

August 4, 2020

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Regarding: Notice of Exempt Modification – T-Mobile Site #: CT11041D_Anchor
Address: 53 Dayton Road, Waterford, CT

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 166-foot level of the existing 180-foot self-support tower at the above-referenced address, latitude 41.377778, longitude -72.141389. The tower is operated by American Tower Corporation.

T-Mobile now intends to modify its existing telecommunications facility by adding three (3) antennas, adding three (3) remote radio units (RRU) and adding three (3) cables as more particularly detailed and described on the enclosed Construction Drawings prepared by A.T. Engineering Service, PLLC, last revised July 29, 2020. The centerline height of the existing and proposed antennas is and will remain at 166 feet.

Planned Modifications:

Add:

- (3) AIR6449 B41 Antennae
- (3) 4415 B25 RRU
- (3) 1-1/4" Hybrid Cables

Existing to Remain:

- (9) Antenna
- (3) RRU
- (12) 1-5/8" Coax Cables
- (2) 1-1/4" Hybrid Cables
- (1) 1-5/8" Hybrid Cable

Please accept this letter as notification pursuant to R.C.S.A § 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 American Tower Corporation as tower operator, Rob Brule, First Selectman of the Town of Waterford as chief elected official and Abby Piersall, Planning Director of the Town of Waterford.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require an 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 modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. *Please see the RF emissions calculation for T-Mobile's modified facility dated July 21, 2020 and prepared by EBI Consulting enclosed herewith.*
5. The proposed modifications will not cause an ineligible change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading. *Please see the structural analysis dated July 13, 2020 and prepared by American Tower Corporation enclosed herewith.*

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

Respectfully submitted,



Jennifer Iliades
Site Acquisition Consultant
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
jiliades@clinellc.com

Enclosures: Exhibit A – Original Facility Approval
 Exhibit B – Property Card and GIS
 Exhibit C – Construction Drawings
 Exhibit D – Structural Analysis Report
 Exhibit E – Mount Analysis
 Exhibit F – Power Density/RF Emissions Report

cc: American Tower Corporation, tower operator
 Rob Brule, First Selectman of the Town of Waterford
 Abby Piersall, Planning Director of the Town of Waterford

Exhibit A

Original Facility Approval

302

BUILDING DEPARTMENT
TOWN OF WATERFORD, CONNECTICUT

BUILDING PERMIT

Permit #15308
Date Issued: 11/20/98
Zoning Permit #98-325

Est. Cost \$389,336.00
Permit Fee \$0.00
C of O Fee \$0.00

PERMISSION IS HEREBY GRANTED FOR THE FOLLOWING:

Description:
tower foundation and building

Property Address: 53 Dayton Road

Owner: Cohanzie Fire Department
Address: 53 Dayton Road
Waterford, CT 06385

Telephone: 860-444-1910

Leassee:

Contractor: Standard Builders
Address: 52 Holmes Road
Newington, CT 06111-1708

License #: 00900085
Telephone: 860-947-43

NOTE: The recipient of this permit accepts this permit on the condition that he, as owner, or as representing the owner, agrees to comply with all building and zoning ordinances of the Town of Waterford and the State Statutes of the State of Connecticut regarding the use, occupancy, and type of building to be constructed and agrees that this building is to be located the proper distances from all other zones and is located in a zone in which the building and its use is allowed.


Building Official

Tower

BUILDING DEPARTMENT
TOWN OF WATERFORD, CONNECTICUT

BUILDING PERMIT

| | | |
|-----------------------|------------|--------|
| Permit #15309 | Est. Cost | \$0.00 |
| Date Issued: 11/20/98 | Permit Fee | \$0.00 |
| Zoning Permit # - 0 | C of O Fee | \$0.00 |

PERMISSION IS HEREBY GRANTED FOR THE FOLLOWING:

Description:
Radio tower

Property Address: 53 Dayton Road

Owner: Cohanzie Fire Department
Address: 53 Dayton Road
Waterford, CT 06385

Telephone: 860-444-1910

Leassee:

Contractor: Standard Builders
Address: 52 Holmes Road
Newington, CT 06111

License #: 00900085
Telephone: 860-594-7143

NOTE: The recipient of this permit accepts this permit on the condition that he, as owner, or as representing the owner, agrees to comply with all building and zoning ordinances of the Town of Waterford and the State Statues of the State of Connecticut regarding the use, occupancy, and type of building to be constructed and agrees that this building is to be located the proper distances from all other zones and is located in a zone in which the building and its use is allowed.

[Signature]

Building Official

Exhibit B

Property Card

53 DAYTON ROAD

Location 53 DAYTON ROAD

Mblu 92 / 1844 /

Acct# 00158300

Owner COHANZIE FIRE COMPANY NO 5 INC

Assessment \$1,335,410

Appraisal \$1,907,740

PID 1844

Building Count 2

Current Value

| Appraisal | | | |
|----------------|--------------|-----------|-------------|
| Valuation Year | Improvements | Land | Total |
| 2017 | \$981,150 | \$926,590 | \$1,907,740 |

| Assessment | | | |
|----------------|--------------|-----------|-------------|
| Valuation Year | Improvements | Land | Total |
| 2017 | \$686,800 | \$648,610 | \$1,335,410 |

Parcel Addresses

| Additional Addresses | | |
|----------------------|-----------------|-----------|
| Address | City, State Zip | Type |
| 53 DAYTON ROAD | | Secondary |

Owner of Record

Owner COHANZIE FIRE COMPANY NO 5 INC
Co-Owner

Sale Price \$0
Certificate
Book & Page 0095/0157
Sale Date 11/12/1952
Instrument 00

Ownership History

| Ownership History | | | | | |
|--------------------------------|------------|-------------|-------------|------------|------------|
| Owner | Sale Price | Certificate | Book & Page | Instrument | Sale Date |
| COHANZIE FIRE COMPANY NO 5 INC | \$0 | | 0095/0157 | 00 | 11/12/1952 |

Building Information

Building 1 : Section 1

Year Built: 1950
Living Area: 8,615
Replacement Cost: \$803,074
Building Percent Good: 68

Building Attributes

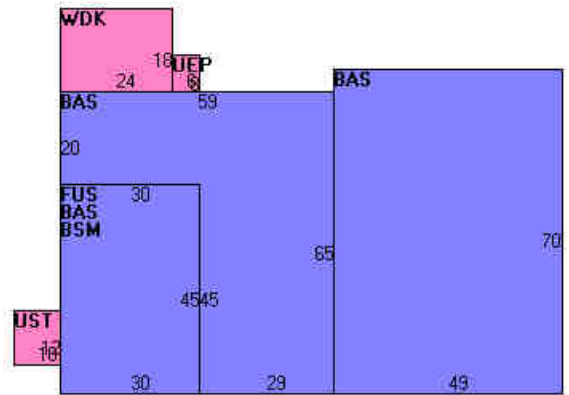
| Field | Description |
|------------------|--------------|
| STYLE | Fire Station |
| MODEL | Comm/Ind |
| Grade | Above Ave |
| Stories: | 1.00 |
| Occupancy | 1.00 |
| Exterior Wall 1 | Vinyl Siding |
| Exterior Wall 2 | Brick Veneer |
| Roof Structure | Gambrel |
| Roof Cover | Asphalt |
| Interior Wall 1 | Plaster |
| Interior Wall 2 | Drywall |
| Interior Floor 1 | Concrete |
| Interior Floor 2 | Comp Tile |
| Heating Fuel | Oil |
| Heating Type | Hot Water |
| % Central Air | 0 |
| Foundation | Poured Conc |
| Bldg Use | Exempt Comm |
| Total Rooms | 0 |
| Total Bedrms | 0 |
| Total Fixtures | 22 |
| % Wet Sprinkler | 100 |
| % Dry Sprinkler | |
| 1st Floor Use | |
| Heat/AC | Typical |
| Frame Type | MASONRY |
| Baths/Plumbing | AVERAGE |
| % Finished | 60 |
| Class | C |
| Wall Height | 11.00 |
| Usrflid 214 | |

Building Photo



(<http://images.vgsi.com/photos/WaterfordCTPhotos/\00\00\88\39.JPG>)

Building Layout



(http://images.vgsi.com/photos/WaterfordCTPhotos//Sketches/1844_1844.j)

| Building Sub-Areas (sq ft) | | | Legend |
|----------------------------|-------------------------|------------|-------------|
| Code | Description | Gross Area | Living Area |
| BAS | First Floor | 7,265 | 7,265 |
| FUS | Finished Upper Story | 1,350 | 1,350 |
| BSM | Basement | 1,350 | 0 |
| UEP | Unfin. Enclosed Porch | 48 | 0 |
| UST | Unfinished Utility Area | 120 | 0 |
| WDK | Deck | 432 | 0 |
| | | 10,565 | 8,615 |

Building 2 : Section 1

Year Built: 1950
Living Area: 3,360

Replacement Cost: \$368,762

Building Percent Good: 62

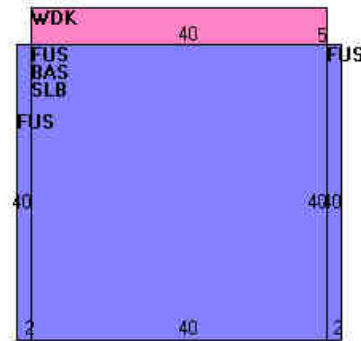
| Building Attributes : Bldg 2 of 2 | |
|-----------------------------------|----------------|
| Field | Description |
| STYLE | Fire Station |
| MODEL | Comm/Ind |
| Grade | Above Ave |
| Stories: | 2.00 |
| Occupancy | 1.00 |
| Exterior Wall 1 | Vinyl Siding |
| Exterior Wall 2 | Brick Veneer |
| Roof Structure | Gambrel |
| Roof Cover | Asphalt |
| Interior Wall 1 | Plaster |
| Interior Wall 2 | Drywall |
| Interior Floor 1 | Concrete |
| Interior Floor 2 | Comp Tile |
| Heating Fuel | Oil |
| Heating Type | Forced Hot Air |
| % Central Air | 0 |
| Foundation | Poured Conc |
| Bldg Use | Exempt Comm |
| Total Rooms | 0 |
| Total Bedrms | 0 |
| Total Fixtures | 0 |
| % Wet Sprinkler | |
| % Dry Sprinkler | |
| 1st Floor Use | |
| Heat/AC | Typical |
| Frame Type | MASONRY |
| Baths/Plumbing | LIGHT |
| % Finished | 0 |
| Class | C |
| Wall Height | 11.00 |
| Usrflid 214 | |

Building Photo



(<http://images.vgsi.com/photos/WaterfordCTPhotos//default.jpg>)

Building Layout



(http://images.vgsi.com/photos/WaterfordCTPhotos//Sketches/1844_20074)

| Building Sub-Areas (sq ft) | | | Legend |
|----------------------------|----------------------|------------|-------------|
| Code | Description | Gross Area | Living Area |
| FUS | Finished Upper Story | 1,760 | 1,760 |
| BAS | First Floor | 1,600 | 1,600 |
| SLB | Slab | 1,600 | 0 |
| WDK | Deck | 200 | 0 |
| | | 5,160 | 3,360 |

Extra Features

| Extra Features | | | | Legend |
|----------------|---------------|-------------|---------|--------|
| Code | Description | Size | Value | Bldg # |
| FBM | Finished Bsmt | 475.00 S.F. | \$3,230 | 1 |

Land**Land Use**

Use Code 920
Description Exempt Comm
Zone R-40
Neighborhood 200
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 9.91
Frontage 0
Depth 0
Assessed Value \$648,610
Appraised Value \$926,590

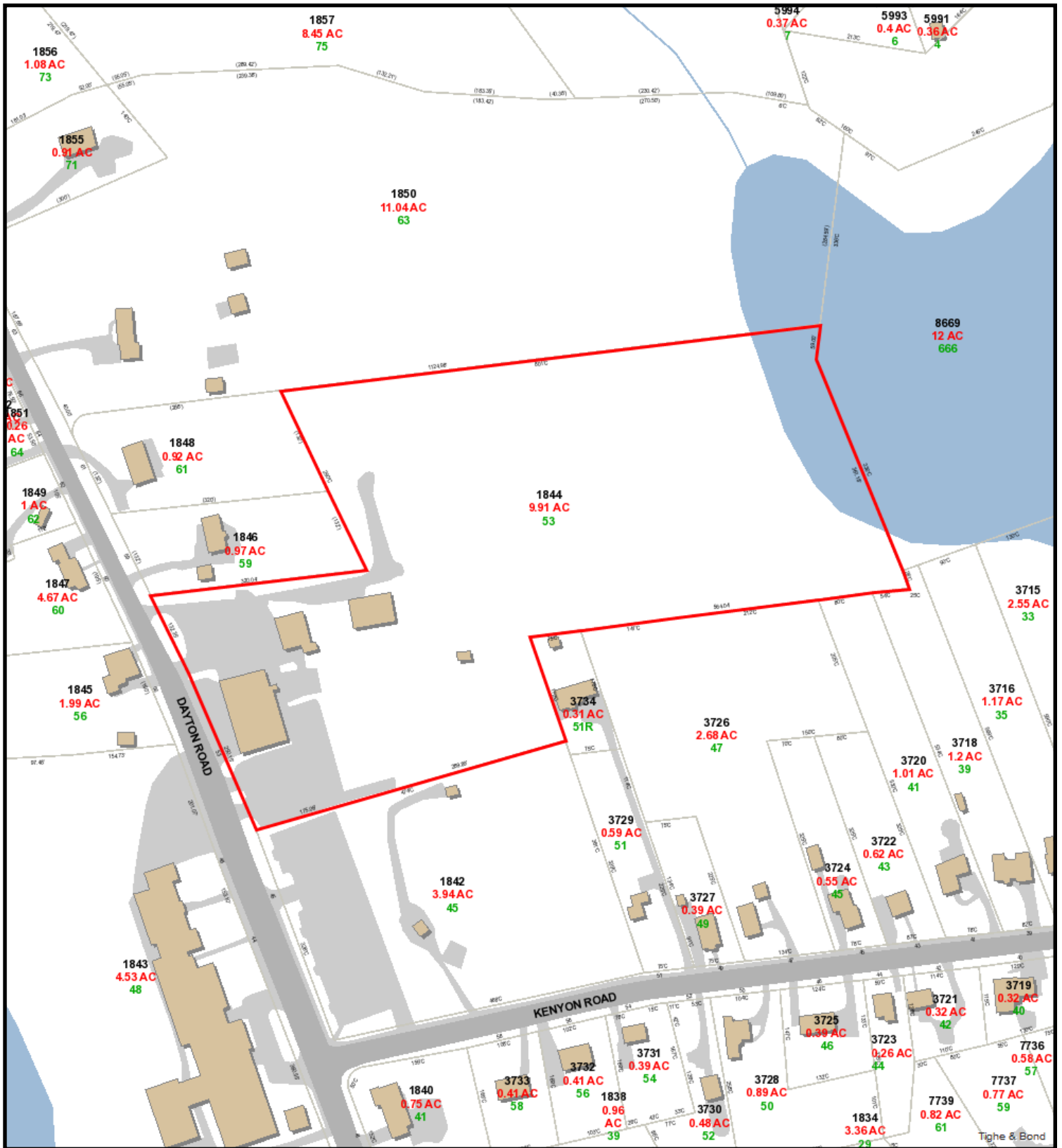
Outbuildings

| Outbuildings | | | | | | Legend |
|---------------------|--------------------|-----------------|------------------------|-----------------|--------------|---------------|
| Code | Description | Sub Code | Sub Description | Size | Value | Bldg # |
| FN1 | Fence | | | 928.00 L.F. | \$7,660 | 2 |
| FGR1 | Garage | MS | Masonry | 220.00 S.F. | \$3,300 | 1 |
| LSUM | Lump Sum | | | 120000.00 UNITS | \$90,000 | 2 |
| PAV1 | Paving | AS | Asphalt | 39900.00 S.F. | \$62,340 | 1 |
| SHD1 | Shed | FR | Frame | 800.00 S.F. | \$6,000 | 1 |
| FN1 | Fence | | | 1408.00 L.F. | \$7,740 | 1 |
| FOP | Porch | | | 1600.00 S.F. | \$24,000 | 1 |
| LSUM | Lump Sum | | | 4320.00 UNITS | \$2,160 | 1 |

Valuation History

| Appraisal | | | |
|-----------------------|---------------------|-------------|--------------|
| Valuation Year | Improvements | Land | Total |
| 4000 | \$981,150 | \$926,590 | \$1,907,740 |
| 2019 | \$981,150 | \$926,590 | \$1,907,740 |

| Assessment | | | |
|-----------------------|---------------------|-------------|--------------|
| Valuation Year | Improvements | Land | Total |
| 4000 | \$686,800 | \$648,610 | \$1,335,410 |
| 2019 | \$686,800 | \$648,610 | \$1,335,410 |



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Scale: 1"=200'

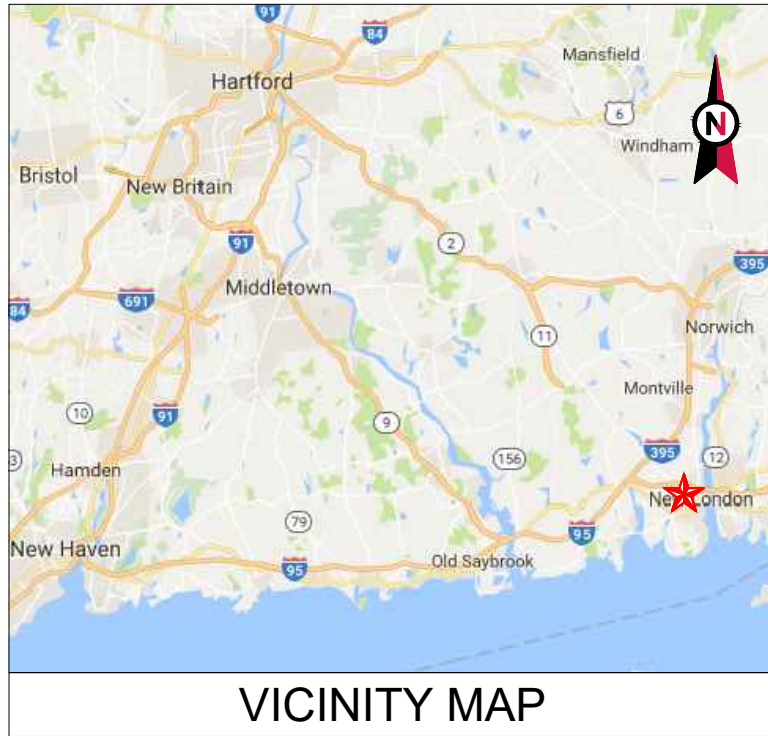
Scale is approximate

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.



Exhibit C

Construction Drawings



VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: WATERFORD CT
 ATC SITE NUMBER: 411183
 T-MOBILE SITE NAME: WATERFORD/ I-95/ X82
 T-MOBILE SITE NUMBER: CT11041D
 SITE ADDRESS: 53 DAYTON RD.
 WATERFORD, CT 06385



LOCATION MAP

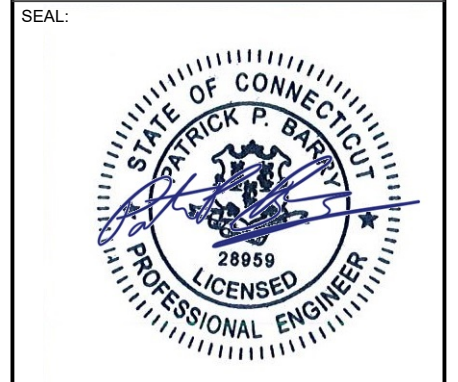
**T-MOBILE ANCHOR ANTENNA AMENDMENT PLAN
 67D5A992DB HYBRID CONFIGURATION**

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 | FOR CONSTRUCTION | CWB | 07/29/20 |
| | | | |
| | | | |
| | | | |
| | | | |

ATC SITE NUMBER:
411183
 ATC SITE NAME:
WATERFORD CT
 T-MOBILE SITE NAME:
WATERFORD/ I-95/ X82
 SITE ADDRESS:
 53 DAYTON RD.
 WATERFORD, CT 06385



| | |
|--------------|----------------------|
| DATE DRAWN: | 07/29/20 |
| ATC JOB NO: | 13251340_D1 |
| CUSTOMER ID: | WATERFORD/ I-95/ X82 |
| CUSTOMER #: | CT11041D |

TITLE SHEET

SHEET NUMBER:
G-001

REVISION:
0

| COMPLIANCE CODE | PROJECT SUMMARY | PROJECT DESCRIPTION | SHEET INDEX | | | | |
|--|---|--|--------------------------------|--------------|----------|----------|-----|
| ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. INTERNATIONAL BUILDING CODE (IBC) 2. NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES | <u>SITE ADDRESS:</u> 53 DAYTON RD. WATERFORD, CT 06385 COUNTY: NEW LONDON <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.377778 LONGITUDE: -72.141389 GROUND ELEVATION: 186' AMSL | THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> INSTALL (3) ANTENNA(s), (3) RRH(s), AND (3) 1-1/4" HYBRID CABLE(s) EXISTING (9) ANTENNA(s), (3) RRH(s), (12) 1-5/8" COAX CABLE(s), (2) 1-1/4" HYBRID CABLE(s), AND (1) 1-5/8" HYBRID CABLE(s) TO REMAIN <u>GROUND WORK:</u> REMOVE (1) CABINET INSTALL (1) 61060 AC CABINET AND (1) ENCLOSURE B160 BATTERY CABINET | SHEET NO: | DESCRIPTION: | REV: | DATE: | BY: |
| | <u>PROJECT TEAM</u> <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>PROPERTY OWNER:</u> COHANZIE VOLUNTEER FIRE SERVICE BENEFIT ASSOC 53 DAYTON RD WATERFORD, CT 06385 | <u>PROJECT NOTES</u> 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. | G-001 | TITLE SHEET | 0 | 07/29/20 | CWB |
| <u>UTILITY COMPANIES</u> POWER COMPANY: NORTHEAST PHONE: (860) 665-6792 TELEPHONE COMPANY: UNKNOWN PHONE: N/A | <u>PROJECT LOCATION DIRECTIONS</u> TAKE I-91 S TOWARDS NEW HAVEN. STAY IN LEFT LANE, GET ON I-95 N TO EXIT 76 (LEFT HAND EXIT I-395 N). I-395 N TO EXIT 77 (RTE 85). TAKE RIGHT AT END OF THE RAMP (RTE 85 S). TAKE LEFT AT TRAFFIC LIGHT (DAYTON). FOLLOW TO FIRE HOUSE (COHANZIE FIRE CO. #5). GO IN PARKING LOT OF FIREHOUSE AND IN THE BACK LEFT THERE IS A CHAIN COMBO 4667. GO IN GATE TO TOWER COMBO 4667 AND UP STAIRS. WE ARE IN THE FIRST DOOR WITH THE CODE PAD 4667. THEN THE ROOM ON LEFT (CT KEY) GENERATOR COMPOUND COMBO IS 9687 | C-101 | DETAILED SITE PLAN | 0 | 07/29/20 | CWB | |
| | | C-102 | DETAILED GROUND PLAN | 0 | 07/29/20 | CWB | |
| | | C-201 | TOWER ELEVATION | 0 | 07/29/20 | CWB | |
| | | C-401 | ANTENNA INFORMATION & SCHEDULE | 0 | 07/29/20 | CWB | |
| | | C-501 | CONSTRUCTION DETAILS | 0 | 07/29/20 | CWB | |
| | | E-501 | GROUNDING DETAILS | 0 | 07/29/20 | CWB | |
| | | R-601 | SUPPLEMENTAL | | | | |
| | | R-602 | EQUIPMENT SPECIFICATIONS | | | | |
| | | R-603 | SUPPLEMENTAL | | | | |
| | | R-604 | SUPPLEMENTAL | | | | |



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GENERAL CONSTRUCTION NOTES:

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

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

COAXIAL CABLE (NOT WITHIN BENDS)

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
 - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
 - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
 - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
 - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
 - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
 - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
 - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF

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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| 0 | FOR CONSTRUCTION | CWB | 07/29/20 |
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ATC SITE NUMBER:
411183
 ATC SITE NAME:
WATERFORD CT
 T-MOBILE SITE NAME:
WATERFORD/ I-95/ X82
 SITE ADDRESS:
 53 DAYTON RD.
 WATERFORD, CT 06385

SEAL:



| | |
|--------------|----------------------|
| DATE DRAWN: | 07/29/20 |
| ATC JOB NO: | 13251340_D1 |
| CUSTOMER ID: | WATERFORD/ I-95/ X82 |
| CUSTOMER #: | CT11041D |

GENERAL NOTES

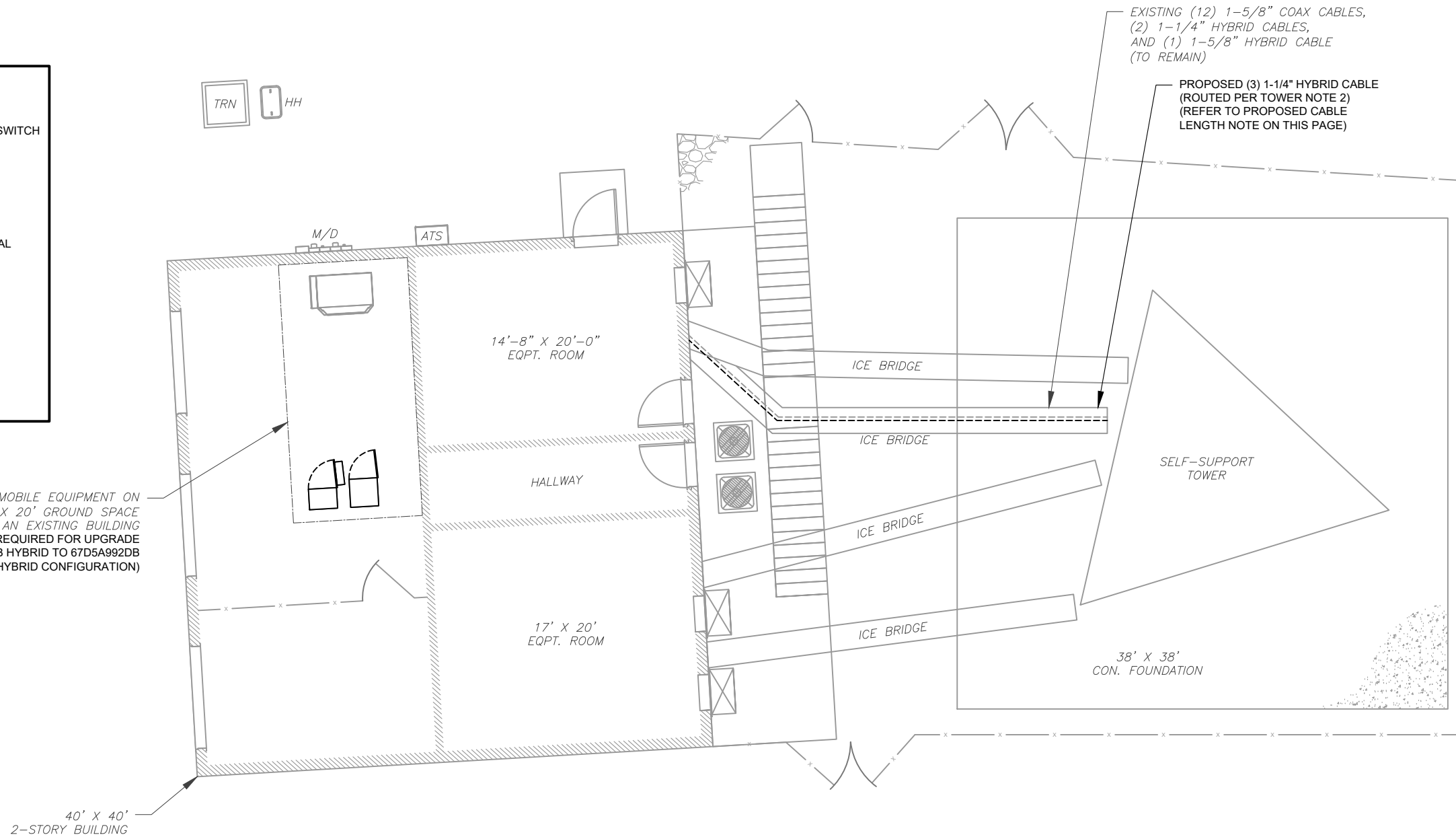
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| SHEET NUMBER: G-002 | REVISION: 0 |
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SITE PLAN NOTES:

- 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.

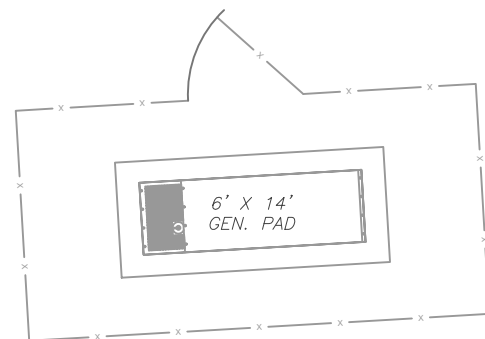
| LEGEND | |
|--------|---------------------------|
| ⊗ | GROUNDING TEST WELL |
| ATS | AUTOMATIC TRANSFER SWITCH |
| B | BOLLARD |
| CSC | CELL SITE CABINET |
| D | DISCONNECT |
| E | ELECTRICAL |
| F | FIBER |
| GEN | GENERATOR |
| G | GENERATOR RECEPTACAL |
| HH, V | HAND HOLE, VAULT |
| IB | ICE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



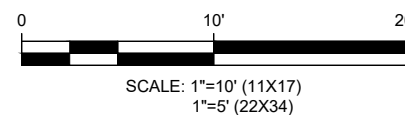
1
R-601
EXISTING T-MOBILE EQUIPMENT ON WITHIN A 10' X 20' GROUND SPACE WITHIN AN EXISTING BUILDING (MODIFIED AS REQUIRED FOR UPGRADE FROM 67D92DB HYBRID TO 67D5A992DB HYBRID CONFIGURATION)

PROPOSED CABLE LENGTH:

- ESTIMATED LENGTH OF PROPOSED CABLE IS **232'**. 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. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).



