

May 31, 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
49 Brainerd Road, Niantic (East Lyme), Connecticut**

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains twelve (12) antennas at the 147-foot level of the existing 169-foot tower at 49 Brainerd Road in Niantic, Connecticut (the “Property”). The tower is owned by SBA. Cellco’s shared use of this tower was approved by the Council in 2011 (Docket No. 396). Cellco now intends to modify its facility by replacing three (3) of its existing remote radio heads (“RRHs”) with three (3) new model RRHs, behind its 2100 MHz antennas. Included in Attachment 1 are specifications for Cellco’s replacement 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 Mark C. Nickerson, First Selectman for the Town of East Lyme; Gary Goeschel II, East Lyme’s Director of Planning; Christopher Samuelsen, the owner of the Property; and SBA, the tower owner.

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

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco’s replacement RRHs will be installed at the 147-foot level of the 169-foot tower.

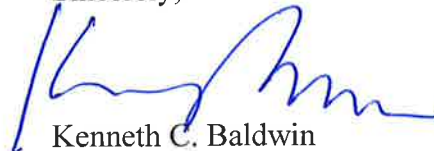
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2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels 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 General Power Density table for Cellco's modified facility is included in Attachment 2.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support Cellco's proposed modifications. (See Structural Analysis Report included in Attachment 3).

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

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

Sincerely,



Kenneth C. Baldwin

Enclosures

Copy to:

Mark C. Nickerson, East Lyme First Selectman
Gary Goeschel II, East Lyme Director of Planning
Christopher Samuelson
SBA
Tim Parks

ATTACHMENT 1

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.

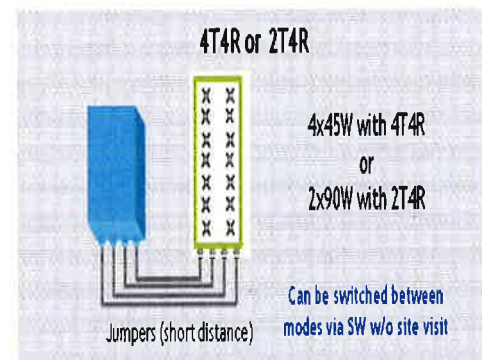
Its compactness and slim design makes the Alcatel-Lucent B66a RRH4x45 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the 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: Rocky Neck (East Lyme) Tower Height: 169ft	General	Power	Density									
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total				
*AT&T	1	500	168.5	1900	0.0068	1.0000	0.07%					
*AT&T	1	500	168.5	700	0.0068	0.4667	0.15%					
*AT&T	1	500	168.5	2300	0.0068	1.0000	0.07%					
*AT&T	2	500	168.5	880	0.0136	0.5867	0.23%					
*AT&T	1	500	168.5	1900	0.0068	1.0000	0.07%					
*T-Mobile	2	12	160	1950	0.0004	1.0000	0.00%					
*T-Mobile	2	12	160	2100	0.0004	1.0000	0.00%					
*T-Mobile	2	24	160	2100	0.0007	1.0000	0.01%					
Verizon PCS	0	452	147	0.0000	1970	1.0000	0.00%					
Verizon Cellular	9	342	147	0.0512	869	0.5793	8.84%					
Verizon AWS	1	7469	147	0.1243	2145	1.0000	12.43%					
Verizon 700	1	1641	147	0.0273	746	0.4973	5.49%					27.36%
* 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 169 ft. SABRE Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT11794-S-03

Customer Site Name: East Lyme 1

Carrier Name: Verizon

Carrier Site ID / Name: 117764 / Rocky Neck CT

Site Location: 49 Brainerd Road

Niantic, Connecticut

New Haven County

Latitude: 41.307583

Longitude: -72.223916

Analysis Result:

Max Structural Usage: 70.4% [Pass]

Max Foundation Usage: 53.0% [Pass]

Report Prepared By : Delu Zhou



Introduction

The purpose of this report is to summarize the analysis results on the 169 ft. SABRE 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	Sabre Towers & Poles, Job# 42498. Dated 04/06/2011
Foundation Drawing	Sabre Towers & Poles, Job# 42498. Dated 04/06/2011
Geotechnical Report	Tower Engineering Professionals, Project #: 103196.01. Dated 03/18/2011.
Modification Drawings	N/A

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:	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ 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:	D
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft.
Seismic Parameters:	$S_s = 0.161$, $S_1 = 0.058$

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	170.0	1	KMW - AM-X-CD-14-65-00T-RET - Panel	(3) Reinforced T-Arms	(6) 1-5/8" (1) 1.50" Fiber (6) 0.64" DC Power	AT&T
2		1	KMW - AM-X-CD-16-65-00T-RET - Panel			
3		1	Andrew - SBNH-1D6565C - Panel			
4		3	CCI DTMAPB7819VG12A TMAs			
5		6	Ericsson RRUS 11 RRUs			
6		6	Ericsson RRUS 12 RRUs			
7		3	CCI - HPA-65R-BBU-H8 - Panel			
8		3	Andrew - SBNHH-1D65A - Panel			
9		3	CCI - HPA-65R-BUU-H6 - Panel			
10		3	Ericsson RRUS-32 RRUs			
11		3	Ericsson RRUS-E2 RRUs			
12		6	Ericsson RRUS A2 Module			
13		3	Raycap DC6-48-60-18-8F DC - SP			
14	160.0	3	Ericsson - Air21 B2A/B4P - Panel	(3) T-Arms	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
15		3	Ericsson - Air21 B4A/B2P - Panel			
16		3	Commscope - LNX-6515DS-A1M - Panel			
17		3	Ericsson KRY 112-114/1 TMAs			
-	147.0	4	Swedcom SC-E 6014 rev2 - Panel	Low Profile Platform	(12) 1 5/8" (2) 1 5/8" Fiber	Verizon
-		6	Andrew SBNHH-1D65B - Panel			
-		2	Antel LPA-80080/4CF - Panel			
-		2	RFS DB-T1-6Z-8AB-OZ			
-		3	ALU 2X60-770 U RRH			
-		3	Alcatel 2x60-1900 RRH			
-		3	Alcatel RRH 2x60 AWS			
-		6	FD9R6004/2C-3L			

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
18	147.0	4	Swedcom SC-E 6014 rev2 - Panel	Low Profile Platform	(10) 1 5/8" (2) 1 5/8" Fiber	Verizon
19		6	Andrew SBNHH-1D65B - Panel			
20		2	Antel LPA-80080/4CF - Panel			
21		6	RFS FD9R6004/2C-3L - DP			
22		2	RFS DB-T1-6Z-8AB-OZ - RET			
23		3	Alcatel 2X60-770 U - RRH			
24		3	Alcatel 2x60-1900 - RRH			
25		3	Alcatel RRH 2x90 AWS - RRH			

All transmission lines are considered running inside of the pole shafts.

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
Max. Usage:	70.4%	68.7%	51.9%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4749.9	38.2	79.5

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 1.8597 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 70.44% at 0.0ft

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)

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

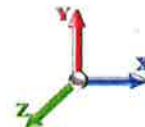
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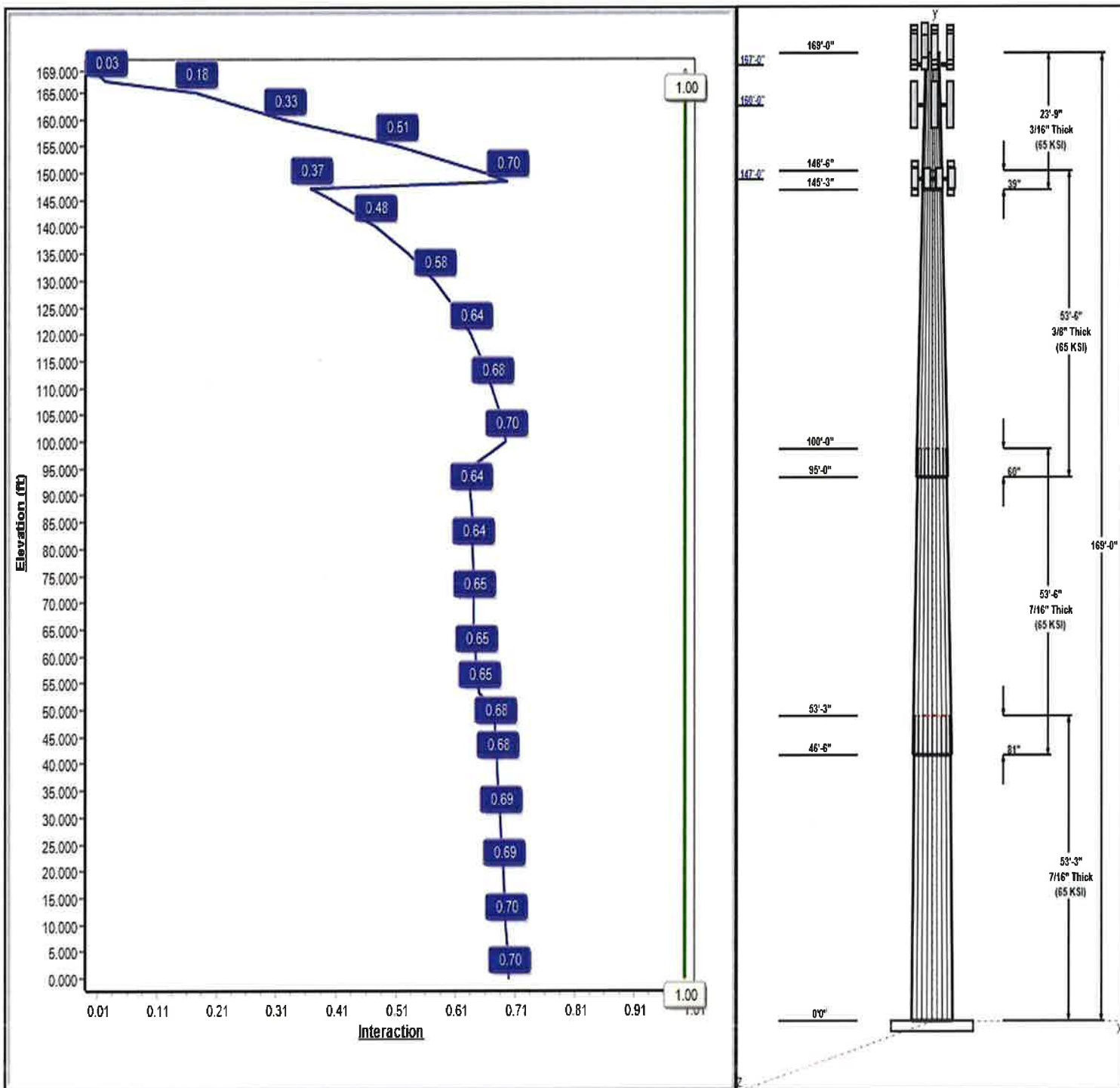
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 25

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Structure: CT11794-S-SBA

Type: Tapered
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.27302

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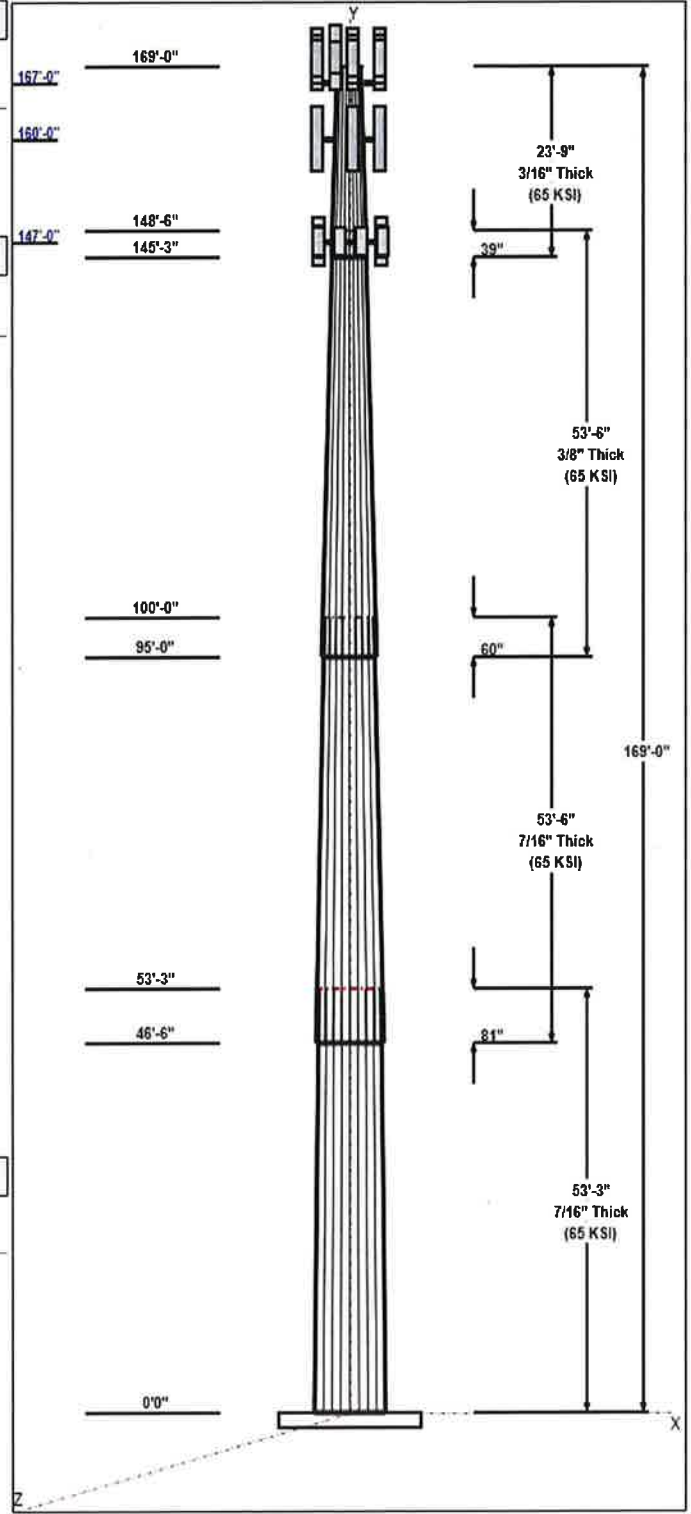


Shaft Properties							
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	45.60	60.14	0.438		0.27302	65
2	53.50	33.71	48.32	0.438	Slip	0.27302	65
3	53.50	21.22	35.83	0.375	Slip	0.27302	65
4	23.75	16.00	22.48	0.188	Slip	0.27302	65

Discrete Appurtenances				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
169.00	170.00	1	KMW	AT&T
169.00	170.00	1	Andrew SBNH-1D6565C	AT&T
169.00	170.00	3	CCI DTMABP7819VG12A	AT&T
169.00	170.00	6	Ericsson RRUS 11 RRUs	AT&T
169.00	170.00	1	AM-X-CD-16-65-00T-RET	AT&T
167.00	170.00	3	Raycap DC6-48-60-18-8F	AT&T
167.00	167.00	3	Reinforced T-Arms	AT&T
167.00	170.00	3	HPA-65R-BBU-H8	AT&T
167.00	170.00	3	HPA-65R-BUU-H6	AT&T
167.00	170.00	3	SBNHH-1D65A	AT&T
167.00	170.00	6	Ericsson RRUS-12 RRUs	AT&T
167.00	170.00	3	Ericsson RRUS 32 RRUs	AT&T
167.00	170.00	3	Ericsson RRUS-E2 RRUs	AT&T
167.00	170.00	6	Ericsson RRUS A2	AT&T
160.00	160.00	3	Ericsson KRY 112-114/1	T-Mobile
160.00	160.00	3	T-Arm	T-Mobile
160.00	160.00	3	Air21 B2A/B4P	T-Mobile
160.00	160.00	3	Air21 B4A/B2P	T-Mobile
160.00	160.00	3	LNx-6515DS-A1M	T-Mobile
147.00	147.00	3	Alcatel 2x60-1900 RRH	Verizon
147.00	147.00	3	RRH 2X90 AWS	Verizon
147.00	147.00	4	Swedcom SC-E 6014 rev2	Verizon
147.00	147.00	2	Antel LPA-80080/4CF	Verizon
147.00	147.00	6	Andrew SBNHH-1D65B	Verizon
147.00	147.00	3	ALU 2X60-770 U RRH	Verizon
147.00	147.00	6	FD9R6004/2C-3L	Verizon
147.00	147.00	2	RFS DB-T1-6Z-8AB-0Z	Verizon
147.00	147.00	1	Low Profile Platform	Verizon

Linear Appurtenances				
Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	170.00	Inside	0.64" DC Power	AT&T
0.00	170.00	Inside	1 5/8" Coax	AT&T
0.00	170.00	Inside	1.5" Fiber	AT&T
0.00	169.00	Outside	Safety Cable	
0.00	169.00	Outside	Step bolts (ladder)	
0.00	160.00	Inside	1 5/8" Coax	T-Mobile
0.00	160.00	Inside	1 5/8" Fiber	T-Mobile
0.00	147.00	Inside	1 5/8" Coax	Verizon
0.00	147.00	Inside	1 5/8" Fiber	Verizon

Anchor Bolts			
Qty	Specifications	Grade (ksi)	Arrangement
20	2.25" 18J	75.0	Radial



Structure: CT11794-S-SBA

Type: Tapered
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.27302

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Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	72.8	50.0	Round

Reactions

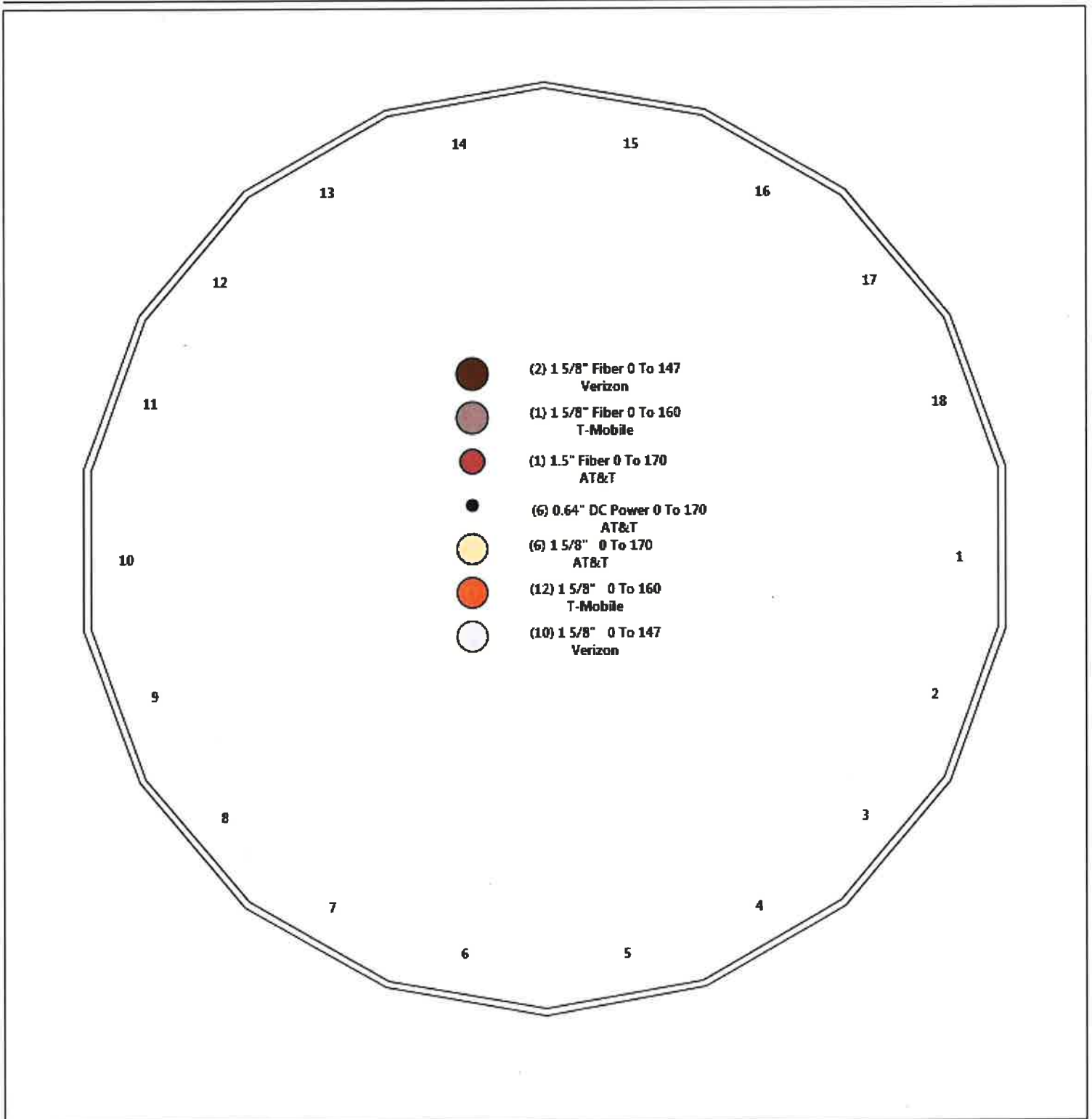
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	4749.9	38.2	52.4
0.9D + 1.6W 97 mph Wind	4697.1	38.2	39.3
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1300.2	10.7	79.5
1.2D + 1.0E	241.2	1.8	52.5
0.9D + 1.0E	238.2	1.8	39.4
1.0D + 1.0W 60 mph Wind	1130.2	9.1	43.7

