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October 6, 2021

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

T-Mobile Northeast LLC – CTNH568A
Tower Share Application
1325 Cheshire Street
Latitude- 41.53258889
Longitude- -72.87047222

Dear Ms. Bachman,

This letter and attachments are submitted on behalf of T-Mobile Northeast LLC (“T-Mobile”). T-Mobile plans to install antennas and related equipment at the tower site located at 1325 Cheshire Street, Cheshire, Connecticut.

T-Mobile will install six (6) 600/700/1900/2100/5G MHz antennas and six (6) RRUs at the 129’ level of the existing 199’ monopole tower. Three (3) hybrid cables will also be installed. T-Mobile’s equipment cabinets will be placed on a 10’ X 15’ concrete pad within the existing ground facility. Included are plans by American Tower (Colliers Engineering), dated September 1, 2021, depicting the planned changes and attached as **Exhibit A**. Also included is a structural analysis prepared by American Tower (CLS Engineering), dated July 30, 2021, confirming that the existing tower is structurally capable of supporting the proposed equipment. This is attached and detailed in **Exhibit B**.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of T-Mobile’s intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A., a copy of this letter is being sent to Sean Kimball, Town Manager of Cheshire, William Voelker, Town Planner, as well as the tower and property owner, American Tower Corporation. Please see the attached letter from American Tower Corporation authorizing the proposed shared use of this facility attached as **Exhibit C**.

The planned modifications of the facility fall squarely within those activities explicitly provided for in R.C.S.A. 16-50j-89.

1. The proposed modification will not result in an increase in the height of the existing structure. The top of the monopole is 199’; T-Mobile’s proposed antennas will be located at a center line height of 129’.
2. The proposed modifications will not result in the increase of the site boundary as depicted on the attached site plan.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed local and state criteria. T-Mobile's plans include the installation of an emergency back-up generator; noise associated with this installation is exempt from State and local noise standards. The incremental effect of the proposed changes will be negligible.
4. The operation of the proposed antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. As indicated in the attached power density calculations, the combined site operations will result in a total power density of 22.35%, as evidenced by **Exhibit D**.

Connecticut General Statutes 16-50aa indicates that the Council must approve the shared use of a telecommunications facility provided it finds the shared use is technically, legally, environmentally, and economically feasible and meets public safety concerns. As demonstrated in this letter, T-Mobile respectfully submits that the shared use of this facility satisfies these criteria.

- A. Technical Feasibility. The existing monopole has been deemed structurally capable of supporting T-Mobile's proposed loading, with the tower modifications/reinforcements as detailed in the structural analysis. The structural analysis is included as **Exhibit B**.
- B. Legal Feasibility. As referenced above, C.G.S. 16-50aa has been authorized to issue orders approving the shared use of an existing tower such as this monopole in Cheshire. Under the authority granted to the Council, an order of the Council approving the requested shared use would permit T-Mobile to obtain a building permit for the proposed installation. Further, a Letter of Authorization is included as **Exhibit C**, authorizing T-Mobile to file this application for shared use.
- C. Environmental Feasibility. The proposed shared use of this facility would have minimal environmental impact. The installation of T-Mobile equipment at the 129' level of the existing 199' tower would have an insignificant visual impact on the area around the tower. T-Mobile's ground equipment would be installed within the existing facility compound. T-Mobile's shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, as evidenced by **Exhibit D**, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.
- D. Economic Feasibility. T-Mobile will be entering into an agreement with the owner of this facility to mutually agreeable terms. As previously mentioned, the Letter of Authorization has been provided by the owner to assist T-Mobile with this tower sharing application.
- E. Public Safety Concerns. As discussed above, the monopole is structurally capable of supporting T-Mobile's proposed loading. T-Mobile is not aware of any public safety concerns relative to the proposed sharing of the existing monopole. T-Mobile's intentions of providing new and improved wireless service through the shared use of this facility is expected to enhance the safety and welfare of local residents and individuals traveling through Cheshire and nearby the facility.

Sincerely,

Eric Breun

Eric Breun
Transcend Wireless
10 Industrial Ave., Suite 3
Mahwah, New Jersey
ebreun@transcendwireless.com
201-658-7728

CC: Sean Kimball – Town Manager
William Voelker – Town Planner
American Tower Corporation

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Delivery Date: Friday, 09/24/2021

Delivery Time: 11:12 AM

Left At: RECEIVER

Signed by: DONNA

TRANSCEND WIRELESS

Tracking Number: [1ZV257420390920544](#)

Ship To: SEAN KIMBALL
84 SOUTH MAIN STREET
CHESHIRE, CT 06410
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 1.0 LBS

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Tracking Number: [1ZV257420394902539](#)

Ship To: WILLIAM VOELKER
84 SOUTH MAIN STREET
CHESHIRE, CT 06410
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 1.0 LBS

Reference Number: [CTNH568A](#)

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Delivery Time: 11:37 AM

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TRANSCEND WIRELESS

Tracking Number:	<u>1ZV257420394488523</u>
Ship To:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 01801 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	<u>CTNH548A</u>

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 ANSIEIA/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.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
 - A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
 - B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
 - C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
 - D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
 - E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
 - A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.

- B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
- C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
- E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
- G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/8" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- H. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE.
- I. ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND T-MOBILE PROJECT MANAGER IN WRITING

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:

CONCRETE AND REINFORCING STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
2. MIX DESIGN SHALL BE APPROVED BY T-MOBILE REP PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-6" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.
4. THE FOLLOWING MATERIALS SHALL BE USED:
 - PORTLAND CEMENT: ASTM C150, TYPE 2
 - REINFORCEMENT: ASTM A185, PLAIN STEEL WELDED WIRE FABRIC
 - REINFORCEMENT BARS: ASTM A615, GRADE 60, DEFORMED
 - NORMAL WEIGHT AGGREGATE: ASTM C33
 - WATER: ASTM C 94/C 94M
 - WELDED WIRE FABRIC: ASTM A185
 - ADMIXTURES:
 - WATER-REDUCING AGENT: ASTM C 494/C 494M, TYPE A
 - AIR-ENTERING AGENT: ASTM C 260/C 260M
 - SUPERPLASTICIZER: ASTM C494, TYPE F OR TYPE G
 - RETARDING: ASTM C 494/C 494M, TYPE B

5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".
6. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR APPROVAL FROM AN ATC ENGINEER WHEN DRILLING HOLES IN CONCRETE.
8. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.
9. DO NOT WELD OR TACK WELD REINFORCING STEEL.
10. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
11. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
12. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
13. FOR COLD-WEATHER (ACI 306) AND HOT-WEATHER (ACI 301M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
14. ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
15. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
16. DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
17. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
18. LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
19. SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".
20. BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.
21. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.
22. SLAB ON GROUND: COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.

ELECTRICAL NOTES:

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

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



Colliers Engineering & Design

www.colliersengineering.com

Doing Business as **MASER**

MADISON
135 New Road

Madison, CT 06443
Phone: 860.395.0055
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/02/21
B	FOR CONSTRUCTION	AMN	08/06/21
C	FOR CONSTRUCTION	RMD	09/01/21
D			
E			

ATC SITE NUMBER:
208478

ATC SITE NAME:
CHESHIRE

T-MOBILE SITE NAME:
CTNH568A

SITE ADDRESS:
**1325 CHESHIRE STREET
CHESHIRE, CT 06410**

Digitally signed by Alec Norris
Date: 2021.09.01 13:42:53-04'00'

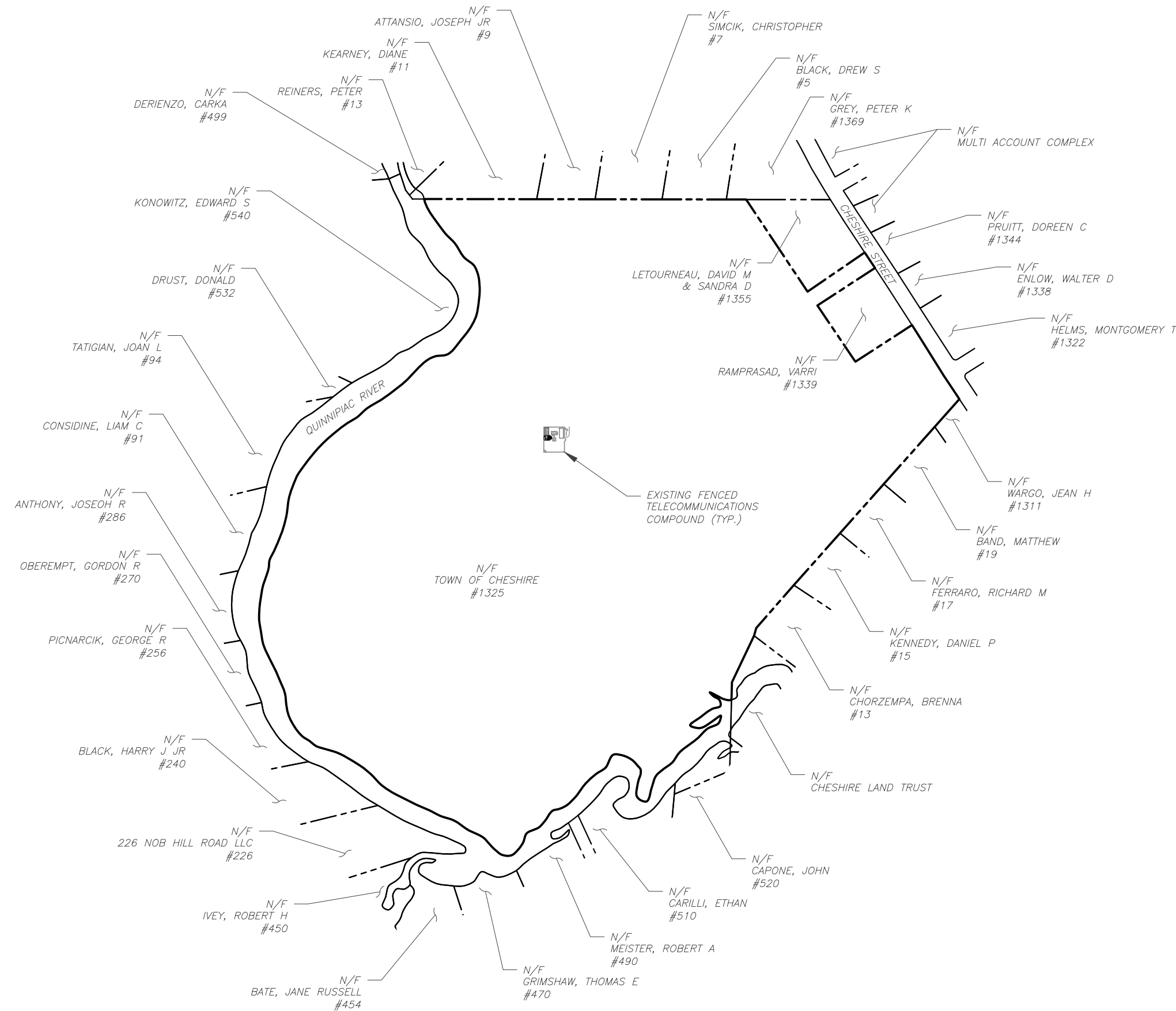
Alec S. Norris
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 32588
COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T.JPC.000131

DATE DRAWN:	08/02/21
ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

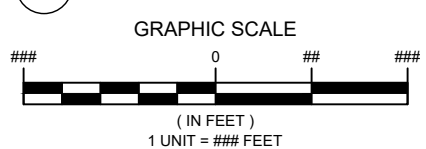
GENERAL NOTES

SHEET NUMBER: G-002	REVISION: 1
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1 OVERALL SITE PLAN



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REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/02/21
B	FOR CONSTRUCTION	AMN	08/06/21
1	FOR CONSTRUCTION	RMD	09/01/21

ATC SITE NUMBER:
208478

ATC SITE NAME:
CHESHIRE

T-MOBILE SITE NAME:
CTNH568A

SITE ADDRESS:
1325 CHESHIRE STREET
CHESHIRE, CT 06410



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Date: 2021.09.01 13:42:56-04'00'

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 LICENSE NUMBER: 32588
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 C.T. JPC.000131



DATE DRAWN:	08/02/21
ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

OVERALL SITE PLAN

SHEET NUMBER:
C-001

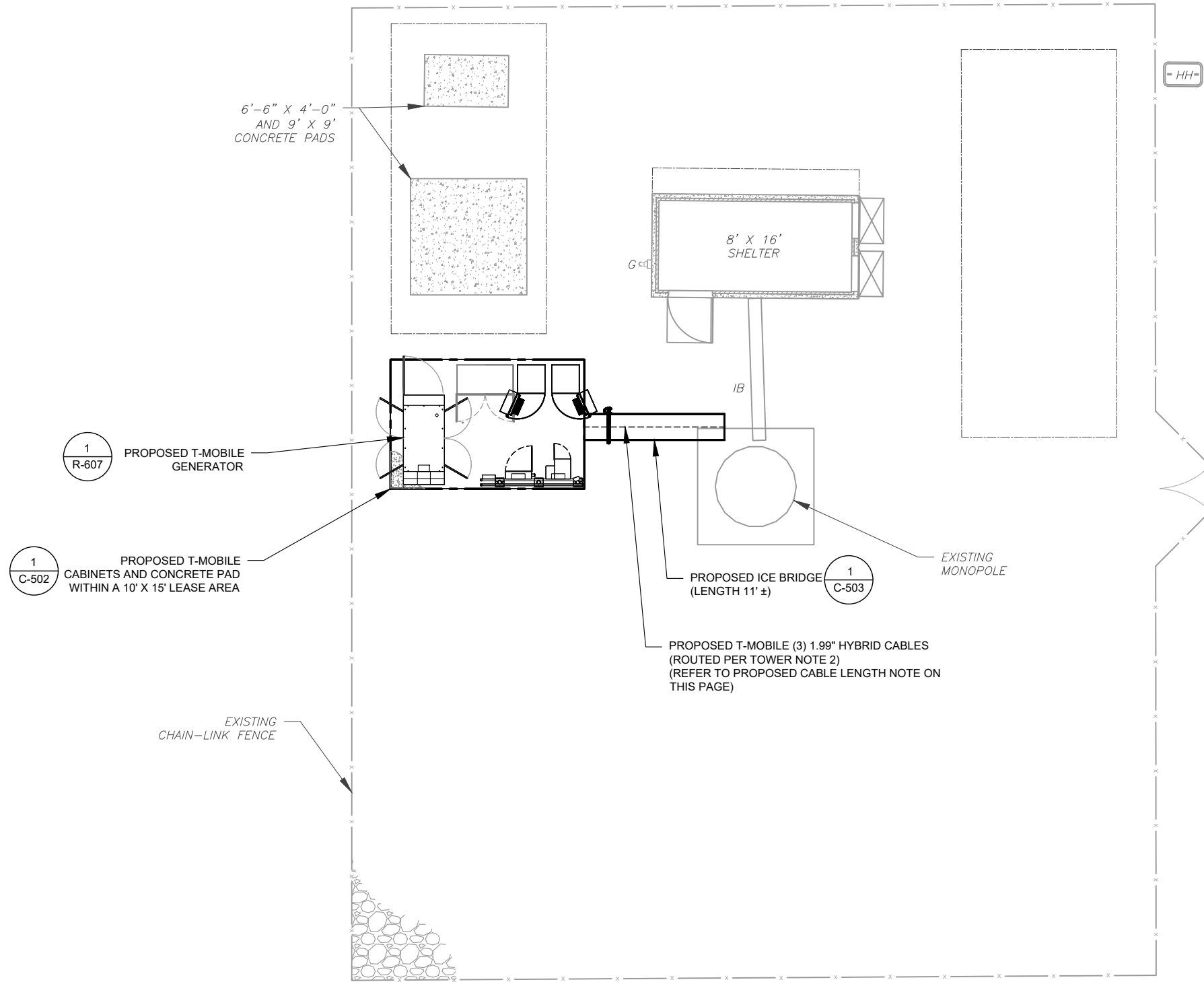
REVISION:
1

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SITE PLAN NOTES:

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

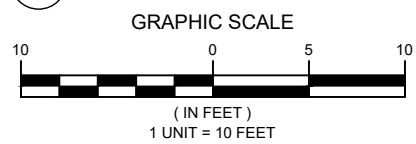
LEGEND	
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
- x -	CHAINLINK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



PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **165'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES). CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

1 DETAILED SITE PLAN



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REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/02/21
B	FOR CONSTRUCTION	AMN	08/06/21
1	FOR CONSTRUCTION	RMD	09/01/21

ATC SITE NUMBER:
208478

ATC SITE NAME:
CHESHIRE

T-MOBILE SITE NAME:
CTNH568A

SITE ADDRESS:
**1325 CHESHIRE STREET
CHESHIRE, CT 06410**

Alec Norris
 32588
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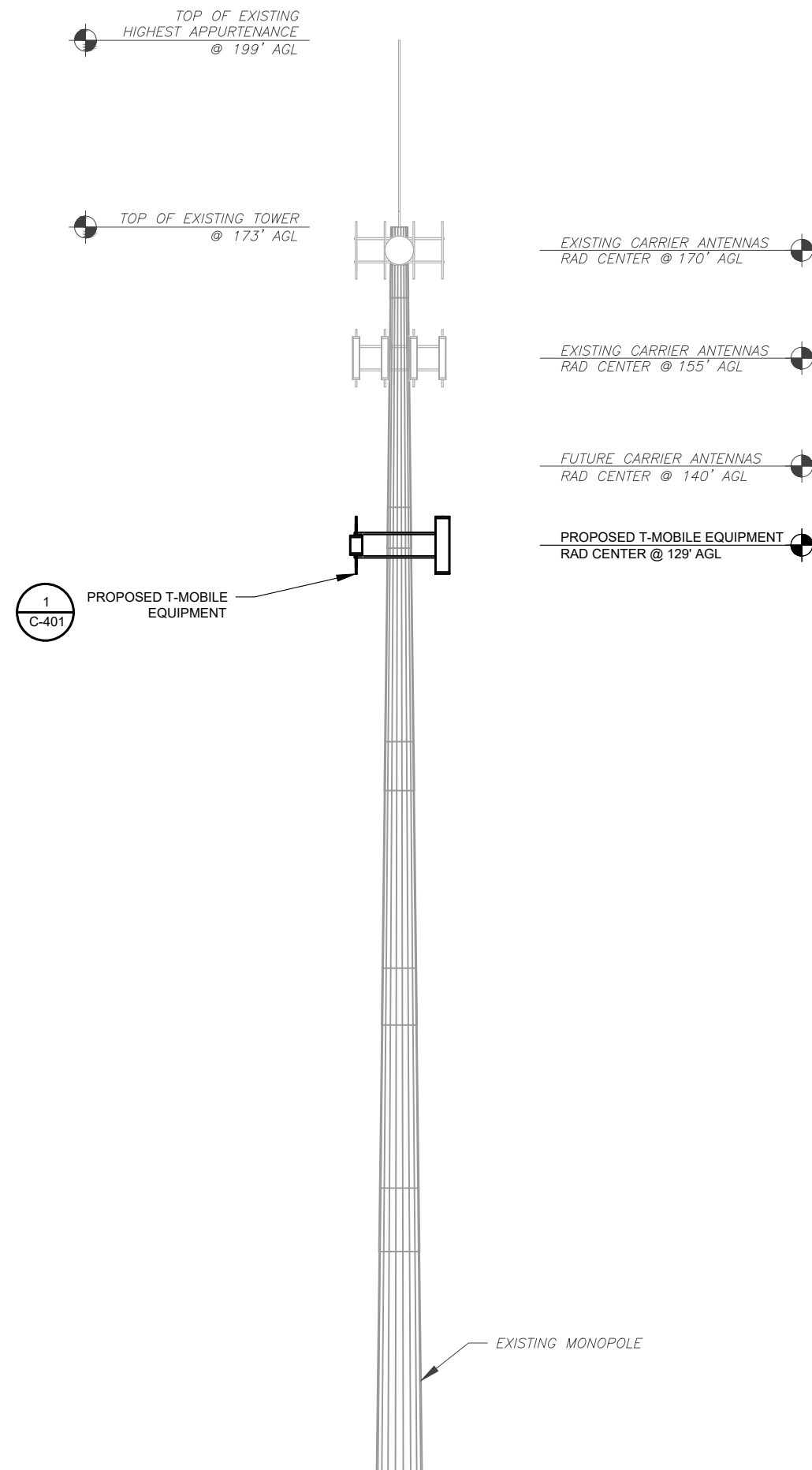


DATE DRAWN:	08/02/21
ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

DETAILED SITE PLAN

SHEET NUMBER: C-101	REVISION: 1
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PER MOUNT ANALYSIS COMPLETED BY CENTEK, DATED 07/21/21, THE PROPOSED MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

1
C-401
PROPOSED T-MOBILE EQUIPMENT

1 TOWER ELEVATION
SCALE: N.T.S.

TOWER NOTE:

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



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CHESHIRE, CT 06410

Alec S. Norris
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Date: 2021.09.01 13:43:03-04'00'

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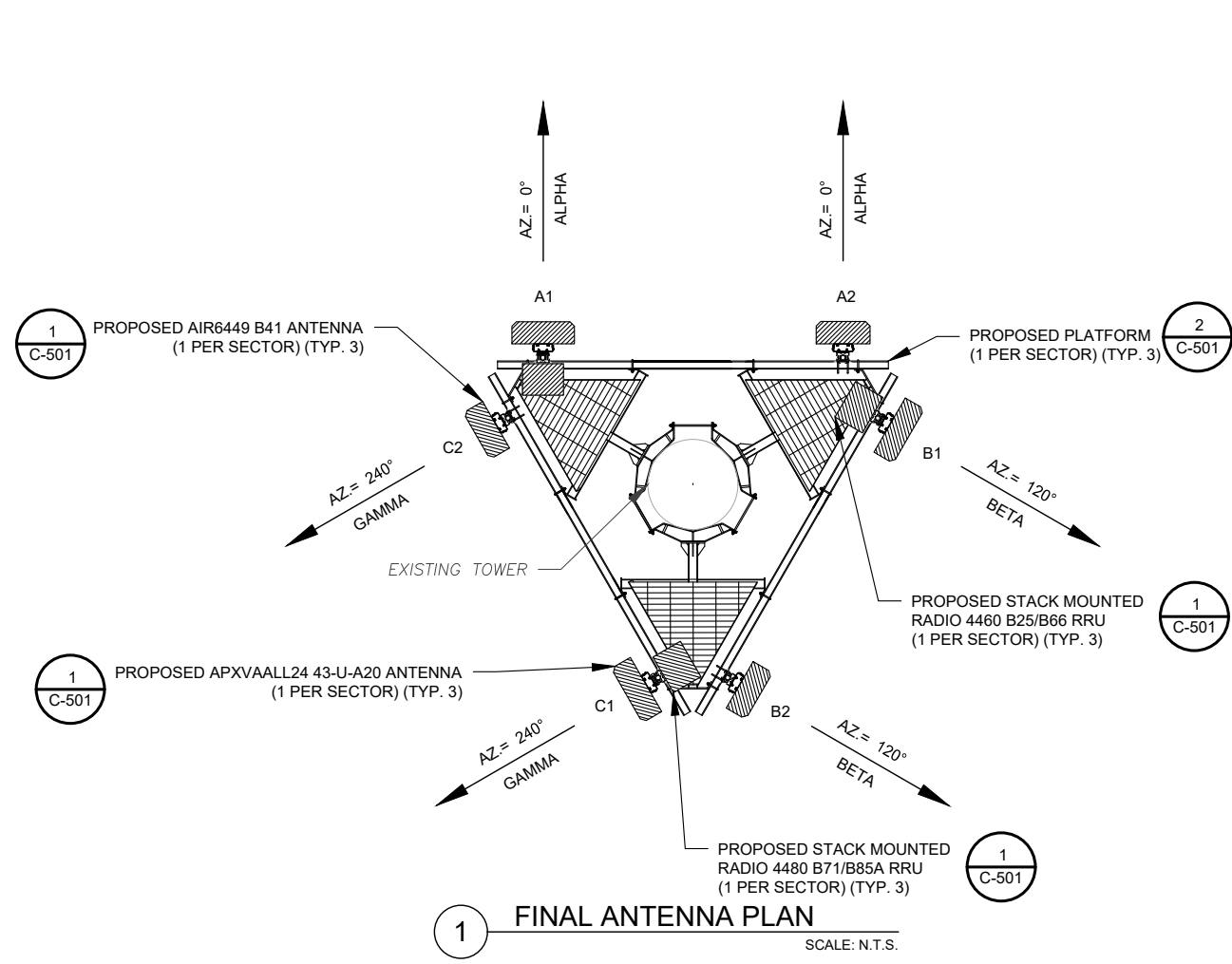
DATE DRAWN:	08/02/21
ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

TOWER ELEVATION

SHEET NUMBER: C-201	REVISION: 1
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PER MOUNT ANALYSIS COMPLETED BY CENTEK, DATED 07/21/21, THE PROPOSED MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



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

FINAL ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT	DISTRIBUTION BOX / CABLING
ALPHA	129'	0°	A1	APXVAALL24 43-U-NA20	L600/L700/L1900/L2100/ N600/G1900/U2100	0/0	RADIO 4460 B25/B66 RADIO 4480 B71/B85	(3) 1.99" HYBRID CABLES
			A2	AIR6449 B41	5G	0/0	-	
BETA	129'	120°	B1	APXVAALL24 43-U-NA20	L600/L700/L1900/L2100/ N600/G1900/U2100	0/0	RADIO 4460 B25/B66 RADIO 4480 B71/B85	
			B2	AIR6449 B41	5G	0/0	-	
GAMMA	129'	240°	C1	APXVAALL24 43-U-NA20	L600/L700/L1900/L2100/ N600/G1900/U2100	0/0	RADIO 4460 B25/B66 RADIO 4480 B71/B85	
			C2	AIR6449 B41	5G	0/0	-	

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

2 ANTENNA SCHEDULE



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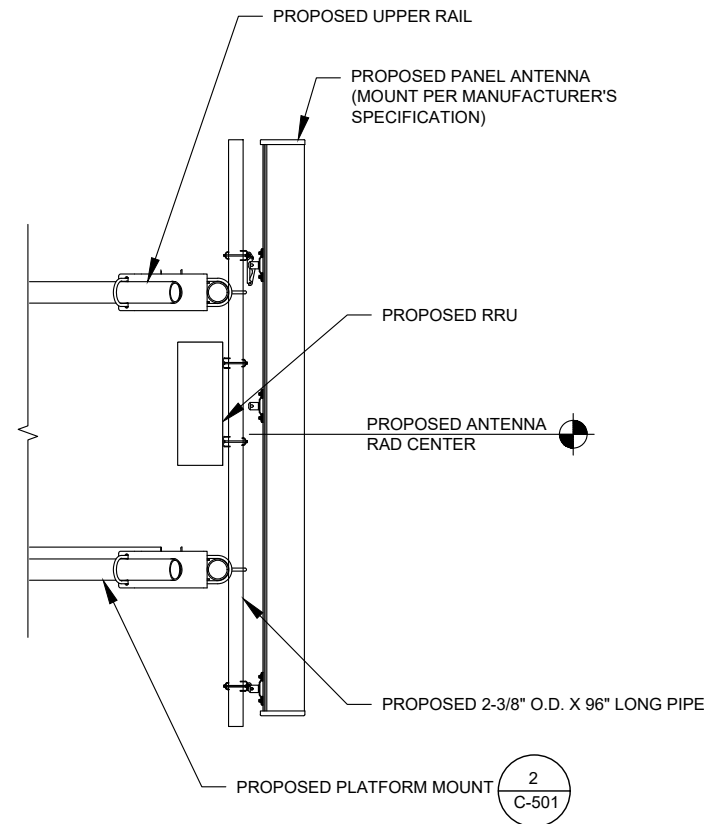


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CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

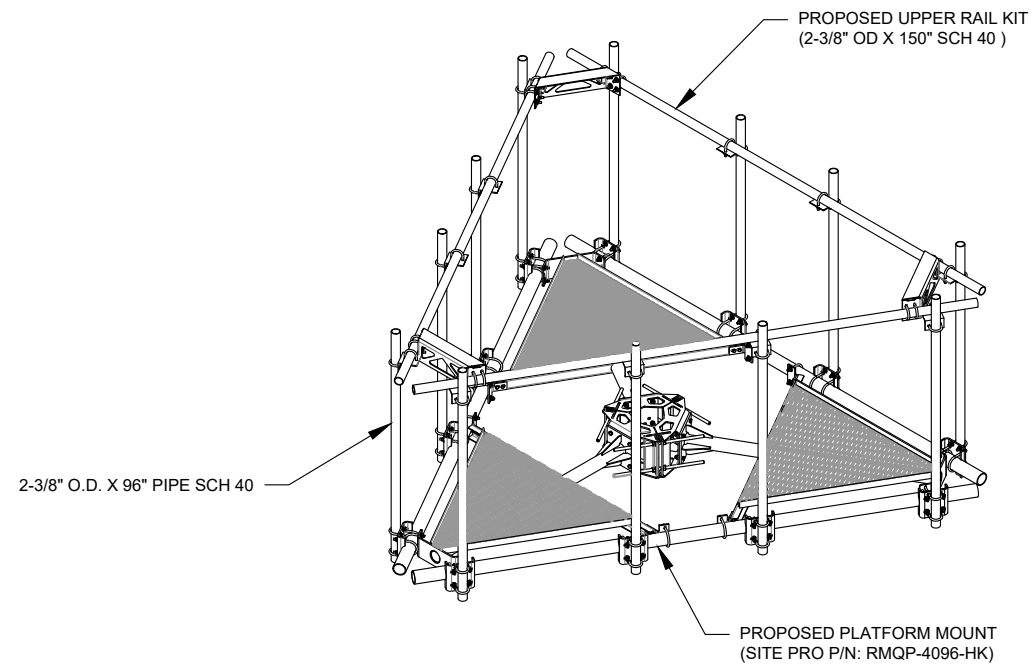
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	1

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1 PROPOSED ANTENNA MOUNTING DETAIL (ELEVATION)
SCALE: NOT TO SCALE



2 ISOMETRIC PLATFORM DETAIL
SCALE: N.T.S.



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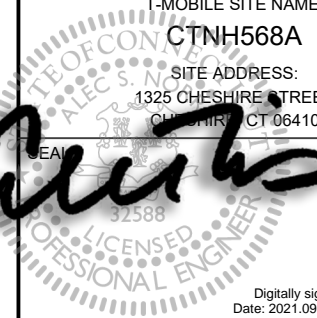
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1	FOR CONSTRUCTION	RMD	09/01/21

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C.T. JPC.0000131



DATE DRAWN:	08/02/21
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CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

MOUNT DETAILS

SHEET NUMBER:	REVISION:
C-501	1

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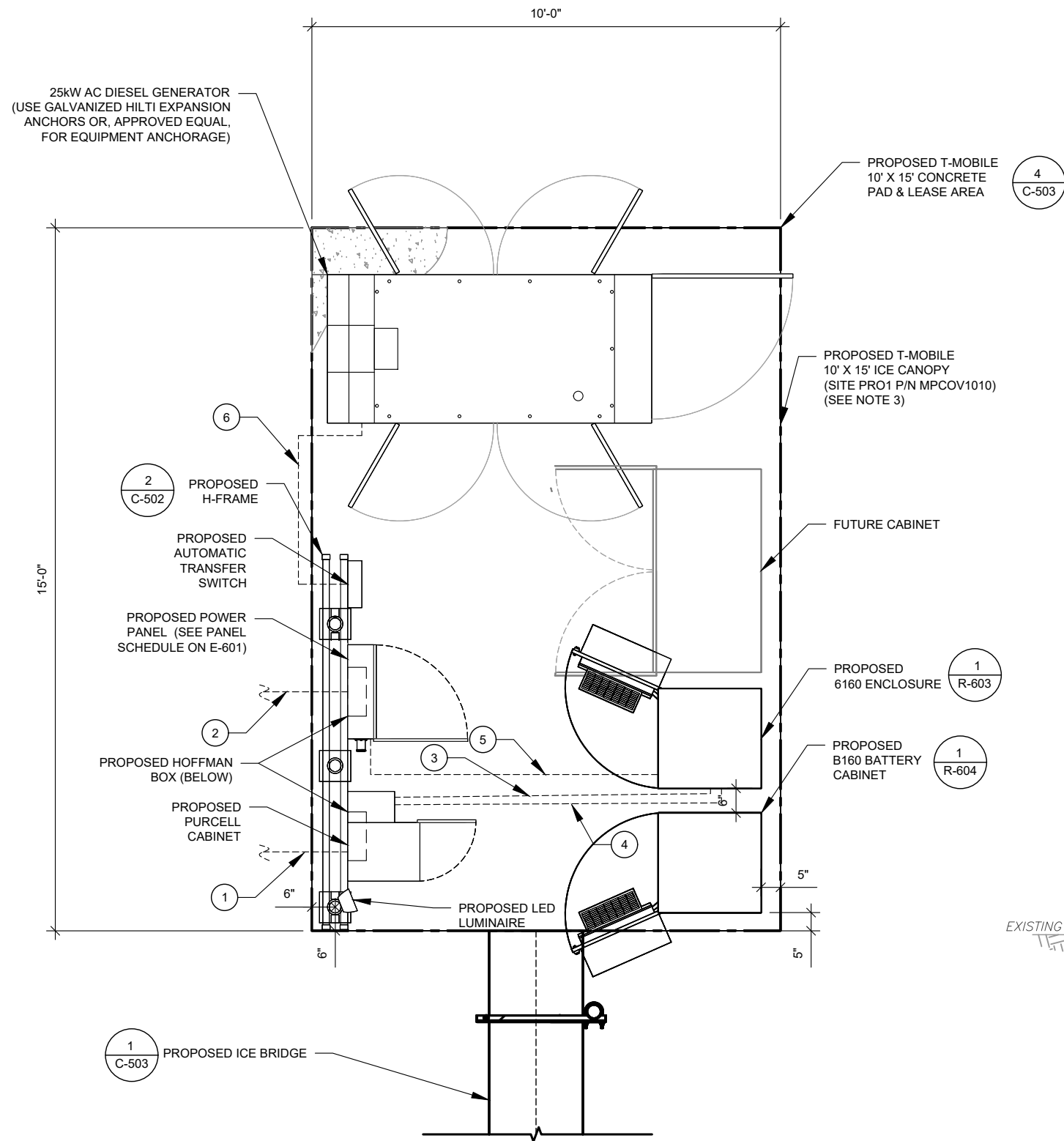
Alec S. Norris
 CONNECTICUT LICENSED PROFESSIONAL ENGINEER
 LICENSE NUMBER: 32588
 COLLIER'S ENGINEERING & DESIGN CT, P.C.
 C.T. JPC.000131



DATE DRAWN:	08/02/21
ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-502	1



EQUIPMENT POWER NOTES:

- 1 2" CONDUIT W/ 3-#3/0 CU, (1) #6 AWG G, PPC POWER
- 2 2" CONDUIT W/ MULE TAPE FOR TELCO FEEDER SERVICE TO TELCO SOURCE PER UTILITY
- 3 2-#12, 1 #12G IN 3/4" CONDUIT FROM TELCO CAB TO 6160
- 4 3-#1/0, 1-#6 IN 2" CONDUIT
- 5 2" CONDUIT, FOR CAT6

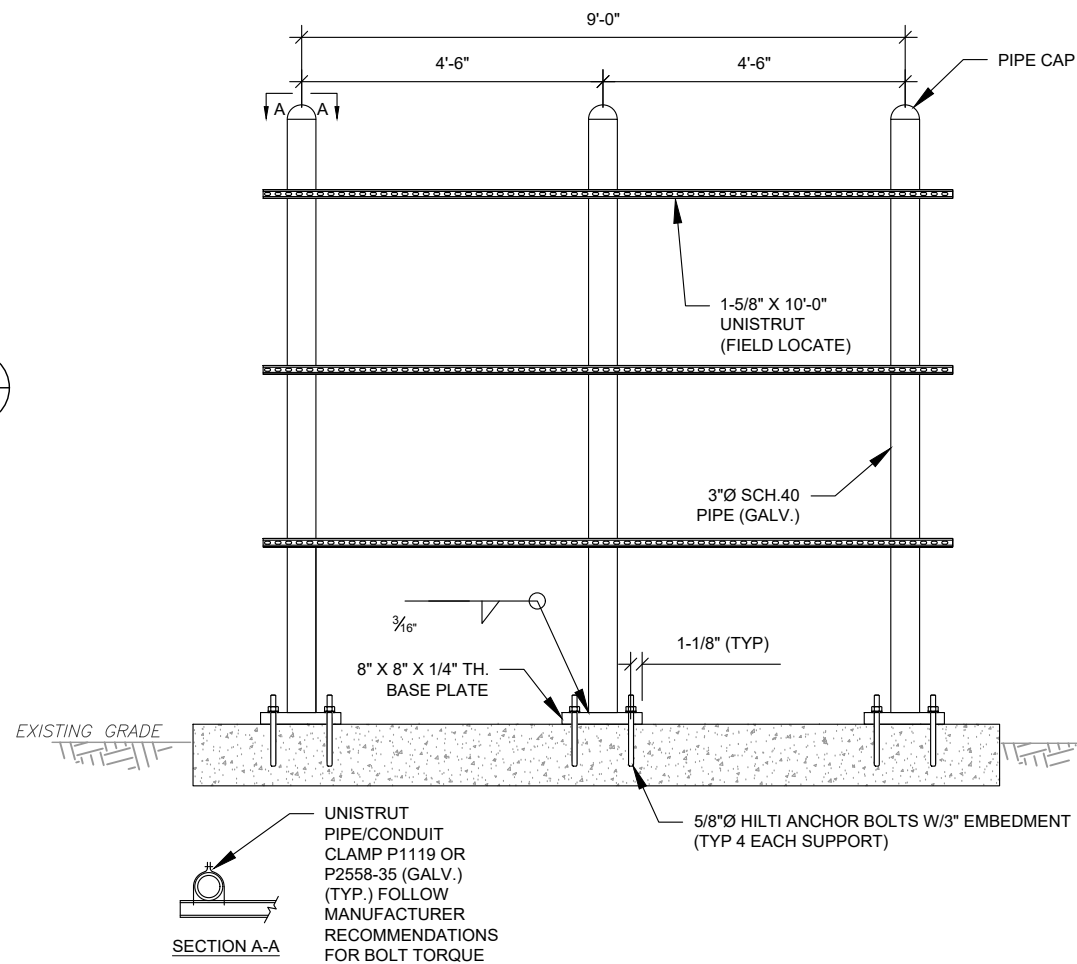
NOTE:

- 1. CABINETS SHALL BE ORIENTED AND INSTALLED EXACTLY AS SHOWN
- 2. WEIGHT OF BTS UNIT IS 1,060 LBS (WEIGHT IS WITHOUT EQUIPMENT)

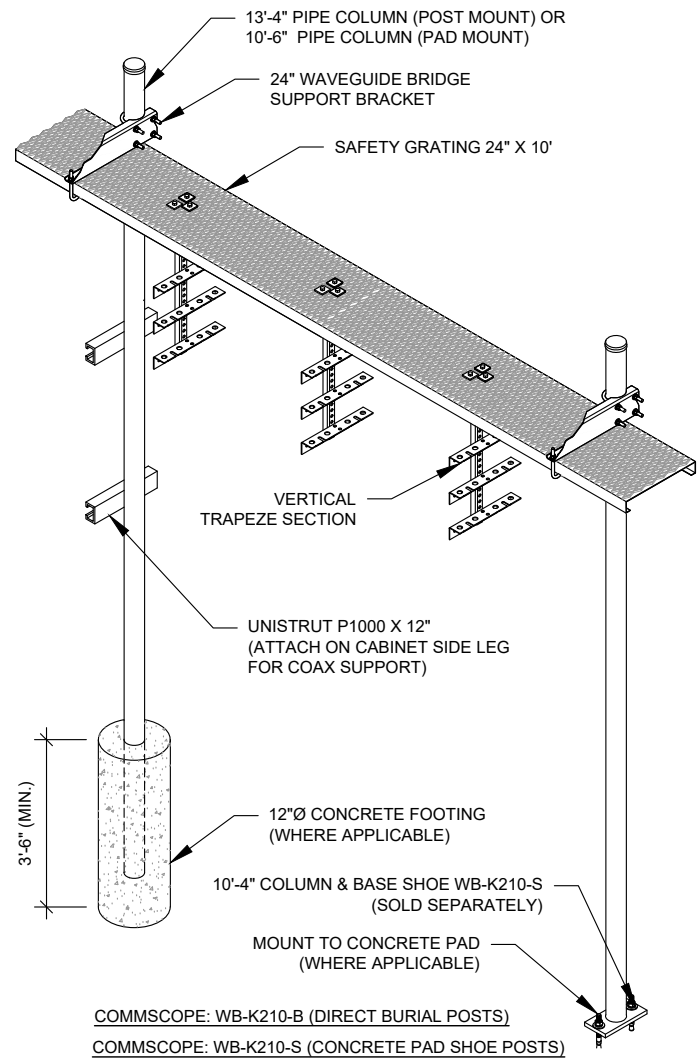
1 DETAILED EQUIPMENT LAYOUT
SCALE: NOT TO SCALE

H-FRAME NOTES:

- 1. IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST WILL ALWAYS BE REQUIRED.
- 2. PROPOSED UNISTRUTS TO BE FIELD CUT AND SHOULD NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
- 3. SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT, ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
- 4. UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
- 5. ALL PROPOSED HARDWARE TO BE MOUNTED PER MANUFACTURERS SPECS.



