Robinson+Cole

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October 5, 2016

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

Re: **Notice of Exempt Modification – Facility Modification**
864 Opening Hill Road, Madison, Connecticut

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) antennas at the 170-foot level of the existing 180-foot tower at 864 Opening Hill Road in Madison, Connecticut (the "Property"). The tower is owned by American Tower Corporation ("ATC"). The Council approved Cellco's use of this tower in 1997. Cellco now intends to modify its facility by replacing nine (9) of its antennas with three (3) model LNX-6514DS, 850 MHz antennas; three (3) model SBNHH-1D65B, 700/1900 MHz antennas; and three (3) model SBNHH-1D65B, 2100 MHz antennas, all at the same level on the tower. Cellco also intends to install nine (9) remote radio heads ("RRHs") and two (2) HYBRIFLEX™ antenna cables. Included in Attachment 1 are specifications for Cellco's replacement antennas, RRHs and HYBRIFLEX™ cables.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this notice is being sent to Thomas Banisch, First Selectman of the Town of Madison. A copy of this letter is also being sent to the North Madison Volunteer Fire Company Inc., the owner of the Property and ATC, the tower owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure. Cellco's new antennas and RRHs will be installed at a centerline height of 170 feet on the 180-foot tower.

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

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

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

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

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

A copy of the Town Assessor's Parcel Map and property owner information is included in Attachment 4.

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Thomas Banisch, Madison First Selectman
North Madison Volunteer Fire Department
ATC
Tim Parks

ATTACHMENT 1

Product Specifications

COMMSCOPE®

LNX-6514DS-VTM | LNX-6514DS-A1M

Single Band Antenna, 698–896 MHz, 65° horizontal beamwidth, RET compatible

- Great solution to maximize network coverage and capacity
- Excellent gain, VSWR, front-to-back ratio, and PIM specifications for robust network performance
- Ideal choice for site collocations and tough zoning restrictions
- Excellent solution for site sharing and maximizing capacity
- Fully compatible with Andrew remote electrical tilt system for greater OpEx savings
- The RF connectors are designed for IP67 rating and the radome for IP56 rating

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**
Gain, dBi	15.8	15.9
Beamwidth, Horizontal, degrees	65	64
Beamwidth, Vertical, degrees	12.4	11.2
Beam Tilt, degrees	0–10	0–10
USLS (First Lobe), dB	17	18
Front-to-Back Ratio at 180°, dB	32	30
CPR at Boresight, dB	23	23
CPR at Sector, dB	12	10
Isolation, dB	30	30
VSWR | Return Loss, dB	1.4 | 15.6	1.4 | 15.6
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153
Input Power per Port, maximum, watts	400	400
Polarization	±45°	±45°
Impedance	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	**698–806**	**806–896**
Gain by all Beam Tilts, average, dBi	15.6	15.7
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.5
Gain by Beam Tilt, average, dBi	0 ° | 15.7 5 ° | 15.7 10 ° | 15.3	0 ° | 15.9 5 ° | 15.8 10 ° | 15.3
Beamwidth, Horizontal Tolerance, degrees	±0.9	±1.4
Beamwidth, Vertical Tolerance, degrees	±0.8	±0.6
USLS, beampeak to 20° above beampeak, dB	18	20
Front-to-Back Total Power at 180° ± 30°, dB	25	23
CPR at Boresight, dB	25	24
CPR at Sector, dB	15	12

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

General Specifications

Antenna Type	Sector
Band	Single band
Brand	DualPol®
Operating Frequency Band	698 – 896 MHz

Product Specifications

LNX-6514DS-VTM | LNX-6514DS-A1M

Performance Note	Outdoor usage

Mechanical Specifications

Color	Light gray
Lightning Protection	dc Ground
Radiator Material	Aluminum
Radome Material	Fiberglass, UV resistant
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	2
Wind Loading, frontal	618.0 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Loading, lateral	197.0 N @ 150 km/h 44.3 lbf @ 150 km/h
Wind Loading, rear	726.0 N @ 150 km/h 163.2 lbf @ 150 km/h
Wind Speed, maximum	241 km/h | 150 mph

Dimensions

Depth	180.5 mm | 7.1 in
Length	1851.0 mm | 72.9 in
Width	301.0 mm | 11.9 in
Net Weight, without mounting kit	14.2 kg | 31.3 lb

Remote Electrical Tilt (RET) Information

Model with Factory Installed AISG 2.0 Actuator	LNX-6514DS-A1M

Packed Dimensions

Depth	295.0 mm | 11.6 in
Length	2048.0 mm | 80.6 in
Width	392.0 mm | 15.4 in
Shipping Weight	29.2 kg | 64.4 lb

Regulatory Compliance/Certifications

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

Included Products

DB380 — Pipe Mounting Kit for 2.4"-4.5" (60-115mm) OD round members on wide panel antennas. Includes 2 clamp sets

and double nuts.

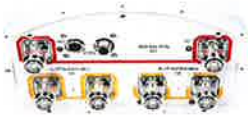
DB5083 — Downtilt Mounting Kit for 2.4"-4.5" (60 - 115 mm) OD round members. Includes a heavy-duty, galvanized steel downtilt mounting bracket assembly and associated hardware. This kit is compatible with the DB380 pipe mount kit for panel antennas that are equipped with two mounting brackets.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

Product Specifications

COMMSCOPE®



SBNHH-1D65B

Multiband Antenna, 698–896 and 2x 1695–2360 MHz, 65° horizontal beamwidth, internal RET. Both high bands share the same electrical tilt.

- Interleaved dipole technology providing for attractive, low wind load mechanical package

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.9	14.7	17.7	18.2	18.6	18.6
Beamwidth, Horizontal, degrees	68	66	69	66	63	58
Beamwidth, Vertical, degrees	12.1	10.7	5.6	5.2	5.0	4.5
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	14	13	15	15	15	13
Front-to-Back Ratio at 180°, dB	27	29	28	28	28	27
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR | Return Loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350	350	350	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.5	14.3	17.4	17.9	18.2	18.3
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.8	±0.4	±0.3	±0.5	±0.3
Gain by Beam Tilt, average, dBi	0 ° | 14.6	0 ° | 14.5	0 ° | 17.4	0 ° | 17.8	0 ° | 18.1	0 ° | 18.2
	7 ° | 14.6	7 ° | 14.4	3 ° | 17.5	3 ° | 17.9	3 ° | 18.3	3 ° | 18.4
	14 ° | 14.2	14 ° | 13.6	7 ° | 17.4	7 ° | 17.9	7 ° | 18.2	7 ° | 18.4
Beamwidth, Horizontal Tolerance, degrees	±2.2	±3.4	±2	±4.6	±5.7	±4.3
Beamwidth, Vertical Tolerance, degrees	±0.8	±1	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	16	14	16	16	16	15
Front-to-Back Total Power at 180° ± 30°, dB	25	26	27	26	26	26
CPR at Boresight, dB	22	23	21	20	20	22
CPR at Sector, dB	13	11	16	12	11	4

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

General Specifications

Antenna Type	Sector with internal RET
Band	Multiband
Brand	DualPol®
Operating Frequency Band	1695 – 2360 MHz | 698 – 896 MHz
Performance Note	Outdoor usage

Mechanical Specifications

Color	Light gray
Lightning Protection	dc Ground

Product Specifications

SBNHH-1D65B

Radiator Material	Aluminum | Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	6
Wind Loading, frontal	618.0 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Loading, lateral	197.0 N @ 150 km/h 44.3 lbf @ 150 km/h
Wind Loading, rear	728.0 N @ 150 km/h 163.7 lbf @ 150 km/h
Wind Speed, maximum	241 km/h | 150 mph

Dimensions

Depth	180.0 mm | 7.1 in
Length	1851.0 mm | 72.9 in
Width	301.0 mm | 11.9 in
Net Weight, without mounting kit	18.4 kg | 40.6 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
Internal RET	High band (1) | Low band (1)
Power Consumption, idle state, maximum	2.0 W
Power Consumption, normal conditions, maximum	13.0 W
Protocol	3GPP/AISG 2.0 (Multi-RET)
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	1 female | 1 male

Packed Dimensions

Depth	296.0 mm | 11.7 in
Length	2025.0 mm | 79.7 in
Width	390.0 mm | 15.4 in
Shipping Weight	31.0 kg | 68.3 lb

Regulatory Compliance/Certifications

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

Product Specifications

SBNHH-1D65B

Included Products

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

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

ALCATEL-LUCENT B25 RRH4X30

Alcatel-Lucent Band 25 Remote Radio Head 4x30W is the new addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B25 RRH4x30 allows operators to have a compact radio solution to deploy LTE in the PCS band (1.9 GHz, 3GPP band 25), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.

The Alcatel-Lucent B25 RRH4x30 product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity, LTE carriers from 3 MHz up to 20 MHz and up to 65 MHz instantaneous bandwidth.

The Alcatel-Lucent B25 RRH4x30 is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

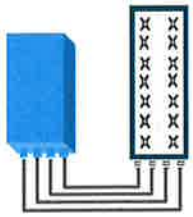
Its compactness and slim design makes the Alcatel-Lucent B25 RRH4x30 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 1.9 GHz band (PCS, 3GPP band 2 & 25)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- Ready for 3, 5, 10, 15 or 20MHz LTE carrier operation with 4Rx Diversity
- Ready to support up to 4 carriers anywhere in 65MHz instantaneous bandwidth
- Convection-cooled (fan-less)
- Supports AISG 2.0 devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in PCS band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Full flexibility for multiple carriers operation over entire PCS spectrum
- Improves downlink spectral efficiency and cell edge throughput through MIMO4
- Increases LTE coverage thanks to 4-way Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options (Pole or Wall)



4x30W with 4T4R
or
2x60W with 2T4R

Can be switched between modes via SW w/o site visit

Alcatel·Lucent

TECHNICAL SPECIFICATIONS

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	3GPP bands 2 & 25 (PCS-G) DL: 1930 - 1995 MHz UL: 1850 - 1915 MHz
Instantaneous bandwidth - #carriers	65MHz – Up to 4 LTE carriers (in 40MHz occupied bandwidth)
LTE carrier bandwidth	3, 5, 10, 15 or 20 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure (3GPP band 2) RX Diversity scheme	2.0 dB typ. (<2.5 dB max) 2 or 4 way Rx diversity
Sizes (HxWxD)(w/ solar shield) in mm (in.) Volume (w/ solar shield) in L Weight (w/ solar shield) in kg (lb)	538 x 304 x 182 (21.2" x 12.0" x 7.2") 30 24 (53)
DC voltage range DC power consumption	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption 580W typical @100% RF load
Environmental conditions Wind load (@150km/h or 93mph)	-40°C (-40°F) /+55°C (+131°F) IP65 Frontal:<200N / Lateral :<150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5 (> 14dB)
CPRI ports	2 CPRI ports (HW ready for Rate7 / 9.8 Gbps)
AISG interfaces	1 AISG2.0 output (RS485), +24V/2A DC power Integrated Smart Bias Tees (x2)
Misc. Interfaces	1 external alarms connector (4 alarms) 4 RF Tx & 4 RF Rx monitor ports 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

ALCATEL-LUCENT B66A RRH4X45

The Alcatel-Lucent B66a Remote Radio Head 4x45 is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering. Its operational range covers beyond that of B4 (AWS) and B10 (AWS+).

