Alex Murshteyn, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (508) 821-0159
AMurshteyn@centerlinecommunications.com

May 15, 2020

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

RE: Notice of Exempt Modification // Site: Bridgeport North (ATC: 383598)
1000 Trumbull Ave, Bridgeport, CT 06606
N 41.2196 // W 73.2012

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless currently maintains 12 antennas at the 155-foot mount on the existing 240-foot self-supporting lattice tower, located at 1000 Trumbull Ave, Bridgeport, CT. The tower and land are owned by American Tower. The Council approved Verizon Wireless use of the existing tower in 1990. Verizon Wireless now intends to replace 3 the existing antennas with 3 new clip-on antennas with 3 remote radio heads units attached thereto, reinforce mounts, and update existing equipment as part of its CBRS (3500 MHz) upgrade. Verizon Wireless will replace all of its remaining remote radio head units (RRUs) with 9 new RRUs and also add 3 new diplexers; altogether updating leased equipment rights, as reflected by the final configuration outlined in the structural analyses and proposed hereby.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Joseph Peter Ganim, Mayor for the City of Bridgeport, which is also the owner of the property, its Zoning Administrator Dennis Buckley and American Tower, 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). Enclosed to accommodate this filing are construction drawings dated March 16, 2020, structural analysis dated February 6, 2020 and antenna mount analysis dated March 3, 2020, as well as radio frequency (RF) analysis table showing worst-case RF emission calculation by Verizon Wireless RF Design Engineering.

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications 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 new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

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

6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis dated February 6, 2020 and antenna mount analysis dated March 3, 2020 by A.T. Engineering Service, PLLC.

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

Sincerely,

Alex Murshteyn, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (508) 821-0159
AMurshteyn@centerlinecommunications.com

Attachments

cc: Joseph Peter Ganim, Mayor, City of Bridgeport - as chief elected official
Dennis Buckley, Zoning Administrator, City of Bridgeport - as P&Z official
American Tower Corporation - as tower & ground owner

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018651

NOTICE OF GRANT OF VARIANCE,

SPECIAL EXCEPTION, OR SPECIAL PERMIT

Pursuant to Chapter 124 (Sec. 8-75-317) of the General Statutes of the State of Connecticut, notice is hereby given that August 11, 1987, the Zoning Board of Appeals of the City of Bridgeport, Connecticut, granted or granted conditionally a variance, special exception, special permit for property located 1330 Chopsey Hill Road and 800 Trumbull Avenue.

DESCRIPTION OF PROPERTY (lot size) About 6 acres (for description see Schedule A attached)

Property owned by The R. & F. Development Co., Inc.

NATURE OF VARIANCE, SPECIAL EXCEPTION, SPECIAL PERMIT

Chapter ___ Section 2 Chapter 4 Section ___

Chapter ___ Section ___ Chapter ___ Section ___

Chapter ___ Section ___ Chapter ___ Section ___

ZONING REGULATIONS - CITY OF BRIDGEPORT, CONNECTICUT

WHAT PERMITTED erection of a 250' high radio station tower and accessory transmission equipment building

Dated and signed at the Zoning Board of Appeals, Bridgeport, Connecticut, this 3 day of ~~August~~ September, 1987.

BY Joseph J. Mecca

Chmn ___ Secr'y ___ Clerk ✓

SCHEDULE A

All that certain parcel of land situated in the City of Bridgeport, County of Fairfield and State of Connecticut and more particularly bounded and described as follows:

WESTERLY: by the east street line of Chopsey Hill Road, [illegible] feet [illegible];

NORTHERLY: by land N/F of City of Bridgeport (Samuel Johnson Elementary School), 711 feet [illegible];

EASTERLY: by land N/F of State of Connecticut (Beardsley Terrace Apts.), [illegible]9 feet M/L;

SOUTHERLY: by the north street line of Trumbull Avenue., 45[illegible] feet M/L.

Received for record September 16, 1987 at 12:47 P.M.

ATTEST

Hector Diaz, Town Clerk

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NOTICE OF GRANT OF VARIANCE,
SPECIAL EXCEPTION, OR SPECIAL PERMIT

Pursuant to Chapter 124 (PA-75-317) of the General Statutes of the State of Connecticut, notice is hereby given that on November 7, 1989, the Zoning Board of Appeals of the City of Bridgeport, Connecticut, granted or granted conditionally variance, special exception, special permit for property located at 1330 Chopsey Hill Road, Bridgeport.

DESCRIPTION OF PROPERTY (lot size) Three (3) ± ac.

Property owned by Chopsey Hill Associates

NATURE OF VARIANCE, SPECIAL EXCEPTION, SPECIAL PERMIT

Chapter 8 Section 3 Chapter ____ Section ____

Chapter ____ Section ____ Chapter ____ Section ____

Chapter ____ Section ____ Chapter ____ Section ____

ZONING REGULATIONS - CITY OF BRIDGEPORT, CONNECTICUT

USE PERMITTED To construct a ___' x ___' concrete addition to the existing nonconforming transmission building. Extension + Enlargement of a non conforming use in an A - Residence Zone.

Dated and Certified by the Zoning Board of Appeals, Bridgeport, Connecticut, this 19th day of Dec., 1989.

BY Deanna Bradley
Chmn ____ Secr'y ____ Clerk ____
Enforcement Officer

RECEIVED FOR RECORD Dec. 19, 1989 at 9:37 A.M.

ATTEST: David A. Tyler
TOWN CLERK

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**240 ft Self Supported Tower**
ATC Site Name	:	**Tartaglia, CT**
ATC Asset Number	:	**383598**
Engineering Number	:	**13192904_C3_01**
Proposed Carrier	:	**VERIZON WIRELESS**
Carrier Site Name	:	**N BIRDGEPORT CT**
Carrier Site Number	:	**467325**
Site Location	:	**1000 Trumbull Avenue** **Bridgeport, CT 06606** **41.219600,-73.201300**
County	:	**Fairfield**
Date	:	**February 6, 2020**
Max Usage	:	**94%**
Result	:	**Pass**

Prepared By:
Hussam Al Tahan, E.I.
Structural Engineer I

Hussam Al Tahan

Reviewed By:

Authorized by "EOR"
07 Feb 2020 04:50:40 cosign

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 240 ft self supported tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower Drawings	Rohn Drawing #C880400RI, dated March 3, 1988
Foundation Drawing	Mapping by FDH Project #10-12269E N1, dated January 17, 2011
Geotechnical Report	Soiltesting Job #G96-1987-87, dated January 6, 1988
Modifications	Centek Job #10001.CO78, dated December 6, 2010 GlenMartin Drawing #GM-07602, dated February 21, 2013

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	97 mph (3-Second Gust, V_{asd}) / 125 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.21, S_1 = 0.06
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
256.0	1	Generic 8' Yagi	Leg	-	OTHER
245.0	1	Generic 10' Omni	Side Arm	(1) 1 1/4" Coax	
243.0	1	Dielectric DCR-L1 w/ Radome	Leg	(1) 1 5/8" Coax	RED WOLF BROADCASTING
234.0	2	Generic 8' Omni	Side Arm	(2) 7/8" Coax	OTHER
229.0	1	Generic 12' Omni	Side Arm	(1) 1 1/4" Coax	
202.0	3	RFS APXVAARR24_43-U-NA20	Sector Frame	(2) 1 1/4" Hybriflex Cable (6) 1 5/8" Coax (1) 1 5/8" Hybriflex	T-MOBILE
	3	Ericsson Air 3246 B66			
	3	Ericsson AIR 32 B66AA B2P			
	3	Ericsson KRY 112 144/2			
	3	Ericsson Radio 4449 B12,B71			
185.0	2	RFS APXVSPP18-C-A20	Sector Frame	(4) 1/2" Coax (1) 2" conduit (4) 1 1/4" Hybriflex Cable (6) 5/16" (0.31"-7.9mm) Coax (1) 1.7" (43.2mm) Hybrid (3) 1 1/4" (1.25"-31.8mm) Fiber	SPRINT NEXTEL
	3	Tongyu TYDA-252718DER4-65P			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	Argus LLPX310R			
183.0	3	Generic RRU (Model TBD)			
181.0	3	Nokia 2.5G MAA - AAHC(64T64R)			
180.0	3	Alcatel-Lucent 800 MHz RRH			
	1	RFS APXV9ERR18-C-A20			
	6	Alcatel-Lucent 1900MHz RRH			
	3	Generic 2' Std. Dish			
	3	Motorola DAP Vx			
165.0	1	Commscope WCS-IMFQ-AMT	Sector Frame	(2) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (2) 2" conduit	AT&T MOBILITY
	6	Powerwave Allgon 7020.00 Dual Band RET			
	3	Raycap DC6-48-60-18-8F (23.5" Height)			
	3	Ericsson RRUS 4426 B66			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 32 (50.8 lbs)			
	3	Ericsson RRUS 32 B2			
	3	Ericsson Radio 4449			
	3	Powerwave Allgon 7770.00			
	3	Andrew SBNHH-1D65A			
	3	Quintel QS66512-3 (112 lbs.)			
	3	Kathrein Scala 80010965			
	9	Powerwave Allgon LGP21401			
	3	CCI DTMABP7819VG12A			
	12	Powerwave Allgon LGP21901			
155.0	3	Samsung B2/B66A RRH-BR049	Sector Frame	(6) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
	2	Raycap RxxDC-3315-PF-48			
	3	Amphenol Antel BXA-80063-6BF-EDIN-X			
	3	Commscope JAHH-65B-R3B			
	3	Commscope CBC78T-DS-43-2X			
	3	Samsung Outdoor CBRS 20W RRH			
	3	Samsung B5/B13 RRH-BR04C			

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
132.0	1	Generic 4' Yagi	Side Arm	(1) 1 1/4" Coax	OTHER
123.0	1	Generic 10' Omni	Side Arm	(1) 7/8" Coax	
98.0	1	Generic 4' Yagi	Side Arm	(1) 1 1/4" Coax	

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
155.0	3	Samsung Outdoor LAA 1W RRH –Clip-on Antenna	-	-	VERIZON WIRELESS

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
155.0	3	Samsung Outdoor CBRS 20W RRH –Clip-on Antenna	Sector Frame	(6) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Commscope JAHH-65B-R3B			

[1] Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed coax stacked on top of existing VERIZON WIRELESS coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	48%	Pass
Diagonals	94%	Pass
Horizontals	89%	Pass
Anchor Bolts	54%	Pass
Leg Bolts	40%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	290.0	391.5	307.6	79%
Axial (Kips)	363.0	490.1	373.4	76%
Shear (Kips)	54.0	72.9	53.7	74%
* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1				

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
180.0	Generic 2' Std. Dish	SPRINT NEXTEL	0.122	0.024	0.053
155.0	Samsung Outdoor CBRS 20W RRH –Clip-on Antenna	VERIZON WIRELESS	0.103	0.021	
	Commscope JAHH-65B-R3B				

***Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G**

Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

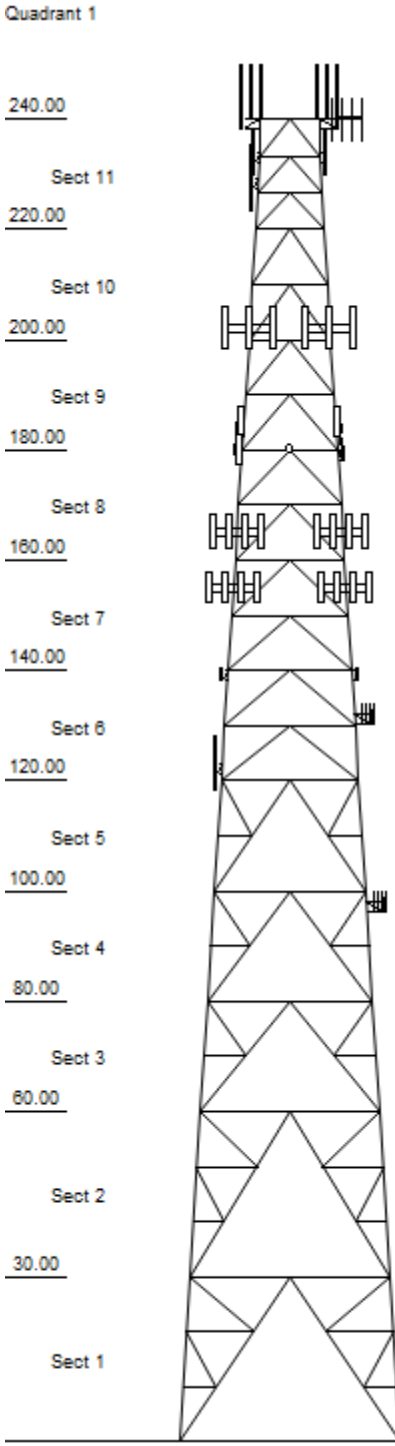
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Loads: 97 mph no ice
50 mph w/ 3/4" radial ice
Site Class: D Ss: 0.21 S1: 0.06
60 mph Serviceability

Job Information

Client : VERIZON WIRELESS
Tower : 383598 Location : Tartaglia, CT Base Width : 40.33 ft
Code : ANSI/TIA-222-G Top Width : 10.93 ft
Tower Ht : 240.00 ft
Shape : Triangle

Sections Properties

Section	Leg Members	Diagonal Members	Horizontal Members
1	PX 50 ksi 10" DIA PIPE	PST 50 ksi 3" DIA PIPE	PST 50 ksi 3-1/2" DIA PIPE
2 - 3	PX 50 ksi 10" DIA PIPE	PST 50 ksi 3" DIA PIPE	PST 50 ksi 3" DIA PIPE
4	PX 50 ksi 8" DIA PIPE	PST 50 ksi 3" DIA PIPE	PST 50 ksi 3" DIA PIPE
5	PX 50 ksi 8" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE
6	PX 50 ksi 8" DIA PIPE	PST 50 ksi 3" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE
7 - 8	PX 50 ksi 8" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE
9 - 10	PX 50 ksi 8" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE	PST 50 ksi 2" DIA PIPE
11	PX 50 ksi 8" DIA PIPE	PST 50 ksi 2" DIA PIPE	PST 50 ksi 2" DIA PIPE

Redundant Secondary Bracing

Section	Sub Diag 1	Sub Horiz 1	Sub Diag 2	Sub Horiz 2	Sub Diag 3	Sub Horiz 3
1	P1-1/2" DIA PIPE	P1-1/2" DIA PIPE	P2-1/2" DIA PIPE	P2" DIA PIPE	-	-
2	P1-1/2" DIA PIPE	P1-1/2" DIA PIPE	P2" DIA PIPE	P2" DIA PIPE	-	-
3 - 4	P2" DIA PIPE	P1-1/2" DIA PIPE	-	-	-	-
5	P1-1/2" DIA PIPE	P1-1/2" DIA PIPE	-	-	-	-
6 - 11	-	-	-	-	-	-

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
240.00	Whip	1	Generic 10' Omni
240.00	Yagi	1	Generic 8' Yagi
240.00	Mounting Frame	1	Round Sector Frame
240.00	Other	1	Dielectric DCR-L1 w/ Radome
240.00	Straight Arm	1	Round Side Arm
240.00	Whip	1	Beacon
240.00	Whip	1	Lightning Rod
234.00	Whip	2	Generic 8' Omni
230.00	Straight Arm	1	Round Side Arm
229.00	Whip	1	Generic 12' Omni
223.00	Straight Arm	1	Empty Flat Side Arm
223.00	Straight Arm	1	Round Side Arm
202.00	Mounting Frame	3	Round Sector Frame
202.00	Panel	3	RFS APXVAARR24_43-U-NA20
202.00	Panel	3	Ericsson Air 3246 B66
202.00	Panel	3	Ericsson AIR 32 B66AA B2P
202.00		3	Ericsson Radio 4449 B12,B71
202.00		3	Ericsson KRY 112 144/2
185.00	Panel	2	RFS APXVSPP18-C-A20
185.00	Panel	3	Tongyu TYDA-252718DER4-65P
185.00	Panel	3	Argus LLPX310R
185.00		3	Alcatel-Lucent TD-RRH8x20-25 w
183.00	Mounting Frame	3	Flat Light Sector Frame
183.00	Straight Arm	3	Side Arms
183.00		3	Generic RRU (Model TBD)
181.00	Panel	3	Nokia 2.5G MAA - AAHC(64T64R)
180.00	Panel	1	RFS APXV9ERR18-C-A20
180.00	Dish	3	Generic 2' Std. Dish
180.00		6	Alcatel-Lucent 1900MHz RRH
180.00		3	Alcatel-Lucent 800 MHz RRH
180.00		3	Motorola DAP Vx
165.00	Mounting Frame	3	Round Sector Frame
165.00	Panel	3	Kathrein Scala 80010965
165.00	Panel	3	Quintel QS66512-3 (112 lbs.)
165.00	Panel	3	Andrew SBNHH-1D65A

Job Information

Client : VERIZON WIRELESS

Tower : 383598 **Location : Tartaglia, CT** **Base Width : 40.33 ft**

Code : ANSI/TIA-222-G **Top Width : 10.93 ft**

Tower Ht : 240.00 ft

Shape : Triangle

165.00	Panel	3	Powerwave Allgon 7770.00
165.00		3	Ericsson Radio 4449
165.00		3	Ericsson RRUS 32 B2
165.00		3	Ericsson RRUS 32 (50.8 lbs)
165.00		3	Ericsson RRUS 4478 B14
165.00		3	Ericsson RRUS 4426 B66
165.00		3	Raycap DC6-48-60-18-8F (23.5"
165.00		9	Powerwave Allgon LGP21401
165.00		1	Commscope WCS-IMFQ-AMT
165.00		3	CCI DTMABP7819VG12A
165.00		6	Powerwave Allgon 7020.00 Dual
165.00		12	Powerwave Allgon LGP21901
155.00	Mounting Frame	3	Flat Light Sector Frame
155.00	Panel	3	Commscope JAHH-65B-R3B
155.00	Panel	3	Commscope JAHH-65B-R3B
155.00	Panel	3	Amphenol Antel BXA-80063-6BF-E
155.00		2	Raycap RxxDC-3315-PF-48
155.00		3	Samsung B2/B66A RRH-BR049
155.00		3	Samsung B5/B13 RRH-BR04C
155.00	Panel	3	Samsung Outdoor CBRS 20W
155.00		3	Samsung Outdoor CBRS 20W
155.00		3	Commscope CBC78T-DS-43-2X
140.00	Whip	3	Small Side Lights
132.00	Straight Arm	1	Flat Side Arm
132.00	Yagi	1	Generic 4' Yagi
123.00	Whip	1	Generic 10' Omni
118.00	Straight Arm	1	Round Side Arm
108.00	Straight Arm	1	Round Side Arm
98.00	Straight Arm	1	Flat Side Arm
98.00	Yagi	1	Generic 4' Yagi
80.00	Straight Arm	1	Empty Round Side Arm
8.00	Straight Arm	1	Round Side Arm

Linear Appurtenance

Elev (ft) From	To	Qty	Description
0.00	245.00	1	1 1/4" Coax
0.00	243.00	1	1 5/8" Coax
0.00	240.00	1	Waveguide
0.00	234.00	2	7/8" Coax
0.00	229.00	1	1 1/4" Coax
0.00	202.00	1	Waveguide
0.00	202.00	1	1 5/8" Hybriflex
0.00	202.00	6	1 5/8" Coax
0.00	202.00	2	1 1/4" Hybriflex Cab
0.00	187.00	1	2" conduit
0.00	187.00	1	1/2" Coax
0.00	187.00	3	1/2" Coax
0.00	185.00	6	5/16" (0.31"-7.9mm)
0.00	185.00	4	1 1/4" Hybriflex Cab
0.00	183.00	1	Waveguide
0.00	181.00	1	1.7" (43.2mm) Hybrid
0.00	180.00	3	1 1/4" (1.25"- 31.8m
0.00	174.00	1	Waveguide
0.00	165.00	1	Waveguide
0.00	165.00	2	2" conduit
0.00	165.00	12	1 5/8" Coax
0.00	165.00	6	0.78" (19.7mm) 8 AWG
0.00	165.00	2	0.39" (10mm) Fiber T
0.00	155.00	1	Waveguide
0.00	155.00	2	1 5/8" Hybriflex

Job Information

Client : VERIZON WIRELESS

Tower : 383598 **Location :** Tartaglia, CT **Base Width :** 40.33 ft

Code : ANSI/TIA-222-G **Top Width :** 10.93 ft

Tower Ht : 240.00 ft

Shape : Triangle

0.00	155.00	6	1 5/8" Hybriflex
0.00	155.00	6	1 5/8" Coax
0.00	132.00	1	1 1/4" Coax
0.00	123.00	1	7/8" Coax
0.00	98.00	1	1 1/4" Coax

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	11,742.14	111.65	90.25
DL + WL + IL	4,547.72	273.41	35.76

Individual Base Foundation Design Loads

Vertical (kip)	Uplift (kip)	Horizontal (kip)
373.38	307.63	53.73

Site Number:	**383598**	**Code:**	**ANSI/TIA-222-G**	
Site Name:	**Tartaglia, CT**	**Engineering Number:**	**13192904_C3_01**	2/6/2020 4:16:36 PM
Customer:	**VERIZON WIRELESS**			

Analysis Parameters

Location:	**Fairfield County, CT**	**Height (ft):**	**240**
Code:	**ANSI/TIA-222-G**	**Base Elevation (ft):**	**0.00**
Shape:	**Triangle**	**Bottom Face Width (ft):**	**40.33**
Tower Manufacturer:	**Rohn**	**Top Face Width (ft):**	**10.93**
Tower Type:	**Self Support**	**Anchor Bolt Detail Type**	**c**
Kd:			
Ke:			

Ice & Wind Parameters

Structure Class:	**II**	**Design Windspeed Without Ice:**	**97 mph**
Exposure Category:	**C**	**Design Windspeed With Ice:**	**50 mph**
Topographic Category:	**1**	**Operational Windspeed:**	**60 mph**
Crest Height:	**0 ft**	**Design Ice Thickness:**	**0.75 in**

Seismic Parameters

Analysis Method:	**Equivalent Modal Analysis & Equivalent Lateral Force Methods**				
Site Class:	**D - Stiff Soil**				
Period Based on Rayleigh Method (sec):	**0.72**				
T_L (sec):	**6**	**p:**	**1.3**	**C_S:**	**0.048**
S_S :	**0.207**	**S_1 :**	**0.065**	**C_S, Max:**	**0.048**
F_a :	**1.600**	**F_V :**	**2.400**	**C_S, Min:**	**0.030**
S_{ds} :	**0.221**	**S_{d1} :**	**0.104**		

Load Cases

1.2D + 1.6W Normal	**97 mph Normal with No Ice**
1.2D + 1.6W 60 deg	**97 mph 60 degree with No Ice**
1.2D + 1.6W 90 deg	**97 mph 90 degree with No Ice**
0.9D + 1.6W Normal	**97 mph Normal with No Ice (Reduced DL)**
0.9D + 1.6W 60 deg	**97 mph 60 deg with No Ice (Reduced DL)**
0.9D + 1.6W 90 deg	**97 mph 90 deg with No Ice (Reduced DL)**
1.2D + 1.0Di + 1.0Wi Normal	**50 mph Normal with 0.75 in Radial Ice**
1.2D + 1.0Di + 1.0Wi 60 deg	**50 mph 60 deg with 0.75 in Radial Ice**
1.2D + 1.0Di + 1.0Wi 90 deg	**50 mph 90 deg with 0.75 in Radial Ice**
(1.2 + 0.2Sds) * DL + E Normal	**Seismic Normal**
(1.2 + 0.2Sds) * DL + E 60 deg	**Seismic 60 deg**
(1.2 + 0.2Sds) * DL + E 90 deg	**Seismic 90 deg**
(0.9 - 0.2Sds) * DL + E Normal	**Seismic (Reduced DL) Normal**
(0.9 - 0.2Sds) * DL + E 60 deg	**Seismic (Reduced DL) 60 deg**
(0.9 - 0.2Sds) * DL + E 90 deg	**Seismic (Reduced DL) 90 deg**
1.0D + 1.0W Service Normal	**Serviceability - 60 mph Wind Normal**
1.0D + 1.0W Service 60 deg	**Serviceability - 60 mph Wind 60 deg**
1.0D + 1.0W Service 90 deg	**Serviceability - 60 mph Wind 90 deg**

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
240.0	Lightning Rod	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	31.16	42	12
240.0	Dielectric DCR-L1 w/	1	18	1.8	0.0	0.0	0.0	1.00	1.00	3.0	229.4	31.24	76	22
240.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	5.0	638.4	31.29	128	30
240.0	Beacon	1	70	4.5	3.0	18.0	18.0	1.00	1.00	0.0	0.0	31.16	191	84
240.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	31.16	220	180
240.0	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	16.0	8246.9	31.58	515	36
240.0	Round Sector Frame	1	300	14.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	31.16	610	360
234.0	Generic 8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.0	30.99	202	60
230.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	30.88	146	180
229.0	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.0	30.85	151	48
223.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	30.68	217	180
223.0	Empty Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	30.68	263	180
202.0	Ericsson KRY 112	3	10	0.5	0.7	6.7	3.2	0.80	0.50	0.0	0.0	30.05	24	35
202.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	30.05	80	266
202.0	Ericsson AIR 32	3	109	6.9	4.9	12.9	8.7	0.80	0.71	0.0	0.0	30.05	478	392
202.0	Ericsson Air 3246	3	180	7.9	4.8	15.7	9.4	0.80	0.69	0.0	0.0	30.05	537	648
202.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	30.05	887	1080
202.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	30.05	1251	460
185.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	29.50	238	252
185.0	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	29.50	260	103
185.0	Tongyu TYDA-	3	54	7.5	5.3	13.0	5.9	0.80	0.65	0.0	0.0	29.50	471	194
185.0	RFS APXVSPP18-C-	2	57	8.0	6.0	11.8	7.0	0.80	0.77	0.0	0.0	29.50	397	137
183.0	Generic RRU (Model	3	55	4.6	1.8	25.0	7.4	0.80	0.59	0.0	0.0	29.43	259	198
183.0	Side Arms	3	560	8.5	0.0	0.0	0.0	1.00	0.67	0.0	0.0	29.43	684	2016
183.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	29.43	1080	1440
181.0	Nokia 2.5G MAA -	3	104	4.2	2.1	19.7	9.6	0.80	0.64	0.0	0.0	29.36	258	373
180.0	Motorola DAP Vx	3	27	1.6	2.1	7.6	5.5	0.80	0.50	0.0	0.0	29.33	79	95
180.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	29.33	102	191
180.0	Alcatel-Lucent	6	44	3.3	1.9	13.0	17.0	0.80	0.50	0.0	0.0	29.33	312	317
180.0	Generic 2' Std. Dish	3	14	5.2	2.0	24.0	0.0	1.00	1.00	0.0	0.0	29.33	626	50
180.0	RFS APXV9ERR18-C-	1	62	8.0	6.0	11.8	7.9	0.80	1.00	0.0	0.0	29.33	256	74
165.0	Powerwave Allgon	12	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	28.79	38	79
165.0	Powerwave Allgon	6	2	0.3	0.4	8.3	2.4	0.80	0.50	0.0	0.0	28.79	32	16
165.0	CCI	3	19	1.0	0.9	11.0	3.8	0.80	0.50	0.0	0.0	28.79	46	69
165.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	0.50	0.0	0.0	28.79	15	35
165.0	Powerwave Allgon	9	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	28.79	156	152
165.0	Raycap DC6-48-60-	3	20	1.3	2.0	9.7	9.7	0.80	0.50	0.0	0.0	28.79	59	72
165.0	Ericsson RRUS 4426	3	48	1.6	1.3	13.2	5.8	0.80	0.50	0.0	0.0	28.79	78	174
165.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	28.79	87	216
165.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	0.0	0.0	28.79	126	183
165.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.0	28.79	129	191
165.0	Ericsson Radio 4449	3	85	3.5	2.3	15.0	10.0	0.80	0.50	0.0	0.0	28.79	164	306
165.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	28.79	336	126
165.0	Andrew SBNHH-	3	41	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	28.79	381	147
165.0	Quintel QS66512-3	3	112	8.1	6.0	12.0	9.6	0.80	0.74	0.0	0.0	28.79	566	403
165.0	Kathrein Scala	3	98	13.8	6.6	20.0	6.9	0.80	0.62	0.0	0.0	28.79	805	351
165.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.79	850	1080
155.0	Commscope	3	21	0.6	0.8	6.9	6.4	0.80	0.50	0.0	0.0	28.42	26	75
155.0	Samsung Outdoor	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.0	28.42	40	67
155.0	Samsung Outdoor	3	4	0.9	1.0	8.7	1.4	0.80	0.50	0.0	0.0	28.42	41	16
155.0	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.0	28.42	87	253
155.0	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.0	28.42	87	304
155.0	Raycap RxxDC-3315-	2	21	2.5	1.6	15.7	10.3	0.80	0.67	0.0	0.0	28.42	104	51
155.0	Amphenol Antel BXA-	3	19	7.3	5.7	11.2	5.3	0.80	0.66	0.0	0.0	28.42	445	69

Site Number: 383598 **Code:** ANSI/TIA-222-G

Site Name: Tartaglia, CT **Engineering Number:** 13192904_C3_01 2/6/2020 4:16:36 PM

Customer: VERIZON WIRELESS

Tower Loading

155.0	Commscope JAHH-	3	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	28.42	583	218
155.0	Commscope JAHH-	3	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	28.42	583	218
155.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.42	1043	1440
140.0	Small Side Lights	3	45	2.0	1.0	8.0	8.0	1.00	1.00	0.0	0.0	27.81	227	162
132.0	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.0	27.47	183	18
132.0	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	27.47	235	180
123.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	27.07	110	30
118.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	26.83	190	180
108.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	26.34	186	180
98.00	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.0	25.80	172	18
98.00	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	25.80	221	180
80.00	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.72	175	180
8.00	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	17.40	123	180
	Totals	175	14429	853.5									19769	17315

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
240.0	Lightning Rod	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	31.16	42	9
240.0	Dielectric DCR-L1 w/	1	18	1.8	0.0	0.0	0.0	1.00	1.00	3.0	229.4	31.24	76	16
240.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	5.0	638.4	31.29	128	23
240.0	Beacon	1	70	4.5	3.0	18.0	18.0	1.00	1.00	0.0	0.0	31.16	191	63
240.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	31.16	220	135
240.0	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	16.0	8246.9	31.58	515	27
240.0	Round Sector Frame	1	300	14.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	31.16	610	270
234.0	Generic 8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.0	30.99	202	45
230.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	30.88	146	135
229.0	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.0	30.85	151	36
223.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	30.68	217	135
223.0	Empty Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	30.68	263	135
202.0	Ericsson KRY 112	3	10	0.5	0.7	6.7	3.2	0.80	0.50	0.0	0.0	30.05	24	26
202.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	30.05	80	200
202.0	Ericsson AIR 32	3	109	6.9	4.9	12.9	8.7	0.80	0.71	0.0	0.0	30.05	478	294
202.0	Ericsson Air 3246	3	180	7.9	4.8	15.7	9.4	0.80	0.69	0.0	0.0	30.05	537	486
202.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	30.05	887	810
202.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	30.05	1251	345
185.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	29.50	238	189
185.0	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	29.50	260	77
185.0	Tongyu TYDA-	3	54	7.5	5.3	13.0	5.9	0.80	0.65	0.0	0.0	29.50	471	146
185.0	RFS APXVSPP18-C-	2	57	8.0	6.0	11.8	7.0	0.80	0.77	0.0	0.0	29.50	397	103
183.0	Generic RRU (Model	3	55	4.6	1.8	25.0	7.4	0.80	0.59	0.0	0.0	29.43	259	149
183.0	Side Arms	3	560	8.5	0.0	0.0	0.0	1.00	0.67	0.0	0.0	29.43	684	1512
183.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	29.43	1080	1080
181.0	Nokia 2.5G MAA -	3	104	4.2	2.1	19.7	9.6	0.80	0.64	0.0	0.0	29.36	258	280
180.0	Motorola DAP Vx	3	27	1.6	2.1	7.6	5.5	0.80	0.50	0.0	0.0	29.33	79	72
180.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	29.33	102	143
180.0	Alcatel-Lucent	6	44	3.3	1.9	13.0	17.0	0.80	0.50	0.0	0.0	29.33	312	238
180.0	Generic 2' Std. Dish	3	14	5.2	2.0	24.0	0.0	1.00	1.00	0.0	0.0	29.33	626	38
180.0	RFS APXV9ERR18-C-	1	62	8.0	6.0	11.8	7.9	0.80	1.00	0.0	0.0	29.33	256	56
165.0	Powerwave Allgon	12	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	28.79	38	59
165.0	Powerwave Allgon	6	2	0.3	0.4	8.3	2.4	0.80	0.50	0.0	0.0	28.79	32	12
165.0	CCI	3	19	1.0	0.9	11.0	3.8	0.80	0.50	0.0	0.0	28.79	46	52
165.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	0.50	0.0	0.0	28.79	15	27
165.0	Powerwave Allgon	9	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	28.79	156	114
165.0	Raycap DC6-48-60-	3	20	1.3	2.0	9.7	9.7	0.80	0.50	0.0	0.0	28.79	59	54

Tower Loading

165.0	Ericsson RRUS 4426	3	48	1.6	1.3	13.2	5.8	0.80	0.50	0.0	0.0	28.79	78	131
165.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	28.79	87	162
165.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	0.0	0.0	28.79	126	137
165.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.0	28.79	129	143
165.0	Ericsson Radio 4449	3	85	3.5	2.3	15.0	10.0	0.80	0.50	0.0	0.0	28.79	164	230
165.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	28.79	336	95
165.0	Andrew SBNHH-	3	41	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	28.79	381	110
165.0	Quintel QS66512-3	3	112	8.1	6.0	12.0	9.6	0.80	0.74	0.0	0.0	28.79	566	302
165.0	Kathrein Scala	3	98	13.8	6.6	20.0	6.9	0.80	0.62	0.0	0.0	28.79	805	264
165.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.79	850	810
155.0	Commscope	3	21	0.6	0.8	6.9	6.4	0.80	0.50	0.0	0.0	28.42	26	56
155.0	Samsung Outdoor	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.0	28.42	40	50
155.0	Samsung Outdoor	3	4	0.9	1.0	8.7	1.4	0.80	0.50	0.0	0.0	28.42	41	12
155.0	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.0	28.42	87	190
155.0	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.0	28.42	87	228
155.0	Raycap RxxDC-3315-	2	21	2.5	1.6	15.7	10.3	0.80	0.67	0.0	0.0	28.42	104	39
155.0	Amphenol Antel BXA-	3	19	7.3	5.7	11.2	5.3	0.80	0.66	0.0	0.0	28.42	445	52
155.0	Commscope JAHH-	3	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	28.42	583	164
155.0	Commscope JAHH-	3	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	28.42	583	164
155.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.42	1043	1080
140.0	Small Side Lights	3	45	2.0	1.0	8.0	8.0	1.00	1.00	0.0	0.0	27.81	227	122
132.0	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.0	27.47	183	14
132.0	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	27.47	235	135
123.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	27.07	110	23
118.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	26.83	190	135
108.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	26.34	186	135
98.00	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.0	25.80	172	14
98.00	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	25.80	221	135
80.00	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.72	175	135
8.00	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	17.40	123	135
	Totals	175	14429	853.5									19769	12986

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
240.0	Lightning Rod	1	70	1.9	4.0	3.0	3.0	1.00	1.00	0.0	0.0	8.28	14	72
240.0	Dielectric DCR-L1 w/	1	95	5.1	0.0	0.0	0.0	1.00	1.00	3.0	107.8	8.30	36	99
240.0	Generic 10' Omni	1	104	6.8	10.0	3.0	3.0	1.00	1.00	5.0	239.0	8.31	48	109
240.0	Beacon	1	294	4.2	3.0	18.0	18.0	1.00	1.00	0.0	0.0	8.28	29	308
240.0	Round Side Arm	1	227	8.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.28	57	257
240.0	Generic 8' Yagi	1	384	46.9	8.0	60.0	3.0	1.00	1.00	16.0	5355.7	8.39	335	390
240.0	Round Sector Frame	1	685	31.7	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.28	223	745
234.0	Generic 8' Omni	2	89	5.3	8.0	3.0	3.0	1.00	1.00	0.0	0.0	8.23	74	188
230.0	Round Side Arm	1	227	8.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	8.20	38	257
229.0	Generic 12' Omni	1	135	8.1	12.0	3.0	3.0	1.00	1.00	0.0	0.0	8.20	56	143
223.0	Round Side Arm	1	226	8.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.15	56	256
223.0	Empty Flat Side Arm	1	226	8.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.15	61	256
202.0	Ericsson KRY 112	3	24	1.0	0.7	6.7	3.2	0.80	0.50	0.0	0.0	7.98	8	79
202.0	Ericsson Radio 4449	3	131	2.5	1.2	13.2	9.3	0.80	0.50	0.0	0.0	7.98	20	439
202.0	Ericsson AIR 32	3	280	9.2	4.9	12.9	8.7	0.80	0.71	0.0	0.0	7.98	107	905
202.0	Ericsson Air 3246	3	2954	10.3	4.8	15.7	9.4	0.80	0.69	0.0	0.0	7.98	115	8971
202.0	Round Sector Frame	3	677	31.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.98	321	2212
202.0	RFS	3	531	24.0	8.0	24.0	8.7	0.80	0.63	0.0	0.0	7.98	247	1669
185.0	Alcatel-Lucent TD-	3	166	5.4	2.2	18.6	6.7	0.80	0.61	0.0	0.0	7.84	53	540
185.0	Argus LLPX310R	3	120	6.0	3.5	11.8	4.5	0.80	0.63	0.0	0.0	7.84	60	377

