



Filed by:

G. Scott Shepherd, Site Development Specialist II - SBA Communications  
134 Flanders Rd., Suite 125, Westborough, MA 01581  
508.251.0720 x 3807 - GShepherd@sbsite.com

January 11, 2021

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

**Notice of Exempt Modification**  
**651 Paddock Ave., Meriden, CT. 06450**  
**Latitude : 41.512750**  
**Longitude : -72.779449**  
**T-Mobile #: CT11493A\_Anchor**

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 117-foot level of the existing 119-foot Monopole Tower at 651 Paddock Ave., Meriden, CT. The tower is owned by SBA Properties, Inc. The property is owned by the First Assembly of God Church of Meriden. T-Mobile plans to remove six (6) existing L700/L2100 MHz antennas and replace with six (6) new L2500 MHz antennas and install three (3) additional /L700/L600/L1900 MHz antennas.

The new antennas support 5G services and would be installed at the 117-foot level of the tower.

**Please note:** Per the Connecticut Siting Council Website: CSC COVID 19 Guidelines.  
*In order to prevent the spread of Coronavirus and protect the health and safety of our members and staff, as of March 18, 2020, the Connecticut Siting Council shall convert to full remote operations until March 30, 2020. Please be advised that during this time period, all hard copy filing requirements will be waived in lieu of an electronic filing. Please also be advised that the March 26, 2020 regular meeting shall be held via teleconference. The Council's website is not equipped with an on-line filing fee receipt service. Therefore, filing fees and/or direct cost charges associated with matters received electronically during the above-mentioned time period will be directly invoiced at a later date*

Planned Modifications:

TOWER

Remove:

- Low Profile Platform (PV-LPP12M-B)

Remove and Replace:

- (3) Ericsson - AIR 21 B4A/2P – Panel (Remove) / (3) Ericsson AIR6449 B41 Panel L2500 MHz (Replace)
- (3) Ericsson AIR21 B2P/B4P – Panel (Remove) / (3) Ericsson AIR32 KRD901146-1 Panel (Replace)
- (3) Ericsson S11B12 RRU (Remove) / (3) Ericsson 4415 B25 RRU (Replace)

Install New:

- (3) RFS APXVAALL18-43-U-NA20 antenna L700/L600/L1900
- (3) Ericsson Radio 4449 B71+B85 RRU
- (3) Ericsson Radio 4415 RRUs
- Low Profile Platform w/HRK Sitepro RMQP-4096-HK
- Commscope SDX1926Q-43 Diplexers
- (2) 1-5/8" fiber

Existing Equipment to Remain:

- (3) Ericsson KRY 112 144/1 TMAs
- (1) 1-5/8" fiber
- (6) 1-5/8" coax

Entitlements:

- (6) 1-5/8" coax
- (2) 1-5/8" fiber

GROUND

Install New:

- Equipment inside existing RBS6102 equipment cabinet
- B160 Battery Cabinet on existing concrete pad
- Ericsson 6160 Equipment cabinet

Remove and Replace:

- N/A

This facility was approved by the CSC on August 29, 2007, Docket No. 329, and later approved by the City of Meriden under Permit #B07-4079, both attached for your reference. The approval was provided for the construction, maintenance and operation of a telecommunications facility at 651 Paddock Ave. in Meriden, CT. There were no further post construction stipulations set. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16.50j-72(b)(2). In accordance with R.C.S.A. § 16.50j-73, a copy of this letter is being sent to the Town of Meriden's City Manager, Timothy Coon, and Building Official, Thomas Lozier and Property Owner, First Assembly of God Church of Meriden. (Separate notice is not being sent to the tower owner, as it belongs to SBA.)

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modification will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Site Development Specialist II  
 SBA COMMUNICATIONS CORPORATION  
 134 Flanders Rd., Suite 125  
 Westborough, MA 01581  
 508.251.0720 x3804 + T  
 508.366.2610 + F  
 508.868.6000 + C  
[GShepherd@sbsite.com](mailto:GShepherd@sbsite.com)

Attachments

- cc: Timothy Coon, City Manager of the Town of Meriden / with attachments  
*Town of Meriden, 142 East Main St., Meriden, CT 06450*  
 Thomas Lozier, Building Official / with attachments  
*Town of Meriden, 142 East Main St., Meriden, CT 06450*  
 First Assembly of God Church of Meriden / with attachments  
*601 Paddock Ave., Meriden, CT 06450*

**EXHIBIT LIST**

Exhibit 1	Check Copy	To be invoiced at a later date per Covid guidelines.
Exhibit 2	Notification Receipts	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Original Zoning Approval	CSC 8/29/200 Docket No. 329
Exhibit 6	Construction Drawings	Chappell Engineering dated 1/4/21
Exhibit 7	Structural Analysis	TES dated 11/10/20
Exhibit 8	Post-Mod Mount Analysis	TES dated 11/9/20
Exhibit 10	EME Report	Transcom dated 11/25/20

## EXHIBIT 1

Normally, Exhibit 1 would contain a copy of the check for the filing fee.

# EXHIBIT 2

ORIGIN ID:BFBA (508) 614-0389  
RICK WOODS  
SBA COMMUNICATIONS CORPORATION  
134 FLANDERS RD  
SUITE 125  
WESTBOROUGH, MA 01581  
UNITED STATES US

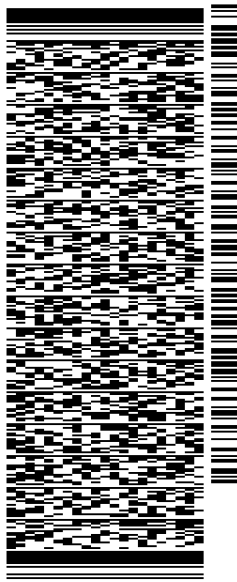
SHIP DATE: 11 JAN 21  
ACTWGT: 1.00 LB  
CAD: 105843304/NET4280

BILL SENDER

TO **MELANIE A. BACHMAN EXEC. DIR**  
**CONNECTICUT SITING COUNCIL**  
**TEN FRANKLIN SQUARE**

**NEW BRITAIN CT 06051**

(508) 251-0720 X.3807 REF: 105692009-6089  
INV# PO: DEPT:

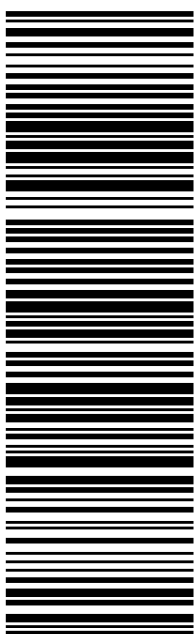


J2020071401uv

TRK# 7725 9227 4011  
0201  
TUE - 12 JAN 10:30A  
PRIORITY OVERNIGHT

**EB BDLA**

06051  
CT-US BDL



56B.J1/1136/B766

**After printing this label:**

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

**Warning:** Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

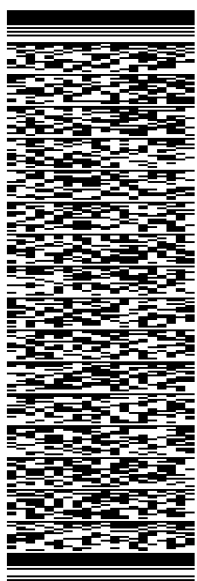
ORIGIN ID:BFBA (508) 614-0389  
RICK WOODS  
SBA COMMUNICATIONS CORPORATION  
134 FLANDERS RD  
SUITE 125  
WESTBOROUGH, MA 01581  
UNITED STATES US

SHIP DATE: 11 JAN 21  
ACTWGT: 1.00 LB  
CAD: 105843304/NET4280  
BILL SENDER

TO **TIMOTHY COON, CITY MANAGER**  
**TOWN OF MERIDEN**  
**142 EAST MAIN ST.**

**MERIDEN CT 06450**

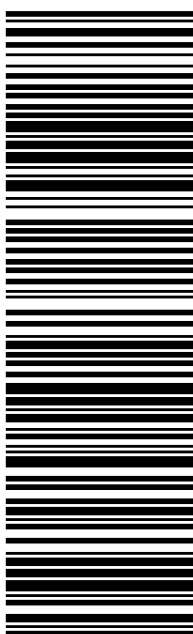
(508) 251-0720 X 3807 REF: 1056920096089  
INV# DEPT:



TRK# 7725 9231 5450 TUE - 12 JAN 10:30A  
0201 PRIORITY OVERNIGHT

**EB RSPA**

06450  
CT:US BDL



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ORIGIN ID:BFBA (508) 614-0389  
 RICK WOODS  
 SBA COMMUNICATIONS CORPORATION  
 134 FLANDERS RD  
 SUITE 125  
 WESTBOROUGH, MA 01581  
 UNITED STATES US

SHIP DATE: 11 JAN 21  
 ACTWGT: 1.00 LB  
 CAD: 105843304/NET4280

BILL SENDER

TO THOMAS LOZIER, BUILDING OFFICIAL  
 TOWN OF MERIDEN  
 142 EAST MAIN ST.

MERIDEN CT 06450

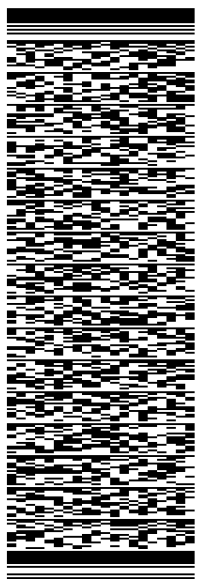
(508) 251-0720 X 3807

REF: 105692009-6089

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PO:

DEPT:



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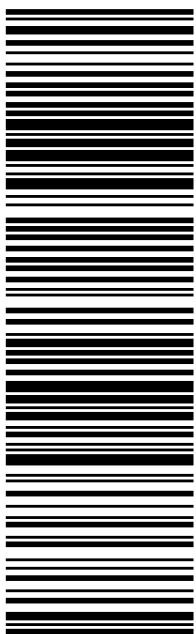
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SBA COMMUNICATIONS CORPORATION	CAD: 105843304/NET4280
134 FLANDERS RD	
SUITE 125	
WESTBOROUGH, MA 01581	BILL SENDER
UNITED STATES US	
TO	
<b>ASSEMBLY OF GOD CHURCH</b>	
<b>601 PADDOCK AVE</b>	
<b>MERIDEN CT 06450</b>	
(508) 251-0720 X 3807	REF: 105692009-6089
INV#	
PO:	DEPT:

TRK#	TUE - 12 JAN 10:30A
0201	PRIORITY OVERNIGHT
<b>7725 9236 6998</b>	
<b>EB RSPA</b>	
CT:US	<b>06450</b>
	<b>BDL</b>

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# EXHIBIT 3



CITY OF MERIDEN

GIS Services

**PROPERTY INFORMATION**

Location: **651 PADDOCK AVE** Map/Lot: 0906-098D-0020-0005

**OWNER INFORMATION**

Owner(s):  
FIRST ASSEMBLY OF GOD CHURCH  
OF MERIDEN INC

Owner Address:  
PO BOX 2777  
MERIDEN, CT 06450

**BUILDING INFORMATION**

**Card Number: 1**

Total Units: 1

OVERVIEW	
Building ID	14581
Finished Area	13,224
Comm/Rental Units	1
Living Units	0
Building Type	Church
Year Built	1968
Effective Yr Built	
Building Number	1
Condo Name	

INTERIOR DETAILS	
<b>Rooms</b>	
<b>BedRooms</b>	
Full Bath	0
Full Bath Rating	
Half Bath	0
Half Bath Rating	
Kitchens	0
Kitchen Rating	
Fireplaces	0

CONSTRUCTION DETAILS	
Exterior	Brick
Roof Structure	Gable
Roof Cover	Asphalt
Quality	C
Heat Fuel	Oil
Heat Type	Forced Air
Prcnt. Heated	100.00
Prcnt. AC	0.00
Stories	1 story
Foundation	Concrete

**Sub Area Summary**

Building ID	Description	Total Area	Fin. Area	Perimeter
14581	1st FLOOR	6,612	6,612	480
14581	BASEMENT	6,612	0	480
14581	COMM BSMT	6,612	6,612	0
14581	ENCL PORCH	64	0	32
14581	ENCL PORCH	224	0	72

**Special Features**

BuildingID	Description	Quantity	Area	Length	Width	YearBuilt	Quality
14581	PAVING-ASPT	1	17,000			1990	Average
14581	SHED FRAME	1	140			1968	Average

**APPRAISAL INFORMATION**

Tax District: 1 District Name: OUTER DISTRICT District Mill Rate: 40.86

Grand List  
Year: 2019

Land Appraised	Building Appraised	Yard Appraised	Total Appraised Value	Land Assessed	Building Assessed	Yard Assessed	Special Land Value	Total Assessed Value
\$152,200	\$876,800	\$31,100	\$1,060,100	\$106,540	\$613,760	\$21,770	\$0	\$742,070

Previous  
Year: 2018

Land Value	Building Value	Yard Items	Appraised Value	Land Value	Building Value	Yard Items	Assessed Value
\$152,300	\$876,800	\$31,100	\$1,060,200	\$106,610	\$613,760	\$21,770	\$742,140

**LAND INFORMATION**

Land Use	Zoning	Land Area	Neighborhood Description
Tax Exempt	S-R	2.93700	E. SIDE BTWEEN WIL.CRS & 91

\*Confirm zoning with Planning Office.  
[Zoning map](#) is the official document to determine zone.

**SALES INFORMATION**

Sale Date	Sale Price	Book	Page	Grantor	Grantee	Deed Type
11/12/2010	\$12,000	4540	0088	FIRST ASSEMBLY CHURCH OF GOD C,	SHAW JEAN	Warranty Deed
6/26/1967	\$0	487	16			
6/26/1967	\$0	487	16			

**ASSESSOR'S PERMIT HISTORY**

Date	Permit#	Description	Permit Type	Status	Cost
4/27/2018	B-18-209	INSTALL 3 REPLACEMENT ANTENNAS. 7/10/18 EST COMPLETE N/C MM.		Closed	\$15,000
1/22/2018	B-18-42	REPLACE 3 EXISTING ANTENNA W/3 NEWER TECHNOLOGY CELL ANTENNA AND ASSOCIATED EQUIPMENT.NO CHANGE TO TOWER. 7/10/18 EST COMPLETE N/C MM.		Closed	\$25,000
8/22/2017	B-17-685	9/15/17 - 3 DAY FUNCTION.POLE TENT 40X60.ALSO E-17-472 FOR THE ELECTRIC FOR TENT.		Closed	\$1,000
8/22/2017	B-17-685	POLE TENT 40X60 FOR 3DAY EVENT 9/15/17.		Closed	\$1,000
8/22/2017	E-17-472	ELECTRIC FOR TEMP TENT.3 DAY EVENT 9/15/17		Closed	\$1,000

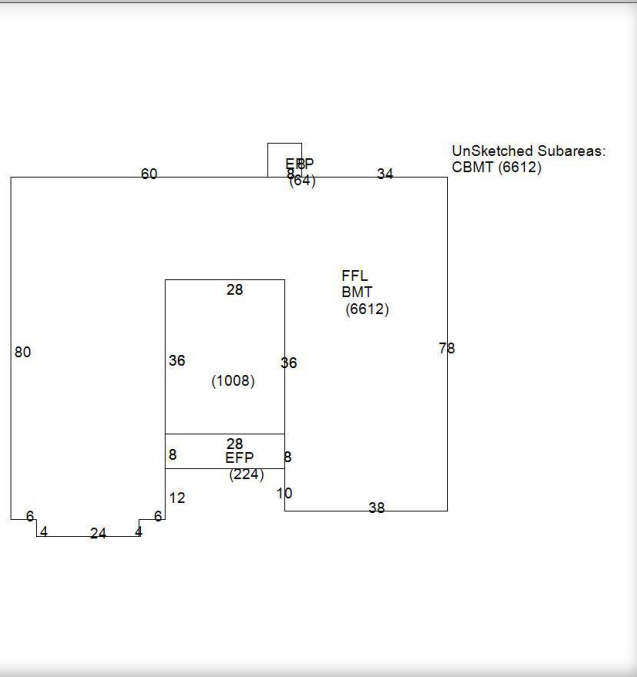
	7/2	3/13/17.			
11/21/2016	B-16-1135	ANTENNAE PANELS REPLACED W/NEW MODELS.		Closed	\$15,000
2/26/2016	E-16-94	CAMERAS INSTALLED.Approved by Bldg Dept.		Closed	\$2,000
5/18/2015	B-15-275			Closed	\$3,000
12/30/2014	B-14-259	NEW SIGN/6X3.		Closed	\$125
8/25/2014	2536			Closed	\$12,000
7/1/2014	1969	ADD ANTENNA'S TO TOWER.		Closed	\$15,000
5/9/2014	1283	REPLACE CELL ANTENNAS & EQUIPMENT.		Closed	\$15,000
4/29/2014	1147	INSTALL LOW VOLTAGE CCTV CAMERA SYS		Closed	\$6,700
12/21/2012	3964	VERIZON WIRELESS - REPLACING 3 EXISTING ANTENNAS WITH 9 NEWER MODEL ANTENNAS		Closed	\$20,000
7/3/2012	2110	REPLACE EXISTING CHURCH STEEPLE WITH SIMILAR STRUCTURE TO CODE	C	Closed	\$4,100
4/27/2011	1269	BONDING OF CSST GAS PIPING PER CODE.		Closed	\$300
2/23/2011	496	FIRE ALARM SYSTEM UPGRADE WITH REPLACEMENT OF PANEL AND DEVICES.		Closed	\$7,150
5/18/2010	1383	"Clearwire" cell site. Install 100a. service per code. CRS#1469392	C	Closed	\$2,000
1/26/2010	160	CLEARWIRE ADDING ANTENNA'S TO EXISTING TELECOMMUNICATIONS TOWER PER PLANS AND TO CODE	C	Closed	\$15,001
12/28/2009	3843	INSTALL 8` OLYPIA CHIMNEY LINER FOR EXISTING WOODSTOVE		Closed	
5/27/2009	1584			Closed	
10/22/2008	3328	INSTALL 1000 GAL PROPANE TANK & GAS LINE PER NFPA 54 & 58		Closed	
8/26/2008	2675	CELL TOWER INSTALL 1-100A SERVICE FOR NEW AT&T EQUIPMENT		Closed	\$0
6/24/2008	1976	INSTALL 200A UG SERVICE AND TEL/COM WIRING TO A 12X30 MODULAR BUILDING		Closed	\$0
6/10/2008	1778	INSTALL ANTENNAS ON EXISTING TOWER AND ADD RADIO EQUIPMENT BUILDING TO COMPOUND 12X30 PREFAB		Closed	\$0
12/26/2007	4348	CELL TOWER:INSTALL UG UTILITIES FOR 800A MULTI-METER CENTER INSTALL GROUND GRID AND 200A FEEDER TO PAD MOUNTED T-MOBILE EQUIPMENT		Closed	\$0
11/26/2007	4079	CONSTRUCTION OF WIRELESS TELECOMMUNICATIONS FACILITY AND OMNIPOINT COMMUNICATIONS INC ANTENNAS AND EQUIPMENT		Closed	\$0
10/25/2007	3561	SERVICE UPGRADE TO 200A- RELOCATE SERVICE ENTRANCE CRS#1018499		Closed	\$0
6/1/2006	2048	10'X16' STORAGE SHED	RA	Closed	\$2,944
11/10/2004	4376	SIDING ON HOUSE	RA	Closed	\$7,750
1/1/1900	4376	SIDING ON HOUSE	RA	Closed	\$7,750
1/1/1900	2675	CELL TOWER INSTALL 1-100A SERVICE FOR NEW AT&T EQUIPMENT		Closed	\$0
1/1/1900	3561	SERVICE UPGRADE TO 200A- RELOCATE SERVICE ENTRANCE CRS#1018499		Closed	\$0

1/1/1900	4079	CONSTRUCTION OF WIRELESS TELECOMMUNICATIONS FACILITY AND OMNIPOINT COMMUNICATIONS INC ANTENNAS AND EQUIPMENT		Closed	\$0
1/1/1900	2048	10'X16' STORAGE SHED	RA	Closed	\$2,944
1/1/1900	4348	CELL TOWER:INSTALL UG UTILITIES FOR 800A MULTI-METER CENTER INSTALL GROUND GRID AND 200A FEEDER TO PAD MOUNTED T-MOBILE EQUIPMENT		Closed	\$0
1/1/1900	1778	INSTALL ANTENNAS ON EXISTING TOWER AND ADD RADIO EQUIPMENT BUILDING TO COMPOUND 12X30 PREFAB		Closed	\$0
1/1/1900	1976	INSTALL 200A UG SERVICE AND TEL/COM WIRING TO A 12X30 MODULAR BUILDING		Closed	\$0

PROPERTY IMAGES

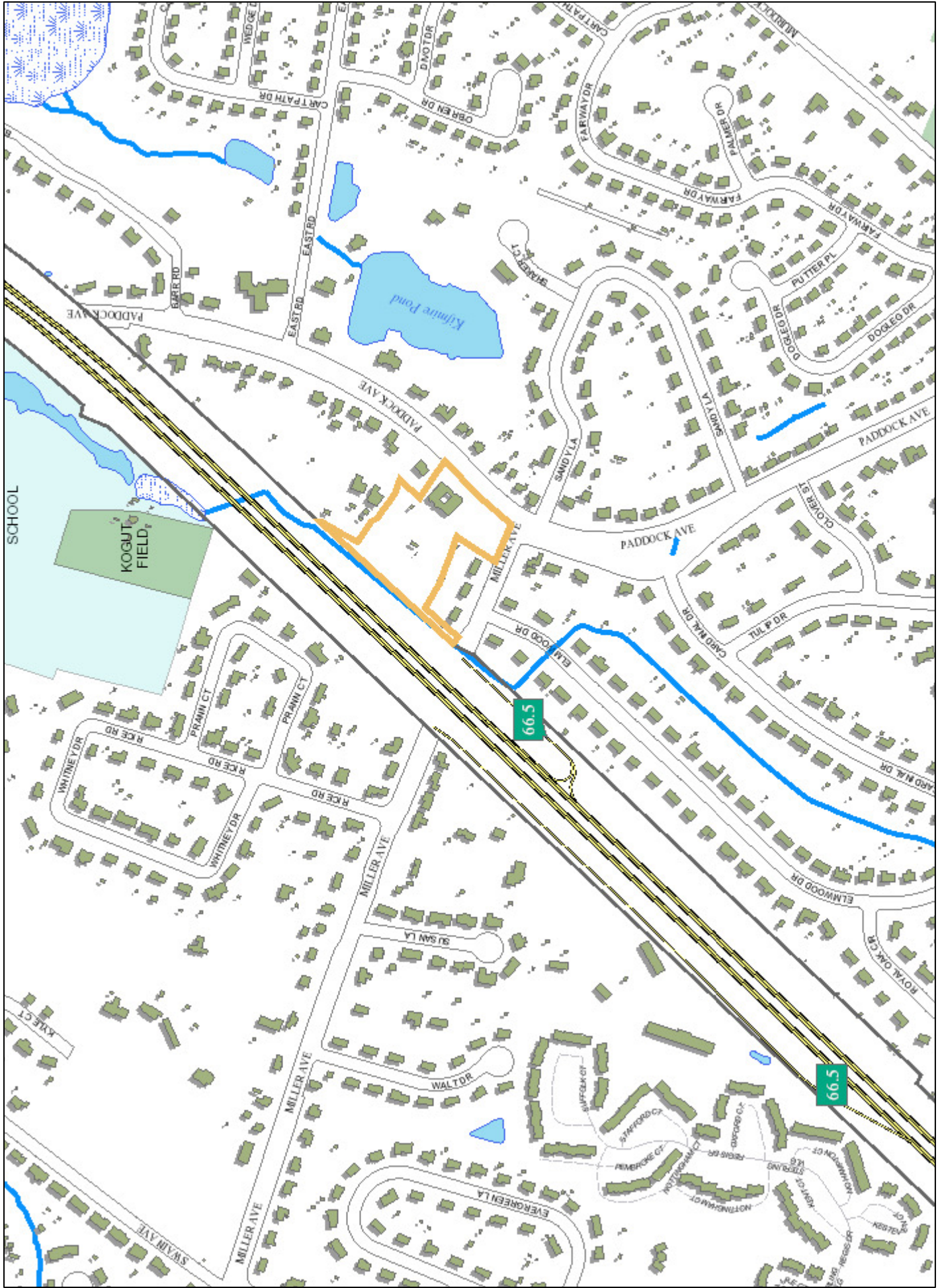


1 2 3 4



14583  
0906-098D-0020-0005  
1

# EXHIBIT 4





# EXHIBIT 5

SITE NAME: MERIDEN

SITE ID: CT13069-A

Transaction: Optasite

999-0040

**ZONING/PERMITTING COMPLETION FORM**

Address: 651 Paddock Ave, Meriden, CT 6450

Jurisdiction: CSC Zoning District: \_\_\_\_\_

Zoning Approval Type: Cert. of Env. Compatibility Case #: 329

Approval Date: 8/29/2007 Approved Height: \_\_\_\_\_ Tower Build Date: \_\_\_\_\_

If tower is destroyed or drop/swap required, tower can likely be rebuilt?  YES  NO

**Conditions of Approval:**

	Yes	No	N/A
Removal Bond _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Site Plan Submittal _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fall Zone _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Periodic Inspections _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Periodic Reporting _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Approval Renewal _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Additional Conditions _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**JURISDICTION POC/DEPT.**

Planning/Zoning: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Bldg./Code Enforcement: Bill Lussier

Phone: 203-630-4091 Fax: \_\_\_\_\_

Submitted by: Datches Estes Date: 9/11/08  
Zoning Compliance

**TO BE COMPLETED BY CORPORATE**

	Yes	No	N/A	
Zoning Approval Attached (required)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ordinance Attached (required)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Building Permit Attached (required) <u>City of Meriden</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>07-4079</u>
Certificate of Occupancy or Compliance (CO) attached (required)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>8/14/08</u>
Zoning Manager Approval: <u>Diane E. Borchardt</u>				Date <u>9/11/2008</u>
				<u>Diane E. Borchardt, AICP</u>



Daniel F. Caruso  
Chairman

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

Internet: [ct.gov/csc](http://ct.gov/csc)

September 11, 2007

Julie Kohler, Esq.  
Carrie L. Larson, Esq.  
Cohen and Wolf, P.C.  
1115 Broad Street  
Bridgeport, CT 06604

RE: **DOCKET NO. 329** – Optasite Towers LLC and Omnipoint Communications, Inc.  
application for a Certificate of Environmental Compatibility and Public Need for the  
construction, maintenance and operation of a telecommunications facility at Paddock  
Avenue in Meriden, Connecticut.

Dear Attorneys Kohler and Larson:

By its Decision and Order dated August 29, 2007, the Connecticut Siting Council (Council)  
granted a Certificate of Environmental Compatibility and Public Need for the construction,  
maintenance and operation of a telecommunications facility at 651 Paddock Avenue in Meriden,  
Connecticut.

Enclosed are the Council's Certificate, Findings of Fact, Opinion, and Decision and Order.

Very truly yours,

S/ Derek Phelps  
Executive Director

SDP/cm

Enclosures (4)



Daniel F. Caruso  
Chairman

# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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Internet: [ct.gov/csc](http://ct.gov/csc)

### CERTIFICATE

OF

### ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

### DOCKET NO. 329

Pursuant to General Statutes § 16-50k, as amended, the Connecticut Siting Council hereby issues a Certificate of Environmental Compatibility and Public Need to Optasite Towers LLC and Omnipoint Communications, Inc. This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on August 29, 2007.

By order of the Council,

August 29, 2007



Daniel F. Caruso, Chairman



---

**CITY OF MERIDEN**  
Department of Development & Enforcement  
Building Division - City Hall - Room #137

---

142 East Main Street  
Meriden, CT 06450  
Tel: (203) 630-4091  
Fax: (203) 630-4093

August 14, 2008

**RE: 651 Paddock Avenue - Meriden**  
**Permit #B07-4079**

To Whom It May Concern:

Please be advised, the building work completed at the above referenced property for a concrete pad for installation of satellite/antenna equipment at the above referenced property has been inspected by this Department and has been found to be acceptable.

Very truly yours,

William Lussier  
Building Official

/lw

PHONE 630-4091

CITY OF MERIDEN BUILDING DEPARTMENT

# BUILDING PERMIT

07-4079

### NOTICE!

THIS CARD MUST BE DISPLAYED  
ON PREMISES AT ALL TIMES  
UNDER \$5.00 PENALTY.

NAME *Anthony's Bulky Co. Inc.*

ADDRESS *657 Poppleton Ave*

By *W. Johnson*

ACME PRESS - PRINTERS

Inspection Inquiry - Results Comments - City of Meriden - E

SUNSHINE PUBLIC SECTOR  
NavLine



Inspection Inquiry - Results Comments

MBL: 0906-098D-020 -005 -  
Property address: 651 PADDOCK AVE  
Application, structure number: 08 00001976 000 000  
Permit type, sequence number: EL1 00 ELECTRICAL PMT UNDER 75K SQFT  
Inspection type, sequence number: EFIN 0001 ELECTRICAL FINAL  
Inspection status, date: INSPECTION COMPLETED 8/04/08

with exception  
1. cadweld ground wire west service post

- ✓ OK
- Y Exit
- < Cancel

# EXHIBIT 6

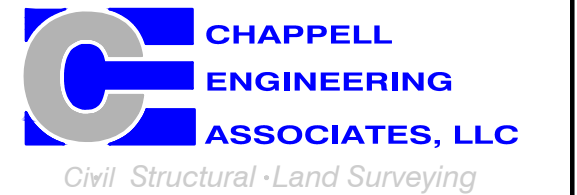


**T-MOBILE  
NORTHEAST LLC**

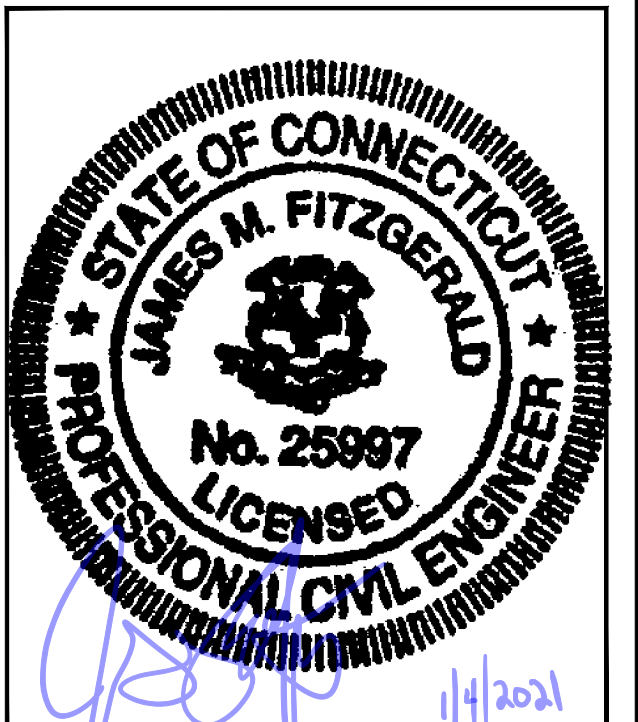
15 COMMERCE WAY, SUITE B  
NORTON, MA 02766  
(508) 286-2700



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



R.K. EXECUTIVE CENTRE  
201 BOSTON POST ROAD WEST, SUITE 101  
MARLBOROUGH, MA 01752  
(508) 481-7400  
www.chappellengineering.com



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	01/04/21	ISSUED FOR CONSTRUCTION	CMC
0	11/15/20	ISSUED FOR REVIEW	JRV

SITE NUMBER:  
**CT11493A**

SITE ADDRESS:  
651 PADDOCK AVENUE  
MERIDEN, CT 06450

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T-1**

# CT493/OPTASITE MERIDEN\_FT

651 PADDOCK AVENUE  
MERIDEN, CT 06450  
NEW HAVEN COUNTY

## SITE NO.: CT11493A

RF DESIGN GUIDELINE: 67D5A997DB HYBRID

### SITE NOTES

- THIS IS AN UNMANNED AND RESTRICTED ACCESS TELECOMMUNICATION FACILITY, AND IS NOT FOR HUMAN HABITATION. IT WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
  - ADA COMPLIANCE NOT REQUIRED.
  - POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.
  - NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
- CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
- NEW CONSTRUCTION WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
  - BUILDING CODE: 2018 CONNECTICUT STATE BUILDING CODE
  - ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE
  - STRUCTURAL CODE: TIA/EIA-222-G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

### APPROVALS

PROJECT MANAGER:	DATE:	ZONING/SITE ACQ.:	DATE:
CONSTRUCTION:	DATE:	OPERATIONS:	DATE:
RF ENGINEERING:	DATE:	TOWER OWNER:	DATE:

### T-MOBILE TECHNICIAN SITE SAFETY NOTES

LOCATION	SPECIAL RESTRICTIONS
SECTOR A:	ACCESS BY CERTIFIED CLIMBER
SECTOR B:	ACCESS BY CERTIFIED CLIMBER
SECTOR C:	ACCESS BY CERTIFIED CLIMBER
GPS/LMU:	UNRESTRICTED
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE

### GENERAL NOTES

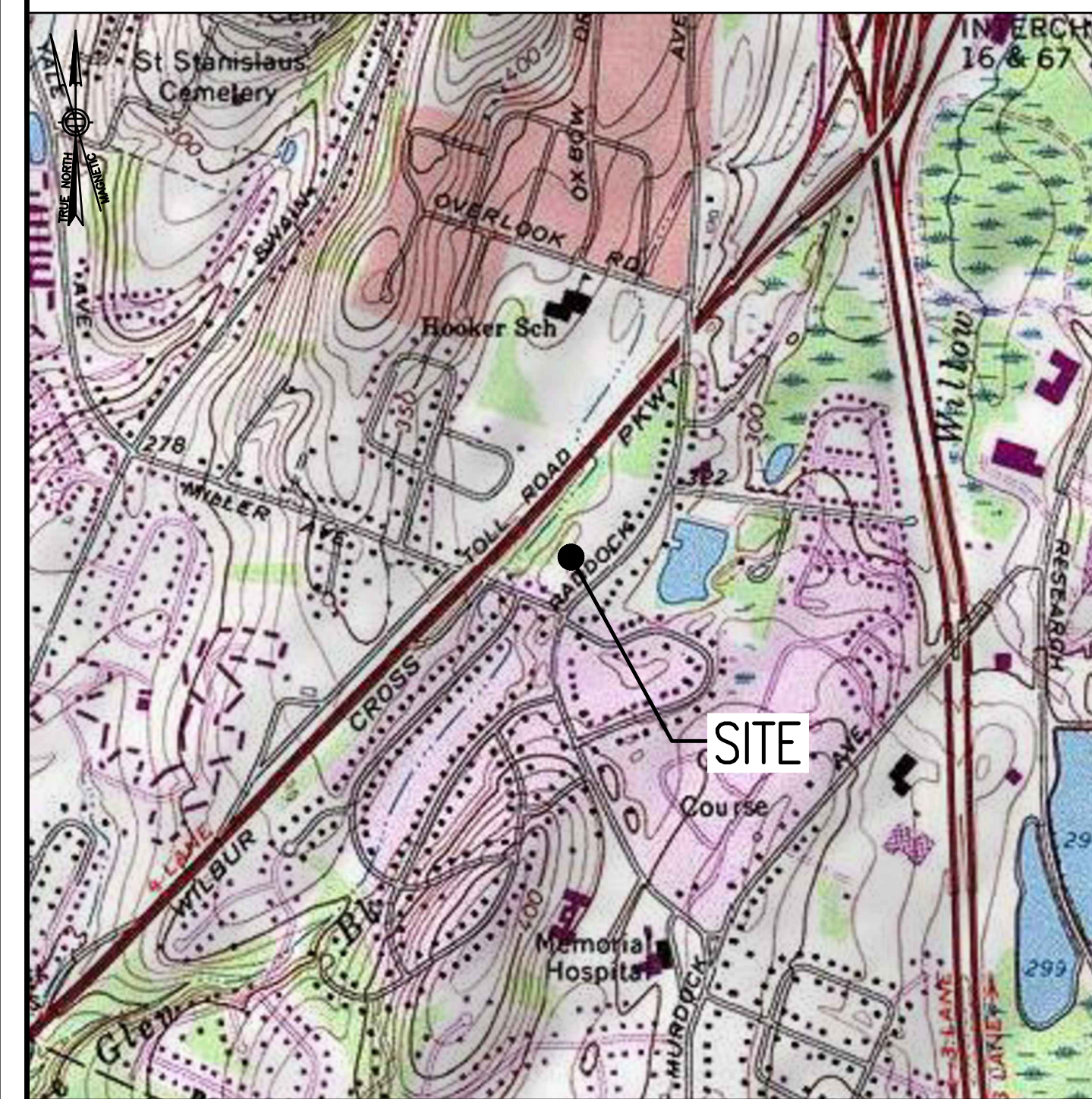
- THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
- THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
- THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE OWNERS REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
- THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
- THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE, UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
- THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
- THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
- THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
- THE CONTRACTOR SHALL NOTIFY THE PROJECT OWNER'S REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNLESS THE CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
- ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK.

AT LEAST 72 HOURS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 811



### VICINITY MAP

SCALE: 1" = 1000'-0"



### DIRECTIONS

TURN LEFT ONTO S WASHINGTON ST. TURN RIGHT ONTO MA-123 E. TURN LEFT TO MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. MERGE ONTO I-495 NORTH. TAKE EXIT 22 TO MERGE ONTO I-90 WEST TOWARD ALBANY. TAKE EXIT 9 FOR I-84 TOWARD HARTFORD CT/NEW YORK CITY. CONTINUE ONTO I-84. TAKE EXIT 57 ON THE LEFT FOR CT-15 SOUTH TOWARD I-91 SOUTH/CHARTER OAK BRIDGE/N.Y. CITY. CONTINUE ONTO CT-15 SOUTH. TAKE EXIT 86 TO MERGE ONTO I-91 SOUTH TOWARD NEW HAVEN/NEW YORK CITY. KEEP RIGHT TO STAY ON I-91 SOUTH. TAKE EXIT 17 FOR EAST MAIN STREET. TURN RIGHT ONTO EAST MAIN STREET. TURN LEFT ONTO PADDOCK AVENUE. SITE WILL BE ON THE RIGHT.

### SHEET INDEX

SHT. NO.	DESCRIPTION	VER.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND & EQUIPMENT PLANS	1
A-2	TOWER ELEVATION & ANTENNA PLANS	1
A-3	SITE DETAILS	1
A-4	ANTENNA & FEEDLINE CHARTS	1
E-1	ELECTRIC & GROUNDING DETAILS	1

### DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

### PROJECT SUMMARY

SITE NUMBER:	CT11493A
SBA SITE NUMBER:	CT13069-A
SBA SITE NAME:	MERIDEN
SITE ADDRESS:	651 PADDOCK AVENUE MERIDEN, CT 06450
PROPERTY OWNER:	FIRST ASSEMBLY OF GOD CHURCH OF MERIDEN INC PO BOX 2777 MERIDEN, CT 06450
TOWER OWNER:	SBA INFRASTRUCTURE, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	NEW HAVEN
ZONING DISTRICT:	S-R (SUBURBAN RESIDENTIAL)
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	119'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
SBA RSM:	STEPHEN ROTH PHONE: 860-539-4920 EMAIL: SROth@sbasite.com
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: N.41.512508° N41°30'45.03" LONGITUDE W.72.779165° W72°46'44.99"

#### SPECIAL ZONING NOTE:

BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE FACILITY REQUEST, EXPEDITED REVIEW, AND LIMITED/PARTIAL ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW, OR ADMINISTRATIVE REVIEW).

### GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR – T-MOBILE  
SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)  
OWNER – T-MOBILE  
OEM – ORIGINAL EQUIPMENT MANUFACTURER
- 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.
- 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, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND 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 AND/OR LANDLORD PRIOR TO CONSTRUCTION.
- 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 THE OWNER.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.
- THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.
- CONSTRUCTION SHALL COMPLY WITH ALL T-MOBILE STANDARDS AND SPECIFICATIONS.
- 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.
- THE EXISTING CELL SITES ARE 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.
- IF THE EXISTING 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 TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

### SITE WORK GENERAL NOTES:

- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T-MOBILE SPECIFICATION FOR SITE SIGNAGE.

### CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (400PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNDO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:  
CONCRETE CAST AGAINST EARTH.....3 IN.  
CONCRETE EXPOSED TO EARTH OR WEATHER:  
#6 AND LARGER .....2 IN.  
#5 AND SMALLER & WWF .....1½ IN.  
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:  
SLAB AND WALL .....¾ IN.  
BEAMS AND COLUMNS .....½ IN.
- A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.
- CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;  
(A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.  
(B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.  
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.
- AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.
- EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

### STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T-MOBILE SPECIFICATIONS UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾") AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ¾" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL
- ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

### SOIL COMPACTION NOTES FOR SLAB ON GRADE:

- EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
- COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
- AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.
- COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.
- AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

### COMPACTION EQUIPMENT:

- HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

### CONSTRUCTION NOTES:

- FIELD VERIFICATION:  
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T-MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.
- COORDINATION OF WORK:  
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
- CABLE LADDER RACK:  
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

### ELECTRICAL INSTALLATION NOTES:

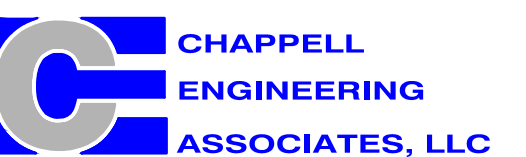
- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLE TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.
- POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND, DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

## T-MOBILE NORTHEAST LLC

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(508) 286-2700

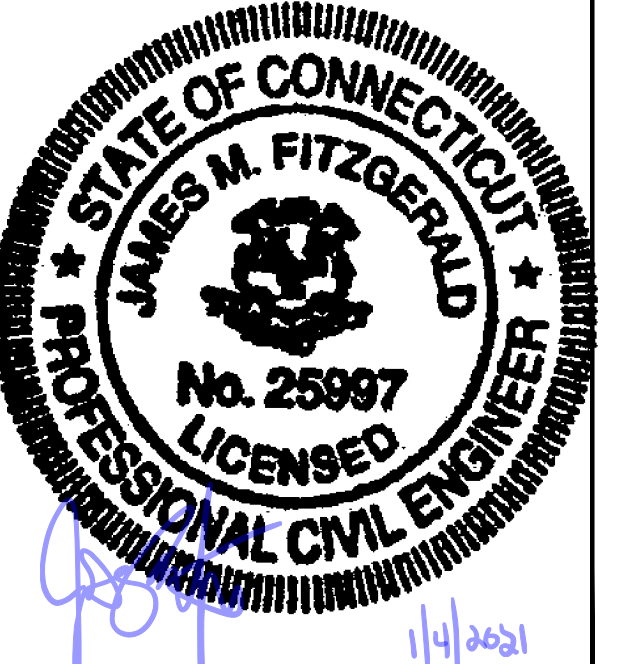


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CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	01/04/21	ISSUED FOR CONSTRUCTION	CAC
0	11/15/20	ISSUED FOR REVIEW	JRV

SITE NUMBER:  
**CT11493A**

SITE ADDRESS:  
651 PADDOCK AVENUE  
MERRIDEN, CT 06450

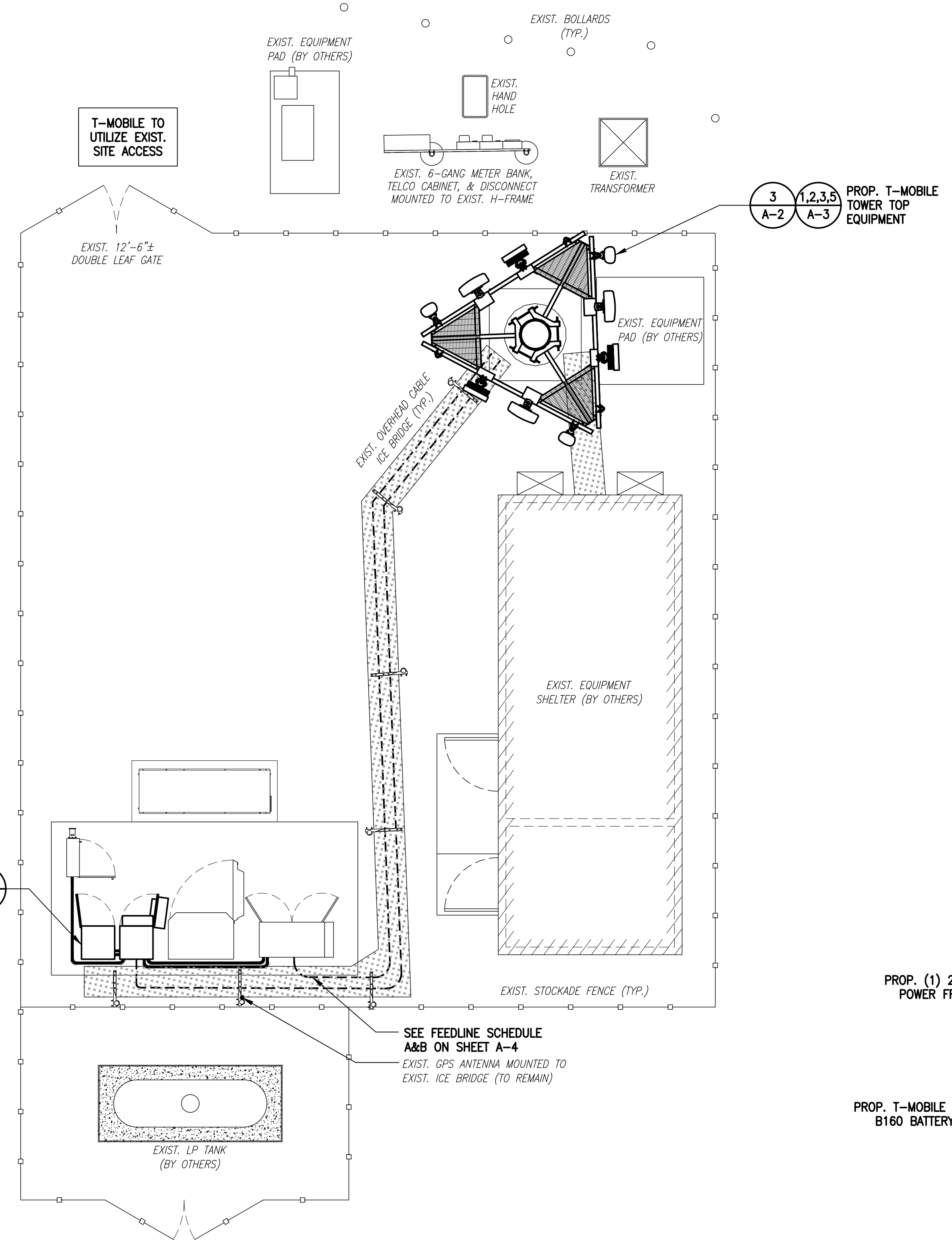
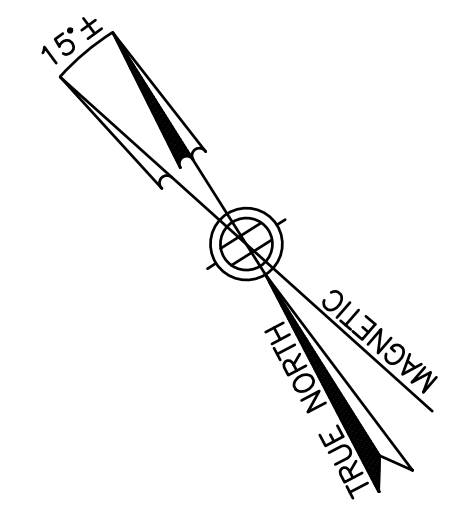
SHEET TITLE

GENERAL NOTES

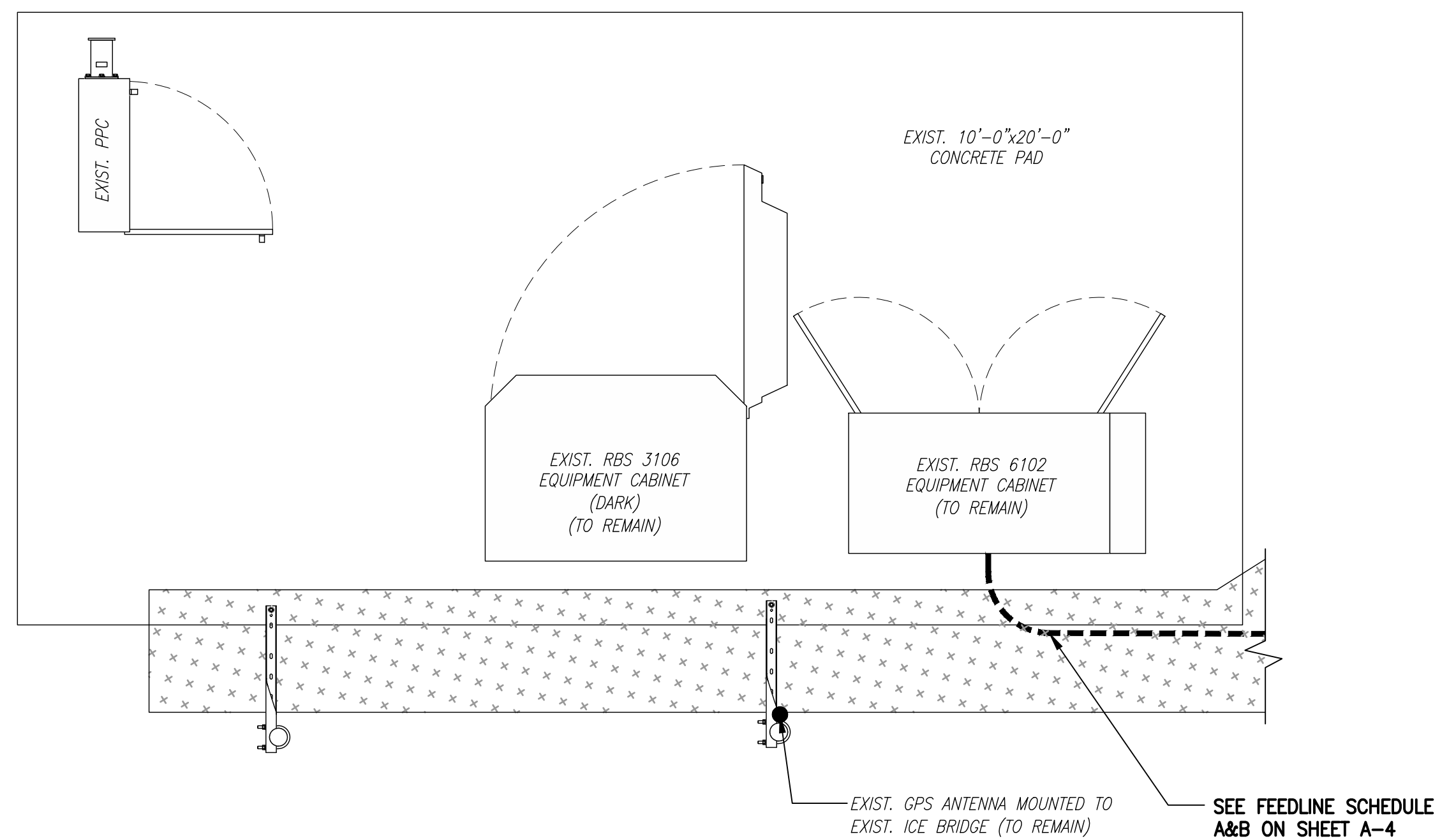
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**GN-1**

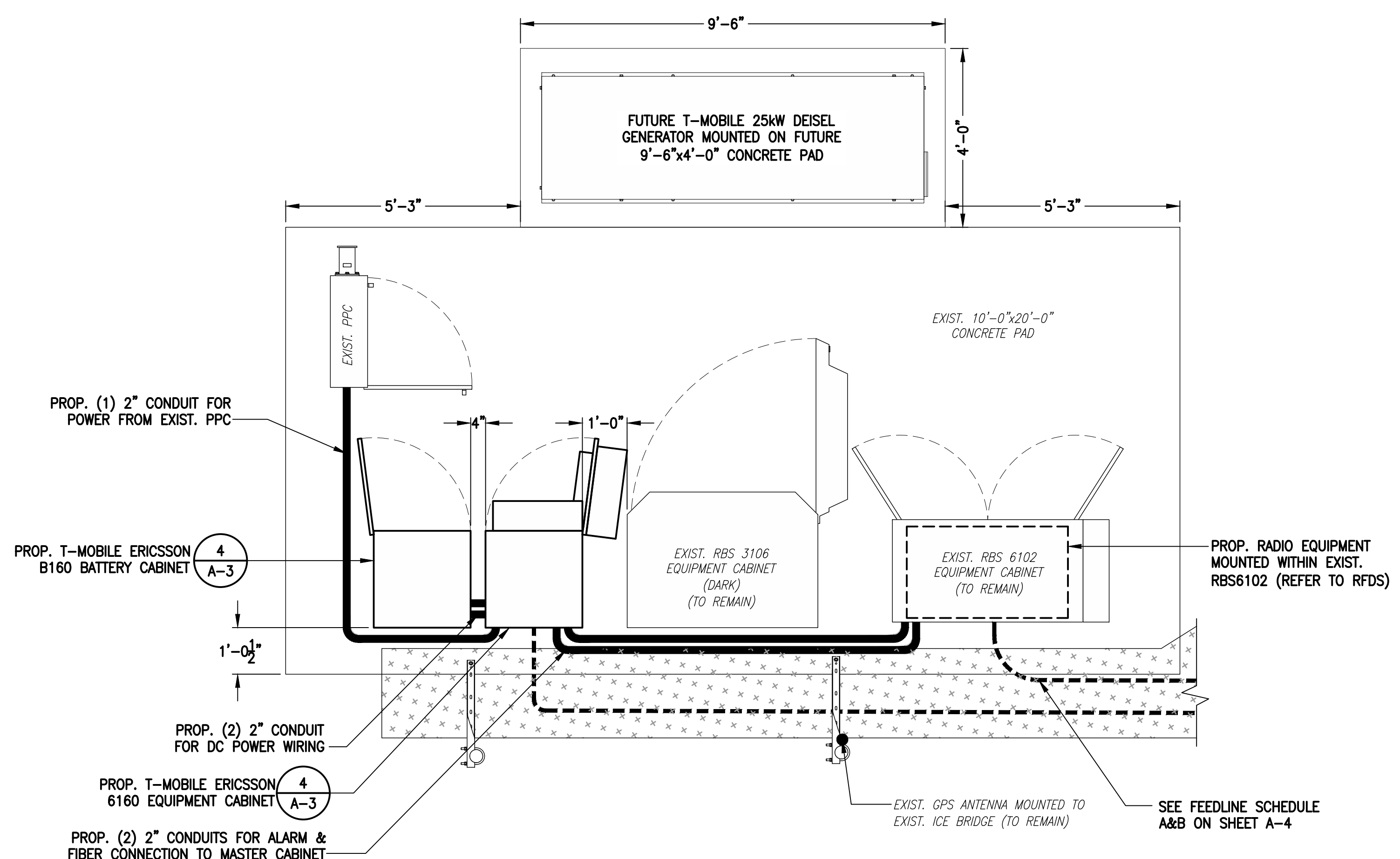
**SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):**  
 GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.



**COMPOUND PLAN** (1) (A-1)  
 SCALE: 1" = 5'-0"  
 0 5'-0" 10'-0" 15'-0"



**EXISTING EQUIPMENT PLAN** (2) (A-1)  
 SCALE: 1/2" = 1'-0"  
 0 2'-0" 4'-0" 6'-0"



**PROPOSED EQUIPMENT PLAN** (3) (A-1)  
 SCALE: 1/2" = 1'-0"  
 0 2'-0" 4'-0" 6'-0"

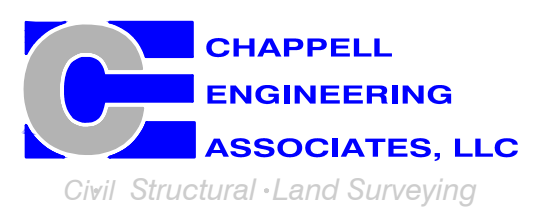
**MOUNT NOTE:**  
 REFER TO MOUNT ANALYSIS DONE BY TOWER ENGINEERING SOLUTIONS DATED 11/09/2020 FOR ADDITIONAL MOUNTING DETAILS

**T-MOBILE  
 NORTHEAST LLC**

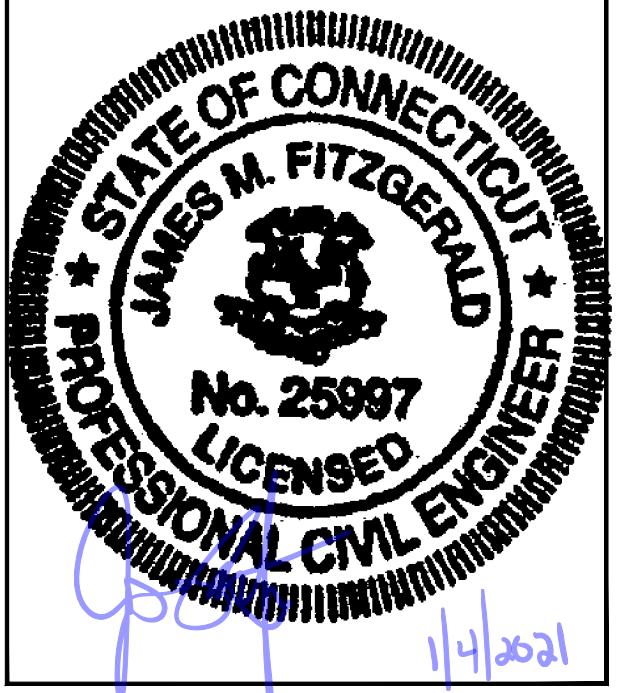
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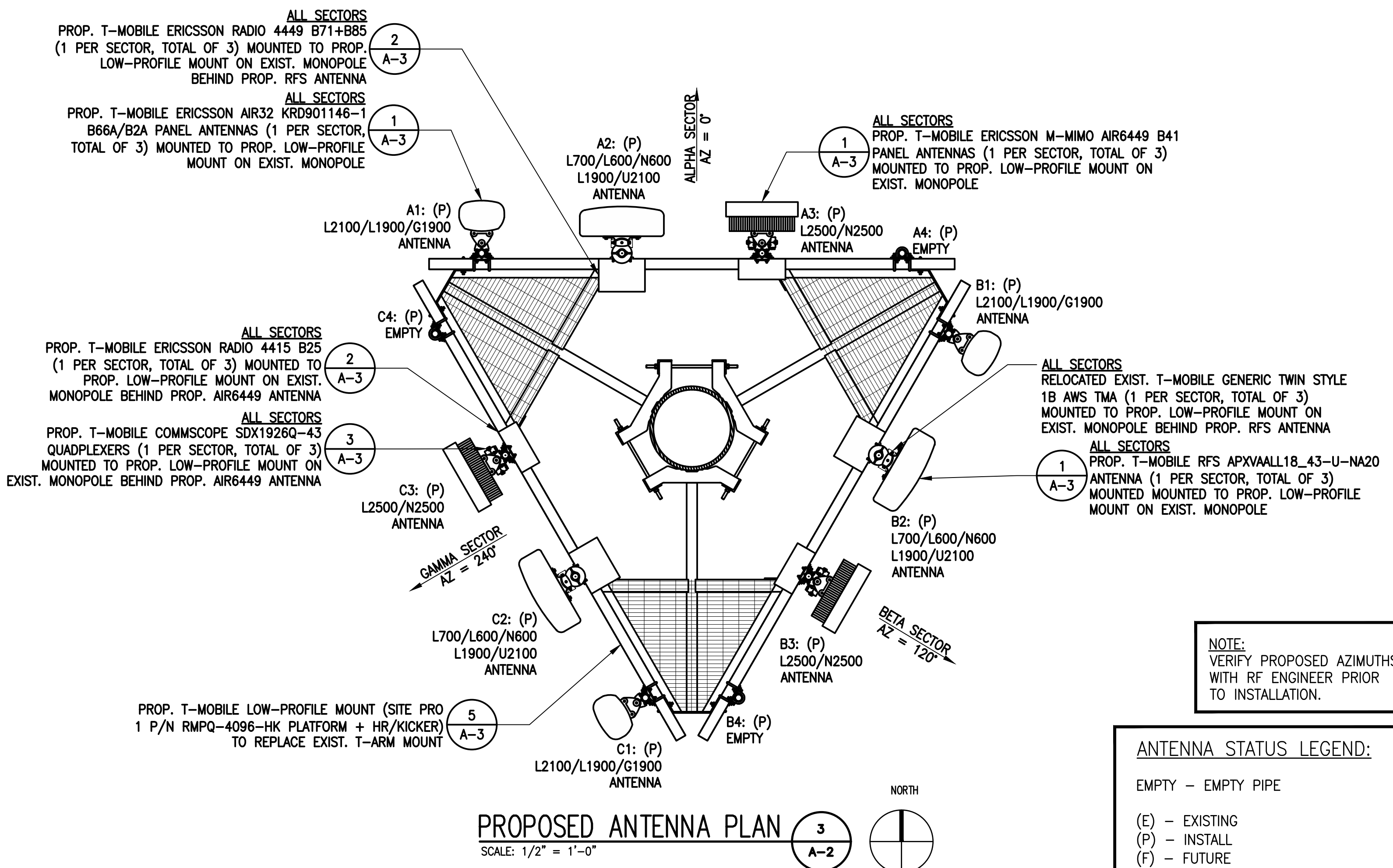
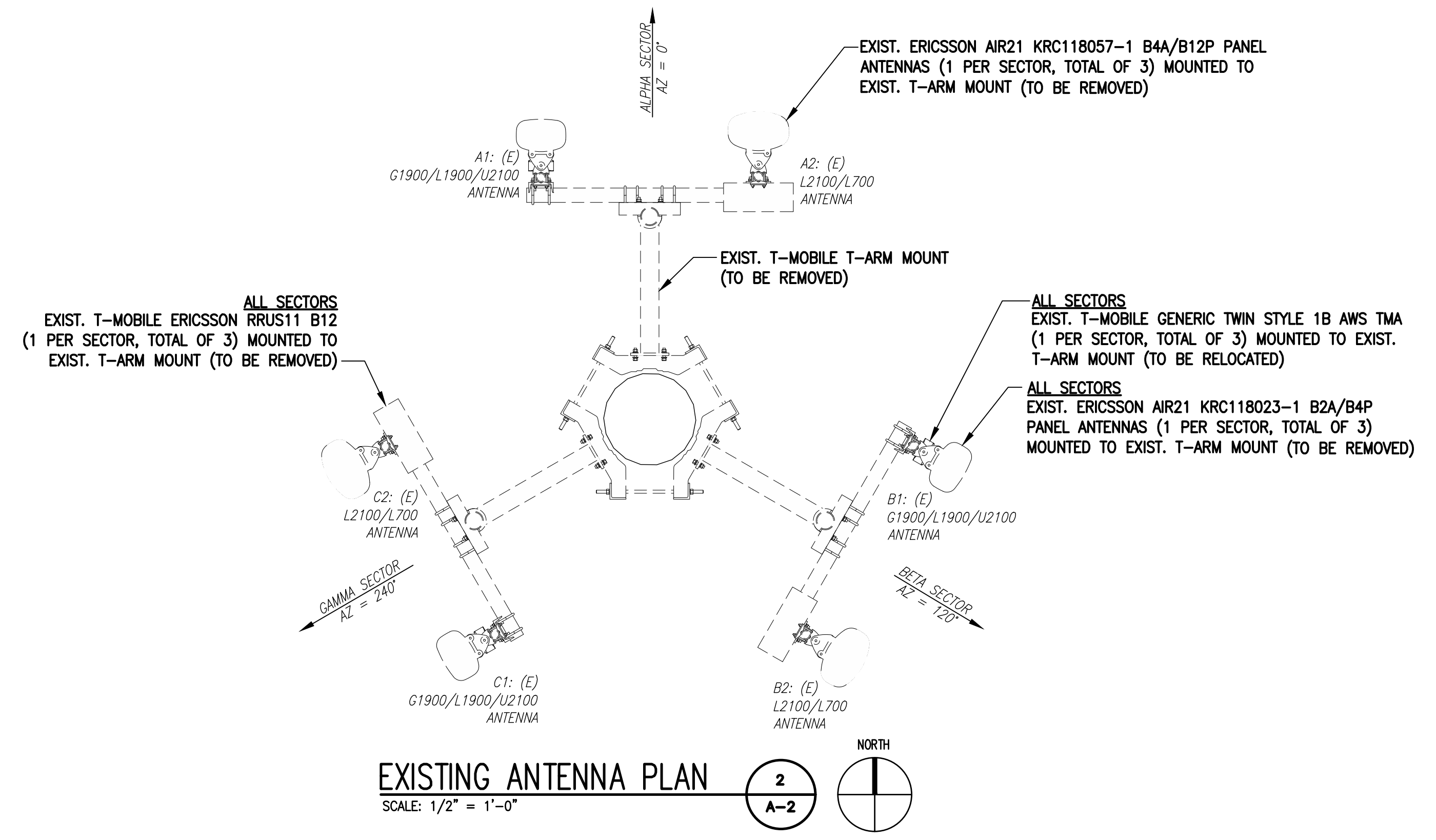
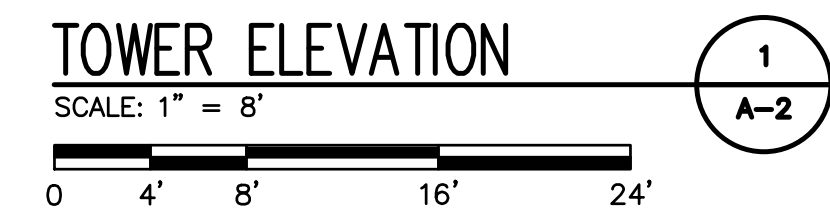
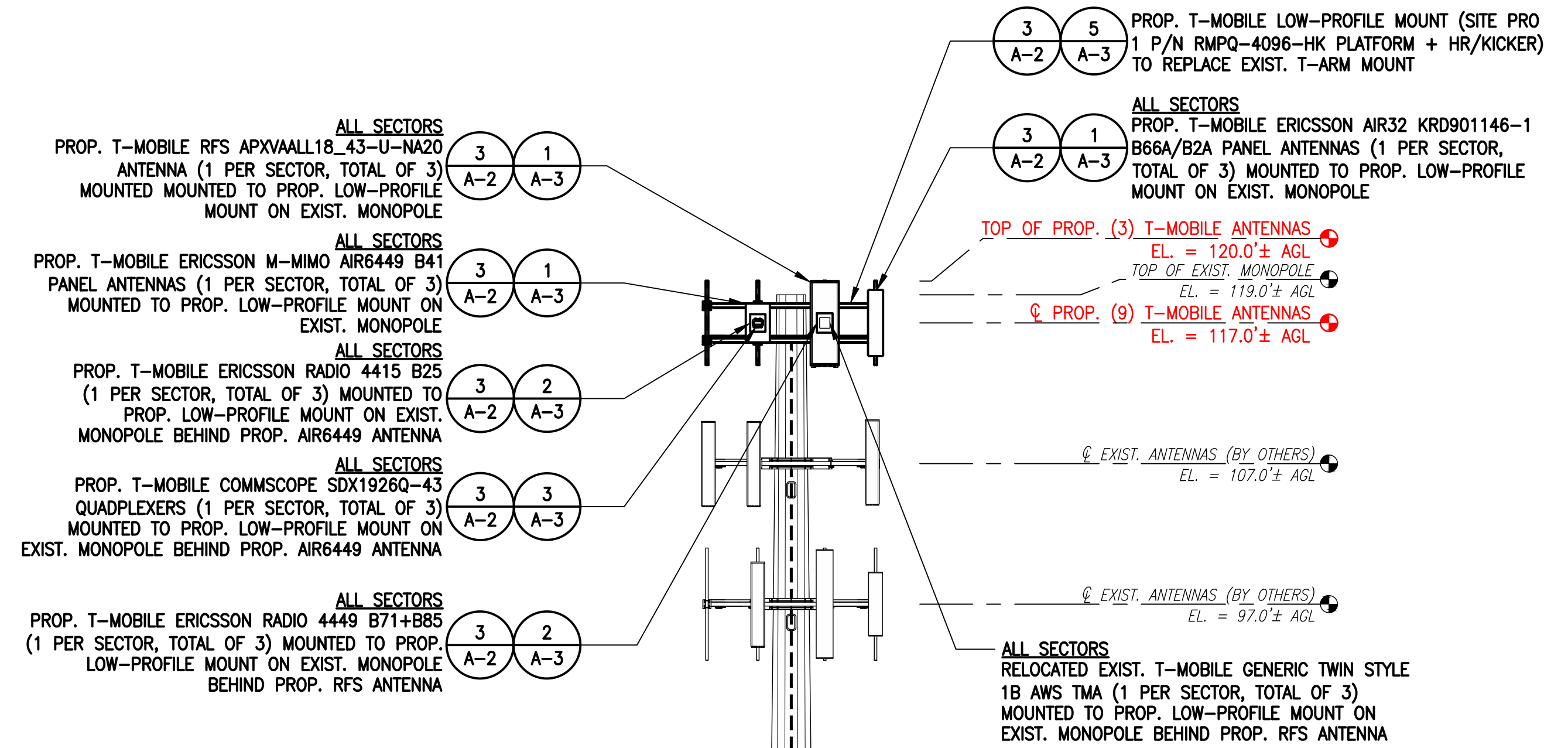
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 651 PADDOCK AVENUE  
 MERIDEN, CT 06450

SHEET TITLE  
**COMPOUND &  
 EQUIPMENT PLAN**

SHEET NUMBER  
**A-1**

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**RAD CENTER NOTE:**  
 T-MOBILE RAD CENTER SHOWN IN RED TEXT BASED ON SBA-PROVIDED CO-LOCATION APPLICATION, EQUIPMENT DATABASE, AND STRUCTURAL ANALYSIS. THE SBA-PROVIDED ANTENNA RAD CENTER SHALL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM THE T-MOBILE RFDs.



NOTE:  
 VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

**ANTENNA STATUS LEGEND:**

EMPTY - EMPTY PIPE

(E) - EXISTING

(P) - INSTALL

(F) - FUTURE

**MOUNT NOTE:**  
 REFER TO MOUNT ANALYSIS DONE BY TOWER ENGINEERING SOLUTIONS DATED 11/09/2020 FOR ADDITIONAL MOUNTING DETAILS

**T-MOBILE NORTHEAST LLC**

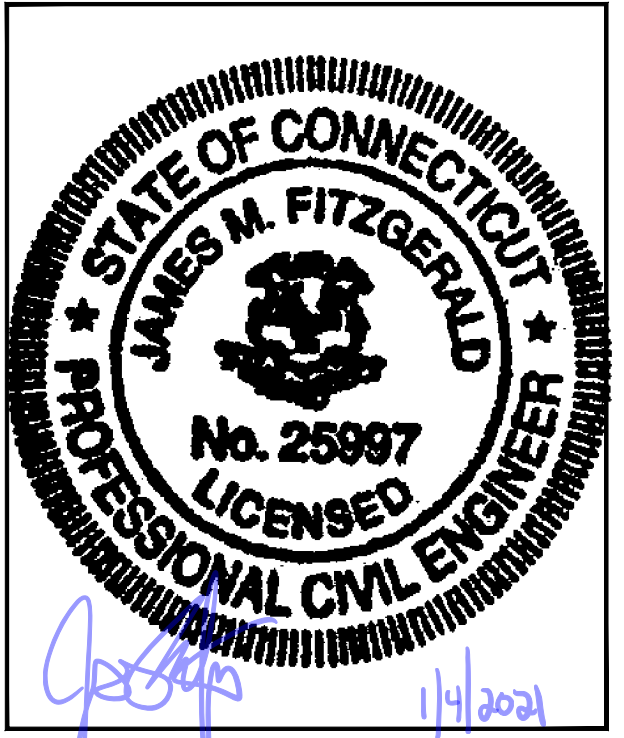
15 COMMERCE WAY, SUITE B  
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**SBA**

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**CHAPPELL ENGINEERING ASSOCIATES, LLC**  
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**SUBMITTALS**

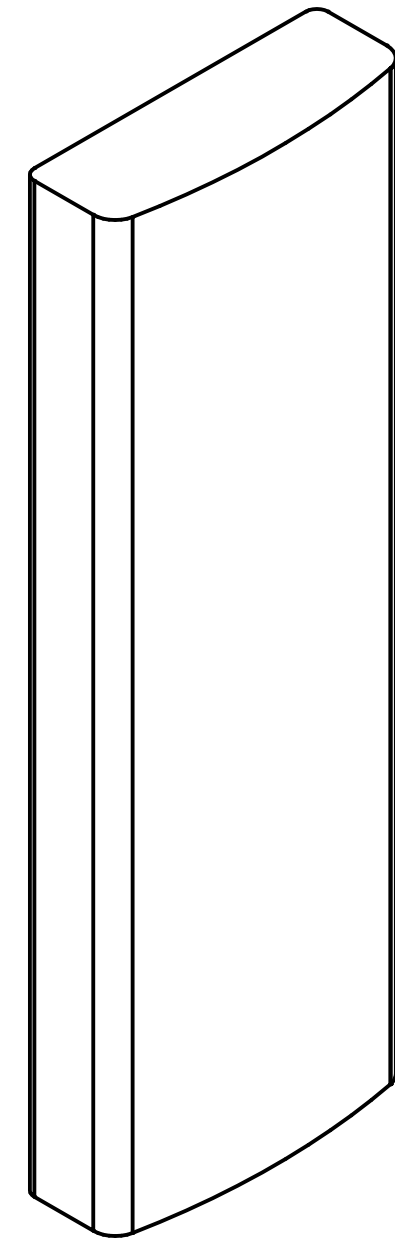
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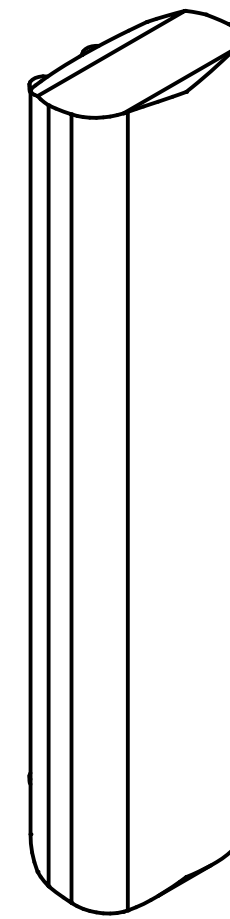
SITE ADDRESS:  
 651 PADDOCK AVENUE  
 MERIDEN, CT 06450

SHEET TITLE  
**TOWER ELEVATIONS & ANTENNA PLAN**

SHEET NUMBER  
**A-2**



**RFS APXVAALL18 43-U-NA20 ANTENNA**  
 DIMENSIONS: 72.0"H x 24.0"W x 8.5"D  
 WEIGHT: 106.0 lbs  
 QUANTITY: 1 PER SECTOR, TOTAL OF 3



**ERICSSON AIR32 KRD901146-1 B66A/B2A ANTENNA**  
 DIMENSIONS: 56.6"H x 12.9"W x 8.7"D  
 WEIGHT: 132.2 lbs  
 QUANTITY: 1 PER SECTOR, TOTAL OF 3



**ERICSSON M-MIMO AIR6449 B41 ANTENNA**  
 DIMENSIONS: 33.1"H x 20.5"W x 8.3"D  
 WEIGHT: 103.0 lbs  
 QUANTITY: 1 PER SECTOR, TOTAL OF 3



**ERICSSON RADIO 4415 B25**  
 DIMENSIONS: 16.5"H x 13.4"W x 5.9"D  
 WEIGHT: 46.0 lbs  
 QUANTITY: 1 PER SECTOR, TOTAL OF 3



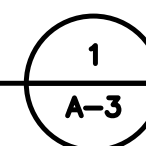
**ERICSSON RADIO 4449 B71+B85**  
 DIMENSIONS: 14.9"H x 13.2"W x 9.3"D  
 WEIGHT: 74.0 lbs  
 QUANTITY: 1 PER SECTOR, TOTAL OF 3



**COMMSCOPE SDX1926Q-43 QUADPLEXER**  
 DIMENSIONS: 4.2"H x 6.9"W x 2.9"D  
 WEIGHT: 6.2 lbs  
 QUANTITY: 1 PER SECTOR, TOTAL OF 3

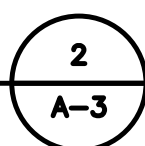
**ANTENNA DETAILS**

SCALE: N.T.S.



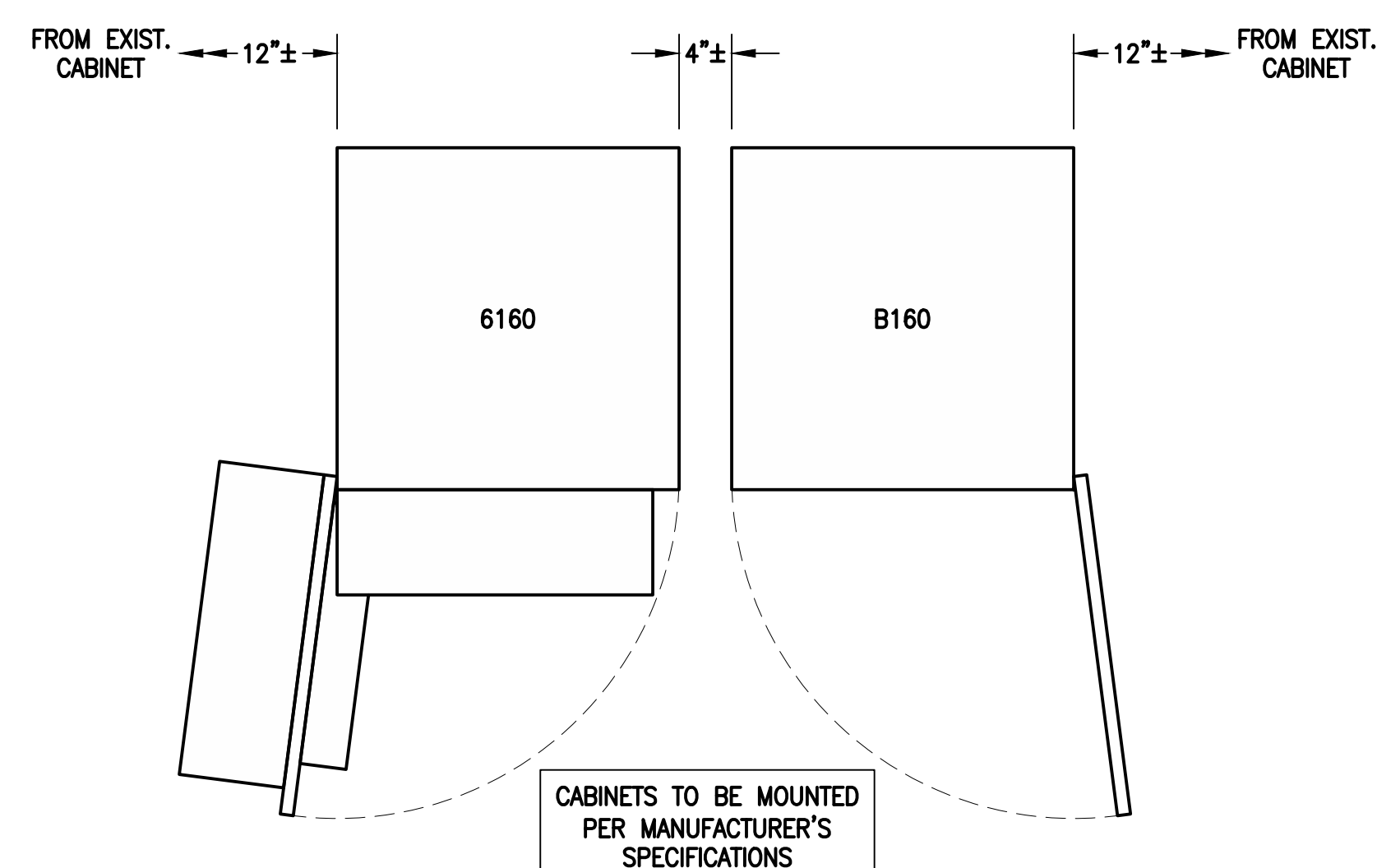
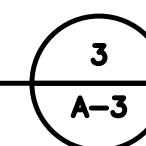
**RADIO DETAILS**

SCALE: N.T.S.



**DIPLEXER DETAIL**

SCALE: N.T.S.

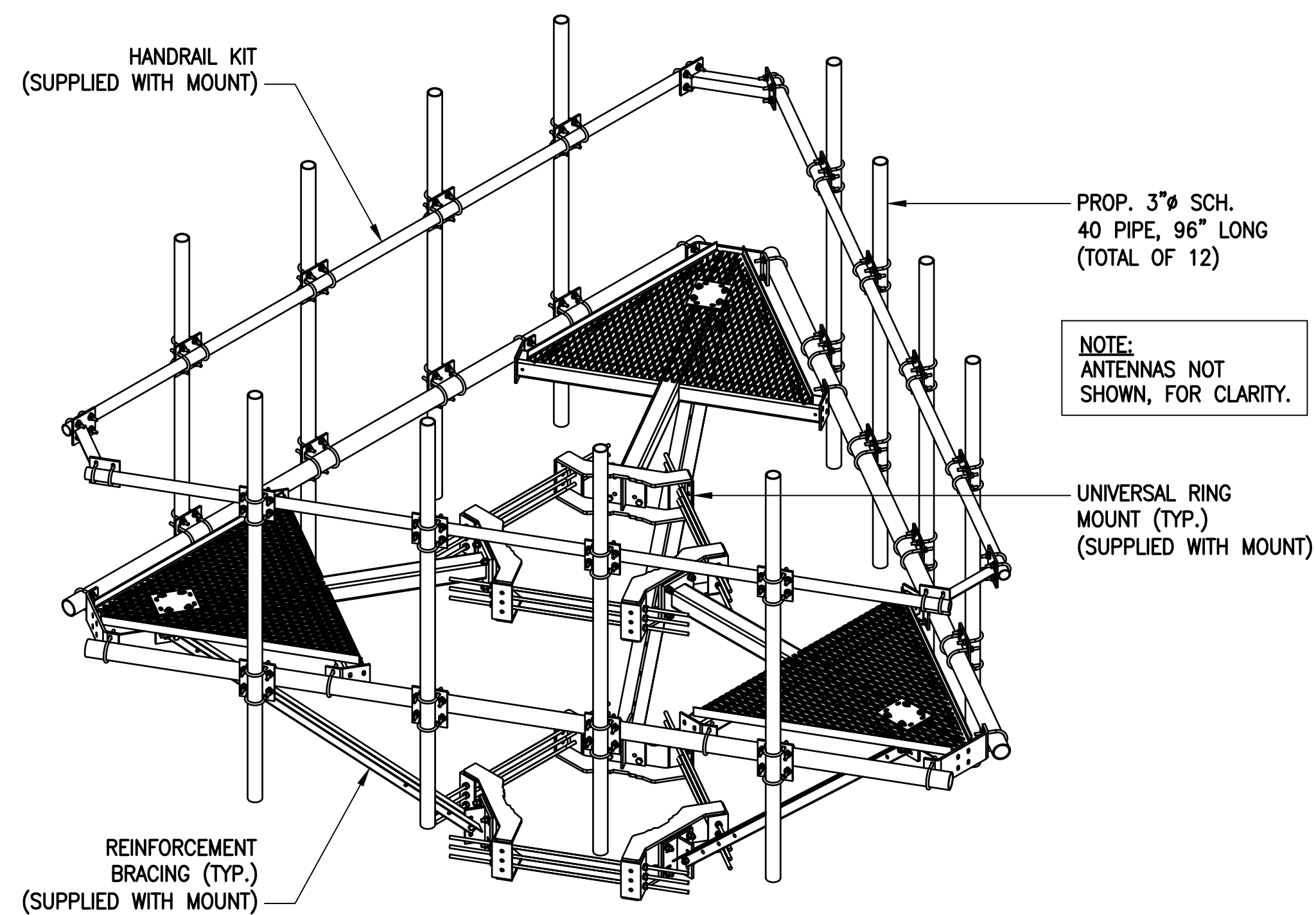
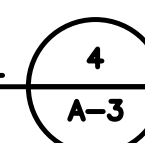


**ERICSSON 6160 SITE SUPPORT CABINET**  
 DIMENSIONS: 63.25"H x 26.0"W x 34.0"D  
 WEIGHT: 680.0 lbs  
 QUANTITY: TOTAL OF 1

**ERICSSON B160 BATTERY CABINET**  
 DIMENSIONS: 63.25"H x 26.0"W x 26.0"D  
 WEIGHT: 1771.0 lbs  
 QUANTITY: TOTAL OF 1

**EQUIPMENT DETAIL**

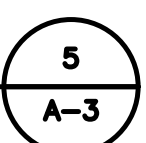
SCALE: N.T.S.



**SITE-PRO 1 12'-6" LOW-PROFILE CO-LOCATION PLATFORM W/HANDRAIL KIT**  
 PART NUMBERS: RMQP-4096-HK  
 (TOTAL OF 1 REQUIRED)

**TYPICAL SITE PRO 1 12'-6" PLATFORM MOUNT**

SCALE: N.T.S.



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APPROVED BY: JMT

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1	01/04/21	ISSUED FOR CONSTRUCTION	CMC
0	11/15/20	ISSUED FOR REVIEW	JRV

SITE NUMBER:  
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SITE ADDRESS:  
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 MERIDEN, CT 06450

SHEET TITLE  
**SITE DETAILS**

SHEET NUMBER  
**A-3**

FINAL ANTENNA CONFIGURATION								
SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	SIGNAL CABLES
ALPHA	A1 ERICSSON AIR32 KRD901146-1 B66A/B2A	117'± AGL	0°	0°	-	L2100/G1900/L1900	-	(6) 1-5/8" COAX CABLES (3) 1-3/8" (6x12) HCS FIBER CABLES
	A2 RFS APXVAALL18_43-U-NA20	117'± AGL	0°	0°	-	L700/L600/N600	RADIO 4449 B71+B85 RADIO 4415 B25 SDX1926Q-43 QUADPLEXER <small>TWIN 1B AWS TMA (KRY 112 144/1)</small>	
	A3 ERICSSON M-MIMO AIR6449 B41	117'± AGL	0°	0°	-	L2500/N2500	-	
BETA	B1 ERICSSON AIR32 KRD901146-1 B66A/B2A	117'± AGL	120°	0°	-	L2100/G1900/L1900	-	
	B2 RFS APXVAALL18_43-U-NA20	117'± AGL	120°	0°	-	L700/L600/N600	RADIO 4449 B71+B85 RADIO 4415 B25 SDX1926Q-43 QUADPLEXER <small>TWIN 1B AWS TMA (KRY 112 144/1)</small>	
	B3 ERICSSON M-MIMO AIR6449 B41	117'± AGL	120°	0°	-	L2500/N2500	-	
GAMMA	C1 ERICSSON AIR32 KRD901146-1 B66A/B2A	117'± AGL	240°	0°	-	L2100/G1900/L1900	-	
	C2 RFS APXVAALL18_43-U-NA20	117'± AGL	240°	0°	-	L700/L600/N600	RADIO 4449 B71+B85 RADIO 4415 B25 SDX1926Q-43 QUADPLEXER <small>TWIN 1B AWS TMA (KRY 112 144/1)</small>	
	C3 ERICSSON M-MIMO AIR6449 B41	117'± AGL	240°	0°	-	L2500/N2500	-	

CABLE NOTE: (E)(6) LMU 1-5/8" COAX CABLES & (1) 1-3/4" (9x18) HCS FIBER CABLE TO BE REMOVED. SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV5 - 09/25/20

FEEDLINE SCHEDULE		
SCHEDULE	FEEDLINES	LOCATION
A	EXISTING TO REMAIN: (6) 1-5/8" COAX CABLES  EXISTING TO BE REMOVED: (6) LMU 1-5/8" COAX CABLES (1) 1-3/4" (9x18) HCS FIBER CABLE	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (3) 1-5/8" (6x12) HCS FIBER CABLES	

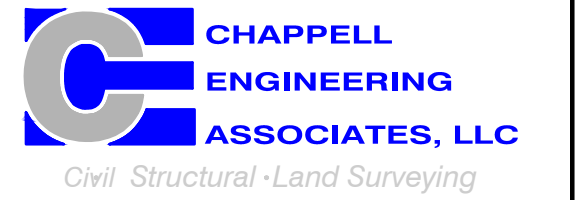
NOTE: EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.