Supporting 2Tx/4Tx MIMO and 2-way/4-way Rx diversity, the Alcatel-Lucent B66a RRH4x45 allows operators to have a compact radio solution to deploy LTE in the 2100 band (3GPP band 4, 10, and 66), providing them with the means to achieve high capacity, high quality, high reliability, large instantaneous bandwidth, and high coverage with minimum site requirements.

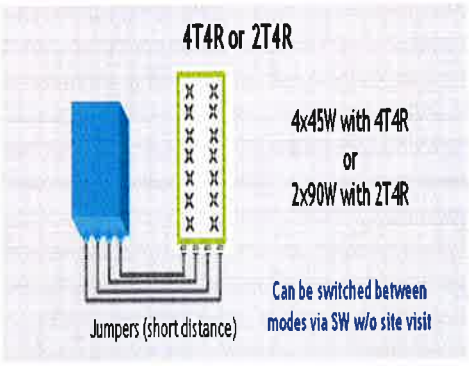
The Alcatel-Lucent B66a RRH4x45 product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x90W or 4x45W RF output power. It also supports 4-way Rx diversity at the 70 MHz instantaneous bandwidth.

The Alcatel-Lucent B66a RRH4x45 is a compact (near zero-footprint) solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

Its compactness and slim design makes the Alcatel-Lucent B66a RRH4x45 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 2110 - 2180 MHz band/DL, 1710-1780MHz/UL (3GPP band 4, 10, and 66a)
- LTE 2Tx or 4Tx MIMO (SW selectable)
- Configuration: 2T2R/2T4R/4T4R
- Output power: Up to 2x90W or 4x45W (SW configurable)
- 70MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports



BENEFITS

- Compact to reduce additional footprint when adding LTE in AWS 1-3 band
- Selection of MIMO configuration (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through 4Tx MIMO
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall

TECHNICAL SPECIFICATIONS

Features & Performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R selectable by SW)
Frequency band	AWS 1-3, B4/B66a DL: 2110-2180 MHz / UL: 1710-1780 MHz
Instantaneous bandwidth - #carriers	70 MHz – 4 LTE MIMO carriers (in 70 MHz occupied bandwidth)
LTE carrier bandwidth	5, 10, 15, 20 MHz
RF output power	2x90W or 4x45W (selectable by SW)
Noise figure – RX Diversity scheme **Receiver Sensivity (FRC A1-3)**	2 dB typical (<2.5 dB max) – 2 or 4 way Rx diversity -104.5 dBm maximum
Sizes (HxWxD) in mm (in.) **Volume in Liters** **Weight in kg (lb) (w/o mounting HW)**	655x299x182 (25.8x11.8x7.2) (with solar shield) 640x290x160 (25.2x11.4x6.3) (without solar shield) 35.5 (with solar shield) 29.7 (without solar shield) 25.8kg (56.8lb) (with solar shield)
DC voltage range **DC power consumption**	Nominal: -48V, -40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption 750W typical @100% RF load (in 2Tx or 4Tx mode); Add 58W for 2A*29V for AISG
Environmental conditions **Wind load (@150km/h or 93mph)**	-40°C (-40°F) /+55°C (+131°F) UL50E Type 4 Enclosure 250N (56lb) Frontal/150N (34lb) Lateral
Antenna ports	4 ports 4.3-10 female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate 7, 9.8 Gbps) SFP: SMDF (HW supports also SMSF and MMDF)
AISG interfaces	1 AISG 2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-487 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27 / FCC Part 15 / GR-3178-CORE

Product Data Sheet HB158-1-08U8-S8J18

HYBRIFLEX™ RRH Hybrid Feeder Cabling Solution, 1-5/8", Single-Mode Fiber

Product Description

RFS' HYBRIFLEX Remote Radio Head (RRH) hybrid feeder cabling solution combines optical fiber and DC power for RRHs in a single lightweight aluminum corrugated cable, making it the world's most innovative solution for RRH deployments.

It was developed to reduce installation complexity and costs at Cellular sites. HYBRIFLEX allows mobile operators deploying an RRH architecture to standardize the RRH installation process and eliminate the need for and cost of cable grounding. HYBRIFLEX combines optical fiber (multi-mode or single-mode) and power in a single corrugated cable. It eliminates the need for junction boxes and can connect multiple RRHs with a single feeder. Standard RFS CELLFLEX® accessories can be used with HYBRIFLEX cable. Both pre-connectorized and on-site options are available.

Figure 1: HYBRIFLEX Series

Features/Benefits

- Aluminum corrugated armor with outstanding bending characteristics – minimizes installation time and enables mechanical protection and shielding
- Same accessories as 1 5/8" coaxial cable
- Outer conductor grounding – Eliminates typical grounding requirements and saves on installation costs
- Lightweight solution and compact design – Decreases tower loading
- Robust cabling – Eliminates need for expensive cable trays and ducts
- Installation of tight bundled fiber optic cable pairs directly to the RRH – Reduces CAPEX and wind load by eliminating need for interconnection
- Optical fiber and power cables housed in single corrugated cable – Saves CAPEX by standardizing RRH cable installation and reducing installation requirements
- Outdoor polyethylene jacket – Ensures long-lasting cable protection

Technical Specifications

Outer Conductor Armor	Corrugated Aluminum	[mm (in)]	46.5 (1.83)
Jacket	Polyethylene, PE	[mm (in)]	50.3 (1.98)
UV-Protection	Individual and External Jacket		Yes
Weight, Approximate		[kg/m (lb/ft)]	1.9 (1.30)
Minimum Bending Radius, Single Bending		[mm (in)]	200 (8)
Minimum Bending Radius, Repeated Bending		[mm (in)]	500 (20)
Recommended/Maximum Clamp Spacing		[m (ft)]	1.0 / 1.2 (3.25 / 4.0)
DC-Resistance Outer Conductor Armor		[Ω/km (Ω/1000ft)]	068 (0.205)
DC-Resistance Power Cable, 8.4mm² (8AWG)		[Ω/km (Ω/1000ft)]	2.1 (0.307)
Version			Single-mode OM3
Quantity, Fiber Count			16 (8 pairs)
Core/Clad		[µm]	50/125
Primary Coating (Acrylate)		[µm]	245
Buffer Diameter, Nominal		[µm]	900
Secondary Protection, Jacket, Nominal		[mm (in)]	2.0 (0.08)
Minimum Bending Radius		[mm (in)]	104 (4.1)
Insertion Loss @ wavelength 850nm		dB/km	3.0
Insertion Loss @ wavelength 1310nm		dB/km	1.0
Standards (Meets or exceeds)			UL94-V0, UL1666 RoHS Compliant
Size (Power)		[mm² (AWG)]	8.4 (8)
Quantity, Wire Count (Power)			16 (8 pairs)
Size (Alarm)		[mm² (AWG)]	0.8 (18)
Quantity, Wire Count (Alarm)			4 (2 pairs)
Type			UV protected
Strands			19
Primary Jacket Diameter, Nominal		[mm (in)]	6.8 (0.27)
Standards (Meets or exceeds)			NFPA 130, ICEA S-95-658 UL Type XHHW-2, UL 44 UL-LS Limited Smoke, UL VW-1 IEEE-383 (1974), IEEE1202/FT4 RoHS Compliant
Installation Temperature		[°C (°F)]	-40 to +65 (-40 to149)
Operation Temperature		[°C (°F)]	-40 to +65 (-40 to149)

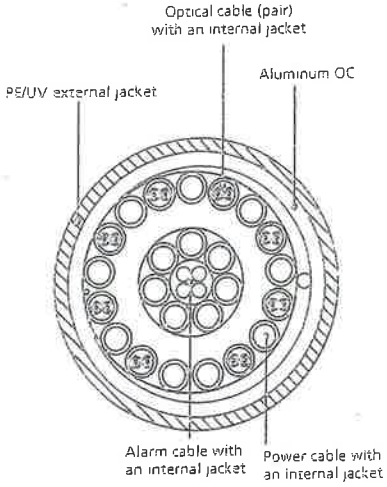


Figure 2: Construction Detail

* This data is provisional and subject to change

ATTACHMENT 2

	General	Power	Density					
Site Name: Madison								
Tower Height: 180Ft.								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*T-Mobile	1	865	130	700	0.0202	0.4667	0.43%	
*T-Mobile	6	1102	130	1900	0.1546	1.0000	1.55%	
*Fire Company	1	100	180	46.06	0.0012	0.2000	0.06%	
*Police Dept	1	100	180	453.5	0.0012	0.3023	0.04%	
*AT&T	2	565	140	880	0.0226	0.5867	0.39%	
*AT&T	2	875	140	1900	0.0350	1.0000	0.35%	
*AT&T	1	283	140	880	0.0057	0.5867	0.10%	
*AT&T	4	525	140	1900	0.0421	1.0000	0.42%	
*AT&T	1	1313	140	734	0.0263	0.4893	0.54%	
*Sprint	2	693	150	1900	0.0240	1.0000	0.24%	
*Sprint	1	390	150	850	0.0068	0.5667	0.12%	
*Sprint	2	693	150	2500	0.0240	1.0000	0.24%	
*Nextel	9	100	160	851	0.0136	0.5673	0.24%	
Verizon PCS	**11**	**401**	**170**	**0.0549**	**1970**	**1.0000**	**5.49%**	
Verizon Cellular	**9**	**338**	**170**	**0.0378**	**869**	**0.5793**	**6.53%**	
Verizon AWS	**1**	**4690**	**170**	**0.0584**	**2145**	**1.0000**	**5.84%**	
Verizon 700	**1**	**1683**	**170**	**0.0209**	**746**	**0.4973**	**4.21%**	
								26.78%
* Source: Siting Council								

ATTACHMENT 3

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Structural Analysis Report

Structure	:	**180 ft Self Supported Tower**
GTP Site Name	:	**North Madison Volunteer FD, CT**
GTP Site Number	:	**CT-9014**
Engineering Number	:	**OAA671594_C3_02**
Proposed Carrier	:	**Verizon Wireless**
Carrier Site Name	:	**Madison CT**
Carrier Site Number	:	**N/A**
Site Location	:	**864 Opening Hill Road** **Madison, CT 06443-0000** **41.35694000,-72.64013000**
County	:	**New Haven**
Date	:	**September 22, 2016**
Max Usage	:	**63%**
Result	:	**Pass**

Reviewed by:
Scott Wirgau, PE
Structural Team Leader

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

Robert D. Barrett

Sep 23 2016 8:48 AM

cosign

COA: PEC.0001553

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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 180 ft self supported tower to reflect the change in loading by Verizon Wireless.

