

June 19, 2017

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

**Re: Notice of Exempt Modification – Facility Modification
60 Rice Lane, Beacon Falls, Connecticut**

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains fifteen (15) antennas at the top of the existing 160-foot tower at 60 Rice Lane in Beacon Falls, Connecticut (the “Property”). The tower is owned by SBA Communications Corporation (“SBA”). The Council approved Cellco’s use of this tower in 2009. Cellco now intends to replace six (6) of its existing antennas with three (3) model SBNHH-1D65B, 700 MHz antennas; three (3) model SBNHH-1D65B; three (3) model SBNHH-1D65B, 1900 MHz antennas; and three (3) model SBNHH-1D65B, 2100 MHz antennas, all at the same level on the tower. Cellco also intends to install three (3) remote radio heads (“RRHs”) behind its antennas. Included in Attachment 1 are specifications for Cellco’s replacement antennas and RRHs.

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 Christopher Bielik, First Selectman for the Town of Beacon Falls; Mike Mormile, Zoning Enforcement Officer for the Town of Beacon Falls; SBA, the owner of the tower; and Charles Edwards, the owner of the Property.

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

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco’s replacement antennas and RRH’s will be located on its existing platform at the top of the 160-foot tower.

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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 worst-case 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 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:

Christopher Bielik, Beacon Falls First Selectman

Mike Mormile, Zoning Enforcement Officer

SBA

Charles Edwards

Tim Parks, Verizon Wireless

ATTACHMENT 1



SBNHH-1D65B

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

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

Electrical Specifications

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

Electrical Specifications, BASTA*

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

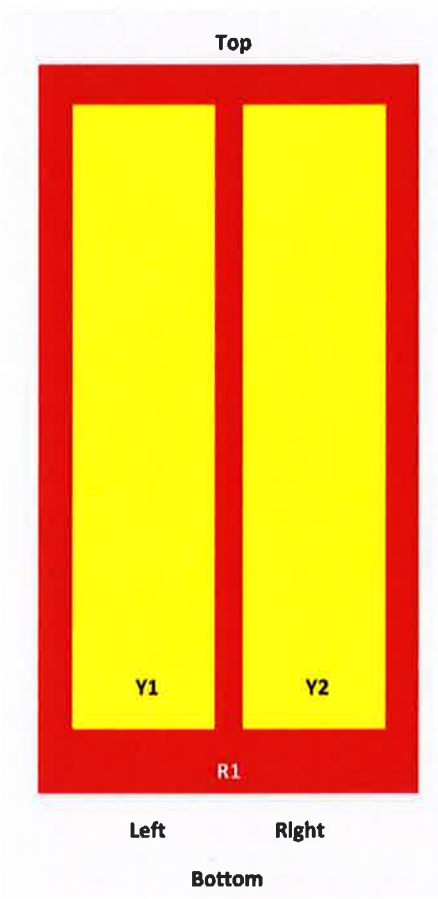
* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, [download the whitepaper Time to Raise the Bar on BSAs.](#)

Array Layout

SBNHH-1D65B

SBNHH 65

Array	Freq (MHz)	Conns	RET (MRET)	AISG RET UID
R1	698-896	1-2	1	A\XXXXXXXXXXXXXXXXX.1
Y1	1695-2360	3-4	2	A\XXXXXXXXXXXXXXXXX.2
Y2	1695-2360	5-6		



View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

General Specifications

Operating Frequency Band	1695 – 2360 MHz 698 – 896 MHz
Antenna Type	Sector
Band	Multiband
Performance Note	Outdoor usage

Mechanical Specifications

RF Connector Quantity, total	6
RF Connector Quantity, low band	2
RF Connector Quantity, high band	4
RF Connector Interface	7-16 DIN Female

SBNHH-1D65B

Color	Light gray
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Radiator Material	Aluminum Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Location	Bottom
Wind Loading, frontal	618.0 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Loading, lateral	197.0 N @ 150 km/h 44.3 lbf @ 150 km/h
Wind Loading, rear	728.0 N @ 150 km/h 163.7 lbf @ 150 km/h
Wind Speed, maximum	241 km/h 150 mph

Dimensions

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

Remote Electrical Tilt (RET) Information

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

Packed Dimensions

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

Regulatory Compliance/Certifications

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



SBNHH1D65B

Included Products

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

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance

ALCATEL-LUCENT B66A RRH4X45

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

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

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



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

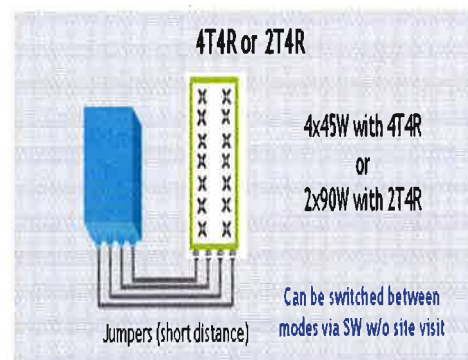
Its compactness and slim design makes the Alcatel-Lucent B66a RRH4x45 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the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

FEATURES

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

BENEFITS

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



TECHNICAL SPECIFICATIONS

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

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ATTACHMENT 2

Site Name: Beacon Falls Tower Height: 160Ft.		General			Power		Density				
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total			
*T-Mobile-AWS-LTE	2	2334	142.9	2100	0.0896	1.0000	0.90%				
*T-Mobile-AWS-UMTS	2	1167	142.9	2100	0.0448	1.0000	0.45%				
*T-Mobile-PCS-UMTS	2	1167	142.9	1950	0.0448	1.0000	0.45%				
*T-Mobile-PCS-GSM	2	1167	142.9	1950	0.0448	1.0000	0.45%				
*T-Mobile-LTE	1	865	142.9	700	0.0166	0.4667	0.36%				
*AT&T	2	419	133	850	0.0187	0.5667	0.33%				
*AT&T	2	877	133	700	0.0391	0.4667	0.84%				
*AT&T	2	419	133	850	0.0187	0.5667	0.33%				
*AT&T	2	817	133	1900	0.0364	1.0000	0.36%				
*AT&T	2	2154	133	2300	0.0960	1.0000	0.96%				
*AT&T	2	1833	133	1900	0.0817	1.0000	0.82%				
*Clearwire	2	152	155	2496	0.0049	1.0000	0.05%				
*Clearwire	1	211	155	11 GHz	0.0034	1.0000	0.03%				
*Sprint	4	13	152	1900	0.0009	1.0000	0.01%				
*Sprint	1	12	152	850	0.0002	0.5667	0.00%				
*Sprint	2	12	152	2500	0.0004	1.0000	0.00%				
*Beacon Hose Co.	1	100	90	33	0.0051	0.2000	0.25%				
Verizon	1	4777	162	0.0654	1970	1.0000	6.54%				
Verizon	9	493	162	0.0608	869	0.5793	10.49%				
Verizon	1	7166	162	0.0982	2145	1.0000	9.82%				
Verizon	1	2133	162	0.0292	746	0.4973	5.88%				
								39.32%			
* Source: Siting Council											

ATTACHMENT 3



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
8445 Freeport Parkway, Suite 375, Irving, Texas 75063

Structural Analysis Report

Existing 160 ft. Nudd Corporation Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT02049-S

Customer Site Name: Beacon Falls

Carrier Name: Verizon

Carrier Site ID / Name: 117618 / Bethany West CT

Site Location: 60 Rice Lane

Beacon Falls, Connecticut

New Haven County

Latitude: 41.455689

Longitude: -73.039866

Analysis Result:

Max Structural Usage: 98.8% [Pass]

Max Foundation Usage: 65% [Pass]

Report Prepared By : Stacey Hesselbein



Introduction

The purpose of this report is to summarize the analysis results on the 160 ft. Nudd Corporation Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Tower Drawing prepared by Fred A. Nudd, Project #7342 dated 1/14/00
Foundation Drawing	Foundation Drawing prepared by Fred A. Nudd, Project #7342 dated 1/14/00
Geotechnical Report	Geotechnical Report prepared by SEA Consultants, Ref #99339.02-A dated 8/2/99
Modification Drawings	Modification Drawing prepared by O2Wireless Solutions, Job #2230-022 dated 5/23/02 Modification Drawing prepared by FDH, Project #09-04232E S2 dated 1/03/09 Modification Drawing prepared by FDH, Project #12-04772E S3 dated 10/15/13 Modification Drawing prepared by TES, Job #20939 Rev3 dated 9/28/16

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-G. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	97.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2012 IBC / 2016 Connecticut State Building Code
Exposure Category:	B
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft.
Seismic Parameters:	$S_s = 0.192$, $S_1 = 0.064$

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft.)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner			
1	165.0	1	Andrew - DB222 - Whip	Low Profile Platform	(1) 7/8"	BFFD			
-	162.0	9	Andrew - SBNHH-1D65B - Panel		(18) 1 5/8" (1) 1 5/8" Fiber	Verizon			
-		6	Andrew - DB846F65ZAXY - Panel						
-		3	Alcatel Lucent - RRH2X60-AWS - RRU						
-		1	Celwave - DB-T1-6Z-8AB-OZ - Dist. Box						
6	152.0	3	RFS - APXVSP18-C-A20 - Panel	Low Profile Platform	(3) 1-1/4" (1) 1-1/4"	Sprint			
7		3	ALU - 1900MHz - RRU						
8		3	ALU - 800MHz - Filter						
9		3	ALU - 800 MHz - RRU						
10		4	RFS - ACU-A20-N - RET						
11	150.0	3	RFS - APXVTM14-C-120 - Panel	Platform w Handrail (Commscope MT-195-12) and V-Brace (VSR-MS-8)	(11) 1 5/8" (1) 1 5/8" Fiber (1) 1-1/4" Hybrid	T-Mobile			
12		3	Alcatel Lucent - TD-RRH8x20-25 - RRU						
13	142.9	3	Ericsson - Air21 B2A B4P - Panel						
14		3	Ericsson - Air21 B4A B2P - Panel						
15		3	Commscope - LNX-6515DS-A1M - Panel						
16		3	Ericsson - KRY 112 144 - TMA						
17		3	Ericsson - S11B12 - RRU						
18	133.0	3	Kathrein - 800 10121 - Panel				Low Profile Platform	(6) 1 1/4" (6) 1 5/8" (2) 3/8" Fiber (4) 3/4" DC inside 3" Conduit	AT&T
19		3	Kathrein - 800 10798 - Panel						
20		3	CCI - DTMABP7819VG12A - TMA/TTA						
21		3	Ericsson - RRUS 12 - RRU						
22		3	Ericsson - RRUS 11 - RRU						
23		3	Ericsson - RRU A2 - RRU						
24		3	Ericsson - RRUS 32 - RRU						
25		2	Raycap - DC6-48-60-18-8F - SP						
26	115.0	1	DB222 - Whip	(1) 3 ft. Standoff	(1) 7/8"	BFFD			
26	40.0	1	GPS	Standoff	(1) 1/2"	Sprint			

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft.)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
2	162.0	6	Andrew - DB846F65ZAXY - Panel	Low Profile Platform	(18) 1 5/8" (1) 1 5/8" Fiber	Verizon
3		9	Andrew - SBNHH-1D65B - Panel			
4		3	Alcatel Lucent - RRH2x90-AWS - RRU			
5		1	RFSCelwave - DB-T1-6Z-8AB-OZ - Dist. Box			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate	Flanges
Max. Usage:	98.8%	63.5%	64.3%	97.9%
Pass/Fail	Pass	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4181.4	37.2	78.5

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.5901 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the ANSI/TIA/EIA 222-G Standard under the design basic wind speed as specified in the Analysis Criteria.

Antenna Mount Note:

The existing mount contributes no additional stress to the tower since it is existing on the tower.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The analysis is based on the presumption that the tower members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.
3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion.
4. An initial tension of 10% of the break strength on all the existing guy wires was assumed in all the structural analyses of guyed towers unless different values were provided by the client. **TES** cannot take responsibility for the deviations in the analysis results because of differences in the initial tension forces of the existing guy wires.
5. Secondary component or connection secondary components, welds and bolts are assumed to be able to carry their intended original design loads. **TES** cannot take responsibility for verification of the adequacy on the connections, bolts and welds present in the structure.
6. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
7. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
8. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
9. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Ratio 82.99% at 16.3ft

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-G
Exposure: B
Gh: 1.1

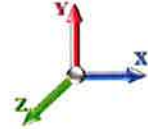
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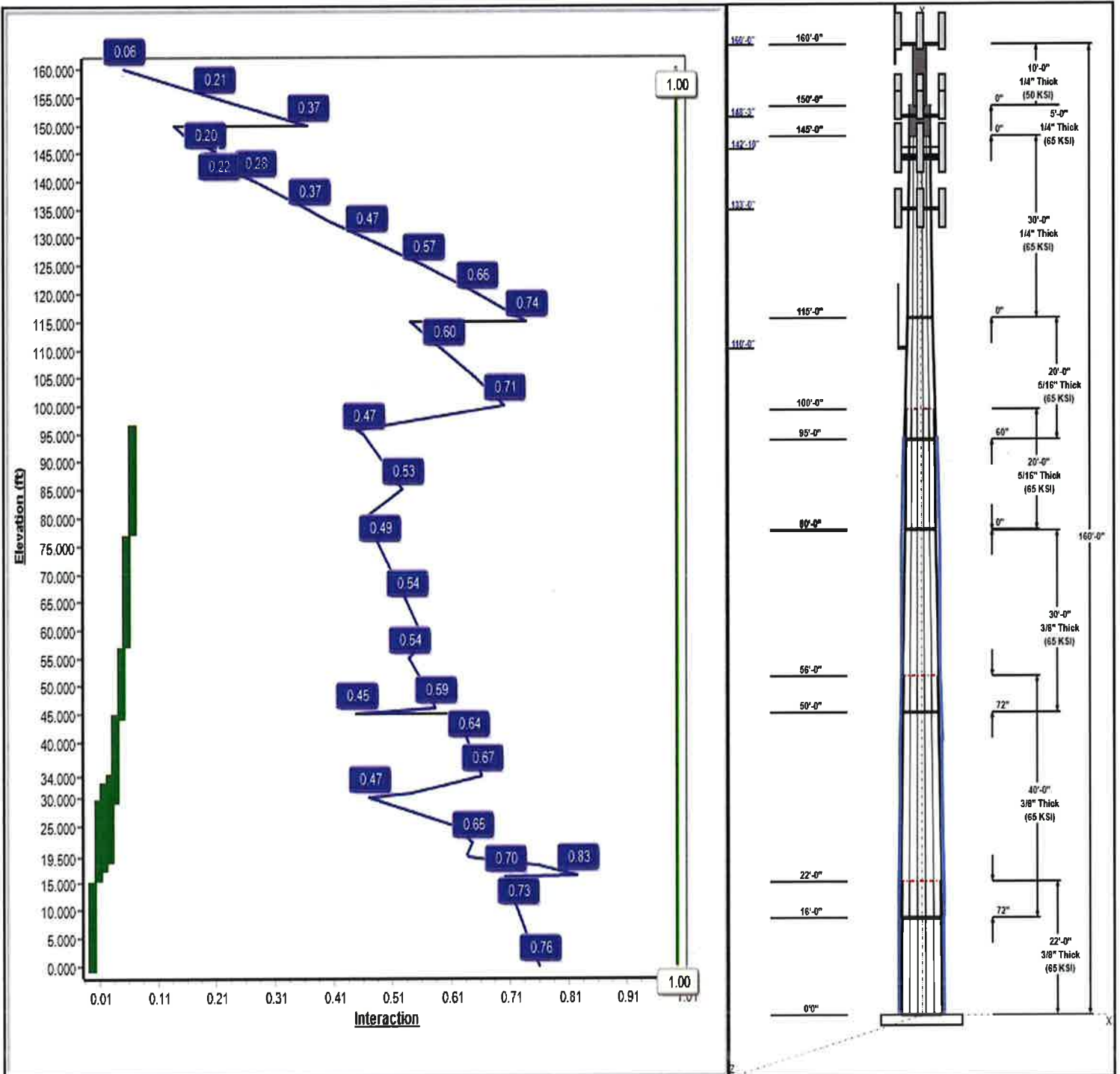
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 24

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Structure: CT02049-S-SBA

Type: Custom
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 12 Sided
Taper: 0.00000

6/9/2017

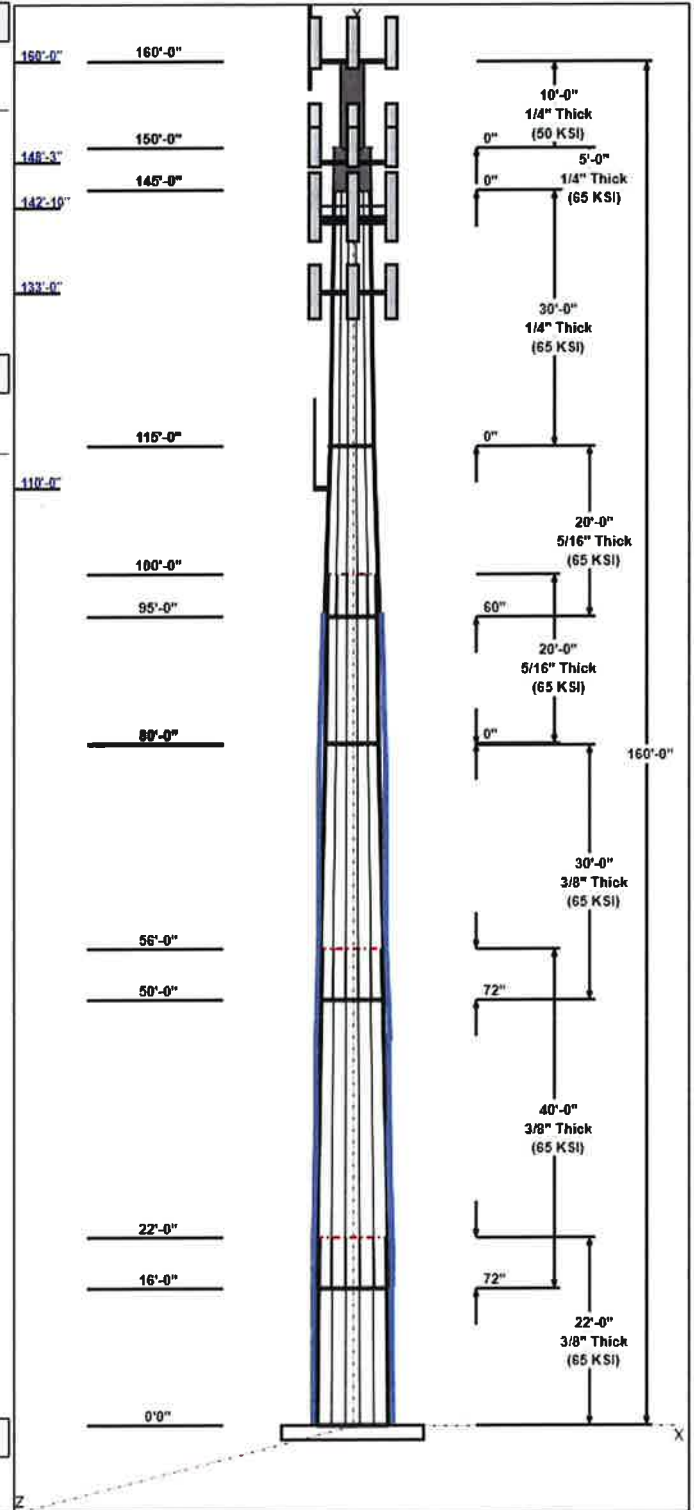
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Shaft Properties							
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	22.00	46.11	50.38	0.375		0.19400	65
2	40.00	40.26	48.02	0.375	Slip	0.19400	65
3	30.00	36.35	42.17	0.375	Slip	0.19400	65
4	20.00	32.48	36.35	0.313	Butt	0.19400	65
5	20.00	30.19	34.07	0.313	Slip	0.19400	65
6	30.00	24.38	30.19	0.250	Butt	0.19400	65
7	5.00	24.38	24.38	0.250	Butt	0.19400	65
8	10.00	16.00	16.00	0.250	Butt	0.00000	50

Discrete Appurtenances				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
160.00	162.00	1	DB222	BFFD
160.00	162.00	6	DB846F65ZAXY	Verizon
160.00	162.00	1	Low Profile Platform	Verizon
160.00	162.00	9	SBNHH-1D65B	Verizon
160.00	162.00	1	DB-T1-6Z-8AB-0Z	Verizon
160.00	162.00	1	6' Lightning rod	
160.00	162.00	3	RRH2x90-AWS	Verizon
148.30	152.00	3	APXVSP18-C-A20	Sprint
148.30	150.00	3	APXVTM14-C-120	Sprint
148.30	152.00	3	1900MHz RRH	Sprint
148.30	152.00	3	800 MHz RRH	Sprint
148.30	152.00	3	ALU 800MHz External	Sprint
148.30	150.00	3	TD-RRH8x20-25	Sprint
148.30	152.00	4	ACU-A20-N	Sprint
148.30	148.30	1	Low Profile Platform	Sprint
142.90	143.60	3	KRY 112 144/1	T-Mobile
142.90	143.60	3	AIR 21 B2A B4P	T-Mobile
142.90	143.60	3	AIR 21 B4A B2P	T-Mobile
142.90	142.90	1	Low-Profile Platform + HR	T-Mobile
142.90	142.90	3	LNx-6515DS-A1M	T-Mobile
142.90	142.90	3	S11B12	T-Mobile
133.00	133.00	3	RRUS 12	AT&T
133.00	133.00	3	800 10121	AT&T
133.00	133.00	3	RRUS 11	AT&T
133.00	133.00	3	RRUS A2 Module	AT&T
133.00	133.00	1	Low Profile Platform	AT&T
133.00	133.00	3	800 10798	AT&T
133.00	133.00	3	DTMABP7819VG12A	AT&T
133.00	133.00	3	RRUS 32	AT&T
133.00	133.00	2	DC6-48-60-18-8F	AT&T
110.00	115.29	1	DB222	BFFD
110.00	110.00	1	3 ft Standoff	BFFD
40.00	40.00	1	GPS	Sprint

Linear Appurtenances				
Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	160.00	Inside	1 5/8" Coax	Verizon
0.00	160.00	Outside	1 5/8" Hybrid	Verizon
0.00	160.00	Outside	7/8" Coax	BFFD
0.00	148.30	Inside	1-1/4" Hybrid	Sprint
0.00	148.30	Inside	1-1/4" Hybrid	Sprint



Structure: CT02049-S-SBA

Type: Custom
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 12 Sided
Taper: 0.00000

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0.00	142.90	Inside	1 5/8" Coax	T-Mobile
0.00	142.90	Outside	1 5/8" Hybrid	T-Mobile
0.00	142.90	Outside	1-1/4" Hybrid	T-Mobile
0.00	133.00	Inside	1 1/4" Coax	AT&T
0.00	133.00	Inside	1 5/8" Coax	AT&T
0.00	133.00	Inside	3/4" DC	AT&T
0.00	133.00	Inside	3/8" Fiber	AT&T
0.00	110.00	Outside	7/8" Coax	BFFD
0.00	98.00	Outside	1.25" Reinforcing plate	
0.00	40.00	Inside	1/2" Coax	Sprint
0.00	32.00	Outside	1.25" Reinforcing plate	

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
18	2.00" F1554 105	105.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.5000	63.0	50.0	Round

Reactions

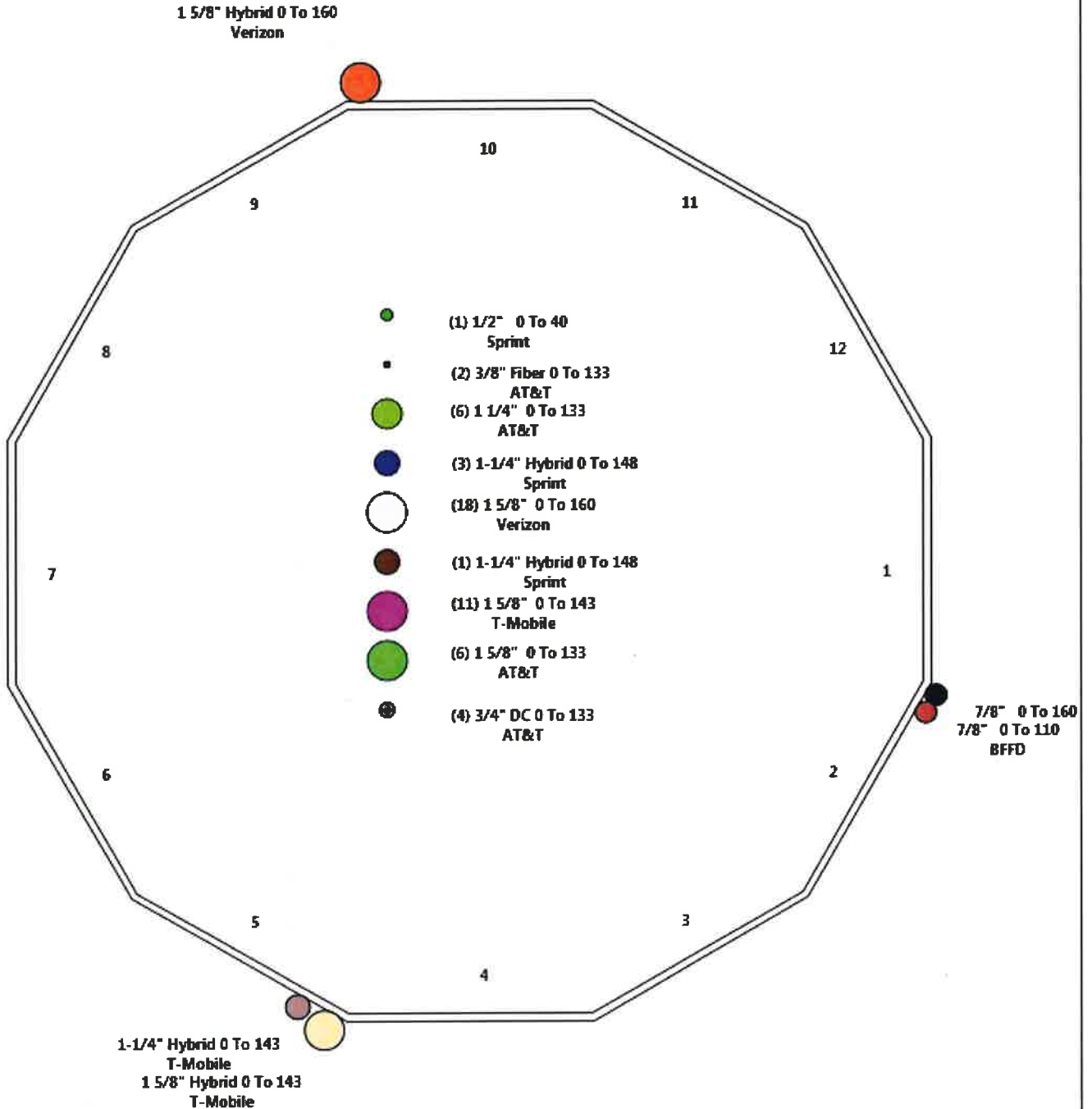
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	4181.4	37.2	48.9
0.9D + 1.6W 97 mph Wind	4136.6	37.2	36.7
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1031.4	8.6	78.5
1.2D + 1.0E	243.9	2.0	49.0
0.9D + 1.0E	240.9	2.0	36.7
1.0D + 1.0W 60 mph Wind	994.3	8.9	40.8

Structure: CT02049-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Beacon Falls
Height: 160.00 (ft)

6/9/2017

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Shaft Properties

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	12	22.000	0.3750	65		0.00	4,327
2	12	40.000	0.3750	65	Slip	72.00	7,193
3	12	30.000	0.3750	65	Slip	72.00	4,794
4	12	20.000	0.3125	65	Flange	0.00	2,335
5	12	20.000	0.3125	65	Slip	60.00	2,179
6	12	30.000	0.2500	65	Flange	0.00	2,221
7	R	5.000	0.2500	65	Flange	0.00	316
8	R	10.000	0.2500	50	Flange	0.00	421
Total Shaft Weight:							23,786

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	50.38	0.00	60.38	19265.63	33.85	134.33	46.11	22.00	55.22	14741.2	30.80	122.9	0.194000
2	48.02	16.00	57.53	16670.65	32.17	128.06	40.26	56.00	48.16	9779.90	26.62	107.3	0.194000
3	42.17	50.00	50.47	11256.46	27.99	112.47	36.35	80.00	43.45	7178.88	23.83	96.95	0.194000
4	36.35	80.00	36.27	6013.63	29.03	116.34	32.48	100.00	32.36	4273.08	25.70	103.9	0.194000
5	34.07	95.00	33.97	4940.86	27.07	109.02	30.19	115.00	30.06	3425.51	23.74	96.61	0.194000
6	30.19	115.0	24.10	2757.64	30.21	120.76	24.38	145.00	19.42	1441.83	23.98	97.50	0.194000
7	24.38	145.0	18.95	1379.54	0.00	97.50	24.38	150.00	18.19	1219.74	0.00	97.50	0.194000
8	16.00	150.0	12.37	383.86	0.00	64.00	16.00	160.00	12.37	383.86	0.00	64.00	0.000000

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Intermediate Connectors			Termination Connectors		
							Description	Spacing (in)	Lower Qty	Description	Spacing (in)	Upper Qty
0.00	16.25	3	PLT C10x30(1.5" Hole)	65	80	0.00	AJM20&sleeve	20.00	AJM20&sleeve	3.00		
16.25	31.00	3	PLT C10x15.3(1.5" Hole)	65	80	0.00	AJM20&sleeve	20.00	AJM20&sleeve	3.00		
18.00	34.00	2	LNP LP6X100-G-20TT	65	80	0.00	5/8" Hollo Bolt	24.00	5/8" Hollo Bolt	3.00	10	10
19.50	35.50	1	LNP LP6X100-G-20TT	65	80	0.00	5/8" Hollo Bolt	24.00	5/8" Hollo Bolt	3.00	10	10
30.00	46.00	3	PLT 6"x1-1/4"(1.25" Hole)	65	80	0.00	AJM20&sleeve	18.00	AJM20&sleeve	3.00	8	8
45.16	58.00	3	PLT 7" x 1.25"(1.25"Hole)	65	80	0.00	AJM20&sleeve	12.00	AJM20&sleeve	3.00	13	
58.00	78.00	3	PLT 5.5"x1 1/4"(1.25"hol)	65	80	0.00	AJM20&sleeve	18.00	AJM20&sleeve	3.00		
78.00	95.58	3	PLT 5.5"x1 1/4"(1.25"hol)	65	80	0.00	AJM20&sleeve	18.00	AJM20&sleeve	3.00		10