## T-MOBILE NORTHEAST LLC

15 COMMERCE WAY, SUITE B  
NORTON, MA 02766  
(508) 286-2700



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



R.K. EXECUTIVE CENTRE  
201 BOSTON POST ROAD WEST, SUITE 101  
MARLBOROUGH, MA 01752  
(508) 481-7400  
www.chappellengineering.com



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	01/04/21	ISSUED FOR CONSTRUCTION	CMC
0	11/15/20	ISSUED FOR REVIEW	JRV

SITE NUMBER:  
**CT11493A**

SITE ADDRESS:  
651 PADDOCK AVENUE  
MERIDEN, CT 06450

SHEET TITLE  
**ANTENNA &  
FEEDLINE CHARTS**

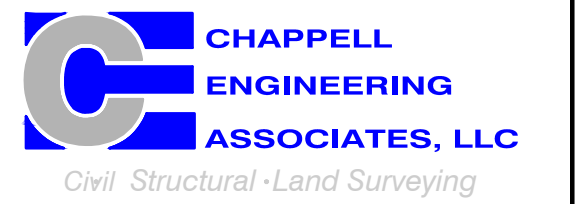
SHEET NUMBER  
**A-4**

T-MOBILE  
NORTHEAST LLC

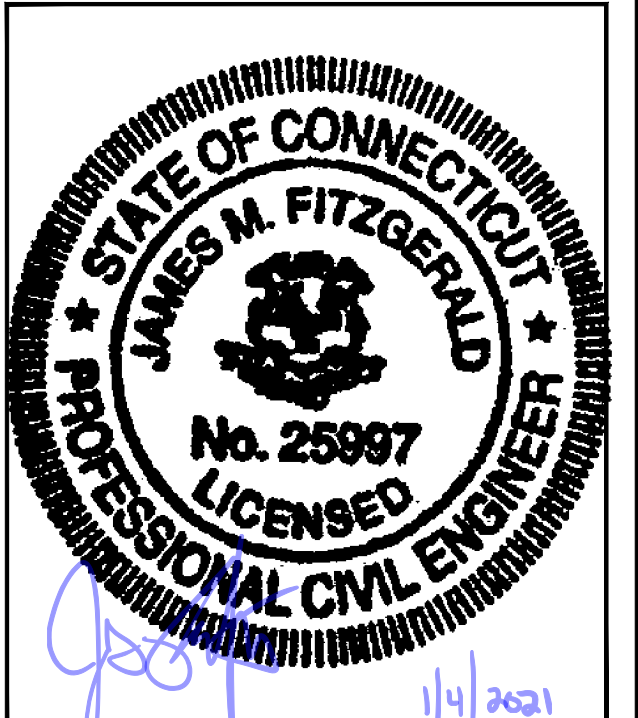
15 COMMERCE WAY, SUITE B  
NORTON, MA 02766  
(508) 286-2700



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



R.K. EXECUTIVE CENTRE  
201 BOSTON POST ROAD WEST, SUITE 101  
MARLBOROUGH, MA 01752  
(508) 481-7400  
www.chappellengineering.com



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	01/04/21	ISSUED FOR CONSTRUCTION	CMC
0	11/15/20	ISSUED FOR REVIEW	JRV

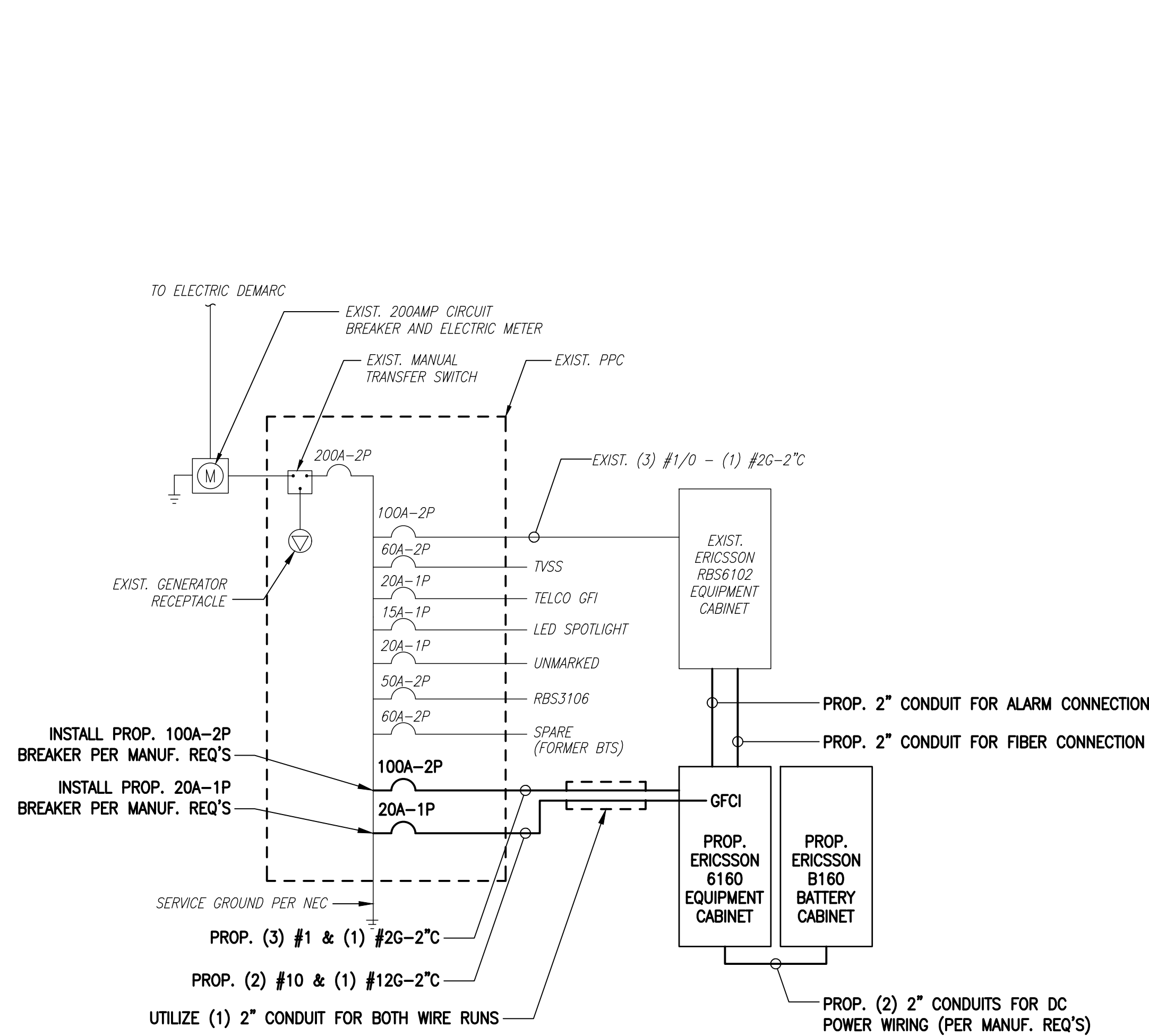
SITE NUMBER:  
**CT11493A**

SITE ADDRESS:  
651 PADDOCK AVENUE  
MERIDEN, CT 06450

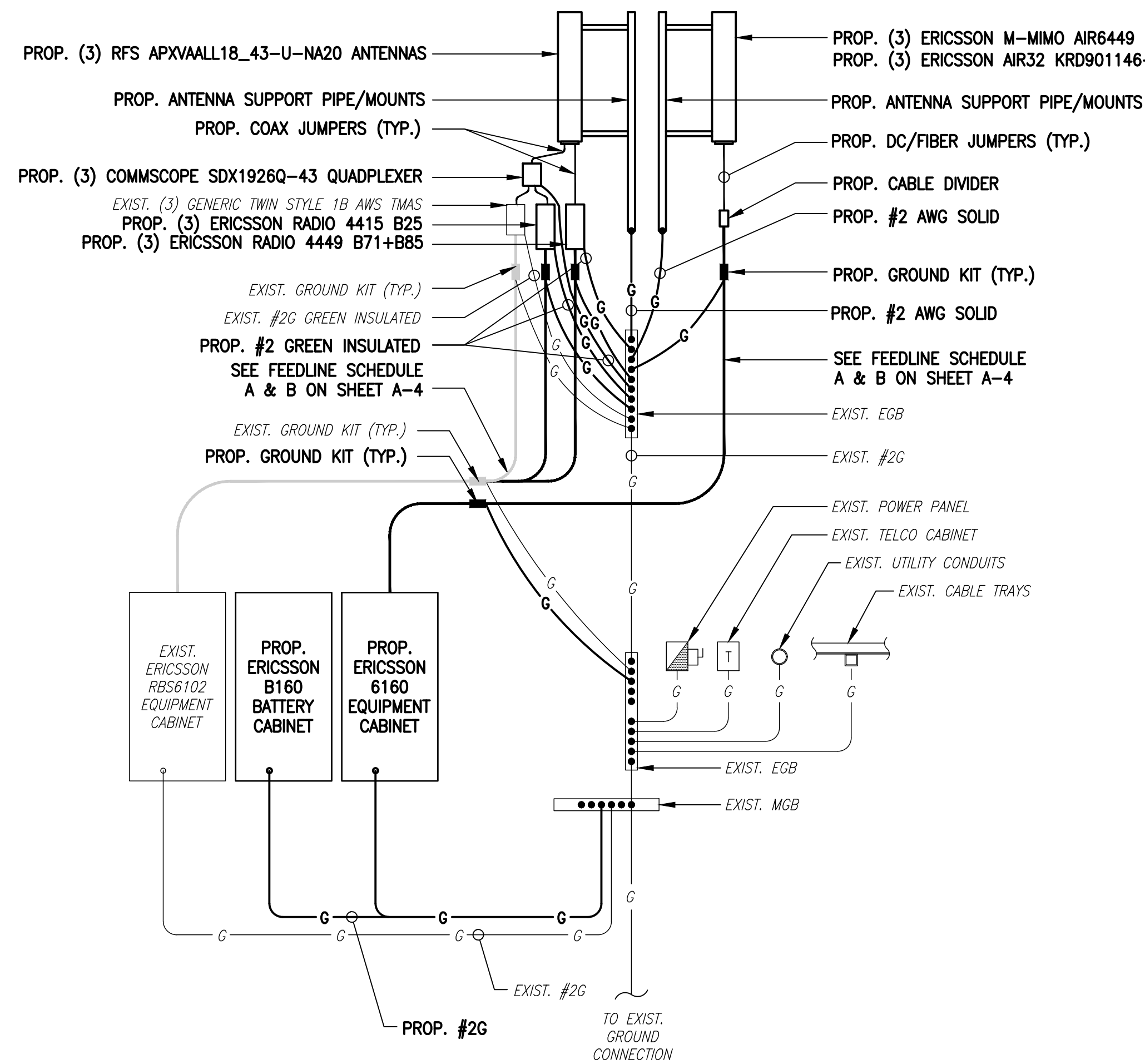
SHEET TITLE  
**ELECTRIC & GROUNDING  
DETAILS**

SHEET NUMBER

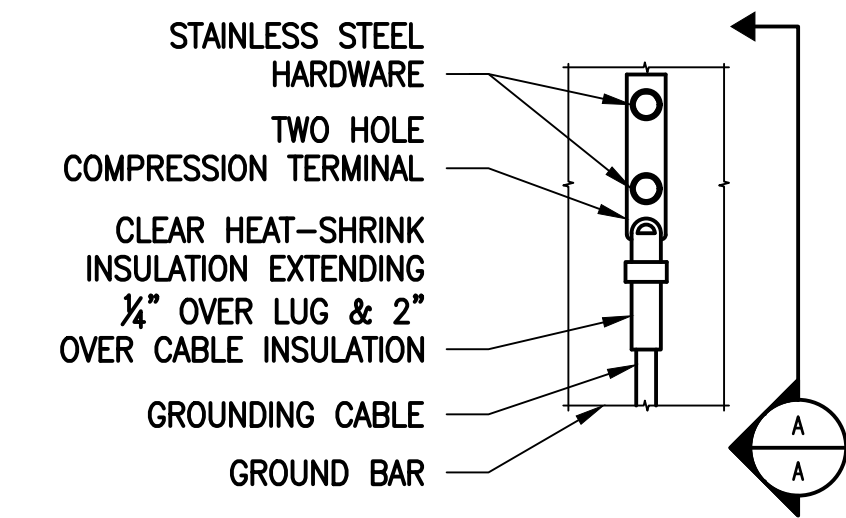
**E-1**



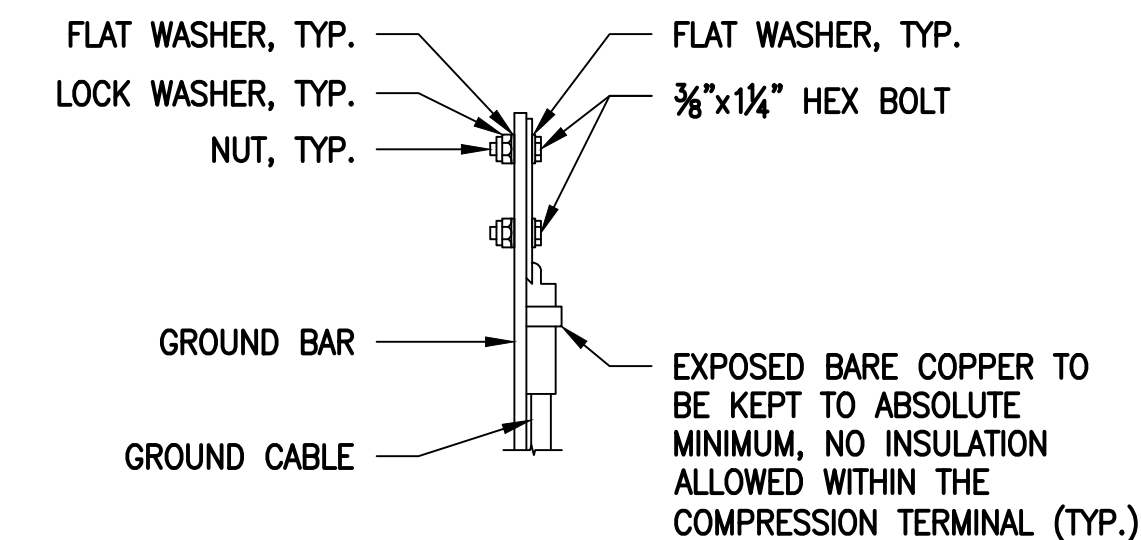
**ONE LINE DIAGRAM**  
SCALE: NOT TO SCALE



**GROUNDING RISER DIAGRAM**  
SCALE: NOT TO SCALE



ELEVATION



SECTION A-A

NOTES:

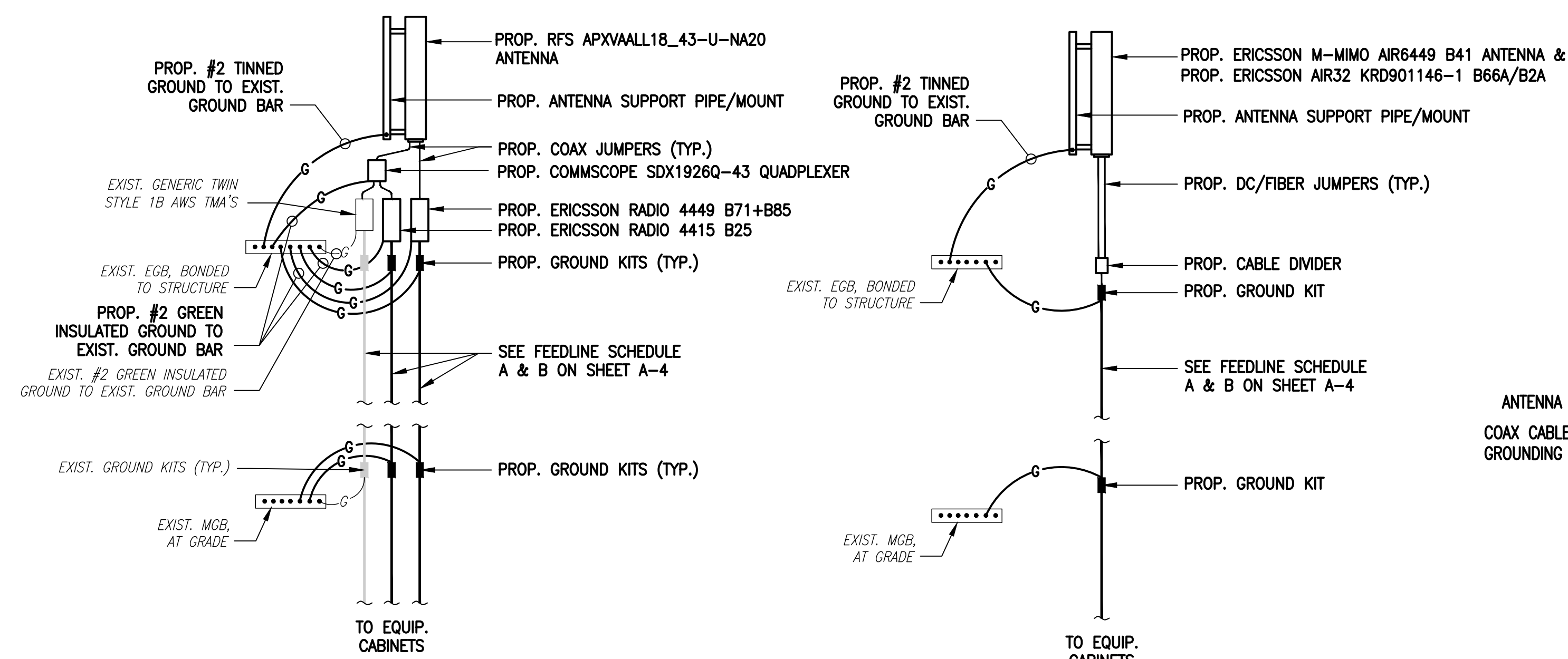
- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
- OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
- CADWELL DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

**TYPICAL GROUND BAR CONNECTIONS DETAIL**

SCALE: NOT TO SCALE

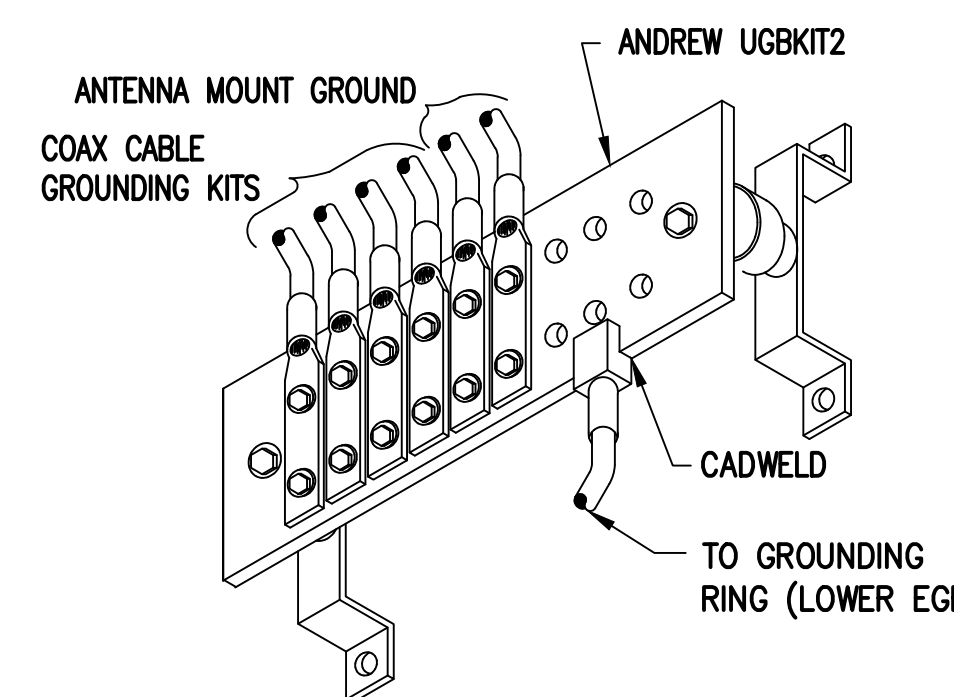
**ELECTRICAL AND GROUNDING NOTES**

- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
- GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
- ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
- BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
- ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN/INSULATION.
- RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
- RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
- WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- PPC SUPPLIED BY PROJECT OWNER.
- GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
- GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
- ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXIST. TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
- CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MINIMUM RESISTANCE REQUIRED.
- CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE-OUT.



**COAX CABLE CONNECTION AND GROUNDING DETAIL**

SCALE: NOT TO SCALE



**GROUND BAR (EGB)**

SCALE: NOT TO SCALE

L700/L600/N600/L1900/U2100 ANTENNA

L2500/N2500 ANTENNA &  
L2100/L1900/G1900 ANTENNA

# EXHIBIT 7





**Tower Engineering Solutions**

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

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## Structural Analysis Report

**Existing 119 ft. SABRE Monopole**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT13069-A**

**Customer Site Name: Meriden**

**Carrier Name: T-Mobile (App#: 141378, V1)**

**Carrier Site ID / Name: CT11493A / Meriden**

**Site Location: 651 Paddock Avenue**

**Meriden, Connecticut**

**New Haven County**

**Latitude: 41.512750**

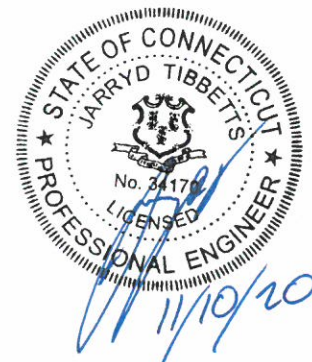
**Longitude: -72.779449**

### Analysis Result:

**Max Structural Usage: 90.4% [Pass]**

**Max Foundation Usage: 87.0% [Pass]**

**Additional Usage Caused by New Mount: +9.6%**



**Report Prepared By : Delu Zhou**

## Introduction

The purpose of this report is to summarize the analysis results on the 119 ft. SABRE Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

## Sources of Information

<b>Tower Drawings</b>	Sabre, Job #08-10201 dated November 9, 2007
<b>Foundation Drawing</b>	Sabre, Job #08-10201 dated November 9, 2007
<b>Geotechnical Report</b>	Gemini Geotechnical Associates, Project #07099CT dated August 21, 2007
<b>Modification Drawings</b>	N/A
<b>Mount Analysis</b>	TES MA Job # 99267, dated 11/09/2020

## Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-222-G-2. 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.

<b>Wind Speed Used in the Analysis:</b>	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ mph (3-Sec. Gust)
<b>Wind Speed with Ice:</b>	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
<b>Operational Wind Speed:</b>	60 mph + 0" Radial ice
<b>Standard/Codes:</b>	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Structure Class:</b>	II
<b>Topographic Category:</b>	1
<b>Crest Height:</b>	0 ft.
<b>Seismic Parameters:</b>	$S_S = 0.183g$ , $S_1 = 0.063g$

This structural analysis is based upon the tower being classified as a Structure Class 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
-	117.0	3	Ericsson AIR 21 B2A/B4P - Panel	Standoff Mount (SitePro RDS-272)	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
-		3	Ericsson AIR 21 B4A/B2P - Panel			
-		3	Ericsson KRY 112 144/1 - TMA			
-		3	Ericsson S11B12 - RRU			
8	107.0	3	Amphenol BXA-80063-6BF-EDIN-X	Low Profile Platform Perfect Vision PV-LPP12M-B	(11) 1 5/8" (2) 1 5/8" Fiber	Verizon
9		6	Andrew SBNHH-1D Panel			
10		3	Alcatel Lucent RRH2X90-AWS RRH			
11		3	Alcatel Lucent RRH2X60-PCS RRH			
12		3	Alcatel Lucent RRH2x60-700 RRH			
13		2	RFS DB-T1-6Z-8AB-0Z			
14	97.0	3	Commscope NNVV-65B-R4 - Panel	(3) SitePro Sector Mount UDS-NPL	(1) 1 5/8" Fiber (4) 1-1/4" Fiber (3) 1/2"	Sprint Nextel
15		3	Nokia AAHC - Panel			
16		3	Alcatel Lucent 1900 MHz- RRUs			
17		6	Alcatel Lucent 800 MHz - RRUs			
18		3	Alcatel Lucent TD-RRH8x20-25 - RRUs			
19		2	Andrew VHLP2-18 - Dish			
20		1	Andrew VHLP1-23 - Dish			

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	117.0	3	Ericsson AIR6449 B41 Panel	Low Profile platform w/HRK Sitepro RMQP-4096-HK	(10) 1 5/8" (3) 1 5/8" Fiber	T-Mobile
2		3	Ericsson Air 32 KRD901146-1_B66A_B2A			
3		3	RFS APXVAALL18-43-U-NA20 panel			
4		3	Ericsson KRY 112 144/1 TMA			
5		3	Commscope SDX1926Q-43 Diplexers			
6		3	Ericsson Radio 4449 B71+B85 RRUs			
7		3	Ericsson 4415 B25 RRUs			

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:	<b>90.4%</b>	<b>80.4%</b>	<b>68.4%</b>
Pass/Fail	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

## **Foundations**

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	1628.1	17.6	47.1

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

## **Operational Condition (Rigidity):**

The maximum twist and sway of the microwave dishes under the operational wind speed as specified in the Analysis Criteria are listed in the table below:

Elevation (ft)	Antenna / Dish	Carrier	Twist (deg)	Sway (deg)
97.0	VHLP2-18 - Dish	Sprint Nextel	0.001	1.096
97.0	VHLP1-23 - Dish	Sprint Nextel	0.001	1.096

It is recommended that the carriers review the twist and sway values of the microwave dishes.

## **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 TIA-222 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 90.36% at 0.0ft

**Structure:** CT13069-A-SBA  
**Site Name:** Meriden  
**Height:** 119.00 (ft)  
**Base Elev:** 0.000 (ft)

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

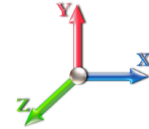
11/10/2020



Page: 1

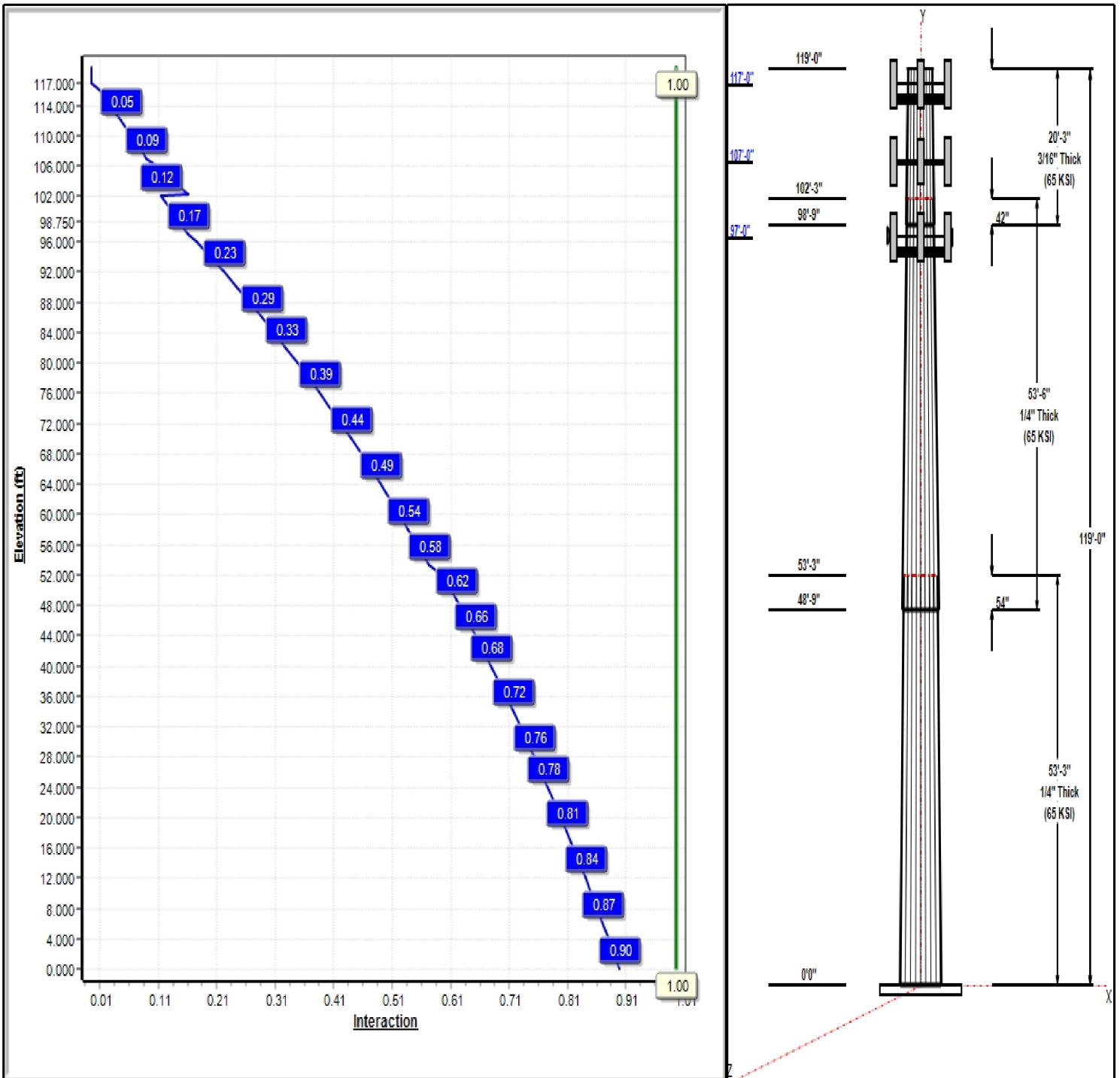
Dead Load Factor: 1.20  
 Wind Load Factor: 1.60

**Load Case : 1.2D + 1.6W 97 mph Wind**



**Iterations:** 29

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## Structure: CT13069-A-SBA

**Type:** Tapered  
**Site Name:** Meriden  
**Height:** 119.00 (ft)  
**Base Elev:** 0.00 (ft)

**Base Shape:** 18 Sided  
**Taper:** 0.16197

11/10/2020



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### Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	34.63	43.26	0.250		0.16197	65
2	53.50	27.20	35.86	0.250	Slip	0.16197	65
3	20.25	24.86	28.14	0.188	Slip	0.16197	65

### Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
117.00	117.00	3	AIR6449 B41	T-Mobile
117.00	117.00	3	Air 32	T-Mobile
117.00	117.00	3	APXVAALL18-43-U-NA20	T-Mobile
117.00	117.00	1	Sitepro RMQP-4096-HK	T-Mobile
117.00	117.00	3	KRY 112 144/1	T-Mobile
117.00	117.00	3	SDX1926Q-43 Diplexer	T-Mobile
117.00	117.00	3	Radio 4449 B71+B85	T-Mobile
117.00	117.00	3	Ericsson 4415 B25 RRU	T-Mobile
107.00	107.00	3	BXA-80063-6BF-EDIN-X	Verizon
107.00	107.00	2	RFS DB-T1-6Z-8AB-0Z	Verizon
107.00	107.00	6	SBNHH-1D65B	Verizon
107.00	107.00	1	PV-LPP12M-B	Verizon
107.00	107.00	3	RRH2X90-AWS RRH	Verizon
107.00	107.00	3	RRH2X60-PCS RRH	Verizon
107.00	107.00	3	RRH2x60-700 RRH	Verizon
97.00	97.00	3	1900 MHz	Sprint Nextel
97.00	97.00	6	800 MHz RRU	Sprint Nextel
97.00	97.00	3	TD-RRH8x20-25	Sprint Nextel
97.00	97.00	3	NNVV-65B-R4	Sprint Nextel
97.00	97.00	3	AAHC	Sprint Nextel
97.00	97.00	1	UDS-NPL (3 Sectors)	Sprint Nextel
97.00	97.00	2	VHLP2-18	Sprint Nextel
97.00	97.00	1	VHLP1-23	Sprint Nextel

### Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	117.00	Inside	1 5/8" Coax	T-Mobile
0.00	117.00	Inside	1 5/8" Fiber	T-Mobile
0.00	107.00	Inside	1 5/8" Coax	Verizon
0.00	107.00	Outside	1 5/8" Fiber	Verizon
0.00	97.00	Inside	1 5/8" Fiber	Sprint Nextel
0.00	97.00	Inside	1-1/4" Fiber	Sprint Nextel
0.00	97.00	Inside	1/2" Coax	Sprint Nextel

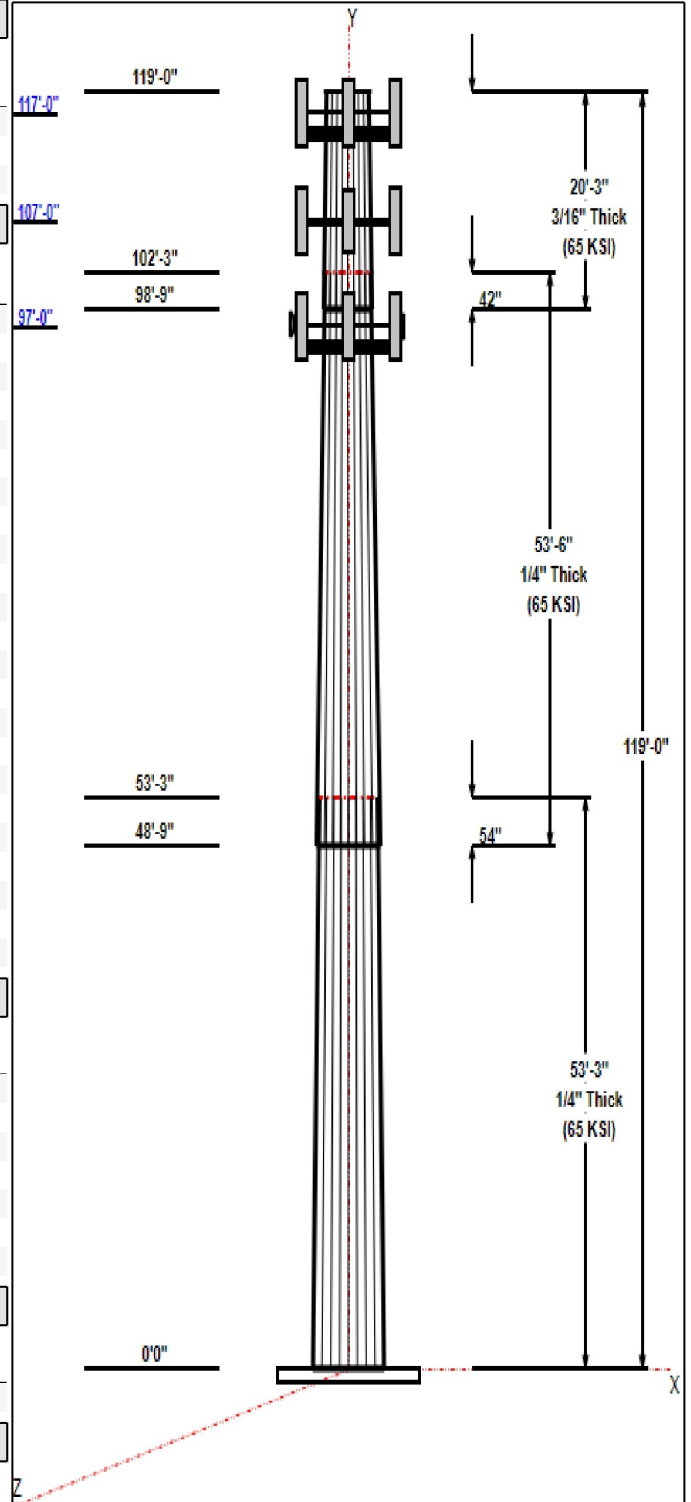
### Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
8	2.25" 18J	75.0	Cluster

### Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.2500	47.0	60.0	Clipped

### Reactions



## Structure: CT13069-A-SBA

**Type:** Tapered  
**Site Name:** Meriden  
**Height:** 119.00 (ft)  
**Base Elev:** 0.00 (ft)

**Base Shape:** 18 Sided  
**Taper:** 0.16197

11/10/2020

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Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	1628.1	17.6	27.8
0.9D + 1.6W 97 mph Wind	1604.6	17.5	20.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind	458.5	4.9	47.1
1.2D + 1.0E	169.5	1.6	27.8
0.9D + 1.0E	166.9	1.6	20.9
1.0D + 1.0W 60 mph Wind	385.9	4.2	23.2



# Structure: CT13069-A-SBA - Coax Line Placement

Type: Monopole  
Site Name: Meriden  
Height: 119.00 (ft)

11/10/2020



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## Shaft Properties

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	53.250	0.2500	65		0.00	5,564
2	18	53.500	0.2500	65	Slip	54.00	4,519
3	18	20.250	0.1875	65	Slip	42.00	1,079
<b>Total Shaft Weight:</b>							<b>11,161</b>

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	43.26	0.00	34.13	7976.14	29.10	173.04	34.63	53.25	27.28	4075.54	23.02	138.5	0.161975
2	35.86	48.75	28.26	4528.32	23.88	143.45	27.20	102.25	21.38	1961.86	17.77	108.7	0.161975
3	28.14	98.75	16.63	1642.13	25.05	150.08	24.86	119.00	14.68	1129.24	21.97	132.5	0.161975

## Load Summary

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> 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	117.00	AIR6449 B41	3	103.00	5.65	0.71	236.75	6.577	0.71	0.00	0.00
2	117.00	Air 32 KRD901146-1_B66A_B2A	3	132.00	6.51	0.87	309.94	7.602	0.87	0.00	0.00
3	117.00	APXVAALL18-43-U-NA20	3	92.60	15.24	0.73	413.84	16.192	0.73	0.00	0.00
4	117.00	Sitepro RMQP-4096-HK	1	2645.00	48.00	1.00	5346.69	82.647	1.00	0.00	0.00
5	117.00	KRY 112 144/1	3	11.00	0.41	0.57	21.52	0.874	0.57	0.00	0.00
6	117.00	SDX1926Q-43 Diplexer	3	6.00	0.29	0.57	15.56	0.699	0.57	0.00	0.00
7	117.00	Radio 4449 B71+B85	3	74.00	1.97	0.57	130.94	2.525	0.57	0.00	0.00
8	117.00	Ericsson 4415 B25 RRU	3	46.00	1.64	0.57	86.09	2.143	0.57	0.00	0.00
9	107.00	BXA-80063-6BF-EDIN-X	3	19.20	7.26	0.78	182.12	8.451	0.78	0.00	0.00
10	107.00	RFS DB-T1-6Z-8AB-0Z	2	18.90	4.80	0.67	157.03	5.643	0.67	0.00	0.00
11	107.00	SBNHH-1D65B	6	40.00	8.16	0.77	235.14	9.414	0.77	0.00	0.00
12	107.00	PV-LPP12M-B	1	1615.00	28.00	1.00	3140.94	62.015	1.00	0.00	0.00
13	107.00	RRH2X90-AWS RRH	3	64.00	2.60	0.57	151.21	3.821	0.57	0.00	0.00
14	107.00	RRH2X60-PCS RRH	3	55.00	2.20	0.57	136.08	2.813	0.57	0.00	0.00
15	107.00	RRH2x60-700 RRH	3	60.00	3.50	0.57	144.39	4.263	0.57	0.00	0.00
16	97.00	1900 MHz	3	60.00	2.71	0.57	137.31	3.920	0.57	0.00	0.00
17	97.00	800 MHz RRU	6	53.00	2.49	0.50	123.81	3.585	0.50	0.00	0.00
18	97.00	TD-RRH8x20-25	3	70.00	4.05	0.57	174.81	4.826	0.57	0.00	0.00
19	97.00	NNVV-65B-R4	3	77.40	12.27	0.74	350.78	13.664	0.74	0.00	0.00
20	97.00	AAHC	3	104.00	4.20	0.75	226.78	4.993	0.75	0.00	0.00
21	97.00	UDS-NPL (3 Sectors)	1	576.00	12.79	0.75	1114.92	28.176	0.75	0.00	0.00
22	97.00	VHLP2-18	2	31.00	4.69	1.00	124.68	5.912	1.00	1.00	0.00
23	97.00	VHLP1-23	1	14.20	1.61	1.00	48.07	2.336	1.00	0.00	0.00
<b>Totals:</b>			<b>65</b>	<b>8,430.60</b>			<b>20,522.10</b>				

### Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	117.00	(10) 1 5/8" Coax	0.00	Inside
0.00	117.00	(3) 1 5/8" Fiber	0.00	Inside
0.00	107.00	(11) 1 5/8" Coax	0.00	Inside
0.00	107.00	(2) 1 5/8" Fiber	0.00	Outside
0.00	97.00	(1) 1 5/8" Fiber	0.00	Inside
0.00	97.00	(4) 1-1/4" Fiber	0.00	Inside
0.00	97.00	(3) 1/2" Coax	0.00	Inside

