



NORTHEAST
SITE SOLUTIONS

Turnkey Wireless Development

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

May 4, 2022

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

RE: Exempt Modification Application
297 North Street, Plymouth, CT 06782
Latitude: 41.693333
Longitude: -73.053694
Site #: CT01497-S_CT11366A_SBA/T-Mobile

Dear Ms. Bachman:

T-Mobile is requesting to file an exempt modification for an existing tower located at 297 North Street (a/k/a 197 North Street), Plymouth, CT 06782. T-Mobile currently maintains three (3) antennas at the 175-foot level of the existing 195-foot monopole tower. The property is owned by Raymond & Brenda Lajosz, and the tower is owned by SBA. T-Mobile now intends to install (3) antennas. The new antennas would be installed at the 175-foot level of the tower. This modification includes B2, B5 hardware that is both 4G (LTE), and 5G capable.

T-Mobile Planned Modifications:

Remove:

(3) Coax – 1-5/8"

Remove and Replace: None

Install New:

(3) ERICSSON AIR6419 B41 Antennas
(3) ERICSSON 4460 B25+B66 RRU
(2) HCS Fiber Cable 1.9"

Existing to Remain:

(3) RFS APXVAALL24-43-U-NA20 Antennas
(3) ERICSSON 4449 B71+B85 RRU
(1) HCS Fiber Cable 1.9"
(9) Coax – 1-5/8" *
(3) Twin TMAs – KRY 112 144/1 *
(3) Twin TMAs – KRY 112 489/2 *
(6) ALLEN Telecom TMAs *

*Equipment listed for entitlement purposed only



The facility was approved by the Town of Plymouth Planning & Zoning Commission on October 14, 1999. 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 Mayor Joseph Kilduff and Scott Eisenlohr, Zoning Enforcement Officer for the Town of Plymouth, 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



NORTHEAST
SITE SOLUTIONS

Turnkey Wireless Development

Attachments

Cc: Mayor Joseph Kilduff
Plymouth Town Hall
80 Main Street
Terryville, CT 06786

Scott Eisenlohr - Zoning Enforcement Officer
Plymouth Town Hall
80 Main Street
Terryville, CT 06786

Raymond & Brenda Lagosz – Property Owners
297 North Street
Plymouth, CT 06782

SBA - Tower Owner

Exhibit A

Original Facility Approval

RECEIVED FOR RECORD

PLANNING & ZONING PUBLIC HEARING
OCTOBER 14, 1999

10-21-99 At 10:06 pm
Gabe R. Rockwell Town Clerk

The Public Hearings were called to order at 7:15 p.m. by Chairman Steven Panasuk.

ATTENDANCE - Gaye Zukauskas, Bill Kuehn-Town Planner, Patrick Herzing, Pat Pierzanowski-Recording & Office Secretary and Steven Panasuk-Chairman. Absent were Vice Chairman Andrew Dolecki and Raymond Kovaleski. There was no staff in the audience.

Chairman Steve Panasuk went over the procedures to be followed for the public hearings.

1. North Street – Telecommunication Tower Special Permit – SBA Communications, Inc. – Tom Flynn represented SBA Communications, Inc. The public hearing was continued so the Commission could inspect the site, look at the materials given them at the last meeting and receive more information to complete the record. Mr. Flynn gave the Commission information regarding photograph and section locations to satisfy the regulations. It won't look much different from what is there because their tower will be quite close. They do make space available to town emergency services without any rent. It will be a mat gray – made of galvanized steel. **FOR** – no one. **AGAINST** – no one. **FOR NOR AGAINST** – No one. The radiation is less than 10% of the maximum standards allowed. The Commission was concerned about abandonment. If it is abandoned, with is to be dismantled within 6 months. Mr. Flynn stated that they have a long term lease with the landowner. They will abide by the regulations. Discussion was had. **MOTION:** Patrick Herzing made a motion to close the public hearing on North Street-Telecommunication Tower-Special Permit-SBA Communication, Inc. Gaye Zukauskas seconded. **VOTE:** P. Herzing – Aye, G. Zukauskas – Aye and Chairman Panasuk so voted. **MOTION:** Gaye Zukauskas made a motion to approve a special permit for SBA Communications, Inc.-North Street. All proper permits to be acquired and bond to be set by the Town Engineer. Letter of removal process upon abandonment to be submitted by SBA Communications, Inc. Patrick Herzing seconded. **VOTE:** P. Herzing – Aye, G. Zukauskas – Aye and Chairman Panasuk so voted.

2. Fall Mountain Lake – Excavation/Dredging Special Permit – Fall Mtn. Lake Property Owners Assoc., Inc. – Robert Geckler, President of the Fall Mountain Lake Property Owners Association, Inc. represented the applicants. Wolcott Sand & Gravel will not require payment until the project is completed. Mr. Geckler stated that no bond was required when the work was done at Lake Plymouth. Steve Panasuk suggested a \$5,000 bond to cover street clean up, etc. Work would probably begin next fall. They are working with DEP regarding the dam. **FOR** – No one. **AGAINST** – No one. **FOR NOR AGAINST** - No one. Discussion was had. **MOTION:** Patrick Herzing made a motion to close the public hearing. Gaye Zukauskas seconded. **VOTE:** P. Herzing – Aye, G. Zukauskas – Aye and Chairman Panasuk so voted. **MOTION:** Gaye Zukauskas made a motion to approve the special permit for Fall Mountain Lake – excavation/dredging – Fall Mountain Lake Property Owners Assoc., Inc. with a \$5000 bond for clean up. Patrick Herzing seconded. **VOTE:** P. Herzing – Aye, G. Zukauskas – Aye and Chairman Panasuk so voted.

3. Town Hill Road – Pines Subdivision – Rear Lot Special Permit – Resubdivision – CT Water Co. – Keith Nadeau, PE for CT Water Co. Mr. Nadeau went over what happened on this. Steve Panasuk read the letter from Anthony A. Lorenzetti dated 10/1/99 into the record. Steve Panasuk read the letter from Rob Rubbo of Torrington Area Health dated 10/4/99 into the record. The water has come through and all lots will have public water. **FOR** – No one. **AGAINST** – No one. **FOR NOR AGAINST** – No one. Discussion was had.

RECEIVED FOR RECORD

9-17-99 At 9:03 AM
Joan M. Hebel, Town Clerk

PLANNING & ZONING PUBLIC HEARING
SEPTEMBER 9, 1999

The Public Hearing was called to order at 7:03 p.m. by Chairman Steven Panasuk.

ATTENDANCE - Gaye Zukauskas, Andrew Dolecki, Bill Kuehn-Town Planner, Patrick Herzing (entered at 7:08), Pat Pierzanowski-Recording & Office Secretary and Steven Panasuk-Chairman. In the audience was Anthony A. Lorenzetti, PE, Director of Public Works.

Chairman Steve Panasuk went over the procedures to be followed for the public hearings.

①. **North Street – Telecommunication Tower Special Permit – SBA Communications, Inc.**
- Mr. Kuehn read the legal notice into the record for all 4 public hearings. Mr. Tom Flynn, Zoning Consultant with SBA represented the applicants. He gave the Commissioners each a package of materials pertaining to this application. He explained that this is a 195' tall monopole on North Street, which will be capable of handling up to 5 PCS type antennae. The site plan poses very little impact. They lease the land and build a tower. Sprint PCS and Nextel will be on this antenna. There will be a pole, a parking area and a fenced in area. It will be manned by someone periodically possibly 2 times a month. There will be electricity and telephone but no water, sewer or septic. There is another antenna on this piece of property. It is a wooded piece of property, fairly isolated and not visible from the surrounding area. The pole will be 213 feet from the house. The utilities will be underground. There will be no landscaping because it is in the woods. As any antennae are proposed, they will have to come to the Commission for approvals, etc. Mr. Flynn showed the Commission a sketch of the pole. It is taller and stockier than the existing pole, which cannot accommodate these carriers. The antenna will not be lit or striped because it is not required by the Siting Council. It is made of galvanized steel and once it hits the air will turn to a grayish brown. Mr. Flynn went over the frequency, power and area coverage. They comply with FCC Regulations regarding electro magnetic radiation and it will not interfere with TVs, radios or telephones. To summarize, it is not within 200 feet of a residence. It is not lit. It is made of galvanized steel and will be dull gray so doesn't need to be painted. There will be no signage or advertising. The pole is suitable to hold up to 5 carriers. It meets all the setbacks. All carriers will have to come to the Commission for special permit approvals. It will be fenced and secure. Complies with all non-interference as per FCC regulations. The utilities will be underground. Monopoles have no history of failings. If they did fail, they would twist and fold or knuckle into itself. **FOR** – no one. **AGAINST** – no one. **FOR NOR AGAINST** – Scott Magnano of Scott Road asked how high the existing pole is. It is 185'. Discussion was had. **MOTION:** Gaye Zukauskas made a motion to continue the public hearing for 297 North Street, SBA, Inc. to our next scheduled meeting to be determined. Patrick Herzing seconded. **VOTE:** A. Dolecki – Aye, G. Zukauskas – Aye, P. Herzing – Aye and Chairman Panasuk so voted.

2. **58 Lakeside Dr. – RA-2 Residence Expansion Special Permit – Casey** – Chris Casey represented himself. They want to take off an addition and put on a new addition using the same footprint. They have already received a variance from ZBA to increase lot coverage. Asked that an A-2 survey be waived. Mr. Kuehn passed around a picture of the property. The addition will be going up. **FOR** – No one. **AGAINST** – No one. **FOR NOR AGAINST** – No one. Discussion was had. **MOTION:** Patrick Herzing made a motion to close the public hearing for 58 Lakeside Dr. Gaye Zukauskas seconded. **VOTE:** A. Dolecki – Aye, G. Zukauskas – Aye, P. Herzing – Aye and Chairman Panasuk so voted. **MOTION:** Gaye Zukauskas made a motion to grant the applicant a special permit for 58 Lakeside Drive. The applicants will get all the permits

Exhibit B

Property Card



Town of Plymouth
Property Listing Report

Parcel ID 017-014-014D

Account

00074600

Property Information

Owner	LAGOSZ RAYMOND & BRENDA
Address	297 NORTH ST
Mailing Address	297 NORTH ST PLYMOUTH, CT 06782
Land Use	-
Land Class	R

Census Tract	4253
Neighborhood	101
Zoning	RA1
Acreage	2.62
Utilities	
Lot Setting/ Desc	/ 1

Photo



PARCEL VALUATIONS (Assessed value = 70% of Appraised Value)

	Appraised	Assessed
Buildings	145040	
Outbuildings		
Improvements		
Extras		
Land	97800	
Total	242840	169990
Previous		

Construction Details

Year Built	
Stories	1.5
Building Style	CAPE
Building Use	
Building Condition	AVERAGE
Total Rooms	7
Bedrooms	4
Full Bathrooms	2/1
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

EXTERIOR WALLS:

Primary	FRAME
Secondary	

INTERIOR WALLS:

Primary	
Secondary	

FLOORS:

Primary	
Secondary	

HEATING/AC:

Heating Type	
Heating Fuel	OIL
AC Type	WARM AIR

BUILDING AREA:

Effective Building Area	
Gross Building Area	
Total Living Area	

SALES HISTORY:

Sale Date	0
Sale Price	0
Book/ Page	163/1122



Town of Plymouth, Connecticut. Assessment Parcel Map

GIS Link 017-014-014D

Address: 297 NORTH ST

542.70

229.13

014D

297

2.62 AC

369.30

278

316

015

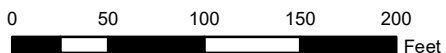
239

0.91 AC

421

014C

1 inch = 100 feet



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

Map Produced: October 2020

Google Maps 297 North St



Imagery ©2021 CNES / Airbus, Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2021 500 ft

Exhibit C

Construction Drawings

THOMASTON3/RT 8

297 NORTH STREET
PLYMOUTH, CT 06782
LITCHFIELD COUNTY

SITE NO.: CT11366A

SITE TYPE: 195'± MONOPOLE

RF DESIGN GUIDELINE: 67D5D998E ODE+6160

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

GENERAL NOTES

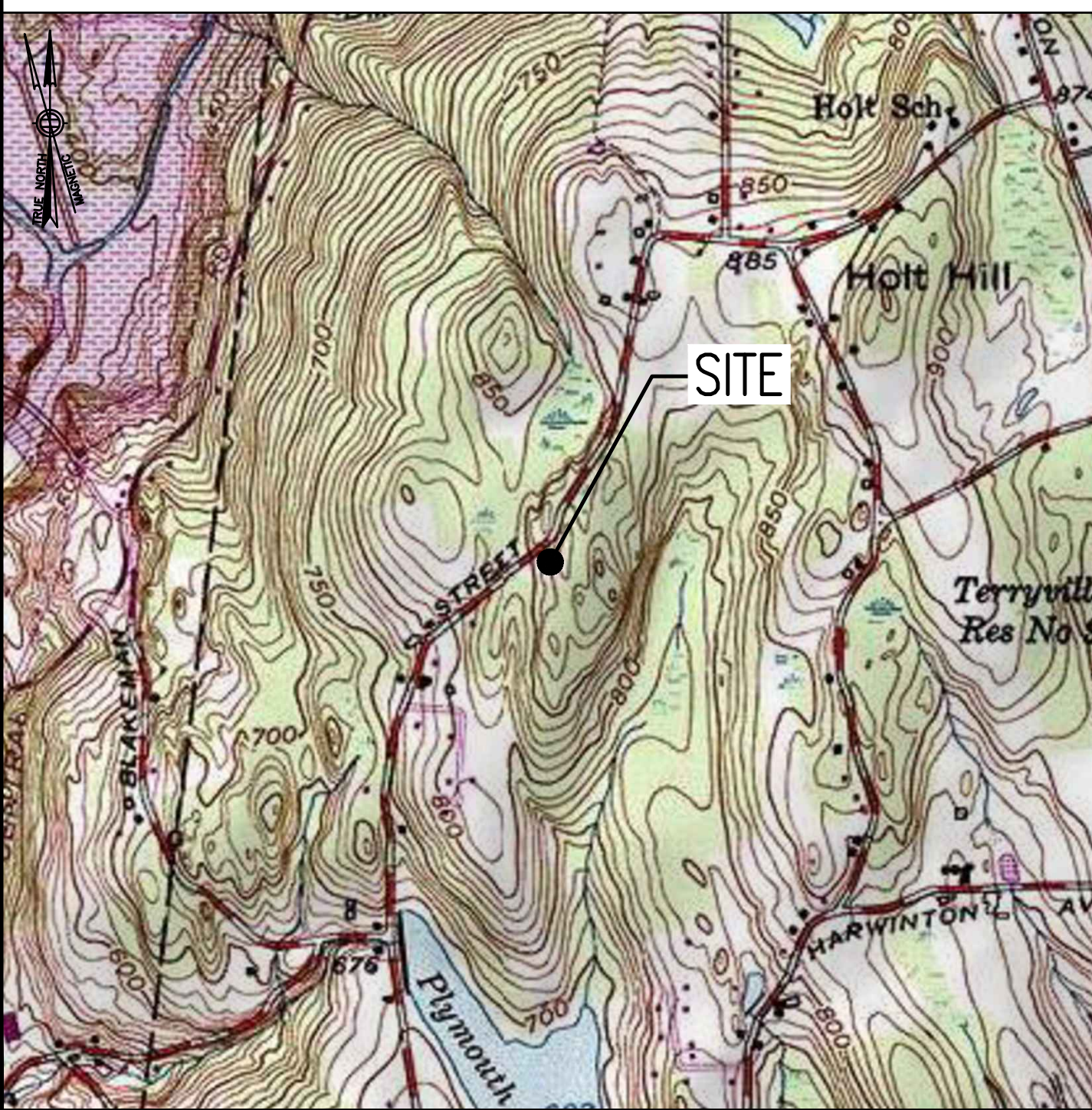
- THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT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

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



VICINITY MAP

SCALE: 1" = 1000'-0"



DIRECTIONS

MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. TAKE EXIT 58 TOWARD I-90 WEST. KEEP LEFT AT FORK & FOLLOW SIGNS FOR I-90 WEST/SPRINGFIELD/ALBANY. MERGE ONTO I-90 WEST. TAKE EXIT 78 TOWARD I-84. CONTINUE ONTO I-84. ENTER CONNECTICUT. TAKE EXIT 33 FOR CT-72 WEST TOWARD BRISTOL. CONTINUE ONTO CT-72 WEST. TURN RIGHT ONTO CT-72. TAKE SLIGHT RIGHT ONTO RIVERSIDE AVENUE. TURN LEFT ONTO MAIN STREET. TURN RIGHT ONTO SCHOOL STREET. CONTINUE ONTO DIVINITY STREET. TURN RIGHT ONTO PARK STREET. CONTINUE ONTO CT-72/TERRYVILLE ROAD. TURN LEFT ONTO US-6 WEST/MAIN STREET. TURN RIGHT ONTO NORTH STREET. SITE IS LOCATED ON THE LEFT HAND SIDE.

SHEET INDEX

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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.

SCOPE OF WORK

REMOVE:	INSTALL:
6 TMAS 3 RADIOS - ALL COAX CABLES 1 100A-2P BREAKER	3 ANTENNAS 3 RADIOS 2 HYBRID CABLES 1 6160 EQUIPMENT CABINET 1 B160 BATTERY CABINET 1 SLACKBOX 2 125A-2P BREAKERS 1 25A-1P BREAKER

SITE NOTES

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

PROJECT SUMMARY

SITE NUMBER:	CT11366A
SITE NAME:	THOMASTON3/RT 8
SBA SITE NUMBER:	CT01497-S
SBA SITE NAME:	PLYMOUTH 2 CT
SITE ADDRESS:	297 NORTH STREET PLYMOUTH, CT 06782
PROPERTY OWNER:	F & B BART & R & B LAGOSZ PTR DBA PINE CREST FARM 297 NORTH STREET PLYMOUTH, CT 06782
TOWER OWNER:	SBA TOWERS, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	LITCHFIELD
ZONING DISTRICT:	RA1 (RESIDENTIAL)
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	195'±
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: 41.693297° N41°41'35.87" LONGITUDE: -73.053692° W73°03'13.29"

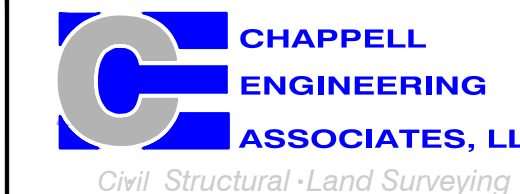
SPECIAL ZONING NOTE:
BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS 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
1	04/20/22	ISSUED FOR CONSTRUCTION	CMC
0	03/24/22	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CT11366A

SITE ADDRESS:
297 NORTH STREET
PLYMOUTH, CT 06782

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

GENERAL NOTES:

1. 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
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
4. 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.
5. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
9. 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.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.
13. 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.
14. 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.
15. CONSTRUCTION SHALL COMPLY WITH ALL T-MOBILE STANDARDS AND SPECIFICATIONS.
16. 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.
17. 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.
18. 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:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. 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.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
6. 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.
7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
8. 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.
9. 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.
10. 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.
11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T-MOBILE SPECIFICATION FOR SITE SIGNAGE.

CONCRETE AND REINFORCING STEEL NOTES:

1. 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.
2. 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
3. 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.
4. 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.
5. A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. 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.
7. 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.
8. 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.
9. 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:

1. 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".
2. 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.
3. 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.
4. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ¾" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL
6. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
3. 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.
4. 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.
5. 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:

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

CONSTRUCTION NOTES:

1. FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T-MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.
2. COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
3. 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:

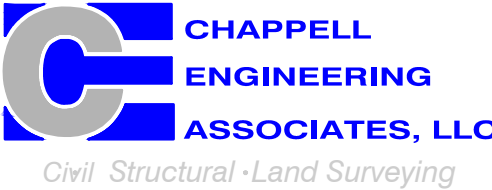
1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
2. SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLEING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
5. 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.
6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.
7. 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).
8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. 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.
11. 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.
12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
13. 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.
14. 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).
15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
17. 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.
18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
20. 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.
21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
23. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
24. CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
25. 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.
26. 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.
27. 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.
28. 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.
29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
30. 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.
31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

T-MOBILE
NORTHEAST LLC

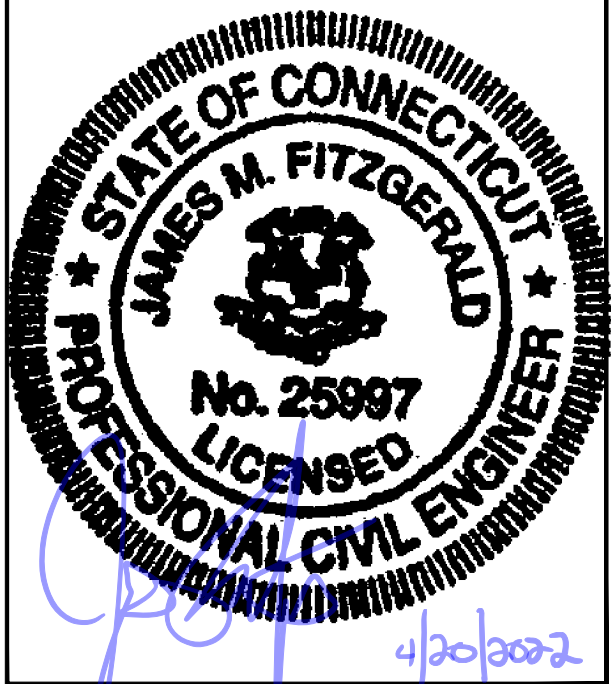
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700



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



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



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	04/20/22	ISSUED FOR CONSTRUCTION	CMC
0	03/24/22	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CT11366A

SITE ADDRESS:
297 NORTH STREET
PLYMOUTH, CT 06782

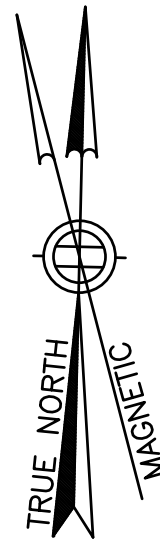
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GENERAL NOTES

SHEET NUMBER

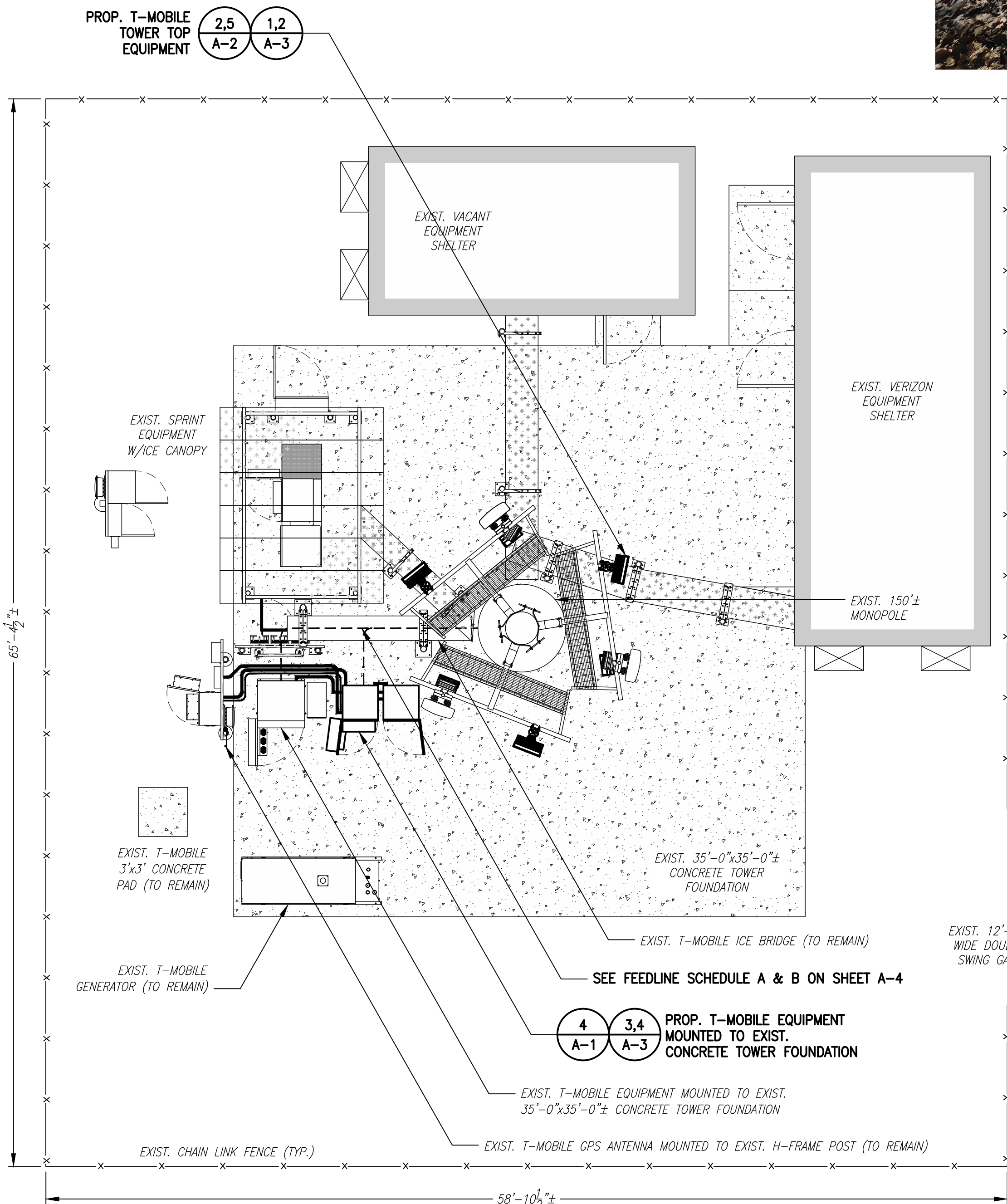
GN-1

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



EXISTING EQUIPMENT PHOTO
SCALE: N.T.S.

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A-1

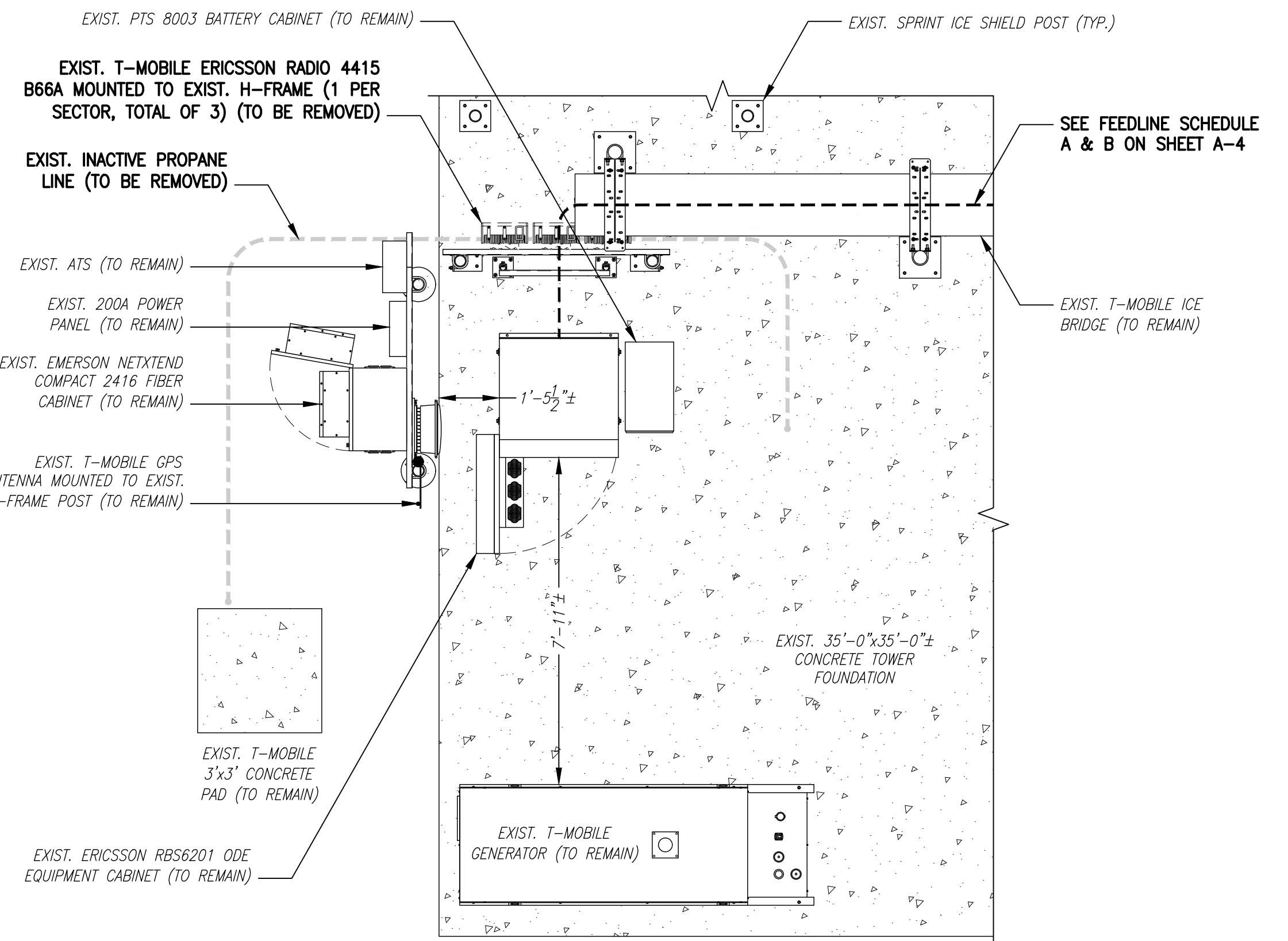


COMPOUND PLAN

SCALE: 3/16" = 1'-0"

0 2'-8" 5'-4" 10'-8" 16'-0"

1
A-1

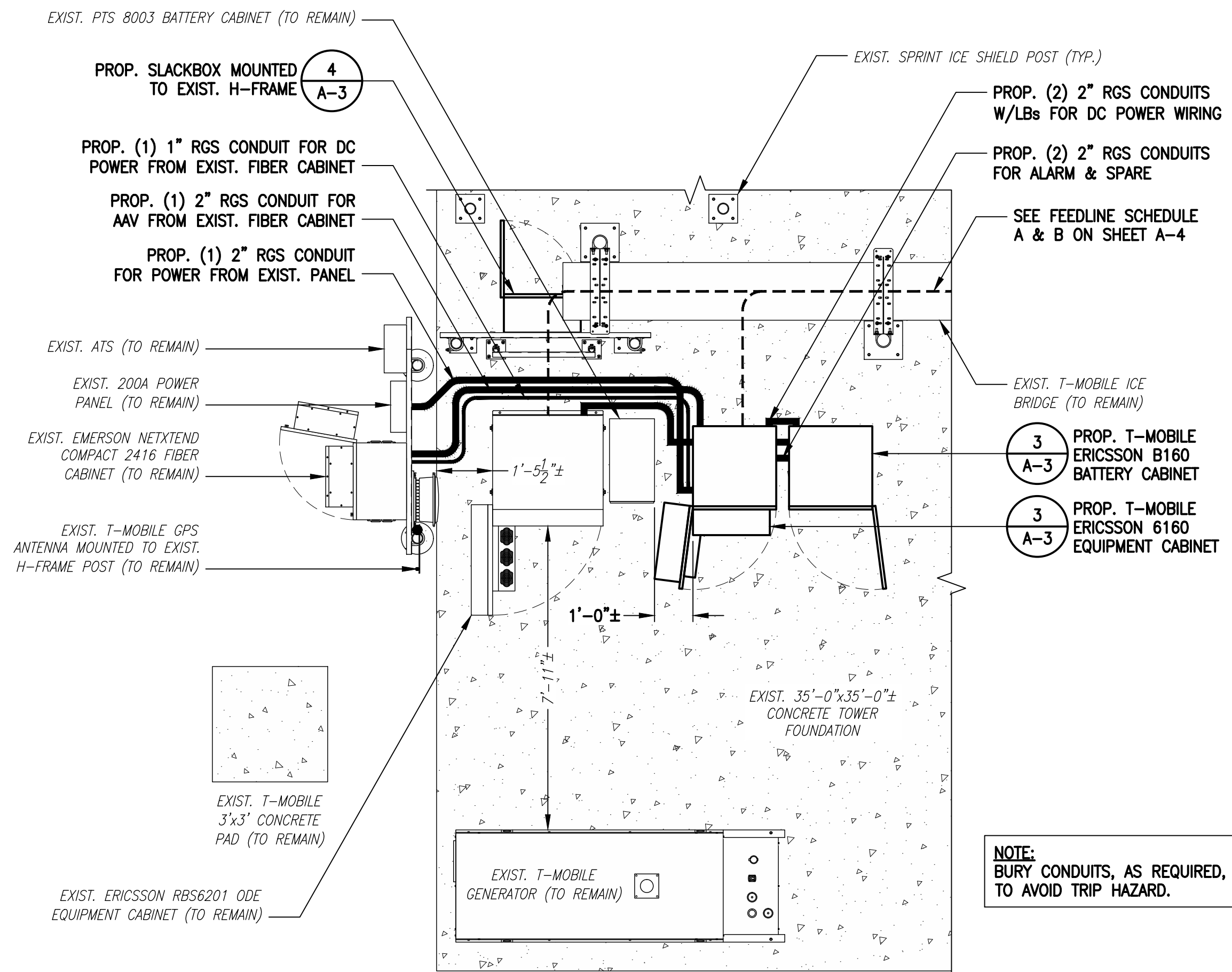


EXISTING EQUIPMENT PLAN

SCALE: 3/8" = 1'-0"

0 2'-8" 5'-4" 8'-0"

2
A-1



PROPOSED EQUIPMENT PLAN

SCALE: 3/8" = 1'-0"

0 2'-8" 5'-4" 8'-0"

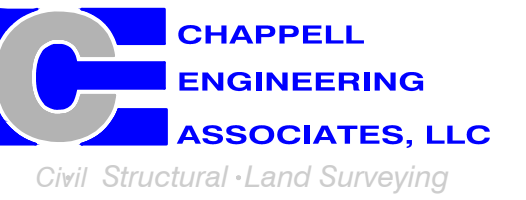
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T-MOBILE NORTHEAST LLC