1 DETAILED SITE PLAN



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411183
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 T-MOBILE SITE NAME:
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 SITE ADDRESS:
 53 DAYTON RD.
 WATERFORD, CT 06385

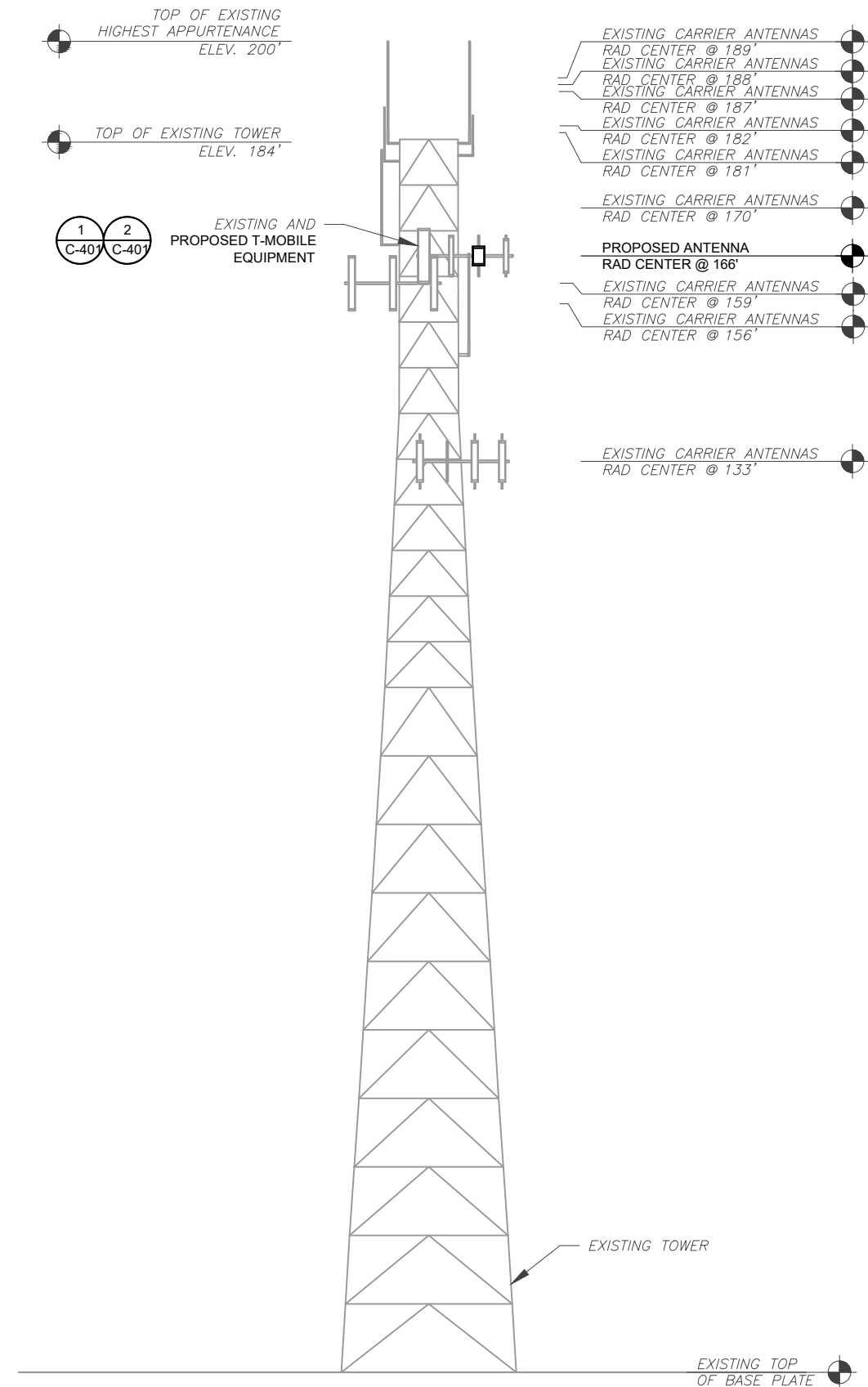
SEAL:



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| DATE DRAWN: | 07/29/20 |
| ATC JOB NO: | 13251340_D1 |
| CUSTOMER ID: | WATERFORD/ I-95/ X82 |
| CUSTOMER #: | CT11041D |

DETAILED SITE PLAN

SHEET NUMBER:
C-101
 REVISION:
0



PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED 07/02/20, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING

1 TOWER ELEVATION
SCALE: N.T.S.

- TOWER NOTE:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION 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.
 - ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
 - TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)



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ATC SITE NUMBER:
411183
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 T-MOBILE SITE NAME:
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 SITE ADDRESS:
 53 DAYTON RD.
 WATERFORD, CT 06385



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| DATE DRAWN: | 07/29/20 |
| ATC JOB NO: | 13251340_D1 |
| CUSTOMER ID: | WATERFORD/ I-95/ X82 |
| CUSTOMER #: | CT11041D |

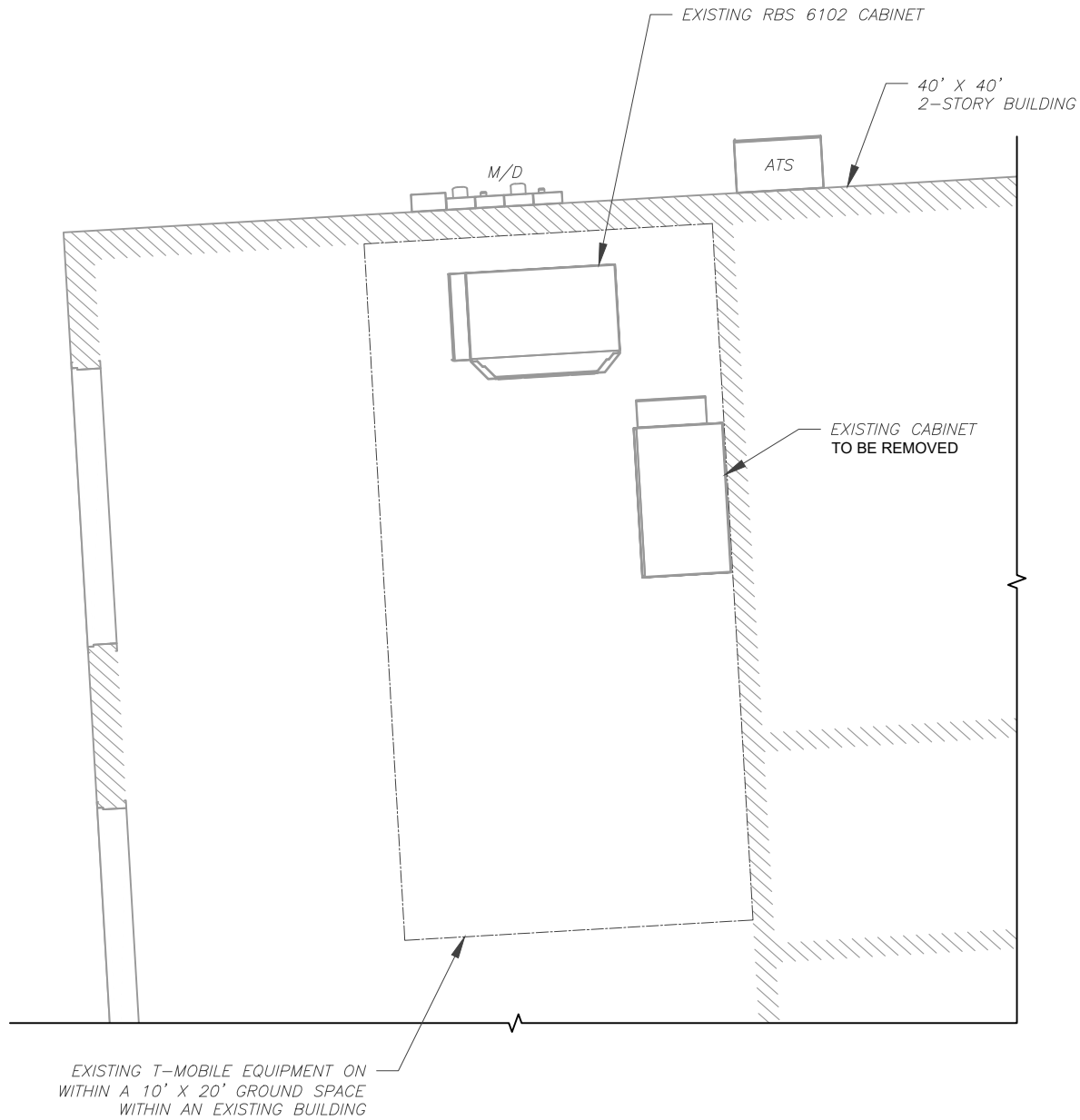
TOWER ELEVATION

| | |
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| SHEET NUMBER: | REVISION: |
| C-201 | 0 |

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SITE PLAN NOTES:

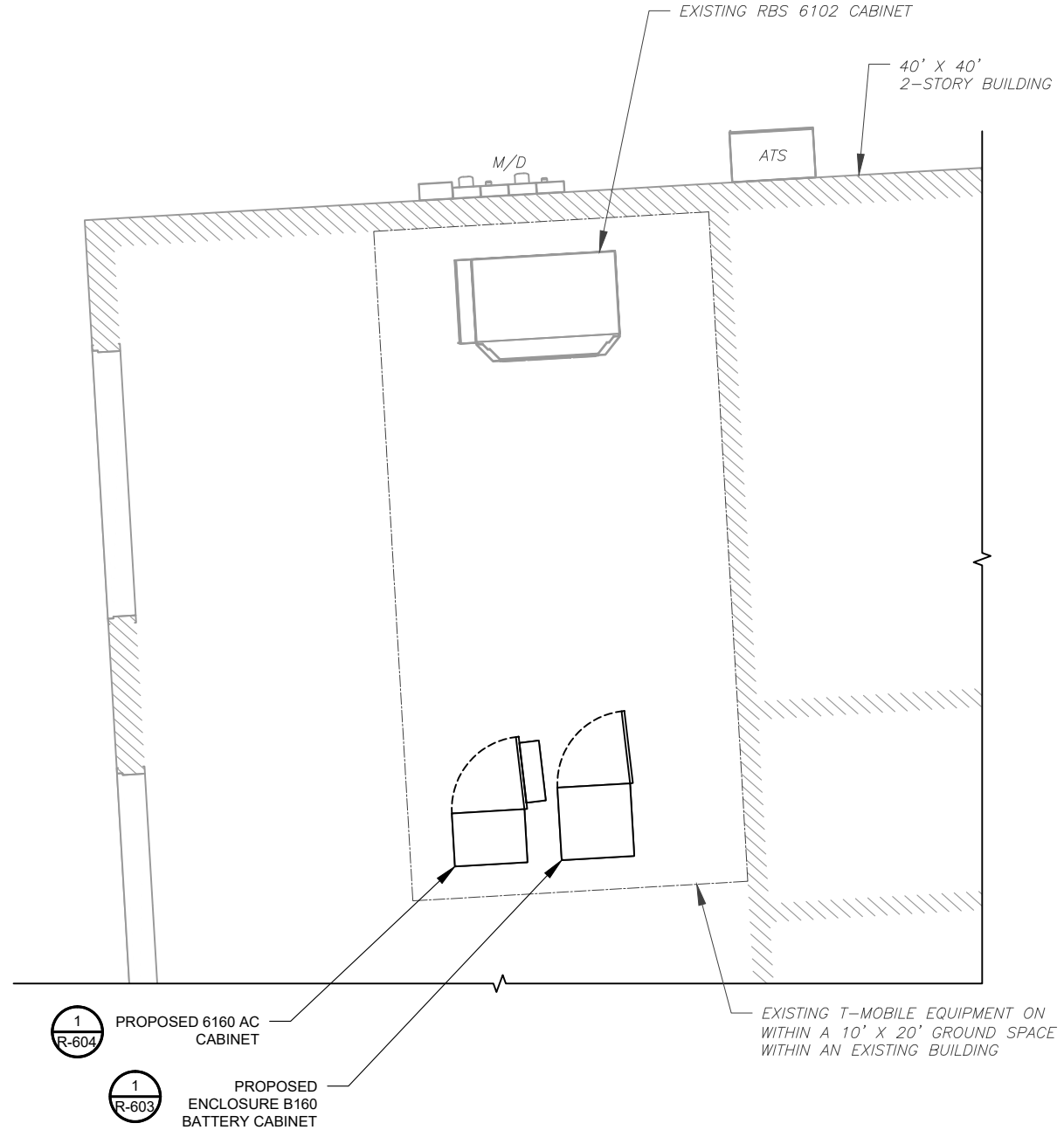
1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. REMOVE EXISTING 2G CABINETS, AND POWER / TELCO WHIPS ASSOCIATED WITH THE DEAD EQUIPMENT IF APPLICABLE.
3. ALL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



1 EXISTING GROUND EQUIPMENT LAYOUT



SCALE: 1"=5' (11X17)
1"=2.5' (22X34)



2 PROPOSED GROUND EQUIPMENT LAYOUT



SCALE: 1"=5' (11X17)
1"=2.5' (22X34)



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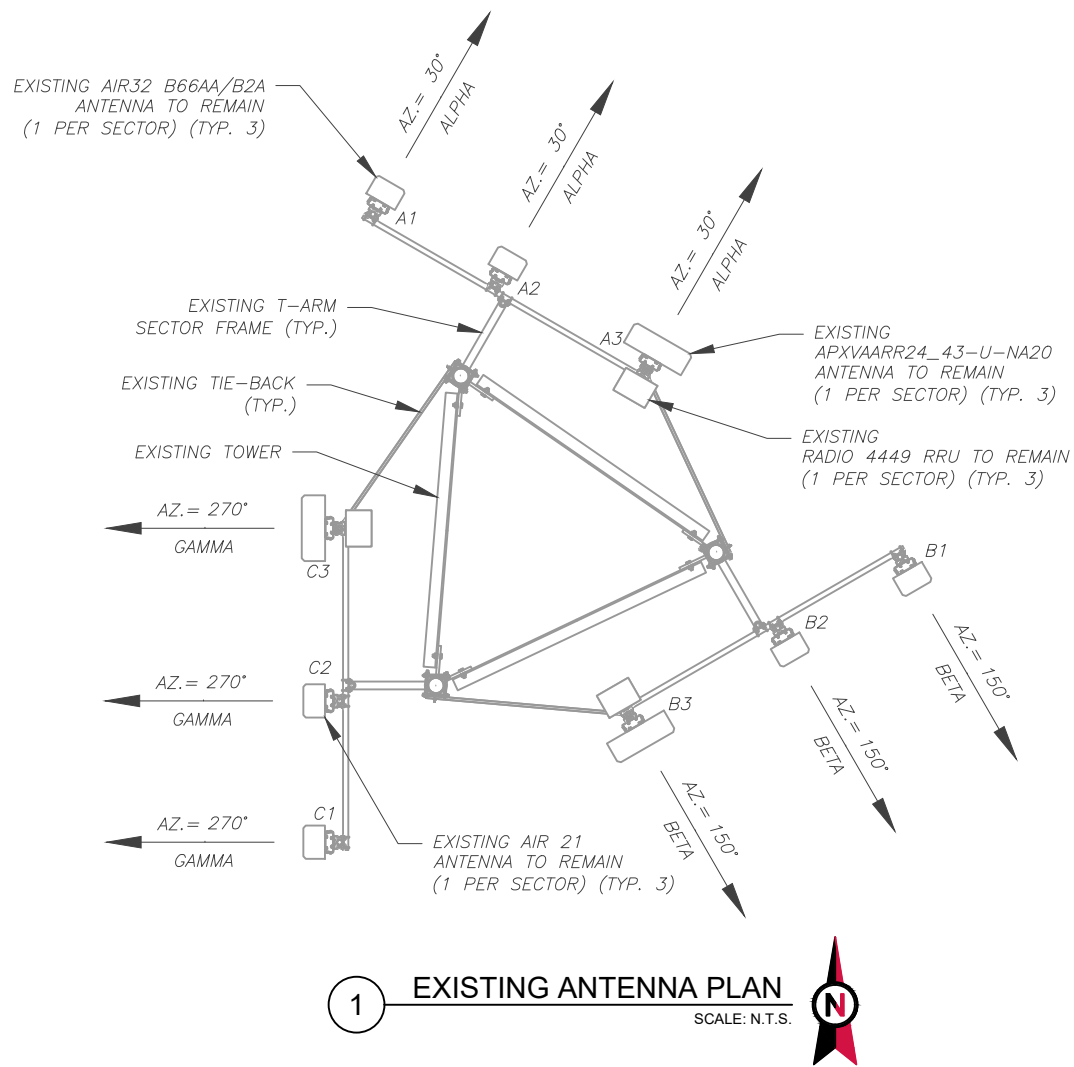
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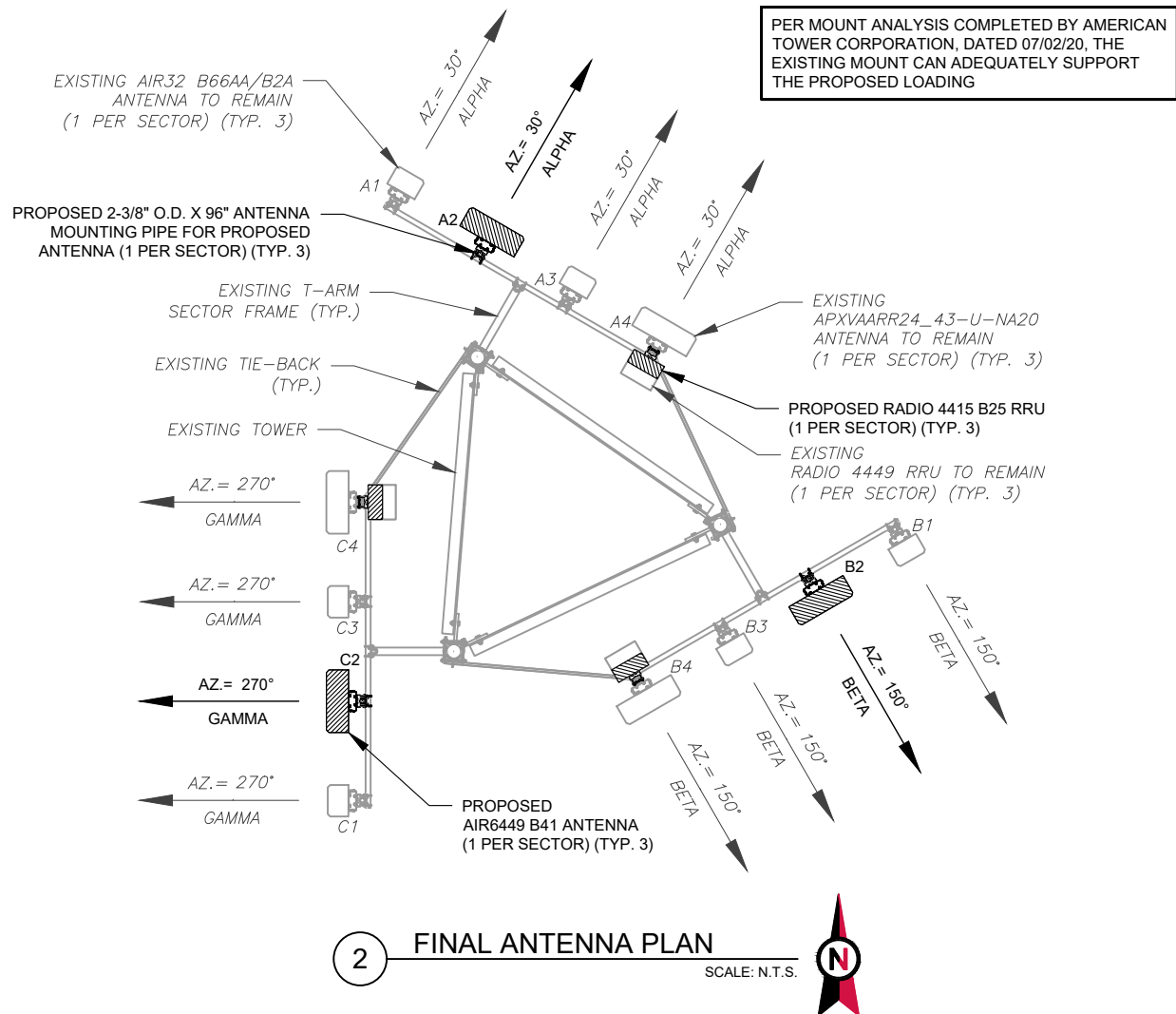
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| DATE DRAWN: | 07/29/20 |
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| CUSTOMER ID: | WATERFORD/ I-95/ X82 |
| CUSTOMER #: | CT11041D |

DETAILED GROUND PLAN

| | |
|---------------|-----------|
| SHEET NUMBER: | REVISION: |
| C-102 | 0 |



1 EXISTING ANTENNA PLAN
SCALE: N.T.S.



2 FINAL ANTENNA PLAN
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED 07/02/20, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING

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SEAL:

DATE DRAWN: 07/29/20
ATC JOB NO: 13251340_D1
CUSTOMER ID: WATERFORD/ I-95/ X82
CUSTOMER #: CT11041D

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER: **C-401** REVISION: **0**

| EXISTING ANTENNA SCHEDULE | | | | | | | | | |
|---------------------------|------|------|-----------------|-----------------------|----------------|------------------|---------------------|------------------------------------|--------|
| LOCATION | | | ANTENNA SUMMARY | | | | NON ANTENNA SUMMARY | | |
| SECTOR | RAD | AZ | POS | ANTENNA | BAND | MECH/ELEC D-TILT | STATUS | ADDITIONAL TOWER MOUNTED EQUIPMENT | STATUS |
| ALPHA | 166' | 30° | A1 | AIR32 B66AA/B2A | L2100/L1900 | 0°/3° | RMN | - | - |
| | | | A2 | AIR 21 | U1900/G1900 | 0°/2° | RMN | - | - |
| | | | A3 | APXVAARR24_43-U-NA 20 | L700/L600/N600 | 0°/2° | REL | RADIO 4449 | RMN |
| BETA | 166' | 150° | B1 | AIR32 B66AA/B2A | L2100/L1900 | 0°/3° | RMN | - | - |
| | | | B2 | AIR 21 | U1900/G1900 | 0°/2° | RMN | - | - |
| | | | B3 | APXVAARR24_43-U-NA 20 | L700/L600/N600 | 0°/2° | REL | RADIO 4449 | RMN |
| GAMMA | 166' | 270° | C1 | AIR32 B66AA/B2A | L2100/L1900 | 0°/3° | RMN | - | - |
| | | | C2 | AIR 21 | U1900/G1900 | 0°/2° | RMN | - | - |
| | | | C3 | APXVAARR24_43-U-NA 20 | L700/L600/N600 | 0°/2° | REL | RADIO 4449 | RMN |

NOTES

- CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

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

| FINAL ANTENNA SCHEDULE | | | | | | | | | |
|------------------------|------|------|-----------------|-----------------------|----------------------|------------------|---------------------|------------------------------------|--------|
| LOCATION | | | ANTENNA SUMMARY | | | | NON ANTENNA SUMMARY | | |
| SECTOR | RAD | AZ | POS | ANTENNA | BAND | MECH/ELEC D-TILT | STATUS | ADDITIONAL TOWER MOUNTED EQUIPMENT | STATUS |
| ALPHA | 166' | 30° | A1 | AIR32 B66AA/B2A | L2100/L1900 | 0°/3° | RMN | - | - |
| | | | A2 | AIR6449 B41 | L2500/N2500 | 0°/3° | ADD | - | - |
| | | | A3 | AIR 21 | U1900/G1900 | 0°/2° | RMN | - | - |
| | | | A4 | APXVAARR24_43-U-NA 20 | L700/L600/N600/L1900 | 0°/2° | RMN | RADIO 4449 | RMN |
| BETA | 166' | 150° | B1 | AIR32 B66AA/B2A | L2100/L1900 | 0°/3° | RMN | - | - |
| | | | B2 | AIR6449 B41 | L2500/N2500 | 0°/3° | ADD | - | - |
| | | | B3 | AIR 21 | U1900/G1900 | 0°/2° | RMN | - | - |
| | | | B4 | APXVAARR24_43-U-NA 20 | L700/L600/N600/L1900 | 0°/2° | RMN | RADIO 4449 | RMN |
| GAMMA | 166' | 270° | C1 | AIR32 B66AA/B2A | L2100/L1900 | 0°/3° | RMN | - | - |
| | | | C2 | AIR6449 B41 | L2500/N2500 | 0°/3° | ADD | - | - |
| | | | C3 | AIR 21 | U1900/G1900 | 0°/2° | RMN | - | - |
| | | | C4 | APXVAARR24_43-U-NA 20 | L700/L600/N600/L1900 | 0°/2° | RMN | RADIO 4449 | RMN |

| EXISTING FIBER DISTRIBUTION/OVP BOX | | EXISTING CABLING SUMMARY | | |
|-------------------------------------|--------|--------------------------|------------|--------|
| MODEL NUMBER | STATUS | COAX | HYBRID | STATUS |
| - | - | (12) 1-5/8" | (2) 1-1/4" | RMN |
| - | - | - | 1-5/8" | RMN |

3 EQUIPMENT SCHEDULES

| FINAL FIBER DISTRIBUTION / OVP BOX | | FINAL CABLING SUMMARY | | |
|------------------------------------|--------|-----------------------|------------|--------|
| MODEL NUMBER | STATUS | COAX | HYBRID | STATUS |
| - | - | (12) 1-5/8" | (2) 1-1/4" | RMN |
| - | - | - | 1-5/8" | RMN |
| - | - | - | (3) 1-1/4" | ADD |

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

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| REV. | DESCRIPTION | BY | DATE |
|------|------------------|-----|----------|
| 0 | FOR CONSTRUCTION | CWB | 07/29/20 |
| | | | |
| | | | |
| | | | |

ATC SITE NUMBER:
411183
 ATC SITE NAME:
WATERFORD CT
 T-MOBILE SITE NAME:
WATERFORD/ I-95/ X82
 SITE ADDRESS:
 53 DAYTON RD.
 WATERFORD, CT 06385

SEAL:

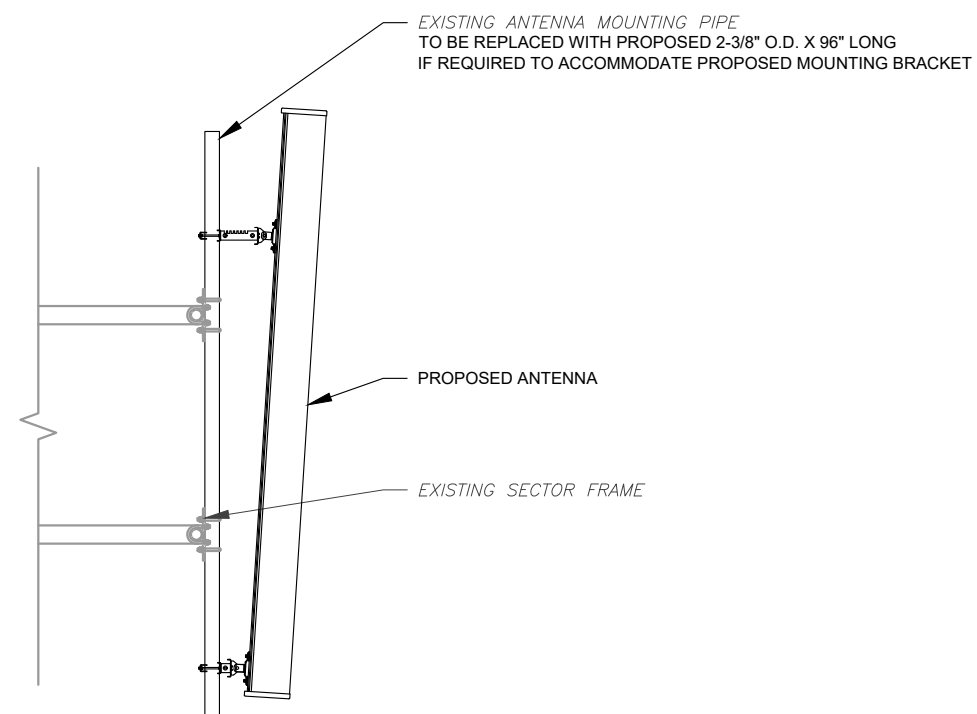


| | |
|--------------|----------------------|
| DATE DRAWN: | 07/29/20 |
| ATC JOB NO: | 13251340_D1 |
| CUSTOMER ID: | WATERFORD/ I-95/ X82 |
| CUSTOMER #: | CT11041D |

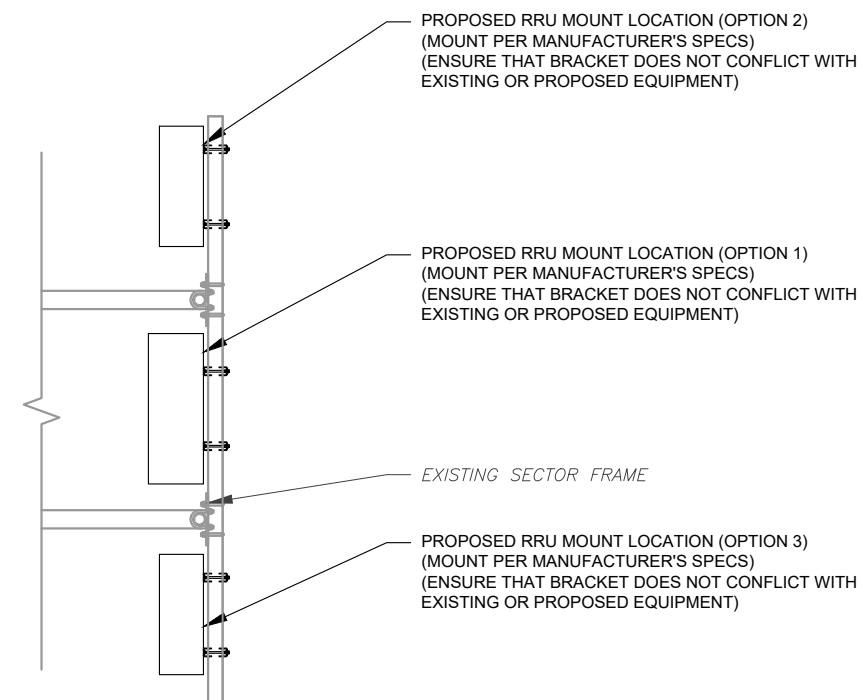
**CONSTRUCTION
 DETAILS**

SHEET NUMBER:
C-501

REVISION:
0

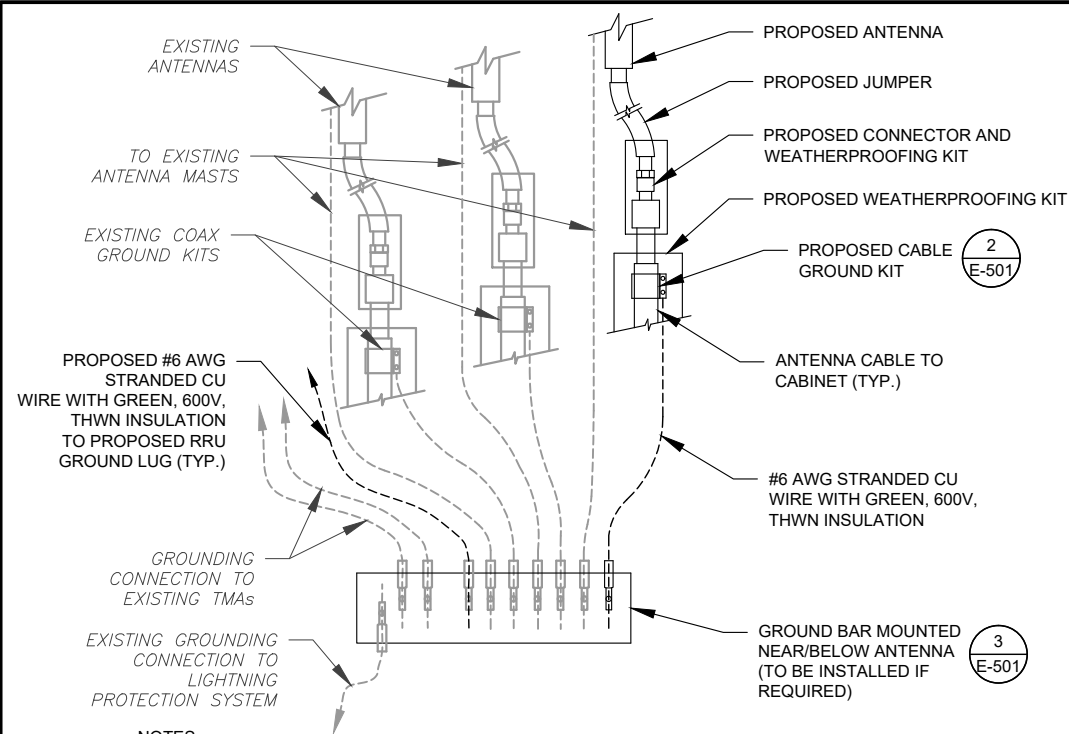


1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL
 SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL
 SCALE: N.T.S.

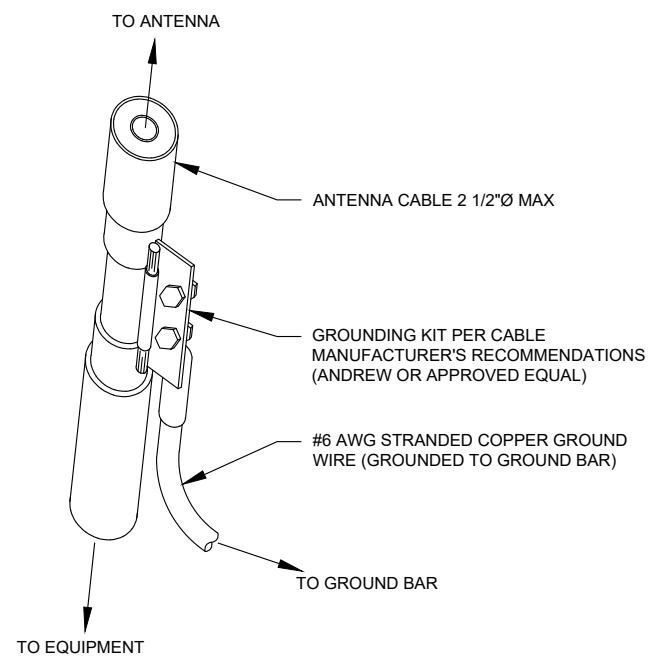
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NOTES:

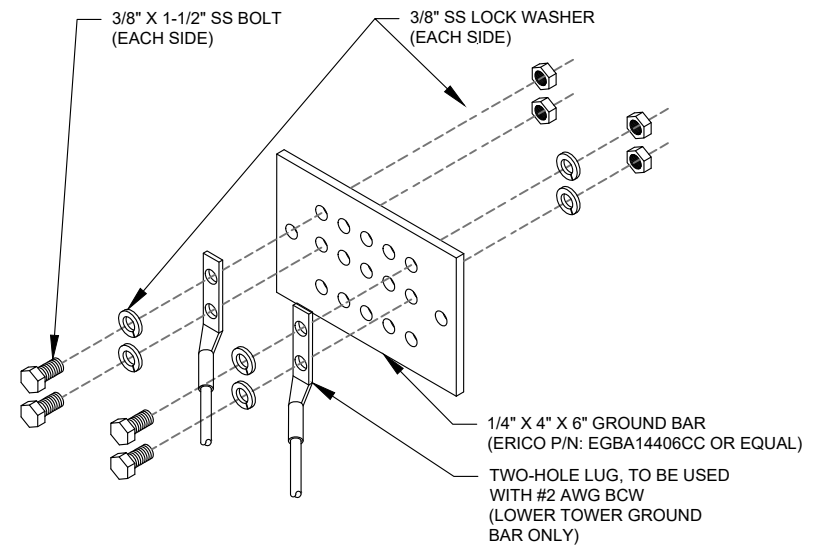
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING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

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



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

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



GROUND BAR NOTES:

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

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



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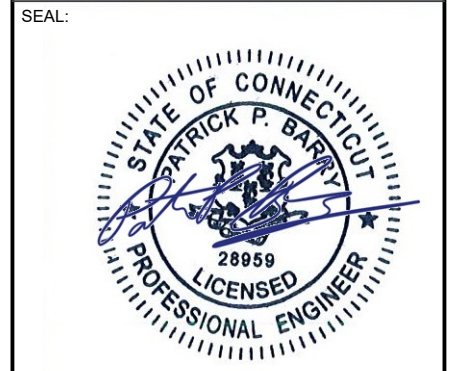
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|------|------------------|-----|----------|
| 0 | FOR CONSTRUCTION | CWB | 07/29/20 |
| | | | |
| | | | |
| | | | |
| | | | |

ATC SITE NUMBER:
411183

ATC SITE NAME:
WATERFORD CT

T-MOBILE SITE NAME:
WATERFORD/ I-95/ X82

SITE ADDRESS:
53 DAYTON RD.
WATERFORD, CT 06385



| | |
|--------------|----------------------|
| DATE DRAWN: | 07/29/20 |
| ATC JOB NO: | 13251340_D1 |
| CUSTOMER ID: | WATERFORD/ I-95/ X82 |
| CUSTOMER #: | CT11041D |

