



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 275 ft Guyed Tower
ATC Site Name : Portland ME, ME
ATC Site Number : 10047
Engineering Number : OAA685516_C3_08
Proposed Carrier : Verizon
Carrier Site Name : Portland_N_ME
Carrier Site Number : 20130840731
Site Location : 225 Riverside Industrial Parkway
Portland, ME 04103-1438
43.706000,-70.310700
County : Cumberland
Date : November 8, 2017
Max Usage : 101%
Result : Pass

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Structural Engineer I

Reviewed By:



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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 275 ft guyed tower to reflect the change in loading by Verizon.

Supporting Documents

| | |
|----------------------------|--|
| Tower Drawings | PiRod Drawing # 110412-B dated September 29, 1987 |
| Foundation Drawing | PiRod Drawing # 110412-B dated September 29, 1987 |
| Geotechnical Report | GEOServices, LLC Project # 21-07254 dated April 27, 2008 |

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: | 98 mph (3-Second Gust) |
| Basic Wind Speed w/ Ice: | 40 mph (3-Second Gust) w/ 1" radial ice concurrent |
| Code: | ANSI/TIA-222-G / 2009 IBC / Maine Model Building Code |
| Structure Class: | II |
| Exposure Category: | B |
| Topographic Category: | 1 |
| Spectral Response: | $S_s = 0.25, S_1 = 0.08$ |
| 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 | | | | | |
| 272.0 | - | - | - | Sector Frames | (17) 1 5/8" Coax | Verizon |
| 260.0 | 260.0 | 3 | RFS APXVAA24_43-U-A20 | Sector Frames | (12) 1 5/8" Coax (1) 1/2" Coax (1) 1 1/4" Fiber | T-Mobile |
| | | 3 | Ericsson Radio 4478 B71 | | | |
| | | 3 | RFS ATMA4P4DBP-1A20 | | | |
| | | 3 | RFS APX16DWV-16DWV-S-E-ACU | | | |
| | | 1 | Radio Waves G3-2.4 | | | |
| 239.0 | 239.0 | 1 | RAC 8' Ice Shield | Leg | - | US Dept. Of Homeland Security |
| 230.0 | 230.0 | 1 | Radio Waves HPD6-4.7NS | Leg | (1) 1/2" Coax (1) 1 5/8" Coax | |
| | | 1 | Motorola PTP 45600 | | | |
| 206.0 | 206.0 | 3 | KMW HB-X-WM-17-65-00T | Stand-Offs | (6) 1 5/8" Coax | Clearwire |
| | | 3 | KMW HB-X-WM-17-65-00T-TTLNA (w/BKT) | | | |
| 195.0 | 195.0 | 1 | 10' Omni | Stand-Off | (1) 1 1/4" Coax | City Of Portland |
| 188.0 | 188.0 | 3 | Ericsson RRUS-11 (50 lbs.) | Sector Frames | (6) 1 5/8" Coax (1) 1 1/4" Fiber | US Cellular |
| | | 6 | KMW AM-X-CD-17-65-00T-RET | | | |
| | | 1 | Raycap RUSDC-6267-PF-48 | | | |
| 175.0 | 175.0 | 1 | 10' Omni | Stand-Off | (1) 7/8" Coax | City Of Portland |
| 171.0 | 171.0 | 1 | TX RX Systems 421-83A-01261 | Stand-Off | (1) 1/2" Coax (1) 7/8" Coax | |
| | | 1 | Bird BA40-41-DIN | | | |
| 153.0 | 153.0 | 1 | 6' Ice Shield | Leg | - | US Dept. Of Homeland Security |
| 142.0 | 142.0 | 1 | Radio Waves HPD4-4.7 | Leg | (2) 1/4" Coax (1) 1 5/8" Coax | |
| | | 1 | Motorola PTP 45600 | | | |
| 131.0 | 131.0 | 1 | Bird BA40-41-DIN | Stand-Off | (1) 7/8" Coax | City Of Portland |
| 125.0 | 125.0 | 2 | 2' Omni | Stand-Off | (1) 1/2" Coax (1) 7/8" Coax | |
| 100.0 | 100.0 | 1 | 2' Omni | Stand-Off | (1) 1/2" Coax | |
| 38.0 | 38.0 | 1 | 2" X 8" GPS | Stand-Off | (1) 1/4" Coax | |

Equipment to be Removed

| Elevation ¹ (ft) | | Qty | Antenna | Mount Type | Lines | Carrier |
|-----------------------------|-------|-----|----------------------------|------------|-------------------------------------|---------|
| Mount | RAD | | | | | |
| 272.0 | 272.0 | 3 | Swedcom SACP 2x5516 | - | (1) 1 5/8" Coax (1) 1 5/8" Fiber | Verizon |
| | | 3 | CSS X7C-665-0 | | | |
| | | 3 | CSS AXP18-60 | | | |
| | | 3 | Swedcom SWCP 2x5515 | | | |
| | | 3 | Alcatel-Lucent RRH2x40-AWS | | | |
| | | 1 | Raycap RDC-4276-PF-48 | | | |



Proposed Equipment

| Elevation ¹ (ft) | | Qty | Antenna | Mount Type | Lines | Carrier |
|-----------------------------|-------|-----|-------------------------------------|---------------|----------------------|---------|
| Mount | RAD | | | | | |
| 272.0 | 272.0 | 12 | Commscope SBNHH-1D65B (72.9") | Sector Frames | (2) 1 5/8" Hybriflex | Verizon |
| | | 2 | Raycap RVZDC-6624-PF-48 | | | |
| | | 3 | Alcatel-Lucent B66a RRH4x45 (AWS-3) | | | |
| | | 3 | Alcatel-Lucent B25 RRH4x30-4R | | | |
| | | 3 | Alcatel-Lucent B13 RRH4x30-4R | | | |

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).

Install proposed coax stacked on top of existing Verizon coax.



Structure Usages

| Structural Component | Controlling Usage | Pass/Fail |
|----------------------|-------------------|-----------|
| Legs | 80% | Pass |
| Diagonals | 98% | Pass |
| Horizontals | 87% | Pass |
| Guys | 62% | Pass |
| Leg Bolts | 65% | Pass |

Foundations

| Reaction Component | Analysis Reactions | % of Usage |
|------------------------|--------------------|------------|
| Base Axial (kips) | 353.9 | 101% |
| Anchor 1 Uplift (kips) | 97.1 | 39% |
| Anchor 1 Shear (kips) | 64.0 | 41% |

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, 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) (°) |
|------------------------|-------------------------------|----------------------|-----------------|-----------|---------------------|
| 272.0 | Raycap RVZDC-6624-PF-48 | Verizon | 0.161 | 0.024 | 0.067 |
| | Commscope SBNHH-1D65B (72.9") | | | | |
| 260.0 | Radio Waves G3-2.4 | T-Mobile | 0.168 | | |
| 230.0 | Radio Waves HPD6-4.7NS | US Dept. of Homeland | 0.157 | | |
| 142.0 | Radio Waves HPD4-4.7 | | 0.109 | | |
| | | | | | 0.044 |

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



Standard Conditions

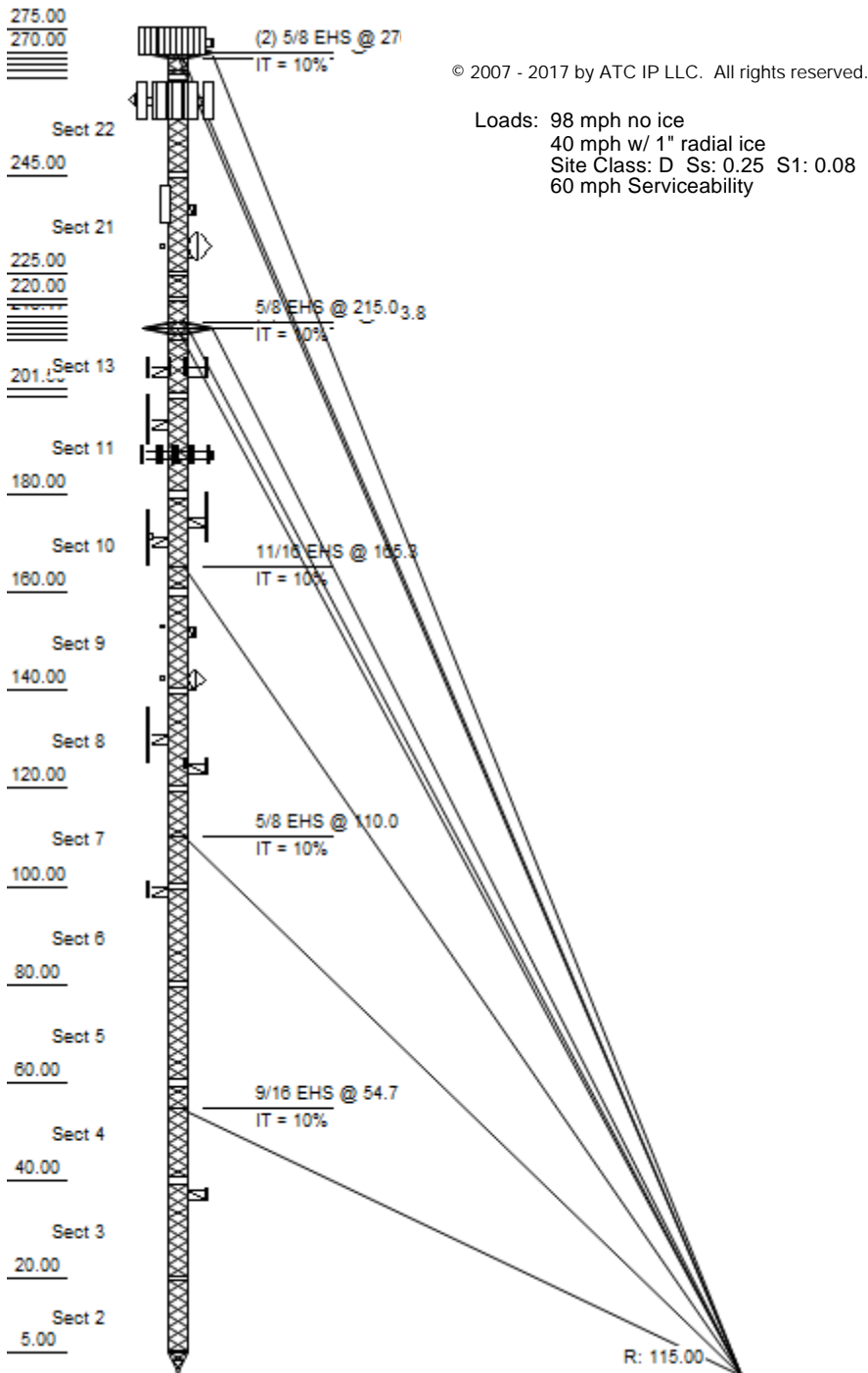
All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- 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 ATC Tower Services LLC 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. ATC Tower Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



| Job Information | | | |
|---------------------------|----------------------------|----------------------|--|
| Tower : 10047 | Location : PORTLAND ME, ME | | |
| Code : ANSI/TIA-222-G | Shape : Triangle | Base Width : 3.50 ft | |
| Client : VERIZON WIRELESS | | | |

| Sections Properties | | | | |
|---------------------|-------------|--------------|-----------------------|------------------------|
| Section | Leg Members | | Diagonal Members | Horizontal Members |
| 1 - 2 | SOL 50 ksi | 2 1/4" SOLID | SOL 50 ksi 3/4" SOLID | SOL 50 ksi 3/4" SOLID |
| 3 - 10 | SOL 50 ksi | 2 1/4" SOLID | SOL 50 ksi 3/4" SOLID | SOL 50 ksi 7/8" SOLID |
| 11 - 14 | SOL 50 ksi | 2" SOLID | SOL 50 ksi 3/4" SOLID | SOL 50 ksi 7/8" SOLID |
| 15 | SOL 50 ksi | 2" SOLID | SOL 50 ksi 3/4" SOLID | PL 50 ksi PL 3 x 0.375 |
| 16 | SOL 50 ksi | 2" SOLID | SOL 50 ksi 3/4" SOLID | SOL 50 ksi 7/8" SOLID |
| 17 | SOL 50 ksi | 2" SOLID | SOL 50 ksi 3/4" SOLID | PL 50 ksi PL 3 x 0.375 |
| 18 - 20 | SOL 50 ksi | 2" SOLID | SOL 50 ksi 3/4" SOLID | SOL 50 ksi 7/8" SOLID |
| 21 - 23 | SOL 50 ksi | 1 3/4" SOLID | SOL 50 ksi 3/4" SOLID | SOL 50 ksi 7/8" SOLID |
| 24 | SOL 50 ksi | 1 3/4" SOLID | SOL 50 ksi 3/4" SOLID | PL 50 ksi PL 3 x 0.375 |
| 25 | SOL 50 ksi | 1 3/4" SOLID | SOL 50 ksi 3/4" SOLID | SOL 50 ksi 7/8" SOLID |
| 26 | SOL 50 ksi | 1 3/4" SOLID | SOL 50 ksi 3/4" SOLID | PL 50 ksi PL 3 x 0.375 |
| 27 | SOL 50 ksi | 1 3/4" SOLID | SOL 50 ksi 3/4" SOLID | SOL 50 ksi 7/8" SOLID |

| Discrete Appurtenance | | | | |
|-----------------------|----------------|-----|--------------------------------|--|
| Elev (ft) | Type | Qty | Description | |
| 272.00 | Panel | 12 | Commscope SBNHH-1D65B (72.9") | |
| 272.00 | Panel | 2 | Raycap RVZDC-6624-PF-48 | |
| 272.00 | Panel | 3 | Alcatel-Lucent B66a RRH4x45 (A | |
| 272.00 | Panel | 3 | Alcatel-Lucent B25 RRH4x30-4R | |
| 272.00 | Panel | 3 | Alcatel-Lucent B13 RRH4x30-4R | |
| 272.00 | Mounting Frame | 3 | Flat Light Sector Frame | |
| 270.00 | Other | 1 | Torque Arms | |
| 260.00 | Panel | 3 | RFS APXVAA24_43-U-A20 | |
| 260.00 | Panel | 3 | Ericsson Radio 4478 B71 | |
| 260.00 | Panel | 3 | RFS ATMA4P4DBP-1A20 | |
| 260.00 | Panel | 3 | RFS APX16DWV-16DWV-S-E-ACU | |
| 260.00 | Dish | 1 | Radio Waves G3-2.4 | |
| 260.00 | Mounting Frame | 3 | Round Sector Frame | |
| 239.00 | Panel | 1 | RAC 8' Ice Shield | |
| 230.00 | Dish | 1 | Radio Waves HPD6-4.7NS | |
| 230.00 | Panel | 1 | Motorola PTP 45600 | |
| 215.00 | Other | 1 | Torque Arms | |
| 206.00 | Straight Arm | 3 | Stand-Off | |
| 206.00 | Panel | 3 | KMW HB-X-WM-17-65-00T | |
| 206.00 | Panel | 3 | KMW HB-X-WM-17-65-00T-TTLNA (w | |
| 195.00 | Straight Arm | 1 | Stand-Off | |
| 195.00 | Whip | 1 | 10' Omni | |
| 188.00 | Panel | 3 | Ericsson RRUS-11 (50 lbs.) | |
| 188.00 | Panel | 6 | KMW AM-X-CD-17-65-00T-RET | |
| 188.00 | Panel | 1 | Raycap RUSDC-6267-PF-48 | |
| 188.00 | Mounting Frame | 3 | Round Sector Frame | |
| 175.00 | Straight Arm | 1 | Stand-Off | |
| 175.00 | Whip | 1 | 10' Omni | |
| 171.00 | Whip | 1 | Bird BA40-41-DIN | |
| 171.00 | Panel | 1 | TX RX Systems 421-83A-01261 | |
| 171.00 | Straight Arm | 1 | Stand-Off | |
| 153.00 | Panel | 1 | 6' Ice Shield | |
| 142.00 | Dish | 1 | Radio Waves HPD4-4.7 | |
| 142.00 | Panel | 1 | Motorola PTP 45600 | |
| 131.00 | Whip | 1 | Bird BA40-41-DIN | |
| 131.00 | Straight Arm | 1 | Stand-Off | |
| 125.00 | Straight Arm | 1 | Stand-Off | |
| 125.00 | Whip | 2 | 2' Omni | |
| 100.00 | Straight Arm | 1 | Stand-Off | |
| 100.00 | Whip | 1 | 2' Omni | |
| 38.00 | Whip | 1 | 2" X 8" GPS | |
| 38.00 | Straight Arm | 1 | Stand-Off | |