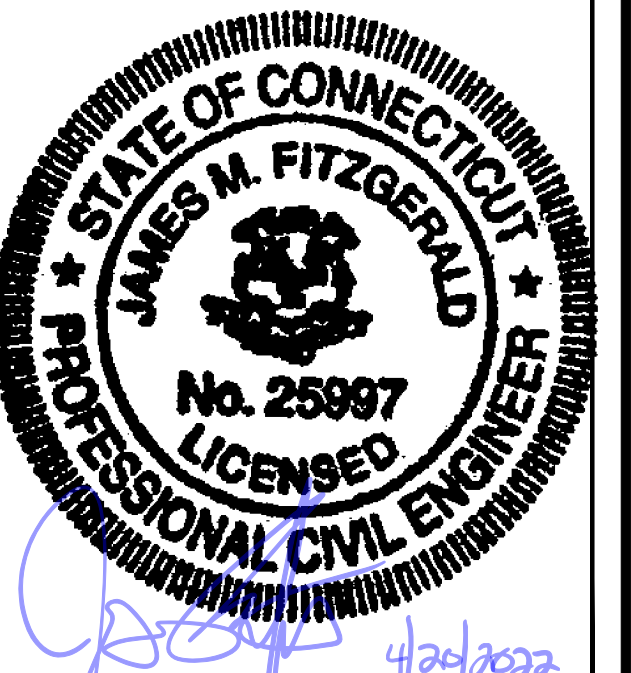
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700



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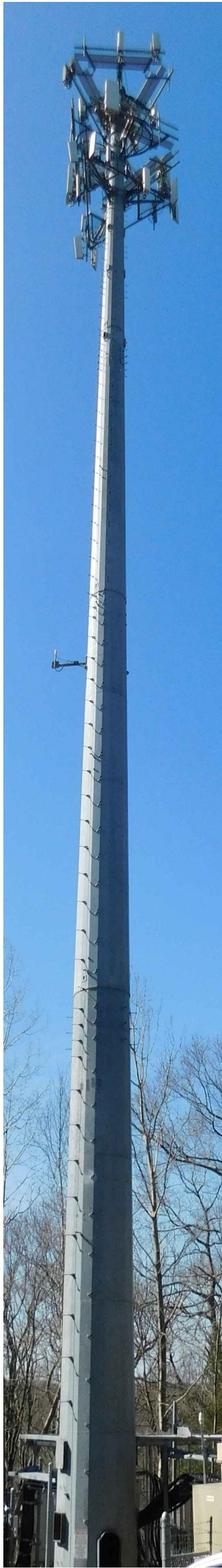
COMPOUND PLAN,
EQUIPMENT PLANS
& PHOTO

SHEET NUMBER

A-1

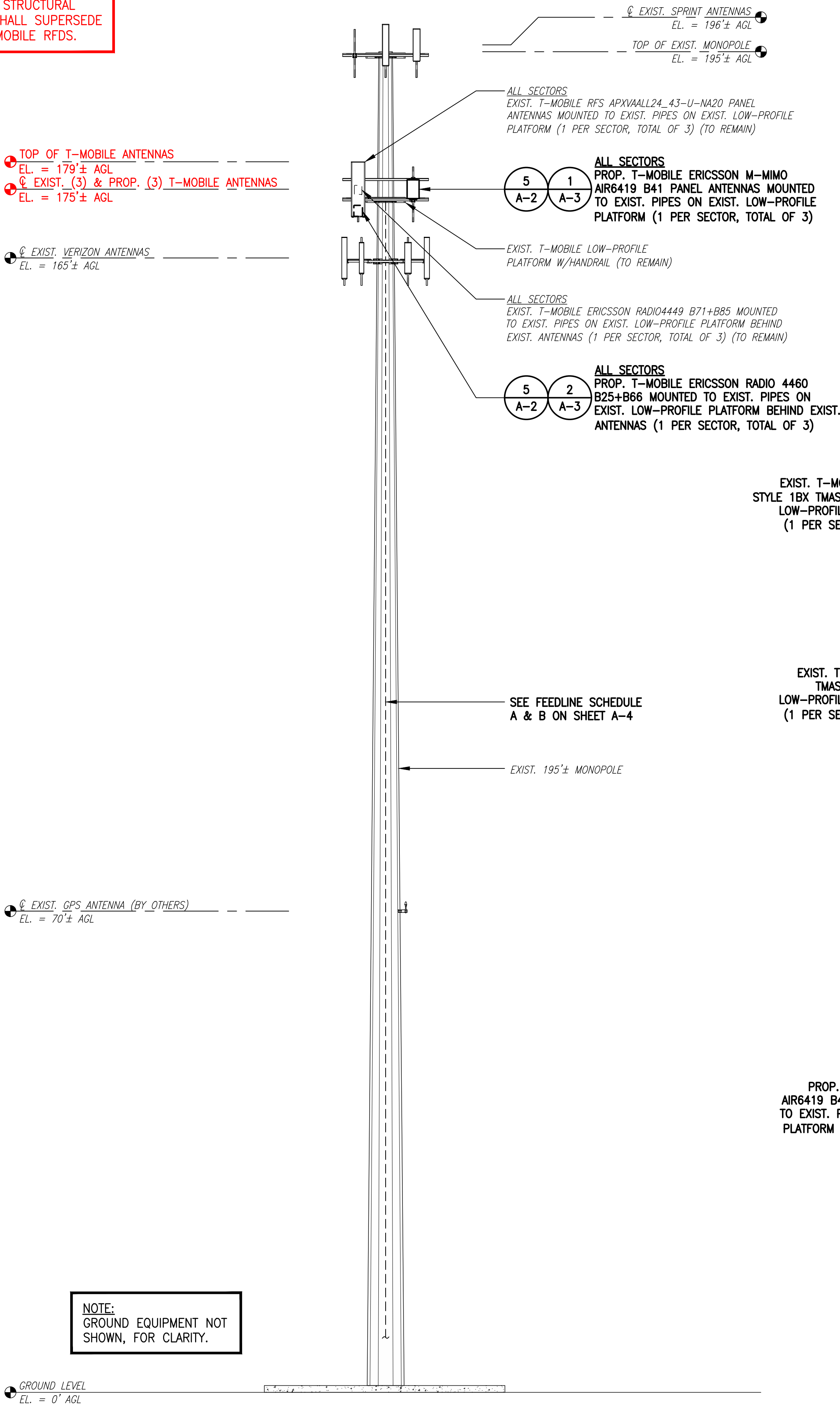
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RAD CENTER NOTE:
T-MOBILE RAD CENTER SHOWN IN RED TEXT BASED ON SBA-PROVIDED
CO-LOCATION APPLICATION, EQUIPMENT DATABASE, AND STRUCTURAL
ANALYSIS. THE SBA-PROVIDED ANTENNA RAD CENTER SHALL SUPERSEDE
ANY CONFLICTING INFORMATION DERIVED FROM THE T-MOBILE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

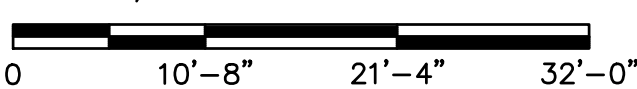


EXISTING TOWER PHOTO
SCALE: N.T.S.

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A-2



TOWER ELEVATION
SCALE: 3/32" = 1'-0"



2
A-2



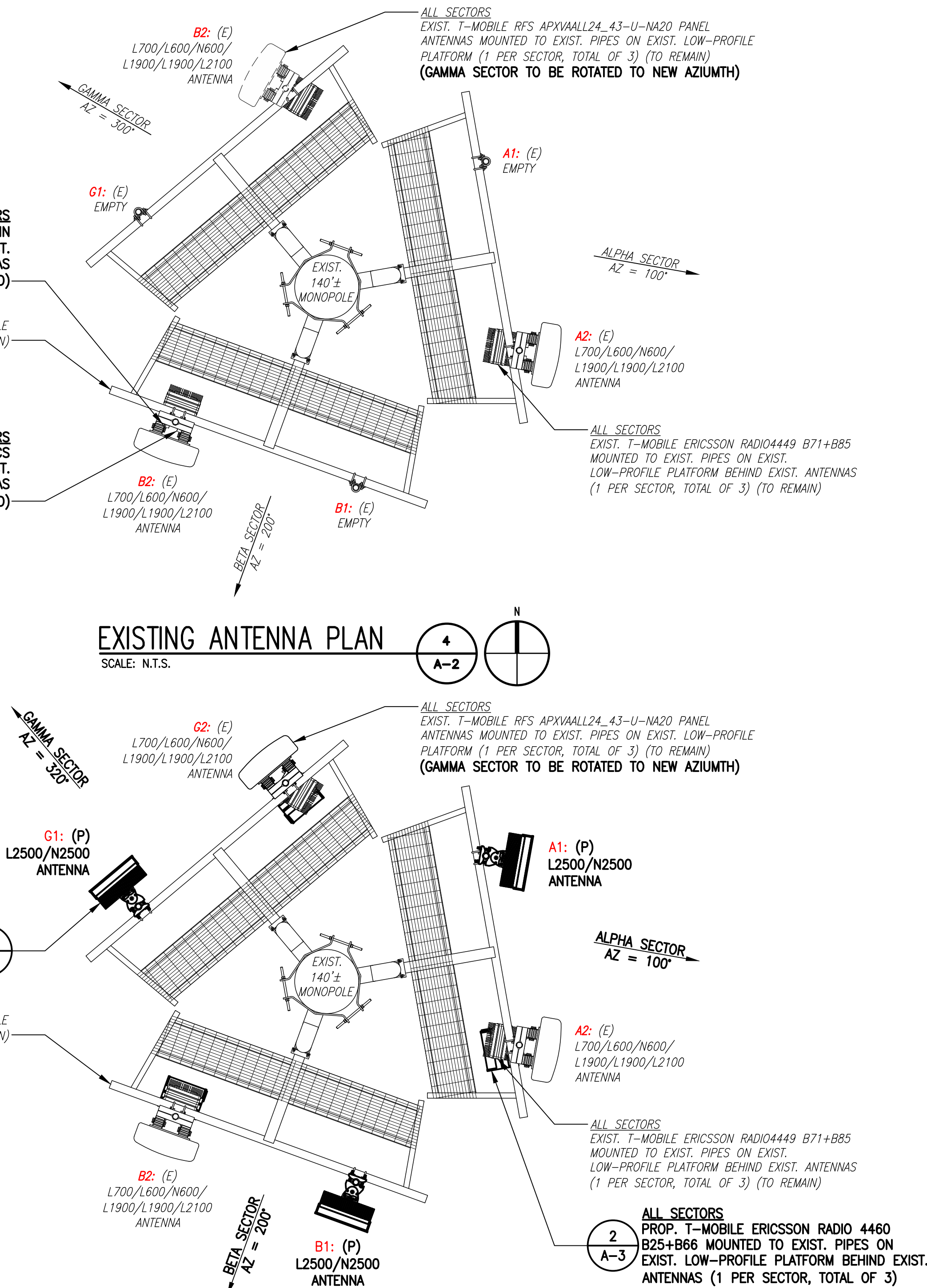
EXISTING ANTENNA PHOTO
SCALE: N.T.S.

3
A-2

ANTENNA STATUS LEGEND:

EMPTY - EMPTY PIPE

(E) - EXISTING
(P) - INSTALL
(F) - FUTURE



EXISTING ANTENNA PLAN
SCALE: N.T.S.

4
A-2

PROPOSED ANTENNA PLAN
SCALE: N.T.S.

5
A-2

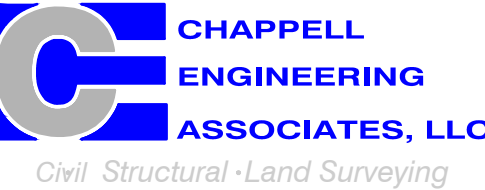
NOTE:
VERIFY PROPOSED AZIMUTHS
WITH RF ENGINEER PRIOR
TO INSTALLATION.

T-MOBILE
NORTHEAST LLC

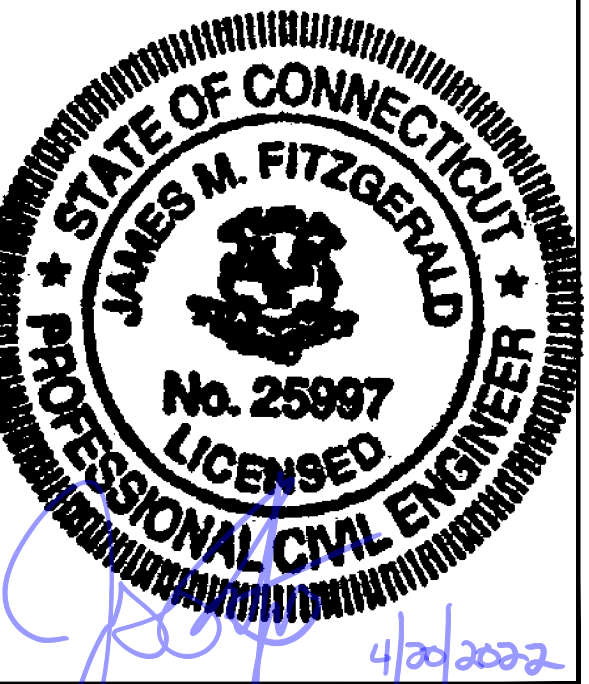
15 COMMERCE WAY, SUITE B
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(508) 286-2700



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



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MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com



CHECKED BY: JMT

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SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	04/20/22	ISSUED FOR CONSTRUCTION	CMC
0	03/24/22	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CT11366A

SITE ADDRESS:
297 NORTH STREET
PLYMOUTH, CT 06782

SHEET TITLE

TOWER ELEVATION,
ANTENNA PLANS &
PHOTOS

SHEET NUMBER

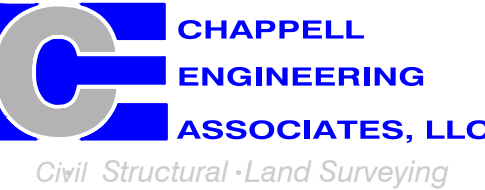
A-2

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SHEET TITLE

SITE DETAILS

SHEET NUMBER

A-3

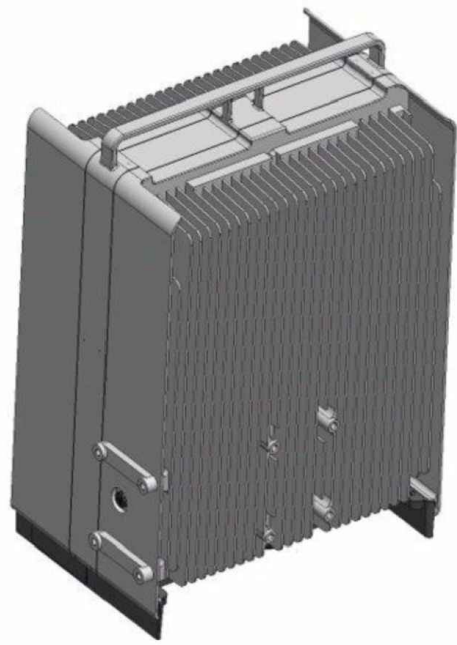
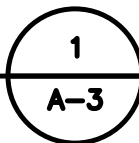


ERICSSON M-MIMO AIR6419 B41 ANTENNA

DIMENSIONS: 36.3"H x 20.9"W x 9.0"D
WEIGHT: 83.3 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ANTENNA DETAIL

SCALE: N.T.S.

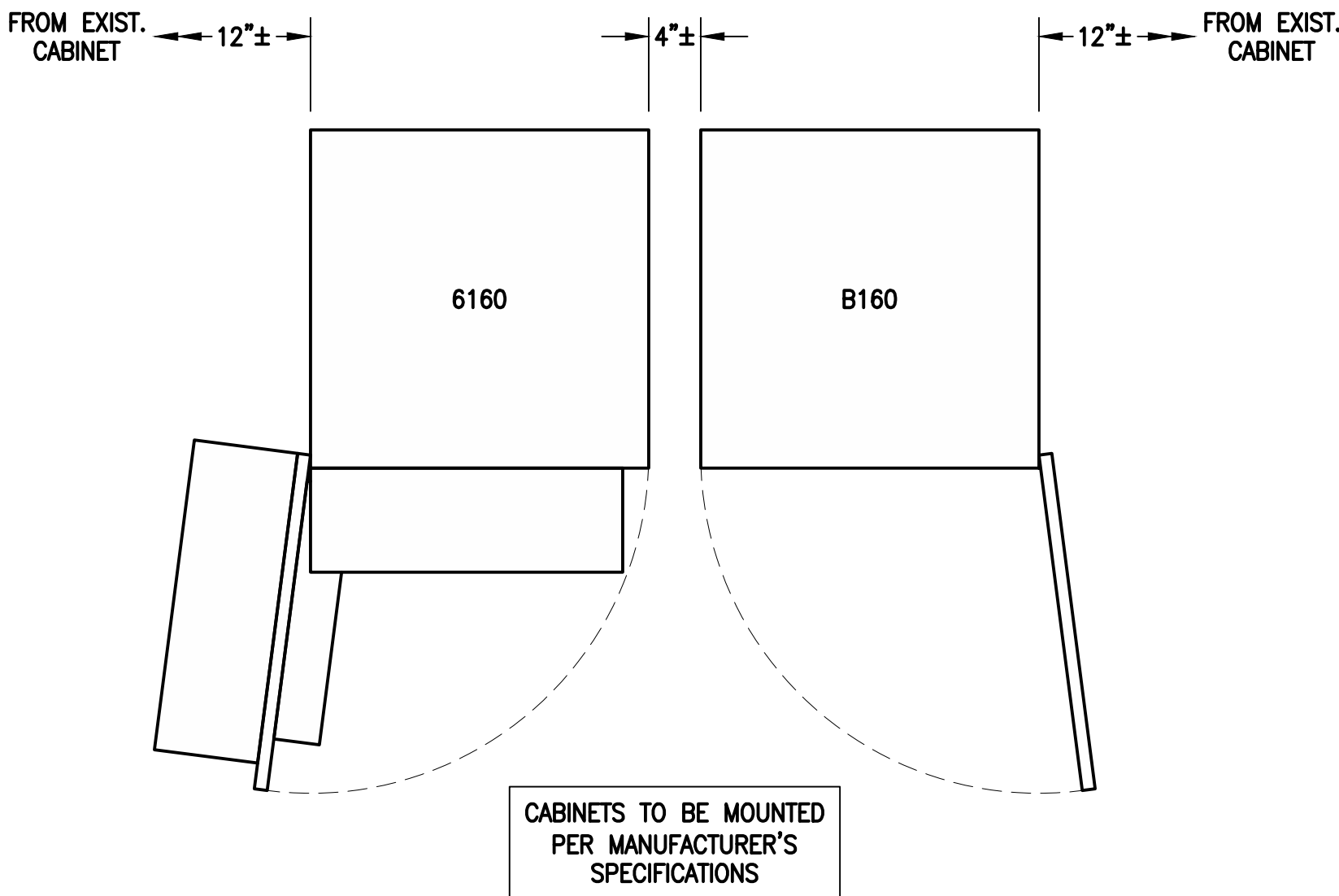
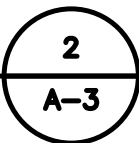


ERICSSON RADIO 4460 B25+B66

DIMENSIONS: 17.0"H x 15.1"W x 11.9"D
WEIGHT: 104.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

RADIO DETAIL

SCALE: N.T.S.



ERICSSON 6160 SITE SUPPORT CABINET

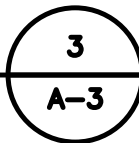
DIMENSIONS: 63.25"H x 26.0"W x 34.0"D
QUANTITY: TOTAL OF 1

ERICSSON B160 BATTERY CABINET

DIMENSIONS: 63.25"H x 26.0"W x 26.0"D
QUANTITY: TOTAL OF 1

EQUIPMENT DETAIL

SCALE: N.T.S.

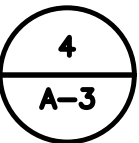


SLACKBOX - HOFFMAN 32FH91
NEMA 3R ENCLOSURE

DIMENSIONS: 24.0"H x 24.0"W x 12.0"D
QUANTITY: TOTAL OF 1

SSC DETAILS

SCALE: N.T.S.



FINAL ANTENNA CONFIGURATION									
SECTOR	ANTENNA		RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	CABLES
ALPHA	A1	ERICSSON M-MIMO AIR6419 B41	175'± AGL	100°	0°	2'	L2500/N2500	—	EXIST. (1) 1- ⁵ / ₈ " (6x12) HCS FIBER CABLE PROP. (2) 2" (6x24) HCS FIBER CABLES
	A2	RFS APXVAALL24_43-U-NA20	175'± AGL	100°	0°	2'	L700/L600/N600	ERICSSON RADIO 4449 B71+B85	
						2'	L1900/G1900/L2100	ERICSSON RADIO 4460 B25+B66	
BETA	B1	ERICSSON M-MIMO AIR6419 B41	175'± AGL	200°	0°	2'	L2500/N2500	—	
	B2	RFS APXVAALL24_43-U-NA20	175'± AGL	200°	0°	2'	L700/L600/N600	ERICSSON RADIO 4449 B71+B85	
						2'	L1900/G1900/L2100	ERICSSON RADIO 4460 B25+B66	
GAMMA	G1	ERICSSON M-MIMO AIR6419 B41	175'± AGL	320°	0°	2'	L2500/N2500	—	
	G2	RFS APXVAALL24_43-U-NA20	175'± AGL	320°	0°	2'	L700/L600/N600	ERICSSON RADIO 4449 B71+B85	
						2'	L1900/G1900/L2100	ERICSSON RADIO 4460 B25+B66	
CABLE NOTE: ALL EXIST. COAX CABLES TO BE REMOVED. SEE FEEDLINE SCHEDULE A & B BELOW.									

NOTE: RFDS REV6 – 03/02/22

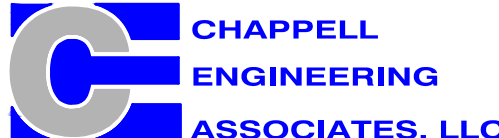
FEEDLINE SCHEDULE		
SCHEDULE	FEEDLINES	LOCATION
A	EXISTING TO REMAIN: (1) ½" COAX FOR GPS ANTENNA (1) 1-5/8" (6x12) HCS FIBER CABLE EXISTING TO BE REMOVED: ALL COAX CABLES	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (2) 2" (6x24) HCS FIBER CABLES	
NOTE: EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.		

T-MOBILE
NORTHEAST LLC

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



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134 FLANDERS ROAD, SUITE 125
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CHAPPELL
ENGINEERING
ASSOCIATES, LLC
Civil Structural Land Surveying

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PLYMOUTH, CT 06782

SHEET TITLE

ANTENNA &
FEEDLINE CHARTS

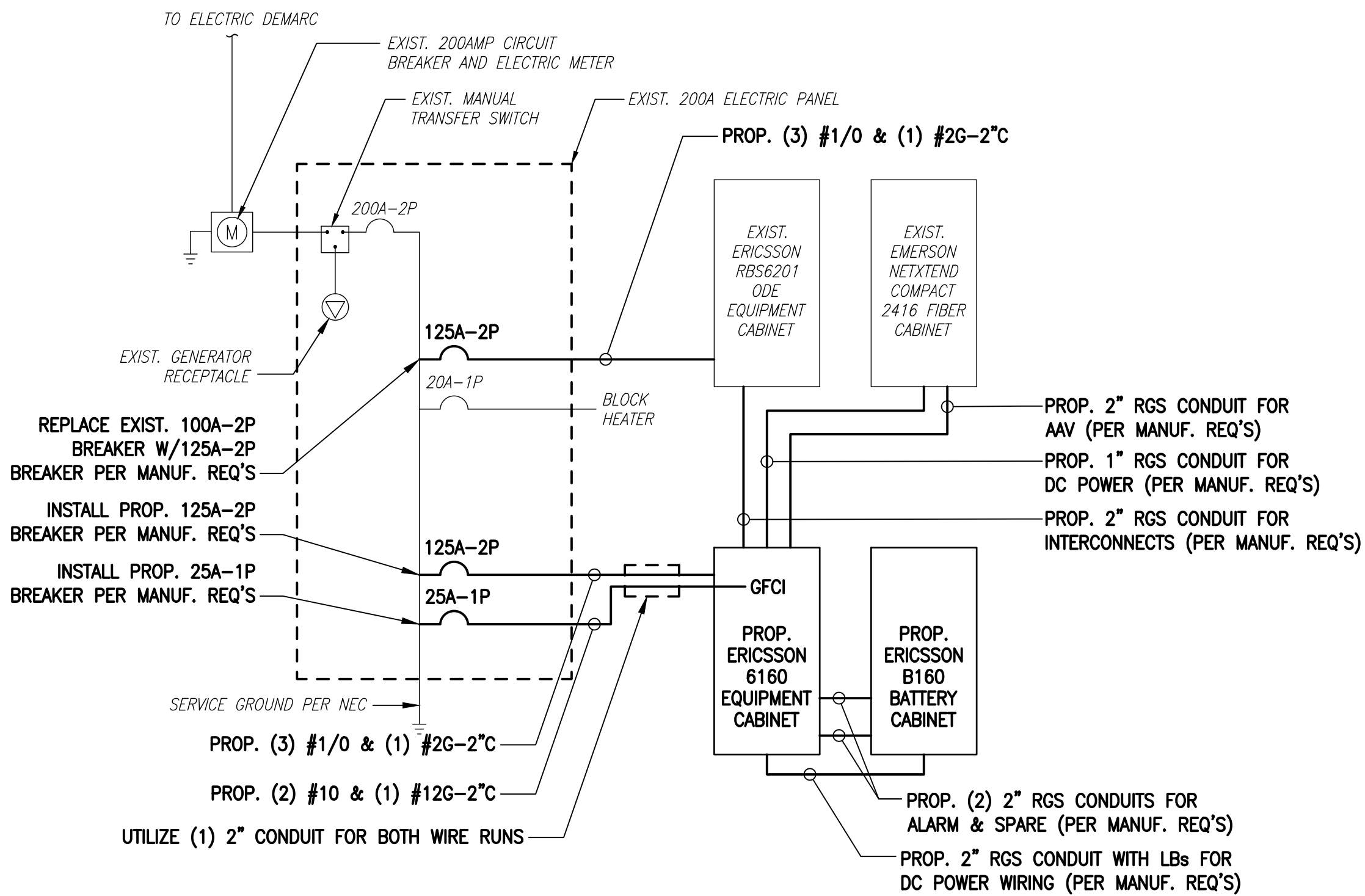
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A-4

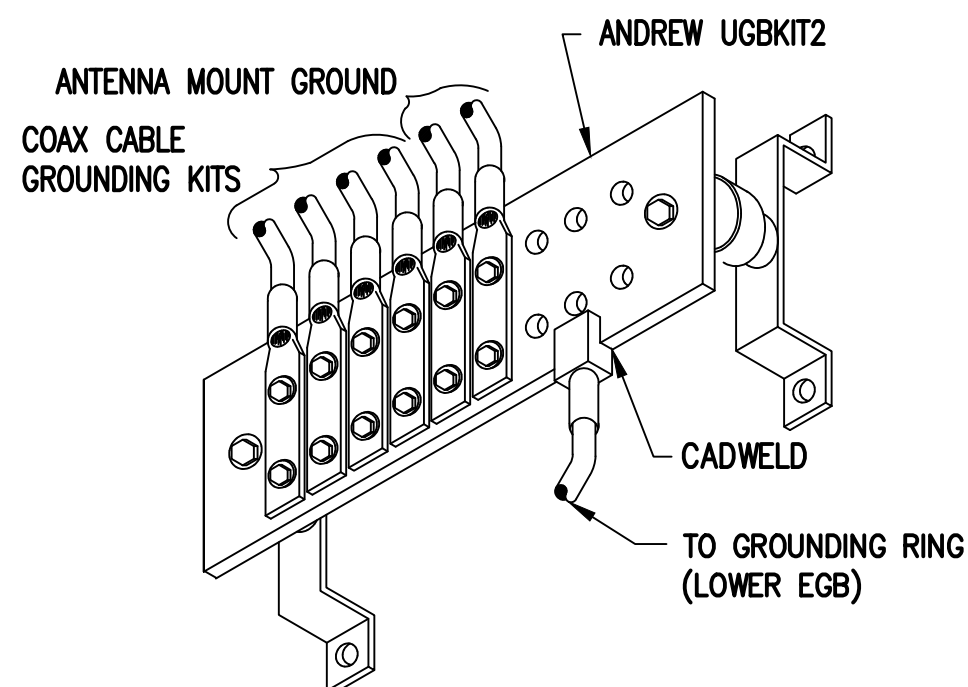
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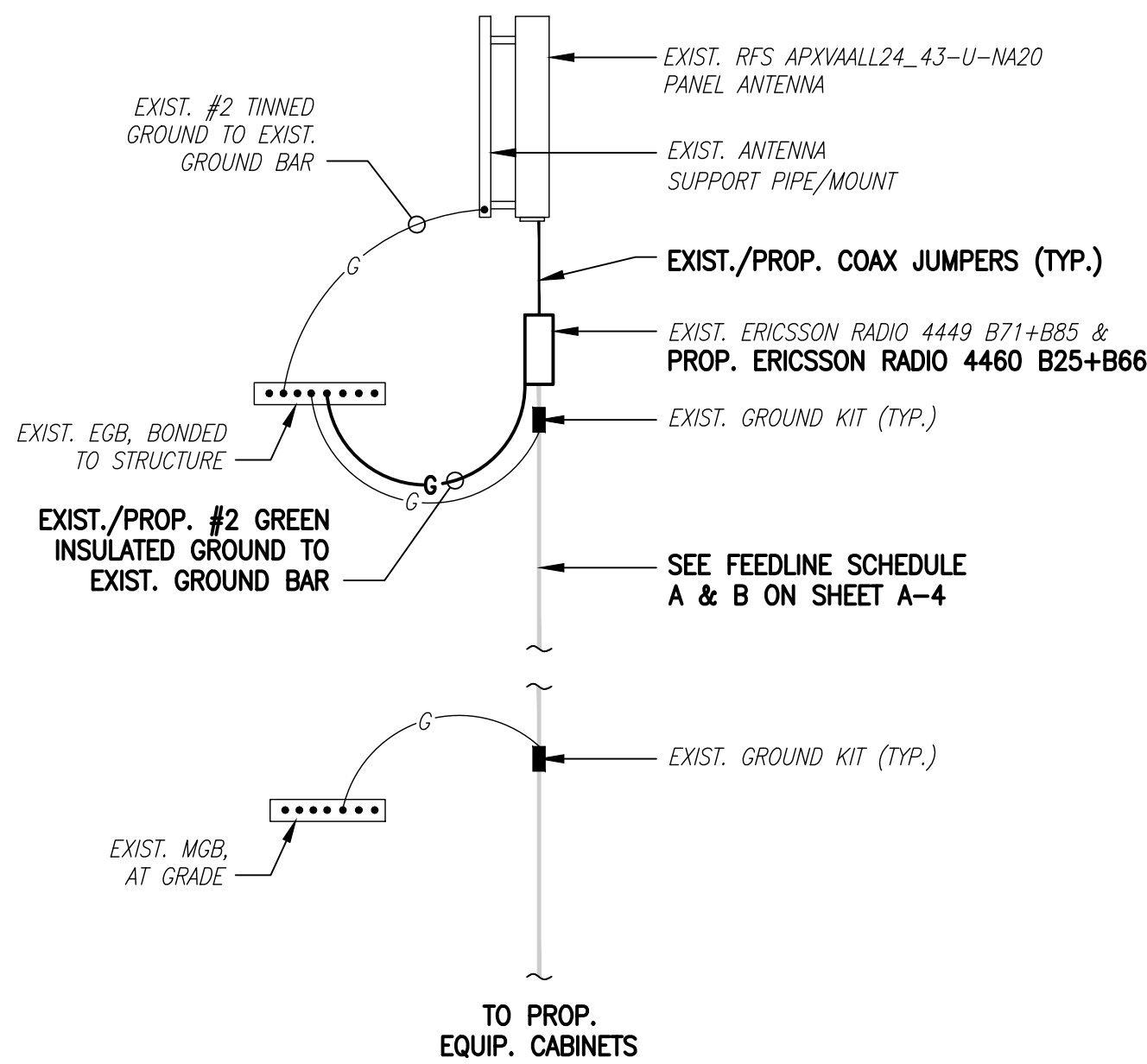
EXISTING POWER PANEL PHOTOS
SCALE: NOT TO SCALE



