



Filed by:
Kri Pelletier, Property Specialist - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
508.251.0720 x 3804 - kpelletier@sbsite.com

November 7, 2017

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

Notice of Exempt Modification
86 Voluntown Road, Stonington, CT
41 24 19.94 N
-71 50 42.89 W
Sprint #: CT03XC108_2.5

Dear Ms. Bachman:

Sprint currently maintains antennas at the 195-foot level of the existing 196-foot Monopole at 86 Voluntown Road in Stonington, CT. The Property is owned by Blackrock Properties II, LLC. The Tower is owned by SBA Towers, LLC. Sprint now intends to add (3) newer technology cell antennas at the 195-foot level of the tower.

Please note: previous approval was given by the Siting Council on 6/16/14 under EM-SPRINT-137-140528. A Notification of Construction Not Complete was sent 9/15/15. Sprint now intends to resume construction. The proposed full scope of work is as follows:

Remove: None

Remove and Replace: None

Install:

- (3) Alcatel Lucent - TD-RRH8x20-25 RRHs
- (3) RFS - APXVTM14-C-120 – Panel Antennas
- (1) 1-1/4" Hybrid

Existing Equipment to Remain (Including entitlements):

- (3) RFS - APXVSPP18-C-A20 – Panel Antennas
- (3) Alcatel Lucent - 1900MHz RRHs
- (3) Alcatel Lucent - 800MHz RRHs
- (3) Alcatel Lucent - 800MHz Filters
- (4) RFS - ACU-A20-N – RETs
- (3) 1-1/4" Hybrid



This facility was originally approved prior to the Council's jurisdiction, through Special Use Permit granted 7/2/98 by the Town of Stonington's Planning and Zoning Commission. Case PZ9823SPA approved a Multi-Tenant monopole telecommunication facility and placement of associated equipment. No restrictions were placed on the tower with regard to improvements and/or upgrades. This modification complies with all conditions.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §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 the Town of Stonington's First Selectman, Robert Simmons, Director of Planning, Jason Vincent, as well as to the property owner, Blackrock Properties II, LLC. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16.50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modification 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 emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Kri Pelletier

Property Specialist

SBA COMMUNICATIONS CORPORATION

134 Flanders Rd., Suite 125

Westborough, MA 01581

508.251.0720 x3804 + T

508.366.2610 + F

203.446.7700 + C

kpelletier@sbsite.com

Attachments

cc: Robert Simmons, First Selectman / with attachments

Town of Stonington, 152 Elm Street, Stonington, CT 06378

Jason Vincent, Director of Planning / with attachments

Town of Stonington, 152 Elm Street, Stonington, CT 06378

Blackrock Properties II, LLC / with attachments

602 West Market Street, Germantown, OH 45327

Per call of 11/6/17 to Blackrock Properties, FedEx delivery address is as stated above

Also note: new PO Box #46, Germantown, OH 45327



POWER DENSITY

SPRINT Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXVSPPI8-C-A20	Make / Model:	RFS APXVSPPI8-C-A20	Make / Model:	RFS APXVSPPI8-C-A20
Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd
Height (AGL):	195 feet	Height (AGL):	195 feet	Height (AGL):	195 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	10	Channel Count	10	Channel Count	10
Total TX Power(W):	220 Watts	Total TX Power(W):	220 Watts	Total TX Power(W):	220 Watts
ERP (W):	7,537.38	ERP (W):	7,537.38	ERP (W):	7,537.38
Antenna A1 MPE%	0.86 %	Antenna B1 MPE%	0.86 %	Antenna C1 MPE%	0.86 %
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVTM14-C-120	Make / Model:	RFS APXVTM14-C-120	Make / Model:	RFS APXVTM14-C-120
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	195 feet	Height (AGL):	195 feet	Height (AGL):	195 feet
Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts
ERP (W):	6,224.72	ERP (W):	6,224.72	ERP (W):	6,224.72
Antenna A2 MPE%	0.63 %	Antenna B2 MPE%	0.63 %	Antenna C2 MPE%	0.63 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	1.49 %
Nextel	0.19 %
T-Mobile	1.55 %
MetroPCS	0.51 %
AT&T	1.65 %
Verizon Wireless	2.91 %
Site Total MPE %:	8.30 %

SPRINT Sector A Total:	1.49 %
SPRINT Sector B Total:	1.49 %
SPRINT Sector C Total:	1.49 %
Site Total:	8.30 %

SPRINT_Max Values per Frequency Band / Technology Per Sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	437.55	195	0.44	850 MHz	567	0.08%
Sprint 850 MHz LTE	2	437.55	195	0.88	850 MHz	567	0.16%
Sprint 1900 MHz (PCS) CDMA	5	622.47	195	3.13	1900 MHz (PCS)	1000	0.31%
Sprint 1900 MHz (PCS) LTE	2	1,556.18	195	3.13	1900 MHz (PCS)	1000	0.31%
Sprint 2500 MHz (BRS) LTE	8	778.09	195	6.26	2500 MHz (BRS)	1000	0.63%
						Total:	1.49%

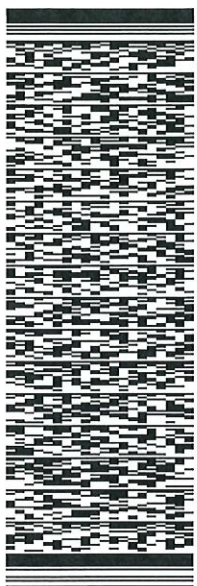
ORIGIN ID:BBFA (508) 614-0389
RICK WOODS
SBA NETWORK SERVICES INC
134 FLANDERS ROAD
SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 07NOV17
ACTWGT: 1.00 LB
CAD: 10584304/NET3920
BILL SENDER

TO
ROBERT SIMMONS, FIRST SELECTMAN
TOWN OF STONINGTON
152 ELM STREET

STONINGTON CT 06378
(508) 251-0720 X 3804 REF: 10-56-92009-6039
INV: DEPT:
PO:

549J3IF877104C



J172117091301uv

TRK# 7706 8808 2993
0201
WED - 08 NOV 12:00P
PRIORITY OVERNIGHT

EBGONA

06378
CT-US BDL



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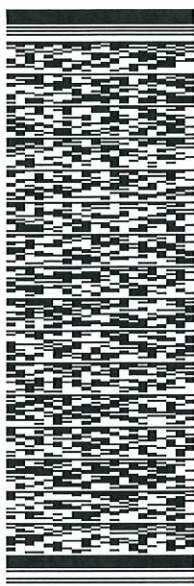
ORIGIN ID:BBFA (508) 614-0389
RICK WOODS
SBA NETWORK SERVICES INC
134 FLANDERS ROAD
SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 07NOV17
ACT WT/GT: 1.00 LB
CAD: 105843304/NET3920
BILL SENDER

TO JASON VINCENT, DIRECTOR OF PLANNING
TOWN OF STONINGTON
152 ELM STREET

STONINGTON CT 06378
(508) 251-0720 X.3804 REF: 10-56-92009-6039
INV. DEPT:
PO:

549J3/F877/104C



J172117091301uv

TRK# 7706 8809 9944
0201

WED - 08 NOV 12:00P
PRIORITY OVERNIGHT

EBGONA

06378
CT-US BDL



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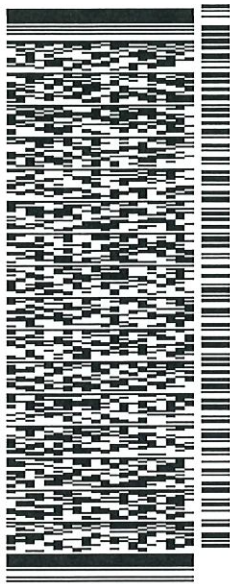
ORIGIN ID:BBFA (508) 614-0389
RICK WOODS
SBA NETWORK SERVICES INC
134 FLANDERS ROAD
SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 07NOV17
ACT WT/GT: 1.00 LB
CAD: 105843304/NET/3920
BILL SENDER

TO ATTN: MINDY THOMAE
BLACKROCK PROPERTIES II LLC
602 WEST MARKET STREET

GERMANTOWN OH 45327
(508) 251-0720 X 3804 REF: 10-56-92009-6089
NY DEPT:
PO

549.33F877104C



J172117091301uv

TRK# 7706 8812 0417 WED - 08 NOV 10:30A
0201 PRIORITY OVERNIGHT

XX MWOA

OH-US DAY 45327



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Property Information

Property Location	86 VOLUNTOWN RD	Fire District	Pawcatuck
Owner	BLACKROCK PROPERTIES II LLC	Census Tract	7051
Co-Owner		Neighborhood	3000
Mailing Address	PO BOX 4443 → 46 Germantown MIAMISBURG OH 45343 → 45327	Zoning Code	HI
Land Use	3030 ACC CM LND	Acreage	0.46
Land Class	C	Utilities	
Survey Map #	NA	Lot Setting/Desc	Suburban Level
School District		Trash Day	TH
		Polling Place (District)	Pawcatuck Fire 2

Photo

Sketch

Per 11/6/17 call w/ Mindy Thomas of BlackRock Properties,
 → PO Box is now 46 in Germantown, OH.
 → FedEx notifications can be sent to: 602 West Market St.
 Germantown, OH 45327

Primary Construction Details

Year Built	
Stories	
Building Style	
Building Use	
Building Condition	
Floors	
Total Rooms	

Bedrooms	0
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

Exterior Walls	
Interior Walls	
Heating Type	
Heating Fuel	
AC Type	
Gross Bldg Area	
Total Living Area	0



Valuation Summary (Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Outbuildings	117400	82100
Land	88100	61700
Total	205500	143800

Outbuilding and Extra Items

Type	Description
FENCE-8' CHAIN	230.00 L.F.
CELL EQ SHELTER	240.00 S.F.
PLATFORM	120.00 SF
PLATFORM	180.00 SF
PLATFORM	36.00 SF
PLATFORM	
CELL EQ SHELTER	240.00 S.F.
CELL TOWER	

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area		0

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
BLACKROCK PROPERTIES II LLC	439/ 311	7/20/1999	
BLACKROCK PROPERTIES II LLC	421/ 916	7/17/1998	35000
BLACKROCK PROPERTIES 11 LLC	421/ 427	7/9/1998	
PRACHNIAK STANLEY & AMELIA &	309/ 175	2/22/1989	
PRACHNIAK STANLEY & PAUL G HOLLAND	245/ 869	12/20/1983	
OLIVERIO DANIEL & MICHAEL A	202/ 75	6/6/1974	



RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

SPRINT Existing Facility

Site ID: CT03XC108

Stonington East
86 Voluntown Road
Stonington, CT 06379

October 30, 2017

EBI Project Number: 6217004755

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	8.30 %



October 30, 2017

SPRINT

Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Emissions Analysis for Site: **CT03XC108 – Stonington East**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **86 Voluntown Road, Stonington, CT**, for the purpose of determining whether the emissions from the Proposed SPRINT Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 850 MHz Band is approximately $567 \mu\text{W}/\text{cm}^2$. The general population exposure limit for the 1900 MHz (PCS) and 2500 MHz (BRS) bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.



Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed SPRINT Wireless antenna facility located at **86 Voluntown Road, Stonington, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since SPRINT is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 1 CDMA channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.
- 2) 2 LTE channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.
- 3) 5 CDMA channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 16 Watts per Channel.
- 4) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 5) 8 LTE channels (2500 MHz (BRS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.



- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the **RFS APXVSP18-C-A20 and the RFS APXVTM14-C-120** for transmission in the 850 MHz, 1900 MHz (PCS) and 2500 MHz (BRS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antenna mounting height centerlines of the proposed antennas are **195 feet** above ground level (AGL) for **Sector A**, **195 feet** above ground level (AGL) for **Sector B** and **195 feet** above ground level (AGL) for Sector C.
- 10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculations were done with respect to uncontrolled / general population threshold limits.



SPRINT Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXVSPPI8-C-A20	Make / Model:	RFS APXVSPPI8-C-A20	Make / Model:	RFS APXVSPPI8-C-A20
Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd
Height (AGL):	195 feet	Height (AGL):	195 feet	Height (AGL):	195 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	10	Channel Count	10	Channel Count	10
Total TX Power(W):	220 Watts	Total TX Power(W):	220 Watts	Total TX Power(W):	220 Watts
ERP (W):	7,537.38	ERP (W):	7,537.38	ERP (W):	7,537.38
Antenna A1 MPE%	0.86 %	Antenna B1 MPE%	0.86 %	Antenna C1 MPE%	0.86 %
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVTM14-C-120	Make / Model:	RFS APXVTM14-C-120	Make / Model:	RFS APXVTM14-C-120
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	195 feet	Height (AGL):	195 feet	Height (AGL):	195 feet
Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts
ERP (W):	6,224.72	ERP (W):	6,224.72	ERP (W):	6,224.72
Antenna A2 MPE%	0.63 %	Antenna B2 MPE%	0.63 %	Antenna C2 MPE%	0.63 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	1.49 %
Nextel	0.19 %
T-Mobile	1.55 %
MetroPCS	0.51 %
AT&T	1.65 %
Verizon Wireless	2.91 %
Site Total MPE %:	8.30 %

SPRINT Sector A Total:	1.49 %
SPRINT Sector B Total:	1.49 %
SPRINT Sector C Total:	1.49 %
Site Total:	8.30 %

SPRINT _ Max Values per Frequency Band / Technology Per Sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	437.55	195	0.44	850 MHz	567	0.08%
Sprint 850 MHz LTE	2	437.55	195	0.88	850 MHz	567	0.16%
Sprint 1900 MHz (PCS) CDMA	5	622.47	195	3.13	1900 MHz (PCS)	1000	0.31%
Sprint 1900 MHz (PCS) LTE	2	1,556.18	195	3.13	1900 MHz (PCS)	1000	0.31%
Sprint 2500 MHz (BRS) LTE	8	778.09	195	6.26	2500 MHz (BRS)	1000	0.63%
						Total:	1.49%

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the SPRINT facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

SPRINT Sector	Power Density Value (%)
Sector A:	1.49 %
Sector B:	1.49 %
Sector C:	1.49 %
SPRINT Maximum Total (per sector):	1.49 %
Site Total:	8.30 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **8.30 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.



Tower Engineering Solutions

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

Structural Analysis Report

Existing 196 ft Valmont Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT00595-S
Customer Site Name: Stonington East
Carrier Name: Sprint Nextel
Carrier Site ID / Name: CT03XC108 / Stonington East
Site Location: 86 Voluntown Road
Stonington, Connecticut
New London County
Latitude: 41.405539
Longitude: -71.845247

Analysis Result:

Max Structural Usage: 99.9% [Pass]
Max Foundation Usage: 82.0% [Pass]
Report Prepared by: Matthew Baker



10/26/17

Introduction

The purpose of this report is to summarize the analysis results on the 196 ft Valmont Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Tower Drawing prepared by Valmont, Order #17507-98 dated 6/23/96
Foundation Drawing	Foundation Drawing prepared by Valmont, Drawing #17507-S-01 dated 7/9/98
Geotechnical Report	Geotechnical Report prepared by SAGE, Project #G004 dated 6/10/98
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 $V_{ult} = 140.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 108.0$ 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:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_S = 0.16$, $S_1 = 0.058$

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
-	195.0	3	RFS - APXVSP18-C-A20 - Panel	Low Profile Platform	(4) 1 1/4"	Sprint Nextel
-		3	RFS - APXVTM14-C-120 - Panel			
-		3	ALU - 1900MHz RRH - RRU			
-		3	ALU - TD-RRH8x20-25 - RRU			
-		3	ALU - 800MHz RRH - RRU			
-		3	ALU - 800MHz - Filter			
-		4	RFS - ACU-A20-N - RET			
8	167.0	3	Ericsson - AIR 21 B2A B4P - Panel	Platform w/ Hand Rails w/ Reinforcement	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
9		3	Ericsson - AIR 21 B4A B2P - Panel			
10		3	Commscope - LNX-6515DS-A1M - Panel			
11		3	Ericsson - KRY 112 144/1 - TMA/TTA			
12		3	Ericsson - S11B12 - RRU			
13	150.0	6	Powerwave - 7700.00 - Panel	Low Profile Platform	(12) 1 5/8" (2) DC (1) Fiber	New Cingular
14		2	Powerwave - P65-17-XLH-RR - Panel			
15		1	KMW - AM-X-CD-14-65-00T - Panel			
16		6	Powerwave - LGP21401 - TMA/TTA			
17		6	Powerwave - LGP13519 - TMA/TTA			
18		6	Ericsson - RRUS 11 - RRU			
19		1	Raycap - DC6-48-60-18-8F - Surge Suppressor			
20	140.0	2	Commscope - LNX-8513DS-VTM - Panel	Low Profile Platform	*(12) 1 5/8" *(2) 1 5/8" Hybrid	Verizon
21		2	RFS - APL866513 - Panel			
22		6	Commscope - HBXX-6517DS-A2M - Panel			
23		3	Commscope - LNX-6414DS-A1M - Panel			
24		3	ALU - RRH2x40 700 - RRU			
25		3	ALU - RRH2x60-2100 - RRU			
26		1	RFS - DB-T1-6Z-8AB-0Z - Junction Box			
27	30.0	1	GPS	Standoff	-	Sprint

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	195.0	3	RFS - APXVSP18-C-A20 - Panel	Low Profile Platform	(4) 1 1/4"	Sprint Nextel
2		3	RFS - APXVTM14-C-120 - Panel			
3		3	Alcatel Lucent - 1900MHz RRH			
4		3	Alcatel Lucent - TD-RRH8x20-25			
5		3	Alcatel Lucent - 800MHz RRH			
6		3	Alcatel Lucent - 800MHz Filter			
7		4	RFS - ACU-A20-N - RET			

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

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	99.9%	82.0%	79.7%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Original Design Reactions	5768.0	46.3	59.5
Analysis Reactions	7415.8	62.0	65.4
Factored Reactions*	7786.8	62.5	80.3
% of Design Reactions	95.2%	99.3%	81.4%

* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design reactions.

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 1.9237 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.

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 99.92% at 0.0ft

Structure: CT00595-S-SBA
Site Name: Stonington East
Height: 196.00 (ft)
Base Elev: 0.000 (ft)

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

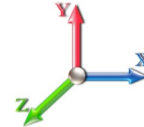
10/26/2017



Page: 1

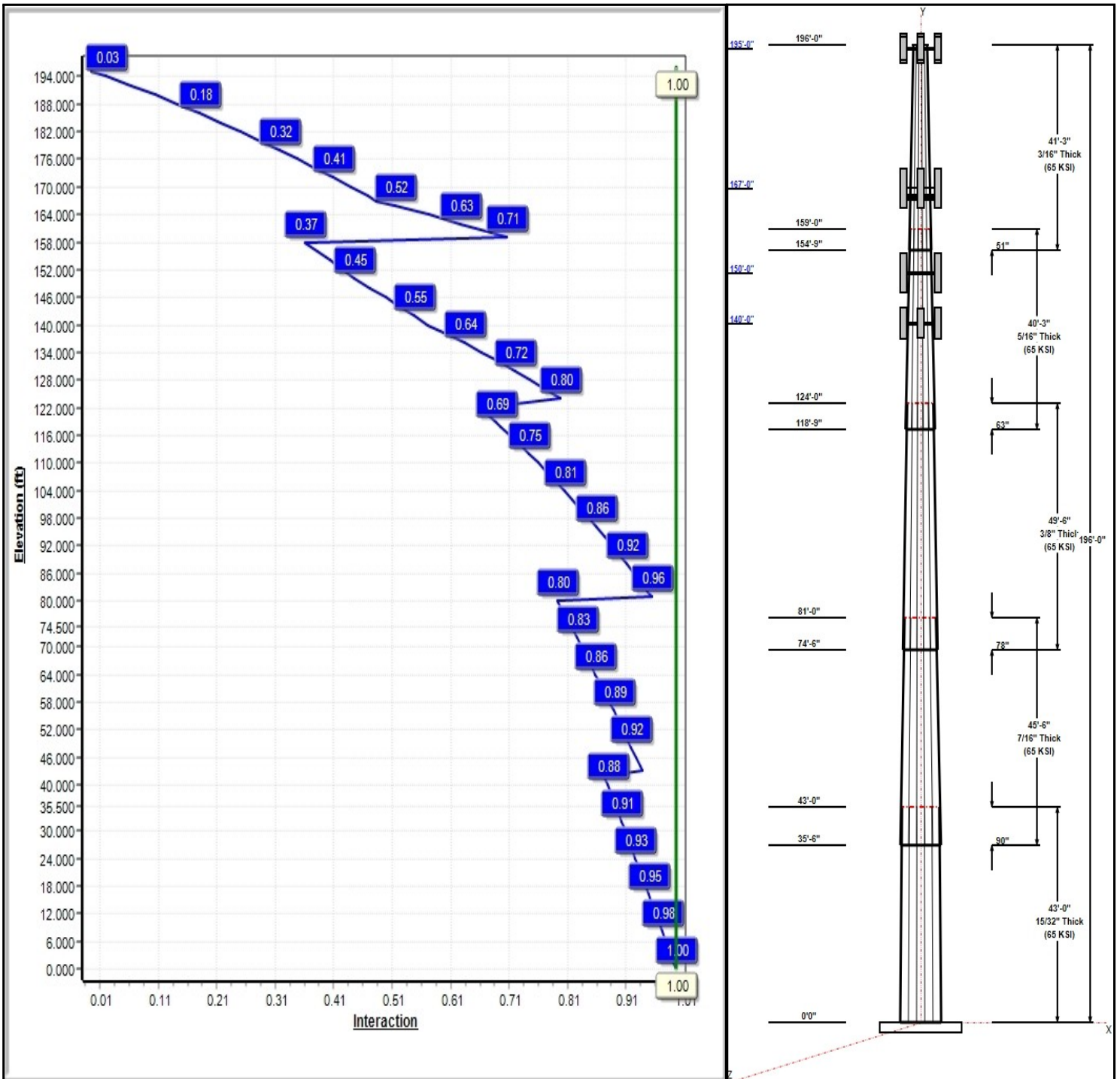
Dead Load Factor: 1.20
 Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 108 mph Wind



Iterations: 31

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Structure: CT00595-S-SBA

Type: Tapered
Site Name: Stonington East
Height: 196.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 12 Sided
Taper: 0.25120

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Shaft Properties

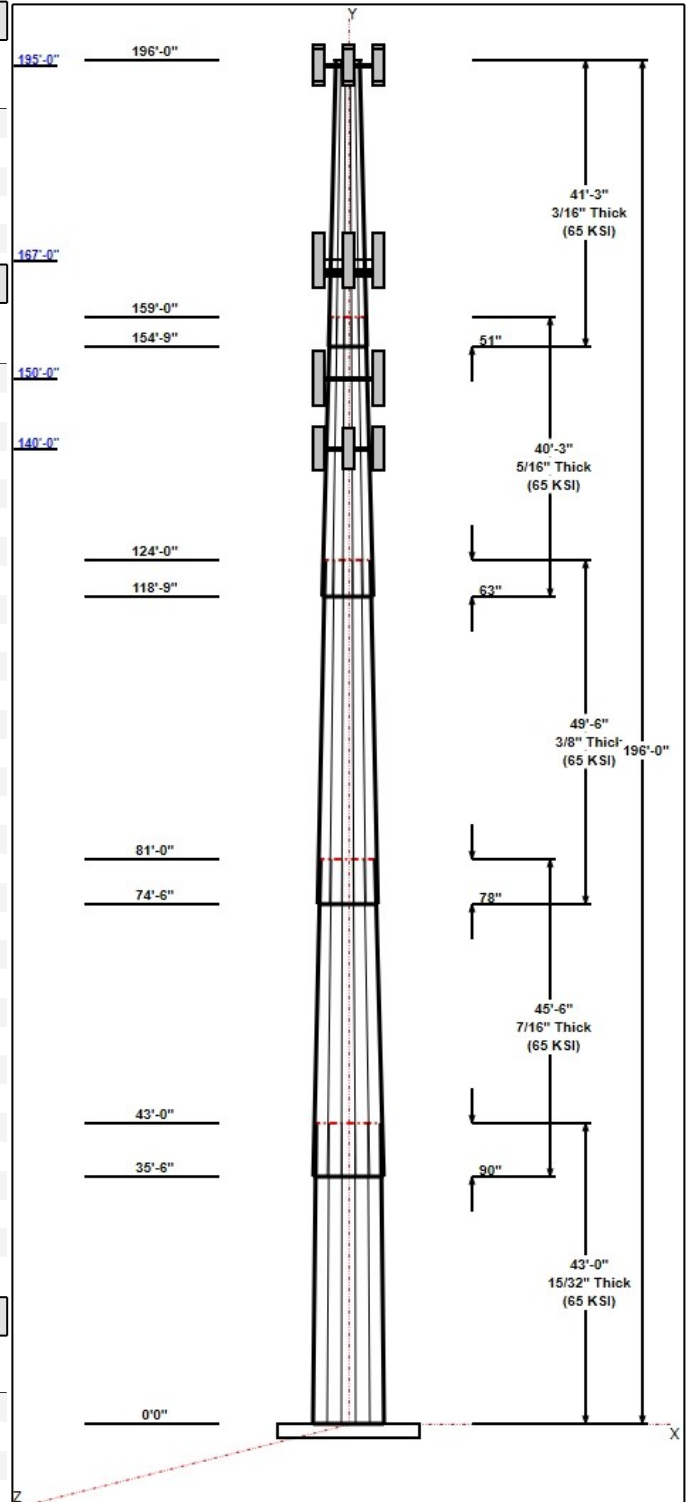
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	43.00	53.20	64.00	0.469		0.25120	65
2	45.50	44.53	55.96	0.438	Slip	0.25120	65
3	49.50	34.48	46.91	0.375	Slip	0.25120	65
4	40.25	26.31	36.42	0.313	Slip	0.25120	65
5	41.25	17.39	27.75	0.188	Slip	0.25120	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
196.00	196.00	1	6' Lightning rod	
195.00	195.00	3	APXVSPP18-C-A20	Sprint
195.00	195.00	3	APXVTM14-C-120	Sprint
195.00	195.00	3	1900MHz RRH	Sprint
195.00	195.00	3	TD-RRH8x20-25	Sprint
195.00	195.00	3	800MHz RRH	Sprint
195.00	195.00	3	800MHz Filter	Sprint
195.00	195.00	4	ACU-A20-N	Sprint
195.00	195.00	1	Low Profile Platform	Sprint
167.00	167.00	3	LNx-6515DS-A1M	T-Mobile
167.00	167.00	3	AIR 21, 1.3M, B2A B4P	T-Mobile
167.00	167.00	3	AIR 21, 1.3M, B4A B2P	T-Mobile
167.00	167.00	3	KRY 112 144/1	T-Mobile
167.00	167.00	3	S11B12	T-Mobile
167.00	167.00	1	Platform w/ Hand Rails	T-Mobile
150.00	150.00	6	7700.00	New Cingular
150.00	150.00	2	P65-17-XLH-RR	New Cingular
150.00	150.00	1	AM-X-CD-14-65-00T-RET	New Cingular
150.00	150.00	6	LGP21401	New Cingular
150.00	150.00	6	LGP13519	New Cingular
150.00	150.00	6	RRUS 11	New Cingular
150.00	150.00	1	DC6-48-60-18-8F	New Cingular
150.00	150.00	1	Low Profile Platform	New Cingular
140.00	140.00	2	LNx-8513DS-VTM	Verizon
140.00	140.00	2	APL866513	Verizon
140.00	140.00	6	HBXX-6517DS-A2M	Verizon
140.00	140.00	3	LNx-6414DS-A1M	Verizon
140.00	140.00	3	RRH2x40 700	Verizon
140.00	140.00	3	RRH2x60-2100	Verizon
140.00	140.00	1	DB-T1-6Z-8AB-OZ	Verizon
140.00	140.00	1	Low Profile Platform	Verizon
30.00	30.00	1	GPS	Sprint

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	195.00	Inside	1 1/4" Coax	Sprint
0.00	167.00	Inside	1 5/8" Coax	T-Mobile
0.00	167.00	Inside	1 5/8" Hybrid	T-Mobile
0.00	150.00	Inside	1 5/8" Coax	New Cingular
0.00	150.00	Inside	DC	New Cingular
0.00	150.00	Inside	Fiber	New Cingular
0.00	140.00	Outside	1 5/8" Coax	Verizon
0.00	140.00	Outside	1 5/8" Hybrid	Verizon



Structure: CT00595-S-SBA

Type: Tapered
Site Name: Stonington East
Height: 196.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 12 Sided
Taper: 0.25120

10/26/2017

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Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.5000	78.8	60.0	Polygon

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 108 mph Wind	7415.8	62.0	65.4
0.9D + 1.6W 108 mph Wind	7335.8	62.0	49.1
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1435.5	11.3	100.4
1.2D + 1.0E	123.5	1.1	65.5
0.9D + 1.0E	122.0	1.1	49.1
1.0D + 1.0W 60 mph Wind	1424.2	12.0	54.6

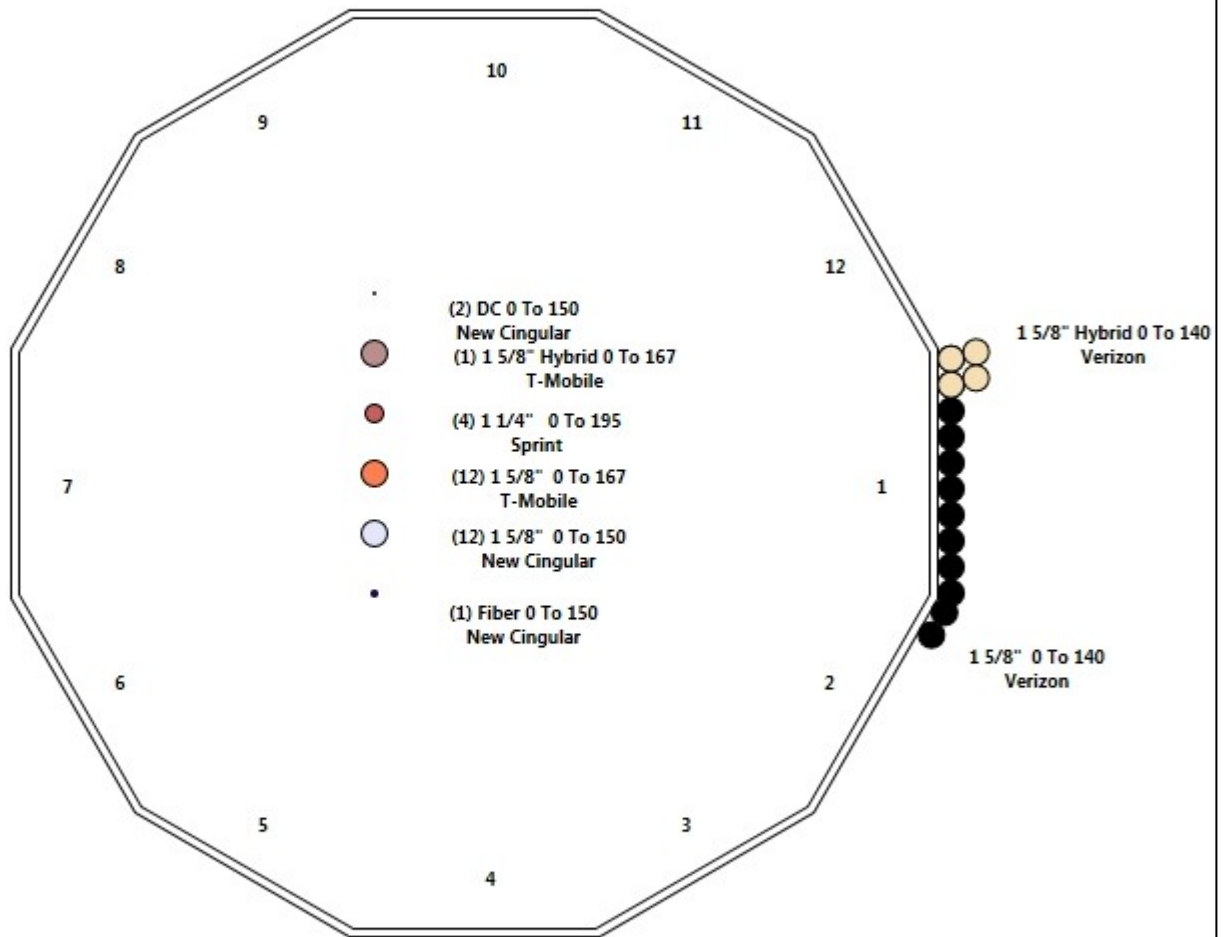
Structure: CT00595-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Stonington East
Height: 196.00 (ft)

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Shaft Properties

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	12	43.000	0.4688	65		0.00	12,838
2	12	45.500	0.4375	65	Slip	90.00	10,863
3	12	49.500	0.3750	65	Slip	78.00	8,200
4	12	40.250	0.3125	65	Slip	63.00	4,280
5	12	41.250	0.1875	65	Slip	51.00	1,897
Total Shaft Weight:							38,078

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	64.00	0.00	95.89	49402.09	34.44	136.53	53.20	43.00	79.59	28245.4	28.27	113.4	0.251199
2	55.96	35.50	78.21	30772.78	32.13	127.90	44.53	81.00	62.11	15411.7	25.13	101.7	0.251199
3	46.91	74.50	56.19	15532.14	31.38	125.10	34.48	124.00	41.18	6112.05	22.49	91.94	0.251199
4	36.42	118.7	36.33	6046.28	29.08	116.54	26.31	159.00	26.16	2256.60	20.42	84.19	0.251199
5	27.75	154.7	16.64	1613.96	37.52	148.01	17.39	196.00	10.39	392.30	22.71	92.75	0.251199

Load Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
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	196.00	6' Lightning rod	1	6.50	0.38	1.00	43.78	1.497	1.00	0.00	0.00
2	195.00	APXVSP18-C-A20	3	57.00	8.02	0.83	234.45	10.888	0.85	0.00	0.00
3	195.00	APXVTM14-C-120	3	56.00	6.34	0.79	221.56	7.485	0.81	0.00	0.00
4	195.00	1900MHz RRH	3	44.00	3.80	0.67	156.07	5.227	0.67	0.00	0.00
5	195.00	TD-RRH8x20-25	3	70.00	4.05	0.67	184.03	4.886	0.67	0.00	0.00
6	195.00	800MHz RRH	3	59.50	2.64	0.67	139.58	3.828	0.67	0.00	0.00
7	195.00	800MHz Filter	3	8.80	0.78	0.50	26.91	1.444	0.50	0.00	0.00
8	195.00	ACU-A20-N	4	1.00	0.14	0.50	5.41	0.445	0.50	0.00	0.00
9	195.00	Low Profile Platform	1	1500.00	22.00	1.00	2843.71	40.131	1.00	0.00	0.00
10	167.00	LNX-6515DS-A1M	3	50.30	11.47	0.84	284.66	14.772	0.84	0.00	0.00
11	167.00	AIR 21, 1.3M, B2A B4P	3	91.50	6.09	0.83	262.57	7.200	0.83	0.00	0.00
12	167.00	AIR 21, 1.3M, B4A B2P	3	90.30	6.09	0.83	261.37	7.200	0.83	0.00	0.00
13	167.00	KRY 112 144/1	3	11.00	0.41	0.50	21.90	0.890	0.50	0.00	0.00
14	167.00	S11B12	3	51.00	2.83	0.50	121.35	3.509	0.50	0.00	0.00
15	167.00	Platform w/ Hand Rails	1	2000.00	40.00	1.00	4116.86	61.169	1.00	0.00	0.00
16	150.00	7700.00	6	16.00	1.73	0.79	70.78	2.327	0.81	0.00	0.00
17	150.00	P65-17-XLH-RR	2	59.00	11.44	0.75	275.60	14.674	0.77	0.00	0.00
18	150.00	AM-X-CD-14-65-00T-RET	1	36.40	5.00	0.75	147.93	6.874	0.77	0.00	0.00
19	150.00	LGP21401	6	14.10	1.29	0.50	39.10	2.126	0.50	0.00	0.00
20	150.00	LGP13519	6	5.30	0.34	0.50	14.80	0.794	0.50	0.00	0.00
21	150.00	RRUS 11	6	50.70	2.52	0.67	139.89	3.171	0.67	0.00	0.00
22	150.00	DC6-48-60-18-8F	1	31.80	1.47	1.00	93.62	2.170	1.00	0.00	0.00
23	150.00	Low Profile Platform	1	1500.00	22.00	1.00	2808.91	39.662	1.00	0.00	0.00
24	140.00	LNX-8513DS-VTM	2	26.30	8.17	0.83	201.38	10.974	0.85	0.00	0.00
25	140.00	APL866513	2	15.70	4.05	0.93	143.45	4.966	0.94	0.00	0.00
26	140.00	HBXX-6517DS-A2M	6	40.80	8.55	0.83	215.83	11.449	0.85	0.00	0.00
27	140.00	LNX-6414DS-A1M	3	33.10	8.09	0.80	206.61	10.866	0.82	0.00	0.00
28	140.00	RRH2x40 700	3	50.00	2.48	0.67	123.07	3.630	0.67	0.00	0.00
29	140.00	RRH2x60-2100	3	19.50	1.51	0.67	78.84	2.056	0.67	0.00	0.00
30	140.00	DB-T1-6Z-8AB-OZ	1	18.90	4.80	0.50	161.46	5.667	0.50	0.00	0.00
31	140.00	Low Profile Platform	1	1500.00	22.00	1.00	2799.91	39.540	1.00	0.00	0.00
32	30.00	GPS	1	10.00	1.00	1.00	34.96	1.606	1.00	0.00	0.00
Totals:			91	9,647.00			24,165.02				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	195.00	(4) 1 1/4" Coax	0.00	Inside
0.00	167.00	(12) 1 5/8" Coax	0.00	Inside
0.00	167.00	(1) 1 5/8" Hybrid	0.00	Inside
0.00	150.00	(12) 1 5/8" Coax	0.00	Inside
0.00	150.00	(2) DC	0.00	Inside
0.00	150.00	(1) Fiber	0.00	Inside
0.00	140.00	(12) 1 5/8" Coax	0.00	Outside
0.00	140.00	(2) 1 5/8" Hybrid	0.00	Outside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		

Shaft Section Properties

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Increment Length: 2 (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		0.4688	64.000	95.892	49402.1	34.44	136.53	67.2	1491.	0.0
2.00		0.4688	63.498	95.134	48239.3	34.15	135.46	67.5	1467.	650.0
4.00		0.4688	62.995	94.376	47095.0	33.87	134.39	67.8	1444.	644.9
6.00		0.4688	62.493	93.618	45968.8	33.58	133.32	68.1	1421.	639.7
8.00		0.4688	61.990	92.859	44860.8	33.29	132.25	68.4	1398.	634.5
10.00		0.4688	61.488	92.101	43770.7	33.00	131.17	68.7	1375.	629.4
12.00		0.4688	60.986	91.343	42698.5	32.72	130.10	69.0	1352.	624.2
14.00		0.4688	60.483	90.584	41643.9	32.43	129.03	69.3	1330.	619.1
16.00		0.4688	59.981	89.826	40606.7	32.14	127.96	69.7	1307.	613.9
18.00		0.4688	59.478	89.068	39587.0	31.86	126.89	70.0	1285.	608.7
20.00		0.4688	58.976	88.309	38584.5	31.57	125.82	70.3	1263.	603.6
22.00		0.4688	58.474	87.551	37599.0	31.28	124.74	70.6	1242.	598.4
24.00		0.4688	57.971	86.793	36630.5	30.99	123.67	70.9	1220.	593.3
26.00		0.4688	57.469	86.034	35678.7	30.71	122.60	71.2	1199.	588.1
28.00		0.4688	56.966	85.276	34743.6	30.42	121.53	71.5	1178.	582.9
30.00		0.4688	56.464	84.518	33825.0	30.13	120.46	71.9	1157.	577.8
32.00		0.4688	55.962	83.760	32922.7	29.85	119.38	72.2	1136.	572.6
34.00		0.4688	55.459	83.001	32036.6	29.56	118.31	72.5	1116.	567.5
35.50	Bot - Section 2	0.4688	55.082	82.433	31382.5	29.34	117.51	72.7	1100.	422.2
36.00		0.4688	54.957	82.243	31166.5	29.27	117.24	72.8	1095.	273.0
38.00		0.4688	54.454	81.485	30312.3	28.98	116.17	73.1	1075.	1085.8
40.00		0.4688	53.952	80.726	29473.9	28.70	115.10	73.4	1055.	1075.8
42.00		0.4688	53.450	79.968	28651.1	28.41	114.03	73.7	1035.	1065.8
43.00	Top - Section 1	0.4375	54.073	75.560	27745.2	30.97	123.60	0.0	0.0	529.2
44.00		0.4375	53.822	75.206	27357.2	30.82	123.02	71.1	981.9	256.5
46.00		0.4375	53.320	74.498	26592.1	30.51	121.87	71.4	963.5	509.4
48.00		0.4375	52.817	73.790	25841.3	30.20	120.73	71.8	945.2	504.6
50.00		0.4375	52.315	73.082	25104.9	29.90	119.58	72.1	927.1	499.8
52.00		0.4375	51.813	72.375	24382.6	29.59	118.43	72.4	909.1	495.0
54.00		0.4375	51.310	71.667	23674.2	29.28	117.28	72.8	891.3	490.1
56.00		0.4375	50.808	70.959	22979.7	28.97	116.13	73.1	873.8	485.3
58.00		0.4375	50.305	70.251	22299.0	28.67	114.98	73.4	856.3	480.5
60.00		0.4375	49.803	69.544	21631.8	28.36	113.84	73.8	839.1	475.7
62.00		0.4375	49.301	68.836	20978.0	28.05	112.69	74.1	822.0	470.9
64.00		0.4375	48.798	68.128	20337.6	27.74	111.54	74.5	805.1	466.1
66.00		0.4375	48.296	67.420	19710.3	27.44	110.39	74.8	788.4	461.2
68.00		0.4375	47.793	66.713	19096.1	27.13	109.24	75.1	771.9	456.4
70.00		0.4375	47.291	66.005	18494.7	26.82	108.09	75.5	755.5	451.6
72.00		0.4375	46.789	65.297	17906.1	26.51	106.95	75.8	739.3	446.8
74.00		0.4375	46.286	64.589	17330.2	26.20	105.80	76.1	723.3	442.0
74.50	Bot - Section 3	0.4375	46.161	64.413	17188.1	26.13	105.51	76.2	719.3	109.7
76.00		0.4375	45.784	63.882	16766.7	25.90	104.65	76.5	707.5	613.1
78.00		0.4375	45.281	63.174	16215.6	25.59	103.50	76.8	691.8	809.6
80.00		0.4375	44.779	62.466	15676.7	25.28	102.35	77.1	676.3	800.7
81.00	Top - Section 2	0.3750	45.278	54.220	13953.9	30.21	120.74	0.0	0.0	397.0
82.00		0.3750	45.027	53.917	13721.0	30.03	120.07	72.0	588.7	184.0
84.00		0.3750	44.524	53.310	13263.1	29.67	118.73	72.4	575.5	364.9
86.00		0.3750	44.022	52.704	12815.4	29.31	117.39	72.7	562.4	360.7
88.00		0.3750	43.519	52.097	12378.0	28.95	116.05	73.1	549.5	356.6
90.00		0.3750	43.017	51.490	11950.6	28.59	114.71	73.5	536.7	352.5

Increment Length: 2 (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)
92.00		0.3750	42.515	50.884	11533.1	28.23	113.37	73.9	524.1	348.4
94.00		0.3750	42.012	50.277	11125.5	27.88	112.03	74.3	511.6	344.2
96.00		0.3750	41.510	49.670	10727.6	27.52	110.69	74.7	499.3	340.1
98.00		0.3750	41.007	49.064	10339.4	27.16	109.35	75.1	487.1	336.0
100.00		0.3750	40.505	48.457	9960.6	26.80	108.01	75.5	475.1	331.8
102.00		0.3750	40.003	47.850	9591.1	26.44	106.67	75.9	463.2	327.7
104.00		0.3750	39.500	47.244	9230.9	26.08	105.33	76.3	451.5	323.6
106.00		0.3750	38.998	46.637	8879.9	25.72	103.99	76.7	439.9	319.5
108.00		0.3750	38.496	46.031	8537.9	25.36	102.65	77.1	428.5	315.3
110.00		0.3750	37.993	45.424	8204.7	25.00	101.31	77.4	417.2	311.2
112.00		0.3750	37.491	44.817	7880.4	24.64	99.98	77.8	406.1	307.1
114.00		0.3750	36.988	44.211	7564.7	24.29	98.64	78.2	395.1	302.9
116.00		0.3750	36.486	43.604	7257.5	23.93	97.30	78.6	384.3	298.8
118.00		0.3750	35.984	42.997	6958.8	23.57	95.96	79.0	373.6	294.7
118.75	Bot - Section 4	0.3750	35.795	42.770	6848.9	23.43	95.45	79.2	369.6	109.4
120.00		0.3750	35.481	42.391	6668.4	23.21	94.62	79.4	363.1	335.0
122.00		0.3750	34.979	41.784	6386.2	22.85	93.28	79.8	352.7	529.8
124.00	Top - Section 3	0.3125	35.101	35.006	5407.7	27.95	112.32	0.0	0.0	522.3
126.00		0.3125	34.599	34.501	5176.8	27.52	110.72	74.7	289.0	236.5
128.00		0.3125	34.097	33.995	4952.5	27.09	109.11	75.2	280.6	233.1
130.00		0.3125	33.594	33.490	4734.8	26.66	107.50	75.6	272.3	229.6
132.00		0.3125	33.092	32.984	4523.6	26.23	105.89	76.1	264.1	226.2
134.00		0.3125	32.589	32.479	4318.8	25.80	104.29	76.6	256.0	222.8
136.00		0.3125	32.087	31.973	4120.3	25.37	102.68	77.0	248.1	219.3
138.00		0.3125	31.585	31.467	3927.9	24.94	101.07	77.5	240.2	215.9
140.00		0.3125	31.082	30.962	3741.6	24.51	99.46	78.0	232.6	212.4
142.00		0.3125	30.580	30.456	3561.3	24.08	97.86	78.5	225.0	209.0
144.00		0.3125	30.077	29.951	3386.9	23.65	96.25	78.9	217.5	205.6
146.00		0.3125	29.575	29.445	3218.3	23.22	94.64	79.4	210.2	202.1
148.00		0.3125	29.073	28.940	3055.3	22.78	93.03	79.9	203.0	198.7
150.00		0.3125	28.570	28.434	2898.0	22.35	91.42	80.3	196.0	195.2
152.00		0.3125	28.068	27.929	2746.2	21.92	89.82	80.8	189.0	191.8
154.00		0.3125	27.565	27.423	2599.7	21.49	88.21	81.3	182.2	188.4
154.75	Bot - Section 5	0.3125	27.377	27.234	2546.2	21.33	87.61	81.5	179.7	69.7
156.00		0.3125	27.063	26.918	2458.6	21.06	86.60	81.7	175.5	185.5
158.00		0.3125	26.561	26.412	2322.6	20.63	84.99	81.9	168.9	292.4
159.00	Top - Section 4	0.1875	26.684	15.997	1433.6	35.99	142.32	0.0	0.0	144.1
160.00		0.1875	26.433	15.846	1393.2	35.63	140.98	65.9	101.8	54.2
162.00		0.1875	25.931	15.542	1314.7	34.91	138.30	66.6	97.9	106.8
164.00		0.1875	25.428	15.239	1239.2	34.20	135.62	67.4	94.1	104.7
166.00		0.1875	24.926	14.936	1166.7	33.48	132.94	68.2	90.4	102.7
167.00		0.1875	24.675	14.784	1131.5	33.12	131.60	68.6	88.6	50.6
168.00		0.1875	24.424	14.633	1097.1	32.76	130.26	69.0	86.8	50.0
170.00		0.1875	23.921	14.329	1030.2	32.04	127.58	69.8	83.2	98.6
172.00		0.1875	23.419	14.026	966.2	31.32	124.90	70.6	79.7	96.5
174.00		0.1875	22.916	13.723	904.9	30.61	122.22	71.3	76.3	94.4
176.00		0.1875	22.414	13.419	846.2	29.89	119.54	72.1	72.9	92.4
178.00		0.1875	21.912	13.116	790.1	29.17	116.86	72.9	69.7	90.3
180.00		0.1875	21.409	12.813	736.5	28.45	114.18	73.7	66.5	88.2
182.00		0.1875	20.907	12.509	685.4	27.73	111.50	74.5	63.3	86.2
184.00		0.1875	20.404	12.206	636.8	27.02	108.82	75.3	60.3	84.1
186.00		0.1875	19.902	11.903	590.5	26.30	106.14	76.0	57.3	82.0
188.00		0.1875	19.400	11.599	546.5	25.58	103.46	76.8	54.4	80.0
190.00		0.1875	18.897	11.296	504.7	24.86	100.79	77.6	51.6	77.9
192.00		0.1875	18.395	10.993	465.1	24.14	98.11	78.4	48.8	75.8
194.00		0.1875	17.892	10.689	427.7	23.43	95.43	79.2	46.2	73.8
195.00		0.1875	17.641	10.538	409.7	23.07	94.09	79.6	44.9	36.1
196.00		0.1875	17.390	10.386	392.3	22.71	92.75	79.9	43.6	35.6

38078.0

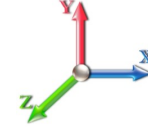
Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 108 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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	0.85	24.112	26.52	549.78	1.000	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	24.112	26.52	545.46	1.000	0.000	2.00	11.000	11.00	466.8	0.0	780.0
4.00		1.00	0.85	24.112	26.52	541.15	1.000	0.000	2.00	10.913	10.91	463.1	0.0	773.8
6.00		1.00	0.85	24.112	26.52	536.83	1.000	0.000	2.00	10.826	10.83	459.4	0.0	767.6
8.00		1.00	0.85	24.112	26.52	532.52	1.000	0.000	2.00	10.740	10.74	455.8	0.0	761.4
10.00		1.00	0.85	24.112	26.52	528.20	1.000	0.000	2.00	10.653	10.65	452.1	0.0	755.3
12.00		1.00	0.85	24.112	26.52	523.88	1.000	0.000	2.00	10.566	10.57	448.4	0.0	749.1
14.00		1.00	0.85	24.112	26.52	519.57	1.000	0.000	2.00	10.479	10.48	444.7	0.0	742.9
16.00		1.00	0.86	24.410	26.85	518.42	1.000	0.000	2.00	10.393	10.39	446.5	0.0	736.7
18.00		1.00	0.88	25.022	27.52	520.50	1.000	0.000	2.00	10.306	10.31	453.9	0.0	730.5
20.00		1.00	0.90	25.584	28.14	521.86	1.000	0.000	2.00	10.219	10.22	460.2	0.0	724.3
22.00		1.00	0.92	26.102	28.71	522.63	1.000	0.000	2.00	10.133	10.13	465.5	0.0	718.1
24.00		1.00	0.94	26.585	29.24	522.90	1.000	0.000	2.00	10.046	10.05	470.0	0.0	711.9
26.00		1.00	0.95	27.037	29.74	522.76	1.000	0.000	2.00	9.959	9.96	473.9	0.0	705.7
28.00		1.00	0.97	27.462	30.21	522.25	1.000	0.000	2.00	9.873	9.87	477.2	0.0	699.5
30.00	Appurtenance(s)	1.00	0.98	27.863	30.65	521.41	1.000	0.000	2.00	9.786	9.79	479.9	0.0	693.3
32.00		1.00	1.00	28.245	31.07	520.30	1.000	0.000	2.00	9.699	9.70	482.2	0.0	687.1
34.00		1.00	1.01	28.607	31.47	518.93	1.000	0.000	2.00	9.613	9.61	484.0	0.0	680.9
35.50	Bot - Section 2	1.00	1.02	28.869	31.76	517.75	1.000	0.000	1.50	7.153	7.15	363.4	0.0	506.6
36.00		1.00	1.02	28.954	31.85	517.33	1.000	0.000	0.50	2.411	2.41	122.9	0.0	327.6
38.00		1.00	1.03	29.285	32.21	515.53	1.000	0.000	2.00	9.590	9.59	494.3	0.0	1303.0
40.00		1.00	1.04	29.603	32.56	513.53	1.000	0.000	2.00	9.504	9.50	495.1	0.0	1291.0
42.00		1.00	1.05	29.909	32.90	511.37	1.000	0.000	2.00	9.417	9.42	495.7	0.0	1279.0
43.00	Top - Section 1	1.00	1.06	30.057	33.06	510.23	1.000	0.000	1.00	4.676	4.68	247.4	0.0	635.0
44.00		1.00	1.06	30.203	33.22	517.46	1.000	0.000	1.00	4.654	4.65	247.4	0.0	307.8
46.00		1.00	1.07	30.487	33.54	515.04	1.000	0.000	2.00	9.243	9.24	496.0	0.0	611.3
48.00		1.00	1.08	30.761	33.84	512.48	1.000	0.000	2.00	9.157	9.16	495.7	0.0	605.5
50.00		1.00	1.09	31.027	34.13	509.79	1.000	0.000	2.00	9.070	9.07	495.3	0.0	599.7
52.00		1.00	1.10	31.284	34.41	506.98	1.000	0.000	2.00	8.983	8.98	494.6	0.0	594.0
54.00		1.00	1.11	31.534	34.69	504.06	1.000	0.000	2.00	8.897	8.90	493.8	0.0	588.2
56.00		1.00	1.12	31.776	34.95	501.04	1.000	0.000	2.00	8.810	8.81	492.7	0.0	582.4
58.00		1.00	1.13	32.012	35.21	497.92	1.000	0.000	2.00	8.723	8.72	491.5	0.0	576.6
60.00		1.00	1.14	32.241	35.47	494.71	1.000	0.000	2.00	8.637	8.64	490.1	0.0	570.8
62.00		1.00	1.14	32.464	35.71	491.42	1.000	0.000	2.00	8.550	8.55	488.5	0.0	565.1
64.00		1.00	1.15	32.682	35.95	488.04	1.000	0.000	2.00	8.463	8.46	486.8	0.0	559.3
66.00		1.00	1.16	32.894	36.18	484.58	1.000	0.000	2.00	8.377	8.38	485.0	0.0	553.5
68.00		1.00	1.17	33.102	36.41	481.05	1.000	0.000	2.00	8.290	8.29	483.0	0.0	547.7
70.00		1.00	1.17	33.305	36.63	477.45	1.000	0.000	2.00	8.203	8.20	480.8	0.0	541.9
72.00		1.00	1.18	33.503	36.85	473.78	1.000	0.000	2.00	8.117	8.12	478.6	0.0	536.2
74.00		1.00	1.19	33.696	37.07	470.04	1.000	0.000	2.00	8.030	8.03	476.2	0.0	530.4
74.50	Bot - Section 3	1.00	1.19	33.744	37.12	469.10	1.000	0.000	0.50	1.994	1.99	118.4	0.0	131.7
76.00		1.00	1.19	33.886	37.27	466.25	1.000	0.000	1.50	6.046	6.05	360.6	0.0	735.7
78.00		1.00	1.20	34.072	37.48	462.39	1.000	0.000	2.00	7.986	7.99	478.9	0.0	971.5
80.00		1.00	1.21	34.254	37.68	458.48	1.000	0.000	2.00	7.899	7.90	476.2	0.0	960.8
81.00	Top - Section 2	1.00	1.21	34.344	37.78	456.51	1.000	0.000	1.00	3.917	3.92	236.8	0.0	476.4
82.00		1.00	1.21	34.433	37.88	462.22	1.000	0.000	1.00	3.895	3.90	236.1	0.0	220.8
84.00		1.00	1.22	34.608	38.07	458.22	1.000	0.000	2.00	7.726	7.73	470.6	0.0	437.8