Tower Loading

185.0	Tongyu TYDA-	3	211	10.0	5.3	13.0	5.9	0.80	0.65	0.0	0.0	7.84	104	664
185.0	RFS APXVSPP18-C-	2	232	10.9	6.0	11.8	7.0	0.80	0.77	0.0	0.0	7.84	89	487
183.0	Generic RRU (Model	3	164	6.0	1.8	25.0	7.4	0.80	0.59	0.0	0.0	7.82	56	524
183.0	Side Arms	3	1035	15.7	0.0	0.0	0.0	1.00	0.67	0.0	0.0	7.82	210	3441
183.0	Flat Light Sector	3	705	33.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.82	333	2356
181.0	Nokia 2.5G MAA -	3	218	5.6	2.1	19.7	9.6	0.80	0.64	0.0	0.0	7.80	57	716
180.0	Motorola DAP Vx	3	74	2.7	2.1	7.6	5.5	0.80	0.50	0.0	0.0	7.79	21	237
180.0	Alcatel-Lucent 800	3	128	3.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	7.79	25	415
180.0	Alcatel-Lucent	6	155	4.5	1.9	13.0	17.0	0.80	0.50	0.0	0.0	7.79	71	980
180.0	Generic 2' Std. Dish	3	70	6.8	2.0	24.0	0.0	1.00	1.00	0.0	0.0	7.79	135	219
180.0	RFS APXV9ERR18-C-	1	246	10.9	6.0	11.8	7.9	0.80	1.00	0.0	0.0	7.79	58	258
165.0	Powerwave Allgon	12	13	0.5	0.3	6.0	3.0	0.80	0.50	0.0	0.0	7.65	16	171
165.0	Powerwave Allgon	6	12	0.7	0.4	8.3	2.4	0.80	0.50	0.0	0.0	7.65	12	77
165.0	CCI	3	45	1.6	0.9	11.0	3.8	0.80	0.50	0.0	0.0	7.65	13	146
165.0	Commscope WCS-	1	63	1.7	0.9	10.6	6.9	0.80	0.50	0.0	0.0	7.65	4	69
165.0	Powerwave Allgon	9	39	1.8	1.2	9.2	2.6	0.80	0.50	0.0	0.0	7.65	43	377
165.0	Raycap DC6-48-60-	3	73	1.9	2.0	9.7	9.7	0.80	0.50	0.0	0.0	7.65	15	230
165.0	Ericsson RRUS 4426	3	93	2.5	1.3	13.2	5.8	0.80	0.50	0.0	0.0	7.65	20	308
165.0	Ericsson RRUS 4478	3	115	2.7	1.4	13.4	7.7	0.80	0.50	0.0	0.0	7.65	21	382
165.0	Ericsson RRUS 32	3	122	3.8	2.2	12.1	6.7	0.80	0.50	0.0	0.0	7.65	30	398
165.0	Ericsson RRUS 32 B2	3	127	3.9	2.3	12.1	7.0	0.80	0.50	0.0	0.0	7.65	31	412
165.0	Ericsson Radio 4449	3	187	4.8	2.3	15.0	10.0	0.80	0.50	0.0	0.0	7.65	37	613
165.0	Powerwave Allgon	3	170	6.6	4.6	11.0	5.0	0.80	0.65	0.0	0.0	7.65	67	532
165.0	Andrew SBNHH-	3	177	8.0	4.6	11.9	7.1	0.80	0.69	0.0	0.0	7.65	86	555
165.0	Quintel QS66512-3	3	312	10.9	6.0	12.0	9.6	0.80	0.74	0.0	0.0	7.65	126	1002
165.0	Kathrein Scala	3	365	16.9	6.6	20.0	6.9	0.80	0.62	0.0	0.0	7.65	163	1153
165.0	Round Sector Frame	3	669	31.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.65	304	2186
155.0	Commscope	3	43	1.1	0.8	6.9	6.4	0.80	0.50	0.0	0.0	7.55	8	141
155.0	Samsung Outdoor	3	43	1.5	1.0	8.5	4.1	0.80	0.50	0.0	0.0	7.55	11	139
155.0	Samsung Outdoor	3	22	1.5	1.0	8.7	1.4	0.80	0.50	0.0	0.0	7.55	12	70
155.0	Samsung B5/B13	3	128	2.8	1.3	15.0	8.1	0.80	0.50	0.0	0.0	7.55	21	425
155.0	Samsung B2/B66A	3	148	2.8	1.3	15.0	10.0	0.80	0.50	0.0	0.0	7.55	21	496
155.0	Raycap RxxDC-3315-	2	101	3.6	1.6	15.7	10.3	0.80	0.67	0.0	0.0	7.55	24	211
155.0	Amphenol Antel BXA-	3	164	9.9	5.7	11.2	5.3	0.80	0.66	0.0	0.0	7.55	101	503
155.0	Commscope JAHH-	3	263	11.9	6.0	13.8	8.2	0.80	0.69	0.0	0.0	7.55	126	826
155.0	Commscope JAHH-	3	263	11.9	6.0	13.8	8.2	0.80	0.69	0.0	0.0	7.55	126	826
155.0	Flat Light Sector	3	702	33.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.55	319	2345
140.0	Small Side Lights	3	86	0.9	1.0	8.0	8.0	1.00	1.00	0.0	0.0	7.39	16	284
132.0	Generic 4' Yagi	1	158	17.7	4.0	48.0	3.0	1.00	1.00	0.0	0.0	7.30	110	161
132.0	Flat Side Arm	1	222	8.7	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.30	54	252
123.0	Generic 10' Omni	1	99	6.5	10.0	3.0	3.0	1.00	1.00	0.0	0.0	7.19	40	104
118.0	Round Side Arm	1	221	7.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.13	48	251
108.0	Round Side Arm	1	220	7.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.00	46	250
98.00	Generic 4' Yagi	1	153	17.2	4.0	48.0	3.0	1.00	1.00	0.0	0.0	6.86	100	156
98.00	Flat Side Arm	1	220	8.6	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.86	50	250
80.00	Empty Round Side	1	218	7.7	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.57	43	248
8.00	Round Side Arm	1	208	7.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.62	29	238
	Totals	175	42467	1367.2									5411	45353

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
240.0	Lightning Rod	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	11.92	10	10
240.0	Dielectric DCR-L1 w/	1	18	1.8	0.0	0.0	0.0	1.00	1.00	3.0	54.9	11.95	18	18
240.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	5.0	152.7	11.97	31	25

Tower Loading

240.0	Beacon	1	70	4.5	3.0	18.0	18.0	1.00	1.00	0.0	0.0	11.92	46	70
240.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	11.92	53	150
240.0	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	16.0	1972.1	12.08	123	30
240.0	Round Sector Frame	1	300	14.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	11.92	146	300
234.0	Generic 8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.0	11.86	48	50
230.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	11.81	35	150
229.0	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.0	11.80	36	40
223.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	11.74	52	150
223.0	Empty Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	11.74	63	150
202.0	Ericsson KRY 112	3	10	0.5	0.7	6.7	3.2	0.80	0.50	0.0	0.0	11.50	6	29
202.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	11.50	19	222
202.0	Ericsson AIR 32	3	109	6.9	4.9	12.9	8.7	0.80	0.71	0.0	0.0	11.50	114	327
202.0	Ericsson Air 3246	3	180	7.9	4.8	15.7	9.4	0.80	0.69	0.0	0.0	11.50	128	540
202.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.50	212	900
202.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	11.50	299	384
185.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	11.29	57	210
185.0	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	11.29	62	86
185.0	Tongyu TYDA-	3	54	7.5	5.3	13.0	5.9	0.80	0.65	0.0	0.0	11.29	113	162
185.0	RFS APXVSPP18-C-	2	57	8.0	6.0	11.8	7.0	0.80	0.77	0.0	0.0	11.29	95	114
183.0	Generic RRU (Model	3	55	4.6	1.8	25.0	7.4	0.80	0.59	0.0	0.0	11.26	62	165
183.0	Side Arms	3	560	8.5	0.0	0.0	0.0	1.00	0.67	0.0	0.0	11.26	164	1680
183.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.26	258	1200
181.0	Nokia 2.5G MAA -	3	104	4.2	2.1	19.7	9.6	0.80	0.64	0.0	0.0	11.23	62	311
180.0	Motorola DAP Vx	3	27	1.6	2.1	7.6	5.5	0.80	0.50	0.0	0.0	11.22	19	80
180.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	11.22	24	159
180.0	Alcatel-Lucent	6	44	3.3	1.9	13.0	17.0	0.80	0.50	0.0	0.0	11.22	75	264
180.0	Generic 2' Std. Dish	3	14	5.2	2.0	24.0	0.0	1.00	1.00	0.0	0.0	11.22	150	42
180.0	RFS APXV9ERR18-C-	1	62	8.0	6.0	11.8	7.9	0.80	1.00	0.0	0.0	11.22	61	62
165.0	Powerwave Allgon	12	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	11.02	9	66
165.0	Powerwave Allgon	6	2	0.3	0.4	8.3	2.4	0.80	0.50	0.0	0.0	11.02	8	13
165.0	CCI	3	19	1.0	0.9	11.0	3.8	0.80	0.50	0.0	0.0	11.02	11	58
165.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	0.50	0.0	0.0	11.02	4	30
165.0	Powerwave Allgon	9	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	11.02	37	127
165.0	Raycap DC6-48-60-	3	20	1.3	2.0	9.7	9.7	0.80	0.50	0.0	0.0	11.02	14	60
165.0	Ericsson RRUS 4426	3	48	1.6	1.3	13.2	5.8	0.80	0.50	0.0	0.0	11.02	19	145
165.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	11.02	21	180
165.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	0.0	0.0	11.02	30	152
165.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.0	11.02	31	159
165.0	Ericsson Radio 4449	3	85	3.5	2.3	15.0	10.0	0.80	0.50	0.0	0.0	11.02	39	255
165.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	11.02	80	105
165.0	Andrew SBNHH-	3	41	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	11.02	91	123
165.0	Quintel QS66512-3	3	112	8.1	6.0	12.0	9.6	0.80	0.74	0.0	0.0	11.02	135	336
165.0	Kathrein Scala	3	98	13.8	6.6	20.0	6.9	0.80	0.62	0.0	0.0	11.02	192	293
165.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.02	203	900
155.0	Commscope	3	21	0.6	0.8	6.9	6.4	0.80	0.50	0.0	0.0	10.87	6	62
155.0	Samsung Outdoor	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.0	10.87	10	56
155.0	Samsung Outdoor	3	4	0.9	1.0	8.7	1.4	0.80	0.50	0.0	0.0	10.87	10	13
155.0	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.0	10.87	21	211
155.0	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.0	10.87	21	253
155.0	Raycap RxxDC-3315-	2	21	2.5	1.6	15.7	10.3	0.80	0.67	0.0	0.0	10.87	25	43
155.0	Amphenol Antel BXA-	3	19	7.3	5.7	11.2	5.3	0.80	0.66	0.0	0.0	10.87	106	58
155.0	Commscope JAHH-	3	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	10.87	139	182
155.0	Commscope JAHH-	3	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	10.87	139	182
155.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	10.87	249	1200
140.0	Small Side Lights	3	45	2.0	1.0	8.0	8.0	1.00	1.00	0.0	0.0	10.64	54	135
132.0	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.0	10.51	44	15
132.0	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.51	56	150
123.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	10.36	26	25
118.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.27	45	150

Tower Loading

108.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.08	45	150
98.00	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.0	9.87	41	15
98.00	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.87	53	150
80.00	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.46	42	150
8.00	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.66	29	150
	Totals	175	14429	853.5									4727	14429

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	245.0	1 1/4" Coax	1	1.55	0.63	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	243.0	1 5/8" Coax	1	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	240.0	Waveguide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	234.0	7/8" Coax	2	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	229.0	1 1/4" Coax	1	1.55	0.63	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	202.0	1 1/4" Hybriflex	2	1.54	1.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	202.0	1 5/8" Coax	6	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	202.0	1 5/8" Hybriflex	1	1.98	1.30	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	202.0	Waveguide	1	1.50	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	187.0	1/2" Coax	3	0.63	0.15	100	2	Individual	0.00	N	1.00	1.00	0.01
0.00	187.0	1/2" Coax	1	0.63	0.15	100	2	Individual	0.00	N	1.00	1.00	0.01
0.00	187.0	2" conduit	1	2.38	3.65	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	185.0	1 1/4" Hybriflex	4	1.54	1.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	185.0	5/16" (0.31"-	6	0.31	0.05	50	2	Block	0.00	N	1.00	1.00	0.00
0.00	183.0	Waveguide	1	1.50	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	181.0	1.7" (43.2mm)	1	1.70	1.78	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	180.0	1 1/4" (1.25"-	3	1.25	1.05	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	174.0	Waveguide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	165.0	0.39" (10mm) Fiber	2	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	165.0	0.78" (19.7mm) 8	6	0.78	0.59	50	1	Block	0.00	N	1.00	1.00	0.00
0.00	165.0	1 5/8" Coax	12	1.98	0.82	50	1	Block	0.00	N	1.00	1.00	0.00
0.00	165.0	2" conduit	2	2.38	3.65	50	1	Block	0.00	N	1.00	1.00	0.00
0.00	165.0	Waveguide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	155.0	1 5/8" Coax	6	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	155.0	1 5/8" Hybriflex	6	1.98	1.30	100	1	Individual	0.00	N	1.00	1.00	0.01
0.00	155.0	1 5/8" Hybriflex	2	1.98	1.30	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	155.0	Waveguide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	132.0	1 1/4" Coax	1	1.55	0.63	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	123.0	7/8" Coax	1	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	98.00	1 1/4" Coax	1	1.55	0.63	100	3	Individual	0.00	N	1.00	1.00	0.00

Section Forces

LoadCase 1.2D + 1.6W Normal — 97 mph Normal with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	30.88	0.000	45.353	0.000	0.179	2.67	1.00	1.00	0.0	22.58	60.21	0.00	4730	0	2529	416	2945
10	210.00	30.29	0.000	45.187	0.000	0.153	2.76	1.00	1.00	0.0	21.88	60.41	0.00	4941	0	2489	579	3067
9	190.00	29.66	0.000	46.842	0.000	0.137	2.82	1.00	1.00	0.0	22.55	63.63	0.00	5489	0	2567	1574	4141
8	170.00	28.97	0.000	50.084	0.000	0.127	2.86	1.00	1.00	0.0	24.29	69.39	0.00	6723	0	2734	2712	5446
7	150.00	28.22	0.000	57.359	0.000	0.130	2.85	1.00	1.00	0.0	28.04	79.87	0.00	8432	0	3065	4423	7488
6	130.00	27.38	0.000	57.395	0.000	0.116	2.90	1.00	1.00	0.0	28.28	81.98	0.00	8646	0	3053	4548	7601
5	110.00	26.44	0.000	56.861	0.000	0.105	2.95	1.00	1.00	0.0	27.07	79.74	0.00	8151	0	2867	4457	7324
4	90.00	25.34	0.000	57.777	0.000	0.097	2.98	1.00	1.00	0.0	28.05	83.46	0.00	8437	0	2877	4331	7207
3	70.00	24.04	0.000	66.406	0.000	0.102	2.96	1.00	1.00	0.0	31.82	94.04	0.00	9431	0	3074	4113	7188
2	45.00	21.90	0.000	98.555	0.000	0.092	3.00	1.00	1.00	0.0	46.70	139.88	0.00	13715	0	4167	5622	9789
1	15.00	17.40	0.000	114.52	0.000	0.097	2.98	1.00	1.00	0.0	54.99	163.66	0.00	15636	0	3873	4467	8340
														94331	0			70536

LoadCase 1.2D + 1.6W 60 deg — 97 mph 60 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	30.88	0.000	45.353	0.000	0.179	2.67	0.80	1.00	0.0	22.58	60.21	0.00	4730	0	2529	416	2945
10	210.00	30.29	0.000	45.187	0.000	0.153	2.76	0.80	1.00	0.0	21.88	60.41	0.00	4941	0	2489	579	3067
9	190.00	29.66	0.000	46.842	0.000	0.137	2.82	0.80	1.00	0.0	22.55	63.63	0.00	5489	0	2567	1574	4141
8	170.00	28.97	0.000	50.084	0.000	0.127	2.86	0.80	1.00	0.0	24.29	69.39	0.00	6723	0	2734	2712	5446
7	150.00	28.22	0.000	57.359	0.000	0.130	2.85	0.80	1.00	0.0	28.04	79.87	0.00	8432	0	3065	4423	7488
6	130.00	27.38	0.000	57.395	0.000	0.116	2.90	0.80	1.00	0.0	28.28	81.98	0.00	8646	0	3053	4548	7601
5	110.00	26.44	0.000	56.861	0.000	0.105	2.95	0.80	1.00	0.0	27.07	79.74	0.00	8151	0	2867	4457	7324
4	90.00	25.34	0.000	57.777	0.000	0.097	2.98	0.80	1.00	0.0	28.05	83.46	0.00	8437	0	2877	4331	7207
3	70.00	24.04	0.000	66.406	0.000	0.102	2.96	0.80	1.00	0.0	31.82	94.04	0.00	9431	0	3074	4113	7188
2	45.00	21.90	0.000	98.555	0.000	0.092	3.00	0.80	1.00	0.0	46.70	139.88	0.00	13715	0	4167	5622	9789
1	15.00	17.40	0.000	114.52	0.000	0.097	2.98	0.80	1.00	0.0	54.99	163.66	0.00	15636	0	3873	4467	8340
														94331	0			70536

LoadCase 1.2D + 1.6W 90 deg — 97 mph 90 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	30.88	0.000	45.353	0.000	0.179	2.67	0.85	1.00	0.0	22.58	60.21	0.00	4730	0	2529	416	2945
10	210.00	30.29	0.000	45.187	0.000	0.153	2.76	0.85	1.00	0.0	21.88	60.41	0.00	4941	0	2489	579	3067
9	190.00	29.66	0.000	46.842	0.000	0.137	2.82	0.85	1.00	0.0	22.55	63.63	0.00	5489	0	2567	1574	4141
8	170.00	28.97	0.000	50.084	0.000	0.127	2.86	0.85	1.00	0.0	24.29	69.39	0.00	6723	0	2734	2712	5446
7	150.00	28.22	0.000	57.359	0.000	0.130	2.85	0.85	1.00	0.0	28.04	79.87	0.00	8432	0	3065	4423	7488
6	130.00	27.38	0.000	57.395	0.000	0.116	2.90	0.85	1.00	0.0	28.28	81.98	0.00	8646	0	3053	4548	7601
5	110.00	26.44	0.000	56.861	0.000	0.105	2.95	0.85	1.00	0.0	27.07	79.74	0.00	8151	0	2867	4457	7324
4	90.00	25.34	0.000	57.777	0.000	0.097	2.98	0.85	1.00	0.0	28.05	83.46	0.00	8437	0	2877	4331	7207
3	70.00	24.04	0.000	66.406	0.000	0.102	2.96	0.85	1.00	0.0	31.82	94.04	0.00	9431	0	3074	4113	7188

Section Forces

2	45.00	21.90	0.000	98.555	0.000	0.092	3.00	0.85	1.00	0.0	46.70	139.88	0.00	13715	0	4167	5622	9789
1	15.00	17.40	0.000	114.52	0.000	0.097	2.98	0.85	1.00	0.0	54.99	163.66	0.00	15636	0	3873	4467	8340
														94331	0			70536

LoadCase 0.9D + 1.6W Normal

97 mph Normal with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	30.88	0.000	45.353	0.000	0.179	2.67	1.00	1.00	0.0	22.58	60.21	0.00	3547	0	2529	416	2945
10	210.00	30.29	0.000	45.187	0.000	0.153	2.76	1.00	1.00	0.0	21.88	60.41	0.00	3706	0	2489	579	3067
9	190.00	29.66	0.000	46.842	0.000	0.137	2.82	1.00	1.00	0.0	22.55	63.63	0.00	4117	0	2567	1574	4141
8	170.00	28.97	0.000	50.084	0.000	0.127	2.86	1.00	1.00	0.0	24.29	69.39	0.00	5043	0	2734	2712	5446
7	150.00	28.22	0.000	57.359	0.000	0.130	2.85	1.00	1.00	0.0	28.04	79.87	0.00	6324	0	3065	4423	7488
6	130.00	27.38	0.000	57.395	0.000	0.116	2.90	1.00	1.00	0.0	28.28	81.98	0.00	6484	0	3053	4548	7601
5	110.00	26.44	0.000	56.861	0.000	0.105	2.95	1.00	1.00	0.0	27.07	79.74	0.00	6113	0	2867	4457	7324
4	90.00	25.34	0.000	57.777	0.000	0.097	2.98	1.00	1.00	0.0	28.05	83.46	0.00	6328	0	2877	4331	7207
3	70.00	24.04	0.000	66.406	0.000	0.102	2.96	1.00	1.00	0.0	31.82	94.04	0.00	7073	0	3074	4113	7188
2	45.00	21.90	0.000	98.555	0.000	0.092	3.00	1.00	1.00	0.0	46.70	139.88	0.00	10286	0	4167	5622	9789
1	15.00	17.40	0.000	114.52	0.000	0.097	2.98	1.00	1.00	0.0	54.99	163.66	0.00	11727	0	3873	4467	8340
														70749	0			70536

LoadCase 0.9D + 1.6W 60 deg

97 mph 60 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	30.88	0.000	45.353	0.000	0.179	2.67	0.80	1.00	0.0	22.58	60.21	0.00	3547	0	2529	416	2945
10	210.00	30.29	0.000	45.187	0.000	0.153	2.76	0.80	1.00	0.0	21.88	60.41	0.00	3706	0	2489	579	3067
9	190.00	29.66	0.000	46.842	0.000	0.137	2.82	0.80	1.00	0.0	22.55	63.63	0.00	4117	0	2567	1574	4141
8	170.00	28.97	0.000	50.084	0.000	0.127	2.86	0.80	1.00	0.0	24.29	69.39	0.00	5043	0	2734	2712	5446
7	150.00	28.22	0.000	57.359	0.000	0.130	2.85	0.80	1.00	0.0	28.04	79.87	0.00	6324	0	3065	4423	7488
6	130.00	27.38	0.000	57.395	0.000	0.116	2.90	0.80	1.00	0.0	28.28	81.98	0.00	6484	0	3053	4548	7601
5	110.00	26.44	0.000	56.861	0.000	0.105	2.95	0.80	1.00	0.0	27.07	79.74	0.00	6113	0	2867	4457	7324
4	90.00	25.34	0.000	57.777	0.000	0.097	2.98	0.80	1.00	0.0	28.05	83.46	0.00	6328	0	2877	4331	7207
3	70.00	24.04	0.000	66.406	0.000	0.102	2.96	0.80	1.00	0.0	31.82	94.04	0.00	7073	0	3074	4113	7188
2	45.00	21.90	0.000	98.555	0.000	0.092	3.00	0.80	1.00	0.0	46.70	139.88	0.00	10286	0	4167	5622	9789
1	15.00	17.40	0.000	114.52	0.000	0.097	2.98	0.80	1.00	0.0	54.99	163.66	0.00	11727	0	3873	4467	8340
														70749	0			70536

LoadCase 0.9D + 1.6W 90 deg

97 mph 90 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	30.88	0.000	45.353	0.000	0.179	2.67	0.85	1.00	0.0	22.58	60.21	0.00	3547	0	2529	416	2945
10	210.00	30.29	0.000	45.187	0.000	0.153	2.76	0.85	1.00	0.0	21.88	60.41	0.00	3706	0	2489	579	3067
9	190.00	29.66	0.000	46.842	0.000	0.137	2.82	0.85	1.00	0.0	22.55	63.63	0.00	4117	0	2567	1574	4141
8	170.00	28.97	0.000	50.084	0.000	0.127	2.86	0.85	1.00	0.0	24.29	69.39	0.00	5043	0	2734	2712	5446

Section Forces

7	150.00	28.22	0.000	57.359	0.000	0.130	2.85	0.85	1.00	0.0	28.04	79.87	0.00	6324	0	3065	4423	7488
6	130.00	27.38	0.000	57.395	0.000	0.116	2.90	0.85	1.00	0.0	28.28	81.98	0.00	6484	0	3053	4548	7601
5	110.00	26.44	0.000	56.861	0.000	0.105	2.95	0.85	1.00	0.0	27.07	79.74	0.00	6113	0	2867	4457	7324
4	90.00	25.34	0.000	57.777	0.000	0.097	2.98	0.85	1.00	0.0	28.05	83.46	0.00	6328	0	2877	4331	7207
3	70.00	24.04	0.000	66.406	0.000	0.102	2.96	0.85	1.00	0.0	31.82	94.04	0.00	7073	0	3074	4113	7188
2	45.00	21.90	0.000	98.555	0.000	0.092	3.00	0.85	1.00	0.0	46.70	139.88	0.00	10286	0	4167	5622	9789
1	15.00	17.40	0.000	114.52	0.000	0.097	2.98	0.85	1.00	0.0	54.99	163.66	0.00	11727	0	3873	4467	8340
														70749	0			70536

LoadCase 1.2D + 1.0Di + 1.0Wi Normal — **50 mph Normal with 0.75 in Radial Ice**

Gust Response Factor (Gh): 0.85 **Ice Dead Load Factor :** 1.00 **Ice Importance Factor :** 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	8.20	0.000	84.578	39.22	0.327	2.23	1.00	1.00	1.8	52.05	115.96	39.23	9827	5098	809	258	1066
10	210.00	8.05	0.000	80.272	35.08	0.266	2.39	1.00	1.00	1.8	47.79	114.19	35.08	10002	5061	781	381	1162
9	190.00	7.88	0.000	83.862	37.02	0.240	2.47	1.00	1.00	1.8	49.36	121.74	37.02	12629	7140	816	995	1810
8	170.00	7.70	0.000	89.161	39.07	0.224	2.52	1.00	1.00	1.8	52.16	131.39	39.08	16410	9687	860	1644	2504
7	150.00	7.50	0.000	97.346	45.20	0.217	2.54	1.00	1.00	1.7	59.83	151.99	45.20	22747	14315	969	2346	3315
6	130.00	7.28	0.000	100.42	43.02	0.201	2.59	1.00	1.00	1.7	58.33	151.16	43.03	22659	14014	935	2446	3381
5	110.00	7.02	0.000	87.599	35.34	0.160	2.74	1.00	1.00	1.7	52.71	144.23	35.34	22524	14373	861	2479	3341
4	90.00	6.73	0.000	90.395	32.61	0.151	2.77	1.00	1.00	1.7	51.67	143.08	32.62	21865	13428	819	2408	3227
3	70.00	6.39	0.000	99.344	32.93	0.152	2.77	1.00	1.00	1.6	56.79	157.05	32.94	22882	13451	853	2251	3103
2	45.00	5.82	0.000	140.66	42.11	0.131	2.84	1.00	1.00	1.5	79.99	227.45	42.11	32482	18767	1125	3047	4172
1	15.00	4.62	0.000	148.84	42.96	0.125	2.86	1.00	1.00	1.4	89.54	256.46	42.97	34031	18395	1008	2278	3286
														228060	133729			30366

LoadCase 1.2D + 1.0Di + 1.0Wi 60 deg — **50 mph 60 deg with 0.75 in Radial Ice**

Gust Response Factor (Gh): 0.85 **Ice Dead Load Factor :** 1.00 **Ice Importance Factor :** 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	8.20	0.000	84.578	39.22	0.327	2.23	0.80	1.00	1.8	52.05	115.96	39.23	9827	5098	809	258	1066
10	210.00	8.05	0.000	80.272	35.08	0.266	2.39	0.80	1.00	1.8	47.79	114.19	35.08	10002	5061	781	381	1162
9	190.00	7.88	0.000	83.862	37.02	0.240	2.47	0.80	1.00	1.8	49.36	121.74	37.02	12629	7140	816	995	1810
8	170.00	7.70	0.000	89.161	39.07	0.224	2.52	0.80	1.00	1.8	52.16	131.39	39.08	16410	9687	860	1644	2504
7	150.00	7.50	0.000	97.346	45.20	0.217	2.54	0.80	1.00	1.7	59.83	151.99	45.20	22747	14315	969	2346	3315
6	130.00	7.28	0.000	100.42	43.02	0.201	2.59	0.80	1.00	1.7	58.33	151.16	43.03	22659	14014	935	2446	3381
5	110.00	7.02	0.000	87.599	35.34	0.160	2.74	0.80	1.00	1.7	52.71	144.23	35.34	22524	14373	861	2479	3341
4	90.00	6.73	0.000	90.395	32.61	0.151	2.77	0.80	1.00	1.7	51.67	143.08	32.62	21865	13428	819	2408	3227
3	70.00	6.39	0.000	99.344	32.93	0.152	2.77	0.80	1.00	1.6	56.79	157.05	32.94	22882	13451	853	2251	3103
2	45.00	5.82	0.000	140.66	42.11	0.131	2.84	0.80	1.00	1.5	79.99	227.45	42.11	32482	18767	1125	3047	4172
1	15.00	4.62	0.000	148.84	42.96	0.125	2.86	0.80	1.00	1.4	89.54	256.46	42.97	34031	18395	1008	2278	3286
														228060	133729			30366

Site Number: 383598 **Code:** ANSI/TIA-222-G

Site Name: Tartaglia, CT **Engineering Number:** 13192904_C3_01 2/6/2020 4:16:36 PM

Customer: VERIZON WIRELESS

Section Forces

LoadCase 1.2D + 1.0Di + 1.0Wi 90 deg — 50 mph 90 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 **Ice Dead Load Factor :** 1.00 **Ice Importance Factor :** 1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	8.20	0.000	84.578	39.22	0.327	2.23	0.85	1.00	1.8	52.05	115.96	39.23	9827	5098	809	258	1066
10	210.00	8.05	0.000	80.272	35.08	0.266	2.39	0.85	1.00	1.8	47.79	114.19	35.08	10002	5061	781	381	1162
9	190.00	7.88	0.000	83.862	37.02	0.240	2.47	0.85	1.00	1.8	49.36	121.74	37.02	12629	7140	816	995	1810
8	170.00	7.70	0.000	89.161	39.07	0.224	2.52	0.85	1.00	1.8	52.16	131.39	39.08	16410	9687	860	1644	2504
7	150.00	7.50	0.000	97.346	45.20	0.217	2.54	0.85	1.00	1.7	59.83	151.99	45.20	22747	14315	969	2346	3315
6	130.00	7.28	0.000	100.42	43.02	0.201	2.59	0.85	1.00	1.7	58.33	151.16	43.03	22659	14014	935	2446	3381
5	110.00	7.02	0.000	87.599	35.34	0.160	2.74	0.85	1.00	1.7	52.71	144.23	35.34	22524	14373	861	2479	3341
4	90.00	6.73	0.000	90.395	32.61	0.151	2.77	0.85	1.00	1.7	51.67	143.08	32.62	21865	13428	819	2408	3227
3	70.00	6.39	0.000	99.344	32.93	0.152	2.77	0.85	1.00	1.6	56.79	157.05	32.94	22882	13451	853	2251	3103
2	45.00	5.82	0.000	140.66	42.11	0.131	2.84	0.85	1.00	1.5	79.99	227.45	42.11	32482	18767	1125	3047	4172
1	15.00	4.62	0.000	148.84	42.96	0.125	2.86	0.85	1.00	1.4	89.54	256.46	42.97	34031	18395	1008	2278	3286
														228060	133729			30366

LoadCase 1.0D + 1.0W Service Normal — Serviceability - 60 mph Wind Normal

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	11.81	0.000	45.353	0.000	0.179	2.67	1.00	1.00	0.0	23.94	63.84	0.00	3941	0	641	99	741
10	210.00	11.59	0.000	45.187	0.000	0.153	2.76	1.00	1.00	0.0	23.42	64.64	0.00	4117	0	637	138	775
9	190.00	11.35	0.000	46.842	0.000	0.137	2.82	1.00	1.00	0.0	24.24	68.38	0.00	4574	0	660	376	1036
8	170.00	11.09	0.000	50.084	0.000	0.127	2.86	1.00	1.00	0.0	26.10	74.55	0.00	5603	0	702	649	1351
7	150.00	10.80	0.000	57.359	0.000	0.130	2.85	1.00	1.00	0.0	30.12	85.80	0.00	7026	0	787	1058	1845
6	130.00	10.48	0.000	57.395	0.000	0.116	2.90	1.00	1.00	0.0	30.42	88.17	0.00	7205	0	785	1087	1873
5	110.00	10.12	0.000	56.861	0.000	0.105	2.95	1.00	1.00	0.0	29.56	87.06	0.00	6792	0	749	1066	1814
4	90.00	9.70	0.000	57.777	0.000	0.097	2.98	1.00	1.00	0.0	30.51	90.78	0.00	7031	0	748	1036	1784
3	70.00	9.20	0.000	66.406	0.000	0.102	2.96	1.00	1.00	0.0	32.91	97.25	0.00	7859	0	760	984	1744
2	45.00	8.38	0.000	98.555	0.000	0.092	3.00	1.00	1.00	0.0	49.14	147.20	0.00	11429	0	1049	1344	2393
1	15.00	6.66	0.000	114.52	0.000	0.097	2.98	1.00	1.00	0.0	59.55	177.24	0.00	13030	0	1003	1068	2071
														78609	0			17427

LoadCase 1.0D + 1.0W Service 60 deg — Serviceability - 60 mph Wind 60 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	11.81	0.000	45.353	0.000	0.179	2.67	0.80	1.00	0.0	23.94	63.84	0.00	3941	0	641	99	741
10	210.00	11.59	0.000	45.187	0.000	0.153	2.76	0.80	1.00	0.0	23.42	64.64	0.00	4117	0	637	138	775
9	190.00	11.35	0.000	46.842	0.000	0.137	2.82	0.80	1.00	0.0	24.24	68.38	0.00	4574	0	660	376	1036
8	170.00	11.09	0.000	50.084	0.000	0.127	2.86	0.80	1.00	0.0	26.10	74.55	0.00	5603	0	702	649	1351
7	150.00	10.80	0.000	57.359	0.000	0.130	2.85	0.80	1.00	0.0	30.12	85.80	0.00	7026	0	787	1058	1845
6	130.00	10.48	0.000	57.395	0.000	0.116	2.90	0.80	1.00	0.0	30.42	88.17	0.00	7205	0	785	1087	1873
5	110.00	10.12	0.000	56.861	0.000	0.105	2.95	0.80	1.00	0.0	29.56	87.06	0.00	6792	0	749	1066	1814
4	90.00	9.70	0.000	57.777	0.000	0.097	2.98	0.80	1.00	0.0	30.51	90.78	0.00	7031	0	748	1036	1784

Section Forces

3	70.00	9.20	0.000	66.406	0.000	0.102	2.96	0.80	1.00	0.0	32.91	97.25	0.00	7859	0	760	984	1744
2	45.00	8.38	0.000	98.555	0.000	0.092	3.00	0.80	1.00	0.0	49.14	147.20	0.00	11429	0	1049	1344	2393
1	15.00	6.66	0.000	114.52	0.000	0.097	2.98	0.80	1.00	0.0	59.55	177.24	0.00	13030	0	1003	1068	2071
														78609	0			17427

LoadCase 1.0D + 1.0W Service 90 deg **Serviceability - 60 mph Wind 90 deg**

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230.00	11.81	0.000	45.353	0.000	0.179	2.67	0.85	1.00	0.0	23.94	63.84	0.00	3941	0	641	99	741
10	210.00	11.59	0.000	45.187	0.000	0.153	2.76	0.85	1.00	0.0	23.42	64.64	0.00	4117	0	637	138	775
9	190.00	11.35	0.000	46.842	0.000	0.137	2.82	0.85	1.00	0.0	24.24	68.38	0.00	4574	0	660	376	1036
8	170.00	11.09	0.000	50.084	0.000	0.127	2.86	0.85	1.00	0.0	26.10	74.55	0.00	5603	0	702	649	1351
7	150.00	10.80	0.000	57.359	0.000	0.130	2.85	0.85	1.00	0.0	30.12	85.80	0.00	7026	0	787	1058	1845
6	130.00	10.48	0.000	57.395	0.000	0.116	2.90	0.85	1.00	0.0	30.42	88.17	0.00	7205	0	785	1087	1873
5	110.00	10.12	0.000	56.861	0.000	0.105	2.95	0.85	1.00	0.0	29.56	87.06	0.00	6792	0	749	1066	1814
4	90.00	9.70	0.000	57.777	0.000	0.097	2.98	0.85	1.00	0.0	30.51	90.78	0.00	7031	0	748	1036	1784
3	70.00	9.20	0.000	66.406	0.000	0.102	2.96	0.85	1.00	0.0	32.91	97.25	0.00	7859	0	760	984	1744
2	45.00	8.38	0.000	98.555	0.000	0.092	3.00	0.85	1.00	0.0	49.14	147.20	0.00	11429	0	1049	1344	2393
1	15.00	6.66	0.000	114.52	0.000	0.097	2.98	0.85	1.00	0.0	59.55	177.24	0.00	13030	0	1003	1068	2071
														78609	0			17427

Equivalent Lateral Force Method

(Based on ASCE7-10 Chapters 11, 12 & 15)

Spectral Response Acceleration for Short Period (S_s):	0.21
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.05
Upper Limit C_s:	0.05
Lower Limit C_s:	0.03
Period based on Rayleigh Method (sec):	0.72
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.11
Total Unfactored Dead Load:	93.04 k
Seismic Base Shear (E):	5.84 k

LoadCase (1.2 + 0.2Sds) * DL + E **Seismic**

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
11	230.00	3,941	1,640,45	0.089	519	4,904
10	210.00	4,117	1,549,25	0.084	490	5,123
9	190.00	4,574	1,540,38	0.083	487	5,691
8	170.00	5,603	1,667,70	0.090	527	6,971
7	150.00	7,026	1,820,34	0.099	575	8,742
6	130.00	7,205	1,592,68	0.086	503	8,964
5	110.00	6,792	1,247,56	0.068	394	8,451
4	90.00	7,031	1,033,71	0.056	327	8,748
3	70.00	7,859	874,412	0.047	276	9,778
2	45.00	11,429	779,012	0.042	246	14,220
1	15.00	13,030	262,609	0.014	83	16,212
Lightning Rod	240.00	10	4,363	0.000	1	12
Dielectric DCR-L1 w/ Radome	240.00	18	7,854	0.000	2	22
Generic 10' Omni	240.00	25	10,908	0.001	3	31
Beacon	240.00	70	30,543	0.002	10	87
Round Side Arm	240.00	150	65,449	0.004	21	187
Generic 8' Yagi	240.00	30	13,090	0.001	4	37
Round Sector Frame	240.00	300	130,898	0.007	41	373
Generic 8' Omni	234.00	50	21,212	0.001	7	62
Round Side Arm	230.00	150	62,431	0.003	20	187
Generic 12' Omni	229.00	40	16,568	0.001	5	50
Round Side Arm	223.00	150	60,328	0.003	19	187
Empty Flat Side Arm	223.00	150	60,328	0.003	19	187
Ericsson KRY 112 144/2	202.00	29	10,488	0.001	3	36
Ericsson Radio 4449 B12,B71	202.00	222	80,009	0.004	25	276