ONE LINE DIAGRAM
SCALE: NOT TO SCALE

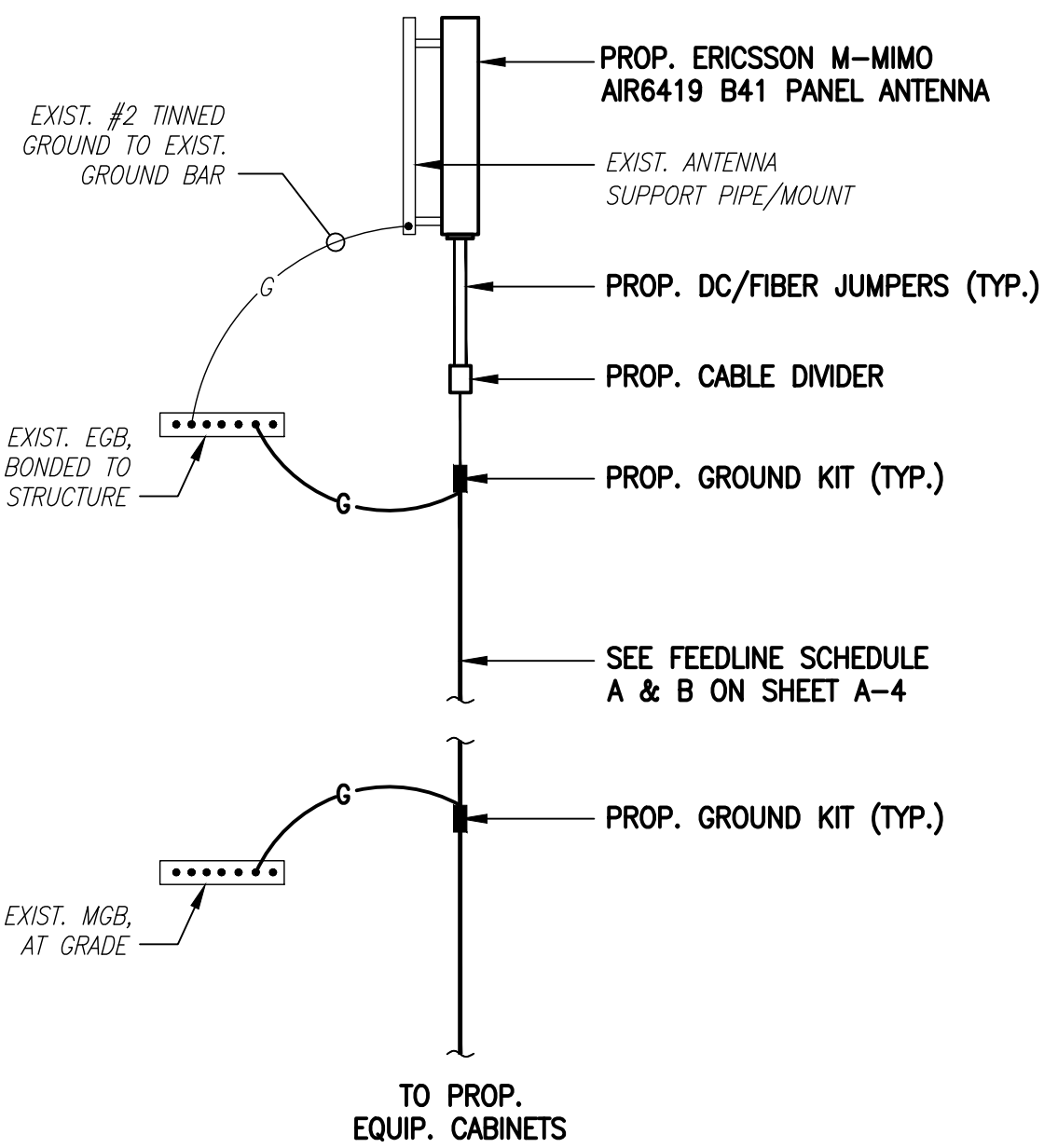


GROUND BAR (EGB)
SCALE: NOT TO SCALE



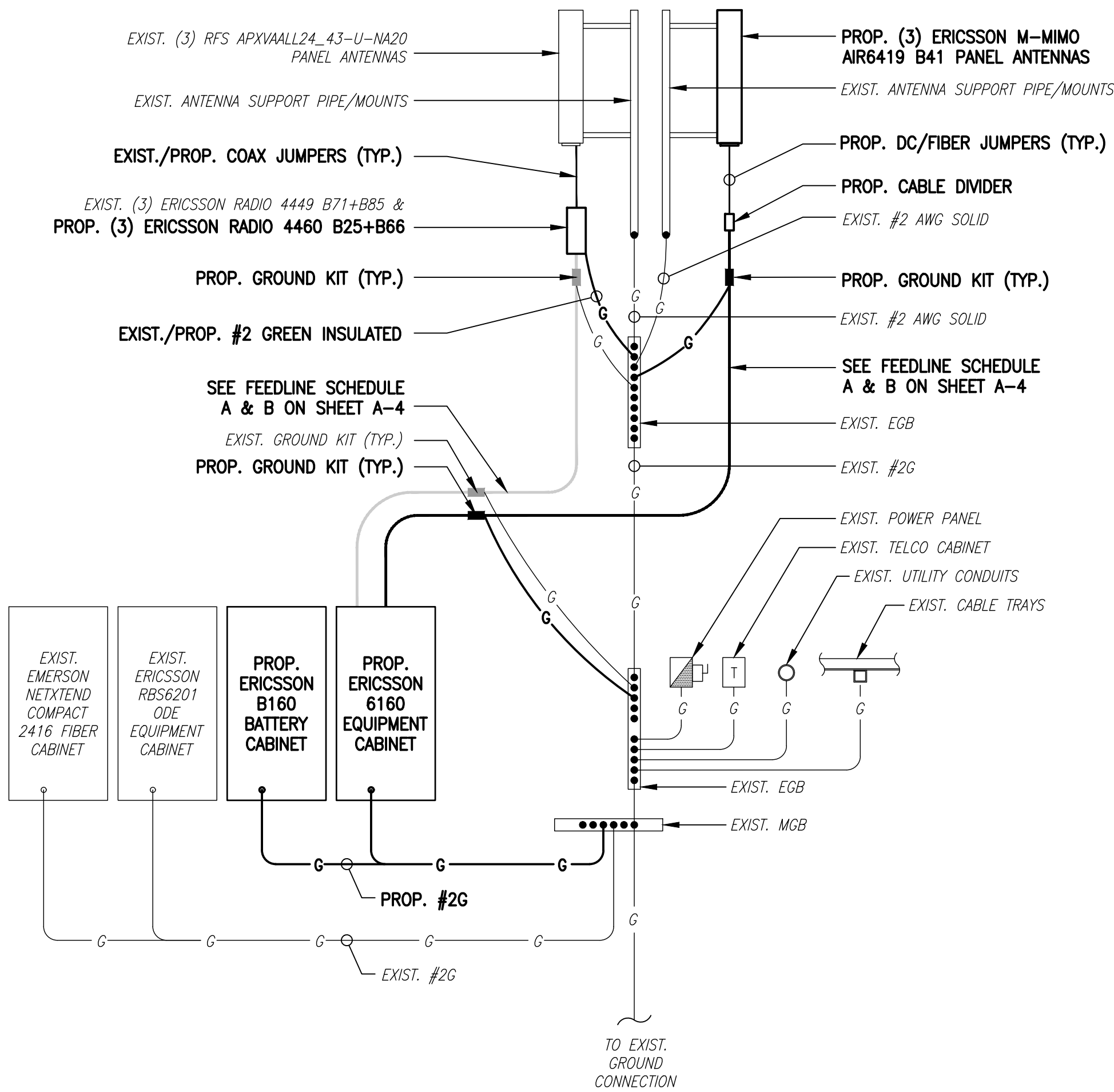
L700/L600/N600/L1900/G1900/L2100
ANTENNA

COAX CABLE CONNECTION
AND GROUNDING DETAIL
SCALE: NOT TO SCALE



L2500/N2500
ANTENNA

TYPICAL GROUND BAR
CONNECTIONS DETAIL
SCALE: NOT TO SCALE



GROUNDING RISER DIAGRAM
SCALE: NOT TO SCALE

ELECTRICAL AND GROUNDING NOTES

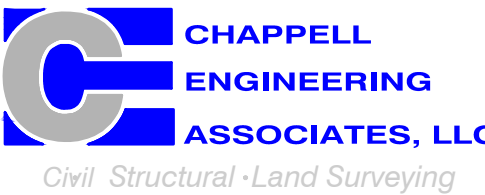
- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED 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 HYSGROUND 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

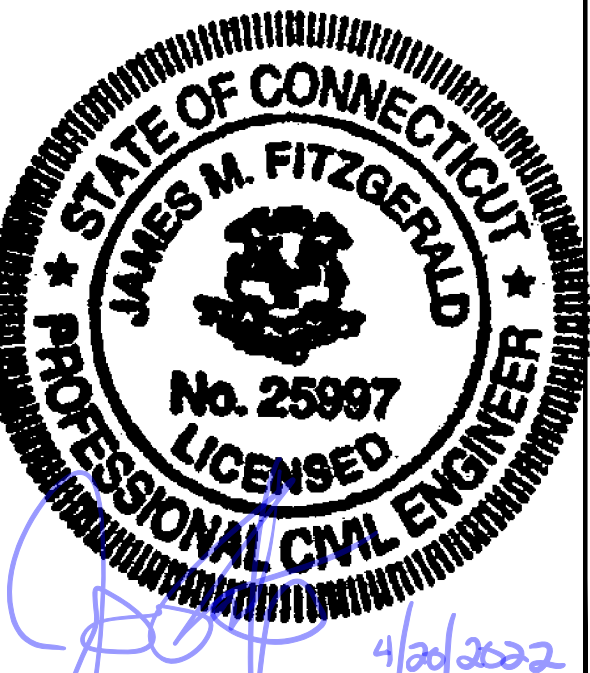
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700



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SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/20/22	ISSUED FOR CONSTRUCTION	CMC
0	03/24/22	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CT11366A

SITE ADDRESS:
297 NORTH STREET
PLYMOUTH, CT 06782

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 195 ft Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT01497-S

Customer Site Name: Plymouth 2 CT

Carrier Name: T-Mobile (App#: 192392, V1)

Carrier Site ID / Name: CT11366A / Washington

Site Location: 297 North Street

Plymouth, Connecticut

Litchfield County

Latitude: 41.693319

Longitude: -73.053711

Analysis Result:

Max Structural Usage: 94.2% [Pass]

Max Foundation Usage: 26.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: N/A



Report Prepared By: Sital Shrestha



Tower Engineering Solutions

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

Structural Analysis Report

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Analysis Result:

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Max Foundation Usage: 26.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Sital Shrestha

Introduction

The purpose of this report is to summarize the analysis results on the 195 ft 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	Fred A. Nudd Corporation, Project #7109, on November, 1999.
Foundation Drawing	Fred A. Nudd Corporation, Project #7109, on November 10, 1999.
Geotechnical Report	Jaworski Geotech, INC., Project #99338G, on November 8, 1999.
Modification Drawings	N/A
Mount Analysis	MA by TES, Project No. 127380, dated 04/07/2022.

Analysis Criteria

The comprehensive analysis was performed in accordance with the requirements and stipulations of the TIA-222-H. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	120.0 mph (3-Sec. Gust) (Ultimate wind speed)
Wind Speed with Ice:	40 mph (3-Sec. Gust) with 1" radial ice concurrent
Service Load Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-H / 2018 IBC
Exposure Category:	C
Risk Category:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_S = 0.183$, $S_1 = 0.054$

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	196.0	3	RFS APXVSP18-C-A20 - Panel	T-arm w/ working platform	(4) 1 1/4"	Sprint
2		3	RFS APXV/TM14-C-I20 - Panel			
3		3	ALU 1900MHz RRH			
4		3	ALU 800 MHz RRH			
5		3	ALU TD-RRH8x20-25			
6		3	ALU 800MHz Filter			
7		4	RFS ACU-A20-N			
-	175.0	3	EMS RR90-17-02DP	(3) T-Arms w/ Working Platforms + Support Rail Kit (MS-HR35-18) +T-Arm Kit (MS-TAW-350RO)	(12) 1 5/8" Coax (1) 1 5/8" Fiber	T-Mobile
-		3	RFS APXVAARR24_43-U-NA20			
-		3	Ericsson KRY 112 144/1			
-		3	Ericsson KRY 112 489/2			
-		6	Allen Telecom FE15501P77/75			
-		3	Ericsson Radio 4449 B71+B12			
15	165.0	6	JMA Wireless - MX06FRO660-03 - Panel	Modified Low Profile Platform with (6) JMA 91900314, (3) SP219-96H and (1) BBPM-K1	(6) 1 5/8" (1) 1 5/8" Hybrid	Verizon
16		3	Samsung - MT6407-77A - Panel			
17		3	Samsung B5/B13 RRHBR04C			
18		3	Samsung B2/B66A RRHBR049			
20		1	Raycap RVZDC-6627-PF-48			
21	70.0	1	Lucent 407577689 Gps	Stand Off	(1) 1/2" Coax	Sprint

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
8	175.0	3	Ericsson AIR6419 B41- Panel	(3) T-Arms w/ Working Platforms + Support Rail Kit (MS-HR35-18) +T-Arm Kit (MS-TAW-350RO)	(9) 1 5/8" Coax (1) 1 5/8" Fiber (2) 1.9" Fiber	T-Mobile
9		3	RFS APXVAALL24_43-U-NA20- Panel			
10		3	Ericsson KRY 112 144/1- TMA			
11		3	Ericsson KRY 112 489/2- TMA			
12		6	Allen Telecom FE15501P77/75- TMA			
13		3	Ericsson 4449 B71 + B85- RRH			
14		3	Ericsson 4460 B25 + B66- RRH			

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:	59.2%	51.3%	94.2%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	3549.6	26.9	53.8

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

Service Load Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.2268 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 59.21% at 0.0ft

Structure: CT01497-S-SBA
Site Name: Plymouth 2 CT
Height: 195.00 (ft)
Base Elev: 0.000 (ft)

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

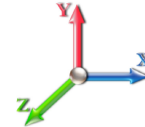
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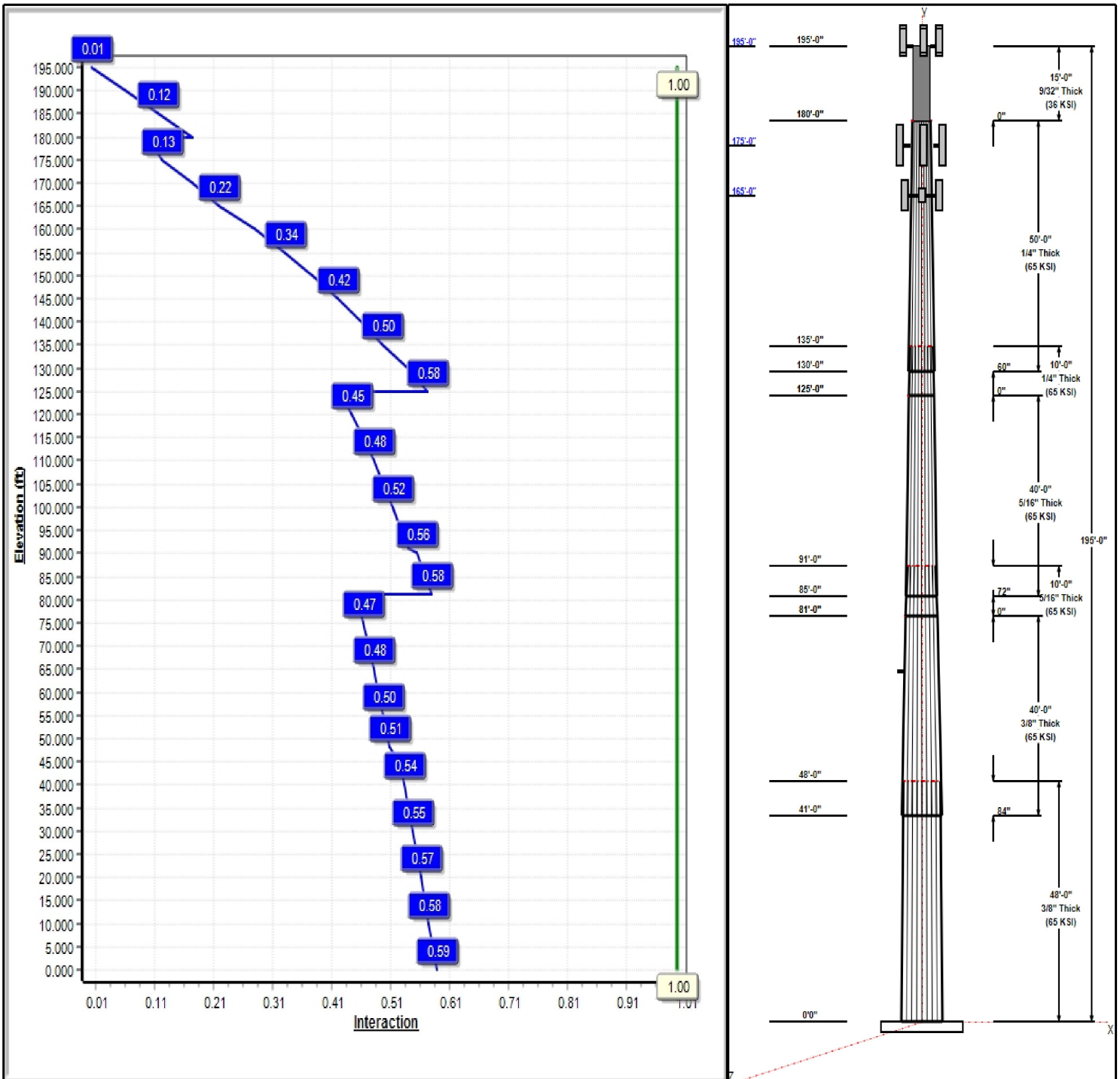
Dead Load Factor: 1.20
Wind Load Factor: 1.00

Load Case : 1.2D + 1.0W 120 mph Wind



Iterations: 26

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Structure: CT01497-S-SBA

Type: Custom
Site Name: Plymouth 2 CT
Height: 195.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23542

4/14/2022

Page: 2



Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	53.20	64.50	0.375		0.23542	65
2	40.00	46.18	55.60	0.375	Slip	0.23542	65
3	10.00	43.83	46.18	0.313	Butt	0.23542	65
4	40.00	36.45	45.86	0.313	Slip	0.23542	65
5	10.00	34.09	36.45	0.250	Butt	0.23542	65
6	50.00	24.00	35.77	0.250	Slip	0.23542	65
7	15.00	24.00	24.00	0.281	Butt	0.00000	36

Discrete Appurtenances

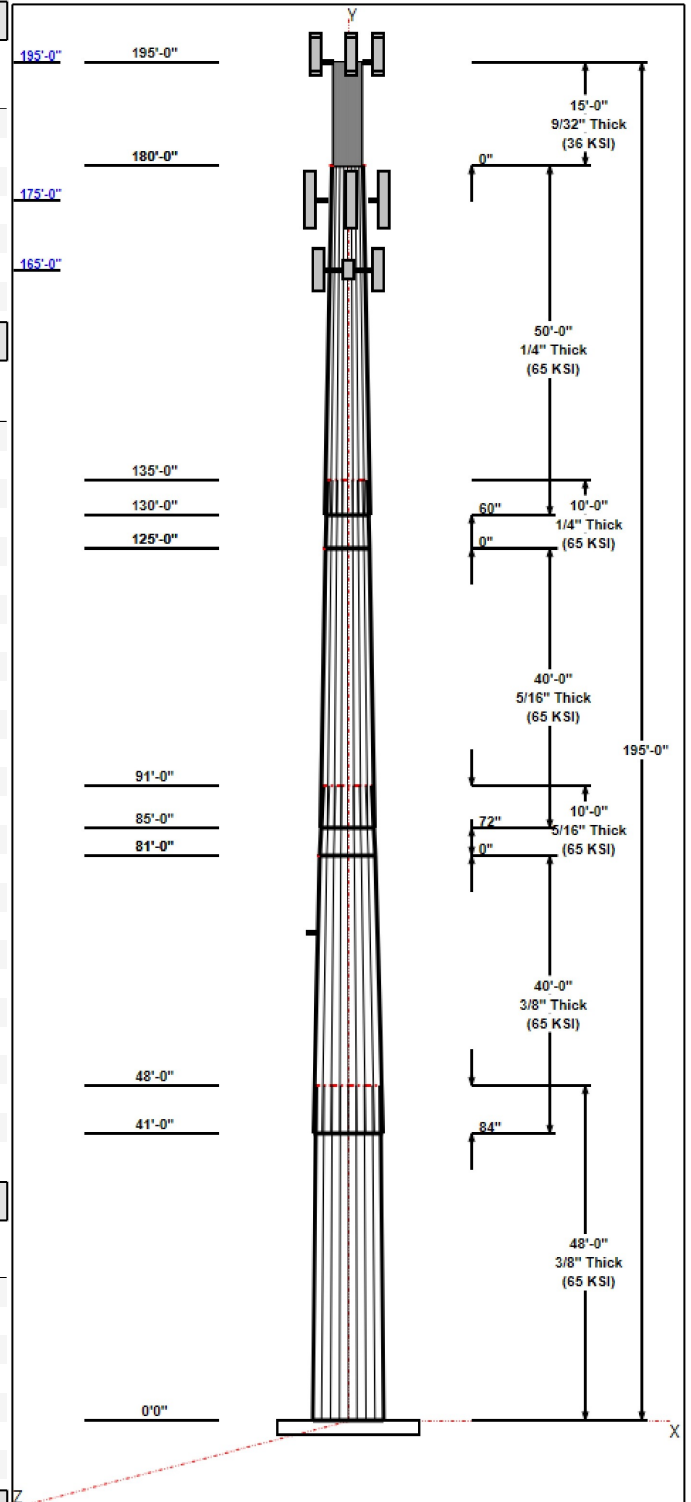
Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
195.00	196.00	3	APXVSP18-C-A20	Sprint
195.00	196.00	3	APXVTM14-C-I20	Sprint
195.00	196.00	3	1900MHz RRH (65MHz)	Sprint
195.00	196.00	3	800 MHz RRH	Sprint
195.00	196.00	3	TD-RRH8x20-25	Sprint
195.00	196.00	3	ALU 800MHz External	Sprint
195.00	196.00	4	ACU-A20-N	Sprint
195.00	195.00	3	T-Arms w/ Working	Sprint
175.00	175.00	3	T-Arms w/ Working	T-Mobile
175.00	175.00	3	APXVAALL24_43-U-NA20	T-Mobile
175.00	175.00	3	KRY 112 144/1	T-Mobile
175.00	175.00	3	KRY 112 489/2	T-Mobile
175.00	175.00	3	4449 B71 + B85	T-Mobile
175.00	175.00	6	FE15501P77/75	T-Mobile
175.00	175.00	1	(3) T-Arm Kit	T-Mobile
175.00	175.00	3	AIR6419 B41	T-Mobile
175.00	175.00	3	4460 B25 + B66	T-Mobile
165.00	165.00	1	Low Profile Platform	Verizon
165.00	165.00	6	MX06FRO660-03	Verizon
165.00	165.00	3	MT6407-77A	Verizon
165.00	165.00	3	Samsung B5/B13	Verizon
165.00	165.00	3	Samsung B2/B66A	Verizon
165.00	165.00	1	Raycap	Verizon
165.00	165.00	1	91900314	Verizon
70.00	70.00	1	407577689 Gps	Sprint
70.00	70.00	1	Side Arm (L. Heavy)	Sprint

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	195.00	Inside	1 1/4" Coax	Sprint
0.00	175.00	Inside	1 5/8" Coax	T-Mobile
0.00	175.00	Inside	1 5/8" Fiber	T-Mobile
0.00	175.00	Inside	1.9" Fiber	T-Mobile
0.00	165.00	Inside	1 5/8" Coax	Verizon
0.00	165.00	Inside	1 5/8" Hybrid	Verizon
0.00	70.00	Inside	1/2" Coax	Sprint

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	2.00" A687	90.0	Radial



Structure: CT01497-S-SBA

Type: Custom
Site Name: Plymouth 2 CT
Height: 195.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.00000

4/14/2022

Page: 3



Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.5000	54.5	60.0	Round

Reactions

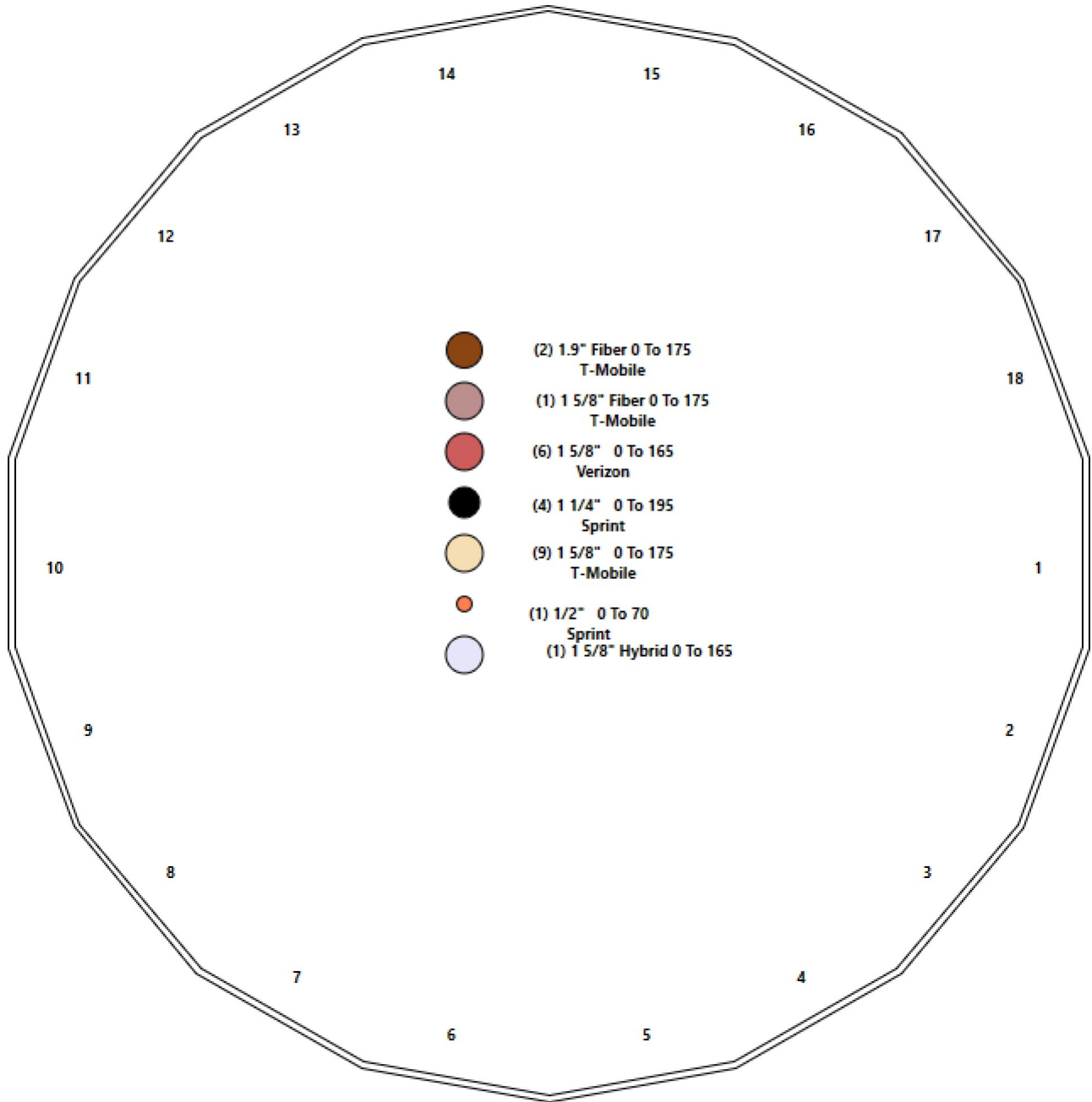
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 120 mph Wind	3549.6	26.9	53.8
0.9D + 1.0W 120 mph Wind	3502.7	26.8	40.4
1.2D + 1.0Di + 1.0Wi 40 mph Wind	669.9	5.2	71.0
1.2D + 1.0Ev + 1.0Eh	121.7	0.7	55.7
0.9D + 1.0Ev + 1.0Eh	120.3	0.7	42.1
1.0D + 1.0W 60 mph Wind	787.8	6.0	44.9

Structure: CT01497-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Plymouth 2 CT
Height: 195.00 (ft)

4/14/2022

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Shaft Properties

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (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	48.000	0.3750	65		0.00	11,368
2	18	40.000	0.3750	65	Slip	84.00	8,183
3	18	10.000	0.3125	65	Flange	0.00	1,508
4	18	40.000	0.3125	65	Slip	72.00	5,514
5	18	10.000	0.2500	65	Flange	0.00	946
6	18	50.000	0.2500	65	Slip	60.00	4,001
7	R	15.000	0.2810	36	Flange	0.00	1,069
Total Shaft Weight:							32,588

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	64.50	0.00	76.32	39651.33	28.92	172.00	53.20	48.00	62.87	22166.3	23.60	141.8	0.235417
2	55.60	41.00	65.73	25324.08	24.73	148.26	46.18	81.00	54.52	14452.7	20.30	123.1	0.235417
3	46.18	81.00	45.49	12093.31	24.65	147.78	43.83	91.00	43.16	10325.2	23.32	140.2	0.235417
4	45.86	85.00	45.18	11844.57	24.47	146.77	36.45	125.00	35.84	5912.81	19.15	116.6	0.235417
5	36.45	125.0	28.72	4754.83	24.30	145.79	34.09	135.00	26.85	3886.15	22.64	136.3	0.235417
6	35.77	130.0	28.18	4492.97	23.82	143.08	24.00	180.00	18.84	1343.00	15.52	96.00	0.235417
7	24.00	180.0	20.94	1473.63	0.00	85.41	24.00	195.00	20.94	1473.63	0.00	85.41	0.000000

Load Summary

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 6



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	195.00	APXVSP18-C-A20	3	57.00	8.02	0.83	175.30	9.932	0.85	0.00	1.00
2	195.00	APXVTM14-C-I20	3	56.20	6.34	0.77	159.07	7.086	0.79	0.00	1.00
3	195.00	1900MHz RRH (65MHz)	3	60.00	2.77	0.67	117.10	3.638	0.67	0.00	1.00
4	195.00	800 MHz RRH	3	53.00	2.49	0.67	103.62	3.273	0.67	0.00	1.00
5	195.00	TD-RRH8x20-25	3	70.00	4.05	0.67	140.71	4.592	0.67	0.00	1.00
6	195.00	ALU 800MHz External Notch Filt	3	8.80	0.78	0.67	20.87	1.223	0.71	0.00	1.00
7	195.00	ACU-A20-N	4	1.00	0.14	0.67	3.94	0.343	0.50	0.00	1.00
8	195.00	T-Arms w/ Working Platforms	3	500.00	16.00	0.75	977.76	27.466	0.75	0.00	0.00
9	175.00	T-Arms w/ Working Platforms	3	500.00	16.00	0.75	972.62	27.343	0.75	0.00	0.00
10	175.00	APXVAALL24_43-U-NA20	3	122.80	20.24	0.70	394.22	21.511	0.70	0.00	0.00
11	175.00	KRY 112 144/1	3	11.00	0.41	0.50	18.30	0.732	0.50	0.00	0.00
12	175.00	KRY 112 489/2	3	15.40	0.65	0.50	27.33	1.064	0.50	0.00	0.00
13	175.00	4449 B71 + B85	3	75.00	1.97	0.50	115.05	2.356	0.50	0.00	0.00
14	175.00	FE15501P77/75	6	17.50	0.71	0.50	32.06	1.165	0.50	0.00	0.00
15	175.00	(3) T-Arm Kit	1	500.00	16.00	0.75	901.73	26.587	0.75	0.00	0.00
16	175.00	AIR6419 B41	3	83.30	3.80	0.76	165.38	4.339	0.76	0.00	0.00
17	175.00	4460 B25 + B66	3	104.00	2.85	0.67	150.45	3.307	0.67	0.00	0.00
18	165.00	Low Profile Platform	1	1500.00	22.00	1.00	2380.96	33.887	1.00	0.00	0.00
19	165.00	MX06FRO660-03	6	71.00	9.87	0.88	243.06	10.779	0.88	0.00	0.00
20	165.00	MT6407-77A	3	79.40	4.69	0.70	154.42	5.321	0.70	0.00	0.00
21	165.00	Samsung B5/B13 RRHBR04C	3	70.30	1.88	0.50	103.03	2.251	0.50	0.00	0.00
22	165.00	Samsung B2/B66A RRHBR049	3	84.40	1.88	0.50	118.90	2.251	0.50	0.00	0.00
23	165.00	Raycap RVZDC-6627-PF-48	1	32.00	3.79	0.50	111.76	4.317	0.50	0.00	0.00
24	165.00	91900314	1	25.35	0.00	1.00	37.26	0.000	1.00	0.00	0.00
25	70.00	407577689 Gps	1	4.00	0.91	0.50	19.58	1.531	0.50	0.00	0.00
26	70.00	Side Arm (L. Heavy)	1	120.00	3.50	1.00	184.69	6.021	1.00	0.00	0.00
Totals:			73	8,568.15			17,044.91				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	195.00	(4) 1 1/4" Coax	0.00	Inside
0.00	175.00	(9) 1 5/8" Coax	0.00	Inside
0.00	175.00	(1) 1 5/8" Fiber	0.00	Inside
0.00	175.00	(2) 1.9" Fiber	0.00	Inside
0.00	165.00	(6) 1 5/8" Coax	0.00	Inside
0.00	165.00	(1) 1 5/8" Hybrid	0.00	Inside
0.00	70.00	(1) 1/2" Coax	0.00	Inside