Structure: CT11794-S-SBA - Coax Line Placement

Type: Monopole
Site Name: East Lyme 1
Height: 169.00 (ft)

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Shaft Properties

Structure: CT11794-S-SBA

Site Name: East Lyme 1

Height: 169.00 (ft)

Base Elev: 0.000 (ft)

Gh: 1.1

Code: EIA/TIA-222-G

Exposure: D

Crest Height: 0.00

Site Class: D - Stiff Soil

Struct Class: II

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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	53.250	0.4375	65		0.00	13,193
2	18	53.500	0.4375	65	Slip	81.00	10,258
3	18	53.500	0.3750	65	Slip	60.00	6,099
4	18	23.750	0.1875	65	Slip	39.00	916
Total Shaft Weight:							30,466

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	60.14	0.00	82.90	37333.61	22.83	137.46	45.60	53.25	62.71	16162.5	16.97	104.2	0.273018
2	48.32	46.50	66.49	19259.46	18.06	110.44	33.71	100.00	46.21	6464.05	12.18	77.06	0.273018
3	35.83	95.00	42.20	6701.10	15.44	95.54	21.22	148.50	24.81	1362.38	8.57	56.59	0.273018
4	22.48	145.2	13.27	833.42	19.73	119.92	16.00	169.00	9.41	297.27	13.64	85.33	0.273018

Load Summary

Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (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	169.00	KMW AM-X-CD-14-65-00T-RET	1	36.40	5.00	0.75	149.26	6.897	0.75	0.00	1.00
2	169.00	Andrew SBNH-1D6565C	1	60.80	11.47	0.80	274.79	14.760	0.80	0.00	1.00
3	169.00	CCI DTMABP7819VG12A TMAs	3	19.18	1.14	0.67	44.98	1.919	0.67	0.00	1.00
4	169.00	Ericsson RRUS 11 RRUs	6	55.00	2.52	0.67	142.49	3.475	0.67	0.00	1.00
5	169.00	AM-X-CD-16-65-00T-RET	1	48.50	8.02	0.75	212.72	10.847	0.75	0.00	1.00
6	167.00	Raycap DC6-48-60-18-8F	3	32.80	1.47	0.67	95.29	2.177	0.67	0.00	3.00
7	167.00	Reinforced T-Arms	3	450.00	14.00	0.75	767.53	26.348	0.75	0.00	0.00
8	167.00	HPA-65R-BBU-H8	3	68.00	12.98	0.79	362.71	14.614	0.79	0.00	3.00
9	167.00	HPA-65R-BUU-H6	3	51.00	9.66	0.85	302.23	11.042	0.85	0.00	3.00
10	167.00	SBNHH-1D65A	3	33.50	5.88	0.83	193.92	6.973	0.83	0.00	3.00
11	167.00	Ericsson RRUS-12 RRUs	6	58.00	3.15	0.62	154.65	3.873	0.62	0.00	3.00
12	167.00	Ericsson RRUS 32 RRUs	3	77.00	3.87	0.67	192.07	4.115	0.67	0.00	3.00
13	167.00	Ericsson RRUS-E2 RRUs	3	60.00	3.87	0.67	156.65	3.873	0.67	0.00	3.00
14	167.00	Ericsson RRUS A2	6	22.00	1.86	0.62	59.88	2.844	0.62	0.00	3.00
15	160.00	Ericsson KRY 112-114/1 TMAs	3	11.00	0.41	0.70	21.85	0.888	0.70	0.00	0.00
16	160.00	T-Arm	3	400.00	10.00	0.75	681.04	18.783	0.75	0.00	0.00
17	160.00	Air21 B2A/B4P	3	91.50	6.09	0.86	259.85	7.136	0.86	0.00	0.00
18	160.00	Air21 B4A/B2P	3	90.30	6.09	0.86	829.39	7.136	0.86	0.00	0.00
19	160.00	LNx-6515DS-A1M	3	50.30	11.47	0.80	283.66	14.758	0.80	0.00	0.00
20	147.00	Alcatel 2x60-1900 RRH	3	40.00	1.51	0.67	106.97	2.465	0.67	0.00	0.00
21	147.00	RRH 2X90 AWS	3	64.00	3.50	0.67	156.92	4.288	0.67	0.00	0.00
22	147.00	Swedcom SC-E 6014 rev2	4	15.00	3.33	0.97	109.59	4.996	0.97	0.00	0.00
23	147.00	Antel LPA-80080/4CF	2	12.00	2.61	1.70	147.12	3.461	1.70	0.00	0.00
24	147.00	Andrew SBNHH-1D65B	6	40.00	8.08	0.83	242.64	9.457	0.83	0.00	0.00
25	147.00	ALU 2X60-770 U RRH	3	55.60	3.50	0.76	136.32	4.288	0.76	0.00	0.00
26	147.00	FD9R6004/2C-3L	6	3.10	0.36	0.62	11.11	0.802	0.62	0.00	0.00
27	147.00	RFS DB-T1-6Z-8AB-OZ	2	44.00	4.80	0.71	187.39	5.672	0.71	0.00	0.00
28	147.00	Low Profile Platform	1	1200.00	26.00	1.00	2245.02	47.736	1.00	0.00	0.00
Totals:			90	7,368.84			21,427.95				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	170.00	(6) 0.64" DC Power	0.00	Inside
0.00	170.00	(6) 1 5/8" Coax	0.00	Inside
0.00	170.00	(1) 1.5" Fiber	0.00	Inside
0.00	169.00	(1) Safety Cable	0.00	Outside
0.00	169.00	(1) Step bolts (ladder)	0.00	Outside
0.00	160.00	(12) 1 5/8" Coax	0.00	Inside
0.00	160.00	(1) 1 5/8" Fiber	0.00	Inside
0.00	147.00	(10) 1 5/8" Coax	0.00	Inside
0.00	147.00	(2) 1 5/8" Fiber	0.00	Inside

Shaft Section Properties

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017

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Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in ³)	Weight (lb)
0.00		0.4375	60.140	82.901	37333.6	22.83	137.46	74.6	1222.	0.0
5.00		0.4375	58.775	81.006	34830.8	22.28	134.34	75.2	1167.	1394.4
10.00		0.4375	57.410	79.110	32442.5	21.73	131.22	75.8	1113.	1362.1
15.00		0.4375	56.045	77.215	30165.9	21.18	128.10	76.5	1060.	1329.8
20.00		0.4375	54.680	75.319	27998.4	20.63	124.98	77.1	1008.	1297.6
25.00		0.4375	53.315	73.424	25937.3	20.08	121.86	77.8	958.2	1265.3
30.00		0.4375	51.949	71.528	23979.9	19.53	118.74	78.4	909.2	1233.1
35.00		0.4375	50.584	69.633	22123.5	18.98	115.62	79.1	861.4	1200.8
40.00		0.4375	49.219	67.737	20365.5	18.43	112.50	79.7	815.0	1168.6
45.00		0.4375	47.854	65.842	18703.2	17.88	109.38	80.4	769.8	1136.3
46.50	Bot - Section 2	0.4375	47.445	65.273	18222.8	17.71	108.44	80.6	756.5	334.6
50.00		0.4375	46.489	63.946	17133.9	17.33	106.26	81.0	725.9	1553.4
53.25	Top - Section 1	0.4375	46.477	63.929	17120.2	17.32	106.23	0.0	0.0	1414.2
55.00		0.4375	45.999	63.266	16592.7	17.13	105.14	81.3	710.5	378.7
60.00		0.4375	44.634	61.370	15145.5	16.58	102.02	81.9	668.3	1060.3
65.00		0.4375	43.269	59.475	13785.0	16.03	98.90	82.5	627.5	1028.0
70.00		0.4375	41.904	57.579	12508.5	15.48	95.78	82.5	587.9	995.8
75.00		0.4375	40.539	55.683	11313.4	14.93	92.66	82.5	549.7	963.5
80.00		0.4375	39.174	53.788	10196.9	14.38	89.54	82.5	512.7	931.3
85.00		0.4375	37.808	51.892	9156.4	13.83	86.42	82.5	477.0	899.0
90.00		0.4375	36.443	49.997	8189.2	13.28	83.30	82.5	442.6	866.8
95.00	Bot - Section 3	0.4375	35.078	48.101	7292.7	12.73	80.18	82.5	409.5	834.5
100.00	Top - Section 2	0.3750	34.463	40.572	5956.5	14.79	91.90	0.0	0.0	1506.4
105.00		0.3750	33.098	38.947	5269.1	14.15	88.26	82.5	313.6	676.5
110.00		0.3750	31.733	37.323	4636.8	13.51	84.62	82.5	287.8	648.8
115.00		0.3750	30.368	35.698	4057.3	12.87	80.98	82.5	263.1	621.2
120.00		0.3750	29.003	34.073	3528.1	12.23	77.34	82.5	239.6	593.5
125.00		0.3750	27.638	32.448	3047.1	11.58	73.70	82.5	217.2	565.9
130.00		0.3750	26.273	30.824	2611.9	10.94	70.06	82.5	195.8	538.3
135.00		0.3750	24.908	29.199	2220.3	10.30	66.42	82.5	175.6	510.6
140.00		0.3750	23.543	27.574	1869.9	9.66	62.78	82.5	156.4	483.0
145.00		0.3750	22.177	25.949	1558.4	9.02	59.14	82.5	138.4	455.3
145.25	Bot - Section 4	0.3750	22.109	25.868	1543.8	8.99	58.96	82.5	137.5	22.0
147.00		0.3750	21.631	25.300	1444.3	8.76	57.68	82.5	131.5	230.5
148.50	Top - Section 3	0.1875	21.597	12.741	737.8	18.90	115.18	0.0	0.0	193.5
150.00		0.1875	21.187	12.497	696.3	18.51	113.00	79.6	64.7	64.4
155.00		0.1875	19.822	11.685	569.1	17.23	105.72	81.1	56.6	205.7
160.00		0.1875	18.457	10.872	458.5	15.95	98.44	82.5	48.9	191.9
165.00		0.1875	17.092	10.060	363.2	14.66	91.16	82.5	41.9	178.1
167.00		0.1875	16.546	9.735	329.1	14.15	88.25	82.5	39.2	67.4
169.00		0.1875	16.000	9.410	297.3	13.64	85.33	82.5	36.6	65.1
										30466.3

Wind Loading - Shaft

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017

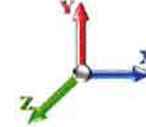
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Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 25

Dead Load Factor 1.20
Wind Load Factor 1.60



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		1.00	1.03	23.569	25.93	500.98	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	1.03	23.569	25.93	489.61	0.650	0.000	5.00	25.156	16.35	678.3	0.0	1673.2
10.00		1.00	1.03	23.569	25.93	478.24	0.650	0.000	5.00	24.579	15.98	662.7	0.0	1634.5
15.00		1.00	1.03	23.574	25.93	466.92	0.650	0.000	5.00	24.001	15.60	647.3	0.0	1595.8
20.00		1.00	1.08	24.784	27.26	467.09	0.650	0.000	5.00	23.423	15.23	664.1	0.0	1557.1
25.00		1.00	1.13	25.765	28.34	464.35	0.650	0.000	5.00	22.846	14.85	673.4	0.0	1518.4
30.00		1.00	1.16	26.595	29.25	459.69	0.650	0.000	5.00	22.268	14.47	677.5	0.0	1479.7
35.00		1.00	1.19	27.317	30.05	453.65	0.650	0.000	5.00	21.691	14.10	677.9	0.0	1441.0
40.00		1.00	1.22	27.959	30.75	446.56	0.650	0.000	5.00	21.113	13.72	675.3	0.0	1402.3
45.00		1.00	1.25	28.538	31.39	438.65	0.650	0.000	5.00	20.536	13.35	670.4	0.0	1363.6
46.50	Bot - Section 2	1.00	1.25	28.701	31.57	436.13	0.650	0.000	1.50	6.048	3.93	198.6	0.0	401.5
50.00		1.00	1.27	29.065	31.97	430.06	0.650	0.000	3.50	14.169	9.21	471.1	0.0	1864.1
53.25	Top - Section 1	1.00	1.28	29.385	32.32	424.16	0.650	0.000	3.25	12.904	8.39	433.8	0.0	1697.0
55.00		1.00	1.29	29.551	32.51	429.06	0.650	0.000	1.75	6.847	4.45	231.5	0.0	454.5
60.00		1.00	1.31	30.002	33.00	419.49	0.650	0.000	5.00	19.173	12.46	658.1	0.0	1272.3
65.00		1.00	1.33	30.422	33.46	409.50	0.650	0.000	5.00	18.596	12.09	647.2	0.0	1233.6
70.00		1.00	1.35	30.817	33.90	399.15	0.650	0.000	5.00	18.018	11.71	635.2	0.0	1194.9
75.00		1.00	1.36	31.189	34.31	388.47	0.650	0.000	5.00	17.440	11.34	622.3	0.0	1156.2
80.00		1.00	1.38	31.541	34.70	377.50	0.650	0.000	5.00	16.863	10.96	608.5	0.0	1117.5
85.00		1.00	1.39	31.875	35.06	366.27	0.650	0.000	5.00	16.285	10.59	593.9	0.0	1078.8
90.00		1.00	1.41	32.194	35.41	354.81	0.650	0.000	5.00	15.708	10.21	578.5	0.0	1040.1
95.00	Bot - Section 3	1.00	1.42	32.498	35.75	343.12	0.650	0.000	5.00	15.130	9.83	562.5	0.0	1001.4
100.00	Top - Section 2	1.00	1.43	32.789	36.07	331.25	0.650	0.000	5.00	14.870	9.67	557.8	0.0	1807.7
105.00		1.00	1.45	33.069	36.38	326.59	0.650	0.000	5.00	14.292	9.29	540.7	0.0	811.8
110.00		1.00	1.46	33.337	36.67	314.38	0.650	0.000	5.00	13.715	8.91	523.1	0.0	778.6
115.00		1.00	1.47	33.596	36.96	302.03	0.650	0.000	5.00	13.137	8.54	504.9	0.0	745.4
120.00		1.00	1.48	33.845	37.23	289.52	0.650	0.000	5.00	12.560	8.16	486.3	0.0	712.2
125.00		1.00	1.49	34.087	37.50	276.87	0.650	0.000	5.00	11.982	7.79	467.2	0.0	679.1
130.00		1.00	1.50	34.320	37.75	264.10	0.650	0.000	5.00	11.405	7.41	447.8	0.0	645.9
135.00		1.00	1.51	34.546	38.00	251.20	0.650	0.000	5.00	10.827	7.04	427.9	0.0	612.7
140.00		1.00	1.52	34.765	38.24	238.18	0.650	0.000	5.00	10.249	6.66	407.6	0.0	579.6
145.00		1.00	1.53	34.978	38.48	225.06	0.650	0.000	5.00	9.672	6.29	387.0	0.0	546.4
145.25	Bot - Section 4	1.00	1.53	34.988	38.49	224.40	0.650	0.000	0.25	0.468	0.30	18.7	0.0	26.4
147.00	Appurtenance(s)	1.00	1.53	35.061	38.57	219.78	0.650	0.000	1.75	3.294	2.14	132.1	0.0	276.6
148.50	Top - Section 3	1.00	1.53	35.123	38.64	215.81	0.650	0.000	1.50	2.767	1.80	111.2	0.0	232.3
150.00		1.00	1.54	35.185	38.70	215.64	0.650	0.000	1.50	2.715	1.76	109.3	0.0	77.3
155.00		1.00	1.55	35.386	38.92	202.33	0.650	0.000	5.00	8.675	5.64	351.2	0.0	246.9
160.00	Appurtenance(s)	1.00	1.55	35.582	39.14	188.91	0.650	0.000	5.00	8.098	5.26	329.6	0.0	230.3
165.00		1.00	1.56	35.773	39.35	175.41	0.650	0.000	5.00	7.520	4.89	307.8	0.0	213.7
167.00	Appurtenance(s)	1.00	1.57	35.848	39.43	169.99	0.650	0.000	2.00	2.846	1.85	116.7	0.0	80.8
169.00	Appurtenance(s)	1.00	1.57	35.922	39.51	164.55	0.650	0.000	2.00	2.754	1.79	113.2	0.0	78.2
Totals:									169.00			18,608.1		36,559.6

Discrete Appurtenance Forces

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017

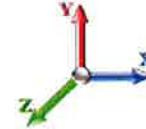
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Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 25

