

August 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
2 Allen Raymond Lane, Westport, Connecticut**

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains twelve (12) antennas at the top of the existing 130-foot tower at 2 Allen Raymond Lane in Westport, Connecticut (the “Property”). The Property is owned by Cellco. The tower is owned by American Tower Corporation (“ATC”). Cellco’s use of this tower was approved by the Council in 2010 (Docket No. 391). Cellco now intends to modify its facility by replacing six (6) of its existing antennas with three (3) model SBNHH-1D85C, 700/1900 MHz antennas; and three (3) model SBNHH-1D85C, 2100 MHz antennas, all at the same level on the tower. Cellco also intends to replace install nine (9) remote radio heads (“RRHs”) behind its 700/1900 and 2100 MHz antennas and two (2) HYBRIFLEX™ fiber optic antenna cables inside the monopole tower. 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 letter is being sent to James Marpe, First Selectman for the Town of Westport. A copy of this letter is also being sent to 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).

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1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas and RRHs will be installed at the top of the 130-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:

James Marpe, Westport First Selectman
ATC
Tim Parks

ATTACHMENT 1



SBNHH-1D85C

Andrew® Tri-band Antenna, 698–896 and 2x 1695–2360 MHz, 85° horizontal beamwidth, internal RETs.

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Three internal RETs for independent tilt on all three bands

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	15.6	15.6	17.0	17.6	17.9	17.8
Beamwidth, Horizontal, degrees	82	83	82	79	79	80
Beamwidth, Vertical, degrees	8.9	8.1	5.6	5.2	5.0	4.6
Beam Tilt, degrees	0–10	0–10	0–8	0–8	0–8	0–8
USLS (First Lobe), dB	16	17	14	14	14	15
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	25	25	25	25
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	300	300	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	15.4	15.4	16.6	17.3	17.6	17.6
Gain by all Beam Tilts Tolerance, dB	±0.2	±0.3	±0.6	±0.2	±0.4	±0.3
Gain by Beam Tilt, average, dBi	0° 15.2	0° 15.1	0° 16.6	0° 17.3	0° 17.6	0° 17.5
	5° 15.5	5° 15.4	4° 16.6	4° 17.4	4° 17.7	4° 17.7
	10° 15.5	10° 15.5	8° 16.4	8° 17.2	8° 17.5	8° 17.3
Beamwidth, Horizontal Tolerance, degrees	±2.3	±1.4	±4.5	±2.4	±2.9	±2.6
Beamwidth, Vertical Tolerance, degrees	±0.5	±0.5	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	17	18	15	16	16	17
Front-to-Back Total Power at 180° ± 30°, dB	23	24	27	26	25	27
CPR at Boresight, dB	20	20	21	22	18	25
CPR at Sector, dB	14	16	13	12	11	6

* 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 Brand	Andrew®
Antenna Type	DualPol® multiband
Band	Multiband
Brand	DualPol®
Operating Frequency Band	1695 – 2360 MHz 698 – 896 MHz
Performance Note	Outdoor usage

Mechanical Specifications

Color	Light gray
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SBNHH-1D85C



Lightning Protection	dc Ground
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, maximum	875.0 N @ 150 km/h 196.7 lbf @ 150 km/h
Wind Speed, maximum	241 km/h 150 mph

Dimensions

Depth	180.0 mm 7.1 in
Length	2438.0 mm 96.0 in
Width	301.0 mm 11.9 in
Net Weight	22.5 kg 49.6 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
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
RET System	Teletilt®

Packed Dimensions

Depth	299.0 mm 11.8 in
Length	2561.0 mm 100.8 in
Width	409.0 mm 16.1 in
Shipping Weight	35.0 kg 77.2 lb

Regulatory Compliance/Certifications

Agency

RoHS 2011/65/EU
China RoHS SJ/T 11364-2006
ISO 9001:2008

Classification

Compliant by Exemption
Above Maximum Concentration Value (MCV)
Designed, manufactured and/or distributed under this quality management system



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.

Product Specifications

COMMSCOPE®

SBNHH-1D85C

POWERED BY



* Footnotes

Performance Note

Severe environmental conditions may degrade optimum performance

ALCATEL-LUCENT B13 RRH4X30-4R

Alcatel-Lucent B13 Remote Radio Head 4x30-4R 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.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B13 RRH4x30-4R allows operators to have a compact radio solution to deploy LTE in the 700U band (700 MHz, 3GPP band 13), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.



The Alcatel-Lucent B13 RRH4x30-4R 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 and up to 10MHz instantaneous bandwidth.

The Alcatel-Lucent B13 RRH4x30-4R is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

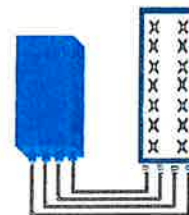
Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 700 MHz band (700U, 3GPP band 13)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- 10MHz 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 700U band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through MIMO4
- Increases LTE coverage thanks to 4Rx 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

TECHNICAL SPECIFICATIONS

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	U700 (C) (3GPP bands 13): DL: 746 - 756 MHz / UL: 777 - 787 MHz
Instantaneous bandwidth - #carriers	10MHz – 1 LTE carrier (in 10MHz occupied bandwidth)
LTE carrier bandwidth	10 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure – RX Diversity scheme	2 dB typ. (<2.5 dB max) – 2 or 4 way Rx diversity
Sizes (HxWxD) in mm (in.)	550 x 305 x 230 (21.6" x 12.0" x 9") (with solar shield)
Volume in L	38 (with solar shield)
Weight in kg (lb) (w/o mounting HW)	26 (57.2) (with solar shield)
DC voltage range	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption
DC power consumption	550W typical @100% RF load (in 2Tx or 4TX mode)
Environmental conditions	-40°C (-40°F) / +55°C (+131°F) IP65
Wind load (@150km/h or 93mph)	Frontal: <200N / Lateral : <150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate7, 9.8 Gbps) SFP single mode dual fiber
AISG interfaces	1 AISG2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) – 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

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ALCATEL-LUCENT WIRELESS PRODUCT DATASHEET RRH2X60-1900A-4R FOR BAND 2/25 APPLICATIONS

The Alcatel-Lucent RRH2x60-1900A-4R is a high power, small form factor Remote Radio Head operating in the PCS 1900MHz frequency band for WCDMA and LTE technologies. It is designed with an eco-efficient approach, providing operators with the means to achieve high quality and high capacity coverage with minimum site requirements and efficient operation.



A distributed Node B expands the deployment options by using two components, a Base Band Unit (BBU) containing the digital assets and a separate RRH containing the radio-frequency (RF) elements. This modular design optimizes available space and allows the main components of a Node B to be installed separately, within the same site or several kilometers apart.

The Alcatel-Lucent RRH2x60-1900A-4R is linked to the BBU by an optical-fiber connection carrying downlink and uplink digital radio signals along with operations,

administration and maintenance (OA&M) information.

SUPERIOR RF PERFORMANCE

The Alcatel-Lucent RRH2x60-1900A-4R integrates all the latest technologies. This allows operators to offer best-in-class characteristics.

It delivers an outstanding 120 watts of total RF power thanks to its two transmit RF paths of 60 W each.

It is ideally suited to support multiple-input multiple-output (MIMO) 2x2 operation.

It includes four RF receivers to natively support 4-way uplink reception diversity. This improves the radio uplink coverage and this can be used to extend the cell radius commensurate with 2x2MIMO 2x60 W for the downlink.

The latest generation power amplifiers (PA) used in this product achieve high efficiency (>40%), resulting in improved power consumption figures.

OPTIMIZED TCO

The Alcatel-Lucent RRH2x60-1900A-4R is designed to make available all the benefits of a distributed Node B, with excellent RF characteristics, with low capital expenditures (CAPEX) and low operating expenditures (OPEX).

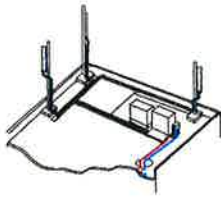
The Alcatel-Lucent RRH2x60-1900A-4R is a very cost-effective solution to deploy LTE MIMO.

EASY INSTALLATION

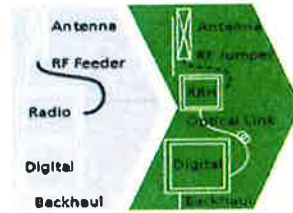
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-1900A-4R installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

The Alcatel-Lucent RRH2x60-1900A-4R is a zero-footprint solution and is convection cooled without fans for silent operation, simplifying negotiations with site property owners and minimizing environmental impacts.

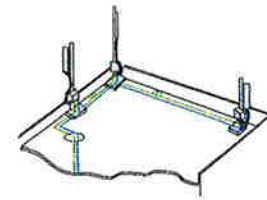
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-1900A-4R is compact and weighs about 21 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

FEATURES

- RRH2x60-1900A-4R integrates two power amplifiers of 60W rating (at each antenna connector)
- RRH2x60-1900A-4R can operate WCDMA only, LTE only or a mix of WCDMA and LTE
- RRH2x60-1900A-4R offers the possibility for WCDMA (non MIMO) to operate the two radio chains independently (2 blocks of 20 MHz anywhere in the band)

- RRH2x60-1900A-4R is a very compact and lightweight product
- Advanced power management techniques are embedded to provide power savings, such as PA bias control

BENEFITS

- MIMO deployment and/or WCDMA and LTE simultaneous operation with only one single unit per sector
- Improved uplink coverage with built-in 4-way receive diversity capability
- RRH can be mounted close to the antenna, eliminating nearly all losses

in RF cables and thus reducing power consumption by 50% compared to conventional solutions

- Distributed configurations provide easily deployable and cost-effective solutions, near zero footprint and silent solutions, with minimum impact on the neighborhood, which ease the deployment
- RETA and TMA support without additional hardware thanks to the AISG v2.0 port and the integrated Bias-Tees. Bias-Tees support AISG DC supply and signaling.

TECHNICAL SPECIFICATIONS

Specifications listed are hardware capabilities. Some capabilities depend on support in a specific software release or future release.

Dimensions and weights

- HxWxD : 500x285x208 mm (30l with solar shield)
- Weight : 21 kg (46 lbs) (with solar shield)

Electrical Data

- Power Supply : -48V DC (-40.5 to -57V)
- Power Consumption: 460W typ. @2x60W (100%RF)

RF Characteristics

- Supported spectrum: DL 1930-1990 / UL 1850-1910
- Frequency band: 3GPP band 2/25
- Output power: 2x60W at antenna connectors
- Technology supported: W-CDMA and LTE
- Instantaneous bandwidth: 20 MHz (MIMO) or 2x20 MHz (non MIMO)
- Rx diversity: 2-way and 4-way uplink reception

- Typical sensitivity without Rx diversity: -124.8dBm for WCDMA and -105 dBm for LTE

Connectivity

- Two CPRI optical ports for daisy chaining and up to six RRHs per fiber
- Type of optical fiber: Single-Mode (SM) and Multi-Mode (MM) SFPs
- Optical fiber length: up to 500m using MM fiber, up to 15km using SM fiber
- TMA/RETA: AISG 2.0 (RS485 connector and internal Bias-Tee)
- Six external alarms
- Surge protection for all external ports (DC and RF)

Environmental specifications

- Operating temperature: -40°C to 55°C including solar load
- Operating relative humidity: 8% to 100%

- Environmental Conditions: ETS300-019-1-4 class4.1E
- Ingress Protection: IEC 60529 IP65
- Acoustic Noise : Noiseless (natural convection cooling)

Safety and Regulatory Data

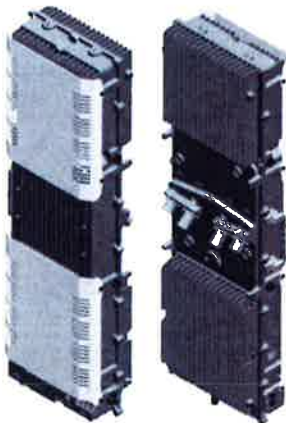
- EMC : 3GPP 25113, EN 301 489-1, EN 301 489-23, GR 1089
- Safety : IEC60950-1, EN 60825-1
- Regulatory: CE Mark-European Directive 2002/95/EC (RoHS), 2002/96/EC (WEEE), 1999/5/EC (R&TTE)
- Health : EN 50385

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ALCATEL-LUCENT WIRELESS PRODUCT DATASHEET B4 RRH2X60-4R FOR AWS BAND APPLICATIONS

The Alcatel-Lucent B4 RRH2x60-4R is a high power, small form factor Remote Radio Head operating in the AWS frequency band (3GPP Band 4) for LTE technology. It is designed with an eco-efficient approach, providing operators with the means to achieve high quality and high capacity coverage with minimum site requirements and efficient operation.



A distributed Node B expands the deployment options by using two components, a Base Band Unit (BBU) containing the digital assets and a separate RRH containing the radio-frequency (RF) elements. This modular design optimizes available space and allows the main components of a Node B to be installed separately, within the same site or several kilometers apart.

The Alcatel-Lucent B4 RRH2x60-4R is linked to the BBU by an optical-fiber connection carrying downlink and uplink digital radio signals along with operations, administration and maintenance (OA&M) information.

SUPERIOR RF PERFORMANCE

The Alcatel-Lucent B4 RRH2x60-4R integrates all the latest

technologies. This allows operators to offer best-in-class characteristics.

It delivers an outstanding 120 watts of total RF power thanks to its two transmit RF paths of 60 W each.

It is ideally suited to support multiple-input multiple-output (MIMO) 2x2 operation.

It includes four RF receivers to natively support 4-way uplink reception diversity. This improves the radio uplink coverage and this can be used to extend the cell radius commensurate with 2x2MIMO 2x60 W for the downlink.

It supports multiple discontinuous LTE carriers within an instantaneous bandwidth of 45 MHz corresponding to the entire AWS B4 spectrum.

The latest generation power amplifiers (PA) used in this product achieve high efficiency (>40%), resulting in improved power consumption figures.

OPTIMIZED TCO

The Alcatel-Lucent B4 RRH2x60-4R is designed to make available all the benefits of a distributed Node B, with excellent RF characteristics, with low capital expenditures (CAPEX) and low operating expenditures (OPEX).

The Alcatel-Lucent B4 RRH2x60-4R is a very cost-effective solution to deploy LTE MIMO.

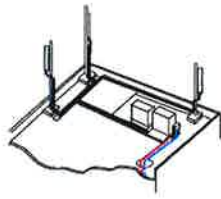
EASY INSTALLATION

The B4 RRH2x60-4R includes a reversible mounting bracket which allows for ease of installation behind an antenna, or on a rooftop knee wall while providing easy access to the mid body RF connectors.

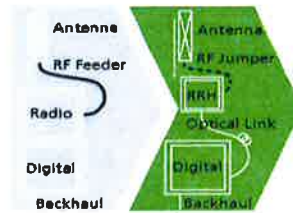
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent B4 RRH2x60-4R installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

The Alcatel-Lucent B4 RRH2x60-4R is a zero-footprint solution and is convection cooled without fans for silent operation, simplifying negotiations with site property owners and minimizing environmental impacts.

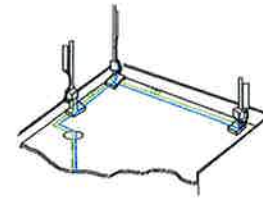
Installation can easily be done by a single person as the Alcatel-Lucent B4 RRH2x60-4R is compact and weighs about 25 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

FEATURES

- B4 RRH2x60-4R integrates two power amplifiers of 60W rating (at each antenna connector)
- Support multiple carriers over the entire 3GPP band 4
- B4 RRH2x60-4R is optimized for LTE operation
- B4 RRH2x60-4R is a very compact and lightweight product
- Advanced power management techniques are embedded to provide power savings, such as PA bias control

BENEFITS

- MIMO LTE operation with only one single unit per sector
- Improved uplink coverage with built-in 4-way receive diversity capability
- RRH can be mounted close to the antenna, eliminating nearly all losses in RF cables and thus reducing power consumption by 50% compared to conventional solutions
- Distributed configurations provide easily deployable and cost-effective solutions, near zero footprint and

silent solutions, with minimum impact on the neighborhood, which ease the deployment

- RETA and TMA support without additional hardware thanks to the AISG v2.0 port and the integrated Bias-Tees. Bias-Tees support AISG DC supply and signaling.

TECHNICAL SPECIFICATIONS

Specifications listed are hardware capabilities. Some capabilities depend on support in a specific software release or future release.

