



Northeast Site Solutions
Denise Sabo
4 Angela's Way, Burlington CT 06013
203-435-3640
denise@northeastsitesolutions.com

May 16, 2022

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Exempt Modification Application
175 Dickinson Road, Glastonbury, CT 06073
Latitude: 41.655900
Longitude: -72.523275
Site #: CT02216-S_CT11336A_SBA/T-Mobile

Dear Ms. Bachman:

T-Mobile is requesting to file an exempt modification for an existing tower located at 175 Dickinson Road, Glastonbury, CT 06073. T-Mobile currently maintains three (3) antennas at the 177-foot level of the existing 176-foot monopole tower. The property is owned by Randall Chapman & Karrie-Lynn Bronzi, and the tower is owned by SBA. T-Mobile now intends to add (3) antennas. The new antennas would be installed at the 177-foot level of the tower. This modification includes B2, B5 hardware that is both 4G (LTE), and 5G capable.

T-Mobile Planned Modifications:

Remove: None

Remove and Replace: None

Install New:

- (3) ERICSSON AIR6449 B41 Antennas
- (3) ERICSSON 4460 B25+B66 RRU
- (2) HCS Fiber Cable 1.9"

Existing to Remain:

- (3) RFS APXVAARR24-43-U-NA20 Antennas
- (3) ERICSSON 4449 B71+B85 RRU
- (1) HCS Fiber Cable 1.9"
- (9) Coax – 1-5/8" *
- (6) Allen Telecom FE15501P77/75 TMA *
- (3) Twin TMAs – KRY 112 489/2 *
- (3) Twin TMAs – KRY 112 144/1 *

*Equipment listed for entitlement purposed only



The facility was approved by the Town of Glastonbury Zoning Board of Appeals on August 9, 2000. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-72(b)(2), 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 Thomas Gullotta, Town Council Chair, Richard Johnson, Town Manager and Rebecca Augur, Director of Planning & Land Use Services for the Town of Glastonbury, as well as the property owner and the tower owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications 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 modifications 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 telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Denise Sabo
Mobile: 203-435-3640
Fax: 413-521-0558
Office: 4 Angela's Way, Burlington CT 06013
Email: denise@northeastsitesolutions.com



NSS **NORTHEAST**
SITE SOLUTIONS
Turnkey Wireless Development

Attachments

Cc: Thomas Gullotta, Town Council Chair
Town of Glastonbury
2155 Main Street
Glastonbury, CT 06033

Richard Johnson, Town Manager
Town of Glastonbury
2155 Main Street
Glastonbury, CT 06033

Rebecca Augur, Director of Planning & Land Use Services
Town of Glastonbury
2155 Main Street
Glastonbury, CT 06033

Randall Chapman & Karrie-Lynn Bronzi – Property Owners
PO Box 7
Troy, ME 04987-0007

SBA - Tower Owner

Exhibit A

Original Facility Approval

Town of Glastonbury



2155 MAIN STREET • P.O. BOX 6523 • GLASTONBURY, CONNECTICUT 06033-6523

DATE: August 15, 2000
 RE: Assessors Lot N3 Dickenson Road
 OWNER: Donald Chapman, Ronald Bronzi and Beverly Bronzi
 ZONE: RR

SBA, Inc., and Sprint PCS
 80 Eastern Boulevard
 Glastonbury, CT 06033

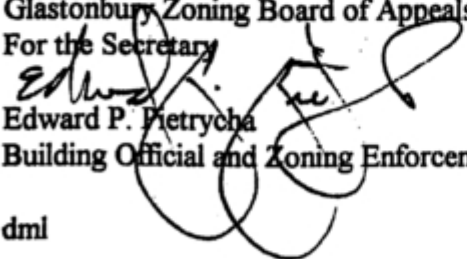
Dear Applicant(s):

Following a Public Hearing of your application on August 9, 2000, the following resolution was passed by the Zoning Board of Appeals:

The Board granted a special exception as provided for in Section 4.2.1 to construct a 180' monopole tower and the installation and operation of antennas and associated equipment for wireless communication system at assessors Lot N3 Dickenson Road as it meets all the requirements of Section 13.9.

The approval will become effective when it is recorded by the property owner in the Town Clerk's Office but to satisfy the provisions of Section 13.10 of the Glastonbury Building Zone Regulations concerning expiration, this approval shall become null and void two years from August 10, 2000, unless substantial construction on a building or structure or use is established on a lot.

This decision is based upon and subject to the representations made and evidence produced by the applicant(s) at the Public Hearing.

Glastonbury Zoning Board of Appeals
 For the Secretary

 Edward P. Pietrycha
 Building Official and Zoning Enforcement Officer

dml

cc: Wendell G. Davis, Jr., Cranmore, FitzGerald & Meaney, 49 Wethersfield Avenue, Hartford, CT.

GLASTONBURY, CT
 RECEIVED

2000 AUG 22 AM 9:32

VOL. _____ FALL _____
 E. J. FRIEDEBERG, TOWN CLERK

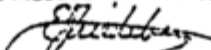


Exhibit B

Property Card

Owner of Record

GIS ID: 18600175
Owner: CHAPMAN RANDALL S+
Co-Owner: BRONZI KARRIE-LYNNE
Address: PO BOX 7
City, State ZIP: TROY, ME 04987-0007

Account Number: 18600175

Property Address: 175 DICKINSON RD

Parcel Information

Map/Street/Lot J12 / 1860 / N0003 **Property ID:** 1492
Developer Lot ID: **Water:** Well
Parcel Acreage: 30.35 **Sewer:** Septic
Zoning Code: RR **Census:** 5205.02

Valuation Summary

Item	Appraised Value	Assessed Value
Buildings	0	0
Land	1155200	808700
Appurtenances	0	0
Total	1155200	808700



Property highlighted in blue

**Building
Picture
Not
Applicable**

Owner of Record

CHAPMAN RANDALL S+
 CHAPMAN RANDALL S+
 CHAPMAN RANDALL S+
 CHAPMAN RANDALL S+
 CHAPMAN RANDALL S+
 CHAPMAN RANDALL S+
 CHAPMAN DONALD A (LU)+ RANDALL S+
 CHAPMAN DONALD A+BRONZI

Deed / Page Sale Date Sale Price

3456/0161 2017-11-07 0
 3379/0090 2016-10-20 0
 3057/0041 2013-01-11 0
 3057/0039 2013-01-11 0
 2684/0333 2009-08-03 0
 2295/0261 2006-02-02 0
 1582/0249 2002-05-08 0
 0442/0018 1988-08-25 0

Building Information

Year Constructed :
Building Type :
Style :
Occupany :
Stories :
Building Zone :
Roof Type :
Roof Material :
Est. Gross S.F. :
Est. Living S.F. :

Number of Rooms :
Number of Bedrooms :
Number of Bathrooms :
Number of Half-Baths :
Exterior Wall :
Interior Wall :
Interior Floor :
Interior Floor #2 :
Air Conditioning Type :
Heat Type :
Fuel Type :

Building ID 0

**Building
Sketch
Not
Applicable**

Subarea Type	Est. Gross S.F.	Est. Living S.F.	Outbuilding Type	Est. Gross S.F.	Comments
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Google Maps 175 Dickinson Rd



Imagery ©2021 CNES / Airbus, Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2021 200 ft

Exhibit C

Construction Drawings

SPECIAL CONSTRUCTION NOTE:
 GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).

RT-2/GLASTONBURY/SBA

175 DICKINSON ROAD
 GLASTONBURY, CT 06073
 HARTFORD COUNTY

SITE NO.: CT11336A

SITE TYPE: 176'± MONOPOLE

RF DESIGN GUIDELINE: 67D5D998E ODE+6160

SCOPE OF WORK

- REMOVE:
- 3 RADIOS
 - 6 TMA'S
 - 1 RBS 6201
 - ALL COAX CABLES
 - 1 200A ELECTRIC PANEL
- INSTALL:
- 3 ANTENNAS
 - 3 RADIOS
 - 1 B160 BATTERY CABINET
 - 1 6160 CABINET
 - 1 SLACKBOX
 - 2 HYBRID CABLES
 - 1 200A PPC

SITE NOTES

1. 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.
2. 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.
3. 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

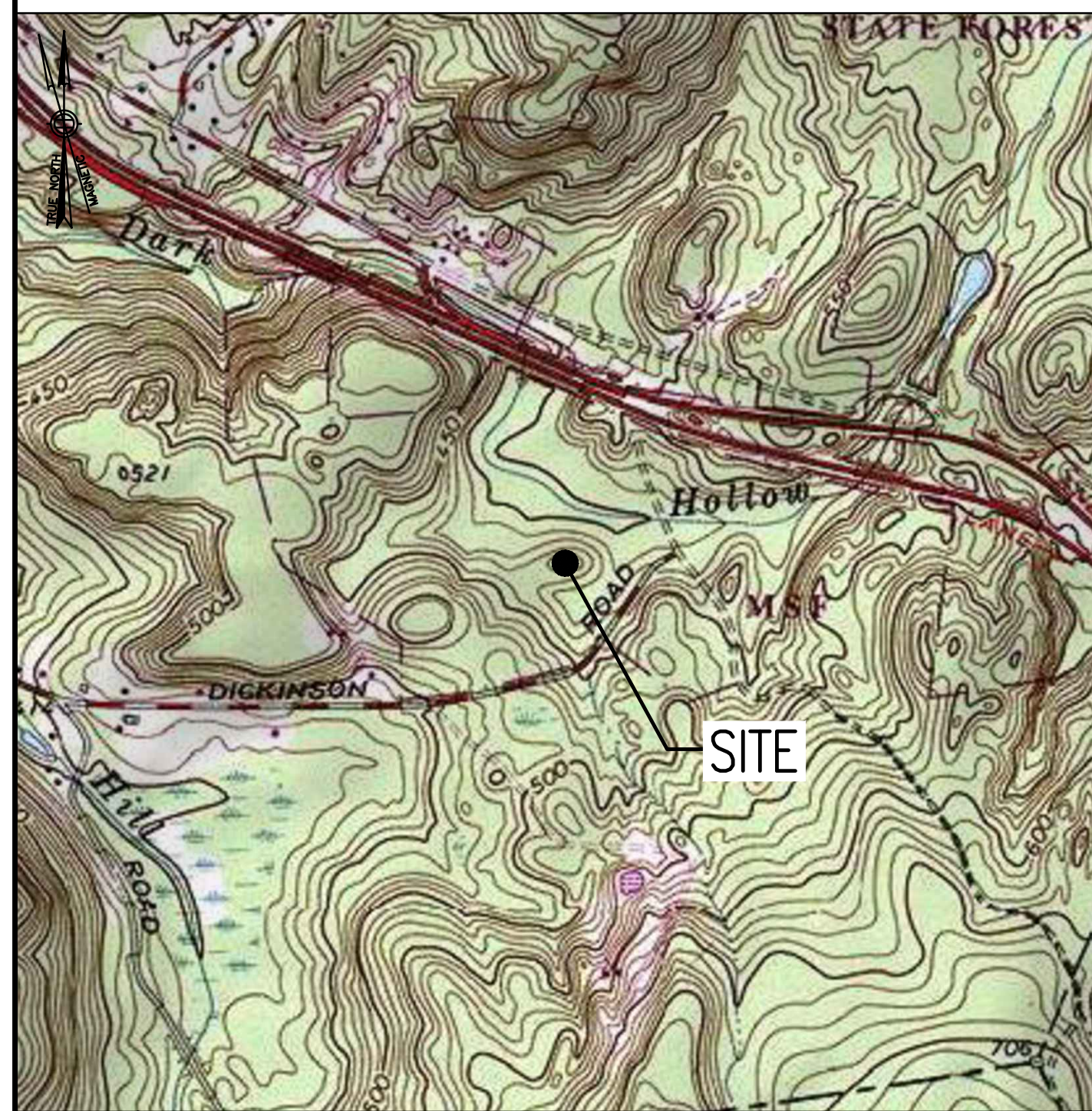
1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. 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 IT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
17. 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

MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. TAKE EXIT 33B FOR I-95 SOUTH TOWARD PROVIDENCE RI. TAKE EXIT 6 FOR I-295 SOUTH TOWARD WOONSOCKET/WARWICK. CONTINUE ONTO I-295 SOUTH. TAKE EXIT 9C-A FOR US-6 WEST TOWARD HARTFORD CT. KEEP RIGHT AT THE FORK & FOLLOW SIGNS FOR JOHNSTON/SCITUATE/FOSTER. MERGE ONTO US-6 WEST. CONTINUE STRAIGHT TO STAY ON US-6 WEST. TAKE SLIGHT LEFT ONTO CONNECTICUT TURNPIKE/GOVERNOR JOHN DAVIS LODGE TURNPIKE. MERGE ONTO I-395 SOUTH. TAKE EXIT 14 TOWARD CT-2 WEST/CT-32 NORTH/HARTFORD/COLCHESTER. TURN RIGHT ONTO W TOWN STREET. CONTINUE ONTO FITCHVILLE ROAD/FRANKLIN TURNPIKE/NORWICH-COLCHESTER TURNPIKE. TURN LEFT TO MERGE ONTO CT-2 WEST TOWARD HARTFORD. TAKE EXIT 11 TOWARD THOMPSON STREET/WASSUC ROAD. CONTINUE ONTO TOLL GATE ROAD. CONTINUE ONTO WASSUC ROAD. TURN LEFT ONTO COUNTRY CLUB ROAD. TURN LEFT ONTO MOTT HILL ROAD. TAKE SLIGHT LEFT ONTO DICKINSON ROAD. SITE IS LOCATED AT THE END OF THE ROAD.

SHEET INDEX

SHT. NO.	DESCRIPTION	VER.
T-1	TITLE SHEET	0
GN-1	GENERAL NOTES	0
A-1	COMPOUND & EQUIPMENT PLAN	0
A-2	TOWER ELEVATIONS & ANTENNA PLAN	0
A-3	SITE DETAILS	0
A-4	ANTENNA & FEEDLINE CHARTS	0
E-1	ELECTRIC & GROUNDING DETAILS	0

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:	CT11336A
SITE NAME:	RT-2/GLASTONBURY/SBA
SBA SITE NUMBER:	CT02216-S
SBA SITE NAME:	GLASTONBURY
SITE ADDRESS:	175 DICKINSON ROAD GLASTONBURY, CT 06073
PROPERTY OWNER:	RANDALL S. CHAPMAN & KARRIE-LYNN BRONZI P.O. BOX 7 TROY, ME 04987
TOWER OWNER:	SBA PROPERTIES, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	HARTFORD
ZONING DISTRICT:	RURAL RESIDENTIAL
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	176'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
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.41.655900° N.41°39'21.24" LONGITUDE: W.72.523300° W.72°31'23.88"

SPECIAL ZONING NOTE:

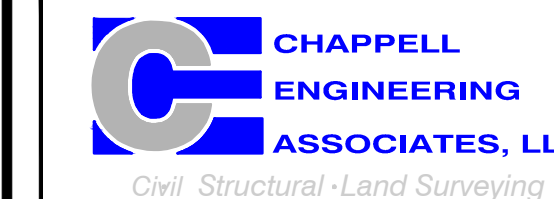
BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE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

T-MOBILE NORTHEAST LLC

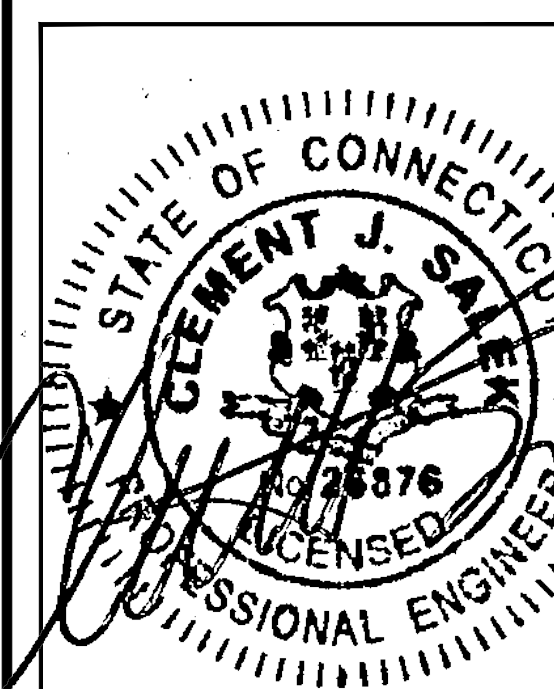
15 COMMERCE WAY, SUITE B
 NORTON, MA 02766
 (508) 286-2700



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
0	03/28/22	ISSUED FOR REVIEW	NWC

SITE NUMBER:
CT11336A

SITE ADDRESS:
 175 DICKINSON ROAD
 GLASTONBURY, CT 06073

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

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, UNO.
- 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 LARGER2 IN.
#5 AND SMALLER & WWF1½ IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
SLAB AND WALL¾ IN.
BEAMS AND COLUMNS½ IN.
- A CHAMFER ¼" 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:

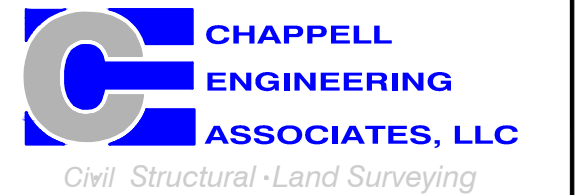
- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLEING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR 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, ANS/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, ANS/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**

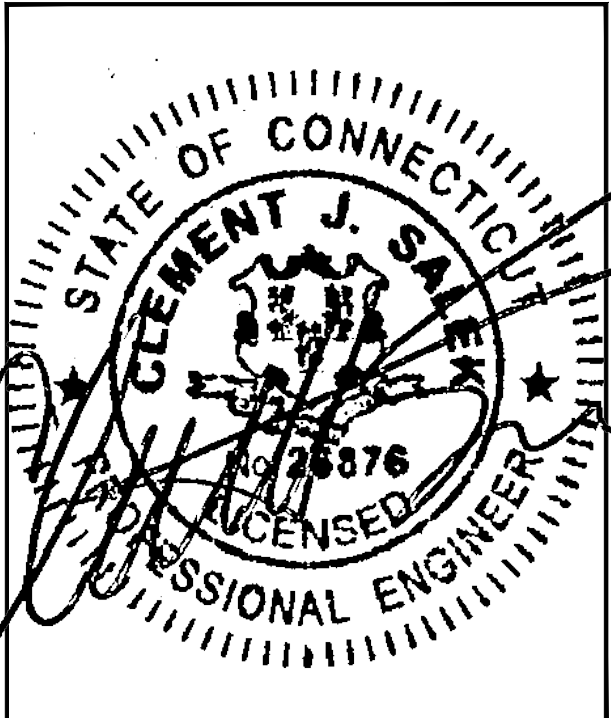
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SITE NUMBER:
CT11336A

SITE ADDRESS:
175 DICKINSON ROAD
GLASTONBURY, CT 06073

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1

SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
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SPECIAL CONSTRUCTION NOTE:
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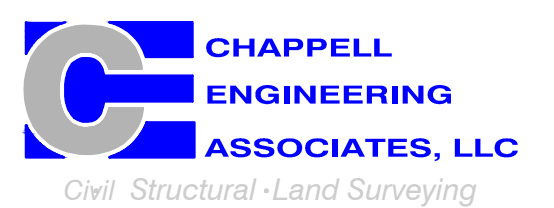


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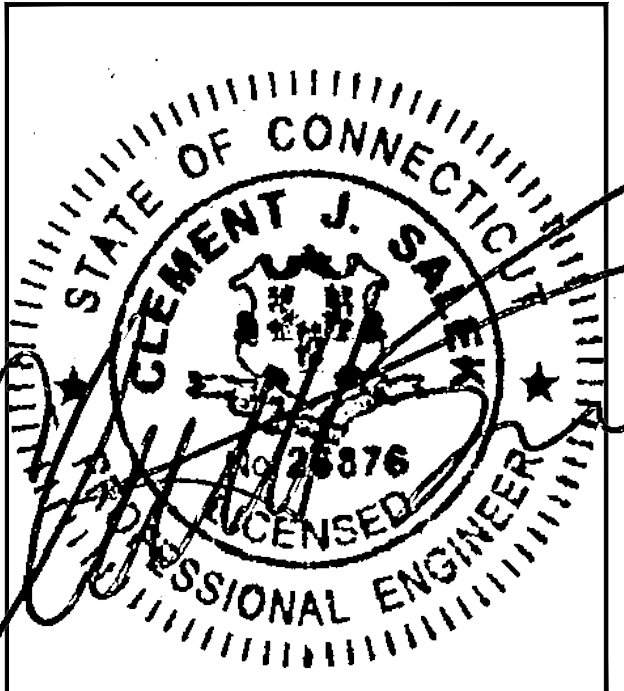
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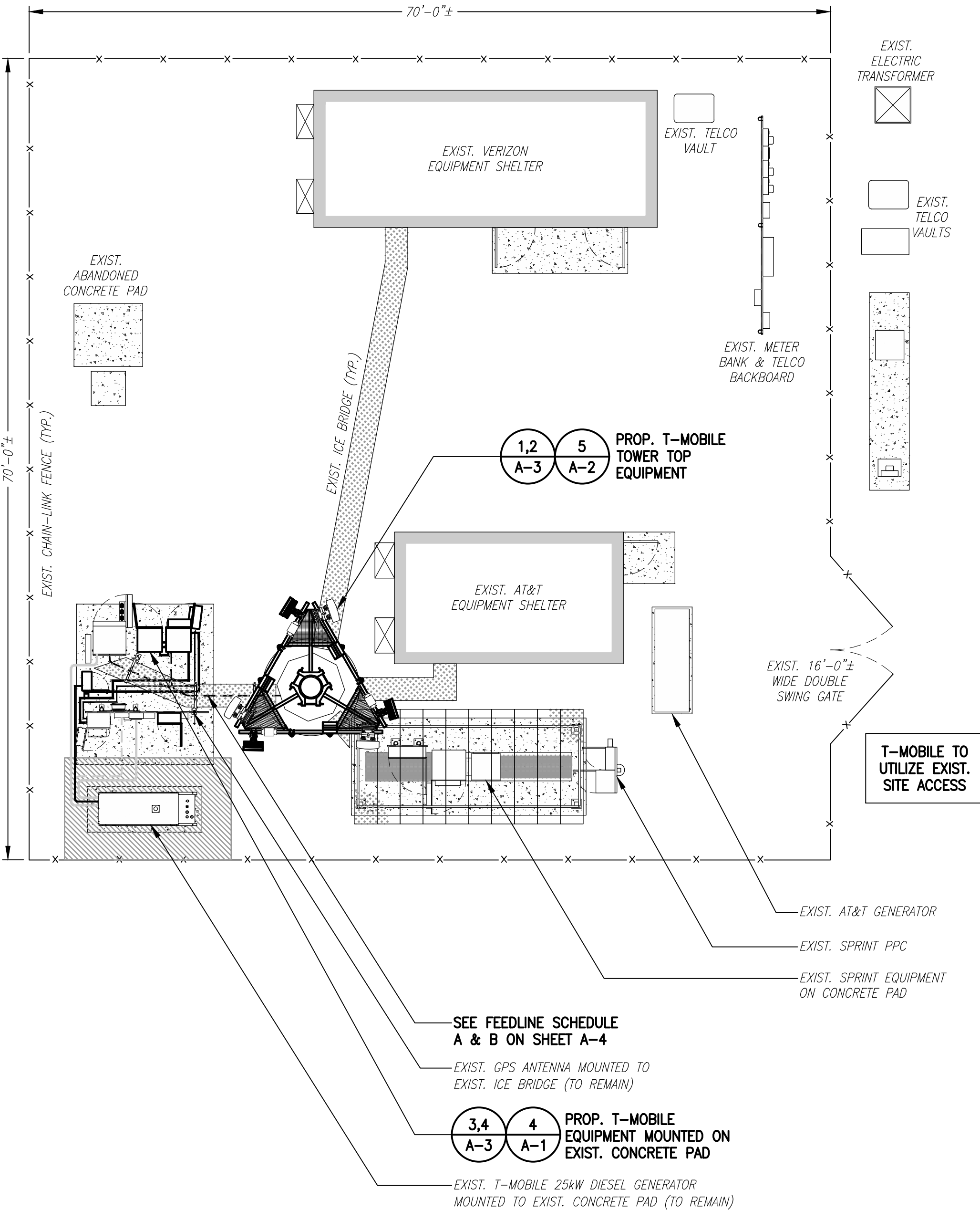
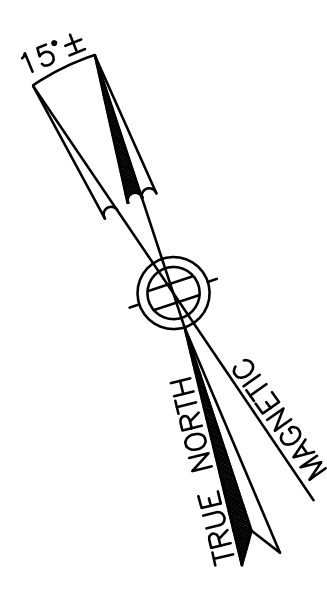
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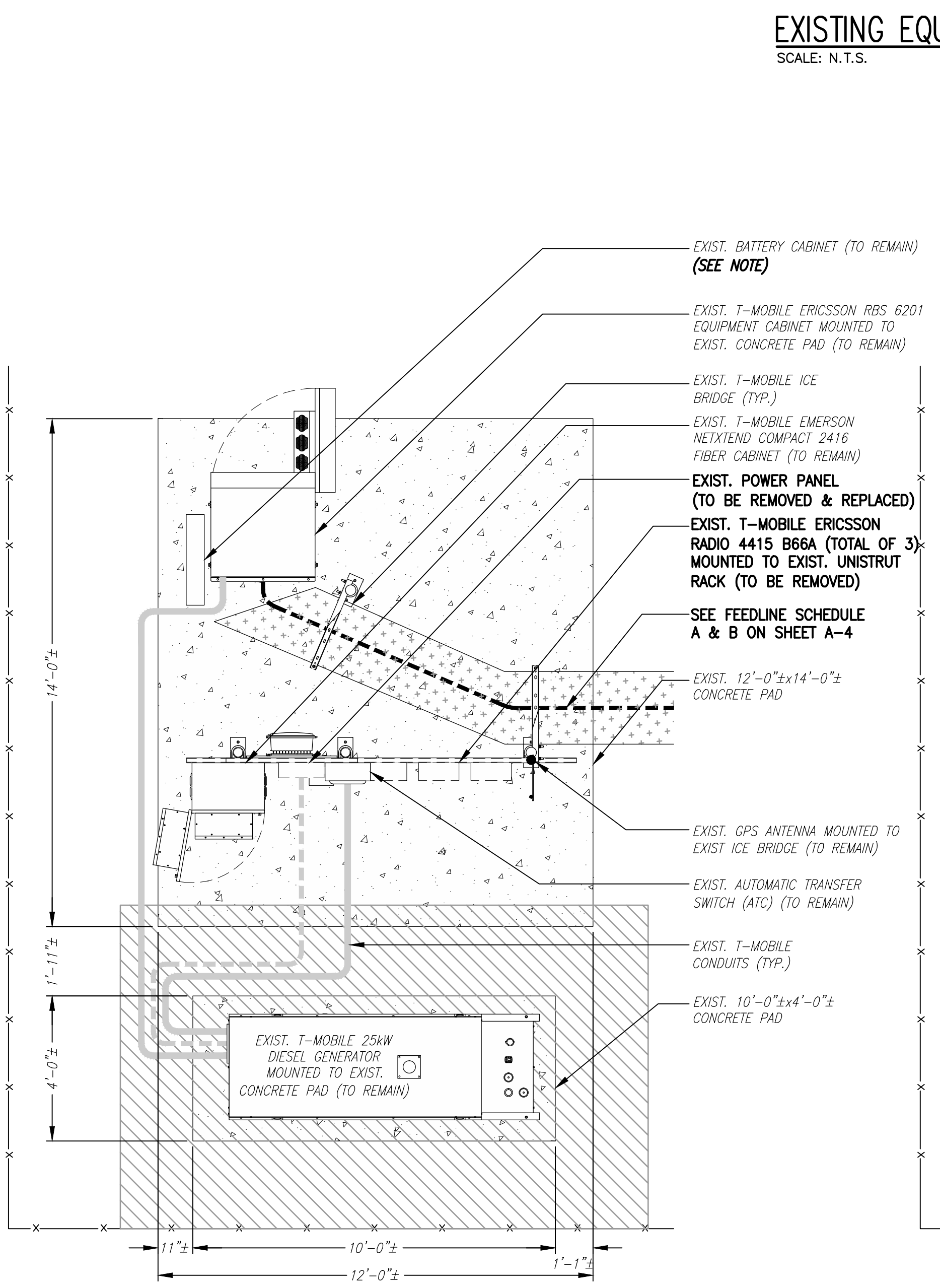
SITE ADDRESS:
 175 DICKINSON ROAD
 GLASTONBURY, CT 06073

SHEET TITLE
COMPOUND & EQUIPMENT PLANS

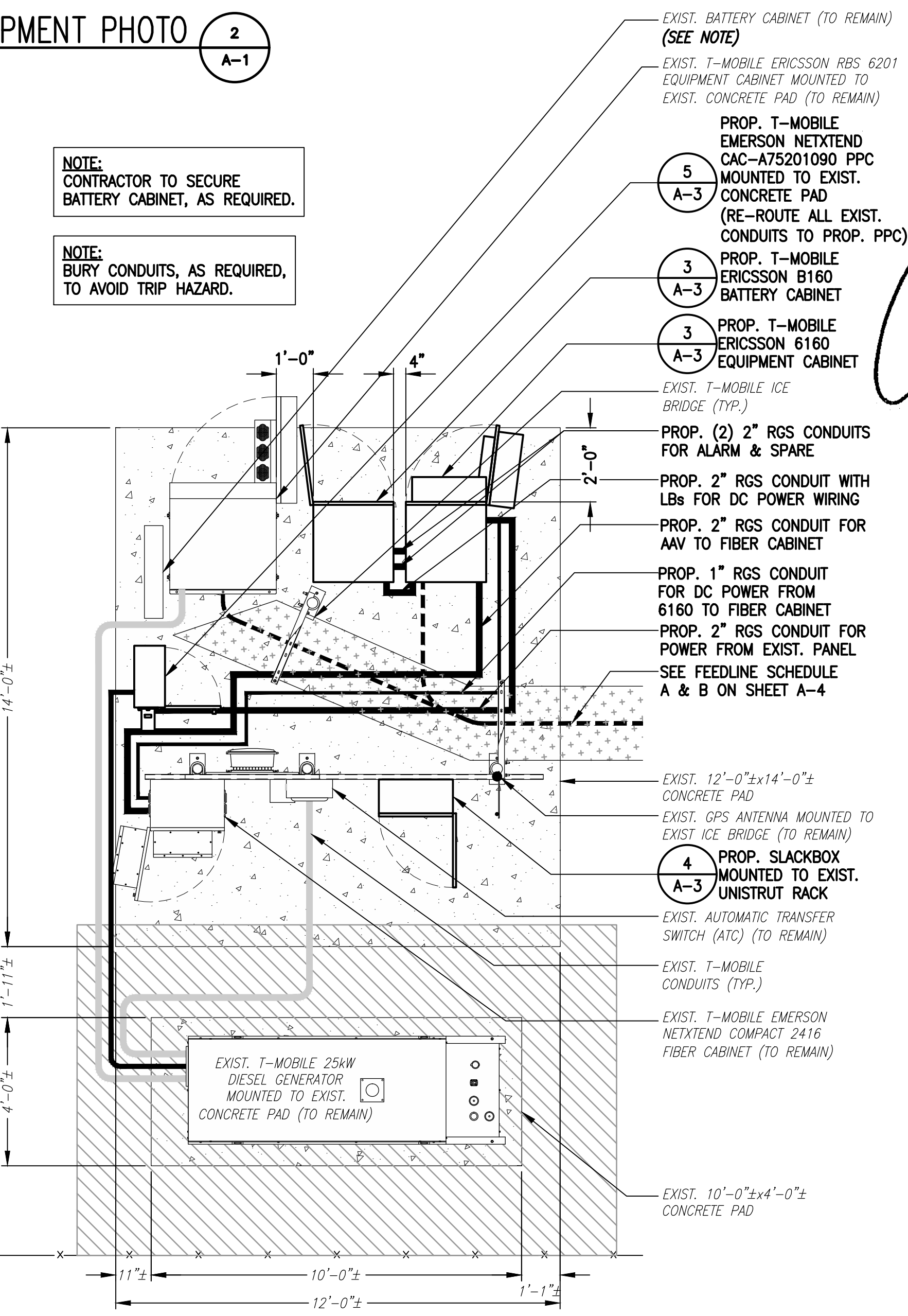
SHEET NUMBER
A-1



COMPOUND PLAN (1/A-1)
 SCALE: 1/8" = 1'-0"
 0 8'-0" 16'-0" 24'-0"



EXISTING EQUIPMENT PLAN (3/A-1)
 SCALE: 3/8" = 1'-0"
 0 2'-8" 5'-4" 8'-0"



PROPOSED EQUIPMENT PLAN (4/A-1)
 SCALE: 3/8" = 1'-0"
 0 2'-8" 5'-4" 8'-0"

EXISTING EQUIPMENT PHOTO (2/A-1)
 SCALE: N.T.S.

NOTE: CONTRACTOR TO SECURE BATTERY CABINET, AS REQUIRED.

NOTE: BURY CONDUITS, AS REQUIRED, TO AVOID TRIP HAZARD.

EXIST. BATTERY CABINET (TO REMAIN) (SEE NOTE)

EXIST. T-MOBILE ERICSSON RBS 6201 EQUIPMENT CABINET MOUNTED TO EXIST. CONCRETE PAD (TO REMAIN)

PROP. T-MOBILE EMERSON NETXTEND CAC-A75201090 PPC MOUNTED TO EXIST. CONCRETE PAD (RE-ROUTE ALL EXIST. CONDUITS TO PROP. PPC)

PROP. T-MOBILE ERICSSON B160 BATTERY CABINET

PROP. T-MOBILE ERICSSON 6160 EQUIPMENT CABINET

EXIST. T-MOBILE ICE BRIDGE (TYP.)

PROP. (2) 2" RGS CONDUITS FOR ALARM & SPARE

PROP. 2" RGS CONDUIT WITH LBS FOR DC POWER WIRING

PROP. 2" RGS CONDUIT FOR AAV TO FIBER CABINET

PROP. 1" RGS CONDUIT FOR DC POWER FROM 6160 TO FIBER CABINET

PROP. 2" RGS CONDUIT FOR POWER FROM EXIST. PANEL SEE FEEDLINE SCHEDULE A & B ON SHEET A-4

EXIST. 12'-0"±x14'-0"± CONCRETE PAD

EXIST. GPS ANTENNA MOUNTED TO EXIST. ICE BRIDGE (TO REMAIN)

PROP. SLACKBOX MOUNTED TO EXIST. UNISTRUT RACK

EXIST. AUTOMATIC TRANSFER SWITCH (ATS) (TO REMAIN)

EXIST. T-MOBILE CONDUITS (TYP.)

