



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

May 2, 2022

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

RE: Exempt Modification Application
1 Westberg Drive, Farmington, CT 06032
Latitude: 41.730491
Longitude: -72.835486
Site#: CT46141-A_CT11768B_SBA/T-Mobile

Dear Ms. Bachman:

T-Mobile is requesting to file an exempt modification for an existing tower located at 1 Westberg Drive, Farmington, CT 06032. T-Mobile currently maintains three (3) antennas at the 130-foot level of the existing 155-foot tower. The property is owned by the Town of Farmington, and the tower is owned by SBA. T-Mobile now intends to replace (3) existing antennas with (3) new antennas. The new antennas would be installed at the 134-foot level of the tower. This modification includes B2, B5 hardware that is both 4G (LTE), and 5G capable.

T-Mobile Planned Modifications:

Remove: None

Remove and Replace:

(3) RFS APXV18-206517S-C-A20 Antennas (Remove) – (3) COMMSCOPE FVV-65B-R3 Antennas (Replace)

Install New:

(3) COMMSCOPE ATSBT-TOP-FM Smart Bias Ts

(6) Coax 1-5/8"

Existing to Remain:

(6) Coax 1-5/8"



This facility was approved by the Connecticut Siting Council, Docket No. 282 on June 4, 2004. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to C.J. Thomas, Town Council Chair, Kathleen Blonski, Town Manager, and Shannon Rutherford, Town Planner for the Town of Farmington, as well as the property owner and the tower owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

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



NSS **NORTHEAST**
SITE SOLUTIONS
Turnkey Wireless Development

Attachments

Cc: C.J. Thomas, Town Council Chair & Property Owner
Town of Farmington
1 Monteith Drive
Farmington, CT 06032

Kathleen Blonski, Town Manager
Town of Farmington
1 Monteith Drive
Farmington, CT 06032

Shannon Rutherford, Town Planner
Town of Farmington
1 Monteith Drive
Farmington, CT 06032

SBA – Tower Owner

Exhibit A

Original Facility Approval

Connecticut Siting Council ^(/CSC)

[CT.gov Home](#) [\(/\)](#) [Connecticut Siting Council](#) [\(/CSC\)](#) DO 282 Farmington D&O

DOCKET NO. 282 – Sprint Spectrum, L.P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility in Farmington, Connecticut.

} Connecticut
}
} Siting
}
} Council

June 9, 2004

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Sprint Spectrum, L.P. for the construction, maintenance and operation of a wireless telecommunications facility at 1 Westerberg Drive, Farmington, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be designed as a flagpole and shall constructed no taller than 156 feet above ground level to provide the proposed telecommunications services to both public and private entities.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on all parties and intervenors, as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
 - a. a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping; and
 - b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the [2002 Connecticut Guidelines for Soil Erosion and Sediment Control](#), as amended.
3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower.
7. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
8. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.
9. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved. Any request for extensions of the period shall be filed with the Council not later than sixty days prior to expiration date of the Certificate and shall be served on all parties and intervenors, as listed in the service list. Any proposed modifications to this Decision and Order shall likewise be so served.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the [Hartford Courant](#) and the [Valley News](#).

The parties and intervenors to this proceeding are:

<p><u>Applicant</u></p> <p>Sprint Spectrum L.P. d/b/a Sprint PCS</p>	<p><u>Its Representative</u></p> <p>Thomas J. Regan Brown, Rudnick, Berlack, Israels, LLP City Place I 185 Asylum Avenue Hartford, CT 06103-3402 (860) 509-6500</p>
<p><u>Intervenor</u></p> <p>Omnipoint Facilities Network 2 L.L.C. ("T-Mobile")</p>	<p><u>Its Representative</u></p> <p>Stephen J. Humes LeBoeuf, Lamb, Greene & MacRae, LLP Goodwin Square 225 Asylum Street Hartford, CT 06103</p>
<p><u>Intervenor</u></p> <p>Nextel Communications of the Mid-Atlantic, Inc. d/b/a Nextel Communications</p>	<p><u>Its Representative</u></p> <p>Julie Donaldson Kohler, Esq. Hurwitz & Sagarin, LLC 147 N. Broad Street Milford, CT 06460 (203) 877-8000</p>

Exhibit B

Property Card

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2017.



Information on the Property Records for the Municipality of Farmington was last updated on 4/27/2022.



Parcel Information

Location:	1 WESTERBERG DR	Property Use:	Special Purpose	Primary Use:	Sewage Treatment Plant
Unique ID:	21350001	Map Block Lot:	0078 38	Acres:	28.00
490 Acres:	0.00	Zone:	CR	Volume / Page:	0148/0503
Developers Map / Lot:		Census:	4602-01		

Value Information

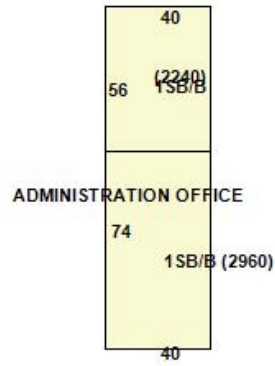
	Appraised Value	Assessed Value
Land	21,000,000	14,700,000
Buildings	21,837,300	15,286,110
Detached Outbuildings	86,060	60,240
Total	42,923,360	30,046,350

Owner's Information

Owner's Data

FARMINGTON TOWN OF
TREATMENT PLANT
, 00000
, 00000

Building 1



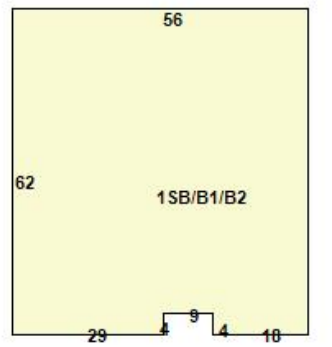
Category:	Office	Use:	Office/Warehouse	GLA:	5,200
Stories:	1.00	Construction:	Fire Resistant	Year Built:	1994
Heating:	FHA	Fuel:	Natural Gas	Cooling Percent:	50
Siding:	BR/CB	Roof Material:	Rolled	Beds/Units:	0

Special Features

Attached Components

Building 2

Photo Not Available



HEADWORKS BUILDING

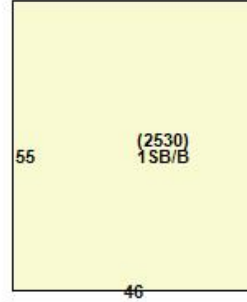
Category:	Office	Use:	Office/Warehouse	GLA:	6,872
Stories:	3.00	Construction:	Fire Resistant	Year Built:	1980
Heating:	FHA	Fuel:	Natural Gas	Cooling Percent:	75
Siding:	BR/CB	Roof Material:	Rolled	Beds/Units:	0

Special Features

Attached Components

Building 3

Photo Not Available



BLDG#3 TRANSFER BUILDING

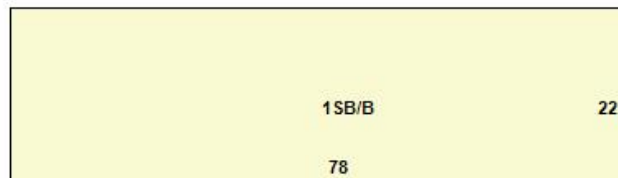
Category:	Office	Use:	Office/Warehouse	GLA:	2,530
Stories:	1.00	Construction:	Fire Resistant	Year Built:	1970
Heating:		Fuel:		Cooling Percent:	0
Siding:		Roof Material:		Beds/Units:	0

Special Features

Attached Components

Building 4

Photo Not Available



BLDG#7 RETURN BUILDING

Category:	Industrial	Use:	Industrial	GLA:	1,716
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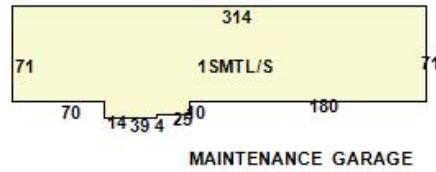
Stories:	1.00	Construction:	Light Steel	Year Built:	1994
Heating:	None	Fuel:		Cooling Percent:	0
Siding:	Metal	Roof Material:	Asphalt	Beds/Units:	0

Special Features

Attached Components

Building 5

Photo Not Available



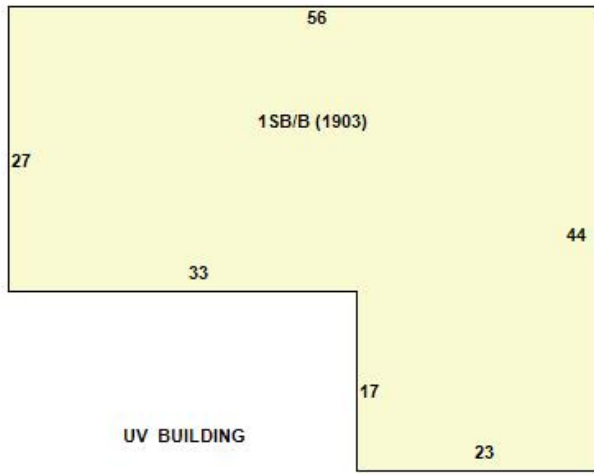
Category:	Industrial	Use:	Industrial	GLA:	23,090
Stories:	1.00	Construction:	Wood Joist	Year Built:	1994
Heating:	None	Fuel:		Cooling Percent:	0
Siding:	Metal	Roof Material:	Asphalt	Beds/Units:	0

Special Features

Attached Components

Building 6

Photo Not Available



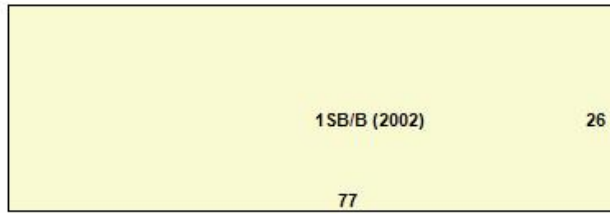
Category:	Industrial	Use:	Industrial	GLA:	1,903
Stories:	0.00	Construction:	Fire Proof	Year Built:	2018
Heating:		Fuel:		Cooling Percent:	0
Siding:		Roof Material:		Beds/Units:	0

Special Features

Attached Components

Building 7

Photo Not Available



PRIMARY BUILDING

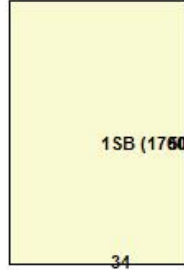
Category:	Industrial	Use:	Industrial	GLA:	2,002
Stories:	0.00	Construction:	Fire Proof	Year Built:	2018
Heating:		Fuel:		Cooling Percent:	0
Siding:		Roof Material:		Beds/Units:	0

Special Features

Attached Components

Building 8

Photo Not Available



BLDG #6 CHEMICAL BUILDING

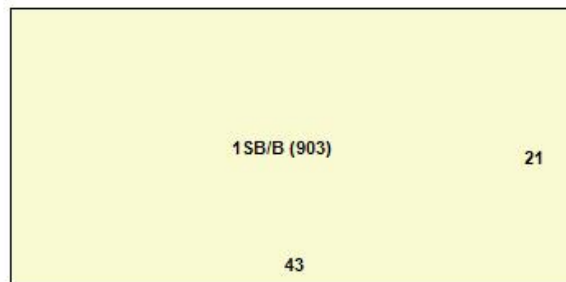
Category:	Industrial	Use:	Industrial	GLA:	1,700
Stories:	0.00	Construction:	Fire Proof	Year Built:	1994
Heating:		Fuel:		Cooling Percent:	0
Siding:		Roof Material:		Beds/Units:	0

Special Features

Attached Components

Building 9

Photo Not Available



TRANSFER BUILDING

Category:	Industrial	Use:	Industrial	GLA:	903
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Stories:	0.00	Construction:	Fire Proof	Year Built:	2018
Heating:		Fuel:		Cooling Percent:	0
Siding:		Roof Material:		Beds/Units:	0

Special Features

Attached Components

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
Det Brick Stone Garage	2018	34.00	31.00	1,054
Sewage Treatment Plant	1994	0.00	0.00	1
Paving	1994	0.00	0.00	24,000

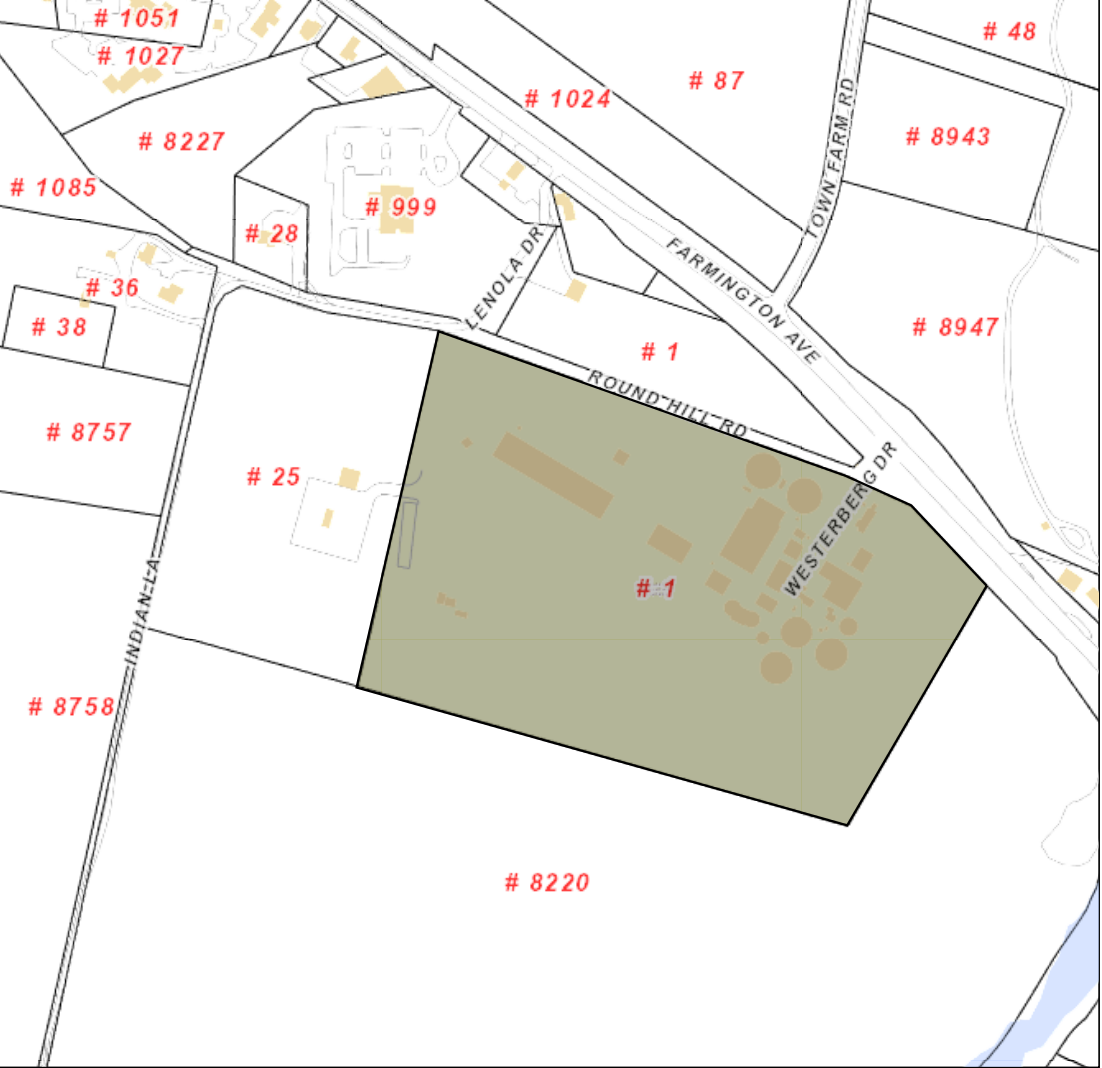
Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Sale Price
FARMINGTON TOWN OF	0148	0503			\$0
FARMINGTON TOWN OF	0000	0000			\$0

Information Published With Permission From The Assessor



Date Printed: 4/29/2022



MAP DISCLAIMER - NOTICE OF LIABILITY
This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Farmington and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 400 feet

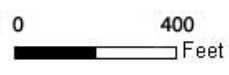


Exhibit C

Construction Drawings

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

SPECIAL CONSTRUCTION NOTE (CANISTER BUMP-OUT DESIGN SERVICES PROVIDED BY SBA COMMUNICATIONS):
SBA COMMUNICATIONS RESPONSIBLE FOR DESIGN-BUILD FOR ALL REQUIRED CANISTER MODIFICATIONS, ENGINEERING CONSTRUCTION CONTROL INSPECTIONS, AND FINAL ENGINEERING AFFIDAVIT (ALL PREVIOUS ITEMS TO BE DESIGN-BUILD PERFORMED BY SBA UNDER A SEPARATE BUILDING PERMIT). THE ENGINEER-OF-RECORD FOR THESE CONSTRUCTION DRAWINGS IS NOT RESPONSIBLE FOR CANISTER BUMP-OUT DESIGN SERVICES OR FOR FINAL ANTENNA FITMENT MODIFICATIONS DESIGNED BY OTHERS.

CT768/SPRINT FRAMINGTON ET

1 WESTERBERG DRIVE
FARMINGTON, CT 06032
HARTFORD COUNTY

SITE NO.: CT11768B

SITE TYPE: 155'± FLAGPOLE

RF DESIGN GUIDELINE: 67G5C998G 6160

SCOPE OF WORK

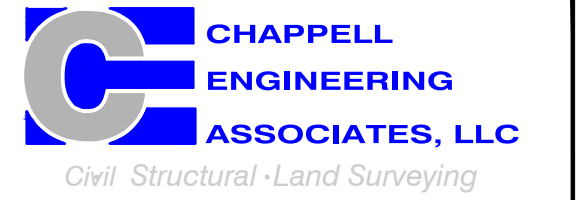
- REMOVE:**
- 3 ANTENNAS
 - 6 TMA'S
 - 6 FILTERS
 - 1 RBS 3106 CABINET
- INSTALL:**
- 3 ANTENNAS
 - 6 RADIOS
 - 3 QUAD DIPLEXERS
 - 3 SMART BIAS T'S
 - 1 B160 BATTERY CABINET
 - 1 6160 CABINET
 - 1 RAC24 CABINET
 - 1 SLACKBOX
 - 6 COAX CABLES
 - 1 150A-2P BREAKER
 - 1 25A-1P BREAKER

T-MOBILE NORTHEAST LLC

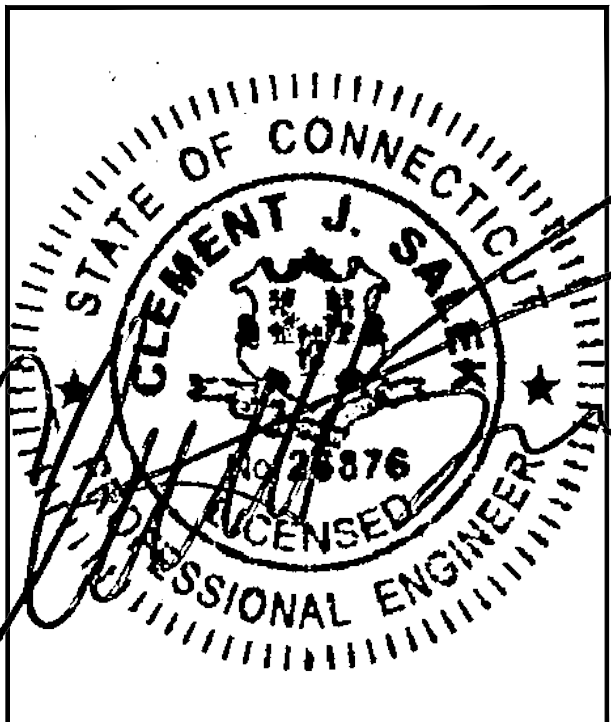
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700



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



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



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	03/30/22	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CT11768B

SITE ADDRESS:
1 WESTERBERG DRIVE
FARMINGTON, CT 06032

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

APPROVALS

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

T-MOBILE TECHNICIAN SITE SAFETY NOTES

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

GENERAL NOTES

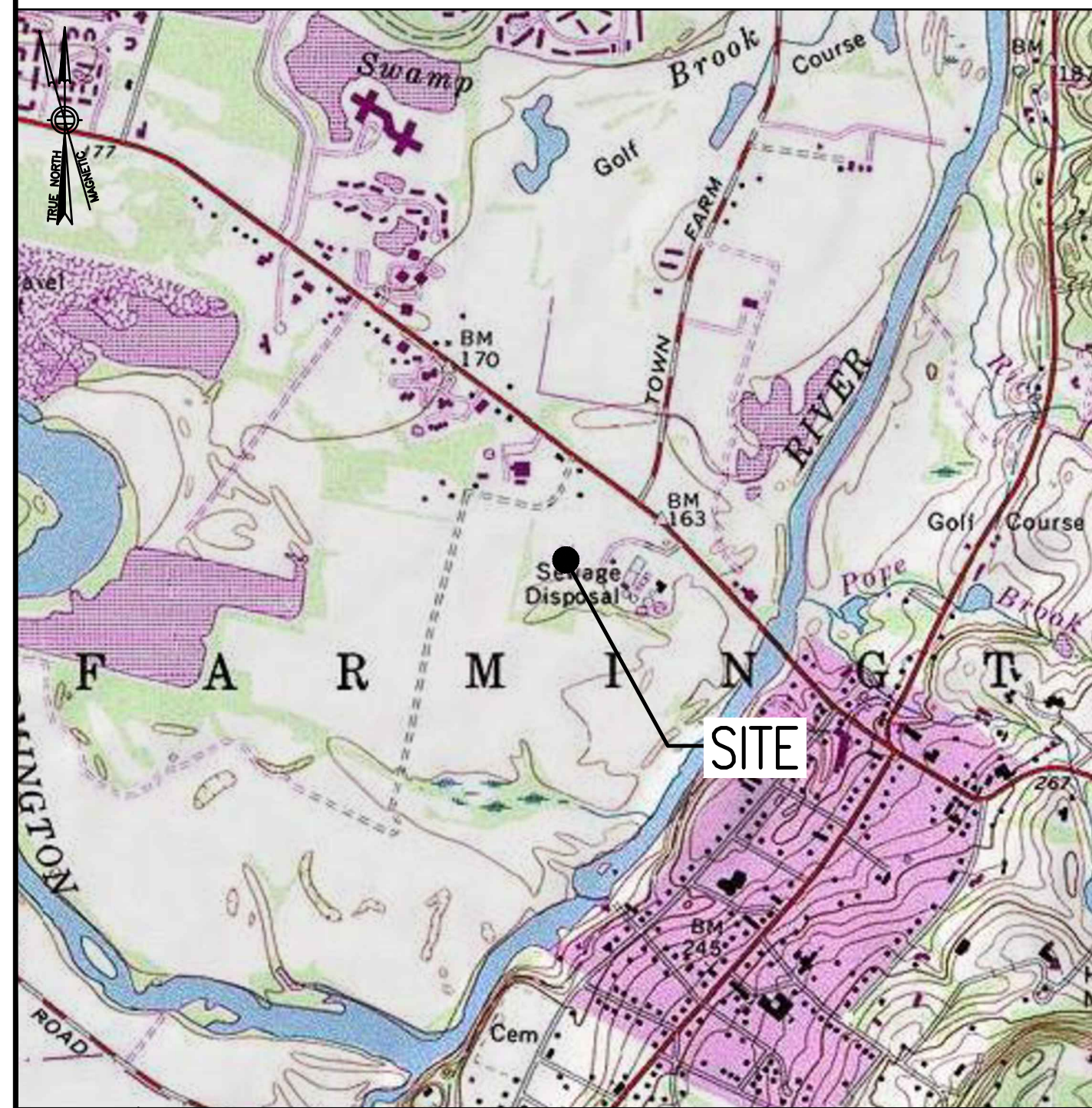
- THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
- THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
- THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE ON-SITE 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

TURN LEFT ONTO S WASHINGTON ST. TURN RIGHT ONTO MA-123 E. TURN LEFT TO MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. MERGE ONTO I-495 NORTH. TAKE EXIT 33b TO MERGE ONTO I-95 SOUTH. KEEP LEFT TO STAY ON I-95 SOUTH. KEEP RIGHT TO STAY ON I-95 SOUTH. TAKE EXIT 91 TOWARD STONINGTON. TURN LEFT ONTO TAUGWONK ROAD. CONTINUE ONTO CT-234 WEST. TURN LEFT ONTO NORTH MAIN STREET. TURN LEFT ONTO US-1 NORTH. SITE WILL BE ON THE LEFT.

SHEET INDEX

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

DO NOT SCALE DRAWINGS

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

PROJECT SUMMARY

SITE NUMBER:	CT11768B
SITE NAME:	CT768/SPRINT FARMINGTON ET
SBA SITE NUMBER:	CT46141-A
SBA SITE NAME:	WATER TREATMENT PLANT 2, CT
SITE ADDRESS:	1 WESTERBERG DRIVE FARMINGTON, CT 06032
PROPERTY OWNER:	PHILLIP C. MCCLELLAN 11 VELVET LANE MYSTIC, CT 06355
TOWER OWNER:	SBA 2012 TC ASSETS, LLC. 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	HARTFORD COUNTY
ZONING DISTRICT:	COMMERCIAL
STRUCTURE TYPE:	FLAGPOLE
STRUCTURE HEIGHT:	155'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: N.41.730499° N.41°43'49.80" LONGITUDE W.72.835617° W.71°50'08.22"

SPECIAL ZONING NOTE:

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

GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR – T–MOBILE
SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
OWNER – T–MOBILE
OEM – ORIGINAL EQUIPMENT MANUFACTURER
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR AND/OR LANDLORD PRIOR TO CONSTRUCTION.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.
- THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.
- CONSTRUCTION SHALL COMPLY WITH ALL T–MOBILE STANDARDS AND SPECIFICATIONS.
- SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- THE EXISTING CELL SITES ARE IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
- IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

SITE WORK GENERAL NOTES:

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

CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (400PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST EARTH.....3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 AND LARGER2 IN.
#5 AND SMALLER & WWF1½ IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
SLAB AND WALL¾ IN.
BEAMS AND COLUMNS½ IN.
- A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.
- CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
(A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIER'S PLANT.
(B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.
- AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.
- EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

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

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

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

COMPACTION EQUIPMENT:

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

CONSTRUCTION NOTES:

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

ELECTRICAL INSTALLATION NOTES:

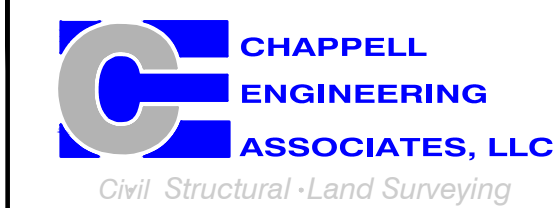
- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TERCORDIA.
- SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLE TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TERCORDIA.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER–STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.
- POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE AND NEC.
- NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE AND NEC.
- CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED, OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

**T-MOBILE
NORTHEAST LLC**

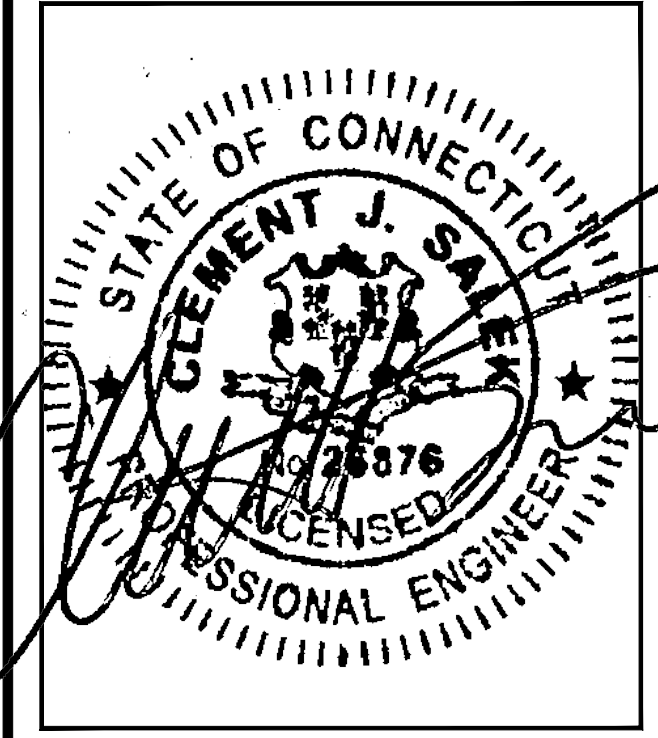
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CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
0	03/30/22	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CT11768B