Shaft Section Properties

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 7



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		0.3750	64.500	76.322	39651.3	28.92	172.00	67.4	1210.	0.0
5.00		0.3750	63.323	74.921	37507.6	28.36	168.86	68.0	1166.	1286.6
10.00		0.3750	62.146	73.520	35442.6	27.81	165.72	68.7	1123.	1262.8
15.00		0.3750	60.969	72.119	33454.9	27.26	162.58	69.3	1080.	1238.9
20.00		0.3750	59.792	70.718	31542.8	26.70	159.44	70.0	1039.	1215.1
25.00		0.3750	58.615	69.317	29705.1	26.15	156.31	70.6	998.2	1191.3
30.00		0.3750	57.437	67.916	27940.1	25.60	153.17	71.3	958.1	1167.4
35.00		0.3750	56.260	66.515	26246.5	25.04	150.03	71.9	918.9	1143.6
40.00		0.3750	55.083	65.114	24622.7	24.49	146.89	72.6	880.4	1119.8
41.00	Bot - Section 2	0.3750	54.848	64.834	24306.2	24.38	146.26	72.7	872.8	221.1
45.00		0.3750	53.906	63.713	23067.4	23.94	143.75	73.2	842.8	1761.8
48.00	Top - Section 1	0.3750	53.950	63.765	23124.0	23.96	143.87	0.0	0.0	1301.3
50.00		0.3750	53.479	63.205	22519.6	23.74	142.61	73.5	829.4	432.1
55.00		0.3750	52.302	61.804	21055.1	23.18	139.47	74.1	792.9	1063.4
60.00		0.3750	51.125	60.403	19655.5	22.63	136.33	74.8	757.2	1039.6
65.00		0.3750	49.948	59.002	18319.3	22.08	133.19	75.4	722.4	1015.8
70.00		0.3750	48.771	57.601	17045.1	21.52	130.06	76.1	688.4	991.9
75.00		0.3750	47.594	56.200	15831.4	20.97	126.92	76.7	655.2	968.1
80.00		0.3750	46.417	54.799	14676.7	20.41	123.78	77.4	622.8	944.3
81.00	Top - Section 2	0.3750	46.181	54.519	14452.7	20.30	123.15	77.5	616.4	186.0
81.00	Bot - Section 3	0.3125	46.181	45.494	12093.3	24.36	147.78	72.4	515.8	
85.00	Bot - Section 4	0.3125	45.240	44.560	11363.7	24.12	144.77	73.0	494.7	612.9
90.00		0.3125	44.062	43.393	10493.7	23.45	141.00	73.8	469.1	1507.0
91.00	Top - Section 3	0.3125	44.452	43.779	10776.5	23.67	142.25	0.0	0.0	296.6
95.00		0.3125	43.510	42.845	10101.4	23.14	139.23	74.2	457.3	589.5
100.00		0.3125	42.333	41.678	9298.0	22.48	135.47	75.0	432.6	719.0
105.00		0.3125	41.156	40.510	8538.3	21.81	131.70	75.7	408.6	699.2
110.00		0.3125	39.979	39.343	7821.2	21.15	127.93	76.5	385.3	679.3
115.00		0.3125	38.802	38.175	7145.4	20.48	124.17	77.3	362.7	659.4
120.00		0.3125	37.625	37.008	6509.6	19.82	120.40	78.1	340.8	639.6
125.00	Top - Section 4	0.3125	36.448	35.841	5912.8	19.15	116.63	78.9	319.5	619.7
125.00	Bot - Section 5	0.2500	36.448	28.722	4754.8	23.94	145.79	72.8	256.9	
130.00	Bot - Section 6	0.2500	35.271	27.788	4305.9	23.47	141.08	73.8	240.5	480.7
135.00	Top - Section 5	0.2500	34.594	27.251	4060.9	22.99	138.37	0.0	0.0	936.4
140.00		0.2500	33.417	26.317	3657.5	22.16	133.67	75.3	215.6	455.7
145.00		0.2500	32.240	25.383	3281.8	21.33	128.96	76.3	200.5	439.8
150.00		0.2500	31.062	24.449	2932.7	20.50	124.25	77.3	186.0	423.9
155.00		0.2500	29.885	23.515	2609.3	19.67	119.54	78.3	172.0	408.0
160.00		0.2500	28.708	22.581	2310.5	18.84	114.83	79.2	158.5	392.1
165.00		0.2500	27.531	21.647	2035.5	18.01	110.12	80.2	145.6	376.2
170.00		0.2500	26.354	20.713	1783.3	17.18	105.42	81.2	133.3	360.4
175.00		0.2500	25.177	19.779	1552.7	16.35	100.71	82.2	121.5	344.5
180.00	Top - Section 6	0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	328.6
180.00	Bot - Section 7	0.2810	24.000	20.939	1473.6	13.80	85.41	36.0	122.8	
185.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36.0	122.8	356.3
190.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36.0	122.8	356.3
195.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36.0	122.8	356.3

32588.3

Wind Loading - Shaft

Structure: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 8

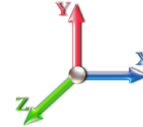


Load Case: 1.2D + 1.0W 120 mph Wind

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	0.85	23.888	26.28	540.93	0.630	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	23.888	26.28	531.06	0.630	0.000	5.00	27.041	17.04	447.6	0.0	1543.9
10.00		1.00	0.85	23.888	26.28	521.19	0.630	0.000	5.00	26.543	16.72	439.4	0.0	1515.3
15.00		1.00	0.85	23.888	26.28	511.31	0.630	0.000	5.00	26.045	16.41	431.2	0.0	1486.7
20.00		1.00	0.90	25.347	27.88	516.52	0.630	0.000	5.00	25.547	16.09	448.7	0.0	1458.1
25.00		1.00	0.95	26.566	29.22	518.39	0.630	0.000	5.00	25.049	15.78	461.1	0.0	1429.5
30.00		1.00	0.98	27.605	30.37	517.82	0.630	0.000	5.00	24.550	15.47	469.7	0.0	1400.9
35.00		1.00	1.01	28.516	31.37	515.50	0.630	0.000	5.00	24.052	15.15	475.3	0.0	1372.3
40.00		1.00	1.04	29.329	32.26	511.86	0.630	0.000	5.00	23.554	14.84	478.7	0.0	1343.7
41.00	Bot - Section 2	1.00	1.05	29.482	32.43	511.00	0.630	0.000	1.00	4.651	2.93	95.0	0.0	265.3
45.00		1.00	1.07	30.065	33.07	507.17	0.630	0.000	4.00	18.659	11.76	388.8	0.0	2114.2
48.00	Top - Section 1	1.00	1.08	30.477	33.52	503.94	0.630	0.000	3.00	13.785	8.68	291.1	0.0	1561.6
50.00		1.00	1.09	30.740	33.81	508.77	0.630	0.000	2.00	9.091	5.73	193.7	0.0	518.5
55.00		1.00	1.12	31.363	34.50	502.59	0.630	0.000	5.00	22.378	14.10	486.4	0.0	1276.1
60.00		1.00	1.14	31.942	35.14	495.80	0.630	0.000	5.00	21.880	13.78	484.3	0.0	1247.5
65.00		1.00	1.16	32.485	35.73	488.48	0.630	0.000	5.00	21.382	13.47	481.4	0.0	1218.9
70.00	Appurtenance(s)	1.00	1.17	32.996	36.30	480.70	0.630	0.000	5.00	20.884	13.16	477.5	0.0	1190.3
75.00		1.00	1.19	33.479	36.83	472.52	0.630	0.000	5.00	20.386	12.84	473.0	0.0	1161.7
80.00		1.00	1.21	33.937	37.33	463.98	0.630	0.000	5.00	19.888	12.53	467.7	0.0	1133.1
81.00	Top - Section 2	1.00	1.21	34.026	37.43	462.23	0.630	0.000	1.00	3.918	2.47	92.4	0.0	223.2
85.00	Bot - Section 4	1.00	1.22	34.373	37.81	455.10	0.630	0.000	4.00	15.472	9.75	368.5	0.0	735.4
90.00		1.00	1.24	34.789	38.27	445.94	0.630	0.000	5.00	19.156	12.07	461.8	0.0	1808.4
91.00	Top - Section 3	1.00	1.24	34.870	38.36	444.07	0.630	0.000	1.00	3.771	2.38	91.1	0.0	356.0
95.00		1.00	1.25	35.187	38.71	442.86	0.630	0.000	4.00	14.887	9.38	363.0	0.0	707.4
100.00		1.00	1.27	35.569	39.13	433.22	0.630	0.000	5.00	18.160	11.44	447.6	0.0	862.8
105.00		1.00	1.28	35.936	39.53	423.34	0.630	0.000	5.00	17.662	11.13	439.9	0.0	839.0
110.00		1.00	1.29	36.290	39.92	413.25	0.630	0.000	5.00	17.164	10.81	431.7	0.0	815.2
115.00		1.00	1.30	36.631	40.29	402.96	0.630	0.000	5.00	16.666	10.50	423.1	0.0	791.3
120.00		1.00	1.32	36.961	40.66	392.49	0.630	0.000	5.00	16.168	10.19	414.1	0.0	767.5
125.00	Top - Section 4	1.00	1.33	37.280	41.01	381.85	0.630	0.000	5.00	15.670	9.87	404.8	0.0	743.7
130.00	Bot - Section 6	1.00	1.34	37.589	41.35	371.05	0.630	0.000	5.00	15.172	9.56	395.2	0.0	576.9
135.00	Top - Section 5	1.00	1.35	37.889	41.68	360.09	0.630	0.000	5.00	14.885	9.38	390.8	0.0	1123.7
140.00		1.00	1.36	38.180	42.00	354.30	0.630	0.000	5.00	14.387	9.06	380.7	0.0	546.8
145.00		1.00	1.37	38.463	42.31	343.08	0.630	0.000	5.00	13.889	8.75	370.2	0.0	527.8
150.00		1.00	1.38	38.739	42.61	331.74	0.630	0.000	5.00	13.391	8.44	359.5	0.0	508.7
155.00		1.00	1.39	39.007	42.91	320.27	0.630	0.000	5.00	12.893	8.12	348.5	0.0	489.6
160.00		1.00	1.40	39.269	43.20	308.69	0.630	0.000	5.00	12.395	7.81	337.3	0.0	470.6
165.00	Appurtenance(s)	1.00	1.41	39.524	43.48	296.99	0.630	0.000	5.00	11.897	7.50	325.9	0.0	451.5
170.00		1.00	1.42	39.773	43.75	285.19	0.630	0.000	5.00	11.399	7.18	314.2	0.0	432.4
175.00	Appurtenance(s)	1.00	1.42	40.016	44.02	273.28	0.630	0.000	5.00	10.901	6.87	302.3	0.0	413.4
180.00	Top - Section 6	1.00	1.43	40.254	44.28	261.28	0.630	0.000	5.00	10.403	6.55	290.2	0.0	394.3
185.00		1.00	1.44	40.487	44.54	258.05	0.450	0.000	5.00	10.000	4.50	200.4	0.0	427.5
190.00		1.00	1.45	40.715	44.79	258.78	0.450	0.000	5.00	10.000	4.50	201.5	0.0	427.5
195.00	Appurtenance(s)	1.00	1.46	40.939	45.03	259.49	0.450	0.000	5.00	10.000	4.50	202.6	0.0	427.5
Totals:									195.00			15,848.2		39,106.0

Discrete Appurtenance Forces

Structure: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

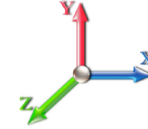
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Load Case: 1.2D + 1.0W 120 mph Wind

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	195.00	800 MHz RRH	3	40.983	45.081	0.60	0.90	4.50	190.80	0.000	1.000	203.06	0.00	203.06
2	195.00	APXVSP18-C-A20	3	40.983	45.081	0.83	1.00	19.97	205.20	0.000	1.000	900.26	0.00	900.26
3	195.00	APXVTM14-C-I20	3	40.983	45.081	0.77	1.00	14.65	202.32	0.000	1.000	660.23	0.00	660.23
4	195.00	1900MHz RRH (65MHz)	3	40.983	45.081	0.60	0.90	5.01	216.00	0.000	1.000	225.90	0.00	225.90
5	195.00	T-Arms w/ Working	3	40.939	45.032	0.56	0.75	27.00	1800.00	0.000	0.000	1215.88	0.00	0.00
6	195.00	TD-RRH8x20-25	3	40.983	45.081	0.60	0.90	7.33	252.00	0.000	1.000	330.28	0.00	330.28
7	195.00	ALU 800MHz External	3	40.983	45.081	0.60	0.90	1.41	31.68	0.000	1.000	63.61	0.00	63.61
8	195.00	ACU-A20-N	4	40.983	45.081	0.60	0.90	0.34	4.80	0.000	1.000	15.22	0.00	15.22
9	175.00	(3) T-Arm Kit	1	40.016	44.018	0.56	0.75	9.00	600.00	0.000	0.000	396.16	0.00	0.00
10	175.00	FE15501P77/75	6	40.016	44.018	0.40	0.80	1.70	126.00	0.000	0.000	75.01	0.00	0.00
11	175.00	4449 B71 + B85	3	40.016	44.018	0.40	0.80	2.36	270.00	0.000	0.000	104.06	0.00	0.00
12	175.00	KRY 112 489/2	3	40.016	44.018	0.40	0.80	0.78	55.44	0.000	0.000	34.33	0.00	0.00
13	175.00	KRY 112 144/1	3	40.016	44.018	0.40	0.80	0.49	39.60	0.000	0.000	21.66	0.00	0.00
14	175.00	APXVAALL24_43-U-NA20	3	40.016	44.018	0.56	0.80	34.00	442.08	0.000	0.000	1496.76	0.00	0.00
15	175.00	4460 B25 + B66	3	40.016	44.018	0.54	0.80	4.58	374.40	0.000	0.000	201.73	0.00	0.00
16	175.00	AIR6419 B41	3	40.016	44.018	0.61	0.80	6.93	299.88	0.000	0.000	305.10	0.00	0.00
17	175.00	T-Arms w/ Working	3	40.016	44.018	0.56	0.75	27.00	1800.00	0.000	0.000	1188.49	0.00	0.00
18	165.00	Samsung B5/B13	3	39.524	43.476	0.40	0.80	2.26	253.08	0.000	0.000	98.08	0.00	0.00
19	165.00	MX06FRO660-03	6	39.524	43.476	0.70	0.80	41.69	511.20	0.000	0.000	1812.56	0.00	0.00
20	165.00	MT6407-77A	3	39.524	43.476	0.56	0.80	7.88	285.84	0.000	0.000	342.56	0.00	0.00
21	165.00	Raycap	1	39.524	43.476	0.40	0.80	1.52	38.40	0.000	0.000	65.91	0.00	0.00
22	165.00	Samsung B2/B66A	3	39.524	43.476	0.40	0.80	2.26	303.84	0.000	0.000	98.08	0.00	0.00
23	165.00	91900314	1	39.524	43.476	1.00	1.00	0.00	30.42	0.000	0.000	0.00	0.00	0.00
24	165.00	Low Profile Platform	1	39.524	43.476	1.00	1.00	22.00	1800.00	0.000	0.000	956.48	0.00	0.00
25	70.00	Side Arm (L. Heavy)	1	32.996	36.296	1.00	1.00	3.50	144.00	0.000	0.000	127.03	0.00	0.00
26	70.00	407577689 Gps	1	32.996	36.296	0.50	1.00	0.46	4.80	0.000	0.000	16.51	0.00	0.00

Totals: 10,281.78

10,954.95

Total Applied Force Summary

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



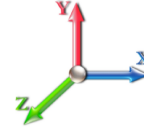
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Load Case: 1.2D + 1.0W 120 mph Wind

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		447.65	1673.54	0.00	0.00
10.00		439.40	1644.94	0.00	0.00
15.00		431.16	1616.33	0.00	0.00
20.00		448.73	1587.73	0.00	0.00
25.00		461.15	1559.13	0.00	0.00
30.00		469.66	1530.52	0.00	0.00
35.00		475.31	1501.92	0.00	0.00
40.00		478.74	1473.32	0.00	0.00
41.00		95.03	291.23	0.00	0.00
45.00		388.77	2217.87	0.00	0.00
48.00		291.15	1639.37	0.00	0.00
50.00		193.65	570.30	0.00	0.00
55.00		486.36	1405.73	0.00	0.00
60.00		484.33	1377.13	0.00	0.00
65.00		481.35	1348.53	0.00	0.00
70.00	(2) attachments	621.08	1468.72	0.00	0.00
75.00		472.96	1290.36	0.00	0.00
80.00		467.72	1261.76	0.00	0.00
81.00		92.38	248.92	0.00	0.00
85.00		368.54	838.36	0.00	0.00
90.00		461.83	1937.01	0.00	0.00
91.00		91.14	381.68	0.00	0.00
95.00		363.00	810.35	0.00	0.00
100.00		447.63	991.48	0.00	0.00
105.00		439.85	967.65	0.00	0.00
110.00		431.66	943.81	0.00	0.00
115.00		423.07	919.97	0.00	0.00
120.00		414.12	896.14	0.00	0.00
125.00		404.83	872.30	0.00	0.00
130.00		395.22	705.51	0.00	0.00
135.00		390.85	1252.35	0.00	0.00
140.00		380.67	675.48	0.00	0.00
145.00		370.22	656.41	0.00	0.00
150.00		359.50	637.34	0.00	0.00
155.00		348.53	618.27	0.00	0.00
160.00		337.32	599.20	0.00	0.00
165.00	(18) attachments	3699.54	3802.91	0.00	0.00
170.00		314.20	517.02	0.00	0.00
175.00	(28) attachments	4125.60	4505.35	0.00	0.00
180.00		290.21	410.13	0.00	0.00
185.00		200.41	443.34	0.00	0.00
190.00		201.54	443.34	0.00	0.00
195.00	(25) attachments	3817.09	3346.14	0.00	2398.56
Totals:		26,803.17	53,878.90	0.00	2,398.56

Calculated Forces

Structure: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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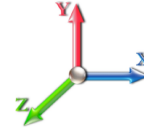


Load Case: 1.2D + 1.0W 120 mph Wind

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	-53.85	-26.86	0.00	-3549.5	0.00	3549.57	4628.91	1339.45	7126.38	6119.66	0.00	0.000	0.000	0.592
5.00	-52.12	-26.53	0.00	-3415.2	0.00	3415.26	4587.84	1314.86	6867.16	5953.37	0.07	-0.125	0.000	0.585
10.00	-50.42	-26.20	0.00	-3282.6	0.00	3282.62	4545.12	1290.28	6612.74	5787.00	0.27	-0.252	0.000	0.579
15.00	-48.74	-25.87	0.00	-3151.6	0.00	3151.64	4500.76	1265.69	6363.12	5620.67	0.60	-0.381	0.000	0.572
20.00	-47.10	-25.51	0.00	-3022.3	0.00	3022.31	4454.76	1241.10	6118.30	5454.49	1.07	-0.512	0.000	0.565
25.00	-45.49	-25.14	0.00	-2894.7	0.00	2894.74	4407.12	1216.52	5878.29	5288.58	1.68	-0.646	0.000	0.558
30.00	-43.90	-24.76	0.00	-2769.0	0.00	2769.02	4357.84	1191.93	5643.07	5123.07	2.43	-0.781	0.000	0.551
35.00	-42.35	-24.37	0.00	-2645.2	0.00	2645.22	4306.92	1167.34	5412.67	4958.08	3.32	-0.919	0.000	0.544
40.00	-40.85	-23.92	0.00	-2523.3	0.00	2523.39	4254.35	1142.76	5187.06	4793.73	4.36	-1.059	0.000	0.536
41.00	-40.53	-23.87	0.00	-2499.4	0.00	2499.47	4243.64	1137.84	5142.51	4760.94	4.58	-1.088	0.000	0.535
45.00	-38.28	-23.51	0.00	-2403.9	0.00	2403.99	4200.14	1118.17	4966.25	4630.13	5.54	-1.203	0.000	0.529
48.00	-36.62	-23.23	0.00	-2333.4	0.00	2333.47	4202.19	1119.08	4974.38	4636.19	6.33	-1.291	0.000	0.512
50.00	-36.01	-23.08	0.00	-2287.0	0.00	2287.01	4180.07	1109.25	4887.33	4570.98	6.88	-1.350	0.000	0.509
55.00	-34.56	-22.65	0.00	-2171.6	0.00	2171.60	4123.62	1084.66	4673.07	4408.60	8.37	-1.491	0.000	0.501
60.00	-33.14	-22.21	0.00	-2058.3	0.00	2058.36	4065.54	1060.07	4463.61	4247.27	10.01	-1.634	0.000	0.493
65.00	-31.75	-21.77	0.00	-1947.3	0.00	1947.32	4005.81	1035.49	4258.96	4087.10	11.80	-1.779	0.000	0.485
70.00	-30.25	-21.18	0.00	-1838.4	0.00	1838.47	3944.44	1010.90	4059.10	3928.21	13.74	-1.926	0.000	0.476
75.00	-28.92	-20.74	0.00	-1732.5	0.00	1732.58	3881.43	986.31	3864.05	3770.72	15.84	-2.075	0.000	0.467
80.00	-27.65	-20.27	0.00	-1628.9	0.00	1628.90	3816.78	961.72	3673.81	3614.75	18.09	-2.226	0.000	0.458
81.00	-27.38	-20.20	0.00	-1608.6	0.00	1608.63	3803.65	956.81	3636.33	3583.75	18.56	-2.257	0.000	0.457
81.00	-27.38	-20.20	0.00	-1608.6	0.00	1608.63	2964.89	798.43	3038.55	2801.11	18.56	-2.257	0.000	0.584
85.00	-26.50	-19.87	0.00	-1527.8	0.00	1527.83	2929.08	782.04	2915.07	2710.08	20.50	-2.381	0.000	0.573
90.00	-24.55	-19.37	0.00	-1428.4	0.00	1428.47	2882.85	761.55	2764.32	2596.94	23.09	-2.566	0.000	0.559
91.00	-24.14	-19.31	0.00	-1409.1	0.00	1409.10	2898.33	768.33	2813.78	2634.30	23.64	-2.604	0.000	0.544
95.00	-23.29	-18.97	0.00	-1331.8	0.00	1331.88	2860.60	751.94	2695.00	2544.15	25.88	-2.755	0.000	0.532
100.00	-22.26	-18.55	0.00	-1237.0	0.00	1237.02	2811.95	731.45	2550.13	2432.25	28.86	-2.936	0.000	0.517
105.00	-21.26	-18.12	0.00	-1144.2	0.00	1144.29	2761.66	710.96	2409.26	2321.34	32.04	-3.118	0.000	0.501
110.00	-20.29	-17.71	0.00	-1053.6	0.00	1053.67	2709.73	690.47	2272.40	2211.55	35.40	-3.301	0.000	0.485
115.00	-19.34	-17.29	0.00	-965.14	0.00	965.14	2656.16	669.98	2139.54	2103.00	38.95	-3.485	0.000	0.467
120.00	-18.42	-16.88	0.00	-878.69	0.00	878.69	2600.95	649.49	2010.67	1995.80	42.70	-3.668	0.000	0.448
125.00	-17.52	-16.48	0.00	-794.29	0.00	794.29	2544.10	629.00	1885.82	1890.08	46.64	-3.851	0.000	0.428
125.00	-17.52	-16.48	0.00	-794.29	0.00	794.29	1882.48	504.07	1513.88	1403.39	46.64	-3.851	0.000	0.576
130.00	-16.79	-16.09	0.00	-711.91	0.00	711.91	1845.69	487.68	1417.02	1330.91	50.76	-4.032	0.000	0.545
135.00	-15.51	-15.67	0.00	-631.46	0.00	631.46	1823.78	478.25	1362.76	1289.51	55.10	-4.254	0.000	0.499
140.00	-14.81	-15.29	0.00	-553.10	0.00	553.10	1784.40	461.86	1270.94	1218.11	59.67	-4.471	0.000	0.463
145.00	-14.13	-14.92	0.00	-476.64	0.00	476.64	1743.38	445.47	1182.33	1147.55	64.46	-4.671	0.000	0.425
150.00	-13.48	-14.55	0.00	-402.03	0.00	402.03	1700.71	429.08	1096.92	1077.96	69.45	-4.862	0.000	0.382
155.00	-12.85	-14.19	0.00	-329.27	0.00	329.27	1656.41	412.69	1014.72	1009.45	74.63	-5.039	0.000	0.335
160.00	-12.25	-13.83	0.00	-258.32	0.00	258.32	1610.46	396.29	935.71	942.14	79.99	-5.199	0.000	0.283
165.00	-8.78	-9.82	0.00	-189.16	0.00	189.16	1562.88	379.90	859.91	876.15	85.51	-5.337	0.000	0.222
170.00	-8.28	-9.47	0.00	-140.06	0.00	140.06	1513.65	363.51	787.30	811.61	91.15	-5.452	0.000	0.179
175.00	-4.18	-4.94	0.00	-92.70	0.00	92.70	1462.77	347.12	717.90	748.63	96.91	-5.545	0.000	0.127
180.00	-3.80	-4.62	0.00	-68.01	0.00	68.01	1400.09	330.73	651.70	682.38	102.75	-5.619	0.000	0.103
180.00	-3.80	-4.62	0.00	-68.01	0.00	68.01	678.42	203.53	25205.7	396.30	102.75	-5.619	0.000	0.178
185.00	-3.37	-4.37	0.00	-44.93	0.00	44.93	678.42	203.53	25205.7	396.30	108.66	-5.678	0.000	0.119
190.00	-2.95	-4.13	0.00	-23.06	0.00	23.06	678.42	203.53	25205.7	396.30	114.61	-5.711	0.000	0.063
195.00	0.00	-3.82	0.00	-2.40	0.00	2.40	678.42	203.53	25205.7	396.30	120.59	-5.723	0.000	0.006

Calculated Forces

Structure:	CT01497-S-SBA	Code:	TIA-222-H	4/14/2022
Site Name:	Plymouth 2 CT	Exposure:	C	
Height:	195.00 (ft)	Crest Height:	0.00	
Base Elev:	0.000 (ft)	Site Class:	D - Stiff Soil	
Gh:	1.1	Topography:	1	Struct Class: II
				Page: 12



Wind Loading - Shaft

Structure: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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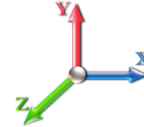


Load Case: 0.9D + 1.0W 120 mph Wind

Iterations 25

Dead Load Factor 0.90

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	23.888	26.28	540.93	0.630	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	23.888	26.28	531.06	0.630	0.000	5.00	27.041	17.04	447.6	0.0	1158.0
10.00		1.00	0.85	23.888	26.28	521.19	0.630	0.000	5.00	26.543	16.72	439.4	0.0	1136.5
15.00		1.00	0.85	23.888	26.28	511.31	0.630	0.000	5.00	26.045	16.41	431.2	0.0	1115.1
20.00		1.00	0.90	25.347	27.88	516.52	0.630	0.000	5.00	25.547	16.09	448.7	0.0	1093.6
25.00		1.00	0.95	26.566	29.22	518.39	0.630	0.000	5.00	25.049	15.78	461.1	0.0	1072.1
30.00		1.00	0.98	27.605	30.37	517.82	0.630	0.000	5.00	24.550	15.47	469.7	0.0	1050.7
35.00		1.00	1.01	28.516	31.37	515.50	0.630	0.000	5.00	24.052	15.15	475.3	0.0	1029.2
40.00		1.00	1.04	29.329	32.26	511.86	0.630	0.000	5.00	23.554	14.84	478.7	0.0	1007.8
41.00	Bot - Section 2	1.00	1.05	29.482	32.43	511.00	0.630	0.000	1.00	4.651	2.93	95.0	0.0	199.0
45.00		1.00	1.07	30.065	33.07	507.17	0.630	0.000	4.00	18.659	11.76	388.8	0.0	1585.6
48.00	Top - Section 1	1.00	1.08	30.477	33.52	503.94	0.630	0.000	3.00	13.785	8.68	291.1	0.0	1171.2
50.00		1.00	1.09	30.740	33.81	508.77	0.630	0.000	2.00	9.091	5.73	193.7	0.0	388.8
55.00		1.00	1.12	31.363	34.50	502.59	0.630	0.000	5.00	22.378	14.10	486.4	0.0	957.1
60.00		1.00	1.14	31.942	35.14	495.80	0.630	0.000	5.00	21.880	13.78	484.3	0.0	935.6
65.00		1.00	1.16	32.485	35.73	488.48	0.630	0.000	5.00	21.382	13.47	481.4	0.0	914.2
70.00	Appurtenance(s)	1.00	1.17	32.996	36.30	480.70	0.630	0.000	5.00	20.884	13.16	477.5	0.0	892.7
75.00		1.00	1.19	33.479	36.83	472.52	0.630	0.000	5.00	20.386	12.84	473.0	0.0	871.3
80.00		1.00	1.21	33.937	37.33	463.98	0.630	0.000	5.00	19.888	12.53	467.7	0.0	849.8
81.00	Top - Section 2	1.00	1.21	34.026	37.43	462.23	0.630	0.000	1.00	3.918	2.47	92.4	0.0	167.4
85.00	Bot - Section 4	1.00	1.22	34.373	37.81	455.10	0.630	0.000	4.00	15.472	9.75	368.5	0.0	551.6
90.00		1.00	1.24	34.789	38.27	445.94	0.630	0.000	5.00	19.156	12.07	461.8	0.0	1356.3
91.00	Top - Section 3	1.00	1.24	34.870	38.36	444.07	0.630	0.000	1.00	3.771	2.38	91.1	0.0	267.0
95.00		1.00	1.25	35.187	38.71	442.86	0.630	0.000	4.00	14.887	9.38	363.0	0.0	530.6
100.00		1.00	1.27	35.569	39.13	433.22	0.630	0.000	5.00	18.160	11.44	447.6	0.0	647.1
105.00		1.00	1.28	35.936	39.53	423.34	0.630	0.000	5.00	17.662	11.13	439.9	0.0	629.3
110.00		1.00	1.29	36.290	39.92	413.25	0.630	0.000	5.00	17.164	10.81	431.7	0.0	611.4
115.00		1.00	1.30	36.631	40.29	402.96	0.630	0.000	5.00	16.666	10.50	423.1	0.0	593.5
120.00		1.00	1.32	36.961	40.66	392.49	0.630	0.000	5.00	16.168	10.19	414.1	0.0	575.6
125.00	Top - Section 4	1.00	1.33	37.280	41.01	381.85	0.630	0.000	5.00	15.670	9.87	404.8	0.0	557.7
130.00	Bot - Section 6	1.00	1.34	37.589	41.35	371.05	0.630	0.000	5.00	15.172	9.56	395.2	0.0	432.7
135.00	Top - Section 5	1.00	1.35	37.889	41.68	360.09	0.630	0.000	5.00	14.885	9.38	390.8	0.0	842.8
140.00		1.00	1.36	38.180	42.00	354.30	0.630	0.000	5.00	14.387	9.06	380.7	0.0	410.1
145.00		1.00	1.37	38.463	42.31	343.08	0.630	0.000	5.00	13.889	8.75	370.2	0.0	395.8
150.00		1.00	1.38	38.739	42.61	331.74	0.630	0.000	5.00	13.391	8.44	359.5	0.0	381.5
155.00		1.00	1.39	39.007	42.91	320.27	0.630	0.000	5.00	12.893	8.12	348.5	0.0	367.2
160.00		1.00	1.40	39.269	43.20	308.69	0.630	0.000	5.00	12.395	7.81	337.3	0.0	352.9
165.00	Appurtenance(s)	1.00	1.41	39.524	43.48	296.99	0.630	0.000	5.00	11.897	7.50	325.9	0.0	338.6
170.00		1.00	1.42	39.773	43.75	285.19	0.630	0.000	5.00	11.399	7.18	314.2	0.0	324.3
175.00	Appurtenance(s)	1.00	1.42	40.016	44.02	273.28	0.630	0.000	5.00	10.901	6.87	302.3	0.0	310.0
180.00	Top - Section 6	1.00	1.43	40.254	44.28	261.28	0.630	0.000	5.00	10.403	6.55	290.2	0.0	295.7
185.00		1.00	1.44	40.487	44.54	258.05	0.450	0.000	5.00	10.000	4.50	200.4	0.0	320.6
190.00		1.00	1.45	40.715	44.79	258.78	0.450	0.000	5.00	10.000	4.50	201.5	0.0	320.6
195.00	Appurtenance(s)	1.00	1.46	40.939	45.03	259.49	0.450	0.000	5.00	10.000	4.50	202.6	0.0	320.6
Totals:									195.00			15,848.2		29,329.5

Discrete Appurtenance Forces

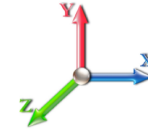
Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 14



Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

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	195.00	800 MHz RRH	3	40.983	45.081	0.60	0.90	4.50	143.10	0.000	1.000	203.06	0.00	203.06
2	195.00	APXVSP18-C-A20	3	40.983	45.081	0.83	1.00	19.97	153.90	0.000	1.000	900.26	0.00	900.26
3	195.00	APXVTM14-C-I20	3	40.983	45.081	0.77	1.00	14.65	151.74	0.000	1.000	660.23	0.00	660.23
4	195.00	1900MHz RRH (65MHz)	3	40.983	45.081	0.60	0.90	5.01	162.00	0.000	1.000	225.90	0.00	225.90
5	195.00	T-Arms w/ Working	3	40.939	45.032	0.56	0.75	27.00	1350.00	0.000	0.000	1215.88	0.00	0.00
6	195.00	TD-RRH8x20-25	3	40.983	45.081	0.60	0.90	7.33	189.00	0.000	1.000	330.28	0.00	330.28
7	195.00	ALU 800MHz External	3	40.983	45.081	0.60	0.90	1.41	23.76	0.000	1.000	63.61	0.00	63.61
8	195.00	ACU-A20-N	4	40.983	45.081	0.60	0.90	0.34	3.60	0.000	1.000	15.22	0.00	15.22
9	175.00	(3) T-Arm Kit	1	40.016	44.018	0.56	0.75	9.00	450.00	0.000	0.000	396.16	0.00	0.00
10	175.00	FE15501P77/75	6	40.016	44.018	0.40	0.80	1.70	94.50	0.000	0.000	75.01	0.00	0.00
11	175.00	4449 B71 + B85	3	40.016	44.018	0.40	0.80	2.36	202.50	0.000	0.000	104.06	0.00	0.00
12	175.00	KRY 112 489/2	3	40.016	44.018	0.40	0.80	0.78	41.58	0.000	0.000	34.33	0.00	0.00
13	175.00	KRY 112 144/1	3	40.016	44.018	0.40	0.80	0.49	29.70	0.000	0.000	21.66	0.00	0.00
14	175.00	APXVAALL24_43-U-NA20	3	40.016	44.018	0.56	0.80	34.00	331.56	0.000	0.000	1496.76	0.00	0.00
15	175.00	4460 B25 + B66	3	40.016	44.018	0.54	0.80	4.58	280.80	0.000	0.000	201.73	0.00	0.00
16	175.00	AIR6419 B41	3	40.016	44.018	0.61	0.80	6.93	224.91	0.000	0.000	305.10	0.00	0.00
17	175.00	T-Arms w/ Working	3	40.016	44.018	0.56	0.75	27.00	1350.00	0.000	0.000	1188.49	0.00	0.00
18	165.00	Samsung B5/B13	3	39.524	43.476	0.40	0.80	2.26	189.81	0.000	0.000	98.08	0.00	0.00
19	165.00	MX06FRO660-03	6	39.524	43.476	0.70	0.80	41.69	383.40	0.000	0.000	1812.56	0.00	0.00
20	165.00	MT6407-77A	3	39.524	43.476	0.56	0.80	7.88	214.38	0.000	0.000	342.56	0.00	0.00
21	165.00	Raycap	1	39.524	43.476	0.40	0.80	1.52	28.80	0.000	0.000	65.91	0.00	0.00
22	165.00	Samsung B2/B66A	3	39.524	43.476	0.40	0.80	2.26	227.88	0.000	0.000	98.08	0.00	0.00
23	165.00	91900314	1	39.524	43.476	1.00	1.00	0.00	22.82	0.000	0.000	0.00	0.00	0.00
24	165.00	Low Profile Platform	1	39.524	43.476	1.00	1.00	22.00	1350.00	0.000	0.000	956.48	0.00	0.00
25	70.00	Side Arm (L. Heavy)	1	32.996	36.296	1.00	1.00	3.50	108.00	0.000	0.000	127.03	0.00	0.00
26	70.00	407577689 Gps	1	32.996	36.296	0.50	1.00	0.46	3.60	0.000	0.000	16.51	0.00	0.00