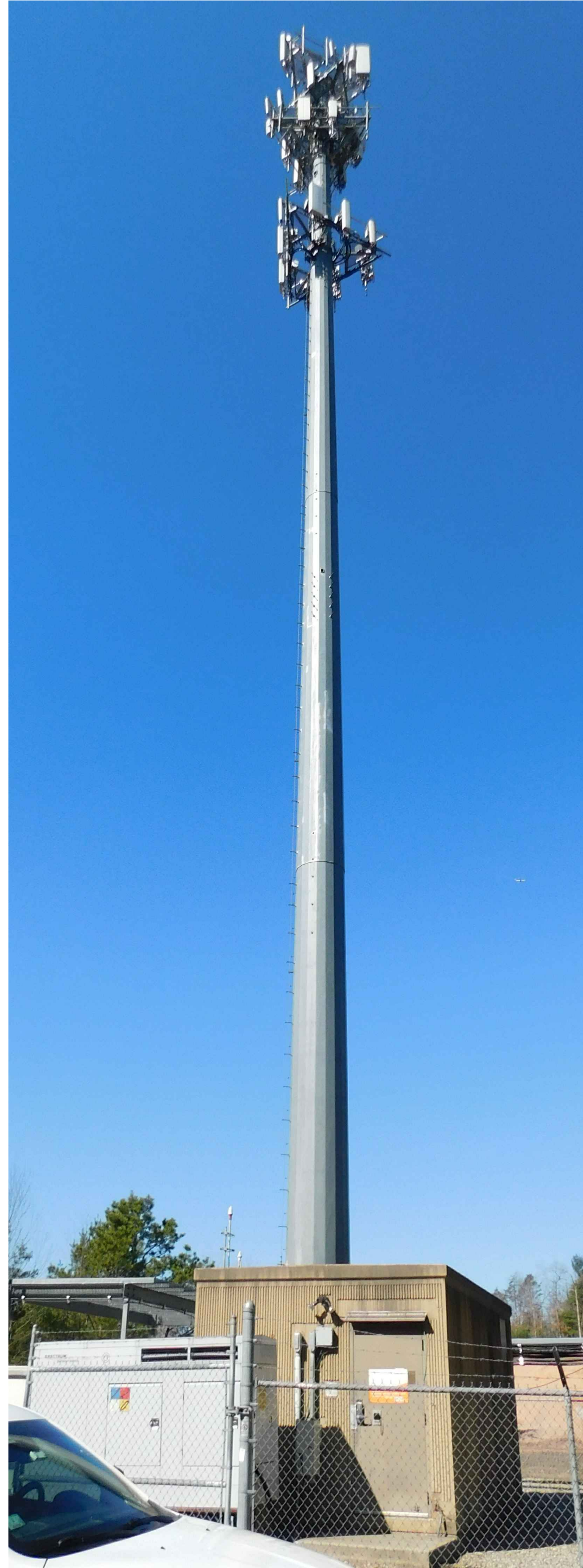
EXIST. T-MOBILE EMERSON NETXTEND COMPACT 2416 FIBER CABINET (TO REMAIN)

EXIST. 10'-0"±x4'-0"± CONCRETE PAD

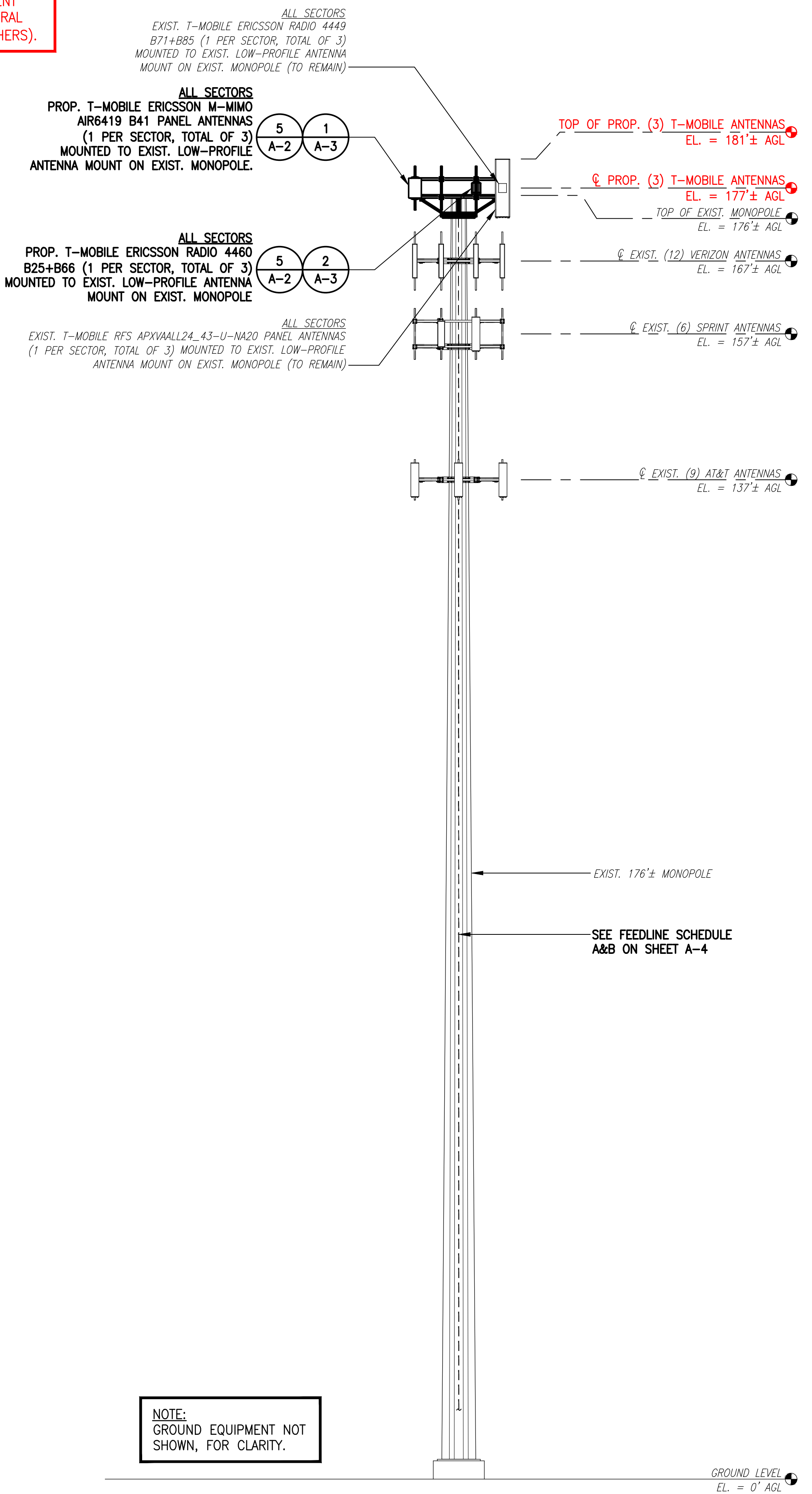
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RAD CENTER NOTE:
 T-MOBILE RAD CENTER SHOWN IN RED TEXT BASED ON SBA-PROVIDED CO-LOCATION APPLICATION, EQUIPMENT DATABASE, AND STRUCTURAL ANALYSIS. THE SBA-PROVIDED ANTENNA RAD CENTER SHALL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM THE T-MOBILE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



EXISTING TOWER PHOTO
 SCALE: N.T.S.



TOWER ELEVATION
 SCALE: 3/32" = 1'-0"
 0 10'-8" 21'-4" 32'-0"

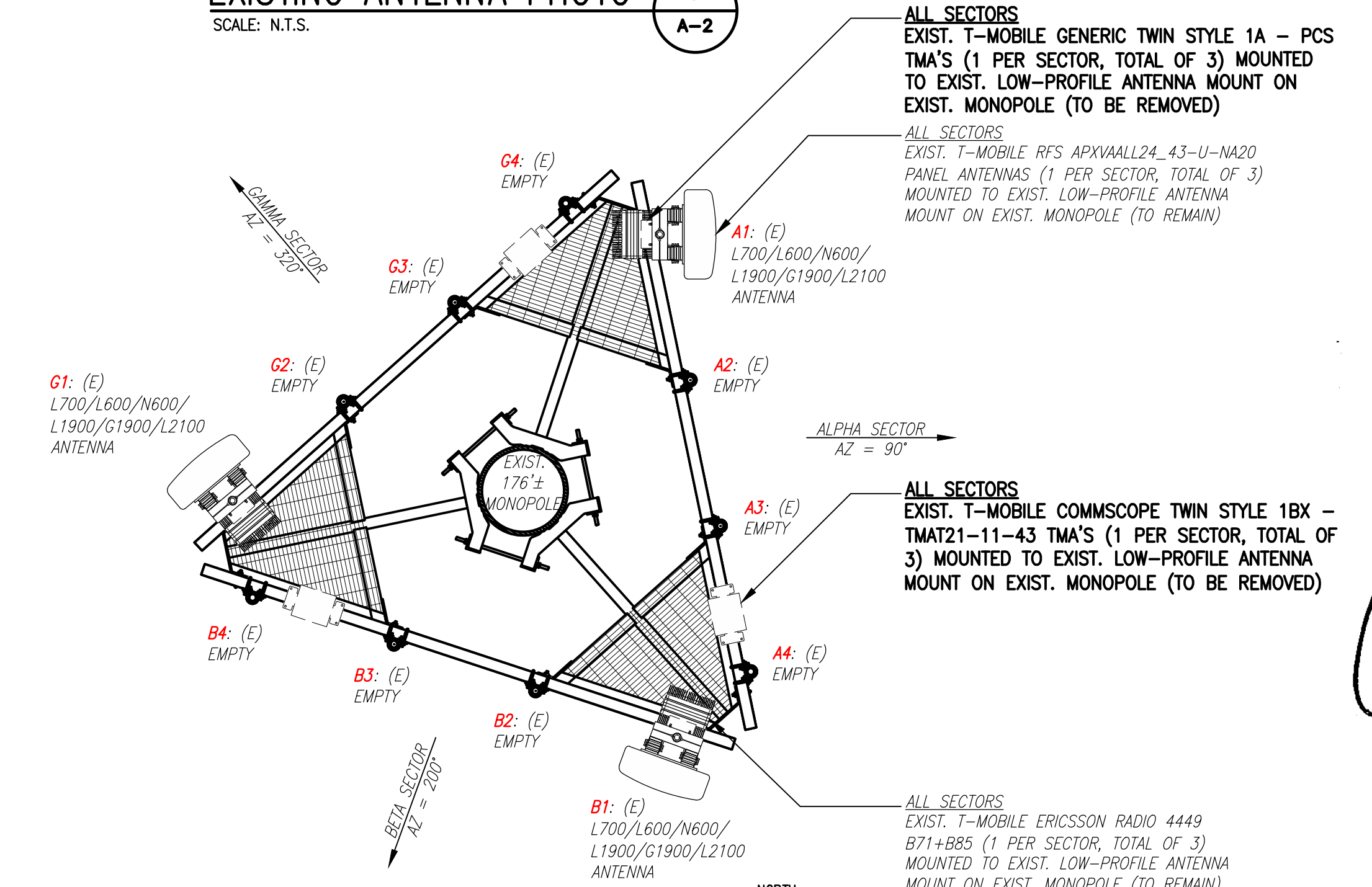
NOTE:
 GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.



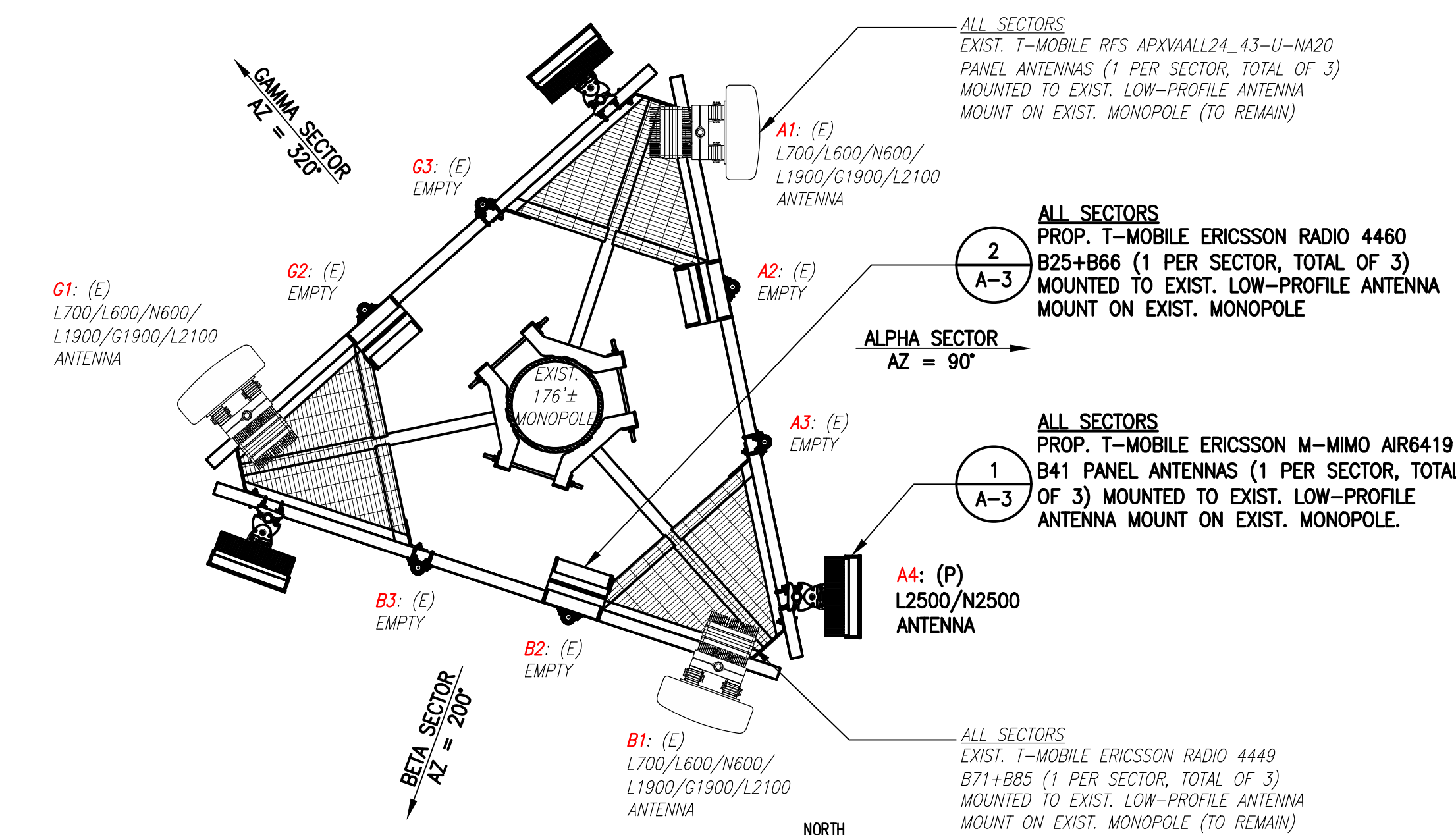
EXISTING ANTENNA PHOTO
 SCALE: N.T.S.

ANTENNA STATUS LEGEND:
 EMPTY - EMPTY PIPE
 (E) - EXISTING
 (P) - INSTALL
 (F) - FUTURE

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



EXISTING ANTENNA PLAN
 SCALE: 3/8" = 1'-0"

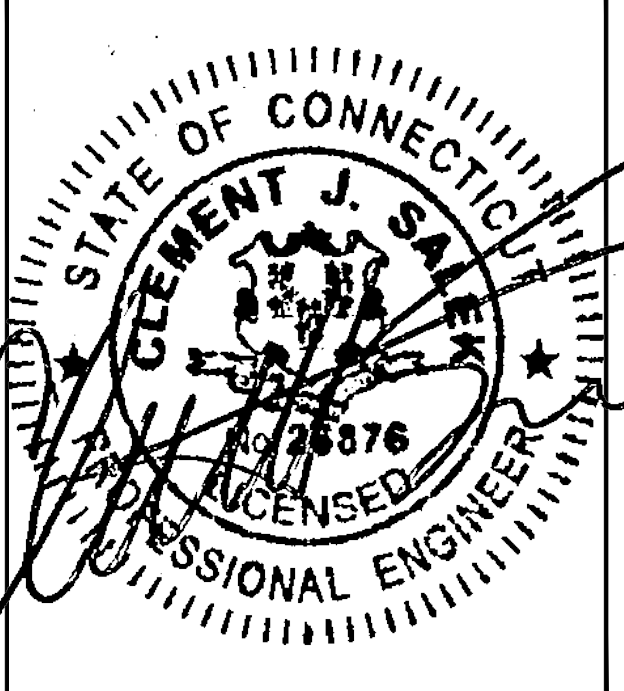


PROPOSED ANTENNA PLAN
 SCALE: 3/8" = 1'-0"

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TOWER ELEVATIONS & ANTENNA PLANS

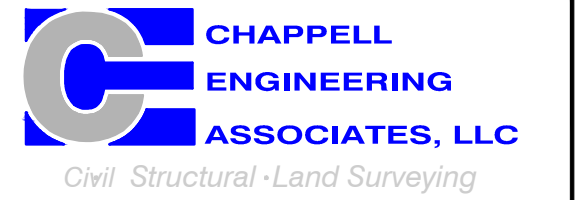
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**T-MOBILE
NORTHEAST LLC**

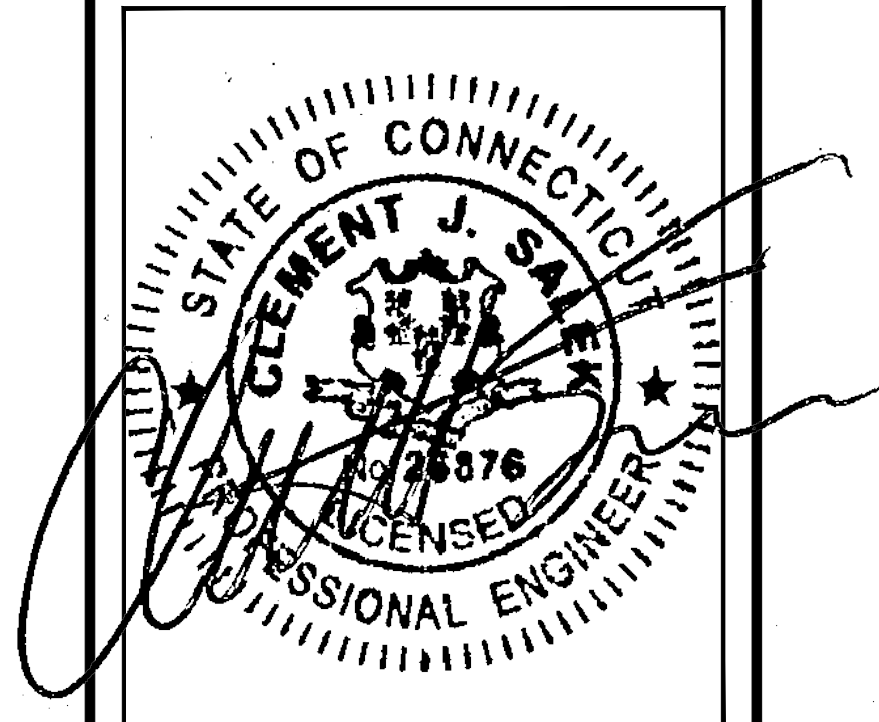
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700



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



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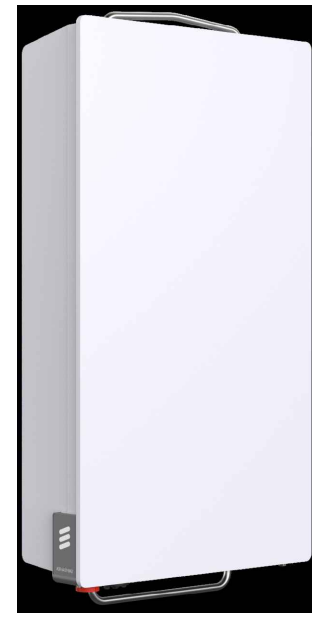
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REV.	DATE	DESCRIPTION	BY
0	03/28/22	ISSUED FOR REVIEW	NWC

SITE NUMBER:
CT11336A

SITE ADDRESS:
175 DICKINSON ROAD
GLASTONBURY, CT 06073

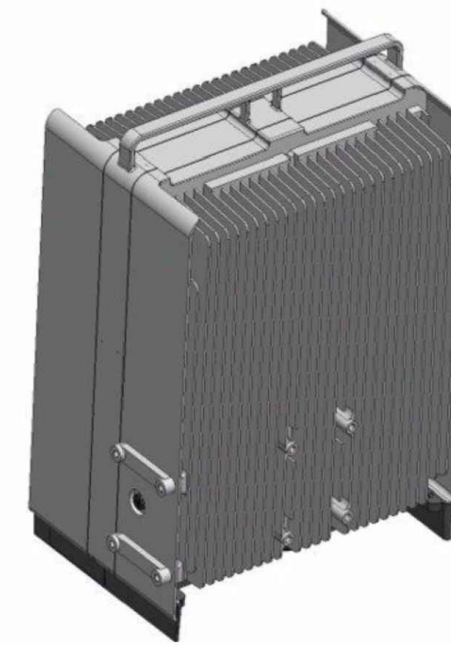
SHEET TITLE
SITE DETAILS

SHEET NUMBER
A-3



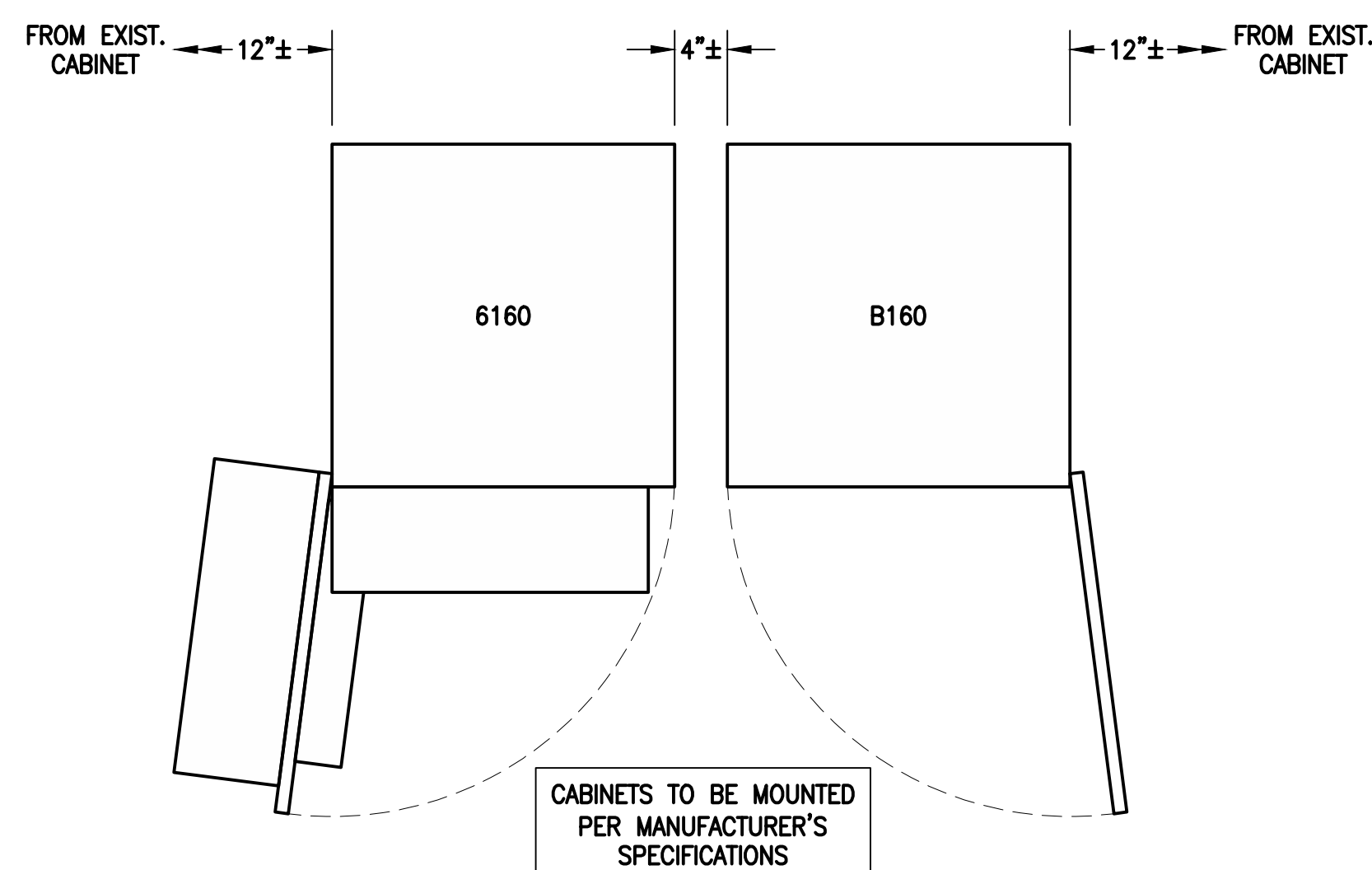
ERICSSON M-MIMO AIR6419 B41 ANTENNA
DIMENSIONS: 36.3"H x 20.9"W x 9.0"D
WEIGHT: 83.3 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ANTENNA DETAILS 1
SCALE: N.T.S. A-3



ERICSSON RADIO 4460 B25+B66
DIMENSIONS: 17.0"H x 15.1"W x 11.9"D
WEIGHT: 104.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

RADIO DETAILS 2
SCALE: N.T.S. A-3



ERICSSON 6160 SITE SUPPORT CABINET
DIMENSIONS: 63.25"H x 26.0"W x 34.0"D
WEIGHT: 880.0 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 3
SCALE: N.T.S. A-3



SLACKBOX - HOFFMAN 32FH91 NEMA 3R ENCLOSURE
DIMENSIONS: 24.0"H x 24.0"W x 12.0"D
QUANTITY: TOTAL OF 1

SSC DETAILS 4
SCALE: N.T.S. A-3



EMERSON CAC-A75201090 PPC
DIMENSIONS: 24.0"H x 15.7"W x 20.0"D
WEIGHT: 80 lbs
QUANTITY: TOTAL OF 1

SSC DETAILS 5
SCALE: N.T.S. A-3

FINAL ANTENNA CONFIGURATION								
SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	SIGNAL CABLES
ALPHA	A1 RFS APXVAALL24_43-U-NA20	177'± AGL	90°	0°	2'	L700/L600/N600	RADIO 4449 B71+B85	(1) 1-5/8" (6x12) HCS FIBER CABLE (2) 2" (6x24) HCS FIBER CABLES
	A2 EMPTY PIPE	-	-	-	-	L2100/L1900/G1900	RADIO 4460 B25+B66	
	A3 EMPTY PIPE	-	-	-	-	-	-	
	A4 ERICSSON M-MIMO AIR6419 B41	177'± AGL	90°	0°	2'	L2500/N2500	-	
BETA	B1 RFS APXVAALL24_43-U-NA20	177'± AGL	200°	0°	2'	L700/L600/N600	RADIO 4449 B71+B85	
	B2 EMPTY PIPE	-	-	-	-	L2100/L1900/G1900	RADIO 4460 B25+B66	
	B3 EMPTY PIPE	-	-	-	-	-	-	
	B4 ERICSSON M-MIMO AIR6419 B41	177'± AGL	200°	0°	2'	L2500/N2500	-	
GAMMA	G1 RFS APXVAALL24_43-U-NA20	177'± AGL	320°	0°	2'	L700/L600/N600	RADIO 4449 B71+B85	
	G2 EMPTY PIPE	-	-	-	-	L2100/L1900/G1900	RADIO 4460 B25+B66	
	G3 EMPTY PIPE	-	-	-	-	-	-	
	G4 ERICSSON M-MIMO AIR6419 B41	177'± AGL	320°	0°	2'	L2500/N2500	-	

CABLE NOTE: ALL COAX TO BE REMOVED. SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV4 - 03/02/22

FEEDLINE SCHEDULE		
SCHEDULE	FEEDLINES	LOCATION
A	EXISTING TO REMAIN: (1) 1-5/8" (6x12) HCS FIBER CABLE EXISTING TO BE REMOVED: ALL COAX TO BE REMOVED	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (2) 2" (6x24) HCS FIBER CABLES	

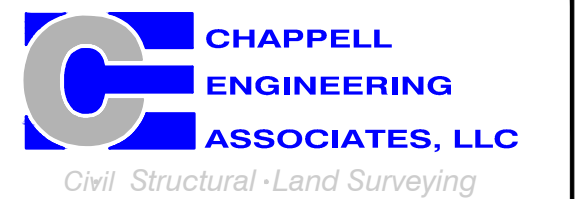
NOTE: EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.

T-MOBILE NORTHEAST LLC

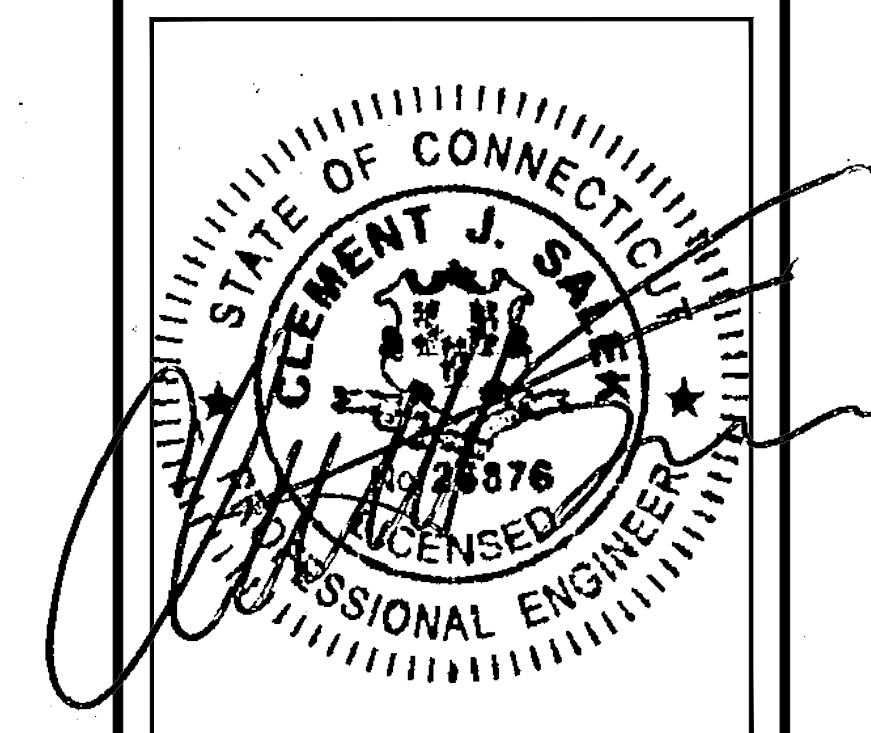
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CHECKED BY: JMT

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SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
0	03/28/22	ISSUED FOR REVIEW	NWC

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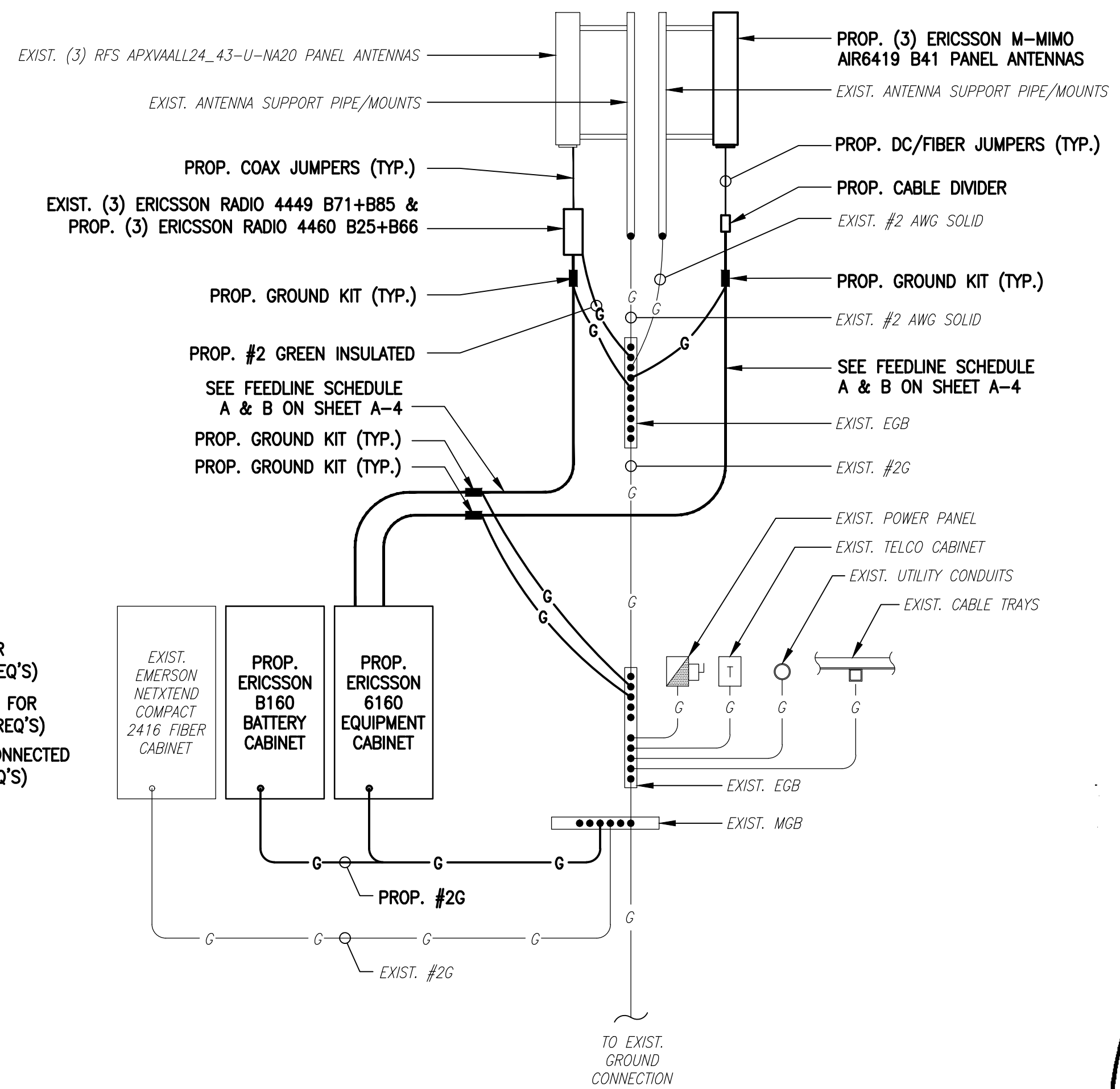
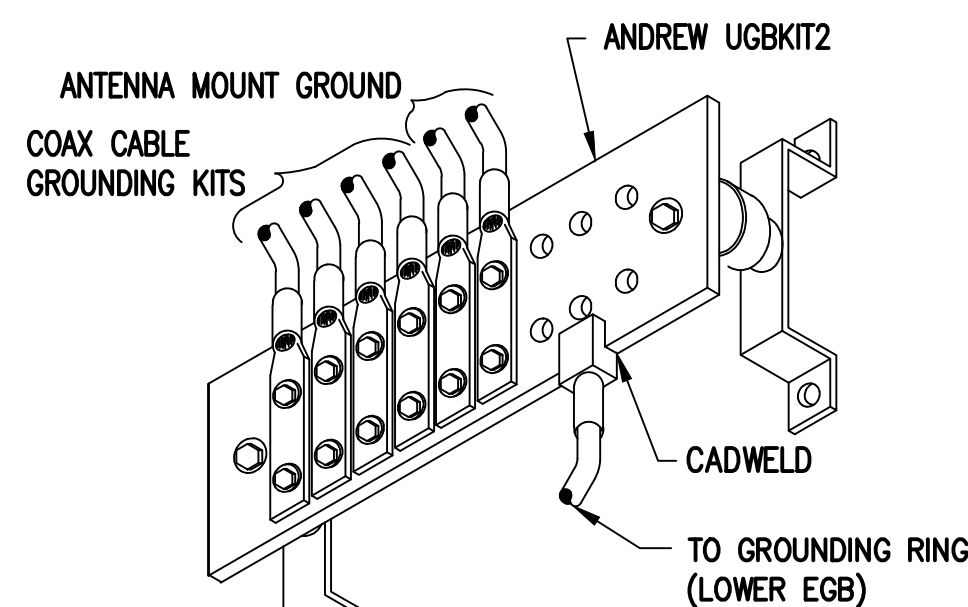
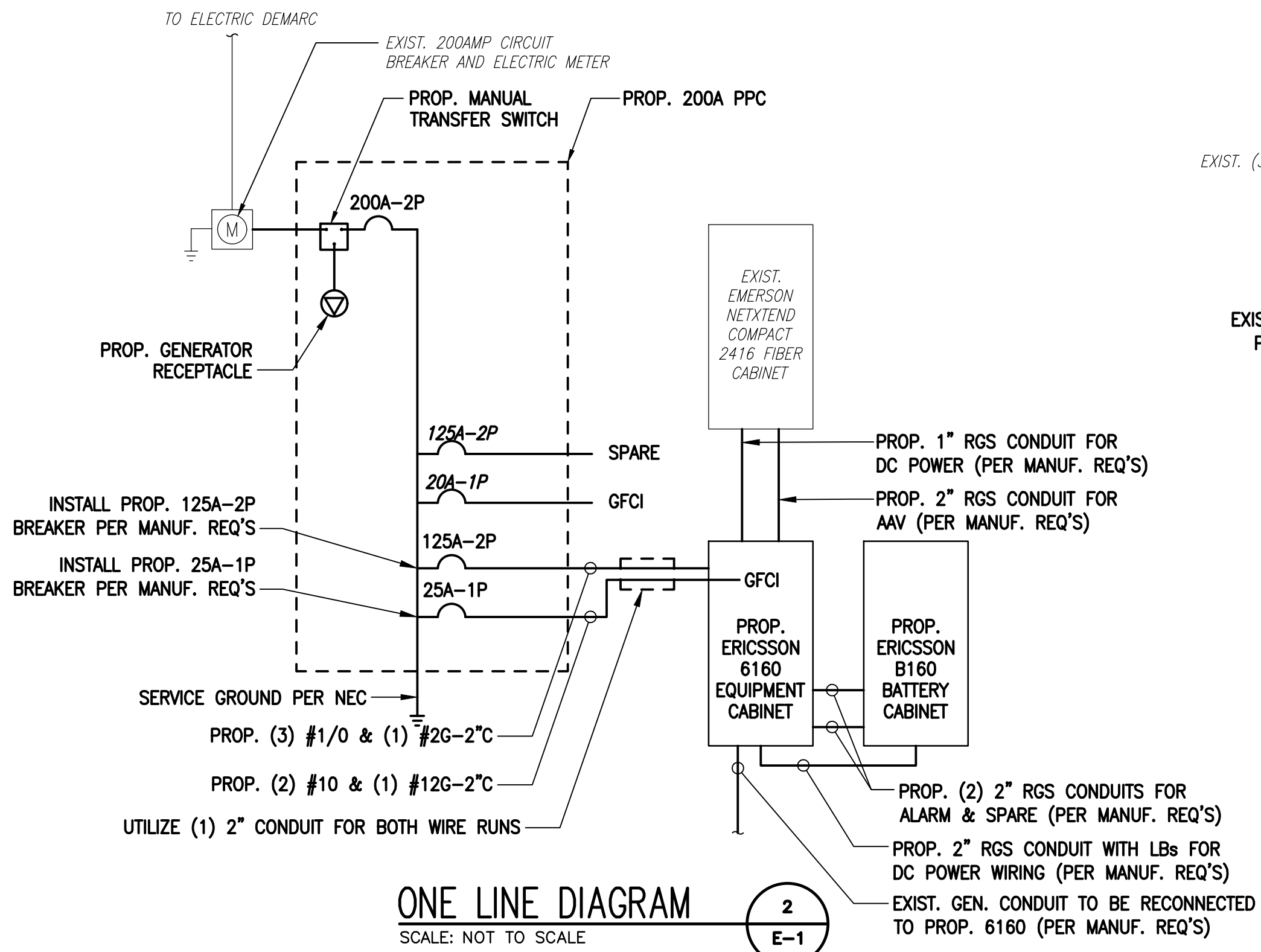
SITE ADDRESS:
175 DICKINSON ROAD
GLASTONBURY, CT 06073

