



Alex Murshteyn, Site Acquisition Consultant  
c/o Cellco Partnership d/b/a Verizon Wireless  
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January 19, 2018

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

**RE: Notice of Exempt Modification // Site: Vernon 3 CT (ATC: 302529)  
777 Talcottville Road, Vernon, CT 06066  
N 41.8634 // W 73.4833**

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless currently maintains 12 antennas at the 150-foot mount on the existing 160-foot monopole tower, located at 777 (aka 779) Talcottville Road, Vernon, CT. The tower is owned by American Tower. The property is owned by 777 Realty LLC. Verizon Wireless now intends remove 3 of its antennas to replace with 3, as well as relocate 2 existing antennas and install them on side-by-side mounts for the LTE (700/850 MHz) replacements for its PCS/AWS/LTE upgrade. Additionally, Verizon Wireless will install 9 new remote radio head units (RRUs), including 3 replacements, to bring the total RRU count to 12; altogether updating leased equipment rights, as reflected by the final configuration outlined in the structural analysis and proposed hereby.

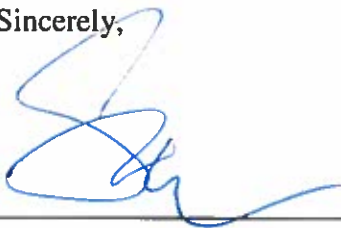
Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Daniel A. Champagne, Mayor for the Town of Vernon, its Town Planner Marina Rodriguez, including for the Planning & Zoning Commission, American Tower, the tower owner, and the ground owner, 777 Realty LLC.

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 December 27, 2017 by ATC Tower Services, LLC, a structural analysis dated January 4, 2018 by A.T. Engineering Service, PLLC and 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 by A.T. Engineering Service, PLLC, dated January 4, 2018.

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,



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Alex Murshteyn, Site Acquisition Consultant  
c/o Cellco Partnership d/b/a Verizon Wireless  
Centerline Communications, LLC  
95 Ryan Drive, Suite 1  
Raynham, MA 02767  
Mobile: (508) 821-0159  
[AMurshteyn@centerlinecommunications.com](mailto:AMurshteyn@centerlinecommunications.com)

Attachments

cc: Daniel A. Champagne, Mayor - 1Z9Y45030303427842  
Marina Rodriguez, Town Planner - as P&Z official - 1Z9Y45030308998851  
American Tower Corporation - as tower owner - 1Z9Y45030308771863  
777 Realty LLC - as property owner - 1Z9Y45030303146879



**AMERICAN TOWER®**  
CORPORATION

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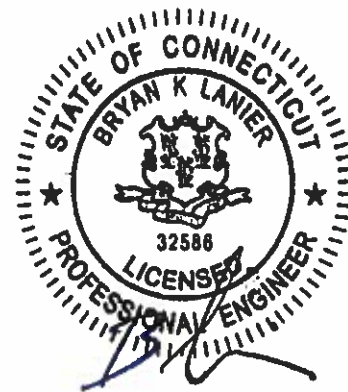
## Structural Analysis Report

**Structure** : 160 ft Monopole  
**ATC Site Name** : Vernon CT 6, CT  
**ATC Site Number** : 302529  
**Engineering Number** : OAA712988\_C3\_04  
**Proposed Carrier** : Verizon  
**Carrier Site Name** : Vernon 3 CT  
**Carrier Site Number** : 2555688  
**Site Location** : 777 Talcotville Road  
Vernon Rockville, CT 06066-2318  
41.863500,-72.483300  
**County** : TOLLAND  
**Date** : January 4, 2018  
**Max Usage** : 29%  
**Result** : Pass

Prepared By:  
Adam Pittman  
Structural Engineer II

*Adam Pittman*

Reviewed By:



Jan 5 2018 9:25 AM **cosign**

COA: PEC.0001553



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## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 160 ft monopole to reflect the change in loading by Verizon.

## Supporting Documents

<b>Tower Drawings</b>	Summit, PJF Job #29201-0893, dated July 26, 2001
<b>Foundation Drawing</b>	Summit, PJF Job #29201-0893, dated September 21, 2001
<b>Geotechnical Report</b>	Dr. Clarence Welti Geotechnical Engineering Job #CT-1065, dated January 2, 2001
<b>Modifications</b>	ATC Job #44531032, dated March 3, 2010

## 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.

<b>Basic Wind Speed:</b>	97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-G / 2015 IBC / 2016 Connecticut State Building Code
<b>Structure Class:</b>	II
<b>Exposure Category:</b>	B
<b>Topographic Category:</b>	1
<b>Crest Height:</b>	0 ft
<b>Spectral Response:</b>	$S_s = 0.18, S_1 = 0.06$
<b>Site Class:</b>	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](mailto: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 <sup>1</sup> (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
160.0	161.0	12	Decibel DB844H90E-XY	Low Profile Platform	(12) 1 1/4" Coax	Sprint Nextel
150.0	150.0	3	Alcatel-Lucent RRH 2X60 700	Low Profile Platform	(12) 1 5/8" Coax (2) 1 5/8" Hybriflex	Verizon
		2	RFS DB-T1-6Z-8AB-0Z			
		3	Andrew LNX-6514DS-A1M			
		6	Andrew SBNHH-1D65B			
142.0	142.0	6	Powerwave LGP21401	T-Arms	(3) 3/8" RET Control Cable (6) 1 1/4" Coax (2) 0.78" 8 AWG 6 (1) 3" Conduit (1) 0.39" Cable	AT&T Mobility
		1	Raycap DC6-48-60-18-8F (23.5" Height)			
		3	RRH			
		3	Ericsson RRUS 12 w/ RRUS A2			
		3	Powerwave 7770.00			
		3	CCI HPA-65R-BUU-H6			
130.0	135.0	6	Alcatel-Lucent 4X40W RRH	Low Profile Platform	(4) 1 1/4" Hybriflex	Sprint Nextel
		3	Alcatel-Lucent 800MHz RRH w/ Notch Filter			
		3	Alcatel-Lucent TD-RRH8x20			
	130.0	3	RFS APXVTM14-C-I20 (56.2 lbs)			
		1	RFS APXV9ERR18-C-A20			
		2	RFS APXVSP18-C-A20			
117.0	117.0	3	RFS APXV18-206517S-C	Flush	(6) 1 5/8" Coax	Metro PCS

**Equipment to be Removed**

Elevation <sup>1</sup> (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	150.0	3	Alcatel-Lucent RRH4X45-B66 w/ Solar Shield	-	-	Verizon
		3	Alcatel-Lucent RRH2x60W			

**Proposed Equipment**

Elevation <sup>1</sup> (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	150.0	3	Nokia B5 RRH4x40-850	Low Profile Platform	-	Verizon
		3	Alcatel-Lucent RRH2X60-1900			
		3	Alcatel-Lucent RRH2x60			
		3	Antel QUAD656C0000X			

<sup>1</sup>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
Anchor Bolts	29%	Pass
Shaft	29%	Pass
Base Plate	27%	Pass

**Foundations**

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	8,100.0	10,935.0	3,270.5	30%
Shear (Kips)	61.0	82.4	29.6	36%

\* 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 and Sway\***

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (")
150.0	Nokia B5 RRH4x40-850	Verizon	0.552	0.384
	Alcatel-Lucent RRH2X60-1900			
	Alcatel-Lucent RRH2x60			
	Amphenol Antel QUAD656C0000X			

\*Deflection 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.

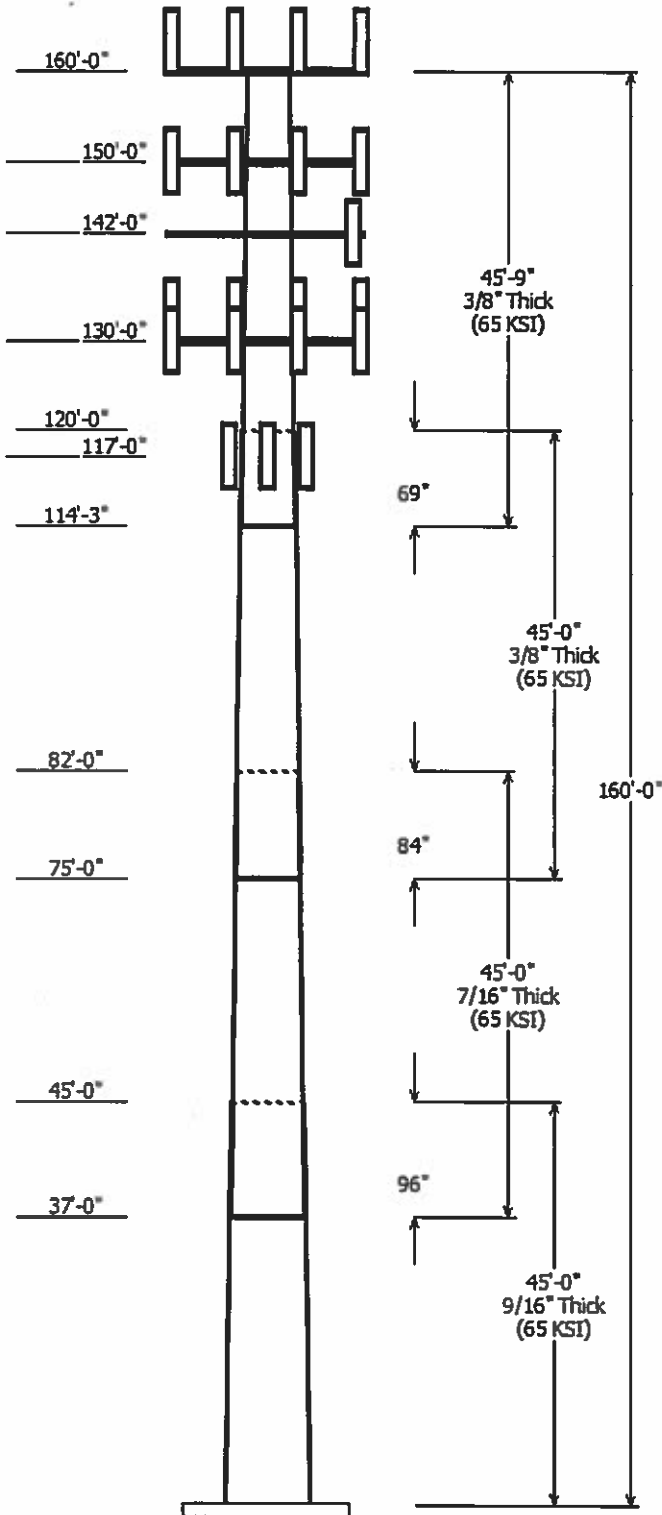
All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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



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Job Information	
Pole : 302529	Code: ANSI/TIA-222-G
Location : Vernon CT 6, CT	
Description : 160 ft Monopole	
Client : VERIZON WIRELESS	Struct Class : II
Shape : 18 Sides	Exposure : B
Height : 160.00 (ft)	Topo : 1
Base Elev (ft): 0.00	
Taper: 0.251317(in/ft)	

Sections Properties							
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in) Type	Overlap Length (in)	Steel Shape	Steel Grade (ksi)
		Across Top	Flats Bottom				
1	45.000	60.82	72.13	0.563	0.000	18 Sides	65
2	45.000	52.39	63.70	0.438 Slip Joint	96.000	18 Sides	65
3	45.000	43.59	54.90	0.375 Slip Joint	84.000	18 Sides	65
4	45.750	34.29	45.79	0.375 Slip Joint	69.000	18 Sides	65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
160.000	161.000	12	Decibel DB844H90E-XY
160.000	160.000	1	Flat Low Profile Platform
150.000	150.000	3	Amphenol Antel
150.000	150.000	3	Alcatel-Lucent RRH2x60
150.000	150.000	3	Alcatel-Lucent RRH2X60-1900
150.000	150.000	3	Nokia B5 RRH4x40-850
150.000	150.000	6	Andrew SBNHH-1D65B
150.000	150.000	3	Andrew LNX-6514DS-A1M
150.000	150.000	2	RFS DB-T1-6Z-8AB-0Z
150.000	150.000	3	Alcatel-Lucent RRH 2X60 700
150.000	150.000	1	Round Low Profile Platform
142.000	142.000	3	CCI HPA-65R-BUU-H6
142.000	142.000	3	Powerwave Allgon 7770.00
142.000	142.000	3	Ericsson RRUS 12 w/ RRUS A2
142.000	142.000	6	Powerwave Allgon LGP21401
142.000	142.000	1	Raycap DC6-48-60-18-8F (23.5"
142.000	142.000	3	Round T-Arm
142.000	142.000	3	RRH
130.000	130.000	1	Round Low Profile Platform
130.000	130.000	1	RFS APXV9ERR18-C-A20
130.000	130.000	2	RFS APXVSP18-C-A20
130.000	130.000	3	RFS APXVTM14-C-I20 (56.2 lbs)
130.000	135.000	3	Alcatel-Lucent TD-RRH8x20
130.000	135.000	3	Alcatel-Lucent 800 MHz RRH
130.000	135.000	6	Alcatel-Lucent 4X40W RRH
117.000	117.000	3	RFS APXV18-206517S-C
117.000	117.000	3	Flush Mounts

Linear Appurtenance			
Elev (ft) From	To	Description	Exposed To Wind
2.000	117.0	1 5/8" Coax	No
2.000	130.0	1 1/4" Hybriflex	No
2.000	142.0	0.39" Cable	No
2.000	142.0	0.78" 8 AWG 6	No
2.000	142.0	1 1/4" Coax	No
2.000	142.0	3" Conduit	No
2.000	142.0	3/8" RET Control	No
2.000	150.0	1 5/8" Coax	No
2.000	150.0	1 5/8" Hybriflex	No

2.000 160.0 1 1/4" Coax No

**Load Cases**

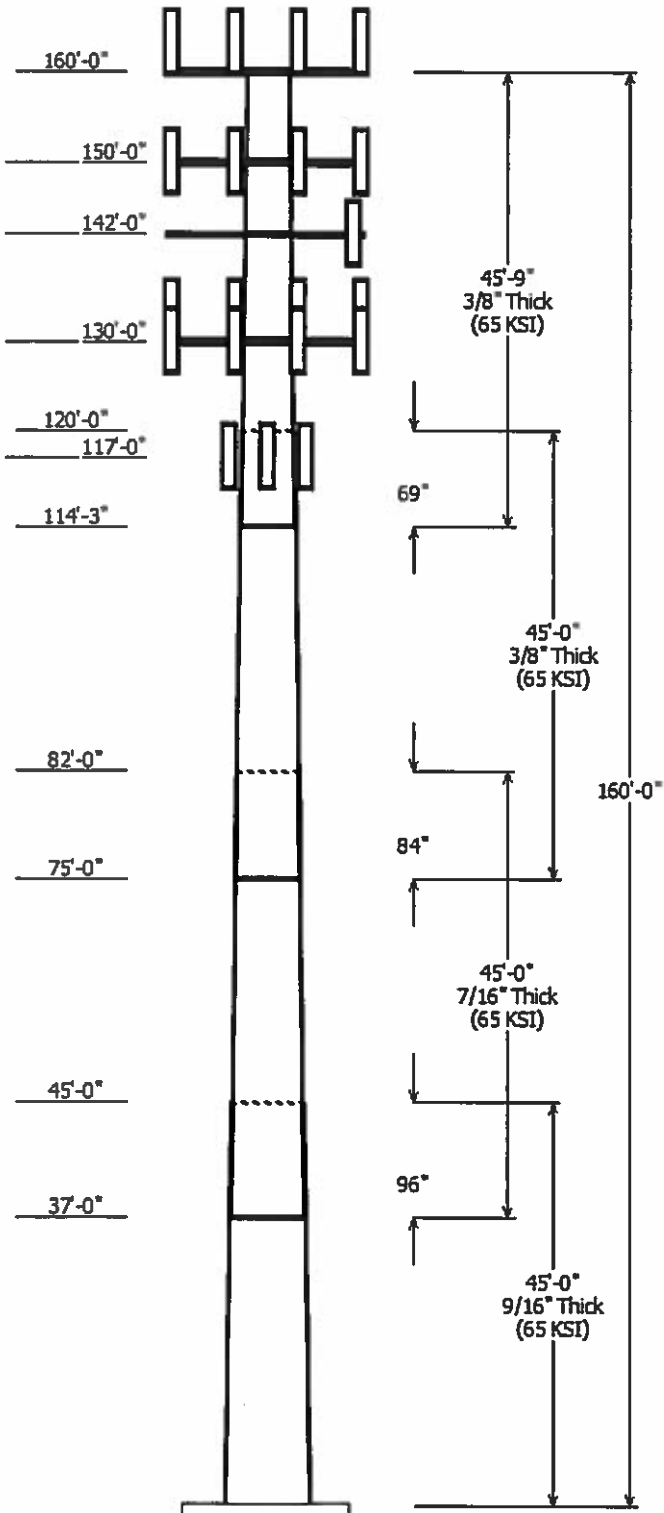
1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

**Reactions**

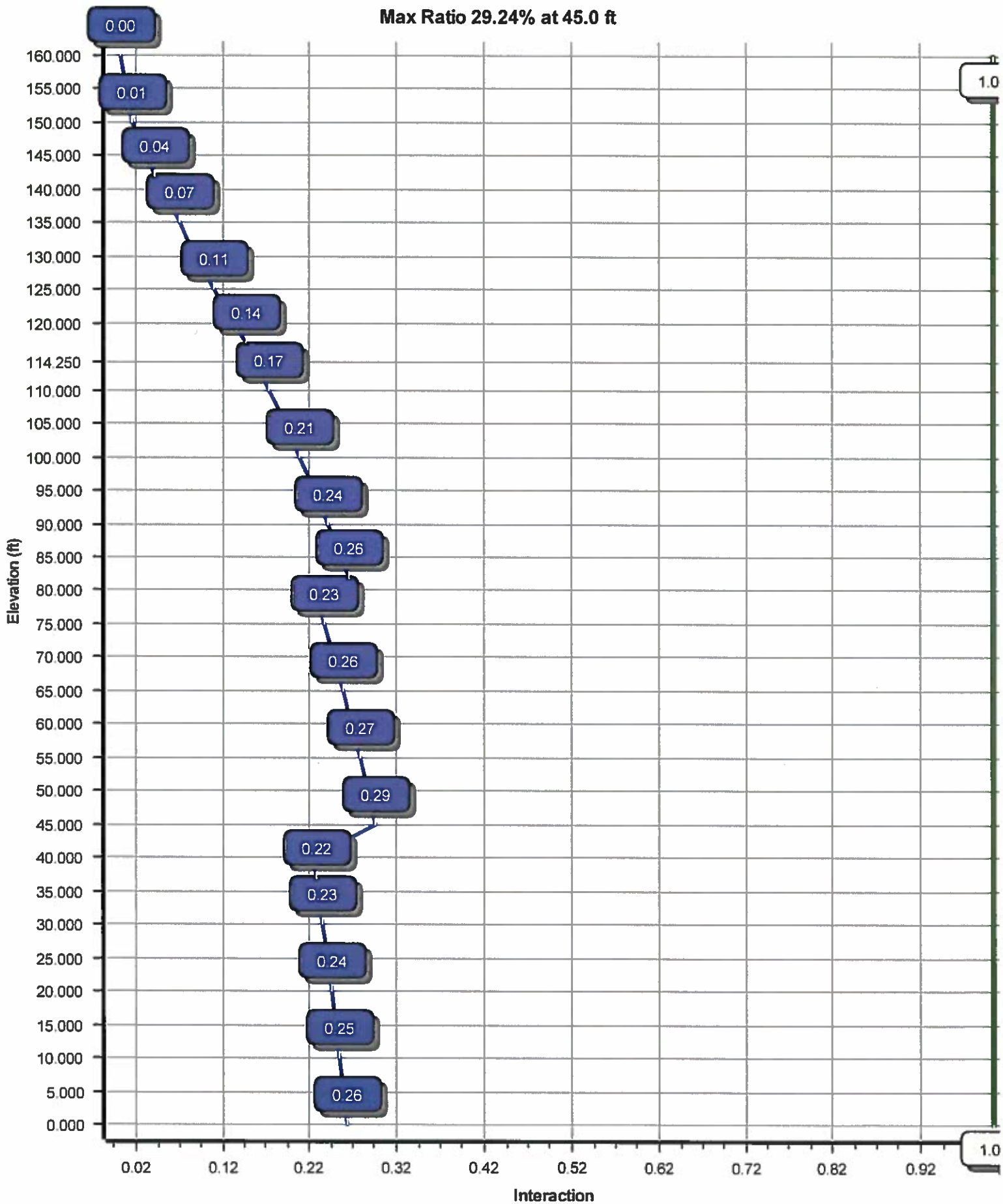
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	3270.47	29.58	73.53
0.9D + 1.6W	3254.21	29.57	55.14
1.2D + 1.0Di + 1.0Wi	964.63	8.86	113.23
(1.2 + 0.2Sds) * DL + E ELFM	406.50	3.45	73.03
(1.2 + 0.2Sds) * DL + E EMAM	396.63	3.38	73.03
(0.9 - 0.2Sds) * DL + E ELFM	404.14	3.45	50.88
(0.9 - 0.2Sds) * DL + E EMAM	394.18	3.38	50.88
1.0D + 1.0W	779.53	7.07	61.29

**Dish Deflections**

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000



Load Case : 1.2D + 1.6W  
Max Ratio 29.24% at 45.0 ft



Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

### Analysis Parameters

Location :	TOLLAND County, CT	Height (ft) :	160
Code :	ANSI/TIA-222-G	Base Diameter (in) :	72.13
Shape :	18 Sides	Top Diameter (in) :	34.29
Pole Type :	Taper	Taper (in/ft) :	0.251
Pole Manufacturer :	Summit Manufacturing	Rotation (deg) :	0.00

### Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	97 mph
Exposure Category:	B	Design Wind Speed With Ice:	50 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	1.00 in

### Seismic Parameters

Analysis Method: Equivalent Modal Analysis & Equivalent Lateral Force Methods

Site Class: D - Stiff Soil

Period Based on Rayleigh Method (sec): 1.58

$T_L$ (sec):	6	$p$ :	1.3	$C_s$ :	0.043
$S_s$ :	0.177	$S_1$ :	0.064	$C_s$ Max:	0.043
$F_a$ :	1.600	$F_v$ :	2.400	$C_s$ Min:	0.030
$S_{ds}$ :	0.189	$S_{d1}$ :	0.102		

