Robinson+Cole

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Also admitted in Massachusetts

February 1, 2018

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

Re: **Notice of Exempt Modification – Facility Modification**
1000 Trumbull Avenue (a/k/a 1330 Chopsey Hill Road), Bridgeport, Connecticut

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) antennas at the 155-foot level of the existing 240-foot tower at 1000 Trumbull Avenue in Bridgeport, Connecticut (the "Property"). The tower is owned by American Tower Corporation ("ATC"). The Council approved Cellco's use of this tower in 1990. Cellco now intends to replace six (6) of its existing antennas with three (3) model JAHH-65B-R3B, 700/1900 MHz antennas and three (3) model JAHH-65B-R3B, 2100 MHz antennas, all at the same level on the tower. Cellco also intends to install six (6) new remote radio heads ("RRHs") behind Cellco's replacement antennas. Included in Attachment 1 are specifications for Cellco's replacement antennas and RRHs.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Mayor Joseph Ganim; Dennis Buckley, Bridgeport's Zoning Administrator; Global Tower Assets, LLC, the owner of the Property; and ATC, the owner of the tower.

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

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas and RRH's will remain at the 155-foot level of the tower.

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

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included behind Attachment 2.

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

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

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

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Joseph Ganim, Bridgeport Mayor
Dennis Buckley, Bridgeport Zoning Administrator
Global Tower Assets, LLC
ATC
Tim Parks

ATTACHMENT 1

Product Specifications

COMMSCOPE®

JAHH-65B-R3B

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

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

Electrical Specifications

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

Electrical Specifications, BASTA*

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

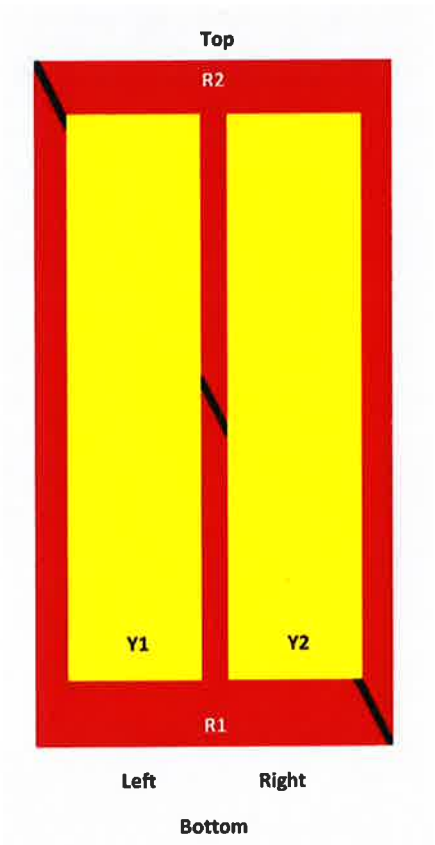
* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, download the whitepaper Time to Raise the Bar on BSAs.

Product Specifications

JAHH-65B-R3B

Array Layout

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



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-798	1-2	1	ANxxxxxxxxxxxxxxx1
R2	824-894	3-4	2	ANxxxxxxxxxxxxxxx2
Y1	1695-2360	5-6	3	ANxxxxxxxxxxxxxxx3
Y2	1695-2360	7-8		

View from the front of the antenna

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

General Specifications

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

Mechanical Specifications

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

Product Specifications

JAHH-65B-R3B

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

Dimensions

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

Remote Electrical Tilt (RET) Information

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

Packed Dimensions

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

Regulatory Compliance/Certifications

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

Product Specifications

JAHH-65B-R3B

Included Products

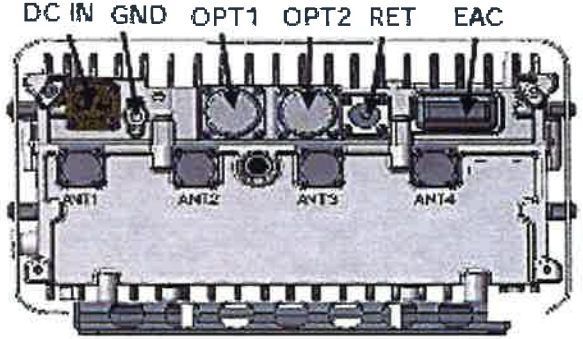
BSAMNT-1 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

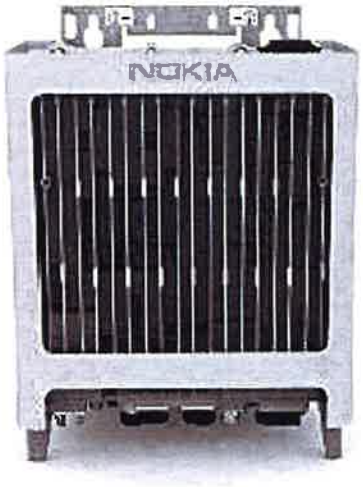
* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

AHCA AirScale RRH 4T4R B5 160W

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





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

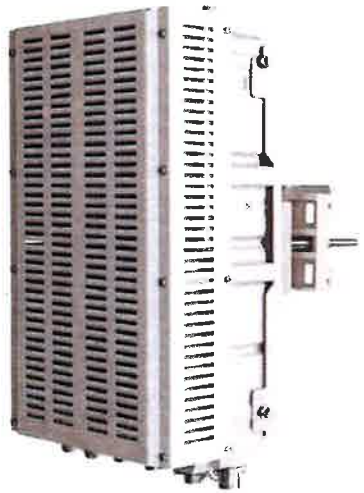
B66a RRH4x45W

Datasheet

Radio Technology FDD-LTE

Feature description:

- Remote Radio Head 4x45W or 2x90W Switchable via SW



Power Output	4 x 45 W or 2x90W (SW Switchable) w/o fans
IBW	70MHz
OBW	60 MHz
RF Sharing	LTE
Mass/Volume	25.8kg/56.9 lb Weight 655H x 299W x 182D mm 25.8"x11.8"x7.2" 29.7L / 35.5L
Antenna Conf.	4Tx/4Rx
Temperature	-40 to 55 °C
IP class	IP65
Input Power	DC 48 V
Cooling	Natural Convection
Mounting	Wall, Pole mount
BBU connection	2x 9.8Gbps SFP(Rate 7 HW ready)

B66a RRH 4x45 – Interfaces

Power:

- Max power: 816W (add 58W for AISG)
- Breaker size: 25A
- Max distance with 6ga power feed and 5.5V drop: 284 feet

RF Interfaces:

- 4.3/10 Connectors
- No monitoring ports(Spectrum analyzer SW takes place of monitoring ports)

AISG:

- Two Smart Bias-T
- One AISG port

B66 Details

- Max power for a single carrier is:
  - 2x60W for 10,15,20 MHz carrier
  - 2x40W for 5 MHz carrier
- Multi- Carrier Support with AWS-1 carriers: 15.1
- Multi- Carrier Support with AWS-3 carriers: 16.2

Carrier power: Multi-carrier

- Assuming 2 Tx power can be assigned per carrier subject to 40W max for 5Mhz, 60W for larger in 2T, cut that power in half for 4T
- Example:B4 (20Mhz) and AWS3 (10MHz)
  - Power can be varied between those two carriers, can go 60W for 20 MHz carrier, 30W for 10 MHz carrier to use the 90W in 2T.
  - It could be 45/45 for 20Mhz/10Mhz if desired.

ATTACHMENT 2

	General	Power	Density					
Site Name: North Bridgeport								
Tower Height: 240'								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*Marcus	5	100	217	450	0.0040	0.3000	0.13%	
*Marcus	5	100	217	450	0.0040	0.3000	0.13%	
*Marcus	1	0	237	5.8GHz	0.0000	1.0000	0.00%	
*AT&T	2	1791	165	2300	0.0510	1.0000	0.51%	
*AT&T	2	1104	165	734	0.0314	0.4893	0.64%	
*AT&T	2	3664	165	1900	0.1042	1.0000	1.04%	
*AT&T	2	492	165	880	0.0140	0.5867	0.24%	
*AT&T	2	419	165	880	0.0119	0.5867	0.20%	
*AT&T	2	817	165	1900	0.0232	1.0000	0.23%	
*Red Star	1	150	217	44	0.0012	0.2000	0.06%	
*Metrocall	1	150	239	75	0.0010	0.2000	0.05%	
*Metrocall	1	3500	240	930	0.0230	0.6200	0.37%	
*Clinton Tower	1	3500	223	930	0.0267	0.6200	0.43%	
*AAT	1	3500	235	930	0.0240	0.6200	0.39%	
*Nextel	8	100	187	851	0.0088	0.5673	0.15%	
*Clearwire	2	153	187	2496	0.0034	1.0000	0.03%	
*Clearwire	1	211	187	11 GHz	0.0023	1.0000	0.02%	
*Sprint	7	618	180.6	1900	0.0510	1.0000	0.51%	
*Sprint	1	310	180.6	850	0.0037	0.5667	0.06%	
*Sprint	2	693	180.6	2500	0.0164	1.0000	0.16%	
*Sprint	3	562	187	2657	0.0185	1.0000	0.19%	
*Sprint	2	4074	180	19500	0.0968	1.0000	0.97%	
*Sprint	2	1097	180	22500	0.0261	1.0000	0.26%	
*Sprint	2	692	180	22500	0.0164	1.0000	0.16%	
*T-Mobile	4	2334	202	1900/2100	0.0874	1.0000	0.87%	
*T-Mobile	4	1167	202	1900	0.0437	1.0000	0.44%	
*T-Mobile	2	618	202	2100	0.0116	1.0000	0.12%	
*T-Mobile	1	865	202	700	0.0081	0.4667	0.17%	
*MetroPCS	7	735	195	2310	0.0518	1.0000	0.52%	
Verizon PCS	**1**	**5062**	**155**	**0.0758**	**1970**	**1.0000**	**7.58%**	
Verizon Cellular	**3**	**497**	**155**	**0.0223**	**876**	**0.5840**	**3.82%**	
Verizon Cellular	**1**	**3709**	**155**	**0.0555**	**869**	**0.5793**	**9.58%**	
Verizon AWS	**1**	**8325**	**155**	**0.1246**	**2145**	**1.0000**	**12.46%**	
Verizon 700	**1**	**2062**	**155**	**0.0309**	**746**	**0.4973**	**6.21%**	
								48.7%
* Source: Siting Council								

