

UPS CampusShip: View/Print Label

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- 2. Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
- 3. GETTING YOUR SHIPMENT TO UPS**
Customers with a Daily Pickup
 Your driver will pickup your shipment(s) as usual.

Customers without a Daily Pickup

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

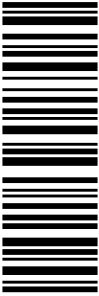
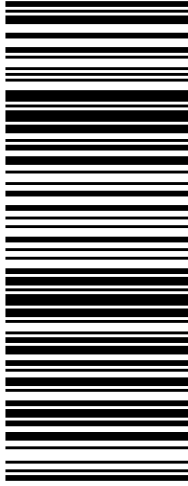

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UPS Access Point™
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FOLD HERE

<p>1 LBS</p> <p>JENNIFER ILADES 978-944-1804 CENTERLINE COMMUNICATIONS 750 W CENTER ST WEST BRIDGEWATER MA 02379</p> <p>SHIP TO: MARK C. NICKERSON, FIRST SELECTMAN 860-739-6931 TOWN OF EAST LYME 108 PENNSYLVANIA AVENUE NIANTIC CT 06357-2510</p>	<p>1 OF 1</p> <p>CT 063 5-02</p> 	<p>UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 1028 6062</p> 	<p>BILLING: P/P</p> <p>Reference # 1: CT1269 - CSC to 1st Selectman</p> <p>CS 22.0.11. WNTNVS0 20.04.10/2019</p> 
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Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Tuesday, January 14, 2020 10:20 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030310286062



Your package has been delivered.

Delivery Date: Tuesday, 01/14/2020
Delivery Time: 10:12 AM

At the request of CENTERLINE SITE ACQUISITION this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	<u>1Z9Y45030310286062</u>
Ship To:	Mark C. Nickerson, First Selectman Town of East Lyme 108 PENNSYLVANIA AVE NIANTIC, CT 06357 US
UPS Service:	UPS GROUND
Number of Packages:	1
Weight:	0.5 LBS
Delivery Location:	OFFICE ANDERSON
Reference Number 1:	CT1269 - CSC to 1st Selectman



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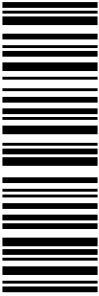


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<p style="text-align: right;">1 OF 1</p> <p>1 LBS</p> <p>JENNIFER ILADES 978-944-1804 CENTERLINE COMMUNICATIONS 750 W CENTER ST WEST BRIDGEWATER MA 02379</p> <p>SHIP TO: GARY A. GOESCHEL, DIR. OF PLANNING 860-739-6931 TOWN OF EAST LYME 108 PENNSYLVANIA AVENUE NIANTIC CT 06357-2510</p>	<p>CT 063 5-02</p> 	<p>UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 0750 1076</p> 	<p style="text-align: center;">BILLING: P/P</p> <p style="text-align: center;">Reference # 1: CT1269 - CSC to Planning</p> <p style="text-align: center; font-size: small;">CS 22.0.11. WNTNVS0 20.04.10/2019</p> 
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Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Tuesday, January 14, 2020 10:20 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030307501076



Your package has been delivered.

Delivery Date: Tuesday, 01/14/2020
Delivery Time: 10:13 AM

At the request of CENTERLINE SITE ACQUISITION this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	<u>1Z9Y45030307501076</u>
Ship To:	Gary A. Goeschel, Dir. of Planning Town of East Lyme 108 PENNSYLVANIA AVE NIANTIC, CT 06357 US
UPS Service:	UPS GROUND
Number of Packages:	1
Weight:	0.5 LBS
Delivery Location:	OFFICE LINDO
Reference Number 1:	CT1269 - CSC to Planning



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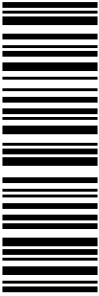
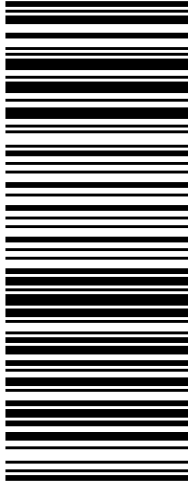

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<p>1 LBS</p> <p>JENNIFER ILADES 978-944-1804 CENTERLINE COMMUNICATIONS 750 W CENTER ST WEST BRIDGEWATER MA 02379</p> <p>SHIP TO: WILLIAM MULHOLLAND, ZONING OFFICIAL 860-691-4114 TOWN OF EAST LYME 108 PENNSYLVANIA AVENUE NIANTIC CT 06357-2510</p>	<p>1 OF 1</p> <p>CT 063 5-02</p> 	<p>UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 0771 8084</p> 	<p>BILLING: P/P</p> <p>Reference # 1: CT1269 - CSC to Zoning</p> <p>CS 22.0.11. WNTNVS0 20.04.10/2019</p> 
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Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Tuesday, January 14, 2020 10:20 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030307718084



Your package has been delivered.

Delivery Date: Tuesday, 01/14/2020
Delivery Time: 10:11 AM

At the request of CENTERLINE SITE ACQUISITION this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	<u>1Z9Y45030307718084</u>
Ship To:	William Mulholland, Zoning Official Town of East Lyme 108 PENNSYLVANIA AVE NIANTIC, CT 06357 US
UPS Service:	UPS GROUND
Number of Packages:	1
Weight:	0.5 LBS
Delivery Location:	OFFICE ROLFE
Reference Number 1:	CT1269 - CSC to Zoning



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<p>1 LBS</p> <p>1 OF 1</p> <p>JENNIFER ILIADES 978-944-1804 CENTERLINE COMMUNICATIONS 750 W CENTER ST WEST BRIDGEWATER MA 02379</p> <p>SHIP TO: SHAWN NOTTAGE 401-533-6434 SBA TOWERS V, LLC 8051 CONGRESS AVENUE BOCA RATON FL 33487-1307</p>	<p>FL 332 6-07</p> 	<p>UPS 2ND DAY AIR</p> <p>2</p> <p>TRACKING #: 1Z 9Y4 503 02 1133 7097</p> 	<p>BILLING: P/P</p> <p>Reference # 1: CTT1269 - CSC to SBA</p> <p>CS 22.0.11. WNTNVS0 20.0A.10/2019</p> 
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Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Wednesday, January 15, 2020 1:53 PM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030215245965



Your package has been delivered.

Delivery Date: Wednesday, 01/15/2020
Delivery Time: 01:50 PM

At the request of CENTERLINE SITE ACQUISITION this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	<u>1Z9Y45030215245965</u>
Ship To:	Shawn Nottage SBA Towers, LLC 8051 CONGRESS AVE BOCA RATON, FL 33487 US
UPS Service:	UPS 2ND DAY AIR
Number of Packages:	1
Weight:	0.5 LBS
Delivery Location:	OFFICE MORALES
Reference Number 1:	CT5231 - CSC to SBA



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<p>1 LBS 1 OF 1</p> <p>JENNIFER ILIADES 978-944-1804 CENTERLINE COMMUNICATIONS 750 W CENTER ST WEST BRIDGEWATER MA 02379</p> <p>SHIP TO: C/O SBA TOWERS V, LLC 401-533-6434 CHRISTOPHER SAMUELSON 8051 CONGRESS AVENUE BOCA RATON FL 33487-1307</p>	<p>FL 332 6-07</p> 	<p>UPS 2ND DAY AIR</p> <p>2</p> <p>TRACKING #: 1Z 9Y4 503 02 1875 8101</p> 	<p>BILLING: P/P</p> <p>Reference # 1: CT1269 -CSC to ground owner c/o SBA</p> <p style="font-size: small;">CS 22.0.11. WNTNVS0 20.04.10/2019</p> 
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Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Wednesday, January 15, 2020 1:53 PM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030204440970



Your package has been delivered.

Delivery Date: Wednesday, 01/15/2020
Delivery Time: 01:50 PM

At the request of CENTERLINE SITE ACQUISITION this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	<u>1Z9Y45030204440970</u>
Ship To:	c/o SBA Towers, LLC Blackrock Properties II, LLC 8051 CONGRESS AVE BOCA RATON, FL 33487 US
UPS Service:	UPS 2ND DAY AIR
Number of Packages:	1
Weight:	0.5 LBS
Delivery Location:	OFFICE MORALES
Reference Number 1:	CT5231 -CSC to Ground Owner c/o SBA



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January 10, 2020

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

Regarding: Notice of Exempt Modification – AT&T Site CT5231
Address: 86 Voluntown Road, Stonington, CT

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (“AT&T”) currently maintains a wireless telecommunications facility on an existing 196’ monopole tower at the above-referenced address, latitude 41.405539, longitude -71.845247. Said monopole tower is managed by SBA Towers, LLC.

AT&T desires to modify its existing telecommunications facility by swapping (6) antennas, swapping (3) remote radio heads, adding (3) remote radio heads, adding (1) surge arrester and accompanying feedlines as more particularly detailed and described on the enclosed Construction Drawings prepared by Hudson Design Group LLC, last revised December 18, 2019. The centerline height of the existing antennas is and will remain at 150 feet.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the following individuals: Danielle Chesebrough, First Selectman, Town of Stonington; Lawrence Stannard, Building Official, Town of Stonington; Keith Brynes, Acting Director of Planning, Town of Stonington; SBA Towers, LLC as manager of the above referenced tower; and Blackrock Properties II, LLC, as property owner at the above referenced address.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require an 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 modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. *Please see the RF emissions calculation for AT&T's modified facility enclosed herewith.*
5. The proposed modifications will not cause an ineligible change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading. *Please see the structural analysis dated December 6, 2019 and prepared by Tower Engineering Solutions enclosed herewith.*

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

Sincerely,



Jennifer Iliades
Site Acquisition Consultant
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
jiliades@clinellc.com

Enclosures: Exhibit 1 – Construction Drawings
Exhibit 2 – Property Card and GIS
Exhibit 3 – Structural Analysis
Exhibit 4 – Mount Analysis
Exhibit 5 – RF Emissions Analysis Report Evaluation
Exhibit 6 – Original Tower Sharing Approval

cc: Danielle Chesebrough, First Selectman, Town of Stonington
Lawrence Stannard, Building Official, Town of Stonington
Keith Brynes, Acting Director of Planning, Town of Stonington
SBA Towers, LLC as manager of tower
Blackrock Properties II LLC, as property owner

EXHIBIT 1

PROJECT INFORMATION

SCOPE OF WORK: ITEMS TO BE MOUNTED ON EXISTING MONOPOLE:

- NEW AT&T ANTENNAS (800-10966) (TYP. OF 1 PER ALPHA & BETA SECTORS, TOTAL OF 2).
- NEW AT&T ANTENNAS (800-10964) (TOTAL OF 1 FOR GAMMA SECTOR).
- NEW AT&T ANTENNAS (HPA65R-BU4A) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS B5/B12 4449 (700/850) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS B2/B66A (AWS/1900) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T SURGE ARRESTOR (DC6-48-60-18-8C) (TOTAL OF 1).
- INSTALL (2) DC POWER CABLES & (1) FIBER RUN (TO FOLLOW EXISTING ROUTE).

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- SWAP BASEBAND WITH 5216.
- ADD 2ND XMU.
- ADD RBS 6630.
- BASEBAND CONFIGURATION AS PER PD / SECTION-7.
- NEW AT&T RRUS B14 4478 (700) (TOTAL OF 2) (ALPHA & BETA SECTORS SHARED).
- NEW AT&T SURGE ARRESTOR (TSXDC-4310FM) (TOTAL OF 8)
- NEW AT&T OUTDOOR DC 12 MOUNTED ON NEW UNISTRUT (TOTAL OF 1)
- NEW AT&T FIBER MANAGEMENT BOX MOUNTED ON NEW UNISTRUT (TOTAL OF 1)
- NEW AT&T_DIPLEXERS (DBCT108F1V92-1) (TYP. OF 2 PER SECTOR, TOTAL OF 6)

ITEMS TO BE REMOVED:

- EXISTING AT&T ANTENNAS: AM-X-CD-17-65-00T-RET (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T ANTENNAS: 7770 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS: RRUS-11 (TYP. OF 1 PER SECTOR, TOTAL OF 3).

ITEMS TO REMAIN:

- (3) ANTENNAS, (6) TMA'S, (1) SURGE ARRESTOR, (12) 1-5/8" COAX, (2) DC POWER & (1) FIBER.

SITE ADDRESS: 86 VOLUNTOWN ROAD
PAWCATUCK, CT 06379

LATITUDE: 41.405591 N, 41° 24' 20.13" N

LONGITUDE: 72.845300 W, 72° 50' 43.08" W

TYPE OF SITE: MONOPOLE / OUTDOOR EQUIPMENT

STRUCTURE HEIGHT: 195'-0"±

RAD CENTER: 150'-0"±

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CT5231

SITE NAME: STONINGTON EAST

FA CODE: 10092210

**PACE ID: MRCTB033551, MRCTB033552, MRCTB033710,
MRCTB033793, MRCTB033886**

PROJECT: LTE 2C_3C_4C_5C_2020 UPGRADE

**FOR ZONING
NOT FOR CONSTRUCTION**

VICINITY MAP

DIRECTIONS TO SITE:

DEPART ENTERPRISE DR TOWARD CAPITOL BLVD. 0.4 MI TURN LEFT ONTO CAPITOL BLVD. 0.2 MI TURN LEFT ONTO WEST ST. 0.3 MI TAKE RAMP LEFT FOR I-91 S. 1.4 MI AT EXIT 22S, TAKE RAMP LEFT FOR CT-9 SOUTH TOWARD OLD SAYBROOK / MIDDLETOWN. 5.5 MI KEEP STRAIGHT ONTO CT-9 S / CT-17 S. 0.8 MI KEEP STRAIGHT ONTO CT-9 S. 22.9 MI TAKE RAMP LEFT FOR US-1 NORTH / I-95 NORTH TOWARD NEW LONDON / PROVIDENCE. 29.7 MI TAKE RAMP RIGHT. 0.2 MI TURN RIGHT ONTO CT-2 / LIBERTY ST. 0.7 MI TURN LEFT ONTO ELMRIDGE RD. 0.1 MI ROAD NAME CHANGES TO CT-49 / VOLUNTOWN RD. 0.1 MI ARRIVE AT 86 VOLUNTOWN RD, PAWCATUCK, CT 06379.



GENERAL NOTES

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- THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
- CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
GN-1	GENERAL NOTES	0
A-1	COMPOUND & EQUIPMENT PLANS	0
A-2	ANTENNA LAYOUTS & ELEVATION	0
A-3	DETAILS	0
SN-1	STRUCTURAL NOTES	0
S-1	MOUNT MODIFICATION DESIGN	0
RF-1	RF PLUMBING DIAGRAM	0
G-1	GROUNDING DETAILS	0

SBA SITE #: CT0595

72 HOURS



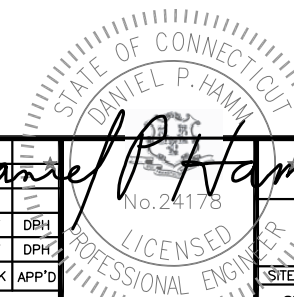
CALL BEFORE YOU DIG



CALL TOLL FREE 1-800-922-4455

OR CALL 811

UNDERGROUND SERVICE ALERT



HGD HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET, SUITE #301
WEST BRIDGEWATER, MA 02379

**SITE NUMBER: CT5231
SITE NAME: STONINGTON EAST
SBA SITE #: CT0595**
86 VOLUNTOWN ROAD
PAWCATUCK, CT 06379
NEW LONDON COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	12/18/19	ISSUED FOR ZONING	TR	AT	DPH
A	04/01/19	ISSUED FOR REVIEW	AM	AT	DPH

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: TR

AT&T
TITLE SHEET
(LTE 2C_3C_4C_5C_2020 UPGRADE)
SITE NUMBER: CT5231 DRAWING NUMBER: T-1 REV: 0

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR – CENTERLINE
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER – AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (FY = 36 KSI) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (FY = 36 KSI). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:
 SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE: IBC 2015 WITH 2018 CT STATE BUILDING CODE AMENDMENTS
 ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE (NFPA 70-2017)

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS					
AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		

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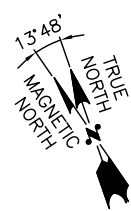
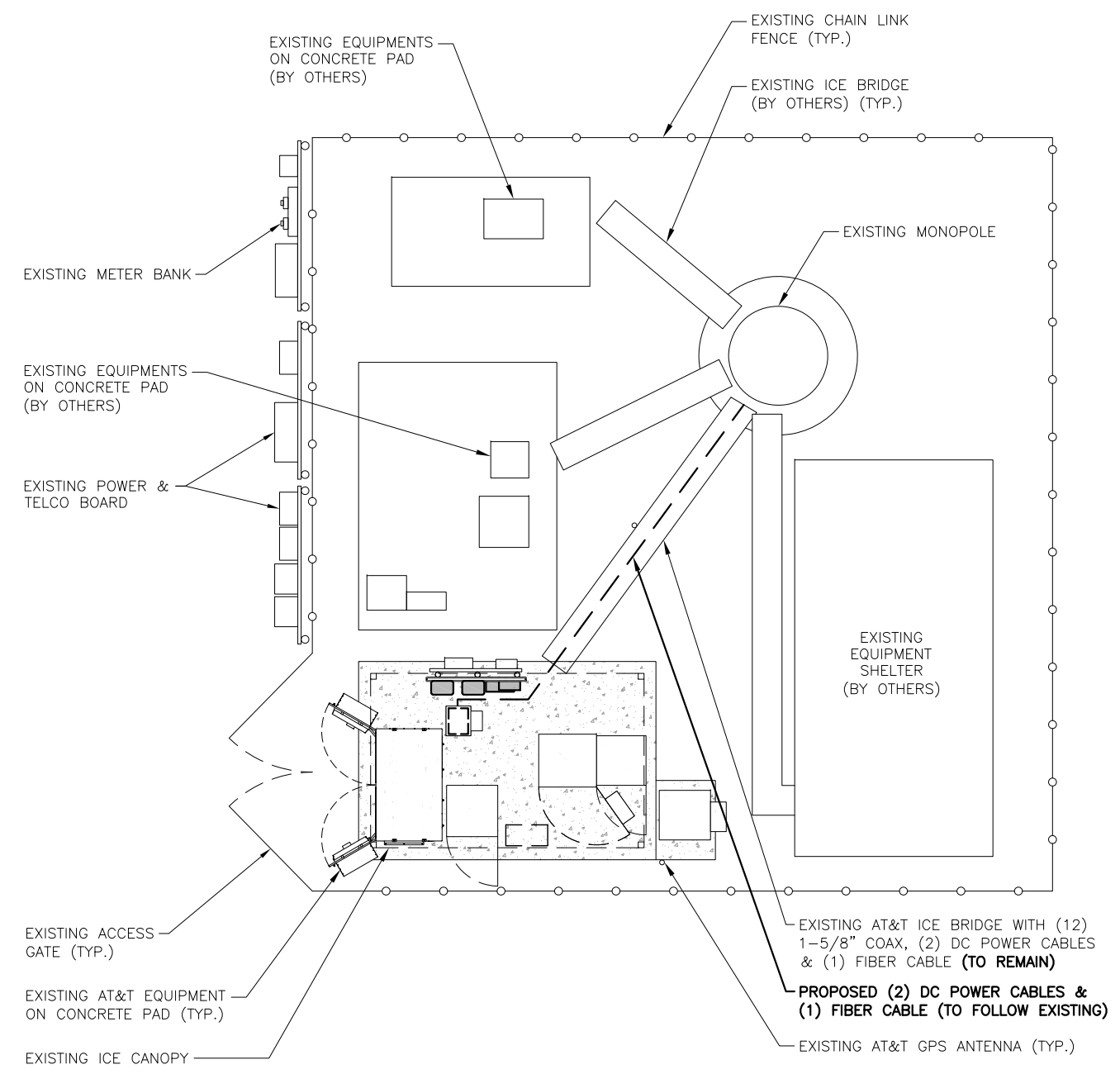
AT&T		
GENERAL NOTES		
(LTE 2C_3C_4C_5C_2020 UPGRADE)		
SITE NUMBER	DRAWING NUMBER	REV
CT5231	GN-1	0

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: NOVEMBER 13, 2019

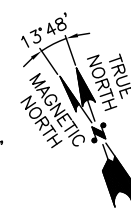
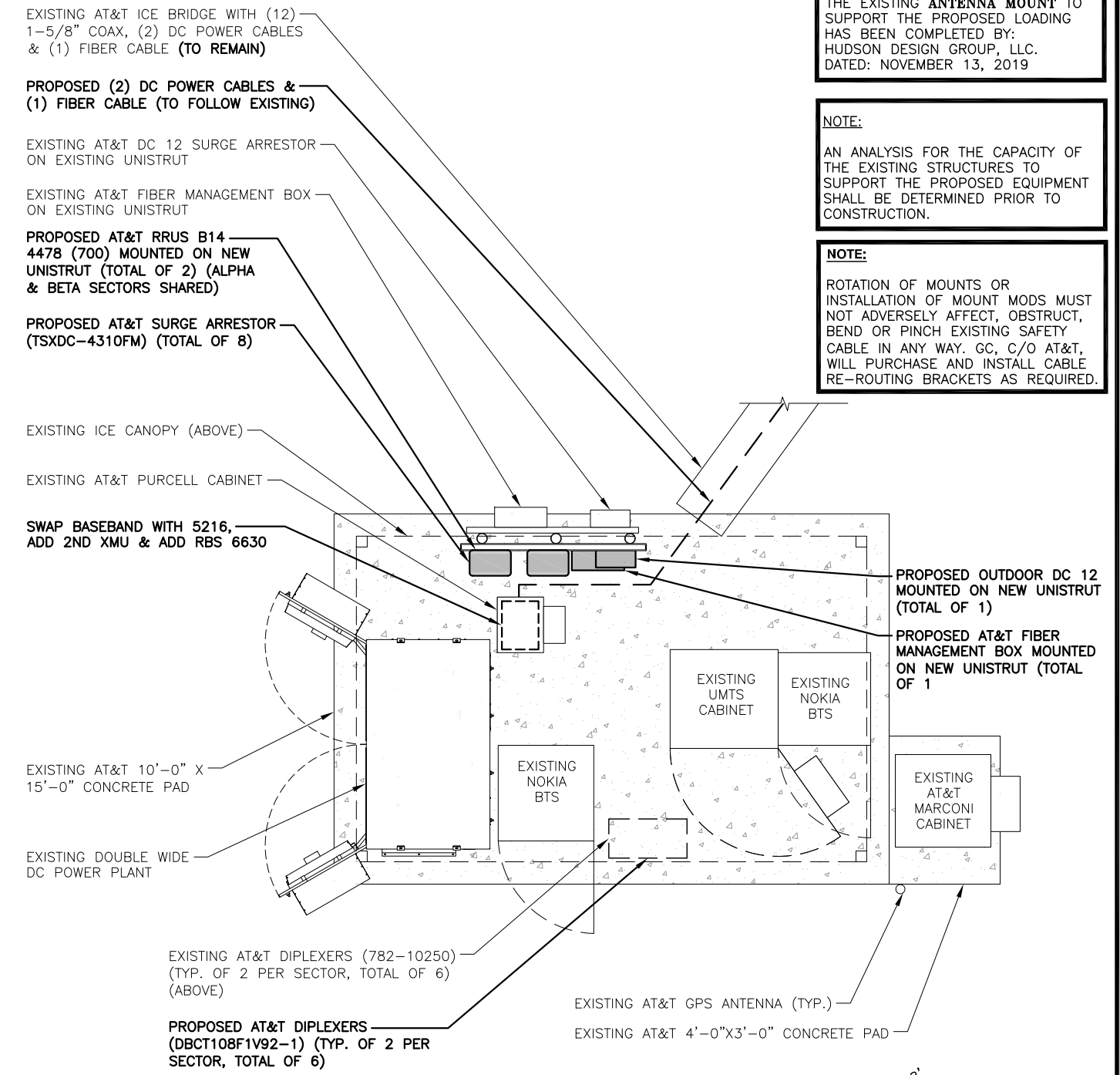
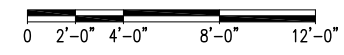
NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NOTE:
ROTATION OF MOUNTS OR INSTALLATION OF MOUNT MODS MUST NOT ADVERSELY AFFECT, OBSTRUCT, BEND OR PINCH EXISTING SAFETY CABLE IN ANY WAY. GC, C/O AT&T, WILL PURCHASE AND INSTALL CABLE RE-ROUTING BRACKETS AS REQUIRED.



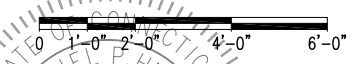
COMPOUND PLAN
22x34 SCALE: 1/4"=1'-0"
11x17 SCALE: 1/8"=1'-0"

1
A-1



EQUIPMENT PLAN
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"

2
A-1



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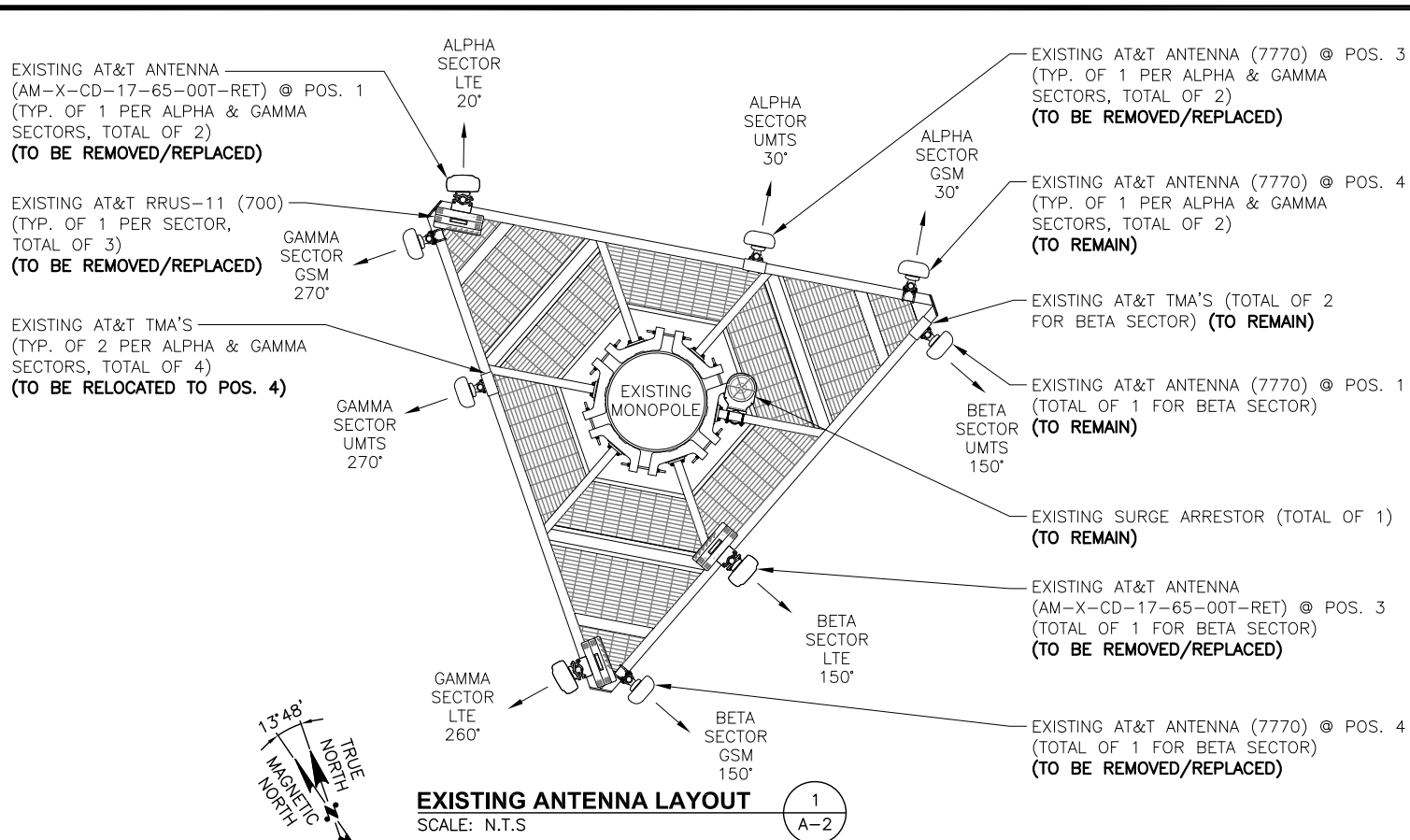
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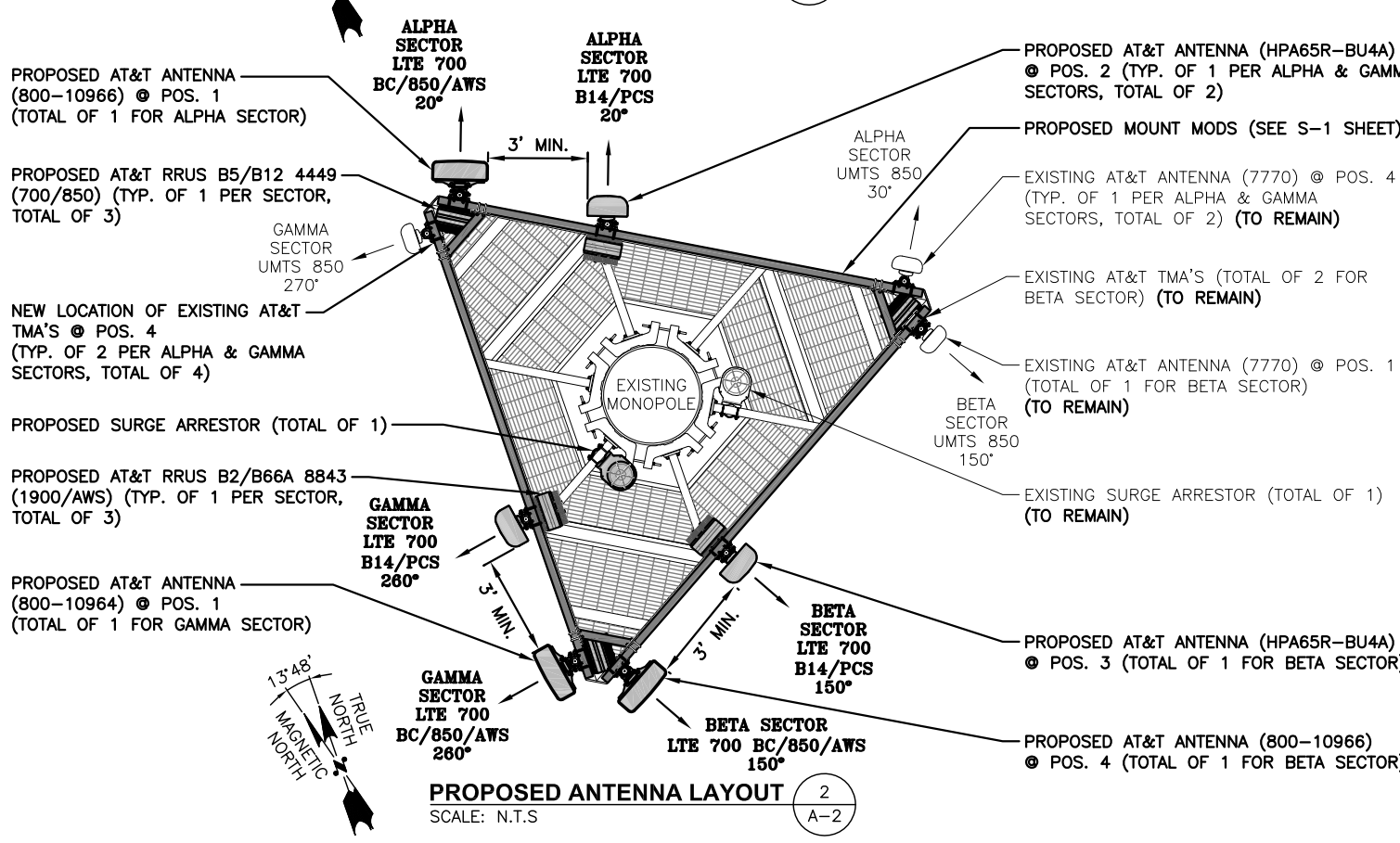
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SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: TR		

DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

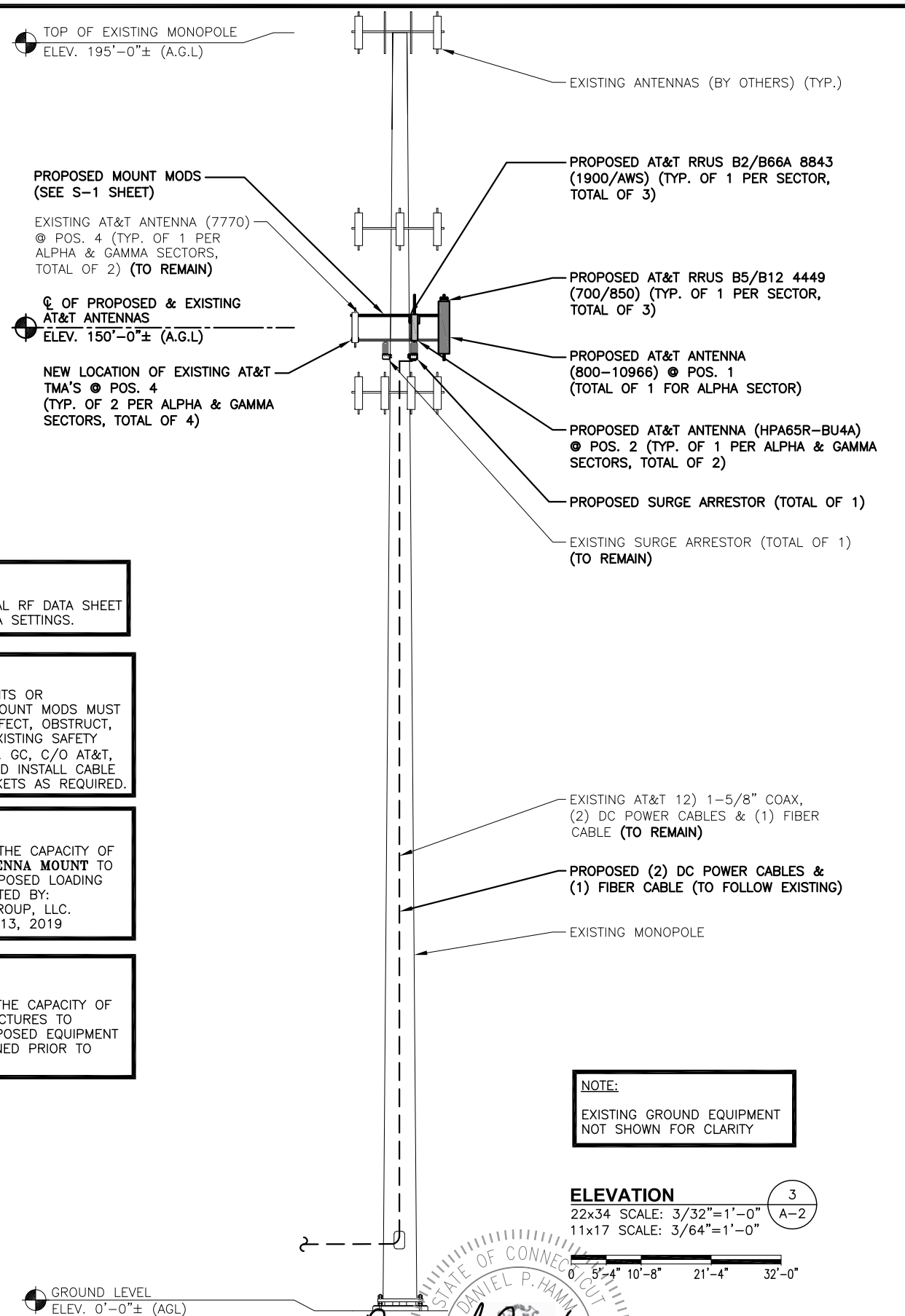
AT&T
COMPOUND & EQUIPMENT PLANS
(LTE 2C_3C_4C_5C_2020 UPGRADE)
SITE NUMBER: CT5231
DRAWING NUMBER: A-1
REV: 0



EXISTING ANTENNA LAYOUT
SCALE: N.T.S. (1) A-2



PROPOSED ANTENNA LAYOUT
SCALE: N.T.S. (2) A-2



NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
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NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: NOVEMBER 13, 2019

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NOTE:
EXISTING GROUND EQUIPMENT NOT SHOWN FOR CLARITY

ELEVATION
22x34 SCALE: 3/32"=1'-0"
11x17 SCALE: 3/64"=1'-0"

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AT&T
ANTENNA LAYOUTS & ELEVATION
(LTE 2C_3C_4C_5C_2020 UPGRADE)
SITE NUMBER: CT5231
DRAWING NUMBER: A-2
REV: 0

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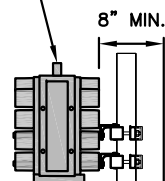
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NOTE:
 REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

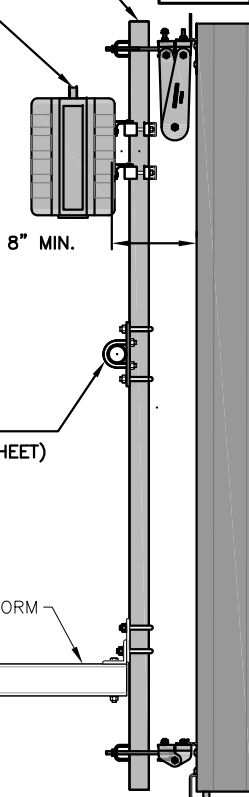
ANTENNA SCHEDULE											
SECTOR	EXISTING/PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA ϕ HEIGHT	AZIMUTH	TMA/DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	PROPOSED	LTE 700 BC/850/AWS	800-10966	96X20X6.9	150'±	20°	(P)(2)(G) DBCT108F1V92-1	(P)(1) B5/B12 4449 (700/850)	14.9X13.2X10.4	-	(E)(1) RAYCAP DC6-48-60-18-8F
A2	PROPOSED	LTE 700 B14/PCS	HPA65R-BU4A	48X11.7X7.6	150'±	20°	-	(G)(P)(1) B14 4478 (700) (P)(1) B2/B66A 8843 (AWS/1900)	18.1X13.4X8.3 14.9X13.2X10.9	(2) 1-5/8" COAX (LENGTH 205'±)	
A3	-	-	-	-	-	-	-	-	-	-	
A4	EXISTING	UMTS 850	7770	55X11X5	150'±	30°	(E)(2)(G) KATHREIN 782-10250 (E)(2) POWERWAVE LGP21401	-	-	(2) 1-5/8" COAX (LENGTH 205'±)	
B1	EXISTING	UMTS 850	7770	55X11X5	150'±	150°	(E)(2)(G) KATHREIN 782-10250 (E)(2) POWERWAVE LGP21401	(P)(1) B5/B12 4449 (700/850)	14.9X13.2X10.4	(2) 1-5/8" COAX (LENGTH 205'±)	(P)(1) RAYCAP DC6-48-60-18-8C
B2	-	-	-	-	-	-	-	-	-	-	
B3	PROPOSED	LTE 700 B14/PCS	HPA65R-BU4A	48X11.7X7.6	150'±	150°	-	B14 4478 (700) (SHARED W/ALPHA) (P)(1) B2/B66A 8843 (AWS/1900)	18.1X13.4X8.3 14.9X13.2X10.9	(2) 1-5/8" COAX (LENGTH 205'±)	
B4	PROPOSED	LTE 700 BC/850/AWS	800-10966	96X20X6.9	150'±	150°	(P)(2)(G) DBCT108F1V92-1	-	-	-	
C1	PROPOSED	LTE 700 BC/850/AWS	800-10964	59X20X6.9	150'±	260°	(P)(2)(G) DBCT108F1V92-1	(P)(1) B5/B12 4449 (700/850)	14.9X13.2X10.4	-	SHARED
C2	PROPOSED	LTE 700 B14/PCS	HPA65R-BU4A	48X11.7X7.6	150'±	260°	-	(G)(P)(1) B14 4478 (700) (P)(1) B2/B66A 8843 (AWS/1900)	18.1X13.4X8.3 14.9X13.2X10.9	(2) 1-5/8" COAX (LENGTH 205'±)	
C3	-	-	-	-	-	-	-	-	-	-	
C4	EXISTING	UMTS 850	7770	55X11X5	150'±	270°	(E)(2)(G) KATHREIN 782-10250 (E)(2) POWERWAVE LGP21401	-	-	(2) 1-5/8" COAX (LENGTH 205'±)	

PROPOSED AT&T RRUS 8843 B2/B66A (AWS/1900) (TYP. OF 1 PER SECTOR, TOTAL OF 3)

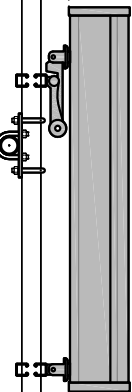


INSTALL NEW 2" STD. (2.38" O.D.) PIPE MAST BEHIND NEW ANTENNAS, SECURE TO THE EXISTING MOUNT (TYP. OF 2 PER SECTOR, TOTAL OF 6)

PROPOSED AT&T RRUS B5/B12 4449 (700/850) (TYP. OF 1 PER SECTOR, TOTAL OF 3)



PROPOSED MOUNT MODS (SEE S-1 SHEET)



PROPOSED AT&T ANTENNA (HPA65R-BU4A) (TYP. OF 1 PER SECTOR, TOTAL OF 3)

PROPOSED MOUNT MODS (SEE S-1 SHEET)

ϕ OF PROPOSED AT&T ANTENNAS
 ELEV. 150'-0"± (A.G.L.)

ϕ OF PROPOSED AT&T ANTENNAS
 ELEV. 150'-0"± (A.G.L.)

EXISTING PLATFORM
 EXISTING PIPE MAST

EXISTING PLATFORM

PROPOSED AT&T ANTENNA (800-10966) (TOTAL OF 2)

PROPOSED ANTENNA & RRH MOUNTING DETAIL

22x34 SCALE: 1"=1'-0"
 11x17 SCALE: 1/2"=1'-0"

2
 A-3

FINAL ANTENNA SCHEDULE

SCALE: N.T.S.

1
 A-3

RRU CHART

QUANTITY	MODEL	L	W	D
3(P)	B2/B66A 8843 (1900/AWS)	14.9"	13.2"	10.9"
3(P)	B5/B12 4449 (700/850)	14.9"	13.2"	10.4"
2(P)(G)	B14 4478 (700)	18.1"	13.4"	8.3"

NOTE:
 MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:
 SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

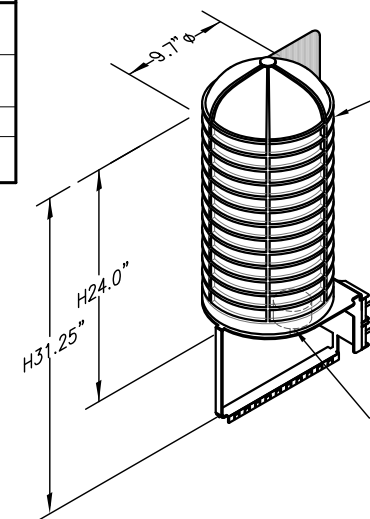
PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:
 MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL

SCALE: N.T.S.

3
 A-3



PROPOSED SURGE SUPPRESSOR
 MODEL NUMBERS:
 DC6-48-60-18-8C
 DC6-48-60-0-8C
 DIMENSIONS:
 H24.0"x9.7"φ
 WITH BRACKET:
 H31.25"x9.7"φ

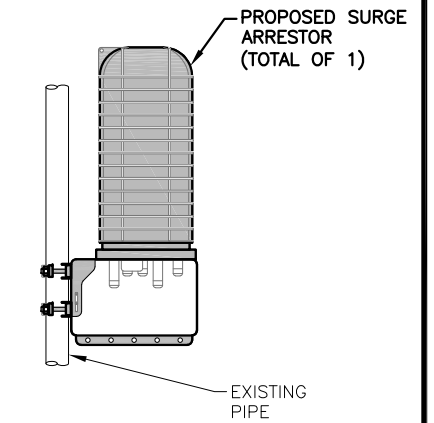
STRIKESORB 30-V1 SURGE PROTECTIVE DEVICE

NOTE:
 MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL

SCALE: N.T.S.

4
 A-3



PROPOSED SURGE ARRESTOR (TOTAL OF 1)

EXISTING PIPE

SURGE SUPPRESSOR MOUNTING DETAIL

SCALE: N.T.S.

5
 A-3



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



750 WEST CENTER STREET, SUITE #301
 WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT5231
 SITE NAME: STONINGTON EAST
 SBA SITE #: CT0595

86 VOLUNTOWN ROAD
 PAWCATUCK, CT 06379
 NEW LONDON COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
 ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	12/18/19	ISSUED FOR ZONING	TR	AT	DPH
A	04/01/19	ISSUED FOR REVIEW	AM	AT	DPH

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: TR

Daniel P. Hamm
 No. 24178
 LICENSED PROFESSIONAL ENGINEER

AT&T

DETAILS
 (LTE 2C_3C_4C_5C_2020 UPGRADE)

SITE NUMBER	DRAWING NUMBER	REV
CT5231	A-5	0

STRUCTURAL NOTES:

- DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
- DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (F_y=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
- STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
- STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
- FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
- CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
- INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
- UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS, AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
- EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
- WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
- ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
- NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
- SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
N/A	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS ³
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

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

750 WEST CENTER STREET, SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CT5231
SITE NAME: STONINGTON EAST
SBA SITE #: CT0595

86 VOLUNTOWN ROAD
PAWCATUCK, CT 06379
NEW LONDON COUNTY

500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	12/18/19	ISSUED FOR ZONING	TR	AT	DPH
A	04/01/19	ISSUED FOR REVIEW	AM	AT	DPH
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: TR		

Daniel P. Hamm
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

STRUCTURAL NOTES
(LTE 2C_3C_4C_5C_2020 UPGRADE)

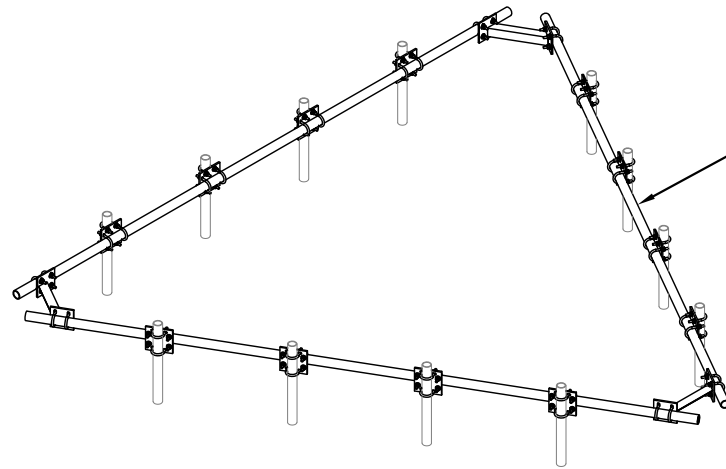
SITE NUMBER	DRAWING NUMBER	REV
CT5231	SN-1	0

NOTE:
 ROTATION OF MOUNTS OR INSTALLATION OF MOUNT MODS MUST NOT ADVERSELY AFFECT, OBSTRUCT, BEND OR PINCH EXISTING SAFETY CABLE IN ANY WAY. GC, C/O AT&T, WILL PURCHASE AND INSTALL CABLE RE-ROUTING BRACKETS AS REQUIRED.

NOTE:
 REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

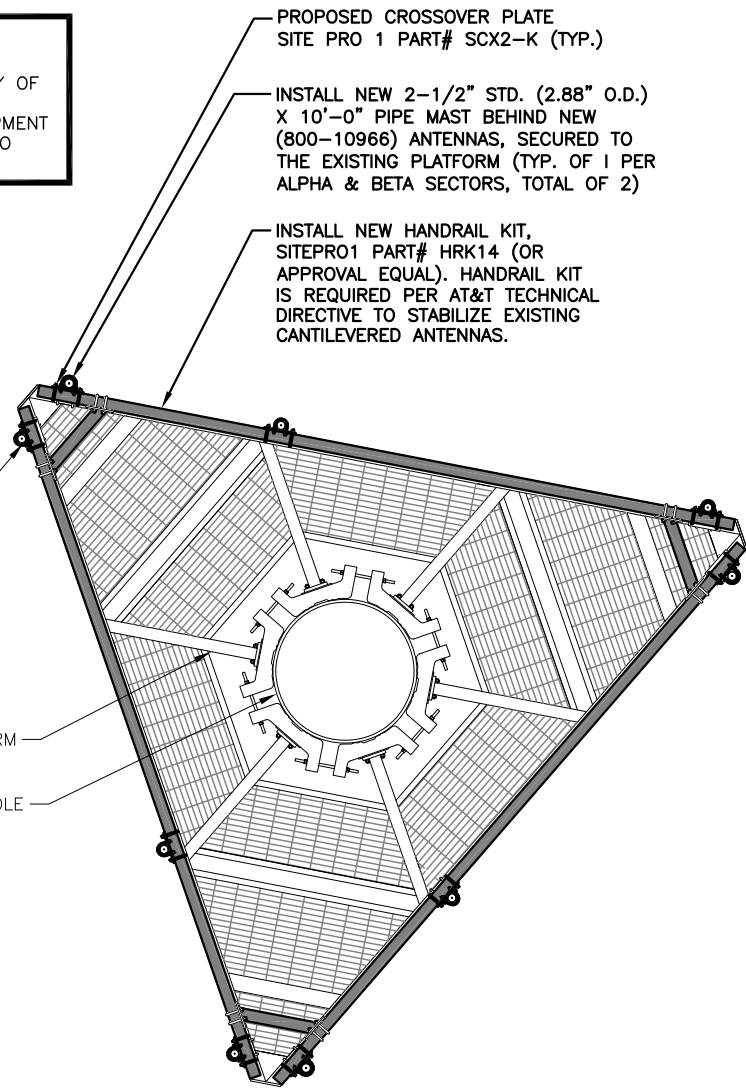
NOTE:
 AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: NOVEMBER 13, 2019

NOTE:
 AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



HRK14 HANDRAIL KIT DETAIL 1
 SCALE: N.T.S.

INSTALL NEW HANDRAIL KIT, SITEPRO1 PART# HRK14 (OR APPROVAL EQUAL). HANDRAIL KIT IS REQUIRED PER AT&T TECHNICAL DIRECTIVE TO STABILIZE EXISTING CANTILEVERED ANTENNAS.



PROPOSED MOUNT MODIFICATIONS PLAN 2
 22x34 SCALE: 1/2"=1'-0"
 11x17 SCALE: 1/4"=1'-0"

INSTALL NEW 2-1/2" STD. (2.88" O.D.) X 10'-0" LONG PIPE MAST BEHIND NEW (800-10966) ANTENNAS, SECURED TO THE EXISTING PLATFORM (TOTAL OF 2)
 PROPOSED CROSSOVER PLATE SITE PRO 1 PART# SCX2-K (TYP.)
 INSTALL NEW HANDRAIL KIT, SITEPRO1 PART# HRK14 (OR APPROVAL EQUAL). HANDRAIL KIT IS REQUIRED PER AT&T TECHNICAL DIRECTIVE TO STABILIZE EXISTING CANTILEVERED ANTENNAS.

PROPOSED 1/2" U-BOLTS (TYP.)