### Load Cases

1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2S <sub>ds</sub> ) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2S <sub>ds</sub> ) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2S <sub>ds</sub> ) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2S <sub>ds</sub> ) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

**Shaft Section Properties**

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	45.000	0.5625	65		0.00	18,019	72.13	0.00	127.77	82681.3	21.20	128.23	60.82	45.00	107.58	49352.3	17.65	108.13	0.251317
2-18	45.000	0.4375	65	Slip	96.00	12,250	63.70	37.00	87.85	44430.6	24.26	145.61	52.39	82.00	72.15	24609.8	19.71	119.76	0.251317
3-18	45.000	0.3750	65	Slip	84.00	8,908	54.90	75.00	64.90	24383.8	24.41	146.42	43.59	120.00	51.44	12141.6	19.09	116.26	0.251317
4-18	45.750	0.3750	65	Slip	69.00	7,350	45.79	114.25	54.06	14087.1	20.12	122.11	34.29	160.00	40.37	5868.1	14.71	91.45	0.251317
Shaft Weight						46,527													

**Discrete Appurtenance Properties**

Attach Elev (ft)	Description	Qty	Distance From Face (ft)	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor
160.00	Decibel DB844H90E-XY	12	0.000	1.000	14.00	3.610	0.74
160.00	Flat Low Profile Platform	1	0.000	0.000	1500.00	26.100	1.00
150.00	Alcatel-Lucent RRH 2X60 700	3	0.000	0.000	56.70	2.150	0.67
150.00	Alcatel-Lucent RRH2x60	3	0.000	0.000	60.00	3.500	0.67
150.00	Alcatel-Lucent RRH2X60-1900	3	0.000	0.000	43.00	1.880	0.50
150.00	Amphenol Antel	3	0.000	0.000	54.00	13.240	0.62
150.00	Andrew LNX-6514DS-A1M	3	0.000	0.000	38.80	8.170	0.83
150.00	Andrew SBNHH-1D65B	6	0.000	0.000	50.70	8.170	0.83
150.00	Nokia B5 RRH4x40-850	3	0.000	0.000	48.50	1.320	0.50
150.00	RFS DB-T1-6Z-8AB-0Z	2	0.000	0.000	44.00	4.800	0.67
150.00	Round Low Profile Platform	1	0.000	0.000	1500.00	21.700	1.00
142.00	CCI HPA-65R-BUU-H6	3	0.000	0.000	51.00	9.660	0.83
142.00	Ericsson RRUS 12 w/ RRUS A2	3	0.000	0.000	71.40	3.150	0.67
142.00	Powerwave Allgon 7770.00	3	0.000	0.000	35.00	5.510	0.77
142.00	Powerwave Allgon LGP21401	6	0.000	0.000	14.10	1.100	0.50
142.00	Raycap DC6-48-60-18-8F (23.5"	1	0.000	0.000	20.00	1.110	1.00
142.00	Round T-Arm	3	0.000	0.000	250.00	9.700	0.67
142.00	RRH	3	0.000	0.000	45.00	2.400	0.50
130.00	Alcatel-Lucent 4X40W RRH	6	0.000	5.000	59.50	2.320	0.67
130.00	Alcatel-Lucent 800 MHz RRH w/	3	0.000	5.000	61.80	2.500	0.67
130.00	Alcatel-Lucent TD-RRH8x20	3	0.000	5.000	66.10	3.690	0.67
130.00	RFS APXV9ERR18-C-A20	1	0.000	0.000	62.00	8.020	0.86
130.00	RFS APXVSP18-C-A20	2	0.000	0.000	57.00	8.020	0.83
130.00	RFS APXVTM14-C-I20 (56.2 lbs)	3	0.000	0.000	56.20	6.340	0.78
130.00	Round Low Profile Platform	1	0.000	0.000	1500.00	21.700	1.00
117.00	Flush Mounts	3	0.000	0.000	65.00	2.000	0.67
117.00	RFS APXV18-206517S-C	3	0.000	0.000	26.40	5.170	0.80
Totals	Num Loadings:27	87			8784.50		

**Linear Appurtenance Properties**

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Projected Width Flat (in)	Exposed To Wind	Carrier
2.00	160.00	12	1 1/4" Coax	1.55	0.63	N 0.00	N	Sprint Nextel
2.00	150.00	12	1 5/8" Coax	1.98	0.82	N 0.00	N	Verizon Wireless
2.00	150.00	2	1 5/8" Hybriflex	1.98	1.30	N 0.00	N	Verizon Wireless
2.00	142.00	1	0.39" Cable	0.39	0.07	N 0.00	N	AT&T Mobility
2.00	142.00	2	0.78" 8 AWG 6	0.78	0.59	N 0.00	N	AT&T Mobility
2.00	142.00	6	1 1/4" Coax	1.55	0.63	N 0.00	N	AT&T Mobility
2.00	142.00	1	3" Conduit	3.50	7.58	N 0.00	N	AT&T Mobility
2.00	142.00	3	3/8" RET Control Cable	0.38	0.23	N 0.00	N	AT&T Mobility

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Site Number: 302529

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

1/4/2018 4:30:24 PM

Customer: VERIZON WIRELESS

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2.00	130.00	4	1 1/4" Hybriflex Cable	1.54	1.00	N	0.00	N	Sprint Nextel
2.00	117.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	Metro PCS

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	F'y (ksi)	S (in <sup>3</sup> )	Z (in <sup>3</sup> )	Weight (lb)
0.00		0.5625	72.130	127.770	82,681.3	21.20	128.23	76.5	2257.	0.0	0.0
5.00		0.5625	70.873	125.526	78,402.1	20.81	126.00	76.9	2178.	0.0	2,154.8
10.00		0.5625	69.616	123.283	74,273.2	20.41	123.76	77.4	2101.	0.0	2,116.6
15.00		0.5625	68.360	121.039	70,291.9	20.02	121.53	77.9	2025.	0.0	2,078.4
20.00		0.5625	67.103	118.796	66,455.4	19.62	119.29	78.3	1950.	0.0	2,040.3
25.00		0.5625	65.847	116.553	62,761.1	19.23	117.06	78.8	1877.	0.0	2,002.1
30.00		0.5625	64.590	114.309	59,206.4	18.84	114.83	79.2	1805.	0.0	1,963.9
35.00		0.5625	63.334	112.066	55,788.4	18.44	112.59	79.7	1735.	0.0	1,925.8
37.00	Bot - Section 2	0.5625	62.831	111.168	54,459.0	18.28	111.70	79.9	1707.	0.0	759.6
40.00		0.5625	62.077	109.822	52,504.7	18.05	110.36	80.2	1665.	0.0	2,019.5
45.00	Top - Section 1	0.4375	61.695	85.061	40,328.1	23.45	141.02	73.8	1287.	0.0	3,311.5
50.00		0.4375	60.439	83.316	37,896.9	22.95	138.15	74.4	1235.	0.0	1,432.4
55.00		0.4375	59.182	81.571	35,565.4	22.44	135.27	75.0	1183.	0.0	1,402.7
60.00		0.4375	57.926	79.827	33,331.6	21.94	132.40	75.6	1133.	0.0	1,373.0
65.00		0.4375	56.669	78.082	31,193.3	21.43	129.53	76.2	1084.	0.0	1,343.3
70.00		0.4375	55.412	76.337	29,148.5	20.92	126.66	76.8	1036.	0.0	1,313.6
75.00	Bot - Section 3	0.4375	54.156	74.592	27,195.1	20.42	123.78	77.4	989.1	0.0	1,283.9
80.00		0.4375	52.899	72.847	25,330.9	19.91	120.91	78.0	943.2	0.0	2,345.8
82.00	Top - Section 2	0.3750	53.147	62.809	22,099.2	23.58	141.72	73.7	819.0	0.0	922.9
85.00		0.3750	52.393	61.912	21,165.5	23.22	139.71	74.1	795.7	0.0	636.6
90.00		0.3750	51.136	60.416	19,668.4	22.63	136.36	74.8	757.6	0.0	1,040.6
95.00		0.3750	49.880	58.921	18,243.6	22.04	133.01	75.5	720.4	0.0	1,015.2
100.00		0.3750	48.623	57.425	16,889.3	21.45	129.66	76.2	684.2	0.0	989.7
105.00		0.3750	47.366	55.929	15,603.7	20.86	126.31	76.9	648.8	0.0	964.3
110.00		0.3750	46.110	54.434	14,385.2	20.27	122.96	77.6	614.5	0.0	938.9
114.2	Bot - Section 4	0.3750	45.042	53.163	13,400.6	19.77	120.11	78.1	586.0	0.0	778.0
115.00		0.3750	44.853	52.938	13,231.7	19.68	119.61	78.3	581.0	0.0	273.1
117.00		0.3750	44.351	52.340	12,788.2	19.44	118.27	78.5	567.9	0.0	722.6
120.00	Top - Section 3	0.3750	44.347	52.335	12,784.7	19.44	118.26	78.5	567.8	0.0	1,068.6
125.00		0.3750	43.090	50.840	11,719.7	18.85	114.91	79.2	535.7	0.0	877.7
130.00		0.3750	41.833	49.344	10,715.5	18.26	111.56	79.9	504.5	0.0	852.3
135.00		0.3750	40.577	47.849	9,770.4	17.67	108.20	80.6	474.3	0.0	826.8
140.00		0.3750	39.320	46.353	8,882.6	17.08	104.85	81.3	444.9	0.0	801.4
142.00		0.3750	38.818	45.755	8,543.1	16.84	103.51	81.6	433.5	0.0	313.4
145.00		0.3750	38.064	44.857	8,050.2	16.49	101.50	82.0	416.6	0.0	462.5
150.00		0.3750	36.807	43.362	7,271.6	15.90	98.15	82.6	389.1	0.0	750.5
155.00		0.3750	35.550	41.866	6,544.8	15.31	94.80	82.6	362.6	0.0	725.0
160.00		0.3750	34.294	40.371	5,868.1	14.71	91.45	82.6	337.0	0.0	699.6
											46,526.7

Site Number: 302529

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

**Load Case: 1.2D + 1.6W**

97 mph with No Ice

19 Iterations

Gust Response Factor :1.10

Wind Importance Factor 1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces			Sum of Forces			
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		277.2	0.0					0.0	0.0	277.2	0.0	0.0	0.0
5.00		549.5	2,585.7					0.0	152.0	549.5	2,737.7	0.0	0.0
10.00		539.7	2,539.9					0.0	253.3	539.7	2,793.2	0.0	0.0
15.00		530.0	2,494.1					0.0	253.3	530.0	2,747.4	0.0	0.0
20.00		520.2	2,448.3					0.0	253.3	520.2	2,701.6	0.0	0.0
25.00		510.5	2,402.5					0.0	253.3	510.5	2,655.8	0.0	0.0
30.00		506.7	2,356.7					0.0	253.3	506.7	2,610.0	0.0	0.0
35.00		357.0	2,310.9					0.0	253.3	357.0	2,564.2	0.0	0.0
37.00	Bot - Section 2	261.4	911.5					0.0	101.3	261.4	1,012.9	0.0	0.0
40.00		425.4	2,423.4					0.0	152.0	425.4	2,575.3	0.0	0.0
45.00	Top - Section 1	537.3	3,973.8					0.0	253.3	537.3	4,227.1	0.0	0.0
50.00		542.5	1,718.9					0.0	253.3	542.5	1,972.2	0.0	0.0
55.00		545.9	1,683.2					0.0	253.3	545.9	1,936.5	0.0	0.0
60.00		547.7	1,647.6					0.0	253.3	547.7	1,900.9	0.0	0.0
65.00		548.3	1,612.0					0.0	253.3	548.3	1,865.3	0.0	0.0
70.00		547.6	1,576.4					0.0	253.3	547.6	1,829.7	0.0	0.0
75.00	Bot - Section 3	549.7	1,540.7					0.0	253.3	549.7	1,794.0	0.0	0.0
80.00		386.2	2,814.9					0.0	253.3	386.2	3,068.3	0.0	0.0
82.00	Top - Section 2	274.6	1,107.5					0.0	101.3	274.6	1,208.8	0.0	0.0
85.00		437.3	763.9					0.0	152.0	437.3	915.9	0.0	0.0
90.00		543.0	1,248.8					0.0	253.3	543.0	1,502.1	0.0	0.0
95.00		537.9	1,218.2					0.0	253.3	537.9	1,471.5	0.0	0.0
100.00		532.1	1,187.7					0.0	253.3	532.1	1,441.0	0.0	0.0
105.00		525.6	1,157.2					0.0	253.3	525.6	1,410.5	0.0	0.0
110.00		480.2	1,126.6					0.0	253.3	480.2	1,379.9	0.0	0.0
114.25	Bot - Section 4	258.1	933.6					0.0	215.3	258.1	1,148.9	0.0	0.0
115.00		142.6	327.7					0.0	38.0	142.6	365.7	0.0	0.0
117.00	Appurtenance(s)	257.7	867.1	683.8	0.0	0.0	329.0	0.0	101.3	941.6	1,297.4	0.0	0.0
120.00	Top - Section 3	407.7	1,282.3					0.0	134.3	407.7	1,416.6	0.0	0.0
125.00		502.6	1,053.2					0.0	223.8	502.6	1,277.0	0.0	0.0
130.00	Appurtenance(s)	493.5	1,022.7	2,888.7	0.0	3,775.7	3,102.4	0.0	223.8	3,382.2	4,348.9	0.0	0.0
135.00		483.8	992.2					0.0	199.8	483.8	1,192.0	0.0	0.0
140.00		333.8	961.6					0.0	199.8	333.8	1,161.4	0.0	0.0
142.00	Appurtenance(s)	234.3	376.1	2,442.6	0.0	0.0	1,754.2	0.0	79.9	2,676.9	2,210.2	0.0	0.0
145.00		368.9	555.0					0.0	72.0	368.9	627.0	0.0	0.0
150.00	Appurtenance(s)	452.3	900.6	4,839.5	0.0	0.0	3,354.2	0.0	120.0	5,291.8	4,374.8	0.0	0.0
155.00		441.0	870.0					0.0	45.4	441.0	915.4	0.0	0.0
160.00	Appurtenance(s)	217.6	839.5	2,357.5	0.0	1,169.4	2,001.6	0.0	45.4	2,575.1	2,886.5	0.0	0.0
<b>Totals:</b>										<b>29,819.5</b>	<b>73,543.8</b>	<b>0.00</b>	<b>0.00</b>



Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.6W

97 mph with No Ice

19 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-73.53	-29.58	0.00	-3,270.47	0.00	3,270.47	8,793.00	4,396.50	25,857.6	12,948.0	0.00	0.00	0.261
5.00	-70.76	-29.10	0.00	-3,122.58	0.00	3,122.58	8,690.95	4,345.48	25,105.2	12,571.3	0.03	-0.05	0.257
10.00	-67.94	-28.62	0.00	-2,977.11	0.00	2,977.11	8,587.03	4,293.52	24,358.2	12,197.2	0.12	-0.11	0.252
15.00	-65.17	-28.14	0.00	-2,834.02	0.00	2,834.02	8,481.24	4,240.62	23,616.8	11,825.9	0.26	-0.17	0.247
20.00	-62.44	-27.68	0.00	-2,693.30	0.00	2,693.30	8,373.58	4,186.79	22,881.3	11,457.6	0.47	-0.22	0.243
25.00	-59.76	-27.21	0.00	-2,554.91	0.00	2,554.91	8,264.05	4,132.02	22,152.0	11,092.4	0.73	-0.28	0.238
30.00	-57.13	-26.75	0.00	-2,418.85	0.00	2,418.85	8,152.64	4,076.32	21,429.1	10,730.5	1.05	-0.33	0.232
35.00	-54.55	-26.41	0.00	-2,285.11	0.00	2,285.11	8,039.37	4,019.68	20,713.0	10,371.9	1.43	-0.39	0.227
37.00	-53.52	-26.17	0.00	-2,232.28	0.00	2,232.28	7,993.53	3,996.77	20,428.6	10,229.4	1.60	-0.41	0.225
40.00	-50.93	-25.77	0.00	-2,153.77	0.00	2,153.77	7,924.22	3,962.11	20,004.0	10,016.9	1.87	-0.45	0.221
45.00	-46.68	-25.24	0.00	-2,024.94	0.00	2,024.94	5,650.82	2,825.41	14,233.8	7,127.48	2.37	-0.50	0.292
50.00	-44.69	-24.73	0.00	-1,898.73	0.00	1,898.73	5,579.57	2,789.79	13,763.9	6,892.22	2.93	-0.56	0.284
55.00	-42.73	-24.21	0.00	-1,775.09	0.00	1,775.09	5,506.45	2,753.22	13,297.0	6,658.42	3.56	-0.63	0.274
60.00	-40.81	-23.69	0.00	-1,654.02	0.00	1,654.02	5,431.46	2,715.73	12,833.3	6,426.21	4.26	-0.70	0.265
65.00	-38.92	-23.17	0.00	-1,535.56	0.00	1,535.56	5,354.59	2,677.30	12,373.1	6,195.75	5.03	-0.77	0.255
70.00	-37.07	-22.64	0.00	-1,419.72	0.00	1,419.72	5,275.86	2,637.93	11,916.6	5,967.17	5.87	-0.83	0.245
75.00	-35.26	-22.10	0.00	-1,306.54	0.00	1,306.54	5,195.26	2,597.63	11,464.2	5,740.64	6.78	-0.90	0.234
80.00	-32.18	-21.69	0.00	-1,196.03	0.00	1,196.03	5,112.78	2,556.39	11,016.1	5,516.28	7.76	-0.97	0.223
82.00	-30.97	-21.41	0.00	-1,152.65	0.00	1,152.65	4,164.29	2,082.14	9,036.58	4,525.01	8.17	-0.99	0.262
85.00	-30.04	-20.99	0.00	-1,088.41	0.00	1,088.41	4,128.03	2,064.01	8,829.01	4,421.07	8.81	-1.03	0.254
90.00	-28.52	-20.45	0.00	-983.47	0.00	983.47	4,066.09	2,033.05	8,484.96	4,248.79	9.92	-1.10	0.239
95.00	-27.04	-19.92	0.00	-881.22	0.00	881.22	4,002.29	2,001.14	8,143.55	4,077.83	11.11	-1.17	0.223
100.00	-25.59	-19.38	0.00	-781.64	0.00	781.64	3,936.61	1,968.31	7,805.07	3,908.34	12.37	-1.23	0.207
105.00	-24.17	-18.85	0.00	-684.73	0.00	684.73	3,869.07	1,934.53	7,469.82	3,740.46	13.70	-1.30	0.189
110.00	-22.79	-18.36	0.00	-590.48	0.00	590.48	3,799.65	1,899.82	7,138.08	3,574.35	15.09	-1.35	0.171
114.25	-21.64	-18.08	0.00	-512.45	0.00	512.45	3,739.17	1,869.59	6,859.09	3,434.64	16.32	-1.40	0.155
115.00	-21.27	-17.94	0.00	-498.89	0.00	498.89	3,728.36	1,864.18	6,810.15	3,410.14	16.54	-1.41	0.152
117.00	-19.99	-16.97	0.00	-463.02	0.00	463.02	3,699.32	1,849.66	6,680.11	3,345.02	17.13	-1.43	0.144
120.00	-18.57	-16.54	0.00	-412.10	0.00	412.10	3,699.09	1,849.55	6,679.09	3,344.51	18.04	-1.46	0.128
125.00	-17.30	-16.02	0.00	-329.39	0.00	329.39	3,625.18	1,812.59	6,357.00	3,183.22	19.59	-1.50	0.108
130.00	-13.03	-12.53	0.00	-245.53	0.00	245.53	3,549.40	1,774.70	6,039.41	3,024.20	21.18	-1.54	0.085
135.00	-11.85	-12.02	0.00	-182.88	0.00	182.88	3,471.74	1,735.87	5,726.63	2,867.57	22.81	-1.56	0.067
140.00	-10.69	-11.66	0.00	-122.79	0.00	122.79	3,392.22	1,696.11	5,418.94	2,713.50	24.46	-1.59	0.048
142.00	-8.56	-8.92	0.00	-99.48	0.00	99.48	3,359.88	1,679.94	5,297.36	2,652.62	25.13	-1.59	0.040
145.00	-7.94	-8.53	0.00	-72.73	0.00	72.73	3,310.82	1,655.41	5,116.64	2,562.12	26.13	-1.60	0.031
150.00	-3.72	-3.12	0.00	-30.06	0.00	30.06	3,221.56	1,610.78	4,811.06	2,409.11	27.82	-1.61	0.014
155.00	-2.81	-2.66	0.00	-14.45	0.00	14.45	3,110.44	1,555.22	4,483.27	2,244.97	29.51	-1.62	0.007
160.00	0.00	-2.58	0.00	-1.17	0.00	1.17	2,999.33	1,499.66	4,167.05	2,086.62	31.20	-1.62	0.001

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

1/4/2018 4:30:28 PM

Customer: VERIZON WIRELESS

**Load Case: 0.9D + 1.6W**

97 mph with No Ice (Reduced DL)