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	1.00	1.23	34.780	38.26	454.18	1.000	0.000	2.00	7.639	7.64	467.6	0.0	432.9
88.00	1.00	1.23	34.948	38.44	450.08	1.000	0.000	2.00	7.552	7.55	464.5	0.0	427.9
90.00	1.00	1.24	35.114	38.63	445.94	1.000	0.000	2.00	7.466	7.47	461.4	0.0	423.0
92.00	1.00	1.24	35.277	38.80	441.75	1.000	0.000	2.00	7.379	7.38	458.1	0.0	418.0
94.00	1.00	1.25	35.437	38.98	437.52	1.000	0.000	2.00	7.292	7.29	454.8	0.0	413.1
96.00	1.00	1.25	35.594	39.15	433.25	1.000	0.000	2.00	7.206	7.21	451.4	0.0	408.1
98.00	1.00	1.26	35.749	39.32	428.93	1.000	0.000	2.00	7.119	7.12	447.9	0.0	403.2
100.00	1.00	1.27	35.902	39.49	424.58	1.000	0.000	2.00	7.032	7.03	444.4	0.0	398.2
102.00	1.00	1.27	36.052	39.66	420.19	1.000	0.000	2.00	6.946	6.95	440.7	0.0	393.3
104.00	1.00	1.28	36.199	39.82	415.76	1.000	0.000	2.00	6.859	6.86	437.0	0.0	388.3
106.00	1.00	1.28	36.345	39.98	411.30	1.000	0.000	2.00	6.772	6.77	433.2	0.0	383.3
108.00	1.00	1.29	36.488	40.14	406.80	1.000	0.000	2.00	6.686	6.69	429.3	0.0	378.4
110.00	1.00	1.29	36.629	40.29	402.26	1.000	0.000	2.00	6.599	6.60	425.4	0.0	373.4
112.00	1.00	1.30	36.768	40.45	397.70	1.000	0.000	2.00	6.512	6.51	421.4	0.0	368.5
114.00	1.00	1.30	36.906	40.60	393.10	1.000	0.000	2.00	6.426	6.43	417.4	0.0	363.5
116.00	1.00	1.31	37.041	40.75	388.47	1.000	0.000	2.00	6.339	6.34	413.2	0.0	358.6
118.00	1.00	1.31	37.175	40.89	383.81	1.000	0.000	2.00	6.252	6.25	409.1	0.0	353.6
118.75 Bot - Section 4	1.00	1.31	37.224	40.95	382.06	1.000	0.000	0.75	2.322	2.32	152.1	0.0	131.3
120.00	1.00	1.32	37.306	41.04	379.12	1.000	0.000	1.25	3.911	3.91	256.8	0.0	402.0
122.00	1.00	1.32	37.436	41.18	374.41	1.000	0.000	2.00	6.187	6.19	407.6	0.0	635.8
124.00 Top - Section 3	1.00	1.32	37.565	41.32	369.66	1.000	0.000	2.00	6.100	6.10	403.3	0.0	626.7
126.00	1.00	1.33	37.692	41.46	371.60	1.000	0.000	2.00	6.013	6.01	398.9	0.0	283.8
128.00	1.00	1.33	37.817	41.60	366.81	1.000	0.000	2.00	5.927	5.93	394.5	0.0	279.7
130.00	1.00	1.34	37.940	41.73	362.00	1.000	0.000	2.00	5.840	5.84	390.0	0.0	275.6
132.00	1.00	1.34	38.063	41.87	357.16	1.000	0.000	2.00	5.753	5.75	385.4	0.0	271.4
134.00	1.00	1.35	38.183	42.00	352.29	1.000	0.000	2.00	5.667	5.67	380.8	0.0	267.3
136.00	1.00	1.35	38.303	42.13	347.40	1.000	0.000	2.00	5.580	5.58	376.1	0.0	263.2
138.00	1.00	1.35	38.420	42.26	342.49	1.000	0.000	2.00	5.493	5.49	371.4	0.0	259.0
140.00 Appurtenance(s)	1.00	1.36	38.537	42.39	337.55	1.000	0.000	2.00	5.406	5.41	366.7	0.0	254.9
142.00	1.00	1.36	38.652	42.52	332.59	1.000	0.000	2.00	5.320	5.32	361.9	0.0	250.8
144.00	1.00	1.37	38.766	42.64	327.61	1.000	0.000	2.00	5.233	5.23	357.0	0.0	246.7
146.00	1.00	1.37	38.879	42.77	322.61	1.000	0.000	2.00	5.146	5.15	352.2	0.0	242.5
148.00	1.00	1.37	38.990	42.89	317.58	1.000	0.000	2.00	5.060	5.06	347.2	0.0	238.4
150.00 Appurtenance(s)	1.00	1.38	39.101	43.01	312.54	1.000	0.000	2.00	4.973	4.97	342.2	0.0	234.3
152.00	1.00	1.38	39.210	43.13	307.47	1.000	0.000	2.00	4.886	4.89	337.2	0.0	230.1
154.00	1.00	1.39	39.318	43.25	302.38	1.000	0.000	2.00	4.800	4.80	332.1	0.0	226.0
154.75 Bot - Section 5	1.00	1.39	39.358	43.29	300.47	1.000	0.000	0.75	1.778	1.78	123.1	0.0	83.7
156.00	1.00	1.39	39.425	43.37	297.27	1.000	0.000	1.25	2.976	2.98	206.5	0.0	222.7
158.00	1.00	1.39	39.531	43.48	292.15	1.000	0.000	2.00	4.691	4.69	326.4	0.0	350.9
159.00 Top - Section 4	1.00	1.40	39.583	43.54	289.57	1.000	0.000	1.00	2.313	2.31	161.1	0.0	173.0
160.00	1.00	1.40	39.636	43.60	291.13	1.000	0.000	1.00	2.291	2.29	159.8	0.0	65.0
162.00	1.00	1.40	39.740	43.71	285.97	1.000	0.000	2.00	4.518	4.52	316.0	0.0	128.2
164.00	1.00	1.40	39.842	43.83	280.79	1.000	0.000	2.00	4.431	4.43	310.7	0.0	125.7
166.00	1.00	1.41	39.944	43.94	275.60	1.000	0.000	2.00	4.344	4.34	305.4	0.0	123.2
167.00 Appurtenance(s)	1.00	1.41	39.995	43.99	272.99	1.000	0.000	1.00	2.140	2.14	150.6	0.0	60.7
168.00	1.00	1.41	40.045	44.05	270.38	1.000	0.000	1.00	2.118	2.12	149.3	0.0	60.1
170.00	1.00	1.42	40.145	44.16	265.15	1.000	0.000	2.00	4.171	4.17	294.7	0.0	118.3
172.00	1.00	1.42	40.244	44.27	259.90	1.000	0.000	2.00	4.084	4.08	289.3	0.0	115.8
174.00	1.00	1.42	40.342	44.38	254.63	1.000	0.000	2.00	3.997	4.00	283.8	0.0	113.3
176.00	1.00	1.43	40.439	44.48	249.35	1.000	0.000	2.00	3.911	3.91	278.3	0.0	110.8
178.00	1.00	1.43	40.535	44.59	244.05	1.000	0.000	2.00	3.824	3.82	272.8	0.0	108.4
180.00	1.00	1.43	40.631	44.69	238.74	1.000	0.000	2.00	3.737	3.74	267.3	0.0	105.9
182.00	1.00	1.44	40.725	44.80	233.41	1.000	0.000	2.00	3.651	3.65	261.7	0.0	103.4
184.00	1.00	1.44	40.819	44.90	228.06	1.000	0.000	2.00	3.564	3.56	256.0	0.0	100.9
186.00	1.00	1.44	40.912	45.00	222.70	1.000	0.000	2.00	3.477	3.48	250.4	0.0	98.4
188.00	1.00	1.45	41.004	45.10	217.32	1.000	0.000	2.00	3.391	3.39	244.7	0.0	96.0
190.00	1.00	1.45	41.096	45.21	211.93	1.000	0.000	2.00	3.304	3.30	239.0	0.0	93.5

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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192.00	1.00	1.45	41.187	45.31	206.52	1.000	0.000	2.00	3.217	3.22	233.2	0.0	91.0
194.00	1.00	1.46	41.277	45.40	201.10	1.000	0.000	2.00	3.131	3.13	227.4	0.0	88.5
195.00 Appurtenance(s)	1.00	1.46	41.321	45.45	198.38	1.000	0.000	1.00	1.533	1.53	111.5	0.0	43.3
196.00 Appurtenance(s)	1.00	1.46	41.366	45.50	195.67	1.000	0.000	1.00	1.511	1.51	110.0	0.0	42.7
							Totals:	196.00			40,075.3		45,693.6

Discrete Appurtenance Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 108 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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	196.00	6' Lightning rod	1	41.366	45.502	1.00	1.00	0.38	7.80	0.000	0.000	27.67	0.00	0.00	
2	195.00	TD-RRH8x20-25	3	41.321	45.453	0.60	0.90	7.33	252.00	0.000	0.000	532.82	0.00	0.00	
3	195.00	APXVSPP18-C-A20	3	41.321	45.453	0.75	0.90	17.97	205.20	0.000	0.000	1307.08	0.00	0.00	
4	195.00	1900MHz RRH	3	41.321	45.453	0.60	0.90	6.87	158.40	0.000	0.000	499.93	0.00	0.00	
5	195.00	APXVTM14-C-120	3	41.321	45.453	0.71	0.90	13.52	201.60	0.000	0.000	983.48	0.00	0.00	
6	195.00	800MHz Filter	3	41.321	45.453	0.45	0.90	1.05	31.68	0.000	0.000	76.58	0.00	0.00	
7	195.00	ACU-A20-N	4	41.321	45.453	0.45	0.90	0.25	4.80	0.000	0.000	18.33	0.00	0.00	
8	195.00	Low Profile Platform	1	41.321	45.453	1.00	1.00	22.00	1800.00	0.000	0.000	1599.96	0.00	0.00	
9	195.00	800MHz RRH	3	41.321	45.453	0.60	0.90	4.78	214.20	0.000	0.000	347.32	0.00	0.00	
10	167.00	AIR 21, 1.3M, B4A B2P	3	39.995	43.994	0.62	0.75	11.32	325.08	0.000	0.000	796.70	0.00	0.00	
11	167.00	LNx-6515DS-A1M	3	39.995	43.994	0.63	0.75	21.58	181.08	0.000	0.000	1518.68	0.00	0.00	
12	167.00	AIR 21, 1.3M, B2A B4P	3	39.995	43.994	0.62	0.75	11.32	329.40	0.000	0.000	796.70	0.00	0.00	
13	167.00	S11B12	3	39.995	43.994	0.38	0.75	3.18	183.60	0.000	0.000	224.11	0.00	0.00	
14	167.00	KRY 112 144/1	3	39.995	43.994	0.38	0.75	0.46	39.60	0.000	0.000	32.47	0.00	0.00	
15	167.00	Platform w/ Hand Rails	1	39.995	43.994	1.00	1.00	40.00	2400.00	0.000	0.000	2815.62	0.00	0.00	
16	150.00	Low Profile Platform	1	39.101	43.011	1.00	1.00	22.00	1800.00	0.000	0.000	1513.98	0.00	0.00	
17	150.00	DC6-48-60-18-8F	1	39.101	43.011	0.80	0.80	1.18	38.16	0.000	0.000	80.93	0.00	0.00	
18	150.00	LGP13519	6	39.101	43.011	0.40	0.80	0.82	38.16	0.000	0.000	56.16	0.00	0.00	
19	150.00	LGP21401	6	39.101	43.011	0.40	0.80	3.10	101.52	0.000	0.000	213.06	0.00	0.00	
20	150.00	AM-X-CD-14-65-00T-RET	1	39.101	43.011	0.60	0.80	3.00	43.68	0.000	0.000	206.45	0.00	0.00	
21	150.00	P65-17-XLH-RR	2	39.101	43.011	0.60	0.80	13.73	141.60	0.000	0.000	944.73	0.00	0.00	
22	150.00	7700.00	6	39.101	43.011	0.63	0.80	6.56	115.20	0.000	0.000	451.45	0.00	0.00	
23	150.00	RRUS 11	6	39.101	43.011	0.54	0.80	8.10	365.04	0.000	0.000	557.72	0.00	0.00	
24	140.00	LNx-6414DS-A1M	3	38.537	42.391	0.64	0.80	15.53	119.16	0.000	0.000	1053.51	0.00	0.00	
25	140.00	LNx-8513DS-VTM	2	38.537	42.391	0.66	0.80	10.85	63.12	0.000	0.000	735.89	0.00	0.00	
26	140.00	APL866513	2	38.537	42.391	0.74	0.80	6.03	37.68	0.000	0.000	408.74	0.00	0.00	
27	140.00	HBXX-6517DS-A2M	6	38.537	42.391	0.66	0.80	34.06	293.76	0.000	0.000	2310.34	0.00	0.00	
28	140.00	DB-T1-6Z-8AB-0Z	1	38.537	42.391	0.40	0.80	1.92	22.68	0.000	0.000	130.22	0.00	0.00	
29	140.00	RRH2x40 700	3	38.537	42.391	0.54	0.80	3.99	180.00	0.000	0.000	270.48	0.00	0.00	
30	140.00	RRH2x60-2100	3	38.537	42.391	0.54	0.80	2.43	70.20	0.000	0.000	164.68	0.00	0.00	
31	140.00	Low Profile Platform	1	38.537	42.391	0.80	0.80	17.60	1800.00	0.000	0.000	1193.72	0.00	0.00	
32	30.00	GPS	1	27.863	30.650	1.00	1.00	1.00	12.00	0.000	0.000	49.04	0.00	0.00	
Totals:									11,576.40						21,918.54

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 108 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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
2.00		466.79	886.20	0.00	0.00
4.00		463.11	880.01	0.00	0.00
6.00		459.43	873.82	0.00	0.00
8.00		455.75	867.62	0.00	0.00
10.00		452.07	861.43	0.00	0.00
12.00		448.39	855.24	0.00	0.00
14.00		444.72	849.04	0.00	0.00
16.00		446.48	842.85	0.00	0.00
18.00		453.88	836.66	0.00	0.00
20.00		460.15	830.47	0.00	0.00
22.00		465.50	824.27	0.00	0.00
24.00		470.05	818.08	0.00	0.00
26.00		473.91	811.89	0.00	0.00
28.00		477.17	805.69	0.00	0.00
30.00	(1) attachments	528.94	811.50	0.00	0.00
32.00		482.16	793.31	0.00	0.00
34.00		483.99	787.12	0.00	0.00
35.50		363.41	586.27	0.00	0.00
36.00		122.87	354.16	0.00	0.00
38.00		494.30	1409.14	0.00	0.00
40.00		495.15	1397.17	0.00	0.00
42.00		495.70	1385.20	0.00	0.00
43.00		247.36	688.11	0.00	0.00
44.00		247.41	360.90	0.00	0.00
46.00		495.98	717.47	0.00	0.00
48.00		495.75	711.69	0.00	0.00
50.00		495.29	705.91	0.00	0.00
52.00		494.63	700.13	0.00	0.00
54.00		493.76	694.35	0.00	0.00
56.00		492.71	688.57	0.00	0.00
58.00		491.48	682.79	0.00	0.00
60.00		490.08	677.01	0.00	0.00
62.00		488.52	671.23	0.00	0.00
64.00		486.81	665.45	0.00	0.00
66.00		484.96	659.67	0.00	0.00
68.00		482.96	653.89	0.00	0.00
70.00		480.84	648.11	0.00	0.00
72.00		478.59	642.33	0.00	0.00
74.00		476.22	636.55	0.00	0.00
74.50		118.42	158.23	0.00	0.00
76.00		360.60	815.31	0.00	0.00
78.00		478.89	1077.69	0.00	0.00
80.00		476.22	1066.96	0.00	0.00
81.00		236.77	529.45	0.00	0.00
82.00		236.07	273.87	0.00	0.00
84.00		470.58	544.02	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00		467.61	539.07	0.00	0.00
88.00		464.54	534.11	0.00	0.00
90.00		461.39	529.16	0.00	0.00
92.00		458.15	524.20	0.00	0.00
94.00		454.82	519.25	0.00	0.00
96.00		451.41	514.29	0.00	0.00
98.00		447.92	509.34	0.00	0.00
100.00		444.35	504.39	0.00	0.00
102.00		440.71	499.43	0.00	0.00
104.00		436.99	494.48	0.00	0.00
106.00		433.20	489.52	0.00	0.00
108.00		429.34	484.57	0.00	0.00
110.00		425.41	479.61	0.00	0.00
112.00		421.42	474.66	0.00	0.00
114.00		417.36	469.71	0.00	0.00
116.00		413.24	464.75	0.00	0.00
118.00		409.06	459.80	0.00	0.00
118.75		152.14	171.15	0.00	0.00
120.00		256.77	468.34	0.00	0.00
122.00		407.63	741.97	0.00	0.00
124.00		403.29	732.88	0.00	0.00
126.00		398.90	390.00	0.00	0.00
128.00		394.46	385.87	0.00	0.00
130.00		389.96	381.74	0.00	0.00
132.00		385.41	377.61	0.00	0.00
134.00		380.80	373.48	0.00	0.00
136.00		376.15	369.35	0.00	0.00
138.00		371.45	365.22	0.00	0.00
140.00	(21) attachments	6634.28	2947.70	0.00	0.00
142.00		361.89	321.74	0.00	0.00
144.00		357.04	317.61	0.00	0.00
146.00		352.15	313.48	0.00	0.00
148.00		347.21	309.35	0.00	0.00
150.00	(29) attachments	4366.71	2948.58	0.00	0.00
152.00		337.20	269.08	0.00	0.00
154.00		332.13	264.95	0.00	0.00
154.75		123.13	98.29	0.00	0.00
156.00		206.49	246.99	0.00	0.00
158.00		326.37	389.81	0.00	0.00
159.00		161.14	192.43	0.00	0.00
160.00		159.84	84.48	0.00	0.00
162.00		315.97	167.10	0.00	0.00
164.00		310.71	164.62	0.00	0.00
166.00		305.41	162.14	0.00	0.00
167.00	(16) attachments	6334.88	3538.90	0.00	0.00
168.00		149.27	63.23	0.00	0.00
170.00		294.69	124.60	0.00	0.00
172.00		289.28	122.12	0.00	0.00
174.00		283.83	119.64	0.00	0.00
176.00		278.34	117.17	0.00	0.00
178.00		272.82	114.69	0.00	0.00
180.00		267.26	112.21	0.00	0.00
182.00		261.67	109.73	0.00	0.00
184.00		256.05	107.26	0.00	0.00
186.00		250.39	104.78	0.00	0.00
188.00		244.70	102.30	0.00	0.00
190.00		238.97	99.83	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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192.00		233.22	97.35	0.00	0.00
194.00		227.43	94.87	0.00	0.00
195.00	(23) attachments	5476.97	2914.39	0.00	0.00
196.00	(1) attachments	137.68	50.52	0.00	0.00
	Totals:	61,993.80	65,476.64	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 108 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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)
2.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	29.95
2.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	5.28
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	29.95
4.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	5.28
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	29.95
6.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	5.28
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	29.95
8.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	5.28
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	29.95
10.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	5.28
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	29.95
12.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	5.28
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	29.95
14.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	5.28
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.410	0.00	29.95
16.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.410	0.00	5.28
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.022	0.00	29.95
18.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.022	0.00	5.28
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.584	0.00	29.95
20.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.584	0.00	5.28
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.102	0.00	29.95
22.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.102	0.00	5.28
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.585	0.00	29.95
24.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.585	0.00	5.28
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.037	0.00	29.95
26.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.037	0.00	5.28
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.462	0.00	29.95
28.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.462	0.00	5.28
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.863	0.00	29.95
30.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.863	0.00	5.28
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.245	0.00	29.95
32.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.245	0.00	5.28
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.607	0.00	29.95
34.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.607	0.00	5.28
35.50	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	22.46
35.50	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	3.96
36.00	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	28.954	0.00	7.49
36.00	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	28.954	0.00	1.32
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.285	0.00	29.95
38.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.285	0.00	5.28
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.603	0.00	29.95
40.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.603	0.00	5.28
42.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.909	0.00	29.95
42.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.909	0.00	5.28
43.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.057	0.00	14.98
43.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.057	0.00	2.64
44.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.203	0.00	14.98

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 108 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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)
44.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.203	0.00	2.64
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.487	0.00	29.95
46.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.487	0.00	5.28
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.761	0.00	29.95
48.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.761	0.00	5.28
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.027	0.00	29.95
50.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.027	0.00	5.28
52.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.284	0.00	29.95
52.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.284	0.00	5.28
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.534	0.00	29.95
54.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.534	0.00	5.28
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.776	0.00	29.95
56.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.776	0.00	5.28
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.012	0.00	29.95
58.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.012	0.00	5.28
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.241	0.00	29.95
60.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.241	0.00	5.28
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.464	0.00	29.95
62.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.464	0.00	5.28
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.682	0.00	29.95
64.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.682	0.00	5.28
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.894	0.00	29.95
66.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.894	0.00	5.28
68.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.102	0.00	29.95
68.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.102	0.00	5.28
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.305	0.00	29.95
70.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.305	0.00	5.28
72.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.503	0.00	29.95
72.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.503	0.00	5.28
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.696	0.00	29.95
74.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.696	0.00	5.28
74.50	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	33.744	0.00	7.49
74.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	33.744	0.00	1.32
76.00	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	33.886	0.00	22.46
76.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	33.886	0.00	3.96
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.072	0.00	29.95
78.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.072	0.00	5.28
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.254	0.00	29.95
80.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.254	0.00	5.28
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	34.344	0.00	14.98
81.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	34.344	0.00	2.64
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	14.98
82.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	2.64
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.608	0.00	29.95
84.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.608	0.00	5.28
86.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.780	0.00	29.95
86.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.780	0.00	5.28

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 108 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 31

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)
88.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.948	0.00	29.95
88.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.948	0.00	5.28
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.114	0.00	29.95
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.114	0.00	5.28
92.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.277	0.00	29.95
92.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.277	0.00	5.28
94.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.437	0.00	29.95
94.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.437	0.00	5.28
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.594	0.00	29.95
96.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.594	0.00	5.28
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.749	0.00	29.95
98.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.749	0.00	5.28
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.902	0.00	29.95
100.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.902	0.00	5.28
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.052	0.00	29.95
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.052	0.00	5.28
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.199	0.00	29.95
104.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.199	0.00	5.28
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.345	0.00	29.95
106.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.345	0.00	5.28
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.488	0.00	29.95
108.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.488	0.00	5.28
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.629	0.00	29.95
110.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.629	0.00	5.28
112.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.768	0.00	29.95
112.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.768	0.00	5.28
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.906	0.00	29.95
114.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.906	0.00	5.28
116.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.041	0.00	29.95
116.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.041	0.00	5.28
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.175	0.00	29.95
118.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.175	0.00	5.28
118.75	1 5/8" Coax	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	37.224	0.00	11.23
118.75	1 5/8" Hybrid	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	37.224	0.00	1.98
120.00	1 5/8" Coax	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	37.306	0.00	18.72
120.00	1 5/8" Hybrid	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	37.306	0.00	3.30
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.436	0.00	29.95
122.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.436	0.00	5.28
124.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.565	0.00	29.95
124.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.565	0.00	5.28
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.692	0.00	29.95
126.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.692	0.00	5.28
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.817	0.00	29.95
128.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.817	0.00	5.28
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.940	0.00	29.95
130.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.940	0.00	5.28
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.063	0.00	29.95

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II

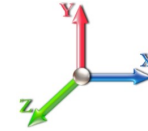


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Load Case: 1.2D + 1.6W 108 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 31

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)
132.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.063	0.00	5.28
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.183	0.00	29.95
134.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.183	0.00	5.28
136.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.303	0.00	29.95
136.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.303	0.00	5.28
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.420	0.00	29.95
138.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.420	0.00	5.28
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.537	0.00	29.95
140.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.537	0.00	5.28
Totals:											0.0	2,466.2

Calculated Forces

Structure: CT00595-S-SBA
Site Name: Stonington East
Height: 196.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G 10/26/2017
Exposure: C
Crest Height: 0.00
Site Class: B - Competent Rock
Struct Class: II

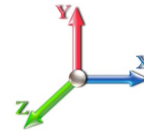


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Load Case: 1.2D + 1.6W 108 mph Wind

Iterations 31

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	-65.43	-62.04	0.00	-7415.7	0.00	7415.79	5795.46	2897.73	15207.4	7510.36	0.00	0.000	0.000	0.999
2.00	-64.45	-61.67	0.00	-7291.7	0.00	7291.71	5776.44	2888.22	15036.7	7426.09	0.02	-0.085	0.000	0.994
4.00	-63.48	-61.30	0.00	-7168.3	0.00	7168.37	5757.00	2878.50	14865.8	7341.68	0.07	-0.170	0.000	0.988
6.00	-62.52	-60.93	0.00	-7045.7	0.00	7045.77	5737.14	2868.57	14694.6	7257.12	0.16	-0.256	0.000	0.982
8.00	-61.56	-60.57	0.00	-6923.9	0.00	6923.91	5716.84	2858.42	14523.1	7172.43	0.29	-0.342	0.000	0.977
10.00	-60.61	-60.20	0.00	-6802.7	0.00	6802.78	5696.12	2848.06	14351.4	7087.63	0.45	-0.429	0.000	0.971
12.00	-59.67	-59.84	0.00	-6682.3	0.00	6682.38	5674.97	2837.49	14179.5	7002.73	0.65	-0.517	0.000	0.965
14.00	-58.73	-59.47	0.00	-6562.7	0.00	6562.71	5653.40	2826.70	14007.4	6917.75	0.89	-0.605	0.000	0.960
16.00	-57.80	-59.11	0.00	-6443.7	0.00	6443.77	5631.39	2815.70	13835.2	6832.69	1.16	-0.694	0.000	0.954
18.00	-56.88	-58.73	0.00	-6325.5	0.00	6325.56	5608.96	2804.48	13662.8	6747.57	1.47	-0.784	0.000	0.948
20.00	-55.96	-58.35	0.00	-6208.0	0.00	6208.09	5586.10	2793.05	13490.4	6662.41	1.82	-0.874	0.000	0.942
22.00	-55.05	-57.96	0.00	-6091.4	0.00	6091.40	5562.81	2781.41	13317.9	6577.21	2.21	-0.964	0.000	0.936
24.00	-54.15	-57.56	0.00	-5975.4	0.00	5975.49	5539.10	2769.55	13145.3	6491.99	2.63	-1.056	0.000	0.931
26.00	-53.26	-57.16	0.00	-5860.3	0.00	5860.37	5514.96	2757.48	12972.7	6406.77	3.09	-1.148	0.000	0.925
28.00	-52.37	-56.75	0.00	-5746.0	0.00	5746.06	5490.39	2745.19	12800.2	6321.55	3.59	-1.240	0.000	0.919
30.00	-51.48	-56.28	0.00	-5632.5	0.00	5632.57	5465.39	2732.69	12627.7	6236.35	4.13	-1.333	0.000	0.913
32.00	-50.61	-55.87	0.00	-5520.0	0.00	5520.00	5439.96	2719.98	12455.2	6151.18	4.71	-1.427	0.000	0.907
34.00	-49.75	-55.43	0.00	-5408.2	0.00	5408.27	5414.11	2707.06	12282.9	6066.06	5.33	-1.522	0.000	0.901
35.50	-49.13	-55.10	0.00	-5325.1	0.00	5325.12	5394.44	2697.22	12153.7	6002.26	5.82	-1.593	0.000	0.897
36.00	-48.72	-55.01	0.00	-5297.5	0.00	5297.57	5387.83	2693.92	12110.6	5981.00	5.99	-1.617	0.000	0.895
38.00	-47.23	-54.56	0.00	-5187.5	0.00	5187.55	5361.12	2680.56	11938.5	5896.01	6.69	-1.713	0.000	0.889
40.00	-45.76	-54.10	0.00	-5078.4	0.00	5078.43	5333.99	2666.99	11766.6	5811.11	7.43	-1.809	0.000	0.883
42.00	-44.33	-53.61	0.00	-4970.2	0.00	4970.24	5306.43	2653.21	11594.9	5726.30	8.21	-1.906	0.000	0.877
43.00	-43.60	-53.38	0.00	-4916.6	0.00	4916.63	4823.70	2411.85	10677.7	5273.35	8.61	-1.955	0.000	0.942
44.00	-43.18	-53.18	0.00	-4863.2	0.00	4863.25	4812.47	2406.23	10602.6	5236.23	9.03	-2.005	0.000	0.938
46.00	-42.39	-52.73	0.00	-4756.8	0.00	4756.89	4789.68	2394.84	10452.2	5161.99	9.89	-2.105	0.000	0.931
48.00	-41.60	-52.28	0.00	-4651.4	0.00	4651.43	4766.46	2383.23	10301.9	5087.77	10.79	-2.205	0.000	0.923
50.00	-40.83	-51.83	0.00	-4546.8	0.00	4546.87	4742.82	2371.41	10151.7	5013.57	11.74	-2.307	0.000	0.916
52.00	-40.05	-51.38	0.00	-4443.2	0.00	4443.21	4718.75	2359.37	10001.6	4939.41	12.73	-2.408	0.000	0.909
54.00	-39.29	-50.93	0.00	-4340.4	0.00	4340.45	4694.25	2347.12	9851.55	4865.31	13.76	-2.511	0.000	0.901
56.00	-38.53	-50.47	0.00	-4238.6	0.00	4238.60	4669.32	2334.66	9701.64	4791.28	14.83	-2.614	0.000	0.893
58.00	-37.78	-50.02	0.00	-4137.6	0.00	4137.65	4643.97	2321.98	9551.90	4717.32	15.95	-2.718	0.000	0.886
60.00	-37.04	-49.57	0.00	-4037.6	0.00	4037.62	4618.19	2309.09	9402.34	4643.46	17.11	-2.822	0.000	0.878
62.00	-36.31	-49.11	0.00	-3938.4	0.00	3938.49	4591.98	2295.99	9253.00	4569.71	18.32	-2.927	0.000	0.870
64.00	-35.58	-48.66	0.00	-3840.2	0.00	3840.27	4565.34	2282.67	9103.90	4496.07	19.56	-3.032	0.000	0.862
66.00	-34.85	-48.20	0.00	-3742.9	0.00	3742.96	4538.28	2269.14	8955.07	4422.57	20.86	-3.138	0.000	0.854
68.00	-34.14	-47.75	0.00	-3646.5	0.00	3646.56	4510.78	2255.39	8806.54	4349.22	22.20	-3.245	0.000	0.846
70.00	-33.43	-47.29	0.00	-3551.0	0.00	3551.07	4482.87	2241.43	8658.34	4276.03	23.58	-3.352	0.000	0.838
72.00	-32.73	-46.84	0.00	-3456.4	0.00	3456.49	4454.52	2227.26	8510.48	4203.01	25.00	-3.460	0.000	0.830
74.00	-32.07	-46.36	0.00	-3362.8	0.00	3362.82	4425.74	2212.87	8363.00	4130.17	26.48	-3.569	0.000	0.822
74.50	-31.87	-46.26	0.00	-3339.6	0.00	3339.64	4418.48	2209.24	8326.19	4111.99	26.85	-3.596	0.000	0.820
76.00	-31.01	-45.90	0.00	-3270.2	0.00	3270.24	4396.54	2198.27	8215.92	4057.54	27.99	-3.678	0.000	0.813
78.00	-29.88	-45.41	0.00	-3178.4	0.00	3178.44	4366.91	2183.46	8069.28	3985.11	29.56	-3.787	0.000	0.805
80.00	-28.78	-44.91	0.00	-3087.6	0.00	3087.61	4336.86	2168.43	7923.09	3912.92	31.17	-3.897	0.000	0.796
81.00	-28.22	-44.66	0.00	-3042.7	0.00	3042.71	3502.12	1751.06	6488.82	3204.59	31.99	-3.953	0.000	0.958
82.00	-27.90	-44.45	0.00	-2998.0	0.00	2998.05	3492.03	1746.01	6433.63	3177.33	32.82	-4.009	0.000	0.952
84.00	-27.29	-44.00	0.00	-2909.1	0.00	2909.14	3471.52	1735.76	6323.29	3122.83	34.53	-4.131	0.000	0.940
86.00	-26.70	-43.55	0.00	-2821.1	0.00	2821.14	3450.59	1725.29	6213.03	3068.38	36.28	-4.254	0.000	0.928

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00	-26.11	-43.11	0.00	-2734.0	0.00	2734.04	3429.23	1714.61	6102.90	3013.99	38.09	-4.378	0.000	0.915
90.00	-25.52	-42.66	0.00	-2647.8	0.00	2647.82	3407.44	1703.72	5992.90	2959.67	39.95	-4.501	0.000	0.903
92.00	-24.94	-42.22	0.00	-2562.5	0.00	2562.50	3385.23	1692.61	5883.07	2905.43	41.86	-4.625	0.000	0.890
94.00	-24.37	-41.77	0.00	-2478.0	0.00	2478.07	3362.58	1681.29	5773.43	2851.28	43.83	-4.750	0.000	0.877
96.00	-23.81	-41.33	0.00	-2394.5	0.00	2394.52	3339.51	1669.76	5664.02	2797.25	45.84	-4.874	0.000	0.864
98.00	-23.25	-40.89	0.00	-2311.8	0.00	2311.86	3316.01	1658.01	5554.85	2743.33	47.91	-4.999	0.000	0.850
100.00	-22.70	-40.46	0.00	-2230.0	0.00	2230.07	3292.09	1646.04	5445.96	2689.56	50.03	-5.124	0.000	0.837
102.00	-22.15	-40.02	0.00	-2149.1	0.00	2149.16	3267.73	1633.87	5337.38	2635.93	52.20	-5.249	0.000	0.823
104.00	-21.62	-39.59	0.00	-2069.1	0.00	2069.12	3242.95	1621.48	5229.12	2582.46	54.42	-5.374	0.000	0.808
106.00	-21.08	-39.16	0.00	-1989.9	0.00	1989.95	3217.75	1608.87	5121.21	2529.17	56.70	-5.499	0.000	0.794
108.00	-20.56	-38.73	0.00	-1911.6	0.00	1911.64	3192.11	1596.05	5013.69	2476.07	59.02	-5.624	0.000	0.779
110.00	-20.04	-38.30	0.00	-1834.1	0.00	1834.19	3166.05	1583.02	4906.58	2423.18	61.40	-5.749	0.000	0.764
112.00	-19.53	-37.87	0.00	-1757.5	0.00	1757.59	3139.56	1569.78	4799.90	2370.49	63.83	-5.874	0.000	0.748
114.00	-19.02	-37.45	0.00	-1681.8	0.00	1681.84	3112.64	1556.32	4693.69	2318.04	66.32	-5.998	0.000	0.732
116.00	-18.53	-37.03	0.00	-1606.9	0.00	1606.94	3085.29	1542.65	4587.97	2265.83	68.85	-6.122	0.000	0.716
118.00	-18.06	-36.60	0.00	-1532.8	0.00	1532.88	3057.52	1528.76	4482.76	2213.87	71.44	-6.245	0.000	0.699
118.75	-17.87	-36.45	0.00	-1505.4	0.00	1505.43	3046.99	1523.50	4443.45	2194.45	72.42	-6.291	0.000	0.692
120.00	-17.37	-36.18	0.00	-1459.8	0.00	1459.86	3029.32	1514.66	4378.10	2162.18	74.08	-6.368	0.000	0.681
122.00	-16.60	-35.72	0.00	-1387.5	0.00	1387.51	3000.69	1500.34	4274.01	2110.77	76.77	-6.490	0.000	0.663
124.00	-15.84	-35.27	0.00	-1316.0	0.00	1316.07	2938.57	1483.57	4174.90	2060.26	79.51	-6.610	0.000	0.645
126.00	-15.43	-34.86	0.00	-1245.5	0.00	1245.53	2919.39	1474.99	4082.90	2019.73	82.29	-6.729	0.000	0.627
128.00	-15.01	-34.46	0.00	-1175.8	0.00	1175.81	2899.78	1466.89	3996.10	1979.18	85.14	-6.846	0.000	0.609
130.00	-14.60	-34.06	0.00	-1106.8	0.00	1106.88	2879.74	1459.19	3913.10	1938.63	88.03	-6.964	0.000	0.591
132.00	-14.20	-33.66	0.00	-1038.7	0.00	1038.76	2859.27	1451.89	3833.10	1898.08	90.98	-7.082	0.000	0.573
134.00	-13.80	-33.27	0.00	-971.44	0.00	971.44	2838.38	1444.99	3755.10	1857.53	93.99	-7.200	0.000	0.555
136.00	-13.41	-32.88	0.00	-904.90	0.00	904.90	2817.06	1438.49	3679.10	1816.98	97.04	-7.318	0.000	0.537
138.00	-13.03	-32.49	0.00	-839.14	0.00	839.14	2795.31	1432.29	3605.10	1776.43	100.15	-7.436	0.000	0.519
140.00	-10.93	-25.55	0.00	-774.16	0.00	774.16	2773.13	1426.39	3533.10	1735.88	103.31	-7.554	0.000	0.501
142.00	-10.61	-25.17	0.00	-723.07	0.00	723.07	2750.53	1420.69	3463.10	1695.33	106.51	-7.672	0.000	0.483
144.00	-10.30	-24.79	0.00	-672.74	0.00	672.74	2727.50	1415.29	3394.10	1654.78	109.76	-7.790	0.000	0.465
146.00	-9.99	-24.42	0.00	-623.16	0.00	623.16	2704.04	1410.09	3326.10	1615.23	113.06	-7.908	0.000	0.447
148.00	-9.69	-24.05	0.00	-574.33	0.00	574.33	2680.15	1405.09	3259.10	1575.68	116.40	-8.026	0.000	0.429
150.00	-7.35	-19.32	0.00	-526.23	0.00	526.23	2655.84	1400.29	3193.10	1536.13	119.78	-8.144	0.000	0.411
152.00	-7.10	-18.96	0.00	-487.59	0.00	487.59	2631.10	1395.69	3128.10	1496.58	123.21	-8.262	0.000	0.393
154.00	-6.86	-18.60	0.00	-449.67	0.00	449.67	2605.93	1391.29	3064.10	1457.03	126.67	-8.380	0.000	0.375
154.75	-6.77	-18.47	0.00	-435.72	0.00	435.72	2596.38	1387.49	3049.10	1447.53	127.98	-8.385	0.000	0.401
156.00	-6.53	-18.24	0.00	-412.63	0.00	412.63	2580.33	1383.89	3034.10	1438.03	130.18	-8.445	0.000	0.387
158.00	-6.17	-17.87	0.00	-376.14	0.00	376.14	2563.84	1380.39	3019.10	1428.53	133.72	-8.536	0.000	0.366
159.00	-5.99	-17.68	0.00	-358.28	0.00	358.28	2545.51	1377.09	3004.10	1419.03	135.51	-8.581	0.000	0.711
160.00	-5.91	-17.52	0.00	-340.59	0.00	340.59	2526.15	1373.79	2989.10	1409.53	137.30	-8.625	0.000	0.685
162.00	-5.75	-17.20	0.00	-305.55	0.00	305.55	2506.84	1370.49	2974.10	1400.03	140.93	-8.757	0.000	0.632
164.00	-5.60	-16.88	0.00	-271.15	0.00	271.15	2487.58	1367.19	2959.10	1390.53	144.62	-8.882	0.000	0.577
166.00	-5.46	-16.56	0.00	-237.40	0.00	237.40	2468.27	1363.89	2944.10	1381.03	148.35	-8.998	0.000	0.521
167.00	-2.95	-9.75	0.00	-220.84	0.00	220.84	2449.01	1360.59	2929.10	1371.53	150.23	-9.054	0.000	0.488
168.00	-2.90	-9.60	0.00	-211.09	0.00	211.09	2429.80	1357.29	2914.10	1362.03	152.13	-9.109	0.000	0.474
170.00	-2.81	-9.29	0.00	-191.89	0.00	191.89	2410.64	1354.09	2899.10	1352.53	155.95	-9.213	0.000	0.444
172.00	-2.72	-8.99	0.00	-173.31	0.00	173.31	2391.53	1350.89	2884.10	1343.03	159.81	-9.314	0.000	0.414
174.00	-2.63	-8.70	0.00	-155.33	0.00	155.33	2372.47	1347.69	2869.10	1333.53	163.72	-9.411	0.000	0.384
176.00	-2.55	-8.41	0.00	-137.94	0.00	137.94	2353.46	1344.49	2854.10	1324.03	167.66	-9.503	0.000	0.353
178.00	-2.47	-8.12	0.00	-121.13	0.00	121.13	2334.50	1341.29	2839.10	1314.53	171.64	-9.590	0.000	0.321
180.00	-2.39	-7.84	0.00	-104.88	0.00	104.88	2315.59	1338.09	2824.10	1305.03	175.66	-9.671	0.000	0.289
182.00	-2.32	-7.57	0.00	-89.20	0.00	89.20	2296.73	1334.89	2809.10	1295.53	179.71	-9.746	0.000	0.255
184.00	-2.25	-7.30	0.00	-74.06	0.00	74.06	2277.92	1331.69	2794.10	1286.03	183.79	-9.814	0.000	0.221
186.00	-2.18	-7.04	0.00	-59.46	0.00	59.46	2259.16	1328.49	2779.10	1276.53	187.89	-9.874	0.000	0.185
188.00	-2.12	-6.78	0.00	-45.38	0.00	45.38	2240.45	1325.29	2764.10	1267.03	192.02	-9.924	0.000	0.148
190.00	-2.06	-6.53	0.00	-31.82	0.00	31.82	2221.79	1322.09	2749.10	1257.53	196.17	-9.964	0.000	0.109
192.00	-2.00	-6.28	0.00	-18.76	0.00	18.76	2203.18	1318.89	2734.10	1248.03	200.33	-9.993	0.000	0.068

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Page: 23
	Struct Class: II	



194.00	-1.94	-6.04	0.00	-6.19	0.00	6.19	761.60	380.80	555.16	274.17	204.50	-10.008	0.000	0.025
195.00	-0.03	-0.14	0.00	-0.14	0.00	0.14	754.51	377.26	542.11	267.73	206.58	-10.010	0.000	0.001
196.00	0.00	-0.14	0.00	0.00	0.00	0.00	747.31	373.66	529.12	261.31	208.67	-10.010	0.000	0.000

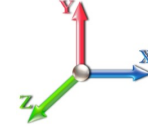
Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 108 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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	0.85	24.112	26.52	549.78	1.000	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	24.112	26.52	545.46	1.000	0.000	2.00	11.000	11.00	466.8	0.0	585.0
4.00		1.00	0.85	24.112	26.52	541.15	1.000	0.000	2.00	10.913	10.91	463.1	0.0	580.4
6.00		1.00	0.85	24.112	26.52	536.83	1.000	0.000	2.00	10.826	10.83	459.4	0.0	575.7
8.00		1.00	0.85	24.112	26.52	532.52	1.000	0.000	2.00	10.740	10.74	455.8	0.0	571.1
10.00		1.00	0.85	24.112	26.52	528.20	1.000	0.000	2.00	10.653	10.65	452.1	0.0	566.4
12.00		1.00	0.85	24.112	26.52	523.88	1.000	0.000	2.00	10.566	10.57	448.4	0.0	561.8
14.00		1.00	0.85	24.112	26.52	519.57	1.000	0.000	2.00	10.479	10.48	444.7	0.0	557.2
16.00		1.00	0.86	24.410	26.85	518.42	1.000	0.000	2.00	10.393	10.39	446.5	0.0	552.5
18.00		1.00	0.88	25.022	27.52	520.50	1.000	0.000	2.00	10.306	10.31	453.9	0.0	547.9
20.00		1.00	0.90	25.584	28.14	521.86	1.000	0.000	2.00	10.219	10.22	460.2	0.0	543.2
22.00		1.00	0.92	26.102	28.71	522.63	1.000	0.000	2.00	10.133	10.13	465.5	0.0	538.6
24.00		1.00	0.94	26.585	29.24	522.90	1.000	0.000	2.00	10.046	10.05	470.0	0.0	533.9
26.00		1.00	0.95	27.037	29.74	522.76	1.000	0.000	2.00	9.959	9.96	473.9	0.0	529.3
28.00		1.00	0.97	27.462	30.21	522.25	1.000	0.000	2.00	9.873	9.87	477.2	0.0	524.6
30.00	Appurtenance(s)	1.00	0.98	27.863	30.65	521.41	1.000	0.000	2.00	9.786	9.79	479.9	0.0	520.0
32.00		1.00	1.00	28.245	31.07	520.30	1.000	0.000	2.00	9.699	9.70	482.2	0.0	515.3
34.00		1.00	1.01	28.607	31.47	518.93	1.000	0.000	2.00	9.613	9.61	484.0	0.0	510.7
35.50	Bot - Section 2	1.00	1.02	28.869	31.76	517.75	1.000	0.000	1.50	7.153	7.15	363.4	0.0	380.0
36.00		1.00	1.02	28.954	31.85	517.33	1.000	0.000	0.50	2.411	2.41	122.9	0.0	245.7
38.00		1.00	1.03	29.285	32.21	515.53	1.000	0.000	2.00	9.590	9.59	494.3	0.0	977.2
40.00		1.00	1.04	29.603	32.56	513.53	1.000	0.000	2.00	9.504	9.50	495.1	0.0	968.2
42.00		1.00	1.05	29.909	32.90	511.37	1.000	0.000	2.00	9.417	9.42	495.7	0.0	959.3
43.00	Top - Section 1	1.00	1.06	30.057	33.06	510.23	1.000	0.000	1.00	4.676	4.68	247.4	0.0	476.3
44.00		1.00	1.06	30.203	33.22	517.46	1.000	0.000	1.00	4.654	4.65	247.4	0.0	230.9
46.00		1.00	1.07	30.487	33.54	515.04	1.000	0.000	2.00	9.243	9.24	496.0	0.0	458.5
48.00		1.00	1.08	30.761	33.84	512.48	1.000	0.000	2.00	9.157	9.16	495.7	0.0	454.1
50.00		1.00	1.09	31.027	34.13	509.79	1.000	0.000	2.00	9.070	9.07	495.3	0.0	449.8
52.00		1.00	1.10	31.284	34.41	506.98	1.000	0.000	2.00	8.983	8.98	494.6	0.0	445.5
54.00		1.00	1.11	31.534	34.69	504.06	1.000	0.000	2.00	8.897	8.90	493.8	0.0	441.1
56.00		1.00	1.12	31.776	34.95	501.04	1.000	0.000	2.00	8.810	8.81	492.7	0.0	436.8
58.00		1.00	1.13	32.012	35.21	497.92	1.000	0.000	2.00	8.723	8.72	491.5	0.0	432.5
60.00		1.00	1.14	32.241	35.47	494.71	1.000	0.000	2.00	8.637	8.64	490.1	0.0	428.1
62.00		1.00	1.14	32.464	35.71	491.42	1.000	0.000	2.00	8.550	8.55	488.5	0.0	423.8
64.00		1.00	1.15	32.682	35.95	488.04	1.000	0.000	2.00	8.463	8.46	486.8	0.0	419.5
66.00		1.00	1.16	32.894	36.18	484.58	1.000	0.000	2.00	8.377	8.38	485.0	0.0	415.1
68.00		1.00	1.17	33.102	36.41	481.05	1.000	0.000	2.00	8.290	8.29	483.0	0.0	410.8
70.00		1.00	1.17	33.305	36.63	477.45	1.000	0.000	2.00	8.203	8.20	480.8	0.0	406.4
72.00		1.00	1.18	33.503	36.85	473.78	1.000	0.000	2.00	8.117	8.12	478.6	0.0	402.1
74.00		1.00	1.19	33.696	37.07	470.04	1.000	0.000	2.00	8.030	8.03	476.2	0.0	397.8
74.50	Bot - Section 3	1.00	1.19	33.744	37.12	469.10	1.000	0.000	0.50	1.994	1.99	118.4	0.0	98.8
76.00		1.00	1.19	33.886	37.27	466.25	1.000	0.000	1.50	6.046	6.05	360.6	0.0	551.8
78.00		1.00	1.20	34.072	37.48	462.39	1.000	0.000	2.00	7.986	7.99	478.9	0.0	728.6
80.00		1.00	1.21	34.254	37.68	458.48	1.000	0.000	2.00	7.899	7.90	476.2	0.0	720.6
81.00	Top - Section 2	1.00	1.21	34.344	37.78	456.51	1.000	0.000	1.00	3.917	3.92	236.8	0.0	357.3
82.00		1.00	1.21	34.433	37.88	462.22	1.000	0.000	1.00	3.895	3.90	236.1	0.0	165.6
84.00		1.00	1.22	34.608	38.07	458.22	1.000	0.000	2.00	7.726	7.73	470.6	0.0	328.4

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	1.00	1.23	34.780	38.26	454.18	1.000	0.000	2.00	7.639	7.64	467.6	0.0	324.7
88.00	1.00	1.23	34.948	38.44	450.08	1.000	0.000	2.00	7.552	7.55	464.5	0.0	321.0
90.00	1.00	1.24	35.114	38.63	445.94	1.000	0.000	2.00	7.466	7.47	461.4	0.0	317.2
92.00	1.00	1.24	35.277	38.80	441.75	1.000	0.000	2.00	7.379	7.38	458.1	0.0	313.5
94.00	1.00	1.25	35.437	38.98	437.52	1.000	0.000	2.00	7.292	7.29	454.8	0.0	309.8
96.00	1.00	1.25	35.594	39.15	433.25	1.000	0.000	2.00	7.206	7.21	451.4	0.0	306.1
98.00	1.00	1.26	35.749	39.32	428.93	1.000	0.000	2.00	7.119	7.12	447.9	0.0	302.4
100.00	1.00	1.27	35.902	39.49	424.58	1.000	0.000	2.00	7.032	7.03	444.4	0.0	298.7
102.00	1.00	1.27	36.052	39.66	420.19	1.000	0.000	2.00	6.946	6.95	440.7	0.0	294.9
104.00	1.00	1.28	36.199	39.82	415.76	1.000	0.000	2.00	6.859	6.86	437.0	0.0	291.2
106.00	1.00	1.28	36.345	39.98	411.30	1.000	0.000	2.00	6.772	6.77	433.2	0.0	287.5
108.00	1.00	1.29	36.488	40.14	406.80	1.000	0.000	2.00	6.686	6.69	429.3	0.0	283.8
110.00	1.00	1.29	36.629	40.29	402.26	1.000	0.000	2.00	6.599	6.60	425.4	0.0	280.1
112.00	1.00	1.30	36.768	40.45	397.70	1.000	0.000	2.00	6.512	6.51	421.4	0.0	276.4
114.00	1.00	1.30	36.906	40.60	393.10	1.000	0.000	2.00	6.426	6.43	417.4	0.0	272.6
116.00	1.00	1.31	37.041	40.75	388.47	1.000	0.000	2.00	6.339	6.34	413.2	0.0	268.9
118.00	1.00	1.31	37.175	40.89	383.81	1.000	0.000	2.00	6.252	6.25	409.1	0.0	265.2
118.75 Bot - Section 4	1.00	1.31	37.224	40.95	382.06	1.000	0.000	0.75	2.322	2.32	152.1	0.0	98.5
120.00	1.00	1.32	37.306	41.04	379.12	1.000	0.000	1.25	3.911	3.91	256.8	0.0	301.5
122.00	1.00	1.32	37.436	41.18	374.41	1.000	0.000	2.00	6.187	6.19	407.6	0.0	476.8
124.00 Top - Section 3	1.00	1.32	37.565	41.32	369.66	1.000	0.000	2.00	6.100	6.10	403.3	0.0	470.0
126.00	1.00	1.33	37.692	41.46	371.60	1.000	0.000	2.00	6.013	6.01	398.9	0.0	212.9
128.00	1.00	1.33	37.817	41.60	366.81	1.000	0.000	2.00	5.927	5.93	394.5	0.0	209.8
130.00	1.00	1.34	37.940	41.73	362.00	1.000	0.000	2.00	5.840	5.84	390.0	0.0	206.7
132.00	1.00	1.34	38.063	41.87	357.16	1.000	0.000	2.00	5.753	5.75	385.4	0.0	203.6
134.00	1.00	1.35	38.183	42.00	352.29	1.000	0.000	2.00	5.667	5.67	380.8	0.0	200.5
136.00	1.00	1.35	38.303	42.13	347.40	1.000	0.000	2.00	5.580	5.58	376.1	0.0	197.4
138.00	1.00	1.35	38.420	42.26	342.49	1.000	0.000	2.00	5.493	5.49	371.4	0.0	194.3
140.00 Appurtenance(s)	1.00	1.36	38.537	42.39	337.55	1.000	0.000	2.00	5.406	5.41	366.7	0.0	191.2
142.00	1.00	1.36	38.652	42.52	332.59	1.000	0.000	2.00	5.320	5.32	361.9	0.0	188.1
144.00	1.00	1.37	38.766	42.64	327.61	1.000	0.000	2.00	5.233	5.23	357.0	0.0	185.0
146.00	1.00	1.37	38.879	42.77	322.61	1.000	0.000	2.00	5.146	5.15	352.2	0.0	181.9
148.00	1.00	1.37	38.990	42.89	317.58	1.000	0.000	2.00	5.060	5.06	347.2	0.0	178.8
150.00 Appurtenance(s)	1.00	1.38	39.101	43.01	312.54	1.000	0.000	2.00	4.973	4.97	342.2	0.0	175.7
152.00	1.00	1.38	39.210	43.13	307.47	1.000	0.000	2.00	4.886	4.89	337.2	0.0	172.6
154.00	1.00	1.39	39.318	43.25	302.38	1.000	0.000	2.00	4.800	4.80	332.1	0.0	169.5
154.75 Bot - Section 5	1.00	1.39	39.358	43.29	300.47	1.000	0.000	0.75	1.778	1.78	123.1	0.0	62.8
156.00	1.00	1.39	39.425	43.37	297.27	1.000	0.000	1.25	2.976	2.98	206.5	0.0	167.0
158.00	1.00	1.39	39.531	43.48	292.15	1.000	0.000	2.00	4.691	4.69	326.4	0.0	263.2
159.00 Top - Section 4	1.00	1.40	39.583	43.54	289.57	1.000	0.000	1.00	2.313	2.31	161.1	0.0	129.7
160.00	1.00	1.40	39.636	43.60	291.13	1.000	0.000	1.00	2.291	2.29	159.8	0.0	48.8
162.00	1.00	1.40	39.740	43.71	285.97	1.000	0.000	2.00	4.518	4.52	316.0	0.0	96.1
164.00	1.00	1.40	39.842	43.83	280.79	1.000	0.000	2.00	4.431	4.43	310.7	0.0	94.3
166.00	1.00	1.41	39.944	43.94	275.60	1.000	0.000	2.00	4.344	4.34	305.4	0.0	92.4
167.00 Appurtenance(s)	1.00	1.41	39.995	43.99	272.99	1.000	0.000	1.00	2.140	2.14	150.6	0.0	45.5
168.00	1.00	1.41	40.045	44.05	270.38	1.000	0.000	1.00	2.118	2.12	149.3	0.0	45.0
170.00	1.00	1.42	40.145	44.16	265.15	1.000	0.000	2.00	4.171	4.17	294.7	0.0	88.7
172.00	1.00	1.42	40.244	44.27	259.90	1.000	0.000	2.00	4.084	4.08	289.3	0.0	86.8
174.00	1.00	1.42	40.342	44.38	254.63	1.000	0.000	2.00	3.997	4.00	283.8	0.0	85.0
176.00	1.00	1.43	40.439	44.48	249.35	1.000	0.000	2.00	3.911	3.91	278.3	0.0	83.1
178.00	1.00	1.43	40.535	44.59	244.05	1.000	0.000	2.00	3.824	3.82	272.8	0.0	81.3
180.00	1.00	1.43	40.631	44.69	238.74	1.000	0.000	2.00	3.737	3.74	267.3	0.0	79.4
182.00	1.00	1.44	40.725	44.80	233.41	1.000	0.000	2.00	3.651	3.65	261.7	0.0	77.5
184.00	1.00	1.44	40.819	44.90	228.06	1.000	0.000	2.00	3.564	3.56	256.0	0.0	75.7
186.00	1.00	1.44	40.912	45.00	222.70	1.000	0.000	2.00	3.477	3.48	250.4	0.0	73.8
188.00	1.00	1.45	41.004	45.10	217.32	1.000	0.000	2.00	3.391	3.39	244.7	0.0	72.0
190.00	1.00	1.45	41.096	45.21	211.93	1.000	0.000	2.00	3.304	3.30	239.0	0.0	70.1