SITE ADDRESS:
1 WESTERBERG DRIVE
FARMINGTON, CT 06032

SHEET TITLE

GENERAL NOTES

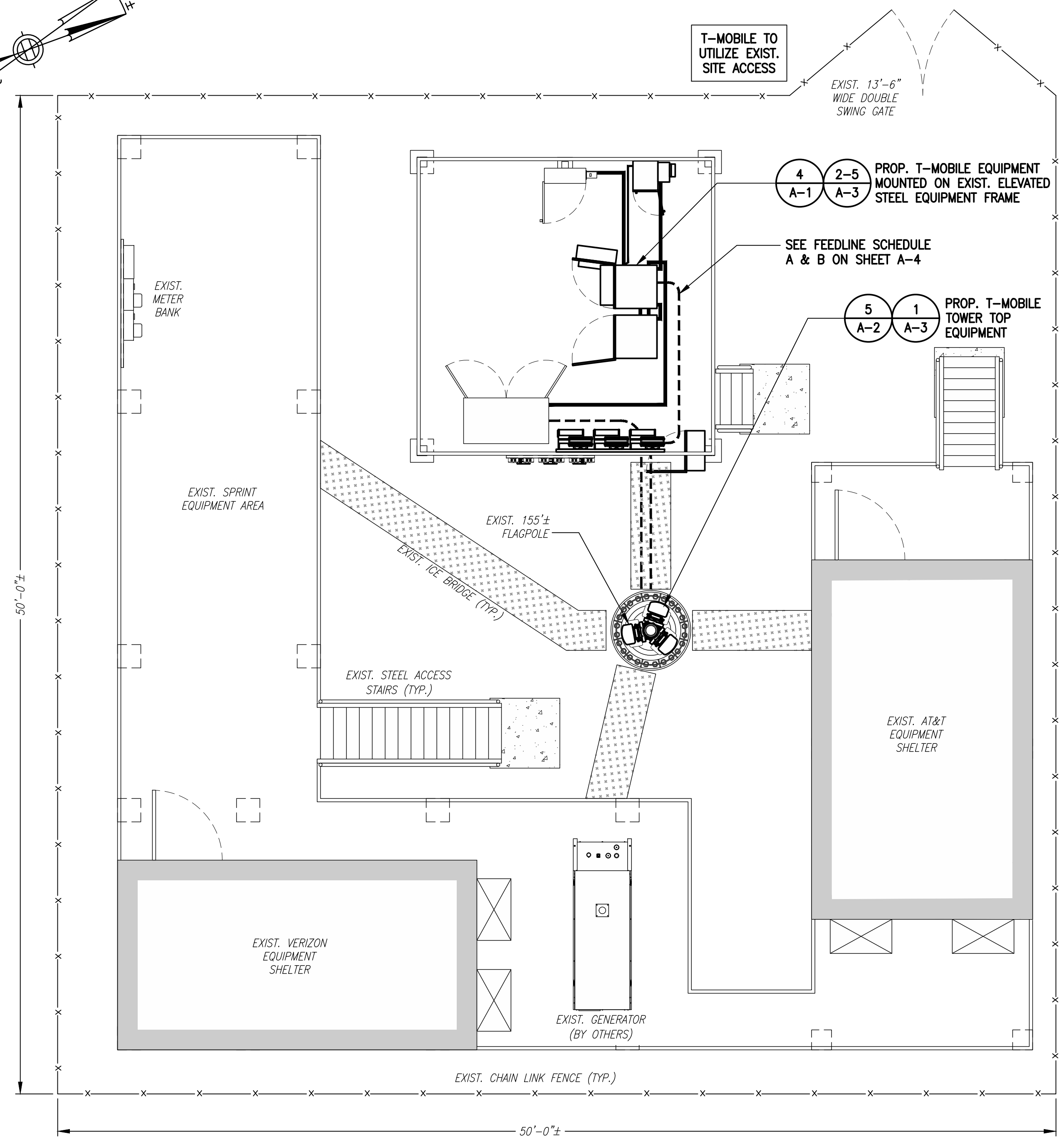
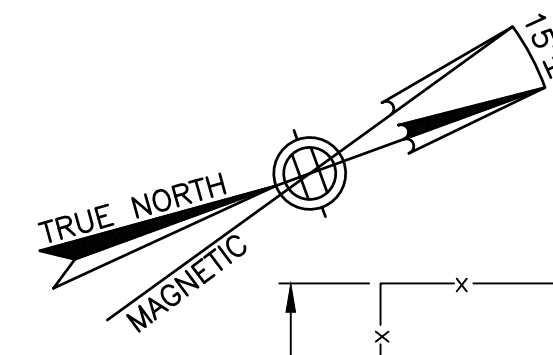
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GN-1

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

SPECIAL CONSTRUCTION NOTE (CANISTER BUMP-OUT DESIGN SERVICES PROVIDED BY SBA COMMUNICATIONS):
 SBA COMMUNICATIONS RESPONSIBLE FOR DESIGN-BUILD FOR ALL REQUIRED CANISTER MODIFICATIONS, ENGINEERING CONSTRUCTION CONTROL INSPECTIONS, AND FINAL ENGINEERING AFFIDAVIT (ALL PREVIOUS ITEMS TO BE DESIGN-BUILD PERFORMED BY SBA UNDER A SEPARATE BUILDING PERMIT). THE ENGINEER-OF-RECORD FOR THESE CONSTRUCTION DRAWINGS IS NOT RESPONSIBLE FOR CANISTER BUMP-OUT DESIGN SERVICES OR FOR FINAL ANTENNA FITMENT MODIFICATIONS DESIGNED BY OTHERS.

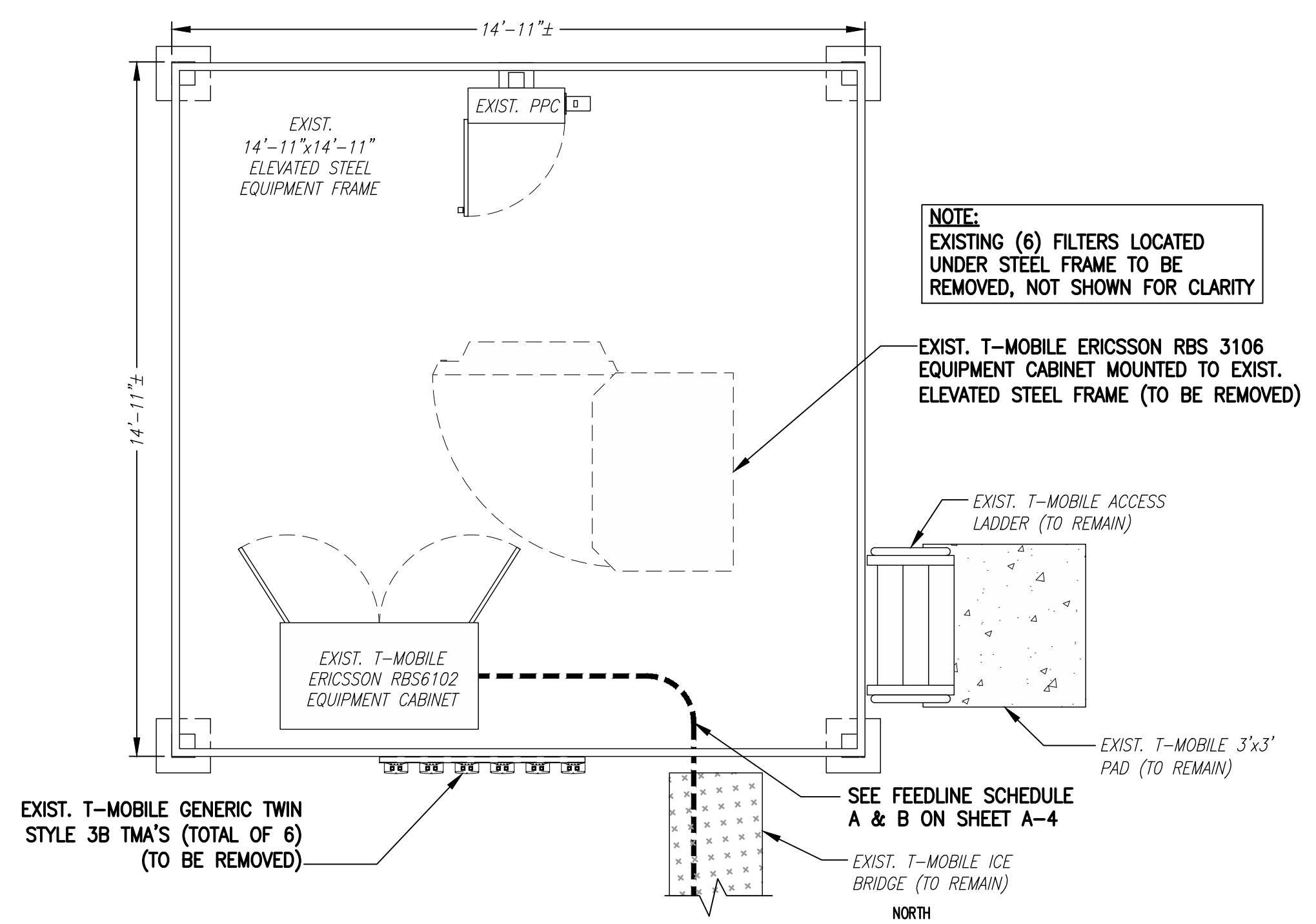
SPECIAL CONSTRUCTION NOTE:
 GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED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



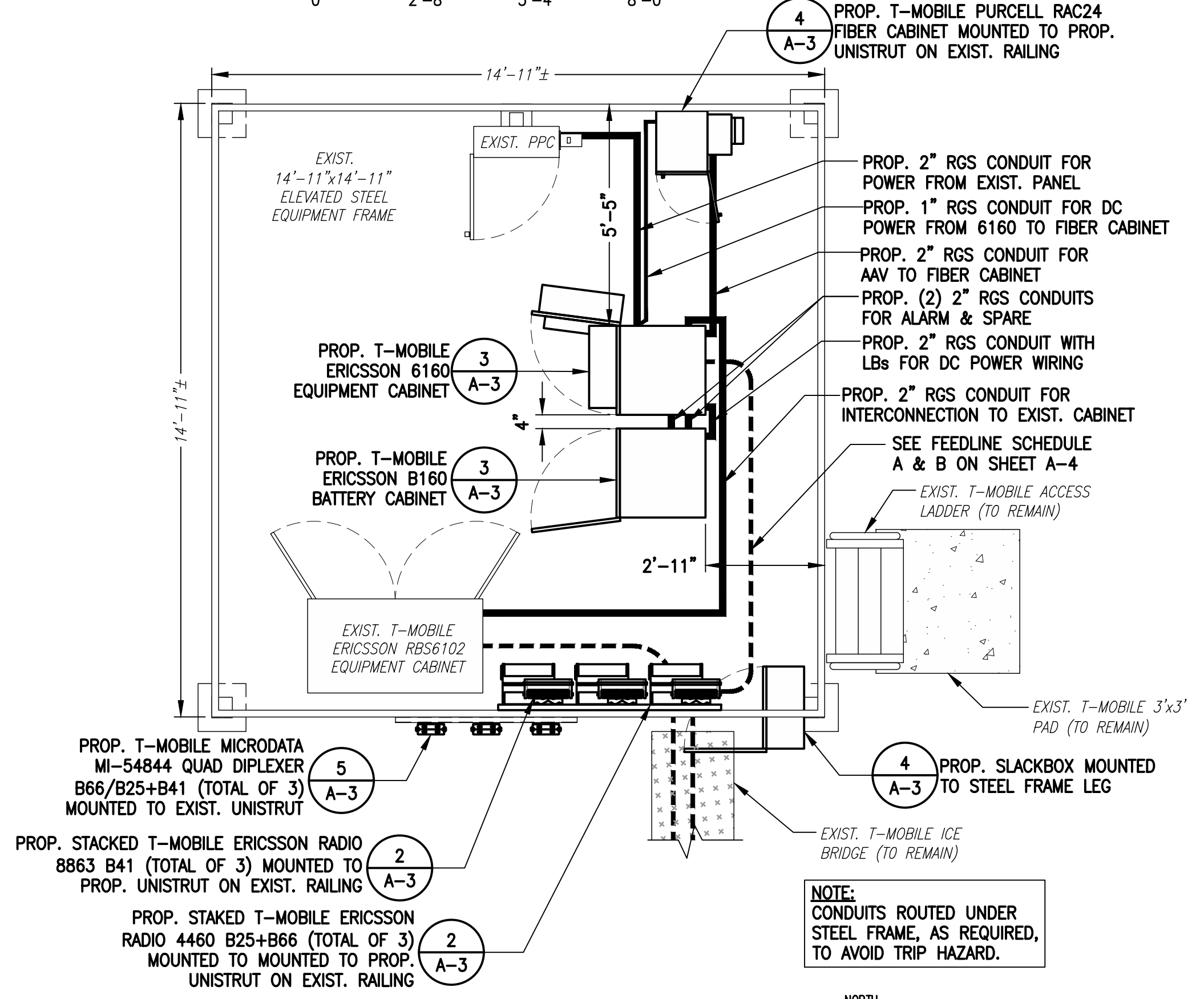
COMPOUND PLAN
 SCALE: 1/4" = 1'-0"
 0 4'-0" 8'-0" 12'-0"



EXISTING EQUIPMENT PHOTO
 SCALE: N.T.S.



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



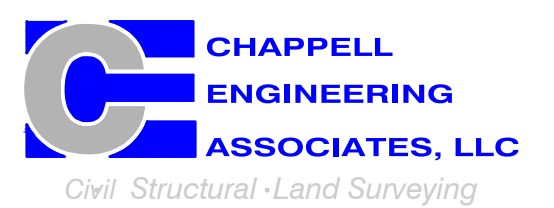
PROPOSED EQUIPMENT PLAN
 SCALE: 3/8" = 1'-0"
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**T-MOBILE
 NORTHEAST LLC**

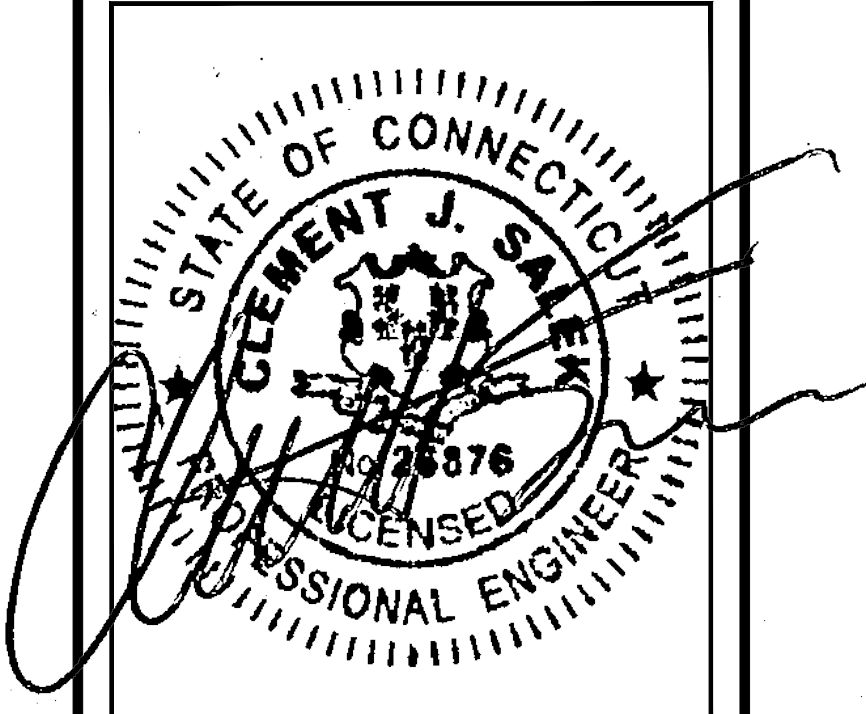
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APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
0	03/30/22	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CT11768B

SITE ADDRESS:
 1 WESTERBERG DRIVE
 FARMINGTON, CT 06032

SHEET TITLE
**COMPOUND &
 EQUIPMENT PLANS**

SHEET NUMBER
A-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.

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

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.

SPECIAL CONSTRUCTION NOTE (CANISTER BUMP-OUT DESIGN SERVICES PROVIDED BY SBA COMMUNICATIONS):
 SBA COMMUNICATIONS RESPONSIBLE FOR DESIGN-BUILD FOR ALL REQUIRED CANISTER MODIFICATIONS, ENGINEERING CONSTRUCTION CONTROL INSPECTIONS, AND FINAL ENGINEERING AFFIDAVIT (ALL PREVIOUS ITEMS TO BE DESIGN-BUILD PERFORMED BY SBA UNDER A SEPARATE BUILDING PERMIT). THE ENGINEER-OF-RECORD FOR THESE CONSTRUCTION DRAWINGS IS NOT RESPONSIBLE FOR CANISTER BUMP-OUT DESIGN SERVICES OR FOR FINAL ANTENNA FITMENT MODIFICATIONS DESIGNED BY OTHERS.

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

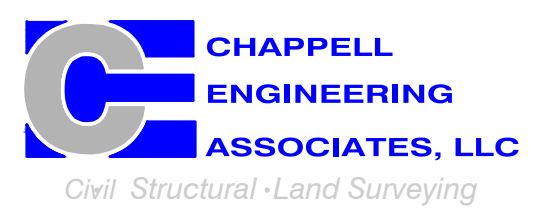
NOTE:
 VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

**T-MOBILE
 NORTHEAST LLC**

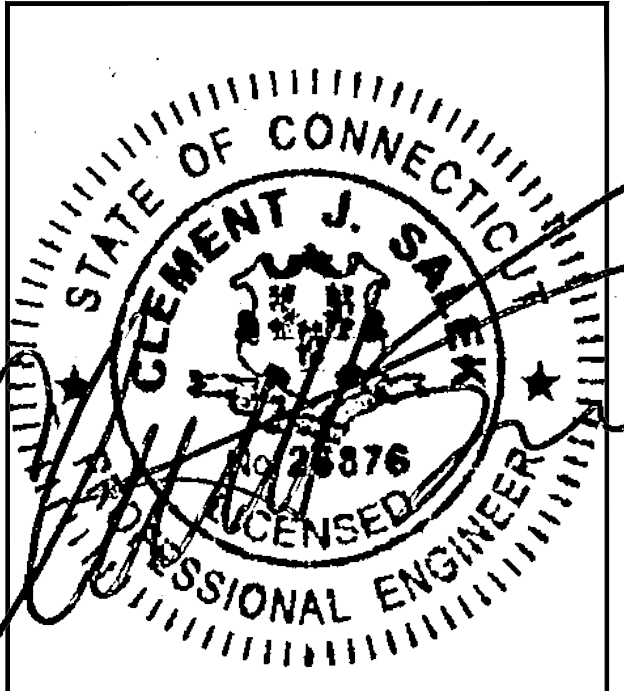
15 COMMERCE WAY, SUITE B
 NORTON, MA 02766
 (508) 286-2700



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



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 201 BOSTON POST ROAD WEST, SUITE 101
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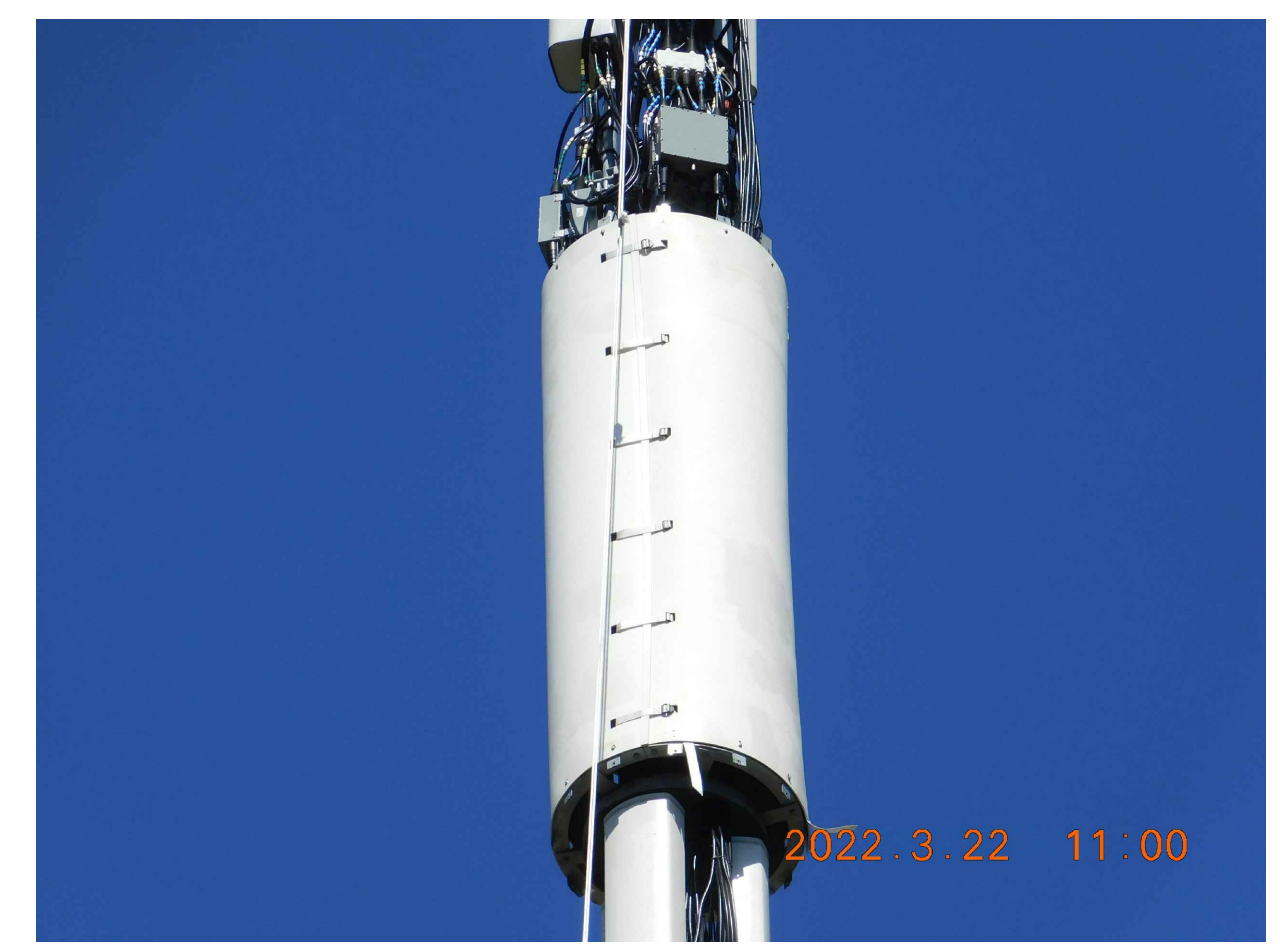
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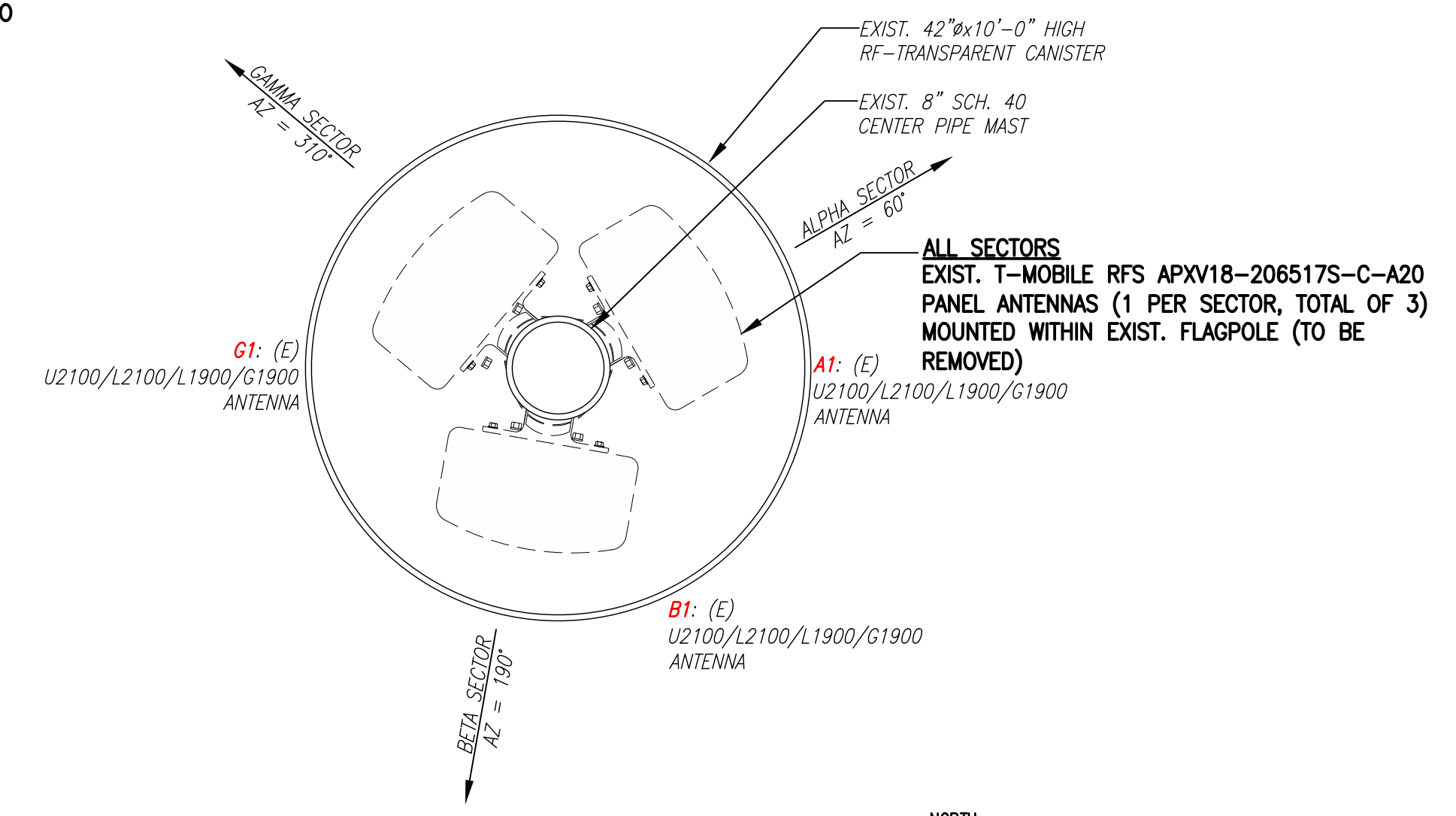
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SHEET TITLE
**TOWER ELEVATIONS &
 ANTENNA PLANS**

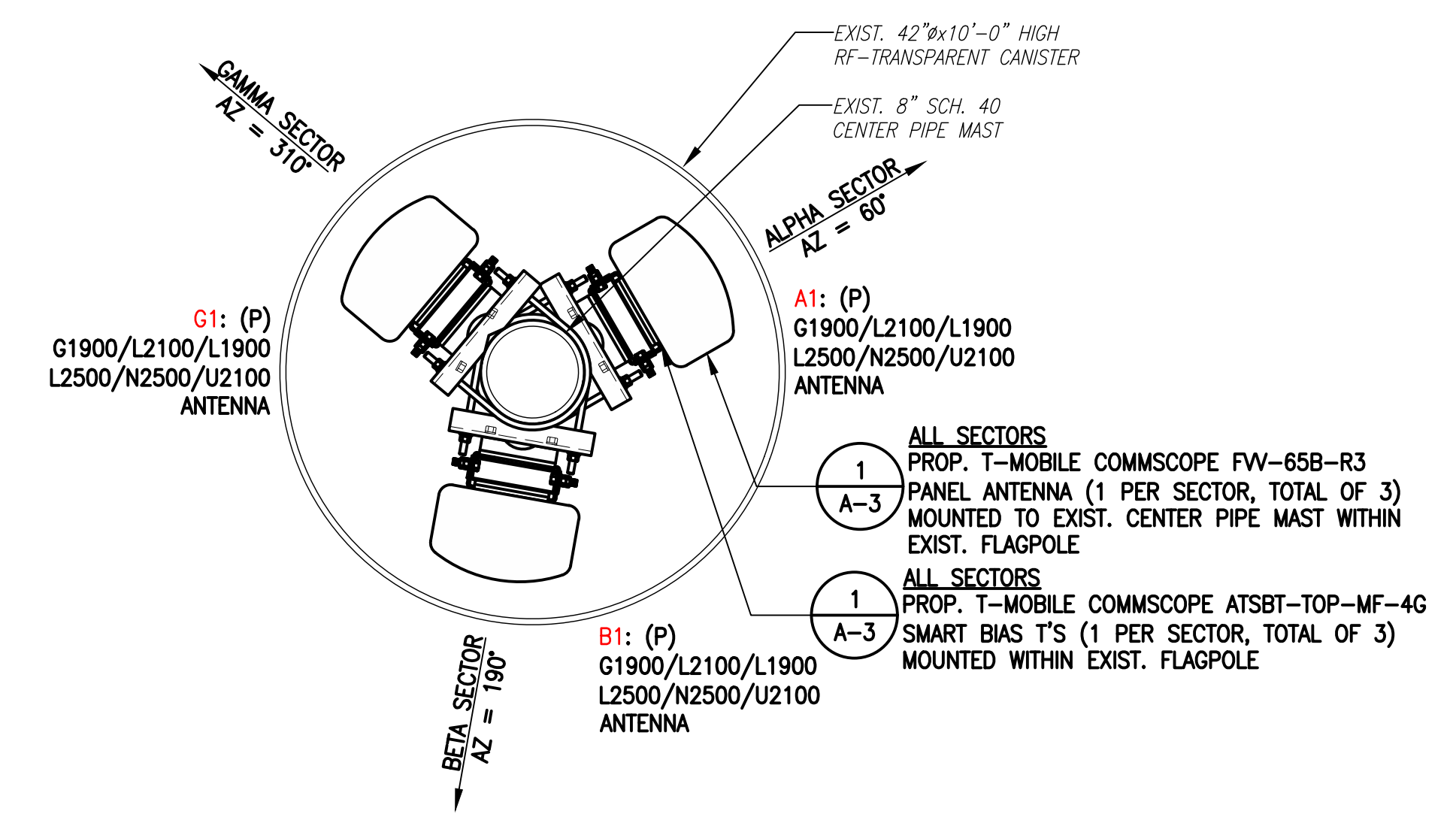
SHEET NUMBER
A-2



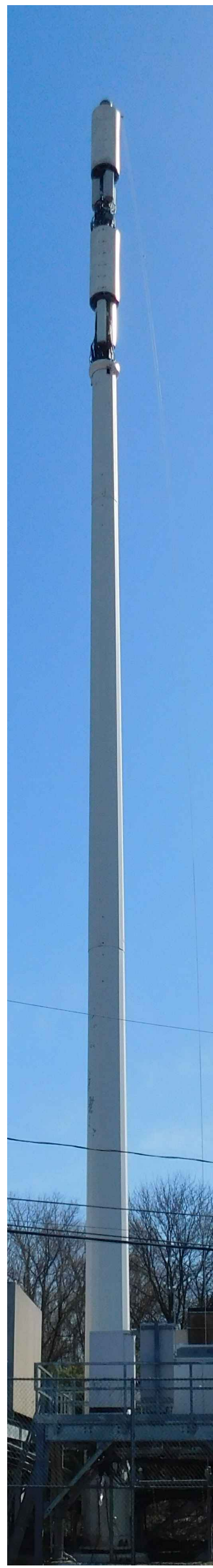
EXISTING ANTENNA PHOTO 3
 SCALE: N.T.S. A-2