Totals: 7,711.34

10,954.95

Total Applied Force Summary

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



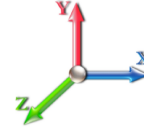
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Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

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		447.65	1255.15	0.00	0.00
10.00		439.40	1233.70	0.00	0.00
15.00		431.16	1212.25	0.00	0.00
20.00		448.73	1190.80	0.00	0.00
25.00		461.15	1169.35	0.00	0.00
30.00		469.66	1147.89	0.00	0.00
35.00		475.31	1126.44	0.00	0.00
40.00		478.74	1104.99	0.00	0.00
41.00		95.03	218.42	0.00	0.00
45.00		388.77	1663.40	0.00	0.00
48.00		291.15	1229.53	0.00	0.00
50.00		193.65	427.73	0.00	0.00
55.00		486.36	1054.30	0.00	0.00
60.00		484.33	1032.85	0.00	0.00
65.00		481.35	1011.39	0.00	0.00
70.00	(2) attachments	621.08	1101.54	0.00	0.00
75.00		472.96	967.77	0.00	0.00
80.00		467.72	946.32	0.00	0.00
81.00		92.38	186.69	0.00	0.00
85.00		368.54	628.77	0.00	0.00
90.00		461.83	1452.76	0.00	0.00
91.00		91.14	286.26	0.00	0.00
95.00		363.00	607.76	0.00	0.00
100.00		447.63	743.61	0.00	0.00
105.00		439.85	725.73	0.00	0.00
110.00		431.66	707.86	0.00	0.00
115.00		423.07	689.98	0.00	0.00
120.00		414.12	672.10	0.00	0.00
125.00		404.83	654.23	0.00	0.00
130.00		395.22	529.14	0.00	0.00
135.00		390.85	939.26	0.00	0.00
140.00		380.67	506.61	0.00	0.00
145.00		370.22	492.31	0.00	0.00
150.00		359.50	478.00	0.00	0.00
155.00		348.53	463.70	0.00	0.00
160.00		337.32	449.40	0.00	0.00
165.00	(18) attachments	3699.54	2852.18	0.00	0.00
170.00		314.20	387.77	0.00	0.00
175.00	(28) attachments	4125.60	3379.02	0.00	0.00
180.00		290.21	307.59	0.00	0.00
185.00		200.41	332.51	0.00	0.00
190.00		201.54	332.51	0.00	0.00
195.00	(25) attachments	3817.09	2509.61	0.00	2398.56
Totals:		26,803.17	40,409.17	0.00	2,398.56

Calculated Forces

Structure: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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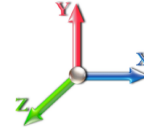


Load Case: 0.9D + 1.0W 120 mph Wind

Iterations 25

Dead Load Factor 0.90

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-40.38	-26.85	0.00	-3502.7	0.00	3502.70	4628.91	1339.45	7126.38	6119.66	0.00	0.000	0.000	0.581
5.00	-39.07	-26.48	0.00	-3368.4	0.00	3368.47	4587.84	1314.86	6867.16	5953.37	0.07	-0.123	0.000	0.575
10.00	-37.78	-26.12	0.00	-3236.0	0.00	3236.06	4545.12	1290.28	6612.74	5787.00	0.26	-0.248	0.000	0.568
15.00	-36.51	-25.77	0.00	-3105.4	0.00	3105.45	4500.76	1265.69	6363.12	5620.67	0.59	-0.376	0.000	0.561
20.00	-35.27	-25.39	0.00	-2976.6	0.00	2976.63	4454.76	1241.10	6118.30	5454.49	1.05	-0.505	0.000	0.554
25.00	-34.04	-24.99	0.00	-2849.6	0.00	2849.69	4407.12	1216.52	5878.29	5288.58	1.65	-0.636	0.000	0.547
30.00	-32.84	-24.59	0.00	-2724.7	0.00	2724.72	4357.84	1191.93	5643.07	5123.07	2.39	-0.770	0.000	0.540
35.00	-31.67	-24.17	0.00	-2601.7	0.00	2601.78	4306.92	1167.34	5412.67	4958.08	3.27	-0.906	0.000	0.533
40.00	-30.54	-23.72	0.00	-2480.9	0.00	2480.92	4254.35	1142.76	5187.06	4793.73	4.29	-1.043	0.000	0.525
41.00	-30.29	-23.66	0.00	-2457.2	0.00	2457.20	4243.64	1137.84	5142.51	4760.94	4.52	-1.072	0.000	0.524
45.00	-28.59	-23.28	0.00	-2362.5	0.00	2362.58	4200.14	1118.17	4966.25	4630.13	5.46	-1.185	0.000	0.518
48.00	-27.34	-23.00	0.00	-2292.7	0.00	2292.72	4202.19	1119.08	4974.38	4636.19	6.24	-1.271	0.000	0.501
50.00	-26.88	-22.85	0.00	-2246.7	0.00	2246.72	4180.07	1109.25	4887.33	4570.98	6.78	-1.329	0.000	0.498
55.00	-25.78	-22.40	0.00	-2132.5	0.00	2132.50	4123.62	1084.66	4673.07	4408.60	8.25	-1.467	0.000	0.490
60.00	-24.71	-21.94	0.00	-2020.5	0.00	2020.52	4065.54	1060.07	4463.61	4247.27	9.86	-1.608	0.000	0.482
65.00	-23.66	-21.49	0.00	-1910.8	0.00	1910.80	4005.81	1035.49	4258.96	4087.10	11.62	-1.750	0.000	0.474
70.00	-22.52	-20.89	0.00	-1803.3	0.00	1803.33	3944.44	1010.90	4059.10	3928.21	13.53	-1.894	0.000	0.465
75.00	-21.52	-20.44	0.00	-1698.8	0.00	1698.86	3881.43	986.31	3864.05	3770.72	15.59	-2.040	0.000	0.457
80.00	-20.56	-19.97	0.00	-1596.6	0.00	1596.64	3816.78	961.72	3673.81	3614.75	17.81	-2.188	0.000	0.448
81.00	-20.35	-19.90	0.00	-1576.6	0.00	1576.67	3803.65	956.81	3636.33	3583.75	18.27	-2.219	0.000	0.446
81.00	-20.35	-19.90	0.00	-1576.6	0.00	1576.67	2964.89	798.43	3038.55	2801.11	18.27	-2.219	0.000	0.570
85.00	-19.69	-19.56	0.00	-1497.0	0.00	1497.06	2929.08	782.04	2915.07	2710.08	20.18	-2.340	0.000	0.560
90.00	-18.22	-19.07	0.00	-1399.2	0.00	1399.26	2882.85	761.55	2764.32	2596.94	22.73	-2.521	0.000	0.546
91.00	-17.91	-19.00	0.00	-1380.1	0.00	1380.19	2898.33	768.33	2813.78	2634.30	23.26	-2.559	0.000	0.531
95.00	-17.26	-18.66	0.00	-1304.2	0.00	1304.21	2860.60	751.94	2695.00	2544.15	25.46	-2.707	0.000	0.519
100.00	-16.49	-18.22	0.00	-1210.9	0.00	1210.93	2811.95	731.45	2550.13	2432.25	28.39	-2.884	0.000	0.504
105.00	-15.73	-17.80	0.00	-1119.8	0.00	1119.81	2761.66	710.96	2409.26	2321.34	31.51	-3.062	0.000	0.489
110.00	-14.99	-17.37	0.00	-1030.8	0.00	1030.83	2709.73	690.47	2272.40	2211.55	34.81	-3.241	0.000	0.472
115.00	-14.27	-16.96	0.00	-943.97	0.00	943.97	2656.16	669.98	2139.54	2103.00	38.30	-3.421	0.000	0.455
120.00	-13.58	-16.54	0.00	-859.19	0.00	859.19	2600.95	649.49	2010.67	1995.80	41.98	-3.601	0.000	0.436
125.00	-12.90	-16.14	0.00	-776.47	0.00	776.47	2544.10	629.00	1885.82	1890.08	45.84	-3.779	0.000	0.417
125.00	-12.90	-16.14	0.00	-776.47	0.00	776.47	1882.48	504.07	1513.88	1403.39	45.84	-3.779	0.000	0.561
130.00	-12.34	-15.75	0.00	-695.79	0.00	695.79	1845.69	487.68	1417.02	1330.91	49.89	-3.956	0.000	0.531
135.00	-11.38	-15.34	0.00	-617.04	0.00	617.04	1823.78	478.25	1362.76	1289.51	54.15	-4.173	0.000	0.486
140.00	-10.85	-14.96	0.00	-540.36	0.00	540.36	1784.40	461.86	1270.94	1218.11	58.63	-4.385	0.000	0.451
145.00	-10.34	-14.58	0.00	-465.57	0.00	465.57	1743.38	445.47	1182.33	1147.55	63.33	-4.581	0.000	0.413
150.00	-9.85	-14.22	0.00	-392.64	0.00	392.64	1700.71	429.08	1096.92	1077.96	68.22	-4.767	0.000	0.371
155.00	-9.37	-13.86	0.00	-321.55	0.00	321.55	1656.41	412.69	1014.72	1009.45	73.30	-4.940	0.000	0.325
160.00	-8.92	-13.51	0.00	-252.26	0.00	252.26	1610.46	396.29	935.71	942.14	78.56	-5.096	0.000	0.274
165.00	-6.39	-9.58	0.00	-184.72	0.00	184.72	1562.88	379.90	859.91	876.15	83.96	-5.231	0.000	0.216
170.00	-6.02	-9.24	0.00	-136.83	0.00	136.83	1513.65	363.51	787.30	811.61	89.50	-5.343	0.000	0.173
175.00	-3.04	-4.82	0.00	-90.63	0.00	90.63	1462.77	347.12	717.90	748.63	95.14	-5.434	0.000	0.123
180.00	-2.75	-4.51	0.00	-66.52	0.00	66.52	1400.09	330.73	651.70	682.38	100.86	-5.506	0.000	0.100
180.00	-2.75	-4.51	0.00	-66.52	0.00	66.52	678.42	203.53	25205.7	396.30	100.86	-5.506	0.000	0.172
185.00	-2.44	-4.28	0.00	-44.00	0.00	44.00	678.42	203.53	25205.7	396.30	106.65	-5.564	0.000	0.115
190.00	-2.12	-4.04	0.00	-22.62	0.00	22.62	678.42	203.53	25205.7	396.30	112.49	-5.597	0.000	0.061
195.00	0.00	-3.82	0.00	-2.40	0.00	2.40	678.42	203.53	25205.7	396.30	118.35	-5.609	0.000	0.006

Calculated Forces

Structure:	CT01497-S-SBA	Code:	TIA-222-H	4/14/2022
Site Name:	Plymouth 2 CT	Exposure:	C	
Height:	195.00 (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: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (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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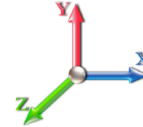


Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	2.654	2.92	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	2.654	2.92	0.00	1.200	0.828	5.00	27.731	33.28	97.2	329.4	1873.4
10.00		1.00	0.85	2.654	2.92	0.00	1.200	0.887	5.00	27.282	32.74	95.6	346.9	1862.2
15.00		1.00	0.85	2.654	2.92	0.00	1.200	0.924	5.00	26.815	32.18	93.9	354.7	1841.5
20.00		1.00	0.90	2.816	3.10	0.00	1.200	0.951	5.00	26.339	31.61	97.9	358.3	1816.4
25.00		1.00	0.95	2.952	3.25	0.00	1.200	0.973	5.00	25.859	31.03	100.8	359.4	1788.9
30.00		1.00	0.98	3.067	3.37	0.00	1.200	0.991	5.00	25.376	30.45	102.7	358.9	1759.8
35.00		1.00	1.01	3.168	3.49	0.00	1.200	1.006	5.00	24.891	29.87	104.1	357.2	1729.5
40.00		1.00	1.04	3.259	3.58	0.00	1.200	1.019	5.00	24.404	29.28	105.0	354.7	1698.4
41.00	Bot - Section 2	1.00	1.05	3.276	3.60	0.00	1.200	1.022	1.00	4.821	5.79	20.8	70.8	336.1
45.00		1.00	1.07	3.341	3.67	0.00	1.200	1.032	4.00	19.347	23.22	85.3	285.0	2399.2
48.00	Top - Section 1	1.00	1.08	3.386	3.72	0.00	1.200	1.038	3.00	14.304	17.17	63.9	212.4	1774.0
50.00		1.00	1.09	3.416	3.76	0.00	1.200	1.042	2.00	9.438	11.33	42.6	141.0	659.4
55.00		1.00	1.12	3.485	3.83	0.00	1.200	1.052	5.00	23.255	27.91	107.0	348.2	1624.3
60.00		1.00	1.14	3.549	3.90	0.00	1.200	1.062	5.00	22.764	27.32	106.6	343.5	1591.1
65.00		1.00	1.16	3.609	3.97	0.00	1.200	1.070	5.00	22.273	26.73	106.1	338.5	1557.5
70.00	Appurtenance(s)	1.00	1.17	3.666	4.03	0.00	1.200	1.078	5.00	21.782	26.14	105.4	333.2	1523.6
75.00		1.00	1.19	3.720	4.09	0.00	1.200	1.086	5.00	21.290	25.55	104.5	327.7	1489.4
80.00		1.00	1.21	3.771	4.15	0.00	1.200	1.093	5.00	20.798	24.96	103.5	321.9	1455.0
81.00	Top - Section 2	1.00	1.21	3.781	4.16	0.00	1.200	1.094	1.00	4.100	4.92	20.5	64.1	287.3
85.00	Bot - Section 4	1.00	1.22	3.819	4.20	0.00	1.200	1.099	4.00	16.205	19.45	81.7	252.7	988.1
90.00		1.00	1.24	3.865	4.25	0.00	1.200	1.106	5.00	20.077	24.09	102.4	313.9	2122.3
91.00	Top - Section 3	1.00	1.24	3.874	4.26	0.00	1.200	1.107	1.00	3.956	4.75	20.2	62.5	418.5
95.00		1.00	1.25	3.910	4.30	0.00	1.200	1.112	4.00	15.628	18.75	80.7	246.0	953.5
100.00		1.00	1.27	3.952	4.35	0.00	1.200	1.117	5.00	19.091	22.91	99.6	301.0	1163.8
105.00		1.00	1.28	3.993	4.39	0.00	1.200	1.123	5.00	18.598	22.32	98.0	294.3	1133.3
110.00		1.00	1.29	4.032	4.44	0.00	1.200	1.128	5.00	18.104	21.72	96.4	287.5	1102.7
115.00		1.00	1.30	4.070	4.48	0.00	1.200	1.133	5.00	17.610	21.13	94.6	280.5	1071.9
120.00		1.00	1.32	4.107	4.52	0.00	1.200	1.138	5.00	17.116	20.54	92.8	273.5	1041.0
125.00	Top - Section 4	1.00	1.33	4.142	4.56	0.00	1.200	1.142	5.00	16.622	19.95	90.9	266.3	1009.9
130.00	Bot - Section 6	1.00	1.34	4.177	4.59	0.00	1.200	1.147	5.00	16.128	19.35	88.9	259.0	835.8
135.00	Top - Section 5	1.00	1.35	4.210	4.63	0.00	1.200	1.151	5.00	15.845	19.01	88.1	255.1	1378.8
140.00		1.00	1.36	4.242	4.67	0.00	1.200	1.155	5.00	15.350	18.42	86.0	247.7	794.5
145.00		1.00	1.37	4.274	4.70	0.00	1.200	1.160	5.00	14.856	17.83	83.8	240.1	767.9
150.00		1.00	1.38	4.304	4.73	0.00	1.200	1.163	5.00	14.361	17.23	81.6	232.4	741.1
155.00		1.00	1.39	4.334	4.77	0.00	1.200	1.167	5.00	13.866	16.64	79.3	224.7	714.3
160.00		1.00	1.40	4.363	4.80	0.00	1.200	1.171	5.00	13.371	16.05	77.0	216.9	687.5
165.00	Appurtenance(s)	1.00	1.41	4.392	4.83	0.00	1.200	1.175	5.00	12.876	15.45	74.6	209.0	660.5
170.00		1.00	1.42	4.419	4.86	0.00	1.200	1.178	5.00	12.381	14.86	72.2	201.1	633.5
175.00	Appurtenance(s)	1.00	1.42	4.446	4.89	0.00	1.200	1.182	5.00	11.886	14.26	69.8	193.1	606.4
180.00	Top - Section 6	1.00	1.43	4.473	4.92	0.00	1.200	1.185	5.00	11.391	13.67	67.3	185.0	579.3
185.00		1.00	1.44	4.499	4.95	0.00	1.200	1.188	5.00	10.990	13.19	65.3	182.8	610.3
190.00		1.00	1.45	4.524	4.98	0.00	1.200	1.191	5.00	10.993	13.19	65.6	183.3	610.8
195.00	Appurtenance(s)	1.00	1.46	4.549	5.00	0.00	1.200	1.194	5.00	10.995	13.19	66.0	183.8	611.3
Totals:									195.00			3,586.2		50,304.1

Discrete Appurtenance Forces

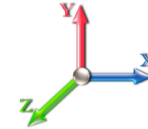
Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 24

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	195.00	800 MHz RRH	3	4.554	5.009	0.60	0.90	5.92	279.35	0.000	1.000	29.66	0.00	29.66
2	195.00	APXVSP18-C-A20	3	4.554	5.009	0.85	1.00	25.33	411.59	0.000	1.000	126.86	0.00	126.86
3	195.00	APXVTM14-C-I20	3	4.554	5.009	0.79	1.00	16.79	510.93	0.000	1.000	84.13	0.00	84.13
4	195.00	1900MHz RRH (65MHz)	3	4.554	5.009	0.60	0.90	6.58	315.61	0.000	1.000	32.97	0.00	32.97
5	195.00	T-Arms w/ Working	3	4.549	5.004	0.56	0.75	46.35	2573.29	0.000	0.000	231.91	0.00	0.00
6	195.00	TD-RRH8x20-25	3	4.554	5.009	0.60	0.90	8.31	464.14	0.000	1.000	41.61	0.00	41.61
7	195.00	ALU 800MHz External	3	4.554	5.009	0.64	0.90	2.34	52.90	0.000	1.000	11.74	0.00	11.74
8	195.00	ACU-A20-N	4	4.554	5.009	0.45	0.90	0.62	11.36	0.000	1.000	3.09	0.00	3.09
9	175.00	(3) T-Arm Kit	1	4.446	4.891	0.56	0.75	14.96	851.73	0.000	0.000	73.14	0.00	0.00
10	175.00	FE15501P77/75	6	4.446	4.891	0.40	0.80	2.80	202.54	0.000	0.000	13.68	0.00	0.00
11	175.00	4449 B71 + B85	3	4.446	4.891	0.40	0.80	2.83	220.36	0.000	0.000	13.82	0.00	0.00
12	175.00	KRY 112 489/2	3	4.446	4.891	0.40	0.80	1.28	76.23	0.000	0.000	6.25	0.00	0.00
13	175.00	KRY 112 144/1	3	4.446	4.891	0.40	0.80	0.88	52.20	0.000	0.000	4.29	0.00	0.00
14	175.00	APXVAALL24_43-U-NA20	3	4.446	4.891	0.56	0.80	36.14	1256.34	0.000	0.000	176.75	0.00	0.00
15	175.00	4460 B25 + B66	3	4.446	4.891	0.54	0.80	5.32	447.75	0.000	0.000	26.01	0.00	0.00
16	175.00	AIR6419 B41	3	4.446	4.891	0.61	0.80	7.91	529.63	0.000	0.000	38.71	0.00	0.00
17	175.00	T-Arms w/ Working	3	4.446	4.891	0.56	0.75	46.14	2557.86	0.000	0.000	225.67	0.00	0.00
18	165.00	Samsung B5/B13	3	4.392	4.831	0.40	0.80	2.70	316.48	0.000	0.000	13.05	0.00	0.00
19	165.00	MX06FRO660-03	6	4.392	4.831	0.70	0.80	45.53	1543.58	0.000	0.000	219.95	0.00	0.00
20	165.00	MT6407-77A	3	4.392	4.831	0.56	0.80	8.94	510.91	0.000	0.000	43.18	0.00	0.00
21	165.00	Raycap	1	4.392	4.831	0.40	0.80	1.73	118.16	0.000	0.000	8.34	0.00	0.00
22	165.00	Samsung B2/B66A	3	4.392	4.831	0.40	0.80	2.70	301.74	0.000	0.000	13.05	0.00	0.00
23	165.00	91900314	1	4.392	4.831	1.00	1.00	0.00	41.18	0.000	0.000	0.00	0.00	0.00
24	165.00	Low Profile Platform	1	4.392	4.831	1.00	1.00	33.89	2380.96	0.000	0.000	163.70	0.00	0.00
25	70.00	Side Arm (L. Heavy)	1	3.666	4.033	1.00	1.00	6.02	178.69	0.000	0.000	24.28	0.00	0.00
26	70.00	407577689 Gps	1	3.666	4.033	0.50	1.00	0.77	13.18	0.000	0.000	3.09	0.00	0.00

Totals: 16,218.69

1,628.93

Total Applied Force Summary

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

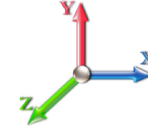


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Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		97.16	2002.97	0.00	0.00
10.00		95.59	1991.85	0.00	0.00
15.00		93.95	1971.06	0.00	0.00
20.00		97.92	1946.02	0.00	0.00
25.00		100.76	1918.53	0.00	0.00
30.00		102.74	1889.42	0.00	0.00
35.00		104.10	1859.14	0.00	0.00
40.00		104.98	1827.98	0.00	0.00
41.00		20.85	362.04	0.00	0.00
45.00		85.31	2502.83	0.00	0.00
48.00		63.94	1851.78	0.00	0.00
50.00		42.55	711.28	0.00	0.00
55.00		106.97	1753.93	0.00	0.00
60.00		106.65	1720.67	0.00	0.00
65.00		106.12	1687.07	0.00	0.00
70.00	(2) attachments	132.78	1845.04	0.00	0.00
75.00		104.54	1618.04	0.00	0.00
80.00		103.52	1583.63	0.00	0.00
81.00		20.46	313.05	0.00	0.00
85.00		81.69	1091.04	0.00	0.00
90.00		102.44	2250.92	0.00	0.00
91.00		20.23	444.21	0.00	0.00
95.00		80.65	1056.38	0.00	0.00
100.00		99.59	1292.48	0.00	0.00
105.00		98.02	1261.96	0.00	0.00
110.00		96.36	1231.30	0.00	0.00
115.00		94.61	1200.50	0.00	0.00
120.00		92.79	1169.59	0.00	0.00
125.00		90.88	1138.56	0.00	0.00
130.00		88.91	964.48	0.00	0.00
135.00		88.05	1507.49	0.00	0.00
140.00		85.96	923.14	0.00	0.00
145.00		83.80	896.50	0.00	0.00
150.00		81.59	869.78	0.00	0.00
155.00		79.33	842.98	0.00	0.00
160.00		77.01	816.10	0.00	0.00
165.00	(18) attachments	535.91	6002.16	0.00	0.00
170.00		72.22	718.09	0.00	0.00
175.00	(28) attachments	648.08	6885.64	0.00	0.00
180.00		67.25	595.09	0.00	0.00
185.00		65.26	626.15	0.00	0.00
190.00		65.64	626.67	0.00	0.00
195.00	(25) attachments	627.99	5246.34	0.00	330.05
Totals:		5,215.16	71,013.90	0.00	330.05

Calculated Forces

Structure: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (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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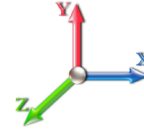


Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Iterations 24

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	-71.01	-5.23	0.00	-669.91	0.00	669.91	4628.91	1339.45	7126.38	6119.66	0.00	0.000	0.000	0.125
5.00	-69.01	-5.16	0.00	-643.77	0.00	643.77	4587.84	1314.86	6867.16	5953.37	0.01	-0.024	0.000	0.123
10.00	-67.01	-5.09	0.00	-617.97	0.00	617.97	4545.12	1290.28	6612.74	5787.00	0.05	-0.047	0.000	0.122
15.00	-65.04	-5.02	0.00	-592.51	0.00	592.51	4500.76	1265.69	6363.12	5620.67	0.11	-0.072	0.000	0.120
20.00	-63.09	-4.95	0.00	-567.40	0.00	567.40	4454.76	1241.10	6118.30	5454.49	0.20	-0.096	0.000	0.118
25.00	-61.17	-4.87	0.00	-542.65	0.00	542.65	4407.12	1216.52	5878.29	5288.58	0.32	-0.121	0.000	0.117
30.00	-59.28	-4.79	0.00	-518.29	0.00	518.29	4357.84	1191.93	5643.07	5123.07	0.46	-0.147	0.000	0.115
35.00	-57.42	-4.71	0.00	-494.33	0.00	494.33	4306.92	1167.34	5412.67	4958.08	0.62	-0.173	0.000	0.113
40.00	-55.59	-4.61	0.00	-470.79	0.00	470.79	4254.35	1142.76	5187.06	4793.73	0.82	-0.199	0.000	0.111
41.00	-55.23	-4.60	0.00	-466.18	0.00	466.18	4243.64	1137.84	5142.51	4760.94	0.86	-0.204	0.000	0.111
45.00	-52.72	-4.53	0.00	-447.76	0.00	447.76	4200.14	1118.17	4966.25	4630.13	1.04	-0.226	0.000	0.109
48.00	-50.87	-4.47	0.00	-434.18	0.00	434.18	4202.19	1119.08	4974.38	4636.19	1.19	-0.242	0.000	0.106
50.00	-50.16	-4.44	0.00	-425.25	0.00	425.25	4180.07	1109.25	4887.33	4570.98	1.29	-0.253	0.000	0.105
55.00	-48.40	-4.34	0.00	-403.06	0.00	403.06	4123.62	1084.66	4673.07	4408.60	1.57	-0.279	0.000	0.103
60.00	-46.68	-4.25	0.00	-381.34	0.00	381.34	4065.54	1060.07	4463.61	4247.27	1.88	-0.306	0.000	0.101
65.00	-44.99	-4.16	0.00	-360.09	0.00	360.09	4005.81	1035.49	4258.96	4087.10	2.21	-0.332	0.000	0.099
70.00	-43.15	-4.03	0.00	-339.30	0.00	339.30	3944.44	1010.90	4059.10	3928.21	2.58	-0.360	0.000	0.097
75.00	-41.53	-3.94	0.00	-319.14	0.00	319.14	3881.43	986.31	3864.05	3770.72	2.97	-0.387	0.000	0.095
80.00	-39.94	-3.84	0.00	-299.45	0.00	299.45	3816.78	961.72	3673.81	3614.75	3.39	-0.415	0.000	0.093
81.00	-39.63	-3.82	0.00	-295.61	0.00	295.61	3803.65	956.81	3636.33	3583.75	3.48	-0.421	0.000	0.093
81.00	-39.63	-3.82	0.00	-295.61	0.00	295.61	2964.89	798.43	3038.55	2801.11	3.48	-0.421	0.000	0.119
85.00	-38.54	-3.75	0.00	-280.32	0.00	280.32	2929.08	782.04	2915.07	2710.08	3.84	-0.443	0.000	0.117
90.00	-36.29	-3.64	0.00	-261.56	0.00	261.56	2882.85	761.55	2764.32	2596.94	4.32	-0.477	0.000	0.113
91.00	-35.84	-3.63	0.00	-257.92	0.00	257.92	2898.33	768.33	2813.78	2634.30	4.42	-0.484	0.000	0.110
95.00	-34.78	-3.56	0.00	-243.40	0.00	243.40	2860.60	751.94	2695.00	2544.15	4.84	-0.512	0.000	0.108
100.00	-33.49	-3.47	0.00	-225.60	0.00	225.60	2811.95	731.45	2550.13	2432.25	5.39	-0.545	0.000	0.105
105.00	-32.23	-3.38	0.00	-208.26	0.00	208.26	2761.66	710.96	2409.26	2321.34	5.98	-0.578	0.000	0.101
110.00	-31.00	-3.28	0.00	-191.39	0.00	191.39	2709.73	690.47	2272.40	2211.55	6.60	-0.611	0.000	0.098
115.00	-29.79	-3.19	0.00	-174.96	0.00	174.96	2656.16	669.98	2139.54	2103.00	7.26	-0.645	0.000	0.094
120.00	-28.62	-3.10	0.00	-158.99	0.00	158.99	2600.95	649.49	2010.67	1995.80	7.96	-0.678	0.000	0.091
125.00	-27.48	-3.02	0.00	-143.47	0.00	143.47	2544.10	629.00	1885.82	1890.08	8.68	-0.711	0.000	0.087
125.00	-27.48	-3.02	0.00	-143.47	0.00	143.47	1882.48	504.07	1513.88	1403.39	8.68	-0.711	0.000	0.117
130.00	-26.52	-2.93	0.00	-128.39	0.00	128.39	1845.69	487.68	1417.02	1330.91	9.45	-0.744	0.000	0.111
135.00	-25.01	-2.84	0.00	-113.73	0.00	113.73	1823.78	478.25	1362.76	1289.51	10.25	-0.784	0.000	0.102
140.00	-24.09	-2.76	0.00	-99.53	0.00	99.53	1784.40	461.86	1270.94	1218.11	11.09	-0.823	0.000	0.095
145.00	-23.19	-2.67	0.00	-85.74	0.00	85.74	1743.38	445.47	1182.33	1147.55	11.97	-0.859	0.000	0.088
150.00	-22.32	-2.59	0.00	-72.37	0.00	72.37	1700.71	429.08	1096.92	1077.96	12.89	-0.893	0.000	0.080
155.00	-21.48	-2.51	0.00	-59.41	0.00	59.41	1656.41	412.69	1014.72	1009.45	13.84	-0.925	0.000	0.072
160.00	-20.66	-2.43	0.00	-46.85	0.00	46.85	1610.46	396.29	935.71	942.14	14.83	-0.954	0.000	0.063
165.00	-14.67	-1.80	0.00	-34.69	0.00	34.69	1562.88	379.90	859.91	876.15	15.84	-0.979	0.000	0.049
170.00	-13.95	-1.72	0.00	-25.69	0.00	25.69	1513.65	363.51	787.30	811.61	16.88	-1.000	0.000	0.041
175.00	-7.08	-0.95	0.00	-17.09	0.00	17.09	1462.77	347.12	717.90	748.63	17.93	-1.017	0.000	0.028
180.00	-6.48	-0.88	0.00	-12.33	0.00	12.33	1400.09	330.73	651.70	682.38	19.01	-1.031	0.000	0.023
180.00	-6.48	-0.88	0.00	-12.33	0.00	12.33	678.42	203.53	25205.7	396.30	19.01	-1.031	0.000	0.041
185.00	-5.86	-0.80	0.00	-7.95	0.00	7.95	678.42	203.53	25205.7	396.30	20.09	-1.041	0.000	0.029
190.00	-5.23	-0.72	0.00	-3.95	0.00	3.95	678.42	203.53	25205.7	396.30	21.19	-1.047	0.000	0.018
195.00	0.00	-0.63	0.00	-0.33	0.00	0.33	678.42	203.53	25205.7	396.30	22.28	-1.049	0.000	0.001

Calculated Forces

Structure:	CT01497-S-SBA	Code:	TIA-222-H	4/14/2022
Site Name:	Plymouth 2 CT	Exposure:	C	
Height:	195.00 (ft)	Crest Height:	0.00	
Base Elev:	0.000 (ft)	Site Class:	D - Stiff Soil	
Gh:	1.1	Topography:	1	Struct Class: II
				Page: 22



Seismic Segment Forces (Factored)

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Ev + 1.0Eh

Iterations 23

Gust Response Factor 1.10

Sds 0.20

Ss 0.18

Dead Load Factor 1.20 **Seismic Load Factor** 1.00

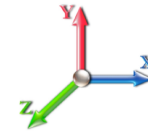
Sd1 0.09

S1 0.05

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.29

SA 0.03

Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	
						R: 1.50
0.00		0.00	0.00	0.00	0.00	
5.00		1416.2	2.50	55.29	0.01	
10.00		1392.3	7.50	54.36	0.06	
15.00		1368.5	12.50	53.43	0.17	
20.00		1344.7	17.50	52.50	0.32	
25.00		1320.8	22.50	51.57	0.51	
30.00		1297.0	27.50	50.64	0.74	
35.00		1273.2	32.50	49.71	1.00	
40.00		1249.3	37.50	48.78	1.28	
41.00	Bot - Section 2	247.01	40.50	9.64	0.06	
45.00		1865.5	43.00	72.83	3.74	
48.00	Top - Section 1	1379.1	46.50	53.84	2.39	
50.00		483.89	49.00	18.89	0.33	
55.00		1193.0	52.50	46.58	2.28	
60.00		1169.2	57.50	45.65	2.63	
65.00		1145.3	62.50	44.72	2.98	
70.00	Appurtenance(s)	1245.5	67.50	48.63	4.11	
75.00		1096.7	72.50	42.82	3.68	
80.00		1072.9	77.50	41.89	4.02	
81.00	Top - Section 2	211.72	80.50	8.27	0.17	
85.00	Bot - Section 4	715.79	83.00	27.94	2.05	
90.00		1635.6	87.50	63.85	11.91	
91.00	Top - Section 3	322.36	90.50	12.58	0.49	
95.00		692.44	93.00	27.03	2.41	
100.00		847.68	97.50	33.09	3.97	
105.00		827.81	102.50	32.32	4.19	
110.00		807.95	107.50	31.54	4.39	
115.00		788.09	112.50	30.77	4.57	
120.00		768.22	117.50	29.99	4.74	
125.00	Top - Section 4	748.36	122.50	29.22	4.89	
130.00	Bot - Section 6	609.37	127.50	23.79	3.51	
135.00	Top - Section 5	1065.0	132.50	41.58	11.58	
140.00		584.34	137.50	22.81	3.75	
145.00		568.45	142.50	22.19	3.81	
150.00		552.56	147.50	21.57	3.86	
155.00		536.66	152.50	20.95	3.89	
160.00		520.77	157.50	20.33	3.91	
165.00	Appurtenance(s)	3190.5	162.50	124.56	156.25	
170.00		444.95	167.50	17.37	3.23	
175.00	Appurtenance(s)	3768.5	172.50	147.12	245.66	
180.00	Top - Section 6	344.41	177.50	13.45	2.17	
185.00		372.09	182.50	14.53	2.68	
190.00		372.09	187.50	14.53	2.83	
195.00	Appurtenance(s)	2791.0	192.50	108.96	167.81	
Totals:		45,647.6		1,782.1	689.0	
					Total Wind:	26,803.2