GROUNDING DETAILS

SHEET NUMBER:
E-501

REVISION:
0

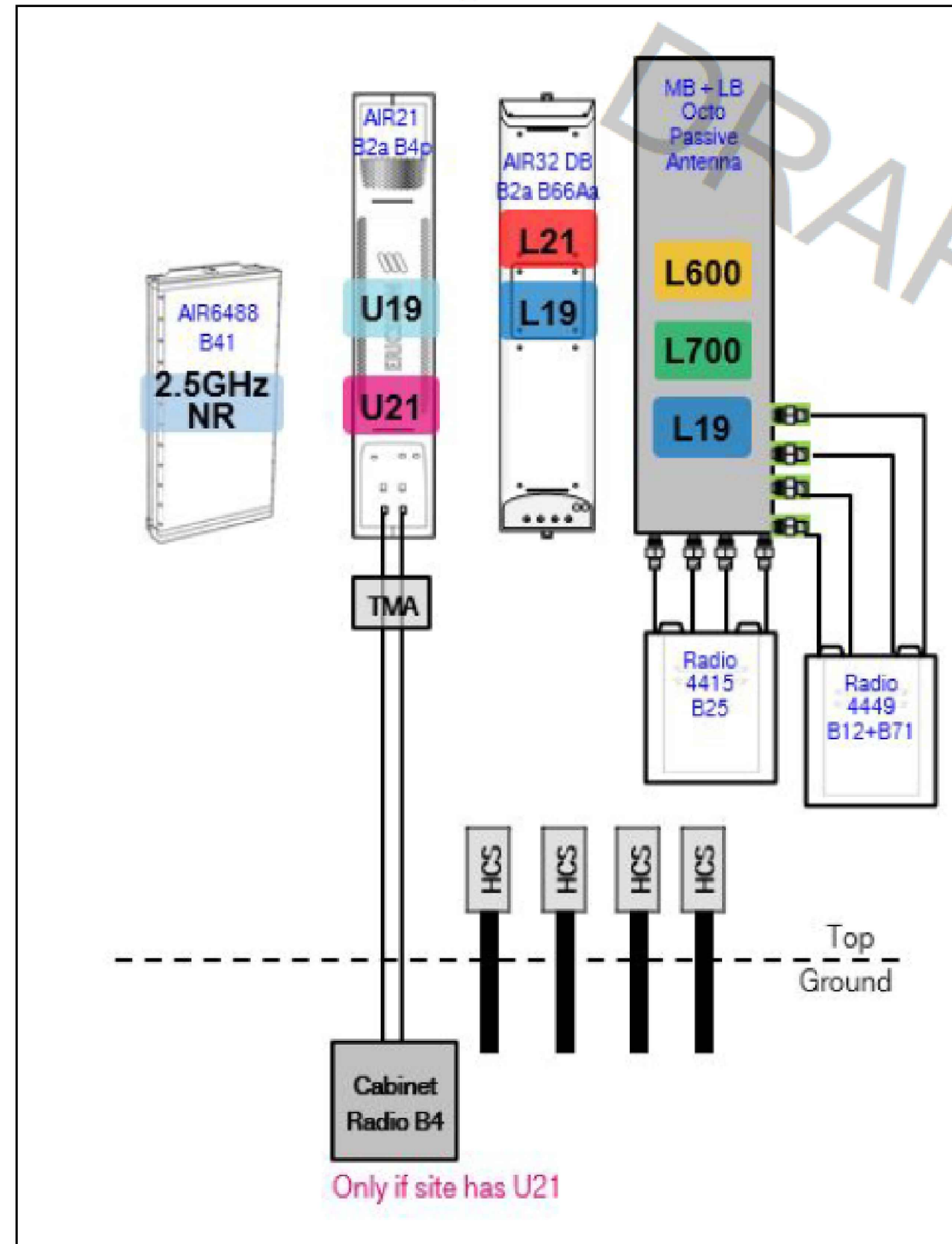
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| Existing RAN Equipment | |
|--------------------------|---|
| Template: 67D92DB Hybrid | |
| Enclosure | 1 2 |
| Enclosure Type | RBS 6102 Ancillary Equipment (Ericsson) |
| Baseband | DUW30 (U1900) DUW30 (G1900) DUG20 (G1900) BB 5216 (L2100, L1900, L700, L600) BB 6630 (N600) |
| Hybrid Cable System | Ericsson 9x18 HCS 70m Ericsson 6x12 HCS 6AWG 80m (x 2) |
| Multiplexer | XMU |
| Radio | RUSD1 B4 (x 6) |

| Proposed RAN Equipment | | | |
|-----------------------------|---|--|---|
| Template: 67D6A092DB Hybrid | | | |
| Enclosure | 1 | 2 | 3 4 |
| Enclosure Type | RBS 6102 | Ancillary Equipment (Ericsson) | Enclosure 6180 6180 |
| Baseband | DUW30 (U1900) DUW30 (G1900) DUG20 (G1900) BB 6630 (L2100, L1900, L700, L600) BB 6630 (N600) | | BB 6630 (x 3) (L2500) BB 6648 (N2500) |
| Hybrid Cable System | | Ericsson 9x18 HCS 70m Ericsson 6x12 HCS 6AWG 80m (x 2) | Ericsson 6x12 HCS *Select AWG & Length* (x 3) |
| Radio | RUSD1 B4 (x 6) | | |

1 CABINET CONFIGURATION
SCALE: NOT TO SCALE

67D5992DB_3xAIR+1OP.JPG



2 ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

SUPPLEMENTAL

SHEET NUMBER: R-601
REVISION: 0

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

AIR6449 B41

| | |
|------------------------|---|
| Frequency Range | LTE TDD B41: 2496 – 2690 MHz |
| Instantaneous BW | DL 194 MHz |
| Antenna Ports | 64T64R |
| Technology | NR, LTE and NR+LTE MSMM |
| Antenna Elements | 192 |
| Output RF Power | 300 W (=64 TRX x 4.6875W) |
| Data Ports | 4 x 25Gb/s CPRI |
| 5G NR Support | YES |
| DC Feed | -48V DC power connector |
| Cooling | Passive cooling (vs. active cooling on AIR32 DB) |
| Dimensions (H x W x D) | 33.1" x 20.6" x 8.6" inches (=841 x 524 x 217 mm) |
| Weight | 104 lbs (=47 kg) |
| Electrical downtilt | -3 to 11 degrees |
| Horizontal beamwidth | +/- 65 degrees |
| HW/SW Availability | July 2020 |
| Material SAP # | 34105 – AIR 6449 B41 |



RRUS 4415 B25

- › B25
 - TX = 1930 – 1995 MHz
 - RX = 1850 – 1915 MHz
- › CPRI 2 ports x 2.5/4.9/9.8/10.1 Gbps. Install 2 SFPs and connect 2 fiber pair to the RRUS 4415 during initial install.
- › Only use Ericsson supplied and approved SFPs RDH10265/25
 - Exception: SFP7 RDH 10265/3 for CPRI 1.4km to 10km
 - Exception: SFP7 (pair): RDH 102 70/1 and RDH 102 70/2 for CPRI > 10km
- › 2 external alarm inputs
- › Max wind load @ 50m/sec = 260N
- › Breaker size = 25A, DC Power Consumption = 670 W (for dimensioning)
- › 200mm horizontal separation required for side by side mounting
- › 200mm separation required from antenna backplane to radio
- › 400mm vertical outdoor/indoor separation required between 2 radios
- › 500mm vertical separation below antenna
- › Min, Max DC cable size from squid to radio = 10,8 AWG
 - Adapter is required for 2-wire connection
 - Shielded DC cable is required
- › Ground cable size = 2AWG
- › Dimensions (incl. handles, feet and sunshield, w/o fan unit)
 - Height: 16.5" (420 mm)
 - Width: 13.4" (342 mm)
 - Depth: 5.9" (149 mm)
- › Weight, excl. mounting hardware = 46 lbs (21 kg)

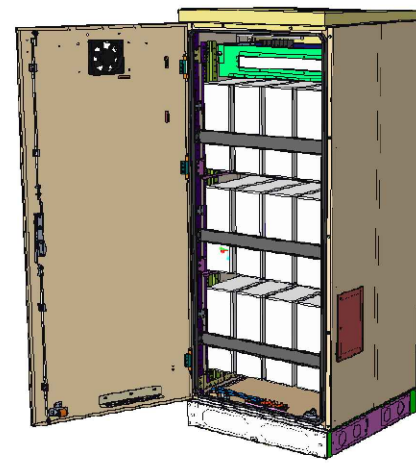


EQUIPMENT SPECIFICATIONS

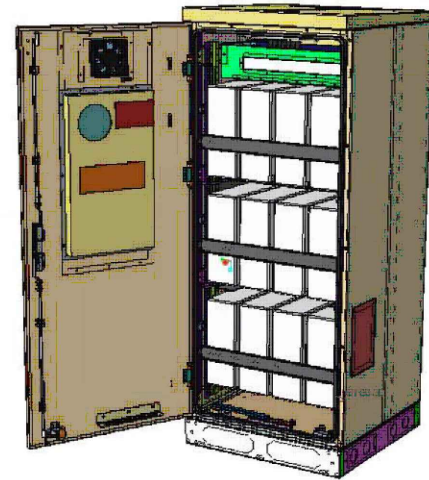
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R-602

REVISION:
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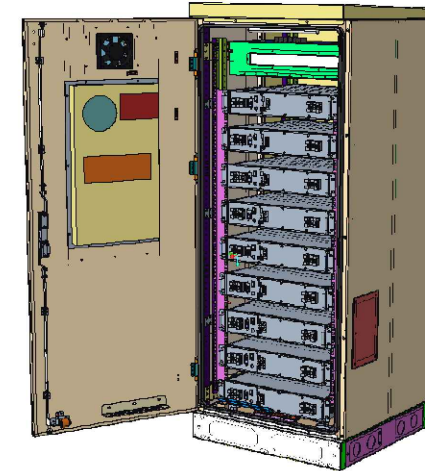
Enclosure B160



Enclosure B160
AirCon + VRLA



Enclosure B160
AirCon + Li-Ion



Enclosure B160
Convection Cooling
+ VRLA

PA1 | 2019-02-03 | Ericsson Confidential | Page 1

Enclosure B160

Capacity

- VRLA 12V: 100Ah / 150Ah / 170Ah / 190Ah / 210Ah
- Li-Ion: 24U 19" / 23"
- Sodium-Nickel: 3x FIAMM

Electrical specification

- DC Output: -48VDC/200A
- Battery breakers: 2x 125/2p
- Alarms: Door open, Climate failure, MCB Connection

Mechanical specification

- Weight: 134kg
- Dimensions: 63 x 26 x 26 in. (incl. Base frame)
- Base frame height: 6 in.
- Material: Galvanized steel (180g/m²)
- Color: Powder paint NCS 2002-B
- Door: Front access
- Locking type: Pad lock / cylinder

Environmental specification

- Ingress protection: VRLA/Sodium IP44
Li-Ion IP55
 - Relative humidity: 15-100%
- ## Climate system
- Air Conditioner
 - Fan type: DC
 - Cooling capacity: 500W @L35/L35
 - Convection cooling
 - Emergency fan

PA1 | 2019-02-03 | Ericsson Confidential | Page 2

SUPPLEMENTAL

SHEET NUMBER:

R-603

REVISION:

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Enclosure 6160 AC

The Enclosure 6160 is a multi-purpose site cabinet designed to support a multitude of equipment such as ERS Baseband, Transport, Li-Ion battery and 3PP vendor equipment. It also provides a highly capable power system and battery back-up - all in a streamlined design and minimized footprint to support cost efficient expansion of mobile broadband.

Being an all-in-one enclosure, the Enclosure 6160 is a very fitting choice for all types of sites where the capacity need is large or room for future expansion is needed. It is ideally used for modernizing existing sites or in greenfield scenarios to match both current and future needs.

With a robust design, IP65 compliance and a sealed Heat Exchanger (HEX) climate system the Enclosure 6160 ensures optimal environmental protection of the active equipment - enabling them for a long-lasting service. The complete system is also integrated and verified for the entire Ericsson Radio System and ensures best-in-class service.

The power system offers 31,5kW of power in total and provides 24kW of -48V DC power for both internal and external consumers.

The equipment space allows 19U of rack space ensuring well enough capacity for existing need and future expansion.

One of the main advantages of the Enclosure 6160 is its default integration with ENM - allowing for advanced remote monitoring and control such a fault management (alarms), inventory management and performance measurements. The cabinet also provides an open O&M interface for integration to 3PP O&M systems.



Preliminary technical specification for Enclosure 6160 AC

CAPACITY

| | |
|---------------------------|--|
| Rack space user equipment | 19U (19" rack) |
| Hardware capabilities | Power and CPRI support for multi-standard remote radios (RRU or AIR) ERS Baseband and Transport units Li-Ion batteries 3PP equipment Additional power feed available as option |

MECHANICAL SPECIFICATION

| | |
|-----------------------|---|
| Weight | 145 kg (excluding active equipment) 320 lbs (excluding active equipment) |
| Dimension (H x W x D) | 1600 x 650 x 650 mm (incl. Base frame) 63 x 26 x 26 in. (incl. Base frame) |
| Base frame height | 150 mm 6 in. |
| Mounting position | Ground |
| Enclosure material | Aluminum |
| Color | Power paint NCS 2002-B |
| Door | Front access |
| Rack type | 19" (IEC 60297-3-100) |
| Locking type | Pad lock or Cylinder |

POWER SYSTEM

| | |
|--------------------------------|--|
| Input voltage | 3P+N+PE: 346/200-415/240 VAC 2P+N+PE: 208/120-220/127 VAC 1P+N+PE: 200-250 VAC |
| Input power | <33kW |
| Output load (-48VDC) | 24kW |
| Total capacity (-48VDC) | 31.5kW |
| AC SPD | Class 2/Type 2 |
| DC SPD | Class 2/Type 2 |
| PSU Slots | 9x |
| Service outlet | Optional |
| Priority load | 8x Circuit Breaker |
| LLVD 1 | 6x Circuit Breaker |
| LLVD 2 | 6x Circuit Breaker |
| CB ratings | 3A / 5A / 10A / 15A / 20A / 25A / 30A / 40A / 50A / 60A / 80A / 100A |
| Battery Interface | 2x Circuit Breaker |
| Battery Circuit Breaker rating | 125A 2pol (200A) |
| PSU capacity | 3500W |

SUPPLEMENTAL

SHEET NUMBER:

R-604

REVISION:

0

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Exhibit D

Structural Analysis Report



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 180 ft Self Supported Tower
ATC Site Name : WATERFORD CT, CT
ATC Asset Number : 411183
Engineering Number : 13251340_C3_05
Proposed Carrier : T-MOBILE
Carrier Site Name : Waterford/ I-95/ X82
Carrier Site Number : CT11041D
Site Location : 53 Dayton Rd.
Waterford, CT 06385-4274
41.377800, -72.141400
County : New London
Date : July 13, 2020
Max Usage : 39%
Result : Pass

Prepared By:
Kyle MacPetrie
Structural Engineer I

Reviewed By:



COA: PEC.0001553



Table of Contents

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|--------------------------------------|----------|
| Introduction | 1 |
| Supporting Documents | 1 |
| Analysis | 1 |
| Conclusion..... | 1 |
| Existing and Reserved Equipment..... | 2 |
| Equipment to be Removed..... | 2 |
| Proposed Equipment | 3 |
| Structure Usages | 3 |
| Foundations | 3 |
| Deflection, Twist, and Sway..... | 3 |
| Standard Conditions | 4 |
| Calculations | Attached |



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 180 ft self supported tower to reflect the change in loading by T-MOBILE.

Supporting Documents

| | |
|----------------------------|---|
| Tower Drawings | Rohn Drawing #A982166, dated August 20, 1998 |
| Foundation Drawing | Rohn Drawing #A982167-1, dated August 20, 1998 |
| Geotechnical Report | Clarence Welti Site Name Cohenzie Fire Station; Waterford, CT, dated March 24, 1997 |

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: | 126 mph (3-Second Gust) |
| Basic Wind Speed w/ Ice: | 50 mph (3-Second Gust) w/ 1" radial ice concurrent |
| Code: | ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code |
| Exposure Category: | B |
| Risk Category: | II |
| Topographic Factor Procedure: | Method 1 |
| Topographic Category: | 1 |
| Spectral Response: | $S_s = 0.19, S_1 = 0.05$ |
| Site Class: | D - Stiff Soil |

Conclusion

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

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



Existing and Reserved Equipment

| Elev. ¹ (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|-------------------------|---------------------------|---------------------------------------|-------------------------|--|-------------------------------------|
| 189.0 | 1 | Generic 15' Omni | Sector Frame & Side Arm | (4) 7/8" Coax | TOWN OF WATERFORD POLICE DEPARTMENT |
| 188.0 | 1 | Generic 15' Omni | | | |
| 187.0 | 2 | Generic 15' Omni | | | |
| 182.0 | 2 | Generic 8' Omni | | (2) 7/8" Coax | |
| 181.0 | 1 | dbSpectra ATS4TMA4-4 | | | |
| 181.0 | 1 | Generic 5' Omni | | | |
| 170.0 | 1 | Generic 13' Omni | (1) 7/8" Coax | | |
| 166.0 | 3 | RFS APXVAARR24_43-U-NA20 | Sector Frame | (2) 1 1/4" Hybriflex Cable (12) 1 5/8" Coax (1) 1 5/8" Hybriflex | T-MOBILE |
| | 3 | Ericsson AIR32 B66Aa/B2a | | | |
| 157.0 | 3 | Ericsson RRUS-11 (50 lbs.) | Sector Frame | (3) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (1) 2" conduit | AT&T MOBILITY |
| | 3 | Ericsson RRUS 4478 B5 (56.1 lbs) | | | |
| | 3 | Ericsson RRUS 4478 B14 | | | |
| | 3 | Ericsson RRUS 4426 B66 | | | |
| | 3 | Raycap DC6-48-60-18-8F (23.5" Height) | | | |
| | 6 | Powerwave Allgon LGP21401 | | | |
| | 6 | Kaelus DBCT108F1V92-1 | | | |
| | 3 | Ericsson RRUS 32 B2 | | | |
| | 3 | Kathrein Scala 80010966 | | | |
| | 3 | CCI TPA-65R-LCUUUU-H8 | | | |
| | 3 | CCI HPA-65R-BUU-H8 | | | |
| | 3 | Powerwave Allgon 7770.00 | | | |
| 3 | Ericsson RRUS-32 (77 lbs) | | | | |
| 156.0 | 1 | Generic 15' Omni | Side Arm | (1) 1 5/8" Coax | TOWN OF WATERFORD POLICE DEPARTMENT |
| 132.0 | 2 | Raycap RRFDC-1064-PF-48 | Sector Frame | (6) 1 5/8" Coax (2) 1 5/8" Hybriflex | VERIZON WIRELESS |
| | 3 | Samsung B5/B13 RRH-BR04C | | | |
| | 3 | Samsung B2/B66A RRH-BR049 | | | |
| | 1 | VZW Unused Reserve (15396.96 sqin) | | | |
| | 3 | Samsung Outdoor CBRS 20W RRH | | | |
| | 3 | Alcatel-Lucent B25 RRH4x30 | | | |
| | 6 | JMA Wireless MX06FRO660-02 | | | |
| | 3 | Andrew LNX-6512DS-A1M | | | |
| | 3 | Samsung CBRS 64T64R MMU | | | |
| | 6 | Alcatel-Lucent B66A RRH 4x45 | | | |
| 50.0 | 1 | Generic GPS | Stand-Off | (1) 1/2" Coax | |

Equipment to be Removed

| Elev. ¹ (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|-------------------------|-----|-----------------------------|------------|-------|----------|
| 166.0 | 3 | Ericsson AIR 21 | - | - | T-MOBILE |
| | 3 | Ericsson Radio 4449 B12,B71 | | | |

Proposed Equipment

| Elev. ¹ (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|-------------------------|-----|---|--------------|----------------------------|----------|
| 166.0 | 3 | Ericsson RRUS 4415 B25 | Sector Frame | (3) 1 1/4" Hybriflex Cable | T-MOBILE |
| | 3 | Ericsson Radio 4449 B71 B85A | | | |
| | 3 | Ericsson Air6449 B41 | | | |
| | 3 | Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs) | | | |

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

Install proposed lines stacked on top-of existing T-MOBILE coax.

Structure Usages

| Structural Component | Controlling Usage | Pass/Fail |
|----------------------|-------------------|-----------|
| Legs | 37% | Pass |
| Diagonals | 39% | Pass |
| Horizontals | 35% | Pass |
| Anchor Bolts | 31% | Pass |
| Leg Bolts | 28% | Pass |

Foundations

| Reaction Component | Original Design Reactions | Factored Design Reactions* | Analysis Reactions | % of Design |
|--------------------|---------------------------|----------------------------|--------------------|-------------|
| Uplift (Kips) | 621.3 | 838.8 | 250.2 | 30% |
| Axial (Kips) | 732.9 | 989.4 | 293.1 | 30% |
| Shear (Kips) | 141.8 | 191.4 | 54.3 | 28% |

* The design reactions are factored by 1.35 per ANSI/TIA-222-H, Sec. 15.6.2

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

Deflection, Twist and Sway*

| Antenna Elevation (ft) | Antenna | Carrier | Deflection (ft) | Twist (°) | Sway (Rotation) (°) |
|------------------------|---|----------|-----------------|-----------|---------------------|
| 166.0 | Ericsson RRUS 4415 B25 | T-MOBILE | 0.135 | 0.007 | 0.097 |
| | Ericsson Radio 4449 B71 B85A | | | | |
| | Ericsson Air6449 B41 | | | | |
| | Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs) | | | | |

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



Standard Conditions

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

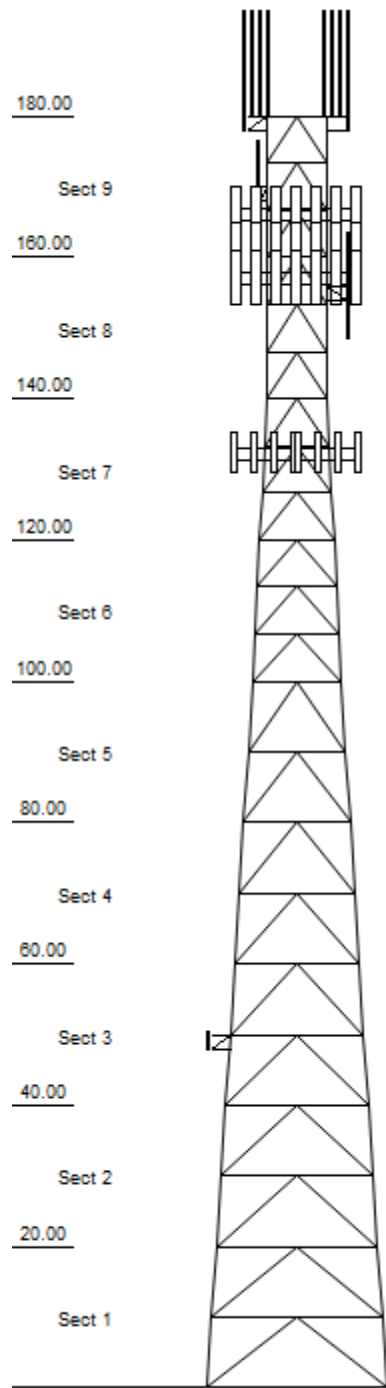
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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 Service, PLLC, 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 Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Quadrant 1



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Loads: 126 mph no ice
 50 mph w/ 1" radial ice
 Site Class: D Ss: 0.19 S1: 0.05
 60 mph Serviceability

Job Information

| | | |
|------------------------------|---------------------------------|------------------------------|
| Client : T-MOBILE | | |
| Tower : 411183 | Location : WATERFORD CT, | Base Width : 25.55 ft |
| Code : ANSI/TIA-222-H | Topo Method: Method 1 | Top Width : 8.50 ft |
| Risk Cat : II | Topo: 1 | Tower Ht : 180.00 ft |
| | Exposure : B | Shape : Triangle |

Sections Properties

| Section | Leg Members | Diagonal Members | Horizontal Members |
|---------|----------------------------|----------------------------|----------------------------|
| 1 - 2 | PX 50 ksi 12" DIA PIPE | PST 50 ksi 3-1/2" DIA PIPE | PST 50 ksi 3" DIA PIPE |
| 3 - 4 | PX 50 ksi 10" DIA PIPE | PX 50 ksi 3" DIA PIPE | PST 50 ksi 2-1/2" DIA PIPE |
| 5 | PSP 50 ksi 8.75" OD x 0.5" | PX 50 ksi 3" DIA PIPE | PX 50 ksi 2" DIA PIPE |
| 6 | PX 50 ksi 6" DIA PIPE | PST 50 ksi 2-1/2" DIA PIPE | PST 50 ksi 2" DIA PIPE |
| 7 | PSP 50 ksi ROHN 5 EH | PST 50 ksi 2-1/2" DIA PIPE | PST 50 ksi 1-1/2" DIA PIPE |
| 8 | PST 50 ksi 4" DIA PIPE | PST 50 ksi 2-1/2" DIA PIPE | PST 50 ksi 2" DIA PIPE |
| 9 | PST 50 ksi 3" DIA PIPE | PST 50 ksi 2" DIA PIPE | PST 50 ksi 1-1/2" DIA PIPE |

Discrete Appurtenance

| Elev (ft) | Type | Qty | Description |
|-----------|----------------|-----|--------------------------------|
| 180.00 | | 1 | dbSpectra ATS4TMA4-4 |
| 180.00 | Whip | 1 | Generic 5' Omni |
| 180.00 | Whip | 2 | Generic 8' Omni |
| 180.00 | Whip | 2 | Generic 15' Omni |
| 180.00 | Whip | 1 | Generic 15' Omni |
| 180.00 | Whip | 1 | Generic 15' Omni |
| 180.00 | Mounting Frame | 1 | Round Sector Frame |
| 180.00 | Straight Arm | 2 | Round Side Arm |
| 170.00 | Whip | 1 | Generic 13' Omni |
| 166.00 | Mounting Frame | 3 | Round Sector Frame |
| 166.00 | Panel | 3 | RFS APXVAARR24_43-U-NA20 |
| 166.00 | Panel | 3 | Ericsson AIR32 B66Aa/B2a |
| 166.00 | Panel | 3 | Ericsson AIR 21, 1.3M, B2A B4P |
| 166.00 | Panel | 3 | Ericsson Air6449 B41 |
| 166.00 | | 3 | Ericsson Radio 4449 B71 B85A |
| 166.00 | | 3 | Ericsson RRUS 4415 B25 |
| 157.00 | Mounting Frame | 3 | Generic Flat Light Sector Fram |
| 157.00 | Panel | 3 | Kathrein Scala 80010966 |
| 157.00 | Panel | 3 | CCI TPA-65R-LCUUUU-H8 |
| 157.00 | Panel | 3 | CCI HPA-65R-BUU-H8 |
| 157.00 | Panel | 3 | Powerwave Allgon 7770.00 |
| 157.00 | | 3 | Ericsson RRUS-32 (77 lbs) |
| 157.00 | | 3 | Ericsson RRUS 32 B2 |
| 157.00 | | 3 | Ericsson RRUS-11 (50 lbs.) |
| 157.00 | | 3 | Ericsson RRUS 4478 B5 (56.1 lb |
| 157.00 | | 3 | Ericsson RRUS 4478 B14 |
| 157.00 | | 3 | Ericsson RRUS 4426 B66 |
| 157.00 | | 3 | Raycap DC6-48-60-18-8F (23.5" |
| 157.00 | | 6 | Powerwave Allgon LGP21401 |
| 157.00 | | 6 | Kaelus DBCT108F1V92-1 |
| 156.00 | Straight Arm | 1 | Round Side Arm |
| 156.00 | Whip | 1 | Generic 15' Omni |
| 132.00 | Other | 1 | VZW Unused Reserve (15396.96 s |
| 132.00 | Mounting Frame | 3 | Round Sector Frame |
| 132.00 | Panel | 6 | JMA Wireless MX06FRO660-02 |
| 132.00 | Panel | 3 | Andrew LNX-6512DS-A1M |
| 132.00 | Panel | 3 | Samsung CBRS 64T64R MMU |
| 132.00 | | 6 | Alcatel-Lucent B66A RRH 4x45 |
| 132.00 | | 3 | Alcatel-Lucent B25 RRH4x30 |
| 132.00 | | 3 | Samsung B2/B66A RRH-BR049 |
| 132.00 | | 3 | Samsung B5/B13 RRH-BR04C |
| 132.00 | | 2 | Raycap RRFDC-1064-PF-48 |
| 132.00 | | 3 | Samsung Outdoor CBRS 20W |
| 50.00 | Straight Arm | 1 | Stand-Off |
| 50.00 | Whip | 1 | Generic GPS |

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| Job Information | | |
|-----------------------|--------------------------|-----------------------|
| Client : T-MOBILE | | |
| Tower : 411183 | Location : WATERFORD CT, | Base Width : 25.55 ft |
| Code : ANSI/TIA-222-H | Topo Method: Method 1 | Top Width : 8.50 ft |
| Risk Cat : II | Topo: 1 | Tower Ht : 180.00 ft |
| | Exposure : B | Shape : Triangle |

| Linear Appurtenance | | | | |
|---------------------|--------|-----|----------------------|--|
| Elev (ft) | | | | |
| From | To | Qty | Description | |
| 0.00 | 189.00 | 1 | 7/8" Coax | |
| 0.00 | 188.00 | 1 | 7/8" Coax | |
| 30.00 | 187.00 | 2 | 7/8" Coax | |
| 0.00 | 182.00 | 1 | 7/8" Coax | |
| 0.00 | 181.00 | 1 | 7/8" Coax | |
| 30.00 | 180.00 | 1 | Waveguide | |
| 0.00 | 180.00 | 1 | Waveguide | |
| 0.00 | 170.00 | 1 | 7/8" Coax | |
| 30.00 | 166.00 | 1 | 1 5/8" Hybriflex | |
| 30.00 | 166.00 | 3 | 1 1/4" Hybriflex Cab | |
| 30.00 | 166.00 | 2 | 1 1/4" Hybriflex Cab | |
| 0.00 | 166.00 | 1 | Waveguide | |
| 0.00 | 166.00 | 12 | 1 5/8" Coax | |
| 30.00 | 157.00 | 1 | Waveguide | |
| 30.00 | 157.00 | 1 | 2" conduit | |
| 30.00 | 157.00 | 12 | 1 5/8" Coax | |
| 30.00 | 157.00 | 6 | 0.78" (19.7mm) 8 AWG | |
| 30.00 | 157.00 | 3 | 0.39" (10mm) Fiber T | |
| 30.00 | 156.00 | 1 | 1 5/8" Coax | |
| 0.00 | 132.00 | 2 | 1 5/8" Hybriflex | |
| 0.00 | 132.00 | 6 | 1 5/8" Coax | |
| 30.00 | 50.00 | 1 | 1/2" Coax | |

| Global Base Foundation Design Loads | | | |
|-------------------------------------|---------------|----------------|------------------|
| Load Case | Moment (k-ft) | Vertical (kip) | Horizontal (kip) |
| DL + WL | 5,953.63 | 72.19 | 54.27 |
| DL + WL + IL | 1,868.07 | 135.84 | 17.56 |

| Individual Base Foundation Design Loads | | |
|---|--------------|------------------|
| Vertical (kip) | Uplift (kip) | Horizontal (kip) |
| 293.13 | 250.20 | 33.54 |

Analysis Parameters

| | | | |
|---------------------|-----------------------|-------------------------|-------|
| Location: | New London County, CT | Height (ft): | 180 |
| Code: | ANSI/TIA-222-H | Base Elevation (ft): | 0.00 |
| Shape: | Triangle | Bottom Face Width (ft): | 25.55 |
| Tower Manufacturer: | Rohn | Top Face Width (ft): | 8.50 |
| Tower Type: | Self Support | Anchor Bolt Detail Type | c |
| Kd: | 0.85 | | |
| Ke: | 0.99 | | |

Ice & Wind Parameters

| | | | |
|-------------------------------|----------|-------------------------------|-----------|
| Exposure Category: | B | Design Windspeed Without Ice: | 126 mph |
| Risk Category: | II | Design Windspeed With Ice: | 50 mph |
| Topographic Factor Procedure: | Method 1 | Operational Windspeed: | 60 mph |
| Topographic Category: | 1 | Design Ice Thickness: | 1.00 in |
| Crest Height: | 0 ft | HMSL: | 188.00 ft |

Seismic Parameters

| | | | |
|--|---------------------------------|--------------|-------|
| Analysis Method: | Equivalent Lateral Force Method | | |
| Site Class: | D - Stiff Soil | | |
| Period Based on Rayleigh Method (sec): | 0.62 | | |
| T_L (sec): | 6 | p: | 1.3 |
| S_S : | 0.194 | S_1 : | 0.053 |
| F_a : | 1.600 | F_v : | 2.400 |
| S_{ds} : | 0.207 | S_{d1} : | 0.085 |
| | | C_S : | 0.045 |
| | | C_S, Max : | 0.045 |
| | | C_S, Min : | 0.030 |

Load Cases

| | |
|-----------------------------|---|
| 1.2D + 1.0W Normal | 126 mph Normal with No Ice |
| 1.2D + 1.0W 60 deg | 126 mph 60 degree with No Ice |
| 1.2D + 1.0W 90 deg | 126 mph 90 degree with No Ice |
| 0.9D + 1.0W Normal | 126 mph Normal with No Ice (Reduced DL) |
| 0.9D + 1.0W 60 deg | 126 mph 60 deg with No Ice (Reduced DL) |
| 0.9D + 1.0W 90 deg | 126 mph 90 deg with No Ice (Reduced DL) |
| 1.2D + 1.0Di + 1.0Wi Normal | 50 mph Normal with 1.00 in Radial Ice |
| 1.2D + 1.0Di + 1.0Wi 60 deg | 50 mph 60 deg with 1.00 in Radial Ice |
| 1.2D + 1.0Di + 1.0Wi 90 deg | 50 mph 90 deg with 1.00 in Radial Ice |
| 1.2D + 1.0Ev + 1.0Eh Normal | Seismic Normal |
| 1.2D + 1.0Ev + 1.0Eh 60 deg | Seismic 60 deg |
| 1.2D + 1.0Ev + 1.0Eh 90 deg | Seismic 90 deg |
| 0.9D - 1.0Ev + 1.0Eh Normal | Seismic (Reduced DL) Normal |
| 0.9D - 1.0Ev + 1.0Eh 60 deg | Seismic (Reduced DL) 60 deg |
| 0.9D - 1.0Ev + 1.0Eh 90 deg | Seismic (Reduced DL) 90 deg |
| 1.0D + 1.0W Service Normal | Serviceability - 60 mph Wind Normal |
| 1.0D + 1.0W Service 60 deg | Serviceability - 60 mph Wind 60 deg |
| 1.0D + 1.0W Service 90 deg | Serviceability - 60 mph Wind 90 deg |

Site Number: 411183

Code:

ANSI/TIA-222-H

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Site Name: WATERFORD CT, CT

Engineering Number: 13251340_C3_05

7/13/2020 9:14:09 AM

Customer: T-MOBILE

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.0W

| Elevation (ft) | Description | Qty | Wt. (lb) | EPA (sf) | Length (ft) | Width (in) | Depth (in) | K _a | Orient. Factor | Vert. Ecc.(ft) | M _u (lb-ft) | Q _z (psf) | F _a (WL) (lb) | P _a (DL) (lb) |
|----------------|---------------------|-----|----------|----------|-------------|------------|------------|----------------|----------------|----------------|------------------------|----------------------|--------------------------|--------------------------|
| 180.0 | Generic 15' Omni | 1 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 9.0 | 1400.1 | 40.67 | 156 | 48 |
| 180.0 | Generic 15' Omni | 1 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 8.0 | 1242.7 | 40.61 | 155 | 48 |
| 180.0 | Generic 15' Omni | 2 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 7.0 | 2171.4 | 40.55 | 310 | 96 |
| 180.0 | Generic 8' Omni | 2 | 25 | 2.4 | 8.0 | 3.0 | 3.0 | 1.00 | 1.00 | 2.0 | 328.3 | 40.24 | 164 | 60 |
| 180.0 | Generic 5' Omni | 1 | 10 | 1.0 | 5.0 | 2.0 | 2.0 | 1.00 | 1.00 | 1.0 | 34.1 | 40.17 | 34 | 12 |
| 180.0 | dbSpectra | 1 | 50 | 2.3 | 2.6 | 13.3 | 11.5 | 1.00 | 1.00 | 1.0 | 78.9 | 40.17 | 79 | 60 |
| 180.0 | Round Side Arm | 2 | 150 | 5.2 | 0.0 | 0.0 | 0.0 | 0.90 | 0.90 | 0.0 | 0.0 | 40.11 | 287 | 360 |
| 180.0 | Round Sector Frame | 1 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 40.11 | 491 | 360 |
| 170.0 | Generic 13' Omni | 1 | 40 | 3.9 | 13.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 39.46 | 131 | 48 |
| 166.0 | Ericsson RRUS 4415 | 3 | 46 | 1.6 | 1.3 | 13.2 | 5.4 | 0.80 | 0.50 | 0.0 | 0.0 | 39.19 | 66 | 166 |
| 166.0 | Ericsson Radio 4449 | 3 | 75 | 1.6 | 1.3 | 13.2 | 10.5 | 0.80 | 0.50 | 0.0 | 0.0 | 39.19 | 66 | 270 |
| 166.0 | Ericsson Air6449 | 3 | 104 | 5.7 | 2.8 | 20.6 | 8.6 | 0.80 | 0.63 | 0.0 | 0.0 | 39.19 | 286 | 374 |
| 166.0 | Ericsson AIR 21, | 3 | 92 | 6.0 | 4.7 | 12.0 | 7.8 | 0.80 | 0.70 | 0.0 | 0.0 | 39.19 | 338 | 329 |
| 166.0 | Ericsson AIR32 | 3 | 132 | 6.5 | 4.7 | 12.9 | 8.7 | 0.80 | 0.71 | 0.0 | 0.0 | 39.19 | 370 | 476 |
| 166.0 | Round Sector Frame | 3 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 0.75 | 0.75 | 0.0 | 0.0 | 39.19 | 809 | 1080 |
| 166.0 | RFS | 3 | 128 | 20.2 | 8.0 | 24.0 | 8.7 | 0.80 | 0.63 | 0.0 | 0.0 | 39.19 | 1020 | 460 |
| 157.0 | Kaelus | 6 | 14 | 0.6 | 0.9 | 7.1 | 6.8 | 0.80 | 0.50 | 0.0 | 0.0 | 38.57 | 50 | 100 |
| 157.0 | Powerwave Allgon | 6 | 14 | 1.1 | 1.2 | 9.2 | 2.6 | 0.80 | 0.50 | 2.0 | 174.4 | 38.71 | 87 | 102 |
| 157.0 | Raycap DC6-48-60- | 3 | 20 | 1.3 | 2.0 | 9.7 | 9.7 | 0.80 | 1.00 | 0.0 | 0.0 | 38.57 | 99 | 72 |
| 157.0 | Ericsson RRUS 4426 | 3 | 48 | 1.6 | 1.3 | 13.2 | 5.8 | 0.80 | 0.50 | 0.0 | 0.0 | 38.57 | 65 | 174 |
| 157.0 | Ericsson RRUS 4478 | 3 | 59 | 2.0 | 1.5 | 13.4 | 8.3 | 0.80 | 0.67 | 0.0 | 0.0 | 38.57 | 107 | 214 |
| 157.0 | Ericsson RRUS 4478 | 3 | 56 | 2.0 | 1.5 | 13.5 | 7.8 | 0.80 | 0.67 | 0.0 | 0.0 | 38.57 | 107 | 202 |
| 157.0 | Ericsson RRUS-11 | 3 | 50 | 2.6 | 1.5 | 17.3 | 7.2 | 0.80 | 0.67 | 2.0 | 271.5 | 38.71 | 136 | 180 |
| 157.0 | Ericsson RRUS 32 B2 | 3 | 53 | 2.7 | 2.3 | 12.1 | 7.0 | 0.80 | 0.67 | 2.0 | 290.3 | 38.71 | 145 | 191 |
| 157.0 | Ericsson RRUS-32 | 3 | 77 | 3.3 | 2.5 | 13.3 | 9.5 | 0.80 | 0.71 | 2.0 | 371.6 | 38.71 | 186 | 277 |
| 157.0 | Powerwave Allgon | 3 | 35 | 5.5 | 4.6 | 11.0 | 5.0 | 0.80 | 0.65 | 2.0 | 565.5 | 38.71 | 283 | 126 |
| 157.0 | CCI HPA-65R-BUU-H8 | 3 | 68 | 13.0 | 7.7 | 14.8 | 7.4 | 0.80 | 0.67 | 2.0 | 1373.2 | 38.71 | 687 | 245 |
| 157.0 | CCI TPA-65R- | 3 | 82 | 13.3 | 8.0 | 14.4 | 8.6 | 0.80 | 0.69 | 2.0 | 1449.2 | 38.71 | 725 | 294 |
| 157.0 | Kathrein Scala | 3 | 115 | 17.4 | 8.0 | 20.0 | 6.9 | 0.80 | 0.63 | 0.0 | 0.0 | 38.57 | 861 | 413 |
| 157.0 | Generic Flat Light | 3 | 400 | 17.9 | 0.0 | 0.0 | 0.0 | 0.75 | 0.75 | 0.0 | 0.0 | 38.57 | 990 | 1440 |
| 156.0 | Generic 15' Omni | 1 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 38.50 | 147 | 48 |
| 156.0 | Round Side Arm | 1 | 150 | 5.2 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 38.50 | 170 | 180 |
| 132.0 | Samsung Outdoor | 3 | 19 | 0.9 | 1.0 | 8.5 | 4.1 | 0.80 | 0.50 | 0.0 | 0.0 | 36.71 | 32 | 67 |
| 132.0 | Raycap RRFDC-1064- | 2 | 14 | 1.2 | 1.1 | 10.2 | 8.2 | 0.80 | 0.50 | 0.0 | 0.0 | 36.71 | 29 | 34 |
| 132.0 | Samsung B5/B13 | 3 | 70 | 1.9 | 1.3 | 15.0 | 8.1 | 0.80 | 0.50 | 0.0 | 0.0 | 36.71 | 70 | 253 |
| 132.0 | Samsung B2/B66A | 3 | 84 | 1.9 | 1.3 | 15.0 | 10.0 | 0.80 | 0.50 | 0.0 | 0.0 | 36.71 | 70 | 304 |
| 132.0 | Alcatel-Lucent B25 | 3 | 53 | 2.1 | 1.8 | 12.0 | 7.2 | 0.80 | 0.67 | 0.0 | 0.0 | 36.71 | 106 | 191 |
| 132.0 | Alcatel-Lucent B66A | 6 | 67 | 2.6 | 2.2 | 12.0 | 7.3 | 0.80 | 0.67 | 0.0 | 0.0 | 36.71 | 259 | 482 |
| 132.0 | Samsung CBRS | 3 | 75 | 4.5 | 2.4 | 18.8 | 4.8 | 0.80 | 0.58 | 0.0 | 0.0 | 36.71 | 195 | 270 |
| 132.0 | Andrew LNX- | 3 | 30 | 5.1 | 4.0 | 11.9 | 7.1 | 0.80 | 0.69 | 0.0 | 0.0 | 36.71 | 263 | 109 |
| 132.0 | JMA Wireless | 6 | 46 | 9.9 | 5.9 | 15.4 | 10.7 | 0.80 | 0.71 | 0.0 | 0.0 | 36.71 | 1050 | 331 |
| 132.0 | Round Sector Frame | 3 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 36.71 | 677 | 1080 |
| 132.0 | VZW Unused | 1 | 790 | 106.9 | 0.0 | 0.0 | 0.0 | 0.80 | 0.90 | 0.0 | 0.0 | 36.71 | 2402 | 947 |
| 50.00 | Generic GPS | 1 | 10 | 0.9 | 1.0 | 9.0 | 6.0 | 1.00 | 1.00 | 0.0 | 0.0 | 27.82 | 21 | 12 |
| 50.00 | Stand-Off | 1 | 40 | 1.6 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 27.82 | 39 | 48 |
| Totals | | 121 | 10527 | 770.0 | | | | | | | | | 14820 | 12633 |

Discrete Appurtenance Properties 0.9D + 1.0W

| Elevation (ft) | Description | Qty | Wt. (lb) | EPA (sf) | Length (ft) | Width (in) | Depth (in) | K _a | Orient. Factor | Vert. Ecc.(ft) | M _u (lb-ft) | Q _z (psf) | F _a (WL) (lb) | P _a (DL) (lb) |
|----------------|------------------|-----|----------|----------|-------------|------------|------------|----------------|----------------|----------------|------------------------|----------------------|--------------------------|--------------------------|
| 180.0 | Generic 15' Omni | 1 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 9.0 | 1400.1 | 40.67 | 156 | 36 |

Tower Loading

| | | | | | | | | | | | | | | |
|--------|---------------------|-----|-------|-------|------|------|------|------|------|-----|--------|-------|-------|------|
| 180.0 | Generic 15' Omni | 1 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 8.0 | 1242.7 | 40.61 | 155 | 36 |
| 180.0 | Generic 15' Omni | 2 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 7.0 | 2171.4 | 40.55 | 310 | 72 |
| 180.0 | Generic 8' Omni | 2 | 25 | 2.4 | 8.0 | 3.0 | 3.0 | 1.00 | 1.00 | 2.0 | 328.3 | 40.24 | 164 | 45 |
| 180.0 | Generic 5' Omni | 1 | 10 | 1.0 | 5.0 | 2.0 | 2.0 | 1.00 | 1.00 | 1.0 | 34.1 | 40.17 | 34 | 9 |
| 180.0 | dbSpectra | 1 | 50 | 2.3 | 2.6 | 13.3 | 11.5 | 1.00 | 1.00 | 1.0 | 78.9 | 40.17 | 79 | 45 |
| 180.0 | Round Side Arm | 2 | 150 | 5.2 | 0.0 | 0.0 | 0.0 | 0.90 | 0.90 | 0.0 | 0.0 | 40.11 | 287 | 270 |
| 180.0 | Round Sector Frame | 1 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 40.11 | 491 | 270 |
| 170.0 | Generic 13' Omni | 1 | 40 | 3.9 | 13.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 39.46 | 131 | 36 |
| 166.0 | Ericsson RRUS 4415 | 3 | 46 | 1.6 | 1.3 | 13.2 | 5.4 | 0.80 | 0.50 | 0.0 | 0.0 | 39.19 | 66 | 124 |
| 166.0 | Ericsson Radio 4449 | 3 | 75 | 1.6 | 1.3 | 13.2 | 10.5 | 0.80 | 0.50 | 0.0 | 0.0 | 39.19 | 66 | 203 |
| 166.0 | Ericsson Air6449 | 3 | 104 | 5.7 | 2.8 | 20.6 | 8.6 | 0.80 | 0.63 | 0.0 | 0.0 | 39.19 | 286 | 281 |
| 166.0 | Ericsson AIR 21, | 3 | 92 | 6.0 | 4.7 | 12.0 | 7.8 | 0.80 | 0.70 | 0.0 | 0.0 | 39.19 | 338 | 247 |
| 166.0 | Ericsson AIR32 | 3 | 132 | 6.5 | 4.7 | 12.9 | 8.7 | 0.80 | 0.71 | 0.0 | 0.0 | 39.19 | 370 | 357 |
| 166.0 | Round Sector Frame | 3 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 0.75 | 0.75 | 0.0 | 0.0 | 39.19 | 809 | 810 |
| 166.0 | RFS | 3 | 128 | 20.2 | 8.0 | 24.0 | 8.7 | 0.80 | 0.63 | 0.0 | 0.0 | 39.19 | 1020 | 345 |
| 157.0 | Kaelus | 6 | 14 | 0.6 | 0.9 | 7.1 | 6.8 | 0.80 | 0.50 | 0.0 | 0.0 | 38.57 | 50 | 75 |
| 157.0 | Powerwave Allgon | 6 | 14 | 1.1 | 1.2 | 9.2 | 2.6 | 0.80 | 0.50 | 2.0 | 174.4 | 38.71 | 87 | 76 |
| 157.0 | Raycap DC6-48-60- | 3 | 20 | 1.3 | 2.0 | 9.7 | 9.7 | 0.80 | 1.00 | 0.0 | 0.0 | 38.57 | 99 | 54 |
| 157.0 | Ericsson RRUS 4426 | 3 | 48 | 1.6 | 1.3 | 13.2 | 5.8 | 0.80 | 0.50 | 0.0 | 0.0 | 38.57 | 65 | 131 |
| 157.0 | Ericsson RRUS 4478 | 3 | 59 | 2.0 | 1.5 | 13.4 | 8.3 | 0.80 | 0.67 | 0.0 | 0.0 | 38.57 | 107 | 160 |
| 157.0 | Ericsson RRUS 4478 | 3 | 56 | 2.0 | 1.5 | 13.5 | 7.8 | 0.80 | 0.67 | 0.0 | 0.0 | 38.57 | 107 | 151 |
| 157.0 | Ericsson RRUS-11 | 3 | 50 | 2.6 | 1.5 | 17.3 | 7.2 | 0.80 | 0.67 | 2.0 | 271.5 | 38.71 | 136 | 135 |
| 157.0 | Ericsson RRUS 32 B2 | 3 | 53 | 2.7 | 2.3 | 12.1 | 7.0 | 0.80 | 0.67 | 2.0 | 290.3 | 38.71 | 145 | 143 |
| 157.0 | Ericsson RRUS-32 | 3 | 77 | 3.3 | 2.5 | 13.3 | 9.5 | 0.80 | 0.71 | 2.0 | 371.6 | 38.71 | 186 | 208 |
| 157.0 | Powerwave Allgon | 3 | 35 | 5.5 | 4.6 | 11.0 | 5.0 | 0.80 | 0.65 | 2.0 | 565.5 | 38.71 | 283 | 95 |
| 157.0 | CCI HPA-65R-BUU-H8 | 3 | 68 | 13.0 | 7.7 | 14.8 | 7.4 | 0.80 | 0.67 | 2.0 | 1373.2 | 38.71 | 687 | 184 |
| 157.0 | CCI TPA-65R- | 3 | 82 | 13.3 | 8.0 | 14.4 | 8.6 | 0.80 | 0.69 | 2.0 | 1449.2 | 38.71 | 725 | 220 |
| 157.0 | Kathrein Scala | 3 | 115 | 17.4 | 8.0 | 20.0 | 6.9 | 0.80 | 0.63 | 0.0 | 0.0 | 38.57 | 861 | 309 |
| 157.0 | Generic Flat Light | 3 | 400 | 17.9 | 0.0 | 0.0 | 0.0 | 0.75 | 0.75 | 0.0 | 0.0 | 38.57 | 990 | 1080 |
| 156.0 | Generic 15' Omni | 1 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 38.50 | 147 | 36 |
| 156.0 | Round Side Arm | 1 | 150 | 5.2 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 38.50 | 170 | 135 |
| 132.0 | Samsung Outdoor | 3 | 19 | 0.9 | 1.0 | 8.5 | 4.1 | 0.80 | 0.50 | 0.0 | 0.0 | 36.71 | 32 | 50 |
| 132.0 | Raycap RRFDC-1064- | 2 | 14 | 1.2 | 1.1 | 10.2 | 8.2 | 0.80 | 0.50 | 0.0 | 0.0 | 36.71 | 29 | 25 |
| 132.0 | Samsung B5/B13 | 3 | 70 | 1.9 | 1.3 | 15.0 | 8.1 | 0.80 | 0.50 | 0.0 | 0.0 | 36.71 | 70 | 190 |
| 132.0 | Samsung B2/B66A | 3 | 84 | 1.9 | 1.3 | 15.0 | 10.0 | 0.80 | 0.50 | 0.0 | 0.0 | 36.71 | 70 | 228 |
| 132.0 | Alcatel-Lucent B25 | 3 | 53 | 2.1 | 1.8 | 12.0 | 7.2 | 0.80 | 0.67 | 0.0 | 0.0 | 36.71 | 106 | 143 |
| 132.0 | Alcatel-Lucent B66A | 6 | 67 | 2.6 | 2.2 | 12.0 | 7.3 | 0.80 | 0.67 | 0.0 | 0.0 | 36.71 | 259 | 362 |
| 132.0 | Samsung CBRS | 3 | 75 | 4.5 | 2.4 | 18.8 | 4.8 | 0.80 | 0.58 | 0.0 | 0.0 | 36.71 | 195 | 203 |
| 132.0 | Andrew LNX- | 3 | 30 | 5.1 | 4.0 | 11.9 | 7.1 | 0.80 | 0.69 | 0.0 | 0.0 | 36.71 | 263 | 82 |
| 132.0 | JMA Wireless | 6 | 46 | 9.9 | 5.9 | 15.4 | 10.7 | 0.80 | 0.71 | 0.0 | 0.0 | 36.71 | 1050 | 248 |
| 132.0 | Round Sector Frame | 3 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 36.71 | 677 | 810 |
| 132.0 | VZW Unused | 1 | 790 | 106.9 | 0.0 | 0.0 | 0.0 | 0.80 | 0.90 | 0.0 | 0.0 | 36.71 | 2402 | 711 |
| 50.00 | Generic GPS | 1 | 10 | 0.9 | 1.0 | 9.0 | 6.0 | 1.00 | 1.00 | 0.0 | 0.0 | 27.82 | 21 | 9 |
| 50.00 | Stand-Off | 1 | 40 | 1.6 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 27.82 | 39 | 36 |
| Totals | | 121 | 10527 | 770.0 | | | | | | | | | 14820 | 9474 |

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

| Elevation (ft) | Description | Qty | Ice Wt (lb) | Ice EPA (sf) | Length (ft) | Width (in) | Depth (in) | K _a | Orient. Factor | Vert. Ecc.(ft) | M _u (lb-ft) | Q _z (psf) | F _a (WL) (lb) | P _a (DL) (lb) |
|----------------|------------------|-----|-------------|--------------|-------------|------------|------------|----------------|----------------|----------------|------------------------|----------------------|--------------------------|--------------------------|
| 180.0 | Generic 15' Omni | 1 | 117 | 8.1 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 9.0 | 397.5 | 6.40 | 44 | 125 |
| 180.0 | Generic 15' Omni | 1 | 117 | 8.1 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 8.0 | 352.8 | 6.39 | 44 | 125 |
| 180.0 | Generic 15' Omni | 2 | 117 | 8.1 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 7.0 | 616.5 | 6.39 | 88 | 249 |
| 180.0 | Generic 8' Omni | 2 | 66 | 4.3 | 8.0 | 3.0 | 3.0 | 1.00 | 1.00 | 2.0 | 91.7 | 6.34 | 46 | 143 |
| 180.0 | Generic 5' Omni | 1 | 29 | 1.9 | 5.0 | 2.0 | 2.0 | 1.00 | 1.00 | 1.0 | 10.4 | 6.33 | 10 | 31 |
| 180.0 | dbSpectra | 1 | 109 | 2.9 | 2.6 | 13.3 | 11.5 | 1.00 | 1.00 | 1.0 | 15.6 | 6.33 | 16 | 119 |

Tower Loading

| | | | | | | | | | | | | | | |
|--------|---------------------|-----|-------|--------|------|------|------|------|------|-----|-------|------|------|-------|
| 180.0 | Round Side Arm | 2 | 199 | 7.0 | 0.0 | 0.0 | 0.0 | 0.90 | 0.90 | 0.0 | 0.0 | 6.32 | 61 | 459 |
| 180.0 | Round Sector Frame | 1 | 549 | 25.6 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 6.32 | 137 | 609 |
| 170.0 | Generic 13' Omni | 1 | 106 | 7.0 | 13.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 6.21 | 37 | 114 |
| 166.0 | Ericsson RRUS 4415 | 3 | 75 | 2.2 | 1.3 | 13.2 | 5.4 | 0.80 | 0.50 | 0.0 | 0.0 | 6.17 | 14 | 253 |
| 166.0 | Ericsson Radio 4449 | 3 | 116 | 2.2 | 1.3 | 13.2 | 10.5 | 0.80 | 0.50 | 0.0 | 0.0 | 6.17 | 14 | 392 |
| 166.0 | Ericsson Air6449 | 3 | 196 | 6.8 | 2.8 | 20.6 | 8.6 | 0.80 | 0.63 | 0.0 | 0.0 | 6.17 | 54 | 651 |
| 166.0 | Ericsson AIR 21, | 3 | 190 | 7.5 | 4.7 | 12.0 | 7.8 | 0.80 | 0.70 | 0.0 | 0.0 | 6.17 | 66 | 625 |
| 166.0 | Ericsson AIR32 | 3 | 240 | 8.0 | 4.7 | 12.9 | 8.7 | 0.80 | 0.71 | 0.0 | 0.0 | 6.17 | 71 | 800 |
| 166.0 | Round Sector Frame | 3 | 549 | 25.6 | 0.0 | 0.0 | 0.0 | 0.75 | 0.75 | 0.0 | 0.0 | 6.17 | 227 | 1826 |
| 166.0 | RFS | 3 | 393 | 22.8 | 8.0 | 24.0 | 8.7 | 0.80 | 0.63 | 0.0 | 0.0 | 6.17 | 180 | 1257 |
| 157.0 | Kaelus | 6 | 31 | 1.0 | 0.9 | 7.1 | 6.8 | 0.80 | 0.50 | 0.0 | 0.0 | 6.07 | 12 | 201 |
| 157.0 | Powerwave Allgon | 6 | 31 | 1.6 | 1.2 | 9.2 | 2.6 | 0.80 | 0.50 | 2.0 | 39.3 | 6.10 | 20 | 202 |
| 157.0 | Raycap DC6-48-60- | 3 | 55 | 1.7 | 2.0 | 9.7 | 9.7 | 0.80 | 1.00 | 0.0 | 0.0 | 6.07 | 21 | 178 |
| 157.0 | Ericsson RRUS 4426 | 3 | 78 | 2.2 | 1.3 | 13.2 | 5.8 | 0.80 | 0.50 | 0.0 | 0.0 | 6.07 | 14 | 264 |
| 157.0 | Ericsson RRUS 4478 | 3 | 100 | 2.7 | 1.5 | 13.4 | 8.3 | 0.80 | 0.67 | 0.0 | 0.0 | 6.07 | 22 | 337 |
| 157.0 | Ericsson RRUS 4478 | 3 | 96 | 2.7 | 1.5 | 13.5 | 7.8 | 0.80 | 0.67 | 0.0 | 0.0 | 6.07 | 22 | 322 |
| 157.0 | Ericsson RRUS-11 | 3 | 96 | 3.3 | 1.5 | 17.3 | 7.2 | 0.80 | 0.67 | 2.0 | 54.4 | 6.10 | 27 | 317 |
| 157.0 | Ericsson RRUS 32 B2 | 3 | 102 | 3.5 | 2.3 | 12.1 | 7.0 | 0.80 | 0.67 | 2.0 | 58.7 | 6.10 | 29 | 338 |
| 157.0 | Ericsson RRUS-32 | 3 | 142 | 4.2 | 2.5 | 13.3 | 9.5 | 0.80 | 0.71 | 2.0 | 73.7 | 6.10 | 37 | 472 |
| 157.0 | Powerwave Allgon | 3 | 118 | 6.2 | 4.6 | 11.0 | 5.0 | 0.80 | 0.65 | 2.0 | 100.2 | 6.10 | 50 | 376 |
| 157.0 | CCI HPA-65R-BUU-H8 | 3 | 240 | 15.4 | 7.7 | 14.8 | 7.4 | 0.80 | 0.67 | 2.0 | 256.1 | 6.10 | 128 | 760 |
| 157.0 | CCI TPA-65R- | 3 | 267 | 15.8 | 8.0 | 14.4 | 8.6 | 0.80 | 0.69 | 2.0 | 271.0 | 6.10 | 136 | 848 |
| 157.0 | Kathrein Scala | 3 | 329 | 19.8 | 8.0 | 20.0 | 6.9 | 0.80 | 0.63 | 0.0 | 0.0 | 6.07 | 155 | 1056 |
| 157.0 | Generic Flat Light | 3 | 601 | 28.0 | 0.0 | 0.0 | 0.0 | 0.75 | 0.75 | 0.0 | 0.0 | 6.07 | 244 | 2043 |
| 156.0 | Generic 15' Omni | 1 | 116 | 8.1 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 6.06 | 42 | 124 |
| 156.0 | Round Side Arm | 1 | 199 | 7.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 6.06 | 36 | 229 |
| 132.0 | Samsung Outdoor | 3 | 34 | 1.3 | 1.0 | 8.5 | 4.1 | 0.80 | 0.50 | 0.0 | 0.0 | 5.78 | 7 | 114 |
| 132.0 | Raycap RRFDC-1064- | 2 | 41 | 1.6 | 1.1 | 10.2 | 8.2 | 0.80 | 0.50 | 0.0 | 0.0 | 5.78 | 6 | 88 |
| 132.0 | Samsung B5/B13 | 3 | 108 | 2.5 | 1.3 | 15.0 | 8.1 | 0.80 | 0.50 | 0.0 | 0.0 | 5.78 | 15 | 366 |
| 132.0 | Samsung B2/B66A | 3 | 126 | 2.5 | 1.3 | 15.0 | 10.0 | 0.80 | 0.50 | 0.0 | 0.0 | 5.78 | 15 | 430 |
| 132.0 | Alcatel-Lucent B25 | 3 | 93 | 2.8 | 1.8 | 12.0 | 7.2 | 0.80 | 0.67 | 0.0 | 0.0 | 5.78 | 22 | 310 |
| 132.0 | Alcatel-Lucent B66A | 6 | 114 | 3.3 | 2.2 | 12.0 | 7.3 | 0.80 | 0.67 | 0.0 | 0.0 | 5.78 | 53 | 763 |
| 132.0 | Samsung CBRS | 3 | 136 | 5.4 | 2.4 | 18.8 | 4.8 | 0.80 | 0.58 | 0.0 | 0.0 | 5.78 | 37 | 454 |
| 132.0 | Andrew LNX- | 3 | 110 | 6.3 | 4.0 | 11.9 | 7.1 | 0.80 | 0.69 | 0.0 | 0.0 | 5.78 | 52 | 348 |
| 132.0 | JMA Wireless | 6 | 204 | 11.7 | 5.9 | 15.4 | 10.7 | 0.80 | 0.71 | 0.0 | 0.0 | 5.78 | 196 | 1279 |
| 132.0 | Round Sector Frame | 3 | 542 | 25.3 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 5.78 | 187 | 1807 |
| 132.0 | VZW Unused | 1 | 1152 | 156.0 | 0.0 | 0.0 | 0.0 | 0.80 | 0.90 | 0.0 | 0.0 | 5.78 | 552 | 1310 |
| 50.00 | Generic GPS | 1 | 28 | 1.3 | 1.0 | 9.0 | 6.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.38 | 5 | 30 |
| 50.00 | Stand-Off | 1 | 68 | 2.3 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 4.38 | 9 | 76 |
| Totals | | 121 | 21112 | 1055.2 | | | | | | | | | 3259 | 23217 |

Discrete Appurtenance Properties 1.0D + 1.0W Service

| Elevation (ft) | Description | Qty | Wt. (lb) | EPA (sf) | Length (ft) | Width (in) | Depth (in) | K _a | Orient. Factor | Vert. Ecc.(ft) | M _u (lb-ft) | Q _z (psf) | F _a (WL) (lb) | P _a (DL) (lb) |
|----------------|---------------------|-----|----------|----------|-------------|------------|------------|----------------|----------------|----------------|------------------------|----------------------|--------------------------|--------------------------|
| 180.0 | Generic 15' Omni | 1 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 9.0 | 317.5 | 9.22 | 35 | 40 |
| 180.0 | Generic 15' Omni | 1 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 8.0 | 281.8 | 9.21 | 35 | 40 |
| 180.0 | Generic 15' Omni | 2 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 7.0 | 492.4 | 9.19 | 70 | 80 |
| 180.0 | Generic 8' Omni | 2 | 25 | 2.4 | 8.0 | 3.0 | 3.0 | 1.00 | 1.00 | 2.0 | 74.4 | 9.12 | 37 | 50 |
| 180.0 | Generic 5' Omni | 1 | 10 | 1.0 | 5.0 | 2.0 | 2.0 | 1.00 | 1.00 | 1.0 | 7.7 | 9.11 | 8 | 10 |
| 180.0 | dbSpectra | 1 | 50 | 2.3 | 2.6 | 13.3 | 11.5 | 1.00 | 1.00 | 1.0 | 17.9 | 9.11 | 18 | 50 |
| 180.0 | Round Side Arm | 2 | 150 | 5.2 | 0.0 | 0.0 | 0.0 | 0.90 | 0.90 | 0.0 | 0.0 | 9.09 | 65 | 300 |
| 180.0 | Round Sector Frame | 1 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 9.09 | 111 | 300 |
| 170.0 | Generic 13' Omni | 1 | 40 | 3.9 | 13.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 8.95 | 30 | 40 |
| 166.0 | Ericsson RRUS 4415 | 3 | 46 | 1.6 | 1.3 | 13.2 | 5.4 | 0.80 | 0.50 | 0.0 | 0.0 | 8.89 | 15 | 138 |
| 166.0 | Ericsson Radio 4449 | 3 | 75 | 1.6 | 1.3 | 13.2 | 10.5 | 0.80 | 0.50 | 0.0 | 0.0 | 8.89 | 15 | 225 |

Site Number: 411183

Code:

ANSI/TIA-222-H

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Site Name: WATERFORD CT, CT

Engineering Number: 13251340_C3_05

7/13/2020 9:14:09 AM

Customer: T-MOBILE

Tower Loading

| | | | | | | | | | | | | | | |
|-------|---------------------|-----|-------|-------|------|------|------|------|------|-----|-------|------|------|-------|
| 166.0 | Ericsson Air6449 | 3 | 104 | 5.7 | 2.8 | 20.6 | 8.6 | 0.80 | 0.63 | 0.0 | 0.0 | 8.89 | 65 | 312 |
| 166.0 | Ericsson AIR 21, | 3 | 92 | 6.0 | 4.7 | 12.0 | 7.8 | 0.80 | 0.70 | 0.0 | 0.0 | 8.89 | 77 | 275 |
| 166.0 | Ericsson AIR32 | 3 | 132 | 6.5 | 4.7 | 12.9 | 8.7 | 0.80 | 0.71 | 0.0 | 0.0 | 8.89 | 84 | 397 |
| 166.0 | Round Sector Frame | 3 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 0.75 | 0.75 | 0.0 | 0.0 | 8.89 | 184 | 900 |
| 166.0 | RFS | 3 | 128 | 20.2 | 8.0 | 24.0 | 8.7 | 0.80 | 0.63 | 0.0 | 0.0 | 8.89 | 231 | 384 |
| 157.0 | Kaelus | 6 | 14 | 0.6 | 0.9 | 7.1 | 6.8 | 0.80 | 0.50 | 0.0 | 0.0 | 8.75 | 11 | 83 |
| 157.0 | Powerwave Allgon | 6 | 14 | 1.1 | 1.2 | 9.2 | 2.6 | 0.80 | 0.50 | 2.0 | 39.5 | 8.78 | 20 | 85 |
| 157.0 | Raycap DC6-48-60- | 3 | 20 | 1.3 | 2.0 | 9.7 | 9.7 | 0.80 | 1.00 | 0.0 | 0.0 | 8.75 | 22 | 60 |
| 157.0 | Ericsson RRUS 4426 | 3 | 48 | 1.6 | 1.3 | 13.2 | 5.8 | 0.80 | 0.50 | 0.0 | 0.0 | 8.75 | 15 | 145 |
| 157.0 | Ericsson RRUS 4478 | 3 | 59 | 2.0 | 1.5 | 13.4 | 8.3 | 0.80 | 0.67 | 0.0 | 0.0 | 8.75 | 24 | 178 |
| 157.0 | Ericsson RRUS 4478 | 3 | 56 | 2.0 | 1.5 | 13.5 | 7.8 | 0.80 | 0.67 | 0.0 | 0.0 | 8.75 | 24 | 168 |
| 157.0 | Ericsson RRUS-11 | 3 | 50 | 2.6 | 1.5 | 17.3 | 7.2 | 0.80 | 0.67 | 2.0 | 61.6 | 8.78 | 31 | 150 |
| 157.0 | Ericsson RRUS 32 B2 | 3 | 53 | 2.7 | 2.3 | 12.1 | 7.0 | 0.80 | 0.67 | 2.0 | 65.8 | 8.78 | 33 | 159 |
| 157.0 | Ericsson RRUS-32 | 3 | 77 | 3.3 | 2.5 | 13.3 | 9.5 | 0.80 | 0.71 | 2.0 | 84.3 | 8.78 | 42 | 231 |
| 157.0 | Powerwave Allgon | 3 | 35 | 5.5 | 4.6 | 11.0 | 5.0 | 0.80 | 0.65 | 2.0 | 128.2 | 8.78 | 64 | 105 |
| 157.0 | CCI HPA-65R-BUU-H8 | 3 | 68 | 13.0 | 7.7 | 14.8 | 7.4 | 0.80 | 0.67 | 2.0 | 311.4 | 8.78 | 156 | 204 |
| 157.0 | CCI TPA-65R- | 3 | 82 | 13.3 | 8.0 | 14.4 | 8.6 | 0.80 | 0.69 | 2.0 | 328.6 | 8.78 | 164 | 245 |
| 157.0 | Kathrein Scala | 3 | 115 | 17.4 | 8.0 | 20.0 | 6.9 | 0.80 | 0.63 | 0.0 | 0.0 | 8.75 | 195 | 344 |
| 157.0 | Generic Flat Light | 3 | 400 | 17.9 | 0.0 | 0.0 | 0.0 | 0.75 | 0.75 | 0.0 | 0.0 | 8.75 | 225 | 1200 |
| 156.0 | Generic 15' Omni | 1 | 40 | 4.5 | 15.0 | 3.0 | 3.0 | 1.00 | 1.00 | 0.0 | 0.0 | 8.73 | 33 | 40 |
| 156.0 | Round Side Arm | 1 | 150 | 5.2 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 8.73 | 39 | 150 |
| 132.0 | Samsung Outdoor | 3 | 19 | 0.9 | 1.0 | 8.5 | 4.1 | 0.80 | 0.50 | 0.0 | 0.0 | 8.32 | 7 | 56 |
| 132.0 | Raycap RRFDC-1064- | 2 | 14 | 1.2 | 1.1 | 10.2 | 8.2 | 0.80 | 0.50 | 0.0 | 0.0 | 8.32 | 7 | 28 |
| 132.0 | Samsung B5/B13 | 3 | 70 | 1.9 | 1.3 | 15.0 | 8.1 | 0.80 | 0.50 | 0.0 | 0.0 | 8.32 | 16 | 211 |
| 132.0 | Samsung B2/B66A | 3 | 84 | 1.9 | 1.3 | 15.0 | 10.0 | 0.80 | 0.50 | 0.0 | 0.0 | 8.32 | 16 | 253 |
| 132.0 | Alcatel-Lucent B25 | 3 | 53 | 2.1 | 1.8 | 12.0 | 7.2 | 0.80 | 0.67 | 0.0 | 0.0 | 8.32 | 24 | 159 |
| 132.0 | Alcatel-Lucent B66A | 6 | 67 | 2.6 | 2.2 | 12.0 | 7.3 | 0.80 | 0.67 | 0.0 | 0.0 | 8.32 | 59 | 402 |
| 132.0 | Samsung CBRS | 3 | 75 | 4.5 | 2.4 | 18.8 | 4.8 | 0.80 | 0.58 | 0.0 | 0.0 | 8.32 | 44 | 225 |
| 132.0 | Andrew LNX- | 3 | 30 | 5.1 | 4.0 | 11.9 | 7.1 | 0.80 | 0.69 | 0.0 | 0.0 | 8.32 | 60 | 91 |
| 132.0 | JMA Wireless | 6 | 46 | 9.9 | 5.9 | 15.4 | 10.7 | 0.80 | 0.71 | 0.0 | 0.0 | 8.32 | 238 | 276 |
| 132.0 | Round Sector Frame | 3 | 300 | 14.4 | 0.0 | 0.0 | 0.0 | 0.75 | 0.67 | 0.0 | 0.0 | 8.32 | 154 | 900 |
| 132.0 | VZW Unused | 1 | 790 | 106.9 | 0.0 | 0.0 | 0.0 | 0.80 | 0.90 | 0.0 | 0.0 | 8.32 | 545 | 790 |
| 50.00 | Generic GPS | 1 | 10 | 0.9 | 1.0 | 9.0 | 6.0 | 1.00 | 1.00 | 0.0 | 0.0 | 6.31 | 5 | 10 |
| 50.00 | Stand-Off | 1 | 40 | 1.6 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | 0.0 | 0.0 | 6.31 | 9 | 40 |
| | Totals | 121 | 10527 | 770.0 | | | | | | | | | 3360 | 10527 |