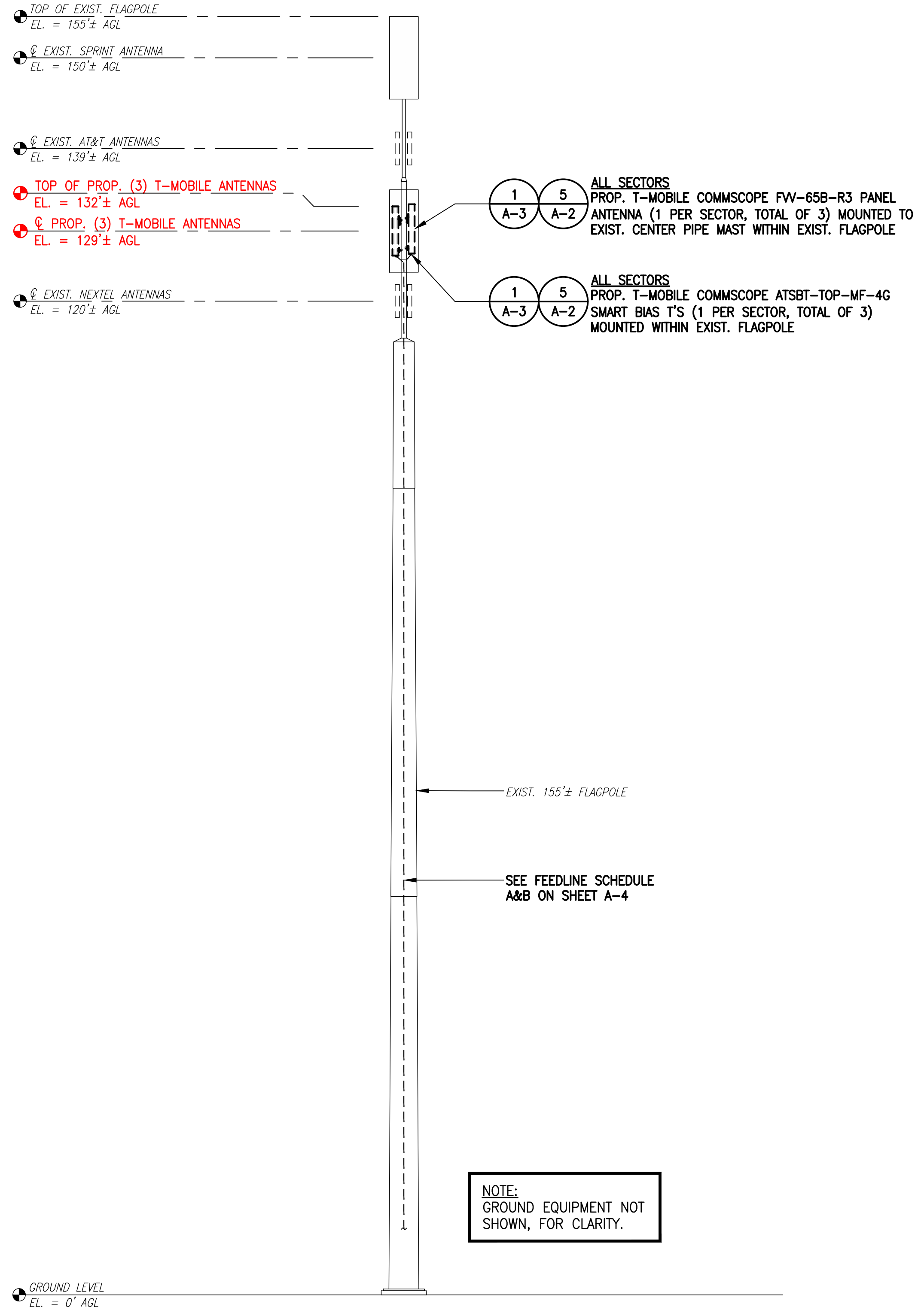
EXISTING ANTENNA PLAN 4
 SCALE: 1" = 1'-0" A-2



PROPOSED ANTENNA PLAN 5
 SCALE: 1" = 1'-0" A-2



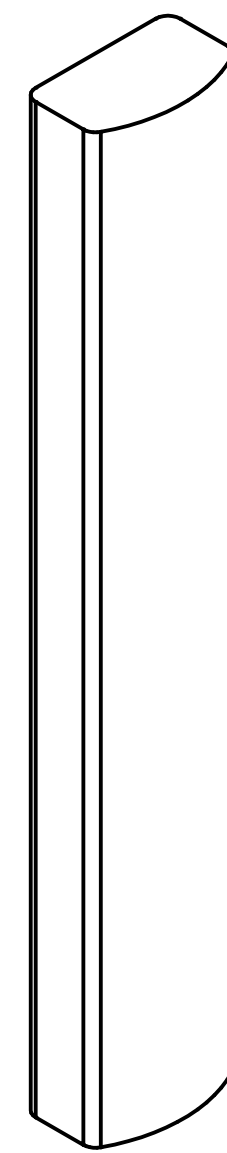
EXISTING TOWER PHOTO 1
 SCALE: N.T.S. A-2



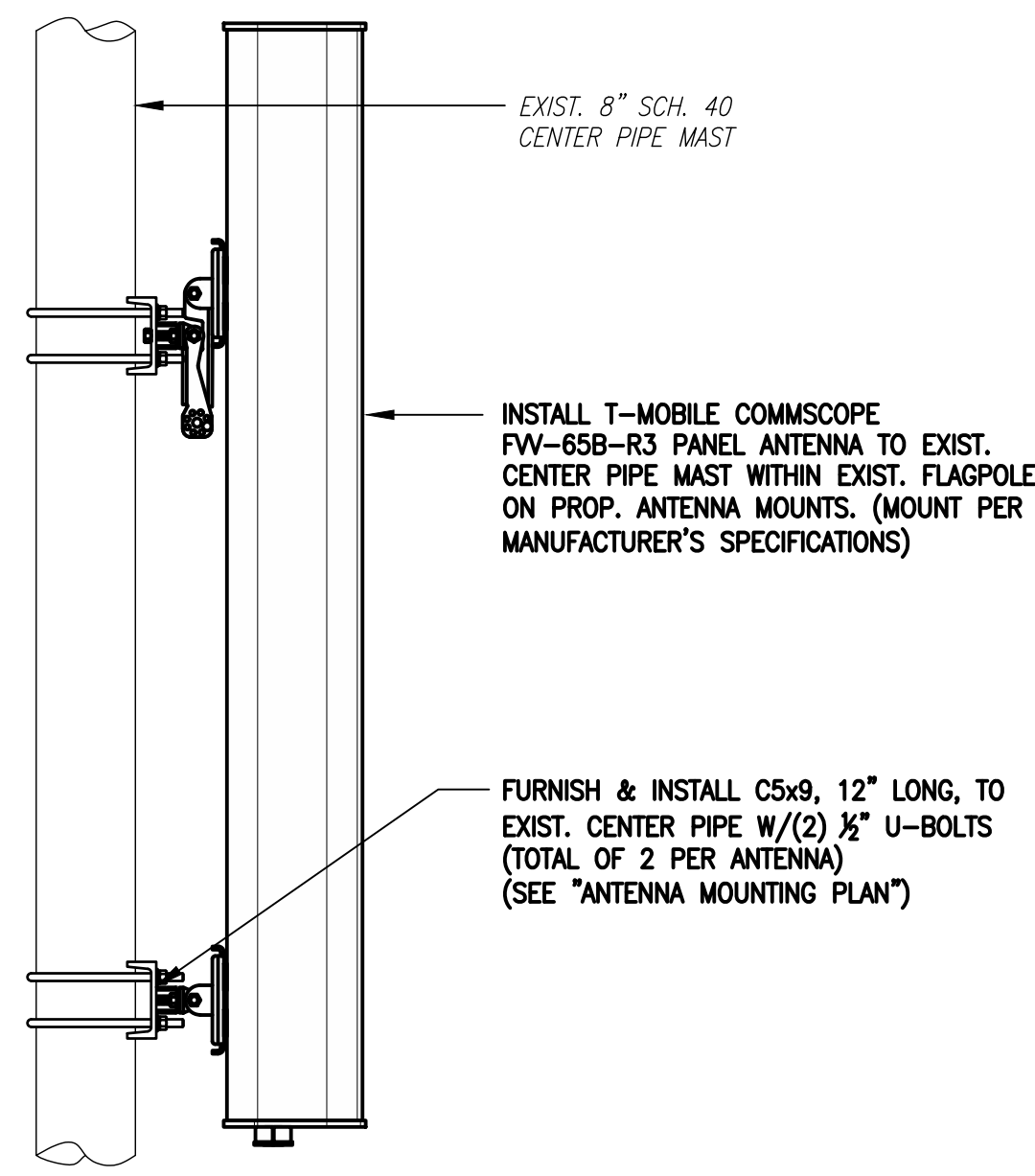
TOWER ELEVATION 2
 SCALE: 1" = 10'-0" A-2

NOTE:
 GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.

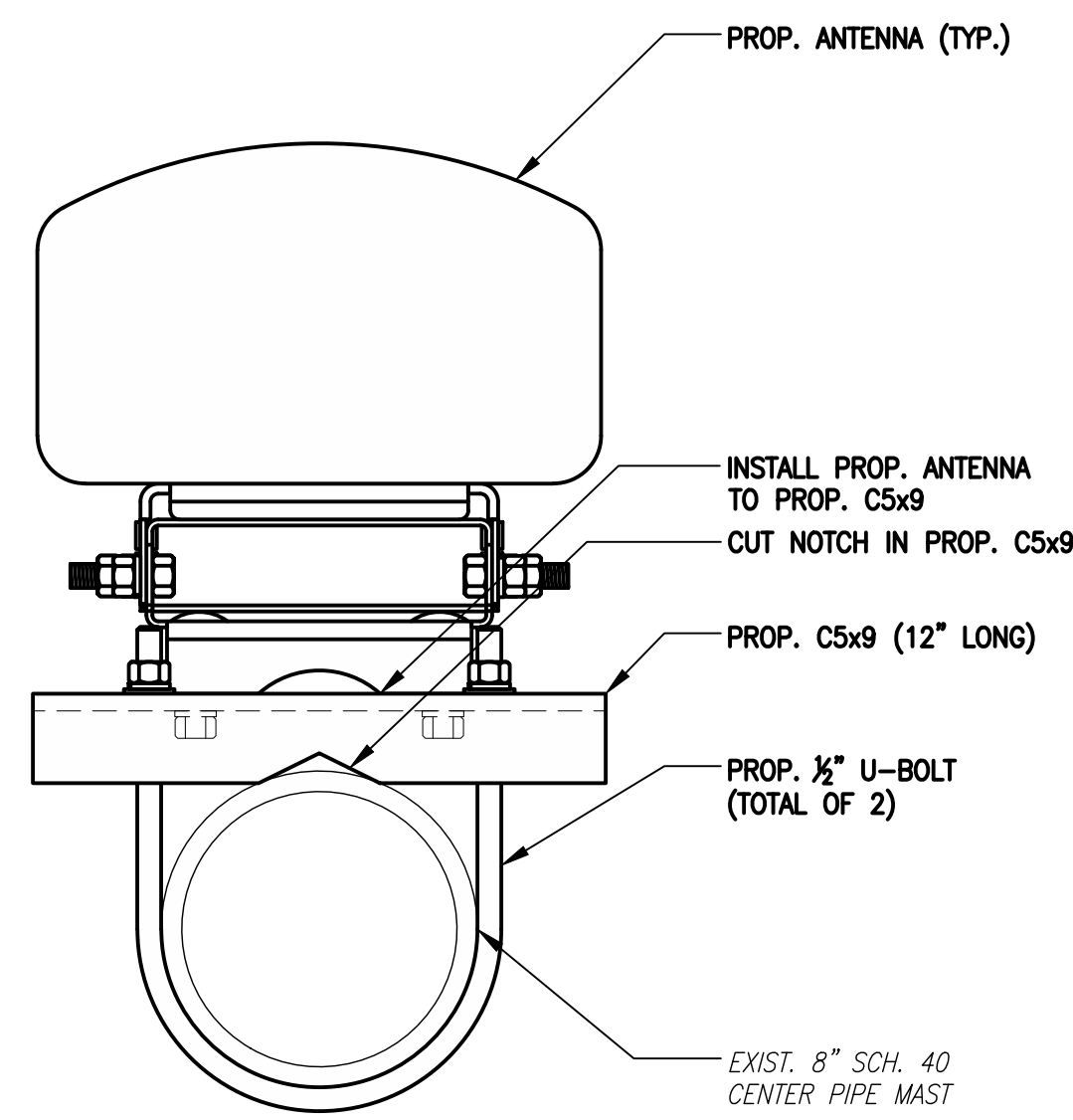




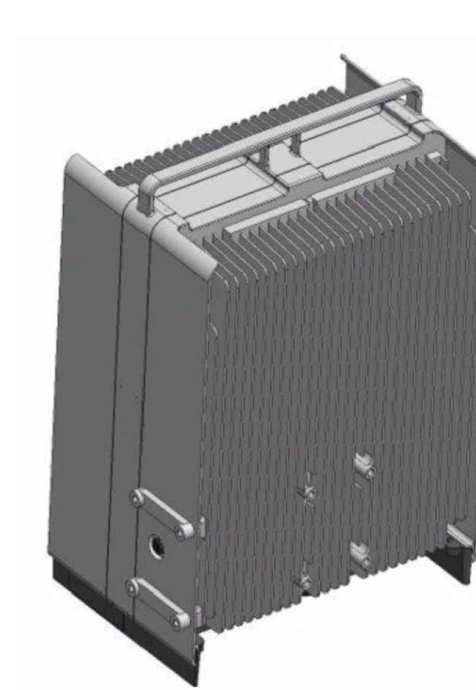
COMMSCOPE FW-65B-R3 ANTENNA
 DIMENSIONS: 72.0"H x 11.8"W x 7.1"D
 WEIGHT: 43.2 lbs
 QUANTITY: 1 PER SECTOR, TOTAL OF 3



ANTENNA MOUNTING SECTION
 SCALE: 1" = 1'-0"



ANTENNA MOUNTING PLAN
 SCALE: 3" = 1'-0"



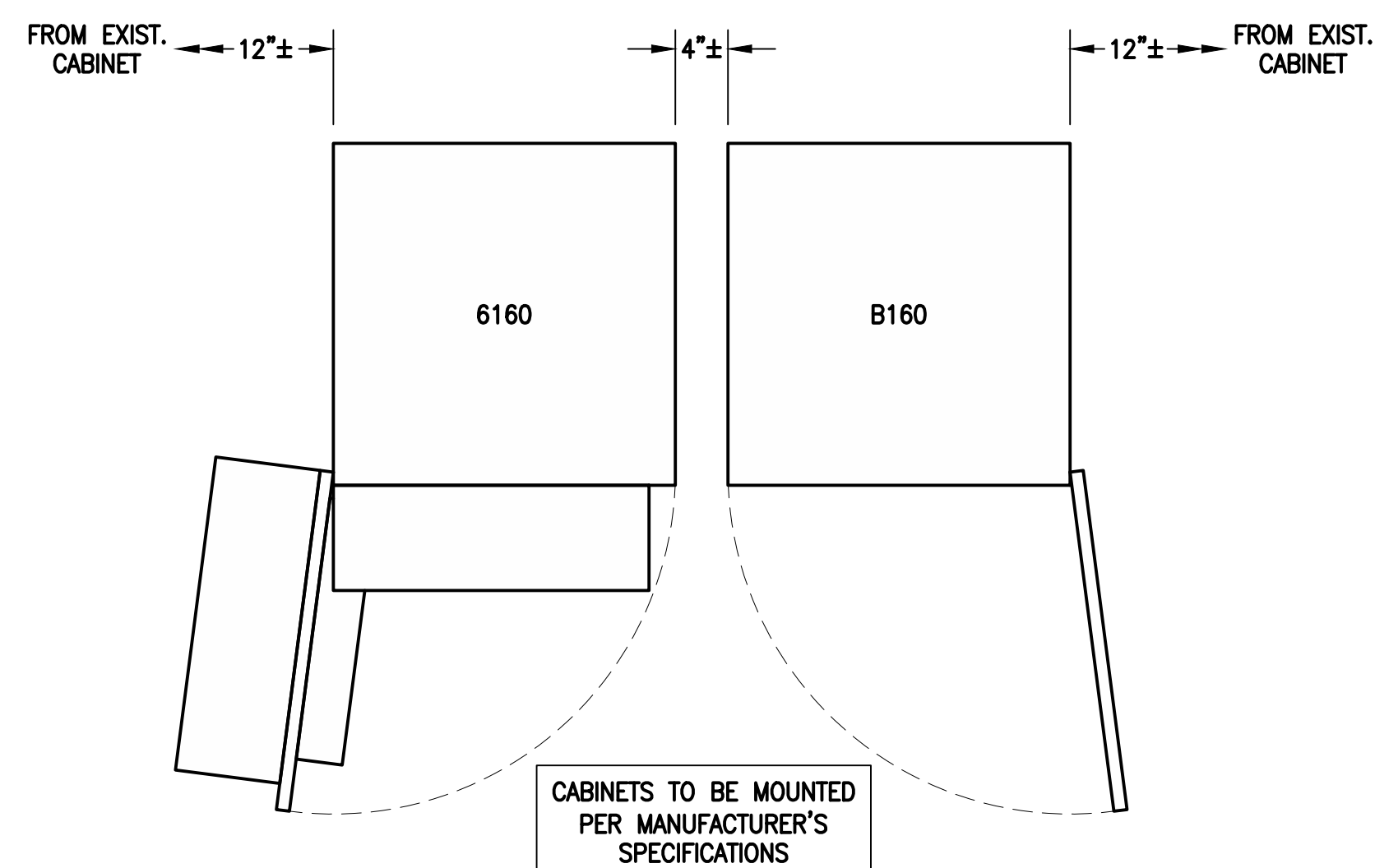
ERICSSON RADIO 4460 B25+B66
 DIMENSIONS: 17.0"H x 15.1"W x 11.9"D
 WEIGHT: 104.0 lbs
 QUANTITY: TOTAL OF 3



ERICSSON RADIO 8863 B41
 DIMENSIONS: 18.5"H x 14.5"W x 5.5"D
 WEIGHT: 51.0 lbs
 QUANTITY: TOTAL OF 3

RADIO DETAILS
 SCALE: N.T.S.

ANTENNA AND MOUNTING DETAILS
 SCALE: N.T.S.



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

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

EQUIPMENT DETAIL
 SCALE: N.T.S.



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



PURCELL SITE SUPPORT CABINET RAC24
 DIMENSIONS: 24.0"H x 15.7"W x 20.0"D
 QUANTITY: TOTAL OF 1

SSC DETAILS
 SCALE: N.T.S.



MICRODATA MI-54844 QUAD (8:4) B66/B25+B41 DIPLEXER
 DIMENSIONS: 4.3"H x 9.4"W x 3.5"D
 WEIGHT: 11.0 lbs
 QUANTITY: TOTAL OF 3

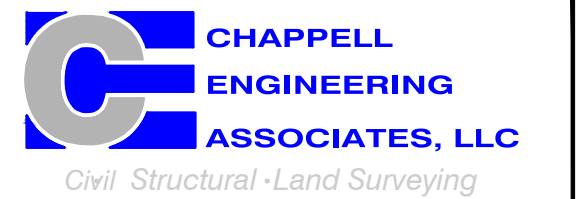
DIPLEXER DETAIL
 SCALE: N.T.S.

T-MOBILE NORTHEAST LLC

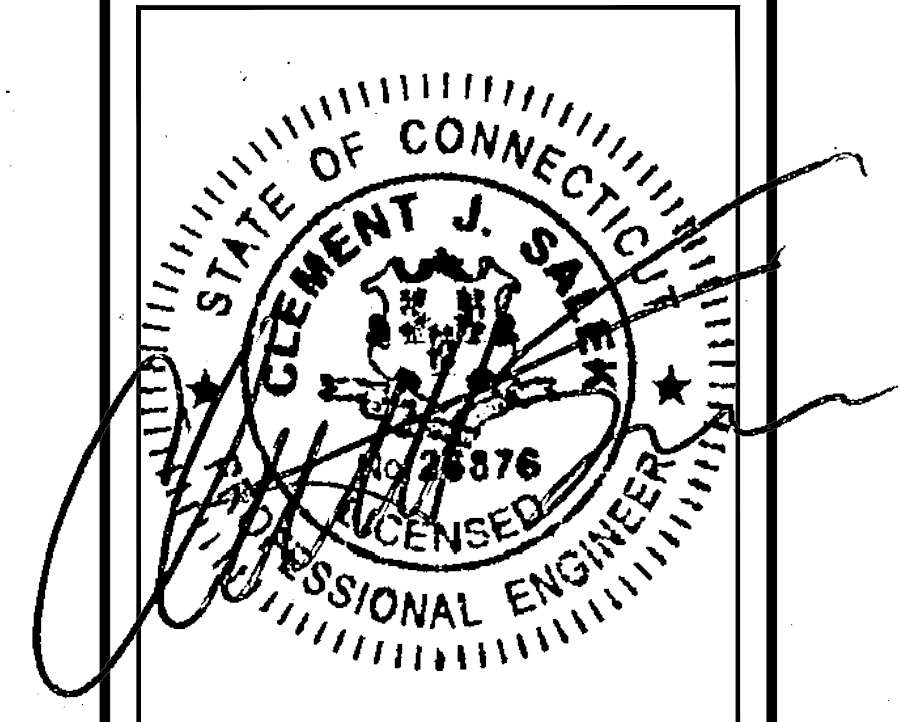
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SHEET TITLE
SITE DETAILS

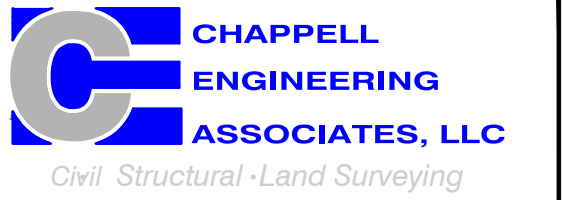
SHEET NUMBER
A-3

**T-MOBILE
NORTHEAST LLC**

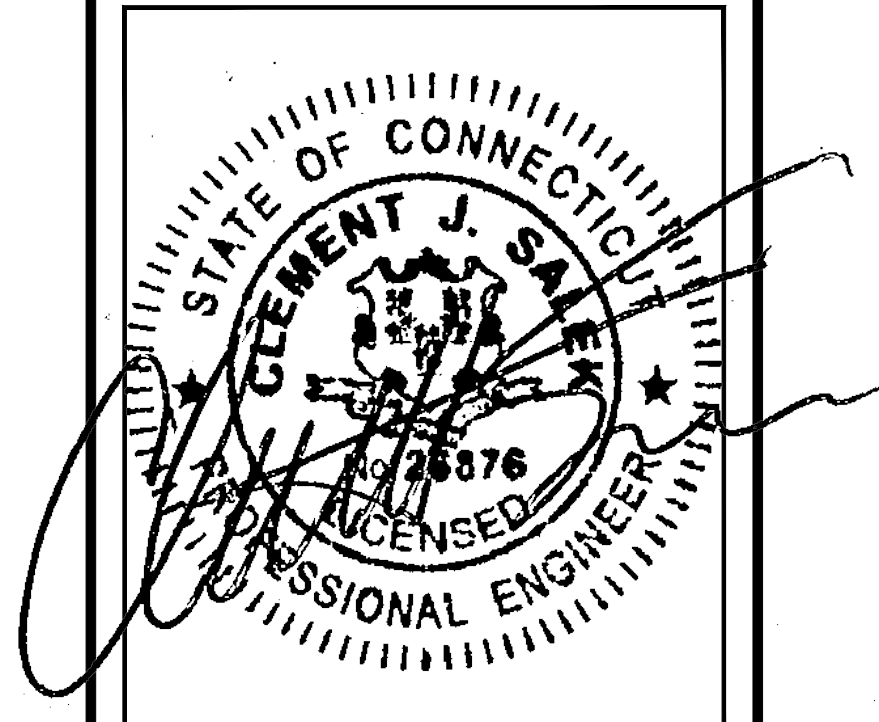
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SHEET TITLE
**ANTENNA &
FEEDLINE CHARTS**

SHEET NUMBER
A-4

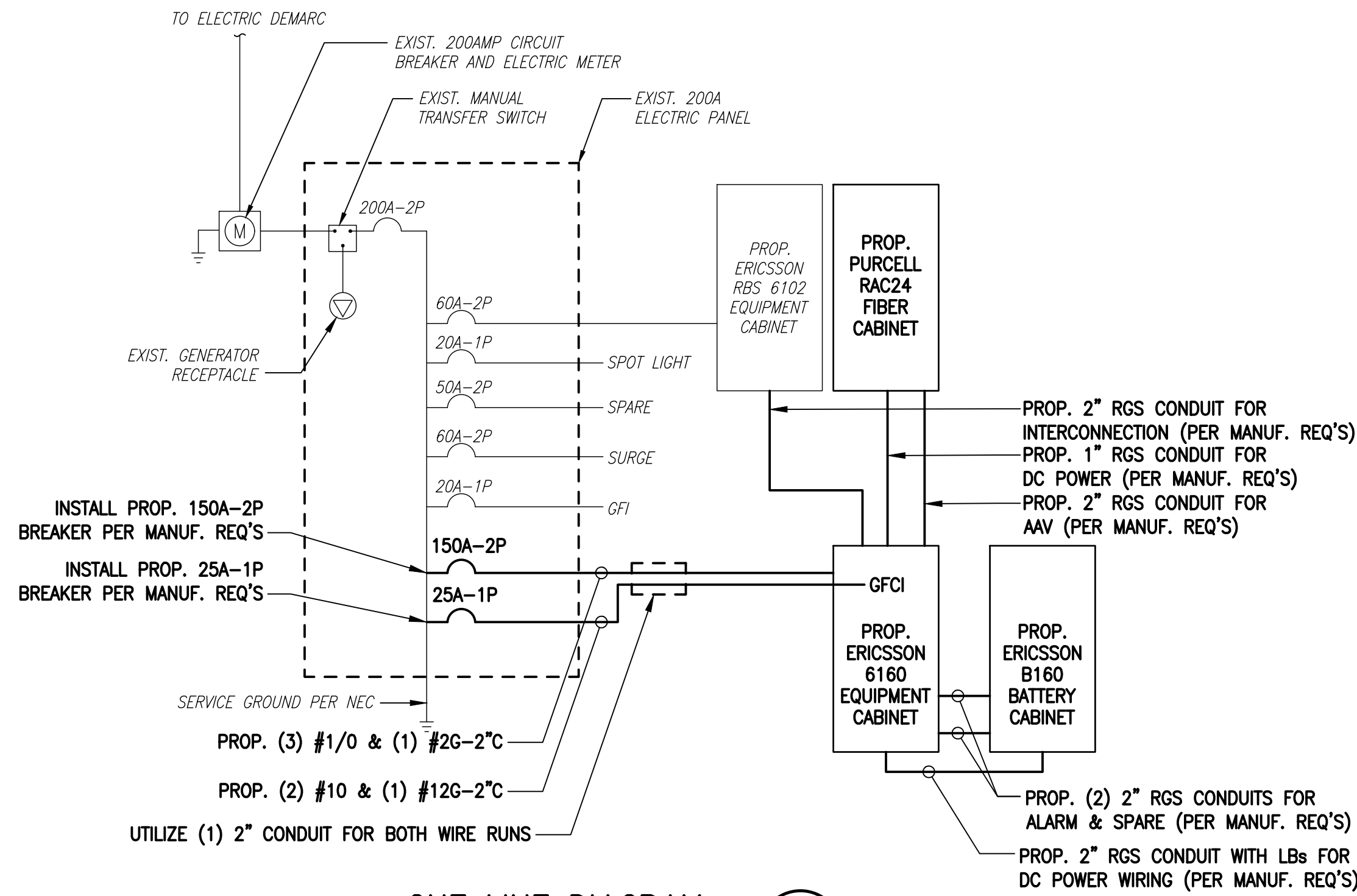
FINAL ANTENNA CONFIGURATION								
SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	SIGNAL CABLES
ALPHA	COMMSCOPE FW-65B-R3	129'± AGL	60°	0°	4°	G1900/U2100/L2100/ L1900/L2500/N2500	COMMSCOPE ATSBT-TOP-MF-4G	(6) 1-5/8" COAX CABLES
							MICRODATA B66/B25+B41 DIPLEXER	
							ERICSSON RADIO 4460 B25+B66	
BETA	COMMSCOPE FW-65B-R3	129'± AGL	190°	0°	4°	G1900/U2100/L2100/ L1900/L2500/N2500	ERICSSON RADIO 8863 B41	(6) 1-5/8" COAX CABLES
							COMMSCOPE ATSBT-TOP-MF-4G	
							MICRODATA B66/B25+B41 DIPLEXER	
GAMMA	COMMSCOPE FW-65B-R3	129'± AGL	310°	0°	4°	G1900/U2100/L2100/ L1900/L2500/N2500	ERICSSON RADIO 8863 B41	(6) 1-5/8" COAX CABLES
							COMMSCOPE ATSBT-TOP-MF-4G	
							MICRODATA B66/B25+B41 DIPLEXER	

CABLE NOTE: SEE FEEDLINE SCHEDULE A & B BELOW.