Supporting Documents

Tower Drawings	Rohn Drawing #C981756, dated December 2, 1998
Foundation Drawing	Rohn Drawing #A992935-1, dated July 21, 1999
Geotechnical Report	Clarence Welti Assoc. Job #35130AE, dated June 9, 1997

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:	101 mph (3-Second Gust, V_{asd}) / 130 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Spectral Response:	Ss = 0.17, S_1 = 0.06
Site Class:	D - Stiff Soil

Conclusion

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

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

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
180.0	190.8	2	RFS PD455	Side Arms	(3) 7/8" Coax (1) 1/2" Coax (1) 2" Conduit (1) 1" Conduit	Town of Madison
	186.0	1	4-Bay Dipole			
	183.0	1	2-Bay Dipole			
170.0	170.0	1	Andrew 8' MW Dish	Sector Frames	(12) 1 5/8" Coax (1) 1 1/4" Coax	Verizon Wireless
		1	Antel BXA-70063/6CF			
		2	Antel BXA-70063/4CF			
		6	RFS FD9R6004/2C-3L			
160.0	160.0	12	Andrew DB844H90E-XY	Sector Frames	(12) 1 5/8" Coax	Sprint Nextel
150.0	150.0	3	ALU 800MHz 2X50W RRH w/ Filter	Sector Frames	(4) 1 1/4" Hybriflex	
		3	ALU 1900MHz 4X45 RRH			
		3	ALU TD-RRH8X20			
		3	RFS APXVSPP18-C-A20			
		3	RFS APXVTM14-C-I20			
140.0	140.0	1	Raycap DC6-48-60-18-8F	Sector Frames	(12) 1 1/4" Coax (2) 0.76" 8 AWG 6 (1) 0.39" Fiber	AT&T Mobility
		6	Ericsson RRUS-11			
		6	KMW AM-X-CD-16-65-00T-RET			
		6	Powerwave LGP21901			
		6	Powerwave LGP21401			
		6	Powerwave 7770			
130.0	130.0	3	RFS ATMAP1412D-1A120	T-Arms	(12) 1 5/8" Coax	T-Mobile
		3	Commscope LNX-6515DS-VTM			
		3	EMS RR90_17_02DP			
75.0	75.0	1	PCTEL GPS-TMG-HR-26N	Stand-Off	(1) 1/2" Coax	Sprint Nextel

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
170.0	170.0	4	Antel APL 868013-42T0	-	(1) 1 5/8" Coax	Verizon Wireless
		2	Antel LPA 80080/6CF			
		3	Antel BXA 171063/8BF			

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
170.0	170.0	3	Alcatel Lucent RRH ALU 4X45 AWS	Sector Frames	(2) 1 5/8" Hybrid	Verizon Wireless
		3	ALU RRH2X60PCS			
		3	ALU RRH4X60LTE			
		6	Commscope SBNHH-1D65B			
		3	Commscope LNX6514DS-A1M			
		2	RFS DB-T1-6Z-8AB-0Z			

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

Install proposed coax stacked on top of existing Verizon Wireless coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	49%	Pass
Diagonals	63%	Pass
Horizontals	50%	Pass
Anchor Bolts	29%	Pass
Leg Bolts	46%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	278.7	57%
Axial (Kips)	319.3	26%
Shear (Kips)	37.6	12%

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) (°)
170.0	ALU RRH4X60LTE	Verizon Wireless	0.171	0.007	0.118
	ALU RRH2X60PCS				
	Alcatel Lucent RRH ALU 4X45 AWS				
	RFS DB-T1-6Z-8AB-0Z				
	RFS DB-T1-6Z-8AB-0Z				
	Commscope LNX6514DS-A1M				
	Commscope SBNHH-1D65B				
	Andrew 8' MW Dish				

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

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Standard Conditions

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

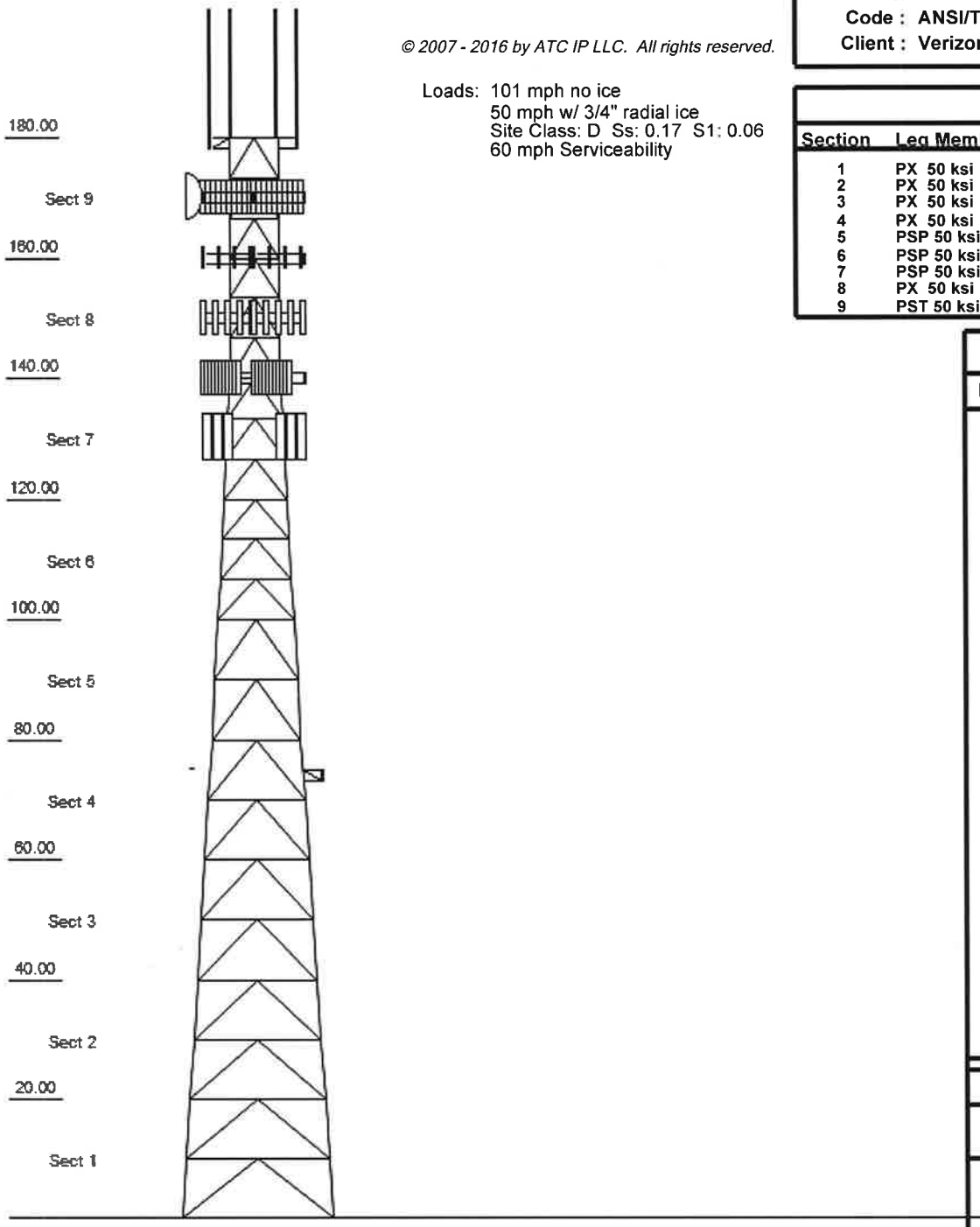
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

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

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

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

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



Loads: 101 mph no ice
50 mph w/ 3/4" radial ice
Site Class: D Ss: 0.17 S1: 0.06
60 mph Serviceability

Job Information

Tower :	CT-9014	Location : North Madison Volunteer FD, CT	
Code :	ANSI/TIA-222-G	Shape : Triangle	Base Width : 25.33 ft
Client :	Verizon Wireless		Top Width : 8.54 ft

Sections Properties

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

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
180.00	Whip	1	2-Bay Dipole
180.00	Whip	1	4-Bay Dipole
180.00	Whip	2	RFS PD455
180.00	Straight Arm	3	Flat Side Arm
170.00	Panel	3	Alcatel Lucent RRH ALU 4X45 AW
170.00	Panel	3	ALU RRH2X60PCS
170.00	Panel	3	ALU RRH4X60LTE
170.00	Panel	6	Commscope SBNHH-1D65B
170.00	Panel	3	Commscope LNX6514DS-A1M
170.00	Dish	1	Andrew 8' MW Dish
170.00	Mounting Frame	3	Flat Light Sector Frame
170.00	Panel	1	Antel BXA-70063/6CF
170.00	Panel	2	Antel BXA-70063/4CF
170.00	Panel	6	RFS FD9R6004/2C-3L
170.00	Panel	1	RFS DB-T1-6Z-8AB-0Z
170.00	Panel	1	RFS DB-T1-6Z-8AB-0Z
160.00	Panel	12	Andrew DB844H90E-XY
160.00	Mounting Frame	3	Flat Light Sector Frame
150.00	Panel	3	ALU 800 MHz 2X50W RRH w/ Filte
150.00	Panel	3	ALU 1900 MHz 4X45 RRH
150.00	Panel	3	ALU TD-RRH8X20
150.00	Panel	3	RFS APXVSPP18-C-A20
150.00	Panel	3	RFS APXVTM14-C-I20
150.00	Mounting Frame	3	Flat Light Sector Frame
140.00	Panel	1	Raycap DC6-48-60-18-8F
140.00	Panel	6	Ericsson RRUS-11
140.00	Panel	6	KMW AM-X-CD-16-65-00T-RET
140.00	Panel	6	Powerwave LGP21901
140.00	Panel	6	Powerwave LGP21401
140.00	Panel	6	Powerwave 7770
140.00	Mounting Frame	3	Flat Light Sector Frame
130.00	Panel	3	RFS ATMAP1412D-1A120
130.00	Panel	3	Commscope LNX-6515DS-VTM
130.00	Panel	3	EMS RR90_17_02DP
130.00	Straight Arm	3	Flat T-Arm
75.00	Panel	1	PCTEL GPS-TMG-HR-26N
75.00	Straight Arm	1	Stand-Off

