ROBINSON & COLE LLP

KENNETH C. BALDWIN

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Also admitted in Massachusetts

July 3, 2013

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

Re: **EM-VER-068-120531- Bulls Bridge Road, Kent, Connecticut**
EM-VER-069-120607- 1375 North Road, Killingly, Connecticut
EM-VER-031-120514- 36 Mohawk Trail Road, Cornwall, Connecticut
EM-VER-091-121206- 302 Ball Pond Road, New Fairfield, Connecticut
EM-VER-092-120217- 115 Greenswood Industrial Park, New Hartford, Connecticut
EM-VER-096-120217- 4 Elkington Farm Road, New Milford, Connecticut
EM-VER-096-120216A- 399 Chestnut Road, New Milford, Connecticut
EM-VER-096-120216B- 86 Boardman Road, New Milford, Connecticut

Completion of Construction Activity

Dear Ms. Bachman:

The purpose of this letter is to notify the Siting Council that construction activity associated with the above-referenced Cellco Partnership d/b/a Verizon Wireless telecommunications facilities has been completed.

If you have any questions or need any additional information regarding this facility please do not hesitate to contact me.

Sincerely,

Kenneth C. Baldwin

Copy to:
Sandy M. Carter

12321674-v1

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

June 1, 2012

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103

RE: **EM-VER-031-120514-** Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at Mohawk Trail Road, Cornwall, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated May 14, 2012. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Linda Roberts

Linda Roberts
Executive Director

LR/CDM/jbw

c: The Honorable Gordon M. Ridgway, First Selectman, Town of Cornwall
Karl Nilsen, Zoning Enforcment Officer, Town of Cornwall
American Tower Corporation

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
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May 15, 2012

The Honorable Gordon M. Ridgway
First Selectman
Town of Cornwall
Town Office
26 Pine Street
P. O. Box 97
Cornwall, CT 06753-0205

RE: **EM-VER-031-120514**- Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at Mohawk Trail Road, Cornwall, Connecticut.

Dear First Selectman Ridgway:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by May 30, 2012.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts

Linda Roberts
Executive Director

LR/jbw

Enclosure: Notice of Intent

c: Karl Nilsen, Zoning Enforcment Officer, Town of Cornwall

CSC
CONNECTICUT SITING COUNCIL

EM-VER-031-120514

ROBINSON & COLE

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May 10, 2012

Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Antenna Swap**
Mohawk Trail Road, Cornwall, Connecticut

Dear Ms. Roberts:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) wireless telecommunications antennas at the 46.5-foot level on an existing 65-foot tower at the above-referenced address. The tower is owned by American Tower Corporation. Cellco's use of the tower was approved by the Council in 2008. Cellco now intends to replace six (6) of its existing antennas with three (3) model BXA-171063-12BF PCS antennas and three (3) model BXA-70063-6CF LTE antennas, all at the same 46.5-foot level. Cellco also intends to install six (6) coax cable diplexers directly behind its proposed antennas. Attached behind Tab 1 are the specifications for the replacement antennas and diplexers.

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 letter is being sent to Gordon Ridgway, First Selectman of the Town of Cornwall. A copy of this letter is also being sent to State of Connecticut, Department of Energy and Environmental Protection, the owner of the property on which the tower is located.

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 tower. Cellco's replacement antennas and diplexers will be located at the 46.5-foot level on the existing 65-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 boundaries.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more.

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) adopted safety standard. A Radio Frequency Exposure Report is provided behind Tab 2.

Also attached is a Structural Analysis Report confirming that the tower and foundation can support Cellco's proposed modifications. (See Tab 3). Please note that notwithstanding the note at the bottom of page 1 of this structural report, Cellco is not proposing to install any new coax cables as part of this modification proposal.

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:
Gordon Ridgway, Cornwall First Selectman
State of Connecticut, Department of Energy and Environmental Protection
Sandy M. Carter

Amphenol ANTENNA SOLUTIONS

BXA-171063-12BF-EDIN-X

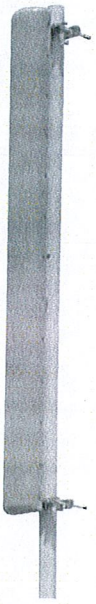
Replace "X" with desired electrical downtilt.

X-Pol | FET Panel | 63° | 19.0 dBi

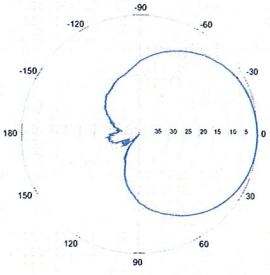
Electrical Characteristics	1710-2170 MHz		
Frequency bands	1710-1880 MHz	1850-1990 MHz	1920-2170 MHz
Polarization	±45°	±45°	±45°
Horizontal beamwidth	68°	65°	60°
Vertical beamwidth	4.5°	4.5°	4.5°
Gain	16.1 dBd / 18.2 dBi	16.5 dBd / 18.6 dBi	16.9 dBd / 19.0 dBi
Electrical downtilt (X)	0, 2, 5		
Impedance	50Ω		
VSWR	≤1.5:1		
First upper sidelobe	< -17 dB		
Front-to-back ratio	> 30 dB		
In-band isolation	> 28 dB		
IM3 (20W carrier)	< -150 dBc		
Input power	300 W		
Lightning protection	Direct Ground		
Connector(s)	2 Ports / EDIN / Female / Bottom		
Operating temperature	-40° to +60° C / -40° to +140° F		

Mechanical Characteristics		
Dimensions Length x Width x Depth	1820 x 154 x 105 mm	71.7 x 6.1 x 4.1 in
Depth with z-brackets	133 mm	5.2 in
Weight without mounting brackets	6.8 kg	15 lbs
Survival wind speed	> 201 km/hr	> 125 mph
Wind area	Front: 0.28 m² Side: 0.19 m²	Front: 3.1 ft² Side: 2.1 ft²
Wind load @ 161 km/hr (100 mph)	Front: 460 N Side: 304 N	Front: 103 lbf Side: 68 lbf

Mounting Options	Part Number	Fits Pipe Diameter	Weight
2-Point Mounting Bracket Kit	26799997	50-102 mm 2.0-4.0 in	2.3 kg 5 lbs
2-Point Mounting & Downtilt Bracket Kit	26799999	50-102 mm 2.0-4.0 in	3.6 kg 8 lbs
Concealment Configurations	For concealment configurations, order BXA-171063-12BF-EDIN-X-FP		