19 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces			Sum of Forces			
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		277.2	0.0					0.0	0.0	277.2	0.0	0.0	0.0
5.00		549.5	1,939.3					0.0	114.0	549.5	2,053.3	0.0	0.0
10.00		539.7	1,904.9					0.0	190.0	539.7	2,094.9	0.0	0.0
15.00		530.0	1,870.6					0.0	190.0	530.0	2,060.6	0.0	0.0
20.00		520.2	1,836.2					0.0	190.0	520.2	2,026.2	0.0	0.0
25.00		510.5	1,801.9					0.0	190.0	510.5	1,991.9	0.0	0.0
30.00		506.7	1,767.5					0.0	190.0	506.7	1,957.5	0.0	0.0
35.00		357.0	1,733.2					0.0	190.0	357.0	1,923.2	0.0	0.0
37.00	Bot - Section 2	261.4	683.7					0.0	76.0	261.4	759.6	0.0	0.0
40.00		425.4	1,817.5					0.0	114.0	425.4	1,931.5	0.0	0.0
45.00	Top - Section 1	537.3	2,980.3					0.0	190.0	537.3	3,170.3	0.0	0.0
50.00		542.5	1,289.1					0.0	190.0	542.5	1,479.1	0.0	0.0
55.00		545.9	1,262.4					0.0	190.0	545.9	1,452.4	0.0	0.0
60.00		547.7	1,235.7					0.0	190.0	547.7	1,425.7	0.0	0.0
65.00		548.3	1,209.0					0.0	190.0	548.3	1,399.0	0.0	0.0
70.00		547.6	1,182.3					0.0	190.0	547.6	1,372.3	0.0	0.0
75.00	Bot - Section 3	549.7	1,155.5					0.0	190.0	549.7	1,345.5	0.0	0.0
80.00		386.2	2,111.2					0.0	190.0	386.2	2,301.2	0.0	0.0
82.00	Top - Section 2	274.6	830.6					0.0	76.0	274.6	906.6	0.0	0.0
85.00		437.3	572.9					0.0	114.0	437.3	686.9	0.0	0.0
90.00		543.0	936.6					0.0	190.0	543.0	1,126.6	0.0	0.0
95.00		537.9	913.7					0.0	190.0	537.9	1,103.7	0.0	0.0
100.00		532.1	890.8					0.0	190.0	532.1	1,080.8	0.0	0.0
105.00		525.6	867.9					0.0	190.0	525.6	1,057.9	0.0	0.0
110.00		480.2	845.0					0.0	190.0	480.2	1,035.0	0.0	0.0
114.25	Bot - Section 4	258.1	700.2					0.0	161.5	258.1	861.7	0.0	0.0
115.00		142.6	245.8					0.0	28.5	142.6	274.2	0.0	0.0
117.00	Appurtenance(s)	257.7	650.3	683.8	0.0	0.0	246.8	0.0	76.0	941.6	973.1	0.0	0.0
120.00	Top - Section 3	407.7	961.7					0.0	100.7	407.7	1,062.4	0.0	0.0
125.00		502.6	789.9					0.0	167.8	502.6	957.8	0.0	0.0
130.00	Appurtenance(s)	493.5	767.0	2,888.7	0.0	3,775.7	2,326.8	0.0	167.8	3,382.2	3,261.7	0.0	0.0
135.00		483.8	744.1					0.0	149.8	483.8	894.0	0.0	0.0
140.00		333.8	721.2					0.0	149.8	333.8	871.1	0.0	0.0
142.00	Appurtenance(s)	234.3	282.1	2,442.6	0.0	0.0	1,315.6	0.0	59.9	2,676.9	1,657.6	0.0	0.0
145.00		368.9	416.2					0.0	54.0	368.9	470.2	0.0	0.0
150.00	Appurtenance(s)	452.3	675.4	4,839.5	0.0	0.0	2,515.7	0.0	90.0	5,291.8	3,281.1	0.0	0.0
155.00		441.0	652.5					0.0	34.0	441.0	686.5	0.0	0.0
160.00	Appurtenance(s)	217.6	629.6	2,357.5	0.0	1,169.4	1,501.2	0.0	34.0	2,575.1	2,164.8	0.0	0.0
<b>Totals:</b>										<b>29,819.5</b>	<b>55,157.8</b>	<b>0.00</b>	<b>0.00</b>

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

1/4/2018 4:30:32 PM

Customer: VERIZON WIRELESS

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

19 Iterations

Gust Response Factor :1.10

Wind Importance Factor 1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-55.14	-29.57	0.00	-3,254.21	0.00	3,254.21	8,793.00	4,396.50	25,857.6	12,948.0	0.00	0.00	0.258
5.00	-53.06	-29.07	0.00	-3,106.36	0.00	3,106.36	8,690.95	4,345.48	25,105.2	12,571.3	0.03	-0.05	0.253
10.00	-50.94	-28.58	0.00	-2,961.01	0.00	2,961.01	8,587.03	4,293.52	24,358.2	12,197.2	0.12	-0.11	0.249
15.00	-48.85	-28.09	0.00	-2,818.14	0.00	2,818.14	8,481.24	4,240.62	23,616.8	11,825.9	0.26	-0.17	0.244
20.00	-46.80	-27.61	0.00	-2,677.70	0.00	2,677.70	8,373.58	4,186.79	22,881.3	11,457.6	0.47	-0.22	0.239
25.00	-44.79	-27.13	0.00	-2,539.66	0.00	2,539.66	8,264.05	4,132.02	22,152.0	11,092.4	0.73	-0.28	0.234
30.00	-42.81	-26.66	0.00	-2,404.01	0.00	2,404.01	8,152.64	4,076.32	21,429.1	10,730.5	1.05	-0.33	0.229
35.00	-40.87	-26.32	0.00	-2,270.73	0.00	2,270.73	8,039.37	4,019.68	20,713.0	10,371.9	1.43	-0.39	0.224
37.00	-40.10	-26.07	0.00	-2,218.10	0.00	2,218.10	7,993.53	3,996.77	20,428.6	10,229.4	1.59	-0.41	0.222
40.00	-38.15	-25.66	0.00	-2,139.89	0.00	2,139.89	7,924.22	3,962.11	20,004.0	10,016.9	1.86	-0.45	0.218
45.00	-34.96	-25.13	0.00	-2,011.60	0.00	2,011.60	5,650.82	2,825.41	14,233.8	7,127.48	2.36	-0.50	0.288
50.00	-33.46	-24.61	0.00	-1,885.95	0.00	1,885.95	5,579.57	2,789.79	13,763.9	6,892.22	2.92	-0.56	0.280
55.00	-31.98	-24.09	0.00	-1,762.91	0.00	1,762.91	5,506.45	2,753.22	13,297.0	6,658.42	3.54	-0.63	0.271
60.00	-30.53	-23.56	0.00	-1,642.47	0.00	1,642.47	5,431.46	2,715.73	12,833.3	6,426.21	4.23	-0.69	0.261
65.00	-29.11	-23.03	0.00	-1,524.68	0.00	1,524.68	5,354.59	2,677.30	12,373.1	6,195.75	5.00	-0.76	0.252
70.00	-27.72	-22.49	0.00	-1,409.54	0.00	1,409.54	5,275.86	2,637.93	11,916.6	5,967.17	5.83	-0.83	0.242
75.00	-26.36	-21.95	0.00	-1,297.08	0.00	1,297.08	5,195.26	2,597.63	11,464.2	5,740.64	6.74	-0.90	0.231
80.00	-24.05	-21.55	0.00	-1,187.31	0.00	1,187.31	5,112.78	2,556.39	11,016.1	5,516.28	7.71	-0.96	0.220
82.00	-23.14	-21.27	0.00	-1,144.22	0.00	1,144.22	4,164.29	2,082.14	9,036.58	4,525.01	8.12	-0.99	0.259
85.00	-22.44	-20.84	0.00	-1,080.40	0.00	1,080.40	4,128.03	2,064.01	8,829.01	4,421.07	8.75	-1.03	0.250
90.00	-21.30	-20.31	0.00	-976.18	0.00	976.18	4,066.09	2,033.05	8,484.96	4,248.79	9.86	-1.09	0.235
95.00	-20.18	-19.77	0.00	-874.66	0.00	874.66	4,002.29	2,001.14	8,143.55	4,077.83	11.05	-1.16	0.220
100.00	-19.09	-19.24	0.00	-775.82	0.00	775.82	3,936.61	1,968.31	7,805.07	3,908.34	12.30	-1.23	0.203
105.00	-18.03	-18.71	0.00	-679.64	0.00	679.64	3,869.07	1,934.53	7,469.82	3,740.46	13.62	-1.29	0.186
110.00	-16.99	-18.22	0.00	-586.11	0.00	586.11	3,799.65	1,899.82	7,138.08	3,574.35	14.99	-1.34	0.169
114.25	-16.12	-17.95	0.00	-508.69	0.00	508.69	3,739.17	1,869.59	6,859.09	3,434.64	16.21	-1.39	0.153
115.00	-15.85	-17.80	0.00	-495.23	0.00	495.23	3,728.36	1,864.18	6,810.15	3,410.14	16.43	-1.40	0.150
117.00	-14.89	-16.84	0.00	-459.63	0.00	459.63	3,699.32	1,849.66	6,680.11	3,345.02	17.02	-1.42	0.142
120.00	-13.83	-16.42	0.00	-409.11	0.00	409.11	3,699.09	1,849.55	6,679.09	3,344.51	17.92	-1.45	0.126
125.00	-12.87	-15.90	0.00	-327.03	0.00	327.03	3,625.18	1,812.59	6,357.00	3,183.22	19.47	-1.49	0.106
130.00	-9.69	-12.44	0.00	-243.76	0.00	243.76	3,549.40	1,774.70	6,039.41	3,024.20	21.05	-1.53	0.083
135.00	-8.81	-11.93	0.00	-181.58	0.00	181.58	3,471.74	1,735.87	5,726.63	2,867.57	22.66	-1.55	0.066
140.00	-7.94	-11.58	0.00	-121.92	0.00	121.92	3,392.22	1,696.11	5,418.94	2,713.50	24.30	-1.58	0.047
142.00	-6.36	-8.86	0.00	-98.76	0.00	98.76	3,359.88	1,679.94	5,297.36	2,652.62	24.96	-1.58	0.039
145.00	-5.90	-8.48	0.00	-72.19	0.00	72.19	3,310.82	1,655.41	5,116.64	2,562.12	25.96	-1.59	0.030
150.00	-2.77	-3.09	0.00	-29.82	0.00	29.82	3,221.56	1,610.78	4,811.06	2,409.11	27.64	-1.60	0.013
155.00	-2.09	-2.63	0.00	-14.34	0.00	14.34	3,110.44	1,555.22	4,483.27	2,244.97	29.31	-1.61	0.007
160.00	0.00	-2.58	0.00	-1.17	0.00	1.17	2,999.33	1,499.66	4,167.05	2,086.62	31.00	-1.61	0.001

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

1/4/2018 4:30:32 PM

Customer: VERIZON WIRELESS

**Load Case:** 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

18 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces			Sum of Forces			
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		88.6	0.0					0.0	0.0	88.6	0.0	0.0	0.0
5.00		176.1	3,286.7					0.0	152.0	176.1	3,438.7	0.0	0.0
10.00		173.8	3,310.6					0.0	253.3	173.8	3,564.0	0.0	0.0
15.00		171.1	3,292.0					0.0	253.3	171.1	3,545.3	0.0	0.0
20.00		168.4	3,259.4					0.0	253.3	168.4	3,512.7	0.0	0.0
25.00		165.6	3,219.6					0.0	253.3	165.6	3,473.0	0.0	0.0
30.00		164.7	3,175.4					0.0	253.3	164.7	3,428.7	0.0	0.0
35.00		116.2	3,128.1					0.0	253.3	116.2	3,381.4	0.0	0.0
37.00	Bot - Section 2	85.2	1,239.3					0.0	101.3	85.2	1,340.7	0.0	0.0
40.00		138.8	2,919.4					0.0	152.0	138.8	3,071.4	0.0	0.0
45.00	Top - Section 1	175.6	4,792.8					0.0	253.3	175.6	5,046.1	0.0	0.0
50.00		177.6	2,531.0					0.0	253.3	177.6	2,784.3	0.0	0.0
55.00		179.1	2,487.3					0.0	253.3	179.1	2,740.6	0.0	0.0
60.00		180.1	2,442.6					0.0	253.3	180.1	2,696.0	0.0	0.0
65.00		180.6	2,397.1					0.0	253.3	180.6	2,650.4	0.0	0.0
70.00		180.8	2,350.9					0.0	253.3	180.8	2,604.2	0.0	0.0
75.00	Bot - Section 3	181.7	2,304.0					0.0	253.3	181.7	2,557.3	0.0	0.0
80.00		127.8	3,576.6					0.0	253.3	127.8	3,829.9	0.0	0.0
82.00	Top - Section 2	91.1	1,410.7					0.0	101.3	91.1	1,512.1	0.0	0.0
85.00		145.2	1,214.1					0.0	152.0	145.2	1,366.1	0.0	0.0
90.00		180.7	1,985.3					0.0	253.3	180.7	2,238.6	0.0	0.0
95.00		179.4	1,941.6					0.0	253.3	179.4	2,194.9	0.0	0.0
100.00		177.9	1,897.5					0.0	253.3	177.9	2,150.8	0.0	0.0
105.00		176.2	1,853.0					0.0	253.3	176.2	2,106.3	0.0	0.0
110.00		161.4	1,808.2					0.0	253.3	161.4	2,061.6	0.0	0.0
114.25	Bot - Section 4	86.8	1,502.7					0.0	215.3	86.8	1,718.0	0.0	0.0
115.00		48.0	429.5					0.0	38.0	48.0	467.5	0.0	0.0
117.00	Appurtenance(s)	86.9	1,136.1	178.5	0.0	0.0	1,166.5	0.0	101.3	265.4	2,403.9	0.0	0.0
120.00	Top - Section 3	137.7	1,680.4					0.0	134.3	137.7	1,814.6	0.0	0.0
125.00		170.2	1,701.1					0.0	223.8	170.2	1,924.9	0.0	0.0
130.00	Appurtenance(s)	167.6	1,655.2	772.5	0.0	876.7	6,606.4	0.0	223.8	940.1	8,485.4	0.0	0.0
135.00		164.9	1,609.2					0.0	199.8	164.9	1,809.0	0.0	0.0
140.00		114.1	1,562.9					0.0	199.8	114.1	1,762.7	0.0	0.0
142.00	Appurtenance(s)	80.3	614.3	612.5	0.0	0.0	5,334.1	0.0	79.9	692.8	6,028.4	0.0	0.0
145.00		126.8	906.4					0.0	72.0	126.8	978.4	0.0	0.0
150.00	Appurtenance(s)	155.9	1,469.7	1,239.5	0.0	0.0	9,463.8	0.0	120.0	1,395.4	11,053.5	0.0	0.0
155.00		152.7	1,422.8					0.0	45.4	152.7	1,468.2	0.0	0.0
160.00	Appurtenance(s)	75.5	1,375.8	619.8	0.0	228.8	4,603.2	0.0	45.4	695.4	6,024.4	0.0	0.0
<b>Totals:</b>										<b>8,933.87</b>	<b>113,233.</b>	<b>0.00</b>	<b>0.00</b>

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

1/4/2018 4:30:36 PM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

18 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-113.23	-8.86	0.00	-964.63	0.00	964.63	8,793.00	4,396.50	25,857.6	12,948.0	0.00	0.00	0.087
5.00	-109.79	-8.72	0.00	-920.32	0.00	920.32	8,690.95	4,345.48	25,105.2	12,571.3	0.01	-0.02	0.086
10.00	-106.22	-8.57	0.00	-876.74	0.00	876.74	8,587.03	4,293.52	24,358.2	12,197.2	0.03	-0.03	0.084
15.00	-102.68	-8.43	0.00	-833.89	0.00	833.89	8,481.24	4,240.62	23,616.8	11,825.9	0.08	-0.05	0.083
20.00	-99.16	-8.28	0.00	-791.76	0.00	791.76	8,373.58	4,186.79	22,881.3	11,457.6	0.14	-0.07	0.081
25.00	-95.69	-8.14	0.00	-750.34	0.00	750.34	8,264.05	4,132.02	22,152.0	11,092.4	0.22	-0.08	0.079
30.00	-92.26	-8.00	0.00	-709.64	0.00	709.64	8,152.64	4,076.32	21,429.1	10,730.5	0.31	-0.10	0.077
35.00	-88.87	-7.89	0.00	-669.65	0.00	669.65	8,039.37	4,019.68	20,713.0	10,371.9	0.42	-0.11	0.076
37.00	-87.53	-7.82	0.00	-653.87	0.00	653.87	7,993.53	3,996.77	20,428.6	10,229.4	0.47	-0.12	0.075
40.00	-84.46	-7.69	0.00	-630.42	0.00	630.42	7,924.22	3,962.11	20,004.0	10,016.9	0.55	-0.13	0.074
45.00	-79.41	-7.53	0.00	-591.96	0.00	591.96	5,650.82	2,825.41	14,233.8	7,127.48	0.70	-0.15	0.097
50.00	-76.63	-7.37	0.00	-554.33	0.00	554.33	5,579.57	2,789.79	13,763.9	6,892.22	0.86	-0.16	0.094
55.00	-73.88	-7.20	0.00	-517.50	0.00	517.50	5,506.45	2,753.22	13,297.0	6,658.42	1.05	-0.18	0.091
60.00	-71.19	-7.04	0.00	-481.47	0.00	481.47	5,431.46	2,715.73	12,833.3	6,426.21	1.25	-0.20	0.088
65.00	-68.53	-6.87	0.00	-446.28	0.00	446.28	5,354.59	2,677.30	12,373.1	6,195.75	1.48	-0.22	0.085
70.00	-65.93	-6.70	0.00	-411.91	0.00	411.91	5,275.86	2,637.93	11,916.6	5,967.17	1.72	-0.24	0.082
75.00	-63.37	-6.53	0.00	-378.39	0.00	378.39	5,195.26	2,597.63	11,464.2	5,740.64	1.99	-0.26	0.078
80.00	-59.54	-6.40	0.00	-345.73	0.00	345.73	5,112.78	2,556.39	11,016.1	5,516.28	2.28	-0.28	0.074
82.00	-58.03	-6.31	0.00	-332.93	0.00	332.93	4,164.29	2,082.14	9,036.58	4,525.01	2.40	-0.29	0.088
85.00	-56.66	-6.17	0.00	-314.00	0.00	314.00	4,128.03	2,064.01	8,829.01	4,421.07	2.58	-0.30	0.085
90.00	-54.42	-6.00	0.00	-283.13	0.00	283.13	4,066.09	2,033.05	8,484.96	4,248.79	2.91	-0.32	0.080
95.00	-52.22	-5.83	0.00	-253.14	0.00	253.14	4,002.29	2,001.14	8,143.55	4,077.83	3.26	-0.34	0.075
100.00	-50.07	-5.65	0.00	-224.01	0.00	224.01	3,936.61	1,968.31	7,805.07	3,908.34	3.62	-0.36	0.070
105.00	-47.96	-5.47	0.00	-195.76	0.00	195.76	3,869.07	1,934.53	7,469.82	3,740.46	4.01	-0.38	0.065
110.00	-45.90	-5.31	0.00	-168.39	0.00	168.39	3,799.65	1,899.82	7,138.08	3,574.35	4.41	-0.39	0.059
114.25	-44.18	-5.22	0.00	-145.82	0.00	145.82	3,739.17	1,869.59	6,859.09	3,434.64	4.77	-0.41	0.054
115.00	-43.72	-5.17	0.00	-141.91	0.00	141.91	3,728.36	1,864.18	6,810.15	3,410.14	4.83	-0.41	0.053
117.00	-41.31	-4.89	0.00	-131.57	0.00	131.57	3,699.32	1,849.66	6,680.11	3,345.02	5.01	-0.42	0.051
120.00	-39.50	-4.75	0.00	-116.89	0.00	116.89	3,699.09	1,849.55	6,679.09	3,344.51	5.27	-0.42	0.046
125.00	-37.58	-4.57	0.00	-93.15	0.00	93.15	3,625.18	1,812.59	6,357.00	3,183.22	5.72	-0.44	0.040
130.00	-29.10	-3.57	0.00	-69.41	0.00	69.41	3,549.40	1,774.70	6,039.41	3,024.20	6.18	-0.45	0.031
135.00	-27.29	-3.39	0.00	-51.56	0.00	51.56	3,471.74	1,735.87	5,726.63	2,867.57	6.66	-0.45	0.026
140.00	-25.53	-3.27	0.00	-34.59	0.00	34.59	3,392.22	1,696.11	5,418.94	2,713.50	7.13	-0.46	0.020
142.00	-19.50	-2.53	0.00	-28.05	0.00	28.05	3,359.88	1,679.94	5,297.36	2,652.62	7.33	-0.46	0.016
145.00	-18.53	-2.39	0.00	-20.47	0.00	20.47	3,310.82	1,655.41	5,116.64	2,562.12	7.62	-0.46	0.014
150.00	-7.49	-0.91	0.00	-8.50	0.00	8.50	3,221.56	1,610.78	4,811.06	2,409.11	8.11	-0.47	0.006
155.00	-6.02	-0.74	0.00	-3.95	0.00	3.95	3,110.44	1,555.22	4,483.27	2,244.97	8.60	-0.47	0.004
160.00	0.00	-0.70	0.00	-0.23	0.00	0.23	2,999.33	1,499.66	4,167.05	2,086.62	9.09	-0.47	0.000