Job Information

Tower : 10047

Location : PORTLAND ME, ME

Code : ANSI/TIA-222-G

Shape : Triangle

Base Width : 3.50 ft

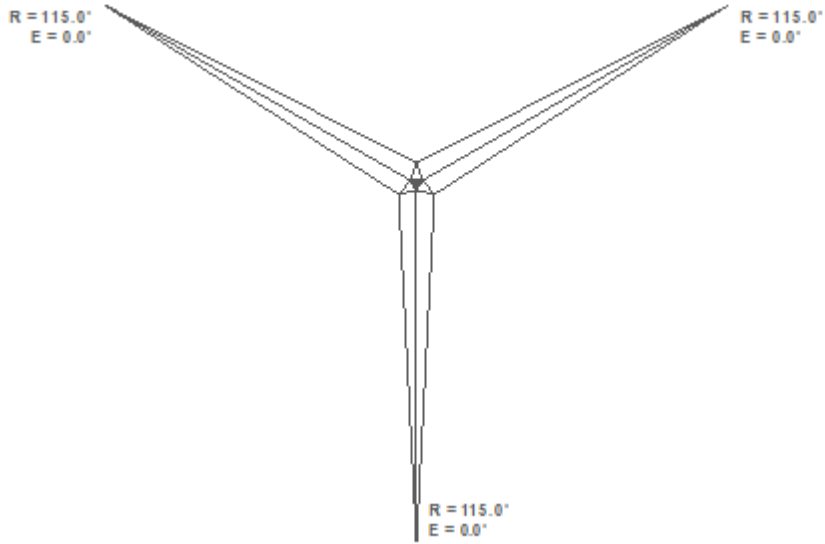
Client : VERIZON WIRELESS

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Linear Appurtenance

| Elev (ft) | | Qty | Description |
|-----------|--------|-----|------------------|
| From | To | | |
| 10.00 | 272.00 | 2 | 1 5/8" Hybriflex |
| 10.00 | 272.00 | 2 | 1 5/8" Coax |
| 10.00 | 272.00 | 5 | 1 5/8" Coax |
| 10.00 | 272.00 | 3 | 1 5/8" Coax |
| 10.00 | 272.00 | 6 | 1 5/8" Coax |
| 10.00 | 260.00 | 1 | 1/2" Coax |
| 10.00 | 260.00 | 12 | 1 5/8" Coax |
| 10.00 | 260.00 | 1 | 1 1/4" Fiber |
| 0.00 | 230.00 | 1 | 1/2" Coax |
| 0.00 | 230.00 | 1 | 1 5/8" Coax |
| 10.00 | 206.00 | 1 | Waveguide |
| 10.00 | 206.00 | 6 | 1 5/8" Coax |
| 10.00 | 195.00 | 1 | 1 1/4" Coax |
| 10.00 | 188.00 | 6 | 1 5/8" Coax |
| 10.00 | 188.00 | 1 | 1 1/4" Fiber |
| 10.00 | 175.00 | 1 | 7/8" Coax |
| 10.00 | 171.00 | 1 | 7/8" Coax |
| 10.00 | 171.00 | 1 | 1/2" Coax |
| 10.00 | 142.00 | 2 | 1/4" Coax |
| 10.00 | 142.00 | 1 | 1 5/8" Coax |
| 10.00 | 131.00 | 1 | 7/8" Coax |
| 10.00 | 125.00 | 1 | 7/8" Coax |
| 10.00 | 125.00 | 1 | 1/2" Coax |
| 10.00 | 100.00 | 1 | 1/2" Coax |
| 10.00 | 38.00 | 1 | 1/4" Coax |

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| Job Information | | |
|---------------------------|----------------------------|----------------------|
| Tower : 10047 | Location : PORTLAND ME, ME | |
| Code : ANSI/TIA-222-G | Shape : Triangle | Base Width : 3.50 ft |
| Client : VERIZON WIRELESS | | |

| Guy Anchor Design Loads | | | | |
|-------------------------|-----------|---------------|--------------|-------------|
| Radius (ft) | Drop (ft) | Azimuth (°) | Uplift (kip) | Shear (kip) |
| 115.00 | 0.00 | 0 | 97.13 | 64.01 |
| 115.00 | 0.00 | 240 | 97.13 | 64.01 |
| 115.00 | 0.00 | 120 | 97.13 | 64.01 |

| Global Base Foundation Design Loads | |
|-------------------------------------|------------------|
| Vertical (kip) | Horizontal (kip) |
| 353.90 | 0.61 |

Site Number: 10047

Code:

ANSI/TIA-222-G

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Site Name: PORTLAND ME, ME

Engineering Number: OAA685516_C3_08

11/8/2017 11:46:30 AM

Customer: VERIZON WIRELESS

Analysis Parameters

| | | | |
|---------------------|-----------------------|-------------------------|------|
| Location: | CUMBERLAND County, ME | Height (ft): | 275 |
| Code: | ANSI/TIA-222-G | Base Elevation (ft): | 0.00 |
| Shape: | Triangle | Bottom Face Width (ft): | 3.50 |
| Tower Manufacturer: | Pirod | Top Face Width (ft): | 3.50 |
| Tower Type: | Guyed | | |

Ice & Wind Parameters

| | | | |
|-----------------------|--------|-------------------------------|---------|
| Structure Class: | II | Design Windspeed Without Ice: | 98 mph |
| Exposure Category: | B | Design Windspeed With Ice: | 40 mph |
| Topographic Category: | 1 | Operational Windspeed: | 60 mph |
| Crest Height: | 0.0 ft | Design Ice Thickness: | 1.00 in |

Seismic Parameters

| | | | | | |
|--|--|------------|-------|--------------|-------|
| Analysis Method: | Equivalent Modal Analysis & Equivalent Lateral Force Methods | | | | |
| Site Class: | D - Stiff Soil | | | | |
| Period Based on Rayleigh Method (sec): | 0.87 | | | | |
| T_L (sec): | 6 | p: | 1.3 | C_S : | 0.058 |
| S_S : | 0.245 | S_1 : | 0.079 | C_S , Max: | 0.058 |
| F_a : | 1.600 | F_V : | 2.400 | C_S , Min: | 0.030 |
| S_{ds} : | 0.261 | S_{d1} : | 0.126 | | |

Load Cases

| | |
|--------------------------------|-------------------------------------|
| 1.2D + 1.6W Normal | 98 mph Normal to Face with No Ice |
| 1.2D + 1.6W 60 deg | 98 mph 60 degree with No Ice |
| 1.2D + 1.6W 90 deg | 98 mph 90 degree with No Ice |
| 1.2D + 1.6W 120 deg | 98 mph 120 degree with No Ice |
| 1.2D + 1.6W 180 deg | 98 mph 180 degree with No Ice |
| 1.2D + 1.6W 210 deg | 98 mph 210 degree with No Ice |
| 1.2D + 1.6W 240 deg | 98 mph 240 degree with No Ice |
| 1.2D + 1.6W 300 deg | 98 mph 300 degree with No Ice |
| 1.2D + 1.6W 330 deg | 98 mph 330 degree with No Ice |
| 1.2D + 1.0Di + 1.0Wi Normal | 40 mph Normal with 1 in Radial Ice |
| 1.2D + 1.0Di + 1.0Wi 60 deg | 40 mph 60 deg with 1 in Radial Ice |
| 1.2D + 1.0Di + 1.0Wi 90 deg | 40 mph 90 deg with 1 in Radial Ice |
| 1.2D + 1.0Di + 1.0Wi 120 deg | 40 mph 120 deg with 1 in Radial Ice |
| 1.2D + 1.0Di + 1.0Wi 180 deg | 40 mph 180 deg with 1 in Radial Ice |
| 1.2D + 1.0Di + 1.0Wi 210 deg | 40 mph 210 deg with 1 in Radial Ice |
| 1.2D + 1.0Di + 1.0Wi 240 deg | 40 mph 240 deg with 1 in Radial Ice |
| 1.2D + 1.0Di + 1.0Wi 300 deg | 40 mph 300 deg with 1 in Radial Ice |
| 1.2D + 1.0Di + 1.0Wi 330 deg | 40 mph 330 deg with 1 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 |

Analysis Parameters

| | |
|---------------------------------|--------------------------------------|
| (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 |

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) |
|----------------|---------------------|-----------|-------------|--------------|-------------|------------|------------|----------------|----------------|----------------|------------------------|----------------------|--------------------------|--------------------------|
| 272.0 | Alcatel-Lucent B13 | 3 | 58 | 2.1 | 1.8 | 12.0 | 8.9 | 0.80 | 0.67 | 0.0 | 0.0 | 27.49 | 129 | 250 |
| 272.0 | Alcatel-Lucent B25 | 3 | 51 | 2.1 | 1.8 | 12.0 | 7.2 | 0.80 | 0.67 | 0.0 | 0.0 | 27.49 | 129 | 220 |
| 272.0 | Raycap RVZDC-6624- | 2 | 32 | 2.5 | 2.4 | 15.7 | 10.3 | 0.80 | 0.67 | 0.0 | 0.0 | 27.49 | 99 | 92 |
| 272.0 | Alcatel-Lucent B66a | 3 | 67 | 2.7 | 2.2 | 12.0 | 6.8 | 0.80 | 0.67 | 0.0 | 0.0 | 27.49 | 160 | 289 |
| 272.0 | Commscope SBNHH- | 12 | 41 | 8.2 | 6.1 | 11.9 | 7.1 | 0.80 | 0.69 | 0.0 | 0.0 | 27.49 | 2031 | 702 |
| 272.0 | Flat Light Sector | 3 | 400 | 17.9 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 27.49 | 1009 | 1728 |
| 270.0 | Torque Arms | 1 | 500 | 15.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 27.43 | 560 | 720 |
| 260.0 | RFS ATMA4P4DBP- | 3 | 16 | 0.9 | 0.9 | 8.0 | 4.9 | 0.80 | 0.50 | 0.0 | 0.0 | 27.14 | 39 | 69 |
| 260.0 | Ericsson Radio 4478 | 3 | 60 | 1.6 | 1.3 | 13.2 | 7.4 | 0.80 | 0.50 | 0.0 | 0.0 | 27.14 | 73 | 259 |
| 260.0 | Radio Waves G3-2.4 | 1 | 25 | 4.2 | 3.0 | 36.0 | 0.0 | 0.80 | 1.00 | 0.0 | 0.0 | 27.14 | 124 | 36 |
| 260.0 | RFS APX16DWV- | 3 | 40 | 6.1 | 4.4 | 13.0 | 3.1 | 0.80 | 0.60 | 0.0 | 0.0 | 27.14 | 323 | 171 |
| 260.0 | Round Sector Frame | 3 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 27.14 | 801 | 1296 |
| 260.0 | RFS APXVAA24_43- | 3 | 101 | 20.3 | 8.0 | 24.0 | 8.5 | 0.80 | 0.63 | 0.0 | 0.0 | 27.14 | 1131 | 438 |
| 239.0 | RAC 8' Ice Shield | 1 | 600 | 6.0 | 8.0 | 60.0 | 24.0 | 1.00 | 1.00 | 0.0 | 0.0 | 26.49 | 216 | 864 |
| 230.0 | Motorola PTP 45600 | 1 | 12 | 1.8 | 1.2 | 14.5 | 3.7 | 1.00 | 0.50 | 0.0 | 0.0 | 26.20 | 31 | 17 |
| 230.0 | Radio Waves HPD6- | 1 | 405 | 44.0 | 6.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 26.20 | 1568 | 583 |
| 215.0 | Torque Arms | 1 | 500 | 15.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 25.70 | 524 | 720 |
| 206.0 | KMW HB-X-WM-17- | 3 | 16 | 1.0 | 1.3 | 7.3 | 3.7 | 0.80 | 0.50 | 0.0 | 0.0 | 25.39 | 40 | 69 |
| 206.0 | KMW HB-X-WM-17- | 3 | 30 | 1.9 | 4.0 | 7.3 | 7.3 | 0.80 | 1.00 | 0.0 | 0.0 | 25.39 | 159 | 130 |
| 206.0 | Stand-Off | 3 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 25.39 | 311 | 432 |
| 195.0 | 10' Omni | 1 | 25 | 3.0 | 10.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 24.99 | 102 | 36 |
| 195.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 24.99 | 102 | 144 |
| 188.0 | Raycap RUSDC-6267- | 1 | 16 | 2.5 | 1.6 | 16.1 | 5.6 | 0.80 | 0.67 | 0.0 | 0.0 | 24.73 | 46 | 23 |
| 188.0 | Ericsson RRUS-11 | 3 | 50 | 2.6 | 1.5 | 17.3 | 7.2 | 0.80 | 0.67 | 0.0 | 0.0 | 24.73 | 139 | 216 |
| 188.0 | KMW AM-X-CD-17- | 6 | 31 | 5.0 | 4.0 | 11.8 | 6.0 | 0.80 | 0.66 | 0.0 | 0.0 | 24.73 | 532 | 266 |
| 188.0 | Round Sector Frame | 3 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 24.73 | 730 | 1296 |
| 175.0 | 10' Omni | 1 | 25 | 3.0 | 10.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 24.23 | 99 | 36 |
| 175.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 24.23 | 99 | 144 |
| 171.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 24.07 | 98 | 144 |
| 171.0 | TX RX Systems 421- | 1 | 20 | 3.1 | 1.7 | 16.0 | 6.0 | 1.00 | 0.50 | 0.0 | 0.0 | 24.07 | 51 | 29 |
| 171.0 | Bird BA40-41-DIN | 1 | 32 | 5.1 | 11.5 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 24.07 | 165 | 46 |
| 153.0 | 6' Ice Shield | 1 | 450 | 3.9 | 1.2 | 100.0 | 48.0 | 1.00 | 1.00 | 0.0 | 0.0 | 23.32 | 123 | 648 |
| 142.0 | Motorola PTP 45600 | 1 | 12 | 2.0 | 1.2 | 14.5 | 3.7 | 1.00 | 1.00 | 0.0 | 0.0 | 22.83 | 63 | 17 |
| 142.0 | Radio Waves HPD4- | 1 | 85 | 15.9 | 4.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 22.83 | 492 | 122 |
| 131.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 22.31 | 91 | 144 |
| 131.0 | Bird BA40-41-DIN | 1 | 32 | 5.1 | 11.5 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 22.31 | 153 | 46 |
| 125.0 | 2' Omni | 2 | 5 | 0.3 | 2.0 | 2.0 | 2.0 | 1.00 | 1.00 | 0.0 | 0.0 | 22.01 | 18 | 14 |
| 125.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 22.01 | 90 | 144 |
| 100.0 | 2' Omni | 1 | 5 | 0.3 | 2.0 | 2.0 | 2.0 | 1.00 | 1.00 | 0.0 | 0.0 | 20.65 | 8 | 7 |
| 100.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 20.65 | 84 | 144 |
| 38.00 | 2" X 8" GPS | 1 | 10 | 0.2 | 0.7 | 2.0 | 2.0 | 1.00 | 1.00 | 0.0 | 0.0 | 15.66 | 3 | 14 |
| 38.00 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 15.66 | 64 | 144 |
| | Totals | 88 | 8966 | 557.8 | | | | | | | | | | |

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

| Elevation (ft) | Description | Qty | Ice 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) |
|----------------|---------------------|-----|-------------|----------|-------------|------------|------------|----------------|----------------|----------------|------------------------|----------------------|--------------------------|--------------------------|
| 272.0 | Alcatel-Lucent B13 | 3 | 184 | 3.1 | 1.8 | 12.0 | 8.9 | 0.80 | 0.67 | 0.0 | 0.0 | 4.58 | 19 | 703 |
| 272.0 | Alcatel-Lucent B25 | 3 | 166 | 3.1 | 1.8 | 12.0 | 7.2 | 0.80 | 0.67 | 0.0 | 0.0 | 4.58 | 19 | 636 |
| 272.0 | Raycap RVZDC-6624- | 2 | 226 | 5.0 | 2.4 | 15.7 | 10.3 | 0.80 | 0.67 | 0.0 | 0.0 | 4.58 | 21 | 557 |
| 272.0 | Alcatel-Lucent B66a | 3 | 200 | 3.7 | 2.2 | 12.0 | 6.8 | 0.80 | 0.67 | 0.0 | 0.0 | 4.58 | 23 | 769 |

Site Number: 10047

Code:

ANSI/TIA-222-G

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Site Name: PORTLAND ME, ME

Engineering Number: OAA685516_C3_08

11/8/2017 11:46:31 AM

Customer: VERIZON WIRELESS

Tower Loading

| | | | | | | | | | | | | | | |
|--------|---------------------|----|-------|-------|------|-------|------|------|------|-----|-----|------|-----|------|
| 272.0 | Commscope SBNHH- | 12 | 353 | 10.1 | 6.1 | 11.9 | 7.1 | 0.80 | 0.69 | 0.0 | 0.0 | 4.58 | 261 | 5196 |
| 272.0 | Flat Light Sector | 3 | 827 | 39.3 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 4.58 | 231 | 3265 |
| 270.0 | Torque Arms | 1 | 993 | 29.8 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.57 | 116 | 1312 |
| 260.0 | RFS ATMA4P4DBP- | 3 | 68 | 1.3 | 0.9 | 8.0 | 4.9 | 0.80 | 0.50 | 0.0 | 0.0 | 4.52 | 6 | 255 |
| 260.0 | Ericsson Radio 4478 | 3 | 156 | 2.4 | 1.3 | 13.2 | 7.4 | 0.80 | 0.50 | 0.0 | 0.0 | 4.52 | 11 | 606 |
| 260.0 | Radio Waves G3-2.4 | 1 | 148 | 41.3 | 3.0 | 36.0 | 0.0 | 0.80 | 1.00 | 0.0 | 0.0 | 4.52 | 127 | 183 |
| 260.0 | RFS APX16DWV- | 3 | 240 | 7.6 | 4.4 | 13.0 | 3.1 | 0.80 | 0.60 | 0.0 | 0.0 | 4.52 | 42 | 891 |
| 260.0 | Round Sector Frame | 3 | 818 | 37.7 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 4.52 | 219 | 3162 |
| 260.0 | RFS APXVAA24_43- | 3 | 734 | 23.0 | 8.0 | 24.0 | 8.5 | 0.80 | 0.63 | 0.0 | 0.0 | 4.52 | 134 | 2716 |
| 239.0 | RAC 8' Ice Shield | 1 | 2154 | 14.8 | 8.0 | 60.0 | 24.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.41 | 56 | 2729 |
| 230.0 | Motorola PTP 45600 | 1 | 91 | 2.6 | 1.2 | 14.5 | 3.7 | 1.00 | 0.50 | 0.0 | 0.0 | 4.37 | 5 | 112 |
| 230.0 | Radio Waves HPD6- | 1 | 1832 | 50.0 | 6.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.37 | 186 | 2296 |
| 215.0 | Torque Arms | 1 | 982 | 29.5 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.28 | 107 | 1299 |
| 206.0 | KMW HB-X-WM-17- | 3 | 71 | 1.6 | 1.3 | 7.3 | 3.7 | 0.80 | 0.50 | 0.0 | 0.0 | 4.23 | 7 | 267 |
| 206.0 | KMW HB-X-WM-17- | 3 | 198 | 4.6 | 4.0 | 7.3 | 7.3 | 0.80 | 1.00 | 0.0 | 0.0 | 4.23 | 40 | 734 |
| 206.0 | Stand-Off | 3 | 167 | 5.2 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.23 | 56 | 674 |
| 195.0 | 10' Omni | 1 | 234 | 6.7 | 10.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.16 | 24 | 287 |
| 195.0 | Stand-Off | 1 | 167 | 5.1 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.16 | 18 | 224 |
| 188.0 | Raycap RUSDC-6267- | 1 | 127 | 3.5 | 1.6 | 16.1 | 5.6 | 0.80 | 0.67 | 0.0 | 0.0 | 4.12 | 7 | 156 |
| 188.0 | Ericsson RRUS-11 | 3 | 171 | 3.5 | 1.5 | 17.3 | 7.2 | 0.80 | 0.67 | 0.0 | 0.0 | 4.12 | 20 | 652 |
| 188.0 | KMW AM-X-CD-17- | 6 | 226 | 6.4 | 4.0 | 11.8 | 6.0 | 0.80 | 0.66 | 0.0 | 0.0 | 4.12 | 71 | 1669 |
| 188.0 | Round Sector Frame | 3 | 803 | 37.0 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 4.12 | 196 | 3108 |
| 175.0 | 10' Omni | 1 | 230 | 6.7 | 10.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.04 | 23 | 282 |
| 175.0 | Stand-Off | 1 | 166 | 5.1 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.04 | 18 | 223 |
| 171.0 | Stand-Off | 1 | 166 | 5.1 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.01 | 17 | 223 |
| 171.0 | TX RX Systems 421- | 1 | 135 | 3.6 | 1.7 | 16.0 | 6.0 | 1.00 | 0.50 | 0.0 | 0.0 | 4.01 | 6 | 167 |
| 171.0 | Bird BA40-41-DIN | 1 | 121 | 18.3 | 11.5 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.01 | 63 | 153 |
| 153.0 | 6' Ice Shield | 1 | 1565 | 9.4 | 1.2 | 100.0 | 48.0 | 1.00 | 1.00 | 0.0 | 0.0 | 3.89 | 31 | 1985 |
| 142.0 | Motorola PTP 45600 | 1 | 86 | 2.5 | 1.2 | 14.5 | 3.7 | 1.00 | 1.00 | 0.0 | 0.0 | 3.80 | 8 | 106 |
| 142.0 | Radio Waves HPD4- | 1 | 298 | 19.0 | 4.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 3.80 | 61 | 378 |
| 131.0 | Stand-Off | 1 | 164 | 5.1 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 3.72 | 16 | 221 |
| 131.0 | Bird BA40-41-DIN | 1 | 118 | 18.0 | 11.5 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 3.72 | 57 | 150 |
| 125.0 | 2' Omni | 2 | 42 | 1.0 | 2.0 | 2.0 | 2.0 | 1.00 | 1.00 | 0.0 | 0.0 | 3.67 | 6 | 103 |
| 125.0 | Stand-Off | 1 | 164 | 5.1 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 3.67 | 16 | 221 |
| 100.0 | 2' Omni | 1 | 40 | 0.9 | 2.0 | 2.0 | 2.0 | 1.00 | 1.00 | 0.0 | 0.0 | 3.44 | 3 | 49 |
| 100.0 | Stand-Off | 1 | 162 | 5.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 3.44 | 15 | 218 |
| 38.00 | 2" X 8" GPS | 1 | 23 | 0.3 | 0.7 | 2.0 | 2.0 | 1.00 | 1.00 | 0.0 | 0.0 | 2.61 | 1 | 30 |
| 38.00 | Stand-Off | 1 | 155 | 4.8 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 2.61 | 11 | 211 |
| Totals | | 88 | 30856 | 983.0 | | | | | | | | | | |

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) |
|----------------|---------------------|-----|----------|----------|-------------|------------|------------|----------------|----------------|----------------|------------------------|----------------------|--------------------------|--------------------------|
| 272.0 | Alcatel-Lucent B13 | 3 | 58 | 2.1 | 1.8 | 12.0 | 8.9 | 0.80 | 0.67 | 0.0 | 0.0 | 10.30 | 30 | 173 |
| 272.0 | Alcatel-Lucent B25 | 3 | 51 | 2.1 | 1.8 | 12.0 | 7.2 | 0.80 | 0.67 | 0.0 | 0.0 | 10.30 | 30 | 153 |
| 272.0 | Raycap RVZDC-6624- | 2 | 32 | 2.5 | 2.4 | 15.7 | 10.3 | 0.80 | 0.67 | 0.0 | 0.0 | 10.30 | 23 | 64 |
| 272.0 | Alcatel-Lucent B66a | 3 | 67 | 2.7 | 2.2 | 12.0 | 6.8 | 0.80 | 0.67 | 0.0 | 0.0 | 10.30 | 37 | 201 |
| 272.0 | Commscope SBNHH- | 12 | 41 | 8.2 | 6.1 | 11.9 | 7.1 | 0.80 | 0.69 | 0.0 | 0.0 | 10.30 | 476 | 487 |
| 272.0 | Flat Light Sector | 3 | 400 | 17.9 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 10.30 | 236 | 1200 |
| 270.0 | Torque Arms | 1 | 500 | 15.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 10.28 | 131 | 500 |
| 260.0 | RFS ATMA4P4DBP- | 3 | 16 | 0.9 | 0.9 | 8.0 | 4.9 | 0.80 | 0.50 | 0.0 | 0.0 | 10.17 | 9 | 48 |
| 260.0 | Ericsson Radio 4478 | 3 | 60 | 1.6 | 1.3 | 13.2 | 7.4 | 0.80 | 0.50 | 0.0 | 0.0 | 10.17 | 17 | 180 |
| 260.0 | Radio Waves G3-2.4 | 1 | 25 | 4.2 | 3.0 | 36.0 | 0.0 | 0.80 | 1.00 | 0.0 | 0.0 | 10.17 | 29 | 25 |
| 260.0 | RFS APX16DWV- | 3 | 40 | 6.1 | 4.4 | 13.0 | 3.1 | 0.80 | 0.60 | 0.0 | 0.0 | 10.17 | 76 | 119 |
| 260.0 | Round Sector Frame | 3 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 10.17 | 188 | 900 |

Site Number: 10047

Code: ANSI/TIA-222-G

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Site Name: PORTLAND ME, ME

Engineering Number: OAA685516_C3_08

11/8/2017 11:46:31 AM

Customer: VERIZON WIRELESS

Tower Loading

| | | | | | | | | | | | | | | |
|-------|--------------------|----|------|-------|------|-------|------|------|------|-----|-----|-------|-----|-----|
| 260.0 | RFS APXVAA24_43- | 3 | 101 | 20.3 | 8.0 | 24.0 | 8.5 | 0.80 | 0.63 | 0.0 | 0.0 | 10.17 | 265 | 304 |
| 239.0 | RAC 8' Ice Shield | 1 | 600 | 6.0 | 8.0 | 60.0 | 24.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.93 | 51 | 600 |
| 230.0 | Motorola PTP 45600 | 1 | 12 | 1.8 | 1.2 | 14.5 | 3.7 | 1.00 | 0.50 | 0.0 | 0.0 | 9.82 | 7 | 12 |
| 230.0 | Radio Waves HPD6- | 1 | 405 | 44.0 | 6.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.82 | 367 | 405 |
| 215.0 | Torque Arms | 1 | 500 | 15.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.63 | 123 | 500 |
| 206.0 | KMW HB-X-WM-17- | 3 | 16 | 1.0 | 1.3 | 7.3 | 3.7 | 0.80 | 0.50 | 0.0 | 0.0 | 9.52 | 9 | 48 |
| 206.0 | KMW HB-X-WM-17- | 3 | 30 | 1.9 | 4.0 | 7.3 | 7.3 | 0.80 | 1.00 | 0.0 | 0.0 | 9.52 | 37 | 90 |
| 206.0 | Stand-Off | 3 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.52 | 73 | 300 |
| 195.0 | 10' Omni | 1 | 25 | 3.0 | 10.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.37 | 24 | 25 |
| 195.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.37 | 24 | 100 |
| 188.0 | Raycap RUSDC-6267- | 1 | 16 | 2.5 | 1.6 | 16.1 | 5.6 | 0.80 | 0.67 | 0.0 | 0.0 | 9.27 | 11 | 16 |
| 188.0 | Ericsson RRUS-11 | 3 | 50 | 2.6 | 1.5 | 17.3 | 7.2 | 0.80 | 0.67 | 0.0 | 0.0 | 9.27 | 33 | 150 |
| 188.0 | KMW AM-X-CD-17- | 6 | 31 | 5.0 | 4.0 | 11.8 | 6.0 | 0.80 | 0.66 | 0.0 | 0.0 | 9.27 | 125 | 185 |
| 188.0 | Round Sector Frame | 3 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 9.27 | 171 | 900 |
| 175.0 | 10' Omni | 1 | 25 | 3.0 | 10.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.08 | 23 | 25 |
| 175.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.08 | 23 | 100 |
| 171.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.02 | 23 | 100 |
| 171.0 | TX RX Systems 421- | 1 | 20 | 3.1 | 1.7 | 16.0 | 6.0 | 1.00 | 0.50 | 0.0 | 0.0 | 9.02 | 12 | 20 |
| 171.0 | Bird BA40-41-DIN | 1 | 32 | 5.1 | 11.5 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.02 | 39 | 32 |
| 153.0 | 6' Ice Shield | 1 | 450 | 3.9 | 1.2 | 100.0 | 48.0 | 1.00 | 1.00 | 0.0 | 0.0 | 8.74 | 29 | 450 |
| 142.0 | Motorola PTP 45600 | 1 | 12 | 2.0 | 1.2 | 14.5 | 3.7 | 1.00 | 1.00 | 0.0 | 0.0 | 8.56 | 15 | 12 |
| 142.0 | Radio Waves HPD4- | 1 | 85 | 15.9 | 4.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 8.56 | 115 | 85 |
| 131.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 8.36 | 21 | 100 |
| 131.0 | Bird BA40-41-DIN | 1 | 32 | 5.1 | 11.5 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 8.36 | 36 | 32 |
| 125.0 | 2' Omni | 2 | 5 | 0.3 | 2.0 | 2.0 | 2.0 | 1.00 | 1.00 | 0.0 | 0.0 | 8.25 | 4 | 10 |
| 125.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 8.25 | 21 | 100 |
| 100.0 | 2' Omni | 1 | 5 | 0.3 | 2.0 | 2.0 | 2.0 | 1.00 | 1.00 | 0.0 | 0.0 | 7.74 | 2 | 5 |
| 100.0 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 7.74 | 20 | 100 |
| 38.00 | 2" X 8" GPS | 1 | 10 | 0.2 | 0.7 | 2.0 | 2.0 | 1.00 | 1.00 | 0.0 | 0.0 | 5.87 | 1 | 10 |
| 38.00 | Stand-Off | 1 | 100 | 3.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 5.87 | 15 | 100 |
| | Totals | 88 | 8966 | 557.8 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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 11/8/2017 11:46:31 AM

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 |
|----------------|--------------|------------------|-----|------------|----------------|--------------|-----------------|----------------------|------------------|-------------|--------------|--------------------|-------------|
| 10.00 | 272.0 | 1 5/8" Coax | 6 | 1.98 | 0.82 | 33 | 2 | Block | 0.00 | N | 0.67 | 1.00 | 0.86 |
| 10.00 | 272.0 | 1 5/8" Coax | 3 | 1.98 | 0.82 | 0 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.01 |
| 10.00 | 272.0 | 1 5/8" Coax | 5 | 1.98 | 0.82 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 272.0 | 1 5/8" Coax | 2 | 1.98 | 0.82 | 0 | 2 | Individual | 0.00 | N | 1.00 | 1.00 | 0.52 |
| 10.00 | 272.0 | 1 5/8" Hybriflex | 2 | 1.98 | 1.30 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.01 |
| 10.00 | 260.0 | 1 1/4" Fiber | 1 | 1.25 | 1.05 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 260.0 | 1 5/8" Coax | 12 | 1.98 | 0.82 | 0 | 3 | Cluster | 7.92 | N | 0.50 | 1.00 | 0.00 |
| 10.00 | 260.0 | 1/2" Coax | 1 | 0.63 | 0.15 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.01 |
| 0.00 | 230.0 | 1 5/8" Coax | 1 | 1.98 | 0.82 | 0 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.43 |
| 0.00 | 230.0 | 1/2" Coax | 1 | 0.63 | 0.15 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.40 |
| 10.00 | 206.0 | 1 5/8" Coax | 6 | 1.98 | 0.82 | 50 | 1 | Block | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 206.0 | Waveguide | 1 | 1.00 | 6.00 | 0 | 1 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 195.0 | 1 1/4" Coax | 1 | 1.55 | 0.66 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 188.0 | 1 1/4" Fiber | 1 | 1.25 | 1.05 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 188.0 | 1 5/8" Coax | 6 | 1.98 | 1.04 | 33 | Lin App | Block | 0.00 | N | 0.67 | 1.00 | 0.86 |
| 10.00 | 175.0 | 7/8" Coax | 1 | 1.09 | 0.33 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.01 |
| 10.00 | 171.0 | 1/2" Coax | 1 | 0.63 | 0.15 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 171.0 | 7/8" Coax | 1 | 1.09 | 0.33 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 142.0 | 1 5/8" Coax | 1 | 1.98 | 0.82 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 142.0 | 1/4" Coax | 2 | 0.34 | 0.06 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.01 |
| 10.00 | 131.0 | 7/8" Coax | 1 | 1.09 | 0.33 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 125.0 | 1/2" Coax | 1 | 0.63 | 0.15 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.01 |
| 10.00 | 125.0 | 7/8" Coax | 1 | 1.09 | 0.33 | 0 | Lin App | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 10.00 | 100.0 | 1/2" Coax | 1 | 0.63 | 0.15 | 0 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.59 |
| 10.00 | 38.00 | 1/4" Coax | 1 | 0.34 | 0.06 | 0 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Equivalent Lateral Force Method

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

| | |
|--|---------|
| Spectral Response Acceleration for Short Period (S_s): | 0.25 |
| Spectral Response Acceleration at 1.0 Second Period (S_1): | 0.08 |
| Long-Period Transition Period (T_L - Seconds): | 6 |
| Importance Factor (I_e): | 1.00 |
| Site Coefficient F_a : | 1.60 |
| Site Coefficient F_v : | 2.40 |
| Response Modification Coefficient (R): | 2.50 |
| Design Spectral Response Acceleration at Short Period (S_{ds}): | 0.26 |
| Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}): | 0.13 |
| Seismic Response Coefficient (C_s): | 0.06 |
| Upper Limit C_s : | 0.06 |
| Lower Limit C_s : | 0.03 |
| Period based on Rayleigh Method (sec): | 0.87 |
| Redundancy Factor (p): | 1.30 |
| Seismic Force Distribution Exponent (k): | 1.18 |
| Total Unfactored Dead Load: | 35.10 k |
| Seismic Base Shear (E): | 2.67 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) |
|---------|------------------------------|----------------|------------------|----------|-----------------------------|---------------------------|
| 27 | 272.50 | 250 | 189,791 | 0.014 | 36 | 313 |
| 26 | 269.42 | 106 | 79,552 | 0.006 | 15 | 133 |
| 25 | 268.25 | 82 | 60,933 | 0.004 | 12 | 102 |
| 24 | 267.08 | 106 | 78,704 | 0.006 | 15 | 133 |
| 23 | 265.75 | 99 | 73,253 | 0.005 | 14 | 124 |
| 22 | 255.00 | 1,318 | 924,912 | 0.066 | 176 | 1,650 |
| 21 | 235.00 | 1,379 | 879,081 | 0.063 | 167 | 1,727 |
| 20 | 222.50 | 416 | 248,668 | 0.018 | 47 | 521 |
| 19 | 219.25 | 129 | 75,544 | 0.005 | 14 | 161 |
| 18 | 217.33 | 177 | 103,107 | 0.007 | 20 | 222 |
| 17 | 215.58 | 129 | 74,230 | 0.005 | 14 | 162 |
| 16 | 214.42 | 137 | 78,210 | 0.006 | 15 | 171 |
| 15 | 213.25 | 129 | 73,243 | 0.005 | 14 | 161 |
| 14 | 212.08 | 121 | 68,295 | 0.005 | 13 | 151 |
| 13 | 206.50 | 802 | 438,838 | 0.031 | 83 | 1,005 |
| 12 | 200.75 | 145 | 76,729 | 0.005 | 15 | 182 |
| 11 | 190.00 | 1,829 | 906,614 | 0.065 | 172 | 2,290 |
| 10 | 170.00 | 2,116 | 919,666 | 0.066 | 175 | 2,650 |
| 9 | 150.00 | 2,108 | 790,146 | 0.056 | 150 | 2,640 |
| 8 | 130.00 | 2,131 | 674,378 | 0.048 | 128 | 2,669 |
| 7 | 110.00 | 2,157 | 560,209 | 0.040 | 106 | 2,701 |
| 6 | 90.00 | 2,144 | 439,230 | 0.031 | 83 | 2,685 |
| 5 | 70.00 | 2,144 | 326,288 | 0.023 | 62 | 2,685 |
| 4 | 50.00 | 2,160 | 220,776 | 0.016 | 42 | 2,705 |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Equivalent Lateral Force Method