Load Summary

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	160.00	DB222	1	16.00	2.25	1.00	85.75	8.351	1.00	0.00	2.00
2	160.00	DB846F65ZAXY	6	21.00	7.05	0.94	219.92	8.290	0.94	0.00	2.00
3	160.00	Low Profile Platform	1	1200.00	22.00	1.00	2253.91	39.776	1.00	0.00	2.00
4	160.00	SBNHH-1D65B	9	40.00	8.16	0.82	244.70	9.469	0.82	0.00	2.00
5	160.00	DB-T1-6Z-8AB-0Z	1	44.00	4.80	0.50	188.83	5.680	0.50	0.00	2.00
6	160.00	6' Lightning rod	1	6.50	0.38	1.00	43.04	1.475	1.00	0.00	2.00
7	160.00	RRH2x90-AWS	3	44.00	2.66	0.67	105.12	3.959	0.67	0.00	2.00
8	148.30	APXVSP18-C-A20	3	57.00	8.02	0.82	229.65	10.810	0.82	0.00	3.70
9	148.30	APXVTM14-C-120	3	56.00	6.34	0.76	216.19	7.452	0.77	0.00	1.70
10	148.30	1900MHz RRH	3	44.00	3.80	0.67	153.04	5.188	0.67	0.00	3.70
11	148.30	800 MHz RRH	3	53.00	2.49	0.67	126.88	3.632	0.67	0.00	3.70
12	148.30	ALU 800MHz External Notch Filt	3	8.80	0.78	0.50	26.42	1.426	0.71	0.00	3.70
13	148.30	TD-RRH8x20-25	3	70.00	4.05	0.69	180.31	4.862	0.71	0.00	1.70
14	148.30	ACU-A20-N	4	1.00	0.14	0.75	5.29	0.436	0.77	0.00	3.70
15	148.30	Low Profile Platform	1	1200.00	17.50	1.00	2245.94	31.533	1.00	0.00	0.00
16	142.90	KRY 112 144/1	3	11.00	0.41	0.70	21.73	0.883	0.72	0.00	0.70
17	142.90	AIR 21 B2A B4P	3	91.50	6.09	0.83	259.41	7.182	0.83	0.00	0.70
18	142.90	AIR 21 B4A B2P	3	90.40	6.09	0.83	258.31	7.182	0.83	0.00	0.70
19	142.90	Low-Profile Platform + HR & V-	1	2246.00	51.70	1.00	5366.63	89.772	1.00	0.00	0.00
20	142.90	LNx-6515DS-A1M	3	49.80	11.47	0.84	278.24	14.721	0.85	0.00	0.00
21	142.90	S11B12	3	51.00	2.83	0.67	120.27	3.498	0.67	0.00	0.00
22	133.00	RRUS 12	3	58.00	2.81	0.70	143.86	3.479	0.71	0.00	0.00
23	133.00	800 10121	3	46.30	5.15	0.79	159.80	7.232	0.81	0.00	0.00
24	133.00	RRUS 11	3	50.70	2.52	0.67	138.59	3.163	0.67	0.00	0.00
25	133.00	RRUS A2 Module	3	21.20	1.86	0.40	56.88	2.822	0.40	0.00	0.00
26	133.00	Low Profile Platform	1	1350.00	22.00	1.00	2513.94	39.450	1.00	0.00	0.00
27	133.00	800 10798	3	81.40	8.62	0.75	511.19	11.539	0.76	0.00	0.00
28	133.00	DTMABP7819VG12A	3	19.00	1.14	0.50	43.95	1.900	0.50	0.00	0.00
29	133.00	RRUS 32	3	77.00	1.65	1.00	124.72	2.222	1.00	0.00	0.00
30	133.00	DC6-48-60-18-8F	2	32.80	1.47	1.00	95.81	2.162	1.00	0.00	0.00
31	110.00	DB222	1	16.00	2.25	1.00	83.19	8.126	1.00	0.00	5.29
32	110.00	3 ft Standoff	1	40.00	2.63	1.00	117.83	8.416	1.00	0.00	0.00
33	40.00	GPS	1	10.00	1.00	1.00	35.69	1.624	1.00	0.00	0.00
Totals:			88	9,624.40			26,133.06				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	160.00	(18) 1 5/8" Coax	0.00	Inside
0.00	160.00	(1) 1 5/8" Hybrid	2.00	Outside
0.00	160.00	(1) 7/8" Coax	0.00	Outside
0.00	148.30	(1) 1-1/4" Hybrid	0.00	Inside
0.00	148.30	(3) 1-1/4" Hybrid	0.00	Inside
0.00	142.90	(11) 1 5/8" Coax	0.00	Inside
0.00	142.90	(1) 1 5/8" Hybrid	2.00	Outside
0.00	142.90	(1) 1-1/4" Hybrid	1.00	Outside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
0.00	133.00	(6) 1 1/4" Coax		0.00		Inside					
0.00	133.00	(6) 1 5/8" Coax		0.00		Inside					
0.00	133.00	(4) 3/4" DC		0.00		Inside					
0.00	133.00	(2) 3/8" Fiber		0.00		Inside					
0.00	110.00	(1) 7/8" Coax		0.00		Outside					
0.00	98.00	(3) 1.25" Reinforcing plate		1.00		Outside					
0.00	40.00	(1) 1/2" Coax		0.00		Inside					
0.00	32.00	(3) 1.25" Reinforcing plate		2.00		Outside					

Shaft Section Properties

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017



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Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing			
											Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
0.00	RB1	0.3750	50.375	60.375	19265.6	33.85	134.33	65	68	0.0	26.46	9158.8	9158.8	
5.00		0.3750	49.405	59.204	18166.0	33.16	131.75	65	69	1017.2	26.46	8824.7	8824.7	450.0
10.00		0.3750	48.435	58.032	17109.0	32.46	129.16	65	69	997.3	26.46	8496.8	8496.8	450.0
15.00		0.3750	47.465	56.861	16093.8	31.77	126.57	65	70	977.4	26.46	8175.1	8175.1	450.0
16.00	Bot - Section 2	0.3750	47.271	56.627	15895.7	31.63	126.06	65	70	193.1	26.46	8111.5	8111.5	90.0
16.25	RT1 RB2	0.3750	47.222	56.568	15846.5	31.60	125.93	65	70	97.1	13.47	4462.4	4462.4	11.5
18.00	RB3	0.3750	46.883	56.158	15504.4	31.36	125.02	65	71	676.7	25.47	9741.7	9741.7	151.8
19.50	RB4	0.3750	46.592	55.807	15215.2	31.15	124.25	65	71	576.1	31.47	9639.7	9639.7	160.7
20.00		0.3750	46.495	55.690	15119.6	31.08	123.99	65	71	191.2	31.47	9602.0	9602.0	53.6
22.00	Top - Section 1	0.3750	46.857	56.127	15478.5	31.34	124.95	65	71	761.0	31.47	9452.1	9452.1	214.3
25.00		0.3750	46.275	55.424	14904.3	30.92	123.40	65	71	569.4	31.47	9229.5	9229.5	321.4
30.00	RB5	0.3750	45.305	54.253	13979.2	30.23	120.81	65	72	933.0	53.97	14995.2	14995.2	918.5
31.00	RT2	0.3750	45.111	54.019	13798.9	30.09	120.30	65	72	184.2	40.50	10892.0	10892.0	137.8
34.00	RT3	0.3750	44.529	53.316	13267.3	29.67	118.74	65	72	547.9	28.50	8669.2	8669.2	290.9
35.00		0.3750	44.335	53.082	13093.2	29.54	118.23	65	73	181.0	28.50	8595.3	8595.3	97.0
35.50	RT4	0.3750	44.238	52.965	13006.7	29.47	117.97	65	73	90.2	22.50	5854.7	5854.7	38.3
40.00		0.3750	43.365	51.910	12245.5	28.84	115.64	65	73	802.9	22.50	5633.5	5633.5	344.5
45.00		0.3750	42.395	50.739	11435.1	28.15	113.05	65	74	873.2	22.50	5392.7	5392.7	382.8
45.16	RB6	0.3750	42.364	50.702	11409.8	28.13	112.97	65	74	27.6	48.75	11681.9	11681.9	26.5
46.00	RT5	0.3750	42.201	50.505	11277.5	28.01	112.54	65	74	144.6	26.25	6250.3	6250.3	75.0
50.00	Bot - Section 3	0.3750	41.425	49.568	10661.4	27.46	110.47	65	75	681.1	26.25	6031.0	6031.0	357.2
55.00		0.3750	40.455	48.397	9923.3	26.76	107.88	65	76	1682.2	26.25	5969.5	5969.5	446.6
56.00	Top - Section 2	0.3750	41.011	49.068	10342.0	27.16	109.36	65	75	331.7	26.25	5915.6	5915.6	89.3
58.00	RT6 RB7	0.3750	40.623	48.599	10048.6	26.88	108.33	65	75	332.3	20.63	4547.7	4547.7	140.4
60.00		0.3750	40.235	48.131	9760.8	26.61	107.29	65	76	329.2	20.63	4464.3	4464.3	140.4
65.00		0.3750	39.265	46.960	9065.4	25.91	104.71	65	76	808.9	20.63	4259.2	4259.2	350.9
70.00		0.3750	38.295	45.788	8403.8	25.22	102.12	65	77	789.0	20.63	4059.0	4059.0	350.9
75.00		0.3750	37.325	44.617	7775.3	24.53	99.53	65	78	769.1	20.63	3863.7	3863.7	350.9
78.00	RT7 RB8	0.3750	36.743	43.914	7413.6	24.11	97.98	65	78	451.9	20.63	3748.8	3748.8	210.5
80.00	Top - Section 3	0.3750	36.355	43.446	7178.9	23.83	96.95	65	79	297.3	20.63	3673.2	3673.2	140.4
80.00	Bot - Section 4	0.3125	36.355	36.268	6013.6	28.60	116.34	65	73					
85.00		0.3125	35.385	35.292	5541.0	28.20	113.23	65	74	608.8	20.63	3487.5	3487.5	350.9
90.00		0.3125	34.415	34.316	5093.9	27.37	110.13	65	75	592.1	20.63	3306.7	3306.7	350.9
95.00	Bot - Section 5	0.3125	33.445	33.340	4671.5	26.53	107.02	65	76	575.5	20.63	3130.7	3130.7	350.9
95.58	RT8	0.3125	33.332	33.226	4624.0	26.44	106.66	65	76	132.6	20.63	3223.1	3223.1	40.7
100.00	Top - Section 4	0.3125	33.100	32.992	4527.1	26.24	105.92	65	76	995.9				
105.00		0.3125	32.130	32.016	4137.0	25.41	102.82	65	77	553.0				
110.00		0.3125	31.160	31.040	3770.1	24.57	99.71	65	78	536.4				
115.00	Top - Section 5	0.3125	30.190	30.064	3425.5	23.74	96.61	65	79	519.8				
115.00	Bot - Section 6	0.2500	30.190	24.102	2757.6	29.68	120.76	65	72					
120.00		0.2500	29.220	23.321	2498.2	29.17	116.88	65	73	403.4				
125.00		0.2500	28.250	22.540	2255.6	28.13	113.00	65	74	390.1				
130.00		0.2500	27.280	21.759	2029.2	27.10	109.12	65	75	376.9				
133.00		0.2500	26.698	21.291	1900.9	26.47	106.79	65	76	219.7				
135.00		0.2500	26.310	20.978	1818.5	26.06	105.24	65	76	143.8				
140.00		0.2500	25.340	20.197	1622.9	25.02	101.36	65	77	350.3				
142.90		0.2500	24.777	19.745	1516.1	24.41	99.11	65	78	197.1				
145.00	Top - Section 6	0.2500	24.370	19.417	1441.8	23.98	97.48	65	79	139.9				
145.00	Bot - Section 7	0.2500	24.375	18.948	1379.5	23.98	97.48	65	55					
148.30		0.2500	23.735	18.445	1272.6	0.00	94.94	65	55	209.9				

Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing			
											Area (in ²)	Ixp (in ⁴)	Iyp (in ⁴)	Weight (lb)
150.00	Top - Section 7	0.2500	23.405	18.186	1219.7	0.00	93.62	65	55	105.9				
150.00	Bot - Section 8	0.2500	16.000	12.370	383.9	0.00	93.62	50	50					
155.00		0.2500	16.000	12.370	383.9	0.00	64.00	50	50	210.5				
160.00		0.2500	16.000	12.370	383.9	0.00	64.00	50	50	210.5				
Total Weight										23786.1	8335.6			

Wind Loading - Shaft

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

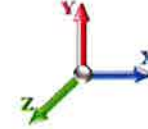
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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60

Iterations 24



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.70	16.018	17.62	352.70	1.000	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	16.018	17.62	345.91	1.223 *	0.000	5.00	21.521	26.31	741.8	0.0	1220.7
10.00		1.00	0.70	16.018	17.62	339.12	1.233 *	0.000	5.00	21.102	26.02	733.6	0.0	1196.8
15.00		1.00	0.70	16.018	17.62	332.33	1.244 *	0.000	5.00	20.684	25.73	725.3	0.0	1172.9
16.00	Bot - Section 2	1.00	0.70	16.018	17.62	330.97	1.251 *	0.000	1.00	4.087	5.11	144.1	0.0	231.7
16.25	RT1 RB2	1.00	0.70	16.018	17.62	330.63	1.252 *	0.000	0.25	1.035	1.30	36.5	0.0	116.5
18.00	RB3	1.00	0.70	16.018	17.62	328.25	1.254 *	0.000	1.75	7.217	9.05	255.2	0.0	812.0
19.50	RB4	1.00	0.70	16.018	17.62	326.22	1.258 *	0.000	1.50	6.145	7.73	217.9	0.0	691.3
20.00		1.00	0.70	16.018	17.62	325.54	1.260 *	0.000	0.50	2.040	2.57	72.5	0.0	229.5
22.00	Top - Section 1	1.00	0.70	16.018	17.62	322.82	1.263 *	0.000	2.00	8.118	10.26	289.1	0.0	913.2
25.00		1.00	0.70	16.018	17.62	324.00	1.260 *	0.000	3.00	12.052	15.19	428.1	0.0	683.3
30.00	RB5	1.00	0.70	16.031	17.63	317.34	1.270 *	0.000	5.00	19.752	25.08	707.5	0.0	1119.6
31.00	RT2	1.00	0.71	16.182	17.80	317.46	1.277 *	0.000	1.00	3.900	4.98	141.8	0.0	221.1
34.00	RT3	1.00	0.73	16.615	18.28	317.53	1.174 *	0.000	3.00	11.600	13.62	398.3	0.0	657.4
35.00		1.00	0.73	16.753	18.43	317.46	1.124 *	0.000	1.00	3.833	4.31	127.0	0.0	217.2
35.50	RT4	1.00	0.74	16.821	18.50	317.41	1.125 *	0.000	0.50	1.910	2.15	63.6	0.0	108.3
40.00	Appurtenance(s)	1.00	0.76	17.405	19.15	316.49	1.130 *	0.000	4.50	17.005	19.22	588.6	0.0	963.5
45.00		1.00	0.79	18.000	19.80	314.67	1.139 *	0.000	5.00	18.497	21.07	667.6	0.0	1047.9
45.16	RB6	1.00	0.79	18.019	19.82	314.59	1.144 *	0.000	0.16	0.585	0.67	21.2	0.0	33.1
46.00	RT5	1.00	0.79	18.114	19.93	314.21	1.145 *	0.000	0.84	3.064	3.51	111.9	0.0	173.6
50.00	Bot - Section 3	1.00	0.81	18.551	20.41	312.13	1.150 *	0.000	4.00	14.429	16.60	542.0	0.0	817.3
55.00		1.00	0.83	19.063	20.97	309.00	1.160 *	0.000	5.00	17.984	20.86	699.9	0.0	2018.6
56.00	Top - Section 2	1.00	0.84	19.161	21.08	308.31	1.167 *	0.000	1.00	3.547	4.14	139.5	0.0	398.0
58.00	RT6 RB7	1.00	0.85	19.354	21.29	312.65	1.161 *	0.000	2.00	7.043	8.18	278.6	0.0	398.8
60.00		1.00	0.85	19.543	21.50	311.16	1.166 *	0.000	2.00	6.976	8.13	279.7	0.0	395.0
65.00		1.00	0.87	19.995	21.99	307.15	1.174 *	0.000	5.00	17.147	20.13	708.3	0.0	970.7
70.00		1.00	0.89	20.422	22.46	302.75	1.186 *	0.000	5.00	16.728	19.83	712.9	0.0	946.8
75.00		1.00	0.91	20.829	22.91	298.01	1.198 *	0.000	5.00	16.310	19.54	716.4	0.0	922.9
78.00	RT7 RB8	1.00	0.92	21.064	23.17	295.01	1.209 *	0.000	3.00	9.585	11.58	429.5	0.0	542.3
80.00	Top - Section 3	1.00	0.93	21.217	23.34	292.95	1.215 *	0.000	2.00	6.306	7.66	286.2	0.0	356.7
85.00		1.00	0.94	21.587	23.75	287.62	1.225 *	0.000	5.00	15.473	18.96	720.2	0.0	730.5
90.00		1.00	0.96	21.943	24.14	282.02	1.240 *	0.000	5.00	15.055	18.66	720.8	0.0	710.6
95.00	Bot - Section 5	1.00	0.97	22.284	24.51	276.20	1.255 *	0.000	5.00	14.636	18.37	720.5	0.0	690.6
95.58	RT8	1.00	0.98	22.323	24.56	275.51	1.264 *	0.000	0.58	1.702	2.15	84.5	0.0	159.1
100.00	Top - Section 4	1.00	0.99	22.613	24.87	270.16	1.223 *	0.000	4.42	12.785	15.63	622.1	0.0	1195.1
105.00		1.00	1.00	22.931	25.22	269.16	1.166 *	0.000	5.00	14.069	16.41	662.3	0.0	663.6
110.00	Appurtenance(s)	1.00	1.02	23.238	25.56	262.78	1.181 *	0.000	5.00	13.651	16.12	659.2	0.0	643.7
115.00	Top - Section 5	1.00	1.03	23.535	25.89	256.22	1.196 *	0.000	5.00	13.232	15.82	655.5	0.0	623.8
120.00		1.00	1.04	23.823	26.20	249.50	1.212 *	0.000	5.00	12.814	15.53	651.2	0.0	484.1
125.00		1.00	1.05	24.102	26.51	242.63	1.229 *	0.000	5.00	12.395	15.24	646.4	0.0	468.2
130.00		1.00	1.07	24.374	26.81	235.61	1.248 *	0.000	5.00	11.977	14.95	641.2	0.0	452.2
133.00	Appurtenance(s)	1.00	1.07	24.533	26.99	231.34	1.264 *	0.000	3.00	6.985	8.83	381.1	0.0	263.7
135.00		1.00	1.08	24.638	27.10	228.46	1.274 *	0.000	2.00	4.573	5.83	252.6	0.0	172.6
140.00		1.00	1.09	24.895	27.38	221.19	1.289 *	0.000	5.00	11.140	14.36	629.2	0.0	420.3
142.90	Appurtenance(s)	1.00	1.09	25.042	27.55	216.91	1.200 *	0.000	2.90	6.269	7.52	331.6	0.0	236.5
145.00	Top - Section 6	1.00	1.10	25.146	27.66	213.79	1.000	0.000	2.10	4.452	4.45	197.0	0.0	167.9
148.30	Appurtenance(s)	1.00	1.11	25.308	27.84	201.77	0.600	0.000	3.30	6.615	3.97	176.8	0.0	251.9

Wind Loading - Shaft

Structure: CT02049-S-SBA

Code: EIA/TIA-222-G

6/9/2017

Site Name: Beacon Falls

Exposure: B

Height: 160.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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150.00 Top - Section 7	1.00	1.11	25.391	27.93	199.29	0.600	0.000	1.70	3.339	2.00	89.5	0.0	127.1
155.00	1.00	1.12	25.630	28.19	136.88	0.645 *	0.000	5.00	6.667	4.30	194.0	0.0	252.6
160.00 Appurtenance(s)	1.00	1.13	25.863	28.45	137.50	0.645 *	0.000	5.00	6.667	4.30	195.7	0.0	252.6
								Totals:	160.00		20,496.7		28,543.3

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

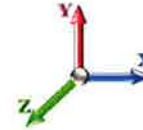
Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	6' Lightning rod	1	25.955	28.551	1.00	1.00	0.38	7.80	0.000	2.000	17.36	0.00	34.72
2	160.00	DB-T1-6Z-8AB-0Z	1	25.955	28.551	0.50	1.00	2.40	52.80	0.000	2.000	109.64	0.00	219.27
3	160.00	SBNHH-1D65B	9	25.955	28.551	0.82	1.00	60.29	432.00	0.000	2.000	2754.33	0.00	5508.65
4	160.00	Low Profile Platform	1	25.955	28.551	1.00	1.00	22.00	1440.00	0.000	2.000	1004.99	0.00	2009.98
5	160.00	DB846F65ZAXY	6	25.955	28.551	0.94	1.00	39.68	151.20	0.000	2.000	1812.52	0.00	3625.04
6	160.00	DB222	1	25.955	28.551	1.00	1.00	2.25	19.20	0.000	2.000	102.78	0.00	205.57
7	160.00	RRH2x90-AWS	3	25.955	28.551	0.67	1.00	5.35	158.40	0.000	2.000	244.24	0.00	488.48
8	148.30	APXVTM14-C-120	3	25.391	27.930	0.61	0.80	11.59	201.60	0.000	1.700	518.14	0.00	880.83
9	148.30	1900MHz RRH	3	25.487	28.036	0.54	0.80	6.11	158.40	0.000	3.700	274.10	0.00	1014.16
10	148.30	800 MHz RRH	3	25.487	28.036	0.54	0.80	4.00	190.80	0.000	3.700	179.61	0.00	664.54
11	148.30	APXVSP18-C-A20	3	25.487	28.036	0.66	0.80	15.78	205.20	0.000	3.700	708.00	0.00	2619.60
12	148.30	Low Profile Platform	1	25.308	27.839	1.00	1.00	17.50	1440.00	0.000	0.000	779.50	0.00	0.00
13	148.30	ALU 800MHz External	3	25.487	28.036	0.40	0.80	0.94	31.68	0.000	3.700	41.99	0.00	155.35
14	148.30	TD-RRH8x20-25	3	25.391	27.930	0.55	0.80	6.71	252.00	0.000	1.700	299.71	0.00	509.51
15	148.30	ACU-A20-N	4	25.487	28.036	0.60	0.80	0.34	4.80	0.000	3.700	15.07	0.00	55.77
16	142.90	S11B12	3	25.042	27.546	0.54	0.80	4.55	183.60	0.000	0.000	200.56	0.00	0.00
17	142.90	LNx-6515DS-A1M	3	25.042	27.546	0.67	0.80	23.12	179.28	0.000	0.000	1019.12	0.00	0.00
18	142.90	AIR 21 B4A B2P	3	25.076	27.584	0.66	0.80	12.09	325.44	0.000	0.700	533.47	0.00	373.43
19	142.90	AIR 21 B2A B4P	3	25.076	27.584	0.66	0.80	12.09	329.40	0.000	0.700	533.47	0.00	373.43
20	142.90	KRY 112 144/1	3	25.076	27.584	0.56	0.80	0.69	39.60	0.000	0.700	30.40	0.00	21.28
21	142.90	Low-Profile Platform + HR	1	25.042	27.546	1.00	1.00	51.70	2695.20	0.000	0.000	2278.58	0.00	0.00
22	133.00	RRUS A2 Module	3	24.533	26.986	0.32	0.80	1.79	76.32	0.000	0.000	77.10	0.00	0.00
23	133.00	RRUS 12	3	24.533	26.986	0.56	0.80	4.74	208.80	0.000	0.000	204.71	0.00	0.00
24	133.00	800 10121	3	24.533	26.986	0.63	0.80	9.76	166.68	0.000	0.000	421.61	0.00	0.00
25	133.00	RRUS 11	3	24.533	26.986	0.54	0.80	4.05	182.52	0.000	0.000	174.96	0.00	0.00
26	133.00	800 10798	3	24.533	26.986	0.60	0.80	15.56	293.04	0.000	0.000	671.74	0.00	0.00
27	133.00	Low Profile Platform	1	24.533	26.986	1.00	1.00	22.00	1620.00	0.000	0.000	949.92	0.00	0.00
28	133.00	DTMABP7819VG12A	3	24.533	26.986	0.40	0.80	1.37	68.40	0.000	0.000	59.07	0.00	0.00
29	133.00	RRUS 32	3	24.533	26.986	0.80	0.80	3.96	277.20	0.000	0.000	170.99	0.00	0.00
30	133.00	DC6-48-60-18-8F	2	24.533	26.986	0.80	0.80	2.35	78.72	0.000	0.000	101.56	0.00	0.00
31	110.00	3 ft Standoff	1	23.238	25.561	1.00	1.00	2.63	48.00	0.000	0.000	107.56	0.00	0.00
32	110.00	DB222	1	23.552	25.907	1.00	1.00	2.25	19.20	0.000	5.292	93.26	0.00	493.53
33	40.00	GPS	1	17.405	19.145	1.00	1.00	1.00	12.00	0.000	0.000	30.63	0.00	0.00
Totals:								11,549.28			16,520.68			

Total Applied Force Summary

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

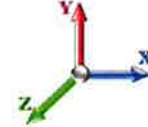


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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		741.85	1522.20	0.00	0.00
10.00		733.59	1498.29	0.00	0.00
15.00		725.33	1474.37	0.00	0.00
16.00		144.08	292.00	0.00	0.00
16.25		36.54	131.55	0.00	0.00
18.00		255.20	917.52	0.00	0.00
19.50		217.95	781.79	0.00	0.00
20.00		72.49	259.64	0.00	0.00
22.00		289.13	1033.77	0.00	0.00
25.00		428.13	864.15	0.00	0.00
30.00		707.54	1421.12	0.00	0.00
31.00		141.84	281.35	0.00	0.00
34.00		398.29	838.32	0.00	0.00
35.00		127.03	277.53	0.00	0.00
35.50		63.64	138.41	0.00	0.00
40.00	(1) attachments	619.26	1246.89	0.00	0.00
45.00		667.60	1348.42	0.00	0.00
45.16		21.23	42.75	0.00	0.00
46.00		111.90	224.06	0.00	0.00
50.00		541.99	1057.69	0.00	0.00
55.00		699.94	2319.14	0.00	0.00
56.00		139.54	458.09	0.00	0.00
58.00		278.64	519.02	0.00	0.00
60.00		279.74	515.20	0.00	0.00
65.00		708.30	1271.26	0.00	0.00
70.00		712.93	1247.34	0.00	0.00
75.00		716.39	1223.43	0.00	0.00
78.00		429.47	722.58	0.00	0.00
80.00		286.20	476.94	0.00	0.00
85.00		720.22	1031.04	0.00	0.00
90.00		720.76	1011.11	0.00	0.00
95.00		720.50	991.19	0.00	0.00
95.58		84.53	194.00	0.00	0.00
100.00		622.14	1460.82	0.00	0.00
105.00		662.31	964.17	0.00	0.00
110.00	(2) attachments	860.02	1011.44	0.00	493.53
115.00		655.49	921.20	0.00	0.00
120.00		651.23	781.53	0.00	0.00
125.00		646.44	765.58	0.00	0.00
130.00		641.16	749.64	0.00	0.00
133.00	(24) attachments	3212.79	3413.81	0.00	0.00
135.00		252.64	262.96	0.00	0.00
140.00		629.21	646.24	0.00	0.00
142.90	(16) attachments	4994.29	4120.03	0.00	768.14
145.00		197.04	228.78	0.00	0.00
148.30	(23) attachments	2992.90	2832.07	0.00	5899.76

Total Applied Force Summary

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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150.00		89.53	168.63	0.00	0.00
155.00		193.97	374.59	0.00	0.00
160.00	(22) attachments	<u>6241.59</u>	<u>2635.99</u>	<u>0.00</u>	<u>12091.71</u>
	Totals:	37,084.50	48,969.66	0.00	19,253.14

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

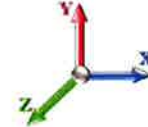


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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.174	1.223	16.018	0.00	6.60
5.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.174	1.223	16.018	0.00	3.12
5.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.174	1.223	16.018	0.00	6.60
5.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.174	1.223	16.018	0.00	5.72
5.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.174	1.223	16.018	0.00	3.12
5.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.174	1.223	16.018	0.00	0.00
5.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.174	1.223	16.018	0.00	0.00
10.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.178	1.233	16.018	0.00	6.60
10.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.233	16.018	0.00	3.12
10.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.178	1.233	16.018	0.00	6.60
10.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.178	1.233	16.018	0.00	5.72
10.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.233	16.018	0.00	3.12
10.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.178	1.233	16.018	0.00	0.00
10.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.178	1.233	16.018	0.00	0.00
15.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.181	1.244	16.018	0.00	6.60
15.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.181	1.244	16.018	0.00	3.12
15.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.181	1.244	16.018	0.00	6.60
15.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.181	1.244	16.018	0.00	5.72
15.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.181	1.244	16.018	0.00	3.12
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.181	1.244	16.018	0.00	0.00
15.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.181	1.244	16.018	0.00	0.00
16.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.184	1.251	16.018	0.00	1.32
16.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.184	1.251	16.018	0.00	0.62
16.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.184	1.251	16.018	0.00	1.32
16.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.184	1.251	16.018	0.00	1.14
16.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.184	1.251	16.018	0.00	0.62
16.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.184	1.251	16.018	0.00	0.00
16.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.21	0.00	0.184	1.251	16.018	0.00	0.00
16.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.184	1.252	16.018	0.00	0.33
16.25	7/8" Coax	Yes	0.25	0.000	0.00	0.00	0.00	0.184	1.252	16.018	0.00	0.16
16.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.184	1.252	16.018	0.00	0.33
16.25	1-1/4" Hybrid	Yes	0.25	0.000	1.25	0.03	0.00	0.184	1.252	16.018	0.00	0.29
16.25	7/8" Coax	Yes	0.25	0.000	0.00	0.00	0.00	0.184	1.252	16.018	0.00	0.16
16.25	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.03	0.00	0.184	1.252	16.018	0.00	0.00
16.25	1.25" Reinforcing	Yes	0.25	0.000	2.50	0.05	0.00	0.184	1.252	16.018	0.00	0.00
18.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.185	1.254	16.018	0.00	2.31
18.00	7/8" Coax	Yes	1.75	0.000	0.00	0.00	0.00	0.185	1.254	16.018	0.00	1.09
18.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.185	1.254	16.018	0.00	2.31
18.00	1-1/4" Hybrid	Yes	1.75	0.000	1.25	0.18	0.00	0.185	1.254	16.018	0.00	2.00
18.00	7/8" Coax	Yes	1.75	0.000	0.00	0.00	0.00	0.185	1.254	16.018	0.00	1.09
18.00	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.18	0.00	0.185	1.254	16.018	0.00	0.00
18.00	1.25" Reinforcing	Yes	1.75	0.000	2.50	0.36	0.00	0.185	1.254	16.018	0.00	0.00
19.50	1 5/8" Hybrid	Yes	1.50	0.000	2.00	0.25	0.00	0.186	1.258	16.018	0.00	1.98
19.50	7/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.186	1.258	16.018	0.00	0.94
19.50	1 5/8" Hybrid	Yes	1.50	0.000	2.00	0.25	0.00	0.186	1.258	16.018	0.00	1.98
19.50	1-1/4" Hybrid	Yes	1.50	0.000	1.25	0.16	0.00	0.186	1.258	16.018	0.00	1.72
19.50	7/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.186	1.258	16.018	0.00	0.94

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



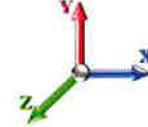
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Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.60



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
19.50	1.25" Reinforcing	Yes	1.50	0.000	1.25	0.16	0.00	0.186	1.258	16.018	0.00	0.00
19.50	1.25" Reinforcing	Yes	1.50	0.000	2.50	0.31	0.00	0.186	1.258	16.018	0.00	0.00
20.00	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.187	1.260	16.018	0.00	0.66
20.00	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.187	1.260	16.018	0.00	0.31
20.00	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.187	1.260	16.018	0.00	0.66
20.00	1-1/4" Hybrid	Yes	0.50	0.000	1.25	0.05	0.00	0.187	1.260	16.018	0.00	0.57
20.00	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.187	1.260	16.018	0.00	0.31
20.00	1.25" Reinforcing	Yes	0.50	0.000	1.25	0.05	0.00	0.187	1.260	16.018	0.00	0.00
20.00	1.25" Reinforcing	Yes	0.50	0.000	2.50	0.10	0.00	0.187	1.260	16.018	0.00	0.00
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.188	1.263	16.018	0.00	2.64
22.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.188	1.263	16.018	0.00	1.25
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.188	1.263	16.018	0.00	2.64
22.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.188	1.263	16.018	0.00	2.29
22.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.188	1.263	16.018	0.00	1.25
22.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.188	1.263	16.018	0.00	0.00
22.00	1.25" Reinforcing	Yes	2.00	0.000	2.50	0.42	0.00	0.188	1.263	16.018	0.00	0.00
25.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.187	1.260	16.018	0.00	3.96
25.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.187	1.260	16.018	0.00	1.87
25.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.187	1.260	16.018	0.00	3.96
25.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.187	1.260	16.018	0.00	3.43
25.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.187	1.260	16.018	0.00	1.87
25.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.187	1.260	16.018	0.00	0.00
25.00	1.25" Reinforcing	Yes	3.00	0.000	2.50	0.63	0.00	0.187	1.260	16.018	0.00	0.00
30.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.190	1.270	16.031	0.00	6.60
30.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.190	1.270	16.031	0.00	3.12
30.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.190	1.270	16.031	0.00	6.60
30.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.190	1.270	16.031	0.00	5.72
30.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.190	1.270	16.031	0.00	3.12
30.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.190	1.270	16.031	0.00	0.00
30.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.190	1.270	16.031	0.00	0.00
31.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.192	1.277	16.182	0.00	1.32
31.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.192	1.277	16.182	0.00	0.62
31.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.192	1.277	16.182	0.00	1.32
31.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.192	1.277	16.182	0.00	1.14
31.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.192	1.277	16.182	0.00	0.62
31.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.192	1.277	16.182	0.00	0.00
31.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.21	0.00	0.192	1.277	16.182	0.00	0.00
34.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.158	1.174	16.615	0.00	3.96
34.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.158	1.174	16.615	0.00	1.87
34.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.158	1.174	16.615	0.00	3.96
34.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.158	1.174	16.615	0.00	3.43
34.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.158	1.174	16.615	0.00	1.87
34.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.158	1.174	16.615	0.00	0.00
34.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.21	0.00	0.158	1.174	16.615	0.00	0.00
35.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.141	1.124	16.753	0.00	1.32
35.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.141	1.124	16.753	0.00	0.62
35.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.141	1.124	16.753	0.00	1.32