Dimensions and weights

- HxWxD : 930x270x146 mm (with solar shield)
- Weight : 25 kg (55 lbs) (with solar shield)

Electrical Data

- Power Supply : -48V DC (-38 to -57V)
- Power Consumption: 346W typ. @2x30W (100%RF), 560W typ. @2x60W (100%RF)

RF Characteristics

- Frequency band: 1710-1755, UL / 2110-2155 MHz, DL (3GPP band 4)
- Output power: 2x60W at antenna connectors
- Technology supported: LTE
- Instantaneous bandwidth: 45 MHz
- Rx diversity: 2-way and 4-way uplink reception
- Typical sensitivity without Rx diversity: -105 dBm for LTE

Connectivity

- Two CPRI (3-6) optical ports for daisy chaining and up to six RRHs per fiber
- Type of optical fiber: Single-Mode (SM) and Multi-Mode (MM) SFPs
- Optical fiber length: up to 300m using MM fiber, up to 15km using SM fiber
- TMA/RETA : AISG 2.0 (RS485 connector and internal Bias-Tee)
- Four external alarms
- Surge protection for all external ports (DC and RF)

Environmental specifications

- Operating temperature: -40°C to 55°C including solar load
- Operating relative humidity: 8% to 100%
- Environmental Conditions : ETS 300 019-1-4 class 4.1E
- Ingress Protection : IEC 60529 IP65

- Acoustic Noise : Noiseless (natural convection cooling)

Safety and Regulatory Data

- EMC : 3GPP 25113, EN 301 489-1, EN 301 489-23, GR 1089, GR 3108, OET-65
- Safety : IEC60950-1, EN 60825-1, UL, ANSI/NFPA 70, CAN/CSA-C22.2
- Regulatory : FCC Part 15 Class B
- Health : EN 50385

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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.

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



Figure 1: HYBRIFLEX Series

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, 8.4mm ² (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)		(mm (AWG))	8.4 (8)
Quantity, Wire Count (Power)			16 (8 pairs)
Size (Alarm)		(mm (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 to 149)
Operation Temperature		(°C (°F))	-40 to +65 (-40 to 149)

* This data is provisional and subject to change

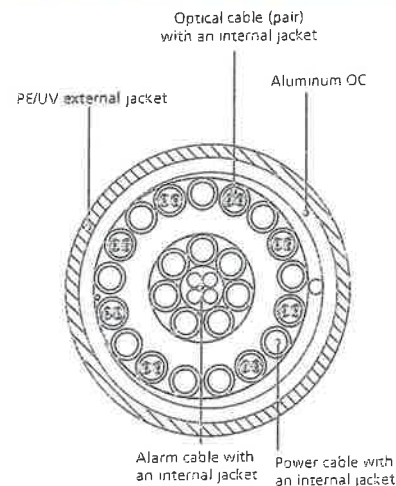


Figure 2: Construction Detail

All information contained in the present datasheet is subject to confirmation at time of ordering.

ATTACHMENT 2

Site Name: Cranbury (Westport) Tower Height: 130Ft.		General		Power	Density						
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total			
*T-Mobile	4	1167	110	1900/2100	0.1552	1.0000	1.55%				
*T-Mobile	2	2335	110	1900/2100	0.1553	1.0000	1.55%				
*T-Mobile	1	865	110	700	0.0288	0.4667	0.62%				
*Clearwire	2	153	120	2496	0.0085	1.0000	0.08%				
*Clearwire	1	211	120	11 GHz	0.0058	1.0000	0.06%				
*Nextel	12	100	144	851	0.0227	0.5673	0.40%				
*Sprint	2	693	120	1900	0.0384	1.0000	0.38%				
*Sprint	1	390	120	850	0.0108	0.5667	0.19%				
*Sprint	2	693	120	2500	0.0384	1.0000	0.38%				
*AT&T	3	427	102	1900	0.0500	1.0000	0.50%				
*AT&T	7	296	102	880	0.0809	0.5867	1.38%				
*AT&T	1	500	102	880	0.0195	0.5867	0.33%				
*AT&T	1	500	102	1900	0.0195	1.0000	0.20%				
*AT&T	1	500	102	740	0.0195	0.4933	0.40%				
Verizon PCS	1	1802	134	0.0361	1970	1.0000	3.61%				
Verizon Cellular	9	347	134	0.0625	869	0.5793	10.79%				
Verizon AWS	1	1940	134	0.0388	2145	1.0000	3.88%				
Verizon 700	1	625	134	0.0125	746	0.4973	2.52%			28.83%	
* Source: Siting Council											

ATTACHMENT 3



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 130 ft Monopole
ATC Site Name : Cranburysu CT, CT
ATC Site Number : 411189
Engineering Number : OAA680236_C3_03
Proposed Carrier : Verizon
Carrier Site Name : Cranbury
Carrier Site Number : 118152
Site Location : 2 Sunny Lane
Westport, CT 06880-1906
41.162917,-73.373083
County : Fairfield
Date : August 3, 2016
Max Usage : 61%
Result : Pass

Reviewed by:
Scott Wirgau, PE
Structural Team Leader



Prepared By:
Max McLean
Engineer Intern

Aug 3 2016 5:38 PM

cosign

COA: PEC.0001553



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Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	2
Proposed Equipment	2
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Deflection, Twist, and Sway.....	3
Standard Conditions	4
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 130 ft monopole to reflect the change in loading by Verizon.

Supporting Documents

Tower Drawings	EI Job #10847, dated June 7, 2002
Foundation Drawing	EI Project #943071, dated March 30, 1999
Geotechnical Report	ERL Project #05443-53, dated November 12, 1996

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:	95 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	No Ice Considered
Code:	ANSI/TIA-222-G / 2003 IBC w/ 2005 CT Supplement & 2009 CT Amendment
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	$S_s = 0.23$, $S_1 = 0.07$
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					
128.0	134.0	3	Antel BXA-171085-8BF-EDIN-X	Low Profile Platform	(12) 1 5/8" Coax	Verizon
		4	Decibel DB846F65ZAXY			
		2	Antel LPA-80080/6CF			
121.0	125.0	3	Alcatel-Lucent 800MHz RRH	Low Profile Platform	(6) 1 5/8" Coax (3) 1 1/4" Coax (3) 0.78" 8 AWG 6 (3) 0.39" Fiber Trunk (2) 2" Conduit (1) 1/2" Coax	Sprint Nextel
		3	Alcatel-Lucent 1900MHz RRH			
		3	Kathrein 840 10054 (30 lb)			
		1	Andrew VHLP800-11 (49 lbs)			
		6	RFS APXVSP18-C-A20			
110.0	113.0	3	Ericsson KRY 112 71	Low Profile Platform	(12) 1 5/8" Coax (6) 7/8" Coax (1) 7/8" Fiber	T-Mobile
		3	Ericsson RRUS 11 B12			
		3	EMS RR90-17-02DP			
		6	Ericsson AIR 21, 1.3 M, B2A B4P			
		3	Commscope LNX-6515DS-VTM			
100.0	104.0	6	Powerwave 7020	Low Profile Platform	(5) 7/8" Coax (12) 1 5/8" Coax (2) 0.78" 8 AWG 6 (1) 3" conduit (1) 0.39" Fiber Trunk	AT&T Mobility
		1	GPS			
		12	Powerwave LGP21401			
		1	Raycap DC6-48-60-18-8F			
		3	Ericsson RRUS-11 (50 lbs.)			
		3	Ericsson RRUS 12 w/ RRUS A2			
		6	Powerwave 7770.00			
		3	CCI HPA-65R-BUU-H6			
		100.0	12			
	91.0	91.0	-			
80.0	80.0	1	GPS	Side Arm	(1) 1/2" Coax	T-Mobile
75.0	75.0	1	GPS	Flush	(1) 1/2" Coax	Sprint Nextel
60.0	60.0	1	GPS	Side Arm	(1) 1/2" Coax	AT&T Mobility

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
129.0	130.0	3	Amphenol Antel BXA-171085-8BF-EDIN-X	-	(6) 1 5/8" Coax	Verizon
	129.0	3	Powerwave P65-16-XL-2			
72.0	72.0	1	2" x 8" GPS	Stand-Off	(1) 0.63" LDF4-50A	
68.0	68.0	1	2" x 8" GPS	Stand-Off	(1) 0.63" LDF4-50A	



Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
128.0	134.0	3	Alcatel-Lucent RRH2X60-1900	Low Profile Platform	(2) 1 5/8" Fiber	Verizon
		3	Alcatel-Lucent RRH2X60-AWS			
		3	Alcatel-Lucent RRH2x60 700			
		2	RFS DB-T1-6Z-8AB-0Z			
		6	Commscope SBNHH-1D85C			
76.0	76.0	1	2" x 8" GPS	Stand-Off	(1) 0.63" LDF4-50A	Verizon
75.0	75.0	1	2" x 8" GPS	Stand-Off	(1) 0.63" LDF4-50A	Verizon

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

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	45%	Pass
Shaft	45%	Pass
Base Plate	61%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	5,110.7	6,899.4	3,347.6	49%
Shear (Kips)	42.6	57.5	34.3	60%

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

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

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
128.0	Alcatel-Lucent RRH2X60-AWS	Verizon	0.780	0.645
	Alcatel-Lucent RRH2X60-1900			
	Alcatel-Lucent RRH2x60 700			
	RFS DB-T1-6Z-8AB-0Z			
	Commscope SBNHH-1D85C			
121.0	Andrew Microwaves VHLP800-11 (49 lbs)	Sprint Nextel	0.702	0.636

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



Standard Conditions

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

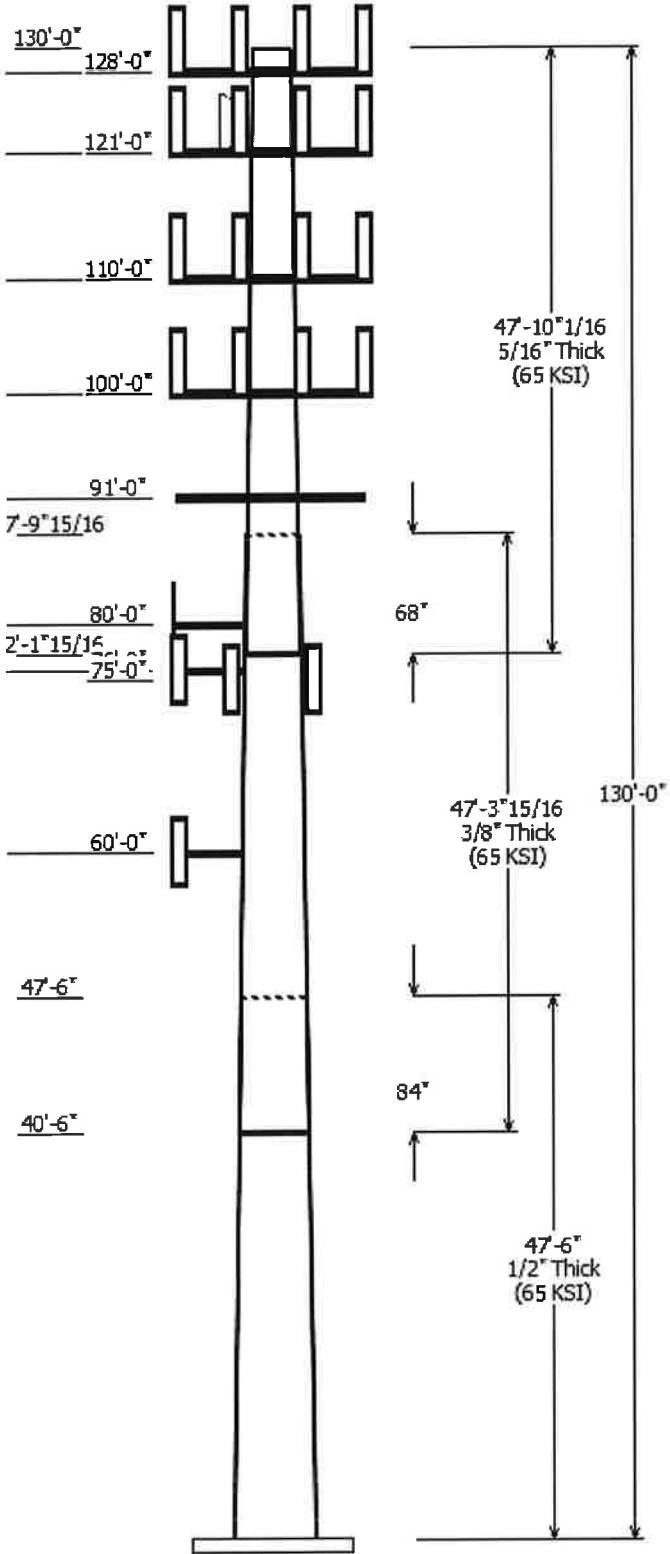
- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements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

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

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

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

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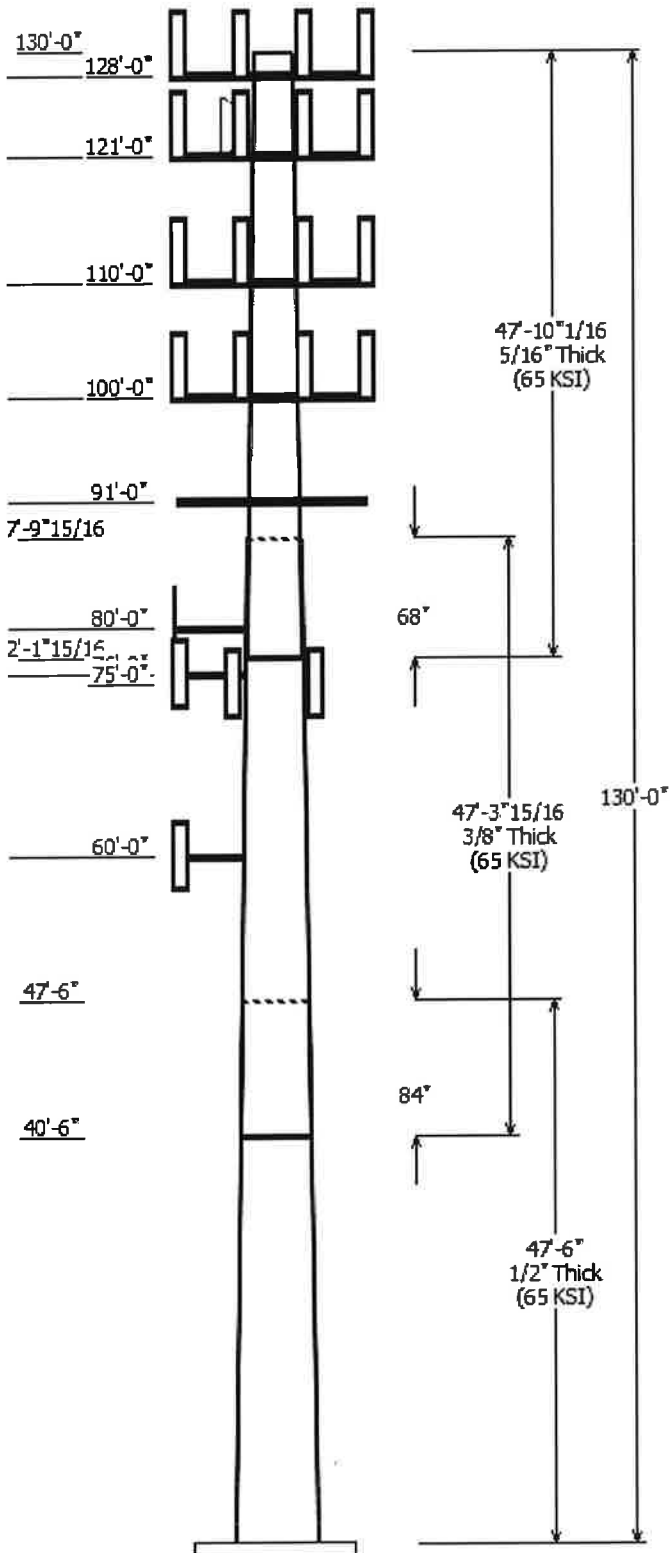


Job Information	
Pole :	411189
Code:	ANSI/TIA-222-G
Description :	130 ft \square Monopole
Client :	Verizon Wireless
Struct Class :	II
Location :	Cranburysu CT, CT
Shape :	18 Sides
Exposure :	C
Height :	130.00 (ft)
Topo :	1
Base Elev (ft):	0.00
Taper:	0.27074(in/ft)

