



10 INDUSTRIAL AVE,
SUITE 3
MORRIS HANCOCK NJ 07430
PHONE: 201.684.0055
FAX: 201.684.0066

December 19th, 2023

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

RE: Notice of Exempt Modification
70 Herb Road, Sharon, CT 06069
Latitude: 41.79135085
Longitude: -73.42569857
T-Mobile Site#: CTNH543A - Anchor

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 81-foot level of the existing 113-foot Monopine at 70 Herb Road in Sharon, CT. The 113-foot monopole is owned by American Tower. The property is owned and operated by James Gillespie. T-Mobile now intends to add three (3) antennas and remove and replace three (3) antennas at the 81-foot level of the existing tower. The antennas support 5G services. T-Mobile will be installing the associated ground equipment within their existing ground space.

Planned Modifications:

Tower:

Install New:

- (3) AIR 6419 B41 Antennas
- (3) VV-65A-R1 Antennas
- (3) Radio 4460 B25 B66
- (3) 6x24 Hybrid Cables

To Be Removed:

- (3) 6x11 HCS Cable
- (3) APX16DWV Antennas
- (6) RRUS 11

To Remain:

- (3) APXVAARR24_43-U-NA20 Antennas
- (3) Radio 4449 B71 B85

Ground:**Install New:**

(1) 6160 Power Enclosure and (1) B160 Battery Cabinet.

This facility was approved by the Connecticut Siting Council in Docket 185 dated November 12, 1998. This project does not violate any of the conditions of this approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to First Selectman Casey Flanagan, Elected Official, and Jamie Casey, Land Use Administrator, as well as the tower and property owner.

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

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

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

Sincerely,

Eric Breun

Transcend Wireless

Cell: 201-658-7728

Email: ebreun@transcendwireless.com

Attachments

cc: Casey Flanagan - First Selectman of Sharon
Jamie Casey - Land Use Administrator
American Tower - Tower Owner
James Gillespie - Property Owner

Hello, your package has been delivered.

Delivery Date: Wednesday, 12/06/2023

Delivery Time: 10:51 AM

Signed by: PITCHER

TRANSCEND WIRELESS

Tracking Number:	<u>1ZV257420394947054</u>
Ship To:	TOWN PLANNER JAMIE CASEY 63 MAIN STREET SHARON, CT 06069 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CTNH543A

Hello, your package has been delivered.

Delivery Date: Wednesday, 12/06/2023

Delivery Time: 10:51 AM

Signed by: PITCHER

TRANSCEND WIRELESS

Tracking Number:	<u>1ZV257420394925041</u>
Ship To:	CASEY FLANAGAN 63 MAIN STREET SHARON, CT 06069 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CTNH543A

Hello, your package has been delivered.

Delivery Date: Wednesday, 12/06/2023

Delivery Time: 12:09 PM

Left At: DOCK

Signed by: ARIEL

TRANSCEND WIRELESS

Tracking Number:	1ZV257420399070483
Ship To:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 01801 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	3.0 LBS
Reference Number:	CTNH543A CT11696E
Reference Number:	CTNH416A

Hello, your package has been delivered.

Delivery Date: Wednesday, 12/06/2023

Delivery Time: 4:56 PM

Left At: MET CUST BOY

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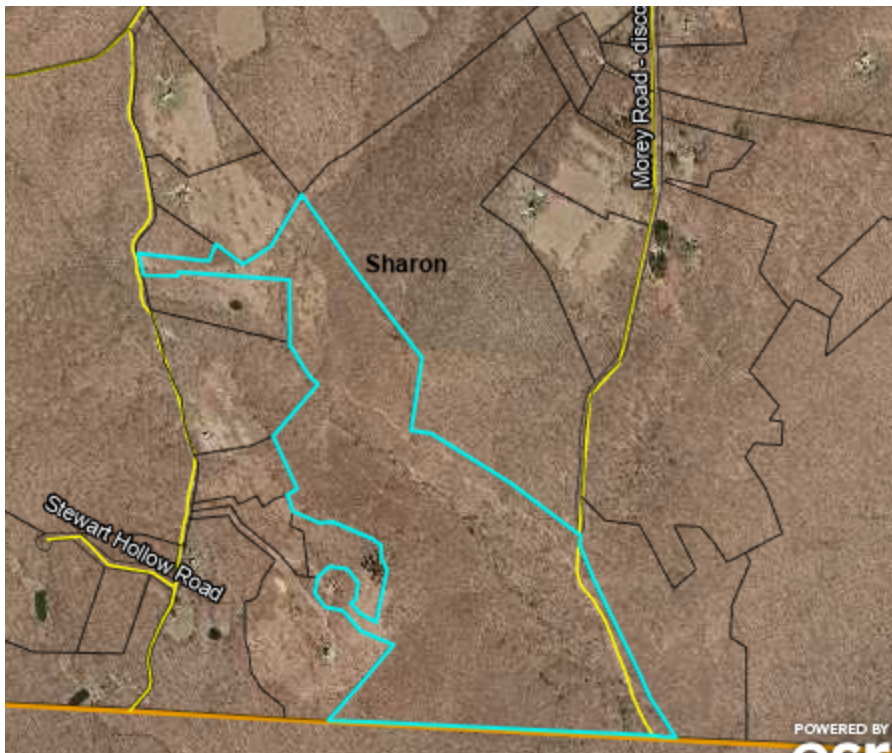


[Set Delivery Instructions](#)

[Manage Preferences](#)

TRANSCEND WIRELESS

Tracking Number:	1ZV257420393773065
Ship To:	JAMES GILLESPIE 72 HERB ROAD SHARON, CT 06069 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CTNH543A



Summary

Account Number	00030730
Parcel ID	3-2
Property Address	70 HERB RD
Use Class/Description	201 Commercial
Map/Block/Lot/Unit	3/2//
Zoning	RR
NBHD Code	6A
Acres	0
Utilities	,
Is Homesteaded	False

[View Map](#)

Owner

GILLESPIE/ALLTEL NEWCO LLC
C/O DUFF & PHELPS LLC

Current Appraised Value

Columns

Assessed Year	2022	2021
Appraised Building Value	\$202,700.00	\$202,700.00
Appraised XF/OB Value	\$205,200.00	\$205,200.00
Appraised Land Value	\$0.00	\$0.00
Appraised Total Value	\$407,900.00	\$407,900.00
Assessed Building Value	\$141,900.00	\$141,900.00
Assessed XF/OB Value	\$143,600.00	\$143,600.00
Assessed Land Value	\$0.00	\$0.00
Assessed Total Value	\$285,500.00	\$285,500.00

Assessment History

Columns

Assessed Year	2022	2021
Appraised Building Value	\$202,700.00	\$202,700.00
Appraised XF/OB Value	\$205,200.00	\$205,200.00
Appraised Land Value	\$0.00	\$0.00
Appraised Total Value	\$407,900.00	\$407,900.00
Assessed Building Value	\$141,900.00	\$141,900.00
Assessed XF/OB Value	\$143,600.00	\$143,600.00
Assessed Land Value	\$0.00	\$0.00
Assessed Total Value	\$285,500.00	\$285,500.00

Land

Building Number	1	Land Units	99.09 AC
Land Use	610 - Forest 490	Value	854,600

Building Number	1	Land Units	2 AC
Land Use	610 - Forest 490	Value	225,800

Building Information

Building #	1	Fireplaces		
Style	Industrial	Roof Cover	Asphalt Shngl.	
Occupancy	0	Roof Structure	Gable/Hip	
Actual Year Built	2001	Floor Type	Vinyl/Asphalt	
Effective Year Built	2006	Heat Type	Hot Air-no Duc	
Living Area	1,540	Fuel Type	Electric	
Stories	1	AC	Unit/AC	
Grade	09 A	Bdrms/Full Bth/Hlf Bth/Ttl Rm		
Condition	A	Basement Finished Area		
Exterior Wall	Wood on Sheath	Basement Sq. Ft.		
Interior Wall	Drywall			

Code	Description	Living Area	Gross Area	Effective Area
BAS	First Floor	1,540	1,540	1,540
	Totals	1,540	1,540	1,540

Building #	1			Fireplaces
Style	Vacant Land			Roof Cover
Occupancy	0			Roof Structure
Actual Year Built	0			Floor Type
Effective Year Built	0			Heat Type
Living Area	0			Fuel Type
Stories				AC
Grade				Bdrms/Full Bth/Hlf Bth/Ttl Rm
Condition				Basement Finished Area
Exterior Wall				Basement Sq. Ft.
Interior Wall				
Code	Description	Living Area	Gross Area	Effective Area

Out Buildings\Extra Features

Description	Cell Tower site	Year Built	2008
Sub Description		Value	\$205,200
Area	1 UNITS		

Sales History

Columns

Sales Date	Instrument Type
10/12/1999	Improved After Sale
7/25/1997	Verif by Deed
2/9/1994	Verif by Deed

DOCKET NO. 185 - An application by Litchfield Acquisition Corporation d/b/a AT&T Wireless Services for a Certificate of Environmental Compatibility and Public Need for construction, maintenance, and operation of a telecommunications tower and associated equipment located at 70 Herb Road, Sharon, Connecticut.

Connecticut Siting Council

November 12, 1998

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility at the proposed site on Herb Road in Sharon, Connecticut, 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 Litchfield Acquisition Corporation d/b/a AT&T Wireless Services (AT&T) for the construction, operation, and maintenance of a telecommunications tower, associated equipment, and buildings at the proposed site at 70 Herb Road, in the Town of Sharon, Connecticut.

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

1. The tower shall be constructed no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of AT&T, Springwich Cellular Limited Partnership (Springwich), Nextel Communications of the Mid-Atlantic, Inc. (Nextel), the antennas of at least two other wireless providers, and other entities, both public and private, as necessary, but such tower, excluding antennas, shall not exceed a height of 110 feet above ground level (AGL).
2. The tower and antennas shall be camouflaged as an evergreen tree, and the equipment building and compound shall be architecturally treated to resemble agricultural/rustic structures, subject to Council approval through Section 3 of this Decision and Order.
3. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of facility construction and shall include: a final site plan(s) for site development to include the location and specifications for the tower with antennas, designed to resemble a tree; tower foundation; architecturally-treated equipment buildings and security fence; vegetative screening; access road and underground utilities; site clearing and tree trimming; water drainage; and erosion and sedimentation controls consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

4. The Certificate Holder shall maintain all portions of the access road in a condition accessible for emergency access. Any damage to private roads caused by vehicles accessing the site shall be promptly repaired to pre-existing conditions.
5. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
6. The Certificate Holder shall provide a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels originally calculated and provided in the application.
7. Within six months of operation, the Certificate Holder and each carrier shall provide drive test data depicting signal levels along Route 7 between the intersections of Route 7 with Routes 341 and 128, and along Route 4 between the intersections of Route 4 with Route 125 and Northrup Road.
8. 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. No antenna, other than whip antennas, may be modified or added to the tower, unless approved by the Council.

9. If the facility does not initially provide, or permanently ceases to provide cellular services following completion of construction, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
10. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antenna becomes obsolete and ceases to function, unless such antenna is necessary to maintain the architectural appearance of the tower and is so ordered to remain on the tower by the Council.
11. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Hartford Courant, the Register Citizen, the News Times, and Litchfield County Times.

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

Litchfield Acquisition Corporation d/b/a
AT&T Wireless Services Its Representatives

Its Representative

Douglas A. Cohen, Esq.
Brown, Rudnick, Freed & Gesmer, P.C.
185 Asylum Street, CityPlace I
Hartford, CT 06103-3402
(860) 509-6511
Mitchell Holmgren
Site Development Coordinator
AT&T Wireless Services
15 East Midland Avenue
Paramus, NJ 07652
(203) 967-3130

Party

Town of Sharon

Its Representative

Robert Moeller
First Selectman
P.O. Box 385, 63 Main Street
Sharon, CT 06069
(860) 364-5789

Intervenor

Springwich Cellular Limited Partnership

Its Representative

Peter J. Tyrrell
Senior Counsel
Springwich Cellular Limited Partnership
500 Enterprise Drive
Rocky Hill, CT 06067-3900
(860) 513-7673

Intervenor

Nextel Communications of the Mid-Atlantic,
Inc. d/b/a Nextel Communication

Its Representative

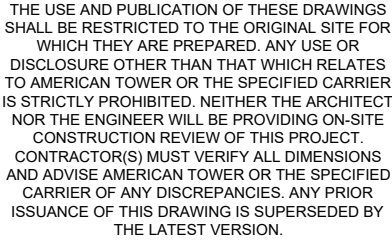
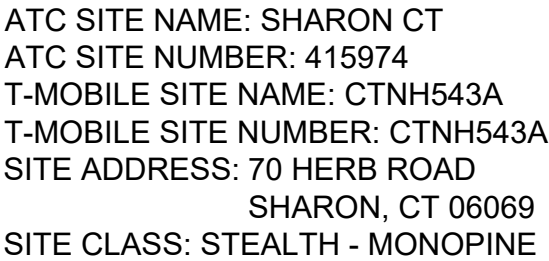
Christopher B. Fisher
Cuddy, Feder & Worby
90 Maple Avenue
White Plains, NY 10601-5196
(914) 761-1300

Intervenors

Mary I. Whitehead
P.O. Box 1235
Sharon, CT 06069
Hartford, CT 06103
Laurance and Carol Rand
30 Morey Road **SERVICE WAIVED**
Sharon, CT 06069
Fred and Judith Schwerin
44 Morey Road **SERVICE WAIVED**
Sharon, CT 06069
Toni Tucker
6 Herb Road **SERVICE WAIVED**
Sharon, CT 06069
José and Grace Noyes
12 Herb Road **SERVICE WAIVED**
Sharon, CT 06069
Melvin Elliott
59 Northrop Road **SERVICE WAIVED**
Sharon, CT 06069

Its Representative

Raymond J. Devlin, Jr.
Law Offices of Raymond J. Devlin, Jr.
100 Pearl Street, 14th Floor
(860) 249-0691

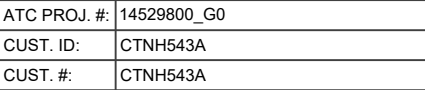
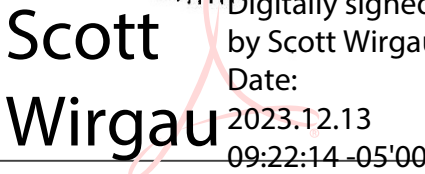


ATC SITE NUMBER:
415974

ATC SITE NAME:
SHARON CT

T-MOBILE SITE NAME:
CTNH543A

SITE ADDRESS:
70 HERB ROAD
SHARON, CT 06069



SHEET NUMBER: **G-001**

COMPLIANCE CODE		PROJECT SUMMARY		PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. 2020 NFPA 70, NATIONAL ELECTRIC CODE (NEC) 2. 2022 CONNECTICUT STATE BUILDING CODE 3. 2021 INTERNATIONAL BUILDING CODE (IBC) <u>DESIGN CRITERIA FROM TOWER STRUCTUAL ANALYSIS:</u> BASIC WIND SPEED: 114 MPH BASIC WIND SPEED W/ ICE: 40 MPH CODE(S): ANSI/TIA-222-H / 2021 IBC / 2022 CONNECTICUT STATE BUILDING CODE EXPOSURE CATEGORY: C RISK CATEGORY: II TOPO FACTOR PROCEDURE: METHOD 1 TOPOGRAPHIC CATEGORY: 1 SPECTRAL RESPONSE: S₀=0.18, S₁=0.05 SITE CLASS: D-STIFF SOIL- DEFAULT INFORMATION TAKEN FROM STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 09/27/2023.		<u>SITE ADDRESS:</u> 70 HERB ROAD SHARON, CT 06069 COUNTY: LITCHFIELD <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.79135085 LONGITUDE: -73.42569857 GROUND ELEVATION: 1100' AMSL		THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (3) ANTENNA(S), (6) RRU(S), (3) 6X12 HCS AWG AND (1) HYBRID TRUNK 6/24 4AWG CABLE(S) INSTALL MOUNT MODIFICATIONS, (6) ANTENNA(S), (3) RRU(S), AND (3) HYBRID TRUNK 6/24 4AWG CABLE(S) EXISTING (3) ANTENNA(S) AND (3) RRU(S) TO REMAIN <u>GROUND WORK:</u> REMOVE (1) RBS 6102 MU AC INSTALL (1) 6160 AC V1, (1) B160 EXISTING (1) PURCELL SFX17 2824, ICE BRIDGE, (1) GPS, AND (1) PPC TO REMAIN 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 HEAD EAST ON I-84 E, USE THE LEFT LANE TO TAKE EXIT 7 FOR US 7 N/US 202 E TOWARD BROOKFIELD/NEW MILFORD, CONTINUE ONTO US-202 E/US-7 N, CONTINUE TO FOLLOW US-7 N, CONTINUE ONTO US-202 E, TURN RIGHT ONTO STILL RIVER DR, STILL RIVER DR TURNS SLIGHTLY LEFT AND BECOMES GROVE ST/LOWER GROVE ST, CONTINUE TO FOLLOW GROVE ST, CONTINUE ONTO EAST ST, CONTINUE ONTO POPLAR ST, CONTINUE ONTO US-202 E/PARK LANE RD, CONTINUE TO FOLLOW US-202 E, SLIGHT LEFT ONTO CT-45 N/E SHORE RD, CONTINUE TO FOLLOW CT-45 N, TURN LEFT ONTO CT-341 W/CT-45 N, TURN RIGHT ONTO CT-45 N, SLIGHT RIGHT TO STAY ON CT-45 N, SLIGHT LEFT ONTO CT-4 W, TURN LEFT ONTO NORTHRUP RD, SLIGHT RIGHT TO STAY ON NORTHRUP RD, TURN LEFT ONTO S ELLSWORTH RD, S ELLSWORTH RD TURNS SLIGHTLY RIGHT AND BECOMES HERB RD, DESTINATION WILL BE ON THE LEFT	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
		G-001	TITLE SHEET		1	12/12/23	MNC		
		G-002	GENERAL NOTES		0	11/29/23	JM		
		C-101	DETAILED SITE PLAN		1	12/12/23	MNC		
		C-102	DETAILED EQUIPMENT PLAN		1	12/12/23	MNC		
		C-201	TOWER ELEVATION		1	12/12/23	MNC		
		C-401	ANTENNA INFORMATION & SCHEDULE		1	12/12/23	MNC		
		C-501	CONSTRUCTION DETAILS		0	11/29/23	JM		
		E-501	GROUNDING DETAILS		0	11/29/23	JM		
		R-601	SUPPLEMENTAL						
R-602	SUPPLEMENTAL								
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R-611	SUPPLEMENTAL								
R-612	SUPPLEMENTAL								

PROJECT TEAM	
<u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> ATC TOWER SERVICES, LLC 3500 REGENCY PKWY STE 100 CARY, NC 27518	<u>APPLICANT:</u> T-MOBILE
<u>PROPERTY OWNER:</u> JAMES E GILLESPIE 70 HERB ROAD SHARON, CT 06069	

UTILITY COMPANIES	
POWER COMPANY: EVERSOURCE PHONE: (888) 783-6617 TELEPHONE COMPANY: AT&T PHONE: (866) 593-1383	
	

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.



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REV.	DESCRIPTION	BY	DATE
△	FOR CONSTRUCTION	JM	11/29/23
△			
△			
△			
△			

ATC SITE NUMBER:

415974

ATC SITE NAME:

SHARON CT

T-MOBILE SITE NAME:

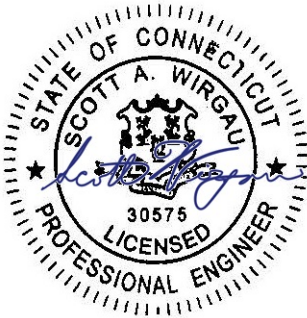
CTNH543A

SITE ADDRESS:

70 HERB ROAD

SHARON, CT 06069

SEAL:



Digitally Signed: 2023-12-13



ATC PROJ. #: 14529800_GO

CUST. ID: CTNH543A

CUST. #: CTNH543A

GENERAL NOTES

SHEET NUMBER:

G-002

REVISION:

0

SITE PLAN NOTES:

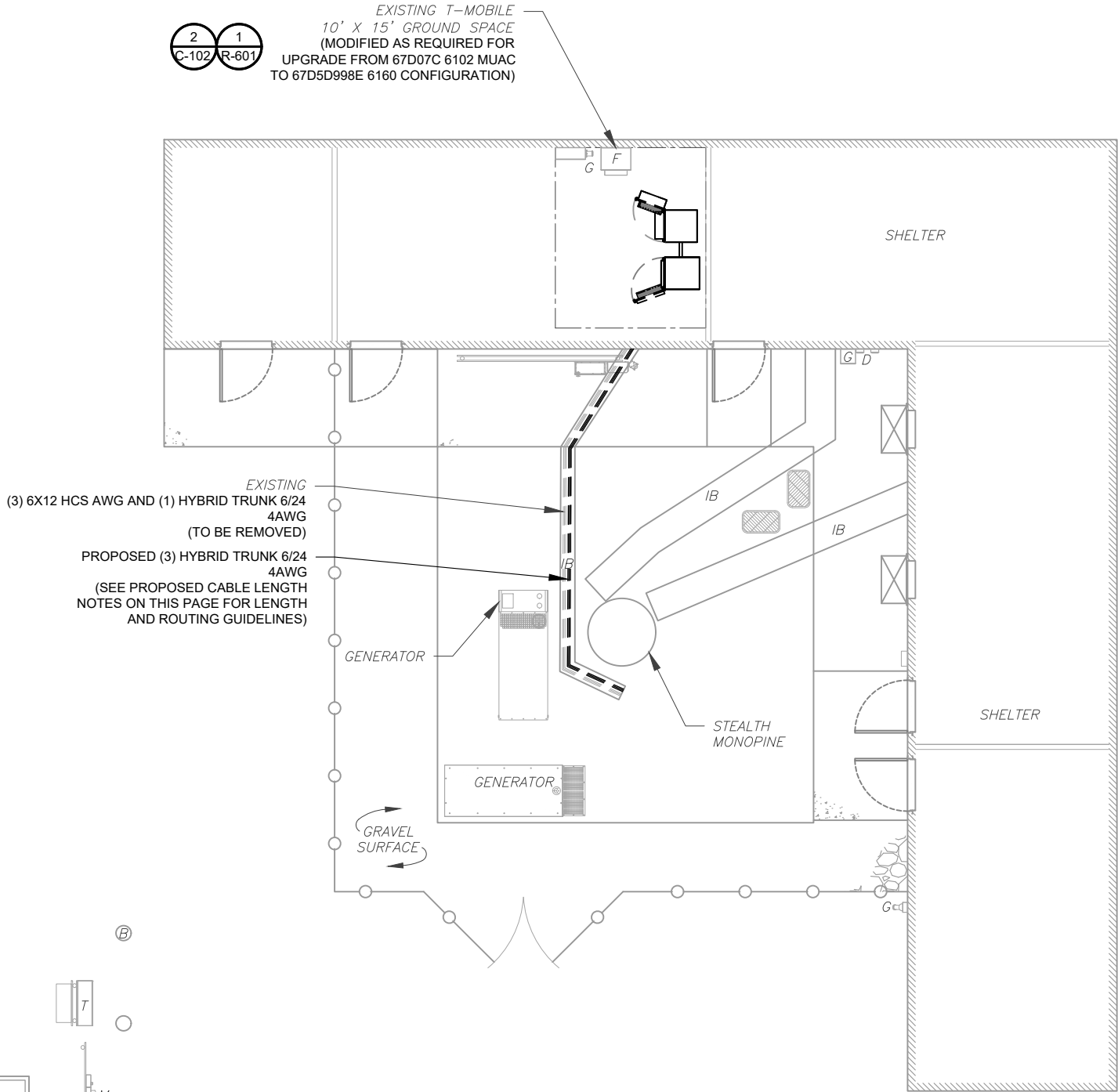
- THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
- ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE 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.
- NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

LEGEND

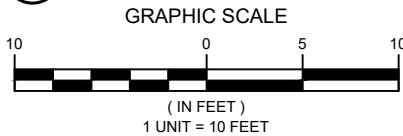
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
—	CHAINLINK FENCE

PROPOSED CABLE NOTES:

- ESTIMATED LENGTH OF PROPOSED CABLE IS **135'**. 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.
- 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



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0	FOR CONSTRUCTION	JM	11/29/23
1	ADMIN	MNC	12/12/23

ATC SITE NUMBER:

415974

ATC SITE NAME:

SHARON CT

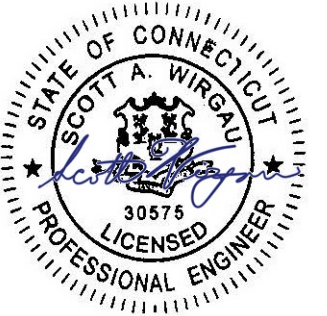
T-MOBILE SITE NAME:

CTNH543A

SITE ADDRESS:

70 HERB ROAD
SHARON, CT 06069

SEAL:



Digitally Signed: 2023-12-13

T-Mobile

ATC PROJ. #: 14529800_G0

CUST. ID: CTNH543A

CUST. #: CTNH543A

DETAILED SITE PLAN

SHEET NUMBER:

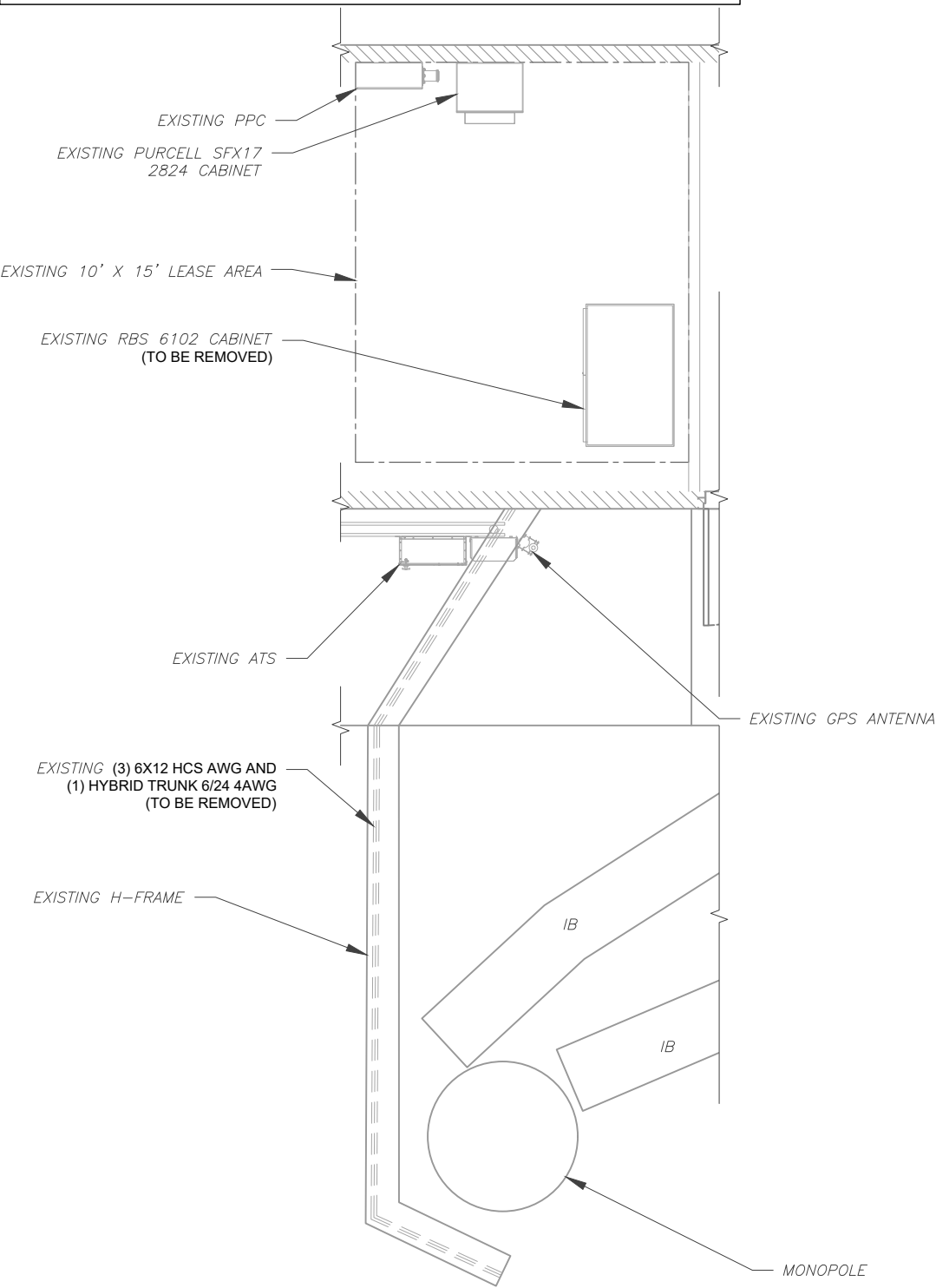
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REVISION:

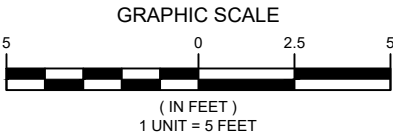
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SITE PLAN NOTES:

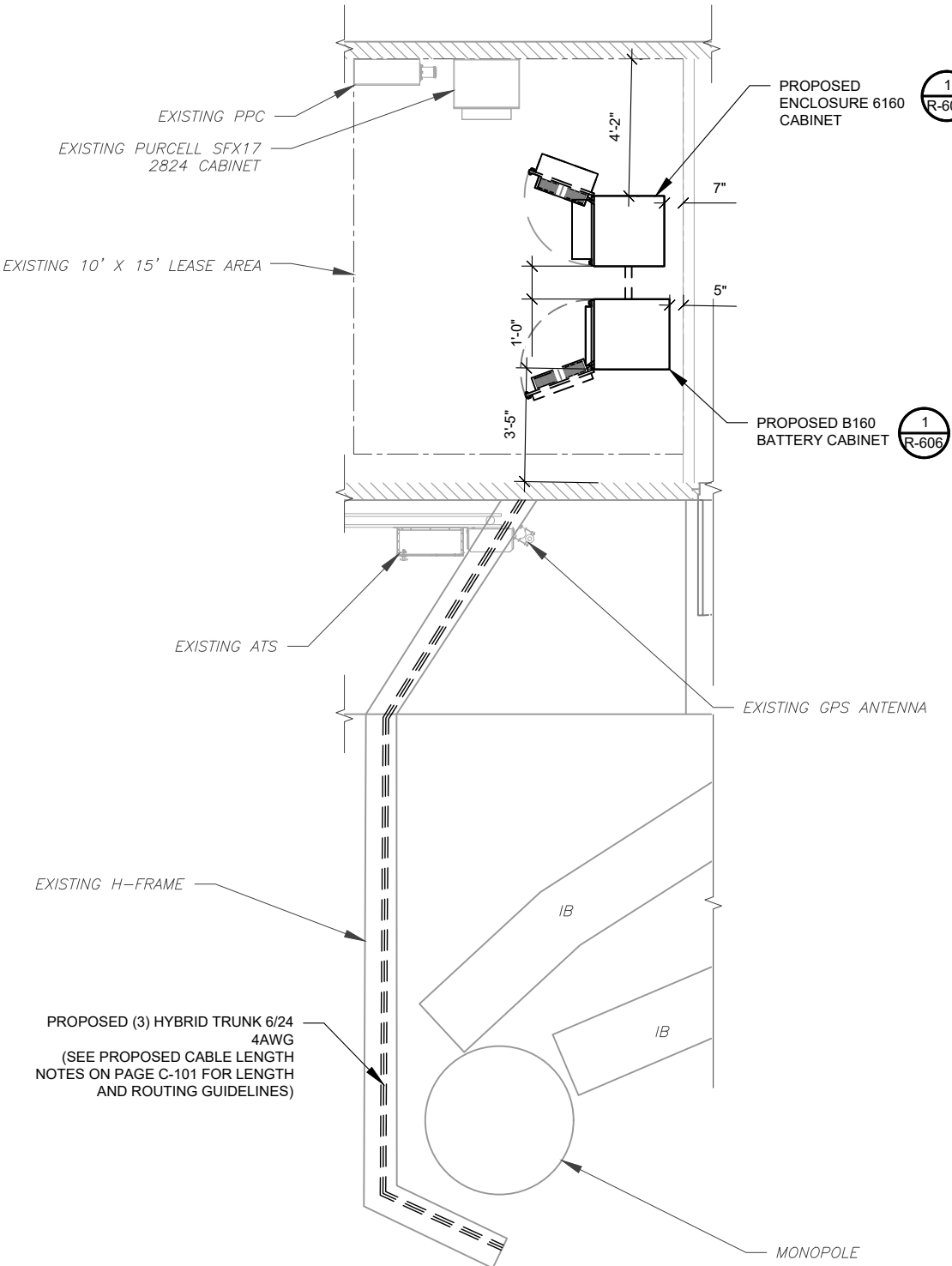
1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
3. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO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



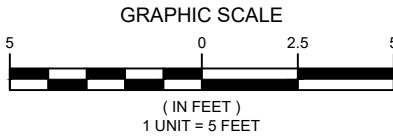
1 EXISTING GROUND EQUIPMENT LAYOUT



T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS.



2 PROPOSED GROUND EQUIPMENT LAYOUT



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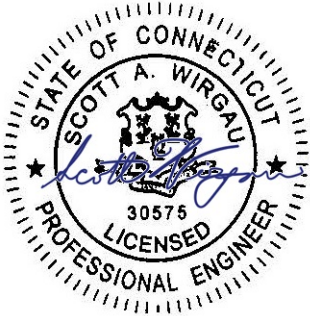
SHARON CT

T-MOBILE SITE NAME:

CTNH543A

SITE ADDRESS:
70 HERB ROAD
SHARON, CT 06069

SEAL:



Digitally Signed: 2023-12-13

T-Mobile

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CUST. ID: CTNH543A
CUST. #: CTNH543A

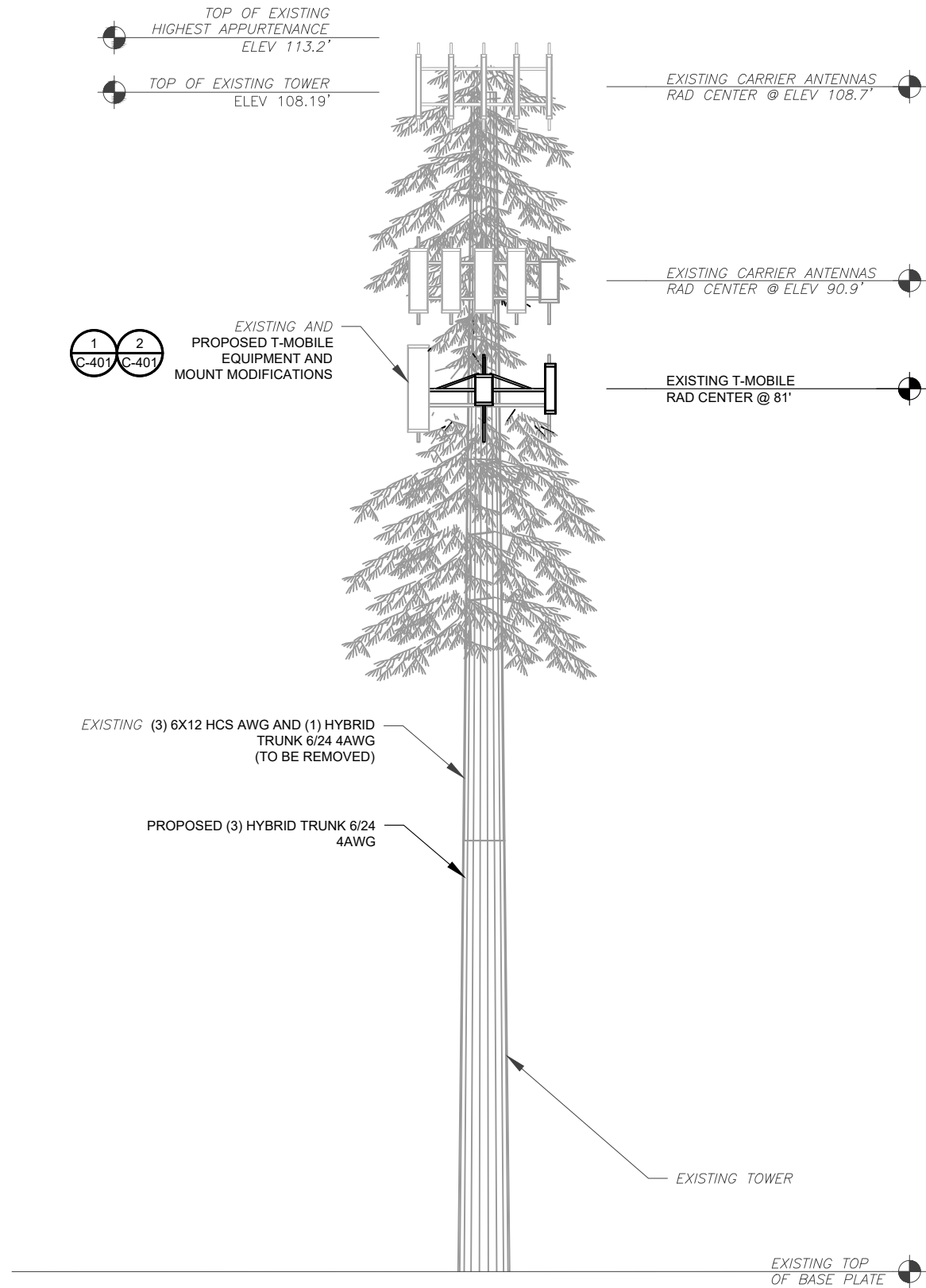
**DETAILED EQUIPMENT
PLAN**

SHEET NUMBER:

C-102

REVISION:

1



1 TOWER ELEVATION
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 10/30/2023, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.