## Shaft Section Properties

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Increment Length:** 2 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in <sup>3</sup> )	Weight (lb)
0.00		0.2500	43.260	34.127	7976.1	29.10	173.04	67.2	363.2	0.0
2.00		0.2500	42.936	33.870	7797.3	28.87	171.74	67.4	357.7	231.4
4.00		0.2500	42.612	33.613	7621.1	28.64	170.45	67.7	352.3	229.6
6.00		0.2500	42.288	33.356	7447.6	28.42	169.15	68.0	346.9	227.9
8.00		0.2500	41.964	33.099	7276.7	28.19	167.86	68.2	341.5	226.1
10.00		0.2500	41.640	32.842	7108.5	27.96	166.56	68.5	336.2	224.4
12.00		0.2500	41.316	32.585	6942.9	27.73	165.27	68.8	331.0	222.6
14.00		0.2500	40.992	32.328	6779.9	27.50	163.97	69.1	325.8	220.9
16.00		0.2500	40.668	32.071	6619.4	27.27	162.67	69.3	320.6	219.1
18.00		0.2500	40.344	31.814	6461.6	27.04	161.38	69.6	315.5	217.4
20.00		0.2500	40.021	31.557	6306.2	26.82	160.08	69.9	310.4	215.6
22.00		0.2500	39.697	31.300	6153.3	26.59	158.79	70.1	305.3	213.9
24.00		0.2500	39.373	31.043	6003.0	26.36	157.49	70.4	300.3	212.1
26.00		0.2500	39.049	30.786	5855.1	26.13	156.19	70.7	295.3	210.4
28.00		0.2500	38.725	30.529	5709.7	25.90	154.90	70.9	290.4	208.6
30.00		0.2500	38.401	30.272	5566.6	25.67	153.60	71.2	285.5	206.9
32.00		0.2500	38.077	30.014	5426.0	25.45	152.31	71.5	280.7	205.1
34.00		0.2500	37.753	29.757	5287.8	25.22	151.01	71.7	275.9	203.4
36.00		0.2500	37.429	29.500	5152.0	24.99	149.72	72.0	271.1	201.6
38.00		0.2500	37.105	29.243	5018.5	24.76	148.42	72.3	266.4	199.9
40.00		0.2500	36.781	28.986	4887.3	24.53	147.12	72.5	261.7	198.1
42.00		0.2500	36.457	28.729	4758.4	24.30	145.83	72.8	257.1	196.4
44.00		0.2500	36.133	28.472	4631.9	24.07	144.53	73.1	252.5	194.6
46.00		0.2500	35.809	28.215	4507.5	23.85	143.24	73.4	247.9	192.9
48.00		0.2500	35.485	27.958	4385.5	23.62	141.94	73.6	243.4	191.1
48.75	Bot - Section 2	0.2500	35.364	27.862	4340.3	23.53	141.45	73.7	241.7	71.2
50.00		0.2500	35.161	27.701	4265.6	23.39	140.65	73.9	238.9	238.0
52.00		0.2500	34.837	27.444	4148.0	23.16	139.35	74.2	234.5	378.0
53.25	Top - Section 1	0.2500	35.135	27.680	4255.9	23.37	140.54	0.0	0.0	234.5
54.00		0.2500	35.013	27.584	4211.6	23.28	140.05	74.0	236.9	70.5
56.00		0.2500	34.689	27.327	4095.0	23.06	138.76	74.3	232.5	186.8
58.00		0.2500	34.365	27.070	3980.5	22.83	137.46	74.6	228.1	185.1
60.00		0.2500	34.042	26.813	3868.2	22.60	136.17	74.8	223.8	183.3
62.00		0.2500	33.718	26.556	3758.0	22.37	134.87	75.1	219.5	181.6
64.00		0.2500	33.394	26.299	3649.9	22.14	133.57	75.4	215.3	179.9
66.00		0.2500	33.070	26.041	3543.9	21.91	132.28	75.6	211.1	178.1
68.00		0.2500	32.746	25.784	3440.0	21.69	130.98	75.9	206.9	176.4
70.00		0.2500	32.422	25.527	3338.2	21.46	129.69	76.2	202.8	174.6
72.00		0.2500	32.098	25.270	3238.3	21.23	128.39	76.4	198.7	172.9
74.00		0.2500	31.774	25.013	3140.5	21.00	127.10	76.7	194.7	171.1
76.00		0.2500	31.450	24.756	3044.7	20.77	125.80	77.0	190.7	169.4
78.00		0.2500	31.126	24.499	2950.8	20.54	124.50	77.2	186.7	167.6
80.00		0.2500	30.802	24.242	2858.9	20.31	123.21	77.5	182.8	165.9
82.00		0.2500	30.478	23.985	2769.0	20.09	121.91	77.8	178.9	164.1
84.00		0.2500	30.154	23.728	2680.9	19.86	120.62	78.0	175.1	162.4
86.00		0.2500	29.830	23.471	2594.7	19.63	119.32	78.3	171.3	160.6
88.00		0.2500	29.506	23.214	2510.4	19.40	118.02	78.6	167.6	158.9
90.00		0.2500	29.182	22.957	2427.9	19.17	116.73	78.9	163.9	157.1
92.00		0.2500	28.858	22.700	2347.3	18.94	115.43	79.1	160.2	155.4
94.00		0.2500	28.534	22.443	2268.4	18.71	114.14	79.4	156.6	153.6

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)
96.00		0.2500	28.210	22.186	2191.4	18.49	112.84	79.7	153.0	151.9
97.00		0.2500	28.048	22.057	2153.5	18.37	112.19	79.8	151.2	75.3
98.00		0.2500	27.886	21.929	2116.1	18.26	111.55	79.9	149.5	74.8
98.75	Bot - Section 3	0.2500	27.765	21.832	2088.3	18.17	111.06	80.0	148.1	55.8
100.00		0.2500	27.563	21.672	2042.5	18.03	110.25	80.2	146.0	163.0
102.00		0.2500	27.239	21.415	1970.7	17.80	108.95	80.5	142.5	258.3
102.25	Top - Section 2	0.1875	27.573	16.297	1544.2	24.52	147.06	0.0	0.0	32.1
104.00		0.1875	27.290	16.129	1496.8	24.25	145.54	72.9	108.0	96.5
106.00		0.1875	26.966	15.936	1443.7	23.95	143.82	73.2	105.5	109.1
107.00		0.1875	26.804	15.839	1417.7	23.80	142.95	73.4	104.2	54.1
108.00		0.1875	26.642	15.743	1392.0	23.64	142.09	73.6	102.9	53.7
110.00		0.1875	26.318	15.550	1341.5	23.34	140.36	74.0	100.4	106.5
112.00		0.1875	25.994	15.357	1292.2	23.03	138.63	74.3	97.9	105.2
114.00		0.1875	25.670	15.165	1244.1	22.73	136.91	74.7	95.5	103.9
116.00		0.1875	25.346	14.972	1197.3	22.42	135.18	75.0	93.0	102.5
117.00		0.1875	25.184	14.875	1174.3	22.27	134.31	75.2	91.8	50.8
118.00		0.1875	25.022	14.779	1151.6	22.12	133.45	75.4	90.7	50.5
119.00		0.1875	24.860	14.683	1129.2	21.97	132.59	75.6	89.5	50.1
										<b>11161.3</b>

## Wind Loading - Shaft

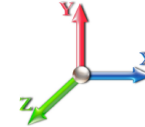
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.6W 97 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.60



**Iterations** 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	0.70	16.018	17.62	297.08	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	16.018	17.62	294.86	0.650	0.000	2.00	7.294	4.74	133.7	0.0	277.7
4.00		1.00	0.70	16.018	17.62	292.63	0.650	0.000	2.00	7.239	4.71	132.7	0.0	275.6
6.00		1.00	0.70	16.018	17.62	290.41	0.650	0.000	2.00	7.184	4.67	131.6	0.0	273.5
8.00		1.00	0.70	16.018	17.62	288.18	0.650	0.000	2.00	7.129	4.63	130.6	0.0	271.4
10.00		1.00	0.70	16.018	17.62	285.96	0.650	0.000	2.00	7.075	4.60	129.6	0.0	269.3
12.00		1.00	0.70	16.018	17.62	283.73	0.650	0.000	2.00	7.020	4.56	128.6	0.0	267.2
14.00		1.00	0.70	16.018	17.62	281.51	0.650	0.000	2.00	6.965	4.53	127.6	0.0	265.1
16.00		1.00	0.70	16.018	17.62	279.28	0.650	0.000	2.00	6.910	4.49	126.6	0.0	263.0
18.00		1.00	0.70	16.018	17.62	277.06	0.650	0.000	2.00	6.855	4.46	125.6	0.0	260.9
20.00		1.00	0.70	16.018	17.62	274.83	0.650	0.000	2.00	6.800	4.42	124.6	0.0	258.8
22.00		1.00	0.70	16.018	17.62	272.61	0.650	0.000	2.00	6.746	4.38	123.6	0.0	256.7
24.00		1.00	0.70	16.018	17.62	270.38	0.650	0.000	2.00	6.691	4.35	122.6	0.0	254.6
26.00		1.00	0.70	16.018	17.62	268.16	0.650	0.000	2.00	6.636	4.31	121.6	0.0	252.5
28.00		1.00	0.70	16.018	17.62	265.94	0.650	0.000	2.00	6.581	4.28	120.6	0.0	250.4
30.00		1.00	0.70	16.031	17.63	263.82	0.650	0.000	2.00	6.526	4.24	119.7	0.0	248.3
32.00		1.00	0.71	16.330	17.96	264.02	0.650	0.000	2.00	6.471	4.21	120.9	0.0	246.2
34.00		1.00	0.73	16.615	18.28	264.05	0.650	0.000	2.00	6.417	4.17	122.0	0.0	244.1
36.00		1.00	0.74	16.889	18.58	263.93	0.650	0.000	2.00	6.362	4.14	122.9	0.0	242.0
38.00		1.00	0.75	17.152	18.87	263.68	0.650	0.000	2.00	6.307	4.10	123.8	0.0	239.9
40.00		1.00	0.76	17.405	19.15	263.30	0.650	0.000	2.00	6.252	4.06	124.5	0.0	237.8
42.00		1.00	0.77	17.649	19.41	262.80	0.650	0.000	2.00	6.197	4.03	125.1	0.0	235.7
44.00		1.00	0.78	17.885	19.67	262.20	0.650	0.000	2.00	6.142	3.99	125.7	0.0	233.6
46.00		1.00	0.79	18.114	19.93	261.51	0.650	0.000	2.00	6.088	3.96	126.2	0.0	231.5
48.00		1.00	0.80	18.335	20.17	260.72	0.650	0.000	2.00	6.033	3.92	126.5	0.0	229.4
48.75	Bot - Section 2	1.00	0.80	18.417	20.26	260.41	0.650	0.000	0.75	2.248	1.46	47.4	0.0	85.5
50.00		1.00	0.81	18.551	20.41	259.85	0.650	0.000	1.25	3.783	2.46	80.3	0.0	285.6
52.00		1.00	0.82	18.760	20.64	258.91	0.650	0.000	2.00	6.008	3.91	128.9	0.0	453.6
53.25	Top - Section 1	1.00	0.83	18.887	20.78	258.28	0.650	0.000	1.25	3.727	2.42	80.5	0.0	281.4
54.00		1.00	0.83	18.963	20.86	261.62	0.650	0.000	0.75	2.226	1.45	48.3	0.0	84.6
56.00		1.00	0.84	19.161	21.08	260.55	0.650	0.000	2.00	5.898	3.83	129.3	0.0	224.2
58.00		1.00	0.85	19.354	21.29	259.41	0.650	0.000	2.00	5.843	3.80	129.4	0.0	222.1
60.00		1.00	0.85	19.543	21.50	258.22	0.650	0.000	2.00	5.789	3.76	129.4	0.0	220.0
62.00		1.00	0.86	19.726	21.70	256.96	0.650	0.000	2.00	5.734	3.73	129.4	0.0	217.9
64.00		1.00	0.87	19.906	21.90	255.65	0.650	0.000	2.00	5.679	3.69	129.3	0.0	215.8
66.00		1.00	0.88	20.082	22.09	254.28	0.650	0.000	2.00	5.624	3.66	129.2	0.0	213.7
68.00		1.00	0.89	20.254	22.28	252.87	0.650	0.000	2.00	5.569	3.62	129.0	0.0	211.6
70.00		1.00	0.89	20.422	22.46	251.41	0.650	0.000	2.00	5.514	3.58	128.8	0.0	209.5
72.00		1.00	0.90	20.587	22.65	249.90	0.650	0.000	2.00	5.460	3.55	128.6	0.0	207.4
74.00		1.00	0.91	20.749	22.82	248.35	0.650	0.000	2.00	5.405	3.51	128.3	0.0	205.3
76.00		1.00	0.91	20.908	23.00	246.75	0.650	0.000	2.00	5.350	3.48	128.0	0.0	203.2
78.00		1.00	0.92	21.064	23.17	245.12	0.650	0.000	2.00	5.295	3.44	127.6	0.0	201.1
80.00		1.00	0.93	21.217	23.34	243.45	0.650	0.000	2.00	5.240	3.41	127.2	0.0	199.0
82.00		1.00	0.93	21.367	23.50	241.74	0.650	0.000	2.00	5.185	3.37	126.8	0.0	196.9
84.00		1.00	0.94	21.514	23.67	239.99	0.650	0.000	2.00	5.131	3.33	126.3	0.0	194.8
86.00		1.00	0.95	21.660	23.83	238.21	0.650	0.000	2.00	5.076	3.30	125.8	0.0	192.7
88.00		1.00	0.95	21.802	23.98	236.40	0.650	0.000	2.00	5.021	3.26	125.2	0.0	190.6

## Wind Loading - Shaft

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 10
	<b>Struct Class:</b> II	



90.00	1.00	0.96	21.943	24.14	234.56	0.650	0.000	2.00	4.966	3.23	124.7	0.0	188.5		
92.00	1.00	0.96	22.081	24.29	232.68	0.650	0.000	2.00	4.911	3.19	124.1	0.0	186.4		
94.00	1.00	0.97	22.217	24.44	230.78	0.650	0.000	2.00	4.857	3.16	123.4	0.0	184.3		
96.00	1.00	0.98	22.351	24.59	228.85	0.650	0.000	2.00	4.802	3.12	122.8	0.0	182.2		
97.00 Appurtenance(s)	1.00	0.98	22.417	24.66	227.87	0.650	0.000	1.00	2.380	1.55	61.0	0.0	90.3		
98.00	1.00	0.98	22.483	24.73	226.89	0.650	0.000	1.00	2.367	1.54	60.9	0.0	89.8		
98.75 Bot - Section 3	1.00	0.98	22.532	24.79	226.14	0.650	0.000	0.75	1.766	1.15	45.5	0.0	67.0		
100.00	1.00	0.99	22.613	24.87	224.90	0.650	0.000	1.25	2.966	1.93	76.7	0.0	195.6		
102.00	1.00	0.99	22.742	25.02	222.89	0.650	0.000	2.00	4.701	3.06	122.3	0.0	310.0		
102.25 Top - Section 2	1.00	0.99	22.758	25.03	222.63	0.650	0.000	0.25	0.584	0.38	15.2	0.0	38.5		
104.00	1.00	1.00	22.868	25.16	223.92	0.650	0.000	1.75	4.062	2.64	106.3	0.0	115.9		
106.00	1.00	1.00	22.993	25.29	221.87	0.650	0.000	2.00	4.591	2.98	120.8	0.0	130.9		
107.00 Appurtenance(s)	1.00	1.01	23.055	25.36	220.83	0.650	0.000	1.00	2.275	1.48	60.0	0.0	64.9		
108.00	1.00	1.01	23.116	25.43	219.79	0.650	0.000	1.00	2.261	1.47	59.8	0.0	64.5		
110.00	1.00	1.02	23.238	25.56	217.69	0.650	0.000	2.00	4.481	2.91	119.1	0.0	127.8		
112.00	1.00	1.02	23.358	25.69	215.56	0.650	0.000	2.00	4.427	2.88	118.3	0.0	126.2		
114.00	1.00	1.03	23.476	25.82	213.41	0.650	0.000	2.00	4.372	2.84	117.4	0.0	124.6		
116.00	1.00	1.03	23.593	25.95	211.24	0.650	0.000	2.00	4.317	2.81	116.5	0.0	123.1		
117.00 Appurtenance(s)	1.00	1.03	23.651	26.02	210.15	0.650	0.000	1.00	2.138	1.39	57.8	0.0	60.9		
118.00	1.00	1.04	23.708	26.08	209.05	0.650	0.000	1.00	2.124	1.38	57.6	0.0	60.5		
119.00	1.00	1.04	23.766	26.14	207.95	0.650	0.000	1.00	2.110	1.37	57.4	0.0	60.2		
<b>Totals:</b>								<b>119.00</b>				<b>7,447.5</b>	<b>13,393.5</b>		

## Discrete Appurtenance Forces

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.6W 97 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.60



**Iterations** 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	117.00	Sitepro RMQP-4096-HK	1	23.651	26.016	1.00	1.00	48.00	3174.00	0.000	0.000	1998.03	0.00	0.00	
2	117.00	AIR6449 B41	3	23.651	26.016	0.53	0.75	9.03	370.80	0.000	0.000	375.71	0.00	0.00	
3	117.00	Air 32	3	23.651	26.016	0.65	0.75	12.74	475.20	0.000	0.000	530.45	0.00	0.00	
4	117.00	APXVAALL18-43-U-NA20	3	23.651	26.016	0.55	0.75	25.03	333.36	0.000	0.000	1041.96	0.00	0.00	
5	117.00	Ericsson 4415 B25 RRU	3	23.651	26.016	0.43	0.75	2.10	165.60	0.000	0.000	87.55	0.00	0.00	
6	117.00	KRY 112 144/1	3	23.651	26.016	0.43	0.75	0.53	39.60	0.000	0.000	21.89	0.00	0.00	
7	117.00	SDX1926Q-43 Diplexer	3	23.651	26.016	0.43	0.75	0.37	21.60	0.000	0.000	15.48	0.00	0.00	
8	117.00	Radio 4449 B71+B85	3	23.651	26.016	0.43	0.75	2.53	266.40	0.000	0.000	105.17	0.00	0.00	
9	107.00	RRH2x60-700 RRH	3	23.055	25.360	0.43	0.75	4.49	216.00	0.000	0.000	182.14	0.00	0.00	
10	107.00	RRH2X60-PCS RRH	3	23.055	25.360	0.43	0.75	2.82	198.00	0.000	0.000	114.49	0.00	0.00	
11	107.00	RRH2X90-AWS RRH	3	23.055	25.360	0.43	0.75	3.33	230.40	0.000	0.000	135.30	0.00	0.00	
12	107.00	PV-LPP12M-B	1	23.055	25.360	1.00	1.00	28.00	1938.00	0.000	0.000	1136.14	0.00	0.00	
13	107.00	RFS DB-T1-6Z-8AB-OZ	2	23.055	25.360	0.50	0.75	4.82	45.36	0.000	0.000	195.74	0.00	0.00	
14	107.00	BXA-80063-6BF-EDIN-X	3	23.055	25.360	0.58	0.75	12.74	69.12	0.000	0.000	517.00	0.00	0.00	
15	107.00	SBNHH-1D65B	6	23.055	25.360	0.58	0.75	28.27	288.00	0.000	0.000	1147.27	0.00	0.00	
16	97.00	AAHC	3	22.417	24.659	0.60	0.80	7.56	374.40	0.000	0.000	298.28	0.00	0.00	
17	97.00	VHLP2-18	2	22.417	24.659	1.00	1.00	9.38	74.40	2.187	0.000	370.09	505.79	0.00	
18	97.00	VHLP1-23	1	22.417	24.659	1.00	1.00	1.61	17.04	0.000	0.000	63.52	0.00	0.00	
19	97.00	NNVV-65B-R4	3	22.417	24.659	0.59	0.80	21.79	278.64	0.000	0.000	859.78	0.00	0.00	
20	97.00	1900 MHz	3	22.417	24.659	0.46	0.80	3.71	216.00	0.000	0.000	146.27	0.00	0.00	
21	97.00	UDS-NPL (3 Sectors)	1	22.417	24.659	0.56	0.75	7.19	691.20	0.000	0.000	283.85	0.00	0.00	
22	97.00	800 MHz RRU	6	22.417	24.659	0.40	0.80	5.98	381.60	0.000	0.000	235.78	0.00	0.00	
23	97.00	TD-RRH8x20-25	3	22.417	24.659	0.46	0.80	5.54	252.00	0.000	0.000	218.59	0.00	0.00	
<b>Totals:</b>									<b>10,116.72</b>						<b>10,080.46</b>



## Total Applied Force Summary

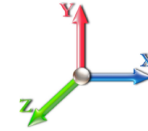
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.6W 97 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.60



**Iterations** 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		133.66	356.22	0.00	0.00
4.00		132.65	354.12	0.00	0.00
6.00		131.65	352.02	0.00	0.00
8.00		130.64	349.92	0.00	0.00
10.00		129.64	347.83	0.00	0.00
12.00		128.63	345.73	0.00	0.00
14.00		127.63	343.63	0.00	0.00
16.00		126.62	341.53	0.00	0.00
18.00		125.62	339.43	0.00	0.00
20.00		124.61	337.33	0.00	0.00
22.00		123.61	335.23	0.00	0.00
24.00		122.60	333.13	0.00	0.00
26.00		121.60	331.03	0.00	0.00
28.00		120.59	328.93	0.00	0.00
30.00		119.69	326.83	0.00	0.00
32.00		120.89	324.73	0.00	0.00
34.00		121.96	322.64	0.00	0.00
36.00		122.91	320.54	0.00	0.00
38.00		123.75	318.44	0.00	0.00
40.00		124.49	316.34	0.00	0.00
42.00		125.13	314.24	0.00	0.00
44.00		125.68	312.14	0.00	0.00
46.00		126.15	310.04	0.00	0.00
48.00		126.54	307.94	0.00	0.00
48.75		47.37	114.94	0.00	0.00
50.00		80.28	334.73	0.00	0.00
52.00		128.93	532.16	0.00	0.00
53.25		80.53	330.47	0.00	0.00
54.00		48.29	114.09	0.00	0.00
56.00		129.29	302.78	0.00	0.00
58.00		129.38	300.68	0.00	0.00
60.00		129.41	298.59	0.00	0.00
62.00		129.39	296.49	0.00	0.00
64.00		129.32	294.39	0.00	0.00
66.00		129.21	292.29	0.00	0.00
68.00		129.04	290.19	0.00	0.00
70.00		128.83	288.09	0.00	0.00
72.00		128.58	285.99	0.00	0.00
74.00		128.29	283.89	0.00	0.00
76.00		127.96	281.79	0.00	0.00
78.00		127.60	279.69	0.00	0.00
80.00		127.19	277.59	0.00	0.00
82.00		126.75	275.49	0.00	0.00
84.00		126.28	273.40	0.00	0.00
86.00		125.77	271.30	0.00	0.00
88.00		125.23	269.20	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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90.00	124.66	267.10	0.00	0.00	
92.00	124.06	265.00	0.00	0.00	
94.00	123.43	262.90	0.00	0.00	
96.00	122.78	260.80	0.00	0.00	
97.00	(22) attachments 2537.20	2414.89	505.79	0.00	
98.00	60.87	122.61	0.00	0.00	
98.75	45.52	91.62	0.00	0.00	
100.00	76.72	236.63	0.00	0.00	
102.00	122.30	375.63	0.00	0.00	
102.25	15.20	46.70	0.00	0.00	
104.00	106.27	173.27	0.00	0.00	
106.00	120.76	196.55	0.00	0.00	
107.00	(21) attachments 3488.08	3082.56	0.00	0.00	
108.00	59.80	80.92	0.00	0.00	
110.00	119.13	160.66	0.00	0.00	
112.00	118.28	159.09	0.00	0.00	
114.00	117.41	157.51	0.00	0.00	
116.00	116.51	155.94	0.00	0.00	
117.00	(22) attachments 4234.07	4923.94	0.00	0.00	
118.00	57.61	60.54	0.00	0.00	
119.00	57.38	60.15	0.00	0.00	
<b>Totals:</b>		<b>17,527.95</b>	<b>27,813.17</b>	<b>505.79</b>	<b>0.00</b>

## Linear Appurtenance Segment Forces (Factored)

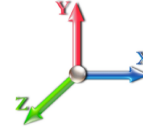
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



**Load Case:** 1.2D + 1.6W 97 mph Wind

**Iterations** 29

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.60



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
4.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
6.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
8.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
10.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
12.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
14.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
16.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
18.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
20.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
22.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
24.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
26.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
28.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	5.28
30.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.031	0.00	5.28
32.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.330	0.00	5.28
34.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.615	0.00	5.28
36.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.889	0.00	5.28
38.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.152	0.00	5.28
40.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.405	0.00	5.28
42.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.649	0.00	5.28
44.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.885	0.00	5.28
46.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.114	0.00	5.28
48.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.335	0.00	5.28
48.75	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	18.417	0.00	1.98
50.00	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	18.551	0.00	3.30
52.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.760	0.00	5.28
53.25	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	18.887	0.00	3.30
54.00	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	18.963	0.00	1.98
56.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.161	0.00	5.28
58.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.354	0.00	5.28
60.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.543	0.00	5.28
62.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.726	0.00	5.28
64.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.906	0.00	5.28
66.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.082	0.00	5.28
68.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.254	0.00	5.28
70.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.422	0.00	5.28
72.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.587	0.00	5.28
74.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.749	0.00	5.28
76.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.908	0.00	5.28
78.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.064	0.00	5.28
80.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.217	0.00	5.28
82.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.367	0.00	5.28
84.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.514	0.00	5.28
86.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.660	0.00	5.28
88.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.802	0.00	5.28
90.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.943	0.00	5.28

## Linear Appurtenance Segment Forces (Factored)

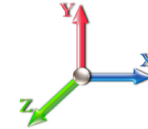
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.6W 97 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.60



**Iterations** 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)
92.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.081	0.00	5.28
94.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.217	0.00	5.28
96.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.351	0.00	5.28
97.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	22.417	0.00	2.64
98.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	22.483	0.00	2.64
98.75	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	22.532	0.00	1.98
100.00	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	22.613	0.00	3.30
102.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.742	0.00	5.28
102.25	1 5/8" Fiber	Yes	0.25	0.000	0.00	0.00	0.00	0.000	0.000	22.758	0.00	0.66
104.00	1 5/8" Fiber	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	22.868	0.00	4.62
106.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.993	0.00	5.28
107.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	23.055	0.00	2.64
<b>Totals:</b>											<b>0.0</b>	<b>282.5</b>

## Calculated Forces

**Structure:** CT13069-A-SBA

**Code:** EIA/TIA-222-G

11/10/2020

**Site Name:** Meriden

**Exposure:** B



**Height:** 119.00 (ft)

**Crest Height:** 0.00

**Base Elev:** 0.000 (ft)

**Site Class:** D - Stiff Soil

**Gh:** 1.1

**Topography:** 1

**Struct Class:** II

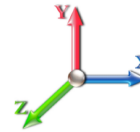
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**Load Case:** 1.2D + 1.6W 97 mph Wind

**Iterations** 29

**Dead Load Factor** 1.20

**Wind Load Factor** 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-27.79	-17.56	-0.50	-1628.0	-0.01	1628.07	2063.18	1031.59	3653.66	1829.55	0.00	0.000	0.000	0.904
2.00	-27.40	-17.48	-0.50	-1592.9	-0.01	1592.95	2055.83	1027.92	3613.07	1809.22	0.03	-0.115	0.000	0.894
4.00	-27.02	-17.40	-0.50	-1558.0	-0.01	1558.00	2048.36	1024.18	3572.46	1788.88	0.10	-0.230	0.000	0.884
6.00	-26.63	-17.32	-0.50	-1523.2	-0.01	1523.20	2040.76	1020.38	3531.83	1768.54	0.22	-0.345	0.000	0.875
8.00	-26.25	-17.24	-0.50	-1488.5	-0.01	1488.57	2033.04	1016.52	3491.19	1748.19	0.39	-0.460	0.000	0.865
10.00	-25.86	-17.16	-0.50	-1454.0	-0.01	1454.09	2025.20	1012.60	3450.55	1727.84	0.61	-0.575	0.000	0.855
12.00	-25.49	-17.08	-0.50	-1419.7	-0.01	1419.78	2017.23	1008.61	3409.91	1707.49	0.87	-0.690	0.000	0.844
14.00	-25.11	-16.99	-0.50	-1385.6	-0.01	1385.63	2009.13	1004.57	3369.28	1687.14	1.19	-0.805	0.000	0.834
16.00	-24.74	-16.91	-0.50	-1351.6	-0.01	1351.64	2000.92	1000.46	3328.65	1666.80	1.55	-0.920	0.000	0.824
18.00	-24.37	-16.83	-0.50	-1317.8	-0.01	1317.82	1992.57	996.29	3288.04	1646.46	1.96	-1.035	0.000	0.813
20.00	-24.00	-16.75	-0.50	-1284.1	-0.01	1284.16	1984.11	992.05	3247.45	1626.14	2.42	-1.149	0.000	0.802
22.00	-23.63	-16.66	-0.50	-1250.6	-0.01	1250.67	1975.52	987.76	3206.89	1605.83	2.92	-1.263	0.000	0.791
24.00	-23.27	-16.58	-0.50	-1217.3	-0.01	1217.35	1966.80	983.40	3166.36	1585.53	3.48	-1.378	0.000	0.780
26.00	-22.91	-16.49	-0.50	-1184.1	-0.01	1184.19	1957.96	978.98	3125.86	1565.25	4.08	-1.491	-0.001	0.769
28.00	-22.55	-16.41	-0.50	-1151.2	-0.01	1151.20	1948.99	974.50	3085.40	1544.99	4.73	-1.605	-0.001	0.757
30.00	-22.19	-16.32	-0.50	-1118.3	-0.01	1118.38	1939.91	969.95	3044.99	1524.76	5.43	-1.718	-0.001	0.745
32.00	-21.84	-16.24	-0.50	-1085.7	-0.01	1085.74	1930.69	965.35	3004.63	1504.55	6.17	-1.831	-0.001	0.733
34.00	-21.49	-16.15	-0.50	-1053.2	-0.01	1053.27	1921.36	960.68	2964.32	1484.36	6.96	-1.943	-0.001	0.721
36.00	-21.15	-16.05	-0.50	-1020.9	-0.01	1020.98	1911.89	955.95	2924.07	1464.21	7.80	-2.054	-0.001	0.709
38.00	-20.80	-15.96	-0.50	-988.87	-0.01	988.87	1902.31	951.15	2883.89	1444.09	8.68	-2.165	-0.001	0.696
40.00	-20.46	-15.86	-0.50	-956.96	-0.01	956.96	1892.60	946.30	2843.78	1424.00	9.61	-2.276	-0.001	0.683
42.00	-20.12	-15.76	-0.50	-925.24	-0.01	925.24	1882.76	941.38	2803.75	1403.96	10.59	-2.385	-0.001	0.670
44.00	-19.78	-15.66	-0.50	-893.72	-0.01	893.72	1872.80	936.40	2763.79	1383.95	11.61	-2.494	-0.001	0.657
46.00	-19.45	-15.56	-0.50	-862.40	-0.01	862.40	1862.72	931.36	2723.92	1363.99	12.68	-2.602	-0.001	0.643
48.00	-19.13	-15.44	-0.50	-831.29	-0.01	831.29	1852.51	926.26	2684.14	1344.07	13.79	-2.709	-0.001	0.629
48.75	-19.00	-15.40	-0.50	-819.71	-0.01	819.71	1848.65	924.33	2669.25	1336.61	14.22	-2.749	-0.001	0.624
50.00	-18.65	-15.34	-0.50	-800.45	-0.01	800.45	1842.18	921.09	2644.46	1324.20	14.95	-2.815	-0.001	0.615
52.00	-18.10	-15.21	-0.50	-769.78	-0.01	769.78	1831.72	915.86	2604.88	1304.37	16.15	-2.920	-0.001	0.600
53.25	-17.76	-15.13	-0.50	-750.77	-0.01	750.77	1841.33	920.67	2641.23	1322.58	16.93	-2.985	-0.001	0.578
54.00	-17.63	-15.09	-0.50	-739.43	-0.02	739.43	1837.42	918.71	2626.38	1315.14	17.40	-3.024	-0.001	0.572
56.00	-17.31	-14.98	-0.50	-709.24	-0.02	709.24	1826.91	913.45	2586.84	1295.34	18.69	-3.122	-0.001	0.557
58.00	-16.99	-14.86	-0.50	-679.29	-0.02	679.29	1816.27	908.14	2547.41	1275.60	20.02	-3.219	-0.001	0.542
60.00	-16.68	-14.74	-0.50	-649.57	-0.02	649.57	1805.51	902.75	2508.10	1255.91	21.38	-3.314	-0.002	0.527
62.00	-16.37	-14.62	-0.50	-620.09	-0.02	620.09	1794.62	897.31	2468.90	1236.28	22.79	-3.407	-0.002	0.511
64.00	-16.06	-14.50	-0.50	-590.85	-0.02	590.85	1783.61	891.81	2429.82	1216.72	24.24	-3.499	-0.002	0.495
66.00	-15.75	-14.38	-0.50	-561.85	-0.02	561.85	1772.48	886.24	2390.88	1197.22	25.72	-3.588	-0.002	0.478
68.00	-15.45	-14.25	-0.50	-533.10	-0.02	533.10	1761.22	880.61	2352.06	1177.78	27.24	-3.676	-0.002	0.462
70.00	-15.15	-14.13	-0.50	-504.59	-0.02	504.59	1749.83	874.92	2313.39	1158.41	28.80	-3.762	-0.002	0.445
72.00	-14.85	-14.00	-0.50	-476.33	-0.02	476.33	1738.33	869.16	2274.85	1139.12	30.40	-3.846	-0.002	0.427
74.00	-14.56	-13.88	-0.50	-448.33	-0.02	448.33	1726.69	863.35	2236.47	1119.90	32.02	-3.927	-0.002	0.409
76.00	-14.27	-13.75	-0.50	-420.58	-0.02	420.58	1714.94	857.47	2198.23	1100.75	33.68	-4.006	-0.002	0.391
78.00	-13.98	-13.62	-0.50	-393.08	-0.02	393.08	1703.06	851.53	2160.16	1081.68	35.38	-4.082	-0.002	0.372
80.00	-13.69	-13.49	-0.50	-365.85	-0.02	365.85	1691.05	845.53	2122.25	1062.70	37.10	-4.155	-0.002	0.353
82.00	-13.41	-13.36	-0.50	-338.87	-0.03	338.87	1678.92	839.46	2084.50	1043.80	38.86	-4.225	-0.003	0.333
84.00	-13.14	-13.23	-0.50	-312.15	-0.03	312.15	1666.67	833.33	2046.93	1024.99	40.64	-4.292	-0.003	0.313
86.00	-12.86	-13.10	-0.50	-285.70	-0.03	285.70	1654.29	827.14	2009.53	1006.26	42.45	-4.355	-0.003	0.292
88.00	-12.59	-12.96	-0.50	-259.51	-0.03	259.51	1641.79	820.89	1972.32	987.63	44.29	-4.415	-0.003	0.271
90.00	-12.32	-12.83	-0.50	-233.58	-0.03	233.58	1629.16	814.58	1935.30	969.09	46.15	-4.471	-0.003	0.249

## Calculated Forces

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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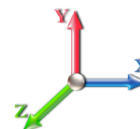
92.00	-12.05	-12.70	-0.50	-207.93	-0.03	207.93	1616.41	808.20	1898.47	950.64	48.03	-4.523	-0.003	0.226
94.00	-11.79	-12.56	-0.50	-182.54	-0.03	182.54	1603.53	801.77	1861.83	932.30	49.93	-4.570	-0.003	0.203
96.00	-11.54	-12.42	-0.50	-157.42	-0.03	157.42	1590.53	795.27	1825.40	914.06	51.86	-4.613	-0.003	0.180
97.00	-9.33	-9.70	0.00	-144.99	0.01	144.99	1583.99	791.99	1807.27	904.98	52.82	-4.632	-0.003	0.166
98.00	-9.21	-9.63	0.00	-135.29	0.01	135.29	1577.41	788.70	1789.18	895.92	53.79	-4.651	-0.003	0.157
98.75	-9.12	-9.58	0.00	-128.06	0.01	128.06	1572.46	786.23	1775.65	889.15	54.53	-4.664	-0.003	0.150
100.00	-8.89	-9.49	0.00	-116.08	0.01	116.08	1564.16	782.08	1753.17	877.89	55.75	-4.685	-0.003	0.138
102.00	-8.52	-9.34	0.00	-97.10	0.00	97.10	1550.79	775.39	1717.38	859.97	57.72	-4.715	-0.003	0.119
102.25	-8.47	-9.33	0.00	-94.76	0.00	94.76	1064.30	532.15	1198.84	600.31	57.96	-4.718	-0.003	0.166
104.00	-8.30	-9.21	0.00	-78.44	0.00	78.44	1057.83	528.92	1179.14	590.45	59.69	-4.740	-0.003	0.141
106.00	-8.11	-9.08	0.00	-60.02	0.00	60.02	1050.33	525.16	1156.68	579.20	61.68	-4.766	-0.003	0.112
107.00	-5.33	-5.34	0.00	-50.95	0.00	50.95	1046.53	523.26	1145.48	573.59	62.68	-4.777	-0.003	0.094
108.00	-5.25	-5.28	0.00	-45.61	0.00	45.61	1042.70	521.35	1134.29	567.99	63.68	-4.787	-0.003	0.085
110.00	-5.10	-5.15	0.00	-35.05	0.00	35.05	1034.95	517.47	1111.97	556.81	65.69	-4.804	-0.003	0.068
112.00	-4.95	-5.02	0.00	-24.75	0.00	24.75	1027.07	513.53	1089.73	545.68	67.70	-4.816	-0.003	0.050
114.00	-4.81	-4.89	0.00	-14.72	0.00	14.72	1019.06	509.53	1067.57	534.58	69.72	-4.825	-0.003	0.032
116.00	-4.66	-4.76	0.00	-4.95	0.00	4.95	1010.94	505.47	1045.49	523.52	71.74	-4.829	-0.003	0.014
117.00	-0.11	-0.12	0.00	-0.19	0.00	0.19	1006.83	503.41	1034.49	518.01	72.75	-4.830	-0.003	0.000
118.00	-0.06	-0.06	0.00	-0.06	0.00	0.06	1002.69	501.34	1023.51	512.52	73.76	-4.830	-0.003	0.000
119.00	0.00	-0.06	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	74.77	-4.830	-0.003	0.000

## Wind Loading - Shaft

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



<b>Load Case:</b> 0.9D + 1.6W 97 mph Wind	<b>Iterations</b> 28
<b>Dead Load Factor</b> 0.90	
<b>Wind Load Factor</b> 1.60	



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	16.018	17.62	297.08	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	16.018	17.62	294.86	0.650	0.000	2.00	7.294	4.74	133.7	0.0	208.2
4.00		1.00	0.70	16.018	17.62	292.63	0.650	0.000	2.00	7.239	4.71	132.7	0.0	206.7
6.00		1.00	0.70	16.018	17.62	290.41	0.650	0.000	2.00	7.184	4.67	131.6	0.0	205.1
8.00		1.00	0.70	16.018	17.62	288.18	0.650	0.000	2.00	7.129	4.63	130.6	0.0	203.5
10.00		1.00	0.70	16.018	17.62	285.96	0.650	0.000	2.00	7.075	4.60	129.6	0.0	201.9
12.00		1.00	0.70	16.018	17.62	283.73	0.650	0.000	2.00	7.020	4.56	128.6	0.0	200.4
14.00		1.00	0.70	16.018	17.62	281.51	0.650	0.000	2.00	6.965	4.53	127.6	0.0	198.8
16.00		1.00	0.70	16.018	17.62	279.28	0.650	0.000	2.00	6.910	4.49	126.6	0.0	197.2
18.00		1.00	0.70	16.018	17.62	277.06	0.650	0.000	2.00	6.855	4.46	125.6	0.0	195.6
20.00		1.00	0.70	16.018	17.62	274.83	0.650	0.000	2.00	6.800	4.42	124.6	0.0	194.1
22.00		1.00	0.70	16.018	17.62	272.61	0.650	0.000	2.00	6.746	4.38	123.6	0.0	192.5
24.00		1.00	0.70	16.018	17.62	270.38	0.650	0.000	2.00	6.691	4.35	122.6	0.0	190.9
26.00		1.00	0.70	16.018	17.62	268.16	0.650	0.000	2.00	6.636	4.31	121.6	0.0	189.3
28.00		1.00	0.70	16.018	17.62	265.94	0.650	0.000	2.00	6.581	4.28	120.6	0.0	187.8
30.00		1.00	0.70	16.031	17.63	263.82	0.650	0.000	2.00	6.526	4.24	119.7	0.0	186.2
32.00		1.00	0.71	16.330	17.96	264.02	0.650	0.000	2.00	6.471	4.21	120.9	0.0	184.6
34.00		1.00	0.73	16.615	18.28	264.05	0.650	0.000	2.00	6.417	4.17	122.0	0.0	183.1
36.00		1.00	0.74	16.889	18.58	263.93	0.650	0.000	2.00	6.362	4.14	122.9	0.0	181.5
38.00		1.00	0.75	17.152	18.87	263.68	0.650	0.000	2.00	6.307	4.10	123.8	0.0	179.9
40.00		1.00	0.76	17.405	19.15	263.30	0.650	0.000	2.00	6.252	4.06	124.5	0.0	178.3
42.00		1.00	0.77	17.649	19.41	262.80	0.650	0.000	2.00	6.197	4.03	125.1	0.0	176.8
44.00		1.00	0.78	17.885	19.67	262.20	0.650	0.000	2.00	6.142	3.99	125.7	0.0	175.2
46.00		1.00	0.79	18.114	19.93	261.51	0.650	0.000	2.00	6.088	3.96	126.2	0.0	173.6
48.00		1.00	0.80	18.335	20.17	260.72	0.650	0.000	2.00	6.033	3.92	126.5	0.0	172.0
48.75 Bot - Section 2		1.00	0.80	18.417	20.26	260.41	0.650	0.000	0.75	2.248	1.46	47.4	0.0	64.1
50.00		1.00	0.81	18.551	20.41	259.85	0.650	0.000	1.25	3.783	2.46	80.3	0.0	214.2
52.00		1.00	0.82	18.760	20.64	258.91	0.650	0.000	2.00	6.008	3.91	128.9	0.0	340.2
53.25 Top - Section 1		1.00	0.83	18.887	20.78	258.28	0.650	0.000	1.25	3.727	2.42	80.5	0.0	211.0
54.00		1.00	0.83	18.963	20.86	261.62	0.650	0.000	0.75	2.226	1.45	48.3	0.0	63.5
56.00		1.00	0.84	19.161	21.08	260.55	0.650	0.000	2.00	5.898	3.83	129.3	0.0	168.2
58.00		1.00	0.85	19.354	21.29	259.41	0.650	0.000	2.00	5.843	3.80	129.4	0.0	166.6
60.00		1.00	0.85	19.543	21.50	258.22	0.650	0.000	2.00	5.789	3.76	129.4	0.0	165.0
62.00		1.00	0.86	19.726	21.70	256.96	0.650	0.000	2.00	5.734	3.73	129.4	0.0	163.4
64.00		1.00	0.87	19.906	21.90	255.65	0.650	0.000	2.00	5.679	3.69	129.3	0.0	161.9
66.00		1.00	0.88	20.082	22.09	254.28	0.650	0.000	2.00	5.624	3.66	129.2	0.0	160.3
68.00		1.00	0.89	20.254	22.28	252.87	0.650	0.000	2.00	5.569	3.62	129.0	0.0	158.7
70.00		1.00	0.89	20.422	22.46	251.41	0.650	0.000	2.00	5.514	3.58	128.8	0.0	157.1
72.00		1.00	0.90	20.587	22.65	249.90	0.650	0.000	2.00	5.460	3.55	128.6	0.0	155.6
74.00		1.00	0.91	20.749	22.82	248.35	0.650	0.000	2.00	5.405	3.51	128.3	0.0	154.0
76.00		1.00	0.91	20.908	23.00	246.75	0.650	0.000	2.00	5.350	3.48	128.0	0.0	152.4
78.00		1.00	0.92	21.064	23.17	245.12	0.650	0.000	2.00	5.295	3.44	127.6	0.0	150.8
80.00		1.00	0.93	21.217	23.34	243.45	0.650	0.000	2.00	5.240	3.41	127.2	0.0	149.3
82.00		1.00	0.93	21.367	23.50	241.74	0.650	0.000	2.00	5.185	3.37	126.8	0.0	147.7
84.00		1.00	0.94	21.514	23.67	239.99	0.650	0.000	2.00	5.131	3.33	126.3	0.0	146.1
86.00		1.00	0.95	21.660	23.83	238.21	0.650	0.000	2.00	5.076	3.30	125.8	0.0	144.5
88.00		1.00	0.95	21.802	23.98	236.40	0.650	0.000	2.00	5.021	3.26	125.2	0.0	143.0