Sections Properties								
Section	Length (ft)	Diameter (in)		Thick Joint (in)	Type	Overlap		Steel Grade (ksi)
		Across Top	Across Bottom			Length (in)	Taper (in/ft)	
1	47.500	49.14	62.00	0.500		0.000	0.270700	65
2	47.330	38.97	51.78	0.375	Slip Joint	84.000	0.270700	65
3	47.837	28.17	41.13	0.313	Slip Joint	68.000	0.270700	65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
128.000	134.000	6	Commscope SBNHH-1D85C
128.000	134.000	2	RFS DB-T1-6Z-8AB-0Z
128.000	134.000	3	Alcatel-Lucent RRH2x60 700
128.000	134.000	3	Alcatel-Lucent RRH2X60-1900
128.000	134.000	3	Alcatel-Lucent RRH2X60-AWS
128.000	134.000	3	Amphenol Antel BXA-171085-
128.000	134.000	2	Antel LPA-80080/6CF
128.000	128.000	1	Flat Low Profile Platform
128.000	134.000	4	Decibel DB846F65ZAXY
121.000	125.000	6	RFS APXVSP18-C-A20
121.000	125.000	3	Kathrein Scala 840 10054 (30 l
121.000	125.000	3	Alcatel-Lucent 800MHz RRH
121.000	125.000	3	Alcatel-Lucent 1900MHz RRH
121.000	121.000	1	Flat Low Profile Platform
121.000	125.000	1	Andrew Microwaves VHLP800-
110.000	113.000	3	Ericsson KRY 112 71
110.000	113.000	6	Ericsson AIR 21, 1.3 M, B2A B4
110.000	113.000	3	EMS RR90-17-02DP
110.000	113.000	3	Commscope LNX-6515DS-VTM
110.000	110.000	1	Flat Low Profile Platform
110.000	113.000	3	Ericsson RRUS 11 B12
100.000	104.000	3	CCI HPA-65R-BUU-H6
100.000	104.000	3	Ericsson RRUS 12 w/ RRUS A2
100.000	104.000	3	Ericsson RRUS-11 (50 lbs.)
100.000	104.000	1	GPS
100.000	104.000	1	Raycap DC6-48-60-18-8F
100.000	104.000	12	Powerwave Allgon LGP21401
100.000	104.000	6	Powerwave Allgon 7770.00
100.000	104.000	6	Powerwave Allgon 7020
100.000	100.000	12	Powerwave Allgon LGP21901
100.000	100.000	1	Flat Low Profile Platform
91.000	91.000	1	Empty Flat Low Profile Platfor
80.000	80.000	1	Flat Side Arm
80.000	80.000	1	GPS
76.000	76.000	1	Stand-Off
76.000	76.000	1	2" x 8" GPS
75.000	75.000	1	2" x 8" GPS
75.000	75.000	1	GPS
60.000	60.000	1	Side Arm
60.000	60.000	1	GPS

Linear Appurtenance			
Elev (ft)			Exposed
From	To	Description	To Wind

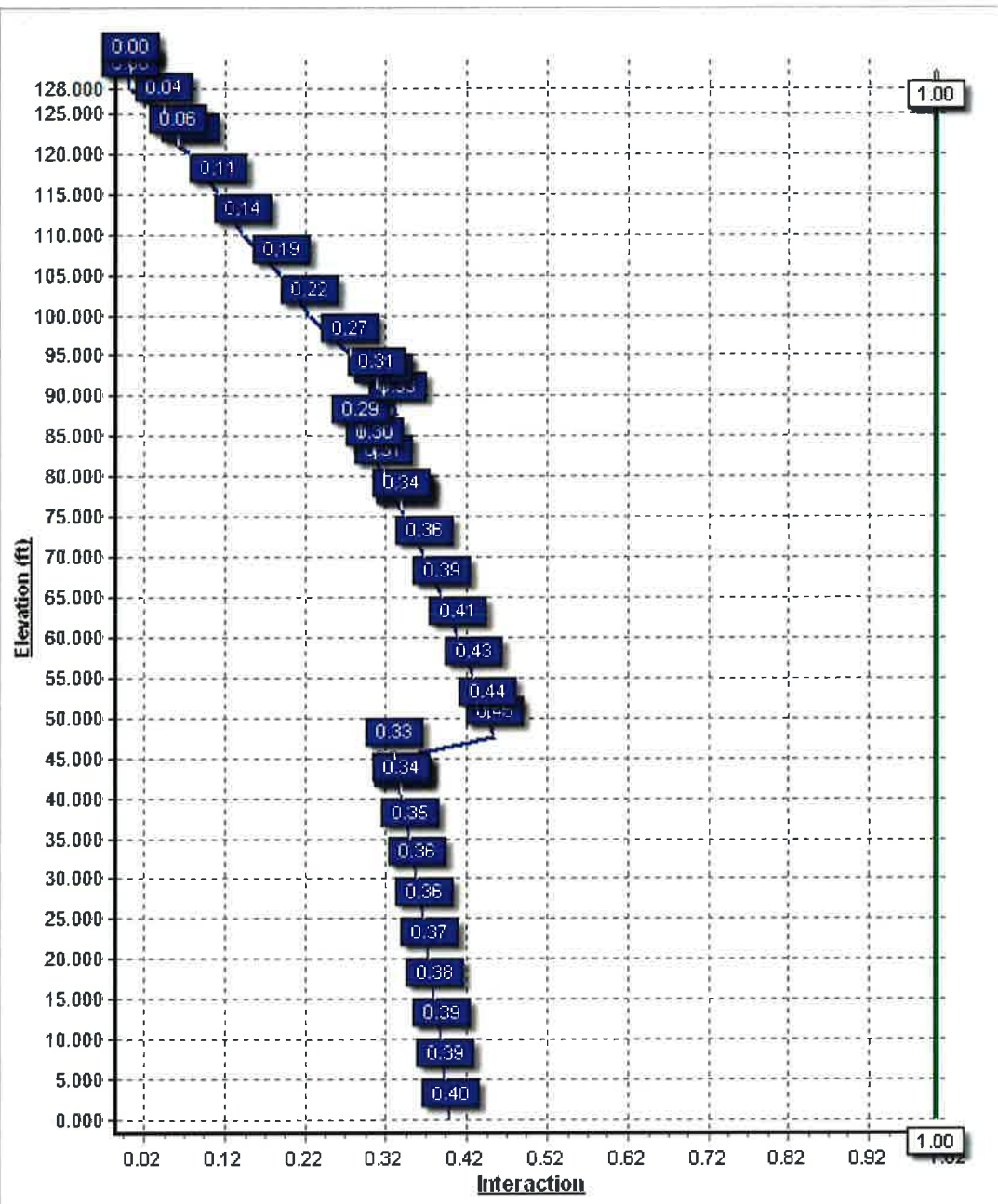


0.000	60.000	1/2" Coax	No
0.000	75.000	0.63" LDF4-50A	No
0.000	75.000	1/2" Coax	No
0.000	76.000	0.63" LDF4-50A	No
0.000	80.000	1/2" Coax	No
0.000	100.0	0.39" Fiber Trunk	No
0.000	100.0	0.78" 8 AWG 6	No
0.000	100.0	1 5/8" Coax	No
0.000	100.0	3" conduit	No
0.000	100.0	7/8" Coax	No
0.000	110.0	1 5/8" Coax	No
0.000	110.0	7/8" Coax	No
0.000	110.0	7/8" Fiber	No
0.000	121.0	0.39" Fiber Trunk	No
0.000	121.0	0.78" 8 AWG 6	No
0.000	121.0	1 1/4" Coax	No
0.000	121.0	1 5/8" Coax	No
0.000	121.0	1/2" Coax	No
0.000	121.0	2" Conduit	No
0.000	128.0	1 5/8" Coax	Yes
0.000	128.0	1 5/8" Coax	No
0.000	128.0	1 5/8" Fiber	No

Load Cases	
1.2D + 1.6W	95 mph with No Ice
0.9D + 1.6W	95 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	0 mph with 0.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	3347.56	34.33	56.27
0.9D + 1.6W	3330.77	34.32	42.20
1.2D + 1.0Di + 1.0Wi	0.00	0.00	54.17
(1.2 + 0.2Sds) * DL + E E LFM	298.35	3.09	56.13
(1.2 + 0.2Sds) * DL + E E MAM	321.09	3.25	56.13
(0.9 - 0.2Sds) * DL + E E LFM	296.56	3.09	38.29
(0.9 - 0.2Sds) * DL + E E MAM	319.00	3.25	38.29
1.0D + 1.0W	831.98	8.56	46.92

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	121.00	8.423	0.636



Site Number: 411189

Code: ANSI/TIA-222-G © 2007 - 2016 by ATC IP LLC. All rights reserved.

Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Analysis Parameters

Location:	Fairfield County, CT	Height (ft):	130
Code:	ANSI/TIA-222-G	Base Diameter (in):	62.00
Shape:	18 Sides	Top Diameter (in):	28.18
Pole Type:	Taper	Taper (in/ft) :	0.271
Pole Manufacturer:	EE		

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	95 mph
Exposure Category:	C	Design Wind Speed With Ice:	0 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	0.00 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	1.41		
T _L (sec):	6	p:	1.3
S _s :	0.227	S _r :	0.067
F _a :	1.600	F _v :	2.400
S _{ds} :	0.242	S _{d1} :	0.107
		C _s :	0.051
		C _s Max:	0.051
		C _s Min:	0.030

Load Cases

1.2D + 1.6W	95 mph with No Ice
0.9D + 1.6W	95 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	0 mph with 0.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E ELM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E ELM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2Sds) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip		Weight (lb)	Bottom							Top						
				Joint Type	Joint Len (in)		Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	47.500	0.5000	65		0.00	14,125	62.00	0.00	97.60	46638.0	20.45	124.00	49.14	47.50	77.19	23072.0	15.92	98.28	0.270745	
2-18	47.330	0.3750	65	Slip	84.00	8,626	51.78	40.50	61.19	20432.2	22.94	138.09	38.97	87.83	45.94	8645.4	16.91	103.92	0.270745	
3-18	47.837	0.3125	65	Slip	68.00	5,544	41.13	82.16	40.48	8521.7	21.80	131.62	28.17	130.00	27.64	2711.5	14.49	90.17	0.270745	
Shaft Weight						28,296														

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice			Ice			Distance From Face (ft)	Vert Ecc (ft)
			Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor		
128.00	Alcatel-Lucent RRH2x60 700	3	56.70	2.150	0.67	56.70	2.148	0.67	0.000	6.000
128.00	Alcatel-Lucent RRH2X60-	3	43.00	1.880	0.50	43.00	1.882	0.50	0.000	6.000
128.00	Alcatel-Lucent RRH2X60-	3	44.00	1.880	0.50	44.00	1.882	0.50	0.000	6.000
128.00	Amphenol Antel BXA-171085-	3	10.50	2.940	0.87	10.50	2.940	0.87	0.000	6.000
128.00	Antel LPA-80080/6CF	2	21.00	8.630	0.75	21.00	4.323	0.75	0.000	6.000
128.00	Commscope SBNHH-1D85C	6	44.10	11.390	0.84	44.10	11.389	0.84	0.000	6.000
128.00	Decibel DB846F65ZAXY	4	21.00	7.030	0.94	21.00	7.033	0.94	0.000	6.000
128.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,500.00	26.100	1.00	0.000	0.000
128.00	RFS DB-T1-6Z-8AB-0Z	2	44.00	4.800	0.67	44.00	4.800	0.67	0.000	6.000
121.00	Alcatel-Lucent 1900MHz RRH	3	44.00	3.260	0.67	44.00	2.492	0.67	0.000	4.000
121.00	Alcatel-Lucent 800MHz RRH	3	53.00	2.130	0.67	53.00	2.130	0.67	0.000	4.000
121.00	Andrew Microwaves	1	49.00	7.760	1.00	49.00	7.760	1.00	0.000	4.000
121.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,500.00	26.100	1.00	0.000	0.000
121.00	Kathrein Scala 840 10054 (30	3	30.00	4.580	0.65	30.00	4.580	0.65	0.000	4.000
121.00	RFS APXVSP18-C-A20	6	57.00	8.020	0.83	57.00	8.020	0.83	0.000	4.000
110.00	Commscope LNX-6515DS-	3	50.30	11.450	0.84	50.30	11.450	0.84	0.000	3.000
110.00	EMS RR90-17-02DP	3	13.50	4.360	0.73	13.50	4.356	0.73	0.000	3.000
110.00	Ericsson AIR 21, 1.3 M, B2A	6	83.00	6.050	0.86	83.00	6.050	0.86	0.000	3.000
110.00	Ericsson KRY 112 71	3	13.20	0.680	0.50	13.20	0.582	0.50	0.000	3.000
110.00	Ericsson RRUS 11 B12	3	50.70	2.790	0.67	50.70	2.790	0.67	0.000	3.000
110.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,500.00	26.100	1.00	0.000	0.000
100.00	CCI HPA-65R-BUU-H6	3	51.00	9.660	0.83	51.00	9.658	0.83	0.000	4.000
100.00	Ericsson RRUS 12 w/ RRUS	3	71.40	3.150	0.67	71.40	3.145	0.67	0.000	4.000
100.00	Ericsson RRUS-11 (50 lbs.)	3	50.00	2.570	0.67	50.00	2.566	0.67	0.000	4.000
100.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,500.00	26.100	1.00	0.000	0.000
100.00	GPS	1	10.00	1.000	0.50	10.00	1.000	0.50	0.000	4.000
100.00	Powerwave Allgon 7020	6	2.20	0.400	0.50	2.20	0.400	0.50	0.000	4.000
100.00	Powerwave Allgon 7770.00	6	35.00	5.510	0.77	35.00	5.508	0.77	0.000	4.000
100.00	Powerwave Allgon LGP21401	12	14.10	1.100	0.50	14.10	1.100	0.50	0.000	4.000
100.00	Powerwave Allgon LGP21901	12	5.50	0.230	0.50	5.50	0.230	0.50	0.000	0.000
100.00	Raycap DC6-48-60-18-8F	1	20.00	1.110	1.00	20.00	1.110	1.00	0.000	4.000
91.00	Empty Flat Low Profile Platfor	1	1500.00	26.100	1.00	1,500.00	26.100	1.00	0.000	0.000
80.00	Flat Side Arm	1	150.00	6.300	0.67	150.00	6.300	0.67	0.000	0.000
80.00	GPS	1	10.00	1.000	1.00	10.00	0.525	1.00	0.000	0.000
76.00	2" x 8" GPS	1	10.00	0.160	1.00	10.00	0.160	1.00	0.000	0.000
76.00	Stand-Off	1	100.00	3.000	1.00	100.00	3.000	1.00	0.000	0.000
75.00	2" x 8" GPS	1	10.00	0.160	1.00	10.00	0.160	1.00	0.000	0.000
75.00	GPS	1	10.00	1.000	1.00	10.00	1.000	1.00	0.000	0.000
60.00	GPS	1	10.00	1.000	1.00	10.00	1.000	1.00	0.000	0.000
60.00	Side Arm	1	126.00	5.000	1.00	126.00	5.000	1.00	0.000	0.000
Totals		120	11525.90			11,525.90			Number of Loadings :	40

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	128.00	6	1 5/8" Coax	1.98	0.82	N	1.98	Y	Verizon
0.00	128.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	Verizon
0.00	128.00	2	1 5/8" Fiber	1.63	1.61	N	0.00	N	Verizon
0.00	121.00	3	0.39" Fiber Trunk	0.39	0.06	N	0.00	N	Sprint Nextel
0.00	121.00	3	0.78" 8 AWG 6	0.78	0.59	N	0.00	N	Sprint Nextel
0.00	121.00	3	1 1/4" Coax	1.55	0.63	N	0.00	N	Sprint Nextel
0.00	121.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	Sprint Nextel
0.00	121.00	1	1/2" Coax	0.63	0.15	N	0.00	N	Sprint Nextel
0.00	121.00	2	2" Conduit	2.38	3.65	N	0.00	N	Sprint Nextel
0.00	110.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	T-Mobile
0.00	110.00	6	7/8" Coax	1.09	0.33	N	0.00	N	T-Mobile
0.00	110.00	1	7/8" Fiber	0.88	0.70	N	0.00	N	T-Mobile
0.00	100.00	1	0.39" Fiber Trunk	0.39	0.06	N	0.00	N	AT&T Mobility
0.00	100.00	2	0.78" 8 AWG 6	0.78	0.59	N	0.00	N	AT&T Mobility
0.00	100.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	AT&T Mobility
0.00	100.00	1	3" conduit	3.50	7.58	N	0.00	N	AT&T Mobility
0.00	100.00	5	7/8" Coax	1.09	0.33	N	0.00	N	AT&T Mobility
0.00	80.00	1	1/2" Coax	0.63	0.15	N	0.00	N	T-Mobile
0.00	76.00	1	0.63" LDF4-50A	0.63	0.15	N	0.00	N	Verizon
0.00	75.00	1	0.63" LDF4-50A	0.63	0.15	N	0.00	N	Verizon
0.00	75.00	1	1/2" Coax	0.63	0.15	N	0.00	N	Sprint Nextel
0.00	60.00	1	1/2" Coax	0.63	0.15	N	0.00	N	AT&T Mobility