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



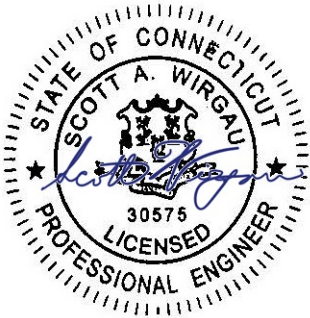
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415974
ATC SITE NAME:
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T-MOBILE SITE NAME:
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SITE ADDRESS:
70 HERB ROAD
SHARON, CT 06069

SEAL:



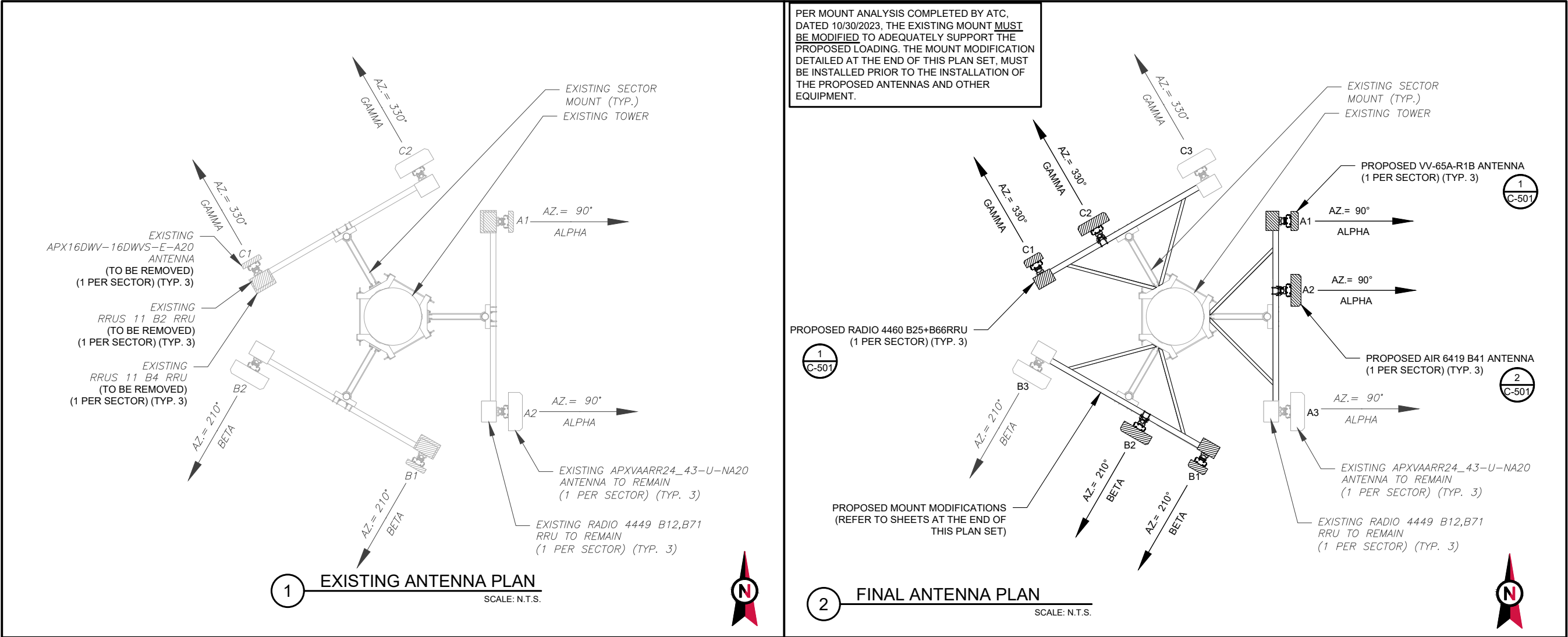
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ATC PROJ. #:	14529800_G0
CUST. ID:	CTNH543A
CUST. #:	CTNH543A

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	1



EXISTING ANTENNA SCHEDULE										NOTES	FINAL ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY			LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS	SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS	
ALPHA	81°	90°	A1	APX16DWV-16DWVS-E-A20	L2100	0° /0°	RMV	RRUS 11 B2 RRUS 11 B4	RMV RMV	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.	ALPHA	81°	90°	A1	VV-65A-R1B	L1900/ L2100/ N1900	0° / 0°	ADD	RADIO 4460 B25+B66	ADD
			A2	APXVAARR24_43-U-NA20	L700/ L600/ N600	0° /0°	RMN	RADIO 4449 B12,B71	RMN					A2	AIR 6419 B41	L2500/ N2500	0° / 0°	ADD	-	-
BETA	81°	210°	B1	APX16DWV-16DWVS-E-A20	L2100	0° /0°	RMV	RRUS 11 B2 RRUS 11 B4	RMV RMV	BETA	81°	210°	B1	VV-65A-R1B	L1900/ L2100/ N1900	0° / 0°	ADD	RADIO 4460 B25+B66	ADD	
			B2	APXVAARR24_43-U-NA20	L700/ L600/ N600	0° /0°	RMN	RADIO 4449 B12,B71	RMN				B2	AIR 6419 B41	L2500/ N2500	0° / 0°	ADD	-	-	
GAMMA	81°	330°	C1	APX16DWV-16DWVS-E-A20	L2100	0° /0°	RMV	RRUS 11 B2 RRUS 11 B4	RMV RMV	GAMMA	81°	330°	C1	VV-65A-R1B	L1900/ L2100/ N1900	0° / 0°	ADD	RADIO 4460 B25+B66	ADD	
			C2	APXVAARR24_43-U-NA20	L700/ L600/ N600	0° /0°	RMN	RADIO 4449 B12,B71	RMN				C2	AIR 6419 B41	L2500/ N2500	0° / 0°	ADD	-	-	



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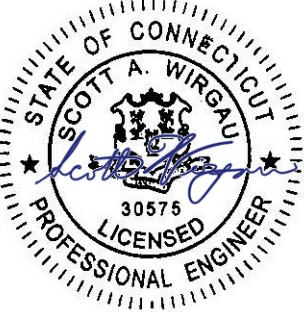
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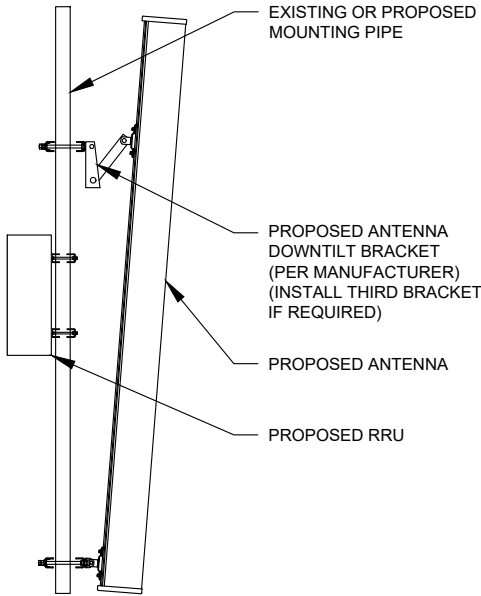
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CUST. ID:	CTNH543A
CUST. #:	CTNH543A

ANTENNA INFORMATION & SCHEDULE

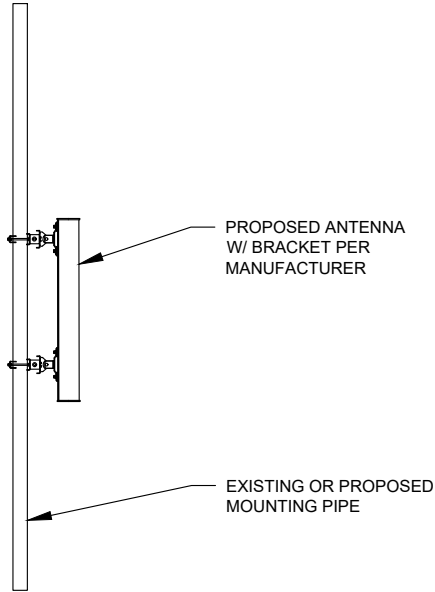
SHEET NUMBER: C-401	REVISION: 1
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EXISTING/PROPOSED MOUNTS AND/OR MOUNT MODIFICATIONS NOT SHOWN FOR CLARITY. REFER TO ANTENNA PLANS, MOUNT ANALYSES AND/OR MOUNT MODIFICATION DOCUMENTS FOR ADDITIONAL DETAIL.



1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



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



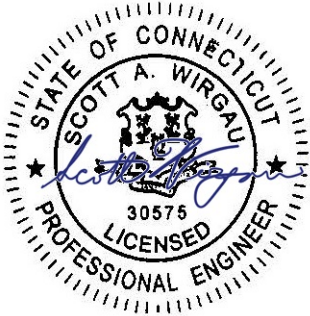
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PHONE: (919) 468-0112
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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	11/29/23

ATC SITE NUMBER:
415974
ATC SITE NAME:
SHARON CT
T-MOBILE SITE NAME:
CTNH543A
SITE ADDRESS:
70 HERB ROAD
SHARON, CT 06069

SEAL:



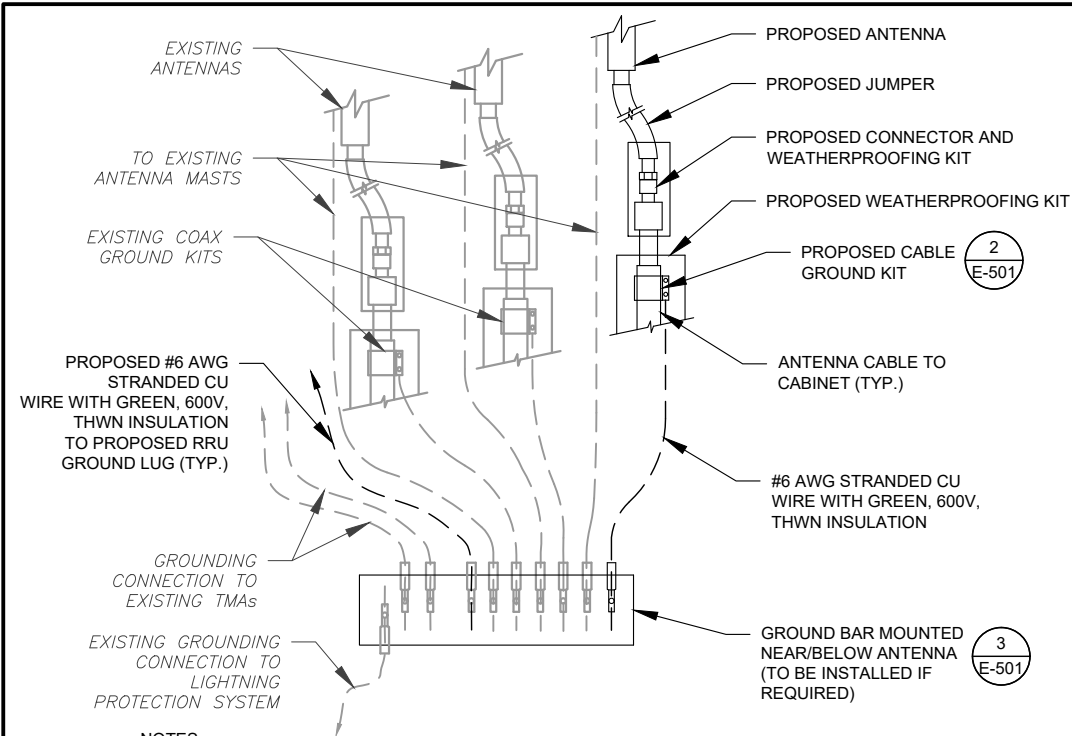
Digitally Signed: 2023-12-13

T-Mobile

ATC PROJ. #:	14529800_G0
CUST. ID:	CTNH543A
CUST. #:	CTNH543A

**CONSTRUCTION
DETAILS**

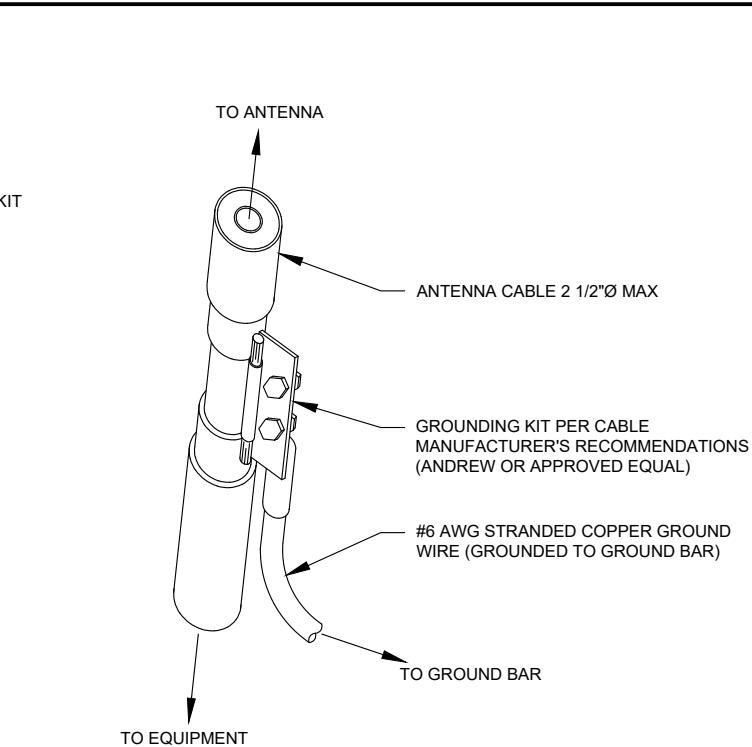
SHEET NUMBER:	REVISION:
C-501	0



NOTES:

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

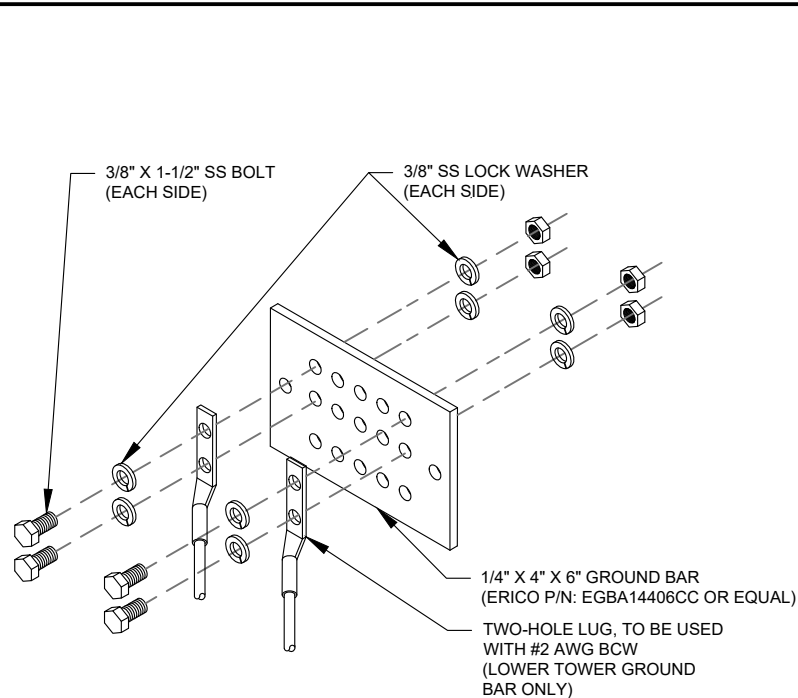
1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



GROUND KIT NOTES:

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

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



GROUND BAR NOTES:

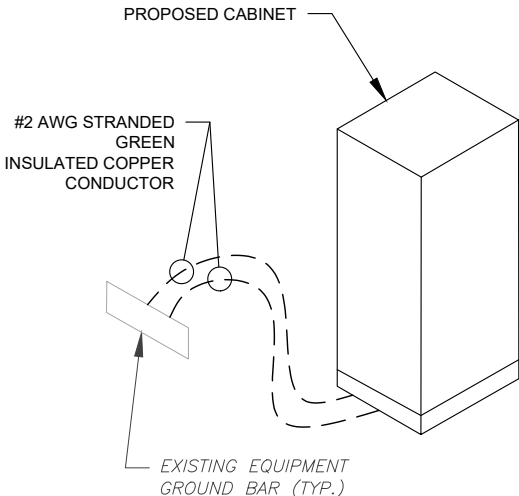
- GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
- GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

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

ELECTRICAL NOTES:

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

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



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

6 ELECTRICAL NOTES

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

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

4 CONDUIT USE TABLES

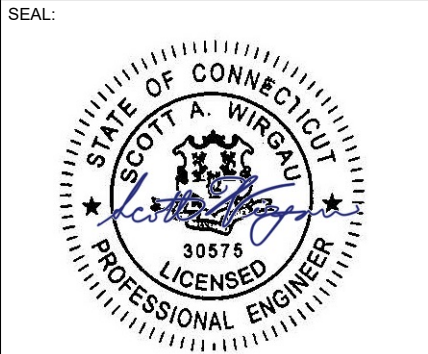


AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	11/29/23
1			
2			
3			
4			

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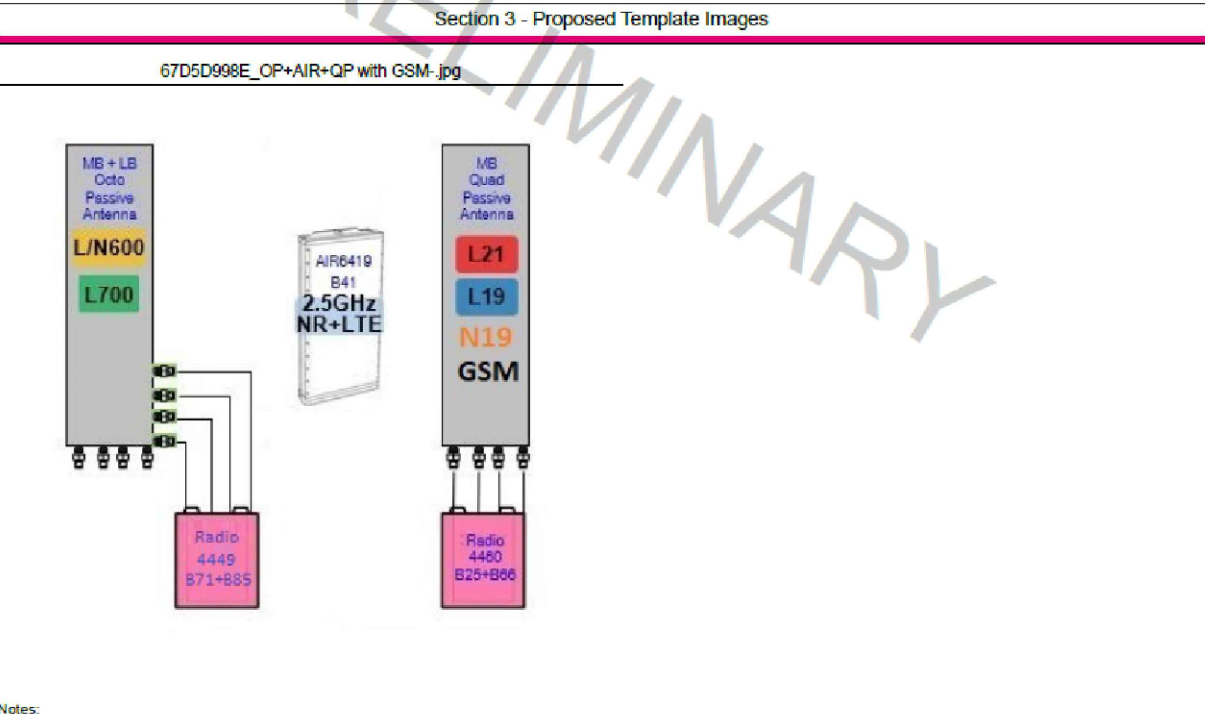
Digitally Signed: 2023-12-13

	
ATC PROJ. #:	14529800_G0
CUST. ID:	CTNH543A
CUST. #:	CTNH543A

GROUNDING DETAILS	
SHEET NUMBER: E-501	REVISION: 0

Proposed RAN Equipment				
Template: 67D6D98E 6160				
Enclosure	1	2	3	4
Enclosure Type	Enclosure 6160 AC V1	RBS 6102 MU AC	B160	Purcell SFX17 2624
Baseband	RP 6651 N2500 L2500	BB 6630 N1900 L1900 L2100 BB 6630 N800 L600 L700		
Transport System	CSR IXRe V2 (Gen2)			
Hybrid Cable System	Hybrid Trunk 6/24 4AWG 50m (x3)			Ericsson 6x12 HCS "Select Length & AWG" (x3)
RAN Scope of Work:				
Remove all unused equipment's from RAN section. Add (1) B160 and (1) B160 cabinets. Add (1) RP6651 for NR2500/L2500 Add (1) IXRe router to B160. Add (3) Hybrid Trunk 6/24 4AWG 50m confirmed Scoping notes: relocate existing battery cabinet.				

1CABINET CONFIGURATION



2ANTENNA CONFIGURATION

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

SUPPLEMENTAL

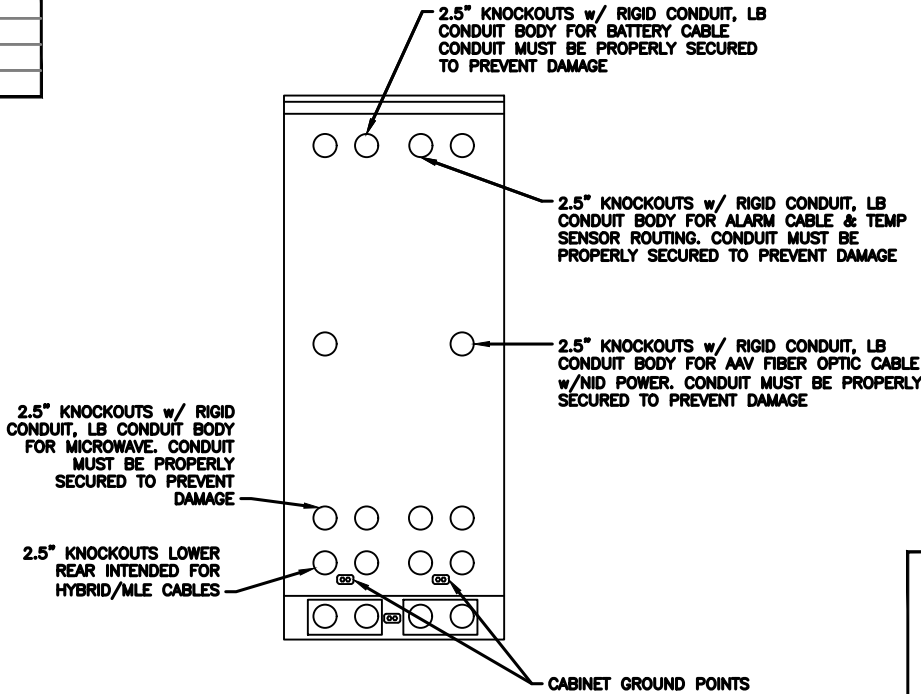
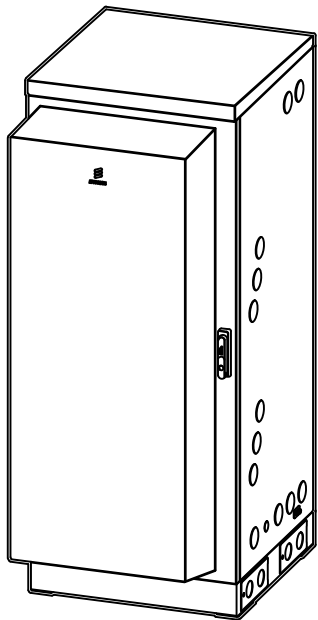
SHEET NUMBER:

R-601

REVISION:

0

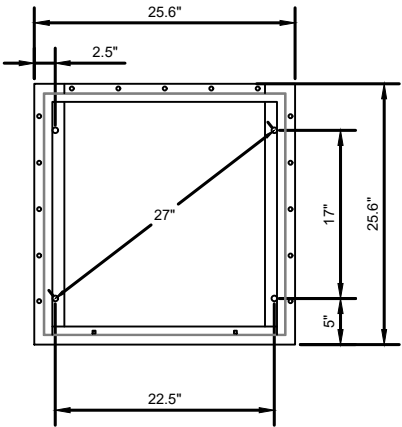
MANUFACTURER:	ERICSSON
MODEL:	6160 SITE SUPPORT CABINET
DIMENSIONS:	63" x 25.6" x 33.6" (H x W x D)
WEIGHT:	373 LBS



REAR VIEW

NOTE:

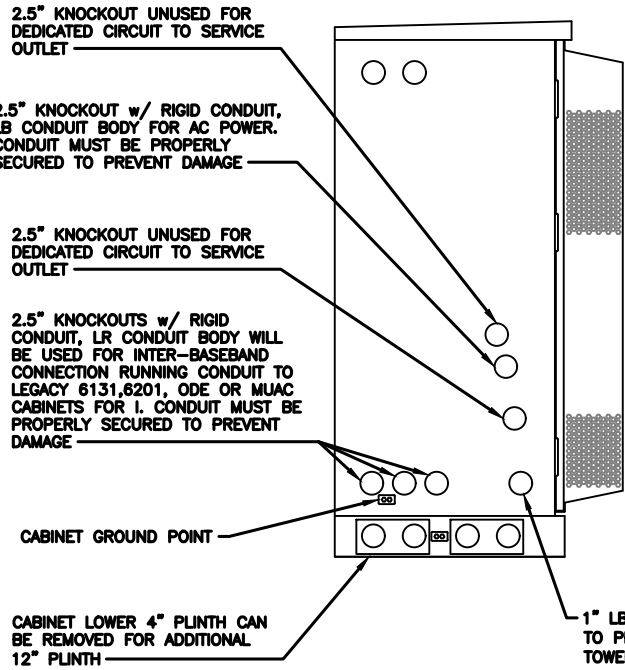
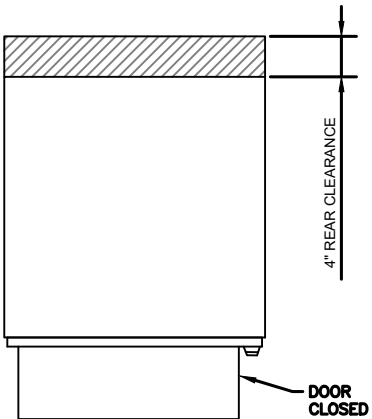
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING



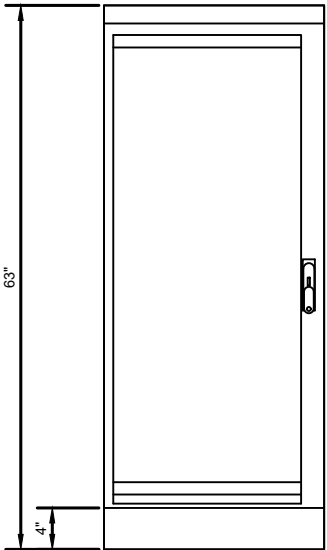
BOLT DOWN PATTERN

GROUNDING NOTE:

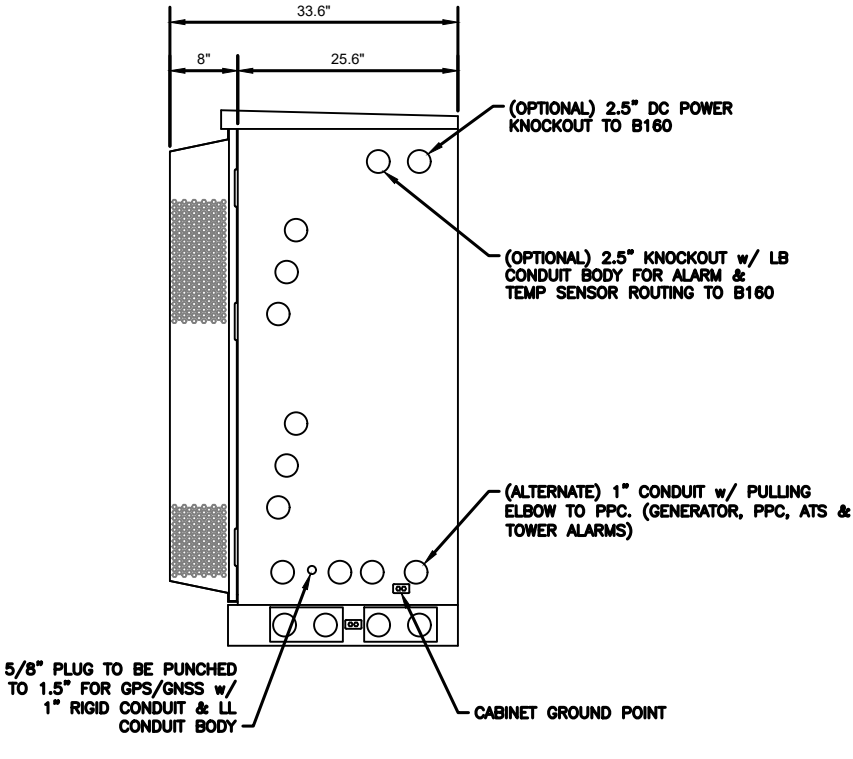
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."



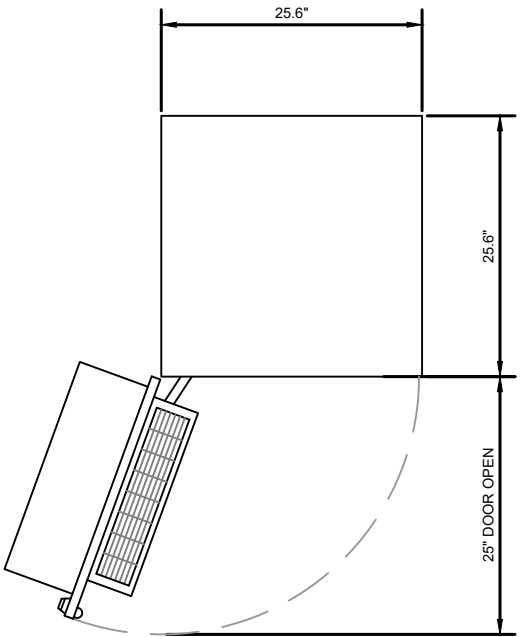
LEFT VIEW



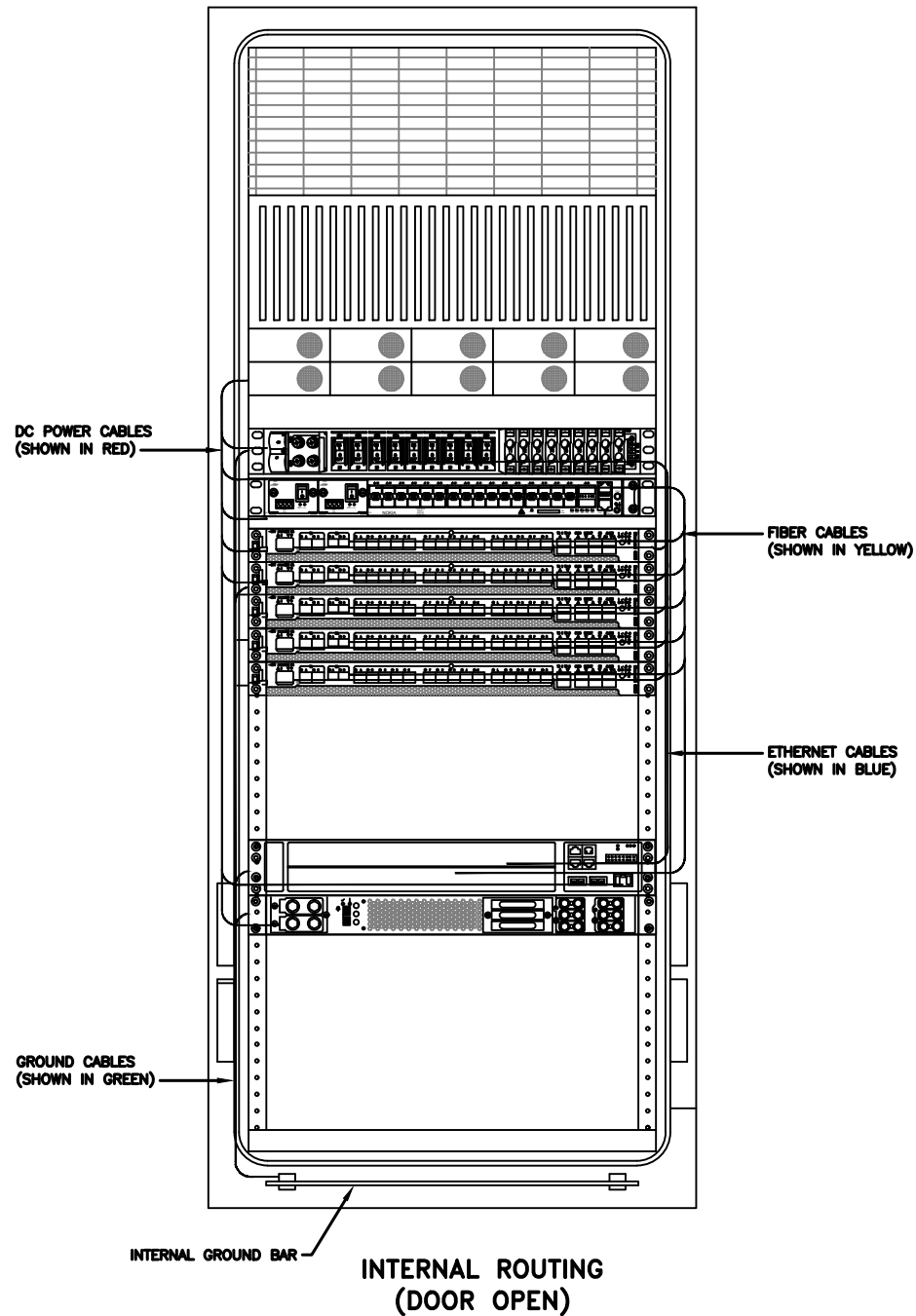
FRONT VIEW



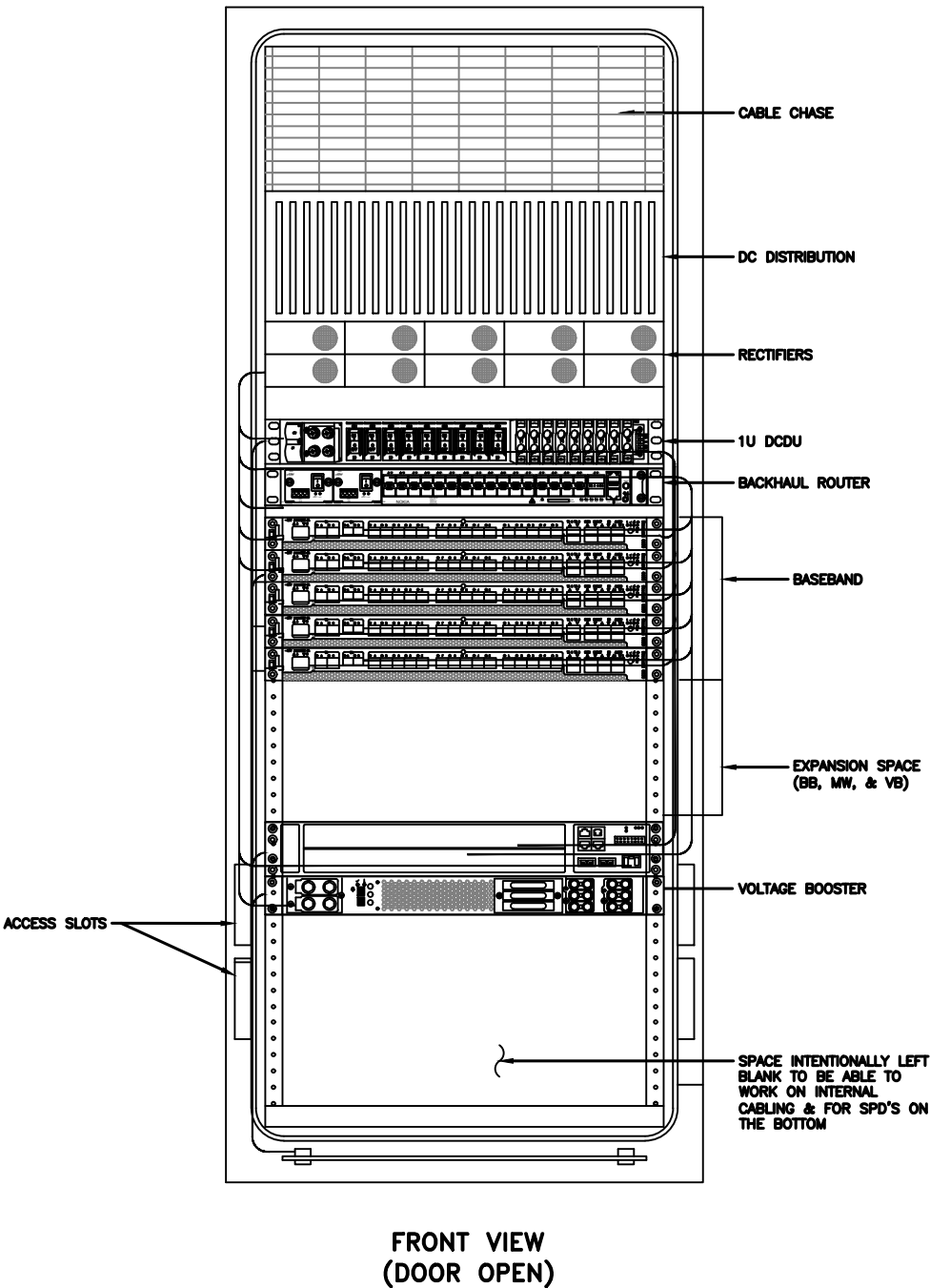
RIGHT VIEW



PLAN VIEW

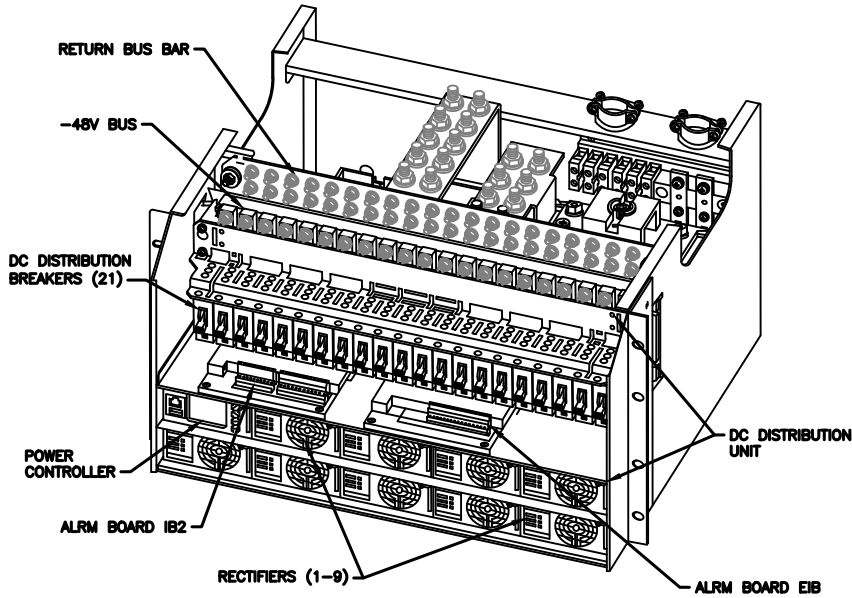


RACK ASSIGNMENTS	
RU SLOTS	DESCRIPTION
1	DC DISTRIBUTION
2	
3	
4	
5	RECTIFIER SHELF
6	
7	FIBER BOX
8	DCDU
9	BACKHAUL ROUTER
10	
11	1ST BASEBAND
12	2ND BASEBAND
13	3RD BASEBAND
14	4TH BASEBAND
15	5TH BASEBAND
16	EXPANSION
17	
18	
19	EXPANSION / LEGACY BASEBAND / VOLTAGE BOOSTER
20	
21	VOLTAGE BOOSTER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