ATTACHMENT 3

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**240 ft Self Supported Tower**
ATC Site Name	:	**Tartaglia, CT**
ATC Site Number	:	**383598**
Engineering Number	:	**12159334_C3_01**
Proposed Carrier	:	**Verizon Wireless**
Carrier Site Name	:	**North Bridgeport CT**
Carrier Site Number	:	**467325**
Site Location	:	**1000 Trumbull Ave** **Bridgeport, CT 06606-0000** **41.218800,-73.201700**
County	:	**Fairfield**
Date	:	**October 17, 2017**
Max Usage	:	**81%**
Result	:	**Pass**

Prepared By:
Robert D. Barrett, E.I.
Structural Engineer I

Robert D. Barrett

Reviewed By:

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32598
LICENSED
PROFESSIONAL ENGINEER

Jan 26 2018 5:37 PM cosign

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

AMERICAN TOWER®
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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 / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
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

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
240.0	240.0	1	10' Omni	Side Arm	(1) 1" Conduit (1) 1 1/4" Coax	--
		1	Beacon			
		1	Lightning Rod			
230.0	230.0	2	8' Omni	Side Arms	(2) 7/8" Coax	
223.0	223.0	1	12' Omni	Side Arm	(1) 1 1/4" Coax	
202.0	202.0	3	Ericsson AIR32 B66Aa/B2a	Sector Frames	(7) 1 5/8" Coax (1) 1" Hybrid	T-Mobile
		3	Ericsson RRUS11			
		3	Commscope LNX-6515DS-VTM			
		3	Ericsson KRY112 144-1			
		3	Ericsson AIR21 B2A/B4P			
196.0	196.0	1	3' Yagi	Leg	(1) 7/8" Coax	--
187.0	187.0	2	2' HP Dish	Leg	(4) 1/2" Coax	Clearwire
		1	Andrew VHLP800-11-DW1			
180.6	180.6	3	DragonWave A-ANT-11G-2C	Sector Frames	(6) 5/16" Coax (3) 1 1/4" Hybriflex (3) 1/2" Ethernet (2) 2" Conduit (1) 1.625" Hybrid	Sprint Nextel
		3	RFS APXVTM14-C-I20			
		3	Alcatel-Lucent TD-RRH8x20-25			
		1	PCTEL GPS-TMG-HR-26NCM			
		3	Samsung DAP Heads			
		3	Argus LLPX310R			
		3	Alcatel-Lucent 800MHz 2/50W			
		6	Alcatel-Lucent 1900MHz 2x40W			
		1	RFS APXV9ERR18-C-A20			
		2	RFS APXVSPP18-C-A20			
174.0	174.0	2	Andrew 950F65T4E-M	Leg	(6) 1 5/8" Coax	--
		4	5' x 5" x 2" Panel			
165.0	165.0	1	20' Omni	Sector Frames	(1) 1 1/4" Coax	
		3	Ericsson RRUS 32 B66		(12) 1 5/8" Coax (2) 0.39" Fiber Trunk (4) 0.78" 8 AWG 6	AT&T Mobility
		3	Commscope SBNHH-1D65A			
		3	Ericsson RRUS-32 B2			
		3	Quintel QS66512-3			
		1	Commscope WCS-IMFQ-AMT			
		3	Powerwave 7770			
		3	Ericsson RRUS-11			
		3	Ericsson RRUS-32			
		2	Raycap DC6-48-60-18-8F			
		9	Powerwave LGP21401			
		3	CCI DTMABP7819VG12A			
		6	Powerwave 7020			
		12	Powerwave LGP21901			
155.0	155.0	3	Antel BXA-80063-6BF	Sector Frames	(12) 1 5/8" Coax (2) 1 5/8" Hybrid	Verizon Wireless
		2	RFS DB-T1-6Z-8AB-0Z			
		3	ALU RH_2x60W-700U			
		3	ALU RH_2x60W-PCS			

Existing and Reserved Equipment (Continued)

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
140.0	140.0	3	Small Side Lights	Leg	-	--
118.0	118.0	1	10' Omni	Side Arm	(1) 7/8" Coax	
108.0	108.0	1	10' Omni	Side Arm	(1) 1 1/4" Coax	
80.0	80.0	-	-	Empty Side Arm	-	
22.0	22.0	1	3' Dish	Leg	(1) 0.24" Cat 5	
20.0	20.0	1	GPS	Leg	(1) 1/2" Coax	Verizon Wireless
8.0	8.0	1	GPS	Side Arm	(1) 1/2" Coax	T-Mobile

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
155.0	155.0	6	Andrew CBC78-DF	-	-	Verizon Wireless
		3	Kathrein 800 10734V01			
		6	Commscope HBXX-6516DS-A2M			

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
155.0	155.0	3	ALU RH_2x80W-850	Sector Frames	-	Verizon Wireless
		3	ALU RH_4x45W-AWS			
		6	Commscope JAHH-65B-R3B			

[1]Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	41%	Pass
Diagonals	81%	Pass
Horizontals	75%	Pass
Anchor Bolts	46%	Pass
Leg Bolts	33%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	290.0	391.5	258.5	66%
Axial (Kips)	363.0	490.1	319.8	65%
Shear (Kips)	54.0	72.9	46.1	63%

*** 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) (°)
187.0	2' HP Dish	Clearwire	0.113	0.003	0.044
	2' HP Dish				
	Andrew VHLP800-11-DW1				
180.6	DragonWave A-ANT-11G-2C	Sprint Nextel	0.105		0.045
	DragonWave A-ANT-11G-2C				
	DragonWave A-ANT-11G-2C				
155.0	ALU RH_2x80W-850	Verizon Wireless	0.090		0.046
	ALU RH_4x45W-AWS				
	Commscope JAHH-65B-R3B				
22.0	3' Dish	--	0.008	0.002	0.024

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

AMERICAN TOWER®
CORPORATION

Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

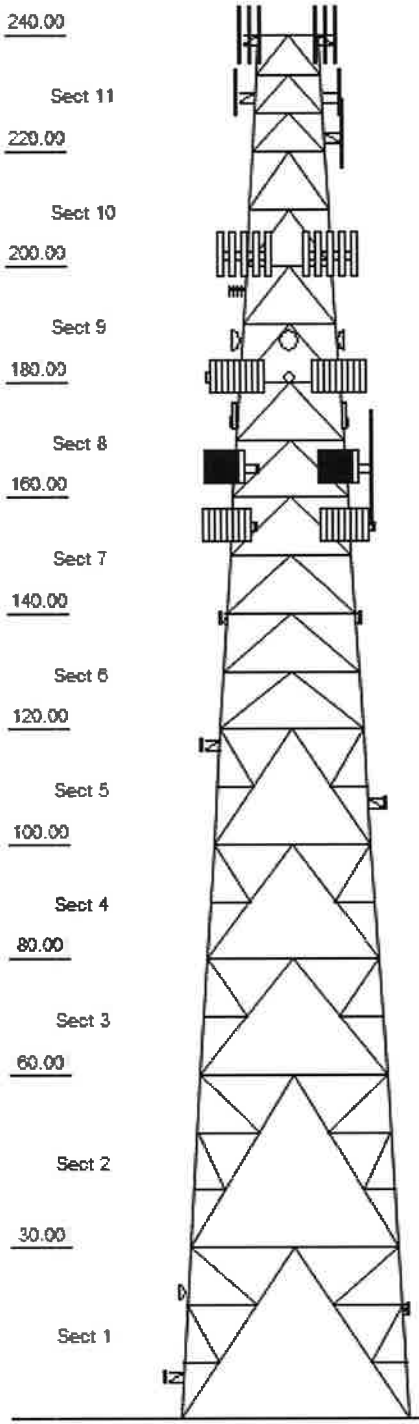
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

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. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

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 we supply.