EXISTING PLATFORM

PROPOSED MOUNT MODIFICATIONS DETAIL 3
 22x34 SCALE: 1"=1'-0"
 11x17 SCALE: 1/2"=1'-0"



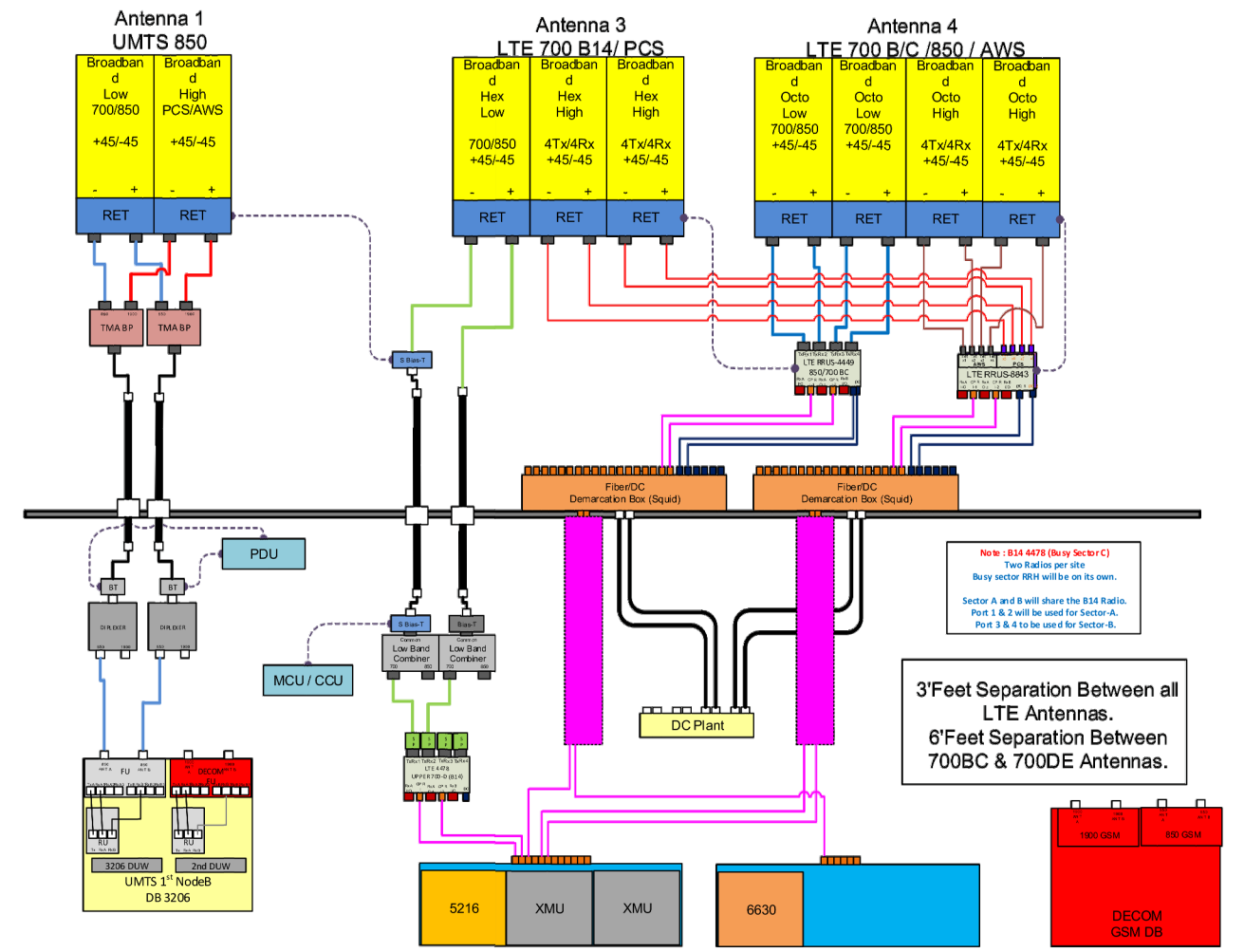
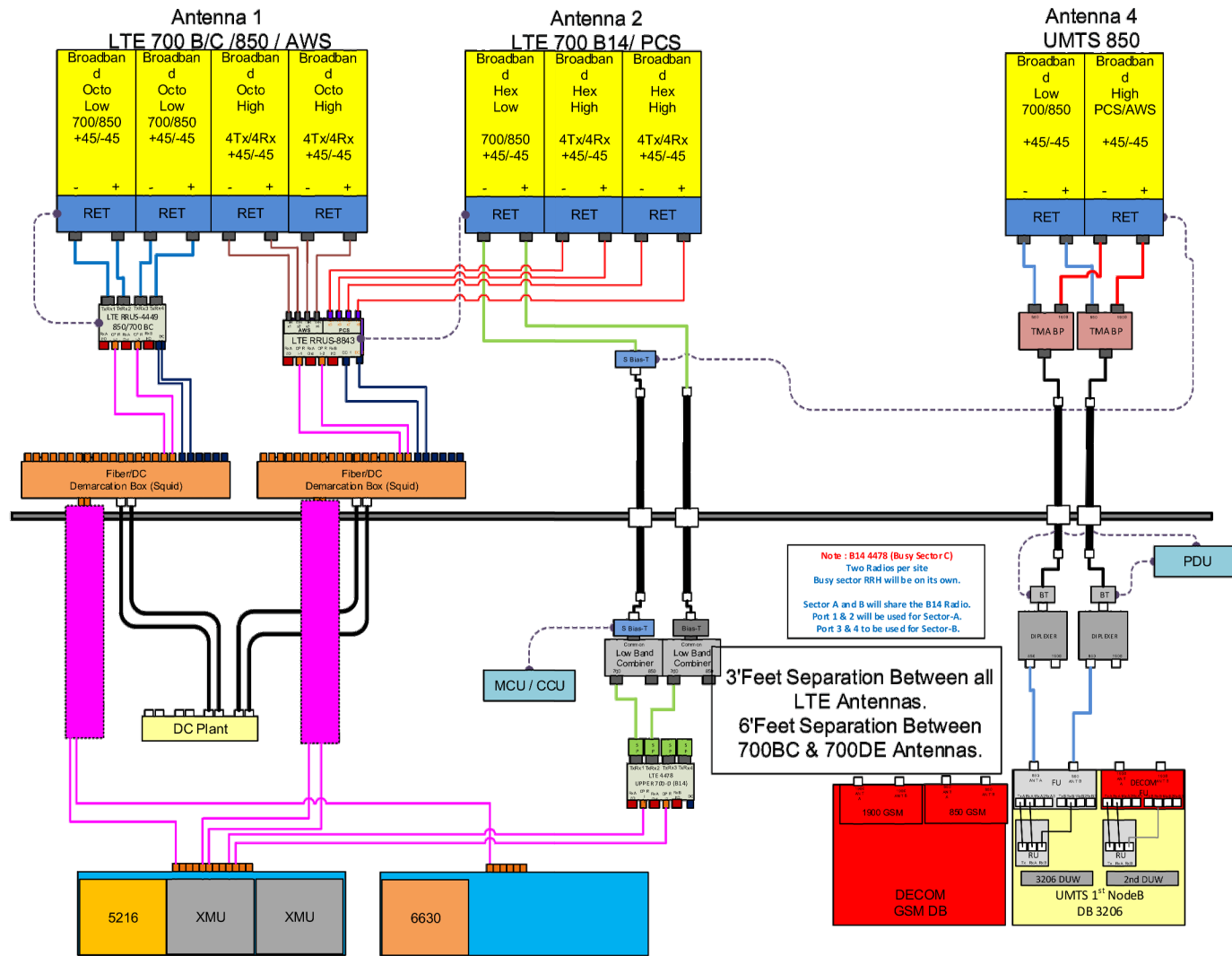
NO.	DATE	REVISIONS	BY	CHK	APP'D
0	12/18/19	ISSUED FOR ZONING	TR	AT	DPH
A	04/01/19	ISSUED FOR REVIEW	AM	AT	DPH
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: TR		

STATE OF CONNECTICUT
 DANIEL P. HAMM
 No. 24178
 LICENSED PROFESSIONAL ENGINEER

AT&T	
MOUNT MODIFICATIONS (LTE 2C_3C_4C_5C_2020 UPGRADE)	
SITE NUMBER	DRAWING NUMBER
CT5231	S-1
REV	0

ALPHA & GAMMA SECTORS

BETA SECTOR



RF PLUMBING DIAGRAM 1
SCALE: N.T.S. RF-1

NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

HG HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET, SUITE #301
WEST BRIDGEWATER, MA 02379

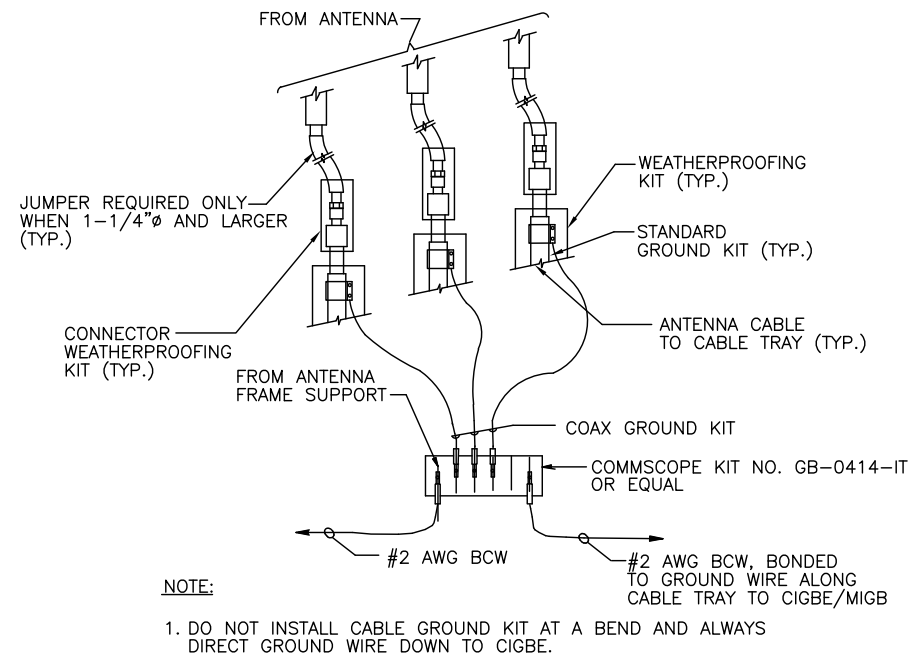
SITE NUMBER: CT5231
SITE NAME: STONINGTON EAST
SBA SITE #: CT0595
86 VOLUNTOWN ROAD
PAWCATUCK, CT 06379
NEW LONDON COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
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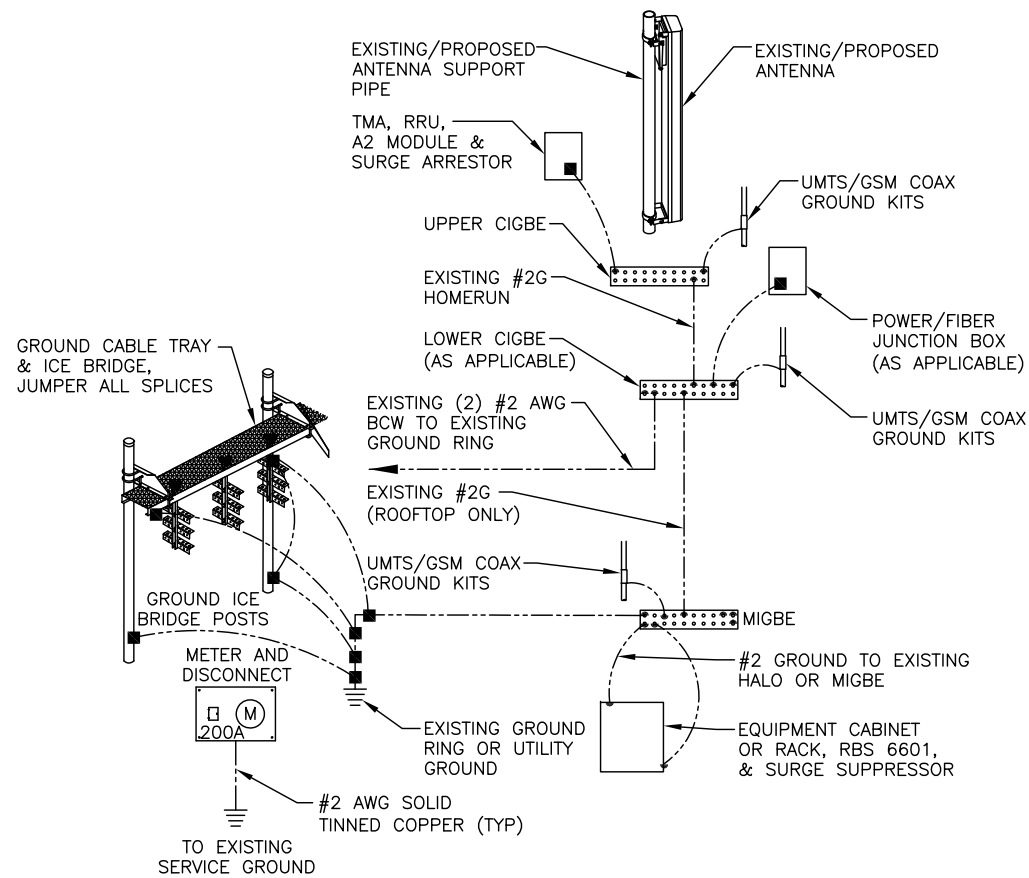
NO.	DATE	REVISIONS	BY	CHK	APP'D
0	12/18/19	ISSUED FOR ZONING	TR	AT	DPH
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SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: TR					

Daniel P. Hamm
No. 24178
LICENSED PROFESSIONAL ENGINEER

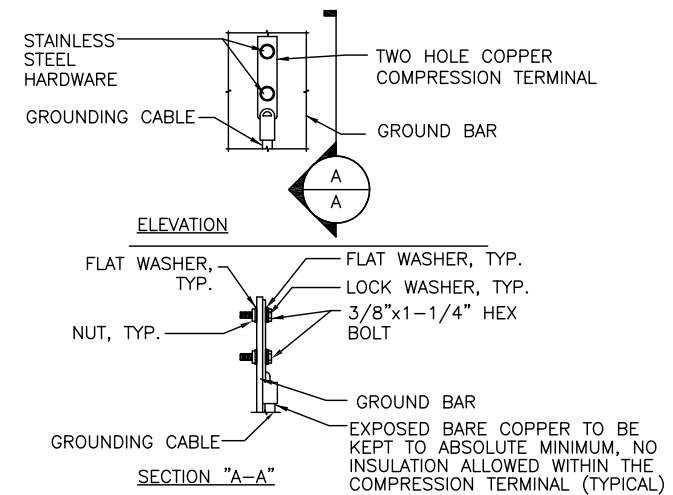
AT&T
RF PLUMBING DIAGRAM
(LTE 2C_3C_4C_5C_2020 UPGRADE)
SITE NUMBER: CT5231 DRAWING NUMBER: RF-1 REV: 0



GROUND WIRE TO GROUND BAR CONNECTION DETAIL 1
SCALE: N.T.S. G-1



GROUNDING RISER DIAGRAM 2
SCALE: N.T.S. G-1



- NOTES:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATION.
 3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB

TYPICAL GROUND BAR CONNECTION DETAIL 3
SCALE: N.T.S. G-1

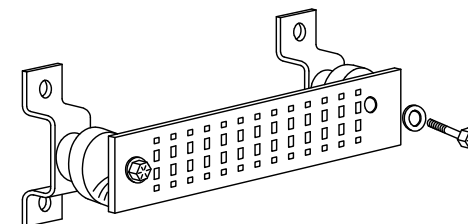
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

- CABLE ENTRY PORTS (HATCH PLATES) (#2 AWG)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2 AWG)
- +24V POWER SUPPLY RETURN BAR (#2 AWG)
- 48V POWER SUPPLY RETURN BAR (#2 AWG)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING (#2 AWG)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)
- BUILDING STEEL (IF AVAILABLE) (#2 AWG)



GROUND BAR - DETAIL 4
SCALE: N.T.S. G-1

NO.	DATE	REVISIONS	BY	CHK	APP'D
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A	04/01/19	ISSUED FOR REVIEW	AM	AT	DPH
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: TR		

Daniel P. Hammon
No. 24178
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AT&T		
GROUNDING DETAILS		
(LTE 2C_3C_4C_5C_2020 UPGRADE)		
SITE NUMBER	DRAWING NUMBER	REV
CT5231	G-1	0

EXHIBIT 2



Town of Stonington, CT

Property Listing Report

Map Block Lot

18-2-5

Building # 1

Section # 1

Account

00671600

Property Information

Property Location	86 VOLUNTOWN RD
Owner	BLACKROCK PROPERTIES II LLC
Co-Owner	
Mailing Address	PO BOX 1113 MIAMISBURG OH 45343
Land Use	430V TEL X STA M-00
Land Class	I
Zoning Code	HI-60
Census Tract	7051

Street Index	3000
Acreage	0.46
Utilities	
Lot Setting/Desc	Suburban
Survey Map #	NA
School District	
Fire District	Pawcatuck
Trash Day	TH
Polling Place (District)	2

Photo



Sketch

No Photo Available

Primary Construction Details

Year Built	0
Stories	
Building Style	UNKNOWN
Building Use	Vacant
Building Condition	
Occupancy	
Extra Fixtures	
Bath Style	NA
Kitchen Style	NA
AC Type	
Heating Type	
Heating Fuel	

Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Total Rooms	0
Roof Style	
Roof Cover	
Interior Floors 1	
Interior Floors 2	
Exterior Walls	
Exterior Walls 2	NA
Interior Walls	
Interior Walls 2	NA

(*Industrial / Commercial Details)

Building Desc.	TEL X STA M-00
Building Grade	
Heat / AC	
Frame Type	
Baths / Plumbing	
Ceiling / Wall	
Rooms / Prtns	
Wall Height	
First Floor Use	



Town of Stonington, CT

Property Listing Report

Map Block Lot **18-2-5**

Building # **1** Section # **1** Account **00671600**

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

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Improvements		
Outbuildings	117100	81900
Land	91900	64300
Total	209000	146200

Sub Areas

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

Outbuilding and Extra Features

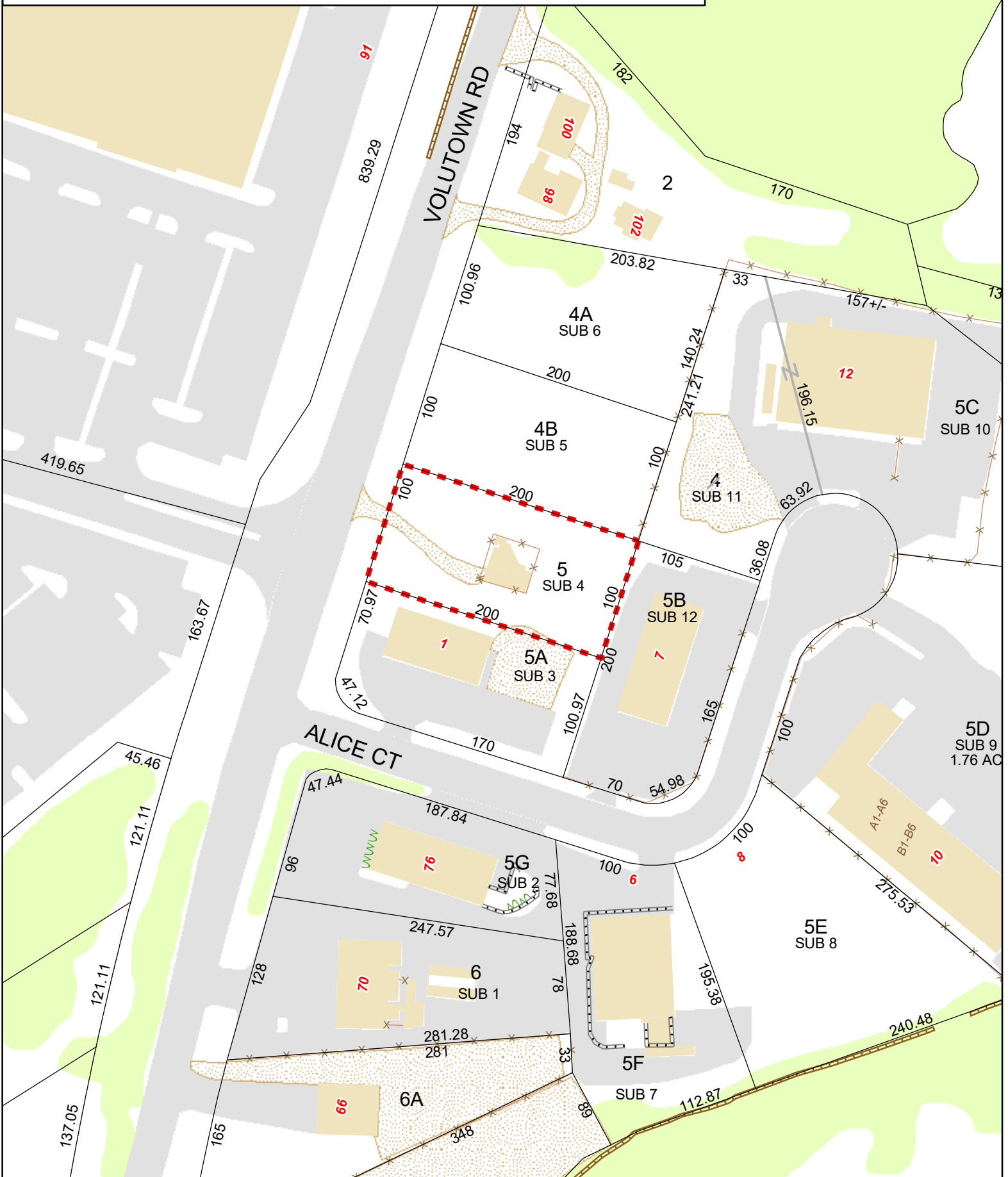
Type	Description
FENCE-8' CHAIN	230.00 L.F.
CELL EQ SHELTER	240.00 S.F.
CELL TOWER	1.00 UNIT
CELL EQ SHELTER	240.00 S.F.
PLATFORM	120.00 UNIT
PLATFORM	180.00 UNIT
PLATFORM	36.00 UNIT
PLATFORM	648.00 UNIT

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
BLACKROCK PROPERTIES II LLC	0439/0311	7/20/1999	0
BLACKROCK PROPERTIES II LLC	0421/0916	7/17/1998	35000
BLACKROCK PROPERTIES 11 LLC	0421/0427	7/9/1998	0
PRACHNIAK STANLEY & AMELIA &	0309/0175	2/22/1989	0
PRACHNIAK STANLEY & PAUL G HOLLAND	0245/0869	12/20/1983	0
OLIVERIO DANIEL & MICHAEL A	0202/0075	6/6/1974	0

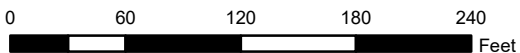
Town of Stonington, Connecticut - Assessment Parcel Map

Parcel: 18-2-5 Address: 86 VOLUNTOWN RD



Approximate Scale:

1 inch = 100 feet



Revised To: October 2018

Map Produced: April 2019

Disclaimer: This map is for informational purposes only. All information is subject to verification by any user. The Town of Stonington and its mapping contractors assume no legal responsibility for the information contained herein.

EXHIBIT 3



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

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: AT&T (App#: 127300, V1)

Carrier Site ID / Name: CT5231 / Stonington East

Site Location: 86 Voluntown Road

Stonington, Connecticut

New London County

Latitude: 41.405539

Longitude: -71.845247

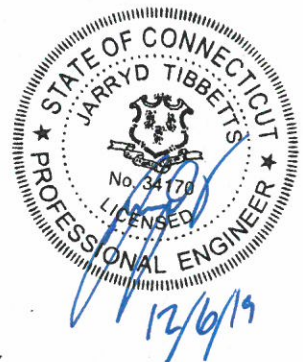
Analysis Result:

Max Structural Usage: 92.2% [Pass]

Max Foundation Usage: 79.0% [Pass]

Additional Usage Caused by Mount Modification: +1.8%

Report Prepared By: Sital Shrestha





Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 196 ft Valmont Monopole

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Max Foundation Usage: 79.0% [Pass]

Additional Usage Caused by Mount Modification: +1.8%

Report Prepared By: Sital Shrestha

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 comprehensive analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-H. 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:	128.0 mph (3-Sec. Gust) (Ultimate wind speed)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Service Load Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-H / 2018 IBC
Exposure Category:	C
Risk Category:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_S = 0.184$, $S_1 = 0.052$

This structural analysis is based upon the tower being classified as a Risk Category II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	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			
8	167.0	3	Ericsson - Air 21 B2A/B4P - Panel	Low profile platform w/ Handrails & Reinforcement Kit (Sitepro PRK-1245; Commscope VSR.MS-B; Sitepro HRK-12-U; Sitepro PRK-SFS-L + (3) Pipe 2.5STD x 8' mount pipes; New Sitepro1 SCX x -43 cross-over plate assemblies	(9) 1 5/8" (4) 1 5/8" Fiber	T-Mobile
9		3	Ericsson - Air 21 B4A/B2P - Panel			
10		3	RFS - APXVAARR24_43-U-NA20 - Panel			
11		3	Ericsson - KRY 112 144/1 - TMA			
12		3	Radio - 4449 B71+B12 - RRU			
-	150.0	6	Powerwave - 7700.00 - Panel	Low Profile Platform	(12) 1 5/8" (2) DC (1) Fiber	AT&T
-		2	Powerwave - P65-17-XLH-RR - Panel			
-		1	KMW - AM-X-CD-14-65-00T - Panel			
-		6	Powerwave - LGP21401 - TMA			
-		6	Powerwave - LGP13519 - TMA			
-		6	Ericsson - RRUS 11 - RRU			
-		1	Raycap - DC6-48-60-18-8F - Surge Suppressor			
22	140.0	2	Commscope - LNX-8513DS-VTM - Panel	Low Profile Platform	*(12) 1 5/8" *(2) 1 5/8" Hybrid	Verizon
23		2	RFS - APL866513 - Panel			
24		6	Commscope - HBXX-6517DS-A2M - Panel			
25		3	Commscope - LNX-6414DS-A1M - Panel			
26		3	ALU - RRH2x40 700 - RRU			
27		3	ALU - RRH2x60-2100 - RRU			
28		1	RFS - DB-T1-6Z-8AB-OZ - Junction Box			

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
13	150.0	3	Powerwave 7770	(1) Low Profile Platform (2) 2-1/2" std. Pipe Mast (1) SitePro1 HRK14 (Handrail Kit)	(12) 1 5/8" (1) 1/2" Fiber (1) 2" Conduit* (2) 3/4" DC	AT&T
14		2	Kathrein 800-10966			
15		1	Kathrein 800-10964			
16		3	Cci HPA65R-BU4A			
17		6	Powerwave LGP21401 TMA			
18		6	Powerwave LGP13519 Diplexer			
19		3	Ericsson 4449 B5/B12			
20		3	Ericsson RRUS 8843 B2 B66A			
21		2	Raycap DC6-48-60-18-8F			

*(1) 2" conduit to house (2) additional DC and (1) additional Fiber.

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:	92.2%	78.7%	76.1%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	6831.8	55.5	92.2

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.

Service Load Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-H for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.6616 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-H 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 structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.
3. 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 ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
4. 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.
5. 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.
6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Ratio 92.25% at 0.0ft

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

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

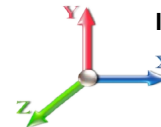
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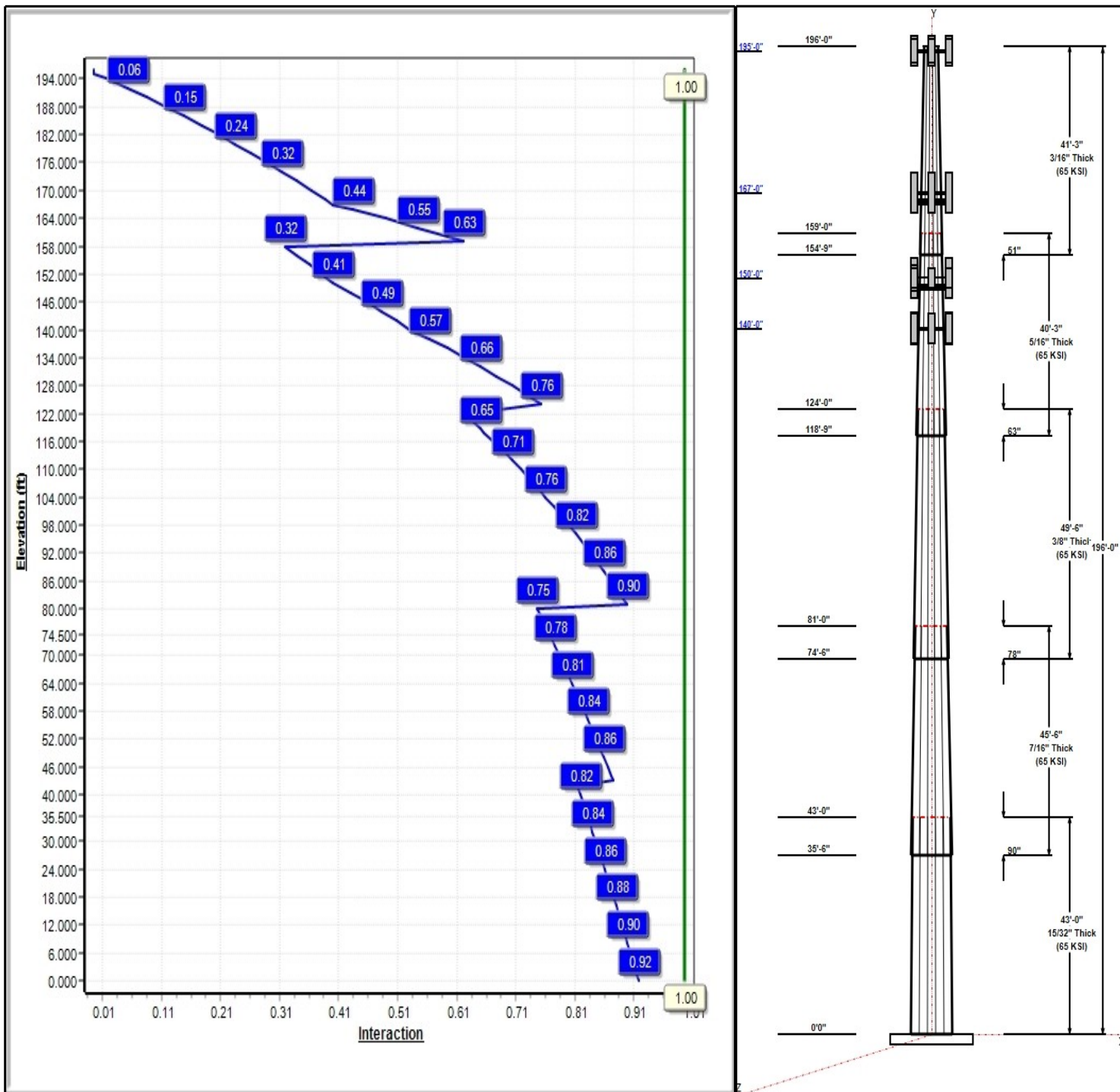
Dead Load Factor: 1.20
Wind Load Factor: 1.00

Load Case : 1.2D + 1.0W 128 mph Wind



Iterations: 32

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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

12/6/2019

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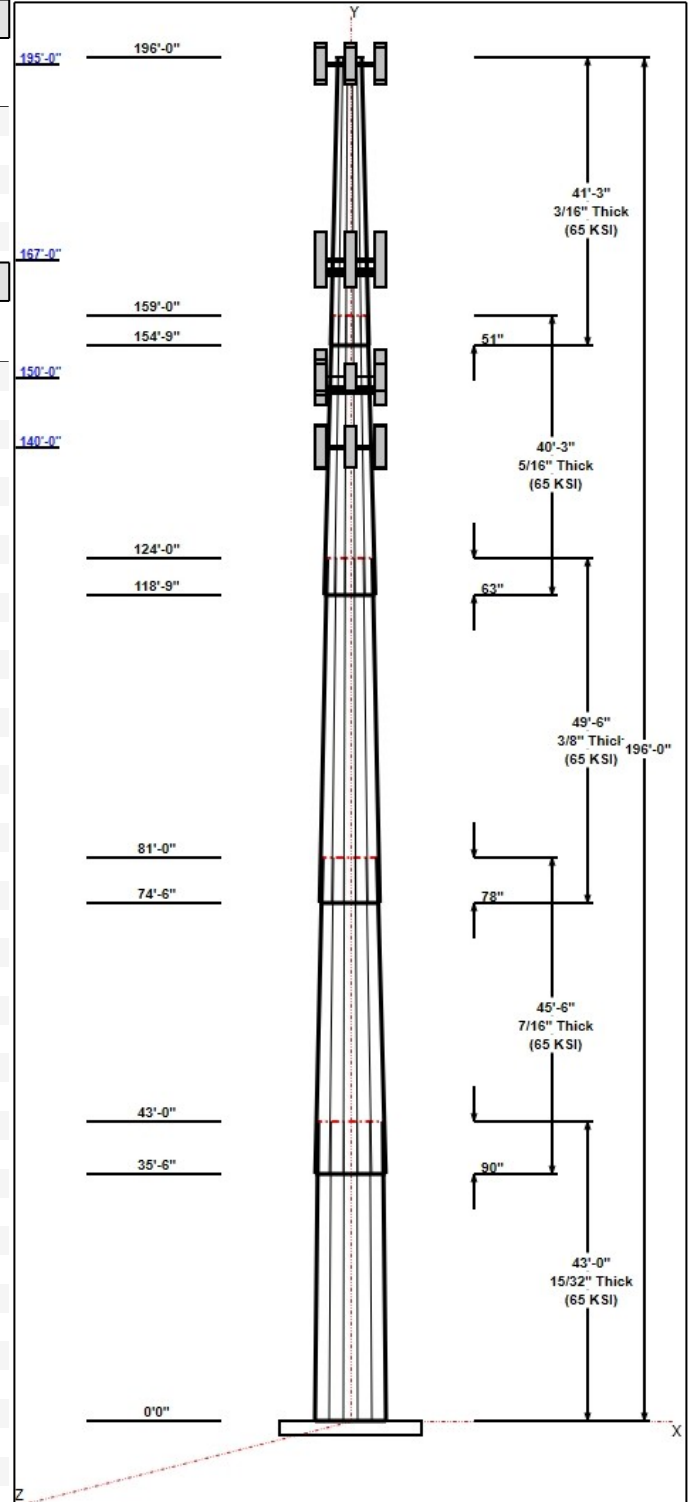


Shaft Properties

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	APXVSP18-C-A20	Sprint Nextel
195.00	195.00	3	APXVTM14-C-120	Sprint Nextel
195.00	195.00	3	1900MHz RRH	Sprint Nextel
195.00	195.00	3	TD-RRH8x20-25	Sprint Nextel
195.00	195.00	3	800MHz RRH	Sprint Nextel
195.00	195.00	3	800MHz Filter	Sprint Nextel
195.00	195.00	4	ACU-A20-N	Sprint Nextel
195.00	195.00	1	Low Profile Platform	Sprint Nextel
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	APXVAARR24_43-U-NA20	T-Mobile
167.00	167.00	1	PRK-1245 (kicker kit)	T-Mobile
167.00	167.00	1	(3) VSR-TS-B	T-Mobile
167.00	167.00	1	HRK12 (Handrail Kit)	T-Mobile
167.00	167.00	1	(3) SFS-H-L (V-Braces)	T-Mobile
167.00	167.00	3	4449	T-Mobile
167.00	167.00	3	KRY 112 144/1	T-Mobile
167.00	167.00	1	Low Profile	T-Mobile
150.00	150.00	3	7700.00	AT&T
150.00	150.00	6	LGP21401	AT&T
150.00	150.00	6	LGP13519	AT&T
150.00	150.00	2	DC6-48-60-18-8F	AT&T
150.00	150.00	1	Low Profile	AT&T
150.00	150.00	2	800 10966	AT&T
150.00	150.00	1	80010964	AT&T
150.00	150.00	3	HPA65R-BU4A	AT&T
150.00	150.00	1	Handrail Kit	AT&T
150.00	150.00	2	mount pipe	AT&T
150.00	150.00	3	4449 B5/B12	AT&T
150.00	150.00	3	B2 B66A 8843	AT&T
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-0Z	Verizon
140.00	140.00	1	Low Profile Platform	Verizon
30.00	30.00	1	GPS	Sprint Nextel



Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	195.00	Inside	1 1/4" Coax	Sprint Nextel

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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0.00	167.00	Inside	1 5/8" Coax	T-Mobile
0.00	167.00	Inside	1 5/8" Fiber	T-Mobile
0.00	150.00	Inside	1 5/8" Coax	AT&T
0.00	150.00	Inside	1/2" Fiber	AT&T
0.00	150.00	Inside	2" Conduit	AT&T
0.00	150.00	Inside	3/4" DC	AT&T
0.00	140.00	Outside	1 5/8" Coax	Verizon
0.00	140.00	Outside	1 5/8" Hybrid	Verizon

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 + 1.0W 128 mph Wind	6831.8	55.5	68.1
0.9D + 1.0W 128 mph Wind	6750.0	55.5	51.1
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1445.9	11.3	92.2
1.2D + 1.0Ev + 1.0Eh	374.2	3.6	68.1
0.9D + 1.0Ev + 1.0Eh	369.6	3.6	51.1
1.0D + 1.0W 60 mph Wind	1492.6	12.2	56.8

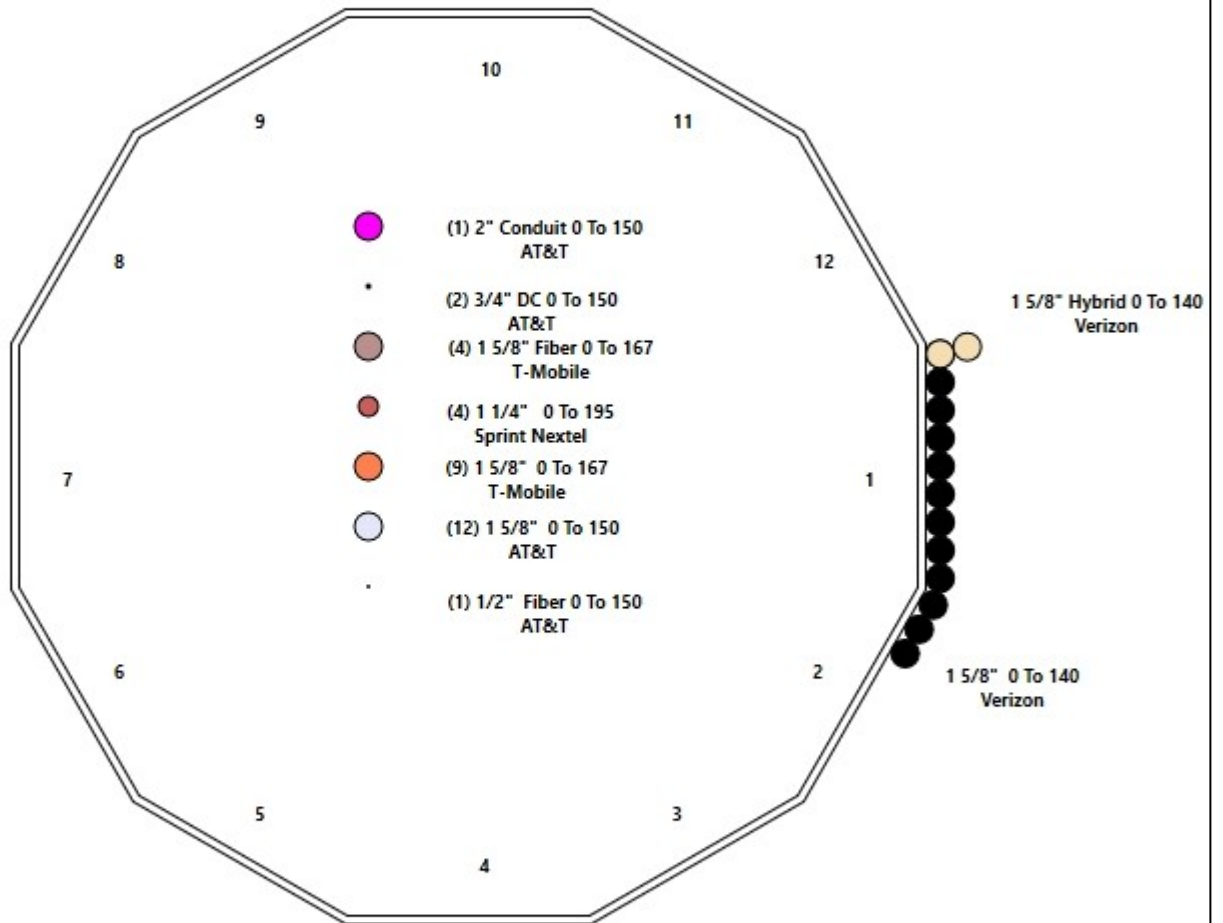
Structure: CT00595-S-SBA - Coax Line Placement

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

12/6/2019



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Shaft Properties

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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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-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	196.00	6' Lightning rod	1	6.50	0.38	1.00	31.36	1.125	1.00	0.00	0.00
2	195.00	APXVSP18-C-A20	3	57.00	8.02	0.83	175.30	9.932	0.85	0.00	0.00
3	195.00	APXVTM14-C-120	3	56.00	6.34	0.79	158.87	7.086	0.81	0.00	0.00
4	195.00	1900MHz RRH	3	44.00	3.80	0.67	118.71	4.751	0.67	0.00	0.00
5	195.00	TD-RRH8x20-25	3	70.00	4.05	0.67	140.71	4.592	0.67	0.00	0.00
6	195.00	800MHz RRH	3	59.50	2.64	0.67	112.89	3.432	0.67	0.00	0.00
7	195.00	800MHz Filter	3	8.80	0.78	0.50	20.87	1.223	0.50	0.00	0.00
8	195.00	ACU-A20-N	4	1.00	0.14	0.50	3.94	0.343	0.50	0.00	0.00
9	195.00	Low Profile Platform	1	1500.00	22.00	1.00	2395.80	34.087	1.00	0.00	0.00
10	167.00	AIR 21, 1.3M, B2A B4P	3	91.50	6.09	0.83	198.21	6.813	0.83	0.00	0.00
11	167.00	AIR 21, 1.3M, B4A B2P	3	90.30	6.09	0.83	197.01	6.813	0.83	0.00	0.00
12	167.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	431.29	21.506	0.71	0.00	0.00
13	167.00	PRK-1245 (kicker kit)	1	464.91	9.50	1.00	683.61	16.203	1.00	0.00	0.00
14	167.00	(3) VSR-TS-B	1	369.30	11.43	1.00	612.51	21.108	1.00	0.00	0.00
15	167.00	HRK12 (Handrail Kit)	1	261.72	6.75	1.00	471.02	11.195	1.00	0.00	0.00
16	167.00	(3) SFS-H-L (V-Braces)	1	230.00	6.70	1.00	446.39	11.428	1.00	0.00	0.00
17	167.00	4449	3	70.00	1.65	0.67	135.86	2.038	0.67	0.00	0.00
18	167.00	KRY 112 144/1	3	11.00	0.41	0.50	18.27	0.730	0.50	0.00	0.00
19	167.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2382.03	33.901	1.00	0.00	0.00
20	150.00	7700.00	3	16.00	1.73	0.79	48.59	2.111	0.81	0.00	0.00
21	150.00	LGP21401	6	14.10	1.29	0.50	30.77	1.847	0.50	0.00	0.00
22	150.00	LGP13519	6	5.30	0.34	0.50	11.63	0.643	0.50	0.00	0.00
23	150.00	DC6-48-60-18-8F	2	31.80	1.47	1.00	73.02	1.937	1.00	0.00	0.00
24	150.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2372.61	33.774	1.00	0.00	0.00
25	150.00	800 10966	2	125.70	17.36	0.72	352.82	18.548	0.72	0.00	0.00
26	150.00	80010964	1	94.80	10.00	0.71	240.37	10.850	0.71	0.00	0.00
27	150.00	HPA65R-BU4A	3	28.70	4.96	0.85	117.48	5.594	0.85	0.00	0.00
28	150.00	Handrail Kit	1	261.72	6.75	1.00	468.78	11.148	1.00	0.00	0.00
29	150.00	mount pipe	2	87.00	3.31	1.00	176.08	6.067	1.00	0.00	0.00
30	150.00	4449 B5/B12	3	71.00	1.97	0.67	106.59	2.335	0.67	0.00	0.00
31	150.00	B2 B66A 8843	3	70.00	1.64	0.67	100.66	1.984	0.67	0.00	0.00
32	140.00	LNx-8513DS-VTM	2	26.30	8.17	0.83	143.02	10.039	0.85	0.00	0.00
33	140.00	APL866513	2	15.70	4.05	0.93	94.73	4.643	0.94	0.00	0.00
34	140.00	HBXX-6517DS-A2M	6	40.80	8.55	0.83	157.49	10.482	0.85	0.00	0.00
35	140.00	LNx-6414DS-A1M	3	33.10	8.09	0.80	148.77	9.941	0.82	0.00	0.00
36	140.00	RRH2x40 700	3	50.00	2.48	0.67	98.71	3.247	0.67	0.00	0.00
37	140.00	RRH2x60-2100	3	19.50	1.51	0.67	55.42	1.860	0.67	0.00	0.00
38	140.00	DB-T1-6Z-8AB-0Z	1	18.90	4.80	0.50	108.42	5.365	0.50	0.00	0.00
39	140.00	Low Profile Platform	1	1500.00	22.00	1.00	2366.61	33.693	1.00	0.00	0.00
40	30.00	GPS	1	10.00	1.00	1.00	26.64	1.404	1.00	0.00	0.00
Totals:			99	11,579.25			22,653.18				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	195.00	(4) 1 1/4" Coax	0.00	Inside

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)		
0.00	167.00	(9) 1 5/8" Coax		0.00						
0.00	167.00	(4) 1 5/8" Fiber		0.00						
0.00	150.00	(12) 1 5/8" Coax		0.00						
0.00	150.00	(1) 1/2" Fiber		0.00						
0.00	150.00	(1) 2" Conduit		0.00						
0.00	150.00	(2) 3/4" DC		0.00						
0.00	140.00	(12) 1 5/8" Coax		0.00						
0.00	140.00	(2) 1 5/8" Hybrid		4.00						

Shaft Section Properties

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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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
Site Name: Stonington East
Height: 196.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

12/6/2019

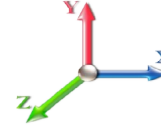


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Load Case: 1.2D + 1.0W 128 mph Wind

Iterations 32

Dead Load Factor 1.20
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	33.806	37.19	650.99	0.950	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	33.806	37.19	645.88	0.950	0.000	2.00	11.000	10.45	388.6	0.0	780.0
4.00		1.00	0.85	33.806	37.19	640.77	0.950	0.000	2.00	10.913	10.37	385.5	0.0	773.8
6.00		1.00	0.85	33.806	37.19	635.66	0.950	0.000	2.00	10.826	10.28	382.5	0.0	767.6
8.00		1.00	0.85	33.806	37.19	630.55	0.950	0.000	2.00	10.740	10.20	379.4	0.0	761.4
10.00		1.00	0.85	33.806	37.19	625.44	0.950	0.000	2.00	10.653	10.12	376.3	0.0	755.3
12.00		1.00	0.85	33.806	37.19	620.33	0.950	0.000	2.00	10.566	10.04	373.3	0.0	749.1
14.00		1.00	0.85	33.806	37.19	615.22	0.950	0.000	2.00	10.479	9.96	370.2	0.0	742.9
16.00		1.00	0.86	34.224	37.65	613.86	0.950	0.000	2.00	10.393	9.87	371.7	0.0	736.7
18.00		1.00	0.88	35.083	38.59	616.31	0.950	0.000	2.00	10.306	9.79	377.8	0.0	730.5
20.00		1.00	0.90	35.870	39.46	617.92	0.950	0.000	2.00	10.219	9.71	383.1	0.0	724.3
22.00		1.00	0.92	36.597	40.26	618.84	0.950	0.000	2.00	10.133	9.63	387.5	0.0	718.1
24.00		1.00	0.94	37.274	41.00	619.17	0.950	0.000	2.00	10.046	9.54	391.3	0.0	711.9
26.00		1.00	0.95	37.907	41.70	618.99	0.950	0.000	2.00	9.959	9.46	394.5	0.0	705.7
28.00		1.00	0.97	38.503	42.35	618.39	0.950	0.000	2.00	9.873	9.38	397.2	0.0	699.5
30.00	Appurtenance(s)	1.00	0.98	39.066	42.97	617.40	0.950	0.000	2.00	9.786	9.30	399.5	0.0	693.3
32.00		1.00	1.00	39.601	43.56	616.08	0.950	0.000	2.00	9.699	9.21	401.4	0.0	687.1
34.00		1.00	1.01	40.110	44.12	614.46	0.950	0.000	2.00	9.613	9.13	402.9	0.0	680.9
35.50	Bot - Section 2	1.00	1.02	40.476	44.52	613.06	0.950	0.000	1.50	7.153	6.79	302.5	0.0	506.6
36.00		1.00	1.02	40.595	44.65	612.56	0.950	0.000	0.50	2.411	2.29	102.3	0.0	327.6
38.00		1.00	1.03	41.060	45.17	610.43	0.950	0.000	2.00	9.590	9.11	411.5	0.0	1303.0
40.00		1.00	1.04	41.506	45.66	608.07	0.950	0.000	2.00	9.504	9.03	412.2	0.0	1291.0
42.00		1.00	1.05	41.934	46.13	605.51	0.950	0.000	2.00	9.417	8.95	412.7	0.0	1279.0
43.00	Top - Section 1	1.00	1.06	42.142	46.36	604.16	0.950	0.000	1.00	4.676	4.44	205.9	0.0	635.0
44.00		1.00	1.06	42.347	46.58	612.72	0.950	0.000	1.00	4.654	4.42	206.0	0.0	307.8
46.00		1.00	1.07	42.745	47.02	609.85	0.950	0.000	2.00	9.243	8.78	412.9	0.0	611.3
48.00		1.00	1.08	43.130	47.44	606.82	0.950	0.000	2.00	9.157	8.70	412.7	0.0	605.5
50.00		1.00	1.09	43.502	47.85	603.63	0.950	0.000	2.00	9.070	8.62	412.3	0.0	599.7
52.00		1.00	1.10	43.863	48.25	600.31	0.950	0.000	2.00	8.983	8.53	411.8	0.0	594.0
54.00		1.00	1.11	44.213	48.63	596.86	0.950	0.000	2.00	8.897	8.45	411.0	0.0	588.2
56.00		1.00	1.12	44.552	49.01	593.28	0.950	0.000	2.00	8.810	8.37	410.2	0.0	582.4
58.00		1.00	1.13	44.883	49.37	589.59	0.950	0.000	2.00	8.723	8.29	409.1	0.0	576.6
60.00		1.00	1.14	45.204	49.72	585.79	0.950	0.000	2.00	8.637	8.20	408.0	0.0	570.8
62.00		1.00	1.14	45.517	50.07	581.88	0.950	0.000	2.00	8.550	8.12	406.7	0.0	565.1
64.00		1.00	1.15	45.823	50.40	577.88	0.950	0.000	2.00	8.463	8.04	405.3	0.0	559.3
66.00		1.00	1.16	46.120	50.73	573.79	0.950	0.000	2.00	8.377	7.96	403.7	0.0	553.5
68.00		1.00	1.17	46.411	51.05	569.60	0.950	0.000	2.00	8.290	7.88	402.1	0.0	547.7
70.00		1.00	1.17	46.695	51.36	565.34	0.950	0.000	2.00	8.203	7.79	400.3	0.0	541.9
72.00		1.00	1.18	46.973	51.67	560.99	0.950	0.000	2.00	8.117	7.71	398.4	0.0	536.2
74.00		1.00	1.19	47.245	51.97	556.57	0.950	0.000	2.00	8.030	7.63	396.4	0.0	530.4
74.50	Bot - Section 3	1.00	1.19	47.312	52.04	555.46	0.950	0.000	0.50	1.994	1.89	98.6	0.0	131.7
76.00		1.00	1.19	47.511	52.26	552.08	0.950	0.000	1.50	6.046	5.74	300.2	0.0	735.7
78.00		1.00	1.20	47.771	52.55	547.52	0.950	0.000	2.00	7.986	7.59	398.7	0.0	971.5
80.00		1.00	1.21	48.027	52.83	542.89	0.950	0.000	2.00	7.899	7.50	396.4	0.0	960.8
81.00	Top - Section 2	1.00	1.21	48.152	52.97	540.55	0.950	0.000	1.00	3.917	3.72	197.1	0.0	476.4
82.00		1.00	1.21	48.277	53.10	547.31	0.950	0.000	1.00	3.895	3.70	196.5	0.0	220.8
84.00		1.00	1.22	48.522	53.37	542.58	0.950	0.000	2.00	7.726	7.34	391.7	0.0	437.8

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	1.00	1.23	48.763	53.64	537.79	0.950	0.000	2.00	7.639	7.26	389.3	0.0	432.9
88.00	1.00	1.23	49.000	53.90	532.94	0.950	0.000	2.00	7.552	7.17	386.7	0.0	427.9
90.00	1.00	1.24	49.232	54.16	528.03	0.950	0.000	2.00	7.466	7.09	384.1	0.0	423.0
92.00	1.00	1.24	49.461	54.41	523.07	0.950	0.000	2.00	7.379	7.01	381.4	0.0	418.0
94.00	1.00	1.25	49.685	54.65	518.06	0.950	0.000	2.00	7.292	6.93	378.6	0.0	413.1
96.00	1.00	1.25	49.906	54.90	513.00	0.950	0.000	2.00	7.206	6.85	375.8	0.0	408.1
98.00	1.00	1.26	50.123	55.14	507.90	0.950	0.000	2.00	7.119	6.76	372.9	0.0	403.2
100.00	1.00	1.27	50.337	55.37	502.74	0.950	0.000	2.00	7.032	6.68	369.9	0.0	398.2
102.00	1.00	1.27	50.547	55.60	497.54	0.950	0.000	2.00	6.946	6.60	366.9	0.0	393.3
104.00	1.00	1.28	50.754	55.83	492.30	0.950	0.000	2.00	6.859	6.52	363.8	0.0	388.3
106.00	1.00	1.28	50.958	56.05	487.01	0.950	0.000	2.00	6.772	6.43	360.6	0.0	383.3
108.00	1.00	1.29	51.159	56.27	481.69	0.950	0.000	2.00	6.686	6.35	357.4	0.0	378.4
110.00	1.00	1.29	51.357	56.49	476.32	0.953 *	0.000	2.00	6.599	6.29	355.2	0.0	373.4
112.00	1.00	1.30	51.552	56.71	470.91	0.957 *	0.000	2.00	6.512	6.23	353.3	0.0	368.5
114.00	1.00	1.30	51.744	56.92	465.47	0.961 *	0.000	2.00	6.426	6.17	351.4	0.0	363.5
116.00	1.00	1.31	51.934	57.13	459.99	0.965 *	0.000	2.00	6.339	6.12	349.4	0.0	358.6
118.00	1.00	1.31	52.121	57.33	454.47	0.969 *	0.000	2.00	6.252	6.06	347.3	0.0	353.6
118.75 Bot - Section 4	1.00	1.31	52.191	57.41	452.39	0.972 *	0.000	0.75	2.322	2.26	129.6	0.0	131.3
120.00	1.00	1.32	52.306	57.54	448.92	0.974 *	0.000	1.25	3.911	3.81	219.2	0.0	402.0
122.00	1.00	1.32	52.489	57.74	443.33	0.978 *	0.000	2.00	6.187	6.05	349.2	0.0	635.8
124.00 Top - Section 3	1.00	1.32	52.669	57.94	437.71	0.982 *	0.000	2.00	6.100	5.99	347.1	0.0	626.7
126.00	1.00	1.33	52.846	58.13	440.01	0.981 *	0.000	2.00	6.013	5.90	342.9	0.0	283.8
128.00	1.00	1.33	53.022	58.32	434.34	0.986 *	0.000	2.00	5.927	5.84	340.7	0.0	279.7
130.00	1.00	1.34	53.195	58.51	428.64	0.990 *	0.000	2.00	5.840	5.78	338.4	0.0	275.6
132.00	1.00	1.34	53.366	58.70	422.91	0.995 *	0.000	2.00	5.753	5.73	336.1	0.0	271.4
134.00	1.00	1.35	53.536	58.89	417.15	1.000 *	0.000	2.00	5.667	5.67	333.8	0.0	267.3
136.00	1.00	1.35	53.703	59.07	411.36	1.006 *	0.000	2.00	5.580	5.61	331.4	0.0	263.2
138.00	1.00	1.35	53.868	59.25	405.54	1.011 *	0.000	2.00	5.493	5.55	329.0	0.0	259.0
140.00 Appurtenance(s)	1.00	1.36	54.032	59.43	399.69	1.016 *	0.000	2.00	5.406	5.50	326.6	0.0	254.9
142.00	1.00	1.36	54.193	59.61	393.82	0.950	0.000	2.00	5.320	5.05	301.3	0.0	250.8
144.00	1.00	1.37	54.353	59.79	387.92	0.950	0.000	2.00	5.233	4.97	297.2	0.0	246.7
146.00	1.00	1.37	54.511	59.96	382.00	0.950	0.000	2.00	5.146	4.89	293.2	0.0	242.5
148.00	1.00	1.37	54.667	60.13	376.05	0.950	0.000	2.00	5.060	4.81	289.0	0.0	238.4
150.00 Appurtenance(s)	1.00	1.38	54.822	60.30	370.07	0.950	0.000	2.00	4.973	4.72	284.9	0.0	234.3
152.00	1.00	1.38	54.975	60.47	364.07	0.950	0.000	2.00	4.886	4.64	280.7	0.0	230.1
154.00	1.00	1.39	55.127	60.64	358.05	0.950	0.000	2.00	4.800	4.56	276.5	0.0	226.0
154.75 Bot - Section 5	1.00	1.39	55.183	60.70	355.78	0.950	0.000	0.75	1.778	1.69	102.5	0.0	83.7
156.00	1.00	1.39	55.277	60.80	352.00	0.950	0.000	1.25	2.976	2.83	171.9	0.0	222.7
158.00	1.00	1.39	55.425	60.97	345.93	0.950	0.000	2.00	4.691	4.46	271.7	0.0	350.9
159.00 Top - Section 4	1.00	1.40	55.499	61.05	342.88	0.950	0.000	1.00	2.313	2.20	134.1	0.0	173.0
160.00	1.00	1.40	55.572	61.13	344.72	0.950	0.000	1.00	2.291	2.18	133.1	0.0	65.0
162.00	1.00	1.40	55.718	61.29	338.61	0.950	0.000	2.00	4.518	4.29	263.0	0.0	128.2
164.00	1.00	1.40	55.862	61.45	332.48	0.950	0.000	2.00	4.431	4.21	258.7	0.0	125.7
166.00	1.00	1.41	56.004	61.60	326.33	0.950	0.000	2.00	4.344	4.13	254.2	0.0	123.2
167.00 Appurtenance(s)	1.00	1.41	56.075	61.68	323.25	0.950	0.000	1.00	2.140	2.03	125.4	0.0	60.7
168.00	1.00	1.41	56.146	61.76	320.16	0.950	0.000	1.00	2.118	2.01	124.3	0.0	60.1
170.00	1.00	1.42	56.286	61.91	313.96	0.950	0.000	2.00	4.171	3.96	245.3	0.0	118.3
172.00	1.00	1.42	56.425	62.07	307.75	0.950	0.000	2.00	4.084	3.88	240.8	0.0	115.8
174.00	1.00	1.42	56.562	62.22	301.51	0.950	0.000	2.00	3.997	3.80	236.3	0.0	113.3
176.00	1.00	1.43	56.698	62.37	295.26	0.950	0.000	2.00	3.911	3.72	231.7	0.0	110.8
178.00	1.00	1.43	56.833	62.52	288.98	0.950	0.000	2.00	3.824	3.63	227.1	0.0	108.4
180.00	1.00	1.43	56.967	62.66	282.69	0.950	0.000	2.00	3.737	3.55	222.5	0.0	105.9
182.00	1.00	1.44	57.100	62.81	276.37	0.950	0.000	2.00	3.651	3.47	217.8	0.0	103.4
184.00	1.00	1.44	57.231	62.95	270.04	0.950	0.000	2.00	3.564	3.39	213.2	0.0	100.9
186.00	1.00	1.44	57.362	63.10	263.69	0.950	0.000	2.00	3.477	3.30	208.4	0.0	98.4
188.00	1.00	1.45	57.491	63.24	257.33	0.950	0.000	2.00	3.391	3.22	203.7	0.0	96.0
190.00	1.00	1.45	57.619	63.38	250.94	0.950	0.000	2.00	3.304	3.14	198.9	0.0	93.5