Calculated Forces

Structure: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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Load Case: 1.2D + 1.0Ev + 1.0Eh

Iterations 23

Gust Response Factor 1.10

Sds 0.20

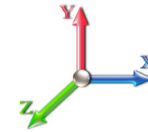
Ss 0.18

Dead Load Factor 1.20 **Seismic Load Factor** 1.00

Sd1 0.09

S1 0.05

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.29 **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	-55.66	-0.69	0.00	-121.68	0.00	121.68	4628.91	1339.45	7126.38	6119.66	0.00	0.00	0.00	0.032
5.00	-53.93	-0.69	0.00	-118.22	0.00	118.22	4587.84	1314.86	6867.16	5953.37	0.00	0.00	0.00	0.032
10.00	-52.23	-0.70	0.00	-114.75	0.00	114.75	4545.12	1290.28	6612.74	5787.00	0.01	-0.01	0.031	0.031
15.00	-50.56	-0.70	0.00	-111.26	0.00	111.26	4500.76	1265.69	6363.12	5620.67	0.02	-0.01	0.031	0.031
20.00	-48.92	-0.71	0.00	-107.75	0.00	107.75	4454.76	1241.10	6118.30	5454.49	0.04	-0.02	0.031	0.031
25.00	-47.31	-0.71	0.00	-104.22	0.00	104.22	4407.12	1216.52	5878.29	5288.58	0.06	-0.02	0.030	0.030
30.00	-45.73	-0.71	0.00	-100.68	0.00	100.68	4357.84	1191.93	5643.07	5123.07	0.08	-0.03	0.030	0.030
35.00	-44.18	-0.71	0.00	-97.13	0.00	97.13	4306.92	1167.34	5412.67	4958.08	0.12	-0.03	0.030	0.030
40.00	-42.66	-0.71	0.00	-93.56	0.00	93.56	4254.35	1142.76	5187.06	4793.73	0.15	-0.04	0.030	0.030
41.00	-42.36	-0.71	0.00	-92.85	0.00	92.85	4243.64	1137.84	5142.51	4760.94	0.16	-0.04	0.029	0.029
45.00	-40.07	-0.71	0.00	-89.99	0.00	89.99	4200.14	1118.17	4966.25	4630.13	0.20	-0.04	0.029	0.029
48.00	-38.37	-0.71	0.00	-87.86	0.00	87.86	4202.19	1119.08	4974.38	4636.19	0.22	-0.05	0.028	0.028
50.00	-37.78	-0.71	0.00	-86.44	0.00	86.44	4180.07	1109.25	4887.33	4570.98	0.24	-0.05	0.028	0.028
55.00	-36.33	-0.71	0.00	-82.88	0.00	82.88	4123.62	1084.66	4673.07	4408.60	0.30	-0.05	0.028	0.028
60.00	-34.91	-0.71	0.00	-79.32	0.00	79.32	4065.54	1060.07	4463.61	4247.27	0.36	-0.06	0.027	0.027
65.00	-33.51	-0.71	0.00	-75.76	0.00	75.76	4005.81	1035.49	4258.96	4087.10	0.42	-0.07	0.027	0.027
70.00	-32.00	-0.71	0.00	-72.21	0.00	72.21	3944.44	1010.90	4059.10	3928.21	0.49	-0.07	0.026	0.026
75.00	-30.66	-0.70	0.00	-68.68	0.00	68.68	3881.43	986.31	3864.05	3770.72	0.57	-0.08	0.026	0.026
80.00	-29.36	-0.70	0.00	-65.15	0.00	65.15	3816.78	961.72	3673.81	3614.75	0.65	-0.08	0.026	0.026
81.00	-29.10	-0.70	0.00	-64.45	0.00	64.45	3803.65	956.81	3636.33	3583.75	0.67	-0.08	0.026	0.026
81.00	-29.10	-0.70	0.00	-64.45	0.00	64.45	2964.89	798.43	3038.55	2801.11	0.67	-0.08	0.033	0.033
85.00	-28.24	-0.70	0.00	-61.65	0.00	61.65	2929.08	782.04	2915.07	2710.08	0.74	-0.09	0.032	0.032
90.00	-26.24	-0.69	0.00	-58.14	0.00	58.14	2882.85	761.55	2764.32	2596.94	0.84	-0.10	0.031	0.031
91.00	-25.84	-0.69	0.00	-57.45	0.00	57.45	2898.33	768.33	2813.78	2634.30	0.86	-0.10	0.031	0.031
95.00	-25.00	-0.69	0.00	-54.69	0.00	54.69	2860.60	751.94	2695.00	2544.15	0.95	-0.10	0.030	0.030
100.00	-23.98	-0.69	0.00	-51.25	0.00	51.25	2811.95	731.45	2550.13	2432.25	1.06	-0.11	0.030	0.030
105.00	-22.98	-0.68	0.00	-47.82	0.00	47.82	2761.66	710.96	2409.26	2321.34	1.18	-0.12	0.029	0.029
110.00	-22.00	-0.68	0.00	-44.41	0.00	44.41	2709.73	690.47	2272.40	2211.55	1.31	-0.13	0.028	0.028
115.00	-21.05	-0.68	0.00	-41.01	0.00	41.01	2656.16	669.98	2139.54	2103.00	1.45	-0.13	0.027	0.027
120.00	-20.13	-0.67	0.00	-37.64	0.00	37.64	2600.95	649.49	2010.67	1995.80	1.59	-0.14	0.027	0.027
125.00	-19.22	-0.67	0.00	-34.28	0.00	34.28	2544.10	629.00	1885.82	1890.08	1.75	-0.15	0.026	0.026
125.00	-19.22	-0.67	0.00	-34.28	0.00	34.28	1882.48	504.07	1513.88	1403.39	1.75	-0.15	0.035	0.035
130.00	-18.50	-0.66	0.00	-30.95	0.00	30.95	1845.69	487.68	1417.02	1330.91	1.91	-0.16	0.033	0.033
135.00	-17.20	-0.65	0.00	-27.63	0.00	27.63	1823.78	478.25	1362.76	1289.51	2.08	-0.17	0.031	0.031
140.00	-16.50	-0.65	0.00	-24.38	0.00	24.38	1784.40	461.86	1270.94	1218.11	2.26	-0.18	0.029	0.029
145.00	-15.82	-0.64	0.00	-21.14	0.00	21.14	1743.38	445.47	1182.33	1147.55	2.45	-0.19	0.027	0.027
150.00	-15.17	-0.64	0.00	-17.91	0.00	17.91	1700.71	429.08	1096.92	1077.96	2.65	-0.19	0.026	0.026
155.00	-14.53	-0.64	0.00	-14.71	0.00	14.71	1656.41	412.69	1014.72	1009.45	2.86	-0.20	0.023	0.023
160.00	-13.91	-0.63	0.00	-11.53	0.00	11.53	1610.46	396.29	935.71	942.14	3.08	-0.21	0.021	0.021
165.00	-9.98	-0.46	0.00	-8.37	0.00	8.37	1562.88	379.90	859.91	876.15	3.30	-0.22	0.016	0.016
170.00	-9.45	-0.46	0.00	-6.05	0.00	6.05	1513.65	363.51	787.30	811.61	3.53	-0.22	0.014	0.014
175.00	-4.79	-0.19	0.00	-3.77	0.00	3.77	1462.77	347.12	717.90	748.63	3.76	-0.22	0.008	0.008
180.00	-4.37	-0.19	0.00	-2.79	0.00	2.79	1400.09	330.73	651.70	682.38	4.00	-0.23	0.007	0.007
180.00	-4.37	-0.19	0.00	-2.79	0.00	2.79	678.42	203.53	25205.7	396.30	4.00	-0.23	0.013	0.013
185.00	-3.91	-0.19	0.00	-1.84	0.00	1.84	678.42	203.53	25205.7	396.30	4.24	-0.23	0.010	0.010
190.00	-3.45	-0.18	0.00	-0.91	0.00	0.91	678.42	203.53	25205.7	396.30	4.48	-0.23	0.007	0.007
195.00	0.00	-0.17	0.00	0.00	0.00	0.00	678.42	203.53	25205.7	396.30	4.72	-0.23	0.000	0.000

Calculated Forces

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 25



Seismic Segment Forces (Factored)

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0Ev + 1.0Eh

Iterations 23

Gust Response Factor 1.10

Sds 0.20

Ss 0.18

Dead Load Factor 0.90 **Seismic Load Factor** 1.00

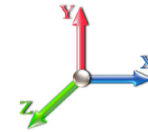
Sd1 0.09

S1 0.05

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.29

SA 0.03

Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	
						R: 1.50
0.00		0.00	0.00	0.00	0.00	
5.00		1383.8	2.50	54.02	0.01	
10.00		1359.9	7.50	53.09	0.06	
15.00		1336.1	12.50	52.16	0.17	
20.00		1312.3	17.50	51.23	0.31	
25.00		1288.4	22.50	50.30	0.50	
30.00		1264.6	27.50	49.37	0.72	
35.00		1240.8	32.50	48.44	0.97	
40.00		1216.9	37.50	47.51	1.24	
41.00	Bot - Section 2	240.53	40.50	9.39	0.06	
45.00		1839.5	43.00	71.82	3.72	
48.00	Top - Section 1	1359.6	46.50	53.08	2.37	
50.00		470.93	49.00	18.39	0.32	
55.00		1160.6	52.50	45.31	2.20	
60.00		1136.8	57.50	44.38	2.54	
65.00		1112.9	62.50	43.45	2.87	
70.00	Appurtenance(s)	1213.1	67.50	47.36	3.98	
75.00		1064.5	72.50	41.56	3.54	
80.00		1040.7	77.50	40.63	3.86	
81.00	Top - Section 2	205.29	80.50	8.01	0.16	
85.00	Bot - Section 4	690.06	83.00	26.94	1.95	
90.00		1603.4	87.50	62.60	11.69	
91.00	Top - Section 3	315.92	90.50	12.33	0.49	
95.00		666.71	93.00	26.03	2.28	
100.00		815.52	97.50	31.84	3.75	
105.00		795.65	102.50	31.06	3.95	
110.00		775.79	107.50	30.29	4.13	
115.00		755.93	112.50	29.51	4.29	
120.00		736.06	117.50	28.74	4.44	
125.00	Top - Section 4	716.20	122.50	27.96	4.57	
130.00	Bot - Section 6	577.21	127.50	22.53	3.22	
135.00	Top - Section 5	1032.9	132.50	40.32	11.12	
140.00		552.18	137.50	21.56	3.42	
145.00		536.29	142.50	20.94	3.47	
150.00		520.40	147.50	20.32	3.50	
155.00		504.50	152.50	19.70	3.51	
160.00		488.61	157.50	19.08	3.52	
165.00	Appurtenance(s)	3158.3	162.50	123.30	156.41	
170.00		423.80	167.50	16.55	2.99	
175.00	Appurtenance(s)	3747.4	172.50	146.30	248.12	
180.00	Top - Section 6	340.45	177.50	13.29	2.17	
185.00		368.13	182.50	14.37	2.68	
190.00		368.13	187.50	14.37	2.83	
195.00	Appurtenance(s)	2787.1	192.50	108.81	170.92	
Totals:		44,524.8		1,738.2	689.0	
						Total Wind: 26,803.2

Calculated Forces

Structure: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (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: 0.9D + 1.0Ev + 1.0Eh

Iterations 23

Gust Response Factor 1.10

Sds 0.20

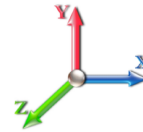
Ss 0.18

Dead Load Factor 0.90 **Seismic Load Factor** 1.00

Sd1 0.09

S1 0.05

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.29 **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	-42.15	-0.69	0.00	-120.28	0.00	120.28	4628.91	1339.45	7126.38	6119.66	0.00	0.00	0.00	0.029
5.00	-40.84	-0.69	0.00	-116.83	0.00	116.83	4587.84	1314.86	6867.16	5953.37	0.00	0.00	0.00	0.029
10.00	-39.55	-0.70	0.00	-113.36	0.00	113.36	4545.12	1290.28	6612.74	5787.00	0.01	-0.01	0.028	0.028
15.00	-38.29	-0.70	0.00	-109.88	0.00	109.88	4500.76	1265.69	6363.12	5620.67	0.02	-0.01	0.028	0.028
20.00	-37.04	-0.70	0.00	-106.39	0.00	106.39	4454.76	1241.10	6118.30	5454.49	0.04	-0.02	0.028	0.028
25.00	-35.83	-0.70	0.00	-102.89	0.00	102.89	4407.12	1216.52	5878.29	5288.58	0.06	-0.02	0.028	0.028
30.00	-34.63	-0.70	0.00	-99.37	0.00	99.37	4357.84	1191.93	5643.07	5123.07	0.08	-0.03	0.027	0.027
35.00	-33.45	-0.71	0.00	-95.85	0.00	95.85	4306.92	1167.34	5412.67	4958.08	0.11	-0.03	0.027	0.027
40.00	-32.30	-0.71	0.00	-92.32	0.00	92.32	4254.35	1142.76	5187.06	4793.73	0.15	-0.04	0.027	0.027
41.00	-32.07	-0.71	0.00	-91.61	0.00	91.61	4243.64	1137.84	5142.51	4760.94	0.16	-0.04	0.027	0.027
45.00	-30.34	-0.70	0.00	-88.78	0.00	88.78	4200.14	1118.17	4966.25	4630.13	0.19	-0.04	0.026	0.026
48.00	-29.05	-0.70	0.00	-86.67	0.00	86.67	4202.19	1119.08	4974.38	4636.19	0.22	-0.05	0.026	0.026
50.00	-28.61	-0.70	0.00	-85.27	0.00	85.27	4180.07	1109.25	4887.33	4570.98	0.24	-0.05	0.025	0.025
55.00	-27.51	-0.70	0.00	-81.75	0.00	81.75	4123.62	1084.66	4673.07	4408.60	0.29	-0.05	0.025	0.025
60.00	-26.43	-0.70	0.00	-78.23	0.00	78.23	4065.54	1060.07	4463.61	4247.27	0.35	-0.06	0.025	0.025
65.00	-25.38	-0.70	0.00	-74.73	0.00	74.73	4005.81	1035.49	4258.96	4087.10	0.42	-0.06	0.025	0.025
70.00	-24.23	-0.70	0.00	-71.23	0.00	71.23	3944.44	1010.90	4059.10	3928.21	0.49	-0.07	0.024	0.024
75.00	-23.22	-0.69	0.00	-67.74	0.00	67.74	3881.43	986.31	3864.05	3770.72	0.56	-0.08	0.024	0.024
80.00	-22.23	-0.69	0.00	-64.26	0.00	64.26	3816.78	961.72	3673.81	3614.75	0.65	-0.08	0.024	0.024
81.00	-22.04	-0.69	0.00	-63.57	0.00	63.57	3803.65	956.81	3636.33	3583.75	0.66	-0.08	0.024	0.024
81.00	-22.04	-0.69	0.00	-63.57	0.00	63.57	2964.89	798.43	3038.55	2801.11	0.66	-0.08	0.030	0.030
85.00	-21.38	-0.69	0.00	-60.81	0.00	60.81	2929.08	782.04	2915.07	2710.08	0.74	-0.09	0.030	0.030
90.00	-19.87	-0.68	0.00	-57.35	0.00	57.35	2882.85	761.55	2764.32	2596.94	0.83	-0.10	0.029	0.029
91.00	-19.57	-0.68	0.00	-56.67	0.00	56.67	2898.33	768.33	2813.78	2634.30	0.85	-0.10	0.028	0.028
95.00	-18.93	-0.68	0.00	-53.96	0.00	53.96	2860.60	751.94	2695.00	2544.15	0.94	-0.10	0.028	0.028
100.00	-18.16	-0.67	0.00	-50.57	0.00	50.57	2811.95	731.45	2550.13	2432.25	1.05	-0.11	0.027	0.027
105.00	-17.40	-0.67	0.00	-47.19	0.00	47.19	2761.66	710.96	2409.26	2321.34	1.17	-0.12	0.027	0.027
110.00	-16.66	-0.67	0.00	-43.83	0.00	43.83	2709.73	690.47	2272.40	2211.55	1.29	-0.13	0.026	0.026
115.00	-15.94	-0.66	0.00	-40.49	0.00	40.49	2656.16	669.98	2139.54	2103.00	1.43	-0.13	0.025	0.025
120.00	-15.24	-0.66	0.00	-37.17	0.00	37.17	2600.95	649.49	2010.67	1995.80	1.57	-0.14	0.024	0.024
125.00	-14.56	-0.66	0.00	-33.87	0.00	33.87	2544.10	629.00	1885.82	1890.08	1.72	-0.15	0.024	0.024
125.00	-14.56	-0.66	0.00	-33.87	0.00	33.87	1882.48	504.07	1513.88	1403.39	1.72	-0.15	0.032	0.032
130.00	-14.01	-0.65	0.00	-30.58	0.00	30.58	1845.69	487.68	1417.02	1330.91	1.88	-0.16	0.031	0.031
135.00	-13.03	-0.64	0.00	-27.32	0.00	27.32	1823.78	478.25	1362.76	1289.51	2.05	-0.17	0.028	0.028
140.00	-12.50	-0.64	0.00	-24.11	0.00	24.11	1784.40	461.86	1270.94	1218.11	2.23	-0.18	0.027	0.027
145.00	-11.99	-0.64	0.00	-20.91	0.00	20.91	1743.38	445.47	1182.33	1147.55	2.42	-0.18	0.025	0.025
150.00	-11.49	-0.63	0.00	-17.73	0.00	17.73	1700.71	429.08	1096.92	1077.96	2.62	-0.19	0.023	0.023
155.00	-11.00	-0.63	0.00	-14.57	0.00	14.57	1656.41	412.69	1014.72	1009.45	2.82	-0.20	0.021	0.021
160.00	-10.54	-0.62	0.00	-11.43	0.00	11.43	1610.46	396.29	935.71	942.14	3.04	-0.21	0.019	0.019
165.00	-7.56	-0.46	0.00	-8.31	0.00	8.31	1562.88	379.90	859.91	876.15	3.26	-0.21	0.014	0.014
170.00	-7.16	-0.45	0.00	-6.01	0.00	6.01	1513.65	363.51	787.30	811.61	3.48	-0.22	0.012	0.012
175.00	-3.63	-0.19	0.00	-3.74	0.00	3.74	1462.77	347.12	717.90	748.63	3.71	-0.22	0.007	0.007
180.00	-3.31	-0.19	0.00	-2.78	0.00	2.78	1400.09	330.73	651.70	682.38	3.95	-0.23	0.006	0.006
180.00	-3.31	-0.19	0.00	-2.78	0.00	2.78	678.42	203.53	25205.7	396.30	3.95	-0.23	0.012	0.012
185.00	-2.96	-0.19	0.00	-1.83	0.00	1.83	678.42	203.53	25205.7	396.30	4.18	-0.23	0.009	0.009
190.00	-2.62	-0.18	0.00	-0.91	0.00	0.91	678.42	203.53	25205.7	396.30	4.42	-0.23	0.006	0.006
195.00	0.00	-0.17	0.00	0.00	0.00	0.00	678.42	203.53	25205.7	396.30	4.66	-0.23	0.000	0.000

Calculated Forces

Structure:	CT01497-S-SBA	Code:	TIA-222-H	4/14/2022
Site Name:	Plymouth 2 CT	Exposure:	C	
Height:	195.00 (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



Wind Loading - Shaft

Structure: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 29

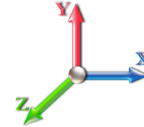


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

Dead Load Factor 1.00

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.343	5.88	270.46	0.630	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.343	5.88	265.53	0.630	0.000	5.00	27.041	17.04	100.1	0.0	1286.6
10.00		1.00	0.85	5.343	5.88	260.59	0.630	0.000	5.00	26.543	16.72	98.3	0.0	1262.8
15.00		1.00	0.85	5.343	5.88	255.66	0.630	0.000	5.00	26.045	16.41	96.4	0.0	1238.9
20.00		1.00	0.90	5.670	6.24	258.26	0.630	0.000	5.00	25.547	16.09	100.4	0.0	1215.1
25.00		1.00	0.95	5.942	6.54	259.19	0.630	0.000	5.00	25.049	15.78	103.2	0.0	1191.3
30.00		1.00	0.98	6.175	6.79	258.91	0.630	0.000	5.00	24.550	15.47	105.1	0.0	1167.4
35.00		1.00	1.01	6.379	7.02	257.75	0.630	0.000	5.00	24.052	15.15	106.3	0.0	1143.6
40.00		1.00	1.04	6.560	7.22	255.93	0.630	0.000	5.00	23.554	14.84	107.1	0.0	1119.8
41.00	Bot - Section 2	1.00	1.05	6.595	7.25	255.50	0.630	0.000	1.00	4.651	2.93	21.3	0.0	221.1
45.00		1.00	1.07	6.725	7.40	253.59	0.630	0.000	4.00	18.659	11.76	87.0	0.0	1761.8
48.00	Top - Section 1	1.00	1.08	6.817	7.50	251.97	0.630	0.000	3.00	13.785	8.68	65.1	0.0	1301.3
50.00		1.00	1.09	6.876	7.56	254.38	0.630	0.000	2.00	9.091	5.73	43.3	0.0	432.1
55.00		1.00	1.12	7.015	7.72	251.29	0.630	0.000	5.00	22.378	14.10	108.8	0.0	1063.4
60.00		1.00	1.14	7.145	7.86	247.90	0.630	0.000	5.00	21.880	13.78	108.3	0.0	1039.6
65.00		1.00	1.16	7.266	7.99	244.24	0.630	0.000	5.00	21.382	13.47	107.7	0.0	1015.8
70.00	Appurtenance(s)	1.00	1.17	7.381	8.12	240.35	0.630	0.000	5.00	20.884	13.16	106.8	0.0	991.9
75.00		1.00	1.19	7.489	8.24	236.26	0.630	0.000	5.00	20.386	12.84	105.8	0.0	968.1
80.00		1.00	1.21	7.591	8.35	231.99	0.630	0.000	5.00	19.888	12.53	104.6	0.0	944.3
81.00	Top - Section 2	1.00	1.21	7.611	8.37	231.11	0.630	0.000	1.00	3.918	2.47	20.7	0.0	186.0
85.00	Bot - Section 4	1.00	1.22	7.689	8.46	227.55	0.630	0.000	4.00	15.472	9.75	82.4	0.0	612.9
90.00		1.00	1.24	7.782	8.56	222.97	0.630	0.000	5.00	19.156	12.07	103.3	0.0	1507.0
91.00	Top - Section 3	1.00	1.24	7.800	8.58	222.04	0.630	0.000	1.00	3.771	2.38	20.4	0.0	296.6
95.00		1.00	1.25	7.871	8.66	221.43	0.630	0.000	4.00	14.887	9.38	81.2	0.0	589.5
100.00		1.00	1.27	7.956	8.75	216.61	0.630	0.000	5.00	18.160	11.44	100.1	0.0	719.0
105.00		1.00	1.28	8.038	8.84	211.67	0.630	0.000	5.00	17.662	11.13	98.4	0.0	699.2
110.00		1.00	1.29	8.118	8.93	206.62	0.630	0.000	5.00	17.164	10.81	96.6	0.0	679.3
115.00		1.00	1.30	8.194	9.01	201.48	0.630	0.000	5.00	16.666	10.50	94.6	0.0	659.4
120.00		1.00	1.32	8.268	9.09	196.25	0.630	0.000	5.00	16.168	10.19	92.6	0.0	639.6
125.00	Top - Section 4	1.00	1.33	8.339	9.17	190.93	0.630	0.000	5.00	15.670	9.87	90.6	0.0	619.7
130.00	Bot - Section 6	1.00	1.34	8.408	9.25	185.52	0.630	0.000	5.00	15.172	9.56	88.4	0.0	480.7
135.00	Top - Section 5	1.00	1.35	8.475	9.32	180.05	0.630	0.000	5.00	14.885	9.38	87.4	0.0	936.4
140.00		1.00	1.36	8.540	9.39	177.15	0.630	0.000	5.00	14.387	9.06	85.2	0.0	455.7
145.00		1.00	1.37	8.604	9.46	171.54	0.630	0.000	5.00	13.889	8.75	82.8	0.0	439.8
150.00		1.00	1.38	8.665	9.53	165.87	0.630	0.000	5.00	13.391	8.44	80.4	0.0	423.9
155.00		1.00	1.39	8.725	9.60	160.13	0.630	0.000	5.00	12.893	8.12	78.0	0.0	408.0
160.00		1.00	1.40	8.784	9.66	154.34	0.630	0.000	5.00	12.395	7.81	75.5	0.0	392.1
165.00	Appurtenance(s)	1.00	1.41	8.841	9.72	148.49	0.630	0.000	5.00	11.897	7.50	72.9	0.0	376.2
170.00		1.00	1.42	8.897	9.79	142.59	0.630	0.000	5.00	11.399	7.18	70.3	0.0	360.4
175.00	Appurtenance(s)	1.00	1.42	8.951	9.85	136.64	0.630	0.000	5.00	10.901	6.87	67.6	0.0	344.5
180.00	Top - Section 6	1.00	1.43	9.004	9.90	130.64	0.630	0.000	5.00	10.403	6.55	64.9	0.0	328.6
185.00		1.00	1.44	9.056	9.96	129.03	0.450	0.000	5.00	10.000	4.50	44.8	0.0	356.3
190.00		1.00	1.45	9.107	10.02	129.39	0.450	0.000	5.00	10.000	4.50	45.1	0.0	356.3
195.00	Appurtenance(s)	1.00	1.46	9.157	10.07	129.74	0.450	0.000	5.00	10.000	4.50	45.3	0.0	356.3
Totals:									195.00			3,545.0		32,588.3

Discrete Appurtenance Forces

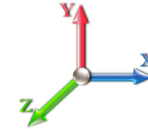
Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	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	195.00	800 MHz RRH	3	9.167	10.084	0.60	0.90	4.50	159.00	0.000	1.000	45.42	0.00	45.42
2	195.00	APXVSP18-C-A20	3	9.167	10.084	0.83	1.00	19.97	171.00	0.000	1.000	201.37	0.00	201.37
3	195.00	APXVTM14-C-I20	3	9.167	10.084	0.77	1.00	14.65	168.60	0.000	1.000	147.68	0.00	147.68
4	195.00	1900MHz RRH (65MHz)	3	9.167	10.084	0.60	0.90	5.01	180.00	0.000	1.000	50.53	0.00	50.53
5	195.00	T-Arms w/ Working	3	9.157	10.073	0.56	0.75	27.00	1500.00	0.000	0.000	271.97	0.00	0.00
6	195.00	TD-RRH8x20-25	3	9.167	10.084	0.60	0.90	7.33	210.00	0.000	1.000	73.88	0.00	73.88
7	195.00	ALU 800MHz External	3	9.167	10.084	0.60	0.90	1.41	26.40	0.000	1.000	14.23	0.00	14.23
8	195.00	ACU-A20-N	4	9.167	10.084	0.60	0.90	0.34	4.00	0.000	1.000	3.41	0.00	3.41
9	175.00	(3) T-Arm Kit	1	8.951	9.846	0.56	0.75	9.00	500.00	0.000	0.000	88.62	0.00	0.00
10	175.00	FE15501P77/75	6	8.951	9.846	0.40	0.80	1.70	105.00	0.000	0.000	16.78	0.00	0.00
11	175.00	4449 B71 + B85	3	8.951	9.846	0.40	0.80	2.36	225.00	0.000	0.000	23.28	0.00	0.00
12	175.00	KRY 112 489/2	3	8.951	9.846	0.40	0.80	0.78	46.20	0.000	0.000	7.68	0.00	0.00
13	175.00	KRY 112 144/1	3	8.951	9.846	0.40	0.80	0.49	33.00	0.000	0.000	4.84	0.00	0.00
14	175.00	APXVAALL24_43-U-NA20	3	8.951	9.846	0.56	0.80	34.00	368.40	0.000	0.000	334.80	0.00	0.00
15	175.00	4460 B25 + B66	3	8.951	9.846	0.54	0.80	4.58	312.00	0.000	0.000	45.12	0.00	0.00
16	175.00	AIR6419 B41	3	8.951	9.846	0.61	0.80	6.93	249.90	0.000	0.000	68.25	0.00	0.00
17	175.00	T-Arms w/ Working	3	8.951	9.846	0.56	0.75	27.00	1500.00	0.000	0.000	265.85	0.00	0.00
18	165.00	Samsung B5/B13	3	8.841	9.725	0.40	0.80	2.26	210.90	0.000	0.000	21.94	0.00	0.00
19	165.00	MX06FRO660-03	6	8.841	9.725	0.70	0.80	41.69	426.00	0.000	0.000	405.44	0.00	0.00
20	165.00	MT6407-77A	3	8.841	9.725	0.56	0.80	7.88	238.20	0.000	0.000	76.62	0.00	0.00
21	165.00	Raycap	1	8.841	9.725	0.40	0.80	1.52	32.00	0.000	0.000	14.74	0.00	0.00
22	165.00	Samsung B2/B66A	3	8.841	9.725	0.40	0.80	2.26	253.20	0.000	0.000	21.94	0.00	0.00
23	165.00	91900314	1	8.841	9.725	1.00	1.00	0.00	25.35	0.000	0.000	0.00	0.00	0.00
24	165.00	Low Profile Platform	1	8.841	9.725	1.00	1.00	22.00	1500.00	0.000	0.000	213.95	0.00	0.00
25	70.00	Side Arm (L. Heavy)	1	7.381	8.119	1.00	1.00	3.50	120.00	0.000	0.000	28.42	0.00	0.00
26	70.00	407577689 Gps	1	7.381	8.119	0.50	1.00	0.46	4.00	0.000	0.000	3.69	0.00	0.00

Totals: 8,568.15

2,450.45

Total Applied Force Summary

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

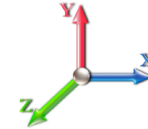


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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		100.13	1394.62	0.00	0.00
10.00		98.29	1370.78	0.00	0.00
15.00		96.44	1346.94	0.00	0.00
20.00		100.37	1323.11	0.00	0.00
25.00		103.15	1299.27	0.00	0.00
30.00		105.06	1275.44	0.00	0.00
35.00		106.32	1251.60	0.00	0.00
40.00		107.09	1227.76	0.00	0.00
41.00		21.26	242.69	0.00	0.00
45.00		86.96	1848.22	0.00	0.00
48.00		65.12	1366.14	0.00	0.00
50.00		43.32	475.25	0.00	0.00
55.00		108.79	1171.44	0.00	0.00
60.00		108.34	1147.61	0.00	0.00
65.00		107.67	1123.77	0.00	0.00
70.00	(2) attachments	138.93	1223.94	0.00	0.00
75.00		105.79	1075.30	0.00	0.00
80.00		104.62	1051.46	0.00	0.00
81.00		20.66	207.43	0.00	0.00
85.00		82.44	698.63	0.00	0.00
90.00		103.30	1614.18	0.00	0.00
91.00		20.39	318.07	0.00	0.00
95.00		81.20	675.29	0.00	0.00
100.00		100.13	826.24	0.00	0.00
105.00		98.39	806.37	0.00	0.00
110.00		96.55	786.51	0.00	0.00
115.00		94.63	766.65	0.00	0.00
120.00		92.63	746.78	0.00	0.00
125.00		90.55	726.92	0.00	0.00
130.00		88.40	587.93	0.00	0.00
135.00		87.43	1043.62	0.00	0.00
140.00		85.15	562.90	0.00	0.00
145.00		82.81	547.01	0.00	0.00
150.00		80.42	531.12	0.00	0.00
155.00		77.96	515.22	0.00	0.00
160.00		75.45	499.33	0.00	0.00
165.00	(18) attachments	827.53	3169.09	0.00	0.00
170.00		70.28	430.85	0.00	0.00
175.00	(28) attachments	922.83	3754.46	0.00	0.00
180.00		64.92	341.77	0.00	0.00
185.00		44.83	369.45	0.00	0.00
190.00		45.08	369.45	0.00	0.00
195.00	(25) attachments	853.82	2788.45	0.00	536.52
Totals:		5,995.45	44,899.08	0.00	536.52