## Wind Loading - Shaft

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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90.00	1.00	0.96	21.943	24.14	234.56	0.650	0.000	2.00	4.966	3.23	124.7	0.0	141.4			
92.00	1.00	0.96	22.081	24.29	232.68	0.650	0.000	2.00	4.911	3.19	124.1	0.0	139.8			
94.00	1.00	0.97	22.217	24.44	230.78	0.650	0.000	2.00	4.857	3.16	123.4	0.0	138.2			
96.00	1.00	0.98	22.351	24.59	228.85	0.650	0.000	2.00	4.802	3.12	122.8	0.0	136.7			
97.00 Appurtenance(s)	1.00	0.98	22.417	24.66	227.87	0.650	0.000	1.00	2.380	1.55	61.0	0.0	67.7			
98.00	1.00	0.98	22.483	24.73	226.89	0.650	0.000	1.00	2.367	1.54	60.9	0.0	67.4			
98.75 Bot - Section 3	1.00	0.98	22.532	24.79	226.14	0.650	0.000	0.75	1.766	1.15	45.5	0.0	50.3			
100.00	1.00	0.99	22.613	24.87	224.90	0.650	0.000	1.25	2.966	1.93	76.7	0.0	146.7			
102.00	1.00	0.99	22.742	25.02	222.89	0.650	0.000	2.00	4.701	3.06	122.3	0.0	232.5			
102.25 Top - Section 2	1.00	0.99	22.758	25.03	222.63	0.650	0.000	0.25	0.584	0.38	15.2	0.0	28.9			
104.00	1.00	1.00	22.868	25.16	223.92	0.650	0.000	1.75	4.062	2.64	106.3	0.0	86.9			
106.00	1.00	1.00	22.993	25.29	221.87	0.650	0.000	2.00	4.591	2.98	120.8	0.0	98.2			
107.00 Appurtenance(s)	1.00	1.01	23.055	25.36	220.83	0.650	0.000	1.00	2.275	1.48	60.0	0.0	48.7			
108.00	1.00	1.01	23.116	25.43	219.79	0.650	0.000	1.00	2.261	1.47	59.8	0.0	48.4			
110.00	1.00	1.02	23.238	25.56	217.69	0.650	0.000	2.00	4.481	2.91	119.1	0.0	95.8			
112.00	1.00	1.02	23.358	25.69	215.56	0.650	0.000	2.00	4.427	2.88	118.3	0.0	94.7			
114.00	1.00	1.03	23.476	25.82	213.41	0.650	0.000	2.00	4.372	2.84	117.4	0.0	93.5			
116.00	1.00	1.03	23.593	25.95	211.24	0.650	0.000	2.00	4.317	2.81	116.5	0.0	92.3			
117.00 Appurtenance(s)	1.00	1.03	23.651	26.02	210.15	0.650	0.000	1.00	2.138	1.39	57.8	0.0	45.7			
118.00	1.00	1.04	23.708	26.08	209.05	0.650	0.000	1.00	2.124	1.38	57.6	0.0	45.4			
119.00	1.00	1.04	23.766	26.14	207.95	0.650	0.000	1.00	2.110	1.37	57.4	0.0	45.1			
<b>Totals:</b>								<b>119.00</b>				<b>7,447.5</b>				<b>10,045.1</b>



## Discrete Appurtenance Forces

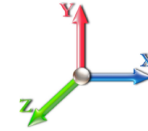
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.6W 97 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.60



**Iterations** 28

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	117.00	Sitepro RMQP-4096-HK	1	23.651	26.016	1.00	1.00	48.00	2380.50	0.000	0.000	1998.03	0.00	0.00	
2	117.00	AIR6449 B41	3	23.651	26.016	0.53	0.75	9.03	278.10	0.000	0.000	375.71	0.00	0.00	
3	117.00	Air 32	3	23.651	26.016	0.65	0.75	12.74	356.40	0.000	0.000	530.45	0.00	0.00	
4	117.00	APXVAALL18-43-U-NA20	3	23.651	26.016	0.55	0.75	25.03	250.02	0.000	0.000	1041.96	0.00	0.00	
5	117.00	Ericsson 4415 B25 RRU	3	23.651	26.016	0.43	0.75	2.10	124.20	0.000	0.000	87.55	0.00	0.00	
6	117.00	KRY 112 144/1	3	23.651	26.016	0.43	0.75	0.53	29.70	0.000	0.000	21.89	0.00	0.00	
7	117.00	SDX1926Q-43 Diplexer	3	23.651	26.016	0.43	0.75	0.37	16.20	0.000	0.000	15.48	0.00	0.00	
8	117.00	Radio 4449 B71+B85	3	23.651	26.016	0.43	0.75	2.53	199.80	0.000	0.000	105.17	0.00	0.00	
9	107.00	RRH2x60-700 RRH	3	23.055	25.360	0.43	0.75	4.49	162.00	0.000	0.000	182.14	0.00	0.00	
10	107.00	RRH2X60-PCS RRH	3	23.055	25.360	0.43	0.75	2.82	148.50	0.000	0.000	114.49	0.00	0.00	
11	107.00	RRH2X90-AWS RRH	3	23.055	25.360	0.43	0.75	3.33	172.80	0.000	0.000	135.30	0.00	0.00	
12	107.00	PV-LPP12M-B	1	23.055	25.360	1.00	1.00	28.00	1453.50	0.000	0.000	1136.14	0.00	0.00	
13	107.00	RFS DB-T1-6Z-8AB-OZ	2	23.055	25.360	0.50	0.75	4.82	34.02	0.000	0.000	195.74	0.00	0.00	
14	107.00	BXA-80063-6BF-EDIN-X	3	23.055	25.360	0.58	0.75	12.74	51.84	0.000	0.000	517.00	0.00	0.00	
15	107.00	SBNHH-1D65B	6	23.055	25.360	0.58	0.75	28.27	216.00	0.000	0.000	1147.27	0.00	0.00	
16	97.00	AAHC	3	22.417	24.659	0.60	0.80	7.56	280.80	0.000	0.000	298.28	0.00	0.00	
17	97.00	VHLP2-18	2	22.417	24.659	1.00	1.00	9.38	55.80	2.187	0.000	370.09	505.79	0.00	
18	97.00	VHLP1-23	1	22.417	24.659	1.00	1.00	1.61	12.78	0.000	0.000	63.52	0.00	0.00	
19	97.00	NNVV-65B-R4	3	22.417	24.659	0.59	0.80	21.79	208.98	0.000	0.000	859.78	0.00	0.00	
20	97.00	1900 MHz	3	22.417	24.659	0.46	0.80	3.71	162.00	0.000	0.000	146.27	0.00	0.00	
21	97.00	UDS-NPL (3 Sectors)	1	22.417	24.659	0.56	0.75	7.19	518.40	0.000	0.000	283.85	0.00	0.00	
22	97.00	800 MHz RRU	6	22.417	24.659	0.40	0.80	5.98	286.20	0.000	0.000	235.78	0.00	0.00	
23	97.00	TD-RRH8x20-25	3	22.417	24.659	0.46	0.80	5.54	189.00	0.000	0.000	218.59	0.00	0.00	
<b>Totals:</b>									<b>7,587.54</b>						<b>10,080.46</b>

## Total Applied Force Summary

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.6W 97 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.60



**Iterations** 28

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		133.66	267.17	0.00	0.00
4.00		132.65	265.59	0.00	0.00
6.00		131.65	264.02	0.00	0.00
8.00		130.64	262.44	0.00	0.00
10.00		129.64	260.87	0.00	0.00
12.00		128.63	259.29	0.00	0.00
14.00		127.63	257.72	0.00	0.00
16.00		126.62	256.15	0.00	0.00
18.00		125.62	254.57	0.00	0.00
20.00		124.61	253.00	0.00	0.00
22.00		123.61	251.42	0.00	0.00
24.00		122.60	249.85	0.00	0.00
26.00		121.60	248.27	0.00	0.00
28.00		120.59	246.70	0.00	0.00
30.00		119.69	245.13	0.00	0.00
32.00		120.89	243.55	0.00	0.00
34.00		121.96	241.98	0.00	0.00
36.00		122.91	240.40	0.00	0.00
38.00		123.75	238.83	0.00	0.00
40.00		124.49	237.25	0.00	0.00
42.00		125.13	235.68	0.00	0.00
44.00		125.68	234.10	0.00	0.00
46.00		126.15	232.53	0.00	0.00
48.00		126.54	230.96	0.00	0.00
48.75		47.37	86.20	0.00	0.00
50.00		80.28	251.05	0.00	0.00
52.00		128.93	399.12	0.00	0.00
53.25		80.53	247.85	0.00	0.00
54.00		48.29	85.56	0.00	0.00
56.00		129.29	227.09	0.00	0.00
58.00		129.38	225.51	0.00	0.00
60.00		129.41	223.94	0.00	0.00
62.00		129.39	222.36	0.00	0.00
64.00		129.32	220.79	0.00	0.00
66.00		129.21	219.22	0.00	0.00
68.00		129.04	217.64	0.00	0.00
70.00		128.83	216.07	0.00	0.00
72.00		128.58	214.49	0.00	0.00
74.00		128.29	212.92	0.00	0.00
76.00		127.96	211.34	0.00	0.00
78.00		127.60	209.77	0.00	0.00
80.00		127.19	208.20	0.00	0.00
82.00		126.75	206.62	0.00	0.00
84.00		126.28	205.05	0.00	0.00
86.00		125.77	203.47	0.00	0.00
88.00		125.23	201.90	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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90.00	124.66	200.32	0.00	0.00	
92.00	124.06	198.75	0.00	0.00	
94.00	123.43	197.17	0.00	0.00	
96.00	122.78	195.60	0.00	0.00	
97.00	(22) attachments 2537.20	1811.17	505.79	0.00	
98.00	60.87	91.96	0.00	0.00	
98.75	45.52	68.71	0.00	0.00	
100.00	76.72	177.48	0.00	0.00	
102.00	122.30	281.72	0.00	0.00	
102.25	15.20	35.02	0.00	0.00	
104.00	106.27	129.95	0.00	0.00	
106.00	120.76	147.41	0.00	0.00	
107.00	(21) attachments 3488.08	2311.92	0.00	0.00	
108.00	59.80	60.69	0.00	0.00	
110.00	119.13	120.50	0.00	0.00	
112.00	118.28	119.31	0.00	0.00	
114.00	117.41	118.13	0.00	0.00	
116.00	116.51	116.95	0.00	0.00	
117.00	(22) attachments 4234.07	3692.95	0.00	0.00	
118.00	57.61	45.41	0.00	0.00	
119.00	57.38	45.11	0.00	0.00	
<b>Totals:</b>		<b>17,527.95</b>	<b>20,859.88</b>	<b>505.79</b>	<b>0.00</b>

## Linear Appurtenance Segment Forces (Factored)

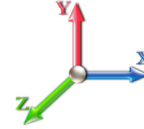
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.6W 97 mph Wind

**Dead Load Factor**     0.90  
**Wind Load Factor**     1.60



**Iterations**     28

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" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
4.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
6.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
8.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
10.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
12.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
14.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
16.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
18.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
20.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
22.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
24.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
26.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
28.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.018	0.00	3.96
30.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.031	0.00	3.96
32.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.330	0.00	3.96
34.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.615	0.00	3.96
36.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	16.889	0.00	3.96
38.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.152	0.00	3.96
40.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.405	0.00	3.96
42.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.649	0.00	3.96
44.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	17.885	0.00	3.96
46.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.114	0.00	3.96
48.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.335	0.00	3.96
48.75	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	18.417	0.00	1.49
50.00	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	18.551	0.00	2.48
52.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.760	0.00	3.96
53.25	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	18.887	0.00	2.48
54.00	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	18.963	0.00	1.49
56.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.161	0.00	3.96
58.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.354	0.00	3.96
60.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.543	0.00	3.96
62.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.726	0.00	3.96
64.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.906	0.00	3.96
66.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.082	0.00	3.96
68.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.254	0.00	3.96
70.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.422	0.00	3.96
72.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.587	0.00	3.96
74.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.749	0.00	3.96
76.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.908	0.00	3.96
78.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.064	0.00	3.96
80.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.217	0.00	3.96
82.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.367	0.00	3.96
84.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.514	0.00	3.96
86.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.660	0.00	3.96
88.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.802	0.00	3.96
90.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.943	0.00	3.96

## Linear Appurtenance Segment Forces (Factored)

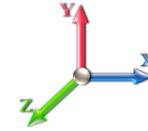
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.6W 97 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.60



**Iterations** 28

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)
92.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.081	0.00	3.96
94.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.217	0.00	3.96
96.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.351	0.00	3.96
97.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	22.417	0.00	1.98
98.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	22.483	0.00	1.98
98.75	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	22.532	0.00	1.49
100.00	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	22.613	0.00	2.48
102.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.742	0.00	3.96
102.25	1 5/8" Fiber	Yes	0.25	0.000	0.00	0.00	0.00	0.000	0.000	22.758	0.00	0.50
104.00	1 5/8" Fiber	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	22.868	0.00	3.47
106.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.993	0.00	3.96
107.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	23.055	0.00	1.98
<b>Totals:</b>											<b>0.0</b>	<b>211.9</b>

# Calculated Forces

Structure: CT13069-A-SBA  
 Site Name: Meriden  
 Height: 119.00 (ft)  
 Base Elev: 0.000 (ft)  
 Gh: 1.1

Topography: 1

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

11/10/2020  
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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90  
 Wind Load Factor 1.60

Iterations 28



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	-20.84	-17.55	-0.50	-1604.6	-0.01	1604.64	2063.18	1031.59	3653.66	1829.55	0.00	0.000	0.000	0.887
2.00	-20.54	-17.46	-0.50	-1569.5	-0.01	1569.54	2055.83	1027.92	3613.07	1809.22	0.02	-0.113	0.000	0.878
4.00	-20.24	-17.36	-0.50	-1534.6	-0.01	1534.63	2048.36	1024.18	3572.46	1788.88	0.10	-0.226	0.000	0.868
6.00	-19.94	-17.27	-0.50	-1499.9	-0.01	1499.91	2040.76	1020.38	3531.83	1768.54	0.22	-0.340	0.000	0.858
8.00	-19.65	-17.17	-0.50	-1465.3	-0.01	1465.38	2033.04	1016.52	3491.19	1748.19	0.38	-0.453	0.000	0.848
10.00	-19.35	-17.08	-0.50	-1431.0	-0.01	1431.03	2025.20	1012.60	3450.55	1727.84	0.60	-0.566	0.000	0.838
12.00	-19.06	-16.99	-0.50	-1396.8	-0.01	1396.86	2017.23	1008.61	3409.91	1707.49	0.86	-0.679	0.000	0.828
14.00	-18.77	-16.89	-0.50	-1362.8	-0.01	1362.89	2009.13	1004.57	3369.28	1687.14	1.17	-0.793	0.000	0.817
16.00	-18.49	-16.80	-0.50	-1329.1	-0.01	1329.11	2000.92	1000.46	3328.65	1666.80	1.53	-0.906	0.000	0.807
18.00	-18.20	-16.71	-0.50	-1295.5	-0.01	1295.51	1992.57	996.29	3288.04	1646.46	1.93	-1.018	0.000	0.796
20.00	-17.92	-16.61	-0.50	-1262.1	-0.01	1262.10	1984.11	992.05	3247.45	1626.14	2.38	-1.131	0.000	0.785
22.00	-17.64	-16.52	-0.50	-1228.8	-0.01	1228.87	1975.52	987.76	3206.89	1605.83	2.88	-1.243	0.000	0.774
24.00	-17.36	-16.42	-0.50	-1195.8	-0.01	1195.84	1966.80	983.40	3166.36	1585.53	3.42	-1.355	0.000	0.763
26.00	-17.08	-16.33	-0.50	-1163.0	-0.01	1163.00	1957.96	978.98	3125.86	1565.25	4.02	-1.467	-0.001	0.752
28.00	-16.81	-16.23	-0.50	-1130.3	-0.01	1130.34	1948.99	974.50	3085.40	1544.99	4.65	-1.579	-0.001	0.741
30.00	-16.53	-16.14	-0.50	-1097.8	-0.01	1097.87	1939.91	969.95	3044.99	1524.76	5.34	-1.690	-0.001	0.729
32.00	-16.26	-16.04	-0.50	-1065.6	-0.01	1065.60	1930.69	965.35	3004.63	1504.55	6.07	-1.800	-0.001	0.717
34.00	-15.99	-15.94	-0.50	-1033.5	-0.01	1033.51	1921.36	960.68	2964.32	1484.36	6.85	-1.910	-0.001	0.705
36.00	-15.73	-15.84	-0.50	-1001.6	-0.01	1001.63	1911.89	955.95	2924.07	1464.21	7.67	-2.020	-0.001	0.693
38.00	-15.46	-15.74	-0.50	-969.94	-0.01	969.94	1902.31	951.15	2883.89	1444.09	8.54	-2.129	-0.001	0.680
40.00	-15.20	-15.63	-0.50	-938.46	-0.01	938.46	1892.60	946.30	2843.78	1424.00	9.46	-2.237	-0.001	0.667
42.00	-14.94	-15.53	-0.50	-907.20	-0.01	907.20	1882.76	941.38	2803.75	1403.96	10.42	-2.344	-0.001	0.654
44.00	-14.69	-15.42	-0.50	-876.14	-0.01	876.14	1872.80	936.40	2763.79	1383.95	11.42	-2.451	-0.001	0.641
46.00	-14.43	-15.31	-0.50	-845.30	-0.01	845.30	1862.72	931.36	2723.92	1363.99	12.47	-2.557	-0.001	0.628
48.00	-14.19	-15.19	-0.50	-814.68	-0.01	814.68	1852.51	926.26	2684.14	1344.07	13.57	-2.661	-0.001	0.614
48.75	-14.09	-15.15	-0.50	-803.29	-0.01	803.29	1848.65	924.33	2669.25	1336.61	13.99	-2.701	-0.001	0.609
50.00	-13.82	-15.08	-0.50	-784.35	-0.01	784.35	1842.18	921.09	2644.46	1324.20	14.70	-2.766	-0.001	0.600
52.00	-13.41	-14.95	-0.50	-754.19	-0.01	754.19	1831.72	915.86	2604.88	1304.37	15.88	-2.868	-0.001	0.586
53.25	-13.15	-14.87	-0.50	-735.50	-0.01	735.50	1841.33	920.67	2641.23	1322.58	16.64	-2.932	-0.001	0.564
54.00	-13.05	-14.83	-0.50	-724.35	-0.01	724.35	1837.42	918.71	2626.38	1315.14	17.11	-2.971	-0.001	0.558
56.00	-12.80	-14.71	-0.50	-694.68	-0.01	694.68	1826.91	913.45	2586.84	1295.34	18.37	-3.066	-0.001	0.544
58.00	-12.56	-14.59	-0.50	-665.25	-0.01	665.25	1816.27	908.14	2547.41	1275.60	19.68	-3.161	-0.001	0.529
60.00	-12.32	-14.47	-0.50	-636.07	-0.02	636.07	1805.51	902.75	2508.10	1255.91	21.02	-3.254	-0.002	0.514
62.00	-12.09	-14.35	-0.50	-607.13	-0.02	607.13	1794.62	897.31	2468.90	1236.28	22.40	-3.345	-0.002	0.498
64.00	-11.85	-14.22	-0.50	-578.43	-0.02	578.43	1783.61	891.81	2429.82	1216.72	23.82	-3.435	-0.002	0.482
66.00	-11.62	-14.10	-0.50	-549.99	-0.02	549.99	1772.48	886.24	2390.88	1197.22	25.28	-3.523	-0.002	0.466
68.00	-11.39	-13.97	-0.50	-521.79	-0.02	521.79	1761.22	880.61	2352.06	1177.78	26.78	-3.609	-0.002	0.450
70.00	-11.16	-13.85	-0.50	-493.84	-0.02	493.84	1749.83	874.92	2313.39	1158.41	28.30	-3.693	-0.002	0.433
72.00	-10.94	-13.72	-0.50	-466.14	-0.02	466.14	1738.33	869.16	2274.85	1139.12	29.87	-3.775	-0.002	0.416
74.00	-10.71	-13.59	-0.50	-438.70	-0.02	438.70	1726.69	863.35	2236.47	1119.90	31.47	-3.854	-0.002	0.398
76.00	-10.49	-13.47	-0.50	-411.52	-0.02	411.52	1714.94	857.47	2198.23	1100.75	33.10	-3.931	-0.002	0.380
78.00	-10.28	-13.34	-0.50	-384.59	-0.02	384.59	1703.06	851.53	2160.16	1081.68	34.76	-4.006	-0.002	0.362
80.00	-10.06	-13.21	-0.50	-357.91	-0.02	357.91	1691.05	845.53	2122.25	1062.70	36.45	-4.077	-0.002	0.343
82.00	-9.85	-13.08	-0.50	-331.50	-0.02	331.50	1678.92	839.46	2084.50	1043.80	38.17	-4.146	-0.003	0.324
84.00	-9.64	-12.95	-0.50	-305.34	-0.03	305.34	1666.67	833.33	2046.93	1024.99	39.92	-4.211	-0.003	0.304
86.00	-9.43	-12.82	-0.50	-279.45	-0.03	279.45	1654.29	827.14	2009.53	1006.26	41.70	-4.273	-0.003	0.284
88.00	-9.23	-12.69	-0.50	-253.82	-0.03	253.82	1641.79	820.89	1972.32	987.63	43.50	-4.332	-0.003	0.263
90.00	-9.03	-12.55	-0.50	-228.44	-0.03	228.44	1629.16	814.58	1935.30	969.09	45.33	-4.387	-0.003	0.242

## Calculated Forces

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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92.00	-8.83	-12.42	-0.50	-203.33	-0.03	203.33	1616.41	808.20	1898.47	950.64	47.17	-4.437	-0.003	0.220
94.00	-8.63	-12.29	-0.50	-178.49	-0.03	178.49	1603.53	801.77	1861.83	932.30	49.04	-4.483	-0.003	0.197
96.00	-8.44	-12.16	-0.50	-153.90	-0.03	153.90	1590.53	795.27	1825.40	914.06	50.93	-4.525	-0.003	0.174
97.00	-6.83	-9.49	0.00	-141.75	0.01	141.75	1583.99	791.99	1807.27	904.98	51.88	-4.544	-0.003	0.161
98.00	-6.74	-9.42	0.00	-132.26	0.01	132.26	1577.41	788.70	1789.18	895.92	52.83	-4.562	-0.003	0.152
98.75	-6.67	-9.37	0.00	-125.19	0.01	125.19	1572.46	786.23	1775.65	889.15	53.55	-4.575	-0.003	0.145
100.00	-6.50	-9.29	0.00	-113.48	0.01	113.48	1564.16	782.08	1753.17	877.89	54.75	-4.596	-0.003	0.134
102.00	-6.23	-9.14	0.00	-94.91	0.01	94.91	1550.79	775.39	1717.38	859.97	56.68	-4.625	-0.003	0.115
102.25	-6.19	-9.13	0.00	-92.62	0.01	92.62	1064.30	532.15	1198.84	600.31	56.92	-4.628	-0.003	0.160
104.00	-6.07	-9.01	0.00	-76.65	0.00	76.65	1057.83	528.92	1179.14	590.45	58.62	-4.650	-0.003	0.136
106.00	-5.93	-8.88	0.00	-58.63	0.00	58.63	1050.33	525.16	1156.68	579.20	60.57	-4.675	-0.003	0.107
107.00	-3.91	-5.22	0.00	-49.75	0.00	49.75	1046.53	523.26	1145.48	573.59	61.55	-4.686	-0.003	0.091
108.00	-3.85	-5.15	0.00	-44.53	0.00	44.53	1042.70	521.35	1134.29	567.99	62.53	-4.696	-0.003	0.082
110.00	-3.74	-5.03	0.00	-34.22	0.00	34.22	1034.95	517.47	1111.97	556.81	64.50	-4.712	-0.003	0.065
112.00	-3.63	-4.90	0.00	-24.17	0.00	24.17	1027.07	513.53	1089.73	545.68	66.47	-4.724	-0.003	0.048
114.00	-3.52	-4.77	0.00	-14.37	0.00	14.37	1019.06	509.53	1067.57	534.58	68.45	-4.732	-0.003	0.030
116.00	-3.41	-4.65	0.00	-4.83	0.00	4.83	1010.94	505.47	1045.49	523.52	70.44	-4.737	-0.003	0.013
117.00	-0.08	-0.12	0.00	-0.18	0.00	0.18	1006.83	503.41	1034.49	518.01	71.43	-4.737	-0.003	0.000
118.00	-0.04	-0.06	0.00	-0.06	0.00	0.06	1002.69	501.34	1023.51	512.52	72.42	-4.737	-0.003	0.000
119.00	0.00	-0.06	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	73.41	-4.738	-0.003	0.000

## Wind Loading - Shaft

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	<b>11/10/2020</b>
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

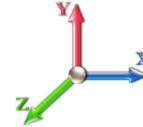


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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 27

**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	0.70	4.256	4.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	4.256	4.68	0.00	1.200	1.133	2.00	7.672	9.21	43.1	125.1	402.8
4.00		1.00	0.70	4.256	4.68	0.00	1.200	1.215	2.00	7.644	9.17	42.9	133.4	408.9
6.00		1.00	0.70	4.256	4.68	0.00	1.200	1.265	2.00	7.606	9.13	42.7	138.0	411.5
8.00		1.00	0.70	4.256	4.68	0.00	1.200	1.302	2.00	7.563	9.08	42.5	141.1	412.5
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.331	2.00	7.518	9.02	42.2	143.3	412.6
12.00		1.00	0.70	4.256	4.68	0.00	1.200	1.356	2.00	7.472	8.97	42.0	144.9	412.1
14.00		1.00	0.70	4.256	4.68	0.00	1.200	1.377	2.00	7.424	8.91	41.7	146.1	411.2
16.00		1.00	0.70	4.256	4.68	0.00	1.200	1.395	2.00	7.375	8.85	41.4	147.0	410.0
18.00		1.00	0.70	4.256	4.68	0.00	1.200	1.412	2.00	7.326	8.79	41.2	147.7	408.6
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.427	2.00	7.276	8.73	40.9	148.2	406.9
22.00		1.00	0.70	4.256	4.68	0.00	1.200	1.440	2.00	7.226	8.67	40.6	148.4	405.1
24.00		1.00	0.70	4.256	4.68	0.00	1.200	1.453	2.00	7.175	8.61	40.3	148.6	403.2
26.00		1.00	0.70	4.256	4.68	0.00	1.200	1.465	2.00	7.124	8.55	40.0	148.7	401.1
28.00		1.00	0.70	4.256	4.68	0.00	1.200	1.476	2.00	7.073	8.49	39.7	148.6	399.0
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.486	2.00	7.022	8.43	39.5	148.5	396.7
32.00		1.00	0.71	4.339	4.77	0.00	1.200	1.495	2.00	6.970	8.36	39.9	148.2	394.4
34.00		1.00	0.73	4.415	4.86	0.00	1.200	1.504	2.00	6.918	8.30	40.3	148.0	392.0
36.00		1.00	0.74	4.487	4.94	0.00	1.200	1.513	2.00	6.866	8.24	40.7	147.6	389.6
38.00		1.00	0.75	4.557	5.01	0.00	1.200	1.521	2.00	6.814	8.18	41.0	147.2	387.1
40.00		1.00	0.76	4.625	5.09	0.00	1.200	1.529	2.00	6.762	8.11	41.3	146.8	384.5
42.00		1.00	0.77	4.689	5.16	0.00	1.200	1.537	2.00	6.710	8.05	41.5	146.3	381.9
44.00		1.00	0.78	4.752	5.23	0.00	1.200	1.544	2.00	6.657	7.99	41.8	145.7	379.3
46.00		1.00	0.79	4.813	5.29	0.00	1.200	1.551	2.00	6.605	7.93	42.0	145.1	376.6
48.00		1.00	0.80	4.872	5.36	0.00	1.200	1.557	2.00	6.552	7.86	42.1	144.5	373.9
48.75 Bot - Section 2		1.00	0.80	4.893	5.38	0.00	1.200	1.560	0.75	2.443	2.93	15.8	54.1	139.6
50.00		1.00	0.81	4.929	5.42	0.00	1.200	1.564	1.25	4.108	4.93	26.7	91.1	376.8
52.00		1.00	0.82	4.984	5.48	0.00	1.200	1.570	2.00	6.531	7.84	43.0	145.1	598.7
53.25 Top - Section 1		1.00	0.83	5.018	5.52	0.00	1.200	1.574	1.25	4.055	4.87	26.9	90.4	371.8
54.00		1.00	0.83	5.039	5.54	0.00	1.200	1.576	0.75	2.423	2.91	16.1	54.2	138.8
56.00		1.00	0.84	5.091	5.60	0.00	1.200	1.581	2.00	6.425	7.71	43.2	143.7	367.9
58.00		1.00	0.85	5.142	5.66	0.00	1.200	1.587	2.00	6.372	7.65	43.3	142.9	365.0
60.00		1.00	0.85	5.193	5.71	0.00	1.200	1.592	2.00	6.319	7.58	43.3	142.1	362.2
62.00		1.00	0.86	5.241	5.77	0.00	1.200	1.598	2.00	6.266	7.52	43.4	141.3	359.3
64.00		1.00	0.87	5.289	5.82	0.00	1.200	1.603	2.00	6.213	7.46	43.4	140.5	356.3
66.00		1.00	0.88	5.336	5.87	0.00	1.200	1.608	2.00	6.160	7.39	43.4	139.6	353.4
68.00		1.00	0.89	5.382	5.92	0.00	1.200	1.612	2.00	6.107	7.33	43.4	138.8	350.4
70.00		1.00	0.89	5.426	5.97	0.00	1.200	1.617	2.00	6.053	7.26	43.4	137.9	347.4
72.00		1.00	0.90	5.470	6.02	0.00	1.200	1.622	2.00	6.000	7.20	43.3	137.0	344.4
74.00		1.00	0.91	5.513	6.06	0.00	1.200	1.626	2.00	5.947	7.14	43.3	136.0	341.4
76.00		1.00	0.91	5.555	6.11	0.00	1.200	1.631	2.00	5.893	7.07	43.2	135.1	338.3
78.00		1.00	0.92	5.597	6.16	0.00	1.200	1.635	2.00	5.840	7.01	43.1	134.1	335.3
80.00		1.00	0.93	5.637	6.20	0.00	1.200	1.639	2.00	5.787	6.94	43.1	133.2	332.2
82.00		1.00	0.93	5.677	6.24	0.00	1.200	1.643	2.00	5.733	6.88	43.0	132.2	329.1
84.00		1.00	0.94	5.716	6.29	0.00	1.200	1.647	2.00	5.680	6.82	42.9	131.2	326.0
86.00		1.00	0.95	5.755	6.33	0.00	1.200	1.651	2.00	5.626	6.75	42.7	130.2	322.9
88.00		1.00	0.95	5.793	6.37	0.00	1.200	1.655	2.00	5.573	6.69	42.6	129.1	319.8



## Wind Loading - Shaft

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 28



90.00	1.00	0.96	5.830	6.41	0.00	1.200	1.658	2.00	5.519	6.62	42.5	128.1	316.6	
92.00	1.00	0.96	5.867	6.45	0.00	1.200	1.662	2.00	5.465	6.56	42.3	127.0	313.5	
94.00	1.00	0.97	5.903	6.49	0.00	1.200	1.666	2.00	5.412	6.49	42.2	126.0	310.3	
96.00	1.00	0.98	5.939	6.53	0.00	1.200	1.669	2.00	5.358	6.43	42.0	124.9	307.1	
97.00 Appurtenance(s)	1.00	0.98	5.956	6.55	0.00	1.200	1.671	1.00	2.659	3.19	20.9	62.2	152.5	
98.00	1.00	0.98	5.974	6.57	0.00	1.200	1.672	1.00	2.645	3.17	20.9	61.9	151.7	
98.75 Bot - Section 3	1.00	0.98	5.987	6.59	0.00	1.200	1.674	0.75	1.975	2.37	15.6	46.3	113.3	
100.00	1.00	0.99	6.008	6.61	0.00	1.200	1.676	1.25	3.315	3.98	26.3	77.7	273.3	
102.00	1.00	0.99	6.043	6.65	0.00	1.200	1.679	2.00	5.260	6.31	42.0	123.2	433.2	
102.25 Top - Section 2	1.00	0.99	6.047	6.65	0.00	1.200	1.680	0.25	0.654	0.78	5.2	15.4	53.9	
104.00	1.00	1.00	6.076	6.68	0.00	1.200	1.682	1.75	4.553	5.46	36.5	106.8	222.7	
106.00	1.00	1.00	6.109	6.72	0.00	1.200	1.686	2.00	5.153	6.18	41.6	121.0	251.9	
107.00 Appurtenance(s)	1.00	1.01	6.126	6.74	0.00	1.200	1.687	1.00	2.556	3.07	20.7	60.2	125.1	
108.00	1.00	1.01	6.142	6.76	0.00	1.200	1.689	1.00	2.543	3.05	20.6	59.9	124.4	
110.00	1.00	1.02	6.174	6.79	0.00	1.200	1.692	2.00	5.045	6.05	41.1	118.7	246.5	
112.00	1.00	1.02	6.206	6.83	0.00	1.200	1.695	2.00	4.992	5.99	40.9	117.5	243.7	
114.00	1.00	1.03	6.238	6.86	0.00	1.200	1.698	2.00	4.938	5.93	40.7	116.4	241.0	
116.00	1.00	1.03	6.269	6.90	0.00	1.200	1.701	2.00	4.884	5.86	40.4	115.2	238.3	
117.00 Appurtenance(s)	1.00	1.03	6.284	6.91	0.00	1.200	1.702	1.00	2.422	2.91	20.1	57.3	118.2	
118.00	1.00	1.04	6.299	6.93	0.00	1.200	1.704	1.00	2.408	2.89	20.0	57.0	117.6	
119.00	1.00	1.04	6.315	6.95	0.00	1.200	1.705	1.00	2.395	2.87	20.0	56.7	116.9	
<b>Totals:</b>								<b>119.00</b>			<b>2,495.9</b>			<b>21,509.9</b>

## Discrete Appurtenance Forces

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

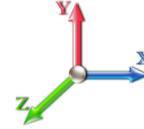


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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 27

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor	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	117.00	Sitepro RMQP-4096-HK	1	6.284	6.913	1.00	1.00	82.65	5120.69	0.000	0.000	571.30	0.00	0.00	
2	117.00	AIR6449 B41	3	6.284	6.913	0.53	0.75	10.51	676.96	0.000	0.000	72.63	0.00	0.00	
3	117.00	Air 32	3	6.284	6.913	0.65	0.75	14.88	1009.01	0.000	0.000	102.87	0.00	0.00	
4	117.00	APXVAALL18-43-U-NA20	3	6.284	6.913	0.55	0.75	26.60	1297.09	0.000	0.000	183.85	0.00	0.00	
5	117.00	Ericsson 4415 B25 RRU	3	6.284	6.913	0.43	0.75	2.75	257.68	0.000	0.000	18.99	0.00	0.00	
6	117.00	KRY 112 144/1	3	6.284	6.913	0.43	0.75	1.12	61.85	0.000	0.000	7.74	0.00	0.00	
7	117.00	SDX1926Q-43 Diplexer	3	6.284	6.913	0.43	0.75	0.90	41.87	0.000	0.000	6.20	0.00	0.00	
8	117.00	Radio 4449 B71+B85	3	6.284	6.913	0.43	0.75	3.24	264.42	0.000	0.000	22.39	0.00	0.00	
9	107.00	RRH2x60-700 RRH	3	6.126	6.738	0.43	0.75	5.47	423.87	0.000	0.000	36.84	0.00	0.00	
10	107.00	RRH2X60-PCS RRH	3	6.126	6.738	0.43	0.75	3.61	441.25	0.000	0.000	24.31	0.00	0.00	
11	107.00	RRH2X90-AWS RRH	3	6.126	6.738	0.43	0.75	4.90	502.82	0.000	0.000	33.02	0.00	0.00	
12	107.00	PV-LPP12M-B	1	6.126	6.738	1.00	1.00	62.01	3278.94	0.000	0.000	417.87	0.00	0.00	
13	107.00	RFS DB-T1-6Z-8AB-OZ	2	6.126	6.738	0.50	0.75	5.67	321.62	0.000	0.000	38.21	0.00	0.00	
14	107.00	BXA-80063-6BF-EDIN-X	3	6.126	6.738	0.58	0.75	14.83	557.89	0.000	0.000	99.94	0.00	0.00	
15	107.00	SBNHH-1D65B	6	6.126	6.738	0.58	0.75	32.62	1458.82	0.000	0.000	219.80	0.00	0.00	
16	97.00	AAHC	3	5.956	6.552	0.60	0.80	8.99	742.75	0.000	0.000	58.88	0.00	0.00	
17	97.00	VHLP2-18	2	5.956	6.552	1.00	1.00	11.82	214.17	2.187	0.000	77.48	169.42	0.00	
18	97.00	VHLP1-23	1	5.956	6.552	1.00	1.00	2.34	40.81	0.000	0.000	15.31	0.00	0.00	
19	97.00	NNVV-65B-R4	3	5.956	6.552	0.59	0.80	24.27	901.37	0.000	0.000	159.00	0.00	0.00	
20	97.00	1900 MHz	3	5.956	6.552	0.46	0.80	5.36	378.63	0.000	0.000	35.13	0.00	0.00	
21	97.00	UDS-NPL (3 Sectors)	1	5.956	6.552	0.56	0.75	15.85	1173.12	0.000	0.000	103.84	0.00	0.00	
22	97.00	800 MHz RRU	6	5.956	6.552	0.40	0.80	8.60	679.83	0.000	0.000	56.37	0.00	0.00	
23	97.00	TD-RRH8x20-25	3	5.956	6.552	0.46	0.80	6.60	566.43	0.000	0.000	43.26	0.00	0.00	
<b>Totals:</b>									<b>20,411.92</b>						<b>2,405.24</b>

## Total Applied Force Summary

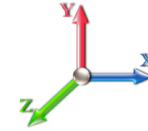
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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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** 27

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		43.10	492.89	0.00	0.00
4.00		42.94	500.00	0.00	0.00
6.00		42.73	503.17	0.00	0.00
8.00		42.49	504.62	0.00	0.00
10.00		42.24	505.10	0.00	0.00
12.00		41.97	504.93	0.00	0.00
14.00		41.71	504.30	0.00	0.00
16.00		41.43	503.34	0.00	0.00
18.00		41.16	502.11	0.00	0.00
20.00		40.88	500.67	0.00	0.00
22.00		40.59	499.05	0.00	0.00
24.00		40.31	497.28	0.00	0.00
26.00		40.02	495.38	0.00	0.00
28.00		39.74	493.38	0.00	0.00
30.00		39.48	491.27	0.00	0.00
32.00		39.92	489.09	0.00	0.00
34.00		40.31	486.82	0.00	0.00
36.00		40.67	484.49	0.00	0.00
38.00		40.99	482.10	0.00	0.00
40.00		41.28	479.66	0.00	0.00
42.00		41.53	477.16	0.00	0.00
44.00		41.76	474.61	0.00	0.00
46.00		41.96	472.02	0.00	0.00
48.00		42.13	469.40	0.00	0.00
48.75		15.78	175.40	0.00	0.00
50.00		26.73	436.51	0.00	0.00
52.00		42.97	694.41	0.00	0.00
53.25		26.86	431.64	0.00	0.00
54.00		16.11	174.70	0.00	0.00
56.00		43.18	463.76	0.00	0.00
58.00		43.26	460.98	0.00	0.00
60.00		43.31	458.17	0.00	0.00
62.00		43.35	455.33	0.00	0.00
64.00		43.38	452.47	0.00	0.00
66.00		43.39	449.59	0.00	0.00
68.00		43.38	446.68	0.00	0.00
70.00		43.36	443.76	0.00	0.00
72.00		43.32	440.81	0.00	0.00
74.00		43.28	437.85	0.00	0.00
76.00		43.22	434.87	0.00	0.00
78.00		43.14	431.87	0.00	0.00
80.00		43.06	428.86	0.00	0.00
82.00		42.96	425.83	0.00	0.00
84.00		42.86	422.78	0.00	0.00
86.00		42.74	419.72	0.00	0.00
88.00		42.61	416.65	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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90.00	42.47	413.56	0.00	0.00
92.00	42.33	410.46	0.00	0.00
94.00	42.17	407.35	0.00	0.00
96.00	42.00	404.23	0.00	0.00
97.00	(22) attachments	570.18	4898.19	169.42
98.00		20.86	193.81	0.00
98.75		15.61	144.87	0.00
100.00		26.29	325.96	0.00
102.00		41.96	517.49	0.00
102.25		5.22	64.41	0.00
104.00		36.52	296.47	0.00
106.00		41.55	336.27	0.00
107.00	(21) attachments	890.66	7152.49	0.00
108.00		20.62	140.83	0.00
110.00		41.12	279.34	0.00
112.00		40.89	276.62	0.00
114.00		40.66	273.89	0.00
116.00		40.41	271.15	0.00
117.00	(22) attachments	1006.06	8864.27	0.00
118.00		20.02	117.56	0.00
119.00		19.96	116.87	0.00
<b>Totals:</b>		<b>4,901.15</b>	<b>47,121.59</b>	<b>169.42</b>
				<b>0.00</b>

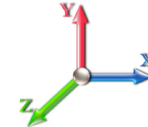
## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 27

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" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	16.81
4.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	17.78
6.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	18.40
8.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	18.86
10.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	19.23
12.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	19.54
14.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	19.81
16.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	20.05
18.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	20.27
20.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	20.47
22.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	20.65
24.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	20.81
26.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	20.97
28.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	21.12
30.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.260	0.00	21.25
32.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.339	0.00	21.38
34.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.415	0.00	21.51
36.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.487	0.00	21.62
38.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.557	0.00	21.74
40.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.625	0.00	21.84
42.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.689	0.00	21.95
44.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.752	0.00	22.04
46.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.813	0.00	22.14
48.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.872	0.00	22.23
48.75	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	4.893	0.00	8.35
50.00	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	4.929	0.00	13.95
52.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.984	0.00	22.40
53.25	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	5.018	0.00	14.03
54.00	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	5.039	0.00	8.43
56.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.091	0.00	22.57
58.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.142	0.00	22.64
60.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.193	0.00	22.72
62.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.241	0.00	22.79
64.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.289	0.00	22.86
66.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.336	0.00	22.93
68.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.382	0.00	23.00
70.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.426	0.00	23.07
72.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.470	0.00	23.13
74.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.513	0.00	23.20
76.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.555	0.00	23.26
78.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.597	0.00	23.32
80.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.637	0.00	23.38
82.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.677	0.00	23.43
84.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.716	0.00	23.49
86.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.755	0.00	23.55
88.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.793	0.00	23.60
90.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.830	0.00	23.65

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

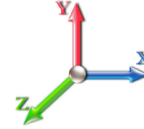


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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 27

**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)
92.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.867	0.00	23.71
94.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.903	0.00	23.76
96.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.939	0.00	23.81
97.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.956	0.00	11.92
98.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.974	0.00	11.93
98.75	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	5.987	0.00	8.95
100.00	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	6.008	0.00	14.94
102.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.043	0.00	23.95
102.25	1 5/8" Fiber	Yes	0.25	0.000	0.00	0.00	0.00	0.000	0.000	6.047	0.00	2.99
104.00	1 5/8" Fiber	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	6.076	0.00	21.00
106.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.109	0.00	24.05
107.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.126	0.00	12.03
<b>Totals:</b>											<b>0.0</b>	<b>1,179.3</b>

