

10 INDUSTRIAL AVE,
SUITE 3
MAHWAH NJ 07430

PHONE: 201.684.0055
FAX: 201.684.0066



October 18, 2022

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

RE: Notice of Exempt Modification
52 Library Street, Salisbury, CT 06068
Latitude: 41.98083607
Longitude: -73.41844873
T-Mobile Site#: CTNH547A - Anchor

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 125-foot level of the existing 149-foot Monopole at the existing facility at 52 Library Street, Salisbury, CT. The property is owned by the Town of Salisbury. The tower is owned by American Tower. T-Mobile now intends to remove three (3) antennas and add (6) antennas. The new antennas support 5G services and will be installed at the same 149-foot level of the monopole.

Planned Modifications:

Tower:

Install New:

- (3) Air 6419 B41 Antennas
- (3) VV-65B-R1 Antennas
- (3) Radio 4460
- (2) 6/24 Fiber Cables

Existing to Remain:

- (3) APXVAALL24 Antennas
- (3) Radio 4449
- (3) 6x12 Fiber Cables

To Be Removed:

- (3) APX16DWV Antennas
- (3) RRUS-11 B2

(3) RRUS-11 B4
All existing coax cables

Ground:

Install New:

(1) 200A PPC Upgrade, (1) RP 6651, (1) CSR IXRE V2, and (1) PSU 4813 VR4A
(1) Enclosure 6160 Cabinet
(1) B160 Battery Cabinet

To Be Removed:

(1) DUW30 Cabinet

This tower facility was approved by the Connecticut Siting Council on November 17, 2005 in Petition No. 306. The proposed modification complies with the approval.

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 First Selectman Curtis Rand, Elected Official, and Abby Conroy, Land Use Administrator, as well as the property owner and 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,

Eric Breun

Transcend Wireless

Cell: 201-658-7728

Email: ebreun@transcendwireless.com

Attachments

cc: Curtis Rand - First Selectman of Salisbury

Abby Conroy - Land Use Administrator

American Tower - Tower Owner

ERIC BREUN
2016587728
1 INTERNATIONAL BLVD.
MAHWAH NJ 07495

1 LBS

1 OF 1

SHIP TO:
FIRST SELECTMAN
CURTIS RAND
27 MAIN STREET
SALISBURY CT 06068



CT 067 9-02



UPS GROUND

TRACKING #: 1Z V25 742 03 9854 9567



BILLING: P/P

Reference #1: CTNH547A

XOL 22.10.08 NV-15-42.0A 10/2022*



TM

ERIC BREUN
2016587728
1 INTERNATIONAL BLVD.
MAHWAH NJ 07495

1 LBS

1 OF 1

SHIP TO:
AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN MA 01801



MA 018 9-04



UPS GROUND

TRACKING #: 1Z V25 742 03 9096 1876



BILLING: P/P

Reference #1: CTNH547A

XOL 22.10.08 NV-15-42.0A 10/2022*



TM

ERIC BREUN
2016587728
1 INTERNATIONAL BLVD.
MAHWAH NJ 07495

1 LBS

1 OF 1

SHIP TO:
LAND USE DEPARTMENT
ABBY CONROY
27 MAIN STREET
SALISBURY CT 06068



CT 067 9-02



UPS GROUND

TRACKING #: 1Z V25 742 03 9071 5883



BILLING: P/P

Reference #1: CTNH547A

XOL 22.10.08 NVJIS 42.0A 10/2022*



TM

Hello, your package has been delivered.

Delivery Date: Wednesday, 10/12/2022

Delivery Time: 11:29 AM

Signed by: LONG

TRANSCEND WIRELESS

Tracking Number: [1ZV257420390961876](#)

Ship To: AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN, MA 01801
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 1.0 LBS

Reference Number: CTNH547A

Hello, your package has been delivered.

Delivery Date: Wednesday, 10/12/2022

Delivery Time: 2:29 PM

Signed by: EGON

TRANSCEND WIRELESS

Tracking Number: [1ZV257420390715883](#)

Ship To: ABBY CONROY
27 MAIN STREET
SALISBURY, CT 06068
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 1.0 LBS

Reference Number: CTNH547A

Hello, your package has been delivered.

Delivery Date: Wednesday, 10/12/2022

Delivery Time: 2:29 PM

Signed by: EGON

TRANSCEND WIRELESS

Tracking Number: [1ZV257420398549567](#)

Ship To: CURTIS RAND
27 MAIN STREET
SALISBURY, CT 06068
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 1.0 LBS

Reference Number: CTNH547A

Detailed Parcel Information

GIS ID
54-89

Parcel ID
54-89

Unique ID
2652

Owner
SALISBURY TOWN OF

Location
52 LIBRARY STREET

MAILING ADDRESS
27 MAIN ST
SALISBURY CT 06068



[Quick Links:](#)

[Summary Card](#) [Assessor Tax Map](#)

Scroll Down For Complete Property Detail

PARCEL VALUATIONS

	Appraised Value	Assessed Value
Buildings	0	0
Land	392700	274900
TOTAL:	752500	526800

PROPERTY INFORMATION

Total Acres	5.13
GIS Acres	
Land Use	VACANT COM
Land Class Code	C
Zoning	C20
Census Tract	
Neighborhood	7
Lot Description	UNKNOWN
Lot Utilities	UNKNOWN

SALE INFORMATION

Sale Date	1961-10-31
Sale Price	0
Book / Page	0084/0121

BUILDING AREA

Building Gross - sqft	0
Living Area - sqft	0

CONSTRUCTION DETAILS

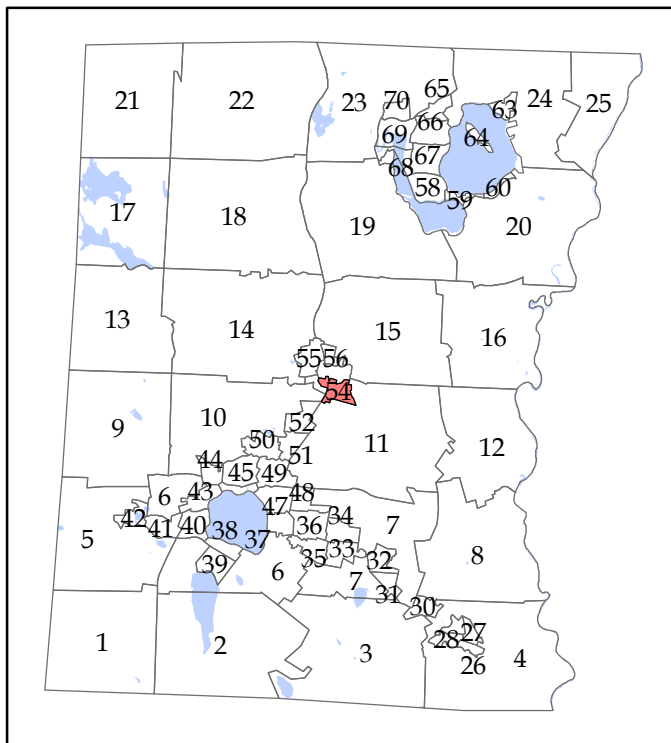
Building Style	UNKNOWN
Building Condition	
Number of Rooms	0
Number of Bedrooms	0
Number of Bathrooms	0
Stories	
Roof Structure	
Primary Exterior Wall Type	
Heating/Cooling Type	
AC_Type	
Heating Fuel	

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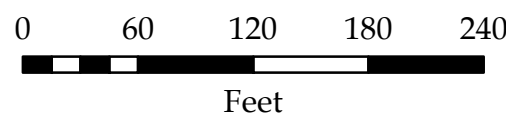
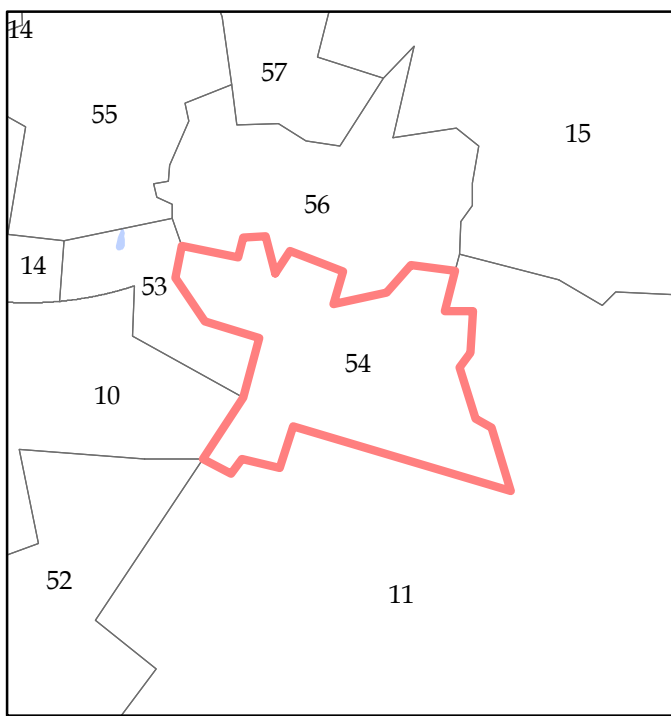
Town of Salisbury, CT

Assessor Map

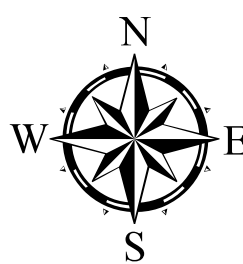
2022



Map 54



1 inch = 100 feet



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

Date: 6/27/2022



DOCKET NO. 306 – Wireless <i>EDGE</i> Fairfield Group LLC	}	Connecticut
application for a Certificate of Environmental Compatibility and	}	
Public Need for the construction, maintenance, and operation of a	}	Siting
cellular telecommunications facility located at 52 Library Street,	}	
Salisbury, Connecticut.	}	Council

November 17, 2005

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 Pubic Need, as provided by General Statutes § 16-50k, be issued to Wireless *EDGE* Fairfield Group LLC for the construction, maintenance and operation of a wireless telecommunications facility to be located at 52 Library Street in Salisbury, 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 monopole and shall be constructed no taller than 150 feet above ground level to provide telecommunications services to both public and private entities. Cingular's antennas to be mounted on the monopole shall be installed using a T-arm configuration.
2. The tower shall be designed and constructed in such a manner as to be able to accommodate a future extension. Any such extension must be approved by the Council as a petition for declaratory ruling, or other administrative procedure as deemed appropriate by the Council.
3. 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 the Town of Salisbury and 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 mountings, 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.
4. 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 in the event other carriers locate at this facility or if circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
5. 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.
6. 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.
7. 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.
8. If the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), 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. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.
9. If the facility 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.
10. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.
11. Any request for extension of the time periods referred to in Conditions 8 and 9 shall be filed with the Council not later than sixty days prior to the expiration date of this Certificate and shall be served on all parties and intervenors and the Town of Salisbury, as listed in the service list. Any proposed modifications to this Decision and Order shall likewise be so served.

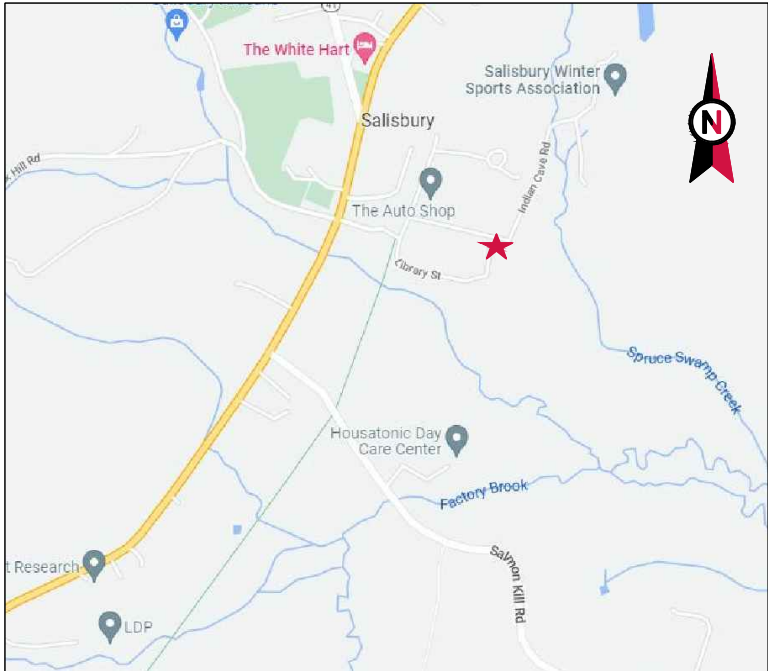
12. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

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 Litchfield County Times and in the Lakeville Journal.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	Wireless Edge Fairfield Group, LLC 270 North Avenue New Rochelle, NY 10801	Julie Donaldson Kohler, Esq. Cohen & Wolf, P.C. 1115 Broad Street Bridgeport, CT 06604 (203) 368-0211 (203) 394-9901 - fax jkohler@cohenandwolf.com
Intervenor (approved 7/20/05)	New Cingular Wireless PCS, LLC	Christopher B. Fisher, Esq. Cuddy & Feder LLP 90 Maple Avenue White Plains, NY 10601 (914) 761-1300 (914) 761-6405 Fax
Intervenor (approved 8/24/05)	Berkshire-Litchfield Environmental Council (BLEC) P.O. Box 552 Lakeville, CT 06039	Send correspondence to: B. Blake Levitt, Trustee 355 Lake Road New Preston, CT 06777 (860) 868-7437 (860) 868-6010 blakelevit.com



VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: SALISBURY CT
ATC SITE NUMBER: 370630
T-MOBILE SITE NAME: CTNH547A
T-MOBILE SITE NUMBER: CTNH547A
SITE ADDRESS: 52 LIBRARY ST.
SALISBURY, CT 06068-0000
SITE CLASS: MONOPOLE

T-MOBILE ANCHOR AMENDMENT PLAN
67D5D998E MUAC CONFIGURATION

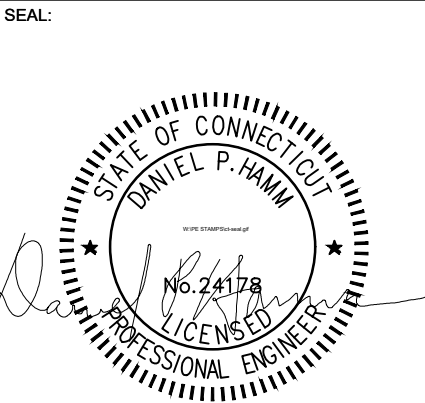


LOCATION MAP



REV.	DESCRIPTION	BY	DATE
A	PRELIM	TR	08/15/22
0	FINALS	DO	10/04/22

ATC SITE NUMBER: 370630
ATC SITE NAME: SALISBURY CT
T-MOBILE SITE NAME: CTNH547A
SITE ADDRESS: 52 LIBRARY ST. SALISBURY, CT 06068-0000



ATC JOB NO:	14138949_G3
CUSTOMER ID:	CTNH547A
CUSTOMER #:	CTNH547A

TITLE SHEET

SHEET NUMBER: G-001	REVISION: 0
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COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. INTERNATIONAL BUILDING CODE (IBC) 2. NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 52 LIBRARY ST. SALISBURY, CT 06068-0000 COUNTY: LITCHFIELD <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.98083607 LONGITUDE: -73.41844873 GROUND ELEVATION: 667' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: TOWER WORK: REMOVE (3) ANTENNA(s), (6) RRU(s), AND (ALL COAX) CABLE(s) INSTALL (6) ANTENNA(s), (3) RRU(s) (2) 6/24 4AWG CABLE(s) EXISTING (3) ANTENNA(s), (3) RRU(s) AND (3) 6X12 HCS 4AWG CABLE(s) TO REMAIN <u>GROUND WORK:</u> REMOVE (1) DUW30 FROM EXISTING 6102 CABINET INSTALL (1) 6160 CABINET, (1) B160 CABINET, 200A PPC UPGRADE, (1) RP 6651, (1) CSR IXRE V2 AND (1) PSU 4813 VR4A EXISTING (1) 6102 MUAC CABINET TO REMAIN THE PROPOSED PROJECT DOES NOT INCLUDE ELECTRICAL SCOPE	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
			G-001	TITLE SHEET	0	08/15/22	TR
			G-002	GENERAL NOTES	0	08/15/22	TR
			C-101	DETAILED SITE PLAN	0	08/15/22	TR
			C-102	DETAILED EQUIPMENT PLANS	0	08/15/22	TR
			C-201	TOWER ELEVATION	0	08/15/22	TR
			C-401	ANTENNA INFORMATION & SCHEDULE	0	08/15/22	TR
			C-501	CONSTRUCTION DETAILS	0	08/15/22	TR
			C-502	CONSTRUCTION DETAILS	0	08/15/22	TR
			E-501	GROUNDING DETAILS	0	08/15/22	TR
			E-601	PANEL SCHEDULE & ELECTRICAL SCHEMATIC	0	08/15/22	TR
			R-601-R-612	SUPPLEMENTAL			

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
- A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)

B. AC/TELCO INTERFACE BOX (PPC)

C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)

D. TOWERS, MONOPOLES

E. TOWER LIGHTING

F. GENERATORS & LIQUID PROPANE TANK

G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING

H. ANTENNAS (INSTALLED BY OTHERS)

I. TRANSMISSION LINE

J. TRANSMISSION LINE JUMPERS

K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS

L. TRANSMISSION LINE GROUND KITS

M. HANGERS

N. HOISTING GRIPS

O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.
- SPECIAL CONSTRUCTION
- ANTENNA INSTALLATION NOTES:
1. WORK INCLUDED:

A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.

B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND T-MOBILE SPECIFICATIONS.

C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.

D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.

E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.

F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.

G. ANTENNA AND COAXIAL CABLE GROUNDING:

2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.

ELECTRICAL NOTES:

1. ELECTRICAL DESIGN SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. STRUCTURAL DESIGN SHALL BE PERFORMED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.
2. ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF CONCORDIA. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3. CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUND LINES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUND LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



REV.	DESCRIPTION	BY	DATE
A	PRELIM	TR	08/15/22
0	FINALS	DO	10/04/22

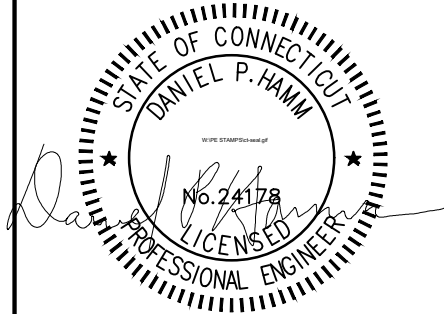
ATC SITE NUMBER:
370630

ATC SITE NAME:
SALISBURY CT

T-MOBILE SITE NAME:
CTNH547A

SITE ADDRESS:
52 LIBRARY ST.
SALISBURY, CT 06068-0000

SEAL:



ATC JOB NO:	14138949_G3
CUSTOMER ID:	CTNH547A
CUSTOMER #:	CTNH547A

GENERAL NOTES

SHEET NUMBER:

G-002

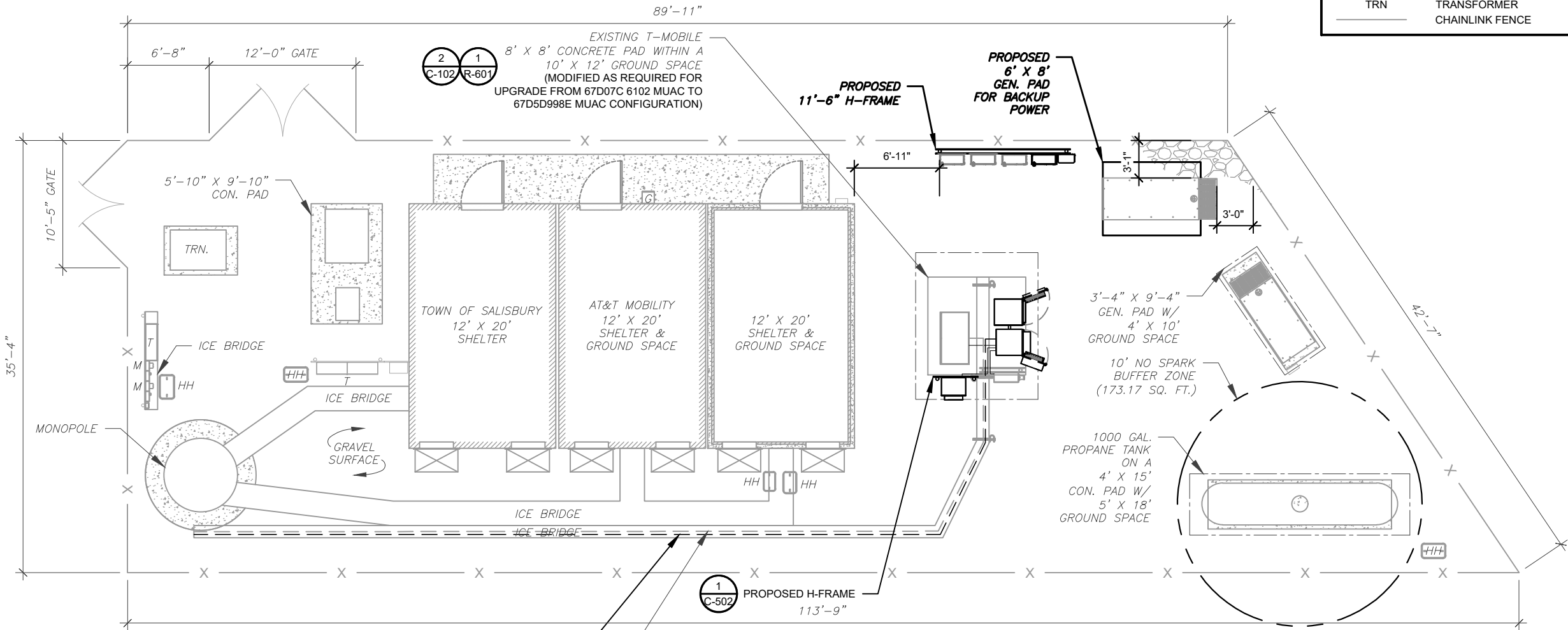
REVISION:

SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
—	CHAINLINK FENCE



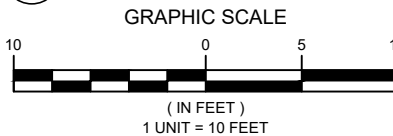
PROPOSED CABLE NOTES:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS ###. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

PROPOSED (2) 6/24 4AWG
(SEE PROPOSED CABLE NOTES THIS PAGE
FOR LENGTH AND ROUTING GUIDELINES)

EXISTING (3) 6X12 HCS 4AWG
(TO REMAIN)
(ALL COAX)
(TO BE REMOVED)

1 DETAILED SITE PLAN



REV.	DESCRIPTION	BY	DATE
A	PRELIM	TR	08/15/22
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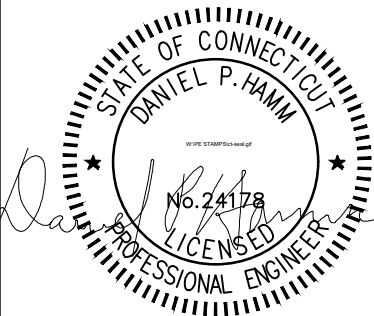
ATC SITE NUMBER:
370630

ATC SITE NAME:
SALISBURY CT

T-MOBILE SITE NAME:
CTNH547A

SITE ADDRESS:
52 LIBRARY ST.
SALISBURY, CT 06068-0000

SEAL:



ATC JOB NO:	14138949_G3
CUSTOMER ID:	CTNH547A
CUSTOMER #:	CTNH547A

DETAILED SITE PLAN

SHEET NUMBER:

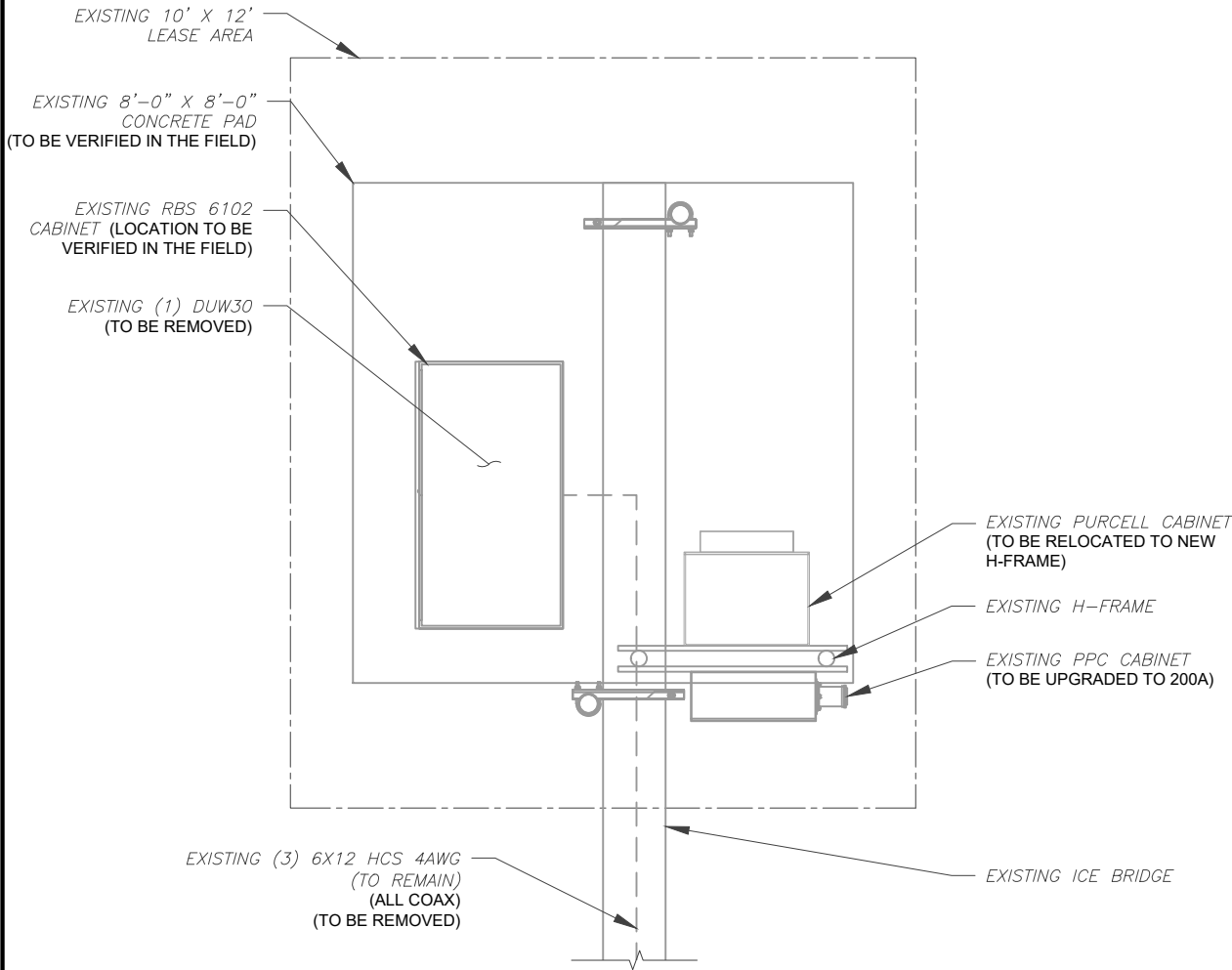
C-101

REVISION:

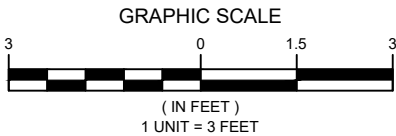
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SITE PLAN NOTES:

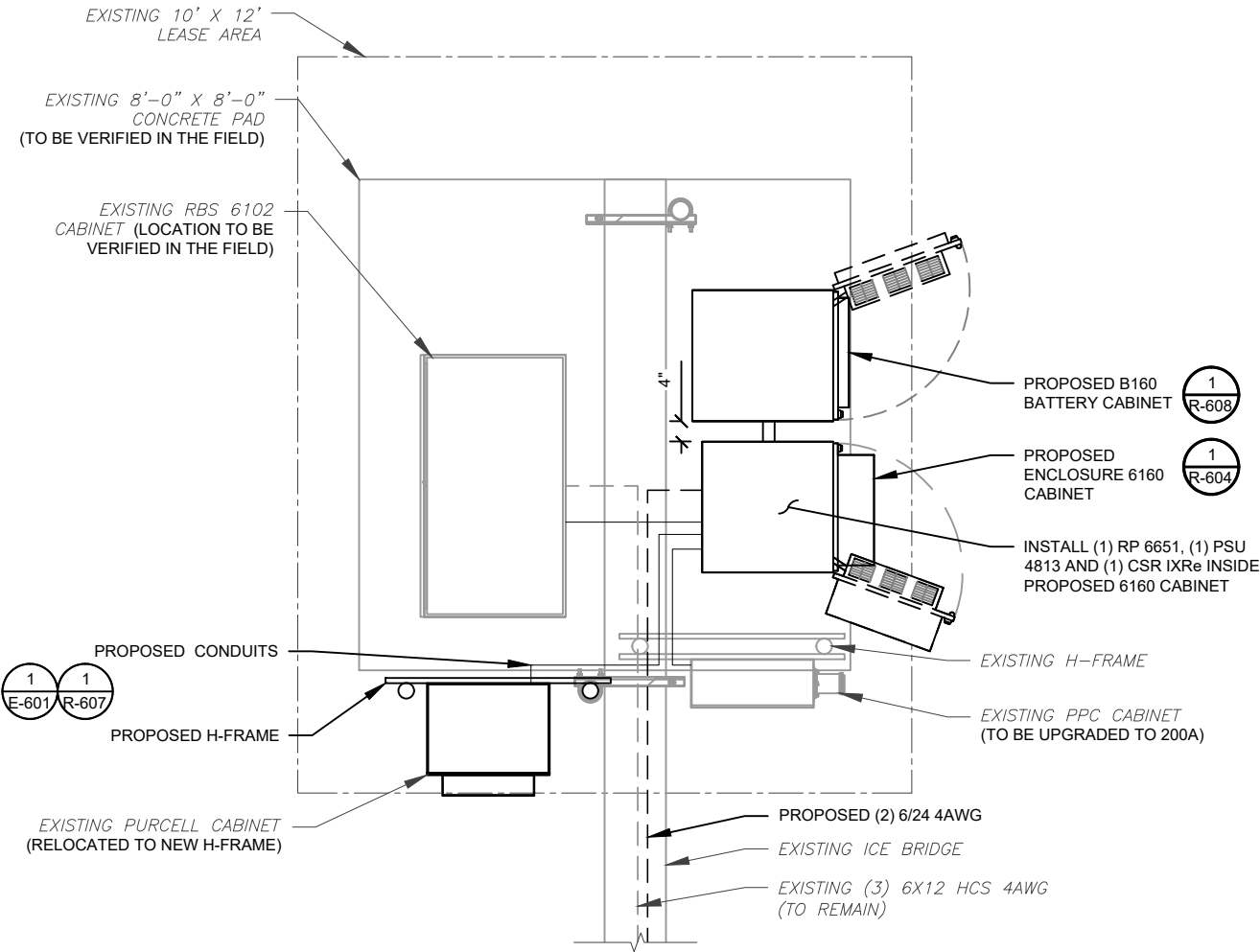
1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
3. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO BE REMOVED FROM EQUIPMENT AREA. DISPOSE OF MATERIALS PROPERLY OFF SITE.



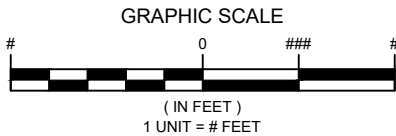
1 EXISTING GROUND EQUIPMENT LAYOUT



T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS.



2 PROPOSED GROUND EQUIPMENT LAYOUT



REV.	DESCRIPTION	BY	DATE
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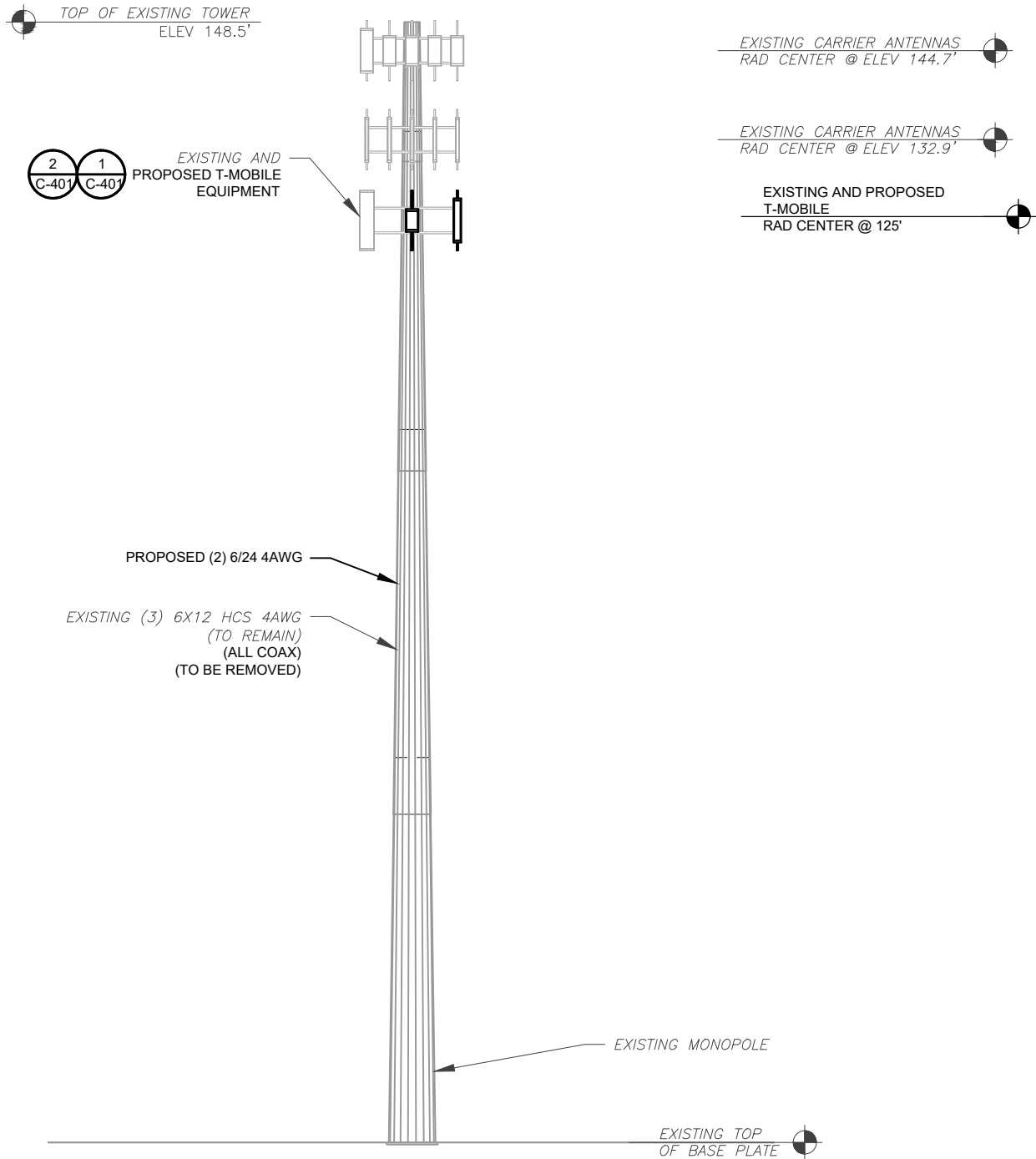
SEAL:



ATC JOB NO:	14138949_G3
CUSTOMER ID:	CTNH547A
CUSTOMER #:	CTNH547A

DETAILED EQUIPMENT
PLANS

SHEET NUMBER:	REVISION:
C-102	0



1 TOWER ELEVATION
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY TOWER ENGINEERING PROFESSIONALS, DATED 08/11/2022, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

- TOWER NOTE:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS. EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
 - WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
 - ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
 - TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
 - TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



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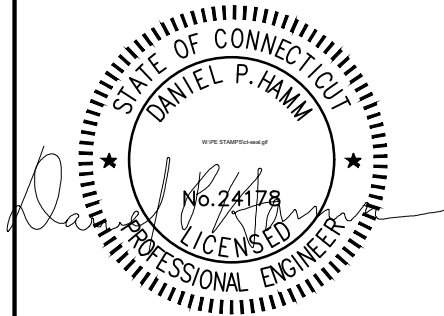
ATC SITE NUMBER:
370630

ATC SITE NAME:
SALISBURY CT

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SITE ADDRESS:
52 LIBRARY ST.
SALISBURY, CT 06068-0000

SEAL:



ATC JOB NO:	14138949_G3
CUSTOMER ID:	CTNH547A
CUSTOMER #:	CTNH547A

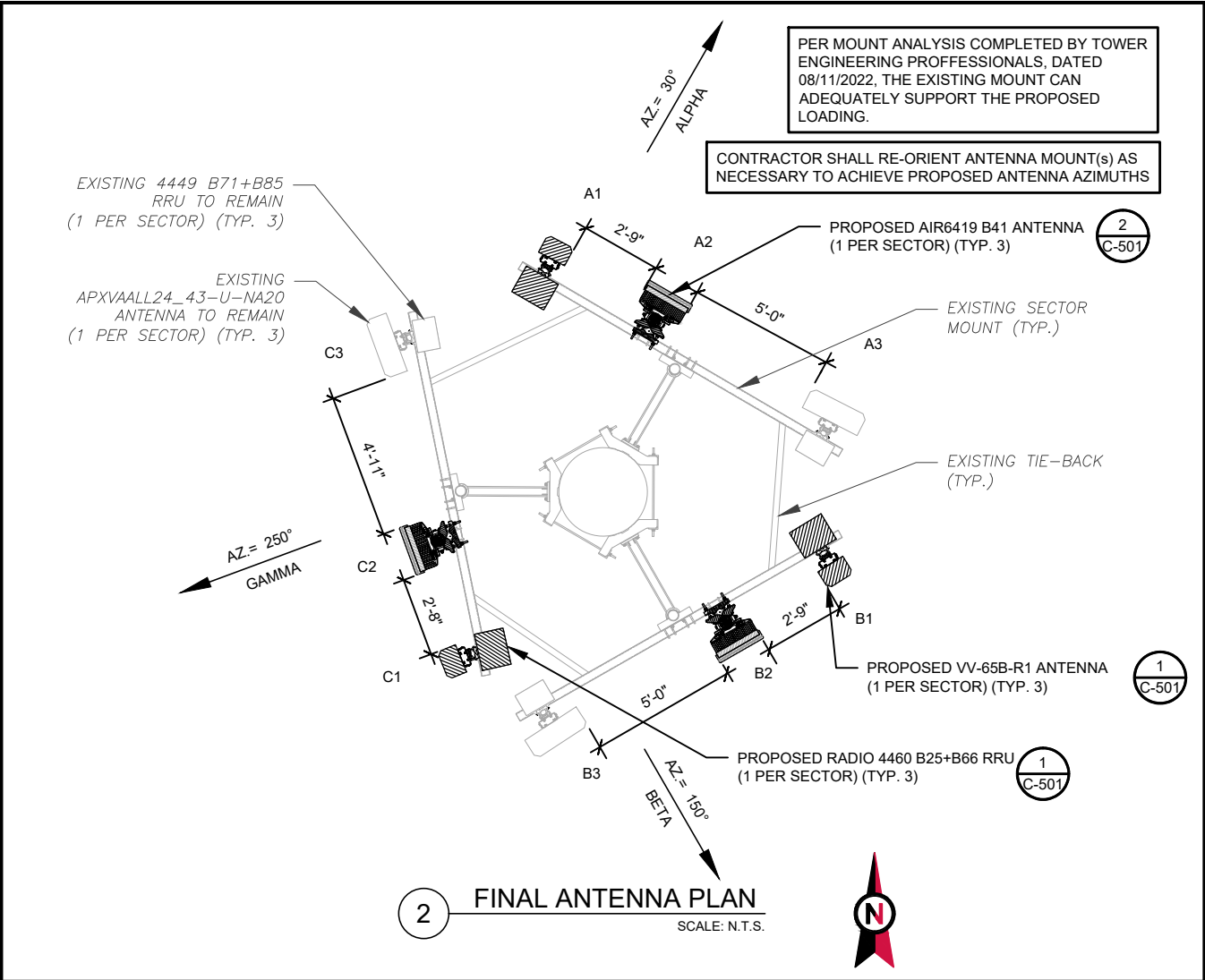
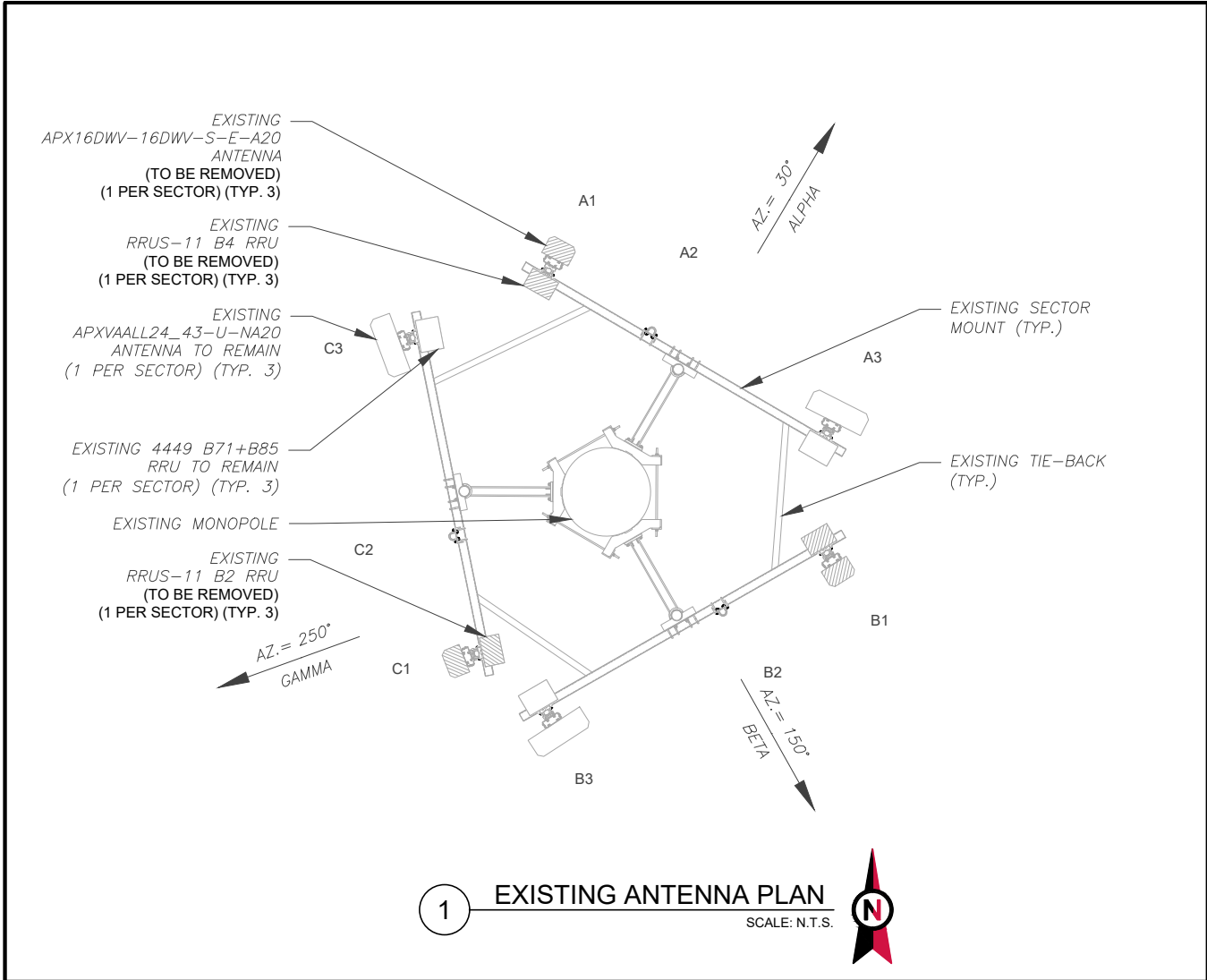
TOWER ELEVATION

SHEET NUMBER:

C-201

REVISION:

0



EXISTING ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	125'	30°	A1	APX16DWV-16DWV-S-E-A20	U1900/L2100	-	RMV	RRUS-11 B2
			A2	-	-	-	-	RRUS-11 B4
			A3	APXVAALL24_43-U-NA20	L700/L600/N600	0/2,2	RMN	4449 B71+B85
BETA	125'	150°	B1	APX16DWV-16DWV-S-E-A20	U1900/L2100	-	RMV	RRUS-11 B2
			B2	-	-	-	-	RRUS-11 B4
			B3	APXVAALL24_43-U-NA20	L700/L600/N600	0/2,2	RMN	4449 B71+B85
GAMMA	125'	250°	C1	APX16DWV-16DWV-S-E-A20	U1900/L2100	-	RMV	RRUS-11 B2
			C2	-	-	-	-	RRUS-11 B4
			C3	APXVAALL24_43-U-NA20	L700/L600/N600	0/2,2	RMN	4449 B71+B85

NOTES
1. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
STATUS ABBREVIATIONS
RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

FINAL ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	125'	30°	A1	VV-65B-R1	L2100, L1900	-	ADD	RADIO 4460 B25,B66
			A2	AIR 6419 B41	L2500/ N2500	-	ADD	-
			A3	APXVAALL24_43-U-NA20	L700/L600/N600	0/2,2	RMN	4449 B71+B85
BETA	125'	150°	B1	VV-65B-R1	L2100, L1900	-	ADD	RADIO 4460 B25,B66
			B2	AIR 6419 B41	L2500/ N2500	-	ADD	-
			B3	APXVAALL24_43-U-NA20	L700/L600/N600	0/2,2	RMN	4449 B71+B85
GAMMA	125'	250°	C1	VV-65B-R1	L2100, L1900	-	ADD	RADIO 4460 B25,B66
			C2	AIR 6419 B41	L2500/ N2500	-	ADD	-
			C3	APXVAALL24_43-U-NA20	L700/L600/N600	0/2,2	RMN	4449 B71+B85

CABLE LENGTHS FOR JUMPERS
JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
-	RMN	(3) 6X12 HCS 4AWG	RMN
-	RMV	(ALL COAX)	RMV

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
-	RMN	(3) 6X12 HCS 4AWG	RMN
-	ADD	(2) 6/24 4AWG	ADD

3 EQUIPMENT SCHEDULES

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

REV.	DESCRIPTION	BY	DATE
A	PRELIM	TR	08/15/22
0	FINALS	DO	10/04/22

ATC SITE NUMBER:
370630

ATC SITE NAME:
SALISBURY CT

T-MOBILE SITE NAME:
CTNH547A

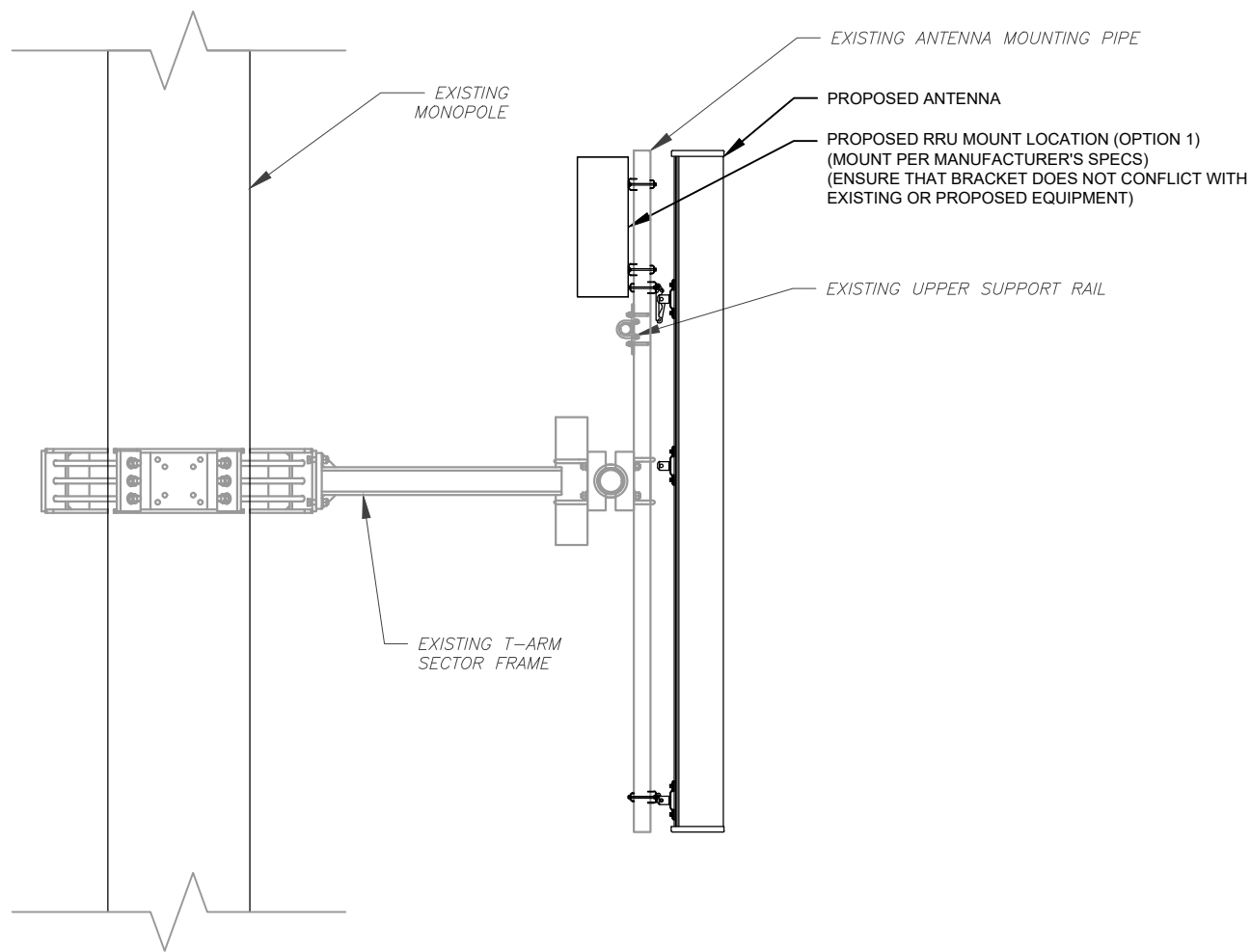
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SALISBURY, CT 06068-0000

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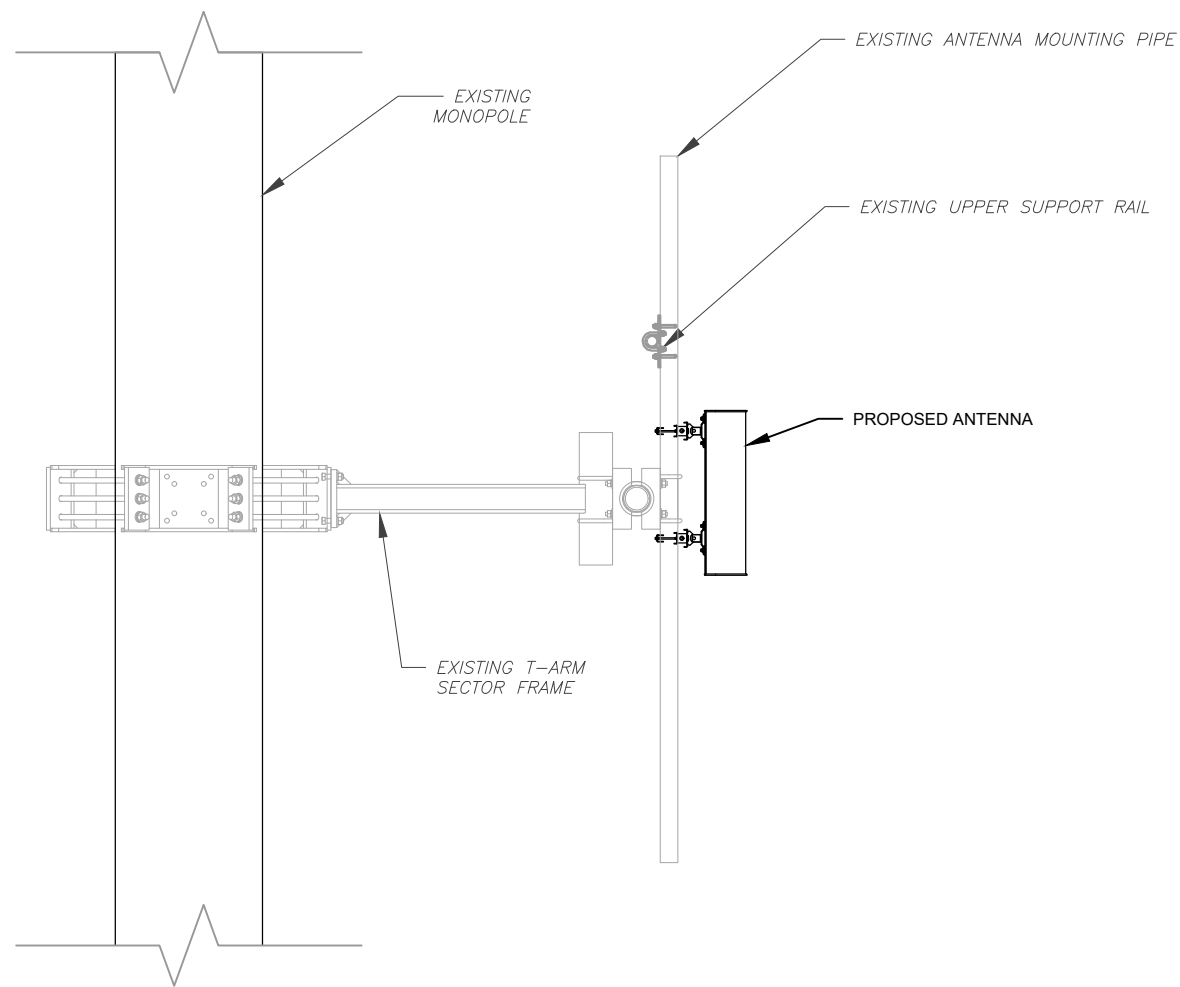
ATC JOB NO: 14138949_G3
CUSTOMER ID: CTNH547A
CUSTOMER #: CTNH547A

ANTENNA INFORMATION & SCHEDULE

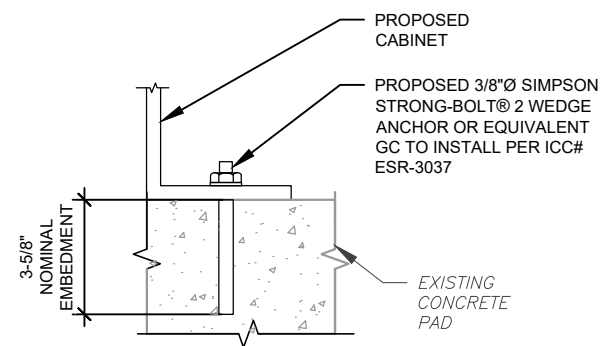
SHEET NUMBER: C-401	REVISION: 0
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1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



NOTE:

INSTALL SIMPSON STRONG-TIE® STRONG-BOLT® 2 WEDGE ANCHOR(S) STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.STRONGTIE.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

3 CABINET ATTACHMENT DETAIL
SCALE: N.T.S.



REV.	DESCRIPTION	BY	DATE
A	PRELIM	TR	08/15/22
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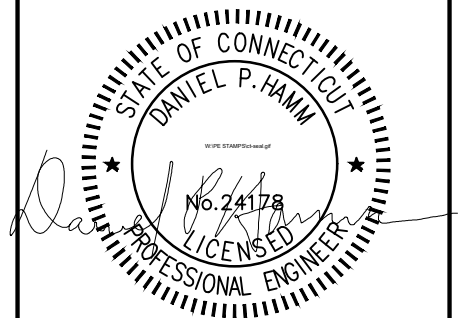
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370630

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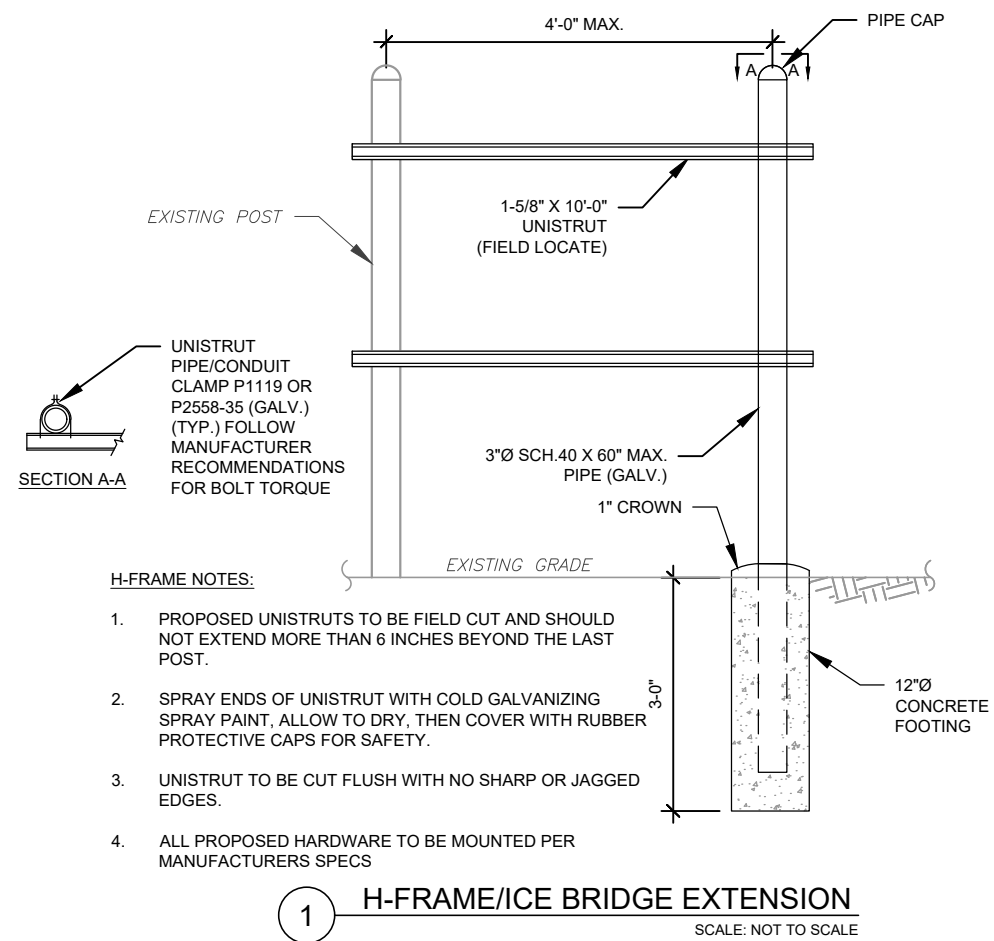
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ATC JOB NO:	14138949_G3
CUSTOMER ID:	CTNH547A
CUSTOMER #:	CTNH547A

CONSTRUCTION
DETAILS

SHEET NUMBER: C-501	REVISION: 0
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REV.	DESCRIPTION	BY	DATE
A	PRELIM	TR	08/15/22
0	FINALS	DO	10/04/22

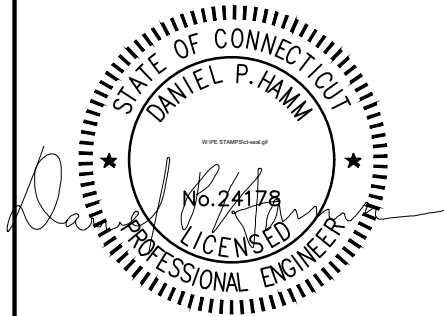
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370630

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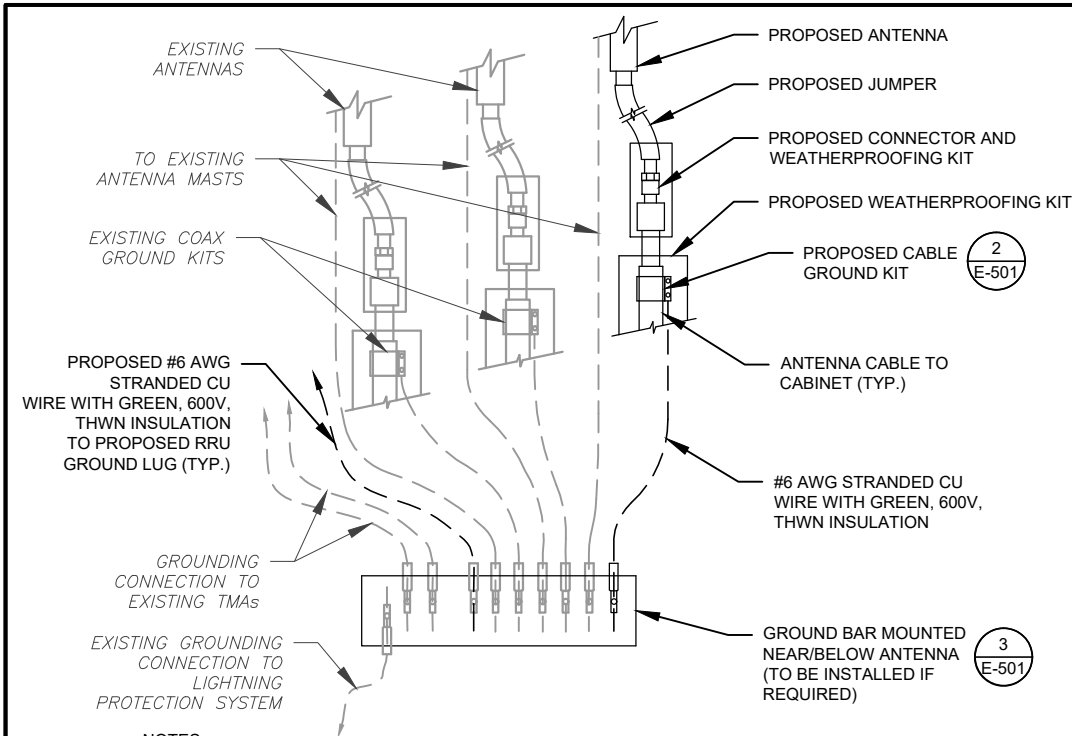
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CUSTOMER ID:	CTNH547A
CUSTOMER #:	CTNH547A

CONSTRUCTION
DETAILS

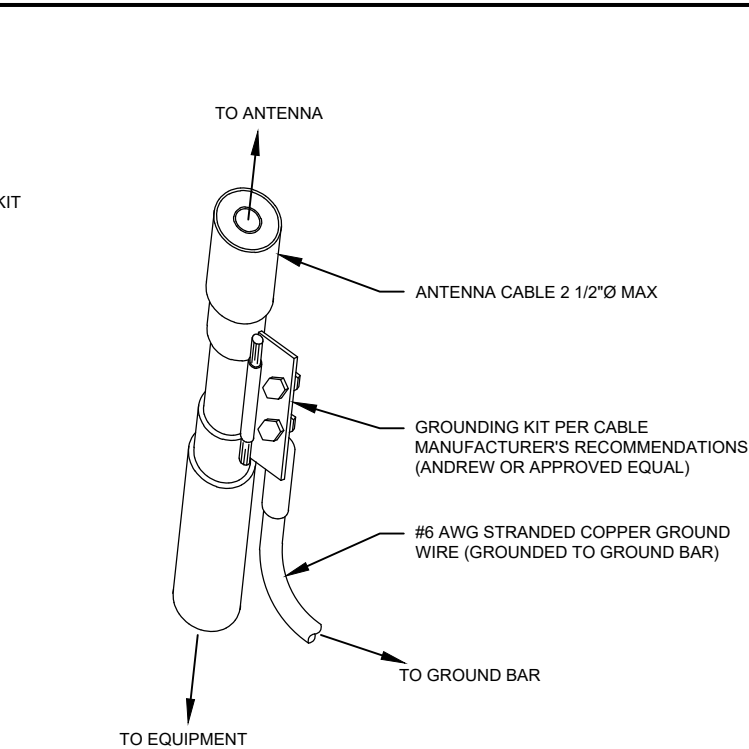
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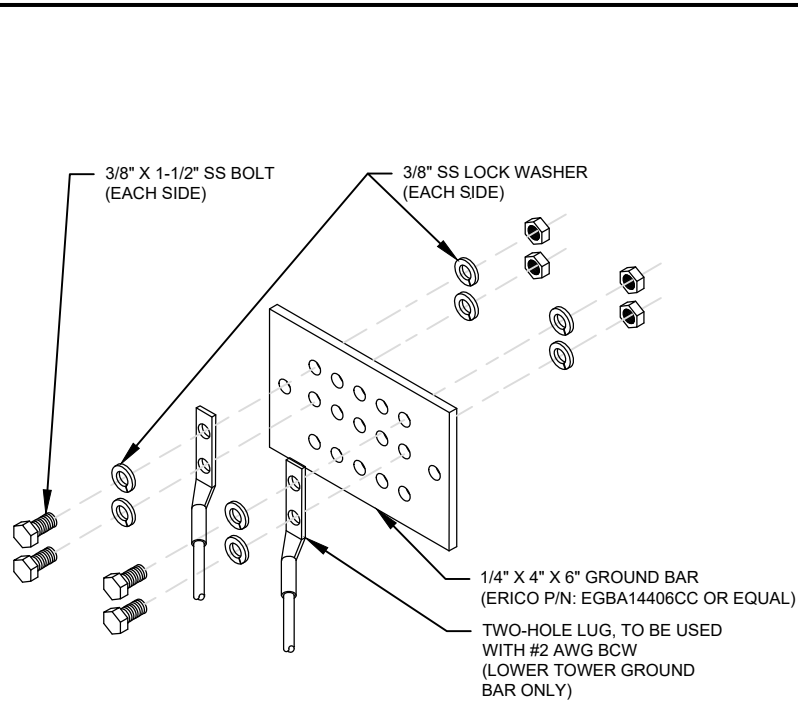
- THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
- SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



- GROUND KIT NOTES:
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 - CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



GROUND BAR NOTES:

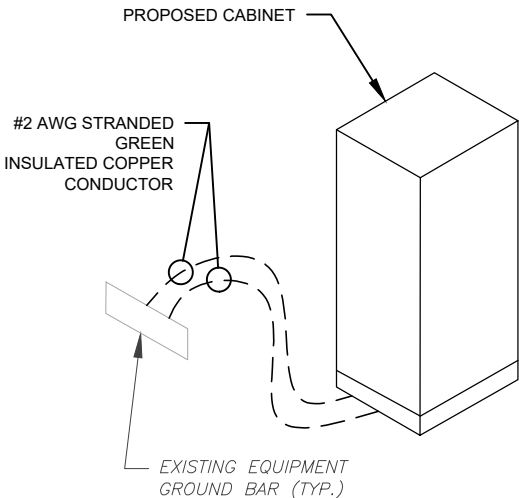
- GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
- GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.

ELECTRICAL NOTES:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
- ATC HAS NOT VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER. PROPOSED CABLE AND CONDUIT SHALL BE MINIMUM SIZE PER BELOW IN CHART.
- FOR SPECIFIC CABINET / ANCILLARY EQUIPMENT WIRING REQUIREMENTS, THE T-MOBILE CONTRACTOR SHOULD REFERENCE DESIGN DOCUMENTS PROVIDED BY T-MOBILE FOR THIS CURRENT PROJECT CONFIGURATION, IN ACCORDANCE WITH LOCAL JURISDICTION REQUIREMENTS & NEC STANDARDS & PRACTICES.

VOLTS	OCPD SIZE	WIRE SIZE	GROUND	CONDUIT
120/240V OR 120/208V	80A/2P	3-#3 AWG	#8 AWG	1-1/4"
	100/2P	3-#2 AWG	#8 AWG	1-1/4"
	125A/2P	3-#3/0 AWG	#6 AWG	2"
	150A/2P	3-#3/0 AWG	#6 AWG	2"
	200A/2P	3-#3/0 AWG	#6 AWG	2"
240V OR 208V	80A/2P	2-#3 AWG	#8 AWG	1-1/4"
	100/2P	2-#2 AWG	#8 AWG	1-1/4"
	125A/2P	2-#3/0 AWG	#6 AWG	2"
	150A/2P	2-#3/0 AWG	#6 AWG	2"
	200A/2P	2-#3/0 AWG	#6 AWG	2"



5 CABINET GROUNDING DETAIL
SCALE: N.T.S.

6 ELECTRICAL NOTES

STANDARD CONDUIT USE TABLE			
CONDUIT TYPE	USE CASE	LOCATION	USE CASE EXAMPLE
RMC (METALLIC)	AC, DC COMM	ABOVE GROUND	ABOVE GROUND PPC TO SSC
PVC	AC POWER	UNDERGROUND	UNDERGROUND PPC TO SSC OR BACKHAUL TRANSPORT HUB TO SSC
LFMC	AC, DC, COMM	MAX 6' PER CONDUIT RUN, ABOVE GROUND ONLY	TIGHT LOCATIONS BETWEEN HUB AND CONDUIT BUT NOT TO BE USED WHERE IT CAN BE STEPPED ON
EMT	INDOOR AC, DC COMM	INDOOR NOT EXPOSED TO THE OUTDOOR ENVIRONMENT (MUST BE DRY)	CIRCUIT PANEL TO JUNCTION BOX
LFNC	GROUND WIRE	CONCEALING AND PROTECTING BTCW RISERS ONLY	GROUND RING TO MGB OR SSC

EXCEPTION CONDUIT USE TABLE			
CONDUIT TYPE	USE CASE	LOCATION	USE CASE EXAMPLE
EMT (NOT PREFERRED)	OUTDOOR DC, COMM	OUTDOOR WHEN USED WITH WATERTIGHT HUBS ONLY	BETWEEN EQUIPMENT AND BATTERY CABINET OR EQUIPMENT TO EQUIPMENT CABINETS FOR INTER CABINET CONNECTION
RMC NONMETALLIC (ALUMINUM)	OUTDOOR/INDOOR PER NEC GUIDLINES	ABOVE GROUND	MAT BE USED AS A LOWER COST ALTERNATIVE TO METALLIC RMC, MUST MEET OR EXCEED FEDERAL SPEC: WW-C-540C, UL-6A, ANSI C80.5, NEC 344.10 (A) ALLOWS THE USE OF EITHER ALUMINUM OR GALVANIZED FITTINGS

4 CONDUIT USE TABLES

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

REV.	DESCRIPTION	BY	DATE
A	PRELIM	TR	08/15/22
0	FINALS	DO	10/04/22

ATC SITE NUMBER:
370630

ATC SITE NAME:
SALISBURY CT

T-MOBILE SITE NAME:
CTNH547A

SITE ADDRESS:
52 LIBRARY ST.
SALISBURY, CT 06068-0000

SEAL:

ATC JOB NO:	14138949_G3
CUSTOMER ID:	CTNH547A
CUSTOMER #:	CTNH547A

GROUNDING DETAILS

SHEET NUMBER: E-501	REVISION: 0
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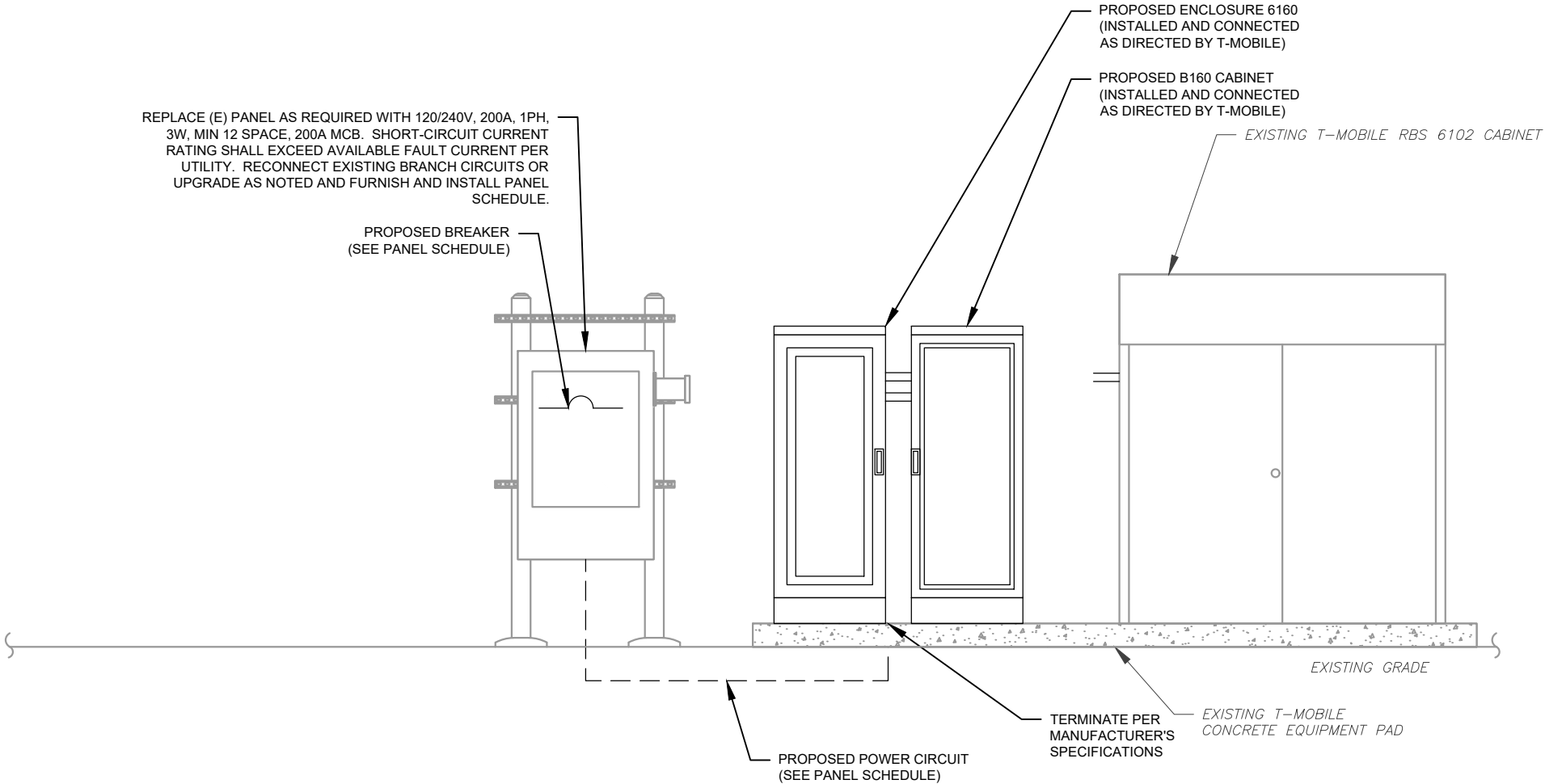
PANEL DESIGNATION: TMO		TYPE: MOUNTING: ENCLOSURE		LIGHTING & APPLIANCE				SYSTEM:				120/240V, 1Ø, 3W, 24 CKT				LOCATION: TMO LEASE EQUIPMENT AREA	
				SURFACE				MAIN BREAKER (MB):				200A				PANEL NOTES: PROPOSED	
				NEMA 3R				MAIN BUS RATING:				200A					
								MIN. A.I.C. RATING:				N/A					

CONNECTED LOAD (KVA)		BRIEF DESCRIPTION	FEEDER OR BRANCH CIRCUIT						CIRC. NOTES	FEEDER OR BRANCH CIRCUIT						BRIEF DESCRIPTION	CONNECTED LOAD (KVA)	
A	B		BREAKER		CIRCUIT		POLE NO.	CIRC. NOTES		POLE NO.	CIRCUIT		BREAKER		A		B	
			AMPS	POLES	WIRE	GND					COND	WIRE	POLES	AMPS				
0.01		SURGE	60	2	3-#6	#10	1"	1		2	1/2"	#12	2-#12	1	20	GF	0.18	
	0.01								3		4	1/2"	#12	2-#12	1	20	LIGHT	
7.50		ENCLOSURE 6160	150	2	2-#3/0	#6	2"	5		6	1/2"	#12	2-#12	1	20	AAV GF	0.15	
	7.50									7		8						
0.18		6160 GH	20	1	2-#12	#12		9		10							0.00	
	0.00							11		12								0.00
0.00								13		14							0.00	
	0.00							15		16							0.00	
0.00								17		18							0.00	
	0.00							19		20							0.00	
0.00								21		22							0.00	
	0.00							23		24							0.00	
7.7	7.5							A	B	TOTAL							0.3	0.5
								8.0	8.0	16.0	CONNECTED LOAD (KVA)							
								8.0	8.0	16.0	DEMAND LOAD (KVA)							
																DERATING FACTOR (80%)		
																DEMAND LOAD SIZING: 83 AMPS		

1 PANEL SCHEDULE

ELECTRICAL NOTES:

- THIS DIAGRAM REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
- ATC HAS NOT YET VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER.



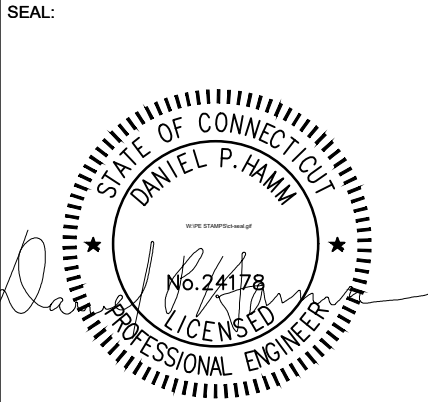
2 ELECTRICAL SCHEMATIC

SCALE: N.T.S.