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

Tower :	383598	Location : Tartaglia, CT	
Code :	ANSI/TIA-222-G	Shape : Triangle	Base Width : 40.33 ft
Client :	Verizon Wireless		Top Width : 10.93 ft

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

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
240.00	Straight Arm	1	Empty Round Side Arm
240.00	Whip	1	10' Omni
240.00	Whip	1	Beacon
240.00	Whip	1	Lightning Rod
230.00	Whip	1	8' Omni
230.00	Whip	1	8' Omni
230.00	Straight Arm	3	Round Side Arm
223.00	Straight Arm	1	Round Side Arm
223.00	Whip	1	12' Omni
202.00	Panel	3	Ericsson AIR32 B66Aa/B2a
202.00	Panel	3	Ericsson RRUS11
202.00	Panel	3	Commscope LNX-6515DS-VTM
202.00	Panel	3	Ericsson KRY112 144-1
202.00	Panel	3	Ericsson AIR21 B2A/B4P
202.00	Mounting Frame	3	Round Sector Frame
196.00	Yagi	1	3' Yagi
187.00	Dish	1	2' HP Dish
187.00	Dish	1	2' HP Dish
187.00	Dish	1	Andrew VHLP800-11-DW1
180.60	Dish	1	DragonWave A-ANT-11G-2C
180.60	Dish	1	DragonWave A-ANT-11G-2C
180.60	Panel	3	RFS APXVTM14-C-I20
180.60	Panel	3	Alcatel-Lucent TD-RRH8x20-25
180.60	Panel	1	PCTEL GPS-TMG-HR-26NCM
180.60	Dish	1	DragonWave A-ANT-11G-2C
180.60	Panel	3	Samsung DAP Heads
180.60	Panel	3	Argus LLPX310R
180.60	Panel	3	Alcatel-Lucent 800 MHz 2/50W
180.60	Panel	6	Alcatel-Lucent 1900 MHz 2x40W
180.60	Panel	1	RFS APXV9ERR18-C-A20
180.60	Panel	2	RFS APXVSPP18-C-A20
180.60	Mounting Frame	3	Flat Light Sector Frame
174.00	Panel	2	Andrew 950F65T4E-M
174.00	Panel	4	5' x 5" x 2" Panel
165.00	Panel	3	Ericsson RRUS 32 B66
165.00	Panel	3	Commscope SBNHH-1D65A
165.00	Panel	3	Ericsson RRUS-32 B2
165.00	Panel	3	Quintel QS66512-3
165.00	Panel	1	Commscope WCS-IMFQ-AMT
165.00	Panel	3	Powerwave 7770
165.00	Panel	3	Ericsson RRUS-11
165.00	Panel	3	Ericsson RRUS-32
165.00	Panel	1	Raycap DC6-48-60-18-8F
165.00	Panel	1	Raycap DC6-48-60-18-8F
165.00	Panel	9	Powerwave LGP21401
165.00	Panel	3	CCI DTMABP7819VG12A
165.00	Panel	6	Powerwave 7020
165.00	Panel	12	Powerwave LGP21901
165.00	Mounting Frame	3	Round Sector Frame
165.00	Whip	1	20' Omni

Job Information

Tower : 383598	Location : Tartaglia, CT		
Code : ANSI/TIA-222-G	Shape : Triangle	Base Width : 40.33 ft	
Client : Verizon Wireless		Top Width : 10.93 ft	

155.00	Panel	3	ALU RH_2x80W-850
155.00	Panel	3	ALU RH_4x45W-AWS
155.00	Panel	6	Commscope JAHH-65B-R3B
155.00	Mounting Frame	3	Flat Light Sector Frame
155.00	Panel	3	Antel BXA-80063-6BF
155.00	Panel	2	RFS DB-T1-6Z-8AB-0Z
155.00	Panel	3	ALU RH_2x60W-700U
155.00	Panel	3	ALU RH_2x60W-PCS
140.00	Whip	3	Small Side Lights
118.00	Straight Arm	1	Round Side Arm
118.00	Whip	1	10' Omni
108.00	Straight Arm	1	Round Side Arm
108.00	Whip	1	10' Omni
80.00	Straight Arm	1	Empty Round Side Arm
22.00	Dish	1	3' Dish
20.00	Whip	1	GPS
8.00	Straight Arm	1	Round Side Arm
8.00	Whip	1	GPS

Linear Appurtenance

Elev (ft) From	To	Qty	Description
0.00	240.00	1	1" Conduit
0.00	240.00	1	1 1/4" Coax
0.00	230.00	2	7/8" Coax
0.00	223.00	1	1 1/4" Coax
0.00	202.00	1	Waveguide
0.00	202.00	1	1" Hybrid
0.00	202.00	7	1 5/8" Coax
0.00	196.00	1	7/8" Coax
0.00	187.00	4	1/2" Coax
0.00	180.60	1	Waveguide
0.00	180.60	6	5/16" Coax
0.00	180.60	2	2" Conduit
0.00	180.60	3	1/2" Ethernet
0.00	180.60	1	1.625" Hybrid
0.00	180.60	3	1 1/4" Hybriflex
0.00	174.00	1	Waveguide
0.00	174.00	6	1 5/8" Coax
0.00	165.00	1	Waveguide
0.00	165.00	12	1 5/8" Coax
0.00	165.00	1	1 1/4" Coax
0.00	165.00	2	0.78" 8 AWG 6
0.00	165.00	2	0.78" 8 AWG 6
0.00	165.00	1	0.39" Fiber Trunk
0.00	165.00	1	0.39" Fiber Trunk
0.00	155.00	1	1 5/8" Hybrid
0.00	155.00	1	1 5/8" Hybrid
0.00	155.00	12	1 5/8" Coax
0.00	152.00	1	Waveguide
0.00	118.00	1	7/8" Coax
0.00	108.00	1	1 1/4" Coax
0.00	22.00	1	0.24" Cat 5
0.00	20.00	1	1/2" Coax
0.00	8.00	1	1/2" Coax

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	9,949.90	104.82	76.88
DL + WL + IL	3,476.69	250.91	27.48

Job Information

Tower : 383598	Location : Tartaglia, CT	
Code : ANSI/TIA-222-G	Shape : Triangle	Base Width : 40.33 ft
Client : Verizon Wireless		Top Width : 10.93 ft

Individual Base Foundation Design Loads

Vertical (kip)	Uplift (kip)	Horizontal (kip)
319.80	258.47	46.12

Site Number:	383598	Code:	ANSI/TIA-222-G	
Site Name:	Tartaglia, CT	Engineering Number:	12159334_C3_01	10/17/2017 4:37:24 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

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:	0.0 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):	0.69				
T_L (sec):	6	p:	1.3	C_S:	0.051
S_S:	0.207	S_1:	0.065	C_S, Max:	0.051
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 to Face 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
1.2D + 1.6W 120 deg	97 mph 120 degree with No Ice
1.2D + 1.6W 180 deg	97 mph 180 degree with No Ice
1.2D + 1.6W 210 deg	97 mph 210 degree with No Ice
1.2D + 1.6W 240 deg	97 mph 240 degree with No Ice
1.2D + 1.6W 300 deg	97 mph 300 degree with No Ice
1.2D + 1.6W 330 deg	97 mph 330 degree with No Ice
0.9D + 1.6W Normal	97 mph Normal to Face 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)
0.9D + 1.6W 120 deg	97 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	97 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 210 deg	97 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.6W 240 deg	97 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.6W 300 deg	97 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.6W 330 deg	97 mph 330 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

Analysis Parameters

1.2D + 1.0Di + 1.0Wi 120 deg	50 mph 120 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	50 mph 180 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 210 deg	50 mph 210 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 240 deg	50 mph 240 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 300 deg	50 mph 300 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 330 deg	50 mph 330 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
(1.2 + 0.2Sds) * DL + E 120 deg	Seismic 120 deg
(1.2 + 0.2Sds) * DL + E 180 deg	Seismic 180 deg
(1.2 + 0.2Sds) * DL + E 210 deg	Seismic 210 deg
(1.2 + 0.2Sds) * DL + E 240 deg	Seismic 240 deg
(1.2 + 0.2Sds) * DL + E 300 deg	Seismic 300 deg
(1.2 + 0.2Sds) * DL + E 330 deg	Seismic 330 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
(0.9 - 0.2Sds) * DL + E 120 deg	Seismic (Reduced DL) 120 deg
(0.9 - 0.2Sds) * DL + E 180 deg	Seismic (Reduced DL) 180 deg
(0.9 - 0.2Sds) * DL + E 210 deg	Seismic (Reduced DL) 210 deg
(0.9 - 0.2Sds) * DL + E 240 deg	Seismic (Reduced DL) 240 deg
(0.9 - 0.2Sds) * DL + E 300 deg	Seismic (Reduced DL) 300 deg
(0.9 - 0.2Sds) * DL + E 330 deg	Seismic (Reduced DL) 330 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
1.0D + 1.0W Service 120 deg	Serviceability - 60 mph Wind 120 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 210 deg	Serviceability - 60 mph Wind 210 deg
1.0D + 1.0W Service 240 deg	Serviceability - 60 mph Wind 240 deg
1.0D + 1.0W Service 300 deg	Serviceability - 60 mph Wind 300 deg
1.0D + 1.0W Service 330 deg	Serviceability - 60 mph Wind 330 deg