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fy (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.5000	62.000	97.597	46,638.0	20.45	124.00	77.3	1481.	0.0	0.0
5.00		0.5000	60.646	95.449	43,625.5	19.98	121.29	77.9	1416.	0.0	1,642.2
10.00		0.5000	59.293	93.300	40,745.7	19.50	118.59	78.5	1353.	0.0	1,605.7
15.00		0.5000	57.939	91.152	37,995.4	19.02	115.88	79.0	1291.	0.0	1,569.1
20.00		0.5000	56.585	89.004	35,371.8	18.54	113.17	79.6	1231.	0.0	1,532.6
25.00		0.5000	55.231	86.856	32,871.8	18.07	110.46	80.2	1172.	0.0	1,496.0
30.00		0.5000	53.878	84.707	30,492.5	17.59	107.76	80.7	1114.	0.0	1,459.5
35.00		0.5000	52.524	82.559	28,230.9	17.11	105.05	81.3	1058.	0.0	1,422.9
40.00		0.5000	51.170	80.411	26,083.9	16.63	102.34	81.8	1004.	0.0	1,386.4
40.50	Bot - Section 2	0.5000	51.035	80.196	25,875.4	16.59	102.07	81.9	998.6	0.0	136.6
45.00		0.5000	49.816	78.262	24,048.7	16.16	99.63	82.4	950.8	0.0	2,139.0
47.50	Top - Section 1	0.3750	49.890	58.933	18,254.8	22.05	133.04	75.5	720.7	0.0	1,166.0
50.00		0.3750	49.213	58.127	17,516.3	21.73	131.23	75.8	701.0	0.0	497.9
55.00		0.3750	47.859	56.516	16,099.7	21.09	127.62	76.6	662.6	0.0	975.3
60.00		0.3750	46.505	54.905	14,761.7	20.46	124.01	77.3	625.2	0.0	947.8
65.00		0.3750	45.152	53.293	13,499.9	19.82	120.40	78.1	588.9	0.0	920.4
70.00		0.3750	43.798	51.682	12,312.1	19.18	116.79	78.8	553.7	0.0	893.0
75.00		0.3750	42.444	50.071	11,196.1	18.55	113.18	79.6	519.6	0.0	865.6
76.00		0.3750	42.173	49.749	10,981.3	18.42	112.46	79.7	512.9	0.0	169.8
80.00		0.3750	41.090	48.460	10,149.7	17.91	109.57	80.3	486.5	0.0	668.4
82.16	Bot - Section 3	0.3750	40.505	47.763	9,717.9	17.63	108.01	80.7	472.6	0.0	354.2
85.00		0.3750	39.737	46.849	9,170.6	17.27	105.96	81.1	454.6	0.0	843.7
87.83	Top - Section 2	0.3125	39.595	38.962	7,596.4	20.93	126.71	76.8	377.9	0.0	825.6
90.00		0.3125	39.008	38.380	7,260.6	20.60	124.83	77.2	366.6	0.0	285.5
91.00		0.3125	38.737	38.111	7,109.3	20.45	123.96	77.4	361.5	0.0	130.1
95.00		0.3125	37.654	37.037	6,525.0	19.84	120.49	78.1	341.3	0.0	511.4
100.0		0.3125	36.301	35.694	5,840.8	19.07	116.16	79.0	316.9	0.0	618.7
105.0		0.3125	34.947	34.352	5,206.1	18.31	111.83	79.9	293.4	0.0	595.9
110.0		0.3125	33.593	33.009	4,619.2	17.54	107.50	80.8	270.8	0.0	573.0
115.0		0.3125	32.239	31.666	4,078.1	16.78	103.17	81.7	249.1	0.0	550.2
120.0		0.3125	30.886	30.324	3,581.1	16.02	98.83	82.6	228.4	0.0	527.3
121.0		0.3125	30.615	30.055	3,486.8	15.86	97.97	82.6	224.3	0.0	102.7
125.0		0.3125	29.532	28.981	3,126.1	15.25	94.50	82.6	208.5	0.0	401.8
128.0		0.3125	28.720	28.175	2,872.6	14.79	91.90	82.6	197.0	0.0	291.7
130.0		0.3125	28.178	27.638	2,711.5	14.49	90.17	82.6	189.5	0.0	189.9
28,296.3											

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Load Case: 1.2D + 1.6W

95 mph with No Ice

19 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		276.9	0.0					0.0	0.0	276.9	0.0	0.0	0.0
5.00		547.6	1,970.7					0.0	377.1	547.6	2,347.8	0.0	0.0
10.00		535.4	1,926.8					0.0	377.1	535.4	2,303.9	0.0	0.0
15.00		531.4	1,883.0					0.0	377.1	531.4	2,260.1	0.0	0.0
20.00		541.3	1,839.1					0.0	377.1	541.3	2,216.2	0.0	0.0
25.00		554.0	1,795.2					0.0	377.1	554.0	2,172.3	0.0	0.0
30.00		561.8	1,751.4					0.0	377.1	561.8	2,128.5	0.0	0.0
35.00		565.8	1,707.5					0.0	377.1	565.8	2,084.6	0.0	0.0
40.00		311.9	1,663.6					0.0	377.1	311.9	2,040.7	0.0	0.0
40.50	Bot - Section 2	287.3	164.0					0.0	37.7	287.3	201.7	0.0	0.0
45.00		402.4	2,566.8					0.0	339.4	402.4	2,906.2	0.0	0.0
47.50	Top - Section 1	286.7	1,399.2					0.0	188.6	286.7	1,587.7	0.0	0.0
50.00		428.1	597.5					0.0	188.6	428.1	786.0	0.0	0.0
55.00		567.2	1,170.3					0.0	377.1	567.2	1,547.4	0.0	0.0
60.00	Appertunance(s)	561.4	1,137.4	263.4	0.0	0.0	163.2	0.0	377.1	824.8	1,677.7	0.0	0.0
65.00		554.3	1,104.5					0.0	376.2	554.3	1,480.7	0.0	0.0
70.00		546.2	1,071.6					0.0	376.2	546.2	1,447.8	0.0	0.0
75.00	Appertunance(s)	324.5	1,038.7	53.4	0.0	0.0	24.0	0.0	376.2	377.9	1,438.9	0.0	0.0
76.00	Appertunance(s)	266.1	203.8	145.8	0.0	0.0	132.0	0.0	74.9	411.9	410.7	0.0	0.0
80.00	Appertunance(s)	326.0	802.0	243.5	0.0	0.0	192.0	0.0	298.8	569.6	1,292.8	0.0	0.0
82.16	Bot - Section 3	263.2	425.0					0.0	161.2	263.2	586.2	0.0	0.0
85.00		297.2	1,012.5					0.0	211.4	297.2	1,223.9	0.0	0.0
87.83	Top - Section 2	259.4	990.7					0.0	210.9	259.4	1,201.6	0.0	0.0
90.00		163.0	342.7					0.0	161.7	163.0	504.4	0.0	0.0
91.00	Appertunance(s)	253.5	156.2	1,251.0	0.0	0.0	1,800.0	0.0	74.5	1,504.5	2,030.7	0.0	0.0
95.00		449.6	613.7					0.0	298.1	449.6	911.8	0.0	0.0
100.00	Appertunance(s)	488.0	742.5	4,107.0	0.0	11,108.1	3,006.7	0.0	372.6	4,595.0	4,121.8	0.0	0.0
105.00		474.7	715.1					0.0	250.7	474.7	965.8	0.0	0.0
110.00	Appertunance(s)	460.8	687.6	4,361.9	0.0	9,180.0	2,857.3	0.0	250.7	4,822.7	3,795.7	0.0	0.0
115.00		446.4	660.2					0.0	175.6	446.4	835.8	0.0	0.0
120.00		262.5	632.8					0.0	175.6	262.5	808.4	0.0	0.0
121.00	Appertunance(s)	211.9	123.3	4,173.5	0.0	11,380.6	2,726.4	0.0	35.1	4,385.4	2,884.8	0.0	0.0
125.00		292.4	482.1					0.0	62.7	292.4	544.8	0.0	0.0
128.00	Appertunance(s)	204.2	350.1	6,371.3	0.0	30,163.0	2,929.4	0.0	47.0	6,575.4	3,326.5	0.0	0.0
130.00		80.7	227.9					0.0	0.0	80.7	227.9	0.0	0.0
Totals:										34,554.5	56,302.0	0.00	0.00

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Load Case: 1.2D + 1.6W

95 mph with No Ice

19 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-56.27	-34.33	0.00	-3,347.56	0.00	3,347.56	6,793.61	3,396.81	17,163.1	8,594.34	0.00	0.00	0.398
5.00	-53.86	-33.87	0.00	-3,175.92	0.00	3,175.92	6,692.31	3,346.15	16,532.0	8,278.33	0.05	-0.10	0.392
10.00	-51.50	-33.42	0.00	-3,006.56	0.00	3,006.56	6,588.83	3,294.42	15,907.1	7,965.37	0.21	-0.20	0.385
15.00	-49.19	-32.97	0.00	-2,839.45	0.00	2,839.45	6,483.18	3,241.59	15,288.6	7,655.67	0.48	-0.30	0.379
20.00	-46.91	-32.50	0.00	-2,674.61	0.00	2,674.61	6,375.36	3,187.68	14,676.9	7,349.39	0.85	-0.41	0.371
25.00	-44.69	-32.01	0.00	-2,512.12	0.00	2,512.12	6,265.37	3,132.69	14,072.5	7,046.72	1.33	-0.51	0.364
30.00	-42.51	-31.51	0.00	-2,352.07	0.00	2,352.07	6,153.21	3,076.61	13,475.6	6,747.85	1.92	-0.62	0.356
35.00	-40.37	-30.99	0.00	-2,194.55	0.00	2,194.55	6,038.88	3,019.44	12,886.7	6,452.96	2.63	-0.72	0.347
40.00	-38.30	-30.69	0.00	-2,039.60	0.00	2,039.60	5,922.38	2,961.19	12,306.1	6,162.22	3.44	-0.83	0.338
40.50	-38.08	-30.44	0.00	-2,024.26	0.00	2,024.26	5,910.61	2,955.30	12,248.5	6,133.39	3.53	-0.84	0.337
45.00	-35.14	-30.03	0.00	-1,887.30	0.00	1,887.30	5,803.70	2,901.85	11,734.2	5,875.83	4.36	-0.94	0.327
47.50	-33.53	-29.75	0.00	-1,812.22	0.00	1,812.22	4,002.81	2,001.40	8,146.29	4,079.20	4.87	-0.99	0.453
50.00	-32.70	-29.37	0.00	-1,737.83	0.00	1,737.83	3,967.67	1,983.84	7,963.57	3,987.71	5.40	-1.05	0.444
55.00	-31.10	-28.84	0.00	-1,591.01	0.00	1,591.01	3,895.77	1,947.89	7,600.87	3,806.08	6.57	-1.18	0.426
60.00	-29.37	-28.05	0.00	-1,446.80	0.00	1,446.80	3,821.70	1,910.85	7,242.12	3,626.44	7.88	-1.31	0.407
65.00	-27.84	-27.52	0.00	-1,306.56	0.00	1,306.56	3,745.46	1,872.73	6,887.67	3,448.96	9.33	-1.45	0.386
70.00	-26.35	-27.00	0.00	-1,168.94	0.00	1,168.94	3,667.05	1,833.52	6,537.91	3,273.81	10.92	-1.58	0.364
75.00	-24.89	-26.61	0.00	-1,033.95	0.00	1,033.95	3,586.46	1,793.23	6,193.19	3,101.20	12.64	-1.70	0.341
76.00	-24.46	-26.22	0.00	-1,007.34	0.00	1,007.34	3,570.09	1,785.04	6,124.88	3,066.99	13.00	-1.73	0.336
80.00	-23.15	-25.64	0.00	-902.48	0.00	902.48	3,503.71	1,751.85	5,853.88	2,931.29	14.49	-1.83	0.315
82.16	-22.55	-25.38	0.00	-847.02	0.00	847.02	3,467.23	1,733.61	5,708.83	2,858.66	15.33	-1.88	0.303
85.00	-21.30	-25.06	0.00	-775.03	0.00	775.03	3,418.78	1,709.39	5,520.34	2,764.27	16.47	-1.95	0.287
87.83	-20.09	-24.78	0.00	-704.10	0.00	704.10	2,692.45	1,346.23	4,345.60	2,176.03	17.65	-2.02	0.331
90.00	-19.57	-24.62	0.00	-650.32	0.00	650.32	2,665.65	1,332.83	4,237.49	2,121.89	18.58	-2.06	0.314
91.00	-17.58	-23.06	0.00	-625.71	0.00	625.71	2,653.16	1,326.58	4,187.89	2,097.06	19.01	-2.09	0.305
95.00	-16.64	-22.60	0.00	-533.48	0.00	533.48	2,602.34	1,301.17	3,990.97	1,998.45	20.80	-2.18	0.274
100.00	-12.67	-17.87	0.00	-409.37	0.00	409.37	2,536.86	1,268.43	3,748.34	1,876.95	23.15	-2.29	0.223
105.00	-11.70	-17.37	0.00	-320.01	0.00	320.01	2,469.21	1,234.61	3,509.96	1,757.59	25.59	-2.37	0.187
110.00	-8.10	-12.41	0.00	-223.97	0.00	223.97	2,399.39	1,199.69	3,276.20	1,640.54	28.12	-2.45	0.140
115.00	-7.27	-11.93	0.00	-161.94	0.00	161.94	2,327.39	1,163.70	3,047.43	1,525.98	30.72	-2.51	0.109
120.00	-6.47	-11.63	0.00	-102.29	0.00	102.29	2,252.89	1,126.45	2,823.60	1,413.90	33.37	-2.56	0.075
121.00	-3.78	-7.13	0.00	-79.28	0.00	79.28	2,232.94	1,116.47	2,773.56	1,388.84	33.91	-2.56	0.059
125.00	-3.25	-6.81	0.00	-50.77	0.00	50.77	2,153.14	1,076.57	2,577.88	1,290.85	36.06	-2.58	0.041
128.00	-0.22	-0.09	0.00	-0.18	0.00	0.18	2,093.29	1,046.64	2,435.81	1,219.72	37.69	-2.60	0.000
130.00	0.00	-0.08	0.00	0.00	0.00	0.00	2,053.39	1,026.69	2,343.34	1,173.41	38.78	-2.60	0.000

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

8/3/2016 4:22:09 PM

Customer: Verizon Wireless

Load Case: 0.9D + 1.6W

95 mph with No Ice (Reduced DL)

19 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		276.9	0.0					0.0	0.0	276.9	0.0	0.0	0.0
5.00		547.6	1,478.0					0.0	282.8	547.6	1,760.8	0.0	0.0
10.00		535.4	1,445.1					0.0	282.8	535.4	1,727.9	0.0	0.0
15.00		531.4	1,412.2					0.0	282.8	531.4	1,695.0	0.0	0.0
20.00		541.3	1,379.3					0.0	282.8	541.3	1,662.1	0.0	0.0
25.00		554.0	1,346.4					0.0	282.8	554.0	1,629.2	0.0	0.0
30.00		561.8	1,313.5					0.0	282.8	561.8	1,596.4	0.0	0.0
35.00		565.8	1,280.6					0.0	282.8	565.8	1,563.5	0.0	0.0
40.00		311.9	1,247.7					0.0	282.8	311.9	1,530.6	0.0	0.0
40.50	Bot - Section 2	287.3	123.0					0.0	28.3	287.3	151.2	0.0	0.0
45.00		402.4	1,925.1					0.0	254.5	402.4	2,179.7	0.0	0.0
47.50	Top - Section 1	286.7	1,049.4					0.0	141.4	286.7	1,190.8	0.0	0.0
50.00		428.1	448.1					0.0	141.4	428.1	589.5	0.0	0.0
55.00		567.2	877.7					0.0	282.8	567.2	1,160.6	0.0	0.0
60.00	Appertunance(s)	561.4	853.1	263.4	0.0	0.0	122.4	0.0	282.8	824.8	1,258.3	0.0	0.0
65.00		554.3	828.4					0.0	282.1	554.3	1,110.5	0.0	0.0
70.00		546.2	803.7					0.0	282.1	546.2	1,085.9	0.0	0.0
75.00	Appertunance(s)	324.5	779.0	53.4	0.0	0.0	18.0	0.0	282.1	377.9	1,079.2	0.0	0.0
76.00	Appertunance(s)	266.1	152.8	145.8	0.0	0.0	99.0	0.0	56.2	411.9	308.0	0.0	0.0
80.00	Appertunance(s)	326.0	601.5	243.5	0.0	0.0	144.0	0.0	224.1	569.6	969.6	0.0	0.0
82.16	Bot - Section 3	263.2	318.7					0.0	120.9	263.2	439.7	0.0	0.0
85.00		297.2	759.3					0.0	158.5	297.2	917.9	0.0	0.0
87.83	Top - Section 2	259.4	743.1					0.0	158.2	259.4	901.2	0.0	0.0
90.00		163.0	257.0					0.0	121.3	163.0	378.3	0.0	0.0
91.00	Appertunance(s)	253.5	117.1	1,251.0	0.0	0.0	1,350.0	0.0	55.9	1,504.5	1,523.0	0.0	0.0
95.00		449.6	460.3					0.0	223.6	449.6	683.8	0.0	0.0
100.00	Appertunance(s)	488.0	556.8	4,107.0	0.0	11,108.1	2,255.0	0.0	279.4	4,595.0	3,091.3	0.0	0.0
105.00		474.7	536.3					0.0	188.1	474.7	724.3	0.0	0.0
110.00	Appertunance(s)	460.8	515.7	4,361.9	0.0	9,180.0	2,143.0	0.0	188.1	4,822.7	2,846.8	0.0	0.0
115.00		446.4	495.2					0.0	131.7	446.4	626.9	0.0	0.0
120.00		262.5	474.6					0.0	131.7	262.5	606.3	0.0	0.0
121.00	Appertunance(s)	211.9	92.5	4,173.5	0.0	11,380.6	2,044.8	0.0	26.3	4,385.4	2,163.6	0.0	0.0
125.00		292.4	361.6					0.0	47.0	292.4	408.6	0.0	0.0
128.00	Appertunance(s)	204.2	262.6	6,371.3	0.0	30,163.0	2,197.1	0.0	35.3	6,575.4	2,494.9	0.0	0.0
130.00		80.7	170.9					0.0	0.0	80.7	170.9	0.0	0.0
Totals:										34,554.5	42,226.5	0.00	0.00