Dead Load Factor 1.20
Wind Load Factor 1.60



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	169.00	Ericsson RRUS 11 RRUs	6	35.959	39.555	0.60	0.90	9.12	396.00	0.000	1.000	577.02	0.00	577.02
2	169.00	CCI DTMABP7819VG12A	3	35.959	39.555	0.60	0.90	2.06	69.05	0.000	1.000	130.52	0.00	130.52
3	169.00	Andrew SBNH-1D6565C	1	35.959	39.555	0.80	1.00	9.18	72.96	0.000	1.000	580.73	0.00	580.73
4	169.00	KMW	1	35.959	39.555	0.75	1.00	3.75	43.68	0.000	1.000	237.33	0.00	237.33
5	169.00	AM-X-CD-16-65-00T-RET	1	35.959	39.555	0.75	1.00	6.01	58.20	0.000	1.000	380.68	0.00	380.68
6	167.00	HPA-65R-BUU-H6	3	35.959	39.555	0.77	0.90	22.17	183.60	0.000	3.000	1403.07	0.00	4209.22
7	167.00	Raycap DC6-48-60-18-8F	3	35.959	39.555	0.60	0.90	2.66	118.08	0.000	3.000	168.30	0.00	504.89
8	167.00	Reinforced T-Arms	3	35.848	39.433	0.56	0.75	23.63	1620.00	0.000	0.000	1490.55	0.00	0.00
9	167.00	HPA-65R-BBU-H8	3	35.959	39.555	0.71	0.90	27.69	244.80	0.000	3.000	1752.21	0.00	5256.63
10	167.00	Ericsson RRUS-E2 RRUs	3	35.959	39.555	0.60	0.90	7.00	216.00	0.000	3.000	443.07	0.00	1329.20
11	167.00	SBNHH-1D65A	3	35.959	39.555	0.75	0.90	13.18	120.60	0.000	3.000	833.95	0.00	2501.85
12	167.00	Ericsson RRUS-12 RRUs	6	35.959	39.555	0.56	0.90	10.55	417.60	0.000	3.000	667.45	0.00	2002.34
13	167.00	Ericsson RRUS 32 RRUs	3	35.959	39.555	0.60	0.90	7.00	277.20	0.000	3.000	443.07	0.00	1329.20
14	167.00	Ericsson RRUS A2	6	35.959	39.555	0.56	0.90	6.23	158.40	0.000	3.000	394.11	0.00	1182.33
15	160.00	LNx-6515DS-A1M	3	35.582	39.140	0.64	0.80	22.02	181.08	0.000	0.000	1379.13	0.00	0.00
16	160.00	Air21 B2A/B4P	3	35.582	39.140	0.69	0.80	12.57	329.40	0.000	0.000	787.17	0.00	0.00
17	160.00	T-Arm	3	35.582	39.140	0.56	0.75	16.88	1440.00	0.000	0.000	1056.78	0.00	0.00
18	160.00	Ericsson KRY 112-114/1	3	35.582	39.140	0.56	0.80	0.69	39.60	0.000	0.000	43.14	0.00	0.00
19	160.00	Air21 B4A/B2P	3	35.582	39.140	0.69	0.80	12.57	325.08	0.000	0.000	787.17	0.00	0.00
20	147.00	Antel LPA-80080/4CF	2	35.061	38.567	1.36	0.80	7.10	28.80	0.000	0.000	438.08	0.00	0.00
21	147.00	Alcatel 2x60-1900 RRH	3	35.061	38.567	0.54	0.80	2.43	144.00	0.000	0.000	149.83	0.00	0.00
22	147.00	RRH 2X90 AWS	3	35.061	38.567	0.54	0.80	5.63	230.40	0.000	0.000	347.29	0.00	0.00
23	147.00	Swedcom SC-E 6014 rev2	4	35.061	38.567	0.78	0.80	10.34	72.00	0.000	0.000	637.83	0.00	0.00
24	147.00	FD9R6004/2C-3L	6	35.061	38.567	0.50	0.80	1.07	22.32	0.000	0.000	66.11	0.00	0.00
25	147.00	Andrew SBNHH-1D65B	6	35.061	38.567	0.66	0.80	32.19	288.00	0.000	0.000	1986.42	0.00	0.00
26	147.00	ALU 2X60-770 U RRH	3	35.061	38.567	0.61	0.80	6.38	200.16	0.000	0.000	393.94	0.00	0.00
27	147.00	RFS DB-T1-6Z-8AB-0Z	2	35.061	38.567	0.57	0.80	5.45	105.60	0.000	0.000	336.48	0.00	0.00
28	147.00	Low Profile Platform	1	35.061	38.567	1.00	1.00	26.00	1440.00	0.000	0.000	1604.41	0.00	0.00
Totals:								8,842.61				19,515.83		

Total Applied Force Summary

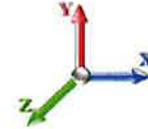
Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 25

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		678.29	1896.92	0.00	0.00
10.00		662.71	1858.22	0.00	0.00
15.00		647.29	1819.52	0.00	0.00
20.00		664.12	1780.82	0.00	0.00
25.00		673.38	1742.12	0.00	0.00
30.00		677.50	1703.42	0.00	0.00
35.00		677.86	1664.72	0.00	0.00
40.00		675.31	1626.02	0.00	0.00
45.00		670.43	1587.32	0.00	0.00
46.50		198.58	468.65	0.00	0.00
50.00		471.14	2020.71	0.00	0.00
53.25		433.78	1842.41	0.00	0.00
55.00		231.48	532.75	0.00	0.00
60.00		658.06	1496.02	0.00	0.00
65.00		647.19	1457.32	0.00	0.00
70.00		635.22	1418.62	0.00	0.00
75.00		622.28	1379.92	0.00	0.00
80.00		608.46	1341.22	0.00	0.00
85.00		593.85	1302.52	0.00	0.00
90.00		578.51	1263.82	0.00	0.00
95.00		562.51	1225.12	0.00	0.00
100.00		557.78	2031.35	0.00	0.00
105.00		540.69	1035.46	0.00	0.00
110.00		523.05	1002.29	0.00	0.00
115.00		504.91	969.11	0.00	0.00
120.00		486.30	935.94	0.00	0.00
125.00		467.25	902.77	0.00	0.00
130.00		447.77	869.60	0.00	0.00
135.00		427.89	836.43	0.00	0.00
140.00		407.63	803.26	0.00	0.00
145.00		387.02	770.08	0.00	0.00
145.25		18.75	37.63	0.00	0.00
147.00	(30) attachments	6092.53	2886.19	0.00	0.00
148.50		111.19	276.68	0.00	0.00
150.00		109.29	121.72	0.00	0.00
155.00		351.20	394.95	0.00	0.00
160.00	(15) attachments	4383.02	2693.53	0.00	0.00
165.00		307.76	280.30	0.00	0.00
167.00	(33) attachments	7712.50	3463.76	0.00	18315.66
169.00	(12) attachments	2019.44	744.71	0.00	1906.27
	Totals:	38,123.91	52,483.89	0.00	20,221.93

Linear Appurtenance Segment Forces (Factored)

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

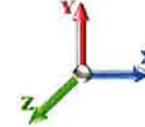
5/25/2017

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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 25

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	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.006	0.000	23.569	0.00	1.64
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.006	0.000	23.569	0.00	6.24
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.006	0.000	23.569	0.00	1.64
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.006	0.000	23.569	0.00	6.24
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	23.574	0.00	1.64
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	23.574	0.00	6.24
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	24.784	0.00	1.64
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	24.784	0.00	6.24
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	25.765	0.00	1.64
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	25.765	0.00	6.24
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	26.595	0.00	1.64
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	26.595	0.00	6.24
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	27.317	0.00	1.64
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	27.317	0.00	6.24
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	27.959	0.00	1.64
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	27.959	0.00	6.24
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	28.538	0.00	1.64
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	28.538	0.00	6.24
46.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.008	0.000	28.701	0.00	0.49
46.50	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.008	0.000	28.701	0.00	1.87
50.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.008	0.000	29.065	0.00	1.15
50.00	Step bolts (ladder)	Yes	3.50	0.000	0.00	0.00	0.00	0.008	0.000	29.065	0.00	4.37
53.25	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.008	0.000	29.385	0.00	1.06
53.25	Step bolts (ladder)	Yes	3.25	0.000	0.00	0.00	0.00	0.008	0.000	29.385	0.00	4.06
55.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.008	0.000	29.551	0.00	0.57
55.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.008	0.000	29.551	0.00	2.18
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	30.002	0.00	1.64
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	30.002	0.00	6.24
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	30.422	0.00	1.64
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	30.422	0.00	6.24
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	30.817	0.00	1.64
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	30.817	0.00	6.24
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	31.189	0.00	1.64
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	31.189	0.00	6.24
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	31.541	0.00	1.64
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	31.541	0.00	6.24
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	31.875	0.00	1.64
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	31.875	0.00	6.24
90.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	32.194	0.00	1.64
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	32.194	0.00	6.24
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	32.498	0.00	1.64
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	32.498	0.00	6.24
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.011	0.000	32.789	0.00	1.64
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	32.789	0.00	6.24
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.011	0.000	33.069	0.00	1.64
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	33.069	0.00	6.24
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	33.337	0.00	1.64

Linear Appurtenance Segment Forces (Factored)

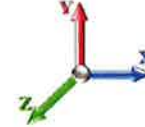
Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 12



Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 25

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)
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	33.337	0.00	6.24
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	33.596	0.00	1.64
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	33.596	0.00	6.24
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.013	0.000	33.845	0.00	1.64
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	33.845	0.00	6.24
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.013	0.000	34.087	0.00	1.64
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	34.087	0.00	6.24
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.014	0.000	34.320	0.00	1.64
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.014	0.000	34.320	0.00	6.24
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.015	0.000	34.546	0.00	1.64
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	34.546	0.00	6.24
140.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.015	0.000	34.765	0.00	1.64
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	34.765	0.00	6.24
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.016	0.000	34.978	0.00	1.64
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.016	0.000	34.978	0.00	6.24
145.25	Safety Cable	Yes	0.25	0.000	0.38	0.01	0.00	0.017	0.000	34.988	0.00	0.08
145.25	Step bolts (ladder)	Yes	0.25	0.000	0.00	0.00	0.00	0.017	0.000	34.988	0.00	0.31
147.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.017	0.000	35.061	0.00	0.57
147.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.017	0.000	35.061	0.00	2.18
148.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.017	0.000	35.123	0.00	0.49
148.50	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.017	0.000	35.123	0.00	1.87
150.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.017	0.000	35.185	0.00	0.49
150.00	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.017	0.000	35.185	0.00	1.87
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	35.386	0.00	1.64
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.018	0.000	35.386	0.00	6.24
160.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	35.582	0.00	1.64
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.020	0.000	35.582	0.00	6.24
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	35.773	0.00	1.64
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.021	0.000	35.773	0.00	6.24
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.022	0.000	35.848	0.00	0.66
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.022	0.000	35.848	0.00	2.50
169.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.023	0.000	35.922	0.00	0.66
169.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.023	0.000	35.922	0.00	2.50
Totals:											0.0	266.3

Calculated Forces

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

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

5/25/2017

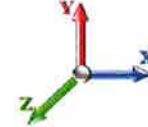


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Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 25

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	-52.42	-38.21	0.00	-4749.8	0.00	4749.89	5562.36	2781.18	13652.7	6836.50	0.00	0.000	0.000	0.704
5.00	-50.41	-37.68	0.00	-4558.8	0.00	4558.86	5482.35	2741.17	13146.4	6582.98	0.10	-0.177	0.000	0.702
10.00	-48.43	-37.17	0.00	-4370.4	0.00	4370.45	5400.13	2700.07	12644.0	6331.40	0.38	-0.360	0.000	0.699
15.00	-46.50	-36.66	0.00	-4184.6	0.00	4184.61	5315.71	2657.86	12145.8	6081.95	0.86	-0.547	0.000	0.697
20.00	-44.60	-36.13	0.00	-4001.3	0.00	4001.31	5229.08	2614.54	11652.3	5834.81	1.53	-0.740	0.000	0.694
25.00	-42.75	-35.58	0.00	-3820.6	0.00	3820.66	5140.25	2570.12	11163.7	5590.18	2.42	-0.939	0.000	0.692
30.00	-40.93	-35.02	0.00	-3642.7	0.00	3642.75	5049.20	2524.60	10680.6	5348.24	3.51	-1.144	0.000	0.689
35.00	-39.15	-34.45	0.00	-3467.6	0.00	3467.64	4955.95	2477.97	10203.2	5109.18	4.82	-1.355	0.000	0.687
40.00	-37.41	-33.88	0.00	-3295.3	0.00	3295.37	4860.49	2430.24	9731.91	4873.19	6.35	-1.572	0.000	0.684
45.00	-35.76	-33.26	0.00	-3125.9	0.00	3125.96	4762.82	2381.41	9267.12	4640.45	8.12	-1.796	0.000	0.681
46.50	-35.23	-33.12	0.00	-3076.0	0.00	3076.08	4733.09	2366.54	9129.00	4571.29	8.70	-1.867	0.000	0.681
50.00	-33.13	-32.67	0.00	-2960.1	0.00	2960.17	4662.94	2331.47	8809.20	4411.15	10.13	-2.032	0.000	0.678
53.25	-31.24	-32.24	0.00	-2853.9	0.00	2853.99	4662.03	2331.01	8805.10	4409.10	11.57	-2.189	0.000	0.654
55.00	-30.63	-32.07	0.00	-2797.5	0.00	2797.58	4626.54	2313.27	8646.55	4329.70	12.38	-2.276	0.000	0.653
60.00	-29.03	-31.47	0.00	-2637.2	0.00	2637.24	4523.67	2261.83	8198.57	4105.38	14.89	-2.509	0.000	0.649
65.00	-27.47	-30.87	0.00	-2479.9	0.00	2479.90	4418.66	2209.33	7758.49	3885.01	17.65	-2.749	0.000	0.645
70.00	-25.95	-30.28	0.00	-2325.5	0.00	2325.53	4277.83	2138.92	7269.40	3640.10	20.66	-2.997	0.000	0.645
75.00	-24.48	-29.70	0.00	-2174.1	0.00	2174.12	4137.00	2068.50	6796.24	3403.17	23.93	-3.253	0.000	0.645
80.00	-23.04	-29.12	0.00	-2025.6	0.00	2025.64	3996.18	1998.09	6339.00	3174.21	27.48	-3.517	0.000	0.644
85.00	-21.64	-28.55	0.00	-1880.0	0.00	1880.05	3855.35	1927.67	5897.69	2953.23	31.31	-3.789	0.000	0.642
90.00	-20.28	-27.99	0.00	-1737.3	0.00	1737.31	3714.52	1857.26	5472.29	2740.21	35.42	-4.070	0.000	0.640
95.00	-18.96	-27.43	0.00	-1597.3	0.00	1597.38	3573.69	1786.85	5062.82	2535.17	39.84	-4.360	0.000	0.636
100.00	-16.83	-26.81	0.00	-1460.2	0.00	1460.23	3014.30	1507.15	4208.99	2107.62	44.56	-4.658	0.000	0.699
105.00	-15.70	-26.27	0.00	-1326.2	0.00	1326.20	2893.59	1446.80	3876.87	1941.32	49.60	-4.965	0.000	0.689
110.00	-14.59	-25.75	0.00	-1194.8	0.00	1194.86	2772.88	1386.44	3558.41	1781.85	54.97	-5.305	0.000	0.676
115.00	-13.52	-25.23	0.00	-1066.1	0.00	1066.13	2652.17	1326.09	3253.59	1629.21	60.71	-5.652	0.000	0.660
120.00	-12.49	-24.73	0.00	-939.96	0.00	939.96	2531.46	1265.73	2962.42	1483.41	66.81	-6.004	0.000	0.639
125.00	-11.49	-24.24	0.00	-816.30	0.00	816.30	2410.75	1205.38	2684.90	1344.44	73.27	-6.358	0.000	0.612
130.00	-10.53	-23.76	0.00	-695.08	0.00	695.08	2290.04	1145.02	2421.02	1212.31	80.11	-6.710	0.000	0.578
135.00	-9.62	-23.30	0.00	-576.27	0.00	576.27	2169.33	1084.67	2170.80	1087.01	87.31	-7.057	0.000	0.535
140.00	-8.74	-22.84	0.00	-459.79	0.00	459.79	2048.62	1024.31	1934.22	968.55	94.86	-7.389	0.000	0.479
145.00	-7.97	-22.38	0.00	-345.60	0.00	345.60	1927.91	963.96	1711.29	856.92	102.75	-7.695	0.000	0.408
145.25	-7.91	-22.36	0.00	-340.00	0.00	340.00	1921.88	960.94	1700.50	851.51	103.15	-7.711	0.000	0.404
147.00	-5.85	-15.94	0.00	-300.87	0.00	300.87	1879.63	939.81	1625.94	814.18	105.99	-7.814	0.000	0.373
148.50	-5.57	-15.80	0.00	-276.95	0.00	276.95	907.84	453.92	797.93	399.56	108.45	-7.899	0.000	0.701
150.00	-5.39	-15.71	0.00	-253.25	0.00	253.25	895.57	447.78	771.95	386.55	110.94	-7.982	0.000	0.662
155.00	-4.94	-15.34	0.00	-174.72	0.00	174.72	853.23	426.61	687.23	344.13	119.51	-8.419	0.000	0.515
160.00	-2.88	-10.61	0.00	-98.05	0.00	98.05	807.76	403.88	604.95	302.92	128.50	-8.760	0.000	0.328
165.00	-2.63	-10.27	0.00	-44.99	0.00	44.99	747.41	373.70	517.50	259.13	137.77	-8.982	0.000	0.178
167.00	-0.42	-2.11	0.00	-6.13	0.00	6.13	723.26	361.63	484.43	242.57	141.53	-9.037	0.000	0.026
169.00	0.00	-2.02	0.00	-1.91	0.00	1.91	699.12	349.56	452.45	226.56	145.30	-9.044	0.000	0.008

Wind Loading - Shaft

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017

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Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 25

Dead Load Factor 0.90

Wind Load Factor 1.60



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		1.00	1.03	23.569	25.93	500.98	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	1.03	23.569	25.93	489.61	0.650	0.000	5.00	25.156	16.35	678.3	0.0	1254.9
10.00		1.00	1.03	23.569	25.93	478.24	0.650	0.000	5.00	24.579	15.98	662.7	0.0	1225.9
15.00		1.00	1.03	23.574	25.93	466.92	0.650	0.000	5.00	24.001	15.60	647.3	0.0	1196.9
20.00		1.00	1.08	24.784	27.26	467.09	0.650	0.000	5.00	23.423	15.23	664.1	0.0	1167.8
25.00		1.00	1.13	25.765	28.34	464.35	0.650	0.000	5.00	22.846	14.85	673.4	0.0	1138.8
30.00		1.00	1.16	26.595	29.25	459.69	0.650	0.000	5.00	22.268	14.47	677.5	0.0	1109.8
35.00		1.00	1.19	27.317	30.05	453.65	0.650	0.000	5.00	21.691	14.10	677.9	0.0	1080.8
40.00		1.00	1.22	27.959	30.75	446.56	0.650	0.000	5.00	21.113	13.72	675.3	0.0	1051.7
45.00		1.00	1.25	28.538	31.39	438.65	0.650	0.000	5.00	20.536	13.35	670.4	0.0	1022.7
46.50	Bot - Section 2	1.00	1.25	28.701	31.57	436.13	0.650	0.000	1.50	6.048	3.93	198.6	0.0	301.2
50.00		1.00	1.27	29.065	31.97	430.06	0.650	0.000	3.50	14.169	9.21	471.1	0.0	1398.1
53.25	Top - Section 1	1.00	1.28	29.385	32.32	424.16	0.650	0.000	3.25	12.904	8.39	433.8	0.0	1272.8
55.00		1.00	1.29	29.551	32.51	429.06	0.650	0.000	1.75	6.847	4.45	231.5	0.0	340.8
60.00		1.00	1.31	30.002	33.00	419.49	0.650	0.000	5.00	19.173	12.46	658.1	0.0	954.2
65.00		1.00	1.33	30.422	33.46	409.50	0.650	0.000	5.00	18.596	12.09	647.2	0.0	925.2
70.00		1.00	1.35	30.817	33.90	399.15	0.650	0.000	5.00	18.018	11.71	635.2	0.0	896.2
75.00		1.00	1.36	31.189	34.31	388.47	0.650	0.000	5.00	17.440	11.34	622.3	0.0	867.2
80.00		1.00	1.38	31.541	34.70	377.50	0.650	0.000	5.00	16.863	10.96	608.5	0.0	838.1
85.00		1.00	1.39	31.875	35.06	366.27	0.650	0.000	5.00	16.285	10.59	593.9	0.0	809.1
90.00		1.00	1.41	32.194	35.41	354.81	0.650	0.000	5.00	15.708	10.21	578.5	0.0	780.1
95.00	Bot - Section 3	1.00	1.42	32.498	35.75	343.12	0.650	0.000	5.00	15.130	9.83	562.5	0.0	751.1
100.00	Top - Section 2	1.00	1.43	32.789	36.07	331.25	0.650	0.000	5.00	14.870	9.67	557.8	0.0	1355.7
105.00		1.00	1.45	33.069	36.38	326.59	0.650	0.000	5.00	14.292	9.29	540.7	0.0	608.8
110.00		1.00	1.46	33.337	36.67	314.38	0.650	0.000	5.00	13.715	8.91	523.1	0.0	583.9
115.00		1.00	1.47	33.596	36.96	302.03	0.650	0.000	5.00	13.137	8.54	504.9	0.0	559.1
120.00		1.00	1.48	33.845	37.23	289.52	0.650	0.000	5.00	12.560	8.16	486.3	0.0	534.2
125.00		1.00	1.49	34.087	37.50	276.87	0.650	0.000	5.00	11.982	7.79	467.2	0.0	509.3
130.00		1.00	1.50	34.320	37.75	264.10	0.650	0.000	5.00	11.405	7.41	447.8	0.0	484.4
135.00		1.00	1.51	34.546	38.00	251.20	0.650	0.000	5.00	10.827	7.04	427.9	0.0	459.5
140.00		1.00	1.52	34.765	38.24	238.18	0.650	0.000	5.00	10.249	6.66	407.6	0.0	434.7
145.00		1.00	1.53	34.978	38.48	225.06	0.650	0.000	5.00	9.672	6.29	387.0	0.0	409.8
145.25	Bot - Section 4	1.00	1.53	34.988	38.49	224.40	0.650	0.000	0.25	0.468	0.30	18.7	0.0	19.8
147.00	Appurtenance(s)	1.00	1.53	35.061	38.57	219.78	0.650	0.000	1.75	3.294	2.14	132.1	0.0	207.5
148.50	Top - Section 3	1.00	1.53	35.123	38.64	215.81	0.650	0.000	1.50	2.767	1.80	111.2	0.0	174.2
150.00		1.00	1.54	35.185	38.70	215.64	0.650	0.000	1.50	2.715	1.76	109.3	0.0	58.0
155.00		1.00	1.55	35.386	38.92	202.33	0.650	0.000	5.00	8.675	5.64	351.2	0.0	185.1
160.00	Appurtenance(s)	1.00	1.55	35.582	39.14	188.91	0.650	0.000	5.00	8.098	5.26	329.6	0.0	172.7
165.00		1.00	1.56	35.773	39.35	175.41	0.650	0.000	5.00	7.520	4.89	307.8	0.0	160.3
167.00	Appurtenance(s)	1.00	1.57	35.848	39.43	169.99	0.650	0.000	2.00	2.846	1.85	116.7	0.0	60.6
169.00	Appurtenance(s)	1.00	1.57	35.922	39.51	164.55	0.650	0.000	2.00	2.754	1.79	113.2	0.0	58.6
Totals:									169.00			18,608.1		27,419.7