Linear Appurtenance

Elev (ft) From	To	Qty	Description
0.00	180.00	3	7/8" Coax
0.00	180.00	1	2" Conduit
0.00	180.00	1	1/2" Coax
0.00	180.00	1	1" Conduit
0.00	170.00	1	Waveguide
0.00	170.00	1	1 5/8" Hybrid

Job Information

Tower :	CT-9014	Location :	North Madison Volunteer FD, CT
Code :	ANSI/TIA-222-G	Shape : Triangle	Base Width : 25.33 ft
Client :	Verizon Wireless		Top Width : 8.54 ft

0.00	170.00	1	1 5/8" Hybrid
0.00	170.00	12	1 5/8" Coax
0.00	170.00	1	1 1/4" Coax
0.00	160.00	1	Waveguide
0.00	160.00	1	Waveguide
0.00	160.00	12	1 5/8" Coax
0.00	150.00	1	Waveguide
0.00	150.00	3	1 1/4" Hybriflex
0.00	150.00	1	1 1/4" Hybriflex
0.00	140.00	1	Waveguide
0.00	140.00	12	1 1/4" Coax
0.00	140.00	2	0.76" 8 AWG 6
0.00	140.00	1	0.39" Fiber
0.00	130.00	1	Waveguide
0.00	130.00	12	1 5/8" Coax
0.00	75.00	1	1/2" Coax

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	6,499.88	69.23	60.68
DL + WL + IL	2,197.68	181.76	21.80

Individual Base Foundation Design Loads

Vertical (kip)	Uplift (kip)	Horizontal (kip)
319.35	278.74	37.62

Site Number:	CT-9014	Code:	ANSI/TIA-222-G	
Site Name:	North Madison Volunteer FD, CT	Engineering Number:	OAA671594_C3_02	9/22/2016 6:08:35 PM
Customer:	Verizon Wireless			

Analysis Parameters

Location:	New Haven County, CT	Height (ft):	180
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	25.33
Tower Manufacturer:	Rohn	Top Face Width (ft):	8.54
Tower Type:	Self Support		

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	101 mph
Exposure Category:	B	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	0.66				
T_L (sec):	6	p:	1.3	C_S:	0.048
S_S:	0.173	S_1:	0.060	C_S, Max:	0.048
F_a:	1.600	F_V:	2.400	C_S, Min:	0.030
S_{ds}:	0.185	S_{d1}:	0.096		

Load Cases

1.2D + 1.6W Normal	101 mph Normal to Face with No Ice
1.2D + 1.6W 60 deg	101 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	101 mph 90 degree with No Ice
1.2D + 1.6W 120 deg	101 mph 120 degree with No Ice
1.2D + 1.6W 180 deg	101 mph 180 degree with No Ice
1.2D + 1.6W 210 deg	101 mph 210 degree with No Ice
1.2D + 1.6W 240 deg	101 mph 240 degree with No Ice
1.2D + 1.6W 300 deg	101 mph 300 degree with No Ice
1.2D + 1.6W 330 deg	101 mph 330 degree with No Ice
0.9D + 1.6W Normal	101 mph Normal to Face with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	101 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	101 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 120 deg	101 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	101 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 210 deg	101 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.6W 240 deg	101 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.6W 300 deg	101 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.6W 330 deg	101 mph 330 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 0.75 in Radial Ice

Analysis Parameters

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

Site Number: CT-9014 Code: ANSI/TIA-222-G

Site Name: North Madison Volunteer FD, CT Engineering Number: OAA671594_C3_02

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Customer: Verizon Wireless

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)
180.0	2-Bay Dipole	1	18	2.0	6.0	4.0	4.0	0.80	1.00	3.0	165.9	26.07	55	25
180.0	4-Bay Dipole	1	35	3.9	12.0	4.0	4.0	0.80	1.00	6.0	666.8	26.19	111	50
180.0	RFS PD455	2	24	6.0	21.5	2.8	2.8	0.80	1.00	10.8	3715.0	26.38	346	69
180.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	25.95	447	648
170.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	25.53	31	22
170.0	ALU RRH4X60LTE	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	25.53	118	229
170.0	ALU RRH2X60PCS	3	55	2.2	1.8	12.0	9.4	0.80	0.67	0.0	0.0	25.53	123	238
170.0	Alcatel Lucent RRH	3	63	2.5	2.2	11.4	5.9	0.80	0.67	0.0	0.0	25.53	138	273
170.0	Antel BXA-70063/4CF	2	10	4.7	4.0	11.2	5.2	0.80	0.77	0.0	0.0	25.53	202	29
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	25.53	89	63
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	25.53	89	63
170.0	Commscope	3	29	5.1	4.0	11.9	7.1	0.80	0.83	0.0	0.0	25.53	352	124
170.0	Antel BXA-70063/6CF	1	17	7.6	5.9	11.2	5.2	0.80	0.77	0.0	0.0	25.53	162	24
170.0	Commscope SBNHH-	6	41	8.1	6.0	11.9	7.1	0.80	0.83	0.0	0.0	25.53	1118	351
170.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	25.53	937	1728
170.0	Andrew 8' MW Dish	1	400	83.6	8.0	96.0	0.0	1.00	1.00	0.0	0.0	25.53	2904	576
160.0	Andrew DB844H90E-	12	14	3.6	4.0	8.0	4.5	0.80	0.82	0.0	0.0	25.09	970	242
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	25.09	1031	1728
150.0	ALU 800 MHz 2X50W	3	64	2.1	1.6	13.0	12.2	0.80	0.67	0.0	0.0	24.63	111	276
150.0	ALU 1900 MHz 4X45	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	24.63	125	259
150.0	ALU TD-RRH8X20	3	66	3.7	2.1	17.5	5.7	0.80	0.67	0.0	0.0	24.63	199	286
150.0	RFS APXVTM14-C-I20	3	53	6.3	4.7	12.6	6.3	0.80	0.78	0.0	0.0	24.63	398	229
150.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.83	0.0	0.0	24.63	535	246
150.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.63	1012	1728
140.0	Powerwave	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	24.15	18	48
140.0	Powerwave	6	18	0.9	1.2	7.0	2.7	0.80	0.50	0.0	0.0	24.15	75	151
140.0	Raycap DC6-48-60-	1	19	1.3	2.0	11.0	11.0	0.80	1.00	0.0	0.0	24.15	34	27
140.0	Ericsson RRUS-11	6	55	3.8	2.1	18.2	6.7	0.80	0.67	0.0	0.0	24.15	400	475
140.0	Powerwave 7770	6	35	5.5	4.6	11.0	5.0	0.80	0.77	0.0	0.0	24.15	669	302
140.0	KMW AM-X-CD-16-	6	49	8.0	6.0	11.8	5.9	0.80	0.79	0.0	0.0	24.15	999	419
140.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.15	992	1728
130.0	RFS ATMAP1412D-	3	13	1.0	1.0	10.0	4.0	0.80	0.50	0.0	0.0	23.64	39	56
130.0	EMS RR90_17_02DP	3	14	4.4	4.7	8.0	2.8	0.80	0.73	0.0	0.0	23.64	246	58
130.0	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	0.80	0.84	0.0	0.0	23.64	742	217
130.0	Flat T-Arm	3	250	12.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.64	700	1080
75.00	PCTEL GPS-TMG-HR-	1	1	0.2	0.4	3.2	3.2	1.00	1.00	0.0	0.0	20.21	4	1
75.00	Stand-Off	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.21	69	108
	Totals	121	9846	762.9										

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
180.0	2-Bay Dipole	1	18	2.0	6.0	4.0	4.0	0.80	1.00	3.0	165.9	26.07	55	14
180.0	4-Bay Dipole	1	35	3.9	12.0	4.0	4.0	0.80	1.00	6.0	666.8	26.19	111	28
180.0	RFS PD455	2	24	6.0	21.5	2.8	2.8	0.80	1.00	10.8	3715.0	26.38	346	39
180.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	25.95	447	365
170.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	25.53	31	13
170.0	ALU RRH4X60LTE	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	25.53	118	129
170.0	ALU RRH2X60PCS	3	55	2.2	1.8	12.0	9.4	0.80	0.67	0.0	0.0	25.53	123	134
170.0	Alcatel Lucent RRH	3	63	2.5	2.2	11.4	5.9	0.80	0.67	0.0	0.0	25.53	138	154
170.0	Antel BXA-70063/4CF	2	10	4.7	4.0	11.2	5.2	0.80	0.77	0.0	0.0	25.53	202	16

Tower Loading

170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	25.53	89	36
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	25.53	89	36
170.0	Commscope	3	29	5.1	4.0	11.9	7.1	0.80	0.83	0.0	0.0	25.53	352	70
170.0	Antel BXA-70063/6CF	1	17	7.6	5.9	11.2	5.2	0.80	0.77	0.0	0.0	25.53	162	14
170.0	Commscope SBNHH-	6	41	8.1	6.0	11.9	7.1	0.80	0.83	0.0	0.0	25.53	1118	197
170.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	25.53	937	972
170.0	Andrew 8' MW Dish	1	400	83.6	8.0	96.0	0.0	1.00	1.00	0.0	0.0	25.53	2904	324
160.0	Andrew DB844H90E-	12	14	3.6	4.0	8.0	4.5	0.80	0.82	0.0	0.0	25.09	970	136
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	25.09	1031	972
150.0	ALU 800 MHz 2X50W	3	64	2.1	1.6	13.0	12.2	0.80	0.67	0.0	0.0	24.63	111	156
150.0	ALU 1900 MHz 4X45	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	24.63	125	146
150.0	ALU TD-RRH8X20	3	66	3.7	2.1	17.5	5.7	0.80	0.67	0.0	0.0	24.63	199	161
150.0	RFS APXVTM14-C-I20	3	53	6.3	4.7	12.6	6.3	0.80	0.78	0.0	0.0	24.63	398	129
150.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.83	0.0	0.0	24.63	535	139
150.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.63	1012	972
140.0	Powerwave	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	24.15	18	27
140.0	Powerwave	6	18	0.9	1.2	7.0	2.7	0.80	0.50	0.0	0.0	24.15	75	85
140.0	Raycap DC6-48-60-	1	19	1.3	2.0	11.0	11.0	0.80	1.00	0.0	0.0	24.15	34	15
140.0	Ericsson RRUS-11	6	55	3.8	2.1	18.2	6.7	0.80	0.67	0.0	0.0	24.15	400	267
140.0	Powerwave 7770	6	35	5.5	4.6	11.0	5.0	0.80	0.77	0.0	0.0	24.15	669	170
140.0	KMW AM-X-CD-16-	6	49	8.0	6.0	11.8	5.9	0.80	0.79	0.0	0.0	24.15	999	236
140.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.15	992	972
130.0	RFS ATMAP1412D-	3	13	1.0	1.0	10.0	4.0	0.80	0.50	0.0	0.0	23.64	39	32
130.0	EMS RR90_17_02DP	3	14	4.4	4.7	8.0	2.8	0.80	0.73	0.0	0.0	23.64	246	33
130.0	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	0.80	0.84	0.0	0.0	23.64	742	122
130.0	Flat T-Arm	3	250	12.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.64	700	608
75.00	PCTEL GPS-TMG-HR-	1	1	0.2	0.4	3.2	3.2	1.00	1.00	0.0	0.0	20.21	4	0
75.00	Stand-Off	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.21	69	61
	Totals	121	9846	762.9										