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

8/3/2016 4:22:11 PM

Customer: Verizon Wireless

Load Case: 0.9D + 1.6W

95 mph with No Ice (Reduced DL)

19 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-42.20	-34.32	0.00	-3,330.77	0.00	3,330.77	6,793.61	3,396.81	17,163.1	8,594.34	0.00	0.00	0.394
5.00	-40.38	-33.84	0.00	-3,159.20	0.00	3,159.20	6,692.31	3,346.15	16,532.0	8,278.33	0.05	-0.10	0.388
10.00	-38.59	-33.36	0.00	-2,990.02	0.00	2,990.02	6,588.83	3,294.42	15,907.1	7,965.37	0.21	-0.20	0.381
15.00	-36.84	-32.89	0.00	-2,823.20	0.00	2,823.20	6,483.18	3,241.59	15,288.6	7,655.67	0.48	-0.30	0.375
20.00	-35.12	-32.40	0.00	-2,658.75	0.00	2,658.75	6,375.36	3,187.68	14,676.9	7,349.39	0.85	-0.40	0.367
25.00	-33.44	-31.90	0.00	-2,496.74	0.00	2,496.74	6,265.37	3,132.69	14,072.5	7,046.72	1.32	-0.51	0.360
30.00	-31.79	-31.38	0.00	-2,337.25	0.00	2,337.25	6,153.21	3,076.61	13,475.6	6,747.85	1.91	-0.61	0.352
35.00	-30.18	-30.85	0.00	-2,180.37	0.00	2,180.37	6,038.88	3,019.44	12,886.7	6,452.96	2.61	-0.72	0.343
40.00	-28.62	-30.55	0.00	-2,026.12	0.00	2,026.12	5,922.38	2,961.19	12,306.1	6,162.22	3.42	-0.82	0.334
40.50	-28.45	-30.28	0.00	-2,010.85	0.00	2,010.85	5,910.61	2,955.30	12,248.5	6,133.39	3.51	-0.83	0.333
45.00	-26.23	-29.88	0.00	-1,874.57	0.00	1,874.57	5,803.70	2,901.85	11,734.2	5,875.83	4.34	-0.93	0.324
47.50	-25.02	-29.60	0.00	-1,799.87	0.00	1,799.87	4,002.81	2,001.40	8,146.29	4,079.20	4.84	-0.98	0.448
50.00	-24.39	-29.20	0.00	-1,725.87	0.00	1,725.87	3,967.67	1,983.84	7,963.57	3,987.71	5.37	-1.04	0.439
55.00	-23.17	-28.67	0.00	-1,579.87	0.00	1,579.87	3,895.77	1,947.89	7,600.87	3,806.08	6.53	-1.17	0.421
60.00	-21.87	-27.86	0.00	-1,436.54	0.00	1,436.54	3,821.70	1,910.85	7,242.12	3,626.44	7.83	-1.31	0.402
65.00	-20.71	-27.33	0.00	-1,297.22	0.00	1,297.22	3,745.46	1,872.73	6,887.67	3,448.96	9.27	-1.44	0.382
70.00	-19.58	-26.80	0.00	-1,160.57	0.00	1,160.57	3,667.05	1,833.52	6,537.91	3,273.81	10.85	-1.57	0.360
75.00	-18.48	-26.42	0.00	-1,026.57	0.00	1,026.57	3,586.46	1,793.23	6,193.19	3,101.20	12.56	-1.69	0.336
76.00	-18.15	-26.02	0.00	-1,000.15	0.00	1,000.15	3,570.09	1,785.04	6,124.88	3,066.99	12.92	-1.72	0.331
80.00	-17.17	-25.44	0.00	-896.10	0.00	896.10	3,503.71	1,751.85	5,853.88	2,931.29	14.40	-1.82	0.311
82.16	-16.71	-25.18	0.00	-841.06	0.00	841.06	3,467.23	1,733.61	5,708.83	2,858.66	15.24	-1.87	0.299
85.00	-15.77	-24.87	0.00	-769.64	0.00	769.64	3,418.78	1,709.39	5,520.34	2,764.27	16.37	-1.94	0.283
87.83	-14.86	-24.59	0.00	-699.26	0.00	699.26	2,692.45	1,346.23	4,345.60	2,176.03	17.54	-2.00	0.327
90.00	-14.47	-24.43	0.00	-645.90	0.00	645.90	2,665.65	1,332.83	4,237.49	2,121.89	18.46	-2.05	0.310
91.00	-12.98	-22.88	0.00	-621.47	0.00	621.47	2,653.16	1,326.58	4,187.89	2,097.06	18.90	-2.07	0.302
95.00	-12.27	-22.43	0.00	-529.95	0.00	529.95	2,602.34	1,301.17	3,990.97	1,998.45	20.67	-2.17	0.270
100.00	-9.33	-17.73	0.00	-406.70	0.00	406.70	2,536.86	1,268.43	3,748.34	1,876.95	23.00	-2.27	0.221
105.00	-8.60	-17.24	0.00	-318.04	0.00	318.04	2,469.21	1,234.61	3,509.96	1,757.59	25.43	-2.36	0.185
110.00	-5.95	-12.31	0.00	-222.66	0.00	222.66	2,399.39	1,199.69	3,276.20	1,640.54	27.94	-2.43	0.138
115.00	-5.33	-11.84	0.00	-161.11	0.00	161.11	2,327.39	1,163.70	3,047.43	1,525.98	30.52	-2.49	0.108
120.00	-4.73	-11.56	0.00	-101.90	0.00	101.90	2,252.89	1,126.45	2,823.60	1,413.90	33.16	-2.54	0.074
121.00	-2.76	-7.08	0.00	-78.96	0.00	78.96	2,232.94	1,116.47	2,773.56	1,388.84	33.69	-2.55	0.058
125.00	-2.36	-6.77	0.00	-50.65	0.00	50.65	2,153.14	1,076.57	2,577.88	1,290.85	35.83	-2.57	0.040
128.00	-0.17	-0.09	0.00	-0.18	0.00	0.18	2,093.29	1,046.64	2,435.81	1,219.72	37.45	-2.58	0.000
130.00	0.00	-0.08	0.00	0.00	0.00	0.00	2,053.39	1,026.69	2,343.34	1,173.41	38.53	-2.58	0.000

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

8/3/2016 4:22:11 PM

Customer: Verizon Wireless

Load Case: 1.2D + 1.0Di + 1.0Wi

0 mph with 0.00 in Radial Ice

5 Iterations

Gust Response Factor : 1.10

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		0.0	0.0					0.0	0.0	0.0	0.0	0.0	0.0
5.00		0.0	1,970.7					0.0	386.9	0.0	2,357.6	0.0	0.0
10.00		0.0	1,926.8					0.0	386.9	0.0	2,313.7	0.0	0.0
15.00		0.0	1,883.0					0.0	386.9	0.0	2,269.9	0.0	0.0
20.00		0.0	1,839.1					0.0	386.9	0.0	2,226.0	0.0	0.0
25.00		0.0	1,795.2					0.0	386.9	0.0	2,182.1	0.0	0.0
30.00		0.0	1,751.4					0.0	386.9	0.0	2,138.3	0.0	0.0
35.00		0.0	1,707.5					0.0	386.9	0.0	2,094.4	0.0	0.0
40.00		0.0	1,663.6					0.0	386.9	0.0	2,050.6	0.0	0.0
40.50	Bot - Section 2	0.0	164.0					0.0	38.7	0.0	202.6	0.0	0.0
45.00		0.0	2,566.8					0.0	348.2	0.0	2,915.1	0.0	0.0
47.50	Top - Section 1	0.0	1,399.2					0.0	193.5	0.0	1,592.6	0.0	0.0
50.00		0.0	597.5					0.0	193.5	0.0	791.0	0.0	0.0
55.00		0.0	1,170.3					0.0	386.9	0.0	1,557.2	0.0	0.0
60.00	Appertunance(s)	0.0	1,137.4	0.0	0.0	0.0	101.2	0.0	386.9	0.0	1,625.5	0.0	0.0
65.00		0.0	1,104.5					0.0	386.0	0.0	1,490.5	0.0	0.0
70.00		0.0	1,071.6					0.0	386.0	0.0	1,457.6	0.0	0.0
75.00	Appertunance(s)	0.0	1,038.7	0.0	0.0	0.0	38.3	0.0	386.0	0.0	1,463.0	0.0	0.0
76.00	Appertunance(s)	0.0	203.8	0.0	0.0	0.0	80.5	0.0	76.8	0.0	361.1	0.0	0.0
80.00	Appertunance(s)	0.0	802.0	0.0	0.0	0.0	112.0	0.0	306.7	0.0	1,220.7	0.0	0.0
82.16	Bot - Section 3	0.0	425.0					0.0	165.5	0.0	590.5	0.0	0.0
85.00		0.0	1,012.5					0.0	217.0	0.0	1,229.4	0.0	0.0
87.83	Top - Section 2	0.0	990.7					0.0	216.4	0.0	1,207.2	0.0	0.0
90.00		0.0	342.7					0.0	166.0	0.0	508.6	0.0	0.0
91.00	Appertunance(s)	0.0	156.2	0.0	0.0	0.0	1,600.0	0.0	76.5	0.0	1,832.7	0.0	0.0
95.00		0.0	613.7					0.0	305.9	0.0	919.6	0.0	0.0
100.00	Appertunance(s)	0.0	742.5	0.0	0.0	0.0	2,654.6	0.0	382.4	0.0	3,779.5	0.0	0.0
105.00		0.0	715.1					0.0	260.6	0.0	975.6	0.0	0.0
110.00	Appertunance(s)	0.0	687.6	0.0	0.0	0.0	2,146.1	0.0	260.6	0.0	3,094.3	0.0	0.0
115.00		0.0	660.2					0.0	185.4	0.0	845.7	0.0	0.0
120.00		0.0	632.8					0.0	185.4	0.0	818.2	0.0	0.0
121.00	Appertunance(s)	0.0	123.3	0.0	0.0	0.0	2,045.1	0.0	37.1	0.0	2,205.5	0.0	0.0
125.00		0.0	482.1					0.0	70.5	0.0	552.7	0.0	0.0
128.00	Appertunance(s)	0.0	350.1	0.0	0.0	0.0	2,673.3	0.0	52.9	0.0	3,076.3	0.0	0.0
130.00		0.0	227.9					0.0	0.0	0.0	227.9	0.0	0.0
Totals:										0.00	54,173.4	0.00	0.00

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Load Case: 1.2D + 1.0Di + 1.0Wi

0 mph with 0.00 in Radial Ice

5 Iterations

Gust Response Factor : 1.10

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-54.17	0.00	0.00	0.00	0.00	0.00	6,793.61	3,396.81	17,163.1	8,594.34	0.00	0.00	0.008
5.00	-51.81	0.00	0.00	0.00	0.00	0.00	6,692.31	3,346.15	16,532.0	8,278.33	0.00	0.00	0.008
10.00	-49.50	0.00	0.00	0.00	0.00	0.00	6,588.83	3,294.42	15,907.1	7,965.37	0.00	0.00	0.008
15.00	-47.23	0.00	0.00	0.00	0.00	0.00	6,483.18	3,241.59	15,288.6	7,655.67	0.00	0.00	0.007
20.00	-45.01	0.00	0.00	0.00	0.00	0.00	6,375.36	3,187.68	14,676.9	7,349.39	0.00	0.00	0.007
25.00	-42.82	0.00	0.00	0.00	0.00	0.00	6,265.37	3,132.69	14,072.5	7,046.72	0.00	0.00	0.007
30.00	-40.68	0.00	0.00	0.00	0.00	0.00	6,153.21	3,076.61	13,475.6	6,747.85	0.00	0.00	0.007
35.00	-38.59	0.00	0.00	0.00	0.00	0.00	6,038.88	3,019.44	12,886.7	6,452.96	0.00	0.00	0.006
40.00	-36.54	0.00	0.00	0.00	0.00	0.00	5,922.38	2,961.19	12,306.1	6,162.22	0.00	0.00	0.006
40.50	-36.34	0.00	0.00	0.00	0.00	0.00	5,910.61	2,955.30	12,248.5	6,133.39	0.00	0.00	0.006
45.00	-33.42	0.00	0.00	0.00	0.00	0.00	5,803.70	2,901.85	11,734.2	5,875.83	0.00	0.00	0.006
47.50	-31.83	0.00	0.00	0.00	0.00	0.00	4,002.81	2,001.40	8,146.29	4,079.20	0.00	0.00	0.008
50.00	-31.04	0.00	0.00	0.00	0.00	0.00	3,967.67	1,983.84	7,963.57	3,987.71	0.00	0.00	0.008
55.00	-29.48	0.00	0.00	0.00	0.00	0.00	3,895.77	1,947.89	7,600.87	3,806.08	0.00	0.00	0.008
60.00	-27.86	0.00	0.00	0.00	0.00	0.00	3,821.70	1,910.85	7,242.12	3,626.44	0.00	0.00	0.007
65.00	-26.37	0.00	0.00	0.00	0.00	0.00	3,745.46	1,872.73	6,887.67	3,448.96	0.00	0.00	0.007
70.00	-24.91	0.00	0.00	0.00	0.00	0.00	3,667.05	1,833.52	6,537.91	3,273.81	0.00	0.00	0.007
75.00	-23.44	0.00	0.00	0.00	0.00	0.00	3,586.46	1,793.23	6,193.19	3,101.20	0.00	0.00	0.007
76.00	-23.08	0.00	0.00	0.00	0.00	0.00	3,570.09	1,785.04	6,124.88	3,066.99	0.00	0.00	0.006
80.00	-21.86	0.00	0.00	0.00	0.00	0.00	3,503.71	1,751.85	5,853.88	2,931.29	0.00	0.00	0.006
82.16	-21.27	0.00	0.00	0.00	0.00	0.00	3,467.23	1,733.61	5,708.83	2,858.66	0.00	0.00	0.006
85.00	-20.04	0.00	0.00	0.00	0.00	0.00	3,418.78	1,709.39	5,520.34	2,764.27	0.00	0.00	0.006
87.83	-18.84	0.00	0.00	0.00	0.00	0.00	2,692.45	1,346.23	4,345.60	2,176.03	0.00	0.00	0.007
90.00	-18.33	0.00	0.00	0.00	0.00	0.00	2,665.65	1,332.83	4,237.49	2,121.89	0.00	0.00	0.007
91.00	-16.49	0.00	0.00	0.00	0.00	0.00	2,653.16	1,326.58	4,187.89	2,097.06	0.00	0.00	0.006
95.00	-15.58	0.00	0.00	0.00	0.00	0.00	2,602.34	1,301.17	3,990.97	1,998.45	0.00	0.00	0.006
100.00	-11.80	0.00	0.00	0.00	0.00	0.00	2,536.86	1,268.43	3,748.34	1,876.95	0.00	0.00	0.005
105.00	-10.82	0.00	0.00	0.00	0.00	0.00	2,469.21	1,234.61	3,509.96	1,757.59	0.00	0.00	0.004
110.00	-7.73	0.00	0.00	0.00	0.00	0.00	2,399.39	1,199.69	3,276.20	1,640.54	0.00	0.00	0.003
115.00	-6.88	0.00	0.00	0.00	0.00	0.00	2,327.39	1,163.70	3,047.43	1,525.98	0.00	0.00	0.003
120.00	-6.06	0.00	0.00	0.00	0.00	0.00	2,252.89	1,126.45	2,823.60	1,413.90	0.00	0.00	0.003
121.00	-3.86	0.00	0.00	0.00	0.00	0.00	2,232.94	1,116.47	2,773.56	1,388.84	0.00	0.00	0.002
125.00	-3.30	0.00	0.00	0.00	0.00	0.00	2,153.14	1,076.57	2,577.88	1,290.85	0.00	0.00	0.002
128.00	-0.23	0.00	0.00	0.00	0.00	0.00	2,093.29	1,046.64	2,435.81	1,219.72	0.00	0.00	0.000
130.00	0.00	0.00	0.00	0.00	0.00	0.00	2,053.39	1,026.69	2,343.34	1,173.41	0.00	0.00	0.000

