



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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E-Mail: siting.council@ct.gov

www.ct.gov/csc

VIA ELECTRONIC MAIL

April 10, 2018

Tyler Ramsden
Site Acquisition
c/o New Cingular Wireless, PCS LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767

RE: **EM-CING-015-180322** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 1000 Trumbull Avenue, Bridgeport, Connecticut.

Dear Mr. Ramsden:

The Connecticut Siting Council (Council) is in receipt of your correspondence of April 10, 2018 submitted in response to the Council's April 3, 2018 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,

Melanie A. Bachman
Executive Director

MB/CMW/cg



From: Tyler Ramsden [mailto:tramsden@clinellc.com]
Sent: Tuesday, April 10, 2018 3:08 PM
To: Galligan, Coleen
Cc: CSC-DL Siting Council
Subject: RE: Incomplete - EM-CING-015-180322 - Trumbull Ave.

Hi Coleen,

I spoke today with Christina Walsh regarding this submission. Since the Verizon application is more recent, their SA shows the tower's full future loading.

I've attached that structural to supplement our application. It shows all AT&T and Verizon equipment and passes at 81%. I also included confirmation from ATC, the tower owner, that this structural analysis is up to date and shows all equipment.

Let me know if you need anything else. I've also sent a hard copy to your attention but per Christina's guidance did not send to other parties (local jurisdiction, tower owner, etc.).

Thanks,



Tyler Ramsden | Site Acquisitions
95 Ryan Drive, Suite #1 | Raynham, MA 02767
Cell: 781.708.3952 | Fax: 508.819.3017
tramsden@clinellc.com | www.centerlinecommunications.com

Tyler Ramsden

From: Shawn Dunn <Shawn.Dunn@AmericanTower.com>
Sent: Tuesday, April 10, 2018 1:50 PM
To: Tyler Ramsden
Subject: RE: Engineering Service Available - Structural, (Pass): AT&T MOBILITY @ Tartaglia, Connecticut, Asset# 383598, Collo# 12132278, Cust Site# N/A
Attachments: CT5093 VZW SA.PDF

Tyler,

The AT&T SA was completed in August of 2017 and the Verizon SA was completed in October of 2017. The Verizon SA was the only one run on their app and should be current and does include AT&T's loading from your app.

Thank You,

Shawn Dunn

Account Project Manager

American Tower Corporation

10 Presidential Way

Woburn, MA 01801

781-926-7061

shawn.dunn@americantower.com

1 C E 217

From: Tyler Ramsden [mailto:tramsden@clinellc.com]

Sent: Monday, April 09, 2018 12:50 PM

To: Shawn Dunn

Subject: RE: Engineering Service Available - Structural, (Pass): AT&T MOBILITY @ Tartaglia, Connecticut, Asset# 383598, Collo# 12132278, Cust Site# N/A

Hi Shawn,

The CSC rejected our submission because there was a more recent Verizon application with an updated structural.

Can you confirm that the attached VZW SA is up to date and shows all equipment to be installed on the tower – both Verizon and AT&T? If you can do so we can resubmit with the VZW SA.

Thanks,



Tyler Ramsden | Site Acquisitions

95 Ryan Drive, Suite #1 | Raynham, MA 02767

Cell: 781.708.3952 | Fax: 508.819.3017

tramsden@clinellc.com | www.centerlinecommunications.com

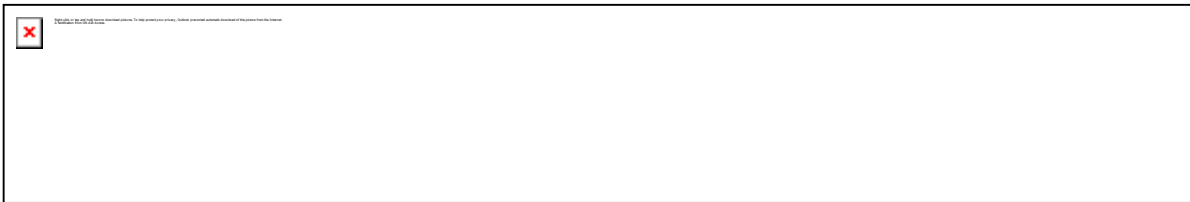
From: OnAirAccess@americantower.com <OnAirAccess@americantower.com>

Sent: Tuesday, November 14, 2017 10:02 AM

To: tramsden <tramsden@clinellc.com>

Cc: Shawn.Dunn@AmericanTower.com

Subject: Engineering Service Available - Structural, (Pass): AT&T MOBILITY @ Tartaglia, Connecticut, Asset# 383598, Collo# 12132278, Cust Site# N/A

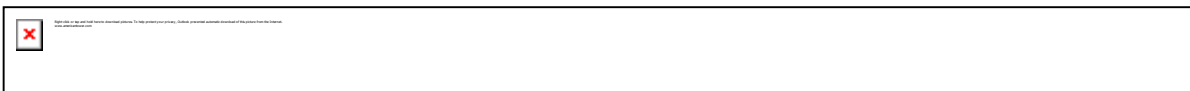


The Engineering Service for your collocation application is complete. The results are available in ON AIR Access. If the structural has failed, you will be contacted regarding modification options.

To view and retrieve your Engineering Service, [please click here](#).

Project status information and site documents are available in [ON AIR Access](#). For assistance with using ON AIR Access, please contact the support team at onairaccess@americantower.com. Please contact your Account Project Manager Shawn Dunn at shawn.dunn@americantower.com or +1-781-926-7061 with questions regarding your project.

Thank you for your continued business.



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American Tower Corporation | 10 Presidential Way | Woburn, MA 01801



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

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

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

Robert D. Barrett

Reviewed By:



Jan 26 2018 5:37 PM **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 240 ft self supported tower to reflect the change in loading by Verizon Wireless.

Supporting Documents

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

Analysis

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

Basic Wind Speed:	97 mph (3-Second Gust, V_{asd}) / 125 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Spectral Response:	$S_s = 0.21$, $S_1 = 0.06$
Site Class:	D - Stiff Soil

Conclusion

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

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

Existing and Reserved Equipment

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



Existing and Reserved Equipment (Continued)

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

Equipment to be Removed

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

Proposed Equipment

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

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

Structure Usages

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

Foundations

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

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

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

Deflection, Twist and Sway*

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

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



Standard Conditions

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

- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

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

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

Job Information

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

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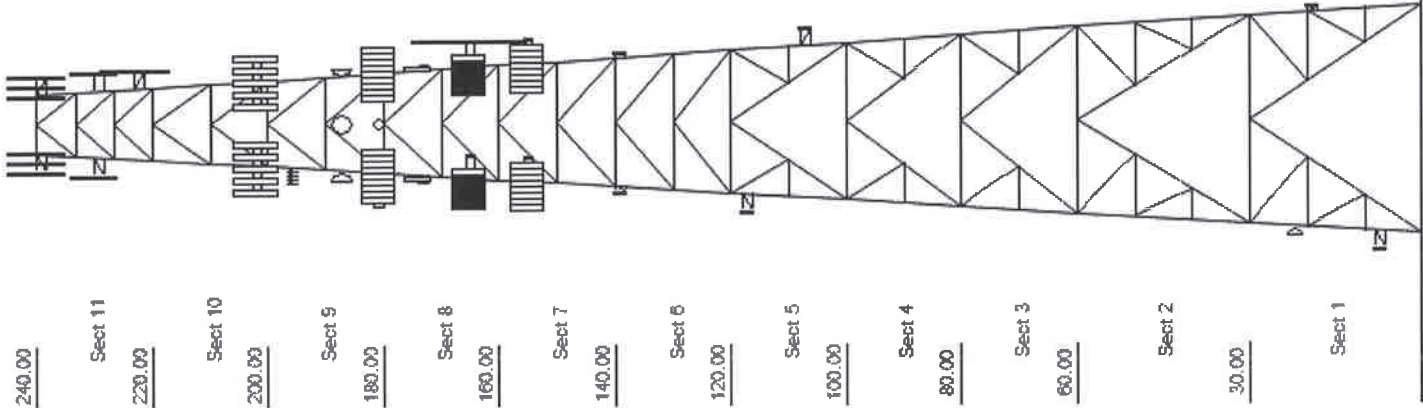
Loads: 97 mph no ice
 50 mph w/ 3/4" radial ice
 Site Class: D. Ss: 0.21 S1: 0.06
 60 mph Serviceability