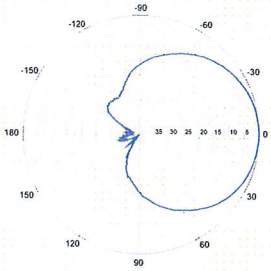


BXA-171063-12BF-EDIN-X



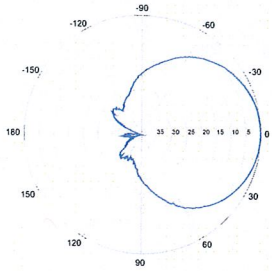
Horizontal | 1710-1880 MHz

BXA-171063-12BF-EDIN-X



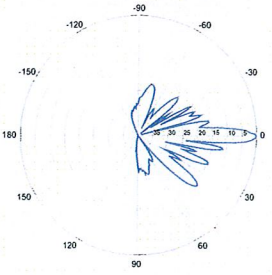
Horizontal | 1850-1990 MHz

BXA-171063-12BF-EDIN-X



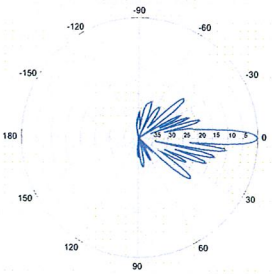
Horizontal | 1920-2170 MHz

BXA-171063-12BF-EDIN-0



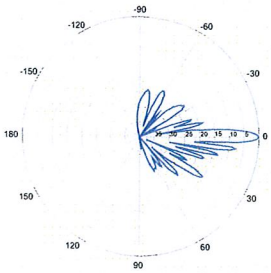
0° | Vertical | 1710-1880 MHz

BXA-171063-12BF-EDIN-0



0° | Vertical | 1850-1990 MHz

BXA-171063-12BF-EDIN-0

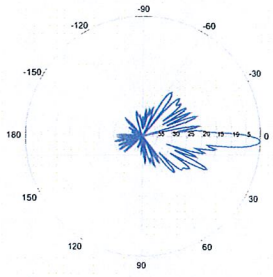


0° | Vertical | 1920-2170 MHz

BXA-171063-12BF-EDIN-X

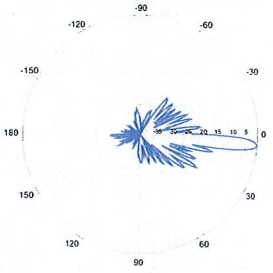
X-Pol | FET Panel | 63° | 19.0 dBi

BXA-171063-12BF-EDIN-2



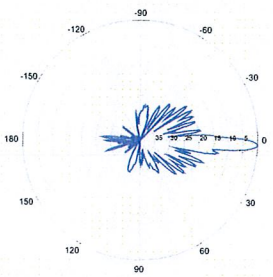
2° | Vertical | 1710-1880 MHz

BXA-171063-12BF-EDIN-5



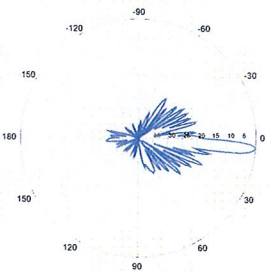
5° | Vertical | 1710-1880 MHz

BXA-171063-12BF-EDIN-2



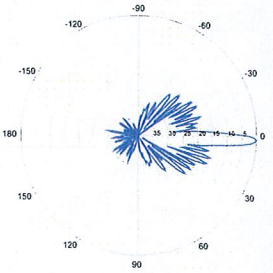
2° | Vertical | 1850-1990 MHz

BXA-171063-12BF-EDIN-5



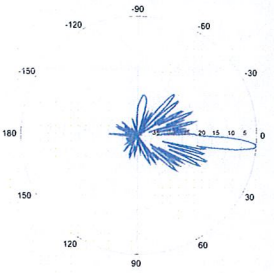
5° | Vertical | 1850-1990 MHz

BXA-171063-12BF-EDIN-2



2° | Vertical | 1920-2170 MHz

BXA-171063-12BF-EDIN-5



5° | Vertical | 1920-2170 MHz

Amphenol ANTENNA SOLUTIONS

BXA-70063-6CF-EDIN-X

X-Pol | FET Panel | 63° | 14.5 dBd

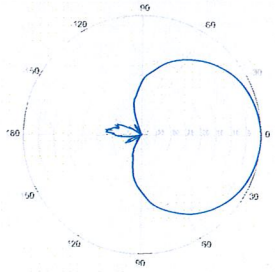
Replace "X" with desired electrical downtilt.

Antenna is also available with NE connector(s). Replace "EDIN" with "NE" in the model number when ordering.

Electrical Characteristics	696-900 MHz	
Frequency bands	696-806 MHz	806-900 MHz
Polarization	±45°	
Horizontal beamwidth	65°	63°
Vertical beamwidth	13°	11°
Gain	14.0 dBd (16.1 dBi)	14.5 dBd (16.6 dBi)
Electrical downtilt (X)	0, 2, 3, 4, 5, 6, 8, 10	
Impedance	50Ω	
VSWR	≤1.35:1	
Upper sidelobe suppression (0°)	-18.3 dB	-18.2 dB
Front-to-back ratio (+/-30°)	-33.4 dB	-36.3 dB
Null fill	5% (-26.02 dB)	
Isolation between ports	< -25 dB	
Input power with EDIN connectors	500 W	
Input power with NE connectors	300 W	
Lightning protection	Direct Ground	
Connector(s)	2 Ports / EDIN or NE / Female / Center (Back)	
Mechanical Characteristics		
Dimensions Length x Width x Depth	1804 x 285 x 132 mm	71.0 x 11.2 x 5.2 in
Depth with z-brackets	172 mm	6.8 in
Weight without mounting brackets	7.9 kg	17 lbs
Survival wind speed	> 201 km/hr	> 125 mph
Wind area	Front: 0.51 m² Side: 0.24 m²	Front: 5.5 ft² Side: 2.6 ft²
Wind load @ 161 km/hr (100 mph)	Front: 759 N Side: 391 N	Front: 169 lbf Side: 89 lbf

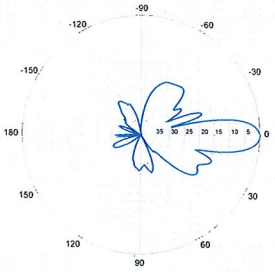
Mounting Options	Part Number	Fits Pipe Diameter	Weight
3-Point Mounting & Downtilt Bracket Kit	36210008	40-115 mm 1.57-4.5 in	6.9 kg 15.2 lbs
Concealment Configurations	For concealment configurations, order BXA-70063-6CF-EDIN-X-FP		

BXA-70063-6CF-EDIN-X



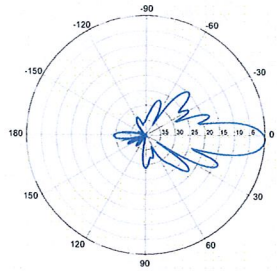
Horizontal | 750 MHz

BXA-70063-6CF-EDIN-0

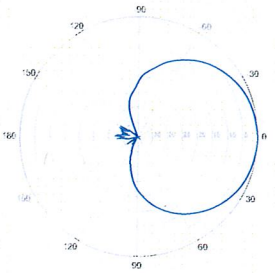


0° | Vertical | 750 MHz

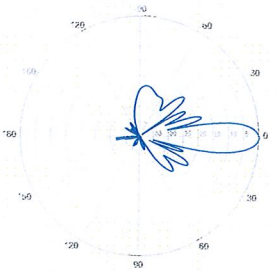
BXA-70063-6CF-EDIN-2



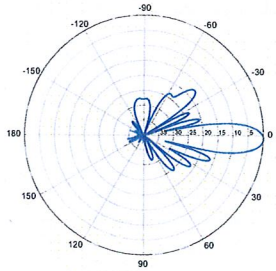
2° | Vertical | 750 MHz



Horizontal | 850 MHz



0° | Vertical | 850 MHz

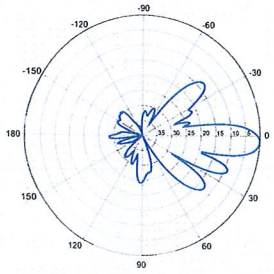


2° | Vertical | 850 MHz

BXA-70063-6CF-EDIN-X

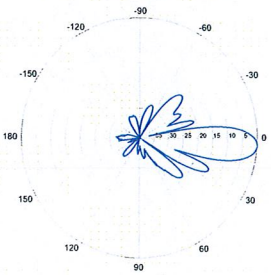
X-Pol | FET Panel | 63° | 14.5 dBd

BXA-70063-6CF-EDIN-3



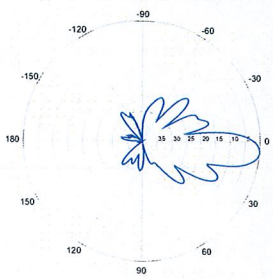
3° | Vertical | 750 MHz

BXA-70063-6CF-EDIN-4

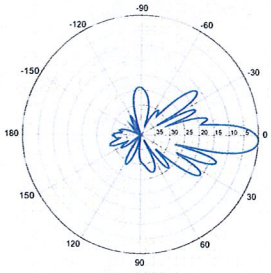


4° | Vertical | 750 MHz

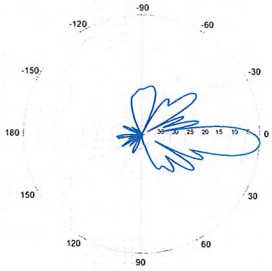
BXA-70063-6CF-EDIN-5



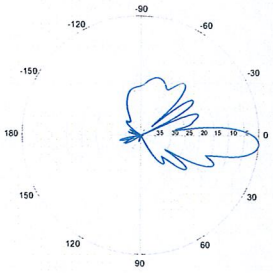
5° | Vertical | 750 MHz



3° | Vertical | 850 MHz

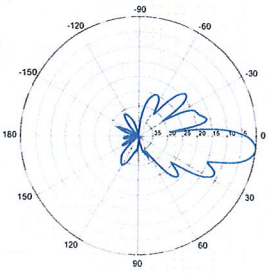


4° | Vertical | 850 MHz



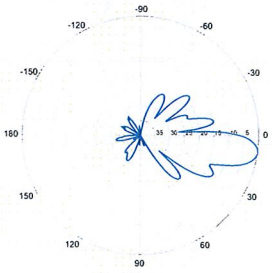
5° | Vertical | 850 MHz

BXA-70063-6CF-EDIN-6



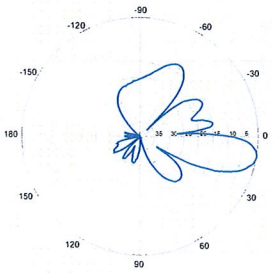
6° | Vertical | 750 MHz

BXA-70063-6CF-EDIN-8

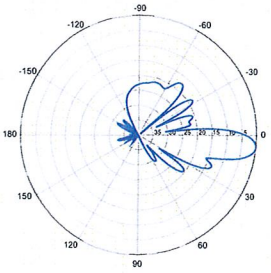


8° | Vertical | 750 MHz

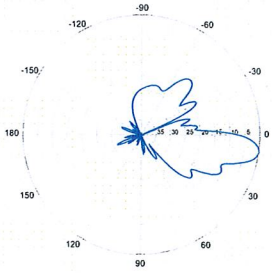
BXA-70063-6CF-EDIN-10



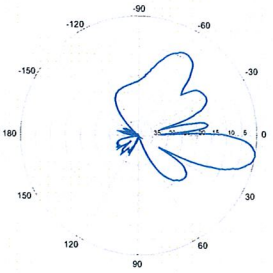
10° | Vertical | 750 MHz



6° | Vertical | 850 MHz



8° | Vertical | 850 MHz



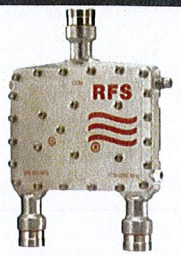
10° | Vertical | 850 MHz

Product Data Sheet **FD9R6004/2C-3L**

ShareLite Wideband Diplexer – In-line 698-960 MHz/1710-2200 MHz, DC pass in high frequency path

Product Description

The ShareLite FD9R6004 Series of diplexers are designed to enable feeder sharing between systems in the 698-960 MHz range and in the 1710-2200 MHz range. The diplexer is equipped with in-line connector placement so it can be installed in the BTS cabinet or at the tower top. This is especially valuable in crowded sites or when the feeders are not easily accessible. Due to its wideband design, the FD9R6004 Series can accommodate many combining solutions between 698-960 MHz and 1710-2200 MHz systems such as LTE 700 MHz, Cellular 800 MHz with PCS, GSM900 with GSM1800, or GSM900 with UMTS. This diplexer features a highly selective filter. It provides a high level of isolation between ports, while keeping the insertion loss on both paths at an extremely low level. The FD9R6004 diplexers are available with various DC pass options, helpful in configurations with or without the Tower Mount Amplifiers installed.