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Load Case: 1.0D + 1.0W

Serviceability 60 mph

18 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		69.0	0.0					0.0	0.0	69.0	0.0	0.0	0.0
5.00		136.5	1,642.2					0.0	314.3	136.5	1,956.5	0.0	0.0
10.00		133.5	1,605.7					0.0	314.3	133.5	1,919.9	0.0	0.0
15.00		132.5	1,569.1					0.0	314.3	132.5	1,883.4	0.0	0.0
20.00		134.9	1,532.6					0.0	314.3	134.9	1,846.8	0.0	0.0
25.00		138.1	1,496.0					0.0	314.3	138.1	1,810.3	0.0	0.0
30.00		140.1	1,459.5					0.0	314.3	140.1	1,773.7	0.0	0.0
35.00		141.1	1,422.9					0.0	314.3	141.1	1,737.2	0.0	0.0
40.00		77.8	1,386.4					0.0	314.3	77.8	1,700.6	0.0	0.0
40.50	Bot - Section 2	71.6	136.6					0.0	31.4	71.6	168.1	0.0	0.0
45.00		100.3	2,139.0					0.0	282.8	100.3	2,421.9	0.0	0.0
47.50	Top - Section 1	71.5	1,166.0					0.0	157.1	71.5	1,323.1	0.0	0.0
50.00		106.7	497.9					0.0	157.1	106.7	655.0	0.0	0.0
55.00		141.4	975.3					0.0	314.3	141.4	1,289.5	0.0	0.0
60.00	Appertunance(s)	140.0	947.8	65.7	0.0	0.0	136.0	0.0	314.3	205.6	1,398.1	0.0	0.0
65.00		138.2	920.4					0.0	313.5	138.2	1,233.9	0.0	0.0
70.00		136.2	893.0					0.0	313.5	136.2	1,206.5	0.0	0.0
75.00	Appertunance(s)	80.9	865.6	13.3	0.0	0.0	20.0	0.0	313.5	94.2	1,199.1	0.0	0.0
76.00	Appertunance(s)	66.3	169.8	36.4	0.0	0.0	110.0	0.0	62.4	102.7	342.2	0.0	0.0
80.00	Appertunance(s)	81.3	668.4	60.7	0.0	0.0	160.0	0.0	249.0	142.0	1,077.4	0.0	0.0
82.16	Bot - Section 3	65.6	354.2					0.0	134.3	65.6	488.5	0.0	0.0
85.00		74.1	843.7					0.0	176.2	74.1	1,019.9	0.0	0.0
87.83	Top - Section 2	64.7	825.6					0.0	175.7	64.7	1,001.4	0.0	0.0
90.00		40.6	285.5					0.0	134.8	40.6	420.3	0.0	0.0
91.00	Appertunance(s)	63.2	130.1	311.9	0.0	0.0	1,500.0	0.0	62.1	375.1	1,692.2	0.0	0.0
95.00		112.1	511.4					0.0	248.4	112.1	759.8	0.0	0.0
100.00	Appertunance(s)	121.7	618.7	1,023.9	0.0	2,769.3	2,505.6	0.0	310.5	1,145.6	3,434.8	0.0	0.0
105.00		118.3	595.9					0.0	209.0	118.3	804.8	0.0	0.0
110.00	Appertunance(s)	114.9	573.0	1,087.5	0.0	2,288.6	2,381.1	0.0	209.0	1,202.3	3,163.1	0.0	0.0
115.00		111.3	550.2					0.0	146.4	111.3	696.5	0.0	0.0
120.00		65.4	527.3					0.0	146.4	65.4	673.7	0.0	0.0
121.00	Appertunance(s)	52.8	102.7	1,040.5	0.0	2,837.3	2,272.0	0.0	29.3	1,093.3	2,404.0	0.0	0.0
125.00		72.9	401.8					0.0	52.2	72.9	454.0	0.0	0.0
128.00	Appertunance(s)	50.9	291.7	1,588.4	0.0	7,519.9	2,441.2	0.0	39.2	1,639.3	2,772.1	0.0	0.0
130.00		20.1	189.9					0.0	0.0	20.1	189.9	0.0	0.0
Totals:										8,614.72	46,918.3	0.00	0.00

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

8/3/2016 4:22:15 PM

Customer: Verizon Wireless

Load Case: 1.0D + 1.0W

Serviceability 60 mph

18 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-46.92	-8.56	0.00	-831.98	0.00	831.98	6,793.61	3,396.81	17,163.1	8,594.34	0.00	0.00	0.104
5.00	-44.96	-8.44	0.00	-789.20	0.00	789.20	6,692.31	3,346.15	16,532.0	8,278.33	0.01	-0.02	0.102
10.00	-43.03	-8.32	0.00	-747.01	0.00	747.01	6,588.83	3,294.42	15,907.1	7,965.37	0.05	-0.05	0.100
15.00	-41.15	-8.21	0.00	-705.40	0.00	705.40	6,483.18	3,241.59	15,288.6	7,655.67	0.12	-0.08	0.098
20.00	-39.30	-8.09	0.00	-664.37	0.00	664.37	6,375.36	3,187.68	14,676.9	7,349.39	0.21	-0.10	0.097
25.00	-37.48	-7.96	0.00	-623.94	0.00	623.94	6,265.37	3,132.69	14,072.5	7,046.72	0.33	-0.13	0.095
30.00	-35.71	-7.83	0.00	-584.13	0.00	584.13	6,153.21	3,076.61	13,475.6	6,747.85	0.48	-0.15	0.092
35.00	-33.96	-7.70	0.00	-544.96	0.00	544.96	6,038.88	3,019.44	12,886.7	6,452.96	0.65	-0.18	0.090
40.00	-32.26	-7.63	0.00	-506.45	0.00	506.45	5,922.38	2,961.19	12,306.1	6,162.22	0.85	-0.21	0.088
40.50	-32.09	-7.56	0.00	-502.63	0.00	502.63	5,910.61	2,955.30	12,248.5	6,133.39	0.88	-0.21	0.087
45.00	-29.67	-7.46	0.00	-468.60	0.00	468.60	5,803.70	2,901.85	11,734.2	5,875.83	1.08	-0.23	0.085
47.50	-28.34	-7.39	0.00	-449.94	0.00	449.94	4,002.81	2,001.40	8,146.29	4,079.20	1.21	-0.25	0.117
50.00	-27.69	-7.29	0.00	-431.46	0.00	431.46	3,967.67	1,983.84	7,963.57	3,987.71	1.34	-0.26	0.115
55.00	-26.39	-7.16	0.00	-394.99	0.00	394.99	3,895.77	1,947.89	7,600.87	3,806.08	1.63	-0.29	0.111
60.00	-24.99	-6.96	0.00	-359.17	0.00	359.17	3,821.70	1,910.85	7,242.12	3,626.44	1.96	-0.33	0.106
65.00	-23.76	-6.83	0.00	-324.36	0.00	324.36	3,745.46	1,872.73	6,887.67	3,448.96	2.32	-0.36	0.100
70.00	-22.55	-6.70	0.00	-290.20	0.00	290.20	3,667.05	1,833.52	6,537.91	3,273.81	2.71	-0.39	0.095
75.00	-21.35	-6.60	0.00	-256.70	0.00	256.70	3,586.46	1,793.23	6,193.19	3,101.20	3.14	-0.42	0.089
76.00	-21.00	-6.51	0.00	-250.09	0.00	250.09	3,570.09	1,785.04	6,124.88	3,066.99	3.23	-0.43	0.087
80.00	-19.92	-6.36	0.00	-224.07	0.00	224.07	3,503.71	1,751.85	5,853.88	2,931.29	3.60	-0.45	0.082
82.16	-19.43	-6.30	0.00	-210.31	0.00	210.31	3,467.23	1,733.61	5,708.83	2,858.66	3.81	-0.47	0.079
85.00	-18.41	-6.22	0.00	-192.45	0.00	192.45	3,418.78	1,709.39	5,520.34	2,764.27	4.09	-0.48	0.075
87.83	-17.41	-6.15	0.00	-174.85	0.00	174.85	2,692.45	1,346.23	4,345.60	2,176.03	4.38	-0.50	0.087
90.00	-16.99	-6.11	0.00	-161.50	0.00	161.50	2,665.65	1,332.83	4,237.49	2,121.89	4.61	-0.51	0.083
91.00	-15.30	-5.72	0.00	-155.39	0.00	155.39	2,653.16	1,326.58	4,187.89	2,097.06	4.72	-0.52	0.080
95.00	-14.54	-5.61	0.00	-132.50	0.00	132.50	2,602.34	1,301.17	3,990.97	1,998.45	5.17	-0.54	0.072
100.00	-11.11	-4.44	0.00	-101.69	0.00	101.69	2,536.86	1,268.43	3,748.34	1,876.95	5.75	-0.57	0.059
105.00	-10.31	-4.31	0.00	-79.51	0.00	79.51	2,469.21	1,234.61	3,509.96	1,757.59	6.36	-0.59	0.049
110.00	-7.16	-3.08	0.00	-55.66	0.00	55.66	2,399.39	1,199.69	3,276.20	1,640.54	6.98	-0.61	0.037
115.00	-6.46	-2.96	0.00	-40.26	0.00	40.26	2,327.39	1,163.70	3,047.43	1,525.98	7.63	-0.62	0.029
120.00	-5.79	-2.89	0.00	-25.45	0.00	25.45	2,252.89	1,126.45	2,823.60	1,413.90	8.29	-0.63	0.021
121.00	-3.40	-1.77	0.00	-19.72	0.00	19.72	2,232.94	1,116.47	2,773.56	1,388.84	8.42	-0.64	0.016
125.00	-2.94	-1.69	0.00	-12.64	0.00	12.64	2,153.14	1,076.57	2,577.88	1,290.85	8.96	-0.64	0.011
128.00	-0.19	-0.02	0.00	-0.04	0.00	0.04	2,093.29	1,046.64	2,435.81	1,219.72	9.36	-0.64	0.000
130.00	0.00	-0.02	0.00	0.00	0.00	0.00	2,053.39	1,026.69	2,343.34	1,173.41	9.63	-0.64	0.000

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.23
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.24
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11
Seismic Response Coefficient (C_s):	0.05
Upper Limit C_s	0.05
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	1.41
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.45
Total Unfactored Dead Load:	46.92 k
Seismic Base Shear (E):	3.09 k

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

8/3/2016 4:22:15 PM

Customer: Verizon Wireless

Equivalent Modal Forces Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.23
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.24
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11
Period Based on Rayleigh Method (sec):	1.41
Redundancy Factor (ρ):	1.30

Load Case (1.2 + 0.2Sds) * DL + E ELFM

Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
34	129.00	190	1.861	1.831	1.086	0.448	74	162
33	126.50	331	1.790	1.492	0.959	0.393	113	282
32	123.00	454	1.692	1.092	0.802	0.321	126	387
31	120.50	132	1.624	0.854	0.703	0.274	31	112
30	117.50	674	1.544	0.615	0.597	0.223	130	574
29	112.50	697	1.415	0.314	0.448	0.148	90	593
28	107.50	782	1.292	0.110	0.329	0.088	60	666
27	102.50	805	1.175	-0.018	0.237	0.041	29	685
26	97.50	929	1.063	-0.088	0.165	0.008	6	791
25	93.00	760	0.967	-0.117	0.116	-0.011	-7	647
24	90.50	192	0.916	-0.121	0.094	-0.017	-3	164
23	88.92	420	0.884	-0.121	0.081	-0.020	-7	358
22	86.42	1,001	0.835	-0.117	0.064	-0.021	-18	853
21	83.58	1,020	0.781	-0.108	0.049	-0.020	-17	868
20	81.08	489	0.735	-0.097	0.037	-0.016	-7	416
19	78.00	917	0.680	-0.081	0.026	-0.009	-7	781
18	75.50	232	0.637	-0.066	0.019	-0.002	0	198
17	72.50	1,179	0.588	-0.049	0.013	0.007	7	1,004
16	67.50	1,207	0.510	-0.020	0.007	0.023	24	1,027
15	62.50	1,234	0.437	0.006	0.006	0.037	39	1,051
14	57.50	1,262	0.370	0.027	0.008	0.047	52	1,075
13	52.50	1,290	0.308	0.043	0.012	0.054	60	1,098
12	48.75	655	0.266	0.052	0.015	0.056	32	558
11	46.25	1,323	0.239	0.057	0.018	0.057	66	1,127
10	42.75	2,422	0.204	0.062	0.023	0.057	120	2,062
9	40.25	168	0.181	0.065	0.026	0.057	8	143
8	37.50	1,701	0.157	0.067	0.029	0.056	83	1,448
7	32.50	1,737	0.118	0.070	0.035	0.054	82	1,479
6	27.50	1,774	0.085	0.071	0.039	0.052	80	1,510
5	22.50	1,810	0.057	0.071	0.042	0.050	78	1,542
4	17.50	1,847	0.034	0.069	0.041	0.047	75	1,573
3	12.50	1,883	0.017	0.062	0.037	0.042	69	1,604
2	7.50	1,920	0.006	0.048	0.027	0.033	55	1,635
1	2.50	1,956	0.001	0.021	0.011	0.015	26	1,666

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Alcatel-Lucent RRH2X	128.00	132	1.832	1.689	1.034	0.425	49	112
Alcatel-Lucent RRH2X	128.00	129	1.832	1.689	1.034	0.425	48	110
Alcatel-Lucent RRH2x	128.00	170	1.832	1.689	1.034	0.425	63	145
Amphenol Antel BXA-1	128.00	32	1.832	1.689	1.034	0.425	12	27
RFS DB-T1-6Z-8AB-0Z	128.00	88	1.832	1.689	1.034	0.425	32	75
Decibel DB846F65ZAXY	128.00	84	1.832	1.689	1.034	0.425	31	72
Antel LPA-80080/6CF	128.00	42	1.832	1.689	1.034	0.425	15	36
Commscope SBNHH-	128.00	265	1.832	1.689	1.034	0.425	98	225
Flat Low Profile Pla	128.00	1,500	1.832	1.689	1.034	0.425	553	1,277
Alcatel-Lucent 800MH	121.00	159	1.637	0.899	0.722	0.283	39	135
Alcatel-Lucent 1900M	121.00	132	1.637	0.899	0.722	0.283	32	112
Kathrein Scala 840 1	121.00	90	1.637	0.899	0.722	0.283	22	77
Andrew Microwaves	121.00	49	1.637	0.899	0.722	0.283	12	42
RFS APXVSP18-C-A20	121.00	342	1.637	0.899	0.722	0.283	84	291
Flat Low Profile Pla	121.00	1,500	1.637	0.899	0.722	0.283	368	1,277
Ericsson KRY 112 71	110.00	40	1.353	0.201	0.385	0.116	4	34
Ericsson RRUS 11 B12	110.00	152	1.353	0.201	0.385	0.116	15	130
EMS RR90-17-02DP	110.00	41	1.353	0.201	0.385	0.116	4	34
Ericsson AIR 21, 1.3	110.00	498	1.353	0.201	0.385	0.116	50	424
Commscope LNX-	110.00	151	1.353	0.201	0.385	0.116	15	129
Flat Low Profile Pla	110.00	1,500	1.353	0.201	0.385	0.116	151	1,277
Powerwave Allgon LGP	100.00	66	1.118	-0.059	0.198	0.023	1	56
Powerwave Allgon 702	100.00	13	1.118	-0.059	0.198	0.023	0	11
GPS	100.00	10	1.118	-0.059	0.198	0.023	0	9
Powerwave Allgon LGP	100.00	169	1.118	-0.059	0.198	0.023	3	144
Raycap DC6-48-60-18-	100.00	20	1.118	-0.059	0.198	0.023	0	17
Ericsson RRUS-11 (50	100.00	150	1.118	-0.059	0.198	0.023	3	128
Ericsson RRUS 12 w/	100.00	214	1.118	-0.059	0.198	0.023	4	182
Powerwave Allgon 777	100.00	210	1.118	-0.059	0.198	0.023	4	179
CCI HPA-65R-BUU-H6	100.00	153	1.118	-0.059	0.198	0.023	3	130
Flat Low Profile Pla	100.00	1,500	1.118	-0.059	0.198	0.023	30	1,277
Empty Flat Low Profi	91.00	1,500	0.926	-0.121	0.098	-0.016	-21	1,277
GPS	80.00	10	0.716	-0.092	0.033	-0.014	0	9
Flat Side Arm	80.00	150	0.716	-0.092	0.033	-0.014	-2	128
2" x 8" GPS	76.00	10	0.646	-0.069	0.021	-0.004	0	9
Stand-Off	76.00	100	0.646	-0.069	0.021	-0.004	0	85
2" x 8" GPS	75.00	10	0.629	-0.063	0.018	-0.001	0	9
GPS	75.00	10	0.629	-0.063	0.018	-0.001	0	9
GPS	60.00	10	0.403	0.017	0.006	0.043	0	9
Side Arm	60.00	126	0.403	0.017	0.006	0.043	5	107
		46,918	74.802	26.777	24.386	9.060	3,276	39,954