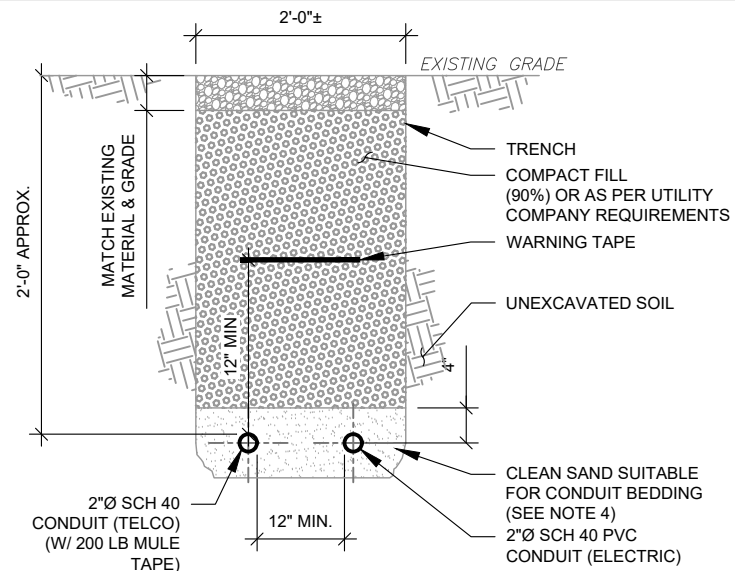
2 TYPICAL H-FRAME DETAIL
SCALE: NOT TO SCALE



CONSTRUCTION NOTE:

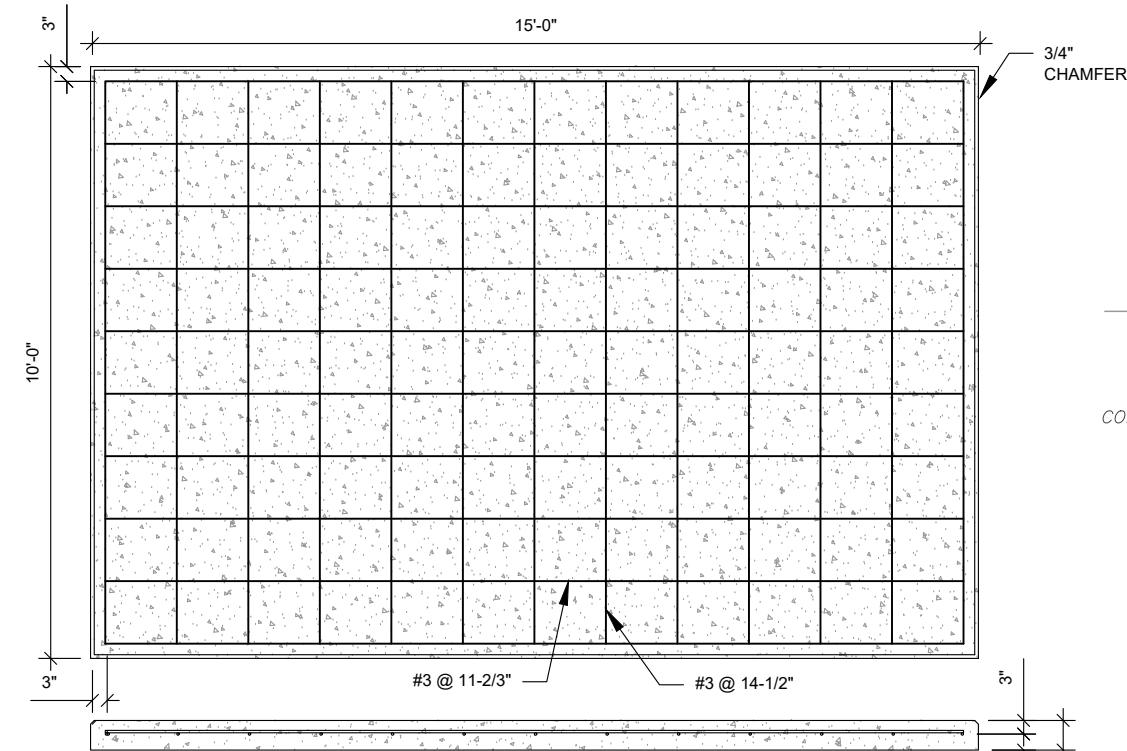
1. INSTALL ICE BRIDGE TO ALLOW 7 FEET CLEARANCE ABOVE GRADE TO LOWEST APPURTENANCE.
2. INSTALL PER MANUFACTURES SPECIFICATION.

1 WAVEGUIDE BRIDGE KIT
SCALE: NOT TO SCALE



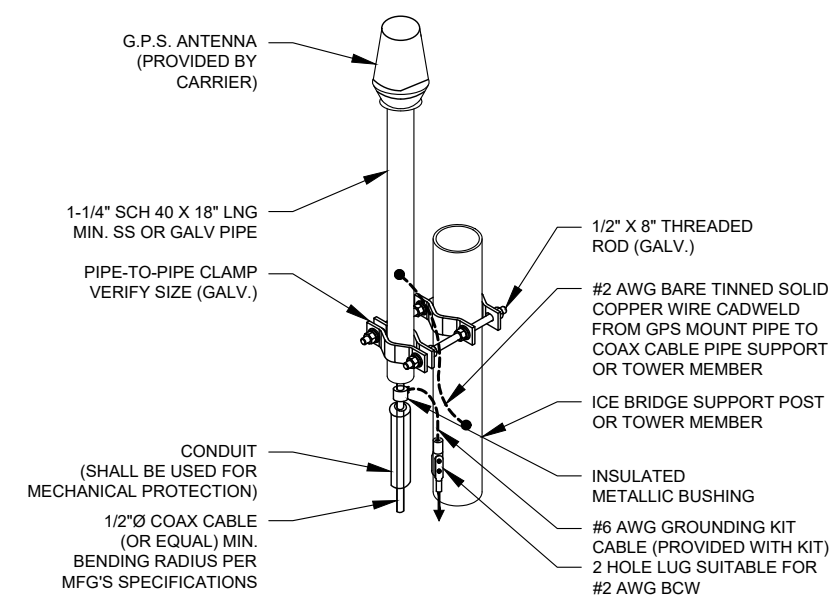
- TRENCH NOTES:**
1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
 2. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
 3. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
 4. CONCRETE ENCASE CONDUIT WHEN TRENCHING UNDER SITE ACCESS ROAD.

2 TELCO AND POWER CONDUIT JOINT TRENCH
SCALE: N.T.S.



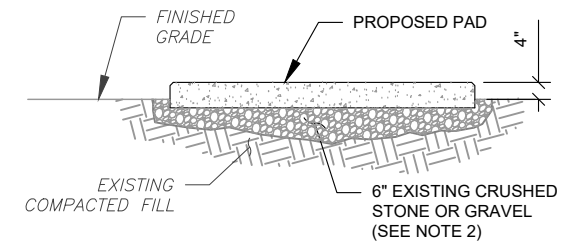
- PAD NOTES:**
1. PADS SHALL BE PRE-CAST MATCHING THIS DESIGN WHERE ALLOWED BY LOCAL JURISDICTION.
 2. REFER TO CONCRETE & REINFORCED STEEL NOTES ON SHEET G-002 & ATC SPEC 033000 FOR CAST-IN-PLACE PADS.

4 REINFORCED PAD LAYOUT
SCALE: NOT TO SCALE



- NOTE:**
1. GPS SHALL BE PLACED WITH CLEAR SIGHT LINE TO THE SOUTHERN SKY.
 2. CONTRACTOR TO SUPPLY COAX FOR GPS UNIT.

3 GPS ANTENNA ATTACHMENT DETAIL
SCALE: NOT TO SCALE



- PAD NOTES:**
1. SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. DELETRIOUS MATERIAL AND ORGANICS SHALL BE REMOVED.
 2. MECHANICALLY COMPACT FOOTPRINT OF PAD PLUS 2' PERIMETER.
 3. USE GALVANIZED HILTI EXPANSION ANCHORS OR, APPROVED EQUAL, FOR EQUIPMENT ANCHORAGE.
 4. FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENT, SEE EQUIPMENT VENDOR DRAWINGS.

5 GRAVEL PREPARATION
SCALE: NOT TO SCALE



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DATE DRAWN:	08/02/21
ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

CONSTRUCTION DETAILS

SHEET NUMBER:
C-503

REVISION:
1

GROUNDING NOTES:

- ALL EQUIPMENT ENCLOSURES, DEVICES AND CONDUITS SHALL BE GROUNDED TO CONFORM WITH THE LATEST REQUIREMENTS OF THE NEC BY THE INSTALLATION OF A SEPARATE, GREEN, INSULATED GROUND CONDUCTOR FOR ALL FEEDER AND BRANCH CIRCUITS. GROUND CONDUCTORS SHALL BE OF THE SIZE INDICATED ON THE DRAWINGS. GROUND CONDUCTORS SHALL BE CONTINUOUS IN LENGTH AND SHALL BE BONDED TO EACH ENCLOSURE THEY PASS THROUGH. CONDUIT SHALL NOT BE USED AS A GROUNDING CONDUCTOR.
- GROUNDING CONDUCTORS SHALL:
 - BE #2 AWG SOLID BARE TINNED COPPER (SBTC) FOR ALL GROUNDING SYSTEM WIRE UNLESS OTHERWISE NOTED, OR OTHERWISE REQUIRED BY CODE.
 - BE MINIMUM 12" BEND RADIUS. KEEP NUMBER OF BENDS TO A MINIMUM.
 - AVOID LONG BONDING CONNECTION RUNS. MAKE DIRECT AS POSSIBLE.
 - NOT HAVE ANY U-SHAPED RUNS.
 - BE IN NON-METALLIC CONDUIT ONLY, IF IN CONDUIT.
 - BE PLACED THROUGH NON-METALLIC SLEEVES IN FLOORS, WALLS, CEILINGS, ETC.
 - PROTECTED IN NON-METALLIC CONDUIT WHERE EXPOSED ABOVE GRADE.
- INSTALL ALL GROUNDING RINGS AND RADIALS WITH CONDUCTIVE CEMENT, SANKOSHA AS DISTRIBUTED BY ELECTRIC MOTION COMPANY, INC., WINSTED, CT 06098, OR AS SPECIFICALLY INDICATED. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- GROUND RINGS SHALL BE:
 - MINIMUM 30" BELOW GRADE, OR BELOW FROST LINE WHICHEVER IS DEEPER.
 - MINIMUM 2' FROM FOUNDATIONS, FOOTINGS, OTHER GROUNDING SYSTEMS AND ALL CONDUCTIVE OBJECTS.
 - WITH MINIMUM 12" BEND RADII.
 - WITH ALL CONNECTIONS IN CONTACT WITH EARTH, BONDED BY EXOTHERMIC WELDING.
 - BONDED TO A SINGLE POINT GROUND (SPG) WITH A SINGLE WIRE AS INDICATED ON DRAWINGS.
- GROUND RODS SHALL BE:
 - MINIMUM 5/8" DIAMETER.
 - MINIMUM 10' LONG.
 - COPPER-CLAD GALVANIZED STEEL OR STAINLESS STEEL.
 - PLACED IN UNDISTURBED SOIL AND BELOW THE FROST LINE.
 - INSTALLED WITH MINIMUM SEPARATION DISTANCE OF TWICE THE DEPTH OF THE ROD(S), OR AS INDICATED ON DRAWINGS.
 - MINIMUM TWO (2) RODS ON THE TOWER RING OR ONE (1) PER LEG WHICHEVER IS LARGER, MINIMUM FOUR (4) RODS ON EVERY EQUIPMENT BUILDING RING WITH ONE AT EACH CORNER OR AS INDICATED, MINIMUM ONE (1) ROD FOR POWER SERVICE GROUNDING ELECTRODE, AND MINIMUM ONE (1) ROD AT END OF EACH RADIAL.
- CONDUCTIVE OBJECTS, SUCH AS FENCES, SHALL BE BONDED TO THE GROUNDING SYSTEM IF WITHIN 20' OF THE TOWER GROUNDING SYSTEM, OR 5' OF ANY OTHER GROUNDED COMPONENT.

EQUIPMENT POWER NOTES:

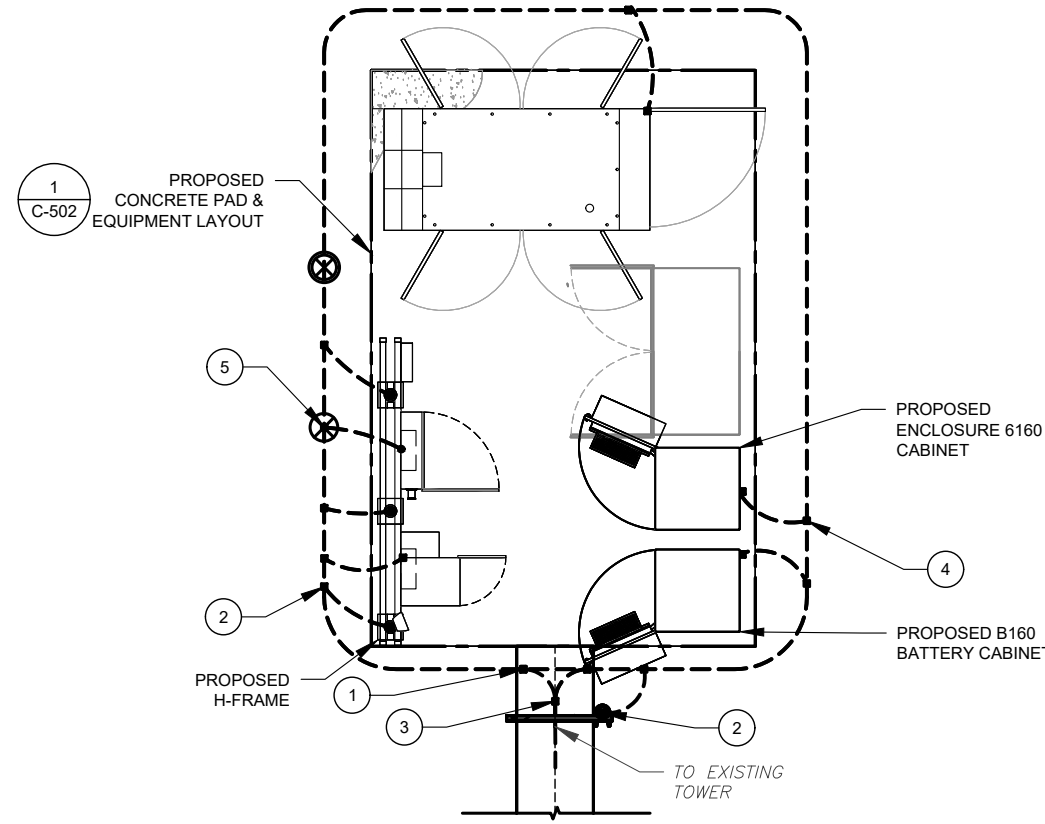
- 2" CONDUIT W/ 3-#3/0 CU, (1) #6 AWG G, PPC POWER
- 2" CONDUIT W/ MULE TAPE FOR TELCO FEEDER SERVICE TO TELCO SOURCE PER UTILITY
- 2-#12, 1 #12G IN 3/4" CONDUIT FROM TELCO CAB TO 6160
- 3-#1/0, 1-#6 IN 2" CONDUIT
- 2" CONDUIT, FOR CAT6

GROUNDING PLAN LEGEND:

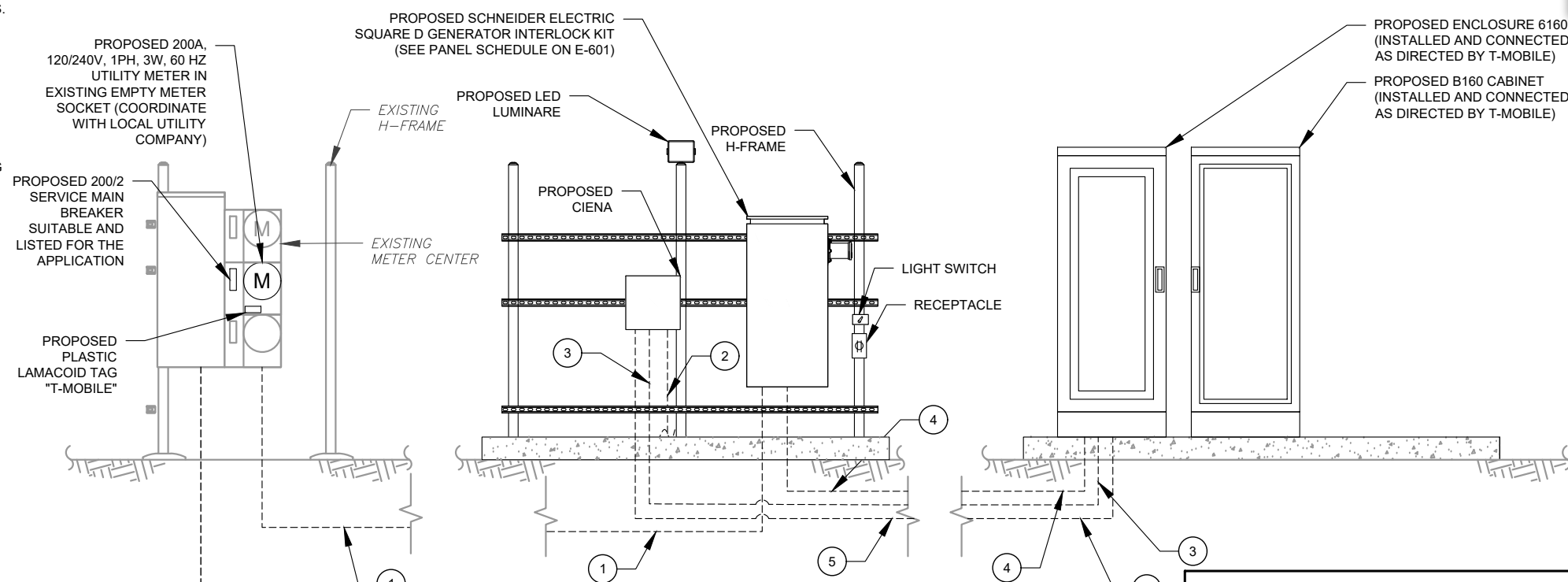
- EXISTING GROUND WIRE
- GROUND WIRE
- EXOTHERMIC WELD
- MECHANICAL WELD
- ⊗ COPPER GROUND ROD
- ⊗ TEST WELL

GROUNDING KEYED NOTES:

- BOND TO TOWER GROUND RING
- #2 AWG BOND FROM VERTICAL H-FRAME AND ICE BRIDGE POST TO EXTERNAL GROUND RING (TYP. EVERY POST).
- #2 AWG SBTC BOND FROM TOWER GROUND RING TO EQUIPMENT.
- EQUIPMENT BOND TO GROUND RING (TYP.)
- 5/8" X 10 FT GROUND ROD.



1 DETAILED GROUNDING PLAN
SCALE: NOT TO SCALE



1 EQUIPMENT POWER AND TELCO SCHEMATIC
SCALE: N.T.S.

NOTE:
ALL EQUIPMENTS' SHORT-CIRCUIT CURRENT RATING SHALL EXCEED AVAILABLE FAULT CURRENT PER UTILITY



Colliers Engineering & Design

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135 New Road
Madison, CT 06443
Phone: 860.395.0055
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/02/21
B	FOR CONSTRUCTION	AMN	08/06/21
1	FOR CONSTRUCTION	RMD	09/01/21

ATC SITE NUMBER:
208478

ATC SITE NAME:
CHESHIRE

T-MOBILE SITE NAME:
CTNH568A

SITE ADDRESS:
1325 CHESHIRE STREET
CHESHIRE, CT 06410



Alec S. Norris

CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 32588
COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T. JPC.000131



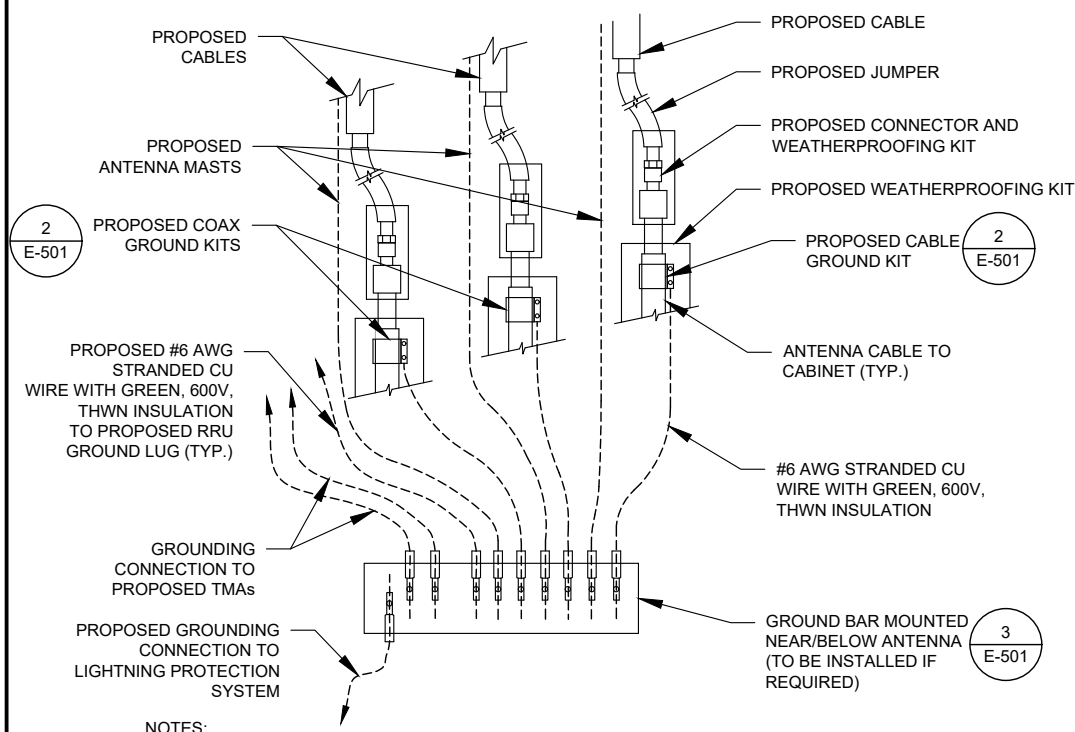
DATE DRAWN:	08/02/21
ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

GROUNDING DETAILS & ELECTRICAL SCHEMATIC

SHEET NUMBER:
E-101

REVISION:
1

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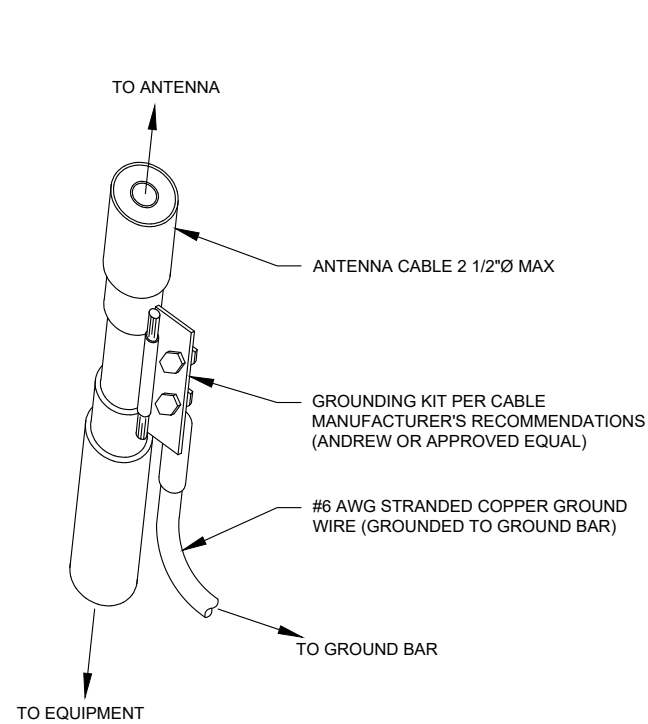


NOTES:

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.

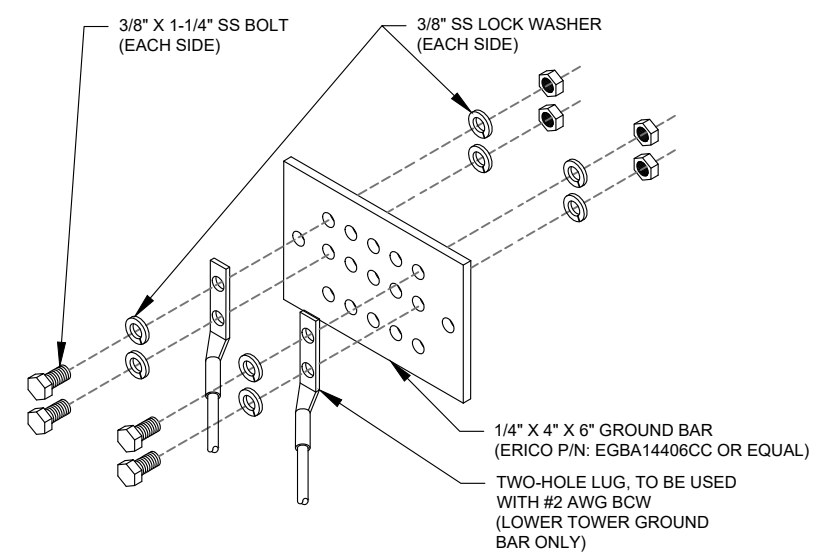


GROUND KIT NOTES:

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.

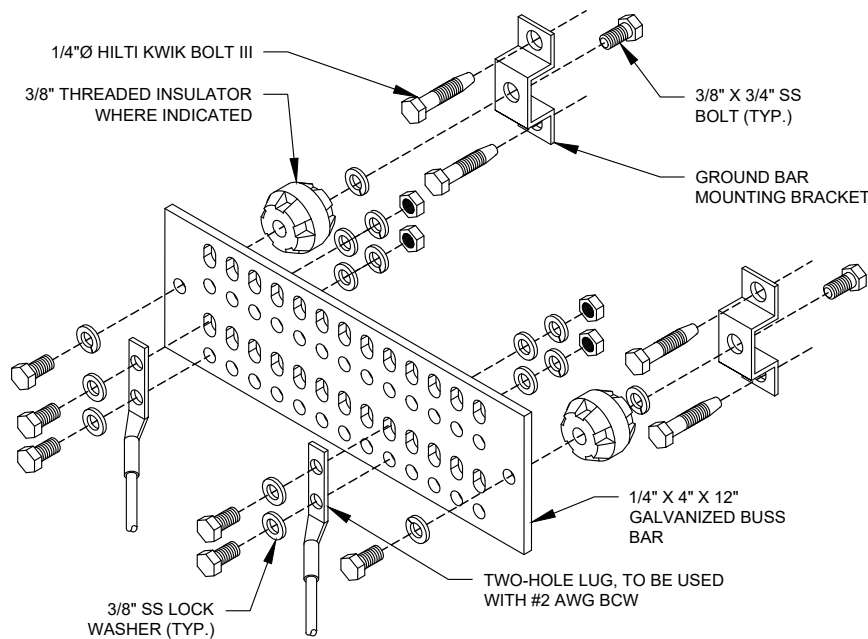


GROUND BAR NOTES:

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.

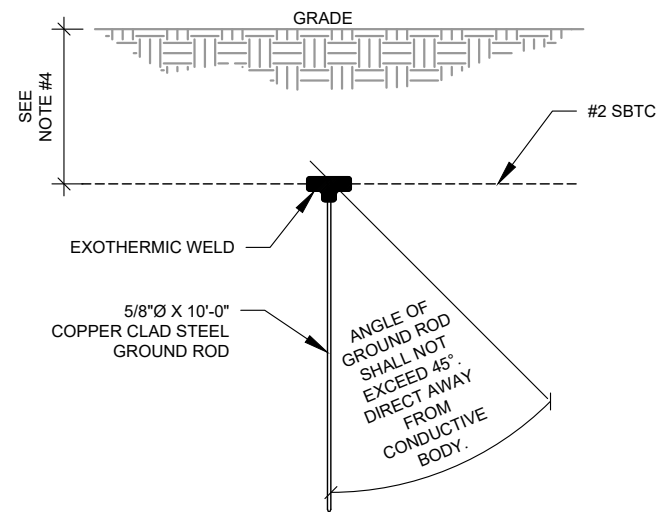


GROUND BAR NOTES

1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

4 MAIN GROUND BAR DETAIL

SCALE: N.T.S.

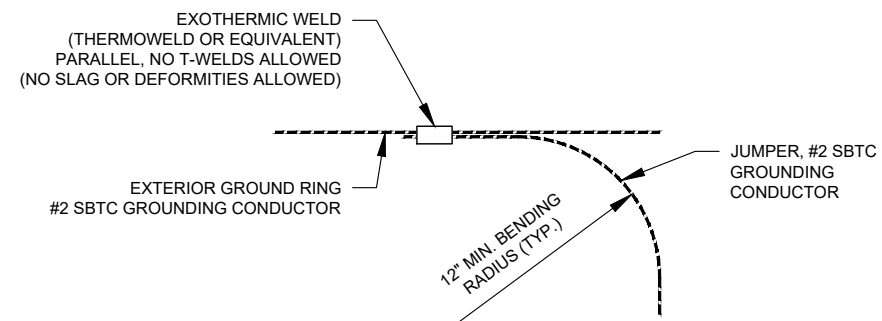


NOTES:

1. SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.
2. COORDINATE UTILITY, LOCATE BEFORE DIGGING.
3. CONDUIT TRENCHING DEPTHS AT 36" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.
4. ALL RING AND RADIAL DEPTHS AT 30" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.

5 GROUND ROD DETAIL

SCALE: N.T.S.



6 TIE CONNECTION DETAIL

SCALE: N.T.S.



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REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/02/21
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1	FOR CONSTRUCTION	RMD	09/01/21

ATC SITE NUMBER:
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ATC SITE NAME:
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T-MOBILE SITE NAME:
CTNH568A

SITE ADDRESS:
1325 CHESHIRE STREET
CHESHIRE, CT 06410

Alec Norris
 32588
 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Alec Norris
Date: 2021.09.01 13:43:23-04'00'

Alec S. Norris
 CONNECTICUT LICENSED PROFESSIONAL ENGINEER
 LICENSE NUMBER: 32588
 COLLIERS ENGINEERING & DESIGN CT, P.C.
 C.T. JPC.0000131



DATE DRAWN:	08/02/21
ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

GROUNDING DETAILS

SHEET NUMBER:
E-501

REVISION:
1



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PANEL DESIGNATION: TMO	TYPE: LIGHTING & APPLIANCE	SYSTEM: 120/240V, 1Ø, 3W, 20 CKT	LOCATION: TMO LEASE EQUIPMENT AREA
	MOUNTING: SURFACE	MAIN BREAKER (MB): 200A	
	ENCLOSURE: NEMA 3R	MAIN BUS RATING: 200A	PANEL NOTES: PROPOSED
		MIN. A.I.C. RATING: N/A	

CONNECTED LOAD (kVA)		BRIEF DESCRIPTION	FEEDER OR BRANCH CIRCUIT							CIRC. NOTES	FEEDER OR BRANCH CIRCUIT							CONNECTED LOAD (kVA)		
A	B		BREAKER		CIRCUIT			POLE NO.	CIRC. NOTES		CIRC. NOTES	POLE NO.	CIRCUIT			BREAKER		A	B	
			AMPS	POLES	WIRE	GND	COND.						COND.	GND	WIRE	POLES	AMPS			
7.50		ENCLOSURE 6160	150	2	3-#1/0	#6	2"	1			2	1/2"	#12	2-#12	1	20	RECEPTACLE	0.18		
	7.50							3			4	1/2"	#12	2-#12	1	20	LIGHT			
0.01		SURGE	60	2	3-#6	#10	1"	5			6	1/2"	#12	2-#12	1	20	AAV GFCI RECEPTACLE	0.18		
	0.01							7			8									
0.00								9			10							0.00		
	0.00							11			12							0.00		
0.00								13			14							0.00	0.00	
	0.00							15			16							0.00		
0.00								17			18							0.00		
	0.00							19			20							0.00		
7.5	7.5								A	B	TOTAL						0.4	0.5		
											7.9	8.0	15.9	CONNECTED LOAD (kVA)						
											7.9	8.0	15.9	DEMAND LOAD (kVA)					DERATING FACTOR (80%) DEMANDLOAD SIZING: 83 AMPS	

1 PANEL SCHEDULE

REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/02/21
0	FOR CONSTRUCTION	AMN	08/06/21
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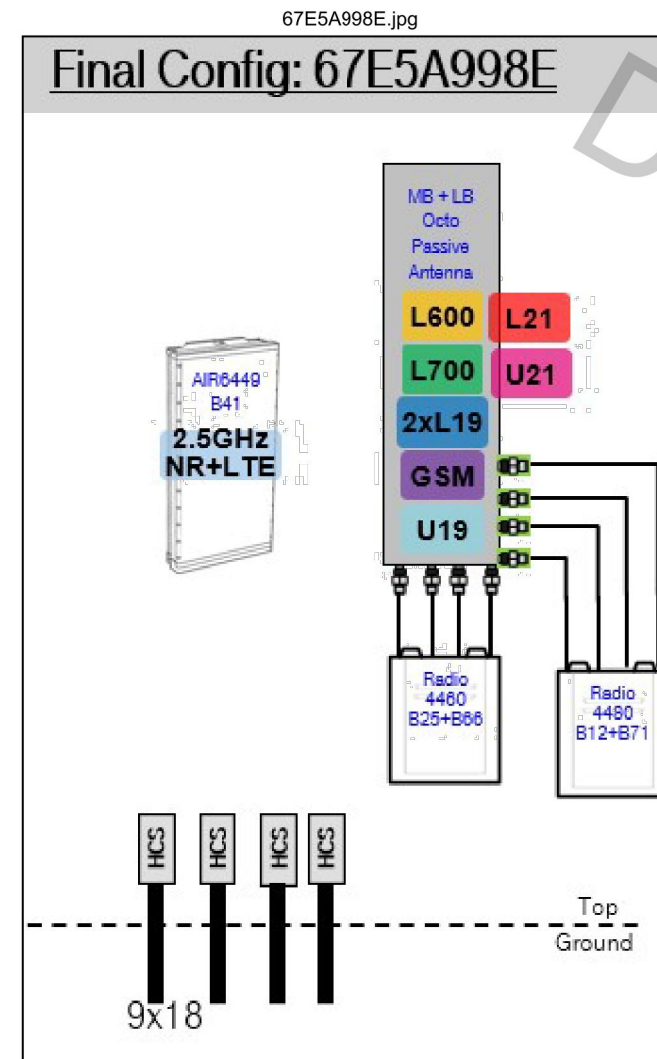
DATE DRAWN:	08/02/21
ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

PANEL SCHEDULE

SHEET NUMBER:	REVISION:
E-601	1

Proposed RAN Equipment			
Template: 67E5A998E 6160			
Enclosure	1	2	3
Enclosure Type	Enclosure 6160	RBS 6601	B160
Baseband	BB 6648 L700 L600 N600 BB 6648 L2500 N2500 BB 6648 L2100 L1900 DUW30 U2100	DUG20 G1900	
Hybrid Cable System	PSU 4813 Ericsson Hybrid Trunk 6/24 4AWG 100m (x 3)		
Transport System	CSR IXRe V2 (Gen2)		
RAN Scope of Work:			
<input type="text"/>			

1 CABINET CONFIGURATION
SCALE: NOT TO SCALE



2 ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

SUPPLEMENTAL

SHEET NUMBER: R-601
REVISION: -

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

Structural Analysis Report

Antenna Mount Analysis

Proposed T-Mobile Upgrade

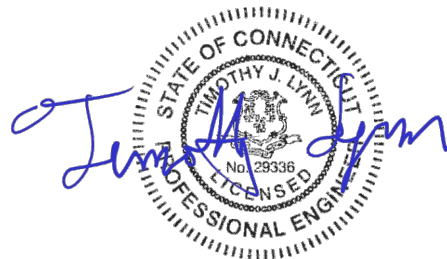
T-Mobile Site #: CTNH568A

*1325 Cheshire Street
Cheshire, CT*

Centek Project No. 21085.03

Date: July 21, 2021

Max Stress Ratio = 67%



Prepared for:
T-Mobile USA
35 Griffin Road
Bloomfield, CT 06002

July 21, 2021

Mr. Dan Reid
Transcend Wireless
10 Industrial Ave
Mahwah, NJ 07430

Re: *Structural Letter ~ Antenna Mount
T-Mobile – Site Ref: CTNH568A
1325 Cheshire Street
Cheshire, CT 06410*

Centek Project No. 21085.03

Dear Mr. Reid,

Centek Engineering, Inc. has reviewed the T-Mobile antenna installation at the above-referenced site. The purpose of the review is to determine the structural adequacy of the proposed 12'-6" low profile platform with handrail (SitePro P/N: RMQP-496-HK). The review considered the effects of wind load, dead load, and ice load in accordance with the 2015 International Building Code as modified by the 2018 Connecticut State Building Code (CTBC), including ASCE 7-10 and ANSI/TIA-222-G Structural Standards for Steel Antenna Towers and Supporting Structures.

The loads considered in this analysis consist of the following:

- **T-Mobile:**
Low Profile Platform: Three (3) RFS APXVAALL24_43-U-NA20 panel antennas, three (3) Ericsson AIR6449 b41 panel antennas, three (3) Ericsson 4480 B71+B85 remote radio heads and three (3) Ericsson 4460 B25+B66 remote radio heads on the proposed mount with a RAD center elevation of 129-ft +/- AGL.

The antenna mount was analyzed per the requirements of the 2015 International Building Code as modified by the 2018 Connecticut State Building Code considering a nominal design wind speed of 97 mph for Cheshire as required in Appendix N of the 2018 Connecticut State Building Code.

Based on our review of the installation, it is our opinion that the **subject antenna mount has sufficient capacity** to support the aforementioned antenna configuration.

If there are any questions regarding this matter, please feel free to call.