Site Number: 383598
Site Name: Tartaglia, CT
Customer: Verizon Wireless

Code: ANSI/TIA-222-G
Engineering Number: 12159334_C3_01

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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	14
240.0	10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	31.16	127	36
240.0	Beacon	1	70	4.5	3.0	18.0	18.0	1.00	1.00	0.0	0.0	31.16	191	101
240.0	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	31.16	220	216
230.0	8' Omni	1	40	2.4	8.0	4.0	4.0	1.00	1.00	0.0	0.0	30.88	101	58
230.0	8' Omni	1	40	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.0	30.88	101	58
230.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	30.88	439	648
223.0	12' Omni	1	40	3.6	12.0	4.0	4.0	1.00	1.00	0.0	0.0	30.68	150	58
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	216
202.0	Ericsson KRY112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	30.05	18	48
202.0	Ericsson RRUS11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	30.05	137	219
202.0	Ericsson AIR21	3	90	5.8	4.7	12.0	8.0	0.80	0.71	0.0	0.0	30.05	404	389
202.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	30.05	453	571
202.0	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	0.80	0.70	0.0	0.0	30.05	786	217
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	1296
196.0	3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.0	29.86	121	14
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.79	0.0	0.0	29.56	126	130
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.97	0.0	0.0	29.56	154	130
187.0	Andrew VHLP800-11-	1	121	16.7	4.1	0.0	0.0	1.00	1.00	0.0	0.0	29.56	672	174
180.6	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.80	1.00	0.0	0.0	29.35	3	1
180.6	Samsung DAP Heads	3	33	1.8	1.4	11.6	5.3	0.80	0.50	0.0	0.0	29.35	87	143
180.6	Alcatel-Lucent 800	3	64	2.4	1.6	13.0	12.2	0.80	0.50	0.0	0.0	29.35	115	276
180.6	Alcatel-Lucent 1900	6	44	3.8	1.9	17.3	13.0	0.80	0.50	0.0	0.0	29.35	367	380
180.6	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	29.35	259	124
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.61	0.0	0.0	29.35	91	39
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	1.00	0.0	0.0	29.35	150	39
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.55	0.0	0.0	29.35	82	39
180.6	Alcatel-Lucent TD-	3	70	4.7	2.2	18.6	6.7	0.80	0.67	0.0	0.0	29.35	303	302
180.6	RFS APXVTM14-C-I20	3	56	6.3	4.7	12.6	6.3	0.80	0.66	0.0	0.0	29.35	401	242
180.6	RFS APXVSPP18-C-	2	57	8.0	6.0	11.8	7.0	0.80	0.71	0.0	0.0	29.35	364	164
180.6	RFS APXV9ERR18-C-	1	62	8.0	6.0	11.8	7.9	0.80	0.71	0.0	0.0	29.35	182	89
180.6	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	29.35	1077	1728
174.0	5' x 5" x 2" Panel	4	30	3.3	5.0	5.0	2.0	1.00	0.74	0.0	0.0	29.12	382	173
174.0	Andrew 950F65T4E-	2	16	4.8	5.0	11.0	7.0	1.00	0.90	0.0	0.0	29.12	339	45
165.0	Powerwave	12	6	0.2	0.5	4.0	3.0	0.80	0.50	0.0	0.0	28.79	38	95
165.0	Powerwave 7020	6	2	0.4	0.4	8.3	2.4	0.80	0.50	0.0	0.0	28.79	38	19
165.0	CCI	3	19	1.0	0.9	11.0	3.8	0.80	0.50	0.0	0.0	28.79	46	83
165.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	28.79	31	42
165.0	Powerwave	9	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	28.79	155	183
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	28.79	35	29
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	28.79	35	29
165.0	Ericsson RRUS-32	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	28.79	126	219
165.0	Ericsson RRUS-32 B2	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	28.79	126	219
165.0	Ericsson RRUS 32	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.0	28.79	129	229
165.0	Ericsson RRUS-11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	28.79	131	219
165.0	Powerwave 7770	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	28.79	336	151
165.0	Commscope SBNHH-	3	41	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	28.79	381	177
165.0	20' Omni	1	55	6.0	20.0	4.0	4.0	0.80	1.00	0.0	0.0	28.79	188	79
165.0	Quintel QS66512-3	3	105	8.1	6.0	12.0	9.6	0.80	0.74	0.0	0.0	28.79	565	454
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	1296
155.0	ALU RH_2x80W-850	3	35	1.0	1.4	7.4	6.5	0.80	0.50	0.0	0.0	28.42	48	152
155.0	ALU RH_2x60W-PCS	3	46	1.8	1.6	11.2	8.2	0.80	0.50	0.0	0.0	28.42	85	199
155.0	ALU RH_2x60W-	3	57	2.2	1.8	12.0	9.0	0.80	0.50	0.0	0.0	28.42	100	247
155.0	ALU RH_4x45W-AWS	3	57	2.5	2.2	11.8	7.2	0.80	0.50	0.0	0.0	28.42	118	245

Tower Loading

155.0	RFS DB-T1-6Z-8AB-	2	7	4.8	2.0	24.0	10.0	0.80	0.50	0.0	0.0	28.42	148	19
155.0	Antel BXA-80063-6BF	3	19	7.3	5.7	11.2	5.3	0.80	0.66	0.0	0.0	28.42	445	83
155.0	Commscope JAHH-	6	63	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	28.42	1166	547
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	1728
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	194
118.0	10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	26.83	5	12
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	216
108.0	10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	26.34	5	12
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	216
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	216
22.00	3' Dish	1	100	6.1	3.0	0.0	0.0	1.00	0.64	0.0	0.0	18.84	100	144
20.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	18.47	25	14
8.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	17.40	24	14
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	216
	Totals	166	11371	749.6										

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	8
240.0	10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	31.16	127	20
240.0	Beacon	1	70	4.5	3.0	18.0	18.0	1.00	1.00	0.0	0.0	31.16	191	57
240.0	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	31.16	220	122
230.0	8' Omni	1	40	2.4	8.0	4.0	4.0	1.00	1.00	0.0	0.0	30.88	101	32
230.0	8' Omni	1	40	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.0	30.88	101	32
230.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	30.88	439	365
223.0	12' Omni	1	40	3.6	12.0	4.0	4.0	1.00	1.00	0.0	0.0	30.68	150	32
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	122
202.0	Ericsson KRY112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	30.05	18	27
202.0	Ericsson RRUS11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	30.05	137	123
202.0	Ericsson AIR21	3	90	5.8	4.7	12.0	8.0	0.80	0.71	0.0	0.0	30.05	404	219
202.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	30.05	453	321
202.0	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	0.80	0.70	0.0	0.0	30.05	786	122
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	729
196.0	3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.0	29.86	121	8
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.79	0.0	0.0	29.56	126	73
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.97	0.0	0.0	29.56	154	73
187.0	Andrew VHLP800-11-	1	121	16.7	4.1	0.0	0.0	1.00	1.00	0.0	0.0	29.56	672	98
180.6	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.80	1.00	0.0	0.0	29.35	3	0
180.6	Samsung DAP Heads	3	33	1.8	1.4	11.6	5.3	0.80	0.50	0.0	0.0	29.35	87	80
180.6	Alcatel-Lucent 800	3	64	2.4	1.6	13.0	12.2	0.80	0.50	0.0	0.0	29.35	115	156
180.6	Alcatel-Lucent 1900	6	44	3.8	1.9	17.3	13.0	0.80	0.50	0.0	0.0	29.35	367	214
180.6	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	29.35	259	69
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.61	0.0	0.0	29.35	91	22
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	1.00	0.0	0.0	29.35	150	22
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.55	0.0	0.0	29.35	82	22
180.6	Alcatel-Lucent TD-	3	70	4.7	2.2	18.6	6.7	0.80	0.67	0.0	0.0	29.35	303	170
180.6	RFS APXVTM14-C-I20	3	56	6.3	4.7	12.6	6.3	0.80	0.66	0.0	0.0	29.35	401	136
180.6	RFS APXVSPP18-C-	2	57	8.0	6.0	11.8	7.0	0.80	0.71	0.0	0.0	29.35	364	92
180.6	RFS APXV9ERR18-C-	1	62	8.0	6.0	11.8	7.9	0.80	0.71	0.0	0.0	29.35	182	50
180.6	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	29.35	1077	972
174.0	5' x 5" x 2" Panel	4	30	3.3	5.0	5.0	2.0	1.00	0.74	0.0	0.0	29.12	382	97
174.0	Andrew 950F65T4E-	2	16	4.8	5.0	11.0	7.0	1.00	0.90	0.0	0.0	29.12	339	25
165.0	Powerwave	12	6	0.2	0.5	4.0	3.0	0.80	0.50	0.0	0.0	28.79	38	53
165.0	Powerwave 7020	6	2	0.4	0.4	8.3	2.4	0.80	0.50	0.0	0.0	28.79	38	11