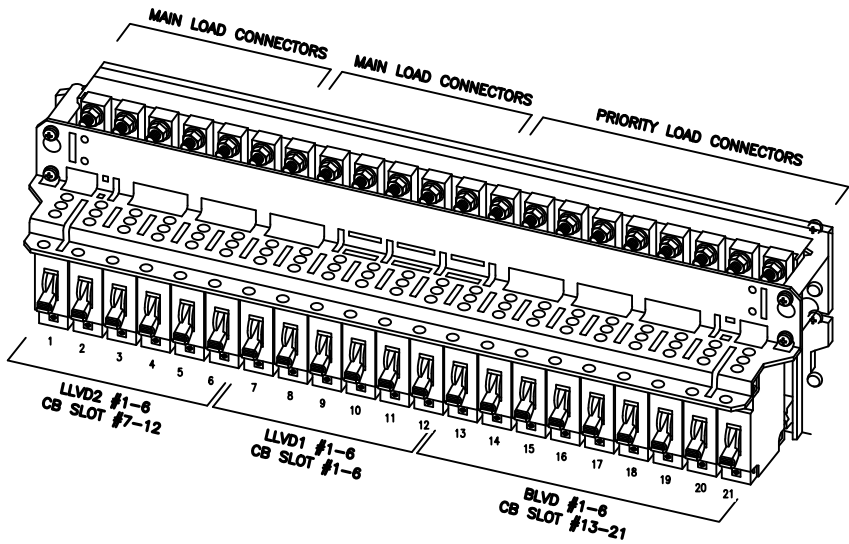


NOTE:
THIS IS FOR REFERENCE ONLY, CHECK
FOR SPECIFIC DETAIL IN T-MOBILE
CABINET SPECIFIC INSTALLATION GUIDES

Breaker Allocation for E6160					
CB SLOT	Ckt #		w/ 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					



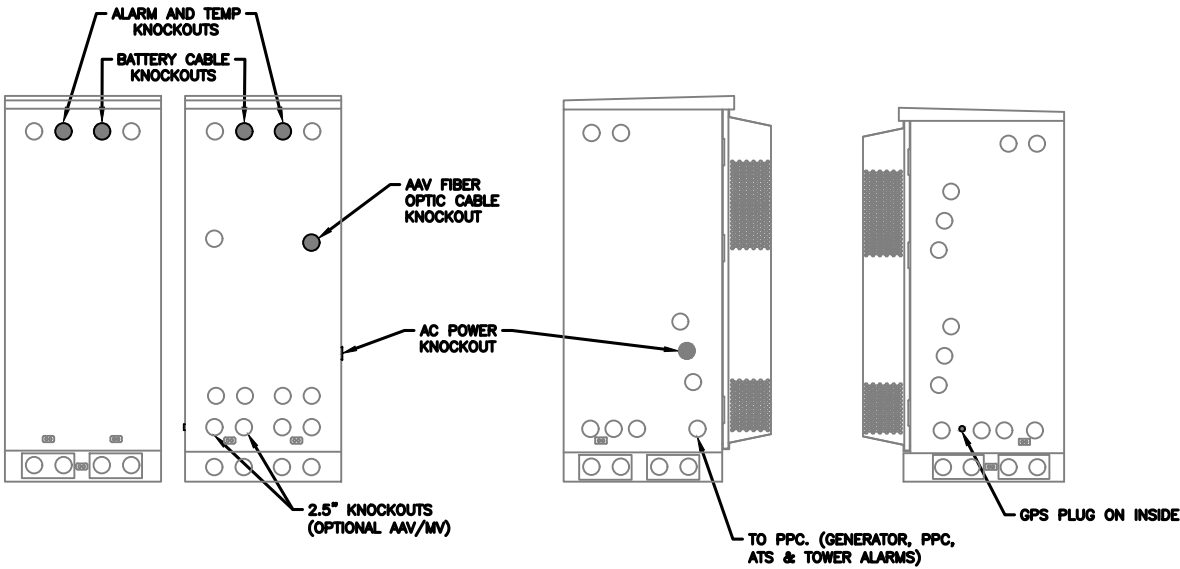
POWER SUBRACK



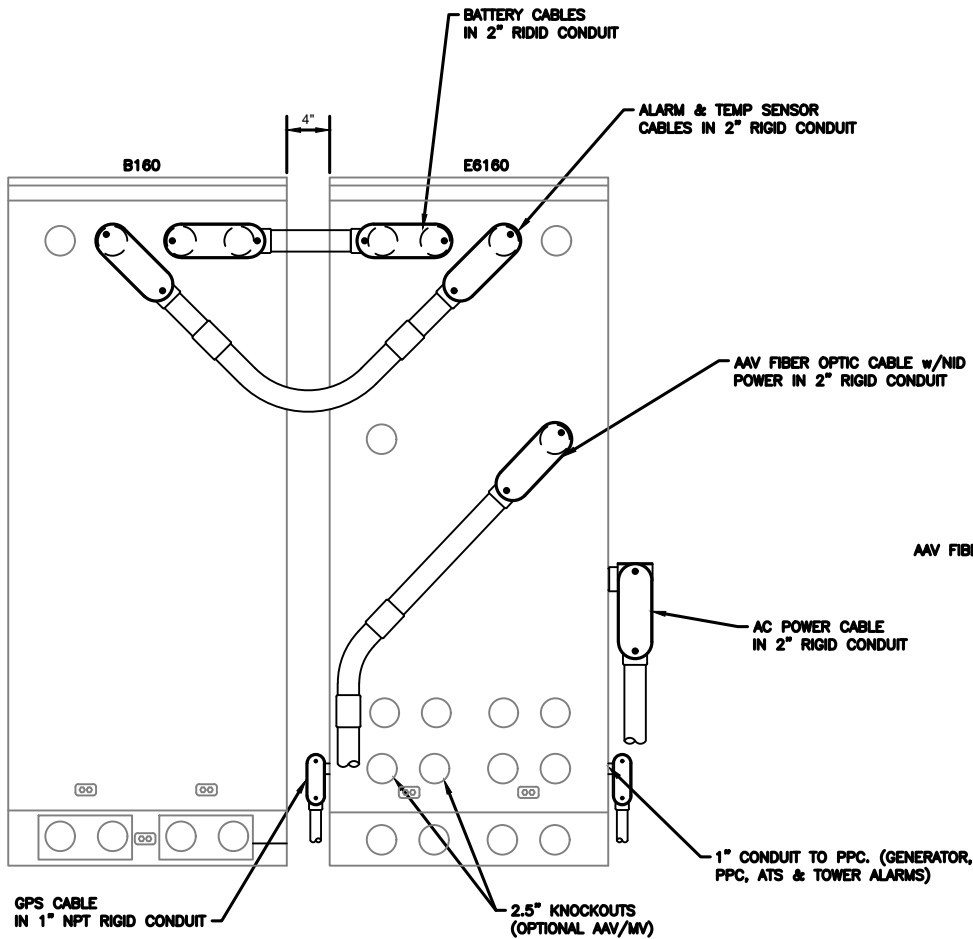
DC DISTRIBUTION

NOTE:

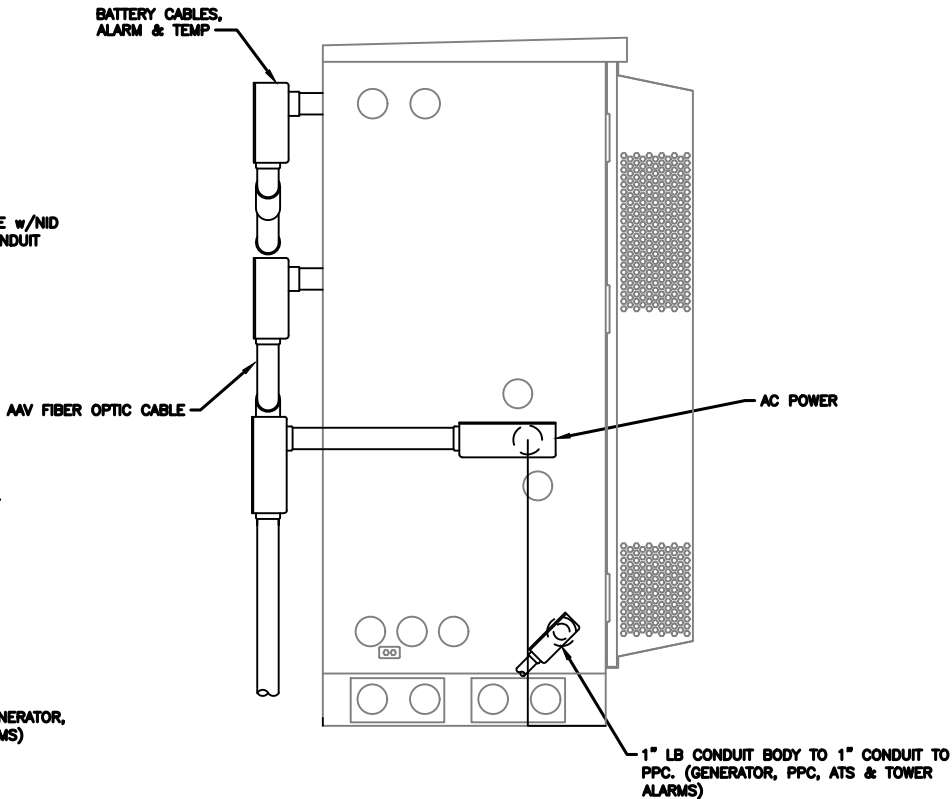
1. ALL CONDUIT AND FITTING ENTRANCES INTO CABINETS AND ENCLOSURES MUST UTILIZE MYERS OR EQUIVALENT HUBS OR SEALING WASHERS TO PREVENT WATER ENTRY/SEEPAGE INTO CABINETS AND ENCLOSURES.
2. (LIQUIDFLEX) FLEXIBLE METALLIC CONDUIT (LFMC) & ASSOCIATED FITTINGS CAN BE USED AS NEEDED BUT ONLY FOR TIGHT CONDUIT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



CONDUIT LOCATIONS

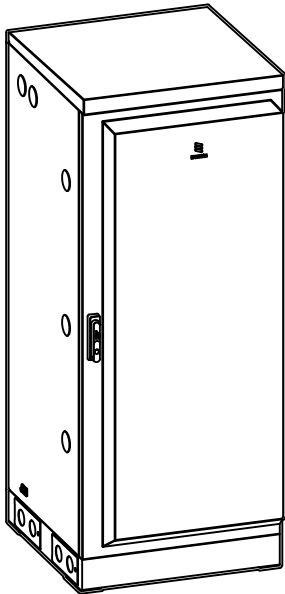


REAR VIEW



SIDE VIEW

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



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

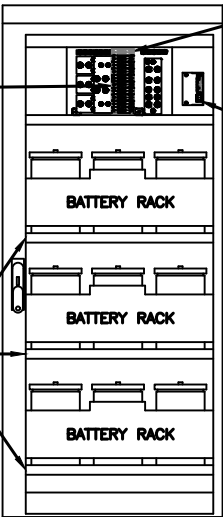
CABINET GROUND POINTS

REAR VIEW

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

3 x 300A BREAKERS

BATTERY VIBRATION MOUNTS



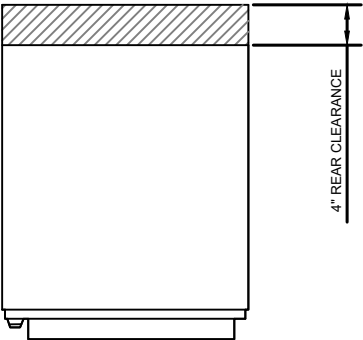
25A AUX BREAKERS, FANS, LIGHTS, ETC.

ALARM BOX, PRELABLED

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

FRONT VIEW (DOOR OPEN)

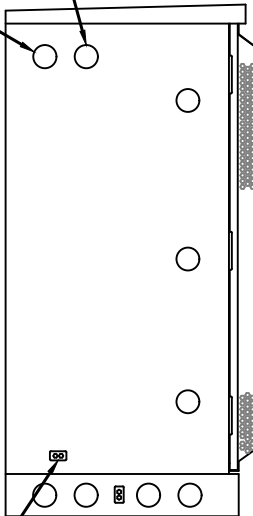
- NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
 - CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING



4" REAR CLEARANCE

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

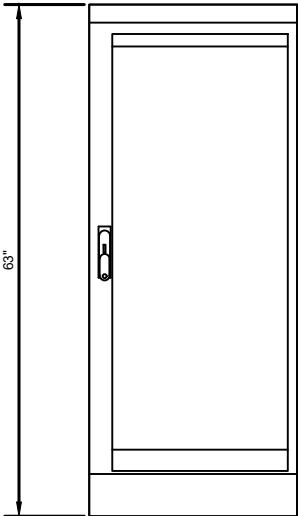
(OPTIONAL) 2.5" DC POWER KNOCKOUTS TO 6160



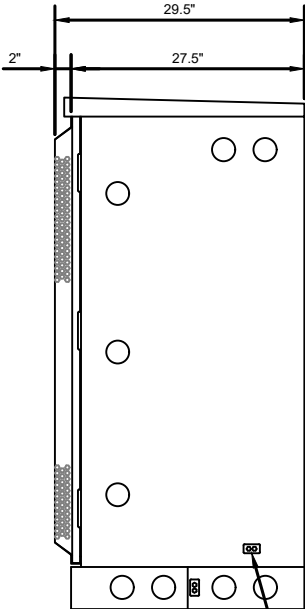
CABINET GROUND POINT

LEFT VIEW

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

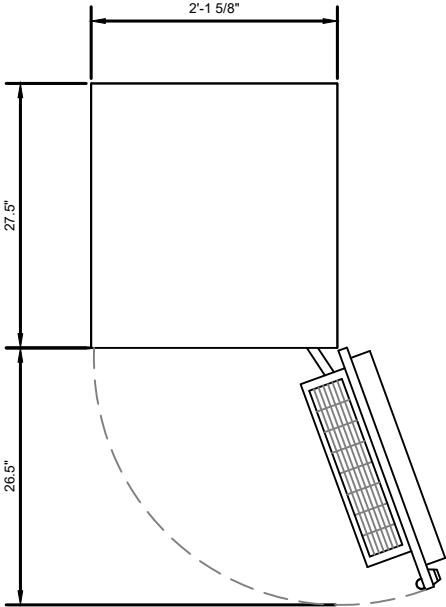


FRONT VIEW



CABINET GROUND POINT

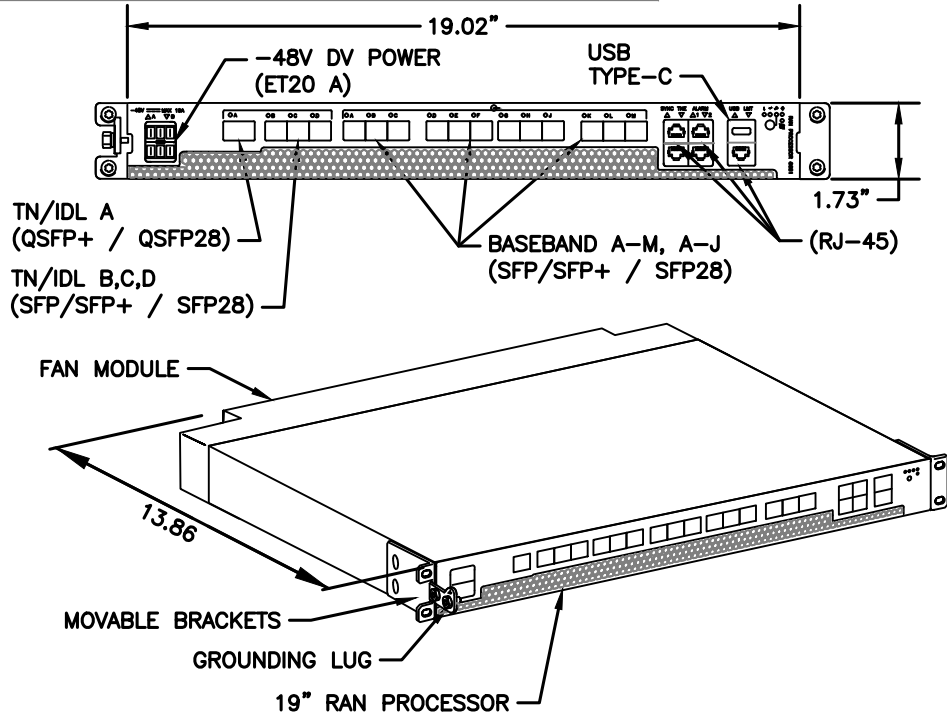
RIGHT VIEW



PLAN VIEW

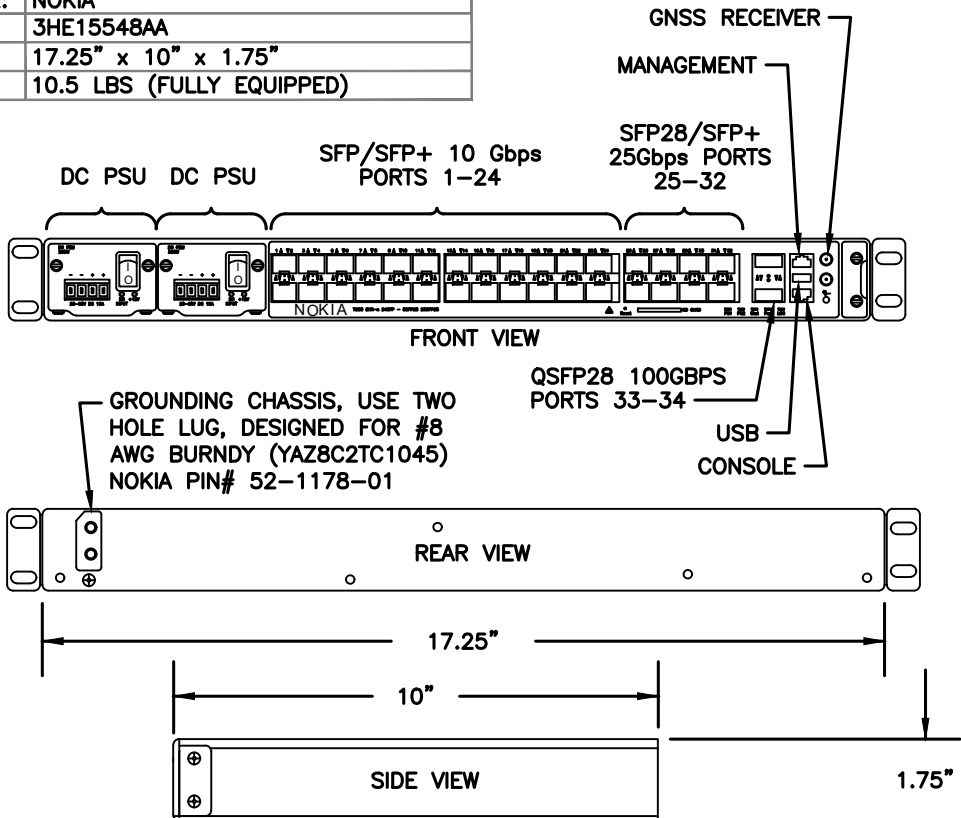
B160 ERICSSON SITE SUPPORT BATTERY CABINET

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



1 34553 - ERICSSON 6651 RAN PROCESSOR
SCALE: N.T.S.

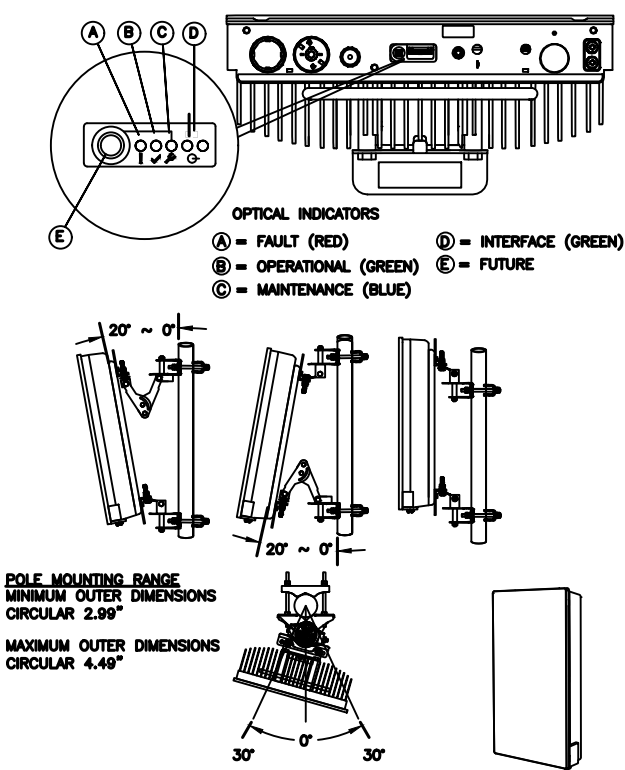
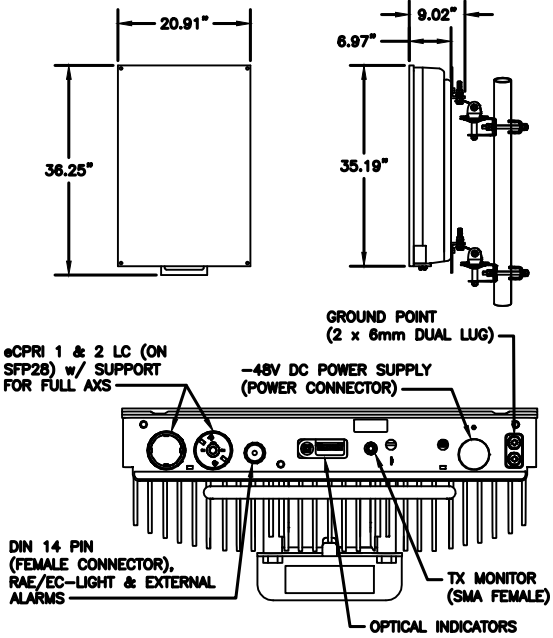
MANUFACTURER:	NOKIA
MODEL:	3HE15548AA
DIMENSIONS:	17.25" x 10" x 1.75"
WEIGHT:	10.5 LBS (FULLY EQUIPPED)



2 34097 - NOKIA 7250 IXR-e ROUTER w/ GNSS
SCALE: N.T.S.

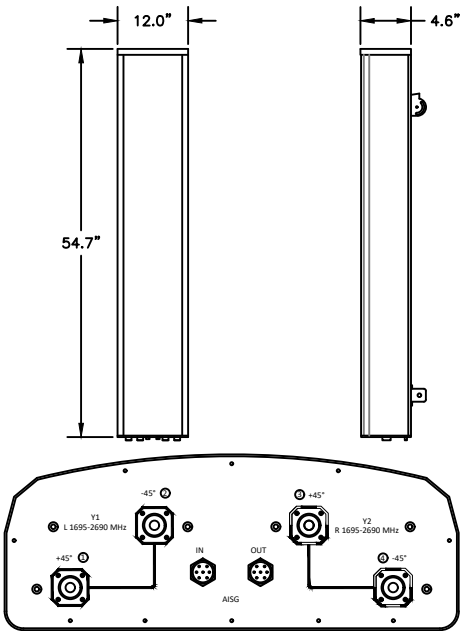
NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

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



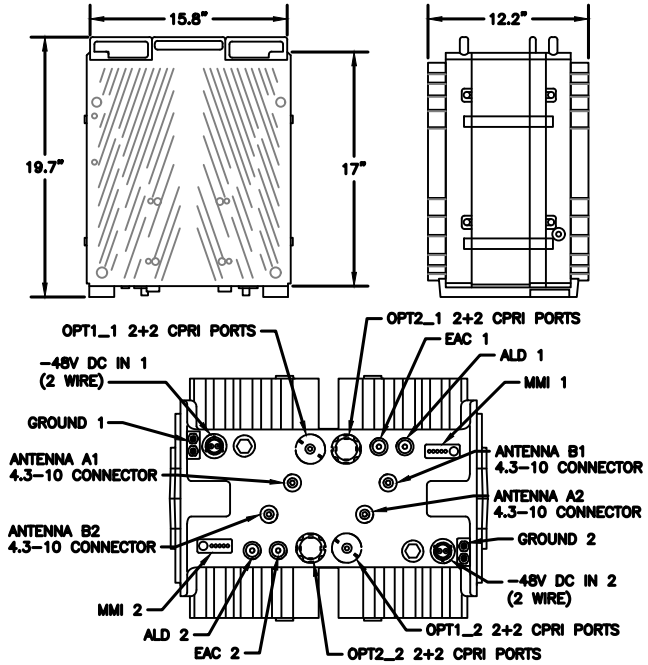
1 34552 - ERICSSON AIR 6419 BAND 41
SCALE: N.T.S.

MANUFACTURER:	COMMSCOPE
MODEL:	VV-65A-R1
DIMENSIONS:	54.7" x 12.1" x 4.6" (H x W x D)
WEIGHT:	24.7 LB
INTERFACE:	4-PORT 4.3-10 FEMALE
MOUNTING KIT:	600899A-2 (INCLUDED) WEIGHT: 8.6 LB



2 34401 - COMMSCOPE VV-65A-R1
SCALE: N.T.S.

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



3 34373 - ERICSSON 4460 RADIO B2/25 B66
SCALE: N.T.S.

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

SUPPLEMENTAL

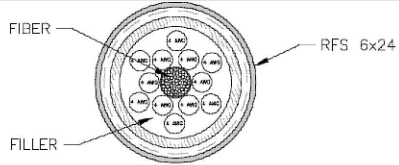
SHEET NUMBER:

R-608

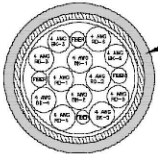
REVISION:

0

PARAMETER	VALUE
NOMINAL DIAMETER (INCHES)	2
CROSS-SECTION AREA (SQUARE INCHES)	3.13
JACKET COLOR	BLACK
WEIGHT/LINEAR FOOT (POUNDS)	2.55

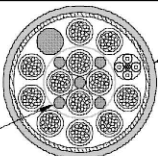


PARAMETER	VALUE
NOMINAL DIAMETER (INCHES)	1.79
CROSS-SECTION AREA (SQUARE INCHES)	2.52
JACKET COLOR	BLACK
WEIGHT/LINEAR FOOT (POUNDS)	2.65



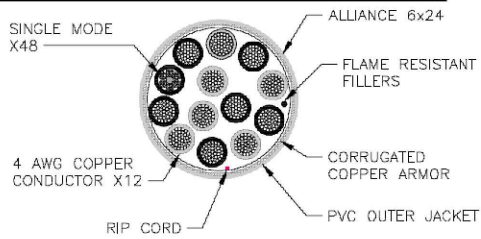
NETWORK WIRELESS SOLUTIONS 6x24

PARAMETER	VALUE
NOMINAL DIAMETER (INCHES)	1.76
CROSS-SECTION AREA (SQUARE INCHES)	2.43
JACKET COLOR	BLACK
WEIGHT/LINEAR FOOT (POUNDS)	2.29

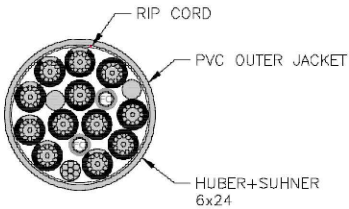


(6x24) HYBRID TRUNK CROSS SECTION
8.5" x 11" SCALE N.T.S. | 11" x 17" SCALE N.T.S.

PARAMETER	VALUE
NOMINAL DIAMETER (INCHES)	1.8
CROSS-SECTION AREA (SQUARE INCHES)	2.54
JACKET COLOR	BLACK
WEIGHT/LINEAR FOOT (POUNDS)	2.48



PARAMETER	VALUE
NOMINAL DIAMETER (INCHES)	1.62
CROSS-SECTION AREA (SQUARE INCHES)	2.04
JACKET COLOR	BLACK
WEIGHT/LINEAR FOOT (POUNDS)	2.39



(6x24) HYBRID TRUNK CROSS SECTION
8.5" x 11" SCALE N.T.S. | 11" x 17" SCALE N.T.S.

Cable Vendor	Cable Type	Nominal OD (in.)	C.S. Area (sq. in.)	Weight (lbs./ft)	onTop Breakout	MAX ENTITLEMENT
HCS 2.0	6 AWG 25' to 225' cable lengths				HCS Pendant (Breakout) Dimension (in.)	
Alliance	6x24 6AWG	1.46	1.67	1.61	16.36 x 9.30 x 5.79 (sq./in 152.15)	Nominal OD (in.) 1.55
CommScope	6x24 6AWG	1.55	1.89	1.71	19.37 x 10.83 x 5.12 (sq./in 235.07)	C.S. Area (sq./in.) 1.89
NWS	6x24 6AWG	1.48	1.72	1.61	15.95 x 10.20 x 3.21 (sq./in 162.69)	Weight (lbs./ft) 1.71
Amphenol	6x24 6AWG	1.46	1.67	1.65	19.37 x 10.83 x 5.12 (sq./in 209.78)	Pendant (sq./in) 235.07
	4 AWG 250' to 450' cable lengths					
Alliance	6x24 4AWG	1.8	2.54	2.48	16.36 x 9.30 x 5.79 (sq./in 152.15)	Nominal OD (in.) 1.8
CommScope	6x24 4AWG	1.76	2.43	2.4	19.37 x 10.83 x 5.12 (sq./in 235.07)	C.S. Area (sq./in.) 2.54
NWS	6x24 4AWG	1.79	2.52	2.65	15.95 x 10.20 x 3.21 (sq./in 162.69)	Weight (lbs./ft) 2.65
Amphenol	6x24 4AWG	1.71	2.3	2.55	19.37 x 10.83 x 5.12 (sq./in 209.78)	Pendant (sq./in) 235.07
6x24					6x24 Canister Breakout - OD x Length (in.)	
Alliance	6x24 4AWG	1.8	2.54	2.48	3.11 x 9.45 (c.s. Area 7.60)	Nominal OD (in.) 2
CommScope	6x24 4AWG	1.76	2.43	2.29	2.68 x 9.81 (c.s. Area 5.64)	C.S. Area (sq./in.) 3.13
H&S	6x24 4AWG	1.62	2.04	2.39	3.82 x 9.26 (c.s. Area 11.46)	Weight (lbs./ft) 2.65
NWS	6x24 4AWG	1.79	2.52	2.65	2.99 x 8.82 (c.s. Area 7.02)	Canister (sq./in) 11.46
RFS	6x24 4AWG	2	3.13	2.55	2.88 x 9.72 (c.s. Area 6.51)	

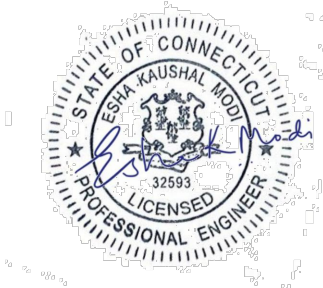
(6x24) HYBRID TRUNK ENTITLEMENT INFORMATION
8.5" x 11" SCALE N.T.S. | 11" x 17" SCALE N.T.S.



Post Modification Mount Analysis Report

ATC Asset Name : Sharon CT
ATC Asset Number : 415974
Engineering Number : 14529800_C9_04
Mount Elevation : 80 ft
Proposed Carrier : T-Mobile
Carrier Site Name : CTNH543A
Carrier Site Number : CTNH543A
Site Location : 70 Herb Road
SHARON, CT 06069-2326
41.7914, -73.4257
County : Litchfield
Date : October 24, 2023
Max Usage : 71%
Analysis Result : Contingent Pass

Prepared By:
Michael Ellis
Structural Engineer II



Digitally Signed: 2023-10-30

COA: PEC.0001553

Introduction

The purpose of this report is to summarize results of the mount analysis performed for T-Mobile at 80 ft.

Supporting Documents

Specifications Sheet:	Site Pro 1 RMV12, dated July 1, 2015
Radio Frequency Data Sheet:	RFDS ID #CTNH543A, dated August 8, 2023
Reference Photos:	Site photos from 2022

Analysis

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

Basic Wind Speed:	114 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1.00" radial ice concurrent
Codes:	ANSI/TIA-222-H / 2021 IBC / 2018 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 = 0.176, S1 = 0.054
Site Class:	D - Stiff Soil
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 modification per ATC Drawing #14529800_C9_04

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.

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-610	0

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8:52 PM 10/24/2023

Option 1 - Modify: Estimate for T-Mobile @ 415974 (Sharon CT) -- 14529800_C9_04

Site Data and Design Parameters		Dates and Designers	
Asset OTM #	415974	Mount Analysis Date / By	10/17/2023 / GW
Asset Name	Sharon CT	Design Date / By	10/24/2023 / MPE
State	CT	Checked Date / By	/ /
County	Litchfield	Detailer (Prev/Current/Level)	/ /
City	SHARON	Software	BIM
Falling Analysis Eng. #	14529800_C9_01	Tower Type	Monopole Round
Mod. Drawing Eng. #	14529800_C9_04	Mount Type	T-twin

Building Codes		Carriers	
TIA/IBC	ANSI/TIA-222-H / 2021 IBC	# of RADs	1
Local:	2022 Connecticut State Building Code	Carrier	T-Mobile
Falling Analysis % / Code	111% / TIA-H		
Post Mod % / Controlling Member	71% / Horizontal		
Usage Limit % / Reason	100% / N/A		

Any modification design comments or assumptions? **No** (including notes to the estimator)

Modification Summary	
Item #	Scope Item
1	Install Site Pro 1 Pbx-303 V Style Stabilizer on All (3) MP sector(s)
2	Install 2.0" Pipe x 150' Pipe w/ Site Pro 1 SCX7-U crossovers on All (3) sector(s)
3	Install 2.0" Pipe x 95' MP w/ Site Pro 1 SCX7-U crossovers on All (3) sector(s) at position 2.