Respectfully Submitted by:

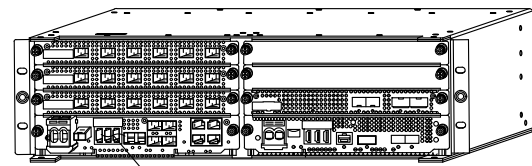
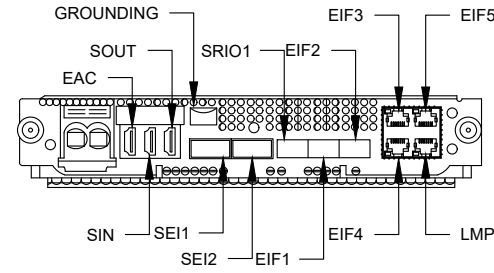
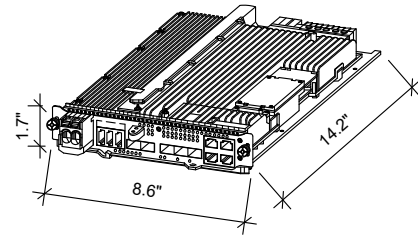
Timothy J. Lynn
Timothy J. Lynn, PE
Structural Engineer



Prepared by:

Fernando J. Palacios E.
Fernando J. Palacios
Engineer

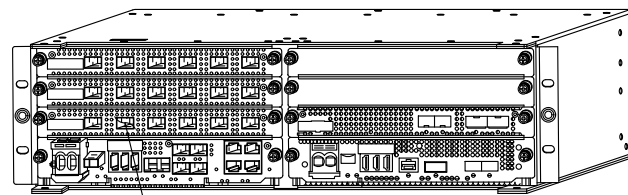
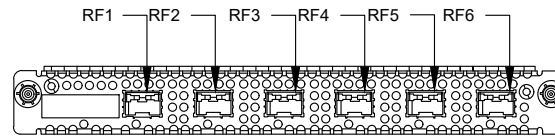
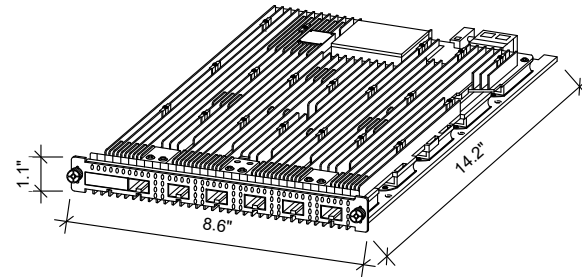
MANUFACTURER:	NOKIA
MODEL:	ASIB
WEIGHT:	6.4 LBS
DIMENSIONS:	8.6"X14.2"X1.7"



PROPOSED ASIB LOCATED WITHIN AMIA RACK

1 ASIB DETAIL
SCALE: N.T.S.

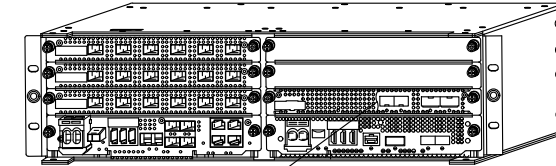
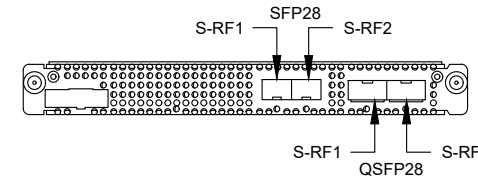
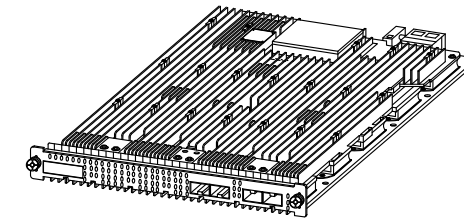
MANUFACTURER:	NOKIA
MODEL:	ABIA
WEIGHT:	4.6 LBS
DIMENSIONS:	8.6"X14.2"X1.1"



PROPOSED ABIA LOCATED WITHIN AMIA RACK

2 ABIA DETAIL
SCALE: N.T.S.

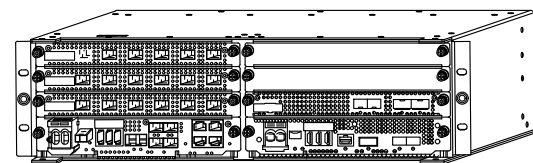
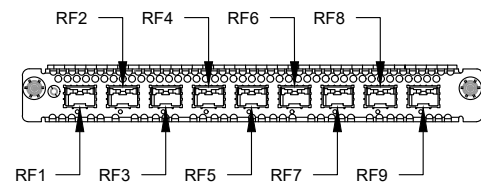
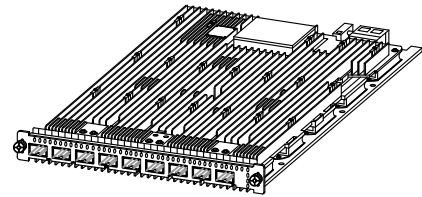
MANUFACTURER:	NOKIA
MODEL:	ABIL
WEIGHT:	4.4 LBS
DIMENSIONS:	8.6"X14.2"X1.1"



PROPOSED ABIL LOCATED WITHIN AMIA RACK

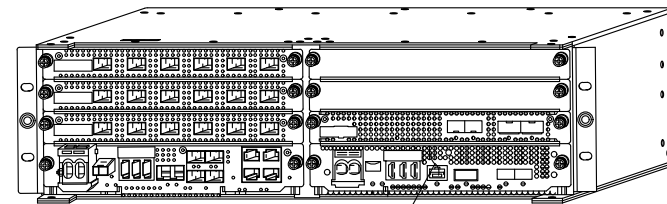
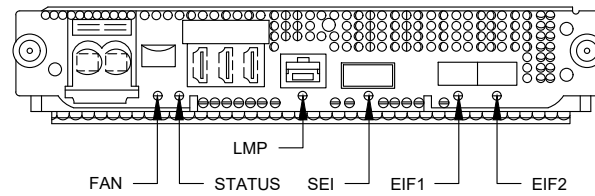
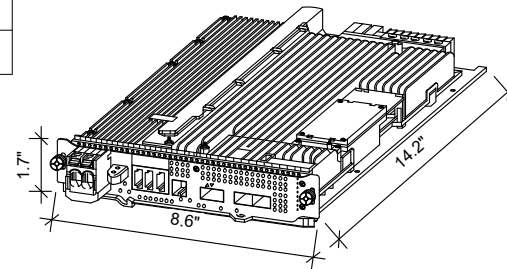
3 ABIL DETAIL
SCALE: N.T.S.

MANUFACTURER:	NOKIA
MODEL:	ABIC
WEIGHT:	5.8 LBS
DIMENSIONS:	8.6"X14.2"X1.7"



4 ABIC DETAIL
SCALE: N.T.S.

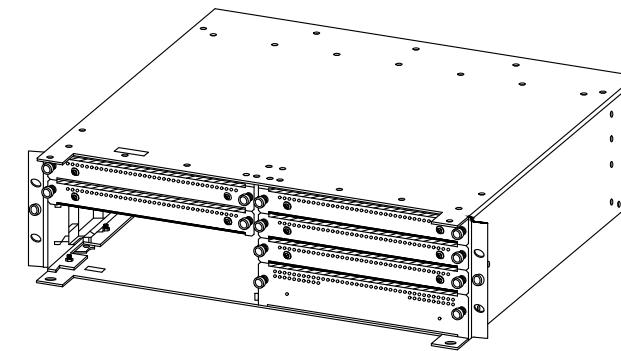
MANUFACTURER:	NOKIA
MODEL:	ASIK
WEIGHT:	6.6 LBS
DIMENSIONS:	8.6"X14.2"X1.7"



PROPOSED ASIK LOCATED WITHIN AMIA RACK

5 ASIK DETAIL
SCALE: N.T.S.

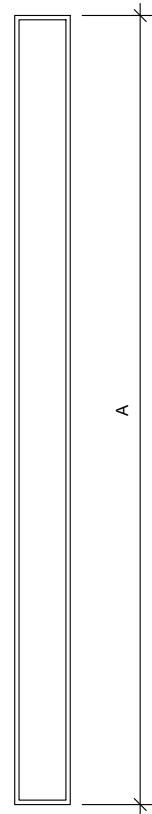
MANUFACTURER:	NOKIA
MODEL:	AMIA
WEIGHT:	11.2 LBS (UNIT ONLY)
DIMENSIONS:	5.1"X15.7"X17.6"



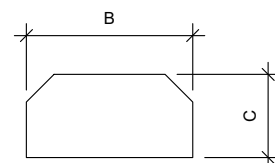
6 AMIA DETAIL
SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	-



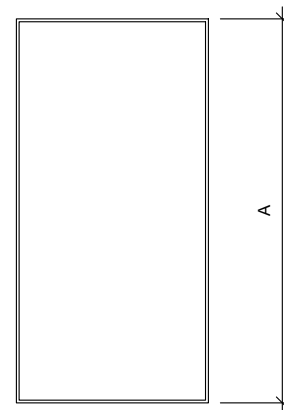
FRONT VIEW



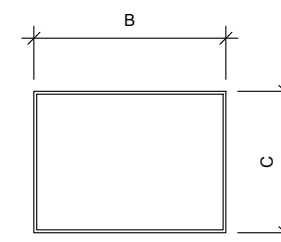
TOP VIEW

1 ANTENNA SPECIFICATIONS
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
AIR6449 B41	33.1"	20.6"	8.6"	104.0
APXVAALL24 43-U-NA20	95.9"	24.0"	8.5"	122.8



FRONT VIEW



TOP VIEW

2 RRU SPECIFICATIONS
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

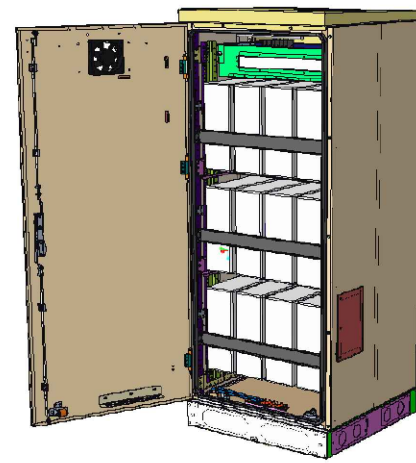
RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RADIO 4460 B25/B66	19.6"	15.7"	12.1"	109.0
RADIO 4480 B71/B85A	21.8"	15.7"	7.5"	46

SUPPLEMENTAL

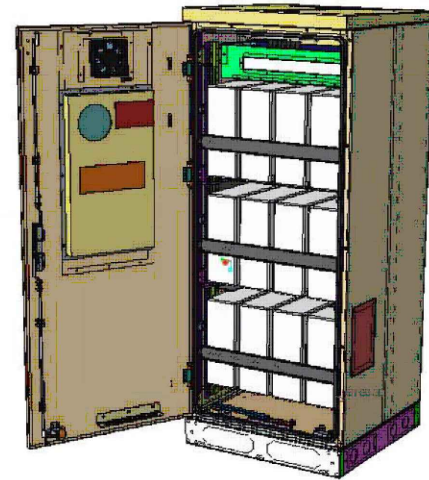
SHEET NUMBER:
R-604

REVISION:
-

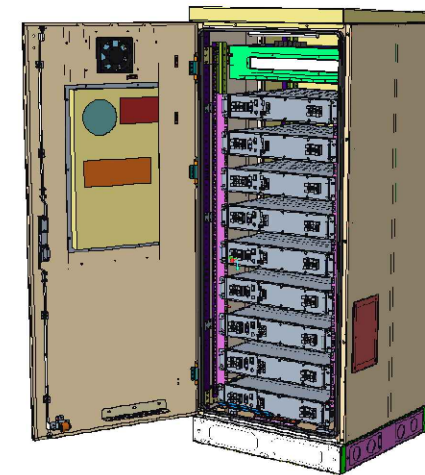
Enclosure B160



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-605

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 as 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-606

REVISION:

-

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RD025 | 2.2L | 25kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
EPA Emission Compliance	Stationary Emergency
Cylinder #	4
Type	In-Line
Displacement - in ³ (L)	135.2 (2.216)
Bore - in (mm)	3.30 (84.0)
Stroke - in (mm)	3.94 (100.0)
Compression Ratio	23.3:1
Intake Air Method	Turbocharged/Aftercooled
Piston Type	Aluminum Alloy
Crankshaft Type	Cast Iron OHV
Engine Block Type	Aluminum

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full Flow Spin-On Canister
Crankcase Capacity - L (qts)	10.6 (11.2)

Cooling System

Cooling System Type	Pre-Lubed, Self-Sealing
Fan Type	Pusher
Fan Speed (RPM)	1,980
Fan Diameter - mm (in)	18.0 (457.2)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specification	ASTM
Fuel Pump Type	Mechanical Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Line mm (in)	7.94 (0.31) ID
Fuel Return Line mm (in)	4.76 (0.19) ID
Fuel Filtering (microns)	25

Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	Group 27F
Battery Voltage	12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	Generac	Standard Excitation	Direct
Poles	4	Bearings	Sealed Ball
Field Type	Rotating	Coupling	Flexible Disc
Insulation Class - Rotor	F	Prototype Short Circuit Test	Yes
Insulation Class - Stator	H	Voltage Regulator Type	Full Digital
Total Harmonic Distortion	<5%	Regulation Accuracy (Steady State)	±1.0%
Telephone Interference Factor (TIF)	<50		

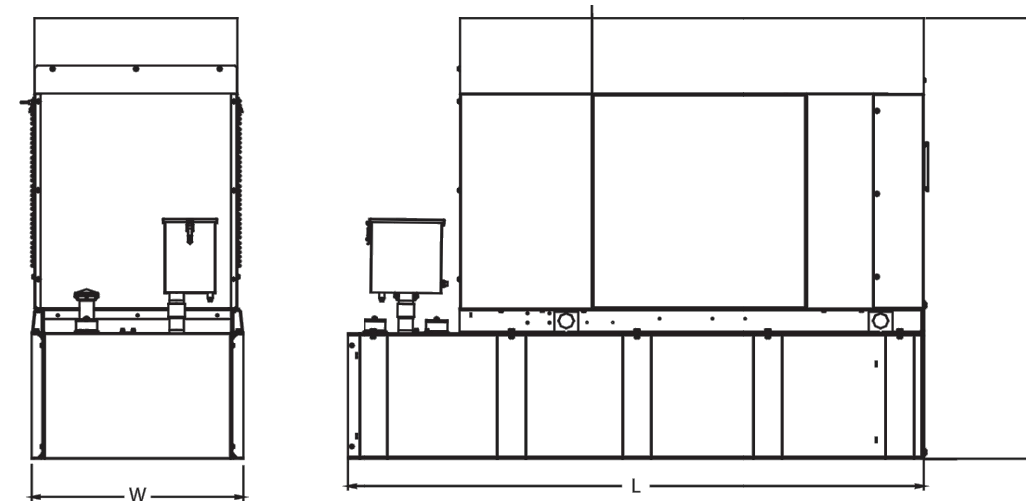
RD025 | 2.2L | 25kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



DIMENSIONS AND WEIGHTS*



Weights and Dimensions

Unit Weight - lbs	Unit Weight with Skid - lbs	Dimensions (L x W x H) - in
2,946	2,984	103.4 x 35.0 x 91.7

25kW Fuel Consumption

Fuel Tank Gross Total Capacity	240
Fuel Tank Gross Usable Capacity	229
Fuel Tank Net Usable Capacity (Run Hours Based on Net Usable Capacity)	206
Run Hours 100% Load	98
Run Hours 75% Load	125
Run Hours 50% Load	161

Sound Emission Data

Rated Load Sound Output at 23ft - dB(A)	65
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* All measurements are approximate and for estimation purposes only. Drawing is for illustration purposes only, not to scale.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

SPEC SHEET

3 OF 5

SPEC SHEET

5 OF 5

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

SUPPLEMENTAL

SHEET NUMBER: R-607	REVISION: -
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AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

CLS ENGINEERING
PLLC

Structural Analysis Report

Structure : 170 ft Monopole
ATC Site Name : Cheshire, CT
ATC Asset Number : 208478
Engineering Number : 13704270_C3_03
Proposed Carrier : T-MOBILE
Carrier Site Name : CTNH568A
Carrier Site Number : CTNH568A
Site Location : 1325 Cheshire Street
Cheshire, CT 06410
41.53259318, -72.87048903
County : New Haven
Date : July 30, 2021
Max Usage : 39%
Result : Pass

Prepared By:
Sreenivasa Kailasa
CLS



Reviewed By:



Tyler M. Barker
CLS Engineering PLLC
PE # 32402 Exp. 1/31/2022
COA # PEC.001833 Exp. 8/14/2022

Digitally signed by
Tyler M. Barker PE
Date: 2021.08.02
17:23:54-04'00'



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Calculations Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 170 ft monopole to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower Drawings	Ambor Structures Job #C15019001, dated September 21, 2015
Foundation Drawing	Bennett & Pless Job #15700064, dated August 24, 2015
Geotechnical Report	Terracon Project #J2145102, dated March 18, 2014
MA Report	CENTEK engineering Project #21085.03, dated July 21, 2021

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:	97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 0.75" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	$S_s = 0.19, S_1 = 0.06$
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	Equipment	Mount Type	Lines	Carrier
181.2	2	dbSpectra DS1F03F36D-N	Stand-Off	-	CITY OF CHESHIRE, CT
170.0	2	RFS SC3-W100AC	Stand-Off	(4) 7/8" Coax (2) E105	
159.3	1	Raycap DC6-48-60-18-8C-EV	Sector Frame	(1) 0.51" (13mm) Hybrid (1) 0.96" (24.3mm) Cable (2) 2" conduit	AT&T MOBILITY
155.0	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4415 B30			
	3	Ericsson 4478 Band 14 (15" Height)			
	6	Ericsson RRUS A2			
	6	Ericsson RRU22			
	3	Ericsson RRUS 12			
	3	Ericsson 8843			
	1	Raycap DC9-48-60-24-8C-EV			
	6	CCI HPA-65R-BUU-H8			
	3	CCI DMP65R-BU8D			
	3	CCI TPA65R-BU8D			
	140.0	1			

Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
No loading was considered as removed as part of this analysis.					

Proposed Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
129.0	3	Ericsson Radio 4460 B25+B66	Site Pro P/N: RMQP-496- HK	(3) 1.99" (50.7mm) Hybrid	T-MOBILE
	3	Ericsson Radio 4480 B71+B85A			
	3	Ericsson Air6449 B41			
	3	RFS APXVAALL24 43-U-NA20			

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

Install proposed lines inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	41%	Pass
Shaft	39%	Pass
Base Plate	19%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	4,704.9	36%
Axial (Kips)	75.7	17%
Shear (Kips)	40.7	30%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
170.0	RFS SC3-W100AC	CITY OF CHESHIRE, CT	0.941	0.578
129.0	Ericsson Radio 4460 B25+B66	T-MOBILE	0.544	0.505
	Ericsson Radio 4480 B71+B85A			
	Ericsson Air6449 B41			
	RFS APXVAALL24 43-U-NA20			

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



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

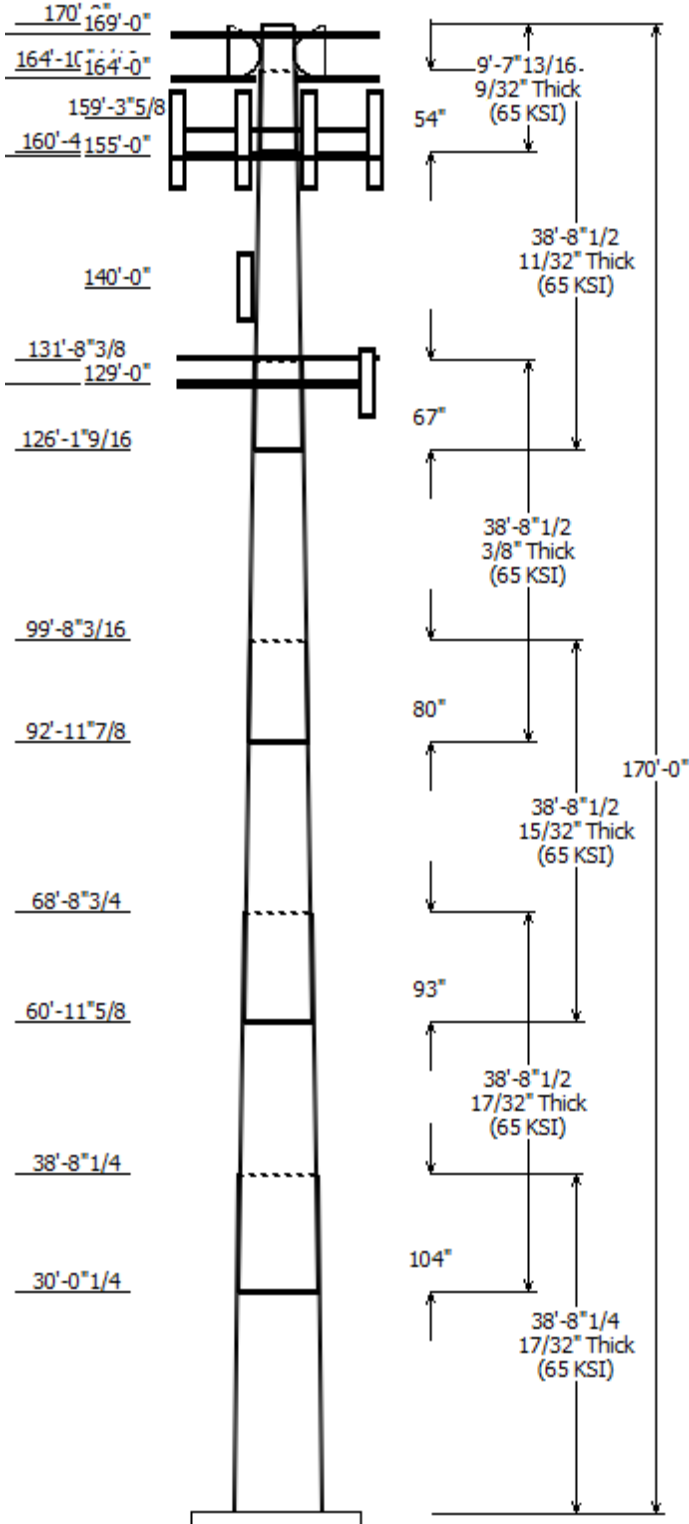
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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.

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Job Information		
Client : T-MOBILE	Code: ANSI/TIA-222-G	
Pole : 208478		
Location : Cheshire, CT	Struct Class : II	
Description :	Exposure : C	
Shape : 18 Sides	Topo : 1	
Height : 170.00 (ft)		
Base Elev (ft): 0.00		
Taper: 0.297646(in/ft)		

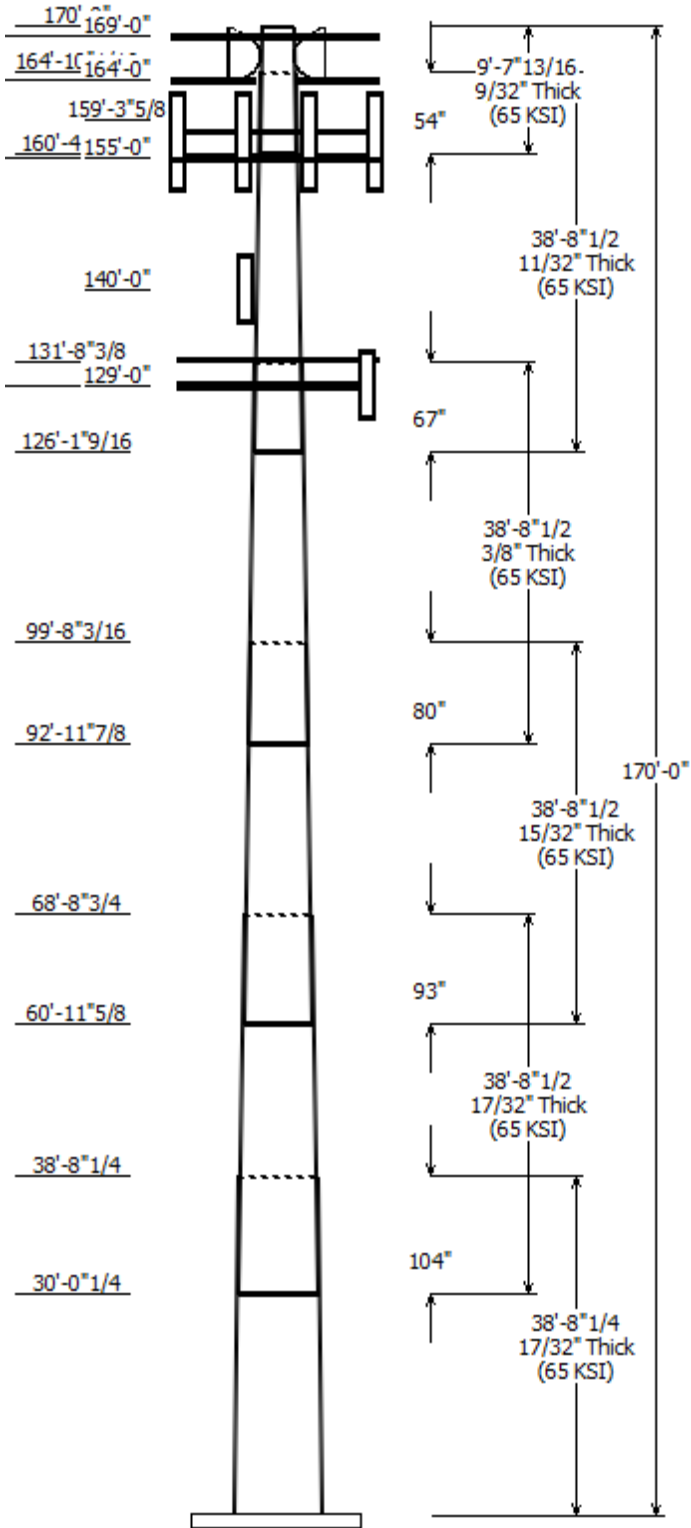
Sections Properties							
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Grade
		Across Flats Top	Across Flats Bottom				
1	38.690	62.17	73.69	0.531		0.000	18 Sides 65
2	38.710	54.29	65.81	0.531	Slip Joint	104.030	18 Sides 65
3	38.710	46.02	57.54	0.469	Slip Joint	93.125	18 Sides 65
4	38.710	37.24	48.76	0.375	Slip Joint	80.280	18 Sides 65
5	38.710	28.06	39.58	0.344	Slip Joint	66.844	18 Sides 65
6	9.649	27.09	29.96	0.281	Slip Joint	53.875	18 Sides 65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
181.200	181.200	2	dbSpectra DS1F03F36D-N
170.000	167.500	2	RFS SC3-W100AC
169.000	169.000	4	Generic Flat Stand-Off
164.000	164.000	2	Generic Flat Stand-Off
159.300	159.300	1	Raycap DC6-48-60-18-8C-EV
155.000	155.000	3	Generic Round Sector Frame
155.000	156.900	3	CCI TPA65R-BU8D
155.000	155.000	3	CCI DMP65R-BU8D
155.000	155.000	6	CCI HPA-65R-BUU-H8
155.000	155.000	1	Raycap DC9-48-60-24-8C-EV
155.000	155.000	3	Ericsson 8843
155.000	155.600	3	Ericsson RRUS 12
155.000	155.000	6	Ericsson RRU22
155.000	155.000	3	Ericsson RRUS 4449 B5, B12
155.000	155.000	3	Ericsson 4478 Band 14 (15" Hei
155.000	155.000	6	Ericsson RRUS A2
155.000	155.000	3	Ericsson RRUS 4415 B30
140.000	140.000	1	Generic Dish Reserve
129.000	129.000	3	RFS APXVAALL24 43-U-NA20
129.000	129.000	3	Ericsson Air6449 B41
129.000	129.000	3	Ericsson Radio 4480 B71+B85A
129.000	129.000	3	Ericsson Radio 4460 B25+B66
129.000	129.000	1	Generic Flat Platform with Han

Linear Appurtenance			
Elev (ft) From	To	Description	Exposed To Wind
0.000	129.0	1.99" (50.7mm)	No
0.000	155.0	0.51" (13mm)	No
0.000	155.0	0.96" (24.3mm)	No
0.000	155.0	2" conduit	No
0.000	170.0	7/8" Coax	No
0.000	170.0	E105	No

Load Cases	
1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice

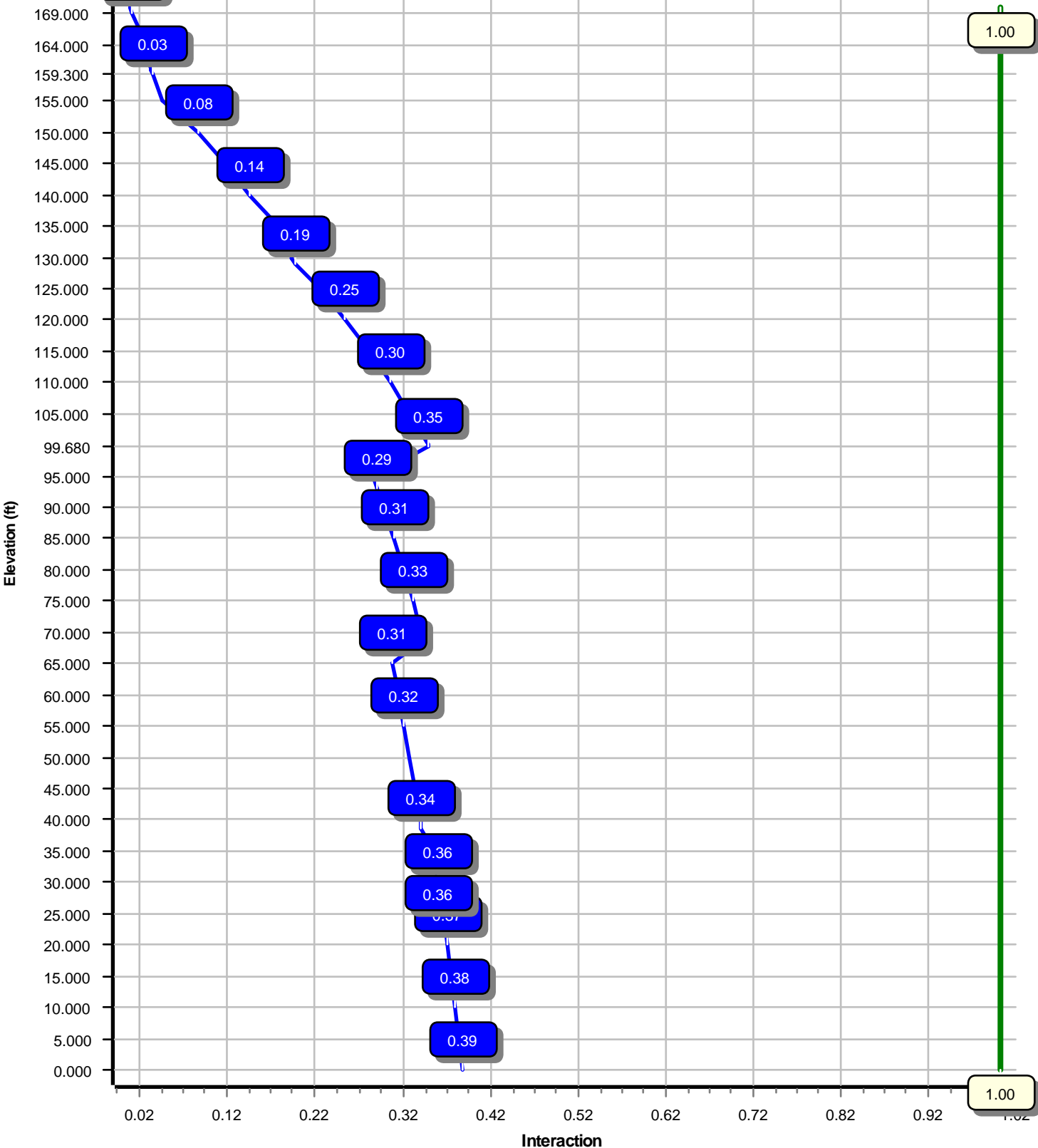
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph



Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	4704.86	40.67	75.70
0.9D + 1.6W	4678.90	40.65	56.77
1.2D + 1.0Di + 1.0Wi	1454.46	12.58	110.50
(1.2 + 0.2Sds) * DL + E ELFM	309.52	2.54	75.54
(1.2 + 0.2Sds) * DL + E EMAM	260.53	2.29	75.54
(0.9 - 0.2Sds) * DL + E ELFM	307.52	2.54	52.45
(0.9 - 0.2Sds) * DL + E EMAM	258.75	2.29	52.45
1.0D + 1.0W	1003.09	8.70	63.10

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	170.00	11.287	0.578

Load Case : 1.2D + 1.6W
Max Ratio 38.58% at 0.0 ft



Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

Analysis Parameters

Location :	New Haven County, CT	Height (ft) :	170
Code :	ANSI/TIA-222-G	Base Diameter (in) :	73.69
Shape :	18 Sides	Top Diameter (in) :	27.09
Pole Type :	Taper	Taper (in/ft) :	0.298
Pole Manufacturer :	Ambor Structures	Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	97 mph
Exposure Category:	C	Design Wind Speed With Ice:	50 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method: Equivalent Modal Analysis & Equivalent Lateral Force Methods

Site Class: D - Stiff Soil

Period Based on Rayleigh Method (sec): 1.67

T_L (sec):	6	p :	1	C_s :	0.040
S_s :	0.185	S_1 :	0.063	C_s Max:	0.040
F_a :	1.600	F_v :	2.400	C_s Min:	0.030
S_{ds} :	0.197	S_{d1} :	0.101		

Load Cases

1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2S _{ds}) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2S _{ds}) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2S _{ds}) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2S _{ds}) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	38.690	0.5313	65		0.00	14,962	73.69	0.00	123.35	83414.6	22.70	138.71	62.17	38.69	103.94	49898.9	18.87	117.03	0.297646
2-18	38.710	0.5313	65	Slip	104.03	13,220	65.81	30.02	110.08	59278.5	20.08	123.89	54.29	68.73	90.65	33106.5	16.26	102.20	0.297646
3-18	38.710	0.4688	65	Slip	93.13	10,056	57.54	60.97	84.91	34945.6	19.88	122.76	46.02	99.68	67.77	17766.5	15.55	98.18	0.297646
4-18	38.710	0.3750	65	Slip	80.28	6,683	48.76	92.99	57.59	17035.5	21.16	130.03	37.24	131.70	43.88	7533.8	15.75	99.31	0.297646
5-18	38.710	0.3438	65	Slip	66.84	4,812	39.58	126.13	42.81	8329.7	18.54	115.16	28.06	164.84	30.24	2936.0	12.63	81.64	0.297646
6-18	9.649	0.2813	65	Slip	53.88	828	29.96	160.35	26.49	2949.0	17.02	106.53	27.09	170.00	23.93	2173.1	15.22	96.32	0.297646
Shaft Weight						50,560													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor
181.20	dbSpectra DS1F03F36D-N	2	1.00	0.000	71.00	6.750	1.00	242.39	14.816	1.00
170.00	RFS SC3-W100AC	2	1.00	-2.500	40.00	10.737	1.00	261.27	12.679	1.00
169.00	Generic Flat Stand-Off	4	1.00	0.000	187.50	6.300	0.67	322.45	9.456	0.67
164.00	Generic Flat Stand-Off	2	1.00	0.000	187.50	6.300	0.67	322.05	9.447	0.67
159.30	Raycap DC6-48-60-18-8C-EV	1	0.80	0.000	16.00	4.788	0.50	146.00	6.269	0.50
155.00	Ericsson RRUS A2	6	0.80	0.000	15.00	1.600	0.50	51.44	2.439	0.50
155.00	Ericsson 4478 Band 14 (15"	3	0.80	0.000	59.90	1.842	0.50	115.40	2.742	0.50
155.00	Ericsson RRUS 4415 B30	3	0.80	0.000	46.00	1.842	0.50	95.21	2.742	0.50
155.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	135.69	2.905	0.50
155.00	Ericsson RRU22	6	0.80	0.000	52.90	2.222	0.50	113.90	3.224	0.50
155.00	Ericsson RRUS 12	3	0.80	0.600	50.00	3.145	0.50	131.18	4.308	0.50
155.00	Ericsson 8843	3	0.80	0.000	85.00	3.500	0.50	187.41	4.782	0.50
155.00	Raycap DC9-48-60-24-8C-EV	1	0.80	0.000	16.00	4.788	0.50	145.58	6.264	0.50
155.00	CCI HPA-65R-BUU-H8	6	0.80	0.000	68.00	12.976	0.67	325.90	16.569	0.67
155.00	Generic Round Sector Frame	3	0.75	0.000	300.00	14.400	0.75	669.20	31.014	0.75
155.00	CCI DMP65R-BU8D	3	0.80	0.000	95.70	17.871	0.63	436.84	21.570	0.63
155.00	CCI TPA65R-BU8D	3	0.80	1.900	82.50	18.089	0.63	428.57	21.795	0.63
140.00	Generic Dish Reserve	1	1.00	0.000	1,835.00	70.000	0.80	10,343.26	239.549	0.80
129.00	Ericsson Radio 4460 B25+B66	3	0.75	0.000	109.00	2.564	0.50	196.15	3.603	0.50
129.00	Ericsson Radio 4480 B71+B85A	3	0.75	0.000	84.00	2.852	0.50	158.49	3.953	0.50
129.00	Ericsson Air6449 B41	3	0.75	0.000	104.00	5.682	0.63	238.37	7.247	0.63
129.00	RFS APXVAALL24 43-U-NA20	3	0.75	0.000	122.80	20.243	0.63	506.83	23.900	0.63
129.00	Generic Flat Platform with	1	1.00	0.000	2,500.00	42.400	1.00	4,251.51	63.077	1.00
Totals	Num Loadings:23	68			10,159.10			30,673.01		

Linear Appurtenance Properties

Load Case Azimuth (deg) : 0

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Max Coax / Flat Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind Carrier
0.00	170.00	4	7/8" Coax	1.09	0.33	N	0	0.00	0	0.00	N CITY OF CHESHIRE,
0.00	170.00	2	E105	1.30	0.40	N	0	0.00	0	0.00	N CITY OF CHESHIRE,
0.00	155.00	1	0.51" (13mm) Hybrid	0.51	0.14	N	0	0.00	0	0.00	N AT&T MOBILITY
0.00	155.00	1	0.96" (24.3mm) Cable	0.96	0.88	N	0	0.00	0	0.00	N AT&T MOBILITY
0.00	155.00	2	2" conduit	2.38	3.65	N	0	0.00	0	0.00	N AT&T MOBILITY
0.00	129.00	3	1.99" (50.7mm) Hybrid	1.99	1.90	N	0	0.00	0	0.00	N T-MOBILE

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.5313	73.690	123.355	83,414.6	22.70	138.71	74.7	2229.	0.0	0.0
5.00		0.5313	72.202	120.846	78,426.9	22.20	135.91	75.3	2139.	0.0	2,077.4
10.00		0.5313	70.714	118.336	73,642.1	21.71	133.11	75.9	2051.	0.0	2,034.7
15.00		0.5313	69.225	115.827	69,055.9	21.21	130.31	76.5	1964.	0.0	1,992.0
20.00		0.5313	67.737	113.318	64,664.2	20.72	127.51	77.0	1880.	0.0	1,949.3
25.00		0.5313	66.249	110.808	60,462.8	20.23	124.70	77.6	1797.	0.0	1,906.6
30.00		0.5313	64.761	108.299	56,447.4	19.73	121.90	78.2	1716.	0.0	1,863.9
30.02	Bot - Section 2	0.5313	64.754	108.288	56,431.1	19.73	121.89	78.2	1716.	0.0	7.7
35.00		0.5313	63.272	105.790	52,613.9	19.24	119.10	78.8	1637.	0.0	3,657.5
38.69	Top - Section 1	0.5313	63.237	105.729	52,523.8	19.23	119.03	78.8	1635.	0.0	2,655.9
40.00		0.5313	62.847	105.072	51,550.1	19.10	118.30	78.9	1615.	0.0	469.8
45.00		0.5313	61.358	102.562	47,944.2	18.60	115.50	79.5	1539.	0.0	1,766.3
50.00		0.5313	59.870	100.053	44,510.5	18.11	112.70	80.1	1464.	0.0	1,723.6
55.00		0.5313	58.382	97.544	41,244.8	17.61	109.90	80.7	1391.	0.0	1,680.9
60.00		0.5313	56.894	95.034	38,142.9	17.12	107.09	81.3	1320.	0.0	1,638.2
60.97	Bot - Section 3	0.5313	56.605	94.547	37,559.5	17.02	106.55	81.4	1306.	0.0	313.0
65.00		0.5313	55.406	92.525	35,200.5	16.63	104.29	81.8	1251.	0.0	2,434.6
68.73	Top - Section 2	0.4688	55.233	81.475	30,872.1	19.01	117.83	79.0	1100.	0.0	2,207.6
70.00		0.4688	54.855	80.913	30,237.6	18.87	117.02	79.2	1085.	0.0	350.7
75.00		0.4688	53.367	78.699	27,822.6	18.31	113.85	79.9	1026.	0.0	1,357.8
80.00		0.4688	51.878	76.485	25,539.8	17.75	110.67	80.5	969.6	0.0	1,320.1
85.00		0.4688	50.390	74.271	23,385.4	17.19	107.50	81.2	914.1	0.0	1,282.5
90.00		0.4688	48.902	72.057	21,355.6	16.63	104.32	81.8	860.1	0.0	1,244.8
92.99	Bot - Section 4	0.4688	48.012	70.733	20,199.7	16.30	102.43	82.2	828.7	0.0	726.5
95.00		0.4688	47.414	69.843	19,446.9	16.07	101.15	82.5	807.8	0.0	872.0
99.68	Top - Section 3	0.3750	46.771	55.220	15,017.7	20.23	124.72	77.6	632.4	0.0	1,988.5
100.0		0.3750	46.675	55.107	14,925.5	20.18	124.47	77.7	629.8	0.0	60.0
105.0		0.3750	45.187	53.336	13,532.0	19.48	120.50	78.5	589.8	0.0	922.5
110.0		0.3750	43.699	51.564	12,228.1	18.78	116.53	79.3	551.1	0.0	892.4
115.0		0.3750	42.211	49.793	11,010.7	18.08	112.56	80.1	513.8	0.0	862.2
120.0		0.3750	40.722	48.022	9,877.0	17.38	108.59	81.0	477.7	0.0	832.1
125.0		0.3750	39.234	46.251	8,823.9	16.68	104.62	81.8	443.0	0.0	802.0
126.1	Bot - Section 5	0.3750	38.898	45.850	8,596.7	16.53	103.73	82.0	435.3	0.0	177.1
129.0		0.3750	38.044	44.833	8,037.4	16.13	101.45	82.4	416.1	0.0	856.3
130.0		0.3750	37.746	44.479	7,848.4	15.99	100.66	82.6	409.5	0.0	293.9
131.7	Top - Section 4	0.3438	37.927	41.005	7,317.8	17.69	110.33	80.6	380.0	0.0	494.5
135.0		0.3438	36.945	39.933	6,759.0	17.19	107.48	81.2	360.3	0.0	454.4
140.0		0.3438	35.457	38.309	5,967.6	16.42	103.15	82.1	331.5	0.0	665.6
145.0		0.3438	33.969	36.686	5,240.5	15.66	98.82	82.6	303.9	0.0	638.0
150.0		0.3438	32.481	35.062	4,575.1	14.90	94.49	82.6	277.4	0.0	610.4
155.0		0.3438	30.992	33.438	3,968.4	14.13	90.16	82.6	252.2	0.0	582.7
159.3		0.3438	29.712	32.042	3,491.7	13.48	86.44	82.6	231.5	0.0	479.1
160.0		0.3438	29.504	31.815	3,418.0	13.37	85.83	82.6	228.2	0.0	76.1
160.3	Bot - Section 6	0.3438	29.400	31.701	3,381.4	13.32	85.53	82.6	226.5	0.0	37.9
164.0		0.3438	28.314	30.516	3,016.2	12.76	82.37	82.6	209.8	0.0	709.3
164.8	Top - Section 5	0.2813	28.626	25.302	2,568.3	16.18	101.78	82.4	176.7	0.0	159.5
165.0		0.2813	28.578	25.260	2,555.4	16.15	101.61	82.4	176.1	0.0	13.8
169.0		0.2813	27.388	24.197	2,246.3	15.41	97.38	82.6	161.5	0.0	336.6
170.0		0.2813	27.090	23.931	2,173.1	15.22	96.32	82.6	158.0	0.0	81.9
											50,560.2