Sections Properties

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

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
240.00	Straight Arm	1	Empty Round Side Arm
240.00	Whip	1	10' Omni
240.00	Whip	1	Beacon
240.00	Whip	1	Lightning Rod
230.00	Whip	1	8' Omni
230.00	Whip	1	8' Omni
230.00	Straight Arm	3	Round Side Arm
223.00	Straight Arm	1	Round Side Arm
223.00	Whip	1	12' Omni
202.00	Panel	3	Ericsson AIR32 B66Aa/B2a
202.00	Panel	3	Ericsson RRUS11
202.00	Panel	3	Commscope LNX-6515DS-VTM
202.00	Panel	3	Ericsson KRY112 144-1
202.00	Panel	3	Ericsson AIR21 B2A/B4P
202.00	Mounting Frame	3	Round Sector Frame
196.00	Yagi	1	3' Yagi
187.00	Dish	1	2' HP Dish
187.00	Dish	1	2' HP Dish
187.00	Dish	1	Andrew VHLP800-11-DW1
180.60	Dish	1	DragonWave A-ANT-11G-2C
180.60	Dish	1	DragonWave A-ANT-11G-2C
180.60	Panel	3	RFS APXVTM14-C-I20
180.60	Panel	3	Alcatel-Lucent TD-RRH8x20-25
180.60	Panel	1	PCTEL GPS-TMG-HR-26NCM
180.60	Dish	1	DragonWave A-ANT-11G-2C
180.60	Panel	3	Samsung DAP Heads
180.60	Panel	3	Argus LLPX310R
180.60	Panel	3	Alcatel-Lucent 800 MHz 2/50W
180.60	Panel	6	Alcatel-Lucent 1900 MHz 2x40W
180.60	Panel	1	RFS APXV9ERR18-C-A20
180.60	Panel	2	RFS APXVSP18-C-A20
180.60	Panel	3	Flat Light Sector Frame
174.00	Mounting Frame	2	Andrew 950F65T4E-M
174.00	Panel	3	5' x 5" x 2" Panel
174.00	Panel	4	Ericsson RRUS 32 B66
165.00	Panel	3	Commscope SBNHH-1D65A
165.00	Panel	3	Ericsson RRUS-32 B2
165.00	Panel	3	Quintel QS66512-3
165.00	Panel	1	Commscope WCS-IMFQ-AMT
165.00	Panel	3	Powerwave 7770
165.00	Panel	3	Ericsson RRUS-11
165.00	Panel	3	Ericsson RRUS-32
165.00	Panel	1	Raycap DC6-48-60-18-8F
165.00	Panel	1	Raycap DC6-48-60-18-8F
165.00	Panel	9	Powerwave LGP21401
165.00	Panel	3	CCI DTMABBP7819VG12A
165.00	Panel	6	Powerwave 7020
165.00	Panel	12	Powerwave LGP21901
165.00	Mounting Frame	3	Round Sector Frame
165.00	Whip	1	20' Omni



240.00

Sect 11

220.00

Sect 10

200.00

Sect 9

180.00

Sect 8

160.00

Sect 7

140.00

Sect 6

120.00

Sect 5

100.00

Sect 4

80.00

Sect 3

60.00

Sect 2

30.00

Sect 1

Job Information

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

155.00 Panel	3	ALU RH_2x80W-850
155.00 Panel	3	ALU RH_4x45W-AWS
155.00 Panel	6	Commscope JAHH-85B-R3B
155.00 Mounting Frame	3	Flat Light Sector Frame
155.00 Panel	3	Antel BXA-80063-68F
155.00 Panel	2	RFS DB-T1-6Z-8AB-0Z
155.00 Panel	3	ALU RH_2x60W-700U
155.00 Panel	3	ALU RH_2x60W-PCS
140.00 Whip	3	Small Side Lights
118.00 Straight Arm	1	Round Side Arm
118.00 Whip	1	10' Omni
108.00 Straight Arm	1	Round Side Arm
108.00 Whip	1	10' Omni
80.00 Straight Arm	1	Empty Round Side Arm
22.00 Dish	1	3' Dish
20.00 Whip	1	GPS
8.00 Straight Arm	1	Round Side Arm
8.00 Whip	1	GPS

Linear Appurtenance

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

Global Base Foundation Design Loads

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

Job Information

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

Individual Base Foundation Design Loads

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

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

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

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10/17/2017 4:37:24 PM

Analysis Parameters

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

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	97 mph
Exposure Category:	C	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	0.69				
T_L (sec):	6	p :	1.3	C_S :	0.051
S_S :	0.207	S_1 :	0.065	$C_{S, Max}$:	0.051
F_a :	1.600	F_v :	2.400	$C_{S, Min}$:	0.030
S_{ds} :	0.221	S_{d1} :	0.104		

Load Cases

1.2D + 1.6W Normal	97 mph Normal to Face with No Ice
1.2D + 1.6W 60 deg	97 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	97 mph 90 degree with No Ice
1.2D + 1.6W 120 deg	97 mph 120 degree with No Ice
1.2D + 1.6W 180 deg	97 mph 180 degree with No Ice
1.2D + 1.6W 210 deg	97 mph 210 degree with No Ice
1.2D + 1.6W 240 deg	97 mph 240 degree with No Ice
1.2D + 1.6W 300 deg	97 mph 300 degree with No Ice
1.2D + 1.6W 330 deg	97 mph 330 degree with No Ice
0.9D + 1.6W Normal	97 mph Normal to Face with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	97 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	97 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 120 deg	97 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	97 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 210 deg	97 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.6W 240 deg	97 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.6W 300 deg	97 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.6W 330 deg	97 mph 330 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 0.75 in Radial Ice

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

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

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Analysis Parameters

1.2D + 1.0Di + 1.0Wi 120 deg	50 mph 120 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	50 mph 180 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 210 deg	50 mph 210 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 240 deg	50 mph 240 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 300 deg	50 mph 300 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 330 deg	50 mph 330 deg with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 60 deg	Seismic 60 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg
(1.2 + 0.2Sds) * DL + E 120 deg	Seismic 120 deg
(1.2 + 0.2Sds) * DL + E 180 deg	Seismic 180 deg
(1.2 + 0.2Sds) * DL + E 210 deg	Seismic 210 deg
(1.2 + 0.2Sds) * DL + E 240 deg	Seismic 240 deg
(1.2 + 0.2Sds) * DL + E 300 deg	Seismic 300 deg
(1.2 + 0.2Sds) * DL + E 330 deg	Seismic 330 deg
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 60 deg	Seismic (Reduced DL) 60 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
(0.9 - 0.2Sds) * DL + E 120 deg	Seismic (Reduced DL) 120 deg
(0.9 - 0.2Sds) * DL + E 180 deg	Seismic (Reduced DL) 180 deg
(0.9 - 0.2Sds) * DL + E 210 deg	Seismic (Reduced DL) 210 deg
(0.9 - 0.2Sds) * DL + E 240 deg	Seismic (Reduced DL) 240 deg
(0.9 - 0.2Sds) * DL + E 300 deg	Seismic (Reduced DL) 300 deg
(0.9 - 0.2Sds) * DL + E 330 deg	Seismic (Reduced DL) 330 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 120 deg	Serviceability - 60 mph Wind 120 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 210 deg	Serviceability - 60 mph Wind 210 deg
1.0D + 1.0W Service 240 deg	Serviceability - 60 mph Wind 240 deg
1.0D + 1.0W Service 300 deg	Serviceability - 60 mph Wind 300 deg
1.0D + 1.0W Service 330 deg	Serviceability - 60 mph Wind 330 deg