Calculated Forces

Structure: CT01497-S-SBA

Code: TIA-222-H

4/14/2022

Site Name: Plymouth 2 CT

Exposure: C

Height: 195.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

Dead Load Factor 1.00

Wind Load Factor 1.00



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	-44.90	-6.01	0.00	-787.77	0.00	787.77	4628.91	1339.45	7126.38	6119.66	0.00	0.000	0.000	0.138
5.00	-43.50	-5.93	0.00	-757.75	0.00	757.75	4587.84	1314.86	6867.16	5953.37	0.01	-0.028	0.000	0.137
10.00	-42.13	-5.85	0.00	-728.11	0.00	728.11	4545.12	1290.28	6612.74	5787.00	0.06	-0.056	0.000	0.135
15.00	-40.78	-5.77	0.00	-698.88	0.00	698.88	4500.76	1265.69	6363.12	5620.67	0.13	-0.085	0.000	0.133
20.00	-39.45	-5.69	0.00	-670.02	0.00	670.02	4454.76	1241.10	6118.30	5454.49	0.24	-0.114	0.000	0.132
25.00	-38.15	-5.60	0.00	-641.59	0.00	641.59	4407.12	1216.52	5878.29	5288.58	0.37	-0.143	0.000	0.130
30.00	-36.87	-5.51	0.00	-613.58	0.00	613.58	4357.84	1191.93	5643.07	5123.07	0.54	-0.173	0.000	0.128
35.00	-35.62	-5.42	0.00	-586.01	0.00	586.01	4306.92	1167.34	5412.67	4958.08	0.74	-0.204	0.000	0.126
40.00	-34.39	-5.32	0.00	-558.91	0.00	558.91	4254.35	1142.76	5187.06	4793.73	0.97	-0.235	0.000	0.125
41.00	-34.14	-5.31	0.00	-553.59	0.00	553.59	4243.64	1137.84	5142.51	4760.94	1.02	-0.241	0.000	0.124
45.00	-32.29	-5.23	0.00	-532.36	0.00	532.36	4200.14	1118.17	4966.25	4630.13	1.23	-0.267	0.000	0.123
48.00	-30.93	-5.16	0.00	-516.68	0.00	516.68	4202.19	1119.08	4974.38	4636.19	1.40	-0.286	0.000	0.119
50.00	-30.45	-5.13	0.00	-506.36	0.00	506.36	4180.07	1109.25	4887.33	4570.98	1.53	-0.299	0.000	0.118
55.00	-29.28	-5.03	0.00	-480.71	0.00	480.71	4123.62	1084.66	4673.07	4408.60	1.86	-0.330	0.000	0.116
60.00	-28.13	-4.93	0.00	-455.57	0.00	455.57	4065.54	1060.07	4463.61	4247.27	2.22	-0.362	0.000	0.114
65.00	-27.00	-4.83	0.00	-430.92	0.00	430.92	4005.81	1035.49	4258.96	4087.10	2.62	-0.394	0.000	0.112
70.00	-25.77	-4.70	0.00	-406.77	0.00	406.77	3944.44	1010.90	4059.10	3928.21	3.05	-0.427	0.000	0.110
75.00	-24.70	-4.60	0.00	-383.29	0.00	383.29	3881.43	986.31	3864.05	3770.72	3.51	-0.460	0.000	0.108
80.00	-23.65	-4.49	0.00	-360.30	0.00	360.30	3816.78	961.72	3673.81	3614.75	4.01	-0.493	0.000	0.106
81.00	-23.44	-4.48	0.00	-355.81	0.00	355.81	3803.65	956.81	3636.33	3583.75	4.11	-0.500	0.000	0.105
81.00	-23.44	-4.48	0.00	-355.81	0.00	355.81	2964.89	798.43	3038.55	2801.11	4.11	-0.500	0.000	0.135
85.00	-22.74	-4.40	0.00	-337.90	0.00	337.90	2929.08	782.04	2915.07	2710.08	4.54	-0.527	0.000	0.132
90.00	-21.12	-4.29	0.00	-315.90	0.00	315.90	2882.85	761.55	2764.32	2596.94	5.12	-0.568	0.000	0.129
91.00	-20.80	-4.28	0.00	-311.60	0.00	311.60	2898.33	768.33	2813.78	2634.30	5.24	-0.577	0.000	0.125
95.00	-20.13	-4.20	0.00	-294.50	0.00	294.50	2860.60	751.94	2695.00	2544.15	5.74	-0.610	0.000	0.123
100.00	-19.30	-4.11	0.00	-273.50	0.00	273.50	2811.95	731.45	2550.13	2432.25	6.40	-0.650	0.000	0.119
105.00	-18.49	-4.01	0.00	-252.97	0.00	252.97	2761.66	710.96	2409.26	2321.34	7.10	-0.690	0.000	0.116
110.00	-17.70	-3.92	0.00	-232.92	0.00	232.92	2709.73	690.47	2272.40	2211.55	7.84	-0.731	0.000	0.112
115.00	-16.93	-3.82	0.00	-213.34	0.00	213.34	2656.16	669.98	2139.54	2103.00	8.63	-0.771	0.000	0.108
120.00	-16.19	-3.73	0.00	-194.22	0.00	194.22	2600.95	649.49	2010.67	1995.80	9.46	-0.812	0.000	0.104
125.00	-15.46	-3.64	0.00	-175.56	0.00	175.56	2544.10	629.00	1885.82	1890.08	10.33	-0.852	0.000	0.099
125.00	-15.46	-3.64	0.00	-175.56	0.00	175.56	1882.48	504.07	1513.88	1403.39	10.33	-0.852	0.000	0.133
130.00	-14.87	-3.56	0.00	-157.35	0.00	157.35	1845.69	487.68	1417.02	1330.91	11.25	-0.892	0.000	0.126
135.00	-13.82	-3.46	0.00	-139.57	0.00	139.57	1823.78	478.25	1362.76	1289.51	12.21	-0.941	0.000	0.116
140.00	-13.26	-3.38	0.00	-122.25	0.00	122.25	1784.40	461.86	1270.94	1218.11	13.22	-0.989	0.000	0.108
145.00	-12.71	-3.30	0.00	-105.35	0.00	105.35	1743.38	445.47	1182.33	1147.55	14.28	-1.034	0.000	0.099
150.00	-12.18	-3.22	0.00	-88.86	0.00	88.86	1700.71	429.08	1096.92	1077.96	15.39	-1.076	0.000	0.090
155.00	-11.66	-3.14	0.00	-72.78	0.00	72.78	1656.41	412.69	1014.72	1009.45	16.53	-1.115	0.000	0.079
160.00	-11.16	-3.06	0.00	-57.10	0.00	57.10	1610.46	396.29	935.71	942.14	17.72	-1.150	0.000	0.068
165.00	-8.01	-2.17	0.00	-41.82	0.00	41.82	1562.88	379.90	859.91	876.15	18.94	-1.181	0.000	0.053
170.00	-7.58	-2.09	0.00	-30.97	0.00	30.97	1513.65	363.51	787.30	811.61	20.19	-1.206	0.000	0.043
175.00	-3.85	-1.09	0.00	-20.51	0.00	20.51	1462.77	347.12	717.90	748.63	21.47	-1.227	0.000	0.030
180.00	-3.51	-1.02	0.00	-15.05	0.00	15.05	1400.09	330.73	651.70	682.38	22.76	-1.243	0.000	0.025
180.00	-3.51	-1.02	0.00	-15.05	0.00	15.05	678.42	203.53	25205.7	396.30	22.76	-1.243	0.000	0.043
185.00	-3.14	-0.97	0.00	-9.95	0.00	9.95	678.42	203.53	25205.7	396.30	24.07	-1.256	0.000	0.030
190.00	-2.77	-0.92	0.00	-5.11	0.00	5.11	678.42	203.53	25205.7	396.30	25.39	-1.264	0.000	0.017
195.00	0.00	-0.85	0.00	-0.54	0.00	0.54	678.42	203.53	25205.7	396.30	26.72	-1.266	0.000	0.001

Calculated Forces

Structure:	CT01497-S-SBA	Code:	TIA-222-H	4/14/2022
Site Name:	Plymouth 2 CT	Exposure:	C	
Height:	195.00 (ft)	Crest Height:	0.00	
Base Elev:	0.000 (ft)	Site Class:	D - Stiff Soil	
Gh:	1.1	Topography:	1	Struct Class: II
				Page: 33



Final Analysis Summary

Structure: CT01497-S-SBA	Code: TIA-222-H	4/14/2022
Site Name: Plymouth 2 CT	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 34

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0W 120 mph Wind	26.9	0.00	53.85	0.00	0.00	3549.57
0.9D + 1.0W 120 mph Wind	26.8	0.00	40.38	0.00	0.00	3502.70
1.2D + 1.0Di + 1.0Wi 40 mph Wind	5.2	0.00	71.01	0.00	0.00	669.91
1.2D + 1.0Ev + 1.0Eh	0.7	0.00	55.66	0.00	0.00	121.68
0.9D + 1.0Ev + 1.0Eh	0.7	0.00	42.15	0.00	0.00	120.28
1.0D + 1.0W 60 mph Wind	6.0	0.00	44.90	0.00	0.00	787.77

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.0W 120 mph Wind	-53.85	-26.86	0.00	-3549.5	0.00	-3549.5	4628.91	1339.4	7126.38	6119.66	0.00	0.592
0.9D + 1.0W 120 mph Wind	-40.38	-26.85	0.00	-3502.7	0.00	-3502.7	4628.91	1339.4	7126.38	6119.66	0.00	0.581
1.2D + 1.0Di + 1.0Wi 40 mph Wind	-71.01	-5.23	0.00	-669.91	0.00	-669.91	4628.91	1339.4	7126.38	6119.66	0.00	0.125
1.2D + 1.0Ev + 1.0Eh	-19.22	-0.67	0.00	-34.28	0.00	-34.28	2544.10	629.00	1885.82	1890.08	125.00	0.035
0.9D + 1.0Ev + 1.0Eh	-14.56	-0.66	0.00	-33.87	0.00	-33.87	2544.10	629.00	1885.82	1890.08	125.00	0.032
1.0D + 1.0W 60 mph Wind	-44.90	-6.01	0.00	-787.77	0.00	-787.77	4628.91	1339.4	7126.38	6119.66	0.00	0.138

	Monopole Mat Foundation Design			Date
				7/14/2021
	Customer Name:	SBA Communcations Corp	EIA/TIA Standard:	EIA-222-G
	Site Name:		Structure Height (Ft.):	195
	Site Number:	CT01497-A-SBA	Engineer Name:	T. Alajaj
	Engr. Number:	127609	Manager Login Req'd:	

Foundation Info Obtained from:

Structure Type:

Analysis or Design?

Base Reactions (Factored):

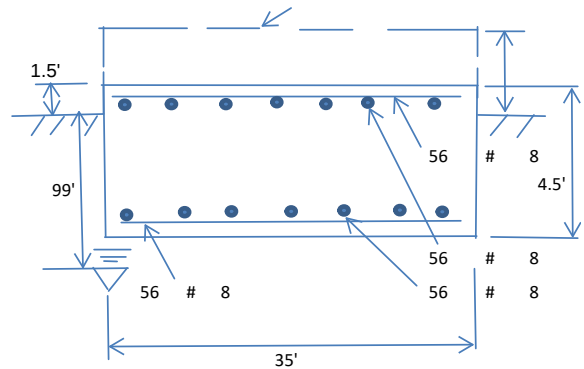
Axial Load (Kips):	53.9	Shear Force (Kips):	26.9
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3549.6

Allowable overstress %: 5.0%

Foundation Geometries:

		Mods required -Yes/No ?:	No
Anchor Bolt Circle (ft.):	58.00	Depth of Base BG (ft.):	3.00
Thickness of Pad (ft):	4.50		
Length of Pad (ft.):	35	Width of Pad (ft.):	35

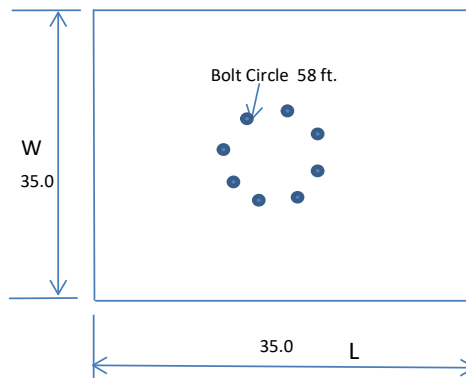
Final Length of pad (ft) 35.0 Final width of pad (ft): 35.0



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Pad Rebar Yield (Ksi):	60	Tie Spacing (in):	12.0	
Pad Steel Rebar Size (#):	8			
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	56	Qty. of Rebar in Pad (W):	56	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	56	Qty. of Rebar in Pad (W):	56	

Apply 1.35 factor for e/w Per G: 1.35



Soil Design Parameters:

Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	30000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	5512.50	Total Dry Concrete Weight (Kips):	826.88
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	826.88	Total Vertical Load on Base (Kips):	880.73

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	1444	<	Allowable Factored Soil Bearing (psf):	22500	0.06	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	13965.7	>	Design Factored Momont (kips-ft):	3672	0.26	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.80					OK!

Load/
Capacity
Ratio

Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00

Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1742.6	>	One-Way Factored Shear (L-D. Kips):	0.0	0.00	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1742.6	>	One-Way Factored Shear (W-D., Kips)	0.0	0.00	OK!
One-Way Design Shear Capacity (Corner-Corner, Kips):	448.2	>	One-Way Factored Shear (C-C, Kips):	29.3	0.07	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0021	OK!	Lower Steel Pad Reinf. Ratio (W-Direct	0.0021		
Lower Steel Pad Moment Capacity (L-Direction, Kips-ft):	9806.8	>	Moment at Bottom (L-Direct. K-Ft):	0.0	0.00	OK!
Lower Steel Pad Moment Capacity (W-Direction, Kips-ft):	9806.8	>	Moment at Bottom (W-Direct. K-Ft):	0.0	0.00	OK!
Lower Steel Pad Moment Capacity (Corner-Corner, K-ft):	16136.1	>	Moment at Bottom (C-C Dir. K-Ft):	0.0	0.00	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0021	OK!	Upper Steel Reinf. Ratio (W-Direct.):	0.0021		
Upper Steel Pad Moment Capacity (L-Direction, Kips-ft):	9806.8	>	Moment at the top (L-Dir Kips-Ft):	104.7	0.01	OK!
Upper Steel Pad Moment Capacity (W-Direction, Kips-ft):	9806.8	>	Moment at the top (W-Dir Kips-Ft):	104.7	0.01	OK!
Upper Steel Pad Moment Capacity (Corner-Corner, K-ft):	16136.1	>	Moment at the top (C-C Direc. K-Ft):	-5.4	0.00	OK!

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 195-Ft Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT01497-S-SBA

Customer Site Name: Plymouth 2 CT

Carrier Name: T-Mobile (App#: 192392-1)

Carrier Site ID / Name: CT11366A / Washington

Site Location: 297 North Street

Plymouth, Connecticut

Litchfield County

Latitude: 41.693319

Longitude: -73.053711



Analysis Result:

Max Structural Usage: 75.8% [Pass]

Report Prepared By: Sandesh Khawas Bhujel



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Longitude: -73.053711

Analysis Result:

Max Structural Usage: 75.8% [Pass]

Report Prepared By: Sandesh Khawas Bhujel

Introduction

The purpose of this report is to summarize the analysis results on the (3) T-Arms w/ working platform at 175.00' 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	Mapping by Full Metal Tower Services; Dated 04/27/2019
Antenna Loading	SBA; Application #: 192392, v1, dated 4/6/2022
Existing Modifications	TES Job #81154, dated 7/22/2019

Analysis Criteria

Basic Wind Speed Used in the Analysis: $V_{ULT} = 120$ mph (3-Sec. Gust) / Equivalent to
 $V_{ASD} = 93$ mph (3-Sec. Gust)

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

Operational Wind Speed: 30 mph +0" Radial ice

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

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

(3) T-Arms w/ working platform at 175.00' elevation

Final Antenna Configuration

3	Ericsson AIR6419 B41
3	RFS APXVAARR24_43-U-NA20
3	Ericsson KRY 112 144/1
3	Ericsson KRY 112 489/2
6	Allen Telecom FE15501P77/75
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 mounts will be structurally adequate to support the proposed antenna configuration. The maximum structural usage is 75.8%, which occurs in the mount pipe. 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. Mount Mapping Information
4. 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.



Structure: CT01497-S-SBA - Plymouth 2 CT

Sector: **A**

4/7/2022

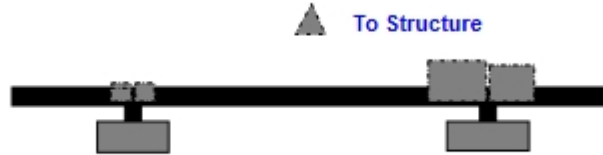
Structure Type: Monopole

Mount Elev: 175.00

Page: 1

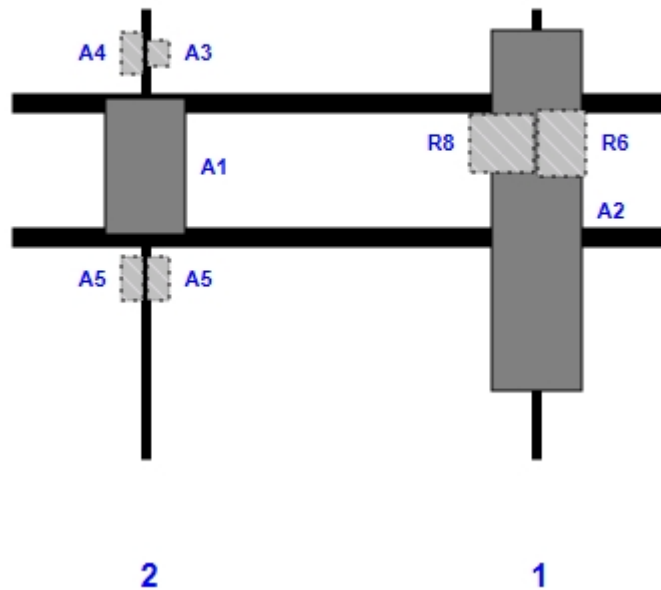


Plan View



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	APXVAARR24_43-U-NA20	95.90	24.00	140.00	1	a	Front	54.00		Retained	
R6	4449 B71 + B85	17.90	13.10	140.00	1	a	Behind	36.00	7.00	Added	
R8	4460 B25 + B66	15.10	17.00	140.00	1	a	Behind	36.00	-9.00	Added	
A1	AIR6419 B41	36.30	20.90	36.00	2	a	Front	42.00		Added	
A3	KRY 112 144/1	6.93	6.10	36.00	2	a	Behind	12.00	3.50	Retained	
A4	KRY 112 489/2	11.00	6.10	36.00	2	a	Behind	12.00	-3.50	Retained	
A5	FE15501P77/75	11.75	5.50	36.00	2	a	Behind	72.00	3.50	Retained	
A5	FE15501P77/75	11.75	5.50	36.00	2	b	Behind	72.00	-3.50	Retained	

Structure: CT01497-S-SBA - Plymouth 2 CT

Sector: **B**

4/7/2022

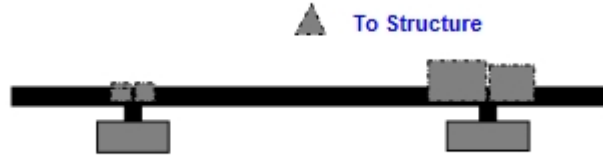
Structure Type: Monopole

Mount Elev: 175.00

Page: 2

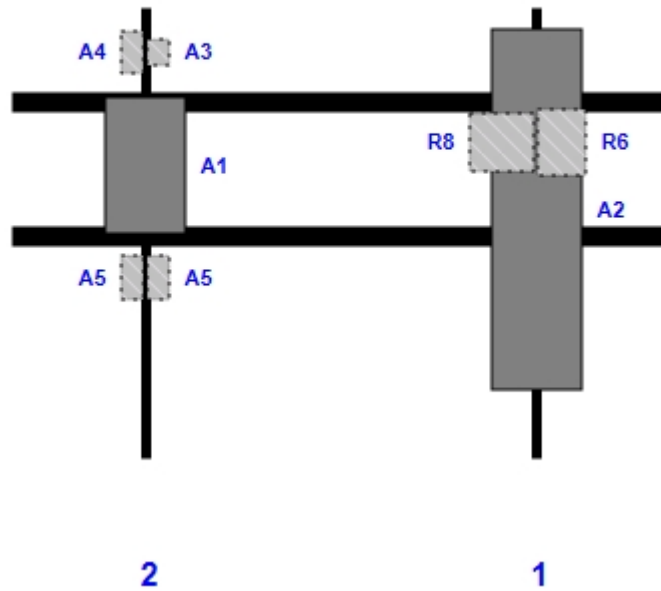


Plan View



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
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A5	FE15501P77/75	11.75	5.50	36.00	2	a	Behind	72.00	3.50	Retained	
A5	FE15501P77/75	11.75	5.50	36.00	2	b	Behind	72.00	-3.50	Retained	

Structure: CT01497-S-SBA - Plymouth 2 CT

Sector: **C**

4/7/2022

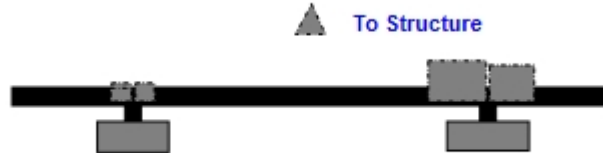
Structure Type: Monopole

Mount Elev: 175.00

Page: 3

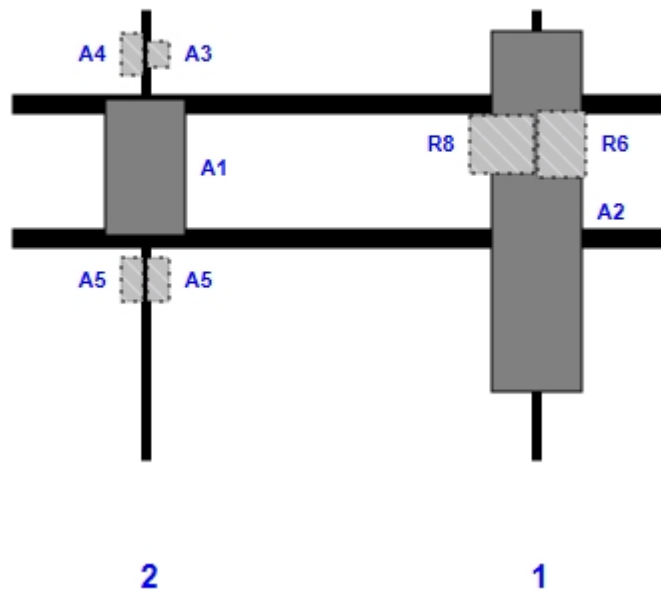


Plan View

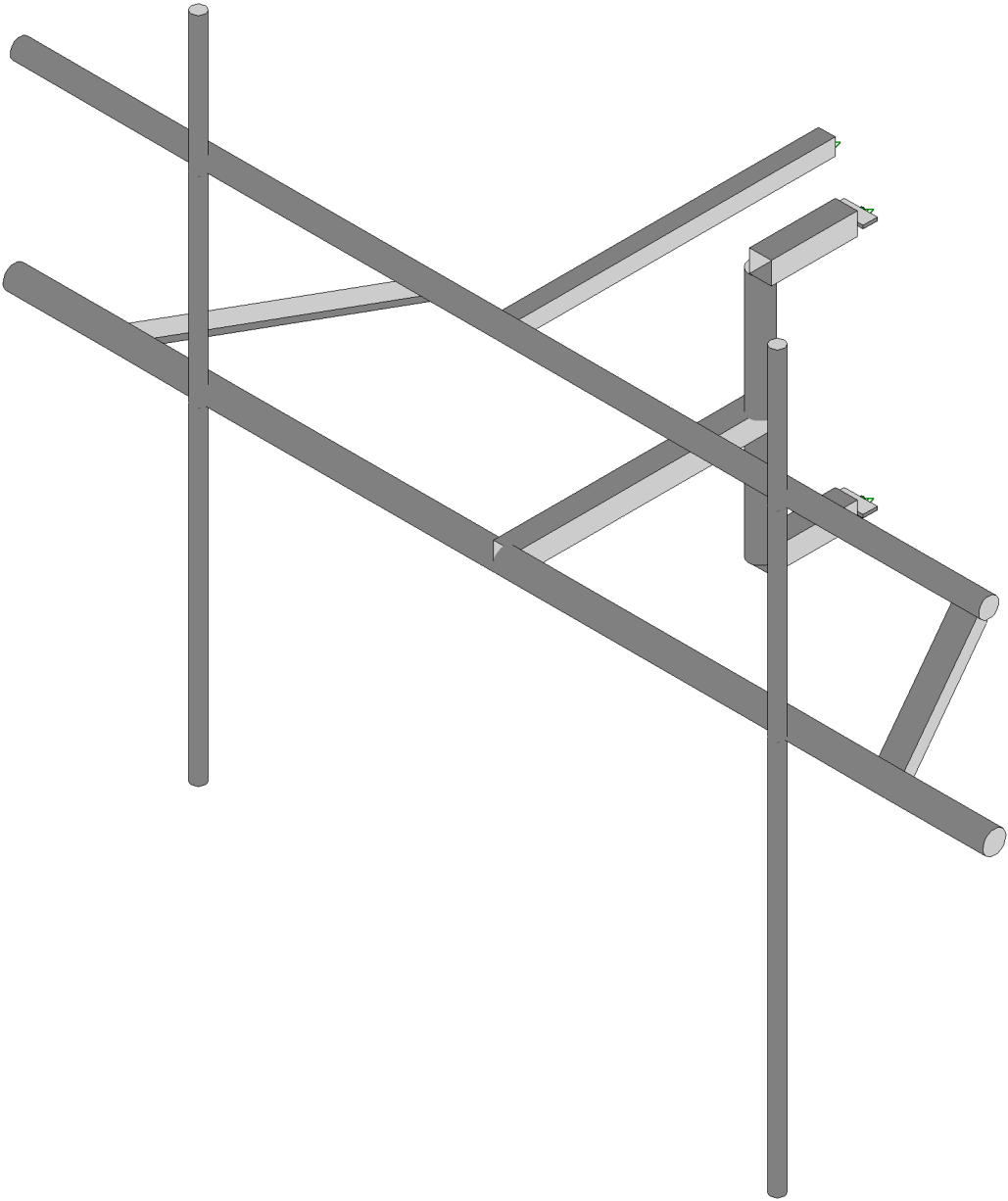
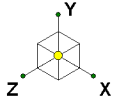


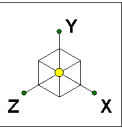
Front View

Looking Toward Structure

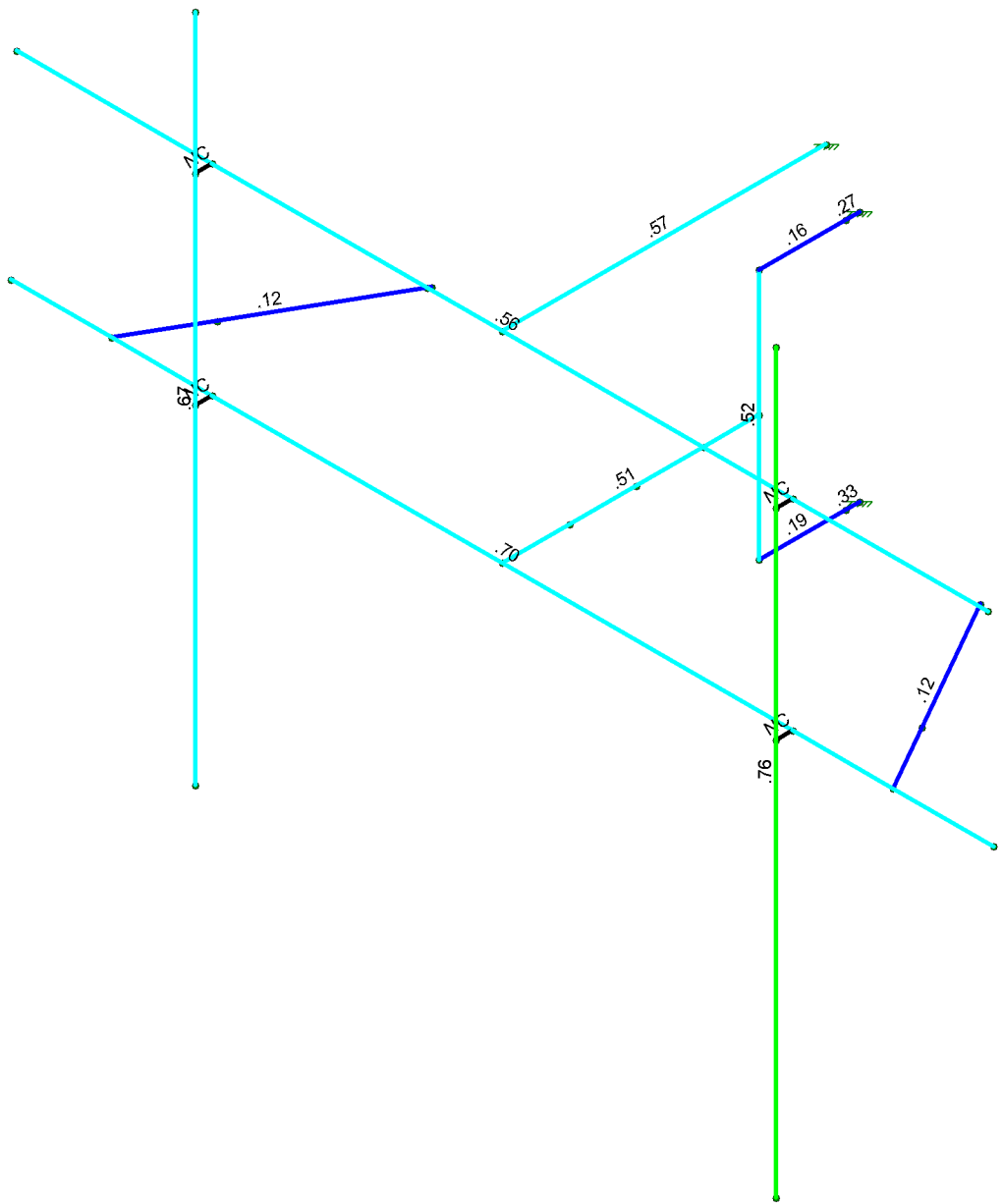


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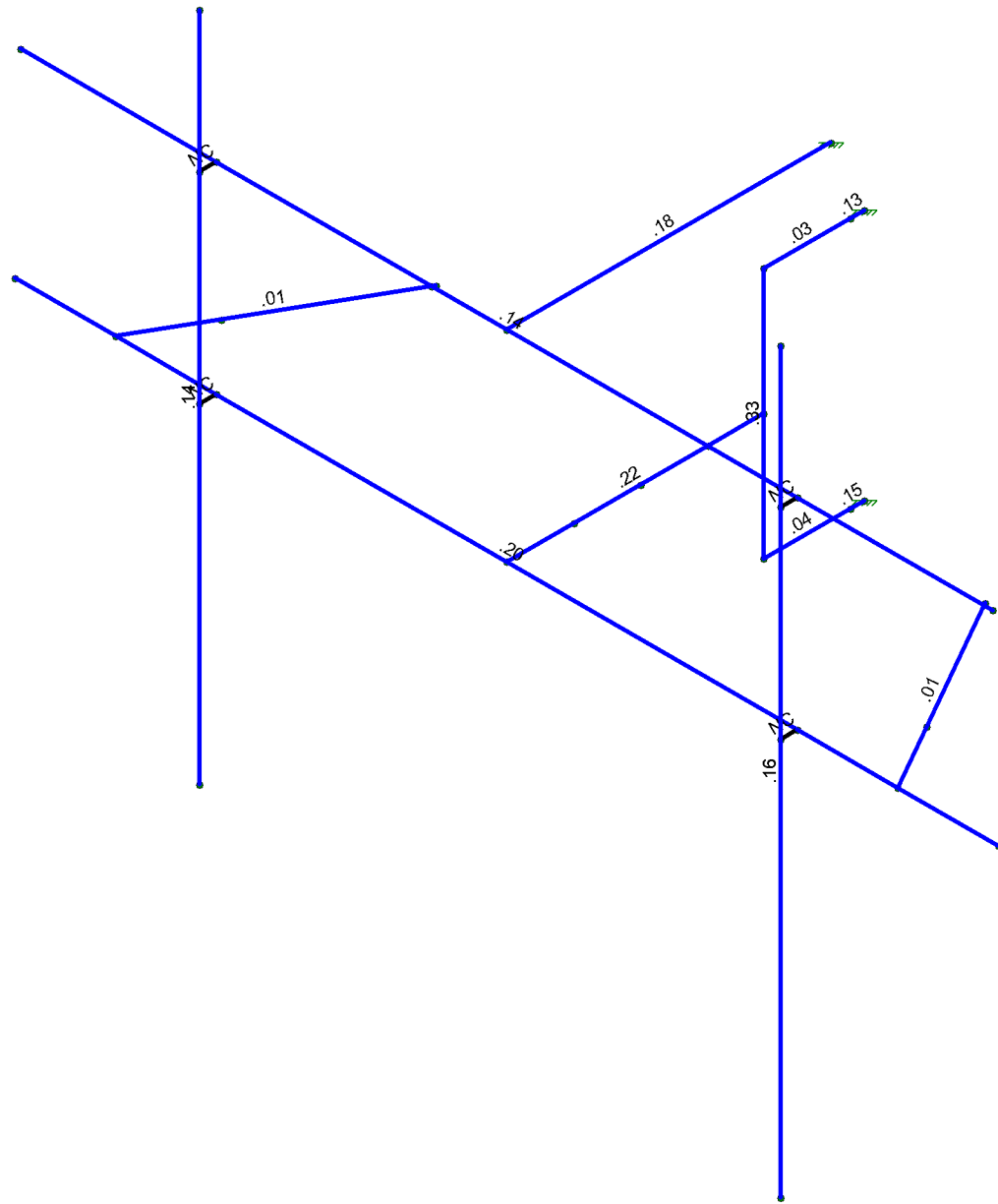
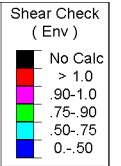
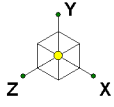


Code Check (Env)	
No Calc	
> 1.0	
.90-1.0	
.75-.90	
.50-.75	
0-.50	



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

Tower Engineering Solutio...	CT01497-S-SBA_MT_LOT_Loads Only_Sector A_G	SK - 2
		Apr 7, 2022 at 9:11 AM
TES Project No. 127380		CT01497-S-SBA_127380_G_RISA_...



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

Tower Engineering Solutio...

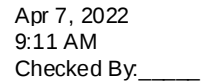
CT01497-S-SBA_MT_LOT_Loads Only_Sector A_G

SK - 3

Apr 7, 2022 at 9:11 AM

TES Project No. 127380

CT01497-S-SBA_127380_G_RISA_...