| | | | | | | |
|-------------------------------------|--------|--------|------------|-------|-------|--------|
| 3 | 30.00 | 2,145 | 119,838 | 0.009 | 23 | 2,687 |
| 2 | 12.50 | 1,368 | 27,135 | 0.002 | 5 | 1,713 |
| 1 | 2.50 | 308 | 910 | 0.000 | 0 | 385 |
| Alcatel-Lucent B13 RRH4x30-4R | 272.00 | 173 | 131,385 | 0.009 | 25 | 217 |
| Alcatel-Lucent B25 RRH4x30-4R | 272.00 | 153 | 115,928 | 0.008 | 22 | 192 |
| Raycap RVZDC-6624-PF-48 | 272.00 | 64 | 48,493 | 0.003 | 9 | 80 |
| Alcatel-Lucent B66a RRH4x45 (AWS-3) | 272.00 | 201 | 152,297 | 0.011 | 29 | 252 |
| Commscope SBNHH-1D65B (72.9") | 272.00 | 487 | 369,150 | 0.026 | 70 | 610 |
| Flat Light Sector Frame | 272.00 | 1,200 | 909,236 | 0.065 | 173 | 1,503 |
| Torque Arms | 270.00 | 500 | 375,556 | 0.027 | 71 | 626 |
| RFS ATMA4P4DBP-1A20 | 260.00 | 48 | 34,264 | 0.002 | 7 | 60 |
| Ericsson Radio 4478 B71 | 260.00 | 180 | 129,298 | 0.009 | 25 | 225 |
| Radio Waves G3-2.4 | 260.00 | 25 | 17,958 | 0.001 | 3 | 31 |
| RFS APX16DWV-16DWV-S-E-ACU | 260.00 | 119 | 85,337 | 0.006 | 16 | 149 |
| Round Sector Frame | 260.00 | 900 | 646,489 | 0.046 | 123 | 1,127 |
| RFS APXVAA24_43-U-A20 | 260.00 | 304 | 218,513 | 0.016 | 42 | 381 |
| RAC 8' Ice Shield | 239.00 | 600 | 390,131 | 0.028 | 74 | 751 |
| Motorola PTP 45600 | 230.00 | 12 | 7,518 | 0.001 | 1 | 15 |
| Radio Waves HPD6-4.7NS | 230.00 | 405 | 251,650 | 0.018 | 48 | 507 |
| Torque Arms | 215.00 | 500 | 286,860 | 0.020 | 55 | 626 |
| KMW HB-X-WM-17-65-00T-TTLNA | 206.00 | 48 | 26,017 | 0.002 | 5 | 60 |
| KMW HB-X-WM-17-65-00T | 206.00 | 90 | 49,088 | 0.003 | 9 | 113 |
| Stand-Off | 206.00 | 300 | 163,627 | 0.012 | 31 | 376 |
| 10' Omni | 195.00 | 25 | 12,779 | 0.001 | 2 | 31 |
| Stand-Off | 195.00 | 100 | 51,115 | 0.004 | 10 | 125 |
| Raycap RUSDC-6267-PF-48 | 188.00 | 16 | 7,734 | 0.001 | 1 | 20 |
| Ericsson RRUS-11 (50 lbs.) | 188.00 | 150 | 73,428 | 0.005 | 14 | 188 |
| KMW AM-X-CD-17-65-00T-RET | 188.00 | 185 | 90,463 | 0.006 | 17 | 231 |
| Round Sector Frame | 188.00 | 900 | 440,566 | 0.031 | 84 | 1,127 |
| 10' Omni | 175.00 | 25 | 11,244 | 0.001 | 2 | 31 |
| Stand-Off | 175.00 | 100 | 44,974 | 0.003 | 9 | 125 |
| Stand-Off | 171.00 | 100 | 43,761 | 0.003 | 8 | 125 |
| TX RX Systems 421-83A-01261 | 171.00 | 20 | 8,752 | 0.001 | 2 | 25 |
| Bird BA40-41-DIN | 171.00 | 32 | 14,003 | 0.001 | 3 | 40 |
| 6' Ice Shield | 153.00 | 450 | 172,649 | 0.012 | 33 | 564 |
| Motorola PTP 45600 | 142.00 | 12 | 4,250 | 0.000 | 1 | 15 |
| Radio Waves HPD4-4.7 | 142.00 | 85 | 29,857 | 0.002 | 6 | 106 |
| Stand-Off | 131.00 | 100 | 31,931 | 0.002 | 6 | 125 |
| Bird BA40-41-DIN | 131.00 | 32 | 10,218 | 0.001 | 2 | 40 |
| 2' Omni | 125.00 | 10 | 3,021 | 0.000 | 1 | 13 |
| Stand-Off | 125.00 | 100 | 30,208 | 0.002 | 6 | 125 |
| 2' Omni | 100.00 | 5 | 1,160 | 0.000 | 0 | 6 |
| Stand-Off | 100.00 | 100 | 23,201 | 0.002 | 4 | 125 |
| 2" X 8" GPS | 38.00 | 10 | 739 | 0.000 | 0 | 13 |
| Stand-Off | 38.00 | 100 | 7,387 | 0.001 | 1 | 125 |
| | | 35,103 | 14,030,513 | 1.000 | 2,666 | 43,959 |

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

| Section | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|---------|------------------------------|----------------|---------------------------|-----------------|-----------------------------|---------------------------|
| 27 | 272.50 | 250 | 189,791 | 0.014 | 36 | 212 |
| 26 | 269.42 | 106 | 79,552 | 0.006 | 15 | 90 |
| 25 | 268.25 | 82 | 60,933 | 0.004 | 12 | 69 |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Equivalent Lateral Force Method

| | | | | | | |
|-------------------------------------|--------|-------|---------|-------|-----|-------|
| 24 | 267.08 | 106 | 78,704 | 0.006 | 15 | 90 |
| 23 | 265.75 | 99 | 73,253 | 0.005 | 14 | 84 |
| 22 | 255.00 | 1,318 | 924,912 | 0.066 | 176 | 1,117 |
| 21 | 235.00 | 1,379 | 879,080 | 0.063 | 167 | 1,169 |
| 20 | 222.50 | 416 | 248,668 | 0.018 | 47 | 353 |
| 19 | 219.25 | 129 | 75,544 | 0.005 | 14 | 109 |
| 18 | 217.33 | 177 | 103,107 | 0.007 | 20 | 150 |
| 17 | 215.58 | 129 | 74,230 | 0.005 | 14 | 109 |
| 16 | 214.42 | 137 | 78,210 | 0.006 | 15 | 116 |
| 15 | 213.25 | 129 | 73,243 | 0.005 | 14 | 109 |
| 14 | 212.08 | 121 | 68,295 | 0.005 | 13 | 103 |
| 13 | 206.50 | 802 | 438,838 | 0.031 | 83 | 680 |
| 12 | 200.75 | 145 | 76,729 | 0.005 | 15 | 123 |
| 11 | 190.00 | 1,829 | 906,614 | 0.065 | 172 | 1,551 |
| 10 | 170.00 | 2,116 | 919,666 | 0.066 | 175 | 1,794 |
| 9 | 150.00 | 2,108 | 790,146 | 0.056 | 150 | 1,787 |
| 8 | 130.00 | 2,131 | 674,378 | 0.048 | 128 | 1,807 |
| 7 | 110.00 | 2,157 | 560,209 | 0.040 | 106 | 1,829 |
| 6 | 90.00 | 2,144 | 439,230 | 0.031 | 83 | 1,818 |
| 5 | 70.00 | 2,144 | 326,288 | 0.023 | 62 | 1,818 |
| 4 | 50.00 | 2,160 | 220,776 | 0.016 | 42 | 1,831 |
| 3 | 30.00 | 2,145 | 119,838 | 0.009 | 23 | 1,819 |
| 2 | 12.50 | 1,368 | 27,135 | 0.002 | 5 | 1,160 |
| 1 | 2.50 | 308 | 910 | 0.000 | 0 | 261 |
| Alcatel-Lucent B13 RRH4x30-4R | 272.00 | 173 | 131,385 | 0.009 | 25 | 147 |
| Alcatel-Lucent B25 RRH4x30-4R | 272.00 | 153 | 115,928 | 0.008 | 22 | 130 |
| Raycap RVZDC-6624-PF-48 | 272.00 | 64 | 48,493 | 0.003 | 9 | 54 |
| Alcatel-Lucent B66a RRH4x45 (AWS-3) | 272.00 | 201 | 152,297 | 0.011 | 29 | 170 |
| Commscope SBNHH-1D65B (72.9") | 272.00 | 487 | 369,150 | 0.026 | 70 | 413 |
| Flat Light Sector Frame | 272.00 | 1,200 | 909,236 | 0.065 | 173 | 1,017 |
| Torque Arms | 270.00 | 500 | 375,556 | 0.027 | 71 | 424 |
| RFS ATMA4P4DBP-1A20 | 260.00 | 48 | 34,264 | 0.002 | 7 | 40 |
| Ericsson Radio 4478 B71 | 260.00 | 180 | 129,298 | 0.009 | 25 | 153 |
| Radio Waves G3-2.4 | 260.00 | 25 | 17,958 | 0.001 | 3 | 21 |
| RFS APX16DWV-16DWV-S-E-ACU | 260.00 | 119 | 85,337 | 0.006 | 16 | 101 |
| Round Sector Frame | 260.00 | 900 | 646,489 | 0.046 | 123 | 763 |
| RFS APXVAA24_43-U-A20 | 260.00 | 304 | 218,513 | 0.016 | 42 | 258 |
| RAC 8' Ice Shield | 239.00 | 600 | 390,131 | 0.028 | 74 | 509 |
| Motorola PTP 45600 | 230.00 | 12 | 7,518 | 0.001 | 1 | 10 |
| Radio Waves HPD6-4.7NS | 230.00 | 405 | 251,650 | 0.018 | 48 | 343 |
| Torque Arms | 215.00 | 500 | 286,860 | 0.020 | 55 | 424 |
| KMW HB-X-WM-17-65-00T-TTLNA | 206.00 | 48 | 26,017 | 0.002 | 5 | 40 |
| KMW HB-X-WM-17-65-00T | 206.00 | 90 | 49,088 | 0.003 | 9 | 76 |
| Stand-Off | 206.00 | 300 | 163,627 | 0.012 | 31 | 254 |
| 10' Omni | 195.00 | 25 | 12,779 | 0.001 | 2 | 21 |
| Stand-Off | 195.00 | 100 | 51,115 | 0.004 | 10 | 85 |
| Raycap RUSDC-6267-PF-48 | 188.00 | 16 | 7,734 | 0.001 | 1 | 13 |
| Ericsson RRUS-11 (50 lbs.) | 188.00 | 150 | 73,428 | 0.005 | 14 | 127 |
| KMW AM-X-CD-17-65-00T-RET | 188.00 | 185 | 90,463 | 0.006 | 17 | 157 |
| Round Sector Frame | 188.00 | 900 | 440,566 | 0.031 | 84 | 763 |
| 10' Omni | 175.00 | 25 | 11,244 | 0.001 | 2 | 21 |
| Stand-Off | 175.00 | 100 | 44,974 | 0.003 | 9 | 85 |
| Stand-Off | 171.00 | 100 | 43,761 | 0.003 | 8 | 85 |
| TX RX Systems 421-83A-01261 | 171.00 | 20 | 8,752 | 0.001 | 2 | 17 |
| Bird BA40-41-DIN | 171.00 | 32 | 14,003 | 0.001 | 3 | 27 |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Equivalent Lateral Force Method

| | | | | | | |
|----------------------|--------|--------|------------|-------|-------|--------|
| 6' Ice Shield | 153.00 | 450 | 172,649 | 0.012 | 33 | 381 |
| Motorola PTP 45600 | 142.00 | 12 | 4,250 | 0.000 | 1 | 10 |
| Radio Waves HPD4-4.7 | 142.00 | 85 | 29,857 | 0.002 | 6 | 72 |
| Stand-Off | 131.00 | 100 | 31,931 | 0.002 | 6 | 85 |
| Bird BA40-41-DIN | 131.00 | 32 | 10,218 | 0.001 | 2 | 27 |
| 2' Omni | 125.00 | 10 | 3,021 | 0.000 | 1 | 8 |
| Stand-Off | 125.00 | 100 | 30,208 | 0.002 | 6 | 85 |
| 2' Omni | 100.00 | 5 | 1,160 | 0.000 | 0 | 4 |
| Stand-Off | 100.00 | 100 | 23,201 | 0.002 | 4 | 85 |
| 2" X 8" GPS | 38.00 | 10 | 739 | 0.000 | 0 | 8 |
| Stand-Off | 38.00 | 100 | 7,387 | 0.001 | 1 | 85 |
| | | 35,103 | 14,030,512 | 1.000 | 2,666 | 29,758 |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Equivalent Modal Analysis Method

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

Spectral Response Acceleration for Short Period (S_s): 0.25
 Spectral Response Acceleration at 1.0 Second Period (S_{d1}): 0.08
 Importance Factor (I_e): 1.00
 Site Coefficient F_a : 1.60
 Site Coefficient F_v : 2.40
 Response Modification Coefficient (R): 2.50
 Design Spectral Response Acceleration at Short Period (S_{ds}): 0.26
 Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}): 0.13
 Period Based on Rayleigh Method (sec): 0.87
 Redundancy Factor (ρ): 1.30

LoadCase (1.2 + 0.2Sds) * DL + E

Seismic

| Section | Height Above Base (ft) | Weight (lb) | a | b | c | S_{az} | Horizontal Force (lb) | Vertical Force (lb) |
|-------------------------------|------------------------------|----------------|-------|--------|-------|----------|-----------------------------|---------------------------|
| 27 | 272.50 | 250 | 1.856 | 1.804 | 1.076 | 0.529 | 69 | 313 |
| 26 | 269.42 | 106 | 1.814 | 1.603 | 1.002 | 0.495 | 27 | 133 |
| 25 | 268.25 | 82 | 1.798 | 1.531 | 0.974 | 0.482 | 20 | 102 |
| 24 | 267.08 | 106 | 1.783 | 1.461 | 0.948 | 0.470 | 26 | 133 |
| 23 | 265.75 | 99 | 1.765 | 1.384 | 0.918 | 0.456 | 24 | 124 |
| 22 | 255.00 | 1,318 | 1.625 | 0.858 | 0.705 | 0.354 | 242 | 1,650 |
| 21 | 235.00 | 1,379 | 1.380 | 0.247 | 0.412 | 0.208 | 149 | 1,727 |
| 20 | 222.50 | 416 | 1.237 | 0.043 | 0.283 | 0.145 | 31 | 521 |
| 19 | 219.25 | 129 | 1.201 | 0.006 | 0.256 | 0.132 | 9 | 161 |
| 18 | 217.33 | 177 | 1.180 | -0.013 | 0.240 | 0.125 | 12 | 222 |
| 17 | 215.58 | 129 | 1.162 | -0.029 | 0.227 | 0.119 | 8 | 162 |
| 16 | 214.42 | 137 | 1.149 | -0.038 | 0.219 | 0.115 | 8 | 171 |
| 15 | 213.25 | 129 | 1.137 | -0.047 | 0.210 | 0.111 | 7 | 161 |
| 14 | 212.08 | 121 | 1.124 | -0.055 | 0.202 | 0.108 | 7 | 151 |
| 13 | 206.50 | 802 | 1.066 | -0.087 | 0.166 | 0.093 | 39 | 1,005 |
| 12 | 200.75 | 145 | 1.007 | -0.108 | 0.135 | 0.081 | 6 | 182 |
| 11 | 190.00 | 1,829 | 0.902 | -0.122 | 0.088 | 0.066 | 63 | 2,290 |
| 10 | 170.00 | 2,116 | 0.722 | -0.093 | 0.034 | 0.059 | 65 | 2,650 |
| 9 | 150.00 | 2,108 | 0.562 | -0.039 | 0.011 | 0.063 | 69 | 2,640 |
| 8 | 130.00 | 2,131 | 0.422 | 0.011 | 0.006 | 0.066 | 73 | 2,669 |
| 7 | 110.00 | 2,157 | 0.302 | 0.045 | 0.012 | 0.064 | 72 | 2,701 |
| 6 | 90.00 | 2,144 | 0.202 | 0.062 | 0.023 | 0.057 | 63 | 2,685 |
| 5 | 70.00 | 2,144 | 0.122 | 0.070 | 0.034 | 0.048 | 54 | 2,685 |
| 4 | 50.00 | 2,160 | 0.062 | 0.072 | 0.041 | 0.040 | 45 | 2,705 |
| 3 | 30.00 | 2,145 | 0.022 | 0.065 | 0.039 | 0.032 | 36 | 2,687 |
| 2 | 12.50 | 1,368 | 0.004 | 0.041 | 0.023 | 0.019 | 14 | 1,713 |
| 1 | 2.50 | 308 | 0.000 | 0.010 | 0.006 | 0.005 | 1 | 385 |
| Alcatel-Lucent B13 RRH4x30-4R | 272.00 | 173 | 1.849 | 1.771 | 1.064 | 0.523 | 47 | 217 |
| Alcatel-Lucent B25 RRH4x30-4R | 272.00 | 153 | 1.849 | 1.771 | 1.064 | 0.523 | 42 | 192 |
| Raycap RVZDC-6624-PF-48 | 272.00 | 64 | 1.849 | 1.771 | 1.064 | 0.523 | 17 | 80 |
| Alcatel-Lucent B66a RRH4x45 | 272.00 | 201 | 1.849 | 1.771 | 1.064 | 0.523 | 55 | 252 |
| Commscope SBNHH-1D65B | 272.00 | 487 | 1.849 | 1.771 | 1.064 | 0.523 | 133 | 610 |
| Flat Light Sector Frame | 272.00 | 1,200 | 1.849 | 1.771 | 1.064 | 0.523 | 326 | 1,503 |
| Torque Arms | 270.00 | 500 | 1.822 | 1.640 | 1.015 | 0.501 | 130 | 626 |
| RFS ATMA4P4DBP-1A20 | 260.00 | 48 | 1.689 | 1.083 | 0.798 | 0.399 | 10 | 60 |
| Ericsson Radio 4478 B71 | 260.00 | 180 | 1.689 | 1.083 | 0.798 | 0.399 | 37 | 225 |
| Radio Waves G3-2.4 | 260.00 | 25 | 1.689 | 1.083 | 0.798 | 0.399 | 5 | 31 |
| RFS APX16DWV-16DWV-S-E-ACU | 260.00 | 119 | 1.689 | 1.083 | 0.798 | 0.399 | 25 | 149 |
| Round Sector Frame | 260.00 | 900 | 1.689 | 1.083 | 0.798 | 0.399 | 187 | 1,127 |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Equivalent Modal Analysis Method

