CENTERLINE

T-Mobile
Cullen Morgan
Site Acquisition Consultant
750 W Center Street
Suite 301
West Bridgewater, MA 02379
(941)549-7263
cmorgan@clinellc.com

January 19, 2024

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

RE: NOTICE OF EXEMPT MODIFICATION
166 Pawcatuck Avenue, Pawcatuck, CT 06379
Latitude: 41.360489
Longitude: -71.854294
T-Mobile Site #: CTNL813C

Dear Members of the Siting Council:

T-Mobile currently maintains nine (9) antennas at the 119-foot level of the existing 120.88-foot monopole tower at 166 Pawcatuck Avenue, Pawcatuck, CT 06379. The 120.88-foot tower is owned by American Tower Corporation and the property is owned by Municipal Bay LLC. T-Mobile now intends to modify its equipment on the tower. All equipment will remain at the 119-foot level.

Planned Modifications:

Existing to be Removed:
(3) AIR21 KRC118023-1_B2A_B4P Antennas
(3) AIR21 KRC118023-1_B2P_B4A Antennas
(1) RBS6131 Cabinet [Ground-Mounted]

Install New:
(3) AIR6419 B41 Antennas
(3) APXVLL19P_43-C-A20 Antennas
(3) Radio 4460 RRUs
(2) Cabinets [Ground-Mounted]

Existing to Remain:
(3) APXVAALL24_43-U-NA20 Antennas
(3) Radio 4449 RRUs
(3) 6/24 Hybrid Cables

This facility was approved by the CT Siting Council in Docket No. 399 dated August 26,2010 with conditions. We used the information from the previous filing. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies§ 16- SOj-73, or construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.SA. § 16-SOj-73, a copy of this letter is being sent to the Honorable Danielle Chesebrough, chief elected official of the Town of Stonington, Lawrence Stannard, Building Official for the Town of Stonington, as well as the property owner and the tower owner.

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

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

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

Respectfully,

Cullen Morgan
Site Acquisition Consultant
Centerline Communications, LLC (Agent to T-Mobile)
Mobile: (941) 549-7263
cmorgan@clinellc.com

Attachments
cc: The Honorable Danielle Chesebrough, First Selectwoman – Town of Stonington
Lawrence Stannard, Building Official – Town of Stonington
American Tower Corporation – Tower Owner
Municipal Bay LLC – Property Owner

CENTERLINE

EXHIBIT A

Letter of Authorization

AMERICAN TOWER®
CORPORATION

LETTER OF AUTHORIZATION FOR PERMITTING

ATC SITE#/NAME/PROJECT: 284984 / PAWCATUCK CT / 14561677
SITE ADDRESS: 166 Pawcatuck Ave, Pawcatuck, CT 06379-2414
APN: STON M:26 B:2 L:1
LICENSEE: T-MOBILE d/b/a T-MOBILE NORTHEAST LLC
SITE ACQUISITION VENDOR: CENTERLINE COMMUNICATIONS LLC

I, Margaret Robinson, Vice President, UST Legal on behalf of American Tower* by and through its wholly owned subsidiary, Municipal Bay, LLC, as attorney-in-fact for Alan D. Main & Jill N. Main** do hereby authorize T-MOBILE d/b/a T-MOBILE NORTHEAST LLC, CENTERLINE COMMUNICATIONS LLC, its successors and assigns, and/or its agent, (collectively, the "Licensee") to act as their non-exclusive agent for the sole purpose of filing and consummating any land-use or building, or permit application(s) as may be required by the applicable permitting authorities for Licensee's telecommunications' installation on the Tower Facility.

I understand that these applications may be approved with conditions. The above authorization is limited to the acceptance by Licensee only of conditions related to Licensee's installation and any such conditions of approval or modifications will be Licensee's sole responsibility.

Signature: _____

Margaret Robinson, Vice President, UST Legal
US Tower Division

NOTARY BLOCK

COMMONWEALTH OF MASSACHUSETTS
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Vice President, UST Legal of American Tower (Tower Facility owner and/or operator), personally known to me (or proved to me based on satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same.

WITNESS my hand and official seal, this 11th day of January 2024.

NOTARY SEAL

GERARD T. HEFFRON
Notary Public
Commonwealth of Massachusetts
My Commission Expires
August 9, 2024

Notary Public _____
My Commission Expires: August 9th, 2024

* American Tower includes all affiliates and subsidiaries of American Tower Corporation.
**For authority, see the Easement and Assignment Agreement attached herewith.

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EXHIBIT B

Original Facility Approval

DOCKET NO. 399 – T-Mobile Northeast LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, management, and maintenance of a telecommunications facility at 166 Pawcatuck Avenue, Stonington, Connecticut.	}	Connecticut
	}	Siting
	}	Council

August 26, 2010

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, management, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to T-Mobile Northeast LLC, hereinafter referred to as the Certificate Holder, for a telecommunications facility located at 166 Pawcatuck Avenue in Stonington, Connecticut.

Unless otherwise approved by the Council, 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 constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of T-Mobile Northeast LLC and other entities, both public and private, but such tower shall not exceed a height of 120 feet above ground level. The tower shall incorporate a yield point at a height approximately 100 feet above ground level.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Stonington for comment, 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, equipment compound, radio equipment, access road, utility line, and landscaping; and
    b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. Prior to the commencement of operation, the Certificate Holder shall provide the Council worst-case modeling of the 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 the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Stonington public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.

7. Unless otherwise approved by the Council, 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.

8. At least one wireless telecommunications carrier shall install their equipment and shall become operational not later than 120 days after the tower is erected. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

9. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Stonington. Any proposed modifications to this Decision and Order shall likewise be so served.

10. 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.

11. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.

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 site 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.

13. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.

14. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder\transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder\transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

Pursuant to General Statutes **§** 16-50p, the Council hereby directs 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 New London Day.

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:

Applicant	**Its Representative**
T-Mobile Northeast, LLC	Julie D. Kohler, Esq. Jesse A. Langer, Esq. Cohen and Wolf, P.C. 1115 Broad Street Bridgeport, CT 06604
Intervenor	**Its Representative**
Cellco Partnership d/b/a Verizon Wireless	Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597

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EXHIBIT C

Property Card

166 PAWCATUCK AVE

Location	166 PAWCATUCK AVE	**Mblu**	26/ 2/ 1/ TWR/
Acct#	511500TW	**Owner**	MUNICIPAL BAY LLC
		Assessment	$530,700
Appraisal	$758,100	**PID**	116065
Building Count	1		

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$758,100	$0	$758,100
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$530,700	$0	$530,700

Parcel Addresses

Additional Addresses
No Additional Addresses available for this parcel

Owner of Record

Owner	MUNICIPAL BAY LLC	**Sale Price**	$0
Co-Owner		**Certificate**	
		Book & Page	802/217
		Sale Date	10/01/2022
		Instrument	00

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
MUNICIPAL BAY LLC	$0		802/217	00	10/01/2022

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style:	
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtures:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Cndtn	
Num Park	
Fireplaces	
Fin Bsmt SF	
Fin Basement	
Fndtn Cndtn	
Basement	

Building Photo

(https://images.vgsi.com/photos/stoningtonctPhotos//default.jpg)

Building Layout


Building Layout (ParcelSketch.ashx?pid=116065&bid=114237)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	430V
Description	TEL X STA M-00
Zone	
Neighborhood	
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	0
Frontage	
Depth	
Assessed Value	$0
Appraised Value	$0

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FN4	FENCE-8' CHAIN			180.00 L.F.	$2,100	1
MSC8	CELL TOWER			1.00 UNIT	$756,000	1

Valuation History

Appraisal
No Data for Appraisal History

Assessment
No Data for Assessment History

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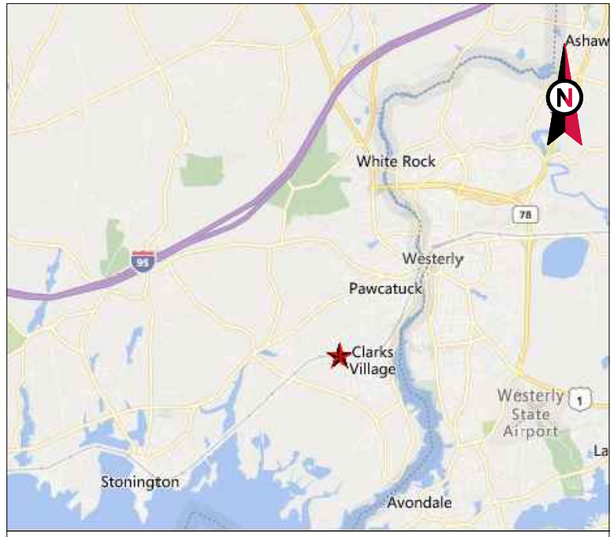
EXHIBIT D

Construction Drawings



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: PAWCATUCK CT
ATC SITE NUMBER: 284984
T-MOBILE SITE NAME: AMTRAK_STONINGTON3
T-MOBILE SITE NUMBER: CTNL813C
SITE ADDRESS: 166 PAWCATUCK AVE
PAWCATUCK, CT 06379
SITE CLASS: MONOPOLE

LOCATION MAP

BIRD WATCH SITE:
PLEASE CONTACT BIRD.WATCH@AMERICANTOWER.COM OR AMERICAN TOWER NOC AT 877-518-6937 FOR ASSISTANCE

T-MOBILE ANCHOR AMENDMENT PLAN
67D5D998E 6160 CONFIGURATION

COMPLIANCE CODE

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.

2021 IBC
NATIONAL ELECTRICAL CODE (NFPA 70, NEC 2020 W/ AMND)
2022 CONNECTICUT STATE BUILDING CODE, IMC PORTION (IMC 2021 W/ AMND)
2022 CONNECTICUT STATE BUILDING CODE, IPC PORTION (IPC 2021 W/ AMND)
2022 CONNECTICUT STATE BUILDING CODE, IECC PORTION (IECC 2021 W/ AMND)
PART III OF THE 2022 CT STATE FIRE SAFETY CODE (IFC 2021 W/ AMND)
2022 CONNECTICUT STATE BUILDING CODE, IEBC PORTION (IEBC 2021 W/ AMND)
2022 CONNECTICUT STATE BUILDING CODE
2022 CONNECTICUT STATE BUILDING CODE, IRC PORTION (IRC 2021 W/ AMND)
CONNECTICUT STATE FUEL GAS CODE (IFGC 2021 W/ AMND)

UTILITY COMPANIES

POWER COMPANY: UNKNOWN
PHONE: N/A

TELEPHONE COMPANY: UNKNOWN
PHONE: N/A

811 Know what's below. Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

166 PAWCATUCK AVE
PAWCATUCK, CT 06379
COUNTY: NEW LONDON

GEOGRAPHIC COORDINATES:

LATITUDE: 41.3605256

LONGITUDE: -71.85242502

GROUND ELEVATION: 51' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

T-MOBILE

ENGINEER:

A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN, STE 300
CARY, NC 27511

PROPERTY OWNER:

PATRICIA L MAIN
166 PAWCATUCK AVE
PAWCATUCK, CT 06379

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

TOWER WORK:
REMOVE (6) ANTENNA(S) AND (3) 1-5/8" HYBRID TRUNK 6/24 4AWG CABLE(S)
INSTALL MOUNT MODIFICATIONS, (6) ANTENNA(S), (3) RRU(S), AND (3) 1.99" HYBRID TRUNK 6/24 4AWG CABLE(S)
EXISTING (3) ANTENNA(S) AND (3) RRU(S) TO REMAIN

GROUND WORK:
REMOVE (1) DUG20, (1) DUW30, (1) CSR 7705 SAR M, (1) BATTERY CABINET, AND (1) RBS 6131 CABINET
INSTALL (1) RP 6651, (1) CSR IXRE V2 (GEN2), (1) 6160 CABINET, (1) B160 BATTERY CABINET, AND (1) ICE BRIDGE
EXISTING (1) PURCELL FIBER BOX AND (1) PPC TO REMAIN
EXISTING (1) BB 6630 AND (1) BB 6648 TO BE RELOCATED

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

FROM DOWNTOWN NEW LONDON CT START OUT GOING NORTHWEST ON WATER ST TOWARD CRYSTAL AVE. WATER ST BECOMES CT-32. MERGE ONTO I-95 N TOWARD PROVIDENCE/GROTON. TAKE THE CT-234 EXIT, EXIT 91, TOWARD STONINGTON BOROUGH/NO MAIN ST. STAY STRAIGHT TO GO ONTO PEQUOT TRL/CT-234. CONTINUE TO FOLLOW PEQUOT TRL. TURN SLIGHT LEFT ONTO S BROAD ST/US-1 N. TURN RIGHT ONTO MECHANIC ST. TURN SLIGHT RIGHT ONTO CLARK ST. TAKE THE 1ST LEFT ONTO PAWCATUCK AVE. 166 PAWCATUCK AVE, PAWCATUCK, CT 06379-2414, 166 PAWCATUCK AVE IS ON THE RIGHT.

SHEET INDEX

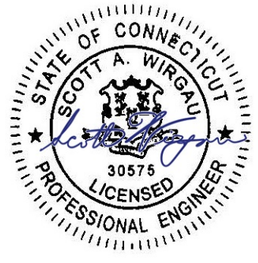
SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	1/9/2024	MNC
G-002	GENERAL NOTES	0	1/9/2024	MNC
C-101	DETAILED SITE PLAN	0	1/9/2024	MNC
C-102	DETAILED EQUIPMENT PLAN	0	1/9/2024	MNC
C-201	TOWER ELEVATION	0	1/9/2024	MNC
C-401	ANTENNA INFORMATION & SCHEDULE	0	1/9/2024	MNC
C-501	CONSTRUCTION DETAILS	0	1/9/2024	MNC
E-501	GROUNDING DETAILS	0	1/9/2024	MNC
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			
R-606	SUPPLEMENTAL			
R-607	SUPPLEMENTAL			
R-608	SUPPLEMENTAL			
R-609	SUPPLEMENTAL			

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	1/9/2024

ATC SITE NUMBER:
284984
ATC SITE NAME:
PAWCATUCK CT
T-MOBILE SITE NAME:
AMTRAK_STONINGTON3
SITE ADDRESS:
166 PAWCATUCK AVE
PAWCATUCK, CT 06379

SEAL:



T-Mobile

ATC PROJ. #:	14561677_G0
CUST. ID:	AMTRAK_STONINGTON3
CUST. #:	CTNL813C

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

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. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT, IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
30. 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.
31. 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.
32. 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.
33. 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.
34. 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.
35. 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/HYBRID 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.
   - E. INSTALL COAXIAL/HYBRID 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/HYBRID CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
2. ANTENNA AND COAXIAL/HYBRID CABLE GROUNDING:
   - A. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
   - B. ALL COAXIAL/HYBRID CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL/HYBRID CABLE (NOT WITHIN BENDS)

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.

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	1/9/2024

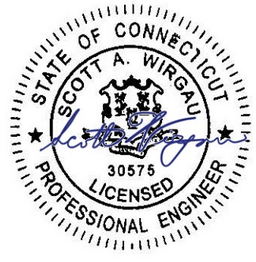
ATC SITE NUMBER:
284984

ATC SITE NAME:
PAWCATUCK CT

T-MOBILE SITE NAME:
AMTRAK_STONINGTON3

SITE ADDRESS:
166 PAWCATUCK AVE
PAWCATUCK, CT 06379

SEAL:



Digitally Signed: 2024-01-09

T-Mobile

ATC PROJ. #:	14561677_G0
CUST. ID:	AMTRAK_STONINGTON3
CUST. #:	CTNL813C

GENERAL NOTES

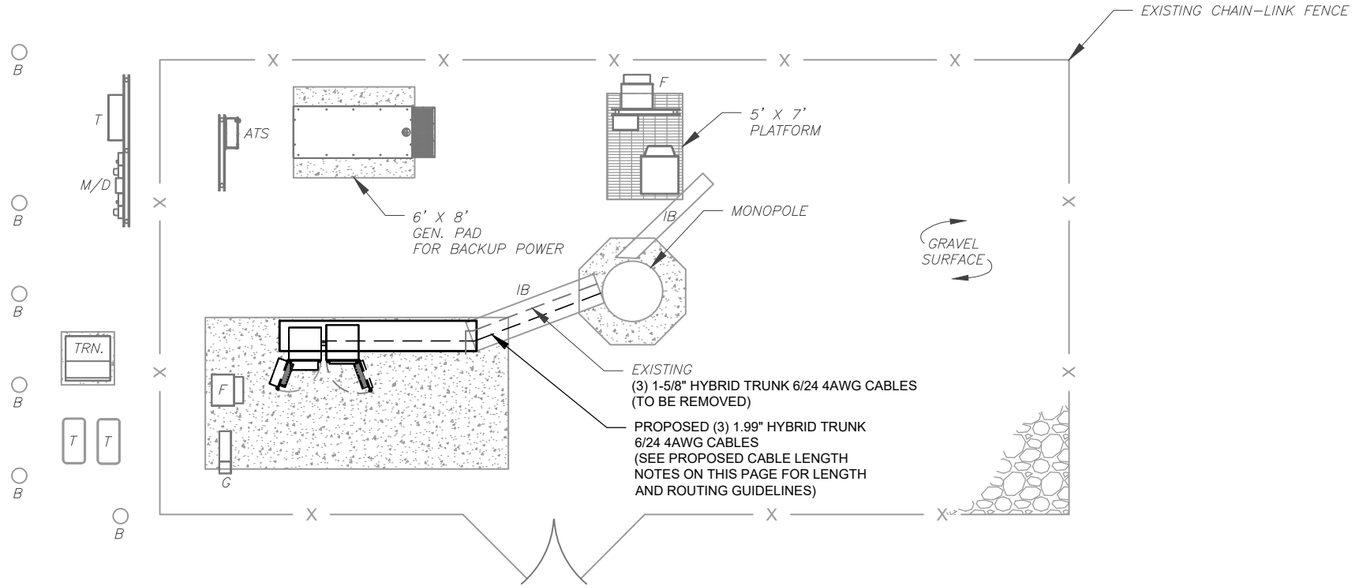
SHEET NUMBER:	REVISION:
G-002	0

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. NO ELECTRICAL SCOPE IS INCLUDED IN 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 RECEPTACLE
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 **162'**. 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.

1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

N

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0	FOR CONSTRUCTION	MNC	1/9/2024

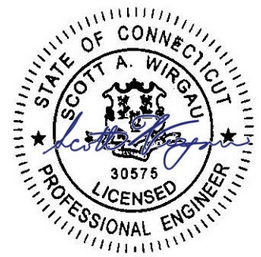
ATC SITE NUMBER:
284984

ATC SITE NAME:
PAWCATUCK CT

T-MOBILE SITE NAME:
AMTRAK_STONINGTON3

SITE ADDRESS:
166 PAWCATUCK AVE
PAWCATUCK, CT 06379

SEAL:



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T-Mobile

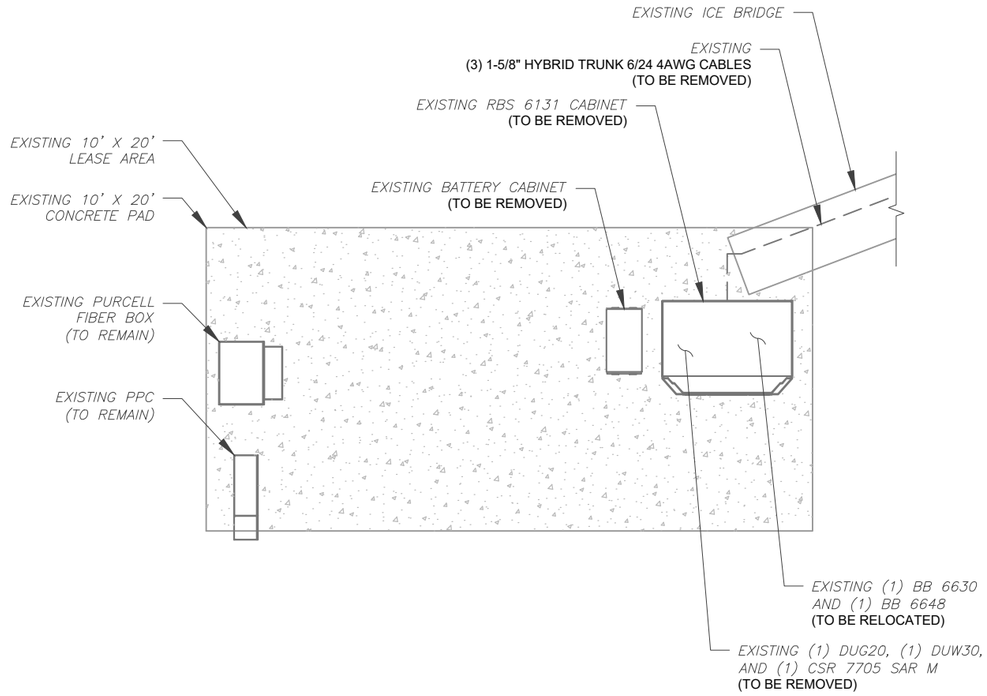
ATC PROJ. #:	14561677_G0
CUST. ID:	AMTRAK_STONINGTON3
CUST. #:	CTNL813C

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

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

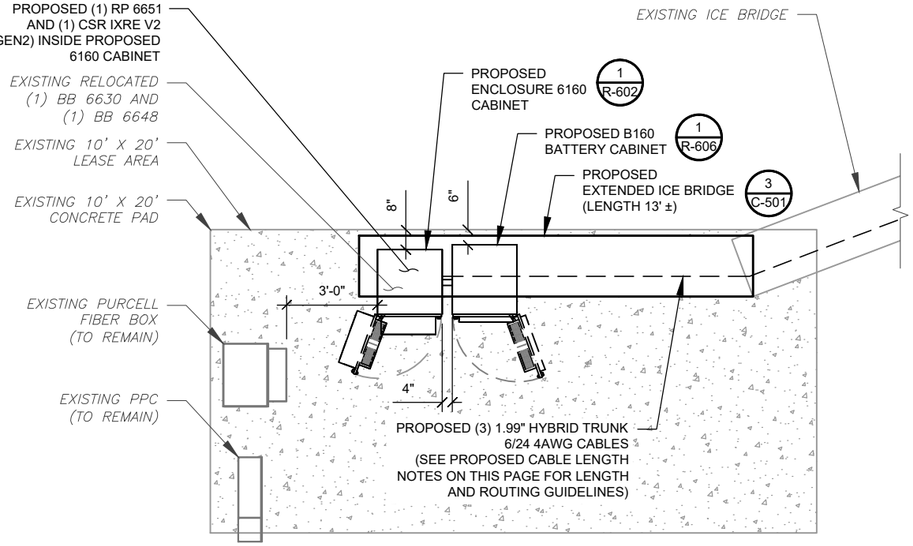
GRAPHIC SCALE

5 0 2.5 5

(IN FEET)
1 UNIT = 5 FEET

N

T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS.



2 PROPOSED GROUND EQUIPMENT LAYOUT

GRAPHIC SCALE

5 0 2.5 5

(IN FEET)
1 UNIT = 5 FEET

N

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PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	1/9/2024

ATC SITE NUMBER:
284984

ATC SITE NAME:
PAWCATUCK CT

T-MOBILE SITE NAME:
AMTRAK_STONINGTON3

SITE ADDRESS:
166 PAWCATUCK AVE
PAWCATUCK, CT 06379

SEAL:

Digitally Signed: 2024-01-09

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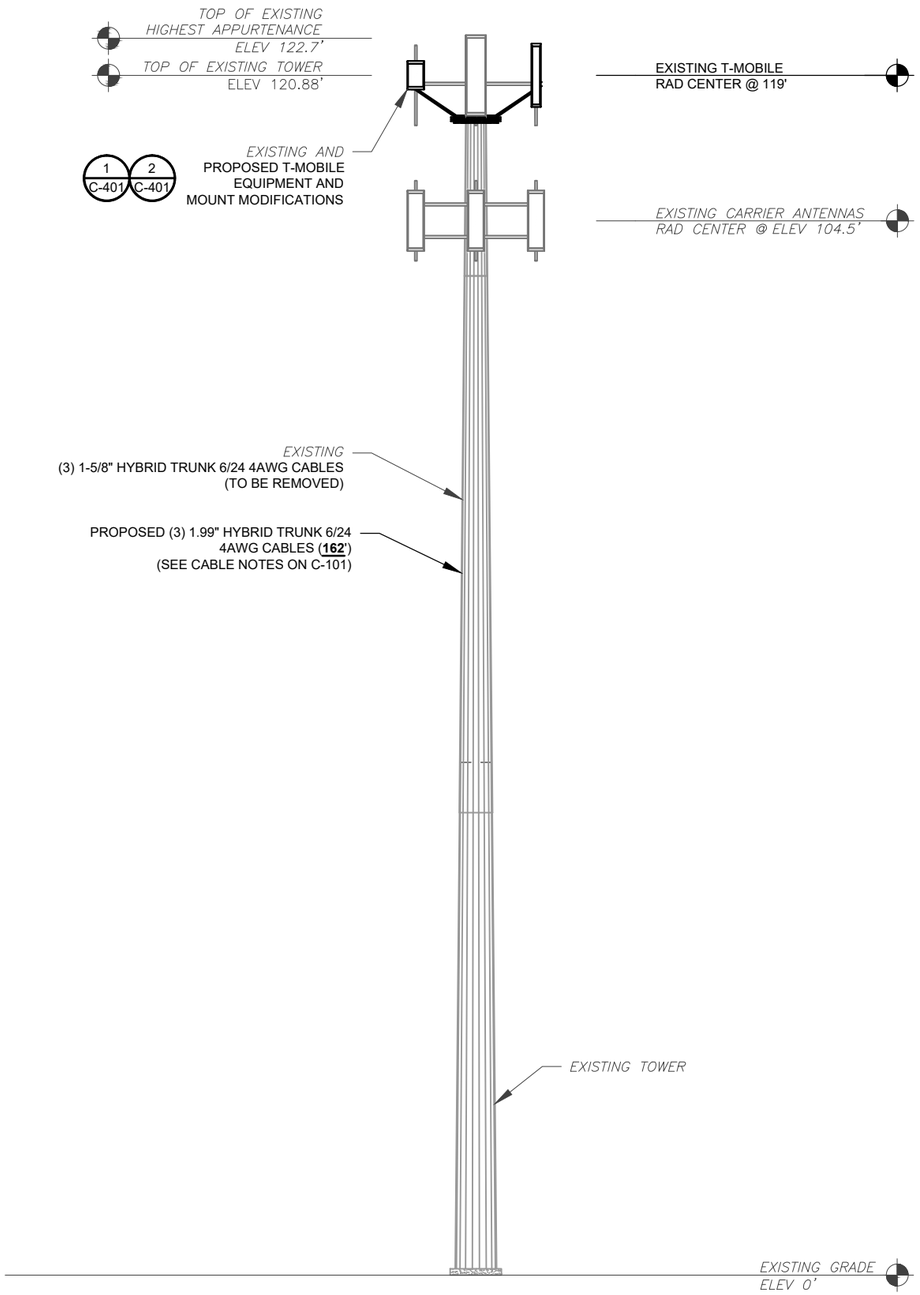
ATC PROJ. #:	14561677_G0
CUST. ID:	AMTRAK_STONINGTON3
CUST. #:	CTNL813C

DETAILED EQUIPMENT PLAN

SHEET NUMBER:	REVISION:
C-102	0

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 12/18/23, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



1 TOWER ELEVATION
SCALE: N.T.S.

ALL ELEVATIONS REFLECT ABOVE GROUND LEVEL (A.G.L.)

TOWER NOTE:

1. 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.
2. 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.
3. 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.
4. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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0	FOR CONSTRUCTION	MNC	1/9/2024

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284984
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PAWCATUCK, CT 06379

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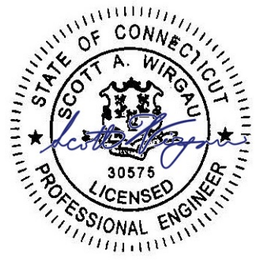

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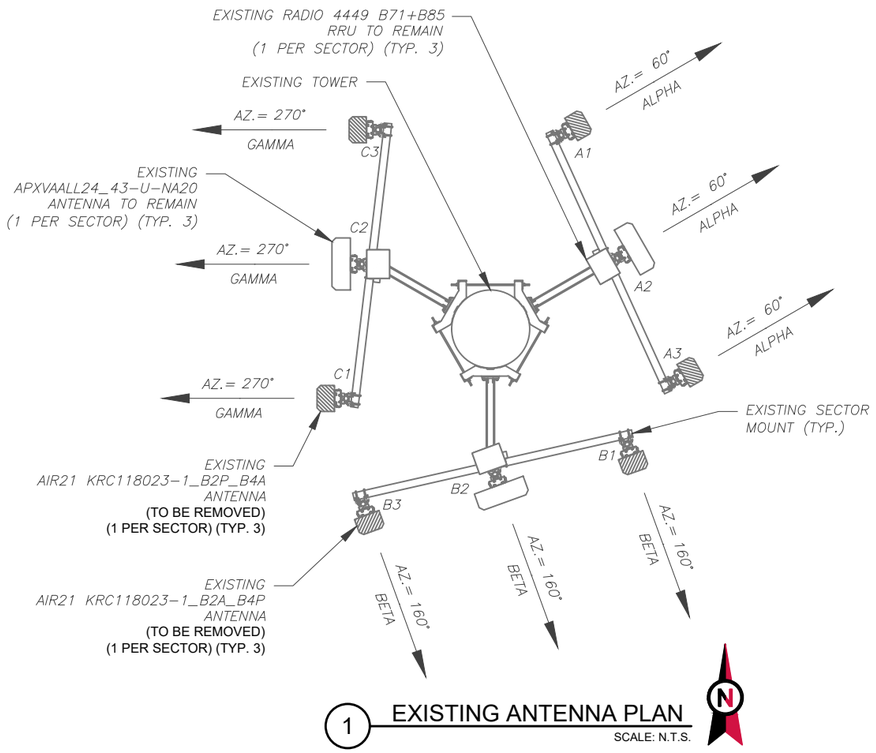
ATC PROJ. #:	14561677_G0
CUST. ID:	AMTRAK_STONINGTON3
CUST. #:	CTNL813C

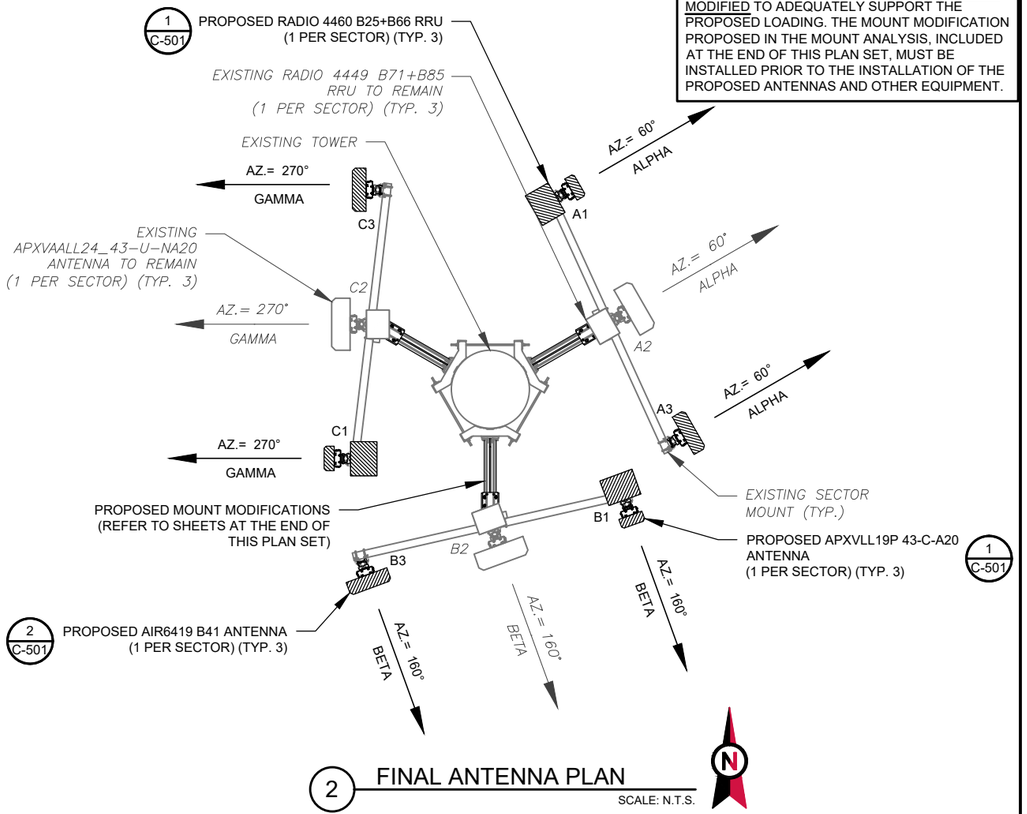
TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 12/18/23, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	119'	60°	A1	AIR21 KRC118023-1_B2P_B4A	L2100	0°/2°	RMV	–	–
			A2	APXVAALL24_43-U-NA20	L700,L600,N600	0°/2°	RMN	RADIO 4449 B71+B85	RMN
			A3	AIR21 KRC118023-1_B2A_B4P	G1900,U1900	0°/2°/2°	RMV	–	–
BETA	119'	160°	B1	AIR21 KRC118023-1_B2P_B4A	L2100	0°/2°	RMV	–	–
			B2	APXVAALL24_43-U-NA20	L700,L600,N600	0°/2°/2°	RMN	RADIO 4449 B71+B85	RMN
			B3	AIR21 KRC118023-1_B2A_B4P	G1900,U1900	0°/2°/2°	RMV	–	–
GAMMA	119'	270°	C1	AIR21 KRC118023-1_B2P_B4A	L2100	0°/2°	RMV	–	–
			C2	APXVAALL24_43-U-NA20	L700,L600,N600	0°/2°/2°	RMN	RADIO 4449 B71+B85	RMN
			C3	AIR21 KRC118023-1_B2A_B4P	G1900,U1900	0°/2°/2°	RMV	–	–

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

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	119'	60°	A1	APXVLL19P_43-C-A20	L1900,N1900,L2100	0°/-	ADD	RADIO 4460 B25+B66	ADD
			A2	APXVAALL24_43-U-NA20	L700,L600,N600	0°/–	RMN	RADIO 4449 B71+B85	RMN
			A3	AIR 6419 B41	N2500	0°/-	ADD	-	-
BETA	119'	160°	B1	APXVLL19P_43-C-A20	L1900,N1900,L2100	0°/-	ADD	RADIO 4460 B25+B66	ADD
			B2	APXVAALL24_43-U-NA20	L700,L600,N600	0°/–	RMN	RADIO 4449 B71+B85	RMN
			B3	AIR 6419 B41	N2500	0°/-	ADD	-	-
GAMMA	119'	270°	C1	APXVLL19P_43-C-A20	L1900,N1900,L2100	0°/-	ADD	RADIO 4460 B25+B66	ADD
			C2	APXVAALL24_43-U-NA20	L700,L600,N600	0°/–	RMN	RADIO 4449 B71+B85	RMN
			C3	AIR 6419 B41	N2500	0°/-	ADD	-	-

EXISTING FIBER DISTRIBUTION / OVP BOX		EXISTING CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
–	–	(3) 1-5/8" HYBRID TRUNK 6/24 4AWG CABLES	RMV

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
-	-	(3) 1.99" HYBRID TRUNK 6/24 4AWG CABLES	ADD

3 EQUIPMENT SCHEDULES

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
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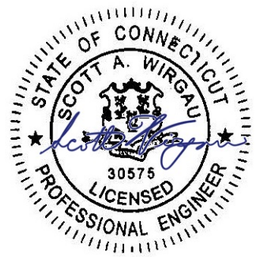


Digitally Signed: 2024-01-09

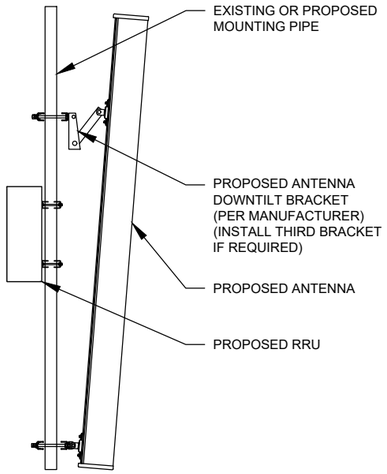
T··Mobile·

ATC PROJ. #:	14561677_G0
CUST. ID:	AMTRAK_STONINGTON3
CUST. #:	CTNL813C

ANTENNA INFORMATION & SCHEDULE

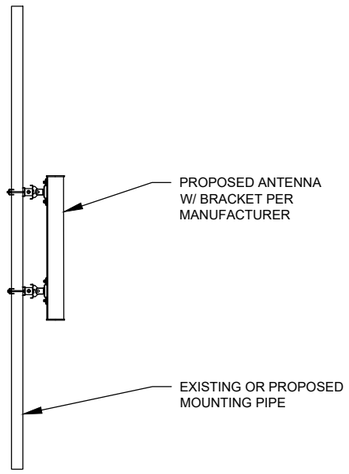
SHEET NUMBER:	REVISION:
C-401	0

EXISTING/PROPOSED MOUNTS AND/OR MOUNT MODIFICATIONS NOT SHOWN FOR CLARITY. REFER TO ANTENNA PLANS, MOUNT ANALYSES AND/OR MOUNT MODIFICATION DOCUMENTS FOR ADDITIONAL DETAIL.



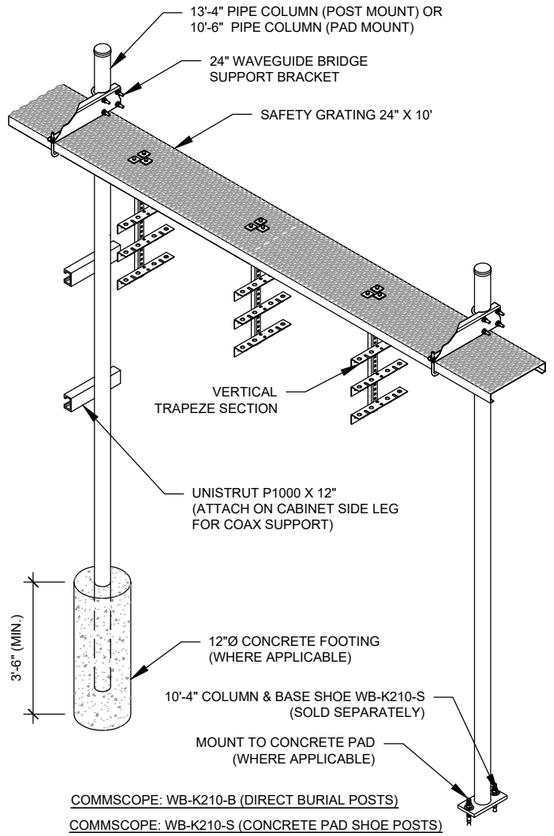
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



COMMSCOPE: WB-K210-B (DIRECT BURIAL POSTS)

COMMSCOPE: WB-K210-S (CONCRETE PAD SHOE POSTS)

CONSTRUCTION NOTE:

1. INSTALL ICE BRIDGE TO ALLOW 7 FEET CLEARANCE ABOVE GRADE TO LOWEST APPURTENANCE.
2. INSTALL PER MANUFACTURES SPECIFICATION.

3 WAVEGUIDE BRIDGE KIT

SCALE: N.T.S.

AMERICAN TOWER®

A.T. ENGINEERING SERVICES LLC

1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	1/9/2024

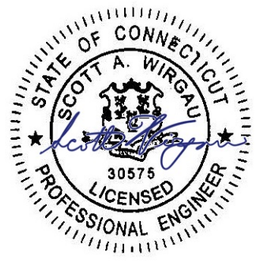
ATC SITE NUMBER:
284984

ATC SITE NAME:
PAWCATUCK CT

T-MOBILE SITE NAME:
AMTRAK_STONINGTON3

SITE ADDRESS:
166 PAWCATUCK AVE
PAWCATUCK, CT 06379

SEAL:



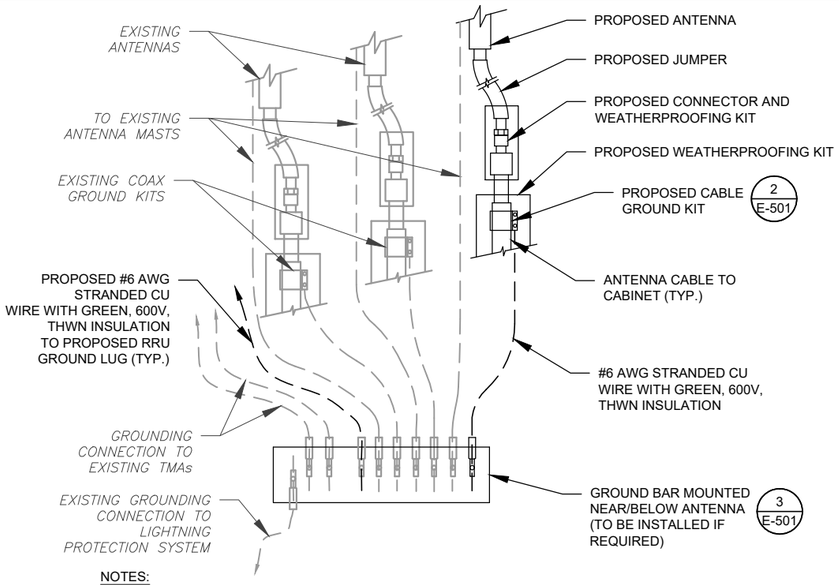
Digitally Signed: 2024-01-09

T-Mobile

ATC PROJ. #:	14561677_G0
CUST. ID:	AMTRAK_STONINGTON3
CUST. #:	CTNL813C

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

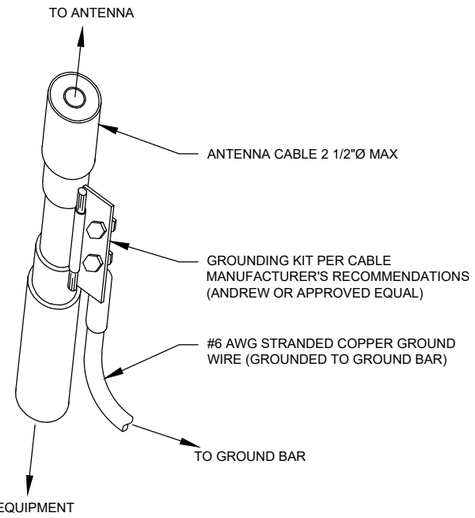


NOTES:

1. 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.
2. 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.

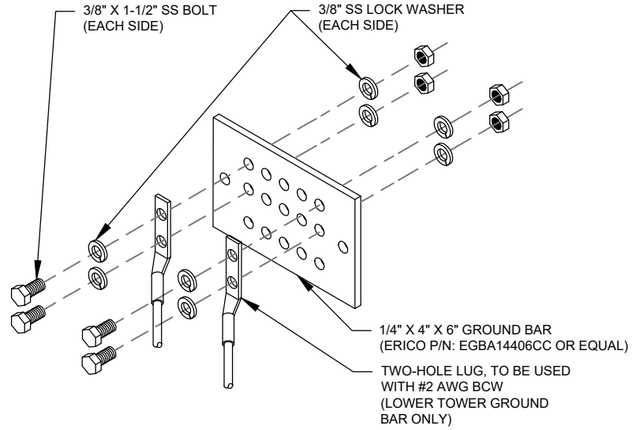


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. 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:

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

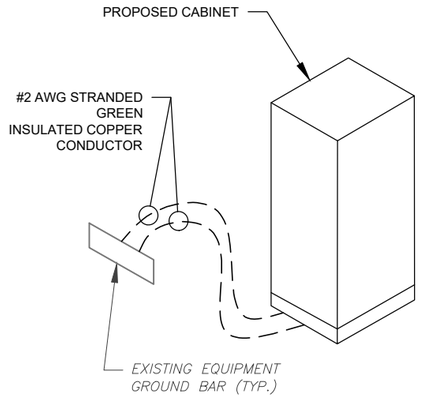
3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

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



5 CABINET GROUNDING DETAIL

SCALE: N.T.S.

ELECTRICAL NOTES:

1. 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.
2. 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.
3. 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"

6 ELECTRICAL NOTES

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	1/9/2024

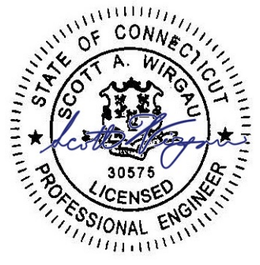
ATC SITE NUMBER:
284984

ATC SITE NAME:
PAWCATUCK CT

T-MOBILE SITE NAME:
AMTRAK_STONINGTON3

SITE ADDRESS:
166 PAWCATUCK AVE
PAWCATUCK, CT 06379

SEAL:



Digitally Signed: 2024-01-09

T-Mobile

ATC PROJ. #:	14561677_G0
CUST. ID:	AMTRAK_STONINGTON3
CUST. #:	CTNL813C

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

Proposed RAN Equipment

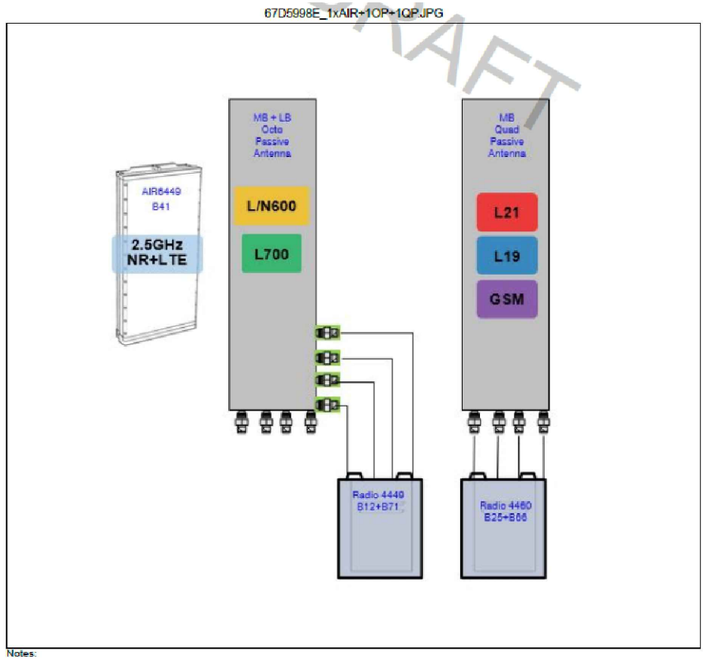
Template: 67D5D998E 6160

Enclosure	1	2
Enclosure Type	Enclosure 6160_v2 AC	B160
Baseband	BB 6630: N1900, L1900, L2100; BB 6648: N600, L600, L700; RP 6651: N2500	
Transport System	CSR IXRe V2 (Gen2)	
Hybrid Cable System	Hybrid Trunk 6/24 4AWG 50m (x3)	

RAN Scope of Work:

RF NOTES:
11/28/2023 - We plan to retain the current mount, but we need to add kickers to provide extra support for the new antennas and RRUs. The Hybrid will also need replacement, but we have to inform RF before submitting the BOM to ensure that we remove an equal number and size of Hybrids from the Live RFDS.

1 CABINET CONFIGURATION



Notes:

2 ANTENNA CONFIGURATION

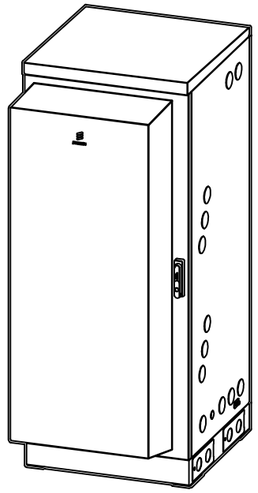
NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

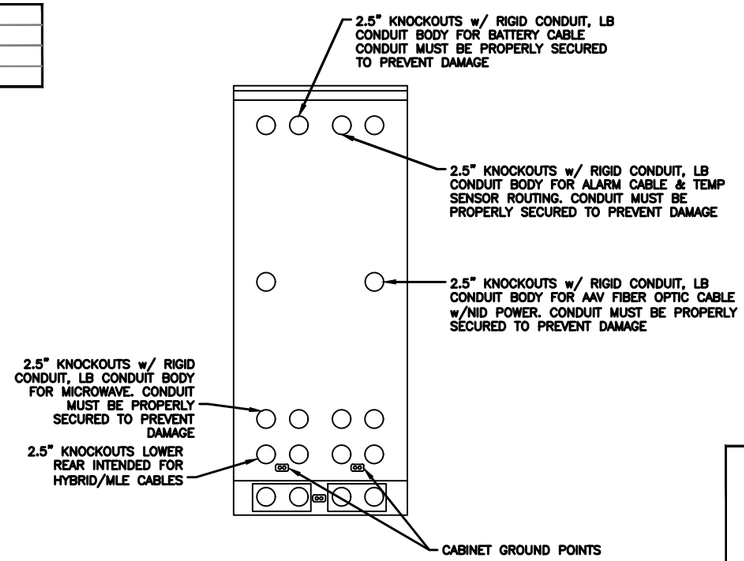
SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: 0

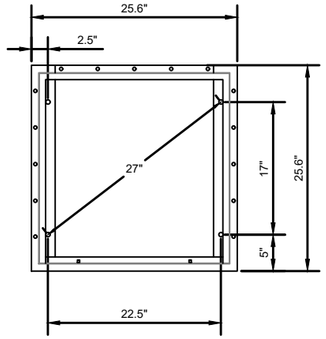
MANUFACTURER:	ERICSSON
MODEL:	6160 SITE SUPPORT CABINET
DIMENSIONS:	63" x 25.6" x 33.6" (H x W x D)
WEIGHT:	373 LBS





REAR VIEW

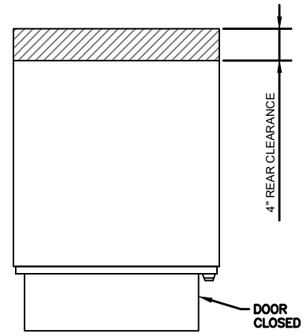
NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING

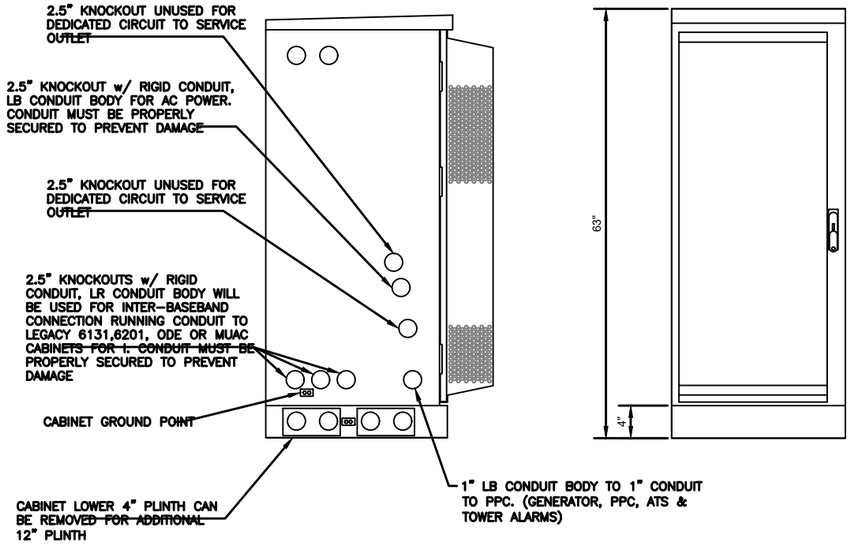


BOLT DOWN PATTERN

GROUNDING NOTE:

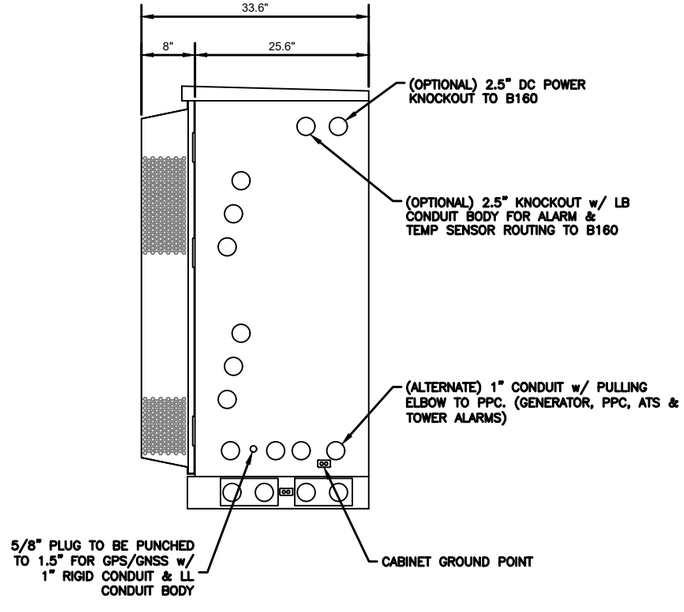
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."



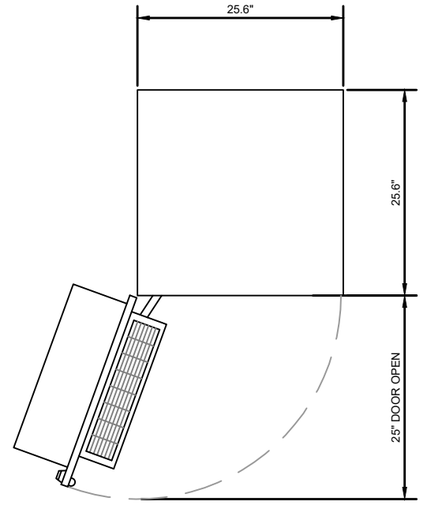


LEFT VIEW

FRONT VIEW



RIGHT VIEW



PLAN VIEW

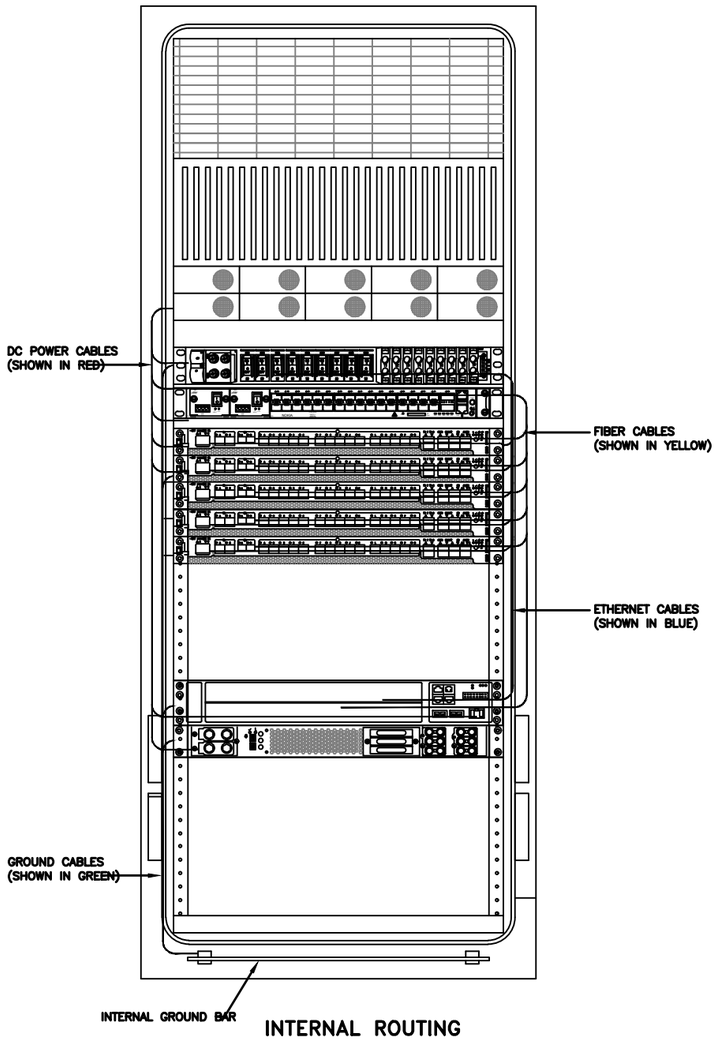
1 ERICSSON 6160 SITE SUPPORT CABINET SPECIFICATIONS

SCALE: N.T.S.

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

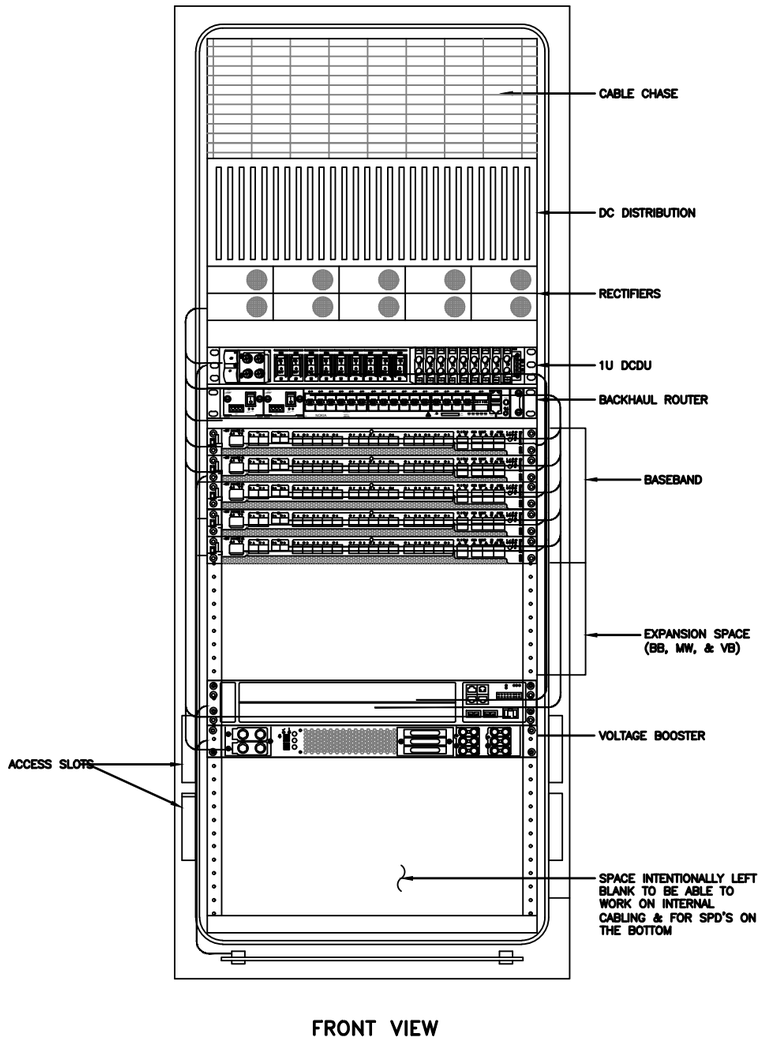
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	0



INTERNAL ROUTING
(DOOR OPEN)

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	
20	EXPANSION / LEGACY BASEBAND / VOLTAGE BOOSTER
21	
22	VOLTAGE BOOSTER
23	OPEN SPACE FOR SPD ACCESS
24	
25	



FRONT VIEW
(DOOR OPEN)

1 ERICSSON 6160 CABINET DETAILS

SCALE: N.T.S.

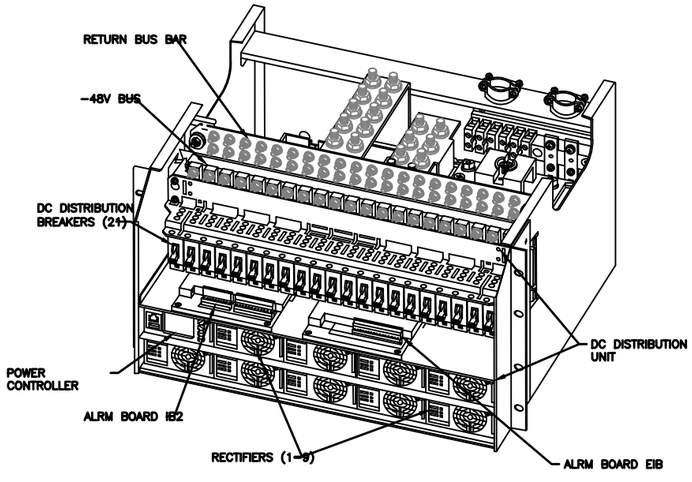
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

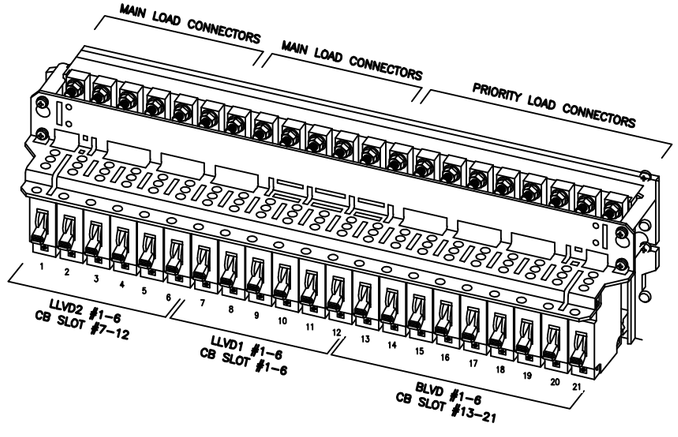
SHEET NUMBER:	REVISION:
R-603	0

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/ DCDU Prior to availability of the 4460 and 4480	w/ DCDU Later Design Post-4460 and Post-4480	w/ DCDU 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 (Air 6449s and Radio 4480s)
4		4			
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

1 ERICSSON 6160 ELECTRICAL DETAILS

SCALE: N.T.S.

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

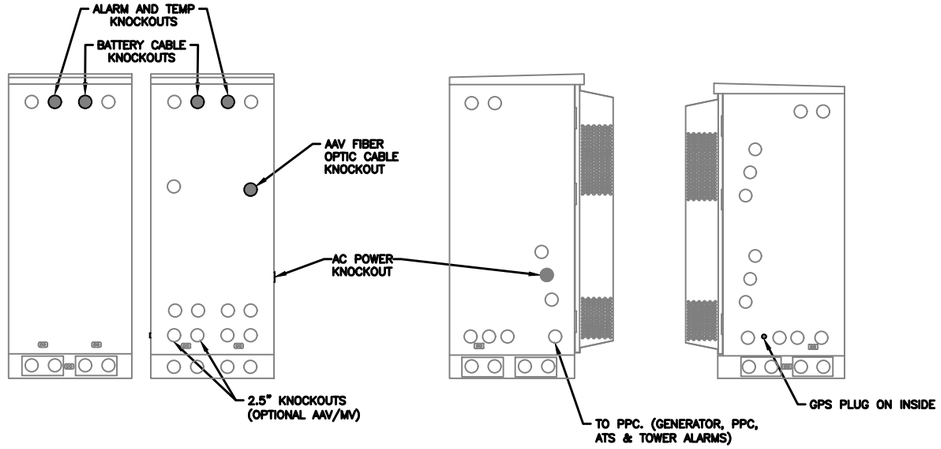
SUPPLEMENTAL

SHEET NUMBER: R-604

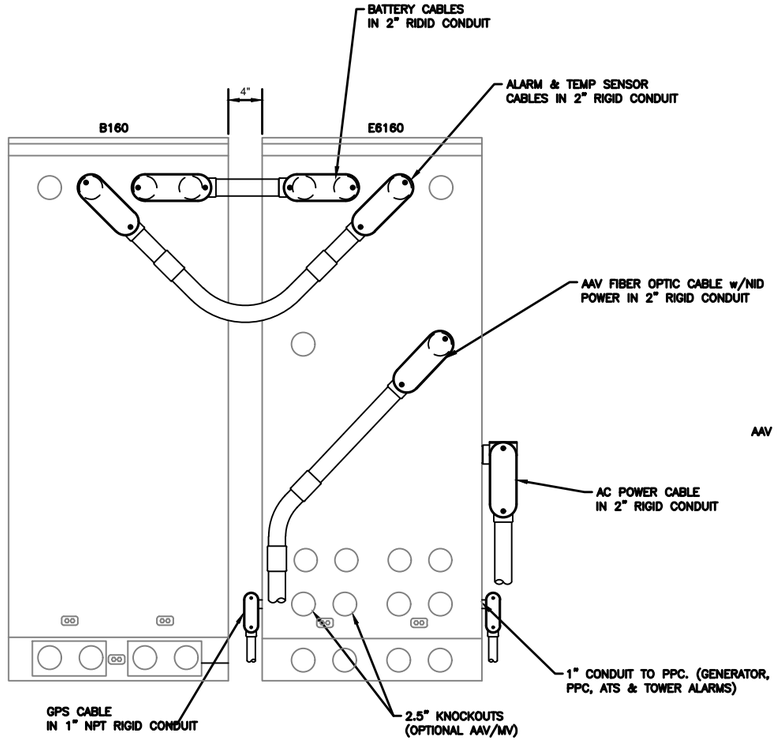
REVISION: 0

NOTE:

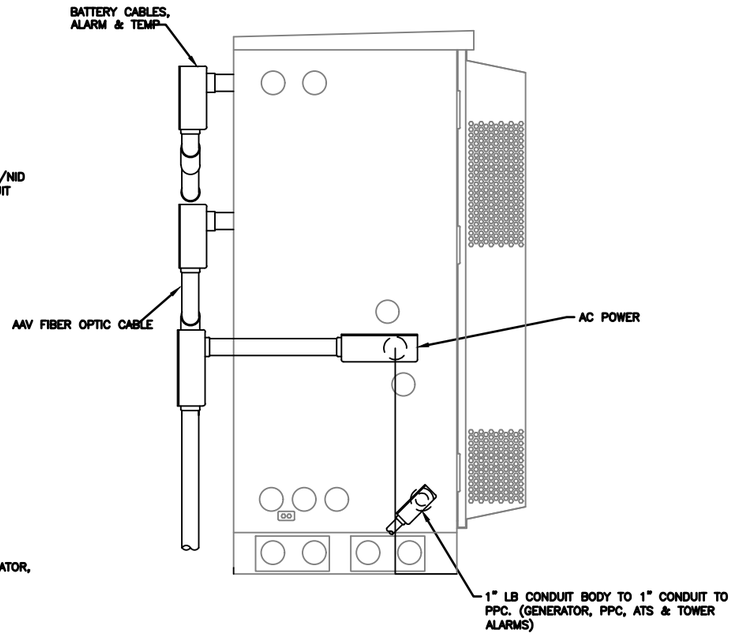
1. ALL CONDUIT AND FITTING ENTRANCES INTO CABINETS AND ENCLOSURES MUST UTILIZE MYERS OR EQUIVALENT HUBS OR SEALING WASHERS TO PREVENT WATER ENTRY/SEEPAGE INTO CABINETS AND ENCLOSURES.
2. (LIQUIDFLEX) FLEXIBLE METALLIC CONDUIT (LFMC) & ASSOCIATED FITTINGS CAN BE USED AS NEEDED BUT ONLY FOR TIGHT CONDUIT 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

1 ERICSSON 6160/B160 CONDUIT ROUTING DETAILS

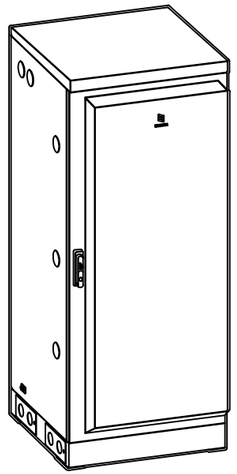
SCALE: N.T.S.

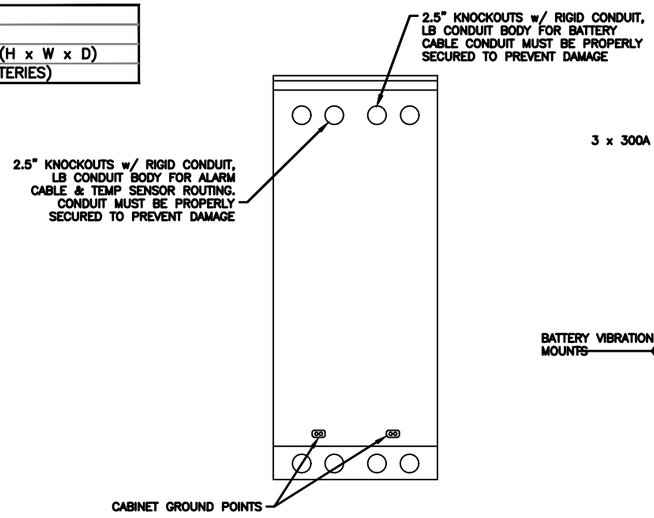
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

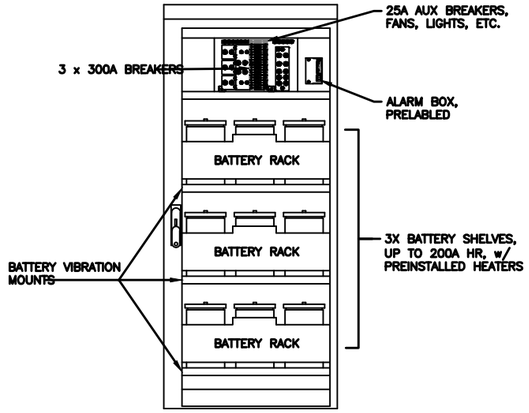
SHEET NUMBER:	REVISION:
R-605	0

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



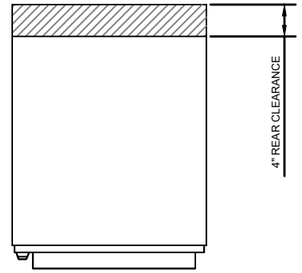


REAR VIEW



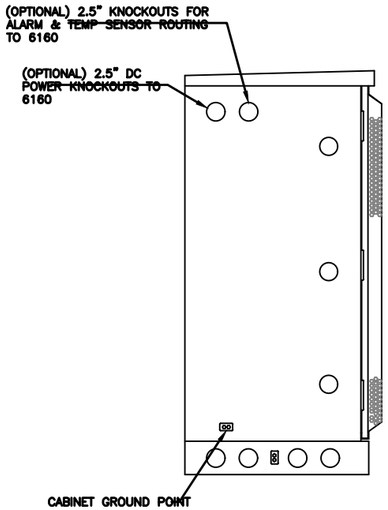
FRONT VIEW
(DOOR OPEN)

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

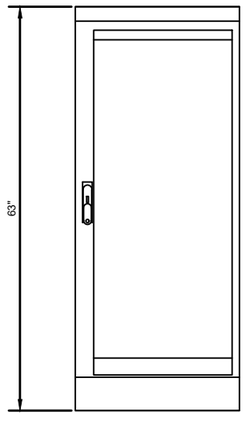


GROUNDING NOTE:

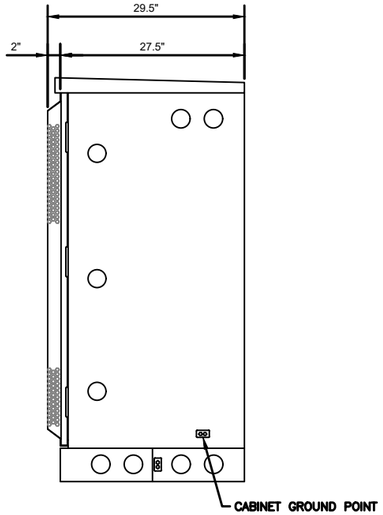
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."



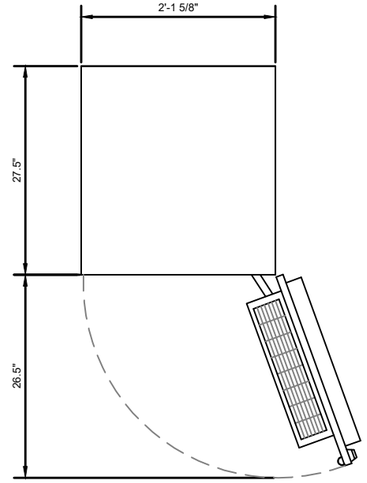
LEFT VIEW



FRONT VIEW



RIGHT VIEW



PLAN VIEW

B160 ERICSSON SITE SUPPORT BATTERY CABINET

1 ERICSSON B160 BATTERY CABINET SPECIFICATIONS

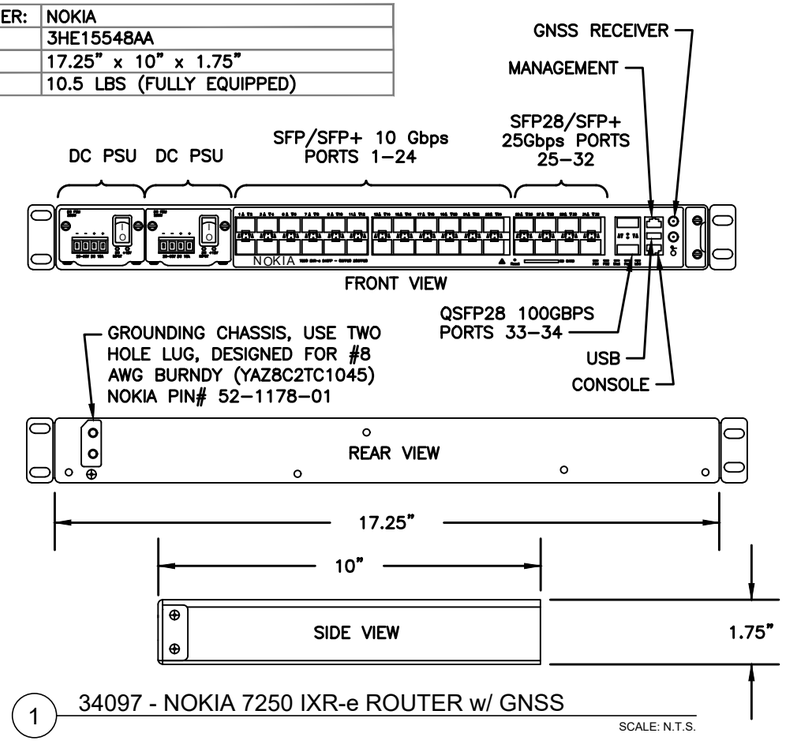
SCALE: N.T.S.

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-606	0

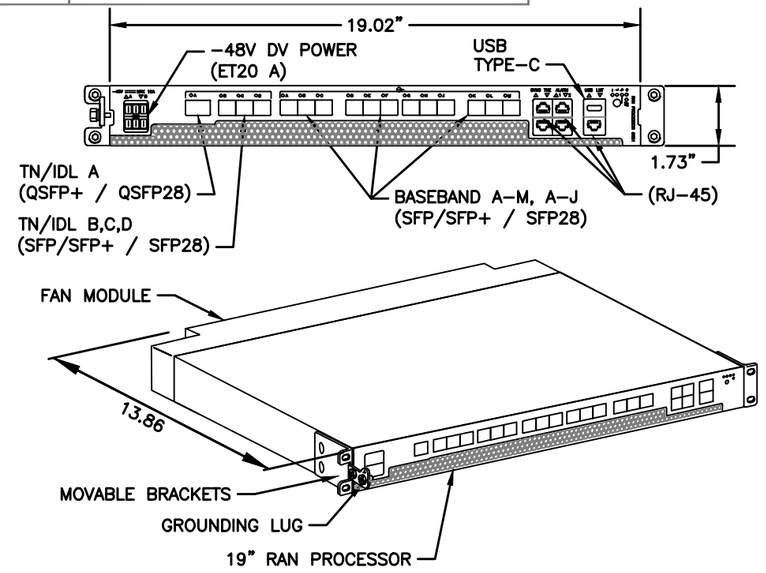
MANUFACTURER:	NOKIA
MODEL:	3HE15548AA
DIMENSIONS:	17.25" x 10" x 1.75"
WEIGHT:	10.5 LBS (FULLY EQUIPPED)



1 34097 - NOKIA 7250 IXR-e ROUTER w/ GNSS

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

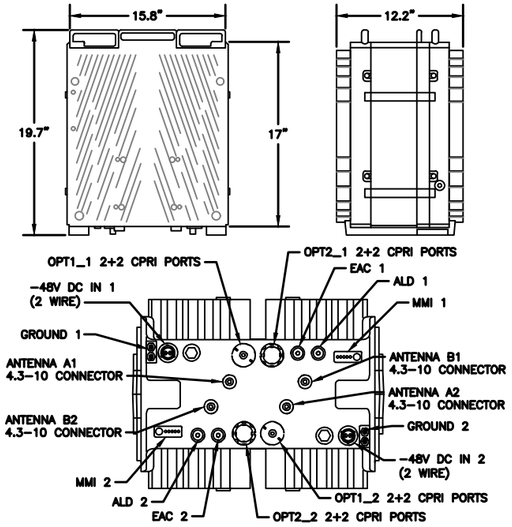
SCALE: N.T.S.

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-607	0

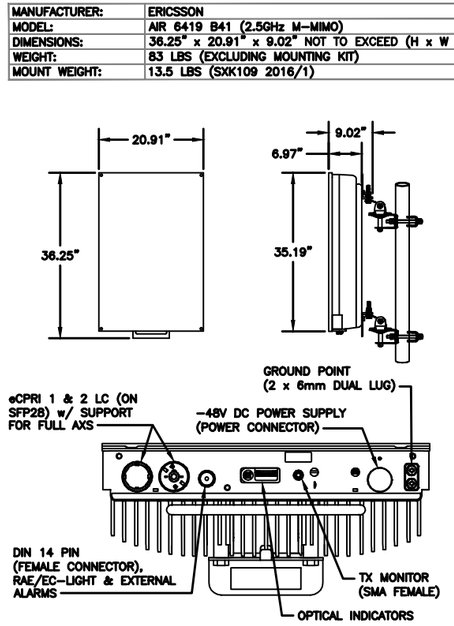
MANUFACTURER:	ERICSSON
MODEL:	4460 RADIO B2/25 B66 (KRC 161 912/3)
DIMENSIONS:	19.7" x 15.8" x 12.2" (H" x W" x D")
WEIGHT:	109 LBS
BRACKET WEIGHT:	4.8 LBS (ERS HEAVY #SXK1255993/1)

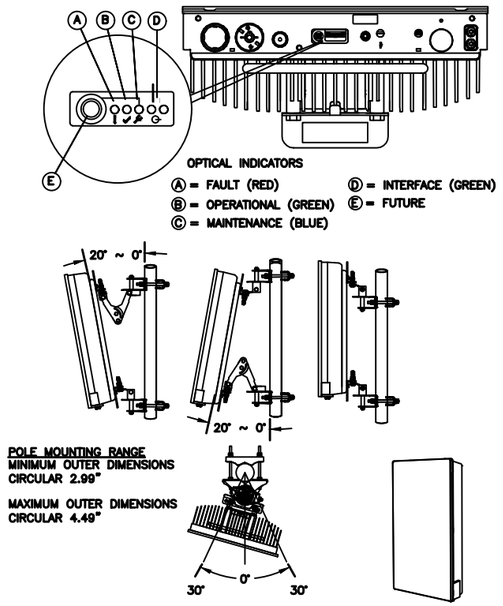


1 34373 - ERICSSON 4460 RADIO B2/25 B66

SCALE: N.T.S.

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 (SXK109 2016/1)

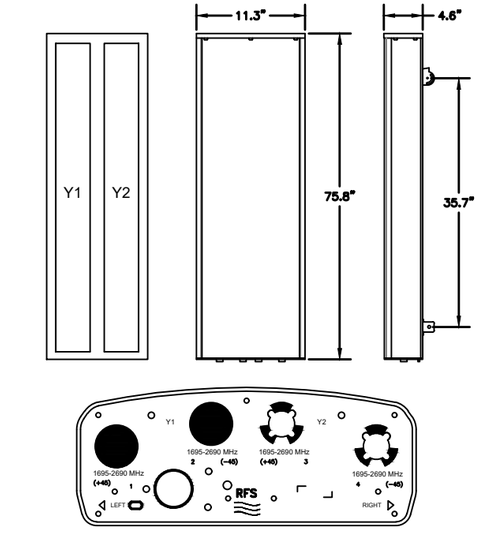




2 34552 - ERICSSON AIR 6419 BAND 41

SCALE: N.T.S.

MANUFACTURER:	RFS
MODEL:	APXVLL19P_43-C-A20
DIMENSIONS:	75.8" x 11.3" x 4.6" H x W x D
WEIGHT:	40.9 LBS
CONNECTOR TYPE:	4 x 4.3-10 FEMALE/BOTTOM + 2 AISG CONNECTORS (1 MALE, 1 FEMALE)
MOUNTING KIT WEIGHT:	7.49 LBS (APM40-2 BEAM TILT KIT)



3 34403 - RFS APXVLL19P_43-C-A20

SCALE: N.T.S.

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-608	0

Mount Analysis Report

ATC Asset Name	:	PAWCATUCK CT
ATC Asset Number	:	284984
Engineering Number	:	14561677_C8_01
Mount Elevation	:	118.5 ft
Proposed Carrier	:	T-Mobile
Carrier Site Name	:	Amtrak_Stonington3
Carrier Site Number	:	CTNL813C
Site Location	:	166 Pawcatuck Ave Pawcatuck, CT 6379 41.3605, -71.8524
County	:	New London
Date	:	December 18, 2023
Max Usage	:	84%
Analysis Result	:	Contingent Pass

Prepared By:
Joseph Swier
Structural Engineer I

Joseph Swier

STATE OF CONNECTICUT · ESHA KAUSHAL MODI · 32593 · LICENSED PROFESSIONAL ENGINEER

Esha Modi

Digitally signed by Esha Modi
Date: 2023.12.18 19:37:23 -05'00'

COA: PEC.0001553

Introduction

The purpose of this report is to summarize results of the mount analysis performed for T-Mobile at 118.5 ft.

Supporting Documents

Specifications Sheet:	PiRod Inc. T-arm Pipe Assembly, dated April 7, 2003
Previous Analysis:	ATC Project #13663614_C8_02, dated April 21, 2021
Radio Frequency Data Sheet:	RFDS ID #CTNL813C, dated November 28, 2023
Reference Photos:	Site photos from 2023

Analysis

This mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	129 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1.00'' radial ice concurrent
Codes:	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.182, S1 = 0.052
Site Class:	D - Stiff Soil - 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 provided the modifications listed below are completed:

- Install Site Pro 1 PRK-1245 XLD Monopole Reinforcement Kit. Install standoff connection point 6" back from the face connection plate and install the collar approx. 42" below the t-arm collar, as seen in the analysis.
- A structural failure was addressed with the noted contingencies. The controlling member was a Connection Plate Check with a usage of 110%.

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact MountAnalysis@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

A.T. Engineering Service, PLLC - 1 Fenton Main, Suite 300 - Cary, NC 27511 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

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 VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-609	0

CENTERLINE

EXHIBIT E

Structural Analysis Report

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	119 ft Monopole
ATC Asset Name	:	PAWCATUCK CT
ATC Asset Number	:	284984
Engineering Number	:	14561677_C3_03
Proposed Carrier	:	T-MOBILE
Carrier Site Name	:	Amtrak_Stonington3
Carrier Site Number	:	CTNL813C
Site Location	:	166 Pawcatuck Ave Pawcatuck, CT 06379 41.3605° N, 71.8524° W
County	:	New London
Date	:	December 18, 2023
Max Usage	:	46%
Analysis Result	:	Pass

Created By:

Taylor Kellner
Structural Engineer I

COA: PEC.0001553

Table of Contents

Introduction 3

Supporting Documents 3

Analysis 3

Conclusion 3

Structure Usages 4

Maximum Reactions 4

Tower Loading 5

Standard Conditions ..... Attached

Calculations ..... Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 119 ft Monopole tower to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower:	Sabre Job #36879, dated November 15, 2010
Foundation:	Sabre Job #36879, dated November 15, 2010
Geotechnical:	Terracon Project #J2105210, dated September 22, 2010

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:	129 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent
Code(s):	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	Ss = 0.18, S_1 = 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 reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **Engineering@americantower.com** Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Result
Pole Shaft	40.1%	1.2D + 1.0W	Pass
Serviceability Usage	16.2%	1.0D + 1.0W	Pass
Upper Flange Plate @ 99.0 ft	45.7%	Bolts	Pass
Base Plate @ 0.0 ft	35.0%	Rods	Pass
Mat & Pier	35.9%	Moment [Soil]	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	1,556.1	26.9	19.5

Reactions shown reflect the results from the Load Case with maximum Moment

Structure base reactions were analyzed using available geotechnical and foundation information.

T-MOBILE Final Loading

Elev (ft)	Qty	Equipment	Lines
120.4	3	Ericsson Radio 4449 B71 B85A	-
119.0	3	Ericsson AIR 6419 B41	(3) 1.99" (50.7mm) Hybrid
	3	Ericsson Radio 4460 B25+B66	
	3	T-Arm	
	3	RFS APXVAALL24 43-U-NA20	
	3	RFS APXVLL19P_43-C-A20	

Install proposed lines inside the pole shaft.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
104.0	1	Commscope RDIDC-9181-PF-48	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	1	Platform with Handrails		
	3	Fujitsu TA08025-B604		
	3	Fujitsu TA08025-B605		
	3	JMA Wireless MX08FRO665-21		

(If table breaks across pages, please see previous page for data in merged cells)

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.

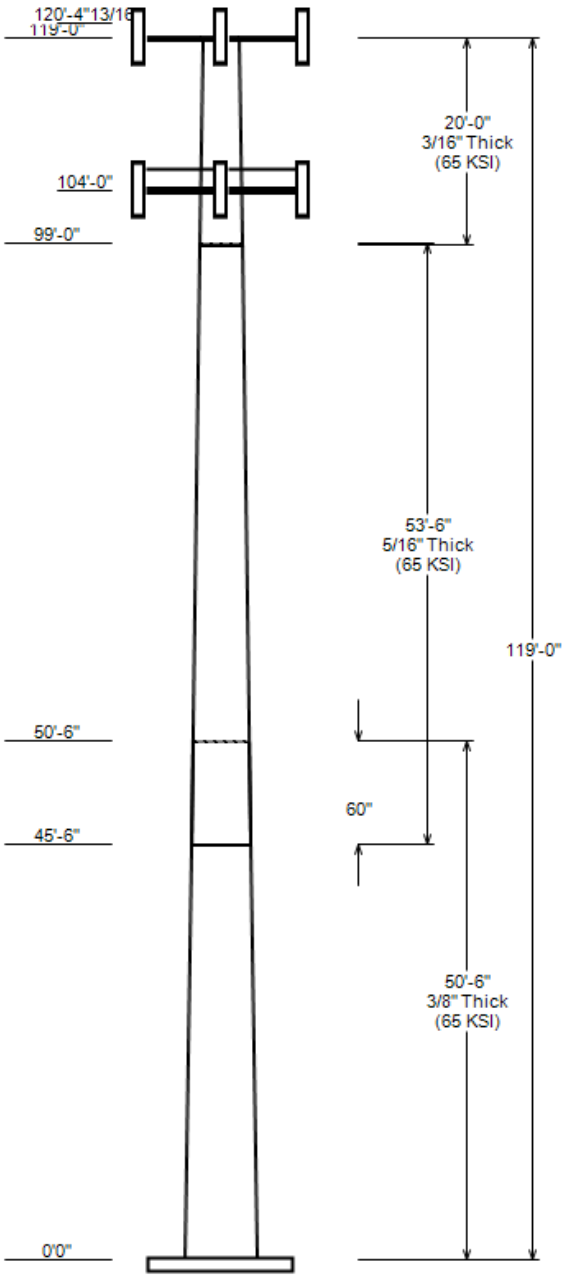
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

ANALYSIS PARAMETERS

Nominal Wind:	129 mph	**Ice Wind:**	50 mph w/ 1" ice	**Service Wind:**	60 mph
Risk Category:	II	**Exposure:**	C	**S_s:** 0.182	**S_1:** 0.052
Topo Category:	1	**Topo Factor:**	Method 1	**Topo Feature:**	
Structure Height:	119 ft	**Base Elevation:**	0.00 ft	**Structure Type:**	Taper
Base Diameter:	48.8 in	**Base Rotation:**	0°	**Taper:**	0.2220 (in/ft)



POLE SECTION PROPERTIES

Section	Length (ft)	Flat Diameter (in) Top	Flat Diameter (in) Bottom	Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
1	50.500	37.59	48.80	0.375		0.000	18 Sides	65
2	53.500	27.44	39.32	0.312	Slip Joint	60.000	18 Sides	65
3	20.000	23.00	27.44	0.188	Butt Joint	0.000	18 Sides	65

DISCRETE APPURTENANCE

Elev (ft)	Description
120.4	(3) Ericsson Radio 4449 B71 B85A
119.0	(3) Ericsson Radio 4460 B25+B66
119.0	(3) Ericsson AIR 6419 B41
119.0	(3) RFS APXVLL19P_43-C-A20
119.0	(3) Generic Round T-Arm
119.0	(3) RFS APXVAALL24 43-U-NA20
104.0	(1) Commscope RDIDC-9181-PF-48
104.0	(3) Fujitsu TA08025-B605
104.0	(3) Fujitsu TA08025-B604
104.0	(3) JMA Wireless MX08FRO665-21
104.0	(1) Generic Round Platform with Ha

LINEAR APPURTENANCE

Elev To (ft)	Description
119.0	(3) 1.99" (50.7mm) Hybrid
104.0	(1) 1.60" (40.6mm) Hybrid

GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	1556.07	26.85	19.46
0.9D + 1.0W	1547.56	20.13	19.46
1.2D + 1.0Di + 1.0Wi	358.24	36.00	4.63
1.2D + 1.0Ev + 1.0Eh	77.94	26.49	0.83
0.9D - 1.0Ev + 1.0Eh	77.42	18.42	0.83
1.0D + 1.0W	300.15	22.39	3.77

ANALYSIS PARAMETERS

Location:	New London County,CT	**Height:**	119 ft
Type and Shape:	Taper, 18 Sides	**Base Diameter:**	48.80 in
Manufacturer:	Sabre	**Top Diameter:**	23.00 in
K_d (non-service):	0.95	**Taper:**	0.2220 in/ft
K_e:	1.00	**Rotation:**	0.000°

ICE & WIND PARAMETERS

Risk Category:	II	**Design Wind Speed:**	129 mph
Exposure Category:	C	**Design Wind Speed w/ Ice:**	50 mph
Topo Factor Procedure:	Method 1	**Design Ice Thickness:**	1.00 in
Topographic Category:	1	**Service Wind Speed:**	60 mph
Crest Height:	0 ft	**HMSL:**	51.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil		**Period Based on Rayleigh Method (sec):**		1.50
T_L (sec):	6	**P:**	1	**C_s:**	0.037
S_s:	0.182	**S_1:**	0.052	**C_s Max:**	0.037
F_a:	1.600	**F_v:**	2.400	**C_s Min:**	0.030
S_{ds}:	0.194	**S_{d1}:**	0.083		

LOAD CASES

1.2D + 1.0W	129 mph Wind with No Ice
0.9D + 1.0W	129 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph Wind with 1" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

SHAFT SECTION PROPERTIES

Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in^2)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in^2)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	50.50	0.3750	65		0.00	8,757	48.80	0.000	57.64	17,075.9	21.18	130.13	37.59	50.50	44.29	7,748.0	15.91	100.23	0.2221
2-18	53.50	0.3125	65	Slip	60.00	5,971	39.32	45.500	38.69	7,438.5	20.42	125.83	27.44	99.00	26.91	2,502.0	13.72	87.81	0.2221
3-18	20.00	0.1875	65	Butt	0.00	1,014	27.44	99.000	16.22	1,522.0	24.04	146.35	23.00	119.00	13.58	892.6	19.87	122.67	0.2221
			Total Shaft Weight			**15,742**													

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
120.40	Ericsson Radio 4449 B71 B85A	3	0.80	0.000	75.00	1.650	0.50	114.19	2.204	0.50
119.00	Ericsson Radio 4460 B25+B66	3	0.80	0.000	109.00	2.564	0.67	166.60	3.251	0.67
119.00	RFS APXVAALL24 43-U-NA20	3	0.80	0.000	122.80	20.243	0.63	376.62	22.660	0.63
119.00	Generic Round T-Arm	3	0.75	0.000	450.00	9.700	0.67	858.57	15.072	0.67
119.00	RFS APXVLL19P_43-C-A20	3	0.80	0.000	40.90	8.250	0.65	140.20	10.175	0.65
119.00	Ericsson AIR 6419 B41	3	0.80	0.000	68.50	5.600	0.60	147.24	6.632	0.60
104.00	Commscope RDIDC-9181-PF-48	1	0.75	0.000	21.90	1.867	1.00	58.48	2.446	1.00
104.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	3541.10	42.912	1.00
104.00	JMA Wireless MX08FRO665-21	3	0.75	0.000	64.50	12.489	0.64	229.71	14.295	0.64
104.00	Fujitsu TA08025-B605	3	0.75	0.000	75.00	1.962	0.50	115.27	2.553	0.50
104.00	Fujitsu TA08025-B604	3	0.75	0.000	63.90	1.962	0.50	101.38	2.553	0.50
Totals	**Row Count: 11**	**29**			**5,730.70**			**10,348.92**		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg): 0.00

Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/ Row	Distance Between Rows(in)	Distance Between Cols(in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
0.00	119.00	3	1.99" (50.7mm) Hybrid	1.99	1.9	N	0	0	0	0	0	N	T-MOBILE
0.00	104.00	1	1.60" (40.6mm) Hybrid	1.6	2.34	N	0	0	0	0	0	N	DISH WIRELESS L.L.C.

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description *(Max Length: 5 ft)*	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		0.3750	48.800	57.636	17,075.90	21.18	130.13	76.5	689.2	0.0	0.0
5.00		0.3750	47.690	56.314	15,928.10	20.66	127.17	77.1	657.8	0.0	969.4
10.00		0.3750	46.579	54.993	14,832.90	20.14	124.21	77.7	627.2	0.0	946.9
15.00		0.3750	45.469	53.671	13,789.10	19.62	121.25	78.3	597.3	0.0	924.4
20.00		0.3750	44.359	52.350	12,795.40	19.09	118.29	78.9	568.1	0.0	901.9
25.00		0.3750	43.249	51.028	11,850.70	18.57	115.33	79.6	539.7	0.0	879.4
30.00		0.3750	42.138	49.707	10,953.60	18.05	112.37	80.2	512.0	0.0	856.9
35.00		0.3750	41.028	48.385	10,103.00	17.53	109.41	80.8	485.0	0.0	834.5
40.00		0.3750	39.918	47.064	9,297.60	17.01	106.45	81.4	458.8	0.0	812.0
45.00		0.3750	38.807	45.742	8,536.20	16.48	103.49	82	433.2	0.0	789.5
45.50	Bot - Section 2	0.3750	38.696	45.610	8,462.50	16.43	103.19	82.1	430.7	0.0	77.7
50.00		0.3750	37.697	44.421	7,817.60	15.96	100.53	82.6	408.5	0.0	1,274.2
50.50	Top - Section 1	0.3125	38.211	37.589	6,821.20	19.80	122.28	78.1	351.6	0.0	139.5
55.00		0.3125	37.212	36.598	6,295.80	19.23	119.08	78.8	333.2	0.0	568.0
60.00		0.3125	36.101	35.497	5,744.40	18.61	115.52	79.5	313.4	0.0	613.3
65.00		0.3125	34.991	34.396	5,226.20	17.98	111.97	80.3	294.2	0.0	594.6
70.00		0.3125	33.881	33.294	4,740.10	17.35	108.42	81	275.6	0.0	575.8
75.00		0.3125	32.771	32.193	4,285.10	16.73	104.87	81.7	257.5	0.0	557.1
80.00		0.3125	31.660	31.092	3,860.20	16.10	101.31	82.5	240.1	0.0	538.4
85.00		0.3125	30.550	29.991	3,464.40	15.47	97.76	82.6	223.4	0.0	519.6
90.00		0.3125	29.440	28.890	3,096.60	14.85	94.21	82.6	207.2	0.0	500.9
95.00		0.3125	28.329	27.788	2,755.80	14.22	90.65	82.6	191.6	0.0	482.2
99.00	Top - Section 2	0.3125	27.441	26.907	2,502.00	13.72	87.81	82.6	179.6	0.0	372.2
99.00	Bot - Section 3	0.1875	27.441	16.219	1,522.00	24.04	146.35	73.1	109.2	0.0	

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description	(Max Length: 5 ft)	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)
100.00			0.1875	27.219	16.087	1,485.10	23.83	145.17	73.4	107.5	0.0	55.0
104.00			0.1875	26.331	15.558	1,343.50	23.00	140.43	74.4	100.5	0.0	215.4
105.00			0.1875	26.109	15.426	1,309.50	22.79	139.25	74.6	98.8	0.0	52.7
110.00			0.1875	24.999	14.765	1,148.40	21.75	133.33	75.8	90.5	0.0	256.8
115.00			0.1875	23.888	14.104	1,001.00	20.70	127.40	77.1	82.5	0.0	245.6
119.00			0.1875	23.000	13.576	892.60	19.87	122.67	78	76.4	0.0	188.4
											Total:	**15,742.3**

CALCULATED FORCES

Load Case: 1.2D + 1.0W — 129 mph Wind with No Ice — 20 Iterations

Gust Response Factor: 1.10
Dead load Factor: 1.20
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-26.85	-19.46	0.00	-1,556.1	0.00	1,556.07	3,967.50	1,011.51	4,424.19	3,953.57	0	0	0.401
5.00	-25.60	-18.96	0.00	-1,458.8	0.00	1,458.75	3,907.65	988.32	4,223.66	3,803.96	0.07	-0.13	0.390
10.00	-24.38	-18.47	0.00	-1,363.9	0.00	1,363.94	3,846.34	965.12	4,027.79	3,655.73	0.27	-0.25	0.380
15.00	-23.18	-17.98	0.00	-1,271.6	0.00	1,271.59	3,783.57	941.93	3,836.56	3,508.96	0.6	-0.38	0.369
20.00	-22.02	-17.47	0.00	-1,181.7	0.00	1,181.71	3,719.35	918.74	3,649.98	3,363.77	1.06	-0.5	0.358
25.00	-20.88	-16.94	0.00	-1,094.4	0.00	1,094.38	3,653.66	895.55	3,468.06	3,220.24	1.66	-0.63	0.346
30.00	-19.78	-16.41	0.00	-1,009.7	0.00	1,009.67	3,586.51	872.36	3,290.78	3,078.48	2.39	-0.76	0.334
35.00	-18.70	-15.86	0.00	-927.6	0.00	927.65	3,517.90	849.16	3,118.16	2,938.60	3.25	-0.88	0.321
40.00	-17.65	-15.31	0.00	-848.4	0.00	848.35	3,447.83	825.97	2,950.18	2,800.69	4.24	-1.01	0.308
45.00	-16.65	-15.00	0.00	-771.8	0.00	771.80	3,376.30	802.78	2,786.86	2,664.86	5.37	-1.13	0.295
45.50	-16.54	-14.73	0.00	-764.3	0.00	764.30	3,369.06	800.46	2,770.78	2,651.39	5.49	-1.14	0.294
50.00	-14.96	-14.42	0.00	-698.0	0.00	698.04	3,300.26	779.59	2,628.19	2,528.86	6.62	-1.26	0.281
50.50	-14.78	-14.15	0.00	-690.8	0.00	690.83	2,642.68	659.69	2,258.21	2,059.93	6.75	-1.27	0.341
55.00	-14.03	-13.62	0.00	-627.2	0.00	627.17	2,594.84	642.30	2,140.71	1,968.88	8	-1.38	0.324
60.00	-13.23	-13.07	0.00	-559.1	0.00	559.08	2,540.30	622.97	2,013.84	1,869.01	9.51	-1.51	0.305
65.00	-12.46	-12.52	0.00	-493.8	0.00	493.76	2,484.30	603.64	1,890.84	1,770.62	11.17	-1.64	0.284
70.00	-11.71	-11.98	0.00	-431.2	0.00	431.17	2,426.84	584.32	1,771.72	1,673.79	12.96	-1.77	0.263
75.00	-10.99	-11.44	0.00	-371.3	0.00	371.29	2,367.92	564.99	1,656.47	1,578.64	14.87	-1.89	0.240
80.00	-10.29	-10.91	0.00	-314.1	0.00	314.09	2,307.54	545.66	1,545.10	1,485.26	16.91	-2	0.216
85.00	-9.62	-10.39	0.00	-259.5	0.00	259.53	2,228.16	526.34	1,437.60	1,382.87	19.06	-2.11	0.192
90.00	-8.98	-9.88	0.00	-207.6	0.00	207.57	2,146.35	507.01	1,333.98	1,282.68	21.32	-2.2	0.166
95.00	-8.35	-9.43	0.00	-158.2	0.00	158.16	2,064.53	487.68	1,234.24	1,186.25	23.68	-2.29	0.138
99.00	-7.87	-9.17	0.00	-120.4	0.00	120.45	1,999.08	472.22	1,157.23	1,111.83	25.62	-2.34	0.113
99.00	-7.87	-9.17	0.00	-120.4	0.00	120.45	1,067.36	284.64	700.65	599.12	25.62	-2.34	0.209
100.00	-7.80	-8.94	0.00	-111.3	0.00	111.27	1,062.22	282.32	689.28	591.34	26.11	-2.36	0.197
104.00	-3.88	-5.65	0.00	-75.5	0.00	75.50	1,041.07	273.04	644.73	560.39	28.12	-2.43	0.139
105.00	-3.81	-5.38	0.00	-69.8	0.00	69.84	1,035.64	270.72	633.83	552.70	28.63	-2.44	0.130
110.00	-3.49	-4.93	0.00	-42.9	0.00	42.93	1,007.60	259.13	580.70	514.53	31.23	-2.51	0.087
115.00	-3.17	-4.53	0.00	-18.3	0.00	18.28	978.09	247.53	529.90	476.95	33.87	-2.54	0.042
119.00	0.00	-4.38	0.00	-0.2	0.00	0.16	953.44	238.26	490.93	447.37	36.01	-2.55	0.001

CALCULATED FORCES

Load Case: 0.9D + 1.0W — 129 mph Wind with No Ice (Reduced DL) — 20 Iterations

Gust Response Factor: 1.10
Dead load Factor: 0.90
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-20.13	-19.46	0.00	-1,547.6	0.00	1,547.56	3,967.50	1,011.51	4,424.19	3,953.57	0	0	0.397
5.00	-19.18	-18.94	0.00	-1,450.3	0.00	1,450.27	3,907.65	988.32	4,223.66	3,803.96	0.07	-0.12	0.387
10.00	-18.26	-18.44	0.00	-1,355.6	0.00	1,355.57	3,846.34	965.12	4,027.79	3,655.73	0.27	-0.25	0.376
15.00	-17.35	-17.93	0.00	-1,263.4	0.00	1,263.39	3,783.57	941.93	3,836.56	3,508.96	0.6	-0.38	0.365
20.00	-16.47	-17.41	0.00	-1,173.7	0.00	1,173.74	3,719.35	918.74	3,649.98	3,363.77	1.06	-0.5	0.354
25.00	-15.61	-16.88	0.00	-1,086.7	0.00	1,086.69	3,653.66	895.55	3,468.06	3,220.24	1.65	-0.63	0.342
30.00	-14.78	-16.33	0.00	-1,002.3	0.00	1,002.31	3,586.51	872.36	3,290.78	3,078.48	2.38	-0.75	0.330
35.00	-13.96	-15.78	0.00	-920.6	0.00	920.65	3,517.90	849.16	3,118.16	2,938.60	3.23	-0.88	0.318
40.00	-13.17	-15.22	0.00	-841.8	0.00	841.75	3,447.83	825.97	2,950.18	2,800.69	4.22	-1	0.305
45.00	-12.41	-14.91	0.00	-765.6	0.00	765.63	3,376.30	802.78	2,786.86	2,664.86	5.33	-1.12	0.291
45.50	-12.33	-14.64	0.00	-758.2	0.00	758.17	3,369.06	800.46	2,770.78	2,651.39	5.45	-1.14	0.290
50.00	-11.14	-14.33	0.00	-692.3	0.00	692.31	3,300.26	779.59	2,628.19	2,528.86	6.58	-1.25	0.277
50.50	-11.00	-14.06	0.00	-685.2	0.00	685.15	2,642.68	659.69	2,258.21	2,059.93	6.71	-1.26	0.337
55.00	-10.44	-13.53	0.00	-621.9	0.00	621.89	2,594.84	642.30	2,140.71	1,968.88	7.95	-1.37	0.320
60.00	-9.84	-12.97	0.00	-554.3	0.00	554.27	2,540.30	622.97	2,013.84	1,869.01	9.45	-1.5	0.301
65.00	-9.26	-12.42	0.00	-489.4	0.00	489.42	2,484.30	603.64	1,890.84	1,770.62	11.09	-1.63	0.281
70.00	-8.69	-11.88	0.00	-427.3	0.00	427.31	2,426.84	584.32	1,771.72	1,673.79	12.87	-1.75	0.259
75.00	-8.15	-11.34	0.00	-367.9	0.00	367.93	2,367.92	564.99	1,656.47	1,578.64	14.77	-1.87	0.237
80.00	-7.63	-10.81	0.00	-311.2	0.00	311.22	2,307.54	545.66	1,545.10	1,485.26	16.79	-1.99	0.213
85.00	-7.12	-10.30	0.00	-257.2	0.00	257.16	2,228.16	526.34	1,437.60	1,382.87	18.93	-2.09	0.190
90.00	-6.64	-9.79	0.00	-205.7	0.00	205.68	2,146.35	507.01	1,333.98	1,282.68	21.17	-2.19	0.164
95.00	-6.18	-9.34	0.00	-156.7	0.00	156.73	2,064.53	487.68	1,234.24	1,186.25	23.51	-2.27	0.135
99.00	-5.82	-9.09	0.00	-119.4	0.00	119.38	1,999.08	472.22	1,157.23	1,111.83	25.43	-2.33	0.111
99.00	-5.82	-9.09	0.00	-119.4	0.00	119.38	1,067.36	284.64	700.65	599.12	25.43	-2.33	0.206
100.00	-5.76	-8.86	0.00	-110.3	0.00	110.29	1,062.22	282.32	689.28	591.34	25.92	-2.34	0.193
104.00	-2.85	-5.61	0.00	-74.9	0.00	74.87	1,041.07	273.04	644.73	560.39	27.92	-2.41	0.137
105.00	-2.81	-5.34	0.00	-69.3	0.00	69.26	1,035.64	270.72	633.83	552.70	28.42	-2.43	0.128
110.00	-2.56	-4.89	0.00	-42.6	0.00	42.57	1,007.60	259.13	580.70	514.53	31	-2.49	0.086
115.00	-2.33	-4.49	0.00	-18.1	0.00	18.13	978.09	247.53	529.90	476.95	33.62	-2.52	0.041
119.00	0.00	-4.38	0.00	-0.2	0.00	0.16	953.44	238.26	490.93	447.37	35.74	-2.53	0.001

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph Wind with 1" Radial Ice — 19 Iterations

Gust Response Factor: 1.10
Dead load Factor: 1.20
Wind Load Factor: 1.00

Ice Dead Load Factor: 1.00

Ice Importance Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-36.00	-4.63	0.00	-358.2	0.00	358.24	3,967.50	1,011.51	4,424.19	3,953.57	0	0	0.100
5.00	-34.56	-4.51	0.00	-335.1	0.00	335.09	3,907.65	988.32	4,223.66	3,803.96	0.02	-0.03	0.097
10.00	-33.11	-4.38	0.00	-312.6	0.00	312.56	3,846.34	965.12	4,027.79	3,655.73	0.06	-0.06	0.094
15.00	-31.69	-4.26	0.00	-290.6	0.00	290.65	3,783.57	941.93	3,836.56	3,508.96	0.14	-0.09	0.091
20.00	-30.29	-4.13	0.00	-269.4	0.00	269.36	3,719.35	918.74	3,649.98	3,363.77	0.24	-0.12	0.088
25.00	-28.92	-4.00	0.00	-248.7	0.00	248.71	3,653.66	895.55	3,468.06	3,220.24	0.38	-0.14	0.085
30.00	-27.58	-3.86	0.00	-228.7	0.00	228.72	3,586.51	872.36	3,290.78	3,078.48	0.55	-0.17	0.082
35.00	-26.26	-3.72	0.00	-209.4	0.00	209.42	3,517.90	849.16	3,118.16	2,938.60	0.74	-0.2	0.079
40.00	-24.98	-3.58	0.00	-190.8	0.00	190.82	3,447.83	825.97	2,950.18	2,800.69	0.97	-0.23	0.075
45.00	-23.73	-3.50	0.00	-172.9	0.00	172.92	3,376.30	802.78	2,786.86	2,664.86	1.23	-0.26	0.072
45.50	-23.60	-3.43	0.00	-171.2	0.00	171.17	3,369.06	800.46	2,770.78	2,651.39	1.25	-0.26	0.072
50.00	-21.80	-3.35	0.00	-155.7	0.00	155.74	3,300.26	779.59	2,628.19	2,528.86	1.51	-0.29	0.068
50.50	-21.60	-3.28	0.00	-154.1	0.00	154.06	2,642.68	659.69	2,258.21	2,059.93	1.54	-0.29	0.083
55.00	-20.65	-3.14	0.00	-139.3	0.00	139.30	2,594.84	642.30	2,140.71	1,968.88	1.82	-0.31	0.079
60.00	-19.62	-3.00	0.00	-123.6	0.00	123.57	2,540.30	622.97	2,013.84	1,869.01	2.17	-0.34	0.074
65.00	-18.61	-2.86	0.00	-108.6	0.00	108.57	2,484.30	603.64	1,890.84	1,770.62	2.54	-0.37	0.069
70.00	-17.64	-2.72	0.00	-94.3	0.00	94.27	2,426.84	584.32	1,771.72	1,673.79	2.94	-0.4	0.064
75.00	-16.69	-2.58	0.00	-80.7	0.00	80.68	2,367.92	564.99	1,656.47	1,578.64	3.38	-0.42	0.058
80.00	-15.78	-2.44	0.00	-67.8	0.00	67.79	2,307.54	545.66	1,545.10	1,485.26	3.83	-0.45	0.052
85.00	-14.89	-2.30	0.00	-55.6	0.00	55.60	2,228.16	526.34	1,437.60	1,382.87	4.32	-0.47	0.047
90.00	-14.03	-2.17	0.00	-44.1	0.00	44.09	2,146.35	507.01	1,333.98	1,282.68	4.82	-0.49	0.041
95.00	-13.20	-2.05	0.00	-33.3	0.00	33.26	2,064.53	487.68	1,234.24	1,186.25	5.35	-0.51	0.034
99.00	-12.55	-1.98	0.00	-25.1	0.00	25.07	1,999.08	472.22	1,157.23	1,111.83	5.78	-0.52	0.029
99.00	-12.55	-1.98	0.00	-25.1	0.00	25.07	1,067.36	284.64	700.65	599.12	5.78	-0.52	0.054
100.00	-12.44	-1.92	0.00	-23.1	0.00	23.10	1,062.22	282.32	689.28	591.34	5.89	-0.52	0.051
104.00	-6.83	-1.20	0.00	-15.4	0.00	15.43	1,041.07	273.04	644.73	560.39	6.34	-0.54	0.034
105.00	-6.72	-1.12	0.00	-14.2	0.00	14.23	1,035.64	270.72	633.83	552.70	6.45	-0.54	0.032
110.00	-6.20	-1.00	0.00	-8.6	0.00	8.61	1,007.60	259.13	580.70	514.53	7.03	-0.56	0.023
115.00	-5.69	-0.89	0.00	-3.6	0.00	3.60	978.09	247.53	529.90	476.95	7.61	-0.56	0.013
119.00	0.00	-0.84	0.00	-0.0	0.00	0.03	953.44	238.26	490.93	447.37	8.08	-0.56	0.000

CALCULATED FORCES

Load Case: 1.0D + 1.0W — 60 mph Wind with No Ice — 19 Iterations

Gust Response Factor: 1.10
Dead load Factor: 1.00
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-22.39	-3.77	0.00	-300.2	0.00	300.15	3,967.50	1,011.51	4,424.19	3,953.57	0	0	0.082
5.00	-21.38	-3.67	0.00	-281.3	0.00	281.32	3,907.65	988.32	4,223.66	3,803.96	0.01	-0.02	0.079
10.00	-20.39	-3.57	0.00	-263.0	0.00	262.98	3,846.34	965.12	4,027.79	3,655.73	0.05	-0.05	0.077
15.00	-19.43	-3.47	0.00	-245.1	0.00	245.13	3,783.57	941.93	3,836.56	3,508.96	0.12	-0.07	0.075
20.00	-18.48	-3.37	0.00	-227.8	0.00	227.76	3,719.35	918.74	3,649.98	3,363.77	0.21	-0.1	0.073
25.00	-17.56	-3.27	0.00	-210.9	0.00	210.90	3,653.66	895.55	3,468.06	3,220.24	0.32	-0.12	0.070
30.00	-16.67	-3.17	0.00	-194.5	0.00	194.54	3,586.51	872.36	3,290.78	3,078.48	0.46	-0.15	0.068
35.00	-15.79	-3.06	0.00	-178.7	0.00	178.71	3,517.90	849.16	3,118.16	2,938.60	0.63	-0.17	0.065
40.00	-14.94	-2.95	0.00	-163.4	0.00	163.42	3,447.83	825.97	2,950.18	2,800.69	0.82	-0.19	0.063
45.00	-14.11	-2.89	0.00	-148.6	0.00	148.65	3,376.30	802.78	2,786.86	2,664.86	1.03	-0.22	0.060
45.50	-14.02	-2.84	0.00	-147.2	0.00	147.21	3,369.06	800.46	2,770.78	2,651.39	1.06	-0.22	0.060
50.00	-12.71	-2.78	0.00	-134.4	0.00	134.43	3,300.26	779.59	2,628.19	2,528.86	1.28	-0.24	0.057
50.50	-12.57	-2.73	0.00	-133.0	0.00	133.04	2,642.68	659.69	2,258.21	2,059.93	1.3	-0.24	0.069
55.00	-11.97	-2.62	0.00	-120.8	0.00	120.77	2,594.84	642.30	2,140.71	1,968.88	1.54	-0.27	0.066
60.00	-11.31	-2.52	0.00	-107.6	0.00	107.65	2,540.30	622.97	2,013.84	1,869.01	1.83	-0.29	0.062
65.00	-10.68	-2.41	0.00	-95.1	0.00	95.06	2,484.30	603.64	1,890.84	1,770.62	2.15	-0.32	0.058
70.00	-10.06	-2.31	0.00	-83.0	0.00	83.01	2,426.84	584.32	1,771.72	1,673.79	2.5	-0.34	0.054
75.00	-9.46	-2.20	0.00	-71.5	0.00	71.48	2,367.92	564.99	1,656.47	1,578.64	2.87	-0.36	0.049
80.00	-8.88	-2.10	0.00	-60.5	0.00	60.46	2,307.54	545.66	1,545.10	1,485.26	3.26	-0.39	0.045
85.00	-8.32	-2.00	0.00	-50.0	0.00	49.96	2,228.16	526.34	1,437.60	1,382.87	3.67	-0.41	0.040
90.00	-7.78	-1.90	0.00	-40.0	0.00	39.96	2,146.35	507.01	1,333.98	1,282.68	4.11	-0.42	0.035
95.00	-7.26	-1.81	0.00	-30.4	0.00	30.45	2,064.53	487.68	1,234.24	1,186.25	4.56	-0.44	0.029
99.00	-6.86	-1.77	0.00	-23.2	0.00	23.19	1,999.08	472.22	1,157.23	1,111.83	4.94	-0.45	0.024
99.00	-6.86	-1.77	0.00	-23.2	0.00	23.19	1,067.36	284.64	700.65	599.12	4.94	-0.45	0.045
100.00	-6.79	-1.72	0.00	-21.4	0.00	21.43	1,062.22	282.32	689.28	591.34	5.03	-0.45	0.043
104.00	-3.42	-1.09	0.00	-14.5	0.00	14.54	1,041.07	273.04	644.73	560.39	5.42	-0.47	0.029
105.00	-3.36	-1.04	0.00	-13.4	0.00	13.45	1,035.64	270.72	633.83	552.70	5.52	-0.47	0.028
110.00	-3.08	-0.95	0.00	-8.3	0.00	8.27	1,007.60	259.13	580.70	514.53	6.02	-0.48	0.019
115.00	-2.80	-0.87	0.00	-3.5	0.00	3.52	978.09	247.53	529.90	476.95	6.53	-0.49	0.010
119.00	0.00	-0.85	0.00	-0.0	0.00	0.03	953.44	238.26	490.93	447.37	6.94	-0.49	0.000

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

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

Spectral Response Acceleration for Short Period (S_S):	0.182
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.052
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}):	0.194
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.083
Seismic Response Coefficient (C_s):	0.037
Upper Limit C_S:	0.037
Lower Limit C_S:	0.030
Period based on Rayleigh Method (sec):	1.500
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.500
Total Unfactored Dead Load:	22.390 k
Seismic Base Shear (E):	0.830 k

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
28	117	211	270	0.020	17	262
27	112.5	274	331	0.025	21	340
26	107.5	285	321	0.024	20	353
25	104.5	58	63	0.005	4	72
24	102	248	258	0.020	16	307
23	99.5	63	63	0.005	4	78
22	97	404	390	0.030	24	501
21	92.5	522	469	0.036	29	647
20	87.5	541	447	0.034	28	670
19	82.5	560	424	0.032	26	694
18	77.5	579	399	0.030	25	717
17	72.5	597	372	0.028	23	740
16	67.5	616	345	0.026	22	763
15	62.5	635	317	0.024	20	786
14	57.5	654	288	0.022	18	810
13	52.75	604	234	0.018	15	748
12	50.25	144	52	0.004	3	178
11	47.75	1,310	436	0.033	27	1,623
10	45.25	82	25	0.002	2	101
9	42.5	830	232	0.018	14	1,028
8	37.5	852	197	0.015	12	1,056
7	32.5	875	163	0.012	10	1,084
6	27.5	897	130	0.010	8	1,111
5	22.5	920	99	0.008	6	1,139
4	17.5	942	69	0.005	4	1,167
3	12.5	965	43	0.003	3	1,195
2	7.5	987	20	0.002	1	1,223
1	2.5	1,010	4	0.000	0	1,251
Ericsson Radio 4449 B71 B85A	119	225	295	0.022	18	279
Ericsson Radio 4460 B25+B66	119	327	429	0.032	27	405
Ericsson AIR 6419 B41	119	206	270	0.020	17	255
RFS APXVLL19P_43-C-A20	119	123	161	0.012	10	152
Generic Round T-Arm	119	1,350	1,771	0.134	111	1,672
RFS APXVAALL24 43-U-NA20	119	368	483	0.036	30	456
Commscope RDIDC-9181-PF-48	104	22	23	0.002	1	27
Fujitsu TA08025-B604	104	192	205	0.016	13	237
Fujitsu TA08025-B605	104	225	241	0.018	15	279
JMA Wireless MX08FRO665-21	104	194	207	0.016	13	240

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
Generic Round Platform with Handrails	104	2,500	2,679	0.203	167	3,097
	Totals:	**22,395**	**13,227**	**1.000**	**826**	**27,743**

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
28	117	211	270	0.020	17	182
27	112.5	274	331	0.025	21	236
26	107.5	285	321	0.024	20	246
25	104.5	58	63	0.005	4	50
24	102	248	258	0.020	16	213
23	99.5	63	63	0.005	4	54
22	97	404	390	0.030	24	348
21	92.5	522	469	0.036	29	450
20	87.5	541	447	0.034	28	466
19	82.5	560	424	0.032	26	482
18	77.5	579	399	0.030	25	498
17	72.5	597	372	0.028	23	514
16	67.5	616	345	0.026	22	531
15	62.5	635	317	0.024	20	547
14	57.5	654	288	0.022	18	563
13	52.75	604	234	0.018	15	520
12	50.25	144	52	0.004	3	124
11	47.75	1,310	436	0.033	27	1,128
10	45.25	82	25	0.002	2	70
9	42.5	830	232	0.018	14	715
8	37.5	852	197	0.015	12	734
7	32.5	875	163	0.012	10	753
6	27.5	897	130	0.010	8	773
5	22.5	920	99	0.008	6	792
4	17.5	942	69	0.005	4	811
3	12.5	965	43	0.003	3	831
2	7.5	987	20	0.002	1	850
1	2.5	1,010	4	0.000	0	869
Ericsson Radio 4449 B71 B85A	119	225	295	0.022	18	194
Ericsson Radio 4460 B25+B66	119	327	429	0.032	27	282
Ericsson AIR 6419 B41	119	206	270	0.020	17	177
RFS APXVLL19P_43-C-A20	119	123	161	0.012	10	106
Generic Round T-Arm	119	1,350	1,771	0.134	111	1,163
RFS APXVAALL24 43-U-NA20	119	368	483	0.036	30	317
Commscope RDIDC-9181-PF-48	104	22	23	0.002	1	19
Fujitsu TA08025-B604	104	192	205	0.016	13	165
Fujitsu TA08025-B605	104	225	241	0.018	15	194
JMA Wireless MX08FRO665-21	104	194	207	0.016	13	167
Generic Round Platform with Handrails	104	2,500	2,679	0.203	167	2,153
	Totals:	**22,395**	**13,227**	**1.000**	**826**	**19,286**

1.2D + 1.0Ev + 1.0Eh **Seismic**

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	-26.49	-0.83	0.00	-77.94	0.00	77.94	3,967.50	1,011.51	4,424	3,953.57	0.00	0.00	0.03
5.00	-25.27	-0.83	0.00	-73.81	0.00	73.81	3,907.65	988.32	4,224	3,803.96	0.00	-0.01	0.03
10.00	-24.07	-0.83	0.00	-69.67	0.00	69.67	3,846.34	965.12	4,028	3,655.73	0.01	-0.01	0.03
15.00	-22.91	-0.83	0.00	-65.53	0.00	65.53	3,783.57	941.93	3,837	3,508.96	0.03	-0.02	0.03
20.00	-21.77	-0.82	0.00	-61.41	0.00	61.41	3,719.35	918.74	3,650	3,363.77	0.05	-0.03	0.02
25.00	-20.66	-0.82	0.00	-57.30	0.00	57.30	3,653.66	895.55	3,468	3,220.24	0.08	-0.03	0.02
30.00	-19.57	-0.81	0.00	-53.22	0.00	53.22	3,586.51	872.36	3,291	3,078.48	0.12	-0.04	0.02

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
35.00	-18.52	-0.80	0.00	-49.19	0.00	49.19	3,517.90	849.16	3,118	2,938.60	0.17	-0.05	0.02
40.00	-17.49	-0.78	0.00	-45.21	0.00	45.21	3,447.83	825.97	2,950	2,800.69	0.22	-0.05	0.02
45.00	-17.39	-0.78	0.00	-41.30	0.00	41.30	3,376.30	802.78	2,787	2,664.86	0.28	-0.06	0.02
45.50	-15.76	-0.75	0.00	-40.91	0.00	40.91	3,369.06	800.46	2,771	2,651.39	0.28	-0.06	0.02
50.00	-15.59	-0.75	0.00	-37.52	0.00	37.52	3,300.26	779.59	2,628	2,528.86	0.34	-0.07	0.02
50.50	-14.84	-0.74	0.00	-37.14	0.00	37.14	2,642.68	659.69	2,258	2,059.93	0.35	-0.07	0.02
55.00	-14.03	-0.72	0.00	-33.83	0.00	33.83	2,594.84	642.30	2,141	1,968.88	0.41	-0.07	0.02
60.00	-13.24	-0.70	0.00	-30.23	0.00	30.23	2,540.30	622.97	2,014	1,869.01	0.49	-0.08	0.02
65.00	-12.48	-0.68	0.00	-26.73	0.00	26.73	2,484.30	603.64	1,891	1,770.62	0.58	-0.09	0.02
70.00	-11.74	-0.66	0.00	-23.33	0.00	23.33	2,426.84	584.32	1,772	1,673.79	0.67	-0.09	0.02
75.00	-11.02	-0.63	0.00	-20.05	0.00	20.05	2,367.92	564.99	1,656	1,578.64	0.78	-0.10	0.02
80.00	-10.33	-0.60	0.00	-16.89	0.00	16.89	2,307.54	545.66	1,545	1,485.26	0.88	-0.11	0.02
85.00	-9.66	-0.58	0.00	-13.87	0.00	13.87	2,228.16	526.34	1,438	1,382.87	1.00	-0.11	0.01
90.00	-9.01	-0.55	0.00	-10.99	0.00	10.99	2,146.35	507.01	1,334	1,282.68	1.12	-0.12	0.01
95.00	-8.51	-0.52	0.00	-8.26	0.00	8.26	2,064.53	487.68	1,234	1,186.25	1.24	-0.12	0.01
99.00	-8.43	-0.52	0.00	-6.17	0.00	6.17	1,067.36	284.64	701	599.12	1.34	-0.12	0.02
99.00	-8.43	-0.52	0.00	-6.17	0.00	6.17	1,999.08	472.22	1,157	1,111.83	1.34	-0.12	0.01
100.00	-8.13	-0.50	0.00	-5.65	0.00	5.65	1,062.22	282.32	689	591.34	1.37	-0.12	0.02
104.00	-4.17	-0.28	0.00	-3.64	0.00	3.64	1,041.07	273.04	645	560.39	1.48	-0.13	0.01
105.00	-3.82	-0.26	0.00	-3.36	0.00	3.36	1,035.64	270.72	634	552.70	1.50	-0.13	0.01
110.00	-3.48	-0.24	0.00	-2.07	0.00	2.07	1,007.60	259.13	581	514.53	1.64	-0.13	0.01
115.00	-3.22	-0.22	0.00	-0.88	0.00	0.88	978.09	247.53	530	476.95	1.78	-0.13	0.01
119.00	0.00	-0.21	0.00	0.00	0.00	0.00	953.44	238.26	491	447.37	1.89	-0.13	0.00

0.9D - 1.0Ev + 1.0Eh **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	-18.42	-0.83	0.00	-77.42	0.00	77.42	3,967.50	1,011.51	4,424	3,953.57	0.00	0.00	0.02
5.00	-17.57	-0.83	0.00	-73.29	0.00	73.29	3,907.65	988.32	4,224	3,803.96	0.00	-0.01	0.02
10.00	-16.74	-0.83	0.00	-69.16	0.00	69.16	3,846.34	965.12	4,028	3,655.73	0.01	-0.01	0.02
15.00	-15.92	-0.82	0.00	-65.03	0.00	65.03	3,783.57	941.93	3,837	3,508.96	0.03	-0.02	0.02
20.00	-15.13	-0.82	0.00	-60.91	0.00	60.91	3,719.35	918.74	3,650	3,363.77	0.05	-0.03	0.02
25.00	-14.36	-0.81	0.00	-56.82	0.00	56.82	3,653.66	895.55	3,468	3,220.24	0.08	-0.03	0.02
30.00	-13.61	-0.80	0.00	-52.77	0.00	52.77	3,586.51	872.36	3,291	3,078.48	0.12	-0.04	0.02
35.00	-12.87	-0.79	0.00	-48.76	0.00	48.76	3,517.90	849.16	3,118	2,938.60	0.17	-0.05	0.02
40.00	-12.16	-0.78	0.00	-44.80	0.00	44.80	3,447.83	825.97	2,950	2,800.69	0.22	-0.05	0.02
45.00	-12.09	-0.78	0.00	-40.92	0.00	40.92	3,376.30	802.78	2,787	2,664.86	0.27	-0.06	0.02
45.50	-10.96	-0.75	0.00	-40.53	0.00	40.53	3,369.06	800.46	2,771	2,651.39	0.28	-0.06	0.02
50.00	-10.83	-0.75	0.00	-37.16	0.00	37.16	3,300.26	779.59	2,628	2,528.86	0.34	-0.06	0.02
50.50	-10.31	-0.73	0.00	-36.79	0.00	36.79	2,642.68	659.69	2,258	2,059.93	0.35	-0.07	0.02
55.00	-9.75	-0.71	0.00	-33.50	0.00	33.50	2,594.84	642.30	2,141	1,968.88	0.41	-0.07	0.02
60.00	-9.20	-0.69	0.00	-29.93	0.00	29.93	2,540.30	622.97	2,014	1,869.01	0.49	-0.08	0.02
65.00	-8.67	-0.67	0.00	-26.46	0.00	26.46	2,484.30	603.64	1,891	1,770.62	0.58	-0.09	0.02
70.00	-8.16	-0.65	0.00	-23.09	0.00	23.09	2,426.84	584.32	1,772	1,673.79	0.67	-0.09	0.02
75.00	-7.66	-0.63	0.00	-19.84	0.00	19.84	2,367.92	564.99	1,656	1,578.64	0.77	-0.10	0.02
80.00	-7.18	-0.60	0.00	-16.72	0.00	16.72	2,307.54	545.66	1,545	1,485.26	0.88	-0.10	0.01
85.00	-6.71	-0.57	0.00	-13.72	0.00	13.72	2,228.16	526.34	1,438	1,382.87	0.99	-0.11	0.01
90.00	-6.26	-0.54	0.00	-10.87	0.00	10.87	2,146.35	507.01	1,334	1,282.68	1.11	-0.12	0.01
95.00	-5.92	-0.52	0.00	-8.17	0.00	8.17	2,064.53	487.68	1,234	1,186.25	1.23	-0.12	0.01
99.00	-5.86	-0.51	0.00	-6.10	0.00	6.10	1,067.36	284.64	701	599.12	1.33	-0.12	0.02
99.00	-5.86	-0.51	0.00	-6.10	0.00	6.10	1,999.08	472.22	1,157	1,111.83	1.33	-0.12	0.01
100.00	-5.65	-0.50	0.00	-5.59	0.00	5.59	1,062.22	282.32	689	591.34	1.36	-0.12	0.02
104.00	-2.90	-0.28	0.00	-3.61	0.00	3.61	1,041.07	273.04	645	560.39	1.46	-0.13	0.01
105.00	-2.66	-0.26	0.00	-3.33	0.00	3.33	1,035.64	270.72	634	552.70	1.49	-0.13	0.01
110.00	-2.42	-0.24	0.00	-2.05	0.00	2.05	1,007.60	259.13	581	514.53	1.63	-0.13	0.01
115.00	-2.24	-0.22	0.00	-0.87	0.00	0.87	978.09	247.53	530	476.95	1.76	-0.13	0.00
119.00	0.00	-0.21	0.00	0.00	0.00	0.00	953.44	238.26	491	447.37	1.87	-0.13	0.00

ANALYSIS SUMMARY

Load Case	Base 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	19.46	0.00	26.85	0.00	0.00	1556.07	0.00	0.4
0.9D + 1.0W	19.46	0.00	20.13	0.00	0.00	1547.56	0.00	0.4
1.2D + 1.0Di + 1.0Wi	4.63	0.00	36.00	0.00	0.00	358.24	0.00	0.1
1.2D + 1.0Ev + 1.0Eh	0.83	0.00	26.49	0.00	0.00	77.94	0.00	0.03
0.9D - 1.0Ev + 1.0Eh	0.83	0.00	18.42	0.00	0.00	77.42	0.00	0.02
1.0D + 1.0W	3.77	0.00	22.39	0.00	0.00	300.15	0.00	0.08

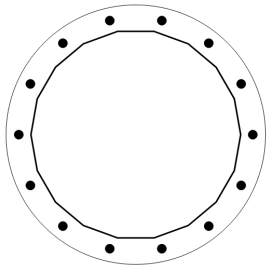
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
1556.07	26.85	19.46

PLATE PARAMETERS (ID# 27629)

Width:	61	in
Shape:	Round	
Thickness:	2.75	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Rod Detail Type:	d	
Clear Distance	4.5	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	180	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#28348]	Radial	14	2.25	55	A615-75	75	100	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	48.8"ø x 0.375" (18 Sides)	56.7602	-	-	16640.36	-
Bolt Group	Original (14) 2.25"ø	3.9761	3.2477	0.8393	15602.27	4.5

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	48.8"ø x 0.375" (18 Sides)	1556.1	26.85	19.46	1.000
Bolt Group	Original (14) 2.25"ø	1556.1	-	19.46	1.000

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	48.92	in	Flat Width:	8.627	in	Neutral Axis:	180	°
Point-to-Point Diameter:	49.68	in	Flat Radians:	0.349	rad	Bend Line Limits:	4.167 to 5.258	rad
Orientation Offset:	-	°						

PLATE PROPERTIES

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in^3)	Applied Moment M_u (k-in)	Moment Capacity ΦM_n (k-in)	Flexure Result $M_u/\Phi M_n$	
Flats	31.871	0.00	60.255	216.1	2711.5	8.0%	✓
Corners	30.681	0.00	58.006	139.8	2610.3	5.4%	✓
Circumferential	40.523	0.00	76.615	272.6	3447.7	7.9%	✓

PLASTIC ANCHOR ROD ANALYSIS

Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P_u (k)	Applied Shear Load V_u (k)	Compressive Capacity ΦP_n (k)	Plastic Result	
Original	14	2.25	85.3	2.2	243.6	35.0%	✓

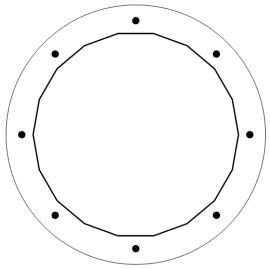
UPPER FLANGE PLATE ANALYSIS @ 99 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
120.45	7.87	9.17

PLATE PARAMETERS (ID# 27628)

Width:	35.125	in
Shape:	Round	
Thickness:	0.75	in
Grade:	A572-60	
Yield Strength:	60	ksi
Tensile Strength:	75	ksi
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	270	°



FLANGE BOLT PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#28349]	Radial	8	1	30.87	A325	92	120	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	27.4412"ø x 0.1875" (18 Sides)	15.9724	-	-	1483.15	-
Bolt Group	Original (8) 1"ø	0.7854	0.6057	0.0292	531.68	8.0

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	27.4412"ø x 0.1875" (18 Sides)	120.4	7.87	9.17	1.000
Bolt Group	Original (8) 1"ø	120.4	-	9.17	1.000

UPPER FLANGE PLATE BEND LINE ANALYSIS @ 99 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	27.57	in	Flat Width:	4.861	in	Neutral Axis:	270	°
Point-to-Point Diameter:	27.99	in	Flat Radians:	0.349	rad	Bend Line Limits:	5.623 to 0.660	rad
Orientation Offset:	-	°						

PLATE PROPERTIES

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in^3)	Applied Moment M_u (k-in)	Moment Capacity ΦM_n (k-in)	Flexure Result $M_u/\Phi M_n$	
Flats	17.111	0.00	2.406	26.1	129.9	20.1%	✓
Corners	16.406	0.00	2.307	20.7	124.6	16.6%	✓
Circumferential	25.451	0.00	3.579	20.7	193.3	10.7%	✓

PLASTIC FLANGE BOLT ANALYSIS

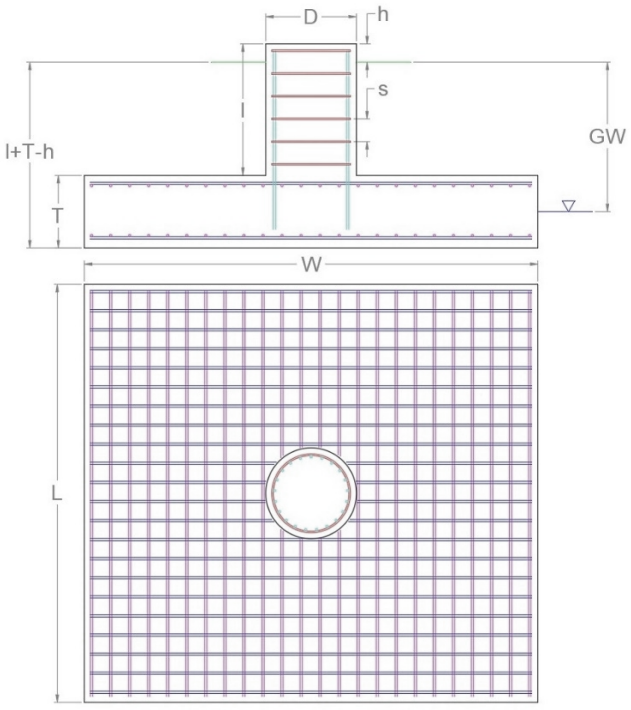
Class	Group Quantity	Bolt Diameter (in)	Applied Axial Load P_u (k)	Applied Shear Load V_u (k)	Compressive Capacity ΦP_n (k)	Interaction Result	
Original	8	1	22.2	1.9	54.5	45.7%	✓

APPLIED GLOBAL REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
1,556.07	26.85	19.46

FOUNDATION PARAMETERS

Mat Length:	L	23	ft
Mat Width:	W	23	ft
Mat Thickness:	T	2	ft
Base Depth:	L+T-h	5.5	ft
Pier Shape:		Round	
Pier Diameter:	D	7	ft
Pier Height above Grade:	h	1	ft
Concrete Compressive Strength:		4,000	psi
Mat Top Rebar:		(28) #8 bars [60 ksi]	
Mat Bottom Rebar:		(28) #8 bars [60 ksi]	
Pier Vertical Rebar:		(36) #8 bars [60 ksi]	
Pier Rebar Ties:	s	#4 bars @ 12.0" c/c [60 ksi]	
Rebar Clear Cover:		3.0	in
Tower Eccentricity:	ecc	0	ft
Tower Leg Count		1	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW		ft
Soil Unit Weight:		130	pcf
Ultimate Skin Friction:		0	psf
Ultimate Bearing Pressure:		12,000	psf
Bearing Pressure Type:		Net	
Coefficient of Shear Friction:		0.5	

SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, Φ_s	Uplift Strength Reduction Factor, Φ_s	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$	
1,682.56	4,686.63	**35.9%**	✓

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$	
1,168.00	9,536.00	Diagonal to Pad Edge	**12.2%**	✓

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, V_u (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$	
19.46	0.00	585.0	26.91	181.52	**11.0%**	✓

MAT REINFORCING STEEL STRENGTH ANALYSIS

Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
29,000	0.9	0.75	0.65

MAT REINFORCING ONE WAY SHEAR ANALYSIS

One Way Design Shear, V_u (k)	Nominal One Way Shear Capacity, $\Phi_c V_n$ (k)	One Way Shear Controlling Load Direction	Mat One Way Shear Usage, $V_u / \Phi_c V_n$	
55.74	505.31	Diagonal to Pad Edge	**11.0%**	✓

MAT REINFORCING PUNCHING SHEAR ANALYSIS

Punching Shear Design Stress, v_u (psi)	Nominal Punching Shear Capacity, $\Phi_c v_n$ (psi)	Mat Punching Shear Usage, $v_u / \Phi_c v_n$	
40.6	189.7	**21.4%**	✓

MAT REINFORCING MOMENT TRANSFER ANALYSIS

Moment Transfer Effective Flexural Width, w_f (in)	Neutral Axis Depth (in)	Pier Moment at Joint, M_{ut} (k-in)	Nominal Moment Transfer Capacity, $\Phi M_{sc,f}$ (k-in)	Mat Moment Transfer Usage, $0.6\ M_{ut} / \Phi M_{sc,f}$	
13.00	1.49	0.00	13,739.8	**0.0%**	✓

MAT REINFORCING FLEXURE ANALYSIS – UPPER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Upper Rebar Flexure Usage, $M_u / \Phi M_n$	
554.26	1,930.97	Parallel to Pad Edge	**28.7%**	✓

MAT REINFORCING FLEXURE ANALYSIS – LOWER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Lower Rebar Flexure Usage, $M_u / \Phi M_n$	
634.80	1,930.97	Parallel to Pad Edge	**32.9%**	✓

PIER REINFORCING STEEL STRENGTH ANALYSIS

Rebar Cage Diameter (in)	Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
76.00	29,000	0.9	0.75	0.65

PIER REINFORCING MOMENT ANALYSIS

Design Moment, M_u (k-ft)	Nominal Moment Capacity, $\Phi_b M_n$ (k-ft)	Bending Reinforcement Ratio	Pier Rebar Flexure Usage, $M_u/\Phi_b M_n$	
1,643.64	4,756.50	0.005	**34.6%**	✓

PIER REINFORCING COMPRESSION ANALYSIS

Design Compression, P_u (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$	
26.85	9,772.21	**0.3%**	✓

PIER REINFORCING SHEAR ANALYSIS

Design Shear, V_u (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$	
19.46	627.81	**3.1%**	✓

CENTERLINE

EXHIBIT F

Mount Analysis Report

AMERICAN TOWER®
CORPORATION

Mount Analysis Report

ATC Asset Name	:	PAWCATUCK CT
ATC Asset Number	:	284984
Engineering Number	:	14561677_C8_01
Mount Elevation	:	118.5 ft
Proposed Carrier	:	T-Mobile
Carrier Site Name	:	Amtrak_Stonington3
Carrier Site Number	:	CTNL813C
Site Location	:	166 Pawcatuck Ave Pawcatuck, CT 6379 41.3605, -71.8524
County	:	New London
Date	:	December 18, 2023
Max Usage	:	84%
Analysis Result	:	Contingent Pass

Prepared By:
Joseph Swier
Structural Engineer I

Joseph Swier

COA: PEC.0001553

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Structure Usages 4

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Equipment Layout 6

Standard Conditions ..... Attached

Calculations ..... Attached

Introduction

The purpose of this report is to summarize results of the mount analysis performed for T-Mobile at 118.5 ft.

Supporting Documents

Specifications Sheet:	PiRod Inc. T-arm Pipe Assembly, dated April 7, 2003
Previous Analysis:	ATC Project #13663614_C8_02, dated April 21, 2021
Radio Frequency Data Sheet:	RFDS ID #CTNL813C, dated November 28, 2023
Reference Photos:	Site photos from 2023

Analysis

This mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	129 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1.00'' radial ice concurrent
Codes:	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.182, S1 = 0.052
Site Class:	D - Stiff Soil - 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 provided the modifications listed below are completed:

- Install Site Pro 1 PRK-1245 XLD Monopole Reinforcement Kit. Install standoff connection point 6" back from the face connection plate and install the collar approx. 42" below the t-arm collar, as seen in the analysis.
- A structural failure was addressed with the noted contingencies. The controlling member was a Connection Plate Check with a usage of 110%.

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact MountAnalysis@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

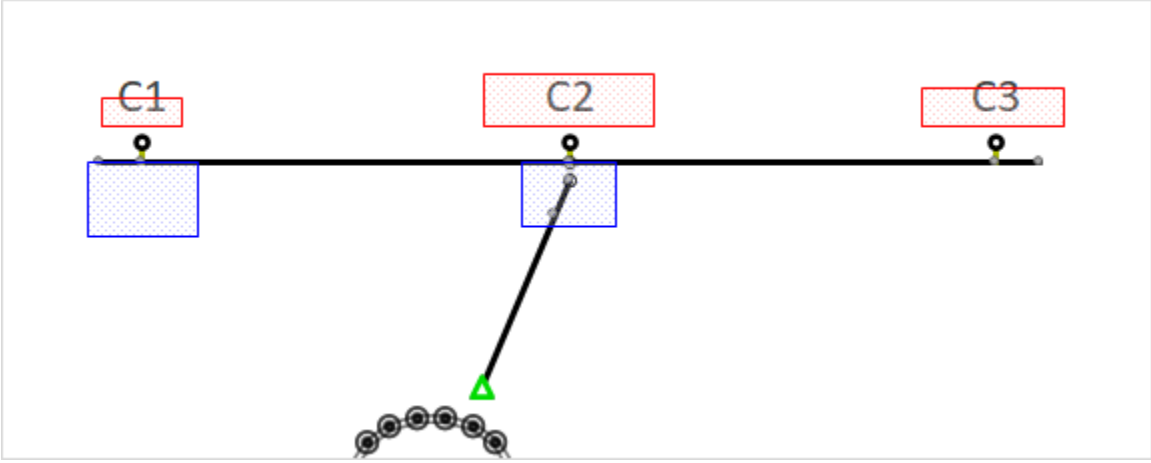
Application Loading

Mount Centerline (ft)	Equipment Centerline (ft)	Qty	Equipment Manufacturer & Model
118.5	119.0	3	RFS APXVAALL24 43-U-NA20
		3	RFS APXVLL19P_43-C-A20
		3	Ericsson AIR 6419 B41
		3	Ericsson Radio 4449 B71 B85A
		3	Ericsson Radio 4460 B25+B66

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Horizontals	72%	Pass
Verticals	39%	Pass
Tie-Backs	17%	Pass
Mount Pipes	54%	Pass
Plate Conn Check	84%	Pass
Serviceability	N/A	Pass

Mount Layout

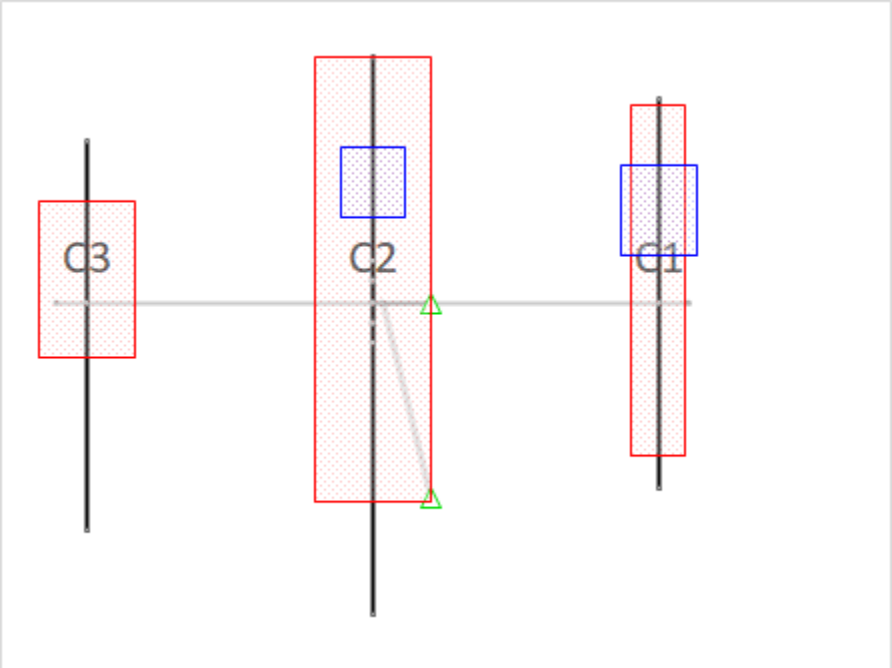


Equipment Position Table

MP	RAD Center (ft)	Qty.	Antenna Model
C1	119.0	1	RFS APXVLL19P_43-C-A20
	119.0	1	Ericsson Radio 4460 B25+B66
C2	119.0	1	RFS APXVAALL24 43-U-NA20
	119.0	1	Ericsson Radio 4449 B71 B85A
C3	119.0	1	Ericsson AIR 6419 B41

Equipment Layout

Front View - Gamma



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC 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 equipment, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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

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

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 A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

Installation of all equipment and steel should be confirmed not to cause tower conflicts nor impede the tower climbing pegs.

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

AMERICAN TOWER®
CORPORATION

Site Number:	*284984*
Project Number:	*14561677_C8_01*
Carrier:	*T-Mobile*
Mount Elevation:	*118.5 ft*
Date:	12/18/2023

Mount Analysis Force Calculations

Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.31	
Topographic Factor	K_{zt}	1.00	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	1.00	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	129	mph
Velocity Pressure	q_z	53.0	psf
Height Escalation Factor	K_{iz}	1.14	
Thickness of Radial Glaze Ice	T_{iz}	1.14	in

Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.146	
1 Second DSRAP	S_{D1}	0.083	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_S	0.073	
Amplification Factor	A	1.0	
Total Weight	W	674.6	lbs
Total Shear Force	V_S	49.1	lbs
Horizontal Seismic Load	Eh	49.1	lbs
Vertical Seismic Load	Ev	19.6	lbs

Antenna Calculations (Elevations per Application/RFDS)*

Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
RFS APXVAALL24 43-U-NA20	95.9	24.0	8.5	122.8	20.24	3.40	22.68	4.41
RFS APXVLL19P_43-C-A20	75.8	11.3	4.6	40.9	8.25	1.84	10.21	2.83
Ericsson AIR 6419 B41	33.6	20.0	6.3	68.5	5.60	0.83	6.66	1.21
Ericsson Radio 4449 B71 B85A	15.0	13.2	10.5	75.0	1.65	1.31	2.23	1.84
Ericsson Radio 4460 B25+B66	19.6	15.7	12.1	109.0	2.56	1.98	3.28	2.62

**** Equipment with EPA values N/A were not considered in the mount analysis***

AMERICAN TOWER®
CORPORATION

Site Number:	*284984*
Project Number:	*14561677_C8_01*
Carrier:	*T-Mobile*
Mount Elevation:	*118.5 ft*
Date:	12/18/2023

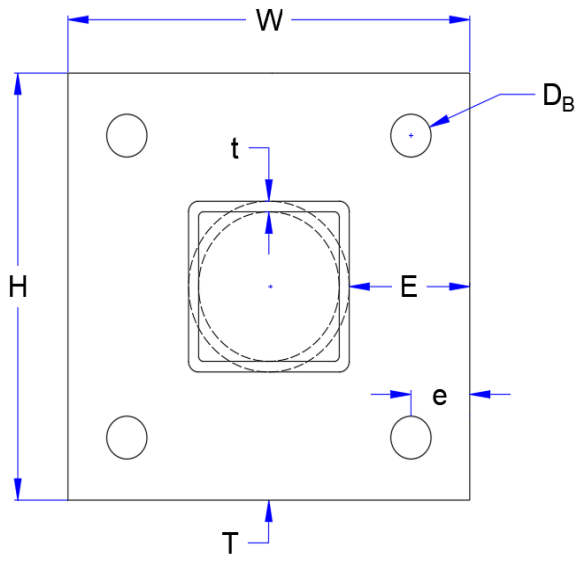
Mount-to-Tower Connection Analysis

Applied Loads from RISA 3D			
Controlling Load Combination		15	
Node Label/ Orientation (Degrees)		N001	0
Force in X	Fx	1293.3	lbs
Force in Y	Fy	171.0	lbs
Force in Z	Fz	1600.8	lbs
Moment about X	Mx	9.3	lb-ft
Moment about Y	My	4670.2	lb-ft
Moment about Z	Mz	-426.0	lb-ft

Bolt Shear and Tensile Capacity			
Bolt Quantity	n	4	
Bolt Diameter	D_B	5/8	in
Bolt Horiz. Edge Distance	e_h	7/8	in
Bolt Vert. Edge Distance	e_v	1	in
Bolt Grade		A36	
Bolt Fy	Fy_B	36	ksi
Bolt Fu	Fu_B	58	ksi
Applied Shear	Vu	0.33	k
Applied Tension	Tu	5.10	k
Tensile Strength	ϕTn	9.8	k
Shear Strength	ϕVn	6.7	k
Interaction Capacity	(Vu/ϕVn)2+(Tu/ϕTn)2	27%	Pass

Plate Flexural Capacity			
Plate Height	H	7.75	in
Plate Width	W	7.75	in
Plate Thickness	T	5/8	in
Plate Grade		A36	
Plate Fy	Fy_P	36	ksi
Plate Fu	Fu_P	58	ksi
Shear Capacity	ϕVn	21.3	k
Applied Moment	Mu	5.3	k-in
Flexural Strength	ϕMn	6.3	k-in
Flexural Capacity	Mu/ϕMn	84%	Pass

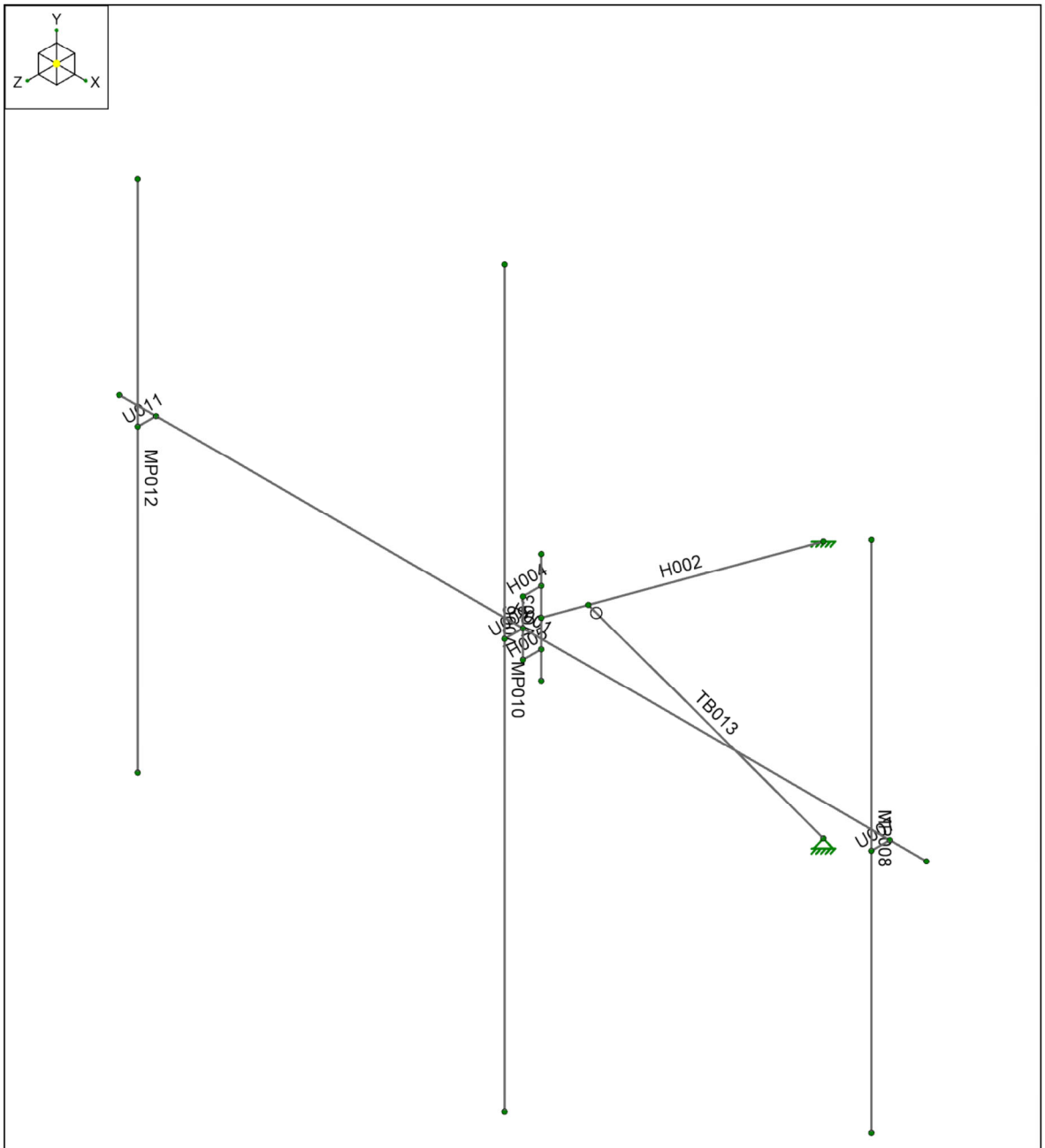
Base Metal Checks		
Minimum Base Metal Thickness	0.160	in
Controlling Base Metal Thickness	0.188	in



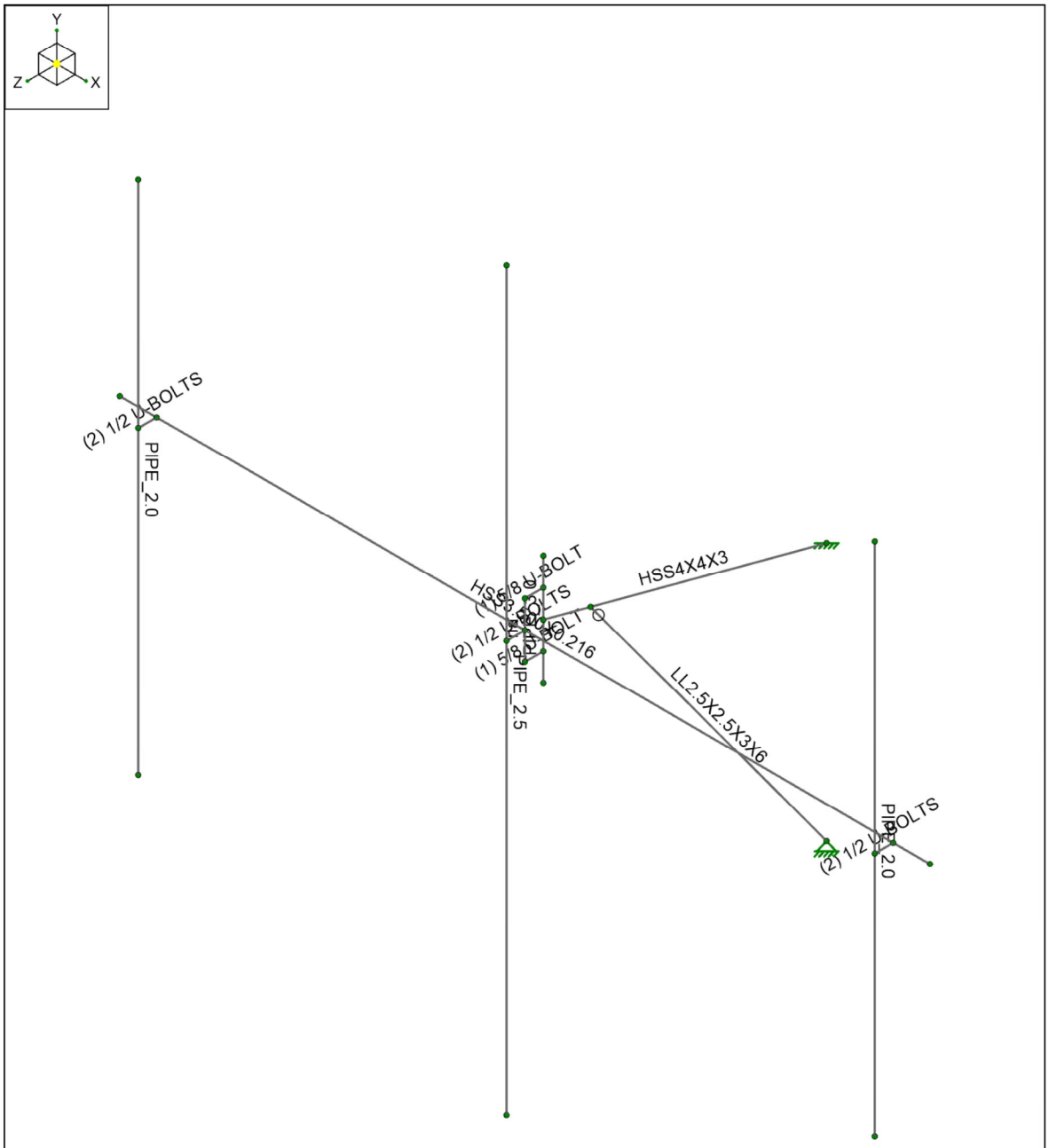
Weld Capacity			
Standoff Type		Tube	
Standoff Member		HSS4x4x3	
Member Edge Distance	E	1.875	in
Member Height	h	4	in
Member Width	w	4	in
Member Thickness	t	0.188	in
Member Grade		A500 Gr. B	
Member Fy	Fy_M	42	ksi
Member Fu	Fu_M	58	ksi
Weld Size	a	3/16	in
Weld Section Modulus	S	2.9	in^3
Applied Weld Stress	σu	20.0	ksi
Capacity Weld Stress	ϕσn	31.5	ksi
Weld Utilization	σu/ϕσn	63%	Pass

Prying Action Considerations			
Moment Arm	b	1.04	in
Effective Moment Arm	b'	0.73	in
Tributary Length	p	2.00	in
Effective Edge Distance	a'	1.31	in
Minimum Thickness	t_{min}	0.29	in
No Prying Thickness	t_{np}	0.38	in
Min Bolt Strength Thickness	t_c	0.52	k-in

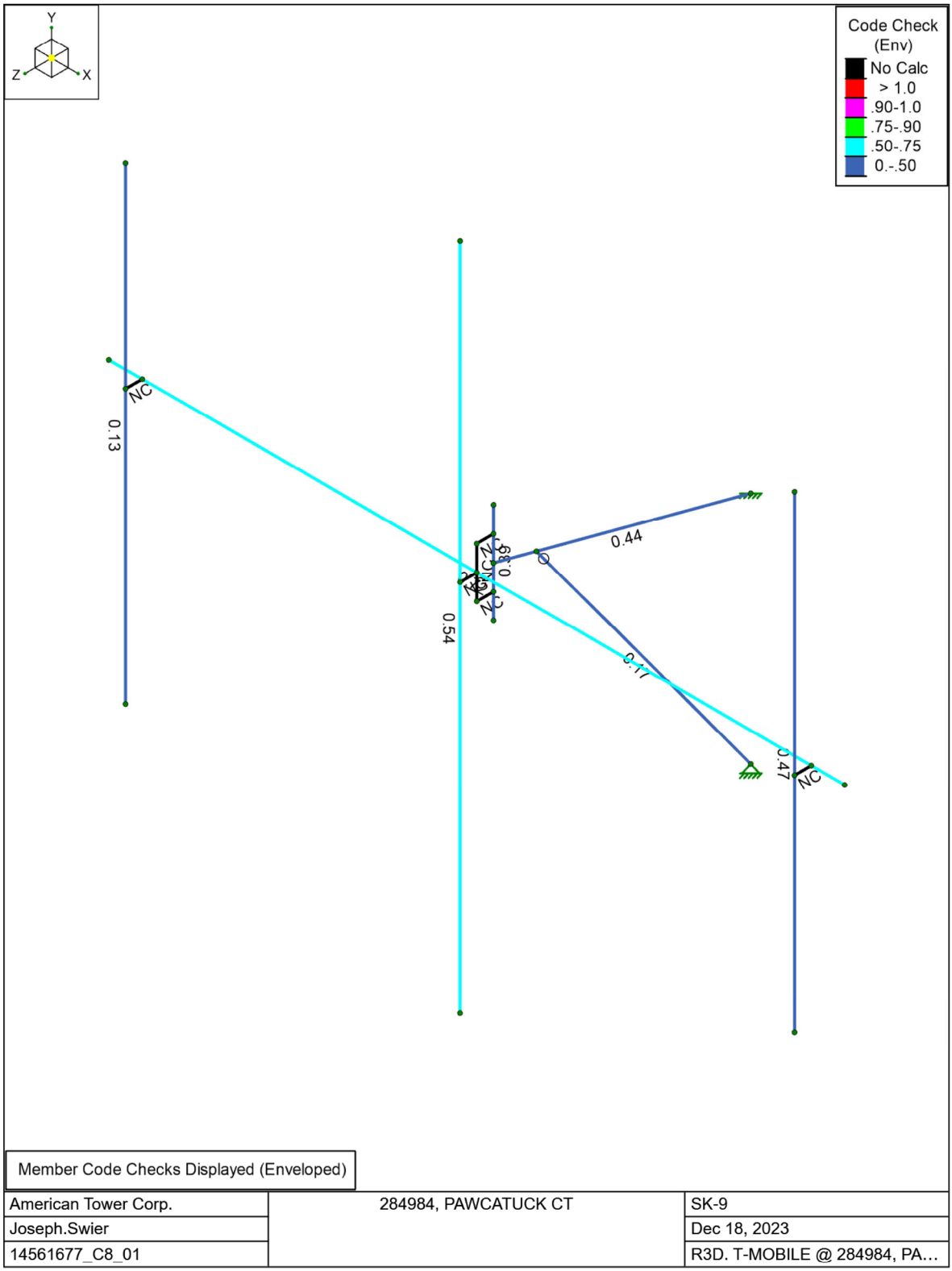
American Tower Corp.	284984, PAWCATUCK CT	SK-6
Joseph.Swier		Dec 18, 2023
14561677_C8_01		R3D. T-MOBILE @ 284984, PA…



American Tower Corp.	284984, PAWCATUCK CT	SK-7
Joseph.Swier		Dec 18, 2023
14561677_C8_01		R3D. T-MOBILE @ 284984, PA…



American Tower Corp.	284984, PAWCATUCK CT	SK-8
Joseph.Swier		Dec 18, 2023
14561677_C8_01		R3D. T-MOBILE @ 284984, PA…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(Env)
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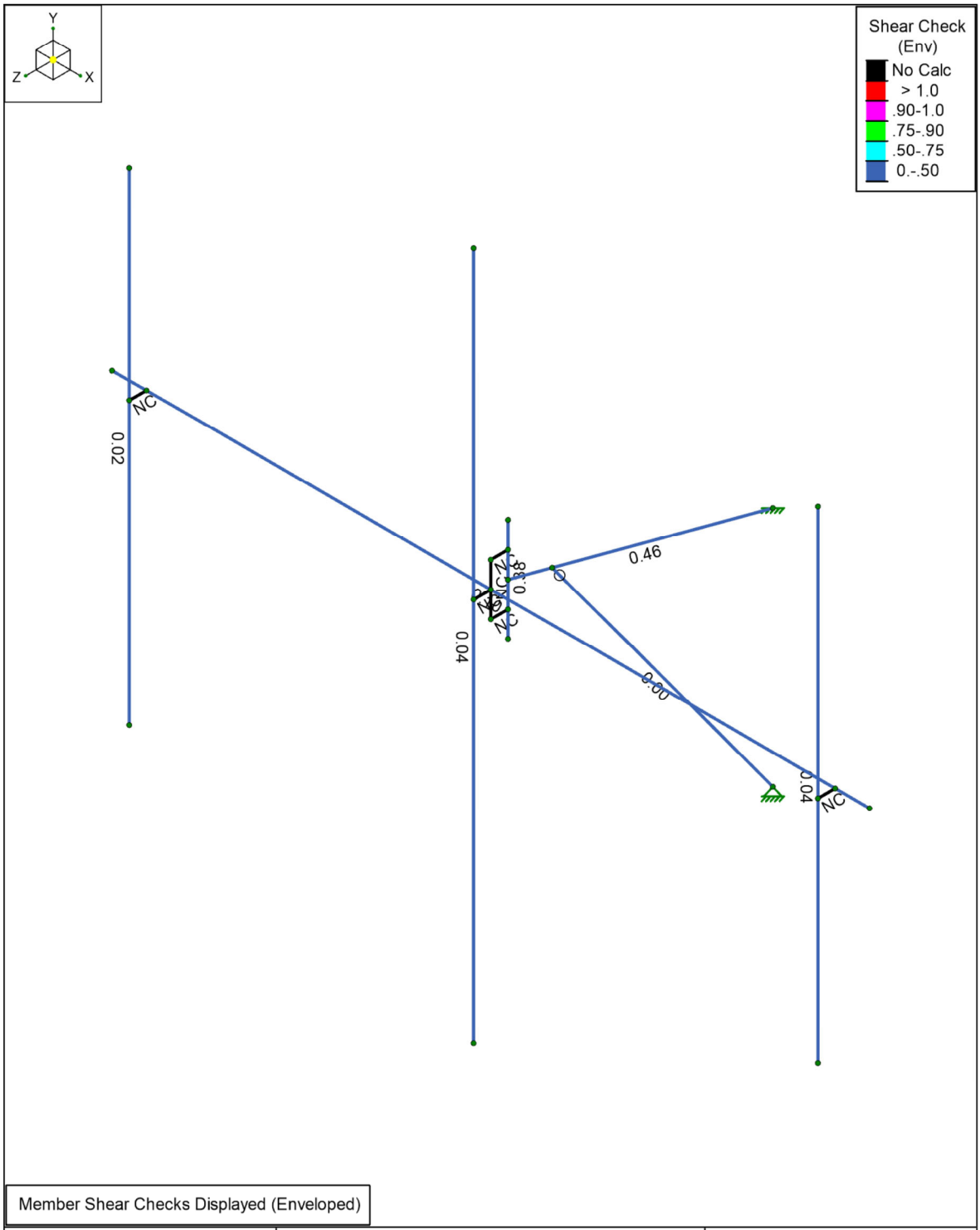
0.-.50
NC
0.13
0.54
0.44
0.11
0.47
NC
Member Code Checks Displayed (Enveloped)
American Tower Corp.
284984, PAWCATUCK CT
SK-9
Joseph.Swier
Dec 18, 2023
14561677_C8_01
R3D. T-MOBILE @ 284984, PA...



Member Shear Checks Displayed (Enveloped)

American Tower Corp.	284984, PAWCATUCK CT	SK-10
Joseph.Swier		Dec 18, 2023
14561677_C8_01		R3D. T-MOBILE @ 284984, PA…

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Point	Distributed
1	D	DL		-1			8	
2	Di	IL					8	7
3	W 0	WL					8	15
4	W 30	WL					16	27
5	W 60	WL					16	27
6	W 90	WL					8	12
7	W 120	WL					16	27
8	W 150	WL					16	27
9	W 180	WL					8	15
10	W 210	WL					16	27
11	W 240	WL					16	27
12	W 270	WL					8	12
13	W 300	WL					16	27
14	W 330	WL					16	27
15	Wi 0	WL					8	15
16	Wi 30	WL					16	27
17	Wi 60	WL					16	27
18	Wi 90	WL					8	12
19	Wi 120	WL					16	27
20	Wi 150	WL					16	27
21	Wi 180	WL					8	15
22	Wi 210	WL					16	27
23	Wi 240	WL					16	27
24	Wi 270	WL					8	12
25	Wi 300	WL					16	27
26	Wi 330	WL					16	27
27	Ws 0	WL					8	15
28	Ws 30	WL					16	27
29	Ws 60	WL					16	27
30	Ws 90	WL					8	12
31	Ws 120	WL					16	27
32	Ws 150	WL					16	27
33	Ws 180	WL					8	15
34	Ws 210	WL					16	27
35	Ws 240	WL					16	27
36	Ws 270	WL					8	12
37	Ws 300	WL					16	27
38	Ws 330	WL					16	27
39	Ev -Y	ELY		-0.029			8	
40	Eh -Z	ELZ			-0.073		8	
41	Eh -X	ELX	-0.073				8	
42	Lv (1)	LL					1	
43	Lv (2)	LL					1	
44	Lv (3)	LL				1		
45	Lm (1)	LL				1		
46	Lm (2)	LL				1		
47	Lm (3)	LL				1		

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.4D	Yes	Y	DL	1.4						
2	1.2D + 1.0W [0°]	Yes	Y	DL	1.2	3	1				
3	1.2D + 1.0W [30°]	Yes	Y	DL	1.2	4	1				
4	1.2D + 1.0W [60°]	Yes	Y	DL	1.2	5	1				

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
5	1.2D + 1.0W [90°]	Yes	Y	DL	1.2	6	1				
6	1.2D + 1.0W [120°]	Yes	Y	DL	1.2	7	1				
7	1.2D + 1.0W [150°]	Yes	Y	DL	1.2	8	1				
8	1.2D + 1.0W [180°]	Yes	Y	DL	1.2	9	1				
9	1.2D + 1.0W [210°]	Yes	Y	DL	1.2	10	1				
10	1.2D + 1.0W [240°]	Yes	Y	DL	1.2	11	1				
11	1.2D + 1.0W [270°]	Yes	Y	DL	1.2	12	1				
12	1.2D + 1.0W [300°]	Yes	Y	DL	1.2	13	1				
13	1.2D + 1.0W [330°]	Yes	Y	DL	1.2	14	1				
14	0.9D + 1.0W [0°]	Yes	Y	DL	0.9	3	1				
15	0.9D + 1.0W [30°]	Yes	Y	DL	0.9	4	1				
16	0.9D + 1.0W [60°]	Yes	Y	DL	0.9	5	1				
17	0.9D + 1.0W [90°]	Yes	Y	DL	0.9	6	1				
18	0.9D + 1.0W [120°]	Yes	Y	DL	0.9	7	1				
19	0.9D + 1.0W [150°]	Yes	Y	DL	0.9	8	1				
20	0.9D + 1.0W [180°]	Yes	Y	DL	0.9	9	1				
21	0.9D + 1.0W [210°]	Yes	Y	DL	0.9	10	1				
22	0.9D + 1.0W [240°]	Yes	Y	DL	0.9	11	1				
23	0.9D + 1.0W [270°]	Yes	Y	DL	0.9	12	1				
24	0.9D + 1.0W [300°]	Yes	Y	DL	0.9	13	1				
25	0.9D + 1.0W [330°]	Yes	Y	DL	0.9	14	1				
26	1.2D + 1.0Di + 1.0Wi [0°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	15	1		
27	1.2D + 1.0Di + 1.0Wi [30°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	16	1		
28	1.2D + 1.0Di + 1.0Wi [60°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	17	1		
29	1.2D + 1.0Di + 1.0Wi [90°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	18	1		
30	1.2D + 1.0Di + 1.0Wi [120°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	19	1		
31	1.2D + 1.0Di + 1.0Wi [150°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	20	1		
32	1.2D + 1.0Di + 1.0Wi [180°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	21	1		
33	1.2D + 1.0Di + 1.0Wi [210°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	22	1		
34	1.2D + 1.0Di + 1.0Wi [240°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	23	1		
35	1.2D + 1.0Di + 1.0Wi [270°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	24	1		
36	1.2D + 1.0Di + 1.0Wi [300°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	25	1		
37	1.2D + 1.0Di + 1.0Wi [330°] + 1.0Ti	Yes	Y	DL	1.2	IL	1	26	1		
38	1.2D + 1.0Ev + 1.0Eh [0°]	Yes	Y	DL	1.2	ELY	1	ELZ	1	ELX	0.001
39	1.2D + 1.0Ev + 1.0Eh [30°]	Yes	Y	DL	1.2	ELY	1	ELZ	0.866	ELX	0.5
40	1.2D + 1.0Ev + 1.0Eh [60°]	Yes	Y	DL	1.2	ELY	1	ELZ	0.5	ELX	0.866
41	1.2D + 1.0Ev + 1.0Eh [90°]	Yes	Y	DL	1.2	ELY	1	ELZ	0.001	ELX	1
42	1.2D + 1.0Ev + 1.0Eh [120°]	Yes	Y	DL	1.2	ELY	1	ELZ	-0.5	ELX	0.866
43	1.2D + 1.0Ev + 1.0Eh [150°]	Yes	Y	DL	1.2	ELY	1	ELZ	-0.866	ELX	0.5
44	1.2D + 1.0Ev + 1.0Eh [180°]	Yes	Y	DL	1.2	ELY	1	ELZ	-1	ELX	0.001
45	1.2D + 1.0Ev + 1.0Eh [210°]	Yes	Y	DL	1.2	ELY	1	ELZ	-0.866	ELX	-0.5
46	1.2D + 1.0Ev + 1.0Eh [240°]	Yes	Y	DL	1.2	ELY	1	ELZ	-0.5	ELX	-0.866
47	1.2D + 1.0Ev + 1.0Eh [270°]	Yes	Y	DL	1.2	ELY	1	ELZ	0.001	ELX	-1
48	1.2D + 1.0Ev + 1.0Eh [300°]	Yes	Y	DL	1.2	ELY	1	ELZ	0.5	ELX	-0.866
49	1.2D + 1.0Ev + 1.0Eh [330°]	Yes	Y	DL	1.2	ELY	1	ELZ	0.866	ELX	-0.5
50	0.9D + 1.0Ev + 1.0Eh [0°]	Yes	Y	DL	0.9	ELY	1	ELZ	1	ELX	0.001
51	0.9D + 1.0Ev + 1.0Eh [30°]	Yes	Y	DL	0.9	ELY	1	ELZ	0.866	ELX	0.5
52	0.9D + 1.0Ev + 1.0Eh [60°]	Yes	Y	DL	0.9	ELY	1	ELZ	0.5	ELX	0.866
53	0.9D + 1.0Ev + 1.0Eh [90°]	Yes	Y	DL	0.9	ELY	1	ELZ	0.001	ELX	1
54	0.9D + 1.0Ev + 1.0Eh [120°]	Yes	Y	DL	0.9	ELY	1	ELZ	-0.5	ELX	0.866
55	0.9D + 1.0Ev + 1.0Eh [150°]	Yes	Y	DL	0.9	ELY	1	ELZ	-0.866	ELX	0.5
56	0.9D + 1.0Ev + 1.0Eh [180°]	Yes	Y	DL	0.9	ELY	1	ELZ	-1	ELX	0.001
57	0.9D + 1.0Ev + 1.0Eh [210°]	Yes	Y	DL	0.9	ELY	1	ELZ	-0.866	ELX	-0.5
58	0.9D + 1.0Ev + 1.0Eh [240°]	Yes	Y	DL	0.9	ELY	1	ELZ	-0.5	ELX	-0.866
59	0.9D + 1.0Ev + 1.0Eh [270°]	Yes	Y	DL	0.9	ELY	1	ELZ	0.001	ELX	-1

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
60	0.9D + 1.0Ev + 1.0Eh [300°]	Yes	Y	DL	0.9	ELY	1	ELZ	0.5	ELX	-0.866
61	0.9D + 1.0Ev + 1.0Eh [330°]	Yes	Y	DL	0.9	ELY	1	ELZ	0.866	ELX	-0.5
62	1.2D + 1.5Lv(1)	Yes	Y	DL	1.2	42	1.5				
63	1.2D + 1.5Lv(2)	Yes	Y	DL	1.2	43	1.5				
64	1.2D + 1.5Lv(3)	Yes	Y	DL	1.2	44	1.5				
65	1.2D + 1.5Lm(1) + 1.0Wm [0°]	Yes	Y	DL	1.2	45	1.5	27	1		
66	1.2D + 1.5Lm(1) + 1.0Wm [30°]	Yes	Y	DL	1.2	45	1.5	28	1		
67	1.2D + 1.5Lm(1) + 1.0Wm [60°]	Yes	Y	DL	1.2	45	1.5	29	1		
68	1.2D + 1.5Lm(1) + 1.0Wm [90°]	Yes	Y	DL	1.2	45	1.5	30	1		
69	1.2D + 1.5Lm(1) + 1.0Wm [120°]	Yes	Y	DL	1.2	45	1.5	31	1		
70	1.2D + 1.5Lm(1) + 1.0Wm [150°]	Yes	Y	DL	1.2	45	1.5	32	1		
71	1.2D + 1.5Lm(1) + 1.0Wm [180°]	Yes	Y	DL	1.2	45	1.5	33	1		
72	1.2D + 1.5Lm(1) + 1.0Wm [210°]	Yes	Y	DL	1.2	45	1.5	34	1		
73	1.2D + 1.5Lm(1) + 1.0Wm [240°]	Yes	Y	DL	1.2	45	1.5	35	1		
74	1.2D + 1.5Lm(1) + 1.0Wm [270°]	Yes	Y	DL	1.2	45	1.5	36	1		
75	1.2D + 1.5Lm(1) + 1.0Wm [300°]	Yes	Y	DL	1.2	45	1.5	37	1		
76	1.2D + 1.5Lm(1) + 1.0Wm [330°]	Yes	Y	DL	1.2	45	1.5	38	1		
77	1.2D + 1.5Lm(2) + 1.0Wm [0°]	Yes	Y	DL	1.2	46	1.5	27	1		
78	1.2D + 1.5Lm(2) + 1.0Wm [30°]	Yes	Y	DL	1.2	46	1.5	28	1		
79	1.2D + 1.5Lm(2) + 1.0Wm [60°]	Yes	Y	DL	1.2	46	1.5	29	1		
80	1.2D + 1.5Lm(2) + 1.0Wm [90°]	Yes	Y	DL	1.2	46	1.5	30	1		
81	1.2D + 1.5Lm(2) + 1.0Wm [120°]	Yes	Y	DL	1.2	46	1.5	31	1		
82	1.2D + 1.5Lm(2) + 1.0Wm [150°]	Yes	Y	DL	1.2	46	1.5	32	1		
83	1.2D + 1.5Lm(2) + 1.0Wm [180°]	Yes	Y	DL	1.2	46	1.5	33	1		
84	1.2D + 1.5Lm(2) + 1.0Wm [210°]	Yes	Y	DL	1.2	46	1.5	34	1		
85	1.2D + 1.5Lm(2) + 1.0Wm [240°]	Yes	Y	DL	1.2	46	1.5	35	1		
86	1.2D + 1.5Lm(2) + 1.0Wm [270°]	Yes	Y	DL	1.2	46	1.5	36	1		
87	1.2D + 1.5Lm(2) + 1.0Wm [300°]	Yes	Y	DL	1.2	46	1.5	37	1		
88	1.2D + 1.5Lm(2) + 1.0Wm [330°]	Yes	Y	DL	1.2	46	1.5	38	1		
89	1.2D + 1.5Lm(3) + 1.0Wm [0°]	Yes	Y	DL	1.2	47	1.5	27	1		
90	1.2D + 1.5Lm(3) + 1.0Wm [30°]	Yes	Y	DL	1.2	47	1.5	28	1		
91	1.2D + 1.5Lm(3) + 1.0Wm [60°]	Yes	Y	DL	1.2	47	1.5	29	1		
92	1.2D + 1.5Lm(3) + 1.0Wm [90°]	Yes	Y	DL	1.2	47	1.5	30	1		
93	1.2D + 1.5Lm(3) + 1.0Wm [120°]	Yes	Y	DL	1.2	47	1.5	31	1		
94	1.2D + 1.5Lm(3) + 1.0Wm [150°]	Yes	Y	DL	1.2	47	1.5	32	1		
95	1.2D + 1.5Lm(3) + 1.0Wm [180°]	Yes	Y	DL	1.2	47	1.5	33	1		
96	1.2D + 1.5Lm(3) + 1.0Wm [210°]	Yes	Y	DL	1.2	47	1.5	34	1		
97	1.2D + 1.5Lm(3) + 1.0Wm [240°]	Yes	Y	DL	1.2	47	1.5	35	1		
98	1.2D + 1.5Lm(3) + 1.0Wm [270°]	Yes	Y	DL	1.2	47	1.5	36	1		
99	1.2D + 1.5Lm(3) + 1.0Wm [300°]	Yes	Y	DL	1.2	47	1.5	37	1		
100	1.2D + 1.5Lm(3) + 1.0Wm [330°]	Yes	Y	DL	1.2	47	1.5	38	1		

Member Primary Data

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
1	H001	N003	N004	HSS3.500X0.216	Beam	None	A500 Gr. B [RND]	Typical
2	H002	N001	N002	HSS4X4X3	Beam	None	A500 Gr. B [SQR]	Typical
3	V003	N006	N005	PIPE_3.0	Column	None	A53 Gr. B	Typical
4	H004	N007	N008	(1) 5/8 U-BOLT	Beam	None	SAE J429 Gr. 2	Typical
5	H005	N009	N010	(1) 5/8 U-BOLT	Beam	None	SAE J429 Gr. 2	Typical
6	V006	N010	N008	RIGID	None	None	RIGID	Typical
7	U007	N012	N015	(2) 1/2 U-BOLTS	Beam	None	A36	Typical
8	MP008	N016	N017	PIPE_2.0	Column	None	A53 Gr. B	Typical
9	U009	N014	N011	(2) 1/2 U-BOLTS	Beam	None	A36	Typical
10	MP010	N019	N020	PIPE_2.5	Column	None	A53 Gr. B	Typical
11	U011	N013	N021	(2) 1/2 U-BOLTS	Beam	None	A36	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
12	MP012	N022	N023	PIPE_2.0	Column	None	A53 Gr. B	Typical
13	TB013	N024	N025	LL2.5X2.5X3X6	Column	None	A36	Typical

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	L-Torque [in]	K y-y	K z-z	Function
1	H001	HSS3.500X0.216	132			Lbyy		2.1	2.1	Lateral
2	H002	HSS4X4X3	36			Lbyy		2.1	2.1	Lateral
3	V003	PIPE_3.0	18			Lbyy		2.1	2.1	Lateral
4	H004	(1) 5/8 U-BOLT	3			Lbyy		2.1	2.1	Lateral
5	H005	(1) 5/8 U-BOLT	3			Lbyy		2.1	2.1	Lateral
6	U007	(2) 1/2 U-BOLTS	3			Lbyy		0.5	0.5	Lateral
7	MP008	PIPE_2.0	84	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
8	U009	(2) 1/2 U-BOLTS	3			Lbyy		0.5	0.5	Lateral
9	MP010	PIPE_2.5	120	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
10	U011	(2) 1/2 U-BOLTS	3			Lbyy		0.5	0.5	Lateral
11	MP012	PIPE_2.0	84	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
12	TB013	LL2.5X2.5X3X6	51.614			Lbyy		2.1	2.1	Lateral

Node Boundary Conditions

	Node Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot [k-in/rad]	Y Rot [k-in/rad]	Z Rot [k-in/rad]
1	N001	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N025	Reaction	Reaction	Reaction			

Member Advanced Data

	Label	I Release	Physical	Deflection Ratio Options	Activation	Seismic DR
1	H001		Yes	N/A		None
2	H002		Yes	N/A		None
3	V003		Yes	** NA **		None
4	H004		Yes	N/A	Exclude	None
5	H005		Yes	N/A	Exclude	None
6	V006		Yes	** NA **		None
7	U007		Yes	N/A	Exclude	None
8	MP008		Yes	** NA **		None
9	U009		Yes	N/A	Exclude	None
10	MP010		Yes	** NA **		None
11	U011		Yes	N/A	Exclude	None
12	MP012		Yes	** NA **		None
13	TB013	BenPIN	Yes	** NA **		None

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Therm. Coeff. [1e^{5}°F^{-1}]	Density [lb/ft^{3}]	Yield [psi]	Ry	Fu [psi]	Rt
1	A500 Gr. B [RND]	2.9e+07	1.115e+07	0.3	0.65	490	42000	1.4	58000	1.3
2	A500 Gr. B [SQR]	2.9e+07	1.115e+07	0.3	0.65	490	46000	1.4	58000	1.3
3	A53 Gr. B	2.9e+07	1.115e+07	0.3	0.65	490	35000	1.6	60000	1.2
4	SAE J429 Gr. 2	2.9e+07	1.115e+07	0.3	0.65	490	57000	1.1	74000	1.1
5	A36	2.9e+07	1.115e+07	0.3	0.65	490	36000	1.5	58000	1.2

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N001	max	1897.937	6	378.937	25	1984.28	14	1795.788	82	5394.283	16	3978.23	72
2		min	-1455.794	24	-1371.292	82	-3189.774	8	-1605.585	76	-5386.709	22	-2406.386	78
3	N025	max	-53.8	25	2917.736	82	1947.639	82	0	100	0	100	0	100
4		min	-709.123	82	218.397	25	145.188	25	0	1	0	1	0	1
5	Totals:	max	1638.938	4	1633.541	26	2181.726	14						
6		min	-1638.938	22	597.333	20	-2181.727	8						

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
1	H001	HSS3.500X0.216	0.718	66	75	0.1	66		8	8349.717	78624	6898.5	6898.5	1.56	H1-1b
2	H002	HSS4X4X3	0.444	0	10	0.455	30	y	72	91043.995	106812	12661.5	12661.5	1.714	H1-1b
3	V003	PIPE_3.0	0.388	9	73	0.382	9		76	61831.933	65205	5748.75	5748.75	1.898	H1-1b
4	MP008	PIPE_2.0	0.468	43.75	9	0.037	43.75		9	15782.678	32130	1871.625	1871.625	1.699	H1-1b
5	MP010	PIPE_2.5	0.541	52.5	8	0.038	52.5		9	25084.05	50715	3596.25	3596.25	1.603	H1-1b
6	MP012	PIPE_2.0	0.131	35	8	0.018	42		8	20490.966	32130	1871.625	1871.625	1.489	H1-1b
7	TB013	LL2.5X2.5X3X6	0.174	51.614	82	0.002	51.614	z	4	20575.52	58320	4643.061	2549.586	1.136	H1-1b*

CENTERLINE

EXHIBIT G

Power Density/RF Emissions Report

Radio Frequency Exposure Analysis Report

January 18, 2024

T-Mobile

Site Name: Amtrak_Stonington3
Site ID: CTNL813C
Site Address: 166 Pawcatuck Avenue, Pawcatuck, CT 06379

Michael Fischer, P.E.
Registered Professional Engineer (Electrical)
Connecticut License Number 33928
Expires January 31, 2024

Signed 18 January 2024

Site Compliance Summary

T-Mobile Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	5.69691 µW/cm^2
Cumulative General Population % MPE (Ground Level):	0.56973%
Cumulative Calculated Power Density (15' Adjacent Rooftop Level):	48.18665 µW/cm^2
Cumulative General Population % MPE (15' Adjacent Rooftop Level):	4.81879%

January 18, 2024

Centerline
Attn: Peter Fales, Vice President SAC
750 W Center St, Suite 301
West Bridgewater, MA 02379

RF Exposure Analysis for Site: **Amtrak_Stonington3**

Centerline was contracted to analyze the proposed T-Mobile facility at **166 Pawcatuck Avenue, Pawcatuck, CT 06379** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

All information used in this report was analyzed as a percentage of the Maximum Permissible Exposure (% MPE) limits as detailed in 47 CFR § 1.1310 as well as Federal Communications Commission (FCC) OET Bulletin 65 Edition 97-01. The FCC MPE limits are typically expressed in units of milliwatts per square centimeter (mW/cm^2) or microwatts per square centimeter ($\mu W/cm^2$). The exposure limits vary depending upon the frequencies being utilized. The General Population/Uncontrolled MPE limit (in mW/cm^2) for frequencies between 300 and 1500 is defined as frequency (in MHz) divided by 1500 ($f_{MHz}/1500$). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of 1 mW/cm^2 (1000 $\mu W/cm^2$). The calculated power density at each sample point divided by the limit at each calculated frequency provides a result in % MPE. Summing the calculated % MPE from all contributors provides a cumulative % MPE at a particular sample point. Wireless carriers use different frequency bands with varying MPE limits; therefore, it is useful to report results in terms of % MPE as opposed to power density.

All results were compared to the FCC radio frequency exposure rules as detailed in 47 CFR § 1.1307(b) to determine compliance with the 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.

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, 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.

Calculation Methodology

Centerline Communications, LLC has performed theoretical modeling of the site using a software tool, RoofMaster®, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.

Data & Results

The following table details the antennas and operating parameters for the T-Mobile antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at the ground level and 15' adjacent building.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at the ground level (0-6' spatial average) and the 15' adjacent building level (15'-21' spatial average). The results from the highest cumulative sample point at the ground level and adjacent building surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table(s) below. The cumulative power density and cumulative % MPE are displayed at the bottom of the table(s) below.

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Maximum Calculated Cumulative Power Density @ Ground Level
(Location: approximately 321' SE of site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu W/cm^2$)	General Population MPE Limit ($\mu W/cm^2$)	General Population % MPE
T-Mobile A 1	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00000	1000.00	0.00000
T-Mobile A 1	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00000	1000.00	0.00000
T-Mobile A 1	RFS APXVLL19P_43-C-A20	2100	17.33	119.00	4.00	60.00	12978.10	0.00001	1000.00	0.00000
T-Mobile A 2	RFS APXVAALL24 43-U-NA20	700	13.65	119.00	4.00	40.00	3707.83	0.00000	466.67	0.00000
T-Mobile A 2	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	40.00	3155.88	0.00000	400.00	0.00000
T-Mobile A 2	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	30.00	2366.91	0.00000	400.00	0.00000
T-Mobile A 3	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.00584	1000.00	0.00058
T-Mobile A 3	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.00584	1000.00	0.00058
T-Mobile A 3	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	0.56627	1000.00	0.05663
T-Mobile A 3	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	0.56627	1000.00	0.05663
T-Mobile B 4	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00003	1000.00	0.00000
T-Mobile B 4	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00003	1000.00	0.00000
T-Mobile B 4	RFS APXVLL19P_43-C-A20	2100	17.33	119.00	4.00	60.00	12978.10	0.00004	1000.00	0.00000
T-Mobile B 5	RFS APXVAALL24 43-U-NA20	700	13.65	119.00	4.00	40.00	3707.83	0.00002	466.67	0.00001
T-Mobile B 5	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	40.00	3155.88	0.00003	400.00	0.00001
T-Mobile B 5	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	30.00	2366.91	0.00002	400.00	0.00001
T-Mobile B 6	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.09877	1000.00	0.00988
T-Mobile B 6	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.09877	1000.00	0.00988
T-Mobile B 6	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	2.17282	1000.00	0.21728
T-Mobile B 6	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	2.17282	1000.00	0.21728
T-Mobile C 7	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00000	1000.00	0.00000
T-Mobile C 7	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00000	1000.00	0.00000
T-Mobile C 7	RFS APXVLL19P_43-C-A20	2100	17.33	119.00	4.00	60.00	12978.10	0.00000	1000.00	0.00000
T-Mobile C 8	RFS APXVAALL24 43-U-NA20	700	13.65	119.00	4.00	40.00	3707.83	0.00000	466.67	0.00000
T-Mobile C 8	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	40.00	3155.88	0.00000	400.00	0.00000
T-Mobile C 8	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	30.00	2366.91	0.00000	400.00	0.00000
T-Mobile C 9	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.00016	1000.00	0.00002
T-Mobile C 9	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.00016	1000.00	0.00002
T-Mobile C 9	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	0.00439	1000.00	0.00044
T-Mobile C 9	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	0.00439	1000.00	0.00044
Dish A 10	JMA MX08FRO665-21	700	12.05	104.00	4.00	30.00	1923.89	0.00000	466.67	0.00000
Dish A 10	JMA MX08FRO665-21	600	11.35	104.00	4.00	30.00	1637.50	0.00000	400.00	0.00000
Dish A 10	JMA MX08FRO665-21	2007	15.75	104.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish A 10	JMA MX08FRO665-21	2100	16.75	104.00	4.00	40.00	7570.42	0.00000	1000.00	0.00000
Dish B 11	JMA MX08FRO665-21	700	12.05	104.00	4.00	30.00	1923.89	0.00005	466.67	0.00001

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (µW/cm²)	General Population MPE Limit (µW/cm²)	General Population % MPE
Dish B 11	JMA MX08FRO665-21	600	11.35	104.00	4.00	30.00	1637.50	0.00004	400.00	0.00001
Dish B 11	JMA MX08FRO665-21	2007	15.75	104.00	4.00	40.00	6013.40	0.00007	1000.00	0.00001
Dish B 11	JMA MX08FRO665-21	2100	16.75	104.00	4.00	40.00	7570.42	0.00007	1000.00	0.00001
Dish C 12	JMA MX08FRO665-21	700	12.05	104.00	4.00	30.00	1923.89	0.00000	466.67	0.00000
Dish C 12	JMA MX08FRO665-21	600	11.35	104.00	4.00	30.00	1637.50	0.00000	400.00	0.00000
Dish C 12	JMA MX08FRO665-21	2007	15.75	104.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish C 12	JMA MX08FRO665-21	2100	16.75	104.00	4.00	40.00	7570.42	0.00000	1000.00	0.00000
							Cumulative Power Density:	**5.69691 µW/cm²**	**Cumulative % MPE:**	**0.56973%**

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Maximum Calculated Cumulative Power Density @ 15' Adjacent Building/House
(Location: approximately 282' southeast of site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu W/cm^2$)	General Population MPE Limit ($\mu W/cm^2$)	General Population % MPE
T-Mobile A 1	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00010	1000.00	0.00001
T-Mobile A 1	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00010	1000.00	0.00001
T-Mobile A 1	RFS APXVLL19P_43-C-A20	2100	17.33	119.00	4.00	60.00	12978.10	0.00016	1000.00	0.00002
T-Mobile A 2	RFS APXVAALL24 43-U-NA20	700	13.65	119.00	4.00	40.00	3707.83	0.00008	466.67	0.00002
T-Mobile A 2	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	40.00	3155.88	0.00007	400.00	0.00002
T-Mobile A 2	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	30.00	2366.91	0.00005	400.00	0.00001
T-Mobile A 3	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.00007	1000.00	0.00001
T-Mobile A 3	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.00007	1000.00	0.00001
T-Mobile A 3	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	11.82733	1000.00	1.18273
T-Mobile A 3	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	11.82733	1000.00	1.18273
T-Mobile B 4	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00012	1000.00	0.00001
T-Mobile B 4	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00012	1000.00	0.00001
T-Mobile B 4	RFS APXVLL19P_43-C-A20	2100	17.33	119.00	4.00	60.00	12978.10	0.00018	1000.00	0.00002
T-Mobile B 5	RFS APXVAALL24 43-U-NA20	700	13.65	119.00	4.00	40.00	3707.83	0.00008	466.67	0.00002
T-Mobile B 5	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	40.00	3155.88	0.00014	400.00	0.00003
T-Mobile B 5	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	30.00	2366.91	0.00010	400.00	0.00003
T-Mobile B 6	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.00007	1000.00	0.00001
T-Mobile B 6	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.00007	1000.00	0.00001
T-Mobile B 6	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	12.24297	1000.00	1.22430
T-Mobile B 6	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	12.24297	1000.00	1.22430
T-Mobile C 7	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00000	1000.00	0.00000
T-Mobile C 7	RFS APXVLL19P_43-C-A20	1900	16.24	119.00	4.00	40.00	6731.63	0.00000	1000.00	0.00000
T-Mobile C 7	RFS APXVLL19P_43-C-A20	2100	17.33	119.00	4.00	60.00	12978.10	0.00000	1000.00	0.00000
T-Mobile C 8	RFS APXVAALL24 43-U-NA20	700	13.65	119.00	4.00	40.00	3707.83	0.00000	466.67	0.00000
T-Mobile C 8	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	40.00	3155.88	0.00000	400.00	0.00000
T-Mobile C 8	RFS APXVAALL24 43-U-NA20	600	12.95	119.00	4.00	30.00	2366.91	0.00000	400.00	0.00000
T-Mobile C 9	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.00000	1000.00	0.00000
T-Mobile C 9	ERICSSON SON_AIR6419	2500	15.55	119.00	1.00	30.00	1076.77	0.00000	1000.00	0.00000
T-Mobile C 9	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	0.02177	1000.00	0.00218
T-Mobile C 9	ERICSSON SON_AIR6419	2500	22.05	119.00	1.00	90.00	14429.21	0.02177	1000.00	0.00218
Dish A 10	JMA MX08FRO665-21	700	12.05	104.00	4.00	30.00	1923.89	0.00007	466.67	0.00002
Dish A 10	JMA MX08FRO665-21	600	11.35	104.00	4.00	30.00	1637.50	0.00008	400.00	0.00002
Dish A 10	JMA MX08FRO665-21	2007	15.75	104.00	4.00	40.00	6013.40	0.00010	1000.00	0.00001
Dish A 10	JMA MX08FRO665-21	2100	16.75	104.00	4.00	40.00	7570.42	0.00010	1000.00	0.00001
Dish B 11	JMA MX08FRO665-21	700	12.05	104.00	4.00	30.00	1923.89	0.00011	466.67	0.00002

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (µW/cm²)	General Population MPE Limit (µW/cm²)	General Population % MPE
Dish B 11	JMA MX08FRO665-21	600	11.35	104.00	4.00	30.00	1637.50	0.00012	400.00	0.00003
Dish B 11	JMA MX08FRO665-21	2007	15.75	104.00	4.00	40.00	6013.40	0.00017	1000.00	0.00002
Dish B 11	JMA MX08FRO665-21	2100	16.75	104.00	4.00	40.00	7570.42	0.00018	1000.00	0.00002
Dish C 12	JMA MX08FRO665-21	700	12.05	104.00	4.00	30.00	1923.89	0.00000	466.67	0.00000
Dish C 12	JMA MX08FRO665-21	600	11.35	104.00	4.00	30.00	1637.50	0.00000	400.00	0.00000
Dish C 12	JMA MX08FRO665-21	2007	15.75	104.00	4.00	40.00	6013.40	0.00000	1000.00	0.00000
Dish C 12	JMA MX08FRO665-21	2100	16.75	104.00	4.00	40.00	7570.42	0.00000	1000.00	0.00000
							Cumulative Power Density:	**48.18665 µW/cm²**	**Cumulative % MPE:**	**4.81879%**

Summary

The theoretical calculations performed for this analysis yielded cumulative power density totals in all areas at the ground level and the 15' adjacent building level that are within the allowable federal limits for public exposure to RF energy. Therefore, the site is **compliant** with FCC rules and regulations.

Michelle Stone
RF EME Technical Writer II
Centerline

CENTERLINE

EXHIBIT H

Mailing Receipts/Proof of Notice

C/O CULLEN MORGAN
9415497263
CENTERLINE COMMUNICATIONS, LLC
12579 SAGEWOOD DRIVE
VENICE FL 34293

2 LBS **1 OF 1**

SHIP TO:
ATTN: CHRISTOPHER SANDOR
8082238587
AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN MA 01801-1053

MA 018 9-04

UPS GROUND
TRACKING #: 1Z 9Y4 503 03 3546 8346

BILLING: P/P

Reference # 1: CTNL813C CC

CS 24.1.00. MACNV50 3.0A 01/2024*

TM

Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030335468346
Date: Wednesday, January 24, 2024 at 11:45:43 AM Eastern Standard Time
From: UPS <pkginfo@ups.com>
To: Cullen Morgan <cmorgan@clinellc.com>

Hello, your package has been delivered.

Delivery Date: Wednesday, 01/24/2024
Delivery Time: 11:44 AM
Left At: INSIDE DELIV
Signed by: DONNA

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030335468346
Ship To:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 018011053 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.5 LBS
Reference Number:	CTNL813C CC

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C/O CULLEN MORGAN
9415497263
CENTERLINE COMMUNICATIONS, LLC
12579 SAGEWOOD DRIVE
VENICE FL 34293

2 LBS **1 OF 1**

SHIP TO:
MUNICIPAL BAY LLC
SUITE 900
ELEVEN PIEDMONT CENTER
3495 PIEDMONT ROAD NE
ATLANTA GA 30305-1717

GA 303 9-02

UPS GROUND
TRACKING #: 1Z 9Y4 503 03 1730 6527

BILLING: P/P

Reference # 1: CTNL813C CC

CS 24.1.00. MACNV50 3.0A 01/2024*

TM

Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030317306527
Date: Tuesday, January 23, 2024 at 1:46:42 PM Eastern Standard Time
From: UPS <pkginfo@ups.com>
To: Cullen Morgan <cmorgan@clinellc.com>

Hello, your package has been delivered.

Delivery Date: Tuesday, 01/23/2024
Delivery Time: 1:45 PM
Signed by: THROCKMORTON

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030317306527
Ship To:	MUNICIPAL BAY LLC 3495 PIEDMONT ROAD NE ELEVEN PIEDMONT CENTER SUITE 900 ATLANTA, GA 303051717 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.5 LBS
Reference Number:	CTNL813C CC

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C/O CULLEN MORGAN
9415497263
CENTERLINE COMMUNICATIONS, LLC
12579 SAGEWOOD DRIVE
VENICE FL 34293

2 LBS **1 OF 1**

SHIP TO:
DANIELLE CHESEBROUGH, 1ST SLCTWMN
TOWN OF STONINGTON
152 ELM STREET
STONINGTON CT 06378-1163

CT 063 0-02

UPS GROUND
TRACKING #: 1Z 9Y4 503 03 1861 3532

BILLING: P/P

Reference # 1: CTNL813C CC

CS 24.1.00. MACNV50 3.0A 01/2024*

TM

Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030318613532
Date: Tuesday, January 23, 2024 at 11:31:42 AM Eastern Standard Time
From: UPS <pkginfo@ups.com>
To: Cullen Morgan <cmorgan@clinellc.com>

Hello, your package has been delivered.

Delivery Date: Tuesday, 01/23/2024
Delivery Time: 11:30 AM
Signed by: CAREY

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030318613532
Ship To:	TOWN OF STONINGTON 152 ELM STREET STONINGTON, CT 063781163 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.5 LBS
Reference Number:	CTNL813C CC

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C/O CULLEN MORGAN
9415497263
CENTERLINE COMMUNICATIONS, LLC
12579 SAGEWOOD DRIVE
VENICE FL 34293
2 LBS
1 OF 1
SHIP TO:
ATTN: BUILDING OFFICIAL
TOWN OF STONINGTON
3RD FLOOR
152 ELM STREET
STONINGTON CT 06378-1163
CT 063 0-02
UPS GROUND
TRACKING #: 1Z 9Y4 503 03 2432 9954
BILLING: P/P
Reference # 1: CTNL813C CC
CS 24.1.00. MACNV50 3.0A 01/2024*
TM

Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030324329954
Date: Tuesday, January 23, 2024 at 11:34:43 AM Eastern Standard Time
From: UPS <pkginfo@ups.com>
To: Cullen Morgan <cmorgan@clinellc.com>

Hello, your package has been delivered.

Delivery Date: Tuesday, 01/23/2024
Delivery Time: 11:30 AM
Signed by: PUBLIC WORKS

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030324329954
Ship To:	TOWN OF STONINGTON 152 ELM STREET 3RD FLOOR STONINGTON, CT 063781163 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.5 LBS
Reference Number:	CTNL813C CC

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C/O CULLEN MORGAN
9415497263
CENTERLINE COMMUNICATIONS, LLC
12579 SAGEWOOD DRIVE
VENICE FL 34293

3 LBS **1 OF 1**

SHIP TO:
CONNECTICUT SITING COUNCIL
10 FRANKLIN SQUARE
NEW BRITAIN CT 06051-2655

CT 067 9-06

UPS GROUND
TRACKING #: 1Z 9Y4 503 03 1117 3735

BILLING: P/P

Reference # 1: CTNL813C ZAP

CS 24.1.00. MACNV50 4.0A 01/2024*

TM