Equivalent Lateral Force Method

Ericsson AIR 32 B66AA B2P	202.00	327	117,851	0.006	37	407
Ericsson Air 3246 B66	202.00	540	194,617	0.011	62	672
Round Sector Frame	202.00	900	324,361	0.018	103	1,120
RFS APXVAARR24_43-U-NA20	202.00	384	138,286	0.007	44	477
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	185.00	210	68,653	0.004	22	261
Argus LLPX310R	185.00	86	28,050	0.002	9	107
Tongyu TYDA-252718DER4-65P	185.00	162	52,961	0.003	17	202
RFS APXVSPP18-C-A20	185.00	114	37,269	0.002	12	142
Generic RRU (Model TBD)	183.00	165	53,296	0.003	17	205
Side Arms	183.00	1,680	542,646	0.029	172	2,090
Flat Light Sector Frame	183.00	1,200	387,604	0.021	123	1,493
Nokia 2.5G MAA - AAHC(64T64R)	181.00	311	99,173	0.005	31	387
Motorola DAP Vx	180.00	79	25,212	0.001	8	99
Alcatel-Lucent 800 MHz RRH	180.00	159	50,425	0.003	16	198
Alcatel-Lucent 1900MHz RRH	180.00	264	83,724	0.005	26	328
Generic 2' Std. Dish	180.00	42	13,320	0.001	4	52
RFS APXV9ERR18-C-A20	180.00	62	19,662	0.001	6	77
Powerwave Allgon LGP21901	165.00	66	19,006	0.001	6	82
Powerwave Allgon 7020.00 Dual Band	165.00	13	3,801	0.000	1	16
CCI DTMABP7819VG12A	165.00	58	16,587	0.001	5	72
Commscope WCS-IMFQ-AMT	165.00	30	8,495	0.000	3	37
Powerwave Allgon LGP21401	165.00	127	36,542	0.002	12	158
Raycap DC6-48-60-18-8F (23.5" Height)	165.00	60	17,278	0.001	5	75
Ericsson RRUS 4426 B66	165.00	145	41,812	0.002	13	181
Ericsson RRUS 4478 B14	165.00	180	51,747	0.003	16	224
Ericsson RRUS 32 (50.8 lbs)	165.00	152	43,885	0.002	14	190
Ericsson RRUS 32 B2	165.00	159	45,786	0.002	14	198
Ericsson Radio 4449	165.00	255	73,430	0.004	23	317
Powerwave Allgon 7770.00	165.00	105	30,236	0.002	10	131
Andrew SBNHH-1D65A	165.00	123	35,333	0.002	11	153
Quintel QS66512-3 (112 lbs.)	165.00	336	96,755	0.005	31	418
Kathrein Scala 80010965	165.00	293	84,315	0.005	27	364
Round Sector Frame	165.00	900	259,166	0.014	82	1,120
Commscope CBC78T-DS-43-2X	155.00	62	16,685	0.001	5	77
Samsung Outdoor CBRS 20W RRH	155.00	56	14,992	0.001	5	69
Samsung Outdoor CBRS 20W RRH –Clip-	155.00	13	3,546	0.000	1	16
Samsung B5/B13 RRH-BR04C	155.00	211	56,663	0.003	18	262
Samsung B2/B66A RRH-BR049	155.00	253	68,028	0.004	22	315
Raycap RxxDC-3315-PF-48	155.00	43	11,499	0.001	4	53
Amphenol Antel BXA-80063-6BF-EDIN-X	155.00	58	15,475	0.001	5	72
Commscope JAHH-65B-R3B	155.00	182	48,845	0.003	15	226
Commscope JAHH-65B-R3B	155.00	182	48,845	0.003	15	226
Flat Light Sector Frame	155.00	1,200	322,406	0.017	102	1,493
Small Side Lights	140.00	135	32,399	0.002	10	168
Generic 4' Yagi	132.00	15	3,372	0.000	1	19
Flat Side Arm	132.00	150	33,725	0.002	11	187
Generic 10' Omni	123.00	25	5,197	0.000	2	31
Round Side Arm	118.00	150	29,781	0.002	9	187
Round Side Arm	108.00	150	26,996	0.001	9	187
Generic 4' Yagi	98.00	15	2,424	0.000	1	19
Flat Side Arm	98.00	150	24,238	0.001	8	187
Empty Round Side Arm	80.00	150	19,353	0.001	6	187
Round Side Arm	8.00	150	1,505	0.000	0	187
		93,039	18,469,867	1.000	5,839	115,755

Equivalent Lateral Force Method

LoadCase (0.9 - 0.2Sds) * DL + E **Seismic (Reduced DL)**

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
11	230.00	3,941	1,640,45	0.089	519	3,373
10	210.00	4,117	1,549,25	0.084	490	3,524
9	190.00	4,574	1,540,38	0.083	487	3,915
8	170.00	5,603	1,667,70	0.090	527	4,795
7	150.00	7,026	1,820,34	0.099	575	6,013
6	130.00	7,205	1,592,68	0.086	503	6,166
5	110.00	6,792	1,247,56	0.068	394	5,813
4	90.00	7,031	1,033,71	0.056	327	6,017
3	70.00	7,859	874,412	0.047	276	6,726
2	45.00	11,429	779,012	0.042	246	9,782
1	15.00	13,030	262,609	0.014	83	11,152
Lightning Rod	240.00	10	4,363	0.000	1	9
Dielectric DCR-L1 w/ Radome	240.00	18	7,854	0.000	2	15
Generic 10' Omni	240.00	25	10,908	0.001	3	21
Beacon	240.00	70	30,543	0.002	10	60
Round Side Arm	240.00	150	65,449	0.004	21	128
Generic 8' Yagi	240.00	30	13,090	0.001	4	26
Round Sector Frame	240.00	300	130,898	0.007	41	257
Generic 8' Omni	234.00	50	21,212	0.001	7	43
Round Side Arm	230.00	150	62,431	0.003	20	128
Generic 12' Omni	229.00	40	16,568	0.001	5	34
Round Side Arm	223.00	150	60,328	0.003	19	128
Empty Flat Side Arm	223.00	150	60,328	0.003	19	128
Ericsson KRY 112 144/2	202.00	29	10,488	0.001	3	25
Ericsson Radio 4449 B12,B71	202.00	222	80,009	0.004	25	190
Ericsson AIR 32 B66AA B2P	202.00	327	117,851	0.006	37	280
Ericsson Air 3246 B66	202.00	540	194,617	0.011	62	462
Round Sector Frame	202.00	900	324,361	0.018	103	770
RFS APXVAARR24_43-U-NA20	202.00	384	138,286	0.007	44	328
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	185.00	210	68,653	0.004	22	180
Argus LLPX310R	185.00	86	28,050	0.002	9	73
Tongyu TYDA-252718DER4-65P	185.00	162	52,961	0.003	17	139
RFS APXVSPP18-C-A20	185.00	114	37,269	0.002	12	98
Generic RRU (Model TBD)	183.00	165	53,296	0.003	17	141
Side Arms	183.00	1,680	542,646	0.029	172	1,438
Flat Light Sector Frame	183.00	1,200	387,604	0.021	123	1,027
Nokia 2.5G MAA - AAHC(64T64R)	181.00	311	99,173	0.005	31	266
Motorola DAP Vx	180.00	79	25,212	0.001	8	68
Alcatel-Lucent 800 MHz RRH	180.00	159	50,425	0.003	16	136
Alcatel-Lucent 1900MHz RRH	180.00	264	83,724	0.005	26	226
Generic 2' Std. Dish	180.00	42	13,320	0.001	4	36
RFS APXV9ERR18-C-A20	180.00	62	19,662	0.001	6	53
Powerwave Allgon LGP21901	165.00	66	19,006	0.001	6	56
Powerwave Allgon 7020.00 Dual Band	165.00	13	3,801	0.000	1	11
CCI DTMABP7819VG12A	165.00	58	16,587	0.001	5	49
Commscope WCS-IMFQ-AMT	165.00	30	8,495	0.000	3	25
Powerwave Allgon LGP21401	165.00	127	36,542	0.002	12	109
Raycap DC6-48-60-18-8F (23.5" Height)	165.00	60	17,278	0.001	5	51
Ericsson RRUS 4426 B66	165.00	145	41,812	0.002	13	124
Ericsson RRUS 4478 B14	165.00	180	51,747	0.003	16	154

Equivalent Lateral Force Method

Ericsson RRUS 32 (50.8 lbs)	165.00	152	43,885	0.002	14	130
Ericsson RRUS 32 B2	165.00	159	45,786	0.002	14	136
Ericsson Radio 4449	165.00	255	73,430	0.004	23	218
Powerwave Allgon 7770.00	165.00	105	30,236	0.002	10	90
Andrew SBNHH-1D65A	165.00	123	35,333	0.002	11	105
Quintel QS66512-3 (112 lbs.)	165.00	336	96,755	0.005	31	288
Kathrein Scala 80010965	165.00	293	84,315	0.005	27	251
Round Sector Frame	165.00	900	259,166	0.014	82	770
Commscope CBC78T-DS-43-2X	155.00	62	16,685	0.001	5	53
Samsung Outdoor CBRS 20W RRH	155.00	56	14,992	0.001	5	48
Samsung Outdoor CBRS 20W RRH –Clip-	155.00	13	3,546	0.000	1	11
Samsung B5/B13 RRH-BR04C	155.00	211	56,663	0.003	18	180
Samsung B2/B66A RRH-BR049	155.00	253	68,028	0.004	22	217
Raycap RxxDC-3315-PF-48	155.00	43	11,499	0.001	4	37
Amphenol Antel BXA-80063-6BF-EDIN-X	155.00	58	15,475	0.001	5	49
Commscope JAHH-65B-R3B	155.00	182	48,845	0.003	15	156
Commscope JAHH-65B-R3B	155.00	182	48,845	0.003	15	156
Flat Light Sector Frame	155.00	1,200	322,406	0.017	102	1,027
Small Side Lights	140.00	135	32,399	0.002	10	116
Generic 4' Yagi	132.00	15	3,372	0.000	1	13
Flat Side Arm	132.00	150	33,725	0.002	11	128
Generic 10' Omni	123.00	25	5,197	0.000	2	21
Round Side Arm	118.00	150	29,781	0.002	9	128
Round Side Arm	108.00	150	26,996	0.001	9	128
Generic 4' Yagi	98.00	15	2,424	0.000	1	13
Flat Side Arm	98.00	150	24,238	0.001	8	128
Empty Round Side Arm	80.00	150	19,353	0.001	6	128
Round Side Arm	8.00	150	1,505	0.000	0	128
		93,039	18,469,866	1.000	5,839	79,626

Equivalent Modal Analysis Method

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.21
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	0.72
Redundancy Factor (p):	1.30

LoadCase (1.2 + 0.2Sds) * DL + E Seismic

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
11	230.00	3,941	1.736	1.263	0.871	0.389	664	4,904
10	210.00	4,117	1.447	0.379	0.482	0.232	413	5,123
9	190.00	4,574	1.185	-0.009	0.243	0.135	267	5,691
8	170.00	5,603	0.948	-0.119	0.107	0.087	211	6,971
7	150.00	7,026	0.738	-0.098	0.038	0.071	216	8,742
6	130.00	7,205	0.555	-0.036	0.010	0.067	210	8,964
5	110.00	6,792	0.397	0.019	0.007	0.063	187	8,451
4	90.00	7,031	0.266	0.052	0.015	0.055	168	8,748
3	70.00	7,859	0.161	0.067	0.029	0.044	151	9,778
2	45.00	11,429	0.066	0.072	0.041	0.032	160	14,220
1	15.00	13,030	0.007	0.050	0.029	0.017	99	16,212
Lightning Rod	240.00	10	1.890	1.980	1.140	0.492	2	12
Dielectric DCR-L1 w/ Radome	240.00	18	1.890	1.980	1.140	0.492	4	22
Generic 10' Omni	240.00	25	1.890	1.980	1.140	0.492	5	31
Beacon	240.00	70	1.890	1.980	1.140	0.492	15	87
Round Side Arm	240.00	150	1.890	1.980	1.140	0.492	32	187
Generic 8' Yagi	240.00	30	1.890	1.980	1.140	0.492	6	37
Round Sector Frame	240.00	300	1.890	1.980	1.140	0.492	64	373
Generic 8' Omni	234.00	50	1.797	1.523	0.972	0.428	9	62
Round Side Arm	230.00	150	1.736	1.263	0.871	0.389	25	187
Generic 12' Omni	229.00	40	1.721	1.202	0.847	0.380	7	50
Round Side Arm	223.00	150	1.632	0.880	0.714	0.327	21	187
Empty Flat Side Arm	223.00	150	1.632	0.880	0.714	0.327	21	187
Ericsson KRY 112 144/2	202.00	29	1.339	0.178	0.372	0.186	2	36
Ericsson Radio 4449 B12,B71	202.00	222	1.339	0.178	0.372	0.186	18	276
Ericsson AIR 32 B66AA B2P	202.00	327	1.339	0.178	0.372	0.186	26	407
Ericsson Air 3246 B66	202.00	540	1.339	0.178	0.372	0.186	44	672
Round Sector Frame	202.00	900	1.339	0.178	0.372	0.186	73	1,120
RFS APXVAARR24_43-U-NA20	202.00	384	1.339	0.178	0.372	0.186	31	477
Alcatel-Lucent TD-RRH8x20-25	185.00	210	1.123	-0.056	0.201	0.119	11	261
Argus LLPX310R	185.00	86	1.123	-0.056	0.201	0.119	4	107
Tongyu TYDA-252718DER4-65P	185.00	162	1.123	-0.056	0.201	0.119	8	202
RFS APXVSPP18-C-A20	185.00	114	1.123	-0.056	0.201	0.119	6	142
Generic RRU (Model TBD)	183.00	165	1.099	-0.071	0.186	0.113	8	205
Side Arms	183.00	1,680	1.099	-0.071	0.186	0.113	82	2,090
Flat Light Sector Frame	183.00	1,200	1.099	-0.071	0.186	0.113	59	1,493
Nokia 2.5G MAA - AAHC(64T64R)	181.00	311	1.075	-0.083	0.172	0.108	15	387
Motorola DAP Vx	180.00	79	1.063	-0.088	0.165	0.106	4	99
Alcatel-Lucent 800 MHz RRH	180.00	159	1.063	-0.088	0.165	0.106	7	198
Alcatel-Lucent 1900MHz RRH	180.00	264	1.063	-0.088	0.165	0.106	12	328

Equivalent Modal Analysis Method

Generic 2' Std. Dish	180.00	42	1.063	-0.088	0.165	0.106	2	52
RFS APXV9ERR18-C-A20	180.00	62	1.063	-0.088	0.165	0.106	3	77
Powerwave Allgon LGP21901	165.00	66	0.893	-0.122	0.085	0.081	2	82
Powerwave Allgon 7020.00 Dual	165.00	13	0.893	-0.122	0.085	0.081	0	16
CCI DTMABP7819VG12A	165.00	58	0.893	-0.122	0.085	0.081	2	72
Commscope WCS-IMFQ-AMT	165.00	30	0.893	-0.122	0.085	0.081	1	37
Powerwave Allgon LGP21401	165.00	127	0.893	-0.122	0.085	0.081	4	158
Raycap DC6-48-60-18-8F (23.5"	165.00	60	0.893	-0.122	0.085	0.081	2	75
Ericsson RRUS 4426 B66	165.00	145	0.893	-0.122	0.085	0.081	5	181
Ericsson RRUS 4478 B14	165.00	180	0.893	-0.122	0.085	0.081	6	224
Ericsson RRUS 32 (50.8 lbs)	165.00	152	0.893	-0.122	0.085	0.081	5	190
Ericsson RRUS 32 B2	165.00	159	0.893	-0.122	0.085	0.081	6	198
Ericsson Radio 4449	165.00	255	0.893	-0.122	0.085	0.081	9	317
Powerwave Allgon 7770.00	165.00	105	0.893	-0.122	0.085	0.081	4	131
Andrew SBNHH-1D65A	165.00	123	0.893	-0.122	0.085	0.081	4	153
Quintel QS66512-3 (112 lbs.)	165.00	336	0.893	-0.122	0.085	0.081	12	418
Kathrein Scala 80010965	165.00	293	0.893	-0.122	0.085	0.081	10	364
Round Sector Frame	165.00	900	0.893	-0.122	0.085	0.081	32	1,120
Commscope CBC78T-DS-43-2X	155.00	62	0.788	-0.110	0.051	0.073	2	77
Samsung Outdoor CBRS 20W	155.00	56	0.788	-0.110	0.051	0.073	2	69
Samsung Outdoor CBRS 20W	155.00	13	0.788	-0.110	0.051	0.073	0	16
Samsung B5/B13 RRH-BR04C	155.00	211	0.788	-0.110	0.051	0.073	7	262
Samsung B2/B66A RRH-BR049	155.00	253	0.788	-0.110	0.051	0.073	8	315
Raycap RxxDC-3315-PF-48	155.00	43	0.788	-0.110	0.051	0.073	1	53
Amphenol Antel BXA-80063-6BF-	155.00	58	0.788	-0.110	0.051	0.073	2	72
Commscope JAHH-65B-R3B	155.00	182	0.788	-0.110	0.051	0.073	6	226
Commscope JAHH-65B-R3B	155.00	182	0.788	-0.110	0.051	0.073	6	226
Flat Light Sector Frame	155.00	1,200	0.788	-0.110	0.051	0.073	38	1,493
Small Side Lights	140.00	135	0.643	-0.068	0.020	0.069	4	168
Generic 4' Yagi	132.00	15	0.572	-0.043	0.012	0.068	0	19
Flat Side Arm	132.00	150	0.572	-0.043	0.012	0.068	4	187
Generic 10' Omni	123.00	25	0.496	-0.015	0.007	0.066	1	31
Round Side Arm	118.00	150	0.457	-0.001	0.006	0.065	4	187
Round Side Arm	108.00	150	0.383	0.023	0.007	0.063	4	187
Generic 4' Yagi	98.00	15	0.315	0.042	0.011	0.059	0	19
Flat Side Arm	98.00	150	0.315	0.042	0.011	0.059	4	187
Empty Round Side Arm	80.00	150	0.210	0.061	0.022	0.050	3	187
Round Side Arm	8.00	150	0.002	0.033	0.018	0.011	1	187
		93,039	77.606	18.344	20.546	11.654	3,575	115,755

LoadCase (0.9 - 0.2Sds) * DL + E **Seismic (Reduced DL)**

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
11	230.00	3,941	1.736	1.263	0.871	0.389	664	3,373
10	210.00	4,117	1.447	0.379	0.482	0.232	413	3,524
9	190.00	4,574	1.185	-0.009	0.243	0.135	267	3,915
8	170.00	5,603	0.948	-0.119	0.107	0.087	211	4,795
7	150.00	7,026	0.738	-0.098	0.038	0.071	216	6,013
6	130.00	7,205	0.555	-0.036	0.010	0.067	210	6,166
5	110.00	6,792	0.397	0.019	0.007	0.063	187	5,813
4	90.00	7,031	0.266	0.052	0.015	0.055	168	6,017
3	70.00	7,859	0.161	0.067	0.029	0.044	151	6,726
2	45.00	11,429	0.066	0.072	0.041	0.032	160	9,782
1	15.00	13,030	0.007	0.050	0.029	0.017	99	11,152
Lightning Rod	240.00	10	1.890	1.980	1.140	0.492	2	9
Dielectric DCR-L1 w/ Radome	240.00	18	1.890	1.980	1.140	0.492	4	15
Generic 10' Omni	240.00	25	1.890	1.980	1.140	0.492	5	21
Beacon	240.00	70	1.890	1.980	1.140	0.492	15	60
Round Side Arm	240.00	150	1.890	1.980	1.140	0.492	32	128
Generic 8' Yagi	240.00	30	1.890	1.980	1.140	0.492	6	26
Round Sector Frame	240.00	300	1.890	1.980	1.140	0.492	64	257
Generic 8' Omni	234.00	50	1.797	1.523	0.972	0.428	9	43

Equivalent Modal Analysis Method

Round Side Arm	230.00	150	1.736	1.263	0.871	0.389	25	128
Generic 12' Omni	229.00	40	1.721	1.202	0.847	0.380	7	34
Round Side Arm	223.00	150	1.632	0.880	0.714	0.327	21	128
Empty Flat Side Arm	223.00	150	1.632	0.880	0.714	0.327	21	128
Ericsson KRY 112 144/2	202.00	29	1.339	0.178	0.372	0.186	2	25
Ericsson Radio 4449 B12,B71	202.00	222	1.339	0.178	0.372	0.186	18	190
Ericsson AIR 32 B66AA B2P	202.00	327	1.339	0.178	0.372	0.186	26	280
Ericsson Air 3246 B66	202.00	540	1.339	0.178	0.372	0.186	44	462
Round Sector Frame	202.00	900	1.339	0.178	0.372	0.186	73	770
RFS APXVAARR24_43-U-NA20	202.00	384	1.339	0.178	0.372	0.186	31	328
Alcatel-Lucent TD-RRH8x20-25	185.00	210	1.123	-0.056	0.201	0.119	11	180
Argus LLPX310R	185.00	86	1.123	-0.056	0.201	0.119	4	73
Tongyu TYDA-252718DER4-65P	185.00	162	1.123	-0.056	0.201	0.119	8	139
RFS APXVSPP18-C-A20	185.00	114	1.123	-0.056	0.201	0.119	6	98
Generic RRU (Model TBD)	183.00	165	1.099	-0.071	0.186	0.113	8	141
Side Arms	183.00	1,680	1.099	-0.071	0.186	0.113	82	1,438
Flat Light Sector Frame	183.00	1,200	1.099	-0.071	0.186	0.113	59	1,027
Nokia 2.5G MAA - AAHC(64T64R)	181.00	311	1.075	-0.083	0.172	0.108	15	266
Motorola DAP Vx	180.00	79	1.063	-0.088	0.165	0.106	4	68
Alcatel-Lucent 800 MHz RRH	180.00	159	1.063	-0.088	0.165	0.106	7	136
Alcatel-Lucent 1900MHz RRH	180.00	264	1.063	-0.088	0.165	0.106	12	226
Generic 2' Std. Dish	180.00	42	1.063	-0.088	0.165	0.106	2	36
RFS APXV9ERR18-C-A20	180.00	62	1.063	-0.088	0.165	0.106	3	53
Powerwave Allgon LGP21901	165.00	66	0.893	-0.122	0.085	0.081	2	56
Powerwave Allgon 7020.00 Dual	165.00	13	0.893	-0.122	0.085	0.081	0	11
CCI DTMABP7819VG12A	165.00	58	0.893	-0.122	0.085	0.081	2	49
Commscope WCS-IMFQ-AMT	165.00	30	0.893	-0.122	0.085	0.081	1	25
Powerwave Allgon LGP21401	165.00	127	0.893	-0.122	0.085	0.081	4	109
Raycap DC6-48-60-18-8F (23.5"	165.00	60	0.893	-0.122	0.085	0.081	2	51
Ericsson RRUS 4426 B66	165.00	145	0.893	-0.122	0.085	0.081	5	124
Ericsson RRUS 4478 B14	165.00	180	0.893	-0.122	0.085	0.081	6	154
Ericsson RRUS 32 (50.8 lbs)	165.00	152	0.893	-0.122	0.085	0.081	5	130
Ericsson RRUS 32 B2	165.00	159	0.893	-0.122	0.085	0.081	6	136
Ericsson Radio 4449	165.00	255	0.893	-0.122	0.085	0.081	9	218
Powerwave Allgon 7770.00	165.00	105	0.893	-0.122	0.085	0.081	4	90
Andrew SBNHH-1D65A	165.00	123	0.893	-0.122	0.085	0.081	4	105
Quintel QS66512-3 (112 lbs.)	165.00	336	0.893	-0.122	0.085	0.081	12	288
Kathrein Scala 80010965	165.00	293	0.893	-0.122	0.085	0.081	10	251
Round Sector Frame	165.00	900	0.893	-0.122	0.085	0.081	32	770
Commscope CBC78T-DS-43-2X	155.00	62	0.788	-0.110	0.051	0.073	2	53
Samsung Outdoor CBRS 20W	155.00	56	0.788	-0.110	0.051	0.073	2	48
Samsung Outdoor CBRS 20W	155.00	13	0.788	-0.110	0.051	0.073	0	11
Samsung B5/B13 RRH-BR04C	155.00	211	0.788	-0.110	0.051	0.073	7	180
Samsung B2/B66A RRH-BR049	155.00	253	0.788	-0.110	0.051	0.073	8	217
Raycap RxxDC-3315-PF-48	155.00	43	0.788	-0.110	0.051	0.073	1	37
Amphenol Antel BXA-80063-6BF-	155.00	58	0.788	-0.110	0.051	0.073	2	49
Commscope JAHH-65B-R3B	155.00	182	0.788	-0.110	0.051	0.073	6	156
Commscope JAHH-65B-R3B	155.00	182	0.788	-0.110	0.051	0.073	6	156
Flat Light Sector Frame	155.00	1,200	0.788	-0.110	0.051	0.073	38	1,027
Small Side Lights	140.00	135	0.643	-0.068	0.020	0.069	4	116
Generic 4' Yagi	132.00	15	0.572	-0.043	0.012	0.068	0	13
Flat Side Arm	132.00	150	0.572	-0.043	0.012	0.068	4	128
Generic 10' Omni	123.00	25	0.496	-0.015	0.007	0.066	1	21
Round Side Arm	118.00	150	0.457	-0.001	0.006	0.065	4	128
Round Side Arm	108.00	150	0.383	0.023	0.007	0.063	4	128
Generic 4' Yagi	98.00	15	0.315	0.042	0.011	0.059	0	13
Flat Side Arm	98.00	150	0.315	0.042	0.011	0.059	4	128
Empty Round Side Arm	80.00	150	0.210	0.061	0.022	0.050	3	128
Round Side Arm	8.00	150	0.002	0.033	0.018	0.011	1	128
		93,039	77.606	18.344	20.546	11.654	3,575	79,626

Force/Stress Summary

Section: 1 1 Bot Elev (ft): 0.00 Height (ft): 30.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 10" DIA PIPE	-322.69	1.2D + 1.6W Normal	30.08	33	33	33	32.8	50.0	669.65	0	0	0.00	0.00	48	Member X
HORIZ PST - 3-1/2" DIA PIP	-17.51	0.9D + 1.6W 90 deg	18.29	100	100	100	163.8	50.0	22.56	2	0	0.00	0.00	77	Member X
DIAG PST - 3" DIA PIPE	-34.46	1.2D + 1.6W 90 deg	36.16	32	32	32	0.0	0.0	41.40	3	0	0.00	0.00	83	User Input

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 10" DIA PIPE	263.01	0.9D + 1.6W 60 deg	50	65	724.50	0	0	0.00	0.00		36	Member
HORIZ PST - 3-1/2" DIA PIP	18.04	1.2D + 1.6W 90 deg	50	65	120.60	2	0	0.00	33.93	0.00	53	Bolt Bear
DIAG PST - 3" DIA PIPE	32.37	1.2D + 1.6W 90 deg	50	65	100.35	3	0	0.00	52.65	0.00	61	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	261.16	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	320.76	1.2D + 1.6W Normal	0.00	0		
Bot Tension	311.61	0.9D + 1.6W 60 deg	726.89	54	12	1" A193-B7
Bot Compression	374.40	1.2D + 1.6W Normal	0.00	0		

Section: 2 2 Bot Elev (ft): 30.00 Height (ft): 30.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 10" DIA PIPE	-264.93	1.2D + 1.6W Normal	30.08	33	33	33	32.8	50.0	669.65	0	0	0.00	0.00	39	Member X
HORIZ PST - 3" DIA PIPE	-16.90	0.9D + 1.6W 90 deg	16.41	96	96	96	163.0	50.0	18.95	2	0	0.00	0.00	89	Member X
DIAG PST - 3" DIA PIPE	-37.61	1.2D + 1.6W 90 deg	35.15	31	31	31	112.7	50.0	39.62	3	0	0.00	0.00	94	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 10" DIA PIPE	212.31	0.9D + 1.6W 60 deg	50	65	724.50	0	0	0.00	0.00		29	Member
HORIZ PST - 3" DIA PIPE	17.70	1.2D + 1.6W 90 deg	50	65	100.35	2	0	0.00	32.43	0.00	54	Bolt Bear
DIAG PST - 3" DIA PIPE	34.95	1.2D + 1.6W 90 deg	50	65	100.35	3	0	0.00	52.65	0.00	66	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	210.55	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	263.07	1.2D + 1.6W Normal	0.00	0		
Bot Tension	261.16	0.9D + 1.6W 60 deg	654.20	40	12	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 3 3 Bot Elev (ft): 60.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 10" DIA PIPE	-225.36	1.2D + 1.6W Normal	20.05	50	50	50	33.1	50.0	668.58	0	0	0.00	0.00	33	Member X
HORIZ PST - 3" DIA PIPE	-15.38	0.9D + 1.6W 90 deg	15.16	100	100	100	156.9	50.0	20.47	2	0	0.00	0.00	75	Member X
DIAG PST - 3" DIA PIPE	-27.66	1.2D + 1.6W 90 deg	25.88	48	48	48	128.5	50.0	30.49	3	0	0.00	0.00	90	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 10" DIA PIPE	179.49	0.9D + 1.6W 60 deg	50	65	724.50	0	0	0.00	0.00		24	Member
HORIZ PST - 3" DIA PIPE	16.12	1.2D + 1.6W 90 deg	50	65	100.35	2	0	0.00	32.43	0.00	49	Bolt Bear
DIAG PST - 3" DIA PIPE	25.87	0.9D + 1.6W 90 deg	50	65	100.35	3	0	0.00	43.80	0.00	59	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	177.87	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	223.64	1.2D + 1.6W Normal	0.00	0		
Bot Tension	210.55	0.9D + 1.6W 60 deg	654.20	32	12	1 A325
Bot Compression	0.00		0.00	0		

Section: 4 4 Bot Elev (ft): 80.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-187.16	1.2D + 1.6W Normal	20.06	50	50	50	41.8	50.0	506.95	0	0	0.00	0.00	36	Member X
HORIZ PST - 3" DIA PIPE	-14.06	0.9D + 1.6W 90 deg	13.83	100	100	100	143.2	50.0	24.58	2	0	0.00	0.00	57	Member X
DIAG PST - 3" DIA PIPE	-26.39	1.2D + 1.6W 90 deg	25.11	48	48	48	124.7	50.0	32.40	3	0	0.00	0.00	81	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	146.58	0.9D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00		25	Member
HORIZ PST - 3" DIA PIPE	14.41	1.2D + 1.6W 90 deg	50	65	100.35	2	0	0.00	32.43	0.00	44	Bolt Bear
DIAG PST - 3" DIA PIPE	24.63	1.2D + 1.6W 90 deg	50	65	100.35	3	0	0.00	43.80	0.00	56	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	145.04	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	185.57	1.2D + 1.6W Normal	0.00	0		
Bot Tension	177.87	0.9D + 1.6W 60 deg	654.20	27	12	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 5 5 Bot Elev (ft): 100.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-148.31	1.2D + 1.6W Normal	20.05	50	50	50	41.8	50.0	507.00	0	0	0.00	0.00	29	Member X
HORIZ PST - 2-1/2" DIA PIP	-12.80	0.9D + 1.6W 90 deg	12.58	98	98	98	156.3	50.0	15.75	2	0	0.00	0.00	81	Member X
DIAG PST - 2-1/2" DIA PIP	-26.01	1.2D + 1.6W 90 deg	24.33	48	48	48	0.0	0.0	28.20	3	0	0.00	0.00	92	User Input

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	112.80	0.9D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00		19	Member
HORIZ PST - 2-1/2" DIA PIP	13.49	1.2D + 1.6W 90 deg	50	65	76.68	2	0	0.00	30.48	0.00	44	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	24.38	1.2D + 1.6W 90 deg	50	65	76.68	3	0	0.00	41.17	0.00	59	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	111.47	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	146.89	1.2D + 1.6W Normal	0.00	0		
Bot Tension	145.04	0.9D + 1.6W 60 deg	654.20	22	12	1 A325
Bot Compression	0.00		0.00	0		

Section: 6 6 Bot Elev (ft): 120.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-128.79	1.2D + 1.6W Normal	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	25	Member X
HORIZ PST - 2-1/2" DIA PIP	-11.61	1.2D + 1.6W 90 deg	11.96	100	100	100	151.6	50.0	16.75	2	0	0.00	0.00	69	Member X
DIAG PST - 3" DIA PIPE	-16.69	1.2D + 1.6W 90 deg	16.08	96	96	96	159.7	50.0	19.75	3	0	0.00	0.00	84	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	92.70	1.2D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00		16	Member
HORIZ PST - 2-1/2" DIA PIP	12.35	1.2D + 1.6W 90 deg	50	65	76.68	2	0	0.00	25.33	0.00	48	Bolt Bear
DIAG PST - 3" DIA PIPE	15.54	1.2D + 1.6W 90 deg	50	65	100.35	3	0	0.00	43.80	0.00	35	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	80.02	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	109.10	1.2D + 1.6W Normal	0.00	0		
Bot Tension	111.47	0.9D + 1.6W 60 deg	436.14	26	8	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 7 7 Bot Elev (ft): 140.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-92.15	1.2D + 1.6W Normal	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	18	Member X
HORIZ PST - 2-1/2" DIA PIP	-10.06	0.9D + 1.6W 90 deg	10.71	100	100	100	135.8	50.0	20.89	2	0	0.00	0.00	48	Member X
DIAG PST - 2-1/2" DIA PIP	-15.11	1.2D + 1.6W 90 deg	15.12	100	100	100	0.0	0.0	23.40	3	0	0.00	0.00	64	User Input

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	65.56	0.9D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00		11	Member
HORIZ PST - 2-1/2" DIA PIP	10.63	1.2D + 1.6W 90 deg	50	65	76.68	2	0	0.00	25.33	0.00	41	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	14.06	1.2D + 1.6W 90 deg	50	65	76.68	3	0	0.00	41.17	0.00	34	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	49.14	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	73.27	1.2D + 1.6W Normal	0.00	0		
Bot Tension	80.02	0.9D + 1.6W 60 deg	436.14	18	8	1 A325
Bot Compression	0.00		0.00	0		

Section: 8 8 Bot Elev (ft): 160.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-58.35	1.2D + 1.6W Normal	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	11	Member X
HORIZ PST - 2-1/2" DIA PIP	-6.64	1.2D + 1.6W 90 deg	9.464	100	100	100	119.9	50.0	26.77	2	0	0.00	0.00	24	Member X
DIAG PST - 2-1/2" DIA PIP	-10.69	1.2D + 1.6W 90 deg	14.20	96	96	96	172.9	50.0	12.88	3	0	0.00	0.00	82	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	37.58	1.2D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00		6	Member
HORIZ PST - 2-1/2" DIA PIP	7.07	1.2D + 1.6W 90 deg	50	65	76.68	2	0	0.00	25.33	0.00	27	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	9.90	1.2D + 1.6W 90 deg	50	65	76.68	3	0	0.00	41.17	0.00	24	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	28.12	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	44.50	1.2D + 1.6W Normal	0.00	0		
Bot Tension	49.14	0.9D + 1.6W 60 deg	436.14	11	8	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 9 9 Bot Elev (ft): 180.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-33.47	1.2D + 1.6W Normal	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	6	Member X
HORIZ PST - 2" DIA PIPE	-4.03	1.2D + 1.6W 90 deg	8.214	100	100	100	125.2	50.0	15.41	2	0	0.00	0.00	26	Member X
DIAG PST - 2-1/2" DIA PIP	-7.14	1.2D + 1.6W 90 deg	13.35	100	100	100	169.2	50.0	13.45	3	0	0.00	0.00	53	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	20.49	1.2D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00		3	Member
HORIZ PST - 2" DIA PIPE	4.33	1.2D + 1.6W 90 deg	50	65	48.15	2	0	0.00	19.22	0.00	22	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	6.60	0.9D + 1.6W 90 deg	50	65	76.68	3	0	0.00	41.17	0.00	16	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	13.88	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	23.85	1.2D + 1.6W Normal	0.00	0		
Bot Tension	28.12	0.9D + 1.6W 60 deg	436.14	6	8	1 A325
Bot Compression	0.00		0.00	0		

Section: 10 10 Bot Elev (ft): 200.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-16.51	1.2D + 1.6W Normal	10.02	100	100	100	41.8	50.0	507.06	0	0	0.00	0.00	3	Member X
HORIZ PST - 2" DIA PIPE	-2.23	1.2D + 1.6W 90 deg	7.026	100	100	100	107.1	50.0	20.80	2	0	0.00	0.00	10	Member X
DIAG PST - 2-1/2" DIA PIP	-4.56	1.2D + 1.6W 90 deg	12.55	100	100	100	159.1	50.0	15.20	3	0	0.00	0.00	29	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	8.86	1.2D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00		1	Member
HORIZ PST - 2" DIA PIPE	2.46	1.2D + 1.6W 90 deg	50	65	48.15	2	0	0.00	19.22	0.00	12	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	4.04	1.2D + 1.6W 90 deg	50	65	76.68	3	0	0.00	41.17	0.00	9	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	4.72	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	10.22	1.2D + 1.6W Normal	0.00	0		
Bot Tension	13.88	0.9D + 1.6W 60 deg	436.14	3	8	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 11 11 **Bot Elev (ft): 220.0** **Height (ft): 20.000**

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-6.76	1.2D + 1.6W Normal	6.68	100	100	100	27.8	50.0	544.30	0	0	0.00	0.00	1	Member X
HORIZ PST - 2" DIA PIPE	-1.48	1.2D + 1.6W Normal	5.464	100	100	100	83.3	50.0	28.99	2	0	0.00	0.00	5	Member X
DIAG PST - 2" DIA PIPE	-2.51	1.2D + 1.6W 90 deg	9.288	100	100	100	141.6	50.0	12.05	3	0	0.00	0.00	20	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	0.91	1.2D + 1.6W Normal	50	65	576.00	0	0	0.00	0.00		0	Member
HORIZ PST - 2" DIA PIPE	1.56	1.2D + 1.6W 90 deg	50	65	48.15	2	0	0.00	19.22	0.00	8	Bolt Bear
DIAG PST - 2" DIA PIPE	2.19	0.9D + 1.6W 90 deg	50	65	48.15	3	0	0.00	31.23	0.00	7	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	0.00		0.00	0	0	
Top Compression	1.24	1.2D + 1.0Di + 1.0Wi	0.00	0		
Bot Tension	4.72	0.9D + 1.6W 60 deg	436.14	1	8	1 A325
Bot Compression	0.00		0.00	0		

Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal	23.29	00.00	0	1	0.00	373.38	-53.73	
	23.29	00.00	120	1a	14.80	-130.87	-18.26	
	23.29	00.00	240	1b	-14.80	-130.87	-18.26	
1.2D + 1.6W 60 deg	23.29	00.00	0	1	-8.07	205.30	-28.71	
	23.29	00.00	120	1a	-28.89	204.91	7.36	
	23.29	00.00	240	1b	-41.20	-298.56	-23.78	
1.2D + 1.6W 90 deg	23.29	00.00	0	1	-9.52	37.22	-3.48	
	23.29	00.00	120	1a	-43.03	327.89	19.55	
	23.29	00.00	240	1b	-37.70	-253.46	-16.06	
0.9D + 1.6W Normal	23.29	00.00	0	1	0.00	363.84	-52.85	
	23.29	00.00	120	1a	15.54	-140.05	-18.70	
	23.29	00.00	240	1b	-15.54	-140.05	-18.70	
0.9D + 1.6W 60 deg	23.29	00.00	0	1	-8.08	195.88	-27.83	
	23.29	00.00	120	1a	-28.14	195.48	6.92	
	23.29	00.00	240	1b	-41.94	-307.63	-24.21	
0.9D + 1.6W 90 deg	23.29	00.00	0	1	-9.53	27.91	-2.61	
	23.29	00.00	120	1a	-42.27	318.38	19.10	
	23.29	00.00	240	1b	-38.45	-262.56	-16.49	
1.2D + 1.0Di + 1.0Wi Normal	23.29	00.00	0	1	0.00	221.33	-28.23	
	23.29	00.00	120	1a	-0.13	26.04	-3.76	
	23.29	00.00	240	1b	0.13	26.04	-3.76	
1.2D + 1.0Di + 1.0Wi 60 deg	23.29	00.00	0	1	-3.27	156.13	-18.25	
	23.29	00.00	120	1a	-17.44	155.89	6.30	
	23.29	00.00	240	1b	-10.23	-38.61	-5.90	
1.2D + 1.0Di + 1.0Wi 90 deg	23.29	00.00	0	1	-3.81	91.14	-8.26	
	23.29	00.00	120	1a	-23.07	203.61	11.16	
	23.29	00.00	240	1b	-8.87	-21.33	-2.89	
(1.2 + 0.2Sds) * DL + E Normal M1	23.29	00.00	0	1	0.00	64.03	-6.99	
	23.29	00.00	120	1a	-1.87	23.13	0.61	
	23.29	00.00	240	1b	1.87	23.13	0.61	
(1.2 + 0.2Sds) * DL + E Normal M2	23.29	00.00	0	1	0.00	54.36	-5.68	
	23.29	00.00	120	1a	-2.35	27.97	1.09	
	23.29	00.00	240	1b	2.35	27.97	1.09	
(1.2 + 0.2Sds) * DL + E 60 deg M1	23.29	00.00	0	1	-0.41	50.40	-5.30	
	23.29	00.00	120	1a	-4.80	50.40	2.30	
	23.29	00.00	240	1b	0.20	9.49	0.12	
(1.2 + 0.2Sds) * DL + E 60 deg M2	23.29	00.00	0	1	-0.23	45.56	-4.65	
	23.29	00.00	120	1a	-4.14	45.56	2.12	
	23.29	00.00	240	1b	1.35	19.17	0.78	
(1.2 + 0.2Sds) * DL + E 90 deg M1	23.29	00.00	0	1	-0.47	36.76	-3.62	
	23.29	00.00	120	1a	-5.78	60.38	3.07	
	23.29	00.00	240	1b	0.48	13.15	0.55	
(1.2 + 0.2Sds) * DL + E 90 deg M2	23.29	00.00	0	1	-0.26	36.76	-3.62	
	23.29	00.00	120	1a	-4.74	52.00	2.59	

	23.29	00.00	240	1b	1.52	21.53	1.03
(0.9 - 0.2Sds) * DL + E Normal M1	23.29	00.00	0	1	0.00	52.53	-5.86
	23.29	00.00	120	1a	-0.90	11.67	0.04
	23.29	00.00	240	1b	0.90	11.67	0.04
(0.9 - 0.2Sds) * DL + E Normal M2	23.29	00.00	0	1	0.00	42.87	-4.55
	23.29	00.00	120	1a	-1.38	16.50	0.53
	23.29	00.00	240	1b	1.38	16.50	0.53
(0.9 - 0.2Sds) * DL + E 60 deg M1	23.29	00.00	0	1	-0.41	38.91	-4.18
	23.29	00.00	120	1a	-3.82	38.91	1.73
	23.29	00.00	240	1b	-0.77	-1.95	-0.45
(0.9 - 0.2Sds) * DL + E 60 deg M2	23.29	00.00	0	1	-0.23	34.08	-3.52
	23.29	00.00	120	1a	-3.16	34.08	1.56
	23.29	00.00	240	1b	0.37	7.71	0.21
(0.9 - 0.2Sds) * DL + E 90 deg M1	23.29	00.00	0	1	-0.47	25.29	-2.49
	23.29	00.00	120	1a	-4.80	48.88	2.50
	23.29	00.00	240	1b	-0.50	1.70	-0.01
(0.9 - 0.2Sds) * DL + E 90 deg M2	23.29	00.00	0	1	-0.26	25.29	-2.49
	23.29	00.00	120	1a	-3.76	40.51	2.02
	23.29	00.00	240	1b	0.54	10.07	0.47
1.0D + 1.0W Service Normal	23.29	00.00	0	1	0.00	113.27	-15.28
	23.29	00.00	120	1a	1.85	-10.11	-3.42
	23.29	00.00	240	1b	-1.85	-10.11	-3.42
1.0D + 1.0W Service 60 deg	23.29	00.00	0	1	-2.01	72.14	-9.09
	23.29	00.00	120	1a	-8.88	72.05	2.80
	23.29	00.00	240	1b	-8.26	-51.15	-4.77
1.0D + 1.0W Service 90 deg	23.29	00.00	0	1	-2.34	31.01	-2.90
	23.29	00.00	120	1a	-12.38	102.14	5.81
	23.29	00.00	240	1b	-7.40	-40.11	-2.91

Max Uplift:	307.63 (kip)	**Moment Ice:**	4,547.72 (kip-ft)	**Moment:**	11,742.14 (kip-ft)	1.2D + 1.6W Normal
Max Down:	373.38 (kip)	**Total Down Ice:**	273.41 (kip)	**Total Down:**	111.65 (kip)	
Max Shear:	53.73 (kip)	**Total Shear Ice:**	35.76 (kip)	**Total Shear:**	90.25 (kip)	

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
97 mph Normal with No Ice	80.00	0.151	0.0121	0.1431	0.1436
97 mph Normal with No Ice	100.00	0.207	0.0199	0.1858	0.1869
97 mph Normal with No Ice	120.00	0.277	0.0291	0.2019	0.2040
97 mph Normal with No Ice	130.00	0.311	0.0345	0.1981	0.2011
97 mph Normal with No Ice	140.00	0.346	0.0388	0.2114	0.2149
97 mph Normal with No Ice	160.00	0.423	0.0486	0.2187	0.2240
97 mph Normal with No Ice	180.00	0.497	0.0590	0.2175	0.2254
97 mph Normal with No Ice	200.00	0.571	0.0695	0.2144	0.2253
97 mph Normal with No Ice	220.00	0.643	0.0801	0.2119	0.2266
97 mph Normal with No Ice	226.67	0.667	0.0838	0.2103	0.2264
97 mph Normal with No Ice	233.33	0.691	0.0875	0.2061	0.2239
97 mph Normal with No Ice	240.00	0.715	0.0898	0.2301	0.2470
97 mph 60 degree with No Ice	80.00	0.151	-0.0286	0.1412	0.1429
97 mph 60 degree with No Ice	100.00	0.207	-0.0412	0.1833	0.1861
97 mph 60 degree with No Ice	120.00	0.277	-0.0523	0.1995	0.2044
97 mph 60 degree with No Ice	130.00	0.311	-0.0571	0.1950	0.2013
97 mph 60 degree with No Ice	140.00	0.346	-0.0629	0.2084	0.2157
97 mph 60 degree with No Ice	160.00	0.422	-0.0735	0.2150	0.2251
97 mph 60 degree with No Ice	180.00	0.496	-0.0835	0.2126	0.2263
97 mph 60 degree with No Ice	200.00	0.570	-0.0934	0.2091	0.2272
97 mph 60 degree with No Ice	220.00	0.642	-0.1032	0.2062	0.2292
97 mph 60 degree with No Ice	226.67	0.666	-0.1064	0.2045	0.2293
97 mph 60 degree with No Ice	233.33	0.689	-0.1097	0.2032	0.2299
97 mph 60 degree with No Ice	240.00	0.712	-0.1118	0.1921	0.2214
97 mph 90 degree with No Ice	80.00	0.151	-0.0344	0.1408	0.1439
97 mph 90 degree with No Ice	100.00	0.207	-0.0497	0.1823	0.1878
97 mph 90 degree with No Ice	120.00	0.277	-0.0632	0.1983	0.2051
97 mph 90 degree with No Ice	130.00	0.311	-0.0691	0.1937	0.2025
97 mph 90 degree with No Ice	140.00	0.346	-0.0762	0.2069	0.2166
97 mph 90 degree with No Ice	160.00	0.422	-0.0891	0.2131	0.2265
97 mph 90 degree with No Ice	180.00	0.496	-0.1014	0.2105	0.2291
97 mph 90 degree with No Ice	200.00	0.570	-0.1135	0.2066	0.2307
97 mph 90 degree with No Ice	220.00	0.641	-0.1256	0.2036	0.2342
97 mph 90 degree with No Ice	226.67	0.665	-0.1296	0.2017	0.2353
97 mph 90 degree with No Ice	233.33	0.689	-0.1337	0.2019	0.2373
97 mph 90 degree with No Ice	240.00	0.711	-0.1362	0.1768	0.2175
97 mph Normal with No Ice (Reduced DL)	80.00	0.151	0.0121	0.1429	0.1434
97 mph Normal with No Ice (Reduced DL)	100.00	0.206	0.0199	0.1856	0.1867
97 mph Normal with No Ice (Reduced DL)	120.00	0.277	0.0291	0.2017	0.2038
97 mph Normal with No Ice (Reduced DL)	130.00	0.311	0.0345	0.1978	0.2008
97 mph Normal with No Ice (Reduced DL)	140.00	0.346	0.0388	0.2112	0.2147
97 mph Normal with No Ice (Reduced DL)	160.00	0.422	0.0486	0.2185	0.2238
97 mph Normal with No Ice (Reduced DL)	180.00	0.497	0.0590	0.2173	0.2252
97 mph Normal with No Ice (Reduced DL)	200.00	0.571	0.0695	0.2141	0.2251
97 mph Normal with No Ice (Reduced DL)	220.00	0.643	0.0801	0.2117	0.2264
97 mph Normal with No Ice (Reduced DL)	226.67	0.667	0.0838	0.2101	0.2262
97 mph Normal with No Ice (Reduced DL)	233.33	0.691	0.0875	0.2059	0.2237
97 mph Normal with No Ice (Reduced DL)	240.00	0.715	0.0898	0.2299	0.2468
97 mph 60 deg with No Ice (Reduced DL)	80.00	0.151	-0.0286	0.1410	0.1428
97 mph 60 deg with No Ice (Reduced DL)	100.00	0.206	-0.0412	0.1832	0.1860
97 mph 60 deg with No Ice (Reduced DL)	120.00	0.277	-0.0522	0.1992	0.2041
97 mph 60 deg with No Ice (Reduced DL)	130.00	0.311	-0.0570	0.1947	0.2010
97 mph 60 deg with No Ice (Reduced DL)	140.00	0.346	-0.0629	0.2082	0.2154
97 mph 60 deg with No Ice (Reduced DL)	160.00	0.422	-0.0734	0.2147	0.2248
97 mph 60 deg with No Ice (Reduced DL)	180.00	0.496	-0.0835	0.2123	0.2261

97 mph 60 deg with No Ice (Reduced DL)	200.00	0.569	-0.0934	0.2088	0.2270
97 mph 60 deg with No Ice (Reduced DL)	220.00	0.641	-0.1032	0.2060	0.2290
97 mph 60 deg with No Ice (Reduced DL)	226.67	0.665	-0.1064	0.2043	0.2292
97 mph 60 deg with No Ice (Reduced DL)	233.33	0.689	-0.1097	0.2029	0.2297
97 mph 60 deg with No Ice (Reduced DL)	240.00	0.712	-0.1118	0.1919	0.2212
97 mph 90 deg with No Ice (Reduced DL)	80.00	0.151	-0.0344	0.1407	0.1438
97 mph 90 deg with No Ice (Reduced DL)	100.00	0.206	-0.0497	0.1821	0.1876
97 mph 90 deg with No Ice (Reduced DL)	120.00	0.277	-0.0632	0.1981	0.2049
97 mph 90 deg with No Ice (Reduced DL)	130.00	0.311	-0.0691	0.1935	0.2023
97 mph 90 deg with No Ice (Reduced DL)	140.00	0.346	-0.0762	0.2066	0.2164
97 mph 90 deg with No Ice (Reduced DL)	160.00	0.422	-0.0891	0.2128	0.2263
97 mph 90 deg with No Ice (Reduced DL)	180.00	0.496	-0.1014	0.2102	0.2289
97 mph 90 deg with No Ice (Reduced DL)	200.00	0.569	-0.1135	0.2064	0.2305
97 mph 90 deg with No Ice (Reduced DL)	220.00	0.641	-0.1256	0.2034	0.2340
97 mph 90 deg with No Ice (Reduced DL)	226.67	0.664	-0.1296	0.2015	0.2351
97 mph 90 deg with No Ice (Reduced DL)	233.33	0.688	-0.1336	0.2016	0.2372
97 mph 90 deg with No Ice (Reduced DL)	240.00	0.711	-0.1362	0.1766	0.2174
50 mph Normal with 0.75 in Radial Ice	80.00	0.061	0.0098	0.0561	0.0569
50 mph Normal with 0.75 in Radial Ice	100.00	0.082	0.0153	0.0718	0.0734
50 mph Normal with 0.75 in Radial Ice	120.00	0.109	0.0216	0.0765	0.0795
50 mph Normal with 0.75 in Radial Ice	130.00	0.122	0.0250	0.0744	0.0785
50 mph Normal with 0.75 in Radial Ice	140.00	0.135	0.0279	0.0791	0.0839
50 mph Normal with 0.75 in Radial Ice	160.00	0.162	0.0343	0.0816	0.0885
50 mph Normal with 0.75 in Radial Ice	180.00	0.190	0.0408	0.0814	0.0910
50 mph Normal with 0.75 in Radial Ice	200.00	0.217	0.0474	0.0806	0.0935
50 mph Normal with 0.75 in Radial Ice	220.00	0.244	0.0540	0.0800	0.0966
50 mph Normal with 0.75 in Radial Ice	226.67	0.253	0.0563	0.0795	0.0974
50 mph Normal with 0.75 in Radial Ice	233.33	0.261	0.0586	0.0776	0.0972
50 mph Normal with 0.75 in Radial Ice	240.00	0.270	0.0600	0.0930	0.1107
50 mph 60 deg with 0.75 in Radial Ice	80.00	0.062	-0.0161	0.0555	0.0571
50 mph 60 deg with 0.75 in Radial Ice	100.00	0.083	-0.0235	0.0702	0.0730
50 mph 60 deg with 0.75 in Radial Ice	120.00	0.110	-0.0302	0.0749	0.0795
50 mph 60 deg with 0.75 in Radial Ice	130.00	0.122	-0.0333	0.0726	0.0785
50 mph 60 deg with 0.75 in Radial Ice	140.00	0.135	-0.0368	0.0770	0.0839
50 mph 60 deg with 0.75 in Radial Ice	160.00	0.163	-0.0434	0.0791	0.0886
50 mph 60 deg with 0.75 in Radial Ice	180.00	0.190	-0.0498	0.0780	0.0909
50 mph 60 deg with 0.75 in Radial Ice	200.00	0.216	-0.0562	0.0770	0.0937
50 mph 60 deg with 0.75 in Radial Ice	220.00	0.243	-0.0626	0.0761	0.0970
50 mph 60 deg with 0.75 in Radial Ice	226.67	0.251	-0.0648	0.0753	0.0978
50 mph 60 deg with 0.75 in Radial Ice	233.33	0.260	-0.0669	0.0755	0.0994
50 mph 60 deg with 0.75 in Radial Ice	240.00	0.268	-0.0683	0.0700	0.0963
50 mph 90 deg with 0.75 in Radial Ice	80.00	0.062	-0.0190	0.0552	0.0567
50 mph 90 deg with 0.75 in Radial Ice	100.00	0.083	-0.0277	0.0699	0.0739
50 mph 90 deg with 0.75 in Radial Ice	120.00	0.110	-0.0357	0.0743	0.0805
50 mph 90 deg with 0.75 in Radial Ice	130.00	0.122	-0.0393	0.0719	0.0797
50 mph 90 deg with 0.75 in Radial Ice	140.00	0.135	-0.0435	0.0762	0.0854
50 mph 90 deg with 0.75 in Radial Ice	160.00	0.163	-0.0513	0.0781	0.0908
50 mph 90 deg with 0.75 in Radial Ice	180.00	0.190	-0.0589	0.0769	0.0944
50 mph 90 deg with 0.75 in Radial Ice	200.00	0.216	-0.0665	0.0757	0.0980
50 mph 90 deg with 0.75 in Radial Ice	220.00	0.243	-0.0741	0.0747	0.1027
50 mph 90 deg with 0.75 in Radial Ice	226.67	0.251	-0.0766	0.0739	0.1044
50 mph 90 deg with 0.75 in Radial Ice	233.33	0.260	-0.0792	0.0749	0.1066
50 mph 90 deg with 0.75 in Radial Ice	240.00	0.268	-0.0808	0.0598	0.0977
Seismic Normal M1	80.00	0.011	0.0007	0.0123	0.0123
Seismic Normal M1	100.00	0.016	0.0010	0.0165	0.0165
Seismic Normal M1	120.00	0.022	0.0012	0.0189	0.0190
Seismic Normal M1	130.00	0.025	0.0012	0.0191	0.0192
Seismic Normal M1	140.00	0.029	0.0013	0.0207	0.0207
Seismic Normal M1	160.00	0.036	0.0014	0.0223	0.0223
Seismic Normal M1	180.00	0.044	0.0014	0.0230	0.0230
Seismic Normal M1	200.00	0.052	0.0014	0.0230	0.0231
Seismic Normal M1	220.00	0.060	0.0014	0.0224	0.0224

Seismic Normal M1	226.67	0.063	0.0014	0.0221	0.0221
Seismic Normal M1	233.33	0.065	0.0014	0.0216	0.0216
Seismic Normal M1	240.00	0.068	0.0014	0.0214	0.0214
Seismic Normal M2	80.00	0.007	0.0004	0.0079	0.0079
Seismic Normal M2	100.00	0.010	0.0006	0.0106	0.0106
Seismic Normal M2	120.00	0.014	0.0007	0.0127	0.0127
Seismic Normal M2	130.00	0.016	0.0008	0.0132	0.0132
Seismic Normal M2	140.00	0.019	0.0008	0.0144	0.0144
Seismic Normal M2	160.00	0.024	0.0009	0.0161	0.0161
Seismic Normal M2	180.00	0.030	0.0010	0.0174	0.0174
Seismic Normal M2	200.00	0.036	0.0011	0.0182	0.0182
Seismic Normal M2	220.00	0.042	0.0010	0.0181	0.0182
Seismic Normal M2	226.67	0.044	0.0010	0.0179	0.0179
Seismic Normal M2	233.33	0.046	0.0010	0.0172	0.0172
Seismic Normal M2	240.00	0.048	0.0010	0.0169	0.0169
Seismic 60 deg M1	80.00	0.011	-0.0007	0.0124	0.0124
Seismic 60 deg M1	100.00	0.016	-0.0010	0.0165	0.0165
Seismic 60 deg M1	120.00	0.022	-0.0012	0.0190	0.0190
Seismic 60 deg M1	130.00	0.025	-0.0012	0.0192	0.0192
Seismic 60 deg M1	140.00	0.029	-0.0013	0.0208	0.0208
Seismic 60 deg M1	160.00	0.036	-0.0014	0.0224	0.0224
Seismic 60 deg M1	180.00	0.044	-0.0014	0.0230	0.0230
Seismic 60 deg M1	200.00	0.052	-0.0014	0.0232	0.0232
Seismic 60 deg M1	220.00	0.060	-0.0014	0.0225	0.0225
Seismic 60 deg M1	226.67	0.063	-0.0014	0.0221	0.0221
Seismic 60 deg M1	233.33	0.065	-0.0014	0.0217	0.0217
Seismic 60 deg M1	240.00	0.068	-0.0014	0.0216	0.0216
Seismic 60 deg M2	80.00	0.007	-0.0004	0.0080	0.0080
Seismic 60 deg M2	100.00	0.010	-0.0006	0.0107	0.0107
Seismic 60 deg M2	120.00	0.014	-0.0007	0.0127	0.0127
Seismic 60 deg M2	130.00	0.016	-0.0008	0.0132	0.0132
Seismic 60 deg M2	140.00	0.018	-0.0008	0.0144	0.0144
Seismic 60 deg M2	160.00	0.024	-0.0009	0.0162	0.0162
Seismic 60 deg M2	180.00	0.030	-0.0010	0.0174	0.0174
Seismic 60 deg M2	200.00	0.036	-0.0011	0.0183	0.0183
Seismic 60 deg M2	220.00	0.042	-0.0010	0.0182	0.0182
Seismic 60 deg M2	226.67	0.044	-0.0010	0.0179	0.0179
Seismic 60 deg M2	233.33	0.046	-0.0010	0.0173	0.0173
Seismic 60 deg M2	240.00	0.048	-0.0010	0.0171	0.0171
Seismic 90 deg M1	80.00	0.011	-0.0008	0.0124	0.0124
Seismic 90 deg M1	100.00	0.016	-0.0011	0.0165	0.0165
Seismic 90 deg M1	120.00	0.022	-0.0013	0.0190	0.0190
Seismic 90 deg M1	130.00	0.025	-0.0014	0.0192	0.0192
Seismic 90 deg M1	140.00	0.029	-0.0015	0.0208	0.0208
Seismic 90 deg M1	160.00	0.036	-0.0016	0.0224	0.0224
Seismic 90 deg M1	180.00	0.044	-0.0017	0.0230	0.0230
Seismic 90 deg M1	200.00	0.052	-0.0017	0.0231	0.0232
Seismic 90 deg M1	220.00	0.060	-0.0016	0.0225	0.0225
Seismic 90 deg M1	226.67	0.063	-0.0016	0.0221	0.0221
Seismic 90 deg M1	233.33	0.065	-0.0016	0.0217	0.0217
Seismic 90 deg M1	240.00	0.068	-0.0016	0.0215	0.0215
Seismic 90 deg M2	80.00	0.007	-0.0005	0.0080	0.0080
Seismic 90 deg M2	100.00	0.010	-0.0007	0.0107	0.0107
Seismic 90 deg M2	120.00	0.014	-0.0008	0.0127	0.0127
Seismic 90 deg M2	130.00	0.016	-0.0009	0.0132	0.0132
Seismic 90 deg M2	140.00	0.018	-0.0010	0.0144	0.0144
Seismic 90 deg M2	160.00	0.024	-0.0011	0.0162	0.0162
Seismic 90 deg M2	180.00	0.030	-0.0012	0.0174	0.0174
Seismic 90 deg M2	200.00	0.036	-0.0012	0.0183	0.0183
Seismic 90 deg M2	220.00	0.042	-0.0012	0.0182	0.0182
Seismic 90 deg M2	226.67	0.044	-0.0012	0.0179	0.0179
Seismic 90 deg M2	233.33	0.046	-0.0012	0.0173	0.0173

Seismic 90 deg M2	240.00	0.048	-0.0011	0.0170	0.0170
Seismic (Reduced DL) Normal M1	80.00	0.011	0.0007	0.0122	0.0123
Seismic (Reduced DL) Normal M1	100.00	0.016	0.0010	0.0164	0.0165
Seismic (Reduced DL) Normal M1	120.00	0.022	0.0012	0.0189	0.0189
Seismic (Reduced DL) Normal M1	130.00	0.025	0.0012	0.0191	0.0191
Seismic (Reduced DL) Normal M1	140.00	0.029	0.0013	0.0207	0.0207
Seismic (Reduced DL) Normal M1	160.00	0.036	0.0014	0.0222	0.0223
Seismic (Reduced DL) Normal M1	180.00	0.044	0.0014	0.0229	0.0230
Seismic (Reduced DL) Normal M1	200.00	0.052	0.0014	0.0229	0.0230
Seismic (Reduced DL) Normal M1	220.00	0.060	0.0014	0.0223	0.0224
Seismic (Reduced DL) Normal M1	226.67	0.063	0.0014	0.0221	0.0221
Seismic (Reduced DL) Normal M1	233.33	0.065	0.0014	0.0215	0.0216
Seismic (Reduced DL) Normal M1	240.00	0.068	0.0014	0.0213	0.0213
Seismic (Reduced DL) Normal M2	80.00	0.007	0.0004	0.0078	0.0078
Seismic (Reduced DL) Normal M2	100.00	0.010	0.0006	0.0106	0.0106
Seismic (Reduced DL) Normal M2	120.00	0.014	0.0007	0.0126	0.0126
Seismic (Reduced DL) Normal M2	130.00	0.016	0.0008	0.0131	0.0131
Seismic (Reduced DL) Normal M2	140.00	0.018	0.0008	0.0143	0.0143
Seismic (Reduced DL) Normal M2	160.00	0.024	0.0009	0.0160	0.0161
Seismic (Reduced DL) Normal M2	180.00	0.030	0.0010	0.0173	0.0174
Seismic (Reduced DL) Normal M2	200.00	0.036	0.0011	0.0182	0.0182
Seismic (Reduced DL) Normal M2	220.00	0.042	0.0010	0.0181	0.0181
Seismic (Reduced DL) Normal M2	226.67	0.044	0.0010	0.0179	0.0179
Seismic (Reduced DL) Normal M2	233.33	0.046	0.0010	0.0171	0.0172
Seismic (Reduced DL) Normal M2	240.00	0.048	0.0010	0.0168	0.0169
Seismic (Reduced DL) 60 deg M1	80.00	0.011	-0.0007	0.0123	0.0123
Seismic (Reduced DL) 60 deg M1	100.00	0.016	-0.0010	0.0164	0.0164
Seismic (Reduced DL) 60 deg M1	120.00	0.022	-0.0012	0.0189	0.0189
Seismic (Reduced DL) 60 deg M1	130.00	0.025	-0.0012	0.0191	0.0191
Seismic (Reduced DL) 60 deg M1	140.00	0.029	-0.0013	0.0207	0.0207
Seismic (Reduced DL) 60 deg M1	160.00	0.036	-0.0014	0.0223	0.0223
Seismic (Reduced DL) 60 deg M1	180.00	0.044	-0.0014	0.0230	0.0230
Seismic (Reduced DL) 60 deg M1	200.00	0.052	-0.0014	0.0231	0.0231
Seismic (Reduced DL) 60 deg M1	220.00	0.060	-0.0014	0.0224	0.0224
Seismic (Reduced DL) 60 deg M1	226.67	0.063	-0.0014	0.0221	0.0221
Seismic (Reduced DL) 60 deg M1	233.33	0.065	-0.0014	0.0216	0.0216
Seismic (Reduced DL) 60 deg M1	240.00	0.068	-0.0014	0.0214	0.0214
Seismic (Reduced DL) 60 deg M2	80.00	0.007	-0.0004	0.0079	0.0079
Seismic (Reduced DL) 60 deg M2	100.00	0.010	-0.0006	0.0106	0.0106
Seismic (Reduced DL) 60 deg M2	120.00	0.014	-0.0007	0.0127	0.0127
Seismic (Reduced DL) 60 deg M2	130.00	0.016	-0.0008	0.0131	0.0131
Seismic (Reduced DL) 60 deg M2	140.00	0.018	-0.0008	0.0144	0.0144
Seismic (Reduced DL) 60 deg M2	160.00	0.024	-0.0009	0.0161	0.0161
Seismic (Reduced DL) 60 deg M2	180.00	0.030	-0.0010	0.0174	0.0174
Seismic (Reduced DL) 60 deg M2	200.00	0.036	-0.0011	0.0183	0.0183
Seismic (Reduced DL) 60 deg M2	220.00	0.042	-0.0010	0.0182	0.0182
Seismic (Reduced DL) 60 deg M2	226.67	0.044	-0.0010	0.0178	0.0178
Seismic (Reduced DL) 60 deg M2	233.33	0.046	-0.0010	0.0172	0.0172
Seismic (Reduced DL) 60 deg M2	240.00	0.048	-0.0010	0.0170	0.0170
Seismic (Reduced DL) 90 deg M1	80.00	0.011	-0.0008	0.0123	0.0123
Seismic (Reduced DL) 90 deg M1	100.00	0.016	-0.0011	0.0164	0.0164
Seismic (Reduced DL) 90 deg M1	120.00	0.022	-0.0013	0.0189	0.0189
Seismic (Reduced DL) 90 deg M1	130.00	0.025	-0.0014	0.0191	0.0191
Seismic (Reduced DL) 90 deg M1	140.00	0.029	-0.0015	0.0207	0.0207
Seismic (Reduced DL) 90 deg M1	160.00	0.036	-0.0016	0.0223	0.0223
Seismic (Reduced DL) 90 deg M1	180.00	0.044	-0.0017	0.0230	0.0230
Seismic (Reduced DL) 90 deg M1	200.00	0.052	-0.0017	0.0231	0.0231
Seismic (Reduced DL) 90 deg M1	220.00	0.060	-0.0016	0.0224	0.0224
Seismic (Reduced DL) 90 deg M1	226.67	0.063	-0.0016	0.0220	0.0221
Seismic (Reduced DL) 90 deg M1	233.33	0.065	-0.0016	0.0216	0.0216
Seismic (Reduced DL) 90 deg M1	240.00	0.068	-0.0016	0.0214	0.0214
Seismic (Reduced DL) 90 deg M2	80.00	0.007	-0.0005	0.0079	0.0079

Seismic (Reduced DL) 90 deg M2	100.00	0.010	-0.0007	0.0106	0.0106
Seismic (Reduced DL) 90 deg M2	120.00	0.014	-0.0008	0.0126	0.0127
Seismic (Reduced DL) 90 deg M2	130.00	0.016	-0.0009	0.0131	0.0131
Seismic (Reduced DL) 90 deg M2	140.00	0.018	-0.0010	0.0144	0.0144
Seismic (Reduced DL) 90 deg M2	160.00	0.024	-0.0011	0.0161	0.0161
Seismic (Reduced DL) 90 deg M2	180.00	0.030	-0.0012	0.0173	0.0174
Seismic (Reduced DL) 90 deg M2	200.00	0.036	-0.0012	0.0182	0.0182
Seismic (Reduced DL) 90 deg M2	220.00	0.042	-0.0012	0.0182	0.0182
Seismic (Reduced DL) 90 deg M2	226.67	0.044	-0.0012	0.0178	0.0178
Seismic (Reduced DL) 90 deg M2	233.33	0.046	-0.0012	0.0172	0.0172
Seismic (Reduced DL) 90 deg M2	240.00	0.048	-0.0011	0.0169	0.0169
Serviceability - 60 mph Wind Normal	80.00	0.037	0.0028	0.0351	0.0352
Serviceability - 60 mph Wind Normal	100.00	0.051	0.0046	0.0456	0.0458
Serviceability - 60 mph Wind Normal	120.00	0.068	0.0068	0.0494	0.0499
Serviceability - 60 mph Wind Normal	130.00	0.076	0.0081	0.0485	0.0491
Serviceability - 60 mph Wind Normal	140.00	0.085	0.0091	0.0517	0.0525
Serviceability - 60 mph Wind Normal	160.00	0.103	0.0115	0.0535	0.0547
Serviceability - 60 mph Wind Normal	180.00	0.122	0.0139	0.0532	0.0550
Serviceability - 60 mph Wind Normal	200.00	0.140	0.0164	0.0525	0.0550
Serviceability - 60 mph Wind Normal	220.00	0.157	0.0190	0.0518	0.0552
Serviceability - 60 mph Wind Normal	226.67	0.163	0.0199	0.0514	0.0551
Serviceability - 60 mph Wind Normal	233.33	0.169	0.0207	0.0504	0.0545
Serviceability - 60 mph Wind Normal	240.00	0.175	0.0213	0.0562	0.0601
Serviceability - 60 mph Wind 60 deg	80.00	0.037	-0.0071	0.0348	0.0351
Serviceability - 60 mph Wind 60 deg	100.00	0.051	-0.0102	0.0449	0.0455
Serviceability - 60 mph Wind 60 deg	120.00	0.068	-0.0129	0.0489	0.0499
Serviceability - 60 mph Wind 60 deg	130.00	0.076	-0.0141	0.0478	0.0491
Serviceability - 60 mph Wind 60 deg	140.00	0.085	-0.0156	0.0511	0.0526
Serviceability - 60 mph Wind 60 deg	160.00	0.103	-0.0182	0.0527	0.0548
Serviceability - 60 mph Wind 60 deg	180.00	0.121	-0.0207	0.0520	0.0550
Serviceability - 60 mph Wind 60 deg	200.00	0.139	-0.0232	0.0512	0.0551
Serviceability - 60 mph Wind 60 deg	220.00	0.157	-0.0256	0.0505	0.0554
Serviceability - 60 mph Wind 60 deg	226.67	0.163	-0.0265	0.0500	0.0555
Serviceability - 60 mph Wind 60 deg	233.33	0.169	-0.0273	0.0498	0.0555
Serviceability - 60 mph Wind 60 deg	240.00	0.174	-0.0278	0.0471	0.0534
Serviceability - 60 mph Wind 90 deg	80.00	0.037	-0.0083	0.0346	0.0352
Serviceability - 60 mph Wind 90 deg	100.00	0.051	-0.0119	0.0448	0.0459
Serviceability - 60 mph Wind 90 deg	120.00	0.068	-0.0151	0.0486	0.0501
Serviceability - 60 mph Wind 90 deg	130.00	0.076	-0.0165	0.0475	0.0494
Serviceability - 60 mph Wind 90 deg	140.00	0.085	-0.0182	0.0507	0.0528
Serviceability - 60 mph Wind 90 deg	160.00	0.103	-0.0213	0.0522	0.0552
Serviceability - 60 mph Wind 90 deg	180.00	0.121	-0.0242	0.0516	0.0558
Serviceability - 60 mph Wind 90 deg	200.00	0.139	-0.0271	0.0506	0.0562
Serviceability - 60 mph Wind 90 deg	220.00	0.157	-0.0300	0.0499	0.0569
Serviceability - 60 mph Wind 90 deg	226.67	0.163	-0.0309	0.0494	0.0572
Serviceability - 60 mph Wind 90 deg	233.33	0.168	-0.0319	0.0494	0.0576
Serviceability - 60 mph Wind 90 deg	240.00	0.174	-0.0325	0.0435	0.0528

Maximum Reactions Summary

	Vertical (kip)				Horizontal (kip)		Moment (kip-ft)	
Anchor Group	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	111.65	273.41	373.38	53.73	90.25	35.76	11742.14	4547.72

AMERICAN TOWER®
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Antenna Mount Analysis Report

ATC Site Name	:	**Tartaglia, CT**
ATC Site Number	:	**383598**
Engineering Number	:	**12991762_C9_07**
Mount Elevation	:	**154 ft**
Carrier	:	**Verizon Wireless**
Carrier Site Name	:	**N BRIDGEPORT CT**
Carrier Site Number	:	**467325**
Site Location	:	**1000 Trumbull Avenue** **Bridgeport, CT 6606** **41.2196 , -73.20128611**
County	:	**Fairfield**
Date	:	**March 3, 2020**
Max Usage	:	**63%**
Result	:	**Contingent Pass**

Prepared By:
Trevor Ridilla
Structural Engineer I

Reviewed By:

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32593
LICENSED PROFESSIONAL ENGINEER

COA: PEC.0001553

Authorized by "EOR"
07 May 2020 06:08:59

Table of Contents

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Verizon Wireless at 154 ft.