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
180.0	2-Bay Dipole	1	71	4.6	6.0	4.0	4.0	0.80	1.00	3.0	60.1	6.39	20	89
180.0	4-Bay Dipole	1	142	9.2	12.0	4.0	4.0	0.80	1.00	6.0	241.6	6.42	40	178
180.0	RFS PD455	2	299	13.8	21.5	2.8	2.8	0.80	1.00	10.8	1304.9	6.47	121	728
180.0	Flat Side Arm	3	224	8.8	0.0	0.0	0.0	1.00	0.67	0.0	0.0	6.36	96	915
170.0	RFS FD9R6004/2C-3L	6	16	0.6	0.5	6.5	1.5	0.80	0.50	0.0	0.0	6.26	7	119
170.0	ALU RRH4X60LTE	3	127	2.8	1.8	12.0	7.2	0.80	0.67	0.0	0.0	6.26	24	497
170.0	ALU RRH2X60PCS	3	127	3.2	1.8	12.0	9.4	0.80	0.67	0.0	0.0	6.26	28	497
170.0	Alcatel Lucent RRH	3	142	3.2	2.2	11.4	5.9	0.80	0.67	0.0	0.0	6.26	27	555
170.0	Antel BXA-70063/4CF	2	133	5.7	4.0	11.2	5.2	0.80	0.77	0.0	0.0	6.26	37	324
170.0	RFS DB-T1-6Z-8AB-	1	190	5.7	2.0	24.0	10.0	0.80	0.67	0.0	0.0	6.26	16	238
170.0	RFS DB-T1-6Z-8AB-	1	190	5.7	2.0	24.0	10.0	0.80	0.67	0.0	0.0	6.26	16	238
170.0	Commscope	3	173	6.1	4.0	11.9	7.1	0.80	0.83	0.0	0.0	6.26	65	642
170.0	Antel BXA-70063/6CF	1	194	8.9	5.9	11.2	5.2	0.80	0.77	0.0	0.0	6.26	29	237
170.0	Commscope SBNHH-	6	245	9.4	6.0	11.9	7.1	0.80	0.83	0.0	0.0	6.26	199	1824
170.0	Flat Light Sector	3	705	33.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.26	266	2827
170.0	Andrew 8' MW Dish	1	1396	89.8	8.0	96.0	0.0	1.00	1.00	0.0	0.0	6.26	478	1771
160.0	Andrew DB844H90E-	12	111	4.5	4.0	8.0	4.5	0.80	0.82	0.0	0.0	6.15	185	1642
160.0	Flat Light Sector	3	702	33.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.15	291	2814
150.0	ALU 800 MHz 2X50W	3	155	2.7	1.6	13.0	12.2	0.80	0.67	0.0	0.0	6.04	22	603
150.0	ALU 1900 MHz 4X45	3	155	3.0	2.1	11.1	10.7	0.80	0.67	0.0	0.0	6.04	25	602
150.0	ALU TD-RRH8X20	3	156	4.9	2.1	17.5	5.7	0.80	0.67	0.0	0.0	6.04	40	607
150.0	RFS APXVTM14-C-I20	3	191	8.5	4.7	12.6	6.3	0.80	0.78	0.0	0.0	6.04	82	725

Tower Loading

150.0	RFS APXVSPP18-C-	3	257	9.3	6.0	11.8	7.0	0.80	0.83	0.0	0.0	6.04	95	965
150.0	Flat Light Sector	3	702	33.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.04	286	2814
140.0	Powerwave	6	18	0.4	0.3	6.0	3.0	0.80	0.50	0.0	0.0	5.92	5	136
140.0	Powerwave	6	45	1.2	1.2	7.0	2.7	0.80	0.50	0.0	0.0	5.92	15	351
140.0	Raycap DC6-48-60-	1	110	2.8	2.0	11.0	11.0	0.80	1.00	0.0	0.0	5.92	11	137
140.0	Ericsson RRUS-11	6	158	4.6	2.1	18.2	6.7	0.80	0.67	0.0	0.0	5.92	74	1219
140.0	Powerwave 7770	6	168	6.5	4.6	11.0	5.0	0.80	0.77	0.0	0.0	5.92	122	1259
140.0	KMW AM-X-CD-16-	6	234	9.3	6.0	11.8	5.9	0.80	0.79	0.0	0.0	5.92	177	1755
140.0	Flat Light Sector	3	697	32.8	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.92	278	2798
130.0	RFS ATMAP1412D-	3	47	1.4	1.0	10.0	4.0	0.80	0.50	0.0	0.0	5.79	8	180
130.0	EMS RR90_17_02DP	3	110	5.3	4.7	8.0	2.8	0.80	0.73	0.0	0.0	5.79	46	407
130.0	Commscope LNX-	3	309	13.1	8.0	11.9	7.1	0.80	0.84	0.0	0.0	5.79	130	1150
130.0	Flat T-Arm	3	456	21.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.79	174	1823
75.00	PCTEL GPS-TMG-HR-	1	10	0.3	0.4	3.2	3.2	1.00	1.00	0.0	0.0	4.95	1	12
75.00	Stand-Off	1	109	3.7	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.95	16	149
	Totals	121	26223	1092.0										

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)
180.0	2-Bay Dipole	1	18	2.0	6.0	4.0	4.0	0.80	1.00	3.0	36.6	9.20	12	18
180.0	4-Bay Dipole	1	35	3.9	12.0	4.0	4.0	0.80	1.00	6.0	147.1	9.24	25	35
180.0	RFS PD455	2	24	6.0	21.5	2.8	2.8	0.80	1.00	10.8	819.4	9.31	76	48
180.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	9.16	99	450
170.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	9.01	7	16
170.0	ALU RRH4X60LTE	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	9.01	26	159
170.0	ALU RRH2X60PCS	3	55	2.2	1.8	12.0	9.4	0.80	0.67	0.0	0.0	9.01	27	165
170.0	Alcatel Lucent RRH	3	63	2.5	2.2	11.4	5.9	0.80	0.67	0.0	0.0	9.01	30	190
170.0	Antel BXA-70063/4CF	2	10	4.7	4.0	11.2	5.2	0.80	0.77	0.0	0.0	9.01	45	20
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	9.01	20	44
170.0	RFS DB-T1-6Z-8AB-	1	44	4.8	2.0	24.0	10.0	0.80	0.67	0.0	0.0	9.01	20	44
170.0	Commscope	3	29	5.1	4.0	11.9	7.1	0.80	0.83	0.0	0.0	9.01	78	86
170.0	Antel BXA-70063/6CF	1	17	7.6	5.9	11.2	5.2	0.80	0.77	0.0	0.0	9.01	36	17
170.0	Commscope SBNHH-	6	41	8.1	6.0	11.9	7.1	0.80	0.83	0.0	0.0	9.01	246	244
170.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.0	9.01	207	1200
170.0	Andrew 8' MW Dish	1	400	83.6	8.0	96.0	0.0	1.00	1.00	0.0	0.0	9.01	640	400
160.0	Andrew DB844H90E-	12	14	3.6	4.0	8.0	4.5	0.80	0.82	0.0	0.0	8.85	214	168
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.85	227	1200
150.0	ALU 800 MHz 2X50W	3	64	2.1	1.6	13.0	12.2	0.80	0.67	0.0	0.0	8.69	24	192
150.0	ALU 1900 MHz 4X45	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	8.69	28	180
150.0	ALU TD-RRH8X20	3	66	3.7	2.1	17.5	5.7	0.80	0.67	0.0	0.0	8.69	44	198
150.0	RFS APXVTM14-C-I20	3	53	6.3	4.7	12.6	6.3	0.80	0.78	0.0	0.0	8.69	88	159
150.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.83	0.0	0.0	8.69	118	171
150.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.69	223	1200
140.0	Powerwave	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	8.52	4	33
140.0	Powerwave	6	18	0.9	1.2	7.0	2.7	0.80	0.50	0.0	0.0	8.52	17	105
140.0	Raycap DC6-48-60-	1	19	1.3	2.0	11.0	11.0	0.80	1.00	0.0	0.0	8.52	7	19
140.0	Ericsson RRUS-11	6	55	3.8	2.1	18.2	6.7	0.80	0.67	0.0	0.0	8.52	88	330
140.0	Powerwave 7770	6	35	5.5	4.6	11.0	5.0	0.80	0.77	0.0	0.0	8.52	148	210
140.0	KMW AM-X-CD-16-	6	49	8.0	6.0	11.8	5.9	0.80	0.79	0.0	0.0	8.52	220	291
140.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.52	219	1200
130.0	RFS ATMAP1412D-	3	13	1.0	1.0	10.0	4.0	0.80	0.50	0.0	0.0	8.34	9	39
130.0	EMS RR90_17_02DP	3	14	4.4	4.7	8.0	2.8	0.80	0.73	0.0	0.0	8.34	54	41
130.0	Commscope LNX-	3	50	11.4	8.0	11.9	7.1	0.80	0.84	0.0	0.0	8.34	164	151
130.0	Flat T-Arm	3	250	12.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.34	154	750

Site Number: CT-9014
Site Name: North Madison Volunteer FD, CT
Customer: Verizon Wireless

Code: ANSI/TIA-222-G
Engineering Number: OAA671594_C3_02

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Tower Loading

75.00	PCTEL GPS-TMG-HR-	1	1	0.2	0.4	3.2	3.2	1.00	1.00	0.0	0.0	7.13	1	1
75.00	Stand-Off	1	75	2.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.13	15	75
	Totals	121	9846	762.9										