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



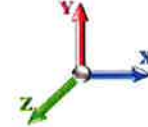
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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 24



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
35.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.141	1.124	16.753	0.00	1.14
35.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.141	1.124	16.753	0.00	0.62
35.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.141	1.124	16.753	0.00	0.00
35.50	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.142	1.125	16.821	0.00	0.66
35.50	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.142	1.125	16.821	0.00	0.31
35.50	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.142	1.125	16.821	0.00	0.66
35.50	1-1/4" Hybrid	Yes	0.50	0.000	1.25	0.05	0.00	0.142	1.125	16.821	0.00	0.57
35.50	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.142	1.125	16.821	0.00	0.31
35.50	1.25" Reinforcing	Yes	0.50	0.000	1.25	0.05	0.00	0.142	1.125	16.821	0.00	0.00
40.00	1 5/8" Hybrid	Yes	4.50	0.000	2.00	0.75	0.00	0.143	1.130	17.405	0.00	5.94
40.00	7/8" Coax	Yes	4.50	0.000	0.00	0.00	0.00	0.143	1.130	17.405	0.00	2.81
40.00	1 5/8" Hybrid	Yes	4.50	0.000	2.00	0.75	0.00	0.143	1.130	17.405	0.00	5.94
40.00	1-1/4" Hybrid	Yes	4.50	0.000	1.25	0.47	0.00	0.143	1.130	17.405	0.00	5.15
40.00	7/8" Coax	Yes	4.50	0.000	0.00	0.00	0.00	0.143	1.130	17.405	0.00	2.81
40.00	1.25" Reinforcing	Yes	4.50	0.000	1.25	0.47	0.00	0.143	1.130	17.405	0.00	0.00
45.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.146	1.139	18.000	0.00	6.60
45.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.146	1.139	18.000	0.00	3.12
45.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.146	1.139	18.000	0.00	6.60
45.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.146	1.139	18.000	0.00	5.72
45.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.146	1.139	18.000	0.00	3.12
45.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.146	1.139	18.000	0.00	0.00
45.16	1 5/8" Hybrid	Yes	0.16	0.000	2.00	0.03	0.00	0.148	1.144	18.019	0.00	0.21
45.16	7/8" Coax	Yes	0.16	0.000	0.00	0.00	0.00	0.148	1.144	18.019	0.00	0.10
45.16	1 5/8" Hybrid	Yes	0.16	0.000	2.00	0.03	0.00	0.148	1.144	18.019	0.00	0.21
45.16	1-1/4" Hybrid	Yes	0.16	0.000	1.25	0.02	0.00	0.148	1.144	18.019	0.00	0.18
45.16	7/8" Coax	Yes	0.16	0.000	0.00	0.00	0.00	0.148	1.144	18.019	0.00	0.10
45.16	1.25" Reinforcing	Yes	0.16	0.000	1.25	0.02	0.00	0.148	1.144	18.019	0.00	0.00
46.00	1 5/8" Hybrid	Yes	0.84	0.000	2.00	0.14	0.00	0.148	1.145	18.114	0.00	1.11
46.00	7/8" Coax	Yes	0.84	0.000	0.00	0.00	0.00	0.148	1.145	18.114	0.00	0.52
46.00	1 5/8" Hybrid	Yes	0.84	0.000	2.00	0.14	0.00	0.148	1.145	18.114	0.00	1.11
46.00	1-1/4" Hybrid	Yes	0.84	0.000	1.25	0.09	0.00	0.148	1.145	18.114	0.00	0.96
46.00	7/8" Coax	Yes	0.84	0.000	0.00	0.00	0.00	0.148	1.145	18.114	0.00	0.52
46.00	1.25" Reinforcing	Yes	0.84	0.000	1.25	0.09	0.00	0.148	1.145	18.114	0.00	0.00
50.00	1 5/8" Hybrid	Yes	4.00	0.000	2.00	0.67	0.00	0.150	1.150	18.551	0.00	5.28
50.00	7/8" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.150	1.150	18.551	0.00	2.50
50.00	1 5/8" Hybrid	Yes	4.00	0.000	2.00	0.67	0.00	0.150	1.150	18.551	0.00	5.28
50.00	1-1/4" Hybrid	Yes	4.00	0.000	1.25	0.42	0.00	0.150	1.150	18.551	0.00	4.58
50.00	7/8" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.150	1.150	18.551	0.00	2.50
50.00	1.25" Reinforcing	Yes	4.00	0.000	1.25	0.42	0.00	0.150	1.150	18.551	0.00	0.00
55.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.153	1.160	19.063	0.00	6.60
55.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.153	1.160	19.063	0.00	3.12
55.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.153	1.160	19.063	0.00	6.60
55.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.153	1.160	19.063	0.00	5.72
55.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.153	1.160	19.063	0.00	3.12
55.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.153	1.160	19.063	0.00	0.00
56.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.156	1.167	19.161	0.00	1.32
56.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.156	1.167	19.161	0.00	0.62

Linear Appurtenance Segment Forces (Factored)

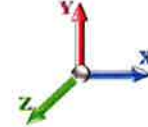
Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
56.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.156	1.167	19.161	0.00	1.32
56.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.156	1.167	19.161	0.00	1.14
56.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.156	1.167	19.161	0.00	0.62
56.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.156	1.167	19.161	0.00	0.00
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.154	1.161	19.354	0.00	2.64
58.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.154	1.161	19.354	0.00	1.25
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.154	1.161	19.354	0.00	2.64
58.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.154	1.161	19.354	0.00	2.29
58.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.154	1.161	19.354	0.00	1.25
58.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.154	1.161	19.354	0.00	0.00
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.155	1.166	19.543	0.00	2.64
60.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.155	1.166	19.543	0.00	1.25
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.155	1.166	19.543	0.00	2.64
60.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.155	1.166	19.543	0.00	2.29
60.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.155	1.166	19.543	0.00	1.25
60.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.155	1.166	19.543	0.00	0.00
65.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.158	1.174	19.995	0.00	6.60
65.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.158	1.174	19.995	0.00	3.12
65.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.158	1.174	19.995	0.00	6.60
65.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.158	1.174	19.995	0.00	5.72
65.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.158	1.174	19.995	0.00	3.12
65.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.158	1.174	19.995	0.00	0.00
70.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.162	1.186	20.422	0.00	6.60
70.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.162	1.186	20.422	0.00	3.12
70.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.162	1.186	20.422	0.00	6.60
70.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.162	1.186	20.422	0.00	5.72
70.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.162	1.186	20.422	0.00	3.12
70.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.162	1.186	20.422	0.00	0.00
75.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.166	1.198	20.829	0.00	6.60
75.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	20.829	0.00	3.12
75.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.166	1.198	20.829	0.00	6.60
75.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.166	1.198	20.829	0.00	5.72
75.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	20.829	0.00	3.12
75.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.166	1.198	20.829	0.00	0.00
78.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.170	1.209	21.064	0.00	3.96
78.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.170	1.209	21.064	0.00	1.87
78.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.170	1.209	21.064	0.00	3.96
78.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.170	1.209	21.064	0.00	3.43
78.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.170	1.209	21.064	0.00	1.87
78.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.170	1.209	21.064	0.00	0.00
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.172	1.215	21.217	0.00	2.64
80.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.172	1.215	21.217	0.00	1.25
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.172	1.215	21.217	0.00	2.64
80.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.172	1.215	21.217	0.00	2.29
80.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.172	1.215	21.217	0.00	1.25
80.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.172	1.215	21.217	0.00	0.00
85.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.175	1.225	21.587	0.00	6.60

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

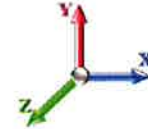


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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
85.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.175	1.225	21.587	0.00	3.12
85.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.175	1.225	21.587	0.00	6.60
85.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.175	1.225	21.587	0.00	5.72
85.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.175	1.225	21.587	0.00	3.12
85.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.175	1.225	21.587	0.00	0.00
90.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.180	1.240	21.943	0.00	6.60
90.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.180	1.240	21.943	0.00	3.12
90.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.180	1.240	21.943	0.00	6.60
90.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.180	1.240	21.943	0.00	5.72
90.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.180	1.240	21.943	0.00	3.12
90.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.180	1.240	21.943	0.00	0.00
95.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.185	1.255	22.284	0.00	6.60
95.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.185	1.255	22.284	0.00	3.12
95.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.185	1.255	22.284	0.00	6.60
95.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.185	1.255	22.284	0.00	5.72
95.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.185	1.255	22.284	0.00	3.12
95.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.185	1.255	22.284	0.00	0.00
95.58	1 5/8" Hybrid	Yes	0.58	0.000	2.00	0.10	0.00	0.188	1.264	22.323	0.00	0.77
95.58	7/8" Coax	Yes	0.58	0.000	0.00	0.00	0.00	0.188	1.264	22.323	0.00	0.36
95.58	1 5/8" Hybrid	Yes	0.58	0.000	2.00	0.10	0.00	0.188	1.264	22.323	0.00	0.77
95.58	1-1/4" Hybrid	Yes	0.58	0.000	1.25	0.06	0.00	0.188	1.264	22.323	0.00	0.66
95.58	7/8" Coax	Yes	0.58	0.000	0.00	0.00	0.00	0.188	1.264	22.323	0.00	0.36
95.58	1.25" Reinforcing	Yes	0.58	0.000	1.25	0.06	0.00	0.188	1.264	22.323	0.00	0.00
100.00	1 5/8" Hybrid	Yes	4.42	0.000	2.00	0.74	0.00	0.174	1.223	22.613	0.00	5.83
100.00	7/8" Coax	Yes	4.42	0.000	0.00	0.00	0.00	0.174	1.223	22.613	0.00	2.76
100.00	1 5/8" Hybrid	Yes	4.42	0.000	2.00	0.74	0.00	0.174	1.223	22.613	0.00	5.83
100.00	1-1/4" Hybrid	Yes	4.42	0.000	1.25	0.46	0.00	0.174	1.223	22.613	0.00	5.06
100.00	7/8" Coax	Yes	4.42	0.000	0.00	0.00	0.00	0.174	1.223	22.613	0.00	2.76
100.00	1.25" Reinforcing	Yes	2.42	0.000	1.25	0.25	0.00	0.174	1.223	22.613	0.00	0.00
105.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.155	1.166	22.931	0.00	6.60
105.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	22.931	0.00	3.12
105.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.155	1.166	22.931	0.00	6.60
105.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.155	1.166	22.931	0.00	5.72
105.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	22.931	0.00	3.12
110.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.160	1.181	23.238	0.00	6.60
110.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.181	23.238	0.00	3.12
110.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.160	1.181	23.238	0.00	6.60
110.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.160	1.181	23.238	0.00	5.72
110.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.181	23.238	0.00	3.12
115.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.165	1.196	23.535	0.00	6.60
115.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.165	1.196	23.535	0.00	3.12
115.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.165	1.196	23.535	0.00	6.60
115.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.165	1.196	23.535	0.00	5.72
120.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.171	1.212	23.823	0.00	6.60
120.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.171	1.212	23.823	0.00	3.12
120.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.171	1.212	23.823	0.00	6.60
120.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.171	1.212	23.823	0.00	5.72

Linear Appurtenance Segment Forces (Factored)

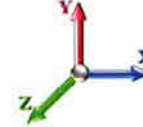
Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
125.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.176	1.229	24.102	0.00	6.60
125.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.176	1.229	24.102	0.00	3.12
125.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.176	1.229	24.102	0.00	6.60
125.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.176	1.229	24.102	0.00	5.72
130.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.183	1.248	24.374	0.00	6.60
130.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.183	1.248	24.374	0.00	3.12
130.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.183	1.248	24.374	0.00	6.60
130.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.183	1.248	24.374	0.00	5.72
133.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.188	1.264	24.533	0.00	3.96
133.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.188	1.264	24.533	0.00	1.87
133.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.188	1.264	24.533	0.00	3.96
133.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.188	1.264	24.533	0.00	3.43
135.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.191	1.274	24.638	0.00	2.64
135.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.191	1.274	24.638	0.00	1.25
135.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.191	1.274	24.638	0.00	2.64
135.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.191	1.274	24.638	0.00	2.29
140.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.196	1.289	24.895	0.00	6.60
140.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.196	1.289	24.895	0.00	3.12
140.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.196	1.289	24.895	0.00	6.60
140.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.196	1.289	24.895	0.00	5.72
142.90	1 5/8" Hybrid	Yes	2.90	1.200	2.00	0.48	0.58	0.202	0.000	25.042	25.56	3.83
142.90	7/8" Coax	Yes	2.90	0.000	0.00	0.00	0.00	0.202	0.000	25.042	0.00	1.81
142.90	1 5/8" Hybrid	Yes	2.90	1.200	2.00	0.48	0.58	0.202	0.000	25.042	25.56	3.83
142.90	1-1/4" Hybrid	Yes	2.90	1.200	1.25	0.30	0.36	0.202	0.000	25.042	15.98	3.32
145.00	1 5/8" Hybrid	Yes	2.10	0.000	2.00	0.35	0.00	0.079	0.000	25.146	0.00	2.77
145.00	7/8" Coax	Yes	2.10	0.000	0.00	0.00	0.00	0.079	0.000	25.146	0.00	1.31
148.30	1 5/8" Hybrid	Yes	3.30	0.000	2.00	0.55	0.00	0.083	0.000	25.308	0.00	4.36
148.30	7/8" Coax	Yes	3.30	0.000	0.00	0.00	0.00	0.083	0.000	25.308	0.00	2.06
150.00	1 5/8" Hybrid	Yes	1.70	0.000	2.00	0.28	0.00	0.085	0.000	25.391	0.00	2.24
150.00	7/8" Coax	Yes	1.70	0.000	0.00	0.00	0.00	0.085	0.000	25.391	0.00	1.06
155.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.125	1.075	25.630	0.00	6.60
155.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.125	1.075	25.630	0.00	3.12
160.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.125	1.075	25.863	0.00	6.60
160.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.125	1.075	25.863	0.00	3.12
Totals:											67.1	731.9

Calculated Forces

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

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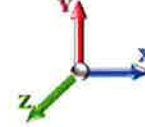


Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.60



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-48.90	-37.17	0.00	-4181.4	0.00	4181.45	3683.82	1841.91	7606.69	3756.66	0.00	0.000	0.000	0.764
5.00	-47.25	-36.60	0.00	-3995.5	0.00	3995.59	3652.63	1826.32	7394.88	3652.06	0.11	-0.205	0.000	0.746
10.00	-45.63	-36.02	0.00	-3812.6	0.00	3812.60	3619.85	1809.93	7182.43	3547.13	0.43	-0.410	0.000	0.727
15.00	-44.08	-35.38	0.00	-3632.5	0.00	3632.50	3585.48	1792.74	6969.53	3441.99	0.97	-0.617	0.000	0.709
16.00	-43.78	-35.25	0.00	-3597.1	0.00	3597.12	3578.41	1789.21	6926.91	3420.94	1.11	-0.660	0.000	0.705
16.25	-43.61	-35.25	0.00	-3588.3	0.00	3588.31	3576.63	1788.32	6916.25	3415.68	1.14	-0.670	0.000	0.830
18.00	-42.65	-35.04	0.00	-3526.6	0.00	3526.62	3564.09	1782.04	6841.65	3378.83	1.41	-0.757	0.000	0.763
19.50	-41.85	-34.85	0.00	-3474.0	0.00	3474.06	3553.18	1776.59	6777.69	3347.24	1.66	-0.827	0.000	0.643
20.00	-41.56	-34.81	0.00	-3456.6	0.00	3456.64	3549.51	1774.75	6756.36	3336.71	1.74	-0.847	0.000	0.641
22.00	-40.47	-34.57	0.00	-3387.0	0.00	3387.03	3563.12	1781.56	6835.93	3376.01	2.12	-0.926	0.000	0.650
25.00	-39.52	-34.23	0.00	-3283.3	0.00	3283.32	3541.13	1770.56	6708.00	3312.83	2.74	-1.043	0.000	0.620
30.00	-38.05	-33.57	0.00	-3112.1	0.00	3112.16	3503.20	1751.60	6494.78	3207.53	3.93	-1.232	0.000	0.474
31.00	-37.73	-33.47	0.00	-3078.5	0.00	3078.59	3495.43	1747.71	6452.15	3186.48	4.19	-1.262	0.000	0.546
34.00	-36.86	-33.10	0.00	-2978.2	0.00	2978.20	3471.72	1735.86	6324.32	3123.35	5.02	-1.367	0.000	0.666
35.00	-36.57	-32.98	0.00	-2945.1	0.00	2945.10	3463.69	1731.84	6281.74	3102.31	5.31	-1.411	0.000	0.662
35.50	-36.37	-32.99	0.00	-2928.6	0.00	2928.61	3459.65	1729.82	6260.45	3091.80	5.46	-1.433	0.000	0.661
40.00	-35.02	-32.46	0.00	-2780.1	0.00	2780.18	3422.57	1711.29	6069.05	2997.28	6.90	-1.627	0.000	0.643
45.00	-33.63	-31.81	0.00	-2617.8	0.00	2617.89	3379.87	1689.93	5856.93	2892.52	8.72	-1.841	0.000	0.622
45.16	-33.58	-31.80	0.00	-2612.8	0.00	2612.80	3378.48	1689.24	5850.15	2889.17	8.78	-1.848	0.000	0.452
46.00	-33.31	-31.74	0.00	-2586.0	0.00	2586.08	3371.14	1685.57	5814.59	2871.61	9.11	-1.875	0.000	0.586
50.00	-32.17	-31.26	0.00	-2459.1	0.00	2459.13	3335.57	1667.79	5645.55	2788.13	10.75	-2.039	0.000	0.570
55.00	-29.82	-30.54	0.00	-2302.8	0.00	2302.81	3289.68	1644.84	5435.12	2684.20	12.99	-2.242	0.000	0.542
56.00	-29.33	-30.41	0.00	-2272.2	0.00	2272.27	3316.18	1658.09	5555.61	2743.71	13.47	-2.283	0.000	0.552
58.00	-28.78	-30.16	0.00	-2211.4	0.00	2211.44	3297.74	1648.87	5471.49	2702.16	14.44	-2.364	0.000	0.570
60.00	-28.20	-29.93	0.00	-2151.1	0.00	2151.13	3279.05	1639.52	5387.54	2660.71	15.45	-2.449	0.000	0.561
65.00	-26.86	-29.26	0.00	-2001.4	0.00	2001.49	3231.20	1615.60	5178.53	2557.48	18.13	-2.657	0.000	0.539
70.00	-25.54	-28.58	0.00	-1855.1	0.00	1855.18	3181.76	1590.88	4970.89	2454.94	21.02	-2.863	0.000	0.515
75.00	-24.28	-27.87	0.00	-1712.2	0.00	1712.28	3130.72	1565.36	4764.82	2353.16	24.12	-3.066	0.000	0.492
78.00	-23.53	-27.44	0.00	-1628.6	0.00	1628.67	3099.34	1549.67	4642.00	2292.51	26.09	-3.189	0.000	0.477
80.00	-23.01	-27.19	0.00	-1573.7	0.00	1573.78	3078.09	1539.05	4560.50	2252.26	27.44	-3.270	0.000	0.468
80.00	-23.01	-27.19	0.00	-1573.7	0.00	1573.78	2384.58	1192.29	3545.27	1750.88	27.44	-3.270	0.000	0.504
85.00	-21.92	-26.49	0.00	-1437.8	0.00	1437.84	2349.22	1174.61	3397.89	1678.09	30.97	-3.468	0.000	0.532
90.00	-20.86	-25.78	0.00	-1305.4	0.00	1305.40	2312.26	1156.13	3251.12	1605.61	34.72	-3.684	0.000	0.499
95.00	-19.87	-25.04	0.00	-1176.4	0.00	1176.48	2273.71	1136.85	3105.16	1533.52	38.69	-3.894	0.000	0.465
95.58	-19.64	-24.98	0.00	-1161.9	0.00	1161.96	2269.13	1134.57	3088.29	1525.19	39.16	-3.919	0.000	0.455
95.58	-19.64	-24.98	0.00	-1161.9	0.00	1161.96	2269.13	1134.57	3088.29	1525.19	39.16	-3.919	0.000	0.455
100.00	-18.12	-24.34	0.00	-1051.5	0.00	1051.56	2259.61	1129.81	3053.48	1508.00	42.87	-4.096	0.000	0.706
105.00	-17.07	-23.70	0.00	-929.88	0.00	929.88	2218.90	1109.45	2908.92	1436.61	47.34	-4.426	0.000	0.655
110.00	-16.02	-22.84	0.00	-810.90	0.00	810.90	2176.60	1088.30	2765.62	1365.84	52.13	-4.725	0.000	0.602
115.00	-15.05	-22.18	0.00	-696.70	0.00	696.70	2132.70	1066.35	2623.78	1295.79	57.23	-5.010	0.000	0.545
115.00	-15.05	-22.18	0.00	-696.70	0.00	696.70	1556.62	778.31	1923.08	949.74	57.23	-5.010	0.000	0.744
120.00	-14.22	-21.54	0.00	-585.79	0.00	585.79	1529.99	765.00	1828.43	902.99	62.61	-5.276	0.000	0.659
125.00	-13.42	-20.89	0.00	-478.11	0.00	478.11	1501.77	750.88	1734.09	856.40	68.30	-5.579	0.000	0.568
130.00	-12.66	-20.22	0.00	-373.68	0.00	373.68	1471.95	735.97	1640.26	810.06	74.28	-5.848	0.000	0.471
133.00	-9.57	-16.69	0.00	-313.03	0.00	313.03	1453.29	726.64	1584.28	782.42	77.99	-5.992	0.000	0.407
135.00	-9.29	-16.43	0.00	-279.65	0.00	279.65	1440.53	720.27	1547.12	764.06	80.52	-6.081	0.000	0.373
140.00	-8.68	-15.76	0.00	-197.48	0.00	197.48	1407.52	703.76	1454.87	718.50	86.98	-6.267	0.000	0.282
142.90	-5.12	-10.35	0.00	-151.01	0.00	151.01	1387.65	693.82	1401.84	692.32	90.81	-6.356	0.000	0.222

Calculated Forces

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 22
	Struct Class: II	



145.00	-4.90	-10.13	0.00	-129.27	0.00	129.27	1372.92	686.46	1363.70	673.48	93.61	-6.411	0.000	0.196
145.00	-4.90	-10.13	0.00	-129.27	0.00	129.27	931.20	465.60	925.89	604.09	93.61	-6.411	0.000	0.220
148.30	-2.42	-6.84	0.00	-89.93	0.00	89.93	911.53	455.77	882.04	573.63	98.06	-6.485	0.000	0.160
150.00	-2.26	-6.74	0.00	-78.30	0.00	78.30	901.40	450.70	859.86	558.24	100.37	-6.517	0.000	0.143
150.00	-2.26	-6.74	0.00	-78.30	0.00	78.30	556.65	278.33	359.38	213.69	100.37	-6.517	0.000	0.371
155.00	-1.90	-6.50	0.00	-44.62	0.00	44.62	556.65	278.33	359.38	213.69	107.22	-6.588	0.000	0.213
160.00	0.00	-6.24	0.00	-12.09	0.00	12.09	556.65	278.33	359.38	213.69	114.18	-6.693	0.000	0.057

Wind Loading - Shaft

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

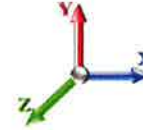
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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60

Iterations 24



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.70	16.018	17.62	352.70	1.000	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	16.018	17.62	345.91	1.223 *	0.000	5.00	21.521	26.31	741.8	0.0	915.5
10.00		1.00	0.70	16.018	17.62	339.12	1.233 *	0.000	5.00	21.102	26.02	733.6	0.0	897.6
15.00		1.00	0.70	16.018	17.62	332.33	1.244 *	0.000	5.00	20.684	25.73	725.3	0.0	879.7
16.00	Bot - Section 2	1.00	0.70	16.018	17.62	330.97	1.251 *	0.000	1.00	4.087	5.11	144.1	0.0	173.8
16.25	RT1 RB2	1.00	0.70	16.018	17.62	330.63	1.252 *	0.000	0.25	1.035	1.30	36.5	0.0	87.4
18.00	RB3	1.00	0.70	16.018	17.62	328.25	1.254 *	0.000	1.75	7.217	9.05	255.2	0.0	609.0
19.50	RB4	1.00	0.70	16.018	17.62	326.22	1.258 *	0.000	1.50	6.145	7.73	217.9	0.0	518.5
20.00		1.00	0.70	16.018	17.62	325.54	1.260 *	0.000	0.50	2.040	2.57	72.5	0.0	172.1
22.00	Top - Section 1	1.00	0.70	16.018	17.62	322.82	1.263 *	0.000	2.00	8.118	10.26	289.1	0.0	684.9
25.00		1.00	0.70	16.018	17.62	324.00	1.260 *	0.000	3.00	12.052	15.19	428.1	0.0	512.4
30.00	RB5	1.00	0.70	16.031	17.63	317.34	1.270 *	0.000	5.00	19.752	25.08	707.5	0.0	839.7
31.00	RT2	1.00	0.71	16.182	17.80	317.46	1.277 *	0.000	1.00	3.900	4.98	141.8	0.0	165.8
34.00	RT3	1.00	0.73	16.615	18.28	317.53	1.174 *	0.000	3.00	11.600	13.62	398.3	0.0	493.1
35.00		1.00	0.73	16.753	18.43	317.46	1.124 *	0.000	1.00	3.833	4.31	127.0	0.0	162.9
35.50	RT4	1.00	0.74	16.821	18.50	317.41	1.125 *	0.000	0.50	1.910	2.15	63.6	0.0	81.2
40.00	Appurtenance(s)	1.00	0.76	17.405	19.15	316.49	1.130 *	0.000	4.50	17.005	19.22	588.6	0.0	722.7
45.00		1.00	0.79	18.000	19.80	314.67	1.139 *	0.000	5.00	18.497	21.07	667.6	0.0	785.9
45.16	RB6	1.00	0.79	18.019	19.82	314.59	1.144 *	0.000	0.16	0.585	0.67	21.2	0.0	24.9
46.00	RT5	1.00	0.79	18.114	19.93	314.21	1.145 *	0.000	0.84	3.064	3.51	111.9	0.0	130.2
50.00	Bot - Section 3	1.00	0.81	18.551	20.41	312.13	1.150 *	0.000	4.00	14.429	16.60	542.0	0.0	612.9
55.00		1.00	0.83	19.063	20.97	309.00	1.160 *	0.000	5.00	17.984	20.86	699.9	0.0	1513.9
56.00	Top - Section 2	1.00	0.84	19.161	21.08	308.31	1.167 *	0.000	1.00	3.547	4.14	139.5	0.0	298.5
58.00	RT6 RB7	1.00	0.85	19.354	21.29	312.65	1.161 *	0.000	2.00	7.043	8.18	278.6	0.0	299.1
60.00		1.00	0.85	19.543	21.50	311.16	1.166 *	0.000	2.00	6.976	8.13	279.7	0.0	296.2
65.00		1.00	0.87	19.995	21.99	307.15	1.174 *	0.000	5.00	17.147	20.13	708.3	0.0	728.0
70.00		1.00	0.89	20.422	22.46	302.75	1.186 *	0.000	5.00	16.728	19.83	712.9	0.0	710.1
75.00		1.00	0.91	20.829	22.91	298.01	1.198 *	0.000	5.00	16.310	19.54	716.4	0.0	692.2
78.00	RT7 RB8	1.00	0.92	21.064	23.17	295.01	1.209 *	0.000	3.00	9.585	11.58	429.5	0.0	406.7
80.00	Top - Section 3	1.00	0.93	21.217	23.34	292.95	1.215 *	0.000	2.00	6.306	7.66	286.2	0.0	267.5
85.00		1.00	0.94	21.587	23.75	287.62	1.225 *	0.000	5.00	15.473	18.96	720.2	0.0	547.9
90.00		1.00	0.96	21.943	24.14	282.02	1.240 *	0.000	5.00	15.055	18.66	720.8	0.0	532.9
95.00	Bot - Section 5	1.00	0.97	22.284	24.51	276.20	1.255 *	0.000	5.00	14.636	18.37	720.5	0.0	518.0
95.58	RT8	1.00	0.98	22.323	24.56	275.51	1.264 *	0.000	0.58	1.702	2.15	84.5	0.0	119.4
100.00	Top - Section 4	1.00	0.99	22.613	24.87	270.16	1.223 *	0.000	4.42	12.785	15.63	622.1	0.0	896.4
105.00		1.00	1.00	22.931	25.22	269.16	1.166 *	0.000	5.00	14.069	16.41	662.3	0.0	497.7
110.00	Appurtenance(s)	1.00	1.02	23.238	25.56	262.78	1.181 *	0.000	5.00	13.651	16.12	659.2	0.0	482.8
115.00	Top - Section 5	1.00	1.03	23.535	25.89	256.22	1.196 *	0.000	5.00	13.232	15.82	655.5	0.0	467.8
120.00		1.00	1.04	23.823	26.20	249.50	1.212 *	0.000	5.00	12.814	15.53	651.2	0.0	363.1
125.00		1.00	1.05	24.102	26.51	242.63	1.229 *	0.000	5.00	12.395	15.24	646.4	0.0	351.1
130.00		1.00	1.07	24.374	26.81	235.61	1.248 *	0.000	5.00	11.977	14.95	641.2	0.0	339.2
133.00	Appurtenance(s)	1.00	1.07	24.533	26.99	231.34	1.264 *	0.000	3.00	6.985	8.83	381.1	0.0	197.8
135.00		1.00	1.08	24.638	27.10	228.46	1.274 *	0.000	2.00	4.573	5.83	252.6	0.0	129.4
140.00		1.00	1.09	24.895	27.38	221.19	1.289 *	0.000	5.00	11.140	14.36	629.2	0.0	315.3
142.90	Appurtenance(s)	1.00	1.09	25.042	27.55	216.91	1.200 *	0.000	2.90	6.269	7.52	331.6	0.0	177.4
145.00	Top - Section 6	1.00	1.10	25.146	27.66	213.79	1.000	0.000	2.10	4.452	4.45	197.0	0.0	125.9
148.30	Appurtenance(s)	1.00	1.11	25.308	27.84	201.77	0.600	0.000	3.30	6.615	3.97	176.8	0.0	188.9

Wind Loading - Shaft

Structure: CT02049-S-SBA

Code: EIA/TIA-222-G

6/9/2017

Site Name: Beacon Falls

Exposure: B

Height: 160.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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150.00 Top - Section 7	1.00	1.11	25.391	27.93	199.29	0.600	0.000	1.70	3.339	2.00	89.5	0.0	95.4
155.00	1.00	1.12	25.630	28.19	136.88	0.645 *	0.000	5.00	6.667	4.30	194.0	0.0	189.4
160.00 Appurtenance(s)	1.00	1.13	25.863	28.45	137.50	0.645 *	0.000	5.00	6.667	4.30	195.7	0.0	189.4
								Totals:	160.00		20,496.7		21,407.5

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

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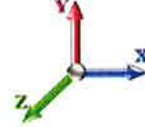


Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 24



No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	6' Lightning rod	1	25.955	28.551	1.00	1.00	0.38	5.85	0.000	2.000	17.36	0.00	34.72
2	160.00	DB-T1-6Z-8AB-OZ	1	25.955	28.551	0.50	1.00	2.40	39.60	0.000	2.000	109.64	0.00	219.27
3	160.00	SBNHH-1D65B	9	25.955	28.551	0.82	1.00	60.29	324.00	0.000	2.000	2754.33	0.00	5508.65
4	160.00	Low Profile Platform	1	25.955	28.551	1.00	1.00	22.00	1080.00	0.000	2.000	1004.99	0.00	2009.98
5	160.00	DB846F65ZAXY	6	25.955	28.551	0.94	1.00	39.68	113.40	0.000	2.000	1812.52	0.00	3625.04
6	160.00	DB222	1	25.955	28.551	1.00	1.00	2.25	14.40	0.000	2.000	102.78	0.00	205.57
7	160.00	RRH2x90-AWS	3	25.955	28.551	0.67	1.00	5.35	118.80	0.000	2.000	244.24	0.00	488.48
8	148.30	APXVTM14-C-120	3	25.391	27.930	0.61	0.80	11.59	151.20	0.000	1.700	518.14	0.00	880.83
9	148.30	1900MHz RRH	3	25.487	28.036	0.54	0.80	6.11	118.80	0.000	3.700	274.10	0.00	1014.16
10	148.30	800 MHz RRH	3	25.487	28.036	0.54	0.80	4.00	143.10	0.000	3.700	179.61	0.00	664.54
11	148.30	APXVSP18-C-A20	3	25.487	28.036	0.66	0.80	15.78	153.90	0.000	3.700	708.00	0.00	2619.60
12	148.30	Low Profile Platform	1	25.308	27.839	1.00	1.00	17.50	1080.00	0.000	0.000	779.50	0.00	0.00
13	148.30	ALU 800MHz External	3	25.487	28.036	0.40	0.80	0.94	23.76	0.000	3.700	41.99	0.00	155.35
14	148.30	TD-RRH8x20-25	3	25.391	27.930	0.55	0.80	6.71	189.00	0.000	1.700	299.71	0.00	509.51
15	148.30	ACU-A20-N	4	25.487	28.036	0.60	0.80	0.34	3.60	0.000	3.700	15.07	0.00	55.77
16	142.90	S11B12	3	25.042	27.546	0.54	0.80	4.55	137.70	0.000	0.000	200.56	0.00	0.00
17	142.90	LNx-6515DS-A1M	3	25.042	27.546	0.67	0.80	23.12	134.46	0.000	0.000	1019.12	0.00	0.00
18	142.90	AIR 21 B4A B2P	3	25.076	27.584	0.66	0.80	12.09	244.08	0.000	0.700	533.47	0.00	373.43
19	142.90	AIR 21 B2A B4P	3	25.076	27.584	0.66	0.80	12.09	247.05	0.000	0.700	533.47	0.00	373.43
20	142.90	KRY 112 144/1	3	25.076	27.584	0.56	0.80	0.69	29.70	0.000	0.700	30.40	0.00	21.28
21	142.90	Low-Profile Platform + HR	1	25.042	27.546	1.00	1.00	51.70	2021.40	0.000	0.000	2278.58	0.00	0.00
22	133.00	RRUS A2 Module	3	24.533	26.986	0.32	0.80	1.79	57.24	0.000	0.000	77.10	0.00	0.00
23	133.00	RRUS 12	3	24.533	26.986	0.56	0.80	4.74	156.60	0.000	0.000	204.71	0.00	0.00
24	133.00	800 10121	3	24.533	26.986	0.63	0.80	9.76	125.01	0.000	0.000	421.61	0.00	0.00
25	133.00	RRUS 11	3	24.533	26.986	0.54	0.80	4.05	136.89	0.000	0.000	174.96	0.00	0.00
26	133.00	800 10798	3	24.533	26.986	0.60	0.80	15.56	219.78	0.000	0.000	671.74	0.00	0.00
27	133.00	Low Profile Platform	1	24.533	26.986	1.00	1.00	22.00	1215.00	0.000	0.000	949.92	0.00	0.00
28	133.00	DTMABP7819VG12A	3	24.533	26.986	0.40	0.80	1.37	51.30	0.000	0.000	59.07	0.00	0.00
29	133.00	RRUS 32	3	24.533	26.986	0.80	0.80	3.96	207.90	0.000	0.000	170.99	0.00	0.00
30	133.00	DC6-48-60-18-8F	2	24.533	26.986	0.80	0.80	2.35	59.04	0.000	0.000	101.56	0.00	0.00
31	110.00	3 ft Standoff	1	23.238	25.561	1.00	1.00	2.63	36.00	0.000	0.000	107.56	0.00	0.00
32	110.00	DB222	1	23.552	25.907	1.00	1.00	2.25	14.40	0.000	5.292	93.26	0.00	493.53
33	40.00	GPS	1	17.405	19.145	1.00	1.00	1.00	9.00	0.000	0.000	30.63	0.00	0.00

Totals: 8,661.96

16,520.68

Total Applied Force Summary

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

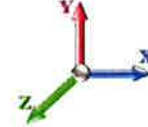


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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		741.85	1141.65	0.00	0.00
10.00		733.59	1123.71	0.00	0.00
15.00		725.33	1105.78	0.00	0.00
16.00		144.08	219.00	0.00	0.00
16.25		36.54	98.66	0.00	0.00
18.00		255.20	688.14	0.00	0.00
19.50		217.95	586.34	0.00	0.00
20.00		72.49	194.73	0.00	0.00
22.00		289.13	775.33	0.00	0.00
25.00		428.13	648.11	0.00	0.00
30.00		707.54	1065.84	0.00	0.00
31.00		141.84	211.02	0.00	0.00
34.00		398.29	628.74	0.00	0.00
35.00		127.03	208.15	0.00	0.00
35.50		63.64	103.80	0.00	0.00
40.00	(1) attachments	619.26	935.17	0.00	0.00
45.00		667.60	1011.32	0.00	0.00
45.16		21.23	32.07	0.00	0.00
46.00		111.90	168.04	0.00	0.00
50.00		541.99	793.27	0.00	0.00
55.00		699.94	1739.35	0.00	0.00
56.00		139.54	343.57	0.00	0.00
58.00		278.64	389.27	0.00	0.00
60.00		279.74	386.40	0.00	0.00
65.00		708.30	953.44	0.00	0.00
70.00		712.93	935.51	0.00	0.00
75.00		716.39	917.57	0.00	0.00
78.00		429.47	541.93	0.00	0.00
80.00		286.20	357.70	0.00	0.00
85.00		720.22	773.28	0.00	0.00
90.00		720.76	758.34	0.00	0.00
95.00		720.50	743.39	0.00	0.00
95.58		84.53	145.50	0.00	0.00
100.00		622.14	1095.61	0.00	0.00
105.00		662.31	723.13	0.00	0.00
110.00	(2) attachments	860.02	758.58	0.00	493.53
115.00		655.49	690.90	0.00	0.00
120.00		651.23	586.14	0.00	0.00
125.00		646.44	574.19	0.00	0.00
130.00		641.16	562.23	0.00	0.00
133.00	(24) attachments	3212.79	2560.36	0.00	0.00
135.00		252.64	197.22	0.00	0.00
140.00		629.21	484.68	0.00	0.00
142.90	(16) attachments	4994.29	3090.02	0.00	768.14
145.00		197.04	171.58	0.00	0.00
148.30	(23) attachments	2992.90	2124.05	0.00	5899.76

Total Applied Force Summary

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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150.00		89.53	126.47	0.00	0.00
155.00		193.97	280.95	0.00	0.00
160.00	(22) attachments	6241.59	1977.00	0.00	12091.71
	Totals:	37,084.50	36,727.25	0.00	19,253.14

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

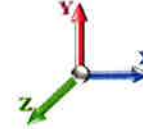


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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.174	1.223	16.018	0.00	4.95
5.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.174	1.223	16.018	0.00	2.34
5.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.174	1.223	16.018	0.00	4.95
5.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.174	1.223	16.018	0.00	4.29
5.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.174	1.223	16.018	0.00	2.34
5.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.174	1.223	16.018	0.00	0.00
5.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.174	1.223	16.018	0.00	0.00
10.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.178	1.233	16.018	0.00	4.95
10.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.233	16.018	0.00	2.34
10.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.178	1.233	16.018	0.00	4.95
10.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.178	1.233	16.018	0.00	4.29
10.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.233	16.018	0.00	2.34
10.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.178	1.233	16.018	0.00	0.00
10.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.178	1.233	16.018	0.00	0.00
15.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.181	1.244	16.018	0.00	4.95
15.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.181	1.244	16.018	0.00	2.34
15.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.181	1.244	16.018	0.00	4.95
15.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.181	1.244	16.018	0.00	4.29
15.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.181	1.244	16.018	0.00	2.34
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.181	1.244	16.018	0.00	0.00
15.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.181	1.244	16.018	0.00	0.00
16.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.184	1.251	16.018	0.00	0.99
16.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.184	1.251	16.018	0.00	0.47
16.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.184	1.251	16.018	0.00	0.99
16.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.184	1.251	16.018	0.00	0.86
16.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.184	1.251	16.018	0.00	0.47
16.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.184	1.251	16.018	0.00	0.00
16.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.21	0.00	0.184	1.251	16.018	0.00	0.00
16.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.184	1.252	16.018	0.00	0.25
16.25	7/8" Coax	Yes	0.25	0.000	0.00	0.00	0.00	0.184	1.252	16.018	0.00	0.12
16.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.184	1.252	16.018	0.00	0.25
16.25	1-1/4" Hybrid	Yes	0.25	0.000	1.25	0.03	0.00	0.184	1.252	16.018	0.00	0.21
16.25	7/8" Coax	Yes	0.25	0.000	0.00	0.00	0.00	0.184	1.252	16.018	0.00	0.12
16.25	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.03	0.00	0.184	1.252	16.018	0.00	0.00
16.25	1.25" Reinforcing	Yes	0.25	0.000	2.50	0.05	0.00	0.184	1.252	16.018	0.00	0.00
18.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.185	1.254	16.018	0.00	1.73
18.00	7/8" Coax	Yes	1.75	0.000	0.00	0.00	0.00	0.185	1.254	16.018	0.00	0.82
18.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.185	1.254	16.018	0.00	1.73
18.00	1-1/4" Hybrid	Yes	1.75	0.000	1.25	0.18	0.00	0.185	1.254	16.018	0.00	1.50
18.00	7/8" Coax	Yes	1.75	0.000	0.00	0.00	0.00	0.185	1.254	16.018	0.00	0.82
18.00	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.18	0.00	0.185	1.254	16.018	0.00	0.00
18.00	1.25" Reinforcing	Yes	1.75	0.000	2.50	0.36	0.00	0.185	1.254	16.018	0.00	0.00
19.50	1 5/8" Hybrid	Yes	1.50	0.000	2.00	0.25	0.00	0.186	1.258	16.018	0.00	1.49
19.50	7/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.186	1.258	16.018	0.00	0.70
19.50	1 5/8" Hybrid	Yes	1.50	0.000	2.00	0.25	0.00	0.186	1.258	16.018	0.00	1.49
19.50	1-1/4" Hybrid	Yes	1.50	0.000	1.25	0.16	0.00	0.186	1.258	16.018	0.00	1.29
19.50	7/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.186	1.258	16.018	0.00	0.70

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



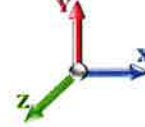
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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 24



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
19.50	1.25" Reinforcing	Yes	1.50	0.000	1.25	0.16	0.00	0.186	1.258	16.018	0.00	0.00
19.50	1.25" Reinforcing	Yes	1.50	0.000	2.50	0.31	0.00	0.186	1.258	16.018	0.00	0.00
20.00	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.187	1.260	16.018	0.00	0.50
20.00	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.187	1.260	16.018	0.00	0.23
20.00	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.187	1.260	16.018	0.00	0.50
20.00	1-1/4" Hybrid	Yes	0.50	0.000	1.25	0.05	0.00	0.187	1.260	16.018	0.00	0.43
20.00	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.187	1.260	16.018	0.00	0.23
20.00	1.25" Reinforcing	Yes	0.50	0.000	1.25	0.05	0.00	0.187	1.260	16.018	0.00	0.00
20.00	1.25" Reinforcing	Yes	0.50	0.000	2.50	0.10	0.00	0.187	1.260	16.018	0.00	0.00
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.188	1.263	16.018	0.00	1.98
22.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.188	1.263	16.018	0.00	0.94
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.188	1.263	16.018	0.00	1.98
22.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.188	1.263	16.018	0.00	1.72
22.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.188	1.263	16.018	0.00	0.94
22.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.188	1.263	16.018	0.00	0.00
22.00	1.25" Reinforcing	Yes	2.00	0.000	2.50	0.42	0.00	0.188	1.263	16.018	0.00	0.00
25.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.187	1.260	16.018	0.00	2.97
25.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.187	1.260	16.018	0.00	1.40
25.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.187	1.260	16.018	0.00	2.97
25.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.187	1.260	16.018	0.00	2.58
25.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.187	1.260	16.018	0.00	1.40
25.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.187	1.260	16.018	0.00	0.00
25.00	1.25" Reinforcing	Yes	3.00	0.000	2.50	0.63	0.00	0.187	1.260	16.018	0.00	0.00
30.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.190	1.270	16.031	0.00	4.95
30.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.190	1.270	16.031	0.00	2.34
30.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.190	1.270	16.031	0.00	4.95
30.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.190	1.270	16.031	0.00	4.29
30.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.190	1.270	16.031	0.00	2.34
30.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.190	1.270	16.031	0.00	0.00
30.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.190	1.270	16.031	0.00	0.00
31.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.192	1.277	16.182	0.00	0.99
31.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.192	1.277	16.182	0.00	0.47
31.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.192	1.277	16.182	0.00	0.99
31.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.192	1.277	16.182	0.00	0.86
31.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.192	1.277	16.182	0.00	0.47
31.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.192	1.277	16.182	0.00	0.00
31.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.21	0.00	0.192	1.277	16.182	0.00	0.00
34.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.158	1.174	16.615	0.00	2.97
34.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.158	1.174	16.615	0.00	1.40
34.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.158	1.174	16.615	0.00	2.97
34.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.158	1.174	16.615	0.00	2.58
34.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.158	1.174	16.615	0.00	1.40
34.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.158	1.174	16.615	0.00	0.00
34.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.21	0.00	0.158	1.174	16.615	0.00	0.00
35.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.141	1.124	16.753	0.00	0.99
35.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.141	1.124	16.753	0.00	0.47
35.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.141	1.124	16.753	0.00	0.99

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



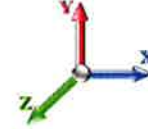
Page: 30

Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 24

Dead Load Factor 0.90

Wind Load Factor 1.60



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
35.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.141	1.124	16.753	0.00	0.86
35.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.141	1.124	16.753	0.00	0.47
35.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.141	1.124	16.753	0.00	0.00
35.50	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.142	1.125	16.821	0.00	0.50
35.50	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.142	1.125	16.821	0.00	0.23
35.50	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.142	1.125	16.821	0.00	0.50
35.50	1-1/4" Hybrid	Yes	0.50	0.000	1.25	0.05	0.00	0.142	1.125	16.821	0.00	0.43
35.50	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.142	1.125	16.821	0.00	0.23
35.50	1.25" Reinforcing	Yes	0.50	0.000	1.25	0.05	0.00	0.142	1.125	16.821	0.00	0.00
40.00	1 5/8" Hybrid	Yes	4.50	0.000	2.00	0.75	0.00	0.143	1.130	17.405	0.00	4.46
40.00	7/8" Coax	Yes	4.50	0.000	0.00	0.00	0.00	0.143	1.130	17.405	0.00	2.11
40.00	1 5/8" Hybrid	Yes	4.50	0.000	2.00	0.75	0.00	0.143	1.130	17.405	0.00	4.46
40.00	1-1/4" Hybrid	Yes	4.50	0.000	1.25	0.47	0.00	0.143	1.130	17.405	0.00	3.86
40.00	7/8" Coax	Yes	4.50	0.000	0.00	0.00	0.00	0.143	1.130	17.405	0.00	2.11
40.00	1.25" Reinforcing	Yes	4.50	0.000	1.25	0.47	0.00	0.143	1.130	17.405	0.00	0.00
45.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.146	1.139	18.000	0.00	4.95
45.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.146	1.139	18.000	0.00	2.34
45.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.146	1.139	18.000	0.00	4.95
45.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.146	1.139	18.000	0.00	4.29
45.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.146	1.139	18.000	0.00	2.34
45.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.146	1.139	18.000	0.00	0.00
45.16	1 5/8" Hybrid	Yes	0.16	0.000	2.00	0.03	0.00	0.148	1.144	18.019	0.00	0.16
45.16	7/8" Coax	Yes	0.16	0.000	0.00	0.00	0.00	0.148	1.144	18.019	0.00	0.07
45.16	1 5/8" Hybrid	Yes	0.16	0.000	2.00	0.03	0.00	0.148	1.144	18.019	0.00	0.16
45.16	1-1/4" Hybrid	Yes	0.16	0.000	1.25	0.02	0.00	0.148	1.144	18.019	0.00	0.14
45.16	7/8" Coax	Yes	0.16	0.000	0.00	0.00	0.00	0.148	1.144	18.019	0.00	0.07
45.16	1.25" Reinforcing	Yes	0.16	0.000	1.25	0.02	0.00	0.148	1.144	18.019	0.00	0.00
46.00	1 5/8" Hybrid	Yes	0.84	0.000	2.00	0.14	0.00	0.148	1.145	18.114	0.00	0.83
46.00	7/8" Coax	Yes	0.84	0.000	0.00	0.00	0.00	0.148	1.145	18.114	0.00	0.39
46.00	1 5/8" Hybrid	Yes	0.84	0.000	2.00	0.14	0.00	0.148	1.145	18.114	0.00	0.83
46.00	1-1/4" Hybrid	Yes	0.84	0.000	1.25	0.09	0.00	0.148	1.145	18.114	0.00	0.72
46.00	7/8" Coax	Yes	0.84	0.000	0.00	0.00	0.00	0.148	1.145	18.114	0.00	0.39
46.00	1.25" Reinforcing	Yes	0.84	0.000	1.25	0.09	0.00	0.148	1.145	18.114	0.00	0.00
50.00	1 5/8" Hybrid	Yes	4.00	0.000	2.00	0.67	0.00	0.150	1.150	18.551	0.00	3.96
50.00	7/8" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.150	1.150	18.551	0.00	1.87
50.00	1 5/8" Hybrid	Yes	4.00	0.000	2.00	0.67	0.00	0.150	1.150	18.551	0.00	3.96
50.00	1-1/4" Hybrid	Yes	4.00	0.000	1.25	0.42	0.00	0.150	1.150	18.551	0.00	3.43
50.00	7/8" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.150	1.150	18.551	0.00	1.87
50.00	1.25" Reinforcing	Yes	4.00	0.000	1.25	0.42	0.00	0.150	1.150	18.551	0.00	0.00
55.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.153	1.160	19.063	0.00	4.95
55.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.153	1.160	19.063	0.00	2.34
55.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.153	1.160	19.063	0.00	4.95
55.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.153	1.160	19.063	0.00	4.29
55.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.153	1.160	19.063	0.00	2.34
55.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.153	1.160	19.063	0.00	0.00
56.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.156	1.167	19.161	0.00	0.99
56.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.156	1.167	19.161	0.00	0.47

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

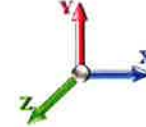
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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
56.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.156	1.167	19.161	0.00	0.99
56.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.156	1.167	19.161	0.00	0.86
56.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.156	1.167	19.161	0.00	0.47
56.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.156	1.167	19.161	0.00	0.00
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.154	1.161	19.354	0.00	1.98
58.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.154	1.161	19.354	0.00	0.94
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.154	1.161	19.354	0.00	1.98
58.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.154	1.161	19.354	0.00	1.72
58.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.154	1.161	19.354	0.00	0.94
58.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.154	1.161	19.354	0.00	0.00
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.155	1.166	19.543	0.00	1.98
60.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.155	1.166	19.543	0.00	0.94
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.155	1.166	19.543	0.00	1.98
60.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.155	1.166	19.543	0.00	1.72
60.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.155	1.166	19.543	0.00	0.94
60.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.155	1.166	19.543	0.00	0.00
65.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.158	1.174	19.995	0.00	4.95
65.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.158	1.174	19.995	0.00	2.34
65.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.158	1.174	19.995	0.00	4.95
65.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.158	1.174	19.995	0.00	4.29
65.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.158	1.174	19.995	0.00	2.34
65.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.158	1.174	19.995	0.00	0.00
70.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.162	1.186	20.422	0.00	4.95
70.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.162	1.186	20.422	0.00	2.34
70.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.162	1.186	20.422	0.00	4.95
70.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.162	1.186	20.422	0.00	4.29
70.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.162	1.186	20.422	0.00	2.34
70.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.162	1.186	20.422	0.00	0.00
75.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.166	1.198	20.829	0.00	4.95
75.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	20.829	0.00	2.34
75.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.166	1.198	20.829	0.00	4.95
75.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.166	1.198	20.829	0.00	4.29
75.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	20.829	0.00	2.34
75.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.166	1.198	20.829	0.00	0.00
78.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.170	1.209	21.064	0.00	2.97
78.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.170	1.209	21.064	0.00	1.40
78.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.170	1.209	21.064	0.00	2.97
78.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.170	1.209	21.064	0.00	2.58
78.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.170	1.209	21.064	0.00	1.40
78.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.170	1.209	21.064	0.00	0.00
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.172	1.215	21.217	0.00	1.98
80.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.172	1.215	21.217	0.00	0.94
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.172	1.215	21.217	0.00	1.98
80.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.172	1.215	21.217	0.00	1.72
80.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.172	1.215	21.217	0.00	0.94
80.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.172	1.215	21.217	0.00	0.00
85.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.175	1.225	21.587	0.00	4.95

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



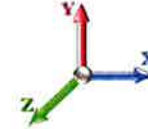
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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 24



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
85.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.175	1.225	21.587	0.00	2.34
85.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.175	1.225	21.587	0.00	4.95
85.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.175	1.225	21.587	0.00	4.29
85.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.175	1.225	21.587	0.00	2.34
85.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.175	1.225	21.587	0.00	0.00
90.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.180	1.240	21.943	0.00	4.95
90.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.180	1.240	21.943	0.00	2.34
90.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.180	1.240	21.943	0.00	4.95
90.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.180	1.240	21.943	0.00	4.29
90.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.180	1.240	21.943	0.00	2.34
90.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.180	1.240	21.943	0.00	0.00
95.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.185	1.255	22.284	0.00	4.95
95.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.185	1.255	22.284	0.00	2.34
95.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.185	1.255	22.284	0.00	4.95
95.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.185	1.255	22.284	0.00	4.29
95.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.185	1.255	22.284	0.00	2.34
95.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.185	1.255	22.284	0.00	0.00
95.58	1 5/8" Hybrid	Yes	0.58	0.000	2.00	0.10	0.00	0.188	1.264	22.323	0.00	0.57
95.58	7/8" Coax	Yes	0.58	0.000	0.00	0.00	0.00	0.188	1.264	22.323	0.00	0.27
95.58	1 5/8" Hybrid	Yes	0.58	0.000	2.00	0.10	0.00	0.188	1.264	22.323	0.00	0.57
95.58	1-1/4" Hybrid	Yes	0.58	0.000	1.25	0.06	0.00	0.188	1.264	22.323	0.00	0.50
95.58	7/8" Coax	Yes	0.58	0.000	0.00	0.00	0.00	0.188	1.264	22.323	0.00	0.27
95.58	1.25" Reinforcing	Yes	0.58	0.000	1.25	0.06	0.00	0.188	1.264	22.323	0.00	0.00
100.00	1 5/8" Hybrid	Yes	4.42	0.000	2.00	0.74	0.00	0.174	1.223	22.613	0.00	4.38
100.00	7/8" Coax	Yes	4.42	0.000	0.00	0.00	0.00	0.174	1.223	22.613	0.00	2.07
100.00	1 5/8" Hybrid	Yes	4.42	0.000	2.00	0.74	0.00	0.174	1.223	22.613	0.00	4.38
100.00	1-1/4" Hybrid	Yes	4.42	0.000	1.25	0.46	0.00	0.174	1.223	22.613	0.00	3.80
100.00	7/8" Coax	Yes	4.42	0.000	0.00	0.00	0.00	0.174	1.223	22.613	0.00	2.07
100.00	1.25" Reinforcing	Yes	2.42	0.000	1.25	0.25	0.00	0.174	1.223	22.613	0.00	0.00
105.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.155	1.166	22.931	0.00	4.95
105.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	22.931	0.00	2.34
105.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.155	1.166	22.931	0.00	4.95
105.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.155	1.166	22.931	0.00	4.29
105.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	22.931	0.00	2.34
110.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.160	1.181	23.238	0.00	4.95
110.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.181	23.238	0.00	2.34
110.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.160	1.181	23.238	0.00	4.95
110.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.160	1.181	23.238	0.00	4.29
110.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.181	23.238	0.00	2.34
115.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.165	1.196	23.535	0.00	4.95
115.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.165	1.196	23.535	0.00	2.34
115.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.165	1.196	23.535	0.00	4.95
115.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.165	1.196	23.535	0.00	4.29
120.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.171	1.212	23.823	0.00	4.95
120.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.171	1.212	23.823	0.00	2.34
120.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.171	1.212	23.823	0.00	4.95
120.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.171	1.212	23.823	0.00	4.29

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
125.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.176	1.229	24.102	0.00	4.95
125.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.176	1.229	24.102	0.00	2.34
125.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.176	1.229	24.102	0.00	4.95
125.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.176	1.229	24.102	0.00	4.29
130.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.183	1.248	24.374	0.00	4.95
130.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.183	1.248	24.374	0.00	2.34
130.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.183	1.248	24.374	0.00	4.95
130.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.183	1.248	24.374	0.00	4.29
133.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.188	1.264	24.533	0.00	2.97
133.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.188	1.264	24.533	0.00	1.40
133.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.188	1.264	24.533	0.00	2.97
133.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.188	1.264	24.533	0.00	2.58
135.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.191	1.274	24.638	0.00	1.98
135.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.191	1.274	24.638	0.00	0.94
135.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.191	1.274	24.638	0.00	1.98
135.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.191	1.274	24.638	0.00	1.72
140.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.196	1.289	24.895	0.00	4.95
140.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.196	1.289	24.895	0.00	2.34
140.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.196	1.289	24.895	0.00	4.95
140.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.196	1.289	24.895	0.00	4.29
142.90	1 5/8" Hybrid	Yes	2.90	1.200	2.00	0.48	0.58	0.202	0.000	25.042	25.56	2.87
142.90	7/8" Coax	Yes	2.90	0.000	0.00	0.00	0.00	0.202	0.000	25.042	0.00	1.36
142.90	1 5/8" Hybrid	Yes	2.90	1.200	2.00	0.48	0.58	0.202	0.000	25.042	25.56	2.87
142.90	1-1/4" Hybrid	Yes	2.90	1.200	1.25	0.30	0.36	0.202	0.000	25.042	15.98	2.49
145.00	1 5/8" Hybrid	Yes	2.10	0.000	2.00	0.35	0.00	0.079	0.000	25.146	0.00	2.08
145.00	7/8" Coax	Yes	2.10	0.000	0.00	0.00	0.00	0.079	0.000	25.146	0.00	0.98
148.30	1 5/8" Hybrid	Yes	3.30	0.000	2.00	0.55	0.00	0.083	0.000	25.308	0.00	3.27
148.30	7/8" Coax	Yes	3.30	0.000	0.00	0.00	0.00	0.083	0.000	25.308	0.00	1.54
150.00	1 5/8" Hybrid	Yes	1.70	0.000	2.00	0.28	0.00	0.085	0.000	25.391	0.00	1.68
150.00	7/8" Coax	Yes	1.70	0.000	0.00	0.00	0.00	0.085	0.000	25.391	0.00	0.80
155.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.125	1.075	25.630	0.00	4.95
155.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.125	1.075	25.630	0.00	2.34
160.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.125	1.075	25.863	0.00	4.95
160.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.125	1.075	25.863	0.00	2.34
Totals:											67.1	548.9

Calculated Forces

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

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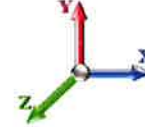


Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 24

Dead Load Factor 0.90

Wind Load Factor 1.60



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-36.66	-37.15	0.00	-4136.5	0.00	4136.56	3683.82	1841.91	7606.69	3756.66	0.00	0.000	0.000	0.754
5.00	-35.39	-36.53	0.00	-3950.8	0.00	3950.81	3652.63	1826.32	7394.88	3652.06	0.11	-0.202	0.000	0.735
10.00	-34.14	-35.91	0.00	-3768.1	0.00	3768.15	3619.85	1809.93	7182.43	3547.13	0.43	-0.406	0.000	0.717
15.00	-32.97	-35.25	0.00	-3588.5	0.00	3588.59	3585.48	1792.74	6969.53	3441.99	0.96	-0.610	0.000	0.698
16.00	-32.74	-35.12	0.00	-3553.3	0.00	3553.34	3578.41	1789.21	6926.91	3420.94	1.10	-0.652	0.000	0.694
16.25	-32.61	-35.11	0.00	-3544.5	0.00	3544.56	3576.63	1788.32	6916.25	3415.68	1.13	-0.663	0.000	0.817
18.00	-31.88	-34.89	0.00	-3483.1	0.00	3483.12	3564.09	1782.04	6841.65	3378.83	1.39	-0.749	0.000	0.752
19.50	-31.27	-34.69	0.00	-3430.7	0.00	3430.79	3553.18	1776.59	6777.69	3347.24	1.64	-0.817	0.000	0.633
20.00	-31.04	-34.64	0.00	-3413.4	0.00	3413.45	3549.51	1774.75	6756.36	3336.71	1.72	-0.837	0.000	0.632
22.00	-30.21	-34.39	0.00	-3344.1	0.00	3344.18	3563.12	1781.56	6835.93	3376.01	2.09	-0.915	0.000	0.640
25.00	-29.48	-34.03	0.00	-3241.0	0.00	3241.02	3541.13	1770.56	6708.00	3312.83	2.70	-1.031	0.000	0.610
30.00	-28.37	-33.35	0.00	-3070.8	0.00	3070.89	3503.20	1751.60	6494.78	3207.53	3.88	-1.217	0.000	0.466
31.00	-28.12	-33.24	0.00	-3037.5	0.00	3037.54	3495.43	1747.71	6452.15	3186.48	4.14	-1.247	0.000	0.538
34.00	-27.46	-32.86	0.00	-2937.8	0.00	2937.83	3471.72	1735.86	6324.32	3123.35	4.96	-1.350	0.000	0.655
35.00	-27.24	-32.74	0.00	-2904.9	0.00	2904.97	3463.69	1731.84	6281.74	3102.31	5.25	-1.394	0.000	0.651
35.50	-27.07	-32.73	0.00	-2888.6	0.00	2888.60	3459.65	1729.82	6260.45	3091.80	5.39	-1.415	0.000	0.650
40.00	-26.04	-32.18	0.00	-2741.3	0.00	2741.33	3422.57	1711.29	6069.05	2997.28	6.82	-1.606	0.000	0.632
45.00	-24.99	-31.53	0.00	-2580.4	0.00	2580.45	3379.87	1689.93	5856.93	2892.52	8.61	-1.818	0.000	0.612
45.16	-24.95	-31.51	0.00	-2575.4	0.00	2575.40	3378.48	1689.24	5850.15	2889.17	8.68	-1.825	0.000	0.445
46.00	-24.73	-31.43	0.00	-2548.9	0.00	2548.94	3371.14	1685.57	5814.59	2871.61	9.00	-1.852	0.000	0.576
50.00	-23.86	-30.94	0.00	-2423.2	0.00	2423.20	3335.57	1667.79	5645.55	2788.13	10.62	-2.013	0.000	0.560
55.00	-22.09	-30.22	0.00	-2268.5	0.00	2268.50	3289.68	1644.84	5435.12	2684.20	12.83	-2.213	0.000	0.532
56.00	-21.72	-30.09	0.00	-2238.2	0.00	2238.27	3316.18	1658.09	5555.61	2743.71	13.30	-2.253	0.000	0.542
58.00	-21.30	-29.83	0.00	-2178.0	0.00	2178.09	3297.74	1648.87	5471.49	2702.16	14.26	-2.333	0.000	0.560
60.00	-20.85	-29.59	0.00	-2118.4	0.00	2118.43	3279.05	1639.52	5387.54	2660.71	15.26	-2.417	0.000	0.551
65.00	-19.82	-28.91	0.00	-1970.4	0.00	1970.49	3231.20	1615.60	5178.53	2557.48	17.90	-2.621	0.000	0.529
70.00	-18.82	-28.22	0.00	-1825.9	0.00	1825.95	3181.76	1590.88	4970.89	2454.94	20.75	-2.824	0.000	0.506
75.00	-17.87	-27.51	0.00	-1684.8	0.00	1684.86	3130.72	1565.36	4764.82	2353.16	23.82	-3.024	0.000	0.483
78.00	-17.30	-27.08	0.00	-1602.3	0.00	1602.34	3099.34	1549.67	4642.00	2292.51	25.76	-3.145	0.000	0.468
80.00	-16.90	-26.81	0.00	-1548.1	0.00	1548.18	3078.09	1539.05	4560.50	2252.26	27.09	-3.225	0.000	0.459
80.00	-16.90	-26.81	0.00	-1548.1	0.00	1548.18	2384.58	1192.29	3545.27	1750.88	27.09	-3.225	0.000	0.495
85.00	-16.07	-26.11	0.00	-1414.1	0.00	1414.12	2349.22	1174.61	3397.89	1678.09	30.57	-3.419	0.000	0.522
90.00	-15.27	-25.40	0.00	-1283.5	0.00	1283.58	2312.26	1156.13	3251.12	1605.61	34.26	-3.632	0.000	0.489
95.00	-14.52	-24.66	0.00	-1156.6	0.00	1156.60	2273.71	1136.85	3105.16	1533.52	38.18	-3.839	0.000	0.456
95.58	-14.34	-24.59	0.00	-1142.3	0.00	1142.30	2269.13	1134.57	3088.29	1525.19	38.64	-3.863	0.000	0.446
95.58	-14.34	-24.59	0.00	-1142.3	0.00	1142.30	2269.13	1134.57	3088.29	1525.19	38.64	-3.863	0.000	0.446
100.00	-13.19	-23.95	0.00	-1033.6	0.00	1033.61	2259.61	1129.81	3053.48	1508.00	42.30	-4.037	0.000	0.692
105.00	-12.39	-23.31	0.00	-913.86	0.00	913.86	2218.90	1109.45	2908.92	1436.61	46.70	-4.361	0.000	0.642
110.00	-11.59	-22.45	0.00	-796.84	0.00	796.84	2176.60	1088.30	2765.62	1365.84	51.42	-4.656	0.000	0.589
115.00	-10.85	-21.79	0.00	-684.61	0.00	684.61	2132.70	1066.35	2623.78	1295.79	56.45	-4.935	0.000	0.534
115.00	-10.85	-21.79	0.00	-684.61	0.00	684.61	1556.62	778.31	1923.08	949.74	56.45	-4.935	0.000	0.729
120.00	-10.22	-21.14	0.00	-575.67	0.00	575.67	1529.99	765.00	1828.43	902.99	61.75	-5.197	0.000	0.645
125.00	-9.61	-20.49	0.00	-469.99	0.00	469.99	1501.77	750.88	1734.09	856.40	67.35	-5.494	0.000	0.556
130.00	-9.04	-19.83	0.00	-367.55	0.00	367.55	1471.95	735.97	1640.26	810.06	73.24	-5.759	0.000	0.461
133.00	-6.79	-16.38	0.00	-308.07	0.00	308.07	1453.29	726.64	1584.28	782.42	76.90	-5.901	0.000	0.399
135.00	-6.58	-16.13	0.00	-275.31	0.00	275.31	1440.53	720.27	1547.12	764.06	79.39	-5.988	0.000	0.365
140.00	-6.13	-15.46	0.00	-194.67	0.00	194.67	1407.52	703.76	1454.87	718.50	85.75	-6.172	0.000	0.276
142.90	-3.59	-10.17	0.00	-149.06	0.00	149.06	1387.65	693.82	1401.84	692.32	89.52	-6.259	0.000	0.218