Page 4

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
13	N13	-4.333333	1.875	5.583333	0	
14	N14	-4.333333	6.958333	5.583333	0	
15	N15	-4.333333	-3.041667	5.583333	0	
16	N16	0	0	.21	0	
17	N17	0	3.75	.21	0	
18	N18	0	1.875	3.333333	0	
19	N19	0	1.875	4.333333	0	
20	N20	0	1.875	2.333333	0	
21	N21	-5.261905	1.875	4.333333	0	
22	N22	-4.119047	1.875	2.333333	0	
23	N23	5.261905	1.875	4.333333	0	
24	N24	4.119047	1.875	2.333333	0	
25	N25	4.333333	6.958333	5.583333	0	
26	N26	4.333333	-4.041667	5.583333	0	
27	N27	4.333333	1.875	5.583333	0	
28	N28	7.25	4.875	5.333333	0	
29	N29	-7.25	4.875	5.333333	0	
30	N30	0	4.875	.5	0	
31	N31	0	4.875	5.333333	0	
32	N32	-4.333333	4.875	5.583333	0	
33	N33	4.333333	4.875	5.583333	0	
34	N34	-4.333333	1.875	5.333333	0	
35	N35	4.333333	1.875	5.333333	0	
36	N36	-4.333333	4.875	5.333333	0	
37	N37	4.333333	4.875	5.333333	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rul...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Standoff Vertical	PIPE 3.5	Beam	Pipe	A53 Gr.B	Typical	2.5	4.52	4.52	9.04
2	Antenna Mount Pipe	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
3	Standoff Arm	HSS4X4X4	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
4	Standoff Arm End Plate	PL1/2x6	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237
5	Face Horizontal	PIPE 3.5	Beam	Pipe	A53 Gr.B	Typical	2.5	4.52	4.52	9.04
6	Grating Angle	L4X4X4	Beam	Single Angle	A36 Gr.36	Typical	1.93	3	3	.044
7	New Support Rail	PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
8	New SR End Connections	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
9	New Strong Mount Pipes	PIPE_2.0X	Beam	Pipe	A53 Gr.B	Typical	1.4	.827	.827	1.65
10	New Rotatable T-Arm	HSS3X3X4	Beam	SquareTube	A500 Gr.B Rect	Typical	2.44	3.02	3.02	5.08

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N4	N17		90	Standoff Arm End Plate	Beam	RECT	A36 Gr.36	Typical
2	M2	N2	N16		90	Standoff Arm End Plate	Beam	RECT	A36 Gr.36	Typical
3	M3	N3	N1			Standoff Vertical	Beam	Pipe	A53 Gr.B	Typical
4	M4	N8	N7			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
5	M5	N6	N5			Standoff Arm	Beam	SquareTube	A500 Gr...	Typical
6	M6	N9	N11		90	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
7	M7	N10	N12		180	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
8	MP2A	N14	N15			New Strong Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
9	M14	N17	N3			Standoff Arm	Beam	SquareTube	A500 Gr...	Typical
10	M15	N16	N1			Standoff Arm	Beam	SquareTube	A500 Gr...	Typical
11	MP1A	N25	N26			New Strong Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
12	M12	N29	N28			New Support Rail	Beam	Pipe	A53 Gr.B	Typical
13	M13	N30	N31			New Rotatable T-Arm	Beam	SquareTube	A500 Gr...	Typical
14	M14A	N32	N36			RIGID	Beam	None	RIGID	DR1
15	M15A	N13	N34			RIGID	Beam	None	RIGID	DR1
16	M16	N33	N37			RIGID	Beam	None	RIGID	DR1
17	M17	N27	N35			RIGID	Beam	None	RIGID	DR1

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes				None
3	M3						Yes				None
4	M4						Yes				None
5	M5						Yes				None
6	M6						Yes				None
7	M7						Yes				None
8	MP2A						Yes				None
9	M14						Yes				None
10	M15						Yes				None
11	MP1A						Yes				None
12	M12						Yes				None
13	M13						Yes				None
14	M14A						Yes				None
15	M15A						Yes				None
16	M16						Yes				None
17	M17						Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Standoff Ar...	.21			Lbyy			.65	.65		Lateral
2	M2	Standoff Ar...	.21			Lbyy			.65	.65		Lateral
3	M3	Standoff Ve...	3.75			Lbyy			1	1		Lateral
4	M4	Face Horizo...	14.667			Lbyy			2.1	2.1		Lateral
5	M5	Standoff Arm	3.833			Lbyy						Lateral
6	M6	Grating Angle	3.5			Lbyy			2.1	2.1		Lateral
7	M7	Grating Angle	3.5			Lbyy			2.1	2.1		Lateral
8	MP2A	New Strong...	10			Lbyy			2.1	2.1		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
9	M14	Standoff Arm	1.29			Lbyy						Lateral
10	M15	Standoff Arm	1.29			Lbyy						Lateral
11	MP1A	New Strong...	11			Lbyy			2.1	2.1		Lateral
12	M12	New Suppor...	14.5			Lbyy			2.1	2.1		Lateral
13	M13	New Rotata...	4.833			Lbyy			2.1	2.1		Lateral

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N4	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N2	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N16						
4	N17						
5	N30	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N4	max	471.109	4	1145.518	6	-107.86	1	.01	1	2.592	4	.088	4
2		min	-579.944	3	-153.426	1	-2518.693	6	-.167	6	-2.51	3	-.078	3
3	N2	max	1089.393	10	1456.068	5	3166.058	5	-.034	2	3.077	4	.077	3
4		min	-782.018	9	93.013	2	189.074	2	-.198	5	-2.459	3	-.098	4
5	N30	max	553.624	9	959.786	5	796.604	1	-1.068	2	2.223	4	1.099	10
6		min	-761.383	10	256.188	2	-1266.78	2	-3.445	5	-2.775	3	-.795	9
7	Totals:	max	1788.237	4	3268.992	8	2777.021	1						
8		min	-1788.239	3	1290.533	3	-2777.018	2						

Envelope Member Section Forces

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1	M1	1	max	-107.86	1	579.754	3	153.426	1	.088	4	.167	6	2.51	3
2			min	-2518.693	6	-470.937	4	-1143.138	6	-.078	3	-.01	1	-2.592	4
3		2	max	-107.86	1	576.987	3	154.069	1	.088	4	.107	6	2.479	3
4			min	-2518.693	6	-468.17	4	-1141.768	6	-.078	3	-.002	1	-2.567	4
5		3	max	-107.86	1	574.219	3	154.713	1	.088	4	.047	6	2.449	3
6			min	-2518.693	6	-465.403	4	-1140.398	6	-.078	3	.006	1	-2.543	4
7		4	max	-107.86	1	571.452	3	155.356	1	.088	4	.014	1	2.419	3
8			min	-2518.693	6	-462.635	4	-1139.028	6	-.078	3	-.02	2	-2.518	4
9		5	max	-107.86	1	568.685	3	155.999	1	.088	4	.022	1	2.389	3
10			min	-2518.693	6	-459.868	4	-1137.658	6	-.078	3	-.072	6	-2.494	4
11	M2	1	max	3166.058	5	782.292	9	-93.067	2	.077	3	.198	5	2.459	3
12			min	189.074	2	-1089.732	10	-1459.373	5	-.098	4	.034	2	-3.077	4
13		2	max	3166.058	5	782.292	9	-92.424	2	.077	3	.121	5	2.431	3
14			min	189.074	2	-1089.732	10	-1458.003	5	-.098	4	.029	2	-3.032	4
15		3	max	3166.058	5	782.292	9	-91.781	2	.077	3	.048	6	2.403	3
16			min	189.074	2	-1089.732	10	-1456.633	5	-.098	4	.012	1	-2.988	4
17		4	max	3166.058	5	782.292	9	-91.138	2	.077	3	.019	2	2.375	3
18			min	189.074	2	-1089.732	10	-1455.263	5	-.098	4	-.038	1	-2.944	4
19		5	max	3166.058	5	782.292	9	-90.495	2	.077	3	.015	2	2.347	3
20			min	189.074	2	-1089.732	10	-1453.893	5	-.098	4	-.108	5	-2.9	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
21	M3	1	max	175.09	1	523.269	3	2518.768	6	1.686	3	.236	1	.078	3
22			min	-1100.417	6	-414.385	4	107.74	1	-1.932	4	-1.515	6	-.088	4
23		2	max	184.661	1	503.502	3	2512.032	6	1.686	3	.855	5	.291	4
24			min	-1079.129	6	-394.618	4	127.507	1	-1.932	4	.31	4	-.404	3
25		3	max	1368.391	5	1089.622	10	3153.03	5	.749	9	1.881	2	1.966	10
26			min	-900.527	2	-782.188	9	1092.614	4	-1.932	4	-3.968	5	-1.411	9
27		4	max	1389.679	5	1089.622	10	3159.765	5	1.846	4	-.097	2	.944	10
28			min	61.778	2	-782.188	9	208.811	2	-1.695	3	-1.009	5	-.677	9
29		5	max	1410.967	5	1089.622	10	3166.501	5	1.846	4	1.956	5	.077	3
30			min	71.349	2	-782.188	9	189.044	2	-1.695	3	.09	2	-.098	4
31	M4	1	max	0	11	0	11	0	11	0	11	0	11	0	11
32			min	0	1	0	1	0	1	0	1	0	1	0	1
33		2	max	878.965	9	-209.998	1	378.618	2	-.011	10	.502	2	.732	9
34			min	-133.169	4	-678.048	6	-562.359	1	-.614	9	-.371	1	-.36	8
35		3	max	982.052	10	1144.795	7	1267.442	1	1.105	2	4.294	2	3.61	10
36			min	266.97	2	-701.501	9	-979.244	2	-.635	1	-5.254	1	1.03	3
37		4	max	982.052	10	1036.419	7	1190.131	1	1.105	2	.846	2	.648	10
38			min	-275.814	3	321.214	4	-901.932	2	-.635	1	-.749	1	-.726	3
39		5	max	0	11	0	11	0	11	0	11	0	11	0	11
40			min	0	1	0	1	0	1	0	1	0	1	0	1
41	M5	1	max	1901.349	1	-635.423	1	793.527	3	2.624	10	2.679	1	.419	1
42			min	-1431.169	2	-1922.749	6	-996.307	4	-1.871	9	-2.262	2	-1.325	6
43		2	max	1901.349	1	-649.606	1	827.205	3	2.624	10	2.572	1	1.035	1
44			min	-1431.169	2	-1952.183	6	-1029.984	4	-1.871	9	-2.314	2	-.437	2
45		3	max	1901.349	1	-684.048	1	860.719	3	2.624	10	2.46	1	2.793	5
46			min	-1431.169	2	-2048.75	6	-1063.524	4	-1.871	9	-2.369	2	.403	2
47		4	max	1901.349	1	-718.378	1	894.08	3	2.624	10	2.509	3	4.762	5
48			min	-1431.169	2	-2147.844	6	-1096.861	4	-1.871	9	-2.711	4	1.279	2
49		5	max	1901.349	1	-732.119	1	927.328	3	2.624	10	3.382	3	6.797	5
50			min	-1431.169	2	-2185.633	6	-1130.047	4	-1.871	9	-3.778	4	2.183	2
51	M6	1	max	52.982	4	92.171	4	-54.129	4	0	11	.274	7	.274	8
52			min	-52.982	1	-93.185	3	-156.584	5	0	1	-.031	4	-.032	3
53		2	max	39.737	4	68.992	4	-47.233	4	0	11	.169	7	.169	8
54			min	-39.737	1	-70.006	3	-137.901	5	0	1	-.013	4	-.013	3
55		3	max	26.491	4	46.138	4	-36.903	4	0	11	.082	7	.082	8
56			min	-26.491	1	-46.542	3	-108.498	5	0	1	-.003	4	-.004	3
57		4	max	13.246	4	22.959	4	-21.02	4	0	11	.022	7	.022	8
58			min	-13.246	1	-23.362	3	-62.194	5	0	1	0	4	0	3
59		5	max	0	11	0	5	0	4	0	11	0	11	0	11
60			min	0	1	-.004	4	-.001	1	0	1	0	1	0	1
61	M7	1	max	52.982	3	-54.086	3	92.173	3	0	11	.274	8	.032	4
62			min	-52.982	4	-156.655	5	-93.216	4	0	1	-.031	3	-.273	7
63		2	max	39.737	3	-47.19	3	68.994	3	0	11	.169	8	.013	4
64			min	-39.737	4	-137.972	5	-70.036	4	0	1	-.013	3	-.169	7
65		3	max	26.491	3	-36.885	3	46.139	3	0	11	.082	8	.004	4
66			min	-26.491	4	-108.527	5	-46.554	4	0	1	-.003	3	-.082	7
67		4	max	13.246	3	-21.002	3	22.959	3	0	11	.022	8	0	4
68			min	-13.246	4	-62.223	5	-23.374	4	0	1	0	3	-.022	7
69		5	max	0	11	0	7	.009	1	0	11	0	11	0	11
70			min	0	1	-.003	1	-.004	3	0	1	0	1	0	1
71	MP2A	1	max	0	11	.227	9	-.068	3	0	11	0	11	0	11
72			min	0	1	-.298	10	-.462	8	0	1	0	1	0	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
73		2	max	49.685	2	-132.167	3	341.751	9	-.066	4	-.074	1	-.079	10
74			min	-367.044	9	-882.063	9	-8.178	1	-.204	5	-.445	9	-.59	9
75		3	max	265.638	6	-92.221	4	373.565	9	-.066	4	.451	9	1.615	9
76			min	-269.453	9	-882.063	9	-126.666	2	-.204	5	-.088	2	.293	1
77		4	max	-14.292	10	31.174	3	31.282	2	0	11	.039	1	.039	3
78			min	-36.742	5	-31.178	4	-31.069	1	0	1	-.039	2	-.039	4
79		5	max	0	11	.351	10	.765	5	0	11	0	11	0	11
80			min	0	1	-.652	9	-.016	2	0	1	0	1	0	1
81	M14	1	max	-107.86	1	1138.122	6	567.456	3	.088	4	2.494	4	.022	1
82			min	-2518.693	6	-156.016	1	-458.7	4	-.078	3	-2.389	3	-.072	6
83		2	max	-107.86	1	1128.217	6	556.123	3	.088	4	2.348	4	.074	1
84			min	-2518.693	6	-160.789	1	-447.367	4	-.078	3	-2.208	3	-.438	6
85		3	max	-107.86	1	1118.311	6	544.79	3	.088	4	2.205	4	.126	1
86			min	-2518.693	6	-165.562	1	-436.034	4	-.078	3	-2.031	3	-.8	6
87		4	max	-107.86	1	1108.406	6	533.457	3	.088	4	2.067	4	.18	1
88			min	-2518.693	6	-170.335	1	-424.701	4	-.078	3	-1.857	3	-1.159	6
89		5	max	-107.86	1	1098.501	6	522.124	3	.088	4	1.932	4	.236	1
90			min	-2518.693	6	-175.108	1	-413.368	4	-.078	3	-1.686	3	-1.515	6
91	M15	1	max	3166.058	5	1452.606	5	783.685	9	.077	3	2.9	4	.015	2
92			min	189.074	2	90.534	2	-1091.338	10	-.098	4	-2.347	3	-.108	5
93		2	max	3166.058	5	1442.701	5	783.685	9	.077	3	2.631	4	-.014	2
94			min	189.074	2	85.761	2	-1091.338	10	-.098	4	-2.179	3	-.575	5
95		3	max	3166.058	5	1432.796	5	783.685	9	.077	3	2.366	4	-.041	2
96			min	189.074	2	80.988	2	-1091.338	10	-.098	4	-2.014	3	-1.038	5
97		4	max	3166.058	5	1422.89	5	783.685	9	.077	3	2.104	4	-.066	2
98			min	189.074	2	76.215	2	-1091.338	10	-.098	4	-1.853	3	-1.499	5
99		5	max	3166.058	5	1412.985	5	783.685	9	.077	3	1.846	4	-.09	2
100			min	189.074	2	71.442	2	-1091.338	10	-.098	4	-1.695	3	-1.956	5
101	MP1A	1	max	0	11	.423	9	.116	1	0	11	0	11	0	11
102			min	0	1	-1.067	8	-1.348	6	0	1	0	1	0	1
103		2	max	27.263	3	985.865	10	407.15	10	.197	5	.158	1	.446	10
104			min	-412.487	10	257.463	4	77.517	9	.051	2	-.412	2	.082	2
105		3	max	-105.122	10	298.579	3	601.151	2	0	11	1.515	1	.762	3
106			min	-372.108	5	-298.133	4	-600.861	1	0	1	-1.517	2	-.76	4
107		4	max	-15.721	10	33.981	3	33.276	2	0	11	.043	1	.046	3
108			min	-40.416	5	-33.534	4	-32.986	1	0	1	-.044	2	-.045	4
109		5	max	0	11	2.735	8	2.304	5	0	11	0	11	0	11
110			min	0	1	-.447	3	-1.151	2	0	1	0	1	0	1
111	M12	1	max	0	11	0	11	0	11	0	11	0	11	0	11
112			min	0	1	0	1	0	1	0	1	0	1	0	1
113		2	max	-47.83	3	-44.006	2	404.301	2	-.099	10	.239	2	-.093	4
114			min	-878.968	9	-450.051	9	-221.246	1	-.486	9	-.363	1	-.604	9
115		3	max	-266.96	2	547.776	10	503.607	1	.574	10	3.211	2	1.228	10
116			min	-982.059	10	-480.692	9	-791.012	2	-.486	9	-2.268	1	.258	2
117		4	max	7.144	4	517.136	10	436.729	1	.574	10	.464	2	-.027	3
118			min	-982.059	10	92.274	3	-724.133	2	-.144	2	-.563	1	-.702	10
119		5	max	0	11	0	11	0	11	0	11	0	11	0	11
120			min	0	1	0	1	0	1	0	1	0	1	0	1
121	M13	1	max	796.604	1	956.615	5	759.69	10	1.099	10	2.223	4	3.445	5
122			min	-1266.78	2	251.871	2	-552.726	9	-.795	9	-2.775	3	1.068	2
123		2	max	796.604	1	927.769	5	759.69	10	1.099	10	1.678	4	2.306	5
124			min	-1266.78	2	238.922	2	-552.726	9	-.795	9	-1.986	3	.771	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
125		3	max	796.604	1	898.922	5	759.69	10	1.099	10	1.198	2	1.21	8
126			min	-1266.78	2	225.974	2	-552.726	9	-.795	9	-1.316	1	.416	3
127		4	max	796.604	1	870.076	5	759.69	10	1.099	10	1.291	2	.225	2
128			min	-1266.78	2	213.026	2	-552.726	9	-.795	9	-1.149	1	-.1	1
129		5	max	796.604	1	841.23	5	759.69	10	1.099	10	1.398	10	-.025	2
130			min	-1266.78	2	200.078	2	-552.726	9	-.795	9	-1.227	9	-.9	5
131	M14A	1	max	152.771	1	-11.857	2	-49.011	3	.957	9	-.066	4	-.102	10
132			min	-336.166	2	-428.309	9	-879.727	9	.172	4	-.204	5	-.593	9
133		2	max	152.771	1	-11.857	2	-49.011	3	.957	9	-.084	2	-.101	10
134			min	-336.166	2	-428.309	9	-879.727	9	.172	4	-.234	5	-.566	9
135		3	max	152.771	1	-11.857	2	-49.011	3	.957	9	-.096	2	-.1	10
136			min	-336.166	2	-428.309	9	-879.727	9	.172	4	-.264	5	-.54	9
137		4	max	152.771	1	-11.857	2	-49.011	3	.957	9	-.1	3	-.099	10
138			min	-336.166	2	-428.309	9	-879.727	9	.172	4	-.295	8	-.513	9
139		5	max	152.771	1	-11.857	2	-49.011	3	.957	9	-.103	3	-.099	10
140			min	-336.166	2	-428.309	9	-879.727	9	.172	4	-.328	8	-.486	9
141	M15A	1	max	425.217	1	197.77	9	878.964	9	1.692	9	.204	5	.037	10
142			min	-241.776	2	-439.57	6	-27.599	4	.198	3	.066	4	-.463	9
143		2	max	425.217	1	197.77	9	878.964	9	1.692	9	.237	7	.05	10
144			min	-241.776	2	-439.57	6	-27.599	4	.198	3	.064	4	-.475	9
145		3	max	425.217	1	197.77	9	878.964	9	1.692	9	.271	7	.064	10
146			min	-241.776	2	-439.57	6	-27.599	4	.198	3	.062	4	-.487	9
147		4	max	425.217	1	197.77	9	878.964	9	1.692	9	.306	7	.077	10
148			min	-241.776	2	-439.57	6	-27.599	4	.198	3	.061	4	-.5	9
149		5	max	425.217	1	197.77	9	878.964	9	1.692	9	.341	7	.091	10
150			min	-241.776	2	-439.57	6	-27.599	4	.198	3	.059	4	-.512	9
151	M16	1	max	376.282	1	-61.786	3	981.83	10	-.127	3	.197	5	.128	2
152			min	-663.086	2	-500.686	10	-5.065	4	-1.102	10	.051	2	-.699	10
153		2	max	376.282	1	-61.786	3	981.83	10	-.127	3	.245	5	.132	2
154			min	-663.086	2	-500.686	10	-5.065	4	-1.102	10	.069	2	-.668	10
155		3	max	376.282	1	-61.786	3	981.83	10	-.127	3	.293	5	.136	2
156			min	-663.086	2	-500.686	10	-5.065	4	-1.102	10	.087	2	-.636	10
157		4	max	376.282	1	-61.786	3	981.83	10	-.127	3	.341	5	.14	2
158			min	-663.086	2	-500.686	10	-5.065	4	-1.102	10	.091	4	-.605	10
159		5	max	376.282	1	-61.786	3	981.83	10	-.127	3	.393	7	.144	2
160			min	-663.086	2	-500.686	10	-5.065	4	-1.102	10	.09	4	-.574	10
161	M17	1	max	1044.8	1	75.281	10	170.807	3	.052	4	-.051	2	.677	1
162			min	-757.996	2	-793.36	7	-980.6	10	-1.861	10	-.197	5	-1.093	2
163		2	max	1044.8	1	75.281	10	170.807	3	.052	4	-.046	3	.692	1
164			min	-757.996	2	-793.36	7	-980.6	10	-1.861	10	-.246	8	-1.071	2
165		3	max	1044.8	1	75.281	10	170.807	3	.052	4	-.036	3	.707	1
166			min	-757.996	2	-793.36	7	-980.6	10	-1.861	10	-.302	8	-1.048	2
167		4	max	1044.8	1	75.281	10	170.807	3	.052	4	-.025	3	.722	1
168			min	-757.996	2	-793.36	7	-980.6	10	-1.861	10	-.358	8	-1.026	2
169		5	max	1044.8	1	75.281	10	170.807	3	.052	4	-.014	3	.737	1
170			min	-757.996	2	-793.36	7	-980.6	10	-1.861	10	-.413	8	-1.003	2

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc...	LC	Shear Check	Loc.....	L...	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn	
1	MP1A	PIPE_2.0X	.758	5.0...	10	.157	5.0...	5	2431.4...	44100	2.531	2.531	3..	H1-1b	
2	M4	PIPE_3.5	.695	7.3...	1	.202	7.3...	2	7475.0...	78750	7.954	7.954	1..	H1-1b	
3	MP2A	PIPE_2.0X	.666	5	9	.135	5	5	2942.0...	44100	2.531	2.531	1..	H1-1b	
4	M13	HSS3X3...	.566	0	7	.177	0	z	10	45105...	101016	8.556	8.556	2..	H1-1b
5	M12	PIPE_3.0	.562	7.25	2	.145	7.25	10	4822.2...	65205	5.749	5.749	1..	H1-1b	
6	M3	PIPE_3.5	.517	1.8...	5	.327	1.8...	4	74362...	78750	7.954	7.954	1..	H1-1b	
7	M5	HSS4X4...	.508	3.8...	8	.225	3.8...	y	10	13119...	139518	16.181	16.181	1..	H1-1b
8	M2	PL1/2x6	.334	0	8	.149	0	y	4	96548...	97200	1.012	12.15	1..	H1-1b
9	M1	PL1/2x6	.273	0	4	.127	0	y	4	96548...	97200	1.012	12.15	1..	H1-1b
10	M15	HSS4X4...	.185	0	4	.040	0	y	5	13854...	139518	16.181	16.181	1..	H1-1b
11	M14	HSS4X4...	.163	1.29	2	.031	0	y	6	13854...	139518	16.181	16.181	1..	H1-1b
12	M7	L4X4X4	.119	0	8	.008	0	y	5	31005...	62532	3.138	6.715	2..	H2-1
13	M6	L4X4X4	.119	0	7	.008	0	z	5	31005...	62532	3.138	6.715	2..	H2-1

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: CT11366A

Thomaston3/RT 8
297 North Street
Plymouth, Connecticut 06782

April 27, 2022

EBI Project Number: 6222002979

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	13.83%



April 27, 2022

T-Mobile

Attn: Jason Overbey, RF Manager

35 Griffin Road South

Bloomfield, Connecticut 06002

Emissions Analysis for Site: CT11366A - Thomaston3/RT 8

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **297 North Street in Plymouth, 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 297 North Street in Plymouth, 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) I LTE Traffic channel (LTE IC 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) I LTE Broadcast channel (LTE IC 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) I 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) I 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 175 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):	175 feet	Height (AGL):	175 feet	Height (AGL):	175 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 %:	2.97%	Antenna B1 MPE %:	2.97%	Antenna C1 MPE %:	2.97%
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):	175 feet	Height (AGL):	175 feet	Height (AGL):	175 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 %:	3.90%	Antenna B2 MPE %:	3.90%	Antenna C2 MPE %:	3.90%



Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	6.87%
VoiceStream	0.13%
Sprint	0.01%
Verizon	6.82%
Site Total MPE % :	13.83%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	6.87%
T-Mobile Sector B Total:	6.87%
T-Mobile Sector C Total:	6.87%
Site Total MPE % :	13.83%

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	175.0	1.49	600 MHz LTE	400	0.37%
T-Mobile 600 MHz NR	1	1577.94	175.0	1.99	600 MHz NR	400	0.50%
T-Mobile 700 MHz LTE	2	695.22	175.0	1.75	700 MHz LTE	467	0.37%
T-Mobile 1900 MHz GSM	4	1052.26	175.0	5.30	1900 MHz GSM	1000	0.53%
T-Mobile 1900 MHz LTE	2	2104.51	175.0	5.30	1900 MHz LTE	1000	0.53%
T-Mobile 2100 MHz LTE	2	2649.42	175.0	6.67	2100 MHz LTE	1000	0.67%
T-Mobile 2500 MHz LTE IC & 2C Traffic	1	9619.47	175.0	12.11	2500 MHz LTE IC & 2C Traffic	1000	1.21%
T-Mobile 2500 MHz LTE IC & 2C Broadcast	1	717.84	175.0	0.90	2500 MHz LTE IC & 2C Broadcast	1000	0.09%
T-Mobile 2500 MHz NR Traffic	1	19238.94	175.0	24.22	2500 MHz NR Traffic	1000	2.42%
T-Mobile 2500 MHz NR Broadcast	1	1435.69	175.0	1.81	2500 MHz NR Broadcast	1000	0.18%
						Total:	6.87%

• 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:

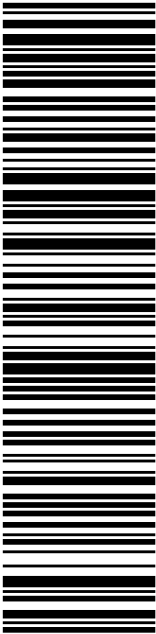
T-Mobile Sector	Power Density Value (%)
Sector A:	6.87%
Sector B:	6.87%
Sector C:	6.87%
T-Mobile Maximum MPE % (Sector A):	6.87%
Site Total:	13.83%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **13.83%** 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

 Click-N-Ship®	
P	usps.com US POSTAGE Flat Rate Env 05/04/2022 Mailed from 01566
US POSTAGE PAID Click-N-Ship®	
PRIORITY MAIL 1-DAY™	
Expected Delivery Date: 05/05/22 Ref#: SBCT-366A 0006	
DEBORAH CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
R005	
SHIP TO: KRI PELLETIER SBA COMMUNICATIONS CORPORATION 13 FLANDERS RD STE 125 WESTBOROUGH MA 01581	
USPS TRACKING #	
	
9405 5036 9930 0240 4600 69	
Electronic Rate Approved #038555749	

✂ ————— Cut on dotted line.

Instructions

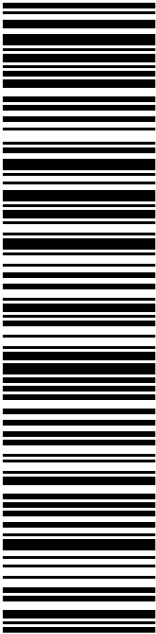
- Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
- Place your label so it does not wrap around the edge of the package.
- Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
- To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
- Mail your package on the "Ship Date" you selected when creating this label.

Click-N-Ship® Label Record

USPS TRACKING # : 9405 5036 9930 0240 4600 69	
Trans. #: 562782621 Print Date: 05/04/2022 Ship Date: 05/04/2022 Expected Delivery Date: 05/05/2022	Priority Mail® Postage: \$8.95 Total: \$8.95
From: DEBORAH CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
To: KRI PELLETIER SBA COMMUNICATIONS CORPORATION 13 FLANDERS RD STE 125 WESTBOROUGH MA 01581	
Ref#: SBCT-366A	
* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.	



Thank you for shipping with the United States Postal Service!
 Check the status of your shipment on the USPS Tracking® page at usps.com

 Click-N-Ship®	
P	usps.com US POSTAGE Flat Rate Env 05/04/2022 Mailed from 01566
9405 5036 9930 0240 4600 83 0089 5000 0010 6786 U.S. POSTAGE PAID Click-N-Ship®	
PRIORITY MAIL 2-DAY™	
Expected Delivery Date: 05/07/22 Ref#: SBCT-366A 0006	
DEBORAH CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
SHIP TO: JOSEPH KILDUFF MAYOR OF PLYMOUTH 80 MAIN ST TERRYVILLE CT 06786-5107	
USPS TRACKING #  9405 5036 9930 0240 4600 83	
Electronic Rate Approved #038555749	

— ✂ — Cut on dotted line.

Instructions

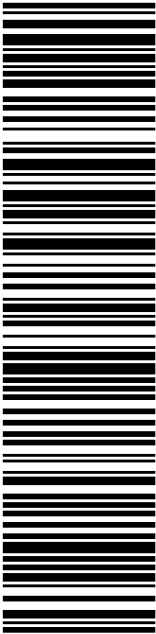
- Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
- Place your label so it does not wrap around the edge of the package.
- Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
- To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
- Mail your package on the "Ship Date" you selected when creating this label.

Click-N-Ship® Label Record

USPS TRACKING # : 9405 5036 9930 0240 4600 83	
Trans. #: 562782621 Print Date: 05/04/2022 Ship Date: 05/04/2022 Expected Delivery Date: 05/07/2022	Priority Mail® Postage: \$8.95 Total: \$8.95
From: DEBORAH CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
To: JOSEPH KILDUFF MAYOR OF PLYMOUTH 80 MAIN ST TERRYVILLE CT 06786-5107	
Ref#: SBCT-366A	
* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.	



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 Click-N-Ship®	
P	usps.com US POSTAGE Flat Rate Env 05/04/2022 Mailed from 01566
9405 5036 9930 0240 4600 90 0089 5000 0010 6786 U.S. POSTAGE PAID Click-N-Ship®	
PRIORITY MAIL 2-DAY™	
Expected Delivery Date: 05/07/22 Ref#: SBCT-366A 0006	
DEBORAH CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
SHIP TO: SCOTT EISENLOHR ZONING ENFORCEMENT OFFICEER 80 MAIN ST TERRYVILLE CT 06786-5107	
USPS TRACKING #  9405 5036 9930 0240 4600 90	
Electronic Rate Approved #038555749	

— ✂ — Cut on dotted line.

Instructions

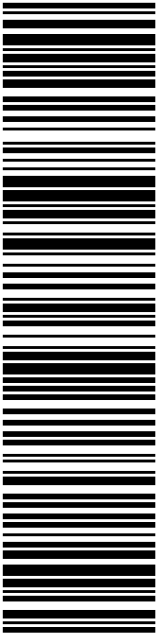
- Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
- Place your label so it does not wrap around the edge of the package.
- Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
- To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
- Mail your package on the "Ship Date" you selected when creating this label.

Click-N-Ship® Label Record

USPS TRACKING # : 9405 5036 9930 0240 4600 90	
Trans. #: 562782621 Print Date: 05/04/2022 Ship Date: 05/04/2022 Expected Delivery Date: 05/07/2022	Priority Mail® Postage: \$8.95 Total: \$8.95
From: DEBORAH CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
To: SCOTT EISENLOHR ZONING ENFORCEMENT OFFICEER 80 MAIN ST TERRYVILLE CT 06786-5107	
Ref#: SBCT-366A	
* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.	



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 Click-N-Ship®	
P	usps.com US POSTAGE Flat Rate Env U.S. POSTAGE PAID Click-N-Ship®
05/04/2022	Mailed from 01566
PRIORITY MAIL 2-DAY™	
DEBORAH CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
Expected Delivery Date: 05/07/22 Ref#: SBCT-366A 0006	
R002	
SHIP TO: RAYMOND & BRENDA LAGOSZ 297 NORTH ST PLYMOUTH CT 06782-2009	
USPS TRACKING #	
	
9405 5036 9930 0240 4601 13	
Electronic Rate Approved #038555749	



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Instructions

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- Place your label so it does not wrap around the edge of the package.
- Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
- To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
- Mail your package on the "Ship Date" you selected when creating this label.

Click-N-Ship® Label Record

USPS TRACKING # : 9405 5036 9930 0240 4601 13	
Trans. #: 562782621 Print Date: 05/04/2022 Ship Date: 05/04/2022 Expected Delivery Date: 05/07/2022	Priority Mail® Postage: \$8.95 Total: \$8.95
From: DEBORAH CHASE NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
To: RAYMOND & BRENDA LAGOSZ 297 NORTH ST PLYMOUTH CT 06782-2009	
Ref#: SBCT-366A	
* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.	



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CT11366A SBA
Tmo



FARMINGTON
210 MAIN ST
FARMINGTON, CT 06032-9998
(800)275-8777

05/05/2022

08:47 AM

Product	Qty	Unit Price	Price
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Prepaid Mail	1		\$0.00
Westborough, MA 01581			
Weight: 0 lb 2.00 oz			
Acceptance Date:			
Thu 05/05/2022			
Tracking #:			
9405 5036 9930 0240 4600 69			

Prepaid Mail	1		\$0.00
Terryville, CT 06786			
Weight: 0 lb 6.70 oz			
Acceptance Date:			
Thu 05/05/2022			
Tracking #:			
9405 5036 9930 0240 4600 90			

Prepaid Mail	1		\$0.00
Terryville, CT 06786			
Weight: 0 lb 6.70 oz			
Acceptance Date:			
Thu 05/05/2022			
Tracking #:			
9405 5036 9930 0240 4600 83			

Prepaid Mail	1		\$0.00
Plymouth, CT 06782			
Weight: 0 lb 6.70 oz			
Acceptance Date:			
Thu 05/05/2022			
Tracking #:			
9405 5036 9930 0240 4601 13			

Grand Total:			\$0.00
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