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

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Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
240.0	Lightning Rod	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	31.16	42	14
240.0	10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	31.16	127	36
240.0	Beacon	1	70	4.5	3.0	18.0	18.0	1.00	1.00	0.0	0.0	31.16	191	101
240.0	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	31.16	220	216
230.0	8' Omni	1	40	2.4	8.0	4.0	4.0	1.00	1.00	0.0	0.0	30.88	101	58
230.0	8' Omni	1	40	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.0	30.88	101	58
230.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	30.88	439	648
223.0	12' Omni	1	40	3.6	12.0	4.0	4.0	1.00	1.00	0.0	0.0	30.68	150	58
223.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	30.68	217	216
202.0	Ericsson KRY112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	30.05	18	48
202.0	Ericsson RRUS11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	30.05	137	219
202.0	Ericsson AIR21	3	90	5.8	4.7	12.0	8.0	0.80	0.71	0.0	0.0	30.05	404	389
202.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	30.05	453	571
202.0	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	0.80	0.70	0.0	0.0	30.05	786	217
202.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	30.05	887	1296
196.0	3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.0	29.86	121	14
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.79	0.0	0.0	29.56	126	130
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.97	0.0	0.0	29.56	154	130
187.0	Andrew VHLP800-11-	1	121	16.7	4.1	0.0	0.0	1.00	1.00	0.0	0.0	29.56	672	174
180.6	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.80	1.00	0.0	0.0	29.35	3	1
180.6	Samsung DAP Heads	3	33	1.8	1.4	11.6	5.3	0.80	0.50	0.0	0.0	29.35	87	143
180.6	Alcatel-Lucent 800	3	64	2.4	1.6	13.0	12.2	0.80	0.50	0.0	0.0	29.35	115	276
180.6	Alcatel-Lucent 1900	6	44	3.8	1.9	17.3	13.0	0.80	0.50	0.0	0.0	29.35	367	380
180.6	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	29.35	259	124
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.61	0.0	0.0	29.35	91	39
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	1.00	0.0	0.0	29.35	150	39
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.55	0.0	0.0	29.35	82	39
180.6	Alcatel-Lucent TD-	3	70	4.7	2.2	18.6	6.7	0.80	0.67	0.0	0.0	29.35	303	302
180.6	RFS APXVTM14-C-I20	3	56	6.3	4.7	12.6	6.3	0.80	0.66	0.0	0.0	29.35	401	242
180.6	RFS APXVSP18-C-	2	57	8.0	6.0	11.8	7.0	0.80	0.71	0.0	0.0	29.35	364	164
180.6	RFS APXV9ERR18-C-	1	62	8.0	6.0	11.8	7.9	0.80	0.71	0.0	0.0	29.35	182	89
180.6	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	29.35	1077	1728
174.0	5' x 5" x 2" Panel	4	30	3.3	5.0	5.0	2.0	1.00	0.74	0.0	0.0	29.12	382	173
174.0	Andrew 950F65T4E-	2	16	4.8	5.0	11.0	7.0	1.00	0.90	0.0	0.0	29.12	339	45
165.0	Powerwave	12	6	0.2	0.5	4.0	3.0	0.80	0.50	0.0	0.0	28.79	38	95
165.0	Powerwave 7020	6	2	0.4	0.4	8.3	2.4	0.80	0.50	0.0	0.0	28.79	38	19
165.0	CCI	3	19	1.0	0.9	11.0	3.8	0.80	0.50	0.0	0.0	28.79	46	83
165.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	28.79	31	42
165.0	Powerwave	9	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	28.79	155	183
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	28.79	35	29
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	28.79	35	29
165.0	Ericsson RRUS-32	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	28.79	126	219
165.0	Ericsson RRUS-32 B2	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	28.79	126	219
165.0	Ericsson RRUS 32	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.0	28.79	129	229
165.0	Ericsson RRUS-11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	28.79	131	219
165.0	Powerwave 7770	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	28.79	336	151
165.0	Commscope SBNHH-	3	41	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	28.79	381	177
165.0	20' Omni	1	55	6.0	20.0	4.0	4.0	0.80	1.00	0.0	0.0	28.79	188	79
165.0	Quintel QS66512-3	3	105	8.1	6.0	12.0	9.6	0.80	0.74	0.0	0.0	28.79	565	454
165.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.79	850	1296
155.0	ALU RH_2x80W-850	3	35	1.0	1.4	7.4	6.5	0.80	0.50	0.0	0.0	28.42	48	152
155.0	ALU RH_2x60W-PCS	3	46	1.8	1.6	11.2	8.2	0.80	0.50	0.0	0.0	28.42	85	199
155.0	ALU RH_2x60W-	3	57	2.2	1.8	12.0	9.0	0.80	0.50	0.0	0.0	28.42	100	247
155.0	ALU RH_4x45W-AWS	3	57	2.5	2.2	11.8	7.2	0.80	0.50	0.0	0.0	28.42	118	245

Site Number: 383598
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Tower Loading

155.0	RFS DB-T1-6Z-8AB-	2	7	4.8	2.0	24.0	10.0	0.80	0.50	0.0	0.0	28.42	148	19
155.0	Antel BXA-80063-6BF	3	19	7.3	5.7	11.2	5.3	0.80	0.66	0.0	0.0	28.42	445	83
155.0	Commscope JAHH-	6	63	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	28.42	1166	547
155.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.42	1043	1728
140.0	Small Side Lights	3	45	2.0	1.0	8.0	8.0	1.00	1.00	0.0	0.0	27.81	227	194
118.0	10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	26.83	5	12
118.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	26.83	190	216
108.0	10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	26.34	5	12
108.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	26.34	186	216
80.00	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.72	175	216
22.00	3' Dish	1	100	6.1	3.0	0.0	0.0	1.00	0.64	0.0	0.0	18.84	100	144
20.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	18.47	25	14
8.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	17.40	24	14
8.00	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	17.40	123	216
Totals		166	11371	749.6										