Discrete Appurtenance Forces

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

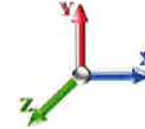
5/25/2017

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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 25

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	169.00	Ericsson RRUS 11 RRUs	6	35.959	39.555	0.60	0.90	9.12	297.00	0.000	1.000	577.02	0.00	577.02
2	169.00	CCI DTMABP7819VG12A	3	35.959	39.555	0.60	0.90	2.06	51.79	0.000	1.000	130.52	0.00	130.52
3	169.00	Andrew SBNH-1D6565C	1	35.959	39.555	0.80	1.00	9.18	54.72	0.000	1.000	580.73	0.00	580.73
4	169.00	KMW	1	35.959	39.555	0.75	1.00	3.75	32.76	0.000	1.000	237.33	0.00	237.33
5	169.00	AM-X-CD-16-65-00T-RET	1	35.959	39.555	0.75	1.00	6.01	43.65	0.000	1.000	380.68	0.00	380.68
6	167.00	HPA-65R-BUU-H6	3	35.959	39.555	0.77	0.90	22.17	137.70	0.000	3.000	1403.07	0.00	4209.22
7	167.00	Raycap DC6-48-60-18-8F	3	35.959	39.555	0.60	0.90	2.66	88.56	0.000	3.000	168.30	0.00	504.89
8	167.00	Reinforced T-Arms	3	35.848	39.433	0.56	0.75	23.63	1215.00	0.000	0.000	1490.55	0.00	0.00
9	167.00	HPA-65R-BBU-H8	3	35.959	39.555	0.71	0.90	27.69	183.60	0.000	3.000	1752.21	0.00	5256.63
10	167.00	Ericsson RRUS-E2 RRUs	3	35.959	39.555	0.60	0.90	7.00	162.00	0.000	3.000	443.07	0.00	1329.20
11	167.00	SBNHH-1D65A	3	35.959	39.555	0.75	0.90	13.18	90.45	0.000	3.000	833.95	0.00	2501.85
12	167.00	Ericsson RRUS-12 RRUs	6	35.959	39.555	0.56	0.90	10.55	313.20	0.000	3.000	667.45	0.00	2002.34
13	167.00	Ericsson RRUS 32 RRUs	3	35.959	39.555	0.60	0.90	7.00	207.90	0.000	3.000	443.07	0.00	1329.20
14	167.00	Ericsson RRUS A2	6	35.959	39.555	0.56	0.90	6.23	118.80	0.000	3.000	394.11	0.00	1182.33
15	160.00	LNX-6515DS-A1M	3	35.582	39.140	0.64	0.80	22.02	135.81	0.000	0.000	1379.13	0.00	0.00
16	160.00	Air21 B2A/B4P	3	35.582	39.140	0.69	0.80	12.57	247.05	0.000	0.000	787.17	0.00	0.00
17	160.00	T-Arm	3	35.582	39.140	0.56	0.75	16.88	1080.00	0.000	0.000	1056.78	0.00	0.00
18	160.00	Ericsson KRY 112-114/1	3	35.582	39.140	0.56	0.80	0.69	29.70	0.000	0.000	43.14	0.00	0.00
19	160.00	Air21 B4A/B2P	3	35.582	39.140	0.69	0.80	12.57	243.81	0.000	0.000	787.17	0.00	0.00
20	147.00	Antel LPA-80080/4CF	2	35.061	38.567	1.36	0.80	7.10	21.60	0.000	0.000	438.08	0.00	0.00
21	147.00	Alcatel 2x60-1900 RRH	3	35.061	38.567	0.54	0.80	2.43	108.00	0.000	0.000	149.83	0.00	0.00
22	147.00	RRH 2X90 AWS	3	35.061	38.567	0.54	0.80	5.63	172.80	0.000	0.000	347.29	0.00	0.00
23	147.00	Swedcom SC-E 6014 rev2	4	35.061	38.567	0.78	0.80	10.34	54.00	0.000	0.000	637.83	0.00	0.00
24	147.00	FD9R6004/2C-3L	6	35.061	38.567	0.50	0.80	1.07	16.74	0.000	0.000	66.11	0.00	0.00
25	147.00	Andrew SBNHH-1D65B	6	35.061	38.567	0.66	0.80	32.19	216.00	0.000	0.000	1986.42	0.00	0.00
26	147.00	ALU 2X60-770 U RRH	3	35.061	38.567	0.61	0.80	6.38	150.12	0.000	0.000	393.94	0.00	0.00
27	147.00	RFS DB-T1-6Z-8AB-0Z	2	35.061	38.567	0.57	0.80	5.45	79.20	0.000	0.000	336.48	0.00	0.00
28	147.00	Low Profile Platform	1	35.061	38.567	1.00	1.00	26.00	1080.00	0.000	0.000	1604.41	0.00	0.00

Totals: 6,631.96

19,515.83

Total Applied Force Summary

Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (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 25

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		678.29	1422.69	0.00	0.00
10.00		662.71	1393.66	0.00	0.00
15.00		647.29	1364.64	0.00	0.00
20.00		664.12	1335.61	0.00	0.00
25.00		673.38	1306.59	0.00	0.00
30.00		677.50	1277.56	0.00	0.00
35.00		677.86	1248.54	0.00	0.00
40.00		675.31	1219.51	0.00	0.00
45.00		670.43	1190.49	0.00	0.00
46.50		198.58	351.49	0.00	0.00
50.00		471.14	1515.53	0.00	0.00
53.25		433.78	1381.81	0.00	0.00
55.00		231.48	399.56	0.00	0.00
60.00		658.06	1122.02	0.00	0.00
65.00		647.19	1092.99	0.00	0.00
70.00		635.22	1063.96	0.00	0.00
75.00		622.28	1034.94	0.00	0.00
80.00		608.46	1005.91	0.00	0.00
85.00		593.85	976.89	0.00	0.00
90.00		578.51	947.86	0.00	0.00
95.00		562.51	918.84	0.00	0.00
100.00		557.78	1523.51	0.00	0.00
105.00		540.69	776.59	0.00	0.00
110.00		523.05	751.71	0.00	0.00
115.00		504.91	726.84	0.00	0.00
120.00		486.30	701.96	0.00	0.00
125.00		467.25	677.08	0.00	0.00
130.00		447.77	652.20	0.00	0.00
135.00		427.89	627.32	0.00	0.00
140.00		407.63	602.44	0.00	0.00
145.00		387.02	577.56	0.00	0.00
145.25		18.75	28.23	0.00	0.00
147.00	(30) attachments	6092.53	2164.64	0.00	0.00
148.50		111.19	207.51	0.00	0.00
150.00		109.29	91.29	0.00	0.00
155.00		351.20	296.22	0.00	0.00
160.00	(15) attachments	4383.02	2020.15	0.00	0.00
165.00		307.76	210.23	0.00	0.00
167.00	(33) attachments	7712.50	2597.82	0.00	18315.66
169.00	(12) attachments	2019.44	558.53	0.00	1906.27
	Totals:	38,123.91	39,362.92	0.00	20,221.93

Linear Appurtenance Segment Forces (Factored)

Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

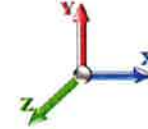


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Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 25

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)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.006	0.000	23.569	0.00	1.23
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.006	0.000	23.569	0.00	4.68
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.006	0.000	23.569	0.00	1.23
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.006	0.000	23.569	0.00	4.68
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	23.574	0.00	1.23
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	23.574	0.00	4.68
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	24.784	0.00	1.23
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	24.784	0.00	4.68
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	25.765	0.00	1.23
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	25.765	0.00	4.68
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	26.595	0.00	1.23
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	26.595	0.00	4.68
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	27.317	0.00	1.23
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	27.317	0.00	4.68
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	27.959	0.00	1.23
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	27.959	0.00	4.68
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	28.538	0.00	1.23
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	28.538	0.00	4.68
46.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.008	0.000	28.701	0.00	0.37
46.50	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.008	0.000	28.701	0.00	1.40
50.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.008	0.000	29.065	0.00	0.86
50.00	Step bolts (ladder)	Yes	3.50	0.000	0.00	0.00	0.00	0.008	0.000	29.065	0.00	3.28
53.25	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.008	0.000	29.385	0.00	0.80
53.25	Step bolts (ladder)	Yes	3.25	0.000	0.00	0.00	0.00	0.008	0.000	29.385	0.00	3.04
55.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.008	0.000	29.551	0.00	0.43
55.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.008	0.000	29.551	0.00	1.64
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	30.002	0.00	1.23
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	30.002	0.00	4.68
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	30.422	0.00	1.23
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	30.422	0.00	4.68
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	30.817	0.00	1.23
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	30.817	0.00	4.68
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	31.189	0.00	1.23
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	31.189	0.00	4.68
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	31.541	0.00	1.23
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	31.541	0.00	4.68
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	31.875	0.00	1.23
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	31.875	0.00	4.68
90.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	32.194	0.00	1.23
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	32.194	0.00	4.68
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	32.498	0.00	1.23
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	32.498	0.00	4.68
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.011	0.000	32.789	0.00	1.23
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	32.789	0.00	4.68
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.011	0.000	33.069	0.00	1.23
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	33.069	0.00	4.68
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	33.337	0.00	1.23

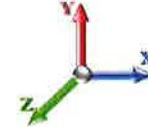
Linear Appurtenance Segment Forces (Factored)

Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 18
	Struct Class: II	



Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 25

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)
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	33.337	0.00	4.68
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	33.596	0.00	1.23
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	33.596	0.00	4.68
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.013	0.000	33.845	0.00	1.23
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	33.845	0.00	4.68
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.013	0.000	34.087	0.00	1.23
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	34.087	0.00	4.68
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.014	0.000	34.320	0.00	1.23
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.014	0.000	34.320	0.00	4.68
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.015	0.000	34.546	0.00	1.23
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	34.546	0.00	4.68
140.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.015	0.000	34.765	0.00	1.23
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	34.765	0.00	4.68
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.016	0.000	34.978	0.00	1.23
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.016	0.000	34.978	0.00	4.68
145.25	Safety Cable	Yes	0.25	0.000	0.38	0.01	0.00	0.017	0.000	34.988	0.00	0.06
145.25	Step bolts (ladder)	Yes	0.25	0.000	0.00	0.00	0.00	0.017	0.000	34.988	0.00	0.23
147.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.017	0.000	35.061	0.00	0.43
147.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.017	0.000	35.061	0.00	1.64
148.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.017	0.000	35.123	0.00	0.37
148.50	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.017	0.000	35.123	0.00	1.40
150.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.017	0.000	35.185	0.00	0.37
150.00	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.017	0.000	35.185	0.00	1.40
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	35.386	0.00	1.23
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.018	0.000	35.386	0.00	4.68
160.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	35.582	0.00	1.23
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.020	0.000	35.582	0.00	4.68
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	35.773	0.00	1.23
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.021	0.000	35.773	0.00	4.68
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.022	0.000	35.848	0.00	0.49
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.022	0.000	35.848	0.00	1.87
169.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.023	0.000	35.922	0.00	0.49
169.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.023	0.000	35.922	0.00	1.87
Totals:											0.0	199.7

Calculated Forces

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017

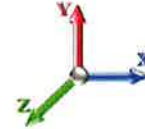
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Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 25

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	-39.30	-38.18	0.00	-4697.1	0.00	4697.13	5562.36	2781.18	13652.7	6836.50	0.00	0.000	0.000	0.694
5.00	-37.76	-37.62	0.00	-4506.2	0.00	4506.21	5482.35	2741.17	13146.4	6582.98	0.09	-0.175	0.000	0.692
10.00	-36.26	-37.07	0.00	-4318.1	0.00	4318.10	5400.13	2700.07	12644.0	6331.40	0.37	-0.356	0.000	0.689
15.00	-34.78	-36.52	0.00	-4132.7	0.00	4132.76	5315.71	2657.86	12145.8	6081.95	0.85	-0.541	0.000	0.686
20.00	-33.33	-35.96	0.00	-3950.1	0.00	3950.14	5229.08	2614.54	11652.3	5834.81	1.52	-0.731	0.000	0.684
25.00	-31.91	-35.38	0.00	-3770.3	0.00	3770.35	5140.25	2570.12	11163.7	5590.18	2.39	-0.928	0.000	0.681
30.00	-30.52	-34.79	0.00	-3593.4	0.00	3593.46	5049.20	2524.60	10680.6	5348.24	3.47	-1.129	0.000	0.678
35.00	-29.16	-34.19	0.00	-3419.5	0.00	3419.54	4955.95	2477.97	10203.2	5109.18	4.76	-1.337	0.000	0.675
40.00	-27.83	-33.59	0.00	-3248.5	0.00	3248.59	4860.49	2430.24	9731.91	4873.19	6.28	-1.552	0.000	0.673
45.00	-26.58	-32.95	0.00	-3080.6	0.00	3080.64	4762.82	2381.41	9267.12	4640.45	8.02	-1.773	0.000	0.670
46.50	-26.16	-32.80	0.00	-3031.2	0.00	3031.22	4733.09	2366.54	9129.00	4571.29	8.59	-1.843	0.000	0.669
50.00	-24.58	-32.34	0.00	-2916.4	0.00	2916.43	4662.94	2331.47	8809.20	4411.15	10.00	-2.005	0.000	0.667
53.25	-23.14	-31.91	0.00	-2811.3	0.00	2811.32	4662.03	2331.01	8805.10	4409.10	11.42	-2.160	0.000	0.643
55.00	-22.67	-31.72	0.00	-2755.4	0.00	2755.49	4626.54	2313.27	8646.55	4329.70	12.23	-2.245	0.000	0.642
60.00	-21.45	-31.11	0.00	-2596.8	0.00	2596.87	4523.67	2261.83	8198.57	4105.38	14.70	-2.475	0.000	0.637
65.00	-20.26	-30.50	0.00	-2441.3	0.00	2441.34	4418.66	2209.33	7758.49	3885.01	17.42	-2.711	0.000	0.633
70.00	-19.10	-29.89	0.00	-2288.8	0.00	2288.87	4277.83	2138.92	7269.40	3640.10	20.39	-2.955	0.000	0.633
75.00	-17.96	-29.30	0.00	-2139.4	0.00	2139.41	4137.00	2068.50	6796.24	3403.17	23.62	-3.207	0.000	0.633
80.00	-16.86	-28.71	0.00	-1992.9	0.00	1992.93	3996.18	1998.09	6339.00	3174.21	27.11	-3.467	0.000	0.632
85.00	-15.79	-28.13	0.00	-1849.4	0.00	1849.40	3855.35	1927.67	5897.69	2953.23	30.89	-3.735	0.000	0.631
90.00	-14.75	-27.56	0.00	-1708.7	0.00	1708.76	3714.52	1857.26	5472.29	2740.21	34.94	-4.011	0.000	0.628
95.00	-13.74	-27.00	0.00	-1570.9	0.00	1570.96	3573.69	1786.85	5062.82	2535.17	39.29	-4.296	0.000	0.624
100.00	-12.13	-26.39	0.00	-1435.9	0.00	1435.95	3014.30	1507.15	4208.99	2107.62	43.95	-4.590	0.000	0.686
105.00	-11.25	-25.85	0.00	-1304.0	0.00	1304.00	2893.59	1446.80	3876.87	1941.32	48.91	-4.891	0.000	0.676
110.00	-10.40	-25.33	0.00	-1174.7	0.00	1174.74	2772.88	1386.44	3558.41	1781.85	54.21	-5.226	0.000	0.663
115.00	-9.58	-24.81	0.00	-1048.1	0.00	1048.12	2652.17	1326.09	3253.59	1629.21	59.85	-5.567	0.000	0.647
120.00	-8.78	-24.31	0.00	-924.05	0.00	924.05	2531.46	1265.73	2962.42	1483.41	65.86	-5.912	0.000	0.627
125.00	-8.01	-23.82	0.00	-802.50	0.00	802.50	2410.75	1205.38	2684.90	1344.44	72.23	-6.260	0.000	0.601
130.00	-7.27	-23.35	0.00	-683.37	0.00	683.37	2290.04	1145.02	2421.02	1212.31	78.96	-6.607	0.000	0.567
135.00	-6.57	-22.89	0.00	-566.62	0.00	566.62	2169.33	1084.67	2170.80	1087.01	86.05	-6.948	0.000	0.525
140.00	-5.90	-22.44	0.00	-452.17	0.00	452.17	2048.62	1024.31	1934.22	968.55	93.49	-7.274	0.000	0.470
145.00	-5.32	-22.00	0.00	-339.95	0.00	339.95	1927.91	963.96	1711.29	856.92	101.25	-7.575	0.000	0.400
145.25	-5.27	-21.98	0.00	-334.45	0.00	334.45	1921.88	960.94	1700.50	851.51	101.65	-7.591	0.000	0.396
147.00	-3.91	-15.66	0.00	-295.98	0.00	295.98	1879.63	939.81	1625.94	814.18	104.44	-7.692	0.000	0.366
148.50	-3.70	-15.53	0.00	-272.48	0.00	272.48	907.84	453.92	797.93	399.56	106.87	-7.776	0.000	0.687
150.00	-3.55	-15.43	0.00	-249.19	0.00	249.19	895.57	447.78	771.95	386.55	109.31	-7.858	0.000	0.650
155.00	-3.20	-15.06	0.00	-172.06	0.00	172.06	853.23	426.61	687.23	344.13	117.76	-8.288	0.000	0.505
160.00	-1.80	-10.43	0.00	-96.76	0.00	96.76	807.76	403.88	604.95	302.92	126.60	-8.624	0.000	0.322
165.00	-1.62	-10.10	0.00	-44.59	0.00	44.59	747.41	373.70	517.50	259.13	135.73	-8.844	0.000	0.175
167.00	-0.24	-2.08	0.00	-6.07	0.00	6.07	723.26	361.63	484.43	242.57	139.44	-8.898	0.000	0.025
169.00	0.00	-2.02	0.00	-1.91	0.00	1.91	699.12	349.56	452.45	226.56	143.15	-8.905	0.000	0.008

Wind Loading - Shaft

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017

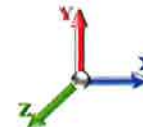
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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 25