Site Number: 383598
Site Name: Tartaglia, CT
Customer: Verizon Wireless

Code: ANSI/TIA-222-G
Engineering Number: 12159334_C3_01

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Tower Loading

165.0	CCI	3	19	1.0	0.9	11.0	3.8	0.80	0.50	0.0	0.0	28.79	46	47
165.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	28.79	31	24
165.0	Powerwave	9	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	28.79	155	103
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	28.79	35	16
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	28.79	35	16
165.0	Ericsson RRUS-32	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	28.79	126	123
165.0	Ericsson RRUS-32 B2	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	28.79	126	123
165.0	Ericsson RRUS 32	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.0	28.79	129	129
165.0	Ericsson RRUS-11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	28.79	131	123
165.0	Powerwave 7770	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	28.79	336	85
165.0	Commscope SBNHH-	3	41	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	28.79	381	99
165.0	20' Omni	1	55	6.0	20.0	4.0	4.0	0.80	1.00	0.0	0.0	28.79	188	45
165.0	Quintel QS66512-3	3	105	8.1	6.0	12.0	9.6	0.80	0.74	0.0	0.0	28.79	565	255
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	729
155.0	ALU RH_2x80W-850	3	35	1.0	1.4	7.4	6.5	0.80	0.50	0.0	0.0	28.42	48	86
155.0	ALU RH_2x60W-PCS	3	46	1.8	1.6	11.2	8.2	0.80	0.50	0.0	0.0	28.42	85	112
155.0	ALU RH_2x60W-	3	57	2.2	1.8	12.0	9.0	0.80	0.50	0.0	0.0	28.42	100	139
155.0	ALU RH_4x45W-AWS	3	57	2.5	2.2	11.8	7.2	0.80	0.50	0.0	0.0	28.42	118	138
155.0	RFS DB-T1-6Z-8AB-	2	7	4.8	2.0	24.0	10.0	0.80	0.50	0.0	0.0	28.42	148	11
155.0	Antel BXA-80063-6BF	3	19	7.3	5.7	11.2	5.3	0.80	0.66	0.0	0.0	28.42	445	47
155.0	Commscope JAHH-	6	63	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	28.42	1166	308
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	972
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	109
118.0	10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	26.83	5	6
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	122
108.0	10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	26.34	5	6
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	122
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	122
22.00	3' Dish	1	100	6.1	3.0	0.0	0.0	1.00	0.64	0.0	0.0	18.84	100	81
20.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	18.47	25	8
8.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	17.40	24	8
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	122
	Totals	166	11371	749.6										

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	86
240.0	10' Omni	1	167	6.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	8.28	42	206
240.0	Beacon	1	294	4.2	3.0	18.0	18.0	1.00	1.00	0.0	0.0	8.28	29	369
240.0	Empty Round Side	1	227	8.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.28	57	308
230.0	8' Omni	1	179	4.9	8.0	4.0	4.0	1.00	1.00	0.0	0.0	8.20	34	224
230.0	8' Omni	1	154	4.5	8.0	3.0	3.0	1.00	1.00	0.0	0.0	8.20	31	195
230.0	Round Side Arm	3	227	8.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	8.20	113	923
223.0	12' Omni	1	242	8.4	12.0	4.0	4.0	1.00	1.00	0.0	0.0	8.15	58	300
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	307
202.0	Ericsson KRY112	3	28	0.6	0.6	6.1	2.7	0.80	0.50	0.0	0.0	7.98	5	109
202.0	Ericsson RRUS11	3	140	3.5	1.6	17.0	7.2	0.80	0.50	0.0	0.0	7.98	28	539
202.0	Ericsson AIR21	3	264	7.2	4.7	12.0	8.0	0.80	0.71	0.0	0.0	7.98	83	1015
202.0	Ericsson AIR32	3	321	7.7	4.7	12.9	8.7	0.80	0.71	0.0	0.0	7.98	89	1250
202.0	Commscope LNX-	3	321	13.1	8.0	11.9	7.1	0.80	0.70	0.0	0.0	7.98	150	1193
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	2655
196.0	3' Yagi	1	102	9.4	3.0	36.0	3.0	1.00	1.00	0.0	0.0	7.93	63	125
187.0	2' HP Dish	1	225	5.1	2.0	0.0	0.0	1.00	0.79	0.0	0.0	7.85	27	292
187.0	2' HP Dish	1	225	5.1	2.0	0.0	0.0	1.00	0.97	0.0	0.0	7.85	33	292

Site Number: 383598
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Tower Loading

187.0	Andrew VHLP800-11-	1	466	19.2	4.1	0.0	0.0	1.00	1.00	0.0	0.0	7.85	128	589
180.6	PCTEL GPS-TMG-HR-	1	11	0.3	0.4	3.2	3.2	0.80	1.00	0.0	0.0	7.80	2	14
180.6	Samsung DAP Heads	3	86	2.1	1.4	11.6	5.3	0.80	0.50	0.0	0.0	7.80	17	334
180.6	Alcatel-Lucent 800	3	156	2.7	1.6	13.0	12.2	0.80	0.50	0.0	0.0	7.80	21	608
180.6	Alcatel-Lucent 1900	6	172	4.0	1.9	17.3	13.0	0.80	0.50	0.0	0.0	7.80	64	1300
180.6	Argus LLPX310R	3	138	5.2	3.5	11.8	4.5	0.80	0.63	0.0	0.0	7.80	52	518
180.6	DragonWave A-ANT-	1	126	6.0	2.2	0.0	0.0	0.80	0.61	0.0	0.0	7.80	19	158
180.6	DragonWave A-ANT-	1	126	6.0	2.2	0.0	0.0	0.80	1.00	0.0	0.0	7.80	32	158
180.6	DragonWave A-ANT-	1	126	6.0	2.2	0.0	0.0	0.80	0.55	0.0	0.0	7.80	17	158
180.6	Alcatel-Lucent TD-	3	164	6.7	2.2	18.6	6.7	0.80	0.67	0.0	0.0	7.80	72	640
180.6	RFS APXVTM14-C-I20	3	204	8.5	4.7	12.6	6.3	0.80	0.66	0.0	0.0	7.80	90	774
180.6	RFS APXVSPP18-C-	2	260	9.3	6.0	11.8	7.0	0.80	0.71	0.0	0.0	7.80	70	651
180.6	RFS APXV9ERR18-C-	1	274	9.3	6.0	11.8	7.9	0.80	0.71	0.0	0.0	7.80	35	343
180.6	Flat Light Sector	3	705	33.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.80	332	2827
174.0	5' x 5" x 2" Panel	4	108	4.3	5.0	5.0	2.0	1.00	0.74	0.0	0.0	7.74	84	546
174.0	Andrew 950F65T4E-	2	181	7.2	5.0	11.0	7.0	1.00	0.90	0.0	0.0	7.74	86	442
165.0	Powerwave	12	18	0.4	0.5	4.0	3.0	0.80	0.50	0.0	0.0	7.65	13	277
165.0	Powerwave 7020	6	18	0.6	0.4	8.3	2.4	0.80	0.50	0.0	0.0	7.65	10	132
165.0	CCI	3	54	1.4	0.9	11.0	3.8	0.80	0.50	0.0	0.0	7.65	11	208
165.0	Commscope WCS-	1	175	1.3	0.9	10.6	6.9	0.80	1.00	0.0	0.0	7.65	7	218
165.0	Powerwave	9	48	1.6	1.2	9.2	2.6	0.80	0.50	0.0	0.0	7.65	37	546
165.0	Raycap DC6-48-60-	1	101	2.5	2.0	9.7	9.7	0.80	1.00	0.0	0.0	7.65	13	125
165.0	Raycap DC6-48-60-	1	101	2.5	2.0	9.7	9.7	0.80	1.00	0.0	0.0	7.65	13	125
165.0	Ericsson RRUS-32	3	115	3.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	7.65	29	451
165.0	Ericsson RRUS-32 B2	3	137	3.4	2.2	12.1	6.8	0.80	0.50	0.0	0.0	7.65	27	529
165.0	Ericsson RRUS 32	3	141	3.5	2.3	12.1	7.0	0.80	0.50	0.0	0.0	7.65	27	546
165.0	Ericsson RRUS-11	3	137	3.5	1.6	17.0	7.2	0.80	0.50	0.0	0.0	7.65	27	530
165.0	Powerwave 7770	3	170	6.6	4.6	11.0	5.0	0.80	0.65	0.0	0.0	7.65	67	638
165.0	Commscope SBNHH-	3	199	7.0	4.6	11.9	7.1	0.80	0.69	0.0	0.0	7.65	75	746
165.0	20' Omni	1	373	15.2	20.0	4.0	4.0	0.80	1.00	0.0	0.0	7.65	79	461
165.0	Quintel QS66512-3	3	332	9.4	6.0	12.0	9.6	0.80	0.74	0.0	0.0	7.65	109	1272
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	2623
155.0	ALU RH_2x80W-850	3	81	1.5	1.4	7.4	6.5	0.80	0.50	0.0	0.0	7.55	12	316
155.0	ALU RH_2x60W-PCS	3	100	2.7	1.6	11.2	8.2	0.80	0.50	0.0	0.0	7.55	21	393
155.0	ALU RH_2x60W-	3	139	2.8	1.8	12.0	9.0	0.80	0.50	0.0	0.0	7.55	21	541
155.0	ALU RH_4x45W-AWS	3	141	3.2	2.2	11.8	7.2	0.80	0.50	0.0	0.0	7.55	25	548
155.0	RFS DB-T1-6Z-8AB-	2	150	5.7	2.0	24.0	10.0	0.80	0.50	0.0	0.0	7.55	29	364
155.0	Antel BXA-80063-6BF	3	189	8.5	5.7	11.2	5.3	0.80	0.66	0.0	0.0	7.55	86	694
155.0	Commscope JAHH-	6	294	10.5	6.0	13.8	8.2	0.80	0.69	0.0	0.0	7.55	222	2206
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	2814
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	341
118.0	10' Omni	1	21	0.4	1.0	2.0	2.0	1.00	1.00	0.0	0.0	7.13	2	27
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	301
108.0	10' Omni	1	20	0.4	1.0	2.0	2.0	1.00	1.00	0.0	0.0	7.00	2	26
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	300
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	298
22.00	3' Dish	1	245	7.1	3.0	0.0	0.0	1.00	0.64	0.0	0.0	5.01	19	318
20.00	GPS	1	38	0.8	1.0	9.0	6.0	1.00	1.00	0.0	0.0	4.91	4	49
8.00	GPS	1	38	0.8	1.0	9.0	6.0	1.00	1.00	0.0	0.0	4.62	3	49
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	286
	Totals	166	30848	1102.3										