REV.	DESCRIPTION	BY	DATE
A	PRELIM	TR	08/15/22
O	FINALS	DO	10/04/22

ATC SITE NUMBER: 370630
ATC SITE NAME: SALISBURY CT
T-MOBILE SITE NAME: CTNH547A
SITE ADDRESS: 52 LIBRARY ST. SALISBURY, CT 06068-0000



ATC JOB NO:	14138949_G3
CUSTOMER ID:	CTNH547A
CUSTOMER #:	CTNH547A

PANEL SCHEDULE & ELECTRICAL SCHEMATIC

SHEET NUMBER: E-601	REVISION: 0
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CTNH547A_Anchor_5

Print Name: Preliminary (RFDS_For_Scoping)

PORs: Anchor_Phase 3

RAN Template: 67DSD998E MUAC

A&L Template: 67DSD998E_1xAIR+10P+1QP

Section 1 - Site Information

Site ID: CTNH547A

Site Name: CTNH547A

Latitude: 41.9890000

Status: Final

Site Class: Monopole

Longitude: -71.4193000

Version: 5

Site Type: Structure Non Building

Address: 52 Library St

Project Type: Anchor

Plan Year: 2022

City, State: Salisbury, CT

Approved: 5/26/2022 3:5:36 PM

Market: CONNECTICUT CT

Region: NORTHEAST

Approved By: Pratik.Patel30@T-Mobile.com

Vendor: Ericsson

Last Modified: 5/26/2022 3:5:36 PM

Last Modified By: Pratik.Patel30@T-Mobile.com

Landlord: ATC

RAN Template: 67DSD998E MUAC

AL Template: 67DSD998E_1xAIR+10P+1QP

Sector Count: 3

Antenna Count: 9

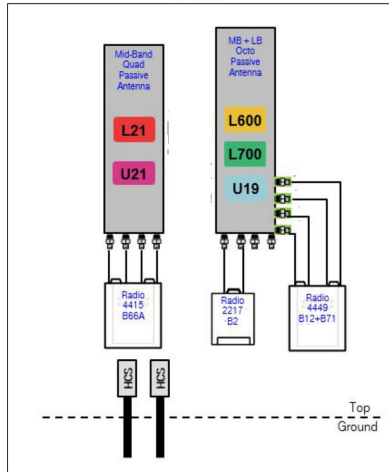
Coax Line Count: 0

TMA Count: 0

RRU Count: 6

Section 2 - Existing Template Images

67D07C.JPG



Notes:

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CTNH547A_Anchor_5

Print Name: Preliminary (RFDS_For_Scoping)

PORs: Anchor_Phase 3

RAN Template: 67DSD998E MUAC

A&L Template: 67DSD998E_1xAIR+10P+1QP

Section 5 - RAN Equipment

Existing RAN Equipment

Template: 67D07C 6102 MUAC

Enclosure

1

Enclosure Type

RBS 6102 MU AC

Baseband

DUW30

BB 6648

BB 6648

U1900

L2100

L700

L600

N600

Hybrid Cable System

Ericsson 6x12 HCS 4AWG 70m (x 3)

Proposed RAN Equipment

Template: 67DSD998E MUAC

Enclosure

1

2

3

Enclosure Type

RBS 6102 MU AC

Enclosure 6160 AC V1

B160

Baseband

BB 6648

BB 6648

L2100

L700

L1900

L600

N600

RP 6651

L2500

N2500

Hybrid Cable System

Ericsson 6x12 HCS 4AWG 70m (x 3)

PSU 4813 vR4A (Kg)

Hybrid Trunk 6/24 4AWG 70m (x 2)

Transport System

CSR iXRe V2 (Gen2)

RAN Scope of Work:

Remove and return all cabinet radios from existing base station cabinet.

U1900 will be decommissioned.

Service upgrade to increase power to 200A.

Add (1) Enclosure 6160.

Add (1) iXRe Router to new Enclosure 6160.

Add (1) RP 6651 for L2500/ N2500 to new Enclosure 6160.

Add (1) PSU4813 Voltage Booster to new Enclosure 6160.

Add (1) Battery Cabinet B160.

Existing : (3) 6x12

Remove all Coax

Add (2) 6X24 HCS. Connect DC for the AIR6419 B41 to the PSU4813 Voltage Booster

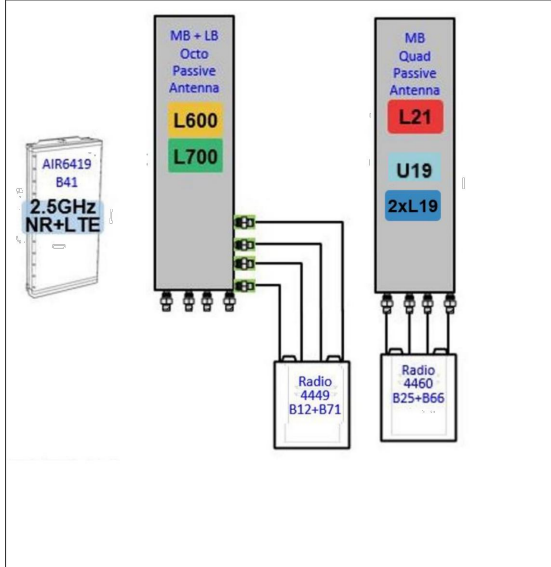
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Section 3 - Proposed Template Images

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Notes:

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CTNH547A_Anchor_5

Print Name: Preliminary (RFDS_For_Scoping)

PORs: Anchor_Phase 3

RAN Template: 67DSD998E MUAC

A&L Template: 67DSD998E_1xAIR+10P+1QP

Section 6 - A&L Equipment

Existing Template: 67D07C_10P+1QP

Proposed Template: 67DSD998E_1xAIR+10P+1QP

Sector 1 (Existing) view from behind

Coverage Type

A - Outdoor Macro

Antenna

1

2

Antenna Model

RFS - APX16DWI-18DWV-S-E-A20 (Quad)

RFS - APXVAALL24_43-U-NA20 (Octo)

Azimuth

30

30

M. Tilt

0

0

Height

125

125

Ports

P1

P2

P3

P4

P5

P6

Active Tech.

U1900

L2100

L700

L800

N600

L700

L600

N600

Dark Tech.

Restricted Tech.

Decomm. Tech.

E. Tilt

Cables

Coax Jumper (x2)

Coax Jumper (x2)

Coax Jumper (x2)

Coax Jumper (x2)

TMA's

Diplexers / Combiners

Radio

RRUS11 B2 (AI Antenna)

RRUS11 B4 (AI Antenna)

Radio 4449 B71+B85 (AI Antenna)

Radio 4449 B71+B85 (AI Antenna)

Sector Equipment

Unconnected Equipment:

Scope of Work:

Replace LB Dual in Position 2 with (1) LBMB Octo.

Replace RRUS11 B12 with (1) Radio 4449 B71+B12 for L600 and L700 in Position 2.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

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Section 4 - Siteplan Images

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RAN Template: 67DSD998E MUAC

A&L Template: 67DSD998E_1xAIR+10P+1QP

CTNH547A_Anchor_5

Print Name: Preliminary (RFDS_For_Scoping)

PORs: Anchor_Phase 3

Sector 1 (Proposed) view from behind

Coverage Type

A - Outdoor Macro

Antenna

1

2

3

Antenna Model

Commscope_VV-65B-R1 (Quad)

AIR 6419 B41 (Active Antenna - Massive MIMO)

RFS - APXVAALL24_43-U-NA20 (Octo)

Azimuth

30

30

30

M. Tilt

0

0

0

Height

125

125

125

Ports

P1

P2

P3

P4

P5

P6

P7

P8

Active Tech.

L2100

L1900

L2100

L1900

N2500

L2500

N2500

L2500

L600

L600

L700

L700

N600

N600

Dark Tech.

Restricted Tech.

Decomm. Tech.

E. Tilt

Cables

Coax Jumper (x2)

Fiber Jumper (x2)

Fiber Jumper (x2)

Fiber Jumper (x4)

SHARED Fiber Jumper (x2)

Coax Jumper (x2)

SHARED Fiber Jumper (x2)

Coax Jumper (x2)

TMA's

Diplexers / Combiners

Radio

Radio 4460 B25+B66 (AI Antenna)

Radio 4460 B25+B66 (AI Antenna)

Radio 4449 B71+B85 (AI Antenna)

Radio 4449 B71+B85 (AI Antenna)

Radio 4449 B71+B85 (AI Antenna)

Radio 4449 B71+B85 (AI Antenna)

Radio 4449 B71+B85 (AI Antenna)

Radio 4449 B71+B85 (AI Antenna)

Sector Equipment

Unconnected Equipment:

Scope of Work:

Replace APX16DW and Radio RRUS11 B2 and RRUS11B4 with (1) VV-65B-R1 at Position 1 and add (1) radio 4460 for L2100, L1900 (Both carriers), and GSM to Position 1 at antenna.

Add (1) AIR6419 for L2500/N2500 at Position 2.

Keep existing octo in Position 3.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

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NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:

R-601

REVISION:

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RAN Template: 67D5D998E_MUAC
A&L Template: 67D5D998E_1xAIR+10P+1QP

CTNH547A_Anchor_5
Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 2 (Existing) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1		2			
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)		RFS - APXVAALL24_43-U-NA20 (Octo)			
Azimuth	150		150			
M. Tilt	0		0			
Height	125		125			
Ports	P1	P2	P3	P4	P5	P6
Active Tech.	L1900	L2100	L700 L800 N800	L700 L800 N800		
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMA's						
Diplexers / Combiners						
Radio	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	Radio 4449 B71+B85 (At Antenna)		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:	Replace LB Dual In Position 2 with (1) LBMB Octo. Replace RRUS11 B12 with (1) Radio 4449 B71+B12 for L800 and L700 in Position 2.					
*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.						

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RAN Template: 67D5D998E_MUAC
A&L Template: 67D5D998E_1xAIR+10P+1QP

CTNH547A_Anchor_5
Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 2 (Proposed) view from behind							
Coverage Type	A - Outdoor Macro						
Antenna	1		2		3		
Antenna Model	Comscope_VV-65B-R1 (Quad)		AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAALL24_43-U-NA20 (Octo)		
Azimuth	150		150		150		
M. Tilt	0		0		0		
Height	125		125		125		
Ports	P1	P2	P3	P4	P5	P6	P7 P8
Active Tech.	L1900 L2100	L1900 L2100	N2500 L2500	N2500 L2500	L800 N800 L700	L800 N800 L700	
Dark Tech.							
Restricted Tech.							
Decomm. Tech.							
E. Tilt							
Cables	Coax Jumper (x2) Fiber Jumper (x2)	SHARED Fiber Jumper (x2) Coax Jumper (x2)	Fiber Jumper (x4)	SHARED Fiber Jumper (x4)	Coax Jumper (x2) Fiber Jumper (x2) Coax Jumper (x2)	SHARED Fiber Jumper (x2) Coax Jumper (x2)	
TMA's							
Diplexers / Combiners							
Radio	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)			Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)	
Sector Equipment							
Unconnected Equipment:							
Scope of Work:	Replace APX16DW and Radio RRUS11 B2 and RRUS11B4 with (1) VV-65B-R1 at Position 1 and add (1) radio 4460 for L2100, L1900 (Both carriers), and GSM to Position 1 at antenna. Add (1) AIR6419 for L2500/N2500 at Position 2. Keep existing octo in Position 3.						
*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.							

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RAN Template: 67D5D998E_MUAC
A&L Template: 67D5D998E_1xAIR+10P+1QP

CTNH547A_Anchor_5
Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 3 (Existing) view from behind					
Coverage Type	A - Outdoor Macro				
Antenna	1		2		
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)		RFS - APXVAALL24_43-U-NA20 (Octo)		
Azimuth	250		250		
M. Tilt	0		0		
Height	125		125		
Ports	P1	P2	P3	P4	P5 P6
Active Tech.	L1900	L2100	L700 L800 N800	L700 L800 N800	
Dark Tech.					
Restricted Tech.					
Decomm. Tech.					
E. Tilt					
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	
TMA's					
Diplexers / Combiners					
Radio	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	
Sector Equipment					
Unconnected Equipment:					
Scope of Work:	Antenna change (3) to RFS LL24_43 Replace LB Dual in Position 2 with (1) LBMB Octo. Replace RRUS11 B12 with (1) Radio 4449 B71+B12 for L800 and L700 in Position 2.				
*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.					

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RAN Template: 67D5D998E_MUAC
A&L Template: 67D5D998E_1xAIR+10P+1QP

CTNH547A_Anchor_5
Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 3 (Proposed) view from behind							
Coverage Type	A - Outdoor Macro						
Antenna	1		2		3		
Antenna Model	Comscope_VV-65B-R1 (Quad)		AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAALL24_43-U-NA20 (Octo)		
Azimuth	250		250		250		
M. Tilt	0		0		0		
Height	125		125		125		
Ports	P1	P2	P3	P4	P5	P6	P7 P8
Active Tech.	L2100 L1900	L2100 L1900	N2500 L2500	N2500 L2500	N800 L800 L700	N800 L800 L700	
Dark Tech.							
Restricted Tech.							
Decomm. Tech.							
E. Tilt							
Cables	Coax Jumper (x2) Fiber Jumper (x2)	SHARED Fiber Jumper (x2) Coax Jumper (x2)	Fiber Jumper (x4)	SHARED Fiber Jumper (x4)	Coax Jumper (x2) Fiber Jumper (x2)	SHARED Fiber Jumper (x2) Coax Jumper (x2)	
TMA's							
Diplexers / Combiners							
Radio	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)			Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)	
Sector Equipment							
Unconnected Equipment:							
Scope of Work:	Replace APX16DW and Radio RRUS11 B2 and RRUS11B4 with (1) VV-65B-R1 at Position 1 and add (1) radio 4460 for L2100, L1900 (Both carriers), and GSM to Position 1 at antenna. Add (1) AIR6419 for L2500/N2500 at Position 2. Keep existing octo in Position 3.						
*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.							

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RAN Template: 67D5D998E_MUAC
A&L Template: 67D5D998E_1xAIR+10P+1QP

CTNH547A_Anchor_5
Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Section 7 - Power Systems Equipment	
Existing Power Systems Equipment	
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Proposed Power Systems Equipment	
Enclosure	1
Enclosure Type	Enclosure 6160 AC VT

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SUPPLEMENTAL

SHEET NUMBER:

R-602

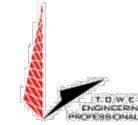
REVISION:

0

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This report was prepared for American Tower Corporation by



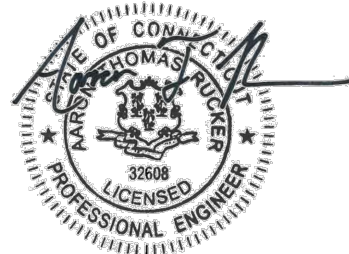
Eng. Number 14138949_C8_01
August 11, 2022
Page 1

Antenna Mount Analysis Report

ATC Site Name : Salisbury CT, CT
ATC Site Number : 370630
Engineering Number : 14138949_C8_01
Mount Elevation : 123 ft
Carrier : T-Mobile
Carrier Site Name : CTNH547A
Carrier Site Number : CTNH547A
Site Location : 52 Library St.
Salisbury, CT 06068-0000
41.980900, -73.418400
County : Litchfield
Date : August 11, 2022
Max Usage : 82%
Result : Pass

Prepared By:
Nicholas P. Danyluk
TEP # 155528.732367

Reviewed By:



08/11/2022

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for T-Mobile at 123 ft.

Supporting Documents

Mount Analysis	SMJ International Project #13657492_C8_02, dated April 22, 2021
RFDS	RFDS dated May 26, 2022
Photos	Site photos from 2021

Analysis

This antenna mount was analyzed using RISA-3D v17 analysis software

Basic Wind Speed:	113 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1.0" radial Ice
Codes:	ANSI/TIA-222-H
Risk Category:	II
Exposure Category:	C
Topographic Factor Procedure:	Method 2
Kzt:	1.000
Spectral Response:	Ss = 0.166, S1 = 0.054
Site Class:	D - Default
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report. If the load differs from that described in this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

SUPPLEMENTAL

SHEET NUMBER:
R-603

REVISION:
0

1 MOUNT ANALYSIS

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

NSB 190FT Red Battery®

Long float life at elevated temperatures



Red Star Technology® uses pure lead plates to deliver exceptionally long float life even at elevated temperatures.

- Pure lead AGM technology delivers long float life for telecom applications even at elevated temperatures
- 15 year float life at 20°C (68°F)
- EUROBAT design life definition: Long Life (12+ years)
- High energy density
- Operating temperature range: -40°C to +65°C (-40°F to 149°F)
- State-of-the-art automated manufacturing ensures consistency and reliability
- Advanced 3 stage terminal design to ensure leak-free operation - female MB brass terminals provide maximum performance
- 2 year shelf life at 25°C (77°F)
- High modulus Polyphenylene Oxide (PPO) plastic materials designed to withstand extended elevated operating temperatures and maintain high battery compression essential for reliable operation
- Non-halogenated, thermally sealed plastic casing
- Flame retardant (UL 94 V0) and LOI of at least 28%
- Integral handles and front access terminals ensure ease of installation and maintenance
- Approved as non-hazardous cargo for ground, sea, and air transport - DOT 43CFR173.155(d), (i) and (ii)

Visit our website to find out more www.northstarbattery.com



NSB 190FT Red Battery®

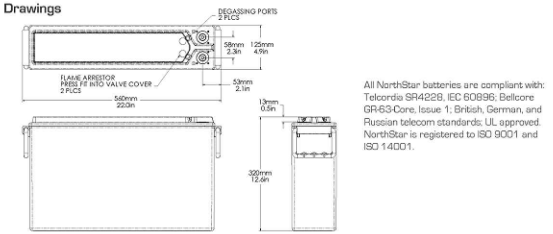
Nominal Technical Specifications



Electrical	International Standard 20°C (68°F)	North American Standard 25°C (77°F)
8 hour capacity to 1.75 VPC	188 Ah	191 Ah
10 hour capacity to 1.80 VPC	190 Ah	192 Ah
Float Voltage	2.29 +/- 0.02 VPC	2.27 +/- 0.02 VPC
Nominal Voltage	12 V	
Impedance (1kHz)	2.2 mΩ @ 25°C (77°F)	
Conductance	2,400 S	
Short Circuit Current	8,000 A	

Dimensions				
Height	320 mm (12.6 in)	Weight	60 kg (132 lbs)	
Width	125 mm (4.9 in)	Terminal	Female MB x 1.25	
Depth	560 mm (22.0 in)	Terminal Torque	8.0 Nm (71 in-lbs)	

Ah Capacity Ratings @ 25°C (77°F)					
Capacity Discharge / hours	1	2	4	8	10
Capacity @ 25°C / Ah	150	167	181	191	192
End of Discharge / VPC	1.70	1.75	1.75	1.75	1.80



All NorthStar batteries are compliant with: Telcordia SR4228, IEC 60896; Bellcore GR63 Core, Issue 1; British, German, and Russian telecom standards; UL approved. NorthStar is registered to ISO 9001 and ISO 14001.

NorthStar Americas NorthStar Battery Company LLC 4000 Continental Way Springfield, MO 65803 United States of America info@northstarbattery.com Tel: +1 417 575 0500 Fax: +1 417 575 0250	NorthStar Europe StatTel Sweden AB Stallens Väg 6-9 SE-192 07 Sollenstam, Stockholm, Sweden europa@northstarbattery.com Tel: +46 8 410 102 00 Fax: +46 8 939 08 00	NorthStar Middle East, Africa StatTel Sweden AB, JTL Branch Office 702, Saba 1 Tower Jumeirah Lake Towers, Dubai United Arab Emirates mea@northstarbattery.com Tel: +971 4 423 9060 Fax: +971 4 423 0051	NorthStar Asia Pacific NS Asia Pacific Sdn. Bhd. Level 20, Menara Standard Chartered 30, Jalan Sultan Ismail, 50250 Kuala Lumpur, Malaysia asia@northstarbattery.com Tel: +60 3 2117 5254
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www.northstarbattery.com



Industrial Lead Acid Battery Safety Data Sheet

3. *COMPOSITION / INFORMATION ON INGREDIENTS		
INGREDIENTS (Chemical/Common Names):	CAS No.:	% by Wt:
Lead and Lead Compounds (inorganic)	7439-92-1	50
Electrolyte (H2SO4/H2O)	7664-93-9	17
Lead Oxide	1309-60-0	20
Lin	7440-31-5	0.2

4. FIRST AID MEASURES
INHALATION:
Sulfuric Acid: Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.
Lead: Remove from exposure, gargle, wash nose and lips; consult physician.

INGESTION:
Sulfuric Acid: Give large quantities of water; Do NOT induce vomiting or aspiration into the lungs may occur and can cause permanent injury or death. Consult a physician.
Lead: Consult a physician immediately.

SKIN:
Sulfuric Acid: Flush with large amounts of water for at least 15 minutes; remove contaminated clothing completely, including shoes. If symptoms persist, seek medical attention. Wash contaminated clothing before reuse. Discard contaminated shoes.
Lead: Wash immediately with soap and water.

EYES:
Sulfuric Acid and Lead: Flush immediately with large amounts of water for at least 15 minutes while lifting lids; Seek immediate medical attention if eyes have been exposed directly to acid.

5. FIRE FIGHTING MEASURES
Flash Point: Not Applicable
Flammable Limits: LEL = 4.1% (Hydrogen Gas in air); UEL = 74.2%
Extinguishing media: CO2; foam; dry chemical. Do not use carbon dioxide directly on cells. Avoid breathing vapors. Use appropriate media for surrounding fire.

Fire Fighting Procedures:
Use positive pressure, self-contained breathing apparatus. Beware of acid splatter during water application and wear acid-resistant clothing, gloves, face and eye protection. If batteries are on charge, shut off power to the charging equipment, but note that strings of series connected batteries may still pose risk of electric shock even when charging equipment is shut down.

Industrial Lead Acid Battery Safety Data Sheet

1. IDENTIFICATION		REVISION DATE: 01-31-18
Product Name: Lead Acid Battery, Non-Spillable Wet	Product Use: Electric Storage Battery	Manufacturer/Supplier: NorthStar Battery, Co., LLC
Synonyms: Industrial Battery, Traction Battery, Stationary Battery, Deep Cycle Battery	Address: 4000 E. Continental Way, Springfield, MO 65803	CAS Number: Not Applicable
General Information Number: 417.575.8200	CHEMTREC: 800-424-9300	

2. GHS HAZARDS IDENTIFICATION		
Health	Environmental	Physical
Acute Toxicity (Oral/Dermal/Inhalation) - Category 4 Skin Corrosion/Irritation - Category 1A Eye Damage - Category 1 Reproductive - Category 1A Carcinogenicity (lead) - Category 1B Carcinogenicity (arsenic) - Category 1A Carcinogenicity (acid mist) - Category 1A Specific Target Organ - Category 2 Toxicity (repeated exposure)	Aquatic Chronic - 1 Aquatic Acute - 1	Explosive Chemical, Division 1.3

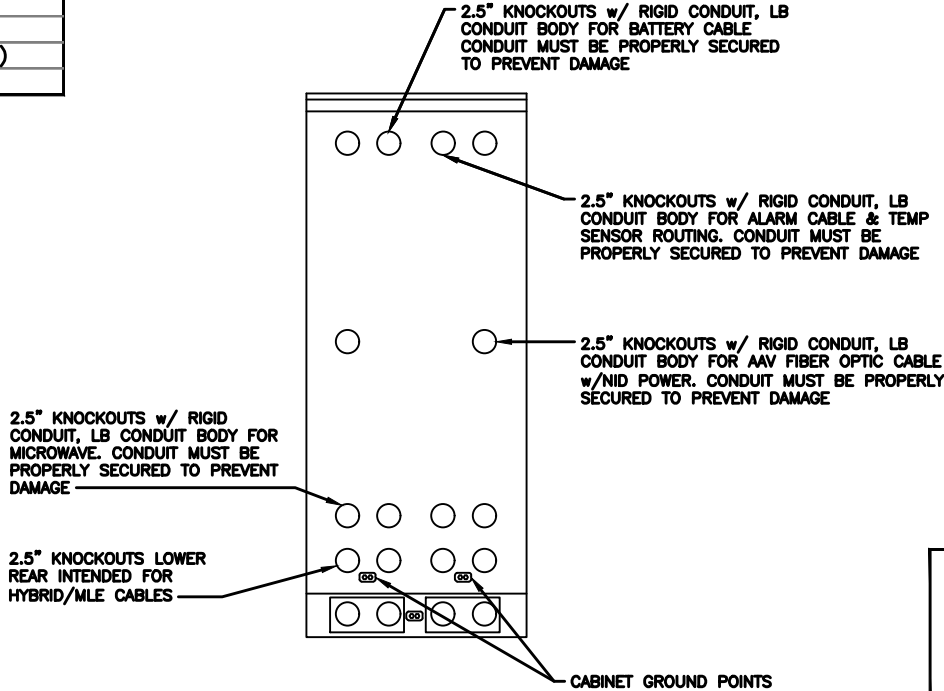
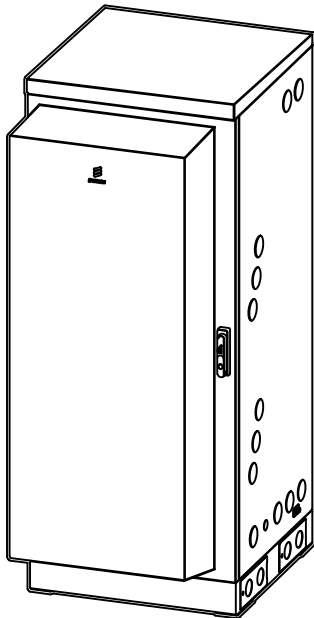
GHS Label:		
Health	Environmental	Physical
Hazard Statements DANGER! Causes severe skin burns and eye damage. Causes serious eye damage. May damage fertility or the unborn child if ingested or inhaled. May cause cancer if ingested or inhaled. Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure. May form explosive air/gas mixture during charging. Extremely flammable gas (hydrogen). Explosive, fire, blast or projection hazard.	Precautionary Statements Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing, eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Causes skin irritation, serious eye damage. Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid. Irritating to eyes, respiratory system, and skin.	

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-604	0

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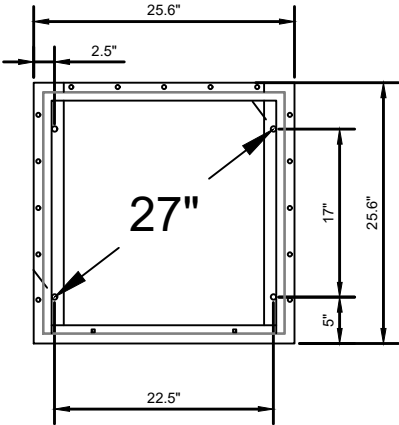
MANUFACTURER:	ERICSSON
MODEL:	6160 SITE SUPPORT CABINET
DIMENSIONS:	63" x 25.6" x 33.6" (H x W x D)
WEIGHT:	373 LBS



REAR VIEW

NOTE:

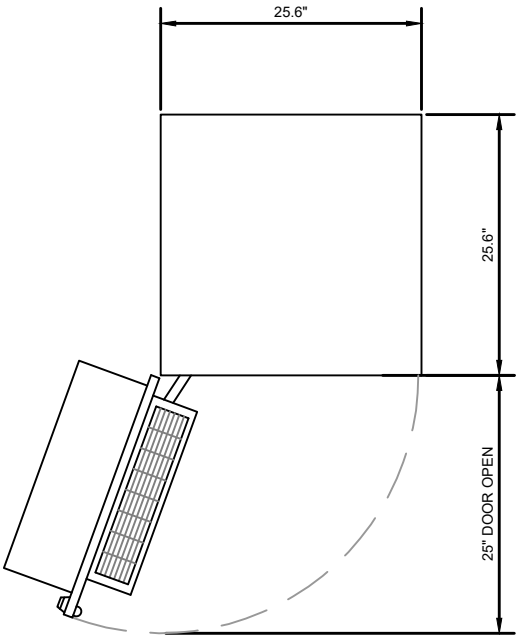
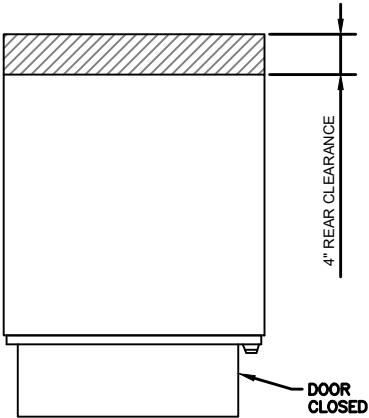
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING



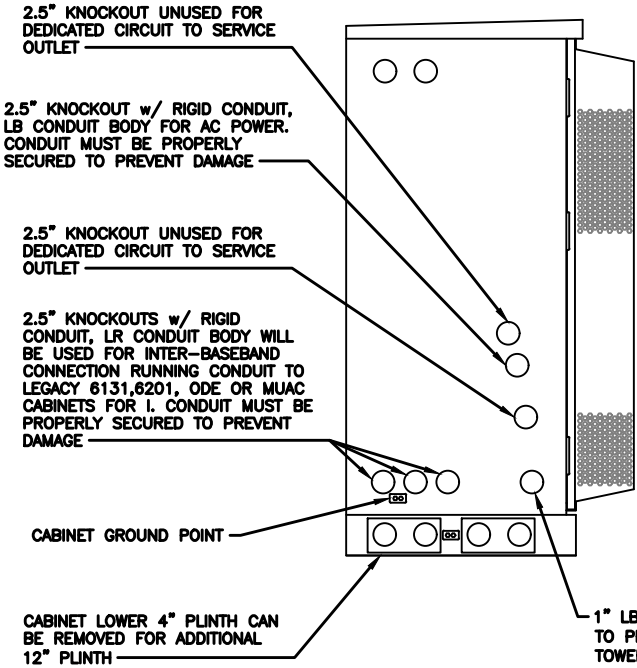
BOLT DOWN PATTERN

GROUNDING NOTE:

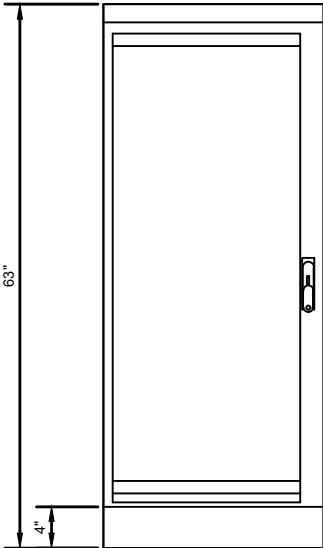
“CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED.”



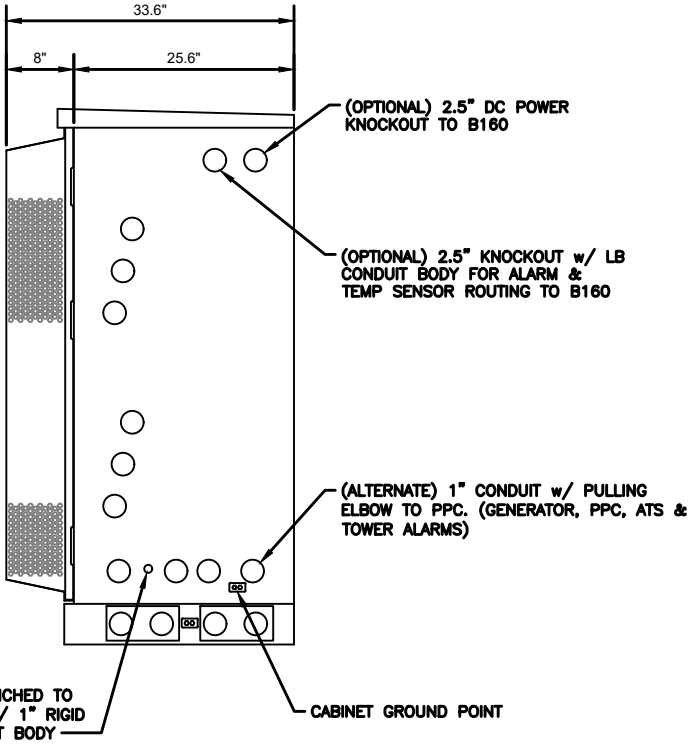
PLAN VIEW



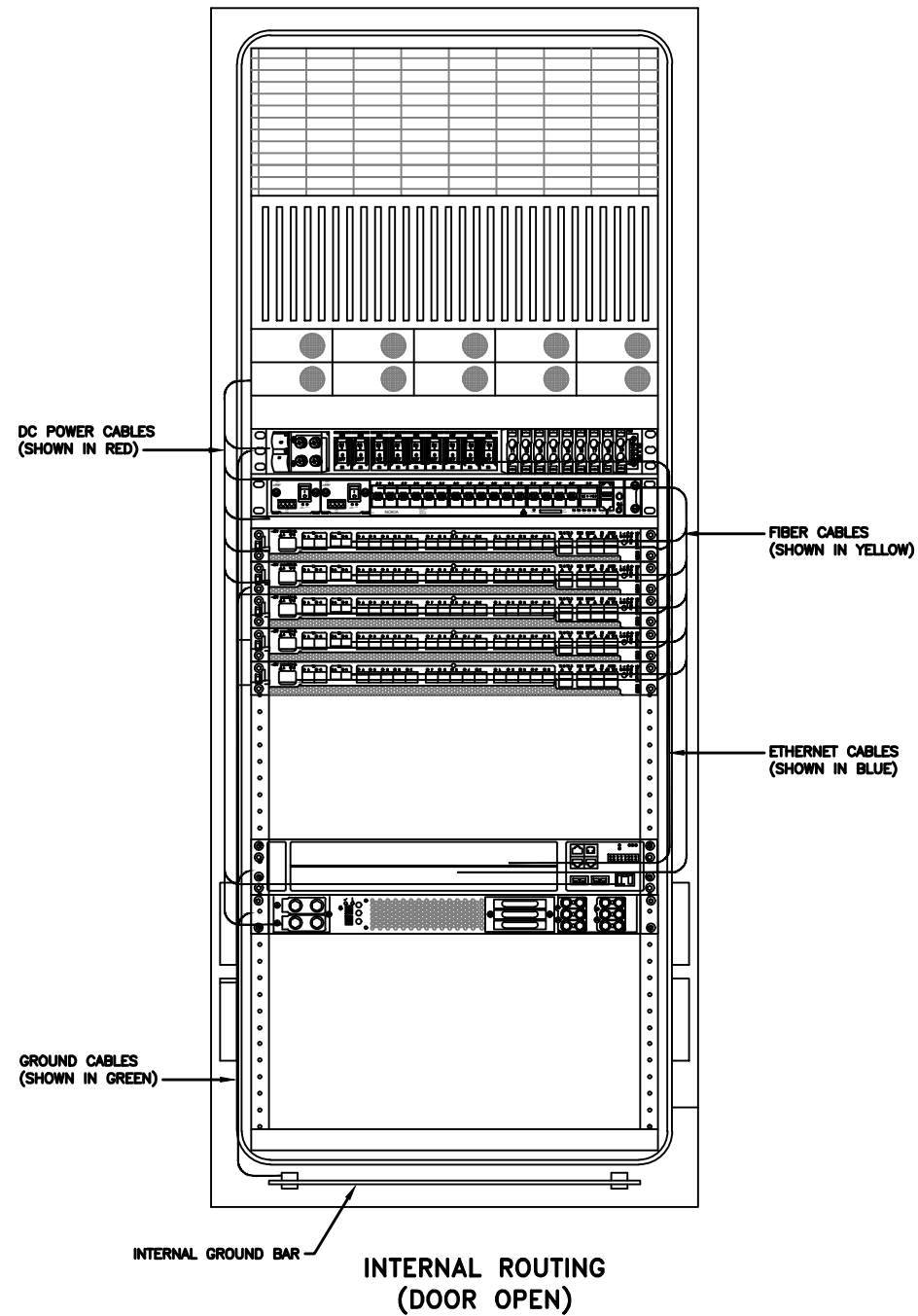
LEFT VIEW



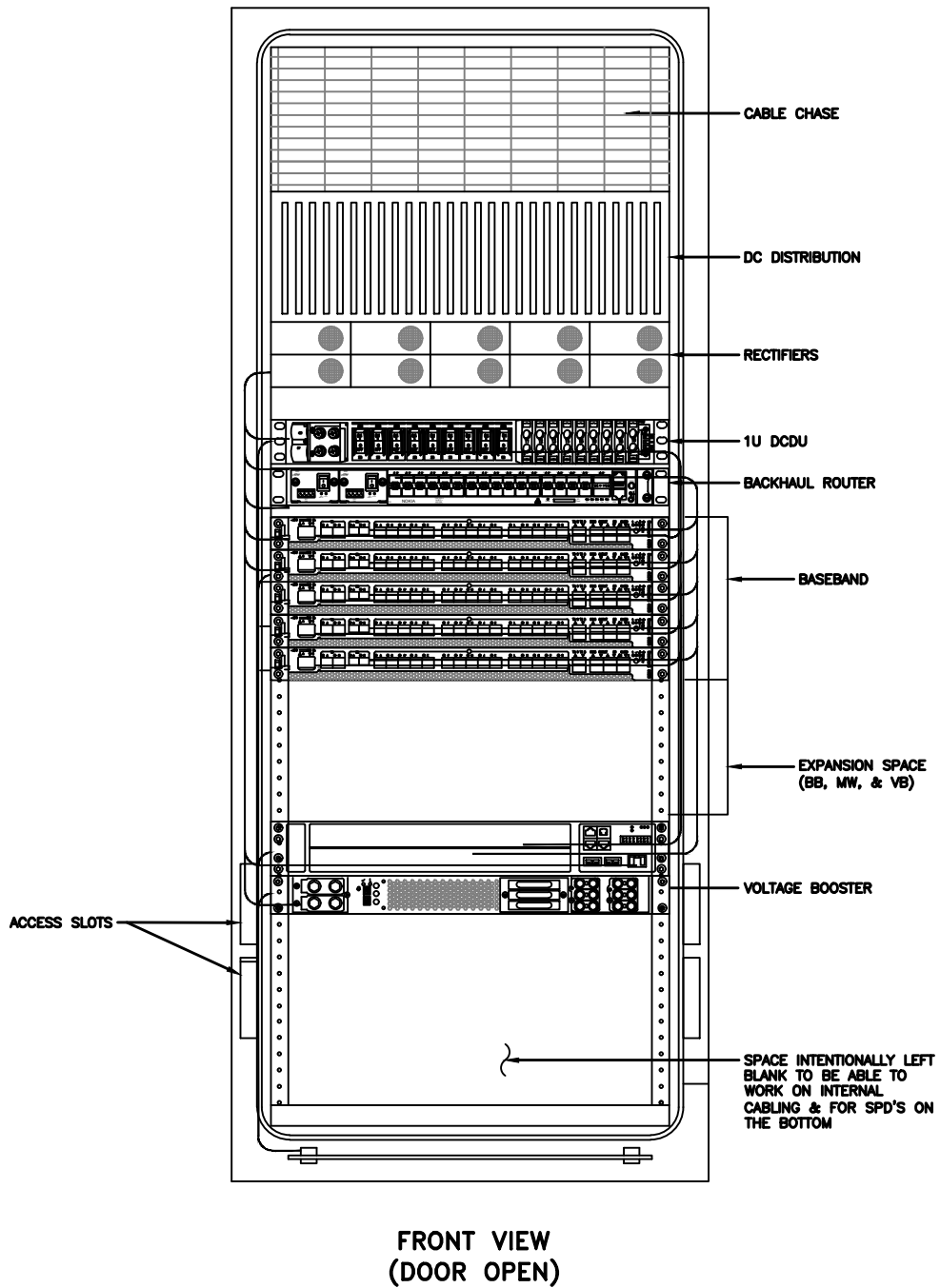
FRONT VIEW



RIGHT VIEW

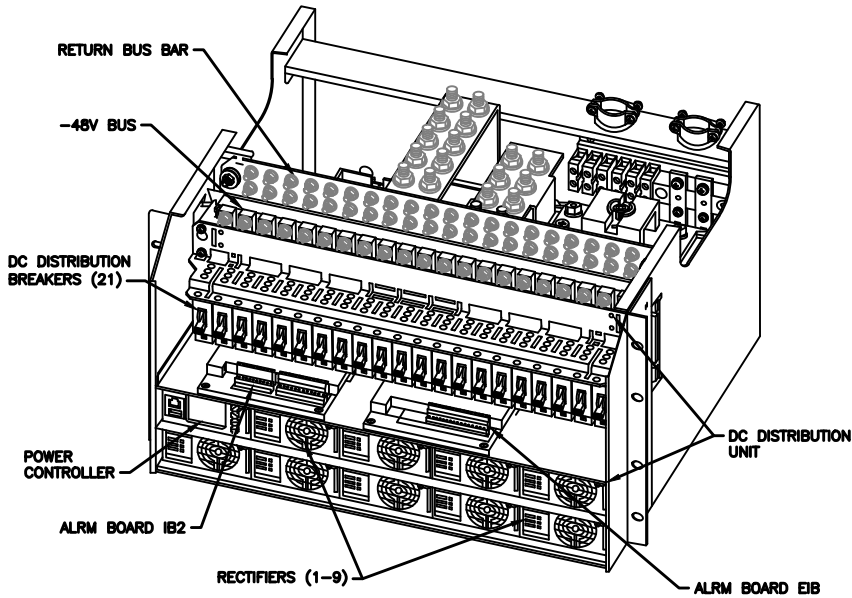


RACK ASSIGNMENTS	
RU SLOTS	DESCRIPTION
1	DC DISTRIBUTION
2	
3	
4	
5	RECTIFIER SHELF
6	
7	FIBER BOX
8	DCDU
9	BACKHAUL ROUTER
10	
11	1ST BASEBAND
12	2ND BASEBAND
13	3RD BASEBAND
14	4TH BASEBAND
15	5TH BASEBAND
16	EXPANSION
17	
18	
19	EXPANSION / LEGACY BASEBAND / VOLTAGE BOOSTER
20	
21	VOLTAGE BOOSTER
22	
23	OPEN SPACE FOR SPD ACCESS
24	
25	

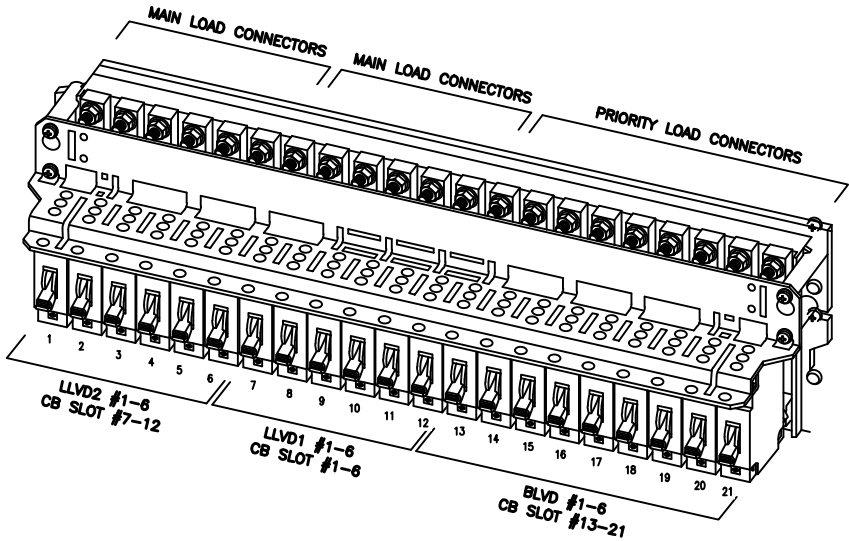


NOTE:
THIS IS FOR REFERENCE ONLY, CHECK
FOR SPECIFIC DETAIL IN T-MOBILE
CABINET SPECIFIC INSTALLATION GUIDES

Breaker Allocation for E6160					
CB SLOT	Ckt #		w/ DCDC Prior to availability of the 4460 and 4480	w/ DCDC Later Design Post-4460 and Post-4480	w/ DCDC 4 and 6 Sector designs
1	LVD1 47.0V	1	Router PS-2*/Future		Radio 4460 B25/66 ζ-1
2		2	Future		Radio 4460 B25/66 ζ-2
3		3	PSU 4813 feeding B25/66 α, β and γ (AIR 1641s)		PSU 4813 feeding B41-δ & B71/12-δ
4		4			(Air 6449s and Radio 4480s)
5		5	PSU 4813 feeding B41 α, β and γ (AIR 6449s)		
6		6			
7	LVD2 45.1V	1	PSU 4813 feeding B71/12 α, β and γ (Radio 4449s)	PSU 4813 feeding B71/12 α, β and γ (Radio 4480s)	
8		2			
9		3	Future		Radio 4460 B25/66 δ-1
10		4	Future		Radio 4460 B25/66 δ-2
11		5	Future		Radio 4460 B25/66 ε-1
12		6	Future		Radio 4460 B25/66 ε-2
13	BLVD 43.2V	1	Router PS-1		
14		2	Radio 4415 B25/66 α	Radio 4460 B25/66 α-1	
15		3	Radio 4415 B25/66 β	Radio 4460 B25/66 α-2	
16		4	Radio 4415 B25/66 γ	Radio 4460 B25/66 β-1	
17		5	PSU 4813 feeding B2/25 α, β and γ (Radio 4424s)	Radio 4460 B25/66 β-2	
18		6		Radio 4460 B25/66 γ-1	
19		7	Future	Radio 4460 B25/66 γ-2	
20		8	DCDU		
21		9	AAV		
Sector Identification α = Alpha, β = Beta, γ = Gamma, δ = Delta, ε = Epsilon, ζ = Zeta					



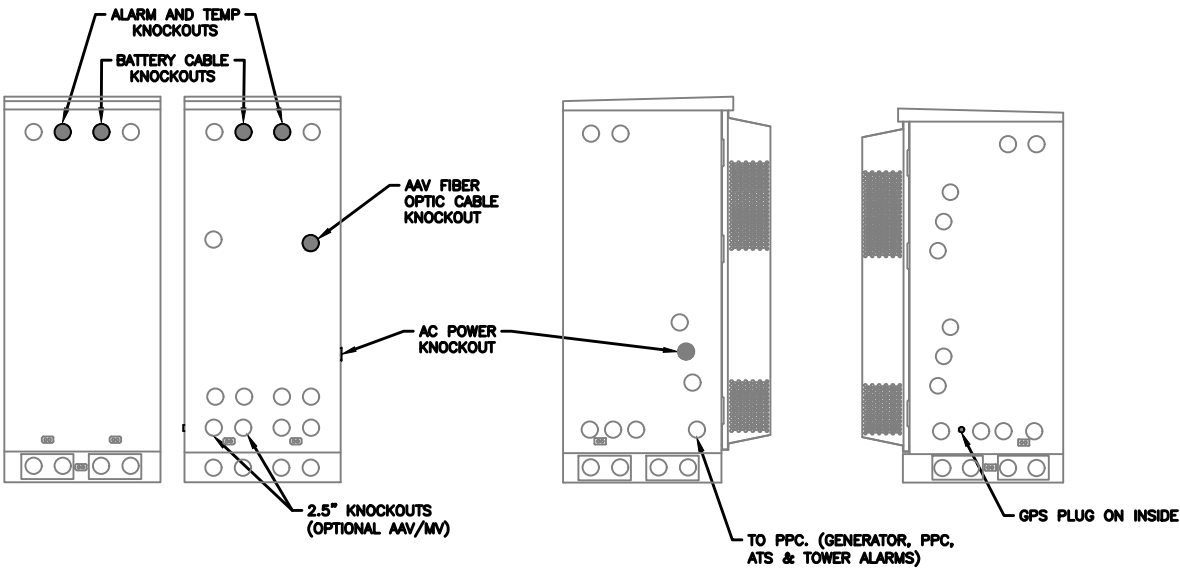
POWER SUBRACK



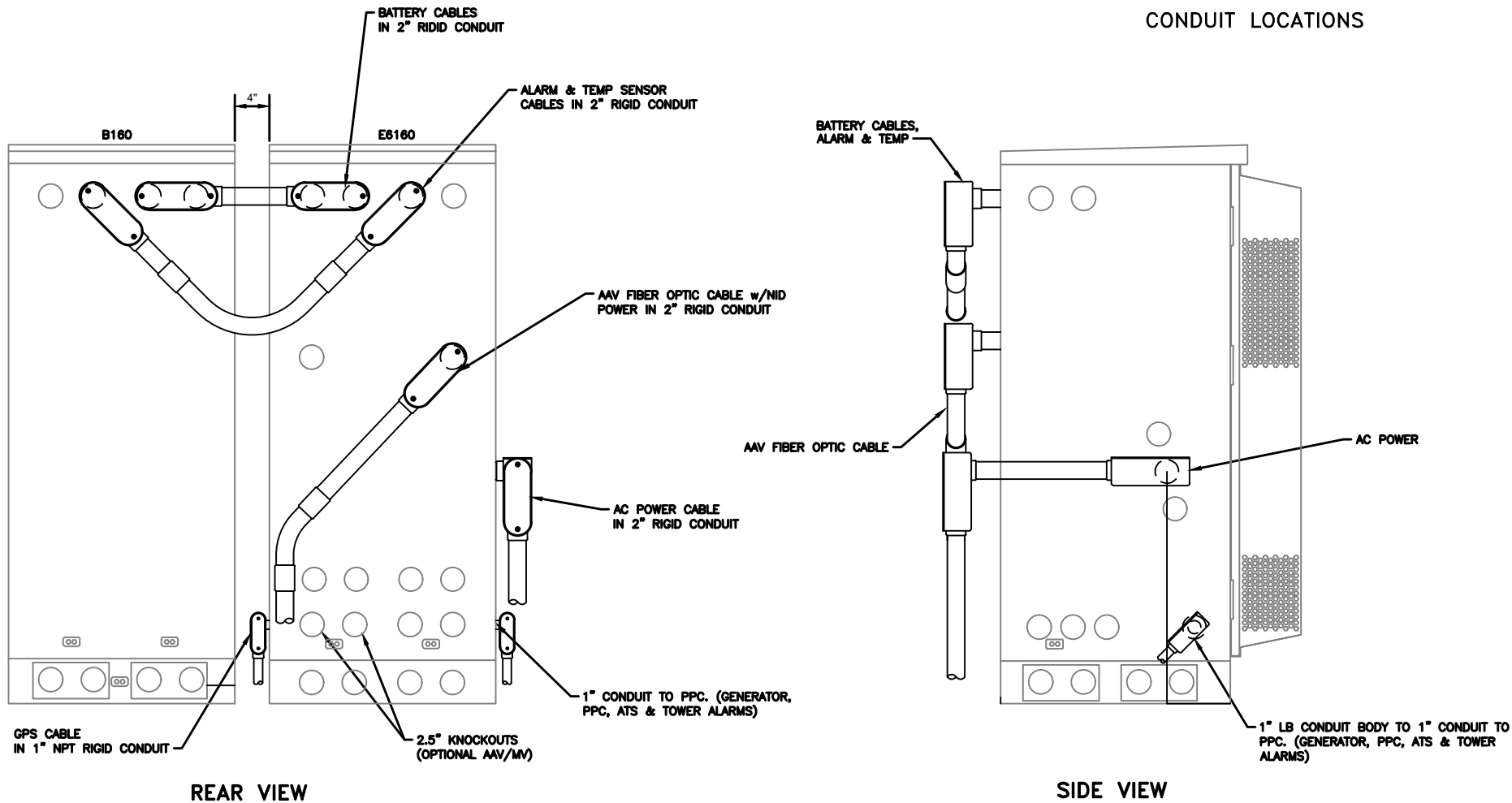
DC DISTRIBUTION

NOTE:

1. ALL CONDUIT AND FITTING ENTRANCES INTO CABINETS AND ENCLOSURES MUST UTILIZE MYERS OR EQUIVALENT HUBS OR SEALING WASHERS TO PREVENT WATER ENTRY/SEEPAGE INTO CABINETS AND ENCLOSURES.
2. (LIQUIDFLEX) FLEXIBLE METALLIC CONDUIT (LFMC) & ASSOCIATED FITTINGS CAN BE USED AS NEEDED BUT ONLY FOR TIGHT CONDUIT BENDS AND RUNS SUBJECT TO UL AND NEC LIMITATIONS. 6' MAX PER CONDUIT RUN.
3. POWER CONDUIT BODY ATTACHED WITH SHORT NIPPLE AND SEALING WASHER INSIDE & OUT. (FOR DOOR HOOD CLEARANCE)
4. PULLING ELBOWS MAY BE USED IN LIEU OF A CONDUIT BODIES WHEN CLEARANCE IS LIMITED.
5. ALL EXTERNAL ALARM CONDUITS ARE TOO TERMINATE AT THE PPC WITH A SINGLE 1" ALARM CONDUIT TO THE 6160.
6. (DO NOT USE CHASE NIPPLES) CONDUIT SHOULD HAVE SEALING WASHERS INSIDE AND OUT w/ LOCK NUT AND CAP.



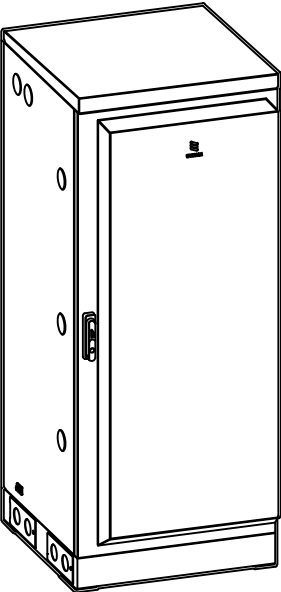
CONDUIT LOCATIONS



REAR VIEW

SIDE VIEW

MANUFACTURER:	ERICSSON
MODEL:	B160 BATTERY CABINET
DIMENSIONS:	63" x 25.6" x 29.5" (H x W x D)
WEIGHT:	295 LBS (WITHOUT BATTERIES)



2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR ALARM CABLE & TEMP SENSOR ROUTING. CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

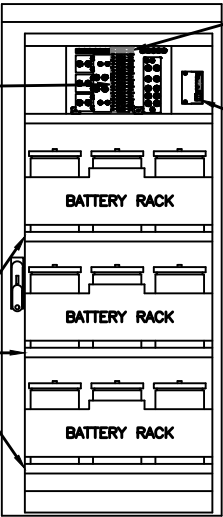
CABINET GROUND POINTS

REAR VIEW

2.5" KNOCKOUTS w/ RIGID CONDUIT, LB CONDUIT BODY FOR BATTERY CABLE CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE

3 x 300A BREAKERS

BATTERY VIBRATION MOUNTS



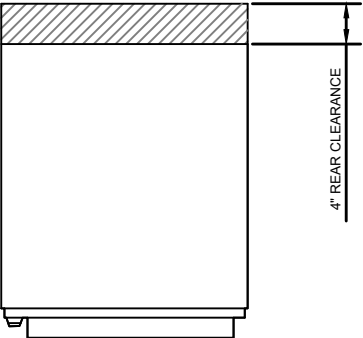
25A AUX BREAKERS, FANS, LIGHTS, ETC.

ALARM BOX, PRELABELED

3X BATTERY SHELVES, UP TO 200A HR, w/ PREINSTALLED HEATERS

FRONT VIEW (DOOR OPEN)

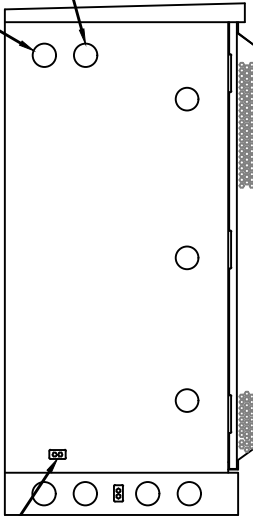
- NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
 - CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING



4" REAR CLEARANCE

(OPTIONAL) 2.5" KNOCKOUTS FOR ALARM & TEMP SENSOR ROUTING TO 6160

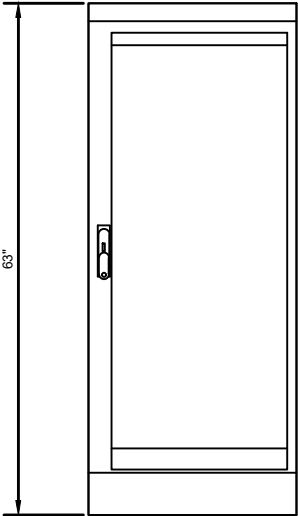
(OPTIONAL) 2.5" DC POWER KNOCKOUTS TO 6160



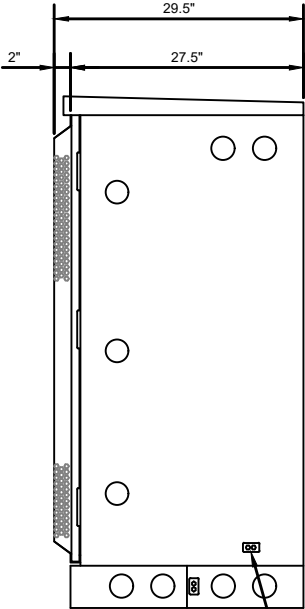
CABINET GROUND POINT

LEFT VIEW

GROUNDING NOTE:
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."

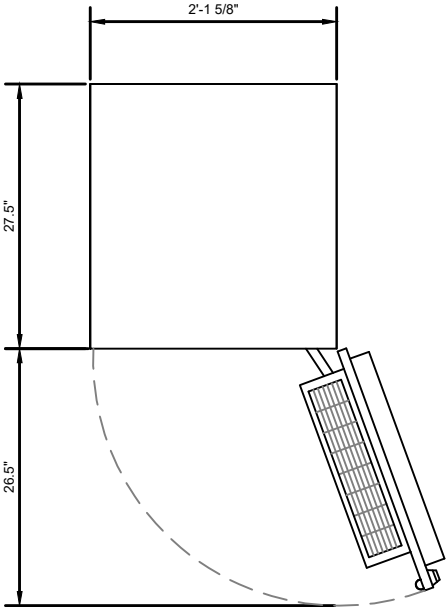


FRONT VIEW



CABINET GROUND POINT

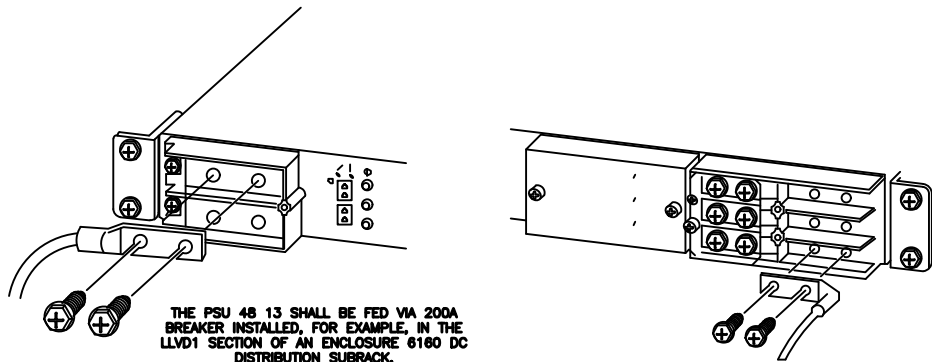
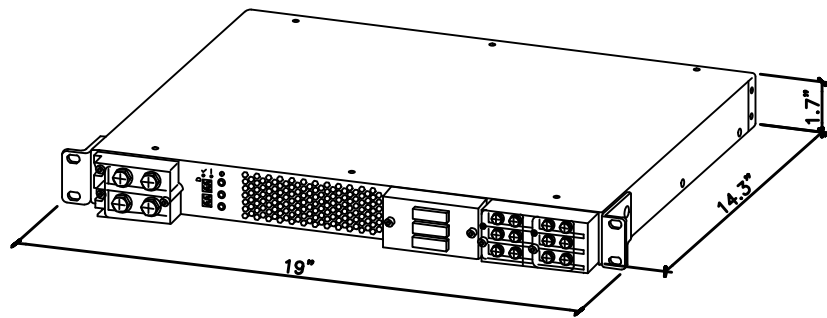
RIGHT VIEW



PLAN VIEW

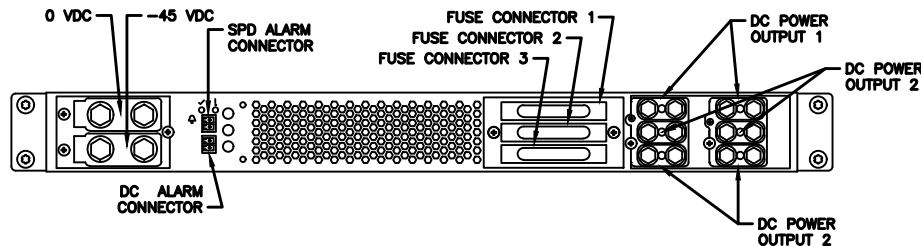
B160 ERICSSON SITE SUPPORT BATTERY CABINET

MANUFACTURER:	ERICSSON	NEEDED INSTALL KIT (PICK 1)
MODEL:	PSU 48 13	34133 PSU4813 INSTALL KIT FOR RBS61XX
WEIGHT:	17.1 LBS	34134 PSU4813 INSTALL KIT FOR PBC6200
DIMENSIONS:	19"x 1.7"x 14.3"	34135 PSU4813 INSTALL KIT FOR 6X60/RBS6230



THE PSU 48 13 SHALL BE FED VIA 200A BREAKER INSTALLED, FOR EXAMPLE, IN THE LLYD1 SECTION OF AN ENCLOSURE 6160 DC DISTRIBUTION SUBRACK.

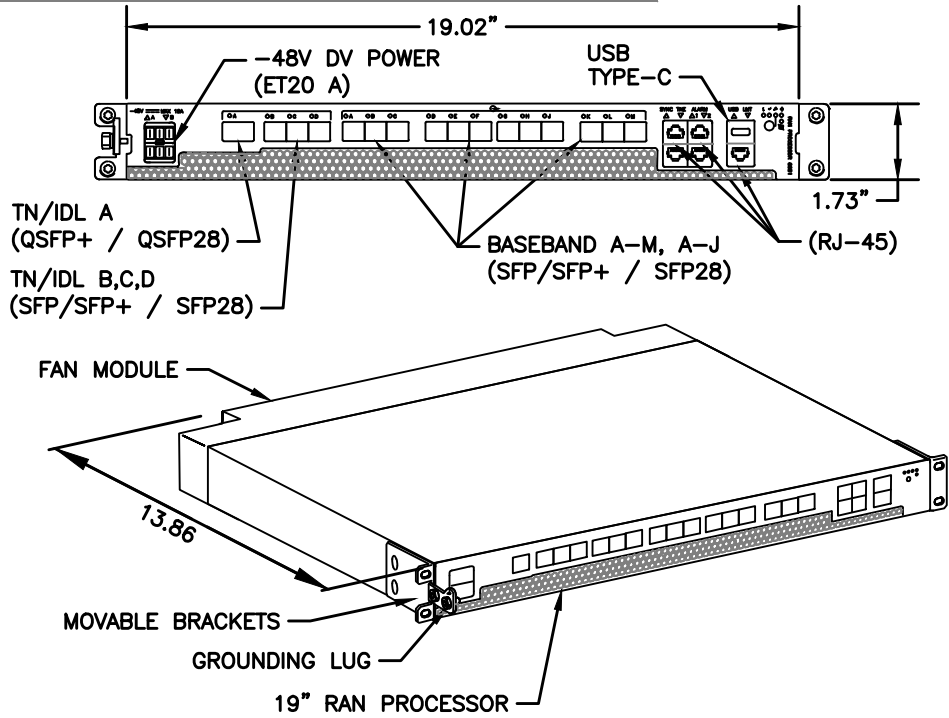
CONNECT -58 VDC DISTRIBUTION CABLE TO TERMINAL AT THE RIGHT, WHICH WILL BE FED TO RRU/AIR AT THE OTHER END.



1 SKU# 34132 - PSU 48 13

SCALE: N.T.S.

MANUFACTURER:	ERICSSON
MODEL:	6651 RAN PROCESSOR (KDU1370093/11)
DIMENSIONS:	1.73" X 19.02" X 13.86" (H" X W" X D")
WEIGHT:	16.98 LBS



2 34553 - ERICSSON 6651 RAN PROCESSOR

SCALE: N.T.S.

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SUPPLEMENTAL

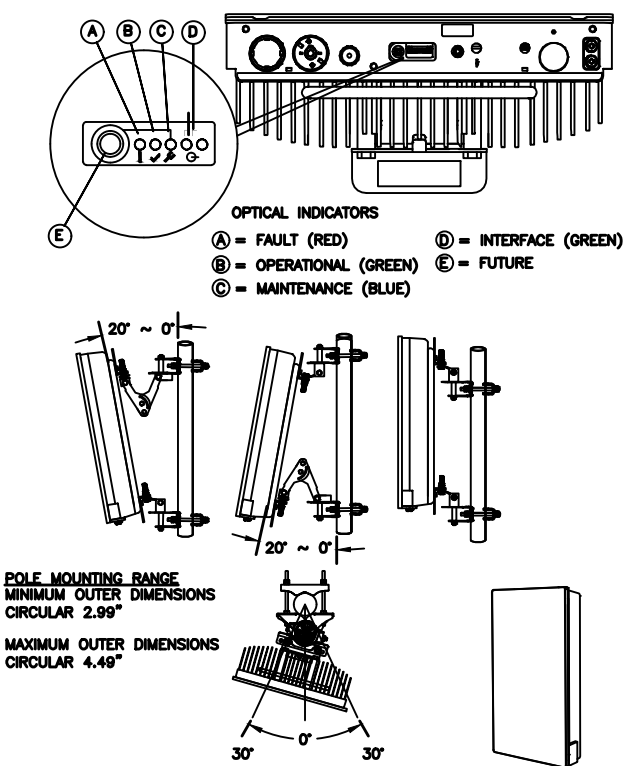
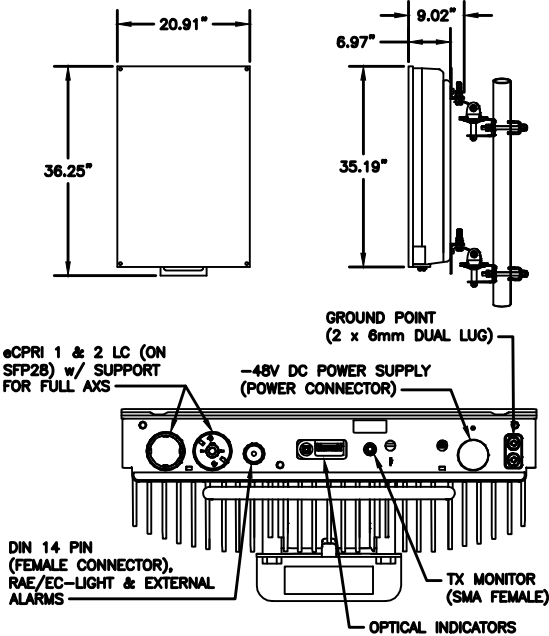
SHEET NUMBER:

R-610

REVISION:

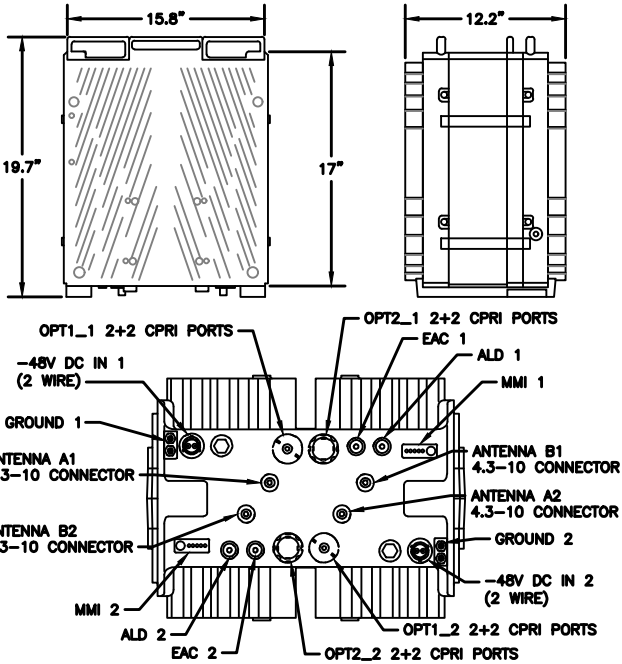
0

MANUFACTURER:	ERICSSON
MODEL:	AIR 6419 B41 (2.5GHz M-MIMO)
DIMENSIONS:	36.25" x 20.91" x 9.02" NOT TO EXCEED (H x W x D)
WEIGHT:	83 LBS (EXCLUDING MOUNTING KIT)
MOUNT WEIGHT:	13.5 LBS (SXX109 2016/1)



1 34552 - ERICSSON AIR 6419 BAND 41
SCALE: N.T.S.

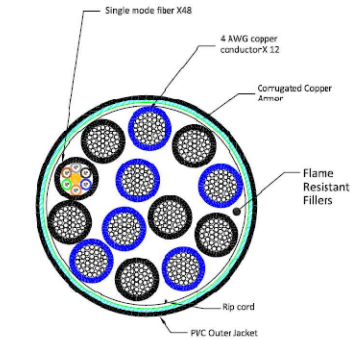
MANUFACTURER:	ERICSSON
MODEL:	4460 RADIO B2/25 B66 (KRC 161 912/3)
DIMENSIONS:	19.7" x 15.8" x 12.2" (H" x W" x D")
WEIGHT:	109 LBS
BRACKET WEIGHT:	4.8 LBS (ERS HEAVY #SXX1255993/1)



2 34373 - ERICSSON 4460 RADIO B2/25 B66
SCALE: N.T.S.

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

MECHANICAL	JACKET COLOR	BLACK
	OUTER DIAMETER (IN)	1.8
	MIN BENDING RADIUS(IN), MULTIPLE BENDS, LOADED	36
	MIN BENDING RADIUS(IN), MULTIPLE BENDS, UNLOADED	18
	MIN BENDING RADIUS(IN), SINGLE BEND, UNLOADED	12.6
	MIN BENDING RADIUS(IN), FURCATION	1.2
	ARMOR	CORRUGATED COPPER
	WEIGHT(lb/kft)	2480
ELECTRICAL	COMPRESSION(lb/in)	250
	TENSILE LOAD, LONG TERM(lbf)	180
	TENSILE LOAD, SHORT TERM(lbf)	600
	CONDUCTOR MATERIAL	COPPER
	CONDUCTOR CONSTRUCTION	STRAND
	CONDUCTOR COLOR	BLUE/BLACK
	RESISTIVITY(nΩ @20°C)	16.78 nohm-M
	CONDUCTORS, QTY	12
	CONDUCTOR SIZE(AWG)	4
	EMI SHIELD	YES
OPTICAL	UL RATING	UL TC-OF-ER
	FIBER TYPE	SINGLE MODE (G.657.A2)
	FIBERS, QTY	48
	ATTENUATION(dB/km), MAX, 1550/1285-1330 nm	0.5
	DISPERSION, MAX, 1550/1285-1330 nm	18 ps/3.5 ps
	RETURN LOSS(dB)	>50
	INSERTION LOSS(dB), POST ENVIRONMENTAL	REDUCTION <0.65
	RETURN LOSS(dB), POST ENVIRONMENTAL	REDUCTION < 5
	CUTOFF WAVELENGTH(nm)	1260
	PIGTAIL TERMINATION	LC PAIR, STRAIGHT
ENVIRON	OPERATING TEMP(°F)	-40 TO +167
	STORAGE TEMP(°F)	-40 TO +167
	UV	IEC 60068-2-5
	THERMAL CYCLE	IEC 60068-2-14
	VIBRATION	IEC 60068-2-64
	IMPACT(R lb)	4.4 NM PER ICEA696



NOTE: CABLE CROSS-SECTION NOT DRAWN TO SCALE

PROJECT WORK NO.
PROJECT NAME
PROJECT LOCATION

REV	DESCRIPTION	DATE
1	REV. 0000	REV.0001

ALLIANCE CORPORATION
THE POWER OF BEING CONNECTED

CUSTOMER:
T-MOBILE

SIGNATURE	DATE
DRAWN: H.S.HIN	20170402
CHECKED: D.D.BHIN	20170602
APPROVED:	

**ARMORED TRUNK
HYBRID CABLE
HIGH-CAPACITY w/ #4
AWG CONDUCTORS**

SHEET NO.	3	OF	3
DWG NO.	AC-HTC05-24DLC-12C		
HORIZONTAL SCALE:	N.T.S.		
VERTICAL SCALE:	N.T.S.		

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1

6X24 HCS 4AWG

SCALE: N.T.S.

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:

R-612

REVISION:

0



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 148.5 ft Monopole
ATC Site Name : SALISBURY CT,CT
ATC Site Number : 370630
Engineering Number : 14138949_C3_03
Proposed Carrier : T-MOBILE
Carrier Site Name : CTNH547A
Carrier Site Number : CTNH547A
Site Location : 52 Library St.
Salisbury, CT 06068-0000
41.9808, -73.4184
County : Litchfield
Date : August 19, 2022
Max Usage : 27%
Result : Pass

Prepared By:

Sarah Kramer
Structural Engineer

Sarah D. Kramer

Reviewed By:



Authorized by "EOR"

22 Aug 2022 07:27:12

cosign

COA : PEC.0001553

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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 149 ft Monopole to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower Drawings	PJF Job #29206-0003, dated January 9, 2006
Foundation Drawing	PJF Job #29206-0003, dated January 9, 2006
Geotechnical Report	JGI Eastern, Inc. Project #05463G, dated August 11, 2005
Mount Analysis	ATC Project #14138949_C8_01, dated August 11, 2022

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	113 mph (3-second gust)
Basic Wind Speed w/ Ice:	40 mph (3-second gust) w/ 1.00" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	$S_s = 0.17$, $S_i = 0.05$
Site Class:	D - Stiff Soil - Default

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
162.0	1	RFS Celwave PD220	Flush	(1) 1/2" Coax	TOWN OF SALISBURY
150.0	1	RFS Celwave PD220	Flush	-	SALISBURY VOLUNTEER AMBULANCE SERVICE, INC.
144.0	3	Ericsson RRUS 4449 B5, B12	T-Arm	(2) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6 (3) 0.96" (24.3mm) Cable (6) 1 5/8" Coax (1) 2" conduit	AT&T MOBILITY
	3	Ericsson RRUS 4478 B14			
	1	Raycap DC9-48-60-24-8C-EV			
	3	Powerwave Allgon 7770.00			
	2	CCI DMP65R-BU4D			
	2	CCI OPA65R-BU4DA-K			
	1	CCI DMP65R-BU6DA			
	3	Ericsson Radio 8843 - B2 + B66A			
	1	Raycap DC6-48-60-18-8F(32.8 lbs)			
	6	Powerwave Allgon LGP21401			
	1	CCI OPA65R-BU6D			
134.0	6	Antel LPA-80080/6CF	T-Arm	(6) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Samsung MT6407-77A			
	1	Raycap RVZDC-6627-PF-48			
	3	Samsung B5/B13 RRH-BR04C			
	6	JMA Wireless MX06FRO660-03			
	3	Samsung B2/B66A RRH-BR049			
123.0	3	RFS APXVAALL24 43-U-NA20	Sector Frame	(2) 1 1/4" (1.25"- 31.8mm) Fiber (1) 1 5/8" Hybriflex	T-MOBILE
	3	Ericsson Radio 4449 B71 B85A			

Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
123.0	3	RFS APX16DWV-16DWVS-E-A20	-	-	T-MOBILE
	3	Ericsson RRUS 11 B4			
	3	Ericsson RRUS 11 B2			

Proposed Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
123.0	3	Commscope VV-65B-R1	Sector Frame	(2) 2.00" (50.8mm) Hybrid	T-MOBILE
	3	Ericsson Radio 4460 B25+B66			
	3	Ericsson AIR 6419 B41			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	20%	Pass
Shaft	26%	Pass
Base Plate	9%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	7150.0	9652.5	2296.4	24%
Shear (Kips)	62.0	83.7	22.8	27%
* The design reactions are factored by 1.35 per ANSI/TIA-222-H, Sec. 15.6.2				

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
123.0	Commscope VV-65B-R1	T-MOBILE	0.334	0.350
	Ericsson Radio 4460 B25+B66			
	Ericsson AIR 6419 B41			

*Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H

Standard Conditions

All engineering services performed by A.T. Engineering Services LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Services LLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively “American Tower”) are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

JOB INFORMATION

Asset : 370630, SALISBURY CT
 Client : T-MOBILE
 Code : ANSI/TIA-222-H

Height : 148.5 ft
 Base Width : 73.08
 Shape : 18 Sides

SITE PARAMETERS

Nominal Wind: 113 mph wind with no ice Topo Category: 1
 Ice Wind: 40 mph wind with 1" radial Topo Method: Method 1
 Base Elev (ft): 0.00 Taper : 0.34000 (in/ft) Topo Feature:
 Structure Class: II Exposure : B S_s : 0.166 S₁ : 0.054

SECTION PROPERTIES

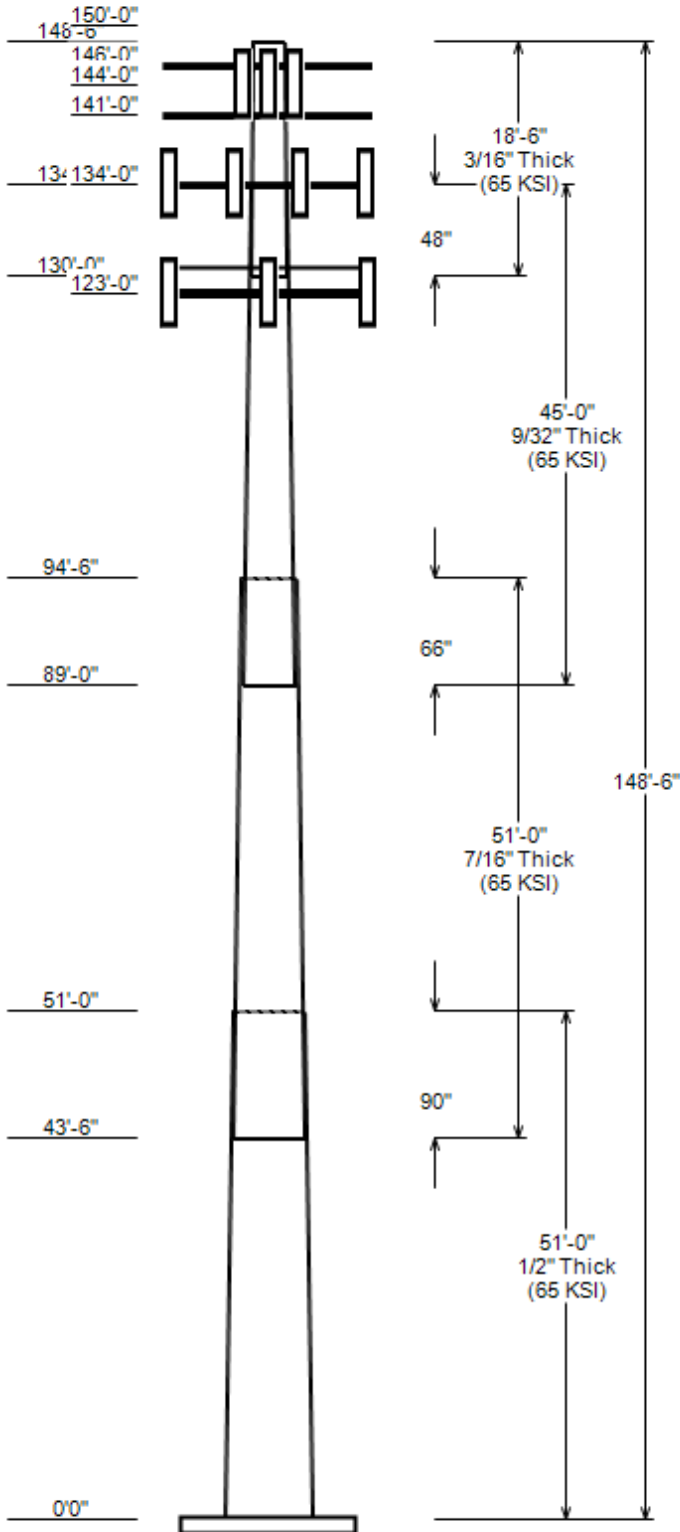
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Type	Overlap Length (in)	Shape	Steel Grade (ksi)
		Across Flats	Top Bottom					
1	51.000	55.74	73.08	0.500		0.000	18 Sides	65
2	51.000	41.82	59.16	0.438	Slip Joint	90.000	18 Sides	65
3	45.000	28.96	44.26	0.281	Slip Joint	66.000	18 Sides	65
4	18.500	24.40	30.69	0.188	Slip Joint	48.000	18 Sides	65

DISCRETE APPURTENANCE

Attach Elev (ft)	Force Elev (ft)	Qty	Description
162.4	162.4	1	RFS Celwave PD220
150.0	150.0	1	RFS Celwave PD220
146.0	146.0	4	Flat T-Arm
144.0	144.0	6	Powerwave Allgon LGP21401
144.0	144.0	1	Raycap DC6-48-60-18-8F(32.8 lb
144.0	144.0	3	Ericsson Radio 8843 - B2 + B66
144.0	144.0	3	Ericsson RRUS 4449 B5, B12
144.0	144.0	3	Ericsson RRUS 4478 B14
144.0	144.0	1	Raycap DC9-48-60-24-8C-EV
144.0	144.0	3	Powerwave Allgon 7770.00
144.0	144.0	2	CCI DMP65R-BU4D
144.0	144.0	2	CCI OPA65R-BU4DA-K
144.0	144.0	1	CCI DMP65R-BU6DA
144.0	144.0	1	CCI OPA65R-BU6D
141.0	141.0	3	Flat T-Arm
134.0	134.0	3	Samsung B2/B66A RRH-BR049
134.0	134.0	3	Samsung B5/B13 RRH-BR04C
134.0	134.0	1	Raycap RVZDC-6627-PF-48
134.0	134.0	3	Samsung MT6407-77A
134.0	134.0	6	Antel LPA-80080/6CF ____
134.0	134.8	3	Round T-Arm
134.0	134.0	6	JMA Wireless MX06FRO660-03
123.0	123.0	3	Ericsson Radio 4449 B71 B85A
123.0	123.0	3	Ericsson Radio 4460 B25+B66
123.0	123.0	3	Ericsson AIR 6419 B41
123.0	123.0	3	Commscope VV-65B-R1
123.0	123.0	3	Generic Round Sector Frame
123.0	123.0	3	RFS APXVAALL24 43-U-NA20

LINEAR APPURTENANCE

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
0.0	162.0	1/2" Coax	No
0.0	144.0	2" conduit	No
0.0	144.0	1 5/8" Coax	No
0.0	144.0	0.96" (24.3mm) Cable	No
0.0	144.0	0.78" (19.7mm) 8 AWG 6	No
0.0	144.0	0.39" (10mm) Fiber Trunk	No
0.0	134.0	1 5/8" Hybriflex	No
0.0	134.0	1 5/8" Coax	No
0.0	123.0	2.00" (50.8mm) Hybrid	No
0.0	123.0	1 5/8" Hybriflex	No



JOB INFORMATION

Asset : 370630, SALISBURY CT
 Client : T-MOBILE
 Code : ANSI/TIA-222-H

Height : 148.5 ft
 Base Width : 73.08
 Shape : 18 Sides

LINEAR APPURTENANCE

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
0.0	123.0	1 1/4" (1.25"- 31.8mm) Fiber	No

LOAD CASES

1.2D + 1.0W Normal	113 mph wind with no ice
0.9D + 1.0W Normal	113 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Nor	40 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Nor	Seismic
0.9D - 1.0Ev + 1.0Eh Nor	Seismic (Reduced DL)
1.0D + 1.0W Service Norm	60 mph Wind with No Ice

REACTIONS

Load Case	Moment (kip-ft)	Shear (Kip)	Axial (Kip)
1.2D + 1.0W Normal	2296.39	22.76	56.18
0.9D + 1.0W Normal	2288.10	22.75	42.13
1.2D + 1.0Di + 1.0Wi Normal	419.40	4.32	71.85
1.2D + 1.0Ev + 1.0Eh Normal	218.54	2.09	55.27
0.9D - 1.0Ev + 1.0Eh Normal	217.66	2.09	38.68
1.0D + 1.0W Service Normal	577.81	5.74	46.82

DISH DEFLECTIONS

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
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ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

ANALYSIS PARAMETERS

Location:	Litchfield County,CT	Height:	148.5 ft
Type and Shape:	Taper, 18 Sides	Base Diameter:	73.08 in
Manufacturer:	Undetermined	Top Diameter:	24.40 in
K_d (non-service):	0.95	Taper:	0.3400 in/ft
K_e:	0.98	Rotation:	0.000°

ICE & WIND PARAMETERS

Exposure Category:	B	Design Wind Speed w/o Ice:	113 mph
Risk Category:	II	Design Wind Speed w/Ice:	40 mph
Topo Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
Topographic Category:	1	Design Ice Thickness:	1.00 in
Crest Height:	0 ft	HMSL:	667.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil	Period Based on Rayleigh Method (sec):	1.29
T_L (sec):	6	P:	1
S_s:	0.166	S₁:	0.054
F_a:	1.600	F_v:	2.400
S_{ds}:	0.177	S_{d1}:	0.086
		C_s:	0.045
		C_s Max:	0.045
		C_s Min:	0.030

LOAD CASES

1.2D + 1.0W Normal	113 mph wind with no ice
0.9D + 1.0W Normal	113 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Normal	40 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL)
1.0D + 1.0W Service Normal	60 mph Wind with No Ice

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

SHAFT SECTION PROPERTIES

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint len (in)	Weight (lb)	Bottom						Top						Taper (in/ft)	
							Dia (in)	Elev (ft)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (in)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio		
							115.1						33,795.1							
1-18	51.00	0.5000	65		0.00	17,601	73.08	0.000	8	76,659.4	24.36	146.16	55.74	51.00	87.66		18.25	111.48	0.3400	
2-18	51.00	0.4375	65	Slip	90.00	12,062	59.16	43.500	81.55	35,532.9	22.43	135.23	41.82	94.50	57.47	12,435.9	15.45	95.60	0.3400	
3-18	45.00	0.2813	65	Slip	66.00	4,966	44.26	89.000	39.26	9,592.3	26.33	157.33	28.96	134.00	25.60	2,659.4	16.74	102.93	0.3400	
							130.00						1,067.2							
4-18	18.50	0.1875	65	Slip	48.00	1,025	30.69	0	18.15	2,133.9	27.45	163.68	24.40	148.50	14.41		21.54	130.13	0.3400	
Shaft Weight						35,654														

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice			Ice		
					Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor
162.40	RFS Celwave PD220	1	1.00	0.000	25.00	5.400	1.00	118.06	10.033	1.00
150.00	RFS Celwave PD220	1	1.00	0.000	25.00	5.400	1.00	118.06	10.033	1.00
146.00	Flat T-Arm	4	0.75	0.000	250.00	12.900	0.67	389.19	18.347	0.67
144.00	CCI DMP65R-BU4D	2	0.80	0.000	67.90	8.280	0.62	187.93	9.626	0.62
144.00	Raycap DC9-48-60-24-8C-EV	1	0.80	0.000	16.00	4.788	1.00	101.80	5.766	1.00
144.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.40	2.021	0.67	100.19	2.648	0.67
144.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	113.83	2.589	0.50
144.00	Ericsson Radio 8843 - B2 + B66	3	0.80	0.000	71.90	1.650	0.50	112.85	2.213	0.50
144.00	Raycap DC6-48-60-18-8F(32.8 lb	1	0.80	0.000	32.80	1.470	1.00	73.80	1.934	1.00
144.00	Powerwave Allgon LGP21401	6	0.80	0.000	14.10	1.104	0.50	30.68	1.578	0.50
144.00	CCI OPA65R-BU4DA-K	2	0.80	0.000	52.50	8.435	0.72	174.33	9.790	0.72
144.00	CCI DMP65R-BU6DA	1	0.80	0.000	79.40	12.709	0.72	250.61	14.563	0.72
144.00	CCI OPA65R-BU6D	1	0.80	0.000	63.20	12.871	1.00	236.90	14.730	1.00
144.00	Powerwave Allgon 7770.00	3	0.80	0.000	35.00	5.508	0.65	110.55	6.921	0.65
141.00	Flat T-Arm	3	0.75	0.000	250.00	12.900	0.67	388.71	18.328	0.67
134.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	108.03	2.470	0.50
134.00	Raycap RVZDC-6627-PF-48	1	0.80	0.000	32.00	3.781	1.00	104.33	4.653	1.00
134.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	148.83	5.711	0.61
134.00	Antel LPA-80080/6CF ____	6	0.80	0.000	21.00	8.628	0.62	140.84	5.078	0.62
134.00	Round T-Arm	3	0.75	0.750	250.00	9.700	0.67	387.84	15.137	0.67
134.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	126.48	2.470	0.50
134.00	JMA Wireless MX06FRO660-03	6	0.80	0.000	60.00	9.872	0.71	218.13	11.682	0.71
123.00	Ericsson Radio 4449 B71 B85A	3	0.80	0.000	75.00	1.650	0.50	114.34	2.206	0.50
123.00	Ericsson Radio 4460 B25+B66	3	0.80	0.000	109.00	2.564	0.67	166.82	3.253	0.67
123.00	Ericsson AIR 6419 B41	3	0.80	0.000	83.30	6.322	0.63	182.30	7.428	0.63
123.00	Commscope VV-65B-R1	3	0.80	0.000	27.90	7.918	0.64	125.03	9.697	0.64
123.00	Generic Round Sector Frame	3	0.75	0.000	300.00	14.400	0.75	540.60	25.227	0.75
123.00	RFS APXVAALL24 43-U-NA20	3	0.80	0.000	122.80	20.243	0.63	377.58	22.669	0.63
Totals	Num Loadings: 28	78			7,159.60			14,934.68		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg) : _

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax/ Row	Dist Between Rows(in)	Dist Between Cols(in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	162.00	1	1/2" Coax	0.63	0.15	N	0	0	0	0	0	N	TOWN OF SALIS
0.00	144.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	144.00	3	0.96" (24.3mm) Cable	0.96	0.88	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	144.00	2	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	144.00	2	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	144.00	1	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	134.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIREL
0.00	134.00	2	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIREL
0.00	123.00	2	2.00" (50.8mm) Hybrid	2	3.09	N	0	0	0	0	0	N	T-MOBILE
0.00	123.00	2	1 1/4" (1.25"- 31.8mm	1.25	1.05	N	0	0	0	0	0	N	T-MOBILE
0.00	123.00	1	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	T-MOBILE

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

SEGMENT PROPERTIES

(Max Len: 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.5000	73.080	115.180	76,659.40	24.36	146.16	72.7	2066.1	0.0	0.0
5.00		0.5000	71.380	112.482	71,397.60	23.76	142.76	73.5	1970.1	0.0	1,936.7
10.00		0.5000	69.680	109.784	66,382.40	23.16	139.36	74.2	1876.4	0.0	1,890.8
15.00		0.5000	67.980	107.086	61,607.60	22.56	135.96	74.9	1785.0	0.0	1,844.9
20.00		0.5000	66.280	104.389	57,067.50	21.96	132.56	75.6	1695.9	0.0	1,799.0
25.00		0.5000	64.580	101.691	52,756.10	21.36	129.16	76.3	1609.0	0.0	1,753.1
30.00		0.5000	62.879	98.993	48,667.60	20.76	125.76	77	1524.4	0.0	1,707.2
35.00		0.5000	61.179	96.295	44,795.90	20.16	122.36	77.7	1442.2	0.0	1,661.3
40.00		0.5000	59.479	93.597	41,135.20	19.56	118.96	78.4	1362.2	0.0	1,615.4
43.50	Bot - Section 2	0.5000	58.289	91.708	38,695.00	19.15	116.58	78.9	1307.5	0.0	1,103.5
45.00		0.5000	57.779	90.899	37,679.50	18.97	115.56	79.1	1284.4	0.0	880.4
50.00		0.5000	56.079	88.201	34,423.10	18.37	112.16	79.8	1209.0	0.0	2,878.9
51.00	Top - Section 1	0.4375	56.614	78.005	31,102.00	21.41	129.40	76.2	1082.0	0.0	565.4
55.00		0.4375	55.254	76.117	28,897.30	20.86	126.29	76.9	1030.1	0.0	1,048.9
60.00		0.4375	53.554	73.756	26,291.10	20.17	122.41	77.7	966.9	0.0	1,275.0
65.00		0.4375	51.854	71.395	23,846.60	19.49	118.52	78.5	905.8	0.0	1,234.8
70.00		0.4375	50.154	69.035	21,558.50	18.80	114.64	79.3	846.6	0.0	1,194.6
75.00		0.4375	48.454	66.674	19,421.60	18.12	110.75	80.1	789.5	0.0	1,154.5
80.00		0.4375	46.754	64.313	17,430.80	17.43	106.87	80.9	734.3	0.0	1,114.3
85.00		0.4375	45.054	61.953	15,581.00	16.75	102.98	81.7	681.2	0.0	1,074.1
89.00	Bot - Section 3	0.4375	43.693	60.064	14,199.10	16.20	99.87	82.3	640.1	0.0	830.4
90.00		0.4375	43.353	59.592	13,866.80	16.06	99.09	82.5	630.0	0.0	336.7
94.50	Top - Section 2	0.2813	42.386	37.592	8,419.80	25.16	150.68	71.8	391.3	0.0	1,482.3
95.00		0.2813	42.216	37.440	8,318.30	25.05	150.07	71.9	388.1	0.0	63.8
100.00		0.2813	40.516	35.922	7,347.00	23.99	144.03	73.2	357.2	0.0	624.1
105.00		0.2813	38.816	34.404	6,454.50	22.92	137.99	74.4	327.5	0.0	598.3
110.00		0.2813	37.116	32.886	5,637.30	21.85	131.94	75.7	299.2	0.0	572.4
115.00		0.2813	35.416	31.368	4,892.20	20.79	125.90	76.9	272.1	0.0	546.6
120.00		0.2813	33.715	29.851	4,215.90	19.72	119.86	78.2	246.3	0.0	520.8
123.00		0.2813	32.695	28.940	3,841.70	19.08	116.23	79	231.4	0.0	300.1
125.00		0.2813	32.015	28.333	3,604.90	18.66	113.81	79.5	221.8	0.0	194.9
130.00	Bot - Section 4	0.2813	30.315	26.815	3,056.00	17.59	107.77	80.7	198.6	0.0	469.1
134.00	Top - Section 3	0.1875	29.330	17.343	1,861.00	26.17	156.43	70.6	125.0	0.0	598.3
135.00		0.1875	28.990	17.141	1,796.60	25.85	154.61	71	122.1	0.0	58.7
140.00		0.1875	27.290	16.129	1,496.90	24.25	145.55	72.9	108.0	0.0	283.0
141.00		0.1875	26.950	15.927	1,441.20	23.93	143.73	73.3	105.3	0.0	54.5
144.00		0.1875	25.930	15.319	1,282.60	22.97	138.29	74.4	97.4	0.0	159.5
145.00		0.1875	25.590	15.117	1,232.50	22.65	136.48	74.8	94.9	0.0	51.8
146.00		0.1875	25.250	14.915	1,183.60	22.33	134.67	75.1	92.3	0.0	51.1
148.50		0.1875	24.400	14.409	1,067.20	21.54	130.13	76.1	86.2	0.0	124.7

Totals: 35,653.9

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

Load Case: 1.2D + 1.0W Normal	113 mph wind with no ice	19 Iterations
Gust Response Factor: 1.10		
Dead load Factor: 1.20		
Wind Load Factor: 1.00		

CALCULATED FORCES

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 (deg)	Ratio
0.00	-56.18	-22.76	0.00	-2,296.4	0.00	2,296.39	7,541.17	2,021.41	13,251.22	11,272.69	0	0	0.211
5.00	-53.66	-22.28	0.00	-2,182.6	0.00	2,182.61	7,435.91	1,974.07	12,637.77	10,853.20	0.02	-0.04	0.208
10.00	-51.20	-21.81	0.00	-2,071.2	0.00	2,071.20	7,327.23	1,926.72	12,038.86	10,436.27	0.09	-0.08	0.206
15.00	-48.79	-21.36	0.00	-1,962.1	0.00	1,962.13	7,215.13	1,879.37	11,454.49	10,022.24	0.2	-0.13	0.203
20.00	-46.44	-20.91	0.00	-1,855.4	0.00	1,855.35	7,099.60	1,832.02	10,884.65	9,611.47	0.36	-0.17	0.200
25.00	-44.14	-20.47	0.00	-1,750.8	0.00	1,750.80	6,980.64	1,784.67	10,329.35	9,204.34	0.56	-0.22	0.197
30.00	-41.90	-20.04	0.00	-1,648.4	0.00	1,648.45	6,858.27	1,737.32	9,788.59	8,801.20	0.81	-0.26	0.194
35.00	-39.71	-19.60	0.00	-1,548.3	0.00	1,548.27	6,732.46	1,689.97	9,262.37	8,402.42	1.11	-0.31	0.190
40.00	-37.58	-19.22	0.00	-1,450.3	0.00	1,450.28	6,603.24	1,642.62	8,750.69	8,008.36	1.46	-0.36	0.187
43.50	-36.13	-18.99	0.00	-1,383.0	0.00	1,383.02	6,510.74	1,609.48	8,401.16	7,735.51	1.74	-0.39	0.184
45.00	-35.01	-18.69	0.00	-1,354.5	0.00	1,354.54	6,470.58	1,595.27	8,253.54	7,619.37	1.86	-0.41	0.183
50.00	-31.37	-18.39	0.00	-1,261.1	0.00	1,261.09	6,334.51	1,547.93	7,770.93	7,235.83	2.31	-0.46	0.179
51.00	-30.65	-18.17	0.00	-1,242.7	0.00	1,242.69	5,351.19	1,369.00	6,946.29	6,185.72	2.41	-0.47	0.207
55.00	-29.24	-17.75	0.00	-1,170.0	0.00	1,170.03	5,265.80	1,335.85	6,614.05	5,938.50	2.82	-0.51	0.203
60.00	-27.52	-17.29	0.00	-1,081.3	0.00	1,081.27	5,155.98	1,294.42	6,210.21	5,632.89	3.38	-0.56	0.197
65.00	-25.84	-16.83	0.00	-994.8	0.00	994.82	5,042.74	1,252.99	5,819.08	5,331.40	4	-0.62	0.192
70.00	-24.22	-16.38	0.00	-910.6	0.00	910.65	4,926.07	1,211.56	5,440.67	5,034.40	4.68	-0.67	0.186
75.00	-22.65	-15.93	0.00	-828.8	0.00	828.76	4,805.98	1,170.13	5,074.98	4,742.24	5.41	-0.73	0.180
80.00	-21.12	-15.48	0.00	-749.1	0.00	749.11	4,682.46	1,128.70	4,722.02	4,455.30	6.21	-0.79	0.173
85.00	-19.65	-15.09	0.00	-671.7	0.00	671.70	4,555.52	1,087.27	4,381.77	4,173.92	7.07	-0.85	0.165
89.00	-18.50	-14.86	0.00	-611.4	0.00	611.36	4,451.50	1,054.13	4,118.74	3,953.08	7.8	-0.89	0.159
90.00	-18.06	-14.63	0.00	-596.5	0.00	596.50	4,425.16	1,045.84	4,054.25	3,898.48	7.99	-0.91	0.157
94.50	-16.12	-14.39	0.00	-530.7	0.00	530.67	2,429.52	659.73	2,508.88	2,107.23	8.87	-0.96	0.259
95.00	-16.01	-14.17	0.00	-523.5	0.00	523.48	2,423.93	657.07	2,488.66	2,093.84	8.97	-0.96	0.257
100.00	-15.07	-13.76	0.00	-452.6	0.00	452.63	2,366.19	630.43	2,290.98	1,960.54	10.03	-1.05	0.238
105.00	-14.17	-13.37	0.00	-383.8	0.00	383.81	2,305.01	603.79	2,101.48	1,828.59	11.17	-1.13	0.217
110.00	-13.29	-12.98	0.00	-317.0	0.00	316.98	2,240.42	577.15	1,920.16	1,698.37	12.4	-1.21	0.193
115.00	-12.45	-12.60	0.00	-252.1	0.00	252.09	2,172.39	550.52	1,747.02	1,570.22	13.7	-1.28	0.167
120.00	-11.64	-12.30	0.00	-189.1	0.00	189.09	2,100.95	523.88	1,582.06	1,444.51	15.07	-1.34	0.137
123.00	-8.66	-9.16	0.00	-152.2	0.00	152.19	2,056.44	507.89	1,487.01	1,370.41	15.93	-1.38	0.116
125.00	-8.38	-8.92	0.00	-133.9	0.00	133.87	2,026.08	497.24	1,425.28	1,321.61	16.51	-1.4	0.106
130.00	-7.70	-8.61	0.00	-89.3	0.00	89.26	1,947.78	470.60	1,276.68	1,201.87	18	-1.44	0.079
134.00	-4.60	-5.20	0.00	-54.4	0.00	54.45	1,102.25	304.37	801.14	661.88	19.22	-1.47	0.087
135.00	-4.51	-5.01	0.00	-49.2	0.00	49.25	1,095.19	300.82	782.56	649.92	19.53	-1.47	0.080
140.00	-4.10	-4.81	0.00	-24.2	0.00	24.21	1,057.85	283.06	692.91	590.46	21.09	-1.5	0.045
141.00	-3.14	-3.96	0.00	-19.4	0.00	19.40	1,049.97	279.51	675.64	578.66	21.41	-1.51	0.037
144.00	-1.49	-1.62	0.00	-7.5	0.00	7.53	1,025.50	268.86	625.12	543.49	22.36	-1.52	0.015
145.00	-1.43	-1.56	0.00	-5.9	0.00	5.91	1,017.07	265.31	608.72	531.85	22.68	-1.52	0.013
146.00	-0.20	-0.48	0.00	-4.3	0.00	4.34	1,008.51	261.75	592.53	520.26	22.99	-1.52	0.009
148.50	0.00	-0.47	0.00	-3.1	0.00	3.14	986.50	252.88	553.02	491.52	23.79	-1.52	0.006

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CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

Load Case: 0.9D + 1.0W Normal	113 mph wind with no ice	19 Iterations
Gust Response Factor: 1.10		
Dead load Factor: 0.90		
Wind Load Factor: 1.00		

CALCULATED FORCES

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 (deg)	Ratio
0.00	-42.13	-22.75	0.00	-2,288.1	0.00	2,288.10	7,541.17	2,021.41	13,251.22	11,272.69	0	0	0.209
5.00	-40.24	-22.27	0.00	-2,174.3	0.00	2,174.34	7,435.91	1,974.07	12,637.77	10,853.20	0.02	-0.04	0.206
10.00	-38.39	-21.79	0.00	-2,063.0	0.00	2,063.01	7,327.23	1,926.72	12,038.86	10,436.27	0.09	-0.08	0.203
15.00	-36.58	-21.32	0.00	-1,954.1	0.00	1,954.06	7,215.13	1,879.37	11,454.49	10,022.24	0.2	-0.13	0.200
20.00	-34.81	-20.87	0.00	-1,847.4	0.00	1,847.44	7,099.60	1,832.02	10,884.65	9,611.47	0.36	-0.17	0.197
25.00	-33.08	-20.42	0.00	-1,743.1	0.00	1,743.10	6,980.64	1,784.67	10,329.35	9,204.34	0.56	-0.22	0.194
30.00	-31.40	-19.98	0.00	-1,641.0	0.00	1,640.98	6,858.27	1,737.32	9,788.59	8,801.20	0.81	-0.26	0.191
35.00	-29.76	-19.54	0.00	-1,541.1	0.00	1,541.06	6,732.46	1,689.97	9,262.37	8,402.42	1.11	-0.31	0.188
40.00	-28.16	-19.15	0.00	-1,443.4	0.00	1,443.36	6,603.24	1,642.62	8,750.69	8,008.36	1.46	-0.35	0.185
43.50	-27.06	-18.92	0.00	-1,376.3	0.00	1,376.32	6,510.74	1,609.48	8,401.16	7,735.51	1.73	-0.39	0.182
45.00	-26.22	-18.62	0.00	-1,347.9	0.00	1,347.94	6,470.58	1,595.27	8,253.54	7,619.37	1.86	-0.4	0.181
50.00	-23.49	-18.33	0.00	-1,254.8	0.00	1,254.82	6,334.51	1,547.93	7,770.93	7,235.83	2.3	-0.45	0.177
51.00	-22.95	-18.10	0.00	-1,236.5	0.00	1,236.49	5,351.19	1,369.00	6,946.29	6,185.72	2.4	-0.46	0.204
55.00	-21.89	-17.68	0.00	-1,164.1	0.00	1,164.09	5,265.80	1,335.85	6,614.05	5,938.50	2.81	-0.5	0.200
60.00	-20.59	-17.22	0.00	-1,075.7	0.00	1,075.68	5,155.98	1,294.42	6,210.21	5,632.89	3.36	-0.56	0.195
65.00	-19.34	-16.76	0.00	-989.6	0.00	989.59	5,042.74	1,252.99	5,819.08	5,331.40	3.98	-0.61	0.190
70.00	-18.12	-16.30	0.00	-905.8	0.00	905.79	4,926.07	1,211.56	5,440.67	5,034.40	4.66	-0.67	0.184
75.00	-16.93	-15.85	0.00	-824.3	0.00	824.28	4,805.98	1,170.13	5,074.98	4,742.24	5.39	-0.73	0.178
80.00	-15.79	-15.41	0.00	-745.0	0.00	745.02	4,682.46	1,128.70	4,722.02	4,455.30	6.18	-0.79	0.171
85.00	-14.68	-15.01	0.00	-668.0	0.00	667.99	4,555.52	1,087.27	4,381.77	4,173.92	7.04	-0.84	0.163
89.00	-13.82	-14.79	0.00	-608.0	0.00	607.96	4,451.50	1,054.13	4,118.74	3,953.08	7.77	-0.89	0.157
90.00	-13.49	-14.55	0.00	-593.2	0.00	593.17	4,425.16	1,045.84	4,054.25	3,898.48	7.95	-0.9	0.155
94.50	-12.03	-14.32	0.00	-527.7	0.00	527.69	2,429.52	659.73	2,508.88	2,107.23	8.83	-0.95	0.256
95.00	-11.95	-14.10	0.00	-520.5	0.00	520.53	2,423.93	657.07	2,488.66	2,093.84	8.93	-0.96	0.254
100.00	-11.24	-13.69	0.00	-450.0	0.00	450.04	2,366.19	630.43	2,290.98	1,960.54	9.98	-1.04	0.235
105.00	-10.56	-13.29	0.00	-381.6	0.00	381.59	2,305.01	603.79	2,101.48	1,828.59	11.12	-1.12	0.214
110.00	-9.90	-12.90	0.00	-315.1	0.00	315.13	2,240.42	577.15	1,920.16	1,698.37	12.34	-1.2	0.190
115.00	-9.27	-12.53	0.00	-250.6	0.00	250.62	2,172.39	550.52	1,747.02	1,570.22	13.64	-1.27	0.164
120.00	-8.66	-12.23	0.00	-188.0	0.00	187.99	2,100.95	523.88	1,582.06	1,444.51	15	-1.34	0.135
123.00	-6.44	-9.11	0.00	-151.3	0.00	151.31	2,056.44	507.89	1,487.01	1,370.41	15.85	-1.37	0.114
125.00	-6.23	-8.87	0.00	-133.1	0.00	133.09	2,026.08	497.24	1,425.28	1,321.61	16.43	-1.39	0.104
130.00	-5.72	-8.56	0.00	-88.8	0.00	88.76	1,947.78	470.60	1,276.68	1,201.87	17.91	-1.43	0.077
134.00	-3.41	-5.17	0.00	-54.1	0.00	54.14	1,102.25	304.37	801.14	661.88	19.13	-1.46	0.085
135.00	-3.35	-4.98	0.00	-49.0	0.00	48.98	1,095.19	300.82	782.56	649.92	19.44	-1.47	0.079
140.00	-3.05	-4.78	0.00	-24.1	0.00	24.10	1,057.85	283.06	692.91	590.46	20.99	-1.5	0.044
141.00	-2.33	-3.94	0.00	-19.3	0.00	19.32	1,049.97	279.51	675.64	578.66	21.3	-1.5	0.036
144.00	-1.11	-1.61	0.00	-7.5	0.00	7.51	1,025.50	268.86	625.12	543.49	22.25	-1.51	0.015
145.00	-1.06	-1.55	0.00	-5.9	0.00	5.89	1,017.07	265.31	608.72	531.85	22.57	-1.51	0.012
146.00	-0.15	-0.48	0.00	-4.3	0.00	4.34	1,008.51	261.75	592.53	520.26	22.88	-1.51	0.008
148.50	0.00	-0.47	0.00	-3.1	0.00	3.14	986.50	252.88	553.02	491.52	23.67	-1.51	0.006

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

Load Case: 1.2D + 1.0Di + 1.0Wi Normal				40 mph wind with 1" radial ice				18 Iterations			
Gust Response Factor: 1.10		Ice Dead Load Factor 1.00									
Dead load Factor: 1.20								Ice Importance Factor		1.00	
Wind Load Factor: 1.00											

CALCULATED FORCES

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 (deg)	Ratio
0.00	-71.85	-4.32	0.00	-419.4	0.00	419.40	7,541.17	2,021.41	13,251.22	11,272.69	0	0	0.047
5.00	-69.00	-4.22	0.00	-397.8	0.00	397.80	7,435.91	1,974.07	12,637.77	10,853.20	0	-0.01	0.046
10.00	-66.17	-4.12	0.00	-376.7	0.00	376.71	7,327.23	1,926.72	12,038.86	10,436.27	0.02	-0.02	0.045
15.00	-63.39	-4.03	0.00	-356.1	0.00	356.10	7,215.13	1,879.37	11,454.49	10,022.24	0.04	-0.02	0.044
20.00	-60.65	-3.93	0.00	-336.0	0.00	335.97	7,099.60	1,832.02	10,884.65	9,611.47	0.07	-0.03	0.044
25.00	-57.97	-3.84	0.00	-316.3	0.00	316.31	6,980.64	1,784.67	10,329.35	9,204.34	0.1	-0.04	0.043
30.00	-55.35	-3.75	0.00	-297.1	0.00	297.12	6,858.27	1,737.32	9,788.59	8,801.20	0.15	-0.05	0.042
35.00	-52.79	-3.66	0.00	-278.4	0.00	278.37	6,732.46	1,689.97	9,262.37	8,402.42	0.2	-0.06	0.041
40.00	-50.29	-3.58	0.00	-260.1	0.00	260.10	6,603.24	1,642.62	8,750.69	8,008.36	0.27	-0.06	0.040
43.50	-48.57	-3.53	0.00	-247.6	0.00	247.58	6,510.74	1,609.48	8,401.16	7,735.51	0.32	-0.07	0.039
45.00	-47.35	-3.46	0.00	-242.3	0.00	242.29	6,470.58	1,595.27	8,253.54	7,619.37	0.34	-0.07	0.039
50.00	-43.34	-3.40	0.00	-225.0	0.00	224.97	6,334.51	1,547.93	7,770.93	7,235.83	0.42	-0.08	0.038
51.00	-42.55	-3.35	0.00	-221.6	0.00	221.57	5,351.19	1,369.00	6,946.29	6,185.72	0.44	-0.08	0.044
55.00	-40.85	-3.27	0.00	-208.2	0.00	208.15	5,265.80	1,335.85	6,614.05	5,938.50	0.51	-0.09	0.043
60.00	-38.78	-3.17	0.00	-191.8	0.00	191.82	5,155.98	1,294.42	6,210.21	5,632.89	0.61	-0.1	0.042
65.00	-36.77	-3.07	0.00	-176.0	0.00	175.98	5,042.74	1,252.99	5,819.08	5,331.40	0.72	-0.11	0.040
70.00	-34.81	-2.97	0.00	-160.6	0.00	160.62	4,926.07	1,211.56	5,440.67	5,034.40	0.84	-0.12	0.039
75.00	-32.91	-2.88	0.00	-145.8	0.00	145.75	4,805.98	1,170.13	5,074.98	4,742.24	0.98	-0.13	0.038
80.00	-31.07	-2.78	0.00	-131.4	0.00	131.36	4,682.46	1,128.70	4,722.02	4,455.30	1.12	-0.14	0.036
85.00	-29.28	-2.70	0.00	-117.4	0.00	117.44	4,555.52	1,087.27	4,381.77	4,173.92	1.27	-0.15	0.035
89.00	-27.90	-2.65	0.00	-106.6	0.00	106.65	4,451.50	1,054.13	4,118.74	3,953.08	1.4	-0.16	0.033
90.00	-27.39	-2.60	0.00	-104.0	0.00	104.00	4,425.16	1,045.84	4,054.25	3,898.48	1.44	-0.16	0.033
94.50	-25.18	-2.55	0.00	-92.3	0.00	92.30	2,429.52	659.73	2,508.88	2,107.23	1.59	-0.17	0.054
95.00	-25.06	-2.50	0.00	-91.0	0.00	91.02	2,423.93	657.07	2,488.66	2,093.84	1.61	-0.17	0.054
100.00	-23.84	-2.42	0.00	-78.5	0.00	78.51	2,366.19	630.43	2,290.98	1,960.54	1.8	-0.19	0.050
105.00	-22.66	-2.33	0.00	-66.4	0.00	66.43	2,305.01	603.79	2,101.48	1,828.59	2	-0.2	0.046
110.00	-21.53	-2.25	0.00	-54.8	0.00	54.78	2,240.42	577.15	1,920.16	1,698.37	2.22	-0.21	0.042
115.00	-20.43	-2.16	0.00	-43.6	0.00	43.55	2,172.39	550.52	1,747.02	1,570.22	2.45	-0.23	0.037
120.00	-19.38	-2.10	0.00	-32.7	0.00	32.73	2,100.95	523.88	1,582.06	1,444.51	2.7	-0.24	0.032
123.00	-14.34	-1.55	0.00	-26.4	0.00	26.44	2,056.44	507.89	1,487.01	1,370.41	2.85	-0.24	0.026
125.00	-13.96	-1.50	0.00	-23.3	0.00	23.33	2,026.08	497.24	1,425.28	1,321.61	2.95	-0.25	0.025
130.00	-13.05	-1.43	0.00	-15.8	0.00	15.82	1,947.78	470.60	1,276.68	1,201.87	3.21	-0.25	0.020
134.00	-7.51	-0.94	0.00	-10.0	0.00	10.02	1,102.25	304.37	801.14	661.88	3.43	-0.26	0.022
135.00	-7.38	-0.90	0.00	-9.1	0.00	9.08	1,095.19	300.82	782.56	649.92	3.48	-0.26	0.021
140.00	-6.76	-0.85	0.00	-4.6	0.00	4.59	1,057.85	283.06	692.91	590.46	3.76	-0.27	0.014
141.00	-5.41	-0.70	0.00	-3.7	0.00	3.73	1,049.97	279.51	675.64	578.66	3.81	-0.27	0.012
144.00	-2.29	-0.33	0.00	-1.6	0.00	1.65	1,025.50	268.86	625.12	543.49	3.98	-0.27	0.005
145.00	-2.18	-0.31	0.00	-1.3	0.00	1.32	1,017.07	265.31	608.72	531.85	4.04	-0.27	0.005
146.00	-0.45	-0.11	0.00	-1.0	0.00	1.01	1,008.51	261.75	592.53	520.26	4.1	-0.27	0.002
148.50	0.00	-0.11	0.00	-0.7	0.00	0.73	986.50	252.88	553.02	491.52	4.24	-0.27	0.001

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

Load Case: 1.0D + 1.0W Service Normal	60 mph Wind with No Ice	18 Iterations
Gust Response Factor: 1.10		
Dead load Factor: 1.00		
Wind Load Factor: 1.00		

CALCULATED FORCES

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 (deg)	Ratio
0.00	-46.82	-5.74	0.00	-577.8	0.00	577.81	7,541.17	2,021.41	13,251.22	11,272.69	0	0	0.057
5.00	-44.74	-5.62	0.00	-549.1	0.00	549.12	7,435.91	1,974.07	12,637.77	10,853.20	0.01	-0.01	0.057
10.00	-42.70	-5.50	0.00	-521.0	0.00	521.03	7,327.23	1,926.72	12,038.86	10,436.27	0.02	-0.02	0.056
15.00	-40.70	-5.38	0.00	-493.5	0.00	493.54	7,215.13	1,879.37	11,454.49	10,022.24	0.05	-0.03	0.055
20.00	-38.75	-5.27	0.00	-466.6	0.00	466.64	7,099.60	1,832.02	10,884.65	9,611.47	0.09	-0.04	0.054
25.00	-36.85	-5.16	0.00	-440.3	0.00	440.30	6,980.64	1,784.67	10,329.35	9,204.34	0.14	-0.05	0.053
30.00	-34.99	-5.04	0.00	-414.5	0.00	414.53	6,858.27	1,737.32	9,788.59	8,801.20	0.2	-0.07	0.052
35.00	-33.18	-4.93	0.00	-389.3	0.00	389.31	6,732.46	1,689.97	9,262.37	8,402.42	0.28	-0.08	0.051
40.00	-31.42	-4.84	0.00	-364.6	0.00	364.64	6,603.24	1,642.62	8,750.69	8,008.36	0.37	-0.09	0.050
43.50	-30.21	-4.78	0.00	-347.7	0.00	347.72	6,510.74	1,609.48	8,401.16	7,735.51	0.44	-0.1	0.050
45.00	-29.28	-4.70	0.00	-340.6	0.00	340.55	6,470.58	1,595.27	8,253.54	7,619.37	0.47	-0.1	0.049
50.00	-26.25	-4.63	0.00	-317.0	0.00	317.03	6,334.51	1,547.93	7,770.93	7,235.83	0.58	-0.11	0.048
51.00	-25.66	-4.57	0.00	-312.4	0.00	312.41	5,351.19	1,369.00	6,946.29	6,185.72	0.61	-0.12	0.055
55.00	-24.49	-4.47	0.00	-294.1	0.00	294.12	5,265.80	1,335.85	6,614.05	5,938.50	0.71	-0.13	0.054
60.00	-23.07	-4.35	0.00	-271.8	0.00	271.80	5,155.98	1,294.42	6,210.21	5,632.89	0.85	-0.14	0.053
65.00	-21.68	-4.23	0.00	-250.0	0.00	250.05	5,042.74	1,252.99	5,819.08	5,331.40	1.01	-0.16	0.051
70.00	-20.34	-4.12	0.00	-228.9	0.00	228.89	4,926.07	1,211.56	5,440.67	5,034.40	1.18	-0.17	0.050
75.00	-19.03	-4.00	0.00	-208.3	0.00	208.30	4,805.98	1,170.13	5,074.98	4,742.24	1.36	-0.18	0.048
80.00	-17.77	-3.89	0.00	-188.3	0.00	188.27	4,682.46	1,128.70	4,722.02	4,455.30	1.56	-0.2	0.046
85.00	-16.55	-3.79	0.00	-168.8	0.00	168.81	4,555.52	1,087.27	4,381.77	4,173.92	1.78	-0.21	0.044
89.00	-15.60	-3.74	0.00	-153.6	0.00	153.64	4,451.50	1,054.13	4,118.74	3,953.08	1.96	-0.22	0.042
90.00	-15.23	-3.68	0.00	-149.9	0.00	149.91	4,425.16	1,045.84	4,054.25	3,898.48	2.01	-0.23	0.042
94.50	-13.61	-3.62	0.00	-133.4	0.00	133.36	2,429.52	659.73	2,508.88	2,107.23	2.23	-0.24	0.069
95.00	-13.53	-3.56	0.00	-131.6	0.00	131.55	2,423.93	657.07	2,488.66	2,093.84	2.26	-0.24	0.068
100.00	-12.76	-3.46	0.00	-113.7	0.00	113.74	2,366.19	630.43	2,290.98	1,960.54	2.52	-0.26	0.063
105.00	-12.01	-3.36	0.00	-96.4	0.00	96.45	2,305.01	603.79	2,101.48	1,828.59	2.81	-0.28	0.058
110.00	-11.29	-3.26	0.00	-79.6	0.00	79.65	2,240.42	577.15	1,920.16	1,698.37	3.12	-0.3	0.052
115.00	-10.60	-3.17	0.00	-63.4	0.00	63.35	2,172.39	550.52	1,747.02	1,570.22	3.44	-0.32	0.045
120.00	-9.93	-3.09	0.00	-47.5	0.00	47.52	2,100.95	523.88	1,582.06	1,444.51	3.79	-0.34	0.038
123.00	-7.39	-2.30	0.00	-38.2	0.00	38.24	2,056.44	507.89	1,487.01	1,370.41	4.01	-0.35	0.032
125.00	-7.15	-2.24	0.00	-33.6	0.00	33.64	2,026.08	497.24	1,425.28	1,321.61	4.15	-0.35	0.029
130.00	-6.58	-2.16	0.00	-22.4	0.00	22.43	1,947.78	470.60	1,276.68	1,201.87	4.53	-0.36	0.022
134.00	-3.93	-1.31	0.00	-13.7	0.00	13.68	1,102.25	304.37	801.14	661.88	4.83	-0.37	0.024
135.00	-3.86	-1.26	0.00	-12.4	0.00	12.38	1,095.19	300.82	782.56	649.92	4.91	-0.37	0.023
140.00	-3.51	-1.21	0.00	-6.1	0.00	6.09	1,057.85	283.06	692.91	590.46	5.3	-0.38	0.014
141.00	-2.70	-0.99	0.00	-4.9	0.00	4.88	1,049.97	279.51	675.64	578.66	5.38	-0.38	0.011
144.00	-1.28	-0.41	0.00	-1.9	0.00	1.90	1,025.50	268.86	625.12	543.49	5.62	-0.38	0.005
145.00	-1.22	-0.39	0.00	-1.5	0.00	1.49	1,017.07	265.31	608.72	531.85	5.7	-0.38	0.004
146.00	-0.17	-0.12	0.00	-1.1	0.00	1.09	1,008.51	261.75	592.53	520.26	5.78	-0.38	0.002
148.50	0.00	-0.12	0.00	-0.8	0.00	0.79	986.50	252.88	553.02	491.52	5.98	-0.38	0.002

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

(Based on ASCE7-16 Chapters 11, 12 and 15)

Spectral Response Acceleration for Short Period (S_S):	0.166
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.054
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.000
Site Coefficient F_a :	1.600
Site Coefficient F_v :	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.177
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.086
Seismic Response Coefficient (C_s):	0.045
Upper Limit C_s :	0.045
Lower Limit C_s :	0.030
Period based on Rayleigh Method (sec):	1.290
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.390
Total Unfactored Dead Load:	46.820 k
Seismic Base Shear (E):	2.090 k

1.2D + 1.0Ev + 1.0Eh Normal

Seismic

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
39	147.25	125	132	0.007	15	155
38	145.5	51	53	0.003	6	63
37	144.5	52	53	0.003	6	64
36	142.5	197	199	0.011	22	244
35	140.5	67	66	0.004	7	83
34	137.5	346	332	0.018	37	428
33	134.5	71	66	0.004	7	88
32	132	679	615	0.033	69	839
31	127.5	570	492	0.026	55	704
30	124	235	195	0.010	22	291
29	121.5	389	314	0.017	35	481
28	117.5	670	515	0.028	57	827
27	112.5	695	504	0.027	56	859
26	107.5	721	490	0.026	55	891
25	102.5	747	475	0.025	53	923
24	97.5	773	458	0.024	51	955
23	94.75	79	45	0.002	5	97
22	92.25	1,616	888	0.047	99	1,997
21	89.5	366	193	0.010	22	453
20	87	949	480	0.026	54	1,173
19	82.5	1,223	575	0.031	64	1,511
18	77.5	1,263	544	0.029	61	1,560
17	72.5	1,303	512	0.027	57	1,610
16	67.5	1,343	477	0.025	53	1,660
15	62.5	1,384	442	0.024	49	1,709
14	57.5	1,424	404	0.022	45	1,759
13	53	1,168	296	0.016	33	1,443
12	50.5	595	141	0.008	16	735
11	47.5	3,028	659	0.035	74	3,740
10	44.25	925	182	0.010	20	1,143
9	41.75	1,208	220	0.012	24	1,492
8	37.5	1,764	276	0.015	31	2,180
7	32.5	1,810	232	0.012	26	2,236
6	27.5	1,856	189	0.010	21	2,293

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
5	22.5	1,902	146	0.008	16	2,350
4	17.5	1,948	105	0.006	12	2,406
3	12.5	1,994	67	0.004	8	2,463
2	7.5	2,040	34	0.002	4	2,520
1	2.5	2,086	7	0.000	1	2,576
RFS Celwave PD220	148.5	25	27	0.001	3	31
RFS Celwave PD220	148.5	25	27	0.001	3	31
Flat T-Arm	146	1,000	1,042	0.056	116	1,235
Flat T-Arm	141	750	744	0.040	83	927
Powerwave Allgon LGP21401	144	85	86	0.005	10	105
Raycap DC6-48-60-18-8F(32.8 lbs)	144	33	34	0.002	4	41
Ericsson Radio 8843 - B2 + B66A	144	216	220	0.012	25	266
Ericsson RRUS 4449 B5, B12	144	213	218	0.012	24	263
Ericsson RRUS 4478 B14	144	178	182	0.010	20	220
Raycap DC9-48-60-24-8C-EV	144	16	16	0.001	2	20
Powerwave Allgon 7770.00	144	105	107	0.006	12	130
CCI DMP65R-BU4D	144	136	139	0.007	15	168
CCI OPA65R-BU4DA-K	144	105	107	0.006	12	130
CCI DMP65R-BU6DA	144	79	81	0.004	9	98
CCI OPA65R-BU6D	144	63	65	0.003	7	78
Samsung B2/B66A RRH-BR049	134	253	234	0.012	26	313
Samsung B5/B13 RRH-BR04C	134	211	195	0.010	22	261
Raycap RVZDC-6627-PF-48	134	32	30	0.002	3	40
Samsung MT6407-77A	134	245	226	0.012	25	302
Antel LPA-80080/6CF ____	134	126	116	0.006	13	156
Round T-Arm	134	750	693	0.037	77	927
JMA Wireless MX06FRO660-03	134	360	333	0.018	37	445
Ericsson Radio 4449 B71 B85A	123	225	185	0.010	21	278
Ericsson Radio 4460 B25+B66	123	327	268	0.014	30	404
Ericsson AIR 6419 B41	123	250	205	0.011	23	309
Commscope VV-65B-R1	123	84	69	0.004	8	103
Generic Round Sector Frame	123	900	738	0.039	82	1,112
RFS APXVAALL24 43-U-NA20	123	368	302	0.016	34	455
		46,823	18,762	1.000	2,093	57,846

0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
39	147.25	125	132	0.007	15	108
38	145.5	51	53	0.003	6	44
37	144.5	52	53	0.003	6	45
36	142.5	197	199	0.011	22	171
35	140.5	67	66	0.004	7	58
34	137.5	346	332	0.018	37	299
33	134.5	71	66	0.004	7	62
32	132	679	615	0.033	69	587
31	127.5	570	492	0.026	55	493
30	124	235	195	0.010	22	203
29	121.5	389	314	0.017	35	337
28	117.5	670	515	0.028	57	579
27	112.5	695	504	0.027	56	601
26	107.5	721	490	0.026	55	624
25	102.5	747	475	0.025	53	646
24	97.5	773	458	0.024	51	668
23	94.75	79	45	0.002	5	68
22	92.25	1,616	888	0.047	99	1,397
21	89.5	366	193	0.010	22	317
20	87	949	480	0.026	54	821
19	82.5	1,223	575	0.031	64	1,057
18	77.5	1,263	544	0.029	61	1,092
17	72.5	1,303	512	0.027	57	1,127
16	67.5	1,343	477	0.025	53	1,162

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
15	62.5	1,384	442	0.024	49	1,196
14	57.5	1,424	404	0.022	45	1,231
13	53	1,168	296	0.016	33	1,010
12	50.5	595	141	0.008	16	515
11	47.5	3,028	659	0.035	74	2,618
10	44.25	925	182	0.010	20	800
9	41.75	1,208	220	0.012	24	1,044
8	37.5	1,764	276	0.015	31	1,525
7	32.5	1,810	232	0.012	26	1,565
6	27.5	1,856	189	0.010	21	1,605
5	22.5	1,902	146	0.008	16	1,644
4	17.5	1,948	105	0.006	12	1,684
3	12.5	1,994	67	0.004	8	1,724
2	7.5	2,040	34	0.002	4	1,763
1	2.5	2,086	7	0.000	1	1,803
RFS Celwave PD220	148.5	25	27	0.001	3	22
RFS Celwave PD220	148.5	25	27	0.001	3	22
Flat T-Arm	146	1,000	1,042	0.056	116	865
Flat T-Arm	141	750	744	0.040	83	648
Powerwave Allgon LGP21401	144	85	86	0.005	10	73
Raycap DC6-48-60-18-8F(32.8 lbs)	144	33	34	0.002	4	28
Ericsson Radio 8843 - B2 + B66A	144	216	220	0.012	25	186
Ericsson RRUS 4449 B5, B12	144	213	218	0.012	24	184
Ericsson RRUS 4478 B14	144	178	182	0.010	20	154
Raycap DC9-48-60-24-8C-EV	144	16	16	0.001	2	14
Powerwave Allgon 7770.00	144	105	107	0.006	12	91
CCI DMP65R-BU4D	144	136	139	0.007	15	117
CCI OPA65R-BU4DA-K	144	105	107	0.006	12	91
CCI DMP65R-BU6DA	144	79	81	0.004	9	69
CCI OPA65R-BU6D	144	63	65	0.003	7	55
Samsung B2/B66A RRH-BR049	134	253	234	0.012	26	219
Samsung B5/B13 RRH-BR04C	134	211	195	0.010	22	182
Raycap RVZDC-6627-PF-48	134	32	30	0.002	3	28
Samsung MT6407-77A	134	245	226	0.012	25	212
Antel LPA-80080/6CF ____	134	126	116	0.006	13	109
Round T-Arm	134	750	693	0.037	77	648
JMA Wireless MX06FRO660-03	134	360	333	0.018	37	311
Ericsson Radio 4449 B71 B85A	123	225	185	0.010	21	195
Ericsson Radio 4460 B25+B66	123	327	268	0.014	30	283
Ericsson AIR 6419 B41	123	250	205	0.011	23	216
Commscope VV-65B-R1	123	84	69	0.004	8	72
Generic Round Sector Frame	123	900	738	0.039	82	778
RFS APXVAALL24 43-U-NA20	123	368	302	0.016	34	319
		46,823	18,762	1.000	2,093	40,483

1.2D + 1.0Ev + 1.0Eh Normal Seismic

CALCULATED FORCES

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 (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-55.27	-2.09	0.00	-218.54	0.00	218.54	7,541.17	2,021.41	13,251	11,272.69	0.00	0.00	0.03
5.00	-52.75	-2.09	0.00	-208.08	0.00	208.08	7,435.91	1,974.07	12,638	10,853.20	0.00	0.00	0.03
10.00	-50.29	-2.09	0.00	-197.61	0.00	197.61	7,327.23	1,926.72	12,039	10,436.27	0.01	-0.01	0.03
15.00	-47.88	-2.08	0.00	-187.16	0.00	187.16	7,215.13	1,879.37	11,454	10,022.24	0.02	-0.01	0.03
20.00	-45.53	-2.07	0.00	-176.76	0.00	176.76	7,099.60	1,832.02	10,885	9,611.47	0.03	-0.02	0.03
25.00	-43.24	-2.05	0.00	-166.42	0.00	166.42	6,980.64	1,784.67	10,329	9,204.34	0.05	-0.02	0.02
30.00	-41.00	-2.03	0.00	-156.18	0.00	156.18	6,858.27	1,737.32	9,789	8,801.20	0.08	-0.02	0.02
35.00	-38.82	-2.00	0.00	-146.05	0.00	146.05	6,732.46	1,689.97	9,262	8,402.42	0.11	-0.03	0.02
40.00	-37.33	-1.97	0.00	-136.07	0.00	136.07	6,603.24	1,642.62	8,751	8,008.36	0.14	-0.03	0.02
43.50	-36.19	-1.95	0.00	-129.17	0.00	129.17	6,510.74	1,609.48	8,401	7,735.51	0.17	-0.04	0.02
45.00	-32.45	-1.88	0.00	-126.24	0.00	126.24	6,470.58	1,595.27	8,254	7,619.37	0.18	-0.04	0.02
50.00	-31.71	-1.86	0.00	-116.84	0.00	116.84	6,334.51	1,547.93	7,771	7,235.83	0.22	-0.04	0.02
51.00	-30.27	-1.83	0.00	-114.97	0.00	114.97	5,351.19	1,369.00	6,946	6,185.72	0.23	-0.04	0.02
55.00	-28.51	-1.79	0.00	-107.65	0.00	107.65	5,265.80	1,335.85	6,614	5,938.50	0.27	-0.05	0.02

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
60.00	-26.80	-1.74	0.00	-98.71	0.00	98.71	5,155.98	1,294.42	6,210	5,632.89	0.32	-0.05	0.02
65.00	-25.14	-1.69	0.00	-90.01	0.00	90.01	5,042.74	1,252.99	5,819	5,331.40	0.38	-0.06	0.02
70.00	-23.53	-1.63	0.00	-81.58	0.00	81.58	4,926.07	1,211.56	5,441	5,034.40	0.44	-0.06	0.02
75.00	-21.97	-1.57	0.00	-73.43	0.00	73.43	4,805.98	1,170.13	5,075	4,742.24	0.51	-0.07	0.02
80.00	-20.46	-1.51	0.00	-65.58	0.00	65.58	4,682.46	1,128.70	4,722	4,455.30	0.59	-0.07	0.02
85.00	-19.28	-1.45	0.00	-58.06	0.00	58.06	4,555.52	1,087.27	4,382	4,173.92	0.66	-0.08	0.02
89.00	-18.83	-1.43	0.00	-52.25	0.00	52.25	4,451.50	1,054.13	4,119	3,953.08	0.73	-0.08	0.02
90.00	-16.84	-1.33	0.00	-50.82	0.00	50.82	4,425.16	1,045.84	4,054	3,898.48	0.75	-0.08	0.02
94.50	-16.74	-1.32	0.00	-44.84	0.00	44.84	2,429.52	659.73	2,509	2,107.23	0.83	-0.09	0.03
95.00	-15.78	-1.27	0.00	-44.18	0.00	44.18	2,423.93	657.07	2,489	2,093.84	0.84	-0.09	0.03
100.00	-14.86	-1.22	0.00	-37.81	0.00	37.81	2,366.19	630.43	2,291	1,960.54	0.94	-0.10	0.03
105.00	-13.97	-1.17	0.00	-31.71	0.00	31.71	2,305.01	603.79	2,101	1,828.59	1.04	-0.10	0.02
110.00	-13.11	-1.11	0.00	-25.88	0.00	25.88	2,240.42	577.15	1,920	1,698.37	1.15	-0.11	0.02
115.00	-12.28	-1.05	0.00	-20.33	0.00	20.33	2,172.39	550.52	1,747	1,570.22	1.27	-0.11	0.02
120.00	-11.80	-1.02	0.00	-15.07	0.00	15.07	2,100.95	523.88	1,582	1,444.51	1.39	-0.12	0.02
123.00	-8.85	-0.79	0.00	-12.02	0.00	12.02	2,056.44	507.89	1,487	1,370.41	1.47	-0.12	0.01
125.00	-8.15	-0.74	0.00	-10.44	0.00	10.44	2,026.08	497.24	1,425	1,321.61	1.52	-0.12	0.01
130.00	-7.31	-0.67	0.00	-6.76	0.00	6.76	1,947.78	470.60	1,277	1,201.87	1.65	-0.13	0.01
134.00	-4.78	-0.45	0.00	-4.10	0.00	4.10	1,102.25	304.37	801	661.88	1.76	-0.13	0.01
135.00	-4.35	-0.41	0.00	-3.65	0.00	3.65	1,095.19	300.82	783	649.92	1.78	-0.13	0.01
140.00	-4.27	-0.40	0.00	-1.59	0.00	1.59	1,057.85	283.06	693	590.46	1.92	-0.13	0.01
141.00	-3.10	-0.30	0.00	-1.19	0.00	1.19	1,049.97	279.51	676	578.66	1.95	-0.13	0.01
144.00	-1.51	-0.15	0.00	-0.30	0.00	0.30	1,025.50	268.86	625	543.49	2.03	-0.13	0.00
145.00	-1.45	-0.14	0.00	-0.16	0.00	0.16	1,017.07	265.31	609	531.85	2.06	-0.13	0.00
146.00	-0.06	-0.01	0.00	-0.02	0.00	0.02	1,008.51	261.75	593	520.26	2.09	-0.13	0.00
148.50	0.00	-0.01	0.00	0.00	0.00	0.00	986.50	252.88	553	491.52	2.16	-0.13	0.00

0.9D - 1.0Ev + 1.0Eh Normal

Seismic (Reduced DL)

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-38.68	-2.09	0.00	-217.66	0.00	217.66	7,541.17	2,021.41	13,251	11,272.69	0.00	0.00	0.02
5.00	-36.92	-2.09	0.00	-207.19	0.00	207.19	7,435.91	1,974.07	12,638	10,853.20	0.00	0.00	0.02
10.00	-35.19	-2.09	0.00	-196.73	0.00	196.73	7,327.23	1,926.72	12,039	10,436.27	0.01	-0.01	0.02
15.00	-33.51	-2.08	0.00	-186.30	0.00	186.30	7,215.13	1,879.37	11,454	10,022.24	0.02	-0.01	0.02
20.00	-31.86	-2.06	0.00	-175.91	0.00	175.91	7,099.60	1,832.02	10,885	9,611.47	0.03	-0.02	0.02
25.00	-30.26	-2.04	0.00	-165.60	0.00	165.60	6,980.64	1,784.67	10,329	9,204.34	0.05	-0.02	0.02
30.00	-28.69	-2.02	0.00	-155.38	0.00	155.38	6,858.27	1,737.32	9,789	8,801.20	0.08	-0.02	0.02
35.00	-27.17	-1.99	0.00	-145.29	0.00	145.29	6,732.46	1,689.97	9,262	8,402.42	0.11	-0.03	0.02
40.00	-26.12	-1.97	0.00	-135.34	0.00	135.34	6,603.24	1,642.62	8,751	8,008.36	0.14	-0.03	0.02
43.50	-25.32	-1.95	0.00	-128.46	0.00	128.46	6,510.74	1,609.48	8,401	7,735.51	0.16	-0.04	0.02
45.00	-22.71	-1.87	0.00	-125.54	0.00	125.54	6,470.58	1,595.27	8,254	7,619.37	0.18	-0.04	0.02
50.00	-22.19	-1.86	0.00	-116.18	0.00	116.18	6,334.51	1,547.93	7,771	7,235.83	0.22	-0.04	0.02
51.00	-21.18	-1.82	0.00	-114.32	0.00	114.32	5,351.19	1,369.00	6,946	6,185.72	0.23	-0.04	0.02
55.00	-19.95	-1.78	0.00	-107.02	0.00	107.02	5,265.80	1,335.85	6,614	5,938.50	0.27	-0.05	0.02
60.00	-18.75	-1.73	0.00	-98.12	0.00	98.12	5,155.98	1,294.42	6,210	5,632.89	0.32	-0.05	0.02
65.00	-17.59	-1.68	0.00	-89.46	0.00	89.46	5,042.74	1,252.99	5,819	5,331.40	0.38	-0.06	0.02
70.00	-16.47	-1.62	0.00	-81.07	0.00	81.07	4,926.07	1,211.56	5,441	5,034.40	0.44	-0.06	0.02
75.00	-15.37	-1.56	0.00	-72.96	0.00	72.96	4,805.98	1,170.13	5,075	4,742.24	0.51	-0.07	0.02
80.00	-14.32	-1.50	0.00	-65.16	0.00	65.16	4,682.46	1,128.70	4,722	4,455.30	0.58	-0.07	0.02
85.00	-13.50	-1.44	0.00	-57.67	0.00	57.67	4,555.52	1,087.27	4,382	4,173.92	0.66	-0.08	0.02
89.00	-13.18	-1.42	0.00	-51.90	0.00	51.90	4,451.50	1,054.13	4,119	3,953.08	0.73	-0.08	0.02
90.00	-11.78	-1.32	0.00	-50.48	0.00	50.48	4,425.16	1,045.84	4,054	3,898.48	0.75	-0.08	0.02
94.50	-11.71	-1.32	0.00	-44.53	0.00	44.53	2,429.52	659.73	2,509	2,107.23	0.83	-0.09	0.03
95.00	-11.04	-1.27	0.00	-43.87	0.00	43.87	2,423.93	657.07	2,489	2,093.84	0.84	-0.09	0.03
100.00	-10.40	-1.21	0.00	-37.54	0.00	37.54	2,366.19	630.43	2,291	1,960.54	0.93	-0.09	0.02
105.00	-9.78	-1.16	0.00	-31.48	0.00	31.48	2,305.01	603.79	2,101	1,828.59	1.03	-0.10	0.02
110.00	-9.17	-1.10	0.00	-25.69	0.00	25.69	2,240.42	577.15	1,920	1,698.37	1.14	-0.11	0.02
115.00	-8.60	-1.04	0.00	-20.18	0.00	20.18	2,172.39	550.52	1,747	1,570.22	1.26	-0.11	0.02
120.00	-8.26	-1.01	0.00	-14.96	0.00	14.96	2,100.95	523.88	1,582	1,444.51	1.38	-0.12	0.01
123.00	-6.19	-0.79	0.00	-11.93	0.00	11.93	2,056.44	507.89	1,487	1,370.41	1.46	-0.12	0.01
125.00	-5.70	-0.73	0.00	-10.36	0.00	10.36	2,026.08	497.24	1,425	1,321.61	1.51	-0.12	0.01
130.00	-5.11	-0.66	0.00	-6.71	0.00	6.71	1,947.78	470.60	1,277	1,201.87	1.64	-0.13	0.01
134.00	-3.34	-0.45	0.00	-4.07	0.00	4.07	1,102.25	304.37	801	661.88	1.75	-0.13	0.01
135.00	-3.04	-0.41	0.00	-3.62	0.00	3.62	1,095.19	300.82	783	649.92	1.77	-0.13	0.01
140.00	-2.99	-0.40	0.00	-1.58	0.00	1.58	1,057.85	283.06	693	590.46	1.91	-0.13	0.01
141.00	-2.17	-0.29	0.00	-1.18	0.00	1.18	1,049.97	279.51	676	578.66	1.94	-0.13	0.00

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
144.00	-1.06	-0.15	0.00	-0.30	0.00	0.30	1,025.50	268.86	625	543.49	2.02	-0.13	0.00
145.00	-1.02	-0.14	0.00	-0.15	0.00	0.15	1,017.07	265.31	609	531.85	2.05	-0.13	0.00
146.00	-0.04	-0.01	0.00	-0.02	0.00	0.02	1,008.51	261.75	593	520.26	2.07	-0.13	0.00
148.50	0.00	-0.01	0.00	0.00	0.00	0.00	986.50	252.88	553	491.52	2.14	-0.13	0.00

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949_C3_03

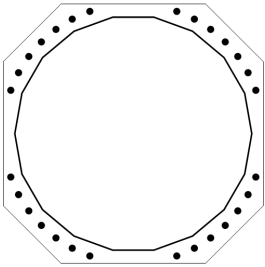
ANALYSIS SUMMARY

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W Normal	22.76	0.00	56.18	0.00	0.00	2296.39	94.50	0.26
0.9D + 1.0W Normal	22.75	0.00	42.13	0.00	0.00	2288.10	94.50	0.26
1.2D + 1.0Di + 1.0Wi Normal	4.32	0.00	71.85	0.00	0.00	419.40	94.50	0.05
1.2D + 1.0Ev + 1.0Eh Normal	2.09	0.00	55.27	0.00	0.00	218.54	94.50	0.03
0.9D - 1.0Ev + 1.0Eh Normal	2.09	0.00	38.68	0.00	0.00	217.66	94.50	0.03
1.0D + 1.0W Service Normal	5.74	0.00	46.82	0.00	0.00	577.81	94.50	0.07

BASE PLATE ANALYSIS @ 0 FT

PLATE PARAMETERS (ID# 3581)

Width:	81	in
Shape:	Square	
Thickness:	3.25	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Clip Length:	18	in
Rod Detail Type:	d	
Clear Distance	3	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	216	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	Fy (ksi)	Fu (ksi)	Spacing (in)	Offset (°)
Original [ID# 6581]	Cluster	28	2.25	81	A615-75	75	100	6	-

ASSET: 370630, SALISBURY CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
ENG NO: 14138949

ANCHOR ROD GEOMETRY AND APPLIED LOADS --- ORIGINAL (28) 2.25"Ø [ID 6581]

Position	Radians	X (in)	Y (in)	Moment Arm (in)	Inertia (in ⁴)	Axial Load (k)	Shear Load (k)
1	0.341	38.17	13.54	11.107	401.474	45.35	1.28
2	0.489	35.75	19.03	5.438	96.877	45.35	1.32
3	0.637	32.55	24.10	-0.350	1.237	-37.32	1.34
4	0.785	28.64	28.64	-6.130	122.888	-37.32	1.32
5	0.934	24.10	32.55	-11.776	451.228	-37.32	1.28
6	1.082	19.03	35.75	-17.164	957.643	-37.32	1.20
7	1.230	13.54	38.17	-22.176	1598.002	-37.32	1.10
8	1.912	-13.54	38.17	-37.581	4587.551	-37.32	0.38
9	2.060	-19.03	35.75	-38.808	4892.148	-37.32	0.19
10	2.208	-24.10	32.55	-39.186	4987.789	-37.32	0.01
11	2.356	-28.64	28.64	-38.705	4866.138	-37.32	0.21
12	2.504	-32.55	24.10	-37.376	4537.796	-37.32	0.40
13	2.652	-35.75	19.03	-35.229	4031.381	-37.32	0.59
14	2.801	-38.17	13.54	-32.309	3391.026	-37.32	0.76
15	3.483	-38.17	-13.54	-11.107	401.476	-37.32	1.28
16	3.631	-35.75	-19.03	-5.438	96.877	-37.32	1.32
17	3.779	-32.55	-24.10	0.350	1.237	45.35	1.34
18	3.927	-28.64	-28.64	6.130	122.889	45.35	1.32
19	4.075	-24.10	-32.55	11.776	451.229	45.35	1.28
20	4.223	-19.03	-35.75	17.164	957.644	45.35	1.20
21	4.371	-13.54	-38.17	22.176	1597.999	45.35	1.10
22	5.053	13.54	-38.17	37.581	4587.552	45.35	0.38
23	5.201	19.03	-35.75	38.808	4892.149	45.35	0.19
24	5.350	24.10	-32.55	39.186	4987.789	45.35	0.01
25	5.498	28.64	-28.64	38.705	4866.138	45.35	0.21
26	5.646	32.55	-24.10	37.376	4537.798	45.35	0.40
27	5.794	35.75	-19.03	35.229	4031.383	45.35	0.59
28	5.942	38.17	-13.54	32.309	3391.024	45.35	0.76

REACTION DISTRIBUTION

Component	ID	Moment Mu (k-ft)	Axial Load Pu (k)	Shear Vu (k)	Moment Factor
Pole	73.08"Ø x 0.5" (18 Sides)	2296.4	56.18	22.76	1.000
Bolt Group	Original (28) 2.25"Ø	2296.4	-	22.76	1.000
TOTALS		2296.39	56.18	22.76	

COMPONENT PROPERTIES

Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	73.08"Ø x 0.5" (18 Sides)	113.4305	-	-	74701.41	-
Bolt Group	Original (28) 2.25"Ø	3.9761	3.2477	0.8393	69846.36	4.5

EXTERNAL BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES			PLATE PROPERTIES			
Flat-to-Flat Diameter:	73.20	in	Neutral Axis:	216	°	
Point-to-Point Diameter:	74.33	in	Bend Line Lower Limit:		rad	
Flat Width:	12.908	in	Bend Line Upper Limit:	-0.109	rad	
Flat Radians:	0.349	rad				

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in ³)	Applied Moment Mu (k-in)	Moment Capacity ϕMn (k-in)	Ratio
Flat	41.346	0.00	109.180	445.2	4913.1	0.091
Corner	40.217	0.00	106.198	300.8	4778.9	0.063

PLASTIC ANCHOR ROD ANALYSIS						
Class	Group Quantity	Rod Diameter (in)	Applied Axial Load Pu (k)	Applied Shear Load Vu (k)	Compressive Capacity ϕPn (k)	Ratio
Original	28	2.25	45.3	1.3	243.6	0.197



AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by



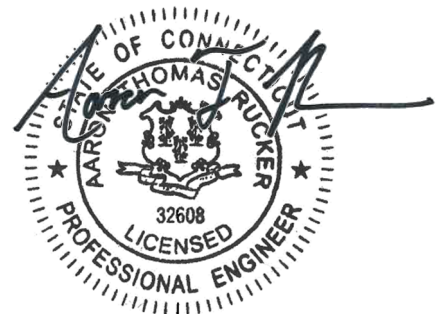
**TOWER
ENGINEERING
PROFESSIONALS**

Antenna Mount Analysis Report

ATC Site Name : Salisbury CT, CT
ATC Site Number : 370630
Engineering Number : 14138949_C8_01
Mount Elevation : 123 ft
Carrier : T-Mobile
Carrier Site Name : CTNH547A
Carrier Site Number : CTNH547A
Site Location : 52 Library St.
Salisbury, CT 06068-0000
41.980900, -73.418400
County : Litchfield
Date : August 11, 2022
Max Usage : 82%
Result : Pass

Prepared By:
Nicholas P. Danyluk
TEP # 155528.732367

Reviewed By:



08/11/2022



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion	1
Antenna Loading.....	2
Structure Usages.....	2
Mount Layout	3
Equipment Layout	4
Standard Conditions.....	5
Calculations	Attached



Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for T-Mobile at 123 ft.

Supporting Documents

Mount Analysis	SMJ International Project #13657492_C8_02, dated April 22, 2021
RFDS	RFDS dated May 26, 2022
Photos	Site photos from 2021

Analysis

This antenna mount was analyzed using RISA-3D v17 analysis software

Basic Wind Speed:	113 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1.0" radial Ice
Codes:	ANSI/TIA-222-H
Risk Category:	II
Exposure Category:	C
Topographic Factor Procedure:	Method 2
Kzt:	1.000
Spectral Response:	$S_s = 0.166$, $S_1 = 0.054$
Site Class:	D - Default
Live Loads:	$L_m = 500$ lbs, $L_v = 250$ lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report. If the load differs from that described in this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Antenna Loading

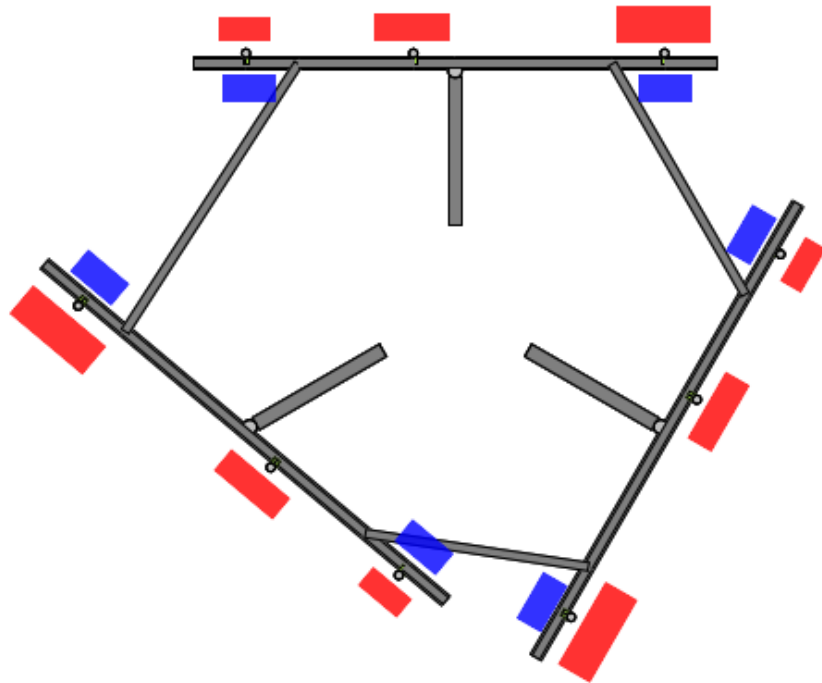
Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
122.0	123.0	3	Ericsson AIR 6419 B41
		3	RFS APXVAALL24 43-U-NA20
		3	Commscope VV-65B-R1
		3	Ericsson Radio 4460 B25+B66
		3	Ericsson Radio 4449 B71 B85A

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Horizontals	74%	Pass
Mount Pipes	77%	Pass
Handrails	37%	Pass
Connection Hardware	82%	Pass

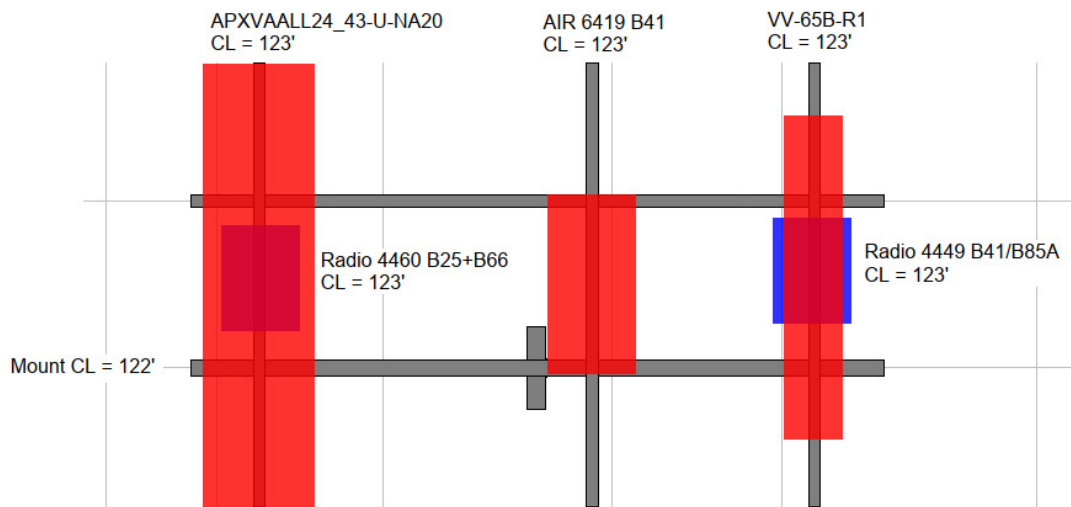


Mount Layout





Equipment Layout





Standard Conditions

All engineering services performed by TEP are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of TEP

It is the responsibility of the client to ensure that the information provided to TEP and used in the performance of our engineering services is correct and complete.

TEP assumes that all structures were constructed in accordance with the drawings and specifications.

TEP assumes that the mount has been maintained in accordance with the manufacturer's specification.

TEP assumes that all mount components are in sufficient condition to carry their full design capacity for this analysis.

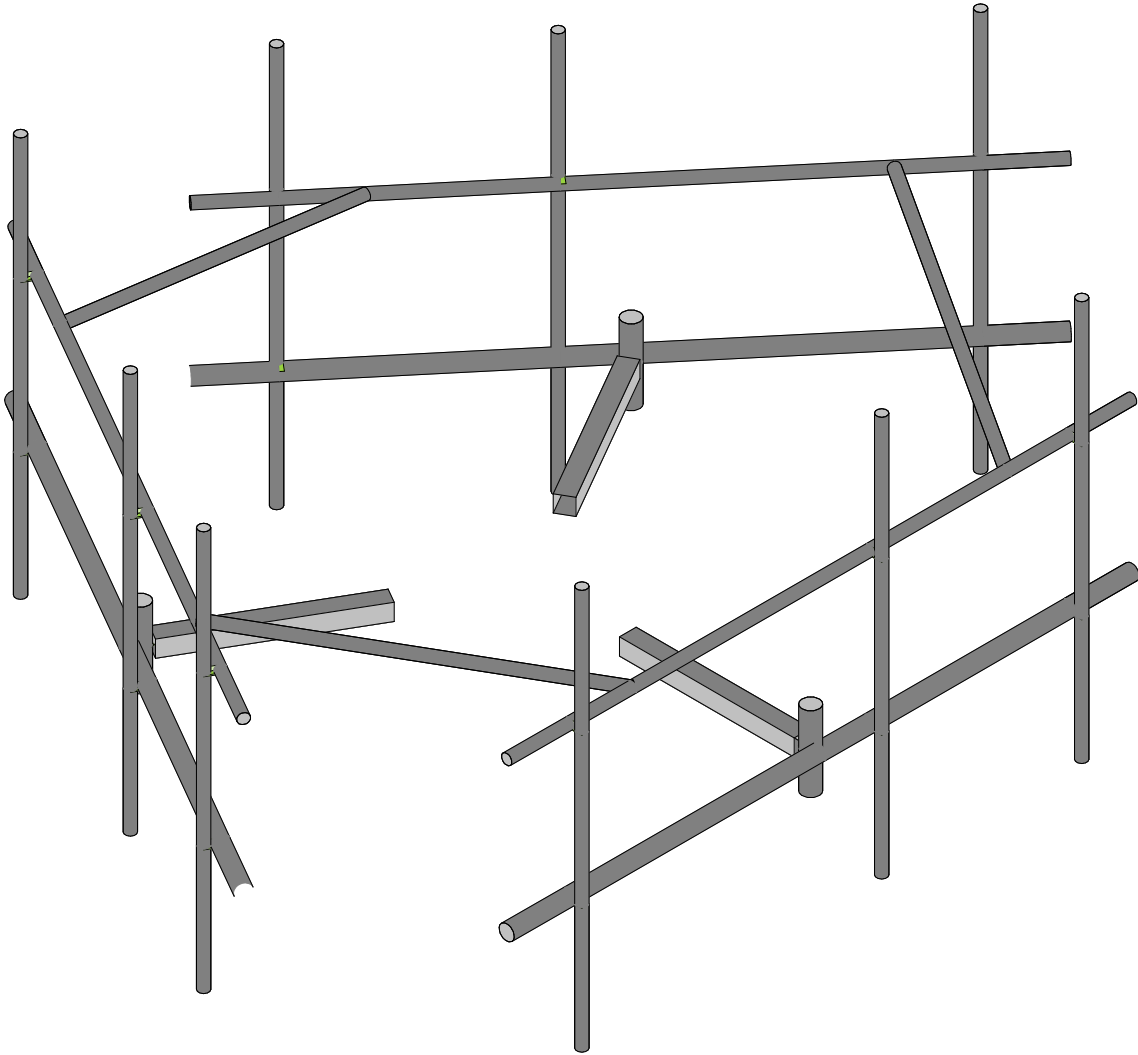
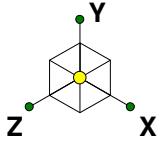
Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance.

All material grades used for this analysis, unless verified by mount manufacturer design, were assumed per AISC Table 2-4, 15th Edition. See RISA 3-D output for confirmation on grades used in this analysis.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

Unless explicitly agreed by both the client and TEP, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. TEP is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Envelope Only Solution

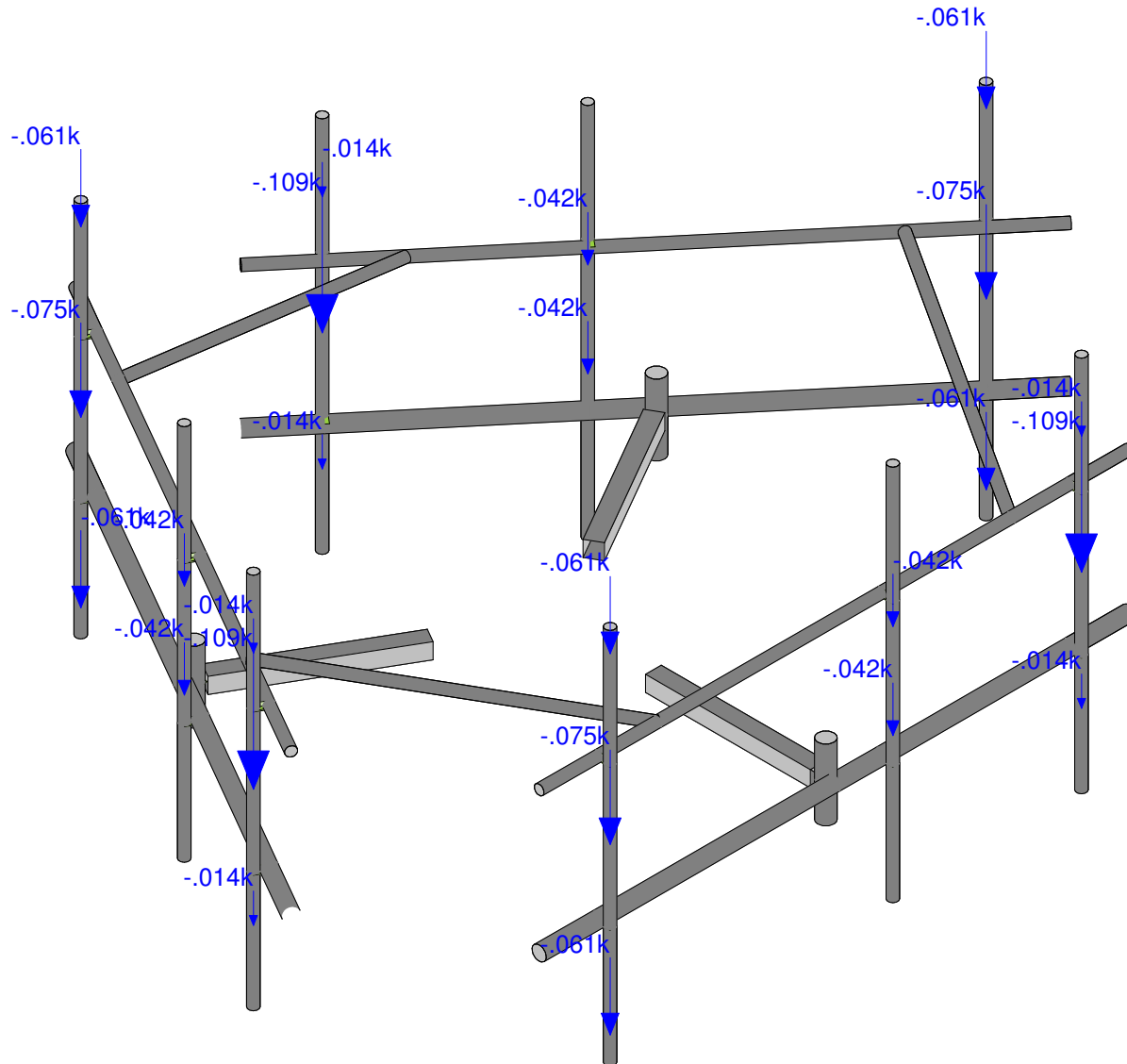
Tower Engineering Profes...
NPD
TEP No. 155528.732367

370630 - Salisbury CT

SK - 1

Aug 11, 2022 at 8:36 AM

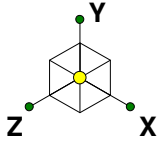
Mount Rev H.r3d



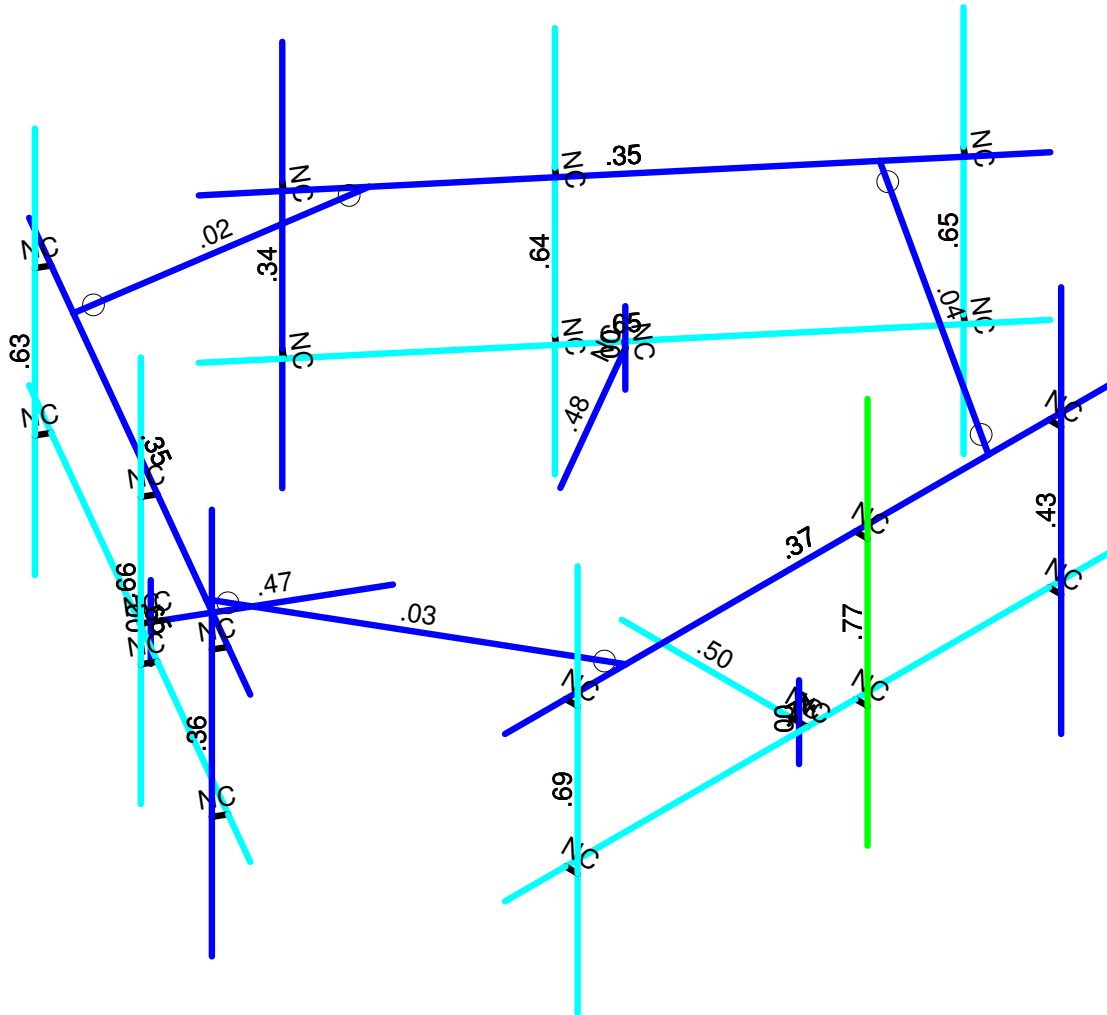
Tower Engineering Profes...
NPD
TEP No. 155528.732367

370630 - Salisbury CT

Aug 11, 2022 at 8:36 AM
Mount Rev H.r3d

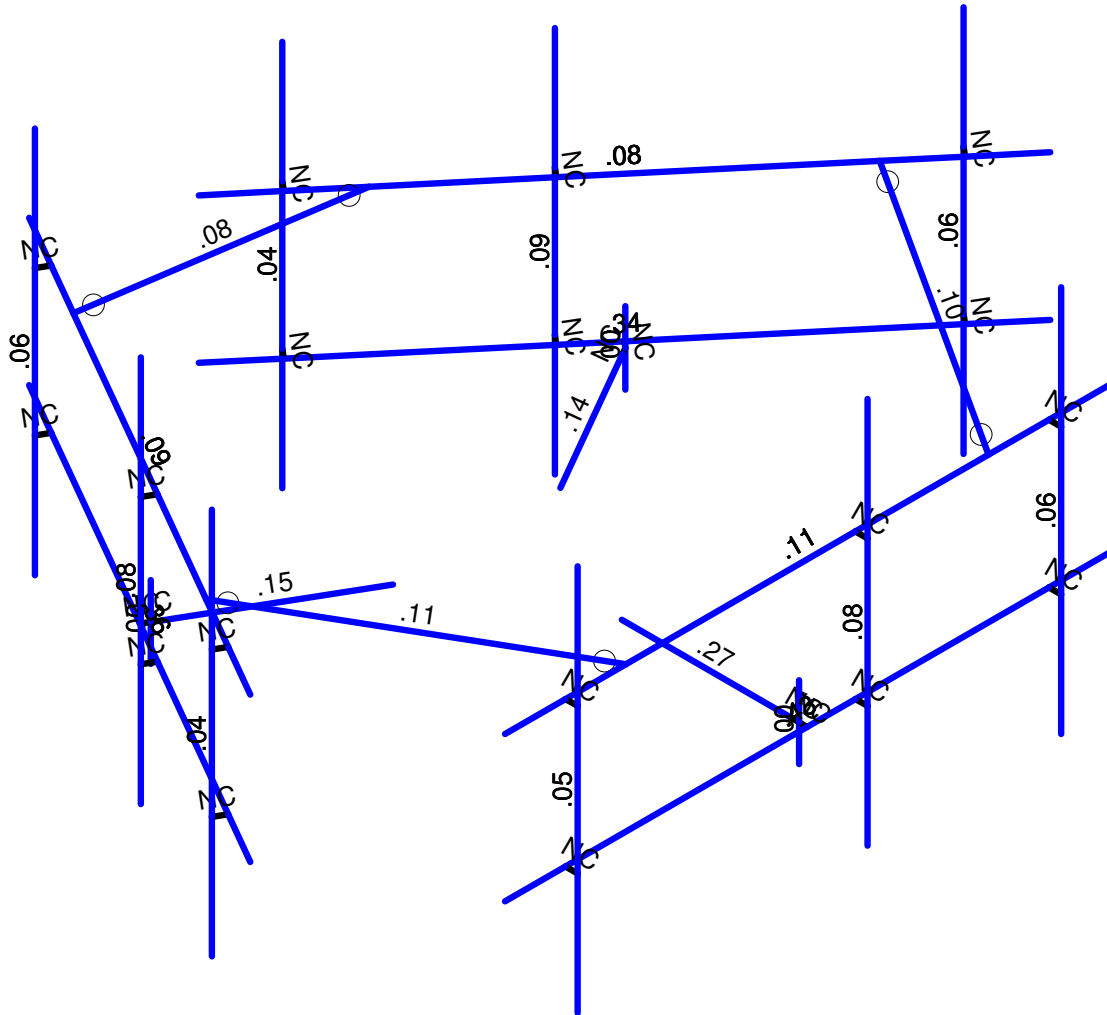
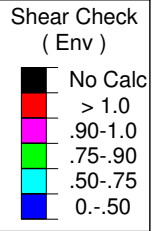
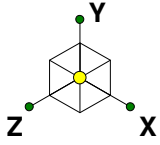


Code Check (Env)	
	No Calc
	> 1.0
	.90-1.0
	.75-.90
	.50-.75
	0-.50



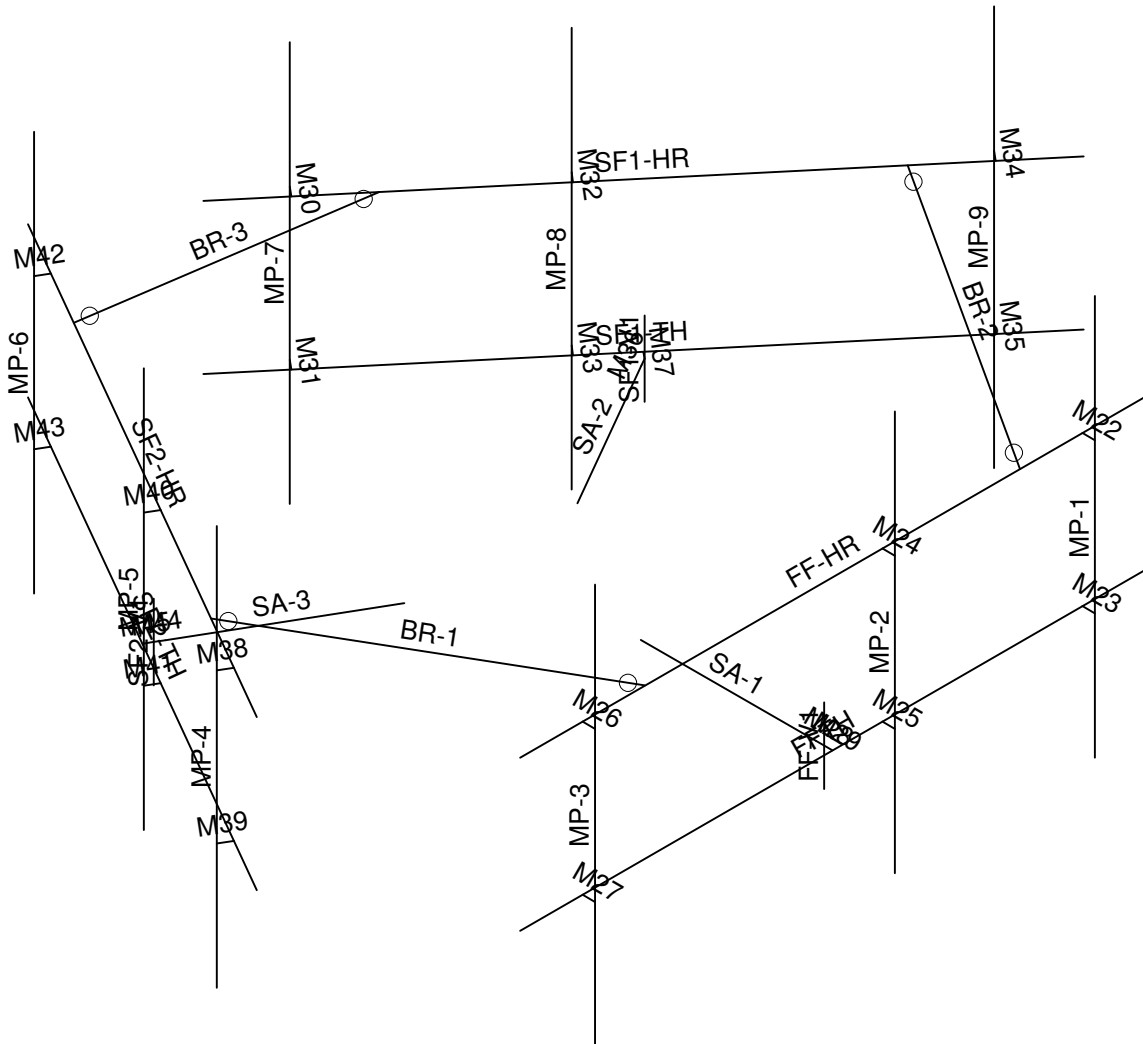
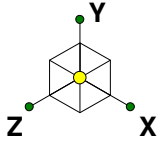
Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Tower Engineering Profes...	370630 - Salisbury CT	SK - 3
NPD		Aug 11, 2022 at 8:54 AM
TEP No. 155528.732367		Mount Rev H.r3d



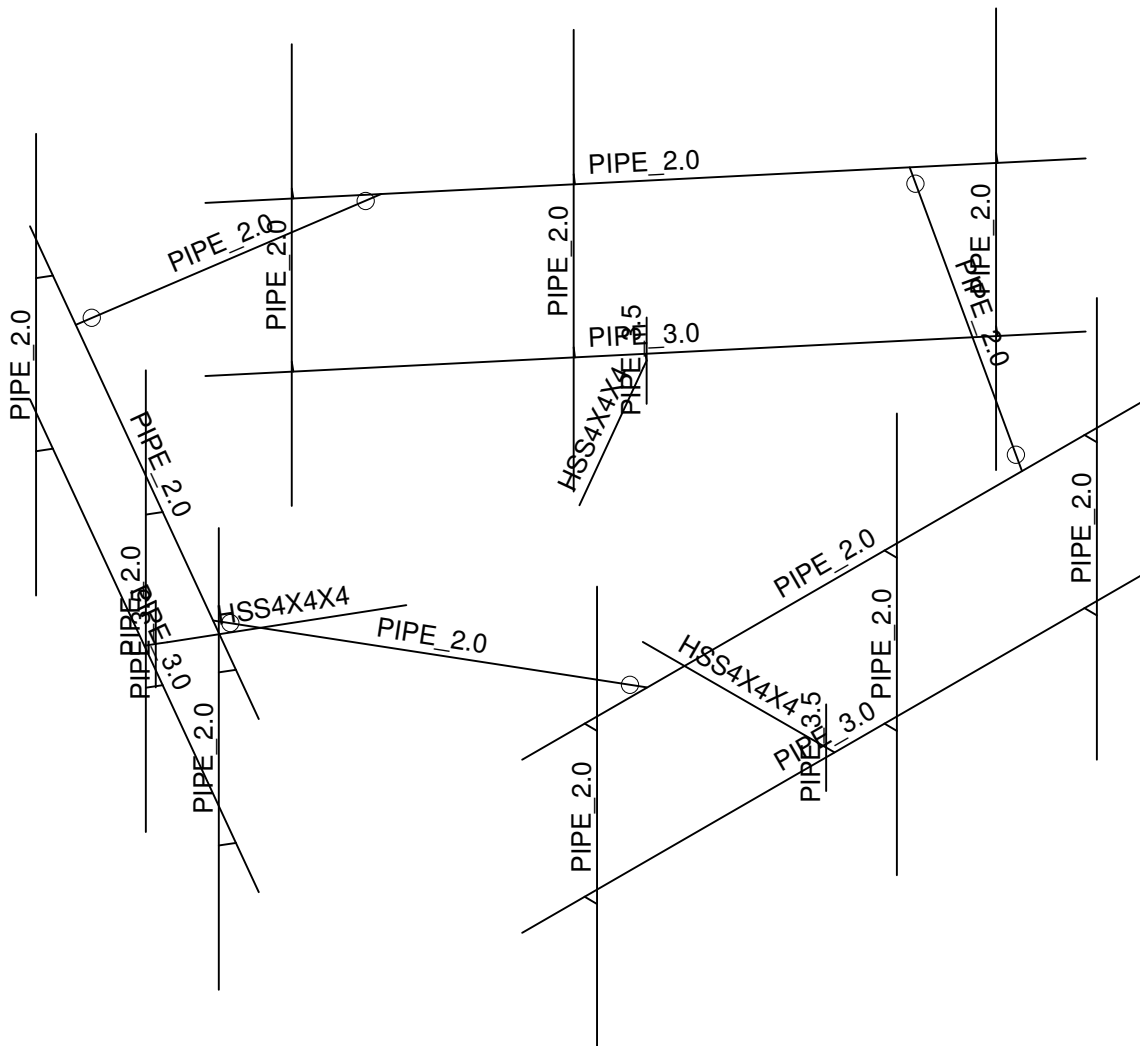
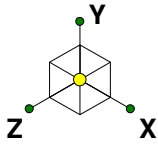
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NPD		Aug 11, 2022 at 8:54 AM
TEP No. 155528.732367		Mount Rev H.r3d



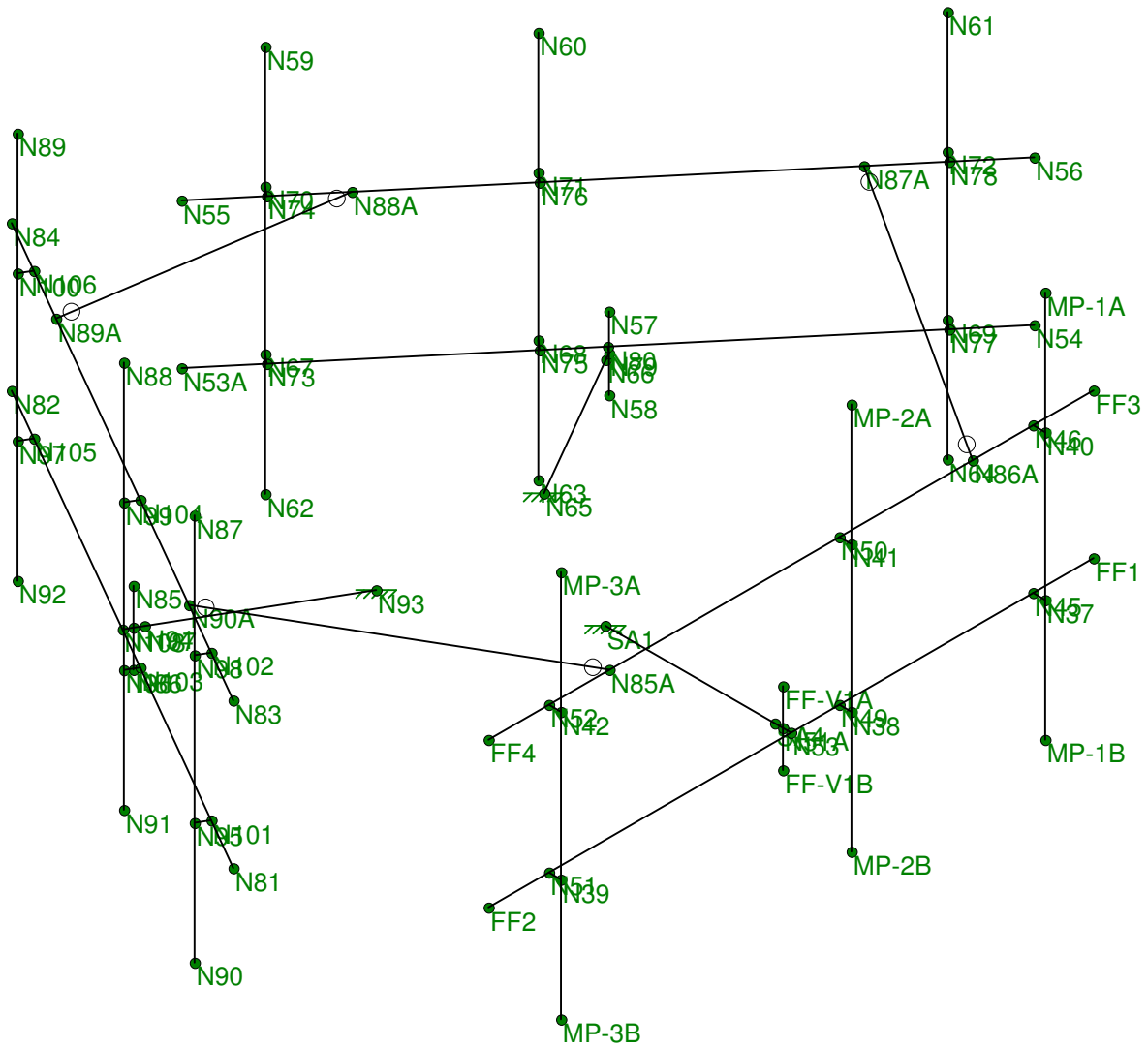
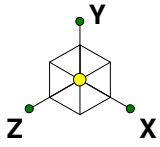
Envelope Only Solution

Tower Engineering Profes...	370630 - Salisbury CT	SK - 5
NPD		Aug 11, 2022 at 8:36 AM
TEP No. 155528.732367		Mount Rev H.r3d



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Tower Engineering Profes...	370630 - Salisbury CT	SK - 6
NPD		Aug 11, 2022 at 8:37 AM
TEP No. 155528.732367		Mount Rev H.r3d



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NPD		Aug 11, 2022 at 8:37 AM
TEP No. 155528.732367		Mount Rev H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area (Me...	Surface (Me...
1	Dead	None		-1			24		
2	0 Wind - No Ice	None					24	24	
3	30 Wind - No Ice	None					48	48	
4	45 Wind - No Ice	None					48	48	
5	60 Wind - No Ice	None					48	48	
6	90 Wind - No Ice	None					24	24	
7	120 Wind - No Ice	None					48	48	
8	135 Wind - No Ice	None					48	48	
9	150 Wind - No Ice	None					48	48	
10	180 Wind - No Ice	None					24	24	
11	210 Wind - No Ice	None					48	48	
12	225 Wind - No Ice	None					48	48	
13	240 Wind - No Ice	None					48	48	
14	270 Wind - No Ice	None					24	24	
15	300 Wind - No Ice	None					48	48	
16	315 Wind - No Ice	None					48	48	
17	330 Wind - No Ice	None					48	48	
18	Ice Weight	None					24	24	
19	0 Wind - Ice	None					24	24	
20	30 Wind - Ice	None					48	48	
21	45 Wind - Ice	None					48	48	
22	60 Wind - Ice	None					48	48	
23	90 Wind - Ice	None					24	24	
24	120 Wind - Ice	None					48	48	
25	135 Wind - Ice	None					48	48	
26	150 Wind - Ice	None					48	48	
27	180 Wind - Ice	None					24	24	
28	210 Wind - Ice	None					48	48	
29	225 Wind - Ice	None					48	48	
30	240 Wind - Ice	None					48	48	
31	270 Wind - Ice	None					24	24	
32	300 Wind - Ice	None					48	48	
33	315 Wind - Ice	None					48	48	
34	330 Wind - Ice	None					48	48	
35	Lm	None				1			
36	Lv	None				1			
37	Seismic Load X	ELX	-1				24		
38	Seismic Load Z	ELZ			-1		24		

Load Combinations

[illegible]

Load Combinations (Continued)

[illegible]



Company : Tower Engineering Professionals, Inc.
Designer : NPD
Job Number : TEP No. 155528.732367
Model Name : 370630 - Salisbury CT

Aug 11, 2022
8:55 AM
Checked By: SDJ

Load Combinations (Continued)

	Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...
71	(1.2+0.2Sds)D+1.0 9...	Yes	Y	1	1.2...	0	ELZ	.088											
72	(1.2+0.2Sds)D+1.0 1...	Yes	Y	1	1.2...	E...	-0...	ELZ	.077										
73	(1.2+0.2Sds)D+1.0 1...	Yes	Y	1	1.2...	E...	-0...	ELZ	.063										
74	(1.2+0.2Sds)D+1.0 1...	Yes	Y	1	1.2...	E...	-0...	ELZ	.044										
75	(1.2+0.2Sds)D+1.0 1...	Yes	Y	1	1.2...	E...	-0...	0											
76	(1.2+0.2Sds)D+1.0 2...	Yes	Y	1	1.2...	E...	-0...	ELZ	-.0...										
77	(1.2+0.2Sds)D+1.0 2...	Yes	Y	1	1.2...	E...	-0...	ELZ	-.0...										
78	(1.2+0.2Sds)D+1.0 2...	Yes	Y	1	1.2...	E...	-0...	ELZ	-.0...										
79	(1.2+0.2Sds)D+1.0 2...	Yes	Y	1	1.2...	0	ELZ	-.0...											
80	(1.2+0.2Sds)D+1.0 3...	Yes	Y	1	1.2...	E...	-.044	ELZ	-.0...										
81	(1.2+0.2Sds)D+1.0 3...	Yes	Y	1	1.2...	E...	-.063	ELZ	-.0...										
82	(1.2+0.2Sds)D+1.0 3...	Yes	Y	1	1.2...	E...	-.077	ELZ	-.0...										
83	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-.088	0											
84	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-.077	ELZ	.044										
85	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-.063	ELZ	.063										
86	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-.044	ELZ	.077										
87	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	0	ELZ	.088											
88	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-0...	ELZ	.077										
89	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-0...	ELZ	.063										
90	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-0...	ELZ	.044										
91	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-0...	0											
92	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-0...	ELZ	-.0...										
93	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-0...	ELZ	-.0...										
94	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-0...	ELZ	-.0...										
95	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	0	ELZ	-.0...											
96	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-.044	ELZ	-.0...										
97	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-.063	ELZ	-.0...										
98	(0.9-0.2Sds)*DL+1.0...	Yes	Y	1	.865	E...	-.077	ELZ	-.0...										

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver



Company : Tower Engineering Professionals, Inc.
Designer : NPD
Job Number : TEP No. 155528.732367
Model Name : 370630 - Salisbury CT

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(Global) Model Settings, Continued

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	No
RISAConnection Code	AISC 14th(360-10): ASD
Cold Formed Steel Code	AISI S100-16: LRFD
Wood Code	AWC NDS-18: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-14
Masonry Code	TMS 402-16: ASD
Aluminum Code	AA ADM1-15: ASD - Building
Stainless Steel Code	AISC 14th(360-10): ASD
Adjust Stiffness?	Yes(Iterative)
Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parame Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	No
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR SET ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8
Seismic Code	ASCE 7-16
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	4
Cd X	4
Rho Z	1
Rho X	1

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design ...
1	BR-1	N90A	N85A			Brace	None	None	A53 Gr.B	Typical
2	BR-2	N86A	N87A			Brace	None	None	A53 Gr.B	Typical
3	BR-3	N88A	N89A			Brace	None	None	A53 Gr.B	Typical
4	FFTH	FF1	FF2			Face Horiz	None	None	A53 Gr.B	Typical



Company : Tower Engineering Professionals, Inc.
Designer : NPD
Job Number : TEP No. 155528.732367
Model Name : 370630 - Salisbury CT

Aug 11, 2022
8:55 AM
Checked By: SDJ

Member Primary Data (Continued)

Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design...
5	SF1-TH	N53A	N54		Face Horiz	None	None	A53 Gr.B	Typical
6	SF2-TH	N81	N82		Face Horiz	None	None	A53 Gr.B	Typical
7	FF-HR	FF3	FF4		Handrail	None	None	A53 Gr.B	Typical
8	SF1-HR	N55	N56		Handrail	None	None	A53 Gr.B	Typical
9	SF2-HR	N83	N84		Handrail	None	None	A53 Gr.B	Typical
10	MP-1	MP-1A	MP-1B		Mount Pipe	None	None	A53 Gr.B	Typical
11	MP-2	MP-2A	MP-2B		Mount Pipe	None	None	A53 Gr.B	Typical
12	MP-3	MP-3A	MP-3B		Mount Pipe	None	None	A53 Gr.B	Typical
13	MP-4	N87	N90		Mount Pipe	None	None	A53 Gr.B	Typical
14	MP-5	N88	N91		Mount Pipe	None	None	A53 Gr.B	Typical
15	MP-6	N89	N92		Mount Pipe	None	None	A53 Gr.B	Typical
16	MP-7	N59	N62		Mount Pipe	None	None	A53 Gr.B	Typical
17	MP-8	N60	N63		Mount Pipe	None	None	A53 Gr.B	Typical
18	MP-9	N61	N64		Mount Pipe	None	None	A53 Gr.B	Typical
19	M22	N40	N46		RIGID	None	None	RIGID	Typical
20	M23	N37	N45		RIGID	None	None	RIGID	Typical
21	M24	N41	N50		RIGID	None	None	RIGID	Typical
22	M25	N38	N49		RIGID	None	None	RIGID	Typical
23	M26	N42	N52		RIGID	None	None	RIGID	Typical
24	M27	N39	N51		RIGID	None	None	RIGID	Typical
25	M28	SA4	N51A		RIGID	None	None	RIGID	Typical
26	M29	N51A	N53		RIGID	None	None	RIGID	Typical
27	M30	N70	N74		RIGID	None	None	RIGID	Typical
28	M31	N67	N73		RIGID	None	None	RIGID	Typical
29	M32	N71	N76		RIGID	None	None	RIGID	Typical
30	M33	N68	N75		RIGID	None	None	RIGID	Typical
31	M34	N72	N78		RIGID	None	None	RIGID	Typical
32	M35	N69	N77		RIGID	None	None	RIGID	Typical
33	M36	N66	N79		RIGID	None	None	RIGID	Typical
34	M37	N79	N80		RIGID	None	None	RIGID	Typical
35	M38	N98	N102		RIGID	None	None	RIGID	Typical
36	M39	N95	N101		RIGID	None	None	RIGID	Typical
37	M40	N99	N104		RIGID	None	None	RIGID	Typical
38	M41	N96	N103		RIGID	None	None	RIGID	Typical
39	M42	N100	N106		RIGID	None	None	RIGID	Typical
40	M43	N97	N105		RIGID	None	None	RIGID	Typical
41	M44	N94	N107		RIGID	None	None	RIGID	Typical
42	M45	N107	N108		RIGID	None	None	RIGID	Typical
43	SA-1	SA1	SA4		Support Arm	None	None	A500 Gr.B Rect	Typical
44	SA-2	N65	N66		Support Arm	None	None	A500 Gr.B Rect	Typical
45	SA-3	N93	N94		Support Arm	None	None	A500 Gr.B Rect	Typical
46	FF-V1	FF-V1A	FF-V1B		Support pipe	None	None	A53 Gr.B	Typical
47	SF1-V1	N57	N58		Support pipe	None	None	A53 Gr.B	Typical
48	SF2-V1	N85	N86		Support pipe	None	None	A53 Gr.B	Typical

Hot Rolled Steel Design Parameters

Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp...	L-torq...	Kyy	Kzz	Cb	Funct...
1	BR-1	Brace	6.355								Lateral
2	BR-2	Brace	7.609								Lateral
3	BR-3	Brace	5.379								Lateral
4	FFTH	Face Horiz	12.5								Lateral
5	SF1-TH	Face Horiz	12.5								Lateral
6	SF2-TH	Face Horiz	12.5								Lateral
7	FF-HR	Handrail	12.5								Lateral
8	SF1-HR	Handrail	12.5								Lateral



Company : Tower Engineering Professionals, Inc.
Designer : NPD
Job Number : TEP No. 155528.732367
Model Name : 370630 - Salisbury CT

Aug 11, 2022
8:55 AM
Checked By: SDJ

Hot Rolled Steel Design Parameters (Continued)

Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp...	L-torq...	Kyy	Kzz	Cb	Funct...
9	SF2-HR	Handrail	12.5								Lateral
10	MP-1	Mount Pipe	8								Lateral
11	MP-2	Mount Pipe	8								Lateral
12	MP-3	Mount Pipe	8								Lateral
13	MP-4	Mount Pipe	8								Lateral
14	MP-5	Mount Pipe	8								Lateral
15	MP-6	Mount Pipe	8								Lateral
16	MP-7	Mount Pipe	8								Lateral
17	MP-8	Mount Pipe	8								Lateral
18	MP-9	Mount Pipe	8								Lateral
19	SA-1	Support Arm	3.5								Lateral
20	SA-2	Support Arm	3.5								Lateral
21	SA-3	Support Arm	3.5								Lateral
22	FF-V1	Support pipe	1.5								Lateral
23	SF1-V1	Support pipe	1.5								Lateral
24	SF2-V1	Support pipe	1.5								Lateral

Cold Formed Steel Design Parameters

Label	Shape	Length...	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp bo...	L-torque[ft]	Kyy	Kzz	Cb	R	a[ft]	Funct...
No Data to Print ...													

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	SA1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N65	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N93	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1...	Density[k/t*3]	Yield[ksi]	Rv	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
8	A913 Gr.65	29000	11154	.3	.65	.49	65	1.1	80	1.1
9	A500 Gr. C	29000	11154	.3	.65	.49	46	1.5	58	1.2
10	A529 Gr. 50	29000	11154	.3	.65	.49	50	1.1	58	1.1
11	A500 Gr.C Rnd	29000	11154	.3	.65	.527	46	1.4	62	1.3
12	A500 Gr. C Rect	29000	11154	.3	.65	.527	50	1.4	62	1.3

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[k/t*3]	Yield[ksi]	Fu[ksi]
1	A653 SS Gr33	29500	11346	.3	.65	.49	33	45
2	A653 SS Gr50/1	29500	11346	.3	.65	.49	50	65
3	A1011	29500	11346	.3	.65	.49	36	58
4	A1011/A1018	29500	11346	.3	.65	.49	36	53



Company : Tower Engineering Professionals, Inc.
Designer : NPD
Job Number : TEP No. 155528.732367
Model Name : 370630 - Salisbury CT

Aug 11, 2022
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Checked By: SDJ

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	SA1	max	1.661	18	1.778	35	.939	20	3.057	66	3.54	28	6.442	42
2		min	-1.396	10	.616	85	-.934	12	-1.66	28	-3.511	4	.009	2
3	N65	max	1.078	2	1.774	42	1.232	6	5.862	39	3.826	26	.363	10
4		min	-1.18	26	.615	95	-1.491	30	-.35	14	-3.791	2	-3.102	34
5	N93	max	1.177	17	1.768	39	1.306	22	-.375	6	3.547	18	.839	10
6		min	-1.342	25	.613	89	-1.05	14	-4.939	46	-3.49	10	-3.89	34
7	Totals:	max	3.789	18	5.319	34	3.268	22						
8		min	-3.789	10	1.844	92	-3.268	14						

Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear_Loc.....	LC	phi*Pn.....	phi*Pn.....	phi*M.....	phi*M.....	Eqn		
1	MP-2	PIPE 2.0	.773	5.5	18	.080	5.5	19	14.916	32.13	1.872	1.872	2.H1-1b	
2	FFTH	PIPE 3.0	.739	6.25	18	.433	6.25	18	28.251	65.205	5.749	5.749	1.H3-6	
3	MP-3	PIPE 2.0	.686	5.5	18	.051	5.5	18	14.916	32.13	1.872	1.872	1.H1-1b	
4	MP-5	PIPE 2.0	.656	5.5	25	.081	5.5	25	14.916	32.13	1.872	1.872	3.H1-1b	
5	SF1-TH	PIPE 3.0	.655	6.25	28	.340	6.25	28	28.251	65.205	5.749	5.749	1.H3-6	
6	SF2-TH	PIPE 3.0	.648	6.25	24	.355	6.25	24	28.251	65.205	5.749	5.749	1.H3-6	
7	MP-9	PIPE 2.0	.647	5.5	29	.061	5.5	28	14.916	32.13	1.872	1.872	1.H1-1b	
8	MP-8	PIPE 2.0	.637	5.5	28	.094	5.5	29	14.916	32.13	1.872	1.872	2.H1-1b	
9	MP-6	PIPE 2.0	.627	5.5	25	.057	5.5	23	14.916	32.13	1.872	1.872	2.H1-1b	
10	SA-1	HSS4X4X4	.502	0	28	.265	0	y	66	132.544	139.518	16.181	16.181	1.H1-1b
11	SA-2	HSS4X4X4	.479	0	23	.136	0	y	23	132.544	139.518	16.181	16.181	1.H1-1b
12	SA-3	HSS4X4X4	.472	0	18	.153	0	z	18	132.544	139.518	16.181	16.181	1.H1-1b
13	MP-1	PIPE 2.0	.426	5.5	18	.058	2.5	66	14.916	32.13	1.872	1.872	2.H1-1b	
14	FF-HR	PIPE 2.0	.367	5.339	19	.107	10....	26	6.295	32.13	1.872	1.872	2.H1-1b	
15	MP-4	PIPE 2.0	.361	5.5	23	.036	5.5	22	14.916	32.13	1.872	1.872	2.H1-1b	
16	SF1-HR	PIPE 2.0	.348	5.339	30	.084	10....	20	6.295	32.13	1.872	1.872	1.H1-1b	
17	SF2-HR	PIPE 2.0	.346	5.339	25	.094	10....	31	6.295	32.13	1.872	1.872	2.H1-1b	
18	MP-7	PIPE 2.0	.340	5.5	27	.039	5.5	23	14.916	32.13	1.872	1.872	2.H1-1b	
19	BR-2	PIPE 2.0	.039	3.804	47	.103	7.609	66	16.049	32.13	1.872	1.872	1.H1-1b	
20	BR-1	PIPE 2.0	.028	3.177	37	.111	0	26	19.798	32.13	1.872	1.872	1.H1-1b	
21	BR-3	PIPE 2.0	.022	2.689	47	.085	5.379	31	22.712	32.13	1.872	1.872	1.H1-1b	
22	FF-V1	PIPE 3.5	.000	.75	27	.000	.75	28	78.031	78.75	7.954	7.954	1.H1-1b	
23	SF1-V1	PIPE 3.5	.000	.75	22	.000	.75	22	78.031	78.75	7.954	7.954	1.H1-1b	
24	SF2-V1	PIPE 3.5	.000	.75	18	.000	.75	33	78.031	78.75	7.954	7.954	1.H1-1b	

Envelope AISI S100-16: LRFD Cold Formed Steel Code Checks

Member	Shape	Code ...	Loc[ft]	LC	Shear...	Loc[ft]	Dir	LC	phi*Pn[k]	phi*Tn[k]	phi*Mn...	phi*Mn...	phi*...	phi*...	Cb	Eqn
No Data to Print ...																



370630 - Salisbury CT

TEP No. 155528.732367

Analysis By: NPD 8/11/2022

Checked By: SDJ 8/11/2022

Code Revisions:	TIA-222-H	IBC 2018
Tower Type:	Monopole	

Wind Inputs:

Ult. Wind Velocity:	113.0	mph
Live Load Velocity:	30.0	mph
Ice Wind Velocity:	40.0	mph
Base Ice Thickness:	1.00	inches
Mount Centerline:	122.0	ft
Antenna Centerline:	123.0	ft
Exposure Category:	C	
Topo Category:	1	
Risk Category:	II	
Ground Elevation:	667	ft

Wind Calculations:

K_{zt} :	1.000	Section 2.6.6
K_d :	0.950	
$K_{z-Mount}$:	1.320	Section 2.6.5.2
$K_{z-Antenna}$:	1.322	Section 2.6.5.2
K_{iz} :	1.140	Section 2.6.10
Ice Thickness:	1.140	inches - Section 2.6.10

Without Ice - (psf)	With Ice - (psf)
$(q_z G_h)_{Mount}$: 40.01	$(q_z G_h)_{Mount}$: 5.01
$(q_z G_h)_{Antenna}$: 40.07	$(q_z G_h)_{Antenna}$: 5.02

Seismic Code Revisions:	TIA-222-H
Seismic Risk Category:	II

Seismic Input

S_{DS} :	0.177	Design Short Period Spectral Accel.
I_p :	1.0	Importance Factor
R_p :	2.0	Response Modification Factor
ρ :	1.0	
A_s :	1.0	Applification Factor - TIA-222-H Section 2.7.8.1
S_1 :	0.054	Spectral Acceleration at a Period of 1 Second

Seismic Design Force

Cs:	0.089	kips/kip	TIA-H Sec 2.7.7.1.1
Cs-min:	0.030	kips/kip	TIA-H Sec 2.7.7.1.1



370630 - Salisbury CT
TEP No. 155528.732367
Analysis By: NPD 8/11/2022
Checked By: SDJ 8/11/2022

Antenna Loads are Calculated in Accordance with TIA-222-H

Azimuth is the absolute angle measured clockwise from RISA-3D global X-axis.

MFR	Model	Height (in)	Width (in)	Depth (in)	Wt. (lbs)	Azimuth°	Qty	Shape	Member Label	Distance from start node of the member		
										Location #1 (ft,%)	Location #2 (ft,%)	Location #3 (ft,%)
Commscope	VV-65B-R1	70.40	12.00	4.60	27.90	0.00	1	Flat	MP-1	1.50	6.50	
Ericsson	Radio 4460 B25+B66	19.60	15.70	12.10	109.00	0.00	1	Flat	MP-1	4.00		
Ericsson	AIR 6419 B41	36.30	20.90	9.00	83.30	0.00	1	Flat	MP-2	3.00	5.00	
RFS/CELWAVE	APXVAALL24_43-U-NA20	95.90	24.00	8.50	122.80	0.00	1	Flat	MP-3	0.50	7.50	
Ericsson	RADIO 4449 B71/B85A	15.00	13.20	10.50	75.00	0.00	1	Flat	MP-3	4.00		
Commscope	VV-65B-R1	70.40	12.00	4.60	27.90	120.00	1	Flat	MP-4	1.50	6.50	
Ericsson	Radio 4460 B25+B66	19.60	15.70	12.10	109.00	120.00	1	Flat	MP-4	4.00		
Ericsson	AIR 6419 B41	36.30	20.90	9.00	83.30	120.00	1	Flat	MP-5	3.00	5.00	
RFS/CELWAVE	APXVAALL24_43-U-NA20	95.90	24.00	8.50	122.80	120.00	1	Flat	MP-6	0.50	7.50	
Ericsson	RADIO 4449 B71/B85A	15.00	13.20	10.50	75.00	120.00	1	Flat	MP-6	4.00		
Commscope	VV-65B-R1	70.40	12.00	4.60	27.90	220.00	1	Flat	MP-7	1.50	6.50	
Ericsson	Radio 4460 B25+B66	19.60	15.70	12.10	109.00	220.00	1	Flat	MP-7	4.00		
Ericsson	AIR 6419 B41	36.30	20.90	9.00	83.30	220.00	1	Flat	MP-8	3.00	5.00	
RFS/CELWAVE	APXVAALL24_43-U-NA20	95.90	24.00	8.50	122.80	220.00	1	Flat	MP-9	0.50	7.50	
Ericsson	RADIO 4449 B71/B85A	15.00	13.20	10.50	75.00	220.00	1	Flat	MP-9	4.00		



370630 - Salisbury CT
 TEP No. 155528.732367
 Analysis By: NPD 8/11/2022
 Checked By: SDJ 8/11/2022

Member Forces are Calculated in Accordance with TIA-222-H

Member Name	Wind Proj. (in)	Length (in)	Shape	θ (°)	Perimeter (in)
BR-1	2.375	76.26	Round	30.00	7.46
BR-2	2.375	91.30	Round	-32.95	7.46
BR-3	2.375	64.55	Round	81.52	7.46
FFTH	3.500	150.00	Round	90.00	11.00
SF1-TH	3.500	150.00	Round	50.00	11.00
SF2-TH	3.500	150.00	Round	-30.00	11.00
FF-HR	2.375	150.00	Round	90.00	7.46
SF1-HR	2.375	150.00	Round	50.00	7.46
SF2-HR	2.375	150.00	Round	-30.00	7.46
MP-1	2.375	96.00	Round		7.46
MP-2	2.375	96.00	Round		7.46
MP-3	2.375	96.00	Round		7.46
MP-4	2.375	96.00	Round		7.46
MP-5	2.375	96.00	Round		7.46
MP-6	2.375	96.00	Round		7.46
MP-7	2.375	96.00	Round		7.46
MP-8	2.375	96.00	Round		7.46
MP-9	2.375	96.00	Round		7.46
SA-1	4.000	42.01	Flat	0.00	16.00
SA-2	4.000	42.01	Flat	-60.00	16.00
SA-3	4.000	42.01	Flat	60.00	16.00
FF-V1	4.000	18.00	Round		12.57
SF1-V1	4.000	18.00	Round		12.57
SF2-V1	4.000	18.00	Round		12.57



370630 - Salisbury CT

TEP No. 155528.732367

Analysis By: NPD 8/11/2022

Checked By: SDJ 8/11/2022

Moment Bolt Group - Tower Connection

Code Revisions: ANSI/TIA-222-H

Bolt Type: Headed Bolts

Connection Inputs:

Bolt Size:	0.625	in
# Bolts:	4	
Plate Width:	10.00	in
Plate Height:	10.00	in
Bolt H Gap:	6.00	in
Bolt V Gap:	6.00	in
Plate T:	0.500	in
Slip Member Ø:	-	in
Bolt Grade:	A307	

Capacities:

Bolt Capacity=	81.6%	PASS
Plate Capacity=	64.3%	PASS

Bolt Properties:

$F_{y\text{bolt}}$:	36.0	ksi
$F_{u\text{bolt}}$:	60.0	ksi
r:	4.2	in
J:	72.0	in^4/in^2
A_{bolt} :	0.3	in^2
$A_{\text{bolt, Net Tensile}}$:	0.2	in^2
Pretension:	9.5	kips

Member Properties:

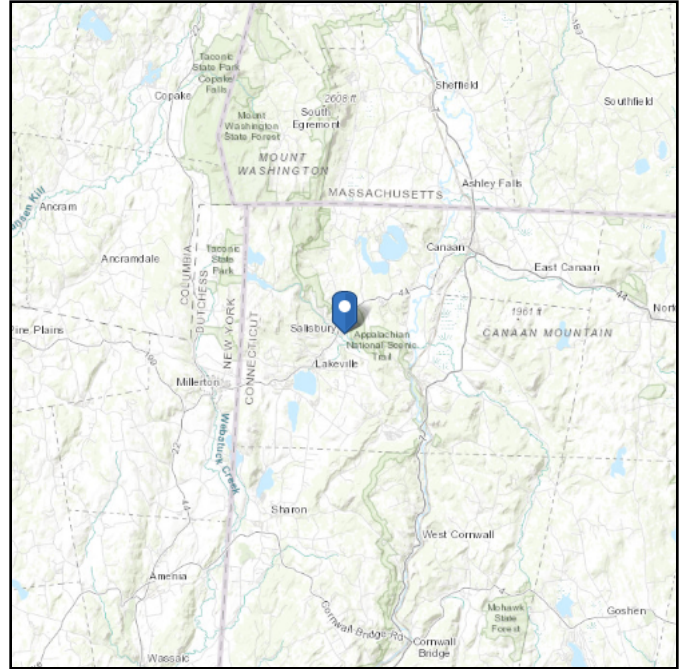
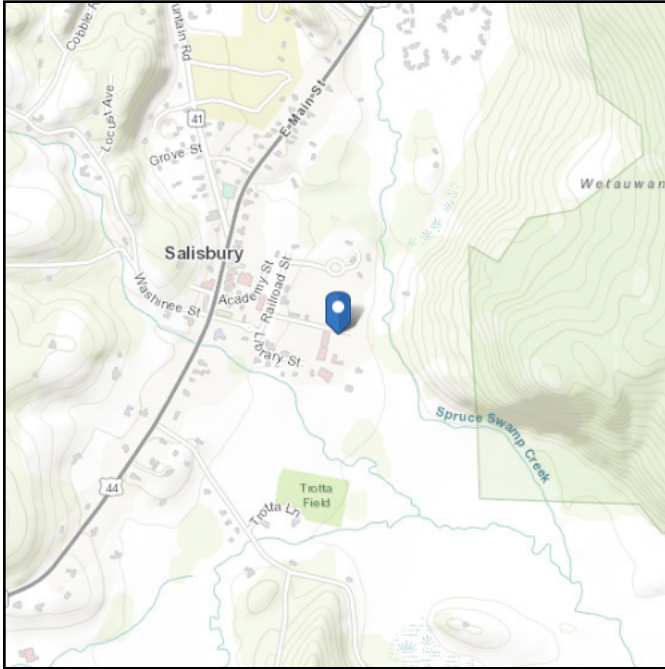
Member Shape:	Flat	
Plate F_y :	36.0	ksi
Plate F_u :	58.0	ksi
Member Height:	4.0	in
Member Width:	4.0	in

ASCE 7 Hazards Report

Address:
No Address at This
Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see
Section 11.4.3)

Elevation: 666.77 ft (NAVD 88)
Latitude: 41.9809
Longitude: -73.4184



Wind

Results:

Wind Speed	113 Vmph
10-year MRI	75 Vmph
25-year MRI	83 Vmph
50-year MRI	89 Vmph
100-year MRI	94 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Thu Aug 11 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

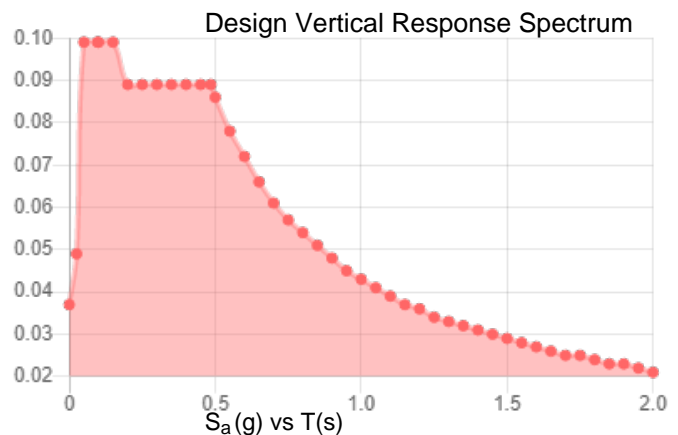
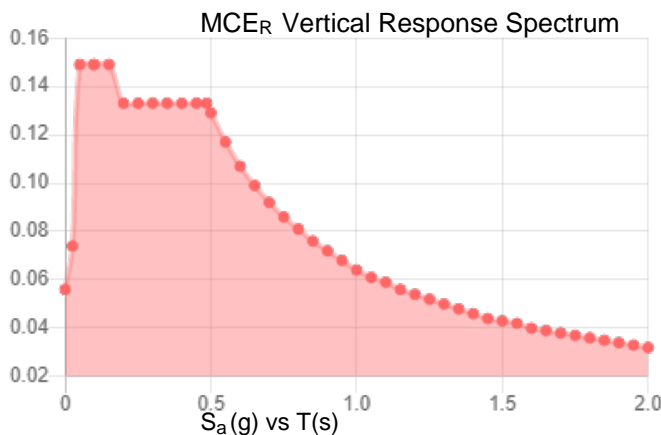
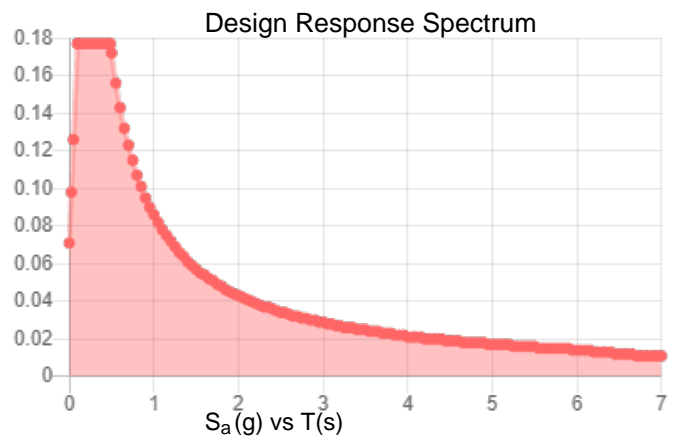
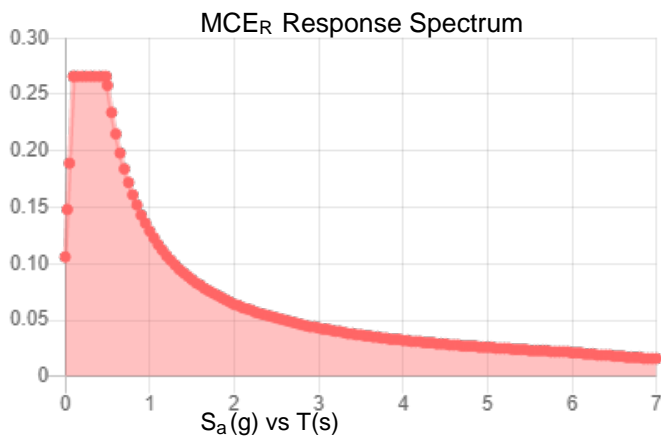
Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Site Soil Class: D - Default (see Section 11.4.3)

Results:

S_S :	0.166	S_{D1} :	0.086
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.087
F_v :	2.4	PGA _M :	0.139
S_{MS} :	0.266	F_{PGA} :	1.6
S_{M1} :	0.129	I_e :	1
S_{DS} :	0.177	C_v :	0.7

Seismic Design Category B



Data Accessed: Thu Aug 11 2022

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Results:

Ice Thickness: 1.00 in.
Concurrent Temperature: 5 F
Gust Speed 40 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Thu Aug 11 2022

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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RAN Template: 67D5D998E MUAC	A&L Template: 67D5998E_1xAIR+1OP+1QP
--	--

CTNH547A_Anchor_5
Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

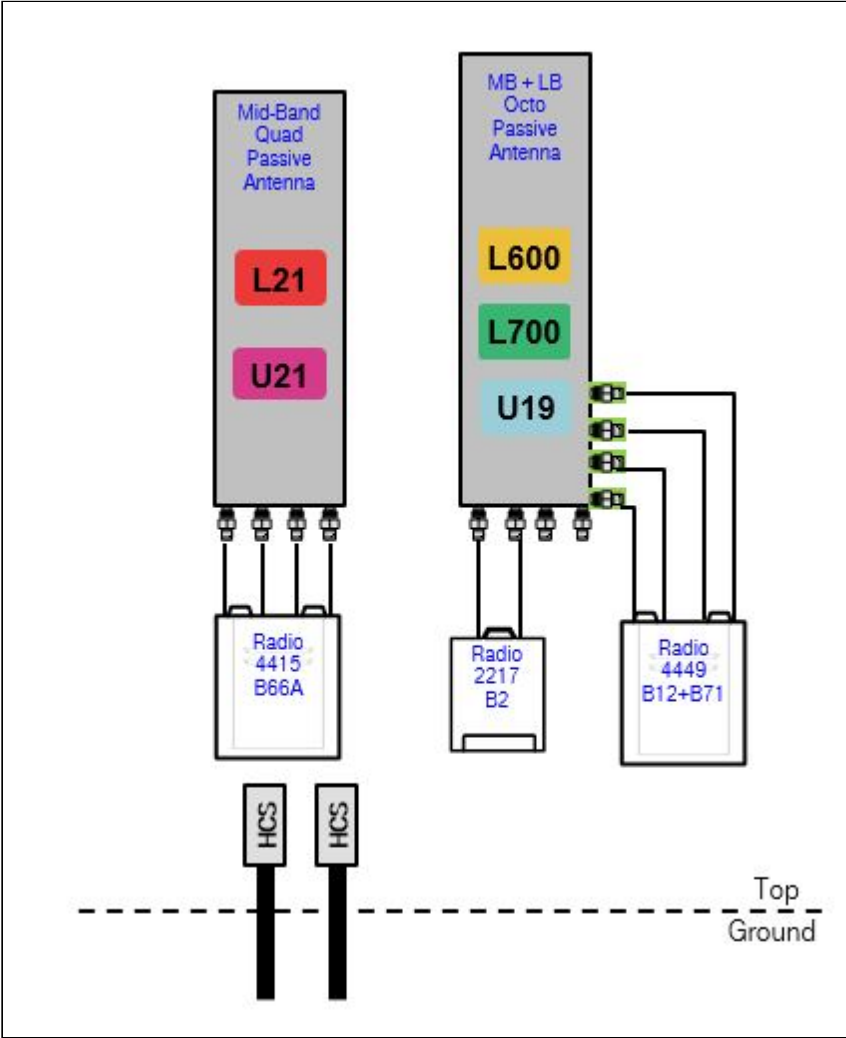
Section 1 - Site Information

Site ID: CTNH547A Status: Final Version: 5 Project Type: Anchor Approved: 5/26/2022 3:5:36 PM Approved By: Pratik.Patil30@T-Mobile.com Last Modified: 5/26/2022 3:5:36 PM Last Modified By: Pratik.Patil30@T-Mobile.com	Site Name: CTNH547A Site Class: Monopole Site Type: Structure Non Building Plan Year: 2022 Market: CONNECTICUT CT Vendor: Ericsson Landlord: ATC	Latitude: 41.98080000 Longitude: -73.41830000 Address: 52 Library St City, State: Salisbury, CT Region: NORTHEAST
--	---	--

RAN Template: 67D5D998E MUAC			AL Template: 67D5998E_1xAIR+1OP+1QP		
Sector Count: 3	Antenna Count: 9	Coax Line Count: 0	TMA Count: 0	RRU Count: 6	

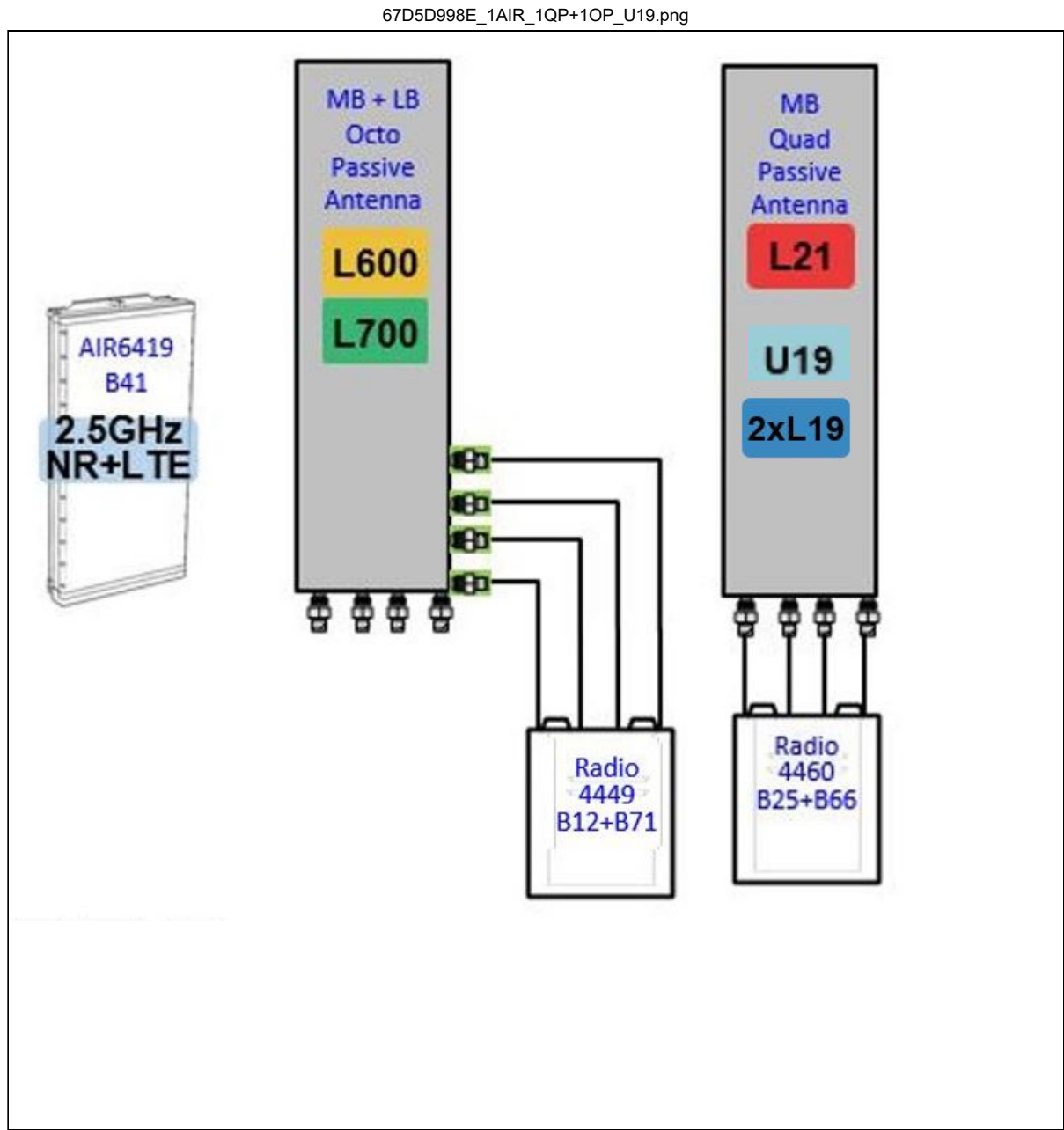
Section 2 - Existing Template Images

67D07C.JPG



Notes:

Section 3 - Proposed Template Images



Notes:

Section 4 - Siteplan Images

----- This section is intentionally blank. -----

Section 5 - RAN Equipment			
Existing RAN Equipment			
Template: 67D07C 6102 MUAC			
Enclosure	1		
Enclosure Type	RBS 6102 MU AC		
Baseband	<div><div>DUW30</div><div>U1900</div></div> <div><div>BB 6648</div><div>L2100</div></div> <div><div>BB 6648</div><div>L700</div><div>L600</div><div>N600</div></div>		
Hybrid Cable System	Ericsson 6x12 HCS 4AWG 70m (x 3)		

Proposed RAN Equipment			
Template: 67D5D998E MUAC			
Enclosure	1	2	3
Enclosure Type	RBS 6102 MU AC	Enclosure 6160 AC V1	B160
Baseband	<div><div>BB 6648</div><div>L2100</div><div>L1900</div></div> <div><div>BB 6648</div><div>L700</div><div>L600</div><div>N600</div></div>	<div><div>RP 6651</div><div>L2500</div><div>N2500</div></div>	
Hybrid Cable System	Ericsson 6x12 HCS 4AWG 70m (x 3)	<div>PSU 4813 vR4A (Kit)</div> <div>Hybrid Trunk 6/24 4AWG 70m (x 2)</div>	
Transport System		CSR IXRe V2 (Gen2)	

RAN Scope of Work:

Remove and return all cabinet radios from existing base station cabinet.

U1900 will be decommissioned.

Service upgrade to increase power to 200A.

Add (1) Enclosure 6160.

Add (1) IXRe Router to new Enclosure 6160.

Add (1) RP 6651 for L2500/ N2500 to new Enclosure 6160.

Add (1) PSU4813 Voltage Booster to new Enclosure 6160.

Add (1) Battery Cabinet B160.

Existing : (3) 6x12

Remove all Coax

Add (2) 6X24 HCS. Connect DC for the AIR6419 B41 to the PSU4813 Voltage Booster

Section 6 - A&L Equipment

Existing Template: 67D07C_1QP+1OP
Proposed Template: 67D5998E_1xAIR+1OP+1QP

Sector 1 (Existing) view from behind

Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)			RFS - APXVAALL24_43-U-NA20 (Octo)		
Azimuth	30			30		
M. Tilt	0			0		
Height	125			125		
Ports	P1	P2	P3	P4	P5	P6
Active Tech.	U1900	L2100	L700 L600 N600	L700 L600 N600		
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMA's						
Diplexers / Combiners						
Radio	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

Replace LB Dual In Position 2 with (1) LB/MB Octo.
Replace RRUS11 B12 with (1) Radio 4449 B71+B12 for L600 and L700 in Position 2.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

Sector 1 (Proposed) view from behind								
Coverage Type	A - Outdoor Macro							
Antenna	1		2		3			
Antenna Model	Commscope_VV-65B-R1 (Quad)		AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAALL24_43-U-NA20 (Octo)			
Azimuth	30		30		30			
M. Tilt	0		0		0			
Height	125		125		125			
Ports	P1	P2	P3	P4	P5	P6	P7	P8
Active Tech.	L2100 L1900	L2100 L1900	N2500 L2500	N2500 L2500	L600 L700 N600	L600 L700 N600		
Dark Tech.								
Restricted Tech.								
Decomm. Tech.								
E. Tilt								
Cables	Coax Jumper (x2) Fiber Jumper (x2)	SHARED Fiber Jumper (x2) Coax Jumper (x2)	Fiber Jumper (x4)	SHARED Fiber Jumper (x4)	Coax Jumper (x2) Fiber Jumper (x2)	SHARED Fiber Jumper (x2) Coax Jumper (x2)		
TMA's								
Diplexers / Combiners								
Radio	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)			Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)		
Sector Equipment								
Unconnected Equipment:								
Scope of Work:								
<div>Replace APX16DW and Radio RRUS11 B2 and RRUS11B4 with (1) VV-65B-R1 at Position 1 and add (1) radio 4460 for L2100, L1900 (Both carriers), and GSM to Position 1 at antenna. Add (1) AIR6419 for L2500/N2500 at Position 2. Keep existing octo in Position 3.</div>								
*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.								

Sector 2 (Existing) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)			RFS - APXVAALL24_43-U-NA20 (Octo)		
Azimuth	150			150		
M. Tilt	0			0		
Height	125			125		
Ports	P1	P2	P3	P4	P5	P6
Active Tech.	U1900	L2100	L700 L600 N600	L700 L600 N600		
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMA's						
Diplexers / Combiners						
Radio	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:						
Replace LB Dual In Position 2 with (1) LB/MB Octo. Replace RRUS11 B12 with (1) Radio 4449 B71+B12 for L600 and L700 in Position 2.						
*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.						

Sector 2 (Proposed) view from behind												
Coverage Type	A - Outdoor Macro											
Antenna	1		2		3							
Antenna Model	Commscope_VV-65B-R1 (Quad)		AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAALL24_43-U-NA20 (Octo)							
Azimuth	150		150		150							
M. Tilt	0		0		0							
Height	125		125		125							
Ports	P1		P2		P3		P4		P5	P6	P7	P8
Active Tech.	L1900 L2100		L1900 L2100		N2500 L2500		N2500 L2500		L600 N600 L700	L600 N600 L700		
Dark Tech.												
Restricted Tech.												
Decomm. Tech.												
E. Tilt												
Cables	Coax Jumper (x2) Fiber Jumper (x2)		SHARED Fiber Jumper (x2) Coax Jumper (x2)		Fiber Jumper (x4)		SHARED Fiber Jumper (x4)		Coax Jumper (x2) Fiber Jumper (x2)	SHARED Fiber Jumper (x2) Coax Jumper (x2)		
TMA's												
Diplexers / Combiners												
Radio	Radio 4460 B25+B66 (At Antenna)		SHARED Radio 4460 B25+B66 (At Antenna)						Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)		
Sector Equipment												

Unconnected Equipment:

Scope of Work:

Replace APX16DW and Radio RRUS11 B2 and RRUS11B4 with (1) VV-65B-R1 at Position 1 and add (1) radio 4460 for L2100, L1900 (Both carriers), and GSM to Position 1 at antenna.
Add (1) AIR6419 for L2500/N2500 at Position 2.
Keep existing octo in Position 3.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

Sector 3 (Existing) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)			RFS - APXVAALL24_43-U-NA20 (Octo)		
Azimuth	250			250		
M. Tilt	0			0		
Height	125			125		
Ports	P1	P2	P3	P4	P5	P6
Active Tech.	U1900	L2100	L700 L600 N600	L700 L600 N600		
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMA's						
Diplexers / Combiners						
Radio	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:						
Antenna change (3) to RFS LL24_43 Replace LB Dual In Position 2 with (1) LB/MB Octo. Replace RRUS11 B12 with (1) Radio 4449 B71+B12 for L600 and L700 in Position 2.						
*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.						

Sector 3 (Proposed) view from behind								
Coverage Type	A - Outdoor Macro							
Antenna	1		2		3			
Antenna Model	Commscope_VV-65B-R1 (Quad)		AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAALL24_43-U-NA20 (Octo)			
Azimuth	250		250		250			
M. Tilt	0		0		0			
Height	125		125		125			
Ports	P1	P2	P3	P4	P5	P6	P7	P8
Active Tech.	L2100 L1900	L2100 L1900	N2500 L2500	N2500 L2500	N600 L600 L700	N600 L600 L700		
Dark Tech.								
Restricted Tech.								
Decomm. Tech.								
E. Tilt								
Cables	Coax Jumper (x2) Fiber Jumper (x2)	SHARED Fiber Jumper (x2) Coax Jumper (x2)	Fiber Jumper (x4)	SHARED Fiber Jumper (x4)	Coax Jumper (x2) Fiber Jumper (x2)	SHARED Fiber Jumper (x2) Coax Jumper (x2)		
TMA's								
Diplexers / Combiners								
Radio	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)			Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)		
Sector Equipment								
Unconnected Equipment:								
Scope of Work:								
Replace APX16DW and Radio RRUS11 B2 and RRUS11B4 with (1) VV-65B-R1 at Position 1 and add (1) radio 4460 for L2100, L1900 (Both carriers), and GSM to Position 1 at antenna.								
Add (1) AIR6419 for L2500/N2500 at Position 2.								
Keep existing octo in Position 3.								
*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.								

Section 7 - Power Systems Equipment	
Existing Power Systems Equipment	
----- This section is intentionally blank. -----	
Proposed Power Systems Equipment	
Enclosure	1
Enclosure Type	Enclosure 6160 AC V1



EBI Consulting

environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CTNH547A

Salisbury CT
52 Library Street
Salisbury, Connecticut 06068

October 11, 2022

EBI Project Number: 6222005903

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	15.57%



October 11, 2022

T-Mobile

Attn: Jason Overbey, RF Manager

35 Griffin Road South

Bloomfield, Connecticut 06002

Emissions Analysis for Site: CTNH547A - Salisbury CT

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **52 Library Street in Salisbury, 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 52 Library Street in Salisbury, Connecticut using the equipment information listed below. Modeling of the antennas and associated equipment was completed using RoofMaster™ software, which is a widely-used predictive modeling program that has been developed to predict RF power density values for rooftop and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. Using the computational methods set forth in Federal Communications (FCC) Office of Engineering & Technology (OET) Bulletin 65, “Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields” (OET-65), RoofMaster™ calculates predicted power density in a scalable grid based on the contributions of all RF sources characterized in the study scenario. At each grid location, the cumulative power density is expressed as a percentage of the FCC limits. Manufacturer antenna pattern data is utilized in these calculations. RoofMaster™ models consist of the Far Field model as specified in OET-65 and an implementation of the OET-65 Cylindrical Model (Sula9). The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

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 power density calculations, the broadcast footprint of the AIR6449 or similar SON antenna has been considered. Due to the beamforming nature of these antennas, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

For all calculations, telecommunications equipment was modeled using the following assumptions:

- 1) 1 LTE channel (600 MHz Band) was considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.
- 3) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 4) 1 LTE channel (PCS Band - 1900 MHz) was considered for each sector of the proposed installation. These Channels have a transmit power of 160 Watts per Channel.
- 5) 1 LTE channel (AWS Band – 2100 MHz) was considered for each sector of the proposed installation. These Channels have a transmit power of 160 Watts per Channel.
- 6) 1 LTE Traffic channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 45 Watts.
- 7) 1 LTE Broadcast channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 15 Watts.
- 8) 1 NR Traffic channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 90 Watts.
- 9) 1 NR Broadcast channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 30 Watts.
- 10) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 11) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative



- estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 12) The antennas used in this modeling are the COMMSCOPE VV-65B-RIB 02DT 1900 for the 1900 MHz / 1900 MHz channel(s), the ERICSSON SON_AIR6419 B4I LTE TB 02.09.21 2500 TMO for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAALL24_43-U-NA20 02DT 600 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector A, the COMMSCOPE VV-65B-RIB 02DT 1900 for the 1900 MHz / 2100 MHz channel(s), the ERICSSON SON_AIR6419 B4I LTE TB 02.09.21 2500 TMO for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAALL24_43-U-NA20 02DT 600 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector B, the COMMSCOPE VV-65B-RIB 02DT 1900 for the 1900 MHz / 2100 MHz channel(s), the ERICSSON SON_AIR6419 B4I LTE TB 02.09.21 2500 TMO for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAALL24_43-U-NA20 02DT 600 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 13) The antenna mounting height centerline of the proposed antennas is 123 feet above ground level (AGL).
- 14) Emissions values for additional carriers were taken from the Connecticut Siting Council active database or documents available on the Connecticut Siting Council website (<https://portal.ct.gov/CSC>). Values in the database are provided by the individual carriers themselves.
- 15) All calculations were done with respect to uncontrolled / general population threshold limits.



T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	COMMSCOPE VV-65B-R1B 02DT 1900	Make / Model:	COMMSCOPE VV-65B-R1B 02DT 1900	Make / Model:	COMMSCOPE VV-65B-R1B 02DT 1900
Frequency Bands:	1900 MHz / 1900 MHz	Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz
Gain:	16.16 dBd / 16.75 dBd	Gain:	16.16 dBd / 16.75 dBd	Gain:	16.16 dBd / 16.75 dBd
Height (AGL):	123 feet	Height (AGL):	123 feet	Height (AGL):	123 feet
Channel Count:	2	Channel Count:	2	Channel Count:	2
Total TX Power (W):	320.00 Watts	Total TX Power (W):	320.00 Watts	Total TX Power (W):	320.00 Watts
ERP (W):	12,292.81	ERP (W):	12,292.81	ERP (W):	12,292.81
Antenna A1 MPE %:	3.23%	Antenna B1 MPE %:	3.23%	Antenna C1 MPE %:	3.23%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	ERICSSON SON_AIR6419 B4I LTE TB 02.09.21 2500 TMO	Make / Model:	ERICSSON SON_AIR6419 B4I LTE TB 02.09.21 2500 TMO	Make / Model:	ERICSSON SON_AIR6419 B4I LTE TB 02.09.21 2500 TMO
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd	Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd	Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd
Height (AGL):	123 feet	Height (AGL):	123 feet	Height (AGL):	123 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	180.00 Watts	Total TX Power (W):	180.00 Watts	Total TX Power (W):	180.00 Watts
ERP (W):	23,258.96	ERP (W):	23,258.96	ERP (W):	23,258.96
Antenna A2 MPE %:	6.11%	Antenna B2 MPE %:	6.11%	Antenna C2 MPE %:	6.11%
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	RFS APXVAALL24_43-U-NA20 02DT 600	Make / Model:	RFS APXVAALL24_43-U-NA20 02DT 600	Make / Model:	RFS APXVAALL24_43-U-NA20 02DT 600
Frequency Bands:	600 MHz / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd
Height (AGL):	123 feet	Height (AGL):	123 feet	Height (AGL):	123 feet
Channel Count:	3	Channel Count:	3	Channel Count:	3
Total TX Power (W):	160.00 Watts	Total TX Power (W):	160.00 Watts	Total TX Power (W):	160.00 Watts
ERP (W):	2,878.76	ERP (W):	2,878.76	ERP (W):	2,878.76
Antenna A3 MPE %:	1.81%	Antenna B3 MPE %:	1.81%	Antenna C3 MPE %:	1.81%



Site Composite MPE %	
Carrier	MPE %
T-Mobile (Combined Sectors):	0.91%
Litchfield County Dispatch	0.64%
EMS	0.32%
AT&T	3.99%
Verizon	9.71%
Site Total MPE % :	15.57%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	0.91%
T-Mobile Sector B Total:	0.91%
T-Mobile Sector C Total:	0.91%
T-Mobile Total MPE % :	0.91%

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 LTE	1	5729.542994	123	15.04751554	1900 MHz LTE	1000.0	1.15%
T-Mobile 2100 MHz LTE	1	6563.265648	123	17.23712379	2100 MHz LTE	1000.0	1.72%
T-Mobile 2500 MHz LTE	1	7214.604258	123	18.94773629	2500 MHz LTE	1000.0	1.89%
T-Mobile 2500 MHz LTE	1	538.382902	123	1.413956592	2500 MHz LTE	1000.0	0.14%
T-Mobile 2500 MHz NR	1	14429.20852	123	37.89547259	2500 MHz NR	1000.0	3.79%
T-Mobile 2500 MHz NR	1	1076.765804	123	2.827913184	2500 MHz NR	1000.0	0.28%
T-Mobile 600 MHz LTE	1	689.5408364	123	1.810943118	600 MHz LTE	400.0	0.45%
T-Mobile 600 MHz NR	1	1379.081673	123	3.621886236	600 MHz NR	400.0	0.91%
T-Mobile 700 MHz LTE	1	810.1398427	123	2.127672642	700 MHz LTE	467.0	0.46%
						T-Mobile Total:	0.91%

- NOTE: Total T-Mobile MPE values reflect all T-Mobile antennas as reported by RoofMaster™ combined modeling.
- 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:	0.91%
Sector B:	0.91%
Sector C:	0.91%
T-Mobile Maximum MPE % (Sector A):	0.91%
T-Mobile Combined Sectors MPE %:	0.91%
Site Total:	15.57%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **15.57%** 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 or documents available on the Connecticut Siting Council website.

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.