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		1.00	1.03	6.262	6.89	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	1.03	6.262	6.89	0.00	1.200	1.242	5.00	26.191	31.43	216.5	467.0	2140.2
10.00		1.00	1.03	6.262	6.89	0.00	1.200	1.331	5.00	25.688	30.83	212.3	489.9	2124.4
15.00		1.00	1.03	6.264	6.89	0.00	1.200	1.386	5.00	25.156	30.19	208.0	498.7	2094.6
20.00		1.00	1.08	6.585	7.24	0.00	1.200	1.427	5.00	24.612	29.53	213.9	501.4	2058.6
25.00		1.00	1.13	6.846	7.53	0.00	1.200	1.459	5.00	24.062	28.87	217.4	500.6	2019.0
30.00		1.00	1.16	7.066	7.77	0.00	1.200	1.486	5.00	23.506	28.21	219.3	497.3	1977.0
35.00		1.00	1.19	7.258	7.98	0.00	1.200	1.509	5.00	22.948	27.54	219.9	492.3	1933.4
40.00		1.00	1.22	7.429	8.17	0.00	1.200	1.529	5.00	22.387	26.86	219.5	486.1	1888.4
45.00		1.00	1.25	7.583	8.34	0.00	1.200	1.547	5.00	21.825	26.19	218.4	478.8	1842.4
46.50	Bot - Section 2	1.00	1.25	7.626	8.39	0.00	1.200	1.552	1.50	6.436	7.72	64.8	142.9	544.5
50.00		1.00	1.27	7.723	8.50	0.00	1.200	1.564	3.50	15.081	18.10	153.7	335.4	2199.6
53.25	Top - Section 1	1.00	1.28	7.808	8.59	0.00	1.200	1.574	3.25	13.756	16.51	141.8	307.8	2004.8
55.00		1.00	1.29	7.852	8.64	0.00	1.200	1.579	1.75	7.307	8.77	75.7	164.7	619.1
60.00		1.00	1.31	7.972	8.77	0.00	1.200	1.592	5.00	20.500	24.60	215.7	461.1	1733.4
65.00		1.00	1.33	8.083	8.89	0.00	1.200	1.605	5.00	19.933	23.92	212.7	451.2	1684.8
70.00		1.00	1.35	8.188	9.01	0.00	1.200	1.617	5.00	19.366	23.24	209.3	440.8	1635.7
75.00		1.00	1.36	8.287	9.12	0.00	1.200	1.628	5.00	18.797	22.56	205.6	430.0	1586.3
80.00		1.00	1.38	8.381	9.22	0.00	1.200	1.639	5.00	18.229	21.87	201.7	418.9	1536.4
85.00		1.00	1.39	8.469	9.32	0.00	1.200	1.649	5.00	17.659	21.19	197.4	407.4	1486.3
90.00		1.00	1.41	8.554	9.41	0.00	1.200	1.658	5.00	17.090	20.51	193.0	395.7	1435.8
95.00	Bot - Section 3	1.00	1.42	8.635	9.50	0.00	1.200	1.667	5.00	16.520	19.82	188.3	383.7	1385.1
100.00	Top - Section 2	1.00	1.43	8.712	9.58	0.00	1.200	1.676	5.00	16.267	19.52	187.1	379.3	2186.9
105.00		1.00	1.45	8.786	9.67	0.00	1.200	1.684	5.00	15.696	18.83	182.0	366.8	1178.6
110.00		1.00	1.46	8.858	9.74	0.00	1.200	1.692	5.00	15.125	18.15	176.8	354.1	1132.7
115.00		1.00	1.47	8.927	9.82	0.00	1.200	1.699	5.00	14.554	17.46	171.5	341.2	1086.7
120.00		1.00	1.48	8.993	9.89	0.00	1.200	1.707	5.00	13.982	16.78	166.0	328.2	1040.4
125.00		1.00	1.49	9.057	9.96	0.00	1.200	1.714	5.00	13.410	16.09	160.3	314.9	994.0
130.00		1.00	1.50	9.119	10.03	0.00	1.200	1.720	5.00	12.838	15.41	154.5	301.5	947.4
135.00		1.00	1.51	9.179	10.10	0.00	1.200	1.727	5.00	12.266	14.72	148.6	288.0	900.7
140.00		1.00	1.52	9.237	10.16	0.00	1.200	1.733	5.00	11.694	14.03	142.6	274.2	853.8
145.00		1.00	1.53	9.294	10.22	0.00	1.200	1.739	5.00	11.121	13.35	136.4	260.4	806.8
145.25	Bot - Section 4	1.00	1.53	9.297	10.23	0.00	1.200	1.740	0.25	0.541	0.65	6.6	13.0	39.4
147.00	Appurtenance(s)	1.00	1.53	9.316	10.25	0.00	1.200	1.742	1.75	3.802	4.56	46.8	90.6	367.2
148.50	Top - Section 3	1.00	1.53	9.332	10.27	0.00	1.200	1.743	1.50	3.203	3.84	39.5	76.4	308.7
150.00		1.00	1.54	9.349	10.28	0.00	1.200	1.745	1.50	3.152	3.78	38.9	75.2	152.4
155.00		1.00	1.55	9.402	10.34	0.00	1.200	1.751	5.00	10.135	12.16	125.8	236.4	483.3
160.00	Appurtenance(s)	1.00	1.55	9.454	10.40	0.00	1.200	1.757	5.00	9.562	11.47	119.3	222.2	452.5
165.00		1.00	1.56	9.505	10.46	0.00	1.200	1.762	5.00	8.989	10.79	112.8	207.9	421.6
167.00	Appurtenance(s)	1.00	1.57	9.525	10.48	0.00	1.200	1.764	2.00	3.434	4.12	43.2	80.8	161.7
169.00	Appurtenance(s)	1.00	1.57	9.545	10.50	0.00	1.200	1.766	2.00	3.343	4.01	42.1	78.5	156.7
Totals:									169.00			6,205.8	49,601.0	

Discrete Appurtenance Forces

Structure: CT11794-S-SBA

Site Name: East Lyme 1

Height: 169.00 (ft)

Base Elev: 0.000 (ft)

Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G

5/25/2017

Exposure: D

Crest Height: 0.00

Site Class: D - Stiff Soil

Struct Class: II

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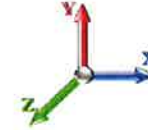


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 25

Dead Load Factor 1.20

Wind Load Factor 1.00



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	169.00	Ericsson RRUS 11 RRUs	6	9.554	10.510	0.60	0.90	12.57	920.94	0.000	1.000	132.12	0.00	132.12
2	169.00	CCI DTMABP7819VG12A	3	9.554	10.510	0.60	0.90	3.47	124.49	0.000	1.000	36.48	0.00	36.48
3	169.00	Andrew SBNH-1D6565C	1	9.554	10.510	0.80	1.00	11.81	215.75	0.000	1.000	124.10	0.00	124.10
4	169.00	KMW	1	9.554	10.510	0.75	1.00	5.17	124.64	0.000	1.000	54.36	0.00	54.36
5	169.00	AM-X-CD-16-65-00T-RET	1	9.554	10.510	0.75	1.00	8.14	175.92	0.000	1.000	85.50	0.00	85.50
6	167.00	HPA-65R-BUU-H6	3	9.554	10.510	0.77	0.90	25.34	937.28	0.000	3.000	266.33	0.00	799.00
7	167.00	Raycap DC6-48-60-18-8F	3	9.554	10.510	0.60	0.90	3.94	252.45	0.000	3.000	41.40	0.00	124.19
8	167.00	Reinforced T-Arms	3	9.525	10.477	0.56	0.75	44.46	2482.59	0.000	0.000	465.85	0.00	0.00
9	167.00	HPA-65R-BBU-H8	3	9.554	10.510	0.71	0.90	31.17	1128.93	0.000	3.000	327.60	0.00	982.81
10	167.00	Ericsson RRUS-E2 RRUs	3	9.554	10.510	0.60	0.90	7.01	505.95	0.000	3.000	73.63	0.00	220.89
11	167.00	SBNHH-1D65A	3	9.554	10.510	0.75	0.90	15.63	601.85	0.000	3.000	164.23	0.00	492.69
12	167.00	Ericsson RRUS-12 RRUs	6	9.554	10.510	0.56	0.90	12.97	997.49	0.000	3.000	136.27	0.00	408.80
13	167.00	Ericsson RRUS 32 RRUs	3	9.554	10.510	0.60	0.90	7.44	622.42	0.000	3.000	78.24	0.00	234.73
14	167.00	Ericsson RRUS A2	6	9.554	10.510	0.56	0.90	9.52	329.27	0.000	3.000	100.08	0.00	300.25
15	160.00	LNx-6515DS-A1M	3	9.454	10.400	0.64	0.80	28.34	685.25	0.000	0.000	294.68	0.00	0.00
16	160.00	Air21 B2A/B4P	3	9.454	10.400	0.69	0.80	14.73	834.44	0.000	0.000	153.18	0.00	0.00
17	160.00	T-Arm	3	9.454	10.400	0.56	0.75	31.70	2043.13	0.000	0.000	329.62	0.00	0.00
18	160.00	Ericsson KRY 112-114/1	3	9.454	10.400	0.56	0.80	1.49	62.85	0.000	0.000	15.52	0.00	0.00
19	160.00	Air21 B4A/B2P	3	9.454	10.400	0.69	0.80	14.73	2542.35	0.000	0.000	153.18	0.00	0.00
20	147.00	Antel LPA-80080/4CF	2	9.316	10.247	1.36	0.80	9.41	299.04	0.000	0.000	96.48	0.00	0.00
21	147.00	Alcatel 2x60-1900 RRH	3	9.316	10.247	0.54	0.80	3.96	344.91	0.000	0.000	40.62	0.00	0.00
22	147.00	RRH 2X90 AWS	3	9.316	10.247	0.54	0.80	6.89	475.86	0.000	0.000	70.65	0.00	0.00
23	147.00	Swedcom SC-E 6014 rev2	4	9.316	10.247	0.78	0.80	15.51	341.98	0.000	0.000	158.90	0.00	0.00
24	147.00	FD9R6004/2C-3L	6	9.316	10.247	0.50	0.80	2.39	56.58	0.000	0.000	24.47	0.00	0.00
25	147.00	Andrew SBNHH-1D65B	6	9.316	10.247	0.66	0.80	37.68	1503.87	0.000	0.000	386.10	0.00	0.00
26	147.00	ALU 2X60-770 U RRH	3	9.316	10.247	0.61	0.80	7.82	368.83	0.000	0.000	80.14	0.00	0.00
27	147.00	RFS DB-T1-6Z-8AB-0Z	2	9.316	10.247	0.57	0.80	6.44	392.37	0.000	0.000	66.03	0.00	0.00
28	147.00	Low Profile Platform	1	9.316	10.247	1.00	1.00	47.74	2185.02	0.000	0.000	489.18	0.00	0.00
Totals:								21,556.45				4,444.96		

Total Applied Force Summary

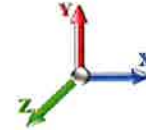
Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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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 25

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		216.51	2387.81	0.00	0.00
10.00		212.35	2375.12	0.00	0.00
15.00		208.00	2347.35	0.00	0.00
20.00		213.94	2312.90	0.00	0.00
25.00		217.43	2274.58	0.00	0.00
30.00		219.26	2233.70	0.00	0.00
35.00		219.86	2190.97	0.00	0.00
40.00		219.53	2146.83	0.00	0.00
45.00		218.45	2101.57	0.00	0.00
46.50		64.79	622.28	0.00	0.00
50.00		153.74	2381.47	0.00	0.00
53.25		141.77	2174.02	0.00	0.00
55.00		75.74	710.28	0.00	0.00
60.00		215.71	1994.47	0.00	0.00
65.00		212.69	1946.42	0.00	0.00
70.00		209.31	1897.88	0.00	0.00
75.00		205.62	1848.90	0.00	0.00
80.00		201.65	1799.53	0.00	0.00
85.00		197.42	1749.81	0.00	0.00
90.00		192.96	1699.78	0.00	0.00
95.00		188.29	1649.45	0.00	0.00
100.00		187.07	2451.67	0.00	0.00
105.00		182.04	1443.68	0.00	0.00
110.00		176.84	1398.18	0.00	0.00
115.00		171.48	1352.47	0.00	0.00
120.00		165.97	1306.56	0.00	0.00
125.00		160.32	1260.46	0.00	0.00
130.00		154.53	1214.19	0.00	0.00
135.00		148.62	1167.76	0.00	0.00
140.00		142.58	1121.16	0.00	0.00
145.00		136.43	1074.43	0.00	0.00
145.25		6.64	52.82	0.00	0.00
147.00	(30) attachments	1459.32	6429.41	0.00	0.00
148.50		39.46	366.34	0.00	0.00
150.00		38.89	210.14	0.00	0.00
155.00		125.78	675.86	0.00	0.00
160.00	(15) attachments	1065.51	6813.35	0.00	0.00
165.00		112.78	533.18	0.00	0.00
167.00	(33) attachments	1696.82	8064.59	0.00	3563.37
169.00	(12) attachments	474.68	1763.19	0.00	432.57
	Totals:	10,650.79	79,544.55	0.00	3,995.94

Linear Appurtenance Segment Forces (Factored)

Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

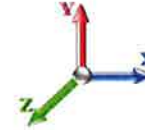


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 25

Dead Load Factor 1.20
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)
5.00	Safety Cable	Yes	5.00	0.000	0.38	1.19	0.00	0.006	0.000	6.262	0.00	12.93
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.006	0.000	6.262	0.00	18.85
10.00	Safety Cable	Yes	5.00	0.000	0.38	1.27	0.00	0.006	0.000	6.262	0.00	14.46
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.006	0.000	6.262	0.00	20.46
15.00	Safety Cable	Yes	5.00	0.000	0.38	1.31	0.00	0.007	0.000	6.264	0.00	15.46
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	6.264	0.00	21.51
20.00	Safety Cable	Yes	5.00	0.000	0.38	1.35	0.00	0.007	0.000	6.585	0.00	16.21
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	6.585	0.00	22.31
25.00	Safety Cable	Yes	5.00	0.000	0.38	1.37	0.00	0.007	0.000	6.846	0.00	16.83
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	6.846	0.00	22.95
30.00	Safety Cable	Yes	5.00	0.000	0.38	1.40	0.00	0.007	0.000	7.066	0.00	17.35
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	7.066	0.00	23.50
35.00	Safety Cable	Yes	5.00	0.000	0.38	1.42	0.00	0.007	0.000	7.258	0.00	17.80
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	7.258	0.00	23.98
40.00	Safety Cable	Yes	5.00	0.000	0.38	1.43	0.00	0.007	0.000	7.429	0.00	18.21
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	7.429	0.00	24.40
45.00	Safety Cable	Yes	5.00	0.000	0.38	1.45	0.00	0.008	0.000	7.583	0.00	18.58
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	7.583	0.00	24.79
46.50	Safety Cable	Yes	1.50	0.000	0.38	0.44	0.00	0.008	0.000	7.626	0.00	5.60
46.50	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.008	0.000	7.626	0.00	7.47
50.00	Safety Cable	Yes	3.50	0.000	0.38	1.02	0.00	0.008	0.000	7.723	0.00	13.24
50.00	Step bolts (ladder)	Yes	3.50	0.000	0.00	0.00	0.00	0.008	0.000	7.723	0.00	17.60
53.25	Safety Cable	Yes	3.25	0.000	0.38	0.96	0.00	0.008	0.000	7.808	0.00	12.43
53.25	Step bolts (ladder)	Yes	3.25	0.000	0.00	0.00	0.00	0.008	0.000	7.808	0.00	16.48
55.00	Safety Cable	Yes	1.75	0.000	0.38	0.52	0.00	0.008	0.000	7.852	0.00	6.73
55.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.008	0.000	7.852	0.00	8.91
60.00	Safety Cable	Yes	5.00	0.000	0.38	1.49	0.00	0.008	0.000	7.972	0.00	19.51
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	7.972	0.00	25.76
65.00	Safety Cable	Yes	5.00	0.000	0.38	1.50	0.00	0.009	0.000	8.083	0.00	19.78
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	8.083	0.00	26.04
70.00	Safety Cable	Yes	5.00	0.000	0.38	1.51	0.00	0.009	0.000	8.188	0.00	20.03
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	8.188	0.00	26.31
75.00	Safety Cable	Yes	5.00	0.000	0.38	1.52	0.00	0.009	0.000	8.287	0.00	20.27
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	8.287	0.00	26.56
80.00	Safety Cable	Yes	5.00	0.000	0.38	1.52	0.00	0.009	0.000	8.381	0.00	20.49
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	8.381	0.00	26.79
85.00	Safety Cable	Yes	5.00	0.000	0.38	1.53	0.00	0.010	0.000	8.469	0.00	20.71
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	8.469	0.00	27.02
90.00	Safety Cable	Yes	5.00	0.000	0.38	1.54	0.00	0.010	0.000	8.554	0.00	20.91
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	8.554	0.00	27.23
95.00	Safety Cable	Yes	5.00	0.000	0.38	1.55	0.00	0.010	0.000	8.635	0.00	21.11
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	8.635	0.00	27.44
100.00	Safety Cable	Yes	5.00	0.000	0.38	1.55	0.00	0.011	0.000	8.712	0.00	21.30
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	8.712	0.00	27.63
105.00	Safety Cable	Yes	5.00	0.000	0.38	1.56	0.00	0.011	0.000	8.786	0.00	21.48
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	8.786	0.00	27.82
110.00	Safety Cable	Yes	5.00	0.000	0.38	1.57	0.00	0.012	0.000	8.858	0.00	21.65

Linear Appurtenance Segment Forces (Factored)

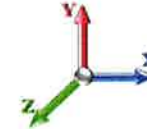
Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 24

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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 25

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)
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	8.858	0.00	28.00
115.00	Safety Cable	Yes	5.00	0.000	0.38	1.57	0.00	0.012	0.000	8.927	0.00	21.82
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	8.927	0.00	28.18
120.00	Safety Cable	Yes	5.00	0.000	0.38	1.58	0.00	0.013	0.000	8.993	0.00	21.98
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	8.993	0.00	28.34
125.00	Safety Cable	Yes	5.00	0.000	0.38	1.59	0.00	0.013	0.000	9.057	0.00	22.14
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	9.057	0.00	28.51
130.00	Safety Cable	Yes	5.00	0.000	0.38	1.59	0.00	0.014	0.000	9.119	0.00	22.29
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.014	0.000	9.119	0.00	28.67
135.00	Safety Cable	Yes	5.00	0.000	0.38	1.60	0.00	0.015	0.000	9.179	0.00	22.43
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	9.179	0.00	28.82
140.00	Safety Cable	Yes	5.00	0.000	0.38	1.60	0.00	0.015	0.000	9.237	0.00	22.57
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	9.237	0.00	28.97
145.00	Safety Cable	Yes	5.00	0.000	0.38	1.61	0.00	0.016	0.000	9.294	0.00	22.71
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.016	0.000	9.294	0.00	29.11
145.25	Safety Cable	Yes	0.25	0.000	0.38	0.08	0.00	0.017	0.000	9.297	0.00	1.14
145.25	Step bolts (ladder)	Yes	0.25	0.000	0.00	0.00	0.00	0.017	0.000	9.297	0.00	1.46
147.00	Safety Cable	Yes	1.75	0.000	0.38	0.56	0.00	0.017	0.000	9.316	0.00	7.97
147.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.017	0.000	9.316	0.00	10.21
148.50	Safety Cable	Yes	1.50	0.000	0.38	0.48	0.00	0.017	0.000	9.332	0.00	6.84
148.50	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.017	0.000	9.332	0.00	8.76
150.00	Safety Cable	Yes	1.50	0.000	0.38	0.48	0.00	0.017	0.000	9.349	0.00	6.85
150.00	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.017	0.000	9.349	0.00	8.78
155.00	Safety Cable	Yes	5.00	0.000	0.38	1.62	0.00	0.018	0.000	9.402	0.00	22.98
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.018	0.000	9.402	0.00	29.39
160.00	Safety Cable	Yes	5.00	0.000	0.38	1.62	0.00	0.020	0.000	9.454	0.00	23.11
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.020	0.000	9.454	0.00	29.52
165.00	Safety Cable	Yes	5.00	0.000	0.38	1.63	0.00	0.021	0.000	9.505	0.00	23.23
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.021	0.000	9.505	0.00	29.65
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.65	0.00	0.022	0.000	9.525	0.00	9.31
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.022	0.000	9.525	0.00	11.88
169.00	Safety Cable	Yes	2.00	0.000	0.38	0.65	0.00	0.023	0.000	9.545	0.00	9.33
169.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.023	0.000	9.545	0.00	11.90
Totals:											0.0	1,571.7

