



STATE OF CONNECTICUT  
*CONNECTICUT SITING COUNCIL*

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**VIA ELECTRONIC MAIL**

April 13, 2020

Alex Murshteyn  
Site Acquisition Consultant  
Centerline Communications, LLC  
750 West Center Street, Suite 301  
West Bridgewater, MA 02379

RE: **EM-VER-002-200316** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 401 Wakelee Avenue, Ansonia, Connecticut.

Dear Mr. Murshteyn:

The Connecticut Siting Council (Council) is in receipt of your correspondence of April 9, 2020 submitted in response to the Council's March 25, 2020 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

*s/ Melanie A. Bachman*

Melanie A. Bachman  
Executive Director

MAB/IN/emr

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**From:** Alex Murshteyn <amurshteyn@clinellc.com>  
**Sent:** Thursday, April 9, 2020 11:56 AM  
**To:** Robidoux, Evan  
**Cc:** CSC-DL Siting Council; 'dcassetti@ansoniacct.org'; Peter Fales; Blake Paynter  
**Subject:** RE: Council Incomplete Letter for EM-VER-002-200316 (401 Wakelee Avenue, Ansonia) // Ansonia CT aka 302470 / 12977015

All,

In response to the correspondence below and attached, please find additionally attached an updated Structural Analysis in order to complete this filing. This SA remains well under capacity (85% vs. 83% in the original) and now fully accounts for the proposed mount modifications proposed in the Mount Analysis as well.

Please note that the Construction Drawings dated March 12, 2020 were included at the end of this filing in March, on pages 174-180 of the consolidated PDF. Preliminary CD dated October 31, 2020 was included within the filing, but solely as Appendix C of the Mount Analysis. As requested, final CD accounts for the MA, including all modifications it proposed.

Thanks,

Alex Murshteyn  
508-821-0159



**AMERICAN TOWER®**  
CORPORATION

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## Structural Analysis Report

**Structure** : 196 ft Self Supported Tower  
**ATC Site Name** : Ansonia Wakelee, CT  
**ATC Asset Number** : 302470  
**Engineering Number** : 12977015\_C3\_05  
**Proposed Carrier** : VERIZON WIRELESS  
**Carrier Site Name** : Ansonia  
**Carrier Site Number** : 15298373  
**Site Location** : 401 Wakelee Ave  
Ansonia, CT 06401-1226  
41.356100,-73.092000  
**County** : New Haven  
**Date** : April 2, 2020  
**Max Usage** : 85%  
**Result** : Pass

Prepared By:  
Jennifer Yu  
Structural Engineer I

Reviewed By:



**COA: PEC.0001553**



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## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 196 ft self supported tower to reflect the change in loading by VERIZON WIRELESS.

## Supporting Documents

<b>Tower Drawings</b>	Rohn Drawing #A991899, dated July 7, 1999
<b>Foundation Drawing</b>	Rohn Drawing #A992523-1, dated September 22, 1999
<b>Geotechnical Report</b>	Tectonic Engineering Consultants W.O. #1170.C754, dated May 20, 1999
<b>Mount Analysis</b>	Trylon Project #152690, dated March 7, 2020

## 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/ 3/4" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
<b>Structure Class:</b>	II
<b>Exposure Category:</b>	C
<b>Topographic Category:</b>	1
<b>Crest Height:</b>	0 ft
<b>Spectral Response:</b>	$S_s = 0.19, S_1 = 0.06$
<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**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
192.0	3	Alcatel-Lucent 1900 MHz 4X45 RRH	Sector Frame	(4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
188.0	3	Alcatel-Lucent 800MHz RRH and Type 1 Notch Filter			
185.0	3	KMW ET-X-WM-18-65-8P			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	Alcatel-Lucent 800 MHz RRH			
	1	RFS APXVSP18-C-A20			
	1	Powerwave Allgon P40-16-XLPP-RRR			
	2	Powerwave Allgon P40-16-XLPP-RRR			
177.0	2	RFS DB-T1-6Z-8AB-OZ	-	(6) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
167.0	1	CCI TPA65R-BU8D	Sector Frame	(2) 0.39" (10mm) Fiber Trunk (8) 0.78" (19.7mm) 8 AWG 6 (12) 1 1/4" Coax (1) 2" conduit	AT&T MOBILITY
	1	CCI OPA-65R-LCUU-H8			
	2	CCI TPA65R-BU6D			
	1	CCI OPA65R-BU8B			
	2	CCI OPA-65R-LCUU-H6			
	2	CCI OPA65R-BU6A			
	3	Ericsson RRUS-32 (77 lbs)			
	3	Ericsson RRUS E2 B29			
	3	Ericsson RRUS 11 (Band 12) (55 lb)			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson Radio 8843 - B2 + B66A (w/ protruding items)			
	3	Ericsson RRUS 4478 B5			
	3	Raycap DC6-48-60-18-8F ("Squid")			
	1	Raycap DC6-48-60-0-8F (24" Height)			
6	Kaelus DBCT108F1V92-1				
6	Powerwave Allgon TT19-08BP111-001				
157.0	3	Kathrein Scala 742 213	Leg	(6) 1 5/8" Coax	METRO PCS INC
148.0	3	Ericsson Radio 4449 B12,B71	Sector Frame	(1) 1 1/4" (1.25"-31.8mm) Fiber (3) 1 5/8" (1.63"-41.3mm) Fiber (6) 1 5/8" Coax	T-MOBILE
	3	Ericsson KRY 112 144/1			
	3	Ericsson AIR 21, 1.3 M, B2A B4P			
	3	Ericsson AIR-32 B2A/B66Aa			
	3	Ericsson RRUS 32 (50.8 lbs)			
	3	RFS APXVAARR24_43-U-NA20			
125.0	2	Motorola PTP54600	Leg	(2) 1/4" Coax	CITY OF ANSONIA, CT
85.0	1	Generic 10' Dipole	Stand-Off	(1) 1/2" Coax	
76.0	1	PCTEL GPS-TMG-HR-26N	Stand-Off	(1) 1/2" Coax	



**Equipment to be Removed**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
177.0	3	Alcatel-Lucent B13 RRH4x30-4R 700U	Sector Frame	(6) 1 5/8" Coax	VERIZON WIRELESS
	3	Alcatel-Lucent PCS B25 RRH2x60/4x30			
	3	Alcatel-Lucent B66 RRH4x45			
	6	Andrew SBNHH-1D65B			
	1	Swedcom SLCP 2x6014			
	1	Amphenol Antel BXA-70063-6BF-EDIN-X			
	1	Powerwave Allgon P65-16-XL-2			
	3	Antel BXA-80080/4CF			

**Proposed Equipment**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
177.0	3	Samsung Outdoor CBRS 20W RRH	Sector Frame with Modifications	-	VERIZON WIRELESS
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung B5/B13 RRH-BR04C			
	3	Commscope SSPX310R			
	3	Amphenol Antel BXA-80080-4CF-EDIN-X			
	6	JMA Wireless MX06FRO660-02			

<sup>1</sup> Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Legs	81%	Pass
Diagonals	85%	Pass
Horizontals	14%	Pass
Anchor Bolts	72%	Pass
Leg Bolts	66%	Pass

**Foundations**

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	301.1	406.5	313.0	77%
Axial (Kips)	343.0	463.1	361.5	78%
Shear (Kips)	54.4	73.4	61.3	84%

\* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1

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



**Deflection, Twist and Sway\***

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
177.0	Samsung Outdoor CBRS 20W RRH	VERIZON WIRELESS	0.366	0.011	0.236
	Samsung B2/B66A RRH-BR049				
	Samsung B5/B13 RRH-BR04C				
	Commscope SSPX310R				
	Amphenol Antel BXA-80080-4CF-EDIN-X				
JMA Wireless MX06FRO660-02					

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





## Standard Conditions

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

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

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

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

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

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

Quadrant 1

196.00

Sect 10

180.00

Sect 9

160.00

Sect 8

140.00

Sect 7

120.00

Sect 6

100.00

Sect 5

80.00

Sect 4

60.00

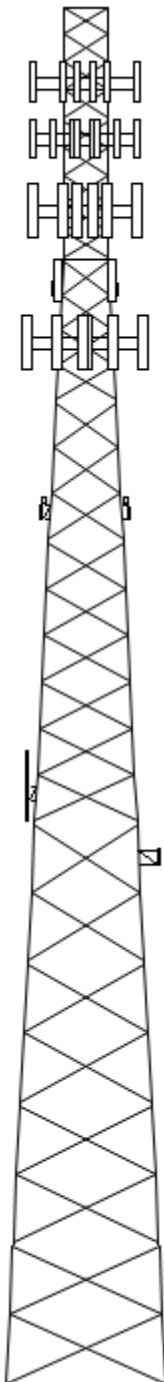
Sect 3

40.00

Sect 2

20.00

Sect 1



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Loads: 97 mph no ice  
50 mph w/ 3/4" radial ice  
Site Class: D Ss: 0.19 S1: 0.06  
60 mph Serviceability

### Job Information

Client : VERIZON WIRELESS

Tower : 302470

Location : Ansonia

Base Width : 23.00 ft

Code : ANSI/TIA-222-G

Top Width : 6.65 ft

Tower Ht : 196.00 ft

Shape : Triangle

### Sections Properties

Section	Leg Members	Diagonal Members	Horizontal Members
1	PX 50 ksi 8" DIA PIPE	SAE 50 ksi 4X4X0.25	
2	PSP 50 ksi ROHN 8 EHS	SAE 50 ksi 4X4X0.25	
3	PSP 50 ksi ROHN 8 EHS	SAE 50 ksi 3.5X3.5X0.25	
4	PX 50 ksi 6" DIA PIPE	SAE 50 ksi 3.5X3.5X0.25	
5	PSP 50 ksi ROHN 6 EHS	SAE 50 ksi 3X3X0.25	
6 - 7	PX 50 ksi 5" DIA PIPE	SAE 36 ksi 2.5X2.5X0.25	
8	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 2X2X0.25	SAE 36 ksi 2X2X0.125
9	PX 50 ksi 3" DIA PIPE	SAE 36 ksi 2X2X0.1875	
10	PST 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875	SAE 36 ksi 2X2X0.125

### Discrete Appurtenance

Elev (ft)	Type	Qty	Description
192.00		3	Alcatel-Lucent 1900 MHz 4X45 R
188.00		3	Alcatel-Lucent 800MHz RRH and
185.00	Mounting Frame	3	Round Sector Frames
185.00	Panel	1	Powerwave Allgon P40-16-XLPP-R
185.00	Panel	2	Powerwave Allgon P40-16-XLPP-R
185.00	Panel	1	RFS APXVSP18-C-A20
185.00	Panel	3	KMW ET-X-WM-18-65-8P
185.00		3	Alcatel-Lucent TD-RRH8x20-25 w
185.00		3	Alcatel-Lucent 800 MHz RRH
177.00	Mounting Frame	3	Flat Light Sector Frames
177.00	Panel	6	JMA Wireless MX06FRO660-02
177.00		2	RFS DB-T1-6Z-8AB-0Z
177.00	Panel	3	Amphenol Antel BXA-80080-4CF-E
177.00	Panel	3	Commscope SSPX310R
177.00		3	Samsung B5/B13 RRH-BR04C
177.00		3	Samsung B2/B66A RRH-BR049
177.00		3	Samsung Outdoor CBRS 20W
167.00	Mounting Frame	3	Round Sector Frames
167.00		6	Kaelus DBCT108F1V92-1
167.00		6	Powerwave Allgon TT19-08BP111-
167.00	Panel	1	CCI TPA65R-BU8D
167.00	Panel	1	CCI OPA-65R-LCUU-H8
167.00	Panel	2	CCI TPA65R-BU6D
167.00	Panel	1	CCI OPA65R-BU8B
167.00	Panel	2	CCI OPA-65R-LCUU-H6
167.00	Panel	2	CCI OPA65R-BU6A
167.00		3	Ericsson RRUS-32 (77 lbs)
167.00		3	Ericsson RRUS E2 B29
167.00		3	Ericsson RRUS 11 (Band 12) (55
167.00		3	Ericsson RRUS 4478 B14
167.00		3	Ericsson Radio 8843 - B2 + B66
167.00		3	Ericsson RRUS 4478 B5
167.00		1	Raycap DC6-48-60-0-8F (24" Hei
167.00		3	Raycap DC6-48-60-18-8F ("Squid
157.00	Panel	3	Kathrein Scala 742 213
148.00	Mounting Frame	3	Round Sector Frame
148.00	Panel	3	RFS APXVAARR24 43-U-NA20
148.00	Panel	3	Ericsson AIR-32 B2A/B66Aa
148.00	Panel	3	Ericsson AIR 21, 1.3 M, B2A B4
148.00		3	Ericsson RRUS 32 (50.8 lbs)
148.00		3	Ericsson Radio 4449 B12,B71
148.00		3	Ericsson KRY 112 144/1
125.00	Panel	2	Motorola PTP54600
102.00	Straight Arm	2	Standoffs

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Job Information		
Client : VERIZON WIRELESS		
Tower : 302470	Location : Ansonia	Base Width : 23.00 ft
Code : ANSI/TIA-222-G		Top Width : 6.65 ft
		Tower Ht : 196.00 ft
		Shape : Triangle

85.00 Whip	1	Generic 10' Dipole
80.00 Straight Arm	1	Standoffs
76.00 Straight Arm	1	Standoffs
76.00 Whip	1	PCTEL GPS-TMG-HR-26N