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)

Site Number: 383598
Site Name: Tartaglia, CT
Customer: Verizon Wireless

Code: ANSI/TIA-222-G
Engineering Number: 12159334_C3_01

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Tower Loading

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	10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	11.92	30	25
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	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	11.92	53	150
230.0	8' Omni	1	40	2.4	8.0	4.0	4.0	1.00	1.00	0.0	0.0	11.81	24	40
230.0	8' Omni	1	40	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.0	11.81	24	40
230.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	11.81	105	450
223.0	12' Omni	1	40	3.6	12.0	4.0	4.0	1.00	1.00	0.0	0.0	11.74	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
202.0	Ericsson KRY112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	11.50	4	33
202.0	Ericsson RRUS11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	11.50	33	152
202.0	Ericsson AIR21	3	90	5.8	4.7	12.0	8.0	0.80	0.71	0.0	0.0	11.50	97	270
202.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	11.50	108	397
202.0	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	0.80	0.70	0.0	0.0	11.50	188	151
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
196.0	3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.0	11.42	29	10
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.79	0.0	0.0	11.31	30	90
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.97	0.0	0.0	11.31	37	90
187.0	Andrew VHLP800-11-	1	121	16.7	4.1	0.0	0.0	1.00	1.00	0.0	0.0	11.31	161	121
180.6	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.80	1.00	0.0	0.0	11.23	1	1
180.6	Samsung DAP Heads	3	33	1.8	1.4	11.6	5.3	0.80	0.50	0.0	0.0	11.23	21	99
180.6	Alcatel-Lucent 800	3	64	2.4	1.6	13.0	12.2	0.80	0.50	0.0	0.0	11.23	27	192
180.6	Alcatel-Lucent 1900	6	44	3.8	1.9	17.3	13.0	0.80	0.50	0.0	0.0	11.23	88	264
180.6	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	11.23	62	86
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.61	0.0	0.0	11.23	22	27
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	1.00	0.0	0.0	11.23	36	27
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.55	0.0	0.0	11.23	20	27
180.6	Alcatel-Lucent TD-	3	70	4.7	2.2	18.6	6.7	0.80	0.67	0.0	0.0	11.23	72	210
180.6	RFS APXVTM14-C-I20	3	56	6.3	4.7	12.6	6.3	0.80	0.66	0.0	0.0	11.23	96	168
180.6	RFS APXVSPP18-C-	2	57	8.0	6.0	11.8	7.0	0.80	0.71	0.0	0.0	11.23	87	114
180.6	RFS APXV9ERR18-C-	1	62	8.0	6.0	11.8	7.9	0.80	0.71	0.0	0.0	11.23	43	62
180.6	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.23	258	1200
174.0	5' x 5" x 2" Panel	4	30	3.3	5.0	5.0	2.0	1.00	0.74	0.0	0.0	11.14	91	120
174.0	Andrew 950F65T4E-	2	16	4.8	5.0	11.0	7.0	1.00	0.90	0.0	0.0	11.14	81	31
165.0	Powerwave	12	6	0.2	0.5	4.0	3.0	0.80	0.50	0.0	0.0	11.02	9	66
165.0	Powerwave 7020	6	2	0.4	0.4	8.3	2.4	0.80	0.50	0.0	0.0	11.02	9	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	1.00	0.0	0.0	11.02	7	30
165.0	Powerwave	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-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	11.02	8	20
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	11.02	8	20
165.0	Ericsson RRUS-32	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	11.02	30	152
165.0	Ericsson RRUS-32 B2	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	11.02	30	152
165.0	Ericsson RRUS 32	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 RRUS-11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	11.02	31	152
165.0	Powerwave 7770	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	11.02	80	105
165.0	Commscope 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	20' Omni	1	55	6.0	20.0	4.0	4.0	0.80	1.00	0.0	0.0	11.02	45	55
165.0	Quintel QS66512-3	3	105	8.1	6.0	12.0	9.6	0.80	0.74	0.0	0.0	11.02	135	315
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	ALU RH_2x80W-850	3	35	1.0	1.4	7.4	6.5	0.80	0.50	0.0	0.0	10.87	12	106
155.0	ALU RH_2x60W-PCS	3	46	1.8	1.6	11.2	8.2	0.80	0.50	0.0	0.0	10.87	20	138
155.0	ALU RH_2x60W-	3	57	2.2	1.8	12.0	9.0	0.80	0.50	0.0	0.0	10.87	24	172
155.0	ALU RH_4x45W-AWS	3	57	2.5	2.2	11.8	7.2	0.80	0.50	0.0	0.0	10.87	28	170
155.0	RFS DB-T1-6Z-8AB-	2	7	4.8	2.0	24.0	10.0	0.80	0.50	0.0	0.0	10.87	35	13
155.0	Antel BXA-80063-6BF	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-	6	63	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	10.87	279	380
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

Site Number: 383598
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Tower Loading

118.0	10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	10.27	1	8
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
108.0	10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	10.08	1	8
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
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
22.00	3' Dish	1	100	6.1	3.0	0.0	0.0	1.00	0.64	0.0	0.0	7.21	24	100
20.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	7.07	6	10
8.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	6.66	6	10
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	166	11371	749.6										

Site Number: 383598
Site Name: Tartaglia, CT
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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	240.0	1 1/4" Coax	1	1.55	0.63	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	240.0	1" Conduit	1	1.30	1.68	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	230.0	7/8" Coax	2	1.09	0.33	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	223.0	1 1/4" Coax	1	1.55	0.63	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	202.0	1 5/8" Coax	7	1.98	0.82	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	202.0	1" Hybrid	1	1.00	0.65	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	202.0	Waveguide	1	1.50	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	196.0	7/8" Coax	1	1.09	0.33	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	187.0	1/2" Coax	4	0.63	0.15	0	1	Individual	0.00	N	1.00	1.00	0.01
0.00	180.6	1 1/4" Hybriflex	3	1.54	1.00	67	2	Block	0.00	N	0.00	1.00	0.00
0.00	180.6	1.625" Hybrid	1	1.63	1.61	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	180.6	1/2" Ethernet	3	0.50	0.14	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	180.6	2" Conduit	2	2.38	3.65	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	180.6	5/16" Coax	6	0.32	0.04	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	180.6	Waveguide	1	1.50	6.00	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	174.0	1 5/8" Coax	6	1.98	0.82	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	174.0	Waveguide	1	1.50	6.00	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	165.0	0.39" Fiber Trunk	1	0.39	0.06	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	165.0	0.39" Fiber Trunk	1	0.39	0.06	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	165.0	0.78" 8 AWG 6	2	0.78	0.59	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	165.0	0.78" 8 AWG 6	2	0.78	0.59	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	165.0	1 1/4" Coax	1	1.55	0.63	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	165.0	1 5/8" Coax	12	1.98	0.82	50	3	Block	0.00	N	0.00	1.00	0.00
0.00	165.0	Waveguide	1	1.50	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	155.0	1 5/8" Coax	12	1.98	0.82	50	3	Block	0.00	N	0.00	1.00	0.00
0.00	155.0	1 5/8" Hybrid	1	1.98	1.30	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	155.0	1 5/8" Hybrid	1	1.98	1.30	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	152.0	Waveguide	1	1.50	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	118.0	7/8" Coax	1	1.09	0.33	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	108.0	1 1/4" Coax	1	1.55	0.63	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	22.00	0.24" Cat 5	1	0.24	0.04	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	20.00	1/2" Coax	1	0.63	0.15	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	8.00	1/2" Coax	1	0.63	0.15	0	3	Individual	0.00	N	1.00	1.00	0.00