## Calculated Forces

Structure: CT13069-A-SBA  
Site Name: Meriden  
Height: 119.00 (ft)  
Base Elev: 0.000 (ft)  
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G 11/10/2020  
Exposure: B  
Crest Height: 0.00  
Site Class: D - Stiff Soil  
Struct Class: II

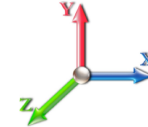
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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 27

Dead Load Factor 1.20  
Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-47.12	-4.91	-0.17	-458.50	0.00	458.50	2063.18	1031.59	3653.66	1829.55	0.00	0.000	0.000	0.273
2.00	-46.62	-4.90	-0.17	-448.67	0.00	448.67	2055.83	1027.92	3613.07	1809.22	0.01	-0.032	0.000	0.271
4.00	-46.12	-4.88	-0.17	-438.88	0.00	438.88	2048.36	1024.18	3572.46	1788.88	0.03	-0.065	0.000	0.268
6.00	-45.62	-4.86	-0.17	-429.12	0.00	429.12	2040.76	1020.38	3531.83	1768.54	0.06	-0.097	0.000	0.265
8.00	-45.11	-4.84	-0.17	-419.39	0.00	419.39	2033.04	1016.52	3491.19	1748.19	0.11	-0.130	0.000	0.262
10.00	-44.60	-4.83	-0.17	-409.71	0.00	409.71	2025.20	1012.60	3450.55	1727.84	0.17	-0.162	0.000	0.259
12.00	-44.09	-4.81	-0.17	-400.05	0.00	400.05	2017.23	1008.61	3409.91	1707.49	0.25	-0.194	0.000	0.256
14.00	-43.59	-4.79	-0.17	-390.44	0.00	390.44	2009.13	1004.57	3369.28	1687.14	0.33	-0.227	0.000	0.253
16.00	-43.08	-4.77	-0.17	-380.86	0.00	380.86	2000.92	1000.46	3328.65	1666.80	0.44	-0.259	0.000	0.250
18.00	-42.58	-4.75	-0.17	-371.33	0.00	371.33	1992.57	996.29	3288.04	1646.46	0.55	-0.291	0.000	0.247
20.00	-42.07	-4.73	-0.17	-361.83	0.00	361.83	1984.11	992.05	3247.45	1626.14	0.68	-0.324	0.000	0.244
22.00	-41.57	-4.71	-0.17	-352.37	0.00	352.37	1975.52	987.76	3206.89	1605.83	0.82	-0.356	0.000	0.240
24.00	-41.07	-4.69	-0.17	-342.95	0.00	342.95	1966.80	983.40	3166.36	1585.53	0.98	-0.388	0.000	0.237
26.00	-40.57	-4.67	-0.17	-333.57	0.00	333.57	1957.96	978.98	3125.86	1565.25	1.15	-0.420	0.000	0.234
28.00	-40.08	-4.65	-0.17	-324.24	0.00	324.24	1948.99	974.50	3085.40	1544.99	1.33	-0.452	0.000	0.230
30.00	-39.59	-4.63	-0.17	-314.95	0.00	314.95	1939.91	969.95	3044.99	1524.76	1.53	-0.484	0.000	0.227
32.00	-39.09	-4.60	-0.17	-305.70	0.00	305.70	1930.69	965.35	3004.63	1504.55	1.74	-0.516	0.000	0.223
34.00	-38.60	-4.58	-0.17	-296.49	0.00	296.49	1921.36	960.68	2964.32	1484.36	1.96	-0.547	0.000	0.220
36.00	-38.12	-4.55	-0.17	-287.33	0.00	287.33	1911.89	955.95	2924.07	1464.21	2.20	-0.579	0.000	0.216
38.00	-37.63	-4.53	-0.17	-278.22	0.00	278.22	1902.31	951.15	2883.89	1444.09	2.45	-0.610	0.000	0.212
40.00	-37.15	-4.50	-0.17	-269.17	0.00	269.17	1892.60	946.30	2843.78	1424.00	2.71	-0.641	0.000	0.209
42.00	-36.67	-4.48	-0.17	-260.16	0.00	260.16	1882.76	941.38	2803.75	1403.96	2.98	-0.672	0.000	0.205
44.00	-36.20	-4.45	-0.17	-251.21	0.00	251.21	1872.80	936.40	2763.79	1383.95	3.27	-0.702	0.000	0.201
46.00	-35.72	-4.42	-0.17	-242.32	0.00	242.32	1862.72	931.36	2723.92	1363.99	3.57	-0.733	0.000	0.197
48.00	-35.25	-4.38	-0.17	-233.48	0.00	233.48	1852.51	926.26	2684.14	1344.07	3.89	-0.763	0.000	0.193
48.75	-35.08	-4.37	-0.17	-230.20	0.00	230.20	1848.65	924.33	2669.25	1336.61	4.01	-0.774	0.000	0.191
50.00	-34.64	-4.36	-0.17	-224.73	0.00	224.73	1842.18	921.09	2644.46	1324.20	4.21	-0.793	0.000	0.189
52.00	-33.94	-4.32	-0.17	-216.02	0.00	216.02	1831.72	915.86	2604.88	1304.37	4.55	-0.822	0.000	0.184
53.25	-33.51	-4.29	-0.17	-210.62	0.00	210.62	1841.33	920.67	2641.23	1322.58	4.77	-0.840	0.000	0.177
54.00	-33.34	-4.28	-0.17	-207.41	0.00	207.41	1837.42	918.71	2626.38	1315.14	4.90	-0.851	0.000	0.176
56.00	-32.87	-4.25	-0.17	-198.84	0.00	198.84	1826.91	913.45	2586.84	1295.34	5.26	-0.879	0.000	0.172
58.00	-32.41	-4.21	-0.17	-190.34	0.00	190.34	1816.27	908.14	2547.41	1275.60	5.64	-0.906	-0.001	0.167
60.00	-31.95	-4.18	-0.17	-181.91	0.00	181.91	1805.51	902.75	2508.10	1255.91	6.02	-0.932	-0.001	0.163
62.00	-31.49	-4.14	-0.17	-173.55	0.00	173.55	1794.62	897.31	2468.90	1236.28	6.42	-0.958	-0.001	0.158
64.00	-31.04	-4.10	-0.17	-165.27	0.00	165.27	1783.61	891.81	2429.82	1216.72	6.83	-0.984	-0.001	0.153
66.00	-30.59	-4.07	-0.17	-157.06	0.00	157.06	1772.48	886.24	2390.88	1197.22	7.24	-1.009	-0.001	0.148
68.00	-30.14	-4.03	-0.17	-148.92	0.00	148.92	1761.22	880.61	2352.06	1177.78	7.67	-1.034	-0.001	0.144
70.00	-29.70	-3.99	-0.17	-140.87	0.00	140.87	1749.83	874.92	2313.39	1158.41	8.11	-1.058	-0.001	0.139
72.00	-29.25	-3.95	-0.17	-132.89	0.00	132.89	1738.33	869.16	2274.85	1139.12	8.56	-1.081	-0.001	0.134
74.00	-28.82	-3.91	-0.17	-124.99	0.00	124.99	1726.69	863.35	2236.47	1119.90	9.02	-1.104	-0.001	0.128
76.00	-28.38	-3.87	-0.17	-117.17	0.00	117.17	1714.94	857.47	2198.23	1100.75	9.48	-1.126	-0.001	0.123
78.00	-27.95	-3.83	-0.17	-109.44	0.00	109.44	1703.06	851.53	2160.16	1081.68	9.96	-1.147	-0.001	0.118
80.00	-27.52	-3.78	-0.17	-101.78	0.00	101.78	1691.05	845.53	2122.25	1062.70	10.45	-1.167	-0.001	0.112
82.00	-27.09	-3.74	-0.17	-94.22	0.00	94.22	1678.92	839.46	2084.50	1043.80	10.94	-1.187	-0.001	0.106
84.00	-26.67	-3.70	-0.17	-86.73	0.00	86.73	1666.67	833.33	2046.93	1024.99	11.44	-1.205	-0.001	0.101
86.00	-26.25	-3.65	-0.17	-79.34	0.00	79.34	1654.29	827.14	2009.53	1006.26	11.95	-1.223	-0.001	0.095
88.00	-25.83	-3.61	-0.17	-72.03	0.00	72.03	1641.79	820.89	1972.32	987.63	12.46	-1.240	-0.001	0.089
90.00	-25.42	-3.57	-0.17	-64.81	0.00	64.81	1629.16	814.58	1935.30	969.09	12.99	-1.255	-0.001	0.082

## Calculated Forces

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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92.00	-25.01	-3.52	-0.17	-57.68	0.00	57.68	1616.41	808.20	1898.47	950.64	13.52	-1.269	-0.001	0.076
94.00	-24.60	-3.47	-0.17	-50.64	0.00	50.64	1603.53	801.77	1861.83	932.30	14.05	-1.283	-0.001	0.070
96.00	-24.20	-3.43	-0.17	-43.69	0.00	43.69	1590.53	795.27	1825.40	914.06	14.59	-1.294	-0.001	0.063
97.00	-19.31	-2.75	0.00	-40.26	0.00	40.26	1583.99	791.99	1807.27	904.98	14.86	-1.300	-0.001	0.057
98.00	-19.12	-2.72	0.00	-37.51	0.00	37.51	1577.41	788.70	1789.18	895.92	15.14	-1.305	-0.001	0.054
98.75	-18.98	-2.71	0.00	-35.47	0.00	35.47	1572.46	786.23	1775.65	889.15	15.34	-1.309	-0.001	0.052
100.00	-18.65	-2.68	0.00	-32.09	0.00	32.09	1564.16	782.08	1753.17	877.89	15.68	-1.314	-0.001	0.048
102.00	-18.13	-2.62	0.00	-26.74	0.00	26.74	1550.79	775.39	1717.38	859.97	16.24	-1.323	-0.001	0.043
102.25	-18.07	-2.62	0.00	-26.08	0.00	26.08	1064.30	532.15	1198.84	600.31	16.31	-1.324	-0.001	0.060
104.00	-17.77	-2.58	0.00	-21.50	0.00	21.50	1057.83	528.92	1179.14	590.45	16.79	-1.330	-0.001	0.053
106.00	-17.44	-2.53	0.00	-16.35	0.00	16.35	1050.33	525.16	1156.68	579.20	17.35	-1.337	-0.001	0.045
107.00	-10.31	-1.47	0.00	-13.82	0.00	13.82	1046.53	523.26	1145.48	573.59	17.63	-1.340	-0.001	0.034
108.00	-10.17	-1.45	0.00	-12.35	0.00	12.35	1042.70	521.35	1134.29	567.99	17.91	-1.342	-0.001	0.032
110.00	-9.89	-1.40	0.00	-9.45	0.00	9.45	1034.95	517.47	1111.97	556.81	18.48	-1.347	-0.001	0.027
112.00	-9.61	-1.35	0.00	-6.65	0.00	6.65	1027.07	513.53	1089.73	545.68	19.04	-1.350	-0.001	0.022
114.00	-9.34	-1.31	0.00	-3.94	0.00	3.94	1019.06	509.53	1067.57	534.58	19.61	-1.353	-0.001	0.017
116.00	-9.07	-1.26	0.00	-1.33	0.00	1.33	1010.94	505.47	1045.49	523.52	20.17	-1.354	-0.001	0.012
117.00	-0.23	-0.05	0.00	-0.07	0.00	0.07	1006.83	503.41	1034.49	518.01	20.46	-1.354	-0.001	0.000
118.00	-0.12	-0.02	0.00	-0.02	0.00	0.02	1002.69	501.34	1023.51	512.52	20.74	-1.354	-0.001	0.000
119.00	0.00	-0.02	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	21.03	-1.354	-0.001	0.000



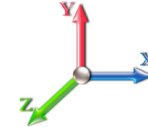
## Seismic Segment Forces (Factored)

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.2D + 1.0E						<b>Iterations</b> 25
<b>Gust Response Factor</b>	1.10			<b>Sds</b>	0.20	<b>Ss</b> 0.18
<b>Dead Load Factor</b>	1.20	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.10	<b>S1</b> 0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.35	<b>SA</b>	0.03	<b>Seismic Importance Factor</b> 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		231.38	0.00	0.02	0.01	2.70	
4.00		229.63	0.00	0.03	0.02	4.39	
6.00		227.88	0.00	0.04	0.02	5.50	
8.00		226.13	0.01	0.05	0.03	6.24	
10.00		224.38	0.01	0.06	0.03	6.73	
12.00		222.63	0.02	0.06	0.04	7.06	
14.00		220.88	0.03	0.07	0.04	7.27	
16.00		219.13	0.03	0.07	0.04	7.41	
18.00		217.39	0.04	0.07	0.04	7.50	
20.00		215.64	0.05	0.07	0.04	7.56	
22.00		213.89	0.06	0.07	0.04	7.60	
24.00		212.14	0.08	0.07	0.04	7.63	
26.00		210.39	0.09	0.07	0.04	7.66	
28.00		208.64	0.10	0.07	0.04	7.69	
30.00		206.89	0.12	0.07	0.03	7.72	
32.00		205.14	0.14	0.07	0.03	7.74	
34.00		203.39	0.15	0.07	0.03	7.74	
36.00		201.64	0.17	0.07	0.03	7.72	
38.00		199.89	0.19	0.06	0.02	7.67	
40.00		198.14	0.21	0.06	0.02	7.57	
42.00		196.39	0.24	0.06	0.02	7.41	
44.00		194.64	0.26	0.05	0.02	7.16	
46.00		192.89	0.28	0.05	0.01	6.82	
48.00		191.15	0.31	0.04	0.01	6.37	
48.75	Bot - Section 2	71.23	0.32	0.04	0.01	2.30	
50.00		238.02	0.33	0.04	0.01	7.26	
52.00		377.99	0.36	0.03	0.01	10.16	
53.25	Top - Section 1	234.47	0.38	0.02	0.01	5.67	
54.00		70.52	0.39	0.02	0.01	1.58	
56.00		186.85	0.42	0.01	0.01	3.18	
58.00		185.10	0.45	0.00	0.01	2.02	
60.00		183.35	0.48	-0.01	0.01	0.76	
62.00		181.60	0.51	-0.02	0.01	-0.54	
64.00		179.85	0.55	-0.03	0.01	-1.82	
66.00		178.10	0.58	-0.05	0.01	-3.03	
68.00		176.35	0.62	-0.06	0.02	-4.11	
70.00		174.60	0.65	-0.07	0.02	-5.02	
72.00		172.85	0.69	-0.08	0.03	-5.71	
74.00		171.10	0.73	-0.10	0.04	-6.19	
76.00		169.35	0.77	-0.11	0.05	-6.43	
78.00		167.61	0.81	-0.11	0.06	-6.44	
80.00		165.86	0.85	-0.12	0.07	-6.22	
82.00		164.11	0.90	-0.12	0.09	-5.78	
84.00		162.36	0.94	-0.12	0.10	-5.14	
86.00		160.61	0.99	-0.11	0.13	-4.29	

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020	
<b>Site Name:</b> Meriden	<b>Exposure:</b> B		
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00		
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil		
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II	Page: 37



88.00		158.86	1.03	-0.10	0.15	-3.26
90.00		157.11	1.08	-0.08	0.18	-2.04
92.00		155.36	1.13	-0.05	0.21	-0.65
94.00		153.61	1.18	-0.01	0.24	0.91
96.00		151.86	1.23	0.03	0.28	2.63
97.00	Appurtenance(s)	1979.6	1.26	0.06	0.30	46.55
98.00		74.84	1.28	0.10	0.32	2.25
98.75	Bot - Section 3	55.84	1.30	0.12	0.34	1.96
100.00		163.02	1.33	0.17	0.37	7.18
102.00		258.35	1.39	0.26	0.42	15.34
102.25	Top - Section 2	32.08	1.40	0.28	0.43	1.97
104.00		96.55	1.44	0.37	0.48	7.34
106.00		109.11	1.50	0.50	0.54	10.27
107.00	Appurtenance(s)	2541.4	1.53	0.57	0.58	263.36
108.00		53.73	1.56	0.65	0.61	6.10
110.00		106.48	1.61	0.83	0.69	14.30
112.00		105.17	1.67	1.03	0.78	16.45
114.00		103.86	1.73	1.26	0.87	18.70
116.00		102.55	1.80	1.52	0.97	21.03
117.00	Appurtenance(s)	4089.5	1.83	1.66	1.02	891.84
118.00		50.45	1.86	1.82	1.08	11.68
119.00		50.13	1.89	1.98	1.14	12.29
<b>Totals:</b>		<b>19,591.9</b>				<b>1,485.3</b>
						<b>Total Wind: 17,528.0</b>

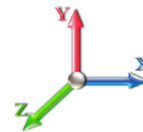
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

## Calculated Forces

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	<b>11/10/2020</b>
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



<b>Load Case:</b> 1.2D + 1.0E			<b>Iterations</b> 25
<b>Gust Response Factor</b>	1.10	<b>Sds</b> 0.20	<b>Ss</b> 0.18
<b>Dead Load Factor</b>	1.20	<b>Seismic Load Factor</b> 1.00	<b>S1</b> 0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b> 0.35	<b>SA</b> 0.03
		<b>Seismic Importance Factor</b> 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	-27.81	-1.55	0.00	-169.49	0.00	169.49	2063.18	1031.59	3653.66	1829.55	0.00	0.00	0.00	0.106
2.00	-27.46	-1.56	0.00	-166.39	0.00	166.39	2055.83	1027.92	3613.07	1809.22	0.00	-0.01	0.105	
4.00	-27.10	-1.56	0.00	-163.28	0.00	163.28	2048.36	1024.18	3572.46	1788.88	0.01	-0.02	0.105	
6.00	-26.75	-1.56	0.00	-160.16	0.00	160.16	2040.76	1020.38	3531.83	1768.54	0.02	-0.04	0.104	
8.00	-26.40	-1.56	0.00	-157.05	0.00	157.05	2033.04	1016.52	3491.19	1748.19	0.04	-0.05	0.103	
10.00	-26.05	-1.55	0.00	-153.94	0.00	153.94	2025.20	1012.60	3450.55	1727.84	0.06	-0.06	0.102	
12.00	-25.71	-1.55	0.00	-150.83	0.00	150.83	2017.23	1008.61	3409.91	1707.49	0.09	-0.07	0.101	
14.00	-25.36	-1.55	0.00	-147.72	0.00	147.72	2009.13	1004.57	3369.28	1687.14	0.12	-0.08	0.100	
16.00	-25.02	-1.55	0.00	-144.62	0.00	144.62	2000.92	1000.46	3328.65	1666.80	0.16	-0.10	0.099	
18.00	-24.68	-1.54	0.00	-141.53	0.00	141.53	1992.57	996.29	3288.04	1646.46	0.21	-0.11	0.098	
20.00	-24.34	-1.54	0.00	-138.44	0.00	138.44	1984.11	992.05	3247.45	1626.14	0.25	-0.12	0.097	
22.00	-24.01	-1.54	0.00	-135.35	0.00	135.35	1975.52	987.76	3206.89	1605.83	0.31	-0.13	0.096	
24.00	-23.67	-1.54	0.00	-132.28	0.00	132.28	1966.80	983.40	3166.36	1585.53	0.37	-0.15	0.095	
26.00	-23.34	-1.53	0.00	-129.21	0.00	129.21	1957.96	978.98	3125.86	1565.25	0.43	-0.16	0.094	
28.00	-23.01	-1.53	0.00	-126.14	0.00	126.14	1948.99	974.50	3085.40	1544.99	0.50	-0.17	0.093	
30.00	-22.69	-1.52	0.00	-123.09	0.00	123.09	1939.91	969.95	3044.99	1524.76	0.57	-0.18	0.092	
32.00	-22.36	-1.52	0.00	-120.04	0.00	120.04	1930.69	965.35	3004.63	1504.55	0.65	-0.20	0.091	
34.00	-22.04	-1.52	0.00	-117.00	0.00	117.00	1921.36	960.68	2964.32	1484.36	0.74	-0.21	0.090	
36.00	-21.72	-1.51	0.00	-113.96	0.00	113.96	1911.89	955.95	2924.07	1464.21	0.83	-0.22	0.089	
38.00	-21.40	-1.51	0.00	-110.94	0.00	110.94	1902.31	951.15	2883.89	1444.09	0.92	-0.23	0.088	
40.00	-21.08	-1.50	0.00	-107.92	0.00	107.92	1892.60	946.30	2843.78	1424.00	1.02	-0.25	0.087	
42.00	-20.77	-1.50	0.00	-104.92	0.00	104.92	1882.76	941.38	2803.75	1403.96	1.13	-0.26	0.086	
44.00	-20.45	-1.50	0.00	-101.92	0.00	101.92	1872.80	936.40	2763.79	1383.95	1.24	-0.27	0.085	
46.00	-20.14	-1.49	0.00	-98.93	0.00	98.93	1862.72	931.36	2723.92	1363.99	1.36	-0.28	0.083	
48.00	-19.84	-1.49	0.00	-95.95	0.00	95.95	1852.51	926.26	2684.14	1344.07	1.48	-0.30	0.082	
48.75	-19.72	-1.49	0.00	-94.83	0.00	94.83	1848.65	924.33	2669.25	1336.61	1.52	-0.30	0.082	
50.00	-19.39	-1.48	0.00	-92.98	0.00	92.98	1842.18	921.09	2644.46	1324.20	1.60	-0.31	0.081	
52.00	-18.85	-1.47	0.00	-90.02	0.00	90.02	1831.72	915.86	2604.88	1304.37	1.74	-0.32	0.079	
53.25	-18.52	-1.46	0.00	-88.18	0.00	88.18	1841.33	920.67	2641.23	1322.58	1.82	-0.33	0.077	
54.00	-18.41	-1.46	0.00	-87.08	0.00	87.08	1837.42	918.71	2626.38	1315.14	1.87	-0.33	0.076	
56.00	-18.11	-1.46	0.00	-84.15	0.00	84.15	1826.91	913.45	2586.84	1295.34	2.01	-0.34	0.075	
58.00	-17.80	-1.46	0.00	-81.22	0.00	81.22	1816.27	908.14	2547.41	1275.60	2.16	-0.35	0.073	
60.00	-17.51	-1.46	0.00	-78.30	0.00	78.30	1805.51	902.75	2508.10	1255.91	2.31	-0.37	0.072	
62.00	-17.21	-1.47	0.00	-75.37	0.00	75.37	1794.62	897.31	2468.90	1236.28	2.47	-0.38	0.071	
64.00	-16.91	-1.47	0.00	-72.44	0.00	72.44	1783.61	891.81	2429.82	1216.72	2.63	-0.39	0.069	
66.00	-16.62	-1.47	0.00	-69.51	0.00	69.51	1772.48	886.24	2390.88	1197.22	2.79	-0.40	0.067	
68.00	-16.33	-1.47	0.00	-66.57	0.00	66.57	1761.22	880.61	2352.06	1177.78	2.96	-0.41	0.066	
70.00	-16.04	-1.47	0.00	-63.63	0.00	63.63	1749.83	874.92	2313.39	1158.41	3.14	-0.42	0.064	
72.00	-15.76	-1.47	0.00	-60.69	0.00	60.69	1738.33	869.16	2274.85	1139.12	3.32	-0.43	0.062	
74.00	-15.47	-1.47	0.00	-57.75	0.00	57.75	1726.69	863.35	2236.47	1119.90	3.50	-0.44	0.061	
76.00	-15.19	-1.47	0.00	-54.81	0.00	54.81	1714.94	857.47	2198.23	1100.75	3.69	-0.45	0.059	
78.00	-14.91	-1.47	0.00	-51.86	0.00	51.86	1703.06	851.53	2160.16	1081.68	3.88	-0.46	0.057	
80.00	-14.63	-1.47	0.00	-48.92	0.00	48.92	1691.05	845.53	2122.25	1062.70	4.08	-0.47	0.055	
82.00	-14.36	-1.47	0.00	-45.97	0.00	45.97	1678.92	839.46	2084.50	1043.80	4.28	-0.48	0.053	
84.00	-14.08	-1.47	0.00	-43.03	0.00	43.03	1666.67	833.33	2046.93	1024.99	4.48	-0.49	0.050	
86.00	-13.81	-1.47	0.00	-40.08	0.00	40.08	1654.29	827.14	2009.53	1006.26	4.69	-0.50	0.048	
88.00	-13.54	-1.47	0.00	-37.14	0.00	37.14	1641.79	820.89	1972.32	987.63	4.90	-0.51	0.046	

## Calculated Forces

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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90.00	-13.28	-1.47	0.00	-34.20	0.00	34.20	1629.16	814.58	1935.30	969.09	5.11	-0.52	0.043
92.00	-13.01	-1.47	0.00	-31.25	0.00	31.25	1616.41	808.20	1898.47	950.64	5.33	-0.52	0.041
94.00	-12.75	-1.47	0.00	-28.31	0.00	28.31	1603.53	801.77	1861.83	932.30	5.55	-0.53	0.038
96.00	-12.49	-1.47	0.00	-25.37	0.00	25.37	1590.53	795.27	1825.40	914.06	5.78	-0.54	0.036
97.00	-10.07	-1.40	0.00	-23.91	0.00	23.91	1583.99	791.99	1807.27	904.98	5.89	-0.54	0.033
98.00	-9.95	-1.39	0.00	-22.51	0.00	22.51	1577.41	788.70	1789.18	895.92	6.00	-0.54	0.031
98.75	-9.86	-1.39	0.00	-21.47	0.00	21.47	1572.46	786.23	1775.65	889.15	6.09	-0.55	0.030
100.00	-9.62	-1.38	0.00	-19.73	0.00	19.73	1564.16	782.08	1753.17	877.89	6.23	-0.55	0.029
102.00	-9.24	-1.36	0.00	-16.96	0.00	16.96	1550.79	775.39	1717.38	859.97	6.46	-0.56	0.026
102.25	-9.20	-1.36	0.00	-16.62	0.00	16.62	1064.30	532.15	1198.84	600.31	6.49	-0.56	0.036
104.00	-9.02	-1.35	0.00	-14.24	0.00	14.24	1057.83	528.92	1179.14	590.45	6.70	-0.56	0.033
106.00	-8.83	-1.34	0.00	-11.53	0.00	11.53	1050.33	525.16	1156.68	579.20	6.93	-0.56	0.028
107.00	-5.75	-1.05	0.00	-10.19	0.00	10.19	1046.53	523.26	1145.48	573.59	7.05	-0.57	0.023
108.00	-5.67	-1.04	0.00	-9.14	0.00	9.14	1042.70	521.35	1134.29	567.99	7.17	-0.57	0.022
110.00	-5.51	-1.03	0.00	-7.05	0.00	7.05	1034.95	517.47	1111.97	556.81	7.41	-0.57	0.018
112.00	-5.35	-1.01	0.00	-5.00	0.00	5.00	1027.07	513.53	1089.73	545.68	7.65	-0.57	0.014
114.00	-5.19	-0.99	0.00	-2.98	0.00	2.98	1019.06	509.53	1067.57	534.58	7.89	-0.58	0.011
116.00	-5.04	-0.97	0.00	-1.00	0.00	1.00	1010.94	505.47	1045.49	523.52	8.13	-0.58	0.007
117.00	-0.12	-0.03	0.00	-0.04	0.00	0.04	1006.83	503.41	1034.49	518.01	8.25	-0.58	0.000
118.00	-0.06	-0.01	0.00	-0.01	0.00	0.01	1002.69	501.34	1023.51	512.52	8.38	-0.58	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	8.50	-0.58	0.000

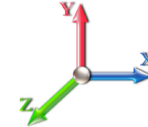
## Seismic Segment Forces (Factored)

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 0.9D + 1.0E				<b>Iterations</b> 25
<b>Gust Response Factor</b>	1.10	<b>Sds</b>	0.20	<b>Ss</b> 0.18
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00	<b>S1</b> 0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.35	<b>SA</b> 0.03
				<b>Seismic Importance Factor</b> 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		231.38	0.00	0.02	0.01	2.70	
4.00		229.63	0.00	0.03	0.02	4.39	
6.00		227.88	0.00	0.04	0.02	5.50	
8.00		226.13	0.01	0.05	0.03	6.24	
10.00		224.38	0.01	0.06	0.03	6.73	
12.00		222.63	0.02	0.06	0.04	7.06	
14.00		220.88	0.03	0.07	0.04	7.27	
16.00		219.13	0.03	0.07	0.04	7.41	
18.00		217.39	0.04	0.07	0.04	7.50	
20.00		215.64	0.05	0.07	0.04	7.56	
22.00		213.89	0.06	0.07	0.04	7.60	
24.00		212.14	0.08	0.07	0.04	7.63	
26.00		210.39	0.09	0.07	0.04	7.66	
28.00		208.64	0.10	0.07	0.04	7.69	
30.00		206.89	0.12	0.07	0.03	7.72	
32.00		205.14	0.14	0.07	0.03	7.74	
34.00		203.39	0.15	0.07	0.03	7.74	
36.00		201.64	0.17	0.07	0.03	7.72	
38.00		199.89	0.19	0.06	0.02	7.67	
40.00		198.14	0.21	0.06	0.02	7.57	
42.00		196.39	0.24	0.06	0.02	7.41	
44.00		194.64	0.26	0.05	0.02	7.16	
46.00		192.89	0.28	0.05	0.01	6.82	
48.00		191.15	0.31	0.04	0.01	6.37	
48.75	Bot - Section 2	71.23	0.32	0.04	0.01	2.30	
50.00		238.02	0.33	0.04	0.01	7.26	
52.00		377.99	0.36	0.03	0.01	10.16	
53.25	Top - Section 1	234.47	0.38	0.02	0.01	5.67	
54.00		70.52	0.39	0.02	0.01	1.58	
56.00		186.85	0.42	0.01	0.01	3.18	
58.00		185.10	0.45	0.00	0.01	2.02	
60.00		183.35	0.48	-0.01	0.01	0.76	
62.00		181.60	0.51	-0.02	0.01	-0.54	
64.00		179.85	0.55	-0.03	0.01	-1.82	
66.00		178.10	0.58	-0.05	0.01	-3.03	
68.00		176.35	0.62	-0.06	0.02	-4.11	
70.00		174.60	0.65	-0.07	0.02	-5.02	
72.00		172.85	0.69	-0.08	0.03	-5.71	
74.00		171.10	0.73	-0.10	0.04	-6.19	
76.00		169.35	0.77	-0.11	0.05	-6.43	
78.00		167.61	0.81	-0.11	0.06	-6.44	
80.00		165.86	0.85	-0.12	0.07	-6.22	
82.00		164.11	0.90	-0.12	0.09	-5.78	
84.00		162.36	0.94	-0.12	0.10	-5.14	
86.00		160.61	0.99	-0.11	0.13	-4.29	

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020	
<b>Site Name:</b> Meriden	<b>Exposure:</b> B		
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00		
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil		
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II	Page: 41



88.00		158.86	1.03	-0.10	0.15	-3.26
90.00		157.11	1.08	-0.08	0.18	-2.04
92.00		155.36	1.13	-0.05	0.21	-0.65
94.00		153.61	1.18	-0.01	0.24	0.91
96.00		151.86	1.23	0.03	0.28	2.63
97.00	Appurtenance(s)	1979.6	1.26	0.06	0.30	46.55
98.00		74.84	1.28	0.10	0.32	2.25
98.75	Bot - Section 3	55.84	1.30	0.12	0.34	1.96
100.00		163.02	1.33	0.17	0.37	7.18
102.00		258.35	1.39	0.26	0.42	15.34
102.25	Top - Section 2	32.08	1.40	0.28	0.43	1.97
104.00		96.55	1.44	0.37	0.48	7.34
106.00		109.11	1.50	0.50	0.54	10.27
107.00	Appurtenance(s)	2541.4	1.53	0.57	0.58	263.36
108.00		53.73	1.56	0.65	0.61	6.10
110.00		106.48	1.61	0.83	0.69	14.30
112.00		105.17	1.67	1.03	0.78	16.45
114.00		103.86	1.73	1.26	0.87	18.70
116.00		102.55	1.80	1.52	0.97	21.03
117.00	Appurtenance(s)	4089.5	1.83	1.66	1.02	891.84
118.00		50.45	1.86	1.82	1.08	11.68
119.00		50.13	1.89	1.98	1.14	12.29
<b>Totals:</b>		<b>19,591.9</b>				<b>1,485.3</b>
						<b>Total Wind: 17,528.0</b>

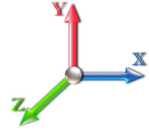
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

## Calculated Forces

**Structure:** CT13069-A-SBA      **Code:** EIA/TIA-222-G      11/10/2020  
**Site Name:** Meriden      **Exposure:** B  
**Height:** 119.00 (ft)      **Crest Height:** 0.00  
**Base Elev:** 0.000 (ft)      **Site Class:** D - Stiff Soil  
**Gh:** 1.1      **Topography:** 1      **Struct Class:** II      Page: 42



<b>Load Case:</b> 0.9D + 1.0E							<b>Iterations</b> 25	
<b>Gust Response Factor</b> 1.10			<b>Sds</b> 0.20			<b>Ss</b> 0.18		
<b>Dead Load Factor</b> 0.90		<b>Seismic Load Factor</b> 1.00		<b>Sd1</b> 0.10		<b>S1</b> 0.06		
<b>Wind Load Factor</b> 0.00		<b>Structure Frequency (f1)</b> 0.35		<b>SA</b> 0.03		<b>Seismic Importance Factor</b> 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	-20.86	-1.55	0.00	-166.89	0.00	166.89	2063.18	1031.59	3653.66	1829.55	0.00	0.00	0.00	0.101
2.00	-20.59	-1.55	0.00	-163.78	0.00	163.78	2055.83	1027.92	3613.07	1809.22	0.00	-0.01	0.00	0.101
4.00	-20.33	-1.55	0.00	-160.67	0.00	160.67	2048.36	1024.18	3572.46	1788.88	0.01	-0.02	0.00	0.100
6.00	-20.06	-1.55	0.00	-157.57	0.00	157.57	2040.76	1020.38	3531.83	1768.54	0.02	-0.04	0.00	0.099
8.00	-19.80	-1.55	0.00	-154.46	0.00	154.46	2033.04	1016.52	3491.19	1748.19	0.04	-0.05	0.00	0.098
10.00	-19.54	-1.55	0.00	-151.36	0.00	151.36	2025.20	1012.60	3450.55	1727.84	0.06	-0.06	0.00	0.097
12.00	-19.28	-1.54	0.00	-148.27	0.00	148.27	2017.23	1008.61	3409.91	1707.49	0.09	-0.07	0.00	0.096
14.00	-19.02	-1.54	0.00	-145.18	0.00	145.18	2009.13	1004.57	3369.28	1687.14	0.12	-0.08	0.00	0.096
16.00	-18.76	-1.54	0.00	-142.10	0.00	142.10	2000.92	1000.46	3328.65	1666.80	0.16	-0.10	0.00	0.095
18.00	-18.51	-1.53	0.00	-139.03	0.00	139.03	1992.57	996.29	3288.04	1646.46	0.20	-0.11	0.00	0.094
20.00	-18.26	-1.53	0.00	-135.97	0.00	135.97	1984.11	992.05	3247.45	1626.14	0.25	-0.12	0.00	0.093
22.00	-18.00	-1.52	0.00	-132.91	0.00	132.91	1975.52	987.76	3206.89	1605.83	0.30	-0.13	0.00	0.092
24.00	-17.75	-1.52	0.00	-129.87	0.00	129.87	1966.80	983.40	3166.36	1585.53	0.36	-0.14	0.00	0.091
26.00	-17.51	-1.51	0.00	-126.83	0.00	126.83	1957.96	978.98	3125.86	1565.25	0.42	-0.16	0.00	0.090
28.00	-17.26	-1.51	0.00	-123.80	0.00	123.80	1948.99	974.50	3085.40	1544.99	0.49	-0.17	0.00	0.089
30.00	-17.01	-1.50	0.00	-120.78	0.00	120.78	1939.91	969.95	3044.99	1524.76	0.56	-0.18	0.00	0.088
32.00	-16.77	-1.50	0.00	-117.77	0.00	117.77	1930.69	965.35	3004.63	1504.55	0.64	-0.19	0.00	0.087
34.00	-16.53	-1.49	0.00	-114.77	0.00	114.77	1921.36	960.68	2964.32	1484.36	0.73	-0.20	0.00	0.086
36.00	-16.29	-1.49	0.00	-111.78	0.00	111.78	1911.89	955.95	2924.07	1464.21	0.81	-0.22	0.00	0.085
38.00	-16.05	-1.48	0.00	-108.80	0.00	108.80	1902.31	951.15	2883.89	1444.09	0.91	-0.23	0.00	0.084
40.00	-15.81	-1.48	0.00	-105.83	0.00	105.83	1892.60	946.30	2843.78	1424.00	1.01	-0.24	0.00	0.083
42.00	-15.57	-1.47	0.00	-102.88	0.00	102.88	1882.76	941.38	2803.75	1403.96	1.11	-0.25	0.00	0.082
44.00	-15.34	-1.47	0.00	-99.93	0.00	99.93	1872.80	936.40	2763.79	1383.95	1.22	-0.27	0.00	0.080
46.00	-15.11	-1.46	0.00	-96.99	0.00	96.99	1862.72	931.36	2723.92	1363.99	1.33	-0.28	0.00	0.079
48.00	-14.88	-1.46	0.00	-94.06	0.00	94.06	1852.51	926.26	2684.14	1344.07	1.45	-0.29	0.00	0.078
48.75	-14.79	-1.46	0.00	-92.97	0.00	92.97	1848.65	924.33	2669.25	1336.61	1.50	-0.29	0.00	0.078
50.00	-14.54	-1.45	0.00	-91.14	0.00	91.14	1842.18	921.09	2644.46	1324.20	1.58	-0.30	0.00	0.077
52.00	-14.14	-1.44	0.00	-88.24	0.00	88.24	1831.72	915.86	2604.88	1304.37	1.71	-0.31	0.00	0.075
53.25	-13.89	-1.44	0.00	-86.44	0.00	86.44	1841.33	920.67	2641.23	1322.58	1.79	-0.32	0.00	0.073
54.00	-13.80	-1.44	0.00	-85.36	0.00	85.36	1837.42	918.71	2626.38	1315.14	1.84	-0.33	0.00	0.072
56.00	-13.58	-1.43	0.00	-82.49	0.00	82.49	1826.91	913.45	2586.84	1295.34	1.98	-0.34	0.00	0.071
58.00	-13.35	-1.43	0.00	-79.62	0.00	79.62	1816.27	908.14	2547.41	1275.60	2.12	-0.35	0.00	0.070
60.00	-13.13	-1.43	0.00	-76.75	0.00	76.75	1805.51	902.75	2508.10	1255.91	2.27	-0.36	0.00	0.068
62.00	-12.90	-1.44	0.00	-73.88	0.00	73.88	1794.62	897.31	2468.90	1236.28	2.42	-0.37	0.00	0.067
64.00	-12.68	-1.44	0.00	-71.01	0.00	71.01	1783.61	891.81	2429.82	1216.72	2.58	-0.38	0.00	0.065
66.00	-12.46	-1.44	0.00	-68.14	0.00	68.14	1772.48	886.24	2390.88	1197.22	2.74	-0.39	0.00	0.064
68.00	-12.25	-1.44	0.00	-65.27	0.00	65.27	1761.22	880.61	2352.06	1177.78	2.91	-0.40	0.00	0.062
70.00	-12.03	-1.44	0.00	-62.39	0.00	62.39	1749.83	874.92	2313.39	1158.41	3.08	-0.41	0.00	0.061
72.00	-11.81	-1.44	0.00	-59.51	0.00	59.51	1738.33	869.16	2274.85	1139.12	3.26	-0.42	0.00	0.059
74.00	-11.60	-1.44	0.00	-56.63	0.00	56.63	1726.69	863.35	2236.47	1119.90	3.44	-0.43	0.00	0.057
76.00	-11.39	-1.44	0.00	-53.76	0.00	53.76	1714.94	857.47	2198.23	1100.75	3.62	-0.44	0.00	0.055
78.00	-11.18	-1.44	0.00	-50.88	0.00	50.88	1703.06	851.53	2160.16	1081.68	3.81	-0.45	0.00	0.054
80.00	-10.97	-1.44	0.00	-47.99	0.00	47.99	1691.05	845.53	2122.25	1062.70	4.00	-0.46	0.00	0.052
82.00	-10.76	-1.44	0.00	-45.11	0.00	45.11	1678.92	839.46	2084.50	1043.80	4.20	-0.47	0.00	0.050
84.00	-10.56	-1.44	0.00	-42.23	0.00	42.23	1666.67	833.33	2046.93	1024.99	4.40	-0.48	0.00	0.048
86.00	-10.36	-1.44	0.00	-39.35	0.00	39.35	1654.29	827.14	2009.53	1006.26	4.60	-0.49	0.00	0.045
88.00	-10.15	-1.44	0.00	-36.47	0.00	36.47	1641.79	820.89	1972.32	987.63	4.81	-0.50	0.00	0.043

## Calculated Forces

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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90.00	-9.95	-1.44	0.00	-33.59	0.00	33.59	1629.16	814.58	1935.30	969.09	5.02	-0.51	0.041
92.00	-9.75	-1.44	0.00	-30.71	0.00	30.71	1616.41	808.20	1898.47	950.64	5.23	-0.51	0.038
94.00	-9.56	-1.44	0.00	-27.83	0.00	27.83	1603.53	801.77	1861.83	932.30	5.45	-0.52	0.036
96.00	-9.36	-1.43	0.00	-24.96	0.00	24.96	1590.53	795.27	1825.40	914.06	5.67	-0.53	0.033
97.00	-7.55	-1.37	0.00	-23.52	0.00	23.52	1583.99	791.99	1807.27	904.98	5.78	-0.53	0.031
98.00	-7.46	-1.37	0.00	-22.15	0.00	22.15	1577.41	788.70	1789.18	895.92	5.89	-0.53	0.029
98.75	-7.39	-1.37	0.00	-21.13	0.00	21.13	1572.46	786.23	1775.65	889.15	5.98	-0.54	0.028
100.00	-7.21	-1.36	0.00	-19.42	0.00	19.42	1564.16	782.08	1753.17	877.89	6.12	-0.54	0.027
102.00	-6.93	-1.34	0.00	-16.70	0.00	16.70	1550.79	775.39	1717.38	859.97	6.35	-0.54	0.024
102.25	-6.90	-1.34	0.00	-16.37	0.00	16.37	1064.30	532.15	1198.84	600.31	6.38	-0.55	0.034
104.00	-6.77	-1.33	0.00	-14.02	0.00	14.02	1057.83	528.92	1179.14	590.45	6.58	-0.55	0.030
106.00	-6.62	-1.32	0.00	-11.36	0.00	11.36	1050.33	525.16	1156.68	579.20	6.81	-0.55	0.026
107.00	-4.31	-1.03	0.00	-10.04	0.00	10.04	1046.53	523.26	1145.48	573.59	6.92	-0.56	0.022
108.00	-4.25	-1.03	0.00	-9.01	0.00	9.01	1042.70	521.35	1134.29	567.99	7.04	-0.56	0.020
110.00	-4.13	-1.01	0.00	-6.95	0.00	6.95	1034.95	517.47	1111.97	556.81	7.28	-0.56	0.016
112.00	-4.01	-0.99	0.00	-4.93	0.00	4.93	1027.07	513.53	1089.73	545.68	7.51	-0.56	0.013
114.00	-3.89	-0.98	0.00	-2.94	0.00	2.94	1019.06	509.53	1067.57	534.58	7.75	-0.57	0.009
116.00	-3.77	-0.95	0.00	-0.99	0.00	0.99	1010.94	505.47	1045.49	523.52	7.99	-0.57	0.006
117.00	-0.09	-0.02	0.00	-0.04	0.00	0.04	1006.83	503.41	1034.49	518.01	8.10	-0.57	0.000
118.00	-0.04	-0.01	0.00	-0.01	0.00	0.01	1002.69	501.34	1023.51	512.52	8.22	-0.57	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	8.34	-0.57	0.000