Estimated Modification Cost	\$17,000
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Option 2 - Replace: Estimate for T-Mobile @ 415974 (Sharon CT) -- 14529800_C9_04

Tower Info	
Tower Number	415974
Tower Name	Sharon CT
State	CT

Jurisdictional Codes	
Design TIA Code	Unknown
Current TIA Code	ANSI/TIA-222-H
IBC	2021 IBC
Other	2022 Connecticut State Building Code

Project Requirements	
New Mount Face Width	150 in
Number of Sectors	3

Project Information	
Carrier	T-Mobile
Structure Type	Monopole

Recommended Mount Replacement	
Site Pro 1 VFA10-SD-S*	Estimated Replacement Cost \$ 36,000.00

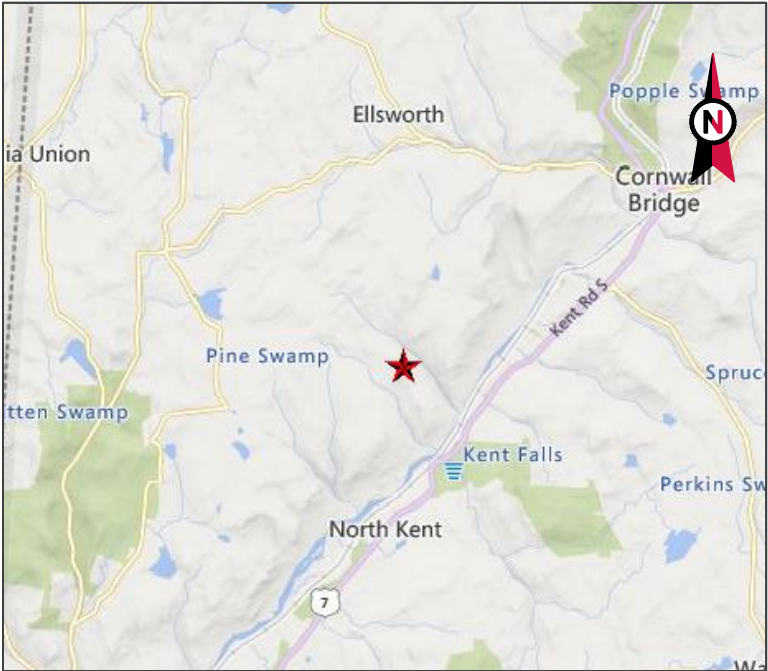
*or approved equivalent

SUPPLEMENTAL

SHEET NUMBER:
R-901

REVISION:
0

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VICINITY MAP



AMERICAN TOWER®

SITE NAME: SHARON CT

SITE NUMBER: 415974

ATC PROJECT NUMBER: 14529800_C9_04

SITE ADDRESS: 70 HERB ROAD

SHARON, CT 06069



LOCATION MAP

MOUNT REINFORCEMENT DRAWINGS
PREPARED FOR T-MOBILE

PROJECT TEAM	PROJECT INFORMATION	SHEET	SHEET TITLE	REV.
<u>TOWER OWNER</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEERED BY</u> ATC TOWER SERVICES 3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518 <u>CARRIER INFORMATION</u> CARRIER: T-MOBILE CARRIER SITE NAME: CTNH543A CARRIER SITE NUMBER: CTNH543A	THE PROJECT DEPICTED IN THESE PLANS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER 14529800_C8_01 DATED 10/05/23. SATISFACTORY COMPLETION OF THE WORK INDICATED IN THESE PLANS WILL RESULT IN THE STRUCTURE MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE STRUCTURAL WAS COMPLETED. PROJECT NOTE 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 § 1.6100 (B)(7). 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. 1. ANSI/TIA/EIA: STRUCTURAL STANDARDS (222-H EDITION) 2. INTERNATIONAL BUILDING CODE (2021 IBC) 3. CONNECTICUT STATE BUILDING CODE (2022)	G-001	COVER	0
		G-002	IBC GENERAL NOTES & MOUNT MODIFICATION INSPECTION	0
		S-101	MODIFICATION PROFILE	0
		S-102	SAFETY CLIMB LAYOUT	0
		R-901	SUPPLEMENTAL	0
811 Know what's below. Call before you dig.	PROJECT LOCATION <u>GEOGRAPHIC COORDINATES</u> LATITUDE: 41.79135085 LONGITUDE: -73.42569857	---	POST MODIFICATION MOUNT ANALYSIS REPORT	---



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	KPJ	10/26/23

ATC SITE NUMBER:
415974

ATC SITE NAME:
SHARON CT

CONNECTICUT

SITE ADDRESS:
70 HERB ROAD
SHARON, CT 06069



Digitally signed by
Esha Modi
Date: 2023.10.30
23:02:39 -04'00'

DRAWN BY:	KPJ
APPROVED BY:	MFE
DATE DRAWN:	10/26/23
ATC JOB NO:	14529800_C9_04

COVER	
SHEET NUMBER: G-001	REVISION: 0

GENERAL

1. ALL WORK TO BE COMPLETED PER APPLICABLE LOCAL, STATE, FEDERAL CODES AND ORDINANCES AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS FOR WIRELESS TOWER SITES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND ABIDING BY ALL REQUIRED PERMITS.
2. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
4. ANY SUBSTITUTIONS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
5. ANY MANUFACTURED DESIGN ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER ANSI/TIA-322 AND ANSI/ASSE A10.48, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
8. CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
- a. ALL W-SHAPES: ASTM A572, GRADE 50, UNLESS NOTED OTHERWISE.

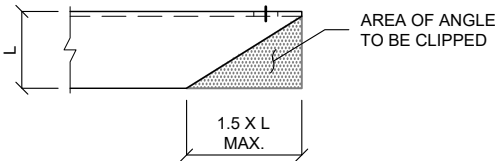
b. ALL OTHER ROLLED SHAPES: ASTM A36, UNLESS NOTED OTHERWISE.

c. HSS SECTION (SQUARE, RECTANGULAR, AND ROUND): ASTM A500, GRADE B, UNLESS NOTED OTHERWISE.

d. ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS: ASTM A3125 GRADE A325, TYPE SC OR N, UNLESS NOTED OTHERWISE.

e. ALL ANCHOR RODS: ASTM F1554, GRADE 36, UNLESS NOTED OTHERWISE.
2. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
3. ALL U-BOLTS SHALL BE ASTM A36 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.
4. FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
5. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES & GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
6. ALL STRUCTURAL STEEL EMBEDDED IN THE CONCRETE SHALL BE APPLIED WITH (2) BRUSHED COATS OF POLYGUARD CA-9 MASTIC OR EQUIVALENT. REFER TO THE MANUFACTURER SPECIFICATIONS FOR SURFACE PREPARATION AND APPLICATION. APPLICATION OF POLYGUARD 400 WRAP IS NOT ESSENTIAL.
7. CONTRACTOR SHALL PERFORM WORK ON ONLY ONE (1) TOWER FACE AND REPLACE/REINFORCE ONE (1) BOLT/MEMBER AT A TIME.
8. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.

MAXIMUM ALLOWABLE ANGLE CLIP



WELDING

1. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
2. ALL WELDS SHALL BE INSPECTED VISUALLY. IF DIRECTED BY ENGINEER OF RECORD, 25% OF WELDS SHALL BE INSPECTED WITH EITHER ULTRASONIC OR MAGNETIC PARTICLE METHODS. (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTABLE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY. 100% OF ALL FULL PENETRATION WELDS SHALL BE INSPECTED WITH EITHER ULTRASONIC OR MAGNETIC PARTICLE METHODS.
3. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
4. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER AND/OR BASE METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
5. IN CASES WHERE BASE METAL GRADE IS UNKNOWN, ALL WELDING ON LATTICE TOWERS SHALL BE DONE WITH E70XX ELECTRODES; ALL WELDING ON POLE STRUCTURES SHALL BE DONE WITH E80XX ELECTRODES, UNLESS NOTED OTHERWISE.
6. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

PAINT

1. AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1L.

BOLT TIGHTENING PROCEDURE

1. STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC SPECIFICATIONS.
2. ALL BOLTS WHOSE AXES ARE INSTALLED VERTICALLY, UNLESS OTHERWISE NOTED, SHALL BE INSTALLED AND TIGHTENED PER SECTION 8.2.1 THROUGH 8.2.4 OF THE RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" PER THE FOLLOWING GUIDELINES:

FOR A325 BOLTS 1" DIAMETER AND LESS:

- a. DIRECT TENSION INDICATING (DTI) SQUIRTER WASHERS: WASHERS SHALL BE INSTALLED AND ORIENTED / TIGHTENED PER MANUFACTURER SPECIFICATIONS TO ACHIEVE DESIRED LEVEL OF BOLT PRE-TENSION.

FOR A325 BOLTS EXCEEDING 1" DIAMETER AND ALL OTHER HIGH STRENGTH BOLTS, ONE OF THE FOLLOWING METHODS SHALL BE USED:

- a. DIRECT TENSION INDICATING (DTI) SQUIRTER WASHERS: WASHERS SHALL BE INSTALLED AND ORIENTED / TIGHTENED PER MANUFACTURER SPECIFICATIONS TO ACHIEVE DESIRED LEVEL OF BOLT PRE-TENSION.
- b. RCSC "TURN-OF-THE-NUT" METHOD: PRIOR TO APPLICATION OF TURN-OF-NUT PRETENSIONING, ALL BOLTS IN THE CONNECTION SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN RCSC SECTION 8.1, AND MATCH-MARKING OF THE NUTS AND PROTRUDING END OF THE BOLTS MUST BE IMPLEMENTED FOR ALL BOLTS IN THE CONNECTION.

BOLT TIGHTENING PROCEDURE (CONTINUED)

SUBSEQUENTLY, ALL BOLTS SHALL BE ROTATED BEYOND SNUG TIGHT CONDITION USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2"	BOLTS 2.25 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 2.75 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 3.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS 5.75 TO 11.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

3. ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.
4. ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

MODIFICATION INSPECTION NOTES

THE MOUNT MODIFICATION INSPECTION (MMI) PROCEDURE IS INTENDED TO CONFIRM THAT CONSTRUCTION AND INSTALLATION MEETS ENGINEERING DESIGN, ATC PROCEDURES AND ATC STANDARD SPECIFICATIONS FOR WIRELESS TOWER SITES.

TO ENSURE THAT THE REQUIREMENTS OF THE MMI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR SUBMIT ALL REQUIRED PHOTOGRAPHS AND DRAWINGS TO AMERICAN TOWER CORPORATION (ATC).

GENERAL CONTRACTOR

THE GENERAL CONTRACTOR IS REQUIRED TO:

- REVIEW THE REQUIREMENTS OF THE MMI CHECKLIST.
- UNDERSTAND ALL INSPECTION REQUIREMENTS.

THE GENERAL CONTRACTOR SHALL PERFORM AND RECORD THE INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MMI CHECKLIST.

MOUNT MODIFICATION INSPECTION CHECKLIST			
INSPECTION DOCUMENT	DESCRIPTION	INSPECTION TESTING REQUIRED	RESPONSIBILITY
ON-SITE COLD GALVANIZING VERIFICATION	PHOTOGRAPHIC EVIDENCE OF COLD GALVANIZATION TYPE AND APPLICATION IN ALL APPLICABLE LOCATIONS TO BE INCLUDED WITHIN THE MMI REPORT	✓	GC
GC AS-BUILT DRAWINGS WITH CONSTRUCTION RED-LINES	"AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS TO MMI FOR APPROVAL/REVIEW AND INCLUSION IN MMI REPORT	✓	GC
PHOTOGRAPHS	PHOTOGRAPHIC EVIDENCE OF MOUNT MODIFICATION INSPECTION, ON SITE REMEDIATION, AND ITEMS FAILING INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE MMI REPORT. COMPLETE PHOTO LOG IS TO BE SUBMITTED WITHIN MMI REPORT.	✓	GC
TABLE KEY: MMI - MOUNT MODIFICATION INSPECTION GC - GENERAL CONTRACTOR ATC - AMERICAN TOWER CORPORATION			



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REV.	DESCRIPTION	BY	DATE
△	FIRST ISSUE	KPJ	10/26/23
△			
△			
△			
△			

ATC SITE NUMBER:

415974

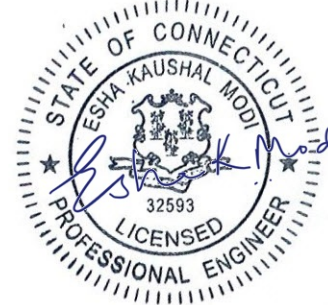
ATC SITE NAME:

SHARON CT

CONNECTICUT

SITE ADDRESS:

70 HERB ROAD
SHARON, CT 06069



Digitally Signed: 2023-10-30

DRAWN BY:	KPJ
APPROVED BY:	MFE
DATE DRAWN:	10/26/23
ATC JOB NO:	14529800_C9_04

IBC GENERAL NOTES & MOUNT MODIFICATION INSPECTION

SHEET NUMBER:

G-002

REVISION:

0



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

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415974

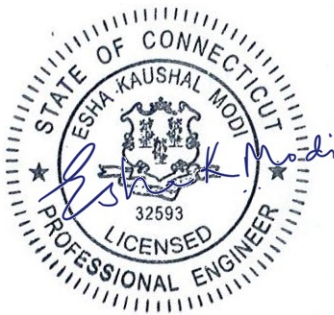
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SHARON CT

CONNECTICUT

SITE ADDRESS:

70 HERB ROAD
SHARON, CT 06069



Digitally Signed: 2023-10-30

DRAWN BY:	KPJ
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ATC JOB NO:	14529800_C9_04

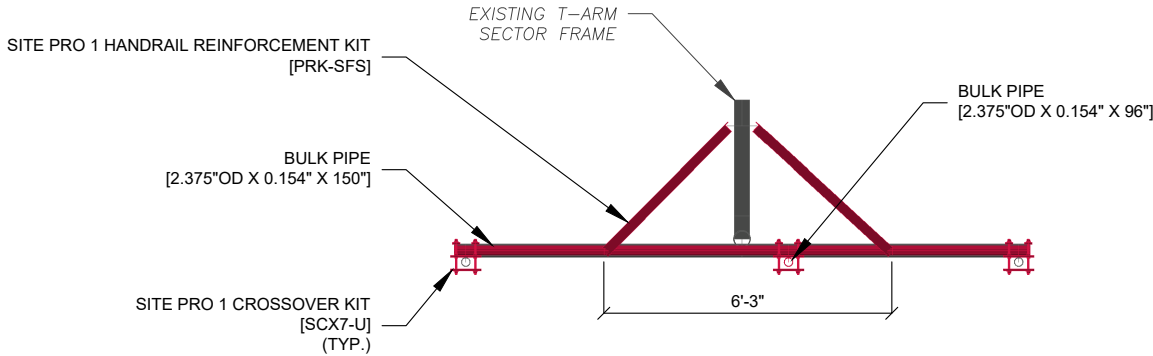
MODIFICATION PROFILE

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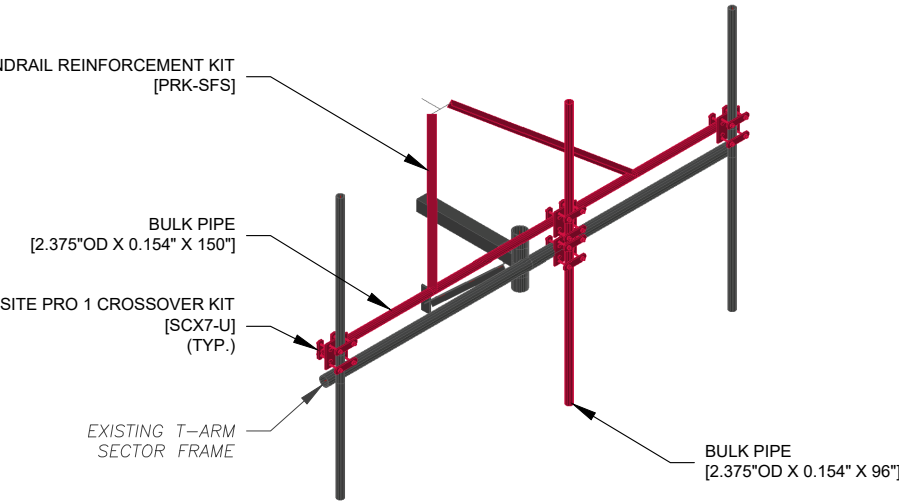
S-101

REVISION:

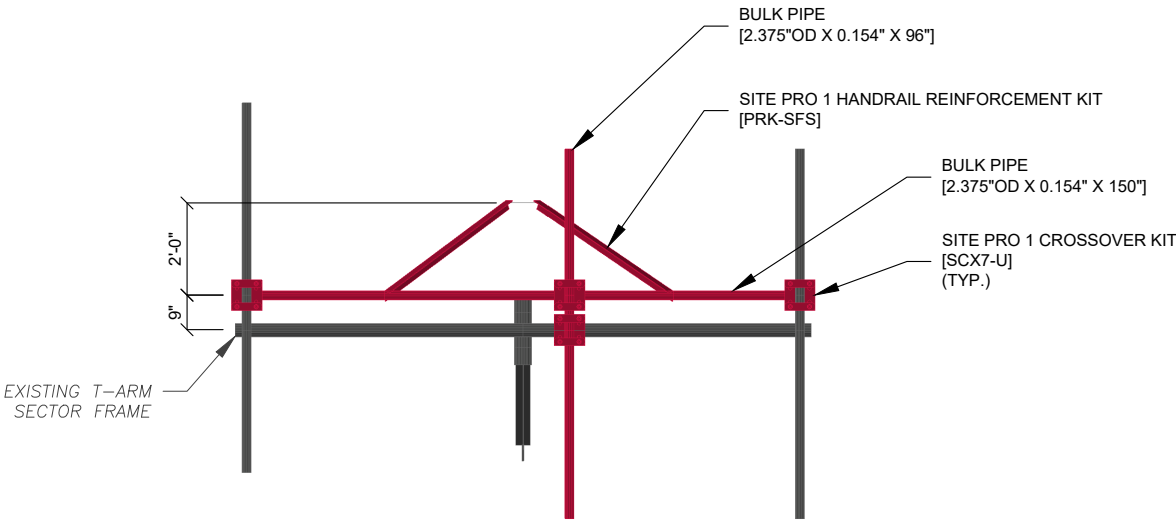
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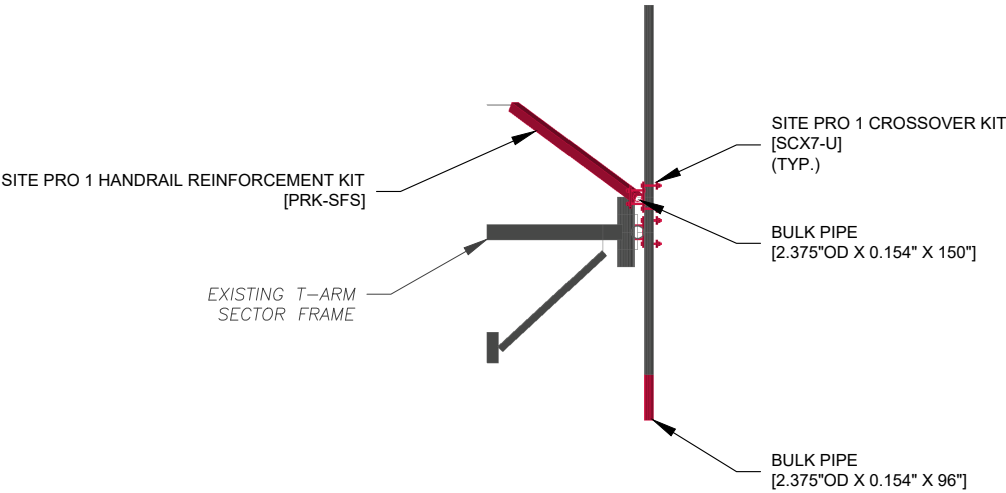
TYPICAL MOUNT MODIFICATION
TOP VIEW



TYPICAL MOUNT MODIFICATION
ISOMETRIC VIEW



TYPICAL MOUNT MODIFICATION
FRONT VIEW

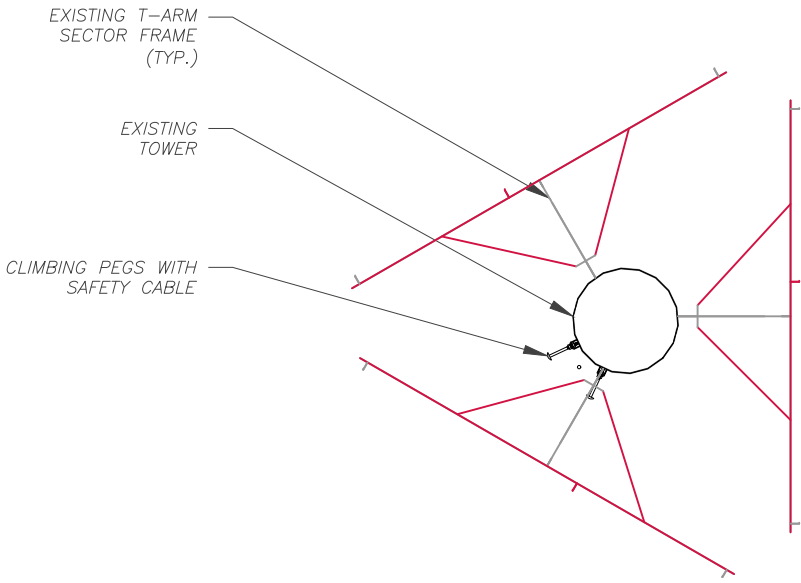


TYPICAL MOUNT MODIFICATION
SIDE VIEW

REINFORCEMENT MATERIALS LIST (ALL SECTORS)

QUANTITY REQUIRED	MANUFACTURER	PART NUMBER	DESCRIPTION	LENGTH	PART WEIGHT (lb)	WEIGHT (lb)	NOTES
1	SITE PRO 1	PRK-SFS	HANDRAIL REINFORCEMENT KIT	----	587.7	588	
12	SITE PRO 1	SCX7-U	CROSSOVER PLATE (V-CLAMP STYLE)	----	17.0	204	
3	----	----	2.375" OD X 0.154" PIPE	8'-0"	30.7	92	
3	----	----	2.375" OD X 0.154" PIPE	12'-6"	48.0	144	
TOTAL WEIGHT (lb)					1,028		

NOTE:
IN THE EVENT A PROPOSED MODIFICATION PART LISTED IN THE DRAWINGS IS NOT AVAILABLE, AN APPROVED EQUIVALENT CAN BE SUBSTITUTED. FOR APPROVAL OF EQUIVALENT PART OR QUESTIONS PLEASE CONTACT AMERICAN TOWER PMI INBOX AT PMI@AMERICANTOWER.COM.



SAFETY CLIMB LOCATION



NOTE:
CONTRACTOR TO INSTALL MOUNT MODIFICATIONS PER THE MANUFACTURERS SPECIFICATION.
MODIFICATIONS SHALL NOT OBSTRUCT, INTERFERE, OR BLOCK EXISTING SAFETY CLIMB SYSTEM. IF
ANY OF THESE OCCURS DURING INSTALLATION CONTACT THE AMERICAN TOWER PMI INBOX
PMI@AMERICANTOWER.COM



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A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	KPJ	10/26/23

ATC SITE NUMBER:

415974

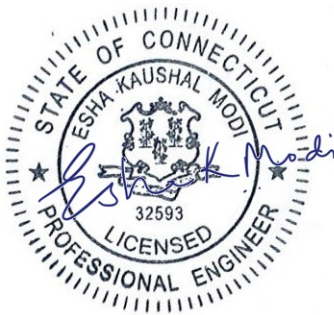
ATC SITE NAME:

SHARON CT

CONNECTICUT

SITE ADDRESS:

70 HERB ROAD
SHARON, CT 06069



Digitally Signed: 2023-10-30

DRAWN BY:	KPJ
APPROVED BY:	MFE
DATE DRAWN:	10/26/23
ATC JOB NO:	14529800_C9_04

SAFETY CLIMB LAYOUT

SHEET NUMBER:

S-102

REVISION:

0

Option 1 - Modify: Estimate for T-Mobile @ 415974 (Sharon CT) -- 14529800_C9_04

Site Data and Design Parameters			Dates and Designers		
Asset OTM #	415974		Mount Analysis Date / By	10/5/2023	/ GW
Asset Name	Sharon CT		Design Date / By	10/24/2023	/ MFE
State	CT		Checked Date / By		/
County	Litchfield		Detailer (Prev/Current/Level)		
City	SHARON		Software		
Failing Analysis Eng. #	14529800_C8_01		Tower Type		
Mod. Drawing Eng. #	14529800_C9_04		Mount Type		
Building Codes	TIA/IBC:	ANSI/TIA-222-H / 2021 IBC	Carriers		
	Local:	2022 Connecticut State Building Code	# of RADs	1	
Failing Analysis % / Code	111% / TIA-H		Carrier	T-Mobile	
Post Mod % / Controlling Member	71% / Horizontals				
Usage Limit % / Reason	105% / N/A				
Any modification design comments or assumptions? <u>No</u> (including notes to the Estimator)					

Modification Summary	
Item #	Scope Item
1	Install Site Pro 1 PRK-SFS V Style Stabilizer on All (3) MP sector(s)
2	Install 2.0" Pipe x 150" Pipe w/ Site Pro 1 SCX7-U crossovers on All (3) sector(s)
3	Install 2.0" Pipe x 96" MP w/ Site Pro 1 SCX7-U crossovers on All (3) sector(s) at position 2.

Estimated Modification Cost	\$17,000
-----------------------------	----------

Option 2 - Replace: Estimate for T-Mobile @ 415974 (Sharon CT) -- 14529800_C9_04

Tower Info	
Tower Number	415974
Tower Name	Sharon CT
State	CT
Jurisdictional Codes	
Design TIA Code	Unknown
Current TIA Code	ANSI/TIA-222-H
IBC	2021 IBC
Other	2022 Connecticut State Building Code
Project Information	
Carrier	T-Mobile
Structure Type	Monopole
Recommended Mount Replacement	
Site Pro 1 VFA10-SD-S*	
*or approved equivalent	

Estimated Replacement Cost	\$	36,000.00
----------------------------	----	-----------

SUPPLEMENTAL

SHEET NUMBER:

R-901

REVISION:

0



Post Modification Mount Analysis Report

ATC Asset Name : Sharon CT
ATC Asset Number : 415974
Engineering Number : 14529800_C9_04
Mount Elevation : 80 ft
Proposed Carrier : T-Mobile
Carrier Site Name : CTNH543A
Carrier Site Number : CTNH543A
Site Location : 70 Herb Road
SHARON, CT 06069-2326
41.7914, -73.4257
County : Litchfield
Date : October 24, 2023
Max Usage : 71%
Analysis Result : Contingent Pass

Prepared By:
Michael Ellis
Structural Engineer II

A handwritten signature in black ink that reads 'Michael Ellis'.



Digitally Signed: 2023-10-30

COA: PEC.0001553

Table of Contents

Introduction	3
Supporting Documents	3
Analysis.....	3
Conclusion.....	3
Application Loading	4
Structure Usages	4
Mount Layout.....	5
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 80 ft.

Supporting Documents

Specifications Sheet:	Site Pro 1 RMV12, dated July 1, 2015
Radio Frequency Data Sheet:	RFDS ID #CTNH543A, dated August 8, 2023
Reference Photos:	Site photos from 2022

Analysis

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

Basic Wind Speed:	114 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1.00" radial ice concurrent
Codes:	ANSI/TIA-222-H / 2021 IBC / 2018 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 = 0.176, S1 = 0.054
Site Class:	D - Stiff Soil
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 modification per ATC Drawing #14529800_C9_04

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.

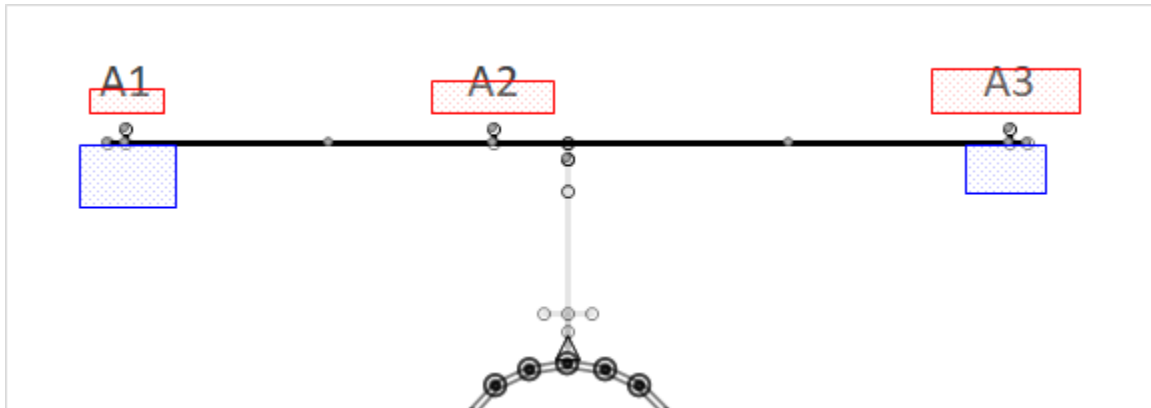
Application Loading

Mount Centerline (ft)	Equipment Centerline (ft)	Qty	Equipment Manufacturer & Model
80.0	81.0	3	RFS APXVAARR24_43-U-NA20
		3	Ericsson AIR 6419 B41
		3	Commscope VV-65A-R1B
		3	Ericsson Radio 4460 B25+B66
		3	Ericsson Radio 4449 B12,B71

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Horizontals	71%	Pass
Verticals	29%	Pass
Diagonals	8%	Pass
Mount Pipes	67%	Pass
Serviceability	N/A	Pass

Mount Layout

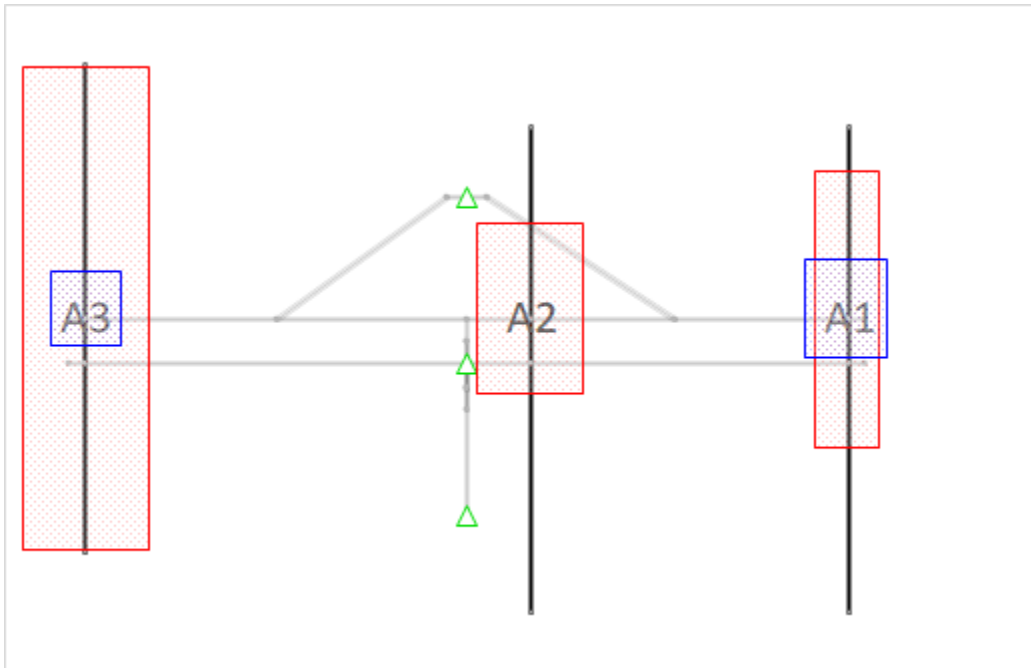


Equipment Position Table

MP	RAD Center (ft)	Qty.	Antenna Model
A1	81.0	1	Commscope VV-65A-R1B
	81.0	1	Ericsson Radio 4460 B25+B66
A2	81.0	1	Ericsson AIR 6419 B41
A3	81.0	1	RFS APXVAARR24_43-U-NA20
	81.0	1	Ericsson Radio 4449 B12,B71

Equipment Layout

Front View - Alpha





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.



Site Number: 415974
 Project Number: 14529800_C9_04
 Carrier: T-Mobile
 Mount Elevation: 80 ft
 Date: 10/24/2023

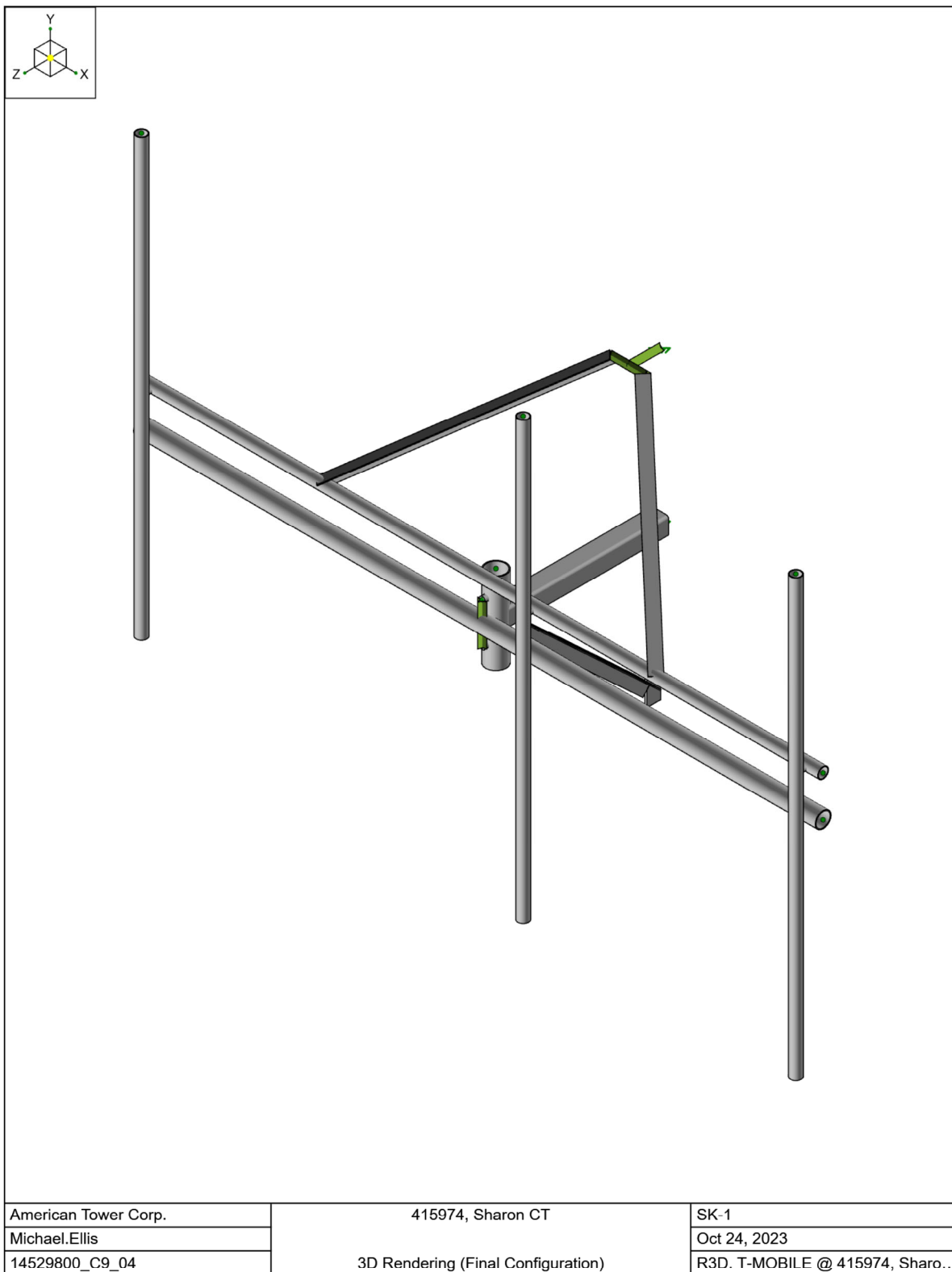
Mount Analysis Force Calculations

Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.21	
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	0.96	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	114	mph
Velocity Pressure	q_z	36.7	psf
Height Escalation Factor	K_{iz}	1.09	
Thickness of Radial Glaze Ice	T_{iz}	1.09	in

Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.188	
1 Second DSRAP	S_{D1}	0.086	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_s	0.094	
Amplification Factor	A	1.0	
Total Weight	W	736.6	lbs
Total Shear Force	V_s	69.1	lbs
Horizontal Seismic Load	E_h	69.1	lbs
Vertical Seismic Load	E_v	27.7	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 APXVAARR24_43-U-NA20	95.9	24.0	8.7	127.9	20.24	3.48	22.59	4.45
Ericsson AIR 6419 B41	33.6	20.0	6.3	68.5	5.60	0.90	6.62	1.29
Commscope VV-65A-R1B	54.7	12.0	4.6	24.7	5.89	1.41	7.24	2.17
Ericsson Radio 4460 B25+B66	19.6	15.7	12.1	109.0	2.56	1.98	3.25	2.59
Ericsson Radio 4449 B12,B71	14.9	13.2	9.3	74.0	1.64	1.15	2.19	1.64