Site Number: 383598
Site Name: Tartaglia, CT
Customer: Verizon Wireless

Code: ANSI/TIA-222-G
Engineering Number: 12159334_C3_01

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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	-276.05	1.2D + 1.6W	30.08	33	33	33	32.8	50.0	669.65	0	0	0.00	0.00	41	Member X
HORIZ PST - 3-1/2" DIA PIP	-14.89	0.9D + 1.6W 90	18.29	100	100	100	163.8	50.0	22.56	2	0	0.00	42.31	66	Member X
DIAG PST - 3" DIA PIPE	-29.55	1.2D + 1.6W 90	36.16	32	32	32	0.0	0.0	41.40	3	0	0.00	60.65	71	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	220.64	0.9D + 1.6W 60	50	65	724.50	0	0	0.00	0.00		30	Member
HORIZ PST - 3-1/2" DIA PIP	15.51	1.2D + 1.6W 90	50	65	120.60	2	0	0.00	33.93	0.00	45	Bolt Bear
DIAG PST - 3" DIA PIPE	27.53	1.2D + 1.6W 90	50	65	100.35	3	0	0.00	52.65	0.00	52	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	219.07	0.9D + 1.6W 180	0.00	0	0	
Top Compression	274.39	1.2D + 1.6W	0.00	0		
Bot Tension	262.00	0.9D + 1.6W 180	726.84	46	12	1" A193-B7
Bot Compression	320.47	1.2D + 1.6W 120	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	-226.20	1.2D + 1.6W	30.08	33	33	33	32.8	50.0	669.65	0	0	0.00	0.00	33	Member X
HORIZ PST - 3" DIA PIPE	-14.24	1.2D + 1.6W 90	16.41	96	96	96	163.0	50.0	18.95	2	0	0.00	40.44	75	Member X
DIAG PST - 3" DIA PIPE	-32.25	1.2D + 1.6W 90	35.15	31	31	31	112.7	50.0	39.62	3	0	0.00	60.65	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 - 10" DIA PIPE	177.73	0.9D + 1.6W 60	50	65	724.50	0	0	0.00	0.00		24	Member
HORIZ PST - 3" DIA PIPE	15.15	1.2D + 1.6W 90	50	65	100.35	2	0	0.00	32.43	0.00	46	Bolt Bear
DIAG PST - 3" DIA PIPE	29.68	1.2D + 1.6W 90	50	65	100.35	3	0	0.00	52.65	0.00	56	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	176.24	0.9D + 1.6W 180	0.00	0	0	
Top Compression	224.60	1.2D + 1.6W	0.00	0		
Bot Tension	219.07	0.9D + 1.6W 180	654.24	33	12	1 A325
Bot Compression	274.39	1.2D + 1.6W	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	-192.06	1.2D + 1.6W	20.05	50	50	50	33.1	50.0	668.58	0	0	0.00	0.00	28	Member X
HORIZ PST - 3" DIA PIPE	-12.91	1.2D + 1.6W 90	15.16	100	100	100	156.9	50.0	20.47	2	0	0.00	40.44	63	Member X
DIAG PST - 3" DIA PIPE	-23.64	1.2D + 1.6W 90	25.88	48	48	48	128.5	50.0	30.49	3	0	0.00	50.54	77	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	150.15	0.9D + 1.6W 60	50	65	724.50	0	0	0.00	0.00		20	Member
HORIZ PST - 3" DIA PIPE	13.75	1.2D + 1.6W 90	50	65	100.35	2	0	0.00	32.43	0.00	42	Bolt Bear
DIAG PST - 3" DIA PIPE	21.91	0.9D + 1.6W 90	50	65	100.35	3	0	0.00	43.80	0.00	50	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	148.77	0.9D + 1.6W 60	0.00	0	0	
Top Compression	190.59	1.2D + 1.6W 120	0.00	0		
Bot Tension	176.24	0.9D + 1.6W 180	654.24	27	12	1 A325
Bot Compression	224.60	1.2D + 1.6W	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	-159.29	1.2D + 1.6W	20.06	50	50	50	41.8	50.0	506.95	0	0	0.00	0.00	31	Member X
HORIZ PST - 3" DIA PIPE	-11.85	0.9D + 1.6W 90	13.83	100	100	100	143.2	50.0	24.58	2	0	0.00	40.44	48	Member X
DIAG PST - 3" DIA PIPE	-22.45	1.2D + 1.6W 90	25.11	48	48	48	124.7	50.0	32.40	3	0	0.00	50.54	69	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	122.52	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00		21	Member
HORIZ PST - 3" DIA PIPE	12.24	1.2D + 1.6W 90	50	65	100.35	2	0	0.00	32.43	0.00	37	Bolt Bear
DIAG PST - 3" DIA PIPE	20.76	1.2D + 1.6W 90	50	65	100.35	3	0	0.00	43.80	0.00	47	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	121.23	0.9D + 1.6W 60	0.00	0	0	
Top Compression	157.94	1.2D + 1.6W	0.00	0		
Bot Tension	148.77	0.9D + 1.6W 60	654.24	23	12	1 A325
Bot Compression	190.59	1.2D + 1.6W 120	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	-125.90	1.2D + 1.6W	20.05	50	50	50	41.8	50.0	507.00	0	0	0.00	0.00	24	Member X
HORIZ PST - 2-1/2" DIA PIP	-10.89	0.9D + 1.6W 90	12.58	98	98	98	156.3	50.0	15.75	2	0	0.00	38.00	69	Member X
DIAG PST - 2-1/2" DIA PIP	-22.24	1.2D + 1.6W 90	24.33	48	48	48	0.0	0.0	28.20	3	0	0.00	47.50	78	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	93.95	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00		16	Member
HORIZ PST - 2-1/2" DIA PIP	11.55	1.2D + 1.6W 90	50	65	76.68	2	0	0.00	30.48	0.00	37	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	20.66	1.2D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00	50	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	92.82	0.9D + 1.6W 180	0.00	0	0	
Top Compression	124.68	1.2D + 1.6W	0.00	0		
Bot Tension	121.23	0.9D + 1.6W 60	654.24	19	12	1 A325
Bot Compression	157.94	1.2D + 1.6W	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	-108.91	1.2D + 1.6W	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	21	Member X
HORIZ PST - 2-1/2" DIA PIP	-9.92	1.2D + 1.6W 90	11.96	100	100	100	151.6	50.0	16.75	2	0	0.00	31.67	59	Member X
DIAG PST - 3" DIA PIPE	-14.37	1.2D + 1.6W 90	16.08	96	96	96	159.7	50.0	19.75	3	0	0.00	50.54	72	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	76.63	1.2D + 1.6W 60	50	65	576.00	0	0	0.00	0.00		13	Member
HORIZ PST - 2-1/2" DIA PIP	10.64	1.2D + 1.6W 90	50	65	76.68	2	0	0.00	25.33	0.00	42	Bolt Bear
DIAG PST - 3" DIA PIPE	13.26	1.2D + 1.6W 90	50	65	100.35	3	0	0.00	43.80	0.00	30	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	65.84	0.9D + 1.6W 60	0.00	0	0	
Top Compression	91.65	1.2D + 1.6W 120	0.00	0		
Bot Tension	92.82	0.9D + 1.6W 180	436.16	21	8	1 A325
Bot Compression	124.68	1.2D + 1.6W	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	-76.66	1.2D + 1.6W	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	15	Member X
HORIZ PST - 2-1/2" DIA PIP	-8.79	0.9D + 1.6W 90	10.71	100	100	100	135.8	50.0	20.89	2	0	0.00	31.67	42	Member X
DIAG PST - 2-1/2" DIA PIP	-13.25	1.2D + 1.6W 90	15.12	100	100	100	0.0	0.0	23.40	3	0	0.00	47.50	56	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	53.29	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00		9	Member
HORIZ PST - 2-1/2" DIA PIP	9.34	1.2D + 1.6W 90	50	65	76.68	2	0	0.00	25.33	0.00	36	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	12.23	1.2D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00	29	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	38.95	0.9D + 1.6W 60	0.00	0	0	
Top Compression	59.90	1.2D + 1.6W 120	0.00	0		
Bot Tension	65.84	0.9D + 1.6W 60	436.16	15	8	1 A325
Bot Compression	91.65	1.2D + 1.6W 120	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	-46.70	1.2D + 1.6W	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	9	Member X
HORIZ PST - 2-1/2" DIA PIP	-5.74	1.2D + 1.6W 90	9.464	100	100	100	119.9	50.0	26.77	2	0	0.00	31.67	21	Member X
DIAG PST - 2-1/2" DIA PIP	-9.34	1.2D + 1.6W 90	14.20	96	96	96	172.9	50.0	12.88	3	0	0.00	47.50	72	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	28.97	1.2D + 1.6W 60	50	65	576.00	0	0	0.00	0.00		5	Member
HORIZ PST - 2-1/2" DIA PIP	6.17	1.2D + 1.6W 90	50	65	76.68	2	0	0.00	25.33	0.00	24	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	8.65	0.9D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00	21	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	21.36	0.9D + 1.6W 180	0.00	0	0	
Top Compression	34.85	1.2D + 1.6W	0.00	0		
Bot Tension	38.95	0.9D + 1.6W 60	436.16	9	8	1 A325
Bot Compression	59.90	1.2D + 1.6W 120	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	-25.66	1.2D + 1.6W	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	5	Member X
HORIZ PST - 2" DIA PIPE	-3.51	1.2D + 1.6W 90	8.214	100	100	100	125.2	50.0	15.41	2	0	0.00	24.02	22	Member X
DIAG PST - 2-1/2" DIA PIP	-6.23	1.2D + 1.6W 90	13.35	100	100	100	169.2	50.0	13.45	3	0	0.00	47.50	46	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	14.20	1.2D + 1.6W 60	50	65	576.00	0	0	0.00	0.00		2	Member
HORIZ PST - 2" DIA PIPE	3.79	1.2D + 1.6W 90	50	65	48.15	2	0	0.00	19.22	0.00	19	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	5.65	1.2D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00	13	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	9.28	0.9D + 1.6W 180	0.00	0	0	
Top Compression	17.55	1.2D + 1.6W	0.00	0		
Bot Tension	21.36	0.9D + 1.6W 180	436.16	5	8	1 A325
Bot Compression	34.85	1.2D + 1.6W	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	-11.65	1.2D + 1.6W	10.02	100	100	100	41.8	50.0	507.06	0	0	0.00	0.00	2	Member X
HORIZ PST - 2" DIA PIPE	-1.67	1.2D + 1.6W 90	7.026	100	100	100	107.1	50.0	20.80	2	0	0.00	24.02	8	Member X
DIAG PST - 2-1/2" DIA PIP	-3.56	1.2D + 1.6W 90	12.55	100	100	100	159.1	50.0	15.20	3	0	0.00	47.50	23	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	6.17	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00		1	Member
HORIZ PST - 2" DIA PIPE	1.75	1.2D + 1.6W 60	50	65	48.15	2	0	0.00	19.22	0.00	9	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	3.06	1.2D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00	7	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	2.59	0.9D + 1.6W 180	0.00	0	0	
Top Compression	6.64	1.2D + 1.6W 120	0.00	0		
Bot Tension	9.28	0.9D + 1.6W 180	436.16	2	8	1 A325
Bot Compression	17.55	1.2D + 1.6W	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	-3.98	1.2D + 1.6W	6.68	100	100	100	27.8	50.0	544.30	0	0	0.00	0.00	0	Member X
HORIZ PST - 2" DIA PIPE	-0.87	1.2D + 1.6W	6.130	100	100	100	93.5	50.0	25.42	2	0	0.00	24.02	3	Member X
DIAG PST - 2" DIA PIPE	-1.84	1.2D + 1.6W 90	9.288	100	100	100	141.6	50.0	12.05	3	0	0.00	36.04	15	Member X