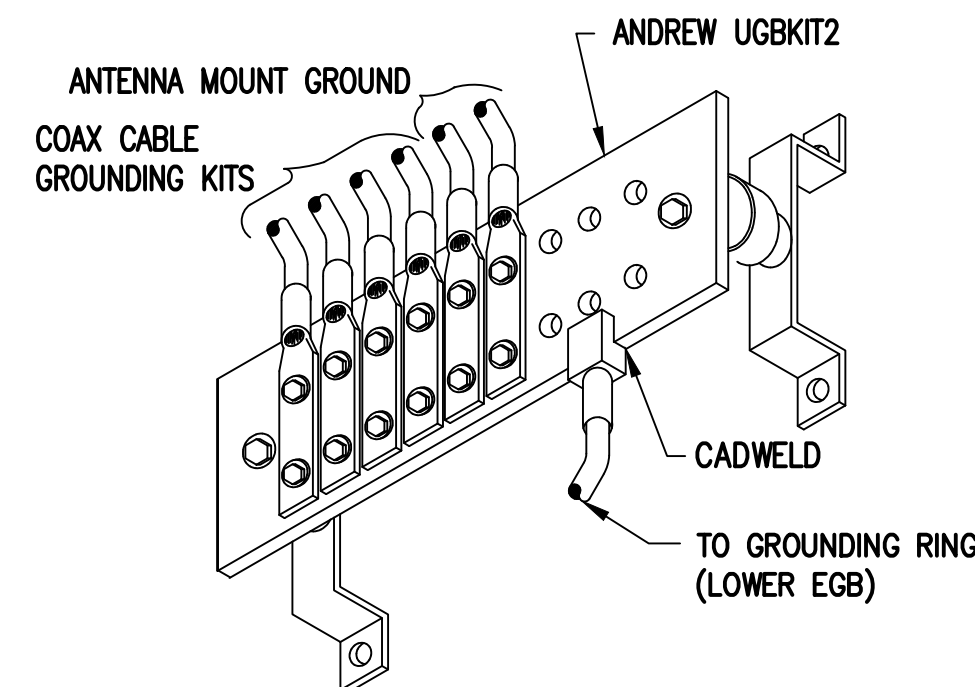
NOTE: RFDS REV6 - 03/02/22

FEEDLINE SCHEDULE		
SCHEDULE	FEEDLINES	LOCATION
A	<p>EXISTING TO REMAIN: (1) 1/2" COAX CABLE FOR GPS ANTENNA (6) 1-5/8" COAX CABLES</p> <p>EXISTING TO BE REMOVED: NONE</p>	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (6) 1-5/8" COAX CABLES	

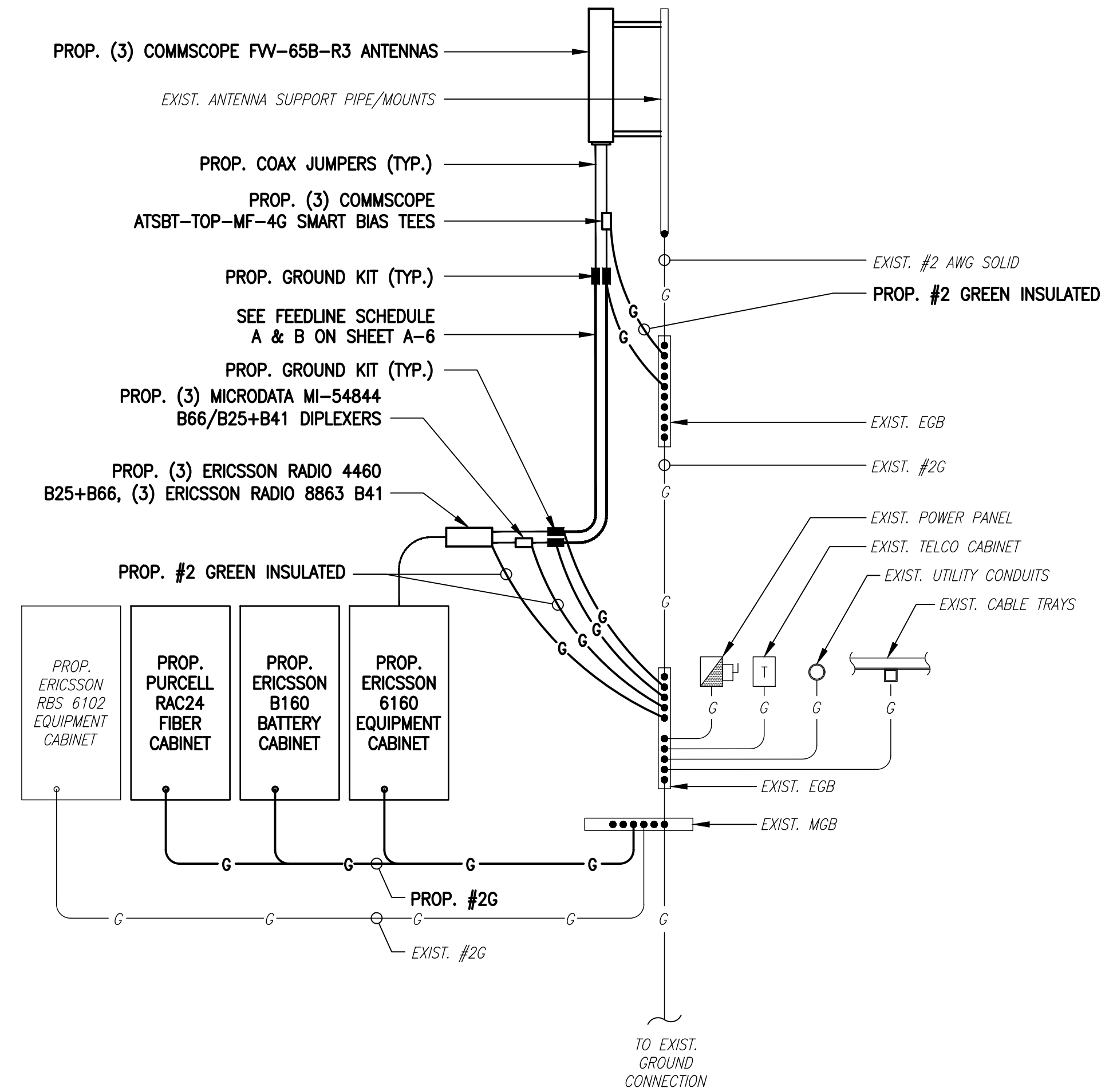
NOTE: EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.



ONE LINE DIAGRAM
SCALE: NOT TO SCALE

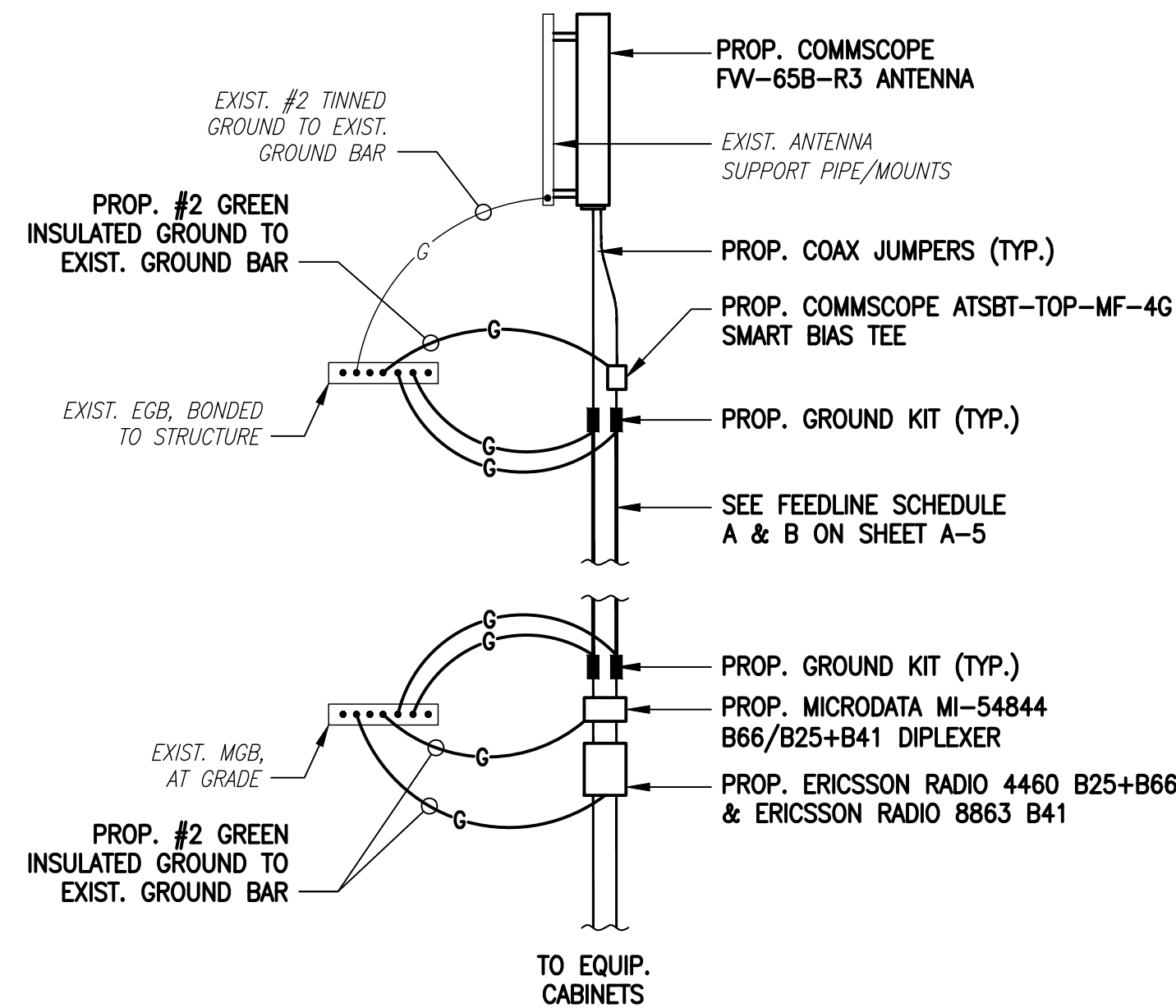


GROUND BAR (EGB)
SCALE: NOT TO SCALE



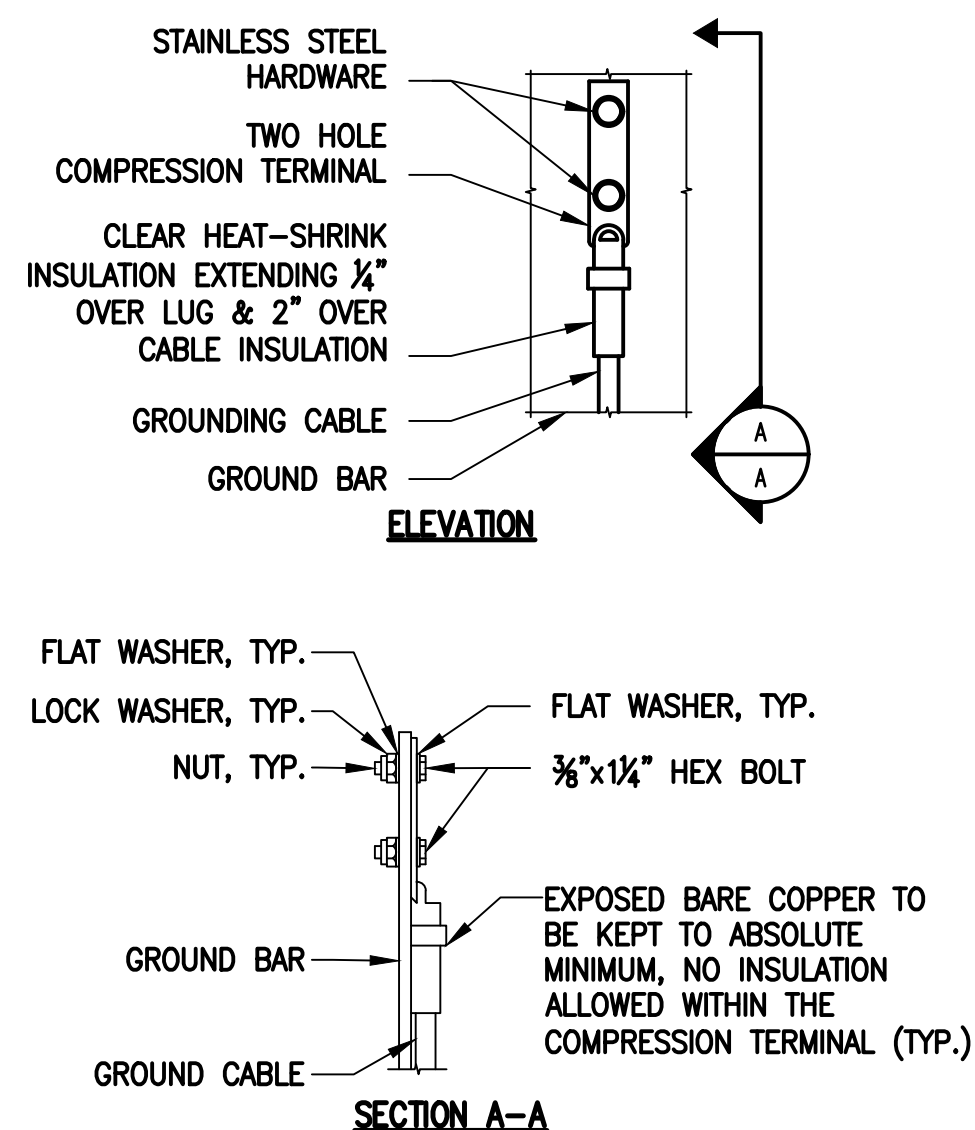
GROUNDING RISER DIAGRAM
SCALE: NOT TO SCALE

EXISTING POWER PANEL PHOTOS
SCALE: NOT TO SCALE



L2500/N2500/L2100/L1900/G1900/U2100
ANTENNA

COAX CABLE CONNECTION AND GROUNDING DETAIL
SCALE: NOT TO SCALE



NOTES:

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

TYPICAL GROUND BAR CONNECTIONS DETAIL
SCALE: NOT TO SCALE

ELECTRICAL AND GROUNDING NOTES

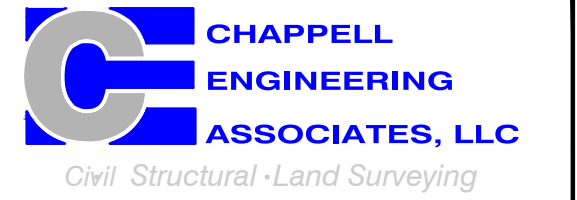
- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED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

T-MOBILE NORTHEAST LLC

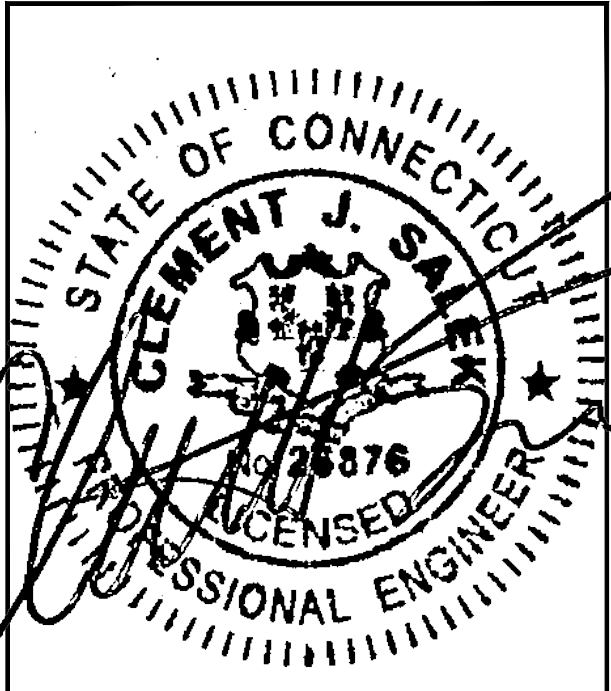
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SITE NUMBER:
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SITE ADDRESS:
1 WESTERBERG DRIVE
FARMINGTON, CT 06032

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 155 ft SABRE Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT46141-A

Customer Site Name: Water Treatment Plant 2, CT

Carrier Name: T-Mobile (App#: 193846-1, V#1)

Carrier Site ID / Name: CT11768B / CT768/Sprint FarmingtonET

Site Location: 1 Westerberg Drive

Farmington, Connecticut

HARTFORD County

Latitude: 41.730499

Longitude: -72.835500

Analysis Result:

Max Structural Usage: 87.8% [Pass]

Max Foundation Usage: 36% [Pass]

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

Report Prepared By : Mariana Franco





Tower Engineering Solutions

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Analysis Result:

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Max Foundation Usage: 36% [Pass]

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

Report Prepared By : Mariana Franco

Introduction

The purpose of this report is to summarize the analysis results on the 155 ft SABRE Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Tower Drawing prepared by Sabre, Job #05-07054 Rev B dated 9/2/04 Canister Drawing prepared by Stealth, Title #CUST-CELL-4C-80-40 Rav A dated 9/23/04
Foundation Drawing	Foundation Drawing prepared by Sabre, Job #05-07054 Rev B dated 9/2/04
Geotechnical Report	Geotechnical Report prepared by Clarence Welti Assoc, dated 6/18/04
Modification Drawings	Modification Drawing prepared by Stealth, Job #AT12-00957W-05R1 dated 9/18/12 TES, Job#75342, Dated 07/24/19
Mount Analysis	N/A

Analysis Criteria

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

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ mph (3-Sec. Gust)
Basic Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	SS = 0.183g, S1 = 0.064g

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	150.0	3	Commscope DHHTT65B-3XR - Panel	Inside Existing 40" Concealment Canister from 135.25' to 155.0'	(12) 1 5/8" (3) 3/8" RET Line	Sprint Nextel
2		3	RFS KIT-FD9R6004/1C-DL - Diplexers			
3		3	CCI DPO-7126Y-0-T1 - Diplexers			
4		4	RFS ACU-A20-N - RETs			
5	139.0	3	Cci Antennas TPA-65R-LCUUUU-H8 - Panel	Inside Existing 40" Concealment Canister from 135.25' to 155.0'	(6) 1 5/8"	AT&T
6		6	Cci DTMAP7819VG12A TMA			
7		6	Kaelus dbc0062f3v52-1			
-	129.0	3	RFS - APX18-206517S-C-A20 - Panel	Inside Existing 40" Concealment Canister from 115.75' to 135.25'	(6) 1 5/8"	T-Mobile
-	127.0	6	RFS - CBC721-DF - Diplexers	Inside Existing 40" Concealment Canister from 115.75' to 135.25'	(12) 1 5/8"	Verizon
10	122.0	3	Commscope - SBNHH-1D6565A - Panel			

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	130.0	3	Commscope FVV-65B-R3 - Panel	Inside Existing 40" Concealment Canister from 135.25' to 155.0'	(12) 1 5/8"	T-Mobile
9		3	Commscope ATSBT-TOP-FM			

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	Flange
Max. Usage:	86.3%	74.8%	66.7%	87.8%
Pass/Fail	Pass	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)
Original Design Reactions	1230.0	13.2
Analysis Reactions	1536.5	17.2
Factored Reactions*	1660.5	17.8
% of Design Reactions	92.5%	96.8%

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

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.4423 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 86.33% at 0.0ft

Structure: CT46141-A-SBA
Site Name: Water Treatment Plant 2, CT
Height: 155.00 (ft)
Base Elev: 0.000 (ft)

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

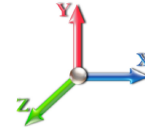
4/18/2022



Page: 1

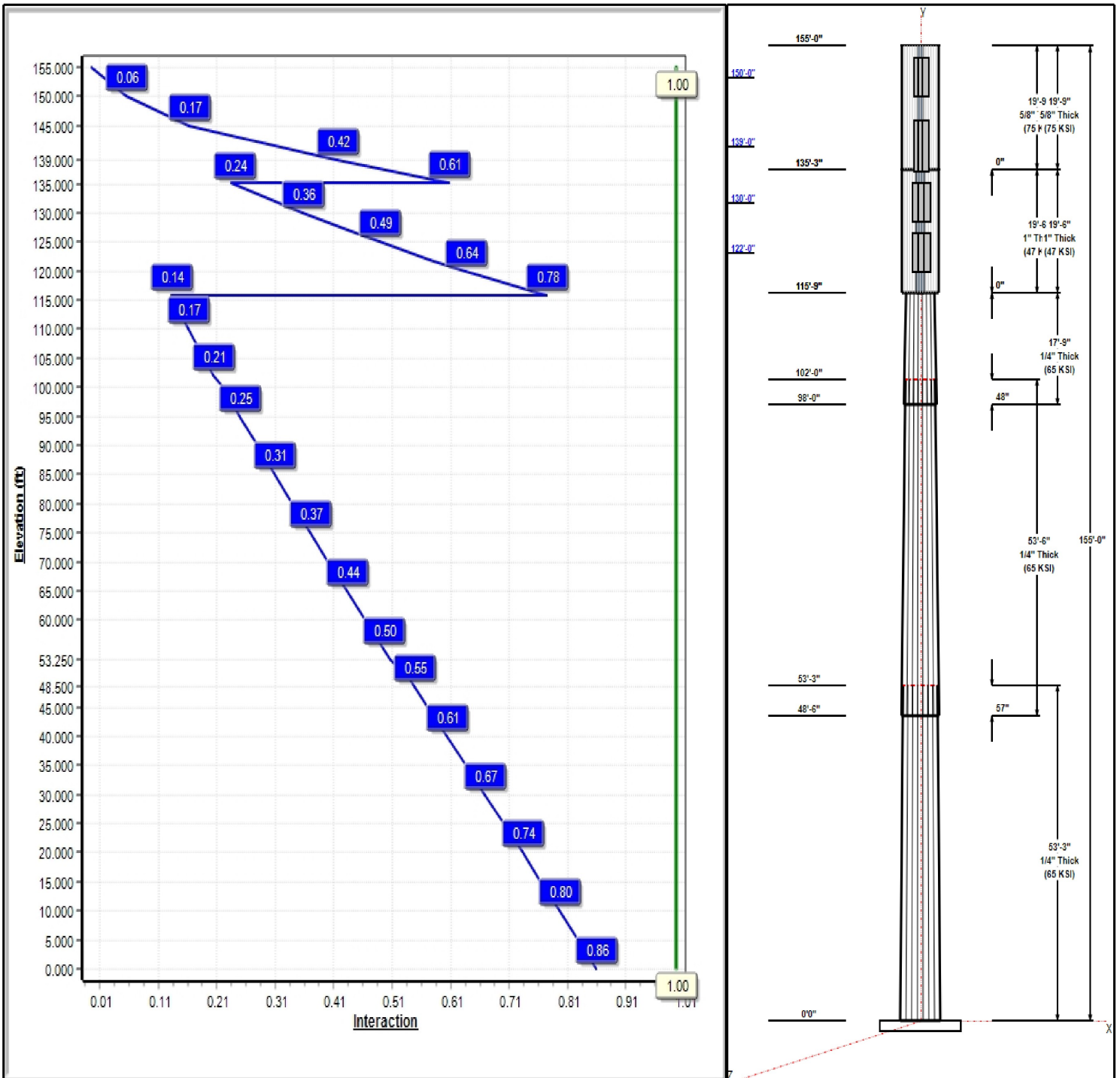
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 30

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Structure: CT46141-A-SBA

Type: Custom
Site Name: Water Treatment Plant 2, CT
Height: 155.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 16 Sided
Taper: 0.12674

4/18/2022

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Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	36.92	43.67	0.250		0.12674	65
2	53.50	31.24	38.02	0.250	Slip	0.12674	65
3	17.75	30.00	32.25	0.250	Slip	0.12674	65
4	19.50	8.00	8.00	1.000	Butt	0.00000	47
5	19.75	5.00	5.00	0.625	Butt	0.00000	75

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
155.00	155.00	1	Truck Ball	
150.00	150.00	3	Commscope	Sprint Nextel
150.00	150.00	3	RFS	Sprint Nextel
150.00	150.00	3	CCI DPO-7126Y-0-T1	Sprint Nextel
150.00	150.00	4	RFS ACU-A20-N	Sprint Nextel
145.00	145.00	1	Flag (20'x30')	
139.00	139.00	3	TPA-65R-LCUUUU-H8	AT&T
139.00	139.00	6	DTMABP0723VG12A	AT&T
139.00	139.00	6	DBC0062F3V52-1	AT&T
130.00	130.00	3	FV65-13-10DBL2	T-Mobile
130.00	130.00	3	ATSBT-TOP-FM	T-Mobile
127.00	127.00	6	CBC721-DF	Verizon
122.00	122.00	3	SBNHH-1D6565A	Verizon

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	150.00	Inside	1 5/8" Coax	Sprint Nextel
0.00	150.00	Inside	3/8" RET	Sprint Nextel
0.00	139.00	Inside	1 5/8" Coax	AT&T
0.00	130.00	Inside	1 5/8" Coax	T-Mobile
0.00	122.00	Inside	1 5/8" Coax	Verizon

Anchor Bolts

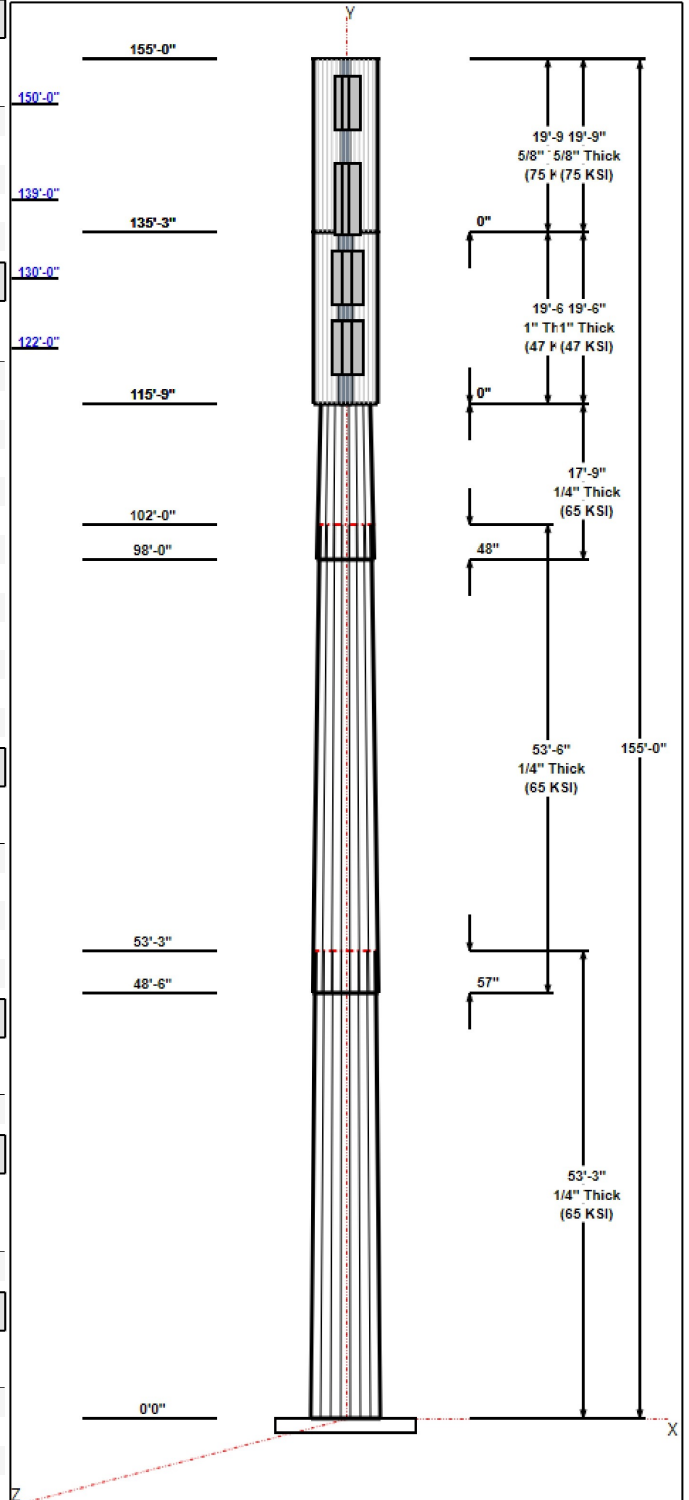
Qty	Specifications	Grade (ksi)	Arrangement
8	2.25" 18J	75.0	Cluster