Calculated Forces

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017



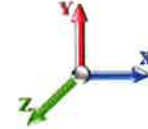
Page: 25

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

Iterations 25

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	-79.54	-10.69	0.00	-1300.1	0.00	1300.17	5562.36	2781.18	13652.7	6836.50	0.00	0.000	0.000	0.204
5.00	-77.14	-10.53	0.00	-1246.7	0.00	1246.75	5482.35	2741.17	13146.4	6582.98	0.03	-0.049	0.000	0.203
10.00	-74.76	-10.38	0.00	-1194.0	0.00	1194.08	5400.13	2700.07	12644.0	6331.40	0.10	-0.098	0.000	0.202
15.00	-72.40	-10.24	0.00	-1142.1	0.00	1142.16	5315.71	2657.86	12145.8	6081.95	0.23	-0.150	0.000	0.201
20.00	-70.08	-10.08	0.00	-1090.9	0.00	1090.98	5229.08	2614.54	11652.3	5834.81	0.42	-0.202	0.000	0.200
25.00	-67.80	-9.92	0.00	-1040.5	0.00	1040.57	5140.25	2570.12	11163.7	5590.18	0.66	-0.256	0.000	0.199
30.00	-65.56	-9.75	0.00	-990.98	0.00	990.98	5049.20	2524.60	10680.6	5348.24	0.96	-0.312	0.000	0.198
35.00	-63.36	-9.59	0.00	-942.21	0.00	942.21	4955.95	2477.97	10203.2	5109.18	1.32	-0.369	0.000	0.197
40.00	-61.20	-9.41	0.00	-894.28	0.00	894.28	4860.49	2430.24	9731.91	4873.19	1.73	-0.428	0.000	0.196
45.00	-59.10	-9.22	0.00	-847.21	0.00	847.21	4762.82	2381.41	9267.12	4640.45	2.22	-0.489	0.000	0.195
46.50	-58.47	-9.18	0.00	-833.38	0.00	833.38	4733.09	2366.54	9129.00	4571.29	2.37	-0.508	0.000	0.195
50.00	-56.08	-9.05	0.00	-801.24	0.00	801.24	4662.94	2331.47	8809.20	4411.15	2.76	-0.553	0.000	0.194
53.25	-53.90	-8.92	0.00	-771.83	0.00	771.83	4662.03	2331.01	8805.10	4409.10	3.15	-0.596	0.000	0.187
55.00	-53.19	-8.87	0.00	-756.22	0.00	756.22	4626.54	2313.27	8646.55	4329.70	3.38	-0.619	0.000	0.186
60.00	-51.19	-8.69	0.00	-711.85	0.00	711.85	4523.67	2261.83	8198.57	4105.38	4.06	-0.682	0.000	0.185
65.00	-49.23	-8.51	0.00	-668.39	0.00	668.39	4418.66	2209.33	7758.49	3885.01	4.81	-0.747	0.000	0.183
70.00	-47.33	-8.33	0.00	-625.83	0.00	625.83	4277.83	2138.92	7269.40	3640.10	5.63	-0.814	0.000	0.183
75.00	-45.47	-8.16	0.00	-584.16	0.00	584.16	4137.00	2068.50	6796.24	3403.17	6.52	-0.882	0.000	0.183
80.00	-43.67	-7.98	0.00	-543.38	0.00	543.38	3996.18	1998.09	6339.00	3174.21	7.48	-0.953	0.000	0.182
85.00	-41.91	-7.81	0.00	-503.48	0.00	503.48	3855.35	1927.67	5897.69	2953.23	8.52	-1.026	0.000	0.181
90.00	-40.20	-7.64	0.00	-464.44	0.00	464.44	3714.52	1857.26	5472.29	2740.21	9.63	-1.102	0.000	0.180
95.00	-38.55	-7.47	0.00	-426.26	0.00	426.26	3573.69	1786.85	5062.82	2535.17	10.83	-1.179	0.000	0.179
100.00	-36.09	-7.28	0.00	-388.93	0.00	388.93	3014.80	1507.15	4208.99	2107.62	12.10	-1.258	0.000	0.197
105.00	-34.64	-7.12	0.00	-352.53	0.00	352.53	2893.59	1446.80	3876.87	1941.32	13.46	-1.340	0.000	0.194
110.00	-33.24	-6.96	0.00	-316.95	0.00	316.95	2772.88	1386.44	3558.41	1781.85	14.92	-1.430	0.000	0.190
115.00	-31.88	-6.80	0.00	-282.15	0.00	282.15	2652.17	1326.09	3253.59	1629.21	16.46	-1.522	0.000	0.185
120.00	-30.57	-6.65	0.00	-248.13	0.00	248.13	2531.46	1265.73	2962.42	1483.41	18.11	-1.615	0.000	0.179
125.00	-29.30	-6.50	0.00	-214.87	0.00	214.87	2410.75	1205.38	2684.90	1344.44	19.85	-1.709	0.000	0.172
130.00	-28.08	-6.36	0.00	-182.35	0.00	182.35	2290.04	1145.02	2421.02	1212.31	21.69	-1.801	0.000	0.163
135.00	-26.91	-6.21	0.00	-150.57	0.00	150.57	2169.33	1084.67	2170.80	1087.01	23.63	-1.892	0.000	0.151
140.00	-25.79	-6.07	0.00	-119.51	0.00	119.51	2048.62	1024.31	1934.22	968.55	25.65	-1.978	0.000	0.136
145.00	-24.71	-5.91	0.00	-89.17	0.00	89.17	1927.91	963.96	1711.29	856.92	27.77	-2.058	0.000	0.117
145.25	-24.66	-5.91	0.00	-87.69	0.00	87.69	1921.88	960.94	1700.50	851.51	27.88	-2.062	0.000	0.116
147.00	-18.28	-4.23	0.00	-77.35	0.00	77.35	1879.63	939.81	1625.94	814.18	28.64	-2.088	0.000	0.105
148.50	-17.92	-4.18	0.00	-71.01	0.00	71.01	907.84	453.92	797.93	399.56	29.30	-2.110	0.000	0.198
150.00	-17.70	-4.16	0.00	-64.74	0.00	64.74	895.57	447.78	771.95	386.55	29.96	-2.132	0.000	0.187
155.00	-17.03	-4.03	0.00	-43.96	0.00	43.96	853.23	426.61	687.23	344.13	32.26	-2.243	0.000	0.148
160.00	-10.26	-2.71	0.00	-23.79	0.00	23.79	807.76	403.88	604.95	302.92	34.66	-2.327	0.000	0.091
165.00	-9.73	-2.58	0.00	-10.25	0.00	10.25	747.41	373.70	517.50	259.13	37.13	-2.380	0.000	0.053
167.00	-1.74	-0.55	0.00	-1.53	0.00	1.53	723.26	361.63	484.43	242.57	38.13	-2.392	0.000	0.009
169.00	0.00	-0.47	0.00	-0.43	0.00	0.43	699.12	349.56	452.45	226.56	39.13	-2.394	0.000	0.002

Seismic Segment Forces (Factored)

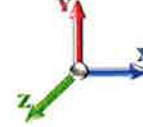
Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E

Gust Response Factor 1.10	Sds 0.17	Iterations 23
Dead Load Factor 1.20	Seismic Load Factor 1.00	Ss 0.16
Wind Load Factor 0.00	Structure Frequency 0.36	S1 0.06
	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		0.00	0.00	0.00	0.00	0.00	
5.00		1394.3	0.00	0.03	0.02	20.30	
10.00		1362.1	0.01	0.05	0.03	29.73	
15.00		1329.8	0.01	0.06	0.04	34.20	
20.00		1297.6	0.03	0.07	0.04	36.16	
25.00		1265.3	0.04	0.07	0.04	36.84	
30.00		1233.1	0.06	0.07	0.04	36.94	
35.00		1200.8	0.08	0.07	0.04	36.81	
40.00		1168.6	0.11	0.07	0.04	36.60	
45.00		1136.3	0.13	0.07	0.03	36.31	
46.50	Bot - Section 2	334.62	0.14	0.07	0.03	10.75	
50.00		1553.4	0.17	0.07	0.03	50.38	
53.25	Top - Section 1	1414.1	0.19	0.06	0.02	46.03	
55.00		378.71	0.20	0.06	0.02	12.32	
60.00		1060.2	0.24	0.06	0.02	33.84	
65.00		1028.0	0.28	0.05	0.01	31.06	
70.00		995.77	0.32	0.04	0.01	26.86	
75.00		963.52	0.37	0.03	0.01	21.01	
80.00		931.27	0.42	0.01	0.01	13.54	
85.00		899.02	0.48	-0.01	0.01	4.90	
90.00		866.77	0.54	-0.03	0.01	-4.04	
95.00	Bot - Section 3	834.52	0.60	-0.05	0.01	-12.12	
100.00	Top - Section 2	1506.3	0.66	-0.07	0.02	-34.32	
105.00		676.47	0.73	-0.10	0.04	-19.20	
110.00		648.82	0.80	-0.11	0.05	-19.90	
115.00		621.18	0.88	-0.12	0.08	-18.26	
120.00		593.54	0.95	-0.12	0.11	-14.53	
125.00		565.89	1.03	-0.10	0.15	-9.02	
130.00		538.25	1.12	-0.06	0.20	-2.05	
135.00		510.61	1.21	0.01	0.26	6.07	
140.00		482.96	1.30	0.12	0.33	15.06	
145.00		455.32	1.39	0.27	0.42	24.63	
145.25	Bot - Section 4	22.04	1.40	0.28	0.43	1.22	
147.00	Appurtenance(s)	2339.9	1.43	0.34	0.46	150.44	
148.50	Top - Section 3	193.54	1.46	0.41	0.50	14.00	
150.00		64.41	1.49	0.47	0.53	5.20	
155.00		205.71	1.59	0.75	0.66	22.84	
160.00	Appurtenance(s)	2121.1	1.69	1.10	0.81	307.93	
165.00		178.07	1.80	1.55	0.98	32.62	
167.00	Appurtenance(s)	2864.2	1.85	1.75	1.06	571.46	
169.00	Appurtenance(s)	598.39	1.89	1.98	1.14	129.53	
Totals:		37,835.2				1,702.1	Total Wind: 38,123.9

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

Calculated Forces

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017

Page: 27



Load Case: 1.2D + 1.0E

Iterations 23

Gust Response Factor 1.10

Sds 0.17

Ss 0.16

Dead Load Factor 1.20

Seismic Load Factor 1.00

Sd1 0.09

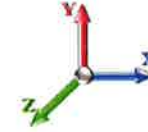
S1 0.06

Wind Load Factor 0.00

Structure Frequency 0.36

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	-52.48	-1.84	0.00	-241.22	0.00	241.22	5562.36	2781.18	13652.7	6836.50	0.00	0.00	0.00	0.045
5.00	-50.59	-1.83	0.00	-232.02	0.00	232.02	5482.35	2741.17	13146.4	6582.98	0.00	-0.01	0.044	0.044
10.00	-48.73	-1.80	0.00	-222.89	0.00	222.89	5400.13	2700.07	12644.0	6331.40	0.02	-0.02	0.044	0.044
15.00	-46.91	-1.78	0.00	-213.87	0.00	213.87	5315.71	2657.86	12145.8	6081.95	0.04	-0.03	0.044	0.044
20.00	-45.13	-1.75	0.00	-204.98	0.00	204.98	5229.08	2614.54	11652.3	5834.81	0.08	-0.04	0.044	0.044
25.00	-43.38	-1.72	0.00	-196.23	0.00	196.23	5140.25	2570.12	11163.7	5590.18	0.12	-0.05	0.044	0.044
30.00	-41.68	-1.69	0.00	-187.64	0.00	187.64	5049.20	2524.60	10680.6	5348.24	0.18	-0.06	0.043	0.043
35.00	-40.02	-1.66	0.00	-179.21	0.00	179.21	4955.95	2477.97	10203.2	5109.18	0.25	-0.07	0.043	0.043
40.00	-38.39	-1.63	0.00	-170.92	0.00	170.92	4860.49	2430.24	9731.91	4873.19	0.32	-0.08	0.043	0.043
45.00	-36.80	-1.59	0.00	-162.80	0.00	162.80	4762.82	2381.41	9267.12	4640.45	0.42	-0.09	0.043	0.043
46.50	-36.33	-1.58	0.00	-160.41	0.00	160.41	4733.09	2366.54	9129.00	4571.29	0.44	-0.10	0.043	0.043
50.00	-34.31	-1.54	0.00	-154.86	0.00	154.86	4662.94	2331.47	8809.20	4411.15	0.52	-0.10	0.042	0.042
53.25	-32.47	-1.49	0.00	-149.87	0.00	149.87	4662.03	2331.01	8805.10	4409.10	0.59	-0.11	0.041	0.041
55.00	-31.94	-1.48	0.00	-147.27	0.00	147.27	4626.54	2313.27	8646.55	4329.70	0.63	-0.12	0.041	0.041
60.00	-30.44	-1.45	0.00	-139.86	0.00	139.86	4523.67	2261.83	8198.57	4105.38	0.76	-0.13	0.041	0.041
65.00	-28.98	-1.42	0.00	-132.61	0.00	132.61	4418.66	2209.33	7758.49	3885.01	0.91	-0.14	0.041	0.041
70.00	-27.56	-1.40	0.00	-125.50	0.00	125.50	4277.83	2138.92	7269.40	3640.10	1.06	-0.16	0.041	0.041
75.00	-26.18	-1.38	0.00	-118.51	0.00	118.51	4137.00	2068.50	6796.24	3403.17	1.23	-0.17	0.041	0.041
80.00	-24.84	-1.37	0.00	-111.61	0.00	111.61	3996.18	1998.09	6339.00	3174.21	1.42	-0.18	0.041	0.041
85.00	-23.54	-1.37	0.00	-104.77	0.00	104.77	3855.35	1927.67	5897.69	2953.23	1.62	-0.20	0.042	0.042
90.00	-22.28	-1.37	0.00	-97.94	0.00	97.94	3714.52	1857.26	5472.29	2740.21	1.84	-0.21	0.042	0.042
95.00	-21.05	-1.37	0.00	-91.10	0.00	91.10	3573.69	1786.85	5062.82	2535.17	2.07	-0.23	0.042	0.042
100.00	-19.02	-1.37	0.00	-84.26	0.00	84.26	3014.30	1507.15	4208.99	2107.62	2.32	-0.25	0.046	0.046
105.00	-17.98	-1.37	0.00	-77.43	0.00	77.43	2893.59	1446.80	3876.87	1941.32	2.59	-0.27	0.046	0.046
110.00	-16.98	-1.37	0.00	-70.59	0.00	70.59	2772.88	1386.44	3558.41	1781.85	2.88	-0.29	0.046	0.046
115.00	-16.01	-1.37	0.00	-63.75	0.00	63.75	2652.17	1326.09	3253.59	1629.21	3.19	-0.31	0.045	0.045
120.00	-15.07	-1.37	0.00	-56.90	0.00	56.90	2531.46	1265.73	2962.42	1483.41	3.53	-0.33	0.044	0.044
125.00	-14.17	-1.37	0.00	-50.05	0.00	50.05	2410.75	1205.38	2684.90	1344.44	3.88	-0.35	0.043	0.043
130.00	-13.30	-1.37	0.00	-43.20	0.00	43.20	2290.04	1145.02	2421.02	1212.31	4.26	-0.37	0.041	0.041
135.00	-12.46	-1.36	0.00	-36.35	0.00	36.35	2169.33	1084.67	2170.80	1087.01	4.66	-0.39	0.039	0.039
140.00	-11.66	-1.35	0.00	-29.54	0.00	29.54	2048.62	1024.31	1934.22	968.55	5.08	-0.41	0.036	0.036
145.00	-10.89	-1.32	0.00	-22.81	0.00	22.81	1927.91	963.96	1711.29	856.92	5.53	-0.43	0.032	0.032
145.25	-10.85	-1.32	0.00	-22.48	0.00	22.48	1921.88	960.94	1700.50	851.51	5.55	-0.44	0.032	0.032
147.00	-7.97	-1.15	0.00	-20.18	0.00	20.18	1879.63	939.81	1625.94	814.18	5.71	-0.44	0.029	0.029
148.50	-7.69	-1.13	0.00	-18.46	0.00	18.46	907.84	453.92	797.93	399.56	5.85	-0.45	0.055	0.055
150.00	-7.57	-1.13	0.00	-16.76	0.00	16.76	895.57	447.78	771.95	386.55	5.99	-0.45	0.052	0.052
155.00	-7.17	-1.10	0.00	-11.13	0.00	11.13	853.23	426.61	687.23	344.13	6.48	-0.48	0.041	0.041
160.00	-4.48	-0.77	0.00	-5.62	0.00	5.62	807.76	403.88	604.95	302.92	7.00	-0.50	0.024	0.024
165.00	-4.20	-0.74	0.00	-1.75	0.00	1.75	747.41	373.70	517.50	259.13	7.53	-0.51	0.012	0.012
167.00	-0.74	-0.14	0.00	-0.27	0.00	0.27	723.26	361.63	484.43	242.57	7.75	-0.52	0.002	0.002
169.00	0.00	-0.13	0.00	0.00	0.00	0.00	699.12	349.56	452.45	226.56	7.97	-0.52	0.000	0.000

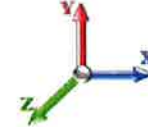
Seismic Segment Forces (Factored)

Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 28

Load Case: 0.9D + 1.0E				Iterations 22
Gust Response Factor	1.10	Sds	0.17	Ss 0.16
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1 0.09
Wind Load Factor	0.00	Structure Frequency	0.36	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		0.00	0.00	0.00	0.00	0.00	
5.00		1394.3	0.00	0.03	0.02	20.30	
10.00		1362.1	0.01	0.05	0.03	29.73	
15.00		1329.8	0.01	0.06	0.04	34.20	
20.00		1297.6	0.03	0.07	0.04	36.16	
25.00		1265.3	0.04	0.07	0.04	36.84	
30.00		1233.1	0.06	0.07	0.04	36.94	
35.00		1200.8	0.08	0.07	0.04	36.81	
40.00		1168.6	0.11	0.07	0.04	36.60	
45.00		1136.3	0.13	0.07	0.03	36.31	
46.50	Bot - Section 2	334.62	0.14	0.07	0.03	10.75	
50.00		1553.4	0.17	0.07	0.03	50.38	
53.25	Top - Section 1	1414.1	0.19	0.06	0.02	46.03	
55.00		378.71	0.20	0.06	0.02	12.32	
60.00		1060.2	0.24	0.06	0.02	33.84	
65.00		1028.0	0.28	0.05	0.01	31.06	
70.00		995.77	0.32	0.04	0.01	26.86	
75.00		963.52	0.37	0.03	0.01	21.01	
80.00		931.27	0.42	0.01	0.01	13.54	
85.00		899.02	0.48	-0.01	0.01	4.90	
90.00		866.77	0.54	-0.03	0.01	-4.04	
95.00	Bot - Section 3	834.52	0.60	-0.05	0.01	-12.12	
100.00	Top - Section 2	1506.3	0.66	-0.07	0.02	-34.32	
105.00		676.47	0.73	-0.10	0.04	-19.20	
110.00		648.82	0.80	-0.11	0.05	-19.90	
115.00		621.18	0.88	-0.12	0.08	-18.26	
120.00		593.54	0.95	-0.12	0.11	-14.53	
125.00		565.89	1.03	-0.10	0.15	-9.02	
130.00		538.25	1.12	-0.06	0.20	-2.05	
135.00		510.61	1.21	0.01	0.26	6.07	
140.00		482.96	1.30	0.12	0.33	15.06	
145.00		455.32	1.39	0.27	0.42	24.63	
145.25	Bot - Section 4	22.04	1.40	0.28	0.43	1.22	
147.00	Appurtenance(s)	2339.9	1.43	0.34	0.46	150.44	
148.50	Top - Section 3	193.54	1.46	0.41	0.50	14.00	
150.00		64.41	1.49	0.47	0.53	5.20	
155.00		205.71	1.59	0.75	0.66	22.84	
160.00	Appurtenance(s)	2121.1	1.69	1.10	0.81	307.93	
165.00		178.07	1.80	1.55	0.98	32.62	
167.00	Appurtenance(s)	2864.2	1.85	1.75	1.06	571.46	
169.00	Appurtenance(s)	598.39	1.89	1.98	1.14	129.53	
Totals:		37,835.2				1,702.1	Total Wind: 38,123.9