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
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192.00	1.00	1.45	41.187	45.31	206.52	1.000	0.000	2.00	3.217	3.22	233.2	0.0	68.3
194.00	1.00	1.46	41.277	45.40	201.10	1.000	0.000	2.00	3.131	3.13	227.4	0.0	66.4
195.00 Appurtenance(s)	1.00	1.46	41.321	45.45	198.38	1.000	0.000	1.00	1.533	1.53	111.5	0.0	32.5
196.00 Appurtenance(s)	1.00	1.46	41.366	45.50	195.67	1.000	0.000	1.00	1.511	1.51	110.0	0.0	32.0
Totals:								196.00			40,075.3		34,270.2

Discrete Appurtenance Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 108 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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	196.00	6' Lightning rod	1	41.366	45.502	1.00	1.00	0.38	5.85	0.000	0.000	27.67	0.00	0.00
2	195.00	TD-RRH8x20-25	3	41.321	45.453	0.60	0.90	7.33	189.00	0.000	0.000	532.82	0.00	0.00
3	195.00	APXVSPP18-C-A20	3	41.321	45.453	0.75	0.90	17.97	153.90	0.000	0.000	1307.08	0.00	0.00
4	195.00	1900MHz RRH	3	41.321	45.453	0.60	0.90	6.87	118.80	0.000	0.000	499.93	0.00	0.00
5	195.00	APXVTM14-C-120	3	41.321	45.453	0.71	0.90	13.52	151.20	0.000	0.000	983.48	0.00	0.00
6	195.00	800MHz Filter	3	41.321	45.453	0.45	0.90	1.05	23.76	0.000	0.000	76.58	0.00	0.00
7	195.00	ACU-A20-N	4	41.321	45.453	0.45	0.90	0.25	3.60	0.000	0.000	18.33	0.00	0.00
8	195.00	Low Profile Platform	1	41.321	45.453	1.00	1.00	22.00	1350.00	0.000	0.000	1599.96	0.00	0.00
9	195.00	800MHz RRH	3	41.321	45.453	0.60	0.90	4.78	160.65	0.000	0.000	347.32	0.00	0.00
10	167.00	AIR 21, 1.3M, B4A B2P	3	39.995	43.994	0.62	0.75	11.32	243.81	0.000	0.000	796.70	0.00	0.00
11	167.00	LNx-6515DS-A1M	3	39.995	43.994	0.63	0.75	21.58	135.81	0.000	0.000	1518.68	0.00	0.00
12	167.00	AIR 21, 1.3M, B2A B4P	3	39.995	43.994	0.62	0.75	11.32	247.05	0.000	0.000	796.70	0.00	0.00
13	167.00	S11B12	3	39.995	43.994	0.38	0.75	3.18	137.70	0.000	0.000	224.11	0.00	0.00
14	167.00	KRY 112 144/1	3	39.995	43.994	0.38	0.75	0.46	29.70	0.000	0.000	32.47	0.00	0.00
15	167.00	Platform w/ Hand Rails	1	39.995	43.994	1.00	1.00	40.00	1800.00	0.000	0.000	2815.62	0.00	0.00
16	150.00	Low Profile Platform	1	39.101	43.011	1.00	1.00	22.00	1350.00	0.000	0.000	1513.98	0.00	0.00
17	150.00	DC6-48-60-18-8F	1	39.101	43.011	0.80	0.80	1.18	28.62	0.000	0.000	80.93	0.00	0.00
18	150.00	LGP13519	6	39.101	43.011	0.40	0.80	0.82	28.62	0.000	0.000	56.16	0.00	0.00
19	150.00	LGP21401	6	39.101	43.011	0.40	0.80	3.10	76.14	0.000	0.000	213.06	0.00	0.00
20	150.00	AM-X-CD-14-65-00T-RET	1	39.101	43.011	0.60	0.80	3.00	32.76	0.000	0.000	206.45	0.00	0.00
21	150.00	P65-17-XLH-RR	2	39.101	43.011	0.60	0.80	13.73	106.20	0.000	0.000	944.73	0.00	0.00
22	150.00	7700.00	6	39.101	43.011	0.63	0.80	6.56	86.40	0.000	0.000	451.45	0.00	0.00
23	150.00	RRUS 11	6	39.101	43.011	0.54	0.80	8.10	273.78	0.000	0.000	557.72	0.00	0.00
24	140.00	LNx-6414DS-A1M	3	38.537	42.391	0.64	0.80	15.53	89.37	0.000	0.000	1053.51	0.00	0.00
25	140.00	LNx-8513DS-VTM	2	38.537	42.391	0.66	0.80	10.85	47.34	0.000	0.000	735.89	0.00	0.00
26	140.00	APL866513	2	38.537	42.391	0.74	0.80	6.03	28.26	0.000	0.000	408.74	0.00	0.00
27	140.00	HBXX-6517DS-A2M	6	38.537	42.391	0.66	0.80	34.06	220.32	0.000	0.000	2310.34	0.00	0.00
28	140.00	DB-T1-6Z-8AB-0Z	1	38.537	42.391	0.40	0.80	1.92	17.01	0.000	0.000	130.22	0.00	0.00
29	140.00	RRH2x40 700	3	38.537	42.391	0.54	0.80	3.99	135.00	0.000	0.000	270.48	0.00	0.00
30	140.00	RRH2x60-2100	3	38.537	42.391	0.54	0.80	2.43	52.65	0.000	0.000	164.68	0.00	0.00
31	140.00	Low Profile Platform	1	38.537	42.391	0.80	0.80	17.60	1350.00	0.000	0.000	1193.72	0.00	0.00
32	30.00	GPS	1	27.863	30.650	1.00	1.00	1.00	9.00	0.000	0.000	49.04	0.00	0.00
Totals:									8,682.30			21,918.54		

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II

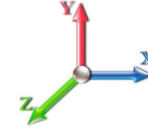


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Load Case: 0.9D + 1.6W 108 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 31

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
2.00		466.79	664.65	0.00	0.00
4.00		463.11	660.01	0.00	0.00
6.00		459.43	655.36	0.00	0.00
8.00		455.75	650.72	0.00	0.00
10.00		452.07	646.07	0.00	0.00
12.00		448.39	641.43	0.00	0.00
14.00		444.72	636.78	0.00	0.00
16.00		446.48	632.14	0.00	0.00
18.00		453.88	627.49	0.00	0.00
20.00		460.15	622.85	0.00	0.00
22.00		465.50	618.20	0.00	0.00
24.00		470.05	613.56	0.00	0.00
26.00		473.91	608.92	0.00	0.00
28.00		477.17	604.27	0.00	0.00
30.00	(1) attachments	528.94	608.63	0.00	0.00
32.00		482.16	594.98	0.00	0.00
34.00		483.99	590.34	0.00	0.00
35.50		363.41	439.70	0.00	0.00
36.00		122.87	265.62	0.00	0.00
38.00		494.30	1056.86	0.00	0.00
40.00		495.15	1047.88	0.00	0.00
42.00		495.70	1038.90	0.00	0.00
43.00		247.36	516.08	0.00	0.00
44.00		247.41	270.68	0.00	0.00
46.00		495.98	538.10	0.00	0.00
48.00		495.75	533.76	0.00	0.00
50.00		495.29	529.43	0.00	0.00
52.00		494.63	525.09	0.00	0.00
54.00		493.76	520.76	0.00	0.00
56.00		492.71	516.42	0.00	0.00
58.00		491.48	512.09	0.00	0.00
60.00		490.08	507.75	0.00	0.00
62.00		488.52	503.42	0.00	0.00
64.00		486.81	499.08	0.00	0.00
66.00		484.96	494.75	0.00	0.00
68.00		482.96	490.41	0.00	0.00
70.00		480.84	486.08	0.00	0.00
72.00		478.59	481.74	0.00	0.00
74.00		476.22	477.41	0.00	0.00
74.50		118.42	118.68	0.00	0.00
76.00		360.60	611.49	0.00	0.00
78.00		478.89	808.27	0.00	0.00
80.00		476.22	800.22	0.00	0.00
81.00		236.77	397.09	0.00	0.00
82.00		236.07	205.40	0.00	0.00
84.00		470.58	408.02	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	467.61	404.30	0.00	0.00
88.00	464.54	400.58	0.00	0.00
90.00	461.39	396.87	0.00	0.00
92.00	458.15	393.15	0.00	0.00
94.00	454.82	389.44	0.00	0.00
96.00	451.41	385.72	0.00	0.00
98.00	447.92	382.01	0.00	0.00
100.00	444.35	378.29	0.00	0.00
102.00	440.71	374.57	0.00	0.00
104.00	436.99	370.86	0.00	0.00
106.00	433.20	367.14	0.00	0.00
108.00	429.34	363.43	0.00	0.00
110.00	425.41	359.71	0.00	0.00
112.00	421.42	356.00	0.00	0.00
114.00	417.36	352.28	0.00	0.00
116.00	413.24	348.56	0.00	0.00
118.00	409.06	344.85	0.00	0.00
118.75	152.14	128.36	0.00	0.00
120.00	256.77	351.26	0.00	0.00
122.00	407.63	556.47	0.00	0.00
124.00	403.29	549.66	0.00	0.00
126.00	398.90	292.50	0.00	0.00
128.00	394.46	289.40	0.00	0.00
130.00	389.96	286.30	0.00	0.00
132.00	385.41	283.21	0.00	0.00
134.00	380.80	280.11	0.00	0.00
136.00	376.15	277.02	0.00	0.00
138.00	371.45	273.92	0.00	0.00
140.00	(21) attachments 6634.28	2210.77	0.00	0.00
142.00	361.89	241.30	0.00	0.00
144.00	357.04	238.21	0.00	0.00
146.00	352.15	235.11	0.00	0.00
148.00	347.21	232.01	0.00	0.00
150.00	(29) attachments 4366.71	2211.44	0.00	0.00
152.00	337.20	201.81	0.00	0.00
154.00	332.13	198.71	0.00	0.00
154.75	123.13	73.72	0.00	0.00
156.00	206.49	185.24	0.00	0.00
158.00	326.37	292.36	0.00	0.00
159.00	161.14	144.32	0.00	0.00
160.00	159.84	63.36	0.00	0.00
162.00	315.97	125.32	0.00	0.00
164.00	310.71	123.46	0.00	0.00
166.00	305.41	121.61	0.00	0.00
167.00	(16) attachments 6334.88	2654.18	0.00	0.00
168.00	149.27	47.42	0.00	0.00
170.00	294.69	93.45	0.00	0.00
172.00	289.28	91.59	0.00	0.00
174.00	283.83	89.73	0.00	0.00
176.00	278.34	87.87	0.00	0.00
178.00	272.82	86.02	0.00	0.00
180.00	267.26	84.16	0.00	0.00
182.00	261.67	82.30	0.00	0.00
184.00	256.05	80.44	0.00	0.00
186.00	250.39	78.58	0.00	0.00
188.00	244.70	76.73	0.00	0.00
190.00	238.97	74.87	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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192.00		233.22	73.01	0.00	0.00
194.00		227.43	71.15	0.00	0.00
195.00	(23) attachments	5476.97	2185.79	0.00	0.00
196.00	(1) attachments	137.68	37.89	0.00	0.00
	Totals:	61,993.80	49,107.48	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

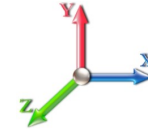
Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 108 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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)
2.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	22.46
2.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	3.96
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	22.46
4.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	3.96
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	22.46
6.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	3.96
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	22.46
8.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	3.96
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	22.46
10.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	3.96
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	22.46
12.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	3.96
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	22.46
14.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.112	0.00	3.96
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.410	0.00	22.46
16.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.410	0.00	3.96
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.022	0.00	22.46
18.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.022	0.00	3.96
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.584	0.00	22.46
20.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.584	0.00	3.96
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.102	0.00	22.46
22.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.102	0.00	3.96
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.585	0.00	22.46
24.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.585	0.00	3.96
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.037	0.00	22.46
26.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.037	0.00	3.96
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.462	0.00	22.46
28.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.462	0.00	3.96
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.863	0.00	22.46
30.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.863	0.00	3.96
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.245	0.00	22.46
32.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.245	0.00	3.96
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.607	0.00	22.46
34.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.607	0.00	3.96
35.50	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	16.85
35.50	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	2.97
36.00	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	28.954	0.00	5.62
36.00	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	28.954	0.00	0.99
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.285	0.00	22.46
38.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.285	0.00	3.96
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.603	0.00	22.46
40.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.603	0.00	3.96
42.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.909	0.00	22.46
42.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.909	0.00	3.96
43.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.057	0.00	11.23
43.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.057	0.00	1.98
44.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.203	0.00	11.23

Linear Appurtenance Segment Forces (Factored)

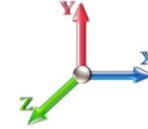
Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 108 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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)
44.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.203	0.00	1.98
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.487	0.00	22.46
46.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.487	0.00	3.96
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.761	0.00	22.46
48.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.761	0.00	3.96
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.027	0.00	22.46
50.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.027	0.00	3.96
52.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.284	0.00	22.46
52.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.284	0.00	3.96
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.534	0.00	22.46
54.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.534	0.00	3.96
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.776	0.00	22.46
56.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.776	0.00	3.96
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.012	0.00	22.46
58.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.012	0.00	3.96
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.241	0.00	22.46
60.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.241	0.00	3.96
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.464	0.00	22.46
62.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.464	0.00	3.96
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.682	0.00	22.46
64.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.682	0.00	3.96
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.894	0.00	22.46
66.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	32.894	0.00	3.96
68.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.102	0.00	22.46
68.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.102	0.00	3.96
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.305	0.00	22.46
70.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.305	0.00	3.96
72.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.503	0.00	22.46
72.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.503	0.00	3.96
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.696	0.00	22.46
74.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	33.696	0.00	3.96
74.50	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	33.744	0.00	5.62
74.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	33.744	0.00	0.99
76.00	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	33.886	0.00	16.85
76.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	33.886	0.00	2.97
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.072	0.00	22.46
78.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.072	0.00	3.96
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.254	0.00	22.46
80.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.254	0.00	3.96
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	34.344	0.00	11.23
81.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	34.344	0.00	1.98
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	11.23
82.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	34.433	0.00	1.98
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.608	0.00	22.46
84.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.608	0.00	3.96
86.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.780	0.00	22.46
86.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.780	0.00	3.96

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 108 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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)
88.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.948	0.00	22.46
88.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	34.948	0.00	3.96
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.114	0.00	22.46
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.114	0.00	3.96
92.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.277	0.00	22.46
92.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.277	0.00	3.96
94.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.437	0.00	22.46
94.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.437	0.00	3.96
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.594	0.00	22.46
96.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.594	0.00	3.96
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.749	0.00	22.46
98.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.749	0.00	3.96
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.902	0.00	22.46
100.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	35.902	0.00	3.96
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.052	0.00	22.46
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.052	0.00	3.96
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.199	0.00	22.46
104.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.199	0.00	3.96
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.345	0.00	22.46
106.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.345	0.00	3.96
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.488	0.00	22.46
108.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.488	0.00	3.96
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.629	0.00	22.46
110.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.629	0.00	3.96
112.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.768	0.00	22.46
112.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.768	0.00	3.96
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.906	0.00	22.46
114.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	36.906	0.00	3.96
116.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.041	0.00	22.46
116.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.041	0.00	3.96
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.175	0.00	22.46
118.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.175	0.00	3.96
118.75	1 5/8" Coax	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	37.224	0.00	8.42
118.75	1 5/8" Hybrid	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	37.224	0.00	1.49
120.00	1 5/8" Coax	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	37.306	0.00	14.04
120.00	1 5/8" Hybrid	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	37.306	0.00	2.48
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.436	0.00	22.46
122.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.436	0.00	3.96
124.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.565	0.00	22.46
124.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.565	0.00	3.96
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.692	0.00	22.46
126.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.692	0.00	3.96
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.817	0.00	22.46
128.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.817	0.00	3.96
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.940	0.00	22.46
130.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	37.940	0.00	3.96
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.063	0.00	22.46

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 108 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 31

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)
132.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.063	0.00	3.96
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.183	0.00	22.46
134.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.183	0.00	3.96
136.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.303	0.00	22.46
136.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.303	0.00	3.96
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.420	0.00	22.46
138.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.420	0.00	3.96
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.537	0.00	22.46
140.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	38.537	0.00	3.96
Totals:											0.0	1,849.7

Calculated Forces

Structure: CT00595-S-SBA
Site Name: Stonington East
Height: 196.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G 10/26/2017
Exposure: C
Crest Height: 0.00
Site Class: B - Competent Rock
Struct Class: II

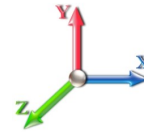


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Load Case: 0.9D + 1.6W 108 mph Wind

Iterations 31

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	-49.06	-62.03	0.00	-7335.8	0.00	7335.84	5795.46	2897.73	15207.4	7510.36	0.00	0.000	0.000	0.986
2.00	-48.30	-61.63	0.00	-7211.7	0.00	7211.78	5776.44	2888.22	15036.7	7426.09	0.02	-0.084	0.000	0.980
4.00	-47.56	-61.24	0.00	-7088.5	0.00	7088.52	5757.00	2878.50	14865.8	7341.68	0.07	-0.168	0.000	0.974
6.00	-46.81	-60.85	0.00	-6966.0	0.00	6966.04	5737.14	2868.57	14694.6	7257.12	0.16	-0.253	0.000	0.969
8.00	-46.07	-60.46	0.00	-6844.3	0.00	6844.35	5716.84	2858.42	14523.1	7172.43	0.29	-0.338	0.000	0.963
10.00	-45.34	-60.07	0.00	-6723.4	0.00	6723.44	5696.12	2848.06	14351.4	7087.63	0.45	-0.425	0.000	0.957
12.00	-44.61	-59.68	0.00	-6603.3	0.00	6603.30	5674.97	2837.49	14179.5	7002.73	0.64	-0.511	0.000	0.951
14.00	-43.89	-59.30	0.00	-6483.9	0.00	6483.94	5653.40	2826.70	14007.4	6917.75	0.88	-0.598	0.000	0.945
16.00	-43.17	-58.91	0.00	-6365.3	0.00	6365.34	5631.39	2815.70	13835.2	6832.69	1.15	-0.686	0.000	0.940
18.00	-42.46	-58.52	0.00	-6247.5	0.00	6247.52	5608.96	2804.48	13662.8	6747.57	1.46	-0.775	0.000	0.934
20.00	-41.75	-58.11	0.00	-6130.4	0.00	6130.49	5586.10	2793.05	13490.4	6662.41	1.80	-0.863	0.000	0.928
22.00	-41.05	-57.70	0.00	-6014.2	0.00	6014.26	5562.81	2781.41	13317.9	6577.21	2.18	-0.953	0.000	0.922
24.00	-40.35	-57.28	0.00	-5898.8	0.00	5898.86	5539.10	2769.55	13145.3	6491.99	2.60	-1.043	0.000	0.916
26.00	-39.66	-56.86	0.00	-5784.2	0.00	5784.29	5514.96	2757.48	12972.7	6406.77	3.06	-1.134	0.000	0.910
28.00	-38.98	-56.44	0.00	-5670.5	0.00	5670.57	5490.39	2745.19	12800.2	6321.55	3.55	-1.225	0.000	0.905
30.00	-38.29	-55.95	0.00	-5557.7	0.00	5557.70	5465.39	2732.69	12627.7	6236.35	4.09	-1.317	0.000	0.899
32.00	-37.62	-55.52	0.00	-5445.8	0.00	5445.80	5439.96	2719.98	12455.2	6151.18	4.66	-1.410	0.000	0.893
34.00	-36.96	-55.07	0.00	-5334.7	0.00	5334.76	5414.11	2707.06	12282.9	6066.06	5.27	-1.503	0.000	0.887
35.50	-36.49	-54.73	0.00	-5252.1	0.00	5252.15	5394.44	2697.22	12153.7	6002.26	5.75	-1.573	0.000	0.882
36.00	-36.17	-54.64	0.00	-5224.7	0.00	5224.79	5387.83	2693.92	12110.6	5981.00	5.92	-1.597	0.000	0.881
38.00	-35.04	-54.17	0.00	-5115.5	0.00	5115.52	5361.12	2680.56	11938.5	5896.01	6.61	-1.692	0.000	0.875
40.00	-33.92	-53.70	0.00	-5007.1	0.00	5007.18	5333.99	2666.99	11766.6	5811.11	7.34	-1.787	0.000	0.868
42.00	-32.83	-53.21	0.00	-4899.7	0.00	4899.78	5306.43	2653.21	11594.9	5726.30	8.11	-1.882	0.000	0.862
43.00	-32.28	-52.97	0.00	-4846.5	0.00	4846.57	4823.70	2411.85	10677.7	5273.35	8.51	-1.931	0.000	0.926
44.00	-31.95	-52.76	0.00	-4793.6	0.00	4793.60	4812.47	2406.23	10602.6	5236.23	8.92	-1.979	0.000	0.923
46.00	-31.33	-52.30	0.00	-4688.0	0.00	4688.08	4789.68	2394.84	10452.2	5161.99	9.77	-2.078	0.000	0.915
48.00	-30.73	-51.84	0.00	-4583.4	0.00	4583.49	4766.46	2383.23	10301.9	5087.77	10.66	-2.177	0.000	0.908
50.00	-30.13	-51.37	0.00	-4479.8	0.00	4479.82	4742.82	2371.41	10151.7	5013.57	11.60	-2.277	0.000	0.900
52.00	-29.54	-50.91	0.00	-4377.0	0.00	4377.07	4718.75	2359.37	10001.6	4939.41	12.57	-2.377	0.000	0.893
54.00	-28.95	-50.45	0.00	-4275.2	0.00	4275.25	4694.25	2347.12	9851.55	4865.31	13.59	-2.478	0.000	0.885
56.00	-28.37	-49.98	0.00	-4174.3	0.00	4174.36	4669.32	2334.66	9701.64	4791.28	14.65	-2.580	0.000	0.878
58.00	-27.79	-49.52	0.00	-4074.4	0.00	4074.40	4643.97	2321.98	9551.90	4717.32	15.75	-2.682	0.000	0.870
60.00	-27.22	-49.05	0.00	-3975.3	0.00	3975.37	4618.19	2309.09	9402.34	4643.46	16.90	-2.784	0.000	0.862
62.00	-26.65	-48.59	0.00	-3877.2	0.00	3877.27	4591.98	2295.99	9253.00	4569.71	18.09	-2.888	0.000	0.855
64.00	-26.09	-48.12	0.00	-3780.0	0.00	3780.09	4565.34	2282.67	9103.90	4496.07	19.32	-2.992	0.000	0.847
66.00	-25.53	-47.66	0.00	-3683.8	0.00	3683.85	4538.28	2269.14	8955.07	4422.57	20.59	-3.096	0.000	0.839
68.00	-24.98	-47.20	0.00	-3588.5	0.00	3588.53	4510.78	2255.39	8806.54	4349.22	21.91	-3.201	0.000	0.831
70.00	-24.44	-46.73	0.00	-3494.1	0.00	3494.14	4482.87	2241.43	8658.34	4276.03	23.28	-3.306	0.000	0.823
72.00	-23.90	-46.27	0.00	-3400.6	0.00	3400.68	4454.52	2227.26	8510.48	4203.01	24.68	-3.413	0.000	0.815
74.00	-23.40	-45.79	0.00	-3308.1	0.00	3308.13	4425.74	2212.87	8363.00	4130.17	26.14	-3.519	0.000	0.807
74.50	-23.25	-45.69	0.00	-3285.2	0.00	3285.24	4418.48	2209.24	8326.19	4111.99	26.51	-3.546	0.000	0.805
76.00	-22.58	-45.33	0.00	-3216.7	0.00	3216.70	4396.54	2198.27	8215.92	4057.54	27.63	-3.627	0.000	0.798
78.00	-21.72	-44.84	0.00	-3126.0	0.00	3126.04	4366.91	2183.46	8069.28	3985.11	29.18	-3.735	0.000	0.790
80.00	-20.89	-44.34	0.00	-3036.3	0.00	3036.36	4336.86	2168.43	7923.09	3912.92	30.76	-3.843	0.000	0.781
81.00	-20.47	-44.10	0.00	-2992.0	0.00	2992.02	3502.12	1751.06	6488.82	3204.59	31.57	-3.897	0.000	0.940
82.00	-20.21	-43.88	0.00	-2947.9	0.00	2947.92	3492.03	1746.01	6433.63	3177.33	32.39	-3.952	0.000	0.934
84.00	-19.75	-43.42	0.00	-2860.1	0.00	2860.16	3471.52	1735.76	6323.29	3122.83	34.08	-4.073	0.000	0.922
86.00	-19.29	-42.97	0.00	-2773.3	0.00	2773.31	3450.59	1725.29	6213.03	3068.38	35.81	-4.193	0.000	0.910

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



88.00	-18.83	-42.52	0.00	-2687.3	0.00	2687.37	3429.23	1714.61	6102.90	3013.99	37.59	-4.315	0.000	0.898
90.00	-18.38	-42.07	0.00	-2602.3	0.00	2602.33	3407.44	1703.72	5992.90	2959.67	39.42	-4.436	0.000	0.885
92.00	-17.94	-41.62	0.00	-2518.2	0.00	2518.20	3385.23	1692.61	5883.07	2905.43	41.30	-4.558	0.000	0.873
94.00	-17.50	-41.17	0.00	-2434.9	0.00	2434.97	3362.58	1681.29	5773.43	2851.28	43.24	-4.680	0.000	0.860
96.00	-17.07	-40.72	0.00	-2352.6	0.00	2352.63	3339.51	1669.76	5664.02	2797.25	45.22	-4.803	0.000	0.847
98.00	-16.64	-40.28	0.00	-2271.1	0.00	2271.19	3316.01	1658.01	5554.85	2743.33	47.26	-4.925	0.000	0.833
100.00	-16.21	-39.84	0.00	-2190.6	0.00	2190.62	3292.09	1646.04	5445.96	2689.56	49.35	-5.048	0.000	0.820
102.00	-15.80	-39.40	0.00	-2110.9	0.00	2110.94	3267.73	1633.87	5337.38	2635.93	51.49	-5.171	0.000	0.806
104.00	-15.38	-38.97	0.00	-2032.1	0.00	2032.14	3242.95	1621.48	5229.12	2582.46	53.68	-5.294	0.000	0.792
106.00	-14.97	-38.53	0.00	-1954.2	0.00	1954.21	3217.75	1608.87	5121.21	2529.17	55.92	-5.417	0.000	0.778
108.00	-14.57	-38.10	0.00	-1877.1	0.00	1877.14	3192.11	1596.05	5013.69	2476.07	58.21	-5.540	0.000	0.763
110.00	-14.18	-37.67	0.00	-1800.9	0.00	1800.94	3166.05	1583.02	4906.58	2423.18	60.56	-5.662	0.000	0.748
112.00	-13.78	-37.25	0.00	-1725.5	0.00	1725.59	3139.56	1569.78	4799.90	2370.49	62.95	-5.784	0.000	0.733
114.00	-13.40	-36.83	0.00	-1651.0	0.00	1651.09	3112.64	1556.32	4693.69	2318.04	65.40	-5.906	0.000	0.717
116.00	-13.02	-36.41	0.00	-1577.4	0.00	1577.44	3085.29	1542.65	4587.97	2265.83	67.89	-6.028	0.000	0.701
118.00	-12.67	-35.98	0.00	-1504.6	0.00	1504.63	3057.52	1528.76	4482.76	2213.87	70.44	-6.149	0.000	0.684
118.75	-12.52	-35.83	0.00	-1477.6	0.00	1477.64	3046.99	1523.50	4443.45	2194.45	71.41	-6.194	0.000	0.678
120.00	-12.13	-35.56	0.00	-1432.8	0.00	1432.86	3029.32	1514.66	4378.10	2162.18	73.04	-6.270	0.000	0.667
122.00	-11.55	-35.11	0.00	-1361.7	0.00	1361.74	3000.69	1500.34	4274.01	2110.77	75.68	-6.389	0.000	0.650
124.00	-10.98	-34.67	0.00	-1291.5	0.00	1291.51	2938.57	1482.29	4179.29	2060.44	78.48	-6.507	0.000	0.633
126.00	-10.66	-34.27	0.00	-1222.1	0.00	1222.17	2919.39	1469.69	4092.90	2013.32	81.43	-6.624	0.000	0.616
128.00	-10.34	-33.87	0.00	-1153.6	0.00	1153.63	2299.78	1449.89	4023.10	1969.89	84.52	-6.735	0.000	0.600
130.00	-10.03	-33.47	0.00	-1085.9	0.00	1085.90	2279.74	1439.87	3960.54	1929.49	87.75	-6.843	0.000	0.584
132.00	-9.72	-33.07	0.00	-1018.9	0.00	1018.96	2259.27	1429.64	3902.24	1892.39	91.12	-6.948	0.000	0.568
134.00	-9.42	-32.68	0.00	-952.82	0.00	952.82	2238.38	1419.19	3847.23	1859.34	94.64	-7.050	0.000	0.553
136.00	-9.13	-32.29	0.00	-887.46	0.00	887.46	2217.06	1408.53	3794.53	1829.45	98.31	-7.149	0.000	0.538
138.00	-8.84	-31.91	0.00	-822.88	0.00	822.88	2195.31	1397.65	3744.17	1799.73	102.14	-7.245	0.000	0.523
140.00	-7.46	-25.06	0.00	-759.07	0.00	759.07	2173.13	1386.57	3695.18	1769.19	106.11	-7.338	0.000	0.508
142.00	-7.22	-24.68	0.00	-708.96	0.00	708.96	2150.53	1375.26	3647.59	1737.84	110.24	-7.428	0.000	0.493
144.00	-6.98	-24.31	0.00	-659.60	0.00	659.60	2127.50	1363.75	3601.41	1705.70	114.52	-7.515	0.000	0.478
146.00	-6.75	-23.94	0.00	-610.98	0.00	610.98	2104.04	1352.02	3556.68	1672.78	118.95	-7.600	0.000	0.463
148.00	-6.53	-23.58	0.00	-563.10	0.00	563.10	2080.15	1340.08	3513.43	1639.10	123.54	-7.682	0.000	0.448
150.00	-4.91	-18.95	0.00	-515.95	0.00	515.95	2055.84	1327.92	3471.68	1604.67	128.29	-7.761	0.000	0.433
152.00	-4.73	-18.60	0.00	-478.05	0.00	478.05	2031.10	1315.55	3431.45	1569.49	133.21	-7.838	0.000	0.418
154.00	-4.56	-18.25	0.00	-440.85	0.00	440.85	2005.93	1302.96	3392.79	1533.59	138.31	-7.913	0.000	0.403
154.75	-4.49	-18.12	0.00	-427.17	0.00	427.17	1996.38	1298.19	3374.43	1522.43	139.58	-7.928	0.000	0.398
156.00	-4.31	-17.89	0.00	-404.52	0.00	404.52	1980.33	1290.17	3357.98	1512.25	140.95	-7.943	0.000	0.393
158.00	-4.05	-17.53	0.00	-368.74	0.00	368.74	1946.84	1273.42	3303.16	1483.68	142.42	-7.958	0.000	0.388
159.00	-3.92	-17.35	0.00	-351.21	0.00	351.21	1942.51	1271.25	3301.78	1483.56	142.49	-7.958	0.000	0.388
160.00	-3.85	-17.19	0.00	-333.85	0.00	333.85	1939.15	1269.58	3301.30	1483.26	142.52	-7.958	0.000	0.388
162.00	-3.74	-16.87	0.00	-299.47	0.00	299.47	1932.13	1266.07	3291.20	1474.52	141.83	-7.958	0.000	0.388
164.00	-3.63	-16.55	0.00	-265.73	0.00	265.73	1924.68	1262.34	3281.95	1466.06	141.25	-7.958	0.000	0.388
166.00	-3.53	-16.24	0.00	-232.63	0.00	232.63	1916.80	1258.40	3273.57	1457.54	140.72	-7.958	0.000	0.388
167.00	-1.88	-9.57	0.00	-216.39	0.00	216.39	1912.70	1256.35	3272.84	1457.76	140.77	-7.958	0.000	0.388
168.00	-1.84	-9.42	0.00	-206.82	0.00	206.82	1908.49	1254.25	3272.90	1457.97	140.77	-7.958	0.000	0.388
170.00	-1.78	-9.11	0.00	-187.99	0.00	187.99	1899.76	1252.44	3273.55	1458.36	140.59	-7.958	0.000	0.388
172.00	-1.72	-8.82	0.00	-169.76	0.00	169.76	1890.60	1250.90	3274.96	1458.74	140.39	-7.958	0.000	0.388
174.00	-1.66	-8.53	0.00	-152.12	0.00	152.12	1881.01	1249.50	3276.35	1459.10	140.14	-7.958	0.000	0.388
176.00	-1.61	-8.24	0.00	-135.07	0.00	135.07	1870.99	1248.20	3277.75	1459.47	139.81	-7.958	0.000	0.388
178.00	-1.56	-7.96	0.00	-118.59	0.00	118.59	1860.55	1247.07	3279.18	1459.86	139.43	-7.958	0.000	0.388
180.00	-1.51	-7.68	0.00	-102.67	0.00	102.67	1849.68	1246.04	3280.64	1460.28	139.01	-7.958	0.000	0.388
182.00	-1.46	-7.41	0.00	-87.31	0.00	87.31	1838.38	1245.19	3282.12	1460.74	138.54	-7.958	0.000	0.388
184.00	-1.42	-7.15	0.00	-72.48	0.00	72.48	1826.65	1244.53	3283.62	1461.26	138.01	-7.958	0.000	0.388
186.00	-1.37	-6.89	0.00	-58.18	0.00	58.18	1814.50	1244.05	3285.14	1461.85	137.42	-7.958	0.000	0.388
188.00	-1.33	-6.64	0.00	-44.40	0.00	44.40	1801.91	1243.72	3286.68	1462.52	136.77	-7.958	0.000	0.388
190.00	-1.30	-6.39	0.00	-31.13	0.00	31.13	1788.90	1243.54	3288.24	1463.29	136.04	-7.958	0.000	0.388
192.00	-1.26	-6.15	0.00	-18.35	0.00	18.35	1775.47	1243.51	3289.82	1464.17	135.23	-7.958	0.000	0.388

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Page: 37
	Struct Class: II	



194.00	-1.23	-5.91	0.00	-6.05	0.00	6.05	761.60	380.80	555.16	274.17	201.33	-9.838	0.000	0.024
195.00	-0.01	-0.14	0.00	-0.14	0.00	0.14	754.51	377.26	542.11	267.73	203.38	-9.840	0.000	0.001
196.00	0.00	-0.14	0.00	0.00	0.00	0.00	747.31	373.66	529.12	261.31	205.43	-9.840	0.000	0.000

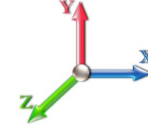
Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 30

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	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	5.168	5.68	0.00	1.200	1.133	2.00	11.377	13.65	77.6	189.8	969.8
4.00		1.00	0.85	5.168	5.68	0.00	1.200	1.215	2.00	11.318	13.58	77.2	202.1	975.9
6.00		1.00	0.85	5.168	5.68	0.00	1.200	1.265	2.00	11.248	13.50	76.7	209.0	976.6
8.00		1.00	0.85	5.168	5.68	0.00	1.200	1.302	2.00	11.173	13.41	76.2	213.5	974.9
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	2.00	11.097	13.32	75.7	216.7	971.9
12.00		1.00	0.85	5.168	5.68	0.00	1.200	1.356	2.00	11.018	13.22	75.2	219.0	968.0
14.00		1.00	0.85	5.168	5.68	0.00	1.200	1.377	2.00	10.938	13.13	74.6	220.6	963.5
16.00		1.00	0.86	5.232	5.76	0.00	1.200	1.395	2.00	10.858	13.03	75.0	221.9	958.5
18.00		1.00	0.88	5.363	5.90	0.00	1.200	1.412	2.00	10.777	12.93	76.3	222.7	953.2
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	2.00	10.695	12.83	77.4	223.3	947.6
22.00		1.00	0.92	5.595	6.15	0.00	1.200	1.440	2.00	10.613	12.74	78.4	223.6	941.7
24.00		1.00	0.94	5.698	6.27	0.00	1.200	1.453	2.00	10.530	12.64	79.2	223.7	935.6
26.00		1.00	0.95	5.795	6.37	0.00	1.200	1.465	2.00	10.448	12.54	79.9	223.6	929.3
28.00		1.00	0.97	5.886	6.47	0.00	1.200	1.476	2.00	10.365	12.44	80.5	223.4	922.9
30.00	Appurtenance(s)	1.00	0.98	5.972	6.57	0.00	1.200	1.486	2.00	10.281	12.34	81.0	223.0	916.4
32.00		1.00	1.00	6.054	6.66	0.00	1.200	1.495	2.00	10.198	12.24	81.5	222.6	909.7
34.00		1.00	1.01	6.132	6.74	0.00	1.200	1.504	2.00	10.114	12.14	81.9	222.0	902.9
35.50	Bot - Section 2	1.00	1.02	6.188	6.81	0.00	1.200	1.511	1.50	7.530	9.04	61.5	166.1	672.8
36.00		1.00	1.02	6.206	6.83	0.00	1.200	1.513	0.50	2.537	3.04	20.8	56.2	383.8
38.00		1.00	1.03	6.277	6.90	0.00	1.200	1.521	2.00	10.097	12.12	83.7	224.0	1527.0
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	2.00	10.013	12.02	83.9	223.2	1514.2
42.00		1.00	1.05	6.410	7.05	0.00	1.200	1.537	2.00	9.929	11.91	84.0	222.3	1501.4
43.00	Top - Section 1	1.00	1.06	6.442	7.09	0.00	1.200	1.540	1.00	4.933	5.92	41.9	110.9	746.0
44.00		1.00	1.06	6.474	7.12	0.00	1.200	1.544	1.00	4.912	5.89	42.0	110.7	418.5
46.00		1.00	1.07	6.534	7.19	0.00	1.200	1.551	2.00	9.760	11.71	84.2	220.4	831.7
48.00		1.00	1.08	6.593	7.25	0.00	1.200	1.557	2.00	9.676	11.61	84.2	219.3	824.8
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	2.00	9.591	11.51	84.2	218.2	817.9
52.00		1.00	1.10	6.705	7.38	0.00	1.200	1.570	2.00	9.507	11.41	84.1	217.1	811.0
54.00		1.00	1.11	6.759	7.43	0.00	1.200	1.576	2.00	9.422	11.31	84.1	215.8	804.0
56.00		1.00	1.12	6.811	7.49	0.00	1.200	1.581	2.00	9.337	11.20	83.9	214.6	797.0
58.00		1.00	1.13	6.861	7.55	0.00	1.200	1.587	2.00	9.252	11.10	83.8	213.3	789.9
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	2.00	9.167	11.00	83.6	212.0	782.8
62.00		1.00	1.14	6.958	7.65	0.00	1.200	1.598	2.00	9.083	10.90	83.4	210.6	775.7
64.00		1.00	1.15	7.005	7.71	0.00	1.200	1.603	2.00	8.998	10.80	83.2	209.2	768.5
66.00		1.00	1.16	7.050	7.76	0.00	1.200	1.608	2.00	8.912	10.69	82.9	207.8	761.3
68.00		1.00	1.17	7.095	7.80	0.00	1.200	1.612	2.00	8.827	10.59	82.7	206.3	754.0
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	2.00	8.742	10.49	82.4	204.8	746.8
72.00		1.00	1.18	7.181	7.90	0.00	1.200	1.622	2.00	8.657	10.39	82.1	203.3	739.5
74.00		1.00	1.19	7.222	7.94	0.00	1.200	1.626	2.00	8.572	10.29	81.7	201.8	732.1
74.50	Bot - Section 3	1.00	1.19	7.233	7.96	0.00	1.200	1.627	0.50	2.130	2.56	20.3	50.3	182.0
76.00		1.00	1.19	7.263	7.99	0.00	1.200	1.631	1.50	6.454	7.74	61.9	152.5	888.2
78.00		1.00	1.20	7.303	8.03	0.00	1.200	1.635	2.00	8.531	10.24	82.2	201.8	1173.3
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	2.00	8.446	10.13	81.8	200.2	1161.0
81.00	Top - Section 2	1.00	1.21	7.361	8.10	0.00	1.200	1.641	1.00	4.191	5.03	40.7	99.7	576.1
82.00		1.00	1.21	7.380	8.12	0.00	1.200	1.643	1.00	4.169	5.00	40.6	99.3	320.1
84.00		1.00	1.22	7.418	8.16	0.00	1.200	1.647	2.00	8.275	9.93	81.0	196.9	634.8

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	1.00	1.23	7.454	8.20	0.00	1.200	1.651	2.00	8.189	9.83	80.6	195.2	628.1
88.00	1.00	1.23	7.491	8.24	0.00	1.200	1.655	2.00	8.104	9.72	80.1	193.6	621.5
90.00	1.00	1.24	7.526	8.28	0.00	1.200	1.658	2.00	8.019	9.62	79.7	191.8	614.8
92.00	1.00	1.24	7.561	8.32	0.00	1.200	1.662	2.00	7.933	9.52	79.2	190.1	608.1
94.00	1.00	1.25	7.595	8.35	0.00	1.200	1.666	2.00	7.848	9.42	78.7	188.4	601.4
96.00	1.00	1.25	7.629	8.39	0.00	1.200	1.669	2.00	7.762	9.31	78.2	186.6	594.7
98.00	1.00	1.26	7.662	8.43	0.00	1.200	1.672	2.00	7.677	9.21	77.6	184.8	588.0
100.00	1.00	1.27	7.695	8.46	0.00	1.200	1.676	2.00	7.591	9.11	77.1	183.0	581.2
102.00	1.00	1.27	7.727	8.50	0.00	1.200	1.679	2.00	7.505	9.01	76.6	181.2	574.5
104.00	1.00	1.28	7.759	8.53	0.00	1.200	1.682	2.00	7.420	8.90	76.0	179.4	567.7
106.00	1.00	1.28	7.790	8.57	0.00	1.200	1.686	2.00	7.334	8.80	75.4	177.6	560.9
108.00	1.00	1.29	7.821	8.60	0.00	1.200	1.689	2.00	7.249	8.70	74.8	175.7	554.1
110.00	1.00	1.29	7.851	8.64	0.00	1.200	1.692	2.00	7.163	8.60	74.2	173.8	547.3
112.00	1.00	1.30	7.881	8.67	0.00	1.200	1.695	2.00	7.077	8.49	73.6	172.0	540.4
114.00	1.00	1.30	7.910	8.70	0.00	1.200	1.698	2.00	6.992	8.39	73.0	170.1	533.6
116.00	1.00	1.31	7.939	8.73	0.00	1.200	1.701	2.00	6.906	8.29	72.4	168.2	526.7
118.00	1.00	1.31	7.968	8.76	0.00	1.200	1.704	2.00	6.820	8.18	71.7	166.2	519.9
118.75 Bot - Section 4	1.00	1.31	7.978	8.78	0.00	1.200	1.705	0.75	2.535	3.04	26.7	62.1	193.4
120.00	1.00	1.32	7.996	8.80	0.00	1.200	1.707	1.25	4.266	5.12	45.0	104.4	506.4
122.00	1.00	1.32	8.024	8.83	0.00	1.200	1.710	2.00	6.756	8.11	71.6	165.1	800.9
124.00 Top - Section 3	1.00	1.32	8.051	8.86	0.00	1.200	1.712	2.00	6.671	8.00	70.9	163.2	789.9
126.00	1.00	1.33	8.079	8.89	0.00	1.200	1.715	2.00	6.585	7.90	70.2	161.2	445.0
128.00	1.00	1.33	8.105	8.92	0.00	1.200	1.718	2.00	6.499	7.80	69.5	159.2	438.9
130.00	1.00	1.34	8.132	8.95	0.00	1.200	1.720	2.00	6.413	7.70	68.8	157.3	432.8
132.00	1.00	1.34	8.158	8.97	0.00	1.200	1.723	2.00	6.328	7.59	68.1	155.3	426.7
134.00	1.00	1.35	8.184	9.00	0.00	1.200	1.726	2.00	6.242	7.49	67.4	153.3	420.6
136.00	1.00	1.35	8.210	9.03	0.00	1.200	1.728	2.00	6.156	7.39	66.7	151.3	414.4
138.00	1.00	1.35	8.235	9.06	0.00	1.200	1.731	2.00	6.070	7.28	66.0	149.2	408.3
140.00 Appurtenance(s)	1.00	1.36	8.260	9.09	0.00	1.200	1.733	2.00	5.984	7.18	65.2	147.2	402.1
142.00	1.00	1.36	8.285	9.11	0.00	1.200	1.736	2.00	5.898	7.08	64.5	145.2	396.0
144.00	1.00	1.37	8.309	9.14	0.00	1.200	1.738	2.00	5.812	6.97	63.7	143.1	389.8
146.00	1.00	1.37	8.333	9.17	0.00	1.200	1.741	2.00	5.727	6.87	63.0	141.1	383.6
148.00	1.00	1.37	8.357	9.19	0.00	1.200	1.743	2.00	5.641	6.77	62.2	139.0	377.4
150.00 Appurtenance(s)	1.00	1.38	8.381	9.22	0.00	1.200	1.745	2.00	5.555	6.67	61.4	136.9	371.2
152.00	1.00	1.38	8.404	9.24	0.00	1.200	1.748	2.00	5.469	6.56	60.7	134.8	365.0
154.00	1.00	1.39	8.427	9.27	0.00	1.200	1.750	2.00	5.383	6.46	59.9	132.7	358.7
154.75 Bot - Section 5	1.00	1.39	8.436	9.28	0.00	1.200	1.751	0.75	1.996	2.40	22.2	49.5	133.2
156.00	1.00	1.39	8.450	9.30	0.00	1.200	1.752	1.25	3.341	4.01	37.3	82.7	305.4
158.00	1.00	1.39	8.473	9.32	0.00	1.200	1.754	2.00	5.276	6.33	59.0	130.2	481.1
159.00 Top - Section 4	1.00	1.40	8.484	9.33	0.00	1.200	1.755	1.00	2.606	3.13	29.2	64.6	237.6
160.00	1.00	1.40	8.495	9.34	0.00	1.200	1.757	1.00	2.584	3.10	29.0	64.1	129.1
162.00	1.00	1.40	8.518	9.37	0.00	1.200	1.759	2.00	5.104	6.12	57.4	126.0	254.2
164.00	1.00	1.40	8.540	9.39	0.00	1.200	1.761	2.00	5.018	6.02	56.6	123.9	249.6
166.00	1.00	1.41	8.561	9.42	0.00	1.200	1.763	2.00	4.932	5.92	55.7	121.7	244.9
167.00 Appurtenance(s)	1.00	1.41	8.572	9.43	0.00	1.200	1.764	1.00	2.434	2.92	27.5	60.3	121.0
168.00	1.00	1.41	8.583	9.44	0.00	1.200	1.765	1.00	2.412	2.89	27.3	59.8	119.8
170.00	1.00	1.42	8.604	9.46	0.00	1.200	1.767	2.00	4.760	5.71	54.1	117.4	235.7
172.00	1.00	1.42	8.626	9.49	0.00	1.200	1.769	2.00	4.674	5.61	53.2	115.3	231.1
174.00	1.00	1.42	8.647	9.51	0.00	1.200	1.771	2.00	4.588	5.51	52.4	113.1	226.4
176.00	1.00	1.43	8.667	9.53	0.00	1.200	1.773	2.00	4.502	5.40	51.5	110.9	221.8
178.00	1.00	1.43	8.688	9.56	0.00	1.200	1.775	2.00	4.416	5.30	50.6	108.8	217.1
180.00	1.00	1.43	8.709	9.58	0.00	1.200	1.777	2.00	4.330	5.20	49.8	106.6	212.4
182.00	1.00	1.44	8.729	9.60	0.00	1.200	1.779	2.00	4.244	5.09	48.9	104.4	207.8
184.00	1.00	1.44	8.749	9.62	0.00	1.200	1.781	2.00	4.158	4.99	48.0	102.2	203.1
186.00	1.00	1.44	8.769	9.65	0.00	1.200	1.783	2.00	4.072	4.89	47.1	100.0	198.4
188.00	1.00	1.45	8.789	9.67	0.00	1.200	1.785	2.00	3.986	4.78	46.2	97.8	193.7
190.00	1.00	1.45	8.808	9.69	0.00	1.200	1.787	2.00	3.900	4.68	45.3	95.6	189.0

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Page: 40
	Struct Class: II	



192.00	1.00	1.45	8.828	9.71	0.00	1.200	1.789	2.00	3.814	4.58	44.4	93.3	184.3
194.00	1.00	1.46	8.847	9.73	0.00	1.200	1.791	2.00	3.728	4.47	43.5	91.1	179.6
195.00 Appurtenance(s)	1.00	1.46	8.857	9.74	0.00	1.200	1.792	1.00	1.831	2.20	21.4	45.0	88.3
196.00 Appurtenance(s)	1.00	1.46	8.866	9.75	0.00	1.200	1.793	1.00	1.810	2.17	21.2	44.4	87.2
Totals:							196.00					6,970.9	62,790.7

Discrete Appurtenance Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
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 30

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	196.00	6' Lightning rod	1	8.866	9.753	1.00	1.00	1.50	39.78	0.000	0.000	14.60	0.00	0.00
2	195.00	TD-RRH8x20-25	3	8.857	9.742	0.60	0.90	8.84	594.09	0.000	0.000	86.12	0.00	0.00
3	195.00	APXVSPP18-C-A20	3	8.857	9.742	0.77	0.90	24.99	589.04	0.000	0.000	243.44	0.00	0.00
4	195.00	1900MHz RRH	3	8.857	9.742	0.60	0.90	9.46	401.00	0.000	0.000	92.12	0.00	0.00
5	195.00	APXVTM14-C-120	3	8.857	9.742	0.73	0.90	16.37	698.29	0.000	0.000	159.48	0.00	0.00
6	195.00	800MHz Filter	3	8.857	9.742	0.45	0.90	1.95	71.02	0.000	0.000	18.99	0.00	0.00
7	195.00	ACU-A20-N	4	8.857	9.742	0.45	0.90	0.80	17.24	0.000	0.000	7.80	0.00	0.00
8	195.00	Low Profile Platform	1	8.857	9.742	1.00	1.00	40.13	2843.71	0.000	0.000	390.97	0.00	0.00
9	195.00	800MHz RRH	3	8.857	9.742	0.60	0.90	6.93	387.24	0.000	0.000	67.47	0.00	0.00
10	167.00	AIR 21, 1.3M, B4A B2P	3	8.572	9.429	0.62	0.75	13.49	838.28	0.000	0.000	127.25	0.00	0.00
11	167.00	LNx-6515DS-A1M	3	8.572	9.429	0.63	0.75	27.92	698.73	0.000	0.000	263.26	0.00	0.00
12	167.00	AIR 21, 1.3M, B2A B4P	3	8.572	9.429	0.62	0.75	13.49	842.60	0.000	0.000	127.25	0.00	0.00
13	167.00	S11B12	3	8.572	9.429	0.38	0.75	3.95	346.45	0.000	0.000	37.22	0.00	0.00
14	167.00	KRY 112 144/1	3	8.572	9.429	0.38	0.75	1.00	65.87	0.000	0.000	9.44	0.00	0.00
15	167.00	Platform w/ Hand Rails	1	8.572	9.429	1.00	1.00	61.17	3916.86	0.000	0.000	576.79	0.00	0.00
16	150.00	Low Profile Platform	1	8.381	9.219	1.00	1.00	39.66	2808.91	0.000	0.000	365.63	0.00	0.00
17	150.00	DC6-48-60-18-8F	1	8.381	9.219	0.80	0.80	1.74	82.28	0.000	0.000	16.00	0.00	0.00
18	150.00	LGP13519	6	8.381	9.219	0.40	0.80	1.91	78.95	0.000	0.000	17.57	0.00	0.00
19	150.00	LGP21401	6	8.381	9.219	0.40	0.80	5.10	208.93	0.000	0.000	47.03	0.00	0.00
20	150.00	AM-X-CD-14-65-00T-RET	1	8.381	9.219	0.62	0.80	4.23	123.31	0.000	0.000	39.04	0.00	0.00
21	150.00	P65-17-XLH-RR	2	8.381	9.219	0.62	0.80	18.08	450.81	0.000	0.000	166.66	0.00	0.00
22	150.00	7700.00	6	8.381	9.219	0.65	0.80	9.05	443.90	0.000	0.000	83.41	0.00	0.00
23	150.00	RRUS 11	6	8.381	9.219	0.54	0.80	10.20	900.21	0.000	0.000	94.02	0.00	0.00
24	140.00	LNx-6414DS-A1M	3	8.260	9.086	0.66	0.80	21.38	489.68	0.000	0.000	194.30	0.00	0.00
25	140.00	LNx-8513DS-VTM	2	8.260	9.086	0.68	0.80	14.92	312.27	0.000	0.000	135.60	0.00	0.00
26	140.00	APL866513	2	8.260	9.086	0.75	0.80	7.47	293.19	0.000	0.000	67.86	0.00	0.00
27	140.00	HBXX-6517DS-A2M	6	8.260	9.086	0.68	0.80	46.71	1041.57	0.000	0.000	424.40	0.00	0.00
28	140.00	DB-T1-6Z-8AB-0Z	1	8.260	9.086	0.40	0.80	2.27	165.24	0.000	0.000	20.60	0.00	0.00
29	140.00	RRH2x40 700	3	8.260	9.086	0.54	0.80	5.84	335.92	0.000	0.000	53.04	0.00	0.00
30	140.00	RRH2x60-2100	3	8.260	9.086	0.54	0.80	3.31	248.23	0.000	0.000	30.04	0.00	0.00
31	140.00	Low Profile Platform	1	8.260	9.086	0.80	0.80	31.63	2799.91	0.000	0.000	287.40	0.00	0.00
32	30.00	GPS	1	5.972	6.569	1.00	1.00	1.61	28.96	0.000	0.000	10.55	0.00	0.00
Totals:									23,162.46			4,275.34		

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
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 30