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

Load Case: 1.0D + 1.0W

Serviceability 60 mph

18 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces			Sum of Forces			
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		66.3	0.0					0.0	0.0	66.3	0.0	0.0	0.0
5.00		131.4	2,154.8					0.0	126.7	131.4	2,281.4	0.0	0.0
10.00		129.1	2,116.6					0.0	211.1	129.1	2,327.7	0.0	0.0
15.00		126.7	2,078.4					0.0	211.1	126.7	2,289.5	0.0	0.0
20.00		124.4	2,040.3					0.0	211.1	124.4	2,251.4	0.0	0.0
25.00		122.1	2,002.1					0.0	211.1	122.1	2,213.2	0.0	0.0
30.00		121.2	1,963.9					0.0	211.1	121.2	2,175.0	0.0	0.0
35.00		85.4	1,925.8					0.0	211.1	85.4	2,136.9	0.0	0.0
37.00	Bot - Section 2	62.5	759.6					0.0	84.4	62.5	844.1	0.0	0.0
40.00		101.7	2,019.5					0.0	126.7	101.7	2,146.1	0.0	0.0
45.00	Top - Section 1	128.5	3,311.5					0.0	211.1	128.5	3,522.6	0.0	0.0
50.00		129.7	1,432.4					0.0	211.1	129.7	1,643.5	0.0	0.0
55.00		130.5	1,402.7					0.0	211.1	130.5	1,613.8	0.0	0.0
60.00		131.0	1,373.0					0.0	211.1	131.0	1,584.1	0.0	0.0
65.00		131.1	1,343.3					0.0	211.1	131.1	1,554.4	0.0	0.0
70.00		131.0	1,313.6					0.0	211.1	131.0	1,524.7	0.0	0.0
75.00	Bot - Section 3	131.4	1,283.9					0.0	211.1	131.4	1,495.0	0.0	0.0
80.00		92.4	2,345.8					0.0	211.1	92.4	2,556.9	0.0	0.0
82.00	Top - Section 2	65.7	922.9					0.0	84.4	65.7	1,007.3	0.0	0.0
85.00		104.6	636.6					0.0	126.7	104.6	763.3	0.0	0.0
90.00		129.9	1,040.6					0.0	211.1	129.9	1,251.7	0.0	0.0
95.00		128.6	1,015.2					0.0	211.1	128.6	1,226.3	0.0	0.0
100.00		127.2	989.7					0.0	211.1	127.2	1,200.8	0.0	0.0
105.00		125.7	964.3					0.0	211.1	125.7	1,175.4	0.0	0.0
110.00		114.8	938.9					0.0	211.1	114.8	1,150.0	0.0	0.0
114.25	Bot - Section 4	61.7	778.0					0.0	179.4	61.7	957.5	0.0	0.0
115.00		34.1	273.1					0.0	31.7	34.1	304.7	0.0	0.0
117.00	Appurtenance(s)	61.6	722.6	163.5	0.0	0.0	274.2	0.0	84.4	225.2	1,081.2	0.0	0.0
120.00	Top - Section 3	97.5	1,068.6					0.0	111.9	97.5	1,180.5	0.0	0.0
125.00		120.2	877.7					0.0	186.5	120.2	1,064.2	0.0	0.0
130.00	Appurtenance(s)	118.0	852.3	690.8	0.0	902.9	2,585.3	0.0	186.5	808.8	3,624.1	0.0	0.0
135.00		115.7	826.8					0.0	166.5	115.7	993.3	0.0	0.0
140.00		79.8	801.4					0.0	166.5	79.8	967.9	0.0	0.0
142.00	Appurtenance(s)	56.0	313.4	584.1	0.0	0.0	1,461.8	0.0	66.6	640.1	1,841.8	0.0	0.0
145.00		88.2	462.5					0.0	60.0	88.2	522.5	0.0	0.0
150.00	Appurtenance(s)	108.2	750.5	1,157.3	0.0	0.0	2,795.2	0.0	100.0	1,265.4	3,645.7	0.0	0.0
155.00		105.5	725.0					0.0	37.8	105.5	762.8	0.0	0.0
160.00	Appurtenance(s)	52.0	699.6	563.8	0.0	279.7	1,668.0	0.0	37.8	615.8	2,405.4	0.0	0.0
<b>Totals:</b>										<b>7,130.84</b>	<b>61,286.5</b>	<b>0.00</b>	<b>0.00</b>

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

Load Case: 1.0D + 1.0W

Serviceability 60 mph

18 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-61.29	-7.07	0.00	-779.53	0.00	779.53	8,793.00	4,396.50	25,857.6	12,948.0	0.00	0.00	0.067
5.00	-59.00	-6.95	0.00	-744.17	0.00	744.17	8,690.95	4,345.48	25,105.2	12,571.3	0.01	-0.01	0.066
10.00	-56.67	-6.84	0.00	-709.41	0.00	709.41	8,587.03	4,293.52	24,358.2	12,197.2	0.03	-0.03	0.065
15.00	-54.38	-6.72	0.00	-675.22	0.00	675.22	8,481.24	4,240.62	23,616.8	11,825.9	0.06	-0.04	0.064
20.00	-52.13	-6.61	0.00	-641.62	0.00	641.62	8,373.58	4,186.79	22,881.3	11,457.6	0.11	-0.05	0.062
25.00	-49.92	-6.49	0.00	-608.58	0.00	608.58	8,264.05	4,132.02	22,152.0	11,092.4	0.17	-0.07	0.061
30.00	-47.74	-6.38	0.00	-576.11	0.00	576.11	8,152.64	4,076.32	21,429.1	10,730.5	0.25	-0.08	0.060
35.00	-45.60	-6.30	0.00	-544.21	0.00	544.21	8,039.37	4,019.68	20,713.0	10,371.9	0.34	-0.09	0.058
37.00	-44.76	-6.24	0.00	-531.61	0.00	531.61	7,993.53	3,996.77	20,428.6	10,229.4	0.38	-0.10	0.058
40.00	-42.61	-6.14	0.00	-512.88	0.00	512.88	7,924.22	3,962.11	20,004.0	10,016.9	0.45	-0.11	0.057
45.00	-39.09	-6.02	0.00	-482.16	0.00	482.16	5,650.82	2,825.41	14,233.8	7,127.48	0.57	-0.12	0.075
50.00	-37.44	-5.89	0.00	-452.07	0.00	452.07	5,579.57	2,789.79	13,763.9	6,892.22	0.70	-0.13	0.072
55.00	-35.83	-5.77	0.00	-422.60	0.00	422.60	5,506.45	2,753.22	13,297.0	6,658.42	0.85	-0.15	0.070
60.00	-34.24	-5.64	0.00	-393.75	0.00	393.75	5,431.46	2,715.73	12,833.3	6,426.21	1.01	-0.17	0.068
65.00	-32.68	-5.52	0.00	-365.52	0.00	365.52	5,354.59	2,677.30	12,373.1	6,195.75	1.20	-0.18	0.065
70.00	-31.16	-5.39	0.00	-337.94	0.00	337.94	5,275.86	2,637.93	11,916.6	5,967.17	1.40	-0.20	0.063
75.00	-29.66	-5.26	0.00	-310.98	0.00	310.98	5,195.26	2,597.63	11,464.2	5,740.64	1.61	-0.21	0.060
80.00	-27.11	-5.16	0.00	-284.67	0.00	284.67	5,112.78	2,556.39	11,016.1	5,516.28	1.85	-0.23	0.057
82.00	-26.10	-5.10	0.00	-274.35	0.00	274.35	4,164.29	2,082.14	9,036.58	4,525.01	1.95	-0.24	0.067
85.00	-25.33	-5.00	0.00	-259.05	0.00	259.05	4,128.03	2,064.01	8,829.01	4,421.07	2.10	-0.25	0.065
90.00	-24.08	-4.87	0.00	-234.07	0.00	234.07	4,066.09	2,033.05	8,484.96	4,248.79	2.36	-0.26	0.061
95.00	-22.85	-4.74	0.00	-209.73	0.00	209.73	4,002.29	2,001.14	8,143.55	4,077.83	2.65	-0.28	0.057
100.00	-21.65	-4.61	0.00	-186.03	0.00	186.03	3,936.61	1,968.31	7,805.07	3,908.34	2.95	-0.29	0.053
105.00	-20.48	-4.49	0.00	-162.97	0.00	162.97	3,869.07	1,934.53	7,469.82	3,740.46	3.26	-0.31	0.049
110.00	-19.33	-4.37	0.00	-140.54	0.00	140.54	3,799.65	1,899.82	7,138.08	3,574.35	3.59	-0.32	0.044
114.25	-18.37	-4.30	0.00	-121.98	0.00	121.98	3,739.17	1,869.59	6,859.09	3,434.64	3.89	-0.33	0.040
115.00	-18.06	-4.27	0.00	-118.75	0.00	118.75	3,728.36	1,864.18	6,810.15	3,410.14	3.94	-0.34	0.040
117.00	-16.98	-4.04	0.00	-110.21	0.00	110.21	3,699.32	1,849.66	6,680.11	3,345.02	4.08	-0.34	0.038
120.00	-15.80	-3.94	0.00	-98.10	0.00	98.10	3,699.09	1,849.55	6,679.09	3,344.51	4.30	-0.35	0.034
125.00	-14.74	-3.81	0.00	-78.41	0.00	78.41	3,625.18	1,812.59	6,357.00	3,183.22	4.67	-0.36	0.029
130.00	-11.12	-2.98	0.00	-58.45	0.00	58.45	3,549.40	1,774.70	6,039.41	3,024.20	5.04	-0.37	0.022
135.00	-10.13	-2.86	0.00	-43.54	0.00	43.54	3,471.74	1,735.87	5,726.63	2,867.57	5.43	-0.37	0.018
140.00	-9.16	-2.78	0.00	-29.23	0.00	29.23	3,392.22	1,696.11	5,418.94	2,713.50	5.83	-0.38	0.013
142.00	-7.32	-2.12	0.00	-23.68	0.00	23.68	3,359.88	1,679.94	5,297.36	2,652.62	5.98	-0.38	0.011
145.00	-6.80	-2.03	0.00	-17.31	0.00	17.31	3,310.82	1,655.41	5,116.64	2,562.12	6.22	-0.38	0.009
150.00	-3.16	-0.74	0.00	-7.15	0.00	7.15	3,221.56	1,610.78	4,811.06	2,409.11	6.62	-0.38	0.004
155.00	-2.40	-0.63	0.00	-3.44	0.00	3.44	3,110.44	1,555.22	4,483.27	2,244.97	7.03	-0.38	0.002
160.00	0.00	-0.62	0.00	-0.28	0.00	0.28	2,999.33	1,499.66	4,167.05	2,086.62	7.43	-0.39	0.000

Site Number: 302529

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

1/4/2018 4:30:40 PM

Customer: VERIZON WIRELESS

### Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period ( $S_d$ ):	0.18
Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.06
Long-Period Transition Period ( $T_L$ ):	6
Importance Factor ( $I_E$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.19
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.10
Seismic Response Coefficient ( $C_s$ ):	0.04
Upper Limit $C_s$	0.04
Lower Limit $C_s$	0.03
Period based on Rayleigh Method (sec):	1.58
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.54
Total Unfactored Dead Load:	61.29 k
Seismic Base Shear (E):	3.45 k

### Load Case (1.2 + 0.2Sds) \* DL + E ELFM      Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
37	157.50	737	1,775	0.031	108	913
36	152.50	763	1,747	0.031	106	944
35	147.50	850	1,850	0.033	112	1,053
34	143.50	522	1,090	0.019	66	647
33	141.00	380	771	0.014	47	470
32	137.50	968	1,890	0.033	115	1,198
31	132.50	993	1,832	0.032	111	1,229
30	127.50	1,039	1,806	0.032	110	1,286
29	122.50	1,064	1,740	0.031	106	1,317
28	118.50	1,180	1,834	0.032	111	1,461
27	116.00	807	1,213	0.021	74	999
26	114.63	305	450	0.008	27	377
25	112.13	957	1,366	0.024	83	1,185
24	107.50	1,150	1,538	0.027	93	1,423
23	102.50	1,175	1,461	0.026	89	1,455
22	97.50	1,201	1,382	0.024	84	1,486
21	92.50	1,226	1,301	0.023	79	1,518
20	87.50	1,252	1,219	0.021	74	1,549
19	83.50	763	692	0.012	42	945
18	81.00	1,007	871	0.015	53	1,247
17	77.50	2,557	2,066	0.036	125	3,165
16	72.50	1,495	1,090	0.019	66	1,851
15	67.50	1,525	996	0.018	60	1,887



Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

14	62.50	1,554	902	0.016	55	1,924
13	57.50	1,584	809	0.014	49	1,961
12	52.50	1,614	716	0.013	43	1,997
11	47.50	1,643	625	0.011	38	2,034
10	42.50	3,523	1,129	0.020	69	4,360
9	38.50	2,146	591	0.010	36	2,656
8	36.00	844	210	0.004	13	1,045
7	32.50	2,137	453	0.008	28	2,645
6	27.50	2,175	357	0.006	22	2,692
5	22.50	2,213	267	0.005	16	2,739
4	17.50	2,251	184	0.003	11	2,787
3	12.50	2,290	112	0.002	7	2,834
2	7.50	2,328	52	0.001	3	2,881
1	2.50	2,281	9	0.000	1	2,824
Decibel DB844H90E-XY	160.00	168	414	0.007	25	208
Flat Low Profile Pla	160.00	1,500	3,699	0.065	224	1,857
Nokia B5 RRH4x40-850	150.00	146	325	0.006	20	180
Alcatel-Lucent RRH2X	150.00	129	288	0.005	17	160
Alcatel-Lucent RRH 2	150.00	170	380	0.007	23	211
Alcatel-Lucent RRH2x	150.00	180	402	0.007	24	223
RFS DB-T1-6Z-8AB-0Z	150.00	88	196	0.003	12	109
Andrew LNX-6514DS-A1	150.00	116	260	0.005	16	144
Andrew SBNHH-1D65B	150.00	304	679	0.012	41	377
Amphenol Antel QUAD6	150.00	162	362	0.006	22	201
Round Low Profile PI	150.00	1,500	3,349	0.059	203	1,857
Powerwave Allgon LGP	142.00	85	174	0.003	11	105
Raycap DC6-48-60-18-RRH	142.00	20	41	0.001	2	25
Ericsson RRUS 12 w/	142.00	135	277	0.005	17	167
Powerwave Allgon 777	142.00	214	440	0.008	27	265
CCI HPA-65R-BUU-H6	142.00	105	215	0.004	13	130
Round T-Arm	142.00	153	314	0.006	19	189
Alcatel-Lucent 4X40W	142.00	750	1,539	0.027	93	928
Alcatel-Lucent 800 M	130.00	357	640	0.011	39	442
Alcatel-Lucent TD-RR	130.00	185	332	0.006	20	229
RFS APXVTM14-C-I20 (	130.00	198	355	0.006	22	245
RFS APXVSPP18-C-A20	130.00	169	302	0.005	18	209
RFS APXV9ERR18-C-A20	130.00	114	204	0.004	12	141
Round Low Profile PI	130.00	62	111	0.002	7	77
Flush Mounts	130.00	1,500	2,687	0.047	163	1,857
RFS APXV18-206517S-C	117.00	195	297	0.005	18	241
		79	121	0.002	7	98
		61,287	56,801	1.000	3,447	75,858

Load Case (0.9 - 0.2Sds) \* DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
37	157.50	737	1,775	0.031	108	636
36	152.50	763	1,747	0.031	106	658
35	147.50	850	1,850	0.033	112	733
34	143.50	522	1,090	0.019	66	451
33	141.00	380	771	0.014	47	328
32	137.50	968	1,890	0.033	115	835
31	132.50	993	1,832	0.032	111	856
30	127.50	1,039	1,806	0.032	110	896
29	122.50	1,064	1,740	0.031	106	918
28	118.50	1,180	1,834	0.032	111	1,018
27	116.00	807	1,213	0.021	74	696
26	114.63	305	450	0.008	27	263
25	112.13	957	1,366	0.024	83	826

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

24	107.50	1,150	1,538	0.027	93	992
23	102.50	1,175	1,461	0.026	89	1,013
22	97.50	1,201	1,382	0.024	84	1,035
21	92.50	1,226	1,301	0.023	79	1,057
20	87.50	1,252	1,219	0.021	74	1,079
19	83.50	763	692	0.012	42	658
18	81.00	1,007	871	0.015	53	869
17	77.50	2,557	2,066	0.036	125	2,205
16	72.50	1,495	1,090	0.019	66	1,289
15	67.50	1,525	996	0.018	60	1,315
14	62.50	1,554	902	0.016	55	1,340
13	57.50	1,584	809	0.014	49	1,366
12	52.50	1,614	716	0.013	43	1,391
11	47.50	1,643	625	0.011	38	1,417
10	42.50	3,523	1,129	0.020	69	3,037
9	38.50	2,146	591	0.010	36	1,850
8	36.00	844	210	0.004	13	728
7	32.50	2,137	453	0.008	28	1,842
6	27.50	2,175	357	0.006	22	1,875
5	22.50	2,213	267	0.005	16	1,908
4	17.50	2,251	184	0.003	11	1,941
3	12.50	2,290	112	0.002	7	1,974
2	7.50	2,328	52	0.001	3	2,007
1	2.50	2,281	9	0.000	1	1,967
Decibel DB844H90E-XY	160.00	168	414	0.007	25	145
Flat Low Profile Pla	160.00	1,500	3,699	0.065	224	1,293
Nokia B5 RRH4x40-850	150.00	146	325	0.006	20	125
Alcatel-Lucent RRH2X	150.00	129	288	0.005	17	111
Alcatel-Lucent RRH 2	150.00	170	380	0.007	23	147
Alcatel-Lucent RRH2x	150.00	180	402	0.007	24	155
RFS DB-T1-6Z-8AB-0Z	150.00	88	196	0.003	12	76
Andrew LNX-6514DS-A1	150.00	116	260	0.005	16	100
Andrew SBNHH-1D65B	150.00	304	679	0.012	41	262
Amphenol Antel QUAD6	150.00	162	362	0.006	22	140
Round Low Profile PI	150.00	1,500	3,349	0.059	203	1,293
Powerwave Allgon LGP	142.00	85	174	0.003	11	73
Raycap DC6-48-60-18-RRH	142.00	20	41	0.001	2	17
Ericsson RRUS 12 w/Powerwave Allgon 777	142.00	135	277	0.005	17	116
Powerwave Allgon 777	142.00	214	440	0.008	27	185
CCI HPA-65R-BUU-H6	142.00	105	215	0.004	13	91
Round T-Arm	142.00	153	314	0.006	19	132
Alcatel-Lucent 4X40W	142.00	750	1,539	0.027	93	647
Alcatel-Lucent 800 M	130.00	357	640	0.011	39	308
Alcatel-Lucent TD-RR	130.00	185	332	0.006	20	160
RFS APXVTM14-C-I20 (	130.00	198	355	0.006	22	171
RFS APXVSPP18-C-A20	130.00	169	302	0.005	18	145
RFS APXV9ERR18-C-A20	130.00	114	204	0.004	12	98
Round Low Profile PI	130.00	62	111	0.002	7	53
Flush Mounts	130.00	1,500	2,687	0.047	163	1,293
RFS APXV18-206517S-C	117.00	195	297	0.005	18	168
		79	121	0.002	7	68
		61,287	56,801	1.000	3,447	52,844

Site Number: 302529

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

**Load Case (1.2 + 0.2Sds) \* DL + E ELFM Seismic Equivalent Lateral Forces Method**

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-73.03	-3.45	0.00	-406.50	0.00	406.50	8,793.00	4,396.50	25,857.6	12,948.0	0.00	0.00	0.040
5.00	-70.15	-3.46	0.00	-389.25	0.00	389.25	8,690.95	4,345.48	25,105.2	12,571.3	0.00	-0.01	0.039
10.00	-67.32	-3.46	0.00	-371.97	0.00	371.97	8,587.03	4,293.52	24,358.2	12,197.2	0.01	-0.01	0.038
15.00	-64.53	-3.45	0.00	-354.69	0.00	354.69	8,481.24	4,240.62	23,616.8	11,825.9	0.03	-0.02	0.038
20.00	-61.79	-3.44	0.00	-337.43	0.00	337.43	8,373.58	4,186.79	22,881.3	11,457.6	0.06	-0.03	0.037
25.00	-59.10	-3.43	0.00	-320.22	0.00	320.22	8,264.05	4,132.02	22,152.0	11,092.4	0.09	-0.03	0.036
30.00	-56.45	-3.40	0.00	-303.09	0.00	303.09	8,152.64	4,076.32	21,429.1	10,730.5	0.13	-0.04	0.035
35.00	-55.41	-3.40	0.00	-286.07	0.00	286.07	8,039.37	4,019.68	20,713.0	10,371.9	0.18	-0.05	0.034
37.00	-52.75	-3.36	0.00	-279.28	0.00	279.28	7,993.53	3,996.77	20,428.6	10,229.4	0.20	-0.05	0.034
40.00	-48.39	-3.29	0.00	-269.20	0.00	269.20	7,924.22	3,962.11	20,004.0	10,016.9	0.23	-0.06	0.033
45.00	-46.36	-3.26	0.00	-252.74	0.00	252.74	5,650.82	2,825.41	14,233.8	7,127.48	0.30	-0.06	0.044
50.00	-44.36	-3.22	0.00	-236.45	0.00	236.45	5,579.57	2,789.79	13,763.9	6,892.22	0.37	-0.07	0.042
55.00	-42.40	-3.17	0.00	-220.35	0.00	220.35	5,506.45	2,753.22	13,297.0	6,658.42	0.44	-0.08	0.041
60.00	-40.47	-3.12	0.00	-204.49	0.00	204.49	5,431.46	2,715.73	12,833.3	6,426.21	0.53	-0.09	0.039
65.00	-38.59	-3.06	0.00	-188.88	0.00	188.88	5,354.59	2,677.30	12,373.1	6,195.75	0.63	-0.10	0.038
70.00	-36.74	-3.00	0.00	-173.56	0.00	173.56	5,275.86	2,637.93	11,916.6	5,967.17	0.73	-0.10	0.036
75.00	-33.57	-2.87	0.00	-158.57	0.00	158.57	5,195.26	2,597.63	11,464.2	5,740.64	0.85	-0.11	0.034
80.00	-32.32	-2.82	0.00	-144.20	0.00	144.20	5,112.78	2,556.39	11,016.1	5,516.28	0.97	-0.12	0.032
82.00	-31.38	-2.78	0.00	-138.56	0.00	138.56	4,164.29	2,082.14	9,036.58	4,525.01	1.02	-0.12	0.038
85.00	-29.83	-2.70	0.00	-130.22	0.00	130.22	4,128.03	2,064.01	8,829.01	4,421.07	1.10	-0.13	0.037
90.00	-28.31	-2.63	0.00	-116.70	0.00	116.70	4,066.09	2,033.05	8,484.96	4,248.79	1.24	-0.14	0.034
95.00	-26.82	-2.54	0.00	-103.57	0.00	103.57	4,002.29	2,001.14	8,143.55	4,077.83	1.38	-0.14	0.032
100.00	-25.37	-2.45	0.00	-90.86	0.00	90.86	3,936.61	1,968.31	7,805.07	3,908.34	1.54	-0.15	0.030
105.00	-23.95	-2.36	0.00	-78.59	0.00	78.59	3,869.07	1,934.53	7,469.82	3,740.46	1.70	-0.16	0.027
110.00	-22.76	-2.28	0.00	-66.79	0.00	66.79	3,799.65	1,899.82	7,138.08	3,574.35	1.87	-0.17	0.025
114.25	-22.38	-2.25	0.00	-57.12	0.00	57.12	3,739.17	1,869.59	6,859.09	3,434.64	2.02	-0.17	0.023
115.00	-21.38	-2.17	0.00	-55.44	0.00	55.44	3,728.36	1,864.18	6,810.15	3,410.14	2.05	-0.17	0.022
117.00	-19.58	-2.03	0.00	-51.09	0.00	51.09	3,699.32	1,849.66	6,680.11	3,345.02	2.12	-0.17	0.021
120.00	-18.27	-1.92	0.00	-45.00	0.00	45.00	3,699.09	1,849.55	6,679.09	3,344.51	2.23	-0.18	0.018
125.00	-16.98	-1.81	0.00	-35.39	0.00	35.39	3,625.18	1,812.59	6,357.00	3,183.22	2.42	-0.18	0.016
130.00	-12.55	-1.40	0.00	-26.33	0.00	26.33	3,549.40	1,774.70	6,039.41	3,024.20	2.61	-0.19	0.012
135.00	-11.36	-1.29	0.00	-19.31	0.00	19.31	3,471.74	1,735.87	5,726.63	2,867.57	2.81	-0.19	0.010
140.00	-10.89	-1.24	0.00	-12.88	0.00	12.88	3,392.22	1,696.11	5,418.94	2,713.50	3.01	-0.19	0.008
142.00	-8.43	-0.98	0.00	-10.40	0.00	10.40	3,359.88	1,679.94	5,297.36	2,652.62	3.09	-0.19	0.006
145.00	-7.38	-0.87	0.00	-7.45	0.00	7.45	3,310.82	1,655.41	5,116.64	2,562.12	3.21	-0.19	0.005
150.00	-2.98	-0.37	0.00	-3.12	0.00	3.12	3,221.56	1,610.78	4,811.06	2,409.11	3.41	-0.19	0.002
155.00	-2.06	-0.26	0.00	-1.28	0.00	1.28	3,110.44	1,555.22	4,483.27	2,244.97	3.61	-0.19	0.001
160.00	0.00	-0.25	0.00	0.00	0.00	0.00	2,999.33	1,499.66	4,167.05	2,086.62	3.81	-0.19	0.000