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

Calculated Forces

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017

Page: 29



Load Case: 0.9D + 1.0E

Iterations 22

Gust Response Factor 1.10

Sds 0.17

Ss 0.16

Dead Load Factor 0.90

Seismic Load Factor 1.00

Sd1 0.09

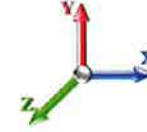
S1 0.06

Wind Load Factor 0.00

Structure Frequency 0.36

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	-39.36	-1.84	0.00	-238.25	0.00	238.25	5562.36	2781.18	13652.7	6836.50	0.00	0.00	0.00	0.042
5.00	-37.94	-1.82	0.00	-229.06	0.00	229.06	5482.35	2741.17	13146.4	6582.98	0.00	-0.01	0.00	0.042
10.00	-36.55	-1.80	0.00	-219.95	0.00	219.95	5400.13	2700.07	12644.0	6331.40	0.02	-0.02	0.00	0.042
15.00	-35.18	-1.77	0.00	-210.95	0.00	210.95	5315.71	2657.86	12145.8	6081.95	0.04	-0.03	0.00	0.041
20.00	-33.85	-1.74	0.00	-202.10	0.00	202.10	5229.08	2614.54	11652.3	5834.81	0.08	-0.04	0.00	0.041
25.00	-32.54	-1.71	0.00	-193.41	0.00	193.41	5140.25	2570.12	11163.7	5590.18	0.12	-0.05	0.00	0.041
30.00	-31.26	-1.67	0.00	-184.87	0.00	184.87	5049.20	2524.60	10680.6	5348.24	0.18	-0.06	0.00	0.041
35.00	-30.01	-1.64	0.00	-176.50	0.00	176.50	4955.95	2477.97	10203.2	5109.18	0.24	-0.07	0.00	0.041
40.00	-28.79	-1.61	0.00	-168.29	0.00	168.29	4860.49	2430.24	9731.91	4873.19	0.32	-0.08	0.00	0.040
45.00	-27.60	-1.58	0.00	-160.24	0.00	160.24	4762.82	2381.41	9267.12	4640.45	0.41	-0.09	0.00	0.040
46.50	-27.25	-1.57	0.00	-157.88	0.00	157.88	4733.09	2366.54	9129.00	4571.29	0.44	-0.09	0.00	0.040
50.00	-25.73	-1.52	0.00	-152.40	0.00	152.40	4662.94	2331.47	8809.20	4411.15	0.51	-0.10	0.00	0.040
53.25	-24.35	-1.47	0.00	-147.47	0.00	147.47	4662.03	2331.01	8805.10	4409.10	0.58	-0.11	0.00	0.039
55.00	-23.95	-1.46	0.00	-144.89	0.00	144.89	4626.54	2313.27	8646.55	4329.70	0.63	-0.12	0.00	0.039
60.00	-22.83	-1.43	0.00	-137.58	0.00	137.58	4523.67	2261.83	8198.57	4105.38	0.75	-0.13	0.00	0.039
65.00	-21.74	-1.40	0.00	-130.43	0.00	130.43	4418.66	2209.33	7758.49	3885.01	0.89	-0.14	0.00	0.038
70.00	-20.67	-1.38	0.00	-123.42	0.00	123.42	4277.83	2138.92	7269.40	3640.10	1.05	-0.15	0.00	0.039
75.00	-19.64	-1.36	0.00	-116.54	0.00	116.54	4137.00	2068.50	6796.24	3403.17	1.22	-0.17	0.00	0.039
80.00	-18.63	-1.35	0.00	-109.75	0.00	109.75	3996.18	1998.09	6339.00	3174.21	1.40	-0.18	0.00	0.039
85.00	-17.65	-1.34	0.00	-103.02	0.00	103.02	3855.35	1927.67	5897.69	2953.23	1.60	-0.20	0.00	0.039
90.00	-16.71	-1.34	0.00	-96.30	0.00	96.30	3714.52	1857.26	5472.29	2740.21	1.81	-0.21	0.00	0.040
95.00	-15.79	-1.34	0.00	-89.58	0.00	89.58	3573.69	1786.85	5062.82	2535.17	2.04	-0.23	0.00	0.040
100.00	-14.26	-1.34	0.00	-82.86	0.00	82.86	3014.30	1507.15	4208.99	2107.62	2.29	-0.24	0.00	0.044
105.00	-13.49	-1.34	0.00	-76.14	0.00	76.14	2893.59	1446.80	3876.87	1941.32	2.55	-0.26	0.00	0.044
110.00	-12.73	-1.34	0.00	-69.42	0.00	69.42	2772.88	1386.44	3558.41	1781.85	2.84	-0.28	0.00	0.044
115.00	-12.01	-1.35	0.00	-62.70	0.00	62.70	2652.17	1326.09	3253.59	1629.21	3.14	-0.30	0.00	0.043
120.00	-11.30	-1.35	0.00	-55.97	0.00	55.97	2531.46	1265.73	2962.42	1483.41	3.47	-0.32	0.00	0.042
125.00	-10.63	-1.35	0.00	-49.24	0.00	49.24	2410.75	1205.38	2684.90	1344.44	3.82	-0.34	0.00	0.041
130.00	-9.97	-1.35	0.00	-42.51	0.00	42.51	2290.04	1145.02	2421.02	1212.31	4.19	-0.37	0.00	0.039
135.00	-9.35	-1.34	0.00	-35.79	0.00	35.79	2169.33	1084.67	2170.80	1087.01	4.59	-0.39	0.00	0.037
140.00	-8.74	-1.32	0.00	-29.09	0.00	29.09	2048.62	1024.31	1934.22	968.55	5.00	-0.41	0.00	0.034
145.00	-8.17	-1.30	0.00	-22.48	0.00	22.48	1927.91	963.96	1711.29	856.92	5.44	-0.43	0.00	0.030
145.25	-8.14	-1.29	0.00	-22.15	0.00	22.15	1921.88	960.94	1700.50	851.51	5.46	-0.43	0.00	0.030
147.00	-5.97	-1.13	0.00	-19.89	0.00	19.89	1879.63	939.81	1625.94	814.18	5.62	-0.43	0.00	0.028
148.50	-5.77	-1.11	0.00	-18.19	0.00	18.19	907.84	453.92	797.93	399.56	5.76	-0.44	0.00	0.052
150.00	-5.67	-1.11	0.00	-16.52	0.00	16.52	895.57	447.78	771.95	386.55	5.90	-0.45	0.00	0.049
155.00	-5.38	-1.09	0.00	-10.97	0.00	10.97	853.23	426.61	687.23	344.13	6.38	-0.47	0.00	0.038
160.00	-3.36	-0.76	0.00	-5.54	0.00	5.54	807.76	403.88	604.95	302.92	6.89	-0.49	0.00	0.022
165.00	-3.15	-0.73	0.00	-1.73	0.00	1.73	747.41	373.70	517.50	259.13	7.42	-0.51	0.00	0.011
167.00	-0.56	-0.13	0.00	-0.27	0.00	0.27	723.26	361.63	484.43	242.57	7.63	-0.51	0.00	0.002
169.00	0.00	-0.13	0.00	0.00	0.00	0.00	699.12	349.56	452.45	226.56	7.84	-0.51	0.00	0.000

Wind Loading - Shaft

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017

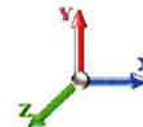
Page: 30



Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

Dead Load Factor 1.00
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		1.00	1.03	9.018	9.92	309.89	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	1.03	9.018	9.92	302.85	0.650	0.000	5.00	25.156	16.35	162.2	0.0	1394.4
10.00		1.00	1.03	9.018	9.92	295.82	0.650	0.000	5.00	24.579	15.98	158.5	0.0	1362.1
15.00		1.00	1.03	9.020	9.92	288.82	0.650	0.000	5.00	24.001	15.60	154.8	0.0	1329.8
20.00		1.00	1.08	9.483	10.43	288.92	0.650	0.000	5.00	23.423	15.23	158.8	0.0	1297.6
25.00		1.00	1.13	9.858	10.84	287.23	0.650	0.000	5.00	22.846	14.85	161.0	0.0	1265.3
30.00		1.00	1.16	10.175	11.19	284.34	0.650	0.000	5.00	22.268	14.47	162.0	0.0	1233.1
35.00		1.00	1.19	10.452	11.50	280.61	0.650	0.000	5.00	21.691	14.10	162.1	0.0	1200.8
40.00		1.00	1.22	10.697	11.77	276.22	0.650	0.000	5.00	21.113	13.72	161.5	0.0	1168.6
45.00		1.00	1.25	10.919	12.01	271.33	0.650	0.000	5.00	20.536	13.35	160.3	0.0	1136.3
46.50	Bot - Section 2	1.00	1.25	10.981	12.08	269.77	0.650	0.000	1.50	6.048	3.93	47.5	0.0	334.6
50.00		1.00	1.27	11.121	12.23	266.01	0.650	0.000	3.50	14.169	9.21	112.7	0.0	1553.4
53.25	Top - Section 1	1.00	1.28	11.243	12.37	262.37	0.650	0.000	3.25	12.904	8.39	103.7	0.0	1414.2
55.00		1.00	1.29	11.307	12.44	265.40	0.650	0.000	1.75	6.847	4.45	55.4	0.0	378.7
60.00		1.00	1.31	11.479	12.63	259.48	0.650	0.000	5.00	19.173	12.46	157.4	0.0	1060.3
65.00		1.00	1.33	11.640	12.80	253.30	0.650	0.000	5.00	18.596	12.09	154.8	0.0	1028.0
70.00		1.00	1.35	11.791	12.97	246.90	0.650	0.000	5.00	18.018	11.71	151.9	0.0	995.8
75.00		1.00	1.36	11.933	13.13	240.29	0.650	0.000	5.00	17.440	11.34	148.8	0.0	963.5
80.00		1.00	1.38	12.068	13.27	233.50	0.650	0.000	5.00	16.863	10.96	145.5	0.0	931.3
85.00		1.00	1.39	12.196	13.42	226.56	0.650	0.000	5.00	16.285	10.59	142.0	0.0	899.0
90.00		1.00	1.41	12.318	13.55	219.47	0.650	0.000	5.00	15.708	10.21	138.3	0.0	866.8
95.00	Bot - Section 3	1.00	1.42	12.434	13.68	212.24	0.650	0.000	5.00	15.130	9.83	134.5	0.0	834.5
100.00	Top - Section 2	1.00	1.43	12.546	13.80	204.89	0.650	0.000	5.00	14.870	9.67	133.4	0.0	1506.4
105.00		1.00	1.45	12.652	13.92	202.01	0.650	0.000	5.00	14.292	9.29	129.3	0.0	676.5
110.00		1.00	1.46	12.755	14.03	194.46	0.650	0.000	5.00	13.715	8.91	125.1	0.0	648.8
115.00		1.00	1.47	12.854	14.14	186.82	0.650	0.000	5.00	13.137	8.54	120.7	0.0	621.2
120.00		1.00	1.48	12.950	14.24	179.08	0.650	0.000	5.00	12.560	8.16	116.3	0.0	593.5
125.00		1.00	1.49	13.042	14.35	171.26	0.650	0.000	5.00	11.982	7.79	111.7	0.0	565.9
130.00		1.00	1.50	13.131	14.44	163.36	0.650	0.000	5.00	11.405	7.41	107.1	0.0	538.3
135.00		1.00	1.51	13.218	14.54	155.38	0.650	0.000	5.00	10.827	7.04	102.3	0.0	510.6
140.00		1.00	1.52	13.302	14.63	147.33	0.650	0.000	5.00	10.249	6.66	97.5	0.0	483.0
145.00		1.00	1.53	13.383	14.72	139.21	0.650	0.000	5.00	9.672	6.29	92.5	0.0	455.3
145.25	Bot - Section 4	1.00	1.53	13.387	14.73	138.80	0.650	0.000	0.25	0.468	0.30	4.5	0.0	22.0
147.00	Appurtenance(s)	1.00	1.53	13.415	14.76	135.95	0.650	0.000	1.75	3.294	2.14	31.6	0.0	230.5
148.50	Top - Section 3	1.00	1.53	13.439	14.78	133.49	0.650	0.000	1.50	2.767	1.80	26.6	0.0	193.5
150.00		1.00	1.54	13.462	14.81	133.39	0.650	0.000	1.50	2.715	1.76	26.1	0.0	64.4
155.00		1.00	1.55	13.539	14.89	125.15	0.650	0.000	5.00	8.675	5.64	84.0	0.0	205.7
160.00	Appurtenance(s)	1.00	1.55	13.614	14.98	116.85	0.650	0.000	5.00	8.098	5.26	78.8	0.0	191.9
165.00		1.00	1.56	13.687	15.06	108.50	0.650	0.000	5.00	7.520	4.89	73.6	0.0	178.1
167.00	Appurtenance(s)	1.00	1.57	13.716	15.09	105.15	0.650	0.000	2.00	2.846	1.85	27.9	0.0	67.4
169.00	Appurtenance(s)	1.00	1.57	13.744	15.12	101.78	0.650	0.000	2.00	2.754	1.79	27.1	0.0	65.1
Totals:									169.00			4,449.8		30,466.3

Discrete Appurtenance Forces

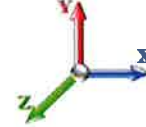
Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 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	169.00	Ericsson RRUS 11 RRUs	6	13.758	15.134	0.60	0.90	9.12	330.00	0.000	1.000	137.98	0.00	137.98
2	169.00	CCI DTMABP7819VG12A	3	13.758	15.134	0.60	0.90	2.06	57.54	0.000	1.000	31.21	0.00	31.21
3	169.00	Andrew SBNH-1D6565C	1	13.758	15.134	0.80	1.00	9.18	60.80	0.000	1.000	138.87	0.00	138.87
4	169.00	KMW	1	13.758	15.134	0.75	1.00	3.75	36.40	0.000	1.000	56.75	0.00	56.75
5	169.00	AM-X-CD-16-65-00T-RET	1	13.758	15.134	0.75	1.00	6.01	48.50	0.000	1.000	91.03	0.00	91.03
6	167.00	HPA-65R-BUU-H6	3	13.758	15.134	0.77	0.90	22.17	153.00	0.000	3.000	335.52	0.00	1006.56
7	167.00	Raycap DC6-48-60-18-8F	3	13.758	15.134	0.60	0.90	2.66	98.40	0.000	3.000	40.25	0.00	120.74
8	167.00	Reinforced T-Arms	3	13.716	15.087	0.56	0.75	23.63	1350.00	0.000	0.000	356.44	0.00	0.00
9	167.00	HPA-65R-BBU-H8	3	13.758	15.134	0.71	0.90	27.69	204.00	0.000	3.000	419.01	0.00	1257.03
10	167.00	Ericsson RRUS-E2 RRUs	3	13.758	15.134	0.60	0.90	7.00	180.00	0.000	3.000	105.95	0.00	317.86
11	167.00	SBNHH-1D65A	3	13.758	15.134	0.75	0.90	13.18	100.50	0.000	3.000	199.42	0.00	598.27
12	167.00	Ericsson RRUS-12 RRUs	6	13.758	15.134	0.56	0.90	10.55	348.00	0.000	3.000	159.61	0.00	478.82
13	167.00	Ericsson RRUS 32 RRUs	3	13.758	15.134	0.60	0.90	7.00	231.00	0.000	3.000	105.95	0.00	317.86
14	167.00	Ericsson RRUS A2	6	13.758	15.134	0.56	0.90	6.23	132.00	0.000	3.000	94.24	0.00	282.73
15	160.00	LNX-6515DS-A1M	3	13.614	14.975	0.64	0.80	22.02	150.90	0.000	0.000	329.80	0.00	0.00
16	160.00	Air21 B2A/B4P	3	13.614	14.975	0.69	0.80	12.57	274.50	0.000	0.000	188.24	0.00	0.00
17	160.00	T-Arm	3	13.614	14.975	0.56	0.75	16.88	1200.00	0.000	0.000	252.71	0.00	0.00
18	160.00	Ericsson KRY 112-114/1	3	13.614	14.975	0.56	0.80	0.69	33.00	0.000	0.000	10.32	0.00	0.00
19	160.00	Air21 B4A/B2P	3	13.614	14.975	0.69	0.80	12.57	270.90	0.000	0.000	188.24	0.00	0.00
20	147.00	Antel LPA-80080/4CF	2	13.415	14.756	1.36	0.80	7.10	24.00	0.000	0.000	104.76	0.00	0.00
21	147.00	Alcatel 2x60-1900 RRH	3	13.415	14.756	0.54	0.80	2.43	120.00	0.000	0.000	35.83	0.00	0.00
22	147.00	RRH 2X90 AWS	3	13.415	14.756	0.54	0.80	5.63	192.00	0.000	0.000	83.05	0.00	0.00
23	147.00	Swedcom SC-E 6014 rev2	4	13.415	14.756	0.78	0.80	10.34	60.00	0.000	0.000	152.53	0.00	0.00
24	147.00	FD9R6004/2C-3L	6	13.415	14.756	0.50	0.80	1.07	18.60	0.000	0.000	15.81	0.00	0.00
25	147.00	Andrew SBNHH-1D65B	6	13.415	14.756	0.66	0.80	32.19	240.00	0.000	0.000	475.02	0.00	0.00
26	147.00	ALU 2X60-770 U RRH	3	13.415	14.756	0.61	0.80	6.38	166.80	0.000	0.000	94.20	0.00	0.00
27	147.00	RFS DB-T1-6Z-8AB-0Z	2	13.415	14.756	0.57	0.80	5.45	88.00	0.000	0.000	80.46	0.00	0.00
28	147.00	Low Profile Platform	1	13.415	14.756	1.00	1.00	26.00	1200.00	0.000	0.000	383.67	0.00	0.00

Totals: 7,368.84

4,666.87

Total Applied Force Summary

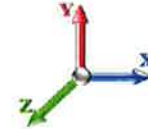
Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 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		162.20	1580.77	0.00	0.00
10.00		158.48	1548.51	0.00	0.00
15.00		154.79	1516.26	0.00	0.00
20.00		158.81	1484.01	0.00	0.00
25.00		161.03	1451.76	0.00	0.00
30.00		162.01	1419.51	0.00	0.00
35.00		162.10	1387.26	0.00	0.00
40.00		161.49	1355.01	0.00	0.00
45.00		160.32	1322.76	0.00	0.00
46.50		47.49	390.54	0.00	0.00
50.00		112.66	1683.92	0.00	0.00
53.25		103.73	1535.34	0.00	0.00
55.00		55.35	443.96	0.00	0.00
60.00		157.36	1246.68	0.00	0.00
65.00		154.76	1214.43	0.00	0.00
70.00		151.90	1182.18	0.00	0.00
75.00		148.81	1149.93	0.00	0.00
80.00		145.50	1117.68	0.00	0.00
85.00		142.01	1085.43	0.00	0.00
90.00		138.34	1053.18	0.00	0.00
95.00		134.51	1020.93	0.00	0.00
100.00		133.38	1692.79	0.00	0.00
105.00		129.30	862.88	0.00	0.00
110.00		125.08	835.24	0.00	0.00
115.00		120.74	807.60	0.00	0.00
120.00		116.29	779.95	0.00	0.00
125.00		111.73	752.31	0.00	0.00
130.00		107.08	724.67	0.00	0.00
135.00		102.32	697.02	0.00	0.00
140.00		97.48	669.38	0.00	0.00
145.00		92.55	641.74	0.00	0.00
145.25		4.48	31.36	0.00	0.00
147.00	(30) attachments	1456.92	2405.16	0.00	0.00
148.50		26.59	230.57	0.00	0.00
150.00		26.14	101.43	0.00	0.00
155.00		83.98	329.13	0.00	0.00
160.00	(15) attachments	1048.12	2244.61	0.00	0.00
165.00		73.60	233.58	0.00	0.00
167.00	(33) attachments	1844.31	2886.46	0.00	4379.87
169.00	(12) attachments	482.92	620.59	0.00	455.85
	Totals:	9,116.67	43,736.57	0.00	4,835.72