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

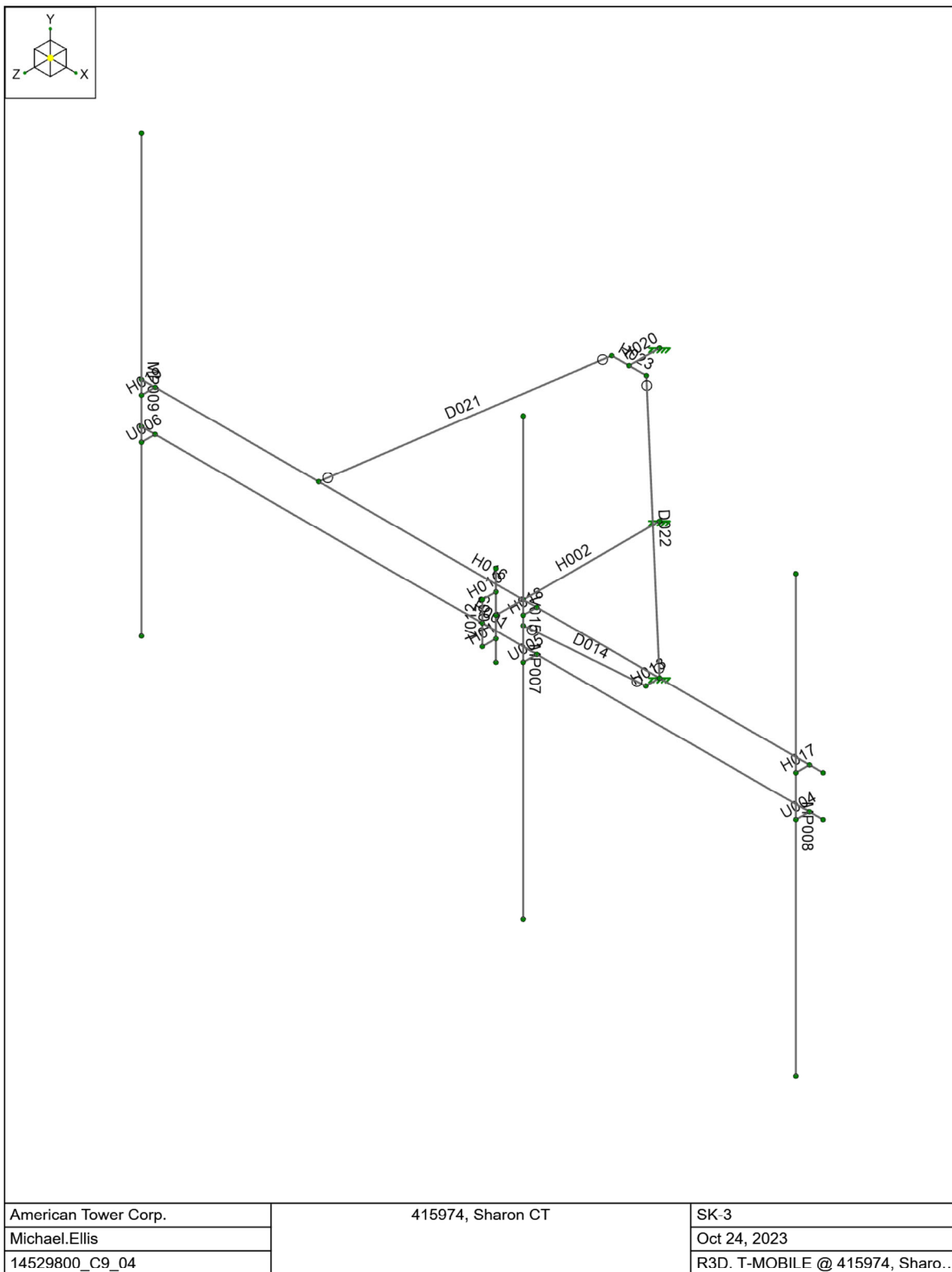


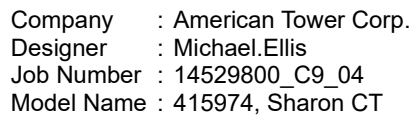


Company : American Tower Corp.
Designer : Michael.Ellis
Job Number : 14529800_C9_04
Model Name : 415974, Sharon CT

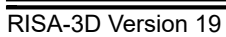
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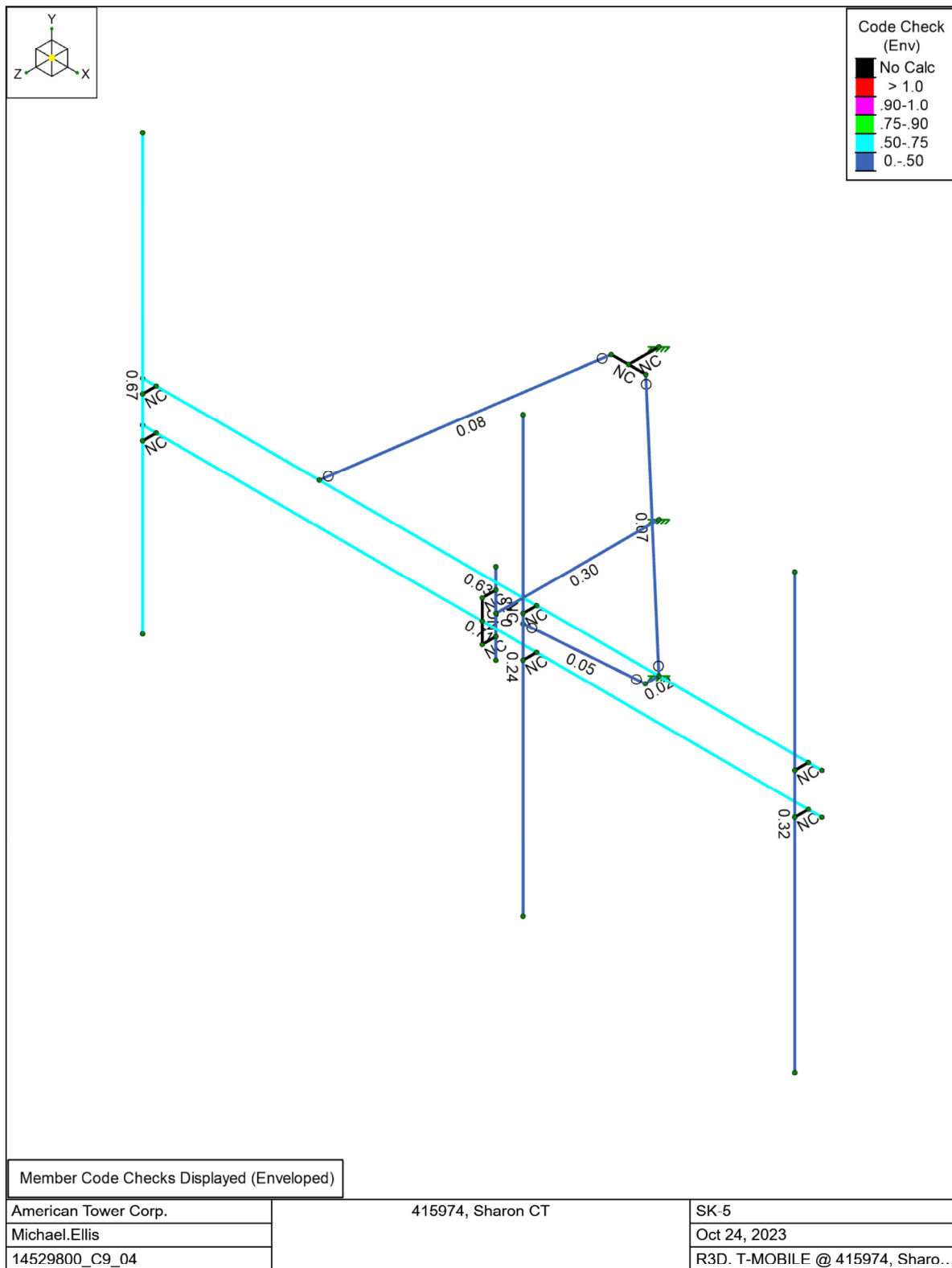


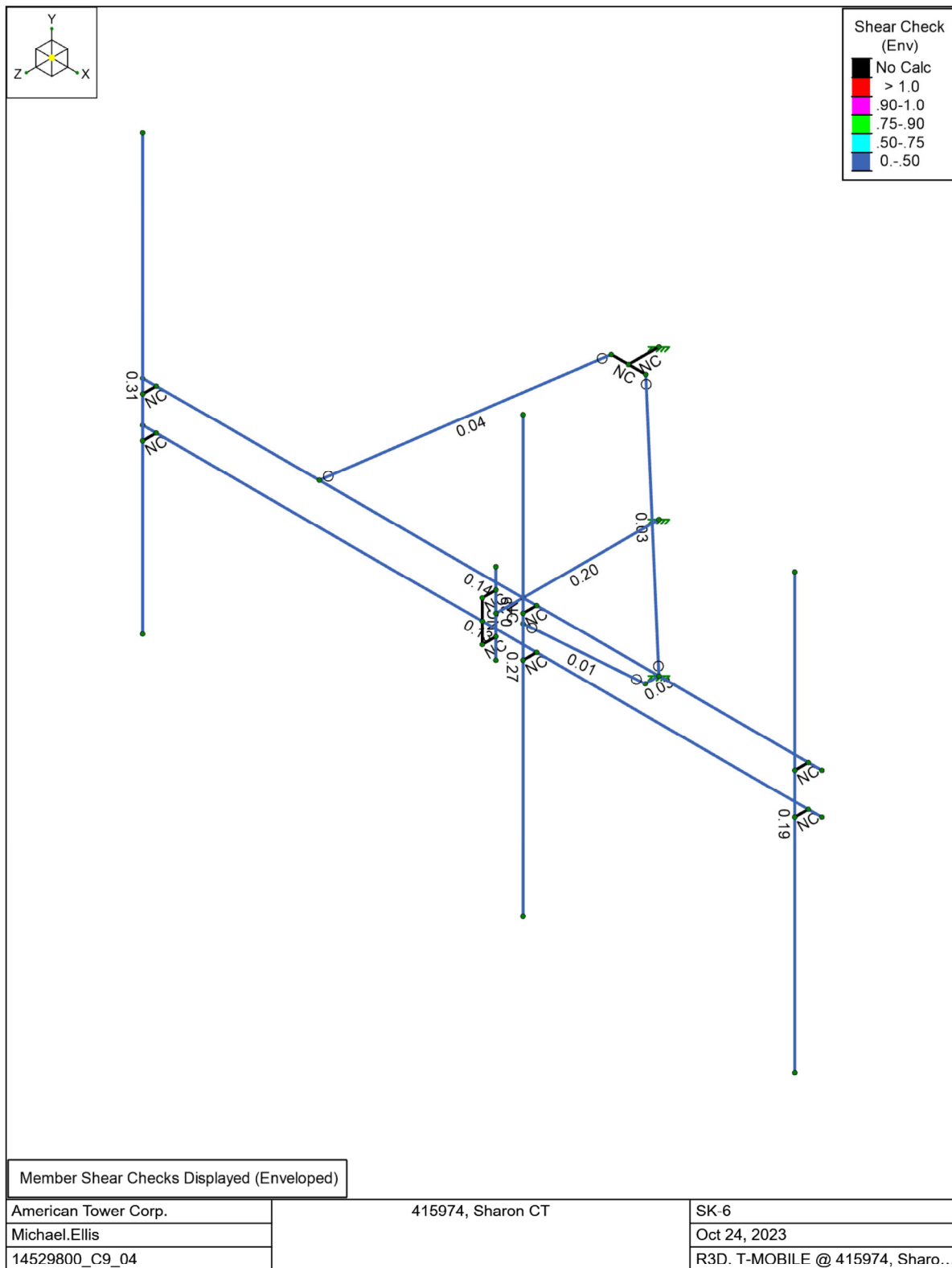




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 Designer : Michael.Ellis
 Job Number : 14529800_C9_04
 Model Name : 415974, Sharon CT

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Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Point	Distributed
1	D	DL		-1			8	
2	Di	IL					8	11
3	W 0	WL					8	22
4	W 30	WL					16	41
5	W 60	WL					16	41
6	W 90	WL					8	19
7	W 120	WL					16	41
8	W 150	WL					16	41
9	W 180	WL					8	22
10	W 210	WL					16	41
11	W 240	WL					16	41
12	W 270	WL					8	19
13	W 300	WL					16	41
14	W 330	WL					16	41
15	Wi 0	WL					8	22
16	Wi 30	WL					16	41
17	Wi 60	WL					16	41
18	Wi 90	WL					8	19
19	Wi 120	WL					16	41
20	Wi 150	WL					16	41
21	Wi 180	WL					8	22
22	Wi 210	WL					16	41
23	Wi 240	WL					16	41
24	Wi 270	WL					8	19
25	Wi 300	WL					16	41
26	Wi 330	WL					16	41
27	Ws 0	WL					8	22
28	Ws 30	WL					16	41
29	Ws 60	WL					16	41
30	Ws 90	WL					8	19
31	Ws 120	WL					16	41
32	Ws 150	WL					16	41
33	Ws 180	WL					8	22
34	Ws 210	WL					16	41
35	Ws 240	WL					16	41
36	Ws 270	WL					8	19
37	Ws 300	WL					16	41
38	Ws 330	WL					16	41
39	Ev -Y	ELY		-0.038			8	
40	Eh -Z	ELZ			-0.094		8	
41	Eh -X	ELX	-0.094				8	
42	Lv (1)	LL					1	
43	Lv (2)	LL					1	
44	Lv (3)	LL					1	
45	Lv (4)	LL				1		
46	Lm (1)	LL				1		
47	Lm (2)	LL				1		
48	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				



Company : American Tower Corp.
Designer : Michael.Ellis
Job Number : 14529800_C9_04
Model Name : 415974, Sharon CT

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Load Combinations (Continued)

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



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 Designer : Michael.Ellis
 Job Number : 14529800_C9_04
 Model Name : 415974, Sharon CT

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Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
59	0.9D + 1.0Ev + 1.0Eh [270°]	Yes	Y	DL	0.9	ELY	1	ELZ	0.001	ELX	-1
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 + 1.5Lv(4)	Yes	Y	DL	1.2	45	1.5				
66	1.2D + 1.5Lm(1) + 1.0Wm [0°]	Yes	Y	DL	1.2	46	1.5	27	1		
67	1.2D + 1.5Lm(1) + 1.0Wm [30°]	Yes	Y	DL	1.2	46	1.5	28	1		
68	1.2D + 1.5Lm(1) + 1.0Wm [60°]	Yes	Y	DL	1.2	46	1.5	29	1		
69	1.2D + 1.5Lm(1) + 1.0Wm [90°]	Yes	Y	DL	1.2	46	1.5	30	1		
70	1.2D + 1.5Lm(1) + 1.0Wm [120°]	Yes	Y	DL	1.2	46	1.5	31	1		
71	1.2D + 1.5Lm(1) + 1.0Wm [150°]	Yes	Y	DL	1.2	46	1.5	32	1		
72	1.2D + 1.5Lm(1) + 1.0Wm [180°]	Yes	Y	DL	1.2	46	1.5	33	1		
73	1.2D + 1.5Lm(1) + 1.0Wm [210°]	Yes	Y	DL	1.2	46	1.5	34	1		
74	1.2D + 1.5Lm(1) + 1.0Wm [240°]	Yes	Y	DL	1.2	46	1.5	35	1		
75	1.2D + 1.5Lm(1) + 1.0Wm [270°]	Yes	Y	DL	1.2	46	1.5	36	1		
76	1.2D + 1.5Lm(1) + 1.0Wm [300°]	Yes	Y	DL	1.2	46	1.5	37	1		
77	1.2D + 1.5Lm(1) + 1.0Wm [330°]	Yes	Y	DL	1.2	46	1.5	38	1		
78	1.2D + 1.5Lm(2) + 1.0Wm [0°]	Yes	Y	DL	1.2	47	1.5	27	1		
79	1.2D + 1.5Lm(2) + 1.0Wm [30°]	Yes	Y	DL	1.2	47	1.5	28	1		
80	1.2D + 1.5Lm(2) + 1.0Wm [60°]	Yes	Y	DL	1.2	47	1.5	29	1		
81	1.2D + 1.5Lm(2) + 1.0Wm [90°]	Yes	Y	DL	1.2	47	1.5	30	1		
82	1.2D + 1.5Lm(2) + 1.0Wm [120°]	Yes	Y	DL	1.2	47	1.5	31	1		
83	1.2D + 1.5Lm(2) + 1.0Wm [150°]	Yes	Y	DL	1.2	47	1.5	32	1		
84	1.2D + 1.5Lm(2) + 1.0Wm [180°]	Yes	Y	DL	1.2	47	1.5	33	1		
85	1.2D + 1.5Lm(2) + 1.0Wm [210°]	Yes	Y	DL	1.2	47	1.5	34	1		
86	1.2D + 1.5Lm(2) + 1.0Wm [240°]	Yes	Y	DL	1.2	47	1.5	35	1		
87	1.2D + 1.5Lm(2) + 1.0Wm [270°]	Yes	Y	DL	1.2	47	1.5	36	1		
88	1.2D + 1.5Lm(2) + 1.0Wm [300°]	Yes	Y	DL	1.2	47	1.5	37	1		
89	1.2D + 1.5Lm(2) + 1.0Wm [330°]	Yes	Y	DL	1.2	47	1.5	38	1		
90	1.2D + 1.5Lm(3) + 1.0Wm [0°]	Yes	Y	DL	1.2	48	1.5	27	1		
91	1.2D + 1.5Lm(3) + 1.0Wm [30°]	Yes	Y	DL	1.2	48	1.5	28	1		
92	1.2D + 1.5Lm(3) + 1.0Wm [60°]	Yes	Y	DL	1.2	48	1.5	29	1		
93	1.2D + 1.5Lm(3) + 1.0Wm [90°]	Yes	Y	DL	1.2	48	1.5	30	1		
94	1.2D + 1.5Lm(3) + 1.0Wm [120°]	Yes	Y	DL	1.2	48	1.5	31	1		
95	1.2D + 1.5Lm(3) + 1.0Wm [150°]	Yes	Y	DL	1.2	48	1.5	32	1		
96	1.2D + 1.5Lm(3) + 1.0Wm [180°]	Yes	Y	DL	1.2	48	1.5	33	1		
97	1.2D + 1.5Lm(3) + 1.0Wm [210°]	Yes	Y	DL	1.2	48	1.5	34	1		
98	1.2D + 1.5Lm(3) + 1.0Wm [240°]	Yes	Y	DL	1.2	48	1.5	35	1		
99	1.2D + 1.5Lm(3) + 1.0Wm [270°]	Yes	Y	DL	1.2	48	1.5	36	1		
100	1.2D + 1.5Lm(3) + 1.0Wm [300°]	Yes	Y	DL	1.2	48	1.5	37	1		
101	1.2D + 1.5Lm(3) + 1.0Wm [330°]	Yes	Y	DL	1.2	48	1.5	38	1		

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	H001	N003	N004		PIPE 3.0	Beam	None	A53 Gr. B	Typical
2	H002	N001	N002		HSS4x4x4	Beam	None	A500 Gr. B [SQR]	Typical
3	V003	N006	N005		PIPE 4.0	Column	None	A53 Gr. B	Typical
4	U004	N008	N010		(2) 1/2 U-Bolts	Beam	None	SAE J429 Gr. 2	Typical
5	U005	N007	N011		(2) 1/2 U-Bolts	Beam	None	SAE J429 Gr. 2	Typical
6	U006	N009	N012		(2) 1/2 U-Bolts	Beam	None	SAE J429 Gr. 2	Typical
7	MP007	N013	N014		PIPE 2.0	Column	None	A53 Gr. B	Typical
8	MP008	N015	N016		PIPE 2.0	Column	None	A53 Gr. B	Typical
9	MP009	N017	N018		PIPE 2.0	Column	None	A53 Gr. B	Typical



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Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
10	H010	N019	N020		(1) 5/8 U-Bolt	Beam	None	SAE J429 Gr. 2	Typical
11	H011	N021	N022		(1) 5/8 U-Bolt	Beam	None	SAE J429 Gr. 2	Typical
12	V012	N022	N020		RIGID	None	None	RIGID	Typical
13	H013	N024	N025		PL8x0.5	Beam	None	A36	Typical
14	D014	N025	N026		LL2.5x2.5x3x6	Column	None	A36	Typical
15	V015	N027	N026		RIGID	None	None	RIGID	Typical
16	H016	N028	N029		PIPE 2.0	Beam	None	A53 Gr. B	Typical
17	H017	N030	N031		(2) 1/2 U-Bolts	Beam	None	A36	Typical
18	H018	N032	N033		(2) 1/2 U-Bolts	Beam	None	A36	Typical
19	H019	N034	N035		(2) 1/2 U-Bolts	Beam	None	A36	Typical
20	H020	N037	N036		RIGID	None	None	RIGID	Typical
21	D021	N040	N039	90	L2.5x2.5x3	Column	None	A36	Typical
22	D022	N041	N038	180	L2.5x2.5x3	Column	None	A36	Typical
23	H023	N038	N039		RIGID	None	None	RIGID	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	PIPE 3.0	150			Lbyy		1	1	Lateral
2	H002	HSS4x4x4	36			Lbyy		1	1	Lateral
3	V003	PIPE 4.0	18			Lbyy		1	1	Lateral
4	U004	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
5	U005	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
6	U006	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
7	MP007	PIPE 2.0	96	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
8	MP008	PIPE 2.0	96	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
9	MP009	PIPE 2.0	96	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
10	H010	(1) 5/8 U-Bolt	3			Lbyy		0.65	0.65	Lateral
11	H011	(1) 5/8 U-Bolt	3			Lbyy		0.65	0.65	Lateral
12	H013	PL8x0.5	3			Lbyy		1	1	Lateral
13	D014	LL2.5x2.5x3x6	36.797			Lbyy		1	1	Lateral
14	H016	PIPE 2.0	150			Lbyy		1	1	Lateral
15	H017	(2) 1/2 U-Bolts	3			Lbyy		0.65	0.65	Lateral
16	H018	(2) 1/2 U-Bolts	3			Lbyy		0.65	0.65	Lateral
17	H019	(2) 1/2 U-Bolts	3			Lbyy		0.65	0.65	Lateral
18	D021	L2.5x2.5x3	51.524			Lbyy		1	1	Lateral
19	D022	L2.5x2.5x3	53.449			Lbyy		1	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	N024	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N036	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Advanced Data

	Label	I Release	J 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	U004			Yes	N/A	Exclude	None
5	U005			Yes	N/A	Exclude	None
6	U006			Yes	N/A	Exclude	None
7	MP007			Yes	** NA **		None



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Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Activation	Seismic DR
8	MP008			Yes	** NA **		None
9	MP009			Yes	** NA **		None
10	H010			Yes	N/A	Exclude	None
11	H011			Yes	N/A	Exclude	None
12	V012			Yes	** NA **		None
13	H013			Yes	N/A		None
14	D014	BenPIN	BenPIN	Yes	** NA **		None
15	V015			Yes	** NA **		None
16	H016			Yes	N/A		None
17	H017			Yes	N/A	Exclude	None
18	H018			Yes	N/A	Exclude	None
19	H019			Yes	N/A	Exclude	None
20	H020			Yes	** NA **		None
21	D021	BenPIN	BenPIN	Yes	** NA **		None
22	D022	BenPIN	BenPIN	Yes	** NA **		None
23	H023			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	A53 Gr. B	2.9e+07	1.115e+07	0.3	0.65	490	35000	1.6	60000	1.2
2	A500 Gr. B [SQR]	2.9e+07	1.115e+07	0.3	0.65	490	46000	1.4	58000	1.3
3	SAE J429 Gr. 2	2.9e+07	1.115e+07	0.3	0.65	490	57000	1.1	74000	1.1
4	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	1012.852	16	258.094	63	40.209	21	105.452	20	4654.994	15	1753.013	85
2		min	-1098.89	10	-135.756	71	-1155.433	67	-236.172	63	-4676.702	9	-2357.222	91
3	N024	max	31.442	17	1480.194	66	1583.075	66	53.189	20	6.778	17	1.035	79
4		min	-31.457	23	-211.228	20	-254.88	20	-369.556	66	-6.976	23	-1.476	97
5	N036	max	876.153	95	1022.5	8	869.258	14	344.64	14	221.11	95	184.667	89
6		min	-834.545	89	-611.697	14	-1407.914	8	-573.226	8	-231.057	88	-209.662	95
7	Totals:	max	1178.774	18	1750.963	33	1636.905	2						
8		min	-1178.774	12	650.121	15	-1636.905	20						

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	PIPE 3.0	0.706	75	90	0.13	75		89	28250.554	65205	5748.75	5748.75	1.604	H1-1b
2	H002	HSS4x4x4	0.298	0	3	0.203	30	y	91	134360.669	139518	16180.5	16180.5	3	H1-1b
3	V003	PIPE 4.0	0.129	9	90	0.288	9		91	92571.332	93240	10631.25	10631.25	1.902	H1-1b
4	MP007	PIPE 2.0	0.24	38	8	0.266	47		91	18907.71	32130	1871.625	1871.625	3	H1-1b
5	MP008	PIPE 2.0	0.322	47	79	0.19	47		84	31188.452	32130	1871.625	1871.625	2.287	H1-1b
6	MP009	PIPE 2.0	0.671	59	13	0.31	59		96	31188.452	32130	1871.625	1871.625	1.836	H1-1b
7	H013	PL8x0.5	0.023	0	67	0.029	0	y	66	126685.849	129600	1350	21600	1.667	H1-1b
8	D014	LL2.5x2.5x3x6	0.05	0	66	0.009	36.797	y	97	43654.551	58320	4643.061	2549.586	1	H1-1b*
9	H016	PIPE 2.0	0.631	110.938	8	0.136	112.5		8	6295.422	32130	1871.625	1871.625	1.664	H1-1b
10	D021	L2.5x2.5x3	0.076	25.762	9	0.036	51.524	y	3	15996.203	29192.4	872.574	1683.847	1.136	H2-1
11	D022	L2.5x2.5x3	0.066	26.725	7	0.027	53.449	y	89	15280.08	29192.4	872.574	1668.294	1.136	H2-1



Mount Analysis Report

ATC Asset Name : Sharon CT
ATC Asset Number : 415974
Engineering Number : 14529800_C8_01
Mount Elevation : 80 ft
Proposed Carrier : T-Mobile
Carrier Site Name : CTNH543A
Carrier Site Number : CTNH543A
Site Location : 70 Herb Road
SHARON, CT 06069-2326
41.7914, -73.4257
County : Litchfield
Date : October 5, 2023
Max Usage : 111%
Analysis Result : Fail

Prepared By:
Garrett Williams
Structural Engineer I

Garrett Williams



Esha
Modi

Digitally signed by
Esha Modi
Date: 2023.10.10
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COA: PEC.0001553

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Introduction

The purpose of this report is to summarize results of the mount analysis performed for T-Mobile at 80 ft.

Supporting Documents

Specifications Sheet:	Site Pro 1 RMV12, dated July 1, 2015
Radio Frequency Data Sheet:	RFDS ID #CTNH543A, dated August 8, 2023
Reference Photos:	Site photos from 2022

Analysis

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

Basic Wind Speed:	114 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1.00" radial ice concurrent
Codes:	ANSI/TIA-222-H / 2021 IBC / 2018 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 = 0.176, S1 = 0.054
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

*Live Load(s) reduction is confirmed to either not govern or not be applicable

Conclusion

Based on the analysis results, the antenna mount does not meet the requirements per the applicable codes listed above. Modifications to be designed in subsequent service to address below failures:

- Install P2 (2.375" x 96") antenna mounting pipe (Mount Pipe A2) with Site Pro 1 SCX7-U (or approved equivalent) crossover plate kits.
- Mount serviceability
- Horizontals (H001)

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.

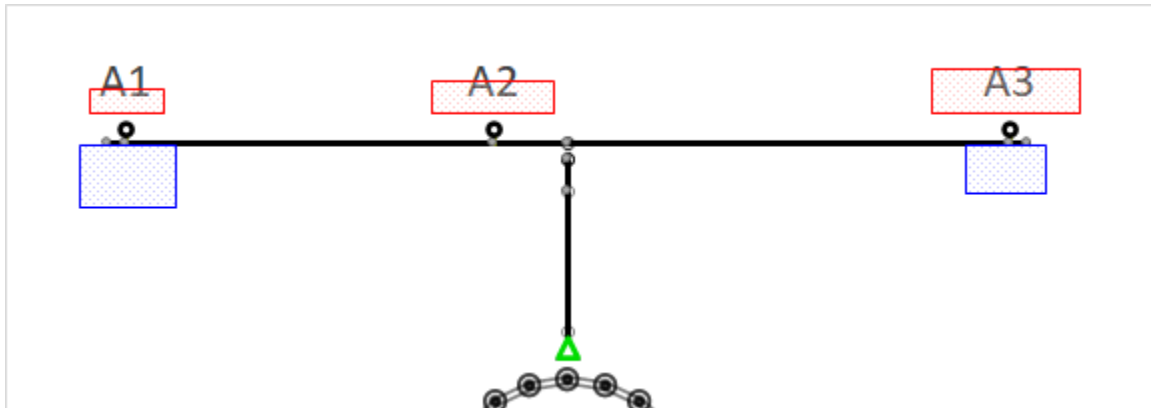
Application Loading

Mount Centerline (ft)	Equipment Centerline (ft)	Qty	Equipment Manufacturer & Model
80.0	81.0	3	RFS APXVAARR24_43-U-NA20
		3	Ericsson AIR 6419 B41
		3	Commscope VV-65A-R1B
		3	Ericsson Radio 4460 B25+B66
		3	Ericsson Radio 4449 B12,B71

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Horizontals	111%	Fail
Verticals	31%	Pass
Diagonals	6%	Pass
Mount Pipes	79%	Pass
Serviceability	N/A	Fail

Mount Layout

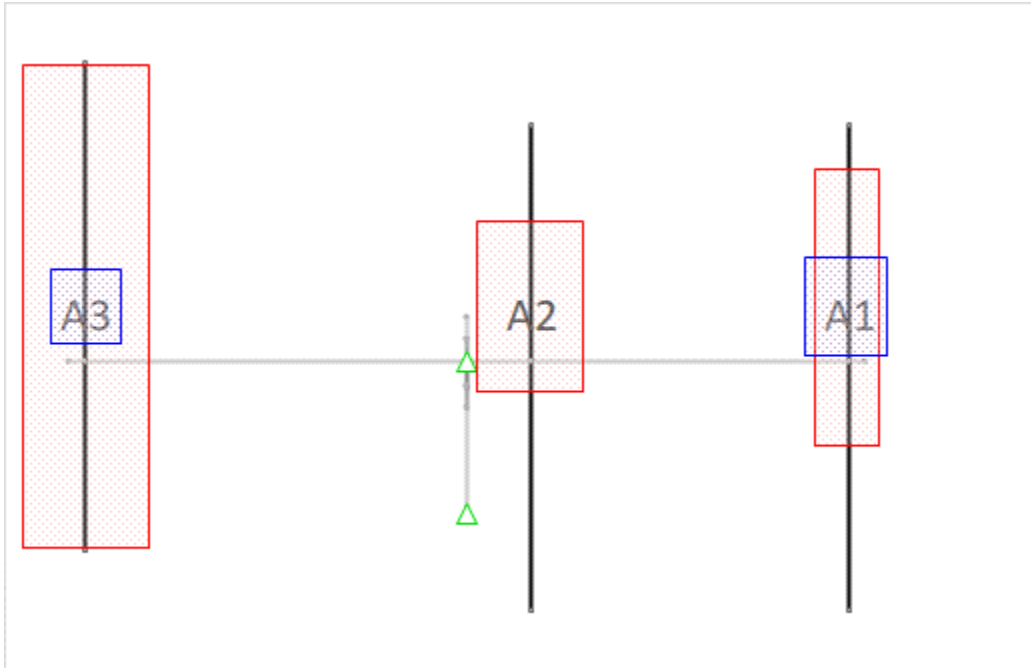


Equipment Position Table

MP	RAD Center (ft)	Qty.	Antenna Model
A1	81.0	1	Commscope VV-65A-R1B
	81.0	1	Ericsson Radio 4460 B25+B66
A2	81.0	1	Ericsson AIR 6419 B41
A3	81.0	1	RFS APXVAARR24_43-U-NA20
	81.0	1	Ericsson Radio 4449 B12,B71

Equipment Layout

Front View - Alpha





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.



Site Number: 415974
 Project Number: 14529800_C8_01
 Carrier: T-Mobile
 Mount Elevation: 80 ft
 Date: 10/5/2023

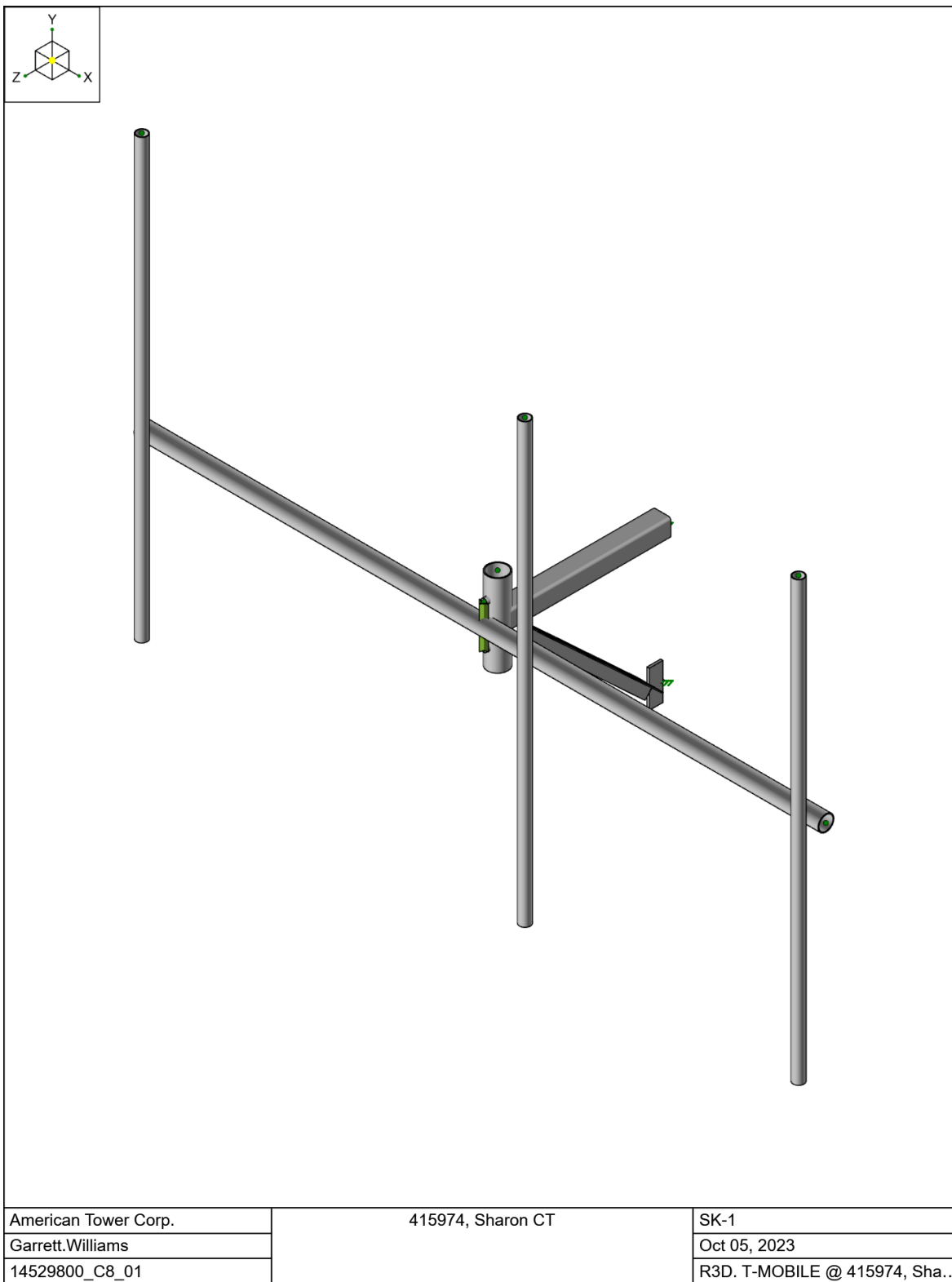
Mount Analysis Force Calculations

Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.21	
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	0.96	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	114	mph
Velocity Pressure	q_z	36.7	psf
Height Escalation Factor	K_{iz}	1.09	
Thickness of Radial Glaze Ice	T_{iz}	1.09	in

Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.188	
1 Second DSRAP	S_{D1}	0.086	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_s	0.094	
Amplification Factor	A	1.0	
Total Weight	W	662.8	lbs
Total Shear Force	V_s	62.2	lbs
Horizontal Seismic Load	E_h	62.2	lbs
Vertical Seismic Load	E_v	24.9	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 APXVAARR24_43-U-NA20	95.9	24.0	8.7	127.9	20.24	3.48	22.59	4.45
Ericsson AIR 6419 B41	33.6	20.0	6.3	68.5	5.60	0.90	6.62	1.29
Commscope VV-65A-R1B	54.7	12.0	4.6	24.7	5.89	1.41	7.24	2.17
Ericsson Radio 4460 B25+B66	19.6	15.7	12.1	109.0	2.56	1.98	3.25	2.59
Ericsson Radio 4449 B12,B71	14.9	13.2	9.3	74.0	1.64	1.15	2.19	1.64