Load Case: 1.2D + 1.6W	97 mph with No Ice	21 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.20		
Wind Load Factor :1.60		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		343.4	0.0					0.0	0.0	343.4	0.0	0.0	0.0
5.00		679.7	2,492.9					0.0	96.8	679.7	2,589.7	0.0	0.0
10.00		665.7	2,441.6					0.0	96.8	665.7	2,538.5	0.0	0.0
15.00		661.9	2,390.4					0.0	96.8	661.9	2,487.3	0.0	0.0
20.00		675.5	2,339.2					0.0	96.8	675.5	2,436.0	0.0	0.0
25.00		692.8	2,288.0					0.0	96.8	692.8	2,384.8	0.0	0.0
30.00		351.3	2,236.7					0.0	96.8	351.3	2,333.6	0.0	0.0
30.02	Bot - Section 2	360.0	9.2					0.0	0.4	360.0	9.6	0.0	0.0
35.00		625.9	4,389.0					0.0	96.4	625.9	4,485.4	0.0	0.0
38.69	Top - Section 1	362.5	3,187.1					0.0	71.5	362.5	3,258.5	0.0	0.0
40.00		458.6	563.8					0.0	25.4	458.6	589.2	0.0	0.0
45.00		726.7	2,119.6					0.0	96.8	726.7	2,216.4	0.0	0.0
50.00		725.0	2,068.4					0.0	96.8	725.0	2,165.2	0.0	0.0
55.00		721.4	2,017.1					0.0	96.8	721.4	2,114.0	0.0	0.0
60.00		429.0	1,965.9					0.0	96.8	429.0	2,062.7	0.0	0.0
60.97	Bot - Section 3	361.3	375.6					0.0	18.8	361.3	394.4	0.0	0.0
65.00		559.9	2,921.5					0.0	78.0	559.9	2,999.6	0.0	0.0
68.73	Top - Section 2	358.7	2,649.1					0.0	72.3	358.7	2,721.3	0.0	0.0
70.00		445.1	420.8					0.0	24.6	445.1	445.4	0.0	0.0
75.00		704.0	1,629.4					0.0	96.8	704.0	1,726.2	0.0	0.0
80.00		693.7	1,584.2					0.0	96.8	693.7	1,681.0	0.0	0.0
85.00		682.5	1,539.0					0.0	96.8	682.5	1,635.8	0.0	0.0
90.00		537.7	1,493.8					0.0	96.8	537.7	1,590.6	0.0	0.0
92.99	Bot - Section 4	334.1	871.8					0.0	57.9	334.1	929.7	0.0	0.0
95.00		444.4	1,046.4					0.0	38.9	444.4	1,085.3	0.0	0.0
99.68	Top - Section 3	330.6	2,386.2					0.0	90.7	330.6	2,476.9	0.0	0.0
100.00		344.5	72.0					0.0	6.2	344.5	78.2	0.0	0.0
105.00		639.9	1,107.0					0.0	96.8	639.9	1,203.9	0.0	0.0
110.00		624.9	1,070.9					0.0	96.8	624.9	1,167.7	0.0	0.0
115.00		609.3	1,034.7					0.0	96.8	609.3	1,131.5	0.0	0.0
120.00		593.1	998.5					0.0	96.8	593.1	1,095.4	0.0	0.0
125.00		357.4	962.4					0.0	96.8	357.4	1,059.2	0.0	0.0
126.13	Bot - Section 5	230.7	212.5					0.0	21.9	230.7	234.4	0.0	0.0
129.00	Appurtenance(s)	222.9	1,027.6	4,584.1	0.0	0.0	4,511.3	0.0	55.6	4,807.1	5,594.5	0.0	0.0
130.00		153.4	352.7					0.0	12.5	153.4	365.2	0.0	0.0
131.70	Top - Section 4	280.3	593.4					0.0	21.3	280.3	614.7	0.0	0.0
135.00		455.3	545.2					0.0	41.3	455.3	586.6	0.0	0.0
140.00	Appurtenance(s)	533.5	798.7	3,063.9	0.0	0.0	2,202.0	0.0	62.6	3,597.3	3,063.4	0.0	0.0
145.00		514.8	765.6					0.0	62.6	514.8	828.2	0.0	0.0
150.00		495.8	732.4					0.0	62.6	495.8	795.1	0.0	0.0
155.00	Appurtenance(s)	444.3	699.3	8,179.0	0.0	3,038.9	3,842.0	0.0	62.6	8,623.3	4,604.0	0.0	0.0
159.30		233.3	574.9					0.0	10.9	233.3	585.8	0.0	0.0
160.00		48.0	91.3					0.0	1.8	48.0	93.0	0.0	0.0
160.35	Bot - Section 6	182.6	45.5					0.0	0.9	182.6	46.3	0.0	0.0
164.00	Appurtenance(s)	204.2	851.2	477.5	0.0	0.0	450.0	0.0	9.3	681.7	1,310.5	0.0	0.0
164.84	Top - Section 5	44.7	191.4					0.0	2.1	44.7	193.5	0.0	0.0
165.00		181.9	16.5					0.0	0.4	181.9	16.9	0.0	0.0
169.00	Appurtenance(s)	217.5	403.9	961.1	0.0	0.0	900.0	0.0	10.2	1,178.6	1,314.1	0.0	0.0

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

7/30/2021 1:59:10 PM

Customer: T-MOBILE

Load Case: 1.2D + 1.6W

97 mph with No Ice

21 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

170.00	Appurtenance(s)	42.7	98.3	1,220.1	0.0	-3,050.3	96.0	0.0	2.5	1,262.8	196.8	0.0	0.0		
											Totals:	40,072.2	75,535.9	0.00	0.00

Load Case: 1.2D + 1.6W

97 mph with No Ice

21 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-75.70	-40.67	0.00	-4,704.86	0.00	4,704.86	8,293.95	4,146.97	24,947.3	12,492.1	0.00	0.00	0.386
5.00	-73.05	-40.09	0.00	-4,501.52	0.00	4,501.52	8,188.41	4,094.21	24,125.2	12,080.5	0.04	-0.08	0.382
10.00	-70.46	-39.52	0.00	-4,301.09	0.00	4,301.09	8,080.26	4,040.13	23,308.5	11,671.6	0.17	-0.16	0.377
15.00	-67.92	-38.94	0.00	-4,103.51	0.00	4,103.51	7,969.48	3,984.74	22,497.8	11,265.6	0.38	-0.24	0.373
20.00	-65.43	-38.35	0.00	-3,908.80	0.00	3,908.80	7,856.07	3,928.03	21,693.5	10,862.9	0.67	-0.32	0.368
25.00	-62.99	-37.74	0.00	-3,717.06	0.00	3,717.06	7,740.04	3,870.02	20,896.1	10,463.6	1.06	-0.41	0.363
30.00	-60.64	-37.41	0.00	-3,528.38	0.00	3,528.38	7,621.39	3,810.69	20,106.1	10,068.0	1.53	-0.49	0.359
30.02	-60.60	-37.10	0.00	-3,527.60	0.00	3,527.60	7,620.89	3,810.44	20,102.8	10,066.3	1.53	-0.49	0.358
35.00	-56.07	-36.50	0.00	-3,342.90	0.00	3,342.90	7,500.11	3,750.05	19,323.9	9,676.35	2.09	-0.58	0.353
38.69	-52.79	-36.15	0.00	-3,208.21	0.00	3,208.21	7,497.16	3,748.58	19,305.2	9,666.97	2.56	-0.64	0.339
40.00	-52.17	-35.73	0.00	-3,160.86	0.00	3,160.86	7,464.93	3,732.47	19,101.7	9,565.07	2.74	-0.67	0.338
45.00	-49.91	-35.05	0.00	-2,982.20	0.00	2,982.20	7,340.28	3,670.14	18,330.4	9,178.83	3.49	-0.75	0.332
50.00	-47.71	-34.37	0.00	-2,806.95	0.00	2,806.95	7,213.00	3,606.50	17,568.0	8,797.08	4.32	-0.84	0.326
55.00	-45.55	-33.68	0.00	-2,635.12	0.00	2,635.12	7,083.10	3,541.55	16,815.1	8,420.07	5.25	-0.92	0.319
60.00	-43.47	-33.26	0.00	-2,466.70	0.00	2,466.70	6,950.58	3,475.29	16,072.1	8,048.04	6.26	-1.01	0.313
60.97	-43.05	-32.93	0.00	-2,434.43	0.00	2,434.43	6,924.56	3,462.28	15,929.1	7,976.43	6.47	-1.03	0.312
65.00	-40.03	-32.36	0.00	-2,301.75	0.00	2,301.75	6,815.43	3,407.72	15,339.6	7,681.23	7.37	-1.10	0.306
68.73	-37.29	-31.98	0.00	-2,181.03	0.00	2,181.03	5,795.65	2,897.83	13,032.6	6,526.01	8.26	-1.17	0.341
70.00	-36.82	-31.56	0.00	-2,140.45	0.00	2,140.45	5,767.85	2,883.92	12,879.8	6,449.52	8.57	-1.19	0.338
75.00	-35.05	-30.88	0.00	-1,982.65	0.00	1,982.65	5,656.65	2,828.32	12,282.9	6,150.62	9.88	-1.29	0.329
80.00	-33.34	-30.20	0.00	-1,828.26	0.00	1,828.26	5,542.83	2,771.41	11,694.2	5,855.81	11.28	-1.39	0.318
85.00	-31.67	-29.53	0.00	-1,677.24	0.00	1,677.24	5,426.38	2,713.19	11,114.1	5,565.33	12.79	-1.49	0.307
90.00	-30.06	-28.99	0.00	-1,529.58	0.00	1,529.58	5,307.32	2,653.66	10,543.2	5,279.44	14.40	-1.58	0.296
92.99	-29.11	-28.66	0.00	-1,442.88	0.00	1,442.88	5,234.85	2,617.42	10,206.2	5,110.73	15.41	-1.64	0.288
95.00	-28.01	-28.22	0.00	-1,385.28	0.00	1,385.28	5,185.62	2,592.81	9,981.88	4,998.36	16.11	-1.68	0.283
99.68	-25.52	-27.83	0.00	-1,253.22	0.00	1,253.22	3,857.00	1,928.50	7,351.35	3,681.14	17.81	-1.77	0.347
100.00	-25.42	-27.51	0.00	-1,244.33	0.00	1,244.33	3,851.70	1,925.85	7,326.08	3,668.49	17.92	-1.78	0.346
105.00	-24.19	-26.88	0.00	-1,106.77	0.00	1,106.77	3,767.40	1,883.70	6,933.57	3,471.94	19.85	-1.89	0.325
110.00	-22.99	-26.26	0.00	-972.37	0.00	972.37	3,680.48	1,840.24	6,546.78	3,278.25	21.89	-2.00	0.303
115.00	-21.84	-25.65	0.00	-841.08	0.00	841.08	3,590.93	1,795.47	6,166.19	3,087.68	24.04	-2.11	0.279
120.00	-20.72	-25.05	0.00	-712.83	0.00	712.83	3,498.76	1,749.38	5,792.30	2,900.46	26.30	-2.21	0.252
125.00	-19.65	-24.67	0.00	-587.58	0.00	587.58	3,403.97	1,701.99	5,425.59	2,716.83	28.67	-2.30	0.222
126.13	-19.41	-24.44	0.00	-559.70	0.00	559.70	3,382.18	1,691.09	5,343.76	2,675.85	29.21	-2.32	0.215
129.00	-14.01	-19.42	0.00	-489.55	0.00	489.55	3,326.25	1,663.12	5,137.72	2,572.68	30.62	-2.37	0.195
130.00	-13.64	-19.26	0.00	-470.13	0.00	470.13	3,304.58	1,652.29	5,063.53	2,535.53	31.12	-2.39	0.190
131.70	-13.03	-18.96	0.00	-437.39	0.00	437.39	2,974.18	1,487.09	4,587.23	2,297.02	31.98	-2.42	0.195
135.00	-12.44	-18.49	0.00	-374.83	0.00	374.83	2,917.76	1,458.88	4,381.54	2,194.03	33.67	-2.47	0.175
140.00	-9.52	-14.78	0.00	-282.37	0.00	282.37	2,830.08	1,415.04	4,075.46	2,040.76	36.29	-2.54	0.142
145.00	-8.70	-14.23	0.00	-208.49	0.00	208.49	2,725.57	1,362.78	3,756.99	1,881.29	38.98	-2.59	0.114
150.00	-7.92	-13.71	0.00	-137.33	0.00	137.33	2,604.93	1,302.47	3,430.18	1,717.64	41.72	-2.64	0.083
155.00	-3.72	-4.88	0.00	-65.76	0.00	65.76	2,484.30	1,242.15	3,118.24	1,561.44	44.50	-2.67	0.044
159.30	-3.13	-4.51	0.00	-44.78	0.00	44.78	2,380.56	1,190.28	2,861.86	1,433.06	46.92	-2.69	0.033
160.00	-3.04	-4.46	0.00	-41.62	0.00	41.62	2,363.67	1,181.83	2,821.16	1,412.68	47.31	-2.69	0.031

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

7/30/2021 1:59:10 PM

Customer: T-MOBILE

Load Case: 1.2D + 1.6W

97 mph with No Ice

21 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

160.35	-3.00	-4.28	0.00	-40.06	0.00	40.06	2,355.21	1,177.61	2,800.89	1,402.53	47.51	-2.69	0.030
164.00	-1.73	-3.53	0.00	-24.45	0.00	24.45	2,267.16	1,133.58	2,594.21	1,299.03	49.57	-2.70	0.020
164.84	-1.54	-3.48	0.00	-21.49	0.00	21.49	1,875.62	937.81	2,180.06	1,091.65	50.05	-2.71	0.021
165.00	-1.53	-3.30	0.00	-20.93	0.00	20.93	1,873.27	936.64	2,173.63	1,088.43	50.14	-2.71	0.020
169.00	-0.27	-2.06	0.00	-7.74	0.00	7.74	1,797.70	898.85	1,997.32	1,000.14	52.41	-2.71	0.008
170.00	0.00	-2.04	0.00	-5.68	0.00	5.68	1,777.96	888.98	1,953.47	978.19	52.98	-2.71	0.006

Load Case: 0.9D + 1.6W	97 mph with No Ice (Reduced DL)	21 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :0.90		
Wind Load Factor :1.60		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		343.4	0.0					0.0	0.0	343.4	0.0	0.0	0.0
5.00		679.7	1,869.7					0.0	72.6	679.7	1,942.3	0.0	0.0
10.00		665.7	1,831.2					0.0	72.6	665.7	1,903.9	0.0	0.0
15.00		661.9	1,792.8					0.0	72.6	661.9	1,865.4	0.0	0.0
20.00		675.5	1,754.4					0.0	72.6	675.5	1,827.0	0.0	0.0
25.00		692.8	1,716.0					0.0	72.6	692.8	1,788.6	0.0	0.0
30.00		351.3	1,677.5					0.0	72.6	351.3	1,750.2	0.0	0.0
30.02	Bot - Section 2	360.0	6.9					0.0	0.3	360.0	7.2	0.0	0.0
35.00		625.9	3,291.7					0.0	72.3	625.9	3,364.1	0.0	0.0
38.69	Top - Section 1	362.5	2,390.3					0.0	53.6	362.5	2,443.9	0.0	0.0
40.00		458.6	422.9					0.0	19.0	458.6	441.9	0.0	0.0
45.00		726.7	1,589.7					0.0	72.6	726.7	1,662.3	0.0	0.0
50.00		725.0	1,551.3					0.0	72.6	725.0	1,623.9	0.0	0.0
55.00		721.4	1,512.8					0.0	72.6	721.4	1,585.5	0.0	0.0
60.00		429.0	1,474.4					0.0	72.6	429.0	1,547.1	0.0	0.0
60.97	Bot - Section 3	361.3	281.7					0.0	14.1	361.3	295.8	0.0	0.0
65.00		559.9	2,191.1					0.0	58.5	559.9	2,249.7	0.0	0.0
68.73	Top - Section 2	358.7	1,986.8					0.0	54.2	358.7	2,041.0	0.0	0.0
70.00		445.1	315.6					0.0	18.4	445.1	334.0	0.0	0.0
75.00		704.0	1,222.0					0.0	72.6	704.0	1,294.7	0.0	0.0
80.00		693.7	1,188.1					0.0	72.6	693.7	1,260.8	0.0	0.0
85.00		682.5	1,154.2					0.0	72.6	682.5	1,226.9	0.0	0.0
90.00		537.7	1,120.3					0.0	72.6	537.7	1,193.0	0.0	0.0
92.99	Bot - Section 4	334.1	653.8					0.0	43.4	334.1	697.3	0.0	0.0
95.00		444.4	784.8					0.0	29.2	444.4	814.0	0.0	0.0
99.68	Top - Section 3	330.6	1,789.7					0.0	68.0	330.6	1,857.6	0.0	0.0
100.00		344.5	54.0					0.0	4.6	344.5	58.6	0.0	0.0
105.00		639.9	830.3					0.0	72.6	639.9	902.9	0.0	0.0
110.00		624.9	803.1					0.0	72.6	624.9	875.8	0.0	0.0
115.00		609.3	776.0					0.0	72.6	609.3	848.6	0.0	0.0
120.00		593.1	748.9					0.0	72.6	593.1	821.5	0.0	0.0
125.00		357.4	721.8					0.0	72.6	357.4	794.4	0.0	0.0
126.13	Bot - Section 5	230.7	159.4					0.0	16.4	230.7	175.8	0.0	0.0
129.00	Appurtenance(s)	222.9	770.7	4,584.1	0.0	0.0	3,383.5	0.0	41.7	4,807.1	4,195.9	0.0	0.0
130.00		153.4	264.5					0.0	9.4	153.4	273.9	0.0	0.0
131.70	Top - Section 4	280.3	445.0					0.0	16.0	280.3	461.0	0.0	0.0
135.00		455.3	408.9					0.0	31.0	455.3	439.9	0.0	0.0
140.00	Appurtenance(s)	533.5	599.0	3,063.9	0.0	0.0	1,651.5	0.0	47.0	3,597.3	2,297.5	0.0	0.0
145.00		514.8	574.2					0.0	47.0	514.8	621.2	0.0	0.0
150.00		495.8	549.3					0.0	47.0	495.8	596.3	0.0	0.0
155.00	Appurtenance(s)	444.3	524.5	8,179.0	0.0	3,038.9	2,881.5	0.0	47.0	8,623.3	3,453.0	0.0	0.0
159.30		233.3	431.1					0.0	8.2	233.3	439.4	0.0	0.0
160.00		48.0	68.4					0.0	1.3	48.0	69.8	0.0	0.0
160.35	Bot - Section 6	182.6	34.1					0.0	0.7	182.6	34.8	0.0	0.0
164.00	Appurtenance(s)	204.2	638.4	477.5	0.0	0.0	337.5	0.0	7.0	681.7	982.9	0.0	0.0
164.84	Top - Section 5	44.7	143.5					0.0	1.6	44.7	145.1	0.0	0.0
165.00		181.9	12.4					0.0	0.3	181.9	12.7	0.0	0.0
169.00	Appurtenance(s)	217.5	302.9	961.1	0.0	0.0	675.0	0.0	7.6	1,178.6	985.6	0.0	0.0

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

7/30/2021 1:59:13 PM

Customer: T-MOBILE

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

21 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

170.00	Appurtenance(s)	42.7	73.7	1,220.1	0.0	-3,050.3	72.0	0.0	1.9	1,262.8	147.6	0.0	0.0		
											Totals:	40,072.2	56,651.9	0.00	0.00

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

7/30/2021 1:59:13 PM

Customer: T-MOBILE

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

21 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-56.77	-40.65	0.00	-4,678.90	0.00	4,678.90	8,293.95	4,146.97	24,947.3	12,492.1	0.00	0.00	0.381
5.00	-54.77	-40.05	0.00	-4,475.63	0.00	4,475.63	8,188.41	4,094.21	24,125.2	12,080.5	0.04	-0.08	0.377
10.00	-52.81	-39.45	0.00	-4,275.39	0.00	4,275.39	8,080.26	4,040.13	23,308.5	11,671.6	0.17	-0.16	0.373
15.00	-50.89	-38.86	0.00	-4,078.13	0.00	4,078.13	7,969.48	3,984.74	22,497.8	11,265.6	0.38	-0.24	0.368
20.00	-49.01	-38.24	0.00	-3,883.84	0.00	3,883.84	7,856.07	3,928.03	21,693.5	10,862.9	0.67	-0.32	0.364
25.00	-47.17	-37.61	0.00	-3,692.63	0.00	3,692.63	7,740.04	3,870.02	20,896.1	10,463.6	1.05	-0.40	0.359
30.00	-45.40	-37.28	0.00	-3,504.59	0.00	3,504.59	7,621.39	3,810.69	20,106.1	10,068.0	1.52	-0.49	0.354
30.02	-45.37	-36.95	0.00	-3,503.81	0.00	3,503.81	7,620.89	3,810.44	20,102.8	10,066.3	1.52	-0.49	0.354
35.00	-41.96	-36.35	0.00	-3,319.83	0.00	3,319.83	7,500.11	3,750.05	19,323.9	9,676.35	2.08	-0.57	0.349
38.69	-39.49	-35.99	0.00	-3,185.70	0.00	3,185.70	7,497.16	3,748.58	19,305.2	9,666.97	2.55	-0.64	0.335
40.00	-39.02	-35.56	0.00	-3,138.55	0.00	3,138.55	7,464.93	3,732.47	19,101.7	9,565.07	2.73	-0.66	0.333
45.00	-37.32	-34.87	0.00	-2,960.73	0.00	2,960.73	7,340.28	3,670.14	18,330.4	9,178.83	3.47	-0.75	0.328
50.00	-35.65	-34.18	0.00	-2,786.37	0.00	2,786.37	7,213.00	3,606.50	17,568.0	8,797.08	4.29	-0.83	0.322
55.00	-34.03	-33.48	0.00	-2,615.48	0.00	2,615.48	7,083.10	3,541.55	16,815.1	8,420.07	5.21	-0.92	0.316
60.00	-32.46	-33.06	0.00	-2,448.06	0.00	2,448.06	6,950.58	3,475.29	16,072.1	8,048.04	6.22	-1.01	0.309
60.97	-32.14	-32.72	0.00	-2,415.98	0.00	2,415.98	6,924.56	3,462.28	15,929.1	7,976.43	6.43	-1.02	0.308
65.00	-29.87	-32.15	0.00	-2,284.14	0.00	2,284.14	6,815.43	3,407.72	15,339.6	7,681.23	7.32	-1.10	0.302
68.73	-27.81	-31.78	0.00	-2,164.19	0.00	2,164.19	5,795.65	2,897.83	13,032.6	6,526.01	8.21	-1.16	0.337
70.00	-27.45	-31.35	0.00	-2,123.86	0.00	2,123.86	5,767.85	2,883.92	12,879.8	6,449.52	8.52	-1.19	0.334
75.00	-26.12	-30.67	0.00	-1,967.10	0.00	1,967.10	5,656.65	2,828.32	12,282.9	6,150.62	9.81	-1.28	0.325
80.00	-24.82	-29.98	0.00	-1,813.77	0.00	1,813.77	5,542.83	2,771.41	11,694.2	5,855.81	11.21	-1.38	0.314
85.00	-23.57	-29.31	0.00	-1,663.85	0.00	1,663.85	5,426.38	2,713.19	11,114.1	5,565.33	12.70	-1.48	0.303
90.00	-22.35	-28.77	0.00	-1,517.30	0.00	1,517.30	5,307.32	2,653.66	10,543.2	5,279.44	14.30	-1.57	0.292
92.99	-21.64	-28.44	0.00	-1,431.26	0.00	1,431.26	5,234.85	2,617.42	10,206.2	5,110.73	15.31	-1.63	0.284
95.00	-20.80	-27.99	0.00	-1,374.11	0.00	1,374.11	5,185.62	2,592.81	9,981.88	4,998.36	16.00	-1.67	0.279
99.68	-18.93	-27.62	0.00	-1,243.09	0.00	1,243.09	3,857.00	1,928.50	7,351.35	3,681.14	17.69	-1.76	0.343
100.00	-18.86	-27.30	0.00	-1,234.26	0.00	1,234.26	3,851.70	1,925.85	7,326.08	3,668.49	17.80	-1.77	0.342
105.00	-17.92	-26.66	0.00	-1,097.78	0.00	1,097.78	3,767.40	1,883.70	6,933.57	3,471.94	19.71	-1.88	0.321
110.00	-17.02	-26.04	0.00	-964.47	0.00	964.47	3,680.48	1,840.24	6,546.78	3,278.25	21.74	-1.99	0.299
115.00	-16.15	-25.43	0.00	-834.26	0.00	834.26	3,590.93	1,795.47	6,166.19	3,087.68	23.88	-2.09	0.275
120.00	-15.31	-24.83	0.00	-707.11	0.00	707.11	3,498.76	1,749.38	5,792.30	2,900.46	26.12	-2.19	0.248
125.00	-14.51	-24.46	0.00	-582.95	0.00	582.95	3,403.97	1,701.99	5,425.59	2,716.83	28.47	-2.28	0.219
126.13	-14.33	-24.23	0.00	-555.31	0.00	555.31	3,382.18	1,691.09	5,343.76	2,675.85	29.01	-2.30	0.212
129.00	-10.32	-19.26	0.00	-485.77	0.00	485.77	3,326.25	1,663.12	5,137.72	2,572.68	30.41	-2.35	0.192
130.00	-10.04	-19.10	0.00	-466.51	0.00	466.51	3,304.58	1,652.29	5,063.53	2,535.53	30.91	-2.37	0.187
131.70	-9.58	-18.81	0.00	-434.03	0.00	434.03	2,974.18	1,487.09	4,587.23	2,297.02	31.75	-2.40	0.192
135.00	-9.14	-18.35	0.00	-371.97	0.00	371.97	2,917.76	1,458.88	4,381.54	2,194.03	33.43	-2.45	0.173
140.00	-6.99	-14.66	0.00	-280.25	0.00	280.25	2,830.08	1,415.04	4,075.46	2,040.76	36.03	-2.52	0.140
145.00	-6.37	-14.12	0.00	-206.95	0.00	206.95	2,725.57	1,362.78	3,756.99	1,881.29	38.70	-2.57	0.112
150.00	-5.79	-13.61	0.00	-136.33	0.00	136.33	2,604.93	1,302.47	3,430.18	1,717.64	41.42	-2.62	0.082
155.00	-2.74	-4.83	0.00	-65.27	0.00	65.27	2,484.30	1,242.15	3,118.24	1,561.44	44.19	-2.65	0.043
159.30	-2.30	-4.47	0.00	-44.49	0.00	44.49	2,380.56	1,190.28	2,861.86	1,433.06	46.58	-2.67	0.032
160.00	-2.23	-4.42	0.00	-41.36	0.00	41.36	2,363.67	1,181.83	2,821.16	1,412.68	46.98	-2.67	0.030

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

7/30/2021 1:59:13 PM

Customer: T-MOBILE

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

21 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

160.35	-2.21	-4.24	0.00	-39.81	0.00	39.81	2,355.21	1,177.61	2,800.89	1,402.53	47.17	-2.67	0.029
164.00	-1.26	-3.51	0.00	-24.35	0.00	24.35	2,267.16	1,133.58	2,594.21	1,299.03	49.22	-2.68	0.019
164.84	-1.11	-3.46	0.00	-21.40	0.00	21.40	1,875.62	937.81	2,180.06	1,091.65	49.69	-2.69	0.020
165.00	-1.11	-3.28	0.00	-20.84	0.00	20.84	1,873.27	936.64	2,173.63	1,088.43	49.78	-2.69	0.020
169.00	-0.18	-2.05	0.00	-7.74	0.00	7.74	1,797.70	898.85	1,997.32	1,000.14	52.03	-2.69	0.008
170.00	0.00	-2.04	0.00	-5.68	0.00	5.68	1,777.96	888.98	1,953.47	978.19	52.60	-2.69	0.006

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice	21 Iterations
Gust Response Factor :1.10	Ice Dead Load Factor :1.00	Wind Importance Factor :1.00
Dead Load Factor :1.20		Ice Importance Factor :1.00
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		108.6	0.0					0.0	0.0	108.6	0.0	0.0	0.0
5.00		215.4	3,025.5					0.0	96.8	215.4	3,122.4	0.0	0.0
10.00		211.6	3,025.1					0.0	96.8	211.6	3,122.0	0.0	0.0
15.00		210.9	2,992.4					0.0	96.8	210.9	3,089.2	0.0	0.0
20.00		215.7	2,949.0					0.0	96.8	215.7	3,045.8	0.0	0.0
25.00		221.6	2,900.2					0.0	96.8	221.6	2,997.0	0.0	0.0
30.00		112.5	2,847.9					0.0	96.8	112.5	2,944.7	0.0	0.0
30.02	Bot - Section 2	115.4	11.8					0.0	0.4	115.4	12.2	0.0	0.0
35.00		200.7	5,004.1					0.0	96.4	200.7	5,100.5	0.0	0.0
38.69	Top - Section 1	116.4	3,641.1					0.0	71.5	116.4	3,712.5	0.0	0.0
40.00		147.4	725.1					0.0	25.4	147.4	750.5	0.0	0.0
45.00		233.9	2,725.7					0.0	96.8	233.9	2,822.6	0.0	0.0
50.00		233.7	2,667.0					0.0	96.8	233.7	2,763.8	0.0	0.0
55.00		232.9	2,607.2					0.0	96.8	232.9	2,704.1	0.0	0.0
60.00		138.7	2,546.8					0.0	96.8	138.7	2,643.6	0.0	0.0
60.97	Bot - Section 3	116.9	488.4					0.0	18.8	116.9	507.2	0.0	0.0
65.00		181.3	3,389.6					0.0	78.0	181.3	3,467.6	0.0	0.0
68.73	Top - Section 2	116.3	3,076.8					0.0	72.3	116.3	3,149.0	0.0	0.0
70.00		144.5	565.9					0.0	24.6	144.5	590.4	0.0	0.0
75.00		228.8	2,188.4					0.0	96.8	228.8	2,285.2	0.0	0.0
80.00		225.9	2,131.8					0.0	96.8	225.9	2,228.6	0.0	0.0
85.00		222.7	2,074.8					0.0	96.8	222.7	2,171.6	0.0	0.0
90.00		175.8	2,017.4					0.0	96.8	175.8	2,114.2	0.0	0.0
92.99	Bot - Section 4	109.4	1,180.9					0.0	57.9	109.4	1,238.8	0.0	0.0
95.00		145.6	1,255.3					0.0	38.9	145.6	1,294.3	0.0	0.0
99.68	Top - Section 3	108.4	2,860.9					0.0	90.7	108.4	2,951.5	0.0	0.0
100.00		113.2	104.4					0.0	6.2	113.2	110.6	0.0	0.0
105.00		210.6	1,600.2					0.0	96.8	210.6	1,697.0	0.0	0.0
110.00		206.2	1,550.7					0.0	96.8	206.2	1,647.5	0.0	0.0
115.00		201.6	1,501.0					0.0	96.8	201.6	1,597.8	0.0	0.0
120.00		196.8	1,451.1					0.0	96.8	196.8	1,547.9	0.0	0.0
125.00		118.8	1,400.9					0.0	96.8	118.8	1,497.7	0.0	0.0
126.13	Bot - Section 5	76.9	311.1					0.0	21.9	76.9	332.9	0.0	0.0
129.00	Appurtenance(s)	74.3	1,277.3	1,033.5	0.0	0.0	7,750.9	0.0	55.6	1,107.8	9,083.8	0.0	0.0
130.00		51.2	439.2					0.0	12.5	51.2	451.7	0.0	0.0
131.70	Top - Section 4	93.7	738.7					0.0	21.3	93.7	760.1	0.0	0.0
135.00		152.5	820.9					0.0	41.3	152.5	862.2	0.0	0.0
140.00	Appurtenance(s)	179.3	1,201.6	1,741.2	0.0	0.0	9,480.8	0.0	62.6	1,920.5	10,745.1	0.0	0.0
145.00		173.8	1,153.8					0.0	62.6	173.8	1,216.4	0.0	0.0
150.00		168.1	1,105.8					0.0	62.6	168.1	1,168.4	0.0	0.0
155.00	Appurtenance(s)	151.3	1,057.6	1,934.1	0.0	611.5	9,403.7	0.0	62.6	2,085.4	10,524.0	0.0	0.0
159.30		79.7	871.9					0.0	10.9	79.7	882.9	0.0	0.0
160.00		16.5	139.4					0.0	1.8	16.5	141.2	0.0	0.0
160.35	Bot - Section 6	62.6	69.5					0.0	0.9	62.6	70.4	0.0	0.0
164.00	Appurtenance(s)	70.0	1,097.4	118.9	0.0	0.0	680.9	0.0	9.3	188.9	1,787.6	0.0	0.0
164.84	Top - Section 5	15.4	247.7					0.0	2.1	15.4	249.8	0.0	0.0
165.00		62.7	27.2					0.0	0.4	62.7	27.6	0.0	0.0
169.00	Appurtenance(s)	75.0	661.5	239.6	0.0	0.0	1,363.3	0.0	10.2	314.6	2,034.9	0.0	0.0

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

7/30/2021 1:59:16 PM

Customer: T-MOBILE

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 in Radial Ice

21 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

170.00	Appurtenance(s)	14.8	162.1	239.3	0.0	-598.2	475.9	0.0	2.5	254.0	640.6	0.0	0.0	
										Totals:	12,362.1	109,907.	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice	21 Iterations
Gust Response Factor :1.10	Ice Dead Load Factor :1.00	Wind Importance Factor :1.00
Dead Load Factor :1.20		Ice Importance Factor :1.00
Wind Load Factor :1.00		

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-110.50	-12.58	0.00	-1,454.46	0.00	1,454.46	8,293.95	4,146.97	24,947.3	12,492.1	0.00	0.00	0.130
5.00	-107.37	-12.41	0.00	-1,391.54	0.00	1,391.54	8,188.41	4,094.21	24,125.2	12,080.5	0.01	-0.02	0.128
10.00	-104.25	-12.25	0.00	-1,329.47	0.00	1,329.47	8,080.26	4,040.13	23,308.5	11,671.6	0.05	-0.05	0.127
15.00	-101.15	-12.08	0.00	-1,268.24	0.00	1,268.24	7,969.48	3,984.74	22,497.8	11,265.6	0.12	-0.07	0.125
20.00	-98.10	-11.90	0.00	-1,207.86	0.00	1,207.86	7,856.07	3,928.03	21,693.5	10,862.9	0.21	-0.10	0.124
25.00	-95.10	-11.72	0.00	-1,148.36	0.00	1,148.36	7,740.04	3,870.02	20,896.1	10,463.6	0.33	-0.13	0.122
30.00	-92.15	-11.62	0.00	-1,089.78	0.00	1,089.78	7,621.39	3,810.69	20,106.1	10,068.0	0.47	-0.15	0.120
30.02	-92.14	-11.52	0.00	-1,089.53	0.00	1,089.53	7,620.89	3,810.44	20,102.8	10,066.3	0.47	-0.15	0.120
35.00	-87.03	-11.34	0.00	-1,032.15	0.00	1,032.15	7,500.11	3,750.05	19,323.9	9,676.35	0.65	-0.18	0.118
38.69	-83.32	-11.24	0.00	-990.30	0.00	990.30	7,497.16	3,748.58	19,305.2	9,666.97	0.79	-0.20	0.114
40.00	-82.56	-11.11	0.00	-975.58	0.00	975.58	7,464.93	3,732.47	19,101.7	9,565.07	0.85	-0.21	0.113
45.00	-79.74	-10.90	0.00	-920.03	0.00	920.03	7,340.28	3,670.14	18,330.4	9,178.83	1.08	-0.23	0.111
50.00	-76.97	-10.69	0.00	-865.52	0.00	865.52	7,213.00	3,606.50	17,568.0	8,797.08	1.34	-0.26	0.109
55.00	-74.26	-10.48	0.00	-812.07	0.00	812.07	7,083.10	3,541.55	16,815.1	8,420.07	1.62	-0.29	0.107
60.00	-71.62	-10.35	0.00	-759.66	0.00	759.66	6,950.58	3,475.29	16,072.1	8,048.04	1.93	-0.31	0.105
60.97	-71.11	-10.25	0.00	-749.62	0.00	749.62	6,924.56	3,462.28	15,929.1	7,976.43	2.00	-0.32	0.104
65.00	-67.64	-10.07	0.00	-708.33	0.00	708.33	6,815.43	3,407.72	15,339.6	7,681.23	2.28	-0.34	0.102
68.73	-64.49	-9.95	0.00	-670.76	0.00	670.76	5,795.65	2,897.83	13,032.6	6,526.01	2.55	-0.36	0.114
70.00	-63.89	-9.82	0.00	-658.13	0.00	658.13	5,767.85	2,883.92	12,879.8	6,449.52	2.65	-0.37	0.113
75.00	-61.60	-9.61	0.00	-609.02	0.00	609.02	5,656.65	2,828.32	12,282.9	6,150.62	3.05	-0.40	0.110
80.00	-59.37	-9.40	0.00	-560.96	0.00	560.96	5,542.83	2,771.41	11,694.2	5,855.81	3.48	-0.43	0.107
85.00	-57.20	-9.19	0.00	-513.96	0.00	513.96	5,426.38	2,713.19	11,114.1	5,565.33	3.95	-0.46	0.103
90.00	-55.08	-9.02	0.00	-468.01	0.00	468.01	5,307.32	2,653.66	10,543.2	5,279.44	4.44	-0.49	0.099
92.99	-53.84	-8.91	0.00	-441.04	0.00	441.04	5,234.85	2,617.42	10,206.2	5,110.73	4.76	-0.51	0.097
95.00	-52.55	-8.78	0.00	-423.12	0.00	423.12	5,185.62	2,592.81	9,981.88	4,998.36	4.97	-0.52	0.095
99.68	-49.59	-8.65	0.00	-382.05	0.00	382.05	3,857.00	1,928.50	7,351.35	3,681.14	5.49	-0.55	0.117
100.00	-49.48	-8.55	0.00	-379.28	0.00	379.28	3,851.70	1,925.85	7,326.08	3,668.49	5.53	-0.55	0.116
105.00	-47.78	-8.36	0.00	-336.51	0.00	336.51	3,767.40	1,883.70	6,933.57	3,471.94	6.12	-0.58	0.110
110.00	-46.13	-8.16	0.00	-294.74	0.00	294.74	3,680.48	1,840.24	6,546.78	3,278.25	6.75	-0.62	0.102
115.00	-44.53	-7.96	0.00	-253.95	0.00	253.95	3,590.93	1,795.47	6,166.19	3,087.68	7.41	-0.65	0.095
120.00	-42.98	-7.77	0.00	-214.14	0.00	214.14	3,498.76	1,749.38	5,792.30	2,900.46	8.11	-0.68	0.086
125.00	-41.48	-7.65	0.00	-175.29	0.00	175.29	3,403.97	1,701.99	5,425.59	2,716.83	8.83	-0.71	0.077
126.13	-41.15	-7.57	0.00	-166.65	0.00	166.65	3,382.18	1,691.09	5,343.76	2,675.85	9.00	-0.71	0.074
129.00	-32.08	-6.36	0.00	-144.92	0.00	144.92	3,326.25	1,663.12	5,137.72	2,572.68	9.43	-0.73	0.066
130.00	-31.63	-6.30	0.00	-138.57	0.00	138.57	3,304.58	1,652.29	5,063.53	2,535.53	9.59	-0.73	0.064
131.70	-30.87	-6.21	0.00	-127.85	0.00	127.85	2,974.18	1,487.09	4,587.23	2,297.02	9.85	-0.74	0.066
135.00	-30.01	-6.05	0.00	-107.38	0.00	107.38	2,917.76	1,458.88	4,381.54	2,194.03	10.36	-0.75	0.059
140.00	-19.29	-3.99	0.00	-77.12	0.00	77.12	2,830.08	1,415.04	4,075.46	2,040.76	11.16	-0.77	0.045
145.00	-18.07	-3.81	0.00	-57.16	0.00	57.16	2,725.57	1,362.78	3,756.99	1,881.29	11.98	-0.79	0.037
150.00	-16.90	-3.63	0.00	-38.13	0.00	38.13	2,604.93	1,302.47	3,430.18	1,717.64	12.82	-0.80	0.029
155.00	-6.41	-1.39	0.00	-19.39	0.00	19.39	2,484.30	1,242.15	3,118.24	1,561.44	13.66	-0.81	0.015
159.30	-5.40	-1.28	0.00	-13.40	0.00	13.40	2,380.56	1,190.28	2,861.86	1,433.06	14.40	-0.82	0.012
160.00	-5.26	-1.26	0.00	-12.51	0.00	12.51	2,363.67	1,181.83	2,821.16	1,412.68	14.52	-0.82	0.011