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
240.0	Lightning Rod	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	31.16	42	8
240.0	10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	31.16	127	20
240.0	Beacon	1	70	4.5	3.0	18.0	18.0	1.00	1.00	0.0	0.0	31.16	191	57
240.0	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	31.16	220	122
230.0	8' Omni	1	40	2.4	8.0	4.0	4.0	1.00	1.00	0.0	0.0	30.88	101	32
230.0	8' Omni	1	40	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.0	30.88	101	32
230.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	30.88	439	365
223.0	12' Omni	1	40	3.6	12.0	4.0	4.0	1.00	1.00	0.0	0.0	30.68	150	32
223.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	30.68	217	122
202.0	Ericsson KRY112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	30.05	18	27
202.0	Ericsson RRUS11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	30.05	137	123
202.0	Ericsson AIR21	3	90	5.8	4.7	12.0	8.0	0.80	0.71	0.0	0.0	30.05	404	219
202.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	30.05	453	321
202.0	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	0.80	0.70	0.0	0.0	30.05	786	122
202.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	30.05	887	729
196.0	3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.0	29.86	121	8
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.79	0.0	0.0	29.56	126	73
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.97	0.0	0.0	29.56	154	73
187.0	Andrew VHLP800-11-	1	121	16.7	4.1	0.0	0.0	1.00	1.00	0.0	0.0	29.56	672	98
180.6	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.80	1.00	0.0	0.0	29.35	3	0
180.6	Samsung DAP Heads	3	33	1.8	1.4	11.6	5.3	0.80	0.50	0.0	0.0	29.35	87	80
180.6	Alcatel-Lucent 800	3	64	2.4	1.6	13.0	12.2	0.80	0.50	0.0	0.0	29.35	115	156
180.6	Alcatel-Lucent 1900	6	44	3.8	1.9	17.3	13.0	0.80	0.50	0.0	0.0	29.35	367	214
180.6	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	29.35	259	69
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.61	0.0	0.0	29.35	91	22
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	1.00	0.0	0.0	29.35	150	22
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.55	0.0	0.0	29.35	82	22
180.6	Alcatel-Lucent TD-	3	70	4.7	2.2	18.6	6.7	0.80	0.67	0.0	0.0	29.35	303	170
180.6	RFS APXVTM14-C-I20	3	56	6.3	4.7	12.6	6.3	0.80	0.66	0.0	0.0	29.35	401	136
180.6	RFS APXVSP18-C-	2	57	8.0	6.0	11.8	7.0	0.80	0.71	0.0	0.0	29.35	364	92
180.6	RFS APXV9ERR18-C-	1	62	8.0	6.0	11.8	7.9	0.80	0.71	0.0	0.0	29.35	182	50
180.6	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	29.35	1077	972
174.0	5' x 5" x 2" Panel	4	30	3.3	5.0	5.0	2.0	1.00	0.74	0.0	0.0	29.12	382	97
174.0	Andrew 950F65T4E-	2	16	4.8	5.0	11.0	7.0	1.00	0.90	0.0	0.0	29.12	339	25
165.0	Powerwave	12	6	0.2	0.5	4.0	3.0	0.80	0.50	0.0	0.0	28.79	38	53
165.0	Powerwave 7020	6	2	0.4	0.4	8.3	2.4	0.80	0.50	0.0	0.0	28.79	38	11

Site Number: 383598
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Tower Loading

165.0	CCI	3	19	1.0	0.9	11.0	3.8	0.80	0.50	0.0	0.0	28.79	46	47
165.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	28.79	31	24
165.0	Powerwave	9	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	28.79	155	103
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	28.79	35	16
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	28.79	35	16
165.0	Ericsson RRUS-32	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	28.79	126	123
165.0	Ericsson RRUS-32 B2	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	28.79	126	123
165.0	Ericsson RRUS 32	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.0	28.79	129	129
165.0	Ericsson RRUS-11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	28.79	131	123
165.0	Powerwave 7770	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	28.79	336	85
165.0	Commscope SBNHH-	3	41	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	28.79	381	99
165.0	20' Omni	1	55	6.0	20.0	4.0	4.0	0.80	1.00	0.0	0.0	28.79	188	45
165.0	Quintel QS66512-3	3	105	8.1	6.0	12.0	9.6	0.80	0.74	0.0	0.0	28.79	565	255
165.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.79	850	729
155.0	ALU RH_2x80W-850	3	35	1.0	1.4	7.4	6.5	0.80	0.50	0.0	0.0	28.42	48	86
155.0	ALU RH_2x60W-PCS	3	46	1.8	1.6	11.2	8.2	0.80	0.50	0.0	0.0	28.42	85	112
155.0	ALU RH_2x60W-	3	57	2.2	1.8	12.0	9.0	0.80	0.50	0.0	0.0	28.42	100	139
155.0	ALU RH_4x45W-AWS	3	57	2.5	2.2	11.8	7.2	0.80	0.50	0.0	0.0	28.42	118	138
155.0	RFS DB-T1-6Z-8AB-	2	7	4.8	2.0	24.0	10.0	0.80	0.50	0.0	0.0	28.42	148	11
155.0	Antel BXA-80063-6BF	3	19	7.3	5.7	11.2	5.3	0.80	0.66	0.0	0.0	28.42	445	47
155.0	Commscope JAHH-	6	63	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	28.42	1166	308
155.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	28.42	1043	972
140.0	Small Side Lights	3	45	2.0	1.0	8.0	8.0	1.00	1.00	0.0	0.0	27.81	227	109
118.0	10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	26.83	5	6
118.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	26.83	190	122
108.0	10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	26.34	5	6
108.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	26.34	186	122
80.00	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.72	175	122
22.00	3' Dish	1	100	6.1	3.0	0.0	0.0	1.00	0.64	0.0	0.0	18.84	100	81
20.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	18.47	25	8
8.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	17.40	24	8
8.00	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	17.40	123	122
Totals		166	11371	749.6										

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
240.0	Lightning Rod	1	70	1.9	4.0	3.0	3.0	1.00	1.00	0.0	0.0	8.28	14	86
240.0	10' Omni	1	167	6.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	8.28	42	206
240.0	Beacon	1	294	4.2	3.0	18.0	18.0	1.00	1.00	0.0	0.0	8.28	29	369
240.0	Empty Round Side	1	227	8.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.28	57	308
230.0	8' Omni	1	179	4.9	8.0	4.0	4.0	1.00	1.00	0.0	0.0	8.20	34	224
230.0	8' Omni	1	154	4.5	8.0	3.0	3.0	1.00	1.00	0.0	0.0	8.20	31	195
230.0	Round Side Arm	3	227	8.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	8.20	113	923
223.0	12' Omni	1	242	8.4	12.0	4.0	4.0	1.00	1.00	0.0	0.0	8.15	58	300
223.0	Round Side Arm	1	226	8.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.15	56	307
202.0	Ericsson KRY112	3	28	0.6	0.6	6.1	2.7	0.80	0.50	0.0	0.0	7.98	5	109
202.0	Ericsson RRUS11	3	140	3.5	1.6	17.0	7.2	0.80	0.50	0.0	0.0	7.98	28	539
202.0	Ericsson AIR21	3	264	7.2	4.7	12.0	8.0	0.80	0.71	0.0	0.0	7.98	83	1015
202.0	Ericsson AIR32	3	321	7.7	4.7	12.9	8.7	0.80	0.71	0.0	0.0	7.98	89	1250
202.0	Commscope LNX-	3	321	13.1	8.0	11.9	7.1	0.80	0.70	0.0	0.0	7.98	150	1193
202.0	Round Sector Frame	3	677	31.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.98	321	2655
196.0	3' Yagi	1	102	9.4	3.0	36.0	3.0	1.00	1.00	0.0	0.0	7.93	63	125
187.0	2' HP Dish	1	225	5.1	2.0	0.0	0.0	1.00	0.79	0.0	0.0	7.85	27	292
187.0	2' HP Dish	1	225	5.1	2.0	0.0	0.0	1.00	0.97	0.0	0.0	7.85	33	292

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

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

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Tower Loading

187.0	Andrew VHLP800-11-	1	466	19.2	4.1	0.0	0.0	1.00	1.00	0.0	0.0	7.85	128	589
180.6	PCTEL GPS-TMG-HR-	1	11	0.3	0.4	3.2	3.2	0.80	1.00	0.0	0.0	7.80	2	14
180.6	Samsung DAP Heads	3	86	2.1	1.4	11.6	5.3	0.80	0.50	0.0	0.0	7.80	17	334
180.6	Alcatel-Lucent 800	3	156	2.7	1.6	13.0	12.2	0.80	0.50	0.0	0.0	7.80	21	608
180.6	Alcatel-Lucent 1900	6	172	4.0	1.9	17.3	13.0	0.80	0.50	0.0	0.0	7.80	64	1300
180.6	Argus LLPX310R	3	138	5.2	3.5	11.8	4.5	0.80	0.63	0.0	0.0	7.80	52	518
180.6	DragonWave A-ANT-	1	126	6.0	2.2	0.0	0.0	0.80	0.61	0.0	0.0	7.80	19	158
180.6	DragonWave A-ANT-	1	126	6.0	2.2	0.0	0.0	0.80	1.00	0.0	0.0	7.80	32	158
180.6	DragonWave A-ANT-	1	126	6.0	2.2	0.0	0.0	0.80	0.55	0.0	0.0	7.80	17	158
180.6	Alcatel-Lucent TD-	3	164	6.7	2.2	18.6	6.7	0.80	0.67	0.0	0.0	7.80	72	640
180.6	RFS APXVTM14-C-I20	3	204	8.5	4.7	12.6	6.3	0.80	0.66	0.0	0.0	7.80	90	774
180.6	RFS APXVSP18-C-	2	260	9.3	6.0	11.8	7.0	0.80	0.71	0.0	0.0	7.80	70	651
180.6	RFS APXV9ERR18-C-	1	274	9.3	6.0	11.8	7.9	0.80	0.71	0.0	0.0	7.80	35	343
180.6	Flat Light Sector	3	705	33.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.80	332	2827
174.0	5' x 5" x 2" Panel	4	108	4.3	5.0	5.0	2.0	1.00	0.74	0.0	0.0	7.74	84	546
174.0	Andrew 950F65T4E-	2	181	7.2	5.0	11.0	7.0	1.00	0.90	0.0	0.0	7.74	86	442
165.0	Powerwave	12	18	0.4	0.5	4.0	3.0	0.80	0.50	0.0	0.0	7.65	13	277
165.0	Powerwave 7020	6	18	0.6	0.4	8.3	2.4	0.80	0.50	0.0	0.0	7.65	10	132
165.0	CCI	3	54	1.4	0.9	11.0	3.8	0.80	0.50	0.0	0.0	7.65	11	208
165.0	Commscope WCS-	1	175	1.3	0.9	10.6	6.9	0.80	1.00	0.0	0.0	7.65	7	218
165.0	Powerwave	9	48	1.6	1.2	9.2	2.6	0.80	0.50	0.0	0.0	7.65	37	546
165.0	Raycap DC6-48-60-	1	101	2.5	2.0	9.7	9.7	0.80	1.00	0.0	0.0	7.65	13	125
165.0	Raycap DC6-48-60-	1	101	2.5	2.0	9.7	9.7	0.80	1.00	0.0	0.0	7.65	13	125
165.0	Ericsson RRUS-32	3	115	3.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	7.65	29	451
165.0	Ericsson RRUS-32 B2	3	137	3.4	2.2	12.1	6.8	0.80	0.50	0.0	0.0	7.65	27	529
165.0	Ericsson RRUS 32	3	141	3.5	2.3	12.1	7.0	0.80	0.50	0.0	0.0	7.65	27	546
165.0	Ericsson RRUS-11	3	137	3.5	1.6	17.0	7.2	0.80	0.50	0.0	0.0	7.65	27	530
165.0	Powerwave 7770	3	170	6.6	4.6	11.0	5.0	0.80	0.65	0.0	0.0	7.65	67	638
165.0	Commscope SBNHH-	3	199	7.0	4.6	11.9	7.1	0.80	0.69	0.0	0.0	7.65	75	746
165.0	20' Omni	1	373	15.2	20.0	4.0	4.0	0.80	1.00	0.0	0.0	7.65	79	461
165.0	Quintel QS66512-3	3	332	9.4	6.0	12.0	9.6	0.80	0.74	0.0	0.0	7.65	109	1272
165.0	Round Sector Frame	3	669	31.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.65	304	2623
155.0	ALU RH_2x80W-850	3	81	1.5	1.4	7.4	6.5	0.80	0.50	0.0	0.0	7.55	12	316
155.0	ALU RH_2x60W-PCS	3	100	2.7	1.6	11.2	8.2	0.80	0.50	0.0	0.0	7.55	21	393
155.0	ALU RH_2x60W-	3	139	2.8	1.8	12.0	9.0	0.80	0.50	0.0	0.0	7.55	21	541
155.0	ALU RH_4x45W-AWS	3	141	3.2	2.2	11.8	7.2	0.80	0.50	0.0	0.0	7.55	25	548
155.0	RFS DB-T1-6Z-8AB-	2	150	5.7	2.0	24.0	10.0	0.80	0.50	0.0	0.0	7.55	29	364
155.0	Antel BXA-80063-6BF	3	189	8.5	5.7	11.2	5.3	0.80	0.66	0.0	0.0	7.55	86	694
155.0	Commscope JAHH-	6	294	10.5	6.0	13.8	8.2	0.80	0.69	0.0	0.0	7.55	222	2206
155.0	Flat Light Sector	3	702	33.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	7.55	319	2814
140.0	Small Side Lights	3	86	0.9	1.0	8.0	8.0	1.00	1.00	0.0	0.0	7.39	16	341
118.0	10' Omni	1	21	0.4	1.0	2.0	2.0	1.00	1.00	0.0	0.0	7.13	2	27
118.0	Round Side Arm	1	221	7.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.13	48	301
108.0	10' Omni	1	20	0.4	1.0	2.0	2.0	1.00	1.00	0.0	0.0	7.00	2	26
108.0	Round Side Arm	1	220	7.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.00	46	300
80.00	Empty Round Side	1	218	7.7	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.57	43	298
22.00	3' Dish	1	245	7.1	3.0	0.0	0.0	1.00	0.64	0.0	0.0	5.01	19	318
20.00	GPS	1	38	0.8	1.0	9.0	6.0	1.00	1.00	0.0	0.0	4.91	4	49
8.00	GPS	1	38	0.8	1.0	9.0	6.0	1.00	1.00	0.0	0.0	4.62	3	49
8.00	Round Side Arm	1	208	7.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.62	29	286
Totals		166	30848	1102.3										

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
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Site Number: 383598
 Site Name: Tartaglia, CT
 Customer: Verizon Wireless

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

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Tower Loading

240.0	Lightning Rod	1	10	1.0	4.0	3.0	3.0	1.00	1.00	0.0	0.0	11.92	10	10
240.0	10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	11.92	30	25
240.0	Beacon	1	70	4.5	3.0	18.0	18.0	1.00	1.00	0.0	0.0	11.92	46	70
240.0	Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	11.92	53	150
230.0	8' Omni	1	40	2.4	8.0	4.0	4.0	1.00	1.00	0.0	0.0	11.81	24	40
230.0	8' Omni	1	40	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.0	11.81	24	40
230.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.0	11.81	105	450
223.0	12' Omni	1	40	3.6	12.0	4.0	4.0	1.00	1.00	0.0	0.0	11.74	36	40
223.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	11.74	52	150
202.0	Ericsson KRY112	3	11	0.4	0.6	6.1	2.7	0.80	0.50	0.0	0.0	11.50	4	33
202.0	Ericsson RRUS11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	11.50	33	152
202.0	Ericsson AIR21	3	90	5.8	4.7	12.0	8.0	0.80	0.71	0.0	0.0	11.50	97	270
202.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	11.50	108	397
202.0	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	0.80	0.70	0.0	0.0	11.50	188	151
202.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.50	212	900
196.0	3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.0	11.42	29	10
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.79	0.0	0.0	11.31	30	90
187.0	2' HP Dish	1	90	4.0	2.0	0.0	0.0	1.00	0.97	0.0	0.0	11.31	37	90
187.0	Andrew VHLP800-11-	1	121	16.7	4.1	0.0	0.0	1.00	1.00	0.0	0.0	11.31	161	121
180.6	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.80	1.00	0.0	0.0	11.23	1	1
180.6	Samsung DAP Heads	3	33	1.8	1.4	11.6	5.3	0.80	0.50	0.0	0.0	11.23	21	99
180.6	Alcatel-Lucent 800	3	64	2.4	1.6	13.0	12.2	0.80	0.50	0.0	0.0	11.23	27	192
180.6	Alcatel-Lucent 1900	6	44	3.8	1.9	17.3	13.0	0.80	0.50	0.0	0.0	11.23	88	264
180.6	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.0	11.23	62	86
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.61	0.0	0.0	11.23	22	27
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	1.00	0.0	0.0	11.23	36	27
180.6	DragonWave A-ANT-	1	27	4.7	2.2	0.0	0.0	0.80	0.55	0.0	0.0	11.23	20	27
180.6	Alcatel-Lucent TD-	3	70	4.7	2.2	18.6	6.7	0.80	0.67	0.0	0.0	11.23	72	210
180.6	RFS APXVTM14-C-I20	3	56	6.3	4.7	12.6	6.3	0.80	0.66	0.0	0.0	11.23	96	168
180.6	RFS APXVSP18-C-	2	57	8.0	6.0	11.8	7.0	0.80	0.71	0.0	0.0	11.23	87	114
180.6	RFS APXV9ERR18-C-	1	62	8.0	6.0	11.8	7.9	0.80	0.71	0.0	0.0	11.23	43	62
180.6	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.23	258	1200
174.0	5' x 5" x 2" Panel	4	30	3.3	5.0	5.0	2.0	1.00	0.74	0.0	0.0	11.14	91	120
174.0	Andrew 950F65T4E-	2	16	4.8	5.0	11.0	7.0	1.00	0.90	0.0	0.0	11.14	81	31
165.0	Powerwave	12	6	0.2	0.5	4.0	3.0	0.80	0.50	0.0	0.0	11.02	9	66
165.0	Powerwave 7020	6	2	0.4	0.4	8.3	2.4	0.80	0.50	0.0	0.0	11.02	9	13
165.0	CCI	3	19	1.0	0.9	11.0	3.8	0.80	0.50	0.0	0.0	11.02	11	58
165.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	11.02	7	30
165.0	Powerwave	9	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	11.02	37	127
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	11.02	8	20
165.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	0.0	0.0	11.02	8	20
165.0	Ericsson RRUS-32	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	11.02	30	152
165.0	Ericsson RRUS-32 B2	3	51	2.7	2.2	12.1	6.8	0.80	0.50	0.0	0.0	11.02	30	152
165.0	Ericsson RRUS 32	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.0	11.02	31	159
165.0	Ericsson RRUS-11	3	51	2.8	1.6	17.0	7.2	0.80	0.50	0.0	0.0	11.02	31	152
165.0	Powerwave 7770	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	11.02	80	105
165.0	Commscope SBNHH-	3	41	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	11.02	91	123
165.0	20' Omni	1	55	6.0	20.0	4.0	4.0	0.80	1.00	0.0	0.0	11.02	45	55
165.0	Quintel QS66512-3	3	105	8.1	6.0	12.0	9.6	0.80	0.74	0.0	0.0	11.02	135	315
165.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	11.02	203	900
155.0	ALU RH_2x80W-850	3	35	1.0	1.4	7.4	6.5	0.80	0.50	0.0	0.0	10.87	12	106
155.0	ALU RH_2x60W-PCS	3	46	1.8	1.6	11.2	8.2	0.80	0.50	0.0	0.0	10.87	20	138
155.0	ALU RH_2x60W-	3	57	2.2	1.8	12.0	9.0	0.80	0.50	0.0	0.0	10.87	24	172
155.0	ALU RH_4x45W-AWS	3	57	2.5	2.2	11.8	7.2	0.80	0.50	0.0	0.0	10.87	28	170
155.0	RFS DB-T1-6Z-8AB-	2	7	4.8	2.0	24.0	10.0	0.80	0.50	0.0	0.0	10.87	35	13
155.0	Antel BXA-80063-6BF	3	19	7.3	5.7	11.2	5.3	0.80	0.66	0.0	0.0	10.87	106	58
155.0	Commscope JAHH-	6	63	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	10.87	279	380
155.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	10.87	249	1200
140.0	Small Side Lights	3	45	2.0	1.0	8.0	8.0	1.00	1.00	0.0	0.0	10.64	54	135

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

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Tower Loading

118.0 10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	10.27	1	8
118.0 Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.27	45	150
108.0 10' Omni	1	8	0.1	1.0	2.0	2.0	1.00	1.00	0.0	0.0	10.08	1	8
108.0 Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.08	45	150
80.00 Empty Round Side	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.46	42	150
22.00 3' Dish	1	100	6.1	3.0	0.0	0.0	1.00	0.64	0.0	0.0	7.21	24	100
20.00 GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	7.07	6	10
8.00 GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	6.66	6	10
8.00 Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.66	29	150
Totals	166	11371	749.6										

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Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	240.0	1 1/4" Coax	1	1.55	0.63	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	240.0	1" Conduit	1	1.30	1.68	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	230.0	7/8" Coax	2	1.09	0.33	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	223.0	1 1/4" Coax	1	1.55	0.63	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	202.0	1 5/8" Coax	7	1.98	0.82	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	202.0	1" Hybrid	1	1.00	0.65	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	202.0	Waveguide	1	1.50	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	196.0	7/8" Coax	1	1.09	0.33	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	187.0	1/2" Coax	4	0.63	0.15	0	1	Individual	0.00	N	1.00	1.00	0.01
0.00	180.6	1 1/4" Hybriflex	3	1.54	1.00	67	2	Block	0.00	N	0.00	1.00	0.00
0.00	180.6	1.625" Hybrid	1	1.63	1.61	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	180.6	1/2" Ethernet	3	0.50	0.14	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	180.6	2" Conduit	2	2.38	3.65	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	180.6	5/16" Coax	6	0.32	0.04	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	180.6	Waveguide	1	1.50	6.00	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	174.0	1 5/8" Coax	6	1.98	0.82	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	174.0	Waveguide	1	1.50	6.00	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	165.0	0.39" Fiber Trunk	1	0.39	0.06	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	165.0	0.39" Fiber Trunk	1	0.39	0.06	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	165.0	0.78" 8 AWG 6	2	0.78	0.59	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	165.0	0.78" 8 AWG 6	2	0.78	0.59	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	165.0	1 1/4" Coax	1	1.55	0.63	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	165.0	1 5/8" Coax	12	1.98	0.82	50	3	Block	0.00	N	0.00	1.00	0.00
0.00	165.0	Waveguide	1	1.50	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	155.0	1 5/8" Coax	12	1.98	0.82	50	3	Block	0.00	N	0.00	1.00	0.00
0.00	155.0	1 5/8" Hybrid	1	1.98	1.30	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	155.0	1 5/8" Hybrid	1	1.98	1.30	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	152.0	Waveguide	1	1.50	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	118.0	7/8" Coax	1	1.09	0.33	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	108.0	1 1/4" Coax	1	1.55	0.63	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	22.00	0.24" Cat 5	1	0.24	0.04	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	20.00	1/2" Coax	1	0.63	0.15	0	3	Individual	0.00	N	1.00	1.00	0.01
0.00	8.00	1/2" Coax	1	0.63	0.15	0	3	Individual	0.00	N	1.00	1.00	0.00

Site Number: 383598
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 Customer: Verizon Wireless

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 Engineering Number: 12159334_C3_01