| | | | | | | | | |
|-----------------------------|--------|--------|--------|--------|--------|--------|-------|--------|
| RFS APXVAA24_43-U-A20 | 260.00 | 304 | 1.689 | 1.083 | 0.798 | 0.399 | 63 | 381 |
| RAC 8' Ice Shield | 239.00 | 600 | 1.428 | 0.338 | 0.461 | 0.233 | 73 | 751 |
| Motorola PTP 45600 | 230.00 | 12 | 1.322 | 0.152 | 0.356 | 0.181 | 1 | 15 |
| Radio Waves HPD6-4.7NS | 230.00 | 405 | 1.322 | 0.152 | 0.356 | 0.181 | 38 | 507 |
| Torque Arms | 215.00 | 500 | 1.155 | -0.033 | 0.223 | 0.117 | 30 | 626 |
| KMW HB-X-WM-17-65-00T-TTLNA | 206.00 | 48 | 1.061 | -0.089 | 0.164 | 0.092 | 2 | 60 |
| KMW HB-X-WM-17-65-00T | 206.00 | 90 | 1.061 | -0.089 | 0.164 | 0.092 | 4 | 113 |
| Stand-Off | 206.00 | 300 | 1.061 | -0.089 | 0.164 | 0.092 | 14 | 376 |
| 10' Omni | 195.00 | 25 | 0.950 | -0.119 | 0.108 | 0.072 | 1 | 31 |
| Stand-Off | 195.00 | 100 | 0.950 | -0.119 | 0.108 | 0.072 | 4 | 125 |
| Raycap RUSDC-6267-PF-48 | 188.00 | 16 | 0.883 | -0.121 | 0.081 | 0.064 | 1 | 20 |
| Ericsson RRUS-11 (50 lbs.) | 188.00 | 150 | 0.883 | -0.121 | 0.081 | 0.064 | 5 | 188 |
| KMW AM-X-CD-17-65-00T-RET | 188.00 | 185 | 0.883 | -0.121 | 0.081 | 0.064 | 6 | 231 |
| Round Sector Frame | 188.00 | 900 | 0.883 | -0.121 | 0.081 | 0.064 | 30 | 1,127 |
| 10' Omni | 175.00 | 25 | 0.765 | -0.105 | 0.044 | 0.059 | 1 | 31 |
| Stand-Off | 175.00 | 100 | 0.765 | -0.105 | 0.044 | 0.059 | 3 | 125 |
| Stand-Off | 171.00 | 100 | 0.731 | -0.096 | 0.036 | 0.059 | 3 | 125 |
| TX RX Systems 421-83A-01261 | 171.00 | 20 | 0.731 | -0.096 | 0.036 | 0.059 | 1 | 25 |
| Bird BA40-41-DIN | 171.00 | 32 | 0.731 | -0.096 | 0.036 | 0.059 | 1 | 40 |
| 6' Ice Shield | 153.00 | 450 | 0.585 | -0.047 | 0.013 | 0.062 | 14 | 564 |
| Motorola PTP 45600 | 142.00 | 12 | 0.504 | -0.018 | 0.007 | 0.065 | 0 | 15 |
| Radio Waves HPD4-4.7 | 142.00 | 85 | 0.504 | -0.018 | 0.007 | 0.065 | 3 | 106 |
| Stand-Off | 131.00 | 100 | 0.429 | 0.009 | 0.006 | 0.066 | 3 | 125 |
| Bird BA40-41-DIN | 131.00 | 32 | 0.429 | 0.009 | 0.006 | 0.066 | 1 | 40 |
| 2' Omni | 125.00 | 10 | 0.390 | 0.021 | 0.007 | 0.066 | 0 | 13 |
| Stand-Off | 125.00 | 100 | 0.390 | 0.021 | 0.007 | 0.066 | 3 | 125 |
| 2' Omni | 100.00 | 5 | 0.250 | 0.055 | 0.017 | 0.061 | 0 | 6 |
| Stand-Off | 100.00 | 100 | 0.250 | 0.055 | 0.017 | 0.061 | 3 | 125 |
| 2" X 8" GPS | 38.00 | 10 | 0.036 | 0.069 | 0.041 | 0.035 | 0 | 13 |
| Stand-Off | 38.00 | 100 | 0.036 | 0.069 | 0.041 | 0.035 | 2 | 125 |
| | | 35,103 | 70.031 | 26.790 | 23.274 | 12.904 | 2,565 | 43,959 |

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

| Section | Height Above Base (ft) | Weight (lb) | a | b | c | S _{az} | Horizontal Force (lb) | Vertical Force (lb) |
|---------|------------------------|-------------|-------|--------|-------|-----------------|-----------------------|---------------------|
| 27 | 272.50 | 250 | 1.856 | 1.804 | 1.076 | 0.529 | 69 | 212 |
| 26 | 269.42 | 106 | 1.814 | 1.603 | 1.002 | 0.495 | 27 | 90 |
| 25 | 268.25 | 82 | 1.798 | 1.531 | 0.974 | 0.482 | 20 | 69 |
| 24 | 267.08 | 106 | 1.783 | 1.461 | 0.948 | 0.470 | 26 | 90 |
| 23 | 265.75 | 99 | 1.765 | 1.384 | 0.918 | 0.456 | 24 | 84 |
| 22 | 255.00 | 1,318 | 1.625 | 0.858 | 0.705 | 0.354 | 242 | 1,117 |
| 21 | 235.00 | 1,379 | 1.380 | 0.247 | 0.412 | 0.208 | 149 | 1,169 |
| 20 | 222.50 | 416 | 1.237 | 0.043 | 0.283 | 0.145 | 31 | 353 |
| 19 | 219.25 | 129 | 1.201 | 0.006 | 0.256 | 0.132 | 9 | 109 |
| 18 | 217.33 | 177 | 1.180 | -0.013 | 0.240 | 0.125 | 12 | 150 |
| 17 | 215.58 | 129 | 1.162 | -0.029 | 0.227 | 0.119 | 8 | 109 |
| 16 | 214.42 | 137 | 1.149 | -0.038 | 0.219 | 0.115 | 8 | 116 |
| 15 | 213.25 | 129 | 1.137 | -0.047 | 0.210 | 0.111 | 7 | 109 |
| 14 | 212.08 | 121 | 1.124 | -0.055 | 0.202 | 0.108 | 7 | 103 |
| 13 | 206.50 | 802 | 1.066 | -0.087 | 0.166 | 0.093 | 39 | 680 |
| 12 | 200.75 | 145 | 1.007 | -0.108 | 0.135 | 0.081 | 6 | 123 |
| 11 | 190.00 | 1,829 | 0.902 | -0.122 | 0.088 | 0.066 | 63 | 1,551 |
| 10 | 170.00 | 2,116 | 0.722 | -0.093 | 0.034 | 0.059 | 65 | 1,794 |
| 9 | 150.00 | 2,108 | 0.562 | -0.039 | 0.011 | 0.063 | 69 | 1,787 |
| 8 | 130.00 | 2,131 | 0.422 | 0.011 | 0.006 | 0.066 | 73 | 1,807 |
| 7 | 110.00 | 2,157 | 0.302 | 0.045 | 0.012 | 0.064 | 72 | 1,829 |
| 6 | 90.00 | 2,144 | 0.202 | 0.062 | 0.023 | 0.057 | 63 | 1,818 |
| 5 | 70.00 | 2,144 | 0.122 | 0.070 | 0.034 | 0.048 | 54 | 1,818 |
| 4 | 50.00 | 2,160 | 0.062 | 0.072 | 0.041 | 0.040 | 45 | 1,831 |
| 3 | 30.00 | 2,145 | 0.022 | 0.065 | 0.039 | 0.032 | 36 | 1,819 |
| 2 | 12.50 | 1,368 | 0.004 | 0.041 | 0.023 | 0.019 | 14 | 1,160 |
| 1 | 2.50 | 308 | 0.000 | 0.010 | 0.006 | 0.005 | 1 | 261 |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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 11/8/2017 11:46:31 AM

Equivalent Modal Analysis Method

| | | | | | | | | |
|-------------------------------|--------|--------|--------|--------|--------|--------|-------|--------|
| Alcatel-Lucent B13 RRH4x30-4R | 272.00 | 173 | 1.849 | 1.771 | 1.064 | 0.523 | 47 | 147 |
| Alcatel-Lucent B25 RRH4x30-4R | 272.00 | 153 | 1.849 | 1.771 | 1.064 | 0.523 | 42 | 130 |
| Raycap RVZDC-6624-PF-48 | 272.00 | 64 | 1.849 | 1.771 | 1.064 | 0.523 | 17 | 54 |
| Alcatel-Lucent B66a RRH4x45 | 272.00 | 201 | 1.849 | 1.771 | 1.064 | 0.523 | 55 | 170 |
| Commscope SBNHH-1D65B | 272.00 | 487 | 1.849 | 1.771 | 1.064 | 0.523 | 133 | 413 |
| Flat Light Sector Frame | 272.00 | 1,200 | 1.849 | 1.771 | 1.064 | 0.523 | 326 | 1,017 |
| Torque Arms | 270.00 | 500 | 1.822 | 1.640 | 1.015 | 0.501 | 130 | 424 |
| RFS ATMA4P4DBP-1A20 | 260.00 | 48 | 1.689 | 1.083 | 0.798 | 0.399 | 10 | 40 |
| Ericsson Radio 4478 B71 | 260.00 | 180 | 1.689 | 1.083 | 0.798 | 0.399 | 37 | 153 |
| Radio Waves G3-2.4 | 260.00 | 25 | 1.689 | 1.083 | 0.798 | 0.399 | 5 | 21 |
| RFS APX16DWV-16DWV-S-E-ACU | 260.00 | 119 | 1.689 | 1.083 | 0.798 | 0.399 | 25 | 101 |
| Round Sector Frame | 260.00 | 900 | 1.689 | 1.083 | 0.798 | 0.399 | 187 | 763 |
| RFS APXVAA24_43-U-A20 | 260.00 | 304 | 1.689 | 1.083 | 0.798 | 0.399 | 63 | 258 |
| RAC 8' Ice Shield | 239.00 | 600 | 1.428 | 0.338 | 0.461 | 0.233 | 73 | 509 |
| Motorola PTP 45600 | 230.00 | 12 | 1.322 | 0.152 | 0.356 | 0.181 | 1 | 10 |
| Radio Waves HPD6-4.7NS | 230.00 | 405 | 1.322 | 0.152 | 0.356 | 0.181 | 38 | 343 |
| Torque Arms | 215.00 | 500 | 1.155 | -0.033 | 0.223 | 0.117 | 30 | 424 |
| KMW HB-X-WM-17-65-00T-TTLNA | 206.00 | 48 | 1.061 | -0.089 | 0.164 | 0.092 | 2 | 40 |
| KMW HB-X-WM-17-65-00T | 206.00 | 90 | 1.061 | -0.089 | 0.164 | 0.092 | 4 | 76 |
| Stand-Off | 206.00 | 300 | 1.061 | -0.089 | 0.164 | 0.092 | 14 | 254 |
| 10' Omni | 195.00 | 25 | 0.950 | -0.119 | 0.108 | 0.072 | 1 | 21 |
| Stand-Off | 195.00 | 100 | 0.950 | -0.119 | 0.108 | 0.072 | 4 | 85 |
| Raycap RUSDC-6267-PF-48 | 188.00 | 16 | 0.883 | -0.121 | 0.081 | 0.064 | 1 | 13 |
| Ericsson RRUS-11 (50 lbs.) | 188.00 | 150 | 0.883 | -0.121 | 0.081 | 0.064 | 5 | 127 |
| KMW AM-X-CD-17-65-00T-RET | 188.00 | 185 | 0.883 | -0.121 | 0.081 | 0.064 | 6 | 157 |
| Round Sector Frame | 188.00 | 900 | 0.883 | -0.121 | 0.081 | 0.064 | 30 | 763 |
| 10' Omni | 175.00 | 25 | 0.765 | -0.105 | 0.044 | 0.059 | 1 | 21 |
| Stand-Off | 175.00 | 100 | 0.765 | -0.105 | 0.044 | 0.059 | 3 | 85 |
| Stand-Off | 171.00 | 100 | 0.731 | -0.096 | 0.036 | 0.059 | 3 | 85 |
| TX RX Systems 421-83A-01261 | 171.00 | 20 | 0.731 | -0.096 | 0.036 | 0.059 | 1 | 17 |
| Bird BA40-41-DIN | 171.00 | 32 | 0.731 | -0.096 | 0.036 | 0.059 | 1 | 27 |
| 6' Ice Shield | 153.00 | 450 | 0.585 | -0.047 | 0.013 | 0.062 | 14 | 381 |
| Motorola PTP 45600 | 142.00 | 12 | 0.504 | -0.018 | 0.007 | 0.065 | 0 | 10 |
| Radio Waves HPD4-4.7 | 142.00 | 85 | 0.504 | -0.018 | 0.007 | 0.065 | 3 | 72 |
| Stand-Off | 131.00 | 100 | 0.429 | 0.009 | 0.006 | 0.066 | 3 | 85 |
| Bird BA40-41-DIN | 131.00 | 32 | 0.429 | 0.009 | 0.006 | 0.066 | 1 | 27 |
| 2' Omni | 125.00 | 10 | 0.390 | 0.021 | 0.007 | 0.066 | 0 | 8 |
| Stand-Off | 125.00 | 100 | 0.390 | 0.021 | 0.007 | 0.066 | 3 | 85 |
| 2' Omni | 100.00 | 5 | 0.250 | 0.055 | 0.017 | 0.061 | 0 | 4 |
| Stand-Off | 100.00 | 100 | 0.250 | 0.055 | 0.017 | 0.061 | 3 | 85 |
| 2" X 8" GPS | 38.00 | 10 | 0.036 | 0.069 | 0.041 | 0.035 | 0 | 8 |
| Stand-Off | 38.00 | 100 | 0.036 | 0.069 | 0.041 | 0.035 | 2 | 85 |
| | | 35,103 | 70.031 | 26.790 | 23.274 | 12.904 | 2,565 | 29,758 |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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 11/8/2017 11:46:32 AM

Force/Stress Summary

| Section: 1 | | PIROD42B | | Bot Elev (ft): 0.00 | | | | Height (ft): 5.000 | | | | | | | |
|-------------------------------|--|----------|----------------|---------------------|-------|---------|-----------|---------------------|--------|--------|-----------|-------|-----------|----------|-------------|
| | | Pu | Len | Bracing % | | | F'y | Phic Pn | Num | Num | Shear | Bear | Use | | |
| | | (kip) | (ft) | X | Y | Z | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | % | Controls | |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG SOL - 2 1/4" SOLID | | -128.57 | 1.2D + 1.0Di + | 1.80 | 100 | 100 | 100 | 38.3 | 50.0 | 160.68 | 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 SOL - 3/4" SOLID | | -5.71 | 1.2D + 1.0Di + | 2.440 | 50 | 50 | 50 | 70.3 | 50.0 | 13.86 | 0 | 0 | 0.00 | 0.00 | 41 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| | | Pu | Load Case | Fy | Fu | Phit Pn | Num | Num | Shear | Bear | Blk Shear | Use | | Controls | |
| | | (kip) | | (ksi) | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | phit Pn | % | | | |
| | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | | 0 | | |
| HORIZ SOL - 3/4" SOLID | | 17.30 | 1.2D + 1.0Di + | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 87 Member | | |
| DIAG SOL - 3/4" SOLID | | 2.75 | 1.2D + 1.0Di + | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 13 Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu | Load Case | phiRnt | Use | Num | Bolt Type | | | | | | | | |
| | | (kip) | | (kip) | % | Bolts | | | | | | | | | |
| | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 114.18 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Section: 2 | | PIROD42 | | Bot Elev (ft): 5.00 | | | | Height (ft): 15.000 | | | | | | | |
| | | Pu | Len | Bracing % | | | F'y | Phic Pn | Num | Num | Shear | Bear | Use | | |
| | | (kip) | (ft) | X | Y | Z | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | % | Controls | |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG SOL - 2 1/4" SOLID | | -117.11 | 1.2D + 1.0Di + | 2.39 | 100 | 100 | 100 | 51.0 | 50.0 | 147.98 | 0 | 0 | 0.00 | 0.00 | 79 Member X |
| HORIZ | | 0.00 | | 0.000 | 0 | 0 | 0 | 0.0 | 0.0 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0 |
| DIAG SOL - 3/4" SOLID | | -0.76 | 1.2D + 1.0Di + | 4.238 | 50 | 50 | 50 | 122.0 | 50.0 | 6.70 | 0 | 0 | 0.00 | 0.00 | 11 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| | | Pu | Load Case | Fy | Fu | Phit Pn | Num | Num | Shear | Bear | Blk Shear | Use | | Controls | |
| | | (kip) | | (ksi) | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | phit Pn | % | | | |
| | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | | 0 | | |
| HORIZ SOL - 3/4" SOLID | | 7.67 | 1.2D + 1.0Di + | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 38 Member | | |
| DIAG SOL - 3/4" SOLID | | 0.60 | 1.2D + 1.0Di + | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 3 Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu | Load Case | phiRnt | Use | Num | Bolt Type | | | | | | | | |
| | | (kip) | | (kip) | % | Bolts | | | | | | | | | |
| | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 116.77 | 1.2D + 1.0Di + | 178.90 | 65 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 114.18 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 3 | | 1 | | Bot Elev (ft): 20.00 | | | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2 1/4" SOLID | -115.02 | 1.2D + 1.0Di + | 2.33 | 100 | 100 | 100 | 49.8 | 50.0 | 149.28 | 0 | 0 | 0.00 | 0.00 | 77 Member X |
| HORIZ | SOL - 7/8" SOLID | -0.19 | 1.2D + 1.6W | 3.500 | 95 | 95 | 95 | 118.6 | 50.0 | 9.66 | 0 | 0 | 0.00 | 0.00 | 1 Member X |
| DIAG | SOL - 3/4" SOLID | -1.58 | 1.2D + 1.6W 90 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 23 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | Fy (ksi) | Fu (ksi) | Phit Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Blk Shear phit Pn (kip) | Use % | Controls | | |
| LEG | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | SOL - 7/8" SOLID | 0.54 | 1.2D + 1.6W | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 2 | Member | | |
| DIAG | SOL - 3/4" SOLID | 0.86 | 1.2D + 1.6W 90 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 4 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 113.75 | 1.2D + 1.0Di + | 178.90 | 64 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 116.77 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