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

7/30/2021 1:59:16 PM

Customer: T-MOBILE

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 in Radial Ice

21 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

160.35	-5.19	-1.19	0.00	-12.06	0.00	12.06	2,355.21	1,177.61	2,800.89	1,402.53	14.58	-0.82	0.011
164.00	-3.40	-0.98	0.00	-7.71	0.00	7.71	2,267.16	1,133.58	2,594.21	1,299.03	15.20	-0.82	0.007
164.84	-3.15	-0.96	0.00	-6.88	0.00	6.88	1,875.62	937.81	2,180.06	1,091.65	15.35	-0.82	0.008
165.00	-3.13	-0.90	0.00	-6.73	0.00	6.73	1,873.27	936.64	2,173.63	1,088.43	15.38	-0.82	0.008
169.00	-1.10	-0.55	0.00	-3.14	0.00	3.14	1,797.70	898.85	1,997.32	1,000.14	16.07	-0.82	0.004
170.00	0.00	-0.54	0.00	-2.59	0.00	2.59	1,777.96	888.98	1,953.47	978.19	16.24	-0.82	0.003

Load Case: 1.0D + 1.0W	Serviceability 60 mph	20 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.00		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		73.5	0.0					0.0	0.0	73.5	0.0	0.0	0.0
5.00		145.4	2,077.4					0.0	80.7	145.4	2,158.1	0.0	0.0
10.00		142.4	2,034.7					0.0	80.7	142.4	2,115.4	0.0	0.0
15.00		141.6	1,992.0					0.0	80.7	141.6	2,072.7	0.0	0.0
20.00		144.5	1,949.3					0.0	80.7	144.5	2,030.0	0.0	0.0
25.00		148.2	1,906.6					0.0	80.7	148.2	1,987.3	0.0	0.0
30.00		75.2	1,863.9					0.0	80.7	75.2	1,944.6	0.0	0.0
30.02	Bot - Section 2	77.0	7.7					0.0	0.3	77.0	8.0	0.0	0.0
35.00		133.9	3,657.5					0.0	80.4	133.9	3,737.8	0.0	0.0
38.69	Top - Section 1	77.6	2,655.9					0.0	59.6	77.6	2,715.4	0.0	0.0
40.00		98.1	469.8					0.0	21.1	98.1	491.0	0.0	0.0
45.00		155.5	1,766.3					0.0	80.7	155.5	1,847.0	0.0	0.0
50.00		155.1	1,723.6					0.0	80.7	155.1	1,804.3	0.0	0.0
55.00		154.3	1,680.9					0.0	80.7	154.3	1,761.6	0.0	0.0
60.00		91.8	1,638.2					0.0	80.7	91.8	1,718.9	0.0	0.0
60.97	Bot - Section 3	77.3	313.0					0.0	15.7	77.3	328.7	0.0	0.0
65.00		119.8	2,434.6					0.0	65.0	119.8	2,499.6	0.0	0.0
68.73	Top - Section 2	76.8	2,207.6					0.0	60.2	76.8	2,267.8	0.0	0.0
70.00		95.2	350.7					0.0	20.5	95.2	371.1	0.0	0.0
75.00		150.6	1,357.8					0.0	80.7	150.6	1,438.5	0.0	0.0
80.00		148.4	1,320.1					0.0	80.7	148.4	1,400.8	0.0	0.0
85.00		146.0	1,282.5					0.0	80.7	146.0	1,363.2	0.0	0.0
90.00		115.0	1,244.8					0.0	80.7	115.0	1,325.5	0.0	0.0
92.99	Bot - Section 4	71.5	726.5					0.0	48.3	71.5	774.8	0.0	0.0
95.00		95.1	872.0					0.0	32.4	95.1	904.4	0.0	0.0
99.68	Top - Section 3	70.7	1,988.5					0.0	75.5	70.7	2,064.0	0.0	0.0
100.00		73.7	60.0					0.0	5.2	73.7	65.1	0.0	0.0
105.00		136.9	922.5					0.0	80.7	136.9	1,003.2	0.0	0.0
110.00		133.7	892.4					0.0	80.7	133.7	973.1	0.0	0.0
115.00		130.4	862.2					0.0	80.7	130.4	942.9	0.0	0.0
120.00		126.9	832.1					0.0	80.7	126.9	912.8	0.0	0.0
125.00		76.5	802.0					0.0	80.7	76.5	882.7	0.0	0.0
126.13	Bot - Section 5	49.4	177.1					0.0	18.2	49.4	195.3	0.0	0.0
129.00	Appurtenance(s)	47.7	856.3	980.8	0.0	0.0	3,759.4	0.0	46.3	1,028.5	4,662.1	0.0	0.0
130.00		32.8	293.9					0.0	10.4	32.8	304.4	0.0	0.0
131.70	Top - Section 4	60.0	494.5					0.0	17.8	60.0	512.2	0.0	0.0
135.00		97.4	454.4					0.0	34.4	97.4	488.8	0.0	0.0
140.00	Appurtenance(s)	114.1	665.6	655.6	0.0	0.0	1,835.0	0.0	52.2	769.7	2,552.8	0.0	0.0
145.00		110.2	638.0					0.0	52.2	110.2	690.2	0.0	0.0
150.00		106.1	610.4					0.0	52.2	106.1	662.6	0.0	0.0
155.00	Appurtenance(s)	95.1	582.7	1,750.0	0.0	650.2	3,201.7	0.0	52.2	1,845.1	3,836.6	0.0	0.0
159.30		49.9	479.1					0.0	9.1	49.9	488.2	0.0	0.0
160.00		10.3	76.1					0.0	1.5	10.3	77.5	0.0	0.0
160.35	Bot - Section 6	39.1	37.9					0.0	0.7	39.1	38.6	0.0	0.0
164.00	Appurtenance(s)	43.7	709.3	102.2	0.0	0.0	375.0	0.0	7.7	145.9	1,092.1	0.0	0.0
164.84	Top - Section 5	9.6	159.5					0.0	1.8	9.6	161.3	0.0	0.0
165.00		38.9	13.8					0.0	0.3	38.9	14.1	0.0	0.0
169.00	Appurtenance(s)	46.5	336.6	205.6	0.0	0.0	750.0	0.0	8.5	252.2	1,095.1	0.0	0.0

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

Load Case: 1.0D + 1.0W

Serviceability 60 mph

20 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

170.00	Appurtenance(s)	9.1	81.9	261.1	0.0	-652.6	80.0	0.0	2.1	270.2	164.0	0.0	0.0	
Totals:											8,573.89	62,946.5	0.00	0.00

Load Case: 1.0D + 1.0W

Serviceability 60 mph

20 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-63.10	-8.70	0.00	-1,003.09	0.00	1,003.09	8,293.95	4,146.97	24,947.3	12,492.1	0.00	0.00	0.088
5.00	-60.94	-8.57	0.00	-959.60	0.00	959.60	8,188.41	4,094.21	24,125.2	12,080.5	0.01	-0.02	0.087
10.00	-58.82	-8.44	0.00	-916.75	0.00	916.75	8,080.26	4,040.13	23,308.5	11,671.6	0.04	-0.03	0.086
15.00	-56.75	-8.32	0.00	-874.53	0.00	874.53	7,969.48	3,984.74	22,497.8	11,265.6	0.08	-0.05	0.085
20.00	-54.72	-8.19	0.00	-832.93	0.00	832.93	7,856.07	3,928.03	21,693.5	10,862.9	0.14	-0.07	0.084
25.00	-52.73	-8.05	0.00	-791.99	0.00	791.99	7,740.04	3,870.02	20,896.1	10,463.6	0.23	-0.09	0.083
30.00	-50.78	-7.98	0.00	-751.71	0.00	751.71	7,621.39	3,810.69	20,106.1	10,068.0	0.33	-0.10	0.081
30.02	-50.77	-7.92	0.00	-751.55	0.00	751.55	7,620.89	3,810.44	20,102.8	10,066.3	0.33	-0.10	0.081
35.00	-47.03	-7.79	0.00	-712.13	0.00	712.13	7,500.11	3,750.05	19,323.9	9,676.35	0.45	-0.12	0.080
38.69	-44.32	-7.71	0.00	-683.40	0.00	683.40	7,497.16	3,748.58	19,305.2	9,666.97	0.55	-0.14	0.077
40.00	-43.82	-7.62	0.00	-673.30	0.00	673.30	7,464.93	3,732.47	19,101.7	9,565.07	0.58	-0.14	0.076
45.00	-41.98	-7.47	0.00	-635.19	0.00	635.19	7,340.28	3,670.14	18,330.4	9,178.83	0.74	-0.16	0.075
50.00	-40.17	-7.33	0.00	-597.82	0.00	597.82	7,213.00	3,606.50	17,568.0	8,797.08	0.92	-0.18	0.074
55.00	-38.41	-7.18	0.00	-561.19	0.00	561.19	7,083.10	3,541.55	16,815.1	8,420.07	1.12	-0.20	0.072
60.00	-36.69	-7.09	0.00	-525.30	0.00	525.30	6,950.58	3,475.29	16,072.1	8,048.04	1.33	-0.22	0.071
60.97	-36.36	-7.02	0.00	-518.42	0.00	518.42	6,924.56	3,462.28	15,929.1	7,976.43	1.38	-0.22	0.070
65.00	-33.85	-6.89	0.00	-490.16	0.00	490.16	6,815.43	3,407.72	15,339.6	7,681.23	1.57	-0.23	0.069
68.73	-31.59	-6.81	0.00	-464.43	0.00	464.43	5,795.65	2,897.83	13,032.6	6,526.01	1.76	-0.25	0.077
70.00	-31.21	-6.72	0.00	-455.79	0.00	455.79	5,767.85	2,883.92	12,879.8	6,449.52	1.83	-0.25	0.076
75.00	-29.77	-6.58	0.00	-422.17	0.00	422.17	5,656.65	2,828.32	12,282.9	6,150.62	2.10	-0.27	0.074
80.00	-28.37	-6.43	0.00	-389.29	0.00	389.29	5,542.83	2,771.41	11,694.2	5,855.81	2.40	-0.30	0.072
85.00	-27.01	-6.29	0.00	-357.13	0.00	357.13	5,426.38	2,713.19	11,114.1	5,565.33	2.73	-0.32	0.069
90.00	-25.68	-6.17	0.00	-325.68	0.00	325.68	5,307.32	2,653.66	10,543.2	5,279.44	3.07	-0.34	0.067
92.99	-24.90	-6.10	0.00	-307.22	0.00	307.22	5,234.85	2,617.42	10,206.2	5,110.73	3.28	-0.35	0.065
95.00	-24.00	-6.01	0.00	-294.96	0.00	294.96	5,185.62	2,592.81	9,981.88	4,998.36	3.43	-0.36	0.064
99.68	-21.93	-5.93	0.00	-266.85	0.00	266.85	3,857.00	1,928.50	7,351.35	3,681.14	3.79	-0.38	0.078
100.00	-21.87	-5.86	0.00	-264.95	0.00	264.95	3,851.70	1,925.85	7,326.08	3,668.49	3.82	-0.38	0.078
105.00	-20.86	-5.72	0.00	-235.67	0.00	235.67	3,767.40	1,883.70	6,933.57	3,471.94	4.23	-0.40	0.073
110.00	-19.89	-5.59	0.00	-207.05	0.00	207.05	3,680.48	1,840.24	6,546.78	3,278.25	4.66	-0.43	0.069
115.00	-18.95	-5.46	0.00	-179.10	0.00	179.10	3,590.93	1,795.47	6,166.19	3,087.68	5.12	-0.45	0.063
120.00	-18.03	-5.33	0.00	-151.81	0.00	151.81	3,498.76	1,749.38	5,792.30	2,900.46	5.60	-0.47	0.058
125.00	-17.15	-5.25	0.00	-125.15	0.00	125.15	3,403.97	1,701.99	5,425.59	2,716.83	6.11	-0.49	0.051
126.13	-16.95	-5.20	0.00	-119.21	0.00	119.21	3,382.18	1,691.09	5,343.76	2,675.85	6.22	-0.49	0.050
129.00	-12.30	-4.14	0.00	-104.28	0.00	104.28	3,326.25	1,663.12	5,137.72	2,572.68	6.52	-0.50	0.044
130.00	-12.00	-4.10	0.00	-100.15	0.00	100.15	3,304.58	1,652.29	5,063.53	2,535.53	6.63	-0.51	0.043
131.70	-11.48	-4.04	0.00	-93.17	0.00	93.17	2,974.18	1,487.09	4,587.23	2,297.02	6.81	-0.51	0.044
135.00	-10.99	-3.94	0.00	-79.85	0.00	79.85	2,917.76	1,458.88	4,381.54	2,194.03	7.17	-0.53	0.040
140.00	-8.45	-3.15	0.00	-60.16	0.00	60.16	2,830.08	1,415.04	4,075.46	2,040.76	7.73	-0.54	0.032
145.00	-7.76	-3.03	0.00	-44.42	0.00	44.42	2,725.57	1,362.78	3,756.99	1,881.29	8.30	-0.55	0.026
150.00	-7.10	-2.92	0.00	-29.26	0.00	29.26	2,604.93	1,302.47	3,430.18	1,717.64	8.89	-0.56	0.020
155.00	-3.28	-1.04	0.00	-14.01	0.00	14.01	2,484.30	1,242.15	3,118.24	1,561.44	9.48	-0.57	0.010
159.30	-2.78	-0.96	0.00	-9.55	0.00	9.55	2,380.56	1,190.28	2,861.86	1,433.06	10.00	-0.57	0.008
160.00	-2.70	-0.95	0.00	-8.87	0.00	8.87	2,363.67	1,181.83	2,821.16	1,412.68	10.08	-0.57	0.007

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

Load Case: 1.0D + 1.0W

Serviceability 60 mph

20 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

160.35	-2.66	-0.91	0.00	-8.54	0.00	8.54	2,355.21	1,177.61	2,800.89	1,402.53	10.12	-0.57	0.007
164.00	-1.57	-0.75	0.00	-5.22	0.00	5.22	2,267.16	1,133.58	2,594.21	1,299.03	10.56	-0.58	0.005
164.84	-1.41	-0.74	0.00	-4.59	0.00	4.59	1,875.62	937.81	2,180.06	1,091.65	10.66	-0.58	0.005
165.00	-1.39	-0.70	0.00	-4.47	0.00	4.47	1,873.27	936.64	2,173.63	1,088.43	10.68	-0.58	0.005
169.00	-0.30	-0.44	0.00	-1.66	0.00	1.66	1,797.70	898.85	1,997.32	1,000.14	11.17	-0.58	0.002
170.00	0.00	-0.44	0.00	-1.22	0.00	1.22	1,777.96	888.98	1,953.47	978.19	11.29	-0.58	0.001

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.04
Upper Limit C_s	0.04
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	1.67
Redundancy Factor (ρ):	1.00
Seismic Force Distribution Exponent (k):	1.59
Total Unfactored Dead Load:	63.10 k
Seismic Base Shear (E):	2.54 k

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
48	169.50	84	287	0.004	10	104
47	167.00	345	1,153	0.015	39	428
46	164.92	14	46	0.001	2	17
45	164.42	161	526	0.007	18	200
44	162.18	717	2,288	0.030	77	889
43	160.18	39	121	0.002	4	48
42	159.65	78	241	0.003	8	96
41	157.15	488	1,482	0.020	50	605
40	152.50	635	1,837	0.024	62	787
39	147.50	663	1,819	0.024	61	821
38	142.50	690	1,794	0.024	60	855
37	137.50	718	1,763	0.023	59	890
36	133.35	489	1,143	0.015	38	606
35	130.85	512	1,163	0.015	39	635
34	129.50	304	680	0.009	23	377
33	127.57	903	1,968	0.026	66	1,119
32	125.57	195	415	0.005	14	242
31	122.50	883	1,805	0.024	60	1,094
30	117.50	913	1,747	0.023	59	1,131
29	112.50	943	1,685	0.022	56	1,169
28	107.50	973	1,617	0.021	54	1,206
27	102.50	1,003	1,546	0.020	52	1,243
26	99.84	65	96	0.001	3	81

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

25	97.34	2,064	2,931	0.039	98	2,558
24	94.00	904	1,215	0.016	41	1,121
23	91.50	775	997	0.013	33	960
22	87.50	1,326	1,590	0.021	53	1,643
21	82.50	1,363	1,489	0.020	50	1,690
20	77.50	1,401	1,386	0.018	46	1,736
19	72.50	1,439	1,281	0.017	43	1,783
18	69.37	371	308	0.004	10	460
17	66.87	2,268	1,776	0.023	60	2,811
16	62.99	2,500	1,780	0.024	60	3,098
15	60.49	329	220	0.003	7	407
14	57.50	1,719	1,060	0.014	36	2,131
13	52.50	1,762	940	0.012	32	2,183
12	47.50	1,804	822	0.011	28	2,236
11	42.50	1,847	705	0.009	24	2,289
10	39.35	491	166	0.002	6	609
9	36.85	2,715	827	0.011	28	3,366
8	32.51	3,738	933	0.012	31	4,633
7	30.01	8	2	0.000	0	10
6	27.50	1,945	372	0.005	12	2,410
5	22.50	1,987	277	0.004	9	2,463
4	17.50	2,030	190	0.003	6	2,516
3	12.50	2,073	114	0.002	4	2,569
2	7.50	2,115	52	0.001	2	2,622
1	2.50	2,158	9	0.000	0	2,675
dbSpectra DS1F03F36D	170.00	142	488	0.006	16	176
RFS SC3-W100AC	170.00	80	275	0.004	9	99
Generic Flat Stand-O	169.00	750	2,554	0.034	86	930
Generic Flat Stand-O	164.00	375	1,218	0.016	41	465
Raycap DC6-48-60-18-	159.30	16	50	0.001	2	20
Ericsson RRUS A2	155.00	90	267	0.004	9	112
Ericsson 4478 Band 1	155.00	180	534	0.007	18	223
Ericsson RRUS 4415 B	155.00	138	410	0.005	14	171
Ericsson RRUS 4449 B	155.00	213	632	0.008	21	264
Ericsson RRU22	155.00	317	942	0.012	32	393
Ericsson RRUS 12	155.00	150	445	0.006	15	186
Ericsson 8843	155.00	255	757	0.010	25	316
Raycap DC9-48-60-24-	155.00	16	48	0.001	2	20
CCI HPA-65R-BUU-H8	155.00	408	1,211	0.016	41	506
Generic Round Sector	155.00	900	2,672	0.035	90	1,116
CCI DMP65R-BU8D	155.00	287	852	0.011	29	356
CCI TPA65R-BU8D	155.00	248	735	0.010	25	307
Generic Dish Reserve	140.00	1,835	4,637	0.061	155	2,274
Ericsson Radio 4460	129.00	327	726	0.010	24	405
Ericsson Radio 4480	129.00	252	559	0.007	19	312
Ericsson Air6449 B41	129.00	312	692	0.009	23	387
RFS APXVAALL24 43-U-	129.00	368	818	0.011	27	457
Generic Flat Platfor	129.00	2,500	5,548	0.073	186	3,099
		63,105	75,733	1.000	2,538	78,216

Load Case (0.9 - 0.2Sds) * DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
48	169.50	84	287	0.004	10	72
47	167.00	345	1,153	0.015	39	297
46	164.92	14	46	0.001	2	12
45	164.42	161	526	0.007	18	139
44	162.18	717	2,288	0.030	77	617
43	160.18	39	121	0.002	4	33

42	159.65	78	241	0.003	8	67
41	157.15	488	1,482	0.020	50	420
40	152.50	635	1,837	0.024	62	546
39	147.50	663	1,819	0.024	61	570
38	142.50	690	1,794	0.024	60	594
37	137.50	718	1,763	0.023	59	618
36	133.35	489	1,143	0.015	38	421
35	130.85	512	1,163	0.015	39	441
34	129.50	304	680	0.009	23	262
33	127.57	903	1,968	0.026	66	777
32	125.57	195	415	0.005	14	168
31	122.50	883	1,805	0.024	60	760
30	117.50	913	1,747	0.023	59	786
29	112.50	943	1,685	0.022	56	811
28	107.50	973	1,617	0.021	54	837
27	102.50	1,003	1,546	0.020	52	863
26	99.84	65	96	0.001	3	56
25	97.34	2,064	2,931	0.039	98	1,776
24	94.00	904	1,215	0.016	41	778
23	91.50	775	997	0.013	33	667
22	87.50	1,326	1,590	0.021	53	1,141
21	82.50	1,363	1,489	0.020	50	1,173
20	77.50	1,401	1,386	0.018	46	1,205
19	72.50	1,439	1,281	0.017	43	1,238
18	69.37	371	308	0.004	10	319
17	66.87	2,268	1,776	0.023	60	1,952
16	62.99	2,500	1,780	0.024	60	2,151
15	60.49	329	220	0.003	7	283
14	57.50	1,719	1,060	0.014	36	1,479
13	52.50	1,762	940	0.012	32	1,516
12	47.50	1,804	822	0.011	28	1,553
11	42.50	1,847	705	0.009	24	1,589
10	39.35	491	166	0.002	6	423
9	36.85	2,715	827	0.011	28	2,337
8	32.51	3,738	933	0.012	31	3,217
7	30.01	8	2	0.000	0	7
6	27.50	1,945	372	0.005	12	1,673
5	22.50	1,987	277	0.004	9	1,710
4	17.50	2,030	190	0.003	6	1,747
3	12.50	2,073	114	0.002	4	1,784
2	7.50	2,115	52	0.001	2	1,820
1	2.50	2,158	9	0.000	0	1,857
dbSpectra DS1F03F36D	170.00	142	488	0.006	16	122
RFS SC3-W100AC	170.00	80	275	0.004	9	69
Generic Flat Stand-O	169.00	750	2,554	0.034	86	645
Generic Flat Stand-O	164.00	375	1,218	0.016	41	323
Raycap DC6-48-60-18-	159.30	16	50	0.001	2	14
Ericsson RRUS A2	155.00	90	267	0.004	9	77
Ericsson 4478 Band 1	155.00	180	534	0.007	18	155
Ericsson RRUS 4415 B	155.00	138	410	0.005	14	119
Ericsson RRUS 4449 B	155.00	213	632	0.008	21	183
Ericsson RRU22	155.00	317	942	0.012	32	273
Ericsson RRUS 12	155.00	150	445	0.006	15	129
Ericsson 8843	155.00	255	757	0.010	25	219
Raycap DC9-48-60-24-	155.00	16	48	0.001	2	14
CCI HPA-65R-BUU-H8	155.00	408	1,211	0.016	41	351
Generic Round Sector	155.00	900	2,672	0.035	90	774
CCI DMP65R-BU8D	155.00	287	852	0.011	29	247
CCI TPA65R-BU8D	155.00	248	735	0.010	25	213
Generic Dish Reserve	140.00	1,835	4,637	0.061	155	1,579
Ericsson Radio 4460	129.00	327	726	0.010	24	281
Ericsson Radio 4480	129.00	252	559	0.007	19	217
Ericsson Air6449 B41	129.00	312	692	0.009	23	268
RFS APXVAALL24 43-U-	129.00	368	818	0.011	27	317

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

Generic Flat Platfor	129.00	2,500	5,548	0.073	186	2,151
		63,105	75,733	1.000	2,538	54,304

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-75.54	-2.54	0.00	-309.52	0.00	309.52	8,293.95	4,146.97	24,947.3	12,492.1	0.00	0.00	0.034
5.00	-72.92	-2.54	0.00	-296.82	0.00	296.82	8,188.41	4,094.21	24,125.2	12,080.5	0.00	-0.01	0.033
10.00	-70.35	-2.55	0.00	-284.10	0.00	284.10	8,080.26	4,040.13	23,308.5	11,671.6	0.01	-0.01	0.033
15.00	-67.83	-2.55	0.00	-271.36	0.00	271.36	7,969.48	3,984.74	22,497.8	11,265.6	0.02	-0.02	0.033
20.00	-65.37	-2.54	0.00	-258.63	0.00	258.63	7,856.07	3,928.03	21,693.5	10,862.9	0.04	-0.02	0.032
25.00	-62.96	-2.54	0.00	-245.92	0.00	245.92	7,740.04	3,870.02	20,896.1	10,463.6	0.07	-0.03	0.032
30.00	-62.95	-2.54	0.00	-233.25	0.00	233.25	7,621.39	3,810.69	20,106.1	10,068.0	0.10	-0.03	0.031
30.02	-58.32	-2.51	0.00	-233.19	0.00	233.19	7,620.89	3,810.44	20,102.8	10,066.3	0.10	-0.03	0.031
35.00	-54.95	-2.48	0.00	-220.71	0.00	220.71	7,500.11	3,750.05	19,323.9	9,676.35	0.14	-0.04	0.030
38.69	-54.34	-2.48	0.00	-211.55	0.00	211.55	7,497.16	3,748.58	19,305.2	9,666.97	0.17	-0.04	0.029
40.00	-52.05	-2.46	0.00	-208.30	0.00	208.30	7,464.93	3,732.47	19,101.7	9,565.07	0.18	-0.04	0.029
45.00	-49.82	-2.43	0.00	-196.02	0.00	196.02	7,340.28	3,670.14	18,330.4	9,178.83	0.23	-0.05	0.028
50.00	-47.63	-2.40	0.00	-183.86	0.00	183.86	7,213.00	3,606.50	17,568.0	8,797.08	0.29	-0.06	0.028
55.00	-45.50	-2.37	0.00	-171.84	0.00	171.84	7,083.10	3,541.55	16,815.1	8,420.07	0.35	-0.06	0.027
60.00	-45.09	-2.37	0.00	-159.99	0.00	159.99	6,950.58	3,475.29	16,072.1	8,048.04	0.41	-0.07	0.026
60.97	-42.00	-2.30	0.00	-157.69	0.00	157.69	6,924.56	3,462.28	15,929.1	7,976.43	0.43	-0.07	0.026
65.00	-39.18	-2.24	0.00	-148.41	0.00	148.41	6,815.43	3,407.72	15,339.6	7,681.23	0.49	-0.07	0.025
68.73	-38.72	-2.24	0.00	-140.03	0.00	140.03	5,795.65	2,897.83	13,032.6	6,526.01	0.54	-0.08	0.028
70.00	-36.94	-2.19	0.00	-137.20	0.00	137.20	5,767.85	2,883.92	12,879.8	6,449.52	0.57	-0.08	0.028
75.00	-35.20	-2.15	0.00	-126.23	0.00	126.23	5,656.65	2,828.32	12,282.9	6,150.62	0.65	-0.08	0.027
80.00	-33.51	-2.10	0.00	-115.50	0.00	115.50	5,542.83	2,771.41	11,694.2	5,855.81	0.74	-0.09	0.026
85.00	-31.87	-2.05	0.00	-105.00	0.00	105.00	5,426.38	2,713.19	11,114.1	5,565.33	0.84	-0.10	0.025
90.00	-30.91	-2.01	0.00	-94.77	0.00	94.77	5,307.32	2,653.66	10,543.2	5,279.44	0.95	-0.10	0.024
92.99	-29.79	-1.97	0.00	-88.75	0.00	88.75	5,234.85	2,617.42	10,206.2	5,110.73	1.01	-0.11	0.023
95.00	-27.23	-1.87	0.00	-84.79	0.00	84.79	5,185.62	2,592.81	9,981.88	4,998.36	1.06	-0.11	0.022
99.68	-27.15	-1.87	0.00	-76.03	0.00	76.03	3,857.00	1,928.50	7,351.35	3,681.14	1.17	-0.11	0.028
100.00	-25.91	-1.82	0.00	-75.43	0.00	75.43	3,851.70	1,925.85	7,326.08	3,668.49	1.17	-0.11	0.027
105.00	-24.70	-1.76	0.00	-66.35	0.00	66.35	3,767.40	1,883.70	6,933.57	3,471.94	1.30	-0.12	0.026
110.00	-23.53	-1.71	0.00	-57.53	0.00	57.53	3,680.48	1,840.24	6,546.78	3,278.25	1.43	-0.13	0.024
115.00	-22.40	-1.65	0.00	-49.00	0.00	49.00	3,590.93	1,795.47	6,166.19	3,087.68	1.57	-0.13	0.022
120.00	-21.31	-1.59	0.00	-40.76	0.00	40.76	3,498.76	1,749.38	5,792.30	2,900.46	1.71	-0.14	0.020
125.00	-21.07	-1.57	0.00	-32.83	0.00	32.83	3,403.97	1,701.99	5,425.59	2,716.83	1.86	-0.15	0.018
126.13	-19.95	-1.51	0.00	-31.05	0.00	31.05	3,382.18	1,691.09	5,343.76	2,675.85	1.90	-0.15	0.018
129.00	-14.91	-1.19	0.00	-26.73	0.00	26.73	3,326.25	1,663.12	5,137.72	2,572.68	1.99	-0.15	0.015
130.00	-14.28	-1.15	0.00	-25.54	0.00	25.54	3,304.58	1,652.29	5,063.53	2,535.53	2.02	-0.15	0.014
131.70	-13.67	-1.11	0.00	-23.58	0.00	23.58	2,974.18	1,487.09	4,587.23	2,297.02	2.07	-0.15	0.015
135.00	-12.78	-1.05	0.00	-19.92	0.00	19.92	2,917.76	1,458.88	4,381.54	2,194.03	2.18	-0.15	0.013
140.00	-9.65	-0.83	0.00	-14.67	0.00	14.67	2,830.08	1,415.04	4,075.46	2,040.76	2.34	-0.16	0.011
145.00	-8.83	-0.76	0.00	-10.53	0.00	10.53	2,725.57	1,362.78	3,756.99	1,881.29	2.51	-0.16	0.009
150.00	-8.04	-0.70	0.00	-6.71	0.00	6.71	2,604.93	1,302.47	3,430.18	1,717.64	2.68	-0.16	0.007
155.00	-3.47	-0.32	0.00	-3.21	0.00	3.21	2,484.30	1,242.15	3,118.24	1,561.44	2.85	-0.17	0.003
159.30	-3.35	-0.31	0.00	-1.84	0.00	1.84	2,380.56	1,190.28	2,861.86	1,433.06	3.00	-0.17	0.003
160.00	-3.31	-0.31	0.00	-1.62	0.00	1.62	2,363.67	1,181.83	2,821.16	1,412.68	3.02	-0.17	0.003
160.35	-2.42	-0.23	0.00	-1.51	0.00	1.51	2,355.21	1,177.61	2,800.89	1,402.53	3.04	-0.17	0.002
164.00	-1.75	-0.17	0.00	-0.69	0.00	0.69	2,267.16	1,133.58	2,594.21	1,299.03	3.16	-0.17	0.001
164.84	-1.74	-0.16	0.00	-0.55	0.00	0.55	1,875.62	937.81	2,180.06	1,091.65	3.19	-0.17	0.001
165.00	-1.31	-0.12	0.00	-0.52	0.00	0.52	1,873.27	936.64	2,173.63	1,088.43	3.20	-0.17	0.001

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

169.00	-0.28	-0.03	0.00	-0.03	0.00	0.03	1,797.70	898.85	1,997.32	1,000.14	3.34	-0.17	0.000
170.00	0.00	-0.03	0.00	0.00	0.00	0.00	1,777.96	888.98	1,953.47	978.19	3.37	-0.17	0.000

Load Case (0.9 - 0.2Sds) * DL + E ELMF

Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-52.45	-2.54	0.00	-307.52	0.00	307.52	8,293.95	4,146.97	24,947.3	12,492.1	0.00	0.00	0.031
5.00	-50.63	-2.54	0.00	-294.83	0.00	294.83	8,188.41	4,094.21	24,125.2	12,080.5	0.00	-0.01	0.031
10.00	-48.84	-2.54	0.00	-282.12	0.00	282.12	8,080.26	4,040.13	23,308.5	11,671.6	0.01	-0.01	0.030
15.00	-47.09	-2.54	0.00	-269.41	0.00	269.41	7,969.48	3,984.74	22,497.8	11,265.6	0.02	-0.02	0.030
20.00	-45.38	-2.53	0.00	-256.71	0.00	256.71	7,856.07	3,928.03	21,693.5	10,862.9	0.04	-0.02	0.029
25.00	-43.71	-2.53	0.00	-244.04	0.00	244.04	7,740.04	3,870.02	20,896.1	10,463.6	0.07	-0.03	0.029
30.00	-43.70	-2.53	0.00	-231.42	0.00	231.42	7,621.39	3,810.69	20,106.1	10,068.0	0.10	-0.03	0.029
30.02	-40.49	-2.50	0.00	-231.37	0.00	231.37	7,620.89	3,810.44	20,102.8	10,066.3	0.10	-0.03	0.028
35.00	-38.15	-2.47	0.00	-218.94	0.00	218.94	7,500.11	3,750.05	19,323.9	9,676.35	0.14	-0.04	0.028
38.69	-37.73	-2.47	0.00	-209.82	0.00	209.82	7,497.16	3,748.58	19,305.2	9,666.97	0.17	-0.04	0.027
40.00	-36.14	-2.44	0.00	-206.59	0.00	206.59	7,464.93	3,732.47	19,101.7	9,565.07	0.18	-0.04	0.026
45.00	-34.58	-2.42	0.00	-194.37	0.00	194.37	7,340.28	3,670.14	18,330.4	9,178.83	0.23	-0.05	0.026
50.00	-33.07	-2.39	0.00	-182.28	0.00	182.28	7,213.00	3,606.50	17,568.0	8,797.08	0.28	-0.05	0.025
55.00	-31.59	-2.35	0.00	-170.34	0.00	170.34	7,083.10	3,541.55	16,815.1	8,420.07	0.34	-0.06	0.025
60.00	-31.31	-2.35	0.00	-158.57	0.00	158.57	6,950.58	3,475.29	16,072.1	8,048.04	0.41	-0.07	0.024
60.97	-29.16	-2.29	0.00	-156.29	0.00	156.29	6,924.56	3,462.28	15,929.1	7,976.43	0.42	-0.07	0.024
65.00	-27.20	-2.23	0.00	-147.07	0.00	147.07	6,815.43	3,407.72	15,339.6	7,681.23	0.48	-0.07	0.023
68.73	-26.88	-2.22	0.00	-138.75	0.00	138.75	5,795.65	2,897.83	13,032.6	6,526.01	0.54	-0.08	0.026
70.00	-25.65	-2.18	0.00	-135.94	0.00	135.94	5,767.85	2,883.92	12,879.8	6,449.52	0.56	-0.08	0.026
75.00	-24.44	-2.13	0.00	-125.05	0.00	125.05	5,656.65	2,828.32	12,282.9	6,150.62	0.65	-0.08	0.025
80.00	-23.27	-2.08	0.00	-114.40	0.00	114.40	5,542.83	2,771.41	11,694.2	5,855.81	0.74	-0.09	0.024
85.00	-22.13	-2.03	0.00	-103.99	0.00	103.99	5,426.38	2,713.19	11,114.1	5,565.33	0.83	-0.10	0.023
90.00	-21.46	-2.00	0.00	-93.85	0.00	93.85	5,307.32	2,653.66	10,543.2	5,279.44	0.94	-0.10	0.022
92.99	-20.68	-1.96	0.00	-87.88	0.00	87.88	5,234.85	2,617.42	10,206.2	5,110.73	1.00	-0.11	0.021
95.00	-18.91	-1.85	0.00	-83.95	0.00	83.95	5,185.62	2,592.81	9,981.88	4,998.36	1.05	-0.11	0.020
99.68	-18.85	-1.85	0.00	-75.27	0.00	75.27	3,857.00	1,928.50	7,351.35	3,681.14	1.16	-0.11	0.025
100.00	-17.99	-1.80	0.00	-74.68	0.00	74.68	3,851.70	1,925.85	7,326.08	3,668.49	1.17	-0.11	0.025
105.00	-17.15	-1.75	0.00	-65.68	0.00	65.68	3,767.40	1,883.70	6,933.57	3,471.94	1.29	-0.12	0.023
110.00	-16.34	-1.69	0.00	-56.95	0.00	56.95	3,680.48	1,840.24	6,546.78	3,278.25	1.42	-0.13	0.022
115.00	-15.55	-1.63	0.00	-48.50	0.00	48.50	3,590.93	1,795.47	6,166.19	3,087.68	1.55	-0.13	0.020
120.00	-14.79	-1.57	0.00	-40.34	0.00	40.34	3,498.76	1,749.38	5,792.30	2,900.46	1.70	-0.14	0.018
125.00	-14.62	-1.56	0.00	-32.49	0.00	32.49	3,403.97	1,701.99	5,425.59	2,716.83	1.85	-0.14	0.016
126.13	-13.85	-1.49	0.00	-30.73	0.00	30.73	3,382.18	1,691.09	5,343.76	2,675.85	1.88	-0.15	0.016
129.00	-10.35	-1.18	0.00	-26.46	0.00	26.46	3,326.25	1,663.12	5,137.72	2,572.68	1.97	-0.15	0.013
130.00	-9.91	-1.14	0.00	-25.28	0.00	25.28	3,304.58	1,652.29	5,063.53	2,535.53	2.00	-0.15	0.013
131.70	-9.49	-1.10	0.00	-23.34	0.00	23.34	2,974.18	1,487.09	4,587.23	2,297.02	2.05	-0.15	0.013
135.00	-8.87	-1.04	0.00	-19.72	0.00	19.72	2,917.76	1,458.88	4,381.54	2,194.03	2.16	-0.15	0.012
140.00	-6.70	-0.82	0.00	-14.52	0.00	14.52	2,830.08	1,415.04	4,075.46	2,040.76	2.32	-0.16	0.009
145.00	-6.13	-0.76	0.00	-10.43	0.00	10.43	2,725.57	1,362.78	3,756.99	1,881.29	2.49	-0.16	0.008
150.00	-5.58	-0.69	0.00	-6.65	0.00	6.65	2,604.93	1,302.47	3,430.18	1,717.64	2.66	-0.16	0.006
155.00	-2.41	-0.32	0.00	-3.18	0.00	3.18	2,484.30	1,242.15	3,118.24	1,561.44	2.83	-0.16	0.003
159.30	-2.33	-0.31	0.00	-1.82	0.00	1.82	2,380.56	1,190.28	2,861.86	1,433.06	2.97	-0.16	0.002
160.00	-2.30	-0.30	0.00	-1.61	0.00	1.61	2,363.67	1,181.83	2,821.16	1,412.68	3.00	-0.16	0.002
160.35	-1.68	-0.22	0.00	-1.50	0.00	1.50	2,355.21	1,177.61	2,800.89	1,402.53	3.01	-0.16	0.002
164.00	-1.22	-0.16	0.00	-0.68	0.00	0.68	2,267.16	1,133.58	2,594.21	1,299.03	3.14	-0.16	0.001
164.84	-1.21	-0.16	0.00	-0.55	0.00	0.55	1,875.62	937.81	2,180.06	1,091.65	3.16	-0.16	0.001
165.00	-0.91	-0.12	0.00	-0.52	0.00	0.52	1,873.27	936.64	2,173.63	1,088.43	3.17	-0.16	0.001