Site Number: 411183

Code:

ANSI/TIA-222-H

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Site Name: WATERFORD CT, CT

Engineering Number: 13251340_C3_05

7/13/2020 9:14:09 AM

Customer: T-MOBILE

Tower Loading

Linear Appurtenance Properties

| Elev From (ft) | Elev To (ft) | Description | Qty | Width (in) | Weight (lb/ft) | Pct In Block | Spread On Faces | Bundling Arrangement | Cluster Dia (in) | Out Of Zone | Spacing (in) | Orientation Factor | Ka Override |
|----------------|--------------|--------------------|-----|------------|----------------|--------------|-----------------|----------------------|------------------|-------------|--------------|--------------------|-------------|
| 0.00 | 189.0 | 7/8" Coax | 1 | 1.09 | 0.33 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 0.00 | 188.0 | 7/8" Coax | 1 | 1.09 | 0.33 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 187.0 | 7/8" Coax | 2 | 1.09 | 0.33 | 100 | 3 | Cluster | 3.22 | N | 1.00 | 1.00 | 0.00 |
| 0.00 | 182.0 | 7/8" Coax | 1 | 1.09 | 0.33 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 0.00 | 181.0 | 7/8" Coax | 1 | 1.09 | 0.33 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 0.00 | 180.0 | Waveguide | 1 | 2.00 | 6.00 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 180.0 | Waveguide | 1 | 2.00 | 6.00 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 0.00 | 170.0 | 7/8" Coax | 1 | 1.09 | 0.33 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 0.00 | 166.0 | 1 5/8" Coax | 12 | 1.98 | 0.82 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 0.00 | 166.0 | Waveguide | 1 | 2.00 | 6.00 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 166.0 | 1 1/4" Hybriflex | 2 | 1.54 | 1.00 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 166.0 | 1 1/4" Hybriflex | 3 | 1.54 | 1.00 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.01 |
| 30.00 | 166.0 | 1 5/8" Hybriflex | 1 | 1.98 | 1.30 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 157.0 | 0.39" (10mm) Fiber | 3 | 0.39 | 0.06 | 100 | 1 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 157.0 | 0.78" (19.7mm) 8 | 6 | 0.78 | 0.59 | 100 | 1 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 157.0 | 1 5/8" Coax | 12 | 1.98 | 0.82 | 100 | 1 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 157.0 | 2" conduit | 1 | 2.38 | 3.65 | 100 | 1 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 157.0 | Waveguide | 1 | 2.00 | 6.00 | 100 | 1 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 156.0 | 1 5/8" Coax | 1 | 1.98 | 0.82 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 0.00 | 132.0 | 1 5/8" Coax | 6 | 1.98 | 0.82 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 0.00 | 132.0 | 1 5/8" Hybriflex | 2 | 1.98 | 1.30 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |
| 30.00 | 50.00 | 1/2" Coax | 1 | 0.63 | 0.15 | 100 | 3 | Individual | 0.00 | N | 1.00 | 1.00 | 0.00 |

Site Number: 411183

Code:

ANSI/TIA-222-H

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Site Name: WATERFORD CT, CT

Engineering Number: 13251340_C3_05

7/13/2020 9:14:09 AM

Customer: T-MOBILE

Equivalent Lateral Force Method

| | |
|--|---------|
| Spectral Response Acceleration for Short Period (S_s): | 0.19 |
| Spectral Response Acceleration at 1.0 Second Period (S_{d1}): | 0.05 |
| Long-Period Transition Period (T_L - Seconds): | 6 |
| Importance Factor (I_p): | 1.00 |
| Site Coefficient F_a : | 1.60 |
| Site Coefficient F_v : | 2.40 |
| Response Modification Coefficient (R): | 3.00 |
| Design Spectral Response Acceleration at Short Period (S_{ds}): | 0.21 |
| Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}): | 0.08 |
| Seismic Response Coefficient (C_s): | 0.05 |
| Upper Limit C_s : | 0.05 |
| Lower Limit C_s : | 0.03 |
| Period based on Rayleigh Method (sec): | 0.62 |
| Redundancy Factor (p): | 1.30 |
| Seismic Force Distribution Exponent (k): | 1.06 |
| Total Unfactored Dead Load: | 60.16 k |
| Seismic Base Shear (E): | 3.55 k |

LoadCase 1.2D + 1.0Ev + 1.0Eh

Seismic

| Section | Height Above Base (ft) | Weight (lb) | W_z (lb-ft) | C_{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|---|------------------------------|----------------|------------------|----------|-----------------------------|---------------------------|
| 9 | 170.00 | 1,706 | 396,739 | 0.059 | 209 | 2,117 |
| 8 | 150.00 | 3,038 | 618,796 | 0.092 | 325 | 3,772 |
| 7 | 130.00 | 3,764 | 658,599 | 0.097 | 346 | 4,672 |
| 6 | 110.00 | 4,583 | 671,693 | 0.099 | 353 | 5,690 |
| 5 | 90.00 | 6,147 | 728,142 | 0.108 | 383 | 7,631 |
| 4 | 70.00 | 7,110 | 645,012 | 0.095 | 339 | 8,826 |
| 3 | 50.00 | 7,349 | 466,582 | 0.069 | 245 | 9,123 |
| 2 | 30.00 | 8,011 | 295,798 | 0.044 | 156 | 9,945 |
| 1 | 10.00 | 7,923 | 91,185 | 0.013 | 48 | 9,835 |
| Generic 15' Omni | 180.00 | 40 | 9,886 | 0.001 | 5 | 50 |
| Generic 15' Omni | 180.00 | 40 | 9,886 | 0.001 | 5 | 50 |
| Generic 15' Omni | 180.00 | 80 | 19,771 | 0.003 | 10 | 99 |
| Generic 8' Omni | 180.00 | 50 | 12,357 | 0.002 | 6 | 62 |
| Generic 5' Omni | 180.00 | 10 | 2,471 | 0.000 | 1 | 12 |
| dbSpectra ATS4TMA4-4 | 180.00 | 50 | 12,357 | 0.002 | 6 | 62 |
| Round Side Arm | 180.00 | 300 | 74,141 | 0.011 | 39 | 372 |
| Round Sector Frame | 180.00 | 300 | 74,141 | 0.011 | 39 | 372 |
| Generic 13' Omni | 170.00 | 40 | 9,304 | 0.001 | 5 | 50 |
| Ericsson RRUS 4415 B25 | 166.00 | 138 | 31,297 | 0.005 | 16 | 171 |
| Ericsson Radio 4449 B71 B85A | 166.00 | 225 | 51,028 | 0.008 | 27 | 279 |
| Ericsson Air6449 B41 | 166.00 | 312 | 70,759 | 0.010 | 37 | 387 |
| Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs) | 166.00 | 275 | 62,254 | 0.009 | 33 | 341 |
| Ericsson AIR32 B66Aa/B2a | 166.00 | 397 | 89,946 | 0.013 | 47 | 492 |
| Round Sector Frame | 166.00 | 900 | 204,113 | 0.030 | 107 | 1,117 |
| RFS APXVAARR24_43-U-NA20 | 166.00 | 384 | 87,020 | 0.013 | 46 | 476 |

Equivalent Lateral Force Method

| | | | | | | |
|---------------------------------------|--------|--------|-----------|-------|-------|--------|
| Kaelus DBCT108F1V92-1 | 157.00 | 83 | 17,828 | 0.003 | 9 | 104 |
| Powerwave Allgon LGP21401 | 157.00 | 85 | 18,085 | 0.003 | 10 | 105 |
| Raycap DC6-48-60-18-8F (23.5" Height) | 157.00 | 60 | 12,826 | 0.002 | 7 | 74 |
| Ericsson RRUS 4426 B66 | 157.00 | 145 | 31,039 | 0.005 | 16 | 180 |
| Ericsson RRUS 4478 B14 | 157.00 | 178 | 38,093 | 0.006 | 20 | 221 |
| Ericsson RRUS 4478 B5 (56.1 lbs) | 157.00 | 168 | 35,977 | 0.005 | 19 | 209 |
| Ericsson RRUS-11 (50 lbs.) | 157.00 | 150 | 32,065 | 0.005 | 17 | 186 |
| Ericsson RRUS 32 B2 | 157.00 | 159 | 33,989 | 0.005 | 18 | 197 |
| Ericsson RRUS-32 (77 lbs) | 157.00 | 231 | 49,380 | 0.007 | 26 | 287 |
| Powerwave Allgon 7770.00 | 157.00 | 105 | 22,446 | 0.003 | 12 | 130 |
| CCI HPA-65R-BUU-H8 | 157.00 | 204 | 43,609 | 0.006 | 23 | 253 |
| CCI TPA-65R-LCUUUU-H8 | 157.00 | 245 | 52,330 | 0.008 | 28 | 304 |
| Kathrein Scala 80010966 | 157.00 | 344 | 73,493 | 0.011 | 39 | 427 |
| Generic Flat Light Sector Frame | 157.00 | 1,200 | 256,521 | 0.038 | 135 | 1,490 |
| Generic 15' Omni | 156.00 | 40 | 8,493 | 0.001 | 4 | 50 |
| Round Side Arm | 156.00 | 150 | 31,848 | 0.005 | 17 | 186 |
| Samsung Outdoor CBRS 20W RRH | 132.00 | 56 | 9,923 | 0.001 | 5 | 69 |
| Raycap RRFDC-1064-PF-48 | 132.00 | 28 | 4,979 | 0.001 | 3 | 35 |
| Samsung B5/B13 RRH-BR04C | 132.00 | 211 | 37,505 | 0.006 | 20 | 262 |
| Samsung B2/B66A RRH-BR049 | 132.00 | 253 | 45,028 | 0.007 | 24 | 314 |
| Alcatel-Lucent B25 RRH4x30 | 132.00 | 159 | 28,276 | 0.004 | 15 | 197 |
| Alcatel-Lucent B66A RRH 4x45 | 132.00 | 402 | 71,490 | 0.011 | 38 | 499 |
| Samsung CBRS 64T64R MMU | 132.00 | 225 | 40,013 | 0.006 | 21 | 279 |
| Andrew LNX-6512DS-A1M | 132.00 | 91 | 16,112 | 0.002 | 8 | 112 |
| JMA Wireless MX06FRO660-02 | 132.00 | 276 | 49,083 | 0.007 | 26 | 343 |
| Round Sector Frame | 132.00 | 900 | 160,052 | 0.024 | 84 | 1,117 |
| VZW Unused Reserve (15396.96 sqin) | 132.00 | 789 | 140,401 | 0.021 | 74 | 980 |
| Generic GPS | 50.00 | 10 | 635 | 0.000 | 0 | 12 |
| Stand-Off | 50.00 | 40 | 2,539 | 0.000 | 1 | 50 |
| | | 60,159 | 6,757,338 | 1.000 | 3,554 | 74,680 |

LoadCase 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

| Section | Height Above Base (ft) | Weight (lb) | W _z (lb-ft) | C _{vx} | Horizontal Force (lb) | Vertical Force (lb) |
|------------------------|------------------------|-------------|------------------------|-----------------|-----------------------|---------------------|
| 9 | 170.00 | 1,706 | 396,739 | 0.059 | 209 | 1,465 |
| 8 | 150.00 | 3,038 | 618,796 | 0.092 | 325 | 2,609 |
| 7 | 130.00 | 3,764 | 658,599 | 0.097 | 346 | 3,232 |
| 6 | 110.00 | 4,583 | 671,693 | 0.099 | 353 | 3,935 |
| 5 | 90.00 | 6,147 | 728,142 | 0.108 | 383 | 5,278 |
| 4 | 70.00 | 7,110 | 645,012 | 0.095 | 339 | 6,104 |
| 3 | 50.00 | 7,349 | 466,582 | 0.069 | 245 | 6,310 |
| 2 | 30.00 | 8,011 | 295,798 | 0.044 | 156 | 6,879 |
| 1 | 10.00 | 7,923 | 91,185 | 0.013 | 48 | 6,803 |
| Generic 15' Omni | 180.00 | 40 | 9,886 | 0.001 | 5 | 34 |
| Generic 15' Omni | 180.00 | 40 | 9,886 | 0.001 | 5 | 34 |
| Generic 15' Omni | 180.00 | 80 | 19,771 | 0.003 | 10 | 69 |
| Generic 8' Omni | 180.00 | 50 | 12,357 | 0.002 | 6 | 43 |
| Generic 5' Omni | 180.00 | 10 | 2,471 | 0.000 | 1 | 9 |
| dbSpectra ATS4TMA4-4 | 180.00 | 50 | 12,357 | 0.002 | 6 | 43 |
| Round Side Arm | 180.00 | 300 | 74,141 | 0.011 | 39 | 258 |
| Round Sector Frame | 180.00 | 300 | 74,141 | 0.011 | 39 | 258 |
| Generic 13' Omni | 170.00 | 40 | 9,304 | 0.001 | 5 | 34 |
| Ericsson RRUS 4415 B25 | 166.00 | 138 | 31,297 | 0.005 | 16 | 118 |

Site Number: 411183

Code: ANSI/TIA-222-H

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Site Name: WATERFORD CT, CT

Engineering Number: 13251340_C3_05

7/13/2020 9:14:09 AM

Customer: T-MOBILE

Equivalent Lateral Force Method

| | | | | | | |
|---|--------|--------|-----------|-------|-------|--------|
| Ericsson Radio 4449 B71 B85A | 166.00 | 225 | 51,028 | 0.008 | 27 | 193 |
| Ericsson Air6449 B41 | 166.00 | 312 | 70,759 | 0.010 | 37 | 268 |
| Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs) | 166.00 | 275 | 62,254 | 0.009 | 33 | 236 |
| Ericsson AIR32 B66Aa/B2a | 166.00 | 397 | 89,946 | 0.013 | 47 | 341 |
| Round Sector Frame | 166.00 | 900 | 204,113 | 0.030 | 107 | 773 |
| RFS APXVAARR24_43-U-NA20 | 166.00 | 384 | 87,020 | 0.013 | 46 | 329 |
| Kaelus DBCT108F1V92-1 | 157.00 | 83 | 17,828 | 0.003 | 9 | 72 |
| Powerwave Allgon LGP21401 | 157.00 | 85 | 18,085 | 0.003 | 10 | 73 |
| Raycap DC6-48-60-18-8F (23.5" Height) | 157.00 | 60 | 12,826 | 0.002 | 7 | 52 |
| Ericsson RRUS 4426 B66 | 157.00 | 145 | 31,039 | 0.005 | 16 | 125 |
| Ericsson RRUS 4478 B14 | 157.00 | 178 | 38,093 | 0.006 | 20 | 153 |
| Ericsson RRUS 4478 B5 (56.1 lbs) | 157.00 | 168 | 35,977 | 0.005 | 19 | 145 |
| Ericsson RRUS-11 (50 lbs.) | 157.00 | 150 | 32,065 | 0.005 | 17 | 129 |
| Ericsson RRUS 32 B2 | 157.00 | 159 | 33,989 | 0.005 | 18 | 137 |
| Ericsson RRUS-32 (77 lbs) | 157.00 | 231 | 49,380 | 0.007 | 26 | 198 |
| Powerwave Allgon 7770.00 | 157.00 | 105 | 22,446 | 0.003 | 12 | 90 |
| CCI HPA-65R-BUU-H8 | 157.00 | 204 | 43,609 | 0.006 | 23 | 175 |
| CCI TPA-65R-LCUUUU-H8 | 157.00 | 245 | 52,330 | 0.008 | 28 | 210 |
| Kathrein Scala 80010966 | 157.00 | 344 | 73,493 | 0.011 | 39 | 295 |
| Generic Flat Light Sector Frame | 157.00 | 1,200 | 256,521 | 0.038 | 135 | 1,030 |
| Generic 15' Omni | 156.00 | 40 | 8,493 | 0.001 | 4 | 34 |
| Round Side Arm | 156.00 | 150 | 31,848 | 0.005 | 17 | 129 |
| Samsung Outdoor CBRS 20W RRH | 132.00 | 56 | 9,923 | 0.001 | 5 | 48 |
| Raycap RRFDC-1064-PF-48 | 132.00 | 28 | 4,979 | 0.001 | 3 | 24 |
| Samsung B5/B13 RRH-BR04C | 132.00 | 211 | 37,505 | 0.006 | 20 | 181 |
| Samsung B2/B66A RRH-BR049 | 132.00 | 253 | 45,028 | 0.007 | 24 | 217 |
| Alcatel-Lucent B25 RRH4x30 | 132.00 | 159 | 28,276 | 0.004 | 15 | 137 |
| Alcatel-Lucent B66A RRH 4x45 | 132.00 | 402 | 71,490 | 0.011 | 38 | 345 |
| Samsung CBRS 64T64R MMU | 132.00 | 225 | 40,013 | 0.006 | 21 | 193 |
| Andrew LNX-6512DS-A1M | 132.00 | 91 | 16,112 | 0.002 | 8 | 78 |
| JMA Wireless MX06FRO660-02 | 132.00 | 276 | 49,083 | 0.007 | 26 | 237 |
| Round Sector Frame | 132.00 | 900 | 160,052 | 0.024 | 84 | 773 |
| VZW Unused Reserve (15396.96 sqin) | 132.00 | 789 | 140,401 | 0.021 | 74 | 678 |
| Generic GPS | 50.00 | 10 | 635 | 0.000 | 0 | 9 |
| Stand-Off | 50.00 | 40 | 2,539 | 0.000 | 1 | 34 |
| | | 60,159 | 6,757,338 | 1.000 | 3,554 | 51,653 |

Site Number: 411183

Code: ANSI/TIA-222-H

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Site Name: WATERFORD CT, CT

Engineering Number: 13251340_C3_05

7/13/2020 9:14:09 AM

Customer: T-MOBILE

Force/Stress Summary

| Section: 1 | | 1 | | Bot Elev (ft): 0.00 | | | | Height (ft): 20.000 | | | | | | | | |
|-------------------------------|----------------------|----------|--------------------|---------------------|-----------|------------|--------------|---------------------|--------------------|------------------|-------------------------|--------------------|------------------|-----------|-------------|--|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | F'y (ksi) | Phic (kip) | Pn Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls | |
| Max Compression Member | | | | | | | | | | | | | | | | |
| LEG | PX - 12" DIA PIPE | -281.43 | 1.2D + 1.0W Normal | 10.02 | 100 | 100 | 100 | 27.8 | 50.0 | 816.60 | 0 | 0 | 0.00 | 0.00 | 34 Member X | |
| HORIZ | PST - 3" DIA PIPE | -7.76 | 1.2D + 1.0W 90 deg | 12.17 | 100 | 100 | 100 | 125.9 | 50.0 | 31.77 | 2 | 0 | 0.00 | 40.44 | 24 Member X | |
| DIAG | PST - 3-1/2" DIA PIP | -12.14 | 1.2D + 1.0W 90 deg | 15.75 | 100 | 100 | 100 | 141.1 | 50.0 | 30.41 | 3 | 0 | 0.00 | 63.46 | 39 Member X | |
| Max Tension Member | | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | Fy (ksi) | Fu (ksi) | Phit (kip) | Pn Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Blk Shear phit Pn (kip) | Use % | Controls | | | |
| LEG | PX - 12" DIA PIPE | 235.05 | 1.2D + 1.0W 60 deg | 50 | 65 | 864.00 | 0 | 0 | 0.00 | 0.00 | | | 27 | Member | | |
| HORIZ | PST - 3" DIA PIPE | 9.23 | 1.2D + 1.0W 90 deg | 50 | 65 | 100.35 | 2 | 0 | 0.00 | 32.43 | 0.00 | | 28 | Bolt Bear | | |
| DIAG | PST - 3-1/2" DIA PIP | 11.13 | 1.2D + 1.0W 90 deg | 50 | 65 | 120.60 | 3 | 0 | 0.00 | 55.09 | 0.00 | | 20 | Bolt Bear | | |
| Max Splice Forces | | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | | |
| Top Tension | | 227.79 | 0.9D + 1.0W 60 deg | 0.00 | 0 | 0 | | | | | | | | | | |
| Top Compression | | 266.34 | 1.2D + 1.0W Normal | 0.00 | 0 | | | | | | | | | | | |
| Bot Tension | | 252.12 | 0.9D + 1.0W 60 deg | 1362.92 | 9 | 24 | 1" A354-BC | | | | | | | | | |
| Bot Compression | | 294.10 | 1.2D + 1.0W Normal | 1584.63 | 31 | | | | | | | | | | | |

| Section: 2 | | 1 | | Bot Elev (ft): 20.00 | | | | Height (ft): 20.000 | | | | | | | | |
|-------------------------------|----------------------|----------|--------------------|----------------------|-----------|------------|--------------|---------------------|--------------------|------------------|-------------------------|--------------------|------------------|-----------|-------------|--|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | F'y (ksi) | Phic (kip) | Pn Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls | |
| Max Compression Member | | | | | | | | | | | | | | | | |
| LEG | PX - 12" DIA PIPE | -254.43 | 1.2D + 1.0W Normal | 10.03 | 100 | 100 | 100 | 27.8 | 50.0 | 816.53 | 0 | 0 | 0.00 | 0.00 | 31 Member X | |
| HORIZ | PST - 3" DIA PIPE | -7.16 | 1.2D + 1.0W 90 deg | 10.88 | 100 | 100 | 100 | 112.6 | 50.0 | 39.73 | 2 | 0 | 0.00 | 40.44 | 18 Member X | |
| DIAG | PST - 3-1/2" DIA PIP | -10.93 | 1.2D + 1.0W 90 deg | 15.29 | 100 | 100 | 100 | 137.0 | 50.0 | 32.26 | 3 | 0 | 0.00 | 63.46 | 33 Member X | |
| Max Tension Member | | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | Fy (ksi) | Fu (ksi) | Phit (kip) | Pn Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Blk Shear phit Pn (kip) | Use % | Controls | | | |
| LEG | PX - 12" DIA PIPE | 218.23 | 0.9D + 1.0W 60 deg | 50 | 65 | 864.00 | 0 | 0 | 0.00 | 0.00 | | | 25 | Member | | |
| HORIZ | PST - 3" DIA PIPE | 7.80 | 1.2D + 1.0W 90 deg | 50 | 65 | 100.35 | 2 | 0 | 0.00 | 32.43 | 0.00 | | 24 | Bolt Bear | | |
| DIAG | PST - 3-1/2" DIA PIP | 9.70 | 1.2D + 1.0W 90 deg | 50 | 65 | 120.60 | 3 | 0 | 0.00 | 55.09 | 0.00 | | 17 | Bolt Bear | | |
| Max Splice Forces | | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | | |
| Top Tension | | 206.62 | 0.9D + 1.0W 60 deg | 0.00 | 0 | 0 | | | | | | | | | | |
| Top Compression | | 240.02 | 1.2D + 1.0W Normal | 0.00 | 0 | | | | | | | | | | | |
| Bot Tension | | 227.79 | 0.9D + 1.0W 60 deg | 872.27 | 26 | 16 | 1 A325 | | | | | | | | | |
| Bot Compression | | 0.00 | | 0.00 | 0 | | | | | | | | | | | |

Force/Stress Summary

| Section: 3 | | 1 | | Bot Elev (ft): 40.00 | | | | Height (ft): 20.000 | | | | | | | |
|-------------------------------|----------------------|----------|--------------------|----------------------|--------------|--------|-----------|---------------------|---------------|-----------|-----------|--------------------|------------------|--------------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | F'y (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | PX - 10" DIA PIPE | -225.28 | 1.2D + 1.0W Normal | 10.03 | 100 | 100 | 100 | 33.1 | 50.0 | 668.58 | 0 | 0 | 0.00 | 0.00 | 33 Member X |
| HORIZ | PST - 2-1/2" DIA PIP | -7.65 | 0.9D + 1.0W 90 deg | 9.570 | 100 | 100 | 100 | 121.3 | 50.0 | 26.18 | 2 | 0 | 0.00 | 38.00 | 29 Member X |
| DIAG | PX - 3" DIA PIPE | -12.02 | 1.2D + 1.0W 90 deg | 14.28 | 100 | 100 | 100 | 150.4 | 50.0 | 30.17 | 3 | 0 | 0.00 | 84.24 | 39 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| LEG | PX - 10" DIA PIPE | 190.44 | 1.2D + 1.0W 60 deg | 50 | 65 | 724.50 | 0 | 0 | 0.00 | 0.00 | | | | 26 Member | |
| HORIZ | PST - 2-1/2" DIA PIP | 8.03 | 1.2D + 1.0W 90 deg | 50 | 65 | 76.68 | 2 | 0 | 0.00 | 30.48 | | | 0.00 | 26 Bolt Bear | |
| DIAG | PX - 3" DIA PIPE | 10.98 | 1.2D + 1.0W 90 deg | 50 | 65 | 135.90 | 3 | 0 | 0.00 | 73.13 | | | 0.00 | 15 Bolt Bear | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | |
| | Top Tension | 180.45 | 0.9D + 1.0W 60 deg | | 0.00 | 0 | 0 | | | | | | | | |
| | Top Compression | 208.61 | 1.2D + 1.0W Normal | | 0.00 | 0 | | | | | | | | | |
| | Bot Tension | 206.62 | 0.9D + 1.0W 60 deg | | 872.27 | 24 | 16 | 1 A325 | | | | | | | |
| | Bot Compression | 0.00 | | | 0.00 | 0 | | | | | | | | | |

| Section: 4 | | 1 | | Bot Elev (ft): 60.00 | | | | Height (ft): 20.000 | | | | | | | |
|-------------------------------|----------------------|----------|--------------------|----------------------|--------------|--------|-----------|---------------------|---------------|-----------|-----------|--------------------|------------------|--------------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | F'y (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | PX - 10" DIA PIPE | -193.64 | 1.2D + 1.0W Normal | 10.03 | 100 | 100 | 100 | 33.2 | 50.0 | 668.56 | 0 | 0 | 0.00 | 0.00 | 28 Member X |
| HORIZ | PST - 2-1/2" DIA PIP | -6.84 | 1.2D + 1.0W 90 deg | 8.298 | 100 | 100 | 100 | 105.1 | 50.0 | 34.17 | 2 | 0 | 0.00 | 38.00 | 20 Member X |
| DIAG | PX - 3" DIA PIPE | -11.67 | 1.2D + 1.0W 90 deg | 13.42 | 100 | 100 | 100 | 141.3 | 50.0 | 34.18 | 3 | 0 | 0.00 | 84.24 | 34 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| LEG | PX - 10" DIA PIPE | 167.90 | 0.9D + 1.0W 60 deg | 50 | 65 | 724.50 | 0 | 0 | 0.00 | 0.00 | | | | 23 Member | |
| HORIZ | PST - 2-1/2" DIA PIP | 7.22 | 1.2D + 1.0W 90 deg | 50 | 65 | 76.68 | 2 | 0 | 0.00 | 30.48 | | | 0.00 | 23 Bolt Bear | |
| DIAG | PX - 3" DIA PIPE | 10.72 | 1.2D + 1.0W 90 deg | 50 | 65 | 135.90 | 3 | 0 | 0.00 | 73.13 | | | 0.00 | 14 Bolt Bear | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | |
| | Top Tension | 153.45 | 0.9D + 1.0W 60 deg | | 0.00 | 0 | 0 | | | | | | | | |
| | Top Compression | 176.75 | 1.2D + 1.0W Normal | | 0.00 | 0 | | | | | | | | | |
| | Bot Tension | 180.45 | 0.9D + 1.0W 60 deg | | 654.20 | 28 | 12 | 1 A325 | | | | | | | |
| | Bot Compression | 0.00 | | | 0.00 | 0 | | | | | | | | | |

Force/Stress Summary

| Section: 5 | | 1 | | Bot Elev (ft): 80.00 | | | | Height (ft): 20.000 | | | | | | | |
|-------------------------------|----------------------|----------|--------------------|----------------------|-----------|---------------|-----------|---------------------|--------------------|------------------|-------------------------|--------------------|------------------|-----------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | F'y (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | PSP - 8.75" OD x 0.5 | -159.99 | 1.2D + 1.0W Normal | 10.03 | 100 | 100 | 100 | 41.2 | 50.0 | 515.18 | 0 | 0 | 0.00 | 0.00 | 31 Member X |
| HORIZ | PX - 2" DIA PIPE | -6.61 | 1.2D + 1.0W 90 deg | 7.035 | 100 | 100 | 100 | 110.2 | 50.0 | 27.40 | 2 | 0 | 0.00 | 40.81 | 24 Member X |
| DIAG | PX - 3" DIA PIPE | -12.17 | 1.2D + 1.0W 90 deg | 12.59 | 100 | 100 | 100 | 132.6 | 50.0 | 38.81 | 3 | 0 | 0.00 | 84.24 | 31 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | Fy (ksi) | Fu (ksi) | Phit Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Blk Shear phit Pn (kip) | Use % | Controls | | |
| LEG | PSP - 8.75" OD x 0.5 | 136.26 | 1.2D + 1.0W 60 deg | 50 | 65 | 583.15 | 0 | 0 | 0.00 | 0.00 | | | 23 | Member | |
| HORIZ | PX - 2" DIA PIPE | 6.84 | 1.2D + 1.0W 90 deg | 50 | 65 | 66.60 | 2 | 0 | 0.00 | 32.73 | 0.00 | | 20 | Bolt Bear | |
| DIAG | PX - 3" DIA PIPE | 11.71 | 1.2D + 1.0W 90 deg | 50 | 65 | 135.90 | 3 | 0 | 0.00 | 73.13 | 0.00 | | 16 | Bolt Bear | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 122.08 | 0.9D + 1.0W 60 deg | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 141.10 | 1.2D + 1.0W Normal | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 153.45 | 0.9D + 1.0W 60 deg | 654.20 | 23 | 12 | 1 A325 | | | | | | | | |
| Bot Compression | | 0.00 | | 0.00 | 0 | | | | | | | | | | |

| Section: 6 | | 1 | | Bot Elev (ft): 100.0 | | | | Height (ft): 20.000 | | | | | | | |
|-------------------------------|----------------------|----------|--------------------|----------------------|-----------|---------------|-----------|---------------------|--------------------|------------------|-------------------------|--------------------|------------------|-----------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | F'y (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | PX - 6" DIA PIPE | -128.20 | 1.2D + 1.0W Normal | 6.68 | 100 | 100 | 100 | 36.5 | 50.0 | 342.89 | 0 | 0 | 0.00 | 0.00 | 37 Member X |
| HORIZ | PST - 2" DIA PIPE | -6.64 | 1.2D + 1.0W 90 deg | 6.072 | 100 | 100 | 100 | 92.6 | 50.0 | 25.73 | 2 | 0 | 0.00 | 24.02 | 25 Member X |
| DIAG | PST - 2-1/2" DIA PIP | -10.32 | 1.2D + 1.0W 90 deg | 9.258 | 100 | 100 | 100 | 117.3 | 50.0 | 27.97 | 3 | 0 | 0.00 | 47.50 | 36 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | Fy (ksi) | Fu (ksi) | Phit Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Blk Shear phit Pn (kip) | Use % | Controls | | |
| LEG | PX - 6" DIA PIPE | 110.75 | 0.9D + 1.0W 60 deg | 50 | 65 | 378.00 | 0 | 0 | 0.00 | 0.00 | | | 29 | Member | |
| HORIZ | PST - 2" DIA PIPE | 6.79 | 1.2D + 1.0W 90 deg | 50 | 65 | 48.15 | 2 | 0 | 0.00 | 19.22 | 0.00 | | 35 | Bolt Bear | |
| DIAG | PST - 2-1/2" DIA PIP | 9.90 | 1.2D + 1.0W 90 deg | 50 | 65 | 76.68 | 3 | 0 | 0.00 | 41.17 | 0.00 | | 24 | Bolt Bear | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | | |
| Top Tension | | 84.23 | 0.9D + 1.0W 60 deg | 0.00 | 0 | 0 | | | | | | | | | |
| Top Compression | | 99.68 | 1.2D + 1.0W Normal | 0.00 | 0 | | | | | | | | | | |
| Bot Tension | | 122.08 | 0.9D + 1.0W 60 deg | 436.14 | 28 | 8 | 1 A325 | | | | | | | | |
| Bot Compression | | 0.00 | | 0.00 | 0 | | | | | | | | | | |