SHEET TITLE
**ANTENNA &
FEEDLINE CHARTS**

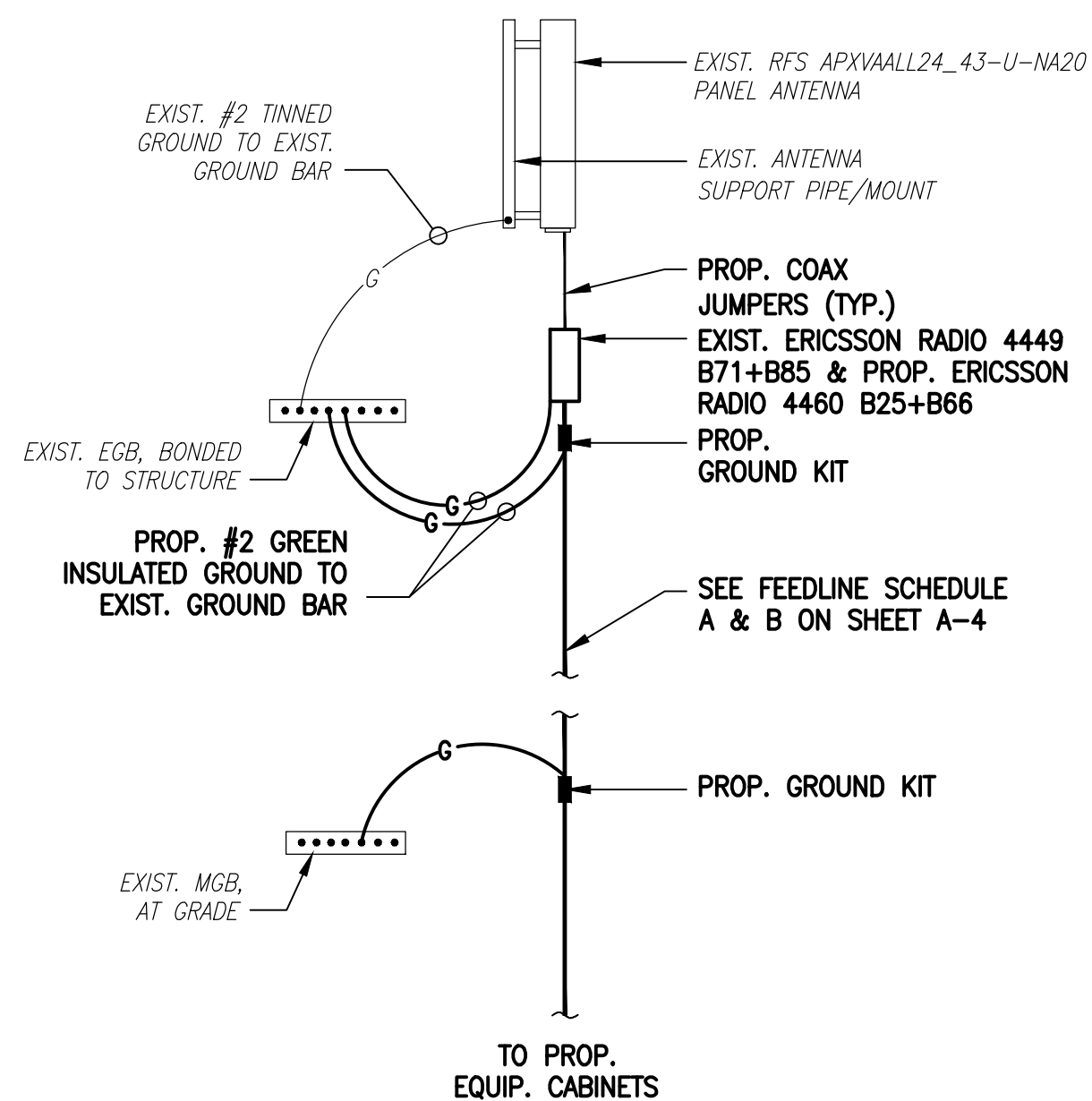
SHEET NUMBER
A-4



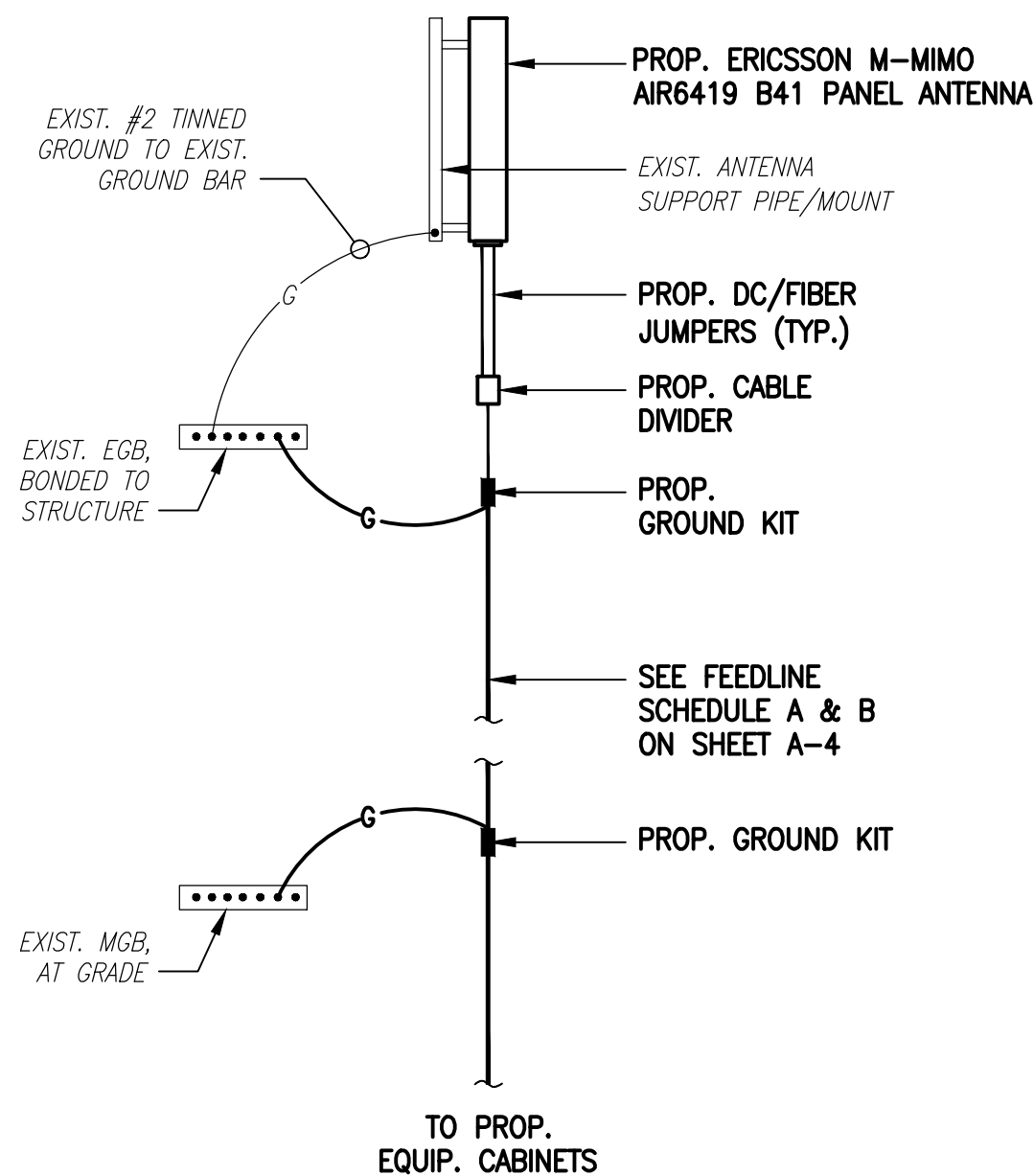
EXISTING POWER PANEL PHOTOS
SCALE: NOT TO SCALE



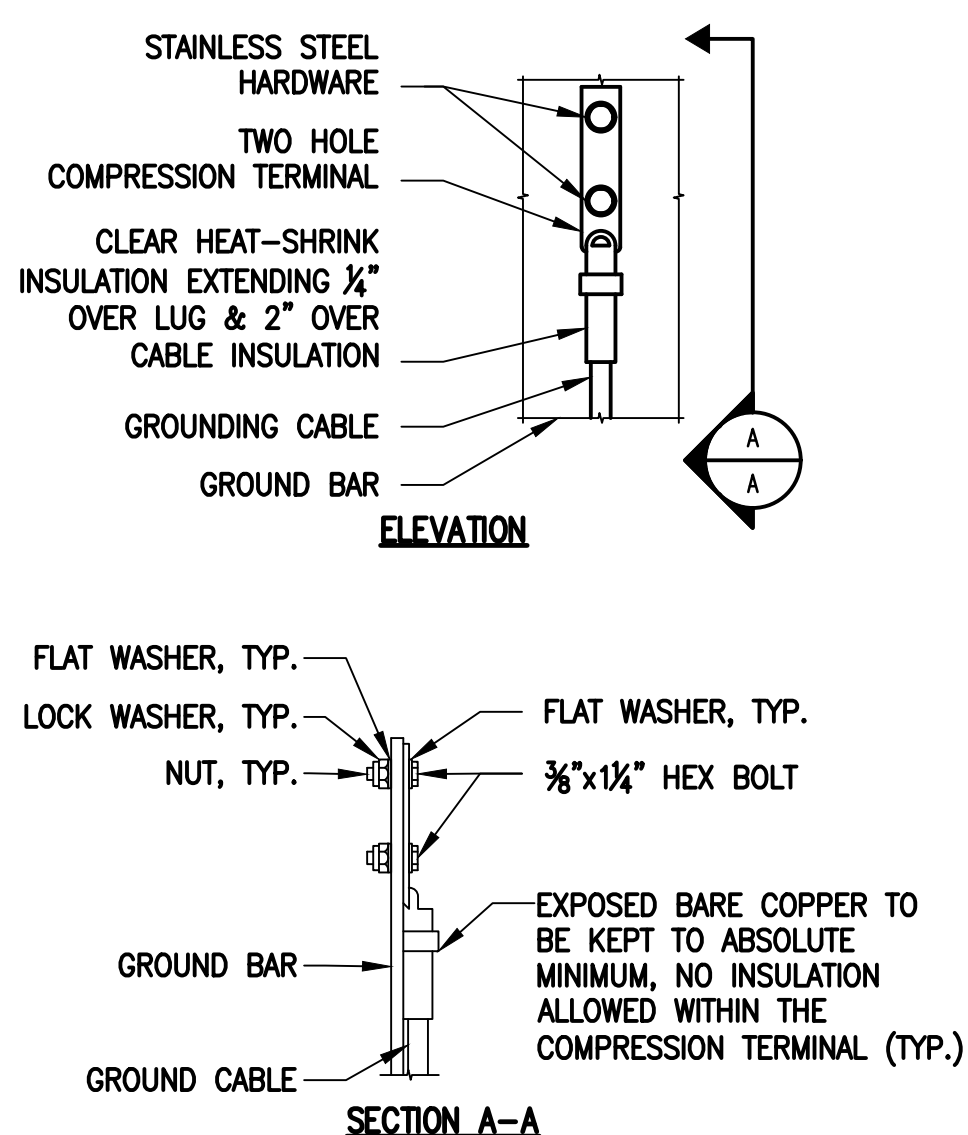
GROUNDING RISER DIAGRAM
SCALE: NOT TO SCALE



L700/L600/N600/L2100/L1900/G1900 ANTENNA



L2500/N2500 ANTENNA



NOTES:

- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
- OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
- CADWELD 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 THININSULATION.
- 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 HYDRON 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.

T-MOBILE
NORTHEAST LLC

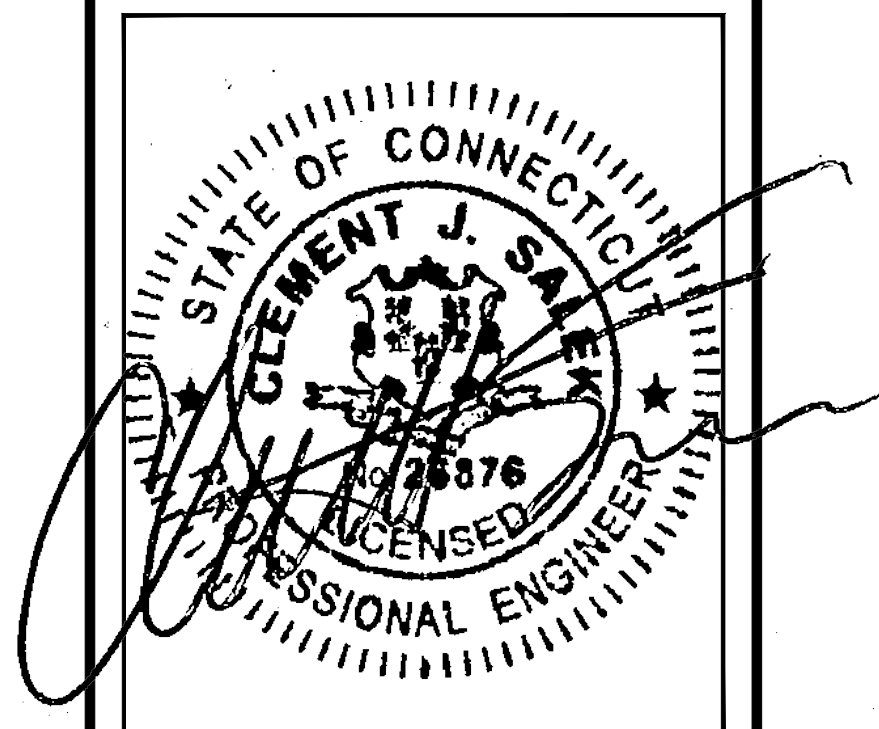
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CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
0	03/28/22	ISSUED FOR REVIEW	NMC

SITE NUMBER:
CT11336A

SITE ADDRESS:
175 DICKINSON ROAD
GLASTONBURY, CT 06073

SHEET TITLE
**ELECTRIC & GROUNDING
DETAILS**

SHEET NUMBER
E-1

Exhibit D

Structural Analysis Report



Tower Engineering Solutions

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

Structural Analysis Report

Existing 176 ft SUMMIT Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT02216-S

Customer Site Name: Glastonbury

Carrier Name: T-Mobile (App#: 192388-1, V1)

Carrier Site ID / Name: CT11336A / RT-2/Glastonbury

Site Location: 175 Dickenson Road

Glastonbury, Connecticut

Hartford County

Latitude: 41.655897

Longitude: -72.523255

Analysis Result:

Max Structural Usage: 74.9% [Pass]

Max Foundation Usage: 60% [Pass]

Additional Usage Caused by New Mount: N/A



Report Prepared By: Praveen Shrestha



Tower Engineering Solutions

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

Structural Analysis Report

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Latitude: 41.655897

Longitude: -72.523255

Analysis Result:

Max Structural Usage: 74.9% [Pass]

Max Foundation Usage: 60% [Pass]

Additional Usage Caused by New Mount: N/A

Report Prepared By: Praveen Shrestha

Introduction

The purpose of this report is to summarize the analysis results on the 176 ft SUMMIT Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Paul J. Ford and Company, Job #29200-887 dated June 19, 2000
Foundation Drawing	Paul J. Ford and Company, Job #29200-887 dated June 19, 2000
Geotechnical Report	FDH Engineering, Project #1204838EG1 dated August 13, 2012
Modification Drawings	N/A
Mount Analysis	TES Project Number: 127509, dated 04/08/22

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.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 125$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_5 = 0.179$, $S_1 = 0.063$

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
-	176.0	3	APXVAARR24 43-U-NA20 - Panel	(1) Low profile platform w/HRK & reinforcement kit Sitepro RMQP-4096-HK	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
-		3	KRY 112 489/2			
-		3	KRY 112 89/4			
-		3	4449			
-		3	RR90-17-02DP - Panel			
-		6	MHA FE15501P77/75			
8	167.0	3	RRH2X60-AWS	(1) Low Profile Platform	(6) 1 5/8" (2) 1 5/8" Hybrid	Verizon
9		3	RRH2X60-700			
10		6	SBNHH-1D65B - Panel			
11		4	LPA-80063-4CF-EDIN-5 - Panel			
12		2	APL868013 - Panel			
13	1	DB-T16Z-8AB-0Z				
14	157.0	3	ALU 1900 Mhz	(1) Low Profile Platform w/ Mount Reinforcement kit: (1) Sitepro PRK-1245L (1) Sitepro HRK14-U (1) Sitepro PRK-SFS-H-L	(4) 1 1/4" Fiber	Sprint Nextel
15		6	ALU 800 Mhz			
16		3	ALU TD-RRH8x20-25			
17		3	RFS APXVTM14-C-I20 - Panel			
18		3	Commscope NNVV-65B-R4 - Panel			
19	147.0	3	JMA Wireless MX08FRO665-21 - Panel	(1) Platform w/Handrail Commscope MC-PK8-DSH	(1) 1.6" Hybrid	Dish Wireless
20		3	Fujitsu TA08025-B605 RRU			
21		3	Fujitsu TA08025-B604 RRU			
22		1	Raycap RDIDC-9181-PF-48			
23	137.0	3	KMW HPA-65R-BU6AA Panel	(1) LP Platformw/handrail Handrail SitePro 1:HRK14	(12) 1 5/8" (2) 1" DC Power (1) 1/2" Fiber	AT&T
24		3	CCI DMP65R-BU6DA Panel			
25		3	Powerwave 7770 Panel			
26		6	Powerwave LGP21401 TMA			
27		3	Ericsson 4449 B5/B12 RRU			
28		3	Ericsson RRUS 8843 B2 B66A RRU			
29		9	Powerwave LGP21903 Diplexer			
30		12	Powerwave 7020.00 RET			
31		1	Raycap DC6-48-60-18-8F			
32		3	Smart Bias T 1001940			

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	176.0	3	Ericsson AIR6419 B41 Panel	(1) Low profile platform w/HRK & reinforcement kit Sitepro RMQP-4096-HK	(9) 1 5/8" Coax (1) 1-5/8" Fiber (2) 1.9" Fiber	T-Mobile
2		3	RFS APXVAALL24_43-U-NA20 Panel			
3		6	Allen Telecom FE15501P77/75 TMA			
4		3	Ericsson KRY 112 144/1 TMA			
5		3	Ericsson KRY 112 489/2 TMA			
6		3	Ericsson 4449 B71 + B85 RRU			
7		3	Ericsson 4460 B25 + B66 RRU			

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:	68.3%	60.3%	74.9%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4762.53	34.8	114.2

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.6529 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the 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 68.22% at 49.0ft

Structure: CT02216-S-SBA
Site Name: Glastonbury
Height: 176.00 (ft)
Base Elev: 0.000 (ft)

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

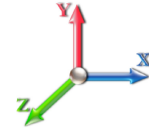
4/19/2022



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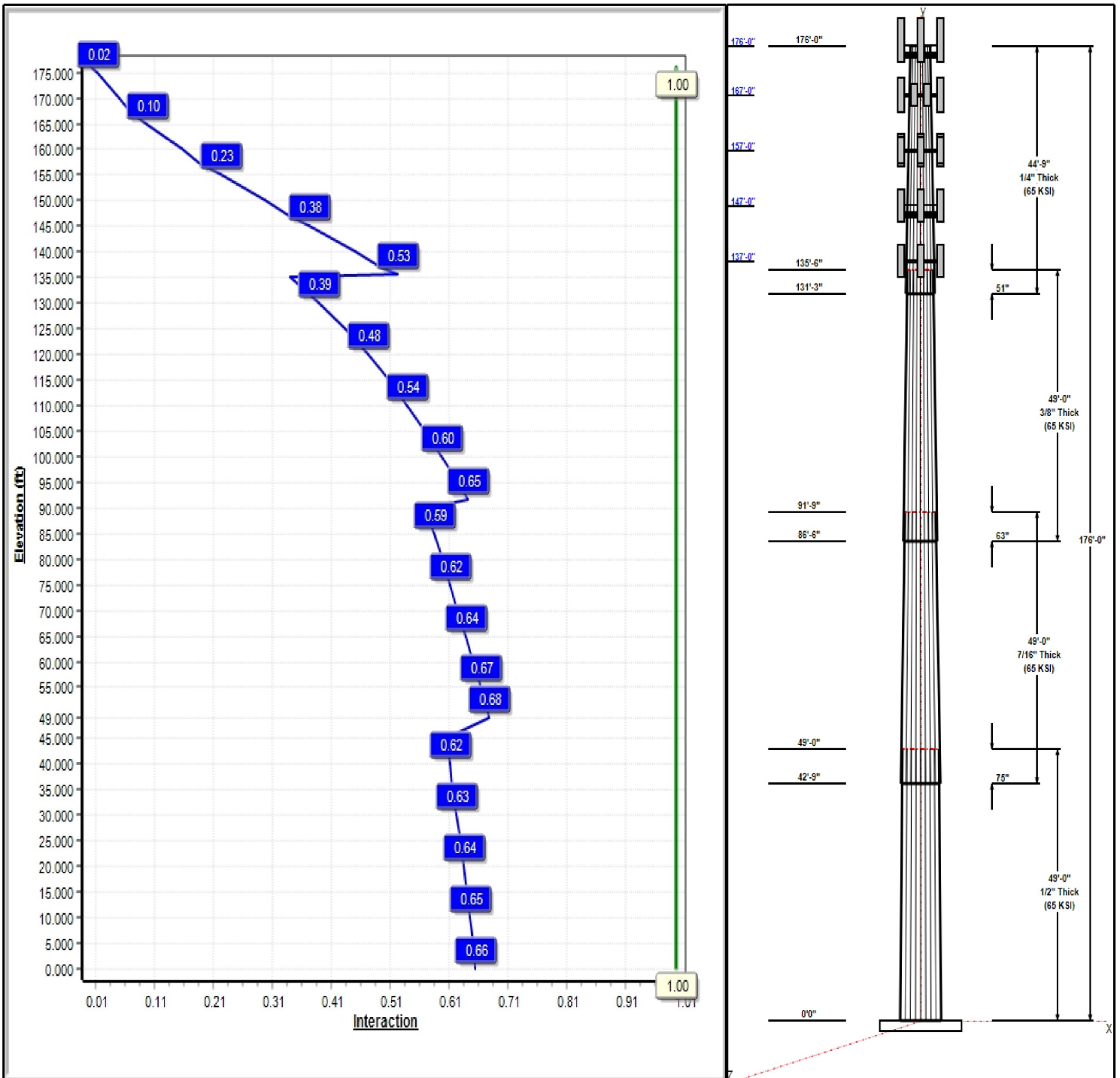
Dead Load Factor: 1.20
 Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 26

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Structure: CT02216-S-SBA

Type: Tapered
Site Name: Glastonbury
Height: 176.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.19702

4/19/2022

Page: 2

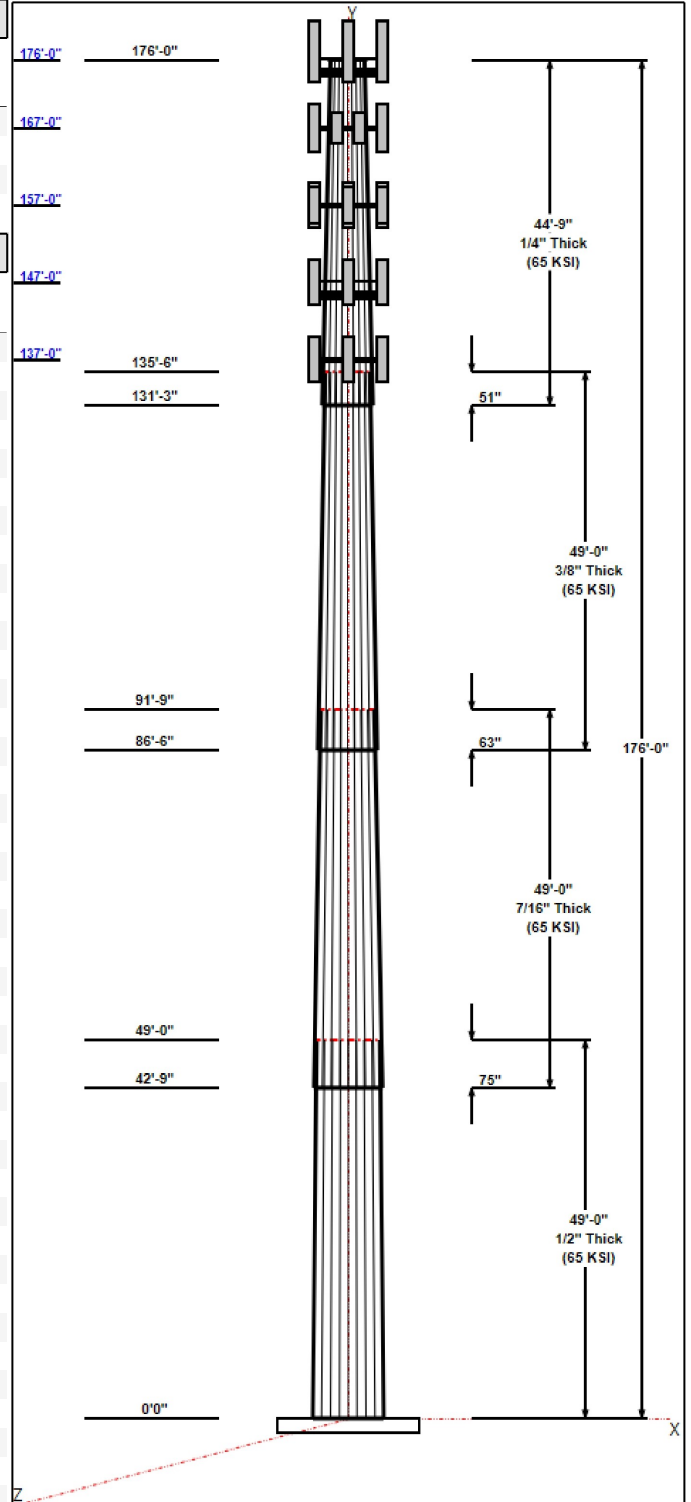


Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	49.00	46.90	56.55	0.500		0.19702	65
2	49.00	39.35	49.00	0.438	Slip	0.19702	65
3	49.00	31.48	41.13	0.375	Slip	0.19702	65
4	44.75	24.00	32.82	0.250	Slip	0.19702	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
176.00	177.00	6	MHA FE15501P77/75	T-Mobile
176.00	179.50	1	Lightning Rod	
176.00	177.00	1	RMQP-496-HK	T-Mobile
176.00	177.00	3	KRY 112 489/2	T-Mobile
176.00	177.00	3	KRY 112 89/4	T-Mobile
176.00	177.00	3	AIR 6419 B41	T-Mobile
176.00	177.00	3	APXVAALL24_43-U-NA20	T-Mobile
176.00	177.00	3	4449 B71 + B85	T-Mobile
176.00	177.00	3	4460 B25 + B66	T-Mobile
167.00	167.00	1	Low Profile	Verizon
167.00	167.00	3	RRH2X60-AWS	Verizon
167.00	167.00	3	RRH2X60-700	Verizon
167.00	167.00	6	SBNHH-1D65B	Verizon
167.00	167.00	4	LPA-80063-4CF-EDIN-5	Verizon
167.00	167.00	2	APL868013	Verizon
167.00	167.00	1	DB-T16Z-8AB-0Z	Verizon
157.00	157.00	3	RFS APXVTM14-C-I20	Sprint Nextel
157.00	157.00	3	Commscope	Sprint Nextel
157.00	157.00	1	Sitepro PRK-1245L	Sprint Nextel
157.00	157.00	1	Sitepro HRK14-U	Sprint Nextel
157.00	157.00	1	Sitepro PRK-SFS-H-L	Sprint Nextel
157.00	157.00	1	Low Profile Platform	Sprint Nextel
157.00	157.00	3	ALU 1900 Mhz	Sprint Nextel
157.00	157.00	6	ALU 800 Mhz	Sprint Nextel
157.00	157.00	3	ALU TD-RRH8x20-25	Sprint Nextel
147.00	147.00	3	MX08FRO665-21	Dish Wireless
147.00	147.00	1	MC-PK8-DSH	Dish Wireless
147.00	147.00	3	TA08025-B605	Dish Wireless
147.00	147.00	3	TA08025-B604	Dish Wireless
147.00	147.00	1	RDIDC-9181-PF-48	Dish Wireless
137.00	137.00	1	HRK14	AT&T
137.00	137.00	3	DMP65R-BU6DA	AT&T
137.00	137.00	3	4449 B5/B12	AT&T
137.00	137.00	3	B2 B66A 8843	AT&T
137.00	137.00	1	LP Platform-Round	AT&T
137.00	137.00	1	DC6-48-60-18-8F	AT&T
137.00	137.00	3	7770.00	AT&T
137.00	137.00	6	LGP21401	AT&T
137.00	137.00	6	LGP21903	AT&T
137.00	137.00	3	HPA-65R-BUU-H6	AT&T
137.00	137.00	12	7020	AT&T
137.00	137.00	3	Smart Bias T 1001940	AT&T



Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
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Structure: CT02216-S-SBA

Type: Tapered
Site Name: Glastonbury
Height: 176.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.19702

4/19/2022

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0.00	176.00	Inside	1 5/8" Coax	T-Mobile
0.00	176.00	Inside	1 5/8" Fiber	T-Mobile
0.00	176.00	Inside	1.9" Fiber	T-Mobile
0.00	176.00	Outside	Safety Cable	
0.00	176.00	Outside	Step bolts (ladder)	
0.00	167.00	Inside	1 5/8" Coax	Verizon
0.00	167.00	Inside	1 5/8" Hybrid	Verizon
0.00	157.00	Inside	1 1/4" Fiber	Sprint Nextel
0.00	147.00	Inside	1.6" Hybrid	Dish Wireless
0.00	137.00	Inside	1 5/8" Coax	AT&T
0.00	137.00	Inside	1" DC	AT&T
0.00	137.00	Inside	1/2" Fiber	AT&T

Anchor Bolts

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

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	66.0	50.0	Clipped

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	4762.5	34.8	66.7
0.9D + 1.6W 97 mph Wind	4683.5	34.7	50.0
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1522.2	10.6	114.2
1.2D + 1.0E	393.5	2.8	66.7
0.9D + 1.0E	386.5	2.8	50.1
1.0D + 1.0W 60 mph Wind	1128.5	8.3	55.6

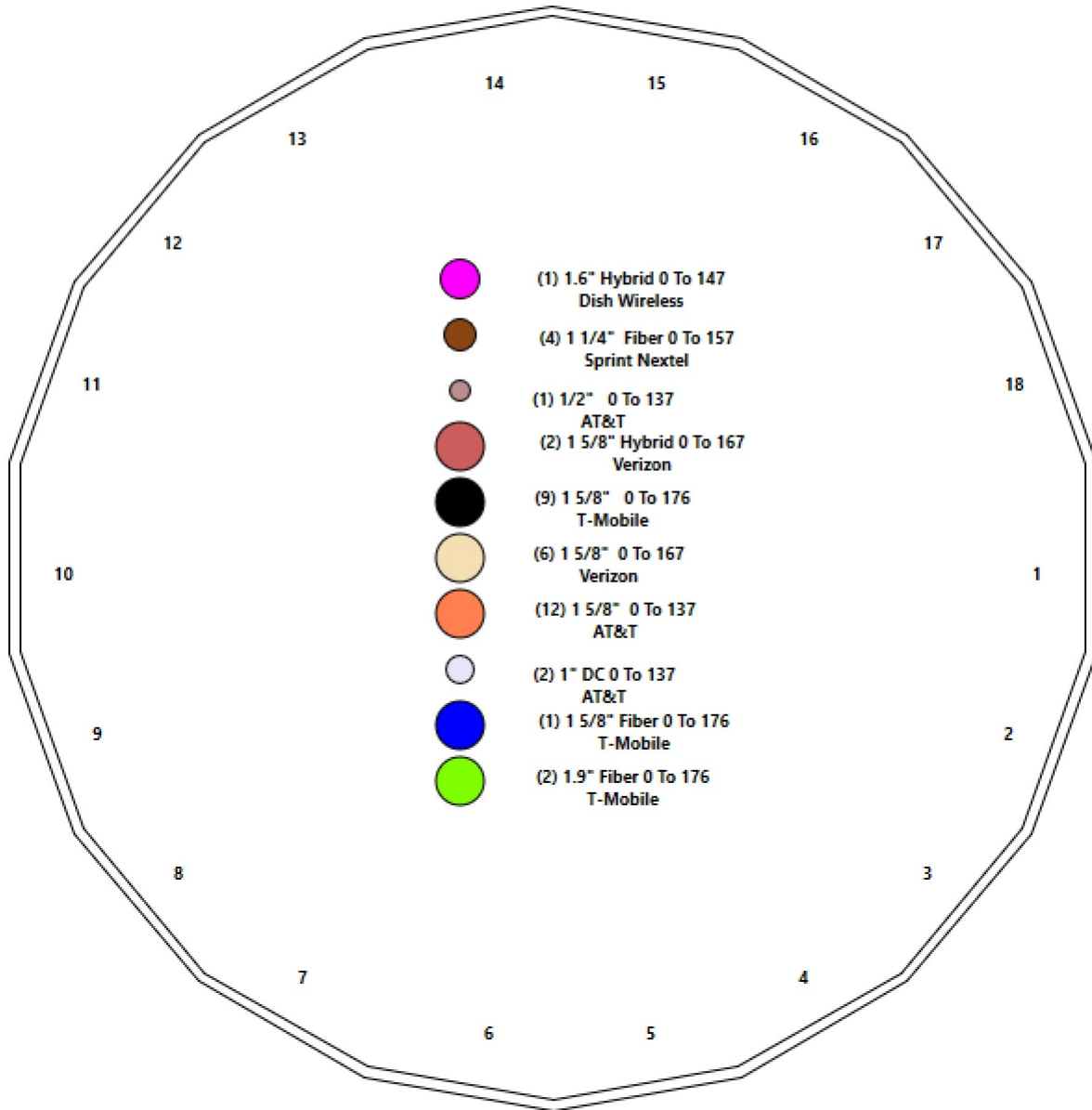
Structure: CT02216-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Glastonbury
Height: 176.00 (ft)

4/19/2022



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Shaft Properties

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	49.000	0.5000	65		0.00	13,554
2	18	49.000	0.4375	65	Slip	75.00	10,126
3	18	49.000	0.3750	65	Slip	63.00	7,131
4	18	44.750	0.2500	65	Slip	51.00	3,402
Total Shaft Weight:							34,213

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	56.55	0.00	88.95	35305.41	18.53	113.10	46.90	49.00	73.63	20024.4	15.13	93.79	0.197017
2	49.00	42.75	67.44	20095.24	18.34	112.01	39.35	91.75	54.03	10335.8	14.45	89.94	0.197017
3	41.13	86.50	48.51	10181.58	17.93	109.69	31.48	135.50	37.02	4525.14	13.39	83.94	0.197017
4	32.82	131.2	25.84	3462.57	21.74	131.27	24.00	176.00	18.84	1343.00	15.52	96.00	0.197017

Load Summary

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	176.00	MHA FE15501P77/75	6	11.00	0.93	0.65	37.10	1.886	0.65	0.00	1.00
2	176.00	Lightning Rod	1	35.00	1.05	1.00	77.56	4.266	1.00	0.00	3.50
3	176.00	RMQP-496-HK	1	2449.00	46.00	1.00	5923.32	89.506	1.00	0.00	1.00
4	176.00	KRY 112 489/2	3	15.40	0.65	0.67	39.27	1.479	0.67	0.00	1.00
5	176.00	KRY 112 89/4	3	15.40	0.65	0.67	39.27	1.479	0.67	0.00	1.00
6	176.00	AIR 6419 B41	3	133.20	6.53	0.70	369.66	8.003	0.70	0.00	1.00
7	176.00	APXVAALL24_43-U-NA20	3	122.80	20.24	0.73	728.19	22.848	0.73	0.00	1.00
8	176.00	4449 B71 + B85	3	73.20	1.97	0.67	151.43	2.741	0.67	0.00	1.00
9	176.00	4460 B25 + B66	3	72.00	1.64	0.67	135.47	2.313	0.67	0.00	1.00
10	167.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	3264.05	45.803	1.00	0.00	0.00
11	167.00	RRH2X60-AWS	3	60.00	3.50	0.67	177.64	4.564	0.67	0.00	0.00
12	167.00	RRH2X60-700	3	60.00	3.50	0.67	177.64	4.564	0.67	0.00	0.00
13	167.00	SBNHH-1D65B	6	40.00	8.16	0.83	332.23	9.954	0.83	0.00	0.00
14	167.00	LPA-80063-4CF-EDIN-5	4	20.00	6.15	0.93	266.55	8.702	0.93	0.00	0.00
15	167.00	APL868013	2	6.30	2.86	0.93	163.90	4.061	0.93	0.00	0.00
16	167.00	DB-T16Z-8AB-0Z	1	18.90	4.80	1.00	224.85	6.005	1.00	0.00	0.00
17	157.00	RFS APXVTM14-C-I20	3	56.20	6.34	0.77	286.02	7.864	0.77	0.00	0.00
18	157.00	Commscope NNVV-65B-R4	3	77.40	12.27	0.75	459.89	14.220	0.75	0.00	0.00
19	157.00	Sitepro PRK-1245L	1	464.91	9.50	1.00	899.62	22.824	1.00	0.00	0.00
20	157.00	Sitepro HRK14-U	1	302.36	8.13	1.00	782.98	18.773	1.00	0.00	0.00
21	157.00	Sitepro PRK-SFS-H-L	1	230.00	6.70	1.00	660.12	16.097	1.00	0.00	0.00
22	157.00	Low Profile Platform	1	1500.00	22.00	1.00	3253.19	45.656	1.00	0.00	0.00
23	157.00	ALU 1900 Mhz	3	60.00	2.77	0.67	171.76	4.469	0.67	0.00	0.00
24	157.00	ALU 800 Mhz	6	53.00	2.49	0.67	152.06	4.022	0.67	0.00	0.00
25	157.00	ALU TD-RRH8x20-25	3	70.00	4.05	0.67	228.65	5.168	0.67	0.00	0.00
26	147.00	MX08FRO665-21	3	64.50	12.49	0.74	451.55	14.439	0.74	0.00	0.00
27	147.00	MC-PK8-DSH	1	1727.00	37.59	1.00	3972.90	00.441	1.00	0.00	0.00
28	147.00	TA08025-B605	3	75.00	1.96	0.67	144.60	2.707	0.67	0.00	0.00
29	147.00	TA08025-B604	3	63.90	1.96	0.67	131.27	2.707	0.67	0.00	0.00
30	147.00	RDIDC-9181-PF-48	1	21.90	2.01	1.00	92.75	2.766	1.00	0.00	0.00
31	137.00	HRK14	1	302.36	8.13	1.00	776.48	18.628	1.00	0.00	0.00
32	137.00	DMP65R-BU6DA	3	79.40	12.71	0.72	468.58	14.644	0.72	0.00	0.00
33	137.00	4449 B5/B12	3	71.00	1.97	0.67	141.53	2.693	0.67	0.00	0.00
34	137.00	B2 B66A 8843	3	70.00	1.64	0.67	130.76	2.322	0.67	0.00	0.00
35	137.00	LP Platform-Round	1	1500.00	22.00	1.00	3229.47	45.336	1.00	0.00	0.00
36	137.00	DC6-48-60-18-8F	1	32.80	1.47	1.00	117.06	2.395	1.00	0.00	0.00
37	137.00	7770.00	3	35.00	5.50	0.73	226.86	6.937	0.73	0.00	0.00
38	137.00	LGP21401	6	19.00	1.29	0.67	63.51	2.394	0.67	0.00	0.00
39	137.00	LGP21903	6	5.00	0.27	0.67	15.12	0.795	0.67	3.00	0.00
40	137.00	HPA-65R-BUU-H6	3	51.00	9.66	0.85	396.24	11.499	0.85	0.00	0.00
41	137.00	7020	12	2.20	0.40	0.67	15.71	1.040	0.67	0.00	0.00
42	137.00	Smart Bias T 1001940	3	2.00	0.09	0.67	4.64	0.400	0.67	5.70	0.00
Totals:			124	14,953.43			43,639.90				