Site Number: CT-9014
Site Name: North Madison Volunteer FD, CT
Customer: Verizon Wireless

Code: ANSI/TIA-222-G
Engineering Number: OAA671594_C3_02

9/22/2016 6:08:35 PM

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	180.0	1" Conduit	1	1.30	1.68	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	180.0	1/2" Coax	1	0.63	0.15	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	180.0	2" Conduit	1	2.38	3.65	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	180.0	7/8" Coax	3	1.09	0.33	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	170.0	1 1/4" Coax	1	1.55	0.63	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	170.0	1 5/8" Coax	12	1.98	0.82	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	170.0	1 5/8" Hybrid	1	1.63	1.61	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	170.0	1 5/8" Hybrid	1	1.63	1.61	0	2	Individual	0.00	N	1.00	1.00	0.01
0.00	170.0	Waveguide	1	1.50	6.00	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	160.0	1 5/8" Coax	12	1.98	0.82	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	160.0	Waveguide	1	1.50	6.00	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	160.0	Waveguide	1	1.50	6.00	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	1 1/4" Hybriflex	1	1.54	1.00	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	1 1/4" Hybriflex	3	1.54	1.00	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	Waveguide	1	1.50	6.00	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	140.0	0.39" Fiber	1	0.39	0.07	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	140.0	0.76" 8 AWG 6	2	0.76	0.53	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	140.0	1 1/4" Coax	12	1.55	0.63	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	140.0	Waveguide	1	1.50	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	130.0	1 5/8" Coax	12	1.98	0.82	50	3	Block	0.00	N	0.00	1.00	0.00
0.00	130.0	Waveguide	1	1.50	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	75.00	1/2" Coax	1	0.63	0.15	0	2	Individual	0.00	N	1.00	1.00	0.00

Force/Stress Summary

Section: 1 1 Bot Elev (ft): 0.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 10" DIA PIPE	-305.92	1.2D + 1.6W	10.03	100	100	100	33.1	50.0	668.58	0	0	0.00	0.00	45	Member X
HORIZ PST - 3" DIA PIPE	-8.86	0.9D + 1.6W 90	12.04	100	100	100	124.6	50.0	32.47	2	0	0.00	40.44	27	Member X
DIAG PX - 3-1/2" DIA PIPE	-12.52	1.2D + 1.6W 90	16.14	100	100	100	147.9	50.0	38.02	3	0	0.00	89.29	32	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)	Use %	Controls
LEG PX - 10" DIA PIPE	262.24	1.2D + 1.6W 60	50	65	724.50	0	0	0.00	0.00	36	Member
HORIZ PST - 3" DIA PIPE	9.68	1.2D + 1.6W 90	50	65	100.35	2	0	0.00	32.43	29	Bolt Bear
DIAG PX - 3-1/2" DIA PIPE	12.12	1.2D + 1.6W 90	50	65	165.60	3	0	0.00	77.51	15	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	253.80	0.9D + 1.6W 180	0.00	0	0	
Top Compression	289.35	1.2D + 1.6W	0.00	0		
Bot Tension	280.96	0.9D + 1.6W 180	969.12	29	16	1" A354-BC
Bot Compression	320.48	1.2D + 1.6W	0.00	0		

Section: 2 2 Bot Elev (ft): 20.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 10" DIA PIPE	-274.87	1.2D + 1.6W	10.03	100	100	100	33.1	50.0	668.58	0	0	0.00	0.00	41	Member X
HORIZ PST - 2-1/2" DIA PIP	-8.68	0.9D + 1.6W 90	10.79	100	100	100	136.7	50.0	20.59	2	0	0.00	31.67	42	Member X
DIAG PST - 3" DIA PIPE	-12.87	1.2D + 1.6W 90	15.18	100	100	100	157.0	50.0	20.43	3	0	0.00	50.54	63	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)	Use %	Controls
LEG PX - 10" DIA PIPE	241.51	0.9D + 1.6W 60	50	65	724.50	0	0	0.00	0.00	33	Member
HORIZ PST - 2-1/2" DIA PIP	9.12	1.2D + 1.6W 90	50	65	76.68	2	0	0.00	25.33	36	Bolt Bear
DIAG PST - 3" DIA PIPE	11.85	1.2D + 1.6W 90	50	65	100.35	3	0	0.00	43.80	27	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	227.48	0.9D + 1.6W 180	0.00	0	0	
Top Compression	257.77	1.2D + 1.6W	0.00	0		
Bot Tension	253.80	0.9D + 1.6W 180	654.24	39	12	1 A325
Bot Compression	289.35	1.2D + 1.6W	0.00	0		

Force/Stress Summary

Section: 3 3 Bot Elev (ft): 40.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-243.11	1.2D + 1.6W	10.03	100	100	100	41.8	50.0	506.95	0	0	0.00	0.00	47	Member X
HORIZ PST - 2-1/2" DIA PIP	-7.79	1.2D + 1.6W 90	9.503	100	100	100	120.4	50.0	26.55	2	0	0.00	31.67	29	Member X
DIAG PST - 3" DIA PIPE	-12.25	1.2D + 1.6W 90	14.26	100	100	100	147.6	50.0	23.13	3	0	0.00	50.54	52	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)	Use %	Controls
LEG PX - 8" DIA PIPE	214.82	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00	37	Member
HORIZ PST - 2-1/2" DIA PIP	8.12	1.2D + 1.6W 90	50	65	76.68	2	0	0.00	25.33	32	Bolt Bear
DIAG PST - 3" DIA PIPE	11.41	0.9D + 1.6W 90	50	65	100.35	3	0	0.00	43.80	26	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	200.57	0.9D + 1.6W 180	0.00	0	0	
Top Compression	226.08	1.2D + 1.6W	0.00	0		
Bot Tension	227.48	0.9D + 1.6W 180	654.24	35	12	1 A325
Bot Compression	257.77	1.2D + 1.6W	0.00	0		

Section: 4 4 Bot Elev (ft): 60.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 8" DIA PIPE	-209.41	1.2D + 1.6W	10.03	100	100	100	41.8	50.0	507.00	0	0	0.00	0.00	41	Member X
HORIZ PST - 2" DIA PIPE	-7.73	0.9D + 1.6W 90	8.214	100	100	100	125.2	50.0	15.41	2	0	0.00	24.02	50	Member X
DIAG PST - 3" DIA PIPE	-12.88	1.2D + 1.6W 90	13.35	100	100	100	138.1	50.0	26.41	3	0	0.00	50.54	48	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)	Use %	Controls
LEG PX - 8" DIA PIPE	185.65	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00	32	Member
HORIZ PST - 2" DIA PIPE	7.92	1.2D + 1.6W 90	50	65	48.15	2	0	0.00	19.22	41	Bolt Bear
DIAG PST - 3" DIA PIPE	12.06	1.2D + 1.6W 90	50	65	100.35	3	0	0.00	43.80	27	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	169.53	0.9D + 1.6W 180	0.00	0	0	
Top Compression	190.59	1.2D + 1.6W	0.00	0		
Bot Tension	200.57	0.9D + 1.6W 180	436.16	46	8	1 A325
Bot Compression	226.08	1.2D + 1.6W	0.00	0		

Force/Stress Summary

Section: 5 5 Bot Elev (ft): 80.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	-171.11	1.2D + 1.6W	10.02	100	100	100	41.2	50.0	386.39	0	0	0.00	0.00	44	Member X
HORIZ PST - 2" DIA PIPE	-7.79	1.2D + 1.6W 90	7.026	100	100	100	107.1	50.0	20.80	2	0	0.00	24.02	37	Member X
DIAG PST - 3" DIA PIPE	-14.13	1.2D + 1.6W 90	12.55	100	100	100	129.9	50.0	29.85	3	0	0.00	50.54	47	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)	Use %	Controls
LEG PSP - ROHN 8 EHS	149.02	1.2D + 1.6W 60	50	65	437.40	0	0	0.00	0.00	34	Member
HORIZ PST - 2" DIA PIPE	7.92	1.2D + 1.6W 90	50	65	48.15	2	0	0.00	19.22	41	Bolt Bear
DIAG PST - 3" DIA PIPE	13.59	0.9D + 1.6W 90	50	65	100.35	3	0	0.00	43.80	31	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	132.61	0.9D + 1.6W 180	0.00	0	0	
Top Compression	149.75	1.2D + 1.6W	0.00	0		
Bot Tension	169.53	0.9D + 1.6W 180	436.16	39	8	1 A325
Bot Compression	190.59	1.2D + 1.6W	0.00	0		

Section: 6 6 Bot Elev (ft): 100.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PSP - ROHN 6 EHS	-135.97	1.2D + 1.6W	6.68	100	100	100	36.0	50.0	274.62	0	0	0.00	0.00	49	Member X
HORIZ PST - 2" DIA PIPE	-7.22	1.2D + 1.6W 90	6.108	100	100	100	93.1	50.0	25.54	2	0	0.00	24.02	28	Member X
DIAG PST - 2-1/2" DIA PIP	-11.18	1.2D + 1.6W 90	9.288	100	100	100	117.7	50.0	27.79	3	0	0.00	47.50	40	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)	Use %	Controls
LEG PSP - ROHN 6 EHS	118.29	1.2D + 1.6W 180	50	65	301.95	0	0	0.00	0.00	39	Member
HORIZ PST - 2" DIA PIPE	7.35	1.2D + 1.6W 90	50	65	48.15	2	0	0.00	19.22	38	Bolt Bear
DIAG PST - 2-1/2" DIA PIP	10.74	1.2D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	26	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	92.22	0.9D + 1.6W 180	0.00	0	0	
Top Compression	105.64	1.2D + 1.6W	0.00	0		
Bot Tension	132.61	0.9D + 1.6W 180	436.16	30	8	1 A325
Bot Compression	149.75	1.2D + 1.6W	0.00	0		