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

Load Case (0.9 - 0.2Sds) \* DL + E ELMF

Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-50.88	-3.45	0.00	-404.14	0.00	404.14	8,793.00	4,396.50	25,857.6	12,948.0	0.00	0.00	0.037
5.00	-48.87	-3.45	0.00	-386.90	0.00	386.90	8,690.95	4,345.48	25,105.2	12,571.3	0.00	-0.01	0.036
10.00	-46.89	-3.45	0.00	-369.64	0.00	369.64	8,587.03	4,293.52	24,358.2	12,197.2	0.01	-0.01	0.036
15.00	-44.95	-3.44	0.00	-352.39	0.00	352.39	8,481.24	4,240.62	23,616.8	11,825.9	0.03	-0.02	0.035
20.00	-43.04	-3.43	0.00	-335.17	0.00	335.17	8,373.58	4,186.79	22,881.3	11,457.6	0.06	-0.03	0.034
25.00	-41.17	-3.41	0.00	-318.01	0.00	318.01	8,264.05	4,132.02	22,152.0	11,092.4	0.09	-0.03	0.034
30.00	-39.33	-3.39	0.00	-300.94	0.00	300.94	8,152.64	4,076.32	21,429.1	10,730.5	0.13	-0.04	0.033
35.00	-38.60	-3.38	0.00	-283.99	0.00	283.99	8,039.37	4,019.68	20,713.0	10,371.9	0.18	-0.05	0.032
37.00	-36.75	-3.35	0.00	-277.23	0.00	277.23	7,993.53	3,996.77	20,428.6	10,229.4	0.20	-0.05	0.032
40.00	-33.71	-3.28	0.00	-267.20	0.00	267.20	7,924.22	3,962.11	20,004.0	10,016.9	0.23	-0.06	0.031
45.00	-32.29	-3.24	0.00	-250.81	0.00	250.81	5,650.82	2,825.41	14,233.8	7,127.48	0.29	-0.06	0.041
50.00	-30.90	-3.20	0.00	-234.61	0.00	234.61	5,579.57	2,789.79	13,763.9	6,892.22	0.36	-0.07	0.040
55.00	-29.53	-3.15	0.00	-218.60	0.00	218.60	5,506.45	2,753.22	13,297.0	6,658.42	0.44	-0.08	0.038
60.00	-28.19	-3.10	0.00	-202.83	0.00	202.83	5,431.46	2,715.73	12,833.3	6,426.21	0.53	-0.09	0.037
65.00	-26.88	-3.04	0.00	-187.32	0.00	187.32	5,354.59	2,677.30	12,373.1	6,195.75	0.62	-0.09	0.035
70.00	-25.59	-2.98	0.00	-172.11	0.00	172.11	5,275.86	2,637.93	11,916.6	5,967.17	0.73	-0.10	0.034
75.00	-23.38	-2.85	0.00	-157.22	0.00	157.22	5,195.26	2,597.63	11,464.2	5,740.64	0.84	-0.11	0.032
80.00	-22.51	-2.80	0.00	-142.96	0.00	142.96	5,112.78	2,556.39	11,016.1	5,516.28	0.96	-0.12	0.030
82.00	-21.86	-2.76	0.00	-137.36	0.00	137.36	4,164.29	2,082.14	9,036.58	4,525.01	1.01	-0.12	0.036
85.00	-20.78	-2.68	0.00	-129.09	0.00	129.09	4,128.03	2,064.01	8,829.01	4,421.07	1.09	-0.13	0.034
90.00	-19.72	-2.61	0.00	-115.67	0.00	115.67	4,066.09	2,033.05	8,484.96	4,248.79	1.23	-0.14	0.032
95.00	-18.68	-2.52	0.00	-102.65	0.00	102.65	4,002.29	2,001.14	8,143.55	4,077.83	1.37	-0.14	0.030
100.00	-17.67	-2.43	0.00	-90.04	0.00	90.04	3,936.61	1,968.31	7,805.07	3,908.34	1.53	-0.15	0.028
105.00	-16.68	-2.34	0.00	-77.88	0.00	77.88	3,869.07	1,934.53	7,469.82	3,740.46	1.69	-0.16	0.025
110.00	-15.85	-2.25	0.00	-66.19	0.00	66.19	3,799.65	1,899.82	7,138.08	3,574.35	1.86	-0.16	0.023
114.25	-15.59	-2.23	0.00	-56.61	0.00	56.61	3,739.17	1,869.59	6,859.09	3,434.64	2.01	-0.17	0.021
115.00	-14.90	-2.15	0.00	-54.93	0.00	54.93	3,728.36	1,864.18	6,810.15	3,410.14	2.03	-0.17	0.020
117.00	-13.64	-2.01	0.00	-50.63	0.00	50.63	3,699.32	1,849.66	6,680.11	3,345.02	2.10	-0.17	0.019
120.00	-12.72	-1.91	0.00	-44.59	0.00	44.59	3,699.09	1,849.55	6,679.09	3,344.51	2.21	-0.18	0.017
125.00	-11.83	-1.79	0.00	-35.07	0.00	35.07	3,625.18	1,812.59	6,357.00	3,183.22	2.40	-0.18	0.014
130.00	-8.74	-1.39	0.00	-26.10	0.00	26.10	3,549.40	1,774.70	6,039.41	3,024.20	2.59	-0.18	0.011
135.00	-7.91	-1.28	0.00	-19.14	0.00	19.14	3,471.74	1,735.87	5,726.63	2,867.57	2.79	-0.19	0.009
140.00	-7.58	-1.23	0.00	-12.76	0.00	12.76	3,392.22	1,696.11	5,418.94	2,713.50	2.98	-0.19	0.007
142.00	-5.87	-0.97	0.00	-10.31	0.00	10.31	3,359.88	1,679.94	5,297.36	2,652.62	3.06	-0.19	0.006
145.00	-5.14	-0.86	0.00	-7.39	0.00	7.39	3,310.82	1,655.41	5,116.64	2,562.12	3.18	-0.19	0.004
150.00	-2.07	-0.36	0.00	-3.09	0.00	3.09	3,221.56	1,610.78	4,811.06	2,409.11	3.38	-0.19	0.002
155.00	-1.44	-0.25	0.00	-1.27	0.00	1.27	3,110.44	1,555.22	4,483.27	2,244.97	3.58	-0.19	0.001
160.00	0.00	-0.25	0.00	0.00	0.00	0.00	2,999.33	1,499.66	4,167.05	2,086.62	3.79	-0.19	0.000

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

### Equivalent Modal Forces Analysis

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

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.18
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):	1.50
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.19
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.10
Period Based on Rayleigh Method (sec):	1.58
Redundancy Factor (p):	1.30

### Load Case (1.2 + 0.2Sds) \* DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
37	157.50	737	1.831	1.685	1.032	0.335	214	913
36	152.50	763	1.717	1.188	0.841	0.268	177	944
35	147.50	850	1.606	0.798	0.679	0.209	154	1,053
34	143.50	522	1.520	0.552	0.567	0.167	76	647
33	141.00	380	1.468	0.425	0.505	0.143	47	470
32	137.50	968	1.396	0.276	0.427	0.113	95	1,198
31	132.50	993	1.296	0.115	0.333	0.075	65	1,229
30	127.50	1,039	1.200	0.005	0.255	0.045	41	1,286
29	122.50	1,064	1.108	-0.065	0.192	0.022	20	1,317
28	118.50	1,180	1.037	-0.099	0.150	0.009	9	1,461
27	116.00	807	0.993	-0.111	0.128	0.002	2	999
26	114.63	305	0.970	-0.116	0.117	-0.001	0	377
25	112.13	957	0.928	-0.121	0.099	-0.005	-4	1,185
24	107.50	1,150	0.853	-0.119	0.070	-0.008	-8	1,423
23	102.50	1,175	0.776	-0.107	0.047	-0.007	-7	1,455
22	97.50	1,201	0.702	-0.087	0.030	-0.002	-2	1,486
21	92.50	1,226	0.632	-0.064	0.019	0.005	6	1,518
20	87.50	1,252	0.565	-0.040	0.011	0.014	15	1,549
19	83.50	763	0.515	-0.022	0.008	0.021	14	945
18	81.00	1,007	0.484	-0.010	0.007	0.025	22	1,247
17	77.50	2,557	0.443	0.004	0.006	0.030	67	3,165
16	72.50	1,495	0.388	0.022	0.007	0.036	47	1,851
15	67.50	1,525	0.336	0.036	0.009	0.040	53	1,887
14	62.50	1,554	0.288	0.048	0.013	0.043	57	1,924
13	57.50	1,584	0.244	0.056	0.018	0.044	60	1,961
12	52.50	1,614	0.203	0.062	0.023	0.043	61	1,997
11	47.50	1,643	0.167	0.066	0.028	0.043	61	2,034
10	42.50	3,523	0.133	0.069	0.033	0.041	126	4,360
9	38.50	2,146	0.109	0.071	0.036	0.040	75	2,656
8	36.00	844	0.096	0.071	0.038	0.039	29	1,045
7	32.50	2,137	0.078	0.072	0.040	0.038	71	2,645
6	27.50	2,175	0.056	0.071	0.042	0.037	69	2,692
5	22.50	2,213	0.037	0.070	0.041	0.035	67	2,739
4	17.50	2,251	0.023	0.065	0.039	0.032	63	2,787

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

3	12.50	2,290	0.012	0.057	0.033	0.028	56	2,834
2	7.50	2,328	0.004	0.042	0.024	0.021	43	2,881
1	2.50	2,281	0.000	0.017	0.009	0.009	18	2,824
Decibel DB844H90E-XY	160.00	168	1.890	1.980	1.140	0.371	54	208
Flat Low Profile Pla	160.00	1,500	1.890	1.980	1.140	0.371	482	1,857
Nokia B5 RRH4x40-850	150.00	146	1.661	0.980	0.756	0.238	30	180
Alcatel-Lucent RRH2X	150.00	129	1.661	0.980	0.756	0.238	27	160
Alcatel-Lucent RRH 2	150.00	170	1.661	0.980	0.756	0.238	35	211
Alcatel-Lucent RRH2x	150.00	180	1.661	0.980	0.756	0.238	37	223
RFS DB-T1-6Z-8AB-0Z	150.00	88	1.661	0.980	0.756	0.238	18	109
Andrew LNX-6514DS-A1	150.00	116	1.661	0.980	0.756	0.238	24	144
Andrew SBNHH-1D65B	150.00	304	1.661	0.980	0.756	0.238	63	377
Amphenol Antel QUAD6	150.00	162	1.661	0.980	0.756	0.238	33	201
Round Low Profile PI	150.00	1,500	1.661	0.980	0.756	0.238	309	1,857
Powerwave Allgon LGP	142.00	85	1.489	0.474	0.529	0.152	11	105
Raycap DC6-48-60-18-RRH	142.00	20	1.489	0.474	0.529	0.152	3	25
Ericsson RRUS 12 w/	142.00	135	1.489	0.474	0.529	0.152	18	167
Powerwave Allgon 777	142.00	214	1.489	0.474	0.529	0.152	28	265
CCI HPA-65R-BUU-H6	142.00	105	1.489	0.474	0.529	0.152	14	130
Round T-Arm	142.00	153	1.489	0.474	0.529	0.152	20	189
Alcatel-Lucent 4X40W	142.00	750	1.489	0.474	0.529	0.152	99	928
Alcatel-Lucent 800 M	130.00	357	1.248	0.054	0.292	0.060	18	442
Alcatel-Lucent TD-RR	130.00	185	1.248	0.054	0.292	0.060	10	229
RFS APXVTM14-C-I20 (	130.00	198	1.248	0.054	0.292	0.060	10	245
RFS APXVSP18-C-A20	130.00	169	1.248	0.054	0.292	0.060	9	209
RFS APXV9ERR18-C-A20	130.00	114	1.248	0.054	0.292	0.060	6	141
Round Low Profile PI	130.00	62	1.248	0.054	0.292	0.060	3	77
Flush Mounts	130.00	1,500	1.248	0.054	0.292	0.060	77	1,857
RFS APXV18-206517S-C	117.00	195	1.011	-0.107	0.137	0.005	1	241
	117.00	79	1.011	-0.107	0.137	0.005	0	98
		61,287	64,123	21,246	21,062	6,404	3,396	75,858

Load Case (0.9 - 0.2Sds) \* DL + E EMAM

Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
37	157.50	737	1.831	1.685	1.032	0.335	214	636
36	152.50	763	1.717	1.188	0.841	0.268	177	658
35	147.50	850	1.606	0.798	0.679	0.209	154	733
34	143.50	522	1.520	0.552	0.567	0.167	76	451
33	141.00	380	1.468	0.425	0.505	0.143	47	328
32	137.50	968	1.396	0.276	0.427	0.113	95	835
31	132.50	993	1.296	0.115	0.333	0.075	65	856
30	127.50	1,039	1.200	0.005	0.255	0.045	41	896
29	122.50	1,064	1.108	-0.065	0.192	0.022	20	918
28	118.50	1,180	1.037	-0.099	0.150	0.009	9	1,018
27	116.00	807	0.993	-0.111	0.128	0.002	2	696
26	114.63	305	0.970	-0.116	0.117	-0.001	0	263
25	112.13	957	0.928	-0.121	0.099	-0.005	-4	826
24	107.50	1,150	0.853	-0.119	0.070	-0.008	-8	992
23	102.50	1,175	0.776	-0.107	0.047	-0.007	-7	1,013
22	97.50	1,201	0.702	-0.087	0.030	-0.002	-2	1,035
21	92.50	1,226	0.632	-0.064	0.019	0.005	6	1,057
20	87.50	1,252	0.565	-0.040	0.011	0.014	15	1,079
19	83.50	763	0.515	-0.022	0.008	0.021	14	658
18	81.00	1,007	0.484	-0.010	0.007	0.025	22	869
17	77.50	2,557	0.443	0.004	0.006	0.030	67	2,205
16	72.50	1,495	0.388	0.022	0.007	0.036	47	1,289
15	67.50	1,525	0.336	0.036	0.009	0.040	53	1,315

Site Number: 302529

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

14	62.50	1,554	0.288	0.048	0.013	0.043	57	1,340
13	57.50	1,584	0.244	0.056	0.018	0.044	60	1,366
12	52.50	1,614	0.203	0.062	0.023	0.043	61	1,391
11	47.50	1,643	0.167	0.066	0.028	0.043	61	1,417
10	42.50	3,523	0.133	0.069	0.033	0.041	126	3,037
9	38.50	2,146	0.109	0.071	0.036	0.040	75	1,850
8	36.00	844	0.096	0.071	0.038	0.039	29	728
7	32.50	2,137	0.078	0.072	0.040	0.038	71	1,842
6	27.50	2,175	0.056	0.071	0.042	0.037	69	1,875
5	22.50	2,213	0.037	0.070	0.041	0.035	67	1,908
4	17.50	2,251	0.023	0.065	0.039	0.032	63	1,941
3	12.50	2,290	0.012	0.057	0.033	0.028	56	1,974
2	7.50	2,328	0.004	0.042	0.024	0.021	43	2,007
1	2.50	2,281	0.000	0.017	0.009	0.009	18	1,967
Decibel DB844H90E-XY	160.00	168	1.890	1.980	1.140	0.371	54	145
Flat Low Profile Pla	160.00	1,500	1.890	1.980	1.140	0.371	482	1,293
Nokia B5 RRH4x40-850	150.00	146	1.661	0.980	0.756	0.238	30	125
Alcatel-Lucent RRH2X	150.00	129	1.661	0.980	0.756	0.238	27	111
Alcatel-Lucent RRH 2	150.00	170	1.661	0.980	0.756	0.238	35	147
Alcatel-Lucent RRH2x	150.00	180	1.661	0.980	0.756	0.238	37	155
RFS DB-T1-6Z-8AB-OZ	150.00	88	1.661	0.980	0.756	0.238	18	76
Andrew LNX-6514DS-A1	150.00	116	1.661	0.980	0.756	0.238	24	100
Andrew SBNHH-1D65B	150.00	304	1.661	0.980	0.756	0.238	63	262
Amphenol Antel QUAD6	150.00	162	1.661	0.980	0.756	0.238	33	140
Round Low Profile PI	150.00	1,500	1.661	0.980	0.756	0.238	309	1,293
Powerwave Allgon LGP	142.00	85	1.489	0.474	0.529	0.152	11	73
Raycap DC6-48-60-18-RRH	142.00	20	1.489	0.474	0.529	0.152	3	17
Ericsson RRUS 12 w/	142.00	135	1.489	0.474	0.529	0.152	18	116
Powerwave Allgon 777	142.00	214	1.489	0.474	0.529	0.152	28	185
Powerwave Allgon 777	142.00	105	1.489	0.474	0.529	0.152	14	91
CCI HPA-65R-BUU-H6	142.00	153	1.489	0.474	0.529	0.152	20	132
Round T-Arm	142.00	750	1.489	0.474	0.529	0.152	99	647
Alcatel-Lucent 4X40W	130.00	357	1.248	0.054	0.292	0.060	18	308
Alcatel-Lucent 800 M	130.00	185	1.248	0.054	0.292	0.060	10	160
Alcatel-Lucent TD-RR	130.00	198	1.248	0.054	0.292	0.060	10	171
RFS APXVTM14-C-I20 (	130.00	169	1.248	0.054	0.292	0.060	9	145
RFS APXVSP18-C-A20	130.00	114	1.248	0.054	0.292	0.060	6	98
RFS APXV9ERR18-C-A20	130.00	62	1.248	0.054	0.292	0.060	3	53
Round Low Profile PI	130.00	1,500	1.248	0.054	0.292	0.060	77	1,293
Flush Mounts	117.00	195	1.011	-0.107	0.137	0.005	1	168
RFS APXV18-206517S-C	117.00	79	1.011	-0.107	0.137	0.005	0	68
		61,287	64.123	21.246	21.062	6.404	3,396	52,844