Linear Appurtenance			
Elev (ft)			
From	To	Qty	Description
8.00	194.00	1	Wave Guide
8.00	185.00	1	Wave Guide
8.00	185.00	1	1 1/4" Hybriflex Cab
8.00	185.00	3	1 1/4" Hybriflex Cab
8.00	177.00	2	1 5/8" Hybriflex
8.00	177.00	6	1 5/8" Coax
8.00	167.00	1	Wave Guide
8.00	167.00	1	2" conduit
8.00	167.00	12	1 1/4" Coax
8.00	167.00	8	0.78" (19.7mm) 8 AWG
8.00	167.00	2	0.39" (10mm) Fiber T
8.00	157.00	1	Waveguide
8.00	157.00	6	1 5/8" Coax
8.00	148.00	1	Wave Guide
0.00	148.00	6	1 5/8" Coax
0.00	148.00	3	1 5/8" (1.63"-41.3mm
0.00	148.00	1	1 1/4" (1.25"- 31.8m
8.00	125.00	2	1/4" Coax
8.00	85.00	1	1/2" Coax
8.00	76.00	1	1/2" Coax

Global Base Foundation Design Loads			
Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	6,829.55	55.78	61.33
DL + WL + IL	2,334.05	160.77	21.73

Individual Base Foundation Design Loads		
Vertical (kip)	Uplift (kip)	Horizontal (kip)
361.47	313.01	37.29

Site Number: 302470

Code:

ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:37 AM

Customer: VERIZON WIRELESS

### Analysis Parameters

Location:	New Haven County, CT	Height (ft):	196
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	23.00
Tower Manufacturer:	Rohn	Top Face Width (ft):	6.65
Tower Type:	Self Support	Anchor Bolt Detail Type	d
Kd:			
Ke:			

### Ice & Wind Parameters

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

### Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	0.95		
$T_L$ (sec):	6	p:	1.3
$S_s$ :	0.190	$S_1$ :	0.060
$F_a$ :	1.600	$F_v$ :	2.400
$S_{ds}$ :	0.203	$S_{d1}$ :	0.096
		$C_s$ :	0.034
		$C_s$ , Max:	0.034
		$C_s$ , Min:	0.030

### Load Cases

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

### Tower Loading

**Discrete Appurtenance Properties** 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
192.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	29.73	113	216
188.0	Alcatel-Lucent	3	64	1.8	1.3	13.8	13.0	0.80	0.50	0.0	0.0	29.60	87	230
185.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	29.50	103	191
185.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	29.50	238	252
185.0	KMW ET-X-WM-18-	3	36	6.7	5.1	12.0	4.3	0.80	0.63	0.0	0.0	29.50	405	131
185.0	Powerwave Allgon	2	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	29.50	582	154
185.0	Powerwave Allgon	1	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	29.50	291	77
185.0	RFS APXVSP18-C-	1	57	8.0	6.0	11.8	7.0	0.80	1.00	0.0	0.0	29.50	257	68
185.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	29.50	975	1080
177.0	Amphenol Antel BXA-	3	12	3.6	4.0	8.0	5.9	0.80	0.72	0.0	0.0	29.22	245	43
177.0	Commscope	3	17	2.9	2.5	11.8	4.5	0.80	0.67	0.0	0.0	29.22	185	59
177.0	Flat Light Sector	3	450	20.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	29.22	1198	1620
177.0	JMA Wireless	6	46	9.9	5.9	15.4	10.7	0.80	0.71	0.0	0.0	29.22	1337	331
177.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.72	1.0	220.0	29.26	220	106
177.0	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.0	29.22	89	304
177.0	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.0	29.22	89	253
177.0	Samsung Outdoor	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.0	29.22	41	67
167.0	CCI OPA-65R-LCUU-	2	73	9.7	6.0	14.8	7.4	0.80	0.75	0.0	0.0	28.87	455	175
167.0	CCI OPA-65R-LCUU-	1	88	13.0	7.7	14.8	7.4	0.80	1.00	0.0	0.0	28.87	408	106
167.0	CCI OPA65R-BU6A	2	58	7.9	5.9	11.7	8.4	0.80	0.79	0.0	0.0	28.87	390	138
167.0	CCI OPA65R-BU8B	1	69	11.2	8.0	11.7	8.4	0.80	1.00	0.0	0.0	28.87	352	83
167.0	CCI TPA65R-BU6D	2	68	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.0	28.87	582	162
167.0	CCI TPA65R-BU8D	1	83	18.1	8.0	21.0	7.8	0.80	1.00	0.0	0.0	28.87	568	99
167.0	Ericsson Radio 8843	3	75	2.0	1.5	13.2	11.3	0.80	0.50	0.0	0.0	28.87	93	270
167.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	28.87	119	198
167.0	Ericsson RRUS 4478	3	59	2.0	1.5	13.4	8.3	0.80	0.50	0.0	0.0	28.87	95	214
167.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	28.87	87	216
167.0	Ericsson RRUS E2	3	60	3.1	1.7	18.5	7.5	0.80	0.50	0.0	0.0	28.87	148	216
167.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.50	0.0	0.0	28.87	156	277
167.0	Kaelus	6	14	0.6	0.9	7.1	6.8	0.80	0.50	0.0	0.0	28.87	60	100
167.0	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	0.0	0.0	28.87	52	115
167.0	Raycap DC6-48-60-0-	1	33	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	28.87	46	39
167.0	Raycap DC6-48-60-	3	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	28.87	139	114
167.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.87	852	1080
157.0	Kathrein Scala 742	3	22	5.1	6.4	6.1	2.7	1.00	0.67	0.0	0.0	28.49	400	79
148.0	Ericsson AIR 21, 1.3	3	83	6.0	4.7	12.0	8.0	0.80	0.71	0.0	0.0	28.14	394	299
148.0	Ericsson AIR-32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	28.14	425	476
148.0	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	28.14	16	40
148.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	28.14	75	266
148.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	0.0	0.0	28.14	166	183
148.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	28.14	1171	460
148.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.14	831	1080
125.0	Motorola PTP54600	2	12	1.8	1.2	14.5	3.8	1.00	0.50	4.0	260.6	27.34	65	29
102.0	Standoffs	2	75	2.5	0.0	0.0	0.0	1.00	0.90	0.0	0.0	26.02	159	180
85.00	Generic 10' Dipole	1	30	3.8	10.0	3.0	3.0	1.00	1.00	0.0	0.0	25.04	128	36
80.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.72	84	90
76.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	0.0	0.0	24.46	3	1
76.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.46	83	90
<b>Totals</b>		<b>126</b>	<b>10078</b>	<b>683.6</b>									<b>15059</b>	<b>12094</b>

### Tower Loading

**Discrete Appurtenance Properties** 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
192.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	29.73	113	162
188.0	Alcatel-Lucent	3	64	1.8	1.3	13.8	13.0	0.80	0.50	0.0	0.0	29.60	87	173
185.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	29.50	103	143
185.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	29.50	238	189
185.0	KMW ET-X-WM-18-	3	36	6.7	5.1	12.0	4.3	0.80	0.63	0.0	0.0	29.50	405	98
185.0	Powerwave Allgon	2	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	29.50	582	115
185.0	Powerwave Allgon	1	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	29.50	291	58
185.0	RFS APXVSP18-C-	1	57	8.0	6.0	11.8	7.0	0.80	1.00	0.0	0.0	29.50	257	51
185.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	29.50	975	810
177.0	Amphenol Antel BXA-	3	12	3.6	4.0	8.0	5.9	0.80	0.72	0.0	0.0	29.22	245	32
177.0	Commscope	3	17	2.9	2.5	11.8	4.5	0.80	0.67	0.0	0.0	29.22	185	45
177.0	Flat Light Sector	3	450	20.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	29.22	1198	1215
177.0	JMA Wireless	6	46	9.9	5.9	15.4	10.7	0.80	0.71	0.0	0.0	29.22	1337	248
177.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.72	1.0	220.0	29.26	220	79
177.0	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.0	29.22	89	228
177.0	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.0	29.22	89	190
177.0	Samsung Outdoor	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.0	29.22	41	50
167.0	CCI OPA-65R-LCUU-	2	73	9.7	6.0	14.8	7.4	0.80	0.75	0.0	0.0	28.87	455	131
167.0	CCI OPA-65R-LCUU-	1	88	13.0	7.7	14.8	7.4	0.80	1.00	0.0	0.0	28.87	408	79
167.0	CCI OPA65R-BU6A	2	58	7.9	5.9	11.7	8.4	0.80	0.79	0.0	0.0	28.87	390	104
167.0	CCI OPA65R-BU8B	1	69	11.2	8.0	11.7	8.4	0.80	1.00	0.0	0.0	28.87	352	62
167.0	CCI TPA65R-BU6D	2	68	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.0	28.87	582	122
167.0	CCI TPA65R-BU8D	1	83	18.1	8.0	21.0	7.8	0.80	1.00	0.0	0.0	28.87	568	74
167.0	Ericsson Radio 8843	3	75	2.0	1.5	13.2	11.3	0.80	0.50	0.0	0.0	28.87	93	203
167.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	28.87	119	149
167.0	Ericsson RRUS 4478	3	59	2.0	1.5	13.4	8.3	0.80	0.50	0.0	0.0	28.87	95	160
167.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	28.87	87	162
167.0	Ericsson RRUS E2	3	60	3.1	1.7	18.5	7.5	0.80	0.50	0.0	0.0	28.87	148	162
167.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.50	0.0	0.0	28.87	156	208
167.0	Kaelus	6	14	0.6	0.9	7.1	6.8	0.80	0.50	0.0	0.0	28.87	60	75
167.0	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	0.0	0.0	28.87	52	86
167.0	Raycap DC6-48-60-0-	1	33	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	28.87	46	30
167.0	Raycap DC6-48-60-	3	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	28.87	139	86
167.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.87	852	810
157.0	Kathrein Scala 742	3	22	5.1	6.4	6.1	2.7	1.00	0.67	0.0	0.0	28.49	400	59
148.0	Ericsson AIR 21, 1.3	3	83	6.0	4.7	12.0	8.0	0.80	0.71	0.0	0.0	28.14	394	224
148.0	Ericsson AIR-32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	28.14	425	357
148.0	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	28.14	16	30
148.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	28.14	75	200
148.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	0.0	0.0	28.14	166	137
148.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	28.14	1171	345
148.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.14	831	810
125.0	Motorola PTP54600	2	12	1.8	1.2	14.5	3.8	1.00	0.50	4.0	260.6	27.34	65	22
102.0	Standoffs	2	75	2.5	0.0	0.0	0.0	1.00	0.90	0.0	0.0	26.02	159	135
85.00	Generic 10' Dipole	1	30	3.8	10.0	3.0	3.0	1.00	1.00	0.0	0.0	25.04	128	27
80.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.72	84	68
76.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	0.0	0.0	24.46	3	1
76.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.46	83	68
<b>Totals</b>		<b>126</b>	<b>10078</b>	<b>683.6</b>									<b>15059</b>	<b>9070</b>