Linear Appurtenance Segment Forces (Factored)

Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

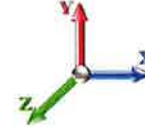


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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

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)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.006	0.000	9.018	0.00	1.37
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.006	0.000	9.018	0.00	5.20
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.006	0.000	9.018	0.00	1.37
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.006	0.000	9.018	0.00	5.20
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	9.020	0.00	1.37
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	9.020	0.00	5.20
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	9.483	0.00	1.37
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	9.483	0.00	5.20
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	9.858	0.00	1.37
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	9.858	0.00	5.20
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	10.175	0.00	1.37
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	10.175	0.00	5.20
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	10.452	0.00	1.37
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	10.452	0.00	5.20
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	10.697	0.00	1.37
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	10.697	0.00	5.20
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	10.919	0.00	1.37
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	10.919	0.00	5.20
46.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.008	0.000	10.981	0.00	0.41
46.50	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.008	0.000	10.981	0.00	1.56
50.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.008	0.000	11.121	0.00	0.96
50.00	Step bolts (ladder)	Yes	3.50	0.000	0.00	0.00	0.00	0.008	0.000	11.121	0.00	3.64
53.25	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.008	0.000	11.243	0.00	0.89
53.25	Step bolts (ladder)	Yes	3.25	0.000	0.00	0.00	0.00	0.008	0.000	11.243	0.00	3.38
55.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.008	0.000	11.307	0.00	0.48
55.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.008	0.000	11.307	0.00	1.82
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	11.479	0.00	1.37
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	11.479	0.00	5.20
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	11.640	0.00	1.37
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	11.640	0.00	5.20
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	11.791	0.00	1.37
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	11.791	0.00	5.20
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	11.933	0.00	1.37
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	11.933	0.00	5.20
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	12.068	0.00	1.37
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	12.068	0.00	5.20
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	12.196	0.00	1.37
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	12.196	0.00	5.20
90.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	12.318	0.00	1.37
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	12.318	0.00	5.20
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	12.434	0.00	1.37
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	12.434	0.00	5.20
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.011	0.000	12.546	0.00	1.37
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	12.546	0.00	5.20
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.011	0.000	12.652	0.00	1.37
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	12.652	0.00	5.20
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	12.755	0.00	1.37

Linear Appurtenance Segment Forces (Factored)

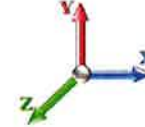
Structure: CT11794-S-SBA	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 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)
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	12.755	0.00	5.20
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	12.854	0.00	1.37
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	12.854	0.00	5.20
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.013	0.000	12.950	0.00	1.37
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	12.950	0.00	5.20
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.013	0.000	13.042	0.00	1.37
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	13.042	0.00	5.20
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.014	0.000	13.131	0.00	1.37
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.014	0.000	13.131	0.00	5.20
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.015	0.000	13.218	0.00	1.37
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	13.218	0.00	5.20
140.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.015	0.000	13.302	0.00	1.37
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	13.302	0.00	5.20
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.016	0.000	13.383	0.00	1.37
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.016	0.000	13.383	0.00	5.20
145.25	Safety Cable	Yes	0.25	0.000	0.38	0.01	0.00	0.017	0.000	13.387	0.00	0.07
145.25	Step bolts (ladder)	Yes	0.25	0.000	0.00	0.00	0.00	0.017	0.000	13.387	0.00	0.26
147.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.017	0.000	13.415	0.00	0.48
147.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.017	0.000	13.415	0.00	1.82
148.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.017	0.000	13.439	0.00	0.41
148.50	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.017	0.000	13.439	0.00	1.56
150.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.017	0.000	13.462	0.00	0.41
150.00	Step bolts (ladder)	Yes	1.50	0.000	0.00	0.00	0.00	0.017	0.000	13.462	0.00	1.56
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	13.539	0.00	1.37
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.018	0.000	13.539	0.00	5.20
160.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	13.614	0.00	1.37
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.020	0.000	13.614	0.00	5.20
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	13.687	0.00	1.37
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.021	0.000	13.687	0.00	5.20
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.022	0.000	13.716	0.00	0.55
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.022	0.000	13.716	0.00	2.08
169.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.023	0.000	13.744	0.00	0.55
169.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.023	0.000	13.744	0.00	2.08
Totals:											0.0	221.9

Final Analysis Summary

Structure: CT11794-S-SBA
Site Name: East Lyme 1
Height: 169.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

5/25/2017

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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	38.2	0.00	52.42	0.00	0.00	4749.89
0.9D + 1.6W 97 mph Wind	38.2	0.00	39.30	0.00	0.00	4697.13
1.2D + 1.0Di + 1.0Wi 50 mph Wind	10.7	0.00	79.54	0.00	0.00	1300.17
1.2D + 1.0E	1.8	0.00	52.48	0.00	0.00	241.22
0.9D + 1.0E	1.8	0.00	39.36	0.00	0.00	238.25
1.0D + 1.0W 60 mph Wind	9.1	0.00	43.73	0.00	0.00	1130.25

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	-52.42	-38.21	0.00	-4749.8	0.00	-4749.8	5562.36	2781.1	13652.7	6836.50	0.00	0.704
0.9D + 1.6W 97 mph Wind	-39.30	-38.18	0.00	-4697.1	0.00	-4697.1	5562.36	2781.1	13652.7	6836.50	0.00	0.694
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-79.54	-10.69	0.00	-1300.1	0.00	-1300.1	5562.36	2781.1	13652.7	6836.50	0.00	0.204
1.2D + 1.0E	-7.69	-1.13	0.00	-18.46	0.00	-18.46	907.84	453.92	797.93	399.56	148.50	0.055
0.9D + 1.0E	-5.77	-1.11	0.00	-18.19	0.00	-18.19	907.84	453.92	797.93	399.56	148.50	0.052
1.0D + 1.0W 60 mph Wind	-43.73	-9.13	0.00	-1130.2	0.00	-1130.2	5562.36	2781.1	13652.7	6836.50	0.00	0.173

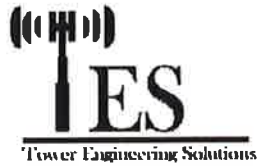
Base Plate Summary

Structure: CT11794-S-SB	Code: EIA/TIA-222-G	5/25/2017
Site Name: East Lyme 1	Exposure: D	
Height: 169.00 (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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Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 50.00	Bolt Circle: 66.75
Moment (kip-ft): 6776.67	Width (in): 72.75	Number Bolts: 20.00
Axial (kip): 62.81	Style: Round	Bolt Type: 2.25" 18J
Shear (kip): 55.54	Polygon Sides: 0.00	Bolt Diameter (in): 2.25
Analysis	Clip Length (in): 0.00	Yield (ksi): 75.00
Moment (kip-ft): 4749.89	Effective Len (in): 13.07	Ultimate (ksi): 100.00
Axial (kip): 79.54	Moment (kip-in): 577.58	Arrangement: Radial
Shear (kip): 38.21	Allow Stress (ksi): 67.50	Cluster Dist (in): 0.00
	Applied Stress (ksi): 0.00	Start Angle (deg): 0.00
Moment Design %: 70.09	Stress Ratio: 0.52	Compression
		Force (kip): 174.76
		Allowable (kip): 260.00
		Ratio: 0.69
		Tension
		Force (kip): 166.81
		Allowable (kip): 260.00
		Ratio: 0.66



Monopole Mat Foundation Design

Date

5/25/2017

Customer Name:	Verizon	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	169
Site Number:	CT11794-S-SBA	Engineer Name:	D. Zhou
Engr. Number:	34546	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Monopole

Analysis or Design?

Analysis

Base Reactions (Factored):

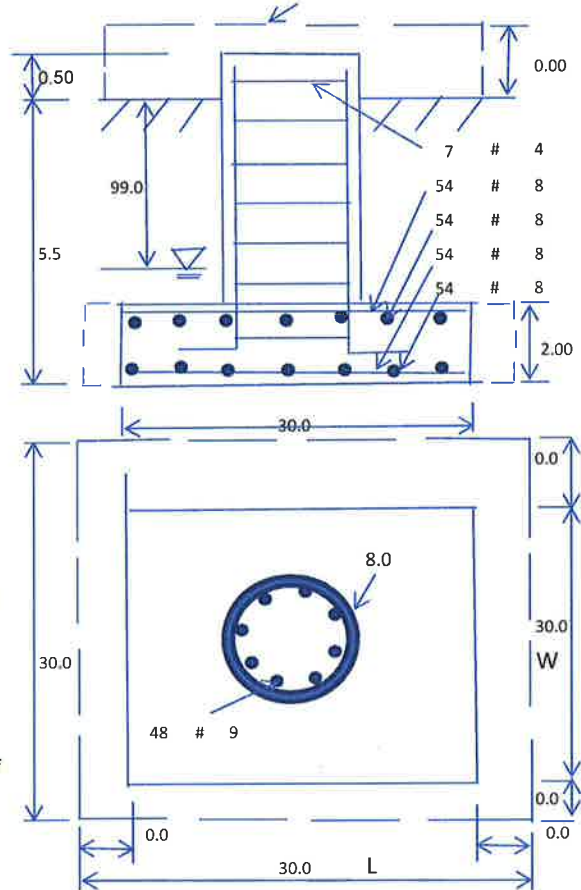
Axial Load (Kips):	52.4	Shear Force (Kips):	38.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4749.9

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	5.5
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	2.00
Length of Pad (ft.):	30	Width of Pad (ft.):	30
Final Length of pad (ft)	30.0	Final width of pad (ft):	30.0
Control Value for Cell D18:	0	Control Value for Cell F18:	0

Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	48	Tie Spacing (in):	12.0	
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):	54	Qty. of Rebar in Pad (W):	54	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	54	Qty. of Rebar in Pad (W):	54	



Soil Design Parameters:

Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	50.0	Pcf
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	15000	Ultimate Skin Friction:	175	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	Angle from Top of Pad:
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00	Angle from Botm of Pad:
				30
				25
				25

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	2974.07	Total Dry Soil Weight (Kips):	356.89
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	356.89	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2001.06	Total Dry Concrete Weight (Kips):	300.16
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	300.16	Total Vertical Load on Base (Kips):	709.45

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	1979	<	Allowable Factored Soil Bearing (psf):	11250	0.18	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	9656.1	>	Design Factored Momont (kips-ft):	4979	0.52	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.94					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

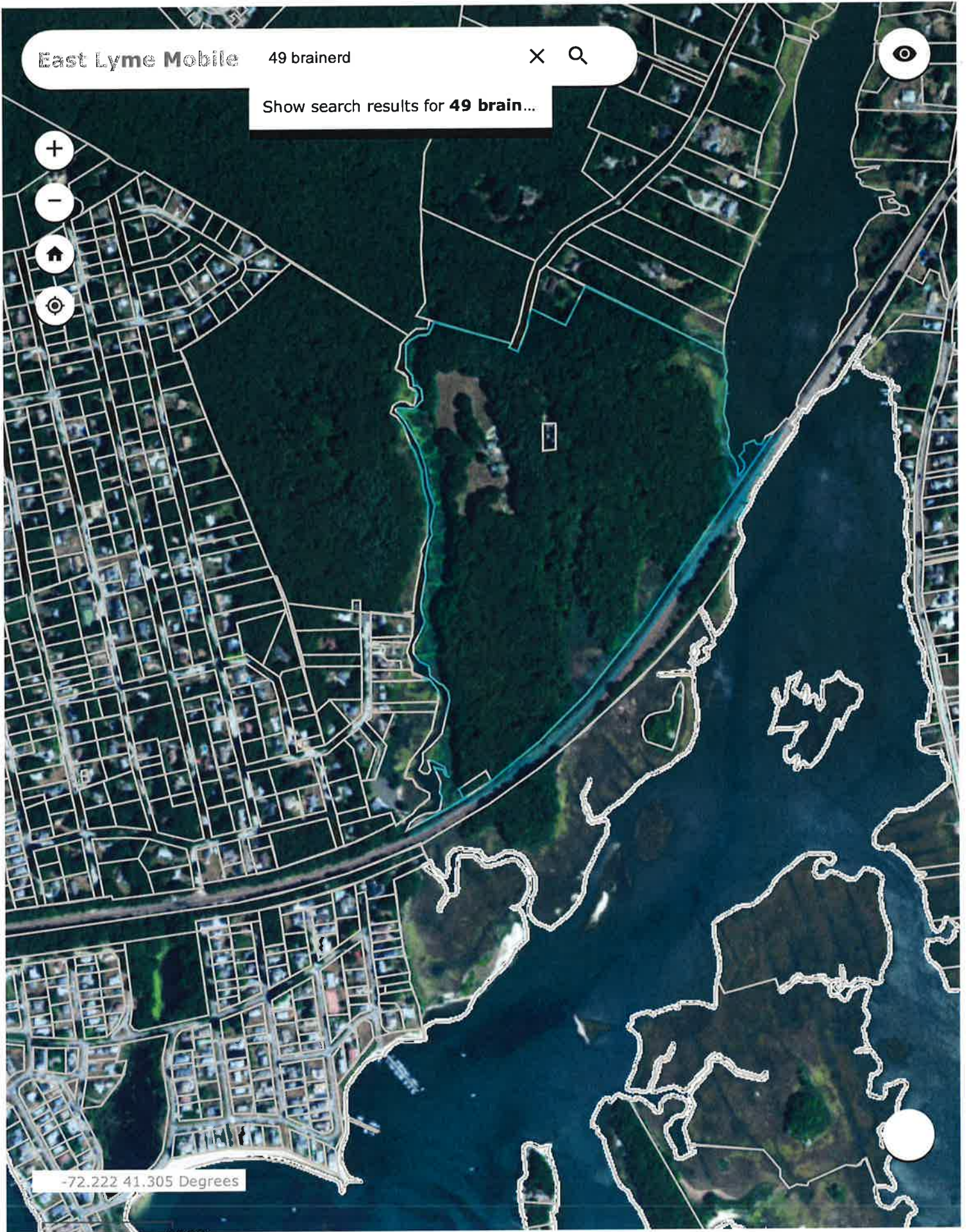
(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	1.00	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	9280.8	> Design Factored Moment (Mu, Kips-Ft)	4902.7	0.53	OK!
Calculated Shear Capacity (Kips):	840.3	> Design Factored Shear (Kips):	38.2	0.05	OK!
Calculated Tension Capacity (Tn, Kips):	2592.0	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	12712.3	> Design Factored Axial Load (Pu Kips):	52.4	0.00	OK!
Moment & Axial Strength Combination:	0.53	OK! Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.007	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	700.1	> One-Way Factored Shear (L-D. Kips):	288.6	0.41	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	700.1	> One-Way Factored Shear (W-D., Kips):	288.6	0.41	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	803.4	> One-Way Factored Shear (C-C, Kips):	296.5	0.37	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0058	OK! Lower Steel Pad Reinf. Ratio (W-Direct	0.0058		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	3734.7	> Moment at Bottom (L-Direct. K-Ft):	1340.6	0.36	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	3734.7	> Moment at Bottom (W-Direct. K-Ft):	1340.6	0.36	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	5215.6	> Moment at Bottom (C-C Dir. K-Ft):	1895.9	0.36	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0058	OK! Upper Steel Reinf. Ratio (W-Direct.):	0.0058		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	3734.7	> Moment at the top (L-Dir Kips-Ft):	229.9	0.06	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	3734.7	> Moment at the top (W-Dir Kips-Ft):	229.9	0.06	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	5215.6	> Moment at the top (C-C Direc. K-Ft):	631.2	0.12	OK!

ATTACHMENT 4



49 BRAINERD RD

Location 49 BRAINERD RD

Mblu 07.4/ 21/ / /

Acct# 005680

Owner SAMUELSEN CHRISTOPHER

Assessment \$359,810

Appraisal \$667,600

PID 5939

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2016	\$231,700	\$435,900	\$667,600

Assessment			
Valuation Year	Improvements	Land	Total
2016	\$162,190	\$197,620	\$359,810

Owner of Record

Owner SAMUELSEN CHRISTOPHER
Co-Owner
Address 49 BRAINERD RD
NIANTIC, CT 06357

Sale Price \$0
Certificate
Book & Page 831/ 222
Sale Date 07/10/2009
Instrument 04

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
SAMUELSEN CHRISTOPHER & SAMUELSEN CHRISTOPHER	\$0		788/ 266	04	10/24/2007
SAMUELSEN CHRISTOPHER	\$560,000		748/ 207	07	07/13/2006
BOUTIN WYNN R	\$0		737/ 532	01	04/03/2006
BOUTIN ZACHARY H OR WYNN R	\$0		542/ 147	08	10/01/2001

Building Information

Building 1 : Section 1

Year Built: 1890
Living Area: 2,485
Replacement Cost: \$284,098
Building Percent Good: 67

Replacement Cost

Less Depreciation: \$190,300

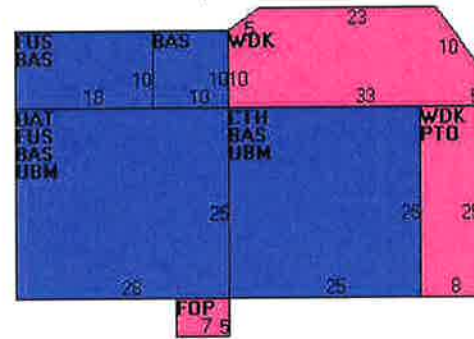
Building Attributes	
Field	Description
Style	Conventional
Model	Residential
Grade:	Good
Stories:	2 Stories
Occupancy	1
Exterior Wall 1	Wood Shingle
Exterior Wall 2	
Roof Structure:	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	Ceram Clay Til
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	Central
Total Bedrooms:	4 Bedrooms
Total Bthrms:	2
Total Half Baths:	1
Total Xtra Fixtrs:	
Total Rooms:	8 Rooms
Bath Style:	Modern
Kitchen Style:	Modern

Building Photo



(<http://images.vgsi.com/photos2/EastLymeCTPhotos//\01\00\6>)

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	1,605	1,605
FUS	Upper Story, Finished	880	880
CTH	Cathedral Ceiling	625	0
FOP	Porch, Open, Finished	35	0
PTO	Patio	200	0
UAT	Attic, Unfinished	700	0
UBM	Basement, Unfinished	1,325	0
WDK	Deck, Wood	599	0
		5,969	2,485

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land**Land Use**

Use Code 1010
Description Single Fam MDL-01
Zone R40
Neighborhood 0060
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 51.31
Frontage 0
Depth 0
Assessed Value \$197,620
Appraised Value \$435,900

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
BRN4	1 STY LFT&BSMT			378 S.F.	\$3,400	1
SHP1	WORK SHOP AVE			841 S.F.	\$21,000	1
FGR2	GARAGE-GOOD			841 S.F.	\$16,800	1
SHD1	SHED FRAME			45 S.F.	\$200	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$231,900	\$435,900	\$667,800
2014	\$231,900	\$435,900	\$667,800
2013	\$231,900	\$435,900	\$667,800

Assessment			
Valuation Year	Improvements	Land	Total
2015	\$162,330	\$193,900	\$356,230
2014	\$162,330	\$193,900	\$356,230
2013	\$162,330	\$193,900	\$356,230