## Wind Loading - Shaft

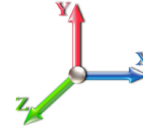
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



**Load Case:** 1.0D + 1.0W 60 mph Wind

**Iterations** 26

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.74	183.76	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	6.129	6.74	182.39	0.650	0.000	2.00	7.294	4.74	32.0	0.0	231.4
4.00		1.00	0.70	6.129	6.74	181.01	0.650	0.000	2.00	7.239	4.71	31.7	0.0	229.6
6.00		1.00	0.70	6.129	6.74	179.63	0.650	0.000	2.00	7.184	4.67	31.5	0.0	227.9
8.00		1.00	0.70	6.129	6.74	178.26	0.650	0.000	2.00	7.129	4.63	31.2	0.0	226.1
10.00		1.00	0.70	6.129	6.74	176.88	0.650	0.000	2.00	7.075	4.60	31.0	0.0	224.4
12.00		1.00	0.70	6.129	6.74	175.50	0.650	0.000	2.00	7.020	4.56	30.8	0.0	222.6
14.00		1.00	0.70	6.129	6.74	174.13	0.650	0.000	2.00	6.965	4.53	30.5	0.0	220.9
16.00		1.00	0.70	6.129	6.74	172.75	0.650	0.000	2.00	6.910	4.49	30.3	0.0	219.1
18.00		1.00	0.70	6.129	6.74	171.38	0.650	0.000	2.00	6.855	4.46	30.0	0.0	217.4
20.00		1.00	0.70	6.129	6.74	170.00	0.650	0.000	2.00	6.800	4.42	29.8	0.0	215.6
22.00		1.00	0.70	6.129	6.74	168.62	0.650	0.000	2.00	6.746	4.38	29.6	0.0	213.9
24.00		1.00	0.70	6.129	6.74	167.25	0.650	0.000	2.00	6.691	4.35	29.3	0.0	212.1
26.00		1.00	0.70	6.129	6.74	165.87	0.650	0.000	2.00	6.636	4.31	29.1	0.0	210.4
28.00		1.00	0.70	6.129	6.74	164.50	0.650	0.000	2.00	6.581	4.28	28.8	0.0	208.6
30.00		1.00	0.70	6.134	6.75	163.19	0.650	0.000	2.00	6.526	4.24	28.6	0.0	206.9
32.00		1.00	0.71	6.248	6.87	163.31	0.650	0.000	2.00	6.471	4.21	28.9	0.0	205.1
34.00		1.00	0.73	6.357	6.99	163.33	0.650	0.000	2.00	6.417	4.17	29.2	0.0	203.4
36.00		1.00	0.74	6.462	7.11	163.26	0.650	0.000	2.00	6.362	4.14	29.4	0.0	201.6
38.00		1.00	0.75	6.562	7.22	163.10	0.650	0.000	2.00	6.307	4.10	29.6	0.0	199.9
40.00		1.00	0.76	6.659	7.33	162.86	0.650	0.000	2.00	6.252	4.06	29.8	0.0	198.1
42.00		1.00	0.77	6.753	7.43	162.56	0.650	0.000	2.00	6.197	4.03	29.9	0.0	196.4
44.00		1.00	0.78	6.843	7.53	162.19	0.650	0.000	2.00	6.142	3.99	30.1	0.0	194.6
46.00		1.00	0.79	6.931	7.62	161.76	0.650	0.000	2.00	6.088	3.96	30.2	0.0	192.9
48.00		1.00	0.80	7.015	7.72	161.27	0.650	0.000	2.00	6.033	3.92	30.3	0.0	191.1
48.75 Bot - Section 2		1.00	0.80	7.047	7.75	161.08	0.650	0.000	0.75	2.248	1.46	11.3	0.0	71.2
50.00		1.00	0.81	7.098	7.81	160.73	0.650	0.000	1.25	3.783	2.46	19.2	0.0	238.0
52.00		1.00	0.82	7.178	7.90	160.15	0.650	0.000	2.00	6.008	3.91	30.8	0.0	378.0
53.25 Top - Section 1		1.00	0.83	7.227	7.95	159.76	0.650	0.000	1.25	3.727	2.42	19.3	0.0	234.5
54.00		1.00	0.83	7.255	7.98	161.83	0.650	0.000	0.75	2.226	1.45	11.5	0.0	70.5
56.00		1.00	0.84	7.331	8.06	161.17	0.650	0.000	2.00	5.898	3.83	30.9	0.0	186.8
58.00		1.00	0.85	7.405	8.15	160.46	0.650	0.000	2.00	5.843	3.80	30.9	0.0	185.1
60.00		1.00	0.85	7.477	8.22	159.72	0.650	0.000	2.00	5.789	3.76	30.9	0.0	183.3
62.00		1.00	0.86	7.548	8.30	158.94	0.650	0.000	2.00	5.734	3.73	30.9	0.0	181.6
64.00		1.00	0.87	7.616	8.38	158.13	0.650	0.000	2.00	5.679	3.69	30.9	0.0	179.9
66.00		1.00	0.88	7.684	8.45	157.29	0.650	0.000	2.00	5.624	3.66	30.9	0.0	178.1
68.00		1.00	0.89	7.749	8.52	156.41	0.650	0.000	2.00	5.569	3.62	30.9	0.0	176.4
70.00		1.00	0.89	7.814	8.60	155.51	0.650	0.000	2.00	5.514	3.58	30.8	0.0	174.6
72.00		1.00	0.90	7.877	8.66	154.58	0.650	0.000	2.00	5.460	3.55	30.7	0.0	172.9
74.00		1.00	0.91	7.939	8.73	153.62	0.650	0.000	2.00	5.405	3.51	30.7	0.0	171.1
76.00		1.00	0.91	8.000	8.80	152.63	0.650	0.000	2.00	5.350	3.48	30.6	0.0	169.4
78.00		1.00	0.92	8.059	8.87	151.62	0.650	0.000	2.00	5.295	3.44	30.5	0.0	167.6
80.00		1.00	0.93	8.118	8.93	150.59	0.650	0.000	2.00	5.240	3.41	30.4	0.0	165.9
82.00		1.00	0.93	8.175	8.99	149.53	0.650	0.000	2.00	5.185	3.37	30.3	0.0	164.1
84.00		1.00	0.94	8.232	9.05	148.45	0.650	0.000	2.00	5.131	3.33	30.2	0.0	162.4
86.00		1.00	0.95	8.287	9.12	147.35	0.650	0.000	2.00	5.076	3.30	30.1	0.0	160.6
88.00		1.00	0.95	8.342	9.18	146.23	0.650	0.000	2.00	5.021	3.26	29.9	0.0	158.9

## Wind Loading - Shaft

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 45
	<b>Struct Class:</b> II	



90.00	1.00	0.96	8.396	9.24	145.09	0.650	0.000	2.00	4.966	3.23	29.8	0.0	157.1		
92.00	1.00	0.96	8.448	9.29	143.93	0.650	0.000	2.00	4.911	3.19	29.7	0.0	155.4		
94.00	1.00	0.97	8.501	9.35	142.75	0.650	0.000	2.00	4.857	3.16	29.5	0.0	153.6		
96.00	1.00	0.98	8.552	9.41	141.55	0.650	0.000	2.00	4.802	3.12	29.4	0.0	151.9		
97.00 Appurtenance(s)	1.00	0.98	8.577	9.43	140.95	0.650	0.000	1.00	2.380	1.55	14.6	0.0	75.3		
98.00	1.00	0.98	8.602	9.46	140.34	0.650	0.000	1.00	2.367	1.54	14.6	0.0	74.8		
98.75 Bot - Section 3	1.00	0.98	8.621	9.48	139.88	0.650	0.000	0.75	1.766	1.15	10.9	0.0	55.8		
100.00	1.00	0.99	8.652	9.52	139.11	0.650	0.000	1.25	2.966	1.93	18.3	0.0	163.0		
102.00	1.00	0.99	8.701	9.57	137.87	0.650	0.000	2.00	4.701	3.06	29.2	0.0	258.3		
102.25 Top - Section 2	1.00	0.99	8.707	9.58	137.71	0.650	0.000	0.25	0.584	0.38	3.6	0.0	32.1		
104.00	1.00	1.00	8.750	9.62	138.51	0.650	0.000	1.75	4.062	2.64	25.4	0.0	96.5		
106.00	1.00	1.00	8.797	9.68	137.24	0.650	0.000	2.00	4.591	2.98	28.9	0.0	109.1		
107.00 Appurtenance(s)	1.00	1.01	8.821	9.70	136.60	0.650	0.000	1.00	2.275	1.48	14.3	0.0	54.1		
108.00	1.00	1.01	8.845	9.73	135.95	0.650	0.000	1.00	2.261	1.47	14.3	0.0	53.7		
110.00	1.00	1.02	8.891	9.78	134.65	0.650	0.000	2.00	4.481	2.91	28.5	0.0	106.5		
112.00	1.00	1.02	8.937	9.83	133.34	0.650	0.000	2.00	4.427	2.88	28.3	0.0	105.2		
114.00	1.00	1.03	8.982	9.88	132.01	0.650	0.000	2.00	4.372	2.84	28.1	0.0	103.9		
116.00	1.00	1.03	9.027	9.93	130.67	0.650	0.000	2.00	4.317	2.81	27.9	0.0	102.5		
117.00 Appurtenance(s)	1.00	1.03	9.049	9.95	129.99	0.650	0.000	1.00	2.138	1.39	13.8	0.0	50.8		
118.00	1.00	1.04	9.071	9.98	129.31	0.650	0.000	1.00	2.124	1.38	13.8	0.0	50.5		
119.00	1.00	1.04	9.093	10.00	128.63	0.650	0.000	1.00	2.110	1.37	13.7	0.0	50.1		
<b>Totals:</b>								<b>119.00</b>				<b>1,780.9</b>	<b>11,161.3</b>		

## Discrete Appurtenance Forces

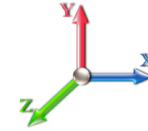
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 26

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	117.00	Sitepro RMQP-4096-HK	1	9.049	9.954	1.00	1.00	48.00	2645.00	0.000	0.000	477.79	0.00	0.00	
2	117.00	AIR6449 B41	3	9.049	9.954	0.53	0.75	9.03	309.00	0.000	0.000	89.84	0.00	0.00	
3	117.00	Air 32	3	9.049	9.954	0.65	0.75	12.74	396.00	0.000	0.000	126.85	0.00	0.00	
4	117.00	APXVAALL18-43-U-NA20	3	9.049	9.954	0.55	0.75	25.03	277.80	0.000	0.000	249.17	0.00	0.00	
5	117.00	Ericsson 4415 B25 RRU	3	9.049	9.954	0.43	0.75	2.10	138.00	0.000	0.000	20.94	0.00	0.00	
6	117.00	KRY 112 144/1	3	9.049	9.954	0.43	0.75	0.53	33.00	0.000	0.000	5.23	0.00	0.00	
7	117.00	SDX1926Q-43 Diplexer	3	9.049	9.954	0.43	0.75	0.37	18.00	0.000	0.000	3.70	0.00	0.00	
8	117.00	Radio 4449 B71+B85	3	9.049	9.954	0.43	0.75	2.53	222.00	0.000	0.000	25.15	0.00	0.00	
9	107.00	RRH2x60-700 RRH	3	8.821	9.703	0.43	0.75	4.49	180.00	0.000	0.000	43.56	0.00	0.00	
10	107.00	RRH2X60-PCS RRH	3	8.821	9.703	0.43	0.75	2.82	165.00	0.000	0.000	27.38	0.00	0.00	
11	107.00	RRH2X90-AWS RRH	3	8.821	9.703	0.43	0.75	3.33	192.00	0.000	0.000	32.36	0.00	0.00	
12	107.00	PV-LPP12M-B	1	8.821	9.703	1.00	1.00	28.00	1615.00	0.000	0.000	271.69	0.00	0.00	
13	107.00	RFS DB-T1-6Z-8AB-OZ	2	8.821	9.703	0.50	0.75	4.82	37.80	0.000	0.000	46.81	0.00	0.00	
14	107.00	BXA-80063-6BF-EDIN-X	3	8.821	9.703	0.58	0.75	12.74	57.60	0.000	0.000	123.63	0.00	0.00	
15	107.00	SBNHH-1D65B	6	8.821	9.703	0.58	0.75	28.27	240.00	0.000	0.000	274.35	0.00	0.00	
16	97.00	AAHC	3	8.577	9.435	0.60	0.80	7.56	312.00	0.000	0.000	71.33	0.00	0.00	
17	97.00	VHLP2-18	2	8.577	9.435	1.00	1.00	9.38	62.00	2.187	0.000	88.50	193.52	0.00	
18	97.00	VHLP1-23	1	8.577	9.435	1.00	1.00	1.61	14.20	0.000	0.000	15.19	0.00	0.00	
19	97.00	NNVV-65B-R4	3	8.577	9.435	0.59	0.80	21.79	232.20	0.000	0.000	205.60	0.00	0.00	
20	97.00	1900 MHz	3	8.577	9.435	0.46	0.80	3.71	180.00	0.000	0.000	34.98	0.00	0.00	
21	97.00	UDS-NPL (3 Sectors)	1	8.577	9.435	0.56	0.75	7.19	576.00	0.000	0.000	67.88	0.00	0.00	
22	97.00	800 MHz RRU	6	8.577	9.435	0.40	0.80	5.98	318.00	0.000	0.000	56.38	0.00	0.00	
23	97.00	TD-RRH8x20-25	3	8.577	9.435	0.46	0.80	5.54	210.00	0.000	0.000	52.27	0.00	0.00	
<b>Totals:</b>									<b>8,430.60</b>						<b>2,410.57</b>

## Total Applied Force Summary

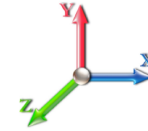
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 26

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		31.96	296.85	0.00	0.00
4.00		31.72	295.10	0.00	0.00
6.00		31.48	293.35	0.00	0.00
8.00		31.24	291.60	0.00	0.00
10.00		31.00	289.85	0.00	0.00
12.00		30.76	288.11	0.00	0.00
14.00		30.52	286.36	0.00	0.00
16.00		30.28	284.61	0.00	0.00
18.00		30.04	282.86	0.00	0.00
20.00		29.80	281.11	0.00	0.00
22.00		29.56	279.36	0.00	0.00
24.00		29.32	277.61	0.00	0.00
26.00		29.08	275.86	0.00	0.00
28.00		28.84	274.11	0.00	0.00
30.00		28.62	272.36	0.00	0.00
32.00		28.91	270.61	0.00	0.00
34.00		29.17	268.86	0.00	0.00
36.00		29.39	267.11	0.00	0.00
38.00		29.59	265.36	0.00	0.00
40.00		29.77	263.61	0.00	0.00
42.00		29.92	261.87	0.00	0.00
44.00		30.05	260.12	0.00	0.00
46.00		30.17	258.37	0.00	0.00
48.00		30.26	256.62	0.00	0.00
48.75		11.33	95.78	0.00	0.00
50.00		19.20	278.94	0.00	0.00
52.00		30.83	443.47	0.00	0.00
53.25		19.26	275.39	0.00	0.00
54.00		11.55	95.07	0.00	0.00
56.00		30.92	252.32	0.00	0.00
58.00		30.94	250.57	0.00	0.00
60.00		30.95	248.82	0.00	0.00
62.00		30.94	247.07	0.00	0.00
64.00		30.93	245.32	0.00	0.00
66.00		30.90	243.57	0.00	0.00
68.00		30.86	241.82	0.00	0.00
70.00		30.81	240.07	0.00	0.00
72.00		30.75	238.33	0.00	0.00
74.00		30.68	236.58	0.00	0.00
76.00		30.60	234.83	0.00	0.00
78.00		30.51	233.08	0.00	0.00
80.00		30.42	231.33	0.00	0.00
82.00		30.31	229.58	0.00	0.00
84.00		30.20	227.83	0.00	0.00
86.00		30.08	226.08	0.00	0.00
88.00		29.95	224.33	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020	
<b>Site Name:</b> Meriden	<b>Exposure:</b> B		
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00		
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil		
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II	Page: 48



90.00		29.81	222.58	0.00	0.00
92.00		29.67	220.83	0.00	0.00
94.00		29.52	219.08	0.00	0.00
96.00		29.36	217.33	0.00	0.00
97.00	(22) attachments	606.73	2012.41	193.52	0.00
98.00		14.56	102.18	0.00	0.00
98.75		10.89	76.35	0.00	0.00
100.00		18.35	197.20	0.00	0.00
102.00		29.24	313.03	0.00	0.00
102.25		3.63	38.91	0.00	0.00
104.00		25.41	144.39	0.00	0.00
106.00		28.88	163.79	0.00	0.00
107.00	(21) attachments	834.11	2568.80	0.00	0.00
108.00		14.30	67.43	0.00	0.00
110.00		28.49	133.88	0.00	0.00
112.00		28.29	132.57	0.00	0.00
114.00		28.08	131.26	0.00	0.00
116.00		27.86	129.95	0.00	0.00
117.00	(22) attachments	1012.51	4103.28	0.00	0.00
118.00		13.78	50.45	0.00	0.00
119.00		13.72	50.13	0.00	0.00
	<b>Totals:</b>	<b>4,191.51</b>	<b>23,177.65</b>	<b>193.52</b>	<b>0.00</b>

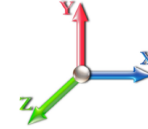
## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 26

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" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
4.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
6.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
8.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
10.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
12.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
14.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
16.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
18.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
20.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
22.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
24.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
26.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
28.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	4.40
30.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.134	0.00	4.40
32.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.248	0.00	4.40
34.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.357	0.00	4.40
36.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.462	0.00	4.40
38.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.562	0.00	4.40
40.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.659	0.00	4.40
42.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.753	0.00	4.40
44.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.843	0.00	4.40
46.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.931	0.00	4.40
48.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.015	0.00	4.40
48.75	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	7.047	0.00	1.65
50.00	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	7.098	0.00	2.75
52.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.178	0.00	4.40
53.25	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	7.227	0.00	2.75
54.00	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	7.255	0.00	1.65
56.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.331	0.00	4.40
58.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.405	0.00	4.40
60.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.477	0.00	4.40
62.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.548	0.00	4.40
64.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.616	0.00	4.40
66.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.684	0.00	4.40
68.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.749	0.00	4.40
70.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.814	0.00	4.40
72.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.877	0.00	4.40
74.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.939	0.00	4.40
76.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.000	0.00	4.40
78.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.059	0.00	4.40
80.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.118	0.00	4.40
82.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.175	0.00	4.40
84.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.232	0.00	4.40
86.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.287	0.00	4.40
88.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.342	0.00	4.40
90.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.396	0.00	4.40

## Linear Appurtenance Segment Forces (Factored)

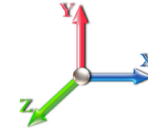
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 26

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)
92.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.448	0.00	4.40
94.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.501	0.00	4.40
96.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.552	0.00	4.40
97.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.577	0.00	2.20
98.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.602	0.00	2.20
98.75	1 5/8" Fiber	Yes	0.75	0.000	0.00	0.00	0.00	0.000	0.000	8.621	0.00	1.65
100.00	1 5/8" Fiber	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	8.652	0.00	2.75
102.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.701	0.00	4.40
102.25	1 5/8" Fiber	Yes	0.25	0.000	0.00	0.00	0.00	0.000	0.000	8.707	0.00	0.55
104.00	1 5/8" Fiber	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	8.750	0.00	3.85
106.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.797	0.00	4.40
107.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.821	0.00	2.20
<b>Totals:</b>											<b>0.0</b>	<b>235.4</b>

### Calculated Forces

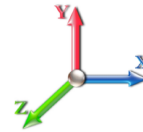
<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



**Load Case:** 1.0D + 1.0W 60 mph Wind

**Iterations** 26

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-23.18	-4.20	-0.19	-385.94	0.00	385.94	2063.18	1031.59	3653.66	1829.55	0.00	0.000	0.000	0.222
2.00	-22.88	-4.17	-0.19	-377.55	0.00	377.55	2055.83	1027.92	3613.07	1809.22	0.01	-0.027	0.000	0.220
4.00	-22.58	-4.15	-0.19	-369.20	0.00	369.20	2048.36	1024.18	3572.46	1788.88	0.02	-0.054	0.000	0.217
6.00	-22.29	-4.13	-0.19	-360.89	0.00	360.89	2040.76	1020.38	3531.83	1768.54	0.05	-0.082	0.000	0.215
8.00	-21.99	-4.11	-0.19	-352.63	0.00	352.63	2033.04	1016.52	3491.19	1748.19	0.09	-0.109	0.000	0.213
10.00	-21.70	-4.09	-0.19	-344.41	0.00	344.41	2025.20	1012.60	3450.55	1727.84	0.14	-0.136	0.000	0.210
12.00	-21.41	-4.07	-0.19	-336.23	0.00	336.23	2017.23	1008.61	3409.91	1707.49	0.21	-0.163	0.000	0.208
14.00	-21.12	-4.05	-0.19	-328.09	0.00	328.09	2009.13	1004.57	3369.28	1687.14	0.28	-0.191	0.000	0.205
16.00	-20.84	-4.03	-0.19	-320.00	0.00	320.00	2000.92	1000.46	3328.65	1666.80	0.37	-0.218	0.000	0.202
18.00	-20.55	-4.00	-0.19	-311.95	0.00	311.95	1992.57	996.29	3288.04	1646.46	0.46	-0.245	0.000	0.200
20.00	-20.27	-3.98	-0.19	-303.94	0.00	303.94	1984.11	992.05	3247.45	1626.14	0.57	-0.272	0.000	0.197
22.00	-19.99	-3.96	-0.19	-295.98	0.00	295.98	1975.52	987.76	3206.89	1605.83	0.69	-0.299	0.000	0.194
24.00	-19.71	-3.94	-0.19	-288.06	0.00	288.06	1966.80	983.40	3166.36	1585.53	0.82	-0.326	0.000	0.192
26.00	-19.43	-3.92	-0.19	-280.18	0.00	280.18	1957.96	978.98	3125.86	1565.25	0.97	-0.353	0.000	0.189
28.00	-19.15	-3.90	-0.19	-272.34	0.00	272.34	1948.99	974.50	3085.40	1544.99	1.12	-0.380	0.000	0.186
30.00	-18.88	-3.87	-0.19	-264.55	0.00	264.55	1939.91	969.95	3044.99	1524.76	1.29	-0.407	0.000	0.183
32.00	-18.61	-3.85	-0.19	-256.80	0.00	256.80	1930.69	965.35	3004.63	1504.55	1.46	-0.433	0.000	0.180
34.00	-18.34	-3.83	-0.19	-249.10	0.00	249.10	1921.36	960.68	2964.32	1484.36	1.65	-0.460	0.000	0.177
36.00	-18.07	-3.81	-0.19	-241.44	0.00	241.44	1911.89	955.95	2924.07	1464.21	1.85	-0.486	0.000	0.174
38.00	-17.80	-3.78	-0.19	-233.83	0.00	233.83	1902.31	951.15	2883.89	1444.09	2.06	-0.513	0.000	0.171
40.00	-17.54	-3.76	-0.19	-226.26	0.00	226.26	1892.60	946.30	2843.78	1424.00	2.28	-0.539	0.000	0.168
42.00	-17.27	-3.73	-0.19	-218.75	0.00	218.75	1882.76	941.38	2803.75	1403.96	2.51	-0.565	0.000	0.165
44.00	-17.01	-3.71	-0.19	-211.28	0.00	211.28	1872.80	936.40	2763.79	1383.95	2.75	-0.590	0.000	0.162
46.00	-16.75	-3.68	-0.19	-203.86	0.00	203.86	1862.72	931.36	2723.92	1363.99	3.00	-0.616	0.000	0.158
48.00	-16.50	-3.65	-0.19	-196.50	0.00	196.50	1852.51	926.26	2684.14	1344.07	3.27	-0.641	0.000	0.155
48.75	-16.40	-3.65	-0.19	-193.76	0.00	193.76	1848.65	924.33	2669.25	1336.61	3.37	-0.651	0.000	0.154
50.00	-16.12	-3.63	-0.19	-189.20	0.00	189.20	1842.18	921.09	2644.46	1324.20	3.54	-0.666	0.000	0.152
52.00	-15.68	-3.60	-0.19	-181.94	0.00	181.94	1831.72	915.86	2604.88	1304.37	3.83	-0.691	0.000	0.148
53.25	-15.40	-3.58	-0.19	-177.44	0.00	177.44	1841.33	920.67	2641.23	1322.58	4.01	-0.706	-0.001	0.143
54.00	-15.30	-3.57	-0.19	-174.76	0.00	174.76	1837.42	918.71	2626.38	1315.14	4.12	-0.716	-0.001	0.141
56.00	-15.05	-3.54	-0.19	-167.62	0.00	167.62	1826.91	913.45	2586.84	1295.34	4.43	-0.739	-0.001	0.138
58.00	-14.80	-3.51	-0.19	-160.53	0.00	160.53	1816.27	908.14	2547.41	1275.60	4.74	-0.762	-0.001	0.134
60.00	-14.55	-3.49	-0.19	-153.50	0.00	153.50	1805.51	902.75	2508.10	1255.91	5.06	-0.784	-0.001	0.130
62.00	-14.30	-3.46	-0.19	-146.53	0.00	146.53	1794.62	897.31	2468.90	1236.28	5.40	-0.806	-0.001	0.127
64.00	-14.05	-3.43	-0.19	-139.62	0.00	139.62	1783.61	891.81	2429.82	1216.72	5.74	-0.828	-0.001	0.123
66.00	-13.81	-3.40	-0.19	-132.76	0.00	132.76	1772.48	886.24	2390.88	1197.22	6.09	-0.849	-0.001	0.119
68.00	-13.57	-3.37	-0.19	-125.96	0.00	125.96	1761.22	880.61	2352.06	1177.78	6.45	-0.870	-0.001	0.115
70.00	-13.33	-3.34	-0.19	-119.22	0.00	119.22	1749.83	874.92	2313.39	1158.41	6.82	-0.890	-0.001	0.111
72.00	-13.09	-3.31	-0.19	-112.55	0.00	112.55	1738.33	869.16	2274.85	1139.12	7.20	-0.910	-0.001	0.106
74.00	-12.85	-3.28	-0.19	-105.93	0.00	105.93	1726.69	863.35	2236.47	1119.90	7.58	-0.929	-0.001	0.102
76.00	-12.62	-3.25	-0.19	-99.37	0.00	99.37	1714.94	857.47	2198.23	1100.75	7.98	-0.948	-0.001	0.098
78.00	-12.38	-3.22	-0.19	-92.87	0.00	92.87	1703.06	851.53	2160.16	1081.68	8.38	-0.966	-0.001	0.093
80.00	-12.15	-3.19	-0.19	-86.44	0.00	86.44	1691.05	845.53	2122.25	1062.70	8.78	-0.983	-0.001	0.089
82.00	-11.92	-3.16	-0.19	-80.06	0.00	80.06	1678.92	839.46	2084.50	1043.80	9.20	-0.999	-0.001	0.084
84.00	-11.69	-3.13	-0.19	-73.75	0.00	73.75	1666.67	833.33	2046.93	1024.99	9.62	-1.015	-0.001	0.079
86.00	-11.47	-3.09	-0.19	-67.50	0.00	67.50	1654.29	827.14	2009.53	1006.26	10.05	-1.030	-0.001	0.074
88.00	-11.24	-3.06	-0.19	-61.31	0.00	61.31	1641.79	820.89	1972.32	987.63	10.49	-1.044	-0.001	0.069
90.00	-11.02	-3.03	-0.19	-55.19	0.00	55.19	1629.16	814.58	1935.30	969.09	10.93	-1.057	-0.001	0.064



## Calculated Forces

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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92.00	-10.80	-3.00	-0.19	-49.12	0.00	49.12	1616.41	808.20	1898.47	950.64	11.37	-1.070	-0.001	0.058
94.00	-10.58	-2.97	-0.19	-43.12	0.00	43.12	1603.53	801.77	1861.83	932.30	11.82	-1.081	-0.001	0.053
96.00	-10.36	-2.94	-0.19	-37.19	0.00	37.19	1590.53	795.27	1825.40	914.06	12.28	-1.091	-0.001	0.047
97.00	-8.36	-2.29	0.00	-34.25	0.00	34.25	1583.99	791.99	1807.27	904.98	12.51	-1.096	-0.001	0.043
98.00	-8.26	-2.28	0.00	-31.96	0.00	31.96	1577.41	788.70	1789.18	895.92	12.74	-1.100	-0.001	0.041
98.75	-8.18	-2.26	0.00	-30.25	0.00	30.25	1572.46	786.23	1775.65	889.15	12.91	-1.103	-0.001	0.039
100.00	-7.99	-2.24	0.00	-27.42	0.00	27.42	1564.16	782.08	1753.17	877.89	13.20	-1.108	-0.001	0.036
102.00	-7.67	-2.21	0.00	-22.93	0.00	22.93	1550.79	775.39	1717.38	859.97	13.66	-1.115	-0.001	0.032
102.25	-7.63	-2.20	0.00	-22.38	0.00	22.38	1064.30	532.15	1198.84	600.31	13.72	-1.116	-0.001	0.044
104.00	-7.49	-2.18	0.00	-18.53	0.00	18.53	1057.83	528.92	1179.14	590.45	14.13	-1.121	-0.001	0.038
106.00	-7.33	-2.15	0.00	-14.17	0.00	14.17	1050.33	525.16	1156.68	579.20	14.60	-1.127	-0.001	0.031
107.00	-4.77	-1.26	0.00	-12.03	0.00	12.03	1046.53	523.26	1145.48	573.59	14.84	-1.130	-0.001	0.026
108.00	-4.71	-1.25	0.00	-10.76	0.00	10.76	1042.70	521.35	1134.29	567.99	15.08	-1.132	-0.001	0.023
110.00	-4.57	-1.21	0.00	-8.27	0.00	8.27	1034.95	517.47	1111.97	556.81	15.55	-1.136	-0.001	0.019
112.00	-4.44	-1.18	0.00	-5.84	0.00	5.84	1027.07	513.53	1089.73	545.68	16.03	-1.139	-0.001	0.015
114.00	-4.31	-1.15	0.00	-3.47	0.00	3.47	1019.06	509.53	1067.57	534.58	16.51	-1.141	-0.001	0.011
116.00	-4.18	-1.12	0.00	-1.17	0.00	1.17	1010.94	505.47	1045.49	523.52	16.99	-1.142	-0.001	0.006
117.00	-0.10	-0.03	0.00	-0.04	0.00	0.04	1006.83	503.41	1034.49	518.01	17.22	-1.142	-0.001	0.000
118.00	-0.05	-0.01	0.00	-0.01	0.00	0.01	1002.69	501.34	1023.51	512.52	17.46	-1.142	-0.001	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	17.70	-1.142	-0.001	0.000

## Final Analysis Summary

<b>Structure:</b> CT13069-A-SBA	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	17.6	0.00	27.79	0.01	0.50	1628.07
0.9D + 1.6W 97 mph Wind	17.5	0.00	20.84	0.01	0.50	1604.64
1.2D + 1.0Di + 1.0Wi 50 mph Wind	4.9	0.00	47.12	0.00	0.17	458.50
1.2D + 1.0E	1.6	0.00	27.81	0.00	0.00	169.49
0.9D + 1.0E	1.6	0.00	20.86	0.00	0.00	166.89
1.0D + 1.0W 60 mph Wind	4.2	0.00	23.18	0.00	0.19	385.94

### Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-27.79	-17.56	-0.50	-1628.0	-0.01	-1628.0	2063.18	1031.5	3653.66	1829.55	0.00	0.904
0.9D + 1.6W 97 mph Wind	-20.84	-17.55	-0.50	-1604.6	-0.01	-1604.6	2063.18	1031.5	3653.66	1829.55	0.00	0.887
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-47.12	-4.91	-0.17	-458.50	0.00	-458.50	2063.18	1031.5	3653.66	1829.55	0.00	0.273
1.2D + 1.0E	-27.81	-1.55	0.00	-169.49	0.00	-169.49	2063.18	1031.5	3653.66	1829.55	0.00	0.106
0.9D + 1.0E	-20.86	-1.55	0.00	-166.89	0.00	-166.89	2063.18	1031.5	3653.66	1829.55	0.00	0.101
1.0D + 1.0W 60 mph Wind	-23.18	-4.20	-0.19	-385.94	0.00	-385.94	2063.18	1031.5	3653.66	1829.55	0.00	0.222

## Base Plate Summary

<b>Structure:</b> CT13069-A-SB	<b>Code:</b> EIA/TIA-222-G	11/10/2020
<b>Site Name:</b> Meriden	<b>Exposure:</b> B	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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Reactions	Base Plate	Anchor Bolts
Original Design	<b>Yield (ksi):</b> 60.00	<b>Bolt Circle:</b> 49.12
<b>Moment (kip-ft):</b> 1627.50	<b>Width (in):</b> 47.00	<b>Number Bolts:</b> 8.00
<b>Axial (kip):</b> 26.65	<b>Style:</b> Clipped	<b>Bolt Type:</b> 2.25" 18J
<b>Shear (kip):</b> 19.08	<b>Polygon Sides:</b> 0.00	<b>Bolt Diameter (in):</b> 2.25
Analysis (1.2D + 1.6W)	<b>Clip Length (in):</b> 7.00	<b>Yield (ksi):</b> 75.00
<b>Moment (kip-ft):</b> 1628.07	<b>Effective Len (in):</b> 12.84	<b>Ultimate (ksi):</b> 100.00
<b>Axial (kip):</b> 27.79	<b>Moment (kip-in):</b> 599.94	<b>Arrangement:</b> Clustered
<b>Shear (kip):</b> 17.56	<b>Allow Stress (ksi):</b> 81.00	<b>Cluster Dist (in):</b> 6.00
	<b>Applied Stress (ksi):</b> 55.08	<b>Start Angle (deg):</b> 45.00
	<b>Stress Ratio:</b> 0.68	Compression
		<b>Force (kip):</b> 204.76
		<b>Allowable (kip):</b> 260.00
		<b>Ratio:</b> 0.80
		Tension
		<b>Force (kip):</b> 192.98
		<b>Allowable (kip):</b> 260.00
		<b>Ratio:</b> 0.76



# Monopole Mat Foundation Design

Date	
11/10/2020	
Customer Name:	T-Mobile
EIA/TIA Standard:	EIA-222-G
Site Name:	
Structure Height (Ft.):	119
Site Number:	CT13069-A-SBA
Engineer Name:	D. Zhou
Engr. Number:	99268
Engineer Login ID:	

**Foundation Info Obtained from:**

Drawings/Calculations
Monopole
Analysis

**Structure Type:**

**Analysis or Design?**

**Base Reactions (Factored):**

Axial Load (Kips):	27.8	Shear Force (Kips):	17.6
Uplift Force (Kips):	0.0	Moment (Kips-ft):	1628.1
Allowable overstress %:	5.0%		

**Foundation Geometries:**

Diameter of Pier (ft.):	6.0	Depth of Base BG (ft.):	5.5	Mods required -Yes/No ?:	No
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft.):	1.50		
Length of Pad (ft.):	17.5	Width of Pad (ft.):	17.5		
Final Length of pad (ft)	17.5	Final width of pad (ft):	17.5		

**Material Properties and Rebar Info:**

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	26	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	18	Qty. of Rebar in Pad (W):	18	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	18	Qty. of Rebar in Pad (W):	18	

Apply 1.35 factor for e/w Per G: 1.35

**Soil Design Parameters:**

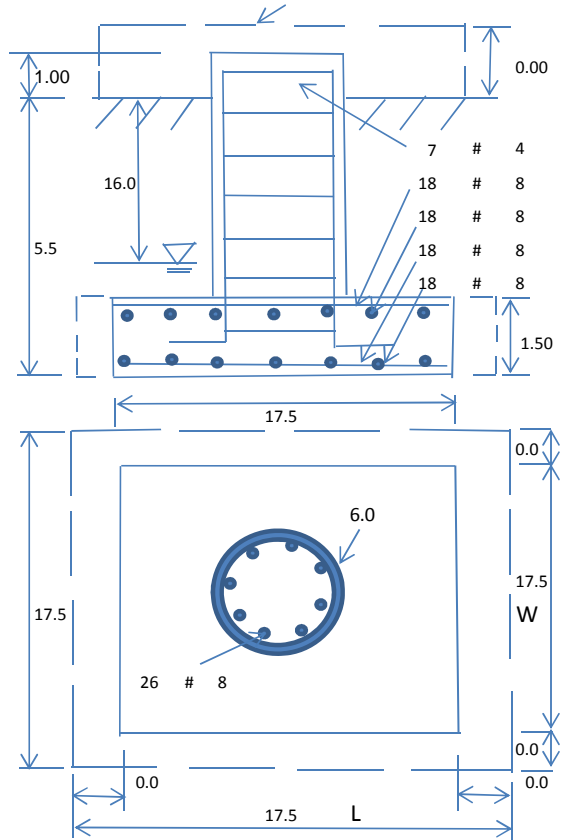
Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	57.6	Pcf
Water Table B.G.S. (ft):	16.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:	0	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00	
		Angle from Top of Pad:	30	
		Angle from Bottm of Pad:	25	
		Angle from Bottm of Pad:	25	

**Foundation Analysis and Design:**

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	1111.90	Total Dry Soil Weight (Kips):	133.43
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	133.43	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	600.75	Total Dry Concrete Weight (Kips):	90.11
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	90.11	Total Vertical Load on Base (Kips):	251.34

**Check Soil Capacities:**

Calculated Maxium Net Soil Pressure under the base (psf):	4093	<	Allowable Factored Soil Bearing (psf):	9000	0.45	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	2003.6	>	Design Factored Momont (kips-ft):	1742	0.87	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.15					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:**

Vertical Steel Rebar Area (sq. in./each):	0.79	Tie / Stirrup Area (sq. in./each):	0.20			
Calculated Moment Capacity (Mn,Kips-Ft):	2994.3	>	Design Factored Moment (Mu, Kips-F	1716.1	0.57	OK!
Calculated Shear Capacity (Kips):	501.5	>	Design Factored Shear (Kips):	17.6	0.04	OK!
Calculated Tension Capacity (Tn, Kips):	1109.2	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7162.1	>	Design Factored Axial Load (Pu Kips):	27.8	0.00	OK!
Moment & Axial Strength Combination:	0.57	OK!	Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.005		Reinforcement Ratio is satisfied per ACI			

**(2).Concrete Pad:**

One-Way Design Shear Capacity (L-Direction, Kips):	288.9	>	One-Way Factored Shear (L-D. Kips):	149.8	0.52	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	288.9	>	One-Way Factored Shear (W-D., Kips)	149.8	0.52	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	269.6	>	One-Way Factored Shear (C-C, Kips):	155.4	0.58	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct. ):	0.0047	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0047		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	889.6	>	Moment at Bottom ( L-Dir. K-Ft):	469.3	0.53	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	889.6	>	Moment at Bottom ( W-Dir. K-Ft):	469.3	0.53	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	1240.8	>	Moment at Bottom ( C-C Dir. K-Ft):	663.7	0.53	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct. ):	0.0047	OK!	Upper Steel Reinf. Ratio (W-Dir. ):	0.0047		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	889.6	>	Moment at the top (L-Dir K-Ft):	212.8	0.24	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	889.6	>	Moment at the top (W-Dir K-Ft):	212.8	0.24	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	1240.8	>	Moment at the top (C-C Dir. K-Ft):	202.0	0.16	OK!

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

Moment transferred by punching shear:	651.2	k-ft.	Max. factored shear stress $v_{u\_CD}$ :	1.9	Psi
Max. factored shear stress $v_{u\_AB}$ :	14.0	Psi	Factored shear Strength $\phi v_n$ :	189.7	Psi
Max. factored shear stress $v_u$ :	14.0	Psi	Check Usage of Punching Shear Capacity:	0.07	OK!

# EXHIBIT 8



**Tower Engineering Solutions**

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

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## Antenna Mount Analysis Report

**Existing 119-Ft Monopole Tower**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT13069-A-SBA / Meriden**

**Customer Site Name: Meriden**

**Carrier Name: T-Mobile (App#: 141378, V-1)**

**Carrier Site ID / Name: CT11493A / Meriden**

**Site Location: 651 Paddock Avenue**

**Meriden, Connecticut**

**New Haven County**

**Latitude: 41.512750**

**Longitude: -72.779449**



**Analysis Result:**

**Max Structural Usage: 54.4% [PASS]**

**Report Prepared By : Biraj Man Dangol**

NOTE: The proposed mount [Sitepro RMQP-4096-HK w/ HRK] is not currently installed on the monopole. The proposed mount [Sitepro RMQP-4096-HK w/ HRK] was assumed to be installed per the manufacturer's instructions, and it was assumed that the mount can be installed properly on the existing monopole. TES cannot verify that the proposed mount [Sitepro RMQP-4096-HK w/ HRK] will fit properly and is not liable for any fit-up issues during installation.

## **Introduction**

The purpose of this report is to summarize the analysis results on the (1) RMQP-4096-HK Platform + HR/Kicker at 117.00' elevation to support the proposed antenna configuration. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

## **Sources of Information**

Mount Drawings	Mount Structural Info as per, SitePro1 Drawing no. RMQP-4096-HK dated 07/14/2014
Antenna Loading	SBA, Application #: 141378, v1
Modification Drawings	n/a

## **Analysis Criteria**

Basic Wind Speed Used in the Analysis:  $V_{ULT} = 125$  mph (3-Sec. Gust) / Equivalent to  
 $V_{ASD} = 97$  mph (3-Sec. Gust)

Basic Wind Speed with Ice: 50 mph (3-Sec. Gust) with 0.75" radial ice concurrent

Operational Wind Speed: 60 mph +0" Radial ice

Standard/Codes: ANSI/TIA/EIA 222-G /2015 IBC/2018 CSBC

Exposure Category: B

Structure Class: II

Topographic Category: 1

Crest Height (Ft): 0

The site is a Risk Category II structure per IBC Table 1604.5. This site does not support emergency communication equipment for first responders such as fire departments, police, hospitals, ambulance services or any of the facilities listed for Risk Categories III and IV. The scope of work detailed in this structural analysis does not include items that are a part of emergency service as the 911 or essential facility service of an emergency response system.

## **Mount Information**

(1) RMQP-4096-HK Platform + HR/Kicker at 117.00' elevation

## **Final Antenna Configuration**

3	Ericsson AIR6449 B41
3	Ericsson Air 32 KRD901146-1_B66A_B2A
3	RFS APXVAALL18-43-U-NA20
3	Ericsson KRY 112 144/1
3	Commscope SDX1926Q-43
3	Ericsson Radio 4449 B71+B85
3	Ericsson 4415 B25



In addition to the proposed equipment loading, a 500 lb serviceability load was also considered in this analysis in accordance with TIA requirements.