Supporting Documents

Mount Mapping	Infinigy Project # 1009-Z0003-H/317-505, dated November 15, 2019
Radio Frequency Data Sheet	RFDS ID #467325, dated November 13, 2019
Reference Photos	Site photos from 2019

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4'' radial ice concurrent
Codes:	ANSI/TIA-222-G/ 2015 IBC/ 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.207, S1 = 0.065
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount does not meet the requirements per the applicable codes listed above. The mount can support the equipment as described in this report after the below listed modifications are completed:

- Refer to ATC Modification Drawing #12991762_C9_07

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

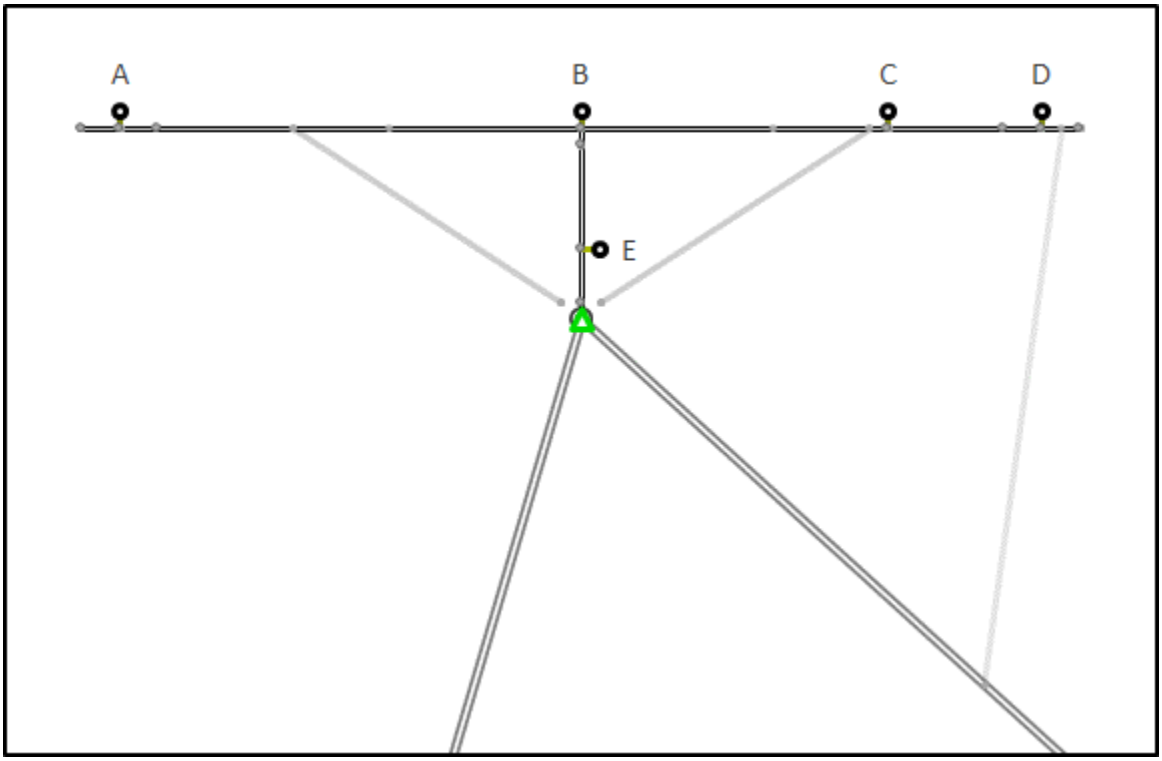
Application Loading

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
154.0	155.0	3	Samsung Outdoor LAA 1W RRH –Clip-on Antenna
		6	Commscope JAHH-65B-R3B
		3	Amphenol Antel BXA-80063-6BF-EDIN-X
		3	Commscope CBC78T-DS-43-2X
		2	Raycap RxxDC-3315-PF-48
		3	Samsung B2/B66A RRH-BR049
		3	Samsung B5/B13 RRH-BR04C
		3	Samsung Outdoor CBRS 20W RRH

Structure Usages

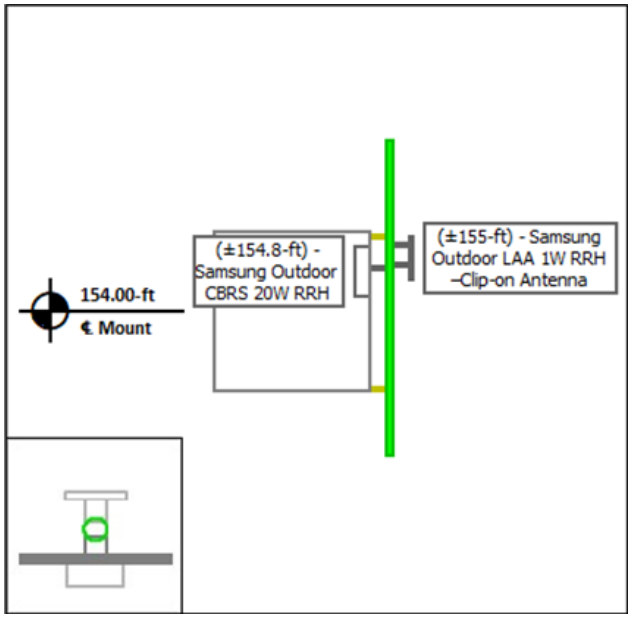
Structural Component	Controlling Usage	Pass/Fail
Horizontals	63%	Pass
Verticals	20%	Pass
Diagonals	20%	Pass
Tie-Backs	10%	Pass
Mount Pipes	31%	Pass
Mod-Kit	32%	Pass

Mount Layout

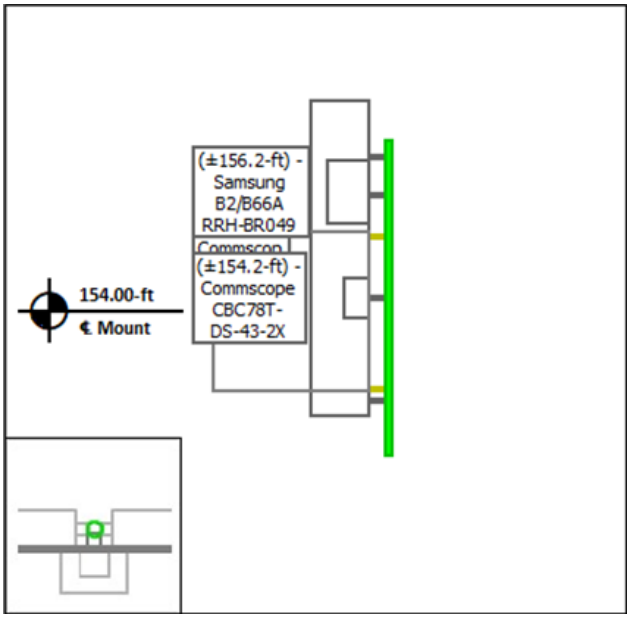


Equipment Layout

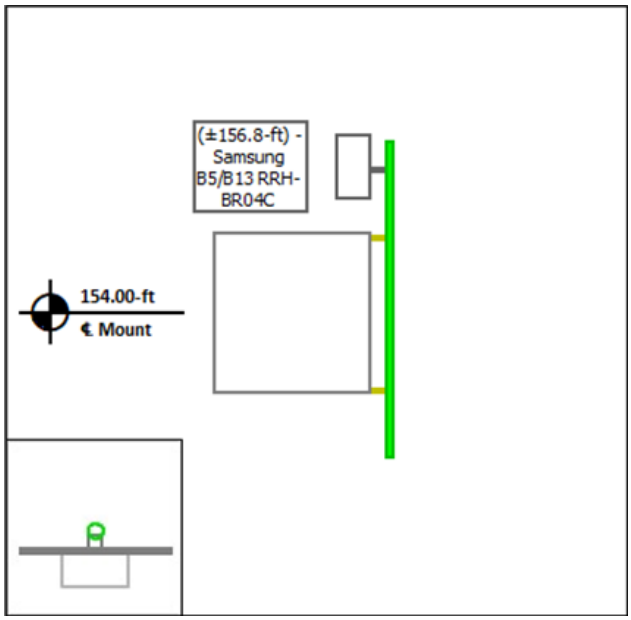
Mount Pipe A



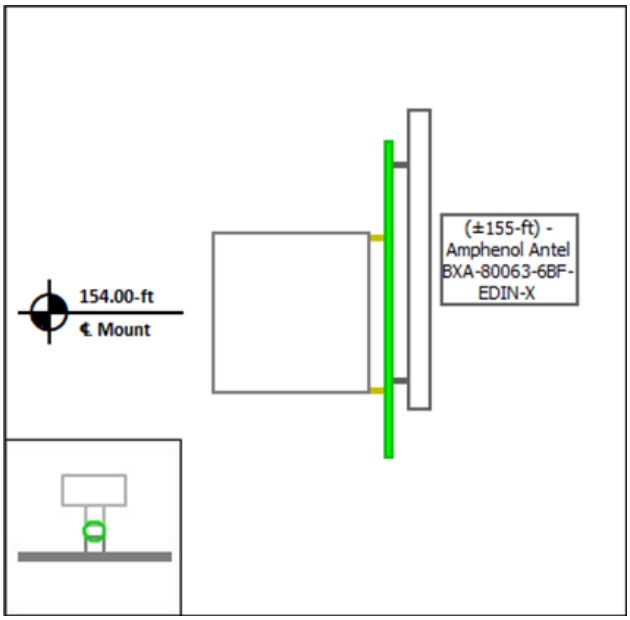
Mount Pipe B



Mount Pipe C

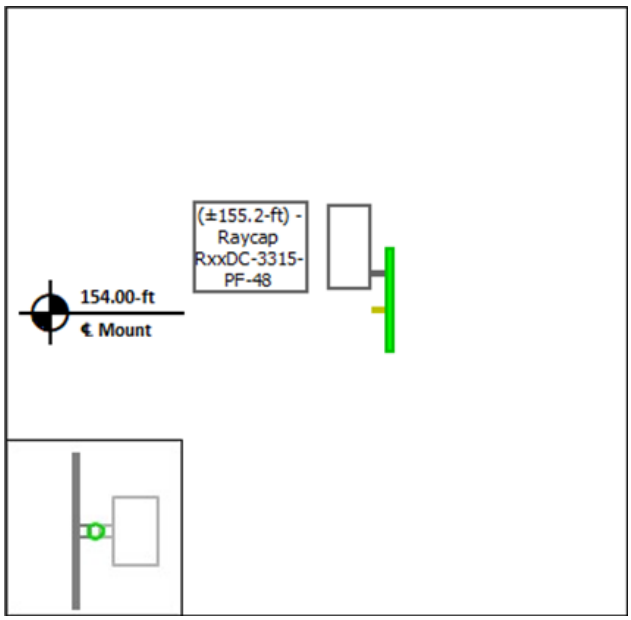


Mount Pipe D



Equipment Layout Cont'd.

Mount Pipe E



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

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Site Number:	*383598*
Project Number:	*12991762_C9_07*
Carrier:	*Verizon Wireless*
Mount Elevation:	*154 ft*
Date:	3/3/2020

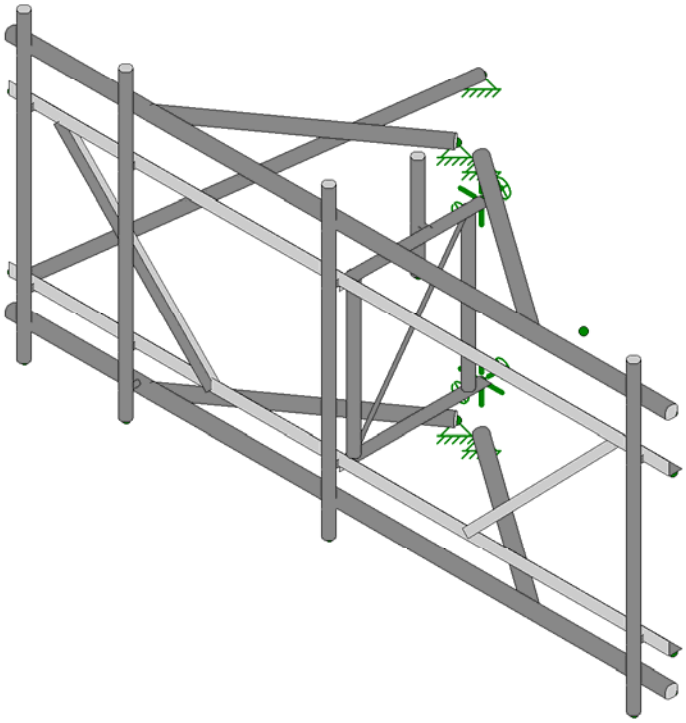
Mount Analysis Force Calculations

Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.39	
Topographic Factor	K_{zt}	1.00	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	1.00	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	97	mph
Velocity Pressure	q_z	31.7	psf
Height Escalation Factor	K_{iz}	1.17	
Thickness of Radial Glaze Ice	T_{iz}	1.75	in

Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.221	
1 Second DSRAP	S_{D1}	0.104	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_S	0.110	
Amplification Factor	A	3.0	
Total Weight	W	412.4	lbs
Total Shear Force	V_S	45.5	lbs
Horizontal Seismic Load	Eh	136.6	lbs
Vertical Seismic Load	Ev	54.6	lbs

Antenna Calculations

Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
Samsung Outdoor LAA 1W RRH –Clip-on Antenna	10.7	9.1	1.2	4.4	0.81	0.08	1.49	0.39
Commscope JAHH-65B-R3B	72.0	13.8	8.2	60.6	9.11	2.46	11.98	3.68
Amphenol Antel BXA-80063-6BF-EDIN-X	68.6	11.2	5.3	19.2	7.26	1.99	10.02	3.47
Commscope CBC78T-DS-43-2X	9.6	6.9	6.4	20.7	0.55	0.51	1.14	1.08
Raycap RxxDC-3315-PF-48	19.2	15.7	10.3	21.4	2.51	1.65	3.63	2.61
Samsung B2/B66A RRH-BR049	15.0	15.0	10.0	84.4	1.88	1.25	2.85	2.08
Samsung B5/B13 RRH-BR04C	15.0	15.0	8.1	70.3	1.88	1.01	2.85	1.79
Samsung Outdoor CBRS 20W RRH	12.1	8.5	4.1	18.6	0.86	0.42	1.56	1.00



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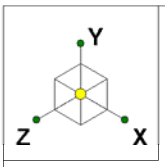

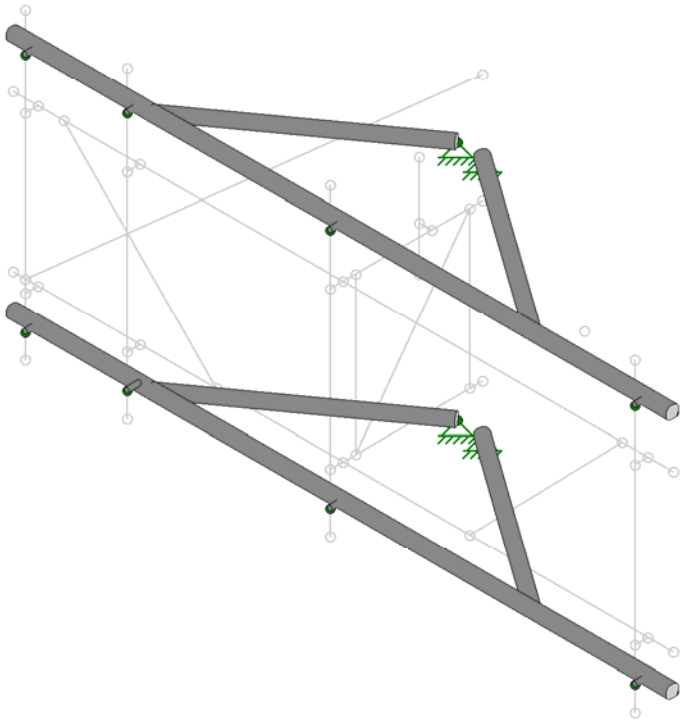

American Tower Corp.		SK - 8
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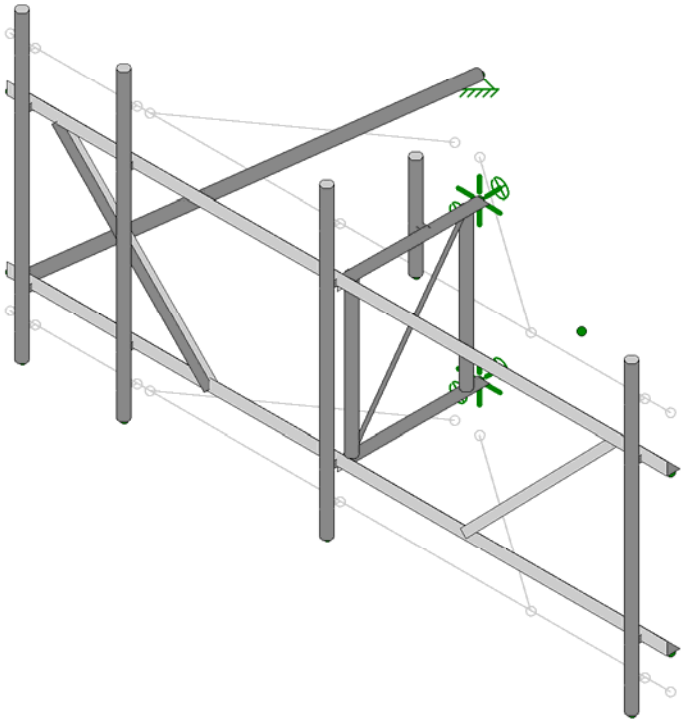

American Tower Corp.		SK - 9
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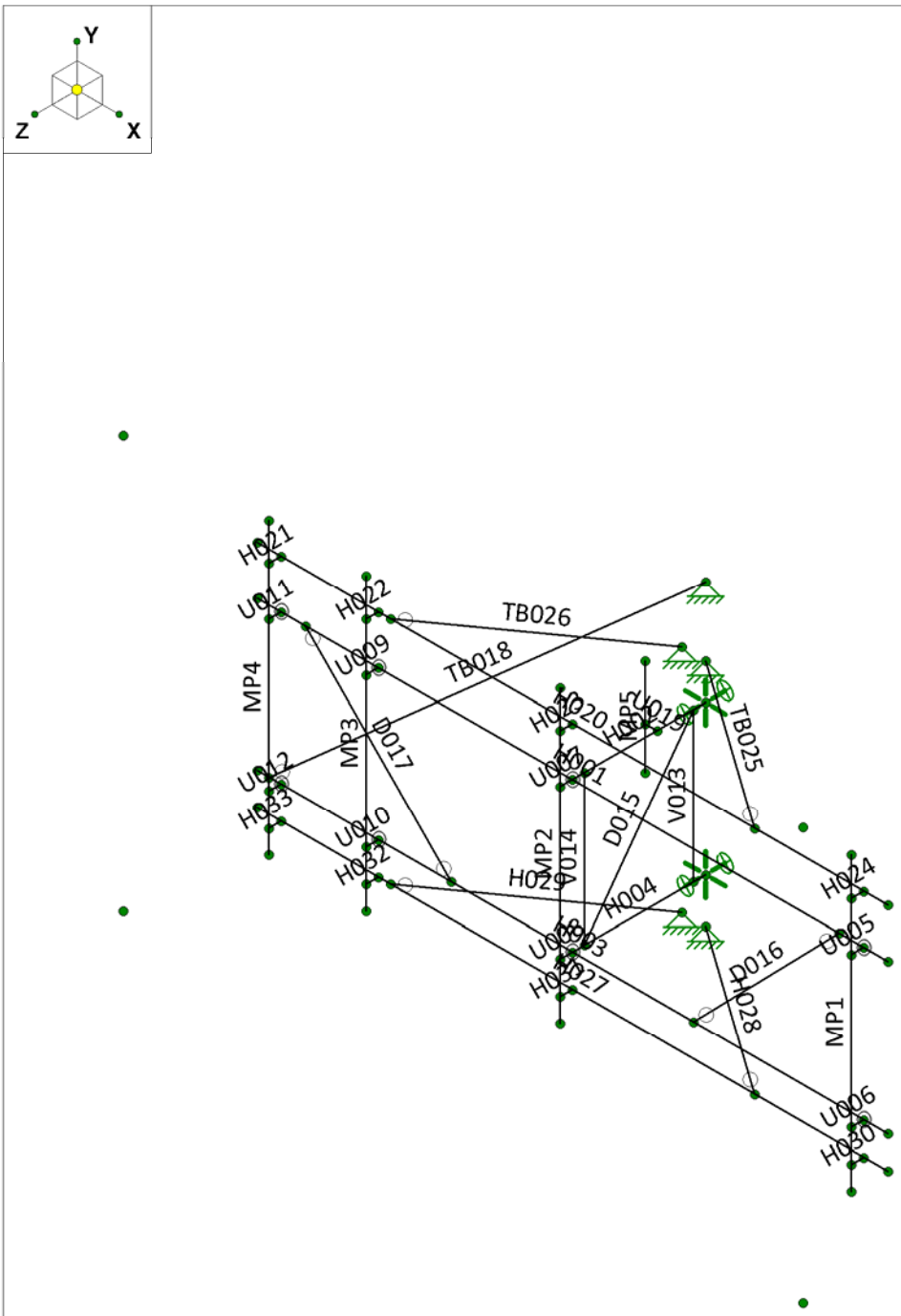

American Tower Corp.		SK - 10
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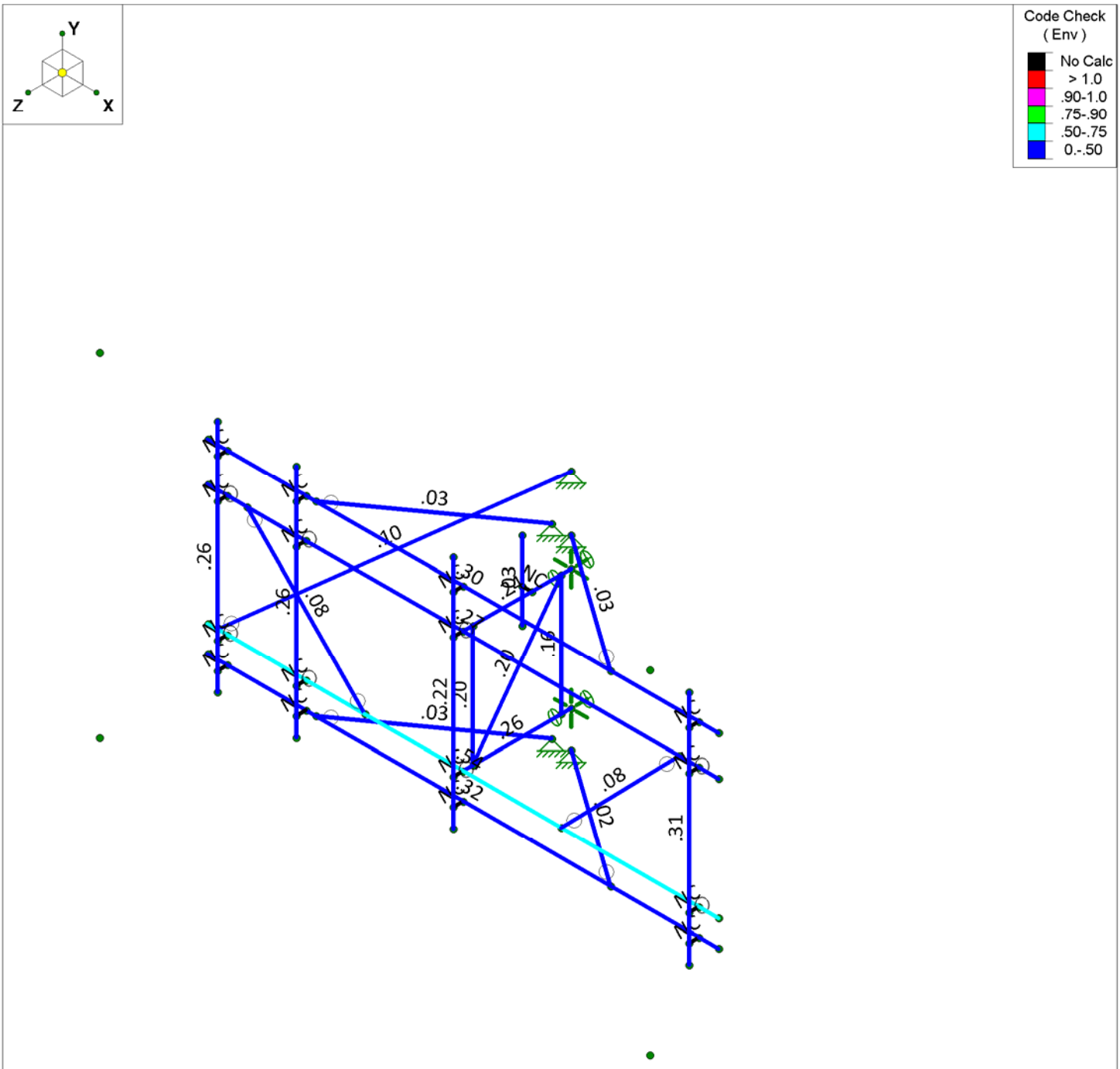
12991762_C9_07	Member Labels	R3D. VERIZON WIRELESS @ 383...



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.4D

American Tower Corp.		SK - 11
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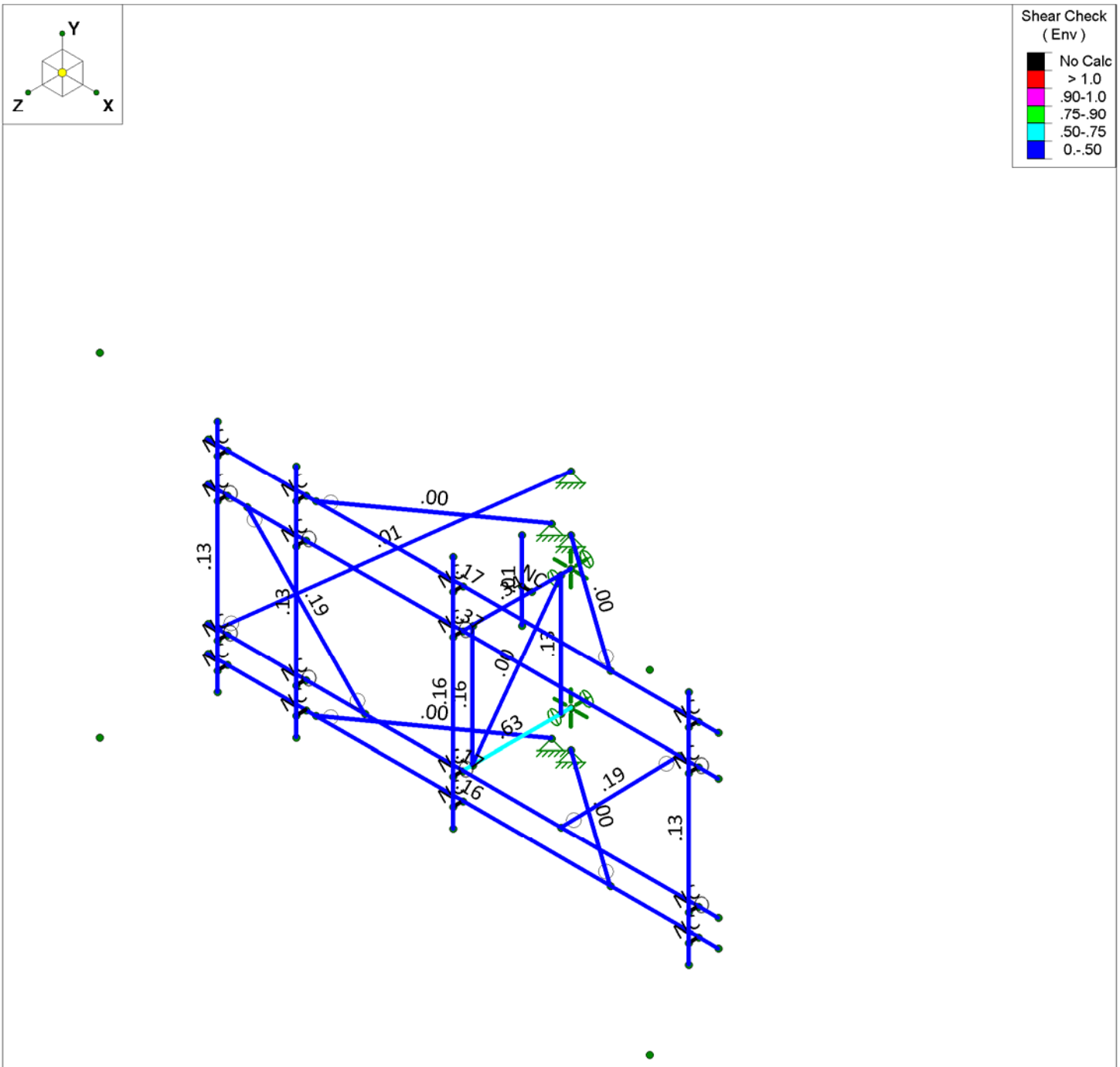
12991762_C9_07	Unity Bending Checks	R3D. VERIZON WIRELESS @ 383...



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.4D

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12991762_C9_07	Shear Checks	R3D. VERIZON WIRELESS @ 383...

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N001	84	84	84	0	
2	N002	162	84	117	0	
3	N003	6	84	117	0	
4	N004	84	84	117	0	
5	N005	84	47	84	0	
6	N006	162	47	117	0	
7	N007	6	47	117	0	
8	N008	84	47	117	0	
9	N009	156	84	120	0	
10	N010	156	84	117	0	
11	N011	156	47	120	0	
12	N012	156	47	117	0	
13	N013	84	84	120	0	
14	N014	36	84	120	0	
15	N015	12	84	120	0	
16	N016	84	47	120	0	
17	N017	36	84	117	0	
18	N018	36	47	120	0	
19	N019	36	47	117	0	
20	N020	12	84	117	0	
21	N021	12	47	120	0	
22	N022	12	47	117	0	
23	N023	84	84	87	0	
24	N024	84	84	114	0	
25	N025	84	47	87	0	
26	N026	84	47	114	0	
27	N027	114	47	117	0	
28	N028	150	84	117	0	
29	N029	18	84	117	0	
30	N030	54	47	117	0	
31	N031	9	47	117	0	
32	N032	21	47	21	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
33	N033	81	84	96	0	
34	N034	84	84	96	0	
35	N035	162	96	117	0	
36	N036	6	96	117	0	
37	N037	156	96	117	0	
38	N038	156	96	120	0	
39	N039	84	96	117	0	
40	N040	84	96	120	0	
41	N041	36	96	117	0	
42	N042	36	96	120	0	
43	N043	12	96	117	0	
44	N044	12	96	120	0	
45	N045	39	96	117	0	
46	N046	129	96	117	0	
47	N047	87	96	87	0	
48	N048	81	96	87	0	
49	N049	162	39	117	0	
50	N050	6	39	117	0	
51	N051	156	39	117	0	
52	N052	156	39	120	0	
53	N053	84	39	117	0	
54	N054	84	39	120	0	
55	N055	36	39	117	0	
56	N056	36	39	120	0	
57	N057	12	39	117	0	
58	N058	12	39	120	0	
59	N059	129	39	117	0	
60	N060	39	39	117	0	
61	N061	87	39	87	0	
62	N062	81	39	87	0	
63	MP1t	156	105.25	120	0	
64	MP1b	156	33.25	120	0	
65	MP2t	84	105.25	120	0	
66	MP2b	84	33.25	120	0	
67	MP3t	36	105.25	120	0	
68	MP3b	36	33.25	120	0	
69	MP4t	12	105.25	120	0	
70	MP4b	12	33.25	120	0	
71	MP5t	81	97.5	96	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
72	MP5b	81	73.5	96	0	
73	NAL1	0	129.25	144	0	
74	NAL2	0	27.25	144	0	
75	NAL3	168	129.25	144	0	
76	NAL4	168	27.25	144	0	
77	NAL5	168	129.25	-3	0	
78	NAL6	168	27.25	-3	0	

Joint Boundary Conditions

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-in/rad]	Y Rot.[k-in/rad]	Z Rot.[k-in/rad]
1	N032	Reaction	Reaction	Reaction			
2	N047	Reaction	Reaction	Reaction			
3	N048	Reaction	Reaction	Reaction			
4	N061	Reaction	Reaction	Reaction			
5	N062	Reaction	Reaction	Reaction			
6	N001	Reaction	Reaction	Reaction			Reaction
7	N005	Reaction	Reaction	Reaction			Reaction

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rules
1	H001	N002	N003			L3x3x4	Beam	None	A36	Typical
2	H002	N001	N004		180	L3x3x6	Beam	None	A36	Typical
3	H003	N006	N007			L3x3x4	Beam	None	A36	Typical
4	H004	N005	N008		180	L3x3x6	Beam	None	A36	Typical
5	U005	N009	N010			(1) 1/2 U-Bolt	Beam	None	A36	Typical
6	U006	N011	N012			(1) 1/2 U-Bolt	Beam	None	A36	Typical
7	U007	N013	N004			(1) 1/2 U-Bolt	Beam	None	A36	Typical
8	U008	N016	N008			(1) 1/2 U-Bolt	Beam	None	A36	Typical
9	U009	N014	N017			(1) 1/2 U-Bolt	Beam	None	A36	Typical
10	U010	N018	N019			(1) 1/2 U-Bolt	Beam	None	A36	Typical
11	U011	N015	N020			(1) 1/2 U-Bolt	Beam	None	A36	Typical
12	U012	N021	N022			(1) 1/2 U-Bolt	Beam	None	A36	Typical
13	V013	N025	N023			PIPE_2.0	Column	None	A53 Gr. B	Typical
14	V014	N026	N024			PIPE_2.0	Column	None	A53 Gr. B	Typical
15	D015	N023	N026			SR_0.75	Column	None	A572-50	Typical
16	D016	N028	N027			L2x2x3	Column	None	A36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rules
17	D017	N029	N030			L2x2x3	Column	None	A36	Typical
18	TB018	N032	N031			PIPE_2.0	Beam	None	A53 Gr. B	Typical
19	U019	N033	N034			(2) 1/2 U-Bolts	Beam	None	A36	Typical
20	H020	N035	N036			PIPE_2.5	Beam	None	A53 Gr. B	Typical
21	H021	N043	N044			(2) 1/2 U-Bolts	Beam	None	SAE J429 ...	Typical
22	H022	N041	N042			(2) 1/2 U-Bolts	Beam	None	SAE J429 ...	Typical
23	H023	N039	N040			(2) 1/2 U-Bolts	Beam	None	SAE J429 ...	Typical
24	H024	N037	N038			(2) 1/2 U-Bolts	Beam	None	SAE J429 ...	Typical
25	TB025	N047	N046			PIPE_2.5	Beam	None	A53 Gr. B	Typical
26	TB026	N048	N045			PIPE_2.5	Beam	None	A53 Gr. B	Typical
27	H027	N049	N050			PIPE_2.5	Beam	None	A53 Gr. B	Typical
28	H028	N061	N059			PIPE_2.5	Beam	None	A53 Gr. B	Typical
29	H029	N062	N060			PIPE_2.5	Beam	None	A53 Gr. B	Typical
30	H030	N052	N051			(2) 1/2 U-Bolts	Beam	None	SAE J429 ...	Typical
31	H031	N054	N053			(2) 1/2 U-Bolts	Beam	None	SAE J429 ...	Typical
32	H032	N056	N055			(2) 1/2 U-Bolts	Beam	None	SAE J429 ...	Typical
33	H033	N058	N057			(2) 1/2 U-Bolts	Beam	None	SAE J429 ...	Typical
34	MP1	MP1t	MP1b			HSS2.375X0.188	Column	None	A500 Gr. ...	Typical
35	MP2	MP2t	MP2b			HSS2.375X0.188	Column	None	A500 Gr. ...	Typical
36	MP3	MP3t	MP3b			HSS2.375X0.188	Column	None	A500 Gr. ...	Typical
37	MP4	MP4t	MP4b			HSS2.375X0.188	Column	None	A500 Gr. ...	Typical
38	MP5	MP5t	MP5b			PIPE_2.0	Column	None	A1085	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic ...
1	H001						Yes				None
2	H002						Yes				None
3	H003						Yes				None
4	H004						Yes				None
5	U005	OOOXOX					Yes			Exclude	None
6	U006	OOOXOX					Yes			Exclude	None
7	U007	OOOXOX					Yes			Exclude	None
8	U008	OOOXOX					Yes			Exclude	None
9	U009	OOOXOX					Yes			Exclude	None
10	U010	OOOXOX					Yes			Exclude	None
11	U011	OOOXOX					Yes			Exclude	None
12	U012	OOOXOX					Yes			Exclude	None
13	V013						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic ...
14	V014						Yes	** NA **			None
15	D015					Tension ...	Yes	** NA **			None
16	D016	BenPIN	BenPIN				Yes	** NA **			None
17	D017	BenPIN	BenPIN				Yes	** NA **			None
18	TB018		BenPIN				Yes				None
19	U019						Yes			Exclude	None
20	H020						Yes				None
21	H021						Yes			Exclude	None
22	H022						Yes			Exclude	None
23	H023						Yes			Exclude	None
24	H024						Yes			Exclude	None
25	TB025		BenPIN				Yes				None
26	TB026		BenPIN				Yes				None
27	H027						Yes				None
28	H028		BenPIN				Yes				None
29	H029		BenPIN				Yes				None
30	H030						Yes			Exclude	None
31	H031						Yes			Exclude	None
32	H032						Yes			Exclude	None
33	H033						Yes			Exclude	None
34	MP1						Yes	** NA **			None
35	MP2						Yes	** NA **			None
36	MP3						Yes	** NA **			None
37	MP4						Yes	** NA **			None
38	MP5						Yes	** NA **			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[i...	Lcomp bot[i...	L-torq...	Kyy	Kzz	Cb	Functi...
1	H001	L3x3x4	156						1	1		Lateral
2	H002	L3x3x6	33						.65	.65		Lateral
3	H003	L3x3x4	156						1	1		Lateral
4	H004	L3x3x6	33						.65	.65		Lateral
5	U005	(1) 1/2 U-Bolt	3						.5	.5		Lateral
6	U006	(1) 1/2 U-Bolt	3						.5	.5		Lateral
7	U007	(1) 1/2 U-Bolt	3						.5	.5		Lateral
8	U008	(1) 1/2 U-Bolt	3						.5	.5		Lateral
9	U009	(1) 1/2 U-Bolt	3						.5	.5		Lateral
10	U010	(1) 1/2 U-Bolt	3						.5	.5		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[i...	Lcomp bot[i...	L-torq...	Kyy	Kzz	Cb	Functi...
11	U011	(1) 1/2 U-Bolt	3						.5	.5		Lateral
12	U012	(1) 1/2 U-Bolt	3						.5	.5		Lateral
13	V013	PIPE_2.0	37						.65	.65		Lateral
14	V014	PIPE_2.0	37						.65	.65		Lateral
15	D015	SR_0.75	45.804						.65	.65		Lateral
16	D016	L2x2x3	51.624						1	1		Lateral
17	D017	L2x2x3	51.624						1	1		Lateral
18	TB018	PIPE_2.0	96.747						1	1		Lateral
19	U019	(2) 1/2 U-B...	3						.5	.5		Lateral
20	H020	PIPE_2.5	156						1	1		Lateral
21	H021	(2) 1/2 U-B...	3						.65	.65		Lateral
22	H022	(2) 1/2 U-B...	3						.65	.65		Lateral
23	H023	(2) 1/2 U-B...	3						.65	.65		Lateral
24	H024	(2) 1/2 U-B...	3						.65	.65		Lateral
25	TB025	PIPE_2.5	51.614						1	1		Lateral
26	TB026	PIPE_2.5	51.614						1	1		Lateral
27	H027	PIPE_2.5	156						1	1		Lateral
28	H028	PIPE_2.5	51.614						1	1		Lateral
29	H029	PIPE_2.5	51.614						1	1		Lateral
30	H030	(2) 1/2 U-B...	3						.65	.65		Lateral
31	H031	(2) 1/2 U-B...	3						.65	.65		Lateral
32	H032	(2) 1/2 U-B...	3						.65	.65		Lateral
33	H033	(2) 1/2 U-B...	3						.65	.65		Lateral
34	MP1	HSS2.375X0...	72						2.1	2.1		Lateral
35	MP2	HSS2.375X0...	72						2.1	2.1		Lateral
36	MP3	HSS2.375X0...	72						2.1	2.1		Lateral
37	MP4	HSS2.375X0...	72						2.1	2.1		Lateral
38	MP5	PIPE_2.0	24						2.1	2.1		Lateral

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Therm (/1E..	Density[lb/...	Yield[psi]	Ry	Fu[psi]	Rt
1	A36	2.9e+7	1.115e+7	.3	.65	490	36000	1.5	58000	1.2
2	A572-50	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
3	A500 Gr. B [RND]	2.9e+7	1.115e+7	.3	.65	527	42000	1.4	58000	1.3
4	A500 Gr. B [SQR]	2.9e+7	1.115e+7	.3	.65	527	46000	1.4	58000	1.3
5	A500 Gr. C	2.9e+7	1.115e+7	.3	.65	190	46000	1.4	62000	1.3
6	A1085	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
7	A53 Gr. B	2.9e+7	1.115e+7	.3	.65	490	35000	1.6	60000	1.2

Hot Rolled Steel Properties (Continued)

	Label	E [psi]	G [psi]	Nu	Therm (/1E..	Density[lb/...	Yield[psi]	Ry	Fu[psi]	Rt
8	A992	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
9	SAE J429 Gr. 2	2.9e+7	1.115e+7	.3	.65	490	57000	1.1	74000	1.1

Joint Loads and Enforced Displacements (BLC 16 : Lv (5))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s...
1	N002	L	Y	-250

Joint Loads and Enforced Displacements (BLC 17 : Lv (6))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s...
1	N003	L	Y	-250

Joint Loads and Enforced Displacements (BLC 18 : Lm (1))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s...
1	MP1t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 19 : Lm (2))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s...
1	MP2t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 20 : Lm (3))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s...
1	MP3t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 21 : Lm (4))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s...
1	MP4t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 22 : Lm (5))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s...
1	MP5t	L	Y	-500

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-2.2	23.35

Member Point Loads (BLC 1 : Dead) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
2	MP1	Y	-2.2	27.85
3	MP1	Y	-18.6	28.55
4	MP2	Y	-30.3	3.45
5	MP2	Y	-30.3	58.5
6	MP2	Y	-30.3	3.45
7	MP2	Y	-30.3	58.5
8	MP2	Y	-84.4	12
9	MP2	Y	-20.7	35.25
10	MP3	Y	-70.3	6
11	MP4	Y	-9.6	4.8
12	MP4	Y	-9.6	53.8
13	MP5	Y	-21.4	5.1

Member Point Loads (BLC 2 : Ice)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-11.994	23.35
2	MP1	Y	-11.994	27.85
3	MP1	Y	-33.161	28.55
4	MP2	Y	-118.157	3.45
5	MP2	Y	-118.157	58.5
6	MP2	Y	-118.157	3.45
7	MP2	Y	-118.157	58.5
8	MP2	Y	-78.517	12
9	MP2	Y	-30.637	35.25
10	MP3	Y	-71.138	6
11	MP4	Y	-87.028	4.8
12	MP4	Y	-87.028	53.8
13	MP5	Y	-96.382	5.1