Base Plate

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

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	1536.5	17.2	26.2
0.9D + 1.6W 97 mph Wind	1517.0	17.2	19.7
1.2D + 1.0Di + 1.0Wi 50 mph Wind	590.4	5.8	45.8
1.2D + 1.0E	32.9	0.4	26.3
0.9D + 1.0E	32.5	0.4	19.7
1.0D + 1.0W 60 mph Wind	364.7	4.1	21.9



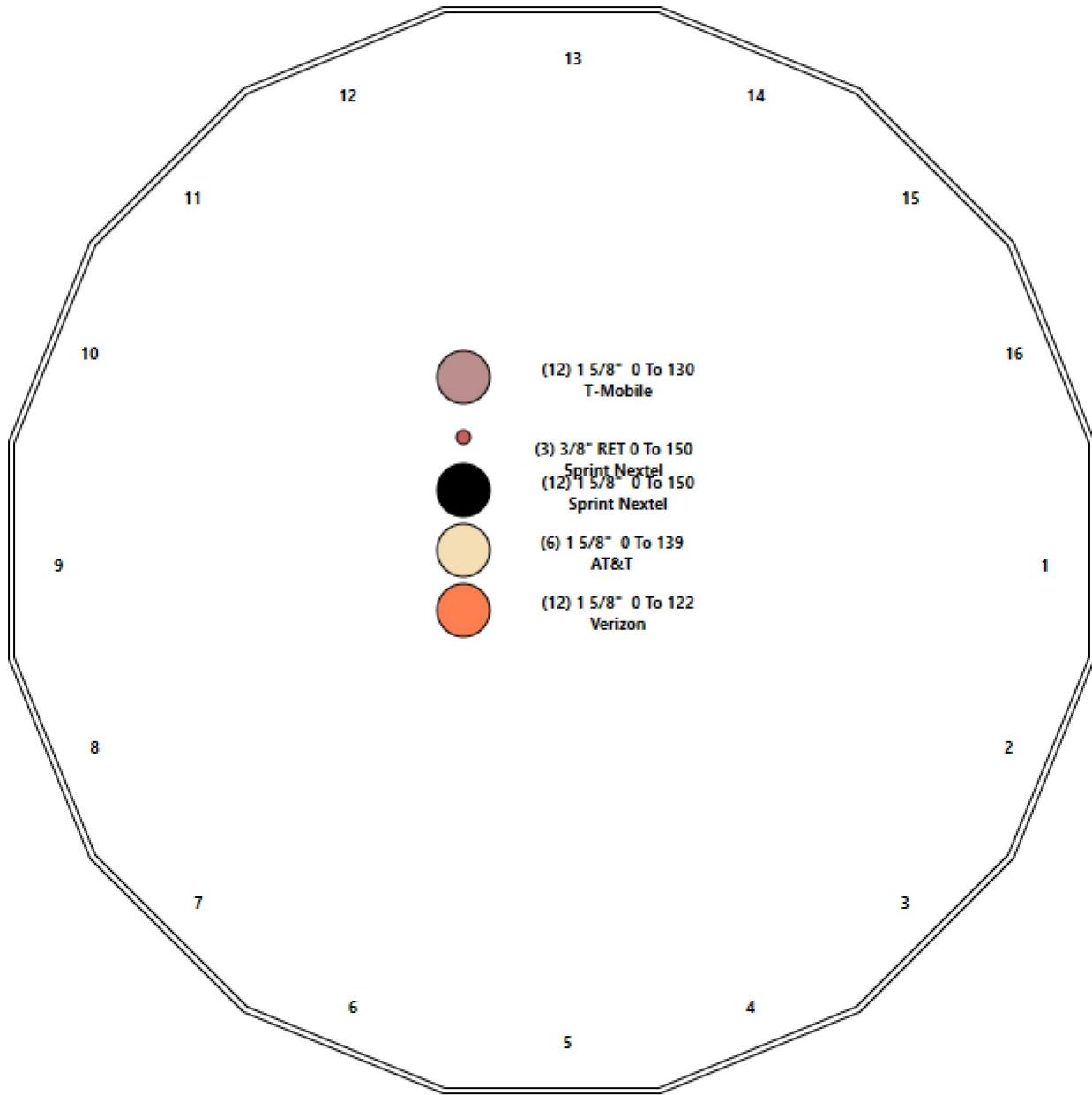
Structure: CT46141-A-SBA - Coax Line Placement

Type: Stealth
Site Name: Water Treatment Plant 2, CT
Height: 155.00 (ft)

4/18/2022



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Shaft Properties

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	16	53.250	0.2500	65		0.00	5,787
2	16	53.500	0.2500	65	Slip	57.00	4,992
3	16	17.750	0.2500	65	Slip	48.00	1,487
4	R	19.500	1.0000	47	Flange	0.00	1,459
5	R	19.750	0.6250	75	Flange	0.00	577
Total Shaft Weight:							14,302

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	Canister Diam (in)
1	43.67	0.00	34.63	8247.35	33.15	174.68	36.92	53.25	29.25	4968.43	27.79	147.6	0.126739	0.00
2	38.02	48.50	30.12	5429.95	28.66	152.09	31.24	102.00	24.72	2999.31	23.27	124.9	0.126739	0.00
3	32.25	98.00	25.52	3301.26	24.07	129.00	30.00	115.75	23.73	2652.81	22.28	120.0	0.126739	0.00
4	8.00	115.7	21.99	134.80	0.00	8.00	8.00	135.25	21.99	134.80	0.00	8.00	0.000000	40.00
5	5.00	135.2	8.59	20.57	0.00	8.00	5.00	155.00	8.59	20.57	0.00	8.00	0.000000	40.00

Load Summary

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	155.00	Truck Ball	1	50.00	3.77	1.00	54.67	4.122	1.00	0.00	0.00
2	150.00	Commscope DHHTT65B-3XR	3	45.40	0.00	1.00	49.63	0.000	1.00	0.00	0.00
3	150.00	RFS KIT-FD9R6004/1C-DL	3	6.50	0.00	1.00	22.73	0.000	1.00	0.00	0.00
4	150.00	CCI DPO-7126Y-0-T1	3	7.30	0.00	1.00	7.98	0.000	1.00	0.00	0.00
5	150.00	RFS ACU-A20-N	4	1.00	0.00	1.00	6.73	0.000	1.00	0.00	0.00
6	145.00	Flag (20'x30')	1	200.00	14.56	1.00	218.55	15.911	1.00	0.00	0.00
7	139.00	TPA-65R-LCUUUU-H8	3	75.00	0.00	1.00	509.48	15.522	1.00	0.00	0.00
8	139.00	DTMABP0723VG12A	6	19.20	0.00	1.00	52.97	0.000	1.00	0.00	0.00
9	139.00	DBC0062F3V52-1	6	6.60	0.00	1.00	24.71	0.000	1.00	0.00	0.00
10	130.00	FV65-13-10DBL2	3	90.00	0.00	0.00	900.19	0.000	0.00	0.00	0.00
11	130.00	ATSBT-TOP-FM	3	1.80	0.00	0.00	9.47	0.000	0.00	0.00	0.00
12	127.00	CBC721-DF	6	4.40	0.00	1.00	16.92	0.000	1.00	0.00	0.00
13	122.00	SBNHH-1D6565A	3	47.40	0.00	1.00	328.78	9.909	1.00	0.00	0.00
Totals:			45	1,255.40			6,352.52				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	150.00	(12) 1 5/8" Coax	0.00	Inside
0.00	150.00	(3) 3/8" RET	0.00	Inside
0.00	139.00	(6) 1 5/8" Coax	0.00	Inside
0.00	130.00	(12) 1 5/8" Coax	0.00	Inside
0.00	122.00	(12) 1 5/8" Coax	0.00	Inside

Shaft Section Properties

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Increment Length: 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		0.2500	43.670	34.627	8247.4	33.15	174.68	65.1	370.5	0.0
5.00		0.2500	43.036	34.122	7891.5	32.65	172.15	65.6	359.7	584.8
10.00		0.2500	42.403	33.617	7546.0	32.15	169.61	66.2	349.1	576.3
15.00		0.2500	41.769	33.111	7210.8	31.64	167.08	66.8	338.6	567.7
20.00		0.2500	41.135	32.606	6885.6	31.14	164.54	67.3	328.3	559.1
25.00		0.2500	40.502	32.101	6570.4	30.63	162.01	67.9	318.2	550.5
30.00		0.2500	39.868	31.595	6264.9	30.13	159.47	68.5	308.2	541.9
35.00		0.2500	39.234	31.090	5969.1	29.63	156.94	69.1	298.4	533.3
40.00		0.2500	38.600	30.584	5682.7	29.12	154.40	69.6	288.8	524.7
45.00		0.2500	37.967	30.079	5405.7	28.62	151.87	70.2	279.3	516.1
48.50	Bot - Section 2	0.2500	37.523	29.725	5217.2	28.26	150.09	70.6	272.7	356.1
50.00		0.2500	37.333	29.574	5137.7	28.11	149.33	70.8	269.9	304.7
53.25	Top - Section 1	0.2500	37.421	29.644	5174.4	28.18	149.68	0.0	0.0	654.9
55.00		0.2500	37.199	29.467	5082.4	28.01	148.80	70.9	268.0	176.0
60.00		0.2500	36.566	28.962	4825.3	27.50	146.26	71.5	258.9	497.1
65.00		0.2500	35.932	28.456	4577.1	27.00	143.73	72.0	249.9	488.5
70.00		0.2500	35.298	27.951	4337.6	26.49	141.19	72.6	241.0	479.9
75.00		0.2500	34.665	27.446	4106.5	25.99	138.66	73.2	232.4	471.3
80.00		0.2500	34.031	26.940	3883.8	25.49	136.12	73.7	223.9	462.7
85.00		0.2500	33.397	26.435	3669.3	24.98	133.59	74.3	215.5	454.1
90.00		0.2500	32.764	25.930	3462.9	24.48	131.05	74.9	207.3	445.5
95.00		0.2500	32.130	25.424	3264.3	23.97	128.52	75.4	199.3	436.9
98.00	Bot - Section 3	0.2500	31.750	25.121	3148.9	23.67	127.00	75.8	194.5	258.0
100.00		0.2500	31.496	24.919	3073.5	23.47	125.98	76.0	191.4	343.3
102.00	Top - Section 2	0.2500	31.743	25.115	3146.8	23.66	126.97	0.0	0.0	340.5
105.00		0.2500	31.362	24.812	3034.2	23.36	125.45	76.1	189.8	254.8
110.00		0.2500	30.729	24.307	2852.6	22.86	122.91	76.7	182.1	417.9
115.00		0.2500	30.095	23.801	2678.3	22.35	120.38	77.3	174.6	409.3
115.75	Top - Section 3	0.2500	30.000	23.726	2652.8	22.28	120.00	77.4	173.5	60.6
115.75	Bot - Section 4	1.0000	8.000	21.991	134.8	5.57	30.00	47.0	33.7	
120.00		1.0000	8.000	21.991	134.8	0.00	8.00	47.0	33.7	318.0
122.00		1.0000	8.000	21.991	134.8	0.00	8.00	47.0	33.7	149.7
125.00		1.0000	8.000	21.991	134.8	0.00	8.00	47.0	33.7	224.5
127.00		1.0000	8.000	21.991	134.8	0.00	8.00	47.0	33.7	149.7
130.00		1.0000	8.000	21.991	134.8	0.00	8.00	47.0	33.7	224.5
135.00		1.0000	8.000	21.991	134.8	0.00	8.00	47.0	33.7	374.2
135.25	Top - Section 4	1.0000	8.000	21.991	134.8	0.00	8.00	47.0	33.7	18.7
135.25	Bot - Section 5	0.6250	5.000	8.590	20.6	0.00	12.80	75.0	8.2	
139.00		0.6250	5.000	8.590	20.6	0.00	8.00	75.0	8.2	109.6
140.00		0.6250	5.000	8.590	20.6	0.00	8.00	75.0	8.2	29.2
145.00		0.6250	5.000	8.590	20.6	0.00	8.00	75.0	8.2	146.2
150.00		0.6250	5.000	8.590	20.6	0.00	8.00	75.0	8.2	146.2
155.00		0.6250	5.000	8.590	20.6	0.00	8.00	75.0	8.2	146.2

14302.3

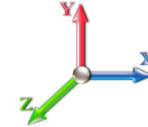
Wind Loading - Shaft

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Page: 7
	Struct Class: II	



Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	331.83	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	327.01	0.750	0.000	5.00	18.418	13.81	472.9	0.0	701.8
10.00		1.00	0.85	19.450	21.40	322.19	0.750	0.000	5.00	18.148	13.61	466.0	0.0	691.5
15.00		1.00	0.85	19.450	21.40	317.38	0.750	0.000	5.00	17.879	13.41	459.0	0.0	681.2
20.00		1.00	0.90	20.638	22.70	321.96	0.750	0.000	5.00	17.610	13.21	479.7	0.0	670.9
25.00		1.00	0.95	21.630	23.79	324.54	0.750	0.000	5.00	17.341	13.01	495.1	0.0	660.5
30.00		1.00	0.98	22.477	24.72	325.65	0.750	0.000	5.00	17.072	12.80	506.5	0.0	650.2
35.00		1.00	1.01	23.218	25.54	325.72	0.750	0.000	5.00	16.802	12.60	515.0	0.0	639.9
40.00		1.00	1.04	23.880	26.27	324.99	0.750	0.000	5.00	16.533	12.40	521.2	0.0	629.6
45.00		1.00	1.07	24.479	26.93	323.64	0.750	0.000	5.00	16.264	12.20	525.5	0.0	619.3
48.50	Bot - Section 2	1.00	1.09	24.869	27.36	322.39	0.750	0.000	3.50	11.225	8.42	368.5	0.0	427.4
50.00		1.00	1.09	25.029	27.53	321.79	0.750	0.000	1.50	4.834	3.63	159.7	0.0	365.6
53.25	Top - Section 1	1.00	1.11	25.363	27.90	320.36	0.750	0.000	3.25	10.390	7.79	347.9	0.0	785.9
55.00		1.00	1.12	25.536	28.09	323.87	0.750	0.000	1.75	5.548	4.16	187.0	0.0	211.2
60.00		1.00	1.14	26.008	28.61	321.28	0.750	0.000	5.00	15.669	11.75	537.9	0.0	596.5
65.00		1.00	1.16	26.450	29.09	318.39	0.750	0.000	5.00	15.400	11.55	537.7	0.0	586.1
70.00		1.00	1.17	26.866	29.55	315.22	0.750	0.000	5.00	15.130	11.35	536.6	0.0	575.8
75.00		1.00	1.19	27.259	29.98	311.82	0.750	0.000	5.00	14.861	11.15	534.7	0.0	565.5
80.00		1.00	1.21	27.632	30.39	308.21	0.750	0.000	5.00	14.592	10.94	532.2	0.0	555.2
85.00		1.00	1.22	27.987	30.79	304.40	0.750	0.000	5.00	14.323	10.74	529.1	0.0	544.9
90.00		1.00	1.24	28.325	31.16	300.43	0.750	0.000	5.00	14.054	10.54	525.5	0.0	534.6
95.00		1.00	1.25	28.650	31.51	296.30	0.750	0.000	5.00	13.784	10.34	521.3	0.0	524.2
98.00	Bot - Section 3	1.00	1.26	28.838	31.72	293.75	0.750	0.000	3.00	8.141	6.11	309.9	0.0	309.6
100.00		1.00	1.27	28.961	31.86	292.03	0.750	0.000	2.00	5.459	4.09	208.7	0.0	411.9
102.00	Top - Section 2	1.00	1.27	29.082	31.99	290.28	0.750	0.000	2.00	5.416	4.06	207.9	0.0	408.6
105.00		1.00	1.28	29.260	32.19	292.29	0.750	0.000	3.00	8.043	6.03	310.6	0.0	305.8
110.00		1.00	1.29	29.548	32.50	287.79	0.750	0.000	5.00	13.189	9.89	514.4	0.0	501.4
115.00		1.00	1.30	29.826	32.81	283.17	0.750	0.000	5.00	12.920	9.69	508.7	0.0	491.1
115.75	Top - Section 3	1.00	1.31	29.866	32.85	282.47	0.750	0.000	0.75	1.915	1.44	75.5	0.0	72.8
120.00		1.00	1.32	30.094	33.10	370.80	0.600	0.000	4.25	14.167	8.50	450.2	0.0	436.0
122.00	Appurtenance(s)	1.00	1.32	30.199	33.22	371.44	0.600	0.000	2.00	6.667	4.00	212.6	0.0	205.2
125.00		1.00	1.33	30.354	33.39	372.39	0.600	0.000	3.00	10.000	6.00	320.5	0.0	307.8
127.00	Appurtenance(s)	1.00	1.33	30.455	33.50	373.02	0.600	0.000	2.00	6.667	4.00	214.4	0.0	205.2
130.00	Appurtenance(s)	1.00	1.34	30.605	33.67	373.93	0.600	0.000	3.00	10.000	6.00	323.2	0.0	307.8
135.00		1.00	1.35	30.850	33.93	375.42	0.600	0.000	5.00	16.667	10.00	543.0	0.0	513.0
135.25	Top - Section 4	1.00	1.35	30.862	33.95	375.50	0.600	0.000	0.25	0.833	0.50	27.2	0.0	25.6
139.00	Appurtenance(s)	1.00	1.36	31.040	34.14	376.58	0.600	0.000	3.75	12.500	7.50	409.7	0.0	179.5
140.00		1.00	1.36	31.087	34.20	376.86	0.600	0.000	1.00	3.333	2.00	109.4	0.0	47.9
145.00	Appurtenance(s)	1.00	1.37	31.317	34.45	378.26	0.600	0.000	5.00	16.667	10.00	551.2	0.0	239.4
150.00	Appurtenance(s)	1.00	1.38	31.541	34.70	379.61	0.600	0.000	5.00	16.667	10.00	555.1	0.0	239.4
155.00	Appurtenance(s)	1.00	1.39	31.760	34.94	380.92	0.600	0.000	5.00	16.667	10.00	559.0	0.0	239.4
								Totals:	155.00			16,170.0	17,665.2	

Discrete Appurtenance Forces

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor	x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	155.00	Truck Ball	1	31.760	34.936	1.00	1.00	1.00	3.77	60.00	0.000	0.000	210.73	0.00	0.00
2	150.00	RFS ACU-A20-N	4	31.541	34.696	1.00	1.00	1.00	0.00	4.80	0.000	0.000	0.00	0.00	0.00
3	150.00	CCI DPO-7126Y-0-T1	3	31.541	34.696	1.00	1.00	1.00	0.00	26.28	0.000	0.000	0.00	0.00	0.00
4	150.00	RFS	3	31.541	34.696	1.00	1.00	1.00	0.00	23.40	0.000	0.000	0.00	0.00	0.00
5	150.00	Commscope	3	31.541	34.696	1.00	1.00	1.00	0.00	163.44	0.000	0.000	0.00	0.00	0.00
6	145.00	Flag (20'x30')	1	31.317	34.449	1.00	1.00	1.00	14.56	240.00	0.000	0.000	802.52	0.00	0.00
7	139.00	DBC0062F3V52-1	6	31.040	34.144	1.00	1.00	1.00	0.00	47.52	0.000	0.000	0.00	0.00	0.00
8	139.00	DTMABP0723VG12A	6	31.040	34.144	1.00	1.00	1.00	0.00	138.24	0.000	0.000	0.00	0.00	0.00
9	139.00	TPA-65R-LCUUUU-H8	3	31.040	34.144	1.00	1.00	1.00	0.00	270.00	0.000	0.000	0.00	0.00	0.00
10	130.00	ATSBT-TOP-FM	3	30.605	33.666	0.00	1.00	1.00	0.00	6.48	0.000	0.000	0.00	0.00	0.00
11	130.00	FV65-13-10DBL2	3	30.605	33.666	0.00	1.00	1.00	0.00	324.00	0.000	0.000	0.00	0.00	0.00
12	127.00	CBC721-DF	6	30.455	33.501	1.00	1.00	1.00	0.00	31.68	0.000	0.000	0.00	0.00	0.00
13	122.00	SBNHH-1D6565A	3	30.199	33.219	1.00	1.00	1.00	0.00	170.64	0.000	0.000	0.00	0.00	0.00
Totals:										1,506.48			1,013.25		

Total Applied Force Summary

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		472.86	964.98	0.00	0.00
10.00		465.95	954.66	0.00	0.00
15.00		459.04	944.34	0.00	0.00
20.00		479.73	934.02	0.00	0.00
25.00		495.11	923.71	0.00	0.00
30.00		506.50	913.39	0.00	0.00
35.00		514.96	903.07	0.00	0.00
40.00		521.15	892.75	0.00	0.00
45.00		525.54	882.43	0.00	0.00
48.50		368.46	611.56	0.00	0.00
50.00		159.70	444.60	0.00	0.00
53.25		347.85	956.92	0.00	0.00
55.00		187.00	303.31	0.00	0.00
60.00		537.92	859.62	0.00	0.00
65.00		537.66	849.30	0.00	0.00
70.00		536.57	838.99	0.00	0.00
75.00		534.73	828.67	0.00	0.00
80.00		532.22	818.35	0.00	0.00
85.00		529.12	808.03	0.00	0.00
90.00		525.46	797.71	0.00	0.00
95.00		521.29	787.40	0.00	0.00
98.00		309.91	467.48	0.00	0.00
100.00		208.68	517.18	0.00	0.00
102.00		207.89	513.88	0.00	0.00
105.00		310.63	463.70	0.00	0.00
110.00		514.41	764.58	0.00	0.00
115.00		508.65	754.26	0.00	0.00
115.75		75.49	112.25	0.00	0.00
120.00		450.21	659.72	0.00	0.00
122.00	(3) attachments	212.60	481.10	0.00	0.00
125.00		320.54	420.76	0.00	0.00
127.00	(6) attachments	214.41	312.19	0.00	0.00
130.00	(6) attachments	323.19	751.24	0.00	0.00
135.00		542.95	626.39	0.00	0.00
135.25		27.16	31.32	0.00	0.00
139.00	(15) attachments	409.72	720.35	0.00	0.00
140.00		109.42	63.07	0.00	0.00
145.00	(1) attachments	1353.70	555.35	0.00	0.00
150.00	(13) attachments	555.13	533.27	0.00	0.00
155.00	(1) attachments	769.71	299.39	0.00	0.00
	Totals:	17,183.21	26,265.28	0.00	0.00

Calculated Forces

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind	Iterations 30
Dead Load Factor 1.20	
Wind Load Factor 1.60	

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-26.23	-17.24	0.00	-1536.4	0.00	1536.48	2027.49	1013.74	3641.02	1807.56	0.00	0.000	0.000	0.863
5.00	-25.19	-16.88	0.00	-1450.2	0.00	1450.27	2015.42	1007.71	3566.22	1770.42	0.14	-0.258	0.000	0.832
10.00	-24.16	-16.51	0.00	-1365.8	0.00	1365.87	2002.83	1001.41	3491.15	1733.15	0.54	-0.511	0.000	0.800
15.00	-23.15	-16.15	0.00	-1283.3	0.00	1283.30	1989.72	994.86	3415.85	1695.77	1.21	-0.761	0.000	0.769
20.00	-22.16	-15.75	0.00	-1202.5	0.00	1202.57	1976.09	988.05	3340.37	1658.30	2.14	-1.006	0.000	0.737
25.00	-21.18	-15.32	0.00	-1123.8	0.00	1123.85	1961.94	980.97	3264.74	1620.75	3.33	-1.247	0.000	0.704
30.00	-20.22	-14.87	0.00	-1047.2	0.00	1047.25	1947.28	973.64	3189.01	1583.16	4.76	-1.482	0.000	0.672
35.00	-19.28	-14.41	0.00	-972.89	0.00	972.89	1932.09	966.05	3113.21	1545.53	6.43	-1.711	0.000	0.640
40.00	-18.35	-13.93	0.00	-900.84	0.00	900.84	1916.39	958.20	3037.39	1507.89	8.34	-1.934	0.000	0.607
45.00	-17.44	-13.43	0.00	-831.18	0.00	831.18	1900.17	950.08	2961.59	1470.26	10.49	-2.151	0.000	0.575
48.50	-16.82	-13.07	0.00	-784.18	0.00	784.18	1888.50	944.25	2908.57	1443.94	12.12	-2.300	0.000	0.552
50.00	-16.36	-12.92	0.00	-764.58	0.00	764.58	1883.43	941.71	2885.86	1432.66	12.85	-2.363	0.000	0.543
53.25	-15.40	-12.56	0.00	-722.59	0.00	722.59	1885.78	942.89	2896.38	1437.89	14.51	-2.497	0.000	0.511
55.00	-15.08	-12.39	0.00	-700.61	0.00	700.61	1879.83	939.91	2869.89	1424.73	15.44	-2.568	0.000	0.500
60.00	-14.20	-11.86	0.00	-638.65	0.00	638.65	1862.46	931.23	2794.28	1387.20	18.22	-2.756	0.000	0.468
65.00	-13.35	-11.32	0.00	-579.34	0.00	579.34	1844.57	922.28	2718.82	1349.74	21.21	-2.935	0.000	0.437
70.00	-12.51	-10.78	0.00	-522.73	0.00	522.73	1826.16	913.08	2643.55	1312.37	24.37	-3.106	0.000	0.405
75.00	-11.68	-10.23	0.00	-468.83	0.00	468.83	1807.23	903.62	2568.52	1275.12	27.71	-3.269	0.000	0.374
80.00	-10.87	-9.68	0.00	-417.67	0.00	417.67	1787.79	893.89	2493.75	1238.00	31.22	-3.423	0.000	0.344
85.00	-10.07	-9.13	0.00	-369.27	0.00	369.27	1767.82	883.91	2419.31	1201.05	34.88	-3.567	0.000	0.313
90.00	-9.29	-8.57	0.00	-323.63	0.00	323.63	1747.34	873.67	2345.22	1164.27	38.68	-3.701	0.000	0.283
95.00	-8.53	-8.02	0.00	-280.76	0.00	280.76	1726.34	863.17	2271.53	1127.68	42.62	-3.825	0.000	0.254
98.00	-8.07	-7.68	0.00	-256.71	0.00	256.71	1713.49	856.74	2227.52	1105.83	45.05	-3.895	0.000	0.237
100.00	-7.57	-7.45	0.00	-241.34	0.00	241.34	1704.82	852.41	2198.27	1091.31	46.69	-3.940	0.000	0.226
102.00	-7.06	-7.21	0.00	-226.45	0.00	226.45	1713.25	856.63	2226.72	1105.44	48.35	-3.984	0.000	0.209
105.00	-6.61	-6.88	0.00	-204.82	0.00	204.82	1700.21	850.10	2182.88	1083.67	50.87	-4.045	0.000	0.193
110.00	-5.88	-6.32	0.00	-170.44	0.00	170.44	1678.06	839.03	2110.21	1047.60	55.15	-4.133	0.000	0.166
115.00	-5.16	-5.76	0.00	-138.86	0.00	138.86	1655.39	827.70	2038.07	1011.78	59.52	-4.210	0.000	0.140
115.75	-5.05	-5.68	0.00	-134.54	0.00	134.54	1651.95	825.97	2027.30	1006.43	60.18	-4.221	0.000	0.137
115.75	-5.05	-5.68	0.00	-134.54	0.00	134.54	930.23	465.11	237.26	173.90	60.18	-4.221	0.000	0.779
120.00	-4.40	-5.20	0.00	-110.41	0.00	110.41	930.23	465.11	237.26	173.90	63.96	-4.277	0.000	0.640
122.00	-3.89	-4.99	0.00	-100.01	0.00	100.01	930.23	465.11	237.26	173.90	65.84	-4.721	0.000	0.579
125.00	-3.46	-4.66	0.00	-85.05	0.00	85.05	930.23	465.11	237.26	173.90	68.99	-5.307	0.000	0.493
127.00	-3.14	-4.44	0.00	-75.74	0.00	75.74	930.23	465.11	237.26	173.90	71.29	-5.646	0.000	0.439
130.00	-2.39	-4.06	0.00	-62.43	0.00	62.43	930.23	465.11	237.26	173.90	74.97	-6.084	0.000	0.362
135.00	-1.81	-3.46	0.00	-42.14	0.00	42.14	930.23	465.11	237.26	173.90	81.64	-6.635	0.000	0.244
135.25	-1.78	-3.43	0.00	-41.27	0.00	41.27	930.23	465.11	237.26	173.90	81.98	-6.657	0.000	0.239
135.25	-1.78	-3.43	0.00	-41.27	0.00	41.27	579.84	289.92	92.43	67.75	81.98	-6.657	0.000	0.612
139.00	-1.09	-2.95	0.00	-28.40	0.00	28.40	579.84	289.92	92.43	67.75	87.31	-6.933	0.000	0.421
140.00	-1.00	-2.85	0.00	-25.45	0.00	25.45	579.84	289.92	92.43	67.75	88.80	-7.306	0.000	0.378
145.00	-0.62	-1.44	0.00	-11.23	0.00	11.23	579.84	289.92	92.43	67.75	97.18	-8.574	0.000	0.167
150.00	-0.17	-0.81	0.00	-4.04	0.00	4.04	579.84	289.92	92.43	67.75	106.44	-9.102	0.000	0.060
155.00	0.00	-0.77	0.00	0.00	0.00	0.00	579.84	289.92	92.43	67.75	116.03	-9.241	0.000	0.000