Load Case (1.2 + 0.2Sds) * DL + E EMAM

Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
34	129.00	190	1.861	1.831	1.086	0.448	74	162
33	126.50	331	1.790	1.492	0.959	0.393	113	282
32	123.00	454	1.692	1.092	0.802	0.321	126	387
31	120.50	132	1.624	0.854	0.703	0.274	31	112
30	117.50	674	1.544	0.615	0.597	0.223	130	574
29	112.50	697	1.415	0.314	0.448	0.148	90	593
28	107.50	782	1.292	0.110	0.329	0.088	60	666
27	102.50	805	1.175	-0.018	0.237	0.041	29	685
26	97.50	929	1.063	-0.088	0.165	0.008	6	791
25	93.00	760	0.967	-0.117	0.116	-0.011	-7	647
24	90.50	192	0.916	-0.121	0.094	-0.017	-3	164
23	88.92	420	0.884	-0.121	0.081	-0.020	-7	358
22	86.42	1,001	0.835	-0.117	0.064	-0.021	-18	853
21	83.58	1,020	0.781	-0.108	0.049	-0.020	-17	868

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

20	81.08	489	0.735	-0.097	0.037	-0.016	-7	416
19	78.00	917	0.680	-0.081	0.026	-0.009	-7	781
18	75.50	232	0.637	-0.066	0.019	-0.002	0	198
17	72.50	1,179	0.588	-0.049	0.013	0.007	7	1,004
16	67.50	1,207	0.510	-0.020	0.007	0.023	24	1,027
15	62.50	1,234	0.437	0.006	0.006	0.037	39	1,051
14	57.50	1,262	0.370	0.027	0.008	0.047	52	1,075
13	52.50	1,290	0.308	0.043	0.012	0.054	60	1,098
12	48.75	655	0.266	0.052	0.015	0.056	32	558
11	46.25	1,323	0.239	0.057	0.018	0.057	66	1,127
10	42.75	2,422	0.204	0.062	0.023	0.057	120	2,062
9	40.25	168	0.181	0.065	0.026	0.057	8	143
8	37.50	1,701	0.157	0.067	0.029	0.056	83	1,448
7	32.50	1,737	0.118	0.070	0.035	0.054	82	1,479
6	27.50	1,774	0.085	0.071	0.039	0.052	80	1,510
5	22.50	1,810	0.057	0.071	0.042	0.050	78	1,542
4	17.50	1,847	0.034	0.069	0.041	0.047	75	1,573
3	12.50	1,883	0.017	0.062	0.037	0.042	69	1,604
2	7.50	1,920	0.006	0.048	0.027	0.033	55	1,635
1	2.50	1,956	0.001	0.021	0.011	0.015	26	1,666
Alcatel-Lucent RRH2X	128.00	132	1.832	1.689	1.034	0.425	49	112
Alcatel-Lucent RRH2X	128.00	129	1.832	1.689	1.034	0.425	48	110
Alcatel-Lucent RRH2x	128.00	170	1.832	1.689	1.034	0.425	63	145
Amphenol Antel BXA-1	128.00	32	1.832	1.689	1.034	0.425	12	27
RFS DB-T1-6Z-8AB-0Z	128.00	88	1.832	1.689	1.034	0.425	32	75
Decibel DB846F65ZAXY	128.00	84	1.832	1.689	1.034	0.425	31	72
Antel LPA-80080/6CF	128.00	42	1.832	1.689	1.034	0.425	15	36
Commscope SBNHH-	128.00	265	1.832	1.689	1.034	0.425	98	225
Flat Low Profile Pla	128.00	1,500	1.832	1.689	1.034	0.425	553	1,277
Alcatel-Lucent 800MH	121.00	159	1.637	0.899	0.722	0.283	39	135
Alcatel-Lucent 1900M	121.00	132	1.637	0.899	0.722	0.283	32	112
Kathrein Scala 840 1	121.00	90	1.637	0.899	0.722	0.283	22	77
Andrew Microwaves	121.00	49	1.637	0.899	0.722	0.283	12	42
RFS APXVSP18-C-A20	121.00	342	1.637	0.899	0.722	0.283	84	291
Flat Low Profile Pla	121.00	1,500	1.637	0.899	0.722	0.283	368	1,277
Ericsson KRY 112 71	110.00	40	1.353	0.201	0.385	0.116	4	34
Ericsson RRUS 11 B12	110.00	152	1.353	0.201	0.385	0.116	15	130
EMS RR90-17-02DP	110.00	41	1.353	0.201	0.385	0.116	4	34
Ericsson AIR 21, 1.3	110.00	498	1.353	0.201	0.385	0.116	50	424
Commscope LNX-	110.00	151	1.353	0.201	0.385	0.116	15	129
Flat Low Profile Pla	110.00	1,500	1.353	0.201	0.385	0.116	151	1,277
Powerwave Allgon LGP	100.00	66	1.118	-0.059	0.198	0.023	1	56
Powerwave Allgon 702	100.00	13	1.118	-0.059	0.198	0.023	0	11
GPS	100.00	10	1.118	-0.059	0.198	0.023	0	9
Powerwave Allgon LGP	100.00	169	1.118	-0.059	0.198	0.023	3	144
Raycap DC6-48-60-18-	100.00	20	1.118	-0.059	0.198	0.023	0	17
Ericsson RRUS-11 (50	100.00	150	1.118	-0.059	0.198	0.023	3	128
Ericsson RRUS 12 w/	100.00	214	1.118	-0.059	0.198	0.023	4	182
Powerwave Allgon 777	100.00	210	1.118	-0.059	0.198	0.023	4	179
CCI HPA-65R-BUU-H6	100.00	153	1.118	-0.059	0.198	0.023	3	130
Flat Low Profile Pla	100.00	1,500	1.118	-0.059	0.198	0.023	30	1,277
Empty Flat Low Profi	91.00	1,500	0.926	-0.121	0.098	-0.016	-21	1,277
GPS	80.00	10	0.716	-0.092	0.033	-0.014	0	9
Flat Side Arm	80.00	150	0.716	-0.092	0.033	-0.014	-2	128
2" x 8" GPS	76.00	10	0.646	-0.069	0.021	-0.004	0	9
Stand-Off	76.00	100	0.646	-0.069	0.021	-0.004	0	85
2" x 8" GPS	75.00	10	0.629	-0.063	0.018	-0.001	0	9
GPS	75.00	10	0.629	-0.063	0.018	-0.001	0	9
GPS	60.00	10	0.403	0.017	0.006	0.043	0	9
Side Arm	60.00	126	0.403	0.017	0.006	0.043	5	107
		46,918	74.802	26.777	24.386	9.060	3,276	39,954

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysy CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Load Case (0.9 - 0.2Sds) * DL + E ELMF

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
34	129.00	190	1.861	1.831	1.086	0.448	74	162
33	126.50	331	1.790	1.492	0.959	0.393	113	282
32	123.00	454	1.692	1.092	0.802	0.321	126	387
31	120.50	132	1.624	0.854	0.703	0.274	31	112
30	117.50	674	1.544	0.615	0.597	0.223	130	574
29	112.50	697	1.415	0.314	0.448	0.148	90	593
28	107.50	782	1.292	0.110	0.329	0.088	60	666
27	102.50	805	1.175	-0.018	0.237	0.041	29	685
26	97.50	929	1.063	-0.088	0.165	0.008	6	791
25	93.00	760	0.967	-0.117	0.116	-0.011	-7	647
24	90.50	192	0.916	-0.121	0.094	-0.017	-3	164
23	88.92	420	0.884	-0.121	0.081	-0.020	-7	358
22	86.42	1,001	0.835	-0.117	0.064	-0.021	-18	853
21	83.58	1,020	0.781	-0.108	0.049	-0.020	-17	868
20	81.08	489	0.735	-0.097	0.037	-0.016	-7	416
19	78.00	917	0.680	-0.081	0.026	-0.009	-7	781
18	75.50	232	0.637	-0.066	0.019	-0.002	0	198
17	72.50	1,179	0.588	-0.049	0.013	0.007	7	1,004
16	67.50	1,207	0.510	-0.020	0.007	0.023	24	1,027
15	62.50	1,234	0.437	0.006	0.006	0.037	39	1,051
14	57.50	1,262	0.370	0.027	0.008	0.047	52	1,075
13	52.50	1,290	0.308	0.043	0.012	0.054	60	1,098
12	48.75	655	0.266	0.052	0.015	0.056	32	558
11	46.25	1,323	0.239	0.057	0.018	0.057	66	1,127
10	42.75	2,422	0.204	0.062	0.023	0.057	120	2,062
9	40.25	168	0.181	0.065	0.026	0.057	8	143
8	37.50	1,701	0.157	0.067	0.029	0.056	83	1,448
7	32.50	1,737	0.118	0.070	0.035	0.054	82	1,479
6	27.50	1,774	0.085	0.071	0.039	0.052	80	1,510
5	22.50	1,810	0.057	0.071	0.042	0.050	78	1,542
4	17.50	1,847	0.034	0.069	0.041	0.047	75	1,573
3	12.50	1,883	0.017	0.062	0.037	0.042	69	1,604
2	7.50	1,920	0.006	0.048	0.027	0.033	55	1,635
1	2.50	1,956	0.001	0.021	0.011	0.015	26	1,666
Alcatel-Lucent RRH2X	128.00	132	1.832	1.689	1.034	0.425	49	112
Alcatel-Lucent RRH2X	128.00	129	1.832	1.689	1.034	0.425	48	110
Alcatel-Lucent RRH2x	128.00	170	1.832	1.689	1.034	0.425	63	145
Amphenol Antel BXA-1	128.00	32	1.832	1.689	1.034	0.425	12	27
RFS DB-T1-6Z-8AB-0Z	128.00	88	1.832	1.689	1.034	0.425	32	75
Decibel DB846F65ZAXY	128.00	84	1.832	1.689	1.034	0.425	31	72
Antel LPA-80080/6CF	128.00	42	1.832	1.689	1.034	0.425	15	36
Commscope SBNHH-	128.00	265	1.832	1.689	1.034	0.425	98	225
Flat Low Profile Pla	128.00	1,500	1.832	1.689	1.034	0.425	553	1,277
Alcatel-Lucent 800MH	121.00	159	1.637	0.899	0.722	0.283	39	135
Alcatel-Lucent 1900M	121.00	132	1.637	0.899	0.722	0.283	32	112
Kathrein Scala 840 1	121.00	90	1.637	0.899	0.722	0.283	22	77
Andrew Microwaves	121.00	49	1.637	0.899	0.722	0.283	12	42
RFS APXVSP18-C-A20	121.00	342	1.637	0.899	0.722	0.283	84	291
Flat Low Profile Pla	121.00	1,500	1.637	0.899	0.722	0.283	368	1,277
Ericsson KRY 112 71	110.00	40	1.353	0.201	0.385	0.116	4	34
Ericsson RRUS 11 B12	110.00	152	1.353	0.201	0.385	0.116	15	130
EMS RR90-17-02DP	110.00	41	1.353	0.201	0.385	0.116	4	34
Ericsson AIR 21, 1.3	110.00	498	1.353	0.201	0.385	0.116	50	424
Commscope LNX-	110.00	151	1.353	0.201	0.385	0.116	15	129
Flat Low Profile Pla	110.00	1,500	1.353	0.201	0.385	0.116	151	1,277
Powerwave Allgon LGP	100.00	66	1.118	-0.059	0.198	0.023	1	56

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Powerwave Allgon 702	100.00	13	1.118	-0.059	0.198	0.023	0	11
GPS	100.00	10	1.118	-0.059	0.198	0.023	0	9
Powerwave Allgon LGP	100.00	169	1.118	-0.059	0.198	0.023	3	144
Raycap DC6-48-60-18-	100.00	20	1.118	-0.059	0.198	0.023	0	17
Ericsson RRUS-11 (50	100.00	150	1.118	-0.059	0.198	0.023	3	128
Ericsson RRUS 12 w/	100.00	214	1.118	-0.059	0.198	0.023	4	182
Powerwave Allgon 777	100.00	210	1.118	-0.059	0.198	0.023	4	179
CCI HPA-65R-BUU-H6	100.00	153	1.118	-0.059	0.198	0.023	3	130
Flat Low Profile Pla	100.00	1,500	1.118	-0.059	0.198	0.023	30	1,277
Empty Flat Low Profi	91.00	1,500	0.926	-0.121	0.098	-0.016	-21	1,277
GPS	80.00	10	0.716	-0.092	0.033	-0.014	0	9
Flat Side Arm	80.00	150	0.716	-0.092	0.033	-0.014	-2	128
2" x 8" GPS	76.00	10	0.646	-0.069	0.021	-0.004	0	9
Stand-Off	76.00	100	0.646	-0.069	0.021	-0.004	0	85
2" x 8" GPS	75.00	10	0.629	-0.063	0.018	-0.001	0	9
GPS	75.00	10	0.629	-0.063	0.018	-0.001	0	9
GPS	60.00	10	0.403	0.017	0.006	0.043	0	9
Side Arm	60.00	126	0.403	0.017	0.006	0.043	5	107
		46,918	74.802	26.777	24.386	9.060	3,276	39,954

Load Case (0.9 - 0.2Sds) * DL + E EMAM

Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
34	129.00	190	1.861	1.831	1.086	0.448	74	162
33	126.50	331	1.790	1.492	0.959	0.393	113	282
32	123.00	454	1.692	1.092	0.802	0.321	126	387
31	120.50	132	1.624	0.854	0.703	0.274	31	112
30	117.50	674	1.544	0.615	0.597	0.223	130	574
29	112.50	697	1.415	0.314	0.448	0.148	90	593
28	107.50	782	1.292	0.110	0.329	0.088	60	666
27	102.50	805	1.175	-0.018	0.237	0.041	29	685
26	97.50	929	1.063	-0.088	0.165	0.008	6	791
25	93.00	760	0.967	-0.117	0.116	-0.011	-7	647
24	90.50	192	0.916	-0.121	0.094	-0.017	-3	164
23	88.92	420	0.884	-0.121	0.081	-0.020	-7	358
22	86.42	1,001	0.835	-0.117	0.064	-0.021	-18	853
21	83.58	1,020	0.781	-0.108	0.049	-0.020	-17	868
20	81.08	489	0.735	-0.097	0.037	-0.016	-7	416
19	78.00	917	0.680	-0.081	0.026	-0.009	-7	781
18	75.50	232	0.637	-0.066	0.019	-0.002	0	198
17	72.50	1,179	0.588	-0.049	0.013	0.007	7	1,004
16	67.50	1,207	0.510	-0.020	0.007	0.023	24	1,027
15	62.50	1,234	0.437	0.006	0.006	0.037	39	1,051
14	57.50	1,262	0.370	0.027	0.008	0.047	52	1,075
13	52.50	1,290	0.308	0.043	0.012	0.054	60	1,098
12	48.75	655	0.266	0.052	0.015	0.056	32	558
11	46.25	1,323	0.239	0.057	0.018	0.057	66	1,127
10	42.75	2,422	0.204	0.062	0.023	0.057	120	2,062
9	40.25	168	0.181	0.065	0.026	0.057	8	143
8	37.50	1,701	0.157	0.067	0.029	0.056	83	1,448
7	32.50	1,737	0.118	0.070	0.035	0.054	82	1,479
6	27.50	1,774	0.085	0.071	0.039	0.052	80	1,510
5	22.50	1,810	0.057	0.071	0.042	0.050	78	1,542
4	17.50	1,847	0.034	0.069	0.041	0.047	75	1,573
3	12.50	1,883	0.017	0.062	0.037	0.042	69	1,604
2	7.50	1,920	0.006	0.048	0.027	0.033	55	1,635
1	2.50	1,956	0.001	0.021	0.011	0.015	26	1,666
Alcatel-Lucent RRH2X	128.00	132	1.832	1.689	1.034	0.425	49	112
Alcatel-Lucent RRH2X	128.00	129	1.832	1.689	1.034	0.425	48	110