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019	
Site Name: Stonington East	Exposure: C		
Height: 196.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 12



192.00	1.00	1.45	57.747	63.52	244.54	0.950	0.000	2.00	3.217	3.06	194.1	0.0	91.0
194.00	1.00	1.46	57.873	63.66	238.12	0.950	0.000	2.00	3.131	2.97	189.3	0.0	88.5
195.00 Appurtenance(s)	1.00	1.46	57.935	63.73	234.91	0.950	0.000	1.00	1.533	1.46	92.8	0.0	43.3
196.00 Appurtenance(s)	1.00	1.46	57.998	63.80	231.69	0.950	0.000	1.00	1.511	1.44	91.6	0.0	42.7
								Totals:	196.00		33,539.4		45,693.6

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

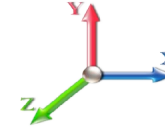
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0W 128 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 32

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor 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	57.998	63.798	1.00	1.00	0.38	7.80	0.000	0.000	24.24	0.00	0.00
2	195.00	Low Profile Platform	1	57.935	63.729	1.00	1.00	22.00	1800.00	0.000	0.000	1402.04	0.00	0.00
3	195.00	ACU-A20-N	4	57.935	63.729	0.40	0.80	0.22	4.80	0.000	0.000	14.28	0.00	0.00
4	195.00	800MHz Filter	3	57.935	63.729	0.40	0.80	0.94	31.68	0.000	0.000	59.65	0.00	0.00
5	195.00	800MHz RRH	3	57.935	63.729	0.54	0.80	4.25	214.20	0.000	0.000	270.54	0.00	0.00
6	195.00	TD-RRH8x20-25	3	57.935	63.729	0.54	0.80	6.51	252.00	0.000	0.000	415.03	0.00	0.00
7	195.00	1900MHz RRH	3	57.935	63.729	0.54	0.80	6.11	158.40	0.000	0.000	389.41	0.00	0.00
8	195.00	APXVTM14-C-120	3	57.935	63.729	0.63	0.80	12.02	201.60	0.000	0.000	766.06	0.00	0.00
9	195.00	APXVSP18-C-A20	3	57.935	63.729	0.66	0.80	15.98	205.20	0.000	0.000	1018.12	0.00	0.00
10	167.00	HRK12 (Handrail Kit)	1	56.075	61.683	1.00	1.00	6.75	314.06	0.000	0.000	416.36	0.00	0.00
11	167.00	(3) VSR-TS-B	1	56.075	61.683	1.00	1.00	11.43	443.16	0.000	0.000	705.03	0.00	0.00
12	167.00	(3) SFS-H-L (V-Braces)	1	56.075	61.683	1.00	1.00	6.70	276.00	0.000	0.000	413.27	0.00	0.00
13	167.00	PRK-1245 (kicker kit)	1	56.075	61.683	1.00	1.00	9.50	557.89	0.000	0.000	585.99	0.00	0.00
14	167.00	APXVAARR24 43-U-NA2	3	56.075	61.683	0.53	0.75	31.97	460.80	0.000	0.000	1971.94	0.00	0.00
15	167.00	Low Profile	1	56.075	61.683	1.00	1.00	22.00	1800.00	0.000	0.000	1357.02	0.00	0.00
16	167.00	4449	3	56.075	61.683	0.50	0.75	2.49	252.00	0.000	0.000	153.43	0.00	0.00
17	167.00	AIR 21, 1.3M, B2A B4P	3	56.075	61.683	0.62	0.75	11.32	329.40	0.000	0.000	698.14	0.00	0.00
18	167.00	AIR 21, 1.3M, B4A B2P	3	56.075	61.683	0.62	0.75	11.32	325.08	0.000	0.000	698.14	0.00	0.00
19	167.00	KRY 112 144/1	3	56.075	61.683	0.38	0.75	0.46	39.60	0.000	0.000	28.45	0.00	0.00
20	150.00	Low Profile	1	54.822	60.304	1.00	1.00	22.00	1800.00	0.000	0.000	1326.69	0.00	0.00
21	150.00	DC6-48-60-18-8F	2	54.822	60.304	0.75	0.75	2.21	76.32	0.000	0.000	132.97	0.00	0.00
22	150.00	mount pipe	2	54.822	60.304	1.00	1.00	6.62	208.80	0.000	0.000	399.21	0.00	0.00
23	150.00	800 10966	2	54.822	60.304	0.54	0.75	18.75	301.68	0.000	0.000	1130.63	0.00	0.00
24	150.00	80010964	1	54.822	60.304	0.53	0.75	5.32	113.76	0.000	0.000	321.12	0.00	0.00
25	150.00	HPA65R-BU4A	3	54.822	60.304	0.64	0.75	9.49	103.32	0.000	0.000	572.05	0.00	0.00
26	150.00	Handrail Kit	1	54.822	60.304	1.00	1.00	6.75	314.06	0.000	0.000	407.05	0.00	0.00
27	150.00	LGP13519	6	54.822	60.304	0.38	0.75	0.77	38.16	0.000	0.000	46.13	0.00	0.00
28	150.00	B2 B66A 8843	3	54.822	60.304	0.50	0.75	2.47	252.00	0.000	0.000	149.09	0.00	0.00
29	150.00	7700.00	3	54.822	60.304	0.59	0.75	3.08	57.60	0.000	0.000	185.44	0.00	0.00
30	150.00	LGP21401	6	54.822	60.304	0.38	0.75	2.90	101.52	0.000	0.000	175.03	0.00	0.00
31	150.00	4449 B5/B12	3	54.822	60.304	0.50	0.75	2.97	255.60	0.000	0.000	179.09	0.00	0.00
32	140.00	LNx-6414DS-A1M	3	54.032	59.435	0.64	0.80	15.53	119.16	0.000	0.000	923.19	0.00	0.00
33	140.00	LNx-8513DS-VTM	2	54.032	59.435	0.66	0.80	10.85	63.12	0.000	0.000	644.85	0.00	0.00
34	140.00	APL866513	2	54.032	59.435	0.74	0.80	6.03	37.68	0.000	0.000	358.18	0.00	0.00
35	140.00	HBXX-6517DS-A2M	6	54.032	59.435	0.66	0.80	34.06	293.76	0.000	0.000	2024.54	0.00	0.00
36	140.00	RRH2x60-2100	3	54.032	59.435	0.54	0.80	2.43	70.20	0.000	0.000	144.31	0.00	0.00
37	140.00	RRH2x40 700	3	54.032	59.435	0.54	0.80	3.99	180.00	0.000	0.000	237.02	0.00	0.00
38	140.00	DB-T1-6Z-8AB-0Z	1	54.032	59.435	0.40	0.80	1.92	22.68	0.000	0.000	114.11	0.00	0.00
39	140.00	Low Profile Platform	1	54.032	59.435	0.80	0.80	17.60	1800.00	0.000	0.000	1046.05	0.00	0.00
40	30.00	GPS	1	39.066	42.973	1.00	1.00	1.00	12.00	0.000	0.000	42.97	0.00	0.00

Totals: 13,895.10

21,946.89

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0W 128 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 32

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		388.59	890.74	0.00	0.00
4.00		385.53	884.54	0.00	0.00
6.00		382.47	878.35	0.00	0.00
8.00		379.40	872.16	0.00	0.00
10.00		376.34	865.97	0.00	0.00
12.00		373.28	859.77	0.00	0.00
14.00		370.22	853.58	0.00	0.00
16.00		371.69	847.39	0.00	0.00
18.00		377.84	841.19	0.00	0.00
20.00		383.07	835.00	0.00	0.00
22.00		387.52	828.81	0.00	0.00
24.00		391.30	822.62	0.00	0.00
26.00		394.52	816.42	0.00	0.00
28.00		397.23	810.23	0.00	0.00
30.00	(1) attachments	442.48	816.04	0.00	0.00
32.00		401.39	797.84	0.00	0.00
34.00		402.91	791.65	0.00	0.00
35.50		302.53	589.67	0.00	0.00
36.00		102.28	355.29	0.00	0.00
38.00		411.49	1413.68	0.00	0.00
40.00		412.20	1401.70	0.00	0.00
42.00		412.66	1389.73	0.00	0.00
43.00		205.92	690.38	0.00	0.00
44.00		205.96	363.17	0.00	0.00
46.00		412.89	722.00	0.00	0.00
48.00		412.70	716.22	0.00	0.00
50.00		412.32	710.44	0.00	0.00
52.00		411.77	704.66	0.00	0.00
54.00		411.05	698.88	0.00	0.00
56.00		410.17	693.10	0.00	0.00
58.00		409.15	687.32	0.00	0.00
60.00		407.98	681.54	0.00	0.00
62.00		406.68	675.76	0.00	0.00
64.00		405.26	669.98	0.00	0.00
66.00		403.72	664.20	0.00	0.00
68.00		402.06	658.42	0.00	0.00
70.00		400.29	652.64	0.00	0.00
72.00		398.42	646.86	0.00	0.00
74.00		396.44	641.08	0.00	0.00
74.50		98.58	159.37	0.00	0.00
76.00		300.19	818.72	0.00	0.00
78.00		398.66	1082.23	0.00	0.00
80.00		396.44	1071.50	0.00	0.00
81.00		197.11	531.72	0.00	0.00
82.00		196.52	276.14	0.00	0.00
84.00		391.75	548.56	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00		389.27	543.60	0.00	0.00
88.00		386.72	538.65	0.00	0.00
90.00		384.10	533.69	0.00	0.00
92.00		381.40	528.74	0.00	0.00
94.00		378.63	523.78	0.00	0.00
96.00		375.79	518.83	0.00	0.00
98.00		372.88	513.88	0.00	0.00
100.00		369.91	508.92	0.00	0.00
102.00		366.88	503.97	0.00	0.00
104.00		363.78	499.01	0.00	0.00
106.00		360.63	494.06	0.00	0.00
108.00		357.42	489.11	0.00	0.00
110.00		355.24	484.15	0.00	0.00
112.00		353.32	479.20	0.00	0.00
114.00		351.36	474.24	0.00	0.00
116.00		349.35	469.29	0.00	0.00
118.00		347.31	464.33	0.00	0.00
118.75		129.56	172.85	0.00	0.00
120.00		219.15	471.18	0.00	0.00
122.00		349.19	746.50	0.00	0.00
124.00		347.07	737.42	0.00	0.00
126.00		342.90	394.53	0.00	0.00
128.00		340.68	390.40	0.00	0.00
130.00		338.42	386.28	0.00	0.00
132.00		336.13	382.15	0.00	0.00
134.00		333.80	378.02	0.00	0.00
136.00		331.43	373.89	0.00	0.00
138.00		329.04	369.76	0.00	0.00
140.00	(21) attachments	5818.86	2952.23	0.00	0.00
142.00		301.27	326.27	0.00	0.00
144.00		297.23	322.14	0.00	0.00
146.00		293.16	318.01	0.00	0.00
148.00		289.05	313.89	0.00	0.00
150.00	(33) attachments	5309.42	3932.58	0.00	0.00
152.00		280.71	269.51	0.00	0.00
154.00		276.49	265.38	0.00	0.00
154.75		102.50	98.45	0.00	0.00
156.00		171.90	247.26	0.00	0.00
158.00		271.70	390.25	0.00	0.00
159.00		134.14	192.65	0.00	0.00
160.00		133.06	84.69	0.00	0.00
162.00		263.04	167.53	0.00	0.00
164.00		258.66	165.05	0.00	0.00
166.00		254.24	162.57	0.00	0.00
167.00	(20) attachments	7153.16	4878.35	0.00	0.00
168.00		124.26	63.23	0.00	0.00
170.00		245.32	124.60	0.00	0.00
172.00		240.82	122.12	0.00	0.00
174.00		236.28	119.64	0.00	0.00
176.00		231.71	117.17	0.00	0.00
178.00		227.12	114.69	0.00	0.00
180.00		222.49	112.21	0.00	0.00
182.00		217.84	109.73	0.00	0.00
184.00		213.15	107.26	0.00	0.00
186.00		208.44	104.78	0.00	0.00
188.00		203.71	102.30	0.00	0.00
190.00		198.94	99.83	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 16



192.00		194.15	97.35	0.00	0.00
194.00		189.33	94.87	0.00	0.00
195.00	(23) attachments	4427.92	2914.39	0.00	0.00
196.00	(1) attachments	115.83	50.52	0.00	0.00
	Totals:	55,486.25	68,139.21	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

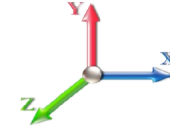
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0W 128 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 32

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	0.061	0.000	33.806	0.00	29.95
2.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.061	0.000	33.806	0.00	5.28
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	33.806	0.00	29.95
4.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.061	0.000	33.806	0.00	5.28
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	33.806	0.00	29.95
6.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.062	0.000	33.806	0.00	5.28
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	33.806	0.00	29.95
8.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.062	0.000	33.806	0.00	5.28
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	33.806	0.00	29.95
10.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.063	0.000	33.806	0.00	5.28
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	33.806	0.00	29.95
12.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.063	0.000	33.806	0.00	5.28
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	33.806	0.00	29.95
14.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.064	0.000	33.806	0.00	5.28
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	34.224	0.00	29.95
16.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.064	0.000	34.224	0.00	5.28
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	35.083	0.00	29.95
18.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.065	0.000	35.083	0.00	5.28
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	35.870	0.00	29.95
20.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.065	0.000	35.870	0.00	5.28
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	36.597	0.00	29.95
22.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.066	0.000	36.597	0.00	5.28
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	37.274	0.00	29.95
24.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.066	0.000	37.274	0.00	5.28
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	37.907	0.00	29.95
26.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.067	0.000	37.907	0.00	5.28
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	38.503	0.00	29.95
28.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.068	0.000	38.503	0.00	5.28
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	39.066	0.00	29.95
30.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.068	0.000	39.066	0.00	5.28
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.069	0.000	39.601	0.00	29.95
32.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.069	0.000	39.601	0.00	5.28
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.069	0.000	40.110	0.00	29.95
34.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.069	0.000	40.110	0.00	5.28
35.50	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.070	0.000	40.476	0.00	22.46
35.50	1 5/8" Hybrid	Yes	1.50	0.000	4.00	0.50	0.00	0.070	0.000	40.476	0.00	3.96
36.00	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.070	0.000	40.595	0.00	7.49
36.00	1 5/8" Hybrid	Yes	0.50	0.000	4.00	0.17	0.00	0.070	0.000	40.595	0.00	1.32
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	41.060	0.00	29.95
38.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.071	0.000	41.060	0.00	5.28
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	41.506	0.00	29.95
40.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.071	0.000	41.506	0.00	5.28
42.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	41.934	0.00	29.95
42.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.072	0.000	41.934	0.00	5.28
43.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.072	0.000	42.142	0.00	14.98
43.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.33	0.00	0.072	0.000	42.142	0.00	2.64
44.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.072	0.000	42.347	0.00	14.98

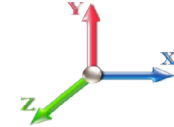
Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0W 128 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 32

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	4.00	0.33	0.00	0.072	0.000	42.347	0.00	2.64
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	42.745	0.00	29.95
46.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.072	0.000	42.745	0.00	5.28
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	43.130	0.00	29.95
48.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.073	0.000	43.130	0.00	5.28
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.074	0.000	43.502	0.00	29.95
50.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.074	0.000	43.502	0.00	5.28
52.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.074	0.000	43.863	0.00	29.95
52.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.074	0.000	43.863	0.00	5.28
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	44.213	0.00	29.95
54.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.075	0.000	44.213	0.00	5.28
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.076	0.000	44.552	0.00	29.95
56.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.076	0.000	44.552	0.00	5.28
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.076	0.000	44.883	0.00	29.95
58.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.076	0.000	44.883	0.00	5.28
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.077	0.000	45.204	0.00	29.95
60.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.077	0.000	45.204	0.00	5.28
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.078	0.000	45.517	0.00	29.95
62.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.078	0.000	45.517	0.00	5.28
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	45.823	0.00	29.95
64.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.079	0.000	45.823	0.00	5.28
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.080	0.000	46.120	0.00	29.95
66.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.080	0.000	46.120	0.00	5.28
68.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.080	0.000	46.411	0.00	29.95
68.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.080	0.000	46.411	0.00	5.28
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	46.695	0.00	29.95
70.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.081	0.000	46.695	0.00	5.28
72.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.082	0.000	46.973	0.00	29.95
72.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.082	0.000	46.973	0.00	5.28
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.083	0.000	47.245	0.00	29.95
74.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.083	0.000	47.245	0.00	5.28
74.50	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.084	0.000	47.312	0.00	7.49
74.50	1 5/8" Hybrid	Yes	0.50	0.000	4.00	0.17	0.00	0.084	0.000	47.312	0.00	1.32
76.00	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.084	0.000	47.511	0.00	22.46
76.00	1 5/8" Hybrid	Yes	1.50	0.000	4.00	0.50	0.00	0.084	0.000	47.511	0.00	3.96
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.085	0.000	47.771	0.00	29.95
78.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.085	0.000	47.771	0.00	5.28
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.086	0.000	48.027	0.00	29.95
80.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.086	0.000	48.027	0.00	5.28
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.087	0.000	48.152	0.00	14.98
81.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.33	0.00	0.087	0.000	48.152	0.00	2.64
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.086	0.000	48.277	0.00	14.98
82.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.33	0.00	0.086	0.000	48.277	0.00	2.64
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.086	0.000	48.522	0.00	29.95
84.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.086	0.000	48.522	0.00	5.28
86.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.087	0.000	48.763	0.00	29.95
86.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.087	0.000	48.763	0.00	5.28

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0W 128 mph Wind	Iterations 32
Dead Load Factor 1.20	
Wind Load Factor 1.00	

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
88.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.088	0.000	49.000	0.00	29.95
88.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.088	0.000	49.000	0.00	5.28
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.089	0.000	49.232	0.00	29.95
90.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.089	0.000	49.232	0.00	5.28
92.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.090	0.000	49.461	0.00	29.95
92.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.090	0.000	49.461	0.00	5.28
94.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	49.685	0.00	29.95
94.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.091	0.000	49.685	0.00	5.28
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.093	0.000	49.906	0.00	29.95
96.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.093	0.000	49.906	0.00	5.28
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.094	0.000	50.123	0.00	29.95
98.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.094	0.000	50.123	0.00	5.28
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.095	0.000	50.337	0.00	29.95
100.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.095	0.000	50.337	0.00	5.28
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.096	0.000	50.547	0.00	29.95
102.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.096	0.000	50.547	0.00	5.28
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.097	0.000	50.754	0.00	29.95
104.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.097	0.000	50.754	0.00	5.28
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.098	0.000	50.958	0.00	29.95
106.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.098	0.000	50.958	0.00	5.28
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.100	0.000	51.159	0.00	29.95
108.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.100	0.000	51.159	0.00	5.28
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.003	51.357	0.00	29.95
110.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.101	1.003	51.357	0.00	5.28
112.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.102	1.007	51.552	0.00	29.95
112.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.102	1.007	51.552	0.00	5.28
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.011	51.744	0.00	29.95
114.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.104	1.011	51.744	0.00	5.28
116.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.105	1.016	51.934	0.00	29.95
116.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.105	1.016	51.934	0.00	5.28
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.107	1.020	52.121	0.00	29.95
118.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.107	1.020	52.121	0.00	5.28
118.75	1 5/8" Coax	Yes	0.75	0.000	0.00	0.00	0.00	0.108	1.023	52.191	0.00	11.23
118.75	1 5/8" Hybrid	Yes	0.75	0.000	4.00	0.25	0.00	0.108	1.023	52.191	0.00	1.98
120.00	1 5/8" Coax	Yes	1.25	0.000	0.00	0.00	0.00	0.108	1.025	52.306	0.00	18.72
120.00	1 5/8" Hybrid	Yes	1.25	0.000	4.00	0.42	0.00	0.108	1.025	52.306	0.00	3.30
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.110	1.029	52.489	0.00	29.95
122.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.110	1.029	52.489	0.00	5.28
124.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.034	52.669	0.00	29.95
124.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.111	1.034	52.669	0.00	5.28
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.033	52.846	0.00	29.95
126.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.111	1.033	52.846	0.00	5.28
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.112	1.037	53.022	0.00	29.95
128.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.112	1.037	53.022	0.00	5.28
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.114	1.042	53.195	0.00	29.95
130.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.114	1.042	53.195	0.00	5.28
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.116	1.048	53.366	0.00	29.95

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

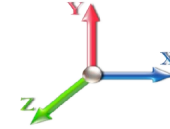


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Load Case: 1.2D + 1.0W 128 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 32

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	4.00	0.67	0.00	0.116	1.048	53.366	0.00	5.28
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.118	1.053	53.536	0.00	29.95
134.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.118	1.053	53.536	0.00	5.28
136.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.119	1.058	53.703	0.00	29.95
136.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.119	1.058	53.703	0.00	5.28
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	53.868	0.00	29.95
138.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.121	1.064	53.868	0.00	5.28
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.123	1.070	54.032	0.00	29.95
140.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.123	1.070	54.032	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

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

12/6/2019

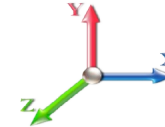


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Load Case: 1.2D + 1.0W 128 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 32

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	-68.10	-55.53	0.00	-6831.7	0.00	6831.77	5795.46	1682.91	8909.80	7510.36	0.00	0.000	0.000	0.922
2.00	-67.13	-55.24	0.00	-6720.7	0.00	6720.70	5776.44	1669.60	8769.44	7426.09	0.02	-0.078	0.000	0.918
4.00	-66.17	-54.94	0.00	-6610.2	0.00	6610.23	5757.00	1656.30	8630.20	7341.68	0.07	-0.157	0.000	0.913
6.00	-65.22	-54.65	0.00	-6500.3	0.00	6500.35	5737.14	1642.99	8492.07	7257.12	0.15	-0.236	0.000	0.908
8.00	-64.27	-54.35	0.00	-6391.0	0.00	6391.06	5716.84	1629.68	8355.05	7172.43	0.27	-0.316	0.000	0.903
10.00	-63.34	-54.06	0.00	-6282.3	0.00	6282.36	5696.12	1616.37	8219.15	7087.63	0.42	-0.396	0.000	0.899
12.00	-62.40	-53.77	0.00	-6174.2	0.00	6174.24	5674.97	1603.06	8084.36	7002.73	0.60	-0.477	0.000	0.894
14.00	-61.48	-53.48	0.00	-6066.7	0.00	6066.70	5653.40	1589.76	7950.69	6917.75	0.82	-0.559	0.000	0.889
16.00	-60.56	-53.19	0.00	-5959.7	0.00	5959.75	5631.39	1576.45	7818.13	6832.69	1.07	-0.641	0.000	0.884
18.00	-59.64	-52.88	0.00	-5853.3	0.00	5853.38	5608.96	1563.14	7686.69	6747.57	1.36	-0.723	0.000	0.879
20.00	-58.74	-52.58	0.00	-5747.6	0.00	5747.61	5586.10	1549.83	7556.36	6662.41	1.68	-0.807	0.000	0.874
22.00	-57.84	-52.26	0.00	-5642.4	0.00	5642.47	5562.81	1536.52	7427.15	6577.21	2.04	-0.891	0.000	0.869
24.00	-56.94	-51.94	0.00	-5537.9	0.00	5537.95	5539.10	1523.21	7299.05	6491.99	2.43	-0.975	0.000	0.864
26.00	-56.06	-51.62	0.00	-5434.0	0.00	5434.07	5514.96	1509.91	7172.06	6406.77	2.86	-1.061	0.000	0.860
28.00	-55.18	-51.29	0.00	-5330.8	0.00	5330.84	5490.39	1496.60	7046.19	6321.55	3.32	-1.147	0.000	0.855
30.00	-54.29	-50.91	0.00	-5228.2	0.00	5228.27	5465.39	1483.29	6921.43	6236.35	3.82	-1.233	0.000	0.849
32.00	-53.43	-50.57	0.00	-5126.4	0.00	5126.45	5439.96	1469.98	6797.79	6151.18	4.35	-1.320	0.000	0.844
34.00	-52.58	-50.22	0.00	-5025.3	0.00	5025.31	5414.11	1456.67	6675.26	6066.06	4.93	-1.408	0.000	0.839
35.50	-51.96	-49.94	0.00	-4949.9	0.00	4949.99	5394.44	1446.69	6584.09	6002.26	5.38	-1.474	0.000	0.836
36.00	-51.56	-49.88	0.00	-4925.0	0.00	4925.01	5387.83	1443.36	6553.84	5981.00	5.54	-1.497	0.000	0.834
38.00	-50.08	-49.51	0.00	-4825.2	0.00	4825.25	5361.12	1430.06	6433.54	5896.01	6.18	-1.586	0.000	0.829
40.00	-48.61	-49.14	0.00	-4726.2	0.00	4726.23	5333.99	1416.75	6314.36	5811.11	6.87	-1.675	0.000	0.824
42.00	-47.18	-48.74	0.00	-4627.9	0.00	4627.97	5306.43	1403.44	6196.29	5726.30	7.59	-1.766	0.000	0.818
43.00	-46.45	-48.55	0.00	-4579.2	0.00	4579.23	4823.70	1326.07	5927.09	5273.35	7.96	-1.811	0.000	0.879
44.00	-46.04	-48.39	0.00	-4530.6	0.00	4530.68	4812.47	1319.86	5871.70	5236.23	8.35	-1.857	0.000	0.876
46.00	-45.25	-48.02	0.00	-4433.9	0.00	4433.92	4789.68	1307.44	5761.71	5161.99	9.15	-1.950	0.000	0.870
48.00	-44.47	-47.66	0.00	-4337.8	0.00	4337.87	4766.46	1295.02	5652.75	5087.77	9.98	-2.044	0.000	0.863
50.00	-43.70	-47.29	0.00	-4242.5	0.00	4242.56	4742.82	1282.60	5544.84	5013.57	10.86	-2.139	0.000	0.857
52.00	-42.93	-46.93	0.00	-4147.9	0.00	4147.98	4718.75	1270.18	5437.96	4939.41	11.78	-2.234	0.000	0.850
54.00	-42.17	-46.56	0.00	-4054.1	0.00	4054.13	4694.25	1257.76	5332.12	4865.31	12.73	-2.329	0.000	0.844
56.00	-41.42	-46.19	0.00	-3961.0	0.00	3961.01	4669.32	1245.33	5227.33	4791.28	13.73	-2.426	0.000	0.837
58.00	-40.67	-45.82	0.00	-3868.6	0.00	3868.64	4643.97	1232.91	5123.57	4717.32	14.77	-2.523	0.000	0.830
60.00	-39.93	-45.45	0.00	-3777.0	0.00	3777.00	4618.19	1220.49	5020.86	4643.46	15.85	-2.620	0.000	0.823
62.00	-39.20	-45.08	0.00	-3686.1	0.00	3686.10	4591.98	1208.07	4919.18	4569.71	16.96	-2.718	0.000	0.817
64.00	-38.47	-44.71	0.00	-3595.9	0.00	3595.94	4565.34	1195.65	4818.55	4496.07	18.12	-2.817	0.000	0.810
66.00	-37.75	-44.34	0.00	-3506.5	0.00	3506.53	4538.28	1183.23	4718.95	4422.57	19.33	-2.917	0.000	0.803
68.00	-37.04	-43.97	0.00	-3417.8	0.00	3417.85	4510.78	1170.81	4620.40	4349.22	20.57	-3.017	0.000	0.795
70.00	-36.33	-43.60	0.00	-3329.9	0.00	3329.92	4482.87	1158.39	4522.88	4276.03	21.85	-3.117	0.000	0.788
72.00	-35.63	-43.23	0.00	-3242.7	0.00	3242.73	4454.52	1145.97	4426.41	4203.01	23.18	-3.218	0.000	0.781
74.00	-34.97	-42.83	0.00	-3156.2	0.00	3156.28	4425.74	1133.55	4330.97	4130.17	24.55	-3.320	0.000	0.774
74.50	-34.78	-42.76	0.00	-3134.8	0.00	3134.86	4418.48	1130.44	4307.27	4111.99	24.90	-3.346	0.000	0.772
76.00	-33.91	-42.46	0.00	-3070.7	0.00	3070.73	4396.54	1121.12	4236.58	4057.54	25.96	-3.423	0.000	0.766
78.00	-32.78	-42.06	0.00	-2985.8	0.00	2985.80	4366.91	1108.70	4143.22	3985.11	27.42	-3.525	0.000	0.758
80.00	-31.68	-41.64	0.00	-2901.6	0.00	2901.69	4336.86	1096.28	4050.91	3912.92	28.92	-3.629	0.000	0.750
81.00	-31.12	-41.44	0.00	-2860.0	0.00	2860.05	3502.12	951.57	3560.67	3204.59	29.68	-3.681	0.000	0.903
82.00	-30.80	-41.27	0.00	-2818.6	0.00	2818.62	3492.03	946.24	3520.94	3177.33	30.46	-3.733	0.000	0.898
84.00	-30.19	-40.90	0.00	-2736.0	0.00	2736.09	3471.52	935.60	3442.15	3122.83	32.05	-3.849	0.000	0.887
86.00	-29.60	-40.54	0.00	-2654.2	0.00	2654.29	3450.59	924.95	3364.26	3068.38	33.68	-3.964	0.000	0.876

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 23
	Struct Class: II	



194.00	-2.20	-4.96	0.00	-5.08	0.00	5.08	761.60	187.60	276.78	274.17	190.14	-9.183	0.000	0.022
195.00	-0.03	-0.12	0.00	-0.12	0.00	0.12	754.51	184.94	268.98	267.73	192.06	-9.185	0.000	0.000
196.00	0.00	-0.12	0.00	0.00	0.00	0.00	747.31	182.27	261.30	261.31	193.97	-9.185	0.000	0.000

Wind Loading - Shaft

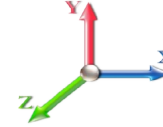
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0W 128 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.00



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	33.806	37.19	650.99	0.950	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	33.806	37.19	645.88	0.950	0.000	2.00	11.000	10.45	388.6	0.0	585.0
4.00		1.00	0.85	33.806	37.19	640.77	0.950	0.000	2.00	10.913	10.37	385.5	0.0	580.4
6.00		1.00	0.85	33.806	37.19	635.66	0.950	0.000	2.00	10.826	10.28	382.5	0.0	575.7
8.00		1.00	0.85	33.806	37.19	630.55	0.950	0.000	2.00	10.740	10.20	379.4	0.0	571.1
10.00		1.00	0.85	33.806	37.19	625.44	0.950	0.000	2.00	10.653	10.12	376.3	0.0	566.4
12.00		1.00	0.85	33.806	37.19	620.33	0.950	0.000	2.00	10.566	10.04	373.3	0.0	561.8
14.00		1.00	0.85	33.806	37.19	615.22	0.950	0.000	2.00	10.479	9.96	370.2	0.0	557.2
16.00		1.00	0.86	34.224	37.65	613.86	0.950	0.000	2.00	10.393	9.87	371.7	0.0	552.5
18.00		1.00	0.88	35.083	38.59	616.31	0.950	0.000	2.00	10.306	9.79	377.8	0.0	547.9
20.00		1.00	0.90	35.870	39.46	617.92	0.950	0.000	2.00	10.219	9.71	383.1	0.0	543.2
22.00		1.00	0.92	36.597	40.26	618.84	0.950	0.000	2.00	10.133	9.63	387.5	0.0	538.6
24.00		1.00	0.94	37.274	41.00	619.17	0.950	0.000	2.00	10.046	9.54	391.3	0.0	533.9
26.00		1.00	0.95	37.907	41.70	618.99	0.950	0.000	2.00	9.959	9.46	394.5	0.0	529.3
28.00		1.00	0.97	38.503	42.35	618.39	0.950	0.000	2.00	9.873	9.38	397.2	0.0	524.6
30.00	Appurtenance(s)	1.00	0.98	39.066	42.97	617.40	0.950	0.000	2.00	9.786	9.30	399.5	0.0	520.0
32.00		1.00	1.00	39.601	43.56	616.08	0.950	0.000	2.00	9.699	9.21	401.4	0.0	515.3
34.00		1.00	1.01	40.110	44.12	614.46	0.950	0.000	2.00	9.613	9.13	402.9	0.0	510.7
35.50	Bot - Section 2	1.00	1.02	40.476	44.52	613.06	0.950	0.000	1.50	7.153	6.79	302.5	0.0	380.0
36.00		1.00	1.02	40.595	44.65	612.56	0.950	0.000	0.50	2.411	2.29	102.3	0.0	245.7
38.00		1.00	1.03	41.060	45.17	610.43	0.950	0.000	2.00	9.590	9.11	411.5	0.0	977.2
40.00		1.00	1.04	41.506	45.66	608.07	0.950	0.000	2.00	9.504	9.03	412.2	0.0	968.2
42.00		1.00	1.05	41.934	46.13	605.51	0.950	0.000	2.00	9.417	8.95	412.7	0.0	959.3
43.00	Top - Section 1	1.00	1.06	42.142	46.36	604.16	0.950	0.000	1.00	4.676	4.44	205.9	0.0	476.3
44.00		1.00	1.06	42.347	46.58	612.72	0.950	0.000	1.00	4.654	4.42	206.0	0.0	230.9
46.00		1.00	1.07	42.745	47.02	609.85	0.950	0.000	2.00	9.243	8.78	412.9	0.0	458.5
48.00		1.00	1.08	43.130	47.44	606.82	0.950	0.000	2.00	9.157	8.70	412.7	0.0	454.1
50.00		1.00	1.09	43.502	47.85	603.63	0.950	0.000	2.00	9.070	8.62	412.3	0.0	449.8
52.00		1.00	1.10	43.863	48.25	600.31	0.950	0.000	2.00	8.983	8.53	411.8	0.0	445.5
54.00		1.00	1.11	44.213	48.63	596.86	0.950	0.000	2.00	8.897	8.45	411.0	0.0	441.1
56.00		1.00	1.12	44.552	49.01	593.28	0.950	0.000	2.00	8.810	8.37	410.2	0.0	436.8
58.00		1.00	1.13	44.883	49.37	589.59	0.950	0.000	2.00	8.723	8.29	409.1	0.0	432.5
60.00		1.00	1.14	45.204	49.72	585.79	0.950	0.000	2.00	8.637	8.20	408.0	0.0	428.1
62.00		1.00	1.14	45.517	50.07	581.88	0.950	0.000	2.00	8.550	8.12	406.7	0.0	423.8
64.00		1.00	1.15	45.823	50.40	577.88	0.950	0.000	2.00	8.463	8.04	405.3	0.0	419.5
66.00		1.00	1.16	46.120	50.73	573.79	0.950	0.000	2.00	8.377	7.96	403.7	0.0	415.1
68.00		1.00	1.17	46.411	51.05	569.60	0.950	0.000	2.00	8.290	7.88	402.1	0.0	410.8
70.00		1.00	1.17	46.695	51.36	565.34	0.950	0.000	2.00	8.203	7.79	400.3	0.0	406.4
72.00		1.00	1.18	46.973	51.67	560.99	0.950	0.000	2.00	8.117	7.71	398.4	0.0	402.1
74.00		1.00	1.19	47.245	51.97	556.57	0.950	0.000	2.00	8.030	7.63	396.4	0.0	397.8
74.50	Bot - Section 3	1.00	1.19	47.312	52.04	555.46	0.950	0.000	0.50	1.994	1.89	98.6	0.0	98.8
76.00		1.00	1.19	47.511	52.26	552.08	0.950	0.000	1.50	6.046	5.74	300.2	0.0	551.8
78.00		1.00	1.20	47.771	52.55	547.52	0.950	0.000	2.00	7.986	7.59	398.7	0.0	728.6
80.00		1.00	1.21	48.027	52.83	542.89	0.950	0.000	2.00	7.899	7.50	396.4	0.0	720.6
81.00	Top - Section 2	1.00	1.21	48.152	52.97	540.55	0.950	0.000	1.00	3.917	3.72	197.1	0.0	357.3
82.00		1.00	1.21	48.277	53.10	547.31	0.950	0.000	1.00	3.895	3.70	196.5	0.0	165.6
84.00		1.00	1.22	48.522	53.37	542.58	0.950	0.000	2.00	7.726	7.34	391.7	0.0	328.4

Wind Loading - Shaft

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

Code: EIA/TIA-222-H 12/6/2019
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II



86.00	1.00	1.23	48.763	53.64	537.79	0.950	0.000	2.00	7.639	7.26	389.3	0.0	324.7
88.00	1.00	1.23	49.000	53.90	532.94	0.950	0.000	2.00	7.552	7.17	386.7	0.0	321.0
90.00	1.00	1.24	49.232	54.16	528.03	0.950	0.000	2.00	7.466	7.09	384.1	0.0	317.2
92.00	1.00	1.24	49.461	54.41	523.07	0.950	0.000	2.00	7.379	7.01	381.4	0.0	313.5
94.00	1.00	1.25	49.685	54.65	518.06	0.950	0.000	2.00	7.292	6.93	378.6	0.0	309.8
96.00	1.00	1.25	49.906	54.90	513.00	0.950	0.000	2.00	7.206	6.85	375.8	0.0	306.1
98.00	1.00	1.26	50.123	55.14	507.90	0.950	0.000	2.00	7.119	6.76	372.9	0.0	302.4
100.00	1.00	1.27	50.337	55.37	502.74	0.950	0.000	2.00	7.032	6.68	369.9	0.0	298.7
102.00	1.00	1.27	50.547	55.60	497.54	0.950	0.000	2.00	6.946	6.60	366.9	0.0	294.9
104.00	1.00	1.28	50.754	55.83	492.30	0.950	0.000	2.00	6.859	6.52	363.8	0.0	291.2
106.00	1.00	1.28	50.958	56.05	487.01	0.950	0.000	2.00	6.772	6.43	360.6	0.0	287.5
108.00	1.00	1.29	51.159	56.27	481.69	0.950	0.000	2.00	6.686	6.35	357.4	0.0	283.8
110.00	1.00	1.29	51.357	56.49	476.32	0.953 *	0.000	2.00	6.599	6.29	355.2	0.0	280.1
112.00	1.00	1.30	51.552	56.71	470.91	0.957 *	0.000	2.00	6.512	6.23	353.3	0.0	276.4
114.00	1.00	1.30	51.744	56.92	465.47	0.961 *	0.000	2.00	6.426	6.17	351.4	0.0	272.6
116.00	1.00	1.31	51.934	57.13	459.99	0.965 *	0.000	2.00	6.339	6.12	349.4	0.0	268.9
118.00	1.00	1.31	52.121	57.33	454.47	0.969 *	0.000	2.00	6.252	6.06	347.3	0.0	265.2
118.75 Bot - Section 4	1.00	1.31	52.191	57.41	452.39	0.972 *	0.000	0.75	2.322	2.26	129.6	0.0	98.5
120.00	1.00	1.32	52.306	57.54	448.92	0.974 *	0.000	1.25	3.911	3.81	219.2	0.0	301.5
122.00	1.00	1.32	52.489	57.74	443.33	0.978 *	0.000	2.00	6.187	6.05	349.2	0.0	476.8
124.00 Top - Section 3	1.00	1.32	52.669	57.94	437.71	0.982 *	0.000	2.00	6.100	5.99	347.1	0.0	470.0
126.00	1.00	1.33	52.846	58.13	440.01	0.981 *	0.000	2.00	6.013	5.90	342.9	0.0	212.9
128.00	1.00	1.33	53.022	58.32	434.34	0.986 *	0.000	2.00	5.927	5.84	340.7	0.0	209.8
130.00	1.00	1.34	53.195	58.51	428.64	0.990 *	0.000	2.00	5.840	5.78	338.4	0.0	206.7
132.00	1.00	1.34	53.366	58.70	422.91	0.995 *	0.000	2.00	5.753	5.73	336.1	0.0	203.6
134.00	1.00	1.35	53.536	58.89	417.15	1.000 *	0.000	2.00	5.667	5.67	333.8	0.0	200.5
136.00	1.00	1.35	53.703	59.07	411.36	1.006 *	0.000	2.00	5.580	5.61	331.4	0.0	197.4
138.00	1.00	1.35	53.868	59.25	405.54	1.011 *	0.000	2.00	5.493	5.55	329.0	0.0	194.3
140.00 Appurtenance(s)	1.00	1.36	54.032	59.43	399.69	1.016 *	0.000	2.00	5.406	5.50	326.6	0.0	191.2
142.00	1.00	1.36	54.193	59.61	393.82	0.950	0.000	2.00	5.320	5.05	301.3	0.0	188.1
144.00	1.00	1.37	54.353	59.79	387.92	0.950	0.000	2.00	5.233	4.97	297.2	0.0	185.0
146.00	1.00	1.37	54.511	59.96	382.00	0.950	0.000	2.00	5.146	4.89	293.2	0.0	181.9
148.00	1.00	1.37	54.667	60.13	376.05	0.950	0.000	2.00	5.060	4.81	289.0	0.0	178.8
150.00 Appurtenance(s)	1.00	1.38	54.822	60.30	370.07	0.950	0.000	2.00	4.973	4.72	284.9	0.0	175.7
152.00	1.00	1.38	54.975	60.47	364.07	0.950	0.000	2.00	4.886	4.64	280.7	0.0	172.6
154.00	1.00	1.39	55.127	60.64	358.05	0.950	0.000	2.00	4.800	4.56	276.5	0.0	169.5
154.75 Bot - Section 5	1.00	1.39	55.183	60.70	355.78	0.950	0.000	0.75	1.778	1.69	102.5	0.0	62.8
156.00	1.00	1.39	55.277	60.80	352.00	0.950	0.000	1.25	2.976	2.83	171.9	0.0	167.0
158.00	1.00	1.39	55.425	60.97	345.93	0.950	0.000	2.00	4.691	4.46	271.7	0.0	263.2
159.00 Top - Section 4	1.00	1.40	55.499	61.05	342.88	0.950	0.000	1.00	2.313	2.20	134.1	0.0	129.7
160.00	1.00	1.40	55.572	61.13	344.72	0.950	0.000	1.00	2.291	2.18	133.1	0.0	48.8
162.00	1.00	1.40	55.718	61.29	338.61	0.950	0.000	2.00	4.518	4.29	263.0	0.0	96.1
164.00	1.00	1.40	55.862	61.45	332.48	0.950	0.000	2.00	4.431	4.21	258.7	0.0	94.3
166.00	1.00	1.41	56.004	61.60	326.33	0.950	0.000	2.00	4.344	4.13	254.2	0.0	92.4
167.00 Appurtenance(s)	1.00	1.41	56.075	61.68	323.25	0.950	0.000	1.00	2.140	2.03	125.4	0.0	45.5
168.00	1.00	1.41	56.146	61.76	320.16	0.950	0.000	1.00	2.118	2.01	124.3	0.0	45.0
170.00	1.00	1.42	56.286	61.91	313.96	0.950	0.000	2.00	4.171	3.96	245.3	0.0	88.7
172.00	1.00	1.42	56.425	62.07	307.75	0.950	0.000	2.00	4.084	3.88	240.8	0.0	86.8
174.00	1.00	1.42	56.562	62.22	301.51	0.950	0.000	2.00	3.997	3.80	236.3	0.0	85.0
176.00	1.00	1.43	56.698	62.37	295.26	0.950	0.000	2.00	3.911	3.72	231.7	0.0	83.1
178.00	1.00	1.43	56.833	62.52	288.98	0.950	0.000	2.00	3.824	3.63	227.1	0.0	81.3
180.00	1.00	1.43	56.967	62.66	282.69	0.950	0.000	2.00	3.737	3.55	222.5	0.0	79.4
182.00	1.00	1.44	57.100	62.81	276.37	0.950	0.000	2.00	3.651	3.47	217.8	0.0	77.5
184.00	1.00	1.44	57.231	62.95	270.04	0.950	0.000	2.00	3.564	3.39	213.2	0.0	75.7
186.00	1.00	1.44	57.362	63.10	263.69	0.950	0.000	2.00	3.477	3.30	208.4	0.0	73.8
188.00	1.00	1.45	57.491	63.24	257.33	0.950	0.000	2.00	3.391	3.22	203.7	0.0	72.0
190.00	1.00	1.45	57.619	63.38	250.94	0.950	0.000	2.00	3.304	3.14	198.9	0.0	70.1

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 26
	Struct Class: II	



192.00	1.00	1.45	57.747	63.52	244.54	0.950	0.000	2.00	3.217	3.06	194.1	0.0	68.3
194.00	1.00	1.46	57.873	63.66	238.12	0.950	0.000	2.00	3.131	2.97	189.3	0.0	66.4
195.00 Appurtenance(s)	1.00	1.46	57.935	63.73	234.91	0.950	0.000	1.00	1.533	1.46	92.8	0.0	32.5
196.00 Appurtenance(s)	1.00	1.46	57.998	63.80	231.69	0.950	0.000	1.00	1.511	1.44	91.6	0.0	32.0
								Totals:	196.00		33,539.4		34,270.2

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance 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-H
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

12/6/2019

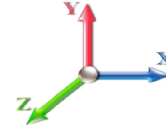
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Load Case: 0.9D + 1.0W 128 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 31

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor 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	57.998	63.798	1.00	1.00	0.38	5.85	0.000	0.000	24.24	0.00	0.00
2	195.00	Low Profile Platform	1	57.935	63.729	1.00	1.00	22.00	1350.00	0.000	0.000	1402.04	0.00	0.00
3	195.00	ACU-A20-N	4	57.935	63.729	0.40	0.80	0.22	3.60	0.000	0.000	14.28	0.00	0.00
4	195.00	800MHz Filter	3	57.935	63.729	0.40	0.80	0.94	23.76	0.000	0.000	59.65	0.00	0.00
5	195.00	800MHz RRH	3	57.935	63.729	0.54	0.80	4.25	160.65	0.000	0.000	270.54	0.00	0.00
6	195.00	TD-RRH8x20-25	3	57.935	63.729	0.54	0.80	6.51	189.00	0.000	0.000	415.03	0.00	0.00
7	195.00	1900MHz RRH	3	57.935	63.729	0.54	0.80	6.11	118.80	0.000	0.000	389.41	0.00	0.00
8	195.00	APXVTM14-C-120	3	57.935	63.729	0.63	0.80	12.02	151.20	0.000	0.000	766.06	0.00	0.00
9	195.00	APXVSP18-C-A20	3	57.935	63.729	0.66	0.80	15.98	153.90	0.000	0.000	1018.12	0.00	0.00
10	167.00	HRK12 (Handrail Kit)	1	56.075	61.683	1.00	1.00	6.75	235.55	0.000	0.000	416.36	0.00	0.00
11	167.00	(3) VSR-TS-B	1	56.075	61.683	1.00	1.00	11.43	332.37	0.000	0.000	705.03	0.00	0.00
12	167.00	(3) SFS-H-L (V-Braces)	1	56.075	61.683	1.00	1.00	6.70	207.00	0.000	0.000	413.27	0.00	0.00
13	167.00	PRK-1245 (kicker kit)	1	56.075	61.683	1.00	1.00	9.50	418.42	0.000	0.000	585.99	0.00	0.00
14	167.00	APXVAARR24 43-U-NA2	3	56.075	61.683	0.53	0.75	31.97	345.60	0.000	0.000	1971.94	0.00	0.00
15	167.00	Low Profile	1	56.075	61.683	1.00	1.00	22.00	1350.00	0.000	0.000	1357.02	0.00	0.00
16	167.00	4449	3	56.075	61.683	0.50	0.75	2.49	189.00	0.000	0.000	153.43	0.00	0.00
17	167.00	AIR 21, 1.3M, B2A B4P	3	56.075	61.683	0.62	0.75	11.32	247.05	0.000	0.000	698.14	0.00	0.00
18	167.00	AIR 21, 1.3M, B4A B2P	3	56.075	61.683	0.62	0.75	11.32	243.81	0.000	0.000	698.14	0.00	0.00
19	167.00	KRY 112 144/1	3	56.075	61.683	0.38	0.75	0.46	29.70	0.000	0.000	28.45	0.00	0.00
20	150.00	Low Profile	1	54.822	60.304	1.00	1.00	22.00	1350.00	0.000	0.000	1326.69	0.00	0.00
21	150.00	DC6-48-60-18-8F	2	54.822	60.304	0.75	0.75	2.21	57.24	0.000	0.000	132.97	0.00	0.00
22	150.00	mount pipe	2	54.822	60.304	1.00	1.00	6.62	156.60	0.000	0.000	399.21	0.00	0.00
23	150.00	800 10966	2	54.822	60.304	0.54	0.75	18.75	226.26	0.000	0.000	1130.63	0.00	0.00
24	150.00	80010964	1	54.822	60.304	0.53	0.75	5.32	85.32	0.000	0.000	321.12	0.00	0.00
25	150.00	HPA65R-BU4A	3	54.822	60.304	0.64	0.75	9.49	77.49	0.000	0.000	572.05	0.00	0.00
26	150.00	Handrail Kit	1	54.822	60.304	1.00	1.00	6.75	235.55	0.000	0.000	407.05	0.00	0.00
27	150.00	LGP13519	6	54.822	60.304	0.38	0.75	0.77	28.62	0.000	0.000	46.13	0.00	0.00
28	150.00	B2 B66A 8843	3	54.822	60.304	0.50	0.75	2.47	189.00	0.000	0.000	149.09	0.00	0.00
29	150.00	7700.00	3	54.822	60.304	0.59	0.75	3.08	43.20	0.000	0.000	185.44	0.00	0.00
30	150.00	LGP21401	6	54.822	60.304	0.38	0.75	2.90	76.14	0.000	0.000	175.03	0.00	0.00
31	150.00	4449 B5/B12	3	54.822	60.304	0.50	0.75	2.97	191.70	0.000	0.000	179.09	0.00	0.00
32	140.00	LNx-6414DS-A1M	3	54.032	59.435	0.64	0.80	15.53	89.37	0.000	0.000	923.19	0.00	0.00
33	140.00	LNx-8513DS-VTM	2	54.032	59.435	0.66	0.80	10.85	47.34	0.000	0.000	644.85	0.00	0.00
34	140.00	APL866513	2	54.032	59.435	0.74	0.80	6.03	28.26	0.000	0.000	358.18	0.00	0.00
35	140.00	HBXX-6517DS-A2M	6	54.032	59.435	0.66	0.80	34.06	220.32	0.000	0.000	2024.54	0.00	0.00
36	140.00	RRH2x60-2100	3	54.032	59.435	0.54	0.80	2.43	52.65	0.000	0.000	144.31	0.00	0.00
37	140.00	RRH2x40 700	3	54.032	59.435	0.54	0.80	3.99	135.00	0.000	0.000	237.02	0.00	0.00
38	140.00	DB-T1-6Z-8AB-0Z	1	54.032	59.435	0.40	0.80	1.92	17.01	0.000	0.000	114.11	0.00	0.00
39	140.00	Low Profile Platform	1	54.032	59.435	0.80	0.80	17.60	1350.00	0.000	0.000	1046.05	0.00	0.00
40	30.00	GPS	1	39.066	42.973	1.00	1.00	1.00	9.00	0.000	0.000	42.97	0.00	0.00

Totals: 10,421.33

21,946.89

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

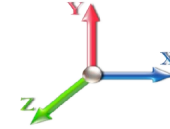


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Load Case: 0.9D + 1.0W 128 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