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

169.00	-0.19	-0.03	0.00	-0.03	0.00	0.03	1,797.70	898.85	1,997.32	1,000.14	3.31	-0.17	0.000
170.00	0.00	-0.03	0.00	0.00	0.00	0.00	1,777.96	888.98	1,953.47	978.19	3.34	-0.17	0.000

Equivalent Modal Analysis Method

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	1.67
Redundancy Factor (p):	1.00

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
48	169.50	84	1.879	1.922	1.119	0.376	21	104
47	167.00	345	1.824	1.649	1.019	0.340	78	428
46	164.92	14	1.779	1.444	0.941	0.312	3	17
45	164.42	161	1.768	1.397	0.923	0.306	33	200
44	162.18	717	1.720	1.200	0.846	0.277	132	889
43	160.18	39	1.678	1.040	0.781	0.253	7	48
42	159.65	78	1.667	1.001	0.765	0.246	13	96
41	157.15	488	1.615	0.826	0.691	0.218	71	605
40	152.50	635	1.521	0.554	0.568	0.169	71	787
39	147.50	663	1.423	0.328	0.456	0.123	54	821
38	142.50	690	1.328	0.161	0.361	0.083	38	855
37	137.50	718	1.236	0.042	0.283	0.051	24	890
36	133.35	489	1.163	-0.027	0.228	0.028	9	606
35	130.85	512	1.120	-0.058	0.199	0.017	6	635
34	129.50	304	1.097	-0.072	0.185	0.012	2	377
33	127.57	903	1.064	-0.088	0.166	0.004	3	1,119
32	125.57	195	1.031	-0.101	0.147	-0.002	0	242
31	122.50	883	0.981	-0.114	0.122	-0.009	-6	1,094
30	117.50	913	0.903	-0.122	0.088	-0.017	-11	1,131
29	112.50	943	0.828	-0.116	0.062	-0.020	-12	1,169
28	107.50	973	0.756	-0.102	0.042	-0.017	-11	1,206
27	102.50	1,003	0.687	-0.083	0.027	-0.011	-7	1,243
26	99.84	65	0.652	-0.071	0.021	-0.006	0	81
25	97.34	2,064	0.620	-0.060	0.017	-0.001	-2	2,558
24	94.00	904	0.578	-0.045	0.012	0.006	3	1,121
23	91.50	775	0.547	-0.034	0.010	0.011	6	960
22	87.50	1,326	0.501	-0.016	0.007	0.019	17	1,643
21	82.50	1,363	0.445	0.003	0.006	0.028	26	1,690
20	77.50	1,401	0.393	0.020	0.007	0.036	33	1,736
19	72.50	1,439	0.344	0.034	0.009	0.041	39	1,783
18	69.37	371	0.315	0.042	0.011	0.044	11	460
17	66.87	2,268	0.292	0.047	0.013	0.045	68	2,811
16	62.99	2,500	0.259	0.054	0.016	0.046	77	3,098
15	60.49	329	0.239	0.057	0.018	0.047	10	407

14	57.50	1,719	0.216	0.061	0.021	0.047	54	2,131
13	52.50	1,762	0.180	0.065	0.026	0.047	55	2,183
12	47.50	1,804	0.148	0.068	0.030	0.046	55	2,236
11	42.50	1,847	0.118	0.070	0.035	0.045	55	2,289
10	39.35	491	0.101	0.071	0.037	0.044	14	609
9	36.85	2,715	0.089	0.071	0.039	0.043	78	3,366
8	32.51	3,738	0.069	0.072	0.041	0.042	105	4,633
7	30.01	8	0.059	0.072	0.041	0.041	0	10
6	27.50	1,945	0.049	0.071	0.042	0.041	53	2,410
5	22.50	1,987	0.033	0.069	0.041	0.039	51	2,463
4	17.50	2,030	0.020	0.064	0.038	0.036	49	2,516
3	12.50	2,073	0.010	0.055	0.032	0.031	43	2,569
2	7.50	2,115	0.004	0.040	0.022	0.023	33	2,622
1	2.50	2,158	0.000	0.016	0.009	0.010	14	2,675
dbSpectra DS1F03F36D	170.00	142	1.890	1.980	1.140	0.383	36	176
RFS SC3-W100AC	170.00	80	1.890	1.980	1.140	0.383	20	99
Generic Flat Stand-O	169.00	750	1.868	1.865	1.098	0.369	184	930
Generic Flat Stand-O	164.00	375	1.759	1.358	0.908	0.300	75	465
Raycap DC6-48-60-18-	159.30	16	1.660	0.975	0.754	0.242	3	20
Ericsson RRUS A2	155.00	90	1.571	0.692	0.632	0.194	12	112
Ericsson 4478 Band 1	155.00	180	1.571	0.692	0.632	0.194	23	223
Ericsson RRUS 4415 B	155.00	138	1.571	0.692	0.632	0.194	18	171
Ericsson RRUS 4449 B	155.00	213	1.571	0.692	0.632	0.194	28	264
Ericsson RRU22	155.00	317	1.571	0.692	0.632	0.194	41	393
Ericsson RRUS 12	155.00	150	1.571	0.692	0.632	0.194	19	186
Ericsson 8843	155.00	255	1.571	0.692	0.632	0.194	33	316
Raycap DC9-48-60-24-	155.00	16	1.571	0.692	0.632	0.194	2	20
CCI HPA-65R-BUU-H8	155.00	408	1.571	0.692	0.632	0.194	53	506
Generic Round Sector	155.00	900	1.571	0.692	0.632	0.194	117	1,116
CCI DMP65R-BU8D	155.00	287	1.571	0.692	0.632	0.194	37	356
CCI TPA65R-BU8D	155.00	248	1.571	0.692	0.632	0.194	32	307
Generic Dish Reserve	140.00	1,835	1.282	0.096	0.320	0.066	81	2,274
Ericsson Radio 4460	129.00	327	1.088	-0.076	0.180	0.010	2	405
Ericsson Radio 4480	129.00	252	1.088	-0.076	0.180	0.010	2	312
Ericsson Air6449 B41	129.00	312	1.088	-0.076	0.180	0.010	2	387
RFS APXVAALL24 43-U-	129.00	368	1.088	-0.076	0.180	0.010	2	457
Generic Flat Platfor	129.00	2,500	1.088	-0.076	0.180	0.010	16	3,099
		63,105	69.993	27.754	24.460	7.714	2,307	78,216

Load Case (0.9 - 0.2Sds) * DL + E EMAM

Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
48	169.50	84	1.879	1.922	1.119	0.376	21	72
47	167.00	345	1.824	1.649	1.019	0.340	78	297
46	164.92	14	1.779	1.444	0.941	0.312	3	12
45	164.42	161	1.768	1.397	0.923	0.306	33	139
44	162.18	717	1.720	1.200	0.846	0.277	132	617
43	160.18	39	1.678	1.040	0.781	0.253	7	33
42	159.65	78	1.667	1.001	0.765	0.246	13	67
41	157.15	488	1.615	0.826	0.691	0.218	71	420
40	152.50	635	1.521	0.554	0.568	0.169	71	546
39	147.50	663	1.423	0.328	0.456	0.123	54	570
38	142.50	690	1.328	0.161	0.361	0.083	38	594
37	137.50	718	1.236	0.042	0.283	0.051	24	618
36	133.35	489	1.163	-0.027	0.228	0.028	9	421
35	130.85	512	1.120	-0.058	0.199	0.017	6	441
34	129.50	304	1.097	-0.072	0.185	0.012	2	262
33	127.57	903	1.064	-0.088	0.166	0.004	3	777

32	125.57	195	1.031	-0.101	0.147	-0.002	0	168
31	122.50	883	0.981	-0.114	0.122	-0.009	-6	760
30	117.50	913	0.903	-0.122	0.088	-0.017	-11	786
29	112.50	943	0.828	-0.116	0.062	-0.020	-12	811
28	107.50	973	0.756	-0.102	0.042	-0.017	-11	837
27	102.50	1,003	0.687	-0.083	0.027	-0.011	-7	863
26	99.84	65	0.652	-0.071	0.021	-0.006	0	56
25	97.34	2,064	0.620	-0.060	0.017	-0.001	-2	1,776
24	94.00	904	0.578	-0.045	0.012	0.006	3	778
23	91.50	775	0.547	-0.034	0.010	0.011	6	667
22	87.50	1,326	0.501	-0.016	0.007	0.019	17	1,141
21	82.50	1,363	0.445	0.003	0.006	0.028	26	1,173
20	77.50	1,401	0.393	0.020	0.007	0.036	33	1,205
19	72.50	1,439	0.344	0.034	0.009	0.041	39	1,238
18	69.37	371	0.315	0.042	0.011	0.044	11	319
17	66.87	2,268	0.292	0.047	0.013	0.045	68	1,952
16	62.99	2,500	0.259	0.054	0.016	0.046	77	2,151
15	60.49	329	0.239	0.057	0.018	0.047	10	283
14	57.50	1,719	0.216	0.061	0.021	0.047	54	1,479
13	52.50	1,762	0.180	0.065	0.026	0.047	55	1,516
12	47.50	1,804	0.148	0.068	0.030	0.046	55	1,553
11	42.50	1,847	0.118	0.070	0.035	0.045	55	1,589
10	39.35	491	0.101	0.071	0.037	0.044	14	423
9	36.85	2,715	0.089	0.071	0.039	0.043	78	2,337
8	32.51	3,738	0.069	0.072	0.041	0.042	105	3,217
7	30.01	8	0.059	0.072	0.041	0.041	0	7
6	27.50	1,945	0.049	0.071	0.042	0.041	53	1,673
5	22.50	1,987	0.033	0.069	0.041	0.039	51	1,710
4	17.50	2,030	0.020	0.064	0.038	0.036	49	1,747
3	12.50	2,073	0.010	0.055	0.032	0.031	43	1,784
2	7.50	2,115	0.004	0.040	0.022	0.023	33	1,820
1	2.50	2,158	0.000	0.016	0.009	0.010	14	1,857
dbSpectra DS1F03F36D	170.00	142	1.890	1.980	1.140	0.383	36	122
RFS SC3-W100AC	170.00	80	1.890	1.980	1.140	0.383	20	69
Generic Flat Stand-O	169.00	750	1.868	1.865	1.098	0.369	184	645
Generic Flat Stand-O	164.00	375	1.759	1.358	0.908	0.300	75	323
Raycap DC6-48-60-18-	159.30	16	1.660	0.975	0.754	0.242	3	14
Ericsson RRUS A2	155.00	90	1.571	0.692	0.632	0.194	12	77
Ericsson 4478 Band 1	155.00	180	1.571	0.692	0.632	0.194	23	155
Ericsson RRUS 4415 B	155.00	138	1.571	0.692	0.632	0.194	18	119
Ericsson RRUS 4449 B	155.00	213	1.571	0.692	0.632	0.194	28	183
Ericsson RRU22	155.00	317	1.571	0.692	0.632	0.194	41	273
Ericsson RRUS 12	155.00	150	1.571	0.692	0.632	0.194	19	129
Ericsson 8843	155.00	255	1.571	0.692	0.632	0.194	33	219
Raycap DC9-48-60-24-	155.00	16	1.571	0.692	0.632	0.194	2	14
CCI HPA-65R-BUU-H8	155.00	408	1.571	0.692	0.632	0.194	53	351
Generic Round Sector	155.00	900	1.571	0.692	0.632	0.194	117	774
CCI DMP65R-BU8D	155.00	287	1.571	0.692	0.632	0.194	37	247
CCI TPA65R-BU8D	155.00	248	1.571	0.692	0.632	0.194	32	213
Generic Dish Reserve	140.00	1,835	1.282	0.096	0.320	0.066	81	1,579
Ericsson Radio 4460	129.00	327	1.088	-0.076	0.180	0.010	2	281
Ericsson Radio 4480	129.00	252	1.088	-0.076	0.180	0.010	2	217
Ericsson Air6449 B41	129.00	312	1.088	-0.076	0.180	0.010	2	268
RFS APXVAALL24 43-U-	129.00	368	1.088	-0.076	0.180	0.010	2	317
Generic Flat Platfor	129.00	2,500	1.088	-0.076	0.180	0.010	16	2,151
		63,105	69.993	27.754	24.460	7.714	2,307	54,304

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-75.54	-2.29	0.00	-260.53	0.00	260.53	8,293.95	4,146.97	24,947.30	12,492.1	0.00	0.00	0.030
5.00	-72.92	-2.27	0.00	-249.06	0.00	249.06	8,188.41	4,094.21	24,125.22	12,080.5	0.00	0.00	0.030
10.00	-70.35	-2.23	0.00	-237.73	0.00	237.73	8,080.26	4,040.13	23,308.58	11,671.6	0.01	-0.01	0.029
15.00	-67.83	-2.18	0.00	-226.59	0.00	226.59	7,969.48	3,984.74	22,497.87	11,265.6	0.02	-0.01	0.029
20.00	-65.37	-2.14	0.00	-215.67	0.00	215.67	7,856.07	3,928.03	21,693.57	10,862.9	0.04	-0.02	0.028
25.00	-62.96	-2.09	0.00	-204.98	0.00	204.98	7,740.04	3,870.02	20,896.16	10,463.6	0.06	-0.02	0.028
30.00	-62.95	-2.09	0.00	-194.54	0.00	194.54	7,621.39	3,810.69	20,106.14	10,068.0	0.08	-0.03	0.028
30.02	-58.32	-1.99	0.00	-194.49	0.00	194.49	7,620.89	3,810.44	20,102.86	10,066.3	0.08	-0.03	0.027
35.00	-54.95	-1.91	0.00	-184.60	0.00	184.60	7,500.11	3,750.05	19,323.97	9,676.35	0.12	-0.03	0.026
38.69	-54.34	-1.90	0.00	-177.55	0.00	177.55	7,497.16	3,748.58	19,305.25	9,666.97	0.14	-0.04	0.026
40.00	-52.05	-1.84	0.00	-175.06	0.00	175.06	7,464.93	3,732.47	19,101.74	9,565.07	0.15	-0.04	0.025
45.00	-49.82	-1.79	0.00	-165.84	0.00	165.84	7,340.28	3,670.14	18,330.40	9,178.83	0.19	-0.04	0.025
50.00	-47.63	-1.74	0.00	-156.88	0.00	156.88	7,213.00	3,606.50	17,568.05	8,797.08	0.24	-0.05	0.024
55.00	-45.50	-1.69	0.00	-148.18	0.00	148.18	7,083.10	3,541.55	16,815.14	8,420.07	0.29	-0.05	0.024
60.00	-45.09	-1.68	0.00	-139.75	0.00	139.75	6,950.58	3,475.29	16,072.19	8,048.04	0.35	-0.06	0.024
60.97	-42.00	-1.60	0.00	-138.12	0.00	138.12	6,924.56	3,462.28	15,929.19	7,976.43	0.36	-0.06	0.023
65.00	-39.19	-1.53	0.00	-131.67	0.00	131.67	6,815.43	3,407.72	15,339.66	7,681.23	0.41	-0.06	0.023
68.73	-38.73	-1.52	0.00	-125.95	0.00	125.95	5,795.65	2,897.83	13,032.65	6,526.01	0.46	-0.07	0.026
70.00	-36.94	-1.48	0.00	-124.01	0.00	124.01	5,767.85	2,883.92	12,879.89	6,449.52	0.47	-0.07	0.026
75.00	-35.21	-1.45	0.00	-116.59	0.00	116.59	5,656.65	2,828.32	12,282.97	6,150.62	0.55	-0.07	0.025
80.00	-33.52	-1.43	0.00	-109.33	0.00	109.33	5,542.83	2,771.41	11,694.23	5,855.81	0.63	-0.08	0.025
85.00	-31.87	-1.41	0.00	-102.19	0.00	102.19	5,426.38	2,713.19	11,114.14	5,565.33	0.71	-0.08	0.024
90.00	-30.91	-1.41	0.00	-95.13	0.00	95.13	5,307.32	2,653.66	10,543.20	5,279.44	0.80	-0.09	0.024
92.99	-29.79	-1.40	0.00	-90.92	0.00	90.92	5,234.85	2,617.42	10,206.29	5,110.73	0.86	-0.09	0.023
95.00	-27.23	-1.40	0.00	-88.10	0.00	88.10	5,185.62	2,592.81	9,981.88	4,998.36	0.90	-0.10	0.023
99.68	-27.15	-1.41	0.00	-81.53	0.00	81.53	3,857.00	1,928.50	7,351.35	3,681.14	1.00	-0.10	0.029
100.00	-25.91	-1.41	0.00	-81.08	0.00	81.08	3,851.70	1,925.85	7,326.08	3,668.49	1.00	-0.10	0.029
105.00	-24.70	-1.42	0.00	-74.02	0.00	74.02	3,767.40	1,883.70	6,933.57	3,471.94	1.11	-0.11	0.028
110.00	-23.53	-1.44	0.00	-66.90	0.00	66.90	3,680.48	1,840.24	6,546.78	3,278.25	1.23	-0.12	0.027
115.00	-22.40	-1.45	0.00	-59.72	0.00	59.72	3,590.93	1,795.47	6,166.19	3,087.68	1.36	-0.12	0.026
120.00	-21.31	-1.45	0.00	-52.48	0.00	52.48	3,498.76	1,749.38	5,792.30	2,900.46	1.49	-0.13	0.024
125.00	-21.07	-1.46	0.00	-45.21	0.00	45.21	3,403.97	1,701.99	5,425.59	2,716.83	1.64	-0.14	0.023
126.13	-19.95	-1.45	0.00	-43.56	0.00	43.56	3,382.18	1,691.09	5,343.76	2,675.85	1.67	-0.14	0.022
129.00	-14.91	-1.41	0.00	-39.40	0.00	39.40	3,326.25	1,663.12	5,137.72	2,572.68	1.76	-0.14	0.020
130.00	-14.27	-1.41	0.00	-37.99	0.00	37.99	3,304.58	1,652.29	5,063.53	2,535.53	1.79	-0.15	0.019
131.70	-13.67	-1.40	0.00	-35.60	0.00	35.60	2,974.18	1,487.09	4,587.23	2,297.02	1.84	-0.15	0.020
135.00	-12.78	-1.37	0.00	-30.99	0.00	30.99	2,917.76	1,458.88	4,381.54	2,194.03	1.94	-0.15	0.019
140.00	-9.65	-1.24	0.00	-24.14	0.00	24.14	2,830.08	1,415.04	4,075.46	2,040.76	2.10	-0.16	0.015
145.00	-8.83	-1.19	0.00	-17.92	0.00	17.92	2,725.57	1,362.78	3,756.99	1,881.29	2.27	-0.16	0.013
150.00	-8.04	-1.11	0.00	-11.99	0.00	11.99	2,604.93	1,302.47	3,430.18	1,717.64	2.45	-0.17	0.010
155.00	-3.47	-0.62	0.00	-6.41	0.00	6.41	2,484.30	1,242.15	3,118.24	1,561.44	2.62	-0.17	0.006
159.30	-3.35	-0.60	0.00	-3.77	0.00	3.77	2,380.56	1,190.28	2,861.86	1,433.06	2.78	-0.17	0.004
160.00	-3.31	-0.59	0.00	-3.35	0.00	3.35	2,363.67	1,181.83	2,821.16	1,412.68	2.80	-0.17	0.004
160.35	-2.42	-0.46	0.00	-3.14	0.00	3.14	2,355.21	1,177.61	2,800.89	1,402.53	2.81	-0.17	0.003
164.00	-1.75	-0.35	0.00	-1.47	0.00	1.47	2,267.16	1,133.58	2,594.21	1,299.03	2.95	-0.17	0.002
164.84	-1.74	-0.35	0.00	-1.18	0.00	1.18	1,875.62	937.81	2,180.06	1,091.65	2.98	-0.17	0.002
165.00	-1.31	-0.27	0.00	-1.12	0.00	1.12	1,873.27	936.64	2,173.63	1,088.43	2.98	-0.17	0.002

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

169.00	-0.27	-0.06	0.00	-0.06	0.00	0.06	1,797.70	898.85	1,997.32	1,000.14	3.13	-0.17	0.000
170.00	0.00	-0.06	0.00	0.00	0.00	0.00	1,777.96	888.98	1,953.47	978.19	3.16	-0.17	0.000

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-52.45	-2.29	0.00	-258.75	0.00	258.75	8,293.95	4,146.97	24,947.30	12,492.1	0.00	0.00	0.027
5.00	-50.63	-2.26	0.00	-247.29	0.00	247.29	8,188.41	4,094.21	24,125.22	12,080.5	0.00	0.00	0.027
10.00	-48.84	-2.22	0.00	-235.97	0.00	235.97	8,080.26	4,040.13	23,308.58	11,671.6	0.01	-0.01	0.026
15.00	-47.09	-2.18	0.00	-224.85	0.00	224.85	7,969.48	3,984.74	22,497.87	11,265.6	0.02	-0.01	0.026
20.00	-45.38	-2.13	0.00	-213.96	0.00	213.96	7,856.07	3,928.03	21,693.57	10,862.9	0.04	-0.02	0.025
25.00	-43.71	-2.08	0.00	-203.31	0.00	203.31	7,740.04	3,870.02	20,896.16	10,463.6	0.06	-0.02	0.025
30.00	-43.70	-2.08	0.00	-192.90	0.00	192.90	7,621.39	3,810.69	20,106.14	10,068.0	0.08	-0.03	0.025
30.02	-40.49	-1.98	0.00	-192.86	0.00	192.86	7,620.89	3,810.44	20,102.86	10,066.3	0.08	-0.03	0.024
35.00	-38.15	-1.90	0.00	-183.01	0.00	183.01	7,500.11	3,750.05	19,323.97	9,676.35	0.11	-0.03	0.024
38.69	-37.73	-1.89	0.00	-176.00	0.00	176.00	7,497.16	3,748.58	19,305.25	9,666.97	0.14	-0.04	0.023
40.00	-36.14	-1.83	0.00	-173.53	0.00	173.53	7,464.93	3,732.47	19,101.74	9,565.07	0.15	-0.04	0.023
45.00	-34.59	-1.78	0.00	-164.36	0.00	164.36	7,340.28	3,670.14	18,330.40	9,178.83	0.19	-0.04	0.023
50.00	-33.07	-1.73	0.00	-155.46	0.00	155.46	7,213.00	3,606.50	17,568.05	8,797.08	0.24	-0.05	0.022
55.00	-31.59	-1.67	0.00	-146.82	0.00	146.82	7,083.10	3,541.55	16,815.14	8,420.07	0.29	-0.05	0.022
60.00	-31.31	-1.67	0.00	-138.45	0.00	138.45	6,950.58	3,475.29	16,072.19	8,048.04	0.34	-0.06	0.022
60.97	-29.16	-1.59	0.00	-136.84	0.00	136.84	6,924.56	3,462.28	15,929.19	7,976.43	0.35	-0.06	0.021
65.00	-27.21	-1.52	0.00	-130.44	0.00	130.44	6,815.43	3,407.72	15,339.66	7,681.23	0.40	-0.06	0.021
68.73	-26.89	-1.51	0.00	-124.77	0.00	124.77	5,795.65	2,897.83	13,032.65	6,526.01	0.45	-0.06	0.024
70.00	-25.65	-1.47	0.00	-122.86	0.00	122.86	5,767.85	2,883.92	12,879.89	6,449.52	0.47	-0.07	0.023
75.00	-24.44	-1.44	0.00	-115.51	0.00	115.51	5,656.65	2,828.32	12,282.97	6,150.62	0.54	-0.07	0.023
80.00	-23.27	-1.41	0.00	-108.32	0.00	108.32	5,542.83	2,771.41	11,694.23	5,855.81	0.62	-0.08	0.023
85.00	-22.13	-1.40	0.00	-101.25	0.00	101.25	5,426.38	2,713.19	11,114.14	5,565.33	0.71	-0.08	0.022
90.00	-21.46	-1.39	0.00	-94.27	0.00	94.27	5,307.32	2,653.66	10,543.20	5,279.44	0.80	-0.09	0.022
92.99	-20.68	-1.39	0.00	-90.10	0.00	90.10	5,234.85	2,617.42	10,206.29	5,110.73	0.85	-0.09	0.022
95.00	-18.91	-1.39	0.00	-87.31	0.00	87.31	5,185.62	2,592.81	9,981.88	4,998.36	0.89	-0.10	0.021
99.68	-18.85	-1.39	0.00	-80.81	0.00	80.81	3,857.00	1,928.50	7,351.35	3,681.14	0.99	-0.10	0.027
100.00	-17.99	-1.40	0.00	-80.37	0.00	80.37	3,851.70	1,925.85	7,326.08	3,668.49	1.00	-0.10	0.027
105.00	-17.15	-1.41	0.00	-73.38	0.00	73.38	3,767.40	1,883.70	6,933.57	3,471.94	1.11	-0.11	0.026
110.00	-16.34	-1.42	0.00	-66.34	0.00	66.34	3,680.48	1,840.24	6,546.78	3,278.25	1.22	-0.12	0.025
115.00	-15.55	-1.43	0.00	-59.23	0.00	59.23	3,590.93	1,795.47	6,166.19	3,087.68	1.35	-0.12	0.024
120.00	-14.79	-1.44	0.00	-52.07	0.00	52.07	3,498.76	1,749.38	5,792.30	2,900.46	1.48	-0.13	0.022
125.00	-14.62	-1.44	0.00	-44.87	0.00	44.87	3,403.97	1,701.99	5,425.59	2,716.83	1.62	-0.14	0.021
126.13	-13.85	-1.44	0.00	-43.25	0.00	43.25	3,382.18	1,691.09	5,343.76	2,675.85	1.66	-0.14	0.020
129.00	-10.35	-1.40	0.00	-39.13	0.00	39.13	3,326.25	1,663.12	5,137.72	2,572.68	1.74	-0.14	0.018
130.00	-9.91	-1.39	0.00	-37.73	0.00	37.73	3,304.58	1,652.29	5,063.53	2,535.53	1.77	-0.14	0.018
131.70	-9.49	-1.38	0.00	-35.36	0.00	35.36	2,974.18	1,487.09	4,587.23	2,297.02	1.82	-0.15	0.019
135.00	-8.87	-1.36	0.00	-30.79	0.00	30.79	2,917.76	1,458.88	4,381.54	2,194.03	1.93	-0.15	0.017
140.00	-6.70	-1.23	0.00	-23.99	0.00	23.99	2,830.08	1,415.04	4,075.46	2,040.76	2.09	-0.16	0.014
145.00	-6.13	-1.18	0.00	-17.82	0.00	17.82	2,725.57	1,362.78	3,756.99	1,881.29	2.25	-0.16	0.012
150.00	-5.58	-1.11	0.00	-11.92	0.00	11.92	2,604.93	1,302.47	3,430.18	1,717.64	2.43	-0.17	0.009
155.00	-2.41	-0.61	0.00	-6.38	0.00	6.38	2,484.30	1,242.15	3,118.24	1,561.44	2.60	-0.17	0.005
159.30	-2.33	-0.60	0.00	-3.75	0.00	3.75	2,380.56	1,190.28	2,861.86	1,433.06	2.75	-0.17	0.004
160.00	-2.29	-0.59	0.00	-3.33	0.00	3.33	2,363.67	1,181.83	2,821.16	1,412.68	2.78	-0.17	0.003
160.35	-1.68	-0.46	0.00	-3.13	0.00	3.13	2,355.21	1,177.61	2,800.89	1,402.53	2.79	-0.17	0.003
164.00	-1.22	-0.35	0.00	-1.46	0.00	1.46	2,267.16	1,133.58	2,594.21	1,299.03	2.92	-0.17	0.002
164.84	-1.20	-0.34	0.00	-1.17	0.00	1.17	1,875.62	937.81	2,180.06	1,091.65	2.95	-0.17	0.002
165.00	-0.91	-0.26	0.00	-1.12	0.00	1.12	1,873.27	936.64	2,173.63	1,088.43	2.96	-0.17	0.002

Site Number: 208478

Code: ANSI/TIA-222-G

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

169.00	-0.19	-0.06	0.00	-0.06	0.00	0.06	1,797.70	898.85	1,997.32	1,000.14	3.10	-0.17	0.000
170.00	0.00	-0.06	0.00	0.00	0.00	0.00	1,777.96	888.98	1,953.47	978.19	3.14	-0.17	0.000

Site Number: 208478

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Site Name: Cheshire, CT

Engineering Number: 13704270_C3_03

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Customer: T-MOBILE

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	40.67	0.00	75.70	0.00	0.00	4704.86	0.00	0.39
0.9D + 1.6W	40.65	0.00	56.77	0.00	0.00	4678.90	0.00	0.38
1.2D + 1.0Di + 1.0Wi	12.58	0.00	110.50	0.00	0.00	1454.46	0.00	0.13
(1.2 + 0.2Sds) * DL + E ELFM	2.54	0.00	75.54	0.00	0.00	309.52	0.00	0.03
(1.2 + 0.2Sds) * DL + E EMAM	2.29	0.00	75.54	0.00	0.00	260.53	0.00	0.03
(0.9 - 0.2Sds) * DL + E ELFM	2.54	0.00	52.45	0.00	0.00	307.52	0.00	0.03
(0.9 - 0.2Sds) * DL + E EMAM	2.29	0.00	52.45	0.00	0.00	258.75	0.00	0.03
1.0D + 1.0W	8.70	0.00	63.10	0.00	0.00	1003.09	0.00	0.09



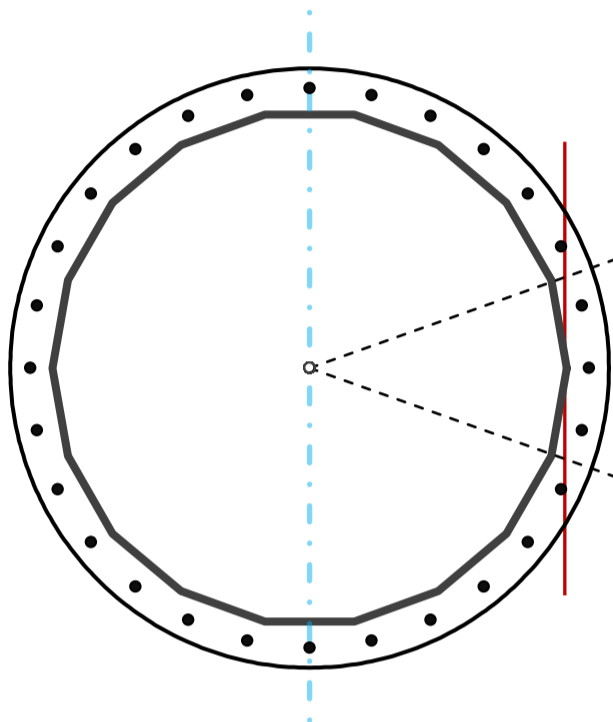
Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	18	-
Diameter	73.69	in
Thickness	17/32	in
Orientation Offset		°

Base Reactions		
Moment, Mu	4,704.9	k-ft
Axial, Pu	75.7	k
Shear, Vu	40.7	k
Neutral Axis	270	°

Report Capacities		
Component	Capacity	Result
Base Plate	19%	Pass
Anchor Rods	41%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ϕ	87.4	in
Thickness	3	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	N/A	in
Orientation Offset		°
Anchor Rod Detail	d	$\eta=0.5$
Clear Distance	4 1/8	in
Applied Moment, Mu	606.5	k
Bending Stress, ϕMn	3147.1	k



Original Anchor Rods		
Arrangement	Radial	-
Quantity	28	-
Diameter, ϕ	2 1/4	in
Bolt Circle	81.56	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	9.2	in
Orientation Offset		°
Applied Force, Pu	104.5	k
Anchor Rods, ϕPn	259.8	k

Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	40.7	4704.9	1.00
Anchor Rod Forces	40.7	4704.9	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in ²	in ²	in ⁴	#	in ⁴
Pole	121.4809	6.7489	0.6372		81285.26
Bolt	3.9761	3.2477	0.8393	4.5	71297.05
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate

Shape	Round	-
Diameter, D	87.4	in
Thickness, t	3	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	46.995	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	4.125	-

Anchor Rods

Anchor Rod Quantity, N	28	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	81.56	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	104.5	k
Applied Shear, Vu	0.5	k
Compressive Capacity, ϕP_n	259.8	k
Tensile Capacity, ϕR_n	0.402	OK
Interaction Capacity	0.406	OK

External Base Plate

Chord Length AA	39.987	in
Additional AA	5.840	in
Section Modulus, Z	103.111	in ³
Applied Moment, Mu	606.5	k-ft
Bending Capacity, ϕM_n	4640.0	k-ft
Capacity, Mu/ ϕM_n	0.131	OK

Chord Length AB	37.802	in
Additional AB	5.840	in
Section Modulus, Z	98.194	in ³
Applied Moment, Mu	430.6	k-ft
Bending Capacity, ϕM_n	4418.7	k-ft
Capacity, Mu/ ϕM_n	0.097	OK

Bend Line Length	31.083	in
Additional Bend Line	0.000	in
Section Modulus, Z	69.936	in ³
Applied Moment, Mu	606.5	k-ft
Bending Capacity, ϕM_n	3147.1	k-ft
Capacity, Mu/ ϕM_n	0.193	OK

Internal Base Plate

Arc Length	0.000	in
Section Modulus, Z	0.000	in ³
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕM_n	0.0	k-ft
Capacity, Mu/ ϕM_n		

Site Name: Cheshire, CT
Site Number: 208478
Tower Type: MP
Design Loads (Factored) - Analysis per TIA-222-G Standards

Monolithic Mat & Pier Foundation Analysis

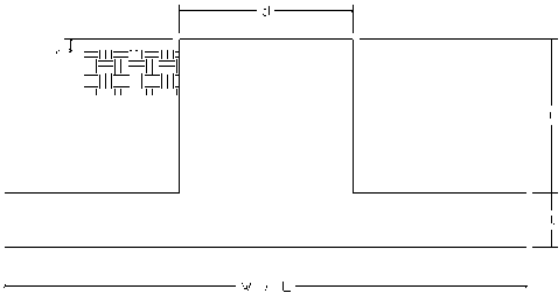
Foundation Analysis Parameters		
Design / Analysis / Mapping:	Analysis	-
Compression/Leg:	75.7	k
Uplift/Leg:	0.0	k
Total Shear:	40.7	k
Moment:	4,704.9	k-ft
Tower + Appurtenance Weight:	75.7	k
Depth to Base of Foundation (l + t - h):	6	ft
Diameter of Pier (d):	9	ft
Length of Pier (l):	4	ft
Height of Pier above Ground (h):	0.5	ft
Width of Pad (W):	33	ft
Length of Pad (L):	33	ft
Thickness of Pad (t):	2.5	ft
Tower Leg Center to Center:	0	ft
Number of Tower Legs:	1	-
Tower Center from Mat Center:	0	ft
Depth Below Ground Surface to Water Table:	11	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Soil Above Water Table:	125	pcf
Unit Weight of Water:	62.4	pcf
Unit Weight of Soil Below Water Table:	62.6	pcf
Friction Angle of Uplift:	30	°
Coefficient of Shear Friction:	0.5	-
Ultimate Compressive Bearing Pressure:	10,000	psf
Ultimate Passive Pressure on Pad Face:	0	psf
$f_{\text{Soil and Concrete Weight}}$:	0.9	-
f_{Soil} :	0.75	-

Foundation Steel Parameters		
Concrete Strength (f_c):	3,000	psi
Pad Tension Steel Depth:	26.0	in
Dead Load Factor:	0.9	-
f_{Shear} :	0.75	-
$f_{\text{Flexure / Tension}}$:	0.9	-
$f_{\text{Compression}}$:	0.65	-
b:	0.85	-
Bottom Pad Rebar Size #:	9	-
# of Bottom Pad Rebar:	56	-
Pad Bottom Steel Area:	56.00	in ²
Pad Steel F_y :	60,000	psi
Top Pad Rebar Size #:	9	-
# of Top Pad Rebar:	56	-
Pad Top Steel Area:	56.00	in ²
Pier Rebar Size #:	10	-
Pier Steel Area (Single Bar):	1.27	in ²
# of Pier Rebar:	48	-
Pier Steel F_y :	60,000	psi
Pier Cage Diameter:	100.0	in
Rebar Strain Limit:	0.008	-
Steel Elastic Modulus:	29,000	ksi
Tie Rebar Size #:	5	-
Tie Steel Area (Single Bar):	0.31	in ²
Tie Spacing:	6	in
Tie Steel F_y :	60,000	psi

Overturning Moment Usage		
Design OTM:	4969.2	k-ft
OTM Resistance:	14830.3	k-ft
Design OTM / OTM Resistance:	34%	Pass

Soil Bearing Pressure Usage		
Net Bearing Pressure:	1306	psf
Factored Nominal Bearing Pressure:	7500	psf
Factored Nominal (Net) Bearing Pressure:	17%	Pass
Load Direction Controlling Design Bearing Pressure:	Diagonal to Pad Edge	

Sliding Factor of Safety		
Ultimate Friction Resistance:	479.1	k
Ultimate Passive Pressure Resistance:	0.0	k
Total Factored Sliding Resistance:	359.3	k
Sliding Design / Sliding Resistance:	11%	Pass



Pad Strength Capacity			
Factored One Way Shear (V_u):	250.3	k	
One Way Shear Capacity (fV_c):	845.9	k	ACI11.3.1.1
V_u / fV_c :	30%	Pass	
Load Direction Controlling Shear Capacity:	Parallel to Pad Edge		
Lower Steel Pad Factored Moment (M_u):	1938.4	k-ft	
Lower Steel Pad Moment Capacity (fM_n):	6195.6	k-ft	ACI10.3
M_u / fM_n :	31%	Pass	
Load Direction Controlling Flexural Capacity:	Parallel to Pad Edge		
Upper Steel Pad Factored Moment (M_u):	1188.2	k-ft	
Upper Steel Pad Moment Capacity (fM_n):	6195.6	k-ft	
M_u / fM_n :	19%	Pass	
Lower Pad Flexural Reinforcement Ratio:	0.0054		OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0054		OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Pad Shrinkage Reinforcement Ratio:	0.0109		OK - Shrinkage Reinforcement Ratio Met - ACI7.12.2.1
Lower Pad Reinforcement Spacing:	7	in	Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Reinforcement Spacing:	7	in	Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Factored Punching Shear (V_u):	23.6	k	
Nominal Punching Shear Capacity ($f_c V_n$):	1798.5	k	ACI11.12.2.1
V_u / fV_c :	1%	Pass	

Pier Strength Capacity			
Factored Moment in Pier (M_u):	4867.5	k-ft	
Pier Moment Capacity (fM_n):	13414.1	k-ft	
M_u / fM_n :	36%	Pass	
Factored Shear in Pier (V_u):	40.7	k	
Pier Shear Capacity (fV_n):	1157.5	k	
V_u / fV_c :	4%	Pass	
Pier Shear Reinforcement Ratio:	0.0004		OK - No Ties Necessary for Shear - ACI11.5.6.1
Factored Tension in Pier (T_u):	0.0	k	
Pier Tension Capacity (fT_n):	3291.8	k	
T_u / fT_n :	0%	Pass	
Factored Compression in Pier (P_u):	75.7	k	
Pier Compression Capacity (fP_n):	12066.5	k	ACI10.3.6.2
P_u / fP_n :	1%	Pass	
Pier Compression Reinforcement Ratio:	0.007		OK - Reinforcement Ratio Met - ACI10.9.1 & 10.8.4
Minimum Depth to Develop Vertical Rebar:	28	in	ACI12.2.3
Minimum Hook Development Length:	20	in	ACI12.5
Minimum Mat Thickness / Edge Distance from Pier:	23.0	in	
Minimum Foundation Depth:	4.52	ft	
$M_u / f_B M_n + T_u / f_T T_n$:	36%	Pass	

Structural Analysis Report

Antenna Mount Analysis

*Proposed T-Mobile
Upgrade*

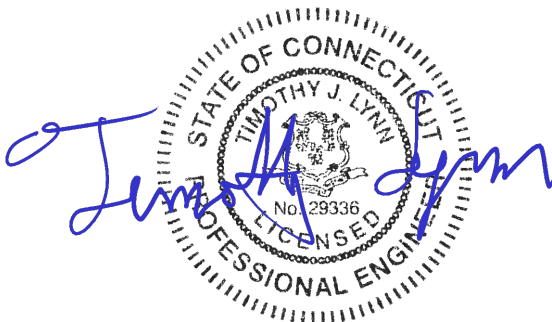
T-Mobile Site #: CTNH568A

*1325 Cheshire Street
Cheshire, CT*

Centek Project No. 21085.03

Date: July 21, 2021

Max Stress Ratio = 67%



Prepared for:
T-Mobile USA
35 Griffin Road
Bloomfield, CT 06002

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- ANTENNA AND APPURTENANCE SUMMARY
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SECTION 3 – REFERENCE MATERIALS (NOT INCLUDED WITHIN REPORT)

- RF DATA SHEET, DATED 07/08/2021

July 21, 2021

Mr. Dan Reid
Transcend Wireless
10 Industrial Ave
Mahwah, NJ 07430

Re: *Structural Letter ~ Antenna Mount
T-Mobile – Site Ref: CTNH568A
1325 Cheshire Street
Cheshire, CT 06410*

Centek Project No. 21085.03

Dear Mr. Reid,

Centek Engineering, Inc. has reviewed the T-Mobile antenna installation at the above-referenced site. The purpose of the review is to determine the structural adequacy of the proposed 12'-6" low profile platform with handrail (SitePro P/N: RMQP-496-HK). The review considered the effects of wind load, dead load, and ice load in accordance with the 2015 International Building Code as modified by the 2018 Connecticut State Building Code (CTBC), including ASCE 7-10 and ANSI/TIA-222-G Structural Standards for Steel Antenna Towers and Supporting Structures.