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
2.00		77.61	1140.40	0.00	0.00
4.00		77.21	1150.94	0.00	0.00
6.00		76.73	1154.40	0.00	0.00
8.00		76.22	1154.79	0.00	0.00
10.00		75.70	1153.43	0.00	0.00
12.00		75.16	1150.92	0.00	0.00
14.00		74.62	1147.59	0.00	0.00
16.00		74.98	1143.66	0.00	0.00
18.00		76.29	1139.26	0.00	0.00
20.00		77.41	1134.47	0.00	0.00
22.00		78.37	1129.37	0.00	0.00
24.00		79.20	1124.01	0.00	0.00
26.00		79.92	1118.42	0.00	0.00
28.00		80.53	1112.64	0.00	0.00
30.00	(1) attachments	91.60	1135.64	0.00	0.00
32.00		81.49	1100.58	0.00	0.00
34.00		81.86	1094.34	0.00	0.00
35.50		61.50	816.60	0.00	0.00
36.00		20.78	431.78	0.00	0.00
38.00		83.66	1719.37	0.00	0.00
40.00		83.86	1707.04	0.00	0.00
42.00		84.02	1694.63	0.00	0.00
43.00		41.95	842.70	0.00	0.00
44.00		41.97	515.35	0.00	0.00
46.00		84.19	1025.76	0.00	0.00
48.00		84.21	1019.31	0.00	0.00
50.00		84.19	1012.78	0.00	0.00
52.00		84.14	1006.20	0.00	0.00
54.00		84.06	999.56	0.00	0.00
56.00		83.94	992.86	0.00	0.00
58.00		83.80	986.12	0.00	0.00
60.00		83.62	979.33	0.00	0.00
62.00		83.42	972.49	0.00	0.00
64.00		83.20	965.61	0.00	0.00
66.00		82.94	958.69	0.00	0.00
68.00		82.67	951.74	0.00	0.00
70.00		82.37	944.74	0.00	0.00
72.00		82.06	937.72	0.00	0.00
74.00		81.72	930.66	0.00	0.00
74.50		20.33	231.68	0.00	0.00
76.00		61.87	1037.29	0.00	0.00
78.00		82.23	1372.33	0.00	0.00
80.00		81.85	1360.24	0.00	0.00
81.00		40.72	675.75	0.00	0.00
82.00		40.62	419.81	0.00	0.00
84.00		81.02	834.49	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00		80.58	828.10	0.00	0.00
88.00		80.13	821.68	0.00	0.00
90.00		79.66	815.24	0.00	0.00
92.00		79.18	808.77	0.00	0.00
94.00		78.68	802.29	0.00	0.00
96.00		78.17	795.78	0.00	0.00
98.00		77.64	789.25	0.00	0.00
100.00		77.10	782.70	0.00	0.00
102.00		76.55	776.14	0.00	0.00
104.00		75.99	769.55	0.00	0.00
106.00		75.42	762.95	0.00	0.00
108.00		74.83	756.33	0.00	0.00
110.00		74.23	749.69	0.00	0.00
112.00		73.62	743.04	0.00	0.00
114.00		73.00	736.37	0.00	0.00
116.00		72.37	729.68	0.00	0.00
118.00		71.73	722.98	0.00	0.00
118.75		26.70	269.59	0.00	0.00
120.00		45.03	633.46	0.00	0.00
122.00		71.56	1004.39	0.00	0.00
124.00		70.90	993.52	0.00	0.00
126.00		70.22	648.84	0.00	0.00
128.00		69.54	642.90	0.00	0.00
130.00		68.84	636.95	0.00	0.00
132.00		68.14	630.98	0.00	0.00
134.00		67.43	625.01	0.00	0.00
136.00		66.71	619.02	0.00	0.00
138.00		65.98	613.02	0.00	0.00
140.00	(21) attachments	1278.48	6293.03	0.00	0.00
142.00		64.50	466.90	0.00	0.00
144.00		63.75	460.72	0.00	0.00
146.00		62.99	454.53	0.00	0.00
148.00		62.22	448.33	0.00	0.00
150.00	(29) attachments	890.82	5539.41	0.00	0.00
152.00		60.67	403.90	0.00	0.00
154.00		59.88	397.68	0.00	0.00
154.75		22.23	147.77	0.00	0.00
156.00		37.26	329.70	0.00	0.00
158.00		59.00	520.04	0.00	0.00
159.00		29.18	257.01	0.00	0.00
160.00		28.98	148.53	0.00	0.00
162.00		57.38	293.09	0.00	0.00
164.00		56.56	288.48	0.00	0.00
166.00		55.74	283.87	0.00	0.00
167.00	(16) attachments	1168.75	6849.27	0.00	0.00
168.00		27.33	123.02	0.00	0.00
170.00		54.06	242.02	0.00	0.00
172.00		53.22	237.39	0.00	0.00
174.00		52.36	232.75	0.00	0.00
176.00		51.51	228.10	0.00	0.00
178.00		50.64	223.44	0.00	0.00
180.00		49.77	218.78	0.00	0.00
182.00		48.90	214.11	0.00	0.00
184.00		48.02	209.44	0.00	0.00
186.00		47.13	204.76	0.00	0.00
188.00		46.24	200.07	0.00	0.00
190.00		45.34	195.38	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017	
Site Name: Stonington East	Exposure: C		
Height: 196.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 44



192.00		44.44	190.68	0.00	0.00
194.00		43.53	185.97	0.00	0.00
195.00	(23) attachments	1087.79	5693.11	0.00	0.00
196.00	(1) attachments	35.78	126.94	0.00	0.00
	Totals:	11,246.22	100,443.9	0.00	0.00
			1		

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
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 30

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)
2.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	82.83
2.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	16.81
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	86.30
4.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	17.78
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	88.46
6.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	18.40
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	90.06
8.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	18.86
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	91.34
10.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	19.23
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	92.40
12.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	19.54
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	93.32
14.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	19.81
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.232	0.00	94.13
16.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.232	0.00	20.05
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.363	0.00	94.85
18.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.363	0.00	20.27
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	95.51
20.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	20.47
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.595	0.00	96.11
22.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.595	0.00	20.65
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.698	0.00	96.67
24.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.698	0.00	20.81
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.795	0.00	97.18
26.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.795	0.00	20.97
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.886	0.00	97.66
28.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.886	0.00	21.12
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	98.11
30.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	21.25
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.054	0.00	98.54
32.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.054	0.00	21.38
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.132	0.00	98.94
34.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.132	0.00	21.51
35.50	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	6.188	0.00	74.42
35.50	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	6.188	0.00	16.20
36.00	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	6.206	0.00	24.83
36.00	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	6.206	0.00	5.41
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.277	0.00	99.69
38.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.277	0.00	21.74
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	100.03
40.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	21.84
42.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.410	0.00	100.37
42.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.410	0.00	21.95
43.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.442	0.00	50.26
43.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.442	0.00	11.00
44.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.474	0.00	50.34

Linear Appurtenance Segment Forces (Factored)

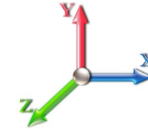
Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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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 30

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)
44.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.474	0.00	11.02
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.534	0.00	100.99
46.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.534	0.00	22.14
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.593	0.00	101.29
48.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.593	0.00	22.23
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	101.57
50.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	22.32
52.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.705	0.00	101.84
52.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.705	0.00	22.40
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.759	0.00	102.11
54.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.759	0.00	22.49
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.811	0.00	102.37
56.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.811	0.00	22.57
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.861	0.00	102.61
58.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.861	0.00	22.64
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	102.86
60.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	22.72
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.958	0.00	103.09
62.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.958	0.00	22.79
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.005	0.00	103.32
64.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.005	0.00	22.86
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.050	0.00	103.54
66.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.050	0.00	22.93
68.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.095	0.00	103.75
68.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.095	0.00	23.00
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	103.96
70.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	23.07
72.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.181	0.00	104.17
72.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.181	0.00	23.13
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.222	0.00	104.37
74.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.222	0.00	23.20
74.50	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	7.233	0.00	26.10
74.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	7.233	0.00	5.80
76.00	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	7.263	0.00	78.42
76.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	7.263	0.00	17.44
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.303	0.00	104.75
78.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.303	0.00	23.32
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	104.94
80.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	23.38
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.361	0.00	52.52
81.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.361	0.00	11.70
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.380	0.00	52.56
82.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.380	0.00	11.72
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.418	0.00	105.30
84.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.418	0.00	23.49
86.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.454	0.00	105.48
86.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.454	0.00	23.55

Linear Appurtenance Segment Forces (Factored)

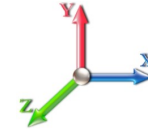
Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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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 30

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)
88.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.491	0.00	105.65
88.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.491	0.00	23.60
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	105.81
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	23.65
92.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.561	0.00	105.98
92.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.561	0.00	23.71
94.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.595	0.00	106.14
94.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.595	0.00	23.76
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.629	0.00	106.30
96.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.629	0.00	23.81
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.662	0.00	106.45
98.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.662	0.00	23.86
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	106.61
100.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	23.91
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.727	0.00	106.76
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.727	0.00	23.95
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.759	0.00	106.90
104.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.759	0.00	24.00
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.790	0.00	107.05
106.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.790	0.00	24.05
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.821	0.00	107.19
108.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.821	0.00	24.09
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.851	0.00	107.33
110.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.851	0.00	24.14
112.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.881	0.00	107.47
112.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.881	0.00	24.18
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.910	0.00	107.61
114.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.910	0.00	24.23
116.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.939	0.00	107.74
116.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.939	0.00	24.27
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.968	0.00	107.87
118.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.968	0.00	24.31
118.75	1 5/8" Coax	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	7.978	0.00	40.47
118.75	1 5/8" Hybrid	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	7.978	0.00	9.12
120.00	1 5/8" Coax	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	7.996	0.00	67.50
120.00	1 5/8" Hybrid	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	7.996	0.00	15.22
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.024	0.00	108.13
122.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.024	0.00	24.39
124.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.051	0.00	108.26
124.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.051	0.00	24.43
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.079	0.00	108.38
126.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.079	0.00	24.47
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.105	0.00	108.50
128.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.105	0.00	24.51
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.132	0.00	108.62
130.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.132	0.00	24.55
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.158	0.00	108.74

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
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 30

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)
132.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.158	0.00	24.59
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.184	0.00	108.86
134.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.184	0.00	24.63
136.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.210	0.00	108.98
136.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.210	0.00	24.67
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.235	0.00	109.09
138.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.235	0.00	24.70
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.260	0.00	109.20
140.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.260	0.00	24.74
Totals:											0.0	8,750.4

Calculated Forces

Structure: CT00595-S-SBA
Site Name: Stonington East
Height: 196.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G 10/26/2017
Exposure: C
Crest Height: 0.00
Site Class: B - Competent Rock
Struct Class: II

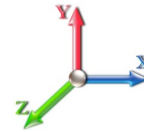


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 30

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	-100.4	-11.26	0.00	-1435.5	0.00	1435.53	5795.46	2897.73	15207.4	7510.36	0.00	0.000	0.000	0.208
2.00	-99.30	-11.21	0.00	-1413.0	0.00	1413.01	5776.44	2888.22	15036.7	7426.09	0.00	-0.016	0.000	0.207
4.00	-98.14	-11.16	0.00	-1390.5	0.00	1390.59	5757.00	2878.50	14865.8	7341.68	0.01	-0.033	0.000	0.206
6.00	-96.99	-11.11	0.00	-1368.2	0.00	1368.27	5737.14	2868.57	14694.6	7257.12	0.03	-0.050	0.000	0.205
8.00	-95.83	-11.06	0.00	-1346.0	0.00	1346.05	5716.84	2858.42	14523.1	7172.43	0.06	-0.066	0.000	0.204
10.00	-94.67	-11.01	0.00	-1323.9	0.00	1323.92	5696.12	2848.06	14351.4	7087.63	0.09	-0.083	0.000	0.203
12.00	-93.52	-10.96	0.00	-1301.8	0.00	1301.89	5674.97	2837.49	14179.5	7002.73	0.13	-0.100	0.000	0.202
14.00	-92.37	-10.92	0.00	-1279.9	0.00	1279.97	5653.40	2826.70	14007.4	6917.75	0.17	-0.118	0.000	0.201
16.00	-91.22	-10.87	0.00	-1258.1	0.00	1258.13	5631.39	2815.70	13835.2	6832.69	0.23	-0.135	0.000	0.200
18.00	-90.08	-10.81	0.00	-1236.4	0.00	1236.40	5608.96	2804.48	13662.8	6747.57	0.29	-0.152	0.000	0.199
20.00	-88.94	-10.76	0.00	-1214.7	0.00	1214.78	5586.10	2793.05	13490.4	6662.41	0.35	-0.170	0.000	0.198
22.00	-87.81	-10.71	0.00	-1193.2	0.00	1193.25	5562.81	2781.41	13317.9	6577.21	0.43	-0.188	0.000	0.197
24.00	-86.68	-10.65	0.00	-1171.8	0.00	1171.84	5539.10	2769.55	13145.3	6491.99	0.51	-0.206	0.000	0.196
26.00	-85.56	-10.59	0.00	-1150.5	0.00	1150.54	5514.96	2757.48	12972.7	6406.77	0.60	-0.224	0.000	0.195
28.00	-84.44	-10.54	0.00	-1129.3	0.00	1129.35	5490.39	2745.19	12800.2	6321.55	0.70	-0.242	0.000	0.194
30.00	-83.31	-10.47	0.00	-1108.2	0.00	1108.28	5465.39	2732.69	12627.7	6236.35	0.80	-0.260	0.000	0.193
32.00	-82.20	-10.41	0.00	-1087.3	0.00	1087.35	5439.96	2719.98	12455.2	6151.18	0.92	-0.279	0.000	0.192
34.00	-81.11	-10.34	0.00	-1066.5	0.00	1066.54	5414.11	2707.06	12282.9	6066.06	1.04	-0.297	0.000	0.191
35.50	-80.29	-10.29	0.00	-1051.0	0.00	1051.03	5394.44	2697.22	12153.7	6002.26	1.13	-0.311	0.000	0.190
36.00	-79.85	-10.28	0.00	-1045.8	0.00	1045.88	5387.83	2693.92	12110.6	5981.00	1.17	-0.316	0.000	0.190
38.00	-78.13	-10.21	0.00	-1025.3	0.00	1025.32	5361.12	2680.56	11938.5	5896.01	1.30	-0.335	0.000	0.188
40.00	-76.42	-10.15	0.00	-1004.8	0.00	1004.89	5333.99	2666.99	11766.6	5811.11	1.45	-0.354	0.000	0.187
42.00	-74.72	-10.07	0.00	-984.60	0.00	984.60	5306.43	2653.21	11594.9	5726.30	1.60	-0.373	0.000	0.186
43.00	-73.88	-10.04	0.00	-974.53	0.00	974.53	4823.70	2411.85	10677.7	5273.35	1.68	-0.383	0.000	0.200
44.00	-73.36	-10.01	0.00	-964.49	0.00	964.49	4812.47	2406.23	10602.6	5236.23	1.76	-0.393	0.000	0.199
46.00	-72.33	-9.94	0.00	-944.48	0.00	944.48	4789.68	2394.84	10452.2	5161.99	1.93	-0.413	0.000	0.198
48.00	-71.31	-9.88	0.00	-924.59	0.00	924.59	4766.46	2383.23	10301.9	5087.77	2.11	-0.433	0.000	0.197
50.00	-70.30	-9.81	0.00	-904.84	0.00	904.84	4742.82	2371.41	10151.7	5013.57	2.29	-0.453	0.000	0.195
52.00	-69.29	-9.74	0.00	-885.23	0.00	885.23	4718.75	2359.37	10001.6	4939.41	2.49	-0.473	0.000	0.194
54.00	-68.29	-9.67	0.00	-865.74	0.00	865.74	4694.25	2347.12	9851.55	4865.31	2.69	-0.494	0.000	0.193
56.00	-67.29	-9.60	0.00	-846.40	0.00	846.40	4669.32	2334.66	9701.64	4791.28	2.90	-0.514	0.000	0.191
58.00	-66.30	-9.54	0.00	-827.19	0.00	827.19	4643.97	2321.98	9551.90	4717.32	3.12	-0.535	0.000	0.190
60.00	-65.32	-9.47	0.00	-808.12	0.00	808.12	4618.19	2309.09	9402.34	4643.46	3.35	-0.556	0.000	0.188
62.00	-64.34	-9.40	0.00	-789.19	0.00	789.19	4591.98	2295.99	9253.00	4569.71	3.59	-0.577	0.000	0.187
64.00	-63.38	-9.33	0.00	-770.39	0.00	770.39	4565.34	2282.67	9103.90	4496.07	3.83	-0.598	0.000	0.185
66.00	-62.41	-9.26	0.00	-751.74	0.00	751.74	4538.28	2269.14	8955.07	4422.57	4.09	-0.619	0.000	0.184
68.00	-61.46	-9.19	0.00	-733.22	0.00	733.22	4510.78	2255.39	8806.54	4349.22	4.35	-0.641	0.000	0.182
70.00	-60.51	-9.12	0.00	-714.85	0.00	714.85	4482.87	2241.43	8658.34	4276.03	4.63	-0.662	0.000	0.181
72.00	-59.57	-9.05	0.00	-696.62	0.00	696.62	4454.52	2227.26	8510.48	4203.01	4.91	-0.684	0.000	0.179
74.00	-58.64	-8.97	0.00	-678.52	0.00	678.52	4425.74	2212.87	8363.00	4130.17	5.20	-0.706	0.000	0.178
74.50	-58.41	-8.96	0.00	-674.04	0.00	674.04	4418.48	2209.24	8326.19	4111.99	5.27	-0.711	0.000	0.177
76.00	-57.37	-8.90	0.00	-660.60	0.00	660.60	4396.54	2198.27	8215.92	4057.54	5.50	-0.728	0.000	0.176
78.00	-55.99	-8.82	0.00	-642.80	0.00	642.80	4366.91	2183.46	8069.28	3985.11	5.81	-0.750	0.000	0.174
80.00	-54.63	-8.74	0.00	-625.16	0.00	625.16	4336.86	2168.43	7923.09	3912.92	6.13	-0.772	0.000	0.172
81.00	-53.96	-8.70	0.00	-616.42	0.00	616.42	3502.12	1751.06	6488.82	3204.59	6.29	-0.783	0.000	0.208
82.00	-53.53	-8.67	0.00	-607.72	0.00	607.72	3492.03	1746.01	6433.63	3177.33	6.46	-0.795	0.000	0.207
84.00	-52.70	-8.60	0.00	-590.38	0.00	590.38	3471.52	1735.76	6323.29	3122.83	6.80	-0.820	0.000	0.204
86.00	-51.87	-8.53	0.00	-573.18	0.00	573.18	3450.59	1725.29	6213.03	3068.38	7.14	-0.845	0.000	0.202

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00	-51.04	-8.46	0.00	-556.13	0.00	556.13	3429.23	1714.61	6102.90	3013.99	7.50	-0.870	0.000	0.199
90.00	-50.22	-8.39	0.00	-539.21	0.00	539.21	3407.44	1703.72	5992.90	2959.67	7.87	-0.895	0.000	0.197
92.00	-49.41	-8.32	0.00	-522.43	0.00	522.43	3385.23	1692.61	5883.07	2905.43	8.25	-0.920	0.000	0.194
94.00	-48.61	-8.25	0.00	-505.79	0.00	505.79	3362.58	1681.29	5773.43	2851.28	8.64	-0.945	0.000	0.192
96.00	-47.81	-8.18	0.00	-489.29	0.00	489.29	3339.51	1669.76	5664.02	2797.25	9.05	-0.971	0.000	0.189
98.00	-47.02	-8.11	0.00	-472.93	0.00	472.93	3316.01	1658.01	5554.85	2743.33	9.46	-0.996	0.000	0.187
100.00	-46.23	-8.04	0.00	-456.71	0.00	456.71	3292.09	1646.04	5445.96	2689.56	9.88	-1.022	0.000	0.184
102.00	-45.46	-7.97	0.00	-440.64	0.00	440.64	3267.73	1633.87	5337.38	2635.93	10.32	-1.048	0.000	0.181
104.00	-44.69	-7.90	0.00	-424.70	0.00	424.70	3242.95	1621.48	5229.12	2582.46	10.76	-1.073	0.000	0.178
106.00	-43.92	-7.83	0.00	-408.90	0.00	408.90	3217.75	1608.87	5121.21	2529.17	11.22	-1.099	0.000	0.175
108.00	-43.16	-7.76	0.00	-393.25	0.00	393.25	3192.11	1596.05	5013.69	2476.07	11.68	-1.125	0.000	0.172
110.00	-42.41	-7.69	0.00	-377.73	0.00	377.73	3166.05	1583.02	4906.58	2423.18	12.16	-1.150	0.000	0.169
112.00	-41.67	-7.62	0.00	-362.36	0.00	362.36	3139.56	1569.78	4799.90	2370.49	12.65	-1.176	0.000	0.166
114.00	-40.93	-7.55	0.00	-347.12	0.00	347.12	3112.64	1556.32	4693.69	2318.04	13.14	-1.202	0.000	0.163
116.00	-40.20	-7.48	0.00	-332.03	0.00	332.03	3085.29	1542.65	4587.97	2265.83	13.65	-1.227	0.000	0.160
118.00	-39.47	-7.40	0.00	-317.07	0.00	317.07	3057.52	1528.76	4482.76	2213.87	14.17	-1.253	0.000	0.156
118.75	-39.20	-7.38	0.00	-311.52	0.00	311.52	3046.99	1523.50	4443.45	2194.45	14.37	-1.262	0.000	0.155
120.00	-38.57	-7.33	0.00	-302.29	0.00	302.29	3029.32	1514.66	4378.10	2162.18	14.70	-1.278	0.000	0.153
122.00	-37.56	-7.26	0.00	-287.63	0.00	287.63	3000.69	1500.34	4274.01	2110.77	15.24	-1.303	0.000	0.149
124.00	-36.57	-7.18	0.00	-273.12	0.00	273.12	2338.57	1169.29	3354.90	1656.86	15.80	-1.328	0.000	0.181
126.00	-35.92	-7.11	0.00	-258.76	0.00	258.76	2319.39	1159.69	3278.90	1619.32	16.36	-1.353	0.000	0.175
128.00	-35.27	-7.04	0.00	-244.54	0.00	244.54	2299.78	1149.89	3203.10	1581.89	16.93	-1.381	0.000	0.170
130.00	-34.63	-6.97	0.00	-230.46	0.00	230.46	2279.74	1139.87	3127.54	1544.58	17.51	-1.408	0.000	0.164
132.00	-34.00	-6.91	0.00	-216.51	0.00	216.51	2259.27	1129.64	3052.24	1507.39	18.11	-1.435	0.000	0.159
134.00	-33.38	-6.84	0.00	-202.70	0.00	202.70	2238.38	1119.19	2977.23	1470.34	18.72	-1.461	0.000	0.153
136.00	-32.76	-6.77	0.00	-189.03	0.00	189.03	2217.06	1108.53	2902.53	1433.45	19.33	-1.487	0.000	0.147
138.00	-32.14	-6.70	0.00	-175.49	0.00	175.49	2195.31	1097.65	2828.17	1396.73	19.96	-1.512	0.000	0.140
140.00	-25.88	-5.27	0.00	-162.09	0.00	162.09	2173.13	1086.57	2754.18	1360.19	20.60	-1.537	0.000	0.131
142.00	-25.42	-5.20	0.00	-151.55	0.00	151.55	2150.53	1075.26	2680.59	1323.84	21.25	-1.561	0.000	0.126
144.00	-24.95	-5.13	0.00	-141.15	0.00	141.15	2127.50	1063.75	2607.41	1287.70	21.91	-1.584	0.000	0.121
146.00	-24.50	-5.07	0.00	-130.88	0.00	130.88	2104.04	1052.02	2534.68	1251.78	22.58	-1.607	0.000	0.116
148.00	-24.05	-5.00	0.00	-120.75	0.00	120.75	2080.15	1040.08	2462.43	1216.10	23.26	-1.629	0.000	0.111
150.00	-18.54	-3.96	0.00	-110.74	0.00	110.74	2055.84	1027.92	2390.68	1180.67	23.94	-1.651	0.000	0.103
152.00	-18.13	-3.89	0.00	-102.82	0.00	102.82	2031.10	1015.55	2319.45	1145.49	24.64	-1.672	0.000	0.099
154.00	-17.74	-3.83	0.00	-95.04	0.00	95.04	2005.93	1002.96	2248.79	1110.59	25.34	-1.692	0.000	0.094
154.75	-17.59	-3.80	0.00	-92.17	0.00	92.17	1996.38	998.19	2222.43	1097.58	25.61	-1.700	0.000	0.093
156.00	-17.26	-3.76	0.00	-87.41	0.00	87.41	1980.33	990.17	2178.70	1075.98	26.06	-1.712	0.000	0.090
158.00	-16.74	-3.69	0.00	-79.89	0.00	79.89	1946.84	973.42	2101.16	1037.68	26.78	-1.732	0.000	0.086
159.00	-16.49	-3.66	0.00	-76.20	0.00	76.20	942.51	471.25	1031.78	509.56	27.14	-1.741	0.000	0.167
160.00	-16.34	-3.63	0.00	-72.54	0.00	72.54	939.15	469.58	1018.30	502.90	27.51	-1.751	0.000	0.162
162.00	-16.04	-3.57	0.00	-65.28	0.00	65.28	932.13	466.07	991.20	489.52	28.25	-1.779	0.000	0.151
164.00	-15.76	-3.51	0.00	-58.14	0.00	58.14	924.68	462.34	963.95	476.06	29.00	-1.805	0.000	0.139
166.00	-15.47	-3.45	0.00	-51.12	0.00	51.12	916.80	458.40	936.57	462.54	29.76	-1.831	0.000	0.127
167.00	-8.66	-2.07	0.00	-47.67	0.00	47.67	912.70	456.35	922.84	455.76	30.15	-1.843	0.000	0.114
168.00	-8.54	-2.04	0.00	-45.60	0.00	45.60	908.49	454.25	909.10	448.97	30.53	-1.854	0.000	0.111
170.00	-8.30	-1.98	0.00	-41.53	0.00	41.53	899.76	449.88	881.55	435.36	31.31	-1.877	0.000	0.105
172.00	-8.06	-1.92	0.00	-37.57	0.00	37.57	890.60	445.30	853.96	421.74	32.11	-1.899	0.000	0.098
174.00	-7.83	-1.86	0.00	-33.73	0.00	33.73	881.01	440.50	826.35	408.10	32.90	-1.920	0.000	0.092
176.00	-7.61	-1.81	0.00	-30.00	0.00	30.00	870.99	435.50	798.75	394.47	33.71	-1.940	0.000	0.085
178.00	-7.38	-1.75	0.00	-26.39	0.00	26.39	860.55	430.27	771.18	380.86	34.53	-1.959	0.000	0.078
180.00	-7.17	-1.70	0.00	-22.88	0.00	22.88	849.68	424.84	743.68	367.28	35.35	-1.976	0.000	0.071
182.00	-6.95	-1.64	0.00	-19.49	0.00	19.49	838.38	419.19	716.27	353.74	36.19	-1.993	0.000	0.063
184.00	-6.75	-1.59	0.00	-16.21	0.00	16.21	826.65	413.33	688.97	340.26	37.02	-2.008	0.000	0.056
186.00	-6.54	-1.54	0.00	-13.03	0.00	13.03	814.50	407.25	661.81	326.85	37.87	-2.021	0.000	0.048
188.00	-6.34	-1.48	0.00	-9.96	0.00	9.96	801.91	400.96	634.83	313.52	38.72	-2.032	0.000	0.040
190.00	-6.15	-1.43	0.00	-7.00	0.00	7.00	788.90	394.45	608.04	300.29	39.57	-2.041	0.000	0.031
192.00	-5.96	-1.38	0.00	-4.13	0.00	4.13	775.47	387.73	581.48	287.17	40.43	-2.047	0.000	0.022

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Page: 51
	Struct Class: II	



194.00	-5.78	-1.33	0.00	-1.37	0.00	1.37	761.60	380.80	555.16	274.17	41.28	-2.050	0.000	0.013
195.00	-0.13	-0.04	0.00	-0.04	0.00	0.04	754.51	377.26	542.11	267.73	41.71	-2.051	0.000	0.000
196.00	0.00	-0.04	0.00	0.00	0.00	0.00	747.31	373.66	529.12	261.31	42.14	-2.051	0.000	0.000

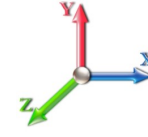
Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E					Iterations 26
Gust Response Factor	1.10	Sds	0.11	Ss	0.16
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.04
Wind Load Factor	0.00	Structure Frequency	0.29	SA	0.01
					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	
2.00		650.02	0.00	0.01	0.01	4.05	
4.00		644.86	0.00	0.02	0.01	6.55	
6.00		639.70	0.00	0.03	0.02	8.26	
8.00		634.54	0.00	0.04	0.02	9.50	
10.00		629.38	0.00	0.04	0.03	10.41	
12.00		624.22	0.01	0.05	0.03	11.08	
14.00		619.06	0.01	0.05	0.03	11.58	
16.00		613.90	0.01	0.06	0.03	11.95	
18.00		608.74	0.02	0.06	0.04	12.22	
20.00		603.57	0.02	0.06	0.04	12.41	
22.00		598.41	0.02	0.07	0.04	12.54	
24.00		593.25	0.03	0.07	0.04	12.62	
26.00		588.09	0.03	0.07	0.04	12.66	
28.00		582.93	0.04	0.07	0.04	12.68	
30.00	Appurtenance(s)	587.77	0.04	0.07	0.04	12.90	
32.00		572.61	0.05	0.07	0.04	12.67	
34.00		567.45	0.06	0.07	0.04	12.65	
35.50	Bot - Section 2	422.20	0.06	0.07	0.04	9.46	
36.00		273.01	0.06	0.07	0.04	6.13	
38.00		1085.8	0.07	0.07	0.04	24.57	
40.00		1075.8	0.08	0.07	0.04	24.52	
42.00		1065.8	0.09	0.07	0.04	24.48	
43.00	Top - Section 1	529.18	0.09	0.07	0.04	12.20	
44.00		256.51	0.10	0.07	0.04	5.94	
46.00		509.41	0.10	0.07	0.04	11.90	
48.00		504.59	0.11	0.07	0.04	11.88	
50.00		499.78	0.12	0.07	0.03	11.87	
52.00		494.96	0.13	0.07	0.03	11.86	
54.00		490.14	0.14	0.07	0.03	11.84	
56.00		485.33	0.15	0.07	0.03	11.82	
58.00		480.51	0.17	0.07	0.03	11.79	
60.00		475.69	0.18	0.07	0.03	11.74	
62.00		470.88	0.19	0.06	0.02	11.68	
64.00		466.06	0.20	0.06	0.02	11.59	
66.00		461.24	0.21	0.06	0.02	11.48	
68.00		456.43	0.23	0.06	0.02	11.32	
70.00		451.61	0.24	0.06	0.02	11.13	
72.00		446.79	0.26	0.05	0.02	10.88	
74.00		441.98	0.27	0.05	0.02	10.58	
74.50	Bot - Section 3	109.74	0.27	0.05	0.01	2.61	
76.00		613.07	0.28	0.05	0.01	14.31	
78.00		809.60	0.30	0.05	0.01	18.27	
80.00		800.65	0.31	0.04	0.01	17.26	
81.00	Top - Section 2	396.97	0.32	0.04	0.01	8.32	
82.00		183.98	0.33	0.04	0.01	3.73	

Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		364.87	0.35	0.03	0.01	6.84
86.00		360.74	0.36	0.03	0.01	6.10
88.00		356.61	0.38	0.02	0.01	5.26
90.00		352.48	0.40	0.02	0.01	4.32
92.00		348.36	0.42	0.01	0.01	3.29
94.00		344.23	0.43	0.01	0.01	2.19
96.00		340.10	0.45	0.00	0.01	1.03
98.00		335.97	0.47	-0.01	0.01	-0.15
100.00		331.84	0.49	-0.01	0.01	-1.33
102.00		327.71	0.51	-0.02	0.01	-2.47
104.00		323.58	0.53	-0.03	0.01	-3.55
106.00		319.46	0.55	-0.04	0.01	-4.53
108.00		315.33	0.57	-0.04	0.01	-5.41
110.00		311.20	0.60	-0.05	0.01	-6.16
112.00		307.07	0.62	-0.06	0.02	-6.79
114.00		302.94	0.64	-0.07	0.02	-7.30
116.00		298.81	0.66	-0.07	0.02	-7.68
118.00		294.68	0.69	-0.08	0.03	-7.95
118.75	Bot - Section 4	109.44	0.69	-0.08	0.03	-3.00
120.00		334.98	0.71	-0.09	0.03	-9.35
122.00		529.83	0.73	-0.10	0.04	-15.11
124.00	Top - Section 3	522.26	0.76	-0.10	0.04	-15.05
126.00		236.52	0.78	-0.11	0.05	-6.81
128.00		233.08	0.81	-0.11	0.06	-6.65
130.00		229.64	0.83	-0.12	0.06	-6.42
132.00		226.20	0.86	-0.12	0.07	-6.14
134.00		222.75	0.88	-0.12	0.08	-5.80
136.00		219.31	0.91	-0.12	0.09	-5.41
138.00		215.87	0.94	-0.12	0.10	-4.99
140.00	Appurtenance(s)	2367.9	0.96	-0.12	0.11	-50.33
142.00		208.99	0.99	-0.11	0.13	-4.01
144.00		205.55	1.02	-0.10	0.14	-3.46
146.00		202.11	1.05	-0.09	0.16	-2.89
148.00		198.67	1.08	-0.08	0.17	-2.28
150.00	Appurtenance(s)	2398.0	1.11	-0.07	0.19	-20.19
152.00		191.79	1.14	-0.05	0.21	-0.98
154.00		188.35	1.17	-0.02	0.23	-0.30
154.75	Bot - Section 5	69.74	1.18	-0.01	0.24	-0.01
156.00		185.55	1.20	0.00	0.25	0.41
158.00		292.41	1.23	0.03	0.28	1.82
159.00	Top - Section 4	144.14	1.24	0.05	0.29	1.20
160.00		54.18	1.26	0.07	0.30	0.57
162.00		106.81	1.29	0.11	0.33	1.61
164.00		104.74	1.32	0.15	0.36	2.08
166.00		102.68	1.36	0.21	0.39	2.55
167.00	Appurtenance(s)	2932.8	1.37	0.23	0.40	80.54
168.00		50.05	1.39	0.26	0.42	1.51
170.00		98.55	1.42	0.33	0.45	3.52
172.00		96.49	1.46	0.40	0.49	4.01
174.00		94.42	1.49	0.48	0.53	4.49
176.00		92.36	1.52	0.56	0.57	4.98
178.00		90.29	1.56	0.66	0.62	5.47
180.00		88.23	1.59	0.76	0.66	5.95
182.00		86.16	1.63	0.87	0.71	6.43
184.00		84.10	1.67	1.00	0.76	6.90
186.00		82.04	1.70	1.13	0.82	7.36
188.00		79.97	1.74	1.28	0.88	7.82

Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017	
Site Name: Stonington East	Exposure: C		
Height: 196.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 54



190.00		77.91	1.78	1.43	0.94	8.26
192.00		75.84	1.81	1.60	1.00	8.69
194.00		73.78	1.85	1.78	1.07	9.11
195.00	Appurtenance(s)	2426.0	1.87	1.88	1.10	310.61
196.00	Appurtenance(s)	42.10	1.89	1.98	1.14	5.58
Totals:		47,725.0				829.9
						Total Wind: 61,993.8

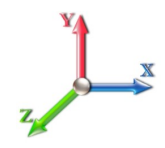
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0E										Iterations 26
Gust Response Factor	1.10						Sds	0.11		Ss 0.16
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.04					S1 0.06
Wind Load Factor	0.00	Structure Frequency	0.29	SA	0.01	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	-65.48	-1.05	0.00	-123.49	0.00	123.49	5795.46	2897.73	15207.4	7510.36	0.00	0.00	0.00	0.028
2.00	-64.59	-1.05	0.00	-121.39	0.00	121.39	5776.44	2888.22	15036.7	7426.09	0.00	0.00	0.00	0.028
4.00	-63.71	-1.04	0.00	-119.30	0.00	119.30	5757.00	2878.50	14865.8	7341.68	0.00	0.00	0.00	0.027
6.00	-62.84	-1.04	0.00	-117.21	0.00	117.21	5737.14	2868.57	14694.6	7257.12	0.00	0.00	0.00	0.027
8.00	-61.97	-1.03	0.00	-115.14	0.00	115.14	5716.84	2858.42	14523.1	7172.43	0.00	-0.01	0.00	0.027
10.00	-61.11	-1.02	0.00	-113.09	0.00	113.09	5696.12	2848.06	14351.4	7087.63	0.01	-0.01	0.00	0.027
12.00	-60.25	-1.01	0.00	-111.05	0.00	111.05	5674.97	2837.49	14179.5	7002.73	0.01	-0.01	0.00	0.026
14.00	-59.40	-1.00	0.00	-109.03	0.00	109.03	5653.40	2826.70	14007.4	6917.75	0.01	-0.01	0.00	0.026
16.00	-58.56	-0.99	0.00	-107.03	0.00	107.03	5631.39	2815.70	13835.2	6832.69	0.02	-0.01	0.00	0.026
18.00	-57.72	-0.98	0.00	-105.05	0.00	105.05	5608.96	2804.48	13662.8	6747.57	0.02	-0.01	0.00	0.026
20.00	-56.89	-0.97	0.00	-103.10	0.00	103.10	5586.10	2793.05	13490.4	6662.41	0.03	-0.01	0.00	0.026
22.00	-56.07	-0.96	0.00	-101.17	0.00	101.17	5562.81	2781.41	13317.9	6577.21	0.04	-0.02	0.00	0.025
24.00	-55.25	-0.94	0.00	-99.26	0.00	99.26	5539.10	2769.55	13145.3	6491.99	0.04	-0.02	0.00	0.025
26.00	-54.44	-0.93	0.00	-97.37	0.00	97.37	5514.96	2757.48	12972.7	6406.77	0.05	-0.02	0.00	0.025
28.00	-53.63	-0.92	0.00	-95.50	0.00	95.50	5490.39	2745.19	12800.2	6321.55	0.06	-0.02	0.00	0.025
30.00	-52.82	-0.91	0.00	-93.66	0.00	93.66	5465.39	2732.69	12627.7	6236.35	0.07	-0.02	0.00	0.025
32.00	-52.03	-0.90	0.00	-91.85	0.00	91.85	5439.96	2719.98	12455.2	6151.18	0.08	-0.02	0.00	0.024
34.00	-51.24	-0.89	0.00	-90.05	0.00	90.05	5414.11	2707.06	12282.9	6066.06	0.09	-0.03	0.00	0.024
35.50	-50.65	-0.88	0.00	-88.72	0.00	88.72	5394.44	2697.22	12153.7	6002.26	0.10	-0.03	0.00	0.024
36.00	-50.30	-0.87	0.00	-88.28	0.00	88.28	5387.83	2693.92	12110.6	5981.00	0.10	-0.03	0.00	0.024
38.00	-48.89	-0.85	0.00	-86.54	0.00	86.54	5361.12	2680.56	11938.5	5896.01	0.11	-0.03	0.00	0.024
40.00	-47.49	-0.82	0.00	-84.85	0.00	84.85	5333.99	2666.99	11766.6	5811.11	0.12	-0.03	0.00	0.024
42.00	-46.11	-0.80	0.00	-83.20	0.00	83.20	5306.43	2653.21	11594.9	5726.30	0.14	-0.03	0.00	0.023
43.00	-45.42	-0.79	0.00	-82.40	0.00	82.40	4823.70	2411.85	10677.7	5273.35	0.14	-0.03	0.00	0.025
44.00	-45.06	-0.78	0.00	-81.61	0.00	81.61	4812.47	2406.23	10602.6	5236.23	0.15	-0.03	0.00	0.025
46.00	-44.34	-0.77	0.00	-80.05	0.00	80.05	4789.68	2394.84	10452.2	5161.99	0.16	-0.04	0.00	0.025
48.00	-43.63	-0.76	0.00	-78.51	0.00	78.51	4766.46	2383.23	10301.9	5087.77	0.18	-0.04	0.00	0.025
50.00	-42.92	-0.75	0.00	-76.99	0.00	76.99	4742.82	2371.41	10151.7	5013.57	0.20	-0.04	0.00	0.024
52.00	-42.22	-0.74	0.00	-75.49	0.00	75.49	4718.75	2359.37	10001.6	4939.41	0.21	-0.04	0.00	0.024
54.00	-41.53	-0.73	0.00	-74.01	0.00	74.01	4694.25	2347.12	9851.55	4865.31	0.23	-0.04	0.00	0.024
56.00	-40.84	-0.72	0.00	-72.56	0.00	72.56	4669.32	2334.66	9701.64	4791.28	0.25	-0.04	0.00	0.024
58.00	-40.16	-0.70	0.00	-71.13	0.00	71.13	4643.97	2321.98	9551.90	4717.32	0.27	-0.05	0.00	0.024
60.00	-39.48	-0.69	0.00	-69.72	0.00	69.72	4618.19	2309.09	9402.34	4643.46	0.29	-0.05	0.00	0.024
62.00	-38.81	-0.68	0.00	-68.33	0.00	68.33	4591.98	2295.99	9253.00	4569.71	0.31	-0.05	0.00	0.023
64.00	-38.15	-0.67	0.00	-66.96	0.00	66.96	4565.34	2282.67	9103.90	4496.07	0.33	-0.05	0.00	0.023
66.00	-37.49	-0.66	0.00	-65.62	0.00	65.62	4538.28	2269.14	8955.07	4422.57	0.35	-0.05	0.00	0.023
68.00	-36.83	-0.65	0.00	-64.30	0.00	64.30	4510.78	2255.39	8806.54	4349.22	0.37	-0.05	0.00	0.023
70.00	-36.18	-0.64	0.00	-63.00	0.00	63.00	4482.87	2241.43	8658.34	4276.03	0.39	-0.06	0.00	0.023
72.00	-35.54	-0.63	0.00	-61.72	0.00	61.72	4454.52	2227.26	8510.48	4203.01	0.42	-0.06	0.00	0.023
74.00	-34.90	-0.62	0.00	-60.46	0.00	60.46	4425.74	2212.87	8363.00	4130.17	0.44	-0.06	0.00	0.023
74.50	-34.75	-0.62	0.00	-60.15	0.00	60.15	4418.48	2209.24	8326.19	4111.99	0.45	-0.06	0.00	0.022
76.00	-33.93	-0.60	0.00	-59.23	0.00	59.23	4396.54	2198.27	8215.92	4057.54	0.47	-0.06	0.00	0.022
78.00	-32.85	-0.58	0.00	-58.02	0.00	58.02	4366.91	2183.46	8069.28	3985.11	0.50	-0.06	0.00	0.022
80.00	-31.79	-0.57	0.00	-56.85	0.00	56.85	4336.86	2168.43	7923.09	3912.92	0.52	-0.07	0.00	0.022
81.00	-31.26	-0.56	0.00	-56.29	0.00	56.29	3502.12	1751.06	6488.82	3204.59	0.54	-0.07	0.00	0.026
82.00	-30.98	-0.56	0.00	-55.73	0.00	55.73	3492.03	1746.01	6433.63	3177.33	0.55	-0.07	0.00	0.026
84.00	-30.44	-0.55	0.00	-54.62	0.00	54.62	3471.52	1735.76	6323.29	3122.83	0.58	-0.07	0.00	0.026

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	-29.90	-0.54	0.00	-53.52	0.00	53.52	3450.59	1725.29	6213.03	3068.38	0.61	-0.07	0.026
88.00	-29.37	-0.54	0.00	-52.43	0.00	52.43	3429.23	1714.61	6102.90	3013.99	0.64	-0.08	0.026
90.00	-28.84	-0.53	0.00	-51.36	0.00	51.36	3407.44	1703.72	5992.90	2959.67	0.67	-0.08	0.026
92.00	-28.31	-0.53	0.00	-50.29	0.00	50.29	3385.23	1692.61	5883.07	2905.43	0.71	-0.08	0.026
94.00	-27.79	-0.53	0.00	-49.22	0.00	49.22	3362.58	1681.29	5773.43	2851.28	0.74	-0.08	0.026
96.00	-27.28	-0.53	0.00	-48.16	0.00	48.16	3339.51	1669.76	5664.02	2797.25	0.78	-0.09	0.025
98.00	-26.77	-0.53	0.00	-47.10	0.00	47.10	3316.01	1658.01	5554.85	2743.33	0.81	-0.09	0.025
100.00	-26.27	-0.53	0.00	-46.04	0.00	46.04	3292.09	1646.04	5445.96	2689.56	0.85	-0.09	0.025
102.00	-25.77	-0.53	0.00	-44.98	0.00	44.98	3267.73	1633.87	5337.38	2635.93	0.89	-0.09	0.025
104.00	-25.27	-0.53	0.00	-43.92	0.00	43.92	3242.95	1621.48	5229.12	2582.46	0.93	-0.10	0.025
106.00	-24.78	-0.53	0.00	-42.86	0.00	42.86	3217.75	1608.87	5121.21	2529.17	0.97	-0.10	0.025
108.00	-24.30	-0.53	0.00	-41.79	0.00	41.79	3192.11	1596.05	5013.69	2476.07	1.01	-0.10	0.024
110.00	-23.82	-0.53	0.00	-40.73	0.00	40.73	3166.05	1583.02	4906.58	2423.18	1.05	-0.10	0.024
112.00	-23.34	-0.53	0.00	-39.66	0.00	39.66	3139.56	1569.78	4799.90	2370.49	1.10	-0.11	0.024
114.00	-22.87	-0.53	0.00	-38.60	0.00	38.60	3112.64	1556.32	4693.69	2318.04	1.14	-0.11	0.024
116.00	-22.41	-0.53	0.00	-37.53	0.00	37.53	3085.29	1542.65	4587.97	2265.83	1.19	-0.11	0.024
118.00	-21.95	-0.53	0.00	-36.46	0.00	36.46	3057.52	1528.76	4482.76	2213.87	1.24	-0.11	0.024
118.75	-21.78	-0.53	0.00	-36.06	0.00	36.06	3046.99	1523.50	4443.45	2194.45	1.25	-0.12	0.024
120.00	-21.31	-0.53	0.00	-35.40	0.00	35.40	3029.32	1514.66	4378.10	2162.18	1.28	-0.12	0.023
122.00	-20.57	-0.53	0.00	-34.33	0.00	34.33	3000.69	1500.34	4274.01	2110.77	1.33	-0.12	0.023
124.00	-19.83	-0.53	0.00	-33.27	0.00	33.27	2338.57	1169.29	3354.90	1656.86	1.39	-0.12	0.029
126.00	-19.44	-0.53	0.00	-32.20	0.00	32.20	2319.39	1159.69	3278.90	1619.32	1.44	-0.13	0.028
128.00	-19.06	-0.53	0.00	-31.14	0.00	31.14	2299.78	1149.89	3203.10	1581.89	1.49	-0.13	0.028
130.00	-18.68	-0.53	0.00	-30.07	0.00	30.07	2279.74	1139.87	3127.54	1544.58	1.55	-0.13	0.028
132.00	-18.30	-0.53	0.00	-29.00	0.00	29.00	2259.27	1129.64	3052.24	1507.39	1.60	-0.14	0.027
134.00	-17.93	-0.53	0.00	-27.94	0.00	27.94	2238.38	1119.19	2977.23	1470.34	1.66	-0.14	0.027
136.00	-17.56	-0.53	0.00	-26.87	0.00	26.87	2217.06	1108.53	2902.53	1433.45	1.72	-0.14	0.027
138.00	-17.19	-0.53	0.00	-25.80	0.00	25.80	2195.31	1097.65	2828.17	1396.73	1.78	-0.15	0.026
140.00	-14.24	-0.53	0.00	-24.73	0.00	24.73	2173.13	1086.57	2754.18	1360.19	1.85	-0.15	0.025
142.00	-13.92	-0.53	0.00	-23.68	0.00	23.68	2150.53	1075.26	2680.59	1323.84	1.91	-0.16	0.024
144.00	-13.60	-0.53	0.00	-22.62	0.00	22.62	2127.50	1063.75	2607.41	1287.70	1.98	-0.16	0.024
146.00	-13.29	-0.53	0.00	-21.56	0.00	21.56	2104.04	1052.02	2534.68	1251.78	2.04	-0.16	0.024
148.00	-12.98	-0.53	0.00	-20.51	0.00	20.51	2080.15	1040.08	2462.43	1216.10	2.11	-0.17	0.023
150.00	-10.03	-0.52	0.00	-19.45	0.00	19.45	2055.84	1027.92	2390.68	1180.67	2.18	-0.17	0.021
152.00	-9.76	-0.52	0.00	-18.41	0.00	18.41	2031.10	1015.55	2319.45	1145.49	2.26	-0.17	0.021
154.00	-9.50	-0.52	0.00	-17.37	0.00	17.37	2005.93	1002.96	2248.79	1110.59	2.33	-0.18	0.020
154.75	-9.40	-0.52	0.00	-16.99	0.00	16.99	1996.38	998.19	2222.43	1097.58	2.36	-0.18	0.020
156.00	-9.15	-0.52	0.00	-16.34	0.00	16.34	1980.33	990.17	2178.70	1075.98	2.41	-0.18	0.020
158.00	-8.76	-0.52	0.00	-15.30	0.00	15.30	1946.84	973.42	2101.16	1037.68	2.48	-0.19	0.019
159.00	-8.57	-0.51	0.00	-14.78	0.00	14.78	942.51	471.25	1031.78	509.56	2.52	-0.19	0.038
160.00	-8.49	-0.51	0.00	-14.27	0.00	14.27	939.15	469.58	1018.30	502.90	2.56	-0.19	0.037
162.00	-8.32	-0.51	0.00	-13.24	0.00	13.24	932.13	466.07	991.20	489.52	2.64	-0.19	0.036
164.00	-8.15	-0.51	0.00	-12.21	0.00	12.21	924.68	462.34	963.95	476.06	2.72	-0.20	0.034
166.00	-7.99	-0.51	0.00	-11.19	0.00	11.19	916.80	458.40	936.57	462.54	2.81	-0.21	0.033
167.00	-4.45	-0.42	0.00	-10.68	0.00	10.68	912.70	456.35	922.84	455.76	2.85	-0.21	0.028
168.00	-4.39	-0.41	0.00	-10.27	0.00	10.27	908.49	454.25	909.10	448.97	2.90	-0.21	0.028
170.00	-4.27	-0.41	0.00	-9.44	0.00	9.44	899.76	449.88	881.55	435.36	2.99	-0.22	0.026
172.00	-4.14	-0.41	0.00	-8.62	0.00	8.62	890.60	445.30	853.96	421.74	3.08	-0.22	0.025
174.00	-4.02	-0.40	0.00	-7.80	0.00	7.80	881.01	440.50	826.35	408.10	3.17	-0.23	0.024
176.00	-3.91	-0.40	0.00	-7.00	0.00	7.00	870.99	435.50	798.75	394.47	3.27	-0.23	0.022
178.00	-3.79	-0.39	0.00	-6.20	0.00	6.20	860.55	430.27	771.18	380.86	3.36	-0.23	0.021
180.00	-3.68	-0.39	0.00	-5.42	0.00	5.42	849.68	424.84	743.68	367.28	3.46	-0.24	0.019
182.00	-3.57	-0.38	0.00	-4.65	0.00	4.65	838.38	419.19	716.27	353.74	3.57	-0.24	0.017
184.00	-3.46	-0.37	0.00	-3.89	0.00	3.89	826.65	413.33	688.97	340.26	3.67	-0.25	0.016
186.00	-3.36	-0.36	0.00	-3.15	0.00	3.15	814.50	407.25	661.81	326.85	3.77	-0.25	0.014
188.00	-3.26	-0.36	0.00	-2.42	0.00	2.42	801.91	400.96	634.83	313.52	3.88	-0.25	0.012
190.00	-3.16	-0.35	0.00	-1.71	0.00	1.71	788.90	394.45	608.04	300.29	3.98	-0.25	0.010

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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192.00	-3.06	-0.34	0.00	-1.01	0.00	1.01	775.47	387.73	581.48	287.17	4.09	-0.26	0.007
194.00	-2.96	-0.33	0.00	-0.34	0.00	0.34	761.60	380.80	555.16	274.17	4.20	-0.26	0.005
195.00	-0.05	-0.01	0.00	-0.01	0.00	0.01	754.51	377.26	542.11	267.73	4.25	-0.26	0.000
196.00	0.00	-0.01	0.00	0.00	0.00	0.00	747.31	373.66	529.12	261.31	4.31	-0.26	0.000

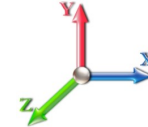
Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E					Iterations 26
Gust Response Factor	1.10	Seismic Load Factor	1.00	Sds 0.11	Ss 0.16
Dead Load Factor	0.90	Structure Frequency	0.29	Sd1 0.04	S1 0.06
Wind Load Factor	0.00			SA 0.01	Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	
0.00		0.00	0.00	0.00	0.00	0.00	R: 1.50
2.00		650.02	0.00	0.01	0.01	4.05	
4.00		644.86	0.00	0.02	0.01	6.55	
6.00		639.70	0.00	0.03	0.02	8.26	
8.00		634.54	0.00	0.04	0.02	9.50	
10.00		629.38	0.00	0.04	0.03	10.41	
12.00		624.22	0.01	0.05	0.03	11.08	
14.00		619.06	0.01	0.05	0.03	11.58	
16.00		613.90	0.01	0.06	0.03	11.95	
18.00		608.74	0.02	0.06	0.04	12.22	
20.00		603.57	0.02	0.06	0.04	12.41	
22.00		598.41	0.02	0.07	0.04	12.54	
24.00		593.25	0.03	0.07	0.04	12.62	
26.00		588.09	0.03	0.07	0.04	12.66	
28.00		582.93	0.04	0.07	0.04	12.68	
30.00	Appurtenance(s)	587.77	0.04	0.07	0.04	12.90	
32.00		572.61	0.05	0.07	0.04	12.67	
34.00		567.45	0.06	0.07	0.04	12.65	
35.50	Bot - Section 2	422.20	0.06	0.07	0.04	9.46	
36.00		273.01	0.06	0.07	0.04	6.13	
38.00		1085.8	0.07	0.07	0.04	24.57	
40.00		1075.8	0.08	0.07	0.04	24.52	
42.00		1065.8	0.09	0.07	0.04	24.48	
43.00	Top - Section 1	529.18	0.09	0.07	0.04	12.20	
44.00		256.51	0.10	0.07	0.04	5.94	
46.00		509.41	0.10	0.07	0.04	11.90	
48.00		504.59	0.11	0.07	0.04	11.88	
50.00		499.78	0.12	0.07	0.03	11.87	
52.00		494.96	0.13	0.07	0.03	11.86	
54.00		490.14	0.14	0.07	0.03	11.84	
56.00		485.33	0.15	0.07	0.03	11.82	
58.00		480.51	0.17	0.07	0.03	11.79	
60.00		475.69	0.18	0.07	0.03	11.74	
62.00		470.88	0.19	0.06	0.02	11.68	
64.00		466.06	0.20	0.06	0.02	11.59	
66.00		461.24	0.21	0.06	0.02	11.48	
68.00		456.43	0.23	0.06	0.02	11.32	
70.00		451.61	0.24	0.06	0.02	11.13	
72.00		446.79	0.26	0.05	0.02	10.88	
74.00		441.98	0.27	0.05	0.02	10.58	
74.50	Bot - Section 3	109.74	0.27	0.05	0.01	2.61	
76.00		613.07	0.28	0.05	0.01	14.31	
78.00		809.60	0.30	0.05	0.01	18.27	
80.00		800.65	0.31	0.04	0.01	17.26	
81.00	Top - Section 2	396.97	0.32	0.04	0.01	8.32	
82.00		183.98	0.33	0.04	0.01	3.73	

Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		364.87	0.35	0.03	0.01	6.84
86.00		360.74	0.36	0.03	0.01	6.10
88.00		356.61	0.38	0.02	0.01	5.26
90.00		352.48	0.40	0.02	0.01	4.32
92.00		348.36	0.42	0.01	0.01	3.29
94.00		344.23	0.43	0.01	0.01	2.19
96.00		340.10	0.45	0.00	0.01	1.03
98.00		335.97	0.47	-0.01	0.01	-0.15
100.00		331.84	0.49	-0.01	0.01	-1.33
102.00		327.71	0.51	-0.02	0.01	-2.47
104.00		323.58	0.53	-0.03	0.01	-3.55
106.00		319.46	0.55	-0.04	0.01	-4.53
108.00		315.33	0.57	-0.04	0.01	-5.41
110.00		311.20	0.60	-0.05	0.01	-6.16
112.00		307.07	0.62	-0.06	0.02	-6.79
114.00		302.94	0.64	-0.07	0.02	-7.30
116.00		298.81	0.66	-0.07	0.02	-7.68
118.00		294.68	0.69	-0.08	0.03	-7.95
118.75	Bot - Section 4	109.44	0.69	-0.08	0.03	-3.00
120.00		334.98	0.71	-0.09	0.03	-9.35
122.00		529.83	0.73	-0.10	0.04	-15.11
124.00	Top - Section 3	522.26	0.76	-0.10	0.04	-15.05
126.00		236.52	0.78	-0.11	0.05	-6.81
128.00		233.08	0.81	-0.11	0.06	-6.65
130.00		229.64	0.83	-0.12	0.06	-6.42
132.00		226.20	0.86	-0.12	0.07	-6.14
134.00		222.75	0.88	-0.12	0.08	-5.80
136.00		219.31	0.91	-0.12	0.09	-5.41
138.00		215.87	0.94	-0.12	0.10	-4.99
140.00	Appurtenance(s)	2367.9	0.96	-0.12	0.11	-50.33
142.00		208.99	0.99	-0.11	0.13	-4.01
144.00		205.55	1.02	-0.10	0.14	-3.46
146.00		202.11	1.05	-0.09	0.16	-2.89
148.00		198.67	1.08	-0.08	0.17	-2.28
150.00	Appurtenance(s)	2398.0	1.11	-0.07	0.19	-20.19
152.00		191.79	1.14	-0.05	0.21	-0.98
154.00		188.35	1.17	-0.02	0.23	-0.30
154.75	Bot - Section 5	69.74	1.18	-0.01	0.24	-0.01
156.00		185.55	1.20	0.00	0.25	0.41
158.00		292.41	1.23	0.03	0.28	1.82
159.00	Top - Section 4	144.14	1.24	0.05	0.29	1.20
160.00		54.18	1.26	0.07	0.30	0.57
162.00		106.81	1.29	0.11	0.33	1.61
164.00		104.74	1.32	0.15	0.36	2.08
166.00		102.68	1.36	0.21	0.39	2.55
167.00	Appurtenance(s)	2932.8	1.37	0.23	0.40	80.54
168.00		50.05	1.39	0.26	0.42	1.51
170.00		98.55	1.42	0.33	0.45	3.52
172.00		96.49	1.46	0.40	0.49	4.01
174.00		94.42	1.49	0.48	0.53	4.49
176.00		92.36	1.52	0.56	0.57	4.98
178.00		90.29	1.56	0.66	0.62	5.47
180.00		88.23	1.59	0.76	0.66	5.95
182.00		86.16	1.63	0.87	0.71	6.43
184.00		84.10	1.67	1.00	0.76	6.90
186.00		82.04	1.70	1.13	0.82	7.36
188.00		79.97	1.74	1.28	0.88	7.82

Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017	
Site Name: Stonington East	Exposure: C		
Height: 196.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 60



190.00		77.91	1.78	1.43	0.94	8.26
192.00		75.84	1.81	1.60	1.00	8.69
194.00		73.78	1.85	1.78	1.07	9.11
195.00	Appurtenance(s)	2426.0	1.87	1.88	1.10	310.61
196.00	Appurtenance(s)	42.10	1.89	1.98	1.14	5.58
Totals:		47,725.0				829.9
						Total Wind: 61,993.8

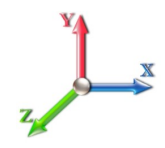
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0E										Iterations 26	
Gust Response Factor	1.10						Sds	0.11		Ss	0.16
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.04					S1	0.06
Wind Load Factor	0.00	Structure Frequency	0.29	SA	0.01	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	-49.11	-1.05	0.00	-122.03	0.00	122.03	5795.46	2897.73	15207.4	7510.36	0.00	0.00	0.00	0.025
2.00	-48.44	-1.05	0.00	-119.93	0.00	119.93	5776.44	2888.22	15036.7	7426.09	0.00	0.00	0.00	0.025
4.00	-47.78	-1.04	0.00	-117.84	0.00	117.84	5757.00	2878.50	14865.8	7341.68	0.00	0.00	0.00	0.024
6.00	-47.13	-1.03	0.00	-115.76	0.00	115.76	5737.14	2868.57	14694.6	7257.12	0.00	0.00	0.00	0.024
8.00	-46.48	-1.03	0.00	-113.69	0.00	113.69	5716.84	2858.42	14523.1	7172.43	0.00	-0.01	0.00	0.024
10.00	-45.83	-1.02	0.00	-111.63	0.00	111.63	5696.12	2848.06	14351.4	7087.63	0.01	-0.01	0.00	0.024
12.00	-45.19	-1.01	0.00	-109.60	0.00	109.60	5674.97	2837.49	14179.5	7002.73	0.01	-0.01	0.00	0.024
14.00	-44.55	-1.00	0.00	-107.59	0.00	107.59	5653.40	2826.70	14007.4	6917.75	0.01	-0.01	0.00	0.023
16.00	-43.92	-0.99	0.00	-105.59	0.00	105.59	5631.39	2815.70	13835.2	6832.69	0.02	-0.01	0.00	0.023
18.00	-43.29	-0.97	0.00	-103.62	0.00	103.62	5608.96	2804.48	13662.8	6747.57	0.02	-0.01	0.00	0.023
20.00	-42.67	-0.96	0.00	-101.68	0.00	101.68	5586.10	2793.05	13490.4	6662.41	0.03	-0.01	0.00	0.023
22.00	-42.05	-0.95	0.00	-99.75	0.00	99.75	5562.81	2781.41	13317.9	6577.21	0.04	-0.02	0.00	0.023
24.00	-41.44	-0.94	0.00	-97.85	0.00	97.85	5539.10	2769.55	13145.3	6491.99	0.04	-0.02	0.00	0.023
26.00	-40.83	-0.93	0.00	-95.97	0.00	95.97	5514.96	2757.48	12972.7	6406.77	0.05	-0.02	0.00	0.022
28.00	-40.22	-0.92	0.00	-94.11	0.00	94.11	5490.39	2745.19	12800.2	6321.55	0.06	-0.02	0.00	0.022
30.00	-39.62	-0.90	0.00	-92.28	0.00	92.28	5465.39	2732.69	12627.7	6236.35	0.07	-0.02	0.00	0.022
32.00	-39.02	-0.89	0.00	-90.48	0.00	90.48	5439.96	2719.98	12455.2	6151.18	0.08	-0.02	0.00	0.022
34.00	-38.43	-0.88	0.00	-88.69	0.00	88.69	5414.11	2707.06	12282.9	6066.06	0.09	-0.02	0.00	0.022
35.50	-37.99	-0.87	0.00	-87.37	0.00	87.37	5394.44	2697.22	12153.7	6002.26	0.10	-0.03	0.00	0.022
36.00	-37.73	-0.87	0.00	-86.94	0.00	86.94	5387.83	2693.92	12110.6	5981.00	0.10	-0.03	0.00	0.022
38.00	-36.67	-0.84	0.00	-85.21	0.00	85.21	5361.12	2680.56	11938.5	5896.01	0.11	-0.03	0.00	0.021
40.00	-35.62	-0.82	0.00	-83.52	0.00	83.52	5333.99	2666.99	11766.6	5811.11	0.12	-0.03	0.00	0.021
42.00	-34.58	-0.79	0.00	-81.89	0.00	81.89	5306.43	2653.21	11594.9	5726.30	0.13	-0.03	0.00	0.021
43.00	-34.07	-0.78	0.00	-81.10	0.00	81.10	4823.70	2411.85	10677.7	5273.35	0.14	-0.03	0.00	0.022
44.00	-33.79	-0.78	0.00	-80.32	0.00	80.32	4812.47	2406.23	10602.6	5236.23	0.15	-0.03	0.00	0.022
46.00	-33.26	-0.76	0.00	-78.77	0.00	78.77	4789.68	2394.84	10452.2	5161.99	0.16	-0.03	0.00	0.022
48.00	-32.72	-0.75	0.00	-77.24	0.00	77.24	4766.46	2383.23	10301.9	5087.77	0.18	-0.04	0.00	0.022
50.00	-32.19	-0.74	0.00	-75.73	0.00	75.73	4742.82	2371.41	10151.7	5013.57	0.19	-0.04	0.00	0.022
52.00	-31.67	-0.73	0.00	-74.25	0.00	74.25	4718.75	2359.37	10001.6	4939.41	0.21	-0.04	0.00	0.022
54.00	-31.15	-0.72	0.00	-72.79	0.00	72.79	4694.25	2347.12	9851.55	4865.31	0.23	-0.04	0.00	0.022
56.00	-30.63	-0.71	0.00	-71.35	0.00	71.35	4669.32	2334.66	9701.64	4791.28	0.24	-0.04	0.00	0.021
58.00	-30.12	-0.70	0.00	-69.94	0.00	69.94	4643.97	2321.98	9551.90	4717.32	0.26	-0.04	0.00	0.021
60.00	-29.61	-0.69	0.00	-68.54	0.00	68.54	4618.19	2309.09	9402.34	4643.46	0.28	-0.05	0.00	0.021
62.00	-29.11	-0.67	0.00	-67.17	0.00	67.17	4591.98	2295.99	9253.00	4569.71	0.30	-0.05	0.00	0.021
64.00	-28.61	-0.66	0.00	-65.82	0.00	65.82	4565.34	2282.67	9103.90	4496.07	0.32	-0.05	0.00	0.021
66.00	-28.11	-0.65	0.00	-64.50	0.00	64.50	4538.28	2269.14	8955.07	4422.57	0.34	-0.05	0.00	0.021
68.00	-27.62	-0.64	0.00	-63.19	0.00	63.19	4510.78	2255.39	8806.54	4349.22	0.37	-0.05	0.00	0.021
70.00	-27.14	-0.63	0.00	-61.91	0.00	61.91	4482.87	2241.43	8658.34	4276.03	0.39	-0.06	0.00	0.021
72.00	-26.66	-0.62	0.00	-60.65	0.00	60.65	4454.52	2227.26	8510.48	4203.01	0.41	-0.06	0.00	0.020
74.00	-26.18	-0.61	0.00	-59.41	0.00	59.41	4425.74	2212.87	8363.00	4130.17	0.44	-0.06	0.00	0.020
74.50	-26.06	-0.61	0.00	-59.11	0.00	59.11	4418.48	2209.24	8326.19	4111.99	0.44	-0.06	0.00	0.020
76.00	-25.45	-0.59	0.00	-58.20	0.00	58.20	4396.54	2198.27	8215.92	4057.54	0.46	-0.06	0.00	0.020
78.00	-24.64	-0.57	0.00	-57.01	0.00	57.01	4366.91	2183.46	8069.28	3985.11	0.49	-0.06	0.00	0.020
80.00	-23.84	-0.56	0.00	-55.86	0.00	55.86	4336.86	2168.43	7923.09	3912.92	0.51	-0.07	0.00	0.020
81.00	-23.44	-0.55	0.00	-55.30	0.00	55.30	3502.12	1751.06	6488.82	3204.59	0.53	-0.07	0.00	0.024
82.00	-23.24	-0.55	0.00	-54.75	0.00	54.75	3492.03	1746.01	6433.63	3177.33	0.54	-0.07	0.00	0.024
84.00	-22.83	-0.54	0.00	-53.66	0.00	53.66	3471.52	1735.76	6323.29	3122.83	0.57	-0.07	0.00	0.024

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	-22.42	-0.53	0.00	-52.59	0.00	52.59	3450.59	1725.29	6213.03	3068.38	0.60	-0.07	0.024
88.00	-22.02	-0.53	0.00	-51.52	0.00	51.52	3429.23	1714.61	6102.90	3013.99	0.63	-0.07	0.024
90.00	-21.63	-0.52	0.00	-50.46	0.00	50.46	3407.44	1703.72	5992.90	2959.67	0.66	-0.08	0.023
92.00	-21.23	-0.52	0.00	-49.41	0.00	49.41	3385.23	1692.61	5883.07	2905.43	0.70	-0.08	0.023
94.00	-20.84	-0.52	0.00	-48.37	0.00	48.37	3362.58	1681.29	5773.43	2851.28	0.73	-0.08	0.023
96.00	-20.46	-0.52	0.00	-47.33	0.00	47.33	3339.51	1669.76	5664.02	2797.25	0.76	-0.08	0.023
98.00	-20.08	-0.52	0.00	-46.29	0.00	46.29	3316.01	1658.01	5554.85	2743.33	0.80	-0.09	0.023
100.00	-19.70	-0.52	0.00	-45.25	0.00	45.25	3292.09	1646.04	5445.96	2689.56	0.84	-0.09	0.023
102.00	-19.32	-0.52	0.00	-44.21	0.00	44.21	3267.73	1633.87	5337.38	2635.93	0.87	-0.09	0.023
104.00	-18.95	-0.52	0.00	-43.17	0.00	43.17	3242.95	1621.48	5229.12	2582.46	0.91	-0.09	0.023
106.00	-18.59	-0.52	0.00	-42.13	0.00	42.13	3217.75	1608.87	5121.21	2529.17	0.95	-0.10	0.022
108.00	-18.22	-0.52	0.00	-41.09	0.00	41.09	3192.11	1596.05	5013.69	2476.07	0.99	-0.10	0.022
110.00	-17.86	-0.52	0.00	-40.05	0.00	40.05	3166.05	1583.02	4906.58	2423.18	1.04	-0.10	0.022
112.00	-17.51	-0.52	0.00	-39.01	0.00	39.01	3139.56	1569.78	4799.90	2370.49	1.08	-0.10	0.022
114.00	-17.15	-0.52	0.00	-37.96	0.00	37.96	3112.64	1556.32	4693.69	2318.04	1.12	-0.11	0.022
116.00	-16.81	-0.52	0.00	-36.92	0.00	36.92	3085.29	1542.65	4587.97	2265.83	1.17	-0.11	0.022
118.00	-16.46	-0.52	0.00	-35.88	0.00	35.88	3057.52	1528.76	4482.76	2213.87	1.22	-0.11	0.022
118.75	-16.33	-0.52	0.00	-35.48	0.00	35.48	3046.99	1523.50	4443.45	2194.45	1.23	-0.11	0.022
120.00	-15.98	-0.52	0.00	-34.83	0.00	34.83	3029.32	1514.66	4378.10	2162.18	1.26	-0.12	0.021
122.00	-15.42	-0.52	0.00	-33.79	0.00	33.79	3000.69	1500.34	4274.01	2110.77	1.31	-0.12	0.021
124.00	-14.88	-0.52	0.00	-32.75	0.00	32.75	2338.57	1169.29	3354.90	1656.86	1.36	-0.12	0.026
126.00	-14.58	-0.52	0.00	-31.70	0.00	31.70	2319.39	1159.69	3278.90	1619.32	1.42	-0.12	0.026
128.00	-14.29	-0.52	0.00	-30.66	0.00	30.66	2299.78	1149.89	3203.10	1581.89	1.47	-0.13	0.026
130.00	-14.01	-0.52	0.00	-29.62	0.00	29.62	2279.74	1139.87	3127.54	1544.58	1.52	-0.13	0.025
132.00	-13.72	-0.52	0.00	-28.57	0.00	28.57	2259.27	1129.64	3052.24	1507.39	1.58	-0.14	0.025
134.00	-13.44	-0.52	0.00	-27.53	0.00	27.53	2238.38	1119.19	2977.23	1470.34	1.64	-0.14	0.025
136.00	-13.17	-0.52	0.00	-26.48	0.00	26.48	2217.06	1108.53	2902.53	1433.45	1.70	-0.14	0.024
138.00	-12.89	-0.52	0.00	-25.44	0.00	25.44	2195.31	1097.65	2828.17	1396.73	1.76	-0.15	0.024
140.00	-10.68	-0.52	0.00	-24.39	0.00	24.39	2173.13	1086.57	2754.18	1360.19	1.82	-0.15	0.023
142.00	-10.44	-0.52	0.00	-23.36	0.00	23.36	2150.53	1075.26	2680.59	1323.84	1.88	-0.15	0.022
144.00	-10.20	-0.52	0.00	-22.32	0.00	22.32	2127.50	1063.75	2607.41	1287.70	1.95	-0.16	0.022
146.00	-9.97	-0.52	0.00	-21.29	0.00	21.29	2104.04	1052.02	2534.68	1251.78	2.01	-0.16	0.022
148.00	-9.74	-0.52	0.00	-20.25	0.00	20.25	2080.15	1040.08	2462.43	1216.10	2.08	-0.16	0.021
150.00	-7.52	-0.51	0.00	-19.22	0.00	19.22	2055.84	1027.92	2390.68	1180.67	2.15	-0.17	0.020
152.00	-7.32	-0.51	0.00	-18.19	0.00	18.19	2031.10	1015.55	2319.45	1145.49	2.22	-0.17	0.019
154.00	-7.12	-0.51	0.00	-17.17	0.00	17.17	2005.93	1002.96	2248.79	1110.59	2.29	-0.18	0.019
154.75	-7.05	-0.51	0.00	-16.78	0.00	16.78	1996.38	998.19	2222.43	1097.58	2.32	-0.18	0.019
156.00	-6.86	-0.51	0.00	-16.14	0.00	16.14	1980.33	990.17	2178.70	1075.98	2.37	-0.18	0.018
158.00	-6.57	-0.51	0.00	-15.12	0.00	15.12	1946.84	973.42	2101.16	1037.68	2.44	-0.18	0.018
159.00	-6.43	-0.51	0.00	-14.61	0.00	14.61	1942.51	971.25	2101.78	1037.68	2.48	-0.18	0.035
160.00	-6.36	-0.51	0.00	-14.11	0.00	14.11	939.15	469.58	1018.30	502.90	2.52	-0.19	0.035
162.00	-6.24	-0.51	0.00	-13.09	0.00	13.09	932.13	466.07	991.20	489.52	2.60	-0.19	0.033
164.00	-6.12	-0.50	0.00	-12.08	0.00	12.08	924.68	462.34	963.95	476.06	2.68	-0.20	0.032
166.00	-5.99	-0.50	0.00	-11.07	0.00	11.07	916.80	458.40	936.57	462.54	2.77	-0.20	0.030
167.00	-3.34	-0.41	0.00	-10.57	0.00	10.57	912.70	456.35	922.84	455.76	2.81	-0.21	0.027
168.00	-3.29	-0.41	0.00	-10.16	0.00	10.16	908.49	454.25	909.10	448.97	2.85	-0.21	0.026
170.00	-3.20	-0.41	0.00	-9.34	0.00	9.34	899.76	449.88	881.55	435.36	2.94	-0.21	0.025
172.00	-3.11	-0.40	0.00	-8.53	0.00	8.53	890.60	445.30	853.96	421.74	3.03	-0.22	0.024
174.00	-3.02	-0.40	0.00	-7.72	0.00	7.72	881.01	440.50	826.35	408.10	3.12	-0.22	0.022
176.00	-2.93	-0.39	0.00	-6.93	0.00	6.93	870.99	435.50	798.75	394.47	3.22	-0.23	0.021
178.00	-2.84	-0.39	0.00	-6.14	0.00	6.14	860.55	430.27	771.18	380.86	3.31	-0.23	0.019
180.00	-2.76	-0.38	0.00	-5.36	0.00	5.36	849.68	424.84	743.68	367.28	3.41	-0.24	0.018
182.00	-2.68	-0.37	0.00	-4.60	0.00	4.60	838.38	419.19	716.27	353.74	3.51	-0.24	0.016
184.00	-2.60	-0.37	0.00	-3.85	0.00	3.85	826.65	413.33	688.97	340.26	3.61	-0.24	0.014
186.00	-2.52	-0.36	0.00	-3.12	0.00	3.12	814.50	407.25	661.81	326.85	3.71	-0.25	0.013
188.00	-2.44	-0.35	0.00	-2.39	0.00	2.39	801.91	400.96	634.83	313.52	3.82	-0.25	0.011
190.00	-2.37	-0.34	0.00	-1.69	0.00	1.69	788.90	394.45	608.04	300.29	3.92	-0.25	0.009

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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192.00	-2.29	-0.34	0.00	-1.00	0.00	1.00	775.47	387.73	581.48	287.17	4.03	-0.25	0.006
194.00	-2.22	-0.33	0.00	-0.33	0.00	0.33	761.60	380.80	555.16	274.17	4.13	-0.25	0.004
195.00	-0.04	-0.01	0.00	-0.01	0.00	0.01	754.51	377.26	542.11	267.73	4.19	-0.25	0.000
196.00	0.00	-0.01	0.00	0.00	0.00	0.00	747.31	373.66	529.12	261.31	4.24	-0.25	0.000

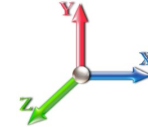
Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 29

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	0.85	7.442	8.19	305.43	1.000	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	7.442	8.19	303.04	1.000	0.000	2.00	11.000	11.00	90.0	0.0	650.0
4.00		1.00	0.85	7.442	8.19	300.64	1.000	0.000	2.00	10.913	10.91	89.3	0.0	644.9
6.00		1.00	0.85	7.442	8.19	298.24	1.000	0.000	2.00	10.826	10.83	88.6	0.0	639.7
8.00		1.00	0.85	7.442	8.19	295.84	1.000	0.000	2.00	10.740	10.74	87.9	0.0	634.5
10.00		1.00	0.85	7.442	8.19	293.44	1.000	0.000	2.00	10.653	10.65	87.2	0.0	629.4
12.00		1.00	0.85	7.442	8.19	291.05	1.000	0.000	2.00	10.566	10.57	86.5	0.0	624.2
14.00		1.00	0.85	7.442	8.19	288.65	1.000	0.000	2.00	10.479	10.48	85.8	0.0	619.1
16.00		1.00	0.86	7.534	8.29	288.01	1.000	0.000	2.00	10.393	10.39	86.1	0.0	613.9
18.00		1.00	0.88	7.723	8.50	289.16	1.000	0.000	2.00	10.306	10.31	87.6	0.0	608.7
20.00		1.00	0.90	7.896	8.69	289.92	1.000	0.000	2.00	10.219	10.22	88.8	0.0	603.6
22.00		1.00	0.92	8.056	8.86	290.35	1.000	0.000	2.00	10.133	10.13	89.8	0.0	598.4
24.00		1.00	0.94	8.205	9.03	290.50	1.000	0.000	2.00	10.046	10.05	90.7	0.0	593.3
26.00		1.00	0.95	8.345	9.18	290.42	1.000	0.000	2.00	9.959	9.96	91.4	0.0	588.1
28.00		1.00	0.97	8.476	9.32	290.14	1.000	0.000	2.00	9.873	9.87	92.0	0.0	582.9
30.00	Appurtenance(s)	1.00	0.98	8.600	9.46	289.67	1.000	0.000	2.00	9.786	9.79	92.6	0.0	577.8
32.00		1.00	1.00	8.717	9.59	289.05	1.000	0.000	2.00	9.699	9.70	93.0	0.0	572.6
34.00		1.00	1.01	8.829	9.71	288.29	1.000	0.000	2.00	9.613	9.61	93.4	0.0	567.5
35.50	Bot - Section 2	1.00	1.02	8.910	9.80	287.64	1.000	0.000	1.50	7.153	7.15	70.1	0.0	422.2
36.00		1.00	1.02	8.936	9.83	287.41	1.000	0.000	0.50	2.411	2.41	23.7	0.0	273.0
38.00		1.00	1.03	9.039	9.94	286.40	1.000	0.000	2.00	9.590	9.59	95.4	0.0	1085.8
40.00		1.00	1.04	9.137	10.05	285.30	1.000	0.000	2.00	9.504	9.50	95.5	0.0	1075.8
42.00		1.00	1.05	9.231	10.15	284.10	1.000	0.000	2.00	9.417	9.42	95.6	0.0	1065.8
43.00	Top - Section 1	1.00	1.06	9.277	10.20	283.46	1.000	0.000	1.00	4.676	4.68	47.7	0.0	529.2
44.00		1.00	1.06	9.322	10.25	287.48	1.000	0.000	1.00	4.654	4.65	47.7	0.0	256.5
46.00		1.00	1.07	9.410	10.35	286.13	1.000	0.000	2.00	9.243	9.24	95.7	0.0	509.4
48.00		1.00	1.08	9.494	10.44	284.71	1.000	0.000	2.00	9.157	9.16	95.6	0.0	504.6
50.00		1.00	1.09	9.576	10.53	283.22	1.000	0.000	2.00	9.070	9.07	95.5	0.0	499.8
52.00		1.00	1.10	9.656	10.62	281.66	1.000	0.000	2.00	8.983	8.98	95.4	0.0	495.0
54.00		1.00	1.11	9.733	10.71	280.04	1.000	0.000	2.00	8.897	8.90	95.2	0.0	490.1
56.00		1.00	1.12	9.807	10.79	278.36	1.000	0.000	2.00	8.810	8.81	95.0	0.0	485.3
58.00		1.00	1.13	9.880	10.87	276.62	1.000	0.000	2.00	8.723	8.72	94.8	0.0	480.5
60.00		1.00	1.14	9.951	10.95	274.84	1.000	0.000	2.00	8.637	8.64	94.5	0.0	475.7
62.00		1.00	1.14	10.020	11.02	273.01	1.000	0.000	2.00	8.550	8.55	94.2	0.0	470.9
64.00		1.00	1.15	10.087	11.10	271.13	1.000	0.000	2.00	8.463	8.46	93.9	0.0	466.1
66.00		1.00	1.16	10.153	11.17	269.21	1.000	0.000	2.00	8.377	8.38	93.5	0.0	461.2
68.00		1.00	1.17	10.217	11.24	267.25	1.000	0.000	2.00	8.290	8.29	93.2	0.0	456.4
70.00		1.00	1.17	10.279	11.31	265.25	1.000	0.000	2.00	8.203	8.20	92.8	0.0	451.6
72.00		1.00	1.18	10.340	11.37	263.21	1.000	0.000	2.00	8.117	8.12	92.3	0.0	446.8
74.00		1.00	1.19	10.400	11.44	261.13	1.000	0.000	2.00	8.030	8.03	91.9	0.0	442.0
74.50	Bot - Section 3	1.00	1.19	10.415	11.46	260.61	1.000	0.000	0.50	1.994	1.99	22.8	0.0	109.7
76.00		1.00	1.19	10.459	11.50	259.03	1.000	0.000	1.50	6.046	6.05	69.6	0.0	613.1
78.00		1.00	1.20	10.516	11.57	256.89	1.000	0.000	2.00	7.986	7.99	92.4	0.0	809.6
80.00		1.00	1.21	10.572	11.63	254.71	1.000	0.000	2.00	7.899	7.90	91.9	0.0	800.7
81.00	Top - Section 2	1.00	1.21	10.600	11.66	253.62	1.000	0.000	1.00	3.917	3.92	45.7	0.0	397.0
82.00		1.00	1.21	10.627	11.69	256.79	1.000	0.000	1.00	3.895	3.90	45.5	0.0	184.0
84.00		1.00	1.22	10.681	11.75	254.57	1.000	0.000	2.00	7.726	7.73	90.8	0.0	364.9

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	1.00	1.23	10.734	11.81	252.32	1.000	0.000	2.00	7.639	7.64	90.2	0.0	360.7
88.00	1.00	1.23	10.787	11.87	250.04	1.000	0.000	2.00	7.552	7.55	89.6	0.0	356.6
90.00	1.00	1.24	10.838	11.92	247.74	1.000	0.000	2.00	7.466	7.47	89.0	0.0	352.5
92.00	1.00	1.24	10.888	11.98	245.42	1.000	0.000	2.00	7.379	7.38	88.4	0.0	348.4
94.00	1.00	1.25	10.937	12.03	243.07	1.000	0.000	2.00	7.292	7.29	87.7	0.0	344.2
96.00	1.00	1.25	10.986	12.08	240.69	1.000	0.000	2.00	7.206	7.21	87.1	0.0	340.1
98.00	1.00	1.26	11.034	12.14	238.30	1.000	0.000	2.00	7.119	7.12	86.4	0.0	336.0
100.00	1.00	1.27	11.081	12.19	235.88	1.000	0.000	2.00	7.032	7.03	85.7	0.0	331.8
102.00	1.00	1.27	11.127	12.24	233.44	1.000	0.000	2.00	6.946	6.95	85.0	0.0	327.7
104.00	1.00	1.28	11.173	12.29	230.98	1.000	0.000	2.00	6.859	6.86	84.3	0.0	323.6
106.00	1.00	1.28	11.218	12.34	228.50	1.000	0.000	2.00	6.772	6.77	83.6	0.0	319.5
108.00	1.00	1.29	11.262	12.39	226.00	1.000	0.000	2.00	6.686	6.69	82.8	0.0	315.3
110.00	1.00	1.29	11.305	12.44	223.48	1.000	0.000	2.00	6.599	6.60	82.1	0.0	311.2
112.00	1.00	1.30	11.348	12.48	220.94	1.000	0.000	2.00	6.512	6.51	81.3	0.0	307.1
114.00	1.00	1.30	11.391	12.53	218.39	1.000	0.000	2.00	6.426	6.43	80.5	0.0	302.9
116.00	1.00	1.31	11.432	12.58	215.82	1.000	0.000	2.00	6.339	6.34	79.7	0.0	298.8
118.00	1.00	1.31	11.474	12.62	213.23	1.000	0.000	2.00	6.252	6.25	78.9	0.0	294.7
118.75 Bot - Section 4	1.00	1.31	11.489	12.64	212.25	1.000	0.000	0.75	2.322	2.32	29.3	0.0	109.4
120.00	1.00	1.32	11.514	12.67	210.62	1.000	0.000	1.25	3.911	3.91	49.5	0.0	335.0
122.00	1.00	1.32	11.554	12.71	208.00	1.000	0.000	2.00	6.187	6.19	78.6	0.0	529.8
124.00 Top - Section 3	1.00	1.32	11.594	12.75	205.37	1.000	0.000	2.00	6.100	6.10	77.8	0.0	522.3
126.00	1.00	1.33	11.633	12.80	206.45	1.000	0.000	2.00	6.013	6.01	76.9	0.0	236.5
128.00	1.00	1.33	11.672	12.84	203.79	1.000	0.000	2.00	5.927	5.93	76.1	0.0	233.1
130.00	1.00	1.34	11.710	12.88	201.11	1.000	0.000	2.00	5.840	5.84	75.2	0.0	229.6
132.00	1.00	1.34	11.748	12.92	198.42	1.000	0.000	2.00	5.753	5.75	74.3	0.0	226.2
134.00	1.00	1.35	11.785	12.96	195.72	1.000	0.000	2.00	5.667	5.67	73.5	0.0	222.8
136.00	1.00	1.35	11.822	13.00	193.00	1.000	0.000	2.00	5.580	5.58	72.6	0.0	219.3
138.00	1.00	1.35	11.858	13.04	190.27	1.000	0.000	2.00	5.493	5.49	71.7	0.0	215.9
140.00 Appurtenance(s)	1.00	1.36	11.894	13.08	187.53	1.000	0.000	2.00	5.406	5.41	70.7	0.0	212.4
142.00	1.00	1.36	11.930	13.12	184.77	1.000	0.000	2.00	5.320	5.32	69.8	0.0	209.0
144.00	1.00	1.37	11.965	13.16	182.01	1.000	0.000	2.00	5.233	5.23	68.9	0.0	205.6
146.00	1.00	1.37	12.000	13.20	179.23	1.000	0.000	2.00	5.146	5.15	67.9	0.0	202.1
148.00	1.00	1.37	12.034	13.24	176.43	1.000	0.000	2.00	5.060	5.06	67.0	0.0	198.7
150.00 Appurtenance(s)	1.00	1.38	12.068	13.27	173.63	1.000	0.000	2.00	4.973	4.97	66.0	0.0	195.2
152.00	1.00	1.38	12.102	13.31	170.82	1.000	0.000	2.00	4.886	4.89	65.0	0.0	191.8
154.00	1.00	1.39	12.135	13.35	167.99	1.000	0.000	2.00	4.800	4.80	64.1	0.0	188.4
154.75 Bot - Section 5	1.00	1.39	12.148	13.36	166.93	1.000	0.000	0.75	1.778	1.78	23.8	0.0	69.7
156.00	1.00	1.39	12.168	13.39	165.15	1.000	0.000	1.25	2.976	2.98	39.8	0.0	185.5
158.00	1.00	1.39	12.201	13.42	162.30	1.000	0.000	2.00	4.691	4.69	63.0	0.0	292.4
159.00 Top - Section 4	1.00	1.40	12.217	13.44	160.87	1.000	0.000	1.00	2.313	2.31	31.1	0.0	144.1
160.00	1.00	1.40	12.233	13.46	161.74	1.000	0.000	1.00	2.291	2.29	30.8	0.0	54.2
162.00	1.00	1.40	12.265	13.49	158.87	1.000	0.000	2.00	4.518	4.52	61.0	0.0	106.8
164.00	1.00	1.40	12.297	13.53	156.00	1.000	0.000	2.00	4.431	4.43	59.9	0.0	104.7
166.00	1.00	1.41	12.328	13.56	153.11	1.000	0.000	2.00	4.344	4.34	58.9	0.0	102.7
167.00 Appurtenance(s)	1.00	1.41	12.344	13.58	151.66	1.000	0.000	1.00	2.140	2.14	29.1	0.0	50.6
168.00	1.00	1.41	12.360	13.60	150.21	1.000	0.000	1.00	2.118	2.12	28.8	0.0	50.0
170.00	1.00	1.42	12.390	13.63	147.31	1.000	0.000	2.00	4.171	4.17	56.8	0.0	98.6
172.00	1.00	1.42	12.421	13.66	144.39	1.000	0.000	2.00	4.084	4.08	55.8	0.0	96.5
174.00	1.00	1.42	12.451	13.70	141.46	1.000	0.000	2.00	3.997	4.00	54.8	0.0	94.4
176.00	1.00	1.43	12.481	13.73	138.53	1.000	0.000	2.00	3.911	3.91	53.7	0.0	92.4
178.00	1.00	1.43	12.511	13.76	135.58	1.000	0.000	2.00	3.824	3.82	52.6	0.0	90.3
180.00	1.00	1.43	12.540	13.79	132.63	1.000	0.000	2.00	3.737	3.74	51.6	0.0	88.2
182.00	1.00	1.44	12.570	13.83	129.67	1.000	0.000	2.00	3.651	3.65	50.5	0.0	86.2
184.00	1.00	1.44	12.599	13.86	126.70	1.000	0.000	2.00	3.564	3.56	49.4	0.0	84.1
186.00	1.00	1.44	12.627	13.89	123.72	1.000	0.000	2.00	3.477	3.48	48.3	0.0	82.0
188.00	1.00	1.45	12.656	13.92	120.73	1.000	0.000	2.00	3.391	3.39	47.2	0.0	80.0
190.00	1.00	1.45	12.684	13.95	117.74	1.000	0.000	2.00	3.304	3.30	46.1	0.0	77.9

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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192.00	1.00	1.45	12.712	13.98	114.73	1.000	0.000	2.00	3.217	3.22	45.0	0.0	75.8
194.00	1.00	1.46	12.740	14.01	111.72	1.000	0.000	2.00	3.131	3.13	43.9	0.0	73.8
195.00 Appurtenance(s)	1.00	1.46	12.753	14.03	110.21	1.000	0.000	1.00	1.533	1.53	21.5	0.0	36.1
196.00 Appurtenance(s)	1.00	1.46	12.767	14.04	108.70	1.000	0.000	1.00	1.511	1.51	21.2	0.0	35.6
Totals:								196.00			7,730.6		38,078.0

Discrete Appurtenance Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
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 29

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	196.00	6' Lightning rod	1	12.767	14.044	1.00	1.00	0.38	6.50	0.000	0.000	5.34	0.00	0.00	
2	195.00	TD-RRH8x20-25	3	12.753	14.029	0.60	0.90	7.33	210.00	0.000	0.000	102.78	0.00	0.00	
3	195.00	APXVSPP18-C-A20	3	12.753	14.029	0.75	0.90	17.97	171.00	0.000	0.000	252.14	0.00	0.00	
4	195.00	1900MHz RRH	3	12.753	14.029	0.60	0.90	6.87	132.00	0.000	0.000	96.44	0.00	0.00	
5	195.00	APXVTM14-C-120	3	12.753	14.029	0.71	0.90	13.52	168.00	0.000	0.000	189.72	0.00	0.00	
6	195.00	800MHz Filter	3	12.753	14.029	0.45	0.90	1.05	26.40	0.000	0.000	14.77	0.00	0.00	
7	195.00	ACU-A20-N	4	12.753	14.029	0.45	0.90	0.25	4.00	0.000	0.000	3.54	0.00	0.00	
8	195.00	Low Profile Platform	1	12.753	14.029	1.00	1.00	22.00	1500.00	0.000	0.000	308.63	0.00	0.00	
9	195.00	800MHz RRH	3	12.753	14.029	0.60	0.90	4.78	178.50	0.000	0.000	67.00	0.00	0.00	
10	167.00	AIR 21, 1.3M, B4A B2P	3	12.344	13.578	0.62	0.75	11.32	270.90	0.000	0.000	153.68	0.00	0.00	
11	167.00	LNx-6515DS-A1M	3	12.344	13.578	0.63	0.75	21.58	150.90	0.000	0.000	292.96	0.00	0.00	
12	167.00	AIR 21, 1.3M, B2A B4P	3	12.344	13.578	0.62	0.75	11.32	274.50	0.000	0.000	153.68	0.00	0.00	
13	167.00	S11B12	3	12.344	13.578	0.38	0.75	3.18	153.00	0.000	0.000	43.23	0.00	0.00	
14	167.00	KRY 112 144/1	3	12.344	13.578	0.38	0.75	0.46	33.00	0.000	0.000	6.26	0.00	0.00	
15	167.00	Platform w/ Hand Rails	1	12.344	13.578	1.00	1.00	40.00	2000.00	0.000	0.000	543.14	0.00	0.00	
16	150.00	Low Profile Platform	1	12.068	13.275	1.00	1.00	22.00	1500.00	0.000	0.000	292.05	0.00	0.00	
17	150.00	DC6-48-60-18-8F	1	12.068	13.275	0.80	0.80	1.18	31.80	0.000	0.000	15.61	0.00	0.00	
18	150.00	LGP13519	6	12.068	13.275	0.40	0.80	0.82	31.80	0.000	0.000	10.83	0.00	0.00	
19	150.00	LGP21401	6	12.068	13.275	0.40	0.80	3.10	84.60	0.000	0.000	41.10	0.00	0.00	
20	150.00	AM-X-CD-14-65-00T-RET	1	12.068	13.275	0.60	0.80	3.00	36.40	0.000	0.000	39.82	0.00	0.00	
21	150.00	P65-17-XLH-RR	2	12.068	13.275	0.60	0.80	13.73	118.00	0.000	0.000	182.24	0.00	0.00	
22	150.00	7700.00	6	12.068	13.275	0.63	0.80	6.56	96.00	0.000	0.000	87.09	0.00	0.00	
23	150.00	RRUS 11	6	12.068	13.275	0.54	0.80	8.10	304.20	0.000	0.000	107.58	0.00	0.00	
24	140.00	LNx-6414DS-A1M	3	11.894	13.084	0.64	0.80	15.53	99.30	0.000	0.000	203.22	0.00	0.00	
25	140.00	LNx-8513DS-VTM	2	11.894	13.084	0.66	0.80	10.85	52.60	0.000	0.000	141.95	0.00	0.00	
26	140.00	APL866513	2	11.894	13.084	0.74	0.80	6.03	31.40	0.000	0.000	78.85	0.00	0.00	
27	140.00	HBXX-6517DS-A2M	6	11.894	13.084	0.66	0.80	34.06	244.80	0.000	0.000	445.67	0.00	0.00	
28	140.00	DB-T1-6Z-8AB-0Z	1	11.894	13.084	0.40	0.80	1.92	18.90	0.000	0.000	25.12	0.00	0.00	
29	140.00	RRH2x40 700	3	11.894	13.084	0.54	0.80	3.99	150.00	0.000	0.000	52.18	0.00	0.00	
30	140.00	RRH2x60-2100	3	11.894	13.084	0.54	0.80	2.43	58.50	0.000	0.000	31.77	0.00	0.00	
31	140.00	Low Profile Platform	1	11.894	13.084	0.80	0.80	17.60	1500.00	0.000	0.000	230.27	0.00	0.00	
32	30.00	GPS	1	8.600	9.460	1.00	1.00	1.00	10.00	0.000	0.000	9.46	0.00	0.00	
Totals:									9,647.00						4,228.11

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
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 29

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
2.00		90.04	738.50	0.00	0.00
4.00		89.33	733.34	0.00	0.00
6.00		88.62	728.18	0.00	0.00
8.00		87.92	723.02	0.00	0.00
10.00		87.21	717.86	0.00	0.00
12.00		86.50	712.70	0.00	0.00
14.00		85.79	707.54	0.00	0.00
16.00		86.13	702.38	0.00	0.00
18.00		87.55	697.22	0.00	0.00
20.00		88.76	692.05	0.00	0.00
22.00		89.79	686.89	0.00	0.00
24.00		90.67	681.73	0.00	0.00
26.00		91.42	676.57	0.00	0.00
28.00		92.05	671.41	0.00	0.00
30.00	(1) attachments	102.03	676.25	0.00	0.00
32.00		93.01	661.09	0.00	0.00
34.00		93.36	655.93	0.00	0.00
35.50		70.10	488.56	0.00	0.00
36.00		23.70	295.13	0.00	0.00
38.00		95.35	1174.28	0.00	0.00
40.00		95.51	1164.31	0.00	0.00
42.00		95.62	1154.33	0.00	0.00
43.00		47.72	573.42	0.00	0.00
44.00		47.73	300.75	0.00	0.00
46.00		95.67	597.89	0.00	0.00
48.00		95.63	593.07	0.00	0.00
50.00		95.54	588.26	0.00	0.00
52.00		95.41	583.44	0.00	0.00
54.00		95.25	578.62	0.00	0.00
56.00		95.04	573.81	0.00	0.00
58.00		94.81	568.99	0.00	0.00
60.00		94.54	564.17	0.00	0.00
62.00		94.24	559.36	0.00	0.00
64.00		93.91	554.54	0.00	0.00
66.00		93.55	549.72	0.00	0.00
68.00		93.16	544.91	0.00	0.00
70.00		92.75	540.09	0.00	0.00
72.00		92.32	535.27	0.00	0.00
74.00		91.86	530.46	0.00	0.00
74.50		22.84	131.86	0.00	0.00
76.00		69.56	679.43	0.00	0.00
78.00		92.38	898.08	0.00	0.00
80.00		91.86	889.13	0.00	0.00
81.00		45.67	441.21	0.00	0.00
82.00		45.54	228.22	0.00	0.00
84.00		90.77	453.35	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	90.20	449.22	0.00	0.00
88.00	89.61	445.09	0.00	0.00
90.00	89.00	440.96	0.00	0.00
92.00	88.38	436.84	0.00	0.00
94.00	87.74	432.71	0.00	0.00
96.00	87.08	428.58	0.00	0.00
98.00	86.40	424.45	0.00	0.00
100.00	85.72	420.32	0.00	0.00
102.00	85.01	416.19	0.00	0.00
104.00	84.30	412.06	0.00	0.00
106.00	83.56	407.94	0.00	0.00
108.00	82.82	403.81	0.00	0.00
110.00	82.06	399.68	0.00	0.00
112.00	81.29	395.55	0.00	0.00
114.00	80.51	391.42	0.00	0.00
116.00	79.72	387.29	0.00	0.00
118.00	78.91	383.16	0.00	0.00
118.75	29.35	142.62	0.00	0.00
120.00	49.53	390.28	0.00	0.00
122.00	78.63	618.31	0.00	0.00
124.00	77.80	610.74	0.00	0.00
126.00	76.95	325.00	0.00	0.00
128.00	76.09	321.56	0.00	0.00
130.00	75.22	318.12	0.00	0.00
132.00	74.35	314.68	0.00	0.00
134.00	73.46	311.23	0.00	0.00
136.00	72.56	307.79	0.00	0.00
138.00	71.65	304.35	0.00	0.00
140.00	(21) attachments	1279.76	2456.41	0.00
142.00		69.81	268.11	0.00
144.00		68.87	264.67	0.00
146.00		67.93	261.23	0.00
148.00		66.98	257.79	0.00
150.00	(29) attachments	842.34	2457.15	0.00
152.00		65.05	224.23	0.00
154.00		64.07	220.79	0.00
154.75		23.75	81.91	0.00
156.00		39.83	205.82	0.00
158.00		62.96	324.85	0.00
159.00		31.08	160.36	0.00
160.00		30.83	70.40	0.00
162.00		60.95	139.25	0.00
164.00		59.94	137.18	0.00
166.00		58.91	135.12	0.00
167.00	(16) attachments	1222.01	2949.09	0.00
168.00		28.79	52.69	0.00
170.00		56.85	103.83	0.00
172.00		55.80	101.77	0.00
174.00		54.75	99.70	0.00
176.00		53.69	97.64	0.00
178.00		52.63	95.57	0.00
180.00		51.56	93.51	0.00
182.00		50.48	91.44	0.00
184.00		49.39	89.38	0.00
186.00		48.30	87.32	0.00
188.00		47.20	85.25	0.00
190.00		46.10	83.19	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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192.00		44.99	81.12	0.00	0.00
194.00		43.87	79.06	0.00	0.00
195.00	(23) attachments	1056.51	2428.66	0.00	0.00
196.00	(1) attachments	26.56	42.10	0.00	0.00
	Totals:	11,958.68	54,563.87	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
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 29

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)
2.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	24.96
2.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	4.40
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	24.96
4.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	4.40
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	24.96
6.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	4.40
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	24.96
8.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	4.40
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	24.96
10.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	4.40
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	24.96
12.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	4.40
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	24.96
14.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	4.40
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.534	0.00	24.96
16.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.534	0.00	4.40
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.723	0.00	24.96
18.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.723	0.00	4.40
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	24.96
20.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	4.40
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.056	0.00	24.96
22.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.056	0.00	4.40
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.205	0.00	24.96
24.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.205	0.00	4.40
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.345	0.00	24.96
26.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.345	0.00	4.40
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.476	0.00	24.96
28.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.476	0.00	4.40
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	24.96
30.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	4.40
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.717	0.00	24.96
32.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.717	0.00	4.40
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.829	0.00	24.96
34.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.829	0.00	4.40
35.50	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	8.910	0.00	18.72
35.50	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	8.910	0.00	3.30
36.00	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	8.936	0.00	6.24
36.00	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	8.936	0.00	1.10
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.039	0.00	24.96
38.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.039	0.00	4.40
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	24.96
40.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	4.40
42.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.231	0.00	24.96
42.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.231	0.00	4.40
43.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.277	0.00	12.48
43.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.277	0.00	2.20
44.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.322	0.00	12.48

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
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 29

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)
44.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.322	0.00	2.20
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.410	0.00	24.96
46.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.410	0.00	4.40
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.494	0.00	24.96
48.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.494	0.00	4.40
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	24.96
50.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	4.40
52.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.656	0.00	24.96
52.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.656	0.00	4.40
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.733	0.00	24.96
54.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.733	0.00	4.40
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.807	0.00	24.96
56.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.807	0.00	4.40
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.880	0.00	24.96
58.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.880	0.00	4.40
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	24.96
60.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	4.40
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.020	0.00	24.96
62.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.020	0.00	4.40
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.087	0.00	24.96
64.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.087	0.00	4.40
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.153	0.00	24.96
66.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.153	0.00	4.40
68.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.217	0.00	24.96
68.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.217	0.00	4.40
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	24.96
70.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	4.40
72.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.340	0.00	24.96
72.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.340	0.00	4.40
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.400	0.00	24.96
74.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.400	0.00	4.40
74.50	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	10.415	0.00	6.24
74.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	10.415	0.00	1.10
76.00	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	10.459	0.00	18.72
76.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	10.459	0.00	3.30
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.516	0.00	24.96
78.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.516	0.00	4.40
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	24.96
80.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	4.40
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.600	0.00	12.48
81.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.600	0.00	2.20
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.627	0.00	12.48
82.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.627	0.00	2.20
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.681	0.00	24.96
84.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.681	0.00	4.40
86.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.734	0.00	24.96
86.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.734	0.00	4.40

Linear Appurtenance Segment Forces (Factored)

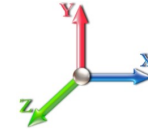
Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 29

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)
88.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.787	0.00	24.96
88.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.787	0.00	4.40
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	24.96
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	4.40
92.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.888	0.00	24.96
92.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.888	0.00	4.40
94.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.937	0.00	24.96
94.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.937	0.00	4.40
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.986	0.00	24.96
96.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.986	0.00	4.40
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.034	0.00	24.96
98.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.034	0.00	4.40
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	24.96
100.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	4.40
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.127	0.00	24.96
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.127	0.00	4.40
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.173	0.00	24.96
104.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.173	0.00	4.40
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.218	0.00	24.96
106.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.218	0.00	4.40
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.262	0.00	24.96
108.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.262	0.00	4.40
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.305	0.00	24.96
110.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.305	0.00	4.40
112.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.348	0.00	24.96
112.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.348	0.00	4.40
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.391	0.00	24.96
114.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.391	0.00	4.40
116.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.432	0.00	24.96
116.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.432	0.00	4.40
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.474	0.00	24.96
118.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.474	0.00	4.40
118.75	1 5/8" Coax	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	11.489	0.00	9.36
118.75	1 5/8" Hybrid	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	11.489	0.00	1.65
120.00	1 5/8" Coax	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	11.514	0.00	15.60
120.00	1 5/8" Hybrid	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	11.514	0.00	2.75
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.554	0.00	24.96
122.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.554	0.00	4.40
124.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.594	0.00	24.96
124.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.594	0.00	4.40
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.633	0.00	24.96
126.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.633	0.00	4.40
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.672	0.00	24.96
128.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.672	0.00	4.40
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.710	0.00	24.96
130.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.710	0.00	4.40
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.748	0.00	24.96

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II

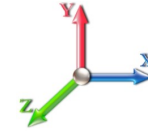


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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 29

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)
132.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.748	0.00	4.40
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.785	0.00	24.96
134.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.785	0.00	4.40
136.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.822	0.00	24.96
136.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.822	0.00	4.40
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.858	0.00	24.96
138.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.858	0.00	4.40
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.894	0.00	24.96
140.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.894	0.00	4.40
Totals:											0.0	2,055.2

Calculated Forces

Structure: CT00595-S-SBA
Site Name: Stonington East
Height: 196.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G 10/26/2017
Exposure: C
Crest Height: 0.00
Site Class: B - Competent Rock
Struct Class: II

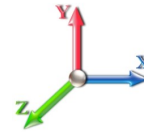


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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 29

Dead Load Factor 1.00
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	-54.56	-11.96	0.00	-1424.1	0.00	1424.18	5795.46	2897.73	15207.4	7510.36	0.00	0.000	0.000	0.199
2.00	-53.82	-11.89	0.00	-1400.2	0.00	1400.25	5776.44	2888.22	15036.7	7426.09	0.00	-0.016	0.000	0.198
4.00	-53.08	-11.82	0.00	-1376.4	0.00	1376.47	5757.00	2878.50	14865.8	7341.68	0.01	-0.033	0.000	0.197
6.00	-52.35	-11.74	0.00	-1352.8	0.00	1352.84	5737.14	2868.57	14694.6	7257.12	0.03	-0.049	0.000	0.196
8.00	-51.63	-11.67	0.00	-1329.3	0.00	1329.36	5716.84	2858.42	14523.1	7172.43	0.06	-0.066	0.000	0.194
10.00	-50.90	-11.59	0.00	-1306.0	0.00	1306.02	5696.12	2848.06	14351.4	7087.63	0.09	-0.082	0.000	0.193
12.00	-50.19	-11.52	0.00	-1282.8	0.00	1282.83	5674.97	2837.49	14179.5	7002.73	0.13	-0.099	0.000	0.192
14.00	-49.48	-11.45	0.00	-1259.7	0.00	1259.79	5653.40	2826.70	14007.4	6917.75	0.17	-0.116	0.000	0.191
16.00	-48.77	-11.38	0.00	-1236.8	0.00	1236.89	5631.39	2815.70	13835.2	6832.69	0.22	-0.133	0.000	0.190
18.00	-48.07	-11.30	0.00	-1214.1	0.00	1214.14	5608.96	2804.48	13662.8	6747.57	0.28	-0.150	0.000	0.189
20.00	-47.38	-11.22	0.00	-1191.5	0.00	1191.54	5586.10	2793.05	13490.4	6662.41	0.35	-0.168	0.000	0.187
22.00	-46.69	-11.15	0.00	-1169.0	0.00	1169.09	5562.81	2781.41	13317.9	6577.21	0.42	-0.185	0.000	0.186
24.00	-46.00	-11.07	0.00	-1146.8	0.00	1146.80	5539.10	2769.55	13145.3	6491.99	0.51	-0.203	0.000	0.185
26.00	-45.32	-10.99	0.00	-1124.6	0.00	1124.66	5514.96	2757.48	12972.7	6406.77	0.59	-0.220	0.000	0.184
28.00	-44.65	-10.91	0.00	-1102.6	0.00	1102.69	5490.39	2745.19	12800.2	6321.55	0.69	-0.238	0.000	0.183
30.00	-43.97	-10.82	0.00	-1080.8	0.00	1080.87	5465.39	2732.69	12627.7	6236.35	0.79	-0.256	0.000	0.181
32.00	-43.30	-10.73	0.00	-1059.2	0.00	1059.24	5439.96	2719.98	12455.2	6151.18	0.91	-0.274	0.000	0.180
34.00	-42.65	-10.65	0.00	-1037.7	0.00	1037.77	5414.11	2707.06	12282.9	6066.06	1.02	-0.292	0.000	0.179
35.50	-42.16	-10.58	0.00	-1021.8	0.00	1021.80	5394.44	2697.22	12153.7	6002.26	1.12	-0.306	0.000	0.178
36.00	-41.86	-10.57	0.00	-1016.5	0.00	1016.51	5387.83	2693.92	12110.6	5981.00	1.15	-0.310	0.000	0.178
38.00	-40.68	-10.48	0.00	-995.38	0.00	995.38	5361.12	2680.56	11938.5	5896.01	1.28	-0.329	0.000	0.176
40.00	-39.51	-10.39	0.00	-974.42	0.00	974.42	5333.99	2666.99	11766.6	5811.11	1.43	-0.347	0.000	0.175
42.00	-38.36	-10.29	0.00	-953.65	0.00	953.65	5306.43	2653.21	11594.9	5726.30	1.58	-0.366	0.000	0.174
43.00	-37.78	-10.25	0.00	-943.35	0.00	943.35	4823.70	2411.85	10677.7	5273.35	1.65	-0.375	0.000	0.187
44.00	-37.48	-10.21	0.00	-933.10	0.00	933.10	4812.47	2406.23	10602.6	5236.23	1.73	-0.385	0.000	0.186
46.00	-36.88	-10.12	0.00	-912.69	0.00	912.69	4789.68	2394.84	10452.2	5161.99	1.90	-0.404	0.000	0.185
48.00	-36.28	-10.03	0.00	-892.45	0.00	892.45	4766.46	2383.23	10301.9	5087.77	2.07	-0.423	0.000	0.183
50.00	-35.69	-9.95	0.00	-872.38	0.00	872.38	4742.82	2371.41	10151.7	5013.57	2.25	-0.443	0.000	0.182
52.00	-35.11	-9.86	0.00	-852.49	0.00	852.49	4718.75	2359.37	10001.6	4939.41	2.44	-0.462	0.000	0.180
54.00	-34.53	-9.77	0.00	-832.77	0.00	832.77	4694.25	2347.12	9851.55	4865.31	2.64	-0.482	0.000	0.179
56.00	-33.95	-9.68	0.00	-813.23	0.00	813.23	4669.32	2334.66	9701.64	4791.28	2.85	-0.502	0.000	0.177
58.00	-33.38	-9.59	0.00	-793.87	0.00	793.87	4643.97	2321.98	9551.90	4717.32	3.06	-0.522	0.000	0.175
60.00	-32.81	-9.51	0.00	-774.68	0.00	774.68	4618.19	2309.09	9402.34	4643.46	3.28	-0.542	0.000	0.174
62.00	-32.25	-9.42	0.00	-755.67	0.00	755.67	4591.98	2295.99	9253.00	4569.71	3.52	-0.562	0.000	0.172
64.00	-31.69	-9.33	0.00	-736.84	0.00	736.84	4565.34	2282.67	9103.90	4496.07	3.76	-0.582	0.000	0.171
66.00	-31.14	-9.24	0.00	-718.18	0.00	718.18	4538.28	2269.14	8955.07	4422.57	4.00	-0.602	0.000	0.169
68.00	-30.59	-9.15	0.00	-699.70	0.00	699.70	4510.78	2255.39	8806.54	4349.22	4.26	-0.623	0.000	0.168
70.00	-30.05	-9.06	0.00	-681.40	0.00	681.40	4482.87	2241.43	8658.34	4276.03	4.53	-0.643	0.000	0.166
72.00	-29.51	-8.98	0.00	-663.27	0.00	663.27	4454.52	2227.26	8510.48	4203.01	4.80	-0.664	0.000	0.164
74.00	-28.98	-8.89	0.00	-645.31	0.00	645.31	4425.74	2212.87	8363.00	4130.17	5.08	-0.685	0.000	0.163
74.50	-28.85	-8.87	0.00	-640.87	0.00	640.87	4418.48	2209.24	8326.19	4111.99	5.16	-0.690	0.000	0.162
76.00	-28.17	-8.80	0.00	-627.57	0.00	627.57	4396.54	2198.27	8215.92	4057.54	5.37	-0.706	0.000	0.161
78.00	-27.27	-8.70	0.00	-609.98	0.00	609.98	4366.91	2183.46	8069.28	3985.11	5.68	-0.727	0.000	0.159
80.00	-26.38	-8.61	0.00	-592.57	0.00	592.57	4336.86	2168.43	7923.09	3912.92	5.98	-0.748	0.000	0.158
81.00	-25.94	-8.56	0.00	-583.96	0.00	583.96	3502.12	1751.06	6488.82	3204.59	6.14	-0.759	0.000	0.190
82.00	-25.71	-8.52	0.00	-575.40	0.00	575.40	3492.03	1746.01	6433.63	3177.33	6.30	-0.769	0.000	0.188
84.00	-25.25	-8.43	0.00	-558.36	0.00	558.36	3471.52	1735.76	6323.29	3122.83	6.63	-0.793	0.000	0.186
86.00	-24.80	-8.35	0.00	-541.49	0.00	541.49	3450.59	1725.29	6213.03	3068.38	6.97	-0.816	0.000	0.184