### Tower Loading

**Discrete Appurtenance Properties** 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
192.0	Alcatel-Lucent 1900	3	143	3.4	2.1	11.1	10.7	0.80	0.50	0.0	0.0	7.90	28	464
188.0	Alcatel-Lucent	3	139	2.7	1.3	13.8	13.0	0.80	0.50	0.0	0.0	7.86	22	454
185.0	Alcatel-Lucent 800	3	129	3.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	7.84	25	418
185.0	Alcatel-Lucent TD-	3	167	5.4	2.2	18.6	6.7	0.80	0.61	0.0	0.0	7.84	53	543
185.0	KMW ET-X-WM-18-	3	166	9.1	5.1	12.0	4.3	0.80	0.63	0.0	0.0	7.84	92	521
185.0	Powerwave Allgon	2	254	11.3	4.5	20.0	6.5	0.80	1.00	0.0	0.0	7.84	121	534
185.0	Powerwave Allgon	1	254	11.3	4.5	20.0	6.5	0.80	1.00	0.0	0.0	7.84	60	267
185.0	RFS APXVSP18-C-	1	234	10.9	6.0	11.8	7.0	0.80	1.00	0.0	0.0	7.84	58	245
185.0	Round Sector	3	621	24.7	0.0	0.0	0.0	0.75	0.75	0.0	0.0	7.84	277	2044
177.0	Amphenol Antel BXA-	3	101	5.4	4.0	8.0	5.9	0.80	0.72	0.0	0.0	7.76	62	311
177.0	Comscope	3	83	4.1	2.5	11.8	4.5	0.80	0.67	0.0	0.0	7.76	44	259
177.0	Flat Light Sector	3	794	37.1	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.76	369	2651
177.0	JMA Wireless	6	289	12.7	5.9	15.4	10.7	0.80	0.71	0.0	0.0	7.76	285	1791
177.0	RFS DB-T1-6Z-8AB-	2	172	6.2	2.0	24.0	10.0	0.80	0.72	1.0	47.5	7.77	48	361
177.0	Samsung B2/B66A	3	149	2.8	1.3	15.0	10.0	0.80	0.50	0.0	0.0	7.76	22	498
177.0	Samsung B5/B13	3	128	2.8	1.3	15.0	8.1	0.80	0.50	0.0	0.0	7.76	22	427
177.0	Samsung Outdoor	3	43	1.5	1.0	8.5	4.1	0.80	0.50	0.0	0.0	7.76	12	140
167.0	CCI OPA-65R-LCUU-	2	280	12.5	6.0	14.8	7.4	0.80	0.75	0.0	0.0	7.67	98	588
167.0	CCI OPA-65R-LCUU-	1	349	16.6	7.7	14.8	7.4	0.80	1.00	0.0	0.0	7.67	87	366
167.0	CCI OPA65R-BU6A	2	243	10.6	5.9	11.7	8.4	0.80	0.79	0.0	0.0	7.67	88	509
167.0	CCI OPA65R-BU8B	1	314	14.5	8.0	11.7	8.4	0.80	1.00	0.0	0.0	7.67	76	328
167.0	CCI TPA65R-BU6D	2	333	15.7	5.9	21.0	7.8	0.80	0.72	0.0	0.0	7.67	118	692
167.0	CCI TPA65R-BU8D	1	432	21.8	8.0	21.0	7.8	0.80	1.00	0.0	0.0	7.67	114	449
167.0	Ericsson Radio 8843	3	148	2.9	1.5	13.2	11.3	0.80	0.50	0.0	0.0	7.67	23	488
167.0	Ericsson RRUS 11	3	123	3.6	1.5	17.0	7.2	0.80	0.50	0.0	0.0	7.67	28	403
167.0	Ericsson RRUS 4478	3	122	3.0	1.5	13.4	8.3	0.80	0.50	0.0	0.0	7.67	23	401
167.0	Ericsson RRUS 4478	3	116	2.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	7.67	22	384
167.0	Ericsson RRUS E2	3	142	4.3	1.7	18.5	7.5	0.80	0.50	0.0	0.0	7.67	34	462
167.0	Ericsson RRUS-32	3	176	4.6	2.5	13.3	9.5	0.80	0.50	0.0	0.0	7.67	36	573
167.0	Kaelus	6	39	1.2	0.9	7.1	6.8	0.80	0.50	0.0	0.0	7.67	19	253
167.0	Powerwave Allgon	6	36	1.1	0.8	6.7	5.4	0.80	0.50	0.0	0.0	7.67	17	238
167.0	Raycap DC6-48-60-0-	1	141	2.2	2.0	11.0	11.0	0.80	1.00	0.0	0.0	7.67	11	148
167.0	Raycap DC6-48-60-	3	94	2.2	2.0	11.0	11.0	0.80	1.00	0.0	0.0	7.67	34	302
167.0	Round Sector	3	618	24.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.67	242	2034
157.0	Kathrein Scala 742	3	135	6.4	6.4	6.1	2.7	1.00	0.67	0.0	0.0	7.57	83	418
148.0	Ericsson AIR 21, 1.3	3	229	8.2	4.7	12.0	8.0	0.80	0.71	0.0	0.0	7.48	89	738
148.0	Ericsson AIR-32	3	292	8.7	4.7	12.9	8.7	0.80	0.71	0.0	0.0	7.48	94	956
148.0	Ericsson KRY 112	3	22	0.8	0.6	6.1	2.7	0.80	0.50	0.0	0.0	7.48	6	72
148.0	Ericsson Radio 4449	3	130	2.5	1.2	13.2	9.3	0.80	0.50	0.0	0.0	7.48	19	435
148.0	Ericsson RRUS 32	3	122	3.8	2.2	12.1	6.7	0.80	0.67	0.0	0.0	7.48	39	398
148.0	RFS	3	521	24.0	8.0	24.0	8.7	0.80	0.63	0.0	0.0	7.48	230	1641
148.0	Round Sector Frame	3	669	31.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.48	297	2186
125.0	Motorola PTP54600	2	51	2.6	1.2	14.5	3.8	1.00	0.50	4.0	64.5	7.26	16	108
102.0	Standoffs	2	100	2.8	0.0	0.0	0.0	1.00	0.90	0.0	0.0	6.91	30	231
85.00	Generic 10' Dipole	1	136	9.5	10.0	3.0	3.0	1.00	1.00	0.0	0.0	6.65	54	142
80.00	Standoffs	1	99	2.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.57	16	114
76.00	PCTEL GPS-TMG-HR-	1	5	0.3	0.4	3.2	3.2	1.00	1.00	0.0	0.0	6.50	1	5
76.00	Standoffs	1	99	2.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.50	16	114
<b>Totals</b>		<b>126</b>	<b>26088</b>	<b>1012.5</b>									<b>3656</b>	<b>28104</b>

### Tower Loading

**Discrete Appurtenance Properties** 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
192.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	11.37	27	180
188.0	Alcatel-Lucent	3	64	1.8	1.3	13.8	13.0	0.80	0.50	0.0	0.0	11.32	21	192
185.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	11.29	25	159
185.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	11.29	57	210
185.0	KMW ET-X-WM-18-	3	36	6.7	5.1	12.0	4.3	0.80	0.63	0.0	0.0	11.29	97	109
185.0	Powerwave Allgon	2	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	11.29	139	128
185.0	Powerwave Allgon	1	64	9.1	4.5	20.0	6.5	0.80	1.00	0.0	0.0	11.29	70	64
185.0	RFS APXVSP18-C-	1	57	8.0	6.0	11.8	7.0	0.80	1.00	0.0	0.0	11.29	62	57
185.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	11.29	233	900
177.0	Amphenol Antel BXA-	3	12	3.6	4.0	8.0	5.9	0.80	0.72	0.0	0.0	11.18	59	36
177.0	Commscope	3	17	2.9	2.5	11.8	4.5	0.80	0.67	0.0	0.0	11.18	44	50
177.0	Flat Light Sector	3	450	20.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.18	287	1350
177.0	JMA Wireless	6	46	9.9	5.9	15.4	10.7	0.80	0.71	0.0	0.0	11.18	320	276
177.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.72	1.0	52.6	11.19	53	88
177.0	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.0	11.18	21	253
177.0	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.0	11.18	21	211
177.0	Samsung Outdoor	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.0	11.18	10	56
167.0	CCI OPA-65R-LCUU-	2	73	9.7	6.0	14.8	7.4	0.80	0.75	0.0	0.0	11.04	109	146
167.0	CCI OPA-65R-LCUU-	1	88	13.0	7.7	14.8	7.4	0.80	1.00	0.0	0.0	11.04	97	88
167.0	CCI OPA65R-BU6A	2	58	7.9	5.9	11.7	8.4	0.80	0.79	0.0	0.0	11.04	93	115
167.0	CCI OPA65R-BU8B	1	69	11.2	8.0	11.7	8.4	0.80	1.00	0.0	0.0	11.04	84	69
167.0	CCI TPA65R-BU6D	2	68	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.0	11.04	139	135
167.0	CCI TPA65R-BU8D	1	83	18.1	8.0	21.0	7.8	0.80	1.00	0.0	0.0	11.04	136	83
167.0	Ericsson Radio 8843	3	75	2.0	1.5	13.2	11.3	0.80	0.50	0.0	0.0	11.04	22	225
167.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	11.04	28	165
167.0	Ericsson RRUS 4478	3	59	2.0	1.5	13.4	8.3	0.80	0.50	0.0	0.0	11.04	23	178
167.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	11.04	21	180
167.0	Ericsson RRUS E2	3	60	3.1	1.7	18.5	7.5	0.80	0.50	0.0	0.0	11.04	35	180
167.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.50	0.0	0.0	11.04	37	231
167.0	Kaelus	6	14	0.6	0.9	7.1	6.8	0.80	0.50	0.0	0.0	11.04	14	83
167.0	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	0.0	0.0	11.04	12	96
167.0	Raycap DC6-48-60-0-	1	33	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	11.04	11	33
167.0	Raycap DC6-48-60-	3	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	11.04	33	95
167.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.04	204	900
157.0	Kathrein Scala 742	3	22	5.1	6.4	6.1	2.7	1.00	0.67	0.0	0.0	10.90	96	66
148.0	Ericsson AIR 21, 1.3	3	83	6.0	4.7	12.0	8.0	0.80	0.71	0.0	0.0	10.77	94	249
148.0	Ericsson AIR-32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	10.77	102	397
148.0	Ericsson KRY 112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	10.77	4	33
148.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	10.77	18	222
148.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.67	0.0	0.0	10.77	40	152
148.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	10.77	280	384
148.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	10.77	199	900
125.0	Motorola PTP54600	2	12	1.8	1.2	14.5	3.8	1.00	0.50	4.0	62.3	10.46	16	24
102.0	Standoffs	2	75	2.5	0.0	0.0	0.0	1.00	0.90	0.0	0.0	9.96	38	150
85.00	Generic 10' Dipole	1	30	3.8	10.0	3.0	3.0	1.00	1.00	0.0	0.0	9.58	31	30
80.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.46	20	75
76.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	0.0	0.0	9.36	1	1
76.00	Standoffs	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.36	20	75
<b>Totals</b>		<b>126</b>	<b>10078</b>	<b>683.6</b>									<b>3601</b>	<b>10078</b>



Site Number: 302470

Code:

ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:37 AM

Customer: VERIZON WIRELESS

## Tower Loading

### Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
8.00	194.0	Wave Guide	1	1.25	5.00	100	3	Individual	0.00	N	1.00	1.00	0.00
8.00	185.0	1 1/4" Hybriflex	3	1.54	1.00	100	2	Individual	0.00	N	1.00	1.00	0.46
8.00	185.0	1 1/4" Hybriflex	1	1.54	1.00	100	2	Individual	0.00	N	1.00	1.00	0.00
8.00	185.0	Wave Guide	1	1.25	5.00	100	2	Individual	0.00	N	1.00	1.00	0.00
8.00	177.0	1 5/8" Coax	6	1.98	0.82	100	3	Individual	0.00	N	1.00	1.00	0.36
8.00	177.0	1 5/8" Hybriflex	2	1.98	1.30	100	3	Individual	0.00	N	1.00	1.00	0.52
8.00	167.0	0.39" (10mm) Fiber	2	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.01
8.00	167.0	0.78" (19.7mm) 8	8	0.78	0.59	100	1	Individual	0.00	N	1.00	1.00	0.01
8.00	167.0	1 1/4" Coax	12	1.55	0.63	100	1	Individual	0.00	N	1.00	1.00	0.00
8.00	167.0	2" conduit	1	2.38	3.65	100	1	Individual	0.00	N	1.00	1.00	0.01
8.00	167.0	Wave Guide	1	1.25	5.00	100	1	Individual	0.00	N	1.00	1.00	0.00
8.00	157.0	1 5/8" Coax	6	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
8.00	157.0	Waveguide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	148.0	1 1/4" (1.25"-	1	1.25	1.05	100	3	Individual	0.00	N	1.00	1.00	0.01
0.00	148.0	1 5/8" (1.63"-	3	1.63	1.61	100	3	Individual	0.00	N	1.00	1.00	0.01
0.00	148.0	1 5/8" Coax	6	1.98	0.82	100	3	Individual	0.00	N	1.00	1.00	0.36
8.00	148.0	Wave Guide	1	1.25	5.00	100	3	Individual	0.00	N	1.00	1.00	0.00
8.00	125.0	1/4" Coax	2	0.34	0.06	100	1	Individual	0.00	N	1.00	1.00	0.00
8.00	85.00	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00
8.00	76.00	1/2" Coax	1	0.63	0.15	100	2	Individual	0.00	N	1.00	1.00	0.00

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:37 AM

Customer: VERIZON WIRELESS

### Equivalent Lateral Force Method

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

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.19
Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.06
Long-Period Transition Period ( $T_L$ - Seconds):	6
Importance Factor ( $I_p$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.20
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.10
Seismic Response Coefficient ( $C_s$ ):	0.03
Upper Limit $C_s$ :	0.03
Lower Limit $C_s$ :	0.03
Period based on Rayleigh Method (sec):	0.95
Redundancy Factor ( $\rho$ ):	1.30
Seismic Force Distribution Exponent (k):	1.22
Total Unfactored Dead Load:	46.49 k
Seismic Base Shear (E):	2.04 k

#### LoadCase (1.2 + 0.2Sds) \* DL + E

#### Seismic

Section	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	820	498,666	0.037	76	1,017
9	170.00	1,739	935,284	0.070	143	2,158
8	150.00	2,802	1,292,59	0.097	198	3,476
7	130.00	3,506	1,357,39	0.102	208	4,349
6	110.00	3,637	1,147,70	0.086	176	4,511
5	90.00	4,114	1,015,50	0.076	155	5,103
4	70.00	4,407	799,752	0.060	122	5,467
3	50.00	4,803	577,390	0.043	88	5,959
2	30.00	5,144	330,859	0.025	51	6,381
1	10.00	5,437	91,109	0.007	14	6,744
Alcatel-Lucent 1900 MHz 4X45 RRH	192.00	180	112,344	0.008	17	223
Alcatel-Lucent 800MHz RRH and Type 1	188.00	192	116,785	0.009	18	238
Alcatel-Lucent 800 MHz RRH	185.00	159	94,826	0.007	15	197
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	185.00	210	125,242	0.009	19	261
KMW ET-X-WM-18-65-8P	185.00	109	65,126	0.005	10	135
Powerwave Allgon P40-16-XLPP-RRR	185.00	128	76,338	0.006	12	159
Powerwave Allgon P40-16-XLPP-RRR	185.00	64	38,169	0.003	6	79
RFS APXVSP18-C-A20	185.00	57	33,994	0.003	5	71
Round Sector Frames	185.00	900	536,752	0.040	82	1,116
Amphenol Antel BXA-80080-4CF-EDIN-X	177.00	36	20,339	0.002	3	45
Commscope SSPX310R	177.00	49	27,966	0.002	4	61
Flat Light Sector Frames	177.00	1,350	762,714	0.057	117	1,675
JMA Wireless MX06FRO660-02	177.00	276	155,933	0.012	24	342
RFS DB-T1-6Z-8AB-0Z	177.00	88	49,718	0.004	8	109
Samsung B2/B66A RRH-BR049	177.00	253	143,051	0.011	22	314