Features/Benefits

- **LTE ready design**
- **Extremely Low Insertion Loss**
- **High level of Rejection between bands – Protection against interferences**
- **Extremely High Power Handling Capability**
- **Integrated DC block/bypass versions available**
- **Very compact & small size design – Easy installation and reduced tower load**
- **In-line long-neck connectors for easy connection & waterproofing**
- **Exceptional reliability & environmental protection (IP 67)**
- **Equipped with 1 * Breathable Vent – Prevent any humidity inside the product**
- **Mounting hardware for Wall and Pole mount provided (P/N SEM2-1A)**
- **Grounding already provided through the mounting bracket**
- **Kit available for easy dual mount**

Technical Specifications

Product Type	Diplexer/Cross Band Coupler
Frequency Range 1, MHz	698-960
Frequency Range 2, MHz	1710-2200
Application	LTE700, GSM900, UMTS, GSM1800, Cellular 800, PCS
Configuration	Sharelite Single diplexer, outdoor, DC pass in the 1710-2170MHz path, with mounting hardware SEM2-1A
Mounting	Wall Mounting: With 4 screws (maximum 6mm diameter); Pole Mounting: With included clamp set 40-110mm (1.57-4.33)
Return Loss All Ports Min/Typ, dB	19/23
Power Handling Continuous, Max, W	1250 at common port; 750 in low frequency path & 500 in high frequency path
Power Handling Peak, Max, W	15000 in low frequency path & 8000 in high frequency path
Impedance, Ohms	50
Insertion Loss, Path 1, dB	0.07 typ.
Insertion Loss, Path 2, dB	0.13 typ.
Rejection Between Bands Min/Typ, dB	58/64@698-960MHz; 60/70@1710-2200MHz
IMP Level at the COM Port, Typ, dBm	-112 @ 2x43
DC Pass in Low Frequency Path	No
DC Pass in High Frequency Path	Yes
Temperature Range, °C (°F)	-40 to +60 (-40 to +140)
Environmental	ETSI 300-019-2-4 Class 4.1E
Ingress Protection	IP 67
Lightning Protection	EN/IEC61000-4-5 Level 4
Connectors	In-line long-neck 7-16-Female
Weight, kg (lb)	1.2 (2.6)
Shipping Weight, kg (lb)	3.2 (7) for 2 * single units in 1 * box, 9.8 (21.6) for 6 * units = 3 * Boxes in 1 * overwrap
Dimensions, H x W x D, mm (in)	147 x 164 x 37 (5.8 x 6.5 x 1.5)
Shipping Dimensions, H x W x D, mm (in)	254 x 406 x 82 (10 x 16 x 3.2) for 2 * Single Units in 1 * box, 280 x 406 x 241 (11 x 16 x 9.5) for 6 * units = 3 * Boxes in 1 * overwrap
Volume, L	0.43
Housing	Aluminum

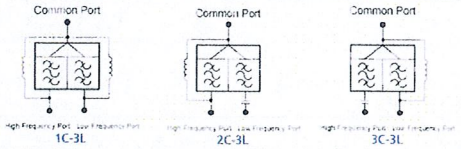
Notes

ShareLite Wideband Diplexer – In-line 698-960 MHz/1710-2200 MHz, DC pass in high frequency path

Other Documentation

FD9R6004/2C-3L Installation Instructions: Wideband_Diplexer_Installation_Rev5.pdf

Selection Guide Diplexer 698-960 / 1710-2200MHz					
	Model Number	Full DC Pass	DC Pass High Band	DC Pass Low Band	Mounting Hardware Included
Single	FD9R6004/1C-3L				X
	FD9R6004/2C-3L				X
	FD9R6004/3C-3L				X
Dual	KIT-FD9R6004/1C-DL				X
	KIT-FD9R6004/2C-DL				X
	KIT-FD9R6004/3C-DL				X



The FD9R6004 Series is upgradeable to a Dual Diplexer kit by means of 2 diplexers and mounting hardware kits SEM2-1A and SEM2-3

Mounting Hardware and Ground Cable Ordering Information		
Model Number	**Description**	
SEM2-1A	Mounting Hardware, Pole mount ø40-110mm (Included with the Single and Dual Diplexer) Wall Screws M6 (Not included with the product)	
SEM2-3	Assembly kit for 2 pcs of FD9R6004/xC-3L (Can be ordered separately but included with the Dual Diplexer Kit)	
CA020-2	Ground Cable, 2m, includes lugs (Optional)	
CA030-2	Ground Cable, 2m, includes lugs (Optional)	
SEM6	Mounting Hardware for 6 Diplexers, Tower Base (Optional)	

C Squared Systems, LLC
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Auburn, NH 03032
(603) 644-2800
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RADIO FREQUENCY EXPOSURE REPORT

MOHAWK MOUNTAIN CT

TOOMEY ROAD
CORNWALL, CT 06753

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed addition of 750MHz LTE equipment by Verizon Wireless to the existing lattice tower located at the peak of Mohawk Mountain, off of Toomey Road in Cornwall, CT. Verizon Wireless, Sprint-Nextel, and Cingular all have antennas mounted on the tower. Figure 1 below is a view of the existing facility.

Figure 1: View of Mohawk Mountain

Site Address	Toomey Rd, Cornwall, CT
Latitude	41° 49' 16.6" N
Longitude	73° 17' 47.1" W
Site Elevation AMSL	1678'
PCS License Information	KNLH262/WQBT321/WWBT322
Cellular License Information	KNKN833
LTE License Information	WQJQ689/WQJQ696
Name of Individual Conducting Survey	Keith Vellante
Date and Time of Survey	4/27/2012; 1:00PM-3:00PM

Table 1: Site Specific Data

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment provided they are fully aware of the potential for exposure, and are able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels considered acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population / uncontrolled exposure and for occupational / controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

3. Tower Compound, Equipment & Posted Signage

The Verizon Wireless equipment is located within an equipment building, forming the northeast side of the tower compound, as shown below in Figure 1.