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II
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88.00	-24.35	-8.26	0.00	-524.80	0.00	524.80	3429.23	1714.61	6102.90	3013.99	7.31	-0.840	0.000	0.181
90.00	-23.91	-8.18	0.00	-508.28	0.00	508.28	3407.44	1703.72	5992.90	2959.67	7.67	-0.864	0.000	0.179
92.00	-23.47	-8.09	0.00	-491.93	0.00	491.93	3385.23	1692.61	5883.07	2905.43	8.04	-0.888	0.000	0.176
94.00	-23.04	-8.01	0.00	-475.74	0.00	475.74	3362.58	1681.29	5773.43	2851.28	8.42	-0.912	0.000	0.174
96.00	-22.61	-7.92	0.00	-459.73	0.00	459.73	3339.51	1669.76	5664.02	2797.25	8.80	-0.935	0.000	0.171
98.00	-22.18	-7.84	0.00	-443.89	0.00	443.89	3316.01	1658.01	5554.85	2743.33	9.20	-0.959	0.000	0.169
100.00	-21.76	-7.75	0.00	-428.22	0.00	428.22	3292.09	1646.04	5445.96	2689.56	9.61	-0.983	0.000	0.166
102.00	-21.34	-7.67	0.00	-412.71	0.00	412.71	3267.73	1633.87	5337.38	2635.93	10.02	-1.007	0.000	0.163
104.00	-20.93	-7.59	0.00	-397.37	0.00	397.37	3242.95	1621.48	5229.12	2582.46	10.45	-1.031	0.000	0.160
106.00	-20.52	-7.51	0.00	-382.19	0.00	382.19	3217.75	1608.87	5121.21	2529.17	10.89	-1.055	0.000	0.158
108.00	-20.11	-7.42	0.00	-367.19	0.00	367.19	3192.11	1596.05	5013.69	2476.07	11.34	-1.079	0.000	0.155
110.00	-19.71	-7.34	0.00	-352.34	0.00	352.34	3166.05	1583.02	4906.58	2423.18	11.79	-1.103	0.000	0.152
112.00	-19.31	-7.26	0.00	-337.66	0.00	337.66	3139.56	1569.78	4799.90	2370.49	12.26	-1.127	0.000	0.149
114.00	-18.92	-7.18	0.00	-323.13	0.00	323.13	3112.64	1556.32	4693.69	2318.04	12.74	-1.151	0.000	0.145
116.00	-18.53	-7.10	0.00	-308.77	0.00	308.77	3085.29	1542.65	4587.97	2265.83	13.23	-1.175	0.000	0.142
118.00	-18.15	-7.02	0.00	-294.57	0.00	294.57	3057.52	1528.76	4482.76	2213.87	13.72	-1.199	0.000	0.139
118.75	-18.00	-6.99	0.00	-289.31	0.00	289.31	3046.99	1523.50	4443.45	2194.45	13.91	-1.208	0.000	0.138
120.00	-17.61	-6.94	0.00	-280.57	0.00	280.57	3029.32	1514.66	4378.10	2162.18	14.23	-1.222	0.000	0.136
122.00	-16.99	-6.85	0.00	-266.69	0.00	266.69	3000.69	1500.34	4274.01	2110.77	14.75	-1.246	0.000	0.132
124.00	-16.38	-6.77	0.00	-252.99	0.00	252.99	2338.57	1169.29	3354.90	1656.86	15.27	-1.269	0.000	0.160
126.00	-16.06	-6.69	0.00	-239.45	0.00	239.45	2319.39	1159.69	3278.90	1619.32	15.81	-1.292	0.000	0.155
128.00	-15.73	-6.62	0.00	-226.07	0.00	226.07	2299.78	1149.89	3203.10	1581.89	16.36	-1.317	0.000	0.150
130.00	-15.41	-6.54	0.00	-212.84	0.00	212.84	2279.74	1139.87	3127.54	1544.58	16.92	-1.343	0.000	0.145
132.00	-15.10	-6.46	0.00	-199.76	0.00	199.76	2259.27	1129.64	3052.24	1507.39	17.48	-1.367	0.000	0.139
134.00	-14.79	-6.39	0.00	-186.83	0.00	186.83	2238.38	1119.19	2977.23	1470.34	18.06	-1.392	0.000	0.134
136.00	-14.48	-6.32	0.00	-174.05	0.00	174.05	2217.06	1108.53	2902.53	1433.45	18.65	-1.416	0.000	0.128
138.00	-14.17	-6.24	0.00	-161.42	0.00	161.42	2195.31	1097.65	2828.17	1396.73	19.25	-1.439	0.000	0.122
140.00	-11.75	-4.90	0.00	-148.94	0.00	148.94	2173.13	1086.57	2754.18	1360.19	19.86	-1.461	0.000	0.115
142.00	-11.48	-4.83	0.00	-139.13	0.00	139.13	2150.53	1075.26	2680.59	1323.84	20.47	-1.483	0.000	0.110
144.00	-11.22	-4.76	0.00	-129.47	0.00	129.47	2127.50	1063.75	2607.41	1287.70	21.10	-1.505	0.000	0.106
146.00	-10.95	-4.69	0.00	-119.94	0.00	119.94	2104.04	1052.02	2534.68	1251.78	21.73	-1.525	0.000	0.101
148.00	-10.70	-4.62	0.00	-110.56	0.00	110.56	2080.15	1040.08	2462.43	1216.10	22.38	-1.546	0.000	0.096
150.00	-8.26	-3.71	0.00	-101.33	0.00	101.33	2055.84	1027.92	2390.68	1180.67	23.03	-1.566	0.000	0.090
152.00	-8.04	-3.65	0.00	-93.90	0.00	93.90	2031.10	1015.55	2319.45	1145.49	23.69	-1.585	0.000	0.086
154.00	-7.82	-3.58	0.00	-86.61	0.00	86.61	2005.93	1002.96	2248.79	1110.59	24.36	-1.603	0.000	0.082
154.75	-7.74	-3.55	0.00	-83.92	0.00	83.92	1996.38	998.19	2222.43	1097.58	24.61	-1.610	0.000	0.080
156.00	-7.53	-3.51	0.00	-79.48	0.00	79.48	1980.33	990.17	2178.70	1075.98	25.03	-1.622	0.000	0.078
158.00	-7.21	-3.44	0.00	-72.47	0.00	72.47	1946.84	973.42	2101.16	1037.68	25.72	-1.639	0.000	0.074
159.00	-7.05	-3.40	0.00	-69.03	0.00	69.03	942.51	471.25	1031.78	509.56	26.06	-1.648	0.000	0.143
160.00	-6.98	-3.37	0.00	-65.62	0.00	65.62	939.15	469.58	1018.30	502.90	26.41	-1.657	0.000	0.138
162.00	-6.84	-3.31	0.00	-58.88	0.00	58.88	932.13	466.07	991.20	489.52	27.11	-1.682	0.000	0.128
164.00	-6.70	-3.25	0.00	-52.26	0.00	52.26	924.68	462.34	963.95	476.06	27.82	-1.706	0.000	0.117
166.00	-6.57	-3.19	0.00	-45.76	0.00	45.76	916.80	458.40	936.57	462.54	28.54	-1.729	0.000	0.106
167.00	-3.66	-1.88	0.00	-42.57	0.00	42.57	912.70	456.35	922.84	455.76	28.90	-1.739	0.000	0.097
168.00	-3.60	-1.85	0.00	-40.69	0.00	40.69	908.49	454.25	909.10	448.97	29.26	-1.750	0.000	0.095
170.00	-3.50	-1.79	0.00	-36.99	0.00	36.99	899.76	449.88	881.55	435.36	30.00	-1.770	0.000	0.089
172.00	-3.40	-1.73	0.00	-33.41	0.00	33.41	890.60	445.30	853.96	421.74	30.75	-1.789	0.000	0.083
174.00	-3.30	-1.68	0.00	-29.95	0.00	29.95	881.01	440.50	826.35	408.10	31.50	-1.808	0.000	0.077
176.00	-3.21	-1.62	0.00	-26.59	0.00	26.59	870.99	435.50	798.75	394.47	32.26	-1.826	0.000	0.071
178.00	-3.11	-1.57	0.00	-23.35	0.00	23.35	860.55	430.27	771.18	380.86	33.03	-1.843	0.000	0.065
180.00	-3.02	-1.51	0.00	-20.22	0.00	20.22	849.68	424.84	743.68	367.28	33.81	-1.858	0.000	0.059
182.00	-2.93	-1.46	0.00	-17.20	0.00	17.20	838.38	419.19	716.27	353.74	34.59	-1.873	0.000	0.052
184.00	-2.84	-1.41	0.00	-14.28	0.00	14.28	826.65	413.33	688.97	340.26	35.37	-1.886	0.000	0.045
186.00	-2.76	-1.36	0.00	-11.46	0.00	11.46	814.50	407.25	661.81	326.85	36.17	-1.897	0.000	0.038
188.00	-2.67	-1.31	0.00	-8.75	0.00	8.75	801.91	400.96	634.83	313.52	36.96	-1.907	0.000	0.031
190.00	-2.59	-1.26	0.00	-6.13	0.00	6.13	788.90	394.45	608.04	300.29	37.76	-1.915	0.000	0.024
192.00	-2.51	-1.21	0.00	-3.62	0.00	3.62	775.47	387.73	581.48	287.17	38.57	-1.920	0.000	0.016

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Page: 77
	Struct Class: II	



194.00	-2.43	-1.17	0.00	-1.19	0.00	1.19	761.60	380.80	555.16	274.17	39.37	-1.923	0.000	0.008
195.00	-0.04	-0.03	0.00	-0.03	0.00	0.03	754.51	377.26	542.11	267.73	39.78	-1.924	0.000	0.000
196.00	0.00	-0.03	0.00	0.00	0.00	0.00	747.31	373.66	529.12	261.31	40.18	-1.924	0.000	0.000

Final Analysis Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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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 108 mph Wind	62.0	0.00	65.43	0.00	0.00	7415.79
0.9D + 1.6W 108 mph Wind	62.0	0.00	49.06	0.00	0.00	7335.84
1.2D + 1.0Di + 1.0Wi 50 mph Wind	11.3	0.00	100.44	0.00	0.00	1435.53
1.2D + 1.0E	1.1	0.00	65.48	0.00	0.00	123.49
0.9D + 1.0E	1.1	0.00	49.11	0.00	0.00	122.03
1.0D + 1.0W 60 mph Wind	12.0	0.00	54.56	0.00	0.00	1424.18

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 108 mph Wind	-65.43	-62.04	0.00	-7415.7	0.00	-7415.7	5795.46	2897.7	15207.4	7510.36	0.00	0.999
0.9D + 1.6W 108 mph Wind	-49.06	-62.03	0.00	-7335.8	0.00	-7335.8	5795.46	2897.7	15207.4	7510.36	0.00	0.986
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-100.4	-11.26	0.00	-1435.5	0.00	-1435.5	5795.46	2897.7	15207.4	7510.36	0.00	0.208
1.2D + 1.0E	-8.57	-0.51	0.00	-14.78	0.00	-14.78	942.51	471.25	1031.78	509.56	159.00	0.038
0.9D + 1.0E	-6.43	-0.51	0.00	-14.61	0.00	-14.61	942.51	471.25	1031.78	509.56	159.00	0.035
1.0D + 1.0W 60 mph Wind	-54.56	-11.96	0.00	-1424.1	0.00	-1424.1	5795.46	2897.7	15207.4	7510.36	0.00	0.199

Base Plate Summary

Structure: CT00595-S-SB	Code: EIA/TIA-222-G	10/26/2017
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 79

Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 60.00	Bolt Circle: 72.76
Moment (kip-ft): 5768.00	Width (in): 78.76	Number Bolts: 24.00
Axial (kip): 59.50	Style: Polygon	Bolt Type: 2.25" 18J
Shear (kip): 46.30	Polygon Sides: 12.00	Bolt Diameter (in): 2.25
Analysis	Clip Length (in): 0.00	Yield (ksi): 75.00
Moment (kip-ft): 7415.79	Effective Len (in): 13.55	Ultimate (ksi): 100.00
Axial (kip): 100.44	Moment (kip-in): 911.16	Arrangement: Radial
Shear (kip): 62.04	Allow Stress (ksi): 81.00	Cluster Dist (in): 0.00
	Applied Stress (ksi): 0.00	Start Angle (deg): 0.00
Moment Design %: 128.57	Stress Ratio: 0.80	Compression
		Force (kip): 208.03
		Allowable (kip): 260.00
		Ratio: 0.82
		Tension
		Force (kip): 199.66
		Allowable (kip): 260.00
		Ratio: 0.79



Monopole Mat Foundation Design

Date
10/26/2017

Customer Name:	Sprint Nextel	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	196
Site Number:	CT00595-S-SBA	Engineer Name:	J. Tibbetts
Engr. Number:	42160	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations
Monopole
Analysis

Structure Type:

Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	65.4	Shear Force (Kips):	62.0
Uplift Force (Kips):	0.0	Moment (Kips-ft):	7415.8

Allowable overstress %: 5.0%

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	9.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	3.50
Length of Pad (ft.):	25	Width of Pad (ft.):	25
Final Length of pad (ft)	25.0	Final width of pad (ft):	25.0
Control Value for Cell D18:	0	Control Value for Cell F18:	0

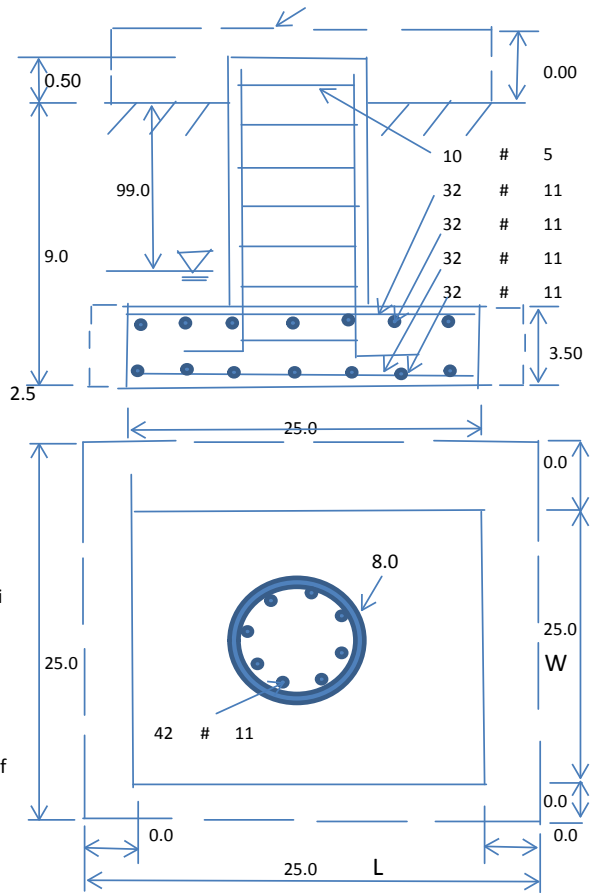
Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	11	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	42	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	11	
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):	32	Qty. of Rebar in Pad (W):	32	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	32	Qty. of Rebar in Pad (W):	32	

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

Soil Unit Weight (pcf):	135.0	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):	16000	Ultimate Skin Friction:	0	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hori. force for O.T.M.:	No	Reduction factor on the maximum soil bearing pressure:	1.00	
		Angle from Top of Pad:	30	
		Angle from Bottm of Pad:	25	
		Angle from Bottm of Pad:	25	



Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	3161.04	Total Dry Soil Weight (Kips):	426.74
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	426.74	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2489.09	Total Dry Concrete Weight (Kips):	373.36
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	373.36	Total Vertical Load on Base (Kips):	865.53

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	5983	<	Allowable Factored Soil Bearing (psf):	12000	0.50	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	9819.0	>	Design Factored Momont (kips-ft):	8005	0.82	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.23					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):	1.56	Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	12376.5	> Design Factored Moment (Mu, Kips-Ft)	7787.8	0.63	OK!
Calculated Shear Capacity (Kips):	924.8	> Design Factored Shear (Kips):	62.0	0.07	OK!
Calculated Tension Capacity (Tn, Kips):	3538.1	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	12681.4	> Design Factored Axial Load (Pu Kips):	65.4	0.01	OK!
Moment & Axial Strength Combination:	0.63	OK! Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.009	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1090.4	> One-Way Factored Shear (L-D. Kips):	409.1	0.38	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1090.4	> One-Way Factored Shear (W-D., Kips)	409.1	0.38	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1193.1	> One-Way Factored Shear (C-C, Kips):	815.8	0.68	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0043	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0043		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	8276.7	> Moment at Bottom (L-Direct. K-Ft):	1085.7	0.13	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	8276.7	> Moment at Bottom (W-Direct. K-Ft):	1085.7	0.13	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	11568.6	> Moment at Bottom (C-C Dir. K-Ft):	1535.4	0.13	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0043	OK! Upper Steel Reinf. Ratio (W-Direct.):	0.0043		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	8276.7	> Moment at the top (L-Dir Kips-Ft):	570.7	0.07	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	8276.7	> Moment at the top (W-Dir Kips-Ft):	570.7	0.07	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	11568.6	> Moment at the top (C-C Direc. K-Ft):	881.3	0.08	OK!



RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

SPRINT Existing Facility

Site ID: CT33XC108

Woodbridge Lake Sewer District
113 Brush Hill Road
Goshen, CT 06756

October 25, 2017

EBI Project Number: 6217004700

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	4.93 %



October 25, 2017

SPRINT

Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Emissions Analysis for Site: **CT33XC108 – Woodbridge Lake Sewer District**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **113 Brush Hill Road, Goshen, CT**, for the purpose of determining whether the emissions from the Proposed SPRINT Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 850 MHz Band is approximately $567 \mu\text{W}/\text{cm}^2$. The general population exposure limit for the 1900 MHz (PCS) and 2500 MHz (BRS) bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.



Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed SPRINT Wireless antenna facility located at **113 Brush Hill Road, Goshen, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since SPRINT is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 1 CDMA channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.
- 2) 2 LTE channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.
- 3) 5 CDMA channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 16 Watts per Channel.
- 4) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 5) 8 LTE channels (2500 MHz (BRS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.



- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the **RFS APXVSP18-C-A20** and the **RFS APXVTM14-ALU-120** for transmission in the 850 MHz, 1900 MHz (PCS) and 2500 MHz (BRS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antenna mounting height centerlines of the proposed antennas are **195 feet** above ground level (AGL) for **Sector A**, **195 feet** above ground level (AGL) for **Sector B** and **195 feet** above ground level (AGL) for Sector C.
- 10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculations were done with respect to uncontrolled / general population threshold limits.



SPRINT Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXVSPPI8-C-A20	Make / Model:	RFS APXVSPPI8-C-A20	Make / Model:	RFS APXVSPPI8-C-A20
Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd
Height (AGL):	195 feet	Height (AGL):	195 feet	Height (AGL):	195 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	10	Channel Count	10	Channel Count	10
Total TX Power(W):	220 Watts	Total TX Power(W):	220 Watts	Total TX Power(W):	220 Watts
ERP (W):	7,537.38	ERP (W):	7,537.38	ERP (W):	7,537.38
Antenna A1 MPE%	0.86 %	Antenna B1 MPE%	0.86 %	Antenna C1 MPE%	0.86 %
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVVM14- ALU-120	Make / Model:	RFS APXVVM14- ALU-120	Make / Model:	RFS APXVVM14- ALU-120
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	195 feet	Height (AGL):	195 feet	Height (AGL):	195 feet
Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts
ERP (W):	6,224.72	ERP (W):	6,224.72	ERP (W):	6,224.72
Antenna A2 MPE%	0.63 %	Antenna B2 MPE%	0.63 %	Antenna C2 MPE%	0.63 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	1.49 %
T-Mobile	1.45 %
Verizon Wireless	0.83 %
AT&T	1.16 %
Site Total MPE %:	4.93 %

SPRINT Sector A Total:	1.49 %
SPRINT Sector B Total:	1.49 %
SPRINT Sector C Total:	1.49 %
Site Total:	4.93 %

SPRINT _ Max Values per Frequency Band / Technology Per Sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	437.55	195	0.44	850 MHz	567	0.08%
Sprint 850 MHz LTE	2	437.55	195	0.88	850 MHz	567	0.16%
Sprint 1900 MHz (PCS) CDMA	5	622.47	195	3.13	1900 MHz (PCS)	1000	0.31%
Sprint 1900 MHz (PCS) LTE	2	1,556.18	195	3.13	1900 MHz (PCS)	1000	0.31%
Sprint 2500 MHz (BRS) LTE	8	778.09	195	6.26	2500 MHz (BRS)	1000	0.63%
						Total:	1.49%

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the SPRINT facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

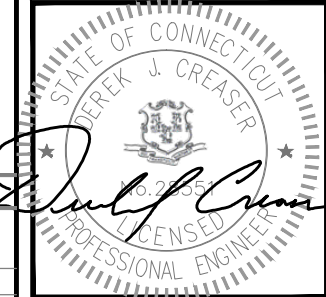
SPRINT Sector	Power Density Value (%)
Sector A:	1.49 %
Sector B:	1.49 %
Sector C:	1.49 %
SPRINT Maximum Total (per sector):	1.49 %
Site Total:	4.93 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **4.93 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

SPECIAL CONSTRUCTION NOTE:
 SPRINT TOWER TOP WORK IS CONTINGENT ON THE FOLLOWING:
 * COMPLETION OF A GLOBAL STRUCTURAL STABILITY ANALYSIS.
 * COMPLETION OF AN ANTENNA/RRH MOUNT STRUCTURAL ASSESSMENT.
 * GC SHALL FURNISH, INSTALL AND COMPLETE ALL REQUIRED STRUCTURAL MODIFICATIONS AS INDICATED IN BEFORE-MENTIONED ANALYSIS AND ASSESSMENT.
 * SBA COMMUNICATIONS CORPORATION SHALL PROVIDE WRITTEN ACCEPTANCE/APPROVAL FOR THE COMPLETION OF ALL TOWER/FOUNDATION STRUCTURAL MODIFICATIONS INCLUDING (AS NECESSARY) CONTROLLED CONSTRUCTION INSPECTIONS, SHOP-DRAWING APPROVALS, MATERIALS TEST RESULTS, AND FINAL ENGINEER'S AFFIDAVIT.

PROJECT: 2.5 EQUIPMENT DEPLOYMENT
SITE NAME: STONINGTON EAST
SITE CASCADE: CT03XC108-A
MARKET: NORTHERN CONNECTICUT
SBA SITE ID: CT00595-S/STONINGTON EAST
SITE ADDRESS: 86 VOLUNTOWN ROAD
 STONINGTON, CT 06379
SITE TYPE: 196' MONOPOLE



NOTE:
 OWNER AND TENANT MAY, FROM TIME TO TIME AT TENANT'S OPTION, REPLACE THIS EXHIBIT WITH AN EXHIBIT SETTING FORTH THE LEGAL DESCRIPTION OF THE SITE, OR WITH ENGINEERED OR AS-BUILT DRAWING DEPICTING THE SITE OR ILLUSTRATING STRUCTURAL MODIFICATIONS OR CONSTRUCTION PLANS OF THE SITE. ANY VISUAL OR TEXTUAL REPRESENTATION OF THE EQUIPMENT LOCATED WITHIN THE SITE CONTAINED IN THESE OTHER DOCUMENTS IS ILLUSTRATIVE ONLY, AND DOES NOT LIMIT THE RIGHTS OF SPRINT AS PROVIDED FOR IN THE AGREEMENT. THE LOCATIONS OF ANY ACCESS AND UTILITY EASEMENTS ARE ILLUSTRATIVE ONLY. ACTUAL LOCATIONS MAY BE DETERMINED BY TENANT AND/OR THE SERVICING UTILITY COMPANY IN COMPLIANCE WITH LOCAL LAWS AND REGULATIONS.

NOTE:
 THESE PLANS ARE BASED ON INFORMATION OBTAINED SITE VISIT ON JUNE 29, 2014. THE SPRINT CONTRACTOR IS RESPONSIBLE TO VERIFYING ALL ITEMS AND NOTIFYING THE ENGINEER OF RECORD AND DISCREPANCIES.

SITE INFORMATION

PROPERTY OWNER:
 BLACKROCK PROP 2 LLC
 PO BOX 1113
 MIAMISBURG, OH 45343

TOWER OWNER:
 SBA TOWERS, LLC.
 8051 CONGRESS AVENUE
 BOCA RATON, FL 33487
 PHONE: (561)995-7670

SBA REGIONAL SITE MANAGER:
 KENNY UHLL
 PHONE: 631-236-2108
 KUhl@sbase.com

LATITUDE (NAD83):
GOOGLE EARTH 2-C CONFIRMATION
 41° 24' 19.94" N
 41.405840'

LONGITUDE (NAD83):
GOOGLE EARTH 2-C CONFIRMATION
 -71° 50' 42.89" W
 -71.845000'

COUNTY:
 NEW LONDON

POWER COMPANY:
 CL & P

AAV PROVIDER:
 COX

SPRINT CONSTRUCTION MANAGER:
 MICHAEL DELIA
 PHONE: 781-316-6348
 Michael.Delia@sprint.com

EQUIPMENT SUPPLIER:
 ALCATEL-LUCENT
 600 MOUNTAIN AVENUE
 MURRAY HILL, NJ 07974



PROJECT DESCRIPTION

SPRINT EQUIPMENT MODIFICATIONS REQUIRED TO SUPPORT MODERNIZATION OF AN EXISTING WIRELESS COMMUNICATIONS FACILITY AND UTILIZATION OF FCC BROADBAND SPECTRUM LICENSE FOR 2.5GHZ FREQUENCY, INCLUDING INSTALLATION OF:

GROUND-LEVEL RAN EQUIPMENT, CONSISTING OF:
 * RETROFIT EXISTING MMBTS CABINET WITH (1) RECTIFIER SHELF, (3) RECTIFIERS, 2.5 RADIO ACCESS NETWORK (RAN) EQUIPMENT & BBU KIT
 * INSTALL (1) ADDITIONAL BATTERY STRING INSIDE EXISTING BATTERY BACKUP (BBU) CABINET

TOWER-TOP EQUIPMENT, INCLUDING INSTALLATION OF:
 * (3) PANEL ANTENNAS
 * (3) REMOTE RADIO HEADS (RRH)
 * (1) HYBRID CABLE (AND ASSOCIATED FIBER, DC POWER, COAXIAL CABLE JUMPERS AND ANTENNA REMOTE ELECTRICAL-TILT (RET) CABLE

SPECIAL ZONING NOTE:
 BASED ON INFORMATION PROVIDED BY SPRINT REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE TAX RELIEF ACT OF 2012, 47 USC 1455(A), AND IS SUBJECT TO AN EXPEDITED ELIGIBLE FACILITIES REQUEST/REVIEW AND ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW, ADMINISTRATIVE REVIEW).

DRAWING INDEX

SHEET NO:	SHEET TITLE	REV	CHK	BY
T-1	TITLE SHEET	2	BB	DJM
SP-1	OUTLINE SPECIFICATIONS	2	BB	DJM
SP-2	OUTLINE SPECIFICATIONS	2	BB	DJM
SP-3	OUTLINE SPECIFICATIONS	2	BB	DJM
A-1	COMPOUND PLAN	2	BB	DJM
A-2	ELEVATION AND ANTENNA PLANS	2	BB	DJM
A-3	RF DATA SHEET	2	BB	DJM
A-4	RAN WIRING DIAGRAM	2	BB	DJM
A-5	EQUIPMENT DETAILS	2	BB	DJM
A-6	EQUIPMENT DETAILS	2	BB	DJM
S-1	STRUCTURAL DETAILS	2	BB	DJM
E-1	ONE LINE DIAGRAM	2	BB	DJM
E-2	GROUNDING DETAILS AND NOTES	2	BB	DJM



GENERAL NOTES

- THIS IS AN UNMANNED TELECOMMUNICATION FACILITY AND NOT FOR HUMAN HABITATION:
 - ADA COMPLIANCE NOT REQUIRED.
 - POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.
 - NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
- CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
- NEW CONSTRUCTION WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
 BUILDING CODE: IBC 2012 W/ 2016 CT STATE BUILDING CODE AMENDMENTS
 ELECTRICAL CODE: 2014 NATIONAL ELECTRICAL CODE
 STRUCTURAL CODE: (TIA) 222-G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

811
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APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.

SPRINT: _____ DATE: _____
 CONSTRUCTION MANAGER: _____ DATE: _____
 LEASING/SITE ACQUISITION: _____ DATE: _____
 RF ENGINEER: _____ DATE: _____
 LANDLORD/TOWER OWNER: _____ DATE: _____

CHECKED BY: BB

APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	10/31/17	REVISED - CODE UPDATE	DJM
1	05/19/14	ISSUED FOR CONSTRUCTION	SF
0	05/02/14	ISSUED FOR CONSTRUCTION	SF

SITE NUMBER:
 CT03XC108-A

SITE NAME:
 STONINGTON EAST

SITE ADDRESS:
 86 VOLUNTOWN ROAD
 STONINGTON, CT 06379

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

THESE OUTLINE SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

SECTION 01 100 – SCOPE OF WORK

PART 1 – GENERAL

1.1 **THE WORK:** THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT CONSTRUCTION STANDARDS FOR WIRELESS SITES, CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 **RELATED DOCUMENTS:**

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 **PRECEDENCE:** SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE. NOTIFY SPRINT CONSTRUCTION MANAGER IF THIS OCCURS.

1.4 **NATIONALLY RECOGNIZED CODES AND STANDARDS:**

- A. THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL AND LOCAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
 1. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
 2. GR-1089 CORE, ELECTROMAGNETIC COMPATIBILITY AND ELECTRICAL SAFETY –GENERIC CRITERIA FOR NETWORK TELECOMMUNICATIONS EQUIPMENT.
 3. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC") AND NFPA 101 (LIFE SAFETY CODE).
 4. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
 5. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
 6. AMERICAN CONCRETE INSTITUTE (ACI)
 7. AMERICAN WIRE PRODUCERS ASSOCIATION (AWPA)
 8. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
 9. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
 10. PORTLAND CEMENT ASSOCIATION (PCA)
 11. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
 12. BRICK INDUSTRY ASSOCIATION (BIA)
 13. AMERICAN WELDING SOCIETY (AWS)
 14. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
 15. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
 16. DOOR AND HARDWARE INSTITUTE (DHI)
 17. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
 18. APPLICABLE BUILDING CODES INCLUDING UNIFORM BUILDING CODE, SOUTHERN BUILDING CODE, BOCA, AND THE INTERNATIONAL BUILDING CODE.

1.5 **DEFINITIONS:**

- A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
- B. COMPANY: SPRINT CORPORATION
- C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
- D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
- E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.
- F. OFCI: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT.
- G. CONSTRUCTION MANAGER – ALL PROJECTS RELATED COMMUNICATION TO FLOW THROUGH SPRINT REPRESENTATIVE IN CHARGE OF PROJECT...

1.6 **SITE FAMILIARITY:** CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE SPRINT CONSTRUCTION MANAGER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OR FIELD CONDITIONS.

1.7 **POINT OF CONTACT:** COMMUNICATION BETWEEN SPRINT AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE SPRINT CONSTRUCTION MANAGER APPOINTED TO MANAGE THE PROJECT FOR SPRINT.

1.8 **ON-SITE SUPERVISION:** THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.

1.9 **DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE:** THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.

- A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN RED PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. CONTRACTOR SHALL NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK.
- B. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. SPACING BETWEEN EQUIPMENT IS THE REQUIRED CLEARANCE. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE SPRINT CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH THE WORK.

1.10 **USE OF JOB SITE:** THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.

1.11 **UTILITIES SERVICES:** WHERE NECESSARY TO CUT EXISTING PIPES, ELECTRICAL WIRES, CONDUITS, CABLES, ETC., OF UTILITY SERVICES, OR OF FIRE PROTECTION OR COMMUNICATIONS SYSTEMS, THEY SHALL BE CUT AND CAPPED AT SUITABLE PLACES OR WHERE SHOWN. ALL SUCH ACTIONS SHALL BE COORDINATED WITH THE UTILITY COMPANY INVOLVED:

1.12 **PERMITS / FEES:** WHEN REQUIRED THAT A PERMIT OR CONNECTION FEE BE PAID TO A PUBLIC UTILITY PROVIDER FOR NEW SERVICE TO THE CONSTRUCTION PROJECT, PAYMENT OF SUCH FEE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

1.13 **CONTRACTOR SHALL TAKE ALL MEASURES AND PROVIDE ALL MATERIAL NECESSARY FOR PROTECTING EXISTING EQUIPMENT AND PROPERTY.**

1.14 **METHODS OF PROCEDURE (MOPS) FOR CONSTRUCTION:** CONTRACTOR SHALL PERFORM WORK AS DESCRIBED IN THE FOLLOWING INSTALLATION AND COMMISSIONING MOPS.

- A. TOP HAT
- B. HOW TO INSTALL A NEW CABINET
- C. BASE BAND UNIT IN EXISTING UNIT
- D. INSTALLATION OF BATTERIES
- E. INSTALLATION OF HYBRID CABLE
- F. INSTALLATION OF RRH'S
- G. CABLING
- H. SPRINT TS-0200 (CURRENT VERSION) – ANTENNA LINE ACCEPTANCE STANDARDS
- I. SPRINT CELL SITE ENGINEERING NOTICE – EN 2012-001, REV 1.
- J. COMMISSIONING MOPS
- K. SPRINT CELL SITE ENGINEERING NOTICE – EN-2013-002
- L. SPRINT ENGINEERING LETTER – EL-0504
- M. SPRINT ENGINEERING LETTER – EL-0568
- N. SPRINT TECHNICAL SPECIFICATION – TS-0193

1.15 **USE OF ELECTRONIC PROJECT MANAGEMENT SYSTEMS:**

- A. CONTRACTOR WILL UTILIZE ITS BEST EFFORTS TO WORK WITH SPRINT ELECTRONIC PROJECT MANAGEMENT SYSTEMS. CONTRACTOR UNDERSTANDS THAT SUFFICIENT INTERNET ACCESS, EQUIVALENT TO "BROADBAND" OR BETTER, IS REQUIRED TO TIMELY AND EFFECTIVELY UTILIZE SPRINT DATA AND DOCUMENT MANAGEMENT SYSTEMS AND AGREES TO MAINTAIN APPROPRIATE CONNECTIONS FOR CONTRACTOR'S STAFF AND OFFICES THAT ARE COMPATIBLE WITH SPRINT DATA AND DOCUMENT MANAGEMENT SYSTEMS

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 **TEMPORARY UTILITIES AND FACILITIES:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.

3.2 **ACCESS TO WORK:** THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.

3.3 **TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS.** SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

3.4 **DIMENSIONS:** VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

3.5 **EXISTING CONDITIONS:** NOTIFY THE SPRINT CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

SECTION 01 200 – COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 – GENERAL

1.1 **THE WORK:** THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 **RELATED DOCUMENTS:**

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 **RECEIPT OF MATERIAL AND EQUIPMENT:**

- A. COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE CONSTRUCTION DOCUMENTS.
- B. THE CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
 1. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
 2. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
 3. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
 4. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO SPRINT OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
 5. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
 6. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

3.2 **DELIVERABLES:**

- A. COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.
- B. IF APPLICABLE, COMPLETE LOST/STOLEN/DAMAGED DOCUMENTATION REPORT AS NECESSARY IN ACCORDANCE WITH COMPANY PRACTICE, AND AS DIRECTED BY COMPANY.
- C. UPLOAD DOCUMENTATION INTO SPRINT SITE MANAGEMENT SYSTEM (SMS) AND/OR PROVIDE HARD COPY DOCUMENTATION AS REQUESTED.

SECTION 01 300 – CELL SITE CONSTRUCTION

PART 1 – GENERAL

1.1 **THE WORK:** THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 **RELATED DOCUMENTS:**

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 **NOTICE TO PROCEED:**

- A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF THE WORK ORDER.
- B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE SPRINT WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 **FUNCTIONAL REQUIREMENTS:**

- A. THE ACTIVITIES DESCRIBED IN THIS PARAGRAPH REPRESENT MINIMUM ACTIONS AND PROCESSES REQUIRED TO SUCCESSFULLY COMPLETE THE WORK. THE ACTIVITIES DESCRIBED ARE NOT EXHAUSTIVE, AND CONTRACTOR SHALL TAKE ANY AND ALL ACTIONS AS NECESSARY TO SUCCESSFULLY COMPLETE THE CONSTRUCTION OF A FULLY FUNCTIONING WIRELESS FACILITY AT THE SITE IN ACCORDANCE WITH COMPANY PROCESSES.
- B. SUBMIT SPECIFIC DOCUMENTATION AS INDICATED HEREIN, AND OBTAIN REQUIRED APPROVALS WHILE THE WORK IS BEING PERFORMED.
- C. MANAGE AND CONDUCT ALL FIELD CONSTRUCTION SERVICE RELATED ACTIVITIES
- D. PROVIDE CONSTRUCTION ACTIVITIES TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 1. PERFORM ANY REQUIRED SITE ENVIRONMENTAL MITIGATION.
 2. PREPARE GROUND SITES; PROVIDE DE-GRUBBING; AND ROUGH AND FINAL GRADING, AND COMPOUND SURFACE TREATMENTS.
 3. MANAGE AND CONDUCT ALL ACTIVITIES FOR INSTALLATION OF UTILITIES INCLUDING ELECTRICAL AND TELCO BACKHAUL.
 4. INSTALL UNDERGROUND FACILITIES INCLUDING UNDERGROUND POWER AND COMMUNICATIONS CONDUITS, AND UNDERGROUND GROUNDING SYSTEM.
 5. INSTALL ABOVE GROUND GROUNDING SYSTEMS.
 6. PROVIDE NEW HVAC INSTALLATIONS AND MODIFICATIONS.
 7. INSTALL "H-FRAMES", CABINETS AND SHELTERS AS INDICATED.
 8. INSTALL ROADS, ACCESS WAYS, CURBS AND DRAINS AS INDICATED.
 9. ACCOMPLISH REQUIRED MODIFICATION OF EXISTING FACILITIES.
 10. PROVIDE ANTENNA SUPPORT STRUCTURE FOUNDATIONS.
 11. PROVIDE SLABS AND EQUIPMENT PLATFORMS.
 12. INSTALL COMPOUND FENCING, SIGHT SHIELDING, LANDSCAPING AND ACCESS BARRIERS.
 13. PERFORM INSPECTION AND MATERIAL TESTING AS REQUIRED HEREINAFTER.
 14. CONDUCT SITE RESISTANCE TO EARTH TESTING AS REQUIRED HEREINAFTER.
 15. INSTALL FIXED GENERATOR SETS AND OTHER STANDBY POWER SOLUTIONS.
 16. INSTALL TOWERS, ANTENNA SUPPORT STRUCTURES AND PLATFORMS ON EXISTING TOWERS AS REQUIRED.
 17. INSTALL CELL SITE RADIOS, MICROWAVE, GPS, COAXIAL MAINLINE, ANTENNAS, CROSS BAND COUPLERS, TOWER TOP AMPLIFIERS, LOW NOISE AMPLIFIERS AND RELATED EQUIPMENT.
 18. PERFORM, DOCUMENT, AND CLOSE OUT ANY CONSTRUCTION CONTROL DOCUMENTS THAT MAY BE REQUIRED BY GOVERNMENT AGENCIES AND LANDLORDS.
 19. PERFORM ANTENNA AND COAX SWEEP TESTING AND MAKE ANY AND ALL NECESSARY CORRECTIONS.
 20. REMAIN ON SITE MOBILIZED THROUGHOUT HAND-OFF AND INTEGRATION TO ASSIST AS NEEDED UNTIL SITE IS DEEMED SUBSTANTIALLY COMPLETE AND PLACED "ON AIR."

3.2 **GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:**

- A. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.
- B. EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.
- C. CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
 1. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
 2. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.
- D. CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION
- E. CONDUCT TESTING AS REQUIRED HEREIN.

3.3 **DELIVERABLES:**

- A. CONTRACTOR SHALL REVIEW, APPROVE, AND SUBMIT TO SPRINT SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS AS REQUIRED HEREINAFTER
- B. PROVIDE DOCUMENTATION INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING. DOCUMENTATION SHALL BE FORWARDED IN ORIGINAL FORMAT AND/OR UPLOADED INTO SMS.
 1. ALL CORRESPONDENCE AND PRELIMINARY CONSTRUCTION REPORTS.
 2. PROJECT PROGRESS REPORTS.
 3. CIVIL CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 4. ELECTRICAL SERVICE COMPLETION DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 5. LINES AND ANTENNA INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 6. POWER INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 7. TELCO READY DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 8. PPC (OR SHELTER) INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 9. TOWER CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 10. TOWER CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 11. BTS AND RADIO EQUIPMENT DELIVERED AT SITE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 12. NETWORK OPERATIONS HANDOFF CHECKLIST (HOC WALK) COMPLETE (UPLOAD FORM IN SMS)
 13. CIVIL CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 14. SITE CONSTRUCTION PROGRESS PHOTOS UNLOADED INTO SMS.

CONTINUE SHEET SP-2



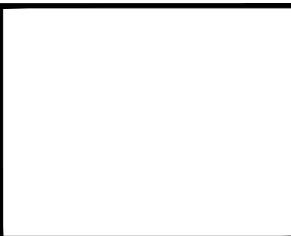
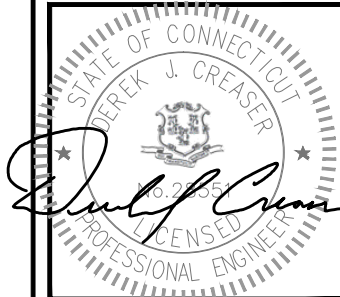
1 INTERNATIONAL BLVD, SUITE 800
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SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
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FAX: (508) 251-1755



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586



CHECKED BY: BB

APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	10/31/17	REVISED - CODE UPDATE	DJM
1	05/19/14	ISSUED FOR CONSTRUCTION	SF
0	05/02/14	ISSUED FOR CONSTRUCTION	SF

SITE NUMBER:
CT03XC108-A

SITE NAME:
STONINGTON EAST

SITE ADDRESS:
86 VOLUNTOWN ROAD
STONINGTON, CT 06379

SHEET TITLE

OUTLINE
SPECIFICATIONS

SHEET NUMBER

SP-1

SECTION 01 400 – SUBMITTALS, TESTS, AND INSPECTIONS

PART 1 – GENERAL

1.1 **THE WORK:** THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 **RELATED DOCUMENTS:**

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 **SUBMITTALS:**

- A. THE WORK IN ALL ASPECTS SHALL COMPLY WITH THE CONSTRUCTION DRAWINGS AND THESE SPECIFICATIONS.
- B. SUBMIT THE FOLLOWING TO COMPANY REPRESENTATIVE FOR APPROVAL.
 - 1. CONCRETE MIX-DESIGNS FOR TOWER FOUNDATIONS, ANCHORS PIERS, AND CONCRETE PAVING.
 - 2. CONCRETE BREAK TESTS AS SPECIFIED HEREIN.
 - 3. SPECIAL FINISHES FOR INTERIOR SPACES, IF ANY.
 - 4. ALL EQUIPMENT AND MATERIALS SO IDENTIFIED ON THE CONSTRUCTION DRAWINGS.
 - 5. CHEMICAL GROUNDING DESIGN.
- C. ALTERNATES: AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINT'S CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO BEING SHIPPED TO SITE. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE CONSIDERED. SUBMITTAL FOR APPROVAL SHALL INCLUDE A STATEMENT OF COST REDUCTION PROPOSED FOR USE OF ALTERNATE PRODUCT.

1.4 **TESTS AND INSPECTIONS:**

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.
- B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - 1. COAX SWEEPS AND FIBER TESTS PER SPRINT TS-0200 (CURRENT VERSION) ANTENNA LINE ACCEPTANCE STANDARDS.
 - 2. AGL, AZIMUTH AND DOWNTILT USING ELECTRONIC COMMERCIAL MADE-FOR-THE-PURPOSE ANTENNA ALIGNMENT TOOL.
 - 3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.
- C. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:
 - 1. AZIMUTH, DOWNTILT, AGL – UPLOAD REPORT FROM ANTENNA ALIGNMENT TOOL TO SITERRA TASK 465. INSTALLED AZIMUTH, DOWNTILT, AND AGL MUST CONFORM TO THE RF DATA SHEETS. SWEEP AND FIBER TESTS
 - 2. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
 - 3. ALL AVAILABLE JURISDICTIONAL INFORMATION
 - 4. PDF SCAN OF REDLINES PRODUCED IN FIELD
 - 5. ELECTRONIC AS-BUILT DRAWINGS IN AUTOCAD AND PDF FORMATS. ANY FIELD CHANGE MUST BE REFLECTED BY MODIFYING THE PLANS, ELEVATIONS, AND DETAILS IN THE DRAWING SETS. GENERAL NOTES INDICATING MODIFICATIONS WILL NOT BE ACCEPTED. CHANGES SHALL BE HIGHLIGHTED AS "CLOUDS" IDENTIFIED AS THE "AS-BUILT" CONDITION.
 - 6. LIEN WAIVERS
 - 7. FINAL PAYMENT APPLICATION
 - 8. REQUIRED FINAL CONSTRUCTION PHOTOS
 - 9. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
 - 10. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).

1.5 **COMMISSIONING:** PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPS

1.6 **INTEGRATION:** PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPS

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 **REQUIREMENTS FOR TESTING:**

- A. THIRD PARTY TESTING AGENCY: WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
 - 1. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
 - 2. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.
 - 3. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.

3.2 **REQUIRED TESTS:**

- A. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - 1. CONCRETE CYLINDER BREAK TESTS FOR THE TOWER AND ANCHOR FOUNDATIONS AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
 - 2. ASPHALT ROADWAY COMPACTED THICKNESS, SURFACE SMOOTHNESS, AND COMPACTED DENSITY TESTING AS SPECIFIED IN SECTION: HOT MIX ASPHALT PAVING.
 - 3. FIELD QUALITY CONTROL TESTING AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
 - 4. TESTING REQUIRED UNDER SECTION: AGGREGATE BASE FOR ACCESS ROADS, PADS AND ANCHOR LOCATIONS
 - 5. STRUCTURAL BACKFILL COMPACTION TESTS FOR THE TOWER FOUNDATION.
 - 6. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.
 - 7. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
 - 8. GROUNDING AT ANTENNA MASTS FOR GPS AND ANTENNAS
 - 9. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

3.3 **REQUIRED INSPECTIONS:**

- A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.
- B. CONDUCT INSPECTIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - 1. GROUNDING SYSTEM INSTALLATION PRIOR TO EARTH CONCEALMENT DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
 - 2. FORMING FOR CONCRETE AND REBAR PLACEMENT PRIOR TO POUR DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
 - 3. COMPACTION OF BACKFILL MATERIALS; AGGREGATE BASE FOR ROADS, PADS, AND ANCHORS; ASPHALT PAVING; AND SHAFT BACKFILL FOR CONCRETE AND WOOD POLES, BY INDEPENDENT THIRD PARTY AGENCY.
 - 4. PRE- AND POST-CONSTRUCTION ROOFTOP AND STRUCTURAL INSPECTIONS ON EXISTING FACILITIES.
 - 5. TOWER ERECTION SECTION STACKING AND PLATFORM ATTACHMENT DOCUMENTED BY DIGITAL PHOTOGRAPHS BY THIRD PARTY AGENCY.
 - 6. ANTENNA AZIMUTH , DOWN TILT AND PER SUNLIGHT TOOL SUNSIGHT INSTRUMENTS – ANTENNALIGN ALIGNMENT TOOL (AAT)
 - 7. VERIFICATION DOCUMENTED WITH THE ANTENNA CHECKLIST REPORT, BY A&E, SITE DEVELOPMENT REP, OR RF REP.
 - 8. FINAL INSPECTION CHECKLIST AND HANDOFF WALK (HOC). SIGNED FORM SHOWING ACCEPTANCE BY FIELD OPS IS TO BE UPLOADED INTO SMS.
 - 9. COAX SWEEP AND FIBER TESTING DOCUMENTS SUBMITTED VIA SMS FOR RF APPROVAL.
 - 10. SCAN-ABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
 - 11. ALL AVAILABLE JURISDICTIONAL INFORMATION
 - 12. PDF SCAN OF REDLINES PRODUCED IN FIELD
- E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.
- F. CONSTRUCTION INSPECTIONS AND CORRECTIVE MEASURES SHALL BE DOCUMENTED BY THE CONTRACTOR WITH WRITTEN REPORTS AND PHOTOGRAPHS. PHOTOGRAPHS MUST BE DIGITAL AND OF SUFFICIENT QUALITY TO CLEARLY SHOW THE SITE CONSTRUCTION. PHOTOGRAPHS MUST CLEARLY IDENTIFY THE PHOTOGRAPHED ITEM AND BE LABELED WITH THE SITE CASCADE NUMBER, SITE NAME, DESCRIPTION, AND DATE.

3.4 **DELIVERABLES:** TEST AND INSPECTION REPORTS AND CLOSEOUT DOCUMENTATION SHALL BE UPLOADED TO THE SMS AND/OR FORWARDED TO SPRINT FOR INCLUSION INTO THE PERMANENT SITE FILES.

- A. THE FOLLOWING TEST AND INSPECTION REPORTS SHALL BE PROVIDED AS APPLICABLE.
 - 1. CONCRETE MIX AND CYLINDER BREAK REPORTS.
 - 2. STRUCTURAL BACKFILL COMPACTION REPORTS.
 - 3. SITE RESISTANCE TO EARTH TEST.
 - 4. ANTENNA AZIMUTH AND DOWN TILT VERIFICATION
 - 5. TOWER ERECTION INSPECTIONS AND MEASUREMENTS DOCUMENTING TOWER INSTALLED PER SUPPLIER'S REQUIREMENTS AND THE APPLICABLE SECTIONS HEREIN.
 - 6. COAX CABLE SWEEP TESTS PER COMPANY'S "ANTENNA LINE ACCEPTANCE STANDARDS".
- B. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES THE FOLLOWING:
 - 1. TEST WELLS AND TRENCHES: PHOTOGRAPHS OF ALL TEST WELLS; PHOTOGRAPHS SHOWING ALL OPEN EXCAVATIONS AND TRENCHING PRIOR TO BACKFILLING SHOWING A TAPE MEASURE VISIBLE IN THE EXCAVATIONS INDICATING DEPTH.
 - 2. CONDUITS, CONDUCTORS AND GROUNDING: PHOTOGRAPHS SHOWING TYPICAL INSTALLATION OF CONDUCTORS AND CONNECTORS; PHOTOGRAPHS SHOWING TYPICAL BEND RADIUS OF INSTALLED GROUND WIRES AND GROUND ROD SPACING;
 - 3. CONCRETE FORMS AND REINFORCING: CONCRETE FORMING AT TOWER AND EQUIPMENT/SHELTER PAD/FOUNDATIONS – PHOTOGRAPHS SHOWING ALL REINFORCING STEEL, UTILITY AND CONDUIT STUB OUTS; PHOTOGRAPHS SHOWING CONCRETE POUR OF SHELTER SLAB/FOUNDATION, TOWER FOUNDATION AND GUY ANCHORS WITH VIBRATOR IN USE; PHOTOGRAPHS SHOWING EACH ANCHOR ON GUYED TOWERS, BEFORE CONCRETE POUR.
 - 4. TOWER, ANTENNAS AND MAINLINE: INSPECTION AND PHOTOGRAPHS OF SECTION STACKING; INSPECTION AND PHOTOGRAPHS OF PLATFORM COMPONENT ATTACHMENT POINTS; PHOTOGRAPHS OF TOWER TOP GROUNDING; PHOTOS OF TOWER COAX LINE COLOR CODING AT THE TOP AND AT GROUND LEVEL; INSPECTION AND PHOTOGRAPHS OF OPERATIONAL OF TOWER LIGHTING, AND PLACEMENT OF FAA REGISTRATION SIGN; PHOTOGRAPHS SHOWING ADDITIONAL GROUNDING POINTS FOR TOWERS GREATER THAN 200 FEET.; PHOTOS OF ANTENNA GROUND BAR, EQUIPMENT GROUND BAR, AND MASTER GROUND BAR; PHOTOS OF GPS ANTENNA(S); PHOTOS OF EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA; PHOTOS OF COAX WEATHERPROOFING – TOP AND BOTTOM; PHOTOS OF COAX GROUNDING--TOP AND BOTTOM; PHOTOS OF ANTENNA AND MAST GROUNDING; PHOTOS OF COAX CABLE ENTRY INTO SHELTER; PHOTOS OF PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.
 - 5. ROOF TOPS: PRE-CONSTRUCTION AND POST-CONSTRUCTION VISUAL INSPECTION AND PHOTOGRAPHS OF THE ROOF AND INTERIOR TO DETERMINE AND DOCUMENT CONDITIONS; ROOF TOP CONSTRUCTION INSPECTIONS AS REQUIRED BY THE JURISDICTION; PHOTOGRAPHS OF CABLE TRAY AND/OR ICE BRIDGE; PHOTOGRAPHS OF DOGHOUSE/CABLE EXIT FROM ROOF;
 - 6. SITE LAYOUT – PHOTOGRAPHS OF THE OVERALL COMPOUND, INCLUDING EQUIPMENT PLATFORM FROM ALL FOUR CORNERS.
 - 7. FINISHED UTILITIES: CLOSE-UP PHOTOGRAPHS OF THE PPC BREAKER PANEL; CLOSE-UP PHOTOGRAPH OF THE INSIDE OF THE TELCO PANEL AND NIU; CLOSE-UP PHOTOGRAPH OF THE POWER METER AND DISCONNECT; PHOTOS OF POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE; PHOTOGRAPHS AT METER BOX AND/OR FACILITY DISTRIBUTION PANEL.
 - 8. REQUIRED MATERIALS CERTIFICATIONS: CONCRETE MIX DESIGNS; MILL CERTIFICATION FOR ALL REINFORCING AND STRUCTURAL STEEL; AND ASPHALT PAVING MIX DESIGN.
 - 9. ANY AND ALL SUBMITTALS BY THE JURISDICTION OR COMPANY.