## **Analysis Results**

Our calculations have determined that under design wind load the existing mounts will be structurally adequate to support the proposed antenna configuration. The maximum structural usage is 54.4%, which occurs in the End Plate Connection. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

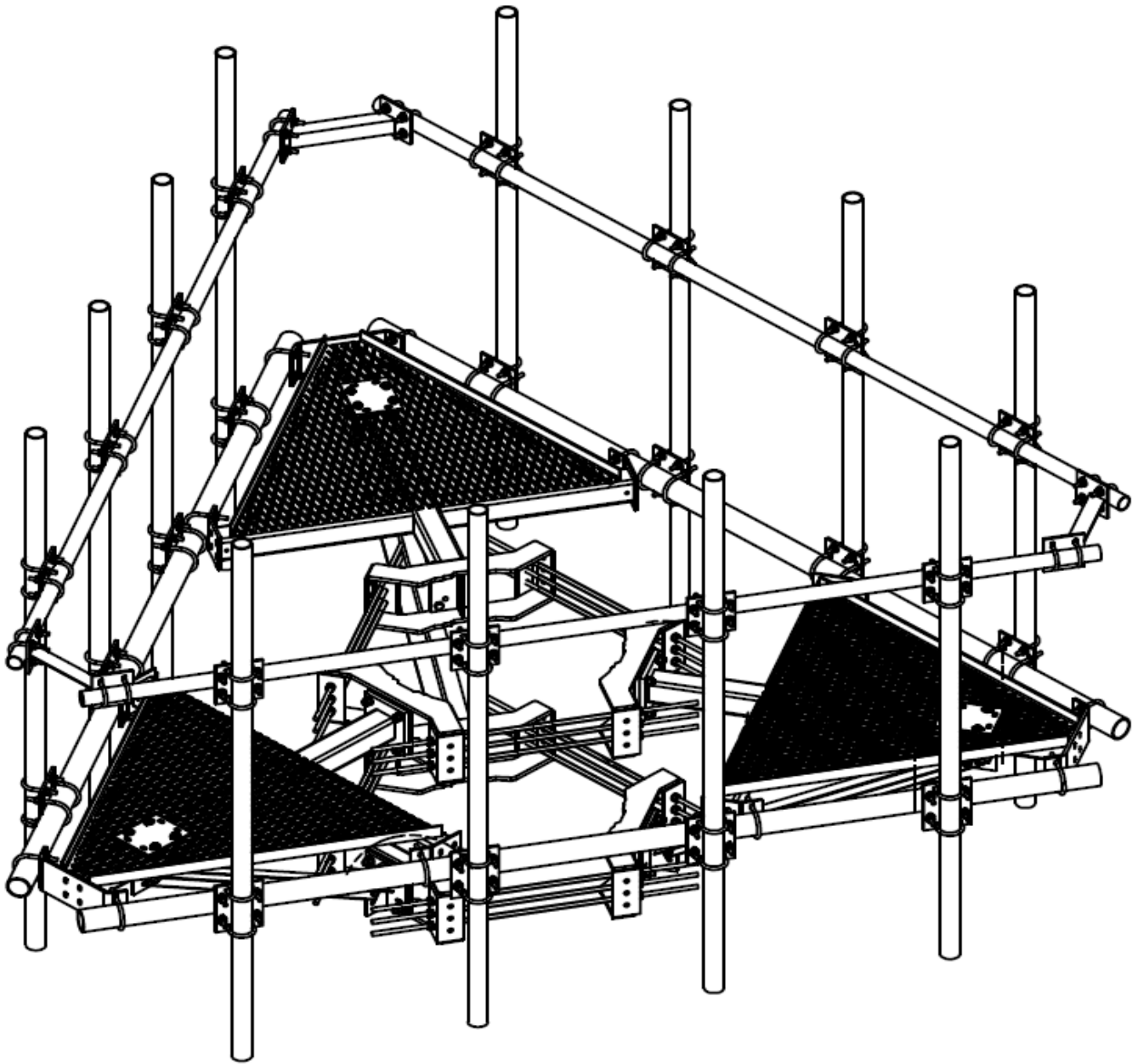
NOTE: The proposed mount [Sitepro RMQP-4096-HK w/ HRK] is not currently installed on the monopole. The proposed mount [Sitepro RMQP-4096-HK w/ HRK] was assumed to be installed per the manufacturer's instructions, and it was assumed that the mount can be installed properly on the existing monopole. TES cannot verify that the proposed mount [Sitepro RMQP-4096-HK w/ HRK] will fit properly and is not liable for any fit-up issues during installation.

## **Attachments**

1. Mount Photos
2. Antenna Placement Diagram
3. Analysis Calculations

## **Standard Conditions**

1. The loading configuration as analyzed in this report is as provided from the customer. Any deviation from this design shall be communicated to TES to verify deviation will not adversely impact the analysis.
2. The analysis is based on the presumption that the antenna mount members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.
3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion. The mount analysis is not a condition assessment of the mount.
4. The mount analysis was performed in accordance with the loading provided, and if applicable the modification required to support the additional loading.
5. If the mount is modified, installation must adhere to the configuration communicated in the modification drawings.
6. The modification drawings are not intended to convey means or methods. These are the responsibility of the installing contractor.
7. Rigging plan review is available if the contractor requires for a construction class IV or other if required. Review fee would apply.
8. The mount modification package was created based upon information provided for the mount loading. The underlying tower is assumed to provide support and sufficient rigidity to support the mount loads as a tower analysis was not part of the mount analysis.
9. TES is not responsible for modifications to climbing facilities unless communicated to TES in writing.



**SITE  
PRO 1**

**RMQP-4096-HK**

Sector: **A**

11/9/2020

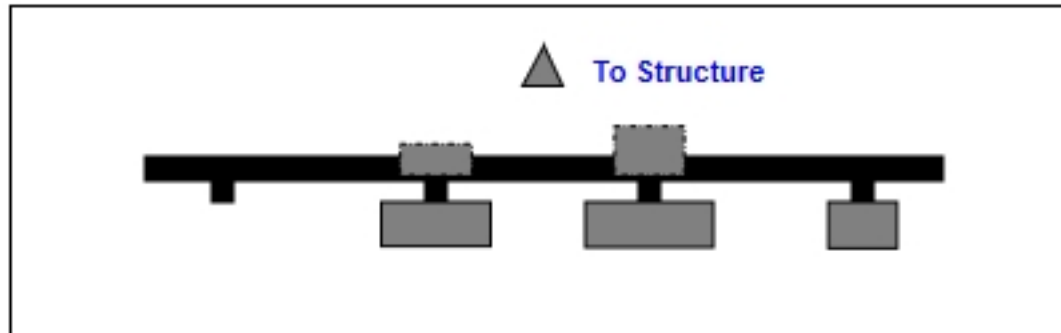


Structure Type: Monopole

Mount Elev: 117.00

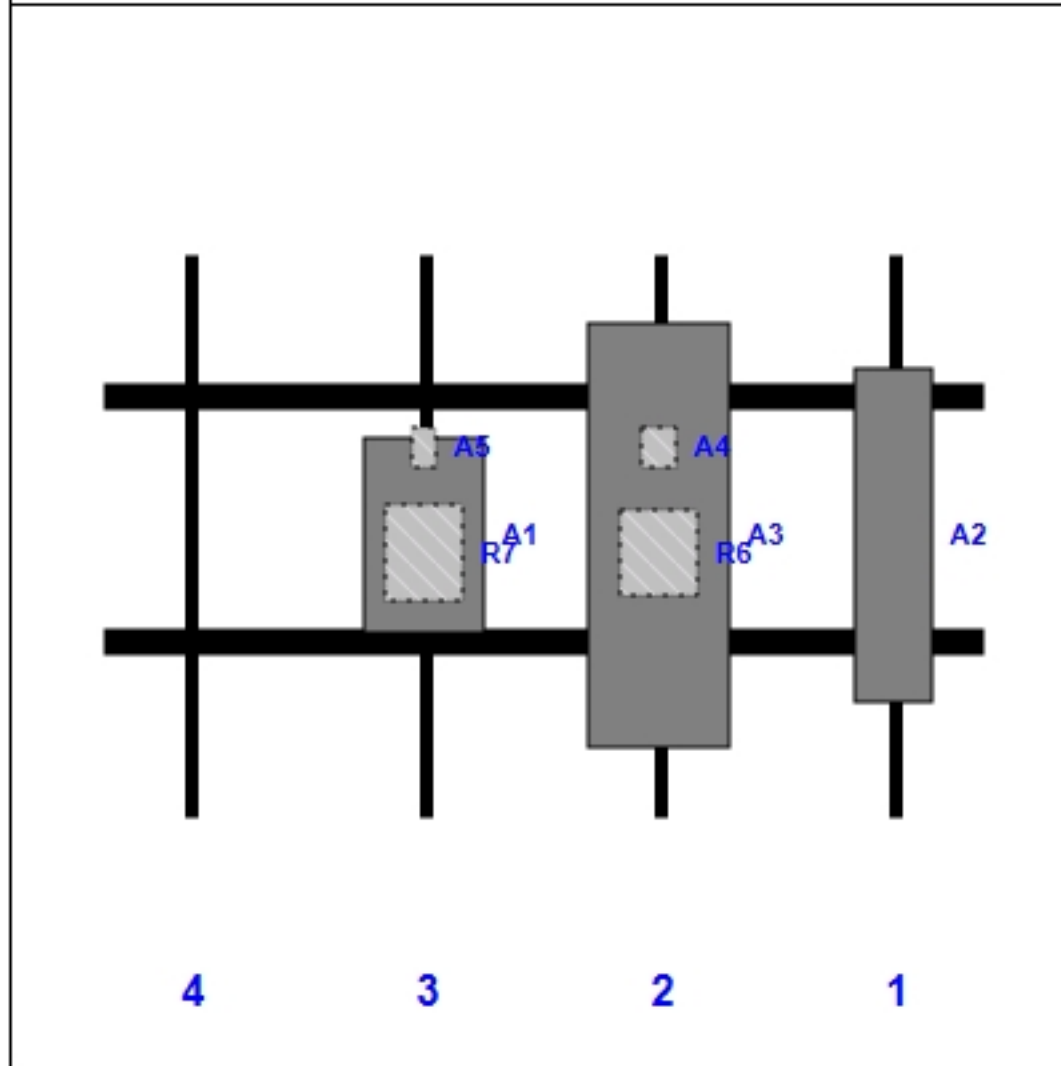
Page: 1

**Plan View**



**Front View**

Looking Toward Structure



Ref #	Model	Height (n)	Width (n)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A2	Air 32 KRD901146-1_B66A_B2A	56.60	12.90	135.00	1	a	Front	48.00			
A3	APXVAALL18-43-U-NA20	72.00	24.00	95.00	2	a	Front	48.00			
R6	Radio 4449 B71+B85	14.90	13.10	95.00	2	b	Behind	51.00			
A4	KRY 112 144/1	6.90	6.10	95.00	2	c	Behind	33.00			
A1	AIR6449 B41	33.10	20.50	55.00	3	a	Front	48.00			
R7	4415 B25	16.50	13.40	55.00	3	b	Behind	51.00			
A5	SDX1926Q-43	6.90	4.10	55.00	3	c	Behind	33.00			

Sector: **B**

11/9/2020

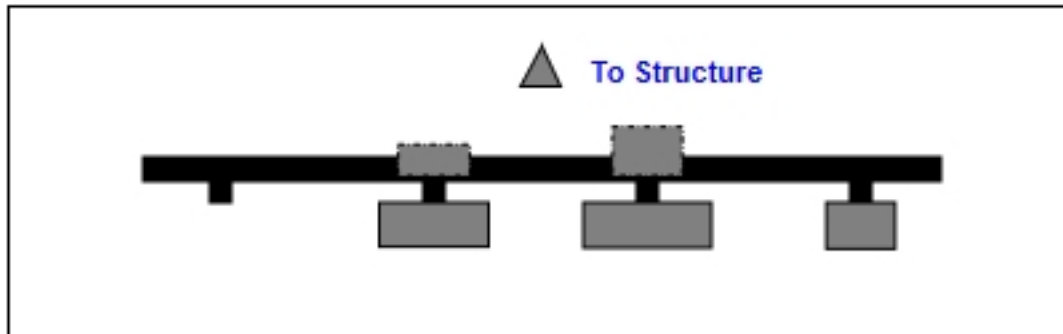


Structure Type: Monopole

Mount Elev: 117.00

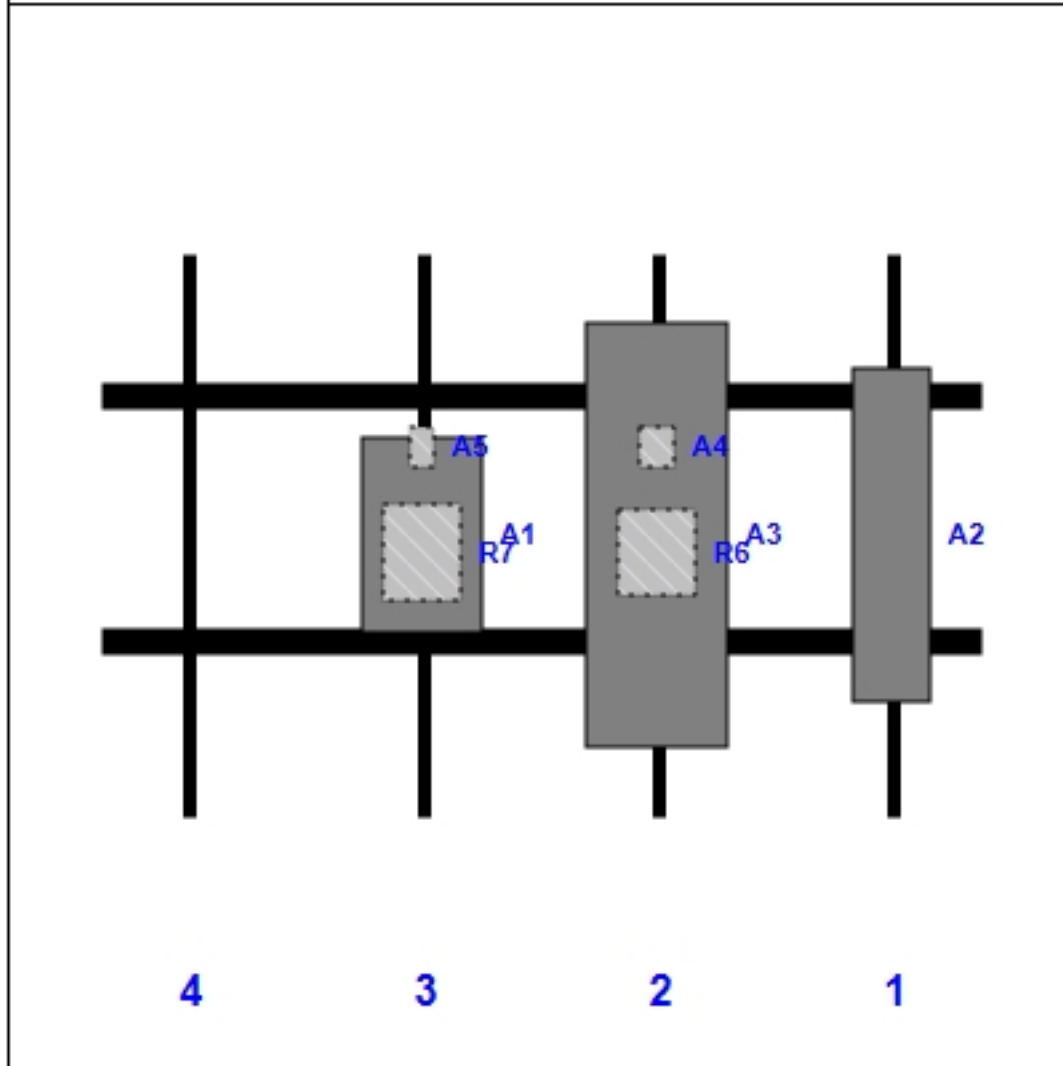
Page: 2

**Plan View**



**Front View**

Looking Toward Structure



Ref #	Model	Height (n)	Width (n)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A2	Air 32 KRD901146-1_B66A_B2A	56.60	12.90	135.00	1	a	Front	48.00			
A3	APXVAALL18-43-U-NA20	72.00	24.00	95.00	2	a	Front	48.00			
R6	Radio 4449 B71+B85	14.90	13.10	95.00	2	b	Behind	51.00			
A4	KRY 112 144/1	6.90	6.10	95.00	2	c	Behind	33.00			
A1	AIR6449 B41	33.10	20.50	55.00	3	a	Front	48.00			
R7	4415 B25	16.50	13.40	55.00	3	b	Behind	51.00			
A5	SDX1926Q-43	6.90	4.10	55.00	3	c	Behind	33.00			

Sector: **C**

11/9/2020

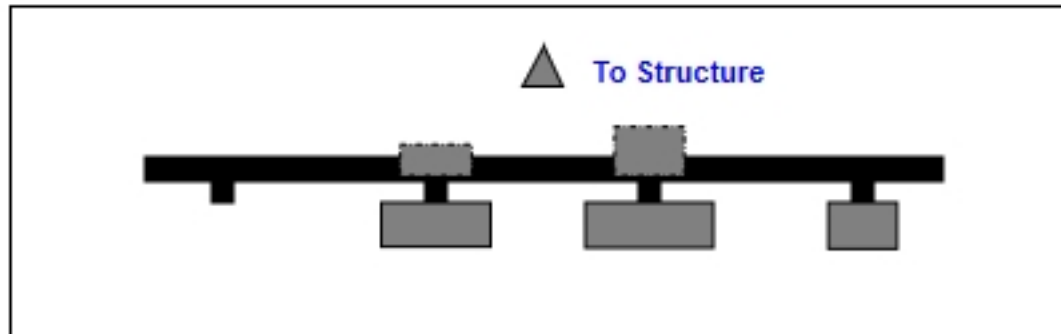


Structure Type: Monopole

Mount Elev: 117.00

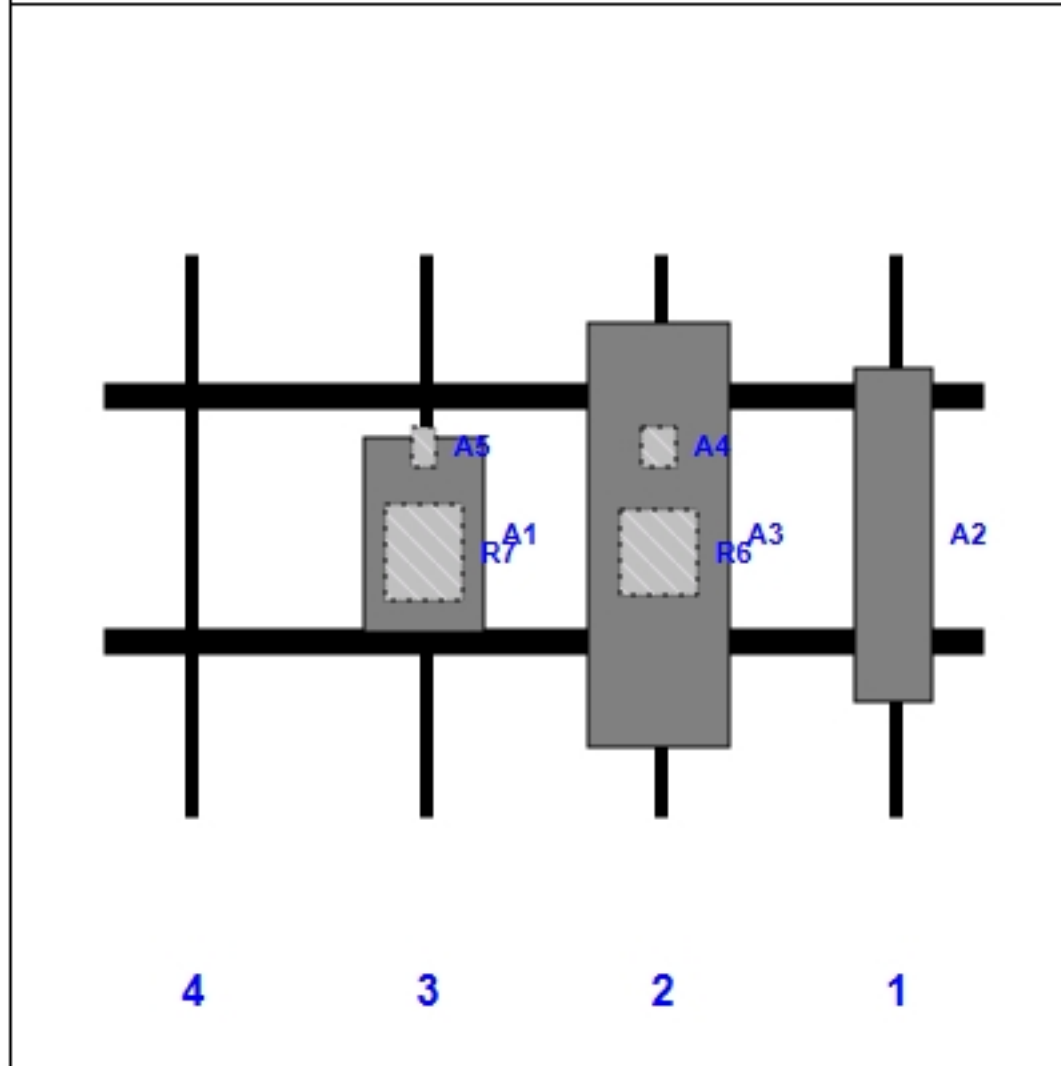
Page: 3

**Plan View**

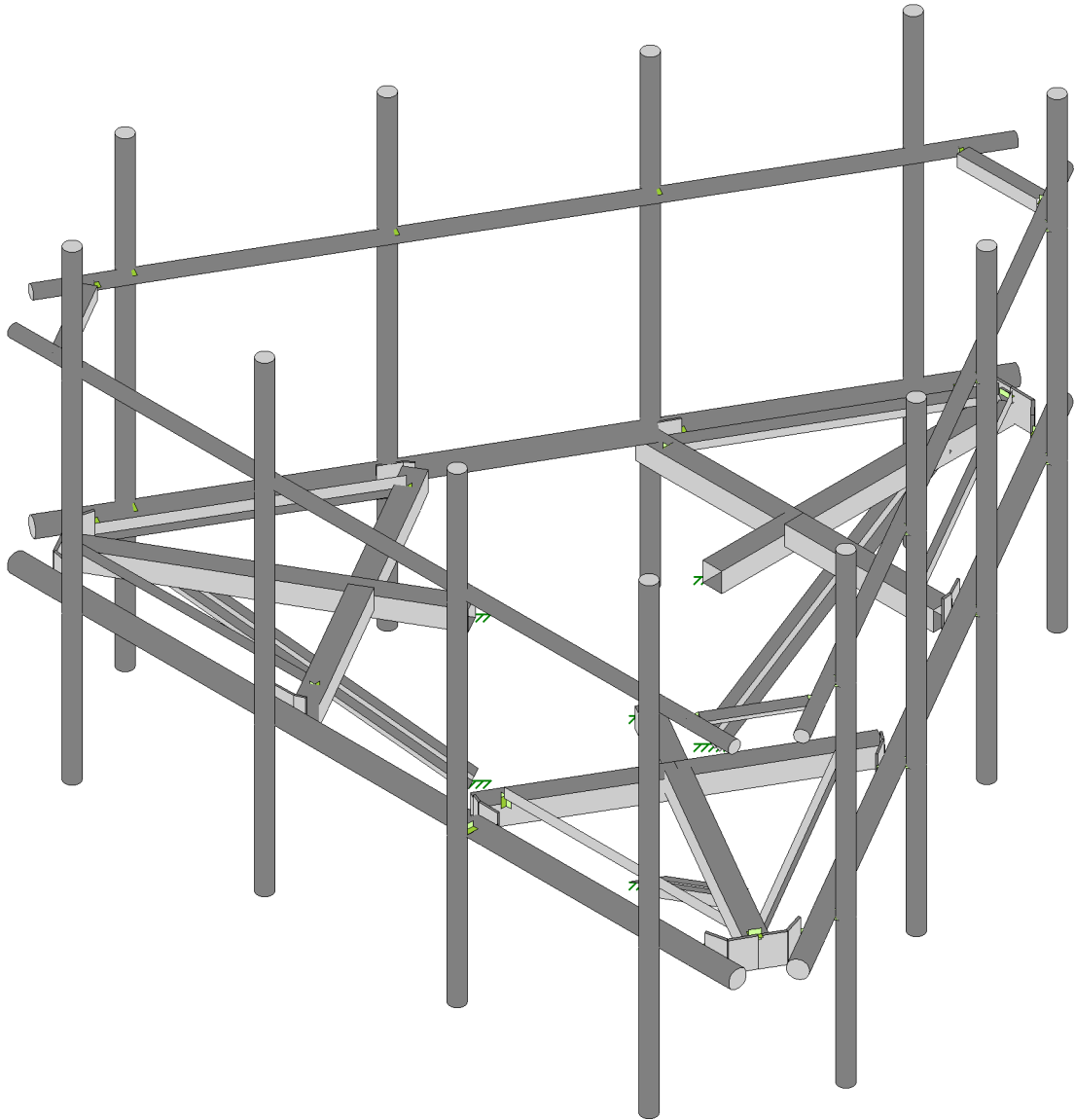
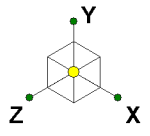


**Front View**

Looking Toward Structure



Ref #	Model	Height (n)	Width (n)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A2	Air 32 KRD901146-1_B66A_B2A	56.60	12.90	135.00	1	a	Front	48.00			
A3	APXVAALL18-43-U-NA20	72.00	24.00	95.00	2	a	Front	48.00			
R6	Radio 4449 B71+B85	14.90	13.10	95.00	2	b	Behind	51.00			
A4	KRY 112 144/1	6.90	6.10	95.00	2	c	Behind	33.00			
A1	AIR6449 B41	33.10	20.50	55.00	3	a	Front	48.00			
R7	4415 B25	16.50	13.40	55.00	3	b	Behind	51.00			
A5	SDX1926Q-43	6.90	4.10	55.00	3	c	Behind	33.00			



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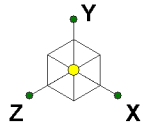
Nov 9, 2020 at 11:47 AM

TES Project No. 99267

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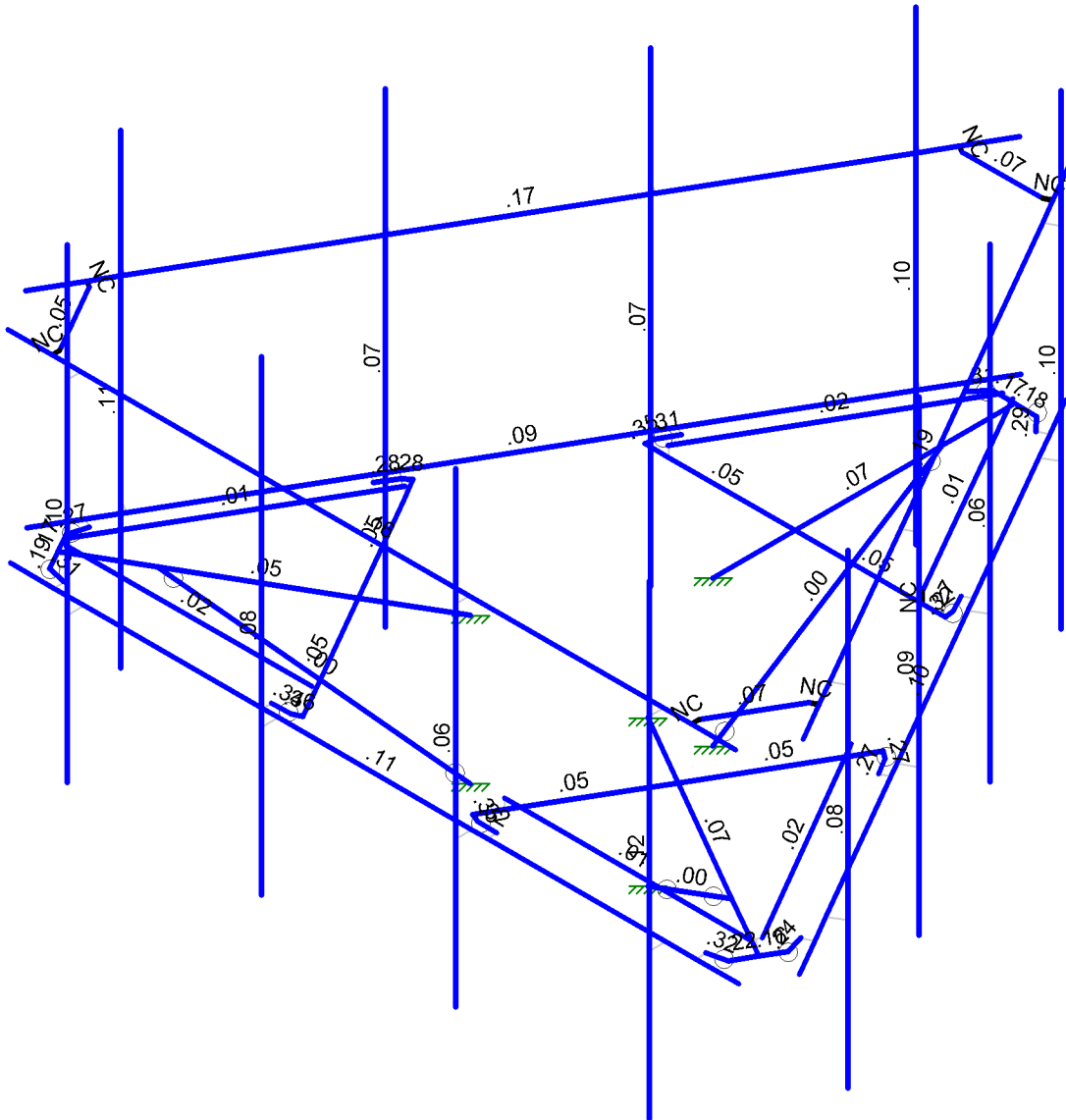






Shear Check (Env)

Black	No Calc
Red	> 1.0
Magenta	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



Member Shear Checks Displayed (Enveloped)  
Results for LC 1, 1.2D+1.6W (Front)

Tower Engineering Solutio...

CT13069-A-SBA\_MT\_LO\_Loads Only\_G

SK - 3

Nov 9, 2020 at 11:50 AM

TES Project No. 99267

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I€	pI€	É ÉÉ J Í Í	HÉ	I ÉJ G G Í	€	
IF	pIF	É ÉJ I Í JH	Í É	I ÉG G G Í	€	
IG	pIG	É ÉJ I Í JH	ÉÉ	I ÉG G G Í	€	
IH	pIH	Í ÉÉ FHÉ	Í É	I ÉG G G Í	€	
II	pII	Í ÉÉ FHÉ	ÉÉ	I ÉG G G Í	€	
ÍÍ	pÍÍ	ÉÉÉ Í Í JH	Í É	I ÉG G G Í	€	
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Í€	PÍ€	Í ÉI I G	ÉÉ	GÉI I I I	€	
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Í€	PÍ€	É É JÉHG	ÉÉ	GÉI I FH	€	
ÍF	PÍF	ÉÉ FÍ HG	Í É	ÉÉ É Í F	€	
ÍG	PÍG	ÉÉ FÍ HG	ÉÉ	ÉÉ É Í F	€	
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ÍI	PÍI	É É I G HG	ÉÉ	ÉÉ FJHG	€	
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Í€	PÍ€	É É H ÉÉ	€	HÉI I I I	€	
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ÍI	PÍI	É É I I I F	HÉ	HÉI I I I	€	
ÍÍ	PÍÍ	É É JÍ I JH	HÉ	I ÉG GÍ	€	
İİ	Pİİ	É É JÍ I JH	€	I ÉG GÍ	€	
ÌÌ	PÌÌ	Í ÉÉFHÉ	€	I ÉG GÍ	€	
ÏÏ	PÏÏ	ÉÉ I I I JH	€	I ÉG GÍ	€	
ÌJ	PÌJ	FÉİİ HÉ	€	I ÉG GÍ	€	
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JH	PJH	Í ÉI I I G	HÉ	GÉI I I I	€	
JI	PJI	Í ÉI I I G	€	GÉI I I I	€	
JÍ	PJÍ	FÉI I I G	€	É É JÍ HÍ	€	
JÏ	PJÏ	I ÉI FGG	€	ÉÉ GFÍ JÍ	€	
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FÍ	TFÍ	PFIJ	BGI			U[{}] æ c	U[{}] æ c	U[{}] æ c	U[{}] æ c	U[{}] æ c	U[{}] æ c	U[{}] æ c	U[{}] æ c
FÌ	TFÌ	PÍI	PÍI			Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
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G	TUFO	BIF	PIG			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
G	TUHO	PÍI	PÍI			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
GJ	TUG	PÍI	PÍI			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
HE	TUI	PÍJ	PÍÉ			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
HF	TUFO	BIF	PIG			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
HG	TUHO	BIF	PIG			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
HH	TUGO	PÍI	PÍI			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
HI	TUI	PÍI	PÍI			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
HÍ	TUFO	PÍJ	PÍÉ			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
HÏ	TUHO	BIF	PIG			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
HÌ	TUGO	BIF	PIG			T[{}] ^	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c	Ö[{}] æ c
H	TH	PÍI	PÍI			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
HJ	THJ	PÍI	PÍJ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
IÉ	TIÉ	PÍI	PÍI			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
IF	TIF	BIF	PIG			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
IG	TIG	PÍI	PÍI			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
IH	TIH	PÍI	PÍI			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
II	TII	PÍI	PÍI			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
IÍ	TIÍ	PÍI	PÍI			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
IÎ	TIÎ	PÍÉ	PFH			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
IÏ	TIÏ	PÍG	PFÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
IÌ	TIÌ	BIF	PFÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
IJ	TIJ	PÍJ	PFEG			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
ÍÉ	TIÉ	PFÉ	PJÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
ÍF	TIÉ	PFÉ	PJÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
ÍG	TIÉ	PFÉ	PJÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
ÍH	TIÉ	PFÉ	PJÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
ÍI	TIÉ	PFÉ	PJÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
ÍÍ	TIÉ	PFÉ	PJÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
ÍÎ	TIÉ	PFÉ	PJÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
ÍÏ	TIÉ	PFÉ	PJÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c
ÍJ	TIJ	PFÉ	PFÉ			Ü[{}] æ c	P[{}] ^	P[{}] ^	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c	Ü[{}] æ c

Ü[{}] æ c Ô[{}] æ c A[{}] æ c F[{}] æ c G[{}] æ c H[{}] æ c I[{}] æ c J[{}] æ c K[{}] æ c L[{}] æ c M[{}] æ c N[{}] æ c O[{}] æ c P[{}] æ c Q[{}] æ c R[{}] æ c S[{}] æ c T[{}] æ c U[{}] æ c V[{}] æ c W[{}] æ c X[{}] æ c Y[{}] æ c Z[{}] æ c











0[ { ] a ^ K V[ , ^ / A ^ ) \* a ^ i a ^ \* A U [ r ^ a ] • E E S O  
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**< chFc`YX'GhY'8 YgJ| b'DU'Ua YhYg f' cbr|bi YXL**

Saa^	U@^	S^)* cZca	Sa^^Zca	Sa::Zca	S&{    A  ] Zca S&{    A  cZca S&{    A  S^	S::	Oa	O^}&a
G	TG	Paa^a aa^	FGH		Sa^^	F	F	Saa^ a^
G	TG	Paa^a aa^	FH		Sa^^	F	F	Saa^ a^
G	TUIOE	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
G	TUFCE	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
G	TUHCE	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
GJ	TUGCE	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
HE	TUIO	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
HF	TUF0	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
HG	TUH0	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
HH	TUG0	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
HI	TUIO	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
HI	TUF0	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
HI	TUH0	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
HI	TUG0	T[ ^ ) dUq^	i		Sa^^	F	F	Saa^ a^
HI	TII	Paa^a aa^	FH		Sa^^	F	F	Saa^ a^
HJ	TIJ	Paa^a aa^	FH		Sa^^	F	F	Saa^ a^
I€	TII	Q[d a a^O }	FH		Sa^^	F	F	Saa^ a^
IF	TII	Q[d a a^O }	FH		Sa^^	F	F	Saa^ a^
IG	TII	Uaa^A aa^	FH		Sa^^	F	F	Saa^ a^
IH	TIJ	Uaa^A aa^	FHG		Sa^^	F	F	Saa^ a^
II	TJE	Uaa^A aa^	FH		Sa^^	F	F	Saa^ a^
II	TJF	Uaa^A aa^	FHH		Sa^^	F	F	Saa^ a^
II	TJG	O:aa^*A^*E	I EF		Sa^^	F	F	Saa^ a^
II	TJH	O:aa^*A^*E	I E F		Sa^^	F	F	Saa^ a^
II	TJI	Q[d a a^O }	FHG		Sa^^	F	F	Saa^ a^
IJ	TJI	Q[d a a^O }	FHG		Sa^^	F	F	Saa^ a^
I€	TJI	Uaa^A aa^*	FH		Sa^^	F	F	Saa^ a^
IF	TJI	Uaa^A aa^*	FH		Sa^^	F	F	Saa^ a^
IG	TJEG	Q[d a a^O }	FH		Sa^^	F	F	Saa^ a^
IH	TJFH	Q[d a a^O }	FH		Sa^^	F	F	Saa^ a^
II	TJF	Uaa^A aa^	FH		Sa^^	F	F	Saa^ a^
II	TJF	Uaa^A aa^	FHG		Sa^^	F	F	Saa^ a^
II	TJF	Uaa^A aa^	FH		Sa^^	F	F	Saa^ a^
II	TJF	Uaa^A aa^	FHH		Sa^^	F	F	Saa^ a^
II	TJF	O:aa^*A^*E	I EF		Sa^^	F	F	Saa^ a^
IJ	TJF	O:aa^*A^*E	I E F		Sa^^	F	F	Saa^ a^
I€	TJFE	Q[d a a^O }	FHG		Sa^^	F	F	Saa^ a^
IF	TJFF	Q[d a a^O }	FHG		Sa^^	F	F	Saa^ a^
IG	TJFG	Uaa^A aa^*	FH		Sa^^	F	F	Saa^ a^
IH	TJFH	Uaa^A aa^*	FH		Sa^^	F	F	Saa^ a^

**7c`X: cfa YX'GhY'8 YgJ| b'DU'Ua YhYg**

Saa^| U@^ S^)\* dE Sa^^Zca Sa::Zca S&{| | A| S&{| | A| S&{| | A| S^ S:: O| E E Oa U aZca^A, E E A, E E  
 P [ A O a a ^ A U i a ^ a E E















# EXHIBIT 9

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

T-Mobile Existing Facility

Site ID: CT11493A

CT493/Optasite Meriden\_FT  
651 Paddock Avenue  
Meriden, Connecticut 06450

**November 25, 2020**

**EBI Project Number: 6220006015**

Site Compliance Summary	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general population allowable limit:	<b>28.25%</b>

November 25, 2020

T-Mobile

Attn: Jason Overbey, RF Manager  
35 Griffin Road South  
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CT11493A - CT493/Optasite Meriden\_FT

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **651 Paddock Avenue in Meriden, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

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

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

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately  $400 \mu\text{W}/\text{cm}^2$  and  $467 \mu\text{W}/\text{cm}^2$ , respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is  $1000 \mu\text{W}/\text{cm}^2$ . Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

## **CALCULATIONS**

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 651 Paddock Avenue in Meriden, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile 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 manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

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

- 1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.
- 3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 5) 4 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.



- 6) 2 UMTS channels (AWS Band - 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 7) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 8) 1 LTE channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.
- 9) 1 NR channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.
- 10) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 11) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 12) The antennas used in this modeling are the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL18\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s) in Sector A, the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL18\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s) in Sector B, the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL18\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, 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.

- 13) The antenna mounting height centerline of the proposed antennas is 117 feet above ground level (AGL).
- 14) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 15) All calculations were done with respect to uncontrolled / general population threshold limits.

## T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Ericsson AIR 32	Make / Model:	Ericsson AIR 32	Make / Model:	Ericsson AIR 32
Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.35 dBd / 15.85 dBd
Height (AGL):	117 feet	Height (AGL):	117 feet	Height (AGL):	117 feet
Channel Count:	8	Channel Count:	8	Channel Count:	8
Total TX Power (W):	360 Watts	Total TX Power (W):	360 Watts	Total TX Power (W):	360 Watts
ERP (W):	12,841.53	ERP (W):	12,841.53	ERP (W):	12,841.53
Antenna A1 MPE %:	3.37%	Antenna B1 MPE %:	3.37%	Antenna C1 MPE %:	3.37%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVAALL18_43-U-NA20	Make / Model:	RFS APXVAALL18_43-U-NA20	Make / Model:	RFS APXVAALL18_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 2100 MHz
Gain:	11.66 dBd / 11.66 dBd / 12.31 dBd / 15.05 dBd / 15.53 dBd	Gain:	11.66 dBd / 11.66 dBd / 12.31 dBd / 15.05 dBd / 15.53 dBd	Gain:	11.66 dBd / 11.66 dBd / 12.31 dBd / 15.05 dBd / 15.53 dBd
Height (AGL):	117 feet	Height (AGL):	117 feet	Height (AGL):	117 feet
Channel Count:	9	Channel Count:	9	Channel Count:	9
Total TX Power (W):	380 Watts	Total TX Power (W):	380 Watts	Total TX Power (W):	380 Watts
ERP (W):	9,055.37	ERP (W):	9,055.37	ERP (W):	9,055.37
Antenna A2 MPE %:	3.49%	Antenna B2 MPE %:	3.49%	Antenna C2 MPE %:	3.49%
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz
Gain:	22.05 dBd / 22.05 dBd	Gain:	22.05 dBd / 22.05 dBd	Gain:	22.05 dBd / 22.05 dBd
Height (AGL):	117 feet	Height (AGL):	117 feet	Height (AGL):	117 feet
Channel Count:	2	Channel Count:	2	Channel Count:	2
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	38,477.89	ERP (W):	38,477.89	ERP (W):	38,477.89
Antenna A3 MPE %:	10.11%	Antenna B3 MPE %:	10.11%	Antenna C3 MPE %:	10.11%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	16.97%
Sprint	5.55%
Clearwire	0.09%
Verizon	5.64%
<b>Site Total MPE % :</b>	<b>28.25%</b>

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	16.97%
T-Mobile Sector B Total:	16.97%
T-Mobile Sector C Total:	16.97%
Site Total MPE % :	28.25%

### T-Mobile Maximum MPE Power Values (Sector A)

T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ( $\mu\text{W}/\text{cm}^2$ )	Frequency (MHz)	Allowable MPE ( $\mu\text{W}/\text{cm}^2$ )	Calculated % MPE
T-Mobile 1900 MHz GSM	4	1028.30	117.0	10.80	1900 MHz GSM	1000	1.08%
T-Mobile 1900 MHz LTE	2	2056.61	117.0	10.80	1900 MHz LTE	1000	1.08%
T-Mobile 2100 MHz LTE	2	2307.55	117.0	12.12	2100 MHz LTE	1000	1.21%
T-Mobile 600 MHz LTE	2	439.66	117.0	2.31	600 MHz LTE	400	0.58%
T-Mobile 600 MHz NR	1	1172.44	117.0	3.08	600 MHz NR	400	0.77%
T-Mobile 700 MHz LTE	2	510.65	117.0	2.68	700 MHz LTE	467	0.57%
T-Mobile 1900 MHz LTE	2	1919.34	117.0	10.08	1900 MHz LTE	1000	1.01%
T-Mobile 2100 MHz UMTS	2	1071.82	117.0	5.63	2100 MHz UMTS	1000	0.56%
T-Mobile 2500 MHz LTE	1	19238.94	117.0	50.53	2500 MHz LTE	1000	5.05%
T-Mobile 2500 MHz NR	1	19238.94	117.0	50.53	2500 MHz NR	1000	5.05%
						<b>Total:</b>	<b>16.97%</b>

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

## 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 T-Mobile 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:

T-Mobile Sector	Power Density Value (%)
Sector A:	16.97%
Sector B:	16.97%
Sector C:	16.97%
T-Mobile Maximum MPE % (Sector A):	16.97%
Site Total:	28.25%
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite MPE value for this site assuming all carriers present is **28.25%** 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.