Site Number: 302529

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

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Customer: VERIZON WIRELESS

Load Case (1.2 + 0.2Sds) \* DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-73.03	-3.38	0.00	-396.63	0.00	396.63	8,793.00	4,396.50	25,857.6	12,948.0	0.00	0.00	0.039
5.00	-70.15	-3.35	0.00	-379.72	0.00	379.72	8,690.95	4,345.48	25,105.2	12,571.3	0.00	-0.01	0.038
10.00	-67.32	-3.30	0.00	-362.99	0.00	362.99	8,587.03	4,293.52	24,358.2	12,197.2	0.01	-0.01	0.038
15.00	-64.53	-3.24	0.00	-346.50	0.00	346.50	8,481.24	4,240.62	23,616.8	11,825.9	0.03	-0.02	0.037
20.00	-61.79	-3.18	0.00	-330.29	0.00	330.29	8,373.58	4,186.79	22,881.3	11,457.6	0.06	-0.03	0.036
25.00	-59.10	-3.12	0.00	-314.39	0.00	314.39	8,264.05	4,132.02	22,152.0	11,092.4	0.09	-0.03	0.035
30.00	-56.45	-3.05	0.00	-298.80	0.00	298.80	8,152.64	4,076.32	21,429.1	10,730.5	0.13	-0.04	0.035
35.00	-55.41	-3.03	0.00	-283.55	0.00	283.55	8,039.37	4,019.68	20,713.0	10,371.9	0.17	-0.05	0.034
37.00	-52.75	-2.95	0.00	-277.50	0.00	277.50	7,993.53	3,996.77	20,428.6	10,229.4	0.20	-0.05	0.034
40.00	-48.39	-2.83	0.00	-268.64	0.00	268.64	7,924.22	3,962.11	20,004.0	10,016.9	0.23	-0.06	0.033
45.00	-46.36	-2.77	0.00	-254.50	0.00	254.50	5,650.82	2,825.41	14,233.8	7,127.48	0.29	-0.06	0.044
50.00	-44.36	-2.71	0.00	-240.65	0.00	240.65	5,579.57	2,789.79	13,763.9	6,892.22	0.36	-0.07	0.043
55.00	-42.40	-2.66	0.00	-227.09	0.00	227.09	5,506.45	2,753.22	13,297.0	6,658.42	0.44	-0.08	0.042
60.00	-40.47	-2.60	0.00	-213.80	0.00	213.80	5,431.46	2,715.73	12,833.3	6,426.21	0.52	-0.09	0.041
65.00	-38.59	-2.55	0.00	-200.78	0.00	200.78	5,354.59	2,677.30	12,373.1	6,195.75	0.62	-0.10	0.040
70.00	-36.74	-2.51	0.00	-188.02	0.00	188.02	5,275.86	2,637.93	11,916.6	5,967.17	0.72	-0.10	0.038
75.00	-33.57	-2.44	0.00	-175.47	0.00	175.47	5,195.26	2,597.63	11,464.2	5,740.64	0.84	-0.11	0.037
80.00	-32.32	-2.42	0.00	-163.27	0.00	163.27	5,112.78	2,556.39	11,016.1	5,516.28	0.96	-0.12	0.036
82.00	-31.38	-2.41	0.00	-158.43	0.00	158.43	4,164.29	2,082.14	9,036.58	4,525.01	1.01	-0.13	0.043
85.00	-29.83	-2.39	0.00	-151.21	0.00	151.21	4,128.03	2,064.01	8,829.01	4,421.07	1.10	-0.13	0.041
90.00	-28.31	-2.39	0.00	-139.25	0.00	139.25	4,066.09	2,033.05	8,484.96	4,248.79	1.24	-0.14	0.040
95.00	-26.82	-2.39	0.00	-127.31	0.00	127.31	4,002.29	2,001.14	8,143.55	4,077.83	1.39	-0.15	0.038
100.00	-25.37	-2.40	0.00	-115.35	0.00	115.35	3,936.61	1,968.31	7,805.07	3,908.34	1.55	-0.16	0.036
105.00	-23.95	-2.41	0.00	-103.36	0.00	103.36	3,869.07	1,934.53	7,469.82	3,740.46	1.73	-0.17	0.034
110.00	-22.76	-2.41	0.00	-91.33	0.00	91.33	3,799.65	1,899.82	7,138.08	3,574.35	1.91	-0.18	0.032
114.25	-22.38	-2.41	0.00	-81.09	0.00	81.09	3,739.17	1,869.59	6,859.09	3,434.64	2.07	-0.19	0.030
115.00	-21.38	-2.41	0.00	-79.28	0.00	79.28	3,728.36	1,864.18	6,810.15	3,410.14	2.10	-0.19	0.029
117.00	-19.58	-2.39	0.00	-74.47	0.00	74.47	3,699.32	1,849.66	6,680.11	3,345.02	2.18	-0.19	0.028
120.00	-18.27	-2.37	0.00	-67.29	0.00	67.29	3,699.09	1,849.55	6,679.09	3,344.51	2.30	-0.19	0.025
125.00	-16.98	-2.33	0.00	-55.45	0.00	55.45	3,625.18	1,812.59	6,357.00	3,183.22	2.51	-0.20	0.022
130.00	-12.55	-2.11	0.00	-43.82	0.00	43.82	3,549.40	1,774.70	6,039.41	3,024.20	2.72	-0.21	0.018
135.00	-11.35	-2.01	0.00	-33.26	0.00	33.26	3,471.74	1,735.87	5,726.63	2,867.57	2.94	-0.21	0.015
140.00	-10.88	-1.97	0.00	-23.18	0.00	23.18	3,392.22	1,696.11	5,418.94	2,713.50	3.17	-0.22	0.012
142.00	-8.43	-1.69	0.00	-19.25	0.00	19.25	3,359.88	1,679.94	5,297.36	2,652.62	3.26	-0.22	0.010
145.00	-7.38	-1.53	0.00	-14.18	0.00	14.18	3,310.82	1,655.41	5,116.64	2,562.12	3.40	-0.22	0.008
150.00	-2.97	-0.76	0.00	-6.53	0.00	6.53	3,221.56	1,610.78	4,811.06	2,409.11	3.63	-0.22	0.004
155.00	-2.06	-0.54	0.00	-2.72	0.00	2.72	3,110.44	1,555.22	4,483.27	2,244.97	3.86	-0.22	0.002
160.00	0.00	-0.54	0.00	0.00	0.00	0.00	2,999.33	1,499.66	4,167.05	2,086.62	4.10	-0.22	0.000



Site Number: 302529

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

1/4/2018 4:30:40 PM

Customer: VERIZON WIRELESS

**Load Case (0.9 - 0.2Sds) \* DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method**

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-50.88	-3.38	0.00	-394.18	0.00	394.18	8,793.00	4,396.50	25,857.6	12,948.0	0.00	0.00	0.036
5.00	-48.87	-3.34	0.00	-377.28	0.00	377.28	8,690.95	4,345.48	25,105.2	12,571.3	0.00	-0.01	0.036
10.00	-46.89	-3.29	0.00	-360.57	0.00	360.57	8,587.03	4,293.52	24,358.2	12,197.2	0.01	-0.01	0.035
15.00	-44.95	-3.23	0.00	-344.11	0.00	344.11	8,481.24	4,240.62	23,616.8	11,825.9	0.03	-0.02	0.034
20.00	-43.04	-3.17	0.00	-327.94	0.00	327.94	8,373.58	4,186.79	22,881.3	11,457.6	0.06	-0.03	0.034
25.00	-41.17	-3.11	0.00	-312.09	0.00	312.09	8,264.05	4,132.02	22,152.0	11,092.4	0.09	-0.03	0.033
30.00	-39.33	-3.04	0.00	-296.56	0.00	296.56	8,152.64	4,076.32	21,429.1	10,730.5	0.13	-0.04	0.032
35.00	-38.60	-3.01	0.00	-281.38	0.00	281.38	8,039.37	4,019.68	20,713.0	10,371.9	0.17	-0.05	0.032
37.00	-36.75	-2.94	0.00	-275.35	0.00	275.35	7,993.53	3,996.77	20,428.6	10,229.4	0.19	-0.05	0.032
40.00	-33.71	-2.81	0.00	-266.54	0.00	266.54	7,924.22	3,962.11	20,004.0	10,016.9	0.23	-0.05	0.031
45.00	-32.29	-2.75	0.00	-252.48	0.00	252.48	5,650.82	2,825.41	14,233.8	7,127.48	0.29	-0.06	0.041
50.00	-30.90	-2.70	0.00	-238.71	0.00	238.71	5,579.57	2,789.79	13,763.9	6,892.22	0.36	-0.07	0.040
55.00	-29.53	-2.64	0.00	-225.24	0.00	225.24	5,506.45	2,753.22	13,297.0	6,658.42	0.43	-0.08	0.039
60.00	-28.19	-2.58	0.00	-212.04	0.00	212.04	5,431.46	2,715.73	12,833.3	6,426.21	0.52	-0.09	0.038
65.00	-26.88	-2.53	0.00	-199.13	0.00	199.13	5,354.59	2,677.30	12,373.1	6,195.75	0.61	-0.09	0.037
70.00	-25.59	-2.49	0.00	-186.46	0.00	186.46	5,275.86	2,637.93	11,916.6	5,967.17	0.72	-0.10	0.036
75.00	-23.38	-2.42	0.00	-174.03	0.00	174.03	5,195.26	2,597.63	11,464.2	5,740.64	0.83	-0.11	0.035
80.00	-22.52	-2.40	0.00	-161.93	0.00	161.93	5,112.78	2,556.39	11,016.1	5,516.28	0.96	-0.12	0.034
82.00	-21.86	-2.39	0.00	-157.13	0.00	157.13	4,164.29	2,082.14	9,036.58	4,525.01	1.01	-0.12	0.040
85.00	-20.78	-2.37	0.00	-149.97	0.00	149.97	4,128.03	2,064.01	8,829.01	4,421.07	1.09	-0.13	0.039
90.00	-19.72	-2.37	0.00	-138.12	0.00	138.12	4,066.09	2,033.05	8,484.96	4,248.79	1.23	-0.14	0.037
95.00	-18.68	-2.37	0.00	-126.29	0.00	126.29	4,002.29	2,001.14	8,143.55	4,077.83	1.38	-0.15	0.036
100.00	-17.67	-2.38	0.00	-114.45	0.00	114.45	3,936.61	1,968.31	7,805.07	3,908.34	1.54	-0.16	0.034
105.00	-16.68	-2.38	0.00	-102.57	0.00	102.57	3,869.07	1,934.53	7,469.82	3,740.46	1.71	-0.17	0.032
110.00	-15.85	-2.39	0.00	-90.65	0.00	90.65	3,799.65	1,899.82	7,138.08	3,574.35	1.89	-0.18	0.030
114.25	-15.59	-2.39	0.00	-80.51	0.00	80.51	3,739.17	1,869.59	6,859.09	3,434.64	2.06	-0.18	0.028
115.00	-14.89	-2.38	0.00	-78.72	0.00	78.72	3,728.36	1,864.18	6,810.15	3,410.14	2.08	-0.19	0.027
117.00	-13.64	-2.37	0.00	-73.95	0.00	73.95	3,699.32	1,849.66	6,680.11	3,345.02	2.16	-0.19	0.026
120.00	-12.72	-2.35	0.00	-66.83	0.00	66.83	3,699.09	1,849.55	6,679.09	3,344.51	2.28	-0.19	0.023
125.00	-11.83	-2.31	0.00	-55.09	0.00	55.09	3,625.18	1,812.59	6,357.00	3,183.22	2.49	-0.20	0.021
130.00	-8.74	-2.10	0.00	-43.55	0.00	43.55	3,549.40	1,774.70	6,039.41	3,024.20	2.70	-0.21	0.017
135.00	-7.91	-2.00	0.00	-33.06	0.00	33.06	3,471.74	1,735.87	5,726.63	2,867.57	2.92	-0.21	0.014
140.00	-7.58	-1.95	0.00	-23.05	0.00	23.05	3,392.22	1,696.11	5,418.94	2,713.50	3.15	-0.22	0.011
142.00	-5.87	-1.68	0.00	-19.15	0.00	19.15	3,359.88	1,679.94	5,297.36	2,652.62	3.24	-0.22	0.009
145.00	-5.14	-1.52	0.00	-14.11	0.00	14.11	3,310.82	1,655.41	5,116.64	2,562.12	3.37	-0.22	0.007
150.00	-2.07	-0.76	0.00	-6.50	0.00	6.50	3,221.56	1,610.78	4,811.06	2,409.11	3.60	-0.22	0.003
155.00	-1.44	-0.54	0.00	-2.71	0.00	2.71	3,110.44	1,555.22	4,483.27	2,244.97	3.83	-0.22	0.002
160.00	0.00	-0.54	0.00	0.00	0.00	0.00	2,999.33	1,499.66	4,167.05	2,086.62	4.07	-0.22	0.000

Site Number: 302529

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

1/4/2018 4:30:40 PM

Customer: VERIZON WIRELESS

### Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	29.58	0.00	73.53	0.00	0.00	3270.47	45.00	0.29
0.9D + 1.6W	29.57	0.00	55.14	0.00	0.00	3254.21	45.00	0.29
1.2D + 1.0Di + 1.0Wi	8.86	0.00	113.23	0.00	0.00	964.63	45.00	0.10
(1.2 + 0.2Sds) * DL + E ELFM	3.45	0.00	73.03	0.00	0.00	406.50	45.00	0.04
(1.2 + 0.2Sds) * DL + E EMAM	3.38	0.00	73.03	0.00	0.00	396.63	45.00	0.04
(0.9 - 0.2Sds) * DL + E ELFM	3.45	0.00	50.88	0.00	0.00	404.14	45.00	0.04
(0.9 - 0.2Sds) * DL + E EMAM	3.38	0.00	50.88	0.00	0.00	394.18	45.00	0.04
1.0D + 1.0W	7.07	0.00	61.29	0.00	0.00	779.53	45.00	0.07

Site Number: 302529

Code: ANSI/TIA-222-G

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Site Name: Vernon CT 6, CT

Engineering Number: OAA712988\_C3\_04

1/4/2018 4:30:41 PM

Customer: VERIZON WIRELESS

Base Summary

Reactions

Original Design			Analysis			
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment Design %
8,100.00	72.00	61.00	3,270.47	113.23	29.58	29.91

Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Mu (kip-in)	Phi Mn (kip-in)	Ratio
55.0	3.250	81.000	Clipped	0	18.00	8.176	291.70	1068.71	0.27

Anchor Bolts

Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Start Angle (deg)	Compression			Tension		
									Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
80.00	28	2.25" 18J	2.25	75.00	100.00	Clustered	6.00	45.0	74.13	260.00	0.29	66.04	260.00	0.26

Site Name: Vernon 3 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 <sup>2</sup> )	(mW/cm <sup>2</sup> )	(%)
VZW PCS	1970	1	5301	5301	150	0.0847	1.0	8.47%
VZW Cellular	869	9	475	4275	150	0.0683	0.579333333	11.79%
VZW 850 LTE	869	1	3086	3086	150	0.0493	0.579333333	8.51%
VZW AWS	2145	1	7952	7952	150	0.1271	1.0	12.71%
VZW 700	746	1	2262	2262	150	0.0362	0.497333333	7.27%

**Total Percentage of Maximum Permissible Exposure** 48.76%

\*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 C95.1-1992

MHz = Megahertz

mW/cm<sup>2</sup> = 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.



0700020078A

AMERICAN TOWER CORPORATION

TALCOTTVILLE RD 779

245

AMERICAN TOWER CORPORATION  
 C/O PROPERTY TAX DEPT  
 PO BOX 723597  
 ATLANTA, GA 31139 617-375-7500

Tax ID 07-0002-0078A

Printed 10/23/2017

Card No. 1 of 1

Neighborhood Number  
 12000  
 Neighborhood Name  
 General Commercial B  
 TAXING DISTRICT INFORMATION  
 Jurisdiction Name Town of Vernon  
 Area 146  
 Routing Number 10610

Transfer of Ownership

Site Description  
 Topography

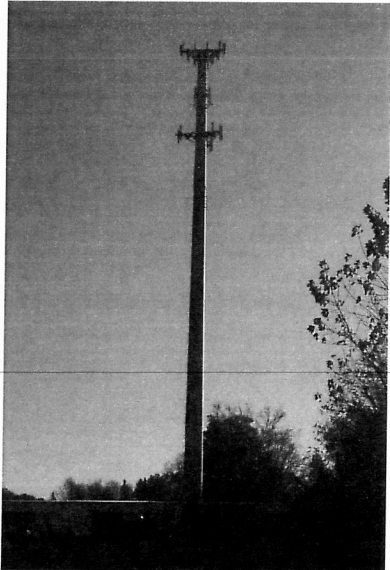
Public Utilities  
 Street or Road  
 Neighborhood  
 Zoning:  
 Legal Acres:  
 0.0000

Valuation Record

Assessment Year	2016							
Reason for Change	2016 Reval							
Market	L	0						
	I	400000						
	T	400000						
70% Assessed/Use	L	0						
	I	280000						
	T	280000						

Land Size

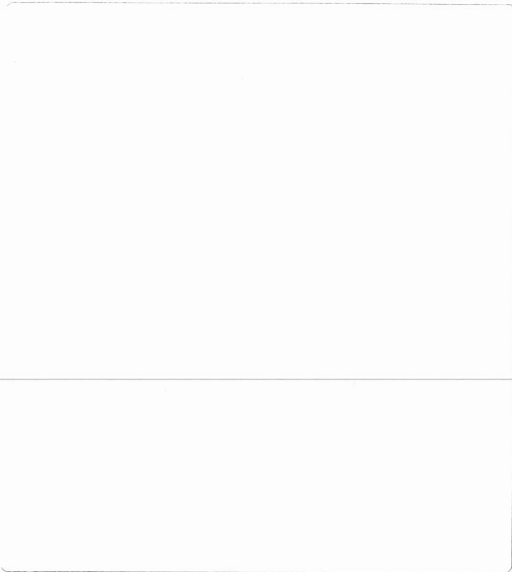
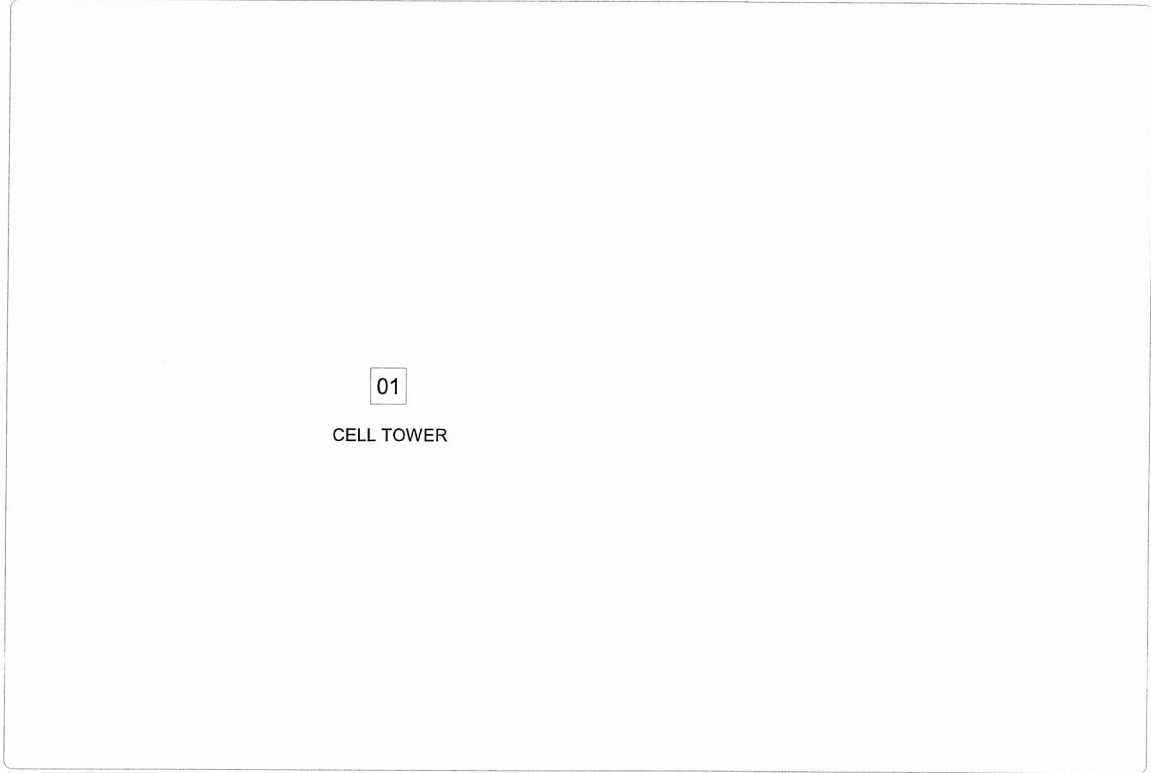
Land Type	Rating, Soil ID - or - Actual Frontage	Acreage - or - Effective Frontage	Square Feet - or - Effective Depth	Influence Factor



Physical Characteristics

Tax ID 07-0002-0078A

Printed 10/23/2017



Special Features	
Description	

Summary of Improvements								
ID	USE	Story Height	Const Type	Grade	Year Cons	Eff Year	Cond	Size or Area
01	TOWERMON	0.00		Good	2005	2005	AV	161

777 REALTY LLC  
 777 TALCOTTVILLE RD  
 VERNON, CT 06066  
 CENSUS TRACT: 530301  
 1/24/11 25% LAWRENCE A SCRANTON TRUST,  
 37.5% L  
 THOMAS SCRANTON, 37.5% S CHRISTOPHER  
 SCRANTON  
 Neighborhood Number 11900  
 Neighborhood Name General Commercial A  
 TAXING DISTRICT INFORMATION  
 Jurisdiction Name Town of Vernon  
 Area 146  
 Routing Number 8641

**Transfer of Ownership**

Owner	Consideration	Transfer Date	Deed Book/Page	Deed Type
SCRANTON L THOMAS SCRANTON MATTHEW L	0	09/26/2012	2244 144	Q
SCRANTON L THOMAS & LAWRENCE SCRANTON	692500	02/03/2012	2205 43	W
SCRANTON LAWRENCE A & CHRISTOPHER &	0	01/24/2011	2150 310	P
SCRANTON LAWRENCE A	0	06/15/1999	1209 43	P
SCRANTON LAWRENCE A	0	03/23/1990	790 12	Q
NA	0	01/01/1900	184 519	

**Site Description**

Topography  
 Public Utilities  
 Electric  
 Street or Road  
 Paved  
 Neighborhood  
 Zoning:  
 Industrial  
 Legal Acres:  
 7.7200

**Valuation Record**

Assessment Year	2011	2012	2015	2016	2016
Reason for Change	2011 REVAL	2012	2015	2016 Reval	2016 Reval
Market	L 922070	I 913760	T 913760	L 1620000	I 1620000
	I 827930	T 1054920	L 1203830	I 1741070	T 1393610
	T 1750000	L 1968680	I 2117590	T 3361070	L 3013610
70% Assessed/Use	L 645450	I 639630	T 639630	L 1134000	I 1134000
	I 579550	T 738450	L 842680	I 1218750	T 975530
	T 1225000	L 1378080	I 1482310	T 2352750	L 2109530



**Land Size**

Land Type	Rating, Soil ID - or - Actual Frontage	Acreage - or - Effective Frontage	Square Feet - or - Effective Depth	Influence Factor



Physical Characteristics

Tax ID 07-0002-00078

Printed 03/04/2017

ROOFING

Built-up

WALLS

	B	1	2	U
Frame		Yes		
Guard	Yes	Yes	Yes	Yes

FRAMING

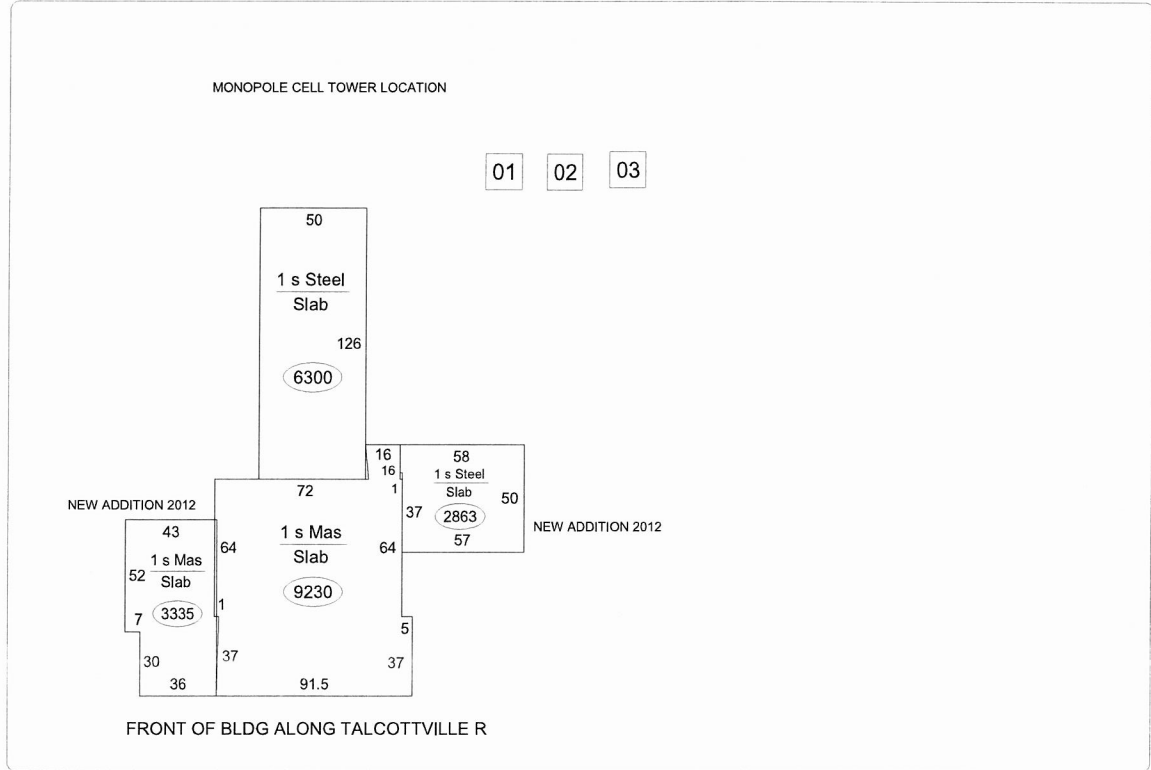
	B	1	2	U
F Res	0	21728	0	0

FINISH

	UF	SF	FO	FD
1	21728	0	0	0
Total	21728	0	0	0

HEATING AND AIR CONDITIONING

	B	1	2	U
Heat	0	9230	0	0
A/C	0	12498	0	0



Special Features

Description

Summary of Improvements

ID	USE	Story Height	Const Type	Grade	Year Cons	Eff Year	Cond	Size or Area
C	AUTOSERV	0.00		Avg	1965	1985	AV	21728
01	PAVING	0.00	85	Avg	1990	1990	AV	225000
02	FENCECL	6.00	51C	Avg	2002	2002	AV	200
03	SHED	0.00	1	Avg	2010	2010	AV	120

Transfer of Ownership

Valuation Record

Assessment Year								
Reason for Change								
Market	L I T							
70% Assessed/Use	L I T							



Land Size

Land Type	Rating, Soil ID - or - Actual Frontage	Acreage - or - Effective Frontage	Square Feet - or - Effective Depth	Influence Factor

Physical Characteristics

Tax ID 07-0002-00078

Printed 03/04/2017

ROOFING

Metal  
Insulation

WALLS

Frame	B	1	2	U
Guard	Yes	Yes	Yes	Yes

FRAMING

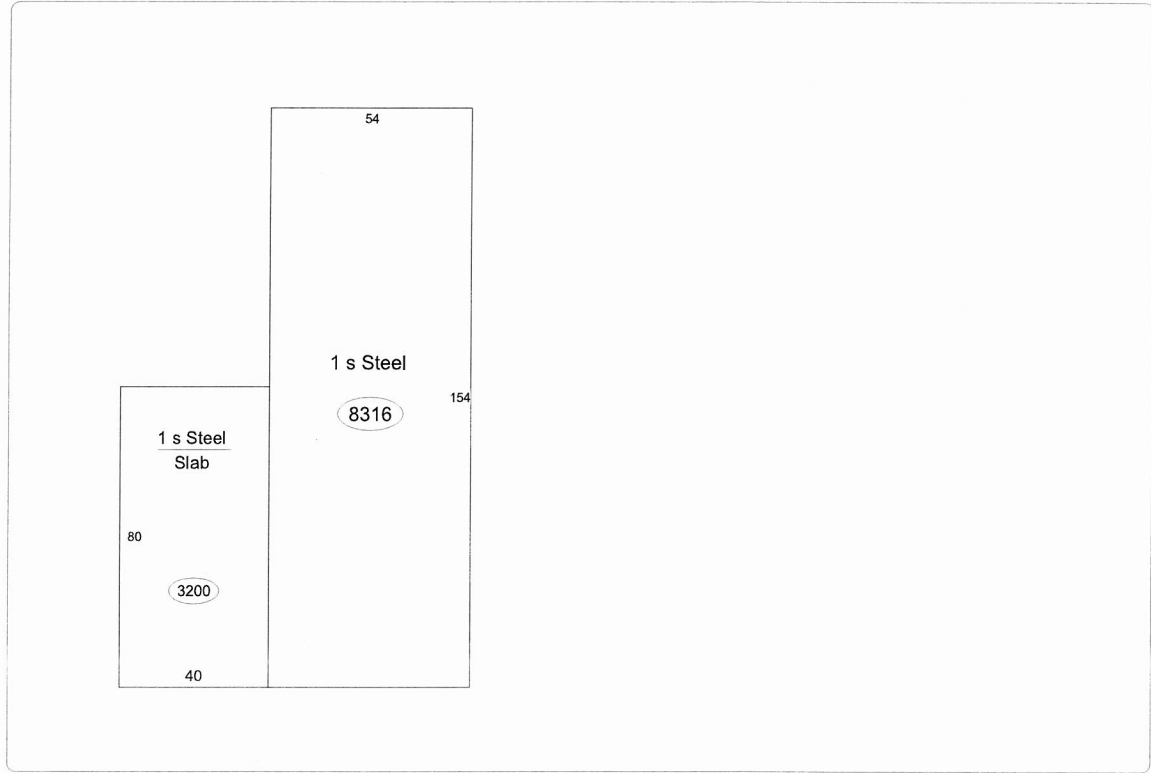
	B	1	2	U
--	---	---	---	---

FINISH

	UF	SF	FO	FD
1	11516	0	0	0
Total	11516	0	0	0

HEATING AND AIR CONDITIONING

Heat	B	1	2	U
	0	11516	0	0

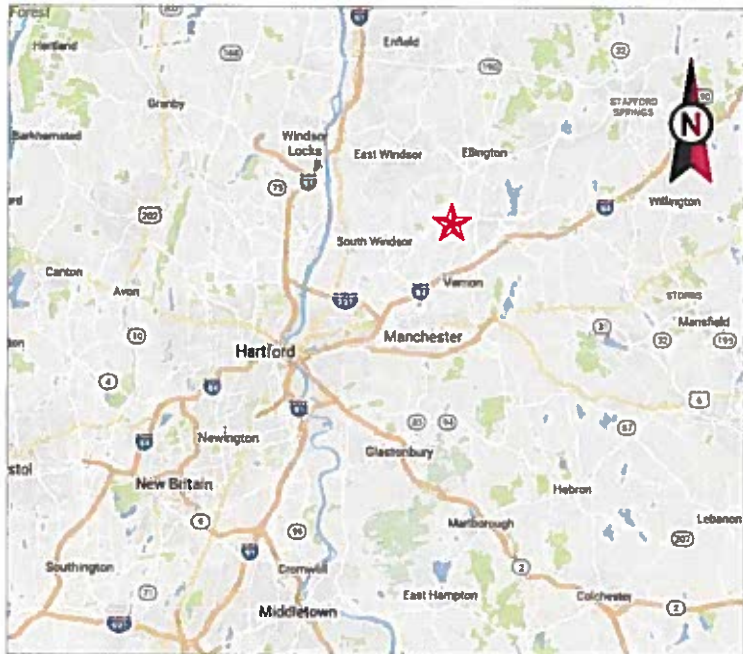


Special Features

Description

Summary of Improvements

ID	USE	Story Height	Const Type	Grade	Year Cons	Eff Year	Cond	Size or Area
C	SERVGAR	0.00		Fair	1980	1990	AV	11516



VICINITY MAP



**AMERICAN TOWER®**

ATC SITE NAME: VERNON CT 6  
 ATC SITE NUMBER: 302529  
 VERIZON SITE NAME: VERNON 3 CT  
 SITE ADDRESS: 777 TALCOTVILLE ROAD  
 VERNON ROCKVILLE, CT 06066



LOCATION MAP

**AMERICAN TOWER®**  
**ATC TOWER SERVICES**  
 3500 REGENCY PARKWAY  
 SUITE 100  
 CARY, NC 27518  
 PHONE: (919) 468-0112  
 COA: 6260F

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OF SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	BRL	12/27/17

ATC SITE NUMBER:  
**302529**  
 ATC SITE NAME:  
**VERNON CT 6**  
 SITE ADDRESS:  
 777 TALCOTVILLE ROAD  
 VERNON ROCKVILLE, CT 06066



Dec 27 2017 5:07 PM cosign



DRAWN BY:	BRL
APPROVED BY:	KRF
DATE DRAWN:	12/27/17
ATC JOB NO:	12157628
CUSTOMER ID:	VERNON 3 CT

**COVER SHEET**

SHEET NUMBER: **G-001**      REVISION: **0**

**VERIZON WIRELESS  
 ANTENNA AMENDMENT DRAWINGS**

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
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. INTERNATIONAL BUILDING CODE (IBC) 2. NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 777 TALCOTVILLE ROAD VERNON ROCKVILLE, CT 06066 COUNTY: TOLLAND  <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.86345 LONGITUDE: -72.48328 GROUND ELEVATION: 236' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:  REMOVE (3) PANELS AND (3) RRU's  INSTALL (3) NEW PANELS AND (9) RRU's  EXISTING (6) PANELS, (3) RRU's, (12) 1-5/8" COAX CABLES, (2) 1-5/8" HYBRID CABLES, AND (2) OVP's TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE	BY:
	<u>PROJECT NOTES</u>  1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED.	<u>PROJECT LOCATION DIRECTIONS</u>  FROM HARTFORD, CT: I-84 TO EXIT 64-65. RIGHT ON TO TALCOTVILLE ROAD. SCRANTON MOTORS CAR DEALERSHIP. SITE IN BACK.	G-001	COVER SHEET	0	12/27/17	BRL
<u>UTILITY COMPANIES</u>  POWER COMPANY: EVERSOURCE PHONE: (877) 659-6326  TELEPHONE COMPANY: FRONTIER COMMUNICATIONS PHONE: (800) 376-6843	<u>PROJECT TEAM</u>  <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801  <u>ENGINEER:</u> ATC TOWER SERVICES, LLC 3500 REGENCY PKWY STE 100 CARY, NC 27518  <u>PROPERTY OWNER:</u> 777 REALTY LLC 777 TALCOTVILLE RD VERNON, CT 06066  <u>APPLICANT:</u> VERIZON WIRELESS 99 EAST RIVER DRIVE, 9TH FLOOR EAST HARTFORD, CT 06108	<u>PROJECT LOCATION DIRECTIONS</u>  FROM HARTFORD, CT: I-84 TO EXIT 64-65. RIGHT ON TO TALCOTVILLE ROAD. SCRANTON MOTORS CAR DEALERSHIP. SITE IN BACK.	C-101	DETAILED SITE PLAN AND TOWER ELEVATION	0	12/27/17	BRL
			C-501	RF SCHEDULE AND ANTENNA INSTALLATION	0	12/27/17	BRL
			C-502	CONSTRUCTION DETAILS	0	12/27/17	BRL



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**GENERAL CONSTRUCTION NOTES:**

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSIE/AITIA-222, AND COMPLY WITH ATC MASTER SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL, SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON WIRELESS REP PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON WIRELESS REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON WIRELESS REP IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH VERIZON WIRELESS WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
19. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON WIRELESS REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
25. CONTRACTOR SHALL NOTIFY VERIZON WIRELESS REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.

27. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
28. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON WIRELESS REP. ANY WORK FOUND BY THE VERIZON WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
29. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.

**STRUCTURAL STEEL NOTES:**

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS
  - A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
  - B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE
  - C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
  - D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
  - E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. 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.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND 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 MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS
  - A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
  - B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
  - C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
  - D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
  - E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
  - F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
  - G. PRIOR TO FIELD WELDING GALVANIZING 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.

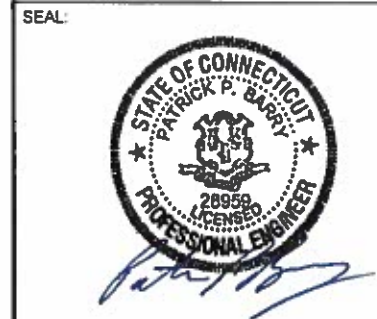


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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	BRL	12/27/17

ATC SITE NUMBER:  
**302529**  
 ATC SITE NAME:  
**VERNON CT 6**  
 SITE ADDRESS:  
 777 TALCOTVILLE ROAD  
 VERNON ROCKVILLE, CT 06066



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DRAWN BY:	BRL
APPROVED BY:	KRF
DATE DRAWN:	12/27/17
ATC JOB NO:	12157628
CUSTOMER ID:	VERNON 3 CT

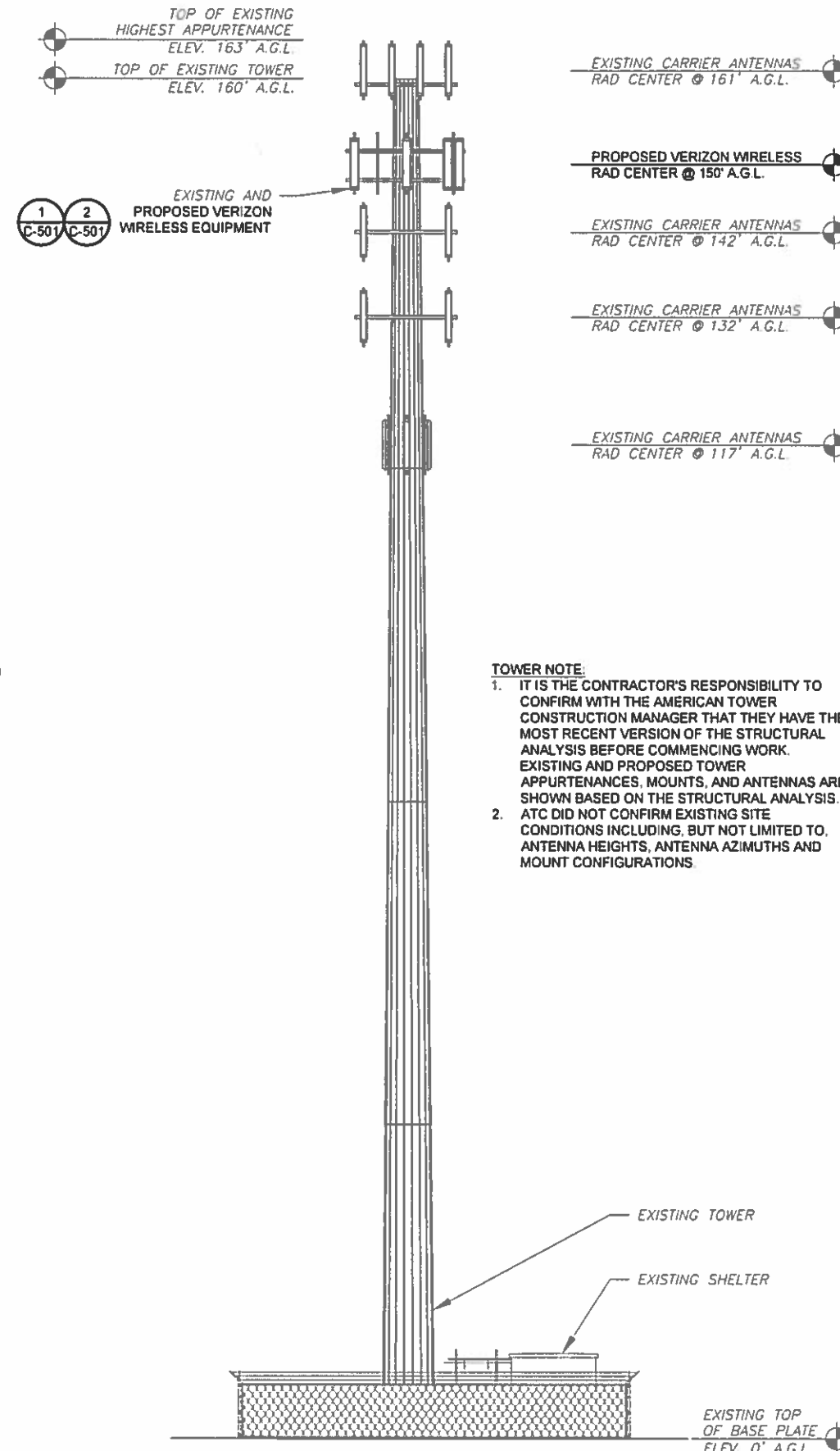
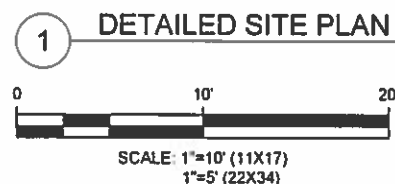
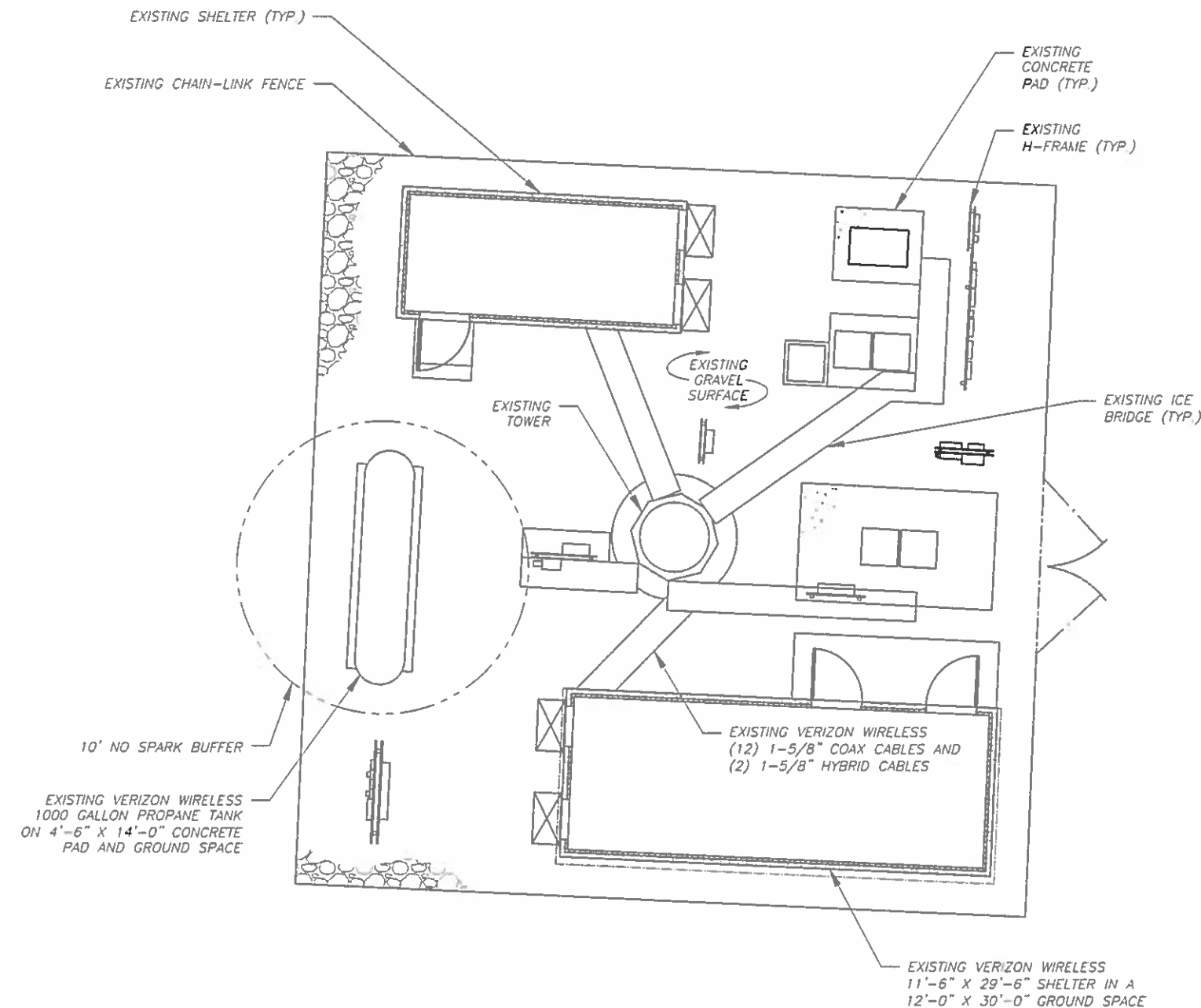
**GENERAL NOTES**

SHEET NUMBER	REVISION
<b>G-002</b>	<b>0</b>

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**SITE PLAN NOTES:**

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, CABLE SUPPORTS, AND CABLES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE INSTALLING NEW CABLE SUPPORT STRUCTURES, COAX PORTS, OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE ATC CONSTRUCTION MANAGER AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.



**2 TOWER ELEVATION**  
SCALE: NOT TO SCALE



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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	BRL	12/27/17

ATC SITE NUMBER:  
**302529**  
 ATC SITE NAME:  
**VERNON CT 6**

SITE ADDRESS:  
 777 TALCOTVILLE ROAD  
 VERNON ROCKVILLE, CT 06066

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ATC JOB NO:	12157628
CUSTOMER ID:	VERNON 3 CT

**DETAILED SITE PLAN AND TOWER ELEVATION**

SHEET NUMBER:	REVISION:
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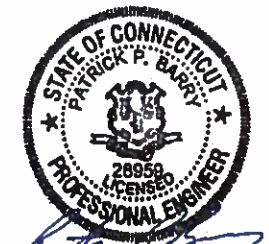
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**302529**  
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**VERNON CT 6**

SITE ADDRESS:  
 777 TALCOTVILLE ROAD  
 VERNON ROCKVILLE, CT 06066

SEAL:



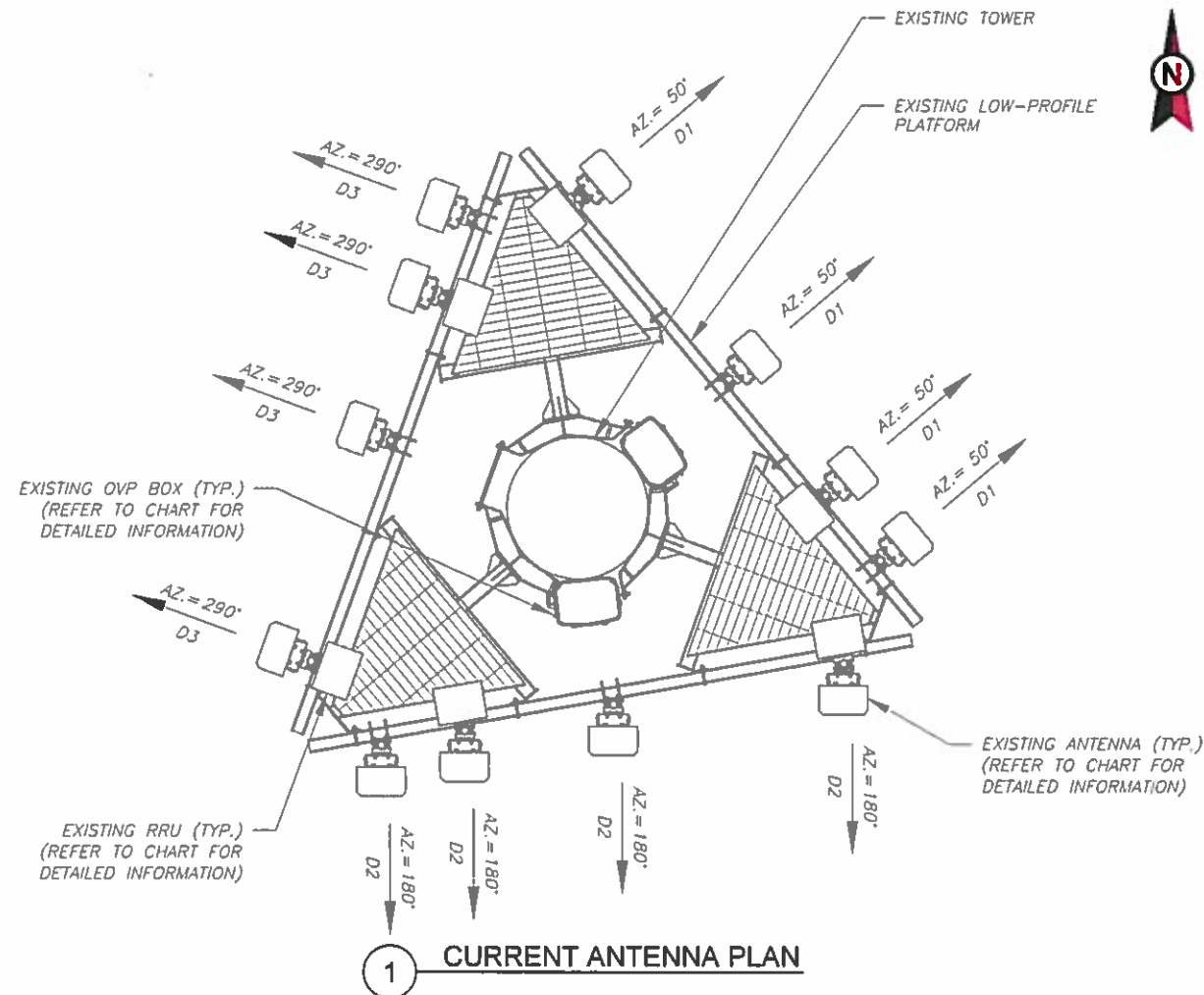
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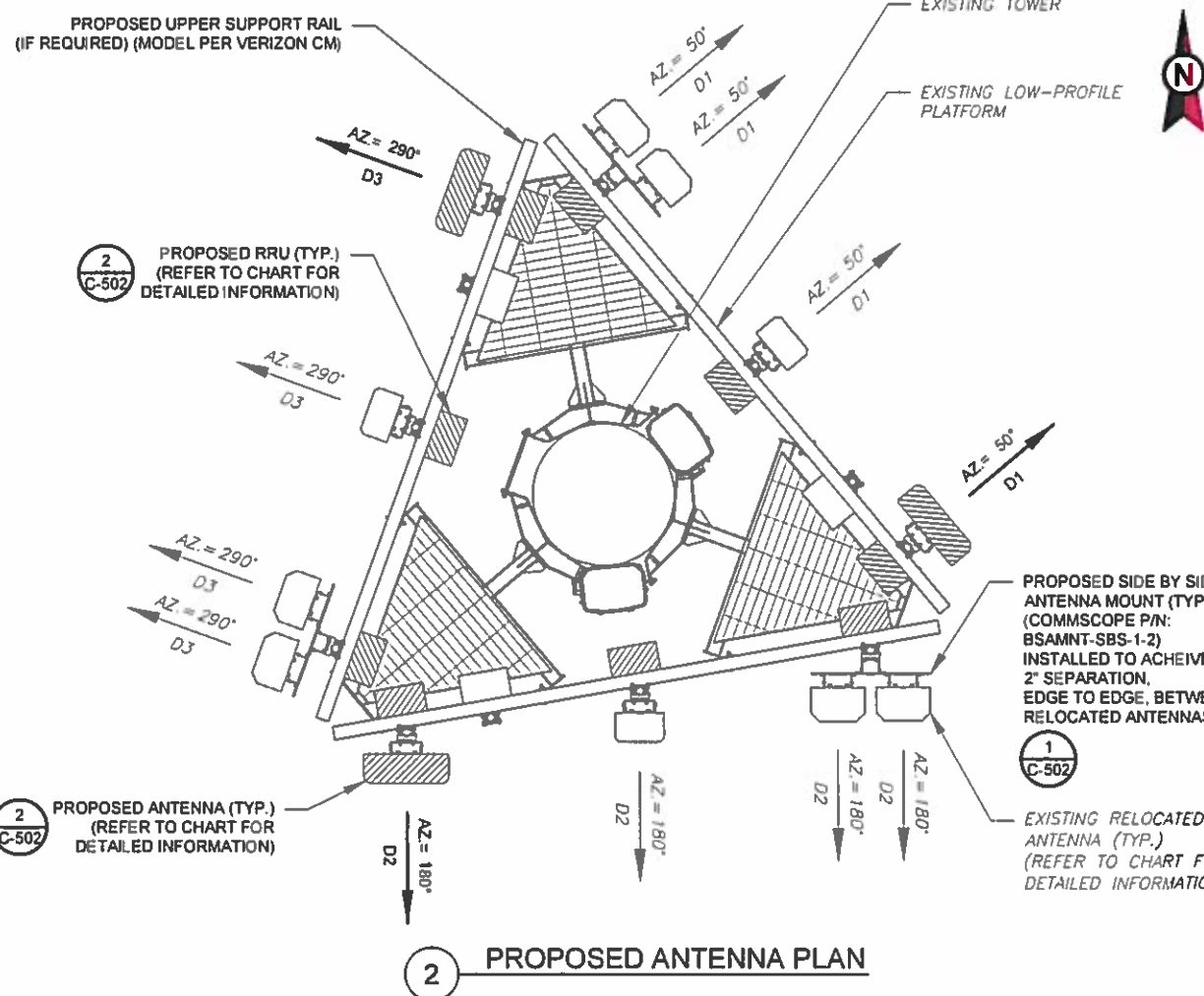
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 DATE DRAWN: 12/27/17  
 ATC JOB NO: 12157628  
 CUSTOMER ID: VERNON 3 CT

**RF SCHEDULE AND ANTENNA INSTALLATION**

SHEET NUMBER:  
**C-501**  
 REVISION:  
**0**



**1 CURRENT ANTENNA PLAN**



**2 PROPOSED ANTENNA PLAN**

**CURRENT ANTENNA AND RF EQUIPMENT SCHEDULE**

LOCATION		ANTENNA SUMMARY				NON ANTENNA SUMMARY			
SECTOR	RAD	AZ	POS	BAND	MODEL NUMBER	STATUS	POS	MODEL NUMBER	STATUS
D1	150'	50°	1	700 / AWS	SBNHH-1D65B	REL	1	B4 RRH2X60-4R	RMV
			2	850 CDMA	LNX-6514DS-A1M	RMN	2	-	-
			3	700 / PCS	SBNHH-1D65B	REL	3	RRH2x60 700	RMN
			4	850 CDMA	LNX-6514DS-A1M	RMV	4	-	-
D2	150'	180°	1	700 / AWS	SBNHH-1D65B	REL	1	B4 RRH2X60-4R	RMV
			2	850 CDMA	LNX-6514DS-A1M	RMN	2	-	-
			3	700 / PCS	SBNHH-1D65B	REL	3	RRH2x60 700	RMN
			4	850 CDMA	LNX-6514DS-A1M	RMV	4	-	-
D3	150'	290°	1	700 / AWS	SBNHH-1D65B	REL	1	B4 RRH2X60-4R	RMV
			2	850 CDMA	LNX-6514DS-A1M	RMN	2	-	-
			3	700 / PCS	SBNHH-1D65B	REL	3	RRH2x60 700	RMN
			4	850 CDMA	LNX-6514DS-A1M	RMV	4	-	-

**NOTES**

- BASED ON APPROVED ATC APPLICATION OAA712988, DATED 09/19/17. CONFIRM WITH VERIZON WIRELESS REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS.
- ATC HAS NOT YET 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 OR SUFFICIENT LENGTH, ETC.) ATC DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.
- ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH THE ATC CM.
- CONFIRM SPACING OF PROPOSED EQUIPMENT DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
- POSITIONS START WITH FIRST PIPE ON THE LEFT SIDE (AS VIEWED FROM BEHIND THE MOUNT).
- CABLE LENGTHS SHOWN ESTIMATE MAXIMUM TYPICAL RUN AND INCORPORATE A 15% SAFETY FACTOR.

**PROPOSED ANTENNA AND RF EQUIPMENT SCHEDULE**

LOCATION		ANTENNA SUMMARY				NON ANTENNA SUMMARY			
SECTOR	RAD	AZ	POS	BAND	MODEL NUMBER	STATUS	POS	MODEL NUMBER	STATUS
D1	150'	50°	1	700 / AWS	SBNHH-1D65B	REL	1	RRH2X60-1900	ADD
			2	700 / PCS	SBNHH-1D65B	REL	2	RRH 2X90 (AWS)	ADD
			3	850 CDMA	LNX-6514DS-A1M	RMN	3	RRH2x60 700	RMN
			4	850 LTE	QUAD656C0000X	ADD	4	B5 RRH4X40-850	ADD
D2	150'	180°	1	700 / AWS	SBNHH-1D65B	REL	1	RRH2X60-1900	ADD
			2	700 / PCS	SBNHH-1D65B	REL	2	RRH 2X90 (AWS)	ADD
			3	850 CDMA	LNX-6514DS-A1M	RMN	3	RRH2x60 700	RMN
			4	850 LTE	QUAD656C0000X	ADD	4	B5 RRH4X40-850	ADD
D3	150'	290°	1	700 / AWS	SBNHH-1D65B	REL	1	RRH2X60-1900	ADD
			2	700 / PCS	SBNHH-1D65B	REL	2	RRH 2X90 (AWS)	ADD
			3	850 CDMA	LNX-6514DS-A1M	RMN	3	RRH2x60 700	RMN
			4	850 LTE	QUAD656C0000X	ADD	4	B5 RRH4X40-850	ADD

**CURRENT FIBER DISTRIBUTION / OVP BOX**

LOCATION	POS	BAND	MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
TOWER	-	-	(2) DB-T1-6Z-8AB-0Z	RMN	(12) 1-5/8"	(2) 1-5/8"	RMN

**CURRENT CABLING SUMMARY**

LOCATION	POS	BAND	MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
TOWER	-	-	(2) DB-T1-6Z-8AB-0Z	RMN	(12) 1-5/8"	(2) 1-5/8"	RMN

**PROPOSED FIBER DISTRIBUTION / OVP BOX**

LOCATION	POS	BAND	MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
TOWER	-	-	(2) DB-T1-6Z-8AB-0Z	RMN	(12) 1-5/8"	(2) 1-5/8"	RMN

**PROPOSED CABLING SUMMARY**

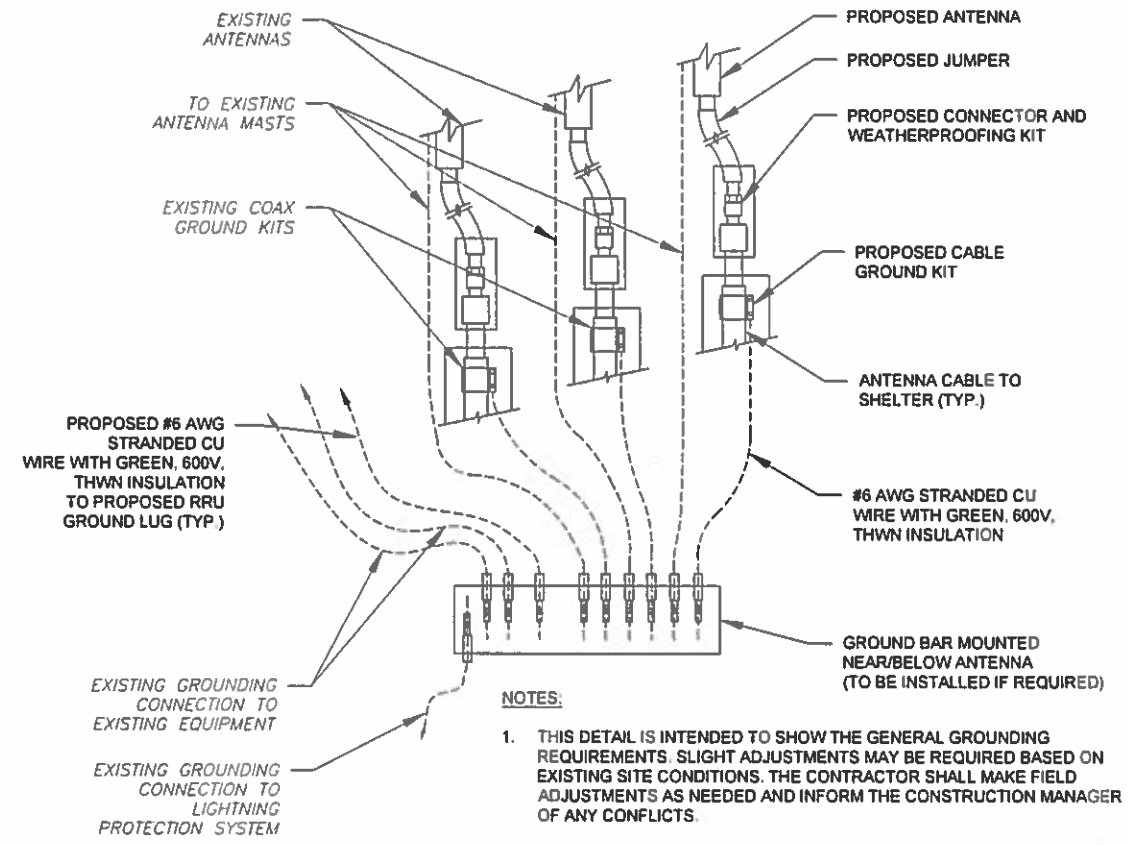
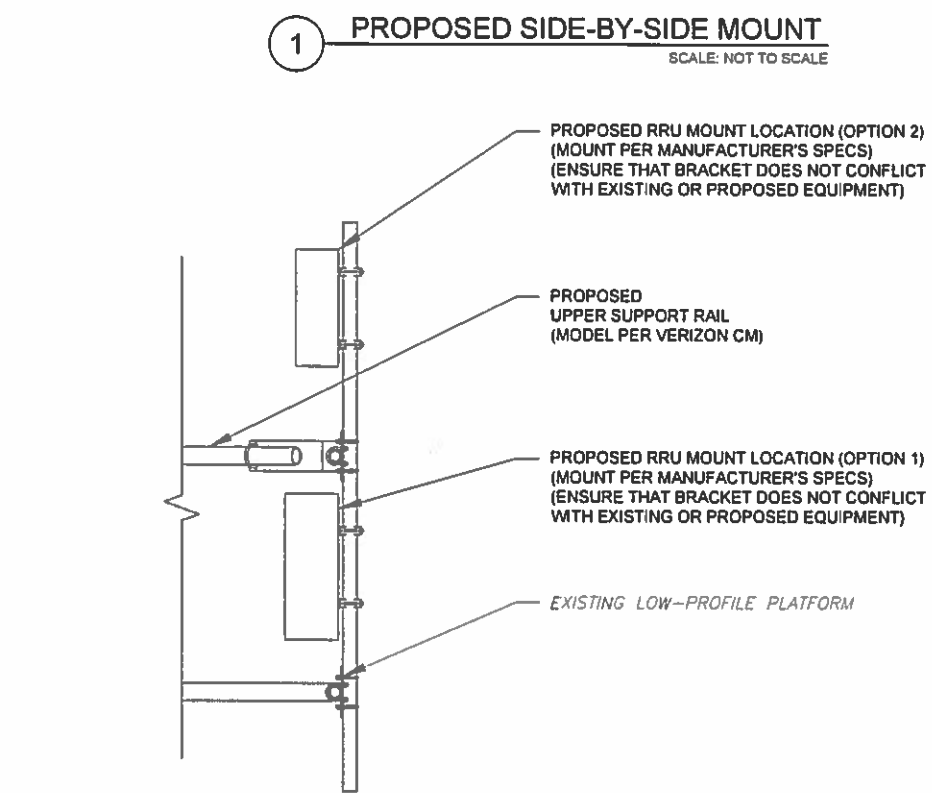
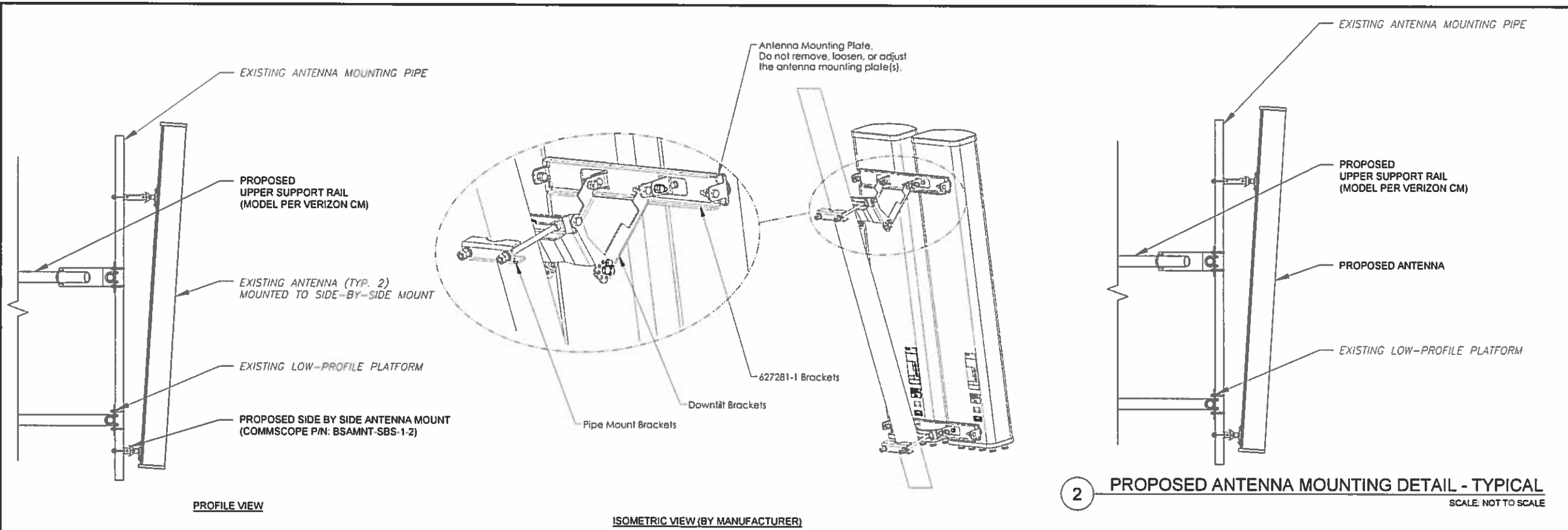
LOCATION	POS	BAND	MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
TOWER	-	-	(2) DB-T1-6Z-8AB-0Z	RMN	(12) 1-5/8"	(2) 1-5/8"	RMN


**STATUS ABBREVIATIONS**

RMV: TO BE REMOVED  
 RMN: TO REMAIN  
 REL: TO BE RELOCATED  
 DSC: TO BE DISCONNECTED AND TO REMAIN

**3 ANTENNA AND RF EQUIPMENT SCHEDULES**

CABLE LENGTHS FOR FIBER AND DC JUMPERS  
 FROM FIBER DISTRIBUTION / OVP BOX TO RRU: 20' JUMPERS  
 FROM RRU TO ANTENNA: 15' JUMPERS





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0	FOR CONSTRUCTION	BRL	12/27/17

ATC SITE NUMBER:  
**302529**


ATC SITE NAME:  
**VERNON CT 6**

SITE ADDRESS:  
777 TALCOTVILLE ROAD  
VERNON ROCKVILLE, CT 06066

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DRAWN BY:	BRL
APPROVED BY:	KRF
DATE DRAWN:	12/27/17
ATC JOB NO:	12157628
CUSTOMER ID:	VERNON 3 CT

**CONSTRUCTION DETAILS**

SHEET NUMBER:	REVISION:
<b>C-502</b>	<b>0</b>

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