Force/Stress Summary

| Section: 7 | | 1 | | Bot Elev (ft): 120.0 | | | | Height (ft): 20.000 | | | | | | | |
|-------------------------------|----------------------|----------|--------------------|----------------------|--------------|--------|-----------|---------------------|---------------|-----------|-----------|--------------------|------------------|--------------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | F'y (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | PSP - ROHN 5 EH | -85.52 | 1.2D + 1.0W Normal | 6.68 | 100 | 100 | 100 | 43.6 | 50.0 | 239.34 | 0 | 0 | 0.00 | 0.00 | 35 Member X |
| HORIZ | PST - 1-1/2" DIA PIP | -6.32 | 1.2D + 1.0W 90 deg | 5.030 | 100 | 100 | 100 | 96.9 | 50.0 | 18.10 | 2 | 0 | 0.00 | 22.62 | 34 Member X |
| DIAG | PST - 2-1/2" DIA PIP | -10.77 | 1.2D + 1.0W 90 deg | 8.566 | 100 | 100 | 100 | 108.5 | 50.0 | 32.40 | 3 | 0 | 0.00 | 47.50 | 33 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| LEG | PSP - ROHN 5 EH | 69.21 | 1.2D + 1.0W 60 deg | 50 | 65 | 274.95 | 0 | 0 | 0.00 | 0.00 | | | | 25 Member | |
| HORIZ | PST - 1-1/2" DIA PIP | 6.43 | 1.2D + 1.0W 90 deg | 50 | 65 | 35.96 | 2 | 0 | 0.00 | 18.10 | | | 0.00 | 35 Bolt Bear | |
| DIAG | PST - 2-1/2" DIA PIP | 10.44 | 1.2D + 1.0W 90 deg | 50 | 65 | 76.68 | 3 | 0 | 0.00 | 41.17 | | | 0.00 | 25 Bolt Bear | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | |
| | Top Tension | 46.18 | 0.9D + 1.0W 60 deg | | 0.00 | 0 | 0 | | | | | | | | |
| | Top Compression | 56.92 | 1.2D + 1.0W Normal | | 0.00 | 0 | | | | | | | | | |
| | Bot Tension | 84.23 | 0.9D + 1.0W 60 deg | | 327.10 | 26 | 6 | 1 A325 | | | | | | | |
| | Bot Compression | 0.00 | | | 0.00 | 0 | | | | | | | | | |

| Section: 8 | | 1 | | Bot Elev (ft): 140.0 | | | | Height (ft): 20.000 | | | | | | | |
|-------------------------------|----------------------|----------|--------------------|----------------------|--------------|--------|-----------|---------------------|---------------|-----------|-----------|--------------------|------------------|--------------|-------------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | F'y (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | |
| LEG | PST - 4" DIA PIPE | -42.14 | 1.2D + 1.0W Normal | 6.67 | 100 | 100 | 100 | 53.0 | 50.0 | 116.18 | 0 | 0 | 0.00 | 0.00 | 36 Member X |
| HORIZ | PST - 2" DIA PIPE | -5.14 | 1.2D + 1.0W 90 deg | 4.325 | 100 | 100 | 100 | 66.0 | 50.0 | 35.03 | 2 | 0 | 0.00 | 24.02 | 14 Member X |
| DIAG | PST - 2-1/2" DIA PIP | -10.09 | 1.2D + 1.0W 90 deg | 7.955 | 100 | 100 | 100 | 100.8 | 50.0 | 36.48 | 3 | 0 | 0.00 | 47.50 | 27 Member X |
| Max Tension Member | | | | | | | | | | | | | | | |
| LEG | PST - 4" DIA PIPE | 32.31 | 0.9D + 1.0W 60 deg | 50 | 65 | 142.65 | 0 | 0 | 0.00 | 0.00 | | | | 22 Member | |
| HORIZ | PST - 2" DIA PIPE | 5.24 | 1.2D + 1.0W 90 deg | 50 | 65 | 48.15 | 2 | 0 | 0.00 | 19.22 | | | 0.00 | 27 Bolt Bear | |
| DIAG | PST - 2-1/2" DIA PIP | 9.85 | 1.2D + 1.0W 90 deg | 50 | 65 | 76.68 | 3 | 0 | 0.00 | 41.17 | | | 0.00 | 23 Bolt Bear | |
| Max Splice Forces | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | |
| | Top Tension | 8.23 | 0.9D + 1.0W 60 deg | | 0.00 | 0 | 0 | | | | | | | | |
| | Top Compression | 15.92 | 1.2D + 1.0W Normal | | 0.00 | 0 | | | | | | | | | |
| | Bot Tension | 46.18 | 0.9D + 1.0W 60 deg | | 218.07 | 21 | 4 | 1 A325 | | | | | | | |
| | Bot Compression | 0.00 | | | 0.00 | 0 | | | | | | | | | |

Site Number: 411183

Code: ANSI/TIA-222-H

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Site Name: WATERFORD CT, CT

Engineering Number: 13251340_C3_05

7/13/2020 9:14:09 AM

Customer: T-MOBILE

Force/Stress Summary

| Section: 9 | | 1 | | Bot Elev (ft): 160.0 | Height (ft): 20.000 | | | | | | | | | | | |
|-------------------------------|----------------------|----------|----------------------|----------------------|---------------------|--------------|-------|-----------|---------------|-----------|-----------|--------------------|------------------|-------------------------|-----------|----------|
| | | Pu (kip) | Load Case | Len (ft) | Bracing % | | | F'y (ksi) | Phic Pn (kip) | Num Bolts | Num Holes | Shear phiRnv (kip) | Bear phiRn (kip) | Blk Shear phiT Pn (kip) | Use % | Controls |
| Max Compression Member | | | | | | | | | | | | | | | | |
| LEG | PST - 3" DIA PIPE | -7.68 | 1.2D + 1.0W Normal | 6.67 | 100 | 100 | 100 | 69.0 | 50.0 | 70.87 | 0 | 0 | 0.00 | 0.00 | 10 | Member X |
| HORIZ | PST - 1-1/2" DIA PIP | -2.38 | 1.2D + 1.0W Normal | 4.280 | 100 | 100 | 100 | 82.4 | 50.0 | 21.87 | 2 | 0 | 0.00 | 22.62 | 10 | Member X |
| DIAG | PST - 2" DIA PIPE | -4.21 | 1.2D + 1.0W 90 deg | 7.931 | 100 | 100 | 100 | 120.9 | 50.0 | 16.53 | 3 | 0 | 0.00 | 36.04 | 25 | Member X |
| Max Tension Member | | | | | | | | | | | | | | | | |
| LEG | PST - 3" DIA PIPE | 3.31 | 0.9D + 1.0W 60 deg | 50 | 65 | 100.35 | 0 | 0 | 0.00 | 0.00 | | | | 3 | Member | |
| HORIZ | PST - 1-1/2" DIA PIP | 2.26 | 1.2D + 1.0W 60 deg | 50 | 65 | 35.96 | 2 | 0 | 0.00 | 18.10 | | | 0.00 | 12 | Bolt Bear | |
| DIAG | PST - 2" DIA PIPE | 4.07 | 1.2D + 1.0W 90 deg | 50 | 65 | 48.15 | 3 | 0 | 0.00 | 31.23 | | | 0.00 | 13 | Bolt Bear | |
| Max Splice Forces | | | | | | | | | | | | | | | | |
| | | Pu (kip) | Load Case | | | phiRnt (kip) | Use % | Num Bolts | Bolt Type | | | | | | | |
| | Top Tension | 0.00 | | | | 0.00 | 0 | 0 | | | | | | | | |
| | Top Compression | 0.89 | 1.2D + 1.0Di + 1.0Wi | | | 0.00 | 0 | | | | | | | | | |
| | Bot Tension | 8.23 | 0.9D + 1.0W 60 deg | | | 166.22 | 5 | 4 | 0.875" A325 | | | | | | | |
| | Bot Compression | 0.00 | | | | 0.00 | 0 | | | | | | | | | |

Site Number: 411183

Code: ANSI/TIA-222-H

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Site Name: WATERFORD CT, CT

Engineering Number: 13251340_C3_05

7/13/2020 9:14:09 AM

Customer: T-MOBILE

Detailed Reactions

| Load Case | Radius (ft) | Elevation (ft) | Azimuth (deg) | Node | FX (kip) | FY (kip) | FZ (kip) | (-) = Uplift (+) = Down |
|---------------------------------------|-------------|----------------|---------------|------|----------|----------|----------|-------------------------|
| 1.2D + 1.0W Normal | 14.75 | 00.00 | 0 | 1 | 0.00 | 293.13 | -33.54 | |
| | 14.75 | 00.00 | 120 | 1a | 9.47 | -110.47 | -10.36 | |
| | 14.75 | 00.00 | 240 | 1b | -9.47 | -110.47 | -10.36 | |
| 1.2D + 1.0W 60 deg | 14.75 | 00.00 | 0 | 1 | -4.16 | 158.61 | -17.97 | |
| | 14.75 | 00.00 | 120 | 1a | -17.63 | 157.94 | 5.38 | |
| | 14.75 | 00.00 | 240 | 1b | -25.24 | -244.35 | -14.56 | |
| 1.2D + 1.0W 90 deg | 14.75 | 00.00 | 0 | 1 | -4.86 | 24.06 | -2.32 | |
| | 14.75 | 00.00 | 120 | 1a | -26.63 | 256.33 | 12.62 | |
| | 14.75 | 00.00 | 240 | 1b | -22.81 | -208.20 | -10.30 | |
| 0.9D + 1.0W Normal | 14.75 | 00.00 | 0 | 1 | 0.00 | 286.96 | -32.98 | |
| | 14.75 | 00.00 | 120 | 1a | 9.97 | -116.41 | -10.66 | |
| | 14.75 | 00.00 | 240 | 1b | -9.97 | -116.41 | -10.66 | |
| 0.9D + 1.0W 60 deg | 14.75 | 00.00 | 0 | 1 | -4.16 | 152.50 | -17.39 | |
| | 14.75 | 00.00 | 120 | 1a | -17.12 | 151.84 | 5.09 | |
| | 14.75 | 00.00 | 240 | 1b | -25.74 | -250.20 | -14.85 | |
| 0.9D + 1.0W 90 deg | 14.75 | 00.00 | 0 | 1 | -4.87 | 18.05 | -1.74 | |
| | 14.75 | 00.00 | 120 | 1a | -26.12 | 250.16 | 12.33 | |
| | 14.75 | 00.00 | 240 | 1b | -23.31 | -214.07 | -10.59 | |
| 1.2D + 1.0Di + 1.0Wi Normal | 14.75 | 00.00 | 0 | 1 | 0.00 | 129.71 | -13.01 | |
| | 14.75 | 00.00 | 120 | 1a | 1.15 | 3.07 | -2.27 | |
| | 14.75 | 00.00 | 240 | 1b | -1.15 | 3.07 | -2.27 | |
| 1.2D + 1.0Di + 1.0Wi 60 deg | 14.75 | 00.00 | 0 | 1 | -1.39 | 87.39 | -7.96 | |
| | 14.75 | 00.00 | 120 | 1a | -7.58 | 87.23 | 2.78 | |
| | 14.75 | 00.00 | 240 | 1b | -6.21 | -38.77 | -3.58 | |
| 1.2D + 1.0Di + 1.0Wi 90 deg | 14.75 | 00.00 | 0 | 1 | -1.61 | 45.28 | -2.92 | |
| | 14.75 | 00.00 | 120 | 1a | -10.49 | 118.21 | 5.13 | |
| | 14.75 | 00.00 | 240 | 1b | -5.45 | -27.65 | -2.21 | |
| 1.2D + 1.0Ev + 1.0Eh Normal M1 | 14.75 | 00.00 | 0 | 1 | 0.00 | 43.54 | -4.47 | |
| | 14.75 | 00.00 | 120 | 1a | -1.29 | 14.59 | 0.48 | |
| | 14.75 | 00.00 | 240 | 1b | 1.29 | 14.59 | 0.48 | |
| 1.2D + 1.0Ev + 1.0Eh 60 deg M1 | 14.75 | 00.00 | 0 | 1 | -0.23 | 33.89 | -3.43 | |
| | 14.75 | 00.00 | 120 | 1a | -3.09 | 33.89 | 1.51 | |
| | 14.75 | 00.00 | 240 | 1b | 0.28 | 4.93 | 0.16 | |
| 1.2D + 1.0Ev + 1.0Eh 90 deg M1 | 14.75 | 00.00 | 0 | 1 | -0.27 | 24.24 | -2.39 | |
| | 14.75 | 00.00 | 120 | 1a | -3.70 | 40.96 | 1.98 | |
| | 14.75 | 00.00 | 240 | 1b | 0.45 | 7.52 | 0.42 | |
| 0.9D - 1.0Ev + 1.0Eh Normal M1 | 14.75 | 00.00 | 0 | 1 | 0.00 | 36.05 | -3.73 | |
| | 14.75 | 00.00 | 120 | 1a | -0.65 | 7.12 | 0.11 | |
| | 14.75 | 00.00 | 240 | 1b | 0.65 | 7.12 | 0.11 | |
| 0.9D - 1.0Ev + 1.0Eh 60 deg M1 | 14.75 | 00.00 | 0 | 1 | -0.23 | 26.41 | -2.69 | |
| | 14.75 | 00.00 | 120 | 1a | -2.45 | 26.41 | 1.14 | |
| | 14.75 | 00.00 | 240 | 1b | -0.36 | -2.53 | -0.21 | |
| 0.9D - 1.0Ev + 1.0Eh 90 deg M1 | 14.75 | 00.00 | 0 | 1 | -0.27 | 16.76 | -1.66 | |
| | 14.75 | 00.00 | 120 | 1a | -3.06 | 33.47 | 1.61 | |

Site Number: 411183

Code:

ANSI/TIA-222-H

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Site Name: WATERFORD CT, CT

Engineering Number: 13251340_C3_05

7/13/2020 9:14:10 AM

Customer: T-MOBILE

| | | | | | | | |
|-----------------------------------|--------------|--------------|------------|-----------|--------------|---------------|--------------|
| | 14.75 | 00.00 | 240 | 1b | -0.19 | 0.06 | 0.05 |
| 1.0D + 1.0W Service Normal | 14.75 | 00.00 | 0 | 1 | 0.00 | 82.02 | -9.21 |
| | 14.75 | 00.00 | 120 | 1a | 0.99 | -10.93 | -1.72 |
| | 14.75 | 00.00 | 240 | 1b | -0.99 | -10.93 | -1.72 |
| 1.0D + 1.0W Service 60 deg | 14.75 | 00.00 | 0 | 1 | -0.99 | 51.04 | -5.57 |
| | 14.75 | 00.00 | 120 | 1a | -5.32 | 50.89 | 1.93 |
| | 14.75 | 00.00 | 240 | 1b | -4.64 | -41.76 | -2.68 |
| 1.0D + 1.0W Service 90 deg | 14.75 | 00.00 | 0 | 1 | -1.15 | 20.05 | -1.93 |
| | 14.75 | 00.00 | 120 | 1a | -7.42 | 73.55 | 3.62 |
| | 14.75 | 00.00 | 240 | 1b | -4.08 | -33.44 | -1.69 |

| | | | | | | |
|-------------|-------------|------------------|-------------------|--------------|-------------------|--------------------|
| Max Uplift: | 250.20(kip) | Moment Ice: | 1,868.07 (kip-ft) | Moment: | 5,953.63 (kip-ft) | 1.2D + 1.0W Normal |
| Max Down: | 293.13(kip) | Total Down Ice: | 135.84 (kip) | Total Down: | 72.19 (kip) | |
| Max Shear: | 33.54 (kip) | Total Shear Ice: | 17.56 (kip) | Total Shear: | 54.27 (kip) | |

Deflections and Rotations

| Load Case | Elevation (ft) | Deflection (ft) | Twist (deg) | Sway (deg) | Resultant (deg) |
|---|----------------|-----------------|-------------|------------|-----------------|
| 126 mph Normal with No Ice | 50.00 | 0.052 | 0.0051 | 0.1048 | 0.1049 |
| 126 mph Normal with No Ice | 133.33 | 0.360 | 0.0100 | 0.3490 | 0.3491 |
| 126 mph Normal with No Ice | 153.33 | 0.493 | 0.0038 | 0.3989 | 0.3989 |
| 126 mph Normal with No Ice | 160.00 | 0.542 | 0.0016 | 0.5090 | 0.5090 |
| 126 mph Normal with No Ice | 166.67 | 0.592 | 0.0018 | 0.4295 | 0.4295 |
| 126 mph Normal with No Ice | 180.00 | 0.692 | 0.0075 | 0.7522 | 0.7523 |
| 126 mph 60 degree with No Ice | 50.00 | 0.052 | 0.0065 | 0.1046 | 0.1047 |
| 126 mph 60 degree with No Ice | 133.33 | 0.359 | 0.0248 | 0.3455 | 0.3456 |
| 126 mph 60 degree with No Ice | 153.33 | 0.489 | 0.0401 | 0.4221 | 0.4237 |
| 126 mph 60 degree with No Ice | 160.00 | 0.538 | 0.0462 | 0.3893 | 0.3920 |
| 126 mph 60 degree with No Ice | 166.67 | 0.587 | 0.0573 | 0.4195 | 0.4234 |
| 126 mph 60 degree with No Ice | 180.00 | 0.683 | 0.0785 | 0.3855 | 0.3934 |
| 126 mph 90 degree with No Ice | 50.00 | 0.052 | -0.0066 | 0.1046 | 0.1048 |
| 126 mph 90 degree with No Ice | 133.33 | 0.358 | -0.0196 | 0.3444 | 0.3450 |
| 126 mph 90 degree with No Ice | 153.33 | 0.488 | -0.0255 | 0.4300 | 0.4307 |
| 126 mph 90 degree with No Ice | 160.00 | 0.536 | -0.0280 | 0.3396 | 0.3408 |
| 126 mph 90 degree with No Ice | 166.67 | 0.585 | -0.0317 | 0.4159 | 0.4162 |
| 126 mph 90 degree with No Ice | 180.00 | 0.680 | -0.0381 | 0.0899 | 0.0972 |
| 126 mph Normal with No Ice (Reduced DL) | 50.00 | 0.052 | 0.0051 | 0.1047 | 0.1049 |
| 126 mph Normal with No Ice (Reduced DL) | 133.33 | 0.360 | 0.0100 | 0.3485 | 0.3487 |
| 126 mph Normal with No Ice (Reduced DL) | 153.33 | 0.492 | 0.0038 | 0.3984 | 0.3984 |
| 126 mph Normal with No Ice (Reduced DL) | 160.00 | 0.542 | 0.0016 | 0.5085 | 0.5085 |
| 126 mph Normal with No Ice (Reduced DL) | 166.67 | 0.592 | 0.0018 | 0.4290 | 0.4290 |
| 126 mph Normal with No Ice (Reduced DL) | 180.00 | 0.691 | 0.0075 | 0.7517 | 0.7517 |
| 126 mph 60 deg with No Ice (Reduced DL) | 50.00 | 0.052 | 0.0065 | 0.1045 | 0.1046 |
| 126 mph 60 deg with No Ice (Reduced DL) | 133.33 | 0.358 | 0.0247 | 0.3452 | 0.3452 |
| 126 mph 60 deg with No Ice (Reduced DL) | 153.33 | 0.489 | 0.0400 | 0.4216 | 0.4232 |
| 126 mph 60 deg with No Ice (Reduced DL) | 160.00 | 0.537 | 0.0461 | 0.3887 | 0.3915 |
| 126 mph 60 deg with No Ice (Reduced DL) | 166.67 | 0.586 | 0.0572 | 0.4190 | 0.4229 |
| 126 mph 60 deg with No Ice (Reduced DL) | 180.00 | 0.683 | 0.0784 | 0.3851 | 0.3931 |
| 126 mph 90 deg with No Ice (Reduced DL) | 50.00 | 0.052 | -0.0066 | 0.1045 | 0.1047 |
| 126 mph 90 deg with No Ice (Reduced DL) | 133.33 | 0.358 | -0.0196 | 0.3440 | 0.3446 |
| 126 mph 90 deg with No Ice (Reduced DL) | 153.33 | 0.488 | -0.0255 | 0.4295 | 0.4302 |
| 126 mph 90 deg with No Ice (Reduced DL) | 160.00 | 0.536 | -0.0280 | 0.3391 | 0.3403 |
| 126 mph 90 deg with No Ice (Reduced DL) | 166.67 | 0.584 | -0.0317 | 0.4154 | 0.4157 |
| 126 mph 90 deg with No Ice (Reduced DL) | 180.00 | 0.680 | -0.0381 | 0.0894 | 0.0968 |
| 50 mph Normal with 1.00 in Radial Ice | 50.00 | 0.018 | 0.0017 | 0.0331 | 0.0332 |
| 50 mph Normal with 1.00 in Radial Ice | 133.33 | 0.110 | 0.0033 | 0.1022 | 0.1023 |
| 50 mph Normal with 1.00 in Radial Ice | 153.33 | 0.148 | 0.0018 | 0.1165 | 0.1165 |
| 50 mph Normal with 1.00 in Radial Ice | 160.00 | 0.163 | 0.0013 | 0.1376 | 0.1377 |
| 50 mph Normal with 1.00 in Radial Ice | 166.67 | 0.177 | 0.0003 | 0.1256 | 0.1256 |
| 50 mph Normal with 1.00 in Radial Ice | 180.00 | 0.206 | 0.0013 | 0.2151 | 0.2151 |
| 50 mph 60 deg with 1.00 in Radial Ice | 50.00 | 0.019 | 0.0018 | 0.0329 | 0.0329 |
| 50 mph 60 deg with 1.00 in Radial Ice | 133.33 | 0.110 | 0.0048 | 0.1010 | 0.1010 |
| 50 mph 60 deg with 1.00 in Radial Ice | 153.33 | 0.148 | 0.0055 | 0.1197 | 0.1198 |
| 50 mph 60 deg with 1.00 in Radial Ice | 160.00 | 0.161 | 0.0059 | 0.1139 | 0.1141 |
| 50 mph 60 deg with 1.00 in Radial Ice | 166.67 | 0.176 | 0.0064 | 0.1196 | 0.1197 |
| 50 mph 60 deg with 1.00 in Radial Ice | 180.00 | 0.203 | 0.0089 | 0.1100 | 0.1104 |
| 50 mph 90 deg with 1.00 in Radial Ice | 50.00 | 0.018 | -0.0021 | 0.0330 | 0.0331 |
| 50 mph 90 deg with 1.00 in Radial Ice | 133.33 | 0.110 | -0.0058 | 0.1011 | 0.1011 |
| 50 mph 90 deg with 1.00 in Radial Ice | 153.33 | 0.148 | -0.0072 | 0.1216 | 0.1219 |
| 50 mph 90 deg with 1.00 in Radial Ice | 160.00 | 0.162 | -0.0078 | 0.1055 | 0.1058 |
| 50 mph 90 deg with 1.00 in Radial Ice | 166.67 | 0.176 | -0.0087 | 0.1183 | 0.1184 |
| 50 mph 90 deg with 1.00 in Radial Ice | 180.00 | 0.203 | -0.0105 | 0.0280 | 0.0296 |
| Seismic Normal M1 | 50.00 | 0.004 | 0.0004 | 0.0077 | 0.0077 |

Site Number: 411183

Code:

ANSI/TIA-222-H

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Site Name: WATERFORD CT, CT

Engineering Number: 13251340_C3_05

7/13/2020 9:14:10 AM

Customer: T-MOBILE

| | | | | | |
|-------------------------------------|--------|-------|---------|--------|--------|
| Seismic Normal M1 | 133.33 | 0.027 | 0.0011 | 0.0267 | 0.0267 |
| Seismic Normal M1 | 153.33 | 0.037 | 0.0011 | 0.0318 | 0.0318 |
| Seismic Normal M1 | 160.00 | 0.041 | 0.0011 | 0.0326 | 0.0326 |
| Seismic Normal M1 | 166.67 | 0.044 | 0.0010 | 0.0336 | 0.0336 |
| Seismic Normal M1 | 180.00 | 0.052 | 0.0010 | 0.0330 | 0.0330 |
| Seismic 60 deg M1 | 50.00 | 0.004 | 0.0004 | 0.0077 | 0.0077 |
| Seismic 60 deg M1 | 133.33 | 0.027 | 0.0011 | 0.0267 | 0.0267 |
| Seismic 60 deg M1 | 153.33 | 0.037 | 0.0011 | 0.0318 | 0.0318 |
| Seismic 60 deg M1 | 160.00 | 0.041 | 0.0011 | 0.0326 | 0.0326 |
| Seismic 60 deg M1 | 166.67 | 0.044 | 0.0010 | 0.0336 | 0.0336 |
| Seismic 60 deg M1 | 180.00 | 0.052 | 0.0010 | 0.0331 | 0.0331 |
| Seismic 90 deg M1 | 50.00 | 0.004 | -0.0005 | 0.0077 | 0.0077 |
| Seismic 90 deg M1 | 133.33 | 0.027 | -0.0013 | 0.0267 | 0.0267 |
| Seismic 90 deg M1 | 153.33 | 0.037 | -0.0013 | 0.0318 | 0.0318 |
| Seismic 90 deg M1 | 160.00 | 0.041 | -0.0013 | 0.0326 | 0.0326 |
| Seismic 90 deg M1 | 166.67 | 0.044 | -0.0012 | 0.0336 | 0.0336 |
| Seismic 90 deg M1 | 180.00 | 0.052 | -0.0012 | 0.0331 | 0.0331 |
| Seismic (Reduced DL) Normal M1 | 50.00 | 0.004 | 0.0004 | 0.0076 | 0.0077 |
| Seismic (Reduced DL) Normal M1 | 133.33 | 0.027 | 0.0011 | 0.0266 | 0.0266 |
| Seismic (Reduced DL) Normal M1 | 153.33 | 0.037 | 0.0011 | 0.0317 | 0.0317 |
| Seismic (Reduced DL) Normal M1 | 160.00 | 0.040 | 0.0011 | 0.0326 | 0.0326 |
| Seismic (Reduced DL) Normal M1 | 166.67 | 0.044 | 0.0010 | 0.0335 | 0.0335 |
| Seismic (Reduced DL) Normal M1 | 180.00 | 0.052 | 0.0010 | 0.0329 | 0.0329 |
| Seismic (Reduced DL) 60 deg M1 | 50.00 | 0.004 | 0.0004 | 0.0076 | 0.0076 |
| Seismic (Reduced DL) 60 deg M1 | 133.33 | 0.027 | 0.0011 | 0.0266 | 0.0266 |
| Seismic (Reduced DL) 60 deg M1 | 153.33 | 0.037 | 0.0011 | 0.0317 | 0.0317 |
| Seismic (Reduced DL) 60 deg M1 | 160.00 | 0.040 | 0.0011 | 0.0326 | 0.0326 |
| Seismic (Reduced DL) 60 deg M1 | 166.67 | 0.044 | 0.0010 | 0.0335 | 0.0335 |
| Seismic (Reduced DL) 60 deg M1 | 180.00 | 0.052 | 0.0010 | 0.0330 | 0.0330 |
| Seismic (Reduced DL) 90 deg M1 | 50.00 | 0.004 | -0.0005 | 0.0076 | 0.0076 |
| Seismic (Reduced DL) 90 deg M1 | 133.33 | 0.027 | -0.0013 | 0.0266 | 0.0266 |
| Seismic (Reduced DL) 90 deg M1 | 153.33 | 0.037 | -0.0013 | 0.0317 | 0.0317 |
| Seismic (Reduced DL) 90 deg M1 | 160.00 | 0.040 | -0.0013 | 0.0326 | 0.0326 |
| Seismic (Reduced DL) 90 deg M1 | 166.67 | 0.044 | -0.0012 | 0.0335 | 0.0335 |
| Seismic (Reduced DL) 90 deg M1 | 180.00 | 0.052 | -0.0012 | 0.0329 | 0.0329 |
| Serviceability - 60 mph Wind Normal | 50.00 | 0.012 | 0.0012 | 0.0241 | 0.0242 |
| Serviceability - 60 mph Wind Normal | 133.33 | 0.082 | 0.0023 | 0.0794 | 0.0795 |
| Serviceability - 60 mph Wind Normal | 153.33 | 0.112 | 0.0008 | 0.0905 | 0.0905 |
| Serviceability - 60 mph Wind Normal | 160.00 | 0.124 | 0.0003 | 0.1155 | 0.1155 |
| Serviceability - 60 mph Wind Normal | 166.67 | 0.135 | 0.0005 | 0.0974 | 0.0974 |
| Serviceability - 60 mph Wind Normal | 180.00 | 0.158 | 0.0018 | 0.1706 | 0.1706 |
| Serviceability - 60 mph Wind 60 deg | 50.00 | 0.012 | 0.0013 | 0.0240 | 0.0241 |
| Serviceability - 60 mph Wind 60 deg | 133.33 | 0.082 | 0.0035 | 0.0784 | 0.0784 |
| Serviceability - 60 mph Wind 60 deg | 153.33 | 0.112 | 0.0040 | 0.0957 | 0.0958 |
| Serviceability - 60 mph Wind 60 deg | 160.00 | 0.123 | 0.0043 | 0.0883 | 0.0884 |
| Serviceability - 60 mph Wind 60 deg | 166.67 | 0.134 | 0.0051 | 0.0951 | 0.0953 |
| Serviceability - 60 mph Wind 60 deg | 180.00 | 0.156 | 0.0071 | 0.0872 | 0.0875 |
| Serviceability - 60 mph Wind 90 deg | 50.00 | 0.012 | -0.0015 | 0.0241 | 0.0241 |
| Serviceability - 60 mph Wind 90 deg | 133.33 | 0.082 | -0.0043 | 0.0783 | 0.0784 |
| Serviceability - 60 mph Wind 90 deg | 153.33 | 0.112 | -0.0055 | 0.0976 | 0.0977 |
| Serviceability - 60 mph Wind 90 deg | 160.00 | 0.122 | -0.0060 | 0.0770 | 0.0773 |
| Serviceability - 60 mph Wind 90 deg | 166.67 | 0.133 | -0.0068 | 0.0943 | 0.0944 |
| Serviceability - 60 mph Wind 90 deg | 180.00 | 0.155 | -0.0081 | 0.0204 | 0.0219 |

Maximum Reactions Summary

| Anchor Group | Vertical (kip) | | | | Horizontal (kip) | | Moment (kip-ft) | |
|--------------|----------------|----------|--------|-------|------------------|----------|-----------------|----------|
| | DL+WL | DL+WL+IL | UpLift | Shear | DL+WL | DL+WL+IL | DL+WL | DL+WL+IL |
| Base | 72.19 | 135.84 | 293.13 | 33.54 | 54.27 | 17.56 | 5953.63 | 1868.07 |

Exhibit E

Mount Analysis



AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name : WATERFORD CT, CT
ATC Site Number : 411183
Engineering Number : 13251340_C8_01
Mount Elevation : 165 ft
Carrier : T-Mobile
Carrier Site Name : Waterford/ I-95/ X82
Carrier Site Number : CT11041D
Site Location : 53 Dayton Rd.
Waterford, CT 06385-4274
41.377778 , -72.141389
County : New London
Date : July 2, 2020
Max Usage : 62%
Result : Pass

Prepared By:
Max Carter
Structural Engineer

Max Carter

Reviewed By:



COA: PEC.0001553



Table of Contents

Introduction 1

Supporting Documents..... 1

Analysis..... 1

Conclusion..... 1

Antenna Loading..... 2

Structure Usages..... 2

Mount Layout 3

Equipment Layout 4

Standard Conditions6

Calculations Attached



Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for T-Mobile at 165 ft.

Supporting Documents

| | |
|-----------------------------------|---|
| Radio Frequency Data Sheet | RFDS ID #CT11041D, dated May 11, 2020 |
| Reference Photos | Site photos from 2018 |
| Other Document | CLS Engineering Project #41124-12605190-01-MA, dated February 4, 2019 |

Analysis

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

| | |
|--------------------------------------|--|
| Basic Wind Speed: | 126 mph (3-Second Gust) |
| Basic Wind Speed w/ Ice: | 50 mph (3-Second Gust) w/ 1" radial ice concurrent |
| Codes: | ANSI/TIA-222-H |
| Exposure Category: | B |
| Risk Category: | II |
| Topographic Factor Procedure: | Method 1 |
| Topographic Category: | 1 |
| Spectral Response: | Ss = 0.194, S1 = 0.053 |
| 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. The mount can support the equipment as described in this report.