Force/Stress Summary

Section: 7 7 — Bot Elev (ft): 120.0 — Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PSP - ROHN 5 EH	-90.71	1.2D + 1.6W	6.68	100	100	100	43.6	50.0	239.34	0	0	0.00	0.00	37	Member X
HORIZ PST - 1-1/2" DIA PIP	-6.66	0.9D + 1.6W 90	5.049	100	100	100	97.2	50.0	18.01	2	0	0.00	22.62	37	Member X
DIAG PX - 2" DIA PIPE	-11.32	1.2D + 1.6W 90	8.579	99	99	99	133.1	50.0	18.89	3	0	0.00	51.01	59	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)	Use %	Controls
LEG PSP - ROHN 5 EH	77.53	0.9D + 1.6W 60	50	65	274.95	0	0	0.00	0.00	28	Member
HORIZ PST - 1-1/2" DIA PIP	6.76	1.2D + 1.6W 90	50	65	35.96	2	0	0.00	18.10	37	Bolt Bear
DIAG PX - 2" DIA PIPE	11.27	1.2D + 1.6W 90	50	65	66.60	3	0	0.00	44.21	25	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	48.20	0.9D + 1.6W 180	0.00	0	0	
Top Compression	58.05	1.2D + 1.6W	0.00	0		
Bot Tension	92.22	0.9D + 1.6W 180	327.12	28	6	1 A325
Bot Compression	105.64	1.2D + 1.6W	0.00	0		

Section: 8 8 — Bot Elev (ft): 140.0 — Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 4" DIA PIPE	-41.21	1.2D + 1.6W	6.67	100	100	100	54.1	50.0	160.28	0	0	0.00	0.00	25	Member X
HORIZ PST - 1-1/2" DIA PIP	-5.69	1.2D + 1.6W 90	4.340	100	100	100	83.6	50.0	21.57	2	0	0.00	22.62	26	Member X
DIAG PX - 2" DIA PIPE	-11.04	1.2D + 1.6W 90	7.963	100	100	100	124.7	50.0	21.49	3	0	0.00	51.01	51	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)	Use %	Controls
LEG PX - 4" DIA PIPE	33.75	0.9D + 1.6W 180	50	65	198.45	0	0	0.00	0.00	17	Member
HORIZ PST - 1-1/2" DIA PIP	5.80	1.2D + 1.6W 90	50	65	35.96	2	0	0.00	18.10	32	Bolt Bear
DIAG PX - 2" DIA PIPE	10.80	1.2D + 1.6W 90	50	65	66.60	3	0	0.00	44.21	24	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	10.92	0.9D + 1.6W 180	0.00	0	0	
Top Compression	15.50	1.2D + 1.6W	0.00	0		
Bot Tension	48.20	0.9D + 1.6W 180	218.08	22	4	1 A325
Bot Compression	58.05	1.2D + 1.6W	0.00	0		

Force/Stress Summary

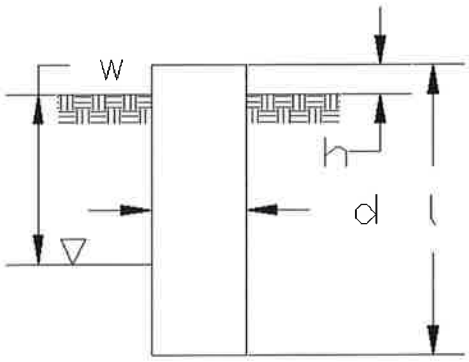
Section: 9 9 Bot Elev (ft): 160.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 3" DIA PIPE	-6.69	1.2D + 1.0Di +	6.67	100	100	100	69.0	50.0	70.87	0	0	0.00	0.00	9	Member X
HORIZ PST - 1-1/2" DIA PIP	-3.27	1.2D + 1.6W	4.299	100	100	100	82.8	50.0	21.78	2	0	0.00	22.62	15	Member X
DIAG PST - 2" DIA PIPE	-5.85	1.2D + 1.6W 90	7.940	100	100	100	121.1	50.0	16.49	3	0	0.00	36.04	35	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)	Use %	Controls
LEG PST - 3" DIA PIPE	3.05	0.9D + 1.6W 180	50	65	100.35	0	0	0.00	0.00	3	Member
HORIZ PST - 1-1/2" DIA PIP	3.30	1.2D + 1.6W 60	50	65	35.96	2	0	0.00	18.10	18	Bolt Bear
DIAG PST - 2" DIA PIPE	5.73	1.2D + 1.6W 90	50	65	48.15	3	0	0.00	31.23	18	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	0.00		0.00	0	0	
Top Compression	0.91	1.2D + 1.0Di +	0.00	0		
Bot Tension	10.92	0.9D + 1.6W 180	166.24	7	4	7/8 A325
Bot Compression	15.50	1.2D + 1.6W	0.00	0		

Site Name:	CT-9014	*Program Last Updated:*	*#REF!*
Site Number:	North Madison Volunteer FD, CT	*American Tower Corporation*	
Engineer:	R. Barrett		
Engineering Number:	OAA671594_C3_02		
Date:	09/22/16		



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

Analyze or Design a Foundation?	Analyze	
Foundation Mapped:	N	
Moment (M):	0.0	k-ft
Shear/Leg (V):	37.6	k
Compression/Leg (P):	319.4	k
Uplift/Leg (U):	278.7	k
Tower Type (GT / SST / MP):	SST	
Diameter of Caisson (d):	6.0	ft
Caisson Embedment (L-h):	18.0	ft
Caisson Height Above Ground (h):	0.5	ft
Depth Below Ground Surface to Water Table (w):	2.5	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Water:	62.4	pcf
Tension Skin Friction/Compression Skin Friction:	1.00	
Pullout Angle:	30.0	degrees

Engineer Notes

Soil Mechanical Properties

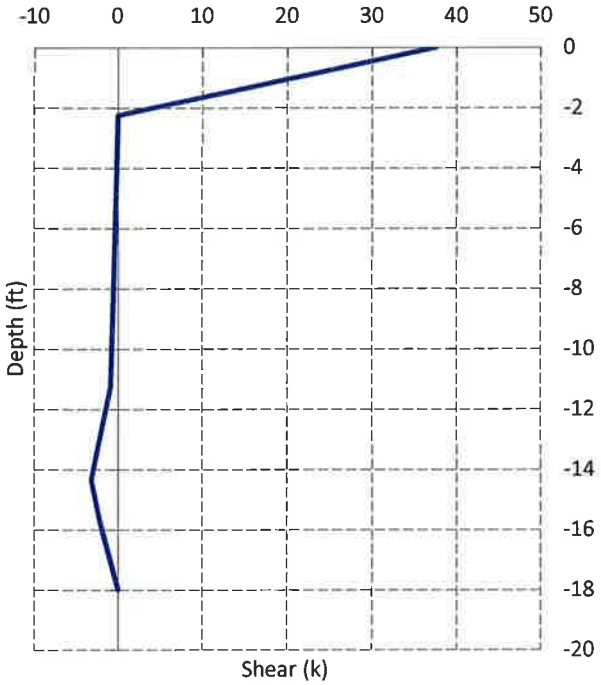
Depth (ft) Top	Depth (ft) Bottom	γ_{Soil} (pcf)	Cohesion (psf)	ϕ (degree)	Ultimate Skin Friction (psf)	Ultimate Bearing Pressure (psf)
0.0	2.0	125	0	0	0	0
2.0	10.0	125	625	0	313	0
10.0	14.0	135	6250	0	3125	0
14.0	19.0	145	8000	0	5000	36719

Volume of Concrete:	523.1	ft^3 =	19.4 yd^3
Weight of Concrete (Buoyancy Effect Considered):	51.1	k	
Average Soil Unit Weight:	77.9	pcf	
Skin Friction Resistance:	659.8	k	
Compressive Bearing Resistance:	1038.2	k	
Pullout Weight (Minus Concrete Weight):	647.7	k	
Nominal Uplift Capacity per Leg ($\phi_s T_n$):	485.8	k	
Nominal Compressive Capacity per Leg ($\phi_s P_n$):	1273.5	k	
P_u:	330.5	k	
$T_u/\phi_s T_n$:	0.57	Result: OK	
$P_u/\phi_s P_n$:	0.26	Result: OK	
Total Lateral Resistance:	2347.2	k	
Inflection Point (Below Ground Surface):	14.3	ft	
Design Overturning Moment At Inflection Point (M_D):	558.3	k-ft	
Nominal Moment Capacity ($\phi_s M_n$):	4527.1	k-ft	
$M_D/\phi_s M_n$:	0.12	Result: OK	
ϕ_s:	0.75		

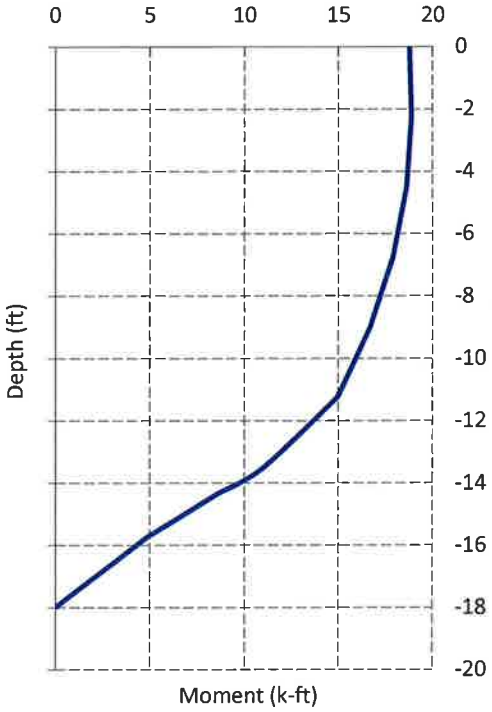
Caisson Strength Capacity

Concrete Compressive Strength (f'_c):	3000	psi
Vertical Steel Rebar Size #:	9	
Vertical Steel Rebar Area:	1.00	in^2
# of Vertical Steel Rebars:	28	
Vertical Steel Rebar Yield Strength (F_y):	60	ksi
Horizontal Tie / Stirrup Size #:	5	
Horizontal Tie / Stirrup Area:	0.31	in^2
Design Horizontal Tie / Stirrup Spacing:	12.0	in
Horizontal Tie / Stirrup Steel Yield Strength (F_y):	60	ksi
Rebar Cage Diameter:	64.0	in
Strength Bending/Tension Reduction Factor (ϕ_B):	0.90	ACI318-05 - 9.3.2.1
Strength Shear Reduction Factor (ϕ_V):	0.75	ACI318-05 - 9.3.2.3
Strength Compression Reduction Factor (ϕ_V):	0.65	ACI318-05 - 9.3.2.2
Steel Elastic Modulus:	29000	ksi
Design Moment (M_u):	188.1	k-ft
Nominal Moment Capacity ($\phi_B M_n$):	3944.2	k-ft - ACI318-005 - 10.2
$M_u/\phi_B M_n$:	0.05	Result: OK
Design Shear (V_u):	37.6	k
Nominal Shear Capacity ($\phi_V V_n$):	323.1	k - ACI318-05 - 11.3.1.1 or 11.5.7.2
$V_u/\phi_V V_n$:	0.12	Result: OK
Design Tension (T_u):	278.7	k
Nominal Tension Capacity ($\phi_T T_n$):	1512.0	k - ACI318-05 - 10.2
$T_u/\phi_T T_n$:	0.18	Result: OK
Design Compression (P_u):	330.5	k
Nominal Compression Capacity ($\phi_P P_n$):	5361.7	k - ACI318-05 - 10.3.6.2
$P_u/\phi_P P_n$:	0.06	Result: OK
Bending Reinforcement Ratio:	0.007	ACI318-05 - 10.8.4 & 10.9.1
$M_u/\phi_B M_n + T_u/\phi_T T_n$:	0.23	Result: OK