Member Point Loads (BLC 3 : Wind -Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-7.33	23.35
2	MP1	Z	-13.286	27.85
3	MP1	Z	-21.777	28.55
4	MP2	Z	-135.65	3.45
5	MP2	Z	-95.901	58.5
6	MP2	Z	-135.65	3.45
7	MP2	Z	-95.901	58.5

Member Point Loads (BLC 3 : Wind -Z) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
8	MP2	Z	-47.64	12
9	MP2	Z	-14.025	35.25
10	MP3	Z	-47.64	6
11	MP4	Z	-103.745	4.8
12	MP4	Z	-80.774	53.8
13	MP5	Z	-41.872	5.1
14	MP5	My	20.413	5.1

Member Point Loads (BLC 4 : Wind -X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-.848	23.35
2	MP1	X	-1.538	27.85
3	MP1	X	-13.35	28.55
4	MP2	X	-45.771	3.45
5	MP2	X	-32.359	58.5
6	MP2	X	-45.771	3.45
7	MP2	X	-32.359	58.5
8	MP2	X	-39.7	12
9	MP2	X	-16.261	35.25
10	MP3	X	-32.157	6
11	MP4	X	-35.516	4.8
12	MP4	X	-27.652	53.8
13	MP5	Mz	38.893	5.1

Member Point Loads (BLC 5 : Wind -Z (Ice))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-6.143	23.35
2	MP1	Z	-11.134	27.85
3	MP1	Z	-17.871	28.55
4	MP2	Z	-42.694	3.45
5	MP2	Z	-30.184	58.5
6	MP2	Z	-42.694	3.45
7	MP2	Z	-30.184	58.5
8	MP2	Z	-24.841	12
9	MP2	Z	-14.831	35.25
10	MP3	Z	-24.841	6
11	MP4	Z	-39.39	4.8
12	MP4	Z	-30.668	53.8

Member Point Loads (BLC 5 : Wind -Z (Ice)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
13	MP5	My	11.929	5.1

Member Point Loads (BLC 6 : Wind -X (Ice))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-3.564	23.35
2	MP1	X	-6.459	27.85
3	MP1	X	-18.566	28.55
4	MP2	X	-22.724	3.45
5	MP2	X	-16.065	58.5
6	MP2	X	-22.724	3.45
7	MP2	X	-16.065	58.5
8	MP2	X	-26.417	12
9	MP2	X	-18.075	35.25
10	MP3	X	-24.656	6
11	MP4	X	-26.478	4.8
12	MP4	X	-20.615	53.8
13	MP5	Mz	17.351	5.1

Member Point Loads (BLC 7 : Wind -Z (Working))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-.701	23.35
2	MP1	Z	-1.271	27.85
3	MP1	Z	-2.083	28.55
4	MP2	Z	-12.975	3.45
5	MP2	Z	-9.173	58.5
6	MP2	Z	-12.975	3.45
7	MP2	Z	-9.173	58.5
8	MP2	Z	-4.557	12
9	MP2	Z	-1.342	35.25
10	MP3	Z	-4.557	6
11	MP4	Z	-9.924	4.8
12	MP4	Z	-7.726	53.8
13	MP5	My	1.953	5.1

Member Point Loads (BLC 8 : Wind -X (Working))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-.081	23.35
2	MP1	X	-.147	27.85

Member Point Loads (BLC 8 : Wind -X (Working)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
3	MP1	X	-1.277	28.55
4	MP2	X	-4.378	3.45
5	MP2	X	-3.095	58.5
6	MP2	X	-4.378	3.45
7	MP2	X	-3.095	58.5
8	MP2	X	-3.797	12
9	MP2	X	-1.555	35.25
10	MP3	X	-3.076	6
11	MP4	X	-3.397	4.8
12	MP4	X	-2.645	53.8
13	MP5	Mz	3.72	5.1

Member Point Loads (BLC 12 : Lv (1))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H001	Y	-250	%50

Member Point Loads (BLC 13 : Lv (2))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H002	Y	-250	%50

Member Point Loads (BLC 14 : Lv (3))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H003	Y	-250	%50

Member Point Loads (BLC 15 : Lv (4))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H004	Y	-250	%50

Member Distributed Loads (BLC 2 : Ice)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H001	Y	-4.609	-4.609	0	%100
2	H002	Y	-4.609	-4.609	0	%100
3	H003	Y	-4.609	-4.609	0	%100
4	H004	Y	-4.609	-4.609	0	%100
5	V013	Y	-9.039	-9.039	0	%100
6	V014	Y	-9.039	-9.039	0	%100

Member Distributed Loads (BLC 2 : Ice) (Continued)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
7	D015	Y	-3.971	-3.971	0	%100
8	D016	Y	-4.351	-4.351	0	%100
9	D017	Y	-4.351	-4.351	0	%100
10	TB018	Y	-9.039	-9.039	0	%100
11	H020	Y	-10.134	-10.134	0	%100
12	TB025	Y	-10.134	-10.134	0	%100
13	TB026	Y	-10.134	-10.134	0	%100
14	H027	Y	-10.134	-10.134	0	%100
15	H028	Y	-10.134	-10.134	0	%100
16	H029	Y	-10.134	-10.134	0	%100
17	MP1	Y	-9.039	-9.039	0	%100
18	MP2	Y	-9.039	-9.039	0	%100
19	MP3	Y	-9.039	-9.039	0	%100
20	MP4	Y	-9.039	-9.039	0	%100
21	MP5	Y	-9.039	-9.039	0	%100

Member Distributed Loads (BLC 5 : Wind -Z (Ice))

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-4.912	-4.912	0	%100
2	H002	Z	-4.912	-4.912	0	%100
3	H003	Z	-4.912	-4.912	0	%100
4	H004	Z	-4.912	-4.912	0	%100
5	V013	Z	-4.912	-4.912	0	%100
6	V014	Z	-4.912	-4.912	0	%100
7	D015	Z	-4.912	-4.912	0	%100
8	D016	Z	-4.912	-4.912	0	%100
9	D017	Z	-4.912	-4.912	0	%100
10	TB018	Z	-4.912	-4.912	0	%100
11	H020	Z	-4.912	-4.912	0	%100
12	TB025	Z	-4.912	-4.912	0	%100
13	TB026	Z	-4.912	-4.912	0	%100
14	H027	Z	-4.912	-4.912	0	%100
15	H028	Z	-4.912	-4.912	0	%100
16	H029	Z	-4.912	-4.912	0	%100
17	MP1	Z	-4.912	-4.912	0	%100
18	MP2	Z	-4.912	-4.912	0	%100
19	MP3	Z	-4.912	-4.912	0	%100
20	MP4	Z	-4.912	-4.912	0	%100
21	MP5	Z	-4.912	-4.912	0	%100

Member Distributed Loads (BLC 6 : Wind -X (Ice))

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H001	X	-4.915	-4.915	0	%100
2	H002	X	-4.915	-4.915	0	%100
3	H003	X	-4.915	-4.915	0	%100
4	H004	X	-4.915	-4.915	0	%100
5	V013	X	-4.915	-4.915	0	%100
6	V014	X	-4.915	-4.915	0	%100
7	D015	X	-4.915	-4.915	0	%100
8	D016	X	-4.915	-4.915	0	%100
9	D017	X	-4.915	-4.915	0	%100
10	TB018	X	-4.915	-4.915	0	%100
11	H020	X	-4.915	-4.915	0	%100
12	TB025	X	-4.915	-4.915	0	%100
13	TB026	X	-4.915	-4.915	0	%100
14	H027	X	-4.915	-4.915	0	%100
15	H028	X	-4.915	-4.915	0	%100
16	H029	X	-4.915	-4.915	0	%100
17	MP1	X	-4.915	-4.915	0	%100
18	MP2	X	-4.915	-4.915	0	%100
19	MP3	X	-4.915	-4.915	0	%100
20	MP4	X	-4.915	-4.915	0	%100
21	MP5	X	-4.915	-4.915	0	%100

Member Distributed Loads (BLC 9 : Ev -Y (Seismic))

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H001	Y	-2.101	-2.101	0	%100
2	H002	Y	-2.101	-2.101	0	%100
3	H003	Y	-2.101	-2.101	0	%100
4	H004	Y	-2.101	-2.101	0	%100
5	V013	Y	-2.101	-2.101	0	%100
6	V014	Y	-2.101	-2.101	0	%100
7	D015	Y	-2.101	-2.101	0	%100
8	D016	Y	-2.101	-2.101	0	%100
9	D017	Y	-2.101	-2.101	0	%100
10	TB018	Y	-2.101	-2.101	0	%100
11	H020	Y	-2.101	-2.101	0	%100
12	TB025	Y	-2.101	-2.101	0	%100
13	TB026	Y	-2.101	-2.101	0	%100
14	H027	Y	-2.101	-2.101	0	%100
15	H028	Y	-2.101	-2.101	0	%100

Member Distributed Loads (BLC 9 : Ev -Y (Seismic)) (Continued)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
16	H029	Y	-2.101	-2.101	0	%100
17	MP1	Y	-2.101	-2.101	0	%100
18	MP2	Y	-2.101	-2.101	0	%100
19	MP3	Y	-2.101	-2.101	0	%100
20	MP4	Y	-2.101	-2.101	0	%100
21	MP5	Y	-2.101	-2.101	0	%100

Member Distributed Loads (BLC 10 : Eh -Z (Seismic))

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-5.253	-5.253	0	%100
2	H002	Z	-5.253	-5.253	0	%100
3	H003	Z	-5.253	-5.253	0	%100
4	H004	Z	-5.253	-5.253	0	%100
5	V013	Z	-5.253	-5.253	0	%100
6	V014	Z	-5.253	-5.253	0	%100
7	D015	Z	-5.253	-5.253	0	%100
8	D016	Z	-5.253	-5.253	0	%100
9	D017	Z	-5.253	-5.253	0	%100
10	TB018	Z	-5.253	-5.253	0	%100
11	H020	Z	-5.253	-5.253	0	%100
12	TB025	Z	-5.253	-5.253	0	%100
13	TB026	Z	-5.253	-5.253	0	%100
14	H027	Z	-5.253	-5.253	0	%100
15	H028	Z	-5.253	-5.253	0	%100
16	H029	Z	-5.253	-5.253	0	%100
17	MP1	Z	-5.253	-5.253	0	%100
18	MP2	Z	-5.253	-5.253	0	%100
19	MP3	Z	-5.253	-5.253	0	%100
20	MP4	Z	-5.253	-5.253	0	%100
21	MP5	Z	-5.253	-5.253	0	%100

Member Distributed Loads (BLC 11 : Eh -X (Seismic))

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H001	X	-5.253	-5.253	0	%100
2	H002	X	-5.253	-5.253	0	%100
3	H003	X	-5.253	-5.253	0	%100
4	H004	X	-5.253	-5.253	0	%100
5	V013	X	-5.253	-5.253	0	%100

Member Distributed Loads (BLC 11 : Eh -X (Seismic)) (Continued)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
6	V014	X	-5.253	-5.253	0	%100
7	D015	X	-5.253	-5.253	0	%100
8	D016	X	-5.253	-5.253	0	%100
9	D017	X	-5.253	-5.253	0	%100
10	TB018	X	-5.253	-5.253	0	%100
11	H020	X	-5.253	-5.253	0	%100
12	TB025	X	-5.253	-5.253	0	%100
13	TB026	X	-5.253	-5.253	0	%100
14	H027	X	-5.253	-5.253	0	%100
15	H028	X	-5.253	-5.253	0	%100
16	H029	X	-5.253	-5.253	0	%100
17	MP1	X	-5.253	-5.253	0	%100
18	MP2	X	-5.253	-5.253	0	%100
19	MP3	X	-5.253	-5.253	0	%100
20	MP4	X	-5.253	-5.253	0	%100
21	MP5	X	-5.253	-5.253	0	%100

Member Distributed Loads (BLC 23 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-14.263	-14.263	0	156
2	H003	Z	-14.263	-14.263	0	156
3	V013	Z	-11.292	-11.292	0	37
4	V014	Z	-11.292	-11.292	0	37
5	D016	Z	-9.509	-9.509	0	51.624
6	D017	Z	-9.509	-9.509	0	51.624
7	TB018	Z	-1.401	-1.401	0	96.747
8	U019	Z	-4.754	-4.754	0	3
9	H020	Z	-13.669	-13.669	0	156
10	TB025	Z	-11.123	-11.123	0	51.614
11	TB026	Z	-11.123	-11.123	0	51.614
12	H027	Z	-13.669	-13.669	0	156
13	H028	Z	-11.123	-11.123	0	51.614
14	H029	Z	-11.123	-11.123	0	51.614
15	MP1	Z	-11.315	-11.315	0	72
16	MP2	Z	-11.315	-11.315	0	72
17	MP3	Z	-11.315	-11.315	0	72
18	MP4	Z	-11.315	-11.315	0	72
19	MP5	Z	-11.292	-11.292	0	24

Member Distributed Loads (BLC 24 : BLC 4 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H002	X	-14.263	-14.263	0	33
2	H004	X	-14.263	-14.263	0	33
3	U005	X	-4.754	-4.754	0	3
4	U006	X	-4.754	-4.754	0	3
5	U007	X	-4.754	-4.754	0	3
6	U008	X	-4.754	-4.754	0	3
7	U009	X	-4.754	-4.754	0	3
8	U010	X	-4.754	-4.754	0	3
9	U011	X	-4.754	-4.754	0	3
10	U012	X	-4.754	-4.754	0	3
11	V013	X	-11.292	-11.292	0	37
12	V014	X	-11.292	-11.292	0	37
13	D016	X	-6.815	-6.815	0	51.624
14	D017	X	-6.815	-6.815	0	51.624
15	TB018	X	-11.204	-11.204	0	96.747
16	H021	X	-4.754	-4.754	0	3
17	H022	X	-4.754	-4.754	0	3
18	H023	X	-4.754	-4.754	0	3
19	H024	X	-4.754	-4.754	0	3
20	TB025	X	-7.945	-7.945	0	51.614
21	TB026	X	-7.945	-7.945	0	51.614
22	H028	X	-7.945	-7.945	0	51.614
23	H029	X	-7.945	-7.945	0	51.614
24	H030	X	-4.754	-4.754	0	3
25	H031	X	-4.754	-4.754	0	3
26	H032	X	-4.754	-4.754	0	3
27	H033	X	-4.754	-4.754	0	3
28	MP1	X	-11.315	-11.315	0	72
29	MP2	X	-11.315	-11.315	0	72
30	MP3	X	-11.315	-11.315	0	72
31	MP4	X	-11.315	-11.315	0	72
32	MP5	X	-11.292	-11.292	0	24

Member Distributed Loads (BLC 25 : BLC 5 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-3.79	-3.79	0	156
2	H003	Z	-3.79	-3.79	0	156
3	V013	Z	-3	-3	0	37
4	V014	Z	-3	-3	0	37

Member Distributed Loads (BLC 25 : BLC 5 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
5	D016	Z	-2.526	-2.526	0	51.624
6	D017	Z	-2.526	-2.526	0	51.624
7	TB018	Z	-.372	-.372	0	96.747
8	U019	Z	-1.263	-1.263	0	3
9	H020	Z	-3.632	-3.632	0	156
10	TB025	Z	-2.955	-2.955	0	51.614
11	TB026	Z	-2.955	-2.955	0	51.614
12	H027	Z	-3.632	-3.632	0	156
13	H028	Z	-2.955	-2.955	0	51.614
14	H029	Z	-2.955	-2.955	0	51.614
15	MP1	Z	-3.006	-3.006	0	72
16	MP2	Z	-3.006	-3.006	0	72
17	MP3	Z	-3.006	-3.006	0	72
18	MP4	Z	-3.006	-3.006	0	72
19	MP5	Z	-3	-3	0	24

Member Distributed Loads (BLC 26 : BLC 6 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H002	X	-3.79	-3.79	0	33
2	H004	X	-3.79	-3.79	0	33
3	U005	X	-1.263	-1.263	0	3
4	U006	X	-1.263	-1.263	0	3
5	U007	X	-1.263	-1.263	0	3
6	U008	X	-1.263	-1.263	0	3
7	U009	X	-1.263	-1.263	0	3
8	U010	X	-1.263	-1.263	0	3
9	U011	X	-1.263	-1.263	0	3
10	U012	X	-1.263	-1.263	0	3
11	V013	X	-3	-3	0	37
12	V014	X	-3	-3	0	37
13	D016	X	-1.811	-1.811	0	51.624
14	D017	X	-1.811	-1.811	0	51.624
15	TB018	X	-2.977	-2.977	0	96.747
16	H021	X	-1.263	-1.263	0	3
17	H022	X	-1.263	-1.263	0	3
18	H023	X	-1.263	-1.263	0	3
19	H024	X	-1.263	-1.263	0	3
20	TB025	X	-2.111	-2.111	0	51.614
21	TB026	X	-2.111	-2.111	0	51.614

Member Distributed Loads (BLC 26 : BLC 6 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
22	H028	X	-2.111	-2.111	0	51.614
23	H029	X	-2.111	-2.111	0	51.614
24	H030	X	-1.263	-1.263	0	3
25	H031	X	-1.263	-1.263	0	3
26	H032	X	-1.263	-1.263	0	3
27	H033	X	-1.263	-1.263	0	3
28	MP1	X	-3.006	-3.006	0	72
29	MP2	X	-3.006	-3.006	0	72
30	MP3	X	-3.006	-3.006	0	72
31	MP4	X	-3.006	-3.006	0	72
32	MP5	X	-3	-3	0	24

Member Distributed Loads (BLC 27 : BLC 7 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-1.364	-1.364	0	156
2	H003	Z	-1.364	-1.364	0	156
3	V013	Z	-1.08	-1.08	0	37
4	V014	Z	-1.08	-1.08	0	37
5	D016	Z	-.91	-.91	0	51.624
6	D017	Z	-.91	-.91	0	51.624
7	TB018	Z	-.134	-.134	0	96.747
8	U019	Z	-.455	-.455	0	3
9	H020	Z	-1.308	-1.308	0	156
10	TB025	Z	-1.064	-1.064	0	51.614
11	TB026	Z	-1.064	-1.064	0	51.614
12	H027	Z	-1.308	-1.308	0	156
13	H028	Z	-1.064	-1.064	0	51.614
14	H029	Z	-1.064	-1.064	0	51.614
15	MP1	Z	-1.082	-1.082	0	72
16	MP2	Z	-1.082	-1.082	0	72
17	MP3	Z	-1.082	-1.082	0	72
18	MP4	Z	-1.082	-1.082	0	72
19	MP5	Z	-1.08	-1.08	0	24

Member Distributed Loads (BLC 28 : BLC 8 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	H002	X	-1.364	-1.364	0	33
2	H004	X	-1.364	-1.364	0	33

Member Distributed Loads (BLC 28 : BLC 8 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
3	U005	X	-.455	-.455	0	3
4	U006	X	-.455	-.455	0	3
5	U007	X	-.455	-.455	0	3
6	U008	X	-.455	-.455	0	3
7	U009	X	-.455	-.455	0	3
8	U010	X	-.455	-.455	0	3
9	U011	X	-.455	-.455	0	3
10	U012	X	-.455	-.455	0	3
11	V013	X	-1.08	-1.08	0	37
12	V014	X	-1.08	-1.08	0	37
13	D016	X	-.652	-.652	0	51.624
14	D017	X	-.652	-.652	0	51.624
15	TB018	X	-1.072	-1.072	0	96.747
16	H021	X	-.455	-.455	0	3
17	H022	X	-.455	-.455	0	3
18	H023	X	-.455	-.455	0	3
19	H024	X	-.455	-.455	0	3
20	TB025	X	-.76	-.76	0	51.614
21	TB026	X	-.76	-.76	0	51.614
22	H028	X	-.76	-.76	0	51.614
23	H029	X	-.76	-.76	0	51.614
24	H030	X	-.455	-.455	0	3
25	H031	X	-.455	-.455	0	3
26	H032	X	-.455	-.455	0	3
27	H033	X	-.455	-.455	0	3
28	MP1	X	-1.082	-1.082	0	72
29	MP2	X	-1.082	-1.082	0	72
30	MP3	X	-1.082	-1.082	0	72
31	MP4	X	-1.082	-1.082	0	72
32	MP5	X	-1.08	-1.08	0	24

Member Area Loads (BLC 3 : Wind -Z)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL1	NAL2	NAL4	NAL3	PZ	Open Structure	-57.052

Member Area Loads (BLC 4 : Wind -X)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]

Member Area Loads (BLC 4 : Wind -X) (Continued)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL3	NAL4	NAL6	NAL5	PX	Open Structure	-57.052

Member Area Loads (BLC 5 : Wind -Z (Ice))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL1	NAL2	NAL4	NAL3	PZ	Open Structure	-15.158

Member Area Loads (BLC 6 : Wind -X (Ice))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL3	NAL4	NAL6	NAL5	PX	Open Structure	-15.158

Member Area Loads (BLC 7 : Wind -Z (Working))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL1	NAL2	NAL4	NAL3	PZ	Open Structure	-5.458

Member Area Loads (BLC 8 : Wind -X (Working))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL3	NAL4	NAL6	NAL5	PX	Open Structure	-5.458

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(Pl...
1	Dead	DL		-1			13			
2	Ice	IL					13	21		
3	Wind -Z	WLZ					14		1	
4	Wind -X	WLX					13		1	
5	Wind -Z (Ice)	WL-Z					13	21	1	
6	Wind -X (Ice)	WL-X					13	21	1	
7	Wind -Z (Working)	WLZP1					13		1	
8	Wind -X (Working)	WLXP1					13		1	
9	Ev -Y (Seismic)	ELY						21		
10	Eh -Z (Seismic)	ELZ						21		
11	Eh -X (Seismic)	ELX						21		
12	Lv (1)	LL					1			
13	Lv (2)	LL					1			
14	Lv (3)	LL					1			
15	Lv (4)	LL					1			
16	Lv (5)	LL				1				

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(Pl...
17	Lv (6)	LL				1				
18	Lm (1)	LL				1				
19	Lm (2)	LL				1				
20	Lm (3)	LL				1				
21	Lm (4)	LL				1				
22	Lm (5)	LL				1				
23	BLC 3 Transient Area ...	None						19		
24	BLC 4 Transient Area ...	None						32		
25	BLC 5 Transient Area ...	None						19		
26	BLC 6 Transient Area ...	None						32		
27	BLC 7 Transient Area ...	None						19		
28	BLC 8 Transient Area ...	None						32		

Load Combinations

	Description	Sol...	PD...	SRSS	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
1	1.4D	Yes	Y		DL	1.4																				
2	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	.001	WLZ	1.6																
3	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	.8	WLZ	1.386																
4	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	1.386	WLZ	.8																
5	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	1.6	WLZ	.001																
6	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	1.386	WLZ	-.8																
7	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	.8	WLZ	-1.3...																
8	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	.001	WLZ	-1.6																
9	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	-.8	WLZ	-1.3...																
10	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	-1.3...	WLZ	-.8																
11	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	-1.6	WLZ	.001																
12	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	-1.3...	WLZ	.8																
13	1.2D + 1.6...	Yes	Y		DL	1.2	WLX	-.8	WLZ	1.386																
14	0.9D + 1.6...	Yes	Y		DL	.9	WLX	.001	WLZ	1.6																
15	0.9D + 1.6...	Yes	Y		DL	.9	WLX	.8	WLZ	1.386																
16	0.9D + 1.6...	Yes	Y		DL	.9	WLX	1.386	WLZ	.8																
17	0.9D + 1.6...	Yes	Y		DL	.9	WLX	1.6	WLZ	.001																
18	0.9D + 1.6...	Yes	Y		DL	.9	WLX	1.386	WLZ	-.8																
19	0.9D + 1.6...	Yes	Y		DL	.9	WLX	.8	WLZ	-1.3...																
20	0.9D + 1.6...	Yes	Y		DL	.9	WLX	.001	WLZ	-1.6																
21	0.9D + 1.6...	Yes	Y		DL	.9	WLX	-.8	WLZ	-1.3...																
22	0.9D + 1.6...	Yes	Y		DL	.9	WLX	-1.3...	WLZ	-.8																
23	0.9D + 1.6...	Yes	Y		DL	.9	WLX	-1.6	WLZ	.001																

Load Combinations (Continued)

	Description	Sol...	PD...	SRSS	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
24	0.9D + 1.6...	Yes	Y		DL	.9	WLX	-1.3...	WLZ	.8														
25	0.9D + 1.6...	Yes	Y		DL	.9	WLX	-.8	WLZ	1.386														
26	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	.001	WL...	1												
27	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	.5	WL...	.866												
28	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	.866	WL...	.5												
29	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	1	WL...	.001												
30	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	.866	WL...	-.5												
31	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	.5	WL...	-.866												
32	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	.001	WL...	-1												
33	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	-.5	WL...	-.866												
34	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	-.866	WL...	-.5												
35	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	-1	WL...	.001												
36	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	-.866	WL...	.5												
37	1.2D + 1.0...	Yes	Y		DL	1.2	IL	1	WL...	-.5	WL...	.866												
38	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	1	ELX	.001												
39	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	.866	ELX	.5												
40	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	.5	ELX	.866												
41	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	.001	ELX	1												
42	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	-.5	ELX	.866												
43	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	-.866	ELX	.5												
44	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	-1	ELX	.001												
45	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	-.866	ELX	-.5												
46	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	-.5	ELX	-.866												
47	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	.001	ELX	-1												
48	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	.5	ELX	-.866												
49	1.2D + 1.0...	Yes	Y		DL	1.2	ELY	1	ELZ	.866	ELX	-.5												
50	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	1	ELX	.001												
51	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	.866	ELX	.5												
52	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	.5	ELX	.866												
53	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	.001	ELX	1												
54	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	-.5	ELX	.866												
55	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	-.866	ELX	.5												
56	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	-1	ELX	.001												
57	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	-.866	ELX	-.5												
58	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	-.5	ELX	-.866												
59	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	.001	ELX	-1												
60	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	.5	ELX	-.866												
61	0.9D + 1.0...	Yes	Y		DL	.9	ELY	1	ELZ	.866	ELX	-.5												
62	1.2D + 1.5...	Yes	Y		DL	1.2	12	1.5																

Load Combinations (Continued)

	Description	Sol...	PD...	SRSS	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
63	1.2D + 1.5...	Yes	Y		DL	1.2	13	1.5																
64	1.2D + 1.5...	Yes	Y		DL	1.2	14	1.5																
65	1.2D + 1.5...	Yes	Y		DL	1.2	15	1.5																
66	1.2D + 1.5...	Yes	Y		DL	1.2	16	1.5																
67	1.2D + 1.5...	Yes	Y		DL	1.2	17	1.5																
68	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	.001	WL...	1												
69	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	.5	WL...	.866												
70	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	.866	WL...	.5												
71	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	1	WL...	.001												
72	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	.866	WL...	-.5												
73	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	.5	WL...	-.866												
74	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	.001	WL...	-.5												
75	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	-.5	WL...	-.866												
76	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	-.866	WL...	-.5												
77	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	-1	WL...	.001												
78	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	-.866	WL...	.5												
79	1.2D + 1.5...	Yes	Y		DL	1.2	18	1.5	WL...	-.5	WL...	.866												
80	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	.001	WL...	1												
81	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	.5	WL...	.866												
82	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	.866	WL...	.5												
83	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	1	WL...	.001												
84	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	.866	WL...	-.5												
85	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	.5	WL...	-.866												
86	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	.001	WL...	-.5												
87	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	-.5	WL...	-.866												
88	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	-.866	WL...	-.5												
89	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	-1	WL...	.001												
90	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	-.866	WL...	.5												
91	1.2D + 1.5...	Yes	Y		DL	1.2	19	1.5	WL...	-.5	WL...	.866												
92	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	.001	WL...	1												
93	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	.5	WL...	.866												
94	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	.866	WL...	.5												
95	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	1	WL...	.001												
96	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	.866	WL...	-.5												
97	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	.5	WL...	-.866												
98	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	.001	WL...	-.5												
99	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	-.5	WL...	-.866												
100	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	-.866	WL...	-.5												
101	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	-1	WL...	.001												

Load Combinations (Continued)

	Description	Sol...	PD...	SRSS	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
102	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	-.866	WL...	.5												
103	1.2D + 1.5...	Yes	Y		DL	1.2	20	1.5	WL...	-.5	WL...	.866												
104	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	.001	WL...	1												
105	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	.5	WL...	.866												
106	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	.866	WL...	.5												
107	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	1	WL...	.001												
108	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	.866	WL...	-.5												
109	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	.5	WL...	-.866												
110	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	.001	WL...	-.5												
111	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	-.5	WL...	-.866												
112	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	-.866	WL...	-.5												
113	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	-1	WL...	.001												
114	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	-.866	WL...	.5												
115	1.2D + 1.5...	Yes	Y		DL	1.2	21	1.5	WL...	-.5	WL...	.866												
116	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	.001	WL...	1												
117	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	.5	WL...	.866												
118	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	.866	WL...	.5												
119	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	1	WL...	.001												
120	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	.866	WL...	-.5												
121	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	.5	WL...	-.866												
122	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	.001	WL...	-.5												
123	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	-.5	WL...	-.866												
124	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	-.866	WL...	-.5												
125	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	-1	WL...	.001												
126	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	-.866	WL...	.5												
127	1.2D + 1.5...	Yes	Y		DL	1.2	22	1.5	WL...	-.5	WL...	.866												

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N032	max	45.891	8	56.13	35	771.763	16	0	127	0	127	0	127
2		min	-46.799	15	7.845	16	-766.035	10	0	1	0	1	0	1
3	N047	max	989.249	3	37.917	27	751.052	2	0	127	0	127	0	127
4		min	-912.102	21	10.008	24	-679.026	20	0	1	0	1	0	1
5	N048	max	1201.663	7	45.622	30	790.908	25	0	127	0	127	0	127
6		min	-1074.839	25	5.286	14	-878.292	7	0	1	0	1	0	1
7	N061	max	393.421	25	36.031	34	322.828	25	0	127	0	127	0	127
8		min	-556.597	109	6.517	108	-431.751	7	0	1	0	1	0	1
9	N062	max	1058.904	18	44.104	29	772.961	12	0	127	0	127	0	127

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
10		min	-1074.117	12	3.367	114	-755.926	18	0	1	0	1	0	1
11	N001	max	138.561	4	1727.87	34	-26.185	14	0	127	0	127	11.98	73
12		min	-139.435	10	347.605	16	-2741.779	33	0	1	0	1	-33.441	127
13	N005	max	61.177	76	1321.726	28	3035.411	28	0	127	0	127	17.329	22
14		min	-152.571	105	220.099	22	154.374	21	0	1	0	1	-19.718	4
15	Totals:	max	1712.3	17	3132.921	37	3546.978	14						
16		min	-1712.3	11	864.894	14	-3546.978	8						

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

	Member	Shape	Code C...	Loc[in]	LC	Shear C...	Loc[in]	Dir	LC	phi*Pnc [l...	phi*Pnt [l...	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	H001	L3x3x4	.271	11.375	66	.365	11.375	y	75	4574.724	46656	1688.138	2929.573	1....	H2-1
2	H002	L3x3x6	.235	30.25	35	.340	30.25	y	105	63630.374	68364	2307.398	5322.329	2....	H2-1
3	H003	L3x3x4	.537	78	76	.170	78	y	67	4574.724	46656	1688.138	2872.677	1....	H2-1
4	H004	L3x3x6	.263	30.25	27	.627	30.25	y	104	63630.374	68364	2307.398	5322.329	2....	H2-1
5	V013	PIPE_2.0	.159	37	31	.130	0		106	30619.308	32130	1871.625	1871.625	2....	H1-1b
6	V014	PIPE_2.0	.199	0	36	.159	37		106	30619.308	32130	1871.625	1871.625	2....	H1-1b
7	D015	SR 0.75	.197	0	33	.005	45.804		3	3958.427	19880.391	248.505	248.505	2....	H1-1b*
8	D016	L2x2x3	.078	26.35	66	.192	0	y	75	9256.049	23392.8	557.717	1065.282	1....	H2-1
9	D017	L2x2x3	.081	25.812	2	.188	0	y	106	9256.049	23392.8	557.717	1065.282	1....	H2-1
10	TB018	PIPE_2.0	.102	48.374	5	.008	0		5	14738.322	32130	1871.625	1871.625	1....	H1-1b
11	H020	PIPE_2.5	.297	78	75	.167	123.5		107	13460.421	50715	3596.25	3596.25	1....	H1-1b
12	TB025	PIPE_2.5	.028	0	2	.003	0		37	43589.976	50715	3596.25	3596.25	1....	H1-1b*
13	TB026	PIPE_2.5	.031	0	25	.003	0		33	43589.976	50715	3596.25	3596.25	1....	H1-1b*
14	H027	PIPE_2.5	.322	78	72	.159	78		106	13460.421	50715	3596.25	3596.25	1....	H1-1b
15	H028	PIPE_2.5	.018	25.807	31	.003	51.614		37	43589.976	50715	3596.25	3596.25	1....	H1-1b
16	H029	PIPE_2.5	.030	0	12	.003	51.614		33	43589.976	50715	3596.25	3596.25	1....	H1-1b*
17	MP1	HSS2.375X0....	.314	9.75	75	.130	66		73	7243.363	45360	2661.75	2661.75	2....	H1-1b
18	MP2	HSS2.375X0....	.216	9.75	107	.161	9.75		106	7243.363	45360	2661.75	2661.75	2....	H1-1b
19	MP3	HSS2.375X0....	.263	9.75	108	.128	58.5		106	7243.363	45360	2661.75	2661.75	2....	H1-1b
20	MP4	HSS2.375X0....	.260	9.75	107	.129	57.75		4	7243.363	45360	2661.75	2661.75	2....	H1-1b
21	MP5	PIPE_2.0	.034	13.5	8	.006	13.5		8	33930.738	45900	2673.75	2673.75	1....	H1-1b

Site Name: N BRIDGEPORT CT
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW PCS	1970	1	1592	1592.2	155	0.0238	1.0	2.38%
VZW Cellular CDMA	869	1	500	500	155	0.0075	0.579333333	1.29%
VZW Cellular LTE	880	1	500	500	155	0.0075	0.586666667	1.28%
VZW AWS	2145	1	1633	1633.42	155	0.0244	1.0	2.44%
VZW 700	746	1	634	633.57	155	0.0095	0.497333333	1.91%
VZW CBRS	3550	1	50	50	155	0.0007	2.366666667	0.03%

Total Percentage of Maximum Permissible Exposure 9.33%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-19

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

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


Chopsey Hill Rd
Trumbull Ave
0
100
200ft
1:500
GBRC | City of Bridgeport, GBRC

Property Location 1000 TRUMBULL AV | Map ID 82/ 2778/ 61/B / | Bldg Name | State Use 200V
Vision ID 32253 | Account # RT-0049550 | Bldg # 1 | Sec # 1 of 1 | Card # 1 of 1 | Print Date 7/21/2019 8:52:

CURRENT OWNER

GLOBAL TOWER ASSETS LLC

10 PRESIDENTIAL WAY

WOBURN MA 01801

TOPO	UTILITIES	STRT / ROAD	LOCATION

SUPPLEMENTAL DATA

Alt Prcl ID	2778--61B------		
Census Tr	CEN728		
Heart			
Abstract	200:200		
Freeze		Special Dis	
GIS ID	2778-61B	Assoc Pid#	

CURRENT ASSESSMENT

Description	Code	Appraised	Assessed
Com Outbl	2-5	75,820	53,090
Vac Cm Ld	5-2	367,620	257,330
Total		443,440	310,420

6015

BRIDGEPORT, CT

VISION

RECORD OF OWNERSHIP

RECORD OF OWNERSHIP	BK-VOL/PAGE		SALE DATE	Q/U	V/I	SALE PRICE	VC
GLOBAL TOWER ASSETS LLC	9695	0074	09-13-2017	U	V	0	04
GLOBAL TOWER ASSETS LLC	9500	0294	09-14-2016	U	V	0	03
CELL TOWER LEASE ACQUISION LLC	7342	0302	01-23-2007	U	I	0	03
UNISON SITE MANAGEMENT LLC	7342	0299	01-23-2007	U	I	1,925,000	03
TARTAGLIA REMO	3018	0317	07-06-1992	U	V	700,000	

PREVIOUS ASSESSMENTS (HISTORY)

Year	Code	Assessed	Year	Code	Assessed V	Year	Code	Assessed
2018	2-5	53,090	2017	2-5	53,090	2016	2-5	53,090
	5-2	257,330		5-2	257,330		5-2	257,330
Total		310420	Total		310420	Total		310420

EXEMPTIONS

Year	Code	Description	Amount
		Total	0.00

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm Int

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD

Nbhd	Nbhd Name	B	Tracing	Batch
021				

NOTES

CELL TOWER

ENTRANCE TO LOT OFF OF CHOPSEY AM RD

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	0
Appraised Xf (B) Value (Bldg)	0
Appraised Ob (B) Value (Bldg)	75,820
Appraised Land Value (Bldg)	367,620
Special Land Value	0
Total Appraised Parcel Value	443,440
Valuation Method	C
Total Appraised Parcel Value	443,440

BUILDING PERMIT RECORD

Permit Id	Issue Date	Type	Description	Amount	Insp Date	% Comp	Date Comp	Comments
138418	06-12-2018	OT	Telecommunica	20,000	04-13-2018	100	01-10-2018	
117018	03-27-2018		Telecommunica	15,000	04-30-2018	0		Replace Antenna
6747	06-07-2017		Telecommunica		09-06-2017	100	05-02-2017	C/O 6097
7023	10-13-2016		Telecommunica	15,000	09-28-2017	100	04-28-2017	C/O #6077
6731	06-01-2016	OT	Telecommunica	40,000	04-13-2018	100	01-10-2018	COA = Replace Antennas (AT
6572	04-04-2016		Telecommunica	40,000	10-11-2016	100	10-05-2016	C/O #5896 ANTENNAS REPL
6482	01-29-2016		Telecommunica	15,000	07-21-2016	100	05-12-2016	C/O #6286 T MOBILE

VISIT / CHANGE HISTORY

Date	Id	Type	Is	Cd	Purpost/Result
07-21-2016	RK	02		P	Permit Activity
10-10-2014	RK	02		P	Permit Activity
05-12-2014	RK	02		P	Permit Activity
06-28-2013	RK	02		P	Permit Activity
08-31-2010	RK	02		P	Permit Activity
09-03-2009	RK	02		P	Permit Activity
10-28-2008	AD			91	Com Field Review

LAND LINE VALUATION SECTION

B	Use Code	Description	Zone	Land Type	Land Units		Unit Price	Size Adj	Site Index	Cond.	Nbhd.	Nbhd. Adj	Notes	Location Adjustment	Adj Unit P	Land Value
1	200V	Commercial Lnd	RA		3.050	AC	101,500.00	1.00000	0	1.25	2140	0.950	CU	1.0000	120,531.2	367,620
Total Card Land Units					3.050	AC	Parcel Total Land Area			3.0500				Total Land Value		367,620

Property Location	1000 TRUMBULL AV		Map ID	82/ 2778/ 61/B /		Bldg Name	State Use 200V
Vision ID	32253	Account #	RT-0049550	Bldg # 1	Sec # 1 of 1	Card # 1 of 1	Print Date

CONSTRUCTION DETAIL

Element	Cd	Description
Style:	79	Telephone Bldg
Model	00	Vacant
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 Full Baths		
Total Half Baths		
Total Xtra Fixtrs		
Total Rooms		
Bath Style:		
Kitchen Style:		
Fireplaces		
Fin Bsmt Area		
Fin Bsmt Qualit		
Bsmt Garages		
.		