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



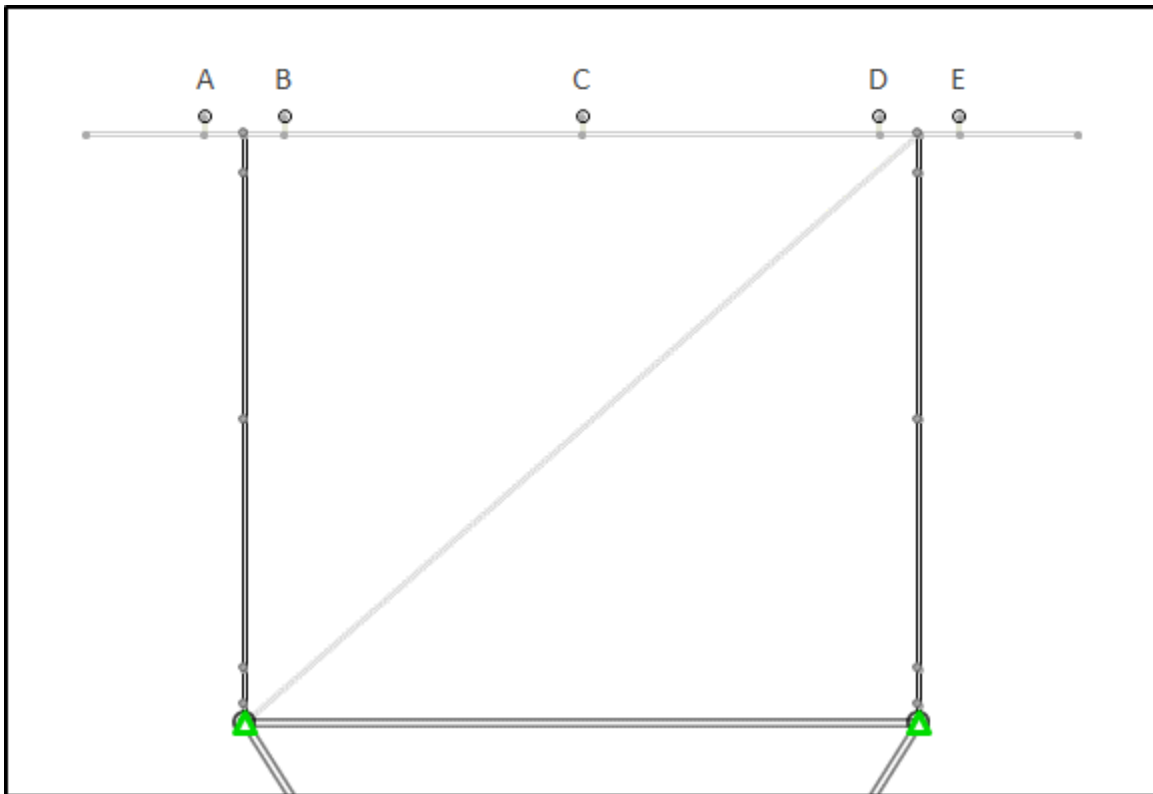
Application Loading

| Mount Centerline (ft) | Antenna Centerline (ft) | Qty | Antenna Model |
|-----------------------|-------------------------|-----|---|
| 165.0 | 166.0 | 3 | Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs) |
| | | 3 | RFS APXVAARR24_43-U-NA20 |
| | | 3 | Ericsson AIR32 B66Aa/B2a |
| | | 3 | Ericsson Air6449 B41 |
| | | 3 | Ericsson Radio 4449 B71 B85A |
| | | 3 | Ericsson RRUS 4415 B25 |

Structure Usages

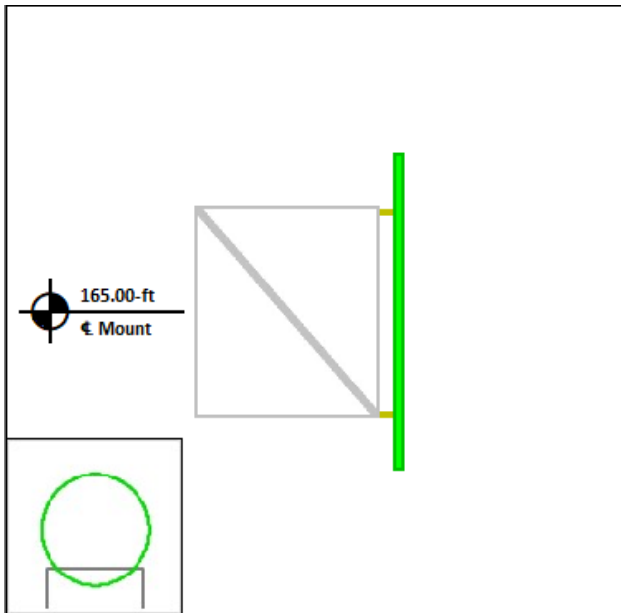
| Structural Component | Controlling Usage | Pass/Fail |
|----------------------|-------------------|-----------|
| Horizontals | 51% | Pass |
| Verticals | 62% | Pass |
| Diagonals | 10% | Pass |
| Tie-Backs | 15% | Pass |
| Mount Pipes | 30% | Pass |

Mount Layout

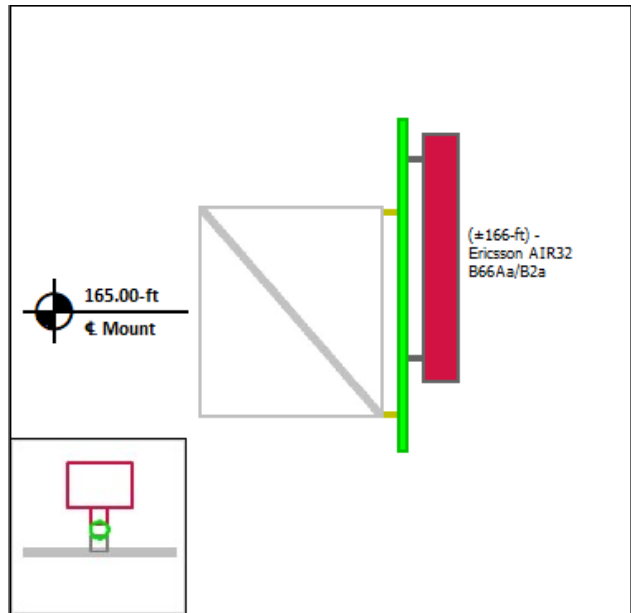


Equipment Layout

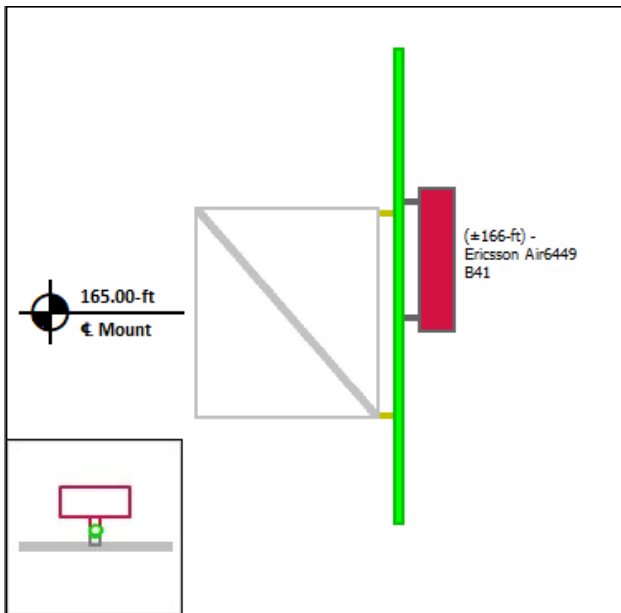
Mount Pipe A



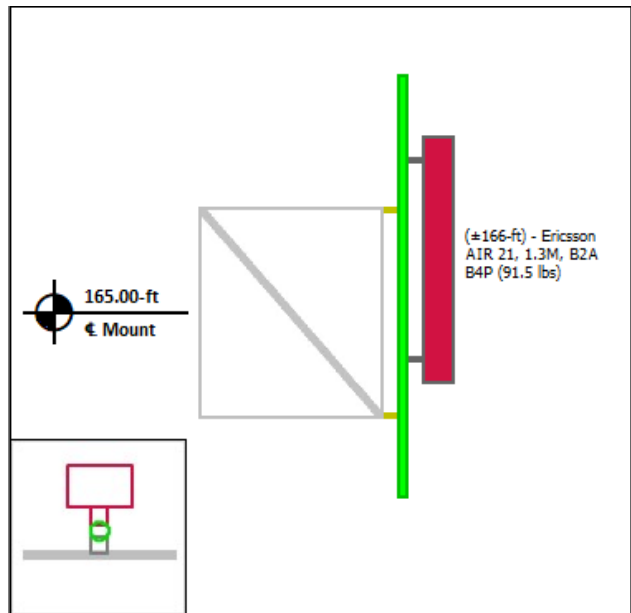
Mount Pipe B



Mount Pipe C

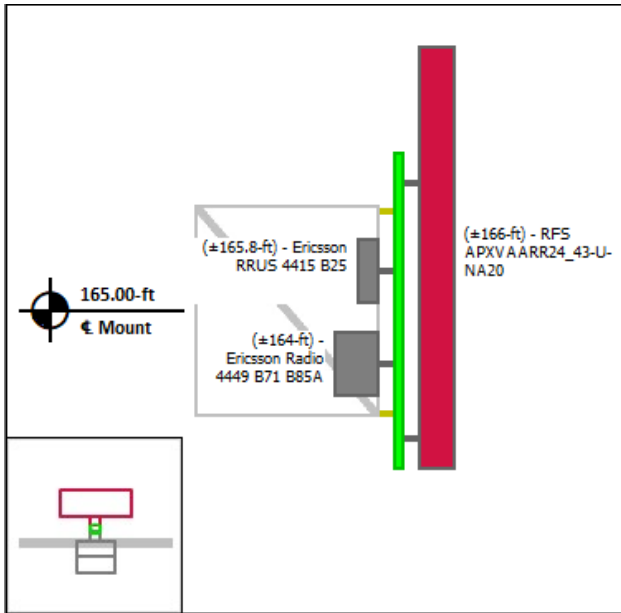


Mount Pipe D



Equipment Layout Cont'd.

Mount Pipe E





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 antenna, 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.

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.

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.

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.



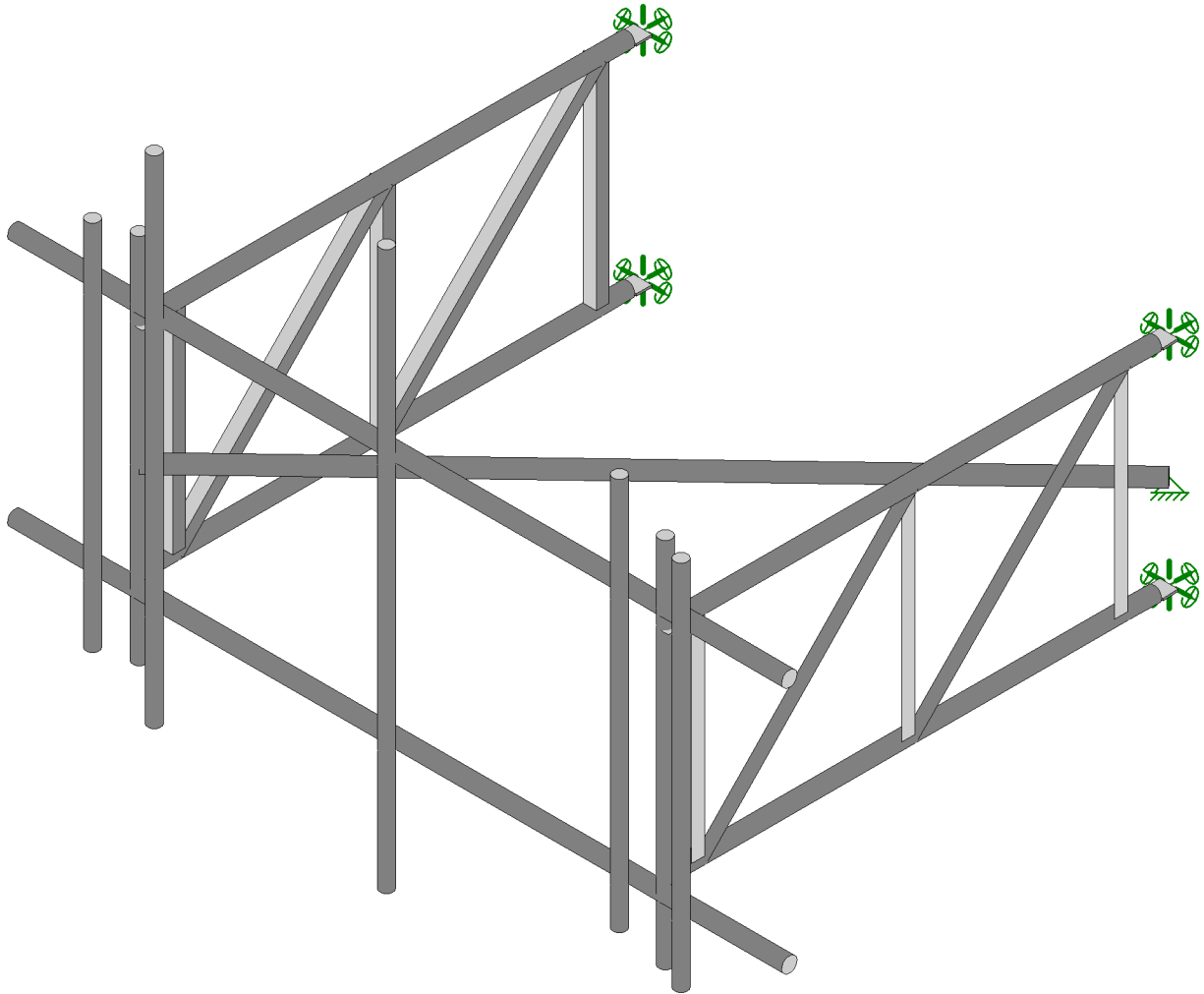
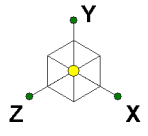
Site Number: 411183
Project Number: 13251340_C8_01
Carrier: T-Mobile
Mount Elevation: 165 ft
Date: 7/2/2020

Mount Analysis Force Calculations

| Wind & Ice Load Calculations | | | |
|-----------------------------------|----------|------|-----|
| Velocity Pressure Coefficient | K_z | 1.14 | |
| 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 | 0.99 | |
| Wind Direction Probability Factor | K_d | 0.95 | |
| Basic Wind Speed | V | 126 | mph |
| Velocity Pressure | q_z | 43.7 | psf |
| Height Escalation Factor | K_{iz} | 1.17 | |
| Thickness of Radial Glaze Ice | T_{iz} | 1.17 | in |

| Seismic Load Calculations | | | |
|-----------------------------------|----------|--------|-----|
| Short Period DSRAP | S_{DS} | 0.207 | |
| 1 Second DSRAP | S_{D1} | 0.085 | |
| Importance Factor | I | 1.0 | |
| Response Modification Coefficient | R | 2.0 | |
| Seismic Response Coefficient | C_s | 0.103 | |
| Amplification Factor | A | 1.0 | |
| Total Weight | W | 1274.4 | lbs |
| Total Shear Force | V_s | 131.9 | lbs |
| Horizontal Seismic Load | E_h | 131.9 | lbs |
| Vertical Seismic Load | E_v | 52.7 | lbs |

| Antenna Calculations | | | | | | | | |
|---|--------|-------|-------|--------|---------|---------|------------|------------|
| Equipment | Height | Width | Depth | Weight | EPA_N | EPA_T | EPA_{Ni} | EPA_{Ti} |
| Model # | in | in | in | lbs | sqft | sqft | sqft | sqft |
| Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs) | 55.9 | 12.0 | 7.8 | 91.5 | 6.04 | 1.82 | 7.52 | 2.46 |
| RFS APXVAARR24_43-U-NA20 | 95.9 | 24.0 | 8.7 | 127.9 | 20.24 | 3.48 | 22.77 | 4.52 |
| Ericsson AIR32 B66Aa/B2a | 56.6 | 12.9 | 8.7 | 132.2 | 6.51 | 3.31 | 8.01 | 4.37 |
| Ericsson Air6449 B41 | 33.1 | 20.6 | 8.6 | 104.0 | 5.68 | 1.56 | 6.78 | 2.13 |
| Ericsson Radio 4449 B71 B85A | 15.0 | 13.2 | 10.5 | 75.0 | 1.65 | 1.31 | 2.25 | 1.86 |
| Ericsson RRUS 4415 B25 | 15.0 | 13.2 | 5.4 | 46.0 | 1.65 | 0.68 | 2.25 | 1.13 |



American Tower Corp.

Max.Carter

13251340_C8_01

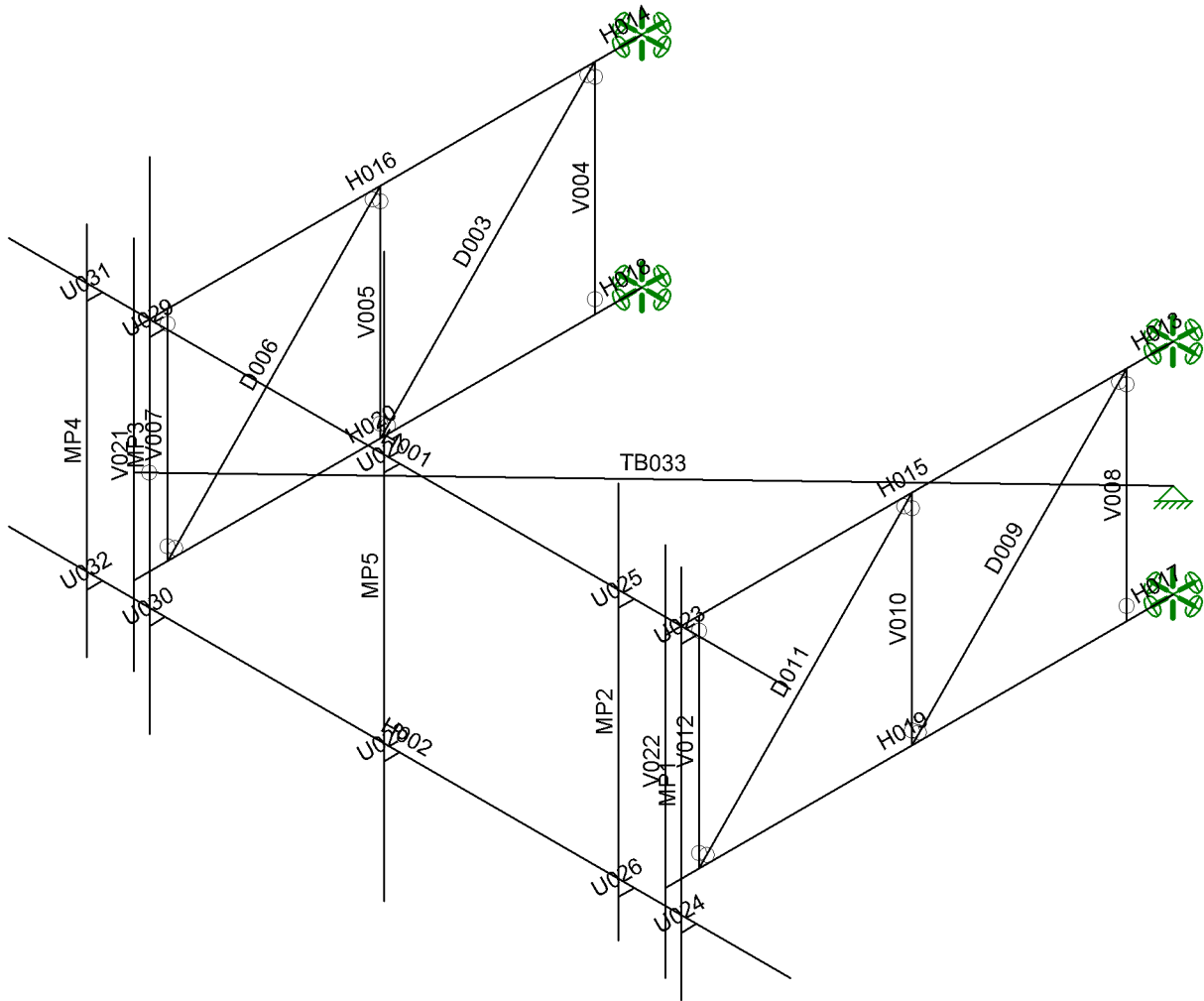
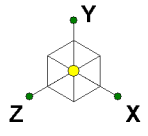
411183, WATERFORD CT

3D Rendering

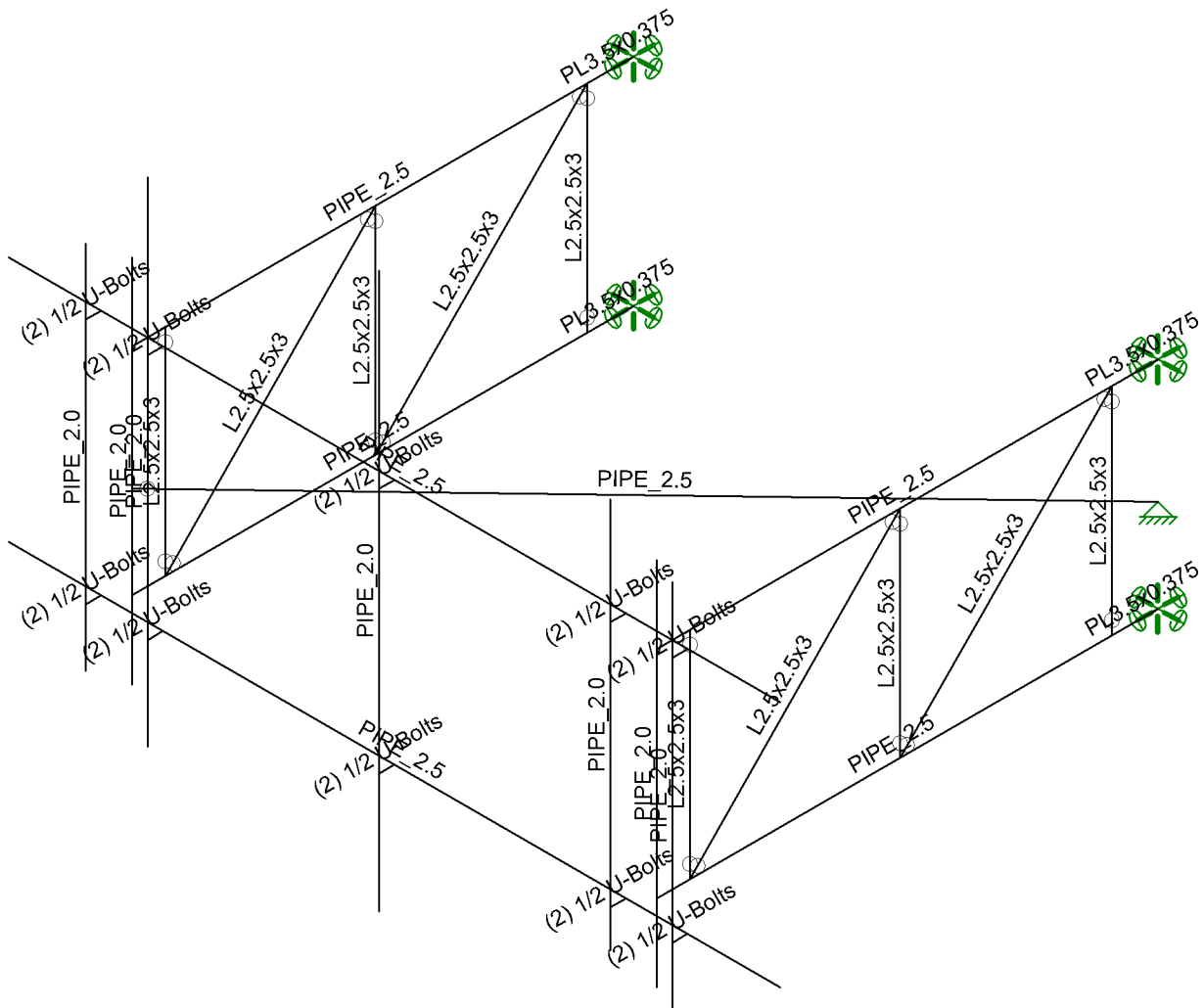
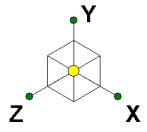
SK - 1

July 2, 2020 at 10:24 AM

R3D. T-MOBILE @ 411183, WATE...



| | | |
|----------------------|---------------------------------------|---------------------------------|
| American Tower Corp. | 411183, WATERFORD CT Member Labels | SK - 2 |
| Max.Carter | | July 2, 2020 at 10:24 AM |
| 13251340_C8_01 | | R3D. T-MOBILE @ 411183, WATE... |



American Tower Corp.

Max.Carter

13251340_C8_01

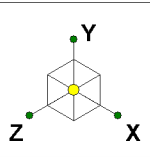
411183, WATERFORD CT

Member Shapes

SK - 3

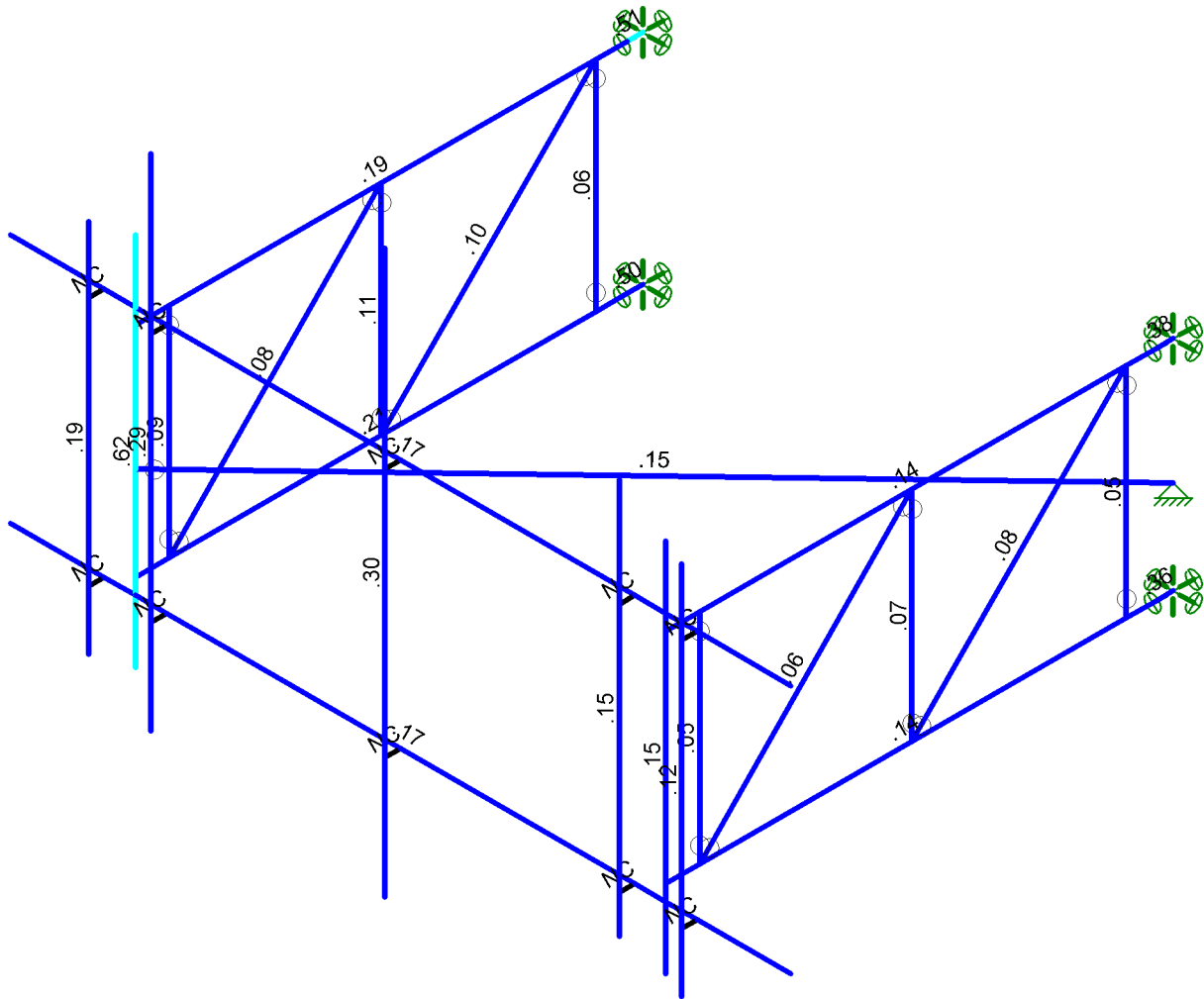
July 2, 2020 at 10:25 AM

R3D. T-MOBILE @ 411183, WATE...



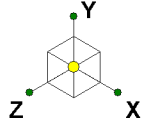
Code Check
(Env)

- No Calc
- > 1.0
- .90-1.0
- .75-.90
- .50-.75
- 0-.50



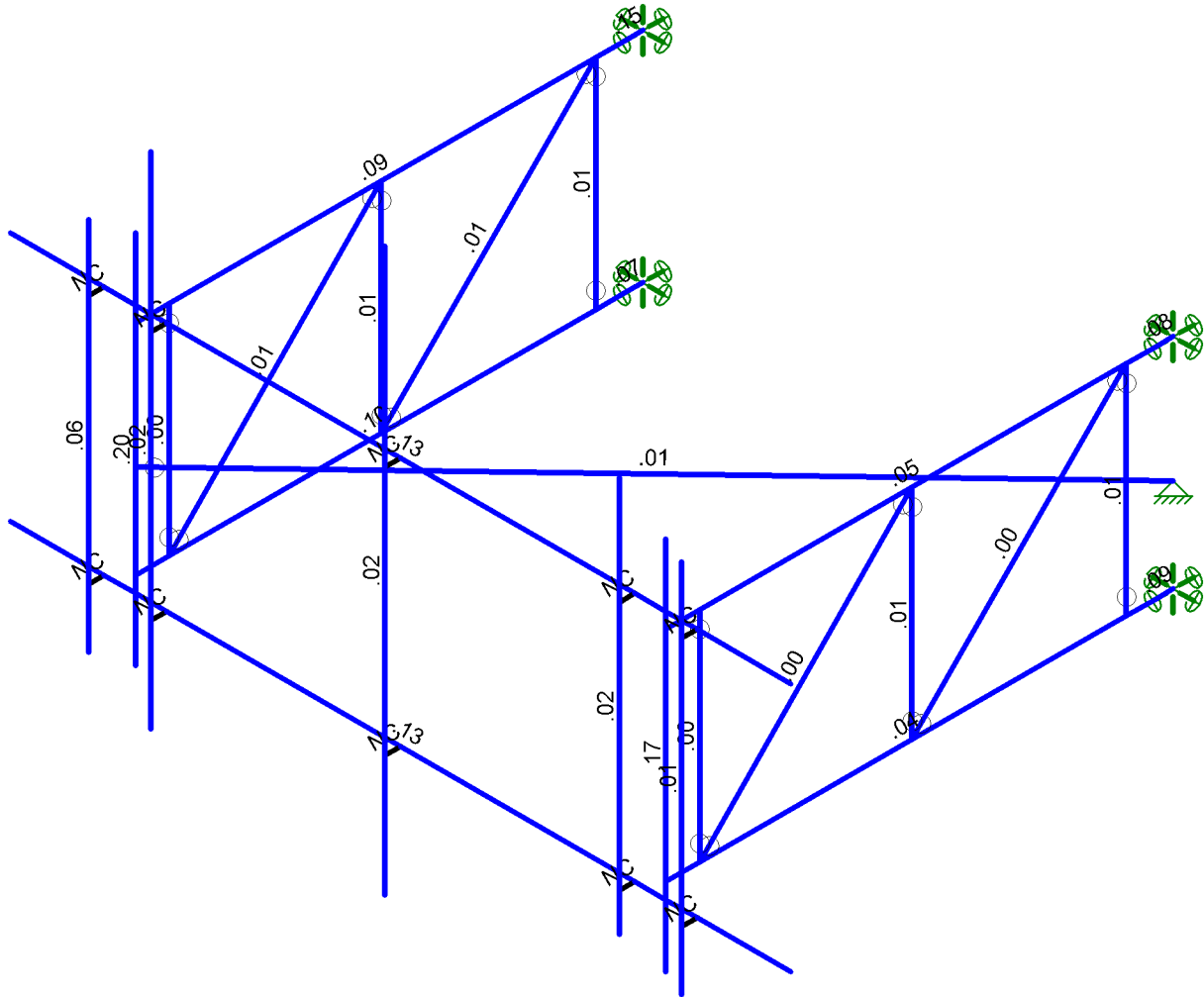
Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.4D

| | | |
|----------------------|----------------------|--------------------------------|
| American Tower Corp. | 41183, WATERFORD CT | SK - 4 |
| Max.Carter | Unity Bending Checks | July 2, 2020 at 10:25 AM |
| 13251340_C8_01 | | R3D. T-MOBILE @ 41183, WATE... |



Shear Check (Env)

| |
|---------|
| No Calc |
| > 1.0 |
| .90-1.0 |
| .75-.90 |
| .50-.75 |
| 0-.50 |



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.4D

| | | |
|----------------------|----------------------|--------------------------|
| American Tower Corp. | 411183, WATERFORD CT | SK - 5 |
| Max.Carter | | July 2, 2020 at 10:25 AM |
| 13251340_C8_01 | | Shear Checks |



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| GG | p e e G G | H E | ì ì | F H E | € | |
| GH | p e e G H | F H G | I G | H Í | € | |
| G | p e e G | H E | I G | H Í | € | |
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| G | p e e G | H E | I G | H U | € | |
| G | p e e G | F H G | I G | F H E | € | |
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| IG | pEG | G | HU | FHE | € | |
| IH | pEH | HE | I€ | FHE | € | |
| Ii | pEI | FHG | I€ | H | € | |
| Ii | pEI | FHG | Ii | FHE | € | |
| Ii | pEI | HE | Ii | FHE | € | |
| Ii | pEI | FHG | HU | FHE | € | |
| Ii | pEI | HE | HU | FHE | € | |
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| I€ | TUfA | FH | Gii | FHE | € | |
| IF | TUfC | FG | Fii | FHE | € | |
| IG | TUfA | FG | Hfi | FHE | € | |
| IH | TUhc | H | FF | FHE | € | |
| Ii | TUHà | H | GF | FHE | € | |
| Ii | TUic | G | JJi | FHE | € | |
| Ii | TUià | G | Gii | FHE | € | |
| Ii | TUic | IF | FGi | FHE | € | |
| Ii | TUià | IF | Fii | FHE | € | |
| IJ | pOSF | € | Fii | FHE | € | |
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| IH | pOSI | FiG | Fii | FG | € | |
| Ii | pOSI | FiG | Jii | FG | € | |

>c]bh6ci bXUfm7cbX]h]cbg

| | R a c a a^ | YAa a | YAa a | ZAa a | YAU dZ l a Dea a | YAU dZ l a Dea a | ZAU dZ l a Dea a |
|---|------------|---------|---------|---------|------------------|------------------|------------------|
| F | pEF | U^aca } | U^aca } | U^aca } | U^aca } | | U^aca } |
| G | pEG | U^aca } | U^aca } | U^aca } | U^aca } | | U^aca } |
| H | pEH | U^aca } | U^aca } | U^aca } | U^aca } | | U^aca } |
| I | pEI | U^aca } | U^aca } | U^aca } | U^aca } | | U^aca } |
| I | pEI | U^aca } | U^aca } | U^aca } | | | |

A Ya Vyf'Df]a Ufm8 UU

| | Saa^ | Qra c | Rra c | Sra c | U^ca (a^ D U^ca) E | V^ ^ | O^ a } Aca | Taa^ a e | O^ a } AU^ ^ |
|----|------|-------|-------|-------|--------------------|-----------|------------|----------|--------------------------|
| F | pEF | pEH | pEI | | | UO O G E | O^ a } | p [] ^ | O E H A O : E O V^] a e |
| G | pEG | pEI | pEI | | | UO O G E | O^ a } | p [] ^ | O E H A O : E O V^] a e |
| H | OEH | pEF | pEJ | J€ | S G e G e H | O [] { } | p [] ^ | O E H | V^] a e |
| I | XEI | pEF | pFG | | S G e G e H | O [] { } | p [] ^ | O E H | V^] a e |
| I | XEI | pEI | pEJ | | S G e G e H | O [] { } | p [] ^ | O E H | V^] a e |
| I | OEI | pEI | pFI | J€ | S G e G e H | O [] { } | p [] ^ | O E H | V^] a e |
| I | XEI | pFI | pFI | | S G e G e H | O [] { } | p [] ^ | O E H | V^] a e |
| I | XEI | pFH | pFI | G € | S G e G e H | O [] { } | p [] ^ | O E H | V^] a e |
| J | O EJ | pFH | pFE | Fi € | S G e G e H | O [] { } | p [] ^ | O E H | V^] a e |
| FE | XFE | pEI | pFE | G € | S G e G e H | O [] { } | p [] ^ | O E H | V^] a e |



0 [{] a ^ K O E ^ i a a A [, ^ i A O [] E
 O ^ a } ^ K T a e O a e ^
 R a A b ^ { a ^ K F H G F H I e ^ O i ^ e ^
 T [a ^ / a e ^ K I F F F i H e V O U U U O A O V