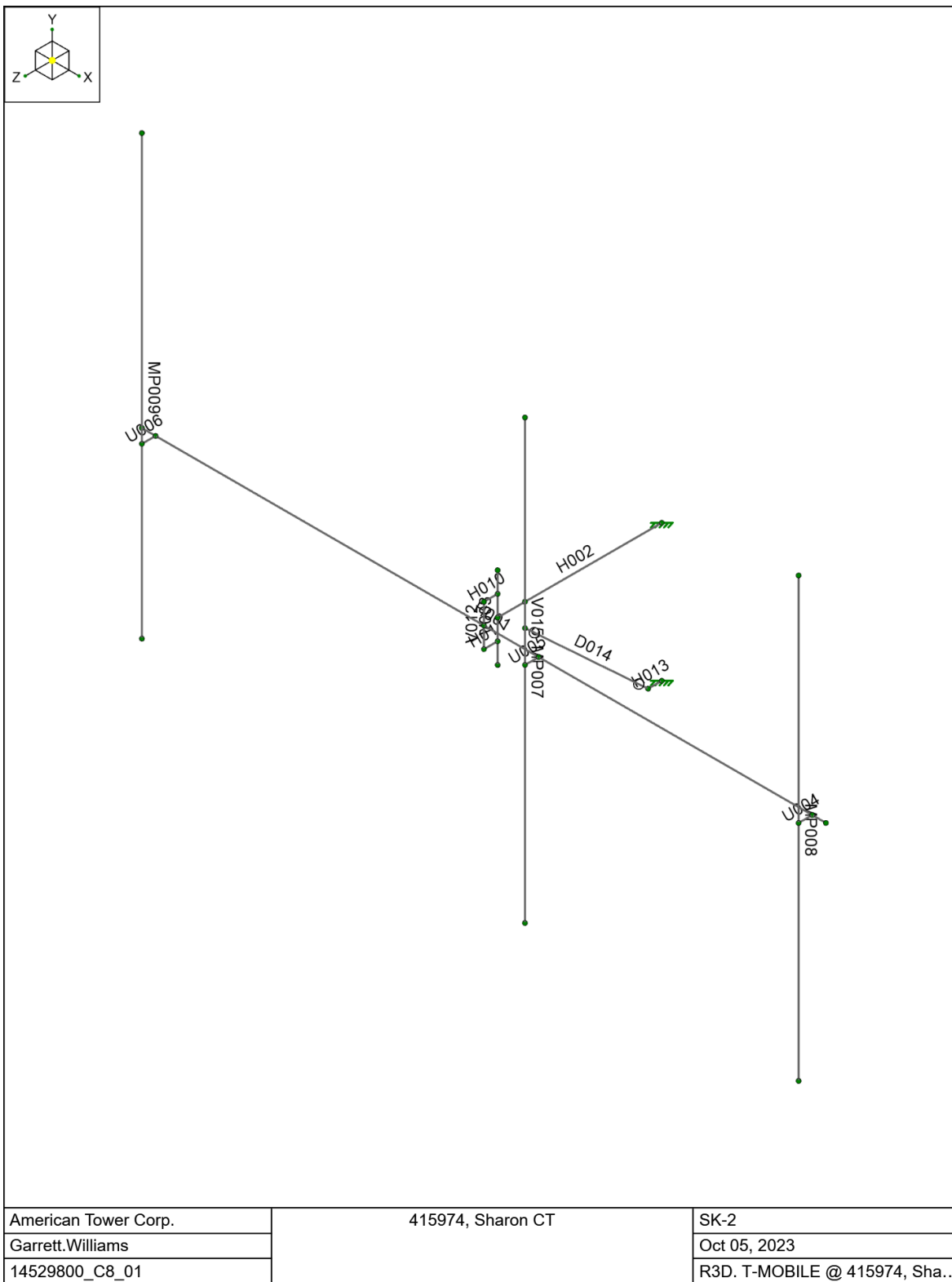
* Equipment with EPA values N/A were not considered in the mount analysis

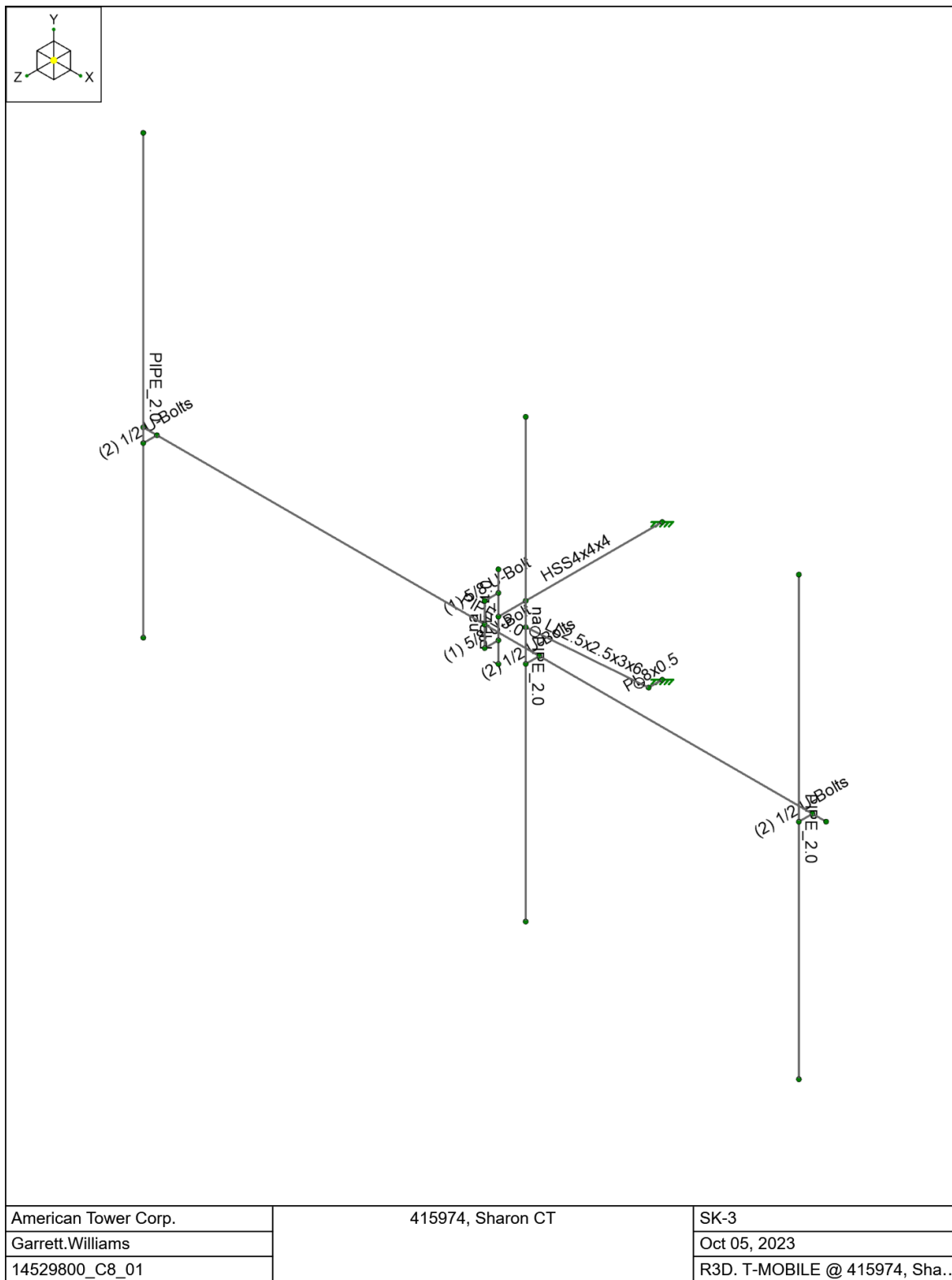


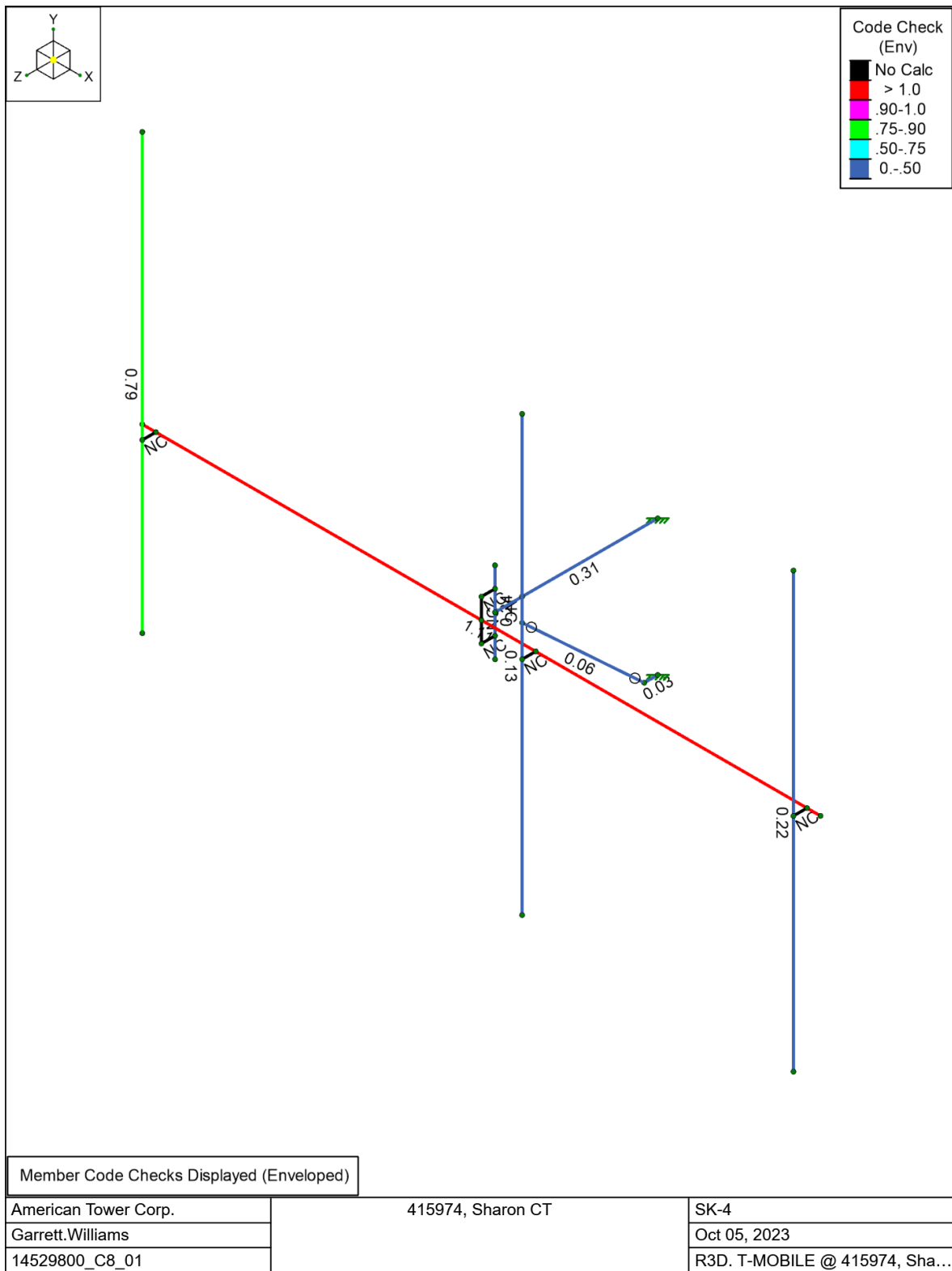


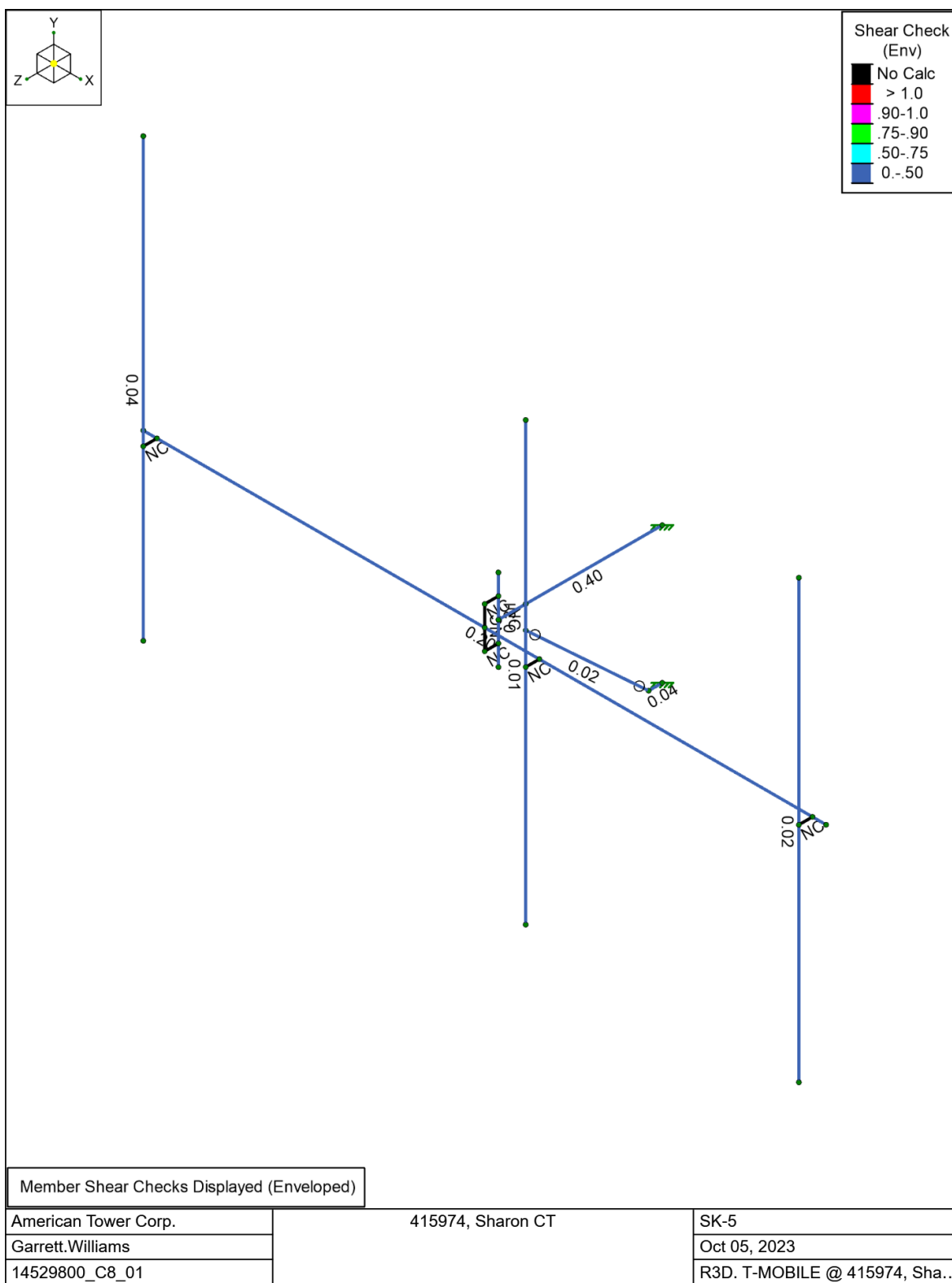
Company : American Tower Corp.
Designer : Garrett.Williams
Job Number : 14529800_C8_01
Model Name : 415974, Sharon CT

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Checked By : -









Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Point	Distributed
1	D	DL		-1			8	
2	Di	IL					8	8
3	W 0	WL					8	16
4	W 30	WL					16	29
5	W 60	WL					16	29
6	W 90	WL					8	13
7	W 120	WL					16	29
8	W 150	WL					16	29
9	W 180	WL					8	16
10	W 210	WL					16	29
11	W 240	WL					16	29
12	W 270	WL					8	13
13	W 300	WL					16	29
14	W 330	WL					16	29
15	Wi 0	WL					8	16
16	Wi 30	WL					16	29
17	Wi 60	WL					16	29
18	Wi 90	WL					8	13
19	Wi 120	WL					16	29
20	Wi 150	WL					16	29
21	Wi 180	WL					8	16
22	Wi 210	WL					16	29
23	Wi 240	WL					16	29
24	Wi 270	WL					8	13
25	Wi 300	WL					16	29
26	Wi 330	WL					16	29
27	Ws 0	WL					8	16
28	Ws 30	WL					16	29
29	Ws 60	WL					16	29
30	Ws 90	WL					8	13
31	Ws 120	WL					16	29
32	Ws 150	WL					16	29
33	Ws 180	WL					8	16
34	Ws 210	WL					16	29
35	Ws 240	WL					16	29
36	Ws 270	WL					8	13
37	Ws 300	WL					16	29
38	Ws 330	WL					16	29
39	Ev -Y	ELY		-0.038			8	
40	Eh -Z	ELZ			-0.094		8	
41	Eh -X	ELX	-0.094				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				



Company : American Tower Corp.
Designer : Garrett.Williams
Job Number : 14529800_C8_01
Model Name : 415974, Sharon CT

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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



Company : American Tower Corp.
 Designer : Garrett.Williams
 Job Number : 14529800_C8_01
 Model Name : 415974, Sharon CT

10/5/2023
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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	PIPE 3.0	Beam	None	A53 Gr. B	Typical
2	H002	N001	N002	HSS4x4x4	Beam	None	A500 Gr. B [SQR]	Typical
3	V003	N006	N005	PIPE 4.0	Column	None	A53 Gr. B	Typical
4	U004	N008	N010	(2) 1/2 U-Bolts	Beam	None	SAE J429 Gr. 2	Typical
5	U005	N007	N011	(2) 1/2 U-Bolts	Beam	None	SAE J429 Gr. 2	Typical
6	U006	N009	N012	(2) 1/2 U-Bolts	Beam	None	SAE J429 Gr. 2	Typical
7	MP007	N013	N014	PIPE 2.0	Column	None	A53 Gr. B	Typical
8	MP008	N015	N016	PIPE 2.0	Column	None	A53 Gr. B	Typical
9	MP009	N017	N018	PIPE 2.0	Column	None	A53 Gr. B	Typical
10	H010	N019	N020	(1) 5/8 U-Bolt	Beam	None	SAE J429 Gr. 2	Typical
11	H011	N021	N022	(1) 5/8 U-Bolt	Beam	None	SAE J429 Gr. 2	Typical



Company : American Tower Corp.
 Designer : Garrett.Williams
 Job Number : 14529800_C8_01
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Member Primary Data (Continued)

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
12	V012	N022	N020	RIGID	None	None	RIGID	Typical
13	H013	N024	N025	PL8x0.5	Beam	None	A36	Typical
14	D014	N025	N026	LL2.5x2.5x3x6	Column	None	A36	Typical
15	V015	N027	N026	RIGID	None	None	RIGID	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	PIPE 3.0	150			Lbyy		1	1	Lateral
2	H002	HSS4x4x4	36			Lbyy		1	1	Lateral
3	V003	PIPE 4.0	18			Lbyy		1	1	Lateral
4	U004	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
5	U005	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
6	U006	(2) 1/2 U-Bolts	3			Lbyy		0.5	0.5	Lateral
7	MP007	PIPE 2.0	96	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
8	MP008	PIPE 2.0	96	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
9	MP009	PIPE 2.0	96	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
10	H010	(1) 5/8 U-Bolt	3			Lbyy		0.65	0.65	Lateral
11	H011	(1) 5/8 U-Bolt	3			Lbyy		0.65	0.65	Lateral
12	H013	PL8x0.5	3			Lbyy		1	1	Lateral
13	D014	LL2.5x2.5x3x6	36.797			Lbyy		1	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	N024	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Advanced Data

	Label	I Release	J 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	U004			Yes	N/A	Exclude	None
5	U005			Yes	N/A	Exclude	None
6	U006			Yes	N/A	Exclude	None
7	MP007			Yes	** NA **		None
8	MP008			Yes	** NA **		None
9	MP009			Yes	** NA **		None
10	H010			Yes	N/A	Exclude	None
11	H011			Yes	N/A	Exclude	None
12	V012			Yes	** NA **		None
13	H013			Yes	N/A		None
14	D014	BenPIN	BenPIN	Yes	** NA **		None
15	V015			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	A53 Gr. B	2.9e+07	1.115e+07	0.3	0.65	490	35000	1.6	60000	1.2
2	A500 Gr. B [SQR]	2.9e+07	1.115e+07	0.3	0.65	490	46000	1.4	58000	1.3
3	SAE J429 Gr. 2	2.9e+07	1.115e+07	0.3	0.65	490	57000	1.1	74000	1.1
4	A36	2.9e+07	1.115e+07	0.3	0.65	490	36000	1.5	58000	1.2



Company : American Tower Corp.
 Designer : Garrett.Williams
 Job Number : 14529800_C8_01
 Model Name : 415974, Sharon CT

10/5/2023
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 Checked By : -

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	1048.288	4	426.815	14	1279.448	14	471.905	8	4400.043	15	4194.597	85					
2		min	-1049.666	10	-633.648	8	-2948.32	8	-368.897	14	-4459.466	9	-4946.917	93					
3	N024	max	31.359	17	1877.14	32	1991.201	32	-39.201	14	6.529	17	3.297	78					
4		min	-31.171	23	158.334	14	172.904	14	-468.424	32	-6.887	23	-3.889	96					
5	Totals:	max	1070.517	16	1552.432	26	1452.353	14											
6		min	-1070.517	10	585.148	20	-1452.353	8											

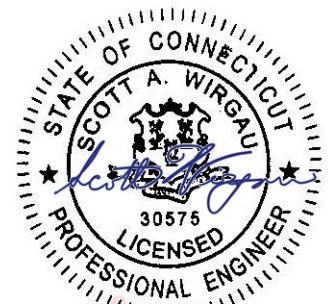
Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	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	PIPE 3.0	1.108	75	91	0.198	75		8	28250.554	65205	5748.75	5748.75	1.523	H1-1b
2	H002	HSS4x4x4	0.311	0	9	0.4	30	y	93	134360.669	139518	16180.5	16180.5	2.39	H1-1b
3	V003	PIPE 4.0	0.24	9	93	0.308	9		90	92571.332	93240	10631.25	10631.25	1.899	H1-1b
4	MP007	PIPE 2.0	0.126	47	8	0.013	48		8	14277.295	32130	1871.625	1871.625	1.338	H1-1b
5	MP008	PIPE 2.0	0.224	47	9	0.022	47		9	14277.295	32130	1871.625	1871.625	2.736	H1-1b
6	MP009	PIPE 2.0	0.793	59	8	0.041	59		7	9227.09	32130	1871.625	1871.625	1.686	H1-1b
7	H013	PL8x0.5	0.031	0	95	0.04	0	y	95	126685.849	129600	1350	21600	1.667	H1-1b
8	D014	LL2.5x2.5x3x6	0.063	0	32	0.023	36.797	y	96	43654.551	58320	4643.061	2549.586	1	H1-1b*



Structural Analysis Report

Structure : 108 ft Monopine
ATC Asset Name : Sharon CT
ATC Asset Number : 415974
Engineering Number : 14529800_C3_02
Proposed Carrier : T-MOBILE
Carrier Site Name : CTNH543A
Carrier Site Number : CTNH543A
Site Location : 70 Herb Road
SHARON, CT 06069-2326
41.7914° N, 73.4257° W
County : Litchfield
Date : September 26, 2023
Max Usage : 60%
Analysis Result : Pass



Scott
Wirgau

Digitally signed
by Scott Wirgau
Date: 2023.09.27
15:18:18 -04'00'

COA: PEC.0001553

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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 108 ft Monopine tower to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower:	Mapping by TEP Report #05605, dated July 6, 2005
Foundation:	Summit, PJF Project #29200-1298, dated September 29, 2000
Geotechnical:	Dr. Clarence Welte Report, dated August 30, 2000

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:	114 mph (3-second gust)
Basic Wind Speed w/ Ice:	40 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:	$S_s = 0.18$, $S_i = 0.05$
Site Class:	D - Stiff Soil - Default

Conclusion

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

If you have any questions or require additional information, please 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	60.3%	1.2D + 1.0W	Pass
Serviceability Usage	25.2%	1.0D + 1.0W	Pass
Base Plate @ 0.0 ft	56.7%	Rods	Pass
Mat & Pier	57.4%	Moment [Soil]	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	2,916.6	41.8	34.2

**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
84.0	3	T-Arm with Site Pro 1 PRK-1245	-
81.0	3	Commscope VV-65A-R1B	(3) 1 5/8" (1.63"-41.3mm) Fiber (3) 1.99" (50.7mm) Hybrid
	3	Ericsson AIR 6419 B41	
	3	Ericsson Radio 4449 B12,B71	
	3	Ericsson Radio 4460 B25+B66	
	3	RFS APXVAARR24_43-U-NA20	

Install proposed lines inside the pole shaft.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
109.0	1	Unused Reserve (20460.8100 sqin)	(12) 1 5/8" Coax	VERIZON WIRELESS
	3	Amphenol Antel BXA-171085-12BF-EDIN-X		
	3	Amphenol Antel BXA-70063-6CF-EDIN-2		
	6	Antel LPA-80080/6CF ____		
	6	RFS FD9R6004/2C-3L		
108.0	3	T-Arm	-	VERIZON WIRELESS
92.0	1	Raycap DC6-48-60-0-8C-EV	(2) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (1) 2" conduit (1) 3" conduit	AT&T MOBILITY
	1	Raycap DC6-48-60-0-8F		
	2	CCI DMP65R-BU4D		
	3	Ericsson RRUS 4449 B5, B12		
	3	Ericsson RRUS 4478 B14		
	3	Ericsson RRUS 8843 B2, B66A		
	3	T-Arm		
	3	Powerwave Allgon 7770.00		
	4	CCI DMP65R-BU6DA		
	6	3CC58056AD		
	6	Powerwave Allgon LGP21401		

(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.

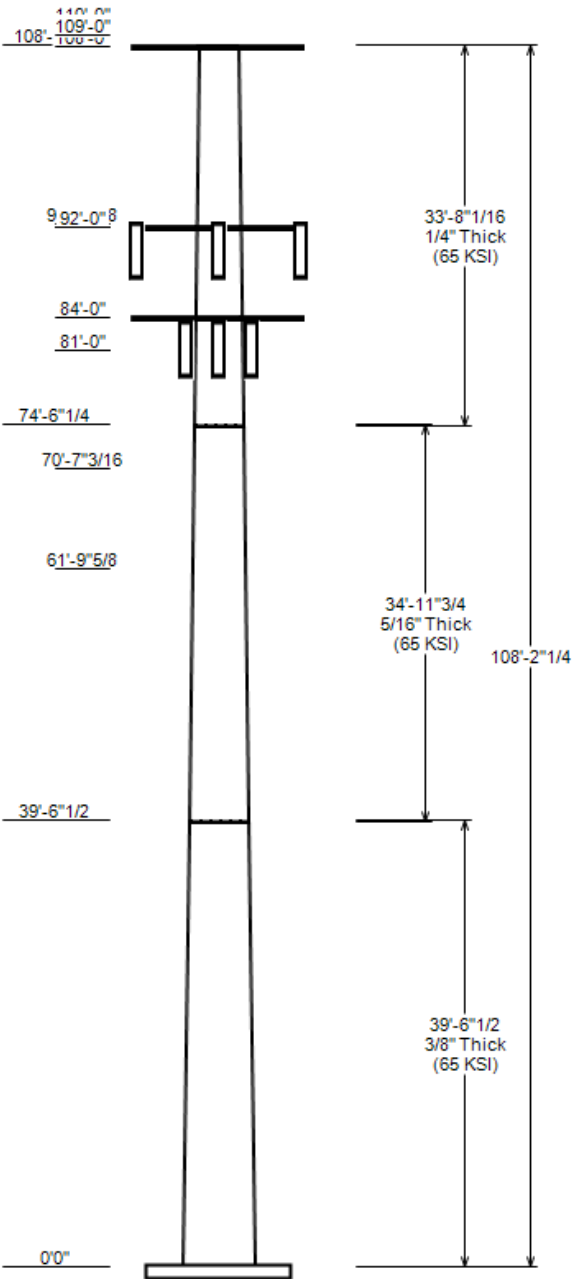
Unless explicitly agreed by both the client and A.T. Engineering Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

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:	114 mph	Ice Wind:	40 mph w/ 1" ice
Risk Category:	II	Exposure:	C
Topo Category:	1	Topo Factor:	Method 1
Structure Height:	108.19 ft	Base Elevation:	0.00 ft
Base Diameter:	55.86 in	Base Rotation:	0°
Service Wind:	60 mph	S _s :	0.176
		S _i :	0.054
Topo Feature:		Structure Type:	Taper
Taper:			0.2670 (in/ft)

POLE SECTION PROPERTIES							
Section	Length (ft)	Flat Diameter (in)		Thick (in)	Joint Type	Joint Length (in)	Yield Strength (ksi)
		Top	Bottom				
1	39.540	45.31	55.86	0.375		0.000	65
2	34.980	35.98	45.31	0.312	Butt Joint	0.000	65
3	33.670	27.00	35.98	0.250	Butt Joint	0.000	65

DISCRETE APPURTENANCE		LINEAR APPURTENANCE	
Elev (ft)	Description	Elev To (ft)	Description
110.0	(1) 4' Pine Tree Branch	109.0	(12) 1 5/8" Coax
109.0	(6) RFS FD9R6004/2C-3L	93.0	(2) 2" conduit
109.0	(3) Amphenol Antel BXA-171085-12BF	92.0	(1) 3" conduit
109.0	(3) Amphenol Antel BXA-70063-6CF-E	92.0	(1) 2" conduit
109.0	(6) Antel LPA-80080/6CF	92.0	(12) 1 5/8" Coax
109.0	(1) VZW Unused Reserve (13846.34 s	92.0	(4) 0.78" (19.7mm) 8 AWG 6
109.0	(1) Unused Reserve (20460.8100 sqi	92.0	(2) 0.39" (10mm) Fiber Trunk
108.0	(3) Generic Flat T-Arm	81.0	(3) 1.99" (50.7mm) Hybrid
92.2	(1) 6' Pine Tree Branch	81.0	(3) 1 5/8" (1.63"-41.3mm) Fiber
92.0	(1) Raycap DC6-48-60-0-8C-EV		
92.0	(6) Powerwave Allgon LGP21401		
92.0	(1) Raycap DC6-48-60-0-8F		
92.0	(6) Generic 3CC58056AD		
92.0	(3) Ericsson RRUS 8843 B2, B66A		
92.0	(3) Ericsson RRUS 4478 B14		
92.0	(3) Ericsson RRUS 4449 B5, B12		
92.0	(3) Powerwave Allgon 7770.00		
92.0	(2) CCI DMP65R-BU4D		
92.0	(3) Generic Round T-Arm		
92.0	(4) CCI DMP65R-BU6DA		
84.0	(3) Round T-Arm with Site Pro 1 PR		
81.0	(3) Ericsson Radio 4449 B12,B71		
81.0	(3) Ericsson Radio 4460 B25+B66		
81.0	(3) Ericsson AIR 6419 B41		
81.0	(3) Commscope VV-65A-R1B		
81.0	(3) RFS APXVAARR24_43-U-NA20		
70.6	(1) 8' Pine Tree Branch		
61.8	(1) 10' Pine Tree Branch		



GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	2916.62	41.84	34.17
0.9D + 1.0W	2900.50	31.36	34.16
1.2D + 1.0Di + 1.0Wi	560.60	61.38	6.60
1.2D + 1.0Ev + 1.0Eh	124.14	41.50	1.45
0.9D - 1.0Ev + 1.0Eh	123.25	28.92	1.45
1.0D + 1.0W	720.51	34.90	8.47

ANALYSIS PARAMETERS			
Location:	Litchfield County,CT	Height:	108.19 ft
Type and Shape:	Taper, 18 Sides	Base Diameter:	55.86 in
Manufacturer:	Undetermined	Top Diameter:	27.00 in
K _d (non-service):	0.95	Taper:	0.2670 in/ft
K _e :	0.96	Rotation:	0.000°

ICE & WIND PARAMETERS			
Risk Category:	II	Design Wind Speed:	114 mph
Exposure Category:	C	Design Wind Speed w/ Ice:	40 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:	1100.00 ft

SEISMIC PARAMETERS					
Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil	Period Based on Rayleigh Method (sec):		1.39	
T _L (sec):	6	P:	1	C _s :	0.041
S _s :	0.176	S ₁ :	0.054	C _s Max:	0.041
F _a :	1.600	F _v :	2.400	C _s Min:	0.030
S _{ds} :	0.188	S _{d1} :	0.086		

LOAD CASES	
1.2D + 1.0W	114 mph Wind with No Ice
0.9D + 1.0W	114 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	40 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

ASSET: 415974, Sharon CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
PROJECT: 14529800_C3_02

SHAFT SECTION PROPERTIES

Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top						Taper (in/ft)
							Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	
1-18	39.54	0.3750	65		0.00	8,041	55.86	0.000	66.04	25,686.4	24.50	148.96	45.31	39.54	53.49	13,646.	19.54	120.83	0.2668
2-18	34.98	0.3125	65	Butt	0.00	4,762	45.31	39.540	44.63	11,419.2	23.80	145.00	35.98	74.52	35.38	5,686.8	18.54	115.14	0.2668
3-18	33.67	0.2500	65	Butt	0.00	2,840	35.98	74.520	28.35	4,573.4	23.61	143.93	27.00	108.19	21.23	1,918.9	17.28	108.00	0.2668
Total Shaft Weight						15,643													

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice			Ice		
					Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor
110.00	4' Pine Tree Branch	1	1.00	0.000	320.00	48.510	1.00	957.32	87.051	1.00
109.00	RFS FD9R6004/2C-3L	6	0.80	1.000	2.60	0.314	0.50	7.78	0.563	0.50
109.00	Amphenol Antel BXA-171085-12BF	3	0.90	0.100	15.00	4.730	0.72	76.25	6.243	0.72
109.00	Amphenol Antel BXA-70063-6CF-E	3	0.90	1.200	17.00	7.569	0.66	112.68	9.352	0.66
109.00	Antel LPA-80080/6CF ____	6	0.80	1.000	21.00	8.628	0.62	138.15	5.062	0.62
109.00	Unused Reserve (20460.8100 sqi	1	0.80	0.000	2262.40	142.089	0.90	3281.36	206.085	0.90
108.00	Generic Flat T-Arm	3	0.75	0.000	312.50	12.900	0.67	481.15	18.179	0.67
92.20	6' Pine Tree Branch	1	1.00	0.000	3240.00	170.100	1.00	9590.36	303.096	1.00
92.00	CCI DMP65R-BU6DA	4	0.80	-1.100	79.40	12.709	0.63	243.10	14.481	0.63
92.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.67	478.51	14.939	0.67
92.00	CCI DMP65R-BU4D	2	0.80	-0.900	67.90	8.280	0.72	182.67	9.567	0.72
92.00	Powerwave Allgon 7770.00	3	0.80	-0.900	35.00	5.508	0.65	107.24	6.859	0.65
92.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.300	71.00	1.969	0.50	111.96	2.562	0.50
92.00	Ericsson RRUS 4478 B14	3	0.80	0.500	59.90	1.842	0.50	95.04	2.412	0.50
92.00	Ericsson RRUS 8843 B2, B66A	3	0.80	0.400	72.00	1.639	0.50	110.95	2.176	0.50
92.00	Generic 3CC58056AD	6	0.80	0.000	14.10	1.520	0.50	40.47	2.081	0.50
92.00	Raycap DC6-48-60-0-8C-EV	1	0.80	1.200	16.00	1.010	1.00	44.65	1.366	1.00
92.00	Powerwave Allgon LGP21401	6	0.80	-1.600	14.10	1.104	0.50	29.95	1.558	0.50
92.00	Raycap DC6-48-60-0-8F	1	0.80	1.100	32.80	1.360	1.00	69.74	1.781	1.00
84.00	Round T-Arm with Site Pro 1 PR	3	0.75	0.000	765.00	14.700	0.67	1100.36	21.144	0.67
81.00	RFS APXVAARR24_43-U-NA20	3	0.80	0.000	127.90	20.243	0.63	374.34	22.571	0.63
81.00	Commscope VV-65A-R1B	3	0.80	0.000	24.70	5.887	0.63	98.07	7.215	0.63
81.00	Ericsson AIR 6419 B41	3	0.80	0.000	68.50	5.600	0.60	144.35	6.594	0.60
81.00	Ericsson Radio 4460 B25+B66	3	0.80	0.000	109.00	2.564	0.67	164.48	3.226	0.67
81.00	Ericsson Radio 4449 B12,B71	3	0.80	0.000	74.00	1.639	0.50	109.14	2.169	0.50
70.60	8' Pine Tree Branch	1	1.00	0.000	900.00	28.620	1.00	2616.98	50.401	1.00
61.80	10' Pine Tree Branch	1	1.00	0.000	770.00	22.070	1.00	2218.04	38.627	1.00
Totals		Row Count: 27		79	14,497.40			32,107.85		

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	109.00	12	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	93.00	2	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	92.00	12	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	92.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	92.00	2	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	92.00	1	3" conduit	3.5	7.58	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	92.00	1	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	81.00	3	1.99" (50.7mm) Hybrid	1.99	1.9	N	0	0	0	0	0	N	T-MOBILE
0.00	81.00	3	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0	0	0	0	0	N	T-MOBILE

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00	(Max Length: 5 ft)	0.3750	55.860	66.039	25,686.40	24.50	148.96	72.6	905.7	0.0	0.0

ASSET: 415974, Sharon CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
PROJECT: 14529800_C3_02