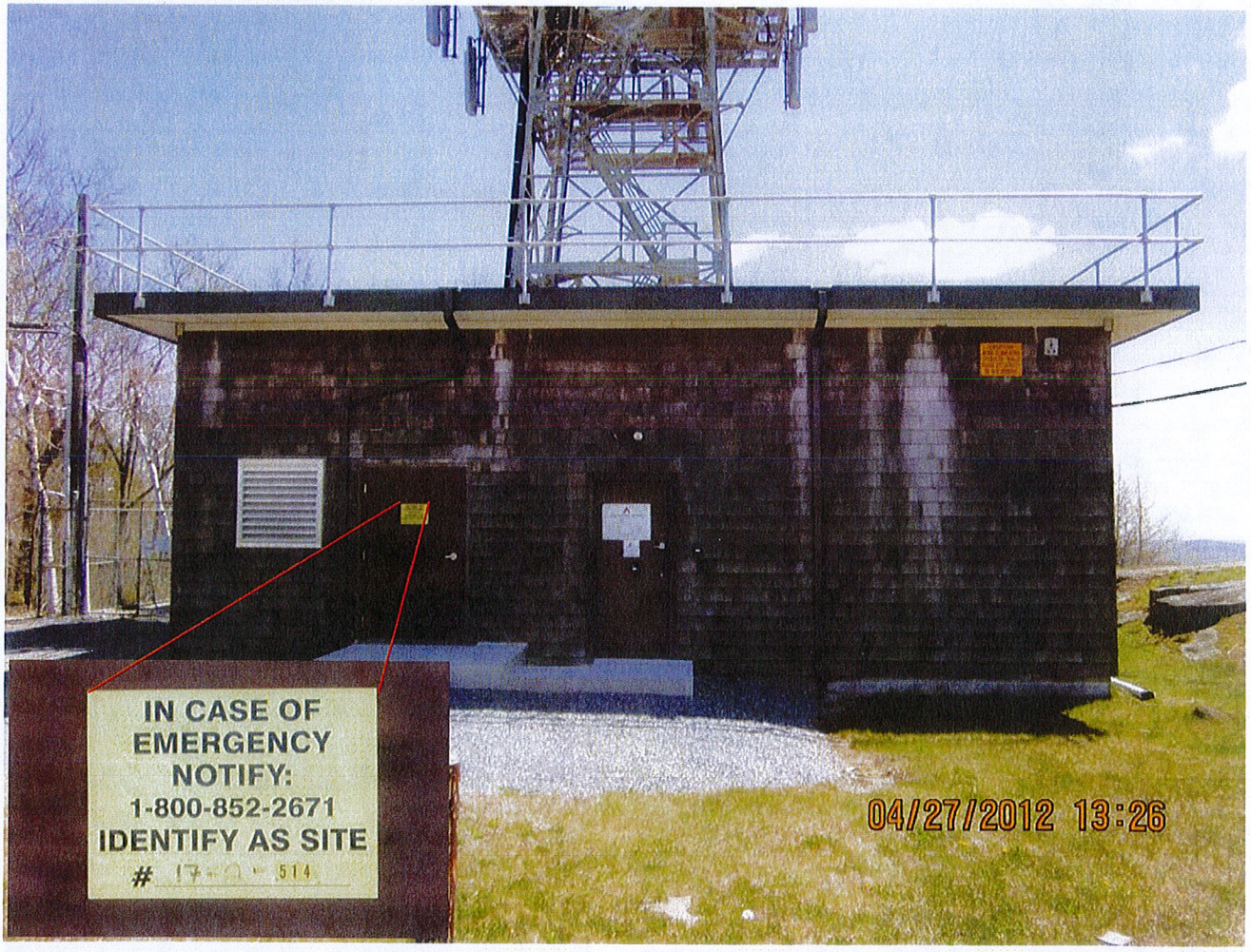


Figure 2: Verizon Wireless Equipment Building

The access gate to the tower compound is around the side of the Verizon Wireless equipment. Figure 3 below also shows the accompanying RF signage posted on the gate.

Figure 3: Tower Compound Access Gate and Signage

Figure 4 and Figure 5 detail the RF Safety signage posted on the southwest and southeast sides of the compound, respectively

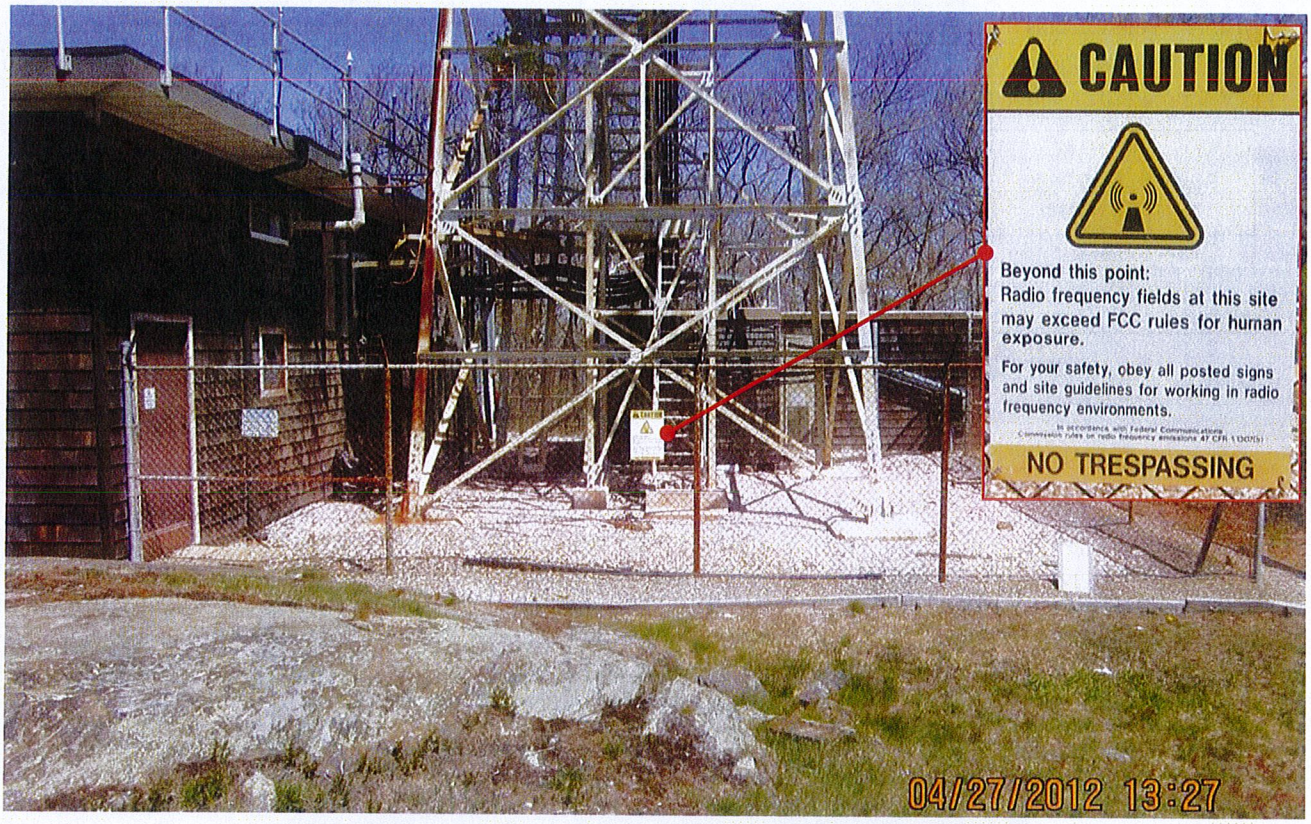


Figure 4: Signage along Southwest Side of Compound

Figure 5: Signage along Southeast Side of Compound

4. Proposed Antenna Inventory

Table 2 below details the proposed Verizon Wireless antennas that will be installed on the existing tower. These are in addition to the existing Verizon Wireless antennas already installed on the tower. These antennas were utilized to perform the theoretical calculations as described in Section 7 of this report.

Sector	TX Freq. (MHz)	Number of Channels	Ant Gain (dBd)	Power ERP (Watts)	Antenna Model	Beam Width	Mech Downtilt	Length (ft)	Antenna Centerline Height (ft)
Alpha	750	2	14.0	2010	BXA-70063-6CF_6	65	2	5.9	46.5
Beta	750	2	14.0	2010	BXA-70063-6CF_6	65	2	5.9	46.5
Gamma	750	2	14.0	2010	BXA-70063-6CF_6	65	2	5.9	46.5

Table 2: Proposed Antenna Inventory[1]

5. Nearby RF Sources

Located within approximately 230'of the tower with Verizon Wireless antennas ("Mohawk Mountain") is a Connecticut State Police tower with antennas in use for numerous government agencies. Because both towers are in the proximity of the survey areas, the measured results will include contributions from the antennas in use on both towers and cannot be pinpointed to one particular RF source.

Shown below is the adjacent CT State Police tower located atop Mohawk Mountain.

Figure 6: Adjacent CT State Police Tower

[1] Transmit power assumes 0 dB of cable loss.

6. Measurement Procedure

Frequencies from 300 KHz to 50 GHz were measured using the Narda Probe EA 5091, E-Field, shaped, FCC probe in conjunction with the NBM550 survey meter. The EA 5091 probe is "shaped" such that in a mixed signal environment (i.e.: more than one frequency band is used in a particular location), it accurately measures the percent of MPE.

From FCC OET Bulletin No. 65 - Edition 97-01 – "A useful characteristic of broadband probes used in multiple-frequency RF environments is a frequency-dependent response that corresponds to the variation in MPE limits with frequency. Broadband probes having such a "shaped" response permit direct assessment of compliance at sites where RF fields result from antennas transmitting over a wide range of frequencies. Such probes can express the composite RF field as a percentage of the applicable MPEs".

Probe Description - As suggested in FCC OET Bulletin No. 65 - Edition 97-01, the response of the measurement instrument should be essentially isotropic, (i.e., independent of orientation or rotation angle of the probe). For this reason, the Narda EA 5091 probe was used for these measurements.

Sampling Description - At each measurement location, a spatially averaged measurement is collected over the height of an average human body. The NBM550 survey meter performs a time average measurement while the user slowly moves the probe over a distance range of 20 cm to 200 cm (about 6 feet) above ground level. The results recorded at each measurement location include average values over the spatial distance.

Instrumentation Information - A summary of specifications for the equipment used is provided in the table below.

Manufacturer	Narda Microwave			
Probe	EA 5091, Serial# 01027			
Calibration Date	December 2010			
Calibration Interval	24 Months			
Meter	NBM550, Serial# B-0495			
Calibration Date	December 2010			
Calibration Interval	24 Months			
Probe Specifications	**Frequency Range**	**Field Measured**	**Standard**	**Measurement Range**
	300 KHz-50 GHz	Electric Field	U.S. FCC 1997 Occupational/Controlled	0.5 – 600 % of Standard

Table 3: Instrumentation Information

Instrument Measurement Uncertainty - The total measurement uncertainty of the NARDA measurement probe and meter is no greater than ±2 dB. The factors which contribute to this include the probe's frequency response deviation, calibration uncertainty, ellipse ratio, and isotropic response. Every effort is taken to reduce the overall uncertainty during measurement collection including pointing the probe directly at the likely highest source of emissions.

7. RF Exposure Prediction Methods

The emission field calculation results displayed in Table 4 were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{1.6^2 \times EIRP}{4\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the antenna pattern

Ground reflection factor of 1.6

These calculations assume that the antenna is operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the finished installation.