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		388.59	668.05	0.00	0.00
4.00		385.53	663.41	0.00	0.00
6.00		382.47	658.76	0.00	0.00
8.00		379.40	654.12	0.00	0.00
10.00		376.34	649.47	0.00	0.00
12.00		373.28	644.83	0.00	0.00
14.00		370.22	640.19	0.00	0.00
16.00		371.69	635.54	0.00	0.00
18.00		377.84	630.90	0.00	0.00
20.00		383.07	626.25	0.00	0.00
22.00		387.52	621.61	0.00	0.00
24.00		391.30	616.96	0.00	0.00
26.00		394.52	612.32	0.00	0.00
28.00		397.23	607.67	0.00	0.00
30.00	(1) attachments	442.48	612.03	0.00	0.00
32.00		401.39	598.38	0.00	0.00
34.00		402.91	593.74	0.00	0.00
35.50		302.53	442.26	0.00	0.00
36.00		102.28	266.47	0.00	0.00
38.00		411.49	1060.26	0.00	0.00
40.00		412.20	1051.28	0.00	0.00
42.00		412.66	1042.30	0.00	0.00
43.00		205.92	517.78	0.00	0.00
44.00		205.96	272.38	0.00	0.00
46.00		412.89	541.50	0.00	0.00
48.00		412.70	537.17	0.00	0.00
50.00		412.32	532.83	0.00	0.00
52.00		411.77	528.50	0.00	0.00
54.00		411.05	524.16	0.00	0.00
56.00		410.17	519.83	0.00	0.00
58.00		409.15	515.49	0.00	0.00
60.00		407.98	511.16	0.00	0.00
62.00		406.68	506.82	0.00	0.00
64.00		405.26	502.49	0.00	0.00
66.00		403.72	498.15	0.00	0.00
68.00		402.06	493.82	0.00	0.00
70.00		400.29	489.48	0.00	0.00
72.00		398.42	485.15	0.00	0.00
74.00		396.44	480.81	0.00	0.00
74.50		98.58	119.53	0.00	0.00
76.00		300.19	614.04	0.00	0.00
78.00		398.66	811.67	0.00	0.00
80.00		396.44	803.62	0.00	0.00
81.00		197.11	398.79	0.00	0.00
82.00		196.52	207.10	0.00	0.00
84.00		391.75	411.42	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00		389.27	407.70	0.00	0.00
88.00		386.72	403.99	0.00	0.00
90.00		384.10	400.27	0.00	0.00
92.00		381.40	396.55	0.00	0.00
94.00		378.63	392.84	0.00	0.00
96.00		375.79	389.12	0.00	0.00
98.00		372.88	385.41	0.00	0.00
100.00		369.91	381.69	0.00	0.00
102.00		366.88	377.98	0.00	0.00
104.00		363.78	374.26	0.00	0.00
106.00		360.63	370.54	0.00	0.00
108.00		357.42	366.83	0.00	0.00
110.00		355.24	363.11	0.00	0.00
112.00		353.32	359.40	0.00	0.00
114.00		351.36	355.68	0.00	0.00
116.00		349.35	351.97	0.00	0.00
118.00		347.31	348.25	0.00	0.00
118.75		129.56	129.64	0.00	0.00
120.00		219.15	353.38	0.00	0.00
122.00		349.19	559.88	0.00	0.00
124.00		347.07	553.06	0.00	0.00
126.00		342.90	295.90	0.00	0.00
128.00		340.68	292.80	0.00	0.00
130.00		338.42	289.71	0.00	0.00
132.00		336.13	286.61	0.00	0.00
134.00		333.80	283.51	0.00	0.00
136.00		331.43	280.42	0.00	0.00
138.00		329.04	277.32	0.00	0.00
140.00	(21) attachments	5818.86	2214.17	0.00	0.00
142.00		301.27	244.70	0.00	0.00
144.00		297.23	241.61	0.00	0.00
146.00		293.16	238.51	0.00	0.00
148.00		289.05	235.41	0.00	0.00
150.00	(33) attachments	5309.42	2949.44	0.00	0.00
152.00		280.71	202.13	0.00	0.00
154.00		276.49	199.04	0.00	0.00
154.75		102.50	73.84	0.00	0.00
156.00		171.90	185.44	0.00	0.00
158.00		271.70	292.68	0.00	0.00
159.00		134.14	144.48	0.00	0.00
160.00		133.06	63.52	0.00	0.00
162.00		263.04	125.65	0.00	0.00
164.00		258.66	123.79	0.00	0.00
166.00		254.24	121.93	0.00	0.00
167.00	(20) attachments	7153.16	3658.77	0.00	0.00
168.00		124.26	47.42	0.00	0.00
170.00		245.32	93.45	0.00	0.00
172.00		240.82	91.59	0.00	0.00
174.00		236.28	89.73	0.00	0.00
176.00		231.71	87.87	0.00	0.00
178.00		227.12	86.02	0.00	0.00
180.00		222.49	84.16	0.00	0.00
182.00		217.84	82.30	0.00	0.00
184.00		213.15	80.44	0.00	0.00
186.00		208.44	78.58	0.00	0.00
188.00		203.71	76.73	0.00	0.00
190.00		198.94	74.87	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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192.00	194.15	73.01	0.00	0.00
194.00	189.33	71.15	0.00	0.00
195.00 (23) attachments	4427.92	2185.79	0.00	0.00
196.00 (1) attachments	115.83	37.89	0.00	0.00
Totals:	55,486.25	51,104.41	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

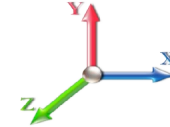
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0W 128 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.00



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	0.061	0.000	33.806	0.00	22.46
2.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.061	0.000	33.806	0.00	3.96
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	33.806	0.00	22.46
4.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.061	0.000	33.806	0.00	3.96
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	33.806	0.00	22.46
6.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.062	0.000	33.806	0.00	3.96
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	33.806	0.00	22.46
8.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.062	0.000	33.806	0.00	3.96
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	33.806	0.00	22.46
10.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.063	0.000	33.806	0.00	3.96
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	33.806	0.00	22.46
12.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.063	0.000	33.806	0.00	3.96
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	33.806	0.00	22.46
14.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.064	0.000	33.806	0.00	3.96
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	34.224	0.00	22.46
16.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.064	0.000	34.224	0.00	3.96
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	35.083	0.00	22.46
18.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.065	0.000	35.083	0.00	3.96
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	35.870	0.00	22.46
20.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.065	0.000	35.870	0.00	3.96
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	36.597	0.00	22.46
22.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.066	0.000	36.597	0.00	3.96
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	37.274	0.00	22.46
24.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.066	0.000	37.274	0.00	3.96
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	37.907	0.00	22.46
26.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.067	0.000	37.907	0.00	3.96
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	38.503	0.00	22.46
28.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.068	0.000	38.503	0.00	3.96
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	39.066	0.00	22.46
30.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.068	0.000	39.066	0.00	3.96
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.069	0.000	39.601	0.00	22.46
32.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.069	0.000	39.601	0.00	3.96
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.069	0.000	40.110	0.00	22.46
34.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.069	0.000	40.110	0.00	3.96
35.50	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.070	0.000	40.476	0.00	16.85
35.50	1 5/8" Hybrid	Yes	1.50	0.000	4.00	0.50	0.00	0.070	0.000	40.476	0.00	2.97
36.00	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.070	0.000	40.595	0.00	5.62
36.00	1 5/8" Hybrid	Yes	0.50	0.000	4.00	0.17	0.00	0.070	0.000	40.595	0.00	0.99
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	41.060	0.00	22.46
38.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.071	0.000	41.060	0.00	3.96
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	41.506	0.00	22.46
40.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.071	0.000	41.506	0.00	3.96
42.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	41.934	0.00	22.46
42.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.072	0.000	41.934	0.00	3.96
43.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.072	0.000	42.142	0.00	11.23
43.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.33	0.00	0.072	0.000	42.142	0.00	1.98
44.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.072	0.000	42.347	0.00	11.23

Linear Appurtenance Segment Forces (Factored)

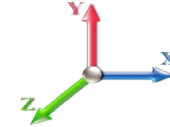
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0W 128 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.00



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	4.00	0.33	0.00	0.072	0.000	42.347	0.00	1.98
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	42.745	0.00	22.46
46.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.072	0.000	42.745	0.00	3.96
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	43.130	0.00	22.46
48.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.073	0.000	43.130	0.00	3.96
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.074	0.000	43.502	0.00	22.46
50.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.074	0.000	43.502	0.00	3.96
52.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.074	0.000	43.863	0.00	22.46
52.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.074	0.000	43.863	0.00	3.96
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	44.213	0.00	22.46
54.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.075	0.000	44.213	0.00	3.96
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.076	0.000	44.552	0.00	22.46
56.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.076	0.000	44.552	0.00	3.96
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.076	0.000	44.883	0.00	22.46
58.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.076	0.000	44.883	0.00	3.96
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.077	0.000	45.204	0.00	22.46
60.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.077	0.000	45.204	0.00	3.96
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.078	0.000	45.517	0.00	22.46
62.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.078	0.000	45.517	0.00	3.96
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	45.823	0.00	22.46
64.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.079	0.000	45.823	0.00	3.96
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.080	0.000	46.120	0.00	22.46
66.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.080	0.000	46.120	0.00	3.96
68.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.080	0.000	46.411	0.00	22.46
68.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.080	0.000	46.411	0.00	3.96
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	46.695	0.00	22.46
70.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.081	0.000	46.695	0.00	3.96
72.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.082	0.000	46.973	0.00	22.46
72.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.082	0.000	46.973	0.00	3.96
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.083	0.000	47.245	0.00	22.46
74.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.083	0.000	47.245	0.00	3.96
74.50	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.084	0.000	47.312	0.00	5.62
74.50	1 5/8" Hybrid	Yes	0.50	0.000	4.00	0.17	0.00	0.084	0.000	47.312	0.00	0.99
76.00	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.084	0.000	47.511	0.00	16.85
76.00	1 5/8" Hybrid	Yes	1.50	0.000	4.00	0.50	0.00	0.084	0.000	47.511	0.00	2.97
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.085	0.000	47.771	0.00	22.46
78.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.085	0.000	47.771	0.00	3.96
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.086	0.000	48.027	0.00	22.46
80.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.086	0.000	48.027	0.00	3.96
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.087	0.000	48.152	0.00	11.23
81.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.33	0.00	0.087	0.000	48.152	0.00	1.98
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.086	0.000	48.277	0.00	11.23
82.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.33	0.00	0.086	0.000	48.277	0.00	1.98
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.086	0.000	48.522	0.00	22.46
84.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.086	0.000	48.522	0.00	3.96
86.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.087	0.000	48.763	0.00	22.46
86.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.087	0.000	48.763	0.00	3.96

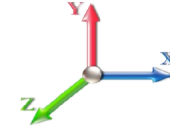
Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0W 128 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.00



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	0.088	0.000	49.000	0.00	22.46
88.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.088	0.000	49.000	0.00	3.96
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.089	0.000	49.232	0.00	22.46
90.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.089	0.000	49.232	0.00	3.96
92.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.090	0.000	49.461	0.00	22.46
92.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.090	0.000	49.461	0.00	3.96
94.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	49.685	0.00	22.46
94.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.091	0.000	49.685	0.00	3.96
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.093	0.000	49.906	0.00	22.46
96.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.093	0.000	49.906	0.00	3.96
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.094	0.000	50.123	0.00	22.46
98.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.094	0.000	50.123	0.00	3.96
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.095	0.000	50.337	0.00	22.46
100.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.095	0.000	50.337	0.00	3.96
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.096	0.000	50.547	0.00	22.46
102.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.096	0.000	50.547	0.00	3.96
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.097	0.000	50.754	0.00	22.46
104.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.097	0.000	50.754	0.00	3.96
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.098	0.000	50.958	0.00	22.46
106.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.098	0.000	50.958	0.00	3.96
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.100	0.000	51.159	0.00	22.46
108.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.100	0.000	51.159	0.00	3.96
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.003	51.357	0.00	22.46
110.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.101	1.003	51.357	0.00	3.96
112.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.102	1.007	51.552	0.00	22.46
112.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.102	1.007	51.552	0.00	3.96
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.011	51.744	0.00	22.46
114.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.104	1.011	51.744	0.00	3.96
116.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.105	1.016	51.934	0.00	22.46
116.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.105	1.016	51.934	0.00	3.96
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.107	1.020	52.121	0.00	22.46
118.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.107	1.020	52.121	0.00	3.96
118.75	1 5/8" Coax	Yes	0.75	0.000	0.00	0.00	0.00	0.108	1.023	52.191	0.00	8.42
118.75	1 5/8" Hybrid	Yes	0.75	0.000	4.00	0.25	0.00	0.108	1.023	52.191	0.00	1.49
120.00	1 5/8" Coax	Yes	1.25	0.000	0.00	0.00	0.00	0.108	1.025	52.306	0.00	14.04
120.00	1 5/8" Hybrid	Yes	1.25	0.000	4.00	0.42	0.00	0.108	1.025	52.306	0.00	2.48
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.110	1.029	52.489	0.00	22.46
122.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.110	1.029	52.489	0.00	3.96
124.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.034	52.669	0.00	22.46
124.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.111	1.034	52.669	0.00	3.96
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.033	52.846	0.00	22.46
126.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.111	1.033	52.846	0.00	3.96
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.112	1.037	53.022	0.00	22.46
128.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.112	1.037	53.022	0.00	3.96
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.114	1.042	53.195	0.00	22.46
130.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.114	1.042	53.195	0.00	3.96
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.116	1.048	53.366	0.00	22.46

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

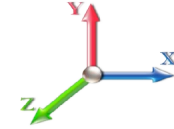


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Load Case: 0.9D + 1.0W 128 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



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	4.00	0.67	0.00	0.116	1.048	53.366	0.00	3.96
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.118	1.053	53.536	0.00	22.46
134.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.118	1.053	53.536	0.00	3.96
136.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.119	1.058	53.703	0.00	22.46
136.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.119	1.058	53.703	0.00	3.96
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	53.868	0.00	22.46
138.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.121	1.064	53.868	0.00	3.96
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.123	1.070	54.032	0.00	22.46
140.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.123	1.070	54.032	0.00	3.96
Totals:											0.0	1,849.7

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0W 128 mph Wind

Iterations 31

Dead Load Factor 0.90
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	-51.06	-55.52	0.00	-6749.9	0.00	6749.99	5795.46	1682.91	8909.80	7510.36	0.00	0.000	0.000	0.909
2.00	-50.32	-55.20	0.00	-6638.9	0.00	6638.95	5776.44	1669.60	8769.44	7426.09	0.02	-0.077	0.000	0.904
4.00	-49.59	-54.88	0.00	-6528.5	0.00	6528.55	5757.00	1656.30	8630.20	7341.68	0.07	-0.155	0.000	0.899
6.00	-48.85	-54.56	0.00	-6418.7	0.00	6418.79	5737.14	1642.99	8492.07	7257.12	0.15	-0.233	0.000	0.894
8.00	-48.13	-54.25	0.00	-6309.6	0.00	6309.66	5716.84	1629.68	8355.05	7172.43	0.26	-0.312	0.000	0.889
10.00	-47.40	-53.93	0.00	-6201.1	0.00	6201.17	5696.12	1616.37	8219.15	7087.63	0.41	-0.391	0.000	0.884
12.00	-46.69	-53.62	0.00	-6093.3	0.00	6093.31	5674.97	1603.06	8084.36	7002.73	0.59	-0.471	0.000	0.879
14.00	-45.97	-53.31	0.00	-5986.0	0.00	5986.07	5653.40	1589.76	7950.69	6917.75	0.81	-0.551	0.000	0.875
16.00	-45.27	-52.99	0.00	-5879.4	0.00	5879.46	5631.39	1576.45	7818.13	6832.69	1.06	-0.633	0.000	0.870
18.00	-44.57	-52.67	0.00	-5773.4	0.00	5773.47	5608.96	1563.14	7686.69	6747.57	1.34	-0.714	0.000	0.865
20.00	-43.87	-52.35	0.00	-5668.1	0.00	5668.13	5586.10	1549.83	7556.36	6662.41	1.66	-0.796	0.000	0.860
22.00	-43.18	-52.01	0.00	-5563.4	0.00	5563.44	5562.81	1536.52	7427.15	6577.21	2.01	-0.879	0.000	0.855
24.00	-42.49	-51.67	0.00	-5459.4	0.00	5459.42	5539.10	1523.21	7299.05	6491.99	2.40	-0.963	0.000	0.850
26.00	-41.81	-51.33	0.00	-5356.0	0.00	5356.08	5514.96	1509.91	7172.06	6406.77	2.82	-1.047	0.000	0.845
28.00	-41.14	-50.98	0.00	-5253.4	0.00	5253.42	5490.39	1496.60	7046.19	6321.55	3.28	-1.131	0.000	0.840
30.00	-40.46	-50.59	0.00	-5151.4	0.00	5151.46	5465.39	1483.29	6921.43	6236.35	3.77	-1.216	0.000	0.835
32.00	-39.79	-50.23	0.00	-5050.2	0.00	5050.29	5439.96	1469.98	6797.79	6151.18	4.30	-1.302	0.000	0.830
34.00	-39.14	-49.87	0.00	-4949.8	0.00	4949.83	5414.11	1456.67	6675.26	6066.06	4.86	-1.389	0.000	0.824
35.50	-38.67	-49.58	0.00	-4875.0	0.00	4875.03	5394.44	1446.69	6584.09	6002.26	5.31	-1.454	0.000	0.821
36.00	-38.36	-49.51	0.00	-4850.2	0.00	4850.24	5387.83	1443.36	6553.84	5981.00	5.46	-1.476	0.000	0.819
38.00	-37.24	-49.13	0.00	-4751.2	0.00	4751.22	5361.12	1430.06	6433.54	5896.01	6.10	-1.564	0.000	0.814
40.00	-36.12	-48.74	0.00	-4652.9	0.00	4652.96	5333.99	1416.75	6314.36	5811.11	6.78	-1.652	0.000	0.809
42.00	-35.03	-48.34	0.00	-4555.4	0.00	4555.48	5306.43	1403.44	6196.29	5726.30	7.49	-1.741	0.000	0.803
43.00	-34.49	-48.15	0.00	-4507.1	0.00	4507.14	4823.70	1326.07	5927.09	5273.35	7.86	-1.786	0.000	0.863
44.00	-34.16	-47.97	0.00	-4459.0	0.00	4459.00	4812.47	1319.86	5871.70	5236.23	8.24	-1.831	0.000	0.860
46.00	-33.56	-47.60	0.00	-4363.0	0.00	4363.05	4789.68	1307.44	5761.71	5161.99	9.02	-1.923	0.000	0.854
48.00	-32.96	-47.22	0.00	-4267.8	0.00	4267.86	4766.46	1295.02	5652.75	5087.77	9.85	-2.015	0.000	0.847
50.00	-32.37	-46.84	0.00	-4173.4	0.00	4173.43	4742.82	1282.60	5544.84	5013.57	10.71	-2.108	0.000	0.841
52.00	-31.78	-46.46	0.00	-4079.7	0.00	4079.75	4718.75	1270.18	5437.96	4939.41	11.62	-2.202	0.000	0.834
54.00	-31.19	-46.08	0.00	-3986.8	0.00	3986.83	4694.25	1257.76	5332.12	4865.31	12.56	-2.296	0.000	0.827
56.00	-30.61	-45.70	0.00	-3894.6	0.00	3894.67	4669.32	1245.33	5227.33	4791.28	13.54	-2.391	0.000	0.821
58.00	-30.04	-45.32	0.00	-3803.2	0.00	3803.27	4643.97	1232.91	5123.57	4717.32	14.56	-2.486	0.000	0.814
60.00	-29.47	-44.94	0.00	-3712.6	0.00	3712.64	4618.19	1220.49	5020.86	4643.46	15.63	-2.582	0.000	0.807
62.00	-28.91	-44.56	0.00	-3622.7	0.00	3622.76	4591.98	1208.07	4919.18	4569.71	16.73	-2.678	0.000	0.800
64.00	-28.35	-44.18	0.00	-3533.6	0.00	3533.64	4565.34	1195.65	4818.55	4496.07	17.87	-2.775	0.000	0.794
66.00	-27.80	-43.80	0.00	-3445.2	0.00	3445.29	4538.28	1183.23	4718.95	4422.57	19.05	-2.873	0.000	0.787
68.00	-27.25	-43.42	0.00	-3357.7	0.00	3357.70	4510.78	1170.81	4620.40	4349.22	20.28	-2.971	0.000	0.779
70.00	-26.71	-43.04	0.00	-3270.8	0.00	3270.86	4482.87	1158.39	4522.88	4276.03	21.55	-3.070	0.000	0.772
72.00	-26.17	-42.66	0.00	-3184.7	0.00	3184.79	4454.52	1145.97	4426.41	4203.01	22.85	-3.169	0.000	0.765
74.00	-25.67	-42.26	0.00	-3099.4	0.00	3099.47	4425.74	1133.55	4330.97	4130.17	24.20	-3.269	0.000	0.758
74.50	-25.52	-42.18	0.00	-3078.3	0.00	3078.34	4418.48	1130.44	4307.27	4111.99	24.55	-3.294	0.000	0.756
76.00	-24.86	-41.89	0.00	-3015.0	0.00	3015.06	4396.54	1121.12	4236.58	4057.54	25.59	-3.370	0.000	0.750
78.00	-24.00	-41.48	0.00	-2931.2	0.00	2931.29	4366.91	1108.70	4143.22	3985.11	27.03	-3.471	0.000	0.742
80.00	-23.17	-41.07	0.00	-2848.3	0.00	2848.33	4336.86	1096.28	4050.91	3912.92	28.50	-3.572	0.000	0.735
81.00	-22.75	-40.87	0.00	-2807.2	0.00	2807.27	3502.12	951.57	3560.67	3204.59	29.25	-3.624	0.000	0.884
82.00	-22.49	-40.69	0.00	-2766.4	0.00	2766.40	3492.03	946.24	3520.94	3177.33	30.02	-3.675	0.000	0.879
84.00	-22.03	-40.31	0.00	-2685.0	0.00	2685.03	3471.52	935.60	3442.15	3122.83	31.58	-3.788	0.000	0.868
86.00	-21.57	-39.94	0.00	-2604.4	0.00	2604.40	3450.59	924.95	3364.26	3068.38	33.19	-3.902	0.000	0.857

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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194.00	-1.48	-4.84	0.00	-4.96	0.00	4.96	761.60	187.60	276.78	274.17	186.87	-9.009	0.000	0.021
195.00	-0.02	-0.12	0.00	-0.12	0.00	0.12	754.51	184.94	268.98	267.73	188.74	-9.011	0.000	0.000
196.00	0.00	-0.12	0.00	0.00	0.00	0.00	747.31	182.27	261.30	261.31	190.62	-9.011	0.000	0.000

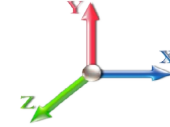
Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
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	5.158	5.67	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	5.158	5.67	0.00	1.200	0.756	2.00	11.251	13.50	76.6	125.8	905.8
4.00		1.00	0.85	5.158	5.67	0.00	1.200	0.810	2.00	11.183	13.42	76.1	133.9	907.7
6.00		1.00	0.85	5.158	5.67	0.00	1.200	0.843	2.00	11.107	13.33	75.6	138.4	906.1
8.00		1.00	0.85	5.158	5.67	0.00	1.200	0.868	2.00	11.029	13.23	75.1	141.4	902.8
10.00		1.00	0.85	5.158	5.67	0.00	1.200	0.887	2.00	10.949	13.14	74.6	143.5	898.7
12.00		1.00	0.85	5.158	5.67	0.00	1.200	0.904	2.00	10.867	13.04	74.0	145.0	894.0
14.00		1.00	0.85	5.158	5.67	0.00	1.200	0.918	2.00	10.785	12.94	73.4	146.0	888.9
16.00		1.00	0.86	5.222	5.74	0.00	1.200	0.930	2.00	10.703	12.84	73.8	146.8	883.5
18.00		1.00	0.88	5.353	5.89	0.00	1.200	0.941	2.00	10.620	12.74	75.0	147.4	877.8
20.00		1.00	0.90	5.473	6.02	0.00	1.200	0.951	2.00	10.536	12.64	76.1	147.7	872.0
22.00		1.00	0.92	5.584	6.14	0.00	1.200	0.960	2.00	10.453	12.54	77.1	147.9	866.0
24.00		1.00	0.94	5.688	6.26	0.00	1.200	0.969	2.00	10.369	12.44	77.8	147.9	859.9
26.00		1.00	0.95	5.784	6.36	0.00	1.200	0.976	2.00	10.285	12.34	78.5	147.9	853.6
28.00		1.00	0.97	5.875	6.46	0.00	1.200	0.984	2.00	10.201	12.24	79.1	147.7	847.2
30.00	Appurtenance(s)	1.00	0.98	5.961	6.56	0.00	1.200	0.991	2.00	10.116	12.14	79.6	147.5	840.8
32.00		1.00	1.00	6.043	6.65	0.00	1.200	0.997	2.00	10.032	12.04	80.0	147.1	834.3
34.00		1.00	1.01	6.120	6.73	0.00	1.200	1.003	2.00	9.947	11.94	80.4	146.7	827.7
35.50	Bot - Section 2	1.00	1.02	6.176	6.79	0.00	1.200	1.007	1.50	7.404	8.89	60.4	109.8	616.4
36.00		1.00	1.02	6.194	6.81	0.00	1.200	1.009	0.50	2.495	2.99	20.4	37.1	364.8
38.00		1.00	1.03	6.265	6.89	0.00	1.200	1.014	2.00	9.928	11.91	82.1	148.1	1451.0
40.00		1.00	1.04	6.333	6.97	0.00	1.200	1.019	2.00	9.843	11.81	82.3	147.5	1438.5
42.00		1.00	1.05	6.399	7.04	0.00	1.200	1.024	2.00	9.758	11.71	82.4	146.9	1425.9
43.00	Top - Section 1	1.00	1.06	6.430	7.07	0.00	1.200	1.027	1.00	4.847	5.82	41.1	73.3	708.3
44.00		1.00	1.06	6.462	7.11	0.00	1.200	1.029	1.00	4.826	5.79	41.2	73.1	381.0
46.00		1.00	1.07	6.522	7.17	0.00	1.200	1.034	2.00	9.588	11.51	82.5	145.6	756.9
48.00		1.00	1.08	6.581	7.24	0.00	1.200	1.038	2.00	9.503	11.40	82.6	144.9	750.4
50.00		1.00	1.09	6.638	7.30	0.00	1.200	1.042	2.00	9.418	11.30	82.5	144.1	743.8
52.00		1.00	1.10	6.693	7.36	0.00	1.200	1.047	2.00	9.332	11.20	82.4	143.3	737.3
54.00		1.00	1.11	6.746	7.42	0.00	1.200	1.050	2.00	9.247	11.10	82.3	142.5	730.7
56.00		1.00	1.12	6.798	7.48	0.00	1.200	1.054	2.00	9.161	10.99	82.2	141.7	724.1
58.00		1.00	1.13	6.849	7.53	0.00	1.200	1.058	2.00	9.076	10.89	82.0	140.8	717.4
60.00		1.00	1.14	6.898	7.59	0.00	1.200	1.062	2.00	8.991	10.79	81.9	139.9	710.7
62.00		1.00	1.14	6.945	7.64	0.00	1.200	1.065	2.00	8.905	10.69	81.6	139.0	704.0
64.00		1.00	1.15	6.992	7.69	0.00	1.200	1.068	2.00	8.819	10.58	81.4	138.0	697.3
66.00		1.00	1.16	7.037	7.74	0.00	1.200	1.072	2.00	8.734	10.48	81.1	137.1	690.6
68.00		1.00	1.17	7.082	7.79	0.00	1.200	1.075	2.00	8.648	10.38	80.8	136.1	683.8
70.00		1.00	1.17	7.125	7.84	0.00	1.200	1.078	2.00	8.563	10.28	80.5	135.1	677.0
72.00		1.00	1.18	7.168	7.88	0.00	1.200	1.081	2.00	8.477	10.17	80.2	134.1	670.2
74.00		1.00	1.19	7.209	7.93	0.00	1.200	1.084	2.00	8.391	10.07	79.8	133.0	663.4
74.50	Bot - Section 3	1.00	1.19	7.219	7.94	0.00	1.200	1.085	0.50	2.084	2.50	19.9	33.2	164.9
76.00		1.00	1.19	7.250	7.97	0.00	1.200	1.087	1.50	6.318	7.58	60.5	100.6	836.3
78.00		1.00	1.20	7.289	8.02	0.00	1.200	1.090	2.00	8.349	10.02	80.3	133.0	1104.6
80.00		1.00	1.21	7.328	8.06	0.00	1.200	1.093	2.00	8.263	9.92	79.9	132.0	1092.8
81.00	Top - Section 2	1.00	1.21	7.347	8.08	0.00	1.200	1.094	1.00	4.099	4.92	39.8	65.7	542.1
82.00		1.00	1.21	7.366	8.10	0.00	1.200	1.095	1.00	4.078	4.89	39.7	65.4	286.2
84.00		1.00	1.22	7.404	8.14	0.00	1.200	1.098	2.00	8.092	9.71	79.1	129.8	567.6

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



86.00	1.00	1.23	7.441	8.18	0.00	1.200	1.101	2.00	8.006	9.61	78.6	128.6	561.5
88.00	1.00	1.23	7.477	8.22	0.00	1.200	1.103	2.00	7.920	9.50	78.2	127.5	555.4
90.00	1.00	1.24	7.512	8.26	0.00	1.200	1.106	2.00	7.834	9.40	77.7	126.4	549.3
92.00	1.00	1.24	7.547	8.30	0.00	1.200	1.108	2.00	7.748	9.30	77.2	125.2	543.2
94.00	1.00	1.25	7.581	8.34	0.00	1.200	1.110	2.00	7.663	9.20	76.7	124.0	537.1
96.00	1.00	1.25	7.615	8.38	0.00	1.200	1.113	2.00	7.577	9.09	76.2	122.9	531.0
98.00	1.00	1.26	7.648	8.41	0.00	1.200	1.115	2.00	7.491	8.99	75.6	121.7	524.8
100.00	1.00	1.27	7.681	8.45	0.00	1.200	1.117	2.00	7.405	8.89	75.1	120.5	518.7
102.00	1.00	1.27	7.713	8.48	0.00	1.200	1.119	2.00	7.319	8.78	74.5	119.2	512.5
104.00	1.00	1.28	7.744	8.52	0.00	1.200	1.122	2.00	7.233	8.68	73.9	118.0	506.3
106.00	1.00	1.28	7.776	8.55	0.00	1.200	1.124	2.00	7.147	8.58	73.4	116.8	500.1
108.00	1.00	1.29	7.806	8.59	0.00	1.200	1.126	2.00	7.061	8.47	72.8	115.5	493.9
110.00	1.00	1.29	7.836	8.62	0.00	1.204 *	1.128	2.00	6.975	8.40	72.4	114.3	487.7
112.00	1.00	1.30	7.866	8.65	0.00	1.209 *	1.130	2.00	6.889	8.33	72.0	113.0	481.5
114.00	1.00	1.30	7.896	8.69	0.00	1.214 *	1.132	2.00	6.803	8.26	71.7	111.8	475.3
116.00	1.00	1.31	7.925	8.72	0.00	1.219 *	1.134	2.00	6.717	8.19	71.4	110.5	469.1
118.00	1.00	1.31	7.953	8.75	0.00	1.224 *	1.136	2.00	6.631	8.12	71.0	109.2	462.8
118.75 Bot - Section 4	1.00	1.31	7.964	8.76	0.00	1.228 *	1.137	0.75	2.464	3.03	26.5	40.8	172.1
120.00	1.00	1.32	7.981	8.78	0.00	1.230 *	1.138	1.25	4.148	5.10	44.8	68.6	470.6
122.00	1.00	1.32	8.009	8.81	0.00	1.235 *	1.140	2.00	6.567	8.11	71.4	108.5	744.3
124.00 Top - Section 3	1.00	1.32	8.037	8.84	0.00	1.241 *	1.142	2.00	6.480	8.04	71.1	107.2	733.9
126.00	1.00	1.33	8.064	8.87	0.00	1.239 *	1.143	2.00	6.394	7.92	70.3	105.8	389.7
128.00	1.00	1.33	8.090	8.90	0.00	1.245 *	1.145	2.00	6.308	7.85	69.9	104.5	384.2
130.00	1.00	1.34	8.117	8.93	0.00	1.251 *	1.147	2.00	6.222	7.78	69.5	103.2	378.8
132.00	1.00	1.34	8.143	8.96	0.00	1.257 *	1.149	2.00	6.136	7.71	69.1	101.9	373.3
134.00	1.00	1.35	8.169	8.99	0.00	1.264 *	1.150	2.00	6.050	7.64	68.7	100.5	367.8
136.00	1.00	1.35	8.194	9.01	0.00	1.270 *	1.152	2.00	5.964	7.57	68.3	99.2	362.4
138.00	1.00	1.35	8.220	9.04	0.00	1.277 *	1.154	2.00	5.878	7.51	67.9	97.8	356.9
140.00 Appurtenance(s)	1.00	1.36	8.245	9.07	0.00	1.284 *	1.155	2.00	5.792	7.44	67.4	96.5	351.4
142.00	1.00	1.36	8.269	9.10	0.00	1.200	1.157	2.00	5.705	6.85	62.3	95.1	345.9
144.00	1.00	1.37	8.294	9.12	0.00	1.200	1.159	2.00	5.619	6.74	61.5	93.7	340.4
146.00	1.00	1.37	8.318	9.15	0.00	1.200	1.160	2.00	5.533	6.64	60.8	92.3	334.9
148.00	1.00	1.37	8.342	9.18	0.00	1.200	1.162	2.00	5.447	6.54	60.0	91.0	329.4
150.00 Appurtenance(s)	1.00	1.38	8.365	9.20	0.00	1.200	1.163	2.00	5.361	6.43	59.2	89.6	323.9
152.00	1.00	1.38	8.389	9.23	0.00	1.200	1.165	2.00	5.275	6.33	58.4	88.2	318.3
154.00	1.00	1.39	8.412	9.25	0.00	1.200	1.167	2.00	5.188	6.23	57.6	86.8	312.8
154.75 Bot - Section 5	1.00	1.39	8.420	9.26	0.00	1.200	1.167	0.75	1.923	2.31	21.4	32.3	116.0
156.00	1.00	1.39	8.435	9.28	0.00	1.200	1.168	1.25	3.219	3.86	35.8	54.1	276.7
158.00	1.00	1.39	8.457	9.30	0.00	1.200	1.170	2.00	5.081	6.10	56.7	85.1	436.0
159.00 Top - Section 4	1.00	1.40	8.468	9.32	0.00	1.200	1.170	1.00	2.508	3.01	28.0	42.2	215.2
160.00	1.00	1.40	8.480	9.33	0.00	1.200	1.171	1.00	2.486	2.98	27.8	41.8	106.9
162.00	1.00	1.40	8.502	9.35	0.00	1.200	1.172	2.00	4.908	5.89	55.1	82.3	210.4
164.00	1.00	1.40	8.524	9.38	0.00	1.200	1.174	2.00	4.822	5.79	54.3	80.8	206.5
166.00	1.00	1.41	8.546	9.40	0.00	1.200	1.175	2.00	4.736	5.68	53.4	79.4	202.6
167.00 Appurtenance(s)	1.00	1.41	8.556	9.41	0.00	1.200	1.176	1.00	2.336	2.80	26.4	39.4	100.0
168.00	1.00	1.41	8.567	9.42	0.00	1.200	1.177	1.00	2.314	2.78	26.2	39.0	99.1
170.00	1.00	1.42	8.589	9.45	0.00	1.200	1.178	2.00	4.564	5.48	51.7	76.5	194.8
172.00	1.00	1.42	8.610	9.47	0.00	1.200	1.180	2.00	4.477	5.37	50.9	75.1	190.9
174.00	1.00	1.42	8.631	9.49	0.00	1.200	1.181	2.00	4.391	5.27	50.0	73.7	187.0
176.00	1.00	1.43	8.651	9.52	0.00	1.200	1.182	2.00	4.305	5.17	49.2	72.2	183.0
178.00	1.00	1.43	8.672	9.54	0.00	1.200	1.184	2.00	4.219	5.06	48.3	70.7	179.1
180.00	1.00	1.43	8.693	9.56	0.00	1.200	1.185	2.00	4.132	4.96	47.4	69.3	175.2
182.00	1.00	1.44	8.713	9.58	0.00	1.200	1.186	2.00	4.046	4.86	46.5	67.8	171.2
184.00	1.00	1.44	8.733	9.61	0.00	1.200	1.187	2.00	3.960	4.75	45.6	66.4	167.3
186.00	1.00	1.44	8.753	9.63	0.00	1.200	1.189	2.00	3.874	4.65	44.8	64.9	163.3
188.00	1.00	1.45	8.772	9.65	0.00	1.200	1.190	2.00	3.787	4.54	43.9	63.4	159.4
190.00	1.00	1.45	8.792	9.67	0.00	1.200	1.191	2.00	3.701	4.44	43.0	61.9	155.4

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 40
	Struct Class: II	



192.00	1.00	1.45	8.811	9.69	0.00	1.200	1.193	2.00	3.615	4.34	42.0	60.4	151.5
194.00	1.00	1.46	8.831	9.71	0.00	1.200	1.194	2.00	3.529	4.23	41.1	59.0	147.5
195.00 Appurtenance(s)	1.00	1.46	8.840	9.72	0.00	1.200	1.194	1.00	1.732	2.08	20.2	29.1	72.4
196.00 Appurtenance(s)	1.00	1.46	8.850	9.73	0.00	1.200	1.195	1.00	1.710	2.05	20.0	28.7	71.4
								Totals:	196.00	6,818.6	56,945.0		

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

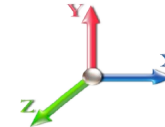
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 30

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor 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	8.850	9.735	1.00	1.00	1.12	27.36	0.000	0.000	10.95	0.00	0.00
2	195.00	Low Profile Platform	1	8.840	9.724	1.00	1.00	34.09	2395.80	0.000	0.000	331.47	0.00	0.00
3	195.00	ACU-A20-N	4	8.840	9.724	0.40	0.80	0.55	11.36	0.000	0.000	5.34	0.00	0.00
4	195.00	800MHz Filter	3	8.840	9.724	0.40	0.80	1.47	52.90	0.000	0.000	14.27	0.00	0.00
5	195.00	800MHz RRH	3	8.840	9.724	0.54	0.80	5.52	307.16	0.000	0.000	53.67	0.00	0.00
6	195.00	TD-RRH8x20-25	3	8.840	9.724	0.54	0.80	7.38	464.14	0.000	0.000	71.81	0.00	0.00
7	195.00	1900MHz RRH	3	8.840	9.724	0.54	0.80	7.64	288.93	0.000	0.000	74.29	0.00	0.00
8	195.00	APXVTM14-C-120	3	8.840	9.724	0.65	0.80	13.78	510.21	0.000	0.000	133.96	0.00	0.00
9	195.00	APXVSP18-C-A20	3	8.840	9.724	0.68	0.80	20.26	411.59	0.000	0.000	197.03	0.00	0.00
10	167.00	HRK12 (Handrail Kit)	1	8.556	9.412	1.00	1.00	11.20	785.08	0.000	0.000	105.37	0.00	0.00
11	167.00	(3) VSR-TS-B	1	8.556	9.412	1.00	1.00	21.11	605.67	0.000	0.000	198.67	0.00	0.00
12	167.00	(3) SFS-H-L (V-Braces)	1	8.556	9.412	1.00	1.00	11.43	391.39	0.000	0.000	107.56	0.00	0.00
13	167.00	PRK-1245 (kicker kit)	1	8.556	9.412	1.00	1.00	16.20	681.50	0.000	0.000	152.51	0.00	0.00
14	167.00	APXVAARR24 43-U-NA2	3	8.556	9.412	0.54	0.75	34.55	1066.78	0.000	0.000	325.19	0.00	0.00
15	167.00	Low Profile	1	8.556	9.412	1.00	1.00	33.90	2382.03	0.000	0.000	319.08	0.00	0.00
16	167.00	4449	3	8.556	9.412	0.50	0.75	3.07	415.67	0.000	0.000	28.92	0.00	0.00
17	167.00	AIR 21, 1.3M, B2A B4P	3	8.556	9.412	0.62	0.75	12.77	649.52	0.000	0.000	120.19	0.00	0.00
18	167.00	AIR 21, 1.3M, B4A B2P	3	8.556	9.412	0.62	0.75	12.77	645.20	0.000	0.000	120.19	0.00	0.00
19	167.00	KRY 112 144/1	3	8.556	9.412	0.38	0.75	0.82	54.98	0.000	0.000	7.73	0.00	0.00
20	150.00	Low Profile	1	8.365	9.202	1.00	1.00	33.77	2372.61	0.000	0.000	310.78	0.00	0.00
21	150.00	DC6-48-60-18-8F	2	8.365	9.202	0.75	0.75	2.90	123.35	0.000	0.000	26.73	0.00	0.00
22	150.00	mount pipe	2	8.365	9.202	1.00	1.00	12.13	324.95	0.000	0.000	111.66	0.00	0.00
23	150.00	800 10966	2	8.365	9.202	0.54	0.75	20.03	755.92	0.000	0.000	184.32	0.00	0.00
24	150.00	80010964	1	8.365	9.202	0.53	0.75	5.78	259.33	0.000	0.000	53.17	0.00	0.00
25	150.00	HPA65R-BU4A	3	8.365	9.202	0.64	0.75	10.70	369.67	0.000	0.000	98.45	0.00	0.00
26	150.00	Handrail Kit	1	8.365	9.202	1.00	1.00	11.15	782.85	0.000	0.000	102.58	0.00	0.00
27	150.00	LGP13519	6	8.365	9.202	0.38	0.75	1.45	59.95	0.000	0.000	13.31	0.00	0.00
28	150.00	B2 B66A 8843	3	8.365	9.202	0.50	0.75	2.99	310.07	0.000	0.000	27.52	0.00	0.00
29	150.00	7700.00	3	8.365	9.202	0.61	0.75	3.85	155.37	0.000	0.000	35.40	0.00	0.00
30	150.00	LGP21401	6	8.365	9.202	0.38	0.75	4.16	158.93	0.000	0.000	38.24	0.00	0.00
31	150.00	4449 B5/B12	3	8.365	9.202	0.50	0.75	3.52	321.56	0.000	0.000	32.39	0.00	0.00
32	140.00	LNx-6414DS-A1M	3	8.245	9.069	0.66	0.80	19.56	316.18	0.000	0.000	177.42	0.00	0.00
33	140.00	LNx-8513DS-VTM	2	8.245	9.069	0.68	0.80	13.65	195.56	0.000	0.000	123.82	0.00	0.00
34	140.00	APL866513	2	8.245	9.069	0.75	0.80	6.98	195.73	0.000	0.000	63.33	0.00	0.00
35	140.00	HBXX-6517DS-A2M	6	8.245	9.069	0.68	0.80	42.77	691.50	0.000	0.000	387.87	0.00	0.00
36	140.00	RRH2x60-2100	3	8.245	9.069	0.54	0.80	2.99	177.97	0.000	0.000	27.13	0.00	0.00
37	140.00	RRH2x40 700	3	8.245	9.069	0.54	0.80	5.22	262.84	0.000	0.000	47.35	0.00	0.00
38	140.00	DB-T1-6Z-8AB-0Z	1	8.245	9.069	0.40	0.80	2.15	112.20	0.000	0.000	19.46	0.00	0.00
39	140.00	Low Profile Platform	1	8.245	9.069	0.80	0.80	26.95	2366.61	0.000	0.000	244.45	0.00	0.00
40	30.00	GPS	1	5.961	6.557	1.00	1.00	1.40	20.64	0.000	0.000	9.21	0.00	0.00

Totals: 22,481.06

4,512.79

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

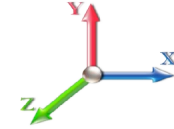


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 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		76.61	1061.16	0.00	0.00
4.00		76.15	1065.81	0.00	0.00
6.00		75.63	1065.84	0.00	0.00
8.00		75.10	1063.88	0.00	0.00
10.00		74.55	1060.78	0.00	0.00
12.00		74.00	1056.94	0.00	0.00
14.00		73.44	1052.56	0.00	0.00
16.00		73.78	1047.79	0.00	0.00
18.00		75.04	1042.72	0.00	0.00
20.00		76.12	1037.39	0.00	0.00
22.00		77.05	1031.86	0.00	0.00
24.00		77.84	1026.16	0.00	0.00
26.00		78.53	1020.32	0.00	0.00
28.00		79.11	1014.34	0.00	0.00
30.00	(1) attachments	88.81	1028.90	0.00	0.00
32.00		80.01	1002.08	0.00	0.00
34.00		80.36	995.81	0.00	0.00
35.50		60.36	742.71	0.00	0.00
36.00		20.40	406.86	0.00	0.00
38.00		82.11	1619.76	0.00	0.00
40.00		82.29	1607.51	0.00	0.00
42.00		82.42	1595.20	0.00	0.00
43.00		41.14	793.02	0.00	0.00
44.00		41.16	465.71	0.00	0.00
46.00		82.55	926.65	0.00	0.00
48.00		82.55	920.38	0.00	0.00
50.00		82.52	914.07	0.00	0.00
52.00		82.45	907.73	0.00	0.00
54.00		82.34	901.34	0.00	0.00
56.00		82.21	894.92	0.00	0.00
58.00		82.05	888.47	0.00	0.00
60.00		81.86	881.99	0.00	0.00
62.00		81.64	875.48	0.00	0.00
64.00		81.40	868.94	0.00	0.00
66.00		81.13	862.37	0.00	0.00
68.00		80.84	855.78	0.00	0.00
70.00		80.53	849.17	0.00	0.00
72.00		80.20	842.53	0.00	0.00
74.00		79.85	835.88	0.00	0.00
74.50		19.86	208.01	0.00	0.00
76.00		60.46	965.72	0.00	0.00
78.00		80.33	1277.33	0.00	0.00
80.00		79.93	1265.66	0.00	0.00
81.00		39.76	628.57	0.00	0.00
82.00		39.65	372.75	0.00	0.00
84.00		79.08	740.81	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00		78.63	734.88	0.00	0.00
88.00		78.17	728.93	0.00	0.00
90.00		77.69	722.96	0.00	0.00
92.00		77.19	716.98	0.00	0.00
94.00		76.68	710.98	0.00	0.00
96.00		76.16	704.97	0.00	0.00
98.00		75.62	698.95	0.00	0.00
100.00		75.07	692.92	0.00	0.00
102.00		74.51	686.87	0.00	0.00
104.00		73.94	680.81	0.00	0.00
106.00		73.35	674.74	0.00	0.00
108.00		72.76	668.65	0.00	0.00
110.00		72.37	662.56	0.00	0.00
112.00		72.04	656.46	0.00	0.00
114.00		71.70	650.34	0.00	0.00
116.00		71.35	644.22	0.00	0.00
118.00		71.00	638.08	0.00	0.00
118.75		26.50	237.84	0.00	0.00
120.00		44.80	580.18	0.00	0.00
122.00		71.44	919.71	0.00	0.00
124.00		71.07	909.43	0.00	0.00
126.00		70.28	565.32	0.00	0.00
128.00		69.89	559.97	0.00	0.00
130.00		69.50	554.62	0.00	0.00
132.00		69.10	549.25	0.00	0.00
134.00		68.69	543.87	0.00	0.00
136.00		68.28	538.49	0.00	0.00
138.00		67.86	533.10	0.00	0.00
140.00	(21) attachments	1158.27	4846.29	0.00	0.00
142.00		62.28	421.37	0.00	0.00
144.00		61.52	415.87	0.00	0.00
146.00		60.75	410.36	0.00	0.00
148.00		59.98	404.85	0.00	0.00
150.00	(33) attachments	1093.75	6393.89	0.00	0.00
152.00		58.41	357.69	0.00	0.00
154.00		57.61	352.16	0.00	0.00
154.75		21.38	130.80	0.00	0.00
156.00		35.84	301.33	0.00	0.00
158.00		56.72	475.35	0.00	0.00
159.00		28.04	234.84	0.00	0.00
160.00		27.83	126.54	0.00	0.00
162.00		55.08	249.80	0.00	0.00
164.00		54.26	245.90	0.00	0.00
166.00		53.42	241.99	0.00	0.00
167.00	(20) attachments	1511.78	7797.52	0.00	0.00
168.00		26.17	102.22	0.00	0.00
170.00		51.74	201.14	0.00	0.00
172.00		50.88	197.22	0.00	0.00
174.00		50.03	193.30	0.00	0.00
176.00		49.16	189.37	0.00	0.00
178.00		48.29	185.44	0.00	0.00
180.00		47.42	181.50	0.00	0.00
182.00		46.53	177.56	0.00	0.00
184.00		45.65	173.61	0.00	0.00
186.00		44.75	169.66	0.00	0.00
188.00		43.86	165.71	0.00	0.00
190.00		42.95	161.75	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
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192.00		42.04	157.79	0.00	0.00
194.00		41.13	153.82	0.00	0.00
195.00	(23) attachments	902.05	4517.71	0.00	0.00
196.00	(1) attachments	30.93	98.80	0.00	0.00
	Totals:	11,331.35	92,188.92	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

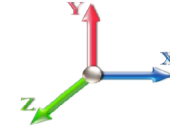
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 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	0.061	0.000	5.158	0.00	67.12
2.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.92	0.00	0.061	0.000	5.158	0.00	12.71
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	5.158	0.00	69.34
4.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.94	0.00	0.061	0.000	5.158	0.00	13.26
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	5.158	0.00	70.71
6.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.95	0.00	0.062	0.000	5.158	0.00	13.60
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	5.158	0.00	71.72
8.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.96	0.00	0.062	0.000	5.158	0.00	13.86
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	5.158	0.00	72.53
10.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.96	0.00	0.063	0.000	5.158	0.00	14.06
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	5.158	0.00	73.20
12.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.97	0.00	0.063	0.000	5.158	0.00	14.23
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	5.158	0.00	73.79
14.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.97	0.00	0.064	0.000	5.158	0.00	14.38
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	5.222	0.00	74.30
16.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.98	0.00	0.064	0.000	5.222	0.00	14.52
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	5.353	0.00	74.76
18.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.98	0.00	0.065	0.000	5.353	0.00	14.64
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	5.473	0.00	75.17
20.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.98	0.00	0.065	0.000	5.473	0.00	14.74
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	5.584	0.00	75.55
22.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.99	0.00	0.066	0.000	5.584	0.00	14.84
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	5.688	0.00	75.90
24.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.99	0.00	0.066	0.000	5.688	0.00	14.94
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	5.784	0.00	76.22
26.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.99	0.00	0.067	0.000	5.784	0.00	15.02
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	5.875	0.00	76.53
28.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.99	0.00	0.068	0.000	5.875	0.00	15.10
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	5.961	0.00	76.81
30.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.00	0.00	0.068	0.000	5.961	0.00	15.18
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.069	0.000	6.043	0.00	77.08
32.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.00	0.00	0.069	0.000	6.043	0.00	15.25
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.069	0.000	6.120	0.00	77.33
34.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.00	0.00	0.069	0.000	6.120	0.00	15.31
35.50	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.070	0.000	6.176	0.00	58.14
35.50	1 5/8" Hybrid	Yes	1.50	0.000	4.00	0.75	0.00	0.070	0.000	6.176	0.00	11.52
36.00	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.070	0.000	6.194	0.00	19.39
36.00	1 5/8" Hybrid	Yes	0.50	0.000	4.00	0.25	0.00	0.070	0.000	6.194	0.00	3.84
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	6.265	0.00	77.80
38.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.00	0.00	0.071	0.000	6.265	0.00	15.44
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	6.333	0.00	78.02
40.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.01	0.00	0.071	0.000	6.333	0.00	15.50
42.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	6.399	0.00	78.23
42.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.01	0.00	0.072	0.000	6.399	0.00	15.55
43.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.072	0.000	6.430	0.00	39.17
43.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.50	0.00	0.072	0.000	6.430	0.00	7.79
44.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.072	0.000	6.462	0.00	39.22

Linear Appurtenance Segment Forces (Factored)

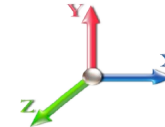
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 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	4.00	0.50	0.00	0.072	0.000	6.462	0.00	7.80
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	6.522	0.00	78.62
46.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.01	0.00	0.072	0.000	6.522	0.00	15.66
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	6.581	0.00	78.81
48.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.01	0.00	0.073	0.000	6.581	0.00	15.71
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.074	0.000	6.638	0.00	78.99
50.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.01	0.00	0.074	0.000	6.638	0.00	15.76
52.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.074	0.000	6.693	0.00	79.16
52.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.02	0.00	0.074	0.000	6.693	0.00	15.80
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	6.746	0.00	79.33
54.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.02	0.00	0.075	0.000	6.746	0.00	15.85
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.076	0.000	6.798	0.00	79.49
56.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.02	0.00	0.076	0.000	6.798	0.00	15.89
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.076	0.000	6.849	0.00	79.64
58.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.02	0.00	0.076	0.000	6.849	0.00	15.93
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.077	0.000	6.898	0.00	79.80
60.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.02	0.00	0.077	0.000	6.898	0.00	15.97
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.078	0.000	6.945	0.00	79.94
62.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.02	0.00	0.078	0.000	6.945	0.00	16.01
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	6.992	0.00	80.08
64.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.02	0.00	0.079	0.000	6.992	0.00	16.05
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.080	0.000	7.037	0.00	80.22
66.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.02	0.00	0.080	0.000	7.037	0.00	16.09
68.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.080	0.000	7.082	0.00	80.36
68.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.02	0.00	0.080	0.000	7.082	0.00	16.13
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	7.125	0.00	80.49
70.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.03	0.00	0.081	0.000	7.125	0.00	16.16
72.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.082	0.000	7.168	0.00	80.62
72.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.03	0.00	0.082	0.000	7.168	0.00	16.20
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.083	0.000	7.209	0.00	80.74
74.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.03	0.00	0.083	0.000	7.209	0.00	16.23
74.50	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.084	0.000	7.219	0.00	20.19
74.50	1 5/8" Hybrid	Yes	0.50	0.000	4.00	0.26	0.00	0.084	0.000	7.219	0.00	4.06
76.00	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.084	0.000	7.250	0.00	60.65
76.00	1 5/8" Hybrid	Yes	1.50	0.000	4.00	0.77	0.00	0.084	0.000	7.250	0.00	12.20
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.085	0.000	7.289	0.00	80.99
78.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.03	0.00	0.085	0.000	7.289	0.00	16.30
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.086	0.000	7.328	0.00	81.10
80.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.03	0.00	0.086	0.000	7.328	0.00	16.33
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.087	0.000	7.347	0.00	40.58
81.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.52	0.00	0.087	0.000	7.347	0.00	8.17
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.086	0.000	7.366	0.00	40.61
82.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.52	0.00	0.086	0.000	7.366	0.00	8.18
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.086	0.000	7.404	0.00	81.33
84.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.03	0.00	0.086	0.000	7.404	0.00	16.39
86.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.087	0.000	7.441	0.00	81.44
86.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.03	0.00	0.087	0.000	7.441	0.00	16.42

Linear Appurtenance Segment Forces (Factored)

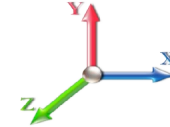
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 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	0.088	0.000	7.477	0.00	81.55
88.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.03	0.00	0.088	0.000	7.477	0.00	16.45
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.089	0.000	7.512	0.00	81.65
90.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.089	0.000	7.512	0.00	16.48
92.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.090	0.000	7.547	0.00	81.75
92.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.090	0.000	7.547	0.00	16.51
94.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	7.581	0.00	81.86
94.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.091	0.000	7.581	0.00	16.54
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.093	0.000	7.615	0.00	81.95
96.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.093	0.000	7.615	0.00	16.56
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.094	0.000	7.648	0.00	82.05
98.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.094	0.000	7.648	0.00	16.59
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.095	0.000	7.681	0.00	82.15
100.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.095	0.000	7.681	0.00	16.62
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.096	0.000	7.713	0.00	82.24
102.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.096	0.000	7.713	0.00	16.64
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.097	0.000	7.744	0.00	82.33
104.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.097	0.000	7.744	0.00	16.67
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.098	0.000	7.776	0.00	82.42
106.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.098	0.000	7.776	0.00	16.69
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.100	0.000	7.806	0.00	82.51
108.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.100	0.000	7.806	0.00	16.72
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.003	7.836	0.00	82.60
110.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.101	1.003	7.836	0.00	16.74
112.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.102	1.007	7.866	0.00	82.69
112.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.102	1.007	7.866	0.00	16.77
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.011	7.896	0.00	82.77
114.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.104	1.011	7.896	0.00	16.79
116.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.105	1.016	7.925	0.00	82.86
116.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.04	0.00	0.105	1.016	7.925	0.00	16.81
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.107	1.020	7.953	0.00	82.94
118.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.05	0.00	0.107	1.020	7.953	0.00	16.84
118.75	1 5/8" Coax	Yes	0.75	0.000	0.00	0.00	0.00	0.108	1.023	7.964	0.00	31.11
118.75	1 5/8" Hybrid	Yes	0.75	0.000	4.00	0.39	0.00	0.108	1.023	7.964	0.00	6.32
120.00	1 5/8" Coax	Yes	1.25	0.000	0.00	0.00	0.00	0.108	1.025	7.981	0.00	51.89
120.00	1 5/8" Hybrid	Yes	1.25	0.000	4.00	0.65	0.00	0.108	1.025	7.981	0.00	10.54
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.110	1.029	8.009	0.00	83.10
122.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.05	0.00	0.110	1.029	8.009	0.00	16.88
124.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.034	8.037	0.00	83.18
124.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.05	0.00	0.111	1.034	8.037	0.00	16.90
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.033	8.064	0.00	83.26
126.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.05	0.00	0.111	1.033	8.064	0.00	16.92
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.112	1.037	8.090	0.00	83.33
128.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.05	0.00	0.112	1.037	8.090	0.00	16.95
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.114	1.042	8.117	0.00	83.41
130.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.05	0.00	0.114	1.042	8.117	0.00	16.97
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.116	1.048	8.143	0.00	83.48