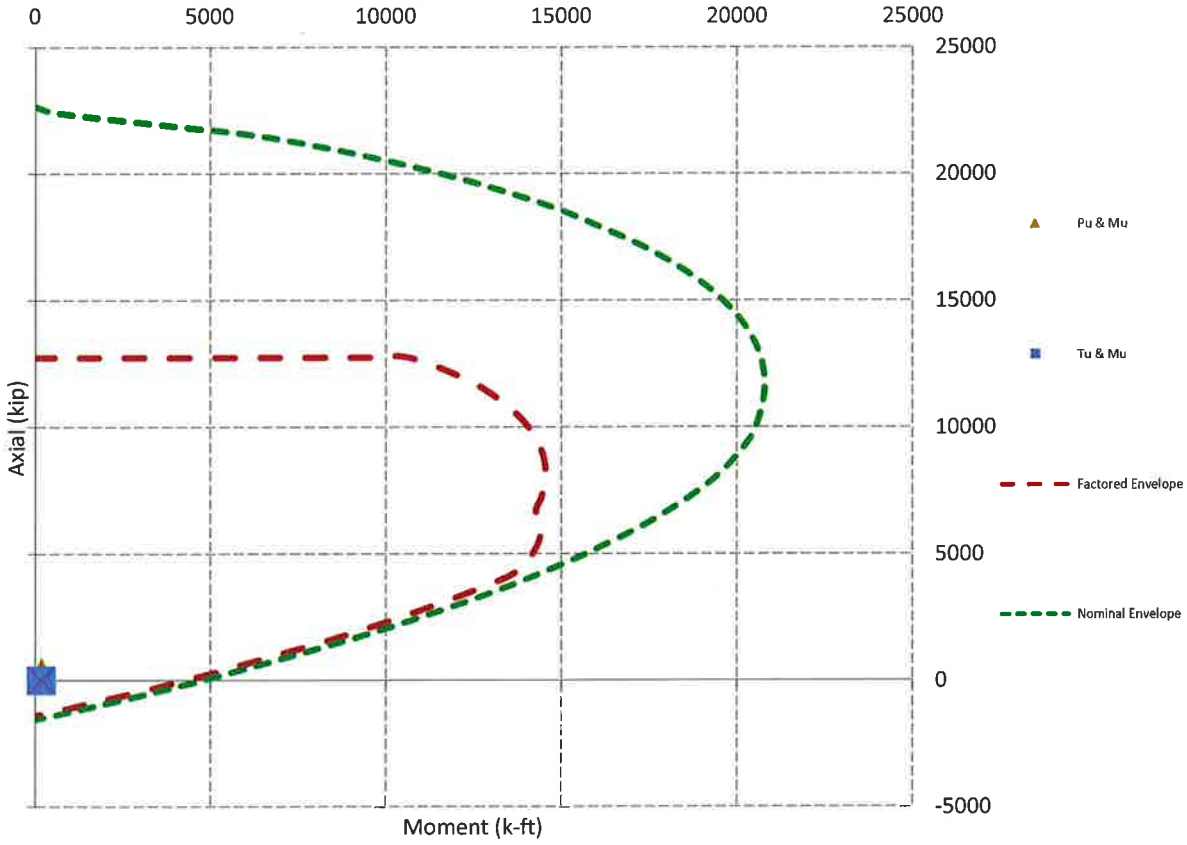
Design Factored Shear / Depth



Design Factored Moment / Depth

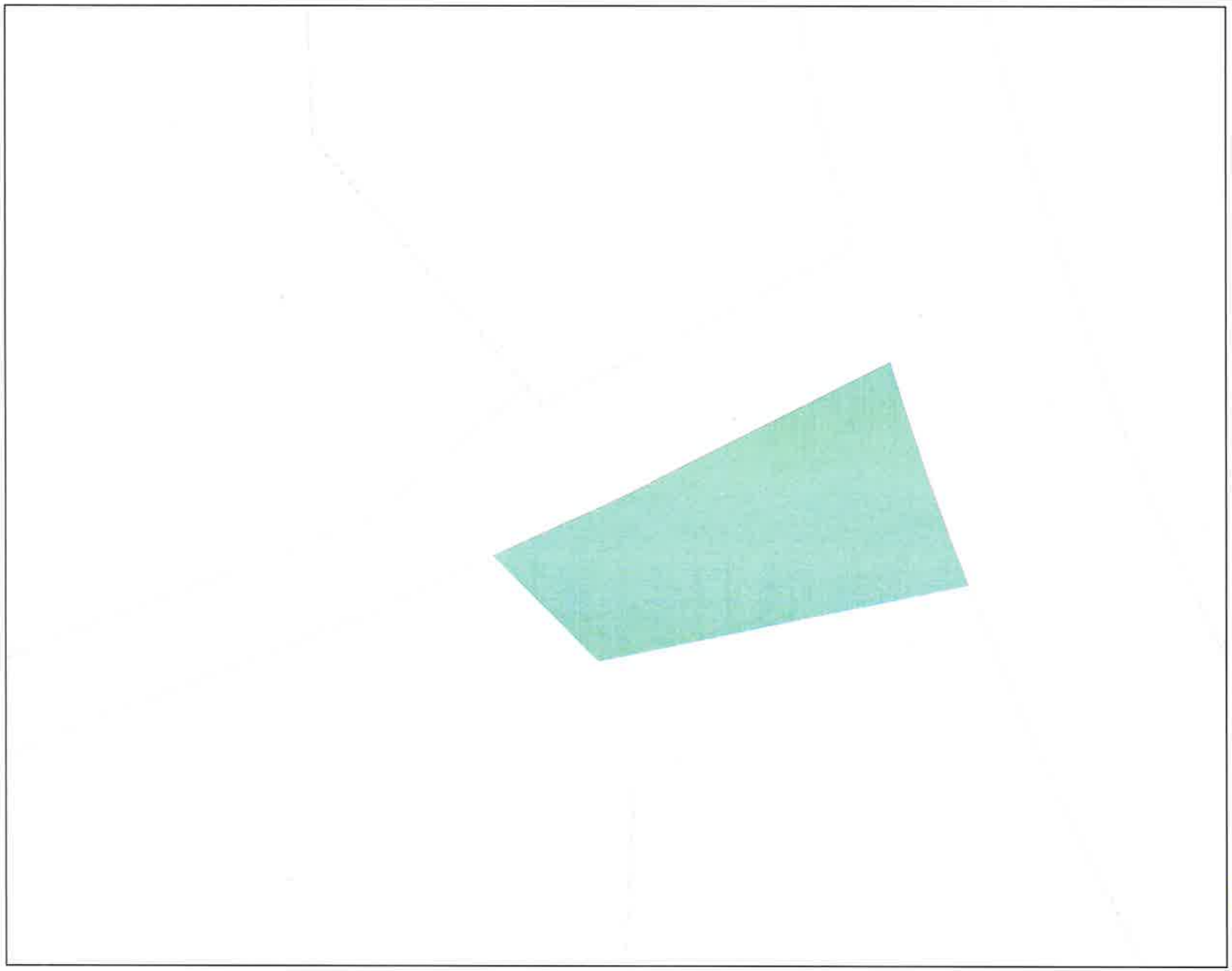


Nominal and Factored Moment Capacity and Factored Design Loads



ATTACHMENT 4

864 Opening Hill Road



Legend

Notes

NEW ENGLAND GEOSYSTEMS
GEOGRAPHIC INFORMATION SYSTEM CONSULTANTS
282 Main Street Extension - C2
Middletown, CT 06457 • (203) 404-7129 • www.ne-geo.com

188 0 94 188
Feet

1: 1,128

SCRCOG

864 OPENING HILL RD

Location	864 OPENING HILL RD	**Mblu**	134/ 17/ / /
Acct#	00665700	**Owner**	NORTH MADISON VOLUNTEER FIRE COMPANY INC
Assessment	$838,200	**Appraisal**	$1,197,500
PID	7027	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$1,083,900	$113,600	$1,197,500

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$758,700	$79,500	$838,200

Owner of Record

Owner	NORTH MADISON VOLUNTEER FIRE COMPANY INC	**Sale Price**	$0
Co-Owner		**Certificate**	
		Book & Page	44/ 130
		Sale Date	

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
NORTH MADISON VOLUNTEER FIRE COMPANY INC	$0		44/ 130	

Building Information

Building 1 : Section 1

Year Built: 1971
Living Area: 10,480

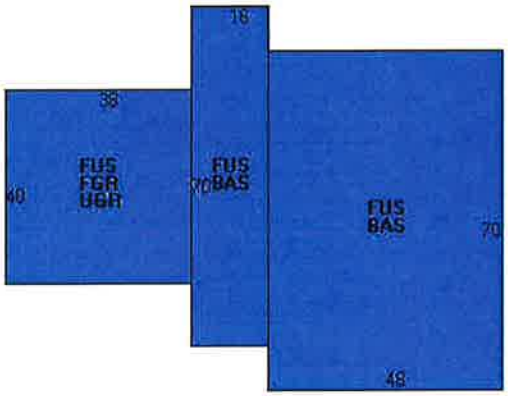
Building Attributes	
Field	**Description**
STYLE	Fire Station
MODEL	Commercial
Stories:	2

Roof Structure	Gambrel
Heating Fuel	Oil
Heating Type	Hot Water
AC Type	None
Bldg Use	Municipal Fire
Total Rooms	
Total Bedrms	00
Total Baths	0
Fireplace	
Xtra Fireplaces	

Building Photo

(http://images.vgsi.com/photos/MadisonCTPhotos//\01\00\72/

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
FUS	Finished Upper Story	6,000	6,000
BAS	First Floor	4,480	4,480
FGR	Garage	1,520	0
UGR	Basement Garage	1,520	0
		13,520	10,480

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Land Line Valuation

Use Code	903L	**Size (Acres)**	0.38
Description	Municipal Fire	**Depth**	0
Zone	RU-1		

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asphalt			10000 S.F.	$7,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$1,083,900	$113,600	$1,197,500

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$758,700	$79,500	$838,200