8. Measurement Locations & Results

Measured and calculated results of each survey location are detailed in the table below. Measurements were recorded on April 27, 2012 between 1:00PM and 3:00PM. The calculated % MPE contribution from the proposed Verizon 700 MHz LTE antennas was then added to the measured % MPE values in the "Composite % MPE" column. These calculated values incorporate the antenna pattern of the specific antenna model specified by Verizon Wireless to determine the "Off Beam Loss" factor shown in the power density formula from Section 7.[2] All % MPE values are in reference to the FCC Uncontrolled/General Population exposure limit.

Table 4 below lists 30 measurements taken in the vicinity of the CT State Police and Mohawk Mountain tower. The highest spatially averaged measurement was 10.84% (Average Uncontrolled/General Population) and was recorded at Location 8, on the elevated weather station platform within the CT State Police Tower compound. This measurement location is approximately 35' north of the CT State Police tower, and 243' west of the Mohawk Mountain tower hosting the existing and proposed Verizon Wireless antennas. Please note that this location is within a gated compound and not normally accessible to the public. At the time of the survey however, the access gate to the CT State Police tower was unlocked due to technical personnel conducting work within the compound.

The highest composite (measured + calculated) % MPE value is calculated to be 14.52% (Average Uncontrolled/General Population), also at Point 8.

Meas. Location	Latitude	Longitude	Ground Elevation (ft)	Distance from Tower (ft)	Measured % MPE (General Population/ Uncontrolled)	Calculated % MPE (LTE - 750MHz)	Composite % MPE
1	41.82136	-73.29740	1668	270	4.49	3.00	7.48
2	41.82132	-73.29737	1668	260	4.87	3.22	8.09
3	41.82129	-73.29734	1665	251	5.07	3.44	8.51
4	41.82124	-73.29718	1670	208	3.84	4.96	8.80
5	41.82131	-73.29722	1672	218	5.71	4.55	10.26
6	41.82119	-73.29731	1663	247	4.03	3.53	7.56
7	41.82129	-73.29753	1660	303	3.42	2.38	5.79
8	**41.82134**	**-73.29730**	**1679**	**243**	**10.84**	**3.68**	**14.52**
9	41.82143	-73.29737	1670	265	8.76	3.12	11.88
10	41.82132	-73.29726	1670	232	4.73	4.03	8.75
11	41.82168	-73.29738	1671	303	4.09	2.40	6.50
12	41.82192	-73.29778	1658	439	3.65	1.15	4.81
13	41.82179	-73.29691	1678	230	4.91	4.15	9.06
14	41.82150	-73.29695	1679	165	3.27	7.87	11.14
15	41.82121	-73.29702	1674	166	3.55	7.43	10.99
16	41.82101	-73.29675	1666	136	3.37	3.69	7.06
17	41.82114	-73.29654	1676	60	2.50	3.06	5.56
18	41.82121	-73.29648	1677	29	3.54	0.61	4.15
19	41.82126	-73.29631	1675	30	2.87	0.55	3.42
20	41.82129	-73.29665	1679	65	1.98	2.99	4.97
21	41.82139	-73.29668	1680	83	2.48	2.81	5.29
22	41.82140	-73.29654	1678	54	3.80	3.21	7.00
23	41.82138	-73.29639	1674	37	5.24	0.55	5.78
24	41.82169	-73.29653	1673	153	3.82	7.57	11.39
25	41.82176	-73.29666	1674	189	5.02	6.01	11.02
26	41.82192	-73.29702	1672	285	7.88	2.71	10.59
27	41.82179	-73.29722	1674	288	1.03	2.66	3.69
28	41.82201	-73.29561	1651	345	6.31	1.83	8.13
29	41.82245	-73.29679	1621	440	3.38	1.11	4.50
30	41.82255	-73.29793	1604	621	3.96	0.57	4.53

Table 4: Measurement Values [3]

[2] See Attachment C for the specifications and antenna pattern used in this analysis.

[3] For all % MPE calculations in Table 4 ground elevation differences between the tower and the specific measurement point are accounted for, and are based upon conservative estimates from Google Earth™. The ground elevation of the tower is 1677'.

Figures 7 and 8 below are aerial views of the Mohawk Mountain and CT State Police towers, and the surrounding area surveyed. Labeled points indicate the locations of the measurements recorded on April 27, 2012 between 1:00PM and 3:00PM.

Figure 7: Measurement Locations

Figure 8: Measurement Locations - Zoomed In

9. Summary of Findings

A number of publicly accessible areas around the towers located off of Toomey Road in Cornwall, CT were surveyed and found to be well within the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure, as delineated in the Federal Communications Commission's Radio Frequency exposure rules published in 47 CFR 1.1307(b)(1)-(b)(3).

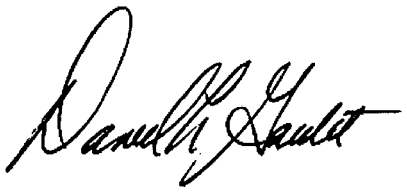
The highest spatially averaged measurement was **10.84%** (Average Uncontrolled/General Population MPE) and was recorded on the elevated weather station platform (measurement location 8). This measurement location is approximately 35' north of the CT State Police tower, and 243' west of the Mohawk Mountain tower.

Adding the calculated values of the proposed 700MHz Verizon Wireless antennas to each of the measured values, results in a maximum spatially averaged power density of **14.52%** (Average Uncontrolled/General Population MPE). This is a **3.68%** increase over the highest measured percent of MPE. This maximum occurs at measurement location 8 and is well below the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure.

The above analysis verifies that the facility does not approach power density levels that would be considered harmful on the ground level, as outlined by the FCC in the OET Bulletin 65 Ed. 97-01.

10. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1, ANSI/IEEE Std. C95.7 and FCC OET Bulletin 65 Edition 97-01.



Daniel L. Goulet
C Squared Systems, LLC

April 30, 2012
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure[4]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure[5]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 5: FCC Limits for Maximum Permissible Exposure

[4] Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

[5] General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

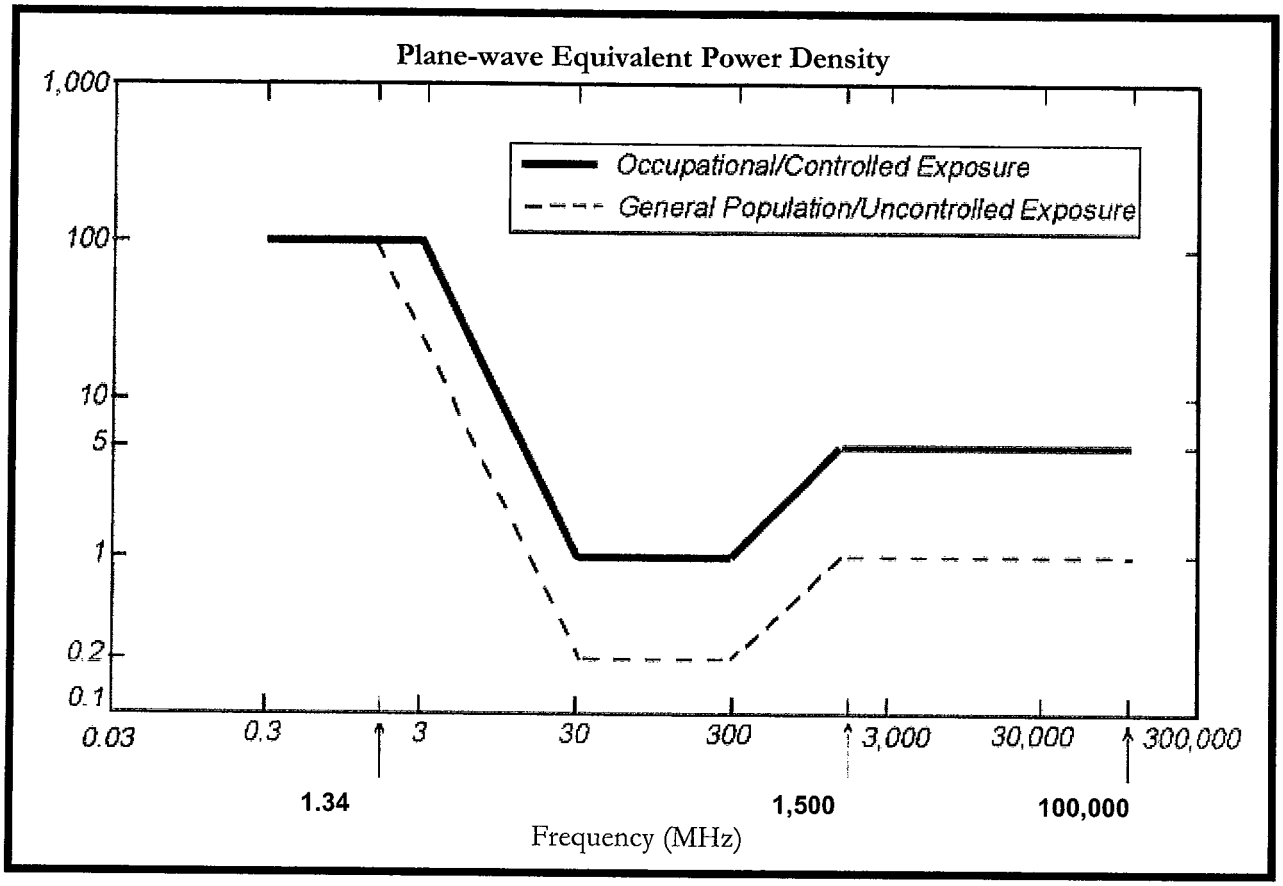
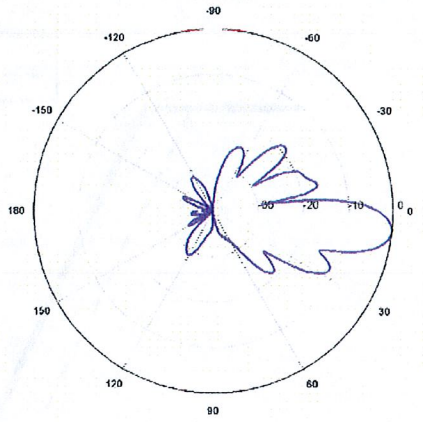