Linear Appurtenance Segment Forces (Factored)

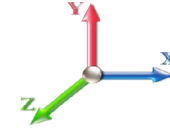
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 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	4.00	1.05	0.00	0.116	1.048	8.143	0.00	16.99
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.118	1.053	8.169	0.00	83.56
134.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.05	0.00	0.118	1.053	8.169	0.00	17.01
136.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.119	1.058	8.194	0.00	83.63
136.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.05	0.00	0.119	1.058	8.194	0.00	17.03
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	8.220	0.00	83.70
138.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.05	0.00	0.121	1.064	8.220	0.00	17.05
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.123	1.070	8.245	0.00	83.77
140.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	1.05	0.00	0.123	1.070	8.245	0.00	17.07
Totals:											0.0	6,678.6

Calculated Forces

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

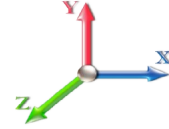
Code: EIA/TIA-222-H
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

12/6/2019
 Page: 49



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 30

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	-92.19	-11.34	0.00	-1445.8	0.00	1445.89	5795.46	1682.91	8909.80	7510.36	0.00	0.000	0.000	0.208
2.00	-91.12	-11.29	0.00	-1423.2	0.00	1423.20	5776.44	1669.60	8769.44	7426.09	0.00	-0.017	0.000	0.207
4.00	-90.05	-11.24	0.00	-1400.6	0.00	1400.62	5757.00	1656.30	8630.20	7341.68	0.01	-0.033	0.000	0.206
6.00	-88.98	-11.19	0.00	-1378.1	0.00	1378.13	5737.14	1642.99	8492.07	7257.12	0.03	-0.050	0.000	0.205
8.00	-87.92	-11.14	0.00	-1355.7	0.00	1355.74	5716.84	1629.68	8355.05	7172.43	0.06	-0.067	0.000	0.204
10.00	-86.85	-11.09	0.00	-1333.4	0.00	1333.46	5696.12	1616.37	8219.15	7087.63	0.09	-0.084	0.000	0.203
12.00	-85.79	-11.04	0.00	-1311.2	0.00	1311.27	5674.97	1603.06	8084.36	7002.73	0.13	-0.101	0.000	0.202
14.00	-84.74	-10.99	0.00	-1289.1	0.00	1289.19	5653.40	1589.76	7950.69	6917.75	0.17	-0.118	0.000	0.201
16.00	-83.69	-10.94	0.00	-1267.2	0.00	1267.20	5631.39	1576.45	7818.13	6832.69	0.23	-0.136	0.000	0.200
18.00	-82.64	-10.89	0.00	-1245.3	0.00	1245.32	5608.96	1563.14	7686.69	6747.57	0.29	-0.154	0.000	0.199
20.00	-81.60	-10.84	0.00	-1223.5	0.00	1223.54	5586.10	1549.83	7556.36	6662.41	0.36	-0.171	0.000	0.198
22.00	-80.57	-10.78	0.00	-1201.8	0.00	1201.86	5562.81	1536.52	7427.15	6577.21	0.43	-0.189	0.000	0.197
24.00	-79.54	-10.73	0.00	-1180.3	0.00	1180.30	5539.10	1523.21	7299.05	6491.99	0.52	-0.207	0.000	0.196
26.00	-78.51	-10.67	0.00	-1158.8	0.00	1158.85	5514.96	1509.91	7172.06	6406.77	0.61	-0.225	0.000	0.195
28.00	-77.50	-10.61	0.00	-1137.5	0.00	1137.51	5490.39	1496.60	7046.19	6321.55	0.70	-0.244	0.000	0.194
30.00	-76.46	-10.54	0.00	-1116.3	0.00	1116.30	5465.39	1483.29	6921.43	6236.35	0.81	-0.262	0.000	0.193
32.00	-75.46	-10.48	0.00	-1095.2	0.00	1095.21	5439.96	1469.98	6797.79	6151.18	0.92	-0.281	0.000	0.192
34.00	-74.46	-10.42	0.00	-1074.2	0.00	1074.25	5414.11	1456.67	6675.26	6066.06	1.05	-0.299	0.000	0.191
35.50	-73.72	-10.36	0.00	-1058.6	0.00	1058.63	5394.44	1446.69	6584.09	6002.26	1.14	-0.314	0.000	0.190
36.00	-73.31	-10.36	0.00	-1053.4	0.00	1053.44	5387.83	1443.36	6553.84	5981.00	1.18	-0.318	0.000	0.190
38.00	-71.68	-10.29	0.00	-1032.7	0.00	1032.73	5361.12	1430.06	6433.54	5896.01	1.31	-0.337	0.000	0.189
40.00	-70.07	-10.22	0.00	-1012.1	0.00	1012.15	5333.99	1416.75	6314.36	5811.11	1.46	-0.357	0.000	0.187
42.00	-68.48	-10.15	0.00	-991.71	0.00	991.71	5306.43	1403.44	6196.29	5726.30	1.61	-0.376	0.000	0.186
43.00	-67.68	-10.11	0.00	-981.56	0.00	981.56	4823.70	1326.07	5927.09	5273.35	1.69	-0.386	0.000	0.200
44.00	-67.21	-10.08	0.00	-971.45	0.00	971.45	4812.47	1319.86	5871.70	5236.23	1.77	-0.396	0.000	0.200
46.00	-66.28	-10.02	0.00	-951.28	0.00	951.28	4789.68	1307.44	5761.71	5161.99	1.94	-0.416	0.000	0.198
48.00	-65.36	-9.95	0.00	-931.24	0.00	931.24	4766.46	1295.02	5652.75	5087.77	2.12	-0.436	0.000	0.197
50.00	-64.44	-9.89	0.00	-911.34	0.00	911.34	4742.82	1282.60	5544.84	5013.57	2.31	-0.456	0.000	0.195
52.00	-63.53	-9.82	0.00	-891.57	0.00	891.57	4718.75	1270.18	5437.96	4939.41	2.51	-0.477	0.000	0.194
54.00	-62.63	-9.75	0.00	-871.93	0.00	871.93	4694.25	1257.76	5332.12	4865.31	2.71	-0.497	0.000	0.193
56.00	-61.73	-9.68	0.00	-852.43	0.00	852.43	4669.32	1245.33	5227.33	4791.28	2.92	-0.518	0.000	0.191
58.00	-60.84	-9.62	0.00	-833.06	0.00	833.06	4643.97	1232.91	5123.57	4717.32	3.14	-0.539	0.000	0.190
60.00	-59.96	-9.55	0.00	-813.83	0.00	813.83	4618.19	1220.49	5020.86	4643.46	3.37	-0.560	0.000	0.188
62.00	-59.08	-9.48	0.00	-794.74	0.00	794.74	4591.98	1208.07	4919.18	4569.71	3.61	-0.581	0.000	0.187
64.00	-58.21	-9.41	0.00	-775.78	0.00	775.78	4565.34	1195.65	4818.55	4496.07	3.86	-0.602	0.000	0.185
66.00	-57.34	-9.34	0.00	-756.96	0.00	756.96	4538.28	1183.23	4718.95	4422.57	4.12	-0.624	0.000	0.184
68.00	-56.48	-9.27	0.00	-738.28	0.00	738.28	4510.78	1170.81	4620.40	4349.22	4.38	-0.645	0.000	0.182
70.00	-55.63	-9.20	0.00	-719.74	0.00	719.74	4482.87	1158.39	4522.88	4276.03	4.66	-0.667	0.000	0.181
72.00	-54.79	-9.13	0.00	-701.33	0.00	701.33	4454.52	1145.97	4426.41	4203.01	4.94	-0.689	0.000	0.179
74.00	-53.95	-9.06	0.00	-683.06	0.00	683.06	4425.74	1133.55	4330.97	4130.17	5.24	-0.711	0.000	0.178
74.50	-53.74	-9.05	0.00	-678.53	0.00	678.53	4418.48	1130.44	4307.27	4111.99	5.31	-0.716	0.000	0.177
76.00	-52.77	-8.99	0.00	-664.97	0.00	664.97	4396.54	1121.12	4236.58	4057.54	5.54	-0.733	0.000	0.176
78.00	-51.49	-8.91	0.00	-646.99	0.00	646.99	4366.91	1108.70	4143.22	3985.11	5.85	-0.755	0.000	0.174
80.00	-50.23	-8.83	0.00	-629.16	0.00	629.16	4336.86	1096.28	4050.91	3912.92	6.17	-0.778	0.000	0.172
81.00	-49.60	-8.79	0.00	-620.33	0.00	620.33	3502.12	951.57	3560.67	3204.59	6.34	-0.789	0.000	0.208
82.00	-49.22	-8.76	0.00	-611.54	0.00	611.54	3492.03	946.24	3520.94	3177.33	6.50	-0.800	0.000	0.207
84.00	-48.48	-8.70	0.00	-594.01	0.00	594.01	3471.52	935.60	3442.15	3122.83	6.84	-0.825	0.000	0.204
86.00	-47.74	-8.63	0.00	-576.62	0.00	576.62	3450.59	924.95	3364.26	3068.38	7.20	-0.850	0.000	0.202

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00	-47.01	-8.56	0.00	-559.37	0.00	559.37	3429.23	914.30	3287.26	3013.99	7.56	-0.876	0.000	0.199
90.00	-46.28	-8.49	0.00	-542.25	0.00	542.25	3407.44	903.66	3211.15	2959.67	7.93	-0.901	0.000	0.197
92.00	-45.56	-8.42	0.00	-525.27	0.00	525.27	3385.23	893.01	3135.93	2905.43	8.31	-0.926	0.000	0.194
94.00	-44.85	-8.35	0.00	-508.43	0.00	508.43	3362.58	882.36	3061.60	2851.28	8.71	-0.952	0.000	0.192
96.00	-44.14	-8.29	0.00	-491.72	0.00	491.72	3339.51	871.72	2988.16	2797.25	9.11	-0.978	0.000	0.189
98.00	-43.44	-8.22	0.00	-475.15	0.00	475.15	3316.01	861.07	2915.61	2743.33	9.53	-1.003	0.000	0.186
100.00	-42.75	-8.15	0.00	-458.72	0.00	458.72	3292.09	850.42	2843.96	2689.56	9.95	-1.029	0.000	0.184
102.00	-42.06	-8.08	0.00	-442.42	0.00	442.42	3267.73	839.78	2773.20	2635.93	10.39	-1.055	0.000	0.181
104.00	-41.37	-8.01	0.00	-426.26	0.00	426.26	3242.95	829.13	2703.33	2582.46	10.84	-1.080	0.000	0.178
106.00	-40.70	-7.94	0.00	-410.24	0.00	410.24	3217.75	818.48	2634.35	2529.17	11.29	-1.106	0.000	0.175
108.00	-40.03	-7.88	0.00	-394.35	0.00	394.35	3192.11	807.84	2566.26	2476.07	11.76	-1.132	0.000	0.172
110.00	-39.36	-7.81	0.00	-378.59	0.00	378.59	3166.05	797.19	2499.06	2423.18	12.24	-1.158	0.000	0.169
112.00	-38.70	-7.74	0.00	-362.98	0.00	362.98	3139.56	786.54	2432.76	2370.49	12.73	-1.183	0.000	0.166
114.00	-38.05	-7.67	0.00	-347.49	0.00	347.49	3112.64	775.90	2367.34	2318.04	13.23	-1.209	0.000	0.162
116.00	-37.41	-7.60	0.00	-332.15	0.00	332.15	3085.29	765.25	2302.82	2265.83	13.75	-1.235	0.000	0.159
118.00	-36.77	-7.53	0.00	-316.94	0.00	316.94	3057.52	754.60	2239.19	2213.87	14.27	-1.260	0.000	0.155
118.75	-36.53	-7.51	0.00	-311.29	0.00	311.29	3046.99	750.61	2215.56	2194.45	14.47	-1.270	0.000	0.154
120.00	-35.95	-7.46	0.00	-301.91	0.00	301.91	3029.32	743.96	2176.45	2162.18	14.80	-1.286	0.000	0.152
122.00	-35.03	-7.39	0.00	-286.98	0.00	286.98	3000.69	733.31	2114.60	2110.77	15.35	-1.311	0.000	0.148
124.00	-34.12	-7.31	0.00	-272.21	0.00	272.21	2338.57	614.36	1781.07	1656.86	15.90	-1.336	0.000	0.179
126.00	-33.55	-7.24	0.00	-257.60	0.00	257.60	2319.39	605.49	1730.00	1619.32	16.47	-1.360	0.000	0.174
128.00	-32.99	-7.17	0.00	-243.12	0.00	243.12	2299.78	596.62	1679.67	1581.89	17.04	-1.388	0.000	0.168
130.00	-32.43	-7.10	0.00	-228.77	0.00	228.77	2279.74	587.74	1630.09	1544.58	17.63	-1.415	0.000	0.162
132.00	-31.88	-7.04	0.00	-214.57	0.00	214.57	2259.27	578.87	1581.25	1507.39	18.23	-1.442	0.000	0.157
134.00	-31.34	-6.97	0.00	-200.49	0.00	200.49	2238.38	570.00	1533.15	1470.34	18.84	-1.468	0.000	0.151
136.00	-30.80	-6.90	0.00	-186.56	0.00	186.56	2217.06	561.13	1485.79	1433.45	19.46	-1.493	0.000	0.144
138.00	-30.26	-6.83	0.00	-172.76	0.00	172.76	2195.31	552.25	1439.18	1396.73	20.09	-1.518	0.000	0.138
140.00	-25.45	-5.55	0.00	-159.10	0.00	159.10	2173.13	543.38	1393.31	1360.19	20.73	-1.542	0.000	0.129
142.00	-25.02	-5.49	0.00	-147.99	0.00	147.99	2150.53	534.51	1348.18	1323.84	21.38	-1.565	0.000	0.124
144.00	-24.61	-5.43	0.00	-137.01	0.00	137.01	2127.50	525.64	1303.79	1287.70	22.04	-1.588	0.000	0.118
146.00	-24.20	-5.36	0.00	-126.16	0.00	126.16	2104.04	516.77	1260.15	1251.78	22.71	-1.610	0.000	0.112
148.00	-23.79	-5.30	0.00	-115.43	0.00	115.43	2080.15	507.89	1217.25	1216.10	23.39	-1.632	0.000	0.106
150.00	-17.43	-4.03	0.00	-104.83	0.00	104.83	2055.84	499.02	1175.10	1180.67	24.08	-1.652	0.000	0.097
152.00	-17.07	-3.97	0.00	-96.77	0.00	96.77	2031.10	490.15	1133.68	1145.49	24.78	-1.672	0.000	0.093
154.00	-16.72	-3.90	0.00	-88.83	0.00	88.83	2005.93	481.28	1093.01	1110.59	25.48	-1.691	0.000	0.088
154.75	-16.59	-3.88	0.00	-85.91	0.00	85.91	1996.38	477.95	1077.95	1097.58	25.75	-1.698	0.000	0.087
156.00	-16.29	-3.84	0.00	-81.06	0.00	81.06	1980.33	472.40	1053.09	1075.98	26.19	-1.710	0.000	0.084
158.00	-15.82	-3.77	0.00	-73.37	0.00	73.37	1946.84	463.53	1013.90	1037.68	26.91	-1.728	0.000	0.079
159.00	-15.58	-3.74	0.00	-69.60	0.00	69.60	942.51	280.76	619.93	509.56	27.28	-1.737	0.000	0.153
160.00	-15.46	-3.71	0.00	-65.86	0.00	65.86	939.15	278.09	608.23	502.90	27.64	-1.745	0.000	0.148
162.00	-15.21	-3.66	0.00	-58.43	0.00	58.43	932.13	272.77	585.17	489.52	28.38	-1.771	0.000	0.136
164.00	-14.96	-3.60	0.00	-51.12	0.00	51.12	924.68	267.45	562.55	476.06	29.12	-1.794	0.000	0.124
166.00	-14.72	-3.54	0.00	-43.92	0.00	43.92	916.80	262.12	540.38	462.54	29.88	-1.816	0.000	0.111
167.00	-6.97	-1.79	0.00	-40.37	0.00	40.37	912.70	259.46	529.46	455.76	30.26	-1.826	0.000	0.096
168.00	-6.87	-1.76	0.00	-38.58	0.00	38.58	908.49	256.80	518.65	448.97	30.65	-1.836	0.000	0.094
170.00	-6.67	-1.70	0.00	-35.07	0.00	35.07	899.76	251.48	497.37	435.36	31.42	-1.855	0.000	0.088
172.00	-6.48	-1.65	0.00	-31.66	0.00	31.66	890.60	246.15	476.54	421.74	32.20	-1.874	0.000	0.082
174.00	-6.28	-1.59	0.00	-28.36	0.00	28.36	881.01	240.83	456.15	408.10	32.99	-1.891	0.000	0.077
176.00	-6.10	-1.54	0.00	-25.18	0.00	25.18	870.99	235.51	436.21	394.47	33.79	-1.908	0.000	0.071
178.00	-5.91	-1.49	0.00	-22.10	0.00	22.10	860.55	230.18	416.71	380.86	34.59	-1.924	0.000	0.065
180.00	-5.73	-1.44	0.00	-19.12	0.00	19.12	849.68	224.86	397.66	367.28	35.40	-1.939	0.000	0.059
182.00	-5.55	-1.38	0.00	-16.25	0.00	16.25	838.38	219.54	379.06	353.74	36.21	-1.953	0.000	0.053
184.00	-5.38	-1.33	0.00	-13.49	0.00	13.49	826.65	214.21	360.90	340.26	37.03	-1.965	0.000	0.046
186.00	-5.21	-1.28	0.00	-10.82	0.00	10.82	814.50	208.89	343.18	326.85	37.86	-1.976	0.000	0.040
188.00	-5.05	-1.23	0.00	-8.25	0.00	8.25	801.91	203.57	325.91	313.52	38.69	-1.985	0.000	0.033
190.00	-4.89	-1.19	0.00	-5.78	0.00	5.78	788.90	198.24	309.09	300.29	39.52	-1.992	0.000	0.025
192.00	-4.73	-1.14	0.00	-3.41	0.00	3.41	775.47	192.92	292.71	287.17	40.36	-1.998	0.000	0.018

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



194.00	-4.58	-1.09	0.00	-1.13	0.00	1.13	761.60	187.60	276.78	274.17	41.19	-2.000	0.000	0.010
195.00	-0.10	-0.03	0.00	-0.03	0.00	0.03	754.51	184.94	268.98	267.73	41.61	-2.001	0.000	0.000
196.00	0.00	-0.03	0.00	0.00	0.00	0.00	747.31	182.27	261.30	261.31	42.03	-2.001	0.000	0.000

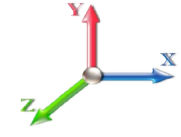
Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Ev + 1.0Eh				Iterations 28
Gust Response Factor	1.10	Sds	0.20	Ss 0.18
Dead Load Factor	1.20	Seismic Load Factor	1.00	S1 0.05
Wind Load Factor	0.00	Structure Frequency (f1)	0.28	SA 0.02
				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	32.45	
4.00		644.86	0.00	0.02	0.01	36.71	
6.00		639.70	0.00	0.03	0.02	39.62	
8.00		634.54	0.00	0.04	0.02	41.69	
10.00		629.38	0.00	0.04	0.03	43.18	
12.00		624.22	0.01	0.05	0.03	44.24	
14.00		619.06	0.01	0.05	0.03	44.98	
16.00		613.90	0.01	0.06	0.03	45.47	
18.00		608.74	0.02	0.06	0.04	45.78	
20.00		603.57	0.02	0.06	0.04	45.93	
22.00		598.41	0.02	0.07	0.04	45.98	
24.00		593.25	0.03	0.07	0.04	45.93	
26.00		588.09	0.03	0.07	0.04	45.83	
28.00		582.93	0.04	0.07	0.04	45.67	
30.00	Appurtenance(s)	587.77	0.04	0.07	0.04	46.26	
32.00		572.61	0.05	0.07	0.04	45.26	
34.00		567.45	0.06	0.07	0.04	45.02	
35.50	Bot - Section 2	422.20	0.06	0.07	0.04	33.59	
36.00		273.01	0.06	0.07	0.04	21.74	
38.00		1085.8	0.07	0.07	0.04	86.80	
40.00		1075.8	0.08	0.07	0.04	86.32	
42.00		1065.8	0.09	0.07	0.04	85.86	
43.00	Top - Section 1	529.18	0.09	0.07	0.04	42.71	
44.00		256.51	0.10	0.07	0.04	20.75	
46.00		509.41	0.10	0.07	0.04	41.37	
48.00		504.59	0.11	0.07	0.04	41.15	
50.00		499.78	0.12	0.07	0.03	40.94	
52.00		494.96	0.13	0.07	0.03	40.71	
54.00		490.14	0.14	0.07	0.03	40.48	
56.00		485.33	0.15	0.07	0.03	40.24	
58.00		480.51	0.17	0.07	0.03	39.98	
60.00		475.69	0.18	0.07	0.03	39.69	
62.00		470.88	0.19	0.06	0.02	39.37	
64.00		466.06	0.20	0.06	0.02	39.00	
66.00		461.24	0.21	0.06	0.02	38.58	
68.00		456.43	0.23	0.06	0.02	38.10	
70.00		451.61	0.24	0.06	0.02	37.54	
72.00		446.79	0.26	0.05	0.02	36.89	
74.00		441.98	0.27	0.05	0.02	36.13	
74.50	Bot - Section 3	109.74	0.27	0.05	0.01	8.94	
76.00		613.07	0.28	0.05	0.01	49.45	
78.00		809.60	0.30	0.05	0.01	64.14	
80.00		800.65	0.31	0.04	0.01	61.98	
81.00	Top - Section 2	396.97	0.32	0.04	0.01	30.31	
82.00		183.98	0.33	0.04	0.01	13.83	

Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		364.87	0.35	0.03	0.01	26.44
86.00		360.74	0.36	0.03	0.01	24.98
88.00		356.61	0.38	0.02	0.01	23.37
90.00		352.48	0.40	0.02	0.01	21.59
92.00		348.36	0.42	0.01	0.01	19.67
94.00		344.23	0.43	0.01	0.01	17.63
96.00		340.10	0.45	0.00	0.01	15.50
98.00		335.97	0.47	-0.01	0.01	13.32
100.00		331.84	0.49	-0.01	0.01	11.15
102.00		327.71	0.51	-0.02	0.01	9.02
104.00		323.58	0.53	-0.03	0.01	6.98
106.00		319.46	0.55	-0.04	0.01	5.09
108.00		315.33	0.57	-0.04	0.01	3.36
110.00		311.20	0.60	-0.05	0.01	1.83
112.00		307.07	0.62	-0.06	0.02	0.51
114.00		302.94	0.64	-0.07	0.02	-0.61
116.00		298.81	0.66	-0.07	0.02	-1.51
118.00		294.68	0.69	-0.08	0.03	-2.21
118.75	Bot - Section 4	109.44	0.69	-0.08	0.03	-0.91
120.00		334.98	0.71	-0.09	0.03	-3.13
122.00		529.83	0.73	-0.10	0.04	-5.63
124.00	Top - Section 3	522.26	0.76	-0.10	0.04	-5.91
126.00		236.52	0.78	-0.11	0.05	-2.71
128.00		233.08	0.81	-0.11	0.06	-2.59
130.00		229.64	0.83	-0.12	0.06	-2.34
132.00		226.20	0.86	-0.12	0.07	-1.99
134.00		222.75	0.88	-0.12	0.08	-1.54
136.00		219.31	0.91	-0.12	0.09	-1.00
138.00		215.87	0.94	-0.12	0.10	-0.38
140.00	Appurtenance(s)	2367.9	0.96	-0.12	0.11	3.60
142.00		208.99	0.99	-0.11	0.13	1.10
144.00		205.55	1.02	-0.10	0.14	1.94
146.00		202.11	1.05	-0.09	0.16	2.85
148.00		198.67	1.08	-0.08	0.17	3.81
150.00	Appurtenance(s)	3214.2	1.11	-0.07	0.19	79.52
152.00		191.79	1.14	-0.05	0.21	5.90
154.00		188.35	1.17	-0.02	0.23	7.00
154.75	Bot - Section 5	69.74	1.18	-0.01	0.24	2.77
156.00		185.55	1.20	0.00	0.25	8.18
158.00		292.41	1.23	0.03	0.28	15.05
159.00	Top - Section 4	144.14	1.24	0.05	0.29	7.97
160.00		54.18	1.26	0.07	0.30	3.21
162.00		106.81	1.29	0.11	0.33	7.22
164.00		104.74	1.32	0.15	0.36	8.00
166.00		102.68	1.36	0.21	0.39	8.79
167.00	Appurtenance(s)	4048.9	1.37	0.23	0.40	365.93
168.00		50.05	1.39	0.26	0.42	4.77
170.00		98.55	1.42	0.33	0.45	10.40
172.00		96.49	1.46	0.40	0.49	11.21
174.00		94.42	1.49	0.48	0.53	12.02
176.00		92.36	1.52	0.56	0.57	12.84
178.00		90.29	1.56	0.66	0.62	13.65
180.00		88.23	1.59	0.76	0.66	14.45
182.00		86.16	1.63	0.87	0.71	15.25
184.00		84.10	1.67	1.00	0.76	16.03
186.00		82.04	1.70	1.13	0.82	16.80
188.00		79.97	1.74	1.28	0.88	17.56

Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019	
Site Name: Stonington East	Exposure: C		
Height: 196.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 54



190.00		77.91	1.78	1.43	0.94	18.29
192.00		75.84	1.81	1.60	1.00	19.00
194.00		73.78	1.85	1.78	1.07	19.69
195.00	Appurtenance(s)	2426.0	1.87	1.88	1.10	667.59
196.00	Appurtenance(s)	42.10	1.89	1.98	1.14	11.94
Totals:		49,657.3				3,518.9
						Total Wind: 55,486.3

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

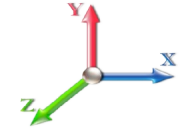
Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Ev + 1.0Eh						Iterations 28
Gust Response Factor	1.10			Sds	0.20	Ss 0.18
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.08	S1 0.05
Wind Load Factor	0.00	Structure Frequency (f1)	0.28	SA	0.02	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	-68.14	-3.55	0.00	-374.18	0.00	374.18	5795.46	1682.91	8909.80	7510.36	0.00	0.00	0.00	0.062
2.00	-67.25	-3.52	0.00	-367.07	0.00	367.07	5776.44	1669.60	8769.44	7426.09	0.00	0.00	0.00	0.061
4.00	-66.36	-3.49	0.00	-360.02	0.00	360.02	5757.00	1656.30	8630.20	7341.68	0.00	0.00	-0.01	0.061
6.00	-65.48	-3.46	0.00	-353.04	0.00	353.04	5737.14	1642.99	8492.07	7257.12	0.01	0.01	-0.01	0.060
8.00	-64.61	-3.42	0.00	-346.12	0.00	346.12	5716.84	1629.68	8355.05	7172.43	0.01	0.01	-0.02	0.060
10.00	-63.75	-3.38	0.00	-339.28	0.00	339.28	5696.12	1616.37	8219.15	7087.63	0.02	0.02	-0.02	0.059
12.00	-62.89	-3.34	0.00	-332.52	0.00	332.52	5674.97	1603.06	8084.36	7002.73	0.03	0.03	-0.03	0.059
14.00	-62.03	-3.30	0.00	-325.83	0.00	325.83	5653.40	1589.76	7950.69	6917.75	0.04	0.04	-0.03	0.058
16.00	-61.18	-3.26	0.00	-319.23	0.00	319.23	5631.39	1576.45	7818.13	6832.69	0.06	0.06	-0.03	0.058
18.00	-60.34	-3.22	0.00	-312.71	0.00	312.71	5608.96	1563.14	7686.69	6747.57	0.07	0.07	-0.04	0.057
20.00	-59.51	-3.18	0.00	-306.27	0.00	306.27	5586.10	1549.83	7556.36	6662.41	0.09	0.09	-0.04	0.057
22.00	-58.68	-3.14	0.00	-299.91	0.00	299.91	5562.81	1536.52	7427.15	6577.21	0.11	0.11	-0.05	0.056
24.00	-57.86	-3.09	0.00	-293.64	0.00	293.64	5539.10	1523.21	7299.05	6491.99	0.13	0.13	-0.05	0.056
26.00	-57.04	-3.05	0.00	-287.46	0.00	287.46	5514.96	1509.91	7172.06	6406.77	0.15	0.15	-0.06	0.055
28.00	-56.23	-3.01	0.00	-281.36	0.00	281.36	5490.39	1496.60	7046.19	6321.55	0.18	0.18	-0.06	0.055
30.00	-55.41	-2.97	0.00	-275.34	0.00	275.34	5465.39	1483.29	6921.43	6236.35	0.21	0.21	-0.07	0.054
32.00	-54.61	-2.92	0.00	-269.41	0.00	269.41	5439.96	1469.98	6797.79	6151.18	0.24	0.24	-0.07	0.054
34.00	-53.82	-2.88	0.00	-263.56	0.00	263.56	5414.11	1456.67	6675.26	6066.06	0.27	0.27	-0.08	0.053
35.50	-53.23	-2.85	0.00	-259.23	0.00	259.23	5394.44	1446.69	6584.09	6002.26	0.29	0.29	-0.08	0.053
36.00	-52.88	-2.83	0.00	-257.81	0.00	257.81	5387.83	1443.36	6553.84	5981.00	0.30	0.30	-0.08	0.053
38.00	-51.46	-2.75	0.00	-252.15	0.00	252.15	5361.12	1430.06	6433.54	5896.01	0.33	0.33	-0.08	0.052
40.00	-50.06	-2.66	0.00	-246.66	0.00	246.66	5333.99	1416.75	6314.36	5811.11	0.37	0.37	-0.09	0.052
42.00	-48.67	-2.58	0.00	-241.34	0.00	241.34	5306.43	1403.44	6196.29	5726.30	0.41	0.41	-0.09	0.051
43.00	-47.98	-2.53	0.00	-238.76	0.00	238.76	4823.70	1326.07	5927.09	5273.35	0.43	0.43	-0.10	0.055
44.00	-47.62	-2.52	0.00	-236.22	0.00	236.22	4812.47	1319.86	5871.70	5236.23	0.45	0.45	-0.10	0.055
46.00	-46.90	-2.48	0.00	-231.19	0.00	231.19	4789.68	1307.44	5761.71	5161.99	0.49	0.49	-0.10	0.055
48.00	-46.18	-2.44	0.00	-226.24	0.00	226.24	4766.46	1295.02	5652.75	5087.77	0.54	0.54	-0.11	0.054
50.00	-45.47	-2.40	0.00	-221.36	0.00	221.36	4742.82	1282.60	5544.84	5013.57	0.58	0.58	-0.11	0.054
52.00	-44.77	-2.36	0.00	-216.56	0.00	216.56	4718.75	1270.18	5437.96	4939.41	0.63	0.63	-0.12	0.053
54.00	-44.07	-2.32	0.00	-211.84	0.00	211.84	4694.25	1257.76	5332.12	4865.31	0.68	0.68	-0.12	0.053
56.00	-43.37	-2.29	0.00	-207.19	0.00	207.19	4669.32	1245.33	5227.33	4791.28	0.73	0.73	-0.13	0.053
58.00	-42.69	-2.25	0.00	-202.62	0.00	202.62	4643.97	1232.91	5123.57	4717.32	0.79	0.79	-0.13	0.052
60.00	-42.00	-2.21	0.00	-198.12	0.00	198.12	4618.19	1220.49	5020.86	4643.46	0.85	0.85	-0.14	0.052
62.00	-41.33	-2.17	0.00	-193.70	0.00	193.70	4591.98	1208.07	4919.18	4569.71	0.91	0.91	-0.14	0.051
64.00	-40.66	-2.14	0.00	-189.35	0.00	189.35	4565.34	1195.65	4818.55	4496.07	0.97	0.97	-0.15	0.051
66.00	-39.99	-2.10	0.00	-185.08	0.00	185.08	4538.28	1183.23	4718.95	4422.57	1.03	1.03	-0.15	0.051
68.00	-39.34	-2.06	0.00	-180.88	0.00	180.88	4510.78	1170.81	4620.40	4349.22	1.10	1.10	-0.16	0.050
70.00	-38.68	-2.03	0.00	-176.75	0.00	176.75	4482.87	1158.39	4522.88	4276.03	1.16	1.16	-0.16	0.050
72.00	-38.04	-1.99	0.00	-172.69	0.00	172.69	4454.52	1145.97	4426.41	4203.01	1.23	1.23	-0.17	0.050
74.00	-37.39	-1.96	0.00	-168.71	0.00	168.71	4425.74	1133.55	4330.97	4130.17	1.31	1.31	-0.18	0.049
74.50	-37.23	-1.95	0.00	-167.73	0.00	167.73	4418.48	1130.44	4307.27	4111.99	1.33	1.33	-0.18	0.049
76.00	-36.42	-1.90	0.00	-164.81	0.00	164.81	4396.54	1121.12	4236.58	4057.54	1.38	1.38	-0.18	0.049
78.00	-35.33	-1.84	0.00	-161.01	0.00	161.01	4366.91	1108.70	4143.22	3985.11	1.46	1.46	-0.19	0.048
80.00	-34.26	-1.77	0.00	-157.33	0.00	157.33	4336.86	1096.28	4050.91	3912.92	1.54	1.54	-0.19	0.048
81.00	-33.73	-1.74	0.00	-155.56	0.00	155.56	3502.12	951.57	3560.67	3204.59	1.58	1.58	-0.20	0.058
82.00	-33.45	-1.73	0.00	-153.82	0.00	153.82	3492.03	946.24	3520.94	3177.33	1.62	1.62	-0.20	0.058
84.00	-32.91	-1.71	0.00	-150.36	0.00	150.36	3471.52	935.60	3442.15	3122.83	1.70	1.70	-0.20	0.058

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



86.00	-32.36	-1.68	0.00	-146.95	0.00	146.95	3450.59	924.95	3364.26	3068.38	1.79	-0.21	0.057
88.00	-31.82	-1.66	0.00	-143.58	0.00	143.58	3429.23	914.30	3287.26	3013.99	1.88	-0.22	0.057
90.00	-31.29	-1.64	0.00	-140.26	0.00	140.26	3407.44	903.66	3211.15	2959.67	1.97	-0.22	0.057
92.00	-30.76	-1.62	0.00	-136.98	0.00	136.98	3385.23	893.01	3135.93	2905.43	2.07	-0.23	0.056
94.00	-30.24	-1.61	0.00	-133.73	0.00	133.73	3362.58	882.36	3061.60	2851.28	2.17	-0.24	0.056
96.00	-29.72	-1.59	0.00	-130.52	0.00	130.52	3339.51	871.72	2988.16	2797.25	2.27	-0.24	0.056
98.00	-29.20	-1.58	0.00	-127.34	0.00	127.34	3316.01	861.07	2915.61	2743.33	2.37	-0.25	0.055
100.00	-28.69	-1.57	0.00	-124.18	0.00	124.18	3292.09	850.42	2843.96	2689.56	2.48	-0.26	0.055
102.00	-28.19	-1.56	0.00	-121.04	0.00	121.04	3267.73	839.78	2773.20	2635.93	2.59	-0.26	0.055
104.00	-27.69	-1.56	0.00	-117.91	0.00	117.91	3242.95	829.13	2703.33	2582.46	2.70	-0.27	0.054
106.00	-27.20	-1.55	0.00	-114.80	0.00	114.80	3217.75	818.48	2634.35	2529.17	2.81	-0.28	0.054
108.00	-26.71	-1.55	0.00	-111.69	0.00	111.69	3192.11	807.84	2566.26	2476.07	2.93	-0.29	0.053
110.00	-26.22	-1.55	0.00	-108.59	0.00	108.59	3166.05	797.19	2499.06	2423.18	3.05	-0.29	0.053
112.00	-25.74	-1.55	0.00	-105.49	0.00	105.49	3139.56	786.54	2432.76	2370.49	3.18	-0.30	0.053
114.00	-25.27	-1.55	0.00	-102.39	0.00	102.39	3112.64	775.90	2367.34	2318.04	3.31	-0.31	0.052
116.00	-24.80	-1.55	0.00	-99.29	0.00	99.29	3085.29	765.25	2302.82	2265.83	3.44	-0.32	0.052
118.00	-24.34	-1.55	0.00	-96.19	0.00	96.19	3057.52	754.60	2239.19	2213.87	3.57	-0.32	0.051
118.75	-24.16	-1.55	0.00	-95.03	0.00	95.03	3046.99	750.61	2215.56	2194.45	3.62	-0.33	0.051
120.00	-23.69	-1.55	0.00	-93.09	0.00	93.09	3029.32	743.96	2176.45	2162.18	3.71	-0.33	0.051
122.00	-22.95	-1.55	0.00	-89.99	0.00	89.99	3000.69	733.31	2114.60	2110.77	3.85	-0.34	0.050
124.00	-22.21	-1.55	0.00	-86.88	0.00	86.88	2338.57	614.36	1781.07	1656.86	3.99	-0.35	0.062
126.00	-21.81	-1.55	0.00	-83.79	0.00	83.79	2319.39	605.49	1730.00	1619.32	4.14	-0.35	0.061
128.00	-21.42	-1.55	0.00	-80.69	0.00	80.69	2299.78	596.62	1679.67	1581.89	4.29	-0.36	0.060
130.00	-21.04	-1.55	0.00	-77.59	0.00	77.59	2279.74	587.74	1630.09	1544.58	4.44	-0.37	0.059
132.00	-20.65	-1.55	0.00	-74.48	0.00	74.48	2259.27	578.87	1581.25	1507.39	4.60	-0.38	0.059
134.00	-20.27	-1.55	0.00	-71.38	0.00	71.38	2238.38	570.00	1533.15	1470.34	4.76	-0.39	0.058
136.00	-19.90	-1.55	0.00	-68.27	0.00	68.27	2217.06	561.13	1485.79	1433.45	4.93	-0.40	0.057
138.00	-19.53	-1.55	0.00	-65.16	0.00	65.16	2195.31	552.25	1439.18	1396.73	5.10	-0.41	0.056
140.00	-16.58	-1.53	0.00	-62.05	0.00	62.05	2173.13	543.38	1393.31	1360.19	5.27	-0.42	0.053
142.00	-16.25	-1.53	0.00	-58.99	0.00	58.99	2150.53	534.51	1348.18	1323.84	5.45	-0.43	0.052
144.00	-15.93	-1.53	0.00	-55.93	0.00	55.93	2127.50	525.64	1303.79	1287.70	5.63	-0.44	0.051
146.00	-15.61	-1.53	0.00	-52.87	0.00	52.87	2104.04	516.77	1260.15	1251.78	5.82	-0.45	0.050
148.00	-15.30	-1.52	0.00	-49.82	0.00	49.82	2080.15	507.89	1217.25	1216.10	6.01	-0.46	0.048
150.00	-11.37	-1.41	0.00	-46.77	0.00	46.77	2055.84	499.02	1175.10	1180.67	6.20	-0.46	0.045
152.00	-11.10	-1.41	0.00	-43.94	0.00	43.94	2031.10	490.15	1133.68	1145.49	6.40	-0.47	0.044
154.00	-10.83	-1.40	0.00	-41.13	0.00	41.13	2005.93	481.28	1093.01	1110.59	6.60	-0.48	0.042
154.75	-10.73	-1.40	0.00	-40.08	0.00	40.08	1996.38	477.95	1077.95	1097.58	6.67	-0.49	0.042
156.00	-10.48	-1.39	0.00	-38.33	0.00	38.33	1980.33	472.40	1053.09	1075.98	6.80	-0.49	0.041
158.00	-10.09	-1.37	0.00	-35.56	0.00	35.56	1946.84	463.53	1013.90	1037.68	7.01	-0.50	0.039
159.00	-9.90	-1.36	0.00	-34.19	0.00	34.19	942.51	280.76	619.93	509.56	7.11	-0.50	0.078
160.00	-9.82	-1.36	0.00	-32.83	0.00	32.83	939.15	278.09	608.23	502.90	7.22	-0.51	0.076
162.00	-9.65	-1.35	0.00	-30.11	0.00	30.11	932.13	272.77	585.17	489.52	7.44	-0.52	0.072
164.00	-9.48	-1.34	0.00	-27.41	0.00	27.41	924.68	267.45	562.55	476.06	7.66	-0.53	0.068
166.00	-9.32	-1.34	0.00	-24.72	0.00	24.72	916.80	262.12	540.38	462.54	7.88	-0.55	0.064
167.00	-4.45	-0.92	0.00	-23.38	0.00	23.38	912.70	259.46	529.46	455.76	8.00	-0.55	0.056
168.00	-4.38	-0.92	0.00	-22.46	0.00	22.46	908.49	256.80	518.65	448.97	8.11	-0.56	0.055
170.00	-4.26	-0.91	0.00	-20.62	0.00	20.62	899.76	251.48	497.37	435.36	8.35	-0.57	0.052
172.00	-4.14	-0.90	0.00	-18.80	0.00	18.80	890.60	246.15	476.54	421.74	8.59	-0.58	0.049
174.00	-4.02	-0.88	0.00	-17.01	0.00	17.01	881.01	240.83	456.15	408.10	8.83	-0.59	0.046
176.00	-3.90	-0.87	0.00	-15.24	0.00	15.24	870.99	235.51	436.21	394.47	9.08	-0.60	0.043
178.00	-3.78	-0.86	0.00	-13.50	0.00	13.50	860.55	230.18	416.71	380.86	9.34	-0.61	0.040
180.00	-3.67	-0.84	0.00	-11.78	0.00	11.78	849.68	224.86	397.66	367.28	9.59	-0.62	0.036
182.00	-3.56	-0.83	0.00	-10.10	0.00	10.10	838.38	219.54	379.06	353.74	9.86	-0.63	0.033
184.00	-3.46	-0.81	0.00	-8.45	0.00	8.45	826.65	214.21	360.90	340.26	10.12	-0.63	0.029
186.00	-3.35	-0.79	0.00	-6.83	0.00	6.83	814.50	208.89	343.18	326.85	10.39	-0.64	0.025
188.00	-3.25	-0.77	0.00	-5.25	0.00	5.25	801.91	203.57	325.91	313.52	10.66	-0.65	0.021
190.00	-3.15	-0.75	0.00	-3.70	0.00	3.70	788.90	198.24	309.09	300.29	10.93	-0.65	0.016

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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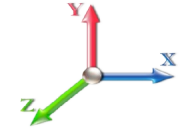
192.00	-3.05	-0.73	0.00	-2.19	0.00	2.19	775.47	192.92	292.71	287.17	11.20	-0.66	0.012
194.00	-2.96	-0.71	0.00	-0.73	0.00	0.73	761.60	187.60	276.78	274.17	11.48	-0.66	0.007
195.00	-0.05	-0.01	0.00	-0.01	0.00	0.01	754.51	184.94	268.98	267.73	11.62	-0.66	0.000
196.00	0.00	-0.01	0.00	0.00	0.00	0.00	747.31	182.27	261.30	261.31	11.75	-0.66	0.000

Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0Ev + 1.0Eh					Iterations 28
Gust Response Factor	1.10	Sds	0.20	Ss	0.18
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.08
Wind Load Factor	0.00	Structure Frequency (f1)	0.28	SA	0.02
				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	32.45	
4.00		644.86	0.00	0.02	0.01	36.71	
6.00		639.70	0.00	0.03	0.02	39.62	
8.00		634.54	0.00	0.04	0.02	41.69	
10.00		629.38	0.00	0.04	0.03	43.18	
12.00		624.22	0.01	0.05	0.03	44.24	
14.00		619.06	0.01	0.05	0.03	44.98	
16.00		613.90	0.01	0.06	0.03	45.47	
18.00		608.74	0.02	0.06	0.04	45.78	
20.00		603.57	0.02	0.06	0.04	45.93	
22.00		598.41	0.02	0.07	0.04	45.98	
24.00		593.25	0.03	0.07	0.04	45.93	
26.00		588.09	0.03	0.07	0.04	45.83	
28.00		582.93	0.04	0.07	0.04	45.67	
30.00	Appurtenance(s)	587.77	0.04	0.07	0.04	46.26	
32.00		572.61	0.05	0.07	0.04	45.26	
34.00		567.45	0.06	0.07	0.04	45.02	
35.50	Bot - Section 2	422.20	0.06	0.07	0.04	33.59	
36.00		273.01	0.06	0.07	0.04	21.74	
38.00		1085.8	0.07	0.07	0.04	86.80	
40.00		1075.8	0.08	0.07	0.04	86.32	
42.00		1065.8	0.09	0.07	0.04	85.86	
43.00	Top - Section 1	529.18	0.09	0.07	0.04	42.71	
44.00		256.51	0.10	0.07	0.04	20.75	
46.00		509.41	0.10	0.07	0.04	41.37	
48.00		504.59	0.11	0.07	0.04	41.15	
50.00		499.78	0.12	0.07	0.03	40.94	
52.00		494.96	0.13	0.07	0.03	40.71	
54.00		490.14	0.14	0.07	0.03	40.48	
56.00		485.33	0.15	0.07	0.03	40.24	
58.00		480.51	0.17	0.07	0.03	39.98	
60.00		475.69	0.18	0.07	0.03	39.69	
62.00		470.88	0.19	0.06	0.02	39.37	
64.00		466.06	0.20	0.06	0.02	39.00	
66.00		461.24	0.21	0.06	0.02	38.58	
68.00		456.43	0.23	0.06	0.02	38.10	
70.00		451.61	0.24	0.06	0.02	37.54	
72.00		446.79	0.26	0.05	0.02	36.89	
74.00		441.98	0.27	0.05	0.02	36.13	
74.50	Bot - Section 3	109.74	0.27	0.05	0.01	8.94	
76.00		613.07	0.28	0.05	0.01	49.45	
78.00		809.60	0.30	0.05	0.01	64.14	
80.00		800.65	0.31	0.04	0.01	61.98	
81.00	Top - Section 2	396.97	0.32	0.04	0.01	30.31	
82.00		183.98	0.33	0.04	0.01	13.83	

Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		364.87	0.35	0.03	0.01	26.44
86.00		360.74	0.36	0.03	0.01	24.98
88.00		356.61	0.38	0.02	0.01	23.37
90.00		352.48	0.40	0.02	0.01	21.59
92.00		348.36	0.42	0.01	0.01	19.67
94.00		344.23	0.43	0.01	0.01	17.63
96.00		340.10	0.45	0.00	0.01	15.50
98.00		335.97	0.47	-0.01	0.01	13.32
100.00		331.84	0.49	-0.01	0.01	11.15
102.00		327.71	0.51	-0.02	0.01	9.02
104.00		323.58	0.53	-0.03	0.01	6.98
106.00		319.46	0.55	-0.04	0.01	5.09
108.00		315.33	0.57	-0.04	0.01	3.36
110.00		311.20	0.60	-0.05	0.01	1.83
112.00		307.07	0.62	-0.06	0.02	0.51
114.00		302.94	0.64	-0.07	0.02	-0.61
116.00		298.81	0.66	-0.07	0.02	-1.51
118.00		294.68	0.69	-0.08	0.03	-2.21
118.75	Bot - Section 4	109.44	0.69	-0.08	0.03	-0.91
120.00		334.98	0.71	-0.09	0.03	-3.13
122.00		529.83	0.73	-0.10	0.04	-5.63
124.00	Top - Section 3	522.26	0.76	-0.10	0.04	-5.91
126.00		236.52	0.78	-0.11	0.05	-2.71
128.00		233.08	0.81	-0.11	0.06	-2.59
130.00		229.64	0.83	-0.12	0.06	-2.34
132.00		226.20	0.86	-0.12	0.07	-1.99
134.00		222.75	0.88	-0.12	0.08	-1.54
136.00		219.31	0.91	-0.12	0.09	-1.00
138.00		215.87	0.94	-0.12	0.10	-0.38
140.00	Appurtenance(s)	2367.9	0.96	-0.12	0.11	3.60
142.00		208.99	0.99	-0.11	0.13	1.10
144.00		205.55	1.02	-0.10	0.14	1.94
146.00		202.11	1.05	-0.09	0.16	2.85
148.00		198.67	1.08	-0.08	0.17	3.81
150.00	Appurtenance(s)	3214.2	1.11	-0.07	0.19	79.52
152.00		191.79	1.14	-0.05	0.21	5.90
154.00		188.35	1.17	-0.02	0.23	7.00
154.75	Bot - Section 5	69.74	1.18	-0.01	0.24	2.77
156.00		185.55	1.20	0.00	0.25	8.18
158.00		292.41	1.23	0.03	0.28	15.05
159.00	Top - Section 4	144.14	1.24	0.05	0.29	7.97
160.00		54.18	1.26	0.07	0.30	3.21
162.00		106.81	1.29	0.11	0.33	7.22
164.00		104.74	1.32	0.15	0.36	8.00
166.00		102.68	1.36	0.21	0.39	8.79
167.00	Appurtenance(s)	4048.9	1.37	0.23	0.40	365.93
168.00		50.05	1.39	0.26	0.42	4.77
170.00		98.55	1.42	0.33	0.45	10.40
172.00		96.49	1.46	0.40	0.49	11.21
174.00		94.42	1.49	0.48	0.53	12.02
176.00		92.36	1.52	0.56	0.57	12.84
178.00		90.29	1.56	0.66	0.62	13.65
180.00		88.23	1.59	0.76	0.66	14.45
182.00		86.16	1.63	0.87	0.71	15.25
184.00		84.10	1.67	1.00	0.76	16.03
186.00		82.04	1.70	1.13	0.82	16.80
188.00		79.97	1.74	1.28	0.88	17.56

Seismic Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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190.00		77.91	1.78	1.43	0.94	18.29
192.00		75.84	1.81	1.60	1.00	19.00
194.00		73.78	1.85	1.78	1.07	19.69
195.00	Appurtenance(s)	2426.0	1.87	1.88	1.10	667.59
196.00	Appurtenance(s)	42.10	1.89	1.98	1.14	11.94
Totals:		49,657.3				3,518.9
						Total Wind: 55,486.3

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-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0Ev + 1.0Eh						Iterations 28
Gust Response Factor 1.10		Sds 0.20				Ss 0.18
Dead Load Factor 0.90		Seismic Load Factor 1.00				S1 0.05
Wind Load Factor 0.00		Structure Frequency (f1) 0.28		SA 0.02		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	-51.10	-3.55	0.00	-369.58	0.00	369.58	5795.46	1682.91	8909.80	7510.36	0.00	0.00	0.00	0.058
2.00	-50.44	-3.52	0.00	-362.48	0.00	362.48	5776.44	1669.60	8769.44	7426.09	0.00	0.00	0.00	0.058
4.00	-49.77	-3.49	0.00	-355.43	0.00	355.43	5757.00	1656.30	8630.20	7341.68	0.00	0.00	-0.01	0.057
6.00	-49.11	-3.45	0.00	-348.45	0.00	348.45	5737.14	1642.99	8492.07	7257.12	0.01	0.01	-0.01	0.057
8.00	-48.46	-3.42	0.00	-341.54	0.00	341.54	5716.84	1629.68	8355.05	7172.43	0.01	0.01	-0.02	0.056
10.00	-47.81	-3.38	0.00	-334.71	0.00	334.71	5696.12	1616.37	8219.15	7087.63	0.02	0.02	-0.02	0.056
12.00	-47.16	-3.33	0.00	-327.96	0.00	327.96	5674.97	1603.06	8084.36	7002.73	0.03	0.03	-0.03	0.055
14.00	-46.52	-3.29	0.00	-321.29	0.00	321.29	5653.40	1589.76	7950.69	6917.75	0.04	0.04	-0.03	0.055
16.00	-45.89	-3.25	0.00	-314.71	0.00	314.71	5631.39	1576.45	7818.13	6832.69	0.06	0.06	-0.03	0.054
18.00	-45.26	-3.21	0.00	-308.20	0.00	308.20	5608.96	1563.14	7686.69	6747.57	0.07	0.07	-0.04	0.054
20.00	-44.63	-3.16	0.00	-301.79	0.00	301.79	5586.10	1549.83	7556.36	6662.41	0.09	0.09	-0.04	0.053
22.00	-44.01	-3.12	0.00	-295.46	0.00	295.46	5562.81	1536.52	7427.15	6577.21	0.11	0.11	-0.05	0.053
24.00	-43.39	-3.08	0.00	-289.22	0.00	289.22	5539.10	1523.21	7299.05	6491.99	0.13	0.13	-0.05	0.052
26.00	-42.78	-3.04	0.00	-283.06	0.00	283.06	5514.96	1509.91	7172.06	6406.77	0.15	0.15	-0.06	0.052
28.00	-42.17	-2.99	0.00	-276.99	0.00	276.99	5490.39	1496.60	7046.19	6321.55	0.18	0.18	-0.06	0.052
30.00	-41.56	-2.95	0.00	-271.00	0.00	271.00	5465.39	1483.29	6921.43	6236.35	0.20	0.20	-0.07	0.051
32.00	-40.96	-2.91	0.00	-265.10	0.00	265.10	5439.96	1469.98	6797.79	6151.18	0.23	0.23	-0.07	0.051
34.00	-40.37	-2.86	0.00	-259.29	0.00	259.29	5414.11	1456.67	6675.26	6066.06	0.26	0.26	-0.07	0.050
35.50	-39.92	-2.83	0.00	-255.00	0.00	255.00	5394.44	1446.69	6584.09	6002.26	0.29	0.29	-0.08	0.050
36.00	-39.66	-2.81	0.00	-253.58	0.00	253.58	5387.83	1443.36	6553.84	5981.00	0.29	0.29	-0.08	0.050
38.00	-38.60	-2.73	0.00	-247.96	0.00	247.96	5361.12	1430.06	6433.54	5896.01	0.33	0.33	-0.08	0.049
40.00	-37.55	-2.64	0.00	-242.51	0.00	242.51	5333.99	1416.75	6314.36	5811.11	0.36	0.36	-0.09	0.049
42.00	-36.50	-2.56	0.00	-237.23	0.00	237.23	5306.43	1403.44	6196.29	5726.30	0.40	0.40	-0.09	0.048
43.00	-35.99	-2.51	0.00	-234.67	0.00	234.67	4823.70	1326.07	5927.09	5273.35	0.42	0.42	-0.09	0.052
44.00	-35.71	-2.49	0.00	-232.16	0.00	232.16	4812.47	1319.86	5871.70	5236.23	0.44	0.44	-0.10	0.052
46.00	-35.17	-2.45	0.00	-227.17	0.00	227.17	4789.68	1307.44	5761.71	5161.99	0.48	0.48	-0.10	0.051
48.00	-34.63	-2.42	0.00	-222.26	0.00	222.26	4766.46	1295.02	5652.75	5087.77	0.53	0.53	-0.11	0.051
50.00	-34.10	-2.38	0.00	-217.43	0.00	217.43	4742.82	1282.60	5544.84	5013.57	0.57	0.57	-0.11	0.051
52.00	-33.57	-2.34	0.00	-212.68	0.00	212.68	4718.75	1270.18	5437.96	4939.41	0.62	0.62	-0.12	0.050
54.00	-33.05	-2.30	0.00	-208.00	0.00	208.00	4694.25	1257.76	5332.12	4865.31	0.67	0.67	-0.12	0.050
56.00	-32.53	-2.26	0.00	-203.40	0.00	203.40	4669.32	1245.33	5227.33	4791.28	0.72	0.72	-0.13	0.049
58.00	-32.01	-2.22	0.00	-198.88	0.00	198.88	4643.97	1232.91	5123.57	4717.32	0.78	0.78	-0.13	0.049
60.00	-31.50	-2.18	0.00	-194.44	0.00	194.44	4618.19	1220.49	5020.86	4643.46	0.83	0.83	-0.14	0.049
62.00	-30.99	-2.15	0.00	-190.07	0.00	190.07	4591.98	1208.07	4919.18	4569.71	0.89	0.89	-0.14	0.048
64.00	-30.49	-2.11	0.00	-185.78	0.00	185.78	4565.34	1195.65	4818.55	4496.07	0.95	0.95	-0.15	0.048
66.00	-29.99	-2.07	0.00	-181.56	0.00	181.56	4538.28	1183.23	4718.95	4422.57	1.01	1.01	-0.15	0.048
68.00	-29.50	-2.03	0.00	-177.42	0.00	177.42	4510.78	1170.81	4620.40	4349.22	1.08	1.08	-0.16	0.047
70.00	-29.01	-2.00	0.00	-173.35	0.00	173.35	4482.87	1158.39	4522.88	4276.03	1.15	1.15	-0.16	0.047
72.00	-28.53	-1.96	0.00	-169.36	0.00	169.36	4454.52	1145.97	4426.41	4203.01	1.22	1.22	-0.17	0.047
74.00	-28.04	-1.93	0.00	-165.43	0.00	165.43	4425.74	1133.55	4330.97	4130.17	1.29	1.29	-0.17	0.046
74.50	-27.92	-1.92	0.00	-164.47	0.00	164.47	4418.48	1130.44	4307.27	4111.99	1.31	1.31	-0.17	0.046
76.00	-27.31	-1.87	0.00	-161.59	0.00	161.59	4396.54	1121.12	4236.58	4057.54	1.36	1.36	-0.18	0.046
78.00	-26.50	-1.81	0.00	-157.85	0.00	157.85	4366.91	1108.70	4143.22	3985.11	1.44	1.44	-0.18	0.046
80.00	-25.70	-1.74	0.00	-154.24	0.00	154.24	4336.86	1096.28	4050.91	3912.92	1.51	1.51	-0.19	0.045
81.00	-25.30	-1.71	0.00	-152.50	0.00	152.50	3502.12	951.57	3560.67	3204.59	1.55	1.55	-0.19	0.055
82.00	-25.09	-1.70	0.00	-150.78	0.00	150.78	3492.03	946.24	3520.94	3177.33	1.59	1.59	-0.19	0.055
84.00	-24.68	-1.67	0.00	-147.38	0.00	147.38	3471.52	935.60	3442.15	3122.83	1.68	1.68	-0.20	0.054