Linear Appurtenances

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		
Bottom	Top										
Elev.	Elev.	Description		Exposed	Exposed						
(ft)	(ft)			Width	Width						
0.00	176.00	(9) 1 5/8" Coax		0.00	Inside						
0.00	176.00	(1) 1 5/8" Fiber		0.00	Inside						
0.00	176.00	(2) 1.9" Fiber		0.00	Inside						
0.00	176.00	(1) Safety Cable		0.38	Outside						
0.00	176.00	(1) Step bolts (ladder)		0.63	Outside						
0.00	167.00	(6) 1 5/8" Coax		0.00	Inside						
0.00	167.00	(2) 1 5/8" Hybrid		0.00	Inside						
0.00	157.00	(4) 1 1/4" Fiber		0.00	Inside						
0.00	147.00	(1) 1.6" Hybrid		0.00	Inside						
0.00	137.00	(12) 1 5/8" Coax		0.00	Inside						
0.00	137.00	(2) 1" DC		0.00	Inside						
0.00	137.00	(1) 1/2" Fiber		0.00	Inside						

Shaft Section Properties

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in ³)	Weight (lb)
0.00		0.5000	56.550	88.948	35305.4	18.53	113.10	79.6	1229.	0.0
5.00		0.5000	55.565	87.385	33476.4	18.18	111.13	80.0	1186.	1500.1
10.00		0.5000	54.580	85.822	31711.8	17.84	109.16	80.4	1144.	1473.5
15.00		0.5000	53.595	84.258	30010.2	17.49	107.19	80.8	1102.	1446.9
20.00		0.5000	52.610	82.695	28370.6	17.14	105.22	81.2	1062.	1420.3
25.00		0.5000	51.625	81.132	26791.9	16.79	103.25	81.6	1022.	1393.7
30.00		0.5000	50.639	79.569	25272.8	16.45	101.28	82.1	983.0	1367.1
35.00		0.5000	49.654	78.005	23812.3	16.10	99.31	82.5	944.6	1340.5
40.00		0.5000	48.669	76.442	22409.2	15.75	97.34	82.5	906.9	1313.9
42.75	Bot - Section 2	0.5000	48.128	75.582	21661.5	15.56	96.26	82.5	886.5	711.3
45.00		0.5000	47.684	74.879	21062.3	15.41	95.37	82.5	870.0	1089.9
49.00	Top - Section 1	0.4375	47.771	65.726	18605.1	17.84	109.19	0.0	0.0	1912.7
50.00		0.4375	47.574	65.453	18373.8	17.76	108.74	80.5	760.7	223.2
55.00		0.4375	46.589	64.085	17245.7	17.37	106.49	81.0	729.1	1102.0
60.00		0.4375	45.604	62.717	16164.8	16.97	104.24	81.4	698.2	1078.7
65.00		0.4375	44.619	61.349	15130.1	16.57	101.99	81.9	667.9	1055.4
70.00		0.4375	43.634	59.981	14140.4	16.18	99.73	82.4	638.3	1032.2
75.00		0.4375	42.649	58.613	13194.9	15.78	97.48	82.5	609.4	1008.9
80.00		0.4375	41.664	57.246	12292.5	15.38	95.23	82.5	581.1	985.6
85.00		0.4375	40.679	55.878	11432.2	14.98	92.98	82.5	553.5	962.3
86.50	Bot - Section 3	0.4375	40.383	55.467	11182.2	14.87	92.30	82.5	545.4	284.2
90.00		0.4375	39.693	54.510	10613.0	14.59	90.73	82.5	526.6	1227.8
91.75	Top - Section 2	0.3750	40.099	47.279	9425.9	17.44	106.93	0.0	0.0	605.9
95.00		0.3750	39.458	46.517	8977.4	17.14	105.22	81.2	448.1	518.7
100.00		0.3750	38.473	45.345	8315.6	16.68	102.60	81.8	425.7	781.5
105.00		0.3750	37.488	44.172	7687.1	16.22	99.97	82.3	403.9	761.5
110.00		0.3750	36.503	43.000	7091.1	15.75	97.34	82.5	382.6	741.6
115.00		0.3750	35.518	41.827	6526.7	15.29	94.71	82.5	361.9	721.6
120.00		0.3750	34.533	40.655	5993.1	14.83	92.09	82.5	341.8	701.7
125.00		0.3750	33.548	39.483	5489.4	14.36	89.46	82.5	322.3	681.7
130.00		0.3750	32.563	38.310	5014.7	13.90	86.83	82.5	303.3	661.8
131.25	Bot - Section 4	0.3750	32.317	38.017	4900.5	13.78	86.18	82.5	298.7	162.3
135.00		0.3750	31.578	37.138	4568.3	13.44	84.21	82.5	284.9	805.5
135.50	Top - Section 3	0.2500	31.979	25.176	3202.3	21.14	127.92	0.0	0.0	106.0
137.00		0.2500	31.684	24.942	3113.6	20.94	126.73	76.8	193.6	127.9
140.00		0.2500	31.093	24.473	2941.3	20.52	124.37	77.3	186.3	252.2
145.00		0.2500	30.108	23.691	2668.4	19.82	120.43	78.1	174.6	409.7
147.00		0.2500	29.713	23.378	2564.1	19.55	118.85	78.4	170.0	160.2
150.00		0.2500	29.122	22.909	2412.9	19.13	116.49	78.9	163.2	236.3
155.00		0.2500	28.137	22.128	2174.2	18.43	112.55	79.7	152.2	383.1
157.00		0.2500	27.743	21.815	2083.4	18.16	110.97	80.0	147.9	149.5
160.00		0.2500	27.152	21.346	1951.9	17.74	108.61	80.5	141.6	220.3
165.00		0.2500	26.167	20.565	1745.2	17.05	104.67	81.4	131.4	356.5
167.00		0.2500	25.773	20.252	1666.8	16.77	103.09	81.7	127.4	138.9
170.00		0.2500	25.182	19.783	1553.7	16.35	100.73	82.2	121.5	204.3
175.00		0.2500	24.197	19.001	1376.7	15.66	96.79	82.5	112.1	329.9
176.00		0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	64.4

34212.9

Wind Loading - Shaft

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

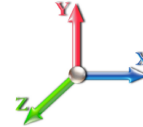


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Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 1.20
Wind Load Factor 1.60



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	16.018	17.62	388.35	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	16.018	17.62	381.58	0.650	0.000	5.00	23.718	15.42	434.6	0.0	1800.1
10.00		1.00	0.70	16.018	17.62	374.82	0.650	0.000	5.00	23.301	15.15	427.0	0.0	1768.1
15.00		1.00	0.70	16.018	17.62	368.05	0.650	0.000	5.00	22.884	14.87	419.3	0.0	1736.2
20.00		1.00	0.70	16.018	17.62	361.29	0.650	0.000	5.00	22.467	14.60	411.7	0.0	1704.3
25.00		1.00	0.70	16.018	17.62	354.52	0.650	0.000	5.00	22.050	14.33	404.1	0.0	1672.4
30.00		1.00	0.70	16.031	17.63	347.90	0.650	0.000	5.00	21.634	14.06	396.8	0.0	1640.5
35.00		1.00	0.73	16.753	18.43	348.73	0.650	0.000	5.00	21.217	13.79	406.6	0.0	1608.6
40.00		1.00	0.76	17.405	19.15	348.40	0.650	0.000	5.00	20.800	13.52	414.2	0.0	1576.6
42.75	Bot - Section 2	1.00	0.78	17.739	19.51	347.81	0.650	0.000	2.75	11.262	7.32	228.5	0.0	853.6
45.00		1.00	0.79	18.000	19.80	347.14	0.650	0.000	2.25	9.288	6.04	191.3	0.0	1307.9
49.00	Top - Section 1	1.00	0.81	18.444	20.29	345.58	0.650	0.000	4.00	16.303	10.60	344.0	0.0	2295.3
50.00		1.00	0.81	18.551	20.41	351.59	0.650	0.000	1.00	4.034	2.62	85.6	0.0	267.8
55.00		1.00	0.83	19.063	20.97	349.03	0.650	0.000	5.00	19.920	12.95	434.4	0.0	1322.4
60.00		1.00	0.85	19.543	21.50	345.92	0.650	0.000	5.00	19.503	12.68	436.0	0.0	1294.4
65.00		1.00	0.87	19.995	21.99	342.34	0.650	0.000	5.00	19.086	12.41	436.6	0.0	1266.5
70.00		1.00	0.89	20.422	22.46	338.35	0.650	0.000	5.00	18.670	12.14	436.2	0.0	1238.6
75.00		1.00	0.91	20.829	22.91	333.98	0.650	0.000	5.00	18.253	11.86	434.9	0.0	1210.7
80.00		1.00	0.93	21.217	23.34	329.29	0.650	0.000	5.00	17.836	11.59	432.9	0.0	1182.7
85.00		1.00	0.94	21.587	23.75	324.30	0.650	0.000	5.00	17.419	11.32	430.2	0.0	1154.8
86.50	Bot - Section 3	1.00	0.95	21.696	23.87	322.75	0.650	0.000	1.50	5.145	3.34	127.7	0.0	341.0
90.00		1.00	0.96	21.943	24.14	319.04	0.650	0.000	3.50	12.080	7.85	303.2	0.0	1473.3
91.75	Top - Section 2	1.00	0.96	22.064	24.27	317.14	0.650	0.000	1.75	5.963	3.88	150.5	0.0	727.1
95.00		1.00	0.97	22.284	24.51	319.61	0.650	0.000	3.25	10.940	7.11	278.9	0.0	622.4
100.00		1.00	0.99	22.613	24.87	313.93	0.650	0.000	5.00	16.486	10.72	426.5	0.0	937.8
105.00		1.00	1.00	22.931	25.22	308.03	0.650	0.000	5.00	16.069	10.45	421.5	0.0	913.8
110.00		1.00	1.02	23.238	25.56	301.93	0.650	0.000	5.00	15.653	10.17	416.1	0.0	889.9
115.00		1.00	1.03	23.535	25.89	295.66	0.650	0.000	5.00	15.236	9.90	410.2	0.0	865.9
120.00		1.00	1.04	23.823	26.20	289.21	0.650	0.000	5.00	14.819	9.63	403.9	0.0	842.0
125.00		1.00	1.05	24.102	26.51	282.60	0.650	0.000	5.00	14.402	9.36	397.1	0.0	818.1
130.00		1.00	1.07	24.374	26.81	275.85	0.650	0.000	5.00	13.986	9.09	390.0	0.0	794.1
131.25	Bot - Section 4	1.00	1.07	24.440	26.88	274.13	0.650	0.000	1.25	3.431	2.23	95.9	0.0	194.8
135.00		1.00	1.08	24.638	27.10	268.95	0.650	0.000	3.75	10.296	6.69	290.2	0.0	966.6
135.50	Top - Section 3	1.00	1.08	24.664	27.13	268.25	0.650	0.000	0.50	1.355	0.88	38.2	0.0	127.2
137.00	Appurtenance(s)	1.00	1.08	24.742	27.22	270.42	0.650	0.000	1.50	4.040	2.63	114.4	0.0	153.5
140.00		1.00	1.09	24.895	27.38	266.20	0.650	0.000	3.00	7.968	5.18	226.9	0.0	302.7
145.00		1.00	1.10	25.146	27.66	259.06	0.650	0.000	5.00	12.947	8.42	372.4	0.0	491.7
147.00	Appurtenance(s)	1.00	1.10	25.245	27.77	256.17	0.650	0.000	2.00	5.062	3.29	146.2	0.0	192.2
150.00		1.00	1.11	25.391	27.93	251.80	0.650	0.000	3.00	7.468	4.85	216.9	0.0	283.5
155.00		1.00	1.12	25.630	28.19	244.42	0.650	0.000	5.00	12.113	7.87	355.2	0.0	459.8
157.00	Appurtenance(s)	1.00	1.12	25.724	28.30	241.44	0.650	0.000	2.00	4.729	3.07	139.2	0.0	179.4
160.00		1.00	1.13	25.863	28.45	236.94	0.650	0.000	3.00	6.968	4.53	206.2	0.0	264.4
165.00		1.00	1.14	26.092	28.70	229.35	0.650	0.000	5.00	11.280	7.33	336.7	0.0	427.8
167.00	Appurtenance(s)	1.00	1.14	26.182	28.80	226.28	0.650	0.000	2.00	4.395	2.86	131.6	0.0	166.7
170.00		1.00	1.15	26.315	28.95	221.66	0.650	0.000	3.00	6.468	4.20	194.7	0.0	245.2
175.00		1.00	1.16	26.534	29.19	213.87	0.650	0.000	5.00	10.446	6.79	317.1	0.0	395.9
176.00	Appurtenance(s)	1.00	1.16	26.577	29.24	212.30	0.650	0.000	1.00	2.039	1.33	62.0	0.0	77.3

Wind Loading - Shaft

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 10



Totals:	176.00	14,174.3	41,055.5
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Discrete Appurtenance Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

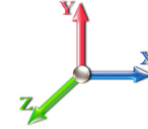


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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 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	176.00	4460 B25 + B66	3	26.620	29.282	0.50	0.75	2.47	259.20	0.000	1.000	115.83	0.00	115.83
2	176.00	4449 B71 + B85	3	26.620	29.282	0.50	0.75	2.97	263.52	0.000	1.000	139.14	0.00	139.14
3	176.00	APXVAALL24_43-U-NA20	3	26.620	29.282	0.55	0.75	33.24	442.08	0.000	1.000	1557.56	0.00	1557.56
4	176.00	AIR 6419 B41	3	26.620	29.282	0.52	0.75	10.28	479.52	0.000	1.000	481.86	0.00	481.86
5	176.00	KRY 112 89/4	3	26.620	29.282	0.50	0.75	0.98	55.44	0.000	1.000	45.91	0.00	45.91
6	176.00	KRY 112 489/2	3	26.620	29.282	0.50	0.75	0.98	55.44	0.000	1.000	45.91	0.00	45.91
7	176.00	RMQP-496-HK	1	26.620	29.282	1.00	1.00	46.00	2938.80	0.000	1.000	2155.19	0.00	2155.19
8	176.00	Lightning Rod	1	26.727	29.400	1.00	1.00	1.05	42.00	0.000	3.500	49.39	0.00	172.87
9	176.00	MHA FE15501P77/75	6	26.620	29.282	0.49	0.75	2.72	79.20	0.000	1.000	127.45	0.00	127.45
10	167.00	RRH2X60-AWS	3	26.182	28.800	0.54	0.80	5.63	216.00	0.000	0.000	259.34	0.00	0.00
11	167.00	RRH2X60-700	3	26.182	28.800	0.54	0.80	5.63	216.00	0.000	0.000	259.34	0.00	0.00
12	167.00	Low Profile	1	26.182	28.800	1.00	1.00	22.00	1800.00	0.000	0.000	1013.76	0.00	0.00
13	167.00	APL868013	2	26.182	28.800	0.74	0.80	4.26	15.12	0.000	0.000	196.10	0.00	0.00
14	167.00	SBNHH-1D65B	6	26.182	28.800	0.66	0.80	32.51	288.00	0.000	0.000	1498.03	0.00	0.00
15	167.00	LPA-80063-4CF-EDIN-5	4	26.182	28.800	0.74	0.80	18.30	96.00	0.000	0.000	843.37	0.00	0.00
16	167.00	DB-T16Z-8AB-0Z	1	26.182	28.800	1.00	1.00	4.80	22.68	0.000	0.000	221.18	0.00	0.00
17	157.00	ALU TD-RRH8x20-25	3	25.724	28.296	0.54	0.80	6.51	252.00	0.000	0.000	294.84	0.00	0.00
18	157.00	ALU 800 Mhz	6	25.724	28.296	0.54	0.80	8.01	381.60	0.000	0.000	362.55	0.00	0.00
19	157.00	ALU 1900 Mhz	3	25.724	28.296	0.54	0.80	4.45	216.00	0.000	0.000	201.66	0.00	0.00
20	157.00	Low Profile Platform	1	25.724	28.296	1.00	1.00	22.00	1800.00	0.000	0.000	996.03	0.00	0.00
21	157.00	Sitepro PRK-SFS-H-L	1	25.724	28.296	1.00	1.00	6.70	276.00	0.000	0.000	303.34	0.00	0.00
22	157.00	Sitepro HRK14-U	1	25.724	28.296	1.00	1.00	8.13	362.83	0.000	0.000	368.08	0.00	0.00
23	157.00	Sitepro PRK-1245L	1	25.724	28.296	1.00	1.00	9.50	557.89	0.000	0.000	430.10	0.00	0.00
24	157.00	Commscope	3	25.724	28.296	0.60	0.80	22.09	278.64	0.000	0.000	999.92	0.00	0.00
25	157.00	RFS APXVTM14-C-I20	3	25.724	28.296	0.62	0.80	11.72	202.32	0.000	0.000	530.45	0.00	0.00
26	147.00	RDIDC-9181-PF-48	1	25.245	27.769	1.00	1.00	2.01	26.28	0.000	0.000	89.31	0.00	0.00
27	147.00	TA08025-B604	3	25.245	27.769	0.50	0.75	2.95	230.04	0.000	0.000	131.28	0.00	0.00
28	147.00	TA08025-B605	3	25.245	27.769	0.50	0.75	2.95	270.00	0.000	0.000	131.28	0.00	0.00
29	147.00	MC-PK8-DSH	1	25.245	27.769	1.00	1.00	37.59	2072.40	0.000	0.000	1670.15	0.00	0.00
30	147.00	MX08FRO665-21	3	25.245	27.769	0.55	0.75	20.80	232.20	0.000	0.000	923.97	0.00	0.00
31	137.00	B2 B66A 8843	3	24.742	27.216	0.50	0.75	2.47	252.00	0.000	0.000	107.66	0.00	0.00
32	137.00	4449 B5/B12	3	24.742	27.216	0.50	0.75	2.97	255.60	0.000	0.000	129.32	0.00	0.00
33	137.00	LP Platform-Round	1	24.742	27.216	1.00	1.00	22.00	1800.00	0.000	0.000	958.00	0.00	0.00
34	137.00	DC6-48-60-18-8F	1	24.742	27.216	1.00	1.00	1.47	39.36	0.000	0.000	64.01	0.00	0.00
35	137.00	DMP65R-BU6DA	3	24.742	27.216	0.54	0.75	20.59	285.84	0.000	0.000	896.61	0.00	0.00
36	137.00	HRK14	1	24.742	27.216	1.00	1.00	8.13	362.83	0.000	0.000	354.02	0.00	0.00
37	137.00	7020	12	24.742	27.216	0.50	0.75	2.41	31.68	0.000	0.000	105.03	0.00	0.00
38	137.00	7770.00	3	24.742	27.216	0.55	0.75	9.03	126.00	0.000	0.000	393.38	0.00	0.00
39	137.00	LGP21401	6	24.742	27.216	0.50	0.75	3.89	136.80	0.000	0.000	169.36	0.00	0.00
40	137.00	LGP21903	6	24.742	27.216	0.50	0.75	0.81	36.00	4.341	0.000	35.45	96.16	0.00
41	137.00	HPA-65R-BUU-H6	3	24.742	27.216	0.64	0.75	18.47	183.60	0.000	0.000	804.49	0.00	0.00
42	137.00	Smart Bias T 1001940	3	24.742	27.216	0.50	0.75	0.14	7.20	7.041	0.000	5.91	26.00	0.00

Totals: 17,944.12 20,465.55

Total Applied Force Summary

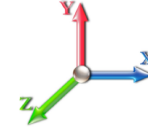
Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 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
5.00		434.61	2043.14	0.00	0.00
10.00		426.97	2011.23	0.00	0.00
15.00		419.34	1979.31	0.00	0.00
20.00		411.70	1947.39	0.00	0.00
25.00		404.06	1915.48	0.00	0.00
30.00		396.76	1883.56	0.00	0.00
35.00		406.64	1851.64	0.00	0.00
40.00		414.15	1819.73	0.00	0.00
42.75		228.55	987.24	0.00	0.00
45.00		191.25	1417.31	0.00	0.00
49.00		343.98	2489.73	0.00	0.00
50.00		85.61	316.44	0.00	0.00
55.00		434.41	1565.44	0.00	0.00
60.00		436.03	1537.51	0.00	0.00
65.00		436.58	1509.59	0.00	0.00
70.00		436.18	1481.66	0.00	0.00
75.00		434.94	1453.73	0.00	0.00
80.00		432.91	1425.81	0.00	0.00
85.00		430.19	1397.88	0.00	0.00
86.50		127.68	413.92	0.00	0.00
90.00		303.24	1643.46	0.00	0.00
91.75		150.52	812.20	0.00	0.00
95.00		278.89	780.38	0.00	0.00
100.00		426.49	1180.84	0.00	0.00
105.00		421.55	1156.90	0.00	0.00
110.00		416.11	1132.96	0.00	0.00
115.00		410.21	1109.02	0.00	0.00
120.00		403.87	1085.09	0.00	0.00
125.00		397.11	1061.15	0.00	0.00
130.00		389.96	1037.21	0.00	0.00
131.25		95.94	255.56	0.00	0.00
135.00		290.20	1148.91	0.00	0.00
135.50		38.24	151.49	0.00	0.00
137.00	(45) attachments	4137.59	3743.32	122.16	0.00
140.00		226.93	400.13	0.00	0.00
145.00		372.44	654.11	0.00	0.00
147.00	(11) attachments	3092.18	3088.10	0.00	0.00
150.00		216.92	377.38	0.00	0.00
155.00		355.16	616.19	0.00	0.00
157.00	(22) attachments	4626.12	4569.29	0.00	0.00
160.00		206.16	348.72	0.00	0.00
165.00		336.68	568.44	0.00	0.00
167.00	(20) attachments	4422.77	2876.71	0.00	0.00
170.00		194.71	299.19	0.00	0.00
175.00		317.09	485.88	0.00	0.00
176.00	(26) attachments	4780.24	4710.46	0.00	4841.72

Total Applied Force Summary

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (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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Totals:	34,639.86	66,740.84	122.16	4,841.72
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Linear Appurtenance Segment Forces (Factored)

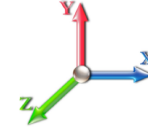
Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 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)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	16.018	0.00	1.64
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	16.018	0.00	6.24
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	16.018	0.00	1.64
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	16.018	0.00	6.24
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	16.018	0.00	1.64
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	16.018	0.00	6.24
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	16.018	0.00	1.64
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	16.018	0.00	6.24
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	16.018	0.00	1.64
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	16.018	0.00	6.24
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	16.031	0.00	1.64
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	16.031	0.00	6.24
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	16.753	0.00	1.64
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	16.753	0.00	6.24
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	17.405	0.00	1.64
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	17.405	0.00	6.24
42.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.021	0.000	17.739	0.00	0.90
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.63	0.14	0.00	0.021	0.000	17.739	0.00	3.43
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.021	0.000	18.000	0.00	0.74
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.63	0.12	0.00	0.021	0.000	18.000	0.00	2.81
49.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.021	0.000	18.444	0.00	1.31
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.021	0.000	18.444	0.00	4.99
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.021	0.000	18.551	0.00	0.33
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.021	0.000	18.551	0.00	1.25
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	19.063	0.00	1.64
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	19.063	0.00	6.24
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	19.543	0.00	1.64
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	19.543	0.00	6.24
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	19.995	0.00	1.64
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	19.995	0.00	6.24
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	20.422	0.00	1.64
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	20.422	0.00	6.24
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	20.829	0.00	1.64
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	20.829	0.00	6.24
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	21.217	0.00	1.64
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	21.217	0.00	6.24
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	21.587	0.00	1.64
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	21.587	0.00	6.24
86.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.025	0.000	21.696	0.00	0.49
86.50	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.025	0.000	21.696	0.00	1.87
90.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.025	0.000	21.943	0.00	1.15
90.00	Step bolts (ladder)	Yes	3.50	0.000	0.63	0.18	0.00	0.025	0.000	21.943	0.00	4.37
91.75	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.025	0.000	22.064	0.00	0.57
91.75	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.09	0.00	0.025	0.000	22.064	0.00	2.18
95.00	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.025	0.000	22.284	0.00	1.06
95.00	Step bolts (ladder)	Yes	3.25	0.000	0.63	0.17	0.00	0.025	0.000	22.284	0.00	4.06
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	22.613	0.00	1.64

Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



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)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	22.613	0.00	6.24
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	22.931	0.00	1.64
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	22.931	0.00	6.24
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.027	0.000	23.238	0.00	1.64
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.027	0.000	23.238	0.00	6.24
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	23.535	0.00	1.64
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	23.535	0.00	6.24
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	23.823	0.00	1.64
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	23.823	0.00	6.24
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.029	0.000	24.102	0.00	1.64
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.029	0.000	24.102	0.00	6.24
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.030	0.000	24.374	0.00	1.64
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.030	0.000	24.374	0.00	6.24
131.25	Safety Cable	Yes	1.25	0.000	0.38	0.04	0.00	0.031	0.000	24.440	0.00	0.41
131.25	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.07	0.00	0.031	0.000	24.440	0.00	1.56
135.00	Safety Cable	Yes	3.75	0.000	0.38	0.12	0.00	0.031	0.000	24.638	0.00	1.23
135.00	Step bolts (ladder)	Yes	3.75	0.000	0.63	0.20	0.00	0.031	0.000	24.638	0.00	4.68
135.50	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.032	0.000	24.664	0.00	0.16
135.50	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.03	0.00	0.032	0.000	24.664	0.00	0.62
137.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.031	0.000	24.742	0.00	0.49
137.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.031	0.000	24.742	0.00	1.87
140.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.032	0.000	24.895	0.00	0.98
140.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.032	0.000	24.895	0.00	3.74
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.033	0.000	25.146	0.00	1.64
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.033	0.000	25.146	0.00	6.24
147.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.033	0.000	25.245	0.00	0.66
147.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.033	0.000	25.245	0.00	2.50
150.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.034	0.000	25.391	0.00	0.98
150.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.034	0.000	25.391	0.00	3.74
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.035	0.000	25.630	0.00	1.64
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.035	0.000	25.630	0.00	6.24
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.036	0.000	25.724	0.00	0.66
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.036	0.000	25.724	0.00	2.50
160.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.036	0.000	25.863	0.00	0.98
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.036	0.000	25.863	0.00	3.74
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.037	0.000	26.092	0.00	1.64
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.037	0.000	26.092	0.00	6.24
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.038	0.000	26.182	0.00	0.66
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.038	0.000	26.182	0.00	2.50
170.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.039	0.000	26.315	0.00	0.98
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.039	0.000	26.315	0.00	3.74
175.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.040	0.000	26.534	0.00	1.64
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.040	0.000	26.534	0.00	6.24
176.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.041	0.000	26.577	0.00	0.33
176.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.041	0.000	26.577	0.00	1.25
Totals:											0.0	277.3

Calculated Forces

Structure: CT02216-S-SBA
Site Name: Glastonbury
Height: 176.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

4/19/2022



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Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 26

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	-66.68	-34.75	-0.12	-4762.5	0.00	4762.53	6372.54	3186.27	14661.2	7341.49	0.00	0.000	0.000	0.659
5.00	-64.53	-34.53	-0.12	-4588.7	0.00	4588.78	6292.68	3146.34	14220.7	7120.95	0.10	-0.188	0.000	0.655
10.00	-62.40	-34.30	-0.12	-4416.1	0.00	4416.15	6211.66	3105.83	13784.2	6902.39	0.40	-0.380	0.000	0.650
15.00	-60.31	-34.07	-0.12	-4244.6	0.00	4244.65	6129.50	3064.75	13351.9	6685.89	0.90	-0.574	0.000	0.645
20.00	-58.25	-33.84	-0.12	-4074.3	0.00	4074.30	6046.18	3023.09	12923.8	6471.51	1.61	-0.771	0.000	0.639
25.00	-56.22	-33.60	-0.12	-3905.1	0.00	3905.12	5961.72	2980.86	12500.0	6259.33	2.52	-0.971	0.000	0.633
30.00	-54.23	-33.36	-0.12	-3737.1	0.00	3737.11	5876.11	2938.05	12080.8	6049.42	3.65	-1.174	0.000	0.627
35.00	-52.27	-33.11	-0.12	-3570.2	0.00	3570.29	5789.35	2894.67	11666.3	5841.84	4.99	-1.380	0.000	0.620
40.00	-50.37	-32.79	-0.12	-3404.7	0.00	3404.76	5679.25	2839.63	11212.8	5614.75	6.55	-1.588	0.000	0.615
42.75	-49.33	-32.62	-0.12	-3314.6	0.00	3314.60	5615.38	2807.69	10960.7	5488.51	7.49	-1.705	0.000	0.613
45.00	-47.84	-32.50	-0.12	-3241.2	0.00	3241.20	5563.11	2781.56	10756.6	5386.29	8.32	-1.802	0.000	0.610
49.00	-45.30	-32.16	-0.12	-3111.2	0.00	3111.20	4756.80	2378.40	9239.06	4626.40	9.90	-1.974	0.000	0.682
50.00	-44.91	-32.17	-0.12	-3079.0	0.00	3079.04	4742.51	2371.25	9172.60	4593.12	10.32	-2.018	0.000	0.680
55.00	-43.23	-31.86	-0.12	-2918.1	0.00	2918.18	4670.33	2335.16	8842.49	4427.82	12.56	-2.250	0.000	0.669
60.00	-41.59	-31.53	-0.12	-2758.9	0.00	2758.91	4597.00	2298.50	8516.13	4264.39	15.04	-2.484	0.000	0.656
65.00	-39.97	-31.19	-0.12	-2601.2	0.00	2601.27	4522.52	2261.26	8193.68	4102.93	17.77	-2.720	0.000	0.643
70.00	-38.38	-30.84	-0.12	-2445.3	0.00	2445.33	4446.89	2223.45	7875.26	3943.48	20.74	-2.957	0.000	0.629
75.00	-36.83	-30.48	-0.12	-2291.1	0.00	2291.14	4354.69	2177.34	7534.33	3772.77	23.97	-3.195	0.000	0.616
80.00	-35.30	-30.11	-0.12	-2138.7	0.00	2138.75	4253.06	2126.53	7185.02	3597.85	27.44	-3.434	0.000	0.603
85.00	-33.86	-29.69	-0.12	-1988.1	-0.01	1988.19	4151.43	2075.72	6843.99	3427.08	31.16	-3.673	0.000	0.588
86.50	-33.39	-29.61	-0.12	-1943.6	-0.01	1943.65	4120.95	2060.47	6743.30	3376.66	32.33	-3.746	0.000	0.584
90.00	-31.70	-29.26	-0.12	-1840.0	-0.01	1840.04	4049.81	2024.90	6511.26	3260.47	35.14	-3.915	0.000	0.572
91.75	-30.84	-29.12	-0.12	-1788.8	-0.01	1788.83	3441.70	1720.85	5608.94	2808.64	36.59	-4.000	0.000	0.646
95.00	-29.98	-28.90	-0.12	-1694.1	-0.01	1694.19	3401.05	1700.53	5452.51	2730.31	39.36	-4.156	0.000	0.630
100.00	-28.71	-28.51	-0.12	-1549.7	-0.01	1549.71	3337.56	1668.78	5214.58	2611.16	43.85	-4.413	0.000	0.602
105.00	-27.47	-28.12	-0.12	-1407.1	-0.01	1407.15	3272.92	1636.46	4980.08	2493.74	48.60	-4.666	0.000	0.573
110.00	-26.25	-27.72	-0.12	-1266.5	-0.01	1266.56	3194.68	1597.34	4730.71	2368.87	53.61	-4.913	0.000	0.543
115.00	-25.07	-27.32	-0.12	-1127.9	-0.01	1127.95	3107.57	1553.79	4474.96	2240.81	58.88	-5.153	0.000	0.512
120.00	-23.92	-26.91	-0.12	-991.35	-0.01	991.35	3020.47	1510.23	4226.32	2116.30	64.40	-5.384	0.000	0.477
125.00	-22.81	-26.50	-0.12	-856.80	-0.01	856.80	2933.36	1466.68	3984.78	1995.35	70.15	-5.604	0.000	0.437
130.00	-21.76	-26.06	-0.12	-724.30	-0.01	724.30	2846.25	1423.13	3750.35	1877.96	76.12	-5.808	0.000	0.394
131.25	-21.47	-25.97	-0.12	-691.73	-0.01	691.73	2824.47	1412.24	3692.86	1849.17	77.64	-5.859	0.000	0.382
135.00	-20.32	-25.59	-0.12	-594.34	-0.01	594.34	2759.14	1379.57	3523.03	1764.13	82.30	-5.999	0.000	0.345
135.50	-20.16	-25.55	-0.12	-581.54	-0.01	581.54	1734.08	867.04	2260.78	1132.07	82.92	-6.017	0.000	0.526
137.00	-16.84	-21.07	0.00	-543.22	0.00	543.22	1723.43	861.72	2225.81	1114.56	84.82	-6.070	0.000	0.498
140.00	-16.40	-20.85	0.00	-480.01	0.00	480.01	1701.83	850.91	2156.25	1079.73	88.67	-6.210	0.000	0.455
145.00	-15.74	-20.45	0.00	-375.75	0.00	375.75	1664.90	832.45	2041.54	1022.29	95.28	-6.417	0.000	0.378
147.00	-12.99	-17.05	0.00	-334.86	0.00	334.86	1649.80	824.90	1996.11	999.54	97.98	-6.493	0.000	0.343
150.00	-12.61	-16.82	0.00	-283.71	0.00	283.71	1626.81	813.41	1928.48	965.67	102.09	-6.596	0.000	0.302
155.00	-12.01	-16.41	0.00	-199.63	0.00	199.63	1587.58	793.79	1817.22	909.96	109.06	-6.738	0.000	0.227
157.00	-8.01	-11.29	0.00	-166.80	0.00	166.80	1571.57	785.79	1773.24	887.94	111.89	-6.786	0.000	0.193
160.00	-7.67	-11.05	0.00	-132.94	0.00	132.94	1547.20	773.60	1707.88	855.21	116.16	-6.848	0.000	0.161
165.00	-7.14	-10.65	0.00	-77.68	0.00	77.68	1505.67	752.84	1600.62	801.50	123.36	-6.924	0.000	0.102
167.00	-4.81	-5.92	0.00	-56.37	0.00	56.37	1488.74	744.37	1558.33	780.32	126.26	-6.946	0.000	0.076
170.00	-4.54	-5.69	0.00	-38.62	0.00	38.62	1462.99	731.50	1495.57	748.90	130.62	-6.971	0.000	0.055
175.00	-4.09	-5.32	0.00	-10.16	0.00	10.16	1411.70	705.85	1385.55	693.80	137.92	-6.993	0.000	0.018
176.00	0.00	-4.78	0.00	-4.84	0.00	4.84	1400.09	700.04	1362.73	682.38	139.38	-6.994	0.000	0.007

Calculated Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 17



Wind Loading - Shaft

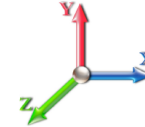
Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 0.90
Wind Load Factor 1.60



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	16.018	17.62	388.35	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	16.018	17.62	381.58	0.650	0.000	5.00	23.718	15.42	434.6	0.0	1350.0
10.00		1.00	0.70	16.018	17.62	374.82	0.650	0.000	5.00	23.301	15.15	427.0	0.0	1326.1
15.00		1.00	0.70	16.018	17.62	368.05	0.650	0.000	5.00	22.884	14.87	419.3	0.0	1302.2
20.00		1.00	0.70	16.018	17.62	361.29	0.650	0.000	5.00	22.467	14.60	411.7	0.0	1278.2
25.00		1.00	0.70	16.018	17.62	354.52	0.650	0.000	5.00	22.050	14.33	404.1	0.0	1254.3
30.00		1.00	0.70	16.031	17.63	347.90	0.650	0.000	5.00	21.634	14.06	396.8	0.0	1230.4
35.00		1.00	0.73	16.753	18.43	348.73	0.650	0.000	5.00	21.217	13.79	406.6	0.0	1206.4
40.00		1.00	0.76	17.405	19.15	348.40	0.650	0.000	5.00	20.800	13.52	414.2	0.0	1182.5
42.75	Bot - Section 2	1.00	0.78	17.739	19.51	347.81	0.650	0.000	2.75	11.262	7.32	228.5	0.0	640.2
45.00		1.00	0.79	18.000	19.80	347.14	0.650	0.000	2.25	9.288	6.04	191.3	0.0	980.9
49.00	Top - Section 1	1.00	0.81	18.444	20.29	345.58	0.650	0.000	4.00	16.303	10.60	344.0	0.0	1721.5
50.00		1.00	0.81	18.551	20.41	351.59	0.650	0.000	1.00	4.034	2.62	85.6	0.0	200.9
55.00		1.00	0.83	19.063	20.97	349.03	0.650	0.000	5.00	19.920	12.95	434.4	0.0	991.8
60.00		1.00	0.85	19.543	21.50	345.92	0.650	0.000	5.00	19.503	12.68	436.0	0.0	970.8
65.00		1.00	0.87	19.995	21.99	342.34	0.650	0.000	5.00	19.086	12.41	436.6	0.0	949.9
70.00		1.00	0.89	20.422	22.46	338.35	0.650	0.000	5.00	18.670	12.14	436.2	0.0	928.9
75.00		1.00	0.91	20.829	22.91	333.98	0.650	0.000	5.00	18.253	11.86	434.9	0.0	908.0
80.00		1.00	0.93	21.217	23.34	329.29	0.650	0.000	5.00	17.836	11.59	432.9	0.0	887.0
85.00		1.00	0.94	21.587	23.75	324.30	0.650	0.000	5.00	17.419	11.32	430.2	0.0	866.1
86.50	Bot - Section 3	1.00	0.95	21.696	23.87	322.75	0.650	0.000	1.50	5.145	3.34	127.7	0.0	255.7
90.00		1.00	0.96	21.943	24.14	319.04	0.650	0.000	3.50	12.080	7.85	303.2	0.0	1105.0
91.75	Top - Section 2	1.00	0.96	22.064	24.27	317.14	0.650	0.000	1.75	5.963	3.88	150.5	0.0	545.3
95.00		1.00	0.97	22.284	24.51	319.61	0.650	0.000	3.25	10.940	7.11	278.9	0.0	466.8
100.00		1.00	0.99	22.613	24.87	313.93	0.650	0.000	5.00	16.486	10.72	426.5	0.0	703.3
105.00		1.00	1.00	22.931	25.22	308.03	0.650	0.000	5.00	16.069	10.45	421.5	0.0	685.4
110.00		1.00	1.02	23.238	25.56	301.93	0.650	0.000	5.00	15.653	10.17	416.1	0.0	667.4
115.00		1.00	1.03	23.535	25.89	295.66	0.650	0.000	5.00	15.236	9.90	410.2	0.0	649.5
120.00		1.00	1.04	23.823	26.20	289.21	0.650	0.000	5.00	14.819	9.63	403.9	0.0	631.5
125.00		1.00	1.05	24.102	26.51	282.60	0.650	0.000	5.00	14.402	9.36	397.1	0.0	613.6
130.00		1.00	1.07	24.374	26.81	275.85	0.650	0.000	5.00	13.986	9.09	390.0	0.0	595.6
131.25	Bot - Section 4	1.00	1.07	24.440	26.88	274.13	0.650	0.000	1.25	3.431	2.23	95.9	0.0	146.1
135.00		1.00	1.08	24.638	27.10	268.95	0.650	0.000	3.75	10.296	6.69	290.2	0.0	724.9
135.50	Top - Section 3	1.00	1.08	24.664	27.13	268.25	0.650	0.000	0.50	1.355	0.88	38.2	0.0	95.4
137.00	Appurtenance(s)	1.00	1.08	24.742	27.22	270.42	0.650	0.000	1.50	4.040	2.63	114.4	0.0	115.1
140.00		1.00	1.09	24.895	27.38	266.20	0.650	0.000	3.00	7.968	5.18	226.9	0.0	227.0
145.00		1.00	1.10	25.146	27.66	259.06	0.650	0.000	5.00	12.947	8.42	372.4	0.0	368.8
147.00	Appurtenance(s)	1.00	1.10	25.245	27.77	256.17	0.650	0.000	2.00	5.062	3.29	146.2	0.0	144.2
150.00		1.00	1.11	25.391	27.93	251.80	0.650	0.000	3.00	7.468	4.85	216.9	0.0	212.6
155.00		1.00	1.12	25.630	28.19	244.42	0.650	0.000	5.00	12.113	7.87	355.2	0.0	344.8
157.00	Appurtenance(s)	1.00	1.12	25.724	28.30	241.44	0.650	0.000	2.00	4.729	3.07	139.2	0.0	134.6
160.00		1.00	1.13	25.863	28.45	236.94	0.650	0.000	3.00	6.968	4.53	206.2	0.0	198.3
165.00		1.00	1.14	26.092	28.70	229.35	0.650	0.000	5.00	11.280	7.33	336.7	0.0	320.9
167.00	Appurtenance(s)	1.00	1.14	26.182	28.80	226.28	0.650	0.000	2.00	4.395	2.86	131.6	0.0	125.0
170.00		1.00	1.15	26.315	28.95	221.66	0.650	0.000	3.00	6.468	4.20	194.7	0.0	183.9
175.00		1.00	1.16	26.534	29.19	213.87	0.650	0.000	5.00	10.446	6.79	317.1	0.0	296.9
176.00	Appurtenance(s)	1.00	1.16	26.577	29.24	212.30	0.650	0.000	1.00	2.039	1.33	62.0	0.0	58.0