Figure 9: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Antenna Model Data Sheet and Electrical Pattern

700 MHz

Manufacturer:	Amphenol-Antel
Model #:	BXA-70063-6CF_6
Frequency Band:	696-806 MHz
Gain:	14.0 dBd
Vertical Beamwidth:	13°
Horizontal Beamwidth:	65°
Polarization:	± 45°
Length:	71"



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**65 ft Self Supported Tower**
ATC Site Name	:	**Cornwall CT, CT**
ATC Site Number	:	**88009**
Proposed Carrier	:	**Verizon**
Carrier Site Name	:	**Mohawk Mtn CT**
Carrier Site Number	:	**45223 / 181433**
County	:	**Litchfield**
Eng. Number	:	**48661021**
Date	:	**February 31, 2012***
Usage	:	**44% Legs, 95% Diagonals, 17% Horizontals**
Result	:	**Pass**

Submitted by:
Esha Modi
Design Engineer

2/1/2012

American Tower Engineering Services
400 Regency Forest Drive
Cary, NC 27518
Phone: 919-468-0112

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 65 ft Self Supported Tower located at the end of Mohawk Mountain Road, Cornwall, CT 06759, Litchfield County (ATC site #88009). The tower member sizes and geometry were taken from a mapping by CSEI (ATC Job #26472221, dated September 19, 2006).

Analysis

The tower was analyzed using Semaan Engineering Solutions, Inc., Software.

Basic Wind Speed: 80 mph (Fastest Mile)
Radial Ice: 69 mph (Fastest Mile) w/ ½" ice
Code: TIA/EIA-222-F / 2003 IBC, Sec. 1609.1.1, Exception (5) & Sec. 3108.4 / 2005 Connecticut Supplement with 2009 CT Amendments

Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
75.0	6	14" x 9" TTA	Platform w/ Handrails on Fire Warden Cab	(3) 7/8 (12) 1 5/8	Sprint Nextel
	12	EMS RR65-19-02DP			
	3	Decibel ASP-950			
72.0	1	10' Dipole		(2) 7/8	State of CT
	1	8' Yagi			
65.0	1	Fire Warden Cab		-	--
65.0	6	Allgon 7770.00	Standoff	(12) 1 1/4	AT&T Mobility
	6	Powerwave LGP21902			
	6	Powerwave LGP21401			
	6	Powerwave 7020.00 Dual Band RE			
50.0	1	Andrew DB616E-BC	Large Flat Platform	(1) 7/8	US Treasury
	4	10' HP Dish		-	-
48.0	3	TTA		(12) 7/8 (3) 1/2	Alltel
	3	Decibel 776QNB120EXM			

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
46.5	3	Antel BXA-171063/12CF	Large Flat Platform	(12) 1 5/8	Verizon
	3	Antel BXA-70063-6CF			
	6	RFS FD9R6004/2C-3L			
	6	Antel LPA-80063/6CF			

Double stack proposed coax in same location as existing Verizon coax.

Results

The maximum structure usage is: 95%

Leg Forces	Original Design Reactions	Current Analysis Reactions	% Of Design
Uplift (Kips)	60.0	55.1	92
Axial (Kips)	113.9	71.8	63

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

Conclusion

Based on the analysis results, the structure meets the requirements per the TIA/EIA-222-F standard and the 2003 IBC with 2005 CT Supplements and 2009 CT Amendments. The tower and foundation can support the existing and proposed antennas with the transmission line distribution as described in this report.

If you have any questions or require additional information, please call 919-466-5017.

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, the antenna 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 Engineering Services 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.

All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. 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. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/EIA-222.

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

Loads: 80 mph no ice
69 mph w/ 1/2" radial ice

Job Information

Tower : 88009	Location : Cornwall CT, CT	
Code: TIA/EIA-222 Rev F	Shape : Square	Base Width : 19.72 ft
Client : US Treasury		Top Width : 7.00 ft

Sections Properties

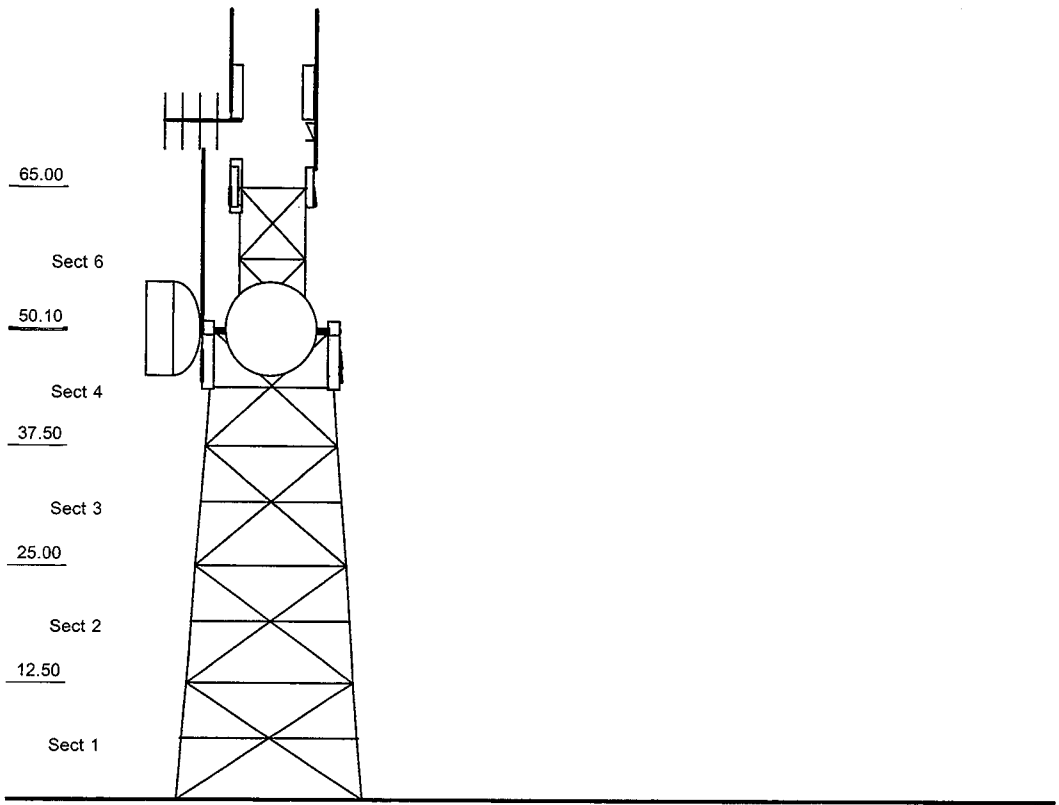
Section	Leg Members		Diagonal Members	Horizontal Members
1 - 2	SAE 33ksi	6X6X0.625	SAU 36ksi 3X4X0.25	DAL 36ksi 3X2.5X0.25
3	SAE 33ksi	6X6X0.5	SAU 36ksi 3.5X3X0.25	DAL 36ksi 3.5X3X0.3125
4	SAE 33ksi	6X6X0.5	SAE 36ksi 3.5X3.5X0.25	DAL 36ksi 3.5X3X0.3125
5	SAE 33ksi	6X6X0.5		
6	SAE 33ksi	6X6X0.5	SAU 36ksi 3X2X0.25	DAL 36ksi 2.5X2X0.25

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
75.00	Whip	3	Decibel ASP-950
75.00	Panel	12	EMS RR65-19-02DP
75.00		6	14" x 9" TTA
72.00	Yagi	1	8' Yagi
72.00	Whip	1	10' Dipole
65.01	Panel	1	Fire Warden Cab
65.00		6	Powerwave 7020.00 Dual Band RE
65.00		6	Powerwave LGP21401
65.00		6	Powerwave LGP21902
65.00	Panel	6	Allgon 7770.00
50.00	Whip	1	Andrew DB616E-BC
50.00	Dish	4	10' HP Dish
50.00	Platform	1	Large Flat Platform
48.00	Panel	3	Decibel 776QNB120EXM
48.00		3	TTA
46.50	Panel	6	Antel LPA-80063/6CF
46.50	Panel	3	Antel BXA-70063/6CF-EDIN-X
46.50	Panel	3	Antel BXA-171063/12CF
46.50		6	RFS FD9R6004/2C-3L
37.50	Platform	1	Platform