CONSTRUCTION DETAIL (CONTINUED)

Element	Cd	Description

CONDO DATA

Parcel Id		C		Owne	
		B		S	

Adjust Type	Code	Description	Factor%
Condo Flr			
Condo Unit			

COST / MARKET VALUATION

Building Value New	0
Year Built	0
Effective Year Built	
Depreciation Code	
Remodel Rating	
Year Remodeled	
Depreciation %	0
Functional Obsol	0
External Obsolescence	0
Trend Factor	1.000
Condition	
Condition %	100
Percent Good	
RCNLD	0
Dep % Ovr	
Dep Ovr Comment	
Misc Imp Ovr	
Misc Imp Ovr Comment	
Cost to Cure Ovr	
Cost to Cure Ovr Comment	

No Sketch

OB - OUTBUILDING & YARD ITEMS(L) / XF - BUILDING EXTRA FEATURES(B)

Code	Description	L/B	Units	Unit Price	Yr Blt	Cond. Cd	% Gd	Grade	Grade Adj.	Appr. Value
FN5	Fence 10'	L	616	20.00	2000		50		0.00	6,160
PAV2	Paving Conc	L	40	4.00	2009		70		0.00	110
TWR	Tower	L	240	200.00	2007		100		0.00	48,000
SHD1	Shed	L	1,200	17.00	1987	A	60	3	1.00	12,240
SHD1	Shed	L	432	17.00	2000	A	60	3	1.00	4,410
SHD1	Shed	L	240	17.00	2000	A	60	3	1.00	2,450
SHD1	Shed	L	240	17.00	2006	A	60	3	1.00	2,450

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Floor Area	Eff Area	Unit Cost	Undeprec Value
	Ttl Gross Liv / Lease Area	0	0	0		0

VZW LOCATION CODE:	467325
VZW SITE NAME:	N BRIDGEPORT CT
PROJECT DESCRIPTION:	ANTENNA RELOCATION /RECONFIGURATION
TOWER TYPE:	240' SELF-SUPPORT
SITE ADDRESS:	1000 TRUMBULL AVE BRIDGEPORT, CT 06606 (FAIRFIELD COUNTY)
JURISDICTION:	CITY OF BRIDGEPORT
PRESENT OCCUPANCY TYPE:	TELECOMMUNICATIONS FACILITY
CURRENT ZONING:	R-A
PARCEL ID:	2778-61B

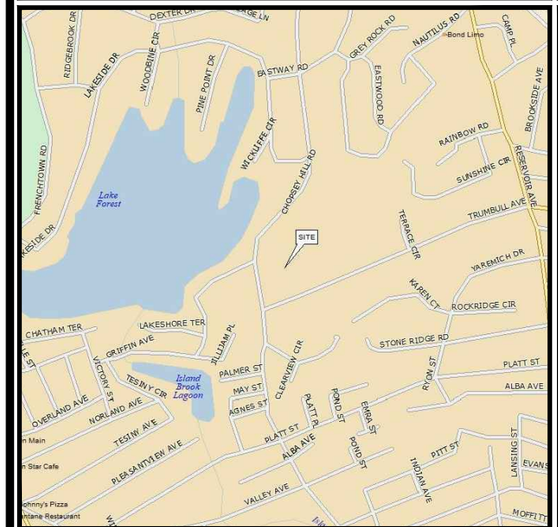
PROJECT INFORMATION

*LATITUDE N 41° 13' 10.60"
*LONGITUDE W 73° 12' 04.60"

*GROUND ELEVATION (AMSL) = 452' ±

*INFORMATION PROVIDED BY ATC

SITE COORDINATES



LOCATION MAP

FROM DOWNTOWN NEW HAVEN CT START OUT GOING NORTHEAST ON CHURCH ST TOWARD WALL ST. CHURCH ST BECOMES WHITNEY AVE. TURN RIGHT ONTO TRUMBULL ST. TURN SLIGHT LEFT TO TAKE THE I-91 S/I-91 N RAMP. MERGE ONTO I-91 S TOWARD I-95/N.Y.CITY/NEW LONDON. KEEP RIGHT TOWARD NY CITY. MERGE ONTO I-95 S VIA THE EXIT ON THE LEFT TOWARD N Y CITY. TAKE EXIT 38 TOWARD CT-15/MERRITT PKWY/W CROSS PKWY. MERGE ONTO MILFORD PKWY. MERGE ONTO MERRITT PARKWAY/CT-15 S VIA EXIT 3B ON THE LEFT TOWARD NY CITY. MERGE ONTO CT-8 S VIA EXIT 52 TOWARD BRIDGEPORT. TAKE THE CT-127/WHITE PLAINS ROAD EXIT, EXIT 7. TURN SLIGHT LEFT ONTO OLD TOWN RD. OLD TOWN RD BECOMES TRUMBULL AVE. TURN RIGHT ONTO CHOPSEY HILL RD. 1336 CHOPSEY HILL RD, BRIDGEPORT, CT 06606-2422, 1336 CHOPSEY HILL RD IS ON THE RIGHT. DRIVE BETWEEN HOUSES TO TOWER SITE

DRIVING DIRECTIONS

verizon

20 ALEXANDER DR, 2ND FLOOR WALLINGFORD, CT 06492

VZW LOCATION CODE: 467325
VZW SITE NAME: N BRIDGEPORT CT

1000 TRUMBULL AVE BRIDGEPORT, CT 06606 (FAIRFIELD COUNTY)

LESSEE:
NAME: VERIZON WIRELESS
ADDRESS: 20 ALEXANDER DR, 2ND FLOOR
CITY, STATE, ZIP: WALLINGFORD, CT 06492

TOWER MANAGER:
NAME: AMERICAN TOWER CORPORATION
ADDRESS: 19100 VON KARMAN AVE, STE 200
CITY, STATE, ZIP: IRVINE, CA 92612
CONTACT: AARON DIAL
PHONE: (919) 466-5383
SITE NAME: TARTAGLIA
SITE NUMBER: 383598

CIVIL ENGINEER:
NAME: TOWER ENGINEERING PROFESSIONALS
ADDRESS: 326 TRYON ROAD
CITY, STATE, ZIP: RALEIGH, NC 27603
CONTACT: GRAHAM M. ANDRES, P.E.
PHONE: (919) 661-6351

PROPERTY OWNER:
NAME: CELL TOWER LEASE ACQUISITION LLC
ADDRESS: 92 THOMAS JOHNSON DR
CITY, STATE, ZIP: FREDERICK, MD 21702

CONTACT INFORMATION

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

1. CONNECTICUT STATE BUILDING CODE (2018 EDITION)
2. CONNECTICUT CODE COUNCIL
3. ANSI/TIA-222-G-2-2009
4. 2017 NEC & ADDENDUM
5. LOCAL BUILDING CODE
6. CITY/COUNTY ORDINANCES

CODE COMPLIANCE

- REMOVE (3) ANTENNAS
- REMOVE (12) RRHs
- INSTALL (3) ANTENNAS
- INSTALL (9) RRHs
- INSTALL (3) DIPLEXERS
- INSTALL MOUNT MODIFICATIONS

SCOPE OF WORK

UTILITIES:
POWER COMPANY: UNITED ILLUMINATING COMPANY
CONTACT: CUSTOMER SERVICE
PHONE: (800) 722-5584
METER # NEAR SITE: 011237921

TELEPHONE COMPANY: AT&T
CONTACT: CUSTOMER SERVICE
PHONE: (800) 288-2020
PHONE # NEAR SITE: (203) 374-4533
PEDESTAL # NEAR SITE: UNKNOWN

SHEET	DESCRIPTION	REV
T1	TITLE SHEET	0
N1	PROJECT NOTES	0
C1	SITE PLAN	0
C2	COMPOUND LAYOUT	0
C3	TOWER ELEVATION	0
C4	ANTENNA LAYOUT	0
C5	FINAL ANTENNA SCHEDULE	0
C6	EQUIPMENT DETAILS	0

INDEX OF SHEETS

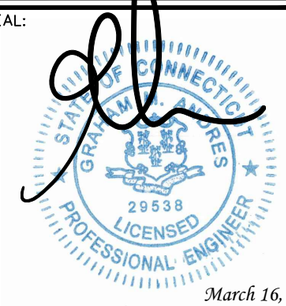
PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

REV	DATE	ISSUED FOR:
0	03-16-20	100% CONSTRUCTION
A	11-27-19	PRELIMINARY

DRAWN BY: KCL CHECKED BY: DEL

SEAL:



March 16, 2020

SHEET NUMBER: T-1

REVISION: 0

TEP#: 193418.205959

PROJECT NOTES:

1. ALL REFERENCES TO THE OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED VERIZON WIRELESS OR ITS DESIGNATED REPRESENTATIVE.

2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF CONNECTICUT.

3. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE CONNECTICUT STATE BUILDING CODE (2018 EDITION) .

4. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.

5. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.

6. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND IT'S COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.

7. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATIONS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.

8. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.

10. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.

11. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.

12. IF APPLICABLE, ALL CONCRETE WORK SHALL COMPLY TO LOCAL CODES AND THE ACI 318-11, "BUILDING REQUIREMENTS FOR STRUCTURAL CONCRETE".

13. ALL TOWER DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.

14. ALL TOWER MODIFICATION WORK SHALL BE IN ACCORDANCE WITH TIA-1019-A STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

PLANS PREPARED FOR:

verizon

20 ALEXANDER DR, 2ND FLOOR
WALLINGOFRD, CT 06492

PROJECT INFORMATION:

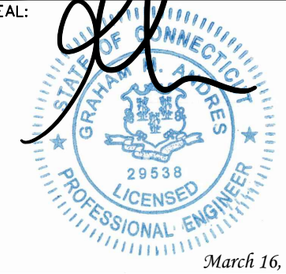
VZW LOCATION CODE:467325
VZW SITE NAME: N BRIDGEPORT CT

1000 TRUMBULL AVE
BRIDGEPORT, CT 06606
(FAIRFIELD COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:



March 16, 2020

REV	DATE	ISSUED FOR:
0	03-16-20	100% CONSTRUCTION
A	11-27-19	PRELIMINARY

DRAWN BY: KCL | CHECKED BY: DEL

SHEET TITLE:

PROJECT NOTES

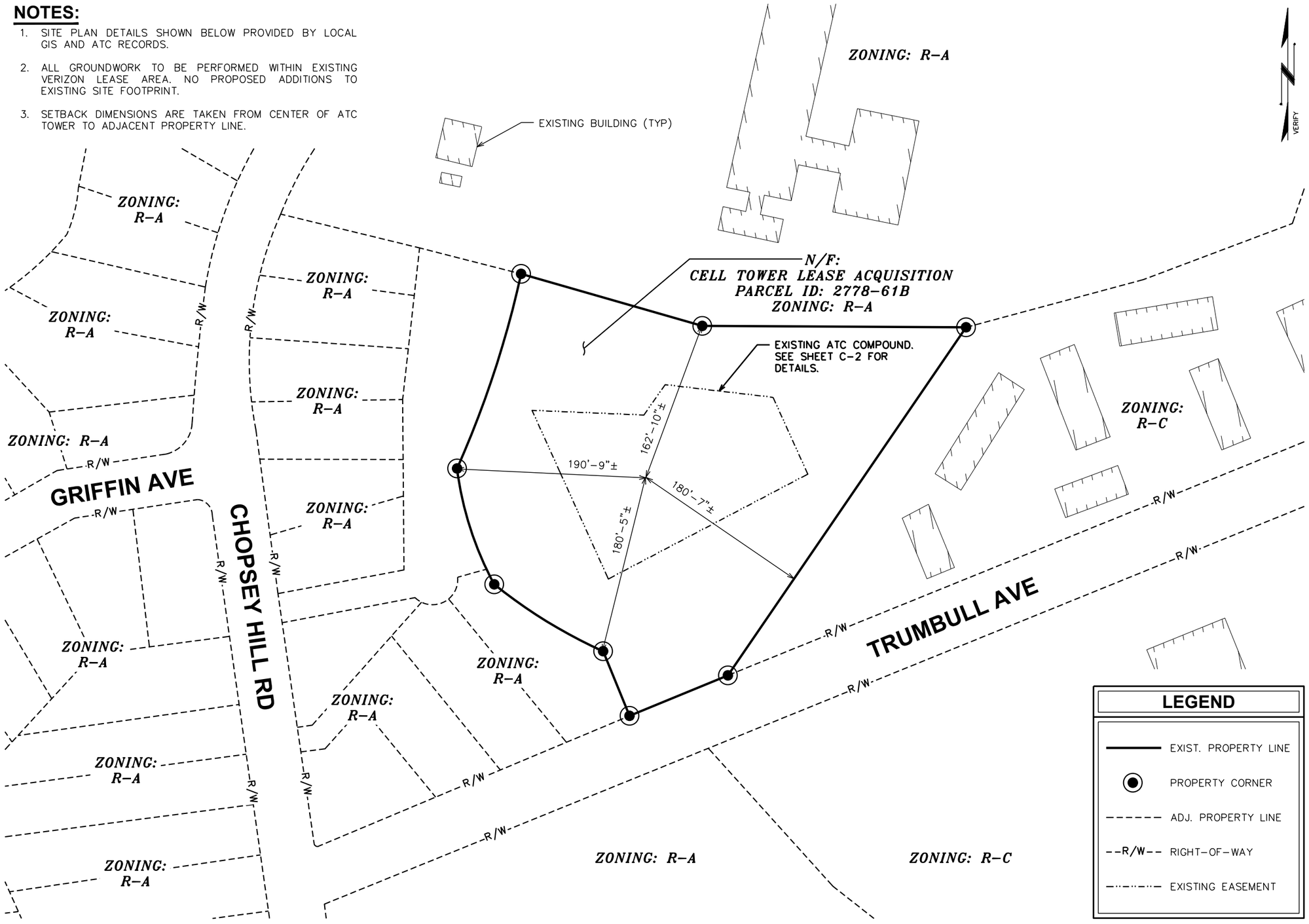
SHEET NUMBER: **N-1**

REVISION: **0**

TEP#: 193418.205959

NOTES:

1. SITE PLAN DETAILS SHOWN BELOW PROVIDED BY LOCAL GIS AND ATC RECORDS.
2. ALL GROUNDWORK TO BE PERFORMED WITHIN EXISTING VERIZON LEASE AREA. NO PROPOSED ADDITIONS TO EXISTING SITE FOOTPRINT.
3. SETBACK DIMENSIONS ARE TAKEN FROM CENTER OF ATC TOWER TO ADJACENT PROPERTY LINE.



LEGEND

- EXIST. PROPERTY LINE
- PROPERTY CORNER
- ADJ. PROPERTY LINE
- R/W — RIGHT-OF-WAY
- EXISTING EASEMENT

SITE PLAN

SCALE: 1" = 100'

0 100 200

SCALE IN FEET

PLANS PREPARED FOR:

verizon

20 ALEXANDER DR, 2ND FLOOR
WALLINGOFRD, CT 06492

PROJECT INFORMATION:

VZW LOCATION CODE:467325
VZW SITE NAME: N BRIDGEPORT CT

1000 TRUMBULL AVE
BRIDGEPORT, CT 06606
(FAIRFIELD COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE (919) 661-6351
www.tepgroup.net

SEAL:

STATE OF CONNECTICUT · GRAHAM M. ANDRES · 29538 · LICENSED PROFESSIONAL ENGINEER

March 16, 2020

REV	DATE	ISSUED FOR:
0	03-16-20	100% CONSTRUCTION
A	11-27-19	PRELIMINARY

DRAWN BY: KCL | CHECKED BY: DEL

SHEET TITLE:

SITE PLAN

SHEET NUMBER: **C-1**

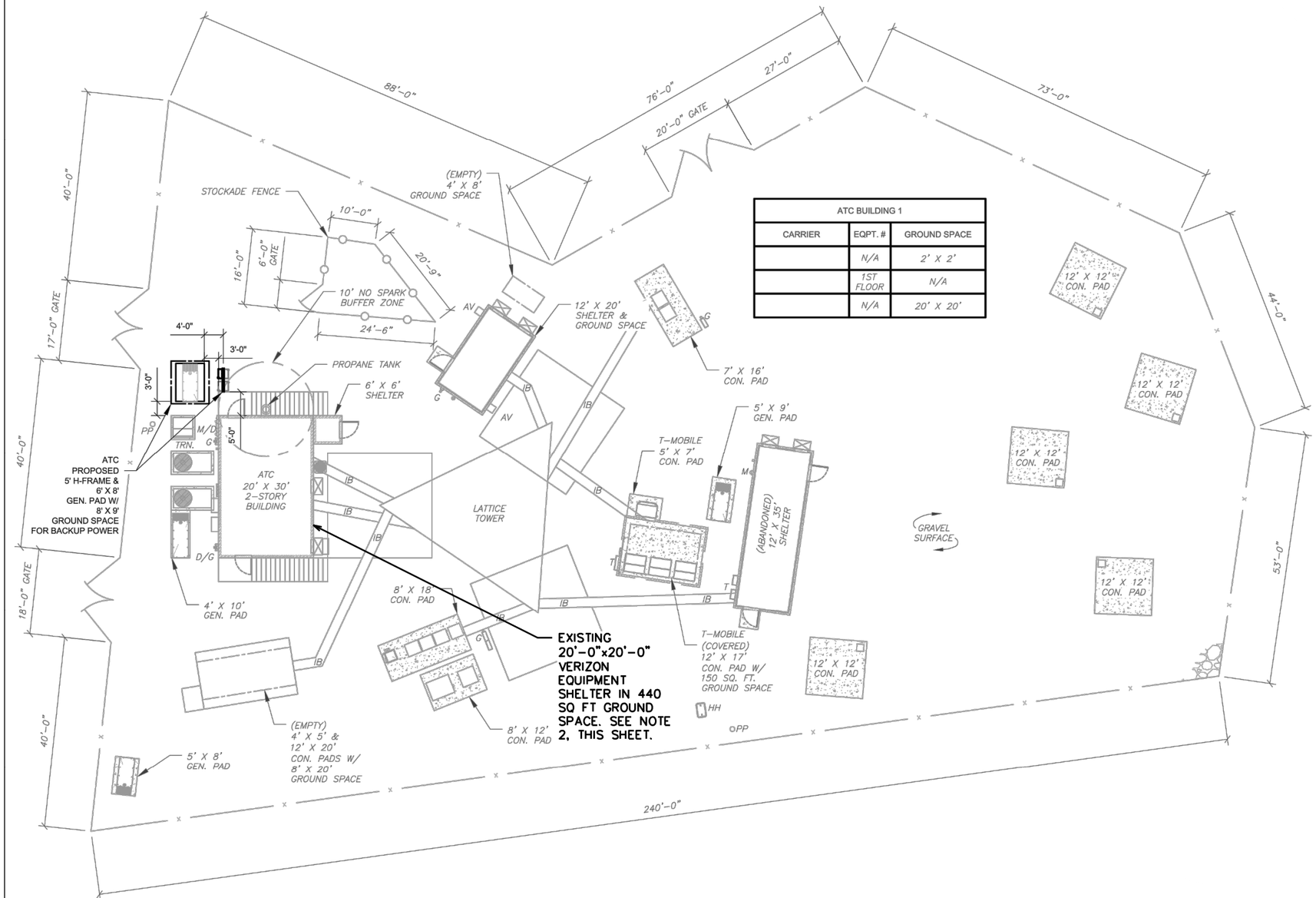
REVISION: **0**

TEP#: 193418.205959

NOTES:

1. COMPOUND DETAIL SHOWN BELOW TAKEN FROM INFORMATION PROVIDED BY ATC. CONTRACTOR TO VERIFY ALL EXISTING INFORMATION IS AS INDICATED ON SITE PLAN. CONTRACTOR IS TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.

2. ALL GROUNDWORK TO BE PERFORMED WITHIN EXISTING VERIZON GROUND SPACE. NO PROPOSED ADDITIONS TO EXISTING SITE FOOTPRINT.



ATC BUILDING 1		
CARRIER	EQPT. #	GROUND SPACE
	N/A	2' X 2'
	1ST FLOOR	N/A
	N/A	20' X 20'

VERIFY

COMPOUND DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:

verizon

20 ALEXANDER DR, 2ND FLOOR
WALLINGOFRD, CT 06492

PROJECT INFORMATION:

VZW LOCATION CODE:467325
VZW SITE NAME: N BRIDGEPORT CT

1000 TRUMBULL AVE
BRIDGEPORT, CT 06606
(FAIRFIELD COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE (919) 661-6351
www.tepgroup.net

SEAL:

STATE OF CONNECTICUT · GRACE M. MORES · 29538 · LICENSED PROFESSIONAL ENGINEER

March 16, 2020

REV	DATE	ISSUED FOR:
0	03-16-20	100% CONSTRUCTION
A	11-27-19	PRELIMINARY

DRAWN BY: KCL | CHECKED BY: DEL

SHEET TITLE:

COMPOUND DETAIL

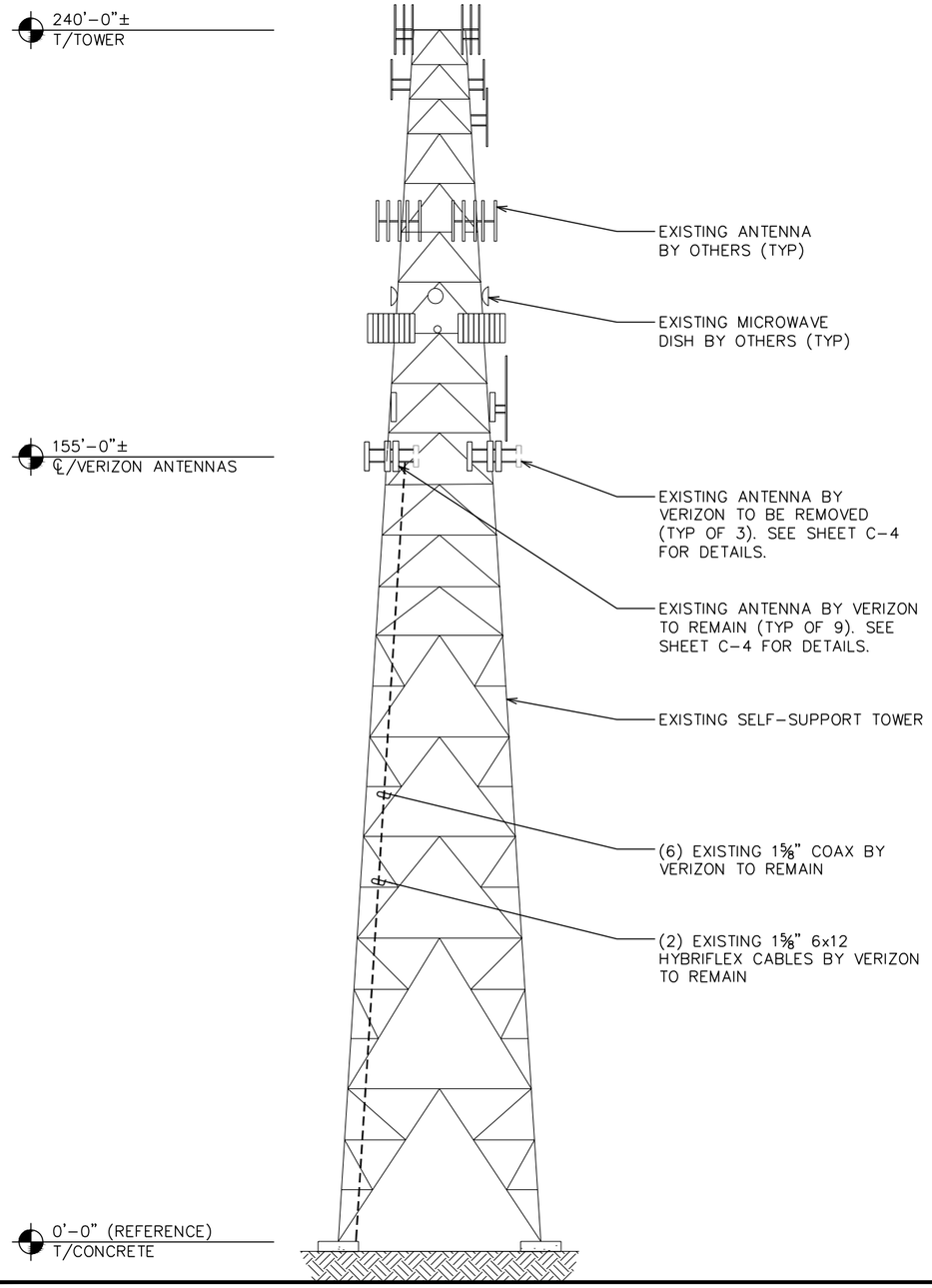
SHEET NUMBER: **C-2**

REVISION: **0**

TEP#: 193418.205959

NOTE:

TOWER ELEVATION IS FOR SCHEMATIC PURPOSES ONLY. TEP DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA HEIGHTS, ANTENNA AZIMUTHS, AND MOUNT CONFIGURATIONS.



EXISTING TOWER ELEVATION

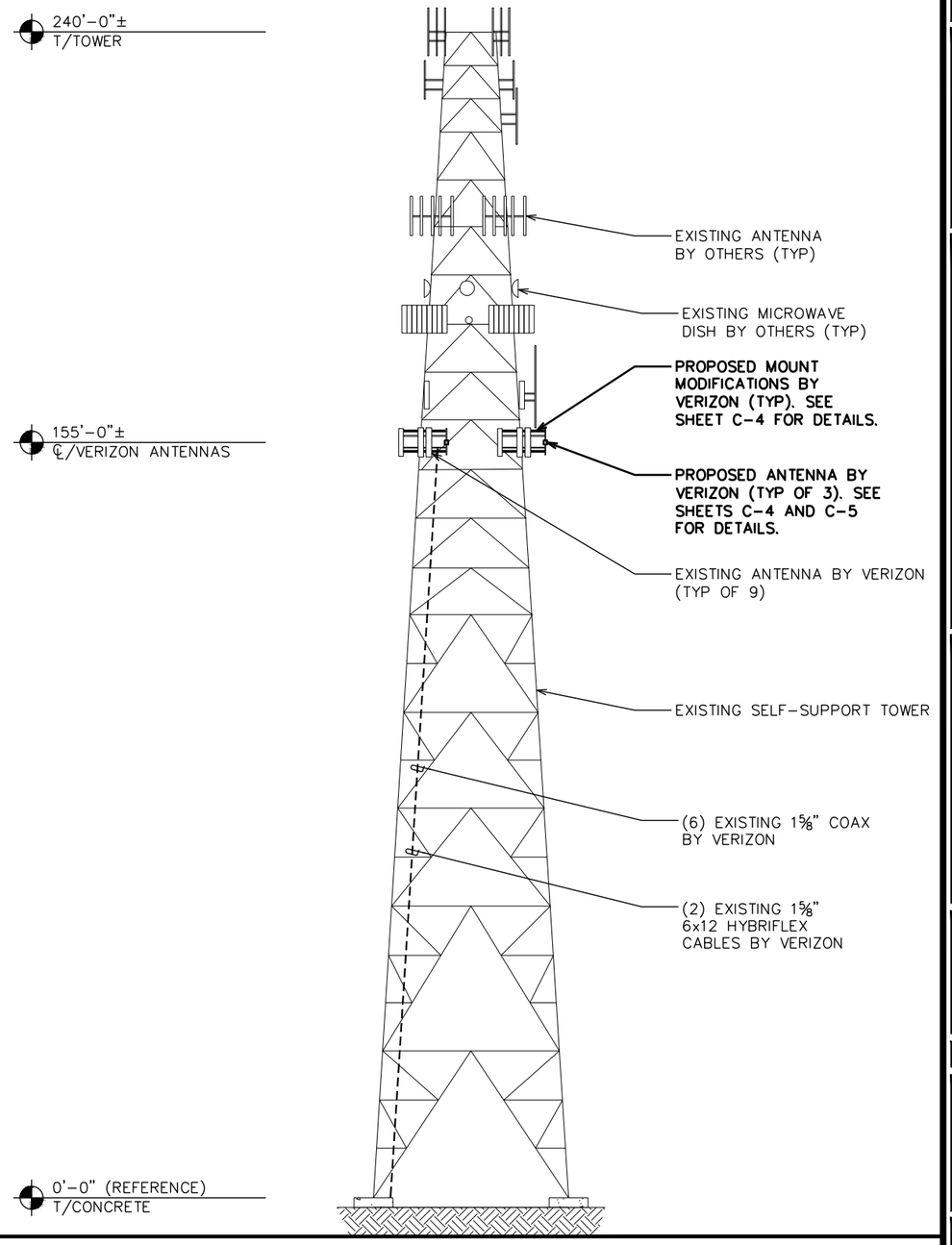
SCALE: 1" = 30'

0 30 60

SCALE IN FEET

NOTE:

TOWER ELEVATION IS FOR SCHEMATIC PURPOSES ONLY. TEP DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA HEIGHTS, ANTENNA AZIMUTHS, AND MOUNT CONFIGURATIONS.



PROPOSED TOWER ELEVATION

SCALE: 1" = 30'

0 30 60

SCALE IN FEET

PLANS PREPARED FOR:

verizon

20 ALEXANDER DR, 2ND FLOOR
WALLINGOFRD, CT 06492

PROJECT INFORMATION:

VZW LOCATION CODE:467325
VZW SITE NAME: N BRIDGEPORT CT

1000 TRUMBULL AVE
BRIDGEPORT, CT 06606
(FAIRFIELD COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

GRAHAM L. ANDRES · STATE OF CONNECTICUT · 29538 · LICENSED PROFESSIONAL ENGINEER

March 16, 2020

REV	DATE	ISSUED FOR:
0	03-16-20	100% CONSTRUCTION
A	11-27-19	PRELIMINARY

DRAWN BY: KCL | CHECKED BY: DEL

SHEET TITLE:

TOWER ELEVATION

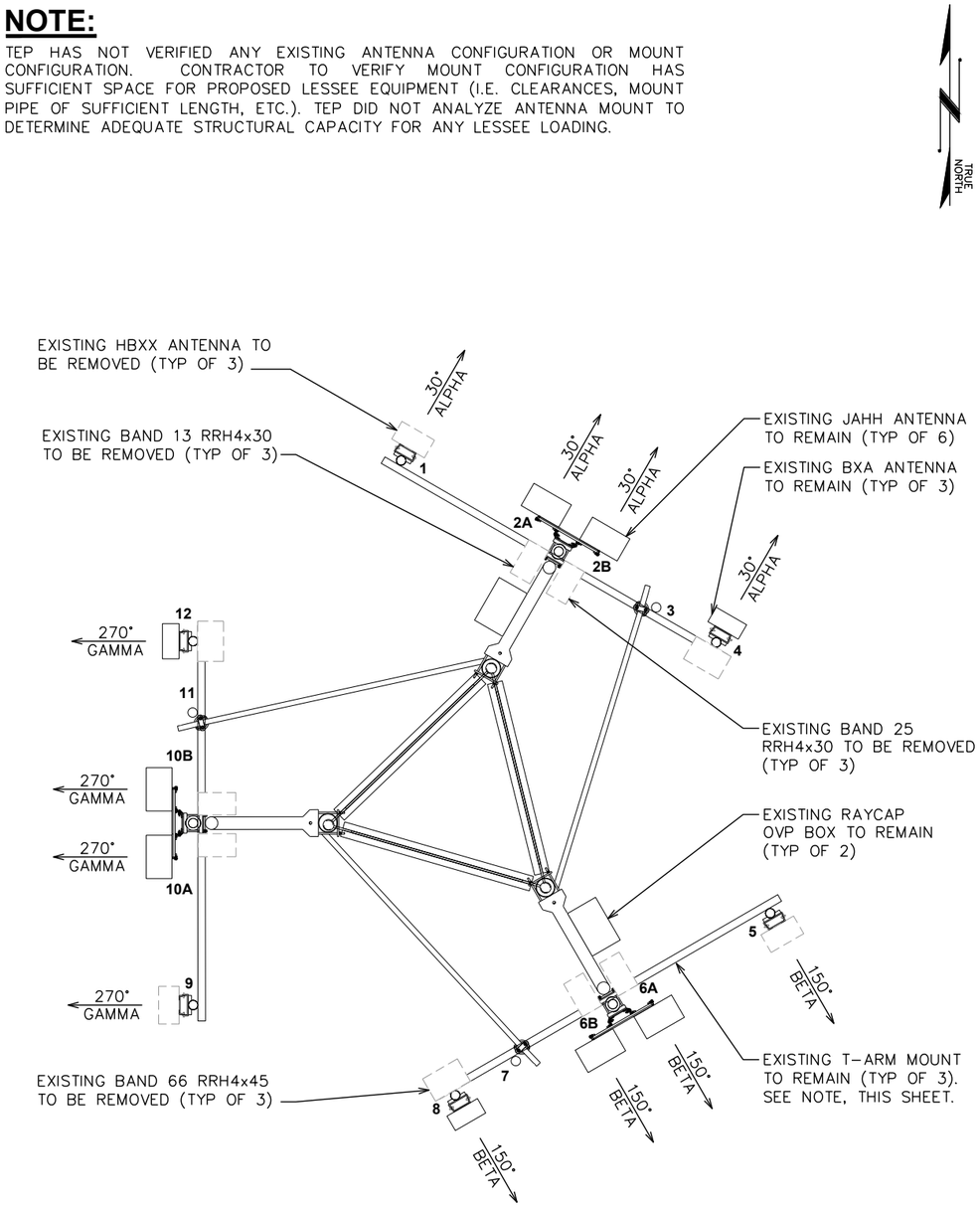
SHEET NUMBER: **C-3**

REVISION: **0**

TEP#:193418.205959

NOTE:

TEP HAS NOT VERIFIED ANY EXISTING ANTENNA CONFIGURATION OR MOUNT CONFIGURATION. CONTRACTOR TO VERIFY MOUNT CONFIGURATION HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (I.E. CLEARANCES, MOUNT PIPE OF SUFFICIENT LENGTH, ETC.). TEP DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.



EXISTING ANTENNA PLAN

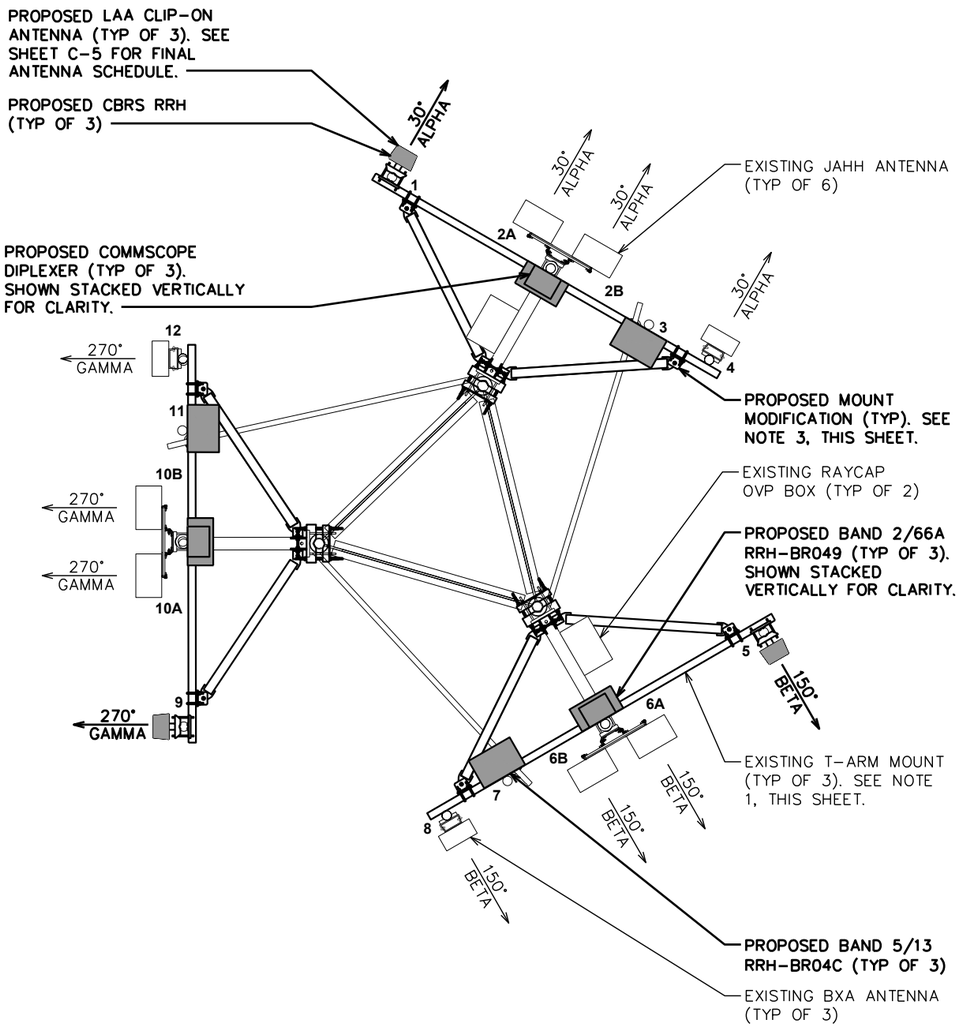
SCALE: ¼" = 1'-0"

0 4 8

SCALE IN FEET

NOTES:

1. TEP HAS NOT VERIFIED ANY EXISTING ANTENNA CONFIGURATION OR MOUNT CONFIGURATION. CONTRACTOR TO VERIFY MOUNT CONFIGURATION HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (I.E. CLEARANCES, MOUNT PIPE OF SUFFICIENT LENGTH, ETC.). TEP DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.
2. CONTRACTOR TO VERIFY PROPOSED LOADING WITH TOWER STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION.
3. EXISTING MOUNT DOES NOT HAVE SUFFICIENT STRUCTURAL CAPACITY AND MUST BE MODIFIED. SEE MOUNT REINFORCEMENT DRAWINGS COMPLETED BY AMERICAN TOWER CORPORATION, DATED MARCH 12, 2020 FOR DETAILS.