Wind Loading - Shaft

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 19



Totals:	176.00	14,174.3	30,791.6
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Discrete Appurtenance Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

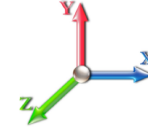


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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 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	176.00	4460 B25 + B66	3	26.620	29.282	0.50	0.75	2.47	194.40	0.000	1.000	115.83	0.00	115.83
2	176.00	4449 B71 + B85	3	26.620	29.282	0.50	0.75	2.97	197.64	0.000	1.000	139.14	0.00	139.14
3	176.00	APXVAALL24_43-U-NA20	3	26.620	29.282	0.55	0.75	33.24	331.56	0.000	1.000	1557.56	0.00	1557.56
4	176.00	AIR 6419 B41	3	26.620	29.282	0.52	0.75	10.28	359.64	0.000	1.000	481.86	0.00	481.86
5	176.00	KRY 112 89/4	3	26.620	29.282	0.50	0.75	0.98	41.58	0.000	1.000	45.91	0.00	45.91
6	176.00	KRY 112 489/2	3	26.620	29.282	0.50	0.75	0.98	41.58	0.000	1.000	45.91	0.00	45.91
7	176.00	RMQP-496-HK	1	26.620	29.282	1.00	1.00	46.00	2204.10	0.000	1.000	2155.19	0.00	2155.19
8	176.00	Lightning Rod	1	26.727	29.400	1.00	1.00	1.05	31.50	0.000	3.500	49.39	0.00	172.87
9	176.00	MHA FE15501P77/75	6	26.620	29.282	0.49	0.75	2.72	59.40	0.000	1.000	127.45	0.00	127.45
10	167.00	RRH2X60-AWS	3	26.182	28.800	0.54	0.80	5.63	162.00	0.000	0.000	259.34	0.00	0.00
11	167.00	RRH2X60-700	3	26.182	28.800	0.54	0.80	5.63	162.00	0.000	0.000	259.34	0.00	0.00
12	167.00	Low Profile	1	26.182	28.800	1.00	1.00	22.00	1350.00	0.000	0.000	1013.76	0.00	0.00
13	167.00	APL868013	2	26.182	28.800	0.74	0.80	4.26	11.34	0.000	0.000	196.10	0.00	0.00
14	167.00	SBNHH-1D65B	6	26.182	28.800	0.66	0.80	32.51	216.00	0.000	0.000	1498.03	0.00	0.00
15	167.00	LPA-80063-4CF-EDIN-5	4	26.182	28.800	0.74	0.80	18.30	72.00	0.000	0.000	843.37	0.00	0.00
16	167.00	DB-T16Z-8AB-0Z	1	26.182	28.800	1.00	1.00	4.80	17.01	0.000	0.000	221.18	0.00	0.00
17	157.00	ALU TD-RRH8x20-25	3	25.724	28.296	0.54	0.80	6.51	189.00	0.000	0.000	294.84	0.00	0.00
18	157.00	ALU 800 Mhz	6	25.724	28.296	0.54	0.80	8.01	286.20	0.000	0.000	362.55	0.00	0.00
19	157.00	ALU 1900 Mhz	3	25.724	28.296	0.54	0.80	4.45	162.00	0.000	0.000	201.66	0.00	0.00
20	157.00	Low Profile Platform	1	25.724	28.296	1.00	1.00	22.00	1350.00	0.000	0.000	996.03	0.00	0.00
21	157.00	Sitepro PRK-SFS-H-L	1	25.724	28.296	1.00	1.00	6.70	207.00	0.000	0.000	303.34	0.00	0.00
22	157.00	Sitepro HRK14-U	1	25.724	28.296	1.00	1.00	8.13	272.12	0.000	0.000	368.08	0.00	0.00
23	157.00	Sitepro PRK-1245L	1	25.724	28.296	1.00	1.00	9.50	418.42	0.000	0.000	430.10	0.00	0.00
24	157.00	Commscope	3	25.724	28.296	0.60	0.80	22.09	208.98	0.000	0.000	999.92	0.00	0.00
25	157.00	RFS APXVTM14-C-I20	3	25.724	28.296	0.62	0.80	11.72	151.74	0.000	0.000	530.45	0.00	0.00
26	147.00	RDIDC-9181-PF-48	1	25.245	27.769	1.00	1.00	2.01	19.71	0.000	0.000	89.31	0.00	0.00
27	147.00	TA08025-B604	3	25.245	27.769	0.50	0.75	2.95	172.53	0.000	0.000	131.28	0.00	0.00
28	147.00	TA08025-B605	3	25.245	27.769	0.50	0.75	2.95	202.50	0.000	0.000	131.28	0.00	0.00
29	147.00	MC-PK8-DSH	1	25.245	27.769	1.00	1.00	37.59	1554.30	0.000	0.000	1670.15	0.00	0.00
30	147.00	MX08FRO665-21	3	25.245	27.769	0.55	0.75	20.80	174.15	0.000	0.000	923.97	0.00	0.00
31	137.00	B2 B66A 8843	3	24.742	27.216	0.50	0.75	2.47	189.00	0.000	0.000	107.66	0.00	0.00
32	137.00	4449 B5/B12	3	24.742	27.216	0.50	0.75	2.97	191.70	0.000	0.000	129.32	0.00	0.00
33	137.00	LP Platform-Round	1	24.742	27.216	1.00	1.00	22.00	1350.00	0.000	0.000	958.00	0.00	0.00
34	137.00	DC6-48-60-18-8F	1	24.742	27.216	1.00	1.00	1.47	29.52	0.000	0.000	64.01	0.00	0.00
35	137.00	DMP65R-BU6DA	3	24.742	27.216	0.54	0.75	20.59	214.38	0.000	0.000	896.61	0.00	0.00
36	137.00	HRK14	1	24.742	27.216	1.00	1.00	8.13	272.12	0.000	0.000	354.02	0.00	0.00
37	137.00	7020	12	24.742	27.216	0.50	0.75	2.41	23.76	0.000	0.000	105.03	0.00	0.00
38	137.00	7770.00	3	24.742	27.216	0.55	0.75	9.03	94.50	0.000	0.000	393.38	0.00	0.00
39	137.00	LGP21401	6	24.742	27.216	0.50	0.75	3.89	102.60	0.000	0.000	169.36	0.00	0.00
40	137.00	LGP21903	6	24.742	27.216	0.50	0.75	0.81	27.00	4.341	0.000	35.45	96.16	0.00
41	137.00	HPA-65R-BUU-H6	3	24.742	27.216	0.64	0.75	18.47	137.70	0.000	0.000	804.49	0.00	0.00
42	137.00	Smart Bias T 1001940	3	24.742	27.216	0.50	0.75	0.14	5.40	7.041	0.000	5.91	26.00	0.00

Totals: 13,458.09

20,465.55

Total Applied Force Summary

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

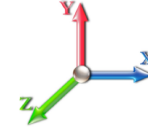


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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 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
5.00		434.61	1532.36	0.00	0.00
10.00		426.97	1508.42	0.00	0.00
15.00		419.34	1484.48	0.00	0.00
20.00		411.70	1460.55	0.00	0.00
25.00		404.06	1436.61	0.00	0.00
30.00		396.76	1412.67	0.00	0.00
35.00		406.64	1388.73	0.00	0.00
40.00		414.15	1364.79	0.00	0.00
42.75		228.55	740.43	0.00	0.00
45.00		191.25	1062.98	0.00	0.00
49.00		343.98	1867.30	0.00	0.00
50.00		85.61	237.33	0.00	0.00
55.00		434.41	1174.08	0.00	0.00
60.00		436.03	1153.14	0.00	0.00
65.00		436.58	1132.19	0.00	0.00
70.00		436.18	1111.25	0.00	0.00
75.00		434.94	1090.30	0.00	0.00
80.00		432.91	1069.35	0.00	0.00
85.00		430.19	1048.41	0.00	0.00
86.50		127.68	310.44	0.00	0.00
90.00		303.24	1232.60	0.00	0.00
91.75		150.52	609.15	0.00	0.00
95.00		278.89	585.29	0.00	0.00
100.00		426.49	885.63	0.00	0.00
105.00		421.55	867.68	0.00	0.00
110.00		416.11	849.72	0.00	0.00
115.00		410.21	831.77	0.00	0.00
120.00		403.87	813.82	0.00	0.00
125.00		397.11	795.86	0.00	0.00
130.00		389.96	777.91	0.00	0.00
131.25		95.94	191.67	0.00	0.00
135.00		290.20	861.68	0.00	0.00
135.50		38.24	113.62	0.00	0.00
137.00	(45) attachments	4137.59	2807.49	122.16	0.00
140.00		226.93	300.09	0.00	0.00
145.00		372.44	490.58	0.00	0.00
147.00	(11) attachments	3092.18	2316.07	0.00	0.00
150.00		216.92	283.03	0.00	0.00
155.00		355.16	462.15	0.00	0.00
157.00	(22) attachments	4626.12	3426.97	0.00	0.00
160.00		206.16	261.54	0.00	0.00
165.00		336.68	426.33	0.00	0.00
167.00	(20) attachments	4422.77	2157.53	0.00	0.00
170.00		194.71	224.39	0.00	0.00
175.00		317.09	364.41	0.00	0.00
176.00	(26) attachments	4780.24	3532.85	0.00	4841.72

Total Applied Force Summary

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (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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Totals:	34,639.86	50,055.63	122.16	4,841.72
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Linear Appurtenance Segment Forces (Factored)

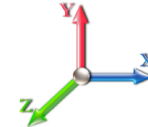
Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 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)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	16.018	0.00	1.23
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	16.018	0.00	4.68
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	16.018	0.00	1.23
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	16.018	0.00	4.68
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	16.018	0.00	1.23
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	16.018	0.00	4.68
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	16.018	0.00	1.23
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	16.018	0.00	4.68
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	16.018	0.00	1.23
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	16.018	0.00	4.68
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	16.031	0.00	1.23
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	16.031	0.00	4.68
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	16.753	0.00	1.23
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	16.753	0.00	4.68
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	17.405	0.00	1.23
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	17.405	0.00	4.68
42.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.021	0.000	17.739	0.00	0.68
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.63	0.14	0.00	0.021	0.000	17.739	0.00	2.57
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.021	0.000	18.000	0.00	0.55
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.63	0.12	0.00	0.021	0.000	18.000	0.00	2.11
49.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.021	0.000	18.444	0.00	0.98
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.021	0.000	18.444	0.00	3.74
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.021	0.000	18.551	0.00	0.25
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.021	0.000	18.551	0.00	0.94
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	19.063	0.00	1.23
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	19.063	0.00	4.68
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	19.543	0.00	1.23
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	19.543	0.00	4.68
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	19.995	0.00	1.23
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	19.995	0.00	4.68
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	20.422	0.00	1.23
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	20.422	0.00	4.68
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	20.829	0.00	1.23
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	20.829	0.00	4.68
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	21.217	0.00	1.23
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	21.217	0.00	4.68
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	21.587	0.00	1.23
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	21.587	0.00	4.68
86.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.025	0.000	21.696	0.00	0.37
86.50	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.025	0.000	21.696	0.00	1.40
90.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.025	0.000	21.943	0.00	0.86
90.00	Step bolts (ladder)	Yes	3.50	0.000	0.63	0.18	0.00	0.025	0.000	21.943	0.00	3.28
91.75	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.025	0.000	22.064	0.00	0.43
91.75	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.09	0.00	0.025	0.000	22.064	0.00	1.64
95.00	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.025	0.000	22.284	0.00	0.80
95.00	Step bolts (ladder)	Yes	3.25	0.000	0.63	0.17	0.00	0.025	0.000	22.284	0.00	3.04
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	22.613	0.00	1.23

Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 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)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	22.613	0.00	4.68
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	22.931	0.00	1.23
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	22.931	0.00	4.68
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.027	0.000	23.238	0.00	1.23
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.027	0.000	23.238	0.00	4.68
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	23.535	0.00	1.23
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	23.535	0.00	4.68
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	23.823	0.00	1.23
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	23.823	0.00	4.68
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.029	0.000	24.102	0.00	1.23
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.029	0.000	24.102	0.00	4.68
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.030	0.000	24.374	0.00	1.23
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.030	0.000	24.374	0.00	4.68
131.25	Safety Cable	Yes	1.25	0.000	0.38	0.04	0.00	0.031	0.000	24.440	0.00	0.31
131.25	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.07	0.00	0.031	0.000	24.440	0.00	1.17
135.00	Safety Cable	Yes	3.75	0.000	0.38	0.12	0.00	0.031	0.000	24.638	0.00	0.92
135.00	Step bolts (ladder)	Yes	3.75	0.000	0.63	0.20	0.00	0.031	0.000	24.638	0.00	3.51
135.50	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.032	0.000	24.664	0.00	0.12
135.50	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.03	0.00	0.032	0.000	24.664	0.00	0.47
137.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.031	0.000	24.742	0.00	0.37
137.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.031	0.000	24.742	0.00	1.40
140.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.032	0.000	24.895	0.00	0.74
140.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.032	0.000	24.895	0.00	2.81
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.033	0.000	25.146	0.00	1.23
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.033	0.000	25.146	0.00	4.68
147.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.033	0.000	25.245	0.00	0.49
147.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.033	0.000	25.245	0.00	1.87
150.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.034	0.000	25.391	0.00	0.74
150.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.034	0.000	25.391	0.00	2.81
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.035	0.000	25.630	0.00	1.23
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.035	0.000	25.630	0.00	4.68
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.036	0.000	25.724	0.00	0.49
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.036	0.000	25.724	0.00	1.87
160.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.036	0.000	25.863	0.00	0.74
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.036	0.000	25.863	0.00	2.81
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.037	0.000	26.092	0.00	1.23
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.037	0.000	26.092	0.00	4.68
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.038	0.000	26.182	0.00	0.49
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.038	0.000	26.182	0.00	1.87
170.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.039	0.000	26.315	0.00	0.74
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.039	0.000	26.315	0.00	2.81
175.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.040	0.000	26.534	0.00	1.23
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.040	0.000	26.534	0.00	4.68
176.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.041	0.000	26.577	0.00	0.25
176.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.041	0.000	26.577	0.00	0.94
Totals:											0.0	208.0

Calculated Forces

Structure: CT02216-S-SBA
Site Name: Glastonbury
Height: 176.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

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

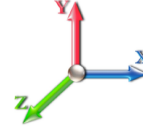
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Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 0.90
Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-50.00	-34.72	-0.12	-4683.4	0.00	4683.45	6372.54	3186.27	14661.2	7341.49	0.00	0.000	0.000	0.646
5.00	-48.35	-34.44	-0.12	-4509.8	0.00	4509.85	6292.68	3146.34	14220.7	7120.95	0.10	-0.185	0.000	0.641
10.00	-46.74	-34.16	-0.12	-4337.6	0.00	4337.64	6211.66	3105.83	13784.2	6902.39	0.39	-0.373	0.000	0.636
15.00	-45.14	-33.88	-0.12	-4166.8	0.00	4166.83	6129.50	3064.75	13351.9	6685.89	0.89	-0.564	0.000	0.631
20.00	-43.57	-33.60	-0.12	-3997.4	0.00	3997.42	6046.18	3023.09	12923.8	6471.51	1.58	-0.757	0.000	0.625
25.00	-42.03	-33.32	-0.12	-3829.4	0.00	3829.41	5961.72	2980.86	12500.0	6259.33	2.48	-0.954	0.000	0.619
30.00	-40.51	-33.04	-0.12	-3662.8	0.00	3662.80	5876.11	2938.05	12080.8	6049.42	3.58	-1.153	0.000	0.612
35.00	-39.01	-32.74	-0.12	-3497.6	0.00	3497.60	5789.35	2894.67	11666.3	5841.84	4.90	-1.354	0.000	0.606
40.00	-37.57	-32.40	-0.12	-3333.8	0.00	3333.89	5679.25	2839.63	11212.8	5614.75	6.43	-1.558	0.000	0.601
42.75	-36.77	-32.22	-0.12	-3244.7	0.00	3244.79	5615.38	2807.69	10960.7	5488.51	7.36	-1.673	0.000	0.598
45.00	-35.64	-32.08	-0.12	-3172.3	0.00	3172.31	5563.11	2781.56	10756.6	5386.29	8.17	-1.768	0.000	0.595
49.00	-33.73	-31.73	-0.12	-3044.0	0.00	3044.01	4756.80	2378.40	9239.06	4626.40	9.72	-1.936	0.000	0.665
50.00	-33.42	-31.72	-0.12	-3012.2	0.00	3012.28	4742.51	2371.25	9172.60	4593.12	10.13	-1.979	0.000	0.663
55.00	-32.14	-31.37	-0.12	-2853.6	0.00	2853.69	4670.33	2335.16	8842.49	4427.82	12.33	-2.206	0.000	0.652
60.00	-30.88	-31.01	-0.12	-2696.8	0.00	2696.84	4597.00	2298.50	8516.13	4264.39	14.76	-2.435	0.000	0.639
65.00	-29.65	-30.64	-0.12	-2541.7	0.00	2541.79	4522.52	2261.26	8193.68	4102.93	17.43	-2.665	0.000	0.626
70.00	-28.43	-30.27	-0.12	-2388.5	0.00	2388.57	4446.89	2223.45	7875.26	3943.48	20.35	-2.897	0.000	0.612
75.00	-27.25	-29.89	-0.12	-2237.2	0.00	2237.21	4354.69	2177.34	7534.33	3772.77	23.50	-3.130	0.000	0.599
80.00	-26.08	-29.50	-0.12	-2087.7	0.00	2087.77	4253.06	2126.53	7185.02	3597.85	26.90	-3.363	0.000	0.587
85.00	-24.99	-29.08	-0.12	-1940.2	0.00	1940.25	4151.43	2075.72	6843.99	3427.08	30.55	-3.596	0.000	0.572
86.50	-24.63	-28.98	-0.12	-1896.6	0.00	1896.64	4120.95	2060.47	6743.30	3376.66	31.69	-3.667	0.000	0.568
90.00	-23.35	-28.65	-0.12	-1795.2	0.00	1795.21	4049.81	2024.90	6511.26	3260.47	34.44	-3.832	0.000	0.557
91.75	-22.70	-28.50	-0.12	-1745.0	0.00	1745.08	3441.70	1720.85	5608.94	2808.64	35.86	-3.915	0.000	0.628
95.00	-22.03	-28.26	-0.12	-1652.4	-0.01	1652.44	3401.05	1700.53	5452.51	2730.31	38.57	-4.067	0.000	0.612
100.00	-21.06	-27.86	-0.12	-1511.1	-0.01	1511.13	3337.56	1668.78	5214.58	2611.16	42.96	-4.318	0.000	0.585
105.00	-20.11	-27.46	-0.12	-1371.8	-0.01	1371.82	3272.92	1636.46	4980.08	2493.74	47.61	-4.564	0.000	0.557
110.00	-19.19	-27.06	-0.12	-1234.5	-0.01	1234.51	3194.68	1597.34	4730.71	2368.87	52.52	-4.805	0.000	0.527
115.00	-18.29	-26.65	-0.12	-1099.2	-0.01	1099.22	3107.57	1553.79	4474.96	2240.81	57.67	-5.039	0.000	0.497
120.00	-17.41	-26.24	-0.12	-965.97	-0.01	965.97	3020.47	1510.23	4226.32	2116.30	63.07	-5.264	0.000	0.463
125.00	-16.56	-25.83	-0.12	-834.76	-0.01	834.76	2933.36	1466.68	3984.78	1995.35	68.69	-5.478	0.000	0.424
130.00	-15.77	-25.40	-0.12	-705.60	-0.01	705.60	2846.25	1423.13	3750.35	1877.96	74.53	-5.678	0.000	0.382
131.25	-15.55	-25.31	-0.12	-673.84	-0.01	673.84	2824.47	1412.24	3692.86	1849.17	76.02	-5.727	0.000	0.370
135.00	-14.69	-24.96	-0.12	-578.92	-0.01	578.92	2759.14	1379.57	3523.03	1764.13	80.56	-5.863	0.000	0.334
135.50	-14.57	-24.92	-0.12	-566.44	-0.01	566.44	1734.08	867.04	2260.78	1132.07	81.18	-5.881	0.000	0.510
137.00	-12.16	-20.53	0.00	-529.06	0.00	529.06	1723.43	861.72	2225.81	1114.56	83.03	-5.932	0.000	0.482
140.00	-11.83	-20.31	0.00	-467.47	0.00	467.47	1701.83	850.91	2156.25	1079.73	86.80	-6.069	0.000	0.440
145.00	-11.33	-19.91	0.00	-365.92	0.00	365.92	1664.90	832.45	2041.54	1022.29	93.25	-6.271	0.000	0.365
147.00	-9.35	-16.60	0.00	-326.09	0.00	326.09	1649.80	824.90	1996.11	999.54	95.89	-6.344	0.000	0.332
150.00	-9.06	-16.37	0.00	-276.29	0.00	276.29	1626.81	813.41	1928.48	965.67	99.90	-6.445	0.000	0.292
155.00	-8.61	-15.98	0.00	-194.42	0.00	194.42	1587.58	793.79	1817.22	909.96	106.72	-6.583	0.000	0.219
157.00	-5.73	-11.00	0.00	-162.46	0.00	162.46	1571.57	785.79	1773.24	887.94	109.48	-6.630	0.000	0.187
160.00	-5.48	-10.77	0.00	-129.47	0.00	129.47	1547.20	773.60	1707.88	855.21	113.66	-6.690	0.000	0.155
165.00	-5.09	-10.39	0.00	-75.63	0.00	75.63	1505.67	752.84	1600.62	801.50	120.69	-6.765	0.000	0.098
167.00	-3.47	-5.74	0.00	-54.86	0.00	54.86	1488.74	744.37	1558.33	780.32	123.52	-6.786	0.000	0.073
170.00	-3.26	-5.52	0.00	-37.63	0.00	37.63	1462.99	731.50	1495.57	748.90	127.79	-6.810	0.000	0.053
175.00	-2.94	-5.17	0.00	-10.01	0.00	10.01	1411.70	705.85	1385.55	693.80	134.91	-6.831	0.000	0.017
176.00	0.00	-4.78	0.00	-4.84	0.00	4.84	1400.09	700.04	1362.73	682.38	136.34	-6.833	0.000	0.007

Calculated Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (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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Wind Loading - Shaft

Structure: CT02216-S-SBA

Code: TIA-222-G

4/19/2022

Site Name: Glastonbury

Exposure: B

Height: 176.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 27

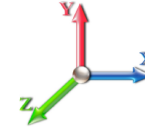


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

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
5.00		1.00	0.70	4.256	4.68	0.00	1.200	1.656	5.00	25.098	30.12	141.0	593.6	2393.6
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.775	5.00	24.780	29.74	139.2	626.5	2394.7
15.00		1.00	0.70	4.256	4.68	0.00	1.200	1.848	5.00	24.424	29.31	137.2	641.9	2378.1
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.902	5.00	24.053	28.86	135.1	649.5	2353.8
25.00		1.00	0.70	4.256	4.68	0.00	1.200	1.945	5.00	23.671	28.41	133.0	652.7	2325.1
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.981	5.00	23.285	27.94	130.9	652.9	2293.4
35.00		1.00	0.73	4.451	4.90	0.00	1.200	2.012	5.00	22.893	27.47	134.5	651.0	2259.5
40.00		1.00	0.76	4.625	5.09	0.00	1.200	2.039	5.00	22.499	27.00	137.3	647.5	2224.1
42.75	Bot - Section 2	1.00	0.78	4.713	5.18	0.00	1.200	2.052	2.75	12.203	14.64	75.9	354.8	1208.3
45.00		1.00	0.79	4.783	5.26	0.00	1.200	2.063	2.25	10.061	12.07	63.5	294.3	1602.2
49.00	Top - Section 1	1.00	0.81	4.901	5.39	0.00	1.200	2.081	4.00	17.690	21.23	114.4	519.7	2814.9
50.00		1.00	0.81	4.929	5.42	0.00	1.200	2.085	1.00	4.381	5.26	28.5	129.7	397.5
55.00		1.00	0.83	5.065	5.57	0.00	1.200	2.105	5.00	21.674	26.01	144.9	641.9	1964.2
60.00		1.00	0.85	5.193	5.71	0.00	1.200	2.123	5.00	21.273	25.53	145.8	634.6	1929.0
65.00		1.00	0.87	5.313	5.84	0.00	1.200	2.140	5.00	20.870	25.04	146.4	626.7	1893.2
70.00		1.00	0.89	5.426	5.97	0.00	1.200	2.156	5.00	20.466	24.56	146.6	618.3	1856.9
75.00		1.00	0.91	5.534	6.09	0.00	1.200	2.171	5.00	20.062	24.07	146.6	609.4	1820.0
80.00		1.00	0.93	5.637	6.20	0.00	1.200	2.185	5.00	19.657	23.59	146.3	600.0	1782.7
85.00		1.00	0.94	5.736	6.31	0.00	1.200	2.198	5.00	19.251	23.10	145.8	590.3	1745.1
86.50	Bot - Section 3	1.00	0.95	5.765	6.34	0.00	1.200	2.202	1.50	5.695	6.83	43.3	176.2	517.2
90.00		1.00	0.96	5.830	6.41	0.00	1.200	2.211	3.50	13.370	16.04	102.9	413.4	1886.7
91.75	Top - Section 2	1.00	0.96	5.862	6.45	0.00	1.200	2.215	1.75	6.610	7.93	51.1	205.4	932.6
95.00		1.00	0.97	5.921	6.51	0.00	1.200	2.223	3.25	12.144	14.57	94.9	377.1	999.5
100.00		1.00	0.99	6.008	6.61	0.00	1.200	2.234	5.00	18.348	22.02	145.5	569.5	1507.3
105.00		1.00	1.00	6.093	6.70	0.00	1.200	2.245	5.00	17.941	21.53	144.3	558.6	1472.4
110.00		1.00	1.02	6.174	6.79	0.00	1.200	2.256	5.00	17.533	21.04	142.9	547.4	1437.3
115.00		1.00	1.03	6.253	6.88	0.00	1.200	2.266	5.00	17.124	20.55	141.3	536.0	1402.0
120.00		1.00	1.04	6.330	6.96	0.00	1.200	2.276	5.00	16.715	20.06	139.7	524.4	1366.4
125.00		1.00	1.05	6.404	7.04	0.00	1.200	2.285	5.00	16.306	19.57	137.8	512.6	1330.7
130.00		1.00	1.07	6.476	7.12	0.00	1.200	2.294	5.00	15.897	19.08	135.9	500.6	1294.7
131.25	Bot - Section 4	1.00	1.07	6.494	7.14	0.00	1.200	2.296	1.25	3.910	4.69	33.5	124.4	319.2
135.00		1.00	1.08	6.546	7.20	0.00	1.200	2.303	3.75	11.735	14.08	101.4	371.7	1338.3
135.50	Top - Section 3	1.00	1.08	6.553	7.21	0.00	1.200	2.303	0.50	1.547	1.86	13.4	49.4	176.6
137.00	Appurtenance(s)	1.00	1.08	6.574	7.23	0.00	1.200	2.306	1.50	4.617	5.54	40.1	147.2	300.7
140.00		1.00	1.09	6.615	7.28	0.00	1.200	2.311	3.00	9.124	10.95	79.7	289.9	592.6
145.00		1.00	1.10	6.681	7.35	0.00	1.200	2.319	5.00	14.879	17.86	131.2	470.7	962.4
147.00	Appurtenance(s)	1.00	1.10	6.708	7.38	0.00	1.200	2.322	2.00	5.836	7.00	51.7	186.3	378.5
150.00		1.00	1.11	6.746	7.42	0.00	1.200	2.327	3.00	8.631	10.36	76.9	274.9	558.4
155.00		1.00	1.12	6.810	7.49	0.00	1.200	2.335	5.00	14.059	16.87	126.4	445.3	905.0
157.00	Appurtenance(s)	1.00	1.12	6.835	7.52	0.00	1.200	2.338	2.00	5.508	6.61	49.7	176.1	355.5
160.00		1.00	1.13	6.872	7.56	0.00	1.200	2.342	3.00	8.139	9.77	73.8	259.4	523.8
165.00		1.00	1.14	6.933	7.63	0.00	1.200	2.349	5.00	13.237	15.88	121.1	419.3	847.1
167.00	Appurtenance(s)	1.00	1.14	6.957	7.65	0.00	1.200	2.352	2.00	5.179	6.21	47.6	165.6	332.3
170.00		1.00	1.15	6.992	7.69	0.00	1.200	2.356	3.00	7.646	9.17	70.6	243.7	488.9
175.00		1.00	1.16	7.050	7.76	0.00	1.200	2.363	5.00	12.415	14.90	115.5	392.8	788.7
176.00	Appurtenance(s)	1.00	1.16	7.062	7.77	0.00	1.200	2.364	1.00	2.433	2.92	22.7	78.0	155.3

Wind Loading - Shaft

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 28



Totals:	176.00	4,827.9	60,806.5
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Discrete Appurtenance Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 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	176.00	4460 B25 + B66	3	7.073	7.780	0.50	0.75	3.49	413.60	0.000	1.000	27.13	0.00	27.13
2	176.00	4449 B71 + B85	3	7.073	7.780	0.50	0.75	4.13	323.01	0.000	1.000	32.15	0.00	32.15
3	176.00	APXVAALL24_43-U-NA20	3	7.073	7.780	0.55	0.75	37.53	2258.25	0.000	1.000	291.99	0.00	291.99
4	176.00	AIR 6419 B41	3	7.073	7.780	0.52	0.75	12.61	1188.91	0.000	1.000	98.07	0.00	98.07
5	176.00	KRY 112 89/4	3	7.073	7.780	0.50	0.75	2.23	112.06	0.000	1.000	17.35	0.00	17.35
6	176.00	KRY 112 489/2	3	7.073	7.780	0.50	0.75	2.23	112.06	0.000	1.000	17.35	0.00	17.35
7	176.00	RMQP-496-HK	1	7.073	7.780	1.00	1.00	89.51	5623.12	0.000	1.000	696.40	0.00	696.40
8	176.00	Lightning Rod	1	7.102	7.812	1.00	1.00	4.27	75.56	0.000	3.500	33.32	0.00	116.63
9	176.00	MHA FE15501P77/75	6	7.073	7.780	0.49	0.75	5.52	202.82	0.000	1.000	42.92	0.00	42.92
10	167.00	RRH2X60-AWS	3	6.957	7.652	0.54	0.80	7.34	508.62	0.000	0.000	56.15	0.00	0.00
11	167.00	RRH2X60-700	3	6.957	7.652	0.54	0.80	7.34	508.62	0.000	0.000	56.15	0.00	0.00
12	167.00	Low Profile	1	6.957	7.652	1.00	1.00	45.80	3264.05	0.000	0.000	350.49	0.00	0.00
13	167.00	APL868013	2	6.957	7.652	0.74	0.80	6.04	330.32	0.000	0.000	46.24	0.00	0.00
14	167.00	SBNHH-1D65B	6	6.957	7.652	0.66	0.80	39.66	2041.39	0.000	0.000	303.46	0.00	0.00
15	167.00	LPA-80063-4CF-EDIN-5	4	6.957	7.652	0.74	0.80	25.90	872.61	0.000	0.000	198.16	0.00	0.00
16	167.00	DB-T16Z-8AB-0Z	1	6.957	7.652	1.00	1.00	6.01	228.63	0.000	0.000	45.95	0.00	0.00
17	157.00	ALU TD-RRH8x20-25	3	6.835	7.518	0.54	0.80	8.31	727.95	0.000	0.000	62.47	0.00	0.00
18	157.00	ALU 800 Mhz	6	6.835	7.518	0.54	0.80	12.93	849.39	0.000	0.000	97.25	0.00	0.00
19	157.00	ALU 1900 Mhz	3	6.835	7.518	0.54	0.80	7.19	479.57	0.000	0.000	54.03	0.00	0.00
20	157.00	Low Profile Platform	1	6.835	7.518	1.00	1.00	45.66	3253.19	0.000	0.000	343.26	0.00	0.00
21	157.00	Sitepro PRK-SFS-H-L	1	6.835	7.518	1.00	1.00	16.10	605.12	0.000	0.000	121.02	0.00	0.00
22	157.00	Sitepro HRK14-U	1	6.835	7.518	1.00	1.00	18.77	1145.81	0.000	0.000	141.14	0.00	0.00
23	157.00	Sitepro PRK-1245L	1	6.835	7.518	1.00	1.00	22.82	897.51	0.000	0.000	171.60	0.00	0.00
24	157.00	Commscope	3	6.835	7.518	0.60	0.80	25.60	1228.70	0.000	0.000	192.45	0.00	0.00
25	157.00	RFS APXVTM14-C-I20	3	6.835	7.518	0.62	0.80	14.53	891.79	0.000	0.000	109.26	0.00	0.00
26	147.00	RDIDC-9181-PF-48	1	6.708	7.378	1.00	1.00	2.77	84.43	0.000	0.000	20.41	0.00	0.00
27	147.00	TA08025-B604	3	6.708	7.378	0.50	0.75	4.08	395.85	0.000	0.000	30.10	0.00	0.00
28	147.00	TA08025-B605	3	6.708	7.378	0.50	0.75	4.08	440.99	0.000	0.000	30.10	0.00	0.00
29	147.00	MC-PK8-DSH	1	6.708	7.378	1.00	1.00	100.44	3945.30	0.000	0.000	741.09	0.00	0.00
30	147.00	MX08FRO665-21	3	6.708	7.378	0.55	0.75	24.04	1191.74	0.000	0.000	177.38	0.00	0.00
31	137.00	B2 B66A 8843	3	6.574	7.231	0.50	0.75	3.50	400.37	0.000	0.000	25.32	0.00	0.00
32	137.00	4449 B5/B12	3	6.574	7.231	0.50	0.75	4.06	426.40	0.000	0.000	29.36	0.00	0.00
33	137.00	LP Platform-Round	1	6.574	7.231	1.00	1.00	45.34	3229.47	0.000	0.000	327.84	0.00	0.00
34	137.00	DC6-48-60-18-8F	1	6.574	7.231	1.00	1.00	2.39	106.92	0.000	0.000	17.32	0.00	0.00
35	137.00	DMP65R-BU6DA	3	6.574	7.231	0.54	0.75	23.72	1251.49	0.000	0.000	171.56	0.00	0.00
36	137.00	HRK14	1	6.574	7.231	1.00	1.00	18.63	1139.31	0.000	0.000	134.71	0.00	0.00
37	137.00	7020	12	6.574	7.231	0.50	0.75	6.27	159.06	0.000	0.000	45.34	0.00	0.00
38	137.00	7770.00	3	6.574	7.231	0.55	0.75	11.39	701.59	0.000	0.000	82.40	0.00	0.00
39	137.00	LGP21401	6	6.574	7.231	0.50	0.75	7.22	390.68	0.000	0.000	52.20	0.00	0.00
40	137.00	LGP21903	6	6.574	7.231	0.50	0.75	2.40	79.34	4.341	0.000	17.34	75.28	0.00
41	137.00	HPA-65R-BUU-H6	3	6.574	7.231	0.64	0.75	21.99	1219.31	0.000	0.000	159.03	0.00	0.00
42	137.00	Smart Bias T 1001940	3	6.574	7.231	0.50	0.75	0.60	8.22	7.041	0.000	4.36	30.69	0.00