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Alcatel-Lucent RRH2x	128.00	170	1.832	1.689	1.034	0.425	63	145
Amphenol Antel BXA-1	128.00	32	1.832	1.689	1.034	0.425	12	27
RFS DB-T1-6Z-8AB-0Z	128.00	88	1.832	1.689	1.034	0.425	32	75
Decibel DB846F65ZAXY	128.00	84	1.832	1.689	1.034	0.425	31	72
Antel LPA-80080/6CF	128.00	42	1.832	1.689	1.034	0.425	15	36
Commscope SBNHH-	128.00	265	1.832	1.689	1.034	0.425	98	225
Flat Low Profile Pla	128.00	1,500	1.832	1.689	1.034	0.425	553	1,277
Alcatel-Lucent 800MH	121.00	159	1.637	0.899	0.722	0.283	39	135
Alcatel-Lucent 1900M	121.00	132	1.637	0.899	0.722	0.283	32	112
Kathrein Scala 840 1	121.00	90	1.637	0.899	0.722	0.283	22	77
Andrew Microwaves	121.00	49	1.637	0.899	0.722	0.283	12	42
RFS APXVSPP18-C-A20	121.00	342	1.637	0.899	0.722	0.283	84	291
Flat Low Profile Pla	121.00	1,500	1.637	0.899	0.722	0.283	368	1,277
Ericsson KRY 112 71	110.00	40	1.353	0.201	0.385	0.116	4	34
Ericsson RRUS 11 B12	110.00	152	1.353	0.201	0.385	0.116	15	130
EMS RR90-17-02DP	110.00	41	1.353	0.201	0.385	0.116	4	34
Ericsson AIR 21, 1.3	110.00	498	1.353	0.201	0.385	0.116	50	424
Commscope LNX-	110.00	151	1.353	0.201	0.385	0.116	15	129
Flat Low Profile Pla	110.00	1,500	1.353	0.201	0.385	0.116	151	1,277
Powerwave Allgon LGP	100.00	66	1.118	-0.059	0.198	0.023	1	56
Powerwave Allgon 702	100.00	13	1.118	-0.059	0.198	0.023	0	11
GPS	100.00	10	1.118	-0.059	0.198	0.023	0	9
Powerwave Allgon LGP	100.00	169	1.118	-0.059	0.198	0.023	3	144
Raycap DC6-48-60-18-	100.00	20	1.118	-0.059	0.198	0.023	0	17
Ericsson RRUS-11 (50	100.00	150	1.118	-0.059	0.198	0.023	3	128
Ericsson RRUS 12 w/	100.00	214	1.118	-0.059	0.198	0.023	4	182
Powerwave Allgon 777	100.00	210	1.118	-0.059	0.198	0.023	4	179
CCI HPA-65R-BUU-H6	100.00	153	1.118	-0.059	0.198	0.023	3	130
Flat Low Profile Pla	100.00	1,500	1.118	-0.059	0.198	0.023	30	1,277
Empty Flat Low Profi	91.00	1,500	0.926	-0.121	0.098	-0.016	-21	1,277
GPS	80.00	10	0.716	-0.092	0.033	-0.014	0	9
Flat Side Arm	80.00	150	0.716	-0.092	0.033	-0.014	-2	128
2" x 8" GPS	76.00	10	0.646	-0.069	0.021	-0.004	0	9
Stand-Off	76.00	100	0.646	-0.069	0.021	-0.004	0	85
2" x 8" GPS	75.00	10	0.629	-0.063	0.018	-0.001	0	9
GPS	75.00	10	0.629	-0.063	0.018	-0.001	0	9
GPS	60.00	10	0.403	0.017	0.006	0.043	0	9
Side Arm	60.00	126	0.403	0.017	0.006	0.043	5	107
		46,918	74.802	26.777	24.386	9.060	3,276	39,954

Site Number: 411189

Code: ANSI/TIA-222-G

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Site Name: Cranburysu CT, CT

Engineering Number: OAA680236_C3_03

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Customer: Verizon Wireless

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	34.33	0.00	56.27	0.00	0.00	3347.56	47.50	0.45
0.9D + 1.6W	34.32	0.00	42.20	0.00	0.00	3330.77	47.50	0.45
1.2D + 1.0Di + 1.0Wi	0.00	0.00	54.17	0.00	0.00	0.00	0.00	0.01
(1.2 + 0.2Sds) * DL + E ELFM	3.09	0.00	56.13	0.00	0.00	298.35	47.50	0.05
(1.2 + 0.2Sds) * DL + E EMAM	3.25	0.00	56.13	0.00	0.00	321.09	47.50	0.05
(0.9 - 0.2Sds) * DL + E ELFM	3.09	0.00	38.29	0.00	0.00	296.56	47.50	0.04
(0.9 - 0.2Sds) * DL + E EMAM	3.25	0.00	38.29	0.00	0.00	319.00	47.50	0.05
1.0D + 1.0W	8.56	0.00	46.92	0.00	0.00	831.98	47.50	0.12

Base/Flange Plate	Plate Type	Baseplate
	Pole Diameter	62 in
	Pole Thickness	0.5 in
	Plate Diameter	77 in
	Plate Thickness	2 in
	Plate Fy	60 ksi
	Weld Length	0.4375 in
	ϕ_s Resistance	525.90 k-in
	Applied	318.79 k-in
	Stiffeners	#

Code Rev. **G**

Moment **3347.6 k-ft**

Axial **56.3 k**

Date **8/3/2016**

Engineer **GMM**

Site # **411189**

Carrier **Verizon**

Bolts	#	20
	Bolt Circle (R)adial / (S)quare	71 in R
	Diameter	2.25 in
	Hole Diameter	2.625 in
	Type	A615-75
	Fy	75 ksi
	Fu	100 ksi
	ϕ_s Resistance	259.82 k
	Applied	115.92 k
	Reinforcement	#
Extra Bolts	#	0

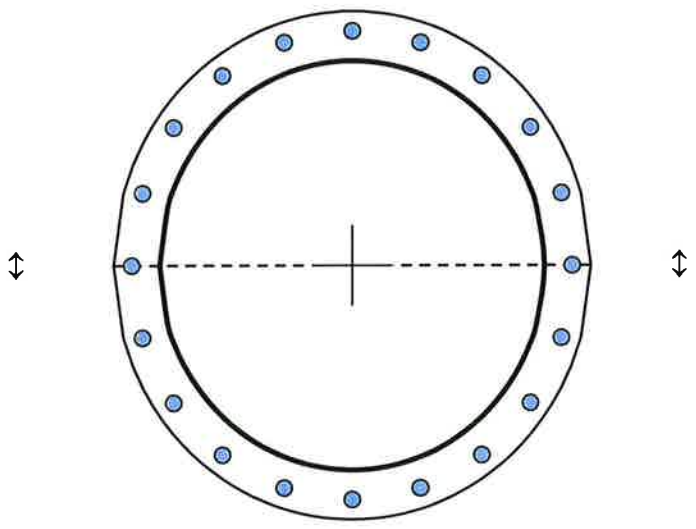
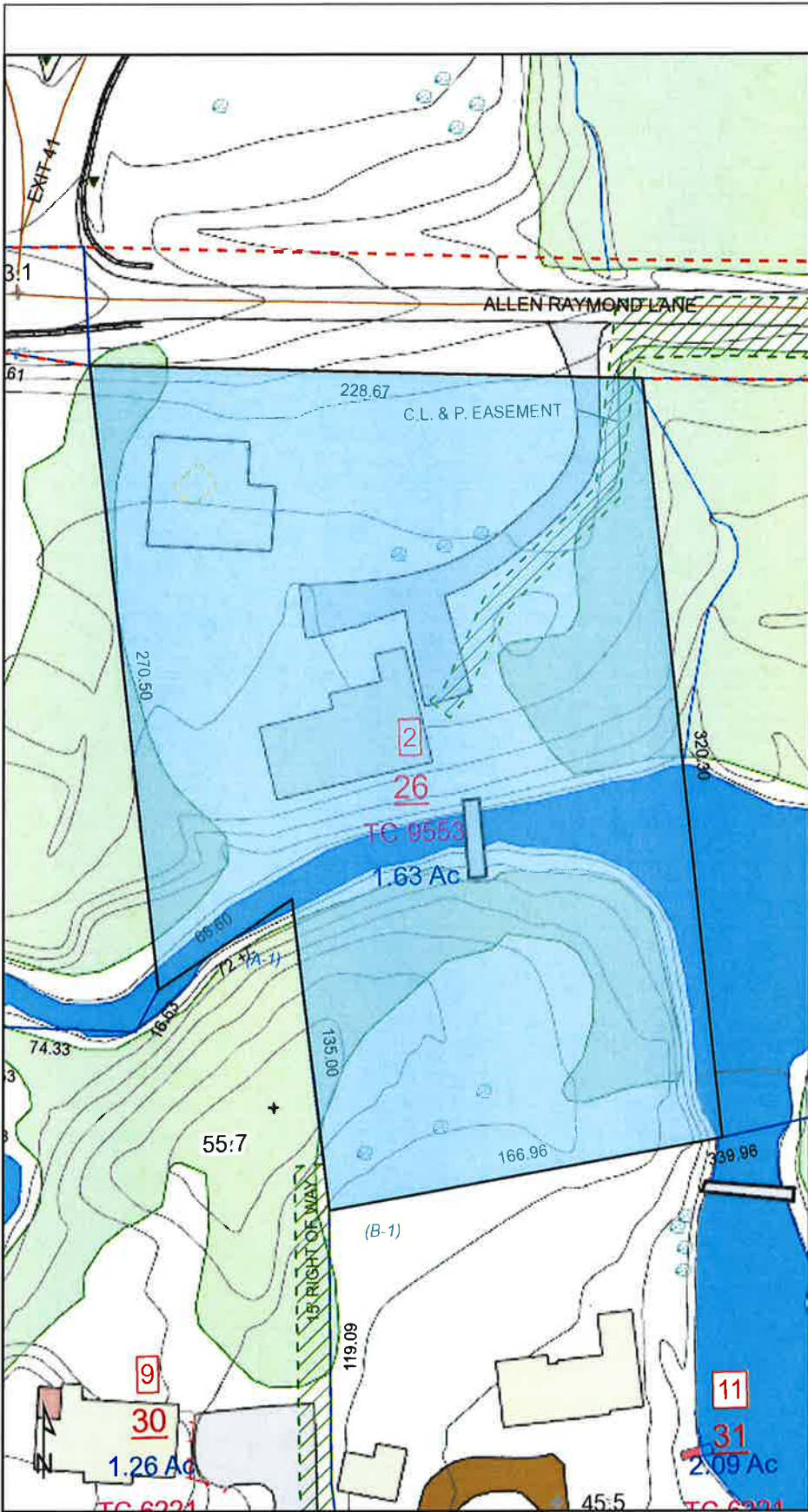


Plate Stress Ratio: **0.61** (Pass)

Bolt Stress Ratio: **0.45** (Pass)

ATTACHMENT 4



Westport CT Web GIS Map Legend

- | | | |
|---------------------------------|-----------------------------|-------------------------------|
| — CAM_line | — Culvert | — Golf Path |
| — Deleted_Wetland | — Dam | — Paved Parking |
| — Amended_Wetland | — Ditch | — Unpaved Parking |
| — old_line | — Rip Rap | — Paved Driveway |
| — Total_Wetland | — Elevation Well | — Unpaved Driveway |
| — Waterbody_Watercourse | — Fence | — Public Stairway |
| — wet_fert_line | — Guardrail | — Tree/line |
| — Wetland | — Hedge | — Wet Area |
| — 100 Year Flood Zone | — Retaining Wall | — Sound, Lake, Pond, or River |
| — 500 Year Flood Zone | — Stone Wall | — Pool |
| — Floodway in Zone AE | — Trail | — Golf Green |
| — Basins | — Abandoned Railroad Tracks | — Golf Bunker |
| — Spot Elevation | — Railroad Tracks | — Tennis Court |
| — Water Spot Elevation | — Paved Road Centerline | — Golf Tee |
| — bulldozer_polyline | — Unpaved Road Centerline | — Wharf, Dock, or Pier |
| — landrock_polyline | — Stream | — Park |
| — original_parcel_polyline | — Coastal Line | — 11 Athletic Field |
| — Inlet | — Easement | — 11 Golf Course |
| — Inlet Depression | — Utility Right of Way | — Inlet_polyline |
| — Inlet Observed | — Private Right of Way | — HYDRIC SOILS |
| — Inlet Depression Obscured | — Proposed Right of Way | — NCN HYDRIC SOILS |
| — Intermediate | — Public Right of Way | — WATER |
| — Intermediate Depression | — Parcel | — A |
| — Intermediate Depression (Obs) | — Fuel Tank | — AA |
| — Tree | — Water Tank | — AAA |
| — Pipe | — Quarry or Pit | — B |
| — Outfall | — Building | — BCD |
| — Catchbasin | — Building Construction | — BPD |
| — Manhole | — Cement Pad | — CPD |
| — Electrical Box | — Deck | — DDD4 |
| — Hydrant | — Foundation | — GSD |
| — Light Pole | — Greenhouse | — QBDIS |
| — Utility Pole | — Mobile Home | — HDD |
| — Sign | — RV | — HSD |
| — Unknown | — Silo | — MHP |
| — Billboard | — Substation | — OSRD |
| — Pipeline Above Ground | — Substack | — PRD |
| — Tower | — Bridge | — RBD |
| — boundary_polyline | — Paved Road | — RORD |
| — Unknown Lines | — Runway | — RPOD |
| | — Unpaved Road | |

1 inch = 71 feet

Westport and its mapping contractors assume no legal responsibility for the information contained herein.

2 ALLEN RAYMOND LN

Location 2 ALLEN RAYMOND LN

Mblu B13/ / 026/000 /

Acct# 8579

Owner CELCO PARTNERSHIP

Assessment \$1,378,920

Appraisal \$1,969,900

PID 4500

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$1,444,300	\$525,600	\$1,969,900

Assessment			
Valuation Year	Improvements	Land	Total
2015	\$1,011,020	\$367,900	\$1,378,920

Owner of Record

Owner CELCO PARTNERSHIP
Co-Owner BELL ATLANTIC NYNEX MOBILE DBA
Address PO BOX 2549
ADDISON , TX 75001

Sale Price \$415,000
Certificate 1
Book & Page 1488/ 99
Sale Date 12/10/1996
Instrument 00

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
CELLCO PARTNERSHIP	\$415,000	1	1488/ 99	00	12/10/1996

Building Information

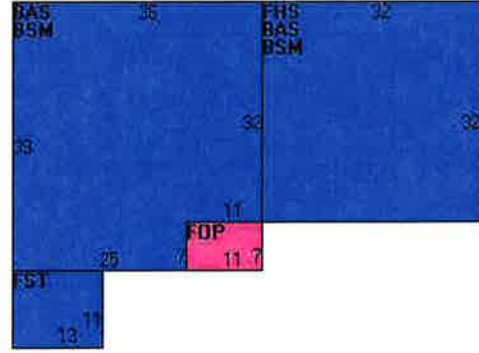
Building 1 : Section 1

Year Built: 1968
Living Area: 3,006
Replacement Cost: \$508,423
Building Percent 80
Good:
Replacement Cost
Less Depreciation: \$406,700

Building Attributes	
Field	Description

STYLE	Res Typ Comm
MODEL	Commercial
Grade	Average +20
Stories:	1
Occupancy	1
Exterior Wall 1	Board & Batten
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Asphalt/F Glas
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Air
AC Type	Central
Bldg Use	Cell Site
Income Adj	
1st Floor Use:	
Heat/AC	Heat/AC Pkgs
Frame Type	Wood Frame
Baths/Plumbing	Average
Ceiling/Walls	Ceil & Walls
Rooms/Prtns	Average
Wall Height	8
% Comn Wall	

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	2,351	2,351
FHS	Half Story, Finished	1,024	512
FST	Utility Storage, Fin	143	143
BSM	Basement Area	2,351	0
FOP	Porch, Open	77	0
		5,946	3,006

Extra Features

Extra Features		Legend
No Data for Extra Features		

Land

Land Use

Use Code	434
Description	Cell Site
Zone	AAA
Neighborhood	C
Alt Land Appr Category	No

Land Line Valuation

Size (Acres)	1.63
Frontage	0
Depth	0
Assessed Value	\$367,900
Appraised Value	\$525,600

Outbuildinas

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
CELL	Cell on TWR	TW		6 Sites	\$1,037,600	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2014	\$1,333,500	\$519,600	\$1,853,100
2012	\$1,333,500	\$519,600	\$1,853,100
2011	\$1,333,500	\$519,600	\$1,853,100

Assessment			
Valuation Year	Improvements	Land	Total
2014	\$933,400	\$363,700	\$1,297,100
2012	\$933,400	\$363,700	\$1,297,100
2011	\$933,400	\$363,700	\$1,297,100

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