PROPOSED ANTENNA PLAN

SCALE: ¼" = 1'-0"

0 4 8

SCALE IN FEET

PLANS PREPARED FOR:

verizon

20 ALEXANDER DR, 2ND FLOOR
WALLINGOFRD, CT 06492

PROJECT INFORMATION:

VZW LOCATION CODE:467325
VZW SITE NAME: N BRIDGEPORT CT

1000 TRUMBULL AVE
BRIDGEPORT, CT 06606
(FAIRFIELD COUNTY)

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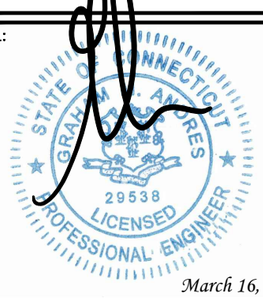
SEAL:



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0	03-16-20	100% CONSTRUCTION
A	11-27-19	PRELIMINARY

DRAWN BY: KCL | CHECKED BY: DEL

SHEET TITLE:

ANTENNA LAYOUT

SHEET NUMBER: **C-4**

REVISION: **0**

TEP#:193418.205959

NOTES:

1. CONTRACTOR TO REFERENCE VERIZON ISSUED RFDS AND GIVE PRECEDENCE TO INFORMATION PROVIDED IN RFDS OVER INFORMATION PROVIDED IN THIS TABLE.
2. VERIFY LOADING WITH STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION.
3. IF STRUCTURAL ANALYSIS AND RFDS DO NOT MATCH CONTRACTOR IS TO CONTACT AMERICAN TOWER CORPORATION IMMEDIATELY.

PROPOSED EQUIPMENT IN BOLD

FINAL ANTENNA/FEEDLINE SCHEDULE

SECTOR	POS.	MANUFACTURER MODEL #	MOUNTING HEIGHT	CABLE SIZE	AZIMUTH (TN)	*CABLE LENGTH	OVP/RRH/TMA/DIPLEXER [MODEL #]
ALPHA	1	**SAMSUNG-OUTDOOR LAA 1W RRH-CLIP-ON ANT.**	**℄ @ 155'-0"±**	(6) 1⅝" COAX (2) 1⅝" 6x12 HYBRIFLEX	**30°**	215'±	(1) RAYCAP OVP BOX [RxxDC-3315-PF-48] **(1) SAMSUNG RRH [B2/B66 RRH-BR049]** **(1) SAMSUNG RRH [B5/B13 RRH-BR04C]** **(1) COMMSCOPE DIPLEXER** **(1) SAMSUNG RRH [OUTDOOR CBRS 20W RRH]**
ALPHA	2A	COMMSCOPE JAHH-65B-R3B	℄ @ 155'-0"±		30°		
ALPHA	2B	COMMSCOPE JAHH-65B-R3B	℄ @ 155'-0"±		30°		
ALPHA	3	–	℄ @ 155'-0"±		30°		
ALPHA	4	ANTEL BXA-80063-6BF-EDIN-X	℄ @ 155'-0"±		150°		
BETA	5	**SAMSUNG-OUTDOOR LAA 1W RRH-CLIP-ON ANT.**	**℄ @ 155'-0"±**		**150°**		(1) RAYCAP OVP BOX [RxxDC-3315-PF-48] **(1) SAMSUNG RRH [B2/B66 RRH-BR049]** **(1) SAMSUNG RRH [B5/B13 RRH-BR04C]** **(1) COMMSCOPE DIPLEXER** **(1) SAMSUNG RRH [OUTDOOR CBRS 20W RRH]**
BETA	6A	COMMSCOPE JAHH-65B-R3B	℄ @ 155'-0"±		150°		
BETA	6B	COMMSCOPE JAHH-65B-R3B	℄ @ 155'-0"±		150°		
BETA	7	–	℄ @ 155'-0"±		270°		
BETA	8	ANTEL BXA-80063-6BF-EDIN-X	℄ @ 155'-0"±		270°		
GAMMA	9	**SAMSUNG-OUTDOOR LAA 1W RRH-CLIP-ON ANT.**	**℄ @ 155'-0"±**		**270°**		**(1) SAMSUNG RRH [B2/B66 RRH-BR049]** **(1) SAMSUNG RRH [B5/B13 RRH-BR04C]** **(1) COMMSCOPE DIPLEXER** **(1) SAMSUNG RRH [OUTDOOR CBRS 20W RRH]**
GAMMA	10A	COMMSCOPE JAHH-65B-R3B	℄ @ 155'-0"±		270°		
GAMMA	10B	COMMSCOPE JAHH-65B-R3B	℄ @ 155'-0"±		270°		
GAMMA	11	–	℄ @ 155'-0"±		270°		
GAMMA	12	ANTEL BXA-80063-6BF-EDIN-X	℄ @ 155'-0"±		270°		

*CONTRACTOR TO VERIFY CABLE LENGTH PRIOR TO CONSTRUCTION.
**ANTENNA DESIGN BASED ON INFORMATION PROVIDED BY AMERICAN TOWER CORPORATION IN THE FORM OF AN APPLICATION (ID: 12991762).

FINAL ANTENNA SCHEDULE

SCALE: N.T.S.

PLANS PREPARED FOR:

verizon

20 ALEXANDER DR, 2ND FLOOR
WALLINGOFRD, CT 06492

PROJECT INFORMATION:

VZW LOCATION CODE:467325
VZW SITE NAME: N BRIDGEPORT CT
1000 TRUMBULL AVE
BRIDGEPORT, CT 06606
(FAIRFIELD COUNTY)

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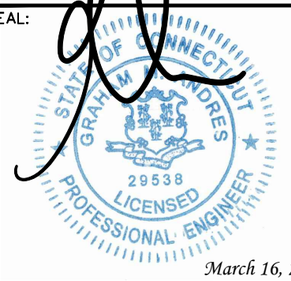


March 16, 2020

REV	DATE	ISSUED FOR:
0	03-16-20	100% CONSTRUCTION
A	11-27-19	PRELIMINARY

DRAWN BY: KCL | CHECKED BY: DEL

SHEET TITLE:

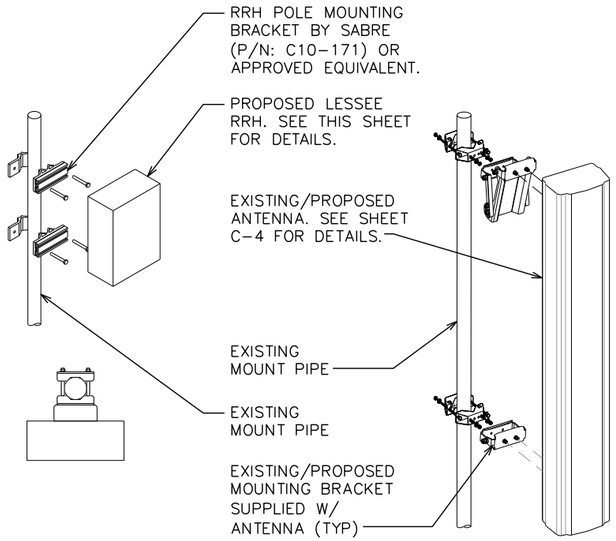
FINAL ANTENNA SCHEDULE

SHEET NUMBER: **C-5**

REVISION: **0**

TEP#: 193418.205959

RRH ANTENNA



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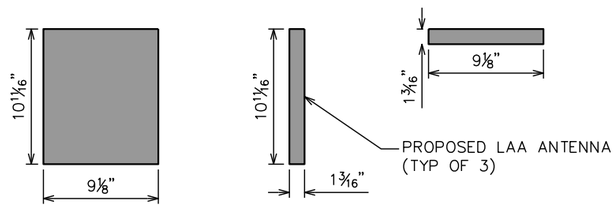

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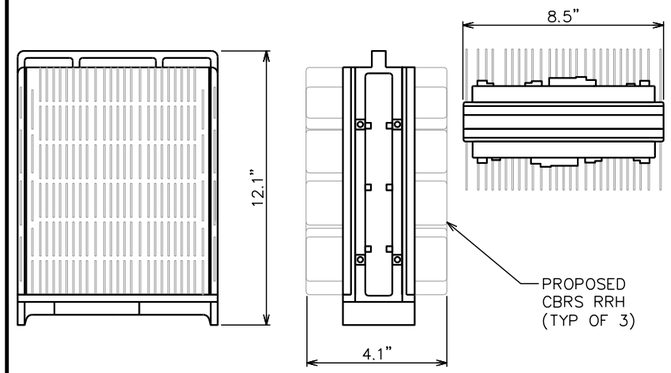
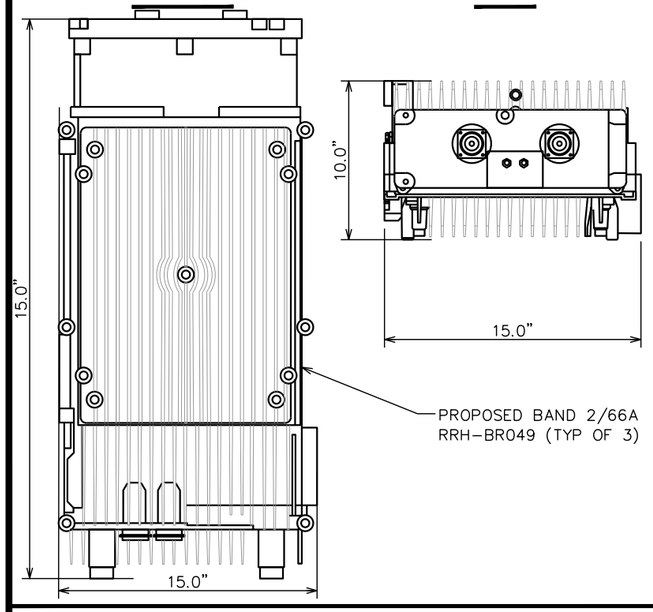


EQUIPMENT MOUNTING DETAIL

SCALE: N.T.S.

FRONT TOP



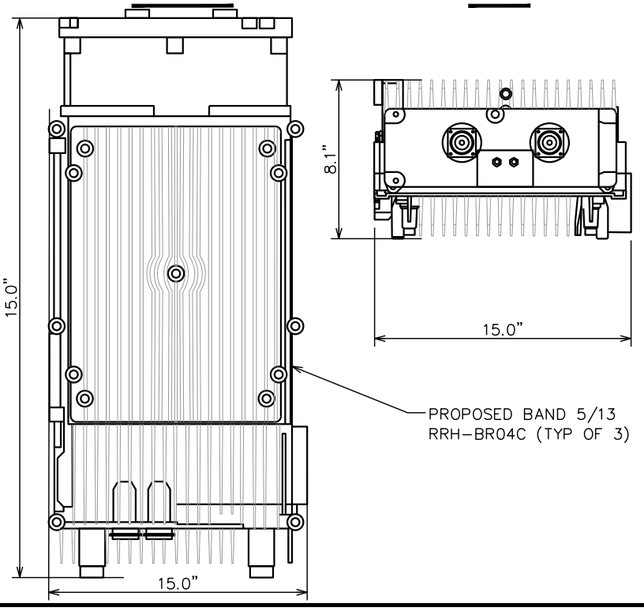
PROPOSED BAND 2/66A RRH-BR049 DETAIL

SCALE: N.T.S.

PROPOSED LAA ANTENNA DETAIL

SCALE: N.T.S.

FRONT TOP



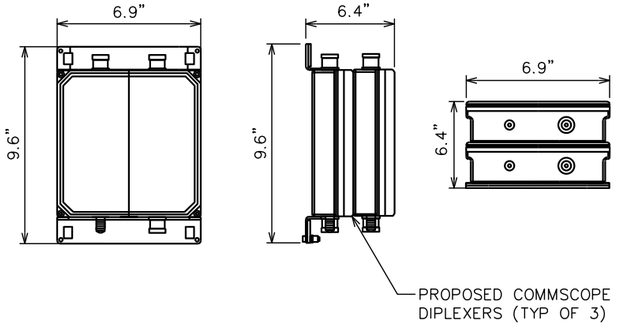
PROPOSED BAND 5/13 RRH-BR04C DETAIL

SCALE: N.T.S.

PROPOSED CBRS RRH DETAIL

SCALE: N.T.S.

FRONT SIDE TOP



PROPOSED COMMSCOPE DIPLEXER DETAIL

SCALE: N.T.S.

PLANS PREPARED FOR:

verizon

20 ALEXANDER DR, 2ND FLOOR
WALLINGOFRD, CT 06492

PROJECT INFORMATION:

VZW LOCATION CODE:467325
VZW SITE NAME: N BRIDGEPORT CT

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BRIDGEPORT, CT 06606
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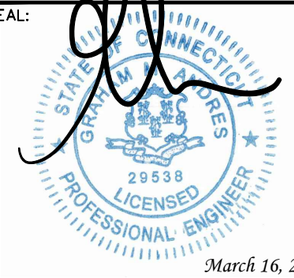

March 16, 2020

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DRAWN BY: KCL CHECKED BY: DEL

SHEET TITLE:

EQUIPMENT DETAILS

SHEET NUMBER: **C-6**

REVISION: **0**

TEP#:193418.205959

VICINITY MAP

AMERICAN TOWER®

SITE NAME: TARTAGLIA
SITE NUMBER: 383598
ATC PROJECT NUMBER: 12991762_C9_07
SITE ADDRESS: 1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606

LOCATION MAP

MOUNT REINFORCEMENT DRAWINGS
PREPARED FOR VERIZON WIRELESS

PROJECT TEAM

TOWER OWNER

AMERICAN TOWER
10 PRESIDENTAL WAY
WOBURN, MA 01801

ENGINEERED BY

ATC TOWER SERVICES
3500 REGENCY PARKWAY, SUITE 100
CARY, NC 27518

CARRIER INFORMATION

CARRIER: VERIZON WIRELESS
CARRIER SITE NAME: N BRIDGEPORT CT
CARRIER SITE NUMBER: 467325

811 Know what's below. Call before you dig.

PROJECT DESCRIPTION

THE MODIFICATIONS PRESENTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE MOUNT ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER 12991762_C8_06 DATED 02/12/20. SATISFACTORY COMPLETION OF THE WORK INDICATED ON THESE DRAWINGS WILL RESULT IN THE MOUNT MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE MOUNT ANALYSIS WAS COMPLETED.

COMPLIANCE CODE

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

1. ANSI/TIA/EIA: STRUCTURAL STANDARDS (222-G EDITION)
2. INTERNATIONAL BUILDING CODE (2015 IBC)
3. CONNECTICUT STATE BUILDING CODE (2018)

PROJECT LOCATION

GEOGRAPHIC COORDINATES

LATITUDE: 41.21960000
LONGITUDE: -73.20128611

SHEET	SHEET TITLE	REV.
G-002	IBC GENERAL NOTES AND MOUNT MODIFICATION INSPECTION	0
S-101	MODIFICATION PROFILE	0
R-601	SUPPLEMENTAL	0
R-602	SUPPLEMENTAL	0
R-603	SUPPLEMENTAL	0

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

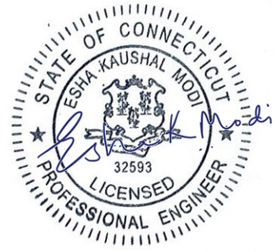
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	NG	03/03/20

ATC SITE NUMBER:
383598

ATC SITE NAME:
TARTAGLIA

CONNECTICUT

SITE ADDRESS:
1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606



Authorized by "EOR"
12 Mar 2020 10:44:59 cosign

DRAWN BY:	NYG
APPROVED BY:	TCR
DATE DRAWN:	03/03/20
ATC JOB NO:	12991762_C9_07

COVER

SHEET NUMBER: G-001
REVISION: 0

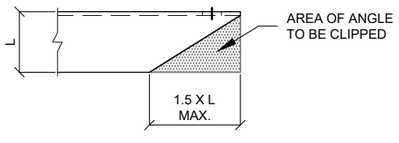
GENERAL

1. ALL WORK TO BE COMPLETED PER APPLICABLE LOCAL, STATE, FEDERAL CODES AND ORDINANCES AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS FOR WIRELESS TOWER SITES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND ABIDING BY ALL REQUIRED PERMITS.
2. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
4. ANY SUBSTITUTIONS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
5. ANY MANUFACTURED DESIGN ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER ANSI/TIA-322 AND ANSI/ASSE A10.48, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
8. CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

STRUCTURAL STEEL

1. ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
2. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
3. ALL U-BOLTS SHALL BE ASTM A36 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.
4. FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
5. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES & GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
6. ALL STRUCTURAL STEEL EMBEDDED IN THE CONCRETE SHALL BE APPLIED WITH (2) BRUSHED COATS OF POLYGUARD CA-14 MASTIC OR EQUIVALENT. REFER TO THE MANUFACTURER SPECIFICATIONS FOR SURFACE PREPARATION AND APPLICATION. APPLICATION OF POLYGUARD 400 WRAP IS NOT ESSENTIAL.
7. CONTRACTOR SHALL PERFORM WORK ON ONLY ONE (1) TOWER FACE AND REPLACE/REINFORCE ONE (1) BOLT/MEMBER AT A TIME.
8. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.

MAXIMUM ALLOWABLE ANGLE CLIP



PAINT

1. AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1L.

WELDING

1. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
2. ALL WELDS SHALL BE INSPECTED VISUALLY. IF DIRECTED BY ENGINEER OF RECORD, 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
3. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
4. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER AND/OR BASE METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
5. IN CASES WHERE BASE METAL GRADE IS UNKNOWN, ALL WELDING ON LATTICE TOWERS SHALL BE DONE WITH E70XX ELECTRODES; ALL WELDING ON POLE STRUCTURES SHALL BE DONE WITH E80XX ELECTRODES, UNLESS NOTED OTHERWISE.
6. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

BOLT TIGHTENING PROCEDURE

1. STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC SPECIFICATIONS.
2. FLANGE BOLTS SHALL BE INSTALLED AND TIGHTENED USING DIRECT TENSION INDICATING (DTI) SQUIRTER WASHERS. DTI SQUIRTER WASHERS ARE TO BE INSTALLED AND ORIENTED / TIGHTENED PER MANUFACTURER SPECIFICATIONS TO ACHIEVE DESIRED LEVEL OF BOLT PRE-TENSION.
3. IN LIEU OF USING DTI SQUIRTER WASHERS, FLANGE BOLTS MAY BE TIGHTENED USING AISC / RCSC "TURN-OF-THE-NUT" METHOD, PENDING APPROVAL BY THE ENGINEER OF RECORD (EOR). TIGHTEN FLANGE BOLTS USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2"	BOLTS 2.25 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 2.75 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 3.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS 5.75 TO 11.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

BOLT TIGHTENING PROCEDURE (CONTINUED)

4. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2.1 OF THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS", LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

   FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

   8.2.1 TURN-OF-NUT PRETENSIONING
   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

5. ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

   ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

MODIFICATION INSPECTION NOTES

THE MOUNT MODIFICATION INSPECTION (MMI) PROCEDURE IS INTENDED TO CONFIRM THAT CONSTRUCTION AND INSTALLATION MEETS ENGINEERING DESIGN, ATC PROCEDURES AND ATC STANDARD SPECIFICATIONS FOR WIRELESS TOWER SITES.

TO ENSURE THAT THE REQUIREMENTS OF THE MMI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR SUBMIT ALL REQUIRED PHOTOGRAPHS AND DRAWINGS TO AMERICAN TOWER CORPORATION (ATC).

GENERAL CONTRACTOR

THE GENERAL CONTRACTOR IS REQUIRED TO:

- REVIEW THE REQUIREMENTS OF THE MMI CHECKLIST.
- UNDERSTAND ALL INSPECTION REQUIREMENTS.

THE GENERAL CONTRACTOR SHALL PERFORM AND RECORD THE INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MMI CHECKLIST.

MOUNT MODIFICATION INSPECTION CHECKLIST

INSPECTION DOCUMENT	DESCRIPTION	INSPECTION TESTING REQUIRED	RESPONSIBILITY
ON-SITE COLD GALVANIZING VERIFICATION	PHOTOGRAPHIC EVIDENCE OF COLD GALVANIZATION TYPE AND APPLICATION IN ALL APPLICABLE LOCATIONS TO BE INCLUDED WITHIN THE MMI REPORT	✔	GC
GC AS-BUILT DRAWINGS WITH CONSTRUCTION RED-LINES	"AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS TO MMI FOR APPROVAL/REVIEW AND INCLUSION IN MMI REPORT	✔	GC
PHOTOGRAPHS	PHOTOGRAPHIC EVIDENCE OF MOUNT MODIFICATION INSPECTION, ON SITE REMEDIATION, AND ITEMS FAILING INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE MMI REPORT. COMPLETE PHOTO LOG IS TO BE SUBMITTED WITHIN MMI REPORT.	✔	GC

TABLE KEY:
MMI - MOUNT MODIFICATION INSPECTION
GC - GENERAL CONTRACTOR
ATC - AMERICAN TOWER CORPORATION

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

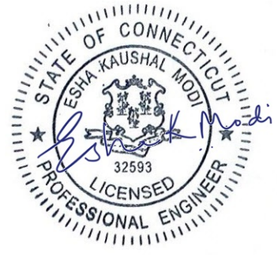
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	NG	03/03/20

ATC SITE NUMBER:
383598

ATC SITE NAME:
TARTAGLIA

CONNECTICUT

SITE ADDRESS:
1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606



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12 Mar 2020 10:44:59
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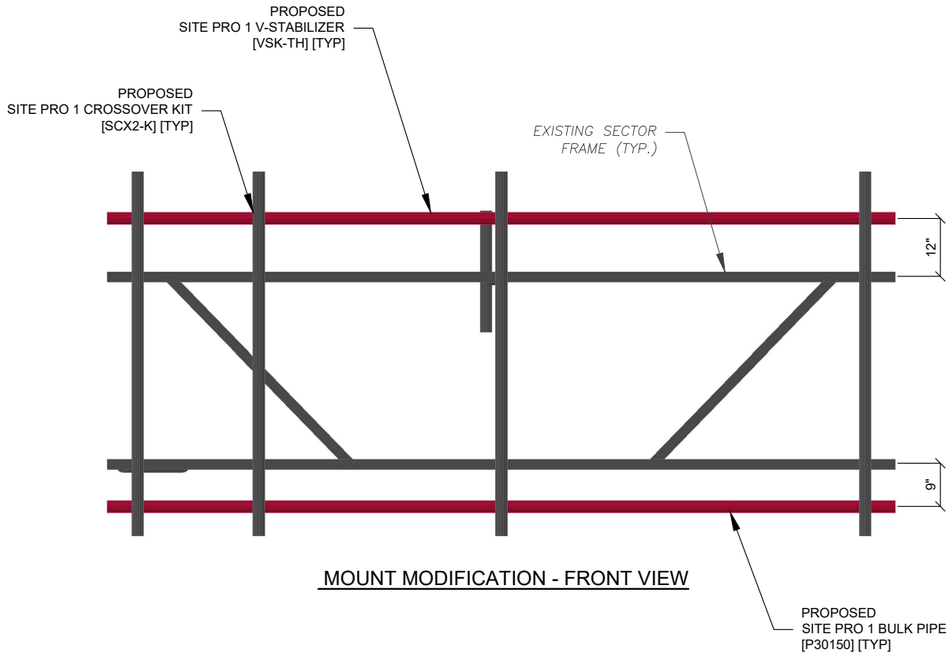
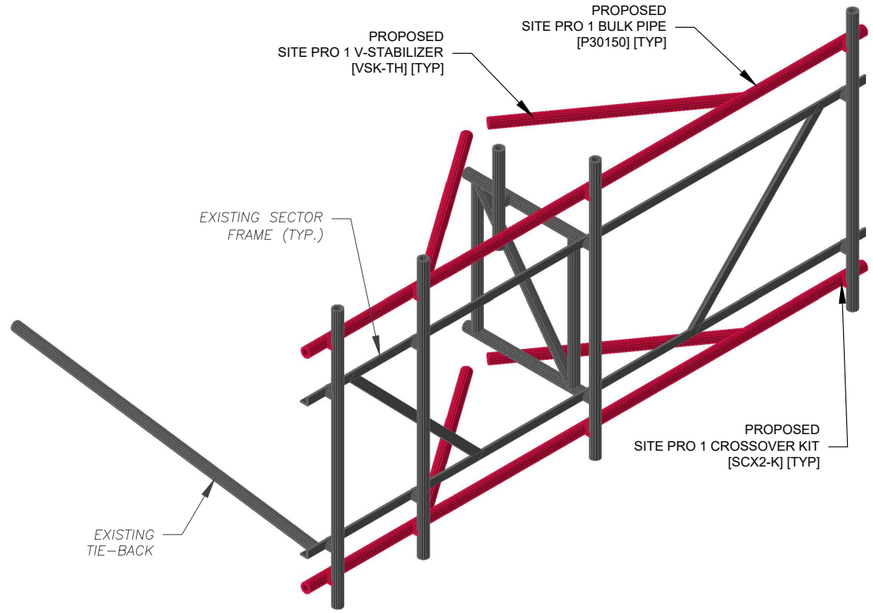
DRAWN BY:	NYG
APPROVED BY:	TCR
DATE DRAWN:	03/03/20
ATC JOB NO:	12991762_C9_07

IBC GENERAL NOTES AND MOUNT MODIFICATION INSPECTION

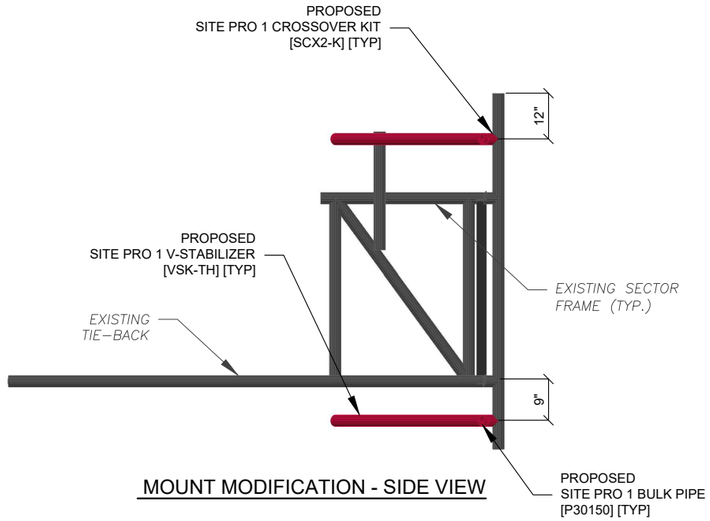
SHEET NUMBER:	REVISION:
G-002	0



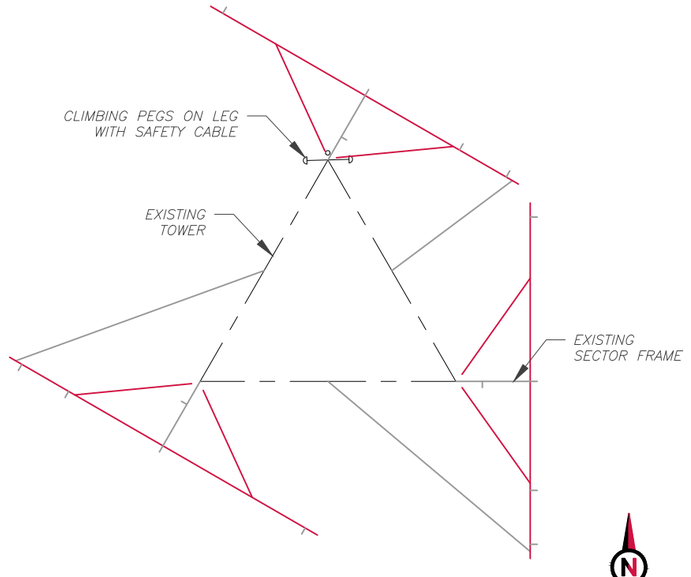
MOUNT MODIFICATION - FRONT VIEW



MOUNT MODIFICATION - ISOMETRIC VIEW



MOUNT MODIFICATION - SIDE VIEW



SAFETY CLIMB LOCATION

NOTE:
CONTRACTOR TO INSTALL MOUNT MODIFICATIONS PER THE MANUFACTURERS SPECIFICATION. MODIFICATIONS SHALL NOT OBSTRUCT, INTERFERE, OR BLOCK EXISTING SAFETY CLIMB SYSTEM. IF ANY OF THESE OCCURS DURING INSTALLATION CONTACT THE AMERICAN TOWER PMI INBOX PMI@AMERICANTOWER.COM

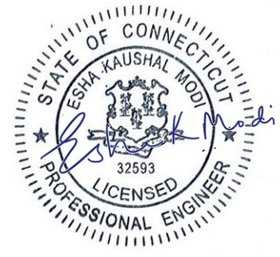
AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	NG	03/03/20

ATC SITE NUMBER:
383598

ATC SITE NAME:
TARTAGLIA
CONNECTICUT

SITE ADDRESS:
1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606



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DRAWN BY:	NYG
APPROVED BY:	TCR
DATE DRAWN:	03/03/20
ATC JOB NO:	12991762_C9_07

MODIFICATION PROFILE

SHEET NUMBER:	REVISION:
S-101	0

AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name	:	**Tartaglia, CT**
ATC Site Number	:	**383598**
Engineering Number	:	**12991762_C9_07**
Mount Elevation	:	**154 ft**
Carrier	:	**Verizon Wireless**
Carrier Site Name	:	**N BRIDGEPORT CT**
Carrier Site Number	:	**467325**
Site Location	:	**1000 Trumbull Avenue** **Bridgeport, CT 6606** **41.2196 , -73.20128611**
County	:	**Fairfield**
Date	:	**March 3, 2020**
Max Usage	:	**63%**
Result	:	**Contingent Pass**

Prepared By:
Trevor Ridilla
Structural Engineer I

Reviewed By:

STATE OF CONNECTICUT · ESHA KAUSHAL MODI · 32599 · LICENSED PROFESSIONAL ENGINEER

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Mar 10 2020 4:45 PM cosign

COA: PEC.0001553

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Verizon Wireless at 154 ft.

Supporting Documents

Mount Mapping	Infinigy Project # 1009-Z0003-H/317-505, dated November 15, 2019
Radio Frequency Data Sheet	RFDS ID #467325, dated November 13, 2019
Reference Photos	Site photos from 2019

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Codes:	ANSI/TIA-222-G/ 2015 IBC/ 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.207, S1 = 0.065
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount does not meet the requirements per the applicable codes listed above. The mount can support the equipment as described in this report after the below listed modifications are completed:

- Refer to ATC Modification Drawing #12991762_C9_07

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

A.T. Engineering Service, PLLC - 3500 Regency Parkway, Suite 100 - Cary, NC 27518 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

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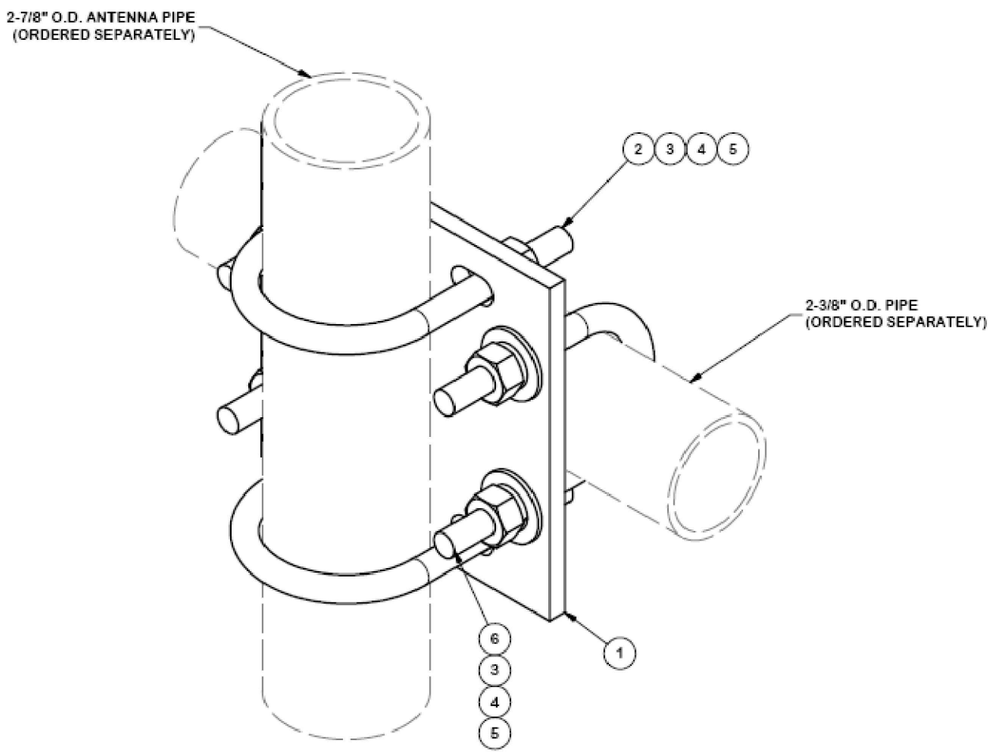
SUPPLEMENTAL

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SHEET NUMBER:	REVISION:
R-601	0

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	SCX2	CROSSOVER PLATE	7 in	4.80	4.80
2	2	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.66	1.31
3	8	G12FW	1/2" HDG USS FLATWASHER		0.03	0.27
4	8	G12LW	1/2" HDG LOCKWASHER		0.01	0.11
5	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
6	2	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	1.25
					TOTAL WT. #	8.39



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: CROSSOVER PLATE KIT

CPD NO.:

DRAWN BY: CEK 6/30/2011

ENG. APPROVAL:

CLASS: | SUB:

DRAWING USAGE: SHOP

CHECKED BY: BMC 7/1/2011

PART NO.: SCX2-K

DWG. NO.: SCX2-K

PAGE 1 OF 1

SITE PRO 1 — A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

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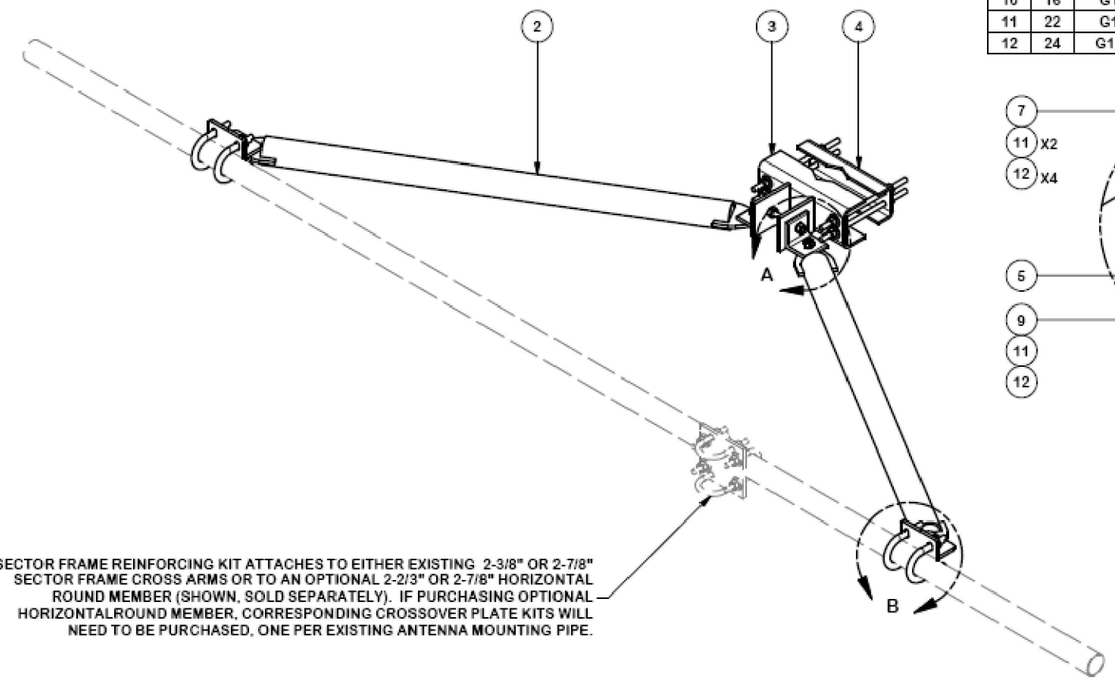
SUPPLEMENTAL

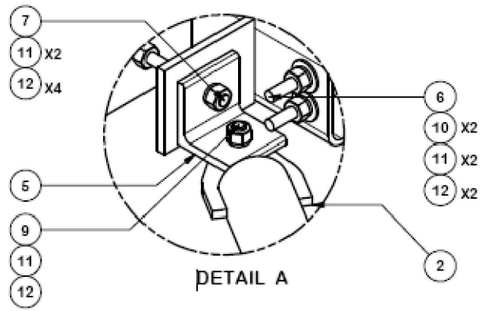
SHEET NUMBER: R-602

REVISION: 0

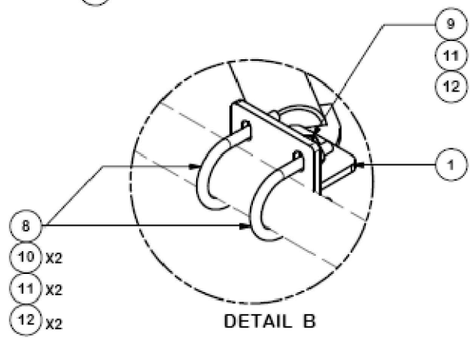
PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-VSKBRKT	T-BRACKET WELDMENT FOR VSK REINFORCEMENTS		4.19	8.38
2	2	X-VSK	SUPPORT WELDMENT FOR VSK REINFORCEMENTS		27.05	54.11
3	1	CFS	LOWER GATE FOOT WELDMENT		12.72	12.72
4	1	GBB	GATE BACKING BAR	11 1/2 in	4.53	4.53
5	2	SHCM-T	CHAIN MOUNT TIGHTENER BRACKET	3 in	1.86	3.72
6	4	G12R-15	1/2" x 15" THREADED ROD (HDG.)		0.84	3.35
6	4	G12R-12	1/2" x 12" THREADED ROD (HDG.)		0.67	2.68
7	1	G12R-6	1/2" x 6" GALV. THREADED ROD		0.33	0.33
8	4	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.67	2.68
8	4	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.60	2.39
9	4	G12112	1/2" x 1-1/2" HDG HEX BOLT GR5	1/2 in	0.15	0.59
10	16	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.55
11	22	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.31
12	24	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	1.72
					TOTAL WT. #	98.04



SECTOR FRAME REINFORCING KIT ATTACHES TO EITHER EXISTING 2-3/8" OR 2-7/8" SECTOR FRAME CROSS ARMS OR TO AN OPTIONAL 2-2/3" OR 2-7/8" HORIZONTAL ROUND MEMBER (SHOWN, SOLD SEPARATELY). IF PURCHASING OPTIONAL HORIZONTALROUND MEMBER, CORRESPONDING CROSSOVER PLATE KITS WILL NEED TO BE PURCHASED, ONE PER EXISTING ANTENNA MOUNTING PIPE.



DETAIL A



DETAIL B

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: SECTOR FRAME STABILIZER HORIZONTAL PIPE ARMS

SITE PRO 1 — A valmont COMPANY

Engineering Support Team: 1-888-753-7446

Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
SP1	CSL 8/1/2019		VSK-TH	1 OF 3
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
87 / 02	CUSTOMER	BMC 8/19/2019	VSK-TH	

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SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	0