Totals: 43,313.11

5,671.66

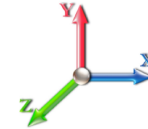
Total Applied Force Summary

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 30



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

Dead Load Factor 1.20
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
5.00		141.00	2676.89	0.00	0.00
10.00		139.21	2683.36	0.00	0.00
15.00		137.21	2670.34	0.00	0.00
20.00		135.13	2648.72	0.00	0.00
25.00		132.98	2622.16	0.00	0.00
30.00		130.92	2592.31	0.00	0.00
35.00		134.52	2560.12	0.00	0.00
40.00		137.34	2526.15	0.00	0.00
42.75		75.92	1374.82	0.00	0.00
45.00		63.52	1738.74	0.00	0.00
49.00		114.43	3058.37	0.00	0.00
50.00		28.51	458.40	0.00	0.00
55.00		144.91	2269.83	0.00	0.00
60.00		145.80	2235.67	0.00	0.00
65.00		146.35	2200.81	0.00	0.00
70.00		146.60	2165.35	0.00	0.00
75.00		146.56	2129.34	0.00	0.00
80.00		146.27	2092.86	0.00	0.00
85.00		145.76	2055.96	0.00	0.00
86.50		43.34	610.51	0.00	0.00
90.00		102.89	2104.84	0.00	0.00
91.75		51.15	1041.72	0.00	0.00
95.00		94.91	1202.52	0.00	0.00
100.00		145.52	1820.30	0.00	0.00
105.00		144.29	1786.07	0.00	0.00
110.00		142.89	1751.58	0.00	0.00
115.00		141.35	1716.83	0.00	0.00
120.00		139.66	1681.84	0.00	0.00
125.00		137.84	1646.62	0.00	0.00
130.00		135.90	1611.21	0.00	0.00
131.25		33.51	398.34	0.00	0.00
135.00		101.41	1576.06	0.00	0.00
135.50		13.38	208.33	0.00	0.00
137.00	(45) attachments	1106.83	9508.00	105.96	0.00
140.00		79.66	734.74	0.00	0.00
145.00		131.23	1199.80	0.00	0.00
147.00	(11) attachments	1050.77	6531.83	0.00	0.00
150.00		76.87	697.48	0.00	0.00
155.00		126.37	1137.37	0.00	0.00
157.00	(22) attachments	1342.18	10527.51	0.00	0.00
160.00		73.83	653.94	0.00	0.00
165.00		121.14	1064.51	0.00	0.00
167.00	(20) attachments	1104.18	8173.56	0.00	0.00
170.00		70.57	589.18	0.00	0.00
175.00		115.54	956.31	0.00	0.00
176.00	(26) attachments	1279.37	10498.20	0.00	1339.99

Total Applied Force Summary

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 31



Totals:	10,499.51	114,189.37	105.96	1,339.99
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Linear Appurtenance Segment Forces (Factored)

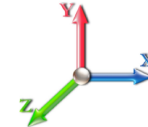
Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 32

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

Dead Load Factor 1.20
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)
5.00	Safety Cable	Yes	5.00	0.000	0.38	1.54	0.00	0.018	0.000	4.256	0.00	20.86
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.64	0.00	0.018	0.000	4.256	0.00	27.18
10.00	Safety Cable	Yes	5.00	0.000	0.38	1.64	0.00	0.018	0.000	4.256	0.00	23.53
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.74	0.00	0.018	0.000	4.256	0.00	29.96
15.00	Safety Cable	Yes	5.00	0.000	0.38	1.70	0.00	0.018	0.000	4.256	0.00	25.26
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.80	0.00	0.018	0.000	4.256	0.00	31.77
20.00	Safety Cable	Yes	5.00	0.000	0.38	1.74	0.00	0.019	0.000	4.256	0.00	26.58
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.85	0.00	0.019	0.000	4.256	0.00	33.13
25.00	Safety Cable	Yes	5.00	0.000	0.38	1.78	0.00	0.019	0.000	4.256	0.00	27.65
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.88	0.00	0.019	0.000	4.256	0.00	34.25
30.00	Safety Cable	Yes	5.00	0.000	0.38	1.81	0.00	0.019	0.000	4.260	0.00	28.56
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.91	0.00	0.019	0.000	4.260	0.00	35.19
35.00	Safety Cable	Yes	5.00	0.000	0.38	1.83	0.00	0.020	0.000	4.451	0.00	29.35
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.94	0.00	0.020	0.000	4.451	0.00	36.02
40.00	Safety Cable	Yes	5.00	0.000	0.38	1.86	0.00	0.020	0.000	4.625	0.00	30.06
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.96	0.00	0.020	0.000	4.625	0.00	36.75
42.75	Safety Cable	Yes	2.75	0.000	0.38	1.03	0.00	0.021	0.000	4.713	0.00	16.73
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.63	1.09	0.00	0.021	0.000	4.713	0.00	20.42
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.84	0.00	0.021	0.000	4.783	0.00	13.82
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.63	0.89	0.00	0.021	0.000	4.783	0.00	16.84
49.00	Safety Cable	Yes	4.00	0.000	0.38	1.51	0.00	0.021	0.000	4.901	0.00	24.94
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	1.60	0.00	0.021	0.000	4.901	0.00	30.32
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.38	0.00	0.021	0.000	4.929	0.00	6.26
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.40	0.00	0.021	0.000	4.929	0.00	7.60
55.00	Safety Cable	Yes	5.00	0.000	0.38	1.91	0.00	0.021	0.000	5.065	0.00	31.83
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.02	0.00	0.021	0.000	5.065	0.00	38.58
60.00	Safety Cable	Yes	5.00	0.000	0.38	1.93	0.00	0.022	0.000	5.193	0.00	32.33
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.03	0.00	0.022	0.000	5.193	0.00	39.10
65.00	Safety Cable	Yes	5.00	0.000	0.38	1.94	0.00	0.022	0.000	5.313	0.00	32.80
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.05	0.00	0.022	0.000	5.313	0.00	39.59
70.00	Safety Cable	Yes	5.00	0.000	0.38	1.96	0.00	0.023	0.000	5.426	0.00	33.24
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.06	0.00	0.023	0.000	5.426	0.00	40.04
75.00	Safety Cable	Yes	5.00	0.000	0.38	1.97	0.00	0.023	0.000	5.534	0.00	33.66
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.07	0.00	0.023	0.000	5.534	0.00	40.47
80.00	Safety Cable	Yes	5.00	0.000	0.38	1.98	0.00	0.024	0.000	5.637	0.00	34.05
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.08	0.00	0.024	0.000	5.637	0.00	40.88
85.00	Safety Cable	Yes	5.00	0.000	0.38	1.99	0.00	0.024	0.000	5.736	0.00	34.43
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.09	0.00	0.024	0.000	5.736	0.00	41.27
86.50	Safety Cable	Yes	1.50	0.000	0.38	0.60	0.00	0.025	0.000	5.765	0.00	10.36
86.50	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.63	0.00	0.025	0.000	5.765	0.00	12.42
90.00	Safety Cable	Yes	3.50	0.000	0.38	1.40	0.00	0.025	0.000	5.830	0.00	24.35
90.00	Step bolts (ladder)	Yes	3.50	0.000	0.63	1.47	0.00	0.025	0.000	5.830	0.00	29.15
91.75	Safety Cable	Yes	1.75	0.000	0.38	0.70	0.00	0.025	0.000	5.862	0.00	12.22
91.75	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.74	0.00	0.025	0.000	5.862	0.00	14.62
95.00	Safety Cable	Yes	3.25	0.000	0.38	1.31	0.00	0.025	0.000	5.921	0.00	22.83
95.00	Step bolts (ladder)	Yes	3.25	0.000	0.63	1.37	0.00	0.025	0.000	5.921	0.00	27.30
100.00	Safety Cable	Yes	5.00	0.000	0.38	2.02	0.00	0.026	0.000	6.008	0.00	35.46

Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

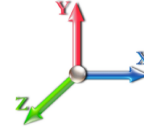


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

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)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.12	0.00	0.026	0.000	6.008	0.00	42.33
105.00	Safety Cable	Yes	5.00	0.000	0.38	2.03	0.00	0.026	0.000	6.093	0.00	35.77
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.13	0.00	0.026	0.000	6.093	0.00	42.66
110.00	Safety Cable	Yes	5.00	0.000	0.38	2.04	0.00	0.027	0.000	6.174	0.00	36.07
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.14	0.00	0.027	0.000	6.174	0.00	42.97
115.00	Safety Cable	Yes	5.00	0.000	0.38	2.05	0.00	0.028	0.000	6.253	0.00	36.37
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.15	0.00	0.028	0.000	6.253	0.00	43.28
120.00	Safety Cable	Yes	5.00	0.000	0.38	2.05	0.00	0.028	0.000	6.330	0.00	36.65
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.16	0.00	0.028	0.000	6.330	0.00	43.57
125.00	Safety Cable	Yes	5.00	0.000	0.38	2.06	0.00	0.029	0.000	6.404	0.00	36.92
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.17	0.00	0.029	0.000	6.404	0.00	43.85
130.00	Safety Cable	Yes	5.00	0.000	0.38	2.07	0.00	0.030	0.000	6.476	0.00	37.19
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.17	0.00	0.030	0.000	6.476	0.00	44.12
131.25	Safety Cable	Yes	1.25	0.000	0.38	0.52	0.00	0.031	0.000	6.494	0.00	9.31
131.25	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.54	0.00	0.031	0.000	6.494	0.00	11.05
135.00	Safety Cable	Yes	3.75	0.000	0.38	1.56	0.00	0.031	0.000	6.546	0.00	28.08
135.00	Step bolts (ladder)	Yes	3.75	0.000	0.63	1.64	0.00	0.031	0.000	6.546	0.00	33.29
135.50	Safety Cable	Yes	0.50	0.000	0.38	0.21	0.00	0.032	0.000	6.553	0.00	3.75
135.50	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.22	0.00	0.032	0.000	6.553	0.00	4.44
137.00	Safety Cable	Yes	1.50	0.000	0.38	0.62	0.00	0.031	0.000	6.574	0.00	11.26
137.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.66	0.00	0.031	0.000	6.574	0.00	13.35
140.00	Safety Cable	Yes	3.00	0.000	0.38	1.25	0.00	0.032	0.000	6.615	0.00	22.61
140.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	1.31	0.00	0.032	0.000	6.615	0.00	26.79
145.00	Safety Cable	Yes	5.00	0.000	0.38	2.09	0.00	0.033	0.000	6.681	0.00	37.93
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.20	0.00	0.033	0.000	6.681	0.00	44.89
147.00	Safety Cable	Yes	2.00	0.000	0.38	0.84	0.00	0.033	0.000	6.708	0.00	15.21
147.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.88	0.00	0.033	0.000	6.708	0.00	18.00
150.00	Safety Cable	Yes	3.00	0.000	0.38	1.26	0.00	0.034	0.000	6.746	0.00	22.90
150.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	1.32	0.00	0.034	0.000	6.746	0.00	27.08
155.00	Safety Cable	Yes	5.00	0.000	0.38	2.10	0.00	0.035	0.000	6.810	0.00	38.40
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.21	0.00	0.035	0.000	6.810	0.00	45.37
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.84	0.00	0.036	0.000	6.835	0.00	15.39
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.88	0.00	0.036	0.000	6.835	0.00	18.19
160.00	Safety Cable	Yes	3.00	0.000	0.38	1.27	0.00	0.036	0.000	6.872	0.00	23.17
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	1.33	0.00	0.036	0.000	6.872	0.00	27.36
165.00	Safety Cable	Yes	5.00	0.000	0.38	2.12	0.00	0.037	0.000	6.933	0.00	38.84
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.22	0.00	0.037	0.000	6.933	0.00	45.83
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.85	0.00	0.038	0.000	6.957	0.00	15.57
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.89	0.00	0.038	0.000	6.957	0.00	18.37
170.00	Safety Cable	Yes	3.00	0.000	0.38	1.27	0.00	0.039	0.000	6.992	0.00	23.43
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	1.34	0.00	0.039	0.000	6.992	0.00	27.63
175.00	Safety Cable	Yes	5.00	0.000	0.38	2.13	0.00	0.040	0.000	7.050	0.00	39.26
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	2.23	0.00	0.040	0.000	7.050	0.00	46.26
176.00	Safety Cable	Yes	1.00	0.000	0.38	0.43	0.00	0.041	0.000	7.062	0.00	7.86
176.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.45	0.00	0.041	0.000	7.062	0.00	9.26
Totals:											0.0	2,605.9

Calculated Forces

Structure: CT02216-S-SBA
Site Name: Glastonbury
Height: 176.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

4/19/2022
 Page: 34



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

Iterations 26

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	-114.1	-10.56	-0.11	-1522.2	0.00	1522.25	6372.54	3186.27	14661.2	7341.49	0.00	0.000	0.000	0.225
5.00	-111.5	-10.54	-0.11	-1469.4	0.00	1469.45	6292.68	3146.34	14220.7	7120.95	0.03	-0.060	0.000	0.224
10.00	-108.8	-10.51	-0.11	-1416.7	0.00	1416.77	6211.66	3105.83	13784.2	6902.39	0.13	-0.122	0.000	0.223
15.00	-106.1	-10.48	-0.11	-1364.2	0.00	1364.22	6129.50	3064.75	13351.9	6685.89	0.29	-0.184	0.000	0.221
20.00	-103.4	-10.45	-0.11	-1311.8	0.00	1311.81	6046.18	3023.09	12923.8	6471.51	0.52	-0.247	0.000	0.220
25.00	-100.8	-10.42	-0.11	-1259.5	0.00	1259.55	5961.72	2980.86	12500.0	6259.33	0.81	-0.312	0.000	0.218
30.00	-98.22	-10.39	-0.11	-1207.4	0.00	1207.45	5876.11	2938.05	12080.8	6049.42	1.17	-0.377	0.000	0.216
35.00	-95.65	-10.35	-0.11	-1155.5	0.00	1155.51	5789.35	2894.67	11666.3	5841.84	1.60	-0.444	0.000	0.214
40.00	-93.12	-10.27	-0.11	-1103.7	0.00	1103.77	5679.25	2839.63	11212.8	5614.75	2.10	-0.511	0.000	0.213
42.75	-91.74	-10.24	-0.11	-1075.5	0.00	1075.52	5615.38	2807.69	10960.7	5488.51	2.41	-0.549	0.000	0.212
45.00	-89.99	-10.23	-0.11	-1052.4	0.00	1052.48	5563.11	2781.56	10756.6	5386.29	2.67	-0.581	0.000	0.212
49.00	-86.93	-10.14	-0.11	-1011.5	0.00	1011.57	4756.80	2378.40	9239.06	4626.40	3.19	-0.637	0.000	0.237
50.00	-86.46	-10.17	-0.11	-1001.4	0.00	1001.43	4742.51	2371.25	9172.60	4593.12	3.32	-0.651	0.000	0.236
55.00	-84.18	-10.11	-0.11	-950.59	0.00	950.59	4670.33	2335.16	8842.49	4427.82	4.04	-0.726	0.000	0.233
60.00	-81.93	-10.04	-0.11	-900.04	0.00	900.04	4597.00	2298.50	8516.13	4264.39	4.84	-0.803	0.000	0.229
65.00	-79.72	-9.97	-0.11	-849.83	0.00	849.83	4522.52	2261.26	8193.68	4102.93	5.73	-0.880	0.000	0.225
70.00	-77.55	-9.90	-0.11	-799.97	0.00	799.97	4446.89	2223.45	7875.26	3943.48	6.69	-0.957	0.000	0.220
75.00	-75.41	-9.82	-0.11	-750.49	0.00	750.49	4354.69	2177.34	7534.33	3772.77	7.73	-1.035	0.000	0.216
80.00	-73.30	-9.73	-0.11	-701.42	0.00	701.42	4253.06	2126.53	7185.02	3597.85	8.86	-1.114	0.000	0.212
85.00	-71.24	-9.61	-0.11	-652.77	0.00	652.77	4151.43	2075.72	6843.99	3427.08	10.07	-1.192	0.000	0.208
86.50	-70.63	-9.60	-0.11	-638.36	0.00	638.36	4120.95	2060.47	6743.30	3376.66	10.45	-1.216	0.000	0.206
90.00	-68.52	-9.50	-0.11	-604.77	0.00	604.77	4049.81	2024.90	6511.26	3260.47	11.36	-1.271	0.000	0.202
91.75	-67.47	-9.47	-0.11	-588.14	0.00	588.14	3441.70	1720.85	5608.94	2808.64	11.83	-1.299	0.000	0.229
95.00	-66.26	-9.43	-0.11	-557.36	0.00	557.36	3401.05	1700.53	5452.51	2730.31	12.73	-1.351	0.000	0.224
100.00	-64.43	-9.33	-0.11	-510.22	0.00	510.22	3337.56	1668.78	5214.58	2611.16	14.19	-1.435	0.000	0.215
105.00	-62.63	-9.23	-0.11	-463.55	0.00	463.55	3272.92	1636.46	4980.08	2493.74	15.74	-1.518	0.000	0.205
110.00	-60.88	-9.13	-0.11	-417.39	0.00	417.39	3194.68	1597.34	4730.71	2368.87	17.37	-1.600	0.000	0.195
115.00	-59.15	-9.02	-0.11	-371.75	0.00	371.75	3107.57	1553.79	4474.96	2240.81	19.09	-1.679	0.000	0.185
120.00	-57.46	-8.90	-0.11	-326.66	0.00	326.66	3020.47	1510.23	4226.32	2116.30	20.89	-1.755	0.000	0.173
125.00	-55.81	-8.78	-0.11	-282.15	0.00	282.15	2933.36	1466.68	3984.78	1995.35	22.77	-1.827	0.000	0.160
130.00	-54.20	-8.63	-0.11	-238.24	0.00	238.24	2846.25	1423.13	3750.35	1877.96	24.72	-1.895	0.000	0.146
131.25	-53.80	-8.62	-0.11	-227.45	0.00	227.45	2824.47	1412.24	3692.86	1849.17	25.22	-1.911	0.000	0.142
135.00	-52.22	-8.48	-0.11	-195.15	0.00	195.15	2759.14	1379.57	3523.03	1764.13	26.74	-1.957	0.000	0.130
135.50	-52.01	-8.47	-0.11	-190.91	0.00	190.91	1734.08	867.04	2260.78	1132.07	26.94	-1.963	0.000	0.199
137.00	-42.54	-7.06	0.00	-178.19	0.00	178.19	1723.43	861.72	2225.81	1114.56	27.56	-1.981	0.000	0.185
140.00	-41.80	-7.00	0.00	-157.00	0.00	157.00	1701.83	850.91	2156.25	1079.73	28.82	-2.027	0.000	0.170
145.00	-40.61	-6.86	0.00	-122.00	0.00	122.00	1664.90	832.45	2041.54	1022.29	30.98	-2.094	0.000	0.144
147.00	-34.11	-5.59	0.00	-108.28	0.00	108.28	1649.80	824.90	1996.11	999.54	31.87	-2.119	0.000	0.129
150.00	-33.42	-5.51	0.00	-91.53	0.00	91.53	1626.81	813.41	1928.48	965.67	33.21	-2.152	0.000	0.115
155.00	-32.28	-5.35	0.00	-63.99	0.00	63.99	1587.58	793.79	1817.22	909.96	35.49	-2.198	0.000	0.091
157.00	-21.81	-3.61	0.00	-53.29	0.00	53.29	1571.57	785.79	1773.24	887.94	36.41	-2.213	0.000	0.074
160.00	-21.16	-3.52	0.00	-42.45	0.00	42.45	1547.20	773.60	1707.88	855.21	37.81	-2.233	0.000	0.063
165.00	-20.10	-3.37	0.00	-24.83	0.00	24.83	1505.67	752.84	1600.62	801.50	40.16	-2.257	0.000	0.044
167.00	-11.98	-1.94	0.00	-18.10	0.00	18.10	1488.74	744.37	1558.33	780.32	41.11	-2.264	0.000	0.031
170.00	-11.39	-1.85	0.00	-12.28	0.00	12.28	1462.99	731.50	1495.57	748.90	42.53	-2.272	0.000	0.024
175.00	-10.44	-1.70	0.00	-3.04	0.00	3.04	1411.70	705.85	1385.55	693.80	44.92	-2.279	0.000	0.012
176.00	0.00	-1.28	0.00	-1.34	0.00	1.34	1400.09	700.04	1362.73	682.38	45.39	-2.280	0.000	0.002

Calculated Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (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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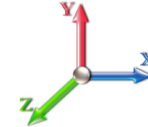
Seismic Segment Forces (Factored)

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E						Iterations 24
Gust Response Factor	1.10			Sds	0.19	Ss 0.18
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.10	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.27	SA	0.03	Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1500.0	0.00	0.03	0.02	29.04	
10.00		1473.4	0.01	0.05	0.03	41.25	
15.00		1446.8	0.01	0.06	0.03	46.98	
20.00		1420.2	0.02	0.07	0.04	49.55	
25.00		1393.6	0.04	0.07	0.04	50.56	
30.00		1367.0	0.05	0.07	0.04	50.86	
35.00		1340.4	0.07	0.07	0.04	50.92	
40.00		1313.8	0.10	0.07	0.04	50.96	
42.75	Bot - Section 2	711.29	0.11	0.07	0.04	27.91	
45.00		1089.9	0.12	0.07	0.03	43.18	
49.00	Top - Section 1	1912.7	0.15	0.07	0.03	76.99	
50.00		223.19	0.15	0.07	0.03	9.01	
55.00		1101.9	0.18	0.06	0.03	45.05	
60.00		1078.7	0.22	0.06	0.02	43.96	
65.00		1055.4	0.26	0.05	0.02	41.69	
70.00		1032.1	0.30	0.05	0.01	37.66	
75.00		1008.8	0.34	0.03	0.01	31.28	
80.00		985.61	0.39	0.02	0.01	22.11	
85.00		962.33	0.44	0.00	0.01	10.30	
86.50	Bot - Section 3	284.16	0.46	0.00	0.01	1.90	
90.00		1227.7	0.49	-0.01	0.01	-4.00	
91.75	Top - Section 2	605.94	0.51	-0.02	0.01	-5.05	
95.00		518.65	0.55	-0.03	0.01	-9.10	
100.00		781.47	0.61	-0.06	0.02	-23.43	
105.00		761.52	0.67	-0.08	0.02	-29.70	
110.00		741.57	0.74	-0.10	0.04	-32.63	
115.00		721.62	0.81	-0.11	0.06	-32.40	
120.00		701.67	0.88	-0.12	0.08	-29.41	
125.00		681.73	0.95	-0.12	0.11	-24.01	
130.00		661.78	1.03	-0.10	0.15	-16.52	
131.25	Bot - Section 4	162.33	1.05	-0.09	0.16	-3.55	
135.00		805.50	1.11	-0.06	0.19	-9.03	
135.50	Top - Section 3	105.99	1.12	-0.06	0.20	-1.02	
137.00	Appurtenance(s)	3058.6	1.15	-0.04	0.22	-14.48	
140.00		252.22	1.20	0.00	0.25	1.52	
145.00		409.73	1.28	0.10	0.32	10.98	
147.00	Appurtenance(s)	2519.2	1.32	0.15	0.35	90.98	
150.00		236.26	1.37	0.23	0.40	12.09	
155.00		383.13	1.47	0.42	0.50	30.33	
157.00	Appurtenance(s)	3755.6	1.50	0.51	0.55	343.23	
160.00		220.30	1.56	0.67	0.62	24.43	
165.00		356.53	1.66	0.98	0.76	52.20	
167.00	Appurtenance(s)	2350.3	1.70	1.13	0.82	380.12	
170.00		204.34	1.76	1.38	0.92	37.98	
175.00		329.93	1.87	1.87	1.10	75.65	

Seismic Segment Forces (Factored)

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (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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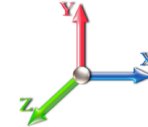
176.00	Appurtenance(s)	3910.3	1.89	1.98	1.14	932.49	
	Totals:	49,166.4				2,518.8	Total Wind: 34,639.9

Calculated Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0E		Iterations 24
Gust Response Factor 1.10	Sds 0.19	Ss 0.18
Dead Load Factor 1.20	Seismic Load Factor 1.00	S1 0.06
Wind Load Factor 0.00	Structure Frequency (f1) 0.27	SA 0.03
	Seismic Importance Factor 1.00	



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-66.74	-2.76	0.00	-393.45	0.00	393.45	6372.54	3186.27	14661.2	7341.49	0.00	0.00	0.00	0.064
5.00	-64.70	-2.75	0.00	-379.64	0.00	379.64	6292.68	3146.34	14220.7	7120.95	0.01	-0.02	0.064	
10.00	-62.68	-2.73	0.00	-365.89	0.00	365.89	6211.66	3105.83	13784.2	6902.39	0.03	-0.03	0.063	
15.00	-60.70	-2.69	0.00	-352.27	0.00	352.27	6129.50	3064.75	13351.9	6685.89	0.07	-0.05	0.063	
20.00	-58.76	-2.66	0.00	-338.80	0.00	338.80	6046.18	3023.09	12923.8	6471.51	0.13	-0.06	0.062	
25.00	-56.84	-2.62	0.00	-325.50	0.00	325.50	5961.72	2980.86	12500.0	6259.33	0.21	-0.08	0.062	
30.00	-54.96	-2.59	0.00	-312.38	0.00	312.38	5876.11	2938.05	12080.8	6049.42	0.30	-0.10	0.061	
35.00	-53.10	-2.55	0.00	-299.45	0.00	299.45	5789.35	2894.67	11666.3	5841.84	0.41	-0.11	0.060	
40.00	-51.28	-2.51	0.00	-286.71	0.00	286.71	5679.25	2839.63	11212.8	5614.75	0.54	-0.13	0.060	
42.75	-50.30	-2.48	0.00	-279.82	0.00	279.82	5615.38	2807.69	10960.7	5488.51	0.62	-0.14	0.060	
45.00	-48.88	-2.45	0.00	-274.24	0.00	274.24	5563.11	2781.56	10756.6	5386.29	0.69	-0.15	0.060	
49.00	-46.39	-2.37	0.00	-264.45	0.00	264.45	4756.80	2378.40	9239.06	4626.40	0.82	-0.16	0.067	
50.00	-46.07	-2.37	0.00	-262.09	0.00	262.09	4742.51	2371.25	9172.60	4593.12	0.86	-0.17	0.067	
55.00	-44.51	-2.33	0.00	-250.24	0.00	250.24	4670.33	2335.16	8842.49	4427.82	1.05	-0.19	0.066	
60.00	-42.97	-2.30	0.00	-238.57	0.00	238.57	4597.00	2298.50	8516.13	4264.39	1.25	-0.21	0.065	
65.00	-41.46	-2.27	0.00	-227.07	0.00	227.07	4522.52	2261.26	8193.68	4102.93	1.48	-0.23	0.065	
70.00	-39.97	-2.24	0.00	-215.73	0.00	215.73	4446.89	2223.45	7875.26	3943.48	1.73	-0.25	0.064	
75.00	-38.52	-2.22	0.00	-204.53	0.00	204.53	4354.69	2177.34	7534.33	3772.77	2.01	-0.27	0.063	
80.00	-37.09	-2.20	0.00	-193.46	0.00	193.46	4253.06	2126.53	7185.02	3597.85	2.30	-0.29	0.062	
85.00	-35.70	-2.19	0.00	-182.46	0.00	182.46	4151.43	2075.72	6843.99	3427.08	2.62	-0.31	0.062	
86.50	-35.28	-2.19	0.00	-179.17	0.00	179.17	4120.95	2060.47	6743.30	3376.66	2.72	-0.32	0.062	
90.00	-33.64	-2.19	0.00	-171.49	0.00	171.49	4049.81	2024.90	6511.26	3260.47	2.96	-0.34	0.061	
91.75	-32.82	-2.19	0.00	-167.66	0.00	167.66	3441.70	1720.85	5608.94	2808.64	3.09	-0.34	0.069	
95.00	-32.04	-2.20	0.00	-160.53	0.00	160.53	3401.05	1700.53	5452.51	2730.31	3.33	-0.36	0.068	
100.00	-30.86	-2.20	0.00	-149.53	0.00	149.53	3337.56	1668.78	5214.58	2611.16	3.72	-0.38	0.067	
105.00	-29.70	-2.21	0.00	-138.51	0.00	138.51	3272.92	1636.46	4980.08	2493.74	4.13	-0.41	0.065	
110.00	-28.57	-2.21	0.00	-127.46	0.00	127.46	3194.68	1597.34	4730.71	2368.87	4.57	-0.43	0.063	
115.00	-27.46	-2.22	0.00	-116.39	0.00	116.39	3107.57	1553.79	4474.96	2240.81	5.04	-0.46	0.061	
120.00	-26.37	-2.22	0.00	-105.31	0.00	105.31	3020.47	1510.23	4226.32	2116.30	5.53	-0.48	0.058	
125.00	-25.31	-2.22	0.00	-94.22	0.00	94.22	2933.36	1466.68	3984.78	1995.35	6.05	-0.51	0.056	
130.00	-24.27	-2.22	0.00	-83.12	0.00	83.12	2846.25	1423.13	3750.35	1877.96	6.59	-0.53	0.053	
131.25	-24.02	-2.22	0.00	-80.35	0.00	80.35	2824.47	1412.24	3692.86	1849.17	6.73	-0.53	0.052	
135.00	-22.87	-2.21	0.00	-72.02	0.00	72.02	2759.14	1379.57	3523.03	1764.13	7.15	-0.55	0.049	
135.50	-22.72	-2.21	0.00	-70.92	0.00	70.92	1734.08	867.04	2260.78	1132.07	7.21	-0.55	0.076	
137.00	-18.97	-2.18	0.00	-67.60	0.00	67.60	1723.43	861.72	2225.81	1114.56	7.39	-0.56	0.072	
140.00	-18.57	-2.18	0.00	-61.06	0.00	61.06	1701.83	850.91	2156.25	1079.73	7.74	-0.58	0.067	
145.00	-17.92	-2.17	0.00	-50.15	0.00	50.15	1664.90	832.45	2041.54	1022.29	8.36	-0.60	0.060	
147.00	-14.83	-2.05	0.00	-45.81	0.00	45.81	1649.80	824.90	1996.11	999.54	8.62	-0.61	0.055	
150.00	-14.45	-2.04	0.00	-39.66	0.00	39.66	1626.81	813.41	1928.48	965.67	9.01	-0.63	0.050	
155.00	-13.84	-2.00	0.00	-29.48	0.00	29.48	1587.58	793.79	1817.22	909.96	9.68	-0.65	0.041	
157.00	-9.27	-1.61	0.00	-25.47	0.00	25.47	1571.57	785.79	1773.24	887.94	9.95	-0.66	0.035	
160.00	-8.92	-1.58	0.00	-20.64	0.00	20.64	1547.20	773.60	1707.88	855.21	10.37	-0.67	0.030	
165.00	-8.35	-1.53	0.00	-12.73	0.00	12.73	1505.67	752.84	1600.62	801.50	11.07	-0.68	0.021	
167.00	-5.48	-1.11	0.00	-9.68	0.00	9.68	1488.74	744.37	1558.33	780.32	11.36	-0.68	0.016	
170.00	-5.18	-1.07	0.00	-6.34	0.00	6.34	1462.99	731.50	1495.57	748.90	11.79	-0.69	0.012	
175.00	-4.70	-0.99	0.00	-0.99	0.00	0.99	1411.70	705.85	1385.55	693.80	12.51	-0.69	0.005	
176.00	0.00	-0.93	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	12.65	-0.69	0.000	

Calculated Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 39



Seismic Segment Forces (Factored)

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E				Iterations 24
Gust Response Factor	1.10	Sds	0.19	Ss 0.18
Dead Load Factor	0.90	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.27	SA 0.03
				Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1500.0	0.00	0.03	0.02	29.04	
10.00		1473.4	0.01	0.05	0.03	41.25	
15.00		1446.8	0.01	0.06	0.03	46.98	
20.00		1420.2	0.02	0.07	0.04	49.55	
25.00		1393.6	0.04	0.07	0.04	50.56	
30.00		1367.0	0.05	0.07	0.04	50.86	
35.00		1340.4	0.07	0.07	0.04	50.92	
40.00		1313.8	0.10	0.07	0.04	50.96	
42.75	Bot - Section 2	711.29	0.11	0.07	0.04	27.91	
45.00		1089.9	0.12	0.07	0.03	43.18	
49.00	Top - Section 1	1912.7	0.15	0.07	0.03	76.99	
50.00		223.19	0.15	0.07	0.03	9.01	
55.00		1101.9	0.18	0.06	0.03	45.05	
60.00		1078.7	0.22	0.06	0.02	43.96	
65.00		1055.4	0.26	0.05	0.02	41.69	
70.00		1032.1	0.30	0.05	0.01	37.66	
75.00		1008.8	0.34	0.03	0.01	31.28	
80.00		985.61	0.39	0.02	0.01	22.11	
85.00		962.33	0.44	0.00	0.01	10.30	
86.50	Bot - Section 3	284.16	0.46	0.00	0.01	1.90	
90.00		1227.7	0.49	-0.01	0.01	-4.00	
91.75	Top - Section 2	605.94	0.51	-0.02	0.01	-5.05	
95.00		518.65	0.55	-0.03	0.01	-9.10	
100.00		781.47	0.61	-0.06	0.02	-23.43	
105.00		761.52	0.67	-0.08	0.02	-29.70	
110.00		741.57	0.74	-0.10	0.04	-32.63	
115.00		721.62	0.81	-0.11	0.06	-32.40	
120.00		701.67	0.88	-0.12	0.08	-29.41	
125.00		681.73	0.95	-0.12	0.11	-24.01	
130.00		661.78	1.03	-0.10	0.15	-16.52	
131.25	Bot - Section 4	162.33	1.05	-0.09	0.16	-3.55	
135.00		805.50	1.11	-0.06	0.19	-9.03	
135.50	Top - Section 3	105.99	1.12	-0.06	0.20	-1.02	
137.00	Appurtenance(s)	3058.6	1.15	-0.04	0.22	-14.48	
140.00		252.22	1.20	0.00	0.25	1.52	
145.00		409.73	1.28	0.10	0.32	10.98	
147.00	Appurtenance(s)	2519.2	1.32	0.15	0.35	90.98	
150.00		236.26	1.37	0.23	0.40	12.09	
155.00		383.13	1.47	0.42	0.50	30.33	
157.00	Appurtenance(s)	3755.6	1.50	0.51	0.55	343.23	
160.00		220.30	1.56	0.67	0.62	24.43	
165.00		356.53	1.66	0.98	0.76	52.20	
167.00	Appurtenance(s)	2350.3	1.70	1.13	0.82	380.12	
170.00		204.34	1.76	1.38	0.92	37.98	
175.00		329.93	1.87	1.87	1.10	75.65	

Seismic Segment Forces (Factored)

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (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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176.00	Appurtenance(s)	3910.3	1.89	1.98	1.14	932.49	
Totals:		49,166.4				2,518.8	Total Wind: 34,639.9

Calculated Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0E		Iterations 24
Gust Response Factor 1.10	Sds 0.19	Ss 0.18
Dead Load Factor 0.90	Seismic Load Factor 1.00	S1 0.06
Wind Load Factor 0.00	Structure Frequency (f1) 0.27	SA 0.03
	Seismic Importance Factor 1.00	