Wind Loading - Shaft

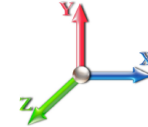
Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	331.83	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	327.01	0.750	0.000	5.00	18.418	13.81	472.9	0.0	526.4
10.00		1.00	0.85	19.450	21.40	322.19	0.750	0.000	5.00	18.148	13.61	466.0	0.0	518.6
15.00		1.00	0.85	19.450	21.40	317.38	0.750	0.000	5.00	17.879	13.41	459.0	0.0	510.9
20.00		1.00	0.90	20.638	22.70	321.96	0.750	0.000	5.00	17.610	13.21	479.7	0.0	503.1
25.00		1.00	0.95	21.630	23.79	324.54	0.750	0.000	5.00	17.341	13.01	495.1	0.0	495.4
30.00		1.00	0.98	22.477	24.72	325.65	0.750	0.000	5.00	17.072	12.80	506.5	0.0	487.7
35.00		1.00	1.01	23.218	25.54	325.72	0.750	0.000	5.00	16.802	12.60	515.0	0.0	479.9
40.00		1.00	1.04	23.880	26.27	324.99	0.750	0.000	5.00	16.533	12.40	521.2	0.0	472.2
45.00		1.00	1.07	24.479	26.93	323.64	0.750	0.000	5.00	16.264	12.20	525.5	0.0	464.5
48.50	Bot - Section 2	1.00	1.09	24.869	27.36	322.39	0.750	0.000	3.50	11.225	8.42	368.5	0.0	320.5
50.00		1.00	1.09	25.029	27.53	321.79	0.750	0.000	1.50	4.834	3.63	159.7	0.0	274.2
53.25	Top - Section 1	1.00	1.11	25.363	27.90	320.36	0.750	0.000	3.25	10.390	7.79	347.9	0.0	589.4
55.00		1.00	1.12	25.536	28.09	323.87	0.750	0.000	1.75	5.548	4.16	187.0	0.0	158.4
60.00		1.00	1.14	26.008	28.61	321.28	0.750	0.000	5.00	15.669	11.75	537.9	0.0	447.3
65.00		1.00	1.16	26.450	29.09	318.39	0.750	0.000	5.00	15.400	11.55	537.7	0.0	439.6
70.00		1.00	1.17	26.866	29.55	315.22	0.750	0.000	5.00	15.130	11.35	536.6	0.0	431.9
75.00		1.00	1.19	27.259	29.98	311.82	0.750	0.000	5.00	14.861	11.15	534.7	0.0	424.1
80.00		1.00	1.21	27.632	30.39	308.21	0.750	0.000	5.00	14.592	10.94	532.2	0.0	416.4
85.00		1.00	1.22	27.987	30.79	304.40	0.750	0.000	5.00	14.323	10.74	529.1	0.0	408.7
90.00		1.00	1.24	28.325	31.16	300.43	0.750	0.000	5.00	14.054	10.54	525.5	0.0	400.9
95.00		1.00	1.25	28.650	31.51	296.30	0.750	0.000	5.00	13.784	10.34	521.3	0.0	393.2
98.00	Bot - Section 3	1.00	1.26	28.838	31.72	293.75	0.750	0.000	3.00	8.141	6.11	309.9	0.0	232.2
100.00		1.00	1.27	28.961	31.86	292.03	0.750	0.000	2.00	5.459	4.09	208.7	0.0	308.9
102.00	Top - Section 2	1.00	1.27	29.082	31.99	290.28	0.750	0.000	2.00	5.416	4.06	207.9	0.0	306.5
105.00		1.00	1.28	29.260	32.19	292.29	0.750	0.000	3.00	8.043	6.03	310.6	0.0	229.4
110.00		1.00	1.29	29.548	32.50	287.79	0.750	0.000	5.00	13.189	9.89	514.4	0.0	376.1
115.00		1.00	1.30	29.826	32.81	283.17	0.750	0.000	5.00	12.920	9.69	508.7	0.0	368.3
115.75	Top - Section 3	1.00	1.31	29.866	32.85	282.47	0.750	0.000	0.75	1.915	1.44	75.5	0.0	54.6
120.00		1.00	1.32	30.094	33.10	370.80	0.600	0.000	4.25	14.167	8.50	450.2	0.0	327.0
122.00	Appurtenance(s)	1.00	1.32	30.199	33.22	371.44	0.600	0.000	2.00	6.667	4.00	212.6	0.0	153.9
125.00		1.00	1.33	30.354	33.39	372.39	0.600	0.000	3.00	10.000	6.00	320.5	0.0	230.8
127.00	Appurtenance(s)	1.00	1.33	30.455	33.50	373.02	0.600	0.000	2.00	6.667	4.00	214.4	0.0	153.9
130.00	Appurtenance(s)	1.00	1.34	30.605	33.67	373.93	0.600	0.000	3.00	10.000	6.00	323.2	0.0	230.8
135.00		1.00	1.35	30.850	33.93	375.42	0.600	0.000	5.00	16.667	10.00	543.0	0.0	384.7
135.25	Top - Section 4	1.00	1.35	30.862	33.95	375.50	0.600	0.000	0.25	0.833	0.50	27.2	0.0	19.2
139.00	Appurtenance(s)	1.00	1.36	31.040	34.14	376.58	0.600	0.000	3.75	12.500	7.50	409.7	0.0	134.7
140.00		1.00	1.36	31.087	34.20	376.86	0.600	0.000	1.00	3.333	2.00	109.4	0.0	35.9
145.00	Appurtenance(s)	1.00	1.37	31.317	34.45	378.26	0.600	0.000	5.00	16.667	10.00	551.2	0.0	179.5
150.00	Appurtenance(s)	1.00	1.38	31.541	34.70	379.61	0.600	0.000	5.00	16.667	10.00	555.1	0.0	179.5
155.00	Appurtenance(s)	1.00	1.39	31.760	34.94	380.92	0.600	0.000	5.00	16.667	10.00	559.0	0.0	179.5
Totals:									155.00			16,170.0		13,248.9

Discrete Appurtenance Forces

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II

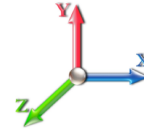


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Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 30

Dead Load Factor 0.90
Wind Load Factor 1.60



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	155.00	Truck Ball	1	31.760	34.936	1.00	1.00	1.00	3.77	45.00	0.000	0.000	210.73	0.00	0.00
2	150.00	RFS ACU-A20-N	4	31.541	34.696	1.00	1.00	1.00	0.00	3.60	0.000	0.000	0.00	0.00	0.00
3	150.00	CCI DPO-7126Y-0-T1	3	31.541	34.696	1.00	1.00	1.00	0.00	19.71	0.000	0.000	0.00	0.00	0.00
4	150.00	RFS	3	31.541	34.696	1.00	1.00	1.00	0.00	17.55	0.000	0.000	0.00	0.00	0.00
5	150.00	Commscope	3	31.541	34.696	1.00	1.00	1.00	0.00	122.58	0.000	0.000	0.00	0.00	0.00
6	145.00	Flag (20'x30')	1	31.317	34.449	1.00	1.00	1.00	14.56	180.00	0.000	0.000	802.52	0.00	0.00
7	139.00	DBC0062F3V52-1	6	31.040	34.144	1.00	1.00	1.00	0.00	35.64	0.000	0.000	0.00	0.00	0.00
8	139.00	DTMABP0723VG12A	6	31.040	34.144	1.00	1.00	1.00	0.00	103.68	0.000	0.000	0.00	0.00	0.00
9	139.00	TPA-65R-LCUUUU-H8	3	31.040	34.144	1.00	1.00	1.00	0.00	202.50	0.000	0.000	0.00	0.00	0.00
10	130.00	ATSBT-TOP-FM	3	30.605	33.666	0.00	1.00	1.00	0.00	4.86	0.000	0.000	0.00	0.00	0.00
11	130.00	FV65-13-10DBL2	3	30.605	33.666	0.00	1.00	1.00	0.00	243.00	0.000	0.000	0.00	0.00	0.00
12	127.00	CBC721-DF	6	30.455	33.501	1.00	1.00	1.00	0.00	23.76	0.000	0.000	0.00	0.00	0.00
13	122.00	SBNHH-1D6565A	3	30.199	33.219	1.00	1.00	1.00	0.00	127.98	0.000	0.000	0.00	0.00	0.00
Totals:										1,129.86			1,013.25		

Total Applied Force Summary

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		472.86	723.73	0.00	0.00
10.00		465.95	716.00	0.00	0.00
15.00		459.04	708.26	0.00	0.00
20.00		479.73	700.52	0.00	0.00
25.00		495.11	692.78	0.00	0.00
30.00		506.50	685.04	0.00	0.00
35.00		514.96	677.30	0.00	0.00
40.00		521.15	669.56	0.00	0.00
45.00		525.54	661.83	0.00	0.00
48.50		368.46	458.67	0.00	0.00
50.00		159.70	333.45	0.00	0.00
53.25		347.85	717.69	0.00	0.00
55.00		187.00	227.48	0.00	0.00
60.00		537.92	644.72	0.00	0.00
65.00		537.66	636.98	0.00	0.00
70.00		536.57	629.24	0.00	0.00
75.00		534.73	621.50	0.00	0.00
80.00		532.22	613.76	0.00	0.00
85.00		529.12	606.02	0.00	0.00
90.00		525.46	598.29	0.00	0.00
95.00		521.29	590.55	0.00	0.00
98.00		309.91	350.61	0.00	0.00
100.00		208.68	387.88	0.00	0.00
102.00		207.89	385.41	0.00	0.00
105.00		310.63	347.78	0.00	0.00
110.00		514.41	573.44	0.00	0.00
115.00		508.65	565.70	0.00	0.00
115.75		75.49	84.19	0.00	0.00
120.00		450.21	494.79	0.00	0.00
122.00	(3) attachments	212.60	360.82	0.00	0.00
125.00		320.54	315.57	0.00	0.00
127.00	(6) attachments	214.41	234.14	0.00	0.00
130.00	(6) attachments	323.19	563.43	0.00	0.00
135.00		542.95	469.79	0.00	0.00
135.25		27.16	23.49	0.00	0.00
139.00	(15) attachments	409.72	540.26	0.00	0.00
140.00		109.42	47.30	0.00	0.00
145.00	(1) attachments	1353.70	416.51	0.00	0.00
150.00	(13) attachments	555.13	399.95	0.00	0.00
155.00	(1) attachments	769.71	224.54	0.00	0.00
	Totals:	17,183.21	19,698.96	0.00	0.00

Calculated Forces

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 14



Load Case: 0.9D + 1.6W 97 mph Wind	Iterations 30
Dead Load Factor 0.90	
Wind Load Factor 1.60	

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-19.66	-17.23	0.00	-1516.9	0.00	1516.97	2027.49	1013.74	3641.02	1807.56	0.00	0.000	0.000	0.849
5.00	-18.86	-16.84	0.00	-1430.8	0.00	1430.83	2015.42	1007.71	3566.22	1770.42	0.14	-0.254	0.000	0.818
10.00	-18.08	-16.44	0.00	-1346.6	0.00	1346.65	2002.83	1001.41	3491.15	1733.15	0.54	-0.505	0.000	0.786
15.00	-17.31	-16.05	0.00	-1264.4	0.00	1264.44	1989.72	994.86	3415.85	1695.77	1.20	-0.751	0.000	0.755
20.00	-16.55	-15.63	0.00	-1184.1	0.00	1184.18	1976.09	988.05	3340.37	1658.30	2.11	-0.992	0.000	0.723
25.00	-15.80	-15.19	0.00	-1106.0	0.00	1106.04	1961.94	980.97	3264.74	1620.75	3.28	-1.229	0.000	0.691
30.00	-15.07	-14.72	0.00	-1030.1	0.00	1030.11	1947.28	973.64	3189.01	1583.16	4.69	-1.460	0.000	0.659
35.00	-14.36	-14.25	0.00	-956.49	0.00	956.49	1932.09	966.05	3113.21	1545.53	6.34	-1.686	0.000	0.627
40.00	-13.65	-13.76	0.00	-885.26	0.00	885.26	1916.39	958.20	3037.39	1507.89	8.22	-1.905	0.000	0.594
45.00	-12.97	-13.25	0.00	-816.48	0.00	816.48	1900.17	950.08	2961.59	1470.26	10.33	-2.118	0.000	0.562
48.50	-12.50	-12.88	0.00	-770.12	0.00	770.12	1888.50	944.25	2908.57	1443.94	11.94	-2.264	0.000	0.540
50.00	-12.15	-12.73	0.00	-750.79	0.00	750.79	1883.43	941.71	2885.86	1432.66	12.66	-2.326	0.000	0.531
53.25	-11.43	-12.37	0.00	-709.41	0.00	709.41	1885.78	942.89	2896.38	1437.89	14.29	-2.458	0.000	0.500
55.00	-11.18	-12.20	0.00	-687.75	0.00	687.75	1879.83	939.91	2869.89	1424.73	15.21	-2.528	0.000	0.489
60.00	-10.52	-11.67	0.00	-626.74	0.00	626.74	1862.46	931.23	2794.28	1387.20	17.95	-2.712	0.000	0.458
65.00	-9.88	-11.13	0.00	-568.39	0.00	568.39	1844.57	922.28	2718.82	1349.74	20.89	-2.888	0.000	0.427
70.00	-9.25	-10.59	0.00	-512.74	0.00	512.74	1826.16	913.08	2643.55	1312.37	24.00	-3.056	0.000	0.396
75.00	-8.63	-10.04	0.00	-459.79	0.00	459.79	1807.23	903.62	2568.52	1275.12	27.28	-3.215	0.000	0.365
80.00	-8.03	-9.50	0.00	-409.57	0.00	409.57	1787.79	893.89	2493.75	1238.00	30.73	-3.366	0.000	0.335
85.00	-7.43	-8.95	0.00	-362.08	0.00	362.08	1767.82	883.91	2419.31	1201.05	34.33	-3.507	0.000	0.306
90.00	-6.85	-8.40	0.00	-317.32	0.00	317.32	1747.34	873.67	2345.22	1164.27	38.07	-3.639	0.000	0.277
95.00	-6.28	-7.86	0.00	-275.30	0.00	275.30	1726.34	863.17	2271.53	1127.68	41.95	-3.761	0.000	0.248
98.00	-5.94	-7.53	0.00	-251.73	0.00	251.73	1713.49	856.74	2227.52	1105.83	44.33	-3.830	0.000	0.231
100.00	-5.56	-7.30	0.00	-236.67	0.00	236.67	1704.82	852.41	2198.27	1091.31	45.94	-3.874	0.000	0.220
102.00	-5.19	-7.07	0.00	-222.07	0.00	222.07	1713.25	856.63	2226.72	1105.44	47.57	-3.916	0.000	0.204
105.00	-4.85	-6.74	0.00	-200.85	0.00	200.85	1700.21	850.10	2182.88	1083.67	50.05	-3.976	0.000	0.188
110.00	-4.31	-6.20	0.00	-167.13	0.00	167.13	1678.06	839.03	2110.21	1047.60	54.26	-4.063	0.000	0.162
115.00	-3.78	-5.65	0.00	-136.15	0.00	136.15	1655.39	827.70	2038.07	1011.78	58.55	-4.138	0.000	0.137
115.75	-3.69	-5.57	0.00	-131.91	0.00	131.91	1651.95	825.97	2027.30	1006.43	59.20	-4.149	0.000	0.133
115.75	-3.69	-5.57	0.00	-131.91	0.00	131.91	930.23	465.11	237.26	173.90	59.20	-4.149	0.000	0.763
120.00	-3.21	-5.10	0.00	-108.23	0.00	108.23	930.23	465.11	237.26	173.90	62.92	-4.204	0.000	0.626
122.00	-2.83	-4.89	0.00	-98.03	0.00	98.03	930.23	465.11	237.26	173.90	64.77	-4.639	0.000	0.567
125.00	-2.50	-4.56	0.00	-83.37	0.00	83.37	930.23	465.11	237.26	173.90	67.87	-5.213	0.000	0.482
127.00	-2.26	-4.34	0.00	-74.25	0.00	74.25	930.23	465.11	237.26	173.90	70.12	-5.546	0.000	0.429
130.00	-1.70	-3.98	0.00	-61.23	0.00	61.23	930.23	465.11	237.26	173.90	73.74	-5.975	0.000	0.354
135.00	-1.27	-3.39	0.00	-41.34	0.00	41.34	930.23	465.11	237.26	173.90	80.28	-6.516	0.000	0.239
135.25	-1.25	-3.37	0.00	-40.50	0.00	40.50	930.23	465.11	237.26	173.90	80.63	-6.537	0.000	0.234
135.25	-1.25	-3.37	0.00	-40.50	0.00	40.50	579.84	289.92	92.43	67.75	80.63	-6.537	0.000	0.600
139.00	-0.74	-2.90	0.00	-27.88	0.00	27.88	579.84	289.92	92.43	67.75	85.86	-6.808	0.000	0.413
140.00	-0.66	-2.80	0.00	-24.98	0.00	24.98	579.84	289.92	92.43	67.75	87.32	-7.174	0.000	0.370
145.00	-0.42	-1.40	0.00	-11.00	0.00	11.00	579.84	289.92	92.43	67.75	95.55	-8.418	0.000	0.163
150.00	-0.10	-0.80	0.00	-3.98	0.00	3.98	579.84	289.92	92.43	67.75	104.64	-8.935	0.000	0.059
155.00	0.00	-0.77	0.00	0.00	0.00	0.00	579.84	289.92	92.43	67.75	114.05	-9.073	0.000	0.000

Wind Loading - Shaft

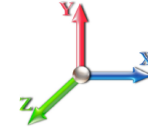
Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	19.798	23.76	135.1	460.7	1162.5
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	19.628	23.55	133.9	488.0	1179.5
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	19.420	23.30	132.5	501.7	1182.9
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	5.00	19.195	23.03	138.9	509.5	1180.3
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	18.962	22.75	143.9	513.8	1174.4
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	18.723	22.47	147.6	515.9	1166.1
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	18.479	22.17	150.5	516.3	1156.2
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	18.232	21.88	152.7	515.6	1145.2
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	5.00	17.983	21.58	154.4	513.8	1133.1
48.50	Bot - Section 2	1.00	1.09	6.608	7.27	0.00	1.200	2.079	3.50	12.437	14.92	108.5	358.5	785.9
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	1.50	5.355	6.43	47.0	155.3	521.0
53.25	Top - Section 1	1.00	1.11	6.739	7.41	0.00	1.200	2.098	3.25	11.527	13.83	102.5	335.3	1121.2
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	1.75	6.162	7.39	55.2	180.2	391.4
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	17.438	20.93	159.1	511.1	1107.5
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	17.183	20.62	159.4	507.0	1093.1
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	16.927	20.31	159.5	502.4	1078.3
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	16.670	20.00	159.4	497.5	1063.1
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	16.413	19.70	159.1	492.3	1047.5
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	5.00	16.155	19.39	158.6	486.8	1031.7
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	5.00	15.896	19.08	157.9	481.1	1015.6
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	5.00	15.637	18.76	157.1	475.1	999.3
98.00	Bot - Section 3	1.00	1.26	7.662	8.43	0.00	1.200	2.230	3.00	9.256	11.11	93.6	282.8	592.4
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	2.00	6.204	7.44	63.0	190.3	602.2
102.00	Top - Section 2	1.00	1.27	7.727	8.50	0.00	1.200	2.239	2.00	6.162	7.39	62.9	189.3	597.9
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	3.00	9.165	11.00	94.1	281.6	587.5
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	5.00	15.069	18.08	156.2	462.8	964.3
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	14.808	17.77	154.9	456.1	947.2
115.75	Top - Section 3	1.00	1.31	7.936	8.73	0.00	1.200	2.267	0.75	2.198	2.64	23.0	68.3	141.0
120.00		1.00	1.32	7.996	8.80	0.00	1.200	2.276	4.25	14.167	17.00	149.5	355.7	791.8
122.00	Appurtenance(s)	1.00	1.32	8.024	8.83	0.00	1.200	2.279	2.00	6.667	8.00	70.6	167.5	372.7
125.00		1.00	1.33	8.065	8.87	0.00	1.200	2.285	3.00	10.000	12.00	106.5	251.5	559.3
127.00	Appurtenance(s)	1.00	1.33	8.092	8.90	0.00	1.200	2.289	2.00	6.667	8.00	71.2	167.8	373.0
130.00	Appurtenance(s)	1.00	1.34	8.132	8.95	0.00	1.200	2.294	3.00	10.000	12.00	107.3	252.0	559.7
135.00		1.00	1.35	8.197	9.02	0.00	1.200	2.303	5.00	16.667	20.00	180.3	420.6	933.6
135.25	Top - Section 4	1.00	1.35	8.200	9.02	0.00	1.200	2.303	0.25	0.833	1.00	9.0	21.0	46.7
139.00	Appurtenance(s)	1.00	1.36	8.247	9.07	0.00	1.200	2.309	3.75	12.500	15.00	136.1	284.1	463.6
140.00		1.00	1.36	8.260	9.09	0.00	1.200	2.311	1.00	3.333	4.00	36.3	75.8	123.7
145.00	Appurtenance(s)	1.00	1.37	8.321	9.15	0.00	1.200	2.319	5.00	16.667	20.00	183.1	379.4	618.7
150.00	Appurtenance(s)	1.00	1.38	8.381	9.22	0.00	1.200	2.327	5.00	16.667	20.00	184.4	379.8	619.2
155.00	Appurtenance(s)	1.00	1.39	8.439	9.28	0.00	1.200	2.335	5.00	16.667	20.00	185.7	380.3	619.7
Totals:								155.00			4,940.3	32,249.9		

Discrete Appurtenance Forces

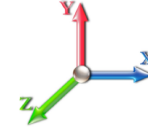
Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	155.00	Truck Ball	1	8.439	9.283	1.00	1.00	4.12	114.67	0.000	0.000	38.26	0.00	0.00
2	150.00	RFS ACU-A20-N	4	8.381	9.219	1.00	1.00	0.00	22.51	0.000	0.000	0.00	0.00	0.00
3	150.00	CCI DPO-7126Y-0-T1	3	8.381	9.219	1.00	1.00	0.00	20.82	0.000	0.000	0.00	0.00	0.00
4	150.00	RFS	3	8.381	9.219	1.00	1.00	0.00	61.90	0.000	0.000	0.00	0.00	0.00
5	150.00	Commscope	3	8.381	9.219	1.00	1.00	0.00	37.52	0.000	0.000	0.00	0.00	0.00
6	145.00	Flag (20'x30')	1	8.321	9.153	1.00	1.00	15.91	240.00	0.000	0.000	145.63	0.00	0.00
7	139.00	DBC0062F3V52-1	6	8.247	9.072	1.00	1.00	0.00	139.36	0.000	0.000	0.00	0.00	0.00
8	139.00	DTMABP0723VG12A	6	8.247	9.072	1.00	1.00	0.00	297.05	0.000	0.000	0.00	0.00	0.00
9	139.00	TPA-65R-LCUUUU-H8	3	8.247	9.072	1.00	1.00	46.57	1573.44	0.000	0.000	422.44	0.00	0.00
10	130.00	ATSBT-TOP-FM	3	8.132	8.945	0.00	1.00	0.00	24.40	0.000	0.000	0.00	0.00	0.00
11	130.00	FV65-13-10DBL2	3	8.132	8.945	0.00	1.00	0.00	2798.08	0.000	0.000	0.00	0.00	0.00
12	127.00	CBC721-DF	6	8.092	8.901	1.00	1.00	0.00	90.62	0.000	0.000	0.00	0.00	0.00
13	122.00	SBNHH-1D6565A	3	8.024	8.826	1.00	1.00	29.73	1014.78	0.000	0.000	262.37	0.00	0.00
Totals:									6,435.15			868.71		

Total Applied Force Summary

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		135.06	1425.63	0.00	0.00
10.00		133.89	1442.66	0.00	0.00
15.00		132.48	1446.07	0.00	0.00
20.00		138.94	1443.51	0.00	0.00
25.00		143.85	1437.52	0.00	0.00
30.00		147.59	1429.27	0.00	0.00
35.00		150.48	1419.40	0.00	0.00
40.00		152.70	1408.32	0.00	0.00
45.00		154.40	1396.27	0.00	0.00
48.50		108.48	970.07	0.00	0.00
50.00		47.01	599.94	0.00	0.00
53.25		102.53	1292.24	0.00	0.00
55.00		55.18	483.46	0.00	0.00
60.00		159.07	1370.71	0.00	0.00
65.00		159.40	1356.27	0.00	0.00
70.00		159.50	1341.42	0.00	0.00
75.00		159.38	1326.21	0.00	0.00
80.00		159.06	1310.68	0.00	0.00
85.00		158.57	1294.86	0.00	0.00
90.00		157.92	1278.77	0.00	0.00
95.00		157.12	1262.45	0.00	0.00
98.00		93.62	750.29	0.00	0.00
100.00		63.01	707.50	0.00	0.00
102.00		62.85	703.18	0.00	0.00
105.00		94.06	745.35	0.00	0.00
110.00		156.16	1227.42	0.00	0.00
115.00		154.90	1210.36	0.00	0.00
115.75		23.03	180.51	0.00	0.00
120.00		149.53	1015.46	0.00	0.00
122.00	(3) attachments	332.98	1492.76	0.00	0.00
125.00		106.46	672.30	0.00	0.00
127.00	(6) attachments	71.21	538.92	0.00	0.00
130.00	(6) attachments	107.34	3495.20	0.00	0.00
135.00		180.33	1046.97	0.00	0.00
135.25		9.02	52.35	0.00	0.00
139.00	(15) attachments	558.53	2558.53	0.00	0.00
140.00		36.34	138.85	0.00	0.00
145.00	(1) attachments	328.70	934.71	0.00	0.00
150.00	(13) attachments	184.37	837.91	0.00	0.00
155.00	(1) attachments	223.92	734.33	0.00	0.00
	Totals:	5,808.96	45,778.64	0.00	0.00

Calculated Forces

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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