The loads considered in this analysis consist of the following:


- T-Mobile:
Low Profile Platform: Three (3) RFS APXVAALL24_43-U-NA20 panel antennas, three (3) Ericsson AIR6449 b41 panel antennas, three (3) Ericsson 4480 B71+B85 remote radio heads and three (3) Ericsson 4460 B25+B66 remote radio heads on the proposed mount with a RAD center elevation of 129-ft +/- AGL.

The antenna mount was analyzed per the requirements of the 2015 International Building Code as modified by the 2018 Connecticut State Building Code considering a nominal design wind speed of 97 mph for Cheshire as required in Appendix N of the 2018 Connecticut State Building Code.

Based on our review of the installation, it is our opinion that the subject antenna mount has sufficient capacity to support the aforementioned antenna configuration.

If there are any questions regarding this matter, please feel free to call.

Respectfully Submitted by:


Timothy J. Lynn, PE
Structural Engineer



Prepared by:


Fernando J. Palacios
Engineer

CEN TEK Engineering, Inc.
Structural Analysis – Mount Analysis
T-Mobile Antenna Upgrade – CTNH568A
Cheshire, CT
July 21, 2021

Section 2 - Calculations

**Development of Design Heights, Exposure Coefficients,
 and Velocity Pressures Per TIA-222-G**

Wind Speeds

Basic Wind Speed	V := 97	mph	(User Input - 2018 CSBC Appendix N)
Basic Wind Speed with Ice	V _i := 50	mph	(User Input per Annex B of TIA-222-G)

Input

Structure Type =	Structure_Type := Pole		(User Input)
Structure Category =	SC := 11		(User Input)
Exposure Category =	Exp := C		(User Input)
Structure Height =	h := 170.0	ft	(User Input)
Height to Center of Antennas =	z := 129	ft	(User Input)
Radial Ice Thickness =	t _i := .75	in	(User Input per Annex B of TIA-222-G)
Radial Ice Density =	l _d := 56.00	pcf	(User Input)
Topographic Factor =	K _{zt} := 1.0		(User Input)
	K _a := 1.0		(User Input)
Gust Response Factor =	G _H = 1.1		(User Input)

Output

Wind Direction Probability Factor =	$K_d := \begin{cases} \text{if Structure_Type = Pole} \\ 0.95 \\ \text{if Structure_Type = Lattice} \\ 0.85 \end{cases} = 0.95$	(Per Table 2-2 of TIA-222-G)
		(Per Table 2-3 of TIA-222-G)

Importance Factors =	$I_{Wind} := \begin{cases} \text{if SC = 1} \\ 0.87 \\ \text{if SC = 2} \\ 1.00 \\ \text{if SC = 3} \\ 1.15 \end{cases} = 1$
----------------------	--

	$I_{Wind_w_Ice} := \begin{cases} \text{if SC = 1} \\ 0 \\ \text{if SC = 2} \\ 1.00 \\ \text{if SC = 3} \\ 1.00 \end{cases} = 1$
--	---

	$I_{Ice} := \begin{cases} \text{if SC = 1} \\ 0 \\ \text{if SC = 2} \\ 1.00 \\ \text{if SC = 3} \\ 1.25 \end{cases} = 1$
--	--

$$K_{iz} := \left(\frac{z}{33}\right)^{0.1} = 1.146$$

Velocity Pressure Coefficient Antennas =	$t_{iz} := 2.0 \cdot t_i \cdot I_{Ice} \cdot K_{iz} \cdot K_{zt}^{0.35} = 1.719$
--	--

$$K_z := 2.01 \cdot \left(\frac{z}{zg}\right)^\alpha = 1.335$$

Velocity Pressure w/o Ice Antennas = $q_z := 0.00256 \cdot K_d \cdot K_z \cdot V^2 \cdot I_{Wind} = 31$ **psf**

Velocity Pressure with Ice Antennas = $q_{z_{ice}} := 0.00256 \cdot K_d \cdot K_z \cdot V_i^2 \cdot I_{Wind} = 8$ **psf**

Development of Wind & Ice Load on Antennas

Antenna Data:

Antenna Model =	RFS APXVAALL24_43-U-NA20	
Antenna Shape =	Flat	(User Input)
Antenna Height =	$L_{ant} := 95.9$	in (User Input)
Antenna Width =	$W_{ant} := 24.0$	in (User Input)
Antenna Thickness =	$T_{ant} := 8.5$	in (User Input)
Antenna Weight =	$WT_{ant} := 150$	lbs (User Input)
Number of Antennas =	$N_{ant} := 1$	(User Input)
Antenna Aspect Ratio =	$Ar_{ant} := \frac{L_{ant}}{W_{ant}} = 4.0$	
Antenna Force Coefficient =	$Ca_{ant} = 1.27$	

Wind Load (without ice)

Surface Area for One Antenna = $SA_{antF} := \frac{L_{ant} \cdot W_{ant}}{144} = 16$ sf

Total Antenna Wind Force Front = $F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antF} = 680$ lbs

Surface Area for One Antenna = $SA_{antS} := \frac{L_{ant} \cdot T_{ant}}{144} = 5.7$ sf

Total Antenna Wind Force Side = $F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antS} = 241$ lbs

Wind Load (with ice)

Surface Area for One Antenna w/ Ice = $SA_{ICEantF} := \frac{(L_{ant} + 2 \cdot t_{iz}) \cdot (W_{ant} + 2 \cdot t_{iz})}{144} = 18.9$ sf

Total Antenna Wind Force w/ Ice Front = $F_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantF} = 214$ lbs

Surface Area for One Antenna w/ Ice = $SA_{ICEantS} := \frac{(L_{ant} + 2 \cdot t_{iz}) \cdot (T_{ant} + 2 \cdot t_{iz})}{144} = 8.2$ sf

Total Antenna Wind Force w/ Ice Side = $F_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantS} = 93$ lbs

Gravity Load (without ice)

Weight of All Antennas = $WT_{ant} \cdot N_{ant} = 150$ lbs

Gravity Loads (ice only)

Volume of Each Antenna = $V_{ant} := L_{ant} \cdot W_{ant} \cdot T_{ant} = 2 \cdot 10^4$ cu in

Volume of Ice on Each Antenna = $V_{ice} := (L_{ant} + 2 \cdot t_{iz}) \cdot (W_{ant} + 2 \cdot t_{iz}) \cdot (T_{ant} + 2 \cdot t_{iz}) - V_{ant} = 1 \cdot 10^4$

Weight of Ice on Each Antenna = $W_{ICEant} := \frac{V_{ice}}{1728} \cdot \rho_d = 421$ lbs

Weight of Ice on All Antennas = $W_{ICEant} \cdot N_{ant} = 421$ lbs

Development of Wind & Ice Load on Antennas

Antenna Data:

Antenna Model =	Ericsson - AIR6449 B41	
Antenna Shape =	Flat	(User Input)
Antenna Height =	$L_{ant} := 33.1$	in (User Input)
Antenna Width =	$W_{ant} := 20.5$	in (User Input)
Antenna Thickness =	$T_{ant} := 8.3$	in (User Input)
Antenna Weight =	$WT_{ant} := 103$	lbs (User Input)
Number of Antennas =	$N_{ant} := 1$	(User Input)
Antenna Aspect Ratio =	$AR_{ant} := \frac{L_{ant}}{W_{ant}} = 1.6$	

Antenna Force Coefficient = $Ca_{ant} = 1.2$

Wind Load (without ice)

Surface Area for One Antenna = $SA_{antF} := \frac{L_{ant} \cdot W_{ant}}{144} = 4.7$ sf

Total Antenna Wind Force Front = $F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antF} = 190$ lbs

Surface Area for One Antenna = $SA_{antS} := \frac{L_{ant} \cdot T_{ant}}{144} = 1.9$ sf

Total Antenna Wind Force Side = $F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antS} = 77$ lbs

Wind Load (with ice)

Surface Area for One Antenna w/ Ice = $SA_{ICEantF} := \frac{(L_{ant} + 2 \cdot t_{iz}) \cdot (W_{ant} + 2 \cdot t_{iz})}{144} = 6.1$ sf

Total Antenna Wind Force w/ Ice Front = $F_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantF} = 65$ lbs

Surface Area for One Antenna w/ Ice = $SA_{ICEantS} := \frac{(L_{ant} + 2 \cdot t_{iz}) \cdot (T_{ant} + 2 \cdot t_{iz})}{144} = 3$ sf

Total Antenna Wind Force w/ Ice Side = $F_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantS} = 32$ lbs

Gravity Load (without ice)

Weight of All Antennas = $WT_{ant} \cdot N_{ant} = 103$ lbs

Gravity Loads (ice only)

Volume of Each Antenna = $V_{ant} := L_{ant} \cdot W_{ant} \cdot T_{ant} = 5632$ cu in

Volume of Ice on Each Antenna = $V_{ice} := (L_{ant} + 2 \cdot t_{iz}) \cdot (W_{ant} + 2 \cdot t_{iz}) \cdot (T_{ant} + 2 \cdot t_{iz}) - V_{ant} = 4635$ cu in

Weight of Ice on Each Antenna = $W_{ICEant} := \frac{V_{ice}}{1728} \cdot \rho = 150$ lbs

Weight of Ice on All Antennas = $W_{ICEant} \cdot N_{ant} = 150$ lbs

Development of Wind & Ice Load on RRUS's

RRUS Data:

RRUS Model =	Ericsson 4480 B71+B85	
RRUS Shape =	Flat	(User Input)
RRUS Height =	$L_{RRUS} := 21.8$	in (User Input)
RRUS Width =	$W_{RRUS} := 15.7$	in (User Input)
RRUS Thickness =	$T_{RRUS} := 7.5$	in (User Input)
RRUS Weight =	$WT_{RRUS} := 84$	lbs (User Input)
Number of RRUS's =	$N_{RRUS} := 1$	
RRUS Aspect Ratio =	$Ar_{RRUS} := \frac{L_{RRUS}}{W_{RRUS}} = 1.4$	
RRUS Force Coefficient =	$Ca_{RRUS} = 1.2$	

Wind Load (without ice)

Surface Area for One RRUS = $SA_{RRUSF} := \frac{L_{RRUS} \cdot W_{RRUS}}{144} = 2.4$ sf

Total RRUS Wind Force = $F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSF} = 96$ lbs

Surface Area for One RRUS = $SA_{RRUSS} := \frac{L_{RRUS} \cdot T_{RRUS}}{144} = 1.1$ sf

Total RRUS Wind Force = $F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSS} = 46$ lbs

Wind Load (with ice)

Surface Area for One RRUS w/ Ice = $SA_{ICERRUSF} := \frac{(L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz})}{144} = 3.4$ sf

Total RRUS Wind Force w/ Ice = $F_{IRRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSF} = 36$ lbs

Surface Area for One RRUS w/ Ice = $SA_{ICERRUSS} := \frac{(L_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz})}{144} = 1.9$ sf

Total RRUS Wind Force w/ Ice = $F_{IRRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSS} = 21$ lbs

Gravity Load (without ice)

Weight of All RRUSs = $WT_{RRUS} \cdot N_{RRUS} = 84$ lbs

Gravity Loads (ice only)

Volume of Each RRUS = $V_{RRUS} := L_{RRUS} \cdot W_{RRUS} \cdot T_{RRUS} = 2567$ cu in

Volume of Ice on Each RRUS = $V_{ice} := (L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz}) - V_{RRUS} = 2716$ cu in

Weight of Ice on Each RRUS = $W_{ICERRUS} := \frac{V_{ice}}{1728} \cdot Id = 88$ lbs

Weight of Ice on All RRUSs = $W_{ICERRUS} \cdot N_{RRUS} = 88$ lbs

Development of Wind & Ice Load on RRUS's

RRUS Data:

RRUS Model =	Ericsson 4460 B25+B66	
RRUS Shape =	Flat	(User Input)
RRUS Height =	$L_{RRUS} := 19.6$	in (User Input)
RRUS Width =	$W_{RRUS} := 15.7$	in (User Input)
RRUS Thickness =	$T_{RRUS} := 12.1$	in (User Input)
RRUS Weight =	$WT_{RRUS} := 109$	lbs (User Input)
Number of RRUS's =	$N_{RRUS} := 1$	
RRUS Aspect Ratio =	$Ar_{RRUS} := \frac{L_{RRUS}}{W_{RRUS}} = 1.2$	
RRUS Force Coefficient =	$Ca_{RRUS} = 1.2$	

Wind Load (without ice)

Surface Area for One RRUS = $SA_{RRUSF} := \frac{L_{RRUS} \cdot W_{RRUS}}{144} = 2.1$ sf

Total RRUS Wind Force = $F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSF} = 86$ lbs

Surface Area for One RRUS = $SA_{RRUSS} := \frac{L_{RRUS} \cdot T_{RRUS}}{144} = 1.6$ sf

Total RRUS Wind Force = $F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSS} = 66$ lbs

Wind Load (with ice)

Surface Area for One RRUS w/ Ice = $SA_{ICERRUSF} := \frac{(L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz})}{144} = 3.1$ sf

Total RRUS Wind Force w/ Ice = $F_{IRRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSF} = 33$ lbs

Surface Area for One RRUS w/ Ice = $SA_{ICERRUSS} := \frac{(L_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz})}{144} = 2.5$ sf

Total RRUS Wind Force w/ Ice = $F_{IRRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSS} = 27$ lbs

Gravity Load (without ice)

Weight of All RRUSs = $WT_{RRUS} \cdot N_{RRUS} = 109$ lbs

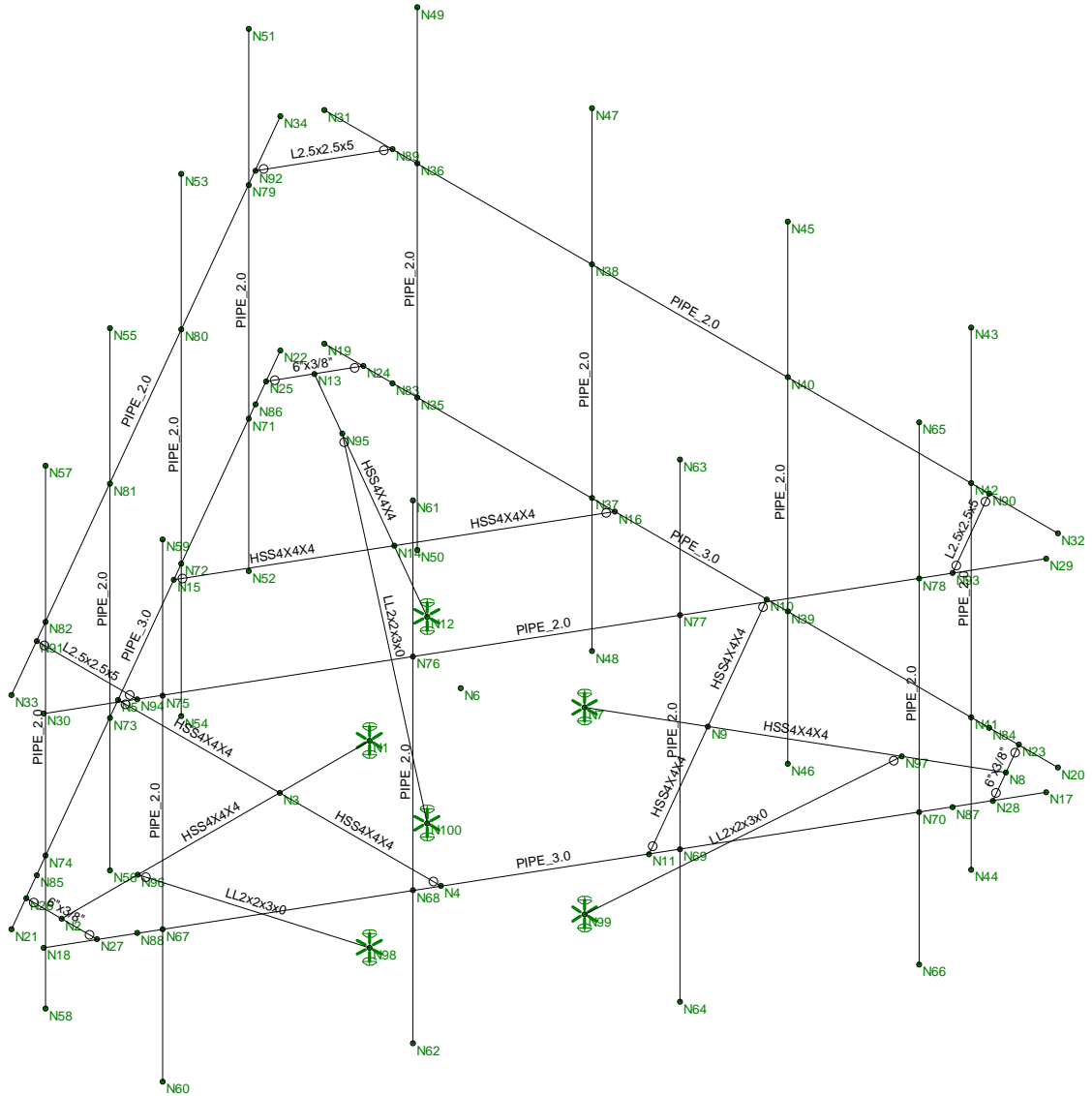
Gravity Loads (ice only)

Volume of Each RRUS = $V_{RRUS} := L_{RRUS} \cdot W_{RRUS} \cdot T_{RRUS} = 3723$ cu in

Volume of Ice on Each RRUS = $V_{ice} := (L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz}) - V_{RRUS} = 3128$ cu in

Weight of Ice on Each RRUS = $W_{ICERRUS} := \frac{V_{ice}}{1728} \cdot Id = 101$ lbs

Weight of Ice on All RRUSs = $W_{ICERRUS} \cdot N_{RRUS} = 101$ lbs



Envelope Only Solution

Centek Engineering

FJP

21085.03

CTNH568A - Mount
Member Framing

July 22, 2021 at 8:00 AM

CTNH568A_AMA.R3D

(Global) Model Settings

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

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 14th(360-10): ASD
Cold Formed Steel Code	AISI S100-10: ASD
Wood Code	AWC NDS-12: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-11
Masonry Code	ACI 530-11: ASD
Aluminum Code	AA ADM1-10: ASD - Building
Stainless Steel Code	AISC 14th(360-10): ASD
Adjust Stiffness?	Yes(Iterative)

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	1
Cd X	1
Rho Z	1
Rho X	1
Footing Overturning Safety Factor	1
Optimize for OTM/Sliding	No
Check Concrete Bearing	No
Footing Concrete Weight (k/ft^3)	150.001
Footing Concrete f'c (ksi)	4
Footing Concrete Ec (ksi)	3644
Lambda	1
Footing Steel fy (ksi)	60
Minimum Steel	0.0018
Maximum Steel	0.0075
Footing Top Bar	#3
Footing Top Bar Cover (in)	2
Footing Bottom Bar	#3
Footing Bottom Bar Cover (in)	3.5
Pedestal Bar	#3
Pedestal Bar Cover (in)	1.5
Pedestal Ties	#3

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\... Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65 .49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65 .49	50	1.1	58	1.2
3	A992	29000	11154	.3	.65 .49	50	1.1	58	1.2
4	A500 Gr.42	29000	11154	.3	.65 .49	42	1.3	58	1.1
5	A500 Gr.46	29000	11154	.3	.65 .49	46	1.2	58	1.1
6	A53 Grade B	29000	11154	.3	.65 .49	35	1.5	58	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Ru... A [in2]	Iyy [in4]	Izz [in4]	J [in4]	
1	Outrigger_HSS4X4	HSS4X4X4	Beam	HSS Pipe	A500 Gr.46	Typical	3.37	7.8	7.8	12.8
2	Face Tube_Pipe 3.0 S...	PIPE_3.0	Beam	Pipe	A53 Grade B	Typical	2.07	2.85	2.85	5.69
3	Handrails_Pipe 2.0 STD	PIPE_2.0	Beam	Pipe	A53 Grade B	Typical	1.02	.627	.627	1.25
4	Antenna Mast_Pipe 2.0...	PIPE_2.0	Column	Pipe	A53 Grade B	Typical	1.02	.627	.627	1.25
5	Plat. Horz_HSS4X4	HSS4X4X4	Beam	HSS Pipe	A500 Gr.46	Typical	3.37	7.8	7.8	12.8
6	PL 3/8"x6 "	6"x3/8"	Beam	RECT	A36 Gr.36	Typical	2.25	.026	6.75	.101
7	Side railings	L2.5x2.5x5	Beam	RECT	A36 Gr.36	Typical	1.46	.837	.837	.05
8	Mount Reinforcement	LL2x2x3x0	Beam	RECT	A36 Gr.36	Typical	1.44	.994	.542	.018

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[...Lcomp bot[...L-torq...	Kyy	Kzz	Cb	Functi...
1	M1	Outrigger_HSS4X4	5.248			Lbyy				Lateral
2	M2	Plat. Horz_HSS4X4	2.75			Lbyy				Lateral
3	M3	Plat. Horz_HSS4X4	2.75			Lbyy				Lateral
4	M4	Outrigger_HSS4X4	5.248			Lbyy				Lateral
5	M5	Plat. Horz_HSS4X4	2.75			Lbyy				Lateral
6	M6	Plat. Horz_HSS4X4	2.75			Lbyy				Lateral
7	M7	Outrigger_HSS4X4	5.248			Lbyy				Lateral
8	M8	Plat. Horz_HSS4X4	2.75			Lbyy				Lateral
9	M9	Plat. Horz_HSS4X4	2.75			Lbyy				Lateral
10	M10	Face Tube_Pipe 3.0...	12.5			Lbyy				Lateral
11	M13	Face Tube_Pipe 3.0...	12.5			Lbyy				Lateral
12	M14	Face Tube_Pipe 3.0...	12.5			Lbyy				Lateral
13	M13A	PL 3/8"x6 "	1.212			Lbyy				Lateral
14	M14A	PL 3/8"x6 "	1.212			Lbyy				Lateral
15	M15	PL 3/8"x6 "	1.212			Lbyy				Lateral
16	M16	Handrails_Pipe 2.0...	12.5			Lbyy				Lateral
17	M17	Handrails_Pipe 2.0...	12.5			Lbyy				Lateral
18	M18	Handrails_Pipe 2.0...	12.5			Lbyy				Lateral
19	PSA.1	Antenna Mast_Pipe...	8			Lbyy				Lateral
20	PSA.2	Antenna Mast_Pipe...	8			Lbyy				Lateral
21	PSA.3	Antenna Mast_Pipe...	8			Lbyy				Lateral
22	PSA.4	Antenna Mast_Pipe...	8			Lbyy				Lateral
23	PSB.1	Antenna Mast_Pipe...	8			Lbyy				Lateral
24	PSB.2	Antenna Mast_Pipe...	8			Lbyy				Lateral
25	PSB.3	Antenna Mast_Pipe...	8			Lbyy				Lateral
26	PSB.4	Antenna Mast_Pipe...	8			Lbyy				Lateral
27	PSC.1	Antenna Mast_Pipe...	8			Lbyy				Lateral
28	PSC.2	Antenna Mast_Pipe...	8			Lbyy				Lateral
29	PSC.3	Antenna Mast_Pipe...	8			Lbyy				Lateral
30	PSC.4	Antenna Mast_Pipe...	8			Lbyy				Lateral
31	M31	Side railings	1.712			Lbyy				Lateral
32	M32	Side railings	1.712			Lbyy				Lateral
33	M33	Side railings	1.712			Lbyy				Lateral
34	M34	Mount Reinforcement	4.991			Lbyy				Lateral
35	M35	Mount Reinforcement	4.991			Lbyy				Lateral
36	M36	Mount Reinforcement	4.991			Lbyy				Lateral

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(...)	Section/Shape	Type	Design List	Material	Design R...
1	M1	N1	N2			Outrigger_HSS4X4	Beam	HSS Pipe	A500 Gr.46	Typical
2	M2	N4	N3		180	Plat. Horz_HSS4X4	Beam	HSS Pipe	A500 Gr.46	Typical
3	M3	N5	N3			Plat. Horz_HSS4X4	Beam	HSS Pipe	A500 Gr.46	Typical
4	M4	N7	N8			Outrigger_HSS4X4	Beam	HSS Pipe	A500 Gr.46	Typical
5	M5	N10	N9		180	Plat. Horz_HSS4X4	Beam	HSS Pipe	A500 Gr.46	Typical
6	M6	N11	N9			Plat. Horz_HSS4X4	Beam	HSS Pipe	A500 Gr.46	Typical
7	M7	N12	N13			Outrigger_HSS4X4	Beam	HSS Pipe	A500 Gr.46	Typical
8	M8	N15	N14		180	Plat. Horz_HSS4X4	Beam	HSS Pipe	A500 Gr.46	Typical
9	M9	N16	N14			Plat. Horz_HSS4X4	Beam	HSS Pipe	A500 Gr.46	Typical
10	M10	N17	N18			Face Tube_Pipe 3.0 STD	Beam	Pipe	A53 Grade B	Typical
11	M13	N19	N20			Face Tube_Pipe 3.0 STD	Beam	Pipe	A53 Grade B	Typical
12	M14	N21	N22			Face Tube_Pipe 3.0 STD	Beam	Pipe	A53 Grade B	Typical
13	M13A	N28	N23			PL 3/8"x6 "	Beam	RECT	A36 Gr.36	Typical
14	M14A	N24	N25			PL 3/8"x6 "	Beam	RECT	A36 Gr.36	Typical
15	M15	N27	N26			PL 3/8"x6 "	Beam	RECT	A36 Gr.36	Typical
16	M16	N29	N30			Handrails_Pipe 2.0 STD	Beam	Pipe	A53 Grade B	Typical
17	M17	N31	N32			Handrails_Pipe 2.0 STD	Beam	Pipe	A53 Grade B	Typical
18	M18	N33	N34			Handrails_Pipe 2.0 STD	Beam	Pipe	A53 Grade B	Typical
19	PSA.1	N43	N44			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
20	PSA.2	N45	N46			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
21	PSA.3	N47	N48			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
22	PSA.4	N49	N50			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
23	PSB.1	N51	N52			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
24	PSB.2	N53	N54			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
25	PSB.3	N55	N56			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
26	PSB.4	N57	N58			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
27	PSC.1	N59	N60			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
28	PSC.2	N61	N62			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
29	PSC.3	N63	N64			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
30	PSC.4	N65	N66			Antenna Mast_Pipe 2.0 STD	Column	Pipe	A53 Grade B	Typical
31	M31	N91	N94		180	Side railings	Beam	RECT	A36 Gr.36	Typical
32	M32	N93	N90		180	Side railings	Beam	RECT	A36 Gr.36	Typical
33	M33	N89	N92		180	Side railings	Beam	RECT	A36 Gr.36	Typical
34	M34	N97	N99			Mount Reinforcement	Beam	RECT	A36 Gr.36	Typical
35	M35	N95	N100			Mount Reinforcement	Beam	RECT	A36 Gr.36	Typical
36	M36	N96	N98			Mount Reinforcement	Beam	RECT	A36 Gr.36	Typical

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	-0.	0	1.548833	0	
2	N2	-0.	0	6.796922	0	
3	N3	-0.	0	3.083333	0	
4	N4	2.75	0	3.083333	0	
5	N5	-2.75	0	3.083333	0	
6	N6	-0.	0	0.	0	
7	N7	1.341329	0	-0.774417	0	
8	N8	5.886307	0	-3.398461	0	
9	N9	2.670245	0	-1.541667	0	
10	N10	1.295245	0	-3.923237	0	



Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
11	N11	4.045245	0	0.839903	0	
12	N12	-1.341329	0	-0.774417	0	
13	N13	-5.886307	0	-3.398461	0	
14	N14	-2.670245	0	-1.541667	0	
15	N15	-4.045245	0	0.839903	0	
16	N16	-1.295245	0	-3.923237	0	
17	N17	6.52262	0	-3.451036	0	
18	N18	0.272625	0	7.374273	0	
19	N19	-6.249995	0	-3.923237	0	
20	N20	6.249995	0	-3.923237	0	
21	N21	-0.272625	0	7.374273	0	
22	N22	-6.52262	0	-3.451036	0	
23	N23	5.583328	0	-3.923237	0	
24	N24	-5.583328	0	-3.923237	0	
25	N25	-6.189287	0	-2.873686	0	
26	N26	-0.605958	0	6.796922	0	
27	N27	0.605958	0	6.796922	0	
28	N28	6.189287	0	-2.873686	0	
29	N29	6.52262	3.45	-3.451036	0	
30	N30	0.272625	3.45	7.374273	0	
31	N31	-6.249995	3.45	-3.923237	0	
32	N32	6.249995	3.45	-3.923237	0	
33	N33	-0.272625	3.45	7.374273	0	
34	N34	-6.52262	3.45	-3.451036	0	
35	N35	-4.666662	0	-3.923237	0	
36	N36	-4.666662	3.45	-3.923237	0	
37	N37	-1.687495	0	-3.923237	0	
38	N38	-1.687495	3.45	-3.923237	0	
39	N39	1.645838	0	-3.923237	0	
40	N40	1.645838	3.45	-3.923237	0	
41	N41	4.770838	0	-3.923237	0	
42	N42	4.770838	3.45	-3.923237	0	
43	N43	4.770838	5.75	-3.923237	0	
44	N44	4.770838	-2.25	-3.923237	0	
45	N45	1.645838	5.75	-3.923237	0	
46	N46	1.645838	-2.25	-3.923237	0	
47	N47	-1.687495	5.75	-3.923237	0	
48	N48	-1.687495	-2.25	-3.923237	0	
49	N49	-4.666662	5.75	-3.923237	0	
50	N50	-4.666662	-2.25	-3.923237	0	
51	N51	-5.783042	5.75	-2.170049	0	
52	N52	-5.783042	-2.25	-2.170049	0	
53	N53	-4.220542	5.75	0.53628	0	
54	N54	-4.220542	-2.25	0.53628	0	
55	N55	-2.553875	5.75	3.423032	0	
56	N56	-2.553875	-2.25	3.423032	0	
57	N57	-1.064292	5.75	6.003066	0	
58	N58	-1.064292	-2.25	6.003066	0	
59	N59	1.012203	5.75	6.093285	0	
60	N60	1.012203	-2.25	6.093285	0	
61	N61	2.574703	5.75	3.386956	0	
62	N62	2.574703	-2.25	3.386956	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
63	N63	4.24137	5.75	0.500205	0	
64	N64	4.24137	-2.25	0.500205	0	
65	N65	5.730953	5.75	-2.079829	0	
66	N66	5.730953	-2.25	-2.079829	0	
67	N67	1.012203	0	6.093285	0	
68	N68	2.574703	0	3.386956	0	
69	N69	4.24137	0	0.500205	0	
70	N70	5.730953	0	-2.079829	0	
71	N71	-5.783042	0	-2.170049	0	
72	N72	-4.220542	0	0.53628	0	
73	N73	-2.553875	0	3.423032	0	
74	N74	-1.064292	0	6.003066	0	
75	N75	1.012203	3.45	6.093285	0	
76	N76	2.574703	3.45	3.386956	0	
77	N77	4.24137	3.45	0.500205	0	
78	N78	5.730953	3.45	-2.079829	0	
79	N79	-5.783042	3.45	-2.170049	0	
80	N80	-4.220542	3.45	0.53628	0	
81	N81	-2.553875	3.45	3.423032	0	
82	N82	-1.064292	3.45	6.003066	0	
83	N83	-5.083328	0	-3.923237	0	
84	N84	5.083328	0	-3.923237	0	
85	N85	-0.855958	0	6.36391	0	
86	N86	-5.939287	0	-2.440673	0	
87	N87	5.939287	0	-2.440673	0	
88	N88	0.855958	0	6.36391	0	
89	N89	-5.083328	3.45	-3.923237	0	
90	N90	5.083328	3.45	-3.923237	0	
91	N91	-0.855958	3.45	6.36391	0	
92	N92	-5.939287	3.45	-2.440673	0	
93	N93	5.939287	3.45	-2.440673	0	
94	N94	0.855958	3.45	6.36391	0	
95	N95	-4.763371	0	-2.750133	0	
96	N96	-0.	0	5.500267	0	
97	N97	4.763371	0	-2.750133	0	
98	N98	-0.	-3.049275	1.548833	0	
99	N99	1.341329	-3.049275	-0.774417	0	
100	N100	-1.341329	-3.049275	-0.774417	0	

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N1	Reaction	Reaction	Reaction		Reaction	
2	N7	Reaction	Reaction	Reaction		Reaction	
3	N12	Reaction	Reaction	Reaction		Reaction	
4	N95						
5	N96						
6	N97						
7	N98	Reaction	Reaction	Reaction		Reaction	
8	N99	Reaction	Reaction	Reaction		Reaction	
9	N100	Reaction	Reaction	Reaction		Reaction	

Member Point Loads (BLC 2 : Equipment Weight)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	PSA.1	Y	-.075	1.083
2	PSA.1	Y	-.075	5.917
3	PSA.4	Y	-.052	1.667
4	PSA.4	Y	-.052	4.417
5	PSA.1	Y	-.084	1
6	PSA.1	Y	-.109	7
7	PSC.1	Y	-.075	1.083
8	PSC.1	Y	-.075	5.917
9	PSC.4	Y	-.052	1.667
10	PSC.4	Y	-.052	4.417
11	PSC.1	Y	-.084	1
12	PSC.1	Y	-.109	7
13	PSB.1	Y	-.075	1.083
14	PSB.1	Y	-.075	5.917
15	PSB.4	Y	-.052	1.667
16	PSB.4	Y	-.052	4.417
17	PSB.1	Y	-.084	1
18	PSB.1	Y	-.109	7

Member Point Loads (BLC 3 : Ice Weight)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	PSA.1	Y	-.211	1.083
2	PSA.1	Y	-.211	5.917
3	PSA.4	Y	-.075	1.667
4	PSA.4	Y	-.075	4.417
5	PSA.1	Y	-.088	1
6	PSA.1	Y	-.101	7
7	PSC.1	Y	-.211	1.083
8	PSC.1	Y	-.211	5.917
9	PSC.4	Y	-.075	1.667
10	PSC.4	Y	-.075	4.417
11	PSC.1	Y	-.088	1
12	PSC.1	Y	-.101	7
13	PSB.1	Y	-.211	1.083
14	PSB.1	Y	-.211	5.917
15	PSB.4	Y	-.075	1.667
16	PSB.4	Y	-.075	4.417
17	PSB.1	Y	-.088	1
18	PSB.1	Y	-.101	7

Member Point Loads (BLC 4 : Wind w/ Ice X (8 psf))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	PSA.1	X	.047	1.083
2	PSA.1	X	.047	5.917
3	PSA.4	X	.016	1.667
4	PSA.4	X	.016	4.417
5	PSA.1	X	.021	1
6	PSA.1	X	.027	7
7	PSC.1	X	.107	1.083
8	PSC.1	X	.107	5.917



Member Point Loads (BLC 4 : Wind w/ Ice X (8 psf)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
9	PSC.4	X	.033	1.667
10	PSC.4	X	.033	4.417
11	PSC.1	X	.036	1
12	PSC.1	X	.033	7
13	PSB.1	X	.107	1.083
14	PSB.1	X	.107	5.917
15	PSB.4	X	.033	1.667
16	PSB.4	X	.033	4.417
17	PSB.1	X	.036	1
18	PSB.1	X	.033	7

Member Point Loads (BLC 5 : Wind X(31 psf))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	PSA.1	X	.121	1.083
2	PSA.1	X	.121	5.917
3	PSA.4	X	.039	1.667
4	PSA.4	X	.039	4.417
5	PSA.1	X	.046	1
6	PSA.1	X	.066	7
7	PSC.1	X	.34	1.083
8	PSC.1	X	.34	5.917
9	PSC.4	X	.095	1.667
10	PSC.4	X	.095	4.417
11	PSC.1	X	.096	1
12	PSC.1	X	.086	7
13	PSB.1	X	.34	1.083
14	PSB.1	X	.34	5.917
15	PSB.4	X	.095	1.667
16	PSB.4	X	.095	4.417
17	PSB.1	X	.096	1
18	PSB.1	X	.086	7

Member Point Loads (BLC 6 : Wind w/ Ice Z(8 psf))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	PSA.1	Z	.107	1.083
2	PSA.1	Z	.107	5.917
3	PSA.4	Z	.033	1.667
4	PSA.4	Z	.033	4.417
5	PSA.1	Z	.036	1
6	PSA.1	Z	.033	7
7	PSC.1	Z	.107	1.083
8	PSC.1	Z	.107	5.917
9	PSC.4	Z	.033	1.667
10	PSC.4	Z	.033	4.417
11	PSC.1	Z	.036	1
12	PSC.1	Z	.033	7
13	PSB.1	Z	.047	1.083
14	PSB.1	Z	.047	5.917
15	PSB.4	Z	.016	1.667
16	PSB.4	Z	.016	4.417
17	PSB.1	Z	.021	1



Member Point Loads (BLC 6 : Wind w/ Ice Z(8 psf)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
18	PSB.1	Z	.027	7

Member Point Loads (BLC 7 : Wind Z (31 psf))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	PSA.1	Z	.34	1.083
2	PSA.1	Z	.34	5.917
3	PSA.4	Z	.095	1.667
4	PSA.4	Z	.095	4.417
5	PSA.1	Z	.096	1
6	PSA.1	Z	.086	7
7	PSC.1	Z	.121	1.083
8	PSC.1	Z	.121	5.917
9	PSC.4	Z	.039	1.667
10	PSC.4	Z	.039	4.417
11	PSC.1	Z	.046	1
12	PSC.1	Z	.066	7
13	PSB.1	Z	.121	1.083
14	PSB.1	Z	.121	5.917
15	PSB.4	Z	.039	1.667
16	PSB.4	Z	.039	4.417
17	PSB.1	Z	.046	1
18	PSB.1	Z	.066	7

Member Distributed Loads (BLC 4 : Wind w/ Ice X (8 psf))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f...]	Start Location[ft,%]	End Location[ft,%]
1	M34	X	.001	.001	0	0
2	M35	X	.001	.001	0	0
3	M36	X	.001	.001	0	0
4	PSA.2	X	.002	.002	0	0
5	PSA.3	X	.002	.002	0	0
6	PSB.2	X	.002	.002	0	0
7	PSB.3	X	.002	.002	0	0
8	PSC.2	X	.002	.002	0	0
9	PSC.3	X	.002	.002	0	0
10	M16	X	.002	.002	0	0
11	M18	X	.002	.002	0	0
12	M10	X	.002	.002	0	0
13	M14	X	.002	.002	0	0