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-50.06	-2.76	0.00	-386.45	0.00	386.45	6372.54	3186.27	14661.2	7341.49	0.00	0.00	0.00	0.060
5.00	-48.52	-2.74	0.00	-372.66	0.00	372.66	6292.68	3146.34	14220.7	7120.95	0.01	-0.02	0.060	
10.00	-47.01	-2.71	0.00	-358.94	0.00	358.94	6211.66	3105.83	13784.2	6902.39	0.03	-0.03	0.060	
15.00	-45.53	-2.68	0.00	-345.37	0.00	345.37	6129.50	3064.75	13351.9	6685.89	0.07	-0.05	0.059	
20.00	-44.07	-2.64	0.00	-331.98	0.00	331.98	6046.18	3023.09	12923.8	6471.51	0.13	-0.06	0.059	
25.00	-42.63	-2.60	0.00	-318.78	0.00	318.78	5961.72	2980.86	12500.0	6259.33	0.21	-0.08	0.058	
30.00	-41.22	-2.56	0.00	-305.78	0.00	305.78	5876.11	2938.05	12080.8	6049.42	0.30	-0.10	0.058	
35.00	-39.83	-2.52	0.00	-292.98	0.00	292.98	5789.35	2894.67	11666.3	5841.84	0.41	-0.11	0.057	
40.00	-38.46	-2.47	0.00	-280.39	0.00	280.39	5679.25	2839.63	11212.8	5614.75	0.53	-0.13	0.057	
42.75	-37.72	-2.45	0.00	-273.59	0.00	273.59	5615.38	2807.69	10960.7	5488.51	0.61	-0.14	0.057	
45.00	-36.66	-2.41	0.00	-268.08	0.00	268.08	5563.11	2781.56	10756.6	5386.29	0.68	-0.15	0.056	
49.00	-34.79	-2.33	0.00	-258.44	0.00	258.44	4756.80	2378.40	9239.06	4626.40	0.81	-0.16	0.063	
50.00	-34.55	-2.33	0.00	-256.11	0.00	256.11	4742.51	2371.25	9172.60	4593.12	0.84	-0.17	0.063	
55.00	-33.38	-2.29	0.00	-244.46	0.00	244.46	4670.33	2335.16	8842.49	4427.82	1.02	-0.18	0.062	
60.00	-32.22	-2.26	0.00	-232.99	0.00	232.99	4597.00	2298.50	8516.13	4264.39	1.23	-0.20	0.062	
65.00	-31.09	-2.22	0.00	-221.71	0.00	221.71	4522.52	2261.26	8193.68	4102.93	1.45	-0.22	0.061	
70.00	-29.98	-2.19	0.00	-210.60	0.00	210.60	4446.89	2223.45	7875.26	3943.48	1.70	-0.24	0.060	
75.00	-28.89	-2.16	0.00	-199.64	0.00	199.64	4354.69	2177.34	7534.33	3772.77	1.97	-0.27	0.060	
80.00	-27.82	-2.15	0.00	-188.82	0.00	188.82	4253.06	2126.53	7185.02	3597.85	2.25	-0.29	0.059	
85.00	-26.77	-2.14	0.00	-178.08	0.00	178.08	4151.43	2075.72	6843.99	3427.08	2.57	-0.31	0.058	
86.50	-26.46	-2.14	0.00	-174.87	0.00	174.87	4120.95	2060.47	6743.30	3376.66	2.66	-0.31	0.058	
90.00	-25.23	-2.14	0.00	-167.38	0.00	167.38	4049.81	2024.90	6511.26	3260.47	2.90	-0.33	0.058	
91.75	-24.62	-2.14	0.00	-163.64	0.00	163.64	3441.70	1720.85	5608.94	2808.64	3.02	-0.34	0.065	
95.00	-24.03	-2.14	0.00	-156.69	0.00	156.69	3401.05	1700.53	5452.51	2730.31	3.26	-0.35	0.064	
100.00	-23.14	-2.15	0.00	-145.97	0.00	145.97	3337.56	1668.78	5214.58	2611.16	3.64	-0.38	0.063	
105.00	-22.27	-2.15	0.00	-135.23	0.00	135.23	3272.92	1636.46	4980.08	2493.74	4.04	-0.40	0.061	
110.00	-21.42	-2.15	0.00	-124.47	0.00	124.47	3194.68	1597.34	4730.71	2368.87	4.47	-0.42	0.059	
115.00	-20.59	-2.16	0.00	-113.70	0.00	113.70	3107.57	1553.79	4474.96	2240.81	4.93	-0.45	0.057	
120.00	-19.78	-2.16	0.00	-102.92	0.00	102.92	3020.47	1510.23	4226.32	2116.30	5.41	-0.47	0.055	
125.00	-18.98	-2.16	0.00	-92.13	0.00	92.13	2933.36	1466.68	3984.78	1995.35	5.92	-0.49	0.053	
130.00	-18.20	-2.16	0.00	-81.33	0.00	81.33	2846.25	1423.13	3750.35	1877.96	6.45	-0.52	0.050	
131.25	-18.01	-2.16	0.00	-78.64	0.00	78.64	2824.47	1412.24	3692.86	1849.17	6.58	-0.52	0.049	
135.00	-17.15	-2.15	0.00	-70.54	0.00	70.54	2759.14	1379.57	3523.03	1764.13	7.00	-0.54	0.046	
135.50	-17.03	-2.15	0.00	-69.47	0.00	69.47	1734.08	867.04	2260.78	1132.07	7.05	-0.54	0.071	
137.00	-14.23	-2.13	0.00	-66.24	0.00	66.24	1723.43	861.72	2225.81	1114.56	7.23	-0.55	0.068	
140.00	-13.93	-2.13	0.00	-59.85	0.00	59.85	1701.83	850.91	2156.25	1079.73	7.57	-0.56	0.064	
145.00	-13.43	-2.12	0.00	-49.19	0.00	49.19	1664.90	832.45	2041.54	1022.29	8.18	-0.59	0.056	
147.00	-11.12	-2.01	0.00	-44.96	0.00	44.96	1649.80	824.90	1996.11	999.54	8.43	-0.60	0.052	
150.00	-10.84	-1.99	0.00	-38.94	0.00	38.94	1626.81	813.41	1928.48	965.67	8.81	-0.61	0.047	
155.00	-10.37	-1.96	0.00	-28.96	0.00	28.96	1587.58	793.79	1817.22	909.96	9.47	-0.63	0.038	
157.00	-6.95	-1.58	0.00	-25.04	0.00	25.04	1571.57	785.79	1773.24	887.94	9.73	-0.64	0.033	
160.00	-6.69	-1.56	0.00	-20.30	0.00	20.30	1547.20	773.60	1707.88	855.21	10.14	-0.65	0.028	
165.00	-6.26	-1.50	0.00	-12.52	0.00	12.52	1505.67	752.84	1600.62	801.50	10.83	-0.66	0.020	
167.00	-4.11	-1.09	0.00	-9.52	0.00	9.52	1488.74	744.37	1558.33	780.32	11.11	-0.67	0.015	
170.00	-3.89	-1.05	0.00	-6.24	0.00	6.24	1462.99	731.50	1495.57	748.90	11.53	-0.67	0.011	
175.00	-3.52	-0.97	0.00	-0.97	0.00	0.97	1411.70	705.85	1385.55	693.80	12.23	-0.67	0.004	
176.00	0.00	-0.93	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	12.37	-0.67	0.000	

Calculated Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (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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Wind Loading - Shaft

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



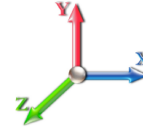
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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

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	240.22	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.74	236.03	0.650	0.000	5.00	23.718	15.42	103.9	0.0	1500.1
10.00		1.00	0.70	6.129	6.74	231.85	0.650	0.000	5.00	23.301	15.15	102.1	0.0	1473.5
15.00		1.00	0.70	6.129	6.74	227.66	0.650	0.000	5.00	22.884	14.87	100.3	0.0	1446.9
20.00		1.00	0.70	6.129	6.74	223.48	0.650	0.000	5.00	22.467	14.60	98.5	0.0	1420.3
25.00		1.00	0.70	6.129	6.74	219.29	0.650	0.000	5.00	22.050	14.33	96.6	0.0	1393.7
30.00		1.00	0.70	6.134	6.75	215.20	0.650	0.000	5.00	21.634	14.06	94.9	0.0	1367.1
35.00		1.00	0.73	6.410	7.05	215.71	0.650	0.000	5.00	21.217	13.79	97.2	0.0	1340.5
40.00		1.00	0.76	6.659	7.33	215.50	0.650	0.000	5.00	20.800	13.52	99.0	0.0	1313.9
42.75	Bot - Section 2	1.00	0.78	6.787	7.47	215.14	0.650	0.000	2.75	11.262	7.32	54.7	0.0	711.3
45.00		1.00	0.79	6.887	7.58	214.72	0.650	0.000	2.25	9.288	6.04	45.7	0.0	1089.9
49.00	Top - Section 1	1.00	0.81	7.057	7.76	213.76	0.650	0.000	4.00	16.303	10.60	82.3	0.0	1912.7
50.00		1.00	0.81	7.098	7.81	217.48	0.650	0.000	1.00	4.034	2.62	20.5	0.0	223.2
55.00		1.00	0.83	7.294	8.02	215.89	0.650	0.000	5.00	19.920	12.95	103.9	0.0	1102.0
60.00		1.00	0.85	7.477	8.22	213.97	0.650	0.000	5.00	19.503	12.68	104.3	0.0	1078.7
65.00		1.00	0.87	7.650	8.42	211.76	0.650	0.000	5.00	19.086	12.41	104.4	0.0	1055.4
70.00		1.00	0.89	7.814	8.60	209.29	0.650	0.000	5.00	18.670	12.14	104.3	0.0	1032.2
75.00		1.00	0.91	7.969	8.77	206.59	0.650	0.000	5.00	18.253	11.86	104.0	0.0	1008.9
80.00		1.00	0.93	8.118	8.93	203.69	0.650	0.000	5.00	17.836	11.59	103.5	0.0	985.6
85.00		1.00	0.94	8.260	9.09	200.60	0.650	0.000	5.00	17.419	11.32	102.9	0.0	962.3
86.50	Bot - Section 3	1.00	0.95	8.301	9.13	199.64	0.650	0.000	1.50	5.145	3.34	30.5	0.0	284.2
90.00		1.00	0.96	8.396	9.24	197.35	0.650	0.000	3.50	12.080	7.85	72.5	0.0	1227.8
91.75	Top - Section 2	1.00	0.96	8.442	9.29	196.17	0.650	0.000	1.75	5.963	3.88	36.0	0.0	605.9
95.00		1.00	0.97	8.526	9.38	197.70	0.650	0.000	3.25	10.940	7.11	66.7	0.0	518.7
100.00		1.00	0.99	8.652	9.52	194.18	0.650	0.000	5.00	16.486	10.72	102.0	0.0	781.5
105.00		1.00	1.00	8.774	9.65	190.53	0.650	0.000	5.00	16.069	10.45	100.8	0.0	761.5
110.00		1.00	1.02	8.891	9.78	186.76	0.650	0.000	5.00	15.653	10.17	99.5	0.0	741.6
115.00		1.00	1.03	9.005	9.91	182.88	0.650	0.000	5.00	15.236	9.90	98.1	0.0	721.6
120.00		1.00	1.04	9.115	10.03	178.89	0.650	0.000	5.00	14.819	9.63	96.6	0.0	701.7
125.00		1.00	1.05	9.222	10.14	174.81	0.650	0.000	5.00	14.402	9.36	95.0	0.0	681.7
130.00		1.00	1.07	9.326	10.26	170.63	0.650	0.000	5.00	13.986	9.09	93.3	0.0	661.8
131.25	Bot - Section 4	1.00	1.07	9.351	10.29	169.57	0.650	0.000	1.25	3.431	2.23	22.9	0.0	162.3
135.00		1.00	1.08	9.427	10.37	166.36	0.650	0.000	3.75	10.296	6.69	69.4	0.0	805.5
135.50	Top - Section 3	1.00	1.08	9.437	10.38	165.93	0.650	0.000	0.50	1.355	0.88	9.1	0.0	106.0
137.00	Appurtenance(s)	1.00	1.08	9.466	10.41	167.27	0.650	0.000	1.50	4.040	2.63	27.3	0.0	127.9
140.00		1.00	1.09	9.525	10.48	164.66	0.650	0.000	3.00	7.968	5.18	54.3	0.0	252.2
145.00		1.00	1.10	9.621	10.58	160.24	0.650	0.000	5.00	12.947	8.42	89.1	0.0	409.7
147.00	Appurtenance(s)	1.00	1.10	9.659	10.62	158.45	0.650	0.000	2.00	5.062	3.29	35.0	0.0	160.2
150.00		1.00	1.11	9.715	10.69	155.75	0.650	0.000	3.00	7.468	4.85	51.9	0.0	236.3
155.00		1.00	1.12	9.806	10.79	151.19	0.650	0.000	5.00	12.113	7.87	84.9	0.0	383.1
157.00	Appurtenance(s)	1.00	1.12	9.842	10.83	149.35	0.650	0.000	2.00	4.729	3.07	33.3	0.0	149.5
160.00		1.00	1.13	9.896	10.89	146.56	0.650	0.000	3.00	6.968	4.53	49.3	0.0	220.3
165.00		1.00	1.14	9.983	10.98	141.86	0.650	0.000	5.00	11.280	7.33	80.5	0.0	356.5
167.00	Appurtenance(s)	1.00	1.14	10.017	11.02	139.97	0.650	0.000	2.00	4.395	2.86	31.5	0.0	138.9
170.00		1.00	1.15	10.069	11.08	137.11	0.650	0.000	3.00	6.468	4.20	46.6	0.0	204.3
175.00		1.00	1.16	10.152	11.17	132.29	0.650	0.000	5.00	10.446	6.79	75.8	0.0	329.9
176.00	Appurtenance(s)	1.00	1.16	10.169	11.19	131.32	0.650	0.000	1.00	2.039	1.33	14.8	0.0	64.4

Wind Loading - Shaft

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 45



Totals:	176.00	3,389.5	34,212.9
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Discrete Appurtenance Forces

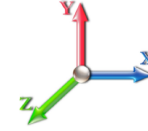
Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

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	176.00	4460 B25 + B66	3	10.185	11.204	0.50	0.75	2.47	216.00	0.000	1.000	27.70	0.00	27.70
2	176.00	4449 B71 + B85	3	10.185	11.204	0.50	0.75	2.97	219.60	0.000	1.000	33.27	0.00	33.27
3	176.00	APXVAALL24_43-U-NA20	3	10.185	11.204	0.55	0.75	33.24	368.40	0.000	1.000	372.46	0.00	372.46
4	176.00	AIR 6419 B41	3	10.185	11.204	0.52	0.75	10.28	399.60	0.000	1.000	115.23	0.00	115.23
5	176.00	KRY 112 89/4	3	10.185	11.204	0.50	0.75	0.98	46.20	0.000	1.000	10.98	0.00	10.98
6	176.00	KRY 112 489/2	3	10.185	11.204	0.50	0.75	0.98	46.20	0.000	1.000	10.98	0.00	10.98
7	176.00	RMQP-496-HK	1	10.185	11.204	1.00	1.00	46.00	2449.00	0.000	1.000	515.38	0.00	515.38
8	176.00	Lightning Rod	1	10.226	11.249	1.00	1.00	1.05	35.00	0.000	3.500	11.81	0.00	41.34
9	176.00	MHA FE15501P77/75	6	10.185	11.204	0.49	0.75	2.72	66.00	0.000	1.000	30.48	0.00	30.48
10	167.00	RRH2X60-AWS	3	10.017	11.019	0.54	0.80	5.63	180.00	0.000	0.000	62.02	0.00	0.00
11	167.00	RRH2X60-700	3	10.017	11.019	0.54	0.80	5.63	180.00	0.000	0.000	62.02	0.00	0.00
12	167.00	Low Profile	1	10.017	11.019	1.00	1.00	22.00	1500.00	0.000	0.000	242.42	0.00	0.00
13	167.00	APL868013	2	10.017	11.019	0.74	0.80	4.26	12.60	0.000	0.000	46.89	0.00	0.00
14	167.00	SBNHH-1D65B	6	10.017	11.019	0.66	0.80	32.51	240.00	0.000	0.000	358.23	0.00	0.00
15	167.00	LPA-80063-4CF-EDIN-5	4	10.017	11.019	0.74	0.80	18.30	80.00	0.000	0.000	201.68	0.00	0.00
16	167.00	DB-T16Z-8AB-0Z	1	10.017	11.019	1.00	1.00	4.80	18.90	0.000	0.000	52.89	0.00	0.00
17	157.00	ALU TD-RRH8x20-25	3	9.842	10.827	0.54	0.80	6.51	210.00	0.000	0.000	70.51	0.00	0.00
18	157.00	ALU 800 Mhz	6	9.842	10.827	0.54	0.80	8.01	318.00	0.000	0.000	86.70	0.00	0.00
19	157.00	ALU 1900 Mhz	3	9.842	10.827	0.54	0.80	4.45	180.00	0.000	0.000	48.22	0.00	0.00
20	157.00	Low Profile Platform	1	9.842	10.827	1.00	1.00	22.00	1500.00	0.000	0.000	238.18	0.00	0.00
21	157.00	Sitepro PRK-SFS-H-L	1	9.842	10.827	1.00	1.00	6.70	230.00	0.000	0.000	72.54	0.00	0.00
22	157.00	Sitepro HRK14-U	1	9.842	10.827	1.00	1.00	8.13	302.36	0.000	0.000	88.02	0.00	0.00
23	157.00	Sitepro PRK-1245L	1	9.842	10.827	1.00	1.00	9.50	464.91	0.000	0.000	102.85	0.00	0.00
24	157.00	Commscope	3	9.842	10.827	0.60	0.80	22.09	232.20	0.000	0.000	239.11	0.00	0.00
25	157.00	RFS APXVTM14-C-I20	3	9.842	10.827	0.62	0.80	11.72	168.60	0.000	0.000	126.85	0.00	0.00
26	147.00	RDIDC-9181-PF-48	1	9.659	10.625	1.00	1.00	2.01	21.90	0.000	0.000	21.36	0.00	0.00
27	147.00	TA08025-B604	3	9.659	10.625	0.50	0.75	2.95	191.70	0.000	0.000	31.39	0.00	0.00
28	147.00	TA08025-B605	3	9.659	10.625	0.50	0.75	2.95	225.00	0.000	0.000	31.39	0.00	0.00
29	147.00	MC-PK8-DSH	1	9.659	10.625	1.00	1.00	37.59	1727.00	0.000	0.000	399.39	0.00	0.00
30	147.00	MX08FRO665-21	3	9.659	10.625	0.55	0.75	20.80	193.50	0.000	0.000	220.95	0.00	0.00
31	137.00	B2 B66A 8843	3	9.466	10.413	0.50	0.75	2.47	210.00	0.000	0.000	25.74	0.00	0.00
32	137.00	4449 B5/B12	3	9.466	10.413	0.50	0.75	2.97	213.00	0.000	0.000	30.92	0.00	0.00
33	137.00	LP Platform-Round	1	9.466	10.413	1.00	1.00	22.00	1500.00	0.000	0.000	229.09	0.00	0.00
34	137.00	DC6-48-60-18-8F	1	9.466	10.413	1.00	1.00	1.47	32.80	0.000	0.000	15.31	0.00	0.00
35	137.00	DMP65R-BU6DA	3	9.466	10.413	0.54	0.75	20.59	238.20	0.000	0.000	214.41	0.00	0.00
36	137.00	HRK14	1	9.466	10.413	1.00	1.00	8.13	302.36	0.000	0.000	84.66	0.00	0.00
37	137.00	7020	12	9.466	10.413	0.50	0.75	2.41	26.40	0.000	0.000	25.12	0.00	0.00
38	137.00	7770.00	3	9.466	10.413	0.55	0.75	9.03	105.00	0.000	0.000	94.07	0.00	0.00
39	137.00	LGP21401	6	9.466	10.413	0.50	0.75	3.89	114.00	0.000	0.000	40.50	0.00	0.00
40	137.00	LGP21903	6	9.466	10.413	0.50	0.75	0.81	30.00	4.341	0.000	8.48	36.79	0.00
41	137.00	HPA-65R-BUU-H6	3	9.466	10.413	0.64	0.75	18.47	153.00	0.000	0.000	192.38	0.00	0.00
42	137.00	Smart Bias T 1001940	3	9.466	10.413	0.50	0.75	0.14	6.00	7.041	0.000	1.41	9.95	0.00

Totals: 14,953.43 4,893.98

Total Applied Force Summary

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		103.93	1702.62	0.00	0.00
10.00		102.10	1676.02	0.00	0.00
15.00		100.28	1649.43	0.00	0.00
20.00		98.45	1622.83	0.00	0.00
25.00		96.62	1596.23	0.00	0.00
30.00		94.88	1569.63	0.00	0.00
35.00		97.24	1543.04	0.00	0.00
40.00		99.04	1516.44	0.00	0.00
42.75		54.65	822.70	0.00	0.00
45.00		45.73	1181.09	0.00	0.00
49.00		82.26	2074.78	0.00	0.00
50.00		20.47	263.70	0.00	0.00
55.00		103.88	1304.53	0.00	0.00
60.00		104.27	1281.26	0.00	0.00
65.00		104.40	1257.99	0.00	0.00
70.00		104.31	1234.72	0.00	0.00
75.00		104.01	1211.44	0.00	0.00
80.00		103.52	1188.17	0.00	0.00
85.00		102.87	1164.90	0.00	0.00
86.50		30.53	344.93	0.00	0.00
90.00		72.51	1369.55	0.00	0.00
91.75		36.00	676.84	0.00	0.00
95.00		66.69	650.32	0.00	0.00
100.00		101.99	984.03	0.00	0.00
105.00		100.81	964.08	0.00	0.00
110.00		99.51	944.14	0.00	0.00
115.00		98.09	924.19	0.00	0.00
120.00		96.58	904.24	0.00	0.00
125.00		94.96	884.29	0.00	0.00
130.00		93.25	864.34	0.00	0.00
131.25		22.94	212.97	0.00	0.00
135.00		69.40	957.42	0.00	0.00
135.50		9.14	126.24	0.00	0.00
137.00	(45) attachments	989.43	3119.43	46.74	0.00
140.00		54.27	333.44	0.00	0.00
145.00		89.06	545.09	0.00	0.00
147.00	(11) attachments	739.44	2573.41	0.00	0.00
150.00		51.87	314.48	0.00	0.00
155.00		84.93	513.49	0.00	0.00
157.00	(22) attachments	1106.26	3807.74	0.00	0.00
160.00		49.30	290.60	0.00	0.00
165.00		80.51	473.70	0.00	0.00
167.00	(20) attachments	1057.63	2397.26	0.00	0.00
170.00		46.56	249.32	0.00	0.00
175.00		75.83	404.90	0.00	0.00
176.00	(26) attachments	1143.11	3925.38	0.00	1157.81

Total Applied Force Summary

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (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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Totals:	8,283.53	55,617.37	46.74	1,157.81
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Linear Appurtenance Segment Forces (Factored)

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

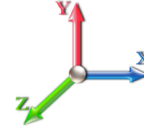


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

Dead Load Factor 1.00

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	6.129	0.00	1.37
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	6.129	0.00	5.20
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	6.129	0.00	1.37
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	6.129	0.00	5.20
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.018	0.000	6.129	0.00	1.37
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.018	0.000	6.129	0.00	5.20
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	6.129	0.00	1.37
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	6.129	0.00	5.20
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	6.129	0.00	1.37
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	6.129	0.00	5.20
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.019	0.000	6.134	0.00	1.37
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.019	0.000	6.134	0.00	5.20
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	6.410	0.00	1.37
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	6.410	0.00	5.20
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.020	0.000	6.659	0.00	1.37
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.020	0.000	6.659	0.00	5.20
42.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.021	0.000	6.787	0.00	0.75
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.63	0.14	0.00	0.021	0.000	6.787	0.00	2.86
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.021	0.000	6.887	0.00	0.61
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.63	0.12	0.00	0.021	0.000	6.887	0.00	2.34
49.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.021	0.000	7.057	0.00	1.09
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.021	0.000	7.057	0.00	4.16
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.021	0.000	7.098	0.00	0.27
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.021	0.000	7.098	0.00	1.04
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.021	0.000	7.294	0.00	1.37
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.021	0.000	7.294	0.00	5.20
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	7.477	0.00	1.37
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	7.477	0.00	5.20
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.022	0.000	7.650	0.00	1.37
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.022	0.000	7.650	0.00	5.20
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	7.814	0.00	1.37
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	7.814	0.00	5.20
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.023	0.000	7.969	0.00	1.37
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.023	0.000	7.969	0.00	5.20
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	8.118	0.00	1.37
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	8.118	0.00	5.20
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.024	0.000	8.260	0.00	1.37
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.024	0.000	8.260	0.00	5.20
86.50	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.025	0.000	8.301	0.00	0.41
86.50	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.025	0.000	8.301	0.00	1.56
90.00	Safety Cable	Yes	3.50	0.000	0.38	0.11	0.00	0.025	0.000	8.396	0.00	0.96
90.00	Step bolts (ladder)	Yes	3.50	0.000	0.63	0.18	0.00	0.025	0.000	8.396	0.00	3.64
91.75	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.025	0.000	8.442	0.00	0.48
91.75	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.09	0.00	0.025	0.000	8.442	0.00	1.82
95.00	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.025	0.000	8.526	0.00	0.89
95.00	Step bolts (ladder)	Yes	3.25	0.000	0.63	0.17	0.00	0.025	0.000	8.526	0.00	3.38
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	8.652	0.00	1.37

Linear Appurtenance Segment Forces (Factored)

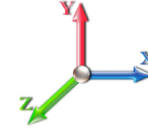
Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	8.652	0.00	5.20
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.026	0.000	8.774	0.00	1.37
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.026	0.000	8.774	0.00	5.20
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.027	0.000	8.891	0.00	1.37
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.027	0.000	8.891	0.00	5.20
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	9.005	0.00	1.37
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	9.005	0.00	5.20
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.028	0.000	9.115	0.00	1.37
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.028	0.000	9.115	0.00	5.20
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.029	0.000	9.222	0.00	1.37
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.029	0.000	9.222	0.00	5.20
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.030	0.000	9.326	0.00	1.37
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.030	0.000	9.326	0.00	5.20
131.25	Safety Cable	Yes	1.25	0.000	0.38	0.04	0.00	0.031	0.000	9.351	0.00	0.34
131.25	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.07	0.00	0.031	0.000	9.351	0.00	1.30
135.00	Safety Cable	Yes	3.75	0.000	0.38	0.12	0.00	0.031	0.000	9.427	0.00	1.02
135.00	Step bolts (ladder)	Yes	3.75	0.000	0.63	0.20	0.00	0.031	0.000	9.427	0.00	3.90
135.50	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.032	0.000	9.437	0.00	0.14
135.50	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.03	0.00	0.032	0.000	9.437	0.00	0.52
137.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.031	0.000	9.466	0.00	0.41
137.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.031	0.000	9.466	0.00	1.56
140.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.032	0.000	9.525	0.00	0.82
140.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.032	0.000	9.525	0.00	3.12
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.033	0.000	9.621	0.00	1.37
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.033	0.000	9.621	0.00	5.20
147.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.033	0.000	9.659	0.00	0.55
147.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.033	0.000	9.659	0.00	2.08
150.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.034	0.000	9.715	0.00	0.82
150.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.034	0.000	9.715	0.00	3.12
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.035	0.000	9.806	0.00	1.37
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.035	0.000	9.806	0.00	5.20
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.036	0.000	9.842	0.00	0.55
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.036	0.000	9.842	0.00	2.08
160.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.036	0.000	9.896	0.00	0.82
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.036	0.000	9.896	0.00	3.12
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.037	0.000	9.983	0.00	1.37
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.037	0.000	9.983	0.00	5.20
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.038	0.000	10.017	0.00	0.55
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.038	0.000	10.017	0.00	2.08
170.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.039	0.000	10.069	0.00	0.82
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.039	0.000	10.069	0.00	3.12
175.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.040	0.000	10.152	0.00	1.37
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.040	0.000	10.152	0.00	5.20
176.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.041	0.000	10.169	0.00	0.27
176.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.041	0.000	10.169	0.00	1.04
Totals:											0.0	231.1

Calculated Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind	Iterations 25
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	-55.61	-8.31	-0.05	-1128.5	0.00	1128.50	6372.54	3186.27	14661.2	7341.49	0.00	0.000	0.000	0.162
5.00	-53.90	-8.24	-0.05	-1086.9	0.00	1086.98	6292.68	3146.34	14220.7	7120.95	0.02	-0.045	0.000	0.161
10.00	-52.22	-8.18	-0.05	-1045.7	0.00	1045.76	6211.66	3105.83	13784.2	6902.39	0.09	-0.090	0.000	0.160
15.00	-50.57	-8.12	-0.05	-1004.8	0.00	1004.86	6129.50	3064.75	13351.9	6685.89	0.21	-0.136	0.000	0.159
20.00	-48.94	-8.05	-0.05	-964.27	0.00	964.27	6046.18	3023.09	12923.8	6471.51	0.38	-0.183	0.000	0.157
25.00	-47.34	-7.99	-0.05	-924.00	0.00	924.00	5961.72	2980.86	12500.0	6259.33	0.60	-0.230	0.000	0.156
30.00	-45.76	-7.93	-0.05	-884.04	0.00	884.04	5876.11	2938.05	12080.8	6049.42	0.86	-0.278	0.000	0.154
35.00	-44.21	-7.86	-0.05	-844.40	0.00	844.40	5789.35	2894.67	11666.3	5841.84	1.18	-0.327	0.000	0.152
40.00	-42.69	-7.78	-0.05	-805.10	0.00	805.10	5679.25	2839.63	11212.8	5614.75	1.55	-0.376	0.000	0.151
42.75	-41.86	-7.74	-0.05	-783.70	0.00	783.70	5615.38	2807.69	10960.7	5488.51	1.77	-0.404	0.000	0.150
45.00	-40.68	-7.71	-0.05	-766.28	0.00	766.28	5563.11	2781.56	10756.6	5386.29	1.97	-0.426	0.000	0.150
49.00	-38.60	-7.63	-0.05	-735.45	0.00	735.45	4756.80	2378.40	9239.06	4626.40	2.35	-0.467	0.000	0.167
50.00	-38.33	-7.63	-0.05	-727.83	0.00	727.83	4742.51	2371.25	9172.60	4593.12	2.44	-0.477	0.000	0.167
55.00	-37.02	-7.55	-0.05	-689.70	0.00	689.70	4670.33	2335.16	8842.49	4427.82	2.97	-0.532	0.000	0.164
60.00	-35.73	-7.46	-0.05	-651.97	0.00	651.97	4597.00	2298.50	8516.13	4264.39	3.56	-0.588	0.000	0.161
65.00	-34.47	-7.38	-0.05	-614.65	0.00	614.65	4522.52	2261.26	8193.68	4102.93	4.21	-0.643	0.000	0.157
70.00	-33.23	-7.29	-0.05	-577.75	0.00	577.75	4446.89	2223.45	7875.26	3943.48	4.91	-0.699	0.000	0.154
75.00	-32.01	-7.21	-0.05	-541.29	0.00	541.29	4354.69	2177.34	7534.33	3772.77	5.67	-0.756	0.000	0.151
80.00	-30.82	-7.12	-0.05	-505.26	0.00	505.26	4253.06	2126.53	7185.02	3597.85	6.49	-0.812	0.000	0.148
85.00	-29.65	-7.02	-0.05	-469.68	0.00	469.68	4151.43	2075.72	6843.99	3427.08	7.38	-0.869	0.000	0.144
86.50	-29.30	-6.99	-0.05	-459.16	0.00	459.16	4120.95	2060.47	6743.30	3376.66	7.65	-0.886	0.000	0.143
90.00	-27.93	-6.91	-0.05	-434.68	0.00	434.68	4049.81	2024.90	6511.26	3260.47	8.32	-0.926	0.000	0.140
91.75	-27.25	-6.88	-0.05	-422.58	0.00	422.58	3441.70	1720.85	5608.94	2808.64	8.66	-0.946	0.000	0.158
95.00	-26.60	-6.83	-0.05	-400.22	0.00	400.22	3401.05	1700.53	5452.51	2730.31	9.32	-0.983	0.000	0.154
100.00	-25.61	-6.73	-0.05	-366.09	0.00	366.09	3337.56	1668.78	5214.58	2611.16	10.38	-1.043	0.000	0.148
105.00	-24.64	-6.64	-0.05	-332.42	0.00	332.42	3272.92	1636.46	4980.08	2493.74	11.50	-1.103	0.000	0.141
110.00	-23.69	-6.55	-0.05	-299.22	0.00	299.22	3194.68	1597.34	4730.71	2368.87	12.69	-1.162	0.000	0.134
115.00	-22.76	-6.45	-0.05	-266.49	0.00	266.49	3107.57	1553.79	4474.96	2240.81	13.94	-1.218	0.000	0.126
120.00	-21.85	-6.35	-0.05	-234.24	0.00	234.24	3020.47	1510.23	4226.32	2116.30	15.24	-1.273	0.000	0.118
125.00	-20.97	-6.26	-0.05	-202.46	0.00	202.46	2933.36	1466.68	3984.78	1995.35	16.60	-1.325	0.000	0.109
130.00	-20.10	-6.16	-0.05	-171.17	0.00	171.17	2846.25	1423.13	3750.35	1877.96	18.02	-1.373	0.000	0.098
131.25	-19.89	-6.13	-0.05	-163.48	0.00	163.48	2824.47	1412.24	3692.86	1849.17	18.38	-1.385	0.000	0.095
135.00	-18.93	-6.05	-0.05	-140.47	0.00	140.47	2759.14	1379.57	3523.03	1764.13	19.48	-1.418	0.000	0.087
135.50	-18.80	-6.04	-0.05	-137.45	0.00	137.45	1734.08	867.04	2260.78	1132.07	19.63	-1.422	0.000	0.132
137.00	-15.71	-4.98	0.00	-128.39	0.00	128.39	1723.43	861.72	2225.81	1114.56	20.08	-1.435	0.000	0.124
140.00	-15.37	-4.93	0.00	-113.46	0.00	113.46	1701.83	850.91	2156.25	1079.73	20.99	-1.468	0.000	0.114
145.00	-14.83	-4.83	0.00	-88.82	0.00	88.82	1664.90	832.45	2041.54	1022.29	22.55	-1.517	0.000	0.096
147.00	-12.27	-4.03	0.00	-79.16	0.00	79.16	1649.80	824.90	1996.11	999.54	23.19	-1.535	0.000	0.087
150.00	-11.96	-3.97	0.00	-67.07	0.00	67.07	1626.81	813.41	1928.48	965.67	24.17	-1.559	0.000	0.077
155.00	-11.45	-3.88	0.00	-47.20	0.00	47.20	1587.58	793.79	1817.22	909.96	25.82	-1.593	0.000	0.059
157.00	-7.67	-2.67	0.00	-39.44	0.00	39.44	1571.57	785.79	1773.24	887.94	26.49	-1.604	0.000	0.049
160.00	-7.38	-2.61	0.00	-31.43	0.00	31.43	1547.20	773.60	1707.88	855.21	27.50	-1.619	0.000	0.042
165.00	-6.91	-2.52	0.00	-18.36	0.00	18.36	1505.67	752.84	1600.62	801.50	29.21	-1.637	0.000	0.028
167.00	-4.54	-1.40	0.00	-13.32	0.00	13.32	1488.74	744.37	1558.33	780.32	29.89	-1.642	0.000	0.020
170.00	-4.29	-1.34	0.00	-9.13	0.00	9.13	1462.99	731.50	1495.57	748.90	30.93	-1.648	0.000	0.015
175.00	-3.89	-1.26	0.00	-2.41	0.00	2.41	1411.70	705.85	1385.55	693.80	32.66	-1.653	0.000	0.006
176.00	0.00	-1.14	0.00	-1.16	0.00	1.16	1400.09	700.04	1362.73	682.38	33.00	-1.653	0.000	0.002

Calculated Forces

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (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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Final Analysis Summary

Structure: CT02216-S-SBA	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	34.8	0.00	66.68	0.00	0.12	4762.53
0.9D + 1.6W 97 mph Wind	34.7	0.00	50.00	0.00	0.12	4683.45
1.2D + 1.0Di + 1.0Wi 50 mph Wind	10.6	0.00	114.18	0.00	0.11	1522.25
1.2D + 1.0E	2.8	0.00	66.74	0.00	0.00	393.45
0.9D + 1.0E	2.8	0.00	50.06	0.00	0.00	386.45
1.0D + 1.0W 60 mph Wind	8.3	0.00	55.61	0.00	0.05	1128.50

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	-45.30	-32.16	-0.12	-3111.2	0.00	-3111.2	4756.80	2378.4	9239.06	4626.40	49.00	0.682
0.9D + 1.6W 97 mph Wind	-33.73	-31.73	-0.12	-3044.0	0.00	-3044.0	4756.80	2378.4	9239.06	4626.40	49.00	0.665
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-86.93	-10.14	-0.11	-1011.5	0.00	-1011.5	4756.80	2378.4	9239.06	4626.40	49.00	0.237
1.2D + 1.0E	-22.72	-2.21	0.00	-70.92	0.00	-70.92	1734.08	867.04	2260.78	1132.07	135.50	0.076
0.9D + 1.0E	-17.03	-2.15	0.00	-69.47	0.00	-69.47	1734.08	867.04	2260.78	1132.07	135.50	0.071
1.0D + 1.0W 60 mph Wind	-38.60	-7.63	-0.05	-735.45	0.00	-735.45	4756.80	2378.4	9239.06	4626.40	49.00	0.167

Base Plate Summary

Structure: CT02216-S-SB	Code: TIA-222-G	4/19/2022
Site Name: Glastonbury	Exposure: B	
Height: 176.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 54



Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 50.00	Bolt Circle: 64.00
Moment (kip-ft): 5100.00	Width (in): 66.00	Number Bolts: 24.00
Axial (kip): 47.00	Style: Clipped	Bolt Type: 2.25" 18J
Shear (kip): 38.00	Polygon Sides: 0.00	Bolt Diameter (in): 2.25
Analysis (1.2D + 1.6W)	Clip Length (in): 16.00	Yield (ksi): 75.00
Moment (kip-ft): 4762.53	Effective Len (in): 7.55	Ultimate (ksi): 100.00
Axial (kip): 66.68	Moment (kip-in): 572.11	Arrangement: Clustered
Shear (kip): 34.75	Allow Stress (ksi): 67.50	Cluster Dist (in): 6.00
	Applied Stress (ksi): 50.63	Start Angle (deg): 45.00
	Stress Ratio: 0.75	Compression
		Force (kip): 153.59
		Allowable (kip): 260.00
		Ratio: 0.60
		Tension
		Force (kip): 144.07
		Allowable (kip): 260.00
		Ratio: 0.57



Pier Foundation Design For Monopole			Date
			4/18/2022
Customer Name:	T-Mobile	EIA/TIA Standard:	TIA-222-G
Site Name:		Structure Height (Ft.):	176
Site Number:	CT02216-S-SBA	Engineer Name:	S. Hesselbein
Engr. Number:	127793	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations	Monopole
Analysis	

Acceptable overstress ($\leq 5.0\%$)

Structure Type:

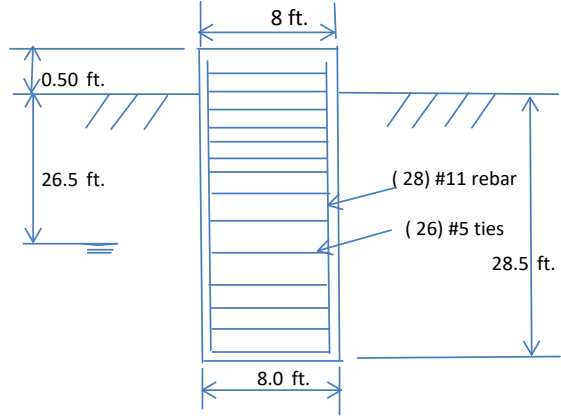
Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	66.7	Shear Force (Kips):	34.8
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4769.0

Foundation Geometries:

Diameter of Pier (ft.):	8.0	Depth of Base B. G. S. :	28.5 ft.
Pier Height A. G. (ft.):	0.50		



Monopole Pier Foundation

Material Properties and Rebar Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield strength:	40	ksi
Vertical Rebar Size #:	11	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	28	Tie Spacing:	18.0	in.
Concrete Cover (in.):	4	Concrete unit weight:	150.0	pcf

Soil Design Parameters:

Water Table B.G.S. (ft):	26.5	Unit weight of water:	62.4	psf
Ratio of Uplift/Axial Skin Friction:	1.0	Pullout failure Angle:	30	(°)
Skin Frictions are to be obtained from:	Soil Report			

Sand

5000

Depth of Layers (ft)		γ_{soil} (pcf)	ϕ (°)	Cohesion (psf)	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types					
Top	Bottom											
0.0	4.0	120	34	0	0	0	Sand					
4.0	9.0	120	33	0	100000	0	Sand					
9.0	19.0	120	34	0	510000	0	Sand					
19.0	26.5	125	36	0	950000	0	Sand					
26.5	29.0	125	36	0	1200000	3000000						
29.0	34.0											

Soil weight Increase Factor for bouyant soils (1.0 to 1.15): 1.1

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75
Total Dry Soil Volume from Conical Failure (cu. Ft.):	13917	Dry Soil Weight from Conical Failure:	1690 Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	32	Buoyant Soil Weight from Conical Failure (Ki	0 Kips
Total Dry Concrete Volume (cu. Ft.):	1357	Total Dry Concrete Weight:	203.6 Kips
Total Buoyant Concrete Volume (cu. Ft.):	100.5	Total Buoyant Concrete Weight:	8.81 Kips
Total Effective Concrete Weight (Kips):	212.4	Total Effective Soil Weight:	1689.2 Kips
Total Effective Vertical Load on Base (Kips):	118.8		

Check Soil Capacities:

Allowable Foundation Overturning Resistance (kips-ft.):	14889.5	>	Design Factored Moment (kips-ft):	5470	Usage	0.37	OK!
Factor of Safety of Passive Soil Resistance against Moment:	2.72	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

Reinforcing Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	1.56	Tie / Stirrup Area (sq. in./each):	0.31	Usage	
Calculated Moment Capacity (Mn, Kips-Ft):	8183.2	>	Design Factored Moment (Mu, K-Ft):	4877.7	0.60 OK!
Calculated Shear Capacity (Kips):	1274.2	>	Design Factored Shear (Kips):	398.7	0.31 OK!
Calculated Tension Capacity (Tn, Kips):	2358.7	>	Design Factored Tension (Tu Kips):	0.0	0.00 OK!
Calculated Compression Capacity (Pn, Kips):	9540	>	Design Factored Axial Load (Pu Kips):	66.7	0.01 OK!
Moment & Axial Strength Combination:	0.60	OK!	Max. Allowable Tie/Stirrup Spacing:	12.00	in.
Pier Reinforcement Ratio:	0.006	Reinforcement Ratio is satisfied per ACI			

Exhibit E

Mount Analysis



Tower Engineering Solutions

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

Antenna Mount Analysis Report

Existing Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT02216-S-SBA

Customer Site Name: Glastonbury

Carrier Name: T-Mobile (App#: 192388-1, V1)

Carrier Site ID / Name: CT11336A / RT-2/Glastonbury

Site Location: 175 Dickenson Road

Glastonbury, Connecticut

Hartford County

Latitude: 41.655897

Longitude: -72.523255

Analysis Result:

Max Structural Usage: 77.9% [Pass]

Report Prepared By: Progesh Roka





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Report Prepared By: Progesh Roka

Introduction

The purpose of this report is to summarize the analysis results on the (1) SitePro RMQP-4096-HK at 177.00' 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 info provided by SBA; Application #: 192388, v1; dated 4/8/2022 1 SitePro RMQP-4096-HK,
Antenna Loading	Provided by SBA; Application #: 192388, v1; dated 4/8/2022
Recent Mount Photos	Provided by SBA
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 1" radial ice concurrent

Operational Wind Speed: 30 mph +0" Radial ice

Standard/Codes: ANSI/TIA/EIA 222-G/2015 IBC/2018 Connecticut State Building Code

Exposure Category: C

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) SitePro RMQP-4096-HK at 177.00' elevation

Final Antenna Configuration

3 Ericsson AIR6419 B41
3 RFS APXVAALL24_43-U-NA20
6 Allen telecom FE15501P77/75
3 Ericsson KRY 112 144/1
3 Ericsson KRY 112 489/2
3 Ericsson 4449 B71 + B85
3 Ericsson 4460 B25 + B66

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 mount will be structurally adequate to support the proposed antenna configuration. The maximum structural usage is 77.9%, which occurs in the support rail. 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.