SECTION 01 500 – PROJECT REPORTING

PART 1 – GENERAL

1.1 **THE WORK:** THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 **RELATED DOCUMENTS:**

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 **WEEKLY REPORTS:**

- A. CONTRACTOR SHALL PROVIDE SPRINT WITH WEEKLY REPORTS SHOWING PROJECT STATUS. THIS STATUS REPORT FORMAT WILL BE PROVIDED TO THE CONTRACTOR BY SPRINT. THE REPORT WILL CONTAIN SITE ID NUMBER, THE MILESTONES FOR EACH SITE, INCLUDING THE BASELINE DATE, ESTIMATED COMPLETION DATE AND ACTUAL COMPLETION DATE.

B. REPORT INFORMATION WILL BE TRANSMITTED TO SPRINT VIA ELECTRONIC MEANS AS REQUIRED. THIS INFORMATION WILL PROVIDE A BASIS FOR PROGRESS MONITORING AND PAYMENT.

3.2 **PROJECT CONFERENCE CALLS:**

- A. SPRINT MAY HOLD WEEKLY PROJECT CONFERENCE CALLS. CONTRACTOR WILL BE REQUIRED TO COMMUNICATE SITE STATUS, MILESTONE COMPLETIONS AND UPCOMING MILESTONE PROJECTIONS, AND ANSWER ANY OTHER SITE STATUS QUESTIONS AS NECESSARY.

3.3 **PROJECT TRACKING IN SMS:**

- A. CONTRACTOR SHALL PROVIDE SCHEDULE UPDATES AND PROJECTIONS IN THE SMS SYSTEM ON A WEEKLY BASIS.

3.4 **ADDITIONAL REPORTING:**

- A. ADDITIONAL OR ALTERNATE REPORTING REQUIREMENTS MAY BE ADDED TO THE REPORT AS DETERMINED TO BE REASONABLY NECESSARY BY COMPANY.

3.5 **PROJECT PHOTOGRAPHS:**

- A. FILE DIGITAL PHOTOGRAPHS OF COMPLETED SITE IN JPEG FORMAT IN THE SMS PHOTO LIBRARY FOR THE RESPECTIVE SITE. PHOTOGRAPHS SHALL BE CLEARLY LABELED WITH SITE NUMBER, NAME AND DESCRIPTION, AND SHALL INCLUDE AT A MINIMUM THE FOLLOWING AS APPLICABLE:
 - 1. SHELTER AND TOWER OVERVIEW.
 - 2. TOWER FOUNDATION(S) – FORMS AND STEEL BEFORE POUR (EACH ANCHOR ON GUYED TOWERS).
 - 3. TOWER FOUNDATION(S) POUR WITH VIBRATOR IN USE (EACH ANCHOR ON GUYED TOWERS).
 - 4. TOWER STEEL AS BEING INSTALLED INTO HOLE (SHOW ANCHOR STEEL ON GUYED TOWERS).
 - 5. PHOTOS OF TOWER SECTION STACKING.
 - 6. CONCRETE TESTING / SAMPLES.
 - 7. PLACING OF ANCHOR BOLTS IN TOWER FOUNDATION.
 - 8. BUILDING/WATER TANK FROM ROAD FOR TENANT IMPROVEMENTS OR COMMENTS.
 - 9. SHELTER FOUNDATION--FORMS AND STEEL BEFORE POURING.
 - 10. SHELTER FOUNDATION POUR WITH VIBRATOR IN USE.
 - 11. COAX CABLE ENTRY INTO SHELTER.
 - 12. PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.
 - 13. ROOFTOP PRE AND POST CONSTRUCTION PHOTOS TO INCLUDE PENETRATIONS AND INTERIOR CEILING.
 - 14. PHOTOS OF TOWER TOP COAX LINE COLOR CODING AND COLOR CODING AT GROUND LEVEL.
 - 15. PHOTOS OF ALL APPROPRIATE COMPANY OR REGULATORY SIGNAGE.
 - 16. PHOTOS OF EQUIPMENT BOLT DOWN INSIDE SHELTER.
 - 17. POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE AND POWER AND TELCO SUPPLY LOCATIONS INCLUDING METER/DISCONNECT.
 - 18. ELECTRICAL TRENCH(S) WITH ELECTRICAL / CONDUIT BEFORE BACKFILL.
 - 19. ELECTRICAL TRENCH(S) WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.
 - 20. TELCO TRENCH WITH TELEPHONE / CONDUIT BEFORE BACKFILL.
 - 21. TELCO TRENCH WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.
 - 22. SHELTER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADI).
 - 23. TOWER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADI).
 - 24. FENCE GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADI).
 - 25. ALL BTS GROUND CONNECTIONS.
 - 26. ALL GROUND TEST WELLS.
 - 27. ANTENNA GROUND BAR AND EQUIPMENT GROUND BAR.
 - 28. ADDITIONAL GROUNDING POINTS ON TOWERS ABOVE 200'.
 - 29. HVAC UNITS INCLUDING CONDENSERS ON SPLIT SYSTEMS.
 - 30. GPS ANTENNAS.
 - 31. CABLE TRAY AND/OR WAVEGUIDE BRIDGE.
 - 32. DOGHOUSE/CABLE EXIT FROM ROOF.
 - 33. EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA.
 - 34. MASTER BUS BAR.
 - 35. TELCO BOARD AND NIU.
 - 36. ELECTRICAL DISTRIBUTION WALL.
 - 37. CABLE ENTRY WITH SURGE SUPPRESSION.
 - 38. ENTRANCE TO EQUIPMENT ROOM.
 - 39. COAX WEATHERPROOFING--TOP AND BOTTOM OF TOWER.
 - 40. COAX GROUNDING --TOP AND BOTTOM OF TOWER.
 - 41. ANTENNA AND MAST GROUNDING.
 - 42. LANDSCAPING – WHERE APPLICABLE.

3.6 **FINAL PROJECT ACCEPTANCE:** COMPLETE ALL REQUIRED REPORTING TASKS PER CONTRACT, CONTRACT DOCUMENTS OR THE SPRINT INTEGRATED CONSTRUCTION STANDARDS FOR WIRELESS SITES AND UPLOAD INTO SITERRA.

SECTION 07 500 – ROOF CUTTING, PATCHING AND REPAIR

SUMMARY:
THIS SECTION SPECIFIES CUTTING AND PATCHING EXISTING ROOFING SYSTEMS WHERE CONDUIT OR CABLES EXIT THE BUILDING ONTO THE ROOF OR BUILDING-MOUNTED ANTENNAS, AND AS REQUIRED FOR WATERTIGHT PERFORMANCE. ROOFTOP ENTRY OPENINGS IN MEMBRANE ROOFTOPS SHALL BE CONSTRUCTED TO COMPLY WITH LANDLORD, ANY EXISTING WARRANTY, AND LOCAL JURISDICTIONAL STANDARDS.

1.4 **SUBMITTALS:**

- A. **PRE-CONSTRUCTION ROOF PHOTOS:** COMPLETE A ROOF INSPECTION PRIOR TO THE INSTALLATION OF SPRINT EQUIPMENT ON ANY ROOFTOP BUILD. AT A MINIMUM INSPECT AND PHOTOGRAPH (MINIMUM 3 EA.) ALL AREAS IMPACTED BY THE ADDITION OF THE SPRINT EQUIPMENT.
- B. PROVIDE SIMILAR PHOTOGRAPHS SHOWING ROOF CONDITIONS AFTER CONSTRUCTION (MINIMUM 3 EA.)
- C. ROOF INSPECTION PHOTOGRAPHS SHOULD BE UPLOADED WITH CLOSEOUT PHOTOGRAPHS.

SECTION 09 900 – PAINTING QUALITY ASSURANCE:

- A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. COMPLY WITH ALL ENVIRONMENTAL REGULATIONS FOR VOLATILE ORGANIC COMPOUNDS.



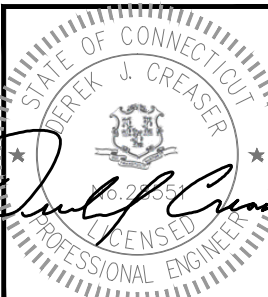
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
TEL: (800) 357-7641



SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
TEL: (508) 251-0720
FAX: (508) 251-1755



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586



CHECKED BY: BB

APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	10/31/17	REVISED - CODE UPDATE	DJM
1	05/19/14	ISSUED FOR CONSTRUCTION	SF
0	05/02/14	ISSUED FOR CONSTRUCTION	SF

SITE NUMBER:
CT03XC108-A

SITE NAME:
STONINGTON EAST

SITE ADDRESS:
86 VOLUNTOWN ROAD
STONINGTON, CT 06379

SHEET TITLE

OUTLINE SPECIFICATIONS

SHEET NUMBER

SP-2

CONTINUED FROM SP-2:

MATERIALS:

- A. MANUFACTURERS: BENJAMIN MOORE, ICI DEVOE COATINGS, PPG, SHERWIN WILLIAMS OR APPROVED EQUAL. PROVIDE PREMIUM GRADE, PROFESSIONAL-QUALITY PRODUCTS FOR COATING SYSTEMS.

PAINT SCHEDULE:

- A. EXTERIOR ANTENNAE AND ANTENNA MOUNTING HARDWARE: ONE COAT OF PRIMER AND TWO FINISH COATS. PAINT FOR ANTENNAE SHALL BE NON-METALLIC BASED AND CONTAIN NO METALLIC PARTICLES. PROVIDE COLORS AND PATTERNS AS REQUIRED TO MASK APPEARANCE OF ANTENNAE ON ADJACENT BUILDING SURFACES AND AS ACCEPTABLE TO THE OWNER. REFER TO ANTENNA MANUFACTURER'S INSTRUCTIONS WHENEVER POSSIBLE.

- B. ROOF TOP CONSTRUCTION: TOUCH UP - PREPARE SURFACES TO BE REPAIRED. FOLLOW INDUSTRY STANDARDS AND REQUIREMENTS OF OWNER TO MATCH EXISTING COATING AND FINISH.

PAINTING APPLICATION:

- INSPECT SURFACES, REPORT UNSATISFACTORY CONDITIONS IN WRITING; BEGINNING WORK MEANS ACCEPTANCE OF SUBSTRATE.
- COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR PREPARATION, PRIMING AND COATING WORK. COORDINATE WITH WORK OF OTHER SECTIONS.
- MATCH APPROVED MOCK-UPS FOR COLOR, TEXTURE, AND PATTERN. RE-COAT OR REMOVE AND REPLACE WORK WHICH DOES NOT MATCH OR SHOWS LOSS OF ADHESION.
- CLEAN UP, TOUCH UP AND PROTECT WORK.

TOUCHUP PAINTING:

- GALVANIZING DAMAGE AND ALL BOLTS AND NUTS SHALL BE TOUCHED UP AFTER TOWER ERECTION WITH "GALVANOX," "DRY GALV," OR "ZINC-IT."
- FIELD TOUCHUP PAINT SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- ALL METAL COMPONENTS SHALL BE HANDLED WITH CARE TO PREVENT DAMAGE TO THE COMPONENTS, THEIR PRESERVATIVE TREATMENT, OR THEIR PROTECTIVE COATINGS.

SECTION 11 700 - ANTENNA ASSEMBLY, REMOTE RADIO HEADS AND CABLE INSTALLATION

SUMMARY:

THIS SECTION SPECIFIES INSTALLATION OF ANTENNAS, RRH'S, AND CABLE EQUIPMENT, INSTALLATION, AND TESTING OF COAXIAL FIBER CABLE.

ANTENNAS AND RRH'S:

THE NUMBER AND TYPE OF ANTENNAS AND RRH'S TO BE INSTALLED IS DETAILED ON THE CONSTRUCTION DRAWINGS.

HYBRID CABLE:

HYBRID CABLE WILL BE DC/FIBER AND FURNISHED FOR INSTALLATION AT EACH SITE. CABLE SHALL BE INSTALLED PER THE CONSTRUCTION DRAWINGS AND THE APPLICABLE MANUFACTURER'S REQUIREMENTS.

JUMPERS AND CONNECTORS:

FURNISH AND INSTALL 1/2" COAX JUMPER CABLES BETWEEN THE RRH'S AND ANTENNAS. JUMPERS SHALL BE TYPE LDF 4, FLC 12-50, CR 540, OR FXL 540. SUPER-FLEX CABLES ARE NOT ACCEPTABLE. JUMPERS BETWEEN THE RRH'S AND ANTENNAS OR TOWER TOP AMPLIFIERS SHALL CONSIST OF 1/2 INCH FOAM DIELECTRIC, OUTDOOR RATED COAXIAL CABLE. DO NOT USE SUPERFLEX OUTDOORS. JUMPERS SHALL BE FACTORY FABRICATED IN APPROPRIATE LENGTHS WITH A MAXIMUM OF 4 FEET EXCESS PER JUMPER AND HAVE CONNECTORS AT EACH END, MANUFACTURED BY SUPPLIER. IF JUMPERS ARE FIELD FABRICATED, FOLLOW MANUFACTURER'S REQUIREMENTS FOR INSTALLATION OF CONNECTORS

REMOTE ELECTRICAL TILT (RET) CABLES:

MISCELLANEOUS:

INSTALL SPLITTERS, COMBINERS, FILTERS PER RF DATA SHEET, FURNISHED BY SPRINT.

ANTENNA INSTALLATION:

THE CONTRACTOR SHALL ASSEMBLE ALL ANTENNAS ONSITE IN ACCORDANCE WITH THE INSTRUCTIONS SUPPLIED BY THE MANUFACTURER. ANTENNA HEIGHT, AZIMUTH, AND FEED ORIENTATION INFORMATION SHALL BE A DESIGNATED ON THE CONSTRUCTION DRAWINGS.

- A. THE CONTRACTOR SHALL POSITION THE ANTENNA ON TOWER PIPE MOUNTS SO THAT THE BOTTOM STRUT IS LEVEL. THE PIPE MOUNTS SHALL BE PLUMB TO WITHIN 1 DEGREE.
- B. ANTENNA MOUNTING REQUIREMENTS: PROVIDE ANTENNA MOUNTING HARDWARE AS INDICATED ON THE DRAWINGS.

HYBRID CABLES INSTALLATION:

- A. THE CONTRACTOR SHALL ROUTE, TEST, AND INSTALL ALL CABLES AS INDICATED ON THE CONSTRUCTION DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- B. THE INSTALLED RADIUS OF THE CABLES SHALL NOT BE LESS THAN THE MANUFACTURER'S SPECIFICATIONS FOR BENDING RADII.
- C. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE CABLES DURING HANDLING AND INSTALLATION.
 - FASTENING MAIN HYBRID CABLES: ALL CABLES SHALL BE PERMANENTLY FASTENED TO THE COAX LADDER AT 4"-0" OC USING NON-MAGNETIC STAINLESS STEEL CLIPS.
 - FASTENING INDIVIDUAL FIBER AND DC CABLES ABOVE BREAKOUT ENCLOSURE (MEDUSA), WITHIN THE MMBTS CABINET AND ANY INTERMEDIATE DISTRIBUTION BOXES:
 - FIBER: SUPPORT FIBER BUNDLES USING 1/2" VELCRO STRAPS OF THE REQUIRED LENGTH @ 18" OC. STRAPS SHALL BE UV, OIL AND WATER RESISTANT AND SUITABLE FOR INDUSTRIAL INSTALLATIONS AS MANUFACTURED BY TEXTOL OR APPROVED EQUAL.
 - DC: SUPPORT DC BUNDLES WITH ZIP TIES OF THE ADEQUATE LENGTH. ZIP TIES TO BE UV STABILIZED, BLACK NYLON, WITH TENSILE STRENGTH AT 12,000 PSI AS MANUFACTURED BY NELCO PRODUCTS OR EQUAL.
 - FASTENING JUMPERS: SECURE JUMPERS TO THE SIDE ARMS OR HEAD FRAMES USING STAINLESS STEEL TIE WRAPS OR STAINLESS STEEL BUTTERFLY CLIPS.
 - CABLE INSTALLATION:
 - INSPECT CABLE PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE CONSTRUCTION MANAGER.
 - CABLE ROUTING: CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOP AS INDICATED ON THE DRAWINGS. AVOID TWISTING AND CROSSOVERS.
 - HOIST CABLE USING PROPER HOISTING GRIPS. DO NOT EXCEED MANUFACTURER'S RECOMMENDED MAXIMUM BEND RADIUS.

- GROUNDING OF TRANSMISSION LINES: ALL TRANSMISSION LINES SHALL BE GROUNDED AS INDICATED ON DRAWINGS.
- HYBRID CABLE COLOR CODING: ALL COLOR CODING SHALL BE AS REQUIRED IN TS 0200 REV 4.
- HYBRID CABLE LABELING: INDIVIDUAL HYBRID AND DC BUNDLES SHALL BE LABELED ALPHA-NUMERICALLY ACCORDING TO SPRINT CELL SITE ENGINEERING NOTICE - EN 2012-001, REV 1

WEATHERPROOFING EXTERIOR CONNECTORS AND HYBRID CABLE GROUND KITS:

- A. ALL FIBER & COAX CONNECTORS AND GROUND KITS SHALL BE WEATHERPROOFED.
- B. WEATHERPROOFED USING ONE OF THE FOLLOWING METHODS. ALL INSTALLATIONS MUST BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INDUSTRY BEST PRACTICES.
 - COLD SHRINK: ENCOMPASS CONNECTOR IN COLD SHRINK TUBING AND PROVIDE A DOUBLE WRAP OF 2" ELECTRICAL TAPE EXTENDING 2" BEYOND TUBING. PROVIDE 3M COLD SHRINK CXS SERIES OR EQUAL.
 - SELF-AMALGAMATING TAPE: CLEAN SURFACES. APPLY A DOUBLE WRAP OF SELF-AMALGAMATING TAPE 2" BEYOND CONNECTOR. APPLY A SECOND WRAP OF SELF-AMALGAMATING TAPE IN OPPOSITE DIRECTION. APPLY DOUBLE WRAP OF 2" WIDE ELECTRICAL TAPE EXTENDING 2" BEYOND THE SELF-AMALGAMATING TAPE.
 - 3M SLIM LOCK CLOSURE 716: SUBSTITUTIONS WILL NOT BE ALLOWED.
 - OPEN FLAME ON JOB SITE IS NOT ACCEPTABLE

SECTION 11 800 - INSTALLATION OF MULTIMODAL BASE STATIONS (MMBTS) AND RELATED EQUIPMENT

SUMMARY:

- A. THIS SECTION SPECIFIES MMBTS CABINETS, POWER CABINETS, AND INTERNAL EQUIPMENT INCLUDING BY NOT LIMITED TO RECTIFIERS, POWER DISTRIBUTION UNITS, BASE BAND UNITS, SURGE ARRESTORS, BATTERIES, AND SIMILAR EQUIPMENT FURNISHED BY THE COMPANY FOR INSTALLATION BY THE CONTRACTOR (OFCI).
- B. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MISCELLANEOUS MATERIALS AND PROVIDE ALL LABOR REQUIRED FOR INSTALLATION EQUIPMENT IN EXISTING CABINET OR NEW CABINET AS SHOWN ON DRAWINGS AND AS REQUIRE BY THE APPLICABLE INSTALLATION MOPS.
- C. COMPLY WITH MANUFACTURERS INSTALLATION AND START-UP REQUIREMENTS

DC CIRCUIT BREAKER LABELING

- A. LABEL CIRCUIT BREAKERS ACCORDING TO SPRINT CELL SITE ENGINEERING NOTICE - EN 2012-001, REV 1.

SECTION 11 800 - INSTALLATION OF MULTIMODAL BASE TRANSCIEVER STATIONS (MMBTS) AND RELATED EQUIPMENT

SUMMARY:

- A. THIS SECTION SPECIFIES MMBTS CABINETS, POWER CABINETS, AND INTERNAL EQUIPMENT INCLUDING BY NOT LIMITED TO RECTIFIERS, POWER DISTRIBUTION UNITS, BASE BAND UNITS, SURGE ARRESTORS, BATTERIES, AND SIMILAR EQUIPMENT FURNISHED BY THE COMPANY FOR INSTALLATION BY THE CONTRACTOR (OFCI).
- B. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MISCELLANEOUS MATERIALS AND PROVIDE ALL LABOR REQUIRED FOR INSTALLATION EQUIPMENT IN EXISTING CABINET OR NEW CABINET AS SHOWN ON DRAWINGS AND AS REQUIRE BY THE APPLICABLE INSTALLATION MOPS.
- C. COMPLY WITH MANUFACTURERS INSTALLATION AND START-UP REQUIREMENTS

SUPPORTING DEVICES:

- A. MANUFACTURED STRUCTURAL SUPPORT MATERIALS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY THE FOLLOWING:
 - ALLIED TUBE AND CONDUIT
 - B-LINE SYSTEM
 - UNISTRUT DIVERSIFIED PRODUCTS
 - THOMAS & BETTS
- B. FASTENERS: TYPES, MATERIALS, AND CONSTRUCTION FEATURES AS FOLLOWS:
 - EXPANSION ANCHORS: CARBON STEEL WEDGE OR SLEEVE TYPE.
 - POWER-DRIVEN THREADED STUDS: HEAT-TREATED STEEL, DESIGNED SPECIFICALLY FOR THE INTENDED SERVICE.
 - FASTEN BY MEANS OF WOOD SCREWS ON WOOD.
 - TOGGLE BOLTS ON HOLLOW MASONRY UNITS.
 - CONCRETE INSERTS OR EXPANSION BOLTS ON CONCRETE OR SOLID MASONRY.
 - MACHINE SCREWS, WELDED THREADED STUDS, OR SPRING-TENSION CLAMPS ON STEEL.
 - EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE SHALL NOT BE PERMITTED.
 - DO NOT WELD CONDUIT, PIPE STRAPS, OR ITEMS OTHER THAN THREADED STUDS TO STEEL STRUCTURES.
 - IN PARTITIONS OF LIGHT STEEL CONSTRUCTION, USE SHEET METAL SCREWS.

SUPPORTING DEVICES:

- A. INSTALL SUPPORTING DEVICES TO FASTEN ELECTRICAL COMPONENTS SECURELY AND PERMANENTLY IN ACCORDANCE WITH NEC.
- B. COORDINATE WITH THE BUILDING STRUCTURAL SYSTEM AND WITH OTHER TRADES.
- C. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, FASTEN ELECTRICAL ITEMS AND THEIR SUPPORTING HARDWARE SECURELY TO THE STRUCTURE IN ACCORDANCE WITH THE FOLLOWING:
- D. ENSURE THAT THE LOAD APPLIED BY ANY FASTENER DOES NOT EXCEED 25 PERCENT OF THE PROOF TEST LOAD.
- E. USE VIBRATION AND SHOCK-RESISTANT FASTENERS FOR ATTACHMENTS TO CONCRETE SLABS.

ELECTRICAL IDENTIFICATION:

- A. UPDATE AND PROVIDE TYPED CIRCUIT BREAKER SCHEDULES IN THE MOUNTING BRACKET, INSIDE DOORS OF AC PANEL BOARDS WITH ANY CHANGES MADE TO THE AC SYSTEM.
- B. BRANCH CIRCUITS FEEDING AVIATION OBSTRUCTION LIGHTING EQUIPMENT SHALL BE CLEARLY IDENTIFIED AS SUCH AT THE BRANCH CIRCUIT PANELBOARD.

SECTION 26 200 - ELECTRICAL MATERIALS AND EQUIPMENT

CONDUIT:

- A. RIGID GALVANIZED STEEL (RGS) CONDUIT SHALL BE USED FOR EXTERIOR LOCATIONS ABOVE GROUND AND IN UNFINISHED INTERIOR LOCATIONS AND FOR ENCASED RUNS IN CONCRETE. RIGID CONDUIT AND FITTINGS SHALL BE STEEL, COATED WITH ZINC EXTERIOR AND INTERIOR BY THE HOT DIP GALVANIZING PROCESS. CONDUIT SHALL BE PRODUCED TO ANSI SPECIFICATIONS C80.1, FEDERAL SPECIFICATION WW-C-581 AND SHALL BE LISTED WITH THE UNDERWRITERS' LABORATORIES. FITTINGS SHALL BE THREADED - SET SCREW OR COMPRESSION FITTINGS WILL NOT BE ACCEPTABLE. RGS CONDUITS SHALL BE MANUFACTURED BY ALLIED, REPUBLIC OR WHEATLAND.
- B. UNDERGROUND CONDUIT IN CONCRETE SHALL BE POLYVINYLCHLORIDE (PVC) SUITABLE FOR DIRECT BURIAL AS APPLICABLE. JOINTS SHALL BE BELLED, AND FLUSH SOLVENT WELDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CONDUIT SHALL BE CARLON ELECTRICAL PRODUCTS OR APPROVED EQUAL.
- C. TRANSITIONS BETWEEN PVC AND RIGID (RGS) SHALL BE MADE WITH PVC COATED METALLIC LONG SWEEP RADIUS ELBOWS.
- D. EMT OR RIGID GALVANIZED STEEL CONDUIT MAY BE USED IN FINISHED SPACES CONCEALED IN WALLS AND CEILINGS. EMT SHALL BE MILD STEEL, ELECTRICALLY WELDED, ELECTRO-GALVANIZED OR HOT-DIPPED GALVANIZED AND PRODUCED TO ANSI SPECIFICATION C80.3, FEDERAL SPECIFICATION WW-C-563, AND SHALL BE UL LISTED. EMT SHALL BE MANUFACTURED BY ALLIED, REPUBLIC OR WHEATLAND, OR APPROVED EQUAL. FITTINGS SHALL BE METALLIC COMPRESSION. SET SCREW CONNECTIONS SHALL NOT BE ACCEPTABLE.
- E. LIQUID TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR FINAL CONNECTION TO EQUIPMENT. FITTINGS SHALL BE METALLIC GLAND TYPE COMPRESSION FITTINGS, MAINTAINING THE INTEGRITY OF CONDUIT SYSTEM. SET SCREW CONNECTIONS SHALL NOT BE ACCEPTABLE. MAXIMUM LENGTH OF FLEXIBLE CONDUIT SHALL NOT EXCEED 6- FEET. LFMC SHALL BE PROTECTED AND SUPPORTED AS REQUIRE BY NEC. MANUFACTURERS OF FLEXIBLE CONDUITS SHALL BE CAROL, ANACONDA METAL HOSE OR UNIVERSAL METAL HOSE, OR APPROVED EQUAL.
- F. MINIMUM SIZE CONDUIT SHALL BE 3/4 INCH (21MM).

HUBS AND BOXES:

- A. AT ENTRANCES TO CABINETS OR OTHER EQUIPMENT NOT HAVING INTEGRAL THREADED HUBS PROVIDE METALLIC THREADED HUBS OF THE SIZE AND CONFIGURATION REQUIRED. HUB SHALL INCLUDE LOCKNUT AND NEOPRENE O-RING SEAL. PROVIDE IMPACT RESISTANT 105 DEGREE C PLASTIC BUSHINGS TO PROTECT CABLE INSULATION.
- B. CABLE TERMINATION FITTINGS FOR CONDUIT
 - CABLE TERMINATORS FOR RGS CONDUITS SHALL BE TYPE CRC BY O-Z/GEDNEY OR EQUAL.
 - CABLE TERMINATORS FOR LFMC SHALL BE ETCO - CL2075; OR MADE FOR THE PURPOSE PRODUCTS BY ROXTEC.
- C. EXTERIOR PULL BOXES AND PULL BOXES IN INTERIOR INDUSTRIAL AREAS SHALL BE PLATED CAST ALLOY, HEAVY DUTY, WEATHERPROOF, DUST PROOF, WITH GASKET, PLATED IRON ALLOY COVER AND STAINLESS STEEL COVER SCREWS, CROUSE-HINDS WAB SERIES OR EQUAL.
- D. CONDUIT OUTLET BODIES SHALL BE PLATED CAST ALLOY WITH SIMILAR GASKETED COVERS. OUTLET BODIES SHALL BE OF THE CONFIGURATION AND SIZE SUITABLE FOR THE APPLICATION. PROVIDE CROUSE-HINDS FORM 8 OR EQUAL.
- E. MANUFACTURER FOR BOXES AND COVERS SHALL BE HOFFMAN, SQUARE "D", CROUSE-HINDS, COOPER, ADALET, APPLETON, O-Z GEDNEY, RACO, OR APPROVED EQUAL.

SUPPLEMENTAL GROUNDING SYSTEM

- A. FURNISH AND INSTALL A SUPPLEMENTAL GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS. SUPPORT SYSTEM WITH NON-MAGNETIC STAINLESS STEEL CLIPS WITH RUBBER GROMMETS. GROUNDING CONNECTORS SHALL BE TINNED COPPER WIRE, SIZES AS INDICATED ON THE DRAWINGS. PROVIDE STRANDED OR SOLID BARE OR INSULATED CONDUCTORS AS INDICATED.
- B. SUPPLEMENTAL GROUNDING SYSTEM: ALL CONNECTIONS TO BE MADE WITH CAD WELDS, EXCEPT AT EQUIPMENT USE LUGS OR OTHER AVAILABLE GROUNDING MEANS AS REQUIRED BY MANUFACTURER; AT GROUND BARS USE TWO HOLE SPADES WITH NO OX.
- C. STOLEN GROUND-BARS: IN THE EVENT OF STOLEN GROUND BARS, CONTACT SPRINT CM FOR REPLACEMENT INSTRUCTION USING THREADED ROD KITS.

EXISTING STRUCTURE:

- A. EXISTING EXPOSED WIRING AND ALL EXPOSED OUTLETS, RECEPTACLES, SWITCHES, DEVICES, BOXES, AND OTHER EQUIPMENT THAT ARE NOT TO BE UTILIZED IN THE COMPLETED PROJECT SHALL BE REMOVED OR DE-ENERGIZED AND CAPPED IN THE WALL, CEILING, OR FLOOR SO THAT THEY ARE CONCEALED AND SAFE. WALL, CEILING, OR FLOOR SHALL BE PATCHED TO MATCH THE ADJACENT CONSTRUCTION.

CONDUIT AND CONDUCTOR INSTALLATION:

- A. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
- B. CONDUCTORS SHALL BE PULLED IN ACCORDANCE WITH ACCEPTED GOOD PRACTICE.



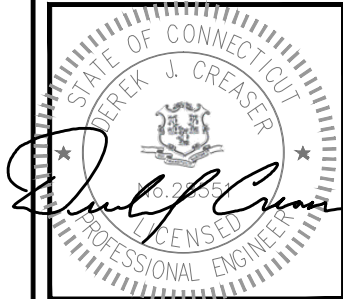
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
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SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
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0	05/02/14	ISSUED FOR CONSTRUCTION	SF

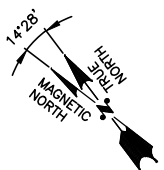
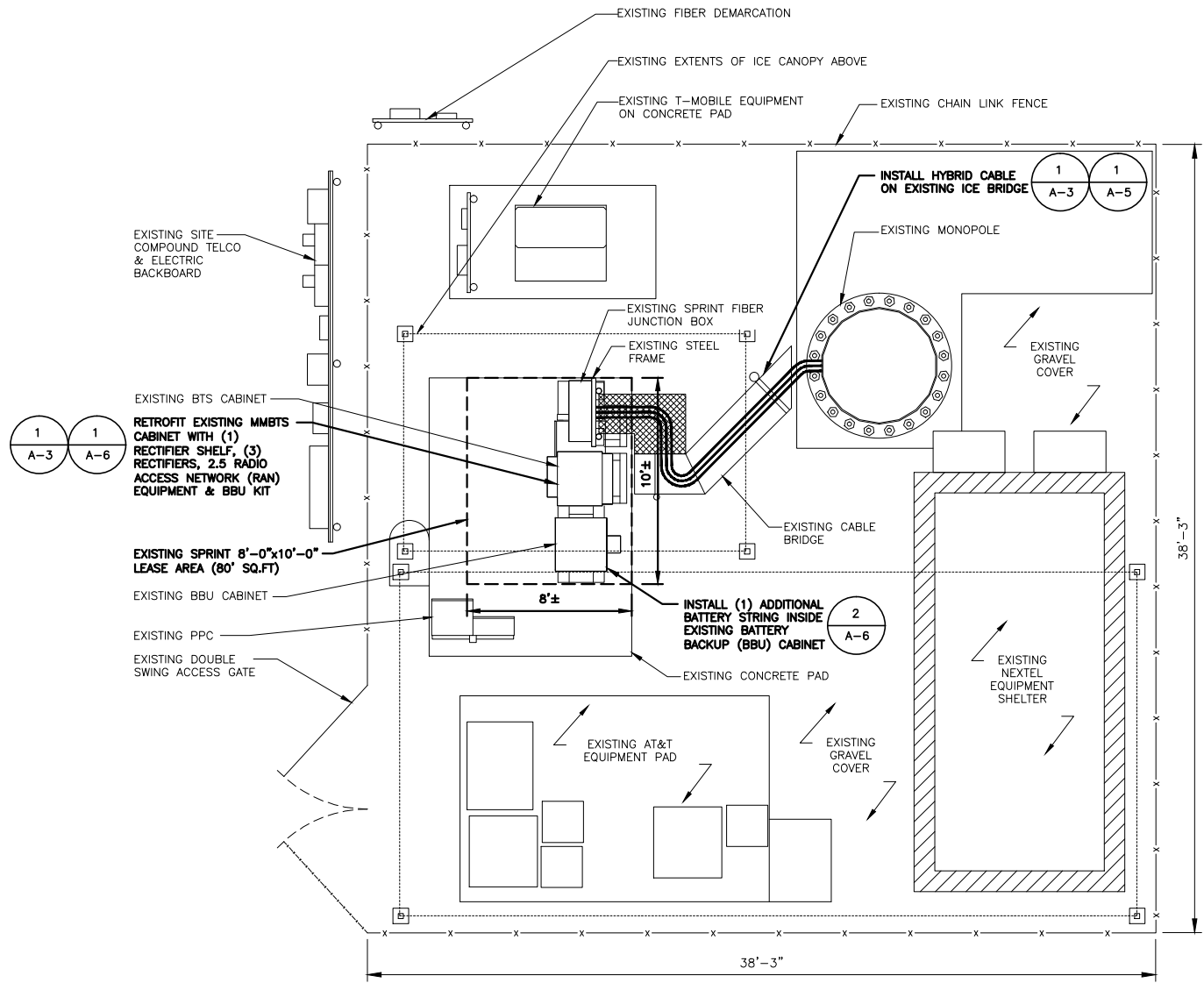
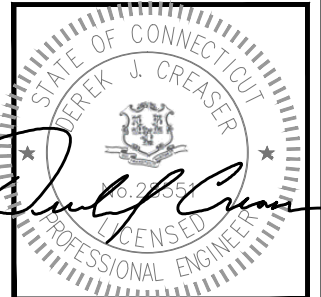
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CT03XC108-A

SITE NAME:
STONINGTON EAST

SITE ADDRESS:
86 VOLUNTOWN ROAD
STONINGTON, CT 06379

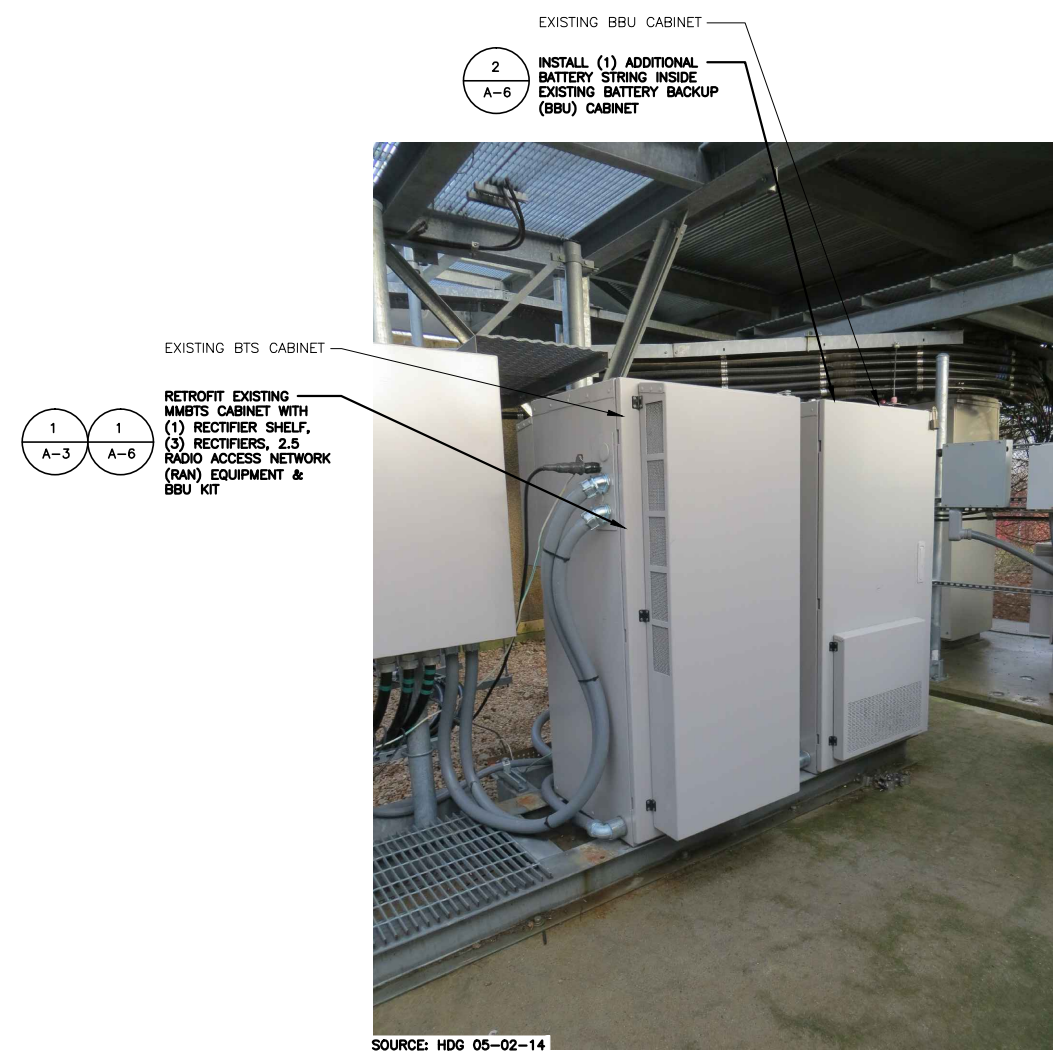
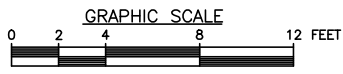
SHEET TITLE
OUTLINE
SPECIFICATIONS

SHEET NUMBER
SP-3



COMPOUND PLAN
SCALE: 1/4"=1'-0"

1
A-1



SOURCE: HDG 05-02-14

RAN EQUIPMENT PHOTO DETAIL
SCALE: N.T.S.

2
A-1

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STONINGTON, CT 06379

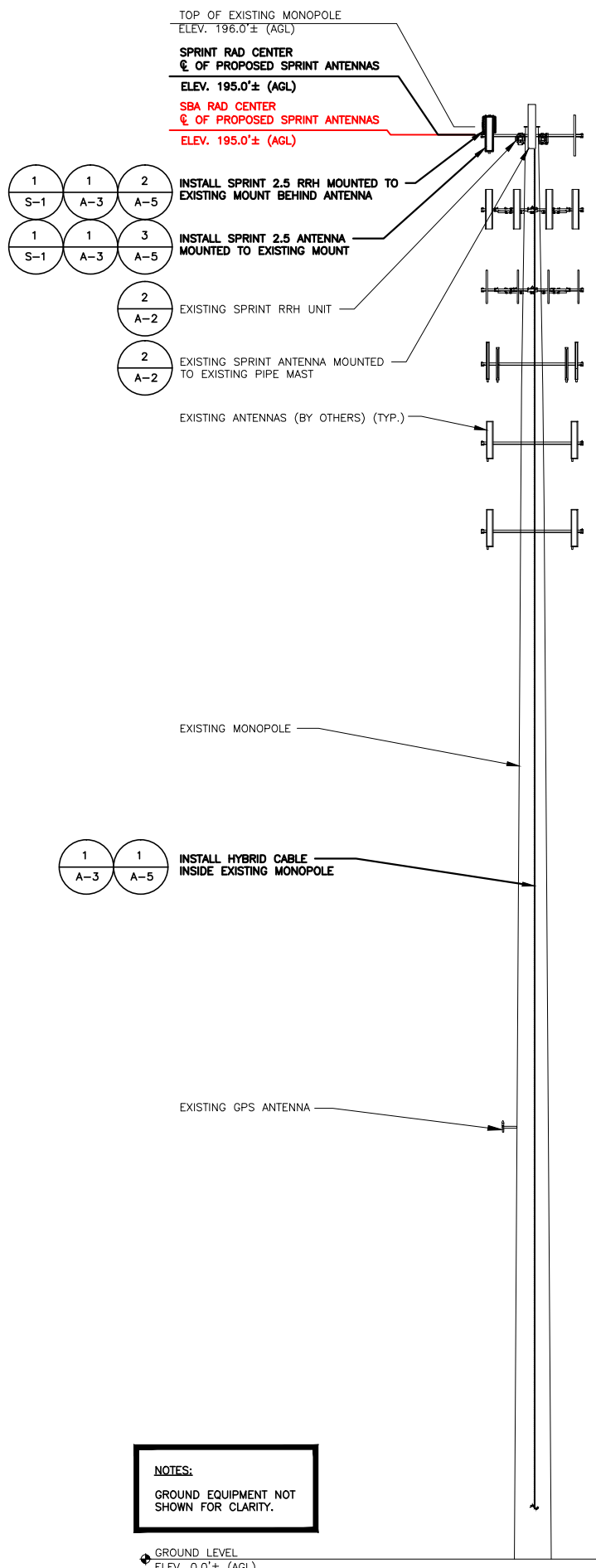
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COMPOUND PLAN

SHEET NUMBER
A-1

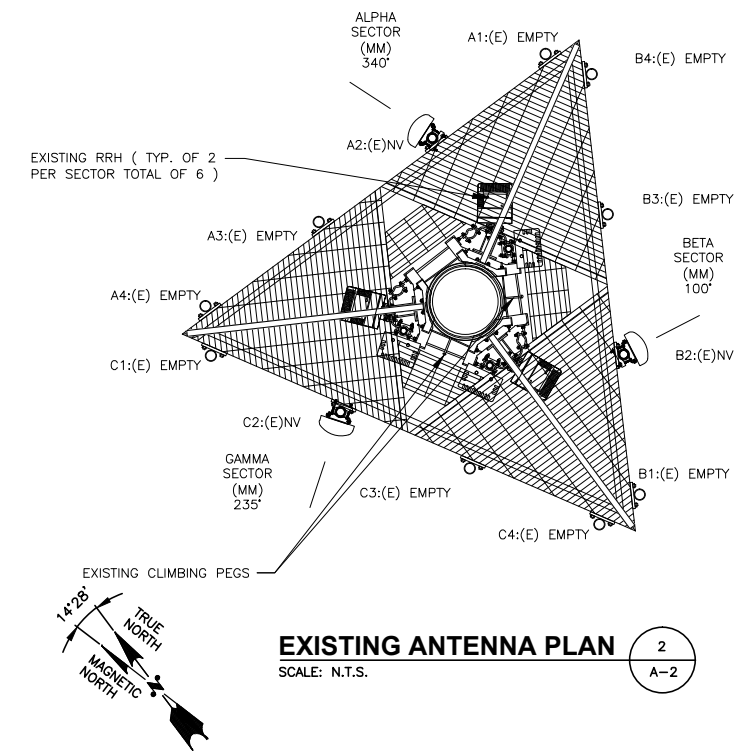
SPECIAL CONSTRUCTION NOTE:
SPRINT TOWER TOP WORK IS CONTINGENT ON THE FOLLOWING:
 * COMPLETION OF A GLOBAL STRUCTURAL STABILITY ANALYSIS.
 * COMPLETION OF AN ANTENNA/RRH MOUNT STRUCTURAL ASSESSMENT.
 * GC SHALL FURNISH, INSTALL AND COMPLETE ALL REQUIRED STRUCTURAL MODIFICATIONS AS INDICATED IN BEFORE-MENTIONED ANALYSIS AND ASSESSMENT.
 * SBA COMMUNICATIONS CORPORATION SHALL PROVIDE WRITTEN ACCEPTANCE/ APPROVAL FOR THE COMPLETION OF ALL TOWER/FOUNDATION STRUCTURAL MODIFICATIONS INCLUDING (AS NECESSARY) CONTROLLED CONSTRUCTION INSPECTIONS, SHOP-DRAWING APPROVALS, MATERIALS TEST RESULTS, AND FINAL ENGINEER'S AFFIDAVIT.

NOTE:
EXISTING AZIMUTHS FROM SPRINT
SITE AUDIT DATED 12/02/13

NOTE:
SPRINT RAD CENTER SHOWN IN RED TEXT BASED ON SBA-PROVIDED COLLOCATION APPLICATION, EQUIPMENT DATABASE, AND STRUCTURAL ANALYSIS. THE SBA-PROVIDED ANTENNA RAD CENTER SHALL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM THE SPRINT NV 2.5 RFDS.



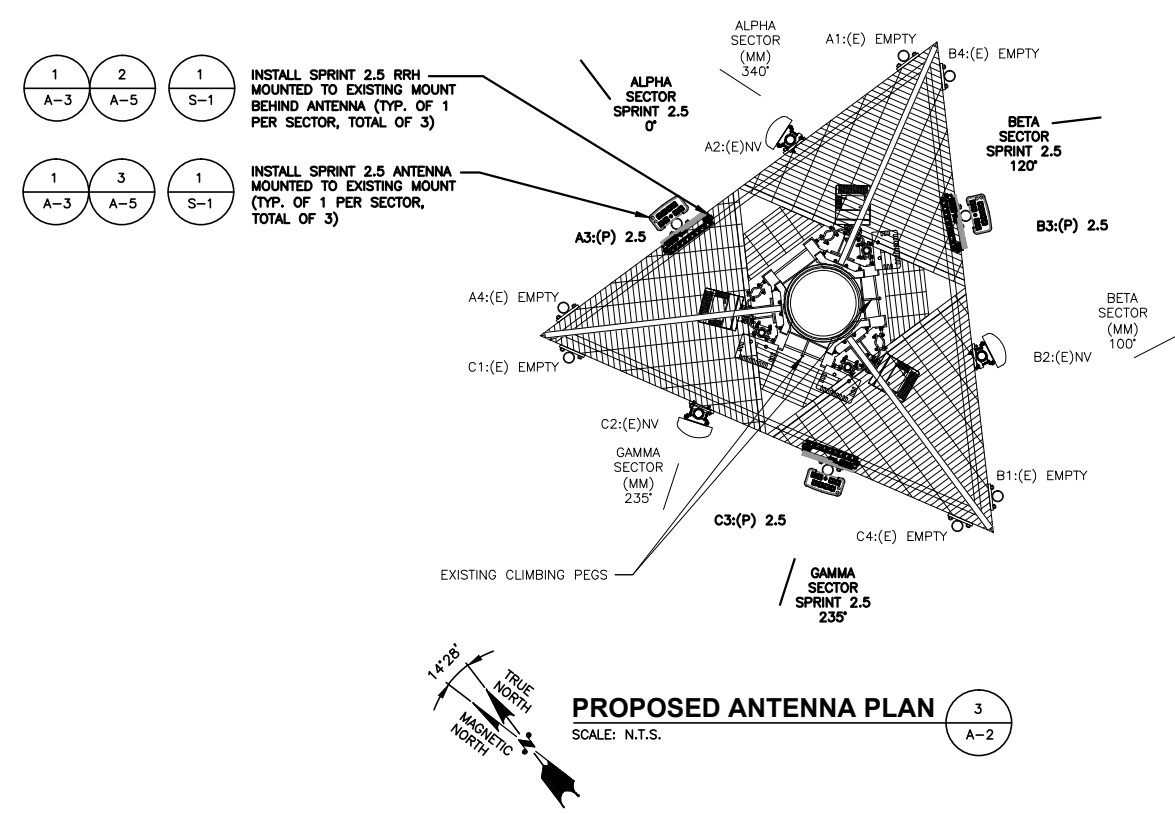
EXISTING PARTIAL ELEVATION DETAIL
SCALE: 1/4"=1'-0"



SPECIAL WORK NOTE:
JUMPERS FROM 2.5 RRH TO 2.5 ANTENNA CAN NOT EXCEED 15'. NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY DISCREPANCY.

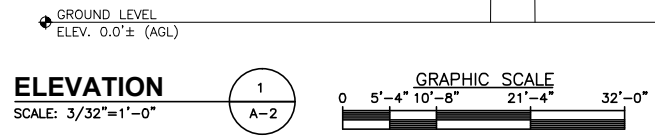
NOTES:
1) VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

ANTENNA STATUS LEGEND:
 EMPTY - EMPTY PIPE
 (E) - EXISTING
 (P) - INSTALL
 NV - SPRINT ANTENNA MODEL APXVSP18-C-A20
 2.5 - SPRINT ANTENNA



INSTALL SPRINT 2.5 RRH MOUNTED TO EXISTING MOUNT BEHIND ANTENNA (TYP. OF 1 PER SECTOR, TOTAL OF 3)
 INSTALL SPRINT 2.5 ANTENNA MOUNTED TO EXISTING MOUNT (TYP. OF 1 PER SECTOR, TOTAL OF 3)

NOTES:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY.



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SITE NAME:
STONINGTON EAST
SITE ADDRESS:
86 VOLUNTOWN ROAD
STONINGTON, CT 06379

SHEET TITLE
ELEVATION AND ANTENNA PLANS

SHEET NUMBER
A-2



RFDS Sheet

(by SBA Network Services 4/8/14. NOTE: General Contractor/Tower Crew shall verify that the latest RFDS is used for equipment installation.)

General Site Information

Site ID	CT03XC108	Equipment Vendor	ALU
Market	Northern Connecticut	Latitude	41.405840
Region	East	Longitude	-71.845000
MLA	SBA	LL SITE ID	CT00595-5
Structure Type	OTHER		
BTS Type	Outdoor Macro		
Solution ID	Not Available	Siterra SR Equipment Type	Outdoor Macro
		Equipment Vendor	ALU
		Incremental Power Draw Needed by Added Equipment	

Base Equipment

BBU Kit	ALU BBU Kit	Top Hat	None
BBU Kit Qty	1	Top Hat Qty	N/A
Growth Cabinet	None	Top Hat Dimensions (Inches)	N/A
Growth Cabinet Qty	N/A	Top Hat Weight (Lbs.)	N/A
Growth Cabinet Dimensions (Inches)	N/A		
Growth Cabinet Weight (Lbs.)	N/A		

RF Path Information

RRH	TD-RRH8x20-25		
RRH Qty	3		
RRH Dimensions (Inches)	26.1" x 18.6" x 6.7"		
RRH Weight (Lbs.)	70.0		
RRH Mount Weight (Lbs.)	10		
Power and Fiber Cable	ALU Hybrid Cable		
Cable Qty	1		
Weight per Foot (Lbs.)	0.992		
Diameter (Inches)	1.250		
Hybrid Cable Length (Feet)	234 (**A&E 250)	(Estimated by Sprint as Antenna CL plus 20%; DO NOT BOM using this length.)	
Coax Jumper	Coax Jumper, Mfg TBD.		
Coax Jumper Qty	27		
Coax Jumper Length (Feet)	8 (**A&E 5)		
Coax Jumper Weight (Lbs.)	1.7		
Coax Jumper Diameter (Inches)	0.5		
AISG Cable	Commscope ATCB-B01-006		
AISG Cable Qty	3		
AISG Diameter (Inches)	0.315		
AISG Cable Length (Feet)	8 (**A&E 5)		
Weight of Entire AISG Cable (Lbs.)	1.3		

Antenna Sector Information

	Sector 1	Sector 2	Sector 3
Antenna Make/Model	RFS APXV9TM14-ALU-I20	RFS APXV9TM14-ALU-I20	RFS APXV9TM14-ALU-I20
Antenna Qty	1	1	1
Antenna Dimensions (Inches)	56.3 x 12.6 x 6.3	56.3 x 12.6 x 6.3	56.3 x 12.6 x 6.3
Antenna Weight (Lbs.)	55.1	55.1	55.1
Antenna Mounting Kit Weight (Lbs.)	11.5	11.5	11.5
CL Height (Feet)	195.0 (* SBA 195')	195.0	195.0
Antenna Azimuth (Degrees)	0	120	235
Antenna Mechanical Downtilt (Degrees)	0	0	0
Antenna Etilt (Degrees)	-2	-2	-2
RF Filter Make/Model	N/A	N/A	N/A

Comments

RFDS generated 4/8/14 by SBA Network Services from Sprint Plan of Record dated 4/2/14.

Comments in Red Text provided by A&E Vendor.

IMPORTANT CONSTRUCTION NOTE: General Contractor/Tower Crew shall verify that the latest RFDS is used for equipment installation.

* Note: Antenna Rad Center based on SBA-Provided Collocation Application, Equipment Database, and Structural Analysis. The SBA-Provided Antenna Rad Center shall supersede any conflicting information derived from the Sprint NV 2.5 Database.

** Note: Sprint CM shall confirm Hybrid Cable Length, Coax Jumper Length and AISG Cable Length before preparing BOM. A&E Recommended Hybrid Cable Length based on NV 2.5 Equipment Audit plus 20 Feet for (2) 10-foot coils at each end of the fiber trunk.

SPRINT CONSTRUCTION STANDARDS:

GENERAL CONTRACTOR SHALL ADHERE TO THE FOLLOWING SPRINT CONSTRUCTION STANDARDS.