Linear Appurtenance

Elev (ft) From	To	Qty	Description
0.000	75.000	3	7/8" Coax
0.000	75.000	12	1 5/8" Coax
0.000	72.000	2	7/8" Coax
0.000	65.000	1	Wave Guide
0.000	65.000	1	Climbing Ladder
0.000	65.000	12	1 1/4" Coax
0.000	50.000	1	7/8" Coax
0.000	48.000	12	7/8" Coax
0.000	48.000	3	1/2" Coax
0.000	46.500	12	1 5/8" Coax



Site Number: 88009
Location: Cornwall CT, CT

Code: TIA/EIA-222 Rev F

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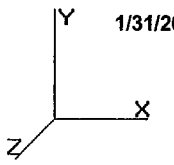

Gh : 1.19

Section Forces

LoadCase Normal No Ice — 80.00 mph Wind Normal To Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
6	57.55	19.21	34.57	29.50	0.00	0.61	1.89	1.00	1.00	0.76	57.06	3.72	0.00	2,884.1	0.0	2,467.96	170.93	2,638.89	1	
5	50.05	18.45	4.30	0.20	0.00	1.00	2.10	1.00	1.00	1.00	4.50	0.02	0.00	338.3	0.0	208.45	1.10	42.99	1	**
4	43.75	17.76	36.30	42.17	0.00	0.47	2.11	1.00	1.00	0.68	65.14	3.13	0.00	4,028.8	0.0	2,909.61	132.59	3,042.21	1	
3	31.25	16.38	38.14	47.04	0.00	0.45	2.15	1.00	1.00	0.67	69.89	3.13	0.00	4,265.2	0.0	2,936.36	122.33	3,058.69	1	
2	18.75	16.38	37.55	47.04	0.00	0.40	2.28	1.00	1.00	0.65	68.21	3.13	0.00	4,378.2	0.0	3,042.31	122.33	3,164.64	1	
1	6.25	16.38	39.43	47.04	0.00	0.37	2.37	1.00	1.00	0.64	69.50	3.13	0.00	4,623.7	0.0	3,223.06	122.33	3,345.39	1	
														20,518.3	0.0			15,292.80		

** = 2QzGhAg Controls

LoadCase Normal Ice — 69.28 mph Wind Normal To Face with Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
6	57.55	14.40	34.57	53.41	23.20	0.84	1.87	1.00	1.00	0.93	84.39	3.72	1.24	4,573.8	1,689.7	2,714.29	153.83	2,868.12	1	
5	50.05	13.84	4.30	1.02	0.76	1.00	2.10	1.00	1.00	1.00	5.32	0.02	0.01	426.9	88.5	184.85	0.99	32.24	1	**
4	43.75	13.32	36.30	75.92	33.14	0.68	1.84	1.00	1.00	0.80	97.25	3.13	1.04	6,333.4	2,304.5	2,846.49	119.33	2,965.82	1	
3	31.25	12.29	38.14	84.43	36.74	0.65	1.85	1.00	1.00	0.79	104.62	3.13	1.04	6,740.2	2,475.0	2,845.57	110.09	2,955.66	1	
2	18.75	12.29	37.55	84.87	37.14	0.58	1.92	1.00	1.00	0.74	100.46	3.13	1.04	6,936.1	2,557.9	2,837.57	110.09	2,947.66	1	
1	6.25	12.29	39.43	85.33	37.55	0.53	1.99	1.00	1.00	0.71	100.36	3.13	1.04	7,294.2	2,670.5	2,937.68	110.09	3,047.77	1	
														32,304.4	11,786.1			14,817.26		

** = 2QzGhAg Controls

LoadCase 45 deg No Ice — 80.00 mph Wind at 45 deg From Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
6	57.55	19.21	34.57	29.50	0.00	0.61	1.89	1.20	1.20	0.76	68.47	3.72	0.00	2,884.1	0.0	2,961.55	170.93	3,132.48	1	
5	50.05	18.45	4.30	0.20	0.00	1.00	2.10	1.20	1.20	1.00	5.40	0.02	0.00	338.3	0.0	250.14	1.10	42.99	1	**
4	43.75	17.76	36.30	42.17	0.00	0.47	2.11	1.20	1.20	0.68	78.16	3.13	0.00	4,028.8	0.0	3,491.54	132.59	3,624.13	1	
3	31.25	16.38	38.14	47.04	0.00	0.45	2.15	1.20	1.20	0.67	83.87	3.13	0.00	4,265.2	0.0	3,523.64	122.33	3,645.97	1	
2	18.75	16.38	37.55	47.04	0.00	0.40	2.28	1.20	1.20	0.65	81.85	3.13	0.00	4,378.2	0.0	3,650.77	122.33	3,773.10	1	
1	6.25	16.38	39.43	47.04	0.00	0.37	2.37	1.20	1.20	0.64	83.40	3.13	0.00	4,623.7	0.0	3,867.67	122.33	3,990.00	1	
														20,518.3	0.0			18,208.66		

** = 2QzGhAg Controls

Site Number: 88009
Location: Cornwall CT, CT

Code: TIA/EIA-222 Rev F

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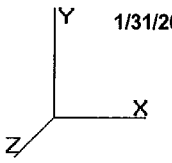

Gh : 1.19

Section Forces

LoadCase 45 deg Ice — **69.28 mph Wind at 45 deg From Face with Ice**

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
6	57.55	14.40	34.57	53.41	23.20	0.84	1.87	1.20	1.20	0.93	101.27	3.72	1.24	4,573.8	1,689.7	3,257.15	153.83	3,410.98	1	
5	50.05	13.84	4.30	1.02	0.76	1.00	2.10	1.20	1.20	1.00	6.39	0.02	0.01	426.9	88.5	221.82	0.99	32.24	1	**
4	43.75	13.32	36.30	75.92	33.14	0.68	1.84	1.20	1.20	0.80	116.70	3.13	1.04	6,333.4	2,304.5	3,415.79	119.33	3,535.11	1	
3	31.25	12.29	38.14	84.43	36.74	0.65	1.85	1.20	1.20	0.79	125.54	3.13	1.04	6,740.2	2,475.0	3,414.68	110.09	3,524.77	1	
2	18.75	12.29	37.55	84.87	37.14	0.58	1.92	1.20	1.20	0.74	120.56	3.13	1.04	6,936.1	2,557.9	3,405.09	110.09	3,515.18	1	
1	6.25	12.29	39.43	85.33	37.55	0.53	1.99	1.20	1.20	0.71	120.43	3.13	1.04	7,294.2	2,670.5	3,525.21	110.09	3,635.30	1	
														32,304.4	11,786.1			17,653.58		

** = 2QzGhAg Controls

Site Number: 88009
Location: Cornwall CT, CT

Code: TIA/EIA-222 Rev F

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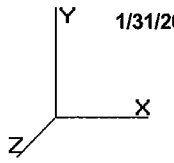

Tower Loading

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Distance From Face (ft)	X Angle (deg)	Vert Ecc (ft)
75.00	Decibel ASP-950	3	14.00	2.520	1.00	32.50	3.450	1.00	0.000	0.00	4.000
75.00	EMS RR65-19-02DP	12	23.00	5.867	0.73	51.51	6.692	0.73	0.000	0.00	0.000
75.00	14" x 9" TTA	6	10.00	1.230	0.50	18.36	1.460	0.50	0.000	0.00	0.000
72.00	8' Yagi	1	30.00	12.000	1.00	127.20	21.590	1.00	0.000	0.00	0.000
72.00	10' Dipole	1	30.00	3.760	1.00	62.00	5.480	1.00	0.000	0.00	0.000
65.01	Fire Warden Cab	1	1500.00	218.40	1.00	2000.00	320.00	1.00	0.000	0.00	0.000
65.00	Powerwave 7020.00 Dual	6	2.20	0.400	0.50	5.10	0.540	0.50	0.000	0.00	0.000
65.00	Powerwave LGP21401	6	14.10	1.290	0.50	21.26	1.530	0.50	0.000	0.00	0.000
65.00	Powerwave LGP21902	6	5.50	0.270	0.50	7.90	0.380	0.50	0.000	0.00	0.000
65.00	Allgon 7770.00	6	35.00	5.880	0.75	68.00	6.430	0.75	0.000	0.00	0.000
50.00	Andrew DB616E-BC	1	51.00	6.730	1.00	98.50	8.700	1.00	0.000	0.00	9.625
50.00	10' HP Dish	4	705.00	99.100	0.80	1310.00	100.75	0.80	0.000	0.00	0.000
50.00	Large Flat Platform	1	4000.00	75.000	1.00	4700.00	95.000	1.00	0.000	0.00	0.000
48.00	Decibel 776QNB120EXM	3	117.00	25.900	0.63	240.76	26.970	0.63	0.000	0.00	0.000
48.00	TTA	3	10.00	1.400	0.50	20.34	1.640	0.50	0.000	0.00	0.000
46.50	Antel LPA-80063/6CF	6	27.00	10.340	0.94	101.00	11.180	0.94	0.000	0.00	0.000
46.50	Antel BXA-70063/6CF-EDIN-X	3	17.00	7.730	0.74	58.00	8.540	0.74	0.000	0.00	0.000
46.50	Antel BXA-171063/12CF	3	15.00	4.790	0.88	42.40	5.460	0.88	0.000	0.00	0.000
46.50	RFS FD9R6004/2C-3L	6	2.00	0.360	0.50	6.00	0.570	0.50	0.000	0.00	1.180
37.50	Platform	1	1200.00	25.000	1.00	1500.00	32.000	1.00	0.000	0.00	0.000
	Totals	79	11000.80			16893.54			Number of Appurtenances : 20		

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Wind	Spread On Faces	Bundling Arrangement
0.00	75.00	1 5/8" Coax	12	1.98	0.82	100.00	1	Separate
0.00	75.00	7/8" Coax	3	1.09	0.33	0.00	1	Separate
0.00	72.00	7/8" Coax	2	1.09	0.33	0.00	1	Separate
0.00	65.00	1 1/4" Coax	12	1.55	0.63	0.00	1	Separate
0.00	65.00	Climbing Ladder	1	3.00	4.00	100.00	Lin App	Separate
0.00	65.00	Wave Guide	1	3.00	5.00	100.00	1	Separate
0.00	50.00	7/8" Coax	1	1.09	0.33	100.00	1	Separate
0.00	48.00	1/2" Coax	3	0.63	0.15	100.00	1	Separate
0.00	48.00	7/8" Coax	12	1.09	0.33	50.00	1	Separate
0.00	46.50	1 5/8" Coax	12	1.98	0.82	50.00	1	Separate

Site Number: 88009
Location: Cornwall CT, CT

Code: TIA/EIA-222 Rev F

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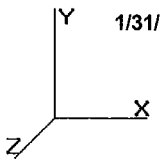

Force/Stress Summary

Section: 1 1 Bot Elev (ft): 0.00 Height (ft): 12.500

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.625	-66.45	45 deg Ice	12.57	50	50	50	63.9	21.2	150.45	0	0	0.00	0.00	44	Member Z
HORIZ DAL - 3X2.5X0.25	-3.50	Normal Ice	17.84	50	50	25	113.3	15.0	39.37	0	0	0.00	0.00	8	Member X
DIAG SAU - 3X4X0.25	-7.12	Normal No Ice	22.57	50	50	50	212.0	4.4	7.49	0	0	0.00	0.00	95	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.625	48.98	45 deg No Ice	33	187.69	0	0	0.00	0.00	26	Member
HORIZ DAL - 3X2.5X0.25	3.40	Normal No Ice	36	75.74	0	0	0.00	0.00	4	Member
DIAG SAU - 3X4X0.25	8.11	Normal Ice	36	48.67	0	0	0.00	0.00	16	Member

Section: 2 1 Bot Elev (ft): 12.50 Height (ft): 12.500

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.625	-51.44	45 deg Ice	12.57	50	50	50	63.9	21.2	150.45	0	0	0.00	0.00	34	Member Z
HORIZ DAL - 3X2.5X0.25	-1.78	Normal No Ice	15.96	50	50	25	101.3	17.1	44.91	0	0	0.00	0.00	3	Member X
DIAG SAU - 3X4X0.25	-7.57	Normal No Ice	21.04	50	50	50	197.6	5.1	8.62	0	0	0.00	0.00	87	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.625	37.77	45 deg No Ice	33	187.69	0	0	0.00	0.00	20	Member
HORIZ DAL - 3X2.5X0.25	2.38	Normal No Ice	36	75.74	0	0	0.00	0.00	3	Member
DIAG SAU - 3X4X0.25	6.78	Normal No Ice	36	48.67	0	0	0.00	0.00	13	Member

Section: 3 1 Bot Elev (ft): 25.00 Height (ft): 12.500

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	-36.73	45 deg Ice	12.57	50	50	50	63.9	21.2	121.67	0	0	0.00	0.00	30	Member Z
HORIZ DAL - 3.5X3X0.3125	-2.38	Normal No Ice	14.08	50	50	25	76.8	20.9	81.04	0	0	0.00	0.00	2	Member X
DIAG SAU - 3.5X3X0.25	-7.87	Normal No Ice	19.56	50	50	50	186.0	5.8	8.97	0	0	0.00	0.00	87	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	25.03	45 deg No Ice	33	151.78	0	0	0.00	0.00	16	Member
HORIZ DAL - 3.5X3X0.3125	3.52	Normal Ice	36	111.44	0	0	0.00	0.00	3	Member
DIAG SAU - 3.5X3X0.25	6.94	Normal No Ice	36	44.92	0	0	0.00	0.00	15	Member

Site Number: 88009
Location: Cornwall CT, CT

Code: TIA/EIA-222 Rev F

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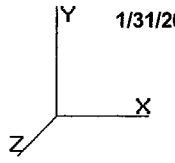

Force/Stress Summary

Section: 4 1 Bot Elev (ft): 37.50 Height (ft): 12.500

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	-21.68	45 deg Ice	12.55	50	50	50	63.8	21.2	121.74	0	0	0.00	0.00	17	Member Z
HORIZ DAL - 3.5X3X0.3125	-1.93	Normal No Ice	12.50	50	50	25	68.2	22.2	85.74	0	0	0.00	0.00	2	Member X
DIAG SAE - 3.5X3.5X0.25	-8.03	Normal No Ice	18.26	50	50	50	157.9	8.0	13.50	0	0	0.00	0.00	59	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	12.44	45 deg No Ice	33	151.78	0	0	0.00	0.00	8	Member
HORIZ DAL - 3.5X3X0.3125	2.32	Normal Ice	36	111.44	0	0	0.00	0.00	2	Member
DIAG SAE - 3.5X3.5X0.25	7.12	Normal No Ice	36	48.67	0	0	0.00	0.00	14	Member

Section: 5 1 Bot Elev (ft): 50.00 Height (ft): 0.100

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	-4.06	Normal No Ice	3.89	50	50	50	0.0	0.0	13,332.	0	0	0.00	0.00	0	User Input
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	3.47	Normal No Ice	33	13,332.	0	0	0.00	0.00	0	User Input
HORIZ	0.00		0	0.00	0	0	0.00	0.00	0	
DIAG	0.00		0	0.00	0	0	0.00	0.00	0	

Section: 6 1 Bot Elev (ft): 50.10 Height (ft): 14.900

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	-10.26	45 deg Ice	7.45	100	100	100	75.8	19.8	113.59	0	0	0.00	0.00	9	Member Z
HORIZ DAL - 2.5X2X0.25	-1.93	45 deg Ice	7.000	100	100	100	198.1	5.1	10.80	0	0	0.00	0.00	17	Member Z
DIAG SAU - 3X2X0.25	-1.38	Normal No Ice	10.22	50	75	50	160.3	7.7	9.22	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SAE - 6X6X0.5	5.96	45 deg No Ice	33	151.78	0	0	0.00	0.00	3	Member
HORIZ DAL - 2.5X2X0.25	0.66	Normal No Ice	36	61.34	0	0	0.00	0.00	1	Member
DIAG SAU - 3X2X0.25	4.16	Normal Ice	36	34.27	0	0	0.00	0.00	12	Member

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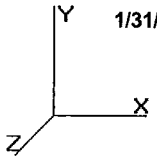

Support Forces Summary

Load Case	Node	FX (kip)	FY (kip)	FZ (kip)
45 deg Ice	1c	-3.64	12.38	-2.26
	1b	-10.44	-47.19	-10.42
	1a	-2.26	12.23	-3.65
	1	-9.01	71.77	-9.02
45 deg No Ice	1c	-2.33	7.97	-4.10
	1b	-9.52	-55.08	-9.51
	1a	-4.10	7.81	-2.34
	1	-11.23	70.83	-11.24
Normal Ice	1c	3.81	51.85	-7.55
	1b	-5.19	-27.25	-8.96
	1a	5.19	-27.25	-8.96
	1	-3.81	51.85	-7.55
Normal No Ice	1c	5.65	49.90	-9.75
	1b	-3.90	-34.14	-8.02
	1a	3.90	-34.14	-8.02
	1	-5.65	49.90	-9.75

(-) = Uplift (+) = Down

Max Uplift:	55.08 (kip)	Moment:	1,755.68 (ft-kip)	45 deg No Ice
Max Down:	71.77 (kip)	Total Down:	31.52 (kip)	
Max Shear:	15.89 (kip)	Total Shear:	38.45 (kip)	

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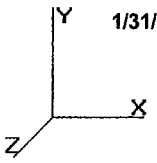

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
69.28 mph Wind Normal To Face with Ice	37.50	0.0225	0.0304	0.3919
	50.00	0.0331	0.0197	1.3553
	65.00	0.2896	0.0076	0.9592
69.28 mph Wind at 45 deg From Face with Ice	37.50	0.0246	0.0271	0.5484
	50.00	0.0356	0.0123	1.8333
	65.00	0.3223	0.0087	1.0936
80.00 mph Wind Normal To Face with No Ice	37.50	0.0227	0.0335	0.3422
	50.00	0.0341	0.0243	1.1584
	65.00	0.2780	0.0079	0.9068
80.00 mph Wind at 45 deg From Face with No Ice	37.50	0.0243	0.0302	0.4922
	50.00	0.0360	0.0190	1.6043
	65.00	0.3084	0.0073	1.0323
		0.0000	0.0000	0.0000