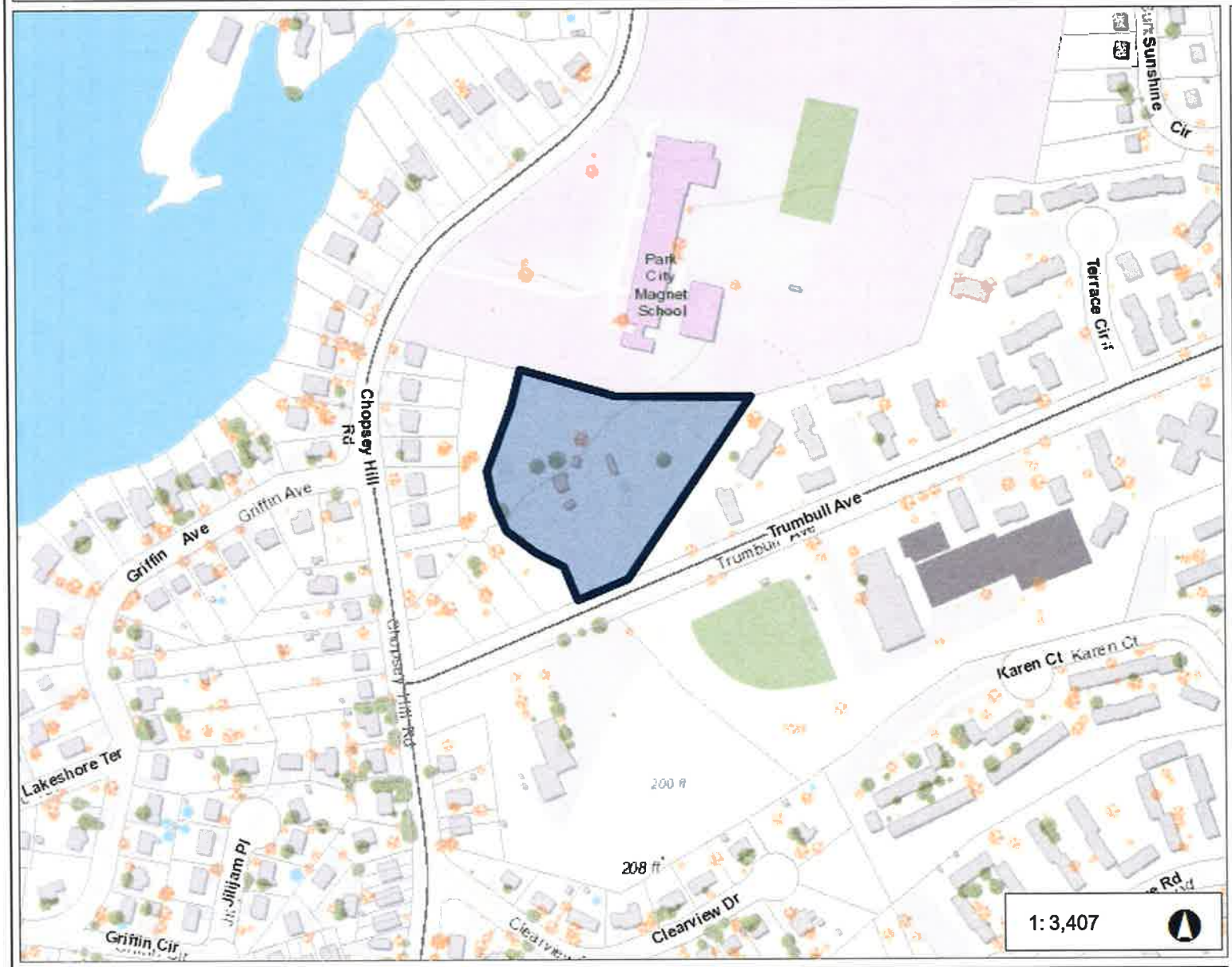
Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	0.79	1.2D + 1.6W 60	50	65	576.00	0	0	0.00	0.00		0	Member
HORIZ PST - 2" DIA PIPE	1.06	1.2D + 1.6W 60	50	65	48.15	2	0	0.00	19.22	0.00	5	Bolt Bear
DIAG PST - 2" DIA PIPE	1.26	1.2D + 1.6W	50	65	48.15	3	0	0.00	31.23	0.00	4	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	0.80	1.2D + 1.0Di +	0.00	0		
Bot Tension	2.59	0.9D + 1.6W 180	436.16	1	8	1 A325
Bot Compression	6.64	1.2D + 1.6W 120	0.00	0		

ATTACHMENT 4

City of Bridgeport

My Map



Legend

- Parcels
- Streetname
- Roadways
  - Local
  - Collector
  - Minor Collector
  - Minor Arterial
  - Major Collector
  - PA Other
  - PA Other Expwy
  - PA Interstate

567.8 0 283.90 567.8 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere
Created by Connecticut Metropolitan Council of Governments

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION

METROCOG
Connecticut Metropolitan Council of Governments

1000 TRUMBULL AV

Location	1000 TRUMBULL AV	**Mblu**	82/ 2778/ 61/B /
Acct#	RT-0049550	**Owner**	GLOBAL TOWER ASSETS LLC
Assessment	$310,420	**Appraisal**	$443,440
PID	32253	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$75,820	$367,620	$443,440
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$53,090	$257,330	$310,420

Owner of Record

Owner	GLOBAL TOWER ASSETS LLC
Co-Owner	
Address	10 PRESIDENTIAL WAY WOBURN, MA 01801

Sale Price	$0
Certificate	
Book & Page	9695/ 74
Sale Date	09/13/2017
Instrument	04

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
GLOBAL TOWER ASSETS LLC	$0		9695/ 74	04	09/13/2017
GLOBAL TOWER ASSETS LLC	$0		9500/ 294	03	09/14/2016
CELL TOWER LEASE ACQUISION LLC	$0		7342/ 302	03	01/23/2007
UNISON SITE MANAGEMENT LLC	$1,925,000		7342/ 299	03	01/23/2007
TARTAGLIA REMO	$700,000		3018/ 317		07/06/1992

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0

Building Percent Good:

Replacement Cost Less Depreciation: $0

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

Building Photo

(http://images.vgsi.com/photos2/BridgeportCTPhotos//\00\09\

Building Layout

Building Layout

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

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	200V
Description	Commercial Lnd
Zone	RA
Neighborhood	2140
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	3.05
Frontage	0
Depth	0
Assessed Value	$257,330
Appraised Value	$367,620

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FN5	Fence 10'			616 LF	$6,160	1
PAV2	Paving Conc			40 SF	$110	1
TWR	Tower			240 LF	$48,000	1
SHD1	Shed	MS	Masonry	1200 SF	$12,240	1
SHD1	Shed	MS	Masonry	432 SF	$4,410	1
SHD1	Shed	MS	Masonry	240 SF	$2,450	1
SHD1	Shed	MS	Masonry	240 SF	$2,450	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$75,820	$367,620	$443,440
2015	$75,820	$367,620	$443,440
2014	$152,140	$348,270	$500,410

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$53,090	$257,330	$310,420
2015	$53,090	$257,330	$310,420
2014	$106,499	$243,790	$350,289

ATTACHMENT 5

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103		3	neopost 02/01/2018 US POSTAGE $002.38 ZIP 06103 041L122033
	Postmaster, per *(name of receiving employee)*		OLD STATE HOUSE STATION 06103 FEB 01 2018 USPS

	USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.		Joseph Ganim, Mayor City of Bridgeport Margaret E. Morton Government Center 999 Broad Street Bridgeport, CT 06604				
2.		Dennis Buckley, Zoning Administrator City of Bridgeport 45 Lyon Terrace Bridgeport, CT 06604				
3.		Global Tower Assets, LLC Attn: Lease Admin 10 Presidential Way Woburn, MA 01801				
4.						
5.						
6.						

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See Reverse for Instructions