R | ^ a e e e
 F e K i A e
 O e & ^ a A O k e

<chFc`YX`GhYY`8 Ygll`b`DU`Ua`Yhfg`f7`cbh`bi`YXL`

| | Saa^ | U@^ | S^)* @ a Sa`^`Za` Sa::`Za`Sa`{ A } Za`Sa`{ A } A e S q ^ e e S`^` S::` Oa` O` & c`} |
|----|------|--------------|---|
| GJ | WEGJ | QDAFBANE OEE | H |
| HE | WEHE | QDAFBANE OEE | H |
| HF | WEHF | QDAFBANE OEE | H |
| HG | WEHG | QDAFBANE OEE | H |
| HH | VOEH | UQO` GEE | FI FIE EI |
| HI | TUF | UQO` GEE | I G |
| HÍ | TUG | UQO` GEE | I I |
| Hİ | TUH | UQO` GEE | J I |
| Hı | TUI | UQO` GEE | I G |
| Hİ | TUI | UQO` GEE | F E |

<chFc`YX`GhYY`DfcdYfHjYg`

| | Saa^ | O`i`a` | O`i`a` | P` | V@{ (A P O E E ^) . a`ZabE E Ya`aZ`a` | U` | O`i`a` | Uc` | | |
|---|----------------|--------|---------|----|---|-----|---------|-----|--------|------|
| F | OHI | GE^EI | FEEF^EI | EH | EI | IJE | HI EEE | FIE | II EEE | FEG |
| G | OI GE E | GE^EI | FEEF^EI | EH | EI | IJE | I EEEE | FIE | II EEE | FIE |
| H | OI EEO:EOAUPOa | GE^EI | FEEF^EI | EH | EI | I G | I GEEE | FIE | II EEE | FIEH |
| I | OI EEO:EOAUUa | GE^EI | FEEF^EI | EH | EI | I G | I I EEE | FIE | II EEE | FIEH |
| I | OI EEO:EO | GE^EI | FEEF^EI | EH | EI | FJE | I I EEE | FIE | I GEEE | FIEH |
| I | OI EI I | GE^EI | FEEF^EI | EH | EI | IJE | I EEEE | FIE | II EEE | FIE |
| I | OI HO:EO | GE^EI | FEEF^EI | EH | EI | IJE | HI EEE | FIE | I EEEE | FEG |
| I | OIJG | GE^EI | FEEF^EI | EH | EI | IJE | I EEEE | FIE | II EEE | FIE |
| J | UCOARI GJAO:EG | GE^EI | FEEF^EI | EH | EI | IJE | II EEE | FIE | II EEE | FIE |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`Jgd`UMWa`Ybhg`f6`@`%`:``@`fH`L`

| | R a o`Saa^ | SÖE | Oa^&c`} | T a e } a` a`Za`Pa`Eo`Dka`Eaa`DQa`E a e e |
|---|------------|-----|---------|---|
| F | P EEH | S | Y | EI E |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`Jgd`UMWa`Ybhg`f6`@`%`:``@`fI`L`

| | R a o`Saa^ | SÖE | Oa^&c`} | T a e } a` a`Za`Pa`Eo`Dka`Eaa`DQa`E a e e |
|---|------------|-----|---------|---|
| F | P EE | S | Y | EI E |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`Jgd`UMWa`Ybhg`f6`@`&\$`:``@`fI`L`

| | R a o`Saa^ | SÖE | Oa^&c`} | T a e } a` a`Za`Pa`Eo`Dka`Eaa`DQa`E a e e |
|---|------------|-----|---------|---|
| F | P EE | S | Y | EI E |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`Jgd`UMWa`Ybhg`f6`@`&%`:``@`fP`\$`L`

| | R a o`Saa^ | SÖE | Oa^&c`} | T a e } a` a`Za`Pa`Eo`Dka`Eaa`DQa`E a e e |
|---|------------|-----|---------|---|
| F | P EE | S | Y | EI E |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`Jgd`UMWa`Ybhg`f6`@`&&`:``@`fH`L`

| | R a o`Saa^ | SÖE | Oa^&c`} | T a e } a` a`Za`Pa`Eo`Dka`Eaa`DQa`E a e e |
|---|------------|-----|---------|---|
| F | T UFc | S | Y | E E |

>c]bh`@`UXg`UbX`9`bZ`f`WX`8`Jgd`UMWa`Ybhg`f6`@`&`:``@`fH`L`

| | R a o`Saa^ | SÖE | Oa^&c`} | T a e } a` a`Za`Pa`Eo`Dka`Eaa`DQa`E a e e |
|---|------------|-----|---------|---|
| F | T UGc | S | Y | E E |



0{ } a^ K Q s a a A[, A[A[] E
 O^ a } s K T a a O a c'
 R a A^ { a^ K F H G F H I e' O i ' e'
 T[a^ A a^ K I F F F I H A Y O B U O U U O A O V

R | A G G E G E
 F e K G A O F
 O @ & ^ a A O K E

>c|bh@UXg'UbX'9bZfWYX'8Jgd'UMWa YbHg'f6 @ '&(:' @ 'f|L

| | R a o S a a ^ | S O E | O a ^ & c a } | T a e } a a ^ Z a f a E c a |
|---|---------------|-------|---------------|-----------------------------|
| F | T U H c | S | Y | E E |

>c|bh@UXg'UbX'9bZfWYX'8Jgd'UMWa YbHg'f6 @ '&):' @ 'f|L

| | R a o S a a ^ | S O E | O a ^ & c a } | T a e } a a ^ Z a f a E c a |
|---|---------------|-------|---------------|-----------------------------|
| F | T U I c | S | Y | E E |

>c|bh@UXg'UbX'9bZfWYX'8Jgd'UMWa YbHg'f6 @ '&*: ' @ 'f|L

| | R a o S a a ^ | S O E | O a ^ & c a } | T a e } a a ^ Z a f a E c a |
|---|---------------|-------|---------------|-----------------------------|
| F | T U I c | S | Y | E E |

A Ya Vyf'Dc|bh@UXg'f6 @ '% '8 YUXL

| | T ^ { a ^ A a a ^ | O a ^ & c a } | T a e } a a ^ Z a f a E c a | S } & c a } Z a E a |
|----|-------------------|---------------|-----------------------------|---------------------|
| F | T U G | Y | E I E | I E |
| G | T U G | Y | E I E | I H E |
| H | T U H | Y | E I E I | F I E |
| I | T U H | Y | E I E I | I H E |
| I | T U I | Y | E H E I | I E I |
| I | T U I | Y | E H E I | I I E |
| I | T U I | Y | E I | I I E |
| I | T U I | Y | E I | G E |
| J | T U I | Y | E G | H |
| F€ | T U I | Y | E G | I E |

A Ya Vyf'Dc|bh@UXg'f6 @ '&: 'WYL

| | T ^ { a ^ A a a ^ | O a ^ & c a } | T a e } a a ^ Z a f a E c a | S } & c a } Z a E a |
|----|-------------------|---------------|-----------------------------|---------------------|
| F | T U G | Y | E J E G I | I E |
| G | T U G | Y | E J E G I | I H E |
| H | T U H | Y | E H E I F | F I E |
| I | T U H | Y | E H E I F | I H E |
| I | T U I | Y | E I G E E | I E I |
| I | T U I | Y | E I G E E | I I E |
| I | T U I | Y | E I E I I | I I E |
| I | T U I | Y | E H E H F | G E |
| J | T U I | Y | E E E | H |
| F€ | T U I | Y | E E E | I E |

A Ya Vyf'Dc|bh@UXg'f6 @ "' : 'K JbX'INL

| | T ^ { a ^ A a a ^ | O a ^ & c a } | T a e } a a ^ Z a f a E c a | S } & c a } Z a E a |
|----|-------------------|---------------|-----------------------------|---------------------|
| F | T U G | Z | E G E G | I E |
| G | T U G | Z | E G E G | I H E |
| H | T U H | Z | E F J E E F | F I E |
| I | T U H | Z | E F J E E F | I H E |
| I | T U I | Z | E I I E J H | I E I |
| I | T U I | Z | E H G E I I | I I E |
| I | T U I | Z | E G E G | I I E |
| I | T U I | Z | E G E G | G E |
| J | T U I | Z | E F G E E J | H |
| F€ | T U I | Z | E F G E E J | I E |



0{ } a^ ^ K Q^ s{ } a^ Á[, ^ Á[] É
 Ó• a} s K T a^ O a^ c
 R á Á^ { a^ K F H G F H I € Ó Ì €
 T { a^ Á^ a^ K I F F F I H É Y O B / O U O U O Á O V

R | ^ Á C F G E G E
 F e K G Á O F
 Ó @ & ^ a Á O K É

A Ya Vyf'Dc]bh@UXg'f6 @ ' : ' K]bX'!L

| | T ^ (a^ Á^ a^ ^) | Ö a^ & c a } | T a^ } a^ a^ Ž a] a E c a | Š } & c a } Ž a] a á |
|----|-------------------|--------------|----------------------------|-----------------------|
| F | T ÚG | Ý | É Í È Ì | Í È |
| G | T ÚG | Ý | É Í È Ì | Í H È |
| H | T ÚH | Ý | É Í È F H | F Í È |
| I | T ÚH | Ý | É Í È F H | Í H È |
| Í | T ÚÍ | Ý | É Í È F | Í È Í |
| Î | T ÚÍ | Ý | É Í È Í | Í Í È |
| Ï | T ÚÍ | Ý | É F È Í | Í Í È |
| Ì | T ÚÍ | Ý | É È Í | G Í È |
| J | T ÚÍ | Ý | É H È Í F | H |
| F€ | T ÚÍ | Ý | É H È Í F | Í È |

A Ya Vyf'Dc]bh@UXg'f6 @ ') : ' K]bX'!N'f#M

| | T ^ (a^ Á^ a^ ^) | Ö a^ & c a } | T a^ } a^ a^ Ž a] a E c a | Š } & c a } Ž a] a á |
|----|-------------------|--------------|----------------------------|-----------------------|
| F | T ÚG | Z | É G È Í | Í È |
| G | T ÚG | Z | É G È Í | Í H È |
| H | T ÚH | Z | É G È G Í | F Í È |
| I | T ÚH | Z | É G È G Í | Í H È |
| Í | T ÚÍ | Z | É È Í | Í È Í |
| Î | T ÚÍ | Z | É G È H | Í Í È |
| Ï | T ÚÍ | Z | É F È J Í | Í Í È |
| Ì | T ÚÍ | Z | É F È J Í | G Í È |
| J | T ÚÍ | Z | É F È Í | H |
| F€ | T ÚÍ | Z | É F È Í | Í È |

A Ya Vyf'Dc]bh@UXg'f6 @ * : ' K]bX'!L'f#M

| | T ^ (a^ Á^ a^ ^) | Ö a^ & c a } | T a^ } a^ a^ Ž a] a E c a | Š } & c a } Ž a] a á |
|----|-------------------|--------------|----------------------------|-----------------------|
| F | T ÚG | Ý | É G È Í G | Í È |
| G | T ÚG | Ý | É G È Í G | Í H È |
| H | T ÚH | Ý | É G È Í G | F Í È |
| I | T ÚH | Ý | É G È Í G | Í H È |
| Í | T ÚÍ | Ý | É G È H | Í È Í |
| Î | T ÚÍ | Ý | É G È Í | Í Í È |
| Ï | T ÚÍ | Ý | É F È € | Í Í È |
| Ì | T ÚÍ | Ý | É Í È Í F | G Í È |
| J | T ÚÍ | Ý | É F È J Í | H |
| F€ | T ÚÍ | Ý | É F È J Í | Í È |

A Ya Vyf'Dc]bh@UXg'f6 @ + : ' K]bX'!N'fK cf]b] #

| | T ^ (a^ Á^ a^ ^) | Ö a^ & c a } | T a^ } a^ a^ Ž a] a E c a | Š } & c a } Ž a] a á |
|----|-------------------|--------------|----------------------------|-----------------------|
| F | T ÚG | Z | É È Í | Í È |
| G | T ÚG | Z | É È Í | Í H È |
| H | T ÚH | Z | É È Í | F Í È |
| I | T ÚH | Z | É È Í | Í H È |
| Í | T ÚÍ | Z | É G È Í | Í È Í |
| Î | T ÚÍ | Z | É H È J Í | Í Í È |
| Ï | T ÚÍ | Z | É È Í | Í Í È |
| Ì | T ÚÍ | Z | É È Í | G Í È |
| J | T ÚÍ | Z | É È Í | H |
| F€ | T ÚÍ | Z | É È Í | Í È |



Ô[{] a^ ^ K Oē A[, A[Ô[] É
 Ô• a} A K T aē O aē
 R[a^ { a^ K F H G F H I € ' Ô[' €
 T[a^ A a^ K I F F F I H E V O B / O U O U O A V

R[/ A G E G E
 F e K I A B
 Ô @ & ^ a A O K E

A Ya Vyf'Dc]bhi@UXg'f6 @ ; : ' K]pX'!L fK cf_]b[tL

| | T^ { a^ / A a^ } | Öä^&cā } | T aē } aē a^ ŽaPaEca | Š } aē } Ž a á |
|----|------------------|----------|----------------------|----------------|
| F | T UG | Y | E H E J I | I E |
| G | T UG | Y | E H E J I | I H E |
| H | T UH | Y | E G E H | F I E |
| I | T UH | Y | E G E H | I H E |
| Í | T ÚI | Y | E E E H | I E I |
| Î | T ÚI | Y | E G I I | I I E |
| Ï | T ÚI | Y | E G H H | I I E |
| İ | T ÚI | Y | E E G | G I E |
| J | T ÚI | Y | E E I I | H I |
| F€ | T ÚI | Y | E E I I | I E |

A Ya Vyf'Dc]bhi@UXg'f6 @ '%&. ' @ fP tL

| | T^ { a^ / A a^ } | Öä^&cā } | T aē } aē a^ ŽaPaEca | Š } aē } Ž a á |
|---|------------------|----------|----------------------|----------------|
| F | P E F | Y | E G E | A I E |

A Ya Vyf'Dc]bhi@UXg'f6 @ '% ' : ' @ fB tL

| | T^ { a^ / A a^ } | Öä^&cā } | T aē } aē a^ ŽaPaEca | Š } aē } Ž a á |
|---|------------------|----------|----------------------|----------------|
| F | P E G | Y | E G E | A I E |

A Ya Vyf'Dc]bhi@UXg'f6 @ '% ' : ' @ fI tL

| | T^ { a^ / A a^ } | Öä^&cā } | T aē } aē a^ ŽaPaEca | Š } aē } Ž a á |
|---|------------------|----------|----------------------|----------------|
| F | P E I | Y | E G E | A I E |

A Ya Vyf'Dc]bhi@UXg'f6 @ '% ' : ' @ fJ tL

| | T^ { a^ / A a^ } | Öä^&cā } | T aē } aē a^ ŽaPaEca | Š } aē } Ž a á |
|---|------------------|----------|----------------------|----------------|
| F | P E J | Y | E G E | A I E |

A Ya Vyf'Dc]bhi@UXg'f6 @ '% ' : ' @ fK tL

| | T^ { a^ / A a^ } | Öä^&cā } | T aē } aē a^ ŽaPaEca | Š } aē } Ž a á |
|---|------------------|----------|----------------------|----------------|
| F | P E J | Y | E G E | A I E |

A Ya Vyf'Dc]bhi@UXg'f6 @ '% ' : ' @ fL tL

| | T^ { a^ / A a^ } | Öä^&cā } | T aē } aē a^ ŽaPaEca | Š } aē } Ž a á |
|---|------------------|----------|----------------------|----------------|
| F | P E E | Y | E G E | A I E |

A Ya Vyf'8]g]f]Vi hYX' @UXg'f6 @ '&. =VY tL

| | T^ { a^ / A a^ } | Öä^&cā } | Ú aē } aē a^ ŽaPaEca | Ú aē } aē a^ ŽaPaEca | Ú aē } aē a^ ŽaPaEca | Š } aē } Ž a á | Ò) aē } aē a^ ŽaPaEca |
|----|------------------|----------|----------------------|----------------------|----------------------|----------------|------------------------|
| F | P E F | Y | E E I I | E E I I | E | A F E E | |
| G | P E G | Y | E E I I | E E I I | E | A F E E | |
| H | O E E H | Y | E G E F | E G E F | E | A F E E | |
| I | X E E | Y | E G E F | E G E F | E | A F E E | |
| Í | X E E | Y | E G E F | E G E F | E | A F E E | |
| Î | O E E I | Y | E G E F | E G E F | E | A F E E | |
| Ï | X E E | Y | E G E F | E G E F | E | A F E E | |
| İ | X E E | Y | E G E F | E G E F | E | A F E E | |
| J | O E E J | Y | E G E F | E G E F | E | A F E E | |
| F€ | X E F E | Y | E G E F | E G E F | E | A F E E | |



0{ } a^ ^ K Oe A[, A/O[] E
 O^ a} s K T aD aC^
 R aA^ { a^ K FHG FHI e' OI ' eF
 T{ a^/ a^ ^ K I FFFI HAY Oe/OUUOAOV

R | / aD e e e
 F e K / a e
 O e & ^ a A k e

A Ya Vyf'8 jgfvI hYX' @ UXg'f6 @ ' & : =WLEf7 cbjbi YXL

| | T { a^/ a^ ^ | O a^ & a } | U c a O A e } a ^ a ^ a D a D a D a A T e } a ^ a ^ a D a D a D a U c a O S & e a } | Z a E a a | O) a A S & e a } | Z a E a a |
|----|--------------|------------|---|-----------|-------------------|-----------|
| FF | O EFF | Y | E G E I F | E G E I F | e | A FEE |
| FG | X EFG | Y | E G E I F | E G E I F | e | A FEE |
| FH | P EFH | Y | E G E I J | E G E I J | e | A FEE |
| FI | P EFI | Y | E G E I J | E G E I J | e | A FEE |
| FÍ | P EFÍ | Y | E B I I | E B I I | e | A FEE |
| FĪ | P EFĪ | Y | E B I I | E B I I | e | A FEE |
| Fİ | P EFİ | Y | E G E I J | E G E I J | e | A FEE |
| Fì | P EFì | Y | E G E I J | E G E I J | e | A FEE |
| FJ | P EFJ | Y | E B I I | E B I I | e | A FEE |
| GE | P EGE | Y | E B I I | E B I I | e | A FEE |
| GF | X EGF | Y | E E G F | E E G F | e | A FEE |
| GG | X EGG | Y | E E G F | E E G F | e | A FEE |
| GH | V O e H | Y | E B I I | E B I I | e | A FEE |
| G | T UF | Y | E E G F | E E G F | e | A FEE |
| G | T UG | Y | E E G F | E E G F | e | A FEE |
| G | T UH | Y | E E G F | E E G F | e | A FEE |
| G | T UI | Y | E E G F | E E G F | e | A FEE |
| G | T Uí | Y | E E G F | E E G F | e | A FEE |

A Ya Vyf'8 jgfvI hYX' @ UXg'f6 @ ') : K j b X' I N f H W L E

| | T { a^/ a^ ^ | O a^ & a } | U c a O A e } a ^ a ^ a D a D a D a A T e } a ^ a ^ a D a D a D a U c a O S & e a } | Z a E a a | O) a A S & e a } | Z a E a a |
|----|--------------|------------|---|-----------|-------------------|-----------|
| F | P EFF | Z | E G E I I | E G E I I | e | A FEE |
| G | P EEG | Z | E G E I I | E G E I I | e | A FEE |
| H | O E e H | Z | E G E I I | E G E I I | e | A FEE |
| I | X EEI | Z | E G E I I | E G E I I | e | A FEE |
| Í | X EEÍ | Z | E G E I I | E G E I I | e | A FEE |
| Ī | O EEĪ | Z | E G E I I | E G E I I | e | A FEE |
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| J | O EEJ | Z | E G E I I | E G E I I | e | A FEE |
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| G | T u G | Y | g g H | g g H | e | A f e e |
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| GG | X€GG | Y | H G | H G | € | A F€€ |
| GH | VÓ€H | Y | H G | H G | € | A F€€ |
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| İ | Xēfē | Z | ĒĦ Ĩ Ĩ | ĒĦ Ĩ Ĩ | € | Ī G |
| İ | Xēfg | Z | ĒĦ Ĩ Ĩ | ĒĦ Ĩ Ĩ | € | Ī G |
| J | Xēgf | Z | ĒĦ Ĩ | ĒĦ Ĩ | € | Ī G |
| Fē | Xēgg | Z | ĒĦ Ĩ | ĒĦ Ĩ | € | Ī G |
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| FH | t ū g | Z | ĒĦ Ĩ | ĒĦ Ĩ | € | Ī Ī |
| FI | t ū h | Z | ĒĦ Ĩ | ĒĦ Ĩ | € | JĪ |
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Exhibit F

Power Density/RF Emissions Report

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

T-Mobile Existing Facility

Site ID: CT11041D

Waterford/ I-95/ X82
53 Dayton Road
Waterford, Connecticut 06385

July 21, 2020

EBI Project Number: 6220003231

| Site Compliance Summary | |
|---|------------------|
| Compliance Status: | COMPLIANT |
| Site total MPE% of FCC general population allowable limit: | 29.11% |

July 21, 2020

T-Mobile

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

Emissions Analysis for Site: CT11041D - Waterford/ I-95/ X82

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **53 Dayton Road in Waterford, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately $400 \mu\text{W}/\text{cm}^2$ and $467 \mu\text{W}/\text{cm}^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 53 Dayton Road in Waterford, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.
- 3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 5) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

- 6) 4 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 7) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 8) 2 LTE channels (BRS Band - 2500 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 9) 2 NR channels (BRS Band - 2500 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 10) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 11) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 12) The antennas used in this modeling are the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s), the Ericsson AIR 21 for the 1900 MHz / 1900 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s) in Sector A, the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s), the Ericsson AIR 21 for the 1900 MHz / 1900 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s) in Sector B, the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s), the Ericsson AIR 21 for the 1900 MHz / 1900 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional

panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

- 13) The antenna mounting height centerline of the proposed antennas is 166 feet above ground level (AGL).
- 14) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 15) All calculations were done with respect to uncontrolled / general population threshold limits.

T-Mobile Site Inventory and Power Data

| | | | | | |
|---------------------|---|---------------------|---|---------------------|---|
| Sector: | A | Sector: | B | Sector: | C |
| Antenna #: | 1 | Antenna #: | 1 | Antenna #: | 1 |
| Make / Model: | Ericsson AIR 32 | Make / Model: | Ericsson AIR 32 | Make / Model: | Ericsson AIR 32 |
| Frequency Bands: | 1900 MHz / 2100 MHz | Frequency Bands: | 1900 MHz / 2100 MHz | Frequency Bands: | 1900 MHz / 2100 MHz |
| Gain: | 15.35 dBd / 15.85 dBd | Gain: | 15.35 dBd / 15.85 dBd | Gain: | 15.35 dBd / 15.85 dBd |
| Height (AGL): | 166 feet | Height (AGL): | 166 feet | Height (AGL): | 166 feet |
| Channel Count: | 4 | Channel Count: | 4 | Channel Count: | 4 |
| Total TX Power (W): | 240 Watts | Total TX Power (W): | 240 Watts | Total TX Power (W): | 240 Watts |
| ERP (W): | 8,728.31 | ERP (W): | 8,728.31 | ERP (W): | 8,728.31 |
| Antenna A1 MPE %: | 1.14% | Antenna B1 MPE %: | 1.14% | Antenna C1 MPE %: | 1.14% |
| Antenna #: | 2 | Antenna #: | 2 | Antenna #: | 2 |
| Make / Model: | Ericsson AIR 6449 | Make / Model: | Ericsson AIR 6449 | Make / Model: | Ericsson AIR 6449 |
| Frequency Bands: | 2500 MHz / 2500 MHz | Frequency Bands: | 2500 MHz / 2500 MHz | Frequency Bands: | 2500 MHz / 2500 MHz |
| Gain: | 22.05 dBd / 22.05 dBd | Gain: | 22.05 dBd / 22.05 dBd | Gain: | 22.05 dBd / 22.05 dBd |
| Height (AGL): | 166 feet | Height (AGL): | 166 feet | Height (AGL): | 166 feet |
| Channel Count: | 4 | Channel Count: | 4 | Channel Count: | 4 |
| Total TX Power (W): | 160 Watts | Total TX Power (W): | 160 Watts | Total TX Power (W): | 160 Watts |
| ERP (W): | 25,651.93 | ERP (W): | 25,651.93 | ERP (W): | 25,651.93 |
| Antenna A2 MPE %: | 3.35% | Antenna B2 MPE %: | 3.35% | Antenna C2 MPE %: | 3.35% |
| Antenna #: | 3 | Antenna #: | 3 | Antenna #: | 3 |
| Make / Model: | Ericsson AIR 21 | Make / Model: | Ericsson AIR 21 | Make / Model: | Ericsson AIR 21 |
| Frequency Bands: | 1900 MHz / 1900 MHz | Frequency Bands: | 1900 MHz / 1900 MHz | Frequency Bands: | 1900 MHz / 1900 MHz |
| Gain: | 15.35 dBd / 15.35 dBd | Gain: | 15.35 dBd / 15.35 dBd | Gain: | 15.35 dBd / 15.35 dBd |
| Height (AGL): | 166 feet | Height (AGL): | 166 feet | Height (AGL): | 166 feet |
| Channel Count: | 6 | Channel Count: | 6 | Channel Count: | 6 |
| Total TX Power (W): | 180 Watts | Total TX Power (W): | 180 Watts | Total TX Power (W): | 180 Watts |
| ERP (W): | 6,169.82 | ERP (W): | 6,169.82 | ERP (W): | 6,169.82 |
| Antenna A3 MPE %: | 0.80% | Antenna B3 MPE %: | 0.80% | Antenna C3 MPE %: | 0.80% |
| Antenna #: | 4 | Antenna #: | 4 | Antenna #: | 4 |
| Make / Model: | RFS APXVAARR24_43-U-NA20 | Make / Model: | RFS APXVAARR24_43-U-NA20 | Make / Model: | RFS APXVAARR24_43-U-NA20 |
| Frequency Bands: | 600 MHz / 600 MHz / 700 MHz / 1900 MHz | Frequency Bands: | 600 MHz / 600 MHz / 700 MHz / 1900 MHz | Frequency Bands: | 600 MHz / 600 MHz / 700 MHz / 1900 MHz |
| Gain: | 12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd | Gain: | 12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd | Gain: | 12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd |
| Height (AGL): | 166 feet | Height (AGL): | 166 feet | Height (AGL): | 166 feet |
| Channel Count: | 8 | Channel Count: | 8 | Channel Count: | 8 |
| Total TX Power (W): | 240 Watts | Total TX Power (W): | 240 Watts | Total TX Power (W): | 240 Watts |
| ERP (W): | 5,868.23 | ERP (W): | 5,868.23 | ERP (W): | 5,868.23 |
| Antenna A4 MPE %: | 1.42% | Antenna B4 MPE %: | 1.42% | Antenna C4 MPE %: | 1.42% |

| Site Composite MPE % | |
|-----------------------------|---------------|
| Carrier | MPE % |
| T-Mobile (Max at Sector A): | 6.71% |
| AT&T | 4.79% |
| Verizon | 16.84% |
| Metro PCS | 0.55% |
| Public Safety | 0.22% |
| Site Total MPE % : | 29.11% |

| T-Mobile MPE % Per Sector | |
|---------------------------|--------|
| T-Mobile Sector A Total: | 6.71% |
| T-Mobile Sector B Total: | 6.71% |
| T-Mobile Sector C Total: | 6.71% |
| | |
| Site Total MPE % : | 29.11% |

| T-Mobile Maximum MPE Power Values (Sector A) | | | | | | | |
|---|------------|-------------------------|---------------|---|-----------------|---|------------------|
| T-Mobile Frequency Band / Technology (Sector A) | # Channels | Watts ERP (Per Channel) | Height (feet) | Total Power Density ($\mu\text{W}/\text{cm}^2$) | Frequency (MHz) | Allowable MPE ($\mu\text{W}/\text{cm}^2$) | Calculated % MPE |
| T-Mobile 1900 MHz LTE | 2 | 2056.61 | 166.0 | 5.37 | 1900 MHz LTE | 1000 | 0.54% |
| T-Mobile 2100 MHz LTE | 2 | 2307.55 | 166.0 | 6.02 | 2100 MHz LTE | 1000 | 0.60% |
| T-Mobile 2500 MHz LTE | 2 | 6412.98 | 166.0 | 16.73 | 2500 MHz LTE | 1000 | 1.67% |
| T-Mobile 2500 MHz NR | 2 | 6412.98 | 166.0 | 16.73 | 2500 MHz NR | 1000 | 1.67% |
| T-Mobile 1900 MHz GSM | 4 | 1028.30 | 166.0 | 5.37 | 1900 MHz GSM | 1000 | 0.54% |
| T-Mobile 1900 MHz UMTS | 2 | 1028.30 | 166.0 | 2.68 | 1900 MHz UMTS | 1000 | 0.27% |
| T-Mobile 600 MHz LTE | 2 | 591.73 | 166.0 | 1.54 | 600 MHz LTE | 400 | 0.39% |
| T-Mobile 600 MHz NR | 2 | 591.73 | 166.0 | 1.54 | 600 MHz NR | 400 | 0.39% |
| T-Mobile 700 MHz LTE | 2 | 648.82 | 166.0 | 1.69 | 700 MHz LTE | 467 | 0.36% |
| T-Mobile 1900 MHz LTE | 2 | 1101.85 | 166.0 | 2.88 | 1900 MHz LTE | 1000 | 0.29% |
| | | | | | | Total: | 6.71% |

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

| T-Mobile Sector | Power Density Value (%) |
|------------------------------------|-------------------------|
| Sector A: | 6.71% |
| Sector B: | 6.71% |
| Sector C: | 6.71% |
| T-Mobile Maximum MPE % (Sector A): | 6.71% |
| | |
| Site Total: | 29.11% |
| | |
| Site Compliance Status: | COMPLIANT |

The anticipated composite MPE value for this site assuming all carriers present is **29.11%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Exhibit G

Mailing Receipts/Proof of Notice

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450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

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1 OF 1

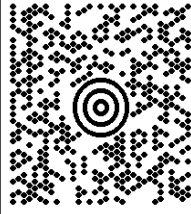
1 LBS

CENTERLINE COMMUNICATIONS
5082655599
CENTERLINE CORPORATE
95 RYAN DR.
RAYNHAM MA 02767

SHIP TO:

PATRICK MASSEY, PM, SITE DEVT.
AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY

WOBURN MA 01801-1053

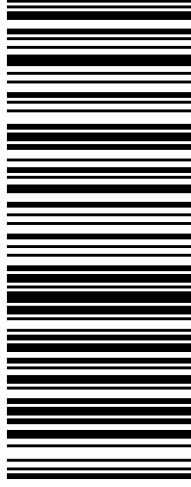


MA 018 9-04



UPS GROUND

TRACKING #: 1Z 9Y4 503 03 2544 7511



BILLING: P/P

Reference # 1: CT11041D - CSC to ATC

CS 22.0.11. WNTNV50 31.0A 07/2020



TM

Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Thursday, August 6, 2020 11:47 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030325447511



Hello, your package has been delivered.

Delivery Date: Thursday, 08/06/2020

Delivery Time: 11:44 AM

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Signed by: LONG

CENTERLINE SITE ACQUISITION

Tracking Number: [1Z9Y45030325447511](#)

Ship To: AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN, MA 018011053
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 0.2 LBS

Reference Number: CT11041D - CSC TO ATC



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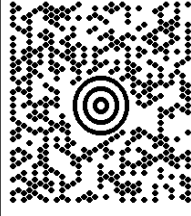
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1 LBS

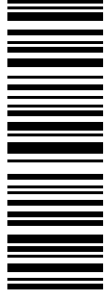
CENTERLINE COMMUNICATIONS
5082655599
CENTERLINE CORPORATE
95 RYAN DR.
RAYNHAM MA 02767

SHIP TO:

ROB BRULE, FIRST SELECTMAN
TOWN OF WATERFORD
15 ROPE FERRY ROAD
WATERFORD CT 06385-2806

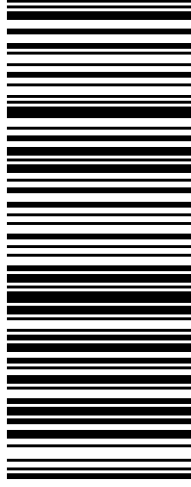


CT 063 5-02



UPS GROUND

TRACKING #: 1Z 9Y4 503 03 2015 7905



BILLING: P/P

Reference # 1: CT11041D - CSC TO TOWN

CS 22.0.11. WNTNV50 31.0A 07/2020



Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
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To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030320157905



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Delivery Time: 11:13 AM

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Signed by: THOMPSON

CENTERLINE SITE ACQUISITION

Tracking Number: [1Z9Y45030320157905](#)

Ship To: TOWN OF WATERFORD
15 ROPE FERRY ROAD
WATERFORD, CT 063852806
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 0.2 LBS

Reference Number: CT11041D - CSC TO TOWN



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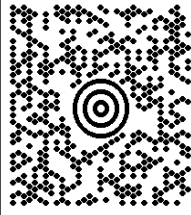
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1 LBS

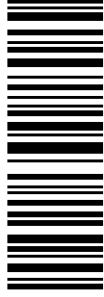
CENTERLINE COMMUNICATIONS
50826555599
CENTERLINE CORPORATE
95 RYAN DR.
RAYNHAM MA 02767

SHIP TO:

ABBY PIERSALL, AICP
TOWN OF WATERFORD
15 ROPE FERRY ROAD
WATERFORD CT 06385-2806

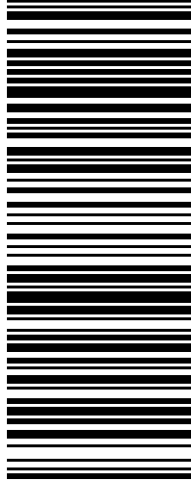


CT 063 5-02



UPS GROUND

TRACKING #: 1Z 9Y4 503 03 2046 1291



BILLING: P/P

Reference # 1: CT11041D - CSC TO PLANNING

CS 22.0.11. WNTNV50 31.0A 07/2020



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To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030320461291



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Delivery Time: 11:13 AM

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Signed by: THOMPSON

CENTERLINE SITE ACQUISITION

Tracking Number: [1Z9Y45030320461291](https://www.ups.com/track/1Z9Y45030320461291)

Ship To: TOWN OF WATERFORD
15 ROPE FERRY ROAD
WATERFORD, CT 063852806
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 0.2 LBS

Reference Number: CT11041D - CSC TO PLANNING



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