Equivalent Lateral Force Method

Samsung B5/B13 RRH-BR04C	177.00	211	119,153	0.009	18	262
Samsung Outdoor CBRS 20W RRH	177.00	56	31,526	0.002	5	69
CCI OPA-65R-LCUU-H6	167.00	146	76,818	0.006	12	181
CCI OPA-65R-LCUU-H8	167.00	88	46,301	0.003	7	109
CCI OPA65R-BU6A	167.00	115	60,507	0.005	9	143
CCI OPA65R-BU8B	167.00	69	36,304	0.003	6	86
CCI TPA65R-BU6D	167.00	135	71,030	0.005	11	167
CCI TPA65R-BU8D	167.00	83	43,407	0.003	7	102
Ericsson Radio 8843 - B2 + B66A (w/ prot	167.00	225	118,383	0.009	18	279
Ericsson RRUS 11 (Band 12) (55 lb)	167.00	165	86,814	0.007	13	205
Ericsson RRUS 4478 B14	167.00	178	93,760	0.007	14	221
Ericsson RRUS 4478 B5	167.00	180	94,549	0.007	14	223
Ericsson RRUS E2 B29	167.00	180	94,707	0.007	14	223
Ericsson RRUS-32 (77 lbs)	167.00	231	121,540	0.009	19	287
Kaelus DBCT108F1V92-1	167.00	83	43,881	0.003	7	103
Powerwave Allgon TT19-08BP111-001	167.00	96	50,510	0.004	8	119
Raycap DC6-48-60-0-8F (24" Height)	167.00	33	17,258	0.001	3	41
Raycap DC6-48-60-18-8F ("Squid")	167.00	95	50,195	0.004	8	118
Round Sector Frames	167.00	900	473,533	0.036	72	1,116
Kathrein Scala 742 213	157.00	66	32,198	0.002	5	82
Ericsson AIR 21, 1.3 M, B2A B4P	148.00	249	113,003	0.008	17	309
Ericsson AIR-32 B2A/B66Aa	148.00	397	179,988	0.014	28	492
Ericsson KRY 112 144/1	148.00	33	14,976	0.001	2	41
Ericsson Radio 4449 B12,B71	148.00	222	100,750	0.008	15	275
Ericsson RRUS 32 (50.8 lbs)	148.00	152	69,163	0.005	11	189
RFS APXVAARR24_43-U-NA20	148.00	384	174,134	0.013	27	476
Round Sector Frame	148.00	900	408,445	0.031	63	1,116
Motorola PTP54600	125.00	24	8,931	0.001	1	30
Standoffs	102.00	150	43,159	0.003	7	186
Generic 10' Dipole	85.00	30	6,905	0.001	1	37
Standoffs	80.00	75	16,028	0.001	2	93
PCTEL GPS-TMG-HR-26N	76.00	1	120	0.000	0	1
Standoffs	76.00	75	15,052	0.001	2	93
		46,486	13,318,580	1.000	2,039	57,668

LoadCase (0.9 - 0.2Sds) \* DL + E

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	820	498,666	0.037	76	705
9	170.00	1,739	935,284	0.070	143	1,495
8	150.00	2,802	1,292,59	0.097	198	2,408
7	130.00	3,506	1,357,39	0.102	208	3,013
6	110.00	3,637	1,147,70	0.086	176	3,126
5	90.00	4,114	1,015,50	0.076	155	3,536
4	70.00	4,407	799,752	0.060	122	3,788
3	50.00	4,803	577,390	0.043	88	4,128
2	30.00	5,144	330,859	0.025	51	4,421
1	10.00	5,437	91,109	0.007	14	4,673
Alcatel-Lucent 1900 MHz 4X45 RRH	192.00	180	112,344	0.008	17	155
Alcatel-Lucent 800MHz RRH and Type 1	188.00	192	116,785	0.009	18	165
Alcatel-Lucent 800 MHz RRH	185.00	159	94,826	0.007	15	137
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	185.00	210	125,242	0.009	19	180
KMW ET-X-WM-18-65-8P	185.00	109	65,126	0.005	10	94

Site Number: 302470

Code:

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:37 AM

Customer: VERIZON WIRELESS

### Equivalent Lateral Force Method

Powerwave Allgon P40-16-XLPP-RRR	185.00	128	76,338	0.006	12	110
Powerwave Allgon P40-16-XLPP-RRR	185.00	64	38,169	0.003	6	55
RFS APXVSP18-C-A20	185.00	57	33,994	0.003	5	49
Round Sector Frames	185.00	900	536,752	0.040	82	774
Amphenol Antel BXA-80080-4CF-EDIN-X	177.00	36	20,339	0.002	3	31
Commscope SSPX310R	177.00	49	27,966	0.002	4	43
Flat Light Sector Frames	177.00	1,350	762,714	0.057	117	1,160
JMA Wireless MX06FRO660-02	177.00	276	155,933	0.012	24	237
RFS DB-T1-6Z-8AB-0Z	177.00	88	49,718	0.004	8	76
Samsung B2/B66A RRH-BR049	177.00	253	143,051	0.011	22	218
Samsung B5/B13 RRH-BR04C	177.00	211	119,153	0.009	18	181
Samsung Outdoor CBRS 20W RRH	177.00	56	31,526	0.002	5	48
CCI OPA-65R-LCUU-H6	167.00	146	76,818	0.006	12	125
CCI OPA-65R-LCUU-H8	167.00	88	46,301	0.003	7	76
CCI OPA65R-BU6A	167.00	115	60,507	0.005	9	99
CCI OPA65R-BU8B	167.00	69	36,304	0.003	6	59
CCI TPA65R-BU6D	167.00	135	71,030	0.005	11	116
CCI TPA65R-BU8D	167.00	83	43,407	0.003	7	71
Ericsson Radio 8843 - B2 + B66A (w/ prot	167.00	225	118,383	0.009	18	193
Ericsson RRUS 11 (Band 12) (55 lb)	167.00	165	86,814	0.007	13	142
Ericsson RRUS 4478 B14	167.00	178	93,760	0.007	14	153
Ericsson RRUS 4478 B5	167.00	180	94,549	0.007	14	154
Ericsson RRUS E2 B29	167.00	180	94,707	0.007	14	155
Ericsson RRUS-32 (77 lbs)	167.00	231	121,540	0.009	19	199
Kaelus DBCT108F1V92-1	167.00	83	43,881	0.003	7	72
Powerwave Allgon TT19-08BP111-001	167.00	96	50,510	0.004	8	83
Raycap DC6-48-60-0-8F (24" Height)	167.00	33	17,258	0.001	3	28
Raycap DC6-48-60-18-8F ("Squid")	167.00	95	50,195	0.004	8	82
Round Sector Frames	167.00	900	473,533	0.036	72	774
Kathrein Scala 742 213	157.00	66	32,198	0.002	5	57
Ericsson AIR 21, 1.3 M, B2A B4P	148.00	249	113,003	0.008	17	214
Ericsson AIR-32 B2A/B66Aa	148.00	397	179,988	0.014	28	341
Ericsson KRY 112 144/1	148.00	33	14,976	0.001	2	28
Ericsson Radio 4449 B12,B71	148.00	222	100,750	0.008	15	191
Ericsson RRUS 32 (50.8 lbs)	148.00	152	69,163	0.005	11	131
RFS APXVAARR24_43-U-NA20	148.00	384	174,134	0.013	27	330
Round Sector Frame	148.00	900	408,445	0.031	63	774
Motorola PTP54600	125.00	24	8,931	0.001	1	21
Standoffs	102.00	150	43,159	0.003	7	129
Generic 10' Dipole	85.00	30	6,905	0.001	1	26
Standoffs	80.00	75	16,028	0.001	2	64
PCTEL GPS-TMG-HR-26N	76.00	1	120	0.000	0	1
Standoffs	76.00	75	15,052	0.001	2	64

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46,486      13,318,580      1.000      2,039      39,953

Site Number: 302470

Code:

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:37 AM

Customer: VERIZON WIRELESS

### Equivalent Modal Analysis Method

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

Spectral Response Acceleration for Short Period ( $S_{s1}$ ):	0.19
Spectral Response Acceleration at 1.0 Second Period ( $S_{s1}$ ):	0.06
Importance Factor ( $I_p$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.20
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.10
Period Based on Rayleigh Method (sec):	0.95
Redundancy Factor ( $\rho$ ):	1.30

#### LoadCase (1.2 + 0.2Sds) \* DL + E

#### Seismic

Section	Height		Seismic				$S_{az}$	Horizontal Force (lb)	Vertical Force (lb)
	Above Base (ft)	Weight (lb)	a	b	c				
10	188.00	820	1.739	1.275	0.876	0.327	116	1,017	
9	170.00	1,739	1.422	0.326	0.455	0.165	124	2,158	
8	150.00	2,802	1.107	-0.066	0.191	0.064	78	3,476	
7	130.00	3,506	0.831	-0.117	0.063	0.033	50	4,349	
6	110.00	3,637	0.595	-0.051	0.014	0.038	61	4,511	
5	90.00	4,114	0.399	0.019	0.007	0.047	84	5,103	
4	70.00	4,407	0.241	0.057	0.018	0.046	88	5,467	
3	50.00	4,803	0.123	0.070	0.034	0.038	80	5,959	
2	30.00	5,144	0.044	0.071	0.042	0.031	68	6,381	
1	10.00	5,437	0.005	0.044	0.025	0.018	42	6,744	
Alcatel-Lucent 1900 MHz 4X45	192.00	180	1.814	1.601	1.001	0.372	29	223	
Alcatel-Lucent 800MHz RRH and	188.00	192	1.739	1.275	0.876	0.327	27	238	
Alcatel-Lucent 800 MHz RRH	185.00	159	1.684	1.062	0.790	0.295	20	197	
Alcatel-Lucent TD-RRH8x20-25	185.00	210	1.684	1.062	0.790	0.295	27	261	
KMW ET-X-WM-18-65-8P	185.00	109	1.684	1.062	0.790	0.295	14	135	
Powerwave Allgon P40-16-XLPP-	185.00	128	1.684	1.062	0.790	0.295	16	159	
Powerwave Allgon P40-16-XLPP-	185.00	64	1.684	1.062	0.790	0.295	8	79	
RFS APXVSPPT8-C-A20	185.00	57	1.684	1.062	0.790	0.295	7	71	
Round Sector Frames	185.00	900	1.684	1.062	0.790	0.295	115	1,116	
Amphenol Antel BXA-80080-4CF-	177.00	36	1.541	0.608	0.593	0.219	3	45	
Commscope SSPX310R	177.00	49	1.541	0.608	0.593	0.219	5	61	
Flat Light Sector Frames	177.00	1,350	1.541	0.608	0.593	0.219	128	1,675	
JMA Wireless MX06FRO660-02	177.00	276	1.541	0.608	0.593	0.219	26	342	
RFS DB-T1-6Z-8AB-0Z	177.00	88	1.541	0.608	0.593	0.219	8	109	
Samsung B2/B66A RRH-BR049	177.00	253	1.541	0.608	0.593	0.219	24	314	
Samsung B5/B13 RRH-BR04C	177.00	211	1.541	0.608	0.593	0.219	20	262	
Samsung Outdoor CBRS 20W	177.00	56	1.541	0.608	0.593	0.219	5	69	
CCI OPA-65R-LCUU-H6	167.00	146	1.372	0.233	0.404	0.144	9	181	
CCI OPA-65R-LCUU-H8	167.00	88	1.372	0.233	0.404	0.144	6	109	
CCI OPA65R-BU6A	167.00	115	1.372	0.233	0.404	0.144	7	143	
CCI OPA65R-BU8B	167.00	69	1.372	0.233	0.404	0.144	4	86	
CCI TPA65R-BU6D	167.00	135	1.372	0.233	0.404	0.144	8	167	
CCI TPA65R-BU8D	167.00	83	1.372	0.233	0.404	0.144	5	102	
Ericsson Radio 8843 - B2 + B66A	167.00	225	1.372	0.233	0.404	0.144	14	279	
Ericsson RRUS 11 (Band 12) (55	167.00	165	1.372	0.233	0.404	0.144	10	205	
Ericsson RRUS 4478 B14	167.00	178	1.372	0.233	0.404	0.144	11	221	
Ericsson RRUS 4478 B5	167.00	180	1.372	0.233	0.404	0.144	11	223	
Ericsson RRUS E2 B29	167.00	180	1.372	0.233	0.404	0.144	11	223	
Ericsson RRUS-32 (77 lbs)	167.00	231	1.372	0.233	0.404	0.144	14	287	
Kaelus DBCT108F1V92-1	167.00	83	1.372	0.233	0.404	0.144	5	103	

Site Number: 302470

Code:

ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:37 AM

Customer: VERIZON WIRELESS

Equivalent Modal Analysis Method

Powerwave Allgon TT19-	167.00	96	1.372	0.233	0.404	0.144	6	119
Raycap DC6-48-60-0-8F (24"	167.00	33	1.372	0.233	0.404	0.144	2	41
Raycap DC6-48-60-18-8F ("Squid")	167.00	95	1.372	0.233	0.404	0.144	6	118
Round Sector Frames	167.00	900	1.372	0.233	0.404	0.144	56	1,116
Kathrein Scala 742 213	157.00	66	1.213	0.017	0.264	0.090	3	82
Ericsson AIR 21, 1.3 M, B2A B4P	148.00	249	1.078	-0.082	0.173	0.058	6	309
Ericsson AIR-32 B2A/B66Aa	148.00	397	1.078	-0.082	0.173	0.058	10	492
Ericsson KRY 112 144/1	148.00	33	1.078	-0.082	0.173	0.058	1	41
Ericsson Radio 4449 B12,B71	148.00	222	1.078	-0.082	0.173	0.058	6	275
Ericsson RRUS 32 (50.8 lbs)	148.00	152	1.078	-0.082	0.173	0.058	4	189
RFS APXVAARR24_43-U-NA20	148.00	384	1.078	-0.082	0.173	0.058	10	476
Round Sector Frame	148.00	900	1.078	-0.082	0.173	0.058	23	1,116
Motorola PTP54600	125.00	24	0.769	-0.105	0.045	0.032	0	30
Standoffs	102.00	150	0.512	-0.020	0.008	0.043	3	186
Generic 10' Dipole	85.00	30	0.355	0.031	0.008	0.048	1	37
Standoffs	80.00	75	0.315	0.042	0.011	0.048	2	93
PCTEL GPS-TMG-HR-26N	76.00	1	0.284	0.049	0.014	0.047	0	1
Standoffs	76.00	75	0.284	0.049	0.014	0.047	2	93
		46,486	68.777	20.254	22.315	8.537	1,530	57,668

LoadCase (0.9 - 0.2Sds) \* DL + E

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S <sub>az</sub>	Horizontal Force (lb)	Vertical Force (lb)
10	188.00	820	1.739	1.275	0.876	0.327	116	705
9	170.00	1,739	1.422	0.326	0.455	0.165	124	1,495
8	150.00	2,802	1.107	-0.066	0.191	0.064	78	2,408
7	130.00	3,506	0.831	-0.117	0.063	0.033	50	3,013
6	110.00	3,637	0.595	-0.051	0.014	0.038	61	3,126
5	90.00	4,114	0.399	0.019	0.007	0.047	84	3,536
4	70.00	4,407	0.241	0.057	0.018	0.046	88	3,788
3	50.00	4,803	0.123	0.070	0.034	0.038	80	4,128
2	30.00	5,144	0.044	0.071	0.042	0.031	68	4,421
1	10.00	5,437	0.005	0.044	0.025	0.018	42	4,673
Alcatel-Lucent 1900 MHz 4X45	192.00	180	1.814	1.601	1.001	0.372	29	155
Alcatel-Lucent 800MHz RRH and	188.00	192	1.739	1.275	0.876	0.327	27	165
Alcatel-Lucent 800 MHz RRH	185.00	159	1.684	1.062	0.790	0.295	20	137
Alcatel-Lucent TD-RRH8x20-25	185.00	210	1.684	1.062	0.790	0.295	27	180
KMW ET-X-WM-18-65-8P	185.00	109	1.684	1.062	0.790	0.295	14	94
Powerwave Allgon P40-16-XLPP-	185.00	128	1.684	1.062	0.790	0.295	16	110
Powerwave Allgon P40-16-XLPP-	185.00	64	1.684	1.062	0.790	0.295	8	55
RFS APXVSP18-C-A20	185.00	57	1.684	1.062	0.790	0.295	7	49
Round Sector Frames	185.00	900	1.684	1.062	0.790	0.295	115	774
Amphenol Antel BXA-80080-4CF-	177.00	36	1.541	0.608	0.593	0.219	3	31
Commscope SSPX310R	177.00	49	1.541	0.608	0.593	0.219	5	43
Flat Light Sector Frames	177.00	1,350	1.541	0.608	0.593	0.219	128	1,160
JMA Wireless MX06FRO660-02	177.00	276	1.541	0.608	0.593	0.219	26	237
RFS DB-T1-6Z-8AB-0Z	177.00	88	1.541	0.608	0.593	0.219	8	76
Samsung B2/B66A RRH-BR049	177.00	253	1.541	0.608	0.593	0.219	24	218
Samsung B5/B13 RRH-BR04C	177.00	211	1.541	0.608	0.593	0.219	20	181
Samsung Outdoor CBRS 20W	177.00	56	1.541	0.608	0.593	0.219	5	48
CCI OPA-65R-LCUU-H6	167.00	146	1.372	0.233	0.404	0.144	9	125
CCI OPA-65R-LCUU-H8	167.00	88	1.372	0.233	0.404	0.144	6	76
CCI OPA65R-BU6A	167.00	115	1.372	0.233	0.404	0.144	7	99
CCI OPA65R-BU8B	167.00	69	1.372	0.233	0.404	0.144	4	59
CCI TPA65R-BU6D	167.00	135	1.372	0.233	0.404	0.144	8	116
CCI TPA65R-BU8D	167.00	83	1.372	0.233	0.404	0.144	5	71
Ericsson Radio 8843 - B2 + B66A	167.00	225	1.372	0.233	0.404	0.144	14	193
Ericsson RRUS 11 (Band 12) (55	167.00	165	1.372	0.233	0.404	0.144	10	142
Ericsson RRUS 4478 B14	167.00	178	1.372	0.233	0.404	0.144	11	153
Ericsson RRUS 4478 B5	167.00	180	1.372	0.233	0.404	0.144	11	154
Ericsson RRUS E2 B29	167.00	180	1.372	0.233	0.404	0.144	11	155
Ericsson RRUS-32 (77 lbs)	167.00	231	1.372	0.233	0.404	0.144	14	199

Site Number: 302470

Code:

ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:37 AM

Customer: VERIZON WIRELESS

### Equivalent Modal Analysis Method

Kaelus DBCT108F1V92-1	167.00	83	1.372	0.233	0.404	0.144	5	72
Powerwave Allgon TT19-	167.00	96	1.372	0.233	0.404	0.144	6	83
Raycap DC6-48-60-0-8F (24"	167.00	33	1.372	0.233	0.404	0.144	2	28
Raycap DC6-48-60-18-8F ("Squid")	167.00	95	1.372	0.233	0.404	0.144	6	82
Round Sector Frames	167.00	900	1.372	0.233	0.404	0.144	56	774
Kathrein Scala 742 213	157.00	66	1.213	0.017	0.264	0.090	3	57
Ericsson AIR 21, 1.3 M, B2A B4P	148.00	249	1.078	-0.082	0.173	0.058	6	214
Ericsson AIR-32 B2A/B66Aa	148.00	397	1.078	-0.082	0.173	0.058	10	341
Ericsson KRY 112 144/1	148.00	33	1.078	-0.082	0.173	0.058	1	28
Ericsson Radio 4449 B12,B71	148.00	222	1.078	-0.082	0.173	0.058	6	191
Ericsson RRUS 32 (50.8 lbs)	148.00	152	1.078	-0.082	0.173	0.058	4	131
RFS APXVAARR24_43-U-NA20	148.00	384	1.078	-0.082	0.173	0.058	10	330
Round Sector Frame	148.00	900	1.078	-0.082	0.173	0.058	23	774
Motorola PTP54600	125.00	24	0.769	-0.105	0.045	0.032	0	21
Standoffs	102.00	150	0.512	-0.020	0.008	0.043	3	129
Generic 10' Dipole	85.00	30	0.355	0.031	0.008	0.048	1	26
Standoffs	80.00	75	0.315	0.042	0.011	0.048	2	64
PCTEL GPS-TMG-HR-26N	76.00	1	0.284	0.049	0.014	0.047	0	1
Standoffs	76.00	75	0.284	0.049	0.014	0.047	2	64
		46,486	68.777	20.254	22.315	8.537	1,530	39,953

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:37 AM

Customer: VERIZON WIRELESS

### Force/Stress Summary

Section: 1		15N25		Bot Elev (ft): 0.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	PX - 8" DIA PIPE	-353.27	1.2D + 1.6W Normal	9.77	100	100	100	40.7	50.0	510.32	0	0	0.00	0.00	69 Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 4X4X0.25	-11.37	1.2D + 1.6W 90 deg	23.62	50	50	50	178.3	43.5	13.79	1	1	17.89	23.40	82 Member Z
<b>Max Tension Member</b>															
LEG	PX - 8" DIA PIPE	314.74	0.9D + 1.6W 60 deg	50	65	576.00	0	0	0.00	0.00	0.00	0.00			54 Member
	HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0.00			0
DIAG	SAE - 4X4X0.25	11.19	1.2D + 1.6W 90 deg	50	65	62.93	1	1	17.89	14.14	17.98	79			Bolt Bear
<b>Max Splice Forces</b>															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
	Top Tension	285.97	0.9D + 1.6W 60 deg		0.00	0	0								
	Top Compression	329.38	1.2D + 1.6W Normal		0.00	0									
	Bot Tension	314.74	0.9D + 1.6W 60 deg		605.74	63	10	1" A354-BC							
	Bot Compression	362.57	1.2D + 1.6W Normal		605.74	72	10	1" A354-BC							

Section: 2		14N46		Bot Elev (ft): 20.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	PSP - ROHN 8 EHS	-318.77	1.2D + 1.6W Normal	9.77	100	100	100	40.1	50.0	388.80	0	0	0.00	0.00	81 Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 4X4X0.25	-10.94	1.2D + 1.6W 90 deg	22.69	50	50	50	171.3	43.5	14.94	1	1	17.89	23.40	73 Member Z
<b>Max Tension Member</b>															
LEG	PSP - ROHN 8 EHS	286.28	0.9D + 1.6W 60 deg	50	65	437.40	0	0	0.00	0.00	0.00	0.00			65 Member
	HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0.00			0
DIAG	SAE - 4X4X0.25	10.76	1.2D + 1.6W 90 deg	50	65	62.93	1	1	17.89	14.14	17.98	76			Bolt Bear
<b>Max Splice Forces</b>															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
	Top Tension	254.94	0.9D + 1.6W 60 deg		0.00	0	0								
	Top Compression	292.76	1.2D + 1.6W Normal		0.00	0									
	Bot Tension	285.97	0.9D + 1.6W 60 deg		436.14	66	8	1 A325							
	Bot Compression	0.00			0.00	0									



### Force/Stress Summary

Section: 3		13N88		Bot Elev (ft): 40.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 8 EHS	-282.71	1.2D + 1.6W Normal	9.77	100	100	100	40.1	50.0	388.78	0	0	0.00	0.00	72 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3.5X3.5X0.25	-9.81	1.2D + 1.6W 90 deg	20.87	50	50	50	182.0	50.0	11.52	1	1	17.89	23.40	85 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PSP - ROHN 8 EHS	255.34	0.9D + 1.6W 60 deg	50	65	437.40	0	0	0.00	0.00		58	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 3.5X3.5X0.25	9.62	1.2D + 1.6W 90 deg	50	65	53.79	1	1	17.89	14.14	17.98	68	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		224.47	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		256.93	1.2D + 1.6W Normal	0.00	0		
Bot Tension		254.94	0.9D + 1.6W 60 deg	436.14	58	8	1 A325
Bot Compression		0.00		0.00	0		

Section: 4		12N50		Bot Elev (ft): 60.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 6" DIA PIPE	-246.41	1.2D + 1.6W Normal	9.77	100	100	100	53.4	50.0	306.88	0	0	0.00	0.00	80 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3.5X3.5X0.25	-9.54	1.2D + 1.6W 90 deg	19.04	50	50	50	166.1	50.0	13.84	1	1	17.89	23.40	68 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PX - 6" DIA PIPE	224.76	0.9D + 1.6W 60 deg	50	65	378.00	0	0	0.00	0.00		59	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 3.5X3.5X0.25	9.55	1.2D + 1.6W 90 deg	50	65	53.79	1	1	17.89	14.14	17.98	67	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		191.41	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		218.77	1.2D + 1.6W Normal	0.00	0		
Bot Tension		224.47	0.9D + 1.6W 60 deg	436.14	51	8	1 A325
Bot Compression		0.00		0.00	0		

### Force/Stress Summary

Section: 5		11N223		Bot Elev (ft): 80.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	PSP - ROHN 6 EHS	-210.71	1.2D + 1.6W Normal	6.51	100	100	100	35.1	50.0	275.92	0	0	0.00	0.00	76 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.25	-8.72	1.2D + 1.6W 90 deg	15.90	50	50	50	161.2	50.0	12.52	1	1	17.89	23.40	69 Member Z
<b>Max Tension Member</b>															
LEG	PSP - ROHN 6 EHS	191.71	0.9D + 1.6W 60 deg	50	65	301.95	0	0	0.00	0.00	0	0	0.00	0.00	63 Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.25	8.57	1.2D + 1.6W 90 deg	50	65	44.65	1	1	17.89	14.14	1	1	14.14	14.93	60 Bolt Bear
<b>Max Splice Forces</b>															
		Pu (kip)	Load Case			phiRnt (kip)	Use %	Num Bolts	Bolt Type						
	Top Tension	155.96	0.9D + 1.6W 60 deg			0.00	0	0							
	Top Compression	178.32	1.2D + 1.6W Normal			0.00	0	0							
	Bot Tension	191.41	0.9D + 1.6W 60 deg			327.10	59	6	1 A325						
	Bot Compression	0.00				0.00	0								

Section: 6		10N152		Bot Elev (ft): 100.0				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	PX - 5" DIA PIPE	-170.86	1.2D + 1.6W Normal	6.51	100	100	100	42.5	50.0	240.59	0	0	0.00	0.00	71 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 2.5X2.5X0.25	-7.41	1.2D + 1.6W 90 deg	14.13	50	50	50	172.8	36.0	9.01	1	1	12.43	17.40	82 Member Z
<b>Max Tension Member</b>															
LEG	PX - 5" DIA PIPE	154.39	1.2D + 1.6W 60 deg	50	65	274.50	0	0	0.00	0.00	0	0	0.00	0.00	56 Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0
DIAG	SAE - 2.5X2.5X0.25	7.57	1.2D + 1.6W 90 deg	36	58	32.71	1	1	12.43	10.44	1	1	10.44	11.83	72 Bolt Bear
<b>Max Splice Forces</b>															
		Pu (kip)	Load Case			phiRnt (kip)	Use %	Num Bolts	Bolt Type						
	Top Tension	120.79	0.9D + 1.6W 60 deg			0.00	0	0							
	Top Compression	138.85	1.2D + 1.6W Normal			0.00	0	0							
	Bot Tension	155.96	0.9D + 1.6W 60 deg			327.10	48	6	1 A325						
	Bot Compression	0.00				0.00	0								

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:37 AM

Customer: VERIZON WIRELESS

### Force/Stress Summary

Section: 7		9N216		Bot Elev (ft): 120.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 5" DIA PIPE	-130.63	1.2D + 1.6W Normal	6.51	100	100	100	42.5	50.0	240.60	0	0	0.00	0.00	54 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 2.5X2.5X0.25	-7.77	1.2D + 1.6W 90 deg	11.25	50	50	50	137.5	36.0	14.22	1	1	12.43	17.40	62 Bolt Shear

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PX - 5" DIA PIPE	120.96	0.9D + 1.6W 60 deg	50	65	274.50	0	0	0.00	0.00		44	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 2.5X2.5X0.25	7.61	1.2D + 1.6W 90 deg	36	58	32.71	1	1	12.43	10.44	11.83	72	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		80.39	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		94.38	1.2D + 1.6W Normal	0.00	0		
Bot Tension		120.79	0.9D + 1.6W 60 deg	218.07	55	4	1 A325
Bot Compression		0.00		0.00	0		

Section: 8		A780252		Bot Elev (ft): 140.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 4" DIA PIPE	-87.84	1.2D + 1.6W Normal	4.88	100	100	100	39.6	50.0	176.95	0	0	0.00	0.00	49 Member X
HORIZ	SAE - 2X2X0.125	-0.37	1.2D + 1.6W 60 deg	6.760	100	100	100	203.8	36.0	2.61	1	1	12.43	8.70	14 Member Z
DIAG	SAE - 2X2X0.25	-6.44	1.2D + 1.6W 90 deg	9.848	50	50	50	151.1	36.0	9.30	1	1	12.43	17.40	69 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PX - 4" DIA PIPE	80.59	0.9D + 1.6W 60 deg	50	65	198.45	0	0	0.00	0.00		40	Member
HORIZ	SAE - 2X2X0.125	0.27	1.2D + 1.6W Normal	36	58	12.60	1	1	12.43	5.22	4.55	6	Blk Shear
DIAG	SAE - 2X2X0.25	6.45	1.2D + 1.6W 90 deg	36	58	24.55	1	1	12.43	10.44	9.11	70	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		38.87	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		47.69	1.2D + 1.6W Normal	0.00	0		
Bot Tension		80.39	0.9D + 1.6W 60 deg	218.07	37	4	1 A325
Bot Compression		0.00		0.00	0		

Site Number: 302470

Code: ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:38 AM

Customer: VERIZON WIRELESS

### Force/Stress Summary

Section: 9		A780178		Bot Elev (ft): 160.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 3" DIA PIPE	-47.05	1.2D + 1.6W Normal	0.25	100	100	100	2.6	50.0	135.83	0	0	0.00	0.00	34 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 2X2X0.1875	-6.24	1.2D + 1.6W 90 deg	7.798	50	50	50	119.1	36.0	10.98	2	1	24.85	26.10	56 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PX - 3" DIA PIPE	38.59	0.9D + 1.6W 60 deg	50	65	135.90	0	0	0.00	0.00			28 Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00		0
DIAG	SAE - 2X2X0.1875	6.16	1.2D + 1.6W 90 deg	36	58	18.74	2	1	24.85	20.88	12.34		49 Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		3.58	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		5.97	1.2D + 1.6W Normal	0.00	0		
Bot Tension		38.87	0.9D + 1.6W 60 deg	166.22	23	4	0.875" A325
Bot Compression		0.00		0.00	0		

Section: 10		A780178		Bot Elev (ft): 180.0				Height (ft): 16.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	-5.88	1.2D + 1.6W Normal	0.25	100	100	100	3.2	50.0	76.62	0	0	0.00	0.00	7 Member X
HORIZ	SAE - 2X2X0.125	-0.12	1.2D + 1.6W Normal	6.647	100	100	100	200.4	36.0	2.70	1	1	12.43	8.70	4 Member Z
DIAG	SAE - 1.75X1.75X0.18	-1.74	1.2D + 1.6W 90 deg	7.758	50	50	50	135.7	36.0	7.62	1	1	12.43	13.05	22 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	3.38	1.2D + 1.6W 60 deg	50	65	76.68	0	0	0.00	0.00			4 Member
HORIZ	SAE - 2X2X0.125	0.12	1.2D + 1.6W 60 deg	36	58	12.60	1	1	12.43	5.22	4.55		2 Blk Shear
DIAG	SAE - 1.75X1.75X0.18	1.73	1.2D + 1.6W 90 deg	36	58	15.67	1	1	12.43	7.83	5.81		29 Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		0.00		0.00	0	0	
Top Compression		0.23	(1.2 + 0.2Sds) * DL	0.00	0		
Bot Tension		3.58	0.9D + 1.6W 60 deg	120.41	3	4	0.75" A325
Bot Compression		0.00		0.00	0		

### Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
<b>1.2D + 1.6W Normal</b>	13.28	00.00	0	1	0.00	361.47	-37.29	
	13.28	00.00	120	1a	12.75	-152.84	-12.02	
	13.28	00.00	240	1b	-12.75	-152.84	-12.02	
<b>1.2D + 1.6W 60 deg</b>	13.28	00.00	0	1	-3.63	182.31	-18.28	
	13.28	00.00	120	1a	-17.64	182.27	6.00	
	13.28	00.00	240	1b	-28.87	-308.79	-16.66	
<b>1.2D + 1.6W 90 deg</b>	13.28	00.00	0	1	-4.34	18.60	-1.13	
	13.28	00.00	120	1a	-28.08	305.45	13.77	
	13.28	00.00	240	1b	-26.33	-268.26	-12.64	
<b>0.9D + 1.6W Normal</b>	13.28	00.00	0	1	0.00	356.37	-36.99	
	13.28	00.00	120	1a	13.00	-157.27	-12.17	
	13.28	00.00	240	1b	-13.00	-157.27	-12.17	
<b>0.9D + 1.6W 60 deg</b>	13.28	00.00	0	1	-3.64	177.44	-17.98	
	13.28	00.00	120	1a	-17.39	177.41	5.84	
	13.28	00.00	240	1b	-29.12	-313.01	-16.81	
<b>0.9D + 1.6W 90 deg</b>	13.28	00.00	0	1	-4.34	13.95	-0.84	
	13.28	00.00	120	1a	-27.82	300.42	13.62	
	13.28	00.00	240	1b	-26.58	-272.54	-12.78	
<b>1.2D + 1.0Di + 1.0Wi Normal</b>	13.28	00.00	0	1	0.00	170.77	-12.74	
	13.28	00.00	120	1a	4.86	-5.00	-4.50	
	13.28	00.00	240	1b	-4.86	-5.00	-4.50	
<b>1.2D + 1.0Di + 1.0Wi 60 deg</b>	13.28	00.00	0	1	-1.41	111.15	-6.21	
	13.28	00.00	120	1a	-6.08	111.14	1.89	
	13.28	00.00	240	1b	-10.91	-61.53	-6.30	
<b>1.2D + 1.0Di + 1.0Wi 90 deg</b>	13.28	00.00	0	1	-1.65	53.59	0.05	
	13.28	00.00	120	1a	-9.80	153.74	4.72	
	13.28	00.00	240	1b	-9.92	-46.57	-4.77	
<b>(1.2 + 0.2Sds) * DL + E Normal M1</b>	13.28	00.00	0	1	0.00	32.66	-2.47	
	13.28	00.00	120	1a	-0.56	11.83	0.24	
	13.28	00.00	240	1b	0.56	11.83	0.24	
<b>(1.2 + 0.2Sds) * DL + E Normal M2</b>	13.28	00.00	0	1	0.00	29.50	-2.16	
	13.28	00.00	120	1a	-0.69	13.41	0.34	
	13.28	00.00	240	1b	0.69	13.41	0.34	
<b>(1.2 + 0.2Sds) * DL + E 60 deg M1</b>	13.28	00.00	0	1	-0.08	25.72	-1.85	
	13.28	00.00	120	1a	-1.64	25.72	0.86	
	13.28	00.00	240	1b	-0.01	4.89	-0.01	
<b>(1.2 + 0.2Sds) * DL + E 60 deg M2</b>	13.28	00.00	0	1	-0.05	24.13	-1.69	
	13.28	00.00	120	1a	-1.49	24.13	0.80	
	13.28	00.00	240	1b	0.26	8.05	0.15	
<b>(1.2 + 0.2Sds) * DL + E 90 deg M1</b>	13.28	00.00	0	1	-0.09	18.77	-1.23	
	13.28	00.00	120	1a	-2.01	30.80	1.11	
	13.28	00.00	240	1b	0.11	6.75	0.12	
<b>(1.2 + 0.2Sds) * DL + E 90 deg M2</b>	13.28	00.00	0	1	-0.06	18.77	-1.23	
	13.28	00.00	120	1a	-1.77	28.06	0.99	

Site Number: 302470

Code:

ANSI/TIA-222-G

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

4/2/2020 9:53:38 AM

Customer: VERIZON WIRELESS

	13.28	00.00	240	1b	0.35	9.49	0.24
<b>(0.9 - 0.2Sds) * DL + E Normal M1</b>	13.28	00.00	0	1	0.00	26.87	-2.09
	13.28	00.00	120	1a	-0.24	6.07	0.05
	13.28	00.00	240	1b	0.24	6.07	0.05
<b>(0.9 - 0.2Sds) * DL + E Normal M2</b>	13.28	00.00	0	1	0.00	23.71	-1.78
	13.28	00.00	120	1a	-0.36	7.65	0.15
	13.28	00.00	240	1b	0.36	7.65	0.15
<b>(0.9 - 0.2Sds) * DL + E 60 deg M1</b>	13.28	00.00	0	1	-0.08	19.94	-1.47
	13.28	00.00	120	1a	-1.31	19.94	0.67
	13.28	00.00	240	1b	-0.34	-0.86	-0.19
<b>(0.9 - 0.2Sds) * DL + E 60 deg M2</b>	13.28	00.00	0	1	-0.05	18.36	-1.31
	13.28	00.00	120	1a	-1.16	18.36	0.61
	13.28	00.00	240	1b	-0.07	2.30	-0.04
<b>(0.9 - 0.2Sds) * DL + E 90 deg M1</b>	13.28	00.00	0	1	-0.09	13.01	-0.85
	13.28	00.00	120	1a	-1.69	25.01	0.92
	13.28	00.00	240	1b	-0.21	1.00	-0.07
<b>(0.9 - 0.2Sds) * DL + E 90 deg M2</b>	13.28	00.00	0	1	-0.06	13.01	-0.85
	13.28	00.00	120	1a	-1.45	22.28	0.80
	13.28	00.00	240	1b	0.02	3.73	0.05
<b>1.0D + 1.0W Service Normal</b>	13.28	00.00	0	1	0.00	98.64	-9.85
	13.28	00.00	120	1a	2.49	-26.07	-2.58
	13.28	00.00	240	1b	-2.49	-26.07	-2.58
<b>1.0D + 1.0W Service 60 deg</b>	13.28	00.00	0	1	-0.92	55.22	-5.19
	13.28	00.00	120	1a	-4.95	55.21	1.80
	13.28	00.00	240	1b	-6.43	-63.95	-3.71
<b>1.0D + 1.0W Service 90 deg</b>	13.28	00.00	0	1	-1.08	15.50	-0.99
	13.28	00.00	120	1a	-7.51	85.15	3.72
	13.28	00.00	240	1b	-5.82	-54.16	-2.73

Max Uplift:	313.01 (kip)	Moment Ice:	2,334.05 (kip-ft)	Moment:	6,829.55 (kip-ft)	1.2D + 1.6W Normal
Max Down:	361.47 (kip)	Total Down Ice:	160.77 (kip)	Total Down:	55.78 (kip)	
Max Shear:	37.29 (kip)	Total Shear Ice:	21.73 (kip)	Total Shear:	61.33 (kip)	

### Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
97 mph Normal with No Ice	79.75	0.293	0.0185	0.4675	0.4675
97 mph Normal with No Ice	80.00	0.295	0.0185	0.4715	0.4715
97 mph Normal with No Ice	86.75	0.348	0.0185	0.4579	0.4583
97 mph Normal with No Ice	100.25	0.468	0.0225	0.6029	0.6029
97 mph Normal with No Ice	126.75	0.767	0.0251	0.7204	0.7208
97 mph Normal with No Ice	150.00	1.093	0.0287	0.8851	0.8851
97 mph Normal with No Ice	154.88	1.168	0.0286	0.8855	0.8860
97 mph Normal with No Ice	168.05	1.387	0.0315	0.9803	0.9803
97 mph Normal with No Ice	175.85	1.520	0.0316	0.9827	0.9832
97 mph Normal with No Ice	184.19	1.664	0.0317	0.9761	0.9766
97 mph Normal with No Ice	188.13	1.731	0.0314	0.9860	0.9860
97 mph Normal with No Ice	192.06	1.799	0.0316	0.9835	0.9840
97 mph 60 degree with No Ice	79.75	0.280	-0.0213	0.4483	0.4483
97 mph 60 degree with No Ice	80.00	0.282	-0.0214	0.4519	0.4519
97 mph 60 degree with No Ice	86.75	0.333	-0.0217	0.4395	0.4400
97 mph 60 degree with No Ice	100.25	0.449	-0.0269	0.5782	0.5782
97 mph 60 degree with No Ice	126.75	0.737	-0.0323	0.6914	0.6921
97 mph 60 degree with No Ice	150.00	1.050	0.0361	0.8525	0.8526
97 mph 60 degree with No Ice	154.88	1.123	0.0358	0.8522	0.8530
97 mph 60 degree with No Ice	168.05	1.333	0.0401	0.9456	0.9457
97 mph 60 degree with No Ice	175.85	1.462	0.0405	0.9412	0.9421
97 mph 60 degree with No Ice	184.19	1.600	0.0404	0.9391	0.9400
97 mph 60 degree with No Ice	188.13	1.665	0.0406	0.9491	0.9492
97 mph 60 degree with No Ice	192.06	1.730	0.0404	0.9469	0.9477
97 mph 90 degree with No Ice	79.75	0.283	-0.0255	0.4483	0.4485
97 mph 90 degree with No Ice	80.00	0.285	-0.0256	0.4516	0.4518
97 mph 90 degree with No Ice	86.75	0.336	-0.0262	0.4451	0.4458
97 mph 90 degree with No Ice	100.25	0.453	-0.0325	0.5778	0.5780
97 mph 90 degree with No Ice	126.75	0.744	-0.0400	0.6977	0.6989
97 mph 90 degree with No Ice	150.00	1.061	-0.0442	0.8575	0.8578
97 mph 90 degree with No Ice	154.88	1.134	-0.0438	0.8645	0.8656
97 mph 90 degree with No Ice	168.05	1.346	-0.0476	0.9530	0.9533
97 mph 90 degree with No Ice	175.85	1.476	-0.0477	0.9529	0.9541
97 mph 90 degree with No Ice	184.19	1.616	-0.0476	0.9529	0.9541
97 mph 90 degree with No Ice	188.13	1.681	-0.0476	0.9540	0.9543
97 mph 90 degree with No Ice	192.06	1.746	-0.0477	0.9589	0.9601
97 mph Normal with No Ice (Reduced DL)	79.75	0.292	0.0185	0.4670	0.4670
97 mph Normal with No Ice (Reduced DL)	80.00	0.294	0.0185	0.4710	0.4710
97 mph Normal with No Ice (Reduced DL)	86.75	0.347	0.0184	0.4571	0.4575
97 mph Normal with No Ice (Reduced DL)	100.25	0.468	0.0224	0.6018	0.6018
97 mph Normal with No Ice (Reduced DL)	126.75	0.766	0.0250	0.7188	0.7193
97 mph Normal with No Ice (Reduced DL)	150.00	1.091	0.0286	0.8831	0.8831
97 mph Normal with No Ice (Reduced DL)	154.88	1.166	0.0285	0.8834	0.8839
97 mph Normal with No Ice (Reduced DL)	168.05	1.384	0.0314	0.9781	0.9781
97 mph Normal with No Ice (Reduced DL)	175.85	1.517	0.0315	0.9803	0.9808
97 mph Normal with No Ice (Reduced DL)	184.19	1.661	0.0316	0.9737	0.9742
97 mph Normal with No Ice (Reduced DL)	188.13	1.727	0.0313	0.9836	0.9836
97 mph Normal with No Ice (Reduced DL)	192.06	1.795	0.0315	0.9811	0.9816
97 mph 60 deg with No Ice (Reduced DL)	79.75	0.280	-0.0213	0.4473	0.4473
97 mph 60 deg with No Ice (Reduced DL)	80.00	0.282	-0.0213	0.4509	0.4509
97 mph 60 deg with No Ice (Reduced DL)	86.75	0.332	-0.0216	0.4387	0.4392
97 mph 60 deg with No Ice (Reduced DL)	100.25	0.448	-0.0268	0.5771	0.5771
97 mph 60 deg with No Ice (Reduced DL)	126.75	0.735	-0.0323	0.6899	0.6906
97 mph 60 deg with No Ice (Reduced DL)	150.00	1.048	0.0360	0.8506	0.8506
97 mph 60 deg with No Ice (Reduced DL)	154.88	1.121	0.0357	0.8503	0.8510

Site Number: 302470

Code:

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

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Customer: VERIZON WIRELESS

97 mph 60 deg with No Ice (Reduced DL)	168.05	1.330	0.0400	0.9432	0.9432
97 mph 60 deg with No Ice (Reduced DL)	175.85	1.459	0.0404	0.9390	0.9399
97 mph 60 deg with No Ice (Reduced DL)	184.19	1.597	0.0402	0.9369	0.9378
97 mph 60 deg with No Ice (Reduced DL)	188.13	1.662	0.0405	0.9469	0.9469
97 mph 60 deg with No Ice (Reduced DL)	192.06	1.726	0.0403	0.9446	0.9454
97 mph 90 deg with No Ice (Reduced DL)	79.75	0.283	-0.0255	0.4477	0.4479
97 mph 90 deg with No Ice (Reduced DL)	80.00	0.285	-0.0256	0.4510	0.4512
97 mph 90 deg with No Ice (Reduced DL)	86.75	0.336	-0.0262	0.4442	0.4450
97 mph 90 deg with No Ice (Reduced DL)	100.25	0.453	-0.0324	0.5767	0.5770
97 mph 90 deg with No Ice (Reduced DL)	126.75	0.743	-0.0399	0.6962	0.6974
97 mph 90 deg with No Ice (Reduced DL)	150.00	1.059	-0.0441	0.8555	0.8558
97 mph 90 deg with No Ice (Reduced DL)	154.88	1.132	-0.0437	0.8625	0.8636
97 mph 90 deg with No Ice (Reduced DL)	168.05	1.343	-0.0475	0.9506	0.9509
97 mph 90 deg with No Ice (Reduced DL)	175.85	1.473	-0.0476	0.9506	0.9518
97 mph 90 deg with No Ice (Reduced DL)	184.19	1.613	-0.0475	0.9506	0.9518
97 mph 90 deg with No Ice (Reduced DL)	188.13	1.677	-0.0475	0.9517	0.9520
97 mph 90 deg with No Ice (Reduced DL)	192.06	1.743	-0.0475	0.9566	0.9578
50 mph Normal with 0.75 in Radial Ice	79.75	0.100	0.0066	0.1555	0.1555
50 mph Normal with 0.75 in Radial Ice	80.00	0.101	0.0067	0.1570	0.1570
50 mph Normal with 0.75 in Radial Ice	86.75	0.118	0.0066	0.1517	0.1518
50 mph Normal with 0.75 in Radial Ice	100.25	0.158	0.0080	0.1993	0.1993
50 mph Normal with 0.75 in Radial Ice	126.75	0.255	0.0089	0.2304	0.2305
50 mph Normal with 0.75 in Radial Ice	150.00	0.358	0.0100	0.2777	0.2777
50 mph Normal with 0.75 in Radial Ice	154.88	0.382	0.0100	0.2776	0.2778
50 mph Normal with 0.75 in Radial Ice	168.05	0.450	0.0108	0.3035	0.3037
50 mph Normal with 0.75 in Radial Ice	175.85	0.491	0.0107	0.3040	0.3042
50 mph Normal with 0.75 in Radial Ice	184.19	0.535	0.0107	0.3020	0.3022
50 mph Normal with 0.75 in Radial Ice	188.13	0.556	0.0106	0.3042	0.3042
50 mph Normal with 0.75 in Radial Ice	192.06	0.577	0.0106	0.3035	0.3037
50 mph 60 deg with 0.75 in Radial Ice	79.75	0.099	-0.0075	0.1584	0.1584
50 mph 60 deg with 0.75 in Radial Ice	80.00	0.100	-0.0076	0.1596	0.1596
50 mph 60 deg with 0.75 in Radial Ice	86.75	0.117	-0.0076	0.1493	0.1495
50 mph 60 deg with 0.75 in Radial Ice	100.25	0.156	-0.0094	0.1970	0.1970
50 mph 60 deg with 0.75 in Radial Ice	126.75	0.252	-0.0111	0.2268	0.2270
50 mph 60 deg with 0.75 in Radial Ice	150.00	0.353	-0.0122	0.2731	0.2731
50 mph 60 deg with 0.75 in Radial Ice	154.88	0.376	-0.0121	0.2727	0.2730
50 mph 60 deg with 0.75 in Radial Ice	168.05	0.443	-0.0129	0.3006	0.3006
50 mph 60 deg with 0.75 in Radial Ice	175.85	0.484	-0.0128	0.2972	0.2974
50 mph 60 deg with 0.75 in Radial Ice	184.19	0.528	-0.0127	0.2963	0.2966
50 mph 60 deg with 0.75 in Radial Ice	188.13	0.548	-0.0127	0.2999	0.2999
50 mph 60 deg with 0.75 in Radial Ice	192.06	0.569	-0.0126	0.2991	0.2993
50 mph 90 deg with 0.75 in Radial Ice	79.75	0.099	-0.0088	0.1568	0.1569
50 mph 90 deg with 0.75 in Radial Ice	80.00	0.100	-0.0088	0.1578	0.1578
50 mph 90 deg with 0.75 in Radial Ice	86.75	0.117	-0.0089	0.1502	0.1505
50 mph 90 deg with 0.75 in Radial Ice	100.25	0.157	-0.0110	0.1951	0.1952
50 mph 90 deg with 0.75 in Radial Ice	126.75	0.253	-0.0131	0.2275	0.2278
50 mph 90 deg with 0.75 in Radial Ice	150.00	0.355	-0.0145	0.2738	0.2739
50 mph 90 deg with 0.75 in Radial Ice	154.88	0.378	-0.0144	0.2753	0.2757
50 mph 90 deg with 0.75 in Radial Ice	168.05	0.445	-0.0154	0.3012	0.3013
50 mph 90 deg with 0.75 in Radial Ice	175.85	0.486	-0.0154	0.2998	0.3002
50 mph 90 deg with 0.75 in Radial Ice	184.19	0.530	-0.0153	0.2993	0.2997
50 mph 90 deg with 0.75 in Radial Ice	188.13	0.550	-0.0152	0.3001	0.3002
50 mph 90 deg with 0.75 in Radial Ice	192.06	0.571	-0.0152	0.3010	0.3013
Seismic Normal M1	79.75	0.012	0.0008	0.0201	0.0201
Seismic Normal M1	80.00	0.012	0.0008	0.0201	0.0202
Seismic Normal M1	86.75	0.015	0.0008	0.0203	0.0203
Seismic Normal M1	100.25	0.020	0.0010	0.0267	0.0267
Seismic Normal M1	126.75	0.034	0.0011	0.0331	0.0331
Seismic Normal M1	150.00	0.049	0.0011	0.0420	0.0420
Seismic Normal M1	154.88	0.052	0.0011	0.0423	0.0423
Seismic Normal M1	168.05	0.063	0.0012	0.0474	0.0474
Seismic Normal M1	175.85	0.069	0.0011	0.0474	0.0474



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Site Name: Ansonia Wakelee, CT

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Customer: VERIZON WIRELESS

Seismic Normal M1	184.19	0.076	0.0011	0.0470	0.0470
Seismic Normal M1	188.13	0.079	0.0010	0.0480	0.0480
Seismic Normal M1	192.06	0.083	0.0010	0.0476	0.0476
Seismic Normal M2	79.75	0.009	0.0005	0.0157	0.0157
Seismic Normal M2	80.00	0.010	0.0005	0.0157	0.0157
Seismic Normal M2	86.75	0.011	0.0005	0.0161	0.0161
Seismic Normal M2	100.25	0.016	0.0006	0.0210	0.0210
Seismic Normal M2	126.75	0.027	0.0007	0.0280	0.0280
Seismic Normal M2	150.00	0.040	0.0007	0.0372	0.0372
Seismic Normal M2	154.88	0.043	0.0007	0.0378	0.0378
Seismic Normal M2	168.05	0.052	0.0008	0.0441	0.0441
Seismic Normal M2	175.85	0.058	0.0008	0.0444	0.0444
Seismic Normal M2	184.19	0.065	0.0007	0.0442	0.0442
Seismic Normal M2	188.13	0.068	0.0007	0.0455	0.0456
Seismic Normal M2	192.06	0.071	0.0007	0.0450	0.0450
Seismic 60 deg M1	79.75	0.012	0.0008	0.0210	0.0210
Seismic 60 deg M1	80.00	0.012	0.0008	0.0211	0.0211
Seismic 60 deg M1	86.75	0.015	0.0008	0.0203	0.0203
Seismic 60 deg M1	100.25	0.020	0.0010	0.0269	0.0269
Seismic 60 deg M1	126.75	0.033	0.0011	0.0332	0.0332
Seismic 60 deg M1	150.00	0.049	0.0012	0.0414	0.0414
Seismic 60 deg M1	154.88	0.052	0.0011	0.0419	0.0419
Seismic 60 deg M1	168.05	0.063	0.0012	0.0475	0.0475
Seismic 60 deg M1	175.85	0.069	-0.0011	0.0471	0.0471
Seismic 60 deg M1	184.19	0.076	-0.0011	0.0468	0.0468
Seismic 60 deg M1	188.13	0.079	-0.0010	0.0480	0.0480
Seismic 60 deg M1	192.06	0.083	-0.0010	0.0477	0.0477
Seismic 60 deg M2	79.75	0.009	0.0005	0.0163	0.0163
Seismic 60 deg M2	80.00	0.009	0.0005	0.0163	0.0163
Seismic 60 deg M2	86.75	0.011	0.0005	0.0161	0.0161
Seismic 60 deg M2	100.25	0.016	0.0007	0.0212	0.0212
Seismic 60 deg M2	126.75	0.027	0.0007	0.0280	0.0280
Seismic 60 deg M2	150.00	0.040	0.0007	0.0366	0.0366
Seismic 60 deg M2	154.88	0.043	0.0007	0.0374	0.0374
Seismic 60 deg M2	168.05	0.052	-0.0008	0.0441	0.0441
Seismic 60 deg M2	175.85	0.058	-0.0007	0.0440	0.0440
Seismic 60 deg M2	184.19	0.065	-0.0007	0.0440	0.0440
Seismic 60 deg M2	188.13	0.068	-0.0007	0.0456	0.0456
Seismic 60 deg M2	192.06	0.071	-0.0007	0.0451	0.0451
Seismic 90 deg M1	79.75	0.012	-0.0009	0.0207	0.0207
Seismic 90 deg M1	80.00	0.012	-0.0009	0.0208	0.0208
Seismic 90 deg M1	86.75	0.015	-0.0009	0.0203	0.0204
Seismic 90 deg M1	100.25	0.020	-0.0011	0.0266	0.0266
Seismic 90 deg M1	126.75	0.034	-0.0013	0.0332	0.0332
Seismic 90 deg M1	150.00	0.049	-0.0013	0.0418	0.0418
Seismic 90 deg M1	154.88	0.052	-0.0013	0.0424	0.0424
Seismic 90 deg M1	168.05	0.063	-0.0014	0.0475	0.0475
Seismic 90 deg M1	175.85	0.069	-0.0013	0.0475	0.0475
Seismic 90 deg M1	184.19	0.076	-0.0012	0.0470	0.0470
Seismic 90 deg M1	188.13	0.079	-0.0012	0.0480	0.0480
Seismic 90 deg M1	192.06	0.083	-0.0012	0.0477	0.0477
Seismic 90 deg M2	79.75	0.009	-0.0006	0.0161	0.0161
Seismic 90 deg M2	80.00	0.009	-0.0006	0.0162	0.0162
Seismic 90 deg M2	86.75	0.011	-0.0006	0.0162	0.0162
Seismic 90 deg M2	100.25	0.016	-0.0008	0.0210	0.0211
Seismic 90 deg M2	126.75	0.027	-0.0008	0.0280	0.0280
Seismic 90 deg M2	150.00	0.040	-0.0008	0.0370	0.0370
Seismic 90 deg M2	154.88	0.043	-0.0008	0.0379	0.0379
Seismic 90 deg M2	168.05	0.052	-0.0009	0.0441	0.0442
Seismic 90 deg M2	175.85	0.058	-0.0009	0.0445	0.0445
Seismic 90 deg M2	184.19	0.065	-0.0008	0.0443	0.0443
Seismic 90 deg M2	188.13	0.068	-0.0008	0.0456	0.0456

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

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Customer: VERIZON WIRELESS

Seismic 90 deg M2	192.06	0.071	-0.0008	0.0451	0.0451
Seismic (Reduced DL) Normal M1	79.75	0.012	0.0008	0.0199	0.0199
Seismic (Reduced DL) Normal M1	80.00	0.012	0.0008	0.0200	0.0200
Seismic (Reduced DL) Normal M1	86.75	0.015	0.0008	0.0202	0.0202
Seismic (Reduced DL) Normal M1	100.25	0.020	0.0010	0.0267	0.0267
Seismic (Reduced DL) Normal M1	126.75	0.033	0.0011	0.0330	0.0331
Seismic (Reduced DL) Normal M1	150.00	0.049	0.0011	0.0418	0.0418
Seismic (Reduced DL) Normal M1	154.88	0.052	0.0011	0.0421	0.0421
Seismic (Reduced DL) Normal M1	168.05	0.062	0.0012	0.0472	0.0472
Seismic (Reduced DL) Normal M1	175.85	0.069	0.0011	0.0472	0.0472
Seismic (Reduced DL) Normal M1	184.19	0.076	0.0011	0.0468	0.0468
Seismic (Reduced DL) Normal M1	188.13	0.079	0.0010	0.0479	0.0479
Seismic (Reduced DL) Normal M1	192.06	0.082	0.0010	0.0474	0.0474
Seismic (Reduced DL) Normal M2	79.75	0.009	0.0005	0.0155	0.0155
Seismic (Reduced DL) Normal M2	80.00	0.009	0.0005	0.0155	0.0155
Seismic (Reduced DL) Normal M2	86.75	0.011	0.0005	0.0161	0.0161
Seismic (Reduced DL) Normal M2	100.25	0.016	0.0006	0.0210	0.0210
Seismic (Reduced DL) Normal M2	126.75	0.027	0.0007	0.0279	0.0279
Seismic (Reduced DL) Normal M2	150.00	0.040	0.0007	0.0370	0.0370
Seismic (Reduced DL) Normal M2	154.88	0.043	0.0007	0.0377	0.0377
Seismic (Reduced DL) Normal M2	168.05	0.052	0.0008	0.0439	0.0439
Seismic (Reduced DL) Normal M2	175.85	0.058	0.0008	0.0442	0.0442
Seismic (Reduced DL) Normal M2	184.19	0.065	0.0007	0.0440	0.0440
Seismic (Reduced DL) Normal M2	188.13	0.068	0.0007	0.0454	0.0454
Seismic (Reduced DL) Normal M2	192.06	0.071	0.0007	0.0449	0.0449
Seismic (Reduced DL) 60 deg M1	79.75	0.012	0.0008	0.0207	0.0207
Seismic (Reduced DL) 60 deg M1	80.00	0.012	0.0008	0.0208	0.0208
Seismic (Reduced DL) 60 deg M1	86.75	0.014	0.0008	0.0202	0.0203
Seismic (Reduced DL) 60 deg M1	100.25	0.020	0.0010	0.0268	0.0268
Seismic (Reduced DL) 60 deg M1	126.75	0.033	0.0011	0.0331	0.0331
Seismic (Reduced DL) 60 deg M1	150.00	0.049	0.0012	0.0414	0.0414
Seismic (Reduced DL) 60 deg M1	154.88	0.052	0.0011	0.0418	0.0418
Seismic (Reduced DL) 60 deg M1	168.05	0.062	0.0012	0.0471	0.0471
Seismic (Reduced DL) 60 deg M1	175.85	0.069	-0.0011	0.0470	0.0470
Seismic (Reduced DL) 60 deg M1	184.19	0.076	-0.0011	0.0467	0.0467
Seismic (Reduced DL) 60 deg M1	188.13	0.079	-0.0010	0.0479	0.0479
Seismic (Reduced DL) 60 deg M1	192.06	0.082	-0.0010	0.0476	0.0476
Seismic (Reduced DL) 60 deg M2	79.75	0.009	0.0005	0.0160	0.0160
Seismic (Reduced DL) 60 deg M2	80.00	0.009	0.0005	0.0160	0.0160
Seismic (Reduced DL) 60 deg M2	86.75	0.011	0.0005	0.0161	0.0161
Seismic (Reduced DL) 60 deg M2	100.25	0.015	0.0007	0.0212	0.0212
Seismic (Reduced DL) 60 deg M2	126.75	0.027	0.0007	0.0280	0.0280
Seismic (Reduced DL) 60 deg M2	150.00	0.040	0.0007	0.0366	0.0366
Seismic (Reduced DL) 60 deg M2	154.88	0.043	0.0007	0.0374	0.0374
Seismic (Reduced DL) 60 deg M2	168.05	0.052	-0.0008	0.0438	0.0438
Seismic (Reduced DL) 60 deg M2	175.85	0.058	-0.0007	0.0440	0.0440
Seismic (Reduced DL) 60 deg M2	184.19	0.065	-0.0007	0.0439	0.0439
Seismic (Reduced DL) 60 deg M2	188.13	0.068	-0.0007	0.0455	0.0455
Seismic (Reduced DL) 60 deg M2	192.06	0.071	-0.0007	0.0450	0.0450
Seismic (Reduced DL) 90 deg M1	79.75	0.012	-0.0009	0.0204	0.0204
Seismic (Reduced DL) 90 deg M1	80.00	0.012	-0.0009	0.0205	0.0205
Seismic (Reduced DL) 90 deg M1	86.75	0.015	-0.0009	0.0203	0.0203
Seismic (Reduced DL) 90 deg M1	100.25	0.020	-0.0011	0.0265	0.0265
Seismic (Reduced DL) 90 deg M1	126.75	0.033	-0.0013	0.0331	0.0331
Seismic (Reduced DL) 90 deg M1	150.00	0.049	-0.0013	0.0416	0.0416
Seismic (Reduced DL) 90 deg M1	154.88	0.052	-0.0013	0.0422	0.0423
Seismic (Reduced DL) 90 deg M1	168.05	0.062	-0.0014	0.0472	0.0472
Seismic (Reduced DL) 90 deg M1	175.85	0.069	-0.0013	0.0474	0.0474
Seismic (Reduced DL) 90 deg M1	184.19	0.076	-0.0012	0.0469	0.0469
Seismic (Reduced DL) 90 deg M1	188.13	0.079	-0.0012	0.0479	0.0479
Seismic (Reduced DL) 90 deg M1	192.06	0.082	-0.0012	0.0475	0.0475
Seismic (Reduced DL) 90 deg M2	79.75	0.009	-0.0006	0.0158	0.0158

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Site Name: Ansonia Wakelee, CT

Engineering Number: 12977015\_C3\_05

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Customer: VERIZON WIRELESS

Seismic (Reduced DL) 90 deg M2	80.00	0.009	-0.0006	0.0159	0.0159
Seismic (Reduced DL) 90 deg M2	86.75	0.011	-0.0006	0.0161	0.0161
Seismic (Reduced DL) 90 deg M2	100.25	0.016	-0.0007	0.0210	0.0210
Seismic (Reduced DL) 90 deg M2	126.75	0.027	-0.0008	0.0280	0.0280
Seismic (Reduced DL) 90 deg M2	150.00	0.040	-0.0008	0.0368	0.0368
Seismic (Reduced DL) 90 deg M2	154.88	0.043	-0.0008	0.0378	0.0378
Seismic (Reduced DL) 90 deg M2	168.05	0.052	-0.0009	0.0439	0.0439
Seismic (Reduced DL) 90 deg M2	175.85	0.058	-0.0009	0.0444	0.0444
Seismic (Reduced DL) 90 deg M2	184.19	0.065	-0.0008	0.0442	0.0442
Seismic (Reduced DL) 90 deg M2	188.13	0.068	-0.0008	0.0454	0.0455
Seismic (Reduced DL) 90 deg M2	192.06	0.071	-0.0008	0.0449	0.0449
Serviceability - 60 mph Wind Normal	79.75	0.071	0.0044	0.1123	0.1123
Serviceability - 60 mph Wind Normal	80.00	0.072	0.0045	0.1134	0.1134
Serviceability - 60 mph Wind Normal	86.75	0.084	0.0044	0.1105	0.1106
Serviceability - 60 mph Wind Normal	100.25	0.113	0.0054	0.1453	0.1453
Serviceability - 60 mph Wind Normal	126.75	0.185	0.0059	0.1733	0.1734
Serviceability - 60 mph Wind Normal	150.00	0.264	0.0067	0.2127	0.2127
Serviceability - 60 mph Wind Normal	154.88	0.282	0.0066	0.2128	0.2129
Serviceability - 60 mph Wind Normal	168.05	0.334	0.0072	0.2351	0.2352
Serviceability - 60 mph Wind Normal	175.85	0.366	0.0071	0.2360	0.2361
Serviceability - 60 mph Wind Normal	184.19	0.401	0.0070	0.2344	0.2345
Serviceability - 60 mph Wind Normal	188.13	0.417	0.0070	0.2366	0.2366
Serviceability - 60 mph Wind Normal	192.06	0.433	0.0070	0.2360	0.2361
Serviceability - 60 mph Wind 60 deg	79.75	0.068	-0.0051	0.1091	0.1091
Serviceability - 60 mph Wind 60 deg	80.00	0.068	-0.0052	0.1100	0.1100
Serviceability - 60 mph Wind 60 deg	86.75	0.081	-0.0052	0.1061	0.1062
Serviceability - 60 mph Wind 60 deg	100.25	0.109	-0.0065	0.1397	0.1397
Serviceability - 60 mph Wind 60 deg	126.75	0.178	-0.0078	0.1664	0.1665
Serviceability - 60 mph Wind 60 deg	150.00	0.253	-0.0086	0.2047	0.2047
Serviceability - 60 mph Wind 60 deg	154.88	0.271	-0.0084	0.2047	0.2048
Serviceability - 60 mph Wind 60 deg	168.05	0.321	-0.0090	0.2274	0.2274
Serviceability - 60 mph Wind 60 deg	175.85	0.352	-0.0088	0.2257	0.2258
Serviceability - 60 mph Wind 60 deg	184.19	0.385	-0.0087	0.2252	0.2254
Serviceability - 60 mph Wind 60 deg	188.13	0.401	-0.0086	0.2277	0.2278
Serviceability - 60 mph Wind 60 deg	192.06	0.416	-0.0086	0.2272	0.2274
Serviceability - 60 mph Wind 90 deg	79.75	0.069	-0.0061	0.1092	0.1092
Serviceability - 60 mph Wind 90 deg	80.00	0.069	-0.0061	0.1099	0.1099
Serviceability - 60 mph Wind 90 deg	86.75	0.082	-0.0062	0.1075	0.1077
Serviceability - 60 mph Wind 90 deg	100.25	0.110	-0.0077	0.1395	0.1396
Serviceability - 60 mph Wind 90 deg	126.75	0.180	-0.0094	0.1681	0.1683
Serviceability - 60 mph Wind 90 deg	150.00	0.256	-0.0103	0.2063	0.2063
Serviceability - 60 mph Wind 90 deg	154.88	0.274	-0.0101	0.2079	0.2082
Serviceability - 60 mph Wind 90 deg	168.05	0.325	-0.0109	0.2294	0.2295
Serviceability - 60 mph Wind 90 deg	175.85	0.356	-0.0108	0.2289	0.2292
Serviceability - 60 mph Wind 90 deg	184.19	0.390	-0.0107	0.2289	0.2292
Serviceability - 60 mph Wind 90 deg	188.13	0.405	-0.0106	0.2292	0.2293
Serviceability - 60 mph Wind 90 deg	192.06	0.421	-0.0106	0.2304	0.2306

### Maximum Reactions Summary

Anchor Group	Vertical (kip)				Horizontal (kip)		Moment (kip-ft)	
	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	55.78	160.77	361.47	37.29	61.33	21.73	6829.55	2334.05