Calculated Forces

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 35
	Struct Class: II	



145.00	-3.43	-9.96	0.00	-127.70	0.00	127.70	1372.92	686.46	1363.70	673.48	92.28	-6.314	0.000	0.192
145.00	-3.43	-9.96	0.00	-127.70	0.00	127.70	931.20	465.60	925.89	604.09	92.28	-6.314	0.000	0.216
148.30	-1.64	-6.75	0.00	-88.94	0.00	88.94	911.53	455.77	882.04	573.63	96.66	-6.386	0.000	0.157
150.00	-1.52	-6.65	0.00	-77.47	0.00	77.47	901.40	450.70	859.86	558.24	98.94	-6.418	0.000	0.141
150.00	-1.52	-6.65	0.00	-77.47	0.00	77.47	556.65	278.33	359.38	213.69	98.94	-6.418	0.000	0.366
155.00	-1.25	-6.43	0.00	-44.22	0.00	44.22	556.65	278.33	359.38	213.69	105.69	-6.489	0.000	0.210
160.00	0.00	-6.24	0.00	-12.09	0.00	12.09	556.65	278.33	359.38	213.69	112.54	-6.593	0.000	0.057

Wind Loading - Shaft

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

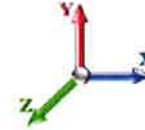
Page: 36



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 23

Dead Load Factor 1.20
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.70	4.256	4.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.256	4.68	0.00	1.467 *	1.242	5.00	22.556	33.10	154.9	397.5	1618.2
10.00		1.00	0.70	4.256	4.68	0.00	1.480 *	1.331	5.00	22.212	32.87	153.9	418.6	1615.4
15.00		1.00	0.70	4.256	4.68	0.00	1.493 *	1.386	5.00	21.839	32.60	152.6	427.9	1600.7
16.00	Bot - Section 2	1.00	0.70	4.256	4.68	0.00	1.501 *	1.395	1.00	4.319	6.48	30.3	85.8	317.5
16.25	RT1 RB2	1.00	0.70	4.256	4.68	0.00	1.502 *	1.397	0.25	1.093	1.64	7.7	21.8	138.3
18.00	RB3	1.00	0.70	4.256	4.68	0.00	1.505 *	1.412	1.75	7.629	11.48	53.8	153.1	965.1
19.50	RB4	1.00	0.70	4.256	4.68	0.00	1.510 *	1.423	1.50	6.501	9.81	45.9	131.5	822.9
20.00		1.00	0.70	4.256	4.68	0.00	1.512 *	1.427	0.50	2.159	3.27	15.3	43.9	273.4
22.00	Top - Section 1	1.00	0.70	4.256	4.68	0.00	1.516 *	1.440	2.00	8.599	13.03	61.0	175.8	1089.0
25.00		1.00	0.70	4.256	4.68	0.00	1.512 *	1.459	3.00	12.782	19.33	90.5	264.0	947.2
30.00	RB5	1.00	0.70	4.260	4.69	0.00	1.523 *	1.486	5.00	20.990	31.98	149.8	439.2	1558.8
31.00	RT2	1.00	0.71	4.300	4.73	0.00	1.532 *	1.491	1.00	4.149	6.36	30.1	87.8	308.8
34.00	RT3	1.00	0.73	4.415	4.86	0.00	1.409 *	1.504	3.00	12.353	17.40	84.5	262.5	919.9
35.00		1.00	0.73	4.451	4.90	0.00	1.349 *	1.509	1.00	4.085	5.51	27.0	87.4	304.6
35.50	RT4	1.00	0.74	4.469	4.92	0.00	1.350 *	1.511	0.50	2.036	2.75	13.5	43.7	151.9
40.00	Appurtenance(s)	1.00	0.76	4.625	5.09	0.00	1.356 *	1.529	4.50	18.152	24.61	125.2	390.3	1353.8
45.00		1.00	0.79	4.783	5.26	0.00	1.367 *	1.547	5.00	19.786	27.05	142.3	429.5	1477.3
45.16	RB6	1.00	0.79	4.788	5.27	0.00	1.373 *	1.548	0.16	0.626	0.86	4.5	13.7	46.9
46.00	RT5	1.00	0.79	4.813	5.29	0.00	1.375 *	1.551	0.84	3.281	4.51	23.9	72.0	245.6
50.00	Bot - Section 3	1.00	0.81	4.929	5.42	0.00	1.381 *	1.564	4.00	15.472	21.36	115.8	339.7	1156.9
55.00		1.00	0.83	5.065	5.57	0.00	1.392 *	1.579	5.00	19.299	26.87	149.7	426.6	2445.2
56.00	Top - Section 2	1.00	0.84	5.091	5.60	0.00	1.400 *	1.581	1.00	3.810	5.33	29.9	85.1	483.1
58.00	RT6 RB7	1.00	0.85	5.142	5.66	0.00	1.394 *	1.587	2.00	7.572	10.55	59.7	169.2	568.0
60.00		1.00	0.85	5.193	5.71	0.00	1.399 *	1.592	2.00	7.507	10.50	60.0	168.3	563.3
65.00		1.00	0.87	5.313	5.84	0.00	1.409 *	1.605	5.00	18.484	26.04	152.2	414.3	1385.1
70.00		1.00	0.89	5.426	5.97	0.00	1.423 *	1.617	5.00	18.076	25.72	153.5	407.6	1354.4
75.00		1.00	0.91	5.534	6.09	0.00	1.438 *	1.628	5.00	17.667	25.40	154.6	400.6	1323.5
78.00	RT7 RB8	1.00	0.92	5.597	6.16	0.00	1.450 *	1.635	3.00	10.402	15.09	92.9	237.7	780.0
80.00	Top - Section 3	1.00	0.93	5.637	6.20	0.00	1.458 *	1.639	2.00	6.853	9.99	62.0	157.3	514.0
85.00		1.00	0.94	5.736	6.31	0.00	1.470 *	1.649	5.00	16.847	24.77	156.3	385.6	1116.1
90.00		1.00	0.96	5.830	6.41	0.00	1.488 *	1.658	5.00	16.437	24.45	156.8	377.7	1088.3
95.00	Bot - Section 5	1.00	0.97	5.921	6.51	0.00	1.506 *	1.667	5.00	16.026	24.14	157.2	369.6	1060.3
95.58	RT8	1.00	0.98	5.931	6.52	0.00	1.517 *	1.668	0.58	1.863	2.83	18.4	43.5	202.7
100.00	Top - Section 4	1.00	0.99	6.008	6.61	0.00	1.467 *	1.676	4.42	14.020	20.57	135.9	325.3	1520.4
105.00		1.00	1.00	6.093	6.70	0.00	1.400 *	1.684	5.00	15.472	21.66	145.1	359.5	1023.1
110.00	Appurtenance(s)	1.00	1.02	6.174	6.79	0.00	1.417 *	1.692	5.00	15.060	21.34	144.9	350.9	994.6
115.00	Top - Section 5	1.00	1.03	6.253	6.88	0.00	1.435 *	1.699	5.00	14.648	21.02	144.6	342.1	965.9
120.00		1.00	1.04	6.330	6.96	0.00	1.455 *	1.707	5.00	14.236	20.71	144.2	333.2	817.3
125.00		1.00	1.05	6.404	7.04	0.00	1.475 *	1.714	5.00	13.823	20.39	143.7	324.1	792.3
130.00		1.00	1.07	6.476	7.12	0.00	1.498 *	1.720	5.00	13.411	20.08	143.1	314.9	767.1
133.00	Appurtenance(s)	1.00	1.07	6.519	7.17	0.00	1.516 *	1.724	3.00	7.847	11.90	85.3	185.6	449.3
135.00		1.00	1.08	6.546	7.20	0.00	1.529 *	1.727	2.00	5.149	7.87	56.7	122.2	294.8
140.00		1.00	1.09	6.615	7.28	0.00	1.547 *	1.733	5.00	12.584	19.47	141.6	296.1	716.4
142.90	Appurtenance(s)	1.00	1.09	6.654	7.32	0.00	1.200 *	1.737	2.90	7.109	8.53	62.4	168.5	405.0
145.00	Top - Section 6	1.00	1.10	6.681	7.35	0.00	1.200	1.739	2.10	5.061	6.07	44.6	120.3	288.3
148.30	Appurtenance(s)	1.00	1.11	6.724	7.40	0.00	1.200	1.743	3.30	7.574	9.09	67.2	179.1	431.0

Wind Loading - Shaft

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

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150.00 Top - Section 7	1.00	1.11	6.746	7.42	0.00	1.200	1.745	1.70	3.834	4.60	34.1	91.2	218.3
155.00	1.00	1.12	6.810	7.49	0.00	1.290 *	1.751	5.00	8.126	10.48	78.5	189.9	442.4
160.00 Appurtenance(s)	1.00	1.13	6.872	7.56	0.00	1.290 *	1.757	5.00	8.130	10.49	79.3	190.5	443.1
								Totals:	160.00		4,537.2	40,365.3	

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

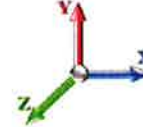
Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	6' Lightning rod	1	6.896	7.586	1.00	1.00	1.47	39.04	0.000	2.000	11.19	0.00	22.37
2	160.00	DB-T1-6Z-8AB-0Z	1	6.896	7.586	0.50	1.00	2.84	197.63	0.000	2.000	21.54	0.00	43.09
3	160.00	SBNHH-1D65B	9	6.896	7.586	0.82	1.00	70.14	2274.32	0.000	2.000	532.06	0.00	1064.13
4	160.00	Low Profile Platform	1	6.896	7.586	1.00	1.00	39.78	1893.91	0.000	2.000	301.74	0.00	603.49
5	160.00	DB846F65ZAXY	6	6.896	7.586	0.94	1.00	46.56	1344.74	0.000	2.000	353.17	0.00	706.34
6	160.00	DB222	1	6.896	7.586	1.00	1.00	8.35	69.05	0.000	2.000	63.35	0.00	126.70
7	160.00	RRH2x90-AWS	3	6.896	7.586	0.67	1.00	7.96	289.55	0.000	2.000	60.37	0.00	120.73
8	148.30	APXVTM14-C-120	3	6.746	7.421	0.61	0.80	13.70	682.17	0.000	1.700	101.67	0.00	172.83
9	148.30	1900MHz RRH	3	6.772	7.449	0.54	0.80	8.34	391.92	0.000	3.700	62.15	0.00	229.95
10	148.30	800 MHz RRH	3	6.772	7.449	0.54	0.80	5.84	349.13	0.000	3.700	43.51	0.00	160.99
11	148.30	APXVSP18-C-A20	3	6.772	7.449	0.66	0.80	21.33	574.66	0.000	3.700	158.87	0.00	587.82
12	148.30	Low Profile Platform	1	6.724	7.397	1.00	1.00	31.53	1885.94	0.000	0.000	233.25	0.00	0.00
13	148.30	ALU 800MHz External	3	6.772	7.449	0.57	0.80	2.43	69.55	0.000	3.700	18.10	0.00	66.98
14	148.30	TD-RRH8x20-25	3	6.746	7.421	0.57	0.80	8.29	582.93	0.000	1.700	61.48	0.00	104.52
15	148.30	ACU-A20-N	4	6.772	7.449	0.62	0.80	1.08	16.76	0.000	3.700	8.01	0.00	29.64
16	142.90	S11B12	3	6.654	7.319	0.54	0.80	5.63	343.10	0.000	0.000	41.17	0.00	0.00
17	142.90	LNX-6515DS-A1M	3	6.654	7.319	0.68	0.80	30.03	667.20	0.000	0.000	219.80	0.00	0.00
18	142.90	AIR 21 B4A B2P	3	6.663	7.329	0.67	0.80	14.37	829.18	0.000	0.700	105.36	0.00	73.75
19	142.90	AIR 21 B2A B4P	3	6.663	7.329	0.67	0.80	14.37	833.14	0.000	0.700	105.36	0.00	73.75
20	142.90	KRY 112 144/1	3	6.663	7.329	0.58	0.80	1.53	62.49	0.000	0.700	11.18	0.00	7.83
21	142.90	Low-Profile Platform + HR	1	6.654	7.319	1.00	1.00	89.77	4811.83	0.000	0.000	657.03	0.00	0.00
22	133.00	RRUS A2 Module	3	6.519	7.170	0.32	0.80	2.71	152.76	0.000	0.000	19.43	0.00	0.00
23	133.00	RRUS 12	3	6.519	7.170	0.57	0.80	5.94	466.39	0.000	0.000	42.63	0.00	0.00
24	133.00	800 10121	3	6.519	7.170	0.65	0.80	14.06	408.47	0.000	0.000	100.80	0.00	0.00
25	133.00	RRUS 11	3	6.519	7.170	0.54	0.80	5.09	446.19	0.000	0.000	36.47	0.00	0.00
26	133.00	800 10798	3	6.519	7.170	0.60	0.80	20.94	1611.20	0.000	0.000	150.12	0.00	0.00
27	133.00	Low Profile Platform	1	6.519	7.170	1.00	1.00	39.45	2333.94	0.000	0.000	282.87	0.00	0.00
28	133.00	DTMABP7819VG12A	3	6.519	7.170	0.40	0.80	2.28	120.76	0.000	0.000	16.35	0.00	0.00
29	133.00	RRUS 32	3	6.519	7.170	0.80	0.80	5.33	420.36	0.000	0.000	38.24	0.00	0.00
30	133.00	DC6-48-60-18-8F	2	6.519	7.170	0.80	0.80	3.46	157.63	0.000	0.000	24.80	0.00	0.00
31	110.00	3 ft Standoff	1	6.174	6.792	1.00	1.00	8.42	102.83	0.000	0.000	57.16	0.00	0.00
32	110.00	DB222	1	6.258	6.884	1.00	1.00	8.13	66.49	0.000	5.292	55.94	0.00	296.00
33	40.00	GPS	1	4.625	5.087	1.00	1.00	1.62	29.69	0.000	0.000	8.26	0.00	0.00

Totals: **24,524.94** **4,003.42**

Total Applied Force Summary

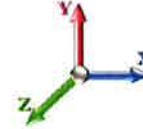
Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		154.94	2066.90	0.00	0.00
10.00		153.87	2079.07	0.00	0.00
15.00		152.62	2074.05	0.00	0.00
16.00		30.34	412.48	0.00	0.00
16.25		7.69	162.04	0.00	0.00
18.00		53.76	1132.35	0.00	0.00
19.50		45.95	966.84	0.00	0.00
20.00		15.29	321.41	0.00	0.00
22.00		61.02	1282.18	0.00	0.00
25.00		90.48	1239.05	0.00	0.00
30.00		149.84	2050.12	0.00	0.00
31.00		30.07	407.27	0.00	0.00
34.00		84.52	1201.72	0.00	0.00
35.00		26.98	396.17	0.00	0.00
35.50		13.52	197.73	0.00	0.00
40.00	(1) attachments	133.47	1798.32	0.00	0.00
45.00		142.31	1940.11	0.00	0.00
45.16		4.53	61.69	0.00	0.00
46.00		23.88	323.40	0.00	0.00
50.00		115.81	1529.20	0.00	0.00
55.00		149.69	2912.92	0.00	0.00
56.00		29.87	576.71	0.00	0.00
58.00		59.70	755.68	0.00	0.00
60.00		59.99	751.23	0.00	0.00
65.00		152.16	1857.05	0.00	0.00
70.00		153.52	1828.35	0.00	0.00
75.00		154.64	1799.20	0.00	0.00
78.00		92.88	1066.04	0.00	0.00
80.00		61.97	704.99	0.00	0.00
85.00		156.27	1595.20	0.00	0.00
90.00		156.82	1568.96	0.00	0.00
95.00		157.21	1542.43	0.00	0.00
95.58		18.44	258.62	0.00	0.00
100.00		135.95	1930.48	0.00	0.00
105.00		145.15	1464.25	0.00	0.00
110.00	(2) attachments	258.03	1606.06	0.00	296.00
115.00		144.60	1380.42	0.00	0.00
120.00		144.18	1232.59	0.00	0.00
125.00		143.66	1208.33	0.00	0.00
130.00		143.06	1183.91	0.00	0.00
133.00	(24) attachments	797.04	6817.29	0.00	0.00
135.00		56.68	433.22	0.00	0.00
140.00		141.65	1063.12	0.00	0.00
142.90	(16) attachments	1235.59	8153.25	0.00	155.32
145.00		44.63	374.40	0.00	0.00
148.30	(23) attachments	754.27	5119.58	0.00	1352.73

Total Applied Force Summary

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 40



150.00		34.14	280.37	0.00	0.00
155.00		78.52	625.27	0.00	0.00
160.00	(22) attachments	1422.70	6734.48	0.00	2686.84
	Totals:	8,573.88	78,466.50	0.00	4,490.90

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

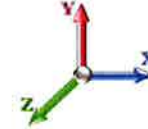


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00

Iterations 23



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	1.87	0.00	0.174	1.223	4.256	0.00	27.35
5.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.174	1.223	4.256	0.00	18.42
5.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	1.87	0.00	0.174	1.223	4.256	0.00	27.35
5.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.56	0.00	0.174	1.223	4.256	0.00	21.84
5.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.174	1.223	4.256	0.00	18.42
5.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.56	0.00	0.174	1.223	4.256	0.00	29.49
5.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	2.08	0.00	0.174	1.223	4.256	0.00	29.49
10.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	1.94	0.00	0.178	1.233	4.256	0.00	29.45
10.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.233	4.256	0.00	20.21
10.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	1.94	0.00	0.178	1.233	4.256	0.00	29.45
10.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.63	0.00	0.178	1.233	4.256	0.00	23.67
10.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.233	4.256	0.00	20.21
10.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.63	0.00	0.178	1.233	4.256	0.00	32.19
10.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	2.15	0.00	0.178	1.233	4.256	0.00	32.19
15.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	1.99	0.00	0.181	1.244	4.256	0.00	30.79
15.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.181	1.244	4.256	0.00	21.36
15.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	1.99	0.00	0.181	1.244	4.256	0.00	30.79
15.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.68	0.00	0.181	1.244	4.256	0.00	24.85
15.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.181	1.244	4.256	0.00	21.36
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.68	0.00	0.181	1.244	4.256	0.00	33.91
15.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	2.20	0.00	0.181	1.244	4.256	0.00	33.91
16.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.40	0.00	0.184	1.251	4.256	0.00	6.20
16.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.184	1.251	4.256	0.00	4.31
16.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.40	0.00	0.184	1.251	4.256	0.00	6.20
16.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.34	0.00	0.184	1.251	4.256	0.00	5.01
16.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.184	1.251	4.256	0.00	4.31
16.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.34	0.00	0.184	1.251	4.256	0.00	6.84
16.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.44	0.00	0.184	1.251	4.256	0.00	6.84
16.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.10	0.00	0.184	1.252	4.256	0.00	1.55
16.25	7/8" Coax	Yes	0.25	0.000	0.00	0.00	0.00	0.184	1.252	4.256	0.00	1.08
16.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.10	0.00	0.184	1.252	4.256	0.00	1.55
16.25	1-1/4" Hybrid	Yes	0.25	0.000	1.25	0.08	0.00	0.184	1.252	4.256	0.00	1.25
16.25	7/8" Coax	Yes	0.25	0.000	0.00	0.00	0.00	0.184	1.252	4.256	0.00	1.08
16.25	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.08	0.00	0.184	1.252	4.256	0.00	1.71
16.25	1.25" Reinforcing	Yes	0.25	0.000	2.50	0.11	0.00	0.184	1.252	4.256	0.00	1.71
18.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.70	0.00	0.185	1.254	4.256	0.00	11.00
18.00	7/8" Coax	Yes	1.75	0.000	0.00	0.00	0.00	0.185	1.254	4.256	0.00	7.67
18.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.70	0.00	0.185	1.254	4.256	0.00	11.00
18.00	1-1/4" Hybrid	Yes	1.75	0.000	1.25	0.59	0.00	0.185	1.254	4.256	0.00	8.89
18.00	7/8" Coax	Yes	1.75	0.000	0.00	0.00	0.00	0.185	1.254	4.256	0.00	7.67
18.00	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.59	0.00	0.185	1.254	4.256	0.00	12.15
18.00	1.25" Reinforcing	Yes	1.75	0.000	2.50	0.78	0.00	0.185	1.254	4.256	0.00	12.15
19.50	1 5/8" Hybrid	Yes	1.50	0.000	2.00	0.61	0.00	0.186	1.258	4.256	0.00	9.51
19.50	7/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.186	1.258	4.256	0.00	6.64
19.50	1 5/8" Hybrid	Yes	1.50	0.000	2.00	0.61	0.00	0.186	1.258	4.256	0.00	9.51
19.50	1-1/4" Hybrid	Yes	1.50	0.000	1.25	0.51	0.00	0.186	1.258	4.256	0.00	7.70
19.50	7/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.186	1.258	4.256	0.00	6.64

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

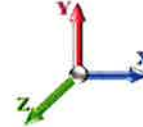


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00

Iterations 23



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
19.50	1.25" Reinforcing	Yes	1.50	0.000	1.25	0.51	0.00	0.186	1.258	4.256	0.00	10.52
19.50	1.25" Reinforcing	Yes	1.50	0.000	2.50	0.67	0.00	0.186	1.258	4.256	0.00	10.52
20.00	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.20	0.00	0.187	1.260	4.256	0.00	3.18
20.00	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.187	1.260	4.256	0.00	2.22
20.00	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.20	0.00	0.187	1.260	4.256	0.00	3.18
20.00	1-1/4" Hybrid	Yes	0.50	0.000	1.25	0.17	0.00	0.187	1.260	4.256	0.00	2.57
20.00	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.187	1.260	4.256	0.00	2.22
20.00	1.25" Reinforcing	Yes	0.50	0.000	1.25	0.17	0.00	0.187	1.260	4.256	0.00	3.52
20.00	1.25" Reinforcing	Yes	0.50	0.000	2.50	0.22	0.00	0.187	1.260	4.256	0.00	3.52
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.81	0.00	0.188	1.263	4.256	0.00	12.86
22.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.188	1.263	4.256	0.00	9.01
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.81	0.00	0.188	1.263	4.256	0.00	12.86
22.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.69	0.00	0.188	1.263	4.256	0.00	10.42
22.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.188	1.263	4.256	0.00	9.01
22.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.69	0.00	0.188	1.263	4.256	0.00	14.25
22.00	1.25" Reinforcing	Yes	2.00	0.000	2.50	0.90	0.00	0.188	1.263	4.256	0.00	14.25
25.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	1.23	0.00	0.187	1.260	4.256	0.00	19.57
25.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.187	1.260	4.256	0.00	13.76
25.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	1.23	0.00	0.187	1.260	4.256	0.00	19.57
25.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	1.04	0.00	0.187	1.260	4.256	0.00	15.88
25.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.187	1.260	4.256	0.00	13.76
25.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	1.04	0.00	0.187	1.260	4.256	0.00	21.74
25.00	1.25" Reinforcing	Yes	3.00	0.000	2.50	1.35	0.00	0.187	1.260	4.256	0.00	21.74
30.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.07	0.00	0.190	1.270	4.260	0.00	33.31
30.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.190	1.270	4.260	0.00	23.53
30.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.07	0.00	0.190	1.270	4.260	0.00	33.31
30.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.76	0.00	0.190	1.270	4.260	0.00	27.08
30.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.190	1.270	4.260	0.00	23.53
30.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.76	0.00	0.190	1.270	4.260	0.00	37.11
30.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	2.28	0.00	0.190	1.270	4.260	0.00	37.11
31.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.42	0.00	0.192	1.277	4.300	0.00	6.69
31.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.192	1.277	4.300	0.00	4.73
31.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.42	0.00	0.192	1.277	4.300	0.00	6.69
31.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.35	0.00	0.192	1.277	4.300	0.00	5.44
31.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.192	1.277	4.300	0.00	4.73
31.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.35	0.00	0.192	1.277	4.300	0.00	7.45
31.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.46	0.00	0.192	1.277	4.300	0.00	7.45
34.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	1.25	0.00	0.158	1.174	4.415	0.00	20.28
34.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.158	1.174	4.415	0.00	14.37
34.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	1.25	0.00	0.158	1.174	4.415	0.00	20.28
34.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	1.06	0.00	0.158	1.174	4.415	0.00	16.51
34.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.158	1.174	4.415	0.00	14.37
34.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	1.06	0.00	0.158	1.174	4.415	0.00	22.63
34.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.46	0.00	0.158	1.174	4.415	0.00	7.54
35.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.42	0.00	0.141	1.124	4.451	0.00	6.78
35.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.141	1.124	4.451	0.00	4.81
35.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.42	0.00	0.141	1.124	4.451	0.00	6.78

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

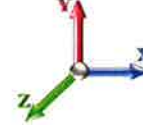
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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00

Iterations 23



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
35.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.36	0.00	0.141	1.124	4.451	0.00	5.52
35.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.141	1.124	4.451	0.00	4.81
35.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.36	0.00	0.141	1.124	4.451	0.00	7.57
35.50	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.21	0.00	0.142	1.125	4.469	0.00	3.40
35.50	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.142	1.125	4.469	0.00	2.41
35.50	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.21	0.00	0.142	1.125	4.469	0.00	3.40
35.50	1-1/4" Hybrid	Yes	0.50	0.000	1.25	0.18	0.00	0.142	1.125	4.469	0.00	2.77
35.50	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.142	1.125	4.469	0.00	2.41
35.50	1.25" Reinforcing	Yes	0.50	0.000	1.25	0.18	0.00	0.142	1.125	4.469	0.00	3.79
40.00	1 5/8" Hybrid	Yes	4.50	0.000	2.00	1.90	0.00	0.143	1.130	4.625	0.00	31.00
40.00	7/8" Coax	Yes	4.50	0.000	0.00	0.00	0.00	0.143	1.130	4.625	0.00	22.07
40.00	1 5/8" Hybrid	Yes	4.50	0.000	2.00	1.90	0.00	0.143	1.130	4.625	0.00	31.00
40.00	1-1/4" Hybrid	Yes	4.50	0.000	1.25	1.62	0.00	0.143	1.130	4.625	0.00	25.28
40.00	7/8" Coax	Yes	4.50	0.000	0.00	0.00	0.00	0.143	1.130	4.625	0.00	22.07
40.00	1.25" Reinforcing	Yes	4.50	0.000	1.25	1.62	0.00	0.143	1.130	4.625	0.00	34.69
45.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.12	0.00	0.146	1.139	4.783	0.00	34.93
45.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.146	1.139	4.783	0.00	24.94
45.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.12	0.00	0.146	1.139	4.783	0.00	34.93
45.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.81	0.00	0.146	1.139	4.783	0.00	28.52
45.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.146	1.139	4.783	0.00	24.94
45.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.81	0.00	0.146	1.139	4.783	0.00	39.14
45.16	1 5/8" Hybrid	Yes	0.16	0.000	2.00	0.07	0.00	0.148	1.144	4.788	0.00	1.12
45.16	7/8" Coax	Yes	0.16	0.000	0.00	0.00	0.00	0.148	1.144	4.788	0.00	0.80
45.16	1 5/8" Hybrid	Yes	0.16	0.000	2.00	0.07	0.00	0.148	1.144	4.788	0.00	1.12
45.16	1-1/4" Hybrid	Yes	0.16	0.000	1.25	0.06	0.00	0.148	1.144	4.788	0.00	0.91
45.16	7/8" Coax	Yes	0.16	0.000	0.00	0.00	0.00	0.148	1.144	4.788	0.00	0.80
45.16	1.25" Reinforcing	Yes	0.16	0.000	1.25	0.06	0.00	0.148	1.144	4.788	0.00	1.25
46.00	1 5/8" Hybrid	Yes	0.84	0.000	2.00	0.36	0.00	0.148	1.145	4.813	0.00	5.88
46.00	7/8" Coax	Yes	0.84	0.000	0.00	0.00	0.00	0.148	1.145	4.813	0.00	4.20
46.00	1 5/8" Hybrid	Yes	0.84	0.000	2.00	0.36	0.00	0.148	1.145	4.813	0.00	5.88
46.00	1-1/4" Hybrid	Yes	0.84	0.000	1.25	0.30	0.00	0.148	1.145	4.813	0.00	4.81
46.00	7/8" Coax	Yes	0.84	0.000	0.00	0.00	0.00	0.148	1.145	4.813	0.00	4.20
46.00	1.25" Reinforcing	Yes	0.84	0.000	1.25	0.30	0.00	0.148	1.145	4.813	0.00	6.60
50.00	1 5/8" Hybrid	Yes	4.00	0.000	2.00	1.71	0.00	0.150	1.150	4.929	0.00	28.29
50.00	7/8" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.150	1.150	4.929	0.00	20.26
50.00	1 5/8" Hybrid	Yes	4.00	0.000	2.00	1.71	0.00	0.150	1.150	4.929	0.00	28.29
50.00	1-1/4" Hybrid	Yes	4.00	0.000	1.25	1.46	0.00	0.150	1.150	4.929	0.00	23.13
50.00	7/8" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.150	1.150	4.929	0.00	20.26
50.00	1.25" Reinforcing	Yes	4.00	0.000	1.25	1.46	0.00	0.150	1.150	4.929	0.00	31.76
55.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.15	0.00	0.153	1.160	5.065	0.00	35.77
55.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.153	1.160	5.065	0.00	25.67
55.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.15	0.00	0.153	1.160	5.065	0.00	35.77
55.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.84	0.00	0.153	1.160	5.065	0.00	29.27
55.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.153	1.160	5.065	0.00	25.67
55.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.84	0.00	0.153	1.160	5.065	0.00	40.20
56.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.43	0.00	0.156	1.167	5.091	0.00	7.17
56.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.156	1.167	5.091	0.00	5.15