Iterations 29

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	-45.77	-5.85	0.00	-590.39	0.00	590.39	2027.49	1013.74	3641.02	1807.56	0.00	0.000	0.000	0.349
5.00	-44.34	-5.79	0.00	-561.15	0.00	561.15	2015.42	1007.71	3566.22	1770.42	0.05	-0.099	0.000	0.339
10.00	-42.89	-5.72	0.00	-532.21	0.00	532.21	2002.83	1001.41	3491.15	1733.15	0.21	-0.198	0.000	0.329
15.00	-41.43	-5.66	0.00	-503.58	0.00	503.58	1989.72	994.86	3415.85	1695.77	0.47	-0.295	0.000	0.318
20.00	-39.98	-5.58	0.00	-475.31	0.00	475.31	1976.09	988.05	3340.37	1658.30	0.83	-0.392	0.000	0.307
25.00	-38.53	-5.48	0.00	-447.43	0.00	447.43	1961.94	980.97	3264.74	1620.75	1.29	-0.487	0.000	0.296
30.00	-37.10	-5.38	0.00	-420.01	0.00	420.01	1947.28	973.64	3189.01	1583.16	1.85	-0.581	0.000	0.284
35.00	-35.67	-5.27	0.00	-393.09	0.00	393.09	1932.09	966.05	3113.21	1545.53	2.51	-0.674	0.000	0.273
40.00	-34.26	-5.16	0.00	-366.72	0.00	366.72	1916.39	958.20	3037.39	1507.89	3.27	-0.764	0.000	0.261
45.00	-32.86	-5.03	0.00	-340.93	0.00	340.93	1900.17	950.08	2961.59	1470.26	4.11	-0.853	0.000	0.249
48.50	-31.88	-4.93	0.00	-323.34	0.00	323.34	1888.50	944.25	2908.57	1443.94	4.76	-0.914	0.000	0.241
50.00	-31.28	-4.89	0.00	-315.95	0.00	315.95	1883.43	941.71	2885.86	1432.66	5.05	-0.940	0.000	0.237
53.25	-29.99	-4.79	0.00	-300.05	0.00	300.05	1885.78	942.89	2896.38	1437.89	5.71	-0.995	0.000	0.225
55.00	-29.50	-4.75	0.00	-291.67	0.00	291.67	1879.83	939.91	2869.89	1424.73	6.08	-1.025	0.000	0.220
60.00	-28.13	-4.61	0.00	-267.90	0.00	267.90	1862.46	931.23	2794.28	1387.20	7.20	-1.103	0.000	0.208
65.00	-26.77	-4.46	0.00	-244.86	0.00	244.86	1844.57	922.28	2718.82	1349.74	8.39	-1.179	0.000	0.196
70.00	-25.43	-4.30	0.00	-222.57	0.00	222.57	1826.16	913.08	2643.55	1312.37	9.67	-1.252	0.000	0.184
75.00	-24.10	-4.14	0.00	-201.08	0.00	201.08	1807.23	903.62	2568.52	1275.12	11.02	-1.321	0.000	0.171
80.00	-22.79	-3.97	0.00	-180.38	0.00	180.38	1787.79	893.89	2493.75	1238.00	12.43	-1.387	0.000	0.158
85.00	-21.49	-3.81	0.00	-160.51	0.00	160.51	1767.82	883.91	2419.31	1201.05	13.92	-1.450	0.000	0.146
90.00	-20.22	-3.64	0.00	-141.47	0.00	141.47	1747.34	873.67	2345.22	1164.27	15.47	-1.508	0.000	0.133
95.00	-18.95	-3.46	0.00	-123.29	0.00	123.29	1726.34	863.17	2271.53	1127.68	17.08	-1.562	0.000	0.120
98.00	-18.21	-3.35	0.00	-112.91	0.00	112.91	1713.49	856.74	2227.52	1105.83	18.07	-1.593	0.000	0.113
100.00	-17.50	-3.28	0.00	-106.21	0.00	106.21	1704.82	852.41	2198.27	1091.31	18.74	-1.613	0.000	0.108
102.00	-16.80	-3.20	0.00	-99.66	0.00	99.66	1713.25	856.63	2226.72	1105.44	19.42	-1.632	0.000	0.100
105.00	-16.05	-3.09	0.00	-90.06	0.00	90.06	1700.21	850.10	2182.88	1083.67	20.46	-1.659	0.000	0.093
110.00	-14.83	-2.91	0.00	-74.59	0.00	74.59	1678.06	839.03	2110.21	1047.60	22.22	-1.698	0.000	0.080
115.00	-13.62	-2.72	0.00	-60.03	0.00	60.03	1655.39	827.70	2038.07	1011.78	24.01	-1.731	0.000	0.068
115.75	-13.44	-2.70	0.00	-57.99	0.00	57.99	1651.95	825.97	2027.30	1006.43	24.28	-1.736	0.000	0.066
115.75	-13.44	-2.70	0.00	-57.99	0.00	57.99	930.23	465.11	237.26	173.90	24.28	-1.736	0.000	0.348
120.00	-12.43	-2.54	0.00	-46.51	0.00	46.51	930.23	465.11	237.26	173.90	25.84	-1.760	0.000	0.281
122.00	-10.94	-2.20	0.00	-41.43	0.00	41.43	930.23	465.11	237.26	173.90	26.62	-1.946	0.000	0.250
125.00	-10.26	-2.11	0.00	-34.82	0.00	34.82	930.23	465.11	237.26	173.90	27.92	-2.187	0.000	0.211
127.00	-9.72	-2.04	0.00	-30.61	0.00	30.61	930.23	465.11	237.26	173.90	28.86	-2.325	0.000	0.187
130.00	-6.23	-1.81	0.00	-24.49	0.00	24.49	930.23	465.11	237.26	173.90	30.38	-2.499	0.000	0.148
135.00	-5.19	-1.59	0.00	-15.46	0.00	15.46	930.23	465.11	237.26	173.90	33.12	-2.710	0.000	0.094
135.25	-5.13	-1.58	0.00	-15.06	0.00	15.06	930.23	465.11	237.26	173.90	33.26	-2.718	0.000	0.092
135.25	-5.13	-1.58	0.00	-15.06	0.00	15.06	579.84	289.92	92.43	67.75	33.26	-2.718	0.000	0.231
139.00	-2.60	-0.90	0.00	-9.13	0.00	9.13	579.84	289.92	92.43	67.75	35.43	-2.814	0.000	0.139
140.00	-2.46	-0.87	0.00	-8.23	0.00	8.23	579.84	289.92	92.43	67.75	36.04	-2.934	0.000	0.126
145.00	-1.54	-0.50	0.00	-3.86	0.00	3.86	579.84	289.92	92.43	67.75	39.35	-3.352	0.000	0.060
150.00	-0.72	-0.27	0.00	-1.35	0.00	1.35	579.84	289.92	92.43	67.75	42.97	-3.532	0.000	0.021
155.00	0.00	-0.22	0.00	0.00	0.00	0.00	579.84	289.92	92.43	67.75	46.70	-3.578	0.000	0.000

Seismic Segment Forces (Factored)

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E				Iterations 25
Gust Response Factor	1.10	Sds	0.12	Ss 0.18
Dead Load Factor	1.20	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.34	SA 0.01
				Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		584.85	0.00	0.03	0.02	8.47	
10.00		576.25	0.01	0.05	0.03	11.52	
15.00		567.65	0.02	0.06	0.04	12.82	
20.00		559.05	0.03	0.07	0.04	13.36	
25.00		550.46	0.05	0.07	0.04	13.57	
30.00		541.86	0.07	0.07	0.04	13.68	
35.00		533.26	0.10	0.07	0.04	13.79	
40.00		524.66	0.13	0.07	0.03	13.92	
45.00		516.06	0.16	0.07	0.03	14.02	
48.50	Bot - Section 2	356.13	0.19	0.06	0.03	9.79	
50.00		304.71	0.20	0.06	0.02	8.39	
53.25	Top - Section 1	654.89	0.22	0.06	0.02	17.99	
55.00		176.00	0.24	0.06	0.02	4.80	
60.00		497.05	0.28	0.05	0.01	12.78	
65.00		488.45	0.33	0.04	0.01	10.81	
70.00		479.85	0.39	0.02	0.01	7.51	
75.00		471.26	0.44	0.00	0.01	2.83	
80.00		462.66	0.50	-0.02	0.01	-2.61	
85.00		454.06	0.57	-0.04	0.01	-7.64	
90.00		445.46	0.64	-0.07	0.02	-11.27	
95.00		436.86	0.71	-0.09	0.03	-13.17	
98.00	Bot - Section 3	257.99	0.76	-0.10	0.04	-8.08	
100.00		343.26	0.79	-0.11	0.05	-10.78	
102.00	Top - Section 2	340.51	0.82	-0.12	0.06	-10.55	
105.00		254.84	0.87	-0.12	0.08	-7.49	
110.00		417.85	0.95	-0.12	0.11	-10.17	
115.00		409.25	1.04	-0.10	0.15	-6.73	
115.75	Top - Section 3	60.65	1.05	-0.09	0.16	-0.91	
120.00		318.03	1.13	-0.05	0.21	-1.83	
122.00	Appurtenance(s)	291.86	1.17	-0.02	0.23	-0.20	
125.00		224.49	1.23	0.03	0.28	1.75	
127.00	Appurtenance(s)	176.06	1.27	0.08	0.31	2.46	
130.00	Appurtenance(s)	499.89	1.33	0.16	0.36	12.09	
135.00		374.15	1.43	0.35	0.47	16.28	
135.25	Top - Section 4	18.71	1.44	0.36	0.47	0.83	
139.00	Appurtenance(s)	489.42	1.52	0.55	0.57	29.93	
140.00		29.23	1.54	0.61	0.59	1.93	
145.00	Appurtenance(s)	346.15	1.65	0.96	0.75	31.62	
150.00	Appurtenance(s)	327.75	1.77	1.41	0.93	39.33	
155.00	Appurtenance(s)	196.15	1.89	1.98	1.14	29.80	
Totals:		15,557.7				264.6	Total Wind: 17,183.2

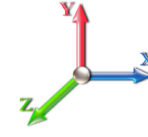
Calculated Forces

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E						Iterations 25
Gust Response Factor	1.10			Sds	0.12	Ss 0.18
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.04	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.34	SA	0.01	Seismic Importance Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-26.27	-0.36	0.00	-32.90	0.00	32.90	2027.49	1013.74	3641.02	1807.56	0.00	0.00	0.00	0.031
5.00	-25.30	-0.35	0.00	-31.12	0.00	31.12	2015.42	1007.71	3566.22	1770.42	0.00	-0.01	0.00	0.030
10.00	-24.35	-0.34	0.00	-29.37	0.00	29.37	2002.83	1001.41	3491.15	1733.15	0.01	-0.01	0.00	0.029
15.00	-23.40	-0.33	0.00	-27.67	0.00	27.67	1989.72	994.86	3415.85	1695.77	0.03	-0.02	0.00	0.028
20.00	-22.47	-0.32	0.00	-26.02	0.00	26.02	1976.09	988.05	3340.37	1658.30	0.05	-0.02	0.00	0.027
25.00	-21.54	-0.31	0.00	-24.43	0.00	24.43	1961.94	980.97	3264.74	1620.75	0.07	-0.03	0.00	0.026
30.00	-20.63	-0.29	0.00	-22.90	0.00	22.90	1947.28	973.64	3189.01	1583.16	0.10	-0.03	0.00	0.025
35.00	-19.73	-0.28	0.00	-21.43	0.00	21.43	1932.09	966.05	3113.21	1545.53	0.14	-0.04	0.00	0.024
40.00	-18.83	-0.27	0.00	-20.02	0.00	20.02	1916.39	958.20	3037.39	1507.89	0.18	-0.04	0.00	0.023
45.00	-17.95	-0.25	0.00	-18.68	0.00	18.68	1900.17	950.08	2961.59	1470.26	0.23	-0.05	0.00	0.022
48.50	-17.34	-0.25	0.00	-17.79	0.00	17.79	1888.50	944.25	2908.57	1443.94	0.26	-0.05	0.00	0.021
50.00	-16.90	-0.24	0.00	-17.42	0.00	17.42	1883.43	941.71	2885.86	1432.66	0.28	-0.05	0.00	0.021
53.25	-15.94	-0.22	0.00	-16.65	0.00	16.65	1885.78	942.89	2896.38	1437.89	0.31	-0.05	0.00	0.020
55.00	-15.64	-0.21	0.00	-16.26	0.00	16.26	1879.83	939.91	2869.89	1424.73	0.33	-0.06	0.00	0.020
60.00	-14.78	-0.20	0.00	-15.19	0.00	15.19	1862.46	931.23	2794.28	1387.20	0.40	-0.06	0.00	0.019
65.00	-13.93	-0.19	0.00	-14.18	0.00	14.18	1844.57	922.28	2718.82	1349.74	0.46	-0.07	0.00	0.018
70.00	-13.09	-0.18	0.00	-13.22	0.00	13.22	1826.16	913.08	2643.55	1312.37	0.53	-0.07	0.00	0.017
75.00	-12.26	-0.18	0.00	-12.30	0.00	12.30	1807.23	903.62	2568.52	1275.12	0.61	-0.07	0.00	0.016
80.00	-11.44	-0.18	0.00	-11.39	0.00	11.39	1787.79	893.89	2493.75	1238.00	0.69	-0.08	0.00	0.016
85.00	-10.63	-0.18	0.00	-10.49	0.00	10.49	1767.82	883.91	2419.31	1201.05	0.77	-0.08	0.00	0.015
90.00	-9.83	-0.18	0.00	-9.59	0.00	9.59	1747.34	873.67	2345.22	1164.27	0.86	-0.09	0.00	0.014
95.00	-9.05	-0.18	0.00	-8.69	0.00	8.69	1726.34	863.17	2271.53	1127.68	0.95	-0.09	0.00	0.013
98.00	-8.58	-0.18	0.00	-8.15	0.00	8.15	1713.49	856.74	2227.52	1105.83	1.01	-0.09	0.00	0.012
100.00	-8.06	-0.18	0.00	-7.79	0.00	7.79	1704.82	852.41	2198.27	1091.31	1.04	-0.09	0.00	0.012
102.00	-7.55	-0.18	0.00	-7.43	0.00	7.43	1713.25	856.63	2226.72	1105.44	1.08	-0.09	0.00	0.011
105.00	-7.08	-0.18	0.00	-6.90	0.00	6.90	1700.21	850.10	2182.88	1083.67	1.14	-0.10	0.00	0.011
110.00	-6.32	-0.18	0.00	-6.01	0.00	6.01	1678.06	839.03	2110.21	1047.60	1.25	-0.10	0.00	0.010
115.00	-5.57	-0.18	0.00	-5.13	0.00	5.13	1655.39	827.70	2038.07	1011.78	1.35	-0.10	0.00	0.008
115.75	-5.45	-0.18	0.00	-5.00	0.00	5.00	1651.95	825.97	2027.30	1006.43	1.37	-0.10	0.00	0.008
115.75	-5.45	-0.18	0.00	-5.00	0.00	5.00	930.23	465.11	237.26	173.90	1.37	-0.10	0.00	0.035
120.00	-4.79	-0.17	0.00	-4.26	0.00	4.26	930.23	465.11	237.26	173.90	1.46	-0.10	0.00	0.030
122.00	-4.31	-0.18	0.00	-3.91	0.00	3.91	930.23	465.11	237.26	173.90	1.51	-0.12	0.00	0.027
125.00	-3.89	-0.17	0.00	-3.38	0.00	3.38	930.23	465.11	237.26	173.90	1.59	-0.14	0.00	0.024
127.00	-3.58	-0.17	0.00	-3.03	0.00	3.03	930.23	465.11	237.26	173.90	1.65	-0.16	0.00	0.021
130.00	-2.83	-0.16	0.00	-2.52	0.00	2.52	930.23	465.11	237.26	173.90	1.76	-0.18	0.00	0.018
135.00	-2.20	-0.14	0.00	-1.72	0.00	1.72	930.23	465.11	237.26	173.90	1.96	-0.20	0.00	0.012
135.25	-2.17	-0.14	0.00	-1.69	0.00	1.69	930.23	465.11	237.26	173.90	1.97	-0.20	0.00	0.012
135.25	-2.17	-0.14	0.00	-1.69	0.00	1.69	579.84	289.92	92.43	67.75	1.97	-0.20	0.00	0.029
139.00	-1.45	-0.11	0.00	-1.16	0.00	1.16	579.84	289.92	92.43	67.75	2.13	-0.21	0.00	0.020
140.00	-1.39	-0.11	0.00	-1.06	0.00	1.06	579.84	289.92	92.43	67.75	2.17	-0.23	0.00	0.018
145.00	-0.83	-0.07	0.00	-0.52	0.00	0.52	579.84	289.92	92.43	67.75	2.44	-0.28	0.00	0.009
150.00	-0.30	-0.03	0.00	-0.16	0.00	0.16	579.84	289.92	92.43	67.75	2.75	-0.30	0.00	0.003
155.00	0.00	-0.03	0.00	0.00	0.00	0.00	579.84	289.92	92.43	67.75	3.07	-0.31	0.00	0.000

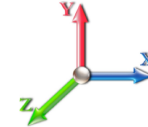
Seismic Segment Forces (Factored)

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E				Iterations 25
Gust Response Factor	1.10	Sds	0.12	Ss 0.18
Dead Load Factor	0.90	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.34	SA 0.01
				Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		584.85	0.00	0.03	0.02	8.47	
10.00		576.25	0.01	0.05	0.03	11.52	
15.00		567.65	0.02	0.06	0.04	12.82	
20.00		559.05	0.03	0.07	0.04	13.36	
25.00		550.46	0.05	0.07	0.04	13.57	
30.00		541.86	0.07	0.07	0.04	13.68	
35.00		533.26	0.10	0.07	0.04	13.79	
40.00		524.66	0.13	0.07	0.03	13.92	
45.00		516.06	0.16	0.07	0.03	14.02	
48.50	Bot - Section 2	356.13	0.19	0.06	0.03	9.79	
50.00		304.71	0.20	0.06	0.02	8.39	
53.25	Top - Section 1	654.89	0.22	0.06	0.02	17.99	
55.00		176.00	0.24	0.06	0.02	4.80	
60.00		497.05	0.28	0.05	0.01	12.78	
65.00		488.45	0.33	0.04	0.01	10.81	
70.00		479.85	0.39	0.02	0.01	7.51	
75.00		471.26	0.44	0.00	0.01	2.83	
80.00		462.66	0.50	-0.02	0.01	-2.61	
85.00		454.06	0.57	-0.04	0.01	-7.64	
90.00		445.46	0.64	-0.07	0.02	-11.27	
95.00		436.86	0.71	-0.09	0.03	-13.17	
98.00	Bot - Section 3	257.99	0.76	-0.10	0.04	-8.08	
100.00		343.26	0.79	-0.11	0.05	-10.78	
102.00	Top - Section 2	340.51	0.82	-0.12	0.06	-10.55	
105.00		254.84	0.87	-0.12	0.08	-7.49	
110.00		417.85	0.95	-0.12	0.11	-10.17	
115.00		409.25	1.04	-0.10	0.15	-6.73	
115.75	Top - Section 3	60.65	1.05	-0.09	0.16	-0.91	
120.00		318.03	1.13	-0.05	0.21	-1.83	
122.00	Appurtenance(s)	291.86	1.17	-0.02	0.23	-0.20	
125.00		224.49	1.23	0.03	0.28	1.75	
127.00	Appurtenance(s)	176.06	1.27	0.08	0.31	2.46	
130.00	Appurtenance(s)	499.89	1.33	0.16	0.36	12.09	
135.00		374.15	1.43	0.35	0.47	16.28	
135.25	Top - Section 4	18.71	1.44	0.36	0.47	0.83	
139.00	Appurtenance(s)	489.42	1.52	0.55	0.57	29.93	
140.00		29.23	1.54	0.61	0.59	1.93	
145.00	Appurtenance(s)	346.15	1.65	0.96	0.75	31.62	
150.00	Appurtenance(s)	327.75	1.77	1.41	0.93	39.33	
155.00	Appurtenance(s)	196.15	1.89	1.98	1.14	29.80	
Totals:		15,557.7				264.6	Total Wind: 17,183.2

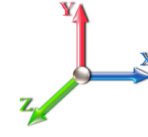
Calculated Forces

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E										Iterations 25
Gust Response Factor 1.10					Sds 0.12					Ss 0.18
Dead Load Factor 0.90			Seismic Load Factor 1.00			Sd1 0.04			S1 0.06	
Wind Load Factor 0.00			Structure Frequency (f1) 0.34			SA 0.01			Seismic Importance Factor 1.00	



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-19.70	-0.36	0.00	-32.46	0.00	32.46	2027.49	1013.74	3641.02	1807.56	0.00	0.00	0.00	0.028
5.00	-18.98	-0.35	0.00	-30.68	0.00	30.68	2015.42	1007.71	3566.22	1770.42	0.00	-0.01	0.00	0.027
10.00	-18.26	-0.34	0.00	-28.93	0.00	28.93	2002.83	1001.41	3491.15	1733.15	0.01	-0.01	0.00	0.026
15.00	-17.55	-0.33	0.00	-27.23	0.00	27.23	1989.72	994.86	3415.85	1695.77	0.03	-0.02	0.00	0.025
20.00	-16.85	-0.32	0.00	-25.59	0.00	25.59	1976.09	988.05	3340.37	1658.30	0.05	-0.02	0.00	0.024
25.00	-16.16	-0.30	0.00	-24.02	0.00	24.02	1961.94	980.97	3264.74	1620.75	0.07	-0.03	0.00	0.023
30.00	-15.47	-0.29	0.00	-22.50	0.00	22.50	1947.28	973.64	3189.01	1583.16	0.10	-0.03	0.00	0.022
35.00	-14.80	-0.28	0.00	-21.05	0.00	21.05	1932.09	966.05	3113.21	1545.53	0.14	-0.04	0.00	0.021
40.00	-14.13	-0.26	0.00	-19.66	0.00	19.66	1916.39	958.20	3037.39	1507.89	0.18	-0.04	0.00	0.020
45.00	-13.46	-0.25	0.00	-18.33	0.00	18.33	1900.17	950.08	2961.59	1470.26	0.22	-0.05	0.00	0.020
48.50	-13.01	-0.24	0.00	-17.45	0.00	17.45	1888.50	944.25	2908.57	1443.94	0.26	-0.05	0.00	0.019
50.00	-12.67	-0.23	0.00	-17.09	0.00	17.09	1883.43	941.71	2885.86	1432.66	0.27	-0.05	0.00	0.019
53.25	-11.95	-0.22	0.00	-16.33	0.00	16.33	1885.78	942.89	2896.38	1437.89	0.31	-0.05	0.00	0.018
55.00	-11.73	-0.21	0.00	-15.96	0.00	15.96	1879.83	939.91	2869.89	1424.73	0.33	-0.06	0.00	0.017
60.00	-11.08	-0.20	0.00	-14.90	0.00	14.90	1862.46	931.23	2794.28	1387.20	0.39	-0.06	0.00	0.017
65.00	-10.44	-0.19	0.00	-13.91	0.00	13.91	1844.57	922.28	2718.82	1349.74	0.45	-0.06	0.00	0.016
70.00	-9.82	-0.18	0.00	-12.98	0.00	12.98	1826.16	913.08	2643.55	1312.37	0.52	-0.07	0.00	0.015
75.00	-9.19	-0.18	0.00	-12.08	0.00	12.08	1807.23	903.62	2568.52	1275.12	0.60	-0.07	0.00	0.015
80.00	-8.58	-0.18	0.00	-11.19	0.00	11.19	1787.79	893.89	2493.75	1238.00	0.67	-0.08	0.00	0.014
85.00	-7.97	-0.18	0.00	-10.31	0.00	10.31	1767.82	883.91	2419.31	1201.05	0.76	-0.08	0.00	0.013
90.00	-7.38	-0.18	0.00	-9.43	0.00	9.43	1747.34	873.67	2345.22	1164.27	0.84	-0.08	0.00	0.012
95.00	-6.79	-0.18	0.00	-8.55	0.00	8.55	1726.34	863.17	2271.53	1127.68	0.93	-0.09	0.00	0.012
98.00	-6.43	-0.18	0.00	-8.02	0.00	8.02	1713.49	856.74	2227.52	1105.83	0.99	-0.09	0.00	0.011
100.00	-6.05	-0.17	0.00	-7.67	0.00	7.67	1704.82	852.41	2198.27	1091.31	1.03	-0.09	0.00	0.011
102.00	-5.66	-0.17	0.00	-7.32	0.00	7.32	1713.25	856.63	2226.72	1105.44	1.07	-0.09	0.00	0.010
105.00	-5.31	-0.17	0.00	-6.79	0.00	6.79	1700.21	850.10	2182.88	1083.67	1.12	-0.09	0.00	0.009
110.00	-4.74	-0.17	0.00	-5.92	0.00	5.92	1678.06	839.03	2110.21	1047.60	1.22	-0.10	0.00	0.008
115.00	-4.17	-0.17	0.00	-5.06	0.00	5.06	1655.39	827.70	2038.07	1011.78	1.33	-0.10	0.00	0.008
115.75	-4.09	-0.17	0.00	-4.93	0.00	4.93	1651.95	825.97	2027.30	1006.43	1.34	-0.10	0.00	0.007
115.75	-4.09	-0.17	0.00	-4.93	0.00	4.93	930.23	465.11	237.26	173.90	1.34	-0.10	0.00	0.033
120.00	-3.60	-0.17	0.00	-4.19	0.00	4.19	930.23	465.11	237.26	173.90	1.44	-0.10	0.00	0.028
122.00	-3.23	-0.17	0.00	-3.85	0.00	3.85	930.23	465.11	237.26	173.90	1.48	-0.12	0.00	0.026
125.00	-2.92	-0.17	0.00	-3.33	0.00	3.33	930.23	465.11	237.26	173.90	1.56	-0.14	0.00	0.022
127.00	-2.68	-0.17	0.00	-2.99	0.00	2.99	930.23	465.11	237.26	173.90	1.63	-0.16	0.00	0.020
130.00	-2.12	-0.16	0.00	-2.48	0.00	2.48	930.23	465.11	237.26	173.90	1.73	-0.17	0.00	0.017
135.00	-1.65	-0.14	0.00	-1.70	0.00	1.70	930.23	465.11	237.26	173.90	1.92	-0.20	0.00	0.012
135.25	-1.63	-0.14	0.00	-1.66	0.00	1.66	930.23	465.11	237.26	173.90	1.93	-0.20	0.00	0.011
135.25	-1.63	-0.14	0.00	-1.66	0.00	1.66	579.84	289.92	92.43	67.75	1.93	-0.20	0.00	0.027
139.00	-1.09	-0.11	0.00	-1.15	0.00	1.15	579.84	289.92	92.43	67.75	2.09	-0.21	0.00	0.019
140.00	-1.04	-0.11	0.00	-1.04	0.00	1.04	579.84	289.92	92.43	67.75	2.14	-0.22	0.00	0.017
145.00	-0.62	-0.07	0.00	-0.52	0.00	0.52	579.84	289.92	92.43	67.75	2.40	-0.28	0.00	0.009
150.00	-0.22	-0.03	0.00	-0.15	0.00	0.15	579.84	289.92	92.43	67.75	2.71	-0.30	0.00	0.003
155.00	0.00	-0.03	0.00	0.00	0.00	0.00	579.84	289.92	92.43	67.75	3.02	-0.30	0.00	0.000

Wind Loading - Shaft

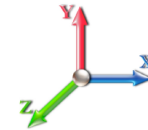
Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	205.25	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	202.27	0.750	0.000	5.00	18.418	13.81	113.1	0.0	584.8
10.00		1.00	0.85	7.442	8.19	199.30	0.750	0.000	5.00	18.148	13.61	111.4	0.0	576.3
15.00		1.00	0.85	7.442	8.19	196.32	0.750	0.000	5.00	17.879	13.41	109.8	0.0	567.7
20.00		1.00	0.90	7.896	8.69	199.15	0.750	0.000	5.00	17.610	13.21	114.7	0.0	559.1
25.00		1.00	0.95	8.276	9.10	200.74	0.750	0.000	5.00	17.341	13.01	118.4	0.0	550.5
30.00		1.00	0.98	8.600	9.46	201.43	0.750	0.000	5.00	17.072	12.80	121.1	0.0	541.9
35.00		1.00	1.01	8.883	9.77	201.47	0.750	0.000	5.00	16.802	12.60	123.1	0.0	533.3
40.00		1.00	1.04	9.137	10.05	201.03	0.750	0.000	5.00	16.533	12.40	124.6	0.0	524.7
45.00		1.00	1.07	9.366	10.30	200.19	0.750	0.000	5.00	16.264	12.20	125.7	0.0	516.1
48.50	Bot - Section 2	1.00	1.09	9.515	10.47	199.42	0.750	0.000	3.50	11.225	8.42	88.1	0.0	356.1
50.00		1.00	1.09	9.576	10.53	199.05	0.750	0.000	1.50	4.834	3.63	38.2	0.0	304.7
53.25	Top - Section 1	1.00	1.11	9.704	10.67	198.16	0.750	0.000	3.25	10.390	7.79	83.2	0.0	654.9
55.00		1.00	1.12	9.770	10.75	200.33	0.750	0.000	1.75	5.548	4.16	44.7	0.0	176.0
60.00		1.00	1.14	9.951	10.95	198.73	0.750	0.000	5.00	15.669	11.75	128.6	0.0	497.1
65.00		1.00	1.16	10.120	11.13	196.94	0.750	0.000	5.00	15.400	11.55	128.6	0.0	488.5
70.00		1.00	1.17	10.279	11.31	194.98	0.750	0.000	5.00	15.130	11.35	128.3	0.0	479.9
75.00		1.00	1.19	10.430	11.47	192.88	0.750	0.000	5.00	14.861	11.15	127.9	0.0	471.3
80.00		1.00	1.21	10.572	11.63	190.64	0.750	0.000	5.00	14.592	10.94	127.3	0.0	462.7
85.00		1.00	1.22	10.708	11.78	188.29	0.750	0.000	5.00	14.323	10.74	126.5	0.0	454.1
90.00		1.00	1.24	10.838	11.92	185.83	0.750	0.000	5.00	14.054	10.54	125.7	0.0	445.5
95.00		1.00	1.25	10.962	12.06	183.28	0.750	0.000	5.00	13.784	10.34	124.7	0.0	436.9
98.00	Bot - Section 3	1.00	1.26	11.034	12.14	181.70	0.750	0.000	3.00	8.141	6.11	74.1	0.0	258.0
100.00		1.00	1.27	11.081	12.19	180.64	0.750	0.000	2.00	5.459	4.09	49.9	0.0	343.3
102.00	Top - Section 2	1.00	1.27	11.127	12.24	179.56	0.750	0.000	2.00	5.416	4.06	49.7	0.0	340.5
105.00		1.00	1.28	11.195	12.31	180.80	0.750	0.000	3.00	8.043	6.03	74.3	0.0	254.8
110.00		1.00	1.29	11.305	12.44	178.01	0.750	0.000	5.00	13.189	9.89	123.0	0.0	417.9
115.00		1.00	1.30	11.412	12.55	175.16	0.750	0.000	5.00	12.920	9.69	121.6	0.0	409.3
115.75	Top - Section 3	1.00	1.31	11.427	12.57	174.73	0.750	0.000	0.75	1.915	1.44	18.1	0.0	60.6
120.00		1.00	1.32	11.514	12.67	229.36	0.600	0.000	4.25	14.167	8.50	107.7	0.0	363.4
122.00	Appurtenance(s)	1.00	1.32	11.554	12.71	229.76	0.600	0.000	2.00	6.667	4.00	50.8	0.0	171.0
125.00		1.00	1.33	11.614	12.78	230.35	0.600	0.000	3.00	10.000	6.00	76.7	0.0	256.5
127.00	Appurtenance(s)	1.00	1.33	11.653	12.82	230.73	0.600	0.000	2.00	6.667	4.00	51.3	0.0	171.0
130.00	Appurtenance(s)	1.00	1.34	11.710	12.88	231.30	0.600	0.000	3.00	10.000	6.00	77.3	0.0	256.5
135.00		1.00	1.35	11.803	12.98	232.22	0.600	0.000	5.00	16.667	10.00	129.8	0.0	427.5
135.25	Top - Section 4	1.00	1.35	11.808	12.99	232.27	0.600	0.000	0.25	0.833	0.50	6.5	0.0	21.4
139.00	Appurtenance(s)	1.00	1.36	11.876	13.06	232.94	0.600	0.000	3.75	12.500	7.50	98.0	0.0	149.6
140.00		1.00	1.36	11.894	13.08	233.11	0.600	0.000	1.00	3.333	2.00	26.2	0.0	39.9
145.00	Appurtenance(s)	1.00	1.37	11.982	13.18	233.97	0.600	0.000	5.00	16.667	10.00	131.8	0.0	199.5
150.00	Appurtenance(s)	1.00	1.38	12.068	13.27	234.81	0.600	0.000	5.00	16.667	10.00	132.7	0.0	199.5
155.00	Appurtenance(s)	1.00	1.39	12.152	13.37	235.62	0.600	0.000	5.00	16.667	10.00	133.7	0.0	199.5
Totals:								155.00			3,866.8	14,721.0		