| Section: 4 | | 1 | | Bot Elev (ft): 40.00 | | | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2 1/4" SOLID | -113.91 | 1.2D + 1.0Di + | 2.33 | 100 | 100 | 100 | 49.8 | 50.0 | 149.28 | 0 | 0 | 0.00 | 0.00 | 76 Member X |
| HORIZ | SOL - 7/8" SOLID | -0.38 | 1.2D + 1.6W 60 | 3.500 | 95 | 95 | 95 | 118.6 | 50.0 | 9.66 | 0 | 0 | 0.00 | 0.00 | 3 Member X |
| DIAG | SOL - 3/4" SOLID | -2.25 | 1.2D + 1.6W 90 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 33 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 | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | SOL - 7/8" SOLID | 1.19 | 1.2D + 1.6W | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 4 | Member | | |
| DIAG | SOL - 3/4" SOLID | 1.41 | 1.2D + 1.6W | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 7 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 108.86 | 1.2D + 1.0Di + | 178.90 | 61 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 113.75 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 5 | | 1 | | Bot Elev (ft): 60.00 | | | | Height (ft): 20.000 | | | | | | | |
|-------------------------------|--------------------|----------|----------------|----------------------|-----------|---------------|-----------|---------------------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | Fy (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2 1/4" SOLID | -107.04 | 1.2D + 1.0Di + | 2.33 | 100 | 100 | 100 | 49.8 | 50.0 | 149.28 | 0 | 0 | 0.00 | 0.00 | 71 Member X |
| HORIZ | SOL - 7/8" SOLID | -0.37 | 1.2D + 1.6W | 3.500 | 95 | 95 | 95 | 118.6 | 50.0 | 9.66 | 0 | 0 | 0.00 | 0.00 | 3 Member X |
| DIAG | SOL - 3/4" SOLID | -1.96 | 1.2D + 1.6W 90 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 28 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 | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | SOL - 7/8" SOLID | 0.94 | 1.2D + 1.6W 60 | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 3 | Member | | |
| DIAG | SOL - 3/4" SOLID | 1.20 | 1.2D + 1.6W 90 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 6 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 102.53 | 1.2D + 1.0Di + | 178.90 | 57 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 108.86 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

| Section: 6 | | 1 | | Bot Elev (ft): 80.00 | | | | Height (ft): 20.000 | | | | | | | |
|-------------------------------|--------------------|----------|----------------|----------------------|-----------|---------------|-----------|---------------------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | Fy (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2 1/4" SOLID | -101.73 | 1.2D + 1.0Di + | 2.33 | 100 | 100 | 100 | 49.8 | 50.0 | 149.28 | 0 | 0 | 0.00 | 0.00 | 68 Member X |
| HORIZ | SOL - 7/8" SOLID | -0.02 | 1.2D + 1.6W | 3.500 | 95 | 95 | 95 | 118.6 | 50.0 | 9.66 | 0 | 0 | 0.00 | 0.00 | 0 Member X |
| DIAG | SOL - 3/4" SOLID | -1.21 | 1.2D + 1.6W 90 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 17 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 | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | SOL - 7/8" SOLID | 0.56 | 1.2D + 1.6W | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 2 | Member | | |
| DIAG | SOL - 3/4" SOLID | 0.70 | 1.2D + 1.6W 60 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 3 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 99.23 | 1.2D + 1.0Di + | 178.90 | 55 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 102.53 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 7 | | 1 | | Bot Elev (ft): 100.0 | | | | Height (ft): 20.000 | | | | | | | |
|-------------------------------|--------------------|-----------|--------|----------------------|---------|-----------|-------|---------------------|--------|-----------|-------|----------|-------|----|----------|
| | | Pu | Len | Bracing % | | | F'y | Phic Pn | Num | Num | Shear | Bear | Use | | |
| | | (kip) | (ft) | X | Y | Z | KL/R | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | % | Controls |
| | | Load Case | | | | | | | | | | (kip) | (kip) | | |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2 1/4" SOLID | -97.73 | 2.33 | 100 | 100 | 100 | 49.8 | 50.0 | 149.28 | 0 | 0 | 0.00 | 0.00 | 65 | Member X |
| HORIZ | SOL - 7/8" SOLID | -0.75 | 3.500 | 95 | 95 | 95 | 118.6 | 50.0 | 9.66 | 0 | 0 | 0.00 | 0.00 | 7 | Member X |
| DIAG | SOL - 3/4" SOLID | -3.09 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 45 | Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| | | Pu | Fy | Fu | Phit Pn | Num | Num | Shear | Bear | Blk Shear | Use | | | | |
| | | (kip) | (ksi) | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | phit Pn | % | Controls | | | |
| | | Load Case | | | | | | (kip) | (kip) | (kip) | | | | | |
| LEG | | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | | |
| HORIZ | SOL - 7/8" SOLID | 1.52 | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 5 | Member | | | |
| DIAG | SOL - 3/4" SOLID | 2.39 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 12 | Member | | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu | phiRnt | Use | Num | Bolt Type | | | | | | | | | |
| | | (kip) | (kip) | % | Bolts | | | | | | | | | | |
| | | Load Case | | | | | | | | | | | | | |
| Top Tension | | 0.00 | 0.00 | 0 | 0 | | | | | | | | | | |
| Top Compression | | 90.40 | 178.90 | 51 | | | | | | | | | | | |
| Bot Tension | | 0.00 | 0.00 | 0 | | | | | | | | | | | |
| Bot Compression | | 99.23 | 0.00 | 0 | | | | | | | | | | | |

| Section: 8 | | 1 | | Bot Elev (ft): 120.0 | | | | Height (ft): 20.000 | | | | | | | |
|-------------------------------|--------------------|-----------|--------|----------------------|---------|-----------|-------|---------------------|--------|-----------|-------|----------|-------|----|----------|
| | | Pu | Len | Bracing % | | | F'y | Phic Pn | Num | Num | Shear | Bear | Use | | |
| | | (kip) | (ft) | X | Y | Z | KL/R | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | % | Controls |
| | | Load Case | | | | | | | | | | (kip) | (kip) | | |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2 1/4" SOLID | -89.80 | 2.33 | 100 | 100 | 100 | 49.8 | 50.0 | 149.28 | 0 | 0 | 0.00 | 0.00 | 60 | Member X |
| HORIZ | SOL - 7/8" SOLID | -0.76 | 3.500 | 95 | 95 | 95 | 118.6 | 50.0 | 9.66 | 0 | 0 | 0.00 | 0.00 | 7 | Member X |
| DIAG | SOL - 3/4" SOLID | -2.75 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 40 | Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| | | Pu | Fy | Fu | Phit Pn | Num | Num | Shear | Bear | Blk Shear | Use | | | | |
| | | (kip) | (ksi) | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | phit Pn | % | Controls | | | |
| | | Load Case | | | | | | (kip) | (kip) | (kip) | | | | | |
| LEG | | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | | |
| HORIZ | SOL - 7/8" SOLID | 1.23 | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 4 | Member | | | |
| DIAG | SOL - 3/4" SOLID | 2.10 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 10 | Member | | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu | phiRnt | Use | Num | Bolt Type | | | | | | | | | |
| | | (kip) | (kip) | % | Bolts | | | | | | | | | | |
| | | Load Case | | | | | | | | | | | | | |
| Top Tension | | 0.00 | 0.00 | 0 | 0 | | | | | | | | | | |
| Top Compression | | 88.62 | 178.90 | 50 | | | | | | | | | | | |
| Bot Tension | | 0.00 | 0.00 | 0 | | | | | | | | | | | |
| Bot Compression | | 90.40 | 0.00 | 0 | | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 9 1 | | Bot Elev (ft): 140.0 | | Height (ft): 20.000 | | | | | | | | | | | |
|-------------------------------|--------------------|----------------------|----------------|---------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | Fy (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2 1/4" SOLID | -87.45 | 1.2D + 1.0Di + | 2.33 | 100 | 100 | 100 | 49.8 | 50.0 | 149.28 | 0 | 0 | 0.00 | 0.00 | 58 Member X |
| HORIZ | SOL - 7/8" SOLID | -0.10 | 1.2D + 1.6W | 3.500 | 95 | 95 | 95 | 118.6 | 50.0 | 9.66 | 0 | 0 | 0.00 | 0.00 | 0 Member X |
| DIAG | SOL - 3/4" SOLID | -1.46 | 1.2D + 1.6W 90 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 21 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 | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | SOL - 7/8" SOLID | 0.78 | 1.2D + 1.6W 60 | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 2 | Member | | |
| DIAG | SOL - 3/4" SOLID | 0.82 | 1.2D + 1.6W 60 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 4 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 84.21 | 1.2D + 1.0Di + | 178.90 | 47 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 88.62 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

| Section: 10 1 | | Bot Elev (ft): 160.0 | | Height (ft): 20.000 | | | | | | | | | | | |
|-------------------------------|--------------------|----------------------|----------------|---------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | Fy (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2 1/4" SOLID | -82.83 | 1.2D + 1.0Di + | 2.33 | 100 | 100 | 100 | 49.8 | 50.0 | 149.28 | 0 | 0 | 0.00 | 0.00 | 55 Member X |
| HORIZ | SOL - 7/8" SOLID | -0.43 | 1.2D + 1.6W 60 | 3.500 | 95 | 95 | 95 | 118.6 | 50.0 | 9.66 | 0 | 0 | 0.00 | 0.00 | 4 Member X |
| DIAG | SOL - 3/4" SOLID | -1.98 | 1.2D + 1.6W 90 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 29 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | Fy (ksi) | Fu (ksi) | Phit Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Blk Shear phit Pn (kip) | Use % | Controls | | |
| LEG | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | SOL - 7/8" SOLID | 1.12 | 1.2D + 1.6W | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 4 | Member | | |
| DIAG | SOL - 3/4" SOLID | 1.92 | 1.2D + 1.6W 90 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 9 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 74.20 | 1.2D + 1.0Di + | 178.90 | 41 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 84.21 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 11 2 | | Bot Elev (ft): 180.0 | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2" SOLID | -73.27 | 1.2D + 1.0Di + | 2.33 | 100 | 100 | 100 | 56.0 | 50.0 | 112.40 | 0 | 0 | 0.00 | 0.00 | 65 Member X |
| HORIZ | SOL - 7/8" SOLID | -0.17 | 1.2D + 1.6W | 3.500 | 96 | 96 | 96 | 119.8 | 50.0 | 9.46 | 0 | 0 | 0.00 | 0.00 | 1 Member X |
| DIAG | SOL - 3/4" SOLID | -1.34 | 1.2D + 1.6W 90 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 19 Member X |
| | | 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 | | |
| Max Tension Member | | | | | | | | | | | | | | | |
| LEG | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | | 0 | | |
| HORIZ | SOL - 7/8" SOLID | 0.71 | 1.2D + 1.6W 60 | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 2 Member | | |
| DIAG | SOL - 3/4" SOLID | 0.86 | 1.2D + 1.6W 90 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 4 Member | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 69.60 | 1.2D + 1.0Di + | 141.40 | 49 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 74.20 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

| Section: 12 2 | | Bot Elev (ft): 200.0 | | Height (ft): 1.500 | | | | | | | | | | | |
|-------------------------------|------------------|----------------------|----------------|--------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2" SOLID | -69.15 | 1.2D + 1.0Di + | 0.83 | 100 | 100 | 100 | 20.0 | 50.0 | 137.30 | 0 | 0 | 0.00 | 0.00 | 50 Member X |
| HORIZ | SOL - 7/8" SOLID | -1.70 | 1.2D + 1.6W 90 | 1.750 | 96 | 96 | 96 | 59.9 | 50.0 | 20.81 | 0 | 0 | 0.00 | 0.00 | 8 Member X |
| DIAG | SOL - 3/4" SOLID | -1.88 | 1.2D + 1.6W 90 | 1.938 | 97 | 97 | 97 | 108.3 | 50.0 | 8.44 | 0 | 0 | 0.00 | 0.00 | 22 Member X |
| | | 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 | | |
| Max Tension Member | | | | | | | | | | | | | | | |
| LEG | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | | 0 | | |
| HORIZ | SOL - 7/8" SOLID | 1.70 | 1.2D + 1.6W | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 6 Member | | |
| DIAG | SOL - 3/4" SOLID | 1.92 | 1.2D + 1.6W 90 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 9 Member | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 68.80 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 69.60 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 13 2 | | Bot Elev (ft): 201.5 | | Height (ft): 10.000 | | | | | | | | | | | |
|-------------------------------|------------------|----------------------|----------------|---------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | Fy (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2" SOLID | -68.36 | 1.2D + 1.0Di + | 2.50 | 100 | 100 | 100 | 60.0 | 50.0 | 108.65 | 0 | 0 | 0.00 | 0.00 | 62 Member X |
| HORIZ | | 0.00 | | 0.000 | 0 | 0 | 0 | 0.0 | 0.0 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0 |
| DIAG | SOL - 3/4" SOLID | -1.69 | 1.2D + 1.6W 90 | 4.301 | 50 | 50 | 50 | 123.9 | 50.0 | 6.51 | 0 | 0 | 0.00 | 0.00 | 26 Member X |
| | | 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 | | |
| Max Tension Member | | | | | | | | | | | | | | | |
| LEG | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | | 0 | | |
| HORIZ | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 0 | | |
| DIAG | SOL - 3/4" SOLID | 1.49 | 1.2D + 1.6W | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 7 Member | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 64.81 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 68.80 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

| Section: 14 2 | | Bot Elev (ft): 211.5 | | Height (ft): 1.167 | | | | | | | | | | | |
|-------------------------------|------------------|----------------------|----------------|--------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | Fy (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2" SOLID | -61.74 | 1.2D + 1.0Di + | 1.17 | 100 | 100 | 100 | 28.0 | 50.0 | 133.49 | 0 | 0 | 0.00 | 0.00 | 46 Member X |
| HORIZ | SOL - 7/8" SOLID | -0.01 | 1.2D + 1.6W | 1.750 | 96 | 96 | 96 | 59.9 | 50.0 | 20.81 | 0 | 0 | 0.00 | 0.00 | 0 Member X |
| DIAG | SOL - 3/4" SOLID | -3.12 | 1.2D + 1.6W | 2.103 | 97 | 97 | 97 | 117.5 | 50.0 | 7.23 | 0 | 0 | 0.00 | 0.00 | 43 Member X |
| | | 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 | | |
| Max Tension Member | | | | | | | | | | | | | | | |
| LEG | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | | 0 | | |
| HORIZ | SOL - 7/8" SOLID | 1.43 | 1.2D + 1.0Di + | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 5 Member | | |
| DIAG | SOL - 3/4" SOLID | 0.69 | 1.2D + 1.6W 90 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 3 Member | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 62.06 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 64.81 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