Linear Appurtenance Segment Forces (Factored)

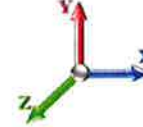
Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 44

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
56.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.43	0.00	0.156	1.167	5.091	0.00	7.17
56.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.37	0.00	0.156	1.167	5.091	0.00	5.87
56.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.156	1.167	5.091	0.00	5.15
56.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.37	0.00	0.156	1.167	5.091	0.00	8.06
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.86	0.00	0.154	1.161	5.142	0.00	14.40
58.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.154	1.161	5.142	0.00	10.35
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.86	0.00	0.154	1.161	5.142	0.00	14.40
58.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.74	0.00	0.154	1.161	5.142	0.00	11.79
58.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.154	1.161	5.142	0.00	10.35
58.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.74	0.00	0.154	1.161	5.142	0.00	16.19
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.86	0.00	0.155	1.166	5.193	0.00	14.46
60.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.155	1.166	5.193	0.00	10.40
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.86	0.00	0.155	1.166	5.193	0.00	14.46
60.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.74	0.00	0.155	1.166	5.193	0.00	11.84
60.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.155	1.166	5.193	0.00	10.40
60.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.74	0.00	0.155	1.166	5.193	0.00	16.27
65.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.17	0.00	0.158	1.174	5.313	0.00	36.49
65.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.158	1.174	5.313	0.00	26.30
65.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.17	0.00	0.158	1.174	5.313	0.00	36.49
65.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.86	0.00	0.158	1.174	5.313	0.00	29.92
65.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.158	1.174	5.313	0.00	26.30
65.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.86	0.00	0.158	1.174	5.313	0.00	41.11
70.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.18	0.00	0.162	1.186	5.426	0.00	36.82
70.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.162	1.186	5.426	0.00	26.59
70.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.18	0.00	0.162	1.186	5.426	0.00	36.82
70.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.87	0.00	0.162	1.186	5.426	0.00	30.21
70.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.162	1.186	5.426	0.00	26.59
70.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.87	0.00	0.162	1.186	5.426	0.00	41.51
75.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.19	0.00	0.166	1.198	5.534	0.00	37.13
75.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	5.534	0.00	26.86
75.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.19	0.00	0.166	1.198	5.534	0.00	37.13
75.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.88	0.00	0.166	1.198	5.534	0.00	30.49
75.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	5.534	0.00	26.86
75.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.88	0.00	0.166	1.198	5.534	0.00	41.90
78.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	1.32	0.00	0.170	1.209	5.597	0.00	22.39
78.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.170	1.209	5.597	0.00	16.21
78.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	1.32	0.00	0.170	1.209	5.597	0.00	22.39
78.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	1.13	0.00	0.170	1.209	5.597	0.00	18.39
78.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.170	1.209	5.597	0.00	16.21
78.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	1.13	0.00	0.170	1.209	5.597	0.00	25.27
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.88	0.00	0.172	1.215	5.637	0.00	14.97
80.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.172	1.215	5.637	0.00	10.85
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.88	0.00	0.172	1.215	5.637	0.00	14.97
80.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.75	0.00	0.172	1.215	5.637	0.00	12.30
80.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.172	1.215	5.637	0.00	10.85
80.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.75	0.00	0.172	1.215	5.637	0.00	16.91
85.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.21	0.00	0.175	1.225	5.736	0.00	37.70

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

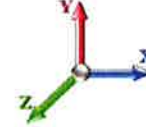
Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017
 Page: 45



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
85.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.175	1.225	5.736	0.00	27.36
85.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.21	0.00	0.175	1.225	5.736	0.00	37.70
85.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.89	0.00	0.175	1.225	5.736	0.00	31.00
85.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.175	1.225	5.736	0.00	27.36
85.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.89	0.00	0.175	1.225	5.736	0.00	42.61
90.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.22	0.00	0.180	1.240	5.830	0.00	37.97
90.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.180	1.240	5.830	0.00	27.59
90.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.22	0.00	0.180	1.240	5.830	0.00	37.97
90.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.90	0.00	0.180	1.240	5.830	0.00	31.24
90.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.180	1.240	5.830	0.00	27.59
90.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.90	0.00	0.180	1.240	5.830	0.00	42.94
95.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.22	0.00	0.185	1.255	5.921	0.00	38.22
95.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.185	1.255	5.921	0.00	27.81
95.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.22	0.00	0.185	1.255	5.921	0.00	38.22
95.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.91	0.00	0.185	1.255	5.921	0.00	31.46
95.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.185	1.255	5.921	0.00	27.81
95.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	1.91	0.00	0.185	1.255	5.921	0.00	43.25
95.58	1 5/8" Hybrid	Yes	0.58	0.000	2.00	0.26	0.00	0.188	1.264	5.931	0.00	4.44
95.58	7/8" Coax	Yes	0.58	0.000	0.00	0.00	0.00	0.188	1.264	5.931	0.00	3.23
95.58	1 5/8" Hybrid	Yes	0.58	0.000	2.00	0.26	0.00	0.188	1.264	5.931	0.00	4.44
95.58	1-1/4" Hybrid	Yes	0.58	0.000	1.25	0.22	0.00	0.188	1.264	5.931	0.00	3.65
95.58	7/8" Coax	Yes	0.58	0.000	0.00	0.00	0.00	0.188	1.264	5.931	0.00	3.23
95.58	1.25" Reinforcing	Yes	0.58	0.000	1.25	0.22	0.00	0.188	1.264	5.931	0.00	5.02
100.00	1 5/8" Hybrid	Yes	4.42	0.000	2.00	1.97	0.00	0.174	1.223	6.008	0.00	34.00
100.00	7/8" Coax	Yes	4.42	0.000	0.00	0.00	0.00	0.174	1.223	6.008	0.00	24.77
100.00	1 5/8" Hybrid	Yes	4.42	0.000	2.00	1.97	0.00	0.174	1.223	6.008	0.00	34.00
100.00	1-1/4" Hybrid	Yes	4.42	0.000	1.25	1.69	0.00	0.174	1.223	6.008	0.00	28.00
100.00	7/8" Coax	Yes	4.42	0.000	0.00	0.00	0.00	0.174	1.223	6.008	0.00	24.77
100.00	1.25" Reinforcing	Yes	2.42	0.000	1.25	0.93	0.00	0.174	1.223	6.008	0.00	21.08
105.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.24	0.00	0.155	1.166	6.093	0.00	38.69
105.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	6.093	0.00	28.23
105.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.24	0.00	0.155	1.166	6.093	0.00	38.69
105.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.92	0.00	0.155	1.166	6.093	0.00	31.89
105.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	6.093	0.00	28.23
110.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.24	0.00	0.160	1.181	6.174	0.00	38.92
110.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.181	6.174	0.00	28.42
110.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.24	0.00	0.160	1.181	6.174	0.00	38.92
110.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.93	0.00	0.160	1.181	6.174	0.00	32.09
110.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.181	6.174	0.00	28.42
115.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.25	0.00	0.165	1.196	6.253	0.00	39.13
115.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.165	1.196	6.253	0.00	28.61
115.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.25	0.00	0.165	1.196	6.253	0.00	39.13
115.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.94	0.00	0.165	1.196	6.253	0.00	32.28
120.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.26	0.00	0.171	1.212	6.330	0.00	39.34
120.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.171	1.212	6.330	0.00	28.79
120.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.26	0.00	0.171	1.212	6.330	0.00	39.34
120.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.94	0.00	0.171	1.212	6.330	0.00	32.47

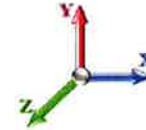
Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 46
	Struct Class: II	



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
125.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.26	0.00	0.176	1.229	6.404	0.00	39.54
125.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.176	1.229	6.404	0.00	28.97
125.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.26	0.00	0.176	1.229	6.404	0.00	39.54
125.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.95	0.00	0.176	1.229	6.404	0.00	32.65
130.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.27	0.00	0.183	1.248	6.476	0.00	39.73
130.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.183	1.248	6.476	0.00	29.14
130.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.27	0.00	0.183	1.248	6.476	0.00	39.73
130.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.95	0.00	0.183	1.248	6.476	0.00	32.82
133.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	1.36	0.00	0.188	1.264	6.519	0.00	23.91
133.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.188	1.264	6.519	0.00	17.54
133.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	1.36	0.00	0.188	1.264	6.519	0.00	23.91
133.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	1.17	0.00	0.188	1.264	6.519	0.00	19.75
135.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.91	0.00	0.191	1.274	6.546	0.00	15.97
135.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.191	1.274	6.546	0.00	11.72
135.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.91	0.00	0.191	1.274	6.546	0.00	15.97
135.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.78	0.00	0.191	1.274	6.546	0.00	13.20
140.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.28	0.00	0.196	1.289	6.615	0.00	40.10
140.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.196	1.289	6.615	0.00	29.47
140.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.28	0.00	0.196	1.289	6.615	0.00	40.10
140.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	1.97	0.00	0.196	1.289	6.615	0.00	33.15
142.90	1 5/8" Hybrid	Yes	2.90	1.200	2.00	1.32	1.59	0.202	0.000	6.654	11.62	23.32
142.90	7/8" Coax	Yes	2.90	0.000	0.00	0.00	0.00	0.202	0.000	6.654	0.00	17.14
142.90	1 5/8" Hybrid	Yes	2.90	1.200	2.00	1.32	1.59	0.202	0.000	6.654	11.62	23.32
142.90	1-1/4" Hybrid	Yes	2.90	1.200	1.25	1.14	1.37	0.202	0.000	6.654	10.03	19.28
145.00	1 5/8" Hybrid	Yes	2.10	0.000	2.00	0.96	0.00	0.079	0.000	6.681	0.00	16.92
145.00	7/8" Coax	Yes	2.10	0.000	0.00	0.00	0.00	0.079	0.000	6.681	0.00	12.44
148.30	1 5/8" Hybrid	Yes	3.30	0.000	2.00	1.51	0.00	0.083	0.000	6.724	0.00	26.66
148.30	7/8" Coax	Yes	3.30	0.000	0.00	0.00	0.00	0.083	0.000	6.724	0.00	19.62
150.00	1 5/8" Hybrid	Yes	1.70	0.000	2.00	0.78	0.00	0.085	0.000	6.746	0.00	13.75
150.00	7/8" Coax	Yes	1.70	0.000	0.00	0.00	0.00	0.085	0.000	6.746	0.00	10.12
155.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.29	0.00	0.125	1.075	6.810	0.00	40.62
155.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.125	1.075	6.810	0.00	29.92
160.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	2.30	0.00	0.125	1.075	6.872	0.00	40.78
160.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.125	1.075	6.872	0.00	30.06
Totals:											33.3	5,431.0

Calculated Forces

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



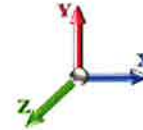
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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 23

Dead Load Factor 1.20

Wind Load Factor 1.00



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-78.46	-8.61	0.00	-1031.4	0.00	1031.43	3683.82	1841.91	7606.69	3756.66	0.00	0.000	0.000	0.201
5.00	-76.39	-8.52	0.00	-988.39	0.00	988.39	3652.63	1826.32	7394.88	3652.06	0.03	-0.051	0.000	0.197
10.00	-74.30	-8.43	0.00	-945.79	0.00	945.79	3619.85	1809.93	7182.43	3547.13	0.11	-0.102	0.000	0.192
15.00	-72.22	-8.31	0.00	-903.64	0.00	903.64	3585.48	1792.74	6969.53	3441.99	0.24	-0.153	0.000	0.188
16.00	-71.81	-8.29	0.00	-895.32	0.00	895.32	3578.41	1789.21	6926.91	3420.94	0.27	-0.163	0.000	0.187
16.25	-71.65	-8.30	0.00	-893.25	0.00	893.25	3576.63	1788.32	6916.25	3415.68	0.28	-0.166	0.000	0.220
18.00	-70.51	-8.26	0.00	-878.74	0.00	878.74	3564.09	1782.04	6841.65	3378.83	0.35	-0.188	0.000	0.202
19.50	-69.54	-8.23	0.00	-866.34	0.00	866.34	3553.18	1776.59	6777.69	3347.24	0.41	-0.205	0.000	0.171
20.00	-69.22	-8.22	0.00	-862.23	0.00	862.23	3549.51	1774.75	6756.36	3336.71	0.43	-0.210	0.000	0.171
22.00	-67.93	-8.19	0.00	-845.78	0.00	845.78	3563.12	1781.56	6835.93	3376.01	0.52	-0.230	0.000	0.173
25.00	-66.69	-8.14	0.00	-821.22	0.00	821.22	3541.13	1770.56	6708.00	3312.83	0.68	-0.259	0.000	0.165
30.00	-64.64	-8.01	0.00	-780.53	0.00	780.53	3503.20	1751.60	6494.78	3207.53	0.97	-0.306	0.000	0.127
31.00	-64.23	-7.99	0.00	-772.52	0.00	772.52	3495.43	1747.71	6452.15	3186.48	1.04	-0.314	0.000	0.146
34.00	-63.02	-7.92	0.00	-748.54	0.00	748.54	3471.72	1735.86	6324.32	3123.35	1.25	-0.340	0.000	0.177
35.00	-62.63	-7.90	0.00	-740.62	0.00	740.62	3463.69	1731.84	6281.74	3102.31	1.32	-0.351	0.000	0.176
35.50	-62.43	-7.92	0.00	-736.67	0.00	736.67	3459.65	1729.82	6260.45	3091.80	1.35	-0.357	0.000	0.177
40.00	-60.62	-7.83	0.00	-701.03	0.00	701.03	3422.57	1711.29	6069.05	2997.28	1.71	-0.406	0.000	0.173
45.00	-58.68	-7.70	0.00	-661.90	0.00	661.90	3379.87	1689.93	5856.93	2892.52	2.17	-0.460	0.000	0.168
45.16	-58.62	-7.70	0.00	-660.67	0.00	660.67	3378.48	1689.24	5850.15	2889.17	2.18	-0.462	0.000	0.122
46.00	-58.29	-7.70	0.00	-654.20	0.00	654.20	3371.14	1685.57	5814.59	2871.61	2.27	-0.468	0.000	0.158
50.00	-56.76	-7.61	0.00	-623.41	0.00	623.41	3335.57	1667.79	5645.55	2788.13	2.68	-0.510	0.000	0.154
55.00	-53.84	-7.47	0.00	-585.34	0.00	585.34	3289.68	1644.84	5435.12	2684.20	3.24	-0.561	0.000	0.147
56.00	-53.26	-7.44	0.00	-577.88	0.00	577.88	3316.18	1658.09	5555.61	2743.71	3.36	-0.572	0.000	0.149
58.00	-52.50	-7.40	0.00	-562.99	0.00	562.99	3297.74	1648.87	5471.49	2702.16	3.60	-0.593	0.000	0.155
60.00	-51.75	-7.36	0.00	-548.20	0.00	548.20	3279.05	1639.52	5387.54	2660.71	3.85	-0.614	0.000	0.152
65.00	-49.89	-7.24	0.00	-511.38	0.00	511.38	3231.20	1615.60	5178.53	2557.48	4.53	-0.667	0.000	0.147
70.00	-48.05	-7.10	0.00	-475.21	0.00	475.21	3181.76	1590.88	4970.89	2454.94	5.25	-0.720	0.000	0.141
75.00	-46.25	-6.96	0.00	-439.68	0.00	439.68	3130.72	1565.36	4764.82	2353.16	6.03	-0.772	0.000	0.135
78.00	-45.18	-6.87	0.00	-418.81	0.00	418.81	3099.34	1549.67	4642.00	2292.51	6.53	-0.804	0.000	0.131
80.00	-44.48	-6.83	0.00	-405.06	0.00	405.06	3078.09	1539.05	4560.50	2252.26	6.87	-0.825	0.000	0.129
80.00	-44.48	-6.83	0.00	-405.06	0.00	405.06	2384.58	1192.29	3545.27	1750.88	6.87	-0.825	0.000	0.139
85.00	-42.88	-6.69	0.00	-370.92	0.00	370.92	2349.22	1174.61	3397.89	1678.09	7.76	-0.875	0.000	0.147
90.00	-41.30	-6.55	0.00	-337.47	0.00	337.47	2312.26	1156.13	3251.12	1605.61	8.71	-0.931	0.000	0.139
95.00	-39.76	-6.39	0.00	-304.74	0.00	304.74	2273.71	1136.85	3105.16	1533.52	9.71	-0.986	0.000	0.130
95.58	-39.50	-6.38	0.00	-301.03	0.00	301.03	2269.13	1134.57	3088.29	1525.19	9.83	-0.992	0.000	0.127
95.58	-39.50	-6.38	0.00	-301.03	0.00	301.03	2269.13	1134.57	3088.29	1525.19	9.83	-0.992	0.000	0.127
100.00	-37.57	-6.25	0.00	-272.83	0.00	272.83	2259.61	1129.81	3053.48	1508.00	10.77	-1.038	0.000	0.198
105.00	-36.10	-6.13	0.00	-241.56	0.00	241.56	2218.90	1109.45	2908.92	1436.61	11.91	-1.124	0.000	0.184
110.00	-34.49	-5.89	0.00	-210.60	0.00	210.60	2176.60	1088.30	2765.62	1365.84	13.13	-1.201	0.000	0.170
115.00	-33.10	-5.75	0.00	-181.16	0.00	181.16	2132.70	1066.35	2623.78	1295.79	14.42	-1.275	0.000	0.155
115.00	-33.10	-5.75	0.00	-181.16	0.00	181.16	1556.62	778.31	1923.08	949.74	14.42	-1.275	0.000	0.212
120.00	-31.87	-5.62	0.00	-152.39	0.00	152.39	1529.99	765.00	1828.43	902.99	15.80	-1.345	0.000	0.190
125.00	-30.65	-5.49	0.00	-124.27	0.00	124.27	1501.77	750.88	1734.09	856.40	17.25	-1.423	0.000	0.166
130.00	-29.47	-5.34	0.00	-96.82	0.00	96.82	1471.95	735.97	1640.26	810.06	18.78	-1.493	0.000	0.140
133.00	-22.67	-4.38	0.00	-80.78	0.00	80.78	1453.29	726.64	1584.28	782.42	19.73	-1.530	0.000	0.119
135.00	-22.24	-4.33	0.00	-72.03	0.00	72.03	1440.53	720.27	1547.12	764.06	20.37	-1.553	0.000	0.110
140.00	-21.18	-4.17	0.00	-50.40	0.00	50.40	1407.52	703.76	1454.87	718.50	22.03	-1.601	0.000	0.085
142.90	-13.06	-2.71	0.00	-38.16	0.00	38.16	1387.65	693.82	1401.84	692.32	23.01	-1.624	0.000	0.065

Calculated Forces

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 48
	Struct Class: II	



145.00	-12.69	-2.66	0.00	-32.47	0.00	32.47	1372.92	686.46	1363.70	673.48	23.73	-1.638	0.000	0.057
145.00	-12.69	-2.66	0.00	-32.47	0.00	32.47	931.20	465.60	925.89	604.09	23.73	-1.638	0.000	0.067
148.30	-7.59	-1.76	0.00	-22.36	0.00	22.36	911.53	455.77	882.04	573.63	24.86	-1.656	0.000	0.047
150.00	-7.31	-1.72	0.00	-19.37	0.00	19.37	901.40	450.70	859.86	558.24	25.46	-1.664	0.000	0.043
150.00	-7.31	-1.72	0.00	-19.37	0.00	19.37	556.65	278.33	359.38	213.69	25.46	-1.664	0.000	0.104
155.00	-6.69	-1.62	0.00	-10.79	0.00	10.79	556.65	278.33	359.38	213.69	27.21	-1.681	0.000	0.063
160.00	0.00	-1.42	0.00	-2.69	0.00	2.69	556.65	278.33	359.38	213.69	28.98	-1.706	0.000	0.013

Seismic Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

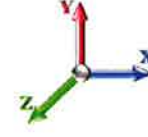


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Load Case: 1.2D + 1.0E

Iterations 22

Gust Response Factor 1.10	Sds 0.20	Ss 0.19
Dead Load Factor 1.20	Seismic Load Factor 1.00	Sd1 0.10
Wind Load Factor 0.00	Structure Frequency 0.28	SA 0.03
	Seismic Importance Factor 1.00	



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	0.00	
5.00		1017.2	0.00	0.03	0.02	22.59	
10.00		997.32	0.01	0.05	0.03	31.37	
15.00		977.39	0.02	0.06	0.04	35.16	
16.00	Bot - Section 2	193.09	0.02	0.06	0.04	7.06	
16.25	RT1 RB2	97.07	0.02	0.06	0.04	3.56	
18.00	RB3	676.67	0.02	0.07	0.04	25.40	
19.50	RB4	576.11	0.03	0.07	0.04	21.97	
20.00		191.24	0.03	0.07	0.04	7.33	
22.00	Top - Section 1	760.98	0.04	0.07	0.04	29.61	
25.00		569.38	0.05	0.07	0.04	22.57	
30.00	RB5	933.02	0.07	0.07	0.04	37.89	
31.00	RT2	184.21	0.07	0.07	0.04	7.51	
34.00	RT3	547.85	0.09	0.07	0.04	22.65	
35.00		181.02	0.09	0.07	0.04	7.52	
35.50	RT4	90.21	0.09	0.07	0.04	3.76	
40.00	Appurtenance(s)	812.95	0.12	0.07	0.03	34.57	
45.00		873.23	0.15	0.07	0.03	37.96	
45.16	RB6	27.61	0.15	0.07	0.03	1.20	
46.00	RT5	144.64	0.16	0.07	0.03	6.31	
50.00	Bot - Section 3	681.05	0.18	0.06	0.03	30.03	
55.00		1682.1	0.22	0.06	0.02	73.84	
56.00	Top - Section 2	331.65	0.23	0.06	0.02	14.49	
58.00	RT6 RB7	332.34	0.25	0.06	0.02	14.32	
60.00		329.15	0.27	0.05	0.02	13.88	
65.00		808.93	0.31	0.04	0.01	30.68	
70.00		789.00	0.36	0.03	0.01	23.79	
75.00		769.07	0.42	0.01	0.01	13.97	
78.00	RT7 RB8	451.88	0.45	0.00	0.01	4.10	
80.00	Top - Section 3	297.27	0.47	-0.01	0.01	0.73	
85.00		608.75	0.53	-0.03	0.01	-8.99	
90.00		592.15	0.60	-0.05	0.01	-17.95	
95.00	Bot - Section 5	575.54	0.67	-0.08	0.02	-23.97	
95.58	RT8	132.62	0.67	-0.08	0.03	-5.65	
100.00	Top - Section 4	995.95	0.74	-0.10	0.04	-47.53	
105.00		553.03	0.81	-0.11	0.06	-26.81	
110.00	Appurtenance(s)	592.42	0.89	-0.12	0.08	-26.19	
115.00	Top - Section 5	519.81	0.98	-0.12	0.12	-18.29	
120.00		403.42	1.06	-0.09	0.17	-8.71	
125.00		390.14	1.15	-0.03	0.22	-1.35	
130.00		376.85	1.25	0.05	0.29	7.24	
133.00	Appurtenance(s)	2696.1	1.31	0.13	0.34	94.40	
135.00		143.83	1.35	0.19	0.38	6.69	
140.00		350.28	1.45	0.38	0.48	27.48	
142.90	Appurtenance(s)	3324.1	1.51	0.52	0.55	329.73	
145.00	Top - Section 6	139.92	1.55	0.64	0.61	16.12	

Seismic Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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148.30	Appurtenance(s)	2280.3	1.62	0.85	0.70	324.29
150.00	Top - Section 7	105.95	1.66	0.98	0.76	16.63
155.00		210.46	1.77	1.42	0.93	42.88
160.00	Appurtenance(s)	2094.9	1.89	1.98	1.14	535.68
	Totals:	33,410.5				1,801.5

Total Wind: 37,084.5

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017



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Load Case: 1.2D + 1.0E

Iterations 22

Gust Response Factor 1.10

Sds 0.20

Ss 0.19

Dead Load Factor 1.20

Seismic Load Factor 1.00

Sd1 0.10

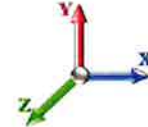
S1 0.06

Wind Load Factor 0.00

Structure Frequency 0.28

SA 0.03

Seismic Importance Factor 1.00



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-48.97	-1.99	0.00	-243.88	0.00	243.88	3683.82	1841.91	7606.69	3756.66	0.00	0.00	0.00	0.053
5.00	-47.45	-1.98	0.00	-233.93	0.00	233.93	3652.63	1826.32	7394.88	3652.06	0.01	-0.01	0.00	0.052
10.00	-45.95	-1.96	0.00	-224.03	0.00	224.03	3619.85	1809.93	7182.43	3547.13	0.03	-0.02	0.00	0.051
15.00	-44.47	-1.93	0.00	-214.25	0.00	214.25	3585.48	1792.74	6969.53	3441.99	0.06	-0.04	0.00	0.050
16.00	-44.18	-1.92	0.00	-212.32	0.00	212.32	3578.41	1789.21	6926.91	3420.94	0.06	-0.04	0.00	0.050
16.25	-44.05	-1.92	0.00	-211.84	0.00	211.84	3576.63	1788.32	6916.25	3415.68	0.07	-0.04	0.00	0.058
18.00	-43.13	-1.90	0.00	-208.48	0.00	208.48	3564.09	1782.04	6841.65	3378.83	0.08	-0.04	0.00	0.053
19.50	-42.35	-1.88	0.00	-205.64	0.00	205.64	3553.18	1776.59	6777.69	3347.24	0.10	-0.05	0.00	0.045
20.00	-42.09	-1.87	0.00	-204.70	0.00	204.70	3549.51	1774.75	6756.36	3336.71	0.10	-0.05	0.00	0.045
22.00	-41.06	-1.84	0.00	-200.96	0.00	200.96	3563.12	1781.56	6835.93	3376.01	0.12	-0.05	0.00	0.046
25.00	-40.19	-1.83	0.00	-195.43	0.00	195.43	3541.13	1770.56	6708.00	3312.83	0.16	-0.06	0.00	0.044
30.00	-38.77	-1.79	0.00	-186.29	0.00	186.29	3503.20	1751.60	6494.78	3207.53	0.23	-0.07	0.00	0.034
31.00	-38.49	-1.79	0.00	-184.50	0.00	184.50	3495.43	1747.71	6452.15	3186.48	0.25	-0.07	0.00	0.039
34.00	-37.65	-1.77	0.00	-179.14	0.00	179.14	3471.72	1735.86	6324.32	3123.35	0.30	-0.08	0.00	0.047
35.00	-37.37	-1.76	0.00	-177.38	0.00	177.38	3463.69	1731.84	6281.74	3102.31	0.31	-0.08	0.00	0.046
35.50	-37.23	-1.76	0.00	-176.50	0.00	176.50	3459.65	1729.82	6260.45	3091.80	0.32	-0.08	0.00	0.047
40.00	-35.99	-1.73	0.00	-168.58	0.00	168.58	3422.57	1711.29	6069.05	2997.28	0.41	-0.10	0.00	0.046
45.00	-34.64	-1.69	0.00	-159.93	0.00	159.93	3379.87	1689.93	5856.93	2892.52	0.51	-0.11	0.00	0.045
45.16	-34.60	-1.69	0.00	-159.65	0.00	159.65	3378.48	1689.24	5850.15	2889.17	0.52	-0.11	0.00	0.033
46.00	-34.37	-1.69	0.00	-158.23	0.00	158.23	3371.14	1685.57	5814.59	2871.61	0.54	-0.11	0.00	0.042
50.00	-33.31	-1.66	0.00	-151.47	0.00	151.47	3335.57	1667.79	5645.55	2788.13	0.64	-0.12	0.00	0.041
55.00	-30.99	-1.59	0.00	-143.14	0.00	143.14	3289.68	1644.84	5435.12	2684.20	0.77	-0.13	0.00	0.039
56.00	-30.54	-1.58	0.00	-141.55	0.00	141.55	3316.18	1658.09	5555.61	2743.71	0.80	-0.14	0.00	0.040
58.00	-30.02	-1.56	0.00	-138.40	0.00	138.40	3297.74	1648.87	5471.49	2702.16	0.86	-0.14	0.00	0.042
60.00	-29.50	-1.55	0.00	-135.27	0.00	135.27	3279.05	1639.52	5387.54	2660.71	0.92	-0.15	0.00	0.041
65.00	-28.23	-1.53	0.00	-127.51	0.00	127.51	3231.20	1615.60	5178.53	2557.48	1.08	-0.16	0.00	0.040
70.00	-26.98	-1.50	0.00	-119.88	0.00	119.88	3181.76	1590.88	4970.89	2454.94	1.25	-0.17	0.00	0.039
75.00	-25.76	-1.49	0.00	-112.36	0.00	112.36	3130.72	1565.36	4764.82	2353.16	1.44	-0.19	0.00	0.038
78.00	-25.04	-1.49	0.00	-107.88	0.00	107.88	3099.34	1549.67	4642.00	2292.51	1.56	-0.19	0.00	0.037
80.00	-24.56	-1.49	0.00	-104.91	0.00	104.91	3078.09	1539.05	4560.50	2252.26	1.64	-0.20	0.00	0.036
80.00	-24.56	-1.49	0.00	-104.91	0.00	104.91	2384.58	1192.29	3545.27	1750.88	1.64	-0.20	0.00	0.039
85.00	-23.53	-1.49	0.00	-97.46	0.00	97.46	2349.22	1174.61	3397.89	1678.09	1.86	-0.21	0.00	0.042
90.00	-22.52	-1.49	0.00	-90.00	0.00	90.00	2312.26	1156.13	3251.12	1605.61	2.09	-0.23	0.00	0.040
95.00	-21.53	-1.49	0.00	-82.54	0.00	82.54	2273.71	1136.85	3105.16	1533.52	2.34	-0.24	0.00	0.038
95.58	-21.33	-1.49	0.00	-81.67	0.00	81.67	2269.13	1134.57	3088.29	1525.19	2.37	-0.24	0.00	0.037
95.58	-21.33	-1.49	0.00	-81.67	0.00	81.67	2269.13	1134.57	3088.29	1525.19	2.37	-0.24	0.00	0.037
100.00	-19.87	-1.49	0.00	-75.07	0.00	75.07	2259.61	1129.81	3053.48	1508.00	2.60	-0.26	0.00	0.059
105.00	-18.91	-1.50	0.00	-67.60	0.00	67.60	2218.90	1109.45	2908.92	1436.61	2.88	-0.28	0.00	0.056
110.00	-17.89	-1.50	0.00	-60.11	0.00	60.11	2176.60	1088.30	2765.62	1365.84	3.19	-0.30	0.00	0.052
115.00	-16.97	-1.50	0.00	-52.62	0.00	52.62	2132.70	1066.35	2623.78	1295.79	3.52	-0.32	0.00	0.049
115.00	-16.97	-1.50	0.00	-52.62	0.00	52.62	1556.62	778.31	1923.08	949.74	3.52	-0.32	0.00	0.066
120.00	-16.19	-1.50	0.00	-45.12	0.00	45.12	1529.99	765.00	1828.43	902.99	3.87	-0.34	0.00	0.061
125.00	-15.42	-1.50	0.00	-37.61	0.00	37.61	1501.77	750.88	1734.09	856.40	4.24	-0.37	0.00	0.054
130.00	-14.67	-1.50	0.00	-30.09	0.00	30.09	1471.95	735.97	1640.26	810.06	4.64	-0.39	0.00	0.047
133.00	-11.26	-1.38	0.00	-25.61	0.00	25.61	1453.29	726.64	1584.28	782.42	4.89	-0.40	0.00	0.040
135.00	-11.00	-1.37	0.00	-22.85	0.00	22.85	1440.53	720.27	1547.12	764.06	5.06	-0.41	0.00	0.038
140.00	-10.35	-1.34	0.00	-15.99	0.00	15.99	1407.52	703.76	1454.87	718.50	5.50	-0.42	0.00	0.030