- CONSTRUCTION STANDARDS: INTEGRATED CONSTRUCTION STANDARDS FOR WIRELESS SITES - (CURRENT VERSION), INCLUDING EXHIBITS A-M.
- CONSTRUCTION SPECIFICATIONS: CONSTRUCTION STANDARDS EXHIBIT A - STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES (CURRENT VERSION).
- GROUNDING STANDARDS: EXTERIOR GROUNDING SYSTEM DESIGN. GROUNDING STANDARDS (SUPPLEMENT): ANTI-THEFT UPDATE TO SPRINT GROUNDING 082412 AND SPRINT ENGINEERING LETTER EL-0504 DATED 04.20.12.
- WEATHER PROOFING STANDARDS: EXCERPT FROM CONSTRUCTION STANDARDS EXHIBIT A, SECTION 3.6 WEATHERPROOFING CONNECTORS AND GROUND KITS.
- COLOR CODING: SPRINT NEXTEL ANT AND LINE COLOR CODING PER SPRINT TS-0200 CURRENT VERSION.
- GENERAL CONTRACTOR TO FIELD VERIFY AZIMUTH AND CL HEIGHT AND MECHANICAL DOWNTILT. IF DIFFERENT THAN CALLED OUT IN RFDS, HALT ANTENNA WORK FOR ONE HOUR, CALL SPRINT RF ENGINEER (OR MANAGER IF RF ENGINEER DOES NOT ANSWER, BUT STILL LEAVE A MESSAGE TO RF ENGINEER) USING SPRINT-PROVIDED CONTACT INFORMATION FOR FURTHER INSTRUCTIONS. IF SPRINT DOES NOT RESPOND WITHIN ONE HOUR, PLACE 2.5G ANTENNA AT SAME CL HEIGHT AS 1.9G ANTENNA AND EMAIL CORRECT CL HEIGHT AND AZIMUTH TO SPRINT RF ENGINEER. UPDATE AS-BUILD DRAWING WITH CORRECT CL HEIGHT. ALSO EMAIL CORRECT 1900 MHZ AND 800 MHZ ANTENNA CL HEIGHT, AZIMUTH AND MECHANICAL DOWNTILT TO RF ENGINEER.
- AISG TESTS TO VERIFY OPERATION IS TO BE PERFORMED AFTER FINAL INSTALLATION OF ANTENNAS AND AISG CABLES HAVE BEEN CONNECTED. VERIFY OPERATION OF ALL EXISTING SPRINT AISG EQUIPMENT INCLUDING 800MHZ, 1.9GHZ AND 2.5G. TEST INCLUDE COMPLETE DOWNTILT, AZIMUTH (IF APPLICABLE) AND BEAMWIDTH SWINGS (IF APPLICABLE). DOCUMENT AISG TEST RESULTS IN COAX SWEEP TEST SPREADSHEET.
- GENERAL CONTRACTOR MUST INSURE THAT NO OBJECT IS LOCATED IN FRONT OF ANTENNA. THIS MEANS NO OBJECT IS TO BE LOCATED 45 DEGREES LEFT AND RIGHT OF FRONT OF ANTENNA OR 7 DEGREES UP AND DOWN FROM CENTER OF ANTENNA. IF THIS IS NOT POSSIBLE, CONTACT RF ENGINEER FOR FURTHER INSTRUCTION. IN ADDITION, 2.5G ANTENNA IS NOT TO BE PLACED IN FRONT OF ANY OTHER ANTENNA USING THE SAME 45 DEGREE RULE. THIS INCLUDES SPRINT AND NON-SPRINT ANTENNAS.
- GENERAL CONTRACTOR IS REQUIRED TO USE A DIGITAL ALIGNMENT TOOL TO SET AZIMUTH, ROLL AND DOWNTILT. AZIMUTH ACCURACY IS TO BE WITHIN 1 DEGREES. DOWNTILT AND ROLL (LEFT TO RIGHT TILT) IS TO BE WITHIN 0.1 DEGREES. IF FOR SOME REASON THIS ACCURACY CANNOT BE ACHIEVED, UPDATE AS-BUILT DRAWINGS AND EMAIL SPRINT RF ENGINEER WITH AS-BUILT SETTINGS. USE 3Z RF ALIGNMENT TOOL OR EQUIVALENT TOOL. [HTTP://WWW.3ZTELECOM.COM/ANTENNA-ALIGNMENT-TOOL/](http://www.3ztelecom.com/antenna-alignment-tool/).



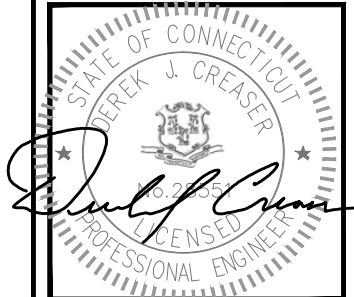
1 INTERNATIONAL BLVD, SUITE 800
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SITE NUMBER:
CT03XC108-A

SITE NAME:
STONINGTON EAST

SITE ADDRESS:
86 VOLUNTOWN ROAD
STONINGTON, CT 06379

SHEET TITLE

RF DATA SHEET

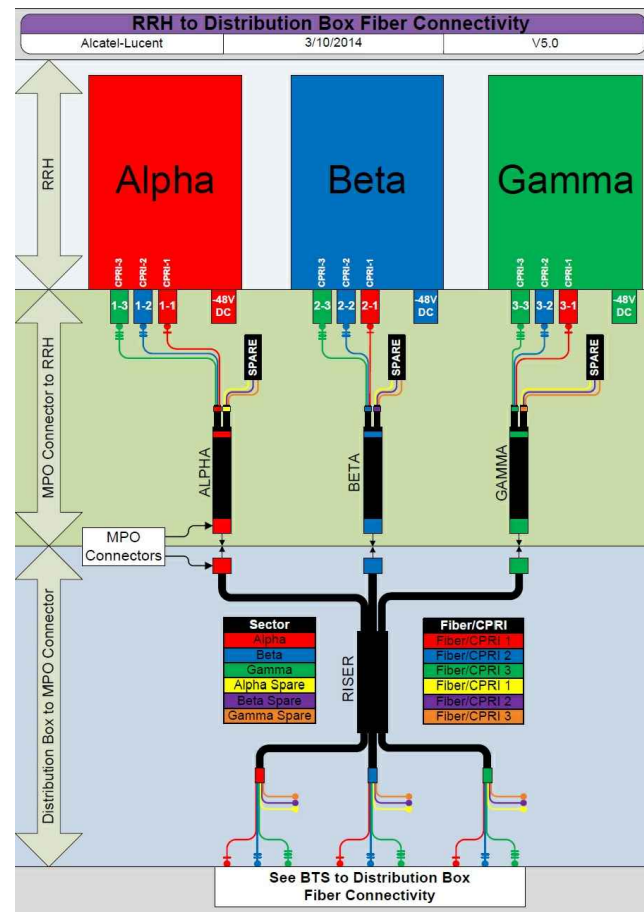
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A-3

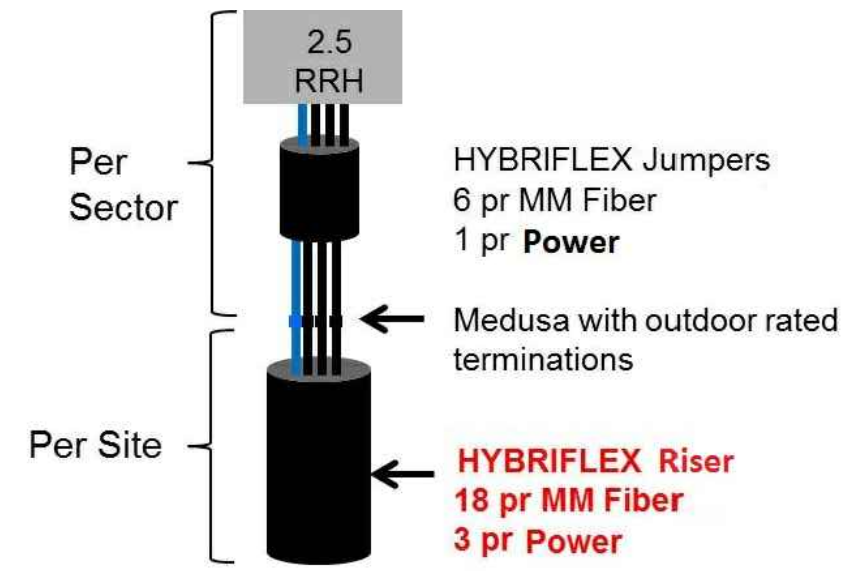
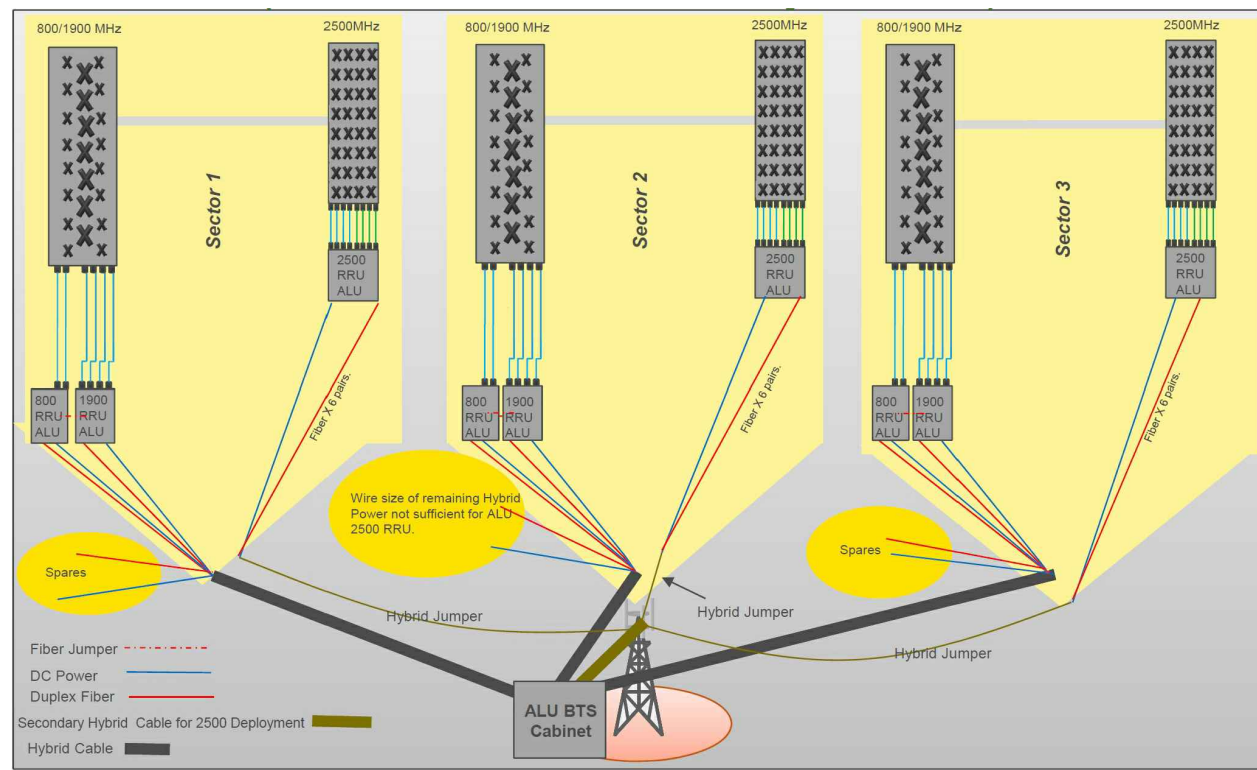
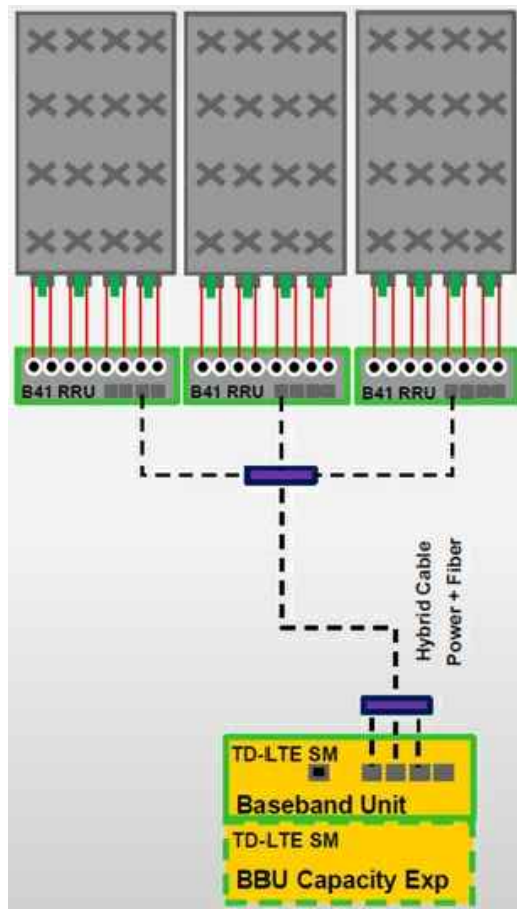
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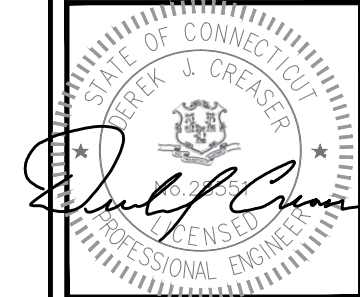
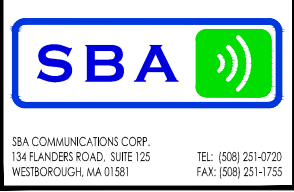
1
A-3



CABLE COLOR CODING DIAGRAM
SCALE: N.T.S.



NOTE:
GENERAL CONTRACTOR SHALL VERIFY THAT THE LATEST RF DATA SHEET IS USED FOR EQUIPMENT INSTALLATION.



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0	05/02/14	ISSUED FOR CONSTRUCTION	SF

SITE NUMBER:
CT03XC108-A

SITE NAME:
STONINGTON EAST

SITE ADDRESS:
86 VOLUNTOWN ROAD
STONINGTON, CT 06379

SHEET TITLE
RAN WIRING
DIAGRAM

SHEET NUMBER
A-4

HYBRID CABLE DC CONDUCTOR SIZE GUIDELINE				
MANUF:	RFS			
CABLE	LENGTH	DC CONDUCTOR	CABLE DIAMETER	
FIBER ONLY	VARIES	USE NV HYBRIFLEX	5/8"	
HYBRIFLEX	<200'	8 AWG	1-1/4"	
HYBRIFLEX	225-300'	6 AWG	1-1/4"	
HYBRIFLEX	325-375'	4 AWG	1-1/4"	

RFS HYBRIFLEX RISER CABLE SCHEDULE

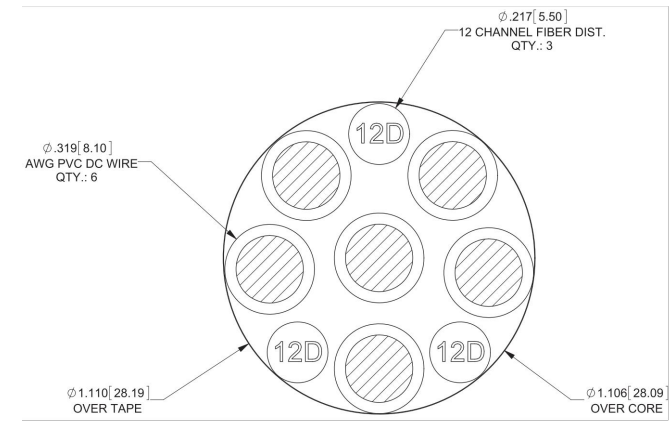
Power	Hybrid cable	Length
Fiber Only (Existing DC Power)	MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F	175 ft
8 AWG Power	MN: HB114-08U3M12-050F 3x 8 AWG power pairs, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 50 ft	50 ft
	MN: HB114-08U3M12-075F	75 ft
	MN: HB114-08U3M12-100F	100 ft
	MN: HB114-08U3M12-125F	125 ft
	MN: HB114-08U3M12-150F	150 ft
	MN: HB114-08U3M12-175F	175 ft
6 AWG Power	MN: HB114-13U3M12-225F 3x 6 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 225 ft	225 ft
	MN: HB114-13U3M12-250F	250 ft
	MN: HB114-13U3M12-275F	275 ft
	MN: HB114-13U3M12-300F	300 ft
4 AWG Power	MN: HB114-21U3M12-325F 3x 4 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 325 ft	325 ft
	MN: HB114-21U3M12-350F	350 ft
	MN: HB114-21U3M12-375F	375 ft

RFS HYBRIFLEX JUMPER CABLE SCHEDULE

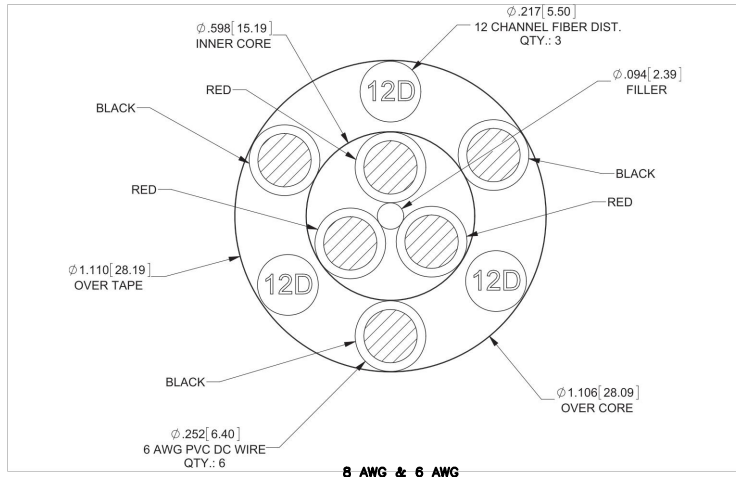
Power	Hybrid Jumper cable	Length
Fiber Only	MN: HBF012-M3-5F1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: HBF012-M3-10F1	10 ft
	MN: HBF012-M3-15F1	15 ft
8 AWG Power	MN: HBF058-08U1M3-5F1 5 ft, 1x 8 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-08U1M3-10F1	10 ft
	MN: HBF058-08U1M3-15F1	15 ft
6 AWG Power	MN: HBF058-13U1M3-5F1 5 ft, 1x 6 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-13U1M3-10F1	10 ft
	MN: HBF058-13U1M3-15F1	15 ft
4 AWG Power	MN: HBF078-21U1M3-5F1 5 ft, 1x 4 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 7/8 cable	5 ft
	MN: HBF078-21U1M3-10F1	10 ft
	MN: HBF078-21U1M3-15F1	15 ft

* NOTE: SPRINT CM TO CONFIRM HYBRID RISER CABLE AND HYBRID JUMPER CABLE MODEL NUMBERS BEFORE PREPARING BOM.

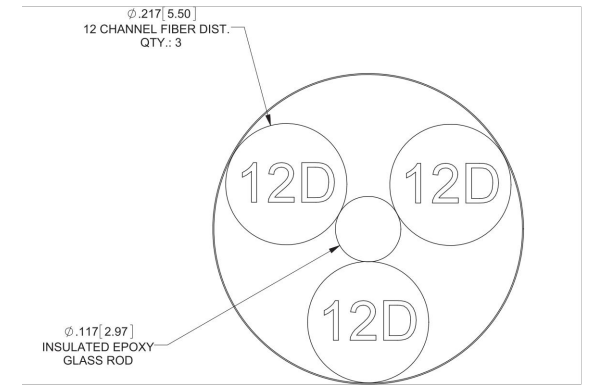
2.5 HYBRID CABLE X-SECTION AND DATA



4 AWG

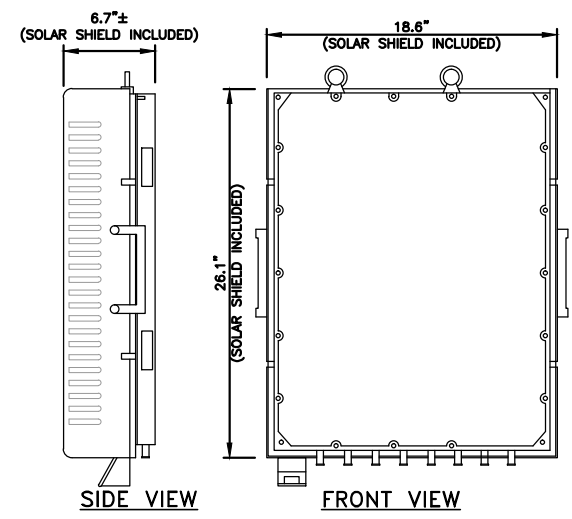


8 AWG & 6 AWG



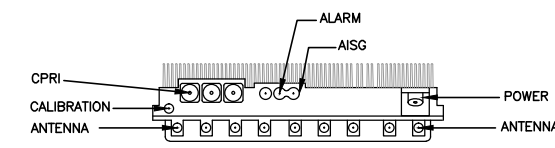
FIBER ONLY

MANUF:	ALCATEL-LUCENT
MODEL:	TD-RRH8x20-25
LENGTH:	26.1
WIDTH:	18.6
DEPTH:	6.7
WEIGHT:	70 LBS
AREA:	3.5 SF



SIDE VIEW

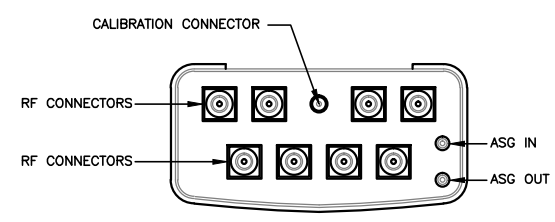
FRONT VIEW



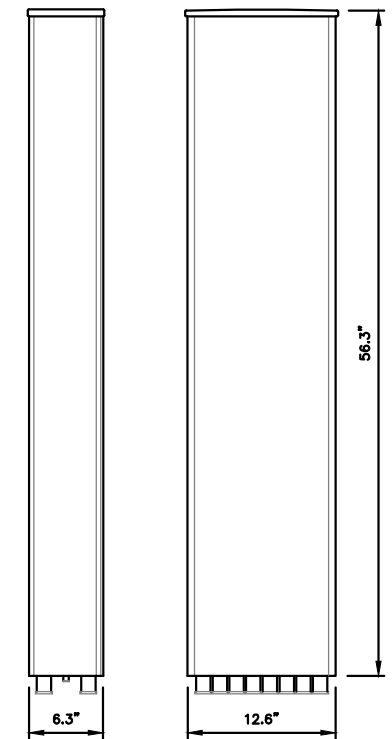
PLAN VIEW

2.5 RRH'S
SCALE: N.T.S.

MANUF:	RFS
MODEL:	APXV9TM14-ALU-120
LENGTH:	56.3
WIDTH:	12.6
DEPTH:	6.3
WEIGHT:	55.1 LBS
AREA:	4.9 SF



PLAN VIEW



2.5 ANTENNA SPECIFICATIONS

SCALE: N.T.S.



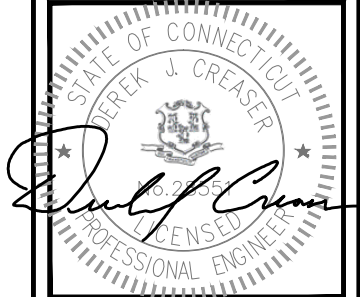
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
TEL: (800) 357-7641



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134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
TEL: (508) 251-0720
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FAX: (978) 336-5586



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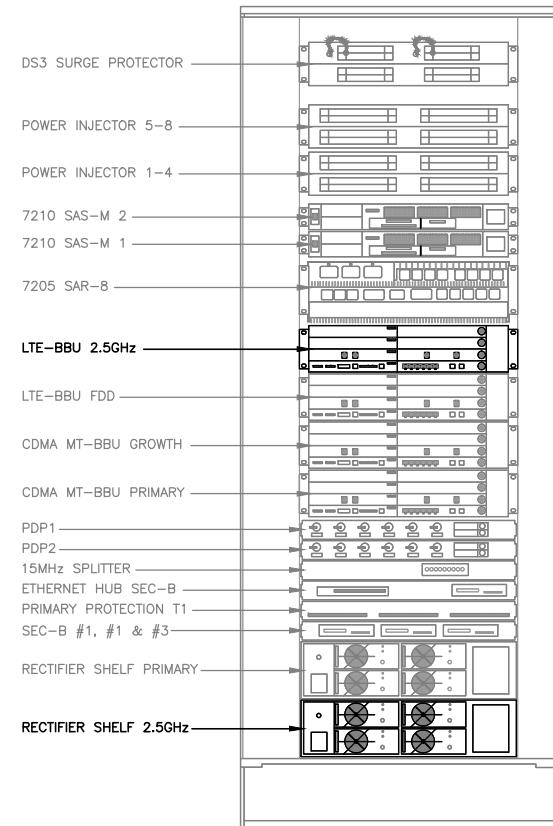
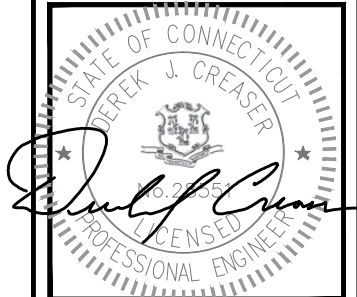
APPROVED BY: DJC

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STONINGTON, CT 06379

SHEET TITLE
EQUIPMENT
DETAILS

SHEET NUMBER
A-5



FRONT VIEW

EXISTING MMBTS OUTDOOR CABINET WITH 2.5 EQUIPMENT

SCALE: N.T.S.

1
A-6



SOURCE: SPRINT AUDIT 12-02-13

FRONT VIEW

SUFFICIENT SPACE IN EXISTING BBU. INSTALL (1) ADDITIONAL BATTERY STRING IN EXISTING BBU CABINET.

EXISTING 2.5 POWER BBU CABINET

SCALE: N.T.S.

2
A-6

CHECKED BY: BB

APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
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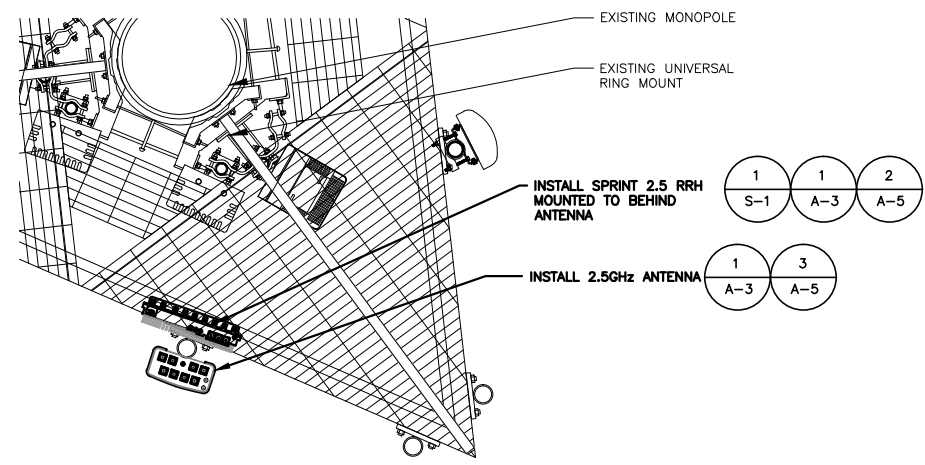
SITE ADDRESS:
86 VOLUNTOWN ROAD
STONINGTON, CT 06379

SHEET TITLE

EQUIPMENT
DETAILS

SHEET NUMBER

A-6



NOTE: ONE SECTOR SHOWN FOR CLARITY
SECTION A-A

- INSTALLATION NOTES:**
- CONTRACTOR TO ENSURE THAT RRH MOUNTING DOES NOT INTERFERE WITH CLIMBING LADDER/PEGS, CABLE CLIMB, OR COAX PORTS. MONOPOLE: COLLAR-MOUNT RRH CLUSTER SHALL PROVIDE AN OPENING BETWEEN ADJACENT RRH AT LEAST 30" WIDE CENTERED ON THE EXISTING SAFETY-CLIMB AND 30" DEEP FROM THE FACE OF THE POLE. SELF-SUPPORT: RRH LEG-MOUNT OR FACE-MOUNT SHALL PROVIDE AN UNOBSTRUCTED VERTICAL CLIMBING PASSAGE AT LEAST 30" WIDE AND 30" DEEP CENTERED ON THE LEG WITH THE CLIMBING LADDER/PEGS.
 - CONTRACTOR TO VERIFY DIAMETER OF EXISTING MONOPOLE BEFORE ORDERING PARTS.
 - CONTRACTOR TO VERIFY IN FIELD SIZE OF EXISTING MOUNTING PIPE TO BE 2-1/2" STD (2.88 O.D.) PIPE MAST (6'-0" LONG).
 - VERIFY EXACT RRH AND ANTENNA MODEL & AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.
 - ROTATE EXISTING ANTENNA FRAME AS NEEDED TO ACCOMMODATE INSTALL ANTENNAS.
 - RRH PLACEMENT FOR REFERENCE ONLY. CONTRACTOR SHALL PLACE RRH IN CORRECT ORDER MATCHING INSTALL ANTENNA PLACEMENT AND ENSURE THAT THERE IS ENOUGH CLEARANCE FOR RRHS TO BE PLACED ON THE INSIDE ON THE ANTENNA FRAME.
 - INSTALL EQUIPMENT TO BE MOUNTED PER MANUFACTURERS SPECIFICATIONS.

- SPECIAL CONSTRUCTION NOTE:**
SPRINT TOWER TOP WORK IS CONTINGENT ON THE FOLLOWING:
- COMPLETION OF A GLOBAL STRUCTURAL STABILITY ANALYSIS (PROVIDED BY TOWER OWNER).
 - COMPLETION OF AN ANTENNA/RRH MOUNT STRUCTURAL ASSESSMENT (PROVIDED BY A&E VENDOR).
 - GC SHALL FURNISH, INSTALL AND COMPLETE ALL REQUIRED STRUCTURAL MODIFICATIONS AS INDICATED IN BEFORE-MENTIONED ANALYSIS AND ASSESSMENT.
 - SBA COMMUNICATIONS CORPORATION SHALL PROVIDE WRITTEN ACCEPTANCE/APPROVAL FOR THE COMPLETION OF ALL TOWER/FOUNDATION STRUCTURAL MODIFICATIONS INCLUDING (AS NECESSARY) CONTROLLED CONSTRUCTION INSPECTIONS, SHOP-DRAWING APPROVALS, MATERIALS TEST RESULTS, AND FINAL ENGINEER'S AFFIDAVIT.



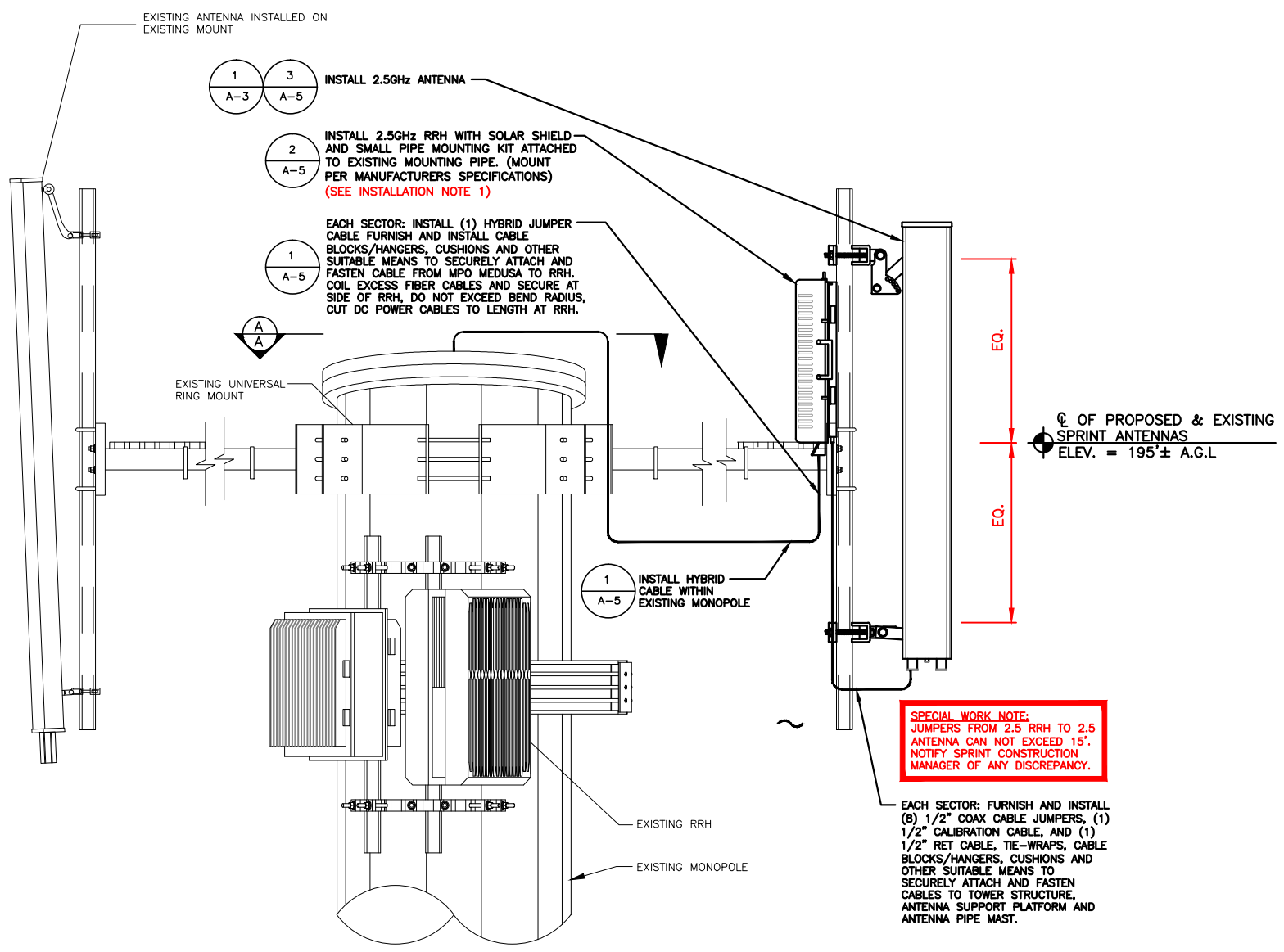
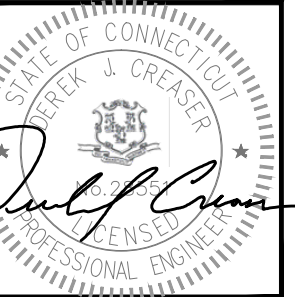
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
TEL: (800) 357-7641



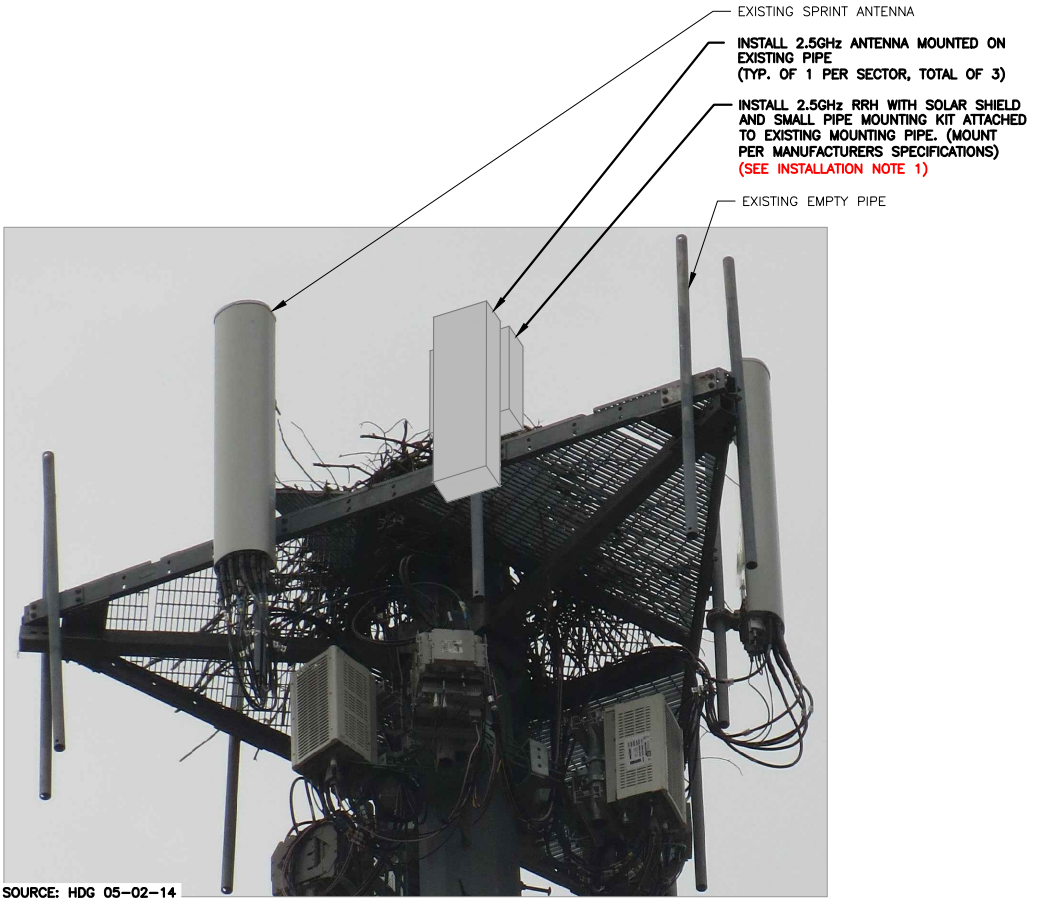
SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
TEL: (508) 251-0720
FAX: (508) 251-1755



45 BEECHWOOD DRIVE
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TEL: (978) 557-5553
FAX: (978) 336-5586



NOTE: ONE SECTOR SHOWN FOR CLARITY
2.5 ANTENNA AND RRH MOUNTING DETAIL
SCALE: N.T.S.



SOURCE: HDG 05-02-14
NOTE: ONE SECTOR SHOWN FOR CLARITY
2.5 ANTENNA AND RRH PHOTO DETAIL AND EQUIPMENT SCHEMATIC
SCALE: N.T.S.

CHECKED BY: BB

APPROVED BY: DJC

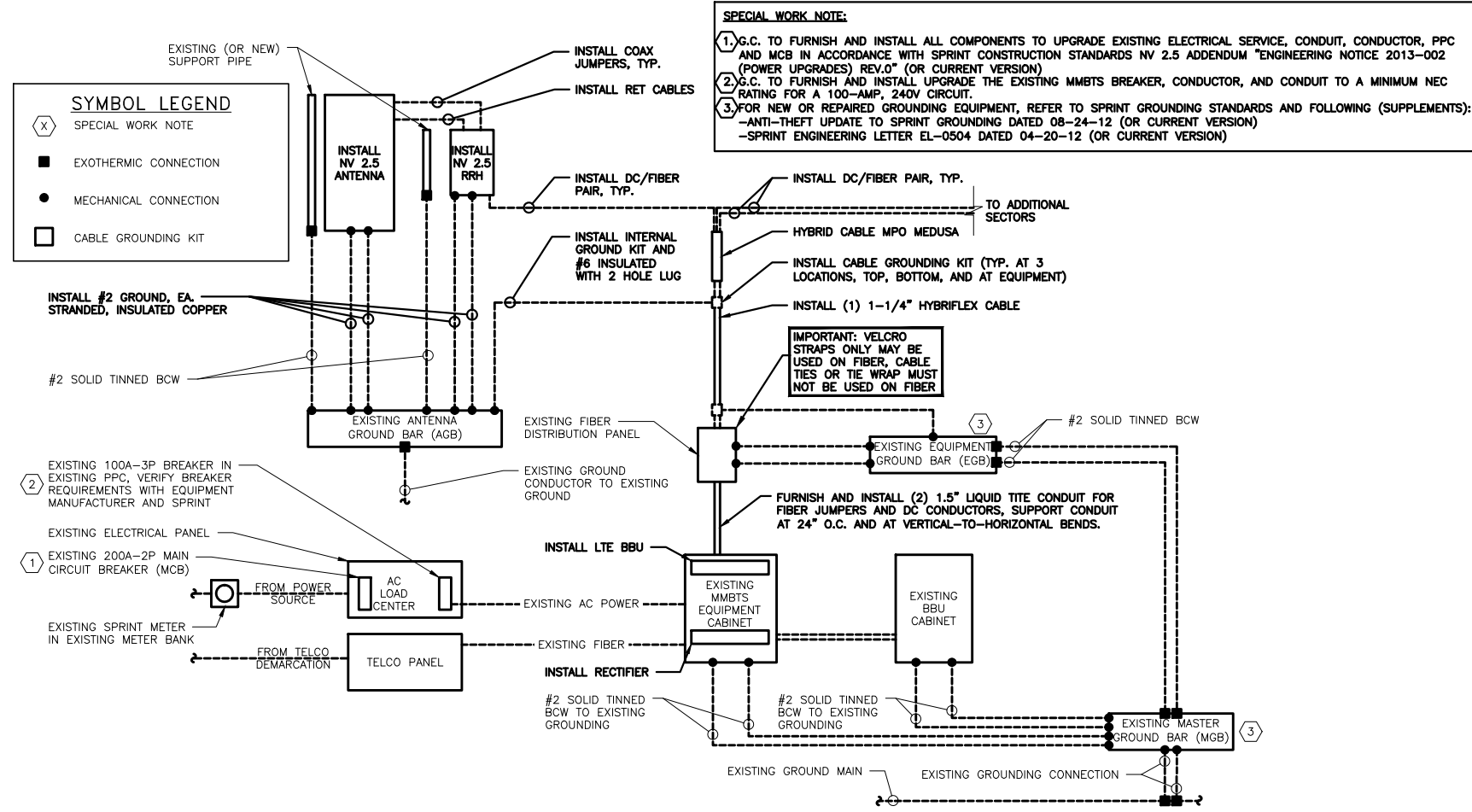
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STONINGTON, CT 06379

SHEET TITLE
STRUCTURAL
DETAILS

SHEET NUMBER
S-1



- ELECTRICAL NOTES**
- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
 - THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT ROUTING WITH LOCAL UTILITY COMPANIES AND SPRINT CONSTRUCTION MANAGER.
 - ALL CONDUITS ROUTED BELOW GRADE SHALL TRANSITION TO RIGID GALVANIZED ELBOWS WITH RIGID GALVANIZED STEEL CONDUIT ABOVE GRADE.
 - ALL METAL CONDUITS SHALL BE PROVIDED WITH GROUNDING BUSHINGS.
 - GENERAL CONTRACTOR SHALL PROVIDE ALL DIRECT BURIED CONDUITS WITH PLASTIC WARNING TAPE IDENTIFYING CONTENTS. TAPE COLORS SHALL BE ORANGE FOR TELEPHONE AND RED FOR ELECTRIC.
 - ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
 - THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIALS DESCRIBED BY DRAWINGS AND SPECIFICATIONS INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
 - GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
 - ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
 - BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
 - ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THIN INSULATION.
 - RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
 - RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
 - FIBER OPTIC CIRCUITS SHALL BE IN ACCORDANCE WITH NEC ARTICLE 770-OPTICAL FIBER CABLES AND RACEWAYS.
 - COMMUNICATIONS CIRCUITS SHALL BE IN ACCORDANCE WITH NEC ARTICLE 800-COMMUNICATIONS SYSTEMS.



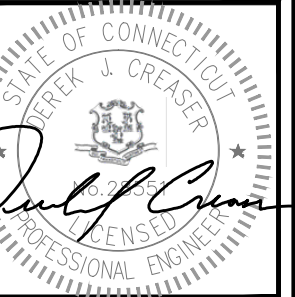
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STONINGTON, CT 06379

SHEET TITLE
ONE LINE DIAGRAM

SHEET NUMBER
E-1

1 EXISTING 200A-2P MAIN CIRCUIT BREAKER (MCB)



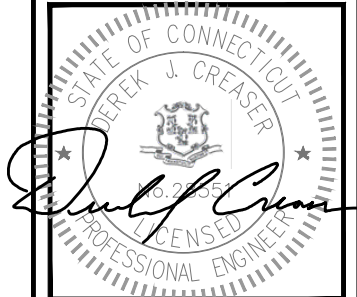
SOURCE: HDG 05-02-14

2 EXISTING 100A-2P MMBTS CIRCUIT BREAKER



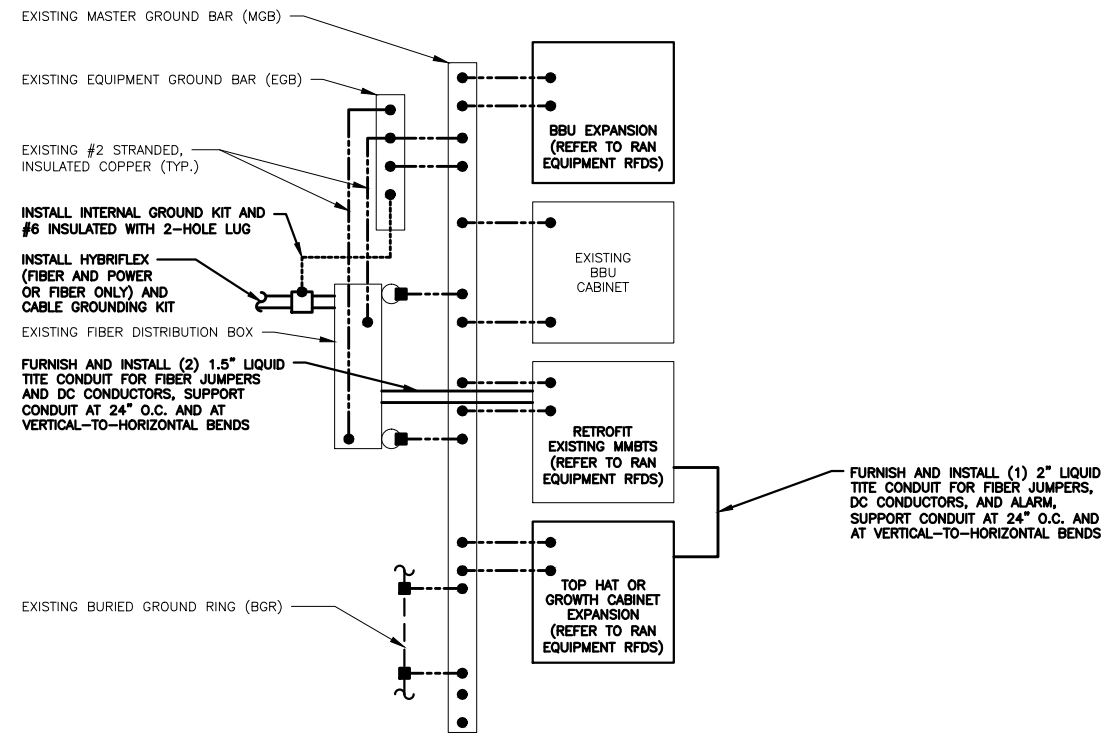
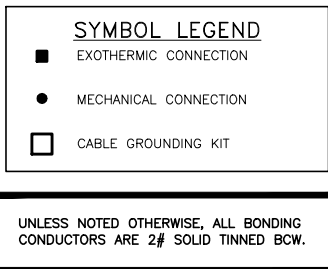
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EXISTING PPC BREAKER PANEL
SCALE: N.T.S.



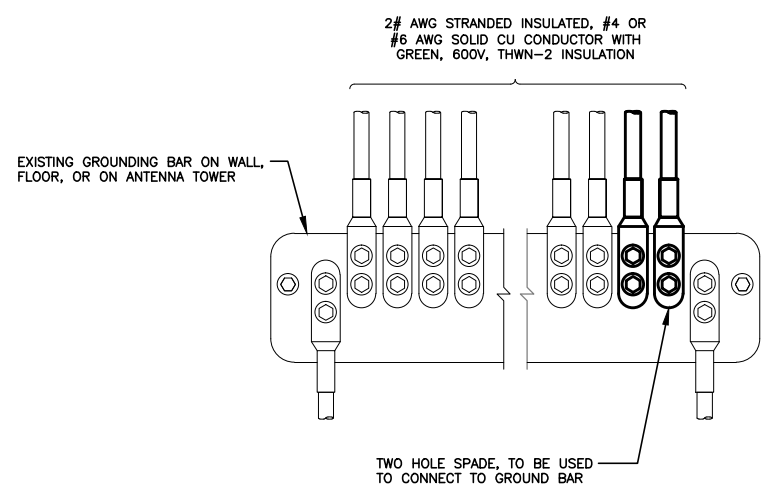
PROTECTIVE GROUNDING SYSTEMS GENERAL NOTES:

- GROUNDING SHALL BE IN ACCORDANCE WITH NEC ARTICLE 250—GROUNDING AND BONDING.
- GROUNDING SHALL BE IN ACCORDANCE WITH SPRINT SSEO DOCUMENTS 3.018.02.004 "BONDING, GROUNDING AND TRANSIENT PROTECTION FOR CELL SITES" AND 3.018.10.002 "SITE RESISTANCE TO EARTH TESTING".
- PROVIDE GROUND CONNECTIONS FOR ALL METALLIC STRUCTURES, ENCLOSURES, RACEWAYS AND OTHER CONDUCTIVE ITEMS ASSOCIATED WITH THE INSTALLATION OF CARRIER'S EQUIPMENT.
- GROUND CONNECTIONS: CLEAN SURFACES THOROUGHLY BEFORE APPLYING GROUND LUGS OR CLAMPS. IF SURFACE IS COATED, REMOVE THE COATING, APPLY A NON-CORROSIVE APPROVED COMPOUND TO CLEAN SURFACE AND INSTALL LUGS OR CLAMPS. WHERE GALVANIZING IS REMOVED FROM METAL, IT SHALL BE PAINTED OR TOUCHED UP WITH "GALVAMOX" OR EQUAL.
- ALL GROUNDING WIRES SHALL PROVIDE A STRAIGHT, DOWNWARD PATH TO GROUND WITH GRADUAL BENDS AS REQUIRED. GROUND WIRES SHALL NOT BE LOOPED OR SHARPLY BENT.
- ALL CLAMPS AND SUPPORTS USED TO SUPPORT THE GROUNDING SYSTEM CONDUCTORS AND PVC CONDUITS SHALL BE PVC TYPE (NON CONDUCTIVE). DO NOT USE METAL BRACKETS OR SUPPORTS WHICH WOULD FORM A COMPLETE RING AROUND ANY GROUNDING CONDUCTOR.
- ALL GROUND WIRES SHALL BE #2 SOLID TINNED BCW UNLESS NOTED OTHERWISE.
- PROVIDE DEDICATED #2 AWG COPPER GROUND WIRE FROM EACH ANTENNA MOUNTING PIPE TO ASSOCIATED CIGBE.
- GROUND ANTENNA BASES, FRAMES, CABLE RACKS, AND OTHER METALLIC COMPONENTS WITH #2 INSULATED TINNED STRANDED COPPER GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.
- EACH EQUIPMENT CABINET SHALL BE CONNECTED TO THE MASTER ISOLATION GROUND BAR (MGB) WITH #2 SOLID TINNED BCW EQUIPMENT CABINETS WALL HAVE (2) CONNECTIONS.
- GROUND HYBRIFLEX SHIELD AT TOP, BOTTOM AND AT TRANSITION TO HYBRIFLEX JUMPER CABLES AT EQUIPMENT CABINET ENTRANCE USING MANUFACTURER'S GUIDELINES. WHEN HYBRIFLEX CABLE EXCEEDS 200', GROUND AT INTERVALS NOT EXCEEDING 100'.
- THE CONTRACTOR SHALL VERIFY THAT THE EXISTING GROUND BARS HAVE ENOUGH SPACE/HOLES FOR ADDITIONAL TWO HOLE LUGS.
- EXOTHERMIC WELDING IS RECOMMENDED FOR GROUNDING CONNECTION WHERE PRACTICAL OTHERWISE. THE CONNECTION SHALL BE MADE USING COMPRESSION TYPE-2 HOLES, LONG BARREL LUGS OR DOUBLE CRIMP "C" CLAMP. THE COPPER CABLES SHALL BE COATED WITH AN ANTI-OXIDANT (THOMAS BETTS KOPR-SHIELD) BEFORE MAKING THE CRIMP CONNECTIONS THE CONTRACTOR SHALL FOLLOW MANUFACTURER'S RECOMMENDED TORQUES ON THE BOLT ASSEMBLY TO SECURE CONNECTIONS.
- AT ALL TERMINATIONS AT EQUIPMENT ENCLOSURES, PANEL AND FRAMES OF EQUIPMENT AND WHERE EXPOSED FOR GROUNDING, CONDUCTOR TERMINATION SHALL BE PERFORMED UTILIZING TWO HOLE BOLTED TONGUE COMPRESSION TYPE LUGS WITH STAINLESS STEEL SELF-TAPPING SCREWS.
- THE MASTER GROUND BAR (MGB) SHALL BE MADE OF BARE 1/4"x2" COPPER (FOR OUTDOOR APPLICATIONS IT SHALL BE TINNED COPPER) AND LARGE ENOUGH TO ACCOMMODATE THE REQUIRED NUMBER OF GROUND CONNECTIONS. THE HARDWARE SECURING THE MGB SHALL ELECTRICAL INSULATE THE MGB FROM ANY STRUCTURE TO WHICH IT IS FASTENED.
- ALL BOLTS, WASHERS, AND NUTS USED ON GROUNDING CONNECTIONS SHALL BE STAINLESS STEEL.
- ALL GROUNDING CONNECTIONS SHALL BE COATED WITH A COPPER SHIELD ANTI-CORROSIVE AGENT SUCH AS T&B KOPR SHIELD. VERIFY PRODUCT WITH SPRINT CONSTRUCTION MANAGER.
- FOR NEW OR REPAIRED GROUNDING EQUIPMENT. REFER TO SPRINT GROUNDING STANDARDS AND FOLLOWING (SUPPLEMENTS):
-ANTI-THEFT UPDATE TO SPRINT GROUNDING DATED: 08-24-12 (OR CURRENT VERSION)
-SPRINT ENGINEERING LETTER EL-0504 DATED: 04-20-12 (OR CURRENT VERSION)



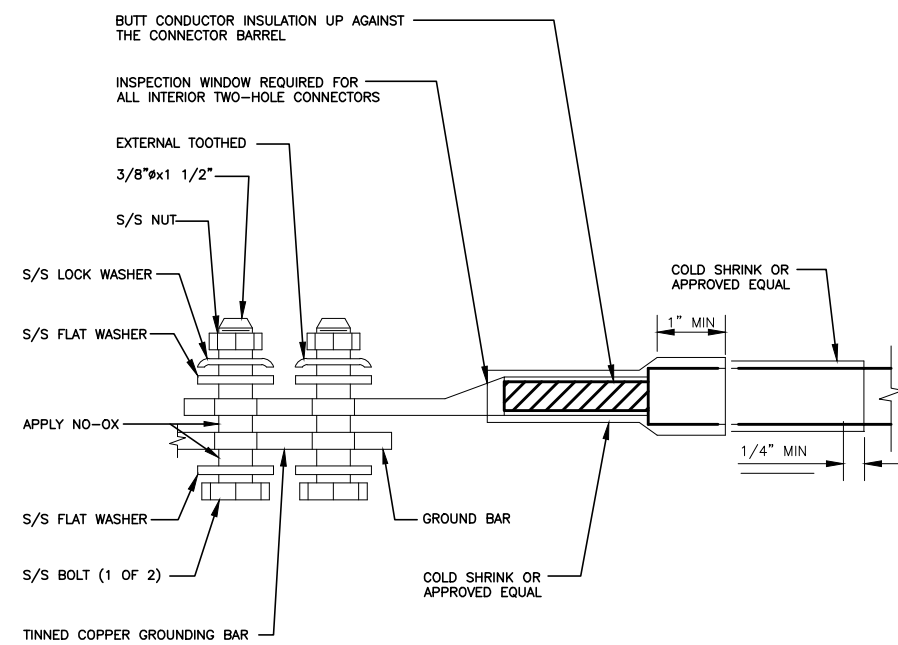
NOTE: HYBRIFLEX (FIBER & POWER) AND HYBRIFLEX (FIBER-ONLY) SHOWN. REFER TO RAN EQUIPMENT RFDS FOR SITE-SPECIFIC SCENARIO.

2.5 RAN EQUIPMENT GROUNDING SCHEMATIC 1
SCALE: N.T.S. E-2



- NOTES**
- APPLY NO-OX TO LUG AND BAR CONTACT SURFACE. DO NOT COAT INLINE LUG.
 - IF STOLEN GROUND BARS ARE ENCOUNTERED, CONTACT SPRINT CM FOR REPLACEMENT THREADED ROD KIT.

INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR 2
SCALE: N.T.S. E-2



TWO HOLE LUG 3
SCALE: N.T.S. E-2

CHECKED BY: BB

APPROVED BY: DJC

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SHEET TITLE
GROUNDING DETAILS AND NOTES

SHEET NUMBER
E-2