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)
5.00			0.3750	54.526	64.451	23,878.20	23.88	145.40	73.3	862.5	0.0	1,110.1
10.00			0.3750	53.192	62.864	22,156.90	23.25	141.85	74.1	820.4	0.0	1,083.1
15.00			0.3750	51.859	61.276	20,520.40	22.62	138.29	74.8	779.4	0.0	1,056.1
20.00			0.3750	50.525	59.689	18,966.50	21.99	134.73	75.5	739.4	0.0	1,029.0
25.00			0.3750	49.191	58.101	17,493.10	21.37	131.18	76.3	700.4	0.0	1,002.0
30.00			0.3750	47.857	56.514	16,098.10	20.74	127.62	77	662.5	0.0	975.0
35.00			0.3750	46.524	54.926	14,779.30	20.11	124.06	77.7	625.7	0.0	948.0
39.54	Top - Section 1		0.3750	45.313	53.485	13,646.00	19.54	120.83	78.4	593.2	0.0	837.4
39.54	Bot - Section 2		0.3125	45.313	44.633	11,419.20	23.80	145.00	73.4	496.4	0.0	
40.00			0.3125	45.190	44.511	11,326.00	23.73	144.61	73.5	493.6	0.0	69.8
45.00			0.3125	43.856	43.188	10,345.90	22.98	140.34	74.4	464.6	0.0	746.1
50.00			0.3125	42.522	41.865	9,424.00	22.23	136.07	75.3	436.5	0.0	723.5
55.00			0.3125	41.189	40.543	8,558.60	21.48	131.80	76.1	409.3	0.0	701.0
60.00			0.3125	39.855	39.220	7,747.80	20.72	127.54	77	382.9	0.0	678.5
61.80			0.3125	39.375	38.743	7,469.00	20.45	126.00	77.3	373.6	0.0	238.8
65.00			0.3125	38.521	37.897	6,990.00	19.97	123.27	77.9	357.4	0.0	417.3
70.00			0.3125	37.187	36.574	6,283.20	19.22	119.00	78.8	332.8	0.0	633.5
70.60			0.3125	37.027	36.415	6,201.80	19.13	118.49	78.9	329.9	0.0	74.5
74.52	Top - Section 2		0.3125	35.982	35.378	5,686.80	18.54	115.14	79.6	311.3	0.0	478.8
74.52	Bot - Section 3		0.2500	35.982	28.352	4,573.40	23.61	143.93	73.6	250.3	0.0	
75.00			0.2500	35.854	28.250	4,524.40	23.52	143.41	73.7	248.5	0.0	46.2
80.00			0.2500	34.520	27.192	4,034.80	22.58	138.08	74.8	230.2	0.0	471.6
81.00			0.2500	34.253	26.980	3,941.30	22.40	137.01	75.1	226.6	0.0	92.2
84.00			0.2500	33.453	26.345	3,669.50	21.83	133.81	75.7	216.1	0.0	272.2
85.00			0.2500	33.186	26.134	3,581.80	21.64	132.74	75.9	212.6	0.0	89.3
90.00			0.2500	31.852	25.075	3,164.00	20.70	127.41	77.1	195.6	0.0	435.6
92.00			0.2500	31.319	24.652	3,006.50	20.33	125.27	77.5	189.1	0.0	169.2
92.20			0.2500	31.265	24.610	2,991.00	20.29	125.06	77.5	188.4	0.0	16.8
95.00			0.2500	30.518	24.017	2,780.10	19.76	122.07	78.2	179.4	0.0	231.7
100.00			0.2500	29.185	22.959	2,428.50	18.82	116.74	79.3	163.9	0.0	399.6
105.00			0.2500	27.851	21.901	2,107.90	17.88	111.40	80.4	149.1	0.0	381.6
108.00			0.2500	27.051	21.266	1,929.80	17.32	108.20	81	140.5	0.0	220.3
108.19			0.2500	27.000	21.225	1,918.90	17.28	108.00	81.1	140.0	0.0	13.7
Total:												15,642.5

CALCULATED FORCES													
Load Case: 1.2D + 1.0W			114 mph Wind with No Ice										19 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	-41.84	-34.17	0.00	-2,916.6	0.00	2,916.62	4,313.87	1,158.98	5,808.08	4,930.27	0	0	0.602
5.00	-40.10	-33.80	0.00	-2,745.8	0.00	2,745.75	4,252.96	1,131.12	5,532.23	4,743.03	0.09	-0.16	0.589
10.00	-38.41	-33.44	0.00	-2,576.7	0.00	2,576.73	4,189.94	1,103.26	5,263.10	4,556.86	0.34	-0.32	0.576
15.00	-36.74	-33.07	0.00	-2,409.5	0.00	2,409.54	4,124.81	1,075.40	5,000.67	4,371.95	0.75	-0.48	0.561
20.00	-35.11	-32.68	0.00	-2,244.2	0.00	2,244.20	4,057.58	1,047.54	4,744.95	4,188.47	1.34	-0.64	0.545
25.00	-33.52	-32.28	0.00	-2,080.8	0.00	2,080.79	3,988.23	1,019.68	4,495.95	4,006.58	2.09	-0.8	0.529
30.00	-31.96	-31.86	0.00	-1,919.4	0.00	1,919.39	3,916.78	991.82	4,253.65	3,826.48	3.02	-0.96	0.511
35.00	-30.44	-31.46	0.00	-1,760.1	0.00	1,760.07	3,843.22	963.96	4,018.07	3,648.32	4.11	-1.12	0.491
39.54	-29.11	-31.23	0.00	-1,617.3	0.00	1,617.26	3,774.61	938.66	3,809.97	3,488.40	5.26	-1.27	0.472
39.54	-29.11	-31.23	0.00	-1,617.3	0.00	1,617.26	2,948.56	783.31	3,183.68	2,732.57	5.26	-1.27	0.603
40.00	-28.95	-31.01	0.00	-1,602.9	0.00	1,602.90	2,943.78	781.17	3,166.34	2,720.65	5.38	-1.29	0.601
45.00	-27.66	-30.59	0.00	-1,447.8	0.00	1,447.84	2,890.69	757.95	2,980.95	2,591.64	6.83	-1.48	0.570
50.00	-26.40	-30.17	0.00	-1,294.9	0.00	1,294.89	2,835.50	734.74	2,801.15	2,463.73	8.48	-1.67	0.537
55.00	-25.17	-29.74	0.00	-1,144.1	0.00	1,144.06	2,778.20	711.52	2,626.94	2,337.11	10.33	-1.85	0.500
60.00	-24.00	-29.43	0.00	-995.4	0.00	995.39	2,718.79	688.30	2,458.33	2,211.94	12.37	-2.03	0.461
61.80	-22.67	-28.34	0.00	-942.4	0.00	942.42	2,696.89	679.95	2,399.00	2,167.27	13.15	-2.09	0.445
65.00	-21.93	-27.99	0.00	-851.7	0.00	851.72	2,657.28	665.09	2,295.30	2,088.40	14.59	-2.2	0.418
70.00	-20.83	-27.73	0.00	-711.8	0.00	711.77	2,593.65	641.87	2,137.87	1,966.66	16.98	-2.36	0.372
70.60	-19.65	-26.38	0.00	-695.1	0.00	695.13	2,585.88	639.09	2,119.36	1,952.18	17.28	-2.38	0.365

ASSET: 415974, Sharon CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
PROJECT: 14529800_C3_02

CALCULATED FORCES

74.52	-18.81	-26.17	0.00	-591.7	0.00	591.74	2,534.33	620.88	2,000.37	1,858.31	19.28	-2.5	0.328
74.52	-18.81	-26.17	0.00	-591.7	0.00	591.74	1,878.69	497.58	1,605.82	1,382.39	19.28	-2.5	0.441
75.00	-18.69	-25.95	0.00	-579.2	0.00	579.18	1,874.65	495.79	1,594.34	1,374.45	19.54	-2.51	0.434
80.00	-17.79	-25.68	0.00	-449.4	0.00	449.42	1,831.50	477.22	1,477.13	1,292.16	22.26	-2.67	0.360
81.00	-16.25	-23.28	0.00	-423.7	0.00	423.74	1,822.62	473.51	1,454.23	1,275.81	22.82	-2.7	0.343
84.00	-13.06	-22.07	0.00	-353.9	0.00	353.89	1,795.47	462.36	1,386.59	1,227.01	24.55	-2.79	0.298
85.00	-12.89	-21.83	0.00	-331.8	0.00	331.82	1,786.25	458.65	1,364.40	1,210.82	25.13	-2.81	0.284
90.00	-12.11	-21.52	0.00	-222.7	0.00	222.67	1,738.88	440.07	1,256.15	1,130.63	28.14	-2.92	0.206
92.00	-9.18	-18.25	0.00	-179.6	0.00	179.63	1,719.34	432.65	1,214.10	1,098.90	29.38	-2.96	0.171
92.20	-5.64	-10.87	0.00	-176.0	0.00	175.98	1,717.37	431.90	1,209.93	1,095.74	29.5	-2.96	0.165
95.00	-5.33	-10.55	0.00	-145.6	0.00	145.56	1,689.41	421.50	1,152.37	1,051.73	31.25	-3.01	0.142
100.00	-4.80	-10.14	0.00	-92.8	0.00	92.81	1,637.83	402.93	1,053.06	974.33	34.44	-3.07	0.099
105.00	-4.30	-9.82	0.00	-42.1	0.00	42.09	1,584.14	384.35	958.23	898.57	37.67	-3.11	0.050
108.00	-2.93	-8.80	0.00	-12.6	0.00	12.62	1,550.91	373.21	903.47	853.99	39.63	-3.12	0.017
108.19	0.00	-8.62	0.00	-11.0	0.00	10.95	1,548.78	372.51	900.06	851.19	39.75	-3.12	0.013

CALCULATED FORCES

Load Case: 0.9D + 1.0W

114 mph Wind with No Ice (Reduced DL)

19 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	-31.36	-34.16	0.00	-2,900.5	0.00	2,900.50	4,313.87	1,158.98	5,808.08	4,930.27	0	0	0.596
5.00	-30.04	-33.76	0.00	-2,729.7	0.00	2,729.70	4,252.96	1,131.12	5,532.23	4,743.03	0.08	-0.16	0.583
10.00	-28.75	-33.37	0.00	-2,560.9	0.00	2,560.90	4,189.94	1,103.26	5,263.10	4,556.86	0.33	-0.31	0.570
15.00	-27.48	-32.98	0.00	-2,394.0	0.00	2,394.05	4,124.81	1,075.40	5,000.67	4,371.95	0.75	-0.47	0.555
20.00	-26.24	-32.57	0.00	-2,229.2	0.00	2,229.17	4,057.58	1,047.54	4,744.95	4,188.47	1.33	-0.63	0.540
25.00	-25.02	-32.15	0.00	-2,066.3	0.00	2,066.32	3,988.23	1,019.68	4,495.95	4,006.58	2.08	-0.79	0.523
30.00	-23.83	-31.71	0.00	-1,905.6	0.00	1,905.59	3,916.78	991.82	4,253.65	3,826.48	3	-0.96	0.505
35.00	-22.67	-31.29	0.00	-1,747.0	0.00	1,747.02	3,843.22	963.96	4,018.07	3,648.32	4.09	-1.12	0.486
39.54	-21.67	-31.06	0.00	-1,605.0	0.00	1,604.97	3,774.61	938.66	3,809.97	3,488.40	5.22	-1.26	0.467
39.54	-21.67	-31.06	0.00	-1,605.0	0.00	1,604.97	2,948.56	783.31	3,183.68	2,732.57	5.22	-1.26	0.596
40.00	-21.53	-30.83	0.00	-1,590.7	0.00	1,590.68	2,943.78	781.17	3,166.34	2,720.65	5.35	-1.28	0.594
45.00	-20.54	-30.39	0.00	-1,436.5	0.00	1,436.54	2,890.69	757.95	2,980.95	2,591.64	6.79	-1.47	0.563
50.00	-19.58	-29.95	0.00	-1,284.6	0.00	1,284.59	2,835.50	734.74	2,801.15	2,463.73	8.43	-1.66	0.530
55.00	-18.64	-29.51	0.00	-1,134.8	0.00	1,134.83	2,778.20	711.52	2,626.94	2,337.11	10.26	-1.84	0.494
60.00	-17.75	-29.20	0.00	-987.3	0.00	987.29	2,718.79	688.30	2,458.33	2,211.94	12.28	-2.01	0.455
61.80	-16.76	-28.11	0.00	-934.7	0.00	934.73	2,696.89	679.95	2,399.00	2,167.27	13.06	-2.08	0.439
65.00	-16.18	-27.76	0.00	-844.8	0.00	844.77	2,657.28	665.09	2,295.30	2,088.40	14.49	-2.19	0.412
70.00	-15.35	-27.49	0.00	-706.0	0.00	705.98	2,593.65	641.87	2,137.87	1,966.66	16.87	-2.34	0.367
70.60	-14.47	-26.15	0.00	-689.5	0.00	689.49	2,585.88	639.09	2,119.36	1,952.18	17.16	-2.36	0.360
74.52	-13.84	-25.94	0.00	-587.0	0.00	586.98	2,534.33	620.88	2,000.37	1,858.31	19.15	-2.48	0.323
74.52	-13.84	-25.94	0.00	-587.0	0.00	586.98	1,878.69	497.58	1,605.82	1,382.39	19.15	-2.48	0.435
75.00	-13.74	-25.72	0.00	-574.5	0.00	574.53	1,874.65	495.79	1,594.34	1,374.45	19.4	-2.49	0.428
80.00	-13.06	-25.45	0.00	-445.9	0.00	445.91	1,831.50	477.22	1,477.13	1,292.16	22.1	-2.65	0.355
81.00	-11.93	-23.07	0.00	-420.5	0.00	420.46	1,822.62	473.51	1,454.23	1,275.81	22.66	-2.68	0.338
84.00	-9.54	-21.89	0.00	-351.2	0.00	351.24	1,795.47	462.36	1,386.59	1,227.01	24.38	-2.77	0.294
85.00	-9.41	-21.65	0.00	-329.4	0.00	329.35	1,786.25	458.65	1,364.40	1,210.82	24.96	-2.79	0.280
90.00	-8.82	-21.35	0.00	-221.1	0.00	221.09	1,738.88	440.07	1,256.15	1,130.63	27.95	-2.9	0.203
92.00	-6.66	-18.11	0.00	-178.4	0.00	178.40	1,719.34	432.65	1,214.10	1,098.90	29.17	-2.94	0.168
92.20	-4.10	-10.78	0.00	-174.8	0.00	174.78	1,717.37	431.90	1,209.93	1,095.74	29.29	-2.94	0.163
95.00	-3.87	-10.47	0.00	-144.6	0.00	144.58	1,689.41	421.50	1,152.37	1,051.73	31.03	-2.98	0.140
100.00	-3.47	-10.07	0.00	-92.2	0.00	92.23	1,637.83	402.93	1,053.06	974.33	34.19	-3.04	0.097
105.00	-3.10	-9.76	0.00	-41.9	0.00	41.88	1,584.14	384.35	958.23	898.57	37.4	-3.08	0.049
108.00	-2.08	-8.75	0.00	-12.6	0.00	12.61	1,550.91	373.21	903.47	853.99	39.35	-3.1	0.017
108.19	0.00	-8.62	0.00	-11.0	0.00	10.95	1,548.78	372.51	900.06	851.19	39.47	-3.1	0.013

CALCULATED FORCES

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

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	-61.38	-6.60	0.00	-560.6	0.00	560.60	4,313.87	1,158.98	5,808.08	4,930.27	0	0	0.128
5.00	-59.47	-6.53	0.00	-527.6	0.00	527.61	4,252.96	1,131.12	5,532.23	4,743.03	0.02	-0.03	0.125
10.00	-57.57	-6.46	0.00	-495.0	0.00	494.96	4,189.94	1,103.26	5,263.10	4,556.86	0.06	-0.06	0.122
15.00	-55.69	-6.39	0.00	-462.6	0.00	462.65	4,124.81	1,075.40	5,000.67	4,371.95	0.14	-0.09	0.119
20.00	-53.84	-6.32	0.00	-430.7	0.00	430.69	4,057.58	1,047.54	4,744.95	4,188.47	0.26	-0.12	0.116
25.00	-52.02	-6.24	0.00	-399.1	0.00	399.10	3,988.23	1,019.68	4,495.95	4,006.58	0.4	-0.15	0.113
30.00	-50.24	-6.16	0.00	-367.9	0.00	367.88	3,916.78	991.82	4,253.65	3,826.48	0.58	-0.18	0.109
35.00	-48.50	-6.08	0.00	-337.1	0.00	337.07	3,843.22	963.96	4,018.07	3,648.32	0.79	-0.22	0.105
39.54	-46.95	-6.04	0.00	-309.4	0.00	309.45	3,774.61	938.66	3,809.97	3,488.40	1.01	-0.24	0.101
39.54	-46.95	-6.04	0.00	-309.4	0.00	309.45	2,948.56	783.31	3,183.68	2,732.57	1.01	-0.24	0.129
40.00	-46.81	-6.00	0.00	-306.7	0.00	306.67	2,943.78	781.17	3,166.34	2,720.65	1.03	-0.25	0.129
45.00	-45.31	-5.92	0.00	-276.7	0.00	276.68	2,890.69	757.95	2,980.95	2,591.64	1.31	-0.28	0.122
50.00	-43.85	-5.84	0.00	-247.1	0.00	247.09	2,835.50	734.74	2,801.15	2,463.73	1.63	-0.32	0.116
55.00	-42.42	-5.75	0.00	-217.9	0.00	217.91	2,778.20	711.52	2,626.94	2,337.11	1.98	-0.35	0.109
60.00	-41.03	-5.69	0.00	-189.2	0.00	189.15	2,718.79	688.30	2,458.33	2,211.94	2.37	-0.39	0.101
61.80	-38.50	-5.45	0.00	-178.9	0.00	178.91	2,696.89	679.95	2,399.00	2,167.27	2.52	-0.4	0.097
65.00	-37.63	-5.38	0.00	-161.5	0.00	161.46	2,657.28	665.09	2,295.30	2,088.40	2.8	-0.42	0.092
70.00	-36.31	-5.33	0.00	-134.5	0.00	134.54	2,593.65	641.87	2,137.87	1,966.66	3.26	-0.45	0.082
70.60	-33.75	-5.03	0.00	-131.3	0.00	131.34	2,585.88	639.09	2,119.36	1,952.18	3.31	-0.46	0.080
74.52	-32.74	-4.99	0.00	-111.6	0.00	111.62	2,534.33	620.88	2,000.37	1,858.31	3.7	-0.48	0.073
74.52	-32.74	-4.99	0.00	-111.6	0.00	111.62	1,878.69	497.58	1,605.82	1,382.39	3.7	-0.48	0.098
75.00	-32.63	-4.95	0.00	-109.2	0.00	109.23	1,874.65	495.79	1,594.34	1,374.45	3.74	-0.48	0.097
80.00	-31.51	-4.89	0.00	-84.5	0.00	84.50	1,831.50	477.22	1,477.13	1,292.16	4.26	-0.51	0.083
81.00	-28.71	-4.52	0.00	-79.6	0.00	79.61	1,822.62	473.51	1,454.23	1,275.81	4.37	-0.52	0.078
84.00	-24.57	-4.29	0.00	-66.0	0.00	66.05	1,795.47	462.36	1,386.59	1,227.01	4.7	-0.53	0.068
85.00	-24.36	-4.24	0.00	-61.8	0.00	61.75	1,786.25	458.65	1,364.40	1,210.82	4.81	-0.54	0.065
90.00	-23.37	-4.18	0.00	-40.5	0.00	40.54	1,738.88	440.07	1,256.15	1,130.63	5.39	-0.56	0.049
92.00	-18.44	-3.63	0.00	-32.2	0.00	32.19	1,719.34	432.65	1,214.10	1,098.90	5.62	-0.56	0.040
92.20	-9.62	-1.97	0.00	-31.5	0.00	31.46	1,717.37	431.90	1,209.93	1,095.74	5.65	-0.56	0.034
95.00	-9.18	-1.90	0.00	-26.0	0.00	25.95	1,689.41	421.50	1,152.37	1,051.73	5.98	-0.57	0.030
100.00	-8.43	-1.81	0.00	-16.4	0.00	16.44	1,637.83	402.93	1,053.06	974.33	6.58	-0.58	0.022
105.00	-7.71	-1.74	0.00	-7.4	0.00	7.38	1,584.14	384.35	958.23	898.57	7.2	-0.59	0.013
108.00	-5.78	-1.55	0.00	-2.2	0.00	2.16	1,550.91	373.21	903.47	853.99	7.57	-0.59	0.006
108.19	0.00	-1.49	0.00	-1.9	0.00	1.87	1,548.78	372.51	900.06	851.19	7.59	-0.59	0.002

ASSET: 415974, Sharon CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
PROJECT: 14529800_C3_02

CALCULATED FORCES

Load Case: 1.0D + 1.0W

60 mph Wind with No Ice

18 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	-34.90	-8.47	0.00	-720.5	0.00	720.51	4,313.87	1,158.98	5,808.08	4,930.27	0	0	0.154
5.00	-33.53	-8.37	0.00	-678.2	0.00	678.18	4,252.96	1,131.12	5,532.23	4,743.03	0.02	-0.04	0.151
10.00	-32.18	-8.28	0.00	-636.3	0.00	636.32	4,189.94	1,103.26	5,263.10	4,556.86	0.08	-0.08	0.147
15.00	-30.87	-8.18	0.00	-594.9	0.00	594.94	4,124.81	1,075.40	5,000.67	4,371.95	0.19	-0.12	0.144
20.00	-29.58	-8.08	0.00	-554.0	0.00	554.04	4,057.58	1,047.54	4,744.95	4,188.47	0.33	-0.16	0.140
25.00	-28.31	-7.98	0.00	-513.6	0.00	513.63	3,988.23	1,019.68	4,495.95	4,006.58	0.52	-0.2	0.135
30.00	-27.08	-7.87	0.00	-473.7	0.00	473.73	3,916.78	991.82	4,253.65	3,826.48	0.75	-0.24	0.131
35.00	-25.87	-7.77	0.00	-434.4	0.00	434.36	3,843.22	963.96	4,018.07	3,648.32	1.02	-0.28	0.126
39.54	-24.79	-7.71	0.00	-399.1	0.00	399.09	3,774.61	938.66	3,809.97	3,488.40	1.3	-0.31	0.121
39.54	-24.79	-7.71	0.00	-399.1	0.00	399.09	2,948.56	783.31	3,183.68	2,732.57	1.3	-0.31	0.155
40.00	-24.70	-7.66	0.00	-395.5	0.00	395.54	2,943.78	781.17	3,166.34	2,720.65	1.33	-0.32	0.154
45.00	-23.69	-7.55	0.00	-357.2	0.00	357.25	2,890.69	757.95	2,980.95	2,591.64	1.69	-0.37	0.146
50.00	-22.71	-7.44	0.00	-319.5	0.00	319.49	2,835.50	734.74	2,801.15	2,463.73	2.09	-0.41	0.138
55.00	-21.74	-7.34	0.00	-282.3	0.00	282.27	2,778.20	711.52	2,626.94	2,337.11	2.55	-0.46	0.129
60.00	-20.81	-7.26	0.00	-245.6	0.00	245.59	2,718.79	688.30	2,458.33	2,211.94	3.05	-0.5	0.119
61.80	-19.71	-6.99	0.00	-232.5	0.00	232.53	2,696.89	679.95	2,399.00	2,167.27	3.25	-0.52	0.115
65.00	-19.12	-6.90	0.00	-210.2	0.00	210.15	2,657.28	665.09	2,295.30	2,088.40	3.6	-0.54	0.108
70.00	-18.23	-6.84	0.00	-175.6	0.00	175.64	2,593.65	641.87	2,137.87	1,966.66	4.19	-0.58	0.096
70.60	-17.23	-6.50	0.00	-171.5	0.00	171.53	2,585.88	639.09	2,119.36	1,952.18	4.27	-0.59	0.095
74.52	-16.54	-6.45	0.00	-146.0	0.00	146.03	2,534.33	620.88	2,000.37	1,858.31	4.76	-0.62	0.085
74.52	-16.54	-6.45	0.00	-146.0	0.00	146.03	1,878.69	497.58	1,605.82	1,382.39	4.76	-0.62	0.115
75.00	-16.47	-6.40	0.00	-142.9	0.00	142.94	1,874.65	495.79	1,594.34	1,374.45	4.82	-0.62	0.113
80.00	-15.74	-6.33	0.00	-110.9	0.00	110.93	1,831.50	477.22	1,477.13	1,292.16	5.5	-0.66	0.095
81.00	-14.39	-5.74	0.00	-104.6	0.00	104.60	1,822.62	473.51	1,454.23	1,275.81	5.63	-0.67	0.090
84.00	-11.71	-5.45	0.00	-87.4	0.00	87.38	1,795.47	462.36	1,386.59	1,227.01	6.06	-0.69	0.078
85.00	-11.57	-5.39	0.00	-81.9	0.00	81.93	1,786.25	458.65	1,364.40	1,210.82	6.21	-0.69	0.074
90.00	-10.93	-5.31	0.00	-55.0	0.00	54.99	1,738.88	440.07	1,256.15	1,130.63	6.95	-0.72	0.055
92.00	-8.37	-4.51	0.00	-44.4	0.00	44.37	1,719.34	432.65	1,214.10	1,098.90	7.25	-0.73	0.045
92.20	-5.13	-2.68	0.00	-43.5	0.00	43.47	1,717.37	431.90	1,209.93	1,095.74	7.28	-0.73	0.043
95.00	-4.87	-2.60	0.00	-36.0	0.00	35.96	1,689.41	421.50	1,152.37	1,051.73	7.72	-0.74	0.037
100.00	-4.42	-2.51	0.00	-22.9	0.00	22.93	1,637.83	402.93	1,053.06	974.33	8.5	-0.76	0.026
105.00	-3.99	-2.43	0.00	-10.4	0.00	10.41	1,584.14	384.35	958.23	898.57	9.3	-0.77	0.014
108.00	-2.81	-2.18	0.00	-3.1	0.00	3.13	1,550.91	373.21	903.47	853.99	9.78	-0.77	0.006
108.19	0.00	-2.14	0.00	-2.7	0.00	2.71	1,548.78	372.51	900.06	851.19	9.82	-0.77	0.003

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

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

Spectral Response Acceleration for Short Period (S_S):	0.176
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.054
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_e):	1.000
Site Coefficient F_a :	1.600
Site Coefficient F_v :	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.188
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.086
Seismic Response Coefficient (C_s):	0.041
Upper Limit C_s :	0.041
Lower Limit C_s :	0.030
Period based on Rayleigh Method (sec):	1.390
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.440
Total Unfactored Dead Load:	34.900 k
Seismic Base Shear (E):	1.450 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)
31	108.095	16	14	0.001	1	19
30	106.5	250	212	0.014	20	309
29	102.5	431	345	0.022	32	533
28	97.5	449	335	0.022	31	555
27	93.6	265	186	0.012	18	328
26	92.1	20	14	0.001	1	25
25	91	251	169	0.011	16	310
24	87.5	639	408	0.026	38	791
23	84.5	130	79	0.005	7	161
22	82.5	394	231	0.015	22	488
21	80.5	143	81	0.005	8	177
20	77.5	728	390	0.025	37	901
19	74.76	71	36	0.002	3	88
18	72.56	680	331	0.022	31	841
17	70.3	105	49	0.003	5	130
16	67.5	890	390	0.025	37	1,101
15	63.4	581	233	0.015	22	719
14	60.9	331	125	0.008	12	410
13	57.5	935	325	0.021	31	1,157
12	52.5	957	292	0.019	27	1,185
11	47.5	980	259	0.017	24	1,212
10	42.5	1,002	225	0.015	21	1,240
9	39.77	93	19	0.001	2	115
8	37.27	1,070	199	0.013	19	1,324
7	32.5	1,204	184	0.012	17	1,490
6	27.5	1,231	148	0.010	14	1,524
5	22.5	1,258	113	0.007	11	1,557
4	17.5	1,285	80	0.005	8	1,590
3	12.5	1,312	50	0.003	5	1,624
2	7.5	1,339	25	0.002	2	1,657
1	2.5	1,366	5	0.000	0	1,691
4' Pine Tree Branch	108.19	320	277	0.018	26	396
RFS FD9R6004/2C-3L	108.19	16	14	0.001	1	19
Amphenol Antel BXA-171085-12BF-EDIN-X	108.19	45	39	0.002	4	56
Amphenol Antel BXA-70063-6CF-EDIN-2	108.19	51	44	0.003	4	63
Antel LPA-80080/6CF ____	108.19	126	109	0.007	10	156
Unused Reserve (20460.8100 sqin)	108.19	2,262	1,960	0.127	184	2,800
Generic Flat T-Arm	108	938	810	0.053	76	1,160

ASSET: 415974, Sharon CT
 CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
 PROJECT: 14529800_C3_02

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)
6' Pine Tree Branch	92.2	3,240	2,228	0.145	209	4,010
Raycap DC6-48-60-0-8C-EV	92	16	11	0.001	1	20
Powerwave Allgon LGP21401	92	85	58	0.004	5	105
Raycap DC6-48-60-0-8F	92	33	22	0.002	2	41
Generic 3CC58056AD	92	85	58	0.004	5	105
Ericsson RRUS 8843 B2, B66A	92	216	148	0.010	14	267
Ericsson RRUS 4478 B14	92	180	123	0.008	12	222
Ericsson RRUS 4449 B5, B12	92	213	146	0.010	14	264
Powerwave Allgon 7770.00	92	105	72	0.005	7	130
CCI DMP65R-BU4D	92	136	93	0.006	9	168
Generic Round T-Arm	92	938	643	0.042	60	1,160
CCI DMP65R-BU6DA	92	318	218	0.014	20	393
Round T-Arm with Site Pro 1 PRK-1245	84	2,295	1,380	0.090	130	2,840
Ericsson Radio 4449 B12,B71	81	222	127	0.008	12	275
Ericsson Radio 4460 B25+B66	81	327	187	0.012	18	405
Ericsson AIR 6419 B41	81	206	117	0.008	11	254
Commscope VV-65A-R1B	81	74	42	0.003	4	92
RFS APXVAARR24_43-U-NA20	81	384	219	0.014	21	475
8' Pine Tree Branch	70.6	900	421	0.027	40	1,114
10' Pine Tree Branch	61.8	770	297	0.019	28	953
Totals:		34,903	15,413	1.000	1,448	43,194

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)
31	108.095	16	14	0.001	1	13
30	106.5	250	212	0.014	20	215
29	102.5	431	345	0.022	32	372
28	97.5	449	335	0.022	31	387
27	93.6	265	186	0.012	18	229
26	92.1	20	14	0.001	1	17
25	91	251	169	0.011	16	216
24	87.5	639	408	0.026	38	551
23	84.5	130	79	0.005	7	112
22	82.5	394	231	0.015	22	340
21	80.5	143	81	0.005	8	124
20	77.5	728	390	0.025	37	628
19	74.76	71	36	0.002	3	61
18	72.56	680	331	0.022	31	586
17	70.3	105	49	0.003	5	91
16	67.5	890	390	0.025	37	767
15	63.4	581	233	0.015	22	501
14	60.9	331	125	0.008	12	285
13	57.5	935	325	0.021	31	806
12	52.5	957	292	0.019	27	825
11	47.5	980	259	0.017	24	845
10	42.5	1,002	225	0.015	21	864
9	39.77	93	19	0.001	2	80
8	37.27	1,070	199	0.013	19	923
7	32.5	1,204	184	0.012	17	1,038
6	27.5	1,231	148	0.010	14	1,062
5	22.5	1,258	113	0.007	11	1,085
4	17.5	1,285	80	0.005	8	1,108
3	12.5	1,312	50	0.003	5	1,132
2	7.5	1,339	25	0.002	2	1,155
1	2.5	1,366	5	0.000	0	1,178
4' Pine Tree Branch	108.19	320	277	0.018	26	276
RFS FD9R6004/2C-3L	108.19	16	14	0.001	1	13
Amphenol Antel BXA-171085-12BF-EDIN-X	108.19	45	39	0.002	4	39
Amphenol Antel BXA-70063-6CF-EDIN-2	108.19	51	44	0.003	4	44

ASSET: 415974, Sharon CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
PROJECT: 14529800_C3_02

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)
Antel LPA-80080/6CF ____	108.19	126	109	0.007	10	109
Unused Reserve (20460.8100 sqin)	108.19	2,262	1,960	0.127	184	1,951
Generic Flat T-Arm	108	938	810	0.053	76	809
6' Pine Tree Branch	92.2	3,240	2,228	0.145	209	2,794
Raycap DC6-48-60-0-8C-EV	92	16	11	0.001	1	14
Powerwave Allgon LGP21401	92	85	58	0.004	5	73
Raycap DC6-48-60-0-8F	92	33	22	0.002	2	28
Generic 3CC58056AD	92	85	58	0.004	5	73
Ericsson RRUS 8843 B2, B66A	92	216	148	0.010	14	186
Ericsson RRUS 4478 B14	92	180	123	0.008	12	155
Ericsson RRUS 4449 B5, B12	92	213	146	0.010	14	184
Powerwave Allgon 7770.00	92	105	72	0.005	7	91
CCI DMP65R-BU4D	92	136	93	0.006	9	117
Generic Round T-Arm	92	938	643	0.042	60	809
CCI DMP65R-BU6DA	92	318	218	0.014	20	274
Round T-Arm with Site Pro 1 PRK-1245	84	2,295	1,380	0.090	130	1,979
Ericsson Radio 4449 B12,B71	81	222	127	0.008	12	191
Ericsson Radio 4460 B25+B66	81	327	187	0.012	18	282
Ericsson AIR 6419 B41	81	206	117	0.008	11	177
Commscope VV-65A-R1B	81	74	42	0.003	4	64
RFS APXVAARR24_43-U-NA20	81	384	219	0.014	21	331
8' Pine Tree Branch	70.6	900	421	0.027	40	776
10' Pine Tree Branch	61.8	770	297	0.019	28	664
Totals:		34,903	15,413	1.000	1,448	30,102

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	-41.50	-1.45	0.00	-124.14	0.00	124.14	4,313.87	1,158.98	5,808	4,930.27	0.00	0.00	0.04
5.00	-39.85	-1.45	0.00	-116.89	0.00	116.89	4,252.96	1,131.12	5,532	4,743.03	0.00	-0.01	0.03
10.00	-38.22	-1.45	0.00	-109.63	0.00	109.63	4,189.94	1,103.26	5,263	4,556.86	0.01	-0.01	0.03
15.00	-36.63	-1.45	0.00	-102.38	0.00	102.38	4,124.81	1,075.40	5,001	4,371.95	0.03	-0.02	0.03
20.00	-35.07	-1.44	0.00	-95.14	0.00	95.14	4,057.58	1,047.54	4,745	4,188.47	0.06	-0.03	0.03
25.00	-33.55	-1.43	0.00	-87.93	0.00	87.93	3,988.23	1,019.68	4,496	4,006.58	0.09	-0.03	0.03
30.00	-32.06	-1.42	0.00	-80.78	0.00	80.78	3,916.78	991.82	4,254	3,826.48	0.13	-0.04	0.03
35.00	-30.74	-1.40	0.00	-73.71	0.00	73.71	3,843.22	963.96	4,018	3,648.32	0.17	-0.05	0.03
39.54	-30.62	-1.40	0.00	-67.35	0.00	67.35	3,774.61	938.66	3,810	3,488.40	0.22	-0.05	0.03
39.54	-30.62	-1.40	0.00	-67.35	0.00	67.35	2,948.56	783.31	3,184	2,732.57	0.22	-0.05	0.04
40.00	-29.38	-1.38	0.00	-66.71	0.00	66.71	2,943.78	781.17	3,166	2,720.65	0.23	-0.05	0.04
45.00	-28.17	-1.36	0.00	-59.81	0.00	59.81	2,890.69	757.95	2,981	2,591.64	0.29	-0.06	0.03
50.00	-26.98	-1.33	0.00	-53.02	0.00	53.02	2,835.50	734.74	2,801	2,463.73	0.36	-0.07	0.03
55.00	-25.83	-1.30	0.00	-46.36	0.00	46.36	2,778.20	711.52	2,627	2,337.11	0.44	-0.08	0.03
60.00	-25.42	-1.29	0.00	-39.84	0.00	39.84	2,718.79	688.30	2,458	2,211.94	0.52	-0.08	0.03
61.80	-23.74	-1.24	0.00	-37.51	0.00	37.51	2,696.89	679.95	2,399	2,167.27	0.55	-0.09	0.03
65.00	-22.64	-1.21	0.00	-33.54	0.00	33.54	2,657.28	665.09	2,295	2,088.40	0.61	-0.09	0.03
70.00	-22.51	-1.20	0.00	-27.51	0.00	27.51	2,593.65	641.87	2,138	1,966.66	0.71	-0.10	0.02
70.60	-20.56	-1.13	0.00	-26.78	0.00	26.78	2,585.88	639.09	2,119	1,952.18	0.73	-0.10	0.02
74.52	-20.47	-1.13	0.00	-22.35	0.00	22.35	2,534.33	620.88	2,000	1,858.31	0.81	-0.10	0.02
74.52	-20.47	-1.13	0.00	-22.35	0.00	22.35	1,878.69	497.58	1,606	1,382.39	0.81	-0.10	0.03
75.00	-19.57	-1.09	0.00	-21.81	0.00	21.81	1,874.65	495.79	1,594	1,374.45	0.82	-0.10	0.03
80.00	-19.39	-1.08	0.00	-16.36	0.00	16.36	1,831.50	477.22	1,477	1,292.16	0.93	-0.11	0.02
81.00	-17.40	-0.99	0.00	-15.28	0.00	15.28	1,822.62	473.51	1,454	1,275.81	0.96	-0.11	0.02
84.00	-14.40	-0.85	0.00	-12.30	0.00	12.30	1,795.47	462.36	1,387	1,227.01	1.03	-0.11	0.02
85.00	-13.61	-0.81	0.00	-11.45	0.00	11.45	1,786.25	458.65	1,364	1,210.82	1.05	-0.11	0.02
90.00	-13.30	-0.80	0.00	-7.39	0.00	7.39	1,738.88	440.07	1,256	1,130.63	1.17	-0.12	0.01
92.00	-10.40	-0.64	0.00	-5.80	0.00	5.80	1,719.34	432.65	1,214	1,098.90	1.22	-0.12	0.01
92.20	-6.07	-0.40	0.00	-5.67	0.00	5.67	1,717.37	431.90	1,210	1,095.74	1.23	-0.12	0.01
95.00	-5.51	-0.37	0.00	-4.54	0.00	4.54	1,689.41	421.50	1,152	1,051.73	1.30	-0.12	0.01