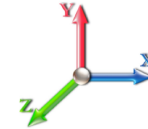
Discrete Appurtenance Forces

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 24



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	155.00	Truck Ball	1	12.152	13.367	1.00	1.00	3.77	50.00	0.000	0.000	50.39	0.00	0.00
2	150.00	RFS ACU-A20-N	4	12.068	13.275	1.00	1.00	0.00	4.00	0.000	0.000	0.00	0.00	0.00
3	150.00	CCI DPO-7126Y-0-T1	3	12.068	13.275	1.00	1.00	0.00	21.90	0.000	0.000	0.00	0.00	0.00
4	150.00	RFS	3	12.068	13.275	1.00	1.00	0.00	19.50	0.000	0.000	0.00	0.00	0.00
5	150.00	Commscope	3	12.068	13.275	1.00	1.00	0.00	136.20	0.000	0.000	0.00	0.00	0.00
6	145.00	Flag (20'x30')	1	11.982	13.181	1.00	1.00	14.56	200.00	0.000	0.000	191.91	0.00	0.00
7	139.00	DBC0062F3V52-1	6	11.876	13.064	1.00	1.00	0.00	39.60	0.000	0.000	0.00	0.00	0.00
8	139.00	DTMABP0723VG12A	6	11.876	13.064	1.00	1.00	0.00	115.20	0.000	0.000	0.00	0.00	0.00
9	139.00	TPA-65R-LCUUUU-H8	3	11.876	13.064	1.00	1.00	0.00	225.00	0.000	0.000	0.00	0.00	0.00
10	130.00	ATSBT-TOP-FM	3	11.710	12.881	0.00	1.00	0.00	5.40	0.000	0.000	0.00	0.00	0.00
11	130.00	FV65-13-10DBL2	3	11.710	12.881	0.00	1.00	0.00	270.00	0.000	0.000	0.00	0.00	0.00
12	127.00	CBC721-DF	6	11.653	12.818	1.00	1.00	0.00	26.40	0.000	0.000	0.00	0.00	0.00
13	122.00	SBNHH-1D6565A	3	11.554	12.710	1.00	1.00	0.00	142.20	0.000	0.000	0.00	0.00	0.00
Totals:									1,255.40			242.30		

Total Applied Force Summary

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		113.08	804.15	0.00	0.00
10.00		111.42	795.55	0.00	0.00
15.00		109.77	786.95	0.00	0.00
20.00		114.72	778.35	0.00	0.00
25.00		118.40	769.76	0.00	0.00
30.00		121.12	761.16	0.00	0.00
35.00		123.14	752.56	0.00	0.00
40.00		124.62	743.96	0.00	0.00
45.00		125.67	735.36	0.00	0.00
48.50		88.11	509.64	0.00	0.00
50.00		38.19	370.50	0.00	0.00
53.25		83.18	797.44	0.00	0.00
55.00		44.72	252.75	0.00	0.00
60.00		128.63	716.35	0.00	0.00
65.00		128.57	707.75	0.00	0.00
70.00		128.31	699.15	0.00	0.00
75.00		127.87	690.56	0.00	0.00
80.00		127.27	681.96	0.00	0.00
85.00		126.53	673.36	0.00	0.00
90.00		125.65	664.76	0.00	0.00
95.00		124.66	656.16	0.00	0.00
98.00		74.11	389.57	0.00	0.00
100.00		49.90	430.98	0.00	0.00
102.00		49.71	428.23	0.00	0.00
105.00		74.28	386.42	0.00	0.00
110.00		123.01	637.15	0.00	0.00
115.00		121.64	628.55	0.00	0.00
115.75		18.05	93.54	0.00	0.00
120.00		107.66	549.77	0.00	0.00
122.00	(3) attachments	50.84	400.92	0.00	0.00
125.00		76.65	350.63	0.00	0.00
127.00	(6) attachments	51.27	260.16	0.00	0.00
130.00	(6) attachments	77.29	626.03	0.00	0.00
135.00		129.84	521.99	0.00	0.00
135.25		6.49	26.10	0.00	0.00
139.00	(15) attachments	97.98	600.29	0.00	0.00
140.00		26.17	52.56	0.00	0.00
145.00	(1) attachments	323.71	462.79	0.00	0.00
150.00	(13) attachments	132.75	444.39	0.00	0.00
155.00	(1) attachments	184.06	249.49	0.00	0.00
	Totals:	4,109.07	21,887.73	0.00	0.00

Calculated Forces

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind	Iterations 28
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	-21.89	-4.12	0.00	-364.67	0.00	364.67	2027.49	1013.74	3641.02	1807.56	0.00	0.000	0.000	0.213
5.00	-21.08	-4.03	0.00	-344.07	0.00	344.07	2015.42	1007.71	3566.22	1770.42	0.03	-0.061	0.000	0.205
10.00	-20.28	-3.94	0.00	-323.93	0.00	323.93	2002.83	1001.41	3491.15	1733.15	0.13	-0.121	0.000	0.197
15.00	-19.49	-3.85	0.00	-304.24	0.00	304.24	1989.72	994.86	3415.85	1695.77	0.29	-0.181	0.000	0.189
20.00	-18.71	-3.75	0.00	-285.01	0.00	285.01	1976.09	988.05	3340.37	1658.30	0.51	-0.239	0.000	0.181
25.00	-17.93	-3.64	0.00	-266.28	0.00	266.28	1961.94	980.97	3264.74	1620.75	0.79	-0.296	0.000	0.173
30.00	-17.17	-3.53	0.00	-248.07	0.00	248.07	1947.28	973.64	3189.01	1583.16	1.13	-0.351	0.000	0.166
35.00	-16.41	-3.42	0.00	-230.40	0.00	230.40	1932.09	966.05	3113.21	1545.53	1.53	-0.406	0.000	0.158
40.00	-15.67	-3.30	0.00	-213.30	0.00	213.30	1916.39	958.20	3037.39	1507.89	1.98	-0.458	0.000	0.150
45.00	-14.93	-3.18	0.00	-196.78	0.00	196.78	1900.17	950.08	2961.59	1470.26	2.49	-0.510	0.000	0.142
48.50	-14.42	-3.10	0.00	-185.63	0.00	185.63	1888.50	944.25	2908.57	1443.94	2.87	-0.545	0.000	0.136
50.00	-14.05	-3.06	0.00	-180.99	0.00	180.99	1883.43	941.71	2885.86	1432.66	3.05	-0.560	0.000	0.134
53.25	-13.25	-2.98	0.00	-171.04	0.00	171.04	1885.78	942.89	2896.38	1437.89	3.44	-0.592	0.000	0.126
55.00	-13.00	-2.94	0.00	-165.83	0.00	165.83	1879.83	939.91	2869.89	1424.73	3.66	-0.609	0.000	0.123
60.00	-12.28	-2.81	0.00	-151.15	0.00	151.15	1862.46	931.23	2794.28	1387.20	4.32	-0.653	0.000	0.116
65.00	-11.57	-2.68	0.00	-137.11	0.00	137.11	1844.57	922.28	2718.82	1349.74	5.03	-0.695	0.000	0.108
70.00	-10.87	-2.55	0.00	-123.71	0.00	123.71	1826.16	913.08	2643.55	1312.37	5.78	-0.736	0.000	0.100
75.00	-10.18	-2.42	0.00	-110.96	0.00	110.96	1807.23	903.62	2568.52	1275.12	6.57	-0.774	0.000	0.093
80.00	-9.50	-2.29	0.00	-98.86	0.00	98.86	1787.79	893.89	2493.75	1238.00	7.40	-0.811	0.000	0.085
85.00	-8.83	-2.16	0.00	-87.42	0.00	87.42	1767.82	883.91	2419.31	1201.05	8.27	-0.845	0.000	0.078
90.00	-8.17	-2.03	0.00	-76.63	0.00	76.63	1747.34	873.67	2345.22	1164.27	9.17	-0.877	0.000	0.070
95.00	-7.51	-1.89	0.00	-66.49	0.00	66.49	1726.34	863.17	2271.53	1127.68	10.10	-0.906	0.000	0.063
98.00	-7.12	-1.82	0.00	-60.81	0.00	60.81	1713.49	856.74	2227.52	1105.83	10.68	-0.923	0.000	0.059
100.00	-6.69	-1.76	0.00	-57.18	0.00	57.18	1704.82	852.41	2198.27	1091.31	11.07	-0.933	0.000	0.056
102.00	-6.26	-1.71	0.00	-53.66	0.00	53.66	1713.25	856.63	2226.72	1105.44	11.46	-0.944	0.000	0.052
105.00	-5.88	-1.63	0.00	-48.54	0.00	48.54	1700.21	850.10	2182.88	1083.67	12.06	-0.958	0.000	0.048
110.00	-5.24	-1.49	0.00	-40.41	0.00	40.41	1678.06	839.03	2110.21	1047.60	13.07	-0.979	0.000	0.042
115.00	-4.62	-1.36	0.00	-32.94	0.00	32.94	1655.39	827.70	2038.07	1011.78	14.11	-0.997	0.000	0.035
115.75	-4.52	-1.34	0.00	-31.91	0.00	31.91	1651.95	825.97	2027.30	1006.43	14.27	-1.000	0.000	0.034
115.75	-4.52	-1.34	0.00	-31.91	0.00	31.91	930.23	465.11	237.26	173.90	14.27	-1.000	0.000	0.188
120.00	-3.97	-1.23	0.00	-26.20	0.00	26.20	930.23	465.11	237.26	173.90	15.16	-1.013	0.000	0.155
122.00	-3.57	-1.18	0.00	-23.74	0.00	23.74	930.23	465.11	237.26	173.90	15.61	-1.119	0.000	0.140
125.00	-3.22	-1.10	0.00	-20.20	0.00	20.20	930.23	465.11	237.26	173.90	16.36	-1.258	0.000	0.120
127.00	-2.96	-1.05	0.00	-18.00	0.00	18.00	930.23	465.11	237.26	173.90	16.90	-1.338	0.000	0.107
130.00	-2.33	-0.96	0.00	-14.85	0.00	14.85	930.23	465.11	237.26	173.90	17.78	-1.442	0.000	0.088
135.00	-1.81	-0.82	0.00	-10.03	0.00	10.03	930.23	465.11	237.26	173.90	19.36	-1.574	0.000	0.060
135.25	-1.79	-0.82	0.00	-9.83	0.00	9.83	930.23	465.11	237.26	173.90	19.44	-1.579	0.000	0.058
135.25	-1.79	-0.82	0.00	-9.83	0.00	9.83	579.84	289.92	92.43	67.75	19.44	-1.579	0.000	0.148
139.00	-1.19	-0.70	0.00	-6.77	0.00	6.77	579.84	289.92	92.43	67.75	20.71	-1.644	0.000	0.102
140.00	-1.13	-0.68	0.00	-6.07	0.00	6.07	579.84	289.92	92.43	67.75	21.06	-1.733	0.000	0.092
145.00	-0.68	-0.34	0.00	-2.68	0.00	2.68	579.84	289.92	92.43	67.75	23.06	-2.036	0.000	0.041
150.00	-0.24	-0.19	0.00	-0.97	0.00	0.97	579.84	289.92	92.43	67.75	25.26	-2.162	0.000	0.015
155.00	0.00	-0.18	0.00	0.00	0.00	0.00	579.84	289.92	92.43	67.75	27.55	-2.195	0.000	0.000

Final Analysis Summary

Structure: CT46141-A-SBA	Code: TIA-222-G	4/18/2022
Site Name: Water Treatment Plant 2, CT	Exposure: C	
Height: 155.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: B - Competent Rock	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 27

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	17.2	0.00	26.23	0.00	0.00	1536.48
0.9D + 1.6W 97 mph Wind	17.2	0.00	19.66	0.00	0.00	1516.97
1.2D + 1.0Di + 1.0Wi 50 mph Wind	5.8	0.00	45.77	0.00	0.00	590.39
1.2D + 1.0E	0.4	0.00	26.27	0.00	0.00	32.90
0.9D + 1.0E	0.4	0.00	19.70	0.00	0.00	32.46
1.0D + 1.0W 60 mph Wind	4.1	0.00	21.89	0.00	0.00	364.67

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-26.23	-17.24	0.00	-1536.4	0.00	-1536.4	2027.49	1013.7	3641.02	1807.56	0.00	0.863
0.9D + 1.6W 97 mph Wind	-19.66	-17.23	0.00	-1516.9	0.00	-1516.9	2027.49	1013.7	3641.02	1807.56	0.00	0.849
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-45.77	-5.85	0.00	-590.39	0.00	-590.39	2027.49	1013.7	3641.02	1807.56	0.00	0.349
1.2D + 1.0E	-5.45	-0.18	0.00	-5.00	0.00	-5.00	1651.95	825.97	2027.30	1006.43	115.75	0.035
0.9D + 1.0E	-4.09	-0.17	0.00	-4.93	0.00	-4.93	1651.95	825.97	2027.30	1006.43	115.75	0.033
1.0D + 1.0W 60 mph Wind	-21.89	-4.12	0.00	-364.67	0.00	-364.67	2027.49	1013.7	3641.02	1807.56	0.00	0.213



Pier Foundation Design For Monopole			Date
			4/18/2022
Customer Name:	T-Mobile	EIA/TIA Standard:	TIA-222-G
Site Name:		Structure Height (Ft.):	155
Site Number:	CT46141-A-SBA	Engineer Name:	M. Franco
Engr. Number:	127552	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations	Monopole
Analysis	

Acceptable overstress (σ) = 5.0%

Structure Type:

Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	26.2	Shear Force (Kips):	17.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	1536.5

Foundation Geometries:

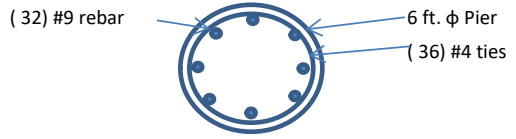
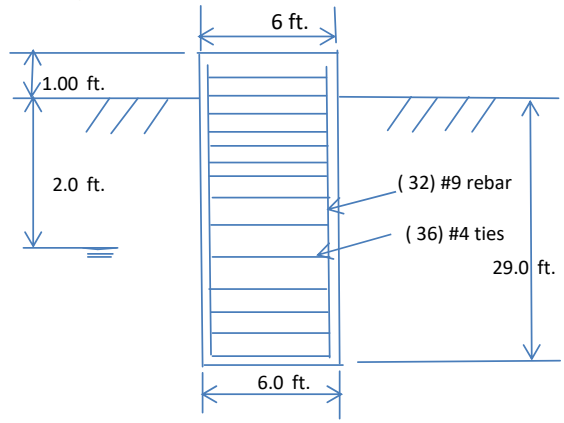
Diameter of Pier (ft.):	6.0	Depth of Base B. G. S. :	29.0 ft.
Pier Height A. G. (ft.):	1.00		

Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield strength:	60	ksi
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	32	Tie Spacing:	12.0	in.
Concrete Cover (in.):	1	Concrete unit weight:	150.0	pcf

Soil Design Parameters:

Water Table B.G.S. (ft):	2.0	Unit weight of water:	62.4	psf
Ratio of Uplift/Axial Skin Friction:	1.0	Pullout failure Angle:	30	(°)
Skin Frictions are to be obtained from:	Soil Report			



Monopole Pier Foundation

Sand
5000

Depth of Layers (ft)		γ_{soil} (pcf)	ϕ (°)	Cohesion (psf)	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types						
Top	Bottom												
0.0	3.0	130	0	0			Sand						
3.0	30.0	130	34	0			Sand						
30.0	35.0	130											

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

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75
Total Dry Soil Volume from Conical Failure (cu. Ft.):	2224	Dry Soil Weight from Conical Failure:	289 Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	10837	Buoyant Soil Weight from Conical Failure (Kips):	944 Kips
Total Dry Concrete Volume (cu. Ft.):	85	Total Dry Concrete Weight:	12.7 Kips
Total Buoyant Concrete Volume (cu. Ft.):	763.4	Total Buoyant Concrete Weight:	66.87 Kips
Total Effective Concrete Weight (Kips):	79.6	Total Effective Soil Weight:	1233.0 Kips
Total Effective Vertical Load on Base (Kips):	32.0		

Check Soil Capacities:

Allowable Foundation Overturning Resistance (kips-ft.):	7490.8	>	Design Factored Moment (kips-ft):	1892	Usage	0.25	OK!
Factor of Safety of Passive Soil Resistance against Moment:	3.96	OK!					

Check the capacities of Reinforcing Concrete:

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

Reinforcing Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	1.00	Tie / Stirrup Area (sq. in./each):	0.20	Usage	
Calculated Moment Capacity (Mn,Kips-Ft):	4465.7	>	Design Factored Moment (Mu, K-Ft):	1609.7	0.36 OK!
Calculated Shear Capacity (Kips):	818.1	>	Design Factored Shear (Kips):	141.5	0.17 OK!
Calculated Tension Capacity (Tn, Kips):	1728.0	>	Design Factored Tension (Tu Kips):	0.0	0.00 OK!
Calculated Compression Capacity (Pn, Kips):	7142	>	Design Factored Axial Load (Pu Kips):	26.2	0.00 OK!
Moment & Axial Strength Combination:	0.36	OK!	Max. Allowable Tie/Stirrup Spacing:	12.00	in.
Pier Reinforcement Ratio:	0.008	Reinforcement Ratio is satisfied per ACI			

Exhibit E

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: CT11768B

CT768/Sprint FarmingtonET
1 Westerberg Drive
Farmington, Connecticut 06032

April 27, 2022

EBI Project Number: 6222002981

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	11.47%

April 27, 2022

T-Mobile

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

Emissions Analysis for Site: CT11768B - CT768/Sprint FarmingtonET

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **1 Westerberg Drive** in **Farmington, 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 1 Westerberg Drive in Farmington, 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) 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.
- 2) 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.
- 3) 2 UMTS channels (AWS Band - 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 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.
- 5) 2 LTE BRS channels (2500 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 6) 2 NR BRS channels (2500 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

- 7) 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.
- 8) 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.
- 9) The antennas used in this modeling are the Commscope FVV-65B-R3 for the 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz / 2500 MHz / 2500 MHz channel(s) in Sector A, the Commscope FVV-65B-R3 for the 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz / 2500 MHz / 2500 MHz channel(s) in Sector B, the Commscope FVV-65B-R3 for the 1900 MHz / 1900 MHz / 2100 MHz / 2100 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.
- 10) The antenna mounting height centerline of the proposed antennas is 130 feet above ground level (AGL).
- 11) 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.
- 12) 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 #:	I	Antenna #:	I	Antenna #:	I
Make / Model:	Commscope FVV-65B-R3	Make / Model:	Commscope FVV-65B-R3	Make / Model:	Commscope FVV-65B-R3
Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz / 2500 MHz / 2500 MHz
Gain:	15.17 dBd / 15.17 dBd / 16.12 dBd / 16.12 dBd / 16.36 dBd / 16.36 dBd	Gain:	15.17 dBd / 15.17 dBd / 16.12 dBd / 16.12 dBd / 16.36 dBd / 16.36 dBd	Gain:	15.17 dBd / 15.17 dBd / 16.12 dBd / 16.12 dBd / 16.36 dBd / 16.36 dBd
Height (AGL):	130 feet	Height (AGL):	130 feet	Height (AGL):	130 feet
Channel Count:	14	Channel Count:	14	Channel Count:	14
Total TX Power (W):	580.00 Watts	Total TX Power (W):	580.00 Watts	Total TX Power (W):	580.00 Watts
ERP (W):	22,179.35	ERP (W):	22,179.35	ERP (W):	22,179.35
Antenna AI MPE %:	5.19%	Antenna BI MPE %:	5.19%	Antenna CI MPE %:	5.19%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	5.19%
Sprint	2.22%
AT&T	2.95%
Verizon	1.11%
Site Total MPE % :	11.47%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	5.19%
T-Mobile Sector B Total:	5.19%
T-Mobile Sector C Total:	5.19%
Site Total MPE % :	11.47%

T-Mobile Maximum MPE Power Values (Sector A)							
T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile 1900 MHz GSM	4	986.55	130.0	9.23	1900 MHz GSM	1000	0.92%
T-Mobile 1900 MHz LTE	2	1973.11	130.0	9.23	1900 MHz LTE	1000	0.92%
T-Mobile 2100 MHz UMTS	2	1227.78	130.0	5.74	2100 MHz UMTS	1000	0.57%
T-Mobile 2100 MHz LTE	2	2455.56	130.0	11.48	2100 MHz LTE	1000	1.15%
T-Mobile 2500 MHz LTE	2	1730.06	130.0	8.09	2500 MHz LTE	1000	0.81%
T-Mobile 2500 MHz NR	2	1730.06	130.0	8.09	2500 MHz NR	1000	0.81%
						Total:	5.19%

• 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:

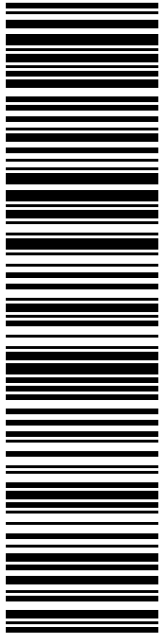
T-Mobile Sector	Power Density Value (%)
Sector A:	5.19%
Sector B:	5.19%
Sector C:	5.19%
T-Mobile Maximum MPE % (Sector A):	5.19%
Site Total:	11.47%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **11.47%** 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 F

Recipient Mailings



USPS TRACKING #

9405 5036 9930 0238 4439 20

Electronic Rate Approved #038555749

P

05/02/2022

US POSTAGE

Flat Rate Env

U.S. POSTAGE PAID

click-n-ship®

Mailed from 01566

UNITED STATES POSTAL SERVICE®

Click-N-Ship®

usps.com 9405 5036 9930 0238 4439 20 0089 5000 0010 1581

US POSTAGE

Flat Rate Env

05/02/2022

PRIORITY MAIL 1-DAY™

Expected Delivery Date: 05/03/22

Ref#: SBCT-768B

0006

R005

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



Cut on dotted line.

Instructions

1. 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.
2. Place your label so it does not wrap around the edge of the package.
3. 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.
4. 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.
5. Mail your package on the "Ship Date" you selected when creating this label.

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0238 4439 20

Trans. #: 562611611	Priority Mail® Postage: \$8.95
Print Date: 05/02/2022	Total: \$8.95
Ship Date: 05/02/2022	
Expected Delivery Date: 05/03/2022	

From: DEBORAH CHASE Ref#: SBCT-768B
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

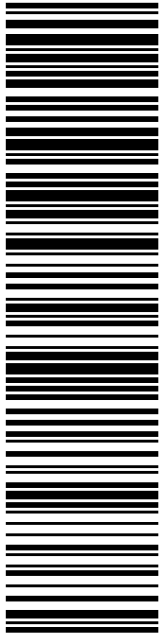
To: KRI PELLETIER
SBA COMMUNICATIONS CORPORATION
13 FLANDERS RD
STE 125
WESTBOROUGH MA 01581

* 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



USPS TRACKING #

9405 5036 9930 0238 4439 37

Electronic Rate Approved #038555749

SHIP

TO: CJ THOMAS
TOWN COUNCIL
1 MONTIETH DR
FARMINGTON CT 06032-1082

P

PRIORITY MAIL 2-DAY™

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

Expected Delivery Date: 05/05/22
Ref#: SBCT-768B
0006

R001

UNITED STATES POSTAL SERVICE®

Click-N-Ship®

U.S. POSTAGE PAID

Flat Rate Env
US POSTAGE \$8.95
usps.com 9405 5036 9930 0238 4439 37 0089 5000 0010 6032

Mailed from 01566
05/02/2022



Cut on dotted line.

Instructions

1. 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.
2. Place your label so it does not wrap around the edge of the package.
3. 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.
4. 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.
5. Mail your package on the "Ship Date" you selected when creating this label.

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0238 4439 37

Trans. #: 562611611	Priority Mail® Postage: \$8.95
Print Date: 05/02/2022	Total: \$8.95
Ship Date: 05/02/2022	
Expected Delivery Date: 05/05/2022	

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


Ref#: SBCT-768B

To: CJ THOMAS
TOWN COUNCIL
1 MONTIETH DR
FARMINGTON CT 06032-1082

* 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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Check the status of your shipment on the USPS Tracking® page at usps.com



**UNITED STATES
POSTAL SERVICE®**

Click-N-Ship®

P

USPS.com 9405 5036 9930 0238 4439 44 0089 5000 0010 6032
US POSTAGE
 Flat Rate Env
 U.S. POSTAGE PAID
 Click-N-Ship®

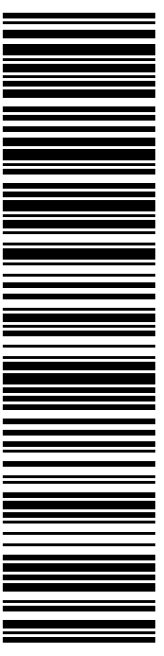
05/02/2022 Mailed from 01566

PRIORITY MAIL 2-DAY™

Expected Delivery Date: 05/05/22
 Ref#: SBCT-768B
0006

SHIP TO: KATHLEEN A BLONSKI
 FARMINGTON TOWN HALL- TOWN MANAGER
 1 MONTIETH DR
 FARMINGTON CT 06032-1082

USPS TRACKING #



9405 5036 9930 0238 4439 44

Electronic Rate Approved #038555749



Cut on dotted line.

Instructions

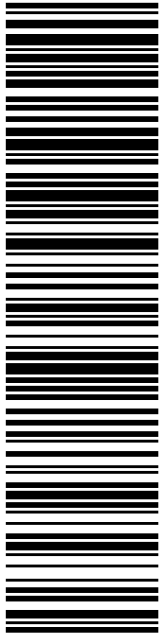
1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. 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.
5. Mail your package on the "Ship Date" you selected when creating this label.

Click-N-Ship® Label Record

USPS TRACKING # :	
9405 5036 9930 0238 4439 44	
Trans. #: 562611611	Priority Mail® Postage: \$8.95
Print Date: 05/02/2022	Total: \$8.95
Ship Date: 05/02/2022	
Expected Delivery Date: 05/05/2022	
From: DEBORAH CHASE Ref#: SBCT-768B NORTHEAST SITE SOLUTIONS 420 MAIN ST STE 1 STURBRIDGE MA 01566-1359	
To: KATHLEEN A BLONSKI FARMINGTON TOWN HALL- TOWN MANAGER 1 MONTIETH DR FARMINGTON CT 06032-1082	
* 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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 Check the status of your shipment on the USPS Tracking® page at usps.com



USPS TRACKING #

9405 5036 9930 0238 4439 51

Electronic Rate Approved #038555749

SHIP TO: SHANNON RUTHERFORD
TOWN PLANNER-FARMINGTON
1 MONTIETH DR
FARMINGTON CT 06032-1082

R001

P

05/02/2022 Mailed from 01566


USPS TRACKING #
9405 5036 9930 0238 4439 51

US POSTAGE
Flat Rate Env
U.S. POSTAGE PAID
click-n-ship®

PRIORITY MAIL 2-DAY™

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

Expected Delivery Date: 05/05/22
Ref#: SBCT-768B
0006



Click-N-Ship®



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Instructions

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Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0238 4439 51

Trans. #: 562611611	Priority Mail® Postage: \$8.95
Print Date: 05/02/2022	Total: \$8.95
Ship Date: 05/02/2022	
Expected Delivery Date: 05/05/2022	

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

Ref#: SBCT-768B

To: SHANNON RUTHERFORD
TOWN PLANNER-FARMINGTON
1 MONTIETH DR
FARMINGTON CT 06032-1082

* 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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ET11768.13 SBA
imo



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

05/02/2022

04:21 PM

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:			
Mon 05/02/2022			
Tracking #:			
9405 5036 9930 0238 4439 20			

Prepaid Mail	1		\$0.00
Farmington, CT 06032			
Weight: 0 lb 7.30 oz			
Acceptance Date:			
Mon 05/02/2022			
Tracking #:			
9405 5036 9930 0238 4439 37			

Prepaid Mail	1		\$0.00
Farmington, CT 06032			
Weight: 0 lb 7.30 oz			
Acceptance Date:			
Mon 05/02/2022			
Tracking #:			
9405 5036 9930 0238 4439 51			

Grand Total:			\$0.00
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 of 4 free test kits.
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<https://informedelivery.usps.com>

All sales final on stamps

CT1126813 7524 1/2



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

05/04/2022 09:55 AM

Product	Qty	Unit Price	Price
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Prepaid Mail	1		\$0.00
Boca Raton, FL 33487			
Weight: 0 lb 5.70 oz			
Acceptance Date:			
Wed 05/04/2022			
Tracking #:			
9405 5035 9930 0238 3407 48			

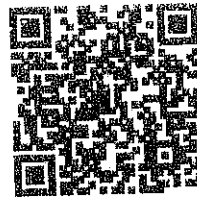
Grand Total:			\$0.00
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or call 1-800-410-7420.

UFN: 082618-0132
 Receipt #: 840-50600020-1-4706288-1
 Clerk: 9