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	-24.27	-1.65	0.00	-144.03	0.00	144.03	3450.59	924.95	3364.26	3068.38	1.76	-0.21	0.054
88.00	-23.87	-1.63	0.00	-140.73	0.00	140.73	3429.23	914.30	3287.26	3013.99	1.85	-0.21	0.054
90.00	-23.47	-1.61	0.00	-137.47	0.00	137.47	3407.44	903.66	3211.15	2959.67	1.94	-0.22	0.053
92.00	-23.07	-1.59	0.00	-134.26	0.00	134.26	3385.23	893.01	3135.93	2905.43	2.04	-0.23	0.053
94.00	-22.68	-1.57	0.00	-131.08	0.00	131.08	3362.58	882.36	3061.60	2851.28	2.13	-0.23	0.053
96.00	-22.29	-1.56	0.00	-127.93	0.00	127.93	3339.51	871.72	2988.16	2797.25	2.23	-0.24	0.052
98.00	-21.90	-1.55	0.00	-124.82	0.00	124.82	3316.01	861.07	2915.61	2743.33	2.33	-0.25	0.052
100.00	-21.52	-1.54	0.00	-121.72	0.00	121.72	3292.09	850.42	2843.96	2689.56	2.44	-0.25	0.052
102.00	-21.14	-1.53	0.00	-118.65	0.00	118.65	3267.73	839.78	2773.20	2635.93	2.54	-0.26	0.051
104.00	-20.77	-1.52	0.00	-115.60	0.00	115.60	3242.95	829.13	2703.33	2582.46	2.65	-0.27	0.051
106.00	-20.40	-1.52	0.00	-112.55	0.00	112.55	3217.75	818.48	2634.35	2529.17	2.77	-0.27	0.051
108.00	-20.03	-1.51	0.00	-109.52	0.00	109.52	3192.11	807.84	2566.26	2476.07	2.88	-0.28	0.051
110.00	-19.67	-1.51	0.00	-106.49	0.00	106.49	3166.05	797.19	2499.06	2423.18	3.00	-0.29	0.050
112.00	-19.31	-1.51	0.00	-103.46	0.00	103.46	3139.56	786.54	2432.76	2370.49	3.13	-0.30	0.050
114.00	-18.95	-1.51	0.00	-100.43	0.00	100.43	3112.64	775.90	2367.34	2318.04	3.25	-0.30	0.049
116.00	-18.60	-1.51	0.00	-97.40	0.00	97.40	3085.29	765.25	2302.82	2265.83	3.38	-0.31	0.049
118.00	-18.25	-1.51	0.00	-94.38	0.00	94.38	3057.52	754.60	2239.19	2213.87	3.51	-0.32	0.049
118.75	-18.12	-1.52	0.00	-93.24	0.00	93.24	3046.99	750.61	2215.56	2194.45	3.56	-0.32	0.048
120.00	-17.77	-1.52	0.00	-91.35	0.00	91.35	3029.32	743.96	2176.45	2162.18	3.65	-0.33	0.048
122.00	-17.21	-1.51	0.00	-88.31	0.00	88.31	3000.69	733.31	2114.60	2110.77	3.78	-0.33	0.048
124.00	-16.65	-1.51	0.00	-85.29	0.00	85.29	2338.57	614.36	1781.07	1656.86	3.93	-0.34	0.059
126.00	-16.36	-1.51	0.00	-82.26	0.00	82.26	2319.39	605.49	1730.00	1619.32	4.07	-0.35	0.058
128.00	-16.06	-1.51	0.00	-79.23	0.00	79.23	2299.78	596.62	1679.67	1581.89	4.22	-0.36	0.057
130.00	-15.77	-1.52	0.00	-76.20	0.00	76.20	2279.74	587.74	1630.09	1544.58	4.37	-0.37	0.056
132.00	-15.49	-1.52	0.00	-73.17	0.00	73.17	2259.27	578.87	1581.25	1507.39	4.52	-0.38	0.055
134.00	-15.20	-1.52	0.00	-70.14	0.00	70.14	2238.38	570.00	1533.15	1470.34	4.68	-0.38	0.055
136.00	-14.92	-1.52	0.00	-67.11	0.00	67.11	2217.06	561.13	1485.79	1433.45	4.85	-0.39	0.054
138.00	-14.65	-1.52	0.00	-64.07	0.00	64.07	2195.31	552.25	1439.18	1396.73	5.01	-0.40	0.053
140.00	-12.43	-1.50	0.00	-61.04	0.00	61.04	2173.13	543.38	1393.31	1360.19	5.18	-0.41	0.051
142.00	-12.19	-1.50	0.00	-58.04	0.00	58.04	2150.53	534.51	1348.18	1323.84	5.36	-0.42	0.050
144.00	-11.94	-1.50	0.00	-55.04	0.00	55.04	2127.50	525.64	1303.79	1287.70	5.54	-0.43	0.048
146.00	-11.71	-1.49	0.00	-52.05	0.00	52.05	2104.04	516.77	1260.15	1251.78	5.72	-0.44	0.047
148.00	-11.47	-1.49	0.00	-49.06	0.00	49.06	2080.15	507.89	1217.25	1216.10	5.90	-0.45	0.046
150.00	-8.52	-1.39	0.00	-46.08	0.00	46.08	2055.84	499.02	1175.10	1180.67	6.09	-0.46	0.043
152.00	-8.32	-1.38	0.00	-43.30	0.00	43.30	2031.10	490.15	1133.68	1145.49	6.29	-0.47	0.042
154.00	-8.12	-1.38	0.00	-40.53	0.00	40.53	2005.93	481.28	1093.01	1110.59	6.48	-0.47	0.041
154.75	-8.05	-1.37	0.00	-39.50	0.00	39.50	1996.38	477.95	1077.95	1097.58	6.56	-0.48	0.040
156.00	-7.86	-1.36	0.00	-37.79	0.00	37.79	1980.33	472.40	1053.09	1075.98	6.68	-0.48	0.039
158.00	-7.57	-1.35	0.00	-35.06	0.00	35.06	1946.84	463.53	1013.90	1037.68	6.89	-0.49	0.038
159.00	-7.42	-1.34	0.00	-33.71	0.00	33.71	942.51	280.76	619.93	509.56	6.99	-0.50	0.074
160.00	-7.36	-1.34	0.00	-32.37	0.00	32.37	939.15	278.09	608.23	502.90	7.10	-0.50	0.072
162.00	-7.23	-1.33	0.00	-29.70	0.00	29.70	932.13	272.77	585.17	489.52	7.31	-0.51	0.068
164.00	-7.11	-1.32	0.00	-27.05	0.00	27.05	924.68	267.45	562.55	476.06	7.52	-0.52	0.065
166.00	-6.99	-1.31	0.00	-24.40	0.00	24.40	916.80	262.12	540.38	462.54	7.75	-0.54	0.060
167.00	-3.33	-0.91	0.00	-23.09	0.00	23.09	912.70	259.46	529.46	455.76	7.86	-0.54	0.054
168.00	-3.28	-0.91	0.00	-22.18	0.00	22.18	908.49	256.80	518.65	448.97	7.97	-0.55	0.053
170.00	-3.19	-0.90	0.00	-20.36	0.00	20.36	899.76	251.48	497.37	435.36	8.21	-0.56	0.050
172.00	-3.10	-0.89	0.00	-18.57	0.00	18.57	890.60	246.15	476.54	421.74	8.44	-0.57	0.048
174.00	-3.01	-0.87	0.00	-16.80	0.00	16.80	881.01	240.83	456.15	408.10	8.68	-0.58	0.045
176.00	-2.92	-0.86	0.00	-15.05	0.00	15.05	870.99	235.51	436.21	394.47	8.93	-0.59	0.042
178.00	-2.84	-0.85	0.00	-13.33	0.00	13.33	860.55	230.18	416.71	380.86	9.18	-0.60	0.038
180.00	-2.75	-0.83	0.00	-11.64	0.00	11.64	849.68	224.86	397.66	367.28	9.43	-0.61	0.035
182.00	-2.67	-0.82	0.00	-9.97	0.00	9.97	838.38	219.54	379.06	353.74	9.69	-0.62	0.031
184.00	-2.59	-0.80	0.00	-8.34	0.00	8.34	826.65	214.21	360.90	340.26	9.95	-0.62	0.028
186.00	-2.51	-0.78	0.00	-6.75	0.00	6.75	814.50	208.89	343.18	326.85	10.21	-0.63	0.024
188.00	-2.43	-0.76	0.00	-5.18	0.00	5.18	801.91	203.57	325.91	313.52	10.48	-0.64	0.020
190.00	-2.36	-0.74	0.00	-3.66	0.00	3.66	788.90	198.24	309.09	300.29	10.74	-0.64	0.015

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 63
	Struct Class: II	



192.00	-2.29	-0.72	0.00	-2.17	0.00	2.17	775.47	192.92	292.71	287.17	11.01	-0.64	0.011
194.00	-2.22	-0.70	0.00	-0.72	0.00	0.72	761.60	187.60	276.78	274.17	11.28	-0.65	0.006
195.00	-0.04	-0.01	0.00	-0.01	0.00	0.01	754.51	184.94	268.98	267.73	11.42	-0.65	0.000
196.00	0.00	-0.01	0.00	0.00	0.00	0.00	747.31	182.27	261.30	261.31	11.55	-0.65	0.000

Wind Loading - Shaft

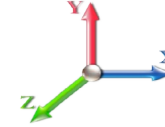
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 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	7.428	8.17	305.15	0.950	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	7.428	8.17	302.76	0.950	0.000	2.00	11.000	10.45	85.4	0.0	650.0
4.00		1.00	0.85	7.428	8.17	300.36	0.950	0.000	2.00	10.913	10.37	84.7	0.0	644.9
6.00		1.00	0.85	7.428	8.17	297.96	0.950	0.000	2.00	10.826	10.28	84.0	0.0	639.7
8.00		1.00	0.85	7.428	8.17	295.57	0.950	0.000	2.00	10.740	10.20	83.4	0.0	634.5
10.00		1.00	0.85	7.428	8.17	293.17	0.950	0.000	2.00	10.653	10.12	82.7	0.0	629.4
12.00		1.00	0.85	7.428	8.17	290.78	0.950	0.000	2.00	10.566	10.04	82.0	0.0	624.2
14.00		1.00	0.85	7.428	8.17	288.38	0.950	0.000	2.00	10.479	9.96	81.3	0.0	619.1
16.00		1.00	0.86	7.520	8.27	287.75	0.950	0.000	2.00	10.393	9.87	81.7	0.0	613.9
18.00		1.00	0.88	7.709	8.48	288.90	0.950	0.000	2.00	10.306	9.79	83.0	0.0	608.7
20.00		1.00	0.90	7.882	8.67	289.65	0.950	0.000	2.00	10.219	9.71	84.2	0.0	603.6
22.00		1.00	0.92	8.041	8.85	290.08	0.950	0.000	2.00	10.133	9.63	85.1	0.0	598.4
24.00		1.00	0.94	8.190	9.01	290.23	0.950	0.000	2.00	10.046	9.54	86.0	0.0	593.3
26.00		1.00	0.95	8.329	9.16	290.15	0.950	0.000	2.00	9.959	9.46	86.7	0.0	588.1
28.00		1.00	0.97	8.460	9.31	289.87	0.950	0.000	2.00	9.873	9.38	87.3	0.0	582.9
30.00	Appurtenance(s)	1.00	0.98	8.584	9.44	289.41	0.950	0.000	2.00	9.786	9.30	87.8	0.0	577.8
32.00		1.00	1.00	8.701	9.57	288.79	0.950	0.000	2.00	9.699	9.21	88.2	0.0	572.6
34.00		1.00	1.01	8.813	9.69	288.03	0.950	0.000	2.00	9.613	9.13	88.5	0.0	567.5
35.50	Bot - Section 2	1.00	1.02	8.894	9.78	287.37	0.950	0.000	1.50	7.153	6.79	66.5	0.0	422.2
36.00		1.00	1.02	8.920	9.81	287.14	0.950	0.000	0.50	2.411	2.29	22.5	0.0	273.0
38.00		1.00	1.03	9.022	9.92	286.14	0.950	0.000	2.00	9.590	9.11	90.4	0.0	1085.8
40.00		1.00	1.04	9.120	10.03	285.03	0.950	0.000	2.00	9.504	9.03	90.6	0.0	1075.8
42.00		1.00	1.05	9.214	10.14	283.83	0.950	0.000	2.00	9.417	8.95	90.7	0.0	1065.8
43.00	Top - Section 1	1.00	1.06	9.260	10.19	283.20	0.950	0.000	1.00	4.676	4.44	45.2	0.0	529.2
44.00		1.00	1.06	9.305	10.24	287.21	0.950	0.000	1.00	4.654	4.42	45.3	0.0	256.5
46.00		1.00	1.07	9.392	10.33	285.87	0.950	0.000	2.00	9.243	8.78	90.7	0.0	509.4
48.00		1.00	1.08	9.477	10.42	284.45	0.950	0.000	2.00	9.157	8.70	90.7	0.0	504.6
50.00		1.00	1.09	9.559	10.51	282.95	0.950	0.000	2.00	9.070	8.62	90.6	0.0	499.8
52.00		1.00	1.10	9.638	10.60	281.40	0.950	0.000	2.00	8.983	8.53	90.5	0.0	495.0
54.00		1.00	1.11	9.715	10.69	279.78	0.950	0.000	2.00	8.897	8.45	90.3	0.0	490.1
56.00		1.00	1.12	9.789	10.77	278.10	0.950	0.000	2.00	8.810	8.37	90.1	0.0	485.3
58.00		1.00	1.13	9.862	10.85	276.37	0.950	0.000	2.00	8.723	8.29	89.9	0.0	480.5
60.00		1.00	1.14	9.933	10.93	274.59	0.950	0.000	2.00	8.637	8.20	89.6	0.0	475.7
62.00		1.00	1.14	10.001	11.00	272.76	0.950	0.000	2.00	8.550	8.12	89.4	0.0	470.9
64.00		1.00	1.15	10.068	11.08	270.88	0.950	0.000	2.00	8.463	8.04	89.0	0.0	466.1
66.00		1.00	1.16	10.134	11.15	268.96	0.950	0.000	2.00	8.377	7.96	88.7	0.0	461.2
68.00		1.00	1.17	10.198	11.22	267.00	0.950	0.000	2.00	8.290	7.88	88.3	0.0	456.4
70.00		1.00	1.17	10.260	11.29	265.00	0.950	0.000	2.00	8.203	7.79	88.0	0.0	451.6
72.00		1.00	1.18	10.321	11.35	262.97	0.950	0.000	2.00	8.117	7.71	87.5	0.0	446.8
74.00		1.00	1.19	10.381	11.42	260.89	0.950	0.000	2.00	8.030	7.63	87.1	0.0	442.0
74.50	Bot - Section 3	1.00	1.19	10.396	11.44	260.37	0.950	0.000	0.50	1.994	1.89	21.7	0.0	109.7
76.00		1.00	1.19	10.439	11.48	258.79	0.950	0.000	1.50	6.046	5.74	66.0	0.0	613.1
78.00		1.00	1.20	10.497	11.55	256.65	0.950	0.000	2.00	7.986	7.59	87.6	0.0	809.6
80.00		1.00	1.21	10.553	11.61	254.48	0.950	0.000	2.00	7.899	7.50	87.1	0.0	800.7
81.00	Top - Section 2	1.00	1.21	10.580	11.64	253.38	0.950	0.000	1.00	3.917	3.72	43.3	0.0	397.0
82.00		1.00	1.21	10.608	11.67	256.55	0.950	0.000	1.00	3.895	3.70	43.2	0.0	184.0
84.00		1.00	1.22	10.662	11.73	254.33	0.950	0.000	2.00	7.726	7.34	86.1	0.0	364.9

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	1.00	1.23	10.715	11.79	252.09	0.950	0.000	2.00	7.639	7.26	85.5	0.0	360.7
88.00	1.00	1.23	10.767	11.84	249.81	0.950	0.000	2.00	7.552	7.17	85.0	0.0	356.6
90.00	1.00	1.24	10.818	11.90	247.51	0.950	0.000	2.00	7.466	7.09	84.4	0.0	352.5
92.00	1.00	1.24	10.868	11.95	245.19	0.950	0.000	2.00	7.379	7.01	83.8	0.0	348.4
94.00	1.00	1.25	10.917	12.01	242.84	0.950	0.000	2.00	7.292	6.93	83.2	0.0	344.2
96.00	1.00	1.25	10.966	12.06	240.47	0.950	0.000	2.00	7.206	6.85	82.6	0.0	340.1
98.00	1.00	1.26	11.013	12.11	238.08	0.950	0.000	2.00	7.119	6.76	81.9	0.0	336.0
100.00	1.00	1.27	11.060	12.17	235.66	0.950	0.000	2.00	7.032	6.68	81.3	0.0	331.8
102.00	1.00	1.27	11.106	12.22	233.22	0.950	0.000	2.00	6.946	6.60	80.6	0.0	327.7
104.00	1.00	1.28	11.152	12.27	230.76	0.950	0.000	2.00	6.859	6.52	79.9	0.0	323.6
106.00	1.00	1.28	11.197	12.32	228.29	0.950	0.000	2.00	6.772	6.43	79.2	0.0	319.5
108.00	1.00	1.29	11.241	12.37	225.79	0.950	0.000	2.00	6.686	6.35	78.5	0.0	315.3
110.00	1.00	1.29	11.284	12.41	223.27	0.953 *	0.000	2.00	6.599	6.29	78.1	0.0	311.2
112.00	1.00	1.30	11.327	12.46	220.74	0.957 *	0.000	2.00	6.512	6.23	77.6	0.0	307.1
114.00	1.00	1.30	11.370	12.51	218.19	0.961 *	0.000	2.00	6.426	6.17	77.2	0.0	302.9
116.00	1.00	1.31	11.411	12.55	215.62	0.965 *	0.000	2.00	6.339	6.12	76.8	0.0	298.8
118.00	1.00	1.31	11.452	12.60	213.03	0.969 *	0.000	2.00	6.252	6.06	76.3	0.0	294.7
118.75 Bot - Section 4	1.00	1.31	11.468	12.61	212.06	0.972 *	0.000	0.75	2.322	2.26	28.5	0.0	109.4
120.00	1.00	1.32	11.493	12.64	210.43	0.974 *	0.000	1.25	3.911	3.81	48.2	0.0	335.0
122.00	1.00	1.32	11.533	12.69	207.81	0.978 *	0.000	2.00	6.187	6.05	76.7	0.0	529.8
124.00 Top - Section 3	1.00	1.32	11.573	12.73	205.18	0.982 *	0.000	2.00	6.100	5.99	76.3	0.0	522.3
126.00	1.00	1.33	11.612	12.77	206.25	0.981 *	0.000	2.00	6.013	5.90	75.3	0.0	236.5
128.00	1.00	1.33	11.650	12.82	203.60	0.986 *	0.000	2.00	5.927	5.84	74.9	0.0	233.1
130.00	1.00	1.34	11.688	12.86	200.92	0.990 *	0.000	2.00	5.840	5.78	74.4	0.0	229.6
132.00	1.00	1.34	11.726	12.90	198.24	0.995 *	0.000	2.00	5.753	5.73	73.9	0.0	226.2
134.00	1.00	1.35	11.763	12.94	195.54	1.000 *	0.000	2.00	5.667	5.67	73.3	0.0	222.8
136.00	1.00	1.35	11.800	12.98	192.82	1.006 *	0.000	2.00	5.580	5.61	72.8	0.0	219.3
138.00	1.00	1.35	11.836	13.02	190.10	1.011 *	0.000	2.00	5.493	5.55	72.3	0.0	215.9
140.00 Appurtenance(s)	1.00	1.36	11.872	13.06	187.36	1.016 *	0.000	2.00	5.406	5.50	71.8	0.0	212.4
142.00	1.00	1.36	11.908	13.10	184.60	0.950	0.000	2.00	5.320	5.05	66.2	0.0	209.0
144.00	1.00	1.37	11.943	13.14	181.84	0.950	0.000	2.00	5.233	4.97	65.3	0.0	205.6
146.00	1.00	1.37	11.978	13.18	179.06	0.950	0.000	2.00	5.146	4.89	64.4	0.0	202.1
148.00	1.00	1.37	12.012	13.21	176.27	0.950	0.000	2.00	5.060	4.81	63.5	0.0	198.7
150.00 Appurtenance(s)	1.00	1.38	12.046	13.25	173.47	0.950	0.000	2.00	4.973	4.72	62.6	0.0	195.2
152.00	1.00	1.38	12.080	13.29	170.66	0.950	0.000	2.00	4.886	4.64	61.7	0.0	191.8
154.00	1.00	1.39	12.113	13.32	167.83	0.950	0.000	2.00	4.800	4.56	60.8	0.0	188.4
154.75 Bot - Section 5	1.00	1.39	12.125	13.34	166.77	0.950	0.000	0.75	1.778	1.69	22.5	0.0	69.7
156.00	1.00	1.39	12.146	13.36	165.00	0.950	0.000	1.25	2.976	2.83	37.8	0.0	185.5
158.00	1.00	1.39	12.178	13.40	162.15	0.950	0.000	2.00	4.691	4.46	59.7	0.0	292.4
159.00 Top - Section 4	1.00	1.40	12.195	13.41	160.73	0.950	0.000	1.00	2.313	2.20	29.5	0.0	144.1
160.00	1.00	1.40	12.211	13.43	161.59	0.950	0.000	1.00	2.291	2.18	29.2	0.0	54.2
162.00	1.00	1.40	12.243	13.47	158.73	0.950	0.000	2.00	4.518	4.29	57.8	0.0	106.8
164.00	1.00	1.40	12.274	13.50	155.85	0.950	0.000	2.00	4.431	4.21	56.8	0.0	104.7
166.00	1.00	1.41	12.306	13.54	152.97	0.950	0.000	2.00	4.344	4.13	55.9	0.0	102.7
167.00 Appurtenance(s)	1.00	1.41	12.321	13.55	151.52	0.950	0.000	1.00	2.140	2.03	27.5	0.0	50.6
168.00	1.00	1.41	12.337	13.57	150.07	0.950	0.000	1.00	2.118	2.01	27.3	0.0	50.0
170.00	1.00	1.42	12.367	13.60	147.17	0.950	0.000	2.00	4.171	3.96	53.9	0.0	98.6
172.00	1.00	1.42	12.398	13.64	144.26	0.950	0.000	2.00	4.084	3.88	52.9	0.0	96.5
174.00	1.00	1.42	12.428	13.67	141.33	0.950	0.000	2.00	3.997	3.80	51.9	0.0	94.4
176.00	1.00	1.43	12.458	13.70	138.40	0.950	0.000	2.00	3.911	3.72	50.9	0.0	92.4
178.00	1.00	1.43	12.488	13.74	135.46	0.950	0.000	2.00	3.824	3.63	49.9	0.0	90.3
180.00	1.00	1.43	12.517	13.77	132.51	0.950	0.000	2.00	3.737	3.55	48.9	0.0	88.2
182.00	1.00	1.44	12.546	13.80	129.55	0.950	0.000	2.00	3.651	3.47	47.9	0.0	86.2
184.00	1.00	1.44	12.575	13.83	126.58	0.950	0.000	2.00	3.564	3.39	46.8	0.0	84.1
186.00	1.00	1.44	12.604	13.86	123.61	0.950	0.000	2.00	3.477	3.30	45.8	0.0	82.0
188.00	1.00	1.45	12.632	13.90	120.62	0.950	0.000	2.00	3.391	3.22	44.8	0.0	80.0
190.00	1.00	1.45	12.661	13.93	117.63	0.950	0.000	2.00	3.304	3.14	43.7	0.0	77.9

Wind Loading - Shaft

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019	
Site Name: Stonington East	Exposure: C		
Height: 196.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 66



192.00	1.00	1.45	12.688	13.96	114.63	0.950	0.000	2.00	3.217	3.06	42.7	0.0	75.8
194.00	1.00	1.46	12.716	13.99	111.62	0.950	0.000	2.00	3.131	2.97	41.6	0.0	73.8
195.00 Appurtenance(s)	1.00	1.46	12.730	14.00	110.11	0.950	0.000	1.00	1.533	1.46	20.4	0.0	36.1
196.00 Appurtenance(s)	1.00	1.46	12.744	14.02	108.60	0.950	0.000	1.00	1.511	1.44	20.1	0.0	35.6
								Totals:	196.00		7,369.5		38,078.0

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

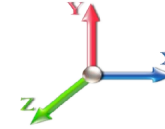
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 29

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor 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	12.744	14.018	1.00	1.00	0.38	6.50	0.000	0.000	5.33	0.00	0.00
2	195.00	Low Profile Platform	1	12.730	14.003	1.00	1.00	22.00	1500.00	0.000	0.000	308.06	0.00	0.00
3	195.00	ACU-A20-N	4	12.730	14.003	0.40	0.80	0.22	4.00	0.000	0.000	3.14	0.00	0.00
4	195.00	800MHz Filter	3	12.730	14.003	0.40	0.80	0.94	26.40	0.000	0.000	13.11	0.00	0.00
5	195.00	800MHz RRH	3	12.730	14.003	0.54	0.80	4.25	178.50	0.000	0.000	59.44	0.00	0.00
6	195.00	TD-RRH8x20-25	3	12.730	14.003	0.54	0.80	6.51	210.00	0.000	0.000	91.19	0.00	0.00
7	195.00	1900MHz RRH	3	12.730	14.003	0.54	0.80	6.11	132.00	0.000	0.000	85.56	0.00	0.00
8	195.00	APXVTM14-C-120	3	12.730	14.003	0.63	0.80	12.02	168.00	0.000	0.000	168.32	0.00	0.00
9	195.00	APXVSP18-C-A20	3	12.730	14.003	0.66	0.80	15.98	171.00	0.000	0.000	223.71	0.00	0.00
10	167.00	HRK12 (Handrail Kit)	1	12.321	13.553	1.00	1.00	6.75	261.72	0.000	0.000	91.49	0.00	0.00
11	167.00	(3) VSR-TS-B	1	12.321	13.553	1.00	1.00	11.43	369.30	0.000	0.000	154.91	0.00	0.00
12	167.00	(3) SFS-H-L (V-Braces)	1	12.321	13.553	1.00	1.00	6.70	230.00	0.000	0.000	90.81	0.00	0.00
13	167.00	PRK-1245 (kicker kit)	1	12.321	13.553	1.00	1.00	9.50	464.91	0.000	0.000	128.76	0.00	0.00
14	167.00	APXVAARR24 43-U-NA2	3	12.321	13.553	0.53	0.75	31.97	384.00	0.000	0.000	433.29	0.00	0.00
15	167.00	Low Profile	1	12.321	13.553	1.00	1.00	22.00	1500.00	0.000	0.000	298.17	0.00	0.00
16	167.00	4449	3	12.321	13.553	0.50	0.75	2.49	210.00	0.000	0.000	33.71	0.00	0.00
17	167.00	AIR 21, 1.3M, B2A B4P	3	12.321	13.553	0.62	0.75	11.32	274.50	0.000	0.000	153.40	0.00	0.00
18	167.00	AIR 21, 1.3M, B4A B2P	3	12.321	13.553	0.62	0.75	11.32	270.90	0.000	0.000	153.40	0.00	0.00
19	167.00	KRY 112 144/1	3	12.321	13.553	0.38	0.75	0.46	33.00	0.000	0.000	6.25	0.00	0.00
20	150.00	Low Profile	1	12.046	13.250	1.00	1.00	22.00	1500.00	0.000	0.000	291.51	0.00	0.00
21	150.00	DC6-48-60-18-8F	2	12.046	13.250	0.75	0.75	2.21	63.60	0.000	0.000	29.22	0.00	0.00
22	150.00	mount pipe	2	12.046	13.250	1.00	1.00	6.62	174.00	0.000	0.000	87.72	0.00	0.00
23	150.00	800 10966	2	12.046	13.250	0.54	0.75	18.75	251.40	0.000	0.000	248.43	0.00	0.00
24	150.00	80010964	1	12.046	13.250	0.53	0.75	5.32	94.80	0.000	0.000	70.56	0.00	0.00
25	150.00	HPA65R-BU4A	3	12.046	13.250	0.64	0.75	9.49	86.10	0.000	0.000	125.69	0.00	0.00
26	150.00	Handrail Kit	1	12.046	13.250	1.00	1.00	6.75	261.72	0.000	0.000	89.44	0.00	0.00
27	150.00	LGP13519	6	12.046	13.250	0.38	0.75	0.77	31.80	0.000	0.000	10.14	0.00	0.00
28	150.00	B2 B66A 8843	3	12.046	13.250	0.50	0.75	2.47	210.00	0.000	0.000	32.76	0.00	0.00
29	150.00	7700.00	3	12.046	13.250	0.59	0.75	3.08	48.00	0.000	0.000	40.75	0.00	0.00
30	150.00	LGP21401	6	12.046	13.250	0.38	0.75	2.90	84.60	0.000	0.000	38.46	0.00	0.00
31	150.00	4449 B5/B12	3	12.046	13.250	0.50	0.75	2.97	213.00	0.000	0.000	39.35	0.00	0.00
32	140.00	LNx-6414DS-A1M	3	11.872	13.059	0.64	0.80	15.53	99.30	0.000	0.000	202.85	0.00	0.00
33	140.00	LNx-8513DS-VTM	2	11.872	13.059	0.66	0.80	10.85	52.60	0.000	0.000	141.69	0.00	0.00
34	140.00	APL866513	2	11.872	13.059	0.74	0.80	6.03	31.40	0.000	0.000	78.70	0.00	0.00
35	140.00	HBXX-6517DS-A2M	6	11.872	13.059	0.66	0.80	34.06	244.80	0.000	0.000	444.84	0.00	0.00
36	140.00	RRH2x60-2100	3	11.872	13.059	0.54	0.80	2.43	58.50	0.000	0.000	31.71	0.00	0.00
37	140.00	RRH2x40 700	3	11.872	13.059	0.54	0.80	3.99	150.00	0.000	0.000	52.08	0.00	0.00
38	140.00	DB-T1-6Z-8AB-0Z	1	11.872	13.059	0.40	0.80	1.92	18.90	0.000	0.000	25.07	0.00	0.00
39	140.00	Low Profile Platform	1	11.872	13.059	0.80	0.80	17.60	1500.00	0.000	0.000	229.85	0.00	0.00
40	30.00	GPS	1	8.584	9.442	1.00	1.00	1.00	10.00	0.000	0.000	9.44	0.00	0.00

Totals: 11,579.25

4,822.31

Total Applied Force Summary

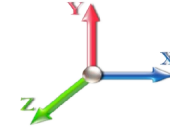
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 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		85.38	742.28	0.00	0.00
4.00		84.71	737.12	0.00	0.00
6.00		84.04	731.96	0.00	0.00
8.00		83.37	726.80	0.00	0.00
10.00		82.69	721.64	0.00	0.00
12.00		82.02	716.48	0.00	0.00
14.00		81.35	711.32	0.00	0.00
16.00		81.67	706.16	0.00	0.00
18.00		83.02	701.00	0.00	0.00
20.00		84.17	695.83	0.00	0.00
22.00		85.15	690.67	0.00	0.00
24.00		85.98	685.51	0.00	0.00
26.00		86.69	680.35	0.00	0.00
28.00		87.28	675.19	0.00	0.00
30.00	(1) attachments	97.22	680.03	0.00	0.00
32.00		88.20	664.87	0.00	0.00
34.00		88.53	659.71	0.00	0.00
35.50		66.47	491.40	0.00	0.00
36.00		22.47	296.07	0.00	0.00
38.00		90.42	1178.06	0.00	0.00
40.00		90.57	1168.09	0.00	0.00
42.00		90.67	1158.11	0.00	0.00
43.00		45.25	575.31	0.00	0.00
44.00		45.26	302.64	0.00	0.00
46.00		90.72	601.67	0.00	0.00
48.00		90.68	596.85	0.00	0.00
50.00		90.60	592.04	0.00	0.00
52.00		90.48	587.22	0.00	0.00
54.00		90.32	582.40	0.00	0.00
56.00		90.13	577.59	0.00	0.00
58.00		89.90	572.77	0.00	0.00
60.00		89.64	567.95	0.00	0.00
62.00		89.36	563.14	0.00	0.00
64.00		89.05	558.32	0.00	0.00
66.00		88.71	553.50	0.00	0.00
68.00		88.34	548.69	0.00	0.00
70.00		87.95	543.87	0.00	0.00
72.00		87.54	539.05	0.00	0.00
74.00		87.11	534.24	0.00	0.00
74.50		21.66	132.81	0.00	0.00
76.00		65.96	682.26	0.00	0.00
78.00		87.60	901.86	0.00	0.00
80.00		87.11	892.91	0.00	0.00
81.00		43.31	443.10	0.00	0.00
82.00		43.18	230.11	0.00	0.00
84.00		86.08	457.13	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00		85.53	453.00	0.00	0.00
88.00		84.97	448.87	0.00	0.00
90.00		84.40	444.74	0.00	0.00
92.00		83.80	440.62	0.00	0.00
94.00		83.19	436.49	0.00	0.00
96.00		82.57	432.36	0.00	0.00
98.00		81.93	428.23	0.00	0.00
100.00		81.28	424.10	0.00	0.00
102.00		80.61	419.97	0.00	0.00
104.00		79.93	415.84	0.00	0.00
106.00		79.24	411.72	0.00	0.00
108.00		78.53	407.59	0.00	0.00
110.00		78.06	403.46	0.00	0.00
112.00		77.63	399.33	0.00	0.00
114.00		77.20	395.20	0.00	0.00
116.00		76.76	391.07	0.00	0.00
118.00		76.31	386.94	0.00	0.00
118.75		28.47	144.04	0.00	0.00
120.00		48.15	392.65	0.00	0.00
122.00		76.73	622.09	0.00	0.00
124.00		76.26	614.52	0.00	0.00
126.00		75.34	328.78	0.00	0.00
128.00		74.86	325.34	0.00	0.00
130.00		74.36	321.90	0.00	0.00
132.00		73.86	318.46	0.00	0.00
134.00		73.34	315.01	0.00	0.00
136.00		72.82	311.57	0.00	0.00
138.00		72.30	308.13	0.00	0.00
140.00	(21) attachments	1278.56	2460.19	0.00	0.00
142.00		66.20	271.89	0.00	0.00
144.00		65.31	268.45	0.00	0.00
146.00		64.41	265.01	0.00	0.00
148.00		63.51	261.57	0.00	0.00
150.00	(33) attachments	1166.62	3277.15	0.00	0.00
152.00		61.68	224.59	0.00	0.00
154.00		60.75	221.15	0.00	0.00
154.75		22.52	82.04	0.00	0.00
156.00		37.77	206.05	0.00	0.00
158.00		59.70	325.21	0.00	0.00
159.00		29.47	160.54	0.00	0.00
160.00		29.24	70.58	0.00	0.00
162.00		57.80	139.61	0.00	0.00
164.00		56.83	137.54	0.00	0.00
166.00		55.86	135.48	0.00	0.00
167.00	(20) attachments	1571.74	4065.30	0.00	0.00
168.00		27.30	52.69	0.00	0.00
170.00		53.90	103.83	0.00	0.00
172.00		52.91	101.77	0.00	0.00
174.00		51.92	99.70	0.00	0.00
176.00		50.91	97.64	0.00	0.00
178.00		49.90	95.57	0.00	0.00
180.00		48.89	93.51	0.00	0.00
182.00		47.86	91.44	0.00	0.00
184.00		46.84	89.38	0.00	0.00
186.00		45.80	87.32	0.00	0.00
188.00		44.76	85.25	0.00	0.00
190.00		43.71	83.19	0.00	0.00

Total Applied Force Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 70



192.00	42.66	81.12	0.00	0.00
194.00	41.60	79.06	0.00	0.00
195.00 (23) attachments	972.93	2428.66	0.00	0.00
196.00 (1) attachments	25.45	42.10	0.00	0.00
Totals:	12,191.80	56,782.68	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

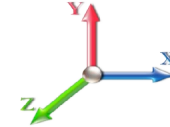
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 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	0.061	0.000	7.428	0.00	24.96
2.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.061	0.000	7.428	0.00	4.40
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	7.428	0.00	24.96
4.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.061	0.000	7.428	0.00	4.40
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	7.428	0.00	24.96
6.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.062	0.000	7.428	0.00	4.40
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	7.428	0.00	24.96
8.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.062	0.000	7.428	0.00	4.40
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	7.428	0.00	24.96
10.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.063	0.000	7.428	0.00	4.40
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	7.428	0.00	24.96
12.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.063	0.000	7.428	0.00	4.40
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	7.428	0.00	24.96
14.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.064	0.000	7.428	0.00	4.40
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	7.520	0.00	24.96
16.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.064	0.000	7.520	0.00	4.40
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	7.709	0.00	24.96
18.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.065	0.000	7.709	0.00	4.40
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	7.882	0.00	24.96
20.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.065	0.000	7.882	0.00	4.40
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	8.041	0.00	24.96
22.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.066	0.000	8.041	0.00	4.40
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	8.190	0.00	24.96
24.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.066	0.000	8.190	0.00	4.40
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	8.329	0.00	24.96
26.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.067	0.000	8.329	0.00	4.40
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	8.460	0.00	24.96
28.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.068	0.000	8.460	0.00	4.40
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	8.584	0.00	24.96
30.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.068	0.000	8.584	0.00	4.40
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.069	0.000	8.701	0.00	24.96
32.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.069	0.000	8.701	0.00	4.40
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.069	0.000	8.813	0.00	24.96
34.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.069	0.000	8.813	0.00	4.40
35.50	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.070	0.000	8.894	0.00	18.72
35.50	1 5/8" Hybrid	Yes	1.50	0.000	4.00	0.50	0.00	0.070	0.000	8.894	0.00	3.30
36.00	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.070	0.000	8.920	0.00	6.24
36.00	1 5/8" Hybrid	Yes	0.50	0.000	4.00	0.17	0.00	0.070	0.000	8.920	0.00	1.10
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	9.022	0.00	24.96
38.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.071	0.000	9.022	0.00	4.40
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	9.120	0.00	24.96
40.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.071	0.000	9.120	0.00	4.40
42.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	9.214	0.00	24.96
42.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.072	0.000	9.214	0.00	4.40
43.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.072	0.000	9.260	0.00	12.48
43.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.33	0.00	0.072	0.000	9.260	0.00	2.20
44.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.072	0.000	9.305	0.00	12.48

Linear Appurtenance Segment Forces (Factored)

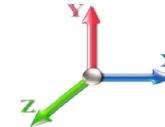
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 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	4.00	0.33	0.00	0.072	0.000	9.305	0.00	2.20
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	9.392	0.00	24.96
46.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.072	0.000	9.392	0.00	4.40
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	9.477	0.00	24.96
48.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.073	0.000	9.477	0.00	4.40
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.074	0.000	9.559	0.00	24.96
50.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.074	0.000	9.559	0.00	4.40
52.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.074	0.000	9.638	0.00	24.96
52.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.074	0.000	9.638	0.00	4.40
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	9.715	0.00	24.96
54.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.075	0.000	9.715	0.00	4.40
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.076	0.000	9.789	0.00	24.96
56.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.076	0.000	9.789	0.00	4.40
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.076	0.000	9.862	0.00	24.96
58.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.076	0.000	9.862	0.00	4.40
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.077	0.000	9.933	0.00	24.96
60.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.077	0.000	9.933	0.00	4.40
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.078	0.000	10.001	0.00	24.96
62.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.078	0.000	10.001	0.00	4.40
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	10.068	0.00	24.96
64.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.079	0.000	10.068	0.00	4.40
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.080	0.000	10.134	0.00	24.96
66.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.080	0.000	10.134	0.00	4.40
68.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.080	0.000	10.198	0.00	24.96
68.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.080	0.000	10.198	0.00	4.40
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	10.260	0.00	24.96
70.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.081	0.000	10.260	0.00	4.40
72.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.082	0.000	10.321	0.00	24.96
72.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.082	0.000	10.321	0.00	4.40
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.083	0.000	10.381	0.00	24.96
74.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.083	0.000	10.381	0.00	4.40
74.50	1 5/8" Coax	Yes	0.50	0.000	0.00	0.00	0.00	0.084	0.000	10.396	0.00	6.24
74.50	1 5/8" Hybrid	Yes	0.50	0.000	4.00	0.17	0.00	0.084	0.000	10.396	0.00	1.10
76.00	1 5/8" Coax	Yes	1.50	0.000	0.00	0.00	0.00	0.084	0.000	10.439	0.00	18.72
76.00	1 5/8" Hybrid	Yes	1.50	0.000	4.00	0.50	0.00	0.084	0.000	10.439	0.00	3.30
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.085	0.000	10.497	0.00	24.96
78.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.085	0.000	10.497	0.00	4.40
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.086	0.000	10.553	0.00	24.96
80.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.086	0.000	10.553	0.00	4.40
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.087	0.000	10.580	0.00	12.48
81.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.33	0.00	0.087	0.000	10.580	0.00	2.20
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.086	0.000	10.608	0.00	12.48
82.00	1 5/8" Hybrid	Yes	1.00	0.000	4.00	0.33	0.00	0.086	0.000	10.608	0.00	2.20
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.086	0.000	10.662	0.00	24.96
84.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.086	0.000	10.662	0.00	4.40
86.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.087	0.000	10.715	0.00	24.96
86.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.087	0.000	10.715	0.00	4.40

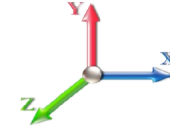
Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
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

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	0.088	0.000	10.767	0.00	24.96
88.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.088	0.000	10.767	0.00	4.40
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.089	0.000	10.818	0.00	24.96
90.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.089	0.000	10.818	0.00	4.40
92.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.090	0.000	10.868	0.00	24.96
92.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.090	0.000	10.868	0.00	4.40
94.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	10.917	0.00	24.96
94.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.091	0.000	10.917	0.00	4.40
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.093	0.000	10.966	0.00	24.96
96.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.093	0.000	10.966	0.00	4.40
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.094	0.000	11.013	0.00	24.96
98.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.094	0.000	11.013	0.00	4.40
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.095	0.000	11.060	0.00	24.96
100.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.095	0.000	11.060	0.00	4.40
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.096	0.000	11.106	0.00	24.96
102.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.096	0.000	11.106	0.00	4.40
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.097	0.000	11.152	0.00	24.96
104.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.097	0.000	11.152	0.00	4.40
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.098	0.000	11.197	0.00	24.96
106.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.098	0.000	11.197	0.00	4.40
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.100	0.000	11.241	0.00	24.96
108.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.100	0.000	11.241	0.00	4.40
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.003	11.284	0.00	24.96
110.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.101	1.003	11.284	0.00	4.40
112.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.102	1.007	11.327	0.00	24.96
112.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.102	1.007	11.327	0.00	4.40
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.011	11.370	0.00	24.96
114.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.104	1.011	11.370	0.00	4.40
116.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.105	1.016	11.411	0.00	24.96
116.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.105	1.016	11.411	0.00	4.40
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.107	1.020	11.452	0.00	24.96
118.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.107	1.020	11.452	0.00	4.40
118.75	1 5/8" Coax	Yes	0.75	0.000	0.00	0.00	0.00	0.108	1.023	11.468	0.00	9.36
118.75	1 5/8" Hybrid	Yes	0.75	0.000	4.00	0.25	0.00	0.108	1.023	11.468	0.00	1.65
120.00	1 5/8" Coax	Yes	1.25	0.000	0.00	0.00	0.00	0.108	1.025	11.493	0.00	15.60
120.00	1 5/8" Hybrid	Yes	1.25	0.000	4.00	0.42	0.00	0.108	1.025	11.493	0.00	2.75
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.110	1.029	11.533	0.00	24.96
122.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.110	1.029	11.533	0.00	4.40
124.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.034	11.573	0.00	24.96
124.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.111	1.034	11.573	0.00	4.40
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.033	11.612	0.00	24.96
126.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.111	1.033	11.612	0.00	4.40
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.112	1.037	11.650	0.00	24.96
128.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.112	1.037	11.650	0.00	4.40
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.114	1.042	11.688	0.00	24.96
130.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.114	1.042	11.688	0.00	4.40
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.116	1.048	11.726	0.00	24.96

Linear Appurtenance Segment Forces (Factored)

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 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	4.00	0.67	0.00	0.116	1.048	11.726	0.00	4.40
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.118	1.053	11.763	0.00	24.96
134.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.118	1.053	11.763	0.00	4.40
136.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.119	1.058	11.800	0.00	24.96
136.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.119	1.058	11.800	0.00	4.40
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	11.836	0.00	24.96
138.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.121	1.064	11.836	0.00	4.40
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.123	1.070	11.872	0.00	24.96
140.00	1 5/8" Hybrid	Yes	2.00	0.000	4.00	0.67	0.00	0.123	1.070	11.872	0.00	4.40
Totals:											0.0	2,055.2

Calculated Forces

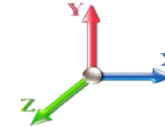
Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 29

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	-56.78	-12.20	0.00	-1492.6	0.00	1492.62	5795.46	1682.91	8909.80	7510.36	0.00	0.000	0.000	0.209
2.00	-56.03	-12.13	0.00	-1468.2	0.00	1468.22	5776.44	1669.60	8769.44	7426.09	0.00	-0.017	0.000	0.207
4.00	-55.29	-12.06	0.00	-1443.9	0.00	1443.97	5757.00	1656.30	8630.20	7341.68	0.01	-0.034	0.000	0.206
6.00	-54.56	-11.99	0.00	-1419.8	0.00	1419.85	5737.14	1642.99	8492.07	7257.12	0.03	-0.052	0.000	0.205
8.00	-53.83	-11.93	0.00	-1395.8	0.00	1395.86	5716.84	1629.68	8355.05	7172.43	0.06	-0.069	0.000	0.204
10.00	-53.10	-11.86	0.00	-1372.0	0.00	1372.01	5696.12	1616.37	8219.15	7087.63	0.09	-0.087	0.000	0.203
12.00	-52.38	-11.79	0.00	-1348.3	0.00	1348.30	5674.97	1603.06	8084.36	7002.73	0.13	-0.104	0.000	0.202
14.00	-51.67	-11.72	0.00	-1324.7	0.00	1324.72	5653.40	1589.76	7950.69	6917.75	0.18	-0.122	0.000	0.201
16.00	-50.96	-11.66	0.00	-1301.2	0.00	1301.27	5631.39	1576.45	7818.13	6832.69	0.23	-0.140	0.000	0.200
18.00	-50.25	-11.59	0.00	-1277.9	0.00	1277.95	5608.96	1563.14	7686.69	6747.57	0.30	-0.158	0.000	0.198
20.00	-49.55	-11.52	0.00	-1254.7	0.00	1254.78	5586.10	1549.83	7556.36	6662.41	0.37	-0.176	0.000	0.197
22.00	-48.86	-11.45	0.00	-1231.7	0.00	1231.74	5562.81	1536.52	7427.15	6577.21	0.44	-0.195	0.000	0.196
24.00	-48.17	-11.37	0.00	-1208.8	0.00	1208.85	5539.10	1523.21	7299.05	6491.99	0.53	-0.213	0.000	0.195
26.00	-47.49	-11.30	0.00	-1186.1	0.00	1186.11	5514.96	1509.91	7172.06	6406.77	0.62	-0.232	0.000	0.194
28.00	-46.81	-11.22	0.00	-1163.5	0.00	1163.51	5490.39	1496.60	7046.19	6321.55	0.72	-0.250	0.000	0.193
30.00	-46.13	-11.14	0.00	-1141.0	0.00	1141.06	5465.39	1483.29	6921.43	6236.35	0.83	-0.269	0.000	0.191
32.00	-45.46	-11.06	0.00	-1118.7	0.00	1118.78	5439.96	1469.98	6797.79	6151.18	0.95	-0.288	0.000	0.190
34.00	-44.80	-10.98	0.00	-1096.6	0.00	1096.66	5414.11	1456.67	6675.26	6066.06	1.08	-0.307	0.000	0.189
35.50	-44.30	-10.92	0.00	-1080.1	0.00	1080.18	5394.44	1446.69	6584.09	6002.26	1.17	-0.322	0.000	0.188
36.00	-44.00	-10.91	0.00	-1074.7	0.00	1074.72	5387.83	1443.36	6553.84	5981.00	1.21	-0.327	0.000	0.188
38.00	-42.82	-10.82	0.00	-1052.9	0.00	1052.91	5361.12	1430.06	6433.54	5896.01	1.35	-0.346	0.000	0.187
40.00	-41.65	-10.74	0.00	-1031.2	0.00	1031.26	5333.99	1416.75	6314.36	5811.11	1.50	-0.366	0.000	0.185
42.00	-40.49	-10.65	0.00	-1009.7	0.00	1009.78	5306.43	1403.44	6196.29	5726.30	1.66	-0.385	0.000	0.184
43.00	-39.92	-10.61	0.00	-999.12	0.00	999.12	4823.70	1326.07	5927.09	5273.35	1.74	-0.395	0.000	0.198
44.00	-39.61	-10.57	0.00	-988.51	0.00	988.51	4812.47	1319.86	5871.70	5236.23	1.82	-0.405	0.000	0.197
46.00	-39.01	-10.49	0.00	-967.36	0.00	967.36	4789.68	1307.44	5761.71	5161.99	2.00	-0.426	0.000	0.196
48.00	-38.41	-10.41	0.00	-946.38	0.00	946.38	4766.46	1295.02	5652.75	5087.77	2.18	-0.446	0.000	0.194
50.00	-37.81	-10.33	0.00	-925.55	0.00	925.55	4742.82	1282.60	5544.84	5013.57	2.37	-0.467	0.000	0.193
52.00	-37.22	-10.25	0.00	-904.89	0.00	904.89	4718.75	1270.18	5437.96	4939.41	2.57	-0.488	0.000	0.191
54.00	-36.64	-10.17	0.00	-884.40	0.00	884.40	4694.25	1257.76	5332.12	4865.31	2.78	-0.508	0.000	0.190
56.00	-36.05	-10.08	0.00	-864.07	0.00	864.07	4669.32	1245.33	5227.33	4791.28	3.00	-0.529	0.000	0.188
58.00	-35.48	-10.00	0.00	-843.90	0.00	843.90	4643.97	1232.91	5123.57	4717.32	3.22	-0.551	0.000	0.187
60.00	-34.91	-9.92	0.00	-823.89	0.00	823.89	4618.19	1220.49	5020.86	4643.46	3.46	-0.572	0.000	0.185
62.00	-34.34	-9.84	0.00	-804.05	0.00	804.05	4591.98	1208.07	4919.18	4569.71	3.70	-0.593	0.000	0.183
64.00	-33.78	-9.76	0.00	-784.38	0.00	784.38	4565.34	1195.65	4818.55	4496.07	3.96	-0.615	0.000	0.182
66.00	-33.23	-9.67	0.00	-764.87	0.00	764.87	4538.28	1183.23	4718.95	4422.57	4.22	-0.637	0.000	0.180
68.00	-32.67	-9.59	0.00	-745.52	0.00	745.52	4510.78	1170.81	4620.40	4349.22	4.49	-0.658	0.000	0.179
70.00	-32.13	-9.51	0.00	-726.34	0.00	726.34	4482.87	1158.39	4522.88	4276.03	4.77	-0.680	0.000	0.177
72.00	-31.59	-9.43	0.00	-707.32	0.00	707.32	4454.52	1145.97	4426.41	4203.01	5.06	-0.702	0.000	0.175
74.00	-31.05	-9.34	0.00	-688.47	0.00	688.47	4425.74	1133.55	4330.97	4130.17	5.36	-0.724	0.000	0.174
74.50	-30.92	-9.32	0.00	-683.80	0.00	683.80	4418.48	1130.44	4307.27	4111.99	5.44	-0.730	0.000	0.173
76.00	-30.23	-9.26	0.00	-669.81	0.00	669.81	4396.54	1121.12	4236.58	4057.54	5.67	-0.747	0.000	0.172
78.00	-29.33	-9.17	0.00	-651.29	0.00	651.29	4366.91	1108.70	4143.22	3985.11	5.99	-0.769	0.000	0.170
80.00	-28.43	-9.08	0.00	-632.95	0.00	632.95	4336.86	1096.28	4050.91	3912.92	6.31	-0.792	0.000	0.168
81.00	-27.99	-9.04	0.00	-623.87	0.00	623.87	3502.12	951.57	3560.67	3204.59	6.48	-0.803	0.000	0.203
82.00	-27.76	-9.00	0.00	-614.83	0.00	614.83	3492.03	946.24	3520.94	3177.33	6.65	-0.815	0.000	0.202
84.00	-27.30	-8.92	0.00	-596.83	0.00	596.83	3471.52	935.60	3442.15	3122.83	7.00	-0.840	0.000	0.199
86.00	-26.84	-8.84	0.00	-579.00	0.00	579.00	3450.59	924.95	3364.26	3068.38	7.36	-0.865	0.000	0.197