Calculated Forces

Structure: CT02049-S-SBA

Code: EIA/TIA-222-G

6/9/2017

Site Name: Beacon Falls

Exposure: B

Height: 160.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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142.90	-6.23	-0.98	0.00	-12.09	0.00	12.09	1387.65	693.82	1401.84	692.32	5.76	-0.43	0.022
145.00	-6.00	-0.97	0.00	-10.03	0.00	10.03	1372.92	686.46	1363.70	673.48	5.95	-0.44	0.019
145.00	-6.00	-0.97	0.00	-10.03	0.00	10.03	931.20	465.60	925.89	604.09	5.95	-0.44	0.023
148.30	-3.17	-0.62	0.00	-6.84	0.00	6.84	911.53	455.77	882.04	573.63	6.25	-0.44	0.015
150.00	-3.01	-0.60	0.00	-5.79	0.00	5.79	901.40	450.70	859.86	558.24	6.41	-0.44	0.014
150.00	-3.01	-0.60	0.00	-5.79	0.00	5.79	556.65	278.33	359.38	213.69	6.41	-0.44	0.033
155.00	-2.63	-0.56	0.00	-2.78	0.00	2.78	556.65	278.33	359.38	213.69	6.87	-0.45	0.018
160.00	0.00	-0.54	0.00	0.00	0.00	0.00	556.65	278.33	359.38	213.69	7.35	-0.45	0.000

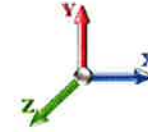
Seismic Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E					Iterations 21
Gust Response Factor	1.10			Sds	0.20
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.10
Wind Load Factor	0.00	Structure Frequency	0.28	SA	0.03
				Seismic Importance Factor	1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	0.00	
5.00		1017.2	0.00	0.03	0.02	22.59	
10.00		997.32	0.01	0.05	0.03	31.37	
15.00		977.39	0.02	0.06	0.04	35.16	
16.00	Bot - Section 2	193.09	0.02	0.06	0.04	7.06	
16.25	RT1 RB2	97.07	0.02	0.06	0.04	3.56	
18.00	RB3	676.67	0.02	0.07	0.04	25.40	
19.50	RB4	576.11	0.03	0.07	0.04	21.97	
20.00		191.24	0.03	0.07	0.04	7.33	
22.00	Top - Section 1	760.98	0.04	0.07	0.04	29.61	
25.00		569.38	0.05	0.07	0.04	22.57	
30.00	RB5	933.02	0.07	0.07	0.04	37.89	
31.00	RT2	184.21	0.07	0.07	0.04	7.51	
34.00	RT3	547.85	0.09	0.07	0.04	22.65	
35.00		181.02	0.09	0.07	0.04	7.52	
35.50	RT4	90.21	0.09	0.07	0.04	3.76	
40.00	Appurtenance(s)	812.95	0.12	0.07	0.03	34.57	
45.00		873.23	0.15	0.07	0.03	37.96	
45.16	RB6	27.61	0.15	0.07	0.03	1.20	
46.00	RT5	144.64	0.16	0.07	0.03	6.31	
50.00	Bot - Section 3	681.05	0.18	0.06	0.03	30.03	
55.00		1682.1	0.22	0.06	0.02	73.84	
56.00	Top - Section 2	331.65	0.23	0.06	0.02	14.49	
58.00	RT6 RB7	332.34	0.25	0.06	0.02	14.32	
60.00		329.15	0.27	0.05	0.02	13.88	
65.00		808.93	0.31	0.04	0.01	30.68	
70.00		789.00	0.36	0.03	0.01	23.79	
75.00		769.07	0.42	0.01	0.01	13.97	
78.00	RT7 RB8	451.88	0.45	0.00	0.01	4.10	
80.00	Top - Section 3	297.27	0.47	-0.01	0.01	0.73	
85.00		608.75	0.53	-0.03	0.01	-8.99	
90.00		592.15	0.60	-0.05	0.01	-17.95	
95.00	Bot - Section 5	575.54	0.67	-0.08	0.02	-23.97	
95.58	RT8	132.62	0.67	-0.08	0.03	-5.65	
100.00	Top - Section 4	995.95	0.74	-0.10	0.04	-47.53	
105.00		553.03	0.81	-0.11	0.06	-26.81	
110.00	Appurtenance(s)	592.42	0.89	-0.12	0.08	-26.19	
115.00	Top - Section 5	519.81	0.98	-0.12	0.12	-18.29	
120.00		403.42	1.06	-0.09	0.17	-8.71	
125.00		390.14	1.15	-0.03	0.22	-1.35	
130.00		376.85	1.25	0.05	0.29	7.24	
133.00	Appurtenance(s)	2696.1	1.31	0.13	0.34	94.40	
135.00		143.83	1.35	0.19	0.38	6.69	
140.00		350.28	1.45	0.38	0.48	27.48	
142.90	Appurtenance(s)	3324.1	1.51	0.52	0.55	329.73	
145.00	Top - Section 6	139.92	1.55	0.64	0.61	16.12	

Seismic Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 54



148.30	Appurtenance(s)	2280.3	1.62	0.85	0.70	324.29
150.00	Top - Section 7	105.95	1.66	0.98	0.76	16.63
155.00		210.46	1.77	1.42	0.93	42.88
160.00	Appurtenance(s)	2094.9	1.89	1.98	1.14	535.68
Totals:		33,410.5				1,801.5

Total Wind: 37,084.5

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

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Load Case: 0.9D + 1.0E

Gust Response Factor 1.10

Sds 0.20

Iterations 21

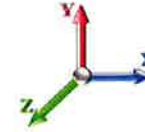
Dead Load Factor 0.90 **Seismic Load Factor** 1.00

Sd1 0.10

Ss 0.19

S1 0.06

Wind Load Factor 0.00 **Structure Frequency** 0.28 **SA** 0.03 **Seismic Importance Factor** 1.00



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-36.73	-1.99	0.00	-240.94	0.00	240.94	3683.82	1841.91	7606.69	3756.66	0.00	0.00	0.00	0.050
5.00	-35.58	-1.97	0.00	-230.99	0.00	230.99	3652.63	1826.32	7394.88	3652.06	0.01	-0.01	-0.01	0.049
10.00	-34.46	-1.95	0.00	-221.12	0.00	221.12	3619.85	1809.93	7182.43	3547.13	0.03	-0.02	-0.02	0.048
15.00	-33.35	-1.92	0.00	-211.38	0.00	211.38	3585.48	1792.74	6969.53	3441.99	0.06	-0.04	-0.04	0.047
16.00	-33.14	-1.91	0.00	-209.46	0.00	209.46	3578.41	1789.21	6926.91	3420.94	0.06	-0.04	-0.04	0.047
16.25	-33.04	-1.91	0.00	-208.98	0.00	208.98	3576.63	1788.32	6916.25	3415.68	0.07	-0.04	-0.04	0.055
18.00	-32.35	-1.89	0.00	-205.64	0.00	205.64	3564.09	1782.04	6841.65	3378.83	0.08	-0.04	-0.04	0.050
19.50	-31.76	-1.87	0.00	-202.81	0.00	202.81	3553.18	1776.59	6777.69	3347.24	0.10	-0.05	-0.05	0.043
20.00	-31.57	-1.86	0.00	-201.88	0.00	201.88	3549.51	1774.75	6756.36	3336.71	0.10	-0.05	-0.05	0.043
22.00	-30.79	-1.83	0.00	-198.16	0.00	198.16	3563.12	1781.56	6835.93	3376.01	0.12	-0.05	-0.05	0.043
25.00	-30.14	-1.81	0.00	-192.66	0.00	192.66	3541.13	1770.56	6708.00	3312.83	0.16	-0.06	-0.06	0.041
30.00	-29.08	-1.78	0.00	-183.59	0.00	183.59	3503.20	1751.60	6494.78	3207.53	0.23	-0.07	-0.07	0.032
31.00	-28.87	-1.77	0.00	-181.81	0.00	181.81	3495.43	1747.71	6452.15	3186.48	0.24	-0.07	-0.07	0.037
34.00	-28.24	-1.75	0.00	-176.50	0.00	176.50	3471.72	1735.86	6324.32	3123.35	0.29	-0.08	-0.08	0.044
35.00	-28.03	-1.74	0.00	-174.75	0.00	174.75	3463.69	1731.84	6281.74	3102.31	0.31	-0.08	-0.08	0.044
35.50	-27.93	-1.74	0.00	-173.87	0.00	173.87	3459.65	1729.82	6260.45	3091.80	0.32	-0.08	-0.08	0.044
40.00	-26.99	-1.71	0.00	-166.03	0.00	166.03	3422.57	1711.29	6069.05	2997.28	0.40	-0.10	-0.10	0.043
45.00	-25.98	-1.68	0.00	-157.47	0.00	157.47	3379.87	1689.93	5856.93	2892.52	0.51	-0.11	-0.11	0.042
45.16	-25.95	-1.68	0.00	-157.20	0.00	157.20	3378.48	1689.24	5850.15	2889.17	0.51	-0.11	-0.11	0.031
46.00	-25.78	-1.67	0.00	-155.79	0.00	155.79	3371.14	1685.57	5814.59	2871.61	0.53	-0.11	-0.11	0.040
50.00	-24.98	-1.64	0.00	-149.10	0.00	149.10	3335.57	1667.79	5645.55	2788.13	0.63	-0.12	-0.12	0.039
55.00	-23.25	-1.57	0.00	-140.88	0.00	140.88	3289.68	1644.84	5435.12	2684.20	0.76	-0.13	-0.13	0.037
56.00	-22.90	-1.56	0.00	-139.31	0.00	139.31	3316.18	1658.09	5555.61	2743.71	0.79	-0.13	-0.13	0.038
58.00	-22.51	-1.54	0.00	-136.20	0.00	136.20	3297.74	1648.87	5471.49	2702.16	0.84	-0.14	-0.14	0.039
60.00	-22.13	-1.53	0.00	-133.11	0.00	133.11	3279.05	1639.52	5387.54	2660.71	0.90	-0.15	-0.15	0.039
65.00	-21.17	-1.50	0.00	-125.46	0.00	125.46	3231.20	1615.60	5178.53	2557.48	1.06	-0.16	-0.16	0.038
70.00	-20.24	-1.48	0.00	-117.94	0.00	117.94	3181.76	1590.88	4970.89	2454.94	1.24	-0.17	-0.17	0.037
75.00	-19.32	-1.47	0.00	-110.53	0.00	110.53	3130.72	1565.36	4764.82	2353.16	1.42	-0.18	-0.18	0.036
78.00	-18.78	-1.46	0.00	-106.13	0.00	106.13	3099.34	1549.67	4642.00	2292.51	1.54	-0.19	-0.19	0.035
80.00	-18.42	-1.47	0.00	-103.20	0.00	103.20	3078.09	1539.05	4560.50	2252.26	1.62	-0.20	-0.20	0.034
80.00	-18.42	-1.47	0.00	-103.20	0.00	103.20	2384.58	1192.29	3545.27	1750.88	1.62	-0.20	-0.20	0.037
85.00	-17.64	-1.47	0.00	-95.87	0.00	95.87	2349.22	1174.61	3397.89	1678.09	1.84	-0.21	-0.21	0.040
90.00	-16.89	-1.47	0.00	-88.54	0.00	88.54	2312.26	1156.13	3251.12	1605.61	2.06	-0.22	-0.22	0.038
95.00	-16.14	-1.47	0.00	-81.19	0.00	81.19	2273.71	1136.85	3105.16	1533.52	2.31	-0.24	-0.24	0.036
95.58	-16.00	-1.47	0.00	-80.34	0.00	80.34	2269.13	1134.57	3088.29	1525.19	2.34	-0.24	-0.24	0.035
95.58	-16.00	-1.47	0.00	-80.34	0.00	80.34	2269.13	1134.57	3088.29	1525.19	2.34	-0.24	-0.24	0.035
100.00	-14.90	-1.47	0.00	-73.85	0.00	73.85	2259.61	1129.81	3053.48	1508.00	2.56	-0.25	-0.25	0.056
105.00	-14.18	-1.47	0.00	-66.50	0.00	66.50	2218.90	1109.45	2908.92	1436.61	2.84	-0.28	-0.28	0.053
110.00	-13.42	-1.47	0.00	-59.15	0.00	59.15	2176.60	1088.30	2765.62	1365.84	3.14	-0.30	-0.30	0.049
115.00	-12.73	-1.47	0.00	-51.79	0.00	51.79	2132.70	1066.35	2623.78	1295.79	3.47	-0.32	-0.32	0.046
115.00	-12.73	-1.47	0.00	-51.79	0.00	51.79	1556.62	778.31	1923.08	949.74	3.47	-0.32	-0.32	0.063
120.00	-12.14	-1.47	0.00	-44.42	0.00	44.42	1529.99	765.00	1828.43	902.99	3.81	-0.34	-0.34	0.057
125.00	-11.57	-1.48	0.00	-37.04	0.00	37.04	1501.77	750.88	1734.09	856.40	4.18	-0.36	-0.36	0.051
130.00	-11.00	-1.47	0.00	-29.67	0.00	29.67	1471.95	735.97	1640.26	810.06	4.57	-0.38	-0.38	0.044
133.00	-8.44	-1.36	0.00	-25.26	0.00	25.26	1453.29	726.64	1584.28	782.42	4.82	-0.39	-0.39	0.038
135.00	-8.25	-1.35	0.00	-22.55	0.00	22.55	1440.53	720.27	1547.12	764.06	4.98	-0.40	-0.40	0.035
140.00	-7.76	-1.32	0.00	-15.79	0.00	15.79	1407.52	703.76	1454.87	718.50	5.41	-0.42	-0.42	0.027

Calculated Forces

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 56



142.90	-4.67	-0.97	0.00	-11.96	0.00	11.96	1387.65	693.82	1401.84	692.32	5.67	-0.42	0.021
145.00	-4.50	-0.95	0.00	-9.92	0.00	9.92	1372.92	686.46	1363.70	673.48	5.86	-0.43	0.018
145.00	-4.50	-0.95	0.00	-9.92	0.00	9.92	931.20	465.60	925.89	604.09	5.86	-0.43	0.021
148.30	-2.38	-0.61	0.00	-6.77	0.00	6.77	911.53	455.77	882.04	573.63	6.16	-0.43	0.014
150.00	-2.25	-0.60	0.00	-5.73	0.00	5.73	901.40	450.70	859.86	558.24	6.31	-0.44	0.013
150.00	-2.25	-0.60	0.00	-5.73	0.00	5.73	556.65	278.33	359.38	213.69	6.31	-0.44	0.031
155.00	-1.97	-0.55	0.00	-2.75	0.00	2.75	556.65	278.33	359.38	213.69	6.77	-0.44	0.016
160.00	0.00	-0.54	0.00	0.00	0.00	0.00	556.65	278.33	359.38	213.69	7.24	-0.45	0.000

Wind Loading - Shaft

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

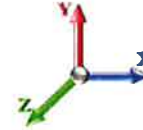
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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00

Iterations 23



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.70	6.129	6.74	218.17	1.000	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.74	213.97	1.223 *	0.000	5.00	21.521	26.31	177.4	0.0	1017.2
10.00		1.00	0.70	6.129	6.74	209.77	1.233 *	0.000	5.00	21.102	26.02	175.4	0.0	997.3
15.00		1.00	0.70	6.129	6.74	205.56	1.244 *	0.000	5.00	20.684	25.73	173.5	0.0	977.4
16.00	Bot - Section 2	1.00	0.70	6.129	6.74	204.72	1.251 *	0.000	1.00	4.087	5.11	34.5	0.0	193.1
16.25	RT1 RB2	1.00	0.70	6.129	6.74	204.51	1.252 *	0.000	0.25	1.035	1.30	8.7	0.0	97.1
18.00	RB3	1.00	0.70	6.129	6.74	203.04	1.254 *	0.000	1.75	7.217	9.05	61.0	0.0	676.7
19.50	RB4	1.00	0.70	6.129	6.74	201.78	1.258 *	0.000	1.50	6.145	7.73	52.1	0.0	576.1
20.00		1.00	0.70	6.129	6.74	201.36	1.260 *	0.000	0.50	2.040	2.57	17.3	0.0	191.2
22.00	Top - Section 1	1.00	0.70	6.129	6.74	199.68	1.263 *	0.000	2.00	8.118	10.26	69.1	0.0	761.0
25.00		1.00	0.70	6.129	6.74	200.41	1.260 *	0.000	3.00	12.052	15.19	102.4	0.0	569.4
30.00	RB5	1.00	0.70	6.134	6.75	196.29	1.270 *	0.000	5.00	19.752	25.08	169.2	0.0	933.0
31.00	RT2	1.00	0.71	6.192	6.81	196.37	1.277 *	0.000	1.00	3.900	4.98	33.9	0.0	184.2
34.00	RT3	1.00	0.73	6.357	6.99	196.41	1.174 *	0.000	3.00	11.600	13.62	95.2	0.0	547.9
35.00		1.00	0.73	6.410	7.05	196.37	1.124 *	0.000	1.00	3.833	4.31	30.4	0.0	181.0
35.50	RT4	1.00	0.74	6.436	7.08	196.34	1.125 *	0.000	0.50	1.910	2.15	15.2	0.0	90.2
40.00	Appurtenance(s)	1.00	0.76	6.659	7.33	195.77	1.130 *	0.000	4.50	17.005	19.22	140.8	0.0	802.9
45.00		1.00	0.79	6.887	7.58	194.64	1.139 *	0.000	5.00	18.497	21.07	159.6	0.0	873.2
45.16	RB6	1.00	0.79	6.894	7.58	194.59	1.144 *	0.000	0.16	0.585	0.67	5.1	0.0	27.6
46.00	RT5	1.00	0.79	6.931	7.62	194.36	1.145 *	0.000	0.84	3.064	3.51	26.8	0.0	144.6
50.00	Bot - Section 3	1.00	0.81	7.098	7.81	193.07	1.150 *	0.000	4.00	14.429	16.60	129.6	0.0	681.1
55.00		1.00	0.83	7.294	8.02	191.13	1.160 *	0.000	5.00	17.984	20.86	167.4	0.0	1682.2
56.00	Top - Section 2	1.00	0.84	7.331	8.06	190.71	1.167 *	0.000	1.00	3.547	4.14	33.4	0.0	331.7
58.00	RT6 RB7	1.00	0.85	7.405	8.15	193.39	1.161 *	0.000	2.00	7.043	8.18	66.6	0.0	332.3
60.00		1.00	0.85	7.477	8.22	192.47	1.166 *	0.000	2.00	6.976	8.13	66.9	0.0	329.2
65.00		1.00	0.87	7.650	8.42	189.99	1.174 *	0.000	5.00	17.147	20.13	169.4	0.0	808.9
70.00		1.00	0.89	7.814	8.60	187.27	1.186 *	0.000	5.00	16.728	19.83	170.5	0.0	789.0
75.00		1.00	0.91	7.969	8.77	184.33	1.198 *	0.000	5.00	16.310	19.54	171.3	0.0	769.1
78.00	RT7 RB8	1.00	0.92	8.059	8.87	182.48	1.209 *	0.000	3.00	9.585	11.58	102.7	0.0	451.9
80.00	Top - Section 3	1.00	0.93	8.118	8.93	181.21	1.215 *	0.000	2.00	6.306	7.66	68.4	0.0	297.3
85.00		1.00	0.94	8.260	9.09	177.91	1.225 *	0.000	5.00	15.473	18.96	172.2	0.0	608.8
90.00		1.00	0.96	8.396	9.24	174.45	1.240 *	0.000	5.00	15.055	18.66	172.4	0.0	592.1
95.00	Bot - Section 5	1.00	0.97	8.526	9.38	170.85	1.255 *	0.000	5.00	14.636	18.37	172.3	0.0	575.5
95.58	RT8	1.00	0.98	8.541	9.40	170.42	1.264 *	0.000	0.58	1.702	2.15	20.2	0.0	132.6
100.00	Top - Section 4	1.00	0.99	8.652	9.52	167.11	1.223 *	0.000	4.42	12.785	15.63	148.8	0.0	995.9
105.00		1.00	1.00	8.774	9.65	166.49	1.166 *	0.000	5.00	14.069	16.41	158.4	0.0	553.0
110.00	Appurtenance(s)	1.00	1.02	8.891	9.78	162.54	1.181 *	0.000	5.00	13.651	16.12	157.6	0.0	536.4
115.00	Top - Section 5	1.00	1.03	9.005	9.91	158.49	1.196 *	0.000	5.00	13.232	15.82	156.7	0.0	519.8
120.00		1.00	1.04	9.115	10.03	154.33	1.212 *	0.000	5.00	12.814	15.53	155.7	0.0	403.4
125.00		1.00	1.05	9.222	10.14	150.08	1.229 *	0.000	5.00	12.395	15.24	154.6	0.0	390.1
130.00		1.00	1.07	9.326	10.26	145.74	1.248 *	0.000	5.00	11.977	14.95	153.3	0.0	376.9
133.00	Appurtenance(s)	1.00	1.07	9.387	10.33	143.10	1.264 *	0.000	3.00	6.985	8.83	91.1	0.0	219.7
135.00		1.00	1.08	9.427	10.37	141.32	1.274 *	0.000	2.00	4.573	5.83	60.4	0.0	143.8
140.00		1.00	1.09	9.525	10.48	136.82	1.289 *	0.000	5.00	11.140	14.36	150.5	0.0	350.3
142.90	Appurtenance(s)	1.00	1.09	9.581	10.54	134.17	1.200 *	0.000	2.90	6.269	7.52	79.3	0.0	197.1
145.00	Top - Section 6	1.00	1.10	9.621	10.58	132.24	1.000	0.000	2.10	4.452	4.45	47.1	0.0	139.9
148.30	Appurtenance(s)	1.00	1.11	9.683	10.65	124.81	0.600	0.000	3.30	6.615	3.97	42.3	0.0	209.9

Wind Loading - Shaft

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 58



150.00 Top - Section 7	1.00	1.11	9.715	10.69	123.27	0.600	0.000	1.70	3.339	2.00	21.4	0.0	105.9
155.00	1.00	1.12	9.806	10.79	84.67	0.645 *	0.000	5.00	6.667	4.30	46.4	0.0	210.5
160.00 Appurtenance(s)	1.00	1.13	9.896	10.89	85.05	0.645 *	0.000	5.00	6.667	4.30	46.8	0.0	210.5
								Totals:	160.00		4,901.4		23,786.1

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

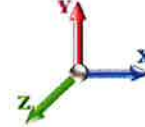
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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00

Iterations 23



No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	6' Lightning rod	1	9.931	10.924	1.00	1.00	0.38	6.50	0.000	2.000	4.15	0.00	8.30
2	160.00	DB-T1-6Z-8AB-OZ	1	9.931	10.924	0.50	1.00	2.40	44.00	0.000	2.000	26.22	0.00	52.43
3	160.00	SBNHH-1D65B	9	9.931	10.924	0.82	1.00	60.29	360.00	0.000	2.000	658.65	0.00	1317.30
4	160.00	Low Profile Platform	1	9.931	10.924	1.00	1.00	22.00	1200.00	0.000	2.000	240.33	0.00	480.65
5	160.00	DB846F65ZAXY	6	9.931	10.924	0.94	1.00	39.68	126.00	0.000	2.000	433.43	0.00	866.87
6	160.00	DB222	1	9.931	10.924	1.00	1.00	2.25	16.00	0.000	2.000	24.58	0.00	49.16
7	160.00	RRH2x90-AWS	3	9.931	10.924	0.67	1.00	5.35	132.00	0.000	2.000	58.41	0.00	116.81
8	148.30	APXVTM14-C-120	3	9.715	10.686	0.61	0.80	11.59	168.00	0.000	1.700	123.90	0.00	210.64
9	148.30	1900MHz RRH	3	9.752	10.727	0.54	0.80	6.11	132.00	0.000	3.700	65.55	0.00	242.52
10	148.30	800 MHz RRH	3	9.752	10.727	0.54	0.80	4.00	159.00	0.000	3.700	42.95	0.00	158.91
11	148.30	APXVSP18-C-A20	3	9.752	10.727	0.66	0.80	15.78	171.00	0.000	3.700	169.31	0.00	626.43
12	148.30	Low Profile Platform	1	9.683	10.652	1.00	1.00	17.50	1200.00	0.000	0.000	186.40	0.00	0.00
13	148.30	ALU 800MHz External	3	9.752	10.727	0.40	0.80	0.94	26.40	0.000	3.700	10.04	0.00	37.15
14	148.30	TD-RRH8x20-25	3	9.715	10.686	0.55	0.80	6.71	210.00	0.000	1.700	71.67	0.00	121.84
15	148.30	ACU-A20-N	4	9.752	10.727	0.60	0.80	0.34	4.00	0.000	3.700	3.60	0.00	13.34
16	142.90	S11B12	3	9.581	10.539	0.54	0.80	4.55	153.00	0.000	0.000	47.96	0.00	0.00
17	142.90	LNX-6515DS-A1M	3	9.581	10.539	0.67	0.80	23.12	149.40	0.000	0.000	243.71	0.00	0.00
18	142.90	AIR 21 B4A B2P	3	9.595	10.554	0.66	0.80	12.09	271.20	0.000	0.700	127.57	0.00	89.30
19	142.90	AIR 21 B2A B4P	3	9.595	10.554	0.66	0.80	12.09	274.50	0.000	0.700	127.57	0.00	89.30
20	142.90	KRY 112 144/1	3	9.595	10.554	0.56	0.80	0.69	33.00	0.000	0.700	7.27	0.00	5.09
21	142.90	Low-Profile Platform + HR	1	9.581	10.539	1.00	1.00	51.70	2246.00	0.000	0.000	544.88	0.00	0.00
22	133.00	RRUS A2 Module	3	9.387	10.325	0.32	0.80	1.79	63.60	0.000	0.000	18.44	0.00	0.00
23	133.00	RRUS 12	3	9.387	10.325	0.56	0.80	4.74	174.00	0.000	0.000	48.95	0.00	0.00
24	133.00	800 10121	3	9.387	10.325	0.63	0.80	9.76	138.90	0.000	0.000	100.82	0.00	0.00
25	133.00	RRUS 11	3	9.387	10.325	0.54	0.80	4.05	152.10	0.000	0.000	41.84	0.00	0.00
26	133.00	800 10798	3	9.387	10.325	0.60	0.80	15.56	244.20	0.000	0.000	160.63	0.00	0.00
27	133.00	Low Profile Platform	1	9.387	10.325	1.00	1.00	22.00	1350.00	0.000	0.000	227.16	0.00	0.00
28	133.00	DTMABP7819VG12A	3	9.387	10.325	0.40	0.80	1.37	57.00	0.000	0.000	14.13	0.00	0.00
29	133.00	RRUS 32	3	9.387	10.325	0.80	0.80	3.96	231.00	0.000	0.000	40.89	0.00	0.00
30	133.00	DC6-48-60-18-8F	2	9.387	10.325	0.80	0.80	2.35	65.60	0.000	0.000	24.29	0.00	0.00
31	110.00	3 ft Standoff	1	8.891	9.780	1.00	1.00	2.63	40.00	0.000	0.000	25.72	0.00	0.00
32	110.00	DB222	1	9.011	9.912	1.00	1.00	2.25	16.00	0.000	5.292	22.30	0.00	118.02
33	40.00	GPS	1	6.659	7.325	1.00	1.00	1.00	10.00	0.000	0.000	7.33	0.00	0.00
Totals:								9,624.40				3,950.64		

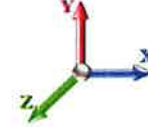
Total Applied Force Summary

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 60
	Struct Class: II	



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		177.40	1268.50	0.00	0.00
10.00		175.43	1248.57	0.00	0.00
15.00		173.45	1228.64	0.00	0.00
16.00		34.45	243.34	0.00	0.00
16.25		8.74	109.63	0.00	0.00
18.00		61.03	764.60	0.00	0.00
19.50		52.12	651.49	0.00	0.00
20.00		17.33	216.37	0.00	0.00
22.00		69.14	861.48	0.00	0.00
25.00		102.38	720.13	0.00	0.00
30.00		169.20	1184.27	0.00	0.00
31.00		33.92	234.46	0.00	0.00
34.00		95.24	698.60	0.00	0.00
35.00		30.38	231.27	0.00	0.00
35.50		15.22	115.34	0.00	0.00
40.00	(1) attachments	148.09	1039.07	0.00	0.00
45.00		159.65	1123.68	0.00	0.00
45.16		5.08	35.63	0.00	0.00
46.00		26.76	186.72	0.00	0.00
50.00		129.61	881.41	0.00	0.00
55.00		167.38	1932.61	0.00	0.00
56.00		33.37	381.74	0.00	0.00
58.00		66.63	432.52	0.00	0.00
60.00		66.89	429.33	0.00	0.00
65.00		169.38	1059.38	0.00	0.00
70.00		170.49	1039.45	0.00	0.00
75.00		171.31	1019.52	0.00	0.00
78.00		102.70	602.15	0.00	0.00
80.00		68.44	397.45	0.00	0.00
85.00		172.23	859.20	0.00	0.00
90.00		172.36	842.60	0.00	0.00
95.00		172.29	825.99	0.00	0.00
95.58		20.21	161.67	0.00	0.00
100.00		148.77	1217.35	0.00	0.00
105.00		158.38	803.48	0.00	0.00
110.00	(2) attachments	205.66	842.87	0.00	118.02
115.00		156.75	767.66	0.00	0.00
120.00		155.73	651.27	0.00	0.00
125.00		154.59	637.99	0.00	0.00
130.00		153.32	624.70	0.00	0.00
133.00	(24) attachments	768.28	2844.84	0.00	0.00
135.00		60.41	219.13	0.00	0.00
140.00		150.47	538.53	0.00	0.00
142.90	(16) attachments	1194.30	3433.36	0.00	183.69
145.00		47.12	190.65	0.00	0.00
148.30	(23) attachments	715.70	2360.06	0.00	1410.83

Total Applied Force Summary

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 61



150.00		21.41	140.53	0.00	0.00
155.00		46.38	312.16	0.00	0.00
160.00	(22) attachments	<u>1492.57</u>	<u>2196.66</u>	<u>0.00</u>	<u>2891.52</u>
	Totals:	8,868.12	40,808.05	0.00	4,604.06

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

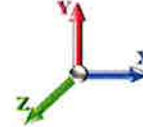


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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00