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Force/Stress Summary

Section: 1 1		Bot Elev (ft): 0.00				Height (ft): 30.000									
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use			
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Boles	phiRnv	phiRn	%	Controls		
		Load Case					KL/R		Holes	(kip)	(kip)				
Max Compression Member															
LEG	PX - 10" DIA PIPE	-276.05	30.08	33	33	33	32.8	50.0	669.65	0	0	0.00	0.00	41	Member X
HORIZ	PST - 3-1/2" DIA PIP	-14.89	18.29	100	100	100	163.8	50.0	22.56	2	0	0.00	42.31	66	Member X
DIAG	PST - 3" DIA PIPE	-29.55	36.16	32	32	32	0.0	0.0	41.40	3	0	0.00	60.65	71	User Input
Max Tension Member															
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use			
		(kip)		(ksi)	(ksi)	(kip)	Boles	Holes	phiRnv	phiRn	phiT Pn	%	Controls		
		Load Case							(kip)	(kip)	(kip)				
LEG	PX - 10" DIA PIPE	220.64	60	50	65	724.50	0	0	0.00	0.00			30	Member	
HORIZ	PST - 3-1/2" DIA PIP	15.51	90	50	65	120.60	2	0	0.00	33.93	0.00		45	Bolt Bear	
DIAG	PST - 3" DIA PIPE	27.53	90	50	65	100.35	3	0	0.00	52.65	0.00		52	Bolt Bear	
Max Splice Forces															
		Pu		phiRnt	Use	Num									
		(kip)		(kip)	%	Boles	Bolt Type								
		Load Case													
Top	Tension	219.07	180	0.00	0	0									
Top	Compression	274.39		0.00	0										
Bot	Tension	262.00	180	726.84	46	12	1" A193-B7								
Bot	Compression	320.47	120	0.00	0										

Section: 2 2		Bot Elev (ft): 30.00				Height (ft): 30.000									
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use			
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Boles	phiRnv	phiRn	%	Controls		
		Load Case					KL/R		Holes	(kip)	(kip)				
Max Compression Member															
LEG	PX - 10" DIA PIPE	-226.20	30.08	33	33	33	32.8	50.0	669.65	0	0	0.00	0.00	33	Member X
HORIZ	PST - 3" DIA PIPE	-14.24	16.41	96	96	96	163.0	50.0	18.95	2	0	0.00	40.44	75	Member X
DIAG	PST - 3" DIA PIPE	-32.25	35.15	31	31	31	112.7	50.0	39.62	3	0	0.00	60.65	81	Member X
Max Tension Member															
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use			
		(kip)		(ksi)	(ksi)	(kip)	Boles	Holes	phiRnv	phiRn	phiT Pn	%	Controls		
		Load Case							(kip)	(kip)	(kip)				
LEG	PX - 10" DIA PIPE	177.73	60	50	65	724.50	0	0	0.00	0.00			24	Member	
HORIZ	PST - 3" DIA PIPE	15.15	90	50	65	100.35	2	0	0.00	32.43	0.00		46	Bolt Bear	
DIAG	PST - 3" DIA PIPE	29.68	90	50	65	100.35	3	0	0.00	52.65	0.00		56	Bolt Bear	
Max Splice Forces															
		Pu		phiRnt	Use	Num									
		(kip)		(kip)	%	Boles	Bolt Type								
		Load Case													
Top	Tension	176.24	180	0.00	0	0									
Top	Compression	224.60		0.00	0										
Bot	Tension	219.07	180	654.24	33	12	1 A325								
Bot	Compression	274.39		0.00	0										

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

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Force/Stress Summary

Section: 3		3		Bot Elev (ft): 60.00				Height (ft): 20.000								
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Shear Bear		Use			
		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
Max Compression Member																
LEG	PX - 10" DIA PIPE	-192.06	1.2D + 1.6W	20.05	50	50	50	33.1	50.0	668.58	0	0	0.00	0.00	28	Member X
HORIZ	PST - 3" DIA PIPE	-12.91	1.2D + 1.6W 90	15.16	100	100	100	156.9	50.0	20.47	2	0	0.00	40.44	63	Member X
DIAG	PST - 3" DIA PIPE	-23.64	1.2D + 1.6W 90	25.88	48	48	48	128.5	50.0	30.49	3	0	0.00	50.54	77	Member X
Max Tension Member																
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use				
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls			
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	(kip)	%	Controls			
LEG	PX - 10" DIA PIPE	150.15	0.9D + 1.6W 60	50	65	724.50	0	0	0.00	0.00			20 Member			
HORIZ	PST - 3" DIA PIPE	13.75	1.2D + 1.6W 90	50	65	100.35	2	0	0.00	32.43	0.00		42 Bolt Bear			
DIAG	PST - 3" DIA PIPE	21.91	0.9D + 1.6W 90	50	65	100.35	3	0	0.00	43.80	0.00		50 Bolt Bear			
Max Splice Forces																
		Pu		phiRnt	Use	Num										
		(kip)	Load Case	(kip)	%	Bolts	Bolt Type									
Top Tension		148.77	0.9D + 1.6W 60	0.00	0	0										
Top Compression		190.59	1.2D + 1.6W 120	0.00	0											
Bot Tension		176.24	0.9D + 1.6W 180	654.24	27	12	1 A325									
Bot Compression		224.60	1.2D + 1.6W	0.00	0											

Section: 4		4		Bot Elev (ft): 80.00				Height (ft): 20.000								
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Shear Bear		Use			
		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
Max Compression Member																
LEG	PX - 8" DIA PIPE	-159.29	1.2D + 1.6W	20.06	50	50	50	41.8	50.0	506.95	0	0	0.00	0.00	31	Member X
HORIZ	PST - 3" DIA PIPE	-11.85	0.9D + 1.6W 90	13.83	100	100	100	143.2	50.0	24.58	2	0	0.00	40.44	48	Member X
DIAG	PST - 3" DIA PIPE	-22.45	1.2D + 1.6W 90	25.11	48	48	48	124.7	50.0	32.40	3	0	0.00	50.54	69	Member X
Max Tension Member																
		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use				
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls			
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	(kip)	%	Controls			
LEG	PX - 8" DIA PIPE	122.52	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00			21 Member			
HORIZ	PST - 3" DIA PIPE	12.24	1.2D + 1.6W 90	50	65	100.35	2	0	0.00	32.43	0.00		37 Bolt Bear			
DIAG	PST - 3" DIA PIPE	20.76	1.2D + 1.6W 90	50	65	100.35	3	0	0.00	43.80	0.00		47 Bolt Bear			
Max Splice Forces																
		Pu		phiRnt	Use	Num										
		(kip)	Load Case	(kip)	%	Bolts	Bolt Type									
Top Tension		121.23	0.9D + 1.6W 60	0.00	0	0										
Top Compression		157.94	1.2D + 1.6W	0.00	0											
Bot Tension		148.77	0.9D + 1.6W 60	654.24	23	12	1 A325									
Bot Compression		190.59	1.2D + 1.6W 120	0.00	0											

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Force/Stress Summary

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

		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear		Bear	Use	
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
Max Compression Member														
LEG	PX - 8" DIA PIPE	-125.90	20.05	50	50	50	41.8	50.0	507.00	0	0	0.00	0.00	24 Member X
HORIZ	PST - 2-1/2" DIA PIP	-10.89	12.58	98	98	98	156.3	50.0	15.75	2	0	0.00	38.00	69 Member X
DIAG	PST - 2-1/2" DIA PIP	-22.24	24.33	48	48	48	0.0	0.0	28.20	3	0	0.00	47.50	78 User Input

		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls
Max Tension Member												
LEG	PX - 8" DIA PIPE	93.95	50	65	576.00	0	0	0.00	0.00			16 Member
HORIZ	PST - 2-1/2" DIA PIP	11.55	50	65	76.68	2	0	0.00	30.48	0.00		37 Bolt Bear
DIAG	PST - 2-1/2" DIA PIP	20.66	50	65	76.68	3	0	0.00	41.17	0.00		50 Bolt Bear

		Pu	phiRnt	Use	Num		
		(kip)	(kip)	%	Bolts	Bolt Type	
Max Splice Forces							
Top Tension		92.82	0.00	0	0		
Top Compression		124.68	0.00	0			
Bot Tension		121.23	654.24	19	12	1 A325	
Bot Compression		157.94	0.00	0			

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

		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear		Bear	Use	
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
Max Compression Member														
LEG	PX - 8" DIA PIPE	-108.91	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	21 Member X
HORIZ	PST - 2-1/2" DIA PIP	-9.92	11.96	100	100	100	151.6	50.0	16.75	2	0	0.00	31.67	59 Member X
DIAG	PST - 3" DIA PIPE	-14.37	16.08	96	96	96	159.7	50.0	19.75	3	0	0.00	50.54	72 Member X