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00	-26.39	-8.76	0.00	-561.32	0.00	561.32	3429.23	914.30	3287.26	3013.99	7.72	-0.890	0.000	0.194
90.00	-25.94	-8.68	0.00	-543.80	0.00	543.80	3407.44	903.66	3211.15	2959.67	8.10	-0.916	0.000	0.191
92.00	-25.50	-8.60	0.00	-526.45	0.00	526.45	3385.23	893.01	3135.93	2905.43	8.49	-0.941	0.000	0.189
94.00	-25.06	-8.52	0.00	-509.25	0.00	509.25	3362.58	882.36	3061.60	2851.28	8.89	-0.967	0.000	0.186
96.00	-24.63	-8.44	0.00	-492.21	0.00	492.21	3339.51	871.72	2988.16	2797.25	9.30	-0.992	0.000	0.183
98.00	-24.20	-8.36	0.00	-475.33	0.00	475.33	3316.01	861.07	2915.61	2743.33	9.72	-1.018	0.000	0.181
100.00	-23.77	-8.28	0.00	-458.61	0.00	458.61	3292.09	850.42	2843.96	2689.56	10.15	-1.044	0.000	0.178
102.00	-23.35	-8.21	0.00	-442.04	0.00	442.04	3267.73	839.78	2773.20	2635.93	10.60	-1.070	0.000	0.175
104.00	-22.93	-8.13	0.00	-425.63	0.00	425.63	3242.95	829.13	2703.33	2582.46	11.05	-1.095	0.000	0.172
106.00	-22.52	-8.05	0.00	-409.37	0.00	409.37	3217.75	818.48	2634.35	2529.17	11.52	-1.121	0.000	0.169
108.00	-22.11	-7.97	0.00	-393.27	0.00	393.27	3192.11	807.84	2566.26	2476.07	11.99	-1.147	0.000	0.166
110.00	-21.70	-7.90	0.00	-377.32	0.00	377.32	3166.05	797.19	2499.06	2423.18	12.48	-1.172	0.000	0.163
112.00	-21.30	-7.82	0.00	-361.53	0.00	361.53	3139.56	786.54	2432.76	2370.49	12.97	-1.198	0.000	0.159
114.00	-20.90	-7.75	0.00	-345.88	0.00	345.88	3112.64	775.90	2367.34	2318.04	13.48	-1.224	0.000	0.156
116.00	-20.51	-7.67	0.00	-330.39	0.00	330.39	3085.29	765.25	2302.82	2265.83	14.00	-1.249	0.000	0.153
118.00	-20.12	-7.59	0.00	-315.05	0.00	315.05	3057.52	754.60	2239.19	2213.87	14.53	-1.274	0.000	0.149
118.75	-19.98	-7.56	0.00	-309.36	0.00	309.36	3046.99	750.61	2215.56	2194.45	14.73	-1.284	0.000	0.148
120.00	-19.58	-7.51	0.00	-299.91	0.00	299.91	3029.32	743.96	2176.45	2162.18	15.07	-1.300	0.000	0.145
122.00	-18.96	-7.43	0.00	-284.88	0.00	284.88	3000.69	733.31	2114.60	2110.77	15.62	-1.325	0.000	0.141
124.00	-18.34	-7.35	0.00	-270.02	0.00	270.02	2938.57	718.48	2052.57	2059.36	16.18	-1.349	0.000	0.137
126.00	-18.01	-7.27	0.00	-255.32	0.00	255.32	2876.45	703.65	1990.45	2008.05	16.75	-1.374	0.000	0.133
128.00	-17.69	-7.20	0.00	-240.77	0.00	240.77	2814.33	688.82	1928.33	1956.74	17.33	-1.401	0.000	0.129
130.00	-17.36	-7.12	0.00	-226.38	0.00	226.38	2752.21	673.99	1866.21	1905.43	17.92	-1.428	0.000	0.125
132.00	-17.04	-7.05	0.00	-212.13	0.00	212.13	2690.09	659.16	1804.09	1854.12	18.53	-1.454	0.000	0.121
134.00	-16.73	-6.98	0.00	-198.03	0.00	198.03	2627.97	644.33	1741.97	1802.81	19.14	-1.480	0.000	0.117
136.00	-16.42	-6.90	0.00	-184.07	0.00	184.07	2565.85	629.50	1679.85	1751.50	19.77	-1.505	0.000	0.113
138.00	-16.11	-6.83	0.00	-170.27	0.00	170.27	2503.73	614.67	1617.73	1700.19	20.40	-1.530	0.000	0.109
140.00	-13.68	-5.49	0.00	-156.61	0.00	156.61	2441.61	599.84	1555.61	1648.88	21.05	-1.553	0.000	0.105
142.00	-13.41	-5.42	0.00	-145.63	0.00	145.63	2379.49	585.01	1493.49	1597.57	21.70	-1.576	0.000	0.101
144.00	-13.14	-5.35	0.00	-134.78	0.00	134.78	2317.37	570.18	1431.37	1546.26	22.37	-1.599	0.000	0.097
146.00	-12.87	-5.29	0.00	-124.07	0.00	124.07	2255.25	555.35	1369.25	1494.95	23.04	-1.620	0.000	0.093
148.00	-12.61	-5.22	0.00	-113.50	0.00	113.50	2193.13	540.52	1307.13	1443.64	23.73	-1.641	0.000	0.089
150.00	-9.37	-3.96	0.00	-103.05	0.00	103.05	2131.01	525.69	1245.01	1392.33	24.42	-1.662	0.000	0.085
152.00	-9.14	-3.90	0.00	-95.13	0.00	95.13	2068.89	510.86	1182.89	1341.02	25.12	-1.681	0.000	0.081
154.00	-8.92	-3.83	0.00	-87.33	0.00	87.33	2006.77	496.03	1120.77	1289.71	25.83	-1.700	0.000	0.077
154.75	-8.84	-3.81	0.00	-84.45	0.00	84.45	1996.38	477.95	1077.95	1251.78	26.10	-1.707	0.000	0.081
156.00	-8.64	-3.77	0.00	-79.69	0.00	79.69	1980.33	472.40	1053.09	1235.98	26.54	-1.719	0.000	0.078
158.00	-8.31	-3.70	0.00	-72.15	0.00	72.15	1946.84	463.53	1013.90	1207.68	27.27	-1.736	0.000	0.074
159.00	-8.15	-3.67	0.00	-68.45	0.00	68.45	1942.51	463.53	1013.90	1207.68	27.63	-1.745	0.000	0.143
160.00	-8.08	-3.64	0.00	-64.78	0.00	64.78	1939.15	463.53	1013.90	1207.68	28.00	-1.753	0.000	0.138
162.00	-7.94	-3.58	0.00	-57.51	0.00	57.51	1932.13	458.36	1008.73	1202.51	28.74	-1.778	0.000	0.126
164.00	-7.81	-3.52	0.00	-50.34	0.00	50.34	1924.68	453.19	1003.56	1197.34	29.49	-1.801	0.000	0.114
166.00	-7.67	-3.46	0.00	-43.30	0.00	43.30	1916.80	448.02	998.39	1192.17	30.25	-1.823	0.000	0.102
167.00	-3.66	-1.76	0.00	-39.84	0.00	39.84	1912.70	442.85	993.22	1187.00	30.63	-1.833	0.000	0.091
168.00	-3.61	-1.74	0.00	-38.07	0.00	38.07	1908.49	437.68	988.05	1181.83	31.02	-1.843	0.000	0.089
170.00	-3.50	-1.68	0.00	-34.60	0.00	34.60	1899.76	432.51	982.88	1176.66	31.79	-1.862	0.000	0.083
172.00	-3.40	-1.63	0.00	-31.24	0.00	31.24	1890.60	427.34	977.71	1171.49	32.58	-1.880	0.000	0.078
174.00	-3.30	-1.57	0.00	-27.99	0.00	27.99	1881.01	422.17	972.54	1166.32	33.37	-1.897	0.000	0.072
176.00	-3.21	-1.52	0.00	-24.84	0.00	24.84	1870.99	417.00	967.37	1161.15	34.17	-1.914	0.000	0.067
178.00	-3.11	-1.47	0.00	-21.81	0.00	21.81	1860.55	411.83	962.20	1155.98	34.97	-1.930	0.000	0.061
180.00	-3.02	-1.41	0.00	-18.88	0.00	18.88	1849.68	406.66	957.03	1150.81	35.78	-1.944	0.000	0.055
182.00	-2.93	-1.36	0.00	-16.05	0.00	16.05	1838.38	401.49	951.86	1145.64	36.60	-1.958	0.000	0.049
184.00	-2.84	-1.32	0.00	-13.32	0.00	13.32	1826.65	396.32	946.69	1140.47	37.42	-1.970	0.000	0.043
186.00	-2.76	-1.27	0.00	-10.69	0.00	10.69	1814.50	391.15	941.52	1135.30	38.25	-1.981	0.000	0.036
188.00	-2.67	-1.22	0.00	-8.15	0.00	8.15	1801.91	385.98	936.35	1130.13	39.08	-1.990	0.000	0.029
190.00	-2.59	-1.17	0.00	-5.71	0.00	5.71	1788.90	380.81	931.18	1124.96	39.92	-1.997	0.000	0.022
192.00	-2.51	-1.13	0.00	-3.37	0.00	3.37	1775.47	375.64	926.01	1119.79	40.75	-2.002	0.000	0.015

Calculated Forces

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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194.00	-2.43	-1.08	0.00	-1.11	0.00	1.11	761.60	187.60	276.78	274.17	41.59	-2.005	0.000	0.007
195.00	-0.04	-0.03	0.00	-0.03	0.00	0.03	754.51	184.94	268.98	267.73	42.01	-2.005	0.000	0.000
196.00	0.00	-0.03	0.00	0.00	0.00	0.00	747.31	182.27	261.30	261.31	42.43	-2.005	0.000	0.000

Final Analysis Summary

Structure: CT00595-S-SBA	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Reactions

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 + 1.0W 128 mph Wind	55.5	0.00	68.10	0.00	0.00	6831.77
0.9D + 1.0W 128 mph Wind	55.5	0.00	51.06	0.00	0.00	6749.99
1.2D + 1.0Di + 1.0Wi 50 mph Wind	11.3	0.00	92.19	0.00	0.00	1445.89
1.2D + 1.0Ev + 1.0Eh	3.6	0.00	68.14	0.00	0.00	374.18
0.9D + 1.0Ev + 1.0Eh	3.6	0.00	51.10	0.00	0.00	369.58
1.0D + 1.0W 60 mph Wind	12.2	0.00	56.78	0.00	0.00	1492.62

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 + 1.0W 128 mph Wind	-68.10	-55.53	0.00	-6831.7	0.00	-6831.7	5795.46	1682.9	8909.80	7510.36	0.00	0.922
0.9D + 1.0W 128 mph Wind	-51.06	-55.52	0.00	-6749.9	0.00	-6749.9	5795.46	1682.9	8909.80	7510.36	0.00	0.909
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-92.19	-11.34	0.00	-1445.8	0.00	-1445.8	5795.46	1682.9	8909.80	7510.36	0.00	0.208
1.2D + 1.0Ev + 1.0Eh	-9.90	-1.36	0.00	-34.19	0.00	-34.19	942.51	280.76	619.93	509.56	159.00	0.078
0.9D + 1.0Ev + 1.0Eh	-7.42	-1.34	0.00	-33.71	0.00	-33.71	942.51	280.76	619.93	509.56	159.00	0.074
1.0D + 1.0W 60 mph Wind	-56.78	-12.20	0.00	-1492.6	0.00	-1492.6	5795.46	1682.9	8909.80	7510.36	0.00	0.209

Base Plate Summary

Structure: CT00595-S-SB	Code: EIA/TIA-222-H	12/6/2019
Site Name: Stonington East	Exposure: C	
Height: 196.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
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Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 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): 6831.77	Effective Len (in): 13.07	Ultimate (ksi): 100.00
Axial (kip): 92.19	Moment (kip-in): 839.34	Arrangement: Radial
Shear (kip): 55.53	Allow Stress (ksi): 81.00	Cluster Dist (in): 0.00
	Applied Stress (ksi): 0.00	Start Angle (deg): 0.00
Moment Design %: 118.44	Stress Ratio: 0.76	Compression
		Force (kip): 191.63
		Allowable (kip): 243.75
		Ratio: 0.79
		Tension
		Force (kip): 183.95
		Allowable (kip): 243.75
		Ratio: 0.75



Monopole Mat Foundation Design

Date

12/6/2019

Customer Name:	AT&T	EIA/TIA Standard:	EIA-222-H
Site Name:		Structure Height (Ft.):	196
Site Number:	CT00595-S-SBA	Engineer Name:	J. Tibbetts
Engr. Number:	90281	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Monopole

Analysis or Design?

Analysis

Base Reactions (Factored):

Axial Load (Kips):	92.2	Shear Force (Kips):	55.5
Uplift Force (Kips):	0.0	Moment (Kips-ft):	6831.8

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
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Material Properties and Reabr 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
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Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	32	Qty. of Rebar in Pad (W):	32
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Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

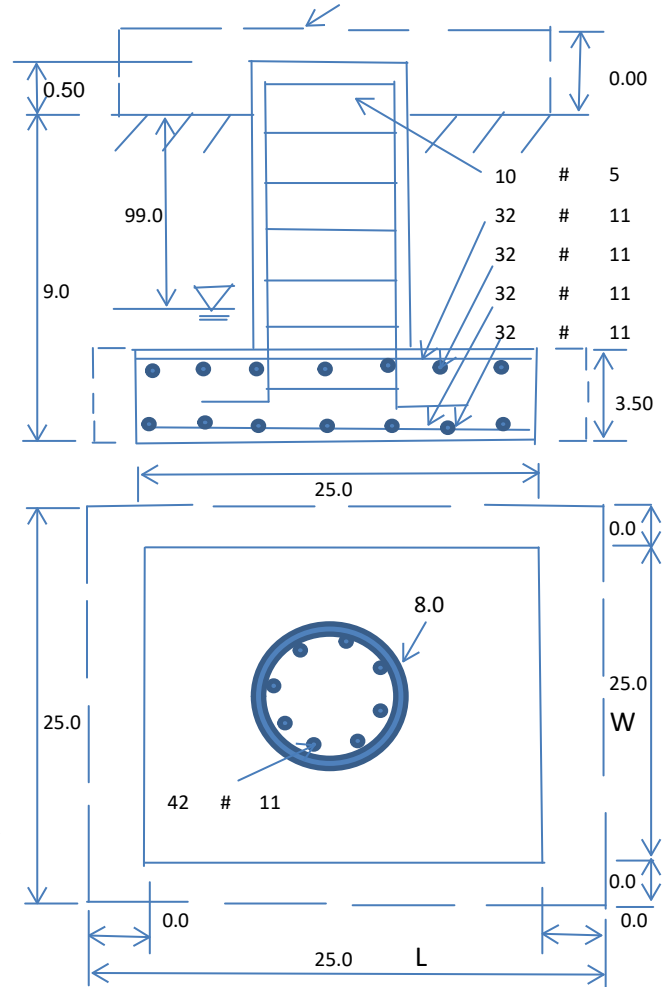
Soil Unit Weight (pcf):	110.0	Soil Buoyant Weight:	50.0	Pcf	
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad: 30
Ultimate Bearing Pressure (psf):	16000	Ultimate Skin Friction:		Psf	Angle from Bottm of Pad: 25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad: 25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00		

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	3161.04	Total Dry Soil Weight (Kips):	347.71
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	347.71	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):	813.28

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	5562	<	Allowable Factored Soil Bearing (psf):	12000	0.46	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	9264.6	>	Design Factored Momont (kips-ft):	7359	0.79	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.26					OK!



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

(1) Concrete Pier:

				Load/ Capacity Ratio	
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-F	7164.8	0.58	OK!
Calculated Shear Capacity (Kips):	924.8	> Design Factored Shear (Kips):	55.5	0.06	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):	92.2	0.01	OK!
Moment & Axial Strength Combination:	0.58	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):	396.5	0.36	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1090.4	> One-Way Factored Shear (W-D., Kips)	396.5	0.36	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	914.6	> One-Way Factored Shear (C-C, Kips):	389.3	0.43	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-Dir. K-Ft):	2145.4	0.26	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	8276.7	> Moment at Bottom (W-Dir. K-Ft):	2145.4	0.26	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	11568.6	> Moment at Bottom (C-C Dir. K-Ft):	3034.1	0.26	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0043	OK! Upper Steel Reinf. Ratio (W-Dir.):	0.0043		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	8276.7	> Moment at the top (L-Dir K-Ft):	972.7	0.12	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	8276.7	> Moment at the top (W-Dir K-Ft):	972.7	0.12	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	11568.6	> Moment at the top (C-C Dir. K-Ft):	918.7	0.08	OK!

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:	2732.7	k-ft.	Max. factored shear stress v_{u_CD} :	4.1	Psi
Max. factored shear stress v_{u_AB} :	13.0	Psi	Factored shear Strength ϕv_n :	189.7	Psi
Max. factored shear stress v_u :	13.0	Psi	Check Usage of Punching Shear Capacity:	0.07	OK!

EXHIBIT 4

November 13, 2019



Centerline Communications
750 West Center Street, Suite #301
West Bridgewater, MA 02379

RE: Site Number: CT5231 (LTE 2C/3C/4C/5C)
 FA Number: 10092210
 PACE Number: MRCTB033551
 PT Number: 2051A0JDBY
 Site Name: STONINGTON EAST
 Site Address: 86 Voluntown Road
 Pawcatuck, CT 06379

To Whom It May Concern:

Hudson Design Group LLC (HDG) has been authorized by Centerline Communications to perform a mount analysis on the existing AT&T antenna/RRH mounts to determine their capability of supporting the following additional loading:

- (3) 7770 Antennas (55.0"x11.0"x5.0" - Wt. = 35 lbs. /each)
- (6) LGP21401 TMA's (14.4"x9.0"x2.7" - Wt. = 19 lbs. /each)
- (1) Squid Surge Arrestor (24.0"x9.7" Φ - Wt. = 33 lbs.)
- **(2) 800-10966 Antennas (96.0"x20.0"x6.9" - Wt. = 115 lbs. /each)**
- **(1) 800-10964 Antennas (59.0"x20.0"x6.9" - Wt. = 95 lbs.)**
- **(3) HPA65R-BU4A Antennas (48.0"x11.7"x7.6" - Wt. = 29 lbs. /each)**
- **(3) B5/B12 4449 RRH's (14.9"x13.2"x10.4" - Wt. = 73 lbs. /each)**
- **(3) B2/B66A 8843 RRH's (14.9"x13.2"x10.9" - Wt. = 72 lbs. /each)**
- **(1) Squid Surge Arrestor (24.0"x9.7" Φ - Wt. = 33 lbs.)**

**Proposed equipment shown in bold*

No original structural design documents or fabrication drawings were available for the existing mounts. HDG's subconsultant, ProVertic LLC, conducted a survey climb and mapping of the existing AT&T antenna mounts on September 16, 2019.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2015 with 2018 Connecticut State Building Code, and AT&T Mount Technical Directive – R13.
- HDG considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-H and Appendix N of the Connecticut State Building Code, the max basic wind speed for this site is equal to 140 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.0 in. An escalated ice thickness of 1.17 in was used for this analysis.
- HDG considers this site to be exposure category C; tower is located near large, flat, open, terrain/grasslands.
- HDG considers this site to be topographic category 1; tower is located on flat terrain or the bottom of a hill or ridge.
- The mount has been analyzed with load combinations consisting of 250 lbs live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 3.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.
- The existing mount is secured to the existing monopole with ring mount with thru bolts. The connection is considered OK by visual inspection.

Based on our evaluation, we have determined that the existing mounts **ARE NOT CAPABLE** of supporting the proposed installation. HDG recommends the following modifications:

- **Install new 2-1/2" std. (2.88" O.D.) pipe mast behind new 800-10966 Antennas secured to existing platform (total of 2).**
- **Install new handrail kit, SitePro1 P/N HRK14 (or approved equal). Handrail kit is required per AT&T Technical Directive to stabilize existing cantilevered antennas.**

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Existing (LTE 2C/3C/4C/5C) Mount Rating	52	LC1	107%	FAIL
Modified (LTE 2C/3C/4C/5C) Mount Rating	52	LC1	58%	PASS

Reference Documents:

- Mount mapping report prepared by ProVertic LLC.

This determination was based on the following limitations and assumptions:

1. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
2. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing mount has been adequately secured to the tower structure per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mounts must be tightened and re-plumbed prior to the installation of new appurtenances.
6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted,
Hudson Design Group LLC



Michael Cabral
Vice President



Daniel P. Hamm, PE
Principal

FIELD PHOTOS:







HUDSON
Design Group LLC

**Wind & Ice
Calculations**

Date: 11/13/2019
 Project Name: STONINGTON EAST
 Project No.: CT5231
 Designed By: RL Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

$K_z = 2.01 (z/z_g)^{2/\alpha}$
 $K_z =$ **1.382**
 $z =$ 152 (ft)
 $z_g =$ 900 (ft)
 $\alpha =$ 9.5

$K_{zmin} \leq K_z \leq 2.01$

Table 2-4

Exposure	Z_g	α	K_{zmin}	K_c
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.2 Topographic Factor:

Table 2-5

Topo. Category	K_t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$K_{zt} = [1 + (K_c K_t / K_h)]^2$

$K_h = e^{(f*z/H)}$

$K_{zt} =$ **#DIV/0!**

$K_h =$ **#DIV/0!**

(If Category 1 then $K_{zt} = 1.0$)

$K_c =$ 1.0 (from Table 2-4)

$K_t =$ 0 (from Table 2-5)

f = 0 (from Table 2-5)

z = 152

$z_s =$ 50 (Mean elevation of base of structure above sea level)

H = 0 (Ht. of the crest above surrounding terrain)

$K_{zt} =$ 1.00 (from 2.6.6.2.1)

$K_e =$ 1.00 (from 2.6.8)

Category = **1**

2.6.10 Design Ice Thickness

Max Ice Thickness =

$t_i =$ 1.00 in

Importance Factor =

I = 1.0 (from Table 2-3)

$K_{iz} =$ 1.17 (from Sec. 2.6.10)

$t_{iz} = t_i * I * K_{iz} * (K_{zt})^{0.35}$

$t_{iz} =$ 1.17 in

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2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

$G_h = 1.0$ Latticed Structures > 600 ft

$G_h = 0.85$ Latticed Structures 450 ft or less

$G_h = 0.85 + 0.15 [h/150 - 3.0]$ $h =$ ht. of structure

$h = 199$ $G_h = 0.85$

2.6.9.2 Guyed Masts

$G_h = 0.85$

2.6.9.3 Pole Structures

$G_h = 1.1$

2.6.9 Appurtenances

$G_h = 1.0$

2.6.9.4 Structures Supported on Other Structures

(Cantilevered tubular or latticed spines, pole, structures on buildings (ht. : width ratio > 5)

$G_h = 1.35$ $G_h = 1.00$

2.6.11.2 Design Wind Force on Appurtenances

$F = q_z * G_h * (EPA)_A$

$q_z = 0.00256 * K_z * K_{zt} * K_s * K_e * K_d * V_{max}^2$

- $K_z = 1.382$ (from 2.6.5.2)
- $K_{zt} = 1.0$ (from 2.6.6.2.1)
- $K_s = 1.0$ (from 2.6.7)
- $K_e = 1.00$ (from 2.6.8)
- $K_d = 0.95$ (from Table 2-2)
- $V_{max} = 140$ mph (Ultimate Wind Speed)
- $V_{max (ice)} = 50$ mph
- $V_{30} = 30$ mph

$q_z = 65.77$
 $q_z (ice) = 8.39$
 $q_z (30) = 3.02$

Table 2-2

Structure Type	Wind Direction Probability Factor, Kd
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95
Tubular pole structures supporting antennas enclosed within a cylindrical shroud	1.00

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Determine Ca:

Table 2-9

Force Coefficients (Ca) for Appurtenances				
Member Type		Aspect Ratio ≤ 2.5	Aspect Ratio = 7	Aspect Ratio ≥ 25
		Ca	Ca	Ca
Flat		1.2	1.4	2.0
Square/Rectangular HSS		$1.2 - 2.8(r_s) \geq 0.85$	$1.4 - 4.0(r_s) \geq 0.90$	$2.0 - 6.0(r_s) \geq 1.25$
Round	C < 39 (Subcritical)	0.7	0.8	1.2
	39 ≤ C ≤ 78 (Transitional)	$4.14/(C^{0.485})$	$3.66/(C^{0.415})$	$46.8/(C^{1.0})$
	C > 78 (Supercritical)	0.5	0.6	0.6

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
 (Aspect ratio is independent of the spacing between support points of a linear appurtenance.)

Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = **1.17 in** Angle = **0 (deg)** Equivalent Angle = **180 (deg)**

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)	Force (lbs) (30 mph)
7770 Antenna	55.0	11.0	5.0	4.20	5.00	1.31	362	58	17
800-10966 Antenna	96.0	20.0	6.9	13.33	4.80	1.30	1142	167	52
800-10964 Antenna	59.0	20.0	6.9	8.19	2.95	1.22	658	97	30
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	4.10	1.27	326	52	15
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.13	1.20	108	19	5
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.20	108	19	5
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	0.00	1.20	0	3	0
LGP21401 TMA	14.4	2.7	9.0	0.27	5.33	1.33	24	7	1
Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	74	13	3
2" Pipe	2.4	12.0		0.20	0.20	1.20	16	5	1
3x3 Angle	3.0	12.0		0.25	0.25	2.00	33	9	2
2x2 Angle	2.0	12.0		0.17	0.17	2.00	22	7	1
HSS 4x4	4.0	12.0		0.33	0.33	1.25	27	7	1

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WIND LOADS

Angle = **30** (deg) Ice Thickness = **1.17** in. Equivalent Angle = **210** (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	362	193	320
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	1142	493	980
800-10964 Antenna	59.0	20.0	6.9	8.19	2.83	2.95	8.55	1.22	1.45	658	270	561
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	2.53	4.10	6.32	1.27	1.37	326	228	302
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	108	85	102
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	108	89	103
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	54	89	63
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	24	71	35

WIND LOADS WITH ICE:

7770 Antenna	57.3	13.3	7.3	5.31	2.92	4.30	7.82	1.28	1.43	57	35	51
800-10966 Antenna	98.3	22.3	9.2	15.25	6.30	4.40	10.65	1.28	1.52	164	80	143
800-10964 Antenna	61.3	22.3	9.2	9.51	3.93	2.75	6.64	1.21	1.38	97	46	84
HPA65R-BU4A Antennas	50.3	14.0	9.9	4.90	3.47	3.59	5.07	1.25	1.31	51	38	48
B5/B12 4449 RRH	17.2	15.5	12.7	1.86	1.52	1.11	1.35	1.20	1.20	19	15	18
B2/B66A 8843 RRH	17.2	15.5	13.2	1.86	1.58	1.11	1.30	1.20	1.20	19	16	18
B2/B66A 8843 RRH (Shielded)	17.2	7.8	13.2	0.93	1.58	2.22	1.30	1.20	1.20	9	16	11
LGP21401 TMA	16.7	5.0	11.3	0.58	1.32	3.33	1.48	1.24	1.20	6	13	8

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	17	9	15
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	52	23	45
800-10964 Antenna	59.0	20.0	6.9	8.19	2.83	2.95	8.55	1.22	1.45	30	12	26
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	2.53	4.10	6.32	1.27	1.37	15	10	14
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	5	4	5
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	5
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	2	4	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	2

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WIND LOADS

Angle = 60 (deg) Ice Thickness = 1.17 in. Equivalent Angle = 240 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	362	193	235
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	1142	493	655
800-10964 Antenna	59.0	20.0	6.9	8.19	2.83	2.95	8.55	1.22	1.45	658	270	367
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	2.53	4.10	6.32	1.27	1.37	326	228	253
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	108	85	91
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	108	89	94
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	81	89	87
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	24	71	59

WIND LOADS WITH ICE:

7770 Antenna	57.3	13.3	7.3	5.31	2.92	4.30	7.82	1.28	1.43	57	35	40
800-10966 Antenna	98.3	22.3	9.2	15.25	6.30	4.40	10.65	1.28	1.52	164	80	101
800-10964 Antenna	61.3	22.3	9.2	9.51	3.93	2.75	6.64	1.21	1.38	97	46	58
HPA65R-BU4A Antennas	50.3	14.0	9.9	4.90	3.47	3.59	5.07	1.25	1.31	51	38	42
B5/B12 4449 RRH	17.2	15.5	12.7	1.86	1.52	1.11	1.35	1.20	1.20	19	15	16
B2/B66A 8843 RRH	17.2	15.5	13.2	1.86	1.58	1.11	1.30	1.20	1.20	19	16	17
B2/B66A 8843 RRH (Shielded)	17.2	11.6	13.2	1.39	1.58	1.48	1.30	1.20	1.20	14	16	15
LGP21401 TMA	16.7	5.0	11.3	0.58	1.32	3.33	1.48	1.24	1.20	6	13	11

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	17	9	11
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	52	23	30
800-10964 Antenna	59.0	20.0	6.9	8.19	2.83	2.95	8.55	1.22	1.45	30	12	17
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	2.53	4.10	6.32	1.27	1.37	15	10	12
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	5	4	4
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	4
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	4	4	4
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	3

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WIND LOADS

Angle = **90** (deg) Ice Thickness = **1.17** in. Equivalent Angle = **270** (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	362	193	193
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	1142	493	493
800-10964 Antenna	59.0	20.0	6.9	8.19	2.83	2.95	8.55	1.22	1.45	658	270	270
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	2.53	4.10	6.32	1.27	1.37	326	228	228
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	108	85	85
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	108	89	89
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	1.13	0.00	1.37	1.20	1.20	0	89	89
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	24	71	71

WIND LOADS WITH ICE:

7770 Antenna	57.3	13.3	7.3	5.31	2.92	4.30	7.82	1.28	1.43	57	35	35
800-10966 Antenna	98.3	22.3	9.2	15.25	6.30	4.40	10.65	1.28	1.52	164	80	80
800-10964 Antenna	61.3	22.3	9.2	9.51	3.93	2.75	6.64	1.21	1.38	97	46	46
HPA65R-BU4A Antennas	50.3	14.0	9.9	4.90	3.47	3.59	5.07	1.25	1.31	51	38	38
B5/B12 4449 RRH	17.2	15.5	12.7	1.86	1.52	1.11	1.35	1.20	1.20	19	15	15
B2/B66A 8843 RRH	17.2	15.5	13.2	1.86	1.58	1.11	1.30	1.20	1.20	19	16	16
B2/B66A 8843 RRH (Shielded)	17.2	2.3	13.2	0.28	1.58	7.39	1.30	1.41	1.20	3	16	16
LGP21401 TMA	16.7	5.0	11.3	0.58	1.32	3.33	1.48	1.24	1.20	6	13	13

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	17	9	9
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	52	23	23
800-10964 Antenna	59.0	20.0	6.9	8.19	2.83	2.95	8.55	1.22	1.45	30	12	12
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	2.53	4.10	6.32	1.27	1.37	15	10	10
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	5	4	4
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	4
B2/B66A 8843 RRH (Shielded)	14.9	0.0	10.9	0.00	1.13	0.00	1.37	1.20	1.20	0	4	4
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	3

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WIND LOADS

Angle = 120 (deg) Ice Thickness = 1.17 in. Equivalent Angle = 300 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	362	193	235
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	1142	493	655
800-10964 Antenna	59.0	20.0	6.9	8.19	2.83	2.95	8.55	1.22	1.45	658	270	367
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	2.53	4.10	6.32	1.27	1.37	326	228	253
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	108	85	91
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	108	89	94
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	81	89	87
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	24	71	59

WIND LOADS WITH ICE:

7770 Antenna	57.3	13.3	7.3	5.31	2.92	4.30	7.82	1.28	1.43	57	35	40
800-10966 Antenna	98.3	22.3	9.2	15.25	6.30	4.40	10.65	1.28	1.52	164	80	101
800-10964 Antenna	61.3	22.3	9.2	9.51	3.93	2.75	6.64	1.21	1.38	97	46	58
HPA65R-BU4A Antennas	50.3	14.0	9.9	4.90	3.47	3.59	5.07	1.25	1.31	51	38	42
B5/B12 4449 RRH	17.2	15.5	12.7	1.86	1.52	1.11	1.35	1.20	1.20	19	15	16
B2/B66A 8843 RRH	17.2	15.5	13.2	1.86	1.58	1.11	1.30	1.20	1.20	19	16	17
B2/B66A 8843 RRH (Shielded)	17.2	11.6	13.2	1.39	1.58	1.48	1.30	1.20	1.20	14	16	15
LGP21401 TMA	16.7	5.0	11.3	0.58	1.32	3.33	1.48	1.24	1.20	6	13	11

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	17	9	11
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	52	23	30
800-10964 Antenna	59.0	20.0	6.9	8.19	2.83	2.95	8.55	1.22	1.45	30	12	17
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	2.53	4.10	6.32	1.27	1.37	15	10	12
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	5	4	4
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	4
B2/B66A 8843 RRH (Shielded)	14.9	9.9	10.9	1.02	1.13	1.51	1.37	1.20	1.20	4	4	4
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	3

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WIND LOADS

Angle = 150 (deg) Ice Thickness = 1.17 in. Equivalent Angle = 330 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	362	193	320
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	1142	493	980
800-10964 Antenna	59.0	20.0	6.9	8.19	2.83	2.95	8.55	1.22	1.45	658	270	561
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	2.53	4.10	6.32	1.27	1.37	326	228	302
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	108	85	102
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	108	89	103
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	54	89	63
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	24	71	35

WIND LOADS WITH ICE:

7770 Antenna	57.3	13.3	7.3	5.31	2.92	4.30	7.82	1.28	1.43	57	35	51
800-10966 Antenna	98.3	22.3	9.2	15.25	6.30	4.40	10.65	1.28	1.52	164	80	143
800-10964 Antenna	61.3	22.3	9.2	9.51	3.93	2.75	6.64	1.21	1.38	97	46	84
HPA65R-BU4A Antennas	50.3	14.0	9.9	4.90	3.47	3.59	5.07	1.25	1.31	51	38	48
B5/B12 4449 RRH	17.2	15.5	12.7	1.86	1.52	1.11	1.35	1.20	1.20	19	15	18
B2/B66A 8843 RRH	17.2	15.5	13.2	1.86	1.58	1.11	1.30	1.20	1.20	19	16	18
B2/B66A 8843 RRH (Shielded)	17.2	7.8	13.2	0.93	1.58	2.22	1.30	1.20	1.20	9	16	11
LGP21401 TMA	16.7	5.0	11.3	0.58	1.32	3.33	1.48	1.24	1.20	6	13	8

WIND LOADS AT 30 MPH:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	17	9	15
800-10966 Antenna	96.0	20.0	6.9	13.33	4.60	4.80	13.91	1.30	1.63	52	23	45
800-10964 Antenna	59.0	20.0	6.9	8.19	2.83	2.95	8.55	1.22	1.45	30	12	26
HPA65R-BU4A Antennas	48.0	11.7	7.6	3.90	2.53	4.10	6.32	1.27	1.37	15	10	14
B5/B12 4449 RRH	14.9	13.2	10.4	1.37	1.08	1.13	1.43	1.20	1.20	5	4	5
B2/B66A 8843 RRH	14.9	13.2	10.9	1.37	1.13	1.13	1.37	1.20	1.20	5	4	5
B2/B66A 8843 RRH (Shielded)	14.9	6.6	10.9	0.68	1.13	2.26	1.37	1.20	1.20	2	4	3
LGP21401 TMA	14.4	2.7	9.0	0.27	0.90	5.33	1.60	1.33	1.20	1	3	2

Date: 11/13/2019

Project Name: STONINGTON EAST

Project No.: CT5231

Designed By: RL Checked By: MSC



HUDSON
Design Group LLC

ICE WEIGHT CALCULATIONS

Thickness of ice: 1.17 in.
Density of ice: 56 pcf

7770 Antenna

Weight of ice based on total radial SF area:
Height (in): 55.0
Width (in): 11.0
Depth (in): 5.0
Total weight of ice on object: 87 lbs
Weight of object: 35.0 lbs
Combined weight of ice and object: 122 lbs

800-10966 Antenna

Weight of ice based on total radial SF area:
Height (in): 96.0
Width (in): 20.0
Depth (in): 6.9
Total weight of ice on object: 255 lbs
Weight of object: 115.0 lbs
Combined weight of ice and object: 370 lbs

800-10964 Antenna

Weight of ice based on total radial SF area:
Height (in): 59.0
Width (in): 20.0
Depth (in): 6.9
Total weight of ice on object: 157 lbs
Weight of object: 84.0 lbs
Combined weight of ice and object: 241 lbs

HPA65R-BU4A Antennas

Weight of ice based on total radial SF area:
Height (in): 48.0
Width (in): 11.7
Depth (in): 7.6
Total weight of ice on object: 86 lbs
Weight of object: 29.0 lbs
Combined weight of ice and object: 115 lbs

B5/B12 4449 RRH

Weight of ice based on total radial SF area:
Height (in): 14.9
Width (in): 13.2
Depth (in): 10.4
Total weight of ice on object: 32 lbs
Weight of object: 73.0 lbs
Combined weight of ice and object: 105 lbs

B2/B66A 8843 RRH

Weight of ice based on total radial SF area:
Height (in): 14.9
Width (in): 13.2
Depth (in): 10.9
Total weight of ice on object: 32 lbs
Weight of object: 72.0 lbs
Combined weight of ice and object: 104 lbs

LGP21401 TMA

Weight of ice based on total radial SF area:
Height (in): 14.4
Width (in): 2.7
Depth (in): 9.0
Total weight of ice on object: 18 lbs
Weight of object: 19.0 lbs
Combined weight of ice and object: 37 lbs

Squid Surge Arrestor

Weight of ice based on total radial SF area:
Depth (in): 24.0
Diameter(in): 9.7
Total weight of ice on object: 31 lbs
Weight of object: 33 lbs
Combined weight of ice and object: 64 lbs

2" pipe

Per foot weight of ice:
diameter (in): 2.38
Per foot weight of ice on object: 5 plf

L 3x3 Angles

Weight of ice based on total radial SF area:
Height (in): 3
Width (in): 3
Per foot weight of ice on object: 8 plf

L 2x2 Angles

Weight of ice based on total radial SF area:
Height (in): 2
Width (in): 2
Per foot weight of ice on object: 6 plf

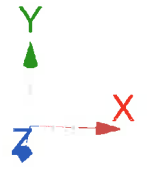
HSS 4x4

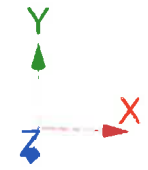
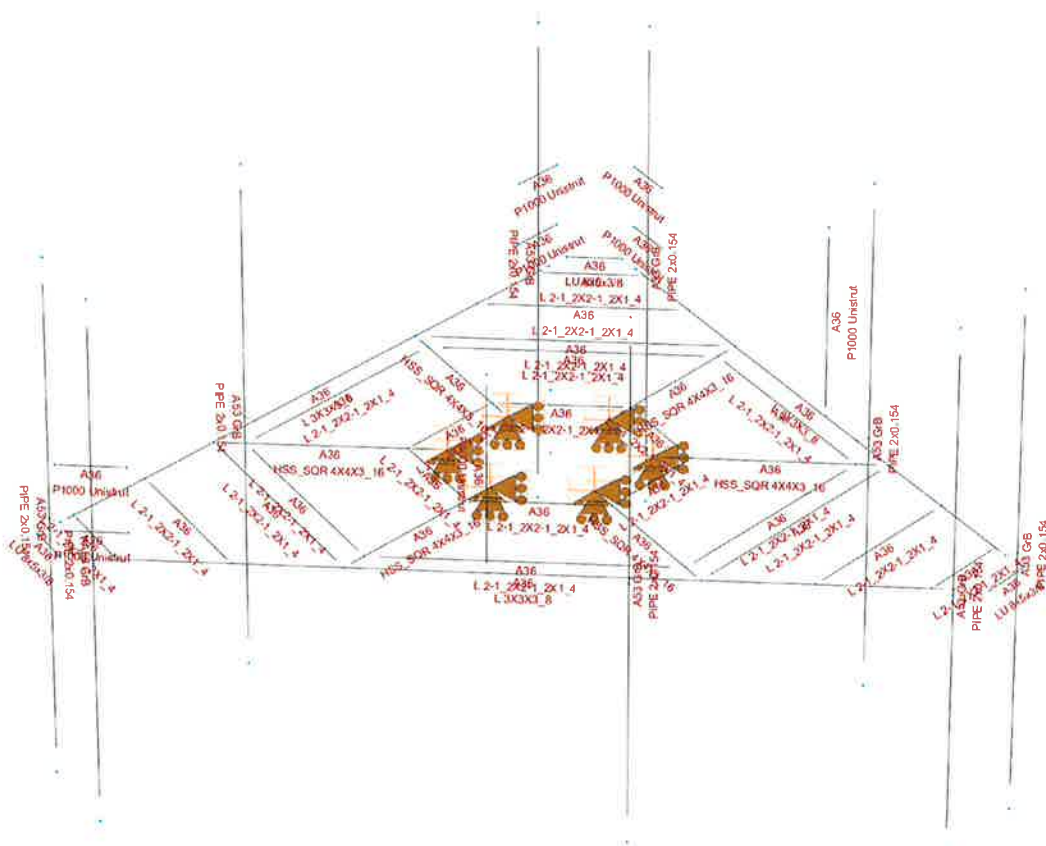
Weight of ice based on total radial SF area:
Height (in): 4
Width (in): 4
Per foot weight of ice on object: 10 plf







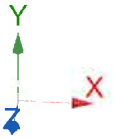
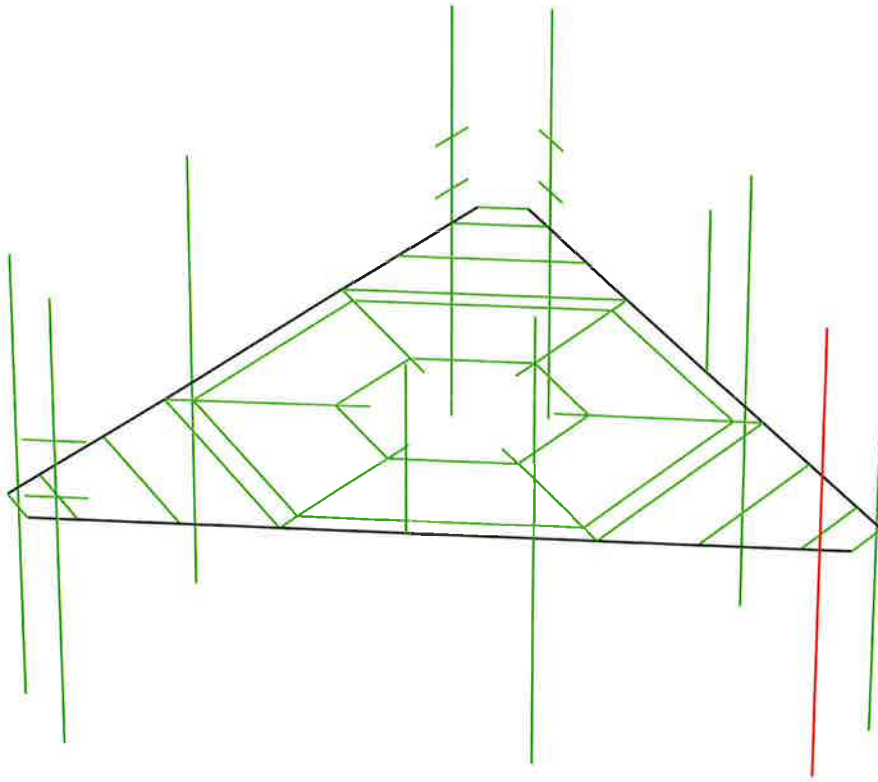
HUDSON
Design Group LLC

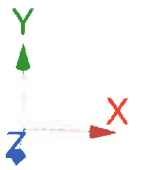
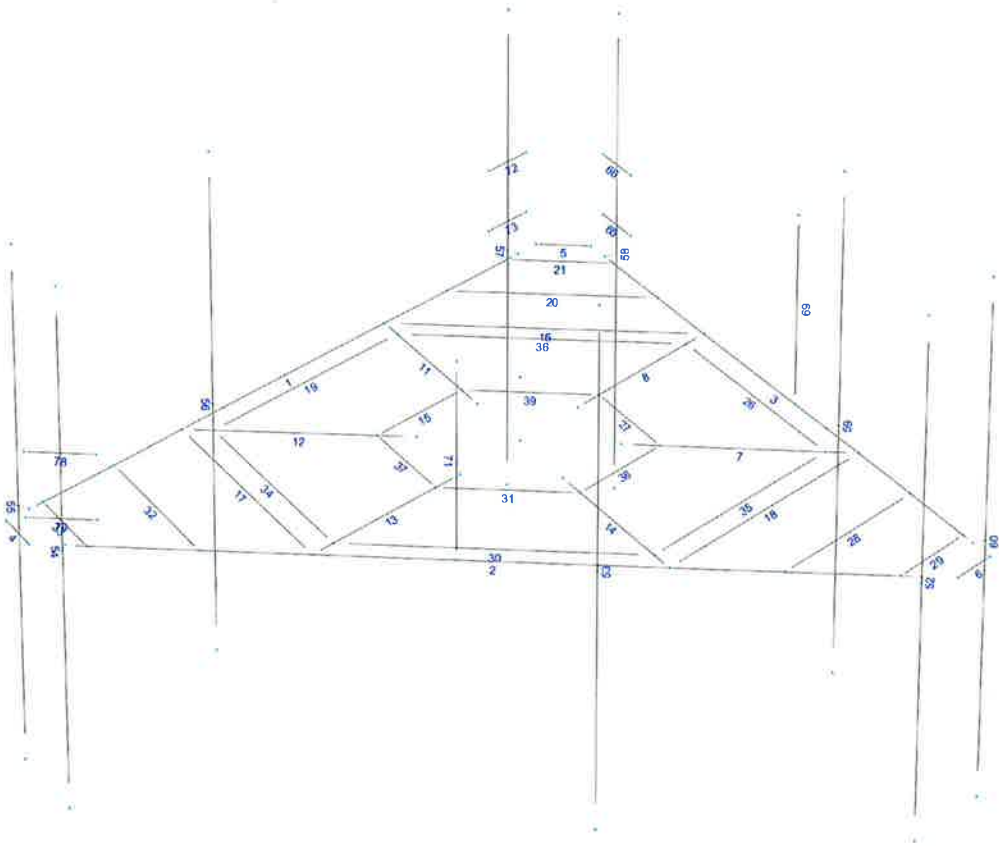
**Mount Calculations
(Existing Conditions)**





-  Not designed
-  Error on design
-  Design O.K.
-  With warnings





Current Date: 11/15/2019 10:52 AM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT5231\LTE (2C 3C 4C 5C)\CT5231 (L' 2C 3C 4C 5C).retx\

Load data

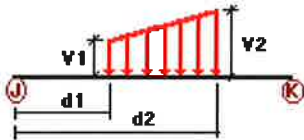
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

Condition	Description	Comb.	Category
DL	Dead Load	No	DL
W0	Wind Load 0/60/120 deg	No	WIND
W30	Wind Load 30/90/150 deg	No	WIND
Di	Ice Load	No	LL
Wi0	Ice Wind Load 0/60/120 deg	No	WIND
Wi30	Ice Wind Load 30/90/150 deg	No	WIND
WL0	WL 30 mph 0/60/120 deg	No	WIND
WL30	WL 30 mph 30/90/150 deg	No	WIND
LL1	250 lb Live Load Center of Mount	No	LL
LL2	250 lb Live Load End of Mount	No	LL
LLa1	250 lb Live Load Antenna 1	No	LL
LLa2	250 lb Live Load Antenna 2	No	LL
LLa3	250 lb Live Load Antenna 3	No	LL

Distributed force on members



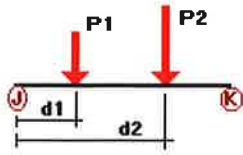
Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
DL	1	y	-0.01	-0.01	5.00	Yes	30.00	Yes
		y	-0.01	-0.01	70.00	Yes	95.00	Yes
	2	y	-0.01	-0.01	5.00	Yes	30.00	Yes
		y	-0.01	-0.01	70.00	Yes	95.00	Yes
	3	y	-0.01	-0.01	5.00	Yes	30.00	Yes
		y	-0.01	-0.01	70.00	Yes	95.00	Yes
15		y	-0.01	-0.01	0.00	No	100.00	Yes
16		y	-0.01	-0.01	0.00	No	100.00	Yes
17		y	-0.01	-0.01	0.00	No	100.00	Yes
18		y	-0.01	-0.01	0.00	No	100.00	Yes
19		y	-0.01	-0.01	0.00	No	100.00	Yes
20		y	-0.01	-0.01	0.00	No	100.00	Yes
21		y	-0.01	-0.01	0.00	No	100.00	Yes
26		y	-0.01	-0.01	0.00	No	100.00	Yes
27		y	-0.01	-0.01	0.00	No	100.00	Yes

	28	y	-0.01	-0.01	0.00	No	100.00	Yes
	29	y	-0.01	-0.01	0.00	No	100.00	Yes
	30	y	-0.01	-0.01	0.00	No	100.00	Yes
	31	y	-0.01	-0.01	0.00	No	100.00	Yes
	32	y	-0.01	-0.01	0.00	No	100.00	Yes
	33	y	-0.01	-0.01	0.00	No	100.00	Yes
	34	y	-0.01	-0.01	0.00	No	100.00	Yes
	35	y	-0.01	-0.01	0.00	No	100.00	Yes
	36	y	-0.01	-0.01	0.00	No	100.00	Yes
	37	y	-0.01	-0.01	0.00	No	100.00	Yes
	38	y	-0.01	-0.01	0.00	No	100.00	Yes
	39	y	-0.01	-0.01	0.00	No	100.00	Yes
W0	1	z	-0.033	-0.033	0.00	No	100.00	Yes
	2	z	-0.033	-0.033	0.00	No	100.00	Yes
	3	z	-0.033	-0.033	0.00	No	100.00	Yes
	7	z	-0.027	-0.027	0.00	No	100.00	Yes
	8	z	-0.027	-0.027	0.00	No	100.00	Yes
	11	z	-0.027	-0.027	0.00	No	100.00	Yes
	12	z	-0.027	-0.027	0.00	No	100.00	Yes
	13	z	-0.027	-0.027	0.00	No	100.00	Yes
	14	z	-0.027	-0.027	0.00	No	100.00	Yes
	15	z	-0.022	-0.022	0.00	No	100.00	Yes
	16	z	-0.022	-0.022	0.00	No	100.00	Yes
	17	z	-0.022	-0.022	0.00	No	100.00	Yes
	18	z	-0.022	-0.022	0.00	No	100.00	Yes
	19	z	-0.022	-0.022	0.00	No	100.00	Yes
	20	z	-0.022	-0.022	0.00	No	100.00	Yes
	21	z	-0.022	-0.022	0.00	No	100.00	Yes
	26	z	-0.022	-0.022	0.00	No	100.00	Yes
	27	z	-0.022	-0.022	0.00	No	100.00	Yes
	28	z	-0.022	-0.022	0.00	No	100.00	Yes
	29	z	-0.022	-0.022	0.00	No	100.00	Yes
	30	z	-0.022	-0.022	0.00	No	100.00	Yes
	31	z	-0.022	-0.022	0.00	No	100.00	Yes
	32	z	-0.022	-0.022	0.00	No	100.00	Yes
	33	z	-0.022	-0.022	0.00	No	100.00	Yes
	34	z	-0.022	-0.022	0.00	No	100.00	Yes
	35	z	-0.022	-0.022	0.00	No	100.00	Yes
	36	z	-0.022	-0.022	0.00	No	100.00	Yes
	37	z	-0.022	-0.022	0.00	No	100.00	Yes
	38	z	-0.022	-0.022	0.00	No	100.00	Yes
	39	z	-0.022	-0.022	0.00	No	100.00	Yes
	55	z	-0.016	-0.016	0.00	No	100.00	Yes
	56	z	-0.016	-0.016	0.00	No	100.00	Yes
	57	z	-0.016	-0.016	0.00	No	100.00	Yes
	58	z	-0.016	-0.016	0.00	No	100.00	Yes
	59	z	-0.016	-0.016	0.00	No	100.00	Yes
	60	z	-0.016	-0.016	0.00	No	100.00	Yes
W30	1	x	-0.033	-0.033	0.00	No	100.00	Yes
	3	x	-0.033	-0.033	0.00	No	100.00	Yes
	7	x	-0.027	-0.027	0.00	No	100.00	Yes
	8	x	-0.027	-0.027	0.00	No	100.00	Yes
	11	x	-0.027	-0.027	0.00	No	100.00	Yes
	12	x	-0.027	-0.027	0.00	No	100.00	Yes
	13	x	-0.027	-0.027	0.00	No	100.00	Yes
	14	x	-0.027	-0.027	0.00	No	100.00	Yes
	15	x	-0.022	-0.022	0.00	No	100.00	Yes
	17	x	-0.022	-0.022	0.00	No	100.00	Yes
	18	x	-0.022	-0.022	0.00	No	100.00	Yes
	19	x	-0.022	-0.022	0.00	No	100.00	Yes