ASSET: 415974, Sharon CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
PROJECT: 14529800_C3_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
100.00	-4.98	-0.34	0.00	-2.68	0.00	2.68	1,637.83	402.93	1,053	974.33	1.43	-0.12	0.01
105.00	-4.67	-0.32	0.00	-1.00	0.00	1.00	1,584.14	384.35	958	898.57	1.55	-0.12	0.00
108.00	-3.49	-0.24	0.00	-0.05	0.00	0.05	1,550.91	373.21	903	853.99	1.63	-0.12	0.00
108.19	0.00	-0.23	0.00	0.00	0.00	0.00	1,548.78	372.51	900	851.19	1.64	-0.12	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	-28.92	-1.45	0.00	-123.25	0.00	123.25	4,313.87	1,158.98	5,808	4,930.27	0.00	0.00	0.03
5.00	-27.77	-1.45	0.00	-116.01	0.00	116.01	4,252.96	1,131.12	5,532	4,743.03	0.00	-0.01	0.03
10.00	-26.64	-1.45	0.00	-108.77	0.00	108.77	4,189.94	1,103.26	5,263	4,556.86	0.01	-0.01	0.03
15.00	-25.53	-1.44	0.00	-101.53	0.00	101.53	4,124.81	1,075.40	5,001	4,371.95	0.03	-0.02	0.03
20.00	-24.44	-1.43	0.00	-94.32	0.00	94.32	4,057.58	1,047.54	4,745	4,188.47	0.06	-0.03	0.03
25.00	-23.38	-1.42	0.00	-87.15	0.00	87.15	3,988.23	1,019.68	4,496	4,006.58	0.09	-0.03	0.03
30.00	-22.34	-1.41	0.00	-80.04	0.00	80.04	3,916.78	991.82	4,254	3,826.48	0.13	-0.04	0.03
35.00	-21.42	-1.39	0.00	-73.01	0.00	73.01	3,843.22	963.96	4,018	3,648.32	0.17	-0.05	0.03
39.54	-21.34	-1.39	0.00	-66.70	0.00	66.70	3,774.61	938.66	3,810	3,488.40	0.22	-0.05	0.03
39.54	-21.34	-1.39	0.00	-66.70	0.00	66.70	2,948.56	783.31	3,184	2,732.57	0.22	-0.05	0.03
40.00	-20.47	-1.37	0.00	-66.06	0.00	66.06	2,943.78	781.17	3,166	2,720.65	0.23	-0.05	0.03
45.00	-19.63	-1.35	0.00	-59.21	0.00	59.21	2,890.69	757.95	2,981	2,591.64	0.29	-0.06	0.03
50.00	-18.80	-1.32	0.00	-52.48	0.00	52.48	2,835.50	734.74	2,801	2,463.73	0.36	-0.07	0.03
55.00	-18.00	-1.29	0.00	-45.88	0.00	45.88	2,778.20	711.52	2,627	2,337.11	0.43	-0.08	0.03
60.00	-17.71	-1.28	0.00	-39.42	0.00	39.42	2,718.79	688.30	2,458	2,211.94	0.52	-0.08	0.02
61.80	-16.55	-1.23	0.00	-37.11	0.00	37.11	2,696.89	679.95	2,399	2,167.27	0.55	-0.09	0.02
65.00	-15.78	-1.19	0.00	-33.18	0.00	33.18	2,657.28	665.09	2,295	2,088.40	0.61	-0.09	0.02
70.00	-15.69	-1.19	0.00	-27.21	0.00	27.21	2,593.65	641.87	2,138	1,966.66	0.71	-0.10	0.02
70.60	-14.33	-1.12	0.00	-26.49	0.00	26.49	2,585.88	639.09	2,119	1,952.18	0.72	-0.10	0.02
74.52	-14.27	-1.12	0.00	-22.11	0.00	22.11	2,534.33	620.88	2,000	1,858.31	0.80	-0.10	0.02
74.52	-14.27	-1.12	0.00	-22.11	0.00	22.11	1,878.69	497.58	1,606	1,382.39	0.80	-0.10	0.02
75.00	-13.64	-1.08	0.00	-21.57	0.00	21.57	1,874.65	495.79	1,594	1,374.45	0.81	-0.10	0.02
80.00	-13.51	-1.07	0.00	-16.18	0.00	16.18	1,831.50	477.22	1,477	1,292.16	0.92	-0.11	0.02
81.00	-12.13	-0.98	0.00	-15.11	0.00	15.11	1,822.62	473.51	1,454	1,275.81	0.95	-0.11	0.02
84.00	-10.04	-0.84	0.00	-12.16	0.00	12.16	1,795.47	462.36	1,387	1,227.01	1.02	-0.11	0.02
85.00	-9.49	-0.80	0.00	-11.32	0.00	11.32	1,786.25	458.65	1,364	1,210.82	1.04	-0.11	0.02
90.00	-9.27	-0.79	0.00	-7.31	0.00	7.31	1,738.88	440.07	1,256	1,130.63	1.16	-0.12	0.01
92.00	-7.25	-0.63	0.00	-5.73	0.00	5.73	1,719.34	432.65	1,214	1,098.90	1.21	-0.12	0.01
92.20	-4.23	-0.40	0.00	-5.61	0.00	5.61	1,717.37	431.90	1,210	1,095.74	1.22	-0.12	0.01
95.00	-3.84	-0.37	0.00	-4.49	0.00	4.49	1,689.41	421.50	1,152	1,051.73	1.29	-0.12	0.01
100.00	-3.47	-0.33	0.00	-2.66	0.00	2.66	1,637.83	402.93	1,053	974.33	1.41	-0.12	0.01
105.00	-3.25	-0.31	0.00	-0.99	0.00	0.99	1,584.14	384.35	958	898.57	1.54	-0.12	0.00
108.00	-2.43	-0.23	0.00	-0.04	0.00	0.04	1,550.91	373.21	903	853.99	1.62	-0.12	0.00
108.19	0.00	-0.23	0.00	0.00	0.00	0.00	1,548.78	372.51	900	851.19	1.62	-0.12	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	34.17	0.00	41.84	0.00	0.00	2916.62	39.54	0.6
0.9D + 1.0W	34.16	0.00	31.36	0.00	0.00	2900.50	0.00	0.6
1.2D + 1.0Di + 1.0Wi	6.60	0.00	61.38	0.00	0.00	560.60	39.54	0.13
1.2D + 1.0Ev + 1.0Eh	1.45	0.00	41.50	0.00	0.00	124.14	39.54	0.04
0.9D - 1.0Ev + 1.0Eh	1.45	0.00	28.92	0.00	0.00	123.25	0.00	0.03
1.0D + 1.0W	8.47	0.00	34.90	0.00	0.00	720.51	39.54	0.15

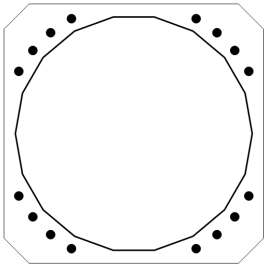
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
2916.62	41.84	34.17

PLATE PARAMETERS (ID# 24759)

Width:	61.86	in
Shape:	Square	
Thickness:	3	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Clip Length:	6	in
Rod Detail Type:	d	
Clear Distance	3	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	45	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F _y (ksi)	F _u (ksi)	Spacing (in)	Offset (°)
Original [ID#25408]	Cluster	16	2.25	62.36	A615-75	75	100	6	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	55.86"ø x 0.375" (18 Sides)	65.0354	-	-	25030.17	-
Bolt Group	Original (16) 2.25"ø	3.9761	3.2477	0.8393	23190.70	4.5

REACTION DISTRIBUTION

Component	ID	Moment M _u (k-ft)	Axial Load P _u (k)	Shear V _u (k)	Moment Factor
Pole	55.86"ø x 0.375" (18 Sides)	2916.6	41.84	34.17	1.000
Bolt Group	Original (16) 2.25"ø	2916.6	-	34.17	1.000

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES					PLATE PROPERTIES		
Flat-to-Flat Diameter:	55.98	in	Flat Width:	9.872	in	Neutral Axis:	45°
Point-to-Point Diameter:	56.85	in	Flat Radians:	0.349	rad		
Orientation Offset:	-	°					
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 /ΦM _n	
Flats	31.498	0.00	70.871	698.1	3189.2	21.9%	✓
Corners	30.635	0.00	68.928	446.5	3101.8	14.4%	✓

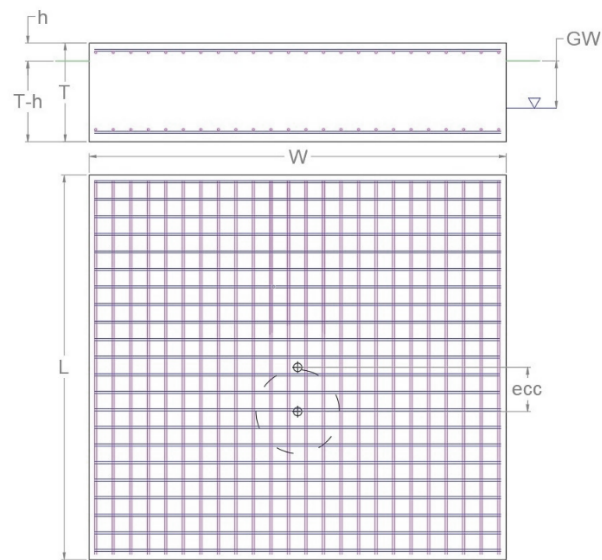
PLASTIC ANCHOR ROD ANALYSIS

Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P _u (k)	Applied Shear Load V _u (k)	Compressive Capacity ΦP _n (k)	Interaction Result
Original	16	2.25	130.8	3.6	243.6	56.7% ✓



APPLIED GLOBAL REACTIONS		
Moment (k-ft)	Axial (k)	Shear (k)
2,916.62	41.84	34.17

FOUNDATION PARAMETERS			
Mat Length:	L	25	ft
Mat Width:	W	25	ft
Mat Thickness:	T	4.5	ft
Base Depth:	L+T-h	4	ft
Concrete Compressive Strength:		3,000	psi
Mat Top Rebar:		(28) #9 bars [60 ksi]	
Mat Bottom Rebar:		(28) #9 bars [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:		13,440	psf
Bearing Pressure Type:		Gross	
Coefficient of Shear Friction:		0.3	

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, $M_{u,Design} / \Phi_m M_n$
3,070.38	5,349.51	57.4%

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, $P_{u,net} / \Phi_b P_n$
1,625.00	10,080.00	Diagonal to Pad Edge	16.1%

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, $V_u / \Phi_s V_n$
34.17	0.00	227.5	25.59	121.96	28.0%

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

ASSET: 415974, Sharon CT
CUSTOMER: T-MOBILE

CODE: ANSI/TIA-222-H
PROJECT: 14529800

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, $V_u / \Phi_c V_n$	
190.07	1,329.74	Diagonal to Pad Edge	14.3%	✓

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, $v_u / \Phi_c V_n$	
71.9	164.3	43.8%	✓

MAT REINFORCING MOMENT TRANSFER ANALYSIS

Moment Transfer Effective Flexural Width, w_t (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, $0.6 M_{ut} / \Phi M_{sc,f}$	
13.50	2.31	0.00	41,995.7	0.0%	✓

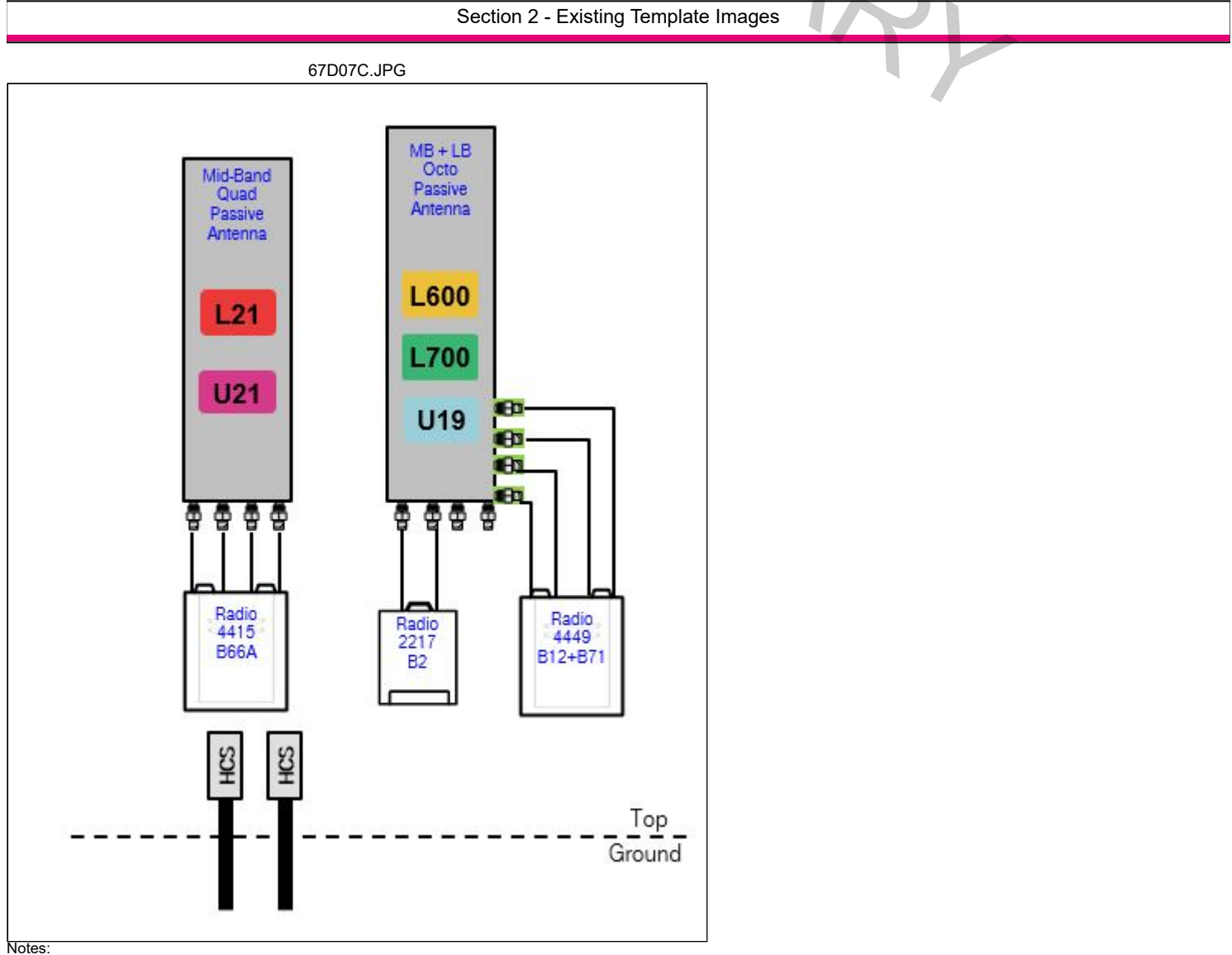
MAT REINFORCING FLEXURE ANALYSIS – UPPER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Upper Rebar Flexure Usage, $M_u / \Phi M_n$	
1,318.36	6,166.65	Parallel to Pad Edge	21.4%	✓

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, $M_u / \Phi M_n$	
1,697.70	6,166.65	Parallel to Pad Edge	27.5%	✓

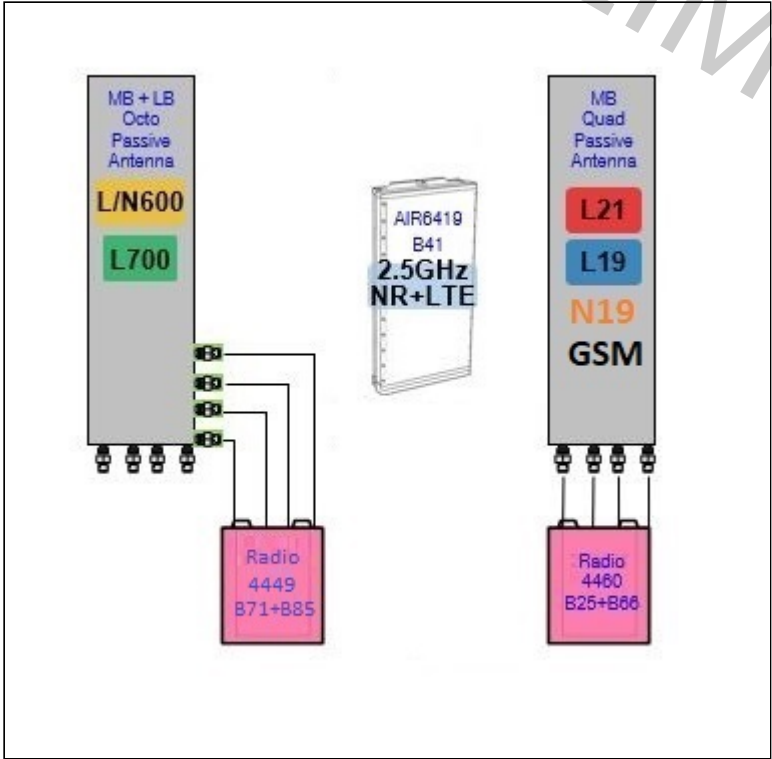
Section 1 - Site Information					
Site ID: CTNH543A		Site Name: CTNH543A		Latitude: 41.79132	
Status: Preliminary		Site Class: Monopine		Longitude: -73.4257	
Version: 3		Site Type: Structure Non Building		Address: 70 Herb Rd	
Project Type: Anchor		Plan Year: 2023		City, State: Sharon, CT	
Approved: 08/07/2023 2:58:44 PM		Market: CONNECTICUT CT		Region: NORTHEAST	
Approved By: Ilyes.Mekias2@T-Mobile.com		Vendor: Ericsson			
Last Modified: 08/07/2023 2:58:44 PM		Landlord: American Tower			
Last Modified By: Ilyes.Mekias2@T-Mobile.com					
RAN Template: 67D5D998E 6160			AL Template: 67D5998E_1xAIR+1OP+1QP		
Sector Count: 3	Antenna Count: 9	Coax Line Count: 0	TMA Count: 0	RRU Count: 6	



Notes:

Section 3 - Proposed Template Images

67D5D998E_OP+AIR+QP with GSM-.jpg



Notes:

Section 4 - Siteplan Images

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Section 5 - RAN Equipment

Existing RAN Equipment		
Template: 67D07C 6102 MUAC		
Enclosure	1	2
Enclosure Type	RBS 6102 MU AC	Purcell SFX17 2824
Baseband	BB 6630 L2100 BB 6630 N600 L600 L700 DUW30 U1900 (DECOMMISSIONED)	
Hybrid Cable System		Ericsson 6x12 HCS *Select Length & AWG* (x3)

Proposed RAN Equipment				
Template: 67D5D998E 6160				
Enclosure	1	2	3	4
Enclosure Type	Enclosure 6160 AC V1	RBS 6102 MU AC	B160	Purcell SFX17 2824
Baseband	RP 6651 N2500 L2500 BB 6630 N1900 L1900 L2100 BB 6630 N600 L600 L700			
Transport System	CSR IXRe V2 (Gen2)			
Hybrid Cable System	Hybrid Trunk 6/24 4AWG 50m (x3)			Ericsson 6x12 HCS *Select Length & AWG* (x3)

RAN Scope of Work:

Remove all unused equipment's from RAN section.

Add (1) 6160 and (1) B160 cabinets.
Add (1) RP6651 for NR2500/L2500
Add (1) IXRe router to 6160.
Add (3) Hybrid Trunk 6/24 4AWG 50m confirmed
Scoping notes:
relocate existing battery cabinet.

Section 6 - A&L Equipment

Existing Template: 67D07C_1QP+1OP

Proposed Template: 67D5998E_1xAIR+1OP+1QP

Sector 1 (Existing) view from behind

Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)			RFS - APXVAARR24_43-U-NA20 (Octo)		
Azimuth	90			90		
M. Tilt	0			0		
Height (ft)	84			84		
Ports	P1	P2	P3	P4	P5	P6
Active Tech		L2100	L700 L600 N600	L700 L600 N600		
Dark Tech						
Restricted Tech						
Decomm. Tech	U1900					
E. Tilt						
Cables	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2)		
TMA						
Diplexer / Combiners						
Radio	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	Radio 4449 B71+B85 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

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

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

Sector 1 (Proposed) view from behind												
Coverage Type	A - Outdoor Macro											
Antenna	1			2		3						
Antenna Model	Commscope_VV-65A-R1 (Quad)			AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAARR24_43-U-NA20 (Octo)						
Azimuth	90			90		90						
M. Tilt	0			0		0						
Height (ft)	84			84		84						
Ports	P1		P2		P3		P4		P5	P6	P7	P8
Active Tech	L1900 L2100 N1900		L1900 L2100 N1900		L2500 N2500		L2500 N2500		N600 L600 L700	N600 L600 L700		
Dark Tech												
Restricted Tech												
Decomm. Tech												
E. Tilt												
Cables	Coax Jumper (x2) Fiber Jumper (x2)		Coax Jumper (x2)		Fiber Jumper (x4)		Fiber Jumper (x4)		Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2)		
TMA's												
Diplexer / Combiners												
Radio	Radio 4460 B25+B66 (At Antenna)		Radio 4460 B25+B66 (At Antenna)						Radio 4449 B71+B85 (At Antenna)	Radio 4449 B71+B85 (At Antenna)		
Sector Equipment												
Unconnected Equipment:												
Scope of Work:												
Replace APX16DWV-16DWV-S-E-A20 with VV-65A-R1 at P1. Add AIR6419 at P2. Add (1) 4460 Radio and connect it to quad antenna at P1. Remove all unused material. Scoping Notes: Add handrail kit												
*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.												

Sector 2 (Existing) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)			RFS - APXVAARR24_43-U-NA20 (Octo)		
Azimuth	210			210		
M. Tilt	0			0		
Height (ft)	84			84		
Ports	P1	P2	P3	P4	P5	P6
Active Tech		L2100	L700 L600 N600	L700 L600 N600		
Dark Tech						
Restricted Tech						
Decomm. Tech	U1900					
E. Tilt						
Cables	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2)		
TMA's						
Diplexer / Combiners						
Radio	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	Radio 4449 B71+B85 (At Antenna)		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:						
Replace LB Dual in Position 2 with (1) LB/MB Octo. Replace RRUS11 B12 in Position 2 with (1) Radio 4449 B71+B12 for L600 and L700.						
*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.						

Sector 2 (Proposed) view from behind								
Coverage Type	A - Outdoor Macro							
Antenna	1		2		3			
Antenna Model	Commscope_VV-65A-R1 (Quad)		AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAARR24_43-U-NA20 (Octo)			
Azimuth	210		210		210			
M. Tilt	0		0		0			
Height (ft)	84		84		84			
Ports	P1	P2	P3	P4	P5	P6	P7	P8
Active Tech	L2100 N1900 L1900	L2100 N1900 L1900	N2500 L2500	N2500 L2500	N600 L600 L700	N600 L600 L700		
Dark Tech								
Restricted Tech								
Decomm. Tech								
E. Tilt								
Cables	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2)	Fiber Jumper (x4)	Fiber Jumper (x4)	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2)		
TMA's								
Diplexer / Combiners								
Radio	Radio 4460 B25+B66 (At Antenna)	Radio 4460 B25+B66 (At Antenna)			Radio 4449 B71+B85 (At Antenna)	Radio 4449 B71+B85 (At Antenna)		
Sector Equipment								
Unconnected Equipment:								
Scope of Work:								
Replace APX16DWV-16DWV-S-E-A20 with VV-65A-R1 at P1. Add AIR6419 at P2. Add (1) 4460 Radio and connect it to quad antenna at P1. Remove all unused material. Scoping Notes: Add handrail kit								
*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.								

Sector 3 (Existing) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)			RFS - APXVAARR24_43-U-NA20 (Octo)		
Azimuth	330			330		
M. Tilt	0			0		
Height (ft)	84			84		
Ports	P1	P2	P3	P4	P5	P6
Active Tech		L2100	L700 L600 N600	L700 L600 N600		
Dark Tech						
Restricted Tech						
Decomm. Tech	U1900					
E. Tilt						
Cables	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2)		
TMA						
Diplexer / Combiners						
Radio	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	Radio 4449 B71+B85 (At Antenna)		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:						
Replace LB Dual in Position 2 with (1) LB/MB Octo. Replace RRUS11 B12 in Position 2 with (1) Radio 4449 B71+B12 for L600 and L700.						
*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.						

Sector 3 (Proposed) view from behind								
Coverage Type	A - Outdoor Macro							
Antenna	1		2		3			
Antenna Model	Commscope_VV-65A-R1 (Quad)		AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAARR24_43-U-NA20 (Octo)			
Azimuth	330		330		330			
M. Tilt	0		0		0			
Height (ft)	84		84		84			
Ports	P1	P2	P3	P4	P5	P6	P7	P8
Active Tech	L2100 N1900 L1900	L2100 N1900 L1900	N2500 L2500	N2500 L2500	N600 L700 L600	N600 L700 L600		
Dark Tech								
Restricted Tech								
Decomm. Tech								
E. Tilt								
Cables	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2)	Fiber Jumper (x4)	Fiber Jumper (x4)	Coax Jumper (x2) Fiber Jumper (x2)	Coax Jumper (x2)		
TMA's								
Diplexer / Combiners								
Radio	Radio 4460 B25+B66 (At Antenna)	Radio 4460 B25+B66 (At Antenna)			Radio 4449 B71+B85 (At Antenna)	Radio 4449 B71+B85 (At Antenna)		
Sector Equipment								
Unconnected Equipment:								
Scope of Work:								
Replace APX16DWV-16DWV-S-E-A20 with VV-65A-R1 at P1. Add AIR6419 at P2. Add (1) 4460 Radio and connect it to quad antenna at P1. Remove all unused material. Scoping Notes: Add handrail kit								
*A dashed border indicates shared connected equipment. Any shared equipment, besides the first, is denoted with the SHARED keyword.								

Radio Frequency Exposure Analysis Report

November 30, 2023

T-Mobile

**Site Name: CTNH543A
Site Number: CTNH543A**

Site Address: 70 Herb Road, Sharon, CT 06069-2326



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

Signed 30 November 2023

Site Compliance Summary

T-Mobile Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	69.30786 $\mu\text{W}/\text{cm}^2$
Cumulative General Population % MPE (Ground Level):	6.93167%



November 30, 2023

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

RF Exposure Analysis for Site: **CTNH543A**

Centerline was contracted to analyze the proposed T-Mobile facility at **70 Herb Road, Sharon, CT 06069-2326** 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 ($\mu\text{W}/\text{cm}^2$). 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 ($f_{\text{MHz}}/1500$). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of $1 \text{ mW}/\text{cm}^2$ ($1000 \mu\text{W}/\text{cm}^2$). 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 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 ground level.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level 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.



Maximum Calculated Cumulative Power Density (Location: approximately 225' north-northwest 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 ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
T-Mobile A 1	RFS APXVAARR24_43-U-NA20	600	13.09	81.00	4.00	40.00	3259.27	0.00115	400.00	0.00029
T-Mobile A 1	RFS APXVAARR24_43-U-NA20	600	13.09	81.00	4.00	30.00	2444.45	0.00086	400.00	0.00022
T-Mobile A 1	RFS APXVAARR24_43-U-NA20	700	13.17	81.00	4.00	40.00	3319.86	0.00119	466.67	0.00026
T-Mobile A 2	ERICSSON SON_AIR6419	2500	15.55	81.00	1.00	30.00	1076.77	0.00104	1000.00	0.00010
T-Mobile A 2	ERICSSON SON_AIR6419	2500	15.55	81.00	1.00	30.00	1076.77	0.00104	1000.00	0.00010
T-Mobile A 2	ERICSSON SON_AIR6419	2500	22.05	81.00	1.00	90.00	14429.21	33.75621	1000.00	3.37562
T-Mobile A 2	ERICSSON SON_AIR6419	2500	22.05	81.00	1.00	90.00	14429.21	33.75621	1000.00	3.37562
T-Mobile A 3	COMMSCOPE VV-65A-R1B	1900	15.15	81.00	4.00	35.00	4582.77	0.00096	1000.00	0.00010
T-Mobile A 3	COMMSCOPE VV-65A-R1B	1900	15.15	81.00	4.00	40.00	5237.45	0.00109	1000.00	0.00011
T-Mobile A 3	COMMSCOPE VV-65A-R1B	1900	15.15	81.00	2.00	10.00	654.68	0.00014	1000.00	0.00001
T-Mobile A 3	COMMSCOPE VV-65A-R1B	2100	15.80	81.00	4.00	60.00	9124.55	0.00171	1000.00	0.00017
T-Mobile B 4	RFS APXVAARR24_43-U-NA20	600	13.09	81.00	4.00	40.00	3259.27	0.00000	400.00	0.00000
T-Mobile B 4	RFS APXVAARR24_43-U-NA20	600	13.09	81.00	4.00	30.00	2444.45	0.00000	400.00	0.00000
T-Mobile B 4	RFS APXVAARR24_43-U-NA20	700	13.17	81.00	4.00	40.00	3319.86	0.00000	466.67	0.00000
T-Mobile B 5	ERICSSON SON_AIR6419	2500	15.55	81.00	1.00	30.00	1076.77	0.00000	1000.00	0.00000
T-Mobile B 5	ERICSSON SON_AIR6419	2500	15.55	81.00	1.00	30.00	1076.77	0.00000	1000.00	0.00000
T-Mobile B 5	ERICSSON SON_AIR6419	2500	22.05	81.00	1.00	90.00	14429.21	0.16120	1000.00	0.01612
T-Mobile B 5	ERICSSON SON_AIR6419	2500	22.05	81.00	1.00	90.00	14429.21	0.16120	1000.00	0.01612
T-Mobile B 6	COMMSCOPE VV-65A-R1B	1900	15.15	81.00	4.00	35.00	4582.77	0.00000	1000.00	0.00000
T-Mobile B 6	COMMSCOPE VV-65A-R1B	1900	15.15	81.00	4.00	40.00	5237.45	0.00000	1000.00	0.00000
T-Mobile B 6	COMMSCOPE VV-65A-R1B	1900	15.15	81.00	2.00	10.00	654.68	0.00000	1000.00	0.00000
T-Mobile B 6	COMMSCOPE VV-65A-R1B	2100	15.80	81.00	4.00	60.00	2281.14	0.00000	1000.00	0.00000
T-Mobile C 7	RFS APXVAARR24_43-U-NA20	600	13.09	81.00	4.00	40.00	814.82	0.00000	400.00	0.00000
T-Mobile C 7	RFS APXVAARR24_43-U-NA20	600	13.09	81.00	4.00	30.00	611.11	0.00000	400.00	0.00000
T-Mobile C 7	RFS APXVAARR24_43-U-NA20	700	13.17	81.00	4.00	40.00	829.97	0.00001	466.67	0.00000
T-Mobile C 8	ERICSSON SON_AIR6419	2500	15.55	81.00	1.00	30.00	1076.77	0.00000	1000.00	0.00000
T-Mobile C 8	ERICSSON SON_AIR6419	2500	15.55	81.00	1.00	30.00	1076.77	0.00000	1000.00	0.00000
T-Mobile C 8	ERICSSON SON_AIR6419	2500	22.05	81.00	1.00	90.00	14429.21	0.72837	1000.00	0.07284
T-Mobile C 8	ERICSSON SON_AIR6419	2500	22.05	81.00	1.00	90.00	14429.21	0.72837	1000.00	0.07284
T-Mobile C 9	COMMSCOPE VV-65A-R1B	1900	15.15	81.00	4.00	35.00	1145.69	0.00001	1000.00	0.00000
T-Mobile C 9	COMMSCOPE VV-65A-R1B	1900	15.15	81.00	4.00	40.00	1309.36	0.00001	1000.00	0.00000
T-Mobile C 9	COMMSCOPE VV-65A-R1B	1900	15.15	81.00	2.00	10.00	327.34	0.00000	1000.00	0.00000
T-Mobile C 9	COMMSCOPE VV-65A-R1B	2100	15.80	81.00	4.00	60.00	2281.14	0.00000	1000.00	0.00000



Verizon A 10	AMPHENOL LPA-80080-6CF	850	14.00	109.00	1.00	0.00	0.00 (Not in Use)	0.00000	566.67	0.00000
Verizon A 11	AMPHENOL LPA-80080-6CF	850	14.00	109.00	1.00	0.00	0.00 (Not in Use)	0.00000	566.67	0.00000
Verizon A 12	AMPHENOL BXA-171085-12BF	1900	15.50	109.00	4.00	40.00	1419.25	0.00043	1000.00	0.00004
Verizon A 12	AMPHENOL BXA-171085-12BF	2100	15.90	109.00	4.00	40.00	1556.18	0.00045	1000.00	0.00005
Verizon A 13	ANTEL BXA-70063-6CF	700	14.00	109.00	4.00	40.00	1004.75	0.00054	466.67	0.00012
Verizon A 13	ANTEL BXA-70063-6CF	850	14.50	109.00	4.00	40.00	1127.35	0.00057	566.67	0.00010
Verizon B 14	AMPHENOL LPA-80080-6CF	850	14.00	109.00	1.00	0.00	0.00 (Not in Use)	0.00000	566.67	0.00000
Verizon B 15	AMPHENOL LPA-80080-6CF	850	14.00	109.00	1.00	0.00	0.00 (Not in Use)	0.00000	566.67	0.00000
Verizon B 16	AMPHENOL BXA-171085-12BF	1900	15.50	109.00	4.00	40.00	1419.25	0.00000	1000.00	0.00000
Verizon B 16	AMPHENOL BXA-171085-12BF	2100	15.90	109.00	4.00	40.00	1556.18	0.00000	1000.00	0.00000
Verizon B 17	ANTEL BXA-70063-6CF	700	14.00	109.00	4.00	40.00	1004.75	0.00000	466.67	0.00000
Verizon B 17	ANTEL BXA-70063-6CF	850	14.50	109.00	4.00	40.00	1127.35	0.00000	566.67	0.00000
Verizon C 18	AMPHENOL LPA-80080-6CF	850	14.00	109.00	1.00	0.00	0.00 (Not in Use)	0.00000	566.67	0.00000
Verizon C 19	AMPHENOL LPA-80080-6CF	850	14.00	109.00	1.00	0.00	0.00 (Not in Use)	0.00000	566.67	0.00000
Verizon C 20	AMPHENOL BXA-171085-12BF	1900	15.50	109.00	4.00	40.00	1419.25	0.00000	1000.00	0.00000
Verizon C 20	AMPHENOL BXA-171085-12BF	2100	15.90	109.00	4.00	40.00	1556.18	0.00000	1000.00	0.00000
Verizon C 21	ANTEL BXA-70063-6CF	700	14.00	109.00	4.00	40.00	1004.75	0.00000	466.67	0.00000
Verizon C 21	ANTEL BXA-70063-6CF	850	14.50	109.00	4.00	40.00	1127.35	0.00000	566.67	0.00000
AT&T A 22	POWERWAVE 7770	850	11.35	92.00	1.00	40.00	545.83	0.00016	566.67	0.00003
AT&T A 23	CCI DMP65R-BU4D	700	9.95	92.00	4.00	40.00	395.42	0.00100	466.67	0.00022
AT&T A 23	CCI DMP65R-BU4D	1900	13.45	92.00	4.00	40.00	885.24	0.00098	1000.00	0.00010
AT&T A 23	CCI DMP65R-BU4D	2100	14.05	92.00	4.00	40.00	1016.39	0.00097	1000.00	0.00010
AT&T A 24	CCI DMP65R-BU4D	700	9.95	92.00	4.00	40.00	395.42	0.00100	466.67	0.00022
AT&T A 24	CCI DMP65R-BU4D	850	10.25	92.00	4.00	40.00	423.70	0.00097	566.67	0.00017
AT&T B 25	POWERWAVE 7770	850	11.35	92.00	1.00	40.00	545.83	0.00000	566.67	0.00000
AT&T B 26	CCI DMP65R-BU6D	700	11.75	92.00	4.00	40.00	598.49	0.00000	466.67	0.00000
AT&T B 26	CCI DMP65R-BU6D	1900	14.05	92.00	4.00	40.00	1016.39	0.00000	1000.00	0.00000
AT&T B 26	CCI DMP65R-BU6D	2100	14.75	92.00	4.00	40.00	1194.15	0.00000	1000.00	0.00000
AT&T B 27	CCI DMP65R-BU6D	700	11.75	92.00	4.00	40.00	598.49	0.00000	466.67	0.00000
AT&T B 27	CCI DMP65R-BU6D	850	11.45	92.00	4.00	40.00	558.55	0.00000	566.67	0.00000
AT&T C 28	POWERWAVE 7770	850	11.35	92.00	1.00	40.00	545.83	0.00001	566.67	0.00000
AT&T C 29	CCI DMP65R-BU6D	700	11.75	92.00	4.00	40.00	598.49	0.00000	466.67	0.00000
AT&T C 29	CCI DMP65R-BU6D	1900	14.05	92.00	4.00	40.00	1016.39	0.00000	1000.00	0.00000
AT&T C 29	CCI DMP65R-BU6D	2100	14.75	92.00	4.00	40.00	1194.15	0.00000	1000.00	0.00000



AT&T C 30	CCI DMP65R-BU6D	700	11.75	92.00	4.00	40.00	598.49	0.00000	466.67	0.00000
AT&T C 30	CCI DMP65R-BU6D	850	11.45	92.00	4.00	40.00	558.55	0.00001	566.67	0.00000
							Cumulative Power Density:	69.30786 $\mu\text{W}/\text{cm}^2$	Cumulative % MPE:	6.93167%



Summary

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

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Centerline