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Force/Stress Summary

| Section: 15 2 | | Bot Elev (ft): 212.6 | | Height (ft): 1.166 | | | | | | | | | | | |
|------------------------|-------------------|----------------------|-------|--------------------|-----|-----|-------|---------|--------|-------|-------|--------|-------|-------------|--|
| | | Pu | Len | Bracing % | | | F'y | Phic Pn | Num | Num | Shear | Bear | Use | | |
| | | (kip) | (ft) | X | Y | Z | KL/R | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | % Controls | |
| Max Compression Member | | Load Case | | | | | | | | | | (kip) | (kip) | | |
| LEG | SOL - 2" SOLID | -54.32 | 1.17 | 100 | 100 | 100 | 28.0 | 50.0 | 133.50 | 0 | 0 | 0.00 | 0.00 | 40 Member X | |
| HORIZ | PL - PL 3 x 0.375 | -7.47 | 1.750 | 96 | 96 | 96 | 121.3 | 50.0 | 17.27 | 0 | 0 | 0.00 | 0.00 | 43 Member Y | |
| DIAG | SOL - 3/4" SOLID | -7.09 | 2.103 | 97 | 97 | 97 | 117.5 | 50.0 | 7.23 | 0 | 0 | 0.00 | 0.00 | 98 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 | | Load Case | | | | | | (kip) | (kip) | (kip) | | |
| LEG | | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | |
| HORIZ | | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0 | |
| DIAG | SOL - 3/4" SOLID | 4.74 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 23 | Member |

| | | Pu | phiRnt | Use | Num | | |
|-------------------|--|-------|--------|-----|-------|-----------|--|
| | | (kip) | (kip) | % | Bolts | Bolt Type | |
| Max Splice Forces | | | | | | | |
| Top Tension | | 0.00 | 0.00 | 0 | 0 | | |
| Top Compression | | 55.50 | 0.00 | 0 | | | |
| Bot Tension | | 0.00 | 0.00 | 0 | | | |
| Bot Compression | | 62.06 | 0.00 | 0 | | | |

| Section: 16 2 | | Bot Elev (ft): 213.8 | | Height (ft): 1.167 | | | | | | | | | | | |
|------------------------|------------------|----------------------|-------|--------------------|-----|-----|-------|---------|--------|-------|-------|--------|-------|-------------|--|
| | | Pu | Len | Bracing % | | | F'y | Phic Pn | Num | Num | Shear | Bear | Use | | |
| | | (kip) | (ft) | X | Y | Z | KL/R | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | % Controls | |
| Max Compression Member | | Load Case | | | | | | | | | | (kip) | (kip) | | |
| LEG | SOL - 2" SOLID | -58.75 | 1.17 | 100 | 100 | 100 | 28.0 | 50.0 | 133.49 | 0 | 0 | 0.00 | 0.00 | 44 Member X | |
| HORIZ | SOL - 7/8" SOLID | 0.00 | 1.750 | 96 | 96 | 96 | 59.9 | 50.0 | 20.81 | 0 | 0 | 0.00 | 0.00 | 0 Member X | |
| DIAG | SOL - 3/4" SOLID | -5.52 | 2.103 | 97 | 97 | 97 | 117.5 | 50.0 | 7.23 | 0 | 0 | 0.00 | 0.00 | 76 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 | | Load Case | | | | | | (kip) | (kip) | (kip) | | |
| LEG | | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | |
| HORIZ | SOL - 7/8" SOLID | 1.61 | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 5 | Member |
| DIAG | SOL - 3/4" SOLID | 5.06 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 25 | Member |

| | | Pu | phiRnt | Use | Num | | |
|-------------------|--|-------|--------|-----|-------|-----------|--|
| | | (kip) | (kip) | % | Bolts | Bolt Type | |
| Max Splice Forces | | | | | | | |
| Top Tension | | 0.00 | 0.00 | 0 | 0 | | |
| Top Compression | | 58.75 | 0.00 | 0 | | | |
| Bot Tension | | 0.00 | 0.00 | 0 | | | |
| Bot Compression | | 55.50 | 0.00 | 0 | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 17 2 | | Bot Elev (ft): 215.0 | | | | | | Height (ft): 1.167 | | | | | | |
|------------------------|-------------------|----------------------|-------|-----------|-----|-----|-------|--------------------|--------|-------|-------|--------|-------|-------------|
| | | Pu | Len | Bracing % | | | F'y | Phic Pn | Num | Num | Shear | Bear | Use | |
| | | (kip) | (ft) | X | Y | Z | KL/R | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | % Controls |
| Max Compression Member | | Load Case | | | | | | | | | | (kip) | (kip) | |
| LEG | SOL - 2" SOLID | -52.71 | 1.17 | 100 | 100 | 100 | 28.0 | 50.0 | 133.49 | 0 | 0 | 0.00 | 0.00 | 39 Member X |
| HORIZ | PL - PL 3 x 0.375 | -2.68 | 1.750 | 96 | 96 | 96 | 121.3 | 50.0 | 17.27 | 0 | 0 | 0.00 | 0.00 | 15 Member Y |
| DIAG | SOL - 3/4" SOLID | -2.03 | 2.103 | 97 | 97 | 97 | 117.5 | 50.0 | 7.23 | 0 | 0 | 0.00 | 0.00 | 28 Member X |

| Max Tension Member | | Pu | Fy | Fu | Phit Pn | Num | Num | Shear | Bear | Blk Shear | Use | |
|--------------------|-------------------|-----------|-------|-------|---------|-------|-------|--------|-------|-----------|-----|-----------|
| | | (kip) | (ksi) | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | phit Pn | % | Controls |
| | | Load Case | | | | | | (kip) | (kip) | (kip) | | |
| LEG | SOL - 2" SOLID | 9.00 | 50 | 65 | 141.37 | 0 | 0 | 0.00 | 0.00 | | | 6 Member |
| HORIZ | PL - PL 3 x 0.375 | 11.99 | 50 | 65 | 50.63 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 23 Member |
| DIAG | SOL - 3/4" SOLID | 1.90 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 9 Member |

| Max Splice Forces | | Pu | phiRnt | Use | Num | Bolt Type | |
|-------------------|--|-------|--------|-----|-------|-----------|--|
| | | (kip) | (kip) | % | Bolts | | |
| Top Tension | | 6.75 | 0.00 | 0 | 0 | | |
| Top Compression | | 50.60 | 0.00 | 0 | | | |
| Bot Tension | | 0.00 | 0.00 | 0 | | | |
| Bot Compression | | 58.75 | 0.00 | 0 | | | |

| Section: 18 2 | | Bot Elev (ft): 216.1 | | | | | | Height (ft): 2.333 | | | | | | |
|------------------------|------------------|----------------------|-------|-----------|-----|-----|-------|--------------------|--------|-------|-------|--------|-------|-------------|
| | | Pu | Len | Bracing % | | | F'y | Phic Pn | Num | Num | Shear | Bear | Use | |
| | | (kip) | (ft) | X | Y | Z | KL/R | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | % Controls |
| Max Compression Member | | Load Case | | | | | | | | | | (kip) | (kip) | |
| LEG | SOL - 2" SOLID | -45.94 | 2.33 | 100 | 100 | 100 | 56.0 | 50.0 | 112.41 | 0 | 0 | 0.00 | 0.00 | 40 Member X |
| HORIZ | | 0.00 | 0.000 | 0 | 0 | 0 | 0.0 | 0.0 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0 |
| DIAG | SOL - 3/4" SOLID | -4.40 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 64 Member X |

| Max Tension Member | | Pu | Fy | Fu | Phit Pn | Num | Num | Shear | Bear | Blk Shear | Use | |
|--------------------|------------------|-----------|-------|-------|---------|-------|-------|--------|-------|-----------|-----|-----------|
| | | (kip) | (ksi) | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | phit Pn | % | Controls |
| | | Load Case | | | | | | (kip) | (kip) | (kip) | | |
| LEG | SOL - 2" SOLID | 2.19 | 50 | 65 | 141.37 | 0 | 0 | 0.00 | 0.00 | | | 1 Member |
| HORIZ | | 0.00 | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 0 |
| DIAG | SOL - 3/4" SOLID | 4.19 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 21 Member |

| Max Splice Forces | | Pu | phiRnt | Use | Num | Bolt Type | |
|-------------------|--|-------|--------|-----|-------|-----------|--|
| | | (kip) | (kip) | % | Bolts | | |
| Top Tension | | 0.00 | 0.00 | 0 | 0 | | |
| Top Compression | | 42.37 | 0.00 | 0 | | | |
| Bot Tension | | 6.75 | 0.00 | 0 | | | |
| Bot Compression | | 50.60 | 0.00 | 0 | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 19 2 | | Bot Elev (ft): 218.5 | | Height (ft): 1.500 | | | | | | | | | | | |
|-------------------------------|------------------|----------------------|-----------------|--------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2" SOLID | -42.24 | 1.2D + 1.6W | 0.83 | 100 | 100 | 100 | 20.0 | 50.0 | 137.30 | 0 | 0 | 0.00 | 0.00 | 30 Member X |
| HORIZ | SOL - 7/8" SOLID | -1.31 | 1.2D + 1.6W 60 | 3.500 | 96 | 96 | 96 | 119.8 | 50.0 | 9.46 | 0 | 0 | 0.00 | 0.00 | 13 Member X |
| DIAG | | 0.00 | | 0.000 | 0 | 0 | 0 | 0.0 | 0.00 | 0.00 | 0 | 0 | 0.00 | 0.00 | |
| 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 | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | SOL - 7/8" SOLID | 1.22 | 1.2D + 1.6W | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 4 | Member | | |
| DIAG | SOL - 3/4" SOLID | 0.01 | 1.2D + 1.6W | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 42.24 | 1.2D + 1.6W 120 | 141.40 | 30 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 42.37 | 1.2D + 1.6W | 0.00 | 0 | | | | | | | | | | |

| Section: 20 2 - 5' | | Bot Elev (ft): 220.0 | | Height (ft): 5.000 | | | | | | | | | | | |
|-------------------------------|------------------|----------------------|-----------------|--------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 2" SOLID | -38.65 | 1.2D + 1.6W | 2.17 | 100 | 100 | 100 | 52.0 | 50.0 | 116.00 | 0 | 0 | 0.00 | 0.00 | 33 Member X |
| HORIZ | SOL - 7/8" SOLID | -2.13 | 1.2D + 1.6W | 3.500 | 96 | 96 | 96 | 119.8 | 50.0 | 9.46 | 0 | 0 | 0.00 | 0.00 | 22 Member X |
| DIAG | SOL - 3/4" SOLID | -3.91 | 1.2D + 1.6W 90 | 4.117 | 50 | 50 | 50 | 118.5 | 50.0 | 7.10 | 0 | 0 | 0.00 | 0.00 | 54 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 | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | SOL - 7/8" SOLID | 2.24 | 1.2D + 1.6W 60 | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 8 | Member | | |
| DIAG | SOL - 3/4" SOLID | 3.92 | 1.2D + 1.6W 90 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 19 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 39.27 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 42.24 | 1.2D + 1.6W 120 | 0.00 | 0 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 21 3 | | Bot Elev (ft): 225.0 | | | | | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 1 3/4" SOLID | -40.59 | 1.2D + 1.0Di + | 2.38 | 100 | 100 | 100 | 65.1 | 50.0 | 79.36 | 0 | 0 | 0.00 | 0.00 | 51 Member X |
| HORIZ | SOL - 7/8" SOLID | -0.98 | 1.2D + 1.6W | 3.500 | 96 | 96 | 96 | 119.8 | 50.0 | 9.46 | 0 | 0 | 0.00 | 0.00 | 10 Member X |
| DIAG | SOL - 3/4" SOLID | -2.81 | 1.2D + 1.6W 90 | 4.230 | 50 | 50 | 50 | 121.8 | 50.0 | 6.73 | 0 | 0 | 0.00 | 0.00 | 41 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 | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | SOL - 7/8" SOLID | 1.26 | 1.2D + 1.6W 60 | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 4 | Member | | |
| DIAG | SOL - 3/4" SOLID | 2.58 | 1.2D + 1.6W 90 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 12 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 41.06 | 1.2D + 1.0Di + | 108.20 | 38 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 39.27 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

| Section: 22 3 | | Bot Elev (ft): 245.0 | | | | | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 1 3/4" SOLID | -46.25 | 1.2D + 1.6W 60 | 2.33 | 100 | 100 | 100 | 64.0 | 50.0 | 80.23 | 0 | 0 | 0.00 | 0.00 | 57 Member X |
| HORIZ | SOL - 7/8" SOLID | -0.34 | 1.2D + 1.6W | 3.500 | 96 | 96 | 96 | 119.8 | 50.0 | 9.46 | 0 | 0 | 0.00 | 0.00 | 3 Member X |
| DIAG | SOL - 3/4" SOLID | -1.35 | 1.2D + 1.6W 90 | 4.206 | 50 | 50 | 50 | 121.1 | 50.0 | 6.80 | 0 | 0 | 0.00 | 0.00 | 19 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 | SOL - 1 3/4" SOLID | 1.15 | 1.2D + 1.6W | 50 | 65 | 108.24 | 0 | 0 | 0.00 | 0.00 | | 1 | Member | | |
| HORIZ | SOL - 7/8" SOLID | 0.71 | 1.2D + 1.6W 60 | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | 2 | Member | | |
| DIAG | SOL - 3/4" SOLID | 1.04 | 1.2D + 1.6W | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 5 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 42.62 | 1.2D + 1.6W 60 | 108.20 | 39 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 41.06 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 23 4 | | Bot Elev (ft): 265.0 | | Height (ft): 1.500 | | | | | | | | | | | |
|-------------------------------|--------------------|----------------------|----------------|--------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 1 3/4" SOLID | -42.56 | 1.2D + 1.6W 60 | 0.67 | 100 | 100 | 100 | 18.3 | 50.0 | 105.62 | 0 | 0 | 0.00 | 0.00 | 40 Member X |
| HORIZ | SOL - 7/8" SOLID | -1.57 | 1.2D + 1.6W 60 | 3.500 | 96 | 96 | 96 | 119.8 | 50.0 | 9.46 | 0 | 0 | 0.00 | 0.00 | 16 Member X |
| DIAG | SOL - 3/4" SOLID | -1.90 | 1.2D + 1.6W 90 | 1.938 | 97 | 97 | 97 | 108.3 | 50.0 | 8.44 | 0 | 0 | 0.00 | 0.00 | 22 Member X |
| | | 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 | | |
| Max Tension Member | | | | | | | | | | | | | | | |
| LEG | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | | 0 | | |
| HORIZ | SOL - 7/8" SOLID | 0.34 | 1.2D + 1.6W | 50 | 65 | 27.06 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 1 Member | | |
| DIAG | SOL - 3/4" SOLID | 2.37 | 1.2D + 1.6W | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 11 Member | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 41.33 | 1.2D + 1.6W 60 | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 42.62 | 1.2D + 1.6W 60 | 0.00 | 0 | | | | | | | | | | |

| Section: 24 4 | | Bot Elev (ft): 266.5 | | Height (ft): 1.166 | | | | | | | | | | | |
|-------------------------------|--------------------|----------------------|----------------|--------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 1 3/4" SOLID | -41.32 | 1.2D + 1.6W 60 | 1.17 | 100 | 100 | 100 | 32.0 | 50.0 | 100.44 | 0 | 0 | 0.00 | 0.00 | 41 Member X |
| HORIZ | PL - PL 3 x 0.375 | -0.88 | 1.2D + 1.6W 60 | 1.750 | 96 | 96 | 96 | 121.3 | 50.0 | 17.26 | 0 | 0 | 0.00 | 0.00 | 5 Member Y |
| DIAG | SOL - 3/4" SOLID | -0.74 | 1.2D + 1.6W 90 | 2.103 | 97 | 97 | 97 | 117.5 | 50.0 | 7.23 | 0 | 0 | 0.00 | 0.00 | 10 Member X |
| | | 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 | | |
| Max Tension Member | | | | | | | | | | | | | | | |
| LEG | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | | 0 | | |
| HORIZ | PL - PL 3 x 0.375 | 1.57 | 1.2D + 1.6W | 50 | 65 | 50.63 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 3 Member | | |
| DIAG | SOL - 3/4" SOLID | 1.20 | 1.2D + 1.6W | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 6 Member | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 40.35 | 1.2D + 1.6W 60 | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 41.33 | 1.2D + 1.6W 60 | 0.00 | 0 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 25 4 | | Bot Elev (ft): 267.6 | | Height (ft): 1.167 | | | | | | | | | | | |
|-------------------------------|--------------------|----------------------|----------------|--------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 1 3/4" SOLID | -38.81 | 1.2D + 1.6W 60 | 1.17 | 100 | 100 | 100 | 32.0 | 50.0 | 100.43 | 0 | 0 | 0.00 | 0.00 | 38 Member X |
| HORIZ | | 0.00 | | 0.000 | 0 | 0 | 0 | 0.0 | 0.0 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0 |
| DIAG | SOL - 3/4" SOLID | -1.83 | 1.2D + 1.6W | 2.103 | 97 | 97 | 97 | 117.5 | 50.0 | 7.23 | 0 | 0 | 0.00 | 0.00 | 25 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 | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0 | | | |
| DIAG | SOL - 3/4" SOLID | 0.74 | 1.2D + 1.6W 90 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 3 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 38.81 | 1.2D + 1.6W 60 | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 40.35 | 1.2D + 1.6W 60 | 0.00 | 0 | | | | | | | | | | |

| Section: 26 4 | | Bot Elev (ft): 268.8 | | Height (ft): 1.167 | | | | | | | | | | | |
|-------------------------------|--------------------|----------------------|----------------|--------------------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|--------------------|------------------|-------|-------------|
| | | 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 |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 1 3/4" SOLID | -18.16 | 1.2D + 1.6W 60 | 1.17 | 100 | 100 | 100 | 32.0 | 50.0 | 100.43 | 0 | 0 | 0.00 | 0.00 | 18 Member X |
| HORIZ | PL - PL 3 x 0.375 | -0.13 | 1.2D + 1.6W 60 | 1.750 | 96 | 96 | 96 | 121.3 | 50.0 | 17.27 | 0 | 0 | 0.00 | 0.00 | 0 Member Y |
| DIAG | SOL - 3/4" SOLID | -2.12 | 1.2D + 1.6W | 2.103 | 97 | 97 | 97 | 117.5 | 50.0 | 7.23 | 0 | 0 | 0.00 | 0.00 | 29 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | Fy (ksi) | Fu (ksi) | Phit Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Blk Shear phit Pn (kip) | Use % | Controls | | |
| LEG | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | 0 | | | |
| HORIZ | PL - PL 3 x 0.375 | 1.17 | 1.2D + 1.6W | 50 | 65 | 50.63 | 0 | 0 | 0.00 | 0.00 | 0.00 | 2 | Member | | |
| DIAG | SOL - 3/4" SOLID | 1.27 | 1.2D + 1.6W 60 | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | 6 | Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 17.35 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 38.81 | 1.2D + 1.6W 60 | 0.00 | 0 | | | | | | | | | | |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

| Section: 27 Top | | Bot Elev (ft): 270.0 | | Height (ft): 5.000 | | | | | | | | | | | |
|-------------------------------|--------------------|----------------------|------------------|--------------------|-------|---------|-----------|---------|--------|-------|-----------|-------|-----------|----------|-------------|
| | | Pu | Len | Bracing % | | | Fy | Phic Pn | Num | Num | Shear | Bear | Use | | |
| | | (kip) | (ft) | X | Y | Z | (ksi) | (kip) | Bolts | Holes | phiRnv | phiRn | % | Controls | |
| | | Load Case | | KL/R | | | | | | | (kip) | (kip) | | | |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | SOL - 1 3/4" SOLID | -16.75 | 1.2D + 1.0Di + | 2.17 | 100 | 100 | 100 | 59.4 | 50.0 | 83.61 | 0 | 0 | 0.00 | 0.00 | 20 Member X |
| HORIZ | SOL - 7/8" SOLID | -3.32 | 1.2D + 1.0Di + | 3.500 | 96 | 96 | 96 | 119.8 | 50.0 | 9.46 | 0 | 0 | 0.00 | 0.00 | 35 Member X |
| DIAG | SOL - 3/4" SOLID | -1.27 | 1.2D + 1.6W 60 | 4.116 | 50 | 50 | 50 | 118.5 | 50.0 | 7.10 | 0 | 0 | 0.00 | 0.00 | 17 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) | (kip) | (kip) | | | | |
| LEG | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | | | 0 | | |
| HORIZ | | 0.00 | | 0 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 0 | | |
| DIAG | SOL - 3/4" SOLID | 3.98 | 1.2D + 1.0Di + | 50 | 65 | 19.88 | 0 | 0 | 0.00 | 0.00 | 0.00 | | 20 Member | | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu | | phiRnt | Use | Num | Bolt Type | | | | | | | | |
| | | (kip) | Load Case | (kip) | % | Bolts | | | | | | | | | |
| Top Tension | | 0.00 | | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 0.35 | (1.2 + 0.2Sds) * | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 0.00 | | 0.00 | 0 | | | | | | | | | | |
| Bot Compression | | 17.35 | 1.2D + 1.0Di + | 0.00 | 0 | | | | | | | | | | |