Di

20		-0.022	-0.022	0.00	No	0.00	No
21		-0.022	-0.022	0.00	No	0.00	No
26	x	-0.022	-0.022	0.00	No	100.00	Yes
27	x	-0.022	-0.022	0.00	No	100.00	Yes
28	x	-0.022	-0.022	0.00	No	100.00	Yes
29	x	-0.022	-0.022	0.00	No	100.00	Yes
31	x	-0.022	-0.022	0.00	No	100.00	Yes
32	x	-0.022	-0.022	0.00	No	100.00	Yes
33	x	-0.022	-0.022	0.00	No	100.00	Yes
34	x	-0.022	-0.022	0.00	No	100.00	Yes
35	x	-0.022	-0.022	0.00	No	100.00	Yes
36		-0.022	-0.022	0.00	No	0.00	No
37	x	-0.022	-0.022	0.00	No	100.00	Yes
38	x	-0.022	-0.022	0.00	No	100.00	Yes
39	x	-0.022	-0.022	0.00	No	100.00	Yes
52	x	-0.016	-0.016	0.00	No	100.00	Yes
53	x	-0.016	-0.016	0.00	No	100.00	Yes
54	x	-0.016	-0.016	0.00	No	100.00	Yes
55	x	-0.016	-0.016	0.00	No	100.00	Yes
56	x	-0.016	-0.016	0.00	No	100.00	Yes
57	x	-0.016	-0.016	0.00	No	100.00	Yes
1	y	-0.008	-0.008	0.00	No	100.00	Yes
2	y	-0.008	-0.008	0.00	No	100.00	Yes
3	y	-0.008	-0.008	0.00	No	100.00	Yes
7	y	-0.01	-0.01	0.00	No	100.00	Yes
8	y	-0.01	-0.01	0.00	No	100.00	Yes
11	y	-0.01	-0.01	0.00	No	100.00	Yes
12	y	-0.01	-0.01	0.00	No	100.00	Yes
13	y	-0.01	-0.01	0.00	No	100.00	Yes
14	y	-0.01	-0.01	0.00	No	100.00	Yes
15	y	-0.006	-0.006	0.00	No	100.00	Yes
16	y	-0.006	-0.006	0.00	No	100.00	Yes
17	y	-0.006	-0.006	0.00	No	100.00	Yes
18	y	-0.006	-0.006	0.00	No	100.00	Yes
19	y	-0.006	-0.006	0.00	No	100.00	Yes
20	y	-0.006	-0.006	0.00	No	100.00	Yes
21	y	-0.006	-0.006	0.00	No	100.00	Yes
26	y	-0.006	-0.006	0.00	No	100.00	Yes
27	y	-0.006	-0.006	0.00	No	100.00	Yes
28	y	-0.006	-0.006	0.00	No	100.00	Yes
29	y	-0.006	-0.006	0.00	No	100.00	Yes
30	y	-0.006	-0.006	0.00	No	100.00	Yes
31	y	-0.006	-0.006	0.00	No	100.00	Yes
32	y	-0.006	-0.006	0.00	No	100.00	Yes
33	y	-0.006	-0.006	0.00	No	100.00	Yes
34	y	-0.006	-0.006	0.00	No	100.00	Yes
35	y	-0.006	-0.006	0.00	No	100.00	Yes
36	y	-0.006	-0.006	0.00	No	100.00	Yes
37	y	-0.006	-0.006	0.00	No	100.00	Yes
38	y	-0.006	-0.006	0.00	No	100.00	Yes
39	y	-0.006	-0.006	0.00	No	100.00	Yes
52	y	-0.005	-0.005	0.00	No	100.00	Yes
53	y	-0.005	-0.005	0.00	No	100.00	Yes
54	y	-0.005	-0.005	0.00	No	100.00	Yes
55	y	-0.005	-0.005	0.00	No	100.00	Yes
56	y	-0.005	-0.005	0.00	No	100.00	Yes
57	y	-0.005	-0.005	0.00	No	100.00	Yes
58	y	-0.005	-0.005	0.00	No	100.00	Yes
59	y	-0.005	-0.005	0.00	No	100.00	Yes
60	y	-0.005	-0.005	0.00	No	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	52	y	-0.058	0.50	No
		y	-0.058	7.50	No
		y	-0.072	1.50	No
	53	y	-0.015	2.50	No
		y	-0.015	5.50	No
		y	-0.073	1.50	No
	54	y	-0.018	2.50	No
		y	-0.018	5.50	No
	55	y	-0.042	2.50	No
		y	-0.042	5.50	No
		y	-0.072	1.50	No
	56	y	-0.015	2.50	No
		y	-0.015	5.50	No
		y	-0.073	1.50	No
	57	y	-0.018	2.50	No
		y	-0.018	5.50	No
	58	y	-0.018	2.50	No
		y	-0.018	5.50	No
		y	-0.072	1.50	No
	59	y	-0.015	2.50	No
		y	-0.015	5.50	No
		y	-0.073	1.50	No
	60	y	-0.058	0.50	No
		y	-0.058	7.50	No
	65	y	-0.01	0.25	No
		y	-0.01	0.75	No
	66	y	-0.01	0.25	No
		y	-0.01	0.75	No
	69	y	-0.033	1.50	No
	71	y	-0.033	1.50	No
72	y	-0.01	0.25	No	
	y	-0.01	0.75	No	
73	y	-0.01	0.25	No	
	y	-0.01	0.75	No	
78	y	-0.01	0.25	No	
	y	-0.01	0.75	No	
79	y	-0.01	0.25	No	
	y	-0.01	0.75	No	
W0	52	z	-0.571	0.50	No
		z	-0.571	7.50	No
	53	z	-0.164	2.50	No
		z	-0.164	5.50	No
	54	z	-0.10	1.50	No
		z	-0.182	2.50	No
		z	-0.182	5.50	No

55	z	-0.184	2.50	No	
	z	-0.184	5.50	No	
	z	-0.091	1.50	No	
56	z	-0.127	2.50	No	
	z	-0.127	5.50	No	
	z	-0.094	1.50	No	
57	z	-0.118	2.50	No	
	z	-0.118	5.50	No	
58	z	-0.118	2.50	No	
	z	-0.118	5.50	No	
	z	-0.091	1.50	No	
59	z	-0.127	2.50	No	
	z	-0.127	5.50	No	
	z	-0.094	1.50	No	
60	z	-0.328	0.50	No	
	z	-0.328	7.50	No	
65	z	-0.03	0.25	No	
	z	-0.03	0.75	No	
66	z	-0.03	0.25	No	
	z	-0.03	0.75	No	
69	z	-0.074	1.50	No	
71	z	-0.074	1.50	No	
72	z	-0.03	0.25	No	
	z	-0.03	0.75	No	
73	z	-0.03	0.25	No	
	z	-0.03	0.75	No	
78	z	-0.012	0.25	No	
	z	-0.012	0.75	No	
79	z	-0.012	0.25	No	
	z	-0.012	0.75	No	
W30	52	x	-0.247	0.50	No
		x	-0.247	7.50	No
		x	-0.089	1.50	No
53	x	-0.115	2.50	No	
	x	-0.115	5.50	No	
	x	-0.085	1.50	No	
54	x	-0.097	2.50	No	
	x	-0.097	5.50	No	
55	x	-0.281	2.50	No	
	x	-0.281	5.50	No	
	x	-0.103	1.50	No	
56	x	-0.151	2.50	No	
	x	-0.151	5.50	No	
	x	-0.102	1.50	No	
57	x	-0.16	2.50	No	
	x	-0.16	5.50	No	
58	x	-0.16	2.50	No	
	x	-0.16	5.50	No	
	x	-0.103	1.50	No	
59	x	-0.151	2.50	No	
	x	-0.151	5.50	No	
	x	-0.102	1.50	No	
60	x	-0.49	0.50	No	
	x	-0.49	7.50	No	
65	x	-0.018	0.25	No	
	x	-0.018	0.75	No	
66	x	-0.018	0.25	No	
	x	-0.018	0.75	No	
69	x	-0.074	1.50	No	
71	x	-0.074	1.50	No	

	72	x	-0.018	0.25	No
		x	-0.018	0.75	No
	73	x	-0.018	0.25	No
		x	-0.018	0.75	No
	78	x	-0.036	0.25	No
		x	-0.036	0.75	No
	79	x	-0.036	0.25	No
		x	-0.036	0.75	No
Di	52	y	-0.128	0.50	No
		y	-0.128	7.50	No
		y	-0.032	1.50	No
	53	y	-0.043	2.50	No
		y	-0.043	5.50	No
		y	-0.032	1.50	No
	54	y	-0.043	2.50	No
		y	-0.043	5.50	No
	55	y	-0.078	2.50	No
		y	-0.078	5.50	No
		y	-0.032	1.50	No
	56	y	-0.043	2.50	No
		y	-0.043	5.50	No
		y	-0.032	1.50	No
	57	y	-0.043	2.50	No
		y	-0.043	5.50	No
	58	y	-0.043	2.50	No
		y	-0.043	5.50	No
		y	-0.032	1.50	No
	59	y	-0.043	2.50	No
		y	-0.043	5.50	No
		y	-0.032	1.50	No
	60	y	-0.128	0.50	No
		y	-0.128	7.50	No
	65	y	-0.009	0.25	No
		y	-0.009	0.75	No
	66	y	-0.009	0.25	No
		y	-0.009	0.75	No
	69	y	-0.031	1.50	No
	71	y	-0.031	1.50	No
	72	y	-0.009	0.25	No
		y	-0.009	0.75	No
	73	y	-0.009	0.25	No
		y	-0.009	0.75	No
	78	y	-0.009	0.25	No
		y	-0.009	0.75	No
	79	y	-0.009	0.25	No
		y	-0.009	0.75	No
W10	52	z	-0.084	0.50	No
		z	-0.084	7.50	No
	53	z	-0.027	2.50	No
		z	-0.027	5.50	No
		z	-0.019	1.50	No
	54	z	-0.03	2.50	No
		z	-0.03	5.50	No
	55	z	-0.03	2.50	No
		z	-0.03	5.50	No
		z	-0.017	1.50	No
	56	z	-0.021	2.50	No
		z	-0.021	5.50	No
		z	-0.016	1.50	No
	57	z	-0.021	2.50	No

		z	-0.021	5.50	No
58		z	-0.021	2.50	No
		z	-0.021	5.50	No
		z	-0.017	1.50	No
59		z	-0.021	2.50	No
		z	-0.021	5.50	No
		z	-0.016	1.50	No
60		z	-0.051	0.50	No
		z	-0.051	7.50	No
65		z	-0.006	0.25	No
		z	-0.006	0.75	No
66		z	-0.006	0.25	No
		z	-0.006	0.75	No
69		z	-0.013	1.50	No
71		z	-0.013	1.50	No
72		z	-0.006	0.25	No
		z	-0.006	0.75	No
73		z	-0.006	0.25	No
		z	-0.006	0.75	No
78		z	-0.003	0.25	No
		z	-0.003	0.75	No
79		z	-0.003	0.25	No
		z	-0.003	0.75	No
Wi30	52	x	-0.041	0.50	No
		x	-0.041	7.50	No
		x	-0.016	1.50	No
53		x	-0.02	2.50	No
		x	-0.02	5.50	No
		x	-0.015	1.50	No
54		x	-0.018	2.50	No
		x	-0.018	5.50	No
55		x	-0.042	2.50	No
		x	-0.042	5.50	No
		x	-0.018	1.50	No
56		x	-0.025	2.50	No
		x	-0.025	5.50	No
		x	-0.018	1.50	No
57		x	-0.026	2.50	No
		x	-0.026	5.50	No
58		x	-0.026	2.50	No
		x	-0.026	5.50	No
		x	-0.018	1.50	No
59		x	-0.025	2.50	No
		x	-0.025	5.50	No
		x	-0.018	1.50	No
60		x	-0.072	0.50	No
		x	-0.072	7.50	No
65		x	-0.004	0.25	No
		x	-0.004	0.75	No
66		x	-0.004	0.25	No
		x	-0.004	0.75	No
69		x	-0.013	1.50	No
71		x	-0.013	1.50	No
72		x	-0.004	0.25	No
		x	-0.004	0.75	No
73		x	-0.004	0.25	No
		x	-0.004	0.75	No
78		x	-0.007	0.25	No
		x	-0.007	0.75	No
79		x	-0.007	0.25	No

WLO	52	x	-0.007	0.75	No
		z	-0.027	0.50	No
		z	-0.027	7.50	No
53	z	-0.008	2.50	No	
	z	-0.008	5.50	No	
	z	-0.005	1.50	No	
54	z	-0.009	2.50	No	
	z	-0.009	5.50	No	
55	z	-0.009	2.50	No	
	z	-0.009	5.50	No	
	z	-0.004	1.50	No	
56	z	-0.006	2.50	No	
	z	-0.006	5.50	No	
	z	-0.004	1.50	No	
57	z	-0.006	2.50	No	
	z	-0.006	5.50	No	
58	z	-0.006	2.50	No	
	z	-0.006	5.50	No	
	z	-0.004	1.50	No	
59	z	-0.006	2.50	No	
	z	-0.006	5.50	No	
	z	-0.004	1.50	No	
60	z	-0.016	0.50	No	
	z	-0.016	7.50	No	
65	z	-0.001	0.25	No	
	z	-0.001	0.75	No	
66	z	-0.001	0.25	No	
	z	-0.001	0.75	No	
69	z	-0.003	1.50	No	
71	z	-0.003	1.50	No	
72	z	-0.001	0.25	No	
	z	-0.001	0.75	No	
73	z	-0.001	0.25	No	
	z	-0.001	0.75	No	
78	z	-0.001	0.25	No	
	z	-0.001	0.75	No	
79	z	-0.001	0.25	No	
	z	-0.001	0.75	No	
WL30	52	x	-0.012	0.50	No
		x	-0.012	7.50	No
		x	-0.004	1.50	No
53	x	-0.006	2.50	No	
	x	-0.006	5.50	No	
	x	-0.004	1.50	No	
54	x	-0.005	2.50	No	
	x	-0.005	5.50	No	
55	x	-0.013	2.50	No	
	x	-0.013	5.50	No	
	x	-0.005	1.50	No	
56	x	-0.007	2.50	No	
	x	-0.007	5.50	No	
	x	-0.005	1.50	No	
57	x	-0.008	2.50	No	
	x	-0.008	5.50	No	
58	x	-0.008	2.50	No	
	x	-0.008	5.50	No	
	x	-0.005	1.50	No	
59	x	-0.007	2.50	No	
	x	-0.007	5.50	No	
	x	-0.005	1.50	No	

	60	x	-0.023	0.50	No
		x	-0.023	7.50	No
	65	x	-0.001	0.25	No
		x	-0.001	0.75	No
	66	x	-0.001	0.25	No
		x	-0.001	0.75	No
	69	x	-0.003	1.50	No
	71	x	-0.003	1.50	No
	72	x	-0.001	0.25	No
		x	-0.001	0.75	No
	73	x	-0.001	0.25	No
		x	-0.001	0.75	No
	78	x	-0.002	0.25	No
		x	-0.002	0.75	No
	79	x	-0.002	0.25	No
		x	-0.002	0.75	No
LL1	2	y	-0.25	50.00	Yes
LL2	2	y	-0.25	100.00	Yes
LLa1	52	y	-0.25	50.00	Yes
LLa2	53	y	-0.25	50.00	Yes
LLa3	54	y	-0.25	50.00	Yes

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
DL	Dead Load	No	0.00	-1.00	0.00
W0	Wind Load 0/60/120 deg	No	0.00	0.00	0.00
W30	Wind Load 30/90/150 deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
Wi0	Ice Wind Load 0/60/120 deg	No	0.00	0.00	0.00
Wi30	Ice Wind Load 30/90/150 deg	No	0.00	0.00	0.00
WLO	WL 30 mph 0/60/120 deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30/90/150 deg	No	0.00	0.00	0.00
LL1	250 lb Live Load Center of Mount	No	0.00	0.00	0.00
LL2	250 lb Live Load End of Mount	No	0.00	0.00	0.00
LLa1	250 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	250 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	250 lb Live Load Antenna 3	No	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
DL	0.00	0.00	0.00
W0	0.00	0.00	0.00
W30	0.00	0.00	0.00
Di	0.00	0.00	0.00
Wi0	0.00	0.00	0.00
Wi30	0.00	0.00	0.00
WLO	0.00	0.00	0.00

WL30	0.00	0.00	0.00
LL1	0.00	0.00	0.00
LL2	0.00	0.00	0.00
LLa1	0.00	0.00	0.00
LLa2	0.00	0.00	0.00
LLa3	0.00	0.00	0.00



Current Date: 11/15/2019 10:52 AM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT5231\LTE (2C 3C 4C 5C)\CT5231 (L 2C 3C 4C 5C).retx\

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.2DL+W0
LC2=1.2DL+W30
LC3=1.2DL-W0
LC4=1.2DL-W30
LC5=0.9DL+W0
LC6=0.9DL+W30
LC7=0.9DL-W0
LC8=0.9DL-W30
LC9=1.2DL+Di+W0
LC10=1.2DL+Di+W30
LC11=1.2DL+Di-W0
LC12=1.2DL+Di-W30
LC13=1.2DL
LC15=1.2DL+1.5LL1
LC16=1.2DL+1.5LL2
LC17=1.2DL+W0+1.5LLa1
LC18=1.2DL+W30+1.5LLa1
LC19=1.2DL-W0+1.5LLa1
LC20=1.2DL-W30+1.5LLa1
LC21=1.2DL+W0+1.5LLa2
LC22=1.2DL+W30+1.5LLa2
LC23=1.2DL-W0+1.5LLa2
LC24=1.2DL-W30+1.5LLa2
LC25=1.2DL+W0+1.5LLa3
LC26=1.2DL+W30+1.5LLa3
LC27=1.2DL-W0+1.5LLa3
LC28=1.2DL-W30+1.5LLa3

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X3_16	7	LC12 at 0.00%	0.42	OK	
		8	LC12 at 0.00%	0.28	OK	
		11	LC9 at 0.00%	0.26	OK	
		12	LC10 at 0.00%	0.33	OK	
		13	LC28 at 0.00%	0.30	OK	
		14	LC11 at 0.00%	0.44	OK	
	L 2-1_2X2-1_2X1_4	15	LC16 at 100.00%	0.11	OK	
		16	LC11 at 50.00%	0.11	OK	
		17	LC12 at 37.50%	0.11	OK	
		18	LC1 at 0.00%	0.11	OK	
		19	LC9 at 100.00%	0.20	OK	
		20	LC4 at 100.00%	0.17	OK	
		21	LC4 at 100.00%	0.22	OK	
		26	LC9 at 100.00%	0.22	OK	
		27	LC11 at 0.00%	0.15	OK	
		28	LC3 at 100.00%	0.21	OK	
		29	LC3 at 100.00%	0.25	OK	
		30	LC11 at 0.00%	0.22	OK	
		31	LC12 at 100.00%	0.15	OK	
		32	LC2 at 100.00%	0.14	OK	

	33	LC2 at 100.00%	0.16	OK	
	34	LC4 at 0.00%	0.13	OK	
	35	LC2 at 100.00%	0.13	OK	
	36	LC3 at 100.00%	0.15	OK	
	37	LC2 at 100.00%	0.07	OK	
	38	LC3 at 0.00%	0.10	OK	
	39	LC1 at 0.00%	0.07	OK	
<hr/>					
L 3X3X3_8	1	LC10 at 30.68%	0.59	With warnings	
	2	LC12 at 30.68%	0.81	With warnings	
	3	LC12 at 69.32%	0.78	With warnings	
<hr/>					
LU 8x5x3/8	4	LC2 at 0.00%	0.03	OK	
	5	LC4 at 0.00%	0.03	OK	
	6	LC3 at 0.00%	0.05	OK	
<hr/>					
P1000 Unistrut	65	LC10 at 50.00%	0.03	OK	
	66	LC10 at 50.00%	0.03	OK	
	69	LC2 at 100.00%	0.26	OK	Eq. H1.2-1
	71	LC1 at 100.00%	0.22	OK	Eq. H1.2-1
	72	LC10 at 50.00%	0.03	OK	
	73	LC10 at 50.00%	0.03	OK	
	78	LC10 at 50.00%	0.03	OK	
	79	LC10 at 50.00%	0.03	OK	
<hr/>					
PIPE 2x0.154	52	LC1 at 50.00%	1.07	N.G.	
	53	LC2 at 46.88%	0.24	OK	
	54	LC2 at 48.44%	0.21	OK	
	55	LC2 at 46.88%	0.38	OK	
	56	LC2 at 46.88%	0.29	OK	
	57	LC2 at 48.44%	0.22	OK	
	58	LC1 at 48.44%	0.33	OK	
	59	LC1 at 46.88%	0.26	OK	
	60	LC2 at 50.00%	0.92	OK	

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
1	0.00	0.00	0.00	0
15	-3.6891	0.00	-2.1299	0
16	-6.9391	0.00	3.4993	0
17	-0.4391	0.00	-7.7591	0
18	-6.50	0.00	4.2598	0
19	6.50	0.00	4.2598	0
20	6.9391	0.00	3.4993	0
21	0.4391	0.00	-7.7591	0
22	0.00	1.00	0.00	0
27	1.50	0.00	0.00	0
29	0.75	0.00	-1.299	0
34	4.9391	0.00	0.0352	0
35	2.4391	0.00	-4.295	0
40	-0.75	0.00	-1.299	0
41	-1.50	0.00	0.00	0
42	-2.4391	0.00	-4.295	0
43	-4.9391	0.00	0.0352	0
44	-0.75	0.00	1.299	0
45	0.75	0.00	1.299	0
46	-2.50	0.00	4.2598	0
47	2.50	0.00	4.2598	0

52	-2.0732	0.00	0.0059	0
53	-1.0315	0.00	-1.7984	0
58	-2.2045	0.00	-3.8789	0
63	-4.4615	0.00	0.0303	0
64	-0.8391	0.00	-7.0662	0
66	-1.6391	0.00	-5.6806	0
67	0.8391	0.00	-7.0662	0
69	1.6391	0.00	-5.6806	0
78	2.2045	0.00	-3.8789	0
79	4.4615	0.00	0.0303	0
80	2.0732	0.00	0.0059	0
81	1.0315	0.00	-1.7984	0
82	4.10	0.00	4.2598	0
83	5.7391	0.00	1.4208	0
86	2.2569	0.00	3.8486	0
87	-2.2569	0.00	3.8486	0
88	-1.0417	0.00	1.7925	0
89	1.0417	0.00	1.7925	0
90	-5.7391	0.00	1.4208	0
91	-4.10	0.00	4.2598	0
92	-5.70	0.00	4.2598	0
93	-6.5391	0.00	2.8064	0
95	0.6891	0.00	-7.3261	0
97	0.8623	0.00	-7.4261	0
106	-0.6891	0.00	-7.3261	0
107	-0.8623	0.00	-7.4261	0
108	-6.6891	0.00	3.0662	0
112	-6.00	0.00	4.2598	0
113	-6.00	0.00	4.4598	0
115	6.00	0.00	4.4598	0
119	-6.8623	-4.00	2.9662	0
120	-6.00	-4.00	4.4598	0
121	1.50	-4.00	4.4598	0
122	6.00	-4.00	4.4598	0
123	6.8623	-4.00	2.9662	0
125	0.8623	-4.00	-7.4261	0
126	-0.8623	-4.00	-7.4261	0
128	-6.8623	4.00	2.9662	0
129	-6.00	4.00	4.4598	0
130	1.50	4.00	4.4598	0
131	6.00	4.00	4.4598	0
132	6.8623	4.00	2.9662	0
134	0.8623	4.00	-7.4261	0
135	-0.8623	4.00	-7.4261	0
146	1.1123	0.50	-6.993	0
147	0.6123	0.50	-7.8591	0
148	1.1123	1.50	-6.993	0
149	0.6123	1.50	-7.8591	0
154	3.9391	0.00	-1.6969	0
155	3.9391	3.00	-1.6969	0
158	-0.50	0.00	4.2598	0
159	-0.50	3.00	4.2598	0
160	-0.6123	1.50	-7.8591	0
161	-1.1123	1.50	-6.993	0
162	-0.6123	0.50	-7.8591	0
163	-1.1123	0.50	-6.993	0
170	-4.6123	-4.00	-0.9309	0
171	-4.6123	4.00	-0.9309	0
174	4.6123	-4.00	-0.9309	0
175	4.6123	4.00	-0.9309	0

176	-6.50	1.50	4.4598	0
177	-5.50	1.50	4.4598	0
178	-6.50	0.50	4.4598	0
179	-5.50	0.50	4.4598	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
27	1	1	1	1	1	1
29	1	1	1	1	1	1
40	1	1	1	1	1	1
41	1	1	1	1	1	1
44	1	1	1	1	1	1
45	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
1	16	17		L 3X3X3_8	A36	0.00	0.00	0.00
2	19	18		L 3X3X3_8	A36	0.00	0.00	0.00
3	21	20		L 3X3X3_8	A36	0.00	0.00	0.00
4	18	16		LU 8x5x3/8	A36	0.00	0.00	0.00
5	17	21		LU 8x5x3/8	A36	0.00	0.00	0.00
6	20	19		LU 8x5x3/8	A36	0.00	0.00	0.00
7	27	34		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
8	29	35		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
11	40	42		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
12	41	43		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
13	44	46		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
14	45	47		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
15	53	52		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
16	35	42		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
17	43	46		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
18	47	34		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
19	63	58		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
20	69	66		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
21	64	67		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
26	78	79		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
27	80	81		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
28	82	83		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
29	84	85		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
30	86	87		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
31	88	89		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
32	90	91		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
33	92	93		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
34	87	63		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
35	79	86		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
36	58	78		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
37	52	88		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
38	89	80		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00

39	81	53	L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
52	131	122	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
53	130	121	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
54	129	120	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
55	128	119	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
56	171	170	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
57	135	126	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
58	134	125	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
59	175	174	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
60	132	123	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
65	146	147	P1000 Unistrut	A36	0.00	0.00	0.00
66	148	149	P1000 Unistrut	A36	0.00	0.00	0.00
69	155	154	P1000 Unistrut	A36	0.00	0.00	0.00
71	159	158	P1000 Unistrut	A36	0.00	0.00	0.00
72	160	161	P1000 Unistrut	A36	0.00	0.00	0.00
73	162	163	P1000 Unistrut	A36	0.00	0.00	0.00
78	176	177	P1000 Unistrut	A36	0.00	0.00	0.00
79	178	179	P1000 Unistrut	A36	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
15	90.00	0	0.00	0.00	0.00
16	90.00	0	0.00	0.00	0.00
17	90.00	0	0.00	0.00	0.00
18	90.00	0	0.00	0.00	0.00
19	90.00	0	0.00	0.00	0.00
20	90.00	0	0.00	0.00	0.00
21	90.00	0	0.00	0.00	0.00
26	90.00	0	0.00	0.00	0.00
27	90.00	0	0.00	0.00	0.00
28	90.00	0	0.00	0.00	0.00
29	90.00	0	0.00	0.00	0.00
30	90.00	0	0.00	0.00	0.00
31	90.00	0	0.00	0.00	0.00
32	90.00	0	0.00	0.00	0.00
33	90.00	0	0.00	0.00	0.00
34	90.00	0	0.00	0.00	0.00
35	90.00	0	0.00	0.00	0.00
36	90.00	0	0.00	0.00	0.00
37	90.00	0	0.00	0.00	0.00
38	90.00	0	0.00	0.00	0.00
39	90.00	0	0.00	0.00	0.00
69	0.00	2	0.50	0.00	0.866

Rigid end offsets

Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
7	0.00	-2.00	0.00	0.00	-2.00	0.00
8	0.00	-2.00	0.00	0.00	-2.00	0.00
11	0.00	-2.00	0.00	0.00	-2.00	0.00
12	0.00	-2.00	0.00	0.00	-2.00	0.00
13	0.00	-2.00	0.00	0.00	-2.00	0.00
14	0.00	-2.00	0.00	0.00	-2.00	0.00
65	0.866	0.00	-0.50	0.866	0.00	-0.50
66	0.866	0.00	-0.50	0.866	0.00	-0.50
72	-0.866	0.00	-0.50	-0.866	0.00	-0.50
73	-0.866	0.00	-0.50	-0.866	0.00	-0.50
78	0.00	0.00	1.00	0.00	0.00	1.00
79	0.00	0.00	1.00	0.00	0.00	1.00

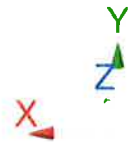


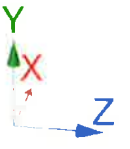
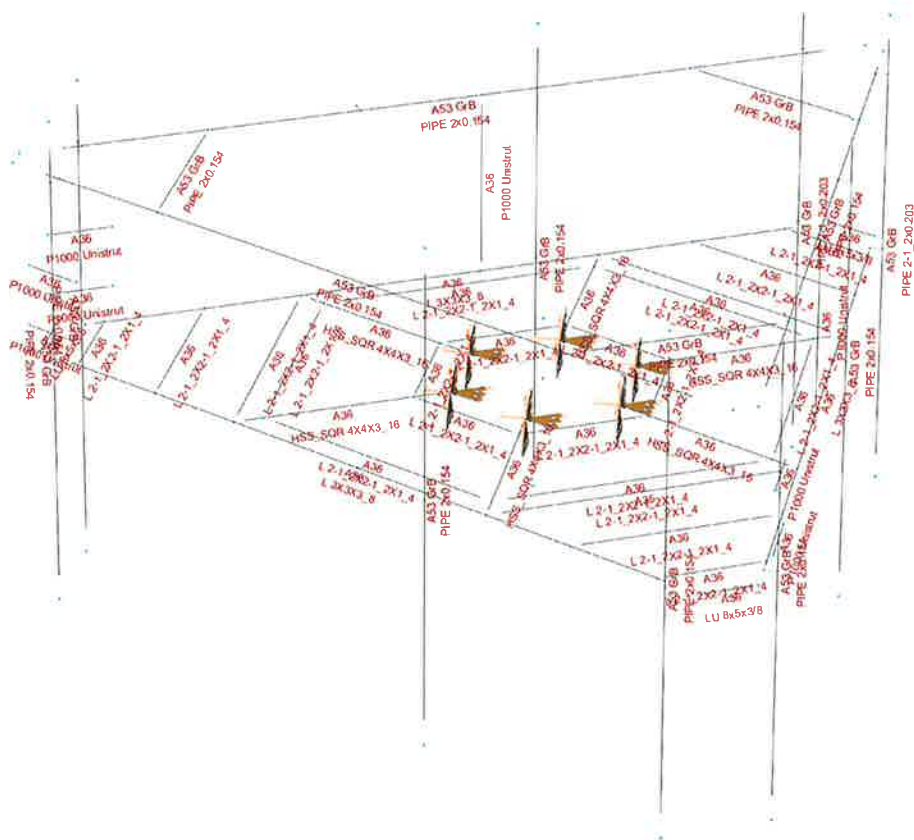
HUDSON
Design Group LLC





**Mount Calculations
(Modified Conditions)**

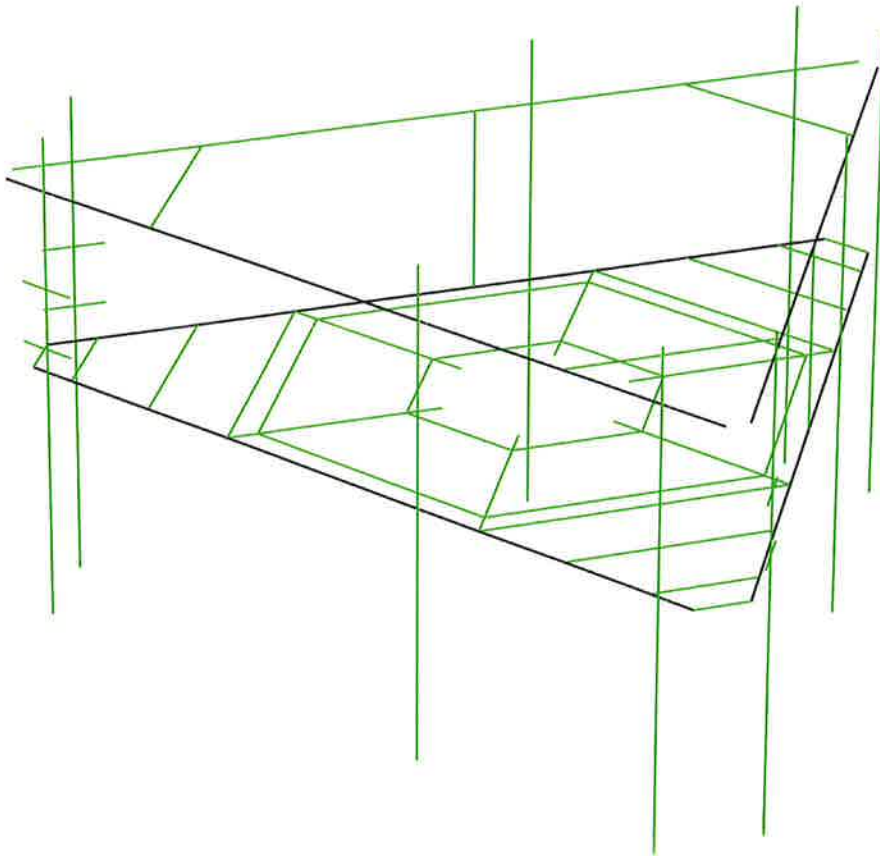
Install new 2-1/2" std. (2.88" O.D.) pipe mast behind new 800-10966 Antennas secured to existing platform (total of 2).

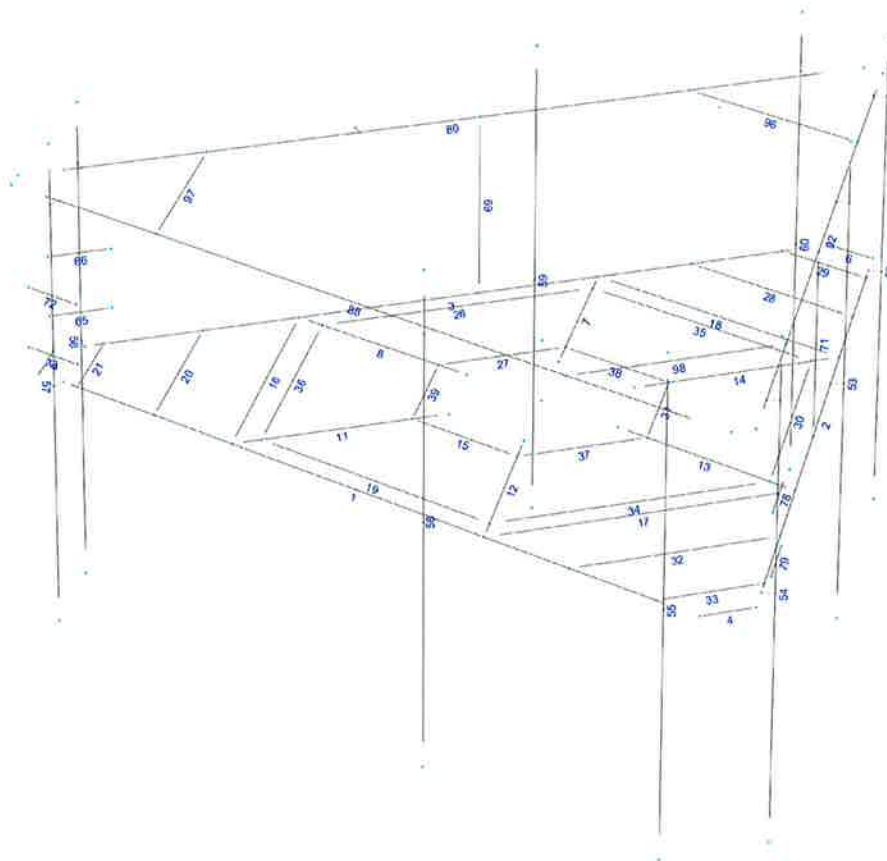
Install new handrail kit, SitePro1 P/N HRK14 (or approved equal). Handrail kit is required per AT&T Technical Directive to stabilize existing cantilevered antennas.





-  Not designed
-  Error on design
-  Design O.K.
-  With warnings







Current Date: 11/15/2019 10:51 AM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT5231\LTE (2C 3C 4C 5C)\CT5231 (L' 2C 3C 4C 5C)(MOD).retx\

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

- LC1=1.2DL+W0
- LC2=1.2DL+W30
- LC3=1.2DL-W0
- LC4=1.2DL-W30
- LC5=0.9DL+W0
- LC6=0.9DL+W30
- LC7=0.9DL-W0
- LC8=0.9DL-W30
- LC9=1.2DL+Di+Wi0
- LC10=1.2DL+Di+Wi30
- LC11=1.2DL+Di-Wi0
- LC12=1.2DL+Di-Wi30
- LC13=1.2DL
- LC15=1.2DL+1.5LL1
- LC16=1.2DL+1.5LL2
- LC17=1.2DL+W0+1.5LLa1
- LC18=1.2DL+W30+1.5LLa1
- LC19=1.2DL-W0+1.5LLa1
- LC20=1.2DL-W30+1.5LLa1
- LC21=1.2DL+W0+1.5LLa2
- LC22=1.2DL+W30+1.5LLa2
- LC23=1.2DL-W0+1.5LLa2
- LC24=1.2DL-W30+1.5LLa2
- LC25=1.2DL+W0+1.5LLa3
- LC26=1.2DL+W30+1.5LLa3
- LC27=1.2DL-W0+1.5LLa3
- LC28=1.2DL-W30+1.5LLa3

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X3_16	7	LC12 at 0.00%	0.40	OK	
		8	LC1 at 0.00%	0.30	OK	
		11	LC1 at 0.00%	0.25	OK	
		12	LC10 at 0.00%	0.29	OK	
		13	LC16 at 0.00%	0.33	OK	
		14	LC11 at 0.00%	0.40	OK	
	L 2-1_2X2-1_2X1_4	15	LC16 at 100.00%	0.09	OK	
		16	LC5 at 100.00%	0.13	OK	
		17	LC15 at 100.00%	0.10	OK	
		18	LC3 at 0.00%	0.12	OK	
		19	LC9 at 100.00%	0.15	OK	
		20	LC4 at 100.00%	0.16	OK	
		21	LC4 at 100.00%	0.16	OK	
		26	LC11 at 0.00%	0.17	OK	
		27	LC3 at 0.00%	0.14	OK	
		28	LC3 at 100.00%	0.21	OK	
		29	LC3 at 100.00%	0.27	OK	
		30	LC12 at 100.00%	0.17	OK	
		31	LC4 at 100.00%	0.13	OK	
		32	LC3 at 0.00%	0.13	OK	

33	LC3 at 0.00%	0.14	OK		
34	LC15 at 0.00%	0.10	OK		
35	LC1 at 0.00%	0.10	OK		
36	LC3 at 100.00%	0.14	OK		
37	LC2 at 0.00%	0.06	OK		
38	LC3 at 0.00%	0.10	OK		
39	LC1 at 0.00%	0.08	OK		
<hr/>					
L 3X3X3_8	1	LC16 at 30.68%	0.39	With warnings	
	2	LC16 at 69.32%	0.52	With warnings	
	3	LC5 at 93.75%	0.50	With warnings	
<hr/>					
LU 8x5x3/8	4	LC7 at 100.00%	0.02	OK	
	5	LC6 at 100.00%	0.02	OK	
	6	LC7 at 0.00%	0.04	OK	
<hr/>					
P1000 Unistrut	65	LC11 at 50.00%	0.03	OK	Sec. G5
	66	LC9 at 50.00%	0.03	OK	Sec. G5
	69	LC3 at 100.00%	0.41	OK	Eq. H1.2-1
	71	LC4 at 100.00%	0.45	OK	Eq. H1.2-1
	72	LC11 at 50.00%	0.03	OK	Sec. G5
	73	LC9 at 50.00%	0.03	OK	Sec. G5
	78	LC10 at 50.00%	0.03	OK	Sec. G5
	79	LC11 at 50.00%	0.03	OK	Sec. G5
<hr/>					
PIPE 2-1_2x0.203	52	LC1 at 47.92%	0.58	OK	
	60	LC2 at 47.92%	0.48	OK	
<hr/>					
PIPE 2x0.154	53	LC2 at 47.92%	0.28	OK	
	54	LC16 at 48.75%	0.48	OK	
	55	LC1 at 47.92%	0.40	OK	
	56	LC1 at 47.92%	0.42	OK	
	57	LC2 at 48.75%	0.48	OK	
	58	LC4 at 48.75%	0.46	OK	
	59	LC1 at 47.92%	0.31	OK	
	80	LC1 at 60.71%	0.29	With warnings	
	88	LC1 at 38.54%	0.26	With warnings	
	92	LC2 at 7.14%	0.24	OK	
	96	LC1 at 100.00%	0.22	OK	
	97	LC2 at 100.00%	0.19	OK	
	98	LC2 at 100.00%	0.18	OK	

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
15	-3.6891	0.00	-2.1299	0
17	-0.4391	0.00	-7.7591	0
18	-6.50	0.00	4.2598	0
19	6.50	0.00	4.2598	0
21	0.4391	0.00	-7.7591	0
22	0.00	1.00	0.00	0
27	1.50	0.00	0.00	0
29	0.75	0.00	-1.299	0
35	2.4391	0.00	-4.295	0
40	-0.75	0.00	-1.299	0
41	-1.50	0.00	0.00	0
42	-2.4391	0.00	-4.295	0
44	-0.75	0.00	1.299	0
45	0.75	0.00	1.299	0
46	-2.50	0.00	4.2598	0
47	2.50	0.00	4.2598	0
52	-2.0732	0.00	0.0059	0
53	-1.0315	0.00	-1.7984	0
58	-2.2045	0.00	-3.8789	0
66	-1.6391	0.00	-5.6806	0
69	1.6391	0.00	-5.6806	0

78	2.2045	0.00	-3.8789	0
81	1.0315	0.00	-1.7984	0
82	4.10	0.00	4.2598	0
83	5.7391	0.00	1.4208	0
86	2.2569	0.00	3.8486	0
87	-2.2569	0.00	3.8486	0
88	-1.0417	0.00	1.7925	0
89	1.0417	0.00	1.7925	0
90	-5.7391	0.00	1.4208	0
91	-4.10	0.00	4.2598	0
92	-5.70	0.00	4.2598	0
119	-6.8623	-4.00	2.9662	0
120	-6.00	-4.00	4.4598	0
121	1.50	-4.00	4.4598	0
122	6.00	-4.00	4.4598	0
123	6.8623	-4.00	2.9662	0
125	0.8623	-4.00	-7.4261	0
126	-0.8623	-4.00	-7.4261	0
128	-6.8623	4.00	2.9662	0
129	-6.00	4.00	4.4598	0
130	1.50	4.00	4.4598	0
131	6.00	4.00	4.4598	0
132	6.8623	4.00	2.9662	0
134	0.8623	4.00	-7.4261	0
135	-0.8623	4.00	-7.4261	0
146	1.1123	0.50	-6.993	0
148	1.1123	1.50	-6.993	0
149	0.6123	1.50	-7.8591	0
154	3.9391	0.00	-1.6969	0
155	3.9391	3.00	-1.6969	0
158	-0.50	0.00	4.2598	0
159	-0.50	3.00	4.2598	0
160	-0.6123	1.50	-7.8591	0
161	-1.1123	1.50	-6.993	0
163	-1.1123	0.50	-6.993	0
170	-4.6123	-4.00	-0.9309	0
171	-4.6123	4.00	-0.9309	0
174	4.6123	-4.00	-0.9309	0
175	4.6123	4.00	-0.9309	0
176	-6.50	1.50	4.4598	0
178	-6.50	0.50	4.4598	0
179	-5.50	0.50	4.4598	0
187	0.1891	3.00	-8.1921	0
188	7.1891	3.00	3.9323	0
203	-7.1891	3.00	3.9323	0
204	-0.1891	3.00	-8.1921	0
211	7.00	3.00	4.2598	0
212	-7.00	3.00	4.2598	0
213	-5.6891	3.00	1.3342	0
214	-1.6891	3.00	-5.594	0
217	5.6891	3.00	1.3342	0
218	1.6891	3.00	-5.594	0
219	-4.00	3.00	4.2598	0
220	4.00	3.00	4.2598	0
106	-0.6891	0.00	-7.3261	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
27	1	1	1	1	1	1
29	1	1	1	1	1	1
40	1	1	1	1	1	1
41	1	1	1	1	1	1
44	1	1	1	1	1	1
45	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
1	16	17		L 3X3X3_8	A36	0.00	0.00	0.00
2	19	18		L 3X3X3_8	A36	0.00	0.00	0.00
3	21	20		L 3X3X3_8	A36	0.00	0.00	0.00
4	18	16		LU 8x5x3/8	A36	0.00	0.00	0.00
5	17	21		LU 8x5x3/8	A36	0.00	0.00	0.00
6	20	19		LU 8x5x3/8	A36	0.00	0.00	0.00
7	27	34		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
8	29	35		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
11	40	42		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
12	41	43		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
13	44	46		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
14	45	47		HSS_SQR 4X4X3_16	A36	0.00	0.00	0.00
15	53	52		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
16	35	42		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
17	43	46		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
18	47	34		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
19	63	58		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
20	69	66		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
21	64	67		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
26	78	79		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
27	80	81		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
28	82	83		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
29	84	85		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
30	86	87		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
31	88	89		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
32	90	91		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
33	92	93		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
34	87	63		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
35	79	86		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
36	58	78		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
37	52	88		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
38	89	80		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
39	81	53		L 2-1_2X2-1_2X1_4	A36	0.00	0.00	0.00
52	131	122		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
53	130	121		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
54	129	120		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
55	128	119		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
56	171	170		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
57	135	126		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
58	134	125		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
59	175	174		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
60	132	123		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
65	146	147		P1000 Unistrut	A36	0.00	0.00	0.00
66	148	149		P1000 Unistrut	A36	0.00	0.00	0.00
69	155	154		P1000 Unistrut	A36	0.00	0.00	0.00

71	159	158	P1000 Unistrut	A36	0.00	0.00	0.00
72	160	161	P1000 Unistrut	A36	0.00	0.00	0.00
73	162	163	P1000 Unistrut	A36	0.00	0.00	0.00
78	176	177	P1000 Unistrut	A36	0.00	0.00	0.00
79	178	179	P1000 Unistrut	A36	0.00	0.00	0.00
80	187	188	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
88	203	204	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
92	211	212	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
96	217	220	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
97	214	218	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
98	213	219	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
15	90.00	0	0.00	0.00	0.00
16	90.00	0	0.00	0.00	0.00
17	90.00	0	0.00	0.00	0.00
18	90.00	0	0.00	0.00	0.00
19	90.00	0	0.00	0.00	0.00
20	90.00	0	0.00	0.00	0.00
21	90.00	0	0.00	0.00	0.00
26	90.00	0	0.00	0.00	0.00
27	90.00	0	0.00	0.00	0.00
28	90.00	0	0.00	0.00	0.00
29	90.00	0	0.00	0.00	0.00
30	90.00	0	0.00	0.00	0.00
31	90.00	0	0.00	0.00	0.00
32	90.00	0	0.00	0.00	0.00
33	90.00	0	0.00	0.00	0.00
34	90.00	0	0.00	0.00	0.00
35	90.00	0	0.00	0.00	0.00
36	90.00	0	0.00	0.00	0.00
37	90.00	0	0.00	0.00	0.00
38	90.00	0	0.00	0.00	0.00
39	90.00	0	0.00	0.00	0.00
69	0.00	2	0.50	0.00	0.866

Rigid end offsets

Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
7	0.00	-2.00	0.00	0.00	-2.00	0.00
8	0.00	-2.00	0.00	0.00	-2.00	0.00
11	0.00	-2.00	0.00	0.00	-2.00	0.00
12	0.00	-2.00	0.00	0.00	-2.00	0.00
13	0.00	-2.00	0.00	0.00	-2.00	0.00
14	0.00	-2.00	0.00	0.00	-2.00	0.00
65	0.866	0.00	-0.50	0.866	0.00	-0.50
66	0.866	0.00	-0.50	0.866	0.00	-0.50
72	-0.866	0.00	-0.50	-0.866	0.00	-0.50

73	-0.866	0.00	-0.50	-0.866	0.00	-0.50
78	0.00	0.00	1.00	0.00	0.00	1.00
79	0.00	0.00	1.00	0.00	0.00	1.00
96	0.00	2.00	0.00	0.00	2.00	0.00
97	0.00	2.00	0.00	0.00	2.00	0.00
98	0.00	2.00	0.00	0.00	2.00	0.00

EXHIBIT 5



Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CTL05231

Stonington East
86 Voluntown Road

Pawcatuck, CT 06379

June 27, 2019

Centerline Communications Project Number: 950012-231

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	11.42 %



June 27, 2019

AT&T Mobility – New England
Attn: John Benedetto, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CTL05231 – Stonington East**

Centerline Communications, LLC (“Centerline”) was directed to analyze the proposed AT&T facility located at **86 Voluntown Road in Stonington, Connecticut** for the purpose of determining whether the emissions from the Proposed AT&T 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.

Population 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 700 and 850 MHz Bands are approximately $467 \mu\text{W}/\text{cm}^2$ and $567 \mu\text{W}/\text{cm}^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) 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 performed for the proposed AT&T Wireless antenna facility located at **86 Voluntown Road in Stonington, Connecticut**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T 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.

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. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
UMTS	850 MHz	2	30
5G	850 MHz	3	25
LTE	850 MHz	2	40
LTE	700 MHz	4	40
LTE	2100 MHz (AWS)	4	30
LTE	1900 MHz (PCS)	4	40

Table 1: Channel Data Table



The following antennas listed in Table 2 were used in the modeling for transmission in the 700 MHz, 850 MHz, 1900 MHz (PCS), and 2100 MHz (AWS) 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.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Kathrein 800-10966	150
A	2	CCI HPA65R-BU4A	150
A	3	Powerwave 7770	150
B	1	Powerwave 7770	150
B	2	CCI HPA65R-BU4A	150
B	3	Kathrein 800-10966	150
C	1	Kathrein 800-10966	150
C	2	CCI HPA65R-BU4A	150
C	3	Powerwave 7770	150

Table 2: Antenna Data

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



RESULTS

Per the calculations completed for the proposed AT&T configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power	ERP (W)	MPE %
Antenna A1	Kathrein 800-10966	700 MHz / 850 MHz / 2100 MHz / 850 MHz	13.45 dBd / 14.15 dBd / 15.95 dBd / 14.15 dBd	10	330	9,873.28	2.31
Antenna A2	CCI HPA65R-BU4A	700 MHz / 1900 MHz / 1900 MHz	11.05 dBd / 14.75 dBd / 14.75 dBd	12	480	11,590.83	2.22
Antenna A3	Powerwave 7770	850 MHz	11.5 dBd	2	60	847.52	0.23
Sector A Composite MPE%							4.77
Antenna B1	Powerwave 7770	850 MHz	11.5 dBd	2	60	847.52	0.23
Antenna B2	CCI HPA65R-BU4A	700 MHz / 1900 MHz / 1900 MHz	11.05 dBd / 14.75 dBd / 14.75 dBd	12	480	11,590.83	2.22
Antenna B3	Kathrein 800-10966	700 MHz / 850 MHz / 2100 MHz / 850 MHz /	13.45 dBd / 14.15 dBd / 15.95 dBd / 14.15 dBd	10	330	9,873.28	2.31
Sector B Composite MPE%							4.77
Antenna C1	Kathrein 800-10966	700 MHz / 850 MHz / 2100 MHz / 850 MHz	13.45 dBd / 14.15 dBd / 15.95 dBd / 14.15 dBd	10	330	9,873.28	2.31
Antenna C2	CCI HPA65R-BU4A	700 MHz / 1900 MHz / 1900 MHz	11.05 dBd / 14.75 dBd / 14.75 dBd	12	480	11,590.83	2.22
Antenna C3	Powerwave 7770	850 MHz	11.5 dBd	2	60	847.52	0.23
Sector C Composite MPE%							4.77

Table 3: AT&T Emissions Levels



The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum AT&T MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each AT&T Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	MPE%
AT&T – Max Per Sector Value	4.77%
Nextel	0.19%
Sprint	1.49%
T-Mobile	1.55%
Metro PCS	0.51%
Verizon	2.91%
Site Total MPE %:	11.42 %

Table 4: All Carrier MPE Contributions

AT&T Sector A Total:	4.77 %
AT&T Sector B Total:	4.77 %
AT&T Sector C Total:	4.77 %
Site Total:	11.42 %

Table 5: Site MPE Summary



FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

AT&T _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (i.tW/cm ²)	Frequency (MHz)	Allowable MPE (i.tW/cm ²)	Calculated % MPE
AT&T 700 MHz LTE	2	885.24	150.0	2.83	700 MHz LTE	467	0.61%
AT&T 850 MHz 5G	2	650.04	150.0	2.08	850 MHz 5G	567	0.37%
AT&T 2100 MHz LTE AWS	4	1180.65	150.0	7.55	2100 MHz LTE AWS	1000	0.75%
AT&T 850 MHz LTE	2	1040.06	150.0	3.32	850 MHz LTE	567	0.59%
AT&T 700 MHz LTE	4	509.40	150.0	3.26	700 MHz LTE	467	0.70%
AT&T 1900 MHz LTE	4	1194.15	150.0	7.63	1900 MHz LTE	1000	0.76%
AT&T 1900 MHz LTE	4	1194.15	150.0	7.63	1900 MHz LTE	1000	0.76%
AT&T 850 MHz UMTS	2	423.76	152.0	1.32	850 MHz UMTS	567	0.23%
						Total:	4.77%

Table 6: AT&T Maximum Sector MPE Power Values



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 AT&T 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:

AT&T Sector	Power Density Value (%)
Sector A:	4.77 %
Sector B:	4.77 %
Sector C:	4.77 %
AT&T Maximum Total (per sector):	4.77 %
Site Total:	11.42 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **11.42 %** 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.

A handwritten signature in black ink that reads 'Ryan B. McManus'.

Ryan McManus
Senior RF EME Compliance Manager
Centerline Communications, LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767

EXHIBIT 6



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

10 Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

May 15, 2001

Christopher B. Fisher, Esq.
Cuddy & Feder & Worby LLP
90 Maple Avenue
White Plains, NY 10601-5196

RE: **TS-AT&T-137-010423-2** - AT&T Wireless PCS LLC request for an order to approve tower sharing at an existing telecommunications facility located at 86 Voluntown Road, Stonington, Connecticut.

Dear Attorney Fisher:

At a public meeting held May 10, 2001, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

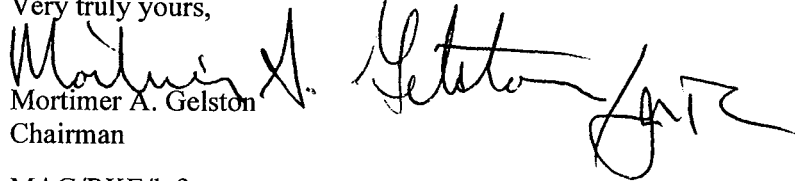
This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letters dated April 19, 2001, and May 4, 2001.

Thank you for your attention and cooperation.

Very truly yours,


Mortimer A. Gelston
Chairman

MAG/RKE/laf

- c: Honorable Donald R. Maranell, First Selectman, Town of Stonington
- Edward Donnelly, Town Planner, Town of Stonington
- Esther McNany, SBA, Inc.
- Julie M. Donaldson, Esq., Hurwitz & Sagarin LLC
- Ronald C. Clark, Nextel Communications, Inc.
- Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae