*

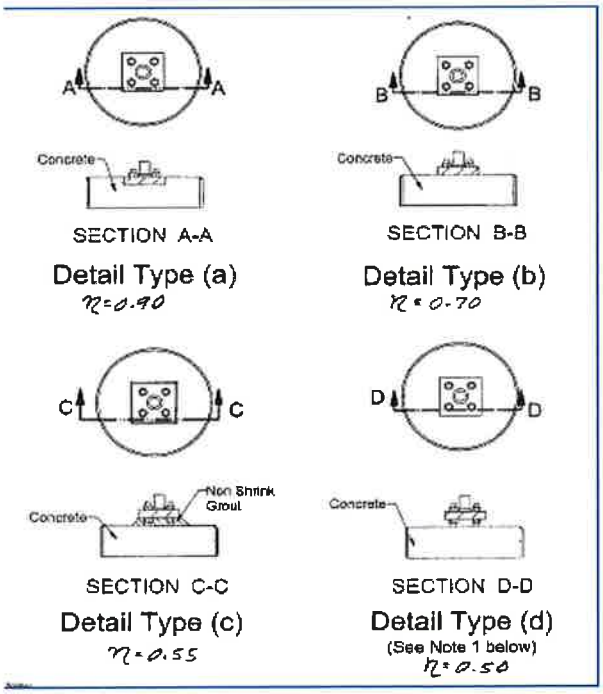


Figure 4-4 of TIA-222-G

Reactions		
Eta Factor, η	0.55	Detail Type
Down load, Pu:/Uplift, Pu:	282	kips
Shear, Vu:	33	kips

l_{ar}:		in
$Mu = 0.65*l_{ar}*V_u$		ft-kips

Anchor Rod Results:

Max Rod (Cu+ Vu/η):	34.2	Kips
Design Axial, Φ*Fu*Anet:	60.6	Kips
Anchor Rod Stress Ratio:	56.4%	

If Applicable;

Anchor Rod Results with Bending Considered:

When the clear distance from the top of concrete to the bottom of level nut excceeds 1.0 times the diameter of the anchor rod, the following interaction equation shall also be satisfied (see Figure 4-4 of Rev. G):

$$(V_u/\phi R_{nv})^2 + [(P_u/\phi R_{nt}) + (M_u/\phi R_{nm})]^2 <= 1$$

$\phi R_{nv}=\phi*0.45*F_{ub}*A_b=$		kips
$\phi R_{nt}=\phi*F_u*A_{net}=$		kips
$\phi R_{nm}=\phi*F_y*Z=$		ft-kips

Maximum Acceptable Ratio:	105	%
Governing Stress Ratio:	56.4%	**Pass**

CCI Foundation Tool Suite - SS Drilled Pier

CCIFTS 1.2.108.14286 - Phase 1-2 Date: 02-08-2017

BU:	876345
Site Name:	SKY HILL, CT
App Number:	394592 Revision # 2
Work Order:	1436252

CROWN CASTLE

Self-Support Drilled Pier

Input

Criteria

TIA Revision:	G
ACI 318 Revision:	2008
Seismic Category:	B

Forces

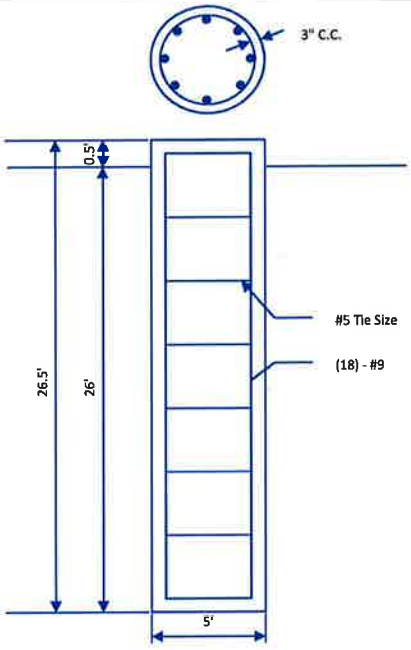
Compression	334 kips
Compression Shear	39 kips
Uplift	282 kips
Uplift Shear	33 kips
Add'l Moment	0 k-ft
Swelling Force	0 kips

Foundation Dimensions

Pier Diameter:	5 ft
Ext. above grade:	0.5 ft
Depth below grade:	26 ft
Bell Diameter:	ft
Bell Angle:	deg

Material Properties

Number of Rebar:	18
Rebar Size:	9
Tie Size	5
Rebar tensile strength:	60 ksi
Concrete Strength:	3000 psi
Ultimate Concrete Strain	0.003 in/in
Clear Cover to Ties:	3 in



Soil Profile Soil profile per FDH.

Layer	Thickness (ft)	From (ft)	To (ft)	Unit Weight (pcf)	Cohesion (psf)	Friction Angle (deg)	Ultimate Uplift Skin Friction (ksf)	Ultimate Comp. Skin Friction (ksf)	Ultimate Bearing Capacity (ksf)	SPT 'N' Counts
1	2	0	2	120			0	0	0	
2	1.33	2	3.33	130			0	0	0	
3	1.67	3.33	5	130	3000		0	0	0	
4	21	5	26	135	5000		2.1	2.1	25.46	

Analysis Results

Soil Lateral Capacity	Uplift case	Comp. case
Depth to Zero Shear:	11.0 ft	11.0 ft
Max Moment, Mu:	262.7 k-ft	310.4 k-ft
Soil Safety Factor:	42.6	36.1
Safety Factor Req'd:	1.33	1.33
RATING:	3.12%	3.69%

Soil Axial Capacity

Concrete Weight:	70.2 kips
Skin Friction:	519.5 kips
Soil Cone:	kips
Uplift Capacity (k), ϕTn:	589.8 kips
Uplift (k), Tu:	282.0 kips
RATING:	47.81%
Skin Friction (k):	519.5 kips
End Bearing (k):	374.9 kips
Comp. Capacity (k), ϕCn:	894.5 kips
Comp. (k), Cu:	334.0 kips
RATING:	37.34%

Concrete/Steel Check	Uplift Case	Comp case
Mu (from soil analysis)	262.7 k-ft	310.4 k-ft
ϕMn	1441.5 k-ft	2493.9 k-ft
RATING:	18.22%	12.45%

rho provided	0.64
rho required	0.33 OK
Rebar Spacing	7.9
Spacing required	18.0 OK
Dev. Length required	14.7
Dev. Length provided	49.4 OK

Overall Foundation Rating: 47.81%

ATTACHMENT 4


02-B-1.2
2.1 ac
02-B-2
75 ac
02-A-1
9.5 ac
02-B-1.3
3.7 ac
Ferrence Rd
01-D-1
1 ac
Janoski Rd
02-B-1.4
5.5 ac
-B-1
1 ac
02-E-1
5.4 ac
Hillside Rd
02-F-1
50.3 ac
02-F-2
9.87 ac
01-E-1
5.3 ac
02-F-2.1
2.97 ac
02-E-2
10 ac
1085 ft
02-F-3
11 ac
Mount Hope River
Sky Hill
04-B-1
57.9 ac
05-A-1.1
05-B-1.1

33 JANOSKI RD

Location	33 JANOSKI RD	**Mblu**	02/ F/ 1.1/ /
Acct#	02 F 1.1	**Owner**	MARTIN DAVID H
Assessment	$252,200	**Appraisal**	$360,200
PID	65	**Building Count**	1
Lot Type		**topoTopography**	
Location			

Current Value

Appraisal					
Valuation Year	**Building**	**Extra Features**	**Outbuildings**	**Land**	**Total**
2016	$0	$0	$183,100	$177,100	$360,200
Assessment					
Valuation Year	**Building**	**Extra Features**	**Outbuildings**	**Land**	**Total**
2016	$0	$0	$128,200	$124,000	$252,200

Parcel Addreses

Additional Addresses		
Address	**City, State Zip**	**Type**
33 JANOSKI RD		Primary

Owner of Record

Owner	MARTIN DAVID H	**Sale Price**	$0
Co-Owner	C/O SPRINT SPECTRUM CT-03XC204	**Certificate**	C
Address	PO BOX 8430 KANSAS CITY, MO 641148430	**Book & Page**	109/ 811
		Sale Date	09/30/1996

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
MARTIN DAVID H	$0	C	109/ 811	09/30/1996

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Outbuildings
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Bsmt. Garages	

Building Photo

(http://images.vgsi.com/photos/AshfordCTPhotos//\00\00\25/3

Building Layout

Building Layout

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

Extra Features

Extra Features	Legend
No Data for Extra Features	

Parcel Information

Use Code 201
Description Commercial Vacant
Deeded Acres 0.7

Land

Land Use

Use Code 201
Description Commercial Vacant
Zone
Neighborhood C3
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 0.7
Frontage
Depth
Assessed Value $124,000
Appraised Value $177,100

Outbuildings

Outbuildings							Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Assessed Value**	**Bldg #**
TWR1	Cell Tower			192 HEIGHT	$73,400	$51,400	1
SHD2	Pre Cast Cell			240 S.F.	$34,400	$24,100	1
FN3	Fence 6'			260 L.F.	$3,600	$2,500	1
SHD2	Pre Cast Cell			360 S.F.	$34,400	$24,100	1
SHD2	Pre Cast Cell			260 S.F.	$37,300	$26,100	1

Valuation History

Appraisal					
Valuation Year	**Building**	**Extra Features**	**Outbuildings**	**Land**	**Total**
2016	$0	$0	$183,100	$177,100	$360,200
2015	$0	$0	$182,200	$189,000	$371,200
2014	$0	$0	$182,200	$189,000	$371,200

Assessment					
Valuation Year	**Building**	**Extra Features**	**Outbuildings**	**Land**	**Total**
2016	$0	$0	$128,200	$124,000	$252,200
2015	$0	$0	$127,600	$132,300	$259,900
2014	$0	$0	$127,600	$132,300	$259,900

ATTACHMENT 5

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3		neopost 02/05/2018 US POSTAGE $002.38 ZIP 06103 041L12203360
	Postmaster, per *(name of receiving employee)*		OLD STATE HOUSE STATION FEB 05 2018 USPS

	USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.		Michael J. Zambo, First Selectman Town of Ashford 5 Town Hall Road Ashford, CT 06278				
2.		Michael Gardner, Land Use Department Administrator Town of Ashford 5 Town Hall Road Ashford, CT 06278				
3.		David H. Martin c/o Sprint Spectrum LP P.O. Box 8430 Kansas City, MO 64114				
4.						
5.						
6.						

PS Form **3665**, January 2017 (Page ___ of ___) PSN 7530-17-000-5549

See Reverse for Instructions