		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls
Max Tension Member												
LEG	PX - 8" DIA PIPE	76.63	50	65	576.00	0	0	0.00	0.00			13 Member
HORIZ	PST - 2-1/2" DIA PIP	10.64	50	65	76.68	2	0	0.00	25.33	0.00		42 Bolt Bear
DIAG	PST - 3" DIA PIPE	13.26	50	65	100.35	3	0	0.00	43.80	0.00		30 Bolt Bear

		Pu	phiRnt	Use	Num		
		(kip)	(kip)	%	Bolts	Bolt Type	
Max Splice Forces							
Top Tension		65.84	0.00	0	0		
Top Compression		91.65	0.00	0			
Bot Tension		92.82	436.16	21	8	1 A325	
Bot Compression		124.68	0.00	0			

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Force/Stress Summary

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

	Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	PhiC Pn (kip)	Num Bolts	Num Holes	Shear Bear		Use %	Controls
				X	Y	Z					phiRnv (kip)	phiRn (kip)		
Max Compression Member														
LEG PX - 8" DIA PIPE	-76.66	1.2D + 1.6W	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	15 Member X
HORIZ PST - 2-1/2" DIA PIP	-8.79	0.9D + 1.6W 90	10.71	100	100	100	135.8	50.0	20.89	2	0	0.00	31.67	42 Member X
DIAG PST - 2-1/2" DIA PIP	-13.25	1.2D + 1.6W 90	15.12	100	100	100	0.0	0.0	23.40	3	0	0.00	47.50	56 User Input

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	PhiT Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
HORIZ PST - 2-1/2" DIA PIP	9.34	1.2D + 1.6W 90	50	65	76.68	2	0	0.00	25.33	0.00	36 Bolt Bear	
DIAG PST - 2-1/2" DIA PIP	12.23	1.2D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00	29 Bolt Bear	

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	38.95	0.9D + 1.6W 60	0.00	0	0	
Top Compression	59.90	1.2D + 1.6W 120	0.00	0		
Bot Tension	65.84	0.9D + 1.6W 60	436.16	15	8	1 A325
Bot Compression	91.65	1.2D + 1.6W 120	0.00	0		

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

	Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	PhiC Pn (kip)	Num Bolts	Num Holes	Shear Bear		Use %	Controls
				X	Y	Z					KL/R	phiRnv (kip)		
Max Compression Member														
LEG PX - 8" DIA PIPE	-46.70	1.2D + 1.6W	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	9 Member X
HORIZ PST - 2-1/2" DIA PIP	-5.74	1.2D + 1.6W 90	9.464	100	100	100	119.9	50.0	26.77	2	0	0.00	31.67	21 Member X
DIAG PST - 2-1/2" DIA PIP	-9.34	1.2D + 1.6W 90	14.20	96	96	96	172.9	50.0	12.88	3	0	0.00	47.50	72 Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	PhiT Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	28.97	1.2D + 1.6W 60	50	65	576.00	0	0	0.00	0.00		5 Member	
HORIZ PST - 2-1/2" DIA PIP	6.17	1.2D + 1.6W 90	50	65	76.68	2	0	0.00	25.33	0.00	24 Bolt Bear	
DIAG PST - 2-1/2" DIA PIP	8.65	0.9D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00	21 Bolt Bear	

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	21.36	0.9D + 1.6W 180	0.00	0	0	
Top Compression	34.85	1.2D + 1.6W	0.00	0		
Bot Tension	38.95	0.9D + 1.6W 60	436.16	9	8	1 A325
Bot Compression	59.90	1.2D + 1.6W 120	0.00	0		

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

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

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Force/Stress Summary

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

Max Compression Member	Pu	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear	Bear	Use %	Controls
	(kip)			phiRnv (kip)	phiRn (kip)									
LEG PX - 8" DIA PIPE	-25.66	1.2D + 1.6W	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	5 Member X
HORIZ PST - 2" DIA PIPE	-3.51	1.2D + 1.6W 90	8.214	100	100	100	125.2	50.0	15.41	2	0	0.00	24.02	22 Member X
DIAG PST - 2-1/2" DIA PIP	-6.23	1.2D + 1.6W 90	13.35	100	100	100	169.2	50.0	13.45	3	0	0.00	47.50	46 Member X

Max Tension Member	Pu	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
	(kip)											
LEG PX - 8" DIA PIPE	14.20	1.2D + 1.6W 60	50	65	576.00	0	0	0.00	0.00			2 Member
HORIZ PST - 2" DIA PIPE	3.79	1.2D + 1.6W 90	50	65	48.15	2	0	0.00	19.22	0.00		19 Bolt Bear
DIAG PST - 2-1/2" DIA PIP	5.65	1.2D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00		13 Bolt Bear

Max Splice Forces	Pu	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
	(kip)					
Top Tension	9.28	0.9D + 1.6W 180	0.00	0	0	
Top Compression	17.55	1.2D + 1.6W	0.00	0		
Bot Tension	21.36	0.9D + 1.6W 180	436.16	5	8	1 A325
Bot Compression	34.85	1.2D + 1.6W	0.00	0		

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

Max Compression Member	Pu	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear	Bear	Use %	Controls
	(kip)			phiRnv (kip)	phiRn (kip)									
LEG PX - 8" DIA PIPE	-11.65	1.2D + 1.6W	10.02	100	100	100	41.8	50.0	507.06	0	0	0.00	0.00	2 Member X
HORIZ PST - 2" DIA PIPE	-1.67	1.2D + 1.6W 90	7.026	100	100	100	107.1	50.0	20.80	2	0	0.00	24.02	8 Member X
DIAG PST - 2-1/2" DIA PIP	-3.56	1.2D + 1.6W 90	12.55	100	100	100	159.1	50.0	15.20	3	0	0.00	47.50	23 Member X

Max Tension Member	Pu	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
	(kip)											
LEG PX - 8" DIA PIPE	6.17	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00			1 Member
HORIZ PST - 2" DIA PIPE	1.75	1.2D + 1.6W 60	50	65	48.15	2	0	0.00	19.22	0.00		9 Bolt Bear
DIAG PST - 2-1/2" DIA PIP	3.06	1.2D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00		7 Bolt Bear

Max Splice Forces	Pu	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
	(kip)					
Top Tension	2.59	0.9D + 1.6W 180	0.00	0	0	
Top Compression	6.64	1.2D + 1.6W 120	0.00	0		
Bot Tension	9.28	0.9D + 1.6W 180	436.16	2	8	1 A325
Bot Compression	17.55	1.2D + 1.6W	0.00	0		

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Force/Stress Summary

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

	Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Bolts	Num Holes	Shear	Bear	Use %	Controls
				phiRnv	phiRn									
Max Compression Member														
LEG PX - 8" DIA PIPE	-3.98	1.2D + 1.6W	6.68	100	100	100	27.8	50.0	544.30	0	0	0.00	0.00	0 Member X
HORIZ PST - 2" DIA PIPE	-0.87	1.2D + 1.6W	6.130	100	100	100	93.5	50.0	25.42	2	0	0.00	24.02	3 Member X
DIAG PST - 2" DIA PIPE	-1.84	1.2D + 1.6W 90	9.288	100	100	100	141.6	50.0	12.05	3	0	0.00	36.04	15 Member X

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

	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num	Bolt Type
					Bolts	
Max Splice Forces						
Top Tension	0.00		0.00	0	0	
Top Compression	0.80	1.2D + 1.0Di +	0.00	0		
Bot Tension	2.59	0.9D + 1.6W 180	436.16	1	8	1 A325
Bot Compression	6.64	1.2D + 1.6W 120	0.00	0		