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.



Sector: **A**

4/8/2022

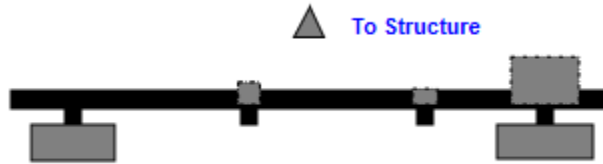
Structure Type: Monopole

Mount Elev: 177.00

Page: 1

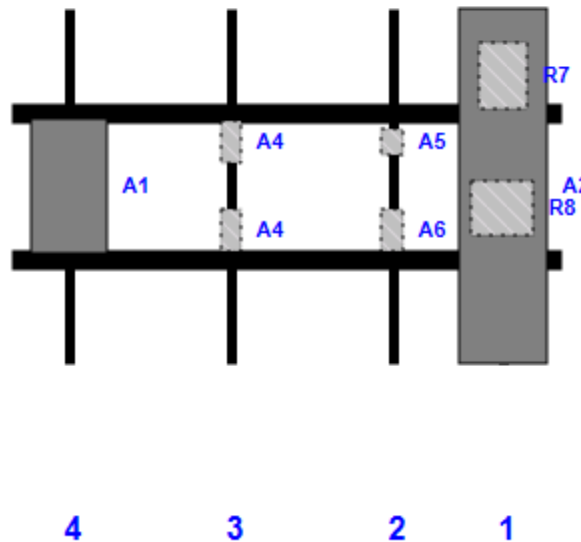


Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A2	APXVAALL24_43-U-NA20	95.90	24.00	134.00	1	a	Front	48.00			
R7	4449 B71 + B85	17.90	13.10	134.00	1	a	Behind	18.00			
R8	4460 B25 + B66	15.10	17.00	134.00	1	a	Behind	54.00			
A5	KRY 112 144/1	6.90	6.10	104.00	2	a	Behind	36.00			
A6	KRY 112 489/2	11.00	6.10	104.00	2	a	Behind	60.00			
A4	FE15501P77/75	11.75	5.40	60.00	3	a	Behind	36.00			
A4	FE15501P77/75	11.75	5.40	60.00	3	b	Behind	60.00			
A1	AIR6419 B41	36.30	20.90	16.00	4	a	Front	47.94			

Sector: **B**

4/8/2022

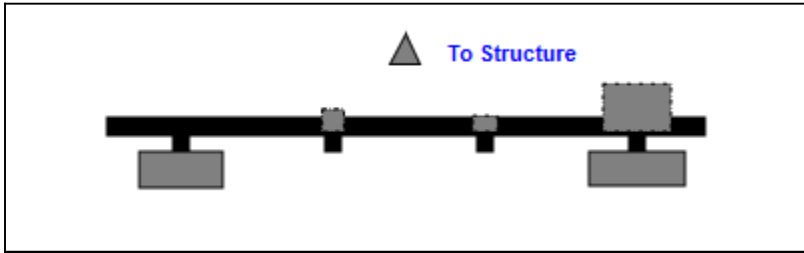
Structure Type: Monopole

Mount Elev: 177.00

Page: 2

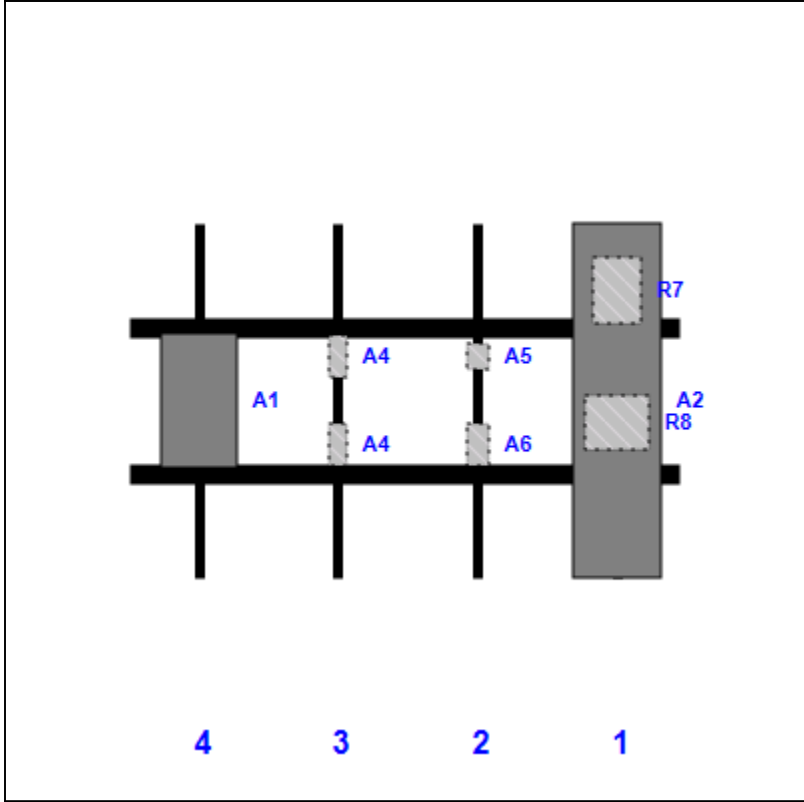


Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A2	APXVAALL24_43-U-NA20	95.90	24.00	133.00	1	a	Front	48.00			
R7	4449 B71 + B85	17.90	13.10	133.00	1	a	Behind	18.00			
R8	4460 B25 + B66	15.10	17.00	133.00	1	a	Behind	54.00			
A5	KRY 112 144/1	6.90	6.10	95.00	2	a	Behind	36.00			
A6	KRY 112 489/2	11.00	6.10	95.00	2	a	Behind	60.00			
A4	FE15501P77/75	11.75	5.40	57.00	3	a	Behind	36.00			
A4	FE15501P77/75	11.75	5.40	57.00	3	b	Behind	60.00			
A1	AIR6419 B41	36.30	20.90	19.00	4	a	Front	47.94			

Sector: C

4/8/2022

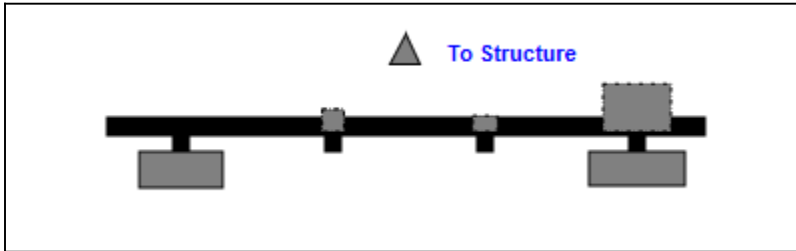
Structure Type: Monopole

Mount Elev: 177.00

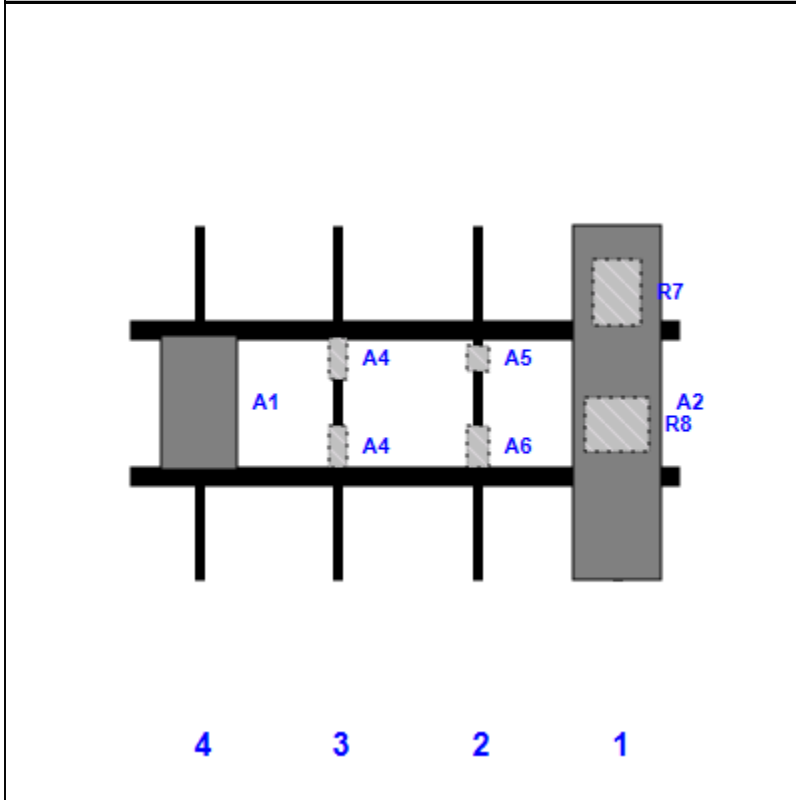
Page: 3



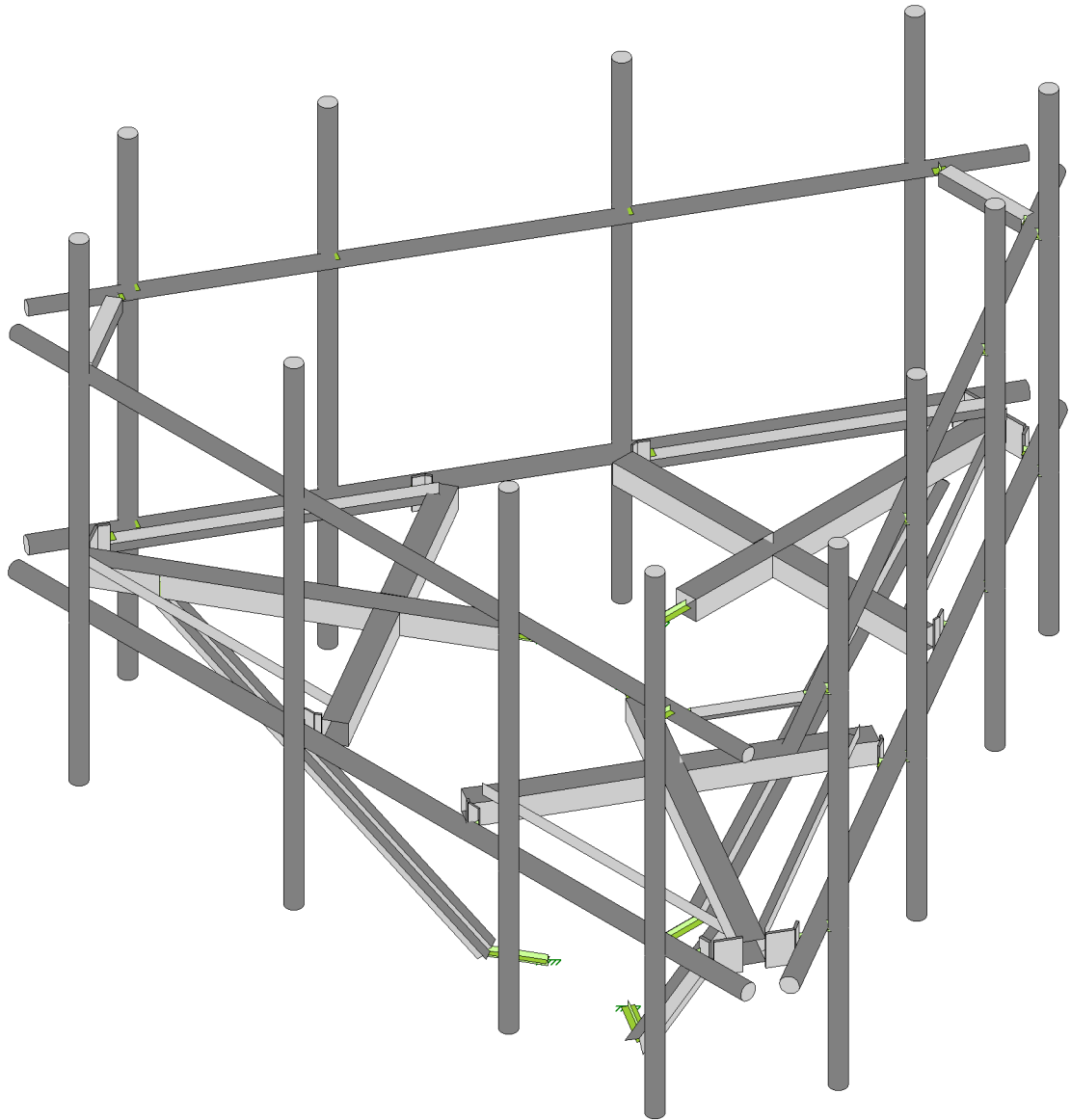
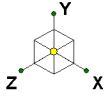
Plan View



Front View
Looking Toward Structure



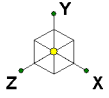
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A2	APXVAALL24_43-U-NA20	95.90	24.00	133.00	1	a	Front	48.00			
R7	4449 B71 + B85	17.90	13.10	133.00	1	a	Behind	18.00			
R8	4460 B25 + B66	15.10	17.00	133.00	1	a	Behind	54.00			
A5	KRY 112 144/1	6.90	6.10	95.00	2	a	Behind	36.00			
A6	KRY 112 489/2	11.00	6.10	95.00	2	a	Behind	60.00			
A4	FE15501P77/75	11.75	5.40	57.00	3	a	Behind	36.00			
A4	FE15501P77/75	11.75	5.40	57.00	3	b	Behind	60.00			
A1	AIR6419 B41	36.30	20.90	19.00	4	a	Front	47.94			



Tower Engineering Solutio...
Progesh Roka
TES Project No. 127509

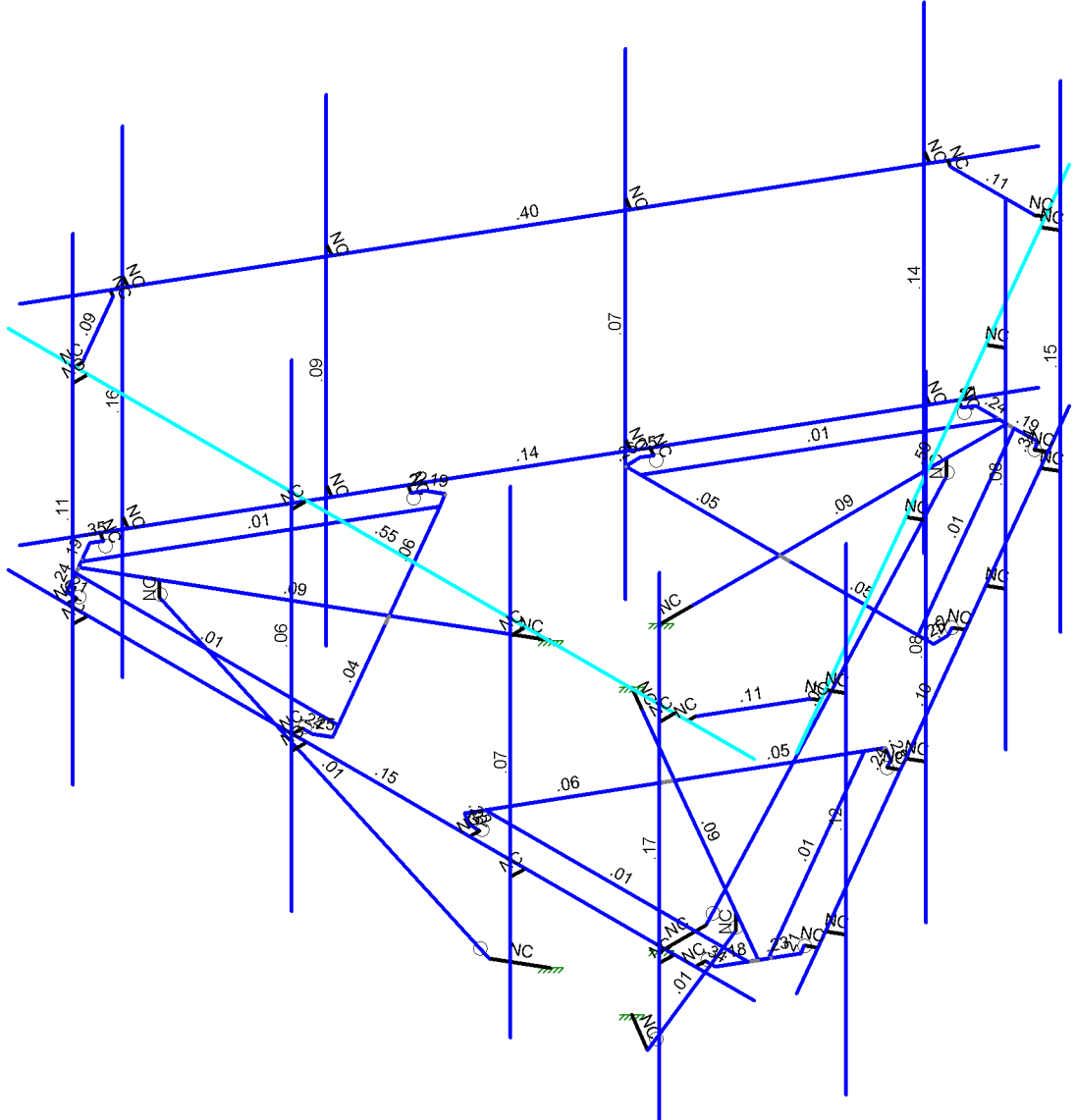
CT02216-S-SBA_MT_LO_Loads Only_G
RENDER

SK - 1
Apr 8, 2022 at 3:05 PM
CT02216-S-SBA_127509_G_RISA_...




Shear Check
(Env)

- No Calc
- > 1.0
- .90-1.0
- .75-.90
- .50-.75
- 0-.50



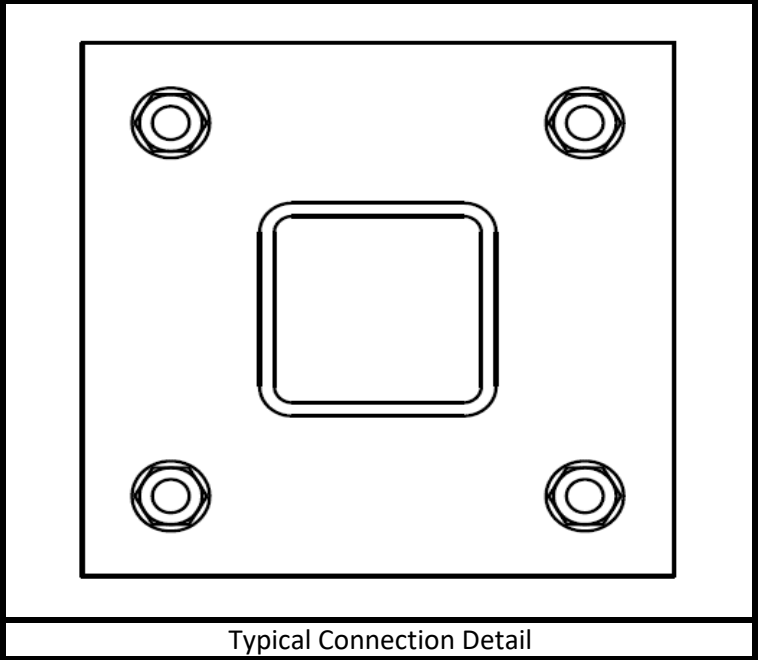
Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.6W (Front)

Tower Engineering Solutio...	CT02216-S-SBA_MT_LO_Loads Only_G SHEAR	SK - 3
Progesh Roka		Apr 8, 2022 at 3:05 PM
TES Project No. 127509		CT02216-S-SBA_127509_G_RISA_...

	Standoff Arm Flange Connection Check		Date	
			4/8/2022	
	Customer:	SBA	TIA Standard:	ANSI/TIA-222-G
	Carrier:	T-Mobile	Mount Elev. [ft]:	177
	Site Name:	Glastonbury	Engineer Name:	Progesh Roka
Site Number:	CT02216-S-SBA	Project #:	127509	

NOTE: The calculations shown below are for a single representative load combination for example purposes. The results for all load combinations are presented in the Results Summary Table.

RISA Member Label =	M1	
I or J End?	J	
Load Combination # =	3	
Plate Width, Wp =	10	[In]
Plate Height, Hp =	10	[In]
Plate Thickness, tp =	0.625	[In]
Plate Fy =	36	[KSI]
Bolt Diameter, db =	0.625	[In]
Bolt Fu =	120	[KSI]
Bolt Horizontal Spacing, Sbh =	7	[In]
Bolt Vertical Spacing, Sbv =	7	[In]
Standoff Member Shape =	Rect Tube	
Member Width, Wm =	4	[In]
Member Depth, Dm =	4	[In]
Member Thickness, tm =	0.221	[In]
Standoff Weld Size =	0.1875	[In]
# Standoff Welds =	2	
Length of Stiffener, Ls =		[In]
Width of Stiffener, Ws =		[In]
Width of Notch, Wn =		[In]
Stiffener Dim 1, ds1 =		[In]
Stiffener Dim 2, ds2 =		[In]
Stiffener Fy =		[KSI]
Stiffener Weld Size =		[In]
# Stiffener Welds =		




NOTES

Standoff and Stiffener welds are assumed 0.1875 in.

Capacity Checks:

Max Bolt Shear =	0.802	[Kips]
Bolt Shear Capacity =	13.81	[Kips]
Max Bolt Shear Usage =	5.8%	PASS
Max Bolt Tension =	2.98	[Kips]
Bolt Tension Capacity =	20.34	[Kips]
Max Bolt Tension Usage =	14.6%	PASS
Max Bolt Interaction =	15.6%	PASS
Max Plate Bending Moment =	8.03	[Kip-In]
Length of Yield Line =	7.73	[In]
Plate Moment Capacity =	24.45	[Kip-In]
Max Plate Usage =	28.4%	PASS
Max Weld Usage =	19.1%	PASS

	Standoff Arm Flange Connection Check			Date
				4/8/2022
	Customer:	SBA	TIA Standard:	ANSI/TIA-222-G
	Carrier:	T-Mobile	Mount Elev. [ft]:	177
	Site Name:	Glastonbury	Engineer Name:	Progesh Roka
Site Number:	CT02216-S-SBA	Project #:	127509	

Results Summary Table

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
M1	J	1	0.0304	1.6901	0.2%	8.3%	8.3%	16.4%	10.7%
M1	J	2	0.1469	0.0000	1.1%	0.0%	1.1%	0.0%	8.3%
M1	J	3	0.8022	2.9790	5.8%	14.6%	15.6%	28.4%	19.1%
M1	J	4	0.7409	2.8204	5.4%	13.9%	14.8%	26.8%	22.6%
M1	J	5	0.2470	1.8579	1.8%	9.1%	9.3%	19.3%	13.0%
M1	J	6	0.2999	1.2635	2.2%	6.2%	6.3%	12.8%	9.1%
M1	J	7	0.4433	2.2696	3.2%	11.2%	11.3%	21.6%	6.4%
M1	J	8	0.2260	2.1909	1.6%	10.8%	10.9%	20.9%	16.2%
M1	J	9	0.0882	0.5525	0.6%	2.7%	2.8%	5.4%	3.9%
M1	J	10	0.0595	0.5271	0.4%	2.6%	2.6%	5.5%	3.6%
M1	J	11	0.0978	0.5394	0.7%	2.7%	2.7%	5.6%	3.8%
M26	J	1	0.5590	0.8875	4.0%	4.4%	5.6%	8.4%	7.8%
M26	J	2	0.4675	1.8543	3.4%	9.1%	9.7%	17.7%	13.6%
M26	J	3	0.3140	0.0000	2.3%	0.0%	2.3%	0.0%	9.3%
M26	J	4	0.3279	1.4586	2.4%	7.2%	7.6%	15.2%	9.3%
M26	J	5	0.4021	1.7192	2.9%	8.5%	8.6%	16.4%	8.1%
M26	J	6	0.2051	1.9820	1.5%	9.7%	9.8%	18.9%	14.2%
M26	J	7	0.2582	1.2578	1.9%	6.2%	6.3%	13.0%	9.4%
M26	J	8	0.3149	1.8376	2.3%	9.0%	9.2%	19.1%	12.7%
M26	J	9	0.1322	0.6945	1.0%	3.4%	3.5%	6.6%	3.5%
M26	J	10	0.0925	0.5348	0.7%	2.6%	2.7%	5.1%	2.7%
M26	J	11	0.0978	0.5394	0.7%	2.7%	2.7%	5.6%	3.8%
M50	J	1	0.6429	1.5813	4.7%	7.8%	8.9%	15.1%	20.0%
M50	J	2	0.6800	2.7984	4.9%	13.8%	14.5%	27.0%	17.7%
M50	J	3	0.1868	1.6525	1.4%	8.1%	8.2%	16.0%	8.8%
M50	J	4	0.3216	0.0000	2.3%	0.0%	2.3%	0.0%	11.4%
M50	J	5	0.2366	1.7935	1.7%	8.8%	9.0%	17.1%	13.5%
M50	J	6	0.3989	2.1928	2.9%	10.8%	10.9%	20.9%	8.8%
M50	J	7	0.2093	1.8702	1.5%	9.2%	9.2%	18.8%	12.0%
M50	J	8	0.3470	1.3100	2.5%	6.4%	6.9%	13.3%	10.1%
M50	J	9	0.1151	0.5922	0.8%	2.9%	3.0%	5.6%	4.5%
M50	J	10	0.2154	0.7663	1.6%	3.8%	4.0%	7.3%	5.8%
M50	J	11	0.0978	0.5394	0.7%	2.7%	2.7%	5.6%	3.8%

Exhibit F

Power Density/RF Emissions Report

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

T-Mobile Existing Facility

Site ID: CT11336A

RT 2/GLASTONBURY/SBA
175 Dickinson Road
Glastonbury, Connecticut 06073

May 10, 2022

EBI Project Number: 6222003009

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	19.69%

May 10, 2022

T-Mobile

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

Emissions Analysis for Site: CT11336A - RT 2/GLASTONBURY/SBA

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **175 Dickinson Road in Glastonbury, 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 175 Dickinson Road in Glastonbury, 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) 2 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 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.

- 7) 1 LTE Traffic channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 60 Watts.
- 8) 1 LTE Broadcast channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 20 Watts.
- 9) 1 NR Traffic channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.
- 10) 1 NR Broadcast channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 40 Watts.
- 11) 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.
- 12) 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.
- 13) The antennas used in this modeling are the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector A, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector B, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 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.

- 14) The antenna mounting height centerline of the proposed antennas is 176 feet above ground level (AGL).
- 15) 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.
- 16) 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:	RFS APXVAALL24_43- U-NA20	Make / Model:	RFS APXVAALL24_43- U-NA20	Make / Model:	RFS APXVAALL24_43- U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd
Height (AGL):	176 feet	Height (AGL):	176 feet	Height (AGL):	176 feet
Channel Count:	13	Channel Count:	13	Channel Count:	13
Total TX Power (W):	560.00 Watts	Total TX Power (W):	560.00 Watts	Total TX Power (W):	560.00 Watts
ERP (W):	17,868.72	ERP (W):	17,868.72	ERP (W):	17,868.72
Antenna A1 MPE %:	2.94%	Antenna B1 MPE %:	2.94%	Antenna C1 MPE %:	2.94%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd	Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd	Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd
Height (AGL):	176 feet	Height (AGL):	176 feet	Height (AGL):	176 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240.00 Watts	Total TX Power (W):	240.00 Watts	Total TX Power (W):	240.00 Watts
ERP (W):	31,011.95	ERP (W):	31,011.95	ERP (W):	31,011.95
Antenna A2 MPE %:	3.86%	Antenna B2 MPE %:	3.86%	Antenna C2 MPE %:	3.86%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	6.79%
Dish	1.19%
VoiceStream	0.23%
Metro PCS	0.34%
Verizon	3.13%
Sprint	2.41%
AT&T	5.6%
Site Total MPE % :	19.69%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	6.79%
T-Mobile Sector B Total:	6.79%
T-Mobile Sector C Total:	6.79%
Site Total MPE % :	19.69%

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 600 MHz LTE	2	591.73	176.0	1.47	600 MHz LTE	400	0.37%
T-Mobile 600 MHz NR	1	1577.94	176.0	1.96	600 MHz NR	400	0.49%
T-Mobile 700 MHz LTE	2	695.22	176.0	1.73	700 MHz LTE	467	0.37%
T-Mobile 1900 MHz GSM	4	1052.26	176.0	5.24	1900 MHz GSM	1000	0.52%
T-Mobile 1900 MHz LTE	2	2104.51	176.0	5.24	1900 MHz LTE	1000	0.52%
T-Mobile 2100 MHz LTE	2	2649.42	176.0	6.59	2100 MHz LTE	1000	0.66%
T-Mobile 2500 MHz LTE IC & 2C Traffic	1	9619.47	176.0	11.97	2500 MHz LTE IC & 2C Traffic	1000	1.20%
T-Mobile 2500 MHz LTE IC & 2C Broadcast	1	717.84	176.0	0.89	2500 MHz LTE IC & 2C Broadcast	1000	0.09%
T-Mobile 2500 MHz NR Traffic	1	19238.94	176.0	23.93	2500 MHz NR Traffic	1000	2.39%
T-Mobile 2500 MHz NR Broadcast	1	1435.69	176.0	1.79	2500 MHz NR Broadcast	1000	0.18%
						Total:	6.79%

• 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:

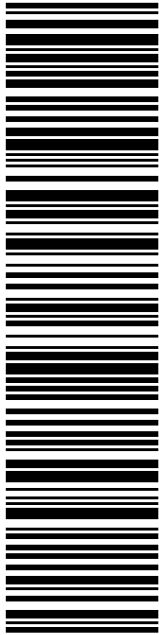
T-Mobile Sector	Power Density Value (%)
Sector A:	6.79%
Sector B:	6.79%
Sector C:	6.79%
T-Mobile Maximum MPE % (Sector A):	6.79%
Site Total:	19.69%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **19.69%** 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.

Exhibit G

Recipient Mailings



USPS TRACKING #

9405 5036 9930 0249 8896 01

Electronic Rate Approved #038555749

SHIP

TO: THOMAS GULLOTTA
TOWN COUNCIL CHAIR
2155 MAIN ST
GLASTONBURY CT 06033-2282

P

USPS.com 9405 5036 9930 0249 8896 01 0009 5000 0010 6033
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Mailed from 01566

PRIORITY MAIL 2-DAY™

DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Expected Delivery Date: 05/18/22
Ref#: SBCT-336A
0006

C002





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9405 5036 9930 0249 8896 01

Trans. #: 563588407	Priority Mail® Postage: \$8.95
Print Date: 05/16/2022	Total: \$8.95
Ship Date: 05/16/2022	
Expected Delivery Date: 05/18/2022	

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359


Ref#: SBCT-336A

To: THOMAS GULLOTTA
TOWN COUNCIL CHAIR
2155 MAIN ST
GLASTONBURY CT 06033-2282

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 05/16/2022

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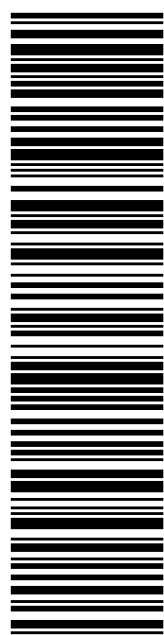
PRIORITY MAIL 2-DAY™

Expected Delivery Date: 05/18/22
 Ref#: SBCT-336A
0006

C002

SHIP
 TO: RICHARD J JOHNSON
 TOWN MANAGER
 2155 MAIN ST
 GLASTONBURY CT 06033-2282

USPS TRACKING #



9405 5036 9930 0249 8896 25

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9405 5036 9930 0249 8896 25

Trans. #: 563588407	Priority Mail® Postage: \$8.95
Print Date: 05/16/2022	Total: \$8.95
Ship Date: 05/16/2022	
Expected Delivery Date: 05/18/2022	

From: DEBORAH CHASE
 NORTHEAST SITE SOLUTIONS
 420 MAIN ST
 STE 1
 STURBRIDGE MA 01566-1359

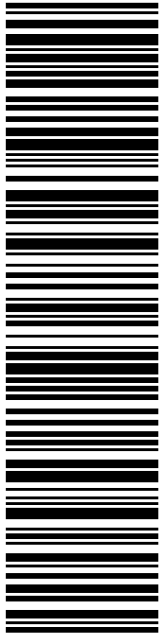
Ref#: SBCT-336A

To: RICHARD J JOHNSON
 TOWN MANAGER
 2155 MAIN ST
 GLASTONBURY CT 06033-2282

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SHIP TO: REBECCA AUGER
DIRECTOR OF PLANNING & LAND USE SERVICES
2155 MAIN ST
GLASTONBURY CT 06033-2282

C002

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USPS TRACKING # :
9405 5036 9930 0249 8896 49

Trans. #: 563588407	Priority Mail® Postage: \$8.95
Print Date: 05/16/2022	Total: \$8.95
Ship Date: 05/16/2022	
Expected Delivery Date: 05/18/2022	

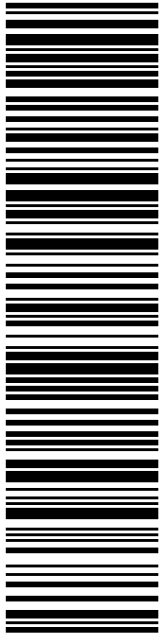
From: DEBORAH CHASE Ref#: SBCT-336A
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

To: REBECCA AUGER
DIRECTOR OF PLANNING & LAND USE SERVICES
2155 MAIN ST
GLASTONBURY CT 06033-2282

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USPS TRACKING #

9405 5036 9930 0249 8896 63

Electronic Rate Approved #038555749

SHIP TO: SBA COMMUNICATIONS CORPORATION
13 FLANDERS RD
STE 125
WESTBOROUGH MA 01581

SHIP TO: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Expected Delivery Date: 05/17/22
Ref#: SBCT-336A
0006

R005

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Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0249 8896 63

Trans. #: 563588407	Priority Mail® Postage: \$8.95
Print Date: 05/16/2022	Total: \$8.95
Ship Date: 05/16/2022	
Expected Delivery Date: 05/17/2022	


From: DEBORAH CHASE Ref#: SBCT-336A
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

To: SBA COMMUNICATIONS CORPORATION
13 FLANDERS RD
STE 125
WESTBOROUGH MA 01581

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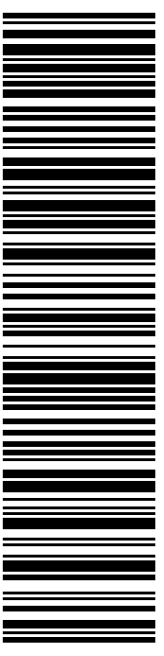
05/16/2022 Mailed from 01566

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Expected Delivery Date: 05/18/22
 Ref#: SBCT-336A
0006

SHIP TO: RANDALL CHAPMAN
 KARRIE-LYNN BRONZI
 PO BOX 7
 TROY ME 04987-0007

USPS TRACKING #



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Trans. #: 563588407	Priority Mail® Postage: \$8.95
Print Date: 05/16/2022	Total: \$8.95
Ship Date: 05/16/2022	
Expected Delivery Date: 05/18/2022	
From: DEBORAH CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	Ref#: SBCT-336A
To: RANDALL CHAPMAN KARRIE-LYNN BRONZI PO BOX 7 TROY ME 04987-0007	
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FARMINGTON
210 MAIN ST
FARMINGTON, CT 06032-9998
(800)275-8777

05/16/2022

03:27 PM

Product	Qty	Unit Price	Price
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Prepaid Mail Troy, ME 04987 Weight: 0 lb 10.20 oz Acceptance Date: Mon 05/16/2022 Tracking #: 9405 5036 9930 0249 8896 94	1		\$0.00
Prepaid Mail Glastonbury, CT 06033 Weight: 0 lb 10.20 oz Acceptance Date: Mon 05/16/2022 Tracking #: 9405 5036 9930 0249 8896 49	1		\$0.00
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Grand Total:			\$0.00