Maximum Reactions Summary

| | <u>Base</u> | <u>Anch1</u> |
|------------------|-------------|--------------|
| Vertical (kip) | 353.90 | -97.13 |
| Horizontal (kip) | 0.61 | 64.01 |

Site Number: 10047
 Site Name: PORTLAND ME, ME
 Customer: VERIZON WIRELESS

Code: ANSI/TIA-222-G
 Engineering Number: OAA685516_C3_08

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Force/Stress Summary

Guy Anchor Design Loads

| Radius (ft) | Drop (ft) | Azimuth (°) | Uplift (kip) | Shear (kip) |
|-------------|-----------|---------------|--------------|-------------|
| 115.00 | 0.00 | 0 | 97.13 | 64.01 |
| 115.00 | 0.00 | 240 | 97.13 | 64.01 |
| 115.00 | 0.00 | 120 | 97.13 | 64.01 |

Maximum Cable Forces Summary

| Load Case | Elevation (ft) | Cable | Anchor Node | Tower Node | Allow Tension (kip) | Applied Tension (kip) | Use % |
|--------------------|----------------|-----------|-------------|------------|---------------------|-----------------------|-------|
| 1.2D + 1.6W 90 deg | 54.66 | 9/16 EHS | A1a | 29b | 21.00 | 9.59 | 46 |
| 1.2D + 1.6W 90 deg | 110.00 | 5/8 EHS | A1a | 57b | 25.44 | 15.27 | 60 |
| 1.2D + 1.6W 90 deg | 165.33 | 11/16 EHS | A1a | 85b | 30.00 | 18.51 | 62 |
| 1.2D + 1.6W 90 deg | 213.83 | 5/8 EHS | A1a | T4a | 25.44 | 13.41 | 53 |
| 1.2D + 1.6W 60 deg | 215.00 | 5/8 EHS | A1a | 111b | 25.44 | 13.16 | 52 |
| 1.2D + 1.6W 60 deg | 268.83 | 11/16 EHS | A1a | 143b | 30.00 | 14.21 | 47 |
| 1.2D + 1.6W 90 deg | 269.99 | 5/8 EHS | A1a | T7a | 25.44 | 11.94 | 47 |

Site Name: Portland ME, ME
 Site Number: 10047
 Engineering Number: OAA685516
 Engineer: Hamid.Kazem
 Date: 11/08/17

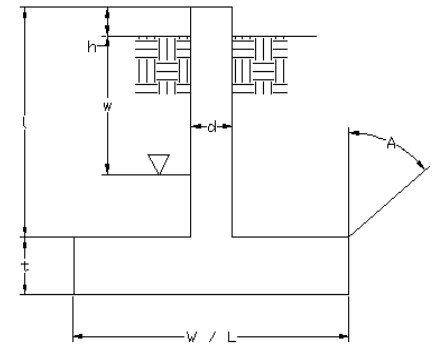
Program Last Updated: 5/13/2014
 American Tower Corporation

Design Base Loads (Factored) per TIA-222-G

| | | | |
|---|-----------|--|----------------------|
| Foundation Mapped: | N | | |
| Moment (M_u): | 0.0 k-ft | Concrete Compressive Strength (f'_c): | 3000 psi |
| Shear/Leg (V_u): | 0.6 k | Vertical Steel Rebar Size #: | 6 |
| Compression/Leg (P_u): | 353.9 k | Vertical Steel Rebar Area: | 0.44 in ² |
| Uplift/Leg (T_u): | 0.0 k | # of Vertical Steel Rebars: | 8 |
| Tower Type (GT / SST): | GT | Vertical Steel Rebar Yield Strength (F_y): | 60 ksi |
| Diameter of Prismatic Portion of Pier (d): | 4.0 ft | Tie / Stirrup Size #: | 4 |
| Depth to Base of Foundation: | 4.0 ft | Tie / Stirrup Area: | 0.20 in ² |
| Pier Height Above Ground (h): | 0.50 ft | Tie / Stirrup Spacing: | 18.0 in |
| Length / Width of Pad (w): | 11.0 ft | Tie / Stirrup Steel Yield Strength (F_y): | 60 ksi |
| Thickness of Pad (t): | 1.5 ft | Rebar Cage Diameter: | 40.0 in |
| Depth Below Ground Surface to Water Table (w): | 99.0 ft | Bending/Tension Reduction Factor (ϕ_B): | 0.90 |
| Unit Weight of Concrete: | 150.0 pcf | Shear Reduction Factor (ϕ_V): | 0.75 |
| Unit Weight of Water: | 62.4 pcf | Compression Reduction Factor (ϕ_C): | 0.65 |
| Unit Weight of Soil Above Water Table: | 110.0 pcf | Steel Elastic Modulus: | 29000 ksi |
| Unit Weight of Soil Below Water Table: | 47.6 pcf | Pad Steel Rebar Size #: | 8 |
| Friction Angle of Uplift from Top of Pad: | 0 Degrees | Pad Steel Rebar Area: | 0.79 in ² |
| Friction Angle of Uplift from Base of Pad: | 0 Degrees | Pad Steel Rebar Yield Strength (F_y): | 60 ksi |
| Uplift Angle Started at Top or Base of Pad (T/B): | T | # of Rebar in Top of Pad: | 0 |
| Ultimate Skin Friction: | 756 psf | # of Rebar in Base of Pad: | 11 |
| Ultimate Compressive Bearing Pressure: | 4964 psf | Pad Clear Cover: | 3 in |
| Capacity Increase (Due to Transient Loads): | 1.00 | | |
| Bearing Strength Reduction Factor (ϕ_s): | 0.60 | | |
| Uplift Strength Reduction Factor (ϕ_s): | 0.75 | | |

Axial Capacities and Design Moment

| | |
|--|-------------------------|
| Weight of Concrete (Bouyancy Considered): | 32.9 k |
| Weight of Soil (Bouyancy Considered): | 45.2 k |
| Ultimate Skin Friction Resistance: | 49.9 k |
| Controlling Failure Mode (Top / Base): | Base |
| Nominal Uplift Capacity per Leg ($\phi_s T_n$): | 58.5 k |
| Nominal Compressive Capacity per Leg ($\phi_s P_n$): | 360.4 k |
| P_u : | 365.3 k |
| $T_u / \phi_s T_n$: | 0.00 Result: OK |
| $P_u / \phi_s P_n$: | 1.01 Result: Acceptable |



| Depth (ft) | | Ultimate Lateral Bearing Pressure (psf) | Increment (psf/ft) | γ_{Soil} (pcf) | Cohesion (psf) | ϕ (degree) |
|------------|--------|---|--------------------|-----------------------|----------------|-----------------|
| Top | Bottom | | | | | |
| 0.0 | 2.0 | 0.0 | 110.0 | 110 | 0 | 0 |
| 2.0 | 2.5 | 1020.0 | 110.0 | 110 | 400 | 0 |

Inflection Point (Below Ground Surface): 1.7 ft
 Factored Design Moment At Inflection Point (M_u): 0.5 k-ft

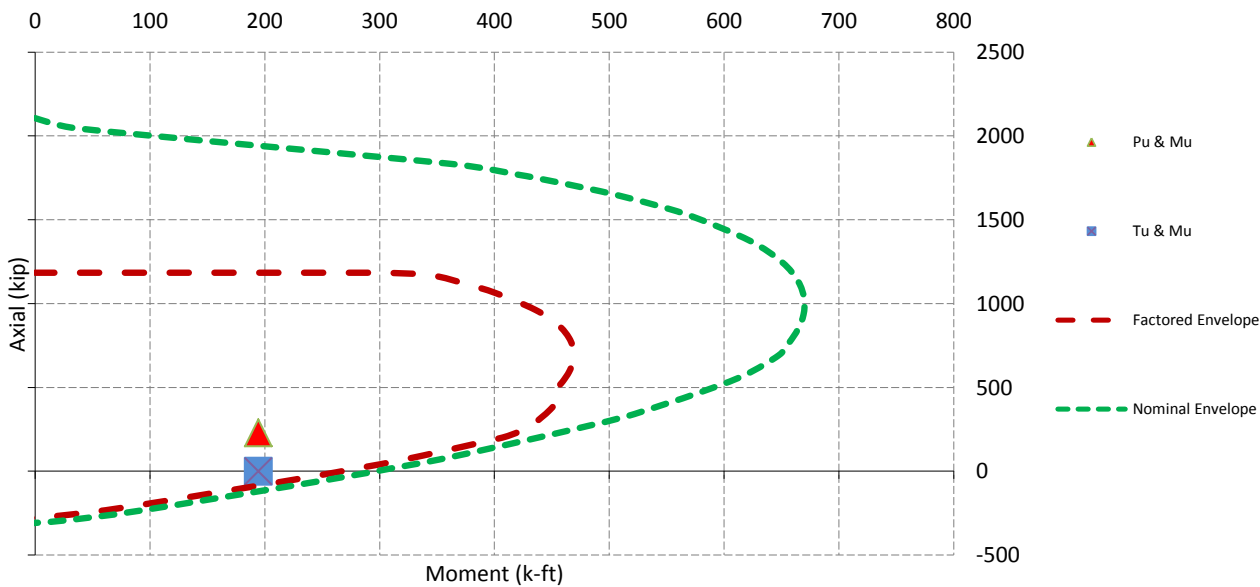
Pad Strength Capacity

| | |
|---|--|
| β : | 0.85 ACI318-05 - 10.2.7.3 |
| Upper Pad Flexural Reinforcement Spacing: | 0 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4 |
| One Way Design Shear (V_u): | 75.7 k |
| One Way Shear Capacity (ϕV_c): | 162.2 k - ACI318-05 - 11.3.1.1 |
| $V_u / \phi V_c$: | 0.47 Result: OK |
| Punching Design Shear (V_u): | 289.9 k |
| Nominal Punching Shear Capacity ($\phi_c V_n$): | 467.8 k - ACI318-05 - 11.12.2.1 |
| $V_u / \phi V_c$: | 0.62 Result: OK |
| Flexural Loading Due to Soil Pressure (M_u): | 202.3 k-ft |
| Lower Steel Pad Moment Capacity (ϕM_n): | 536.7 k-ft - ACI318-05 - 10.3 |
| $M_u / \phi M_n$: | 0.38 Result: OK |
| Flexural Loading Due to Uplift (M_u): | 0.0 k-ft |
| Upper Steel Pad Moment Capacity (ϕM_n): | 0.0 k-ft - ACI318-05 - 10.3 |
| $M_u / \phi M_n$: | 0.00 Result: OK |

Pier Strength Capacity

| | |
|--|--|
| Design Moment (M_u): | 0.5 k-ft |
| Nominal Moment Capacity ($\phi_B M_n$): | 315.5 k-ft - ACI318-005 - 10.2 |
| $M_u / \phi_B M_n$: | 0.00 Result: OK |
| Design Shear (V_u): | 0.6 k |
| Nominal Shear Capacity ($\phi_V V_n$): | 199.9 k - ACI318-05 - 11.3.1.1 or 11.5.7.2 |
| $V_u / \phi_V V_n$: | 0.00 Result: OK |
| Design Tension (T_u): | 0.0 k |
| Nominal Tension Capacity ($\phi_T T_n$): | 190.1 k - ACI318-05 - 10.2 |
| $T_u / \phi_T T_n$: | 0.00 Result: OK |
| Design Compression (P_u): | 353.9 k |
| Nominal Compression Capacity ($\phi_P P_n$): | 2394.8 k - ACI318-05 - 10.3.6.2 |
| $P_u / \phi_P P_n$: | 0.15 Result: OK |
| $M_u / \phi_B M_n + T_u / \phi_T T_n$: | 0.00 Result: OK |

Nominal and Factored Moment Capacity and Factored Design Loads

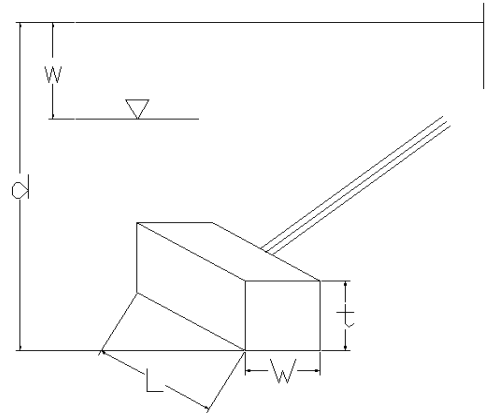


Site Name: Portland ME, ME
 Site Number: 10047
 Engineering Number: OAA685516
 Engineer: Hamid.Kazem
 Date: 11/08/17

Program Last Updated: 5/13/2014
 American Tower Corporation

Design Standard per TIA-222-G

| | |
|--|-------------------------------|
| Anchor Radius: | 230.0 ft |
| Uplift (Factored - P_u): | 97.1 k |
| Shear (Factored - V_u): | 64.0 k |
| Berm Present: | N |
| Design Anchor Rod: | N |
| Mapped Foundation: | N |
| Anchor Base Depth (d): | 12.5 ft |
| Width of Anchor (W): | 12.0 ft |
| Length of Anchor (L): | 12.0 ft |
| Thickness of Anchor (t): | 3.0 ft |
| Depth Below Ground Surface to Water Table (w): | 99.0 ft |
| Soil Uplift at Base / Top of Anchor (B/T): | T |
| Unit Weight of Concrete: | 150.0 pcf |
| Unit Weight of Soil Above Water Table: | 110.0 pcf |
| Unit Weight of Water: | 62.4 pcf |
| Submerged Soil Unit Weight: | 47.6 pcf |
| Internal Angle of Friction: | 10 Degrees |
| Cohesion: | 1232 psf |
| Ultimate Skin Friction of Pad Sides to Soil: | 602 psf |
| Ultimate Coefficient of Shear Friction: | 0.30 |
| Maximum Top Conical Failure Angle: | 30 Degrees |
| Maximum Base Conical Failure Angle: | 30 Degrees |
| Allowable Capacity Increase: | 1.00 (Due to Transient Loads) |
| Uplift Strength Reduction Factor (ϕ_u): | 0.75 |
| Shear Strength Reduction Factor (ϕ_v): | 0.75 |
| Concrete Uplift Strength Reduction Factor (ϕ_{uc}): | 0.90 |



Uplift

| | |
|--|-----------------|
| Weight of Concrete (Buoyancy Effect Considered): | 64.8 k |
| Weight of Soil (Buoyancy Effect Considered): | 250.3 k |
| Ultimate Uplift Resistance from Skin Friction: | 65.0 k |
| Nominal Factored Uplift Resistance ($\phi_u P_n$): | 246.0 k |
| $P_u / \phi_u P_n$: | 0.39 Result: OK |

Shear

| | |
|--|-----------------|
| Ultimate Shear Friction Resistance Due to Normal Force - Uplift: | 42.7 k |
| Passive Pressure: | 4655 psf |
| Ultimate Passive Pressure Resistance: | 167.6 k |
| Nominal Shear Resistance ($\phi_v V_n$): | 157.7 k |
| $V_u / \phi_v V_n$: | 0.41 Result: OK |

Strength Analysis of Reinforced Concrete

| | |
|---|----------------------|
| Concrete Compressive Strength (f'_c): | 3000 psi |
| Longitudinal Rebar Yield Strength: | 60000 psi |
| # Longitudinal Rebar (Top): | 10 |
| # Longitudinal Rebar (1 Side): | 3 |
| Rebar Size: | 5 |
| Strength Reduction Factor for Shear (ϕ_v): | 0.75 |
| Strength Reduction Factor for Flexure (ϕ_b): | 0.9 |
| Compression Zone Factor (β_1): | 0.85 |
| Area of Single Rebar: | 0.31 in ² |
| One Way Shear due to Shear Load (V_u): | 0.9 k |
| Nominal One Way Shear Capacity for Shear Load ($\phi_c V_n$): | 414.1 k |
| $V_u/\phi_v V_n$: | 0.00 Result: OK |
| One Way Shear due to Uplift (V_u): | 37.8 k |
| Nominal One Way Shear Capacity for Uplift ($\phi_c V_n$): | 378.6 k |
| $V_u/\phi_v V_n$: | 0.10 Result: OK |
| Pad Flexure due to Shear Load (M_u): | 96.0 k-ft |
| Nominal Flexural Capacity for Shear Load ($\phi_b M_n$): | 585.9 k-ft |
| Pad Flexure due to Uplift (M_u): | 145.7 k-ft |
| Nominal Flexural Capacity for Uplift ($\phi_b M_n$): | 446.3 k-ft |
| $M_u/\phi_b M_n$ (Max.): | 0.33 Result: OK |