Iterations 23



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.174	1.223	6.129	0.00	5.50
5.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.174	1.223	6.129	0.00	2.60
5.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.174	1.223	6.129	0.00	5.50
5.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.174	1.223	6.129	0.00	4.77
5.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.174	1.223	6.129	0.00	2.60
5.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.174	1.223	6.129	0.00	0.00
5.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.174	1.223	6.129	0.00	0.00
10.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.178	1.233	6.129	0.00	5.50
10.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.233	6.129	0.00	2.60
10.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.178	1.233	6.129	0.00	5.50
10.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.178	1.233	6.129	0.00	4.77
10.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.233	6.129	0.00	2.60
10.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.178	1.233	6.129	0.00	0.00
10.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.178	1.233	6.129	0.00	0.00
15.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.181	1.244	6.129	0.00	5.50
15.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.181	1.244	6.129	0.00	2.60
15.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.181	1.244	6.129	0.00	5.50
15.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.181	1.244	6.129	0.00	4.77
15.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.181	1.244	6.129	0.00	2.60
15.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.181	1.244	6.129	0.00	0.00
15.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.181	1.244	6.129	0.00	0.00
16.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.184	1.251	6.129	0.00	1.10
16.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.184	1.251	6.129	0.00	0.52
16.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.184	1.251	6.129	0.00	1.10
16.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.184	1.251	6.129	0.00	0.95
16.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.184	1.251	6.129	0.00	0.52
16.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.184	1.251	6.129	0.00	0.00
16.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.21	0.00	0.184	1.251	6.129	0.00	0.00
16.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.184	1.252	6.129	0.00	0.28
16.25	7/8" Coax	Yes	0.25	0.000	0.00	0.00	0.00	0.184	1.252	6.129	0.00	0.13
16.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.184	1.252	6.129	0.00	0.28
16.25	1-1/4" Hybrid	Yes	0.25	0.000	1.25	0.03	0.00	0.184	1.252	6.129	0.00	0.24
16.25	7/8" Coax	Yes	0.25	0.000	0.00	0.00	0.00	0.184	1.252	6.129	0.00	0.13
16.25	1.25" Reinforcing	Yes	0.25	0.000	1.25	0.03	0.00	0.184	1.252	6.129	0.00	0.00
16.25	1.25" Reinforcing	Yes	0.25	0.000	2.50	0.05	0.00	0.184	1.252	6.129	0.00	0.00
18.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.185	1.254	6.129	0.00	1.93
18.00	7/8" Coax	Yes	1.75	0.000	0.00	0.00	0.00	0.185	1.254	6.129	0.00	0.91
18.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.185	1.254	6.129	0.00	1.93
18.00	1-1/4" Hybrid	Yes	1.75	0.000	1.25	0.18	0.00	0.185	1.254	6.129	0.00	1.67
18.00	7/8" Coax	Yes	1.75	0.000	0.00	0.00	0.00	0.185	1.254	6.129	0.00	0.91
18.00	1.25" Reinforcing	Yes	1.75	0.000	1.25	0.18	0.00	0.185	1.254	6.129	0.00	0.00
18.00	1.25" Reinforcing	Yes	1.75	0.000	2.50	0.36	0.00	0.185	1.254	6.129	0.00	0.00
19.50	1 5/8" Hybrid	Yes	1.50	0.000	2.00	0.25	0.00	0.186	1.258	6.129	0.00	1.65
19.50	7/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.186	1.258	6.129	0.00	0.78
19.50	1 5/8" Hybrid	Yes	1.50	0.000	2.00	0.25	0.00	0.186	1.258	6.129	0.00	1.65
19.50	1-1/4" Hybrid	Yes	1.50	0.000	1.25	0.16	0.00	0.186	1.258	6.129	0.00	1.43
19.50	7/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.186	1.258	6.129	0.00	0.78

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

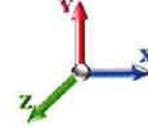


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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 23

Dead Load Factor 1.00
Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
19.50	1.25" Reinforcing	Yes	1.50	0.000	1.25	0.16	0.00	0.186	1.258	6.129	0.00	0.00
19.50	1.25" Reinforcing	Yes	1.50	0.000	2.50	0.31	0.00	0.186	1.258	6.129	0.00	0.00
20.00	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.187	1.260	6.129	0.00	0.55
20.00	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.187	1.260	6.129	0.00	0.26
20.00	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.187	1.260	6.129	0.00	0.55
20.00	1-1/4" Hybrid	Yes	0.50	0.000	1.25	0.05	0.00	0.187	1.260	6.129	0.00	0.48
20.00	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.187	1.260	6.129	0.00	0.26
20.00	1.25" Reinforcing	Yes	0.50	0.000	1.25	0.05	0.00	0.187	1.260	6.129	0.00	0.00
20.00	1.25" Reinforcing	Yes	0.50	0.000	2.50	0.10	0.00	0.187	1.260	6.129	0.00	0.00
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.188	1.263	6.129	0.00	2.20
22.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.188	1.263	6.129	0.00	1.04
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.188	1.263	6.129	0.00	2.20
22.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.188	1.263	6.129	0.00	1.91
22.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.188	1.263	6.129	0.00	1.04
22.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.188	1.263	6.129	0.00	0.00
22.00	1.25" Reinforcing	Yes	2.00	0.000	2.50	0.42	0.00	0.188	1.263	6.129	0.00	0.00
25.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.187	1.260	6.129	0.00	3.30
25.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.187	1.260	6.129	0.00	1.56
25.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.187	1.260	6.129	0.00	3.30
25.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.187	1.260	6.129	0.00	2.86
25.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.187	1.260	6.129	0.00	1.56
25.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.187	1.260	6.129	0.00	0.00
25.00	1.25" Reinforcing	Yes	3.00	0.000	2.50	0.63	0.00	0.187	1.260	6.129	0.00	0.00
30.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.190	1.270	6.134	0.00	5.50
30.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.190	1.270	6.134	0.00	2.60
30.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.190	1.270	6.134	0.00	5.50
30.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.190	1.270	6.134	0.00	4.77
30.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.190	1.270	6.134	0.00	2.60
30.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.190	1.270	6.134	0.00	0.00
30.00	1.25" Reinforcing	Yes	5.00	0.000	2.50	1.04	0.00	0.190	1.270	6.134	0.00	0.00
31.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.192	1.277	6.192	0.00	1.10
31.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.192	1.277	6.192	0.00	0.52
31.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.192	1.277	6.192	0.00	1.10
31.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.192	1.277	6.192	0.00	0.95
31.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.192	1.277	6.192	0.00	0.52
31.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.192	1.277	6.192	0.00	0.00
31.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.21	0.00	0.192	1.277	6.192	0.00	0.00
34.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.158	1.174	6.357	0.00	3.30
34.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.158	1.174	6.357	0.00	1.56
34.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.158	1.174	6.357	0.00	3.30
34.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.158	1.174	6.357	0.00	2.86
34.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.158	1.174	6.357	0.00	1.56
34.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.158	1.174	6.357	0.00	0.00
34.00	1.25" Reinforcing	Yes	1.00	0.000	2.50	0.21	0.00	0.158	1.174	6.357	0.00	0.00
35.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.141	1.124	6.410	0.00	1.10
35.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.141	1.124	6.410	0.00	0.52
35.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.141	1.124	6.410	0.00	1.10

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

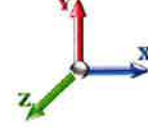
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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 23

Dead Load Factor 1.00
Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
35.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.141	1.124	6.410	0.00	0.95
35.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.141	1.124	6.410	0.00	0.52
35.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.141	1.124	6.410	0.00	0.00
35.50	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.142	1.125	6.436	0.00	0.55
35.50	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.142	1.125	6.436	0.00	0.26
35.50	1 5/8" Hybrid	Yes	0.50	0.000	2.00	0.08	0.00	0.142	1.125	6.436	0.00	0.55
35.50	1-1/4" Hybrid	Yes	0.50	0.000	1.25	0.05	0.00	0.142	1.125	6.436	0.00	0.48
35.50	7/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.142	1.125	6.436	0.00	0.26
35.50	1.25" Reinforcing	Yes	0.50	0.000	1.25	0.05	0.00	0.142	1.125	6.436	0.00	0.00
40.00	1 5/8" Hybrid	Yes	4.50	0.000	2.00	0.75	0.00	0.143	1.130	6.659	0.00	4.95
40.00	7/8" Coax	Yes	4.50	0.000	0.00	0.00	0.00	0.143	1.130	6.659	0.00	2.34
40.00	1 5/8" Hybrid	Yes	4.50	0.000	2.00	0.75	0.00	0.143	1.130	6.659	0.00	4.95
40.00	1-1/4" Hybrid	Yes	4.50	0.000	1.25	0.47	0.00	0.143	1.130	6.659	0.00	4.29
40.00	7/8" Coax	Yes	4.50	0.000	0.00	0.00	0.00	0.143	1.130	6.659	0.00	2.34
40.00	1.25" Reinforcing	Yes	4.50	0.000	1.25	0.47	0.00	0.143	1.130	6.659	0.00	0.00
45.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.146	1.139	6.887	0.00	5.50
45.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.146	1.139	6.887	0.00	2.60
45.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.146	1.139	6.887	0.00	5.50
45.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.146	1.139	6.887	0.00	4.77
45.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.146	1.139	6.887	0.00	2.60
45.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.146	1.139	6.887	0.00	0.00
45.16	1 5/8" Hybrid	Yes	0.16	0.000	2.00	0.03	0.00	0.148	1.144	6.894	0.00	0.18
45.16	7/8" Coax	Yes	0.16	0.000	0.00	0.00	0.00	0.148	1.144	6.894	0.00	0.08
45.16	1 5/8" Hybrid	Yes	0.16	0.000	2.00	0.03	0.00	0.148	1.144	6.894	0.00	0.18
45.16	1-1/4" Hybrid	Yes	0.16	0.000	1.25	0.02	0.00	0.148	1.144	6.894	0.00	0.15
45.16	7/8" Coax	Yes	0.16	0.000	0.00	0.00	0.00	0.148	1.144	6.894	0.00	0.08
45.16	1.25" Reinforcing	Yes	0.16	0.000	1.25	0.02	0.00	0.148	1.144	6.894	0.00	0.00
46.00	1 5/8" Hybrid	Yes	0.84	0.000	2.00	0.14	0.00	0.148	1.145	6.931	0.00	0.92
46.00	7/8" Coax	Yes	0.84	0.000	0.00	0.00	0.00	0.148	1.145	6.931	0.00	0.44
46.00	1 5/8" Hybrid	Yes	0.84	0.000	2.00	0.14	0.00	0.148	1.145	6.931	0.00	0.92
46.00	1-1/4" Hybrid	Yes	0.84	0.000	1.25	0.09	0.00	0.148	1.145	6.931	0.00	0.80
46.00	7/8" Coax	Yes	0.84	0.000	0.00	0.00	0.00	0.148	1.145	6.931	0.00	0.44
46.00	1.25" Reinforcing	Yes	0.84	0.000	1.25	0.09	0.00	0.148	1.145	6.931	0.00	0.00
50.00	1 5/8" Hybrid	Yes	4.00	0.000	2.00	0.67	0.00	0.150	1.150	7.098	0.00	4.40
50.00	7/8" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.150	1.150	7.098	0.00	2.08
50.00	1 5/8" Hybrid	Yes	4.00	0.000	2.00	0.67	0.00	0.150	1.150	7.098	0.00	4.40
50.00	1-1/4" Hybrid	Yes	4.00	0.000	1.25	0.42	0.00	0.150	1.150	7.098	0.00	3.82
50.00	7/8" Coax	Yes	4.00	0.000	0.00	0.00	0.00	0.150	1.150	7.098	0.00	2.08
50.00	1.25" Reinforcing	Yes	4.00	0.000	1.25	0.42	0.00	0.150	1.150	7.098	0.00	0.00
55.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.153	1.160	7.294	0.00	5.50
55.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.153	1.160	7.294	0.00	2.60
55.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.153	1.160	7.294	0.00	5.50
55.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.153	1.160	7.294	0.00	4.77
55.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.153	1.160	7.294	0.00	2.60
55.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.153	1.160	7.294	0.00	0.00
56.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.156	1.167	7.331	0.00	1.10
56.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.156	1.167	7.331	0.00	0.52

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

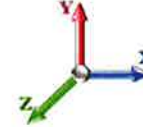
Page: 65



Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 23

Dead Load Factor 1.00
Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
56.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.156	1.167	7.331	0.00	1.10
56.00	1-1/4" Hybrid	Yes	1.00	0.000	1.25	0.10	0.00	0.156	1.167	7.331	0.00	0.95
56.00	7/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.156	1.167	7.331	0.00	0.52
56.00	1.25" Reinforcing	Yes	1.00	0.000	1.25	0.10	0.00	0.156	1.167	7.331	0.00	0.00
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.154	1.161	7.405	0.00	2.20
58.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.154	1.161	7.405	0.00	1.04
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.154	1.161	7.405	0.00	2.20
58.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.154	1.161	7.405	0.00	1.91
58.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.154	1.161	7.405	0.00	1.04
58.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.154	1.161	7.405	0.00	0.00
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.155	1.166	7.477	0.00	2.20
60.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.155	1.166	7.477	0.00	1.04
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.155	1.166	7.477	0.00	2.20
60.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.155	1.166	7.477	0.00	1.91
60.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.155	1.166	7.477	0.00	1.04
60.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.155	1.166	7.477	0.00	0.00
65.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.158	1.174	7.650	0.00	5.50
65.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.158	1.174	7.650	0.00	2.60
65.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.158	1.174	7.650	0.00	5.50
65.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.158	1.174	7.650	0.00	4.77
65.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.158	1.174	7.650	0.00	2.60
65.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.158	1.174	7.650	0.00	0.00
70.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.162	1.186	7.814	0.00	5.50
70.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.162	1.186	7.814	0.00	2.60
70.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.162	1.186	7.814	0.00	5.50
70.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.162	1.186	7.814	0.00	4.77
70.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.162	1.186	7.814	0.00	2.60
70.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.162	1.186	7.814	0.00	0.00
75.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.166	1.198	7.969	0.00	5.50
75.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	7.969	0.00	2.60
75.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.166	1.198	7.969	0.00	5.50
75.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.166	1.198	7.969	0.00	4.77
75.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	7.969	0.00	2.60
75.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.166	1.198	7.969	0.00	0.00
78.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.170	1.209	8.059	0.00	3.30
78.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.170	1.209	8.059	0.00	1.56
78.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.170	1.209	8.059	0.00	3.30
78.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.170	1.209	8.059	0.00	2.86
78.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.170	1.209	8.059	0.00	1.56
78.00	1.25" Reinforcing	Yes	3.00	0.000	1.25	0.31	0.00	0.170	1.209	8.059	0.00	0.00
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.172	1.215	8.118	0.00	2.20
80.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.172	1.215	8.118	0.00	1.04
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.172	1.215	8.118	0.00	2.20
80.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.172	1.215	8.118	0.00	1.91
80.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.172	1.215	8.118	0.00	1.04
80.00	1.25" Reinforcing	Yes	2.00	0.000	1.25	0.21	0.00	0.172	1.215	8.118	0.00	0.00
85.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.175	1.225	8.260	0.00	5.50

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

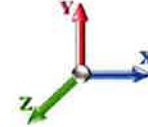
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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00

Iterations 23



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
85.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.175	1.225	8.260	0.00	2.60
85.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.175	1.225	8.260	0.00	5.50
85.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.175	1.225	8.260	0.00	4.77
85.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.175	1.225	8.260	0.00	2.60
85.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.175	1.225	8.260	0.00	0.00
90.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.180	1.240	8.396	0.00	5.50
90.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.180	1.240	8.396	0.00	2.60
90.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.180	1.240	8.396	0.00	5.50
90.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.180	1.240	8.396	0.00	4.77
90.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.180	1.240	8.396	0.00	2.60
90.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.180	1.240	8.396	0.00	0.00
95.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.185	1.255	8.526	0.00	5.50
95.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.185	1.255	8.526	0.00	2.60
95.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.185	1.255	8.526	0.00	5.50
95.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.185	1.255	8.526	0.00	4.77
95.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.185	1.255	8.526	0.00	2.60
95.00	1.25" Reinforcing	Yes	5.00	0.000	1.25	0.52	0.00	0.185	1.255	8.526	0.00	0.00
95.58	1 5/8" Hybrid	Yes	0.58	0.000	2.00	0.10	0.00	0.188	1.264	8.541	0.00	0.64
95.58	7/8" Coax	Yes	0.58	0.000	0.00	0.00	0.00	0.188	1.264	8.541	0.00	0.30
95.58	1 5/8" Hybrid	Yes	0.58	0.000	2.00	0.10	0.00	0.188	1.264	8.541	0.00	0.64
95.58	1-1/4" Hybrid	Yes	0.58	0.000	1.25	0.06	0.00	0.188	1.264	8.541	0.00	0.55
95.58	7/8" Coax	Yes	0.58	0.000	0.00	0.00	0.00	0.188	1.264	8.541	0.00	0.30
95.58	1.25" Reinforcing	Yes	0.58	0.000	1.25	0.06	0.00	0.188	1.264	8.541	0.00	0.00
100.00	1 5/8" Hybrid	Yes	4.42	0.000	2.00	0.74	0.00	0.174	1.223	8.652	0.00	4.86
100.00	7/8" Coax	Yes	4.42	0.000	0.00	0.00	0.00	0.174	1.223	8.652	0.00	2.30
100.00	1 5/8" Hybrid	Yes	4.42	0.000	2.00	0.74	0.00	0.174	1.223	8.652	0.00	4.86
100.00	1-1/4" Hybrid	Yes	4.42	0.000	1.25	0.46	0.00	0.174	1.223	8.652	0.00	4.22
100.00	7/8" Coax	Yes	4.42	0.000	0.00	0.00	0.00	0.174	1.223	8.652	0.00	2.30
100.00	1.25" Reinforcing	Yes	2.42	0.000	1.25	0.25	0.00	0.174	1.223	8.652	0.00	0.00
105.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.155	1.166	8.774	0.00	5.50
105.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	8.774	0.00	2.60
105.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.155	1.166	8.774	0.00	5.50
105.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.155	1.166	8.774	0.00	4.77
105.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	8.774	0.00	2.60
110.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.160	1.181	8.891	0.00	5.50
110.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.181	8.891	0.00	2.60
110.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.160	1.181	8.891	0.00	5.50
110.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.160	1.181	8.891	0.00	4.77
110.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.181	8.891	0.00	2.60
115.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.165	1.196	9.005	0.00	5.50
115.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.165	1.196	9.005	0.00	2.60
115.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.165	1.196	9.005	0.00	5.50
115.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.165	1.196	9.005	0.00	4.77
120.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.171	1.212	9.115	0.00	5.50
120.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.171	1.212	9.115	0.00	2.60
120.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.171	1.212	9.115	0.00	5.50
120.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.171	1.212	9.115	0.00	4.77

Linear Appurtenance Segment Forces (Factored)

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

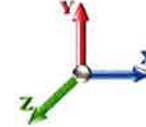
6/9/2017

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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
125.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.176	1.229	9.222	0.00	5.50
125.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.176	1.229	9.222	0.00	2.60
125.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.176	1.229	9.222	0.00	5.50
125.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.176	1.229	9.222	0.00	4.77
130.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.183	1.248	9.326	0.00	5.50
130.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.183	1.248	9.326	0.00	2.60
130.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.183	1.248	9.326	0.00	5.50
130.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.183	1.248	9.326	0.00	4.77
133.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.188	1.264	9.387	0.00	3.30
133.00	7/8" Coax	Yes	3.00	0.000	0.00	0.00	0.00	0.188	1.264	9.387	0.00	1.56
133.00	1 5/8" Hybrid	Yes	3.00	0.000	2.00	0.50	0.00	0.188	1.264	9.387	0.00	3.30
133.00	1-1/4" Hybrid	Yes	3.00	0.000	1.25	0.31	0.00	0.188	1.264	9.387	0.00	2.86
135.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.191	1.274	9.427	0.00	2.20
135.00	7/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.191	1.274	9.427	0.00	1.04
135.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.191	1.274	9.427	0.00	2.20
135.00	1-1/4" Hybrid	Yes	2.00	0.000	1.25	0.21	0.00	0.191	1.274	9.427	0.00	1.91
140.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.196	1.289	9.525	0.00	5.50
140.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.196	1.289	9.525	0.00	2.60
140.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.196	1.289	9.525	0.00	5.50
140.00	1-1/4" Hybrid	Yes	5.00	0.000	1.25	0.52	0.00	0.196	1.289	9.525	0.00	4.77
142.90	1 5/8" Hybrid	Yes	2.90	1.200	2.00	0.48	0.58	0.202	0.000	9.581	6.11	3.19
142.90	7/8" Coax	Yes	2.90	0.000	0.00	0.00	0.00	0.202	0.000	9.581	0.00	1.51
142.90	1 5/8" Hybrid	Yes	2.90	1.200	2.00	0.48	0.58	0.202	0.000	9.581	6.11	3.19
142.90	1-1/4" Hybrid	Yes	2.90	1.200	1.25	0.30	0.36	0.202	0.000	9.581	3.82	2.77
145.00	1 5/8" Hybrid	Yes	2.10	0.000	2.00	0.35	0.00	0.079	0.000	9.621	0.00	2.31
145.00	7/8" Coax	Yes	2.10	0.000	0.00	0.00	0.00	0.079	0.000	9.621	0.00	1.09
148.30	1 5/8" Hybrid	Yes	3.30	0.000	2.00	0.55	0.00	0.083	0.000	9.683	0.00	3.63
148.30	7/8" Coax	Yes	3.30	0.000	0.00	0.00	0.00	0.083	0.000	9.683	0.00	1.72
150.00	1 5/8" Hybrid	Yes	1.70	0.000	2.00	0.28	0.00	0.085	0.000	9.715	0.00	1.87
150.00	7/8" Coax	Yes	1.70	0.000	0.00	0.00	0.00	0.085	0.000	9.715	0.00	0.88
155.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.125	1.075	9.806	0.00	5.50
155.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.125	1.075	9.806	0.00	2.60
160.00	1 5/8" Hybrid	Yes	5.00	0.000	2.00	0.83	0.00	0.125	1.075	9.896	0.00	5.50
160.00	7/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	0.125	1.075	9.896	0.00	2.60
Totals:											16.0	609.9

Calculated Forces

Structure: CT02049-S-SBA	Code: EIA/TIA-222-G	6/9/2017
Site Name: Beacon Falls	Exposure: B	
Height: 160.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 69
	Struct Class: II	



145.00	-4.95	-2.41	0.00	-30.82	0.00	30.82	1372.92	686.46	1363.70	673.48	22.25	-1.523	0.000	0.049
145.00	-4.95	-2.41	0.00	-30.82	0.00	30.82	931.20	465.60	925.89	604.09	22.25	-1.523	0.000	0.056
148.30	-2.61	-1.63	0.00	-21.46	0.00	21.46	911.53	455.77	882.04	573.63	23.31	-1.540	0.000	0.040
150.00	-2.47	-1.61	0.00	-18.69	0.00	18.69	901.40	450.70	859.86	558.24	23.86	-1.548	0.000	0.036
150.00	-2.47	-1.61	0.00	-18.69	0.00	18.69	556.65	278.33	359.38	213.69	23.86	-1.548	0.000	0.092
155.00	-2.15	-1.55	0.00	-10.65	0.00	10.65	556.65	278.33	359.38	213.69	25.49	-1.565	0.000	0.054
160.00	0.00	-1.49	0.00	-2.89	0.00	2.89	556.65	278.33	359.38	213.69	27.15	-1.590	0.000	0.014

Final Analysis Summary

Structure: CT02049-S-SBA
Site Name: Beacon Falls
Height: 160.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

6/9/2017

Page: 70



Reactions

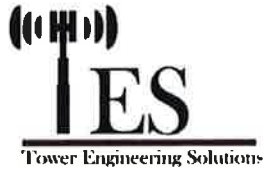
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	37.2	0.00	48.90	0.00	0.00	4181.45
0.9D + 1.6W 97 mph Wind	37.2	0.00	36.66	0.00	0.00	4136.56
1.2D + 1.0Di + 1.0Wi 50 mph Wind	8.6	0.00	78.46	0.00	0.00	1031.43
1.2D + 1.0E	2.0	0.00	48.97	0.00	0.00	243.88
0.9D + 1.0E	2.0	0.00	36.73	0.00	0.00	240.94
1.0D + 1.0W 60 mph Wind	8.9	0.00	40.80	0.00	0.00	994.28

Max Stresses

Load Case	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)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-43.61	-35.25	0.00	-3588.3	0.00	-3588.3	3576.63	1788.3	6916.25	3415.68	16.25	0.830
0.9D + 1.6W 97 mph Wind	-32.61	-35.11	0.00	-3544.5	0.00	-3544.5	3576.63	1788.3	6916.25	3415.68	16.25	0.817
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.65	-8.30	0.00	-893.25	0.00	-893.25	3576.63	1788.3	6916.25	3415.68	16.25	0.220
1.2D + 1.0E	-16.97	-1.50	0.00	-52.62	0.00	-52.62	2132.70	1066.3	2623.78	1295.79	115.00	0.066
0.9D + 1.0E	-12.73	-1.47	0.00	-51.79	0.00	-51.79	2132.70	1066.3	2623.78	1295.79	115.00	0.063
1.0D + 1.0W 60 mph Wind	-36.68	-8.41	0.00	-852.62	0.00	-852.62	3576.63	1788.3	6916.25	3415.68	16.25	0.203

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Lower Termination				Upper Termination				Max Member			
			VQ/I (lb/in)	Vu (kips)	phi Vn (kips)	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
0.0	16.3	(3) PLT-C10x30(1.5" Hole)	-322.3	-6.45	37.1	409.2	37.1	12	0	393.8	37.1			409.17	505.1	468.64	0.873
16.3	31.0	(3) PLT-C10x15.3(1.5" Hole)	-322.3	-6.45	37.1	244.9	37.1			140.6	37.1	4	0	244.90	257.8	247.80	0.988
18.0	34.0	(2) LNP-LP6X100-G-20TT	205.1	4.92	25.3	244.9	25.3	10	10	204.3	25.3	9	10	244.87	297.8	292.50	0.837
19.5	35.5	(1) LNP-LP6X100-G-20TT	-205.1	-4.92	25.3	243.2	25.3	10	10	203.5	25.3	9	10	243.25	297.8	292.50	0.832
30.0	46.0	(3) PLT-6"X1-1/4"(1.25" Hole)	309.7	5.57	37.1	225.0	37.1	7	8	221.1	37.1	6	8	320.05	413.6	356.25	0.898
45.2	58.0	(3) PLT-7" x 1.25"(1.25"Hole)	-358.3	-4.30	37.1	259.1	37.1	7	13	306.6	37.1			336.57	498.6	431.25	0.780
58.0	78.0	(3) PLT-5.5"x1 1/4"(1.25"hol)	-348.4	-6.27	37.1	261.7	37.1			228.7	37.1			261.69	379.1	318.75	0.821
78.0	95.6	(3) PLT-5.5"x1 1/4"(1.25"hol)	-385.2	-6.93	37.1	228.7	37.1			215.0	37.1	6	10	240.66	379.1	318.75	0.755



Monopole Mat Foundation Design

Date
6/9/2017

Customer Name:	Verizon	EIA/TIA Standard:	EIA-222-G
Site Name:	Beacon Falls	Structure Height (Ft.):	160
Site Number:	CT02049-S-SBA	Engineer Name:	J. Tibbetts
Engr. Number:	34922	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Monopole

Analysis or Design?

Analysis

Base Reactions (Factored):

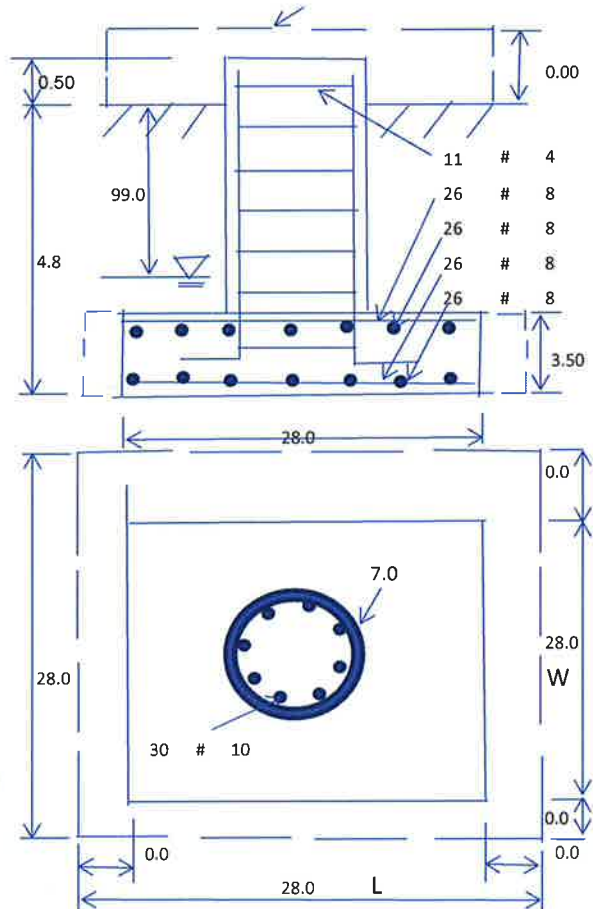
Axial Load (Kips):	48.9	Shear Force (Kips):	37.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4181.4

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	4.8
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	3.50
Length of Pad (ft.):	28	Width of Pad (ft.):	28
Final Length of pad (ft)	28.0	Final width of pad (ft):	28.0
Control Value for Cell D18:	0	Control Value for Cell F18:	0

Material Properties and Rebar Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	10	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	30	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	26	Qty. of Rebar in Pad (W):	26	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	26	Qty. of Rebar in Pad (W):	26	



Soil Design Parameters:

Soil Unit Weight (pcf):	115.0	Soil Buoyant Weight:	50.0	Pcf	
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad: 30
Ultimate Bearing Pressure (psf):	6000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad: 25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad: 25
Consider soil hori. force for O.T.M.:	No	Reduction factor on the maximum soil bearing pressure:	1.00		

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	931.89	Total Dry Soil Weight (Kips):	107.17
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	107.17	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2811.35	Total Dry Concrete Weight (Kips):	421.70
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	421.70	Total Vertical Load on Base (Kips):	577.77

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	2239	<	Allowable Factored Soil Bearing (psf):	4500	0.50	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	7348.4	>	Design Factored Momont (kips-ft):	4377	0.60	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.68					OK!

Load/
Capacity
Ratio

Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00

Load/
Capacity
Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	1.27	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn, Kips-Ft):	6439.6	> Design Factored Moment (Mu, Kips-Ft)	4246.5	0.66	OK!
Calculated Shear Capacity (Kips):	724.1	> Design Factored Shear (Kips):	37.2	0.05	OK!
Calculated Tension Capacity (Tn, Kips):	2057.4	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7297.9	> Design Factored Axial Load (Pu Kips):	48.9	0.01	OK!
Moment & Axial Strength Combination (Pu/Pn+Mu/Mn):	0.67	OK! Check Tie Spacing (Design/Required):		0.5	OK!
Pier Reinforcement Ratio:	0.007	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1062.8	> One-Way Factored Shear (L-D. Kips):	251.7	0.24	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1062.8	> One-Way Factored Shear (W-D., Kips)	251.7	0.24	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1237.3	> One-Way Factored Shear (C-C, Kips):	427.2	0.35	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0016	OK! Lower Steel Pad Reinf. Ratio (W-Direct	0.0016		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	3492.1	> Moment at Bottom (L-Direct. K-Ft):	917.5	0.26	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	3492.1	> Moment at Bottom (W-Direct. K-Ft):	917.5	0.26	OK!
Lower Steel Pad Moment Capacity (Corner-Corner, K-ft):	4918.4	> Moment at Bottom (C-C Dir. K-Ft):	1297.6	0.26	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0016	OK! Upper Steel Reinf. Ratio (W-Direct.):	0.0016		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	3492.1	> Moment at the top (L-Dir Kips-Ft):	513.7	0.15	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	3492.1	> Moment at the top (W-Dir Kips-Ft):	513.7	0.15	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	4918.4	> Moment at the top (C-C Direc. K-Ft):	574.9	0.12	OK!

ATTACHMENT 4



Property Information

Owner	EDWARDS CHARLES
Address	60 RICE LN
Mailing Address	30 LORRAINE DRIVE BEACON FALLS , CT 06403
Land Use	- 11
Land Class	3411

Census Tract	3411
Neighborhood	5
Zoning	
Acreage	49.76
Utilities	
Lot Setting/ Desc	/

Photo

No Photo Available

PARCEL VALUATIONS (Assessed value = 70% of Appraised Value)

	Appraised	Assessed
Buildings	0	0
Outbuildings		
Improvements		
Extras		
Land	259360	48160
Total	259360	181552
Previous		

Construction Details

Year Built	0
Stories	
Building Style	
Building Use	
Building Condition	
Total Rooms	
Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

EXTERIOR WALLS:

Primary	Wood Clapboards
Secondary	

INTERIOR WALLS:

Primary	Drywall
Secondary	

FLOORS:

Primary	Hardwood
Secondary	

HEATING/AC:

Heating Type	
Heating Fuel	
AC Type	

BUILDING AREA:

Effective Building Area	
Gross Building Area	
Total Living Area	0

SALES HISTORY:

Sale Date	8/29/2002
Sale Price	0
Book/ Page	/