Member Distributed Loads (BLC 5 : Wind X(31 psf))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f...]	Start Location[ft,%]	End Location[ft,%]
1	M34	X	.005	.005	0	0
2	M35	X	.005	.005	0	0
3	M36	X	.005	.005	0	0
4	PSA.2	X	.006	.006	0	0
5	PSA.3	X	.006	.006	0	0
6	PSB.2	X	.006	.006	0	0
7	PSB.3	X	.006	.006	0	0
8	PSC.2	X	.006	.006	0	0



Member Distributed Loads (BLC 5 : Wind X(31 psf)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f..	Start Location[ft, %]	End Location[ft, %]
9	PSC.3	X	.006	.006	0	0
10	M16	X	.006	.006	0	0
11	M18	X	.006	.006	0	0
12	M10	X	.009	.009	0	0
13	M14	X	.009	.009	0	0

Member Distributed Loads (BLC 6 : Wind w/ Ice Z(8 psf))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f..	Start Location[ft, %]	End Location[ft, %]
1	M34	Z	.001	.001	0	0
2	M35	Z	.001	.001	0	0
3	PSA.2	Z	.002	.002	0	0
4	PSA.3	Z	.002	.002	0	0
5	PSB.2	Z	.002	.002	0	0
6	PSB.3	Z	.002	.002	0	0
7	PSC.2	Z	.002	.002	0	0
8	PSC.3	Z	.002	.002	0	0
9	M13	Z	.002	.002	0	0
10	M17	Z	.002	.002	0	0

Member Distributed Loads (BLC 7 : Wind Z (31 psf))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f..	Start Location[ft, %]	End Location[ft, %]
1	M34	Z	.005	.005	0	0
2	M35	Z	.005	.005	0	0
3	PSC.3	Z	.006	.006	0	0
4	PSC.2	Z	.006	.006	0	0
5	PSB.3	Z	.006	.006	0	0
6	PSB.2	Z	.006	.006	0	0
7	PSA.3	Z	.006	.006	0	0
8	PSA.2	Z	.006	.006	0	0
9	M17	Z	.006	.006	0	0
10	M13	Z	.009	.009	0	0

Member Distributed Loads (BLC 8 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f..	Start Location[ft, %]	End Location[ft, %]
1	M1	Y	-.015	-.007	2.099	3.149
2	M1	Y	-.007	-.004	3.149	4.198
3	M1	Y	-.004	-.005	4.198	5.248
4	M2	Y	-.004	-.004	.169	2.704
5	M3	Y	-.004	-.004	.169	2.704
6	M10	Y	-.00071	-.003	7.5	9.167
7	M10	Y	-.003	-.003	9.167	10.833
8	M10	Y	-.003	-.0004574	10.833	12.5
9	M14	Y	-.0004575	-.003	0	1.667
10	M14	Y	-.003	-.003	1.667	3.333
11	M14	Y	-.003	-.0007098	3.333	5
12	M15	Y	-.0008711	-.0008711	0	1.212
13	M7	Y	-.015	-.007	2.099	3.149
14	M7	Y	-.007	-.004	3.149	4.198
15	M7	Y	-.004	-.005	4.198	5.248
16	M8	Y	-.004	-.004	.169	2.704

Member Distributed Loads (BLC 8 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/f..	Start Location[ft,%]	End Location[ft,%]
17	M9	Y	-.004	-.004	.169	2.704
18	M13	Y	-.0004575	-.003	0	1.667
19	M13	Y	-.003	-.003	1.667	3.333
20	M13	Y	-.003	-.0007098	3.333	5
21	M14	Y	-.00071	-.003	7.5	9.167
22	M14	Y	-.003	-.003	9.167	10.833
23	M14	Y	-.003	-.0004574	10.833	12.5
24	M14A	Y	-.0008711	-.0008711	0	1.212
25	M4	Y	-.015	-.007	2.099	3.149
26	M4	Y	-.007	-.004	3.149	4.198
27	M4	Y	-.004	-.005	4.198	5.248
28	M5	Y	-.004	-.004	.169	2.704
29	M6	Y	-.004	-.004	.169	2.704
30	M10	Y	-.0004575	-.003	0	1.667
31	M10	Y	-.003	-.003	1.667	3.333
32	M10	Y	-.003	-.0007098	3.333	5
33	M13	Y	-.00071	-.003	7.5	9.167
34	M13	Y	-.003	-.003	9.167	10.833
35	M13	Y	-.003	-.0004574	10.833	12.5
36	M13A	Y	-.0008711	-.0008711	0	1.212

Basic Load Cases

	BLC Description	Category	X Gra...	Y Gra...	Z Gra...	Joint	Point	Distrib..	Area(...	Surfa...
1	Self Weight	None		-1						
2	Equipment Weight	None					18		3	
3	Ice Weight	None					18			
4	Wind w/ Ice X (8 psf)	None					18	13		
5	Wind X(31 psf)	None					18	13		
6	Wind w/ Ice Z(8 psf)	None					18	10		
7	Wind Z (31 psf)	None					18	10		
8	BLC 2 Transient Area Loads	None						36		

Load Combinations

	Description	Solve	P...	S...	B...	Fa...	BLC	Fact...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D + 1.6W (X-dir...	Yes	Y		1	1.2	2	1.2	5	1.6										
2	0.9D + 1.6W (X-dir...	Yes	Y		1	.9	2	.9	5	1.6										
3	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	2	1.2	3	1	4	1								
4	1.2D + 1.6W (Z-dire...	Yes	Y		1	1.2	2	1.2	7	1.6										
5	0.9D + 1.6W (Z-dire...	Yes	Y		1	.9	2	.9	7	1.6										
6	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	2	1.2	3	1	6	1								

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	.071	5	.104	1	-1.287	2	0	6	.17	4	0	6
2		min	-2.401	1	-.208	5	-3.692	4	0	1	-3.364	1	0	1
3	N7	max	-.412	5	.277	4	1.904	1	0	6	2.25	4	0	6
4		min	-3.555	1	-.26	2	-1.812	5	0	1	-.036	2	0	1

Envelope Joint Reactions (Continued)

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
5	N12	max	1.8	6	.473	1	.945	3	0	6	.609	1	0	6
6		min	-2.283	2	.115	6	-.729	5	0	1	-1.041	4	0	1
7	N98	max	0	6	2.078	6	2.674	6	0	6	0	6	0	6
8		min	-.019	2	.742	2	.948	2	0	1	-.002	2	0	1
9	N99	max	2.456	1	2.221	1	-.149	5	0	6	.002	4	0	6
10		min	.222	5	.209	5	-1.43	1	0	1	0	2	0	1
11	N100	max	.549	2	1.64	6	.33	2	0	6	0	1	0	6
12		min	-1.824	6	-.497	2	-1.056	6	0	1	0	5	0	1
13	Totals:	max	0	6	5.585	6	0	3						
14		min	-5.255	1	2.477	2	-3.919	4						

Envelope Joint Displacements

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotatio...	LC	Z Rotation [rad]	LC
1	N1	max	0	6	0	6	0	6	3.797e-04	4	0	6	-5.567e-04	6
2		min	0	1	0	1	0	1	-9.382e-05	2	0	1	-9.839e-04	1
3	N2	max	.166	2	-.02	2	.002	4	1.938e-03	6	3.439e-03	2	7.688e-04	2
4		min	.003	6	-.04	6	0	2	1.041e-03	2	1.238e-04	6	-2.065e-03	6
5	N3	max	.027	1	.002	2	0	4	5.573e-04	4	1.861e-03	2	-5.567e-04	6
6		min	-.002	4	-.008	4	0	2	-1.6e-04	2	-1.413e-04	4	-9.839e-04	1
7	N4	max	.027	1	-.036	3	.038	4	6.092e-03	1	1.386e-03	2	-1.769e-03	6
8		min	-.002	4	-.05	4	-.03	2	1.608e-03	6	2.843e-04	3	-1.539e-02	2
9	N5	max	.027	2	.034	2	.048	2	1.175e-03	4	8.033e-04	2	2.729e-03	5
10		min	-.001	4	-.014	4	.004	6	-7.475e-03	1	-3.018e-04	5	-2.027e-02	1
11	N6	max	0	6	0	6	0	6	0	6	0	6	0	6
12		min	0	1	0	1	0	1	0	1	0	1	0	1
13	N7	max	0	6	0	6	0	6	5.451e-04	5	0	6	4.918e-05	3
14		min	0	1	0	1	0	1	-4.467e-04	3	0	1	-4.878e-04	4
15	N8	max	.066	4	-.003	5	.115	5	-7.977e-04	5	-8.276e-05	3	2.935e-04	5
16		min	.003	3	-.038	3	.002	3	-2.638e-03	3	-2.943e-03	4	-6.144e-04	3
17	N9	max	.008	4	-.001	5	.015	5	6.592e-04	5	1.65e-04	2	8.21e-05	6
18		min	0	2	-.01	1	-.001	1	-4.545e-04	1	-1.084e-03	4	-5.498e-04	2
19	N10	max	.014	1	.02	5	.021	5	1.737e-02	4	2.918e-04	2	3.048e-05	2
20		min	-.002	5	-.038	1	-.009	2	-3.027e-03	2	-1.912e-03	5	-3.006e-03	4
21	N11	max	.038	2	-.019	3	.03	4	8.82e-03	4	-9.931e-05	6	-2.042e-03	3
22		min	-.017	5	-.04	4	-.023	2	1.7e-03	3	-8.916e-04	2	-1.06e-02	4
23	N12	max	0	6	0	6	0	6	5.846e-04	4	0	6	2.826e-04	6
24		min	0	1	0	1	0	1	-7.103e-04	2	0	1	-4.079e-04	2
25	N13	max	.036	2	.006	2	.05	5	7.701e-04	3	1.245e-03	5	2.368e-03	6
26		min	-.029	4	-.035	6	-.061	1	-4.18e-04	5	-1.85e-03	1	-1.507e-04	2
27	N14	max	.002	2	.004	5	.007	5	7.007e-04	4	5.17e-04	5	1.949e-04	6
28		min	-.004	4	-.001	3	-.003	1	-5.043e-04	2	-5.218e-05	1	-7.646e-04	2
29	N15	max	.058	2	.033	2	.03	2	3.605e-03	5	3.504e-04	4	4.662e-03	4
30		min	.001	6	-.03	6	.003	6	-1.257e-02	1	-2.206e-03	2	-1.551e-02	1
31	N16	max	.014	1	.024	5	.008	4	1.594e-02	4	6.298e-04	5	2.64e-03	4
32		min	-.002	5	-.03	1	.001	3	-7.819e-03	1	-4.473e-04	1	-1.427e-03	1
33	N17	max	.119	4	.007	5	.108	4	1.114e-02	4	1.527e-04	2	-2.242e-03	3
34		min	.01	3	-.023	3	-.018	2	1.4e-03	3	-3.e-03	5	-1.828e-02	4
35	N18	max	.187	2	-.014	2	.062	2	1.152e-02	2	3.009e-03	1	-2.686e-03	6
36		min	.002	4	-.047	6	.013	3	2.243e-04	6	-2.62e-04	5	-2.01e-02	1
37	N19	max	.015	2	.011	2	.074	5	1.762e-02	4	1.134e-03	4	-6.919e-05	5

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotatio...	LC	Z Rotation [rad]	LC
38		min	-.002	5	-.022	6	-.086	1	-1.557e-02	1	-1.599e-03	2	-6.279e-04	1
39	N20	max	.015	1	-.005	5	.169	4	2.182e-02	4	-9.076e-05	3	1.16e-03	6
40		min	-.002	5	-.044	3	.002	3	5.269e-04	3	-1.951e-03	4	5.967e-04	5
41	N21	max	.193	2	-.019	5	.016	4	1.235e-04	5	3.815e-03	2	4.962e-05	4
42		min	.004	6	-.03	1	-.047	2	-1.381e-02	1	9.613e-05	6	-2.412e-02	1
43	N22	max	.129	1	.009	2	.047	5	5.605e-03	4	1.092e-03	5	9.226e-03	5
44		min	-.048	5	-.04	6	-.011	1	-1.05e-02	2	-4.283e-04	1	-1.918e-02	1
45	N23	max	.015	1	-.009	5	.154	4	2.182e-02	4	-9.076e-05	3	1.161e-03	6
46		min	-.002	5	-.054	3	.001	3	5.269e-04	3	-1.949e-03	4	5.974e-04	5
47	N24	max	.015	2	.007	2	.065	5	1.762e-02	4	1.133e-03	4	-6.993e-05	5
48		min	-.002	5	-.023	6	-.073	1	-1.557e-02	1	-1.599e-03	2	-6.289e-04	1
49	N25	max	.126	1	.005	2	.043	5	5.606e-03	4	1.092e-03	5	9.226e-03	5
50		min	-.041	5	-.048	6	-.009	1	-1.05e-02	2	-4.27e-04	1	-1.918e-02	1
51	N26	max	.166	2	-.018	5	.016	4	1.229e-04	5	3.814e-03	2	5.011e-05	4
52		min	.003	6	-.029	1	-.031	2	-1.381e-02	1	9.613e-05	6	-2.412e-02	1
53	N27	max	.166	2	-.014	2	.05	2	1.152e-02	2	3.008e-03	1	-2.687e-03	6
54		min	.003	6	-.056	6	.01	3	2.234e-04	6	-2.62e-04	5	-2.01e-02	1
55	N28	max	.098	4	.004	5	.096	4	1.114e-02	4	1.54e-04	2	-2.242e-03	3
56		min	.01	3	-.024	3	-.018	2	1.4e-03	3	-3.e-03	5	-1.828e-02	4
57	N29	max	1.382	4	.055	5	.989	4	1.93e-02	4	6.958e-03	1	-2.905e-03	3
58		min	.093	3	-.047	1	.028	3	1.176e-03	3	-1.523e-02	4	-2.756e-02	4
59	N30	max	1.72	1	.065	2	.823	1	1.97e-02	1	1.206e-02	1	-2.801e-03	6
60		min	.083	6	-.102	4	.124	6	3.914e-03	6	-5.166e-03	4	-4.283e-02	1
61	N31	max	.17	1	.059	2	.867	4	2.329e-02	4	-6.318e-04	6	1.389e-03	4
62		min	-.028	5	-.044	4	-1.4	1	-2.633e-02	1	-1.594e-02	1	-3.123e-03	2
63	N32	max	.17	1	-.03	5	1.692	4	4.505e-02	4	-1.797e-03	6	-8.155e-04	5
64		min	-.029	5	-.121	1	.098	3	1.534e-03	3	-9.491e-03	1	-4.152e-03	1
65	N33	max	1.688	1	-.039	6	-.027	5	2.284e-04	4	9.448e-03	1	-1.963e-03	6
66		min	.115	6	-.105	1	-.718	1	-1.662e-02	1	1.869e-03	3	-3.694e-02	1
67	N34	max	1.346	1	.06	2	.589	4	1.322e-02	5	9.134e-03	4	1.67e-02	4
68		min	-.776	4	-.056	3	-.52	1	-1.754e-02	1	-1.535e-03	2	-3.681e-02	1
69	N35	max	.015	1	0	2	.052	5	1.775e-02	4	1.144e-03	5	-1.77e-05	6
70		min	-.002	5	-.024	6	-.055	1	-1.567e-02	1	-1.921e-03	1	-7.07e-04	1
71	N36	max	.17	1	0	2	.903	4	2.338e-02	4	-6.024e-04	6	1.211e-03	4
72		min	-.028	5	-.024	6	-1.098	1	-2.649e-02	1	-1.544e-02	1	-2.878e-03	2
73	N37	max	.014	1	.013	5	.011	4	1.658e-02	4	7.809e-04	5	2.079e-03	4
74		min	-.002	5	-.024	1	0	3	-9.04e-03	1	-9.589e-04	1	-1.312e-03	2
75	N38	max	.169	1	.013	5	.983	4	2.765e-02	4	-8.987e-04	6	7.491e-05	5
76		min	-.028	5	-.024	1	-.555	1	-1.546e-02	1	-1.249e-02	1	-1.407e-03	1
77	N39	max	.015	2	.01	5	.03	5	1.842e-02	4	1.575e-05	2	-3.554e-04	2
78		min	-.002	5	-.039	3	-.01	2	-2.497e-03	2	-2.366e-03	5	-2.335e-03	4
79	N40	max	.169	1	.009	5	1.22	4	3.491e-02	4	-1.927e-03	6	3.411e-04	5
80		min	-.028	5	-.039	3	-.096	1	-2.572e-03	1	-9.694e-03	1	-1.117e-03	1
81	N41	max	.015	1	-.016	5	.134	5	2.196e-02	4	-1.235e-04	3	6.411e-04	6
82		min	-.002	5	-.064	3	-.002	2	5.641e-04	3	-2.364e-03	4	2.924e-04	2
83	N42	max	.17	1	-.016	5	1.563	4	4.518e-02	4	-1.827e-03	6	-5.814e-04	5
84		min	-.029	5	-.065	3	.065	3	1.538e-03	3	-9.324e-03	1	-4.079e-03	1
85	N43	max	.33	1	-.016	5	2.934	4	5.058e-02	4	-1.827e-03	6	-5.825e-04	5
86		min	-.013	5	-.065	3	.108	3	1.549e-03	3	-9.324e-03	1	-6.128e-03	1
87	N44	max	.044	1	-.016	5	-.015	3	2.077e-02	4	-1.235e-04	3	1.214e-03	1
88		min	.013	5	-.064	3	-.432	4	5.603e-04	3	-2.364e-03	4	5.502e-04	5
89	N45	max	.204	1	.009	5	2.188	4	3.511e-02	4	-1.927e-03	6	3.411e-04	5

Envelope Joint Displacements (Continued)

Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotatio...	LC	Z Rotation [rad]	LC	
90		min	-.038	5	-.039	3	-.167	1	-2.573e-03	1	-9.694e-03	1	-1.313e-03	1
91	N46	max	.009	2	.01	5	.058	2	1.824e-02	4	1.575e-05	2	-1.719e-04	2
92		min	-.065	4	-.039	3	-.464	4	-2.497e-03	2	-2.366e-03	5	-2.335e-03	4
93	N47	max	.212	1	.013	5	1.751	4	2.785e-02	4	-8.987e-04	6	7.492e-05	5
94		min	-.03	5	-.024	1	-.982	1	-1.546e-02	1	-1.249e-02	1	-1.603e-03	1
95	N48	max	.054	4	.013	5	.245	1	1.639e-02	4	7.809e-04	5	2.079e-03	4
96		min	-.017	2	-.024	1	-.432	4	-9.039e-03	1	-9.589e-04	1	-1.128e-03	2
97	N49	max	.252	1	0	2	1.556	4	2.371e-02	4	-6.024e-04	6	1.212e-03	4
98		min	-.061	4	-.024	6	-1.829	1	-2.652e-02	1	-1.544e-02	1	-3.004e-03	2
99	N50	max	0	6	0	2	.369	1	1.775e-02	4	1.144e-03	5	-1.77e-05	6
100		min	-.004	1	-.024	6	-.427	4	-1.567e-02	1	-1.921e-03	1	-7.069e-04	1
101	N51	max	2.468	1	0	2	.918	4	1.524e-02	5	9.03e-03	4	1.684e-02	4
102		min	-1.1	4	-.058	6	-.987	1	-1.745e-02	1	-1.746e-03	2	-4.241e-02	1
103	N52	max	.22	5	0	2	.275	2	4.652e-03	4	1.313e-03	4	9.293e-03	5
104		min	-.374	1	-.057	6	-.092	4	-1.041e-02	2	-7.765e-04	1	-1.815e-02	1
105	N53	max	2.124	1	.021	2	.52	4	6.98e-03	5	8.156e-03	4	1.091e-02	4
106		min	-.628	4	-.034	6	-.93	1	-1.724e-02	1	-1.968e-03	1	-3.24e-02	1
107	N54	max	.151	4	.022	2	.351	1	3.723e-03	5	7.002e-04	4	5.369e-03	4
108		min	-.38	1	-.034	6	-.086	5	-1.208e-02	1	-2.218e-03	2	-1.648e-02	1
109	N55	max	2.204	1	.018	2	.252	5	2.86e-03	5	6.744e-03	4	2.84e-03	4
110		min	-.138	4	-.013	6	-.974	1	-1.782e-02	1	1.002e-03	3	-3.356e-02	1
111	N56	max	.059	5	.018	2	.28	1	1.153e-03	4	1.58e-03	2	2.26e-03	5
112		min	-.537	1	-.013	4	-.012	4	-8.668e-03	1	-7.774e-05	5	-2.103e-02	1
113	N57	max	2.56	1	-.017	5	.049	5	2.529e-04	4	9.233e-03	1	-1.951e-03	6
114		min	.135	6	-.029	1	-1.098	1	-1.7e-02	1	1.829e-03	3	-3.727e-02	1
115	N58	max	0	4	-.017	5	.359	1	3.358e-04	5	3.93e-03	2	-1.024e-04	4
116		min	-.53	1	-.028	1	.009	5	-1.367e-02	1	1.381e-04	6	-2.442e-02	1
117	N59	max	2.84	1	-.013	2	1.268	1	1.999e-02	1	1.211e-02	1	-2.832e-03	6
118		min	.17	6	-.067	6	.263	6	4.665e-03	3	-5.027e-03	4	-4.824e-02	1
119	N60	max	-.059	6	-.013	2	.003	6	1.166e-02	2	3.417e-03	1	-2.343e-03	6
120		min	-.376	1	-.066	6	-.281	2	4.764e-04	6	-2.618e-04	4	-1.892e-02	1
121	N61	max	1.912	1	-.03	2	.926	1	1.678e-02	1	1.159e-02	1	-3.709e-03	6
122		min	.21	6	-.047	4	.202	3	2.969e-03	6	-5.869e-03	4	-2.967e-02	1
123	N62	max	-.045	6	-.03	2	-.036	6	7.172e-03	1	2.133e-03	2	-1.695e-03	6
124		min	-.402	2	-.047	4	-.22	1	1.858e-03	6	2.789e-04	6	-1.61e-02	2
125	N63	max	1.301	1	-.018	3	.97	4	1.371e-02	4	7.085e-03	1	-3.944e-03	3
126		min	.258	3	-.03	4	.123	3	2.225e-03	3	-1.089e-02	4	-2.106e-02	4
127	N64	max	-.052	3	-.017	3	-.043	3	8.944e-03	4	-1.399e-04	3	-2.221e-03	3
128		min	-.336	4	-.03	4	-.232	1	1.463e-03	3	-1.509e-03	4	-1.2e-02	4
129	N65	max	1.9	4	0	5	1.377	4	1.931e-02	4	6.71e-03	1	-2.971e-03	3
130		min	.194	3	-.025	3	.073	3	1.2e-03	3	-1.479e-02	4	-2.786e-02	4
131	N66	max	-.053	3	0	5	-.036	3	1.123e-02	4	1.92e-04	2	-2.326e-03	3
132		min	-.428	4	-.025	3	-.224	4	1.238e-03	3	-3.253e-03	4	-1.839e-02	4
133	N67	max	.14	2	-.013	2	.043	5	1.168e-02	2	3.417e-03	1	-2.359e-03	6
134		min	.004	6	-.066	6	.007	3	7.498e-04	6	-2.618e-04	4	-2.012e-02	1
135	N68	max	.034	1	-.03	2	.039	4	7.173e-03	1	2.133e-03	2	-1.696e-03	6
136		min	0	6	-.047	4	-.027	2	1.888e-03	6	2.789e-04	6	-1.628e-02	2
137	N69	max	.041	2	-.017	3	.032	4	9.128e-03	4	-1.399e-04	3	-2.252e-03	3
138		min	-.012	5	-.03	4	-.022	2	1.463e-03	3	-1.509e-03	4	-1.2e-02	4
139	N70	max	.069	4	0	5	.079	4	1.123e-02	4	1.92e-04	2	-2.326e-03	3
140		min	.01	3	-.025	3	-.017	2	1.239e-03	3	-3.253e-03	4	-1.839e-02	4
141	N71	max	.122	2	0	2	.037	5	5.509e-03	4	1.313e-03	4	9.313e-03	5

Envelope Joint Displacements (Continued)

	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotatio...	LC	Z Rotation [rad]	LC
142		min	-.031	5	-.057	6	-.006	2	-1.043e-02	2	-7.765e-04	1	-1.934e-02	1
143	N72	max	.066	2	.022	2	.025	2	3.906e-03	5	7.002e-04	4	5.37e-03	4
144		min	.001	6	-.034	6	.003	6	-1.208e-02	1	-2.218e-03	2	-1.667e-02	1
145	N73	max	.032	2	.018	2	.046	2	1.337e-03	4	1.58e-03	2	2.26e-03	5
146		min	-.002	5	-.013	4	.004	6	-8.669e-03	1	-7.774e-05	5	-2.122e-02	1
147	N74	max	.129	2	-.017	5	.018	5	3.358e-04	5	3.93e-03	2	-1.024e-04	4
148		min	.002	4	-.028	1	-.01	2	-1.368e-02	1	1.381e-04	6	-2.443e-02	1
149	N75	max	1.535	1	-.013	2	.716	1	1.994e-02	1	1.211e-02	1	-2.814e-03	6
150		min	.092	6	-.067	6	.129	6	3.922e-03	6	-5.027e-03	4	-4.284e-02	1
151	N76	max	1.095	1	-.03	2	.463	1	1.678e-02	1	1.159e-02	1	-3.708e-03	6
152		min	.107	6	-.047	4	.099	3	2.937e-03	6	-5.869e-03	4	-2.947e-02	1
153	N77	max	.759	1	-.018	3	.593	4	1.351e-02	4	7.085e-03	1	-3.911e-03	3
154		min	.149	3	-.03	4	.061	3	2.224e-03	3	-1.089e-02	4	-2.106e-02	4
155	N78	max	1.131	4	0	5	.845	4	1.917e-02	4	6.71e-03	1	-2.9e-03	3
156		min	.112	3	-.025	3	.04	3	1.198e-03	3	-1.479e-02	4	-2.784e-02	4
157	N79	max	1.323	1	0	2	.508	4	1.317e-02	5	9.03e-03	4	1.68e-02	4
158		min	-.636	4	-.057	6	-.506	1	-1.741e-02	1	-1.746e-03	2	-3.703e-02	1
159	N80	max	1.231	1	.021	2	.329	4	6.783e-03	5	8.156e-03	4	1.091e-02	4
160		min	-.327	4	-.034	6	-.454	1	-1.724e-02	1	-1.968e-03	1	-3.22e-02	1
161	N81	max	1.279	1	.018	2	.175	5	2.664e-03	5	6.744e-03	4	2.84e-03	4
162		min	-.06	4	-.013	6	-.482	1	-1.782e-02	1	1.002e-03	3	-3.336e-02	1
163	N82	max	1.533	1	-.017	5	.043	5	1.288e-04	4	9.233e-03	1	-1.948e-03	6
164		min	.081	6	-.029	1	-.629	1	-1.698e-02	1	1.829e-03	3	-3.693e-02	1
165	N83	max	.015	2	.003	2	.058	5	1.769e-02	4	1.135e-03	4	-1.126e-04	5
166		min	-.002	5	-.024	6	-.063	1	-1.562e-02	1	-1.695e-03	2	-6.127e-04	1
167	N84	max	.015	1	-.013	5	.142	5	2.191e-02	4	-1.032e-04	3	9.886e-04	6
168		min	-.002	5	-.061	3	0	2	5.498e-04	3	-2.105e-03	4	5.404e-04	2
169	N85	max	.146	2	-.018	5	.017	5	1.797e-04	5	3.847e-03	2	4.907e-06	4
170		min	.003	6	-.029	1	-.02	2	-1.387e-02	1	1.086e-04	6	-2.421e-02	1
171	N86	max	.124	2	.003	2	.039	5	5.559e-03	4	1.175e-03	5	9.281e-03	5
172		min	-.035	5	-.054	6	-.007	1	-1.044e-02	2	-5.585e-04	1	-1.93e-02	1
173	N87	max	.082	4	.001	5	.087	4	1.113e-02	4	1.662e-04	2	-2.263e-03	3
174		min	.01	3	-.025	3	-.017	2	1.355e-03	3	-3.075e-03	4	-1.837e-02	4
175	N88	max	.151	2	-.014	2	.042	5	1.164e-02	2	3.162e-03	1	-2.563e-03	6
176		min	.004	6	-.063	6	.009	3	4.129e-04	6	-2.619e-04	5	-2.011e-02	1
177	N89	max	.17	1	.016	2	.893	4	2.329e-02	4	-6.378e-04	6	1.378e-03	4
178		min	-.028	5	-.026	6	-1.177	1	-2.633e-02	1	-1.594e-02	1	-3.131e-03	2
179	N90	max	.17	1	-.019	5	1.59	4	4.505e-02	4	-1.79e-03	6	-8.073e-04	5
180		min	-.029	5	-.071	3	.072	3	1.534e-03	3	-9.491e-03	1	-4.141e-03	1
181	N91	max	1.573	1	-.026	5	.025	5	2.19e-04	4	9.426e-03	1	-1.957e-03	6
182		min	.09	6	-.048	1	-.652	1	-1.663e-02	1	1.866e-03	3	-3.693e-02	1
183	N92	max	1.327	1	.013	2	.525	4	1.323e-02	5	9.134e-03	4	1.67e-02	4
184		min	-.666	4	-.057	6	-.509	1	-1.753e-02	1	-1.513e-03	2	-3.682e-02	1
185	N93	max	1.197	4	.013	5	.883	4	1.931e-02	4	6.98e-03	1	-2.9e-03	3
186		min	.107	3	-.028	1	.037	3	1.186e-03	3	-1.523e-02	4	-2.755e-02	4
187	N94	max	1.574	1	.003	2	.739	1	1.969e-02	1	1.204e-02	1	-2.806e-03	6
188		min	.09	6	-.074	6	.128	6	3.905e-03	6	-5.166e-03	4	-4.283e-02	1
189	N95	max	.021	2	.004	2	.032	5	5.78e-04	3	1.282e-03	5	1.62e-03	6
190		min	-.019	4	-.009	6	-.034	1	-2.042e-04	2	-1.935e-03	1	-1.623e-04	2
191	N96	max	.111	2	-.004	2	.002	4	1.188e-03	6	3.506e-03	2	1.709e-04	2
192		min	0	4	-.012	4	0	2	5.067e-04	5	1.328e-04	6	-1.538e-03	6
193	N97	max	.042	4	0	5	.073	5	-2.987e-04	5	-8.758e-05	3	7.627e-05	5

Envelope Joint Displacements (Continued)

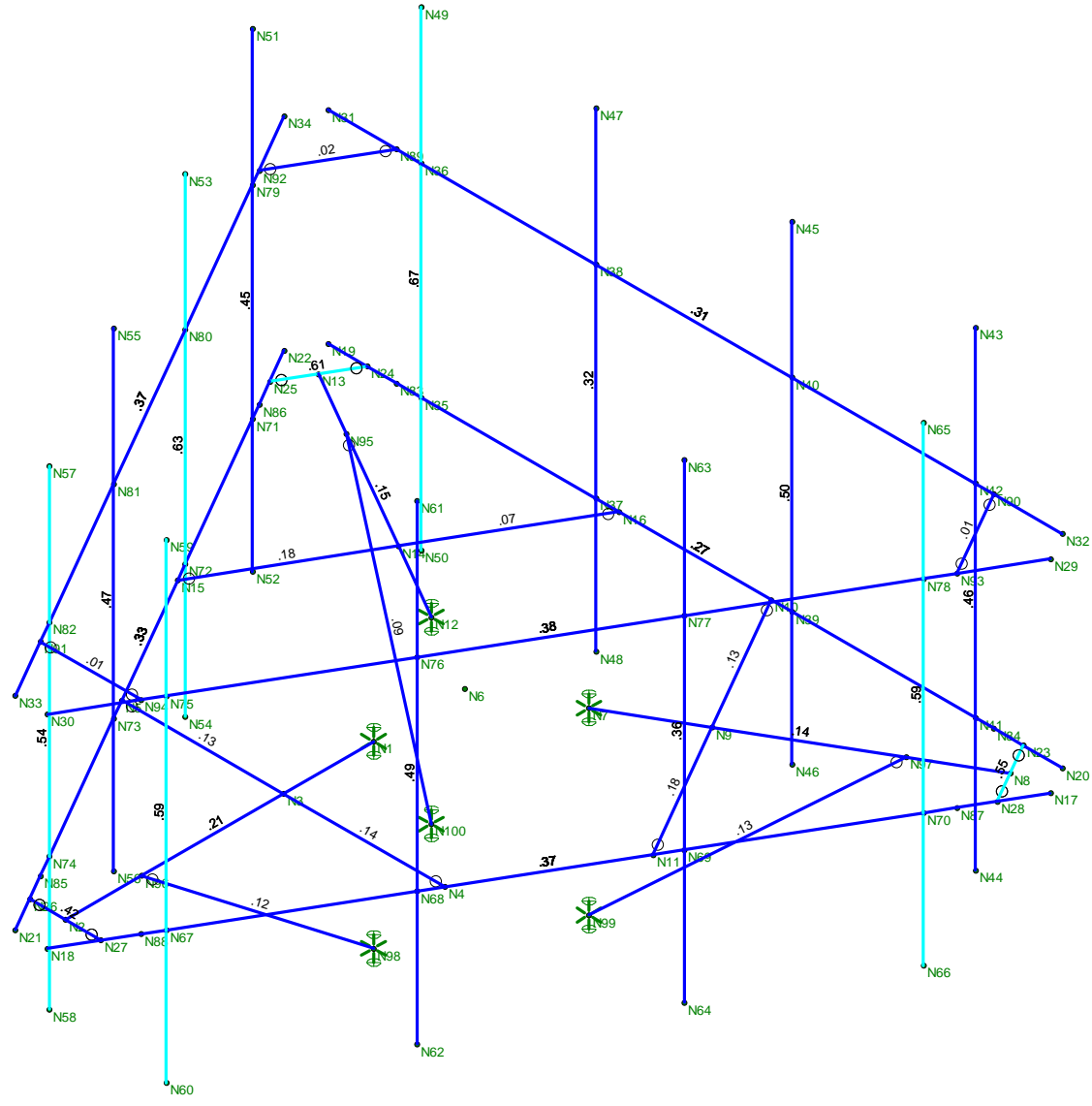
Joint	X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotatio...	LC	Z Rotation [rad]	LC		
194	min	.002	3	-.013	1	0	3	-1.799e-03	3	-3.028e-03	4	-2.55e-04	3	
195	N98	max	0	6	0	6	0	6	4.581e-04	4	0	6	-2.012e-05	5
196	min	0	1	0	1	0	1	2.728e-04	2	0	1	-3.439e-03	1	
197	N99	max	0	6	0	6	0	6	2.268e-03	5	0	6	-4.62e-04	3
198	min	0	1	0	1	0	1	-1.839e-04	3	0	1	-1.463e-03	4	
199	N100	max	0	6	0	6	0	6	1.164e-03	5	0	6	8.316e-04	4
200	min	0	1	0	1	0	1	-1.106e-03	1	0	1	-7.413e-04	2	

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

Member	Shape	Code Check	Lo...	LC	She...Lo...	Dir	...phi*...	phi*...	phi*...	phi*...	Cb	Eqn	
1	PSA.4	PIPE 2.0	.667	5.75	1	.2784.5	1	14.916	32.13	1.872	1.872	4.1...H3-6	
2	PSB.2	PIPE 2.0	.631	5.75	1	.1515.75	4	14.916	32.13	1.872	1.872	2.97H1-...	
3	M14A	6"x3/8"	.614	.606	2	.345.606	y	1	28.164	72.9	.57	9.113 1.4...H1-...	
4	PSC.1	PIPE 2.0	.595	5.75	1	.2185.75	1	14.916	32.13	1.872	1.872	1.7...H1-...	
5	PSC.4	PIPE 2.0	.587	5.75	4	.2424.5	4	14.916	32.13	1.872	1.872	3.1...H1-...	
6	M13A	6"x3/8"	.547	.606	4	.369.606	y	4	28.164	72.9	.57	9.113 1.4...H1-...	
7	PSB.4	PIPE 2.0	.545	5.75	1	.1414.5	4	14.916	32.13	1.872	1.872	3.17H1-...	
8	PSA.2	PIPE 2.0	.496	5.75	4	.1975.75	1	14.916	32.13	1.872	1.872	3.77H1-...	
9	PSC.2	PIPE 2.0	.492	5.75	1	.1905.75	1	14.916	32.13	1.872	1.872	2.8...H1-...	
10	PSB.3	PIPE 2.0	.466	5.75	1	.1385.75	4	14.916	32.13	1.872	1.872	2.94H1-...	
11	PSA.1	PIPE 2.0	.457	5.75	4	.1842....	1	14.916	32.13	1.872	1.872	3.4...H1-...	
12	PSB.1	PIPE 2.0	.453	2.25	1	.1615.75	4	14.916	32.13	1.872	1.872	1.5...H1-...	
13	M15	6"x3/8"	.422	.606	1	.469.606	y	1	28.164	72.9	.57	9.113 1.5...H1-...	
14	M16	PIPE 2.0	.382	10...	1	.2787....	1	6.295	32.13	1.872	1.872	3.6...H3-6	
15	M18	PIPE 2.0	.372	10...	1	.1797....	4	6.295	32.13	1.872	1.872	4.0...H1-...	
16	M10	PIPE 3.0	.366	7....	1	.3607....	1	28.251	65.205	5.749	5.749	1.9...H3-6	
17	PSC.3	PIPE 2.0	.356	5.75	2	.1845.75	4	14.916	32.13	1.872	1.872	2.9...H1-...	
18	M14	PIPE 3.0	.332	4....	2	.3404....	2	28.251	65.205	5.749	5.749	1.7...H3-6	
19	PSA.3	PIPE 2.0	.316	5.75	4	.2245.75	1	14.916	32.13	1.872	1.872	2.98H1-...	
20	M17	PIPE 2.0	.308	4....	1	.2434....	1	6.295	32.13	1.872	1.872	3.9...H3-6	
21	M13	PIPE 3.0	.268	7....	5	.2924....	1	28.251	65.205	5.749	5.749	1.4...H3-6	
22	M1	HSS4X4X4	.214	0	1	.063 0	z	1	124....	139....	16.181	16.181	1.4...H1-...
23	M8	HSS4X4X4	.177	2.75	2	.204 0	z	2	135....	139....	16.181	16.181	1.4...H1-...
24	M6	HSS4X4X4	.176	2.75	1	.1352.75	y	4	135....	139....	16.181	16.181	1.6...H1-...
25	M7	HSS4X4X4	.146	1....	2	.0563....	y	3	124....	139....	16.181	16.181	1.6...H1-...
26	M4	HSS4X4X4	.141	0	5	.0623....	y	3	124....	139....	16.181	16.181	1.7...H1-...
27	M2	HSS4X4X4	.140	2.75	4	.176 0	z	1	135....	139....	16.181	16.181	1.7...H1-...
28	M5	HSS4X4X4	.133	2.75	4	.177 0	z	5	135....	139....	16.181	16.181	1.8...H1-...
29	M34	LL2x2x3x0	.128	0	1	.0084....	z	4	28.249	46.656	2.147	1.607	1.1...H1-...
30	M3	HSS4X4X4	.126	2.75	4	.198 0	z	1	135....	139....	16.181	16.181	1.6...H1-...
31	M36	LL2x2x3x0	.120	4....	6	.0094....	z	2	28.249	46.656	2.147	1.607	1.6...H1-...
32	M35	LL2x2x3x0	.095	4....	6	.0044....	z	5	28.249	46.656	2.147	1.607	1.1...H1-...
33	M9	HSS4X4X4	.071	2.75	6	.148 0	z	4	135....	139....	16.181	16.181	1.7...H1-...
34	M33	L2.5x2.5x5	.016	.856	1	.245 0	y	1	42.973	347.304	1.316	3.061	1.1...H2-1
35	M32	L2.5x2.5x5	.015	.856	4	.262 0	y	4	42.973	347.304	1.316	3.061	1.1...H2-1
36	M31	L2.5x2.5x5	.009	.856	4	.265 0	y	1	42.973	347.304	1.316	3.061	1.1...H2-1



Code Check (Env)	
Black	No Calc
Red	> 1.0
Magenta	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Centek Engineering	CTNH568A - Mount Unity Check	July 22, 2021 at 7:59 AM
FJP		CTNH568A_AMA.R3D
21085.03		



AMERICAN TOWER®
CORPORATION
LETTER OF AUTHORIZATION

SITE NO/PROJECT NO: 208478/ 13704270

SITE NAME: Cheshire

**ADDRESS: 1325 CHESHIRE ST
CHESHIRE, CT 06410-1849**

APN: CHES-000038-000180

I, Margaret Robinson, Senior Counsel, US Tower Division on behalf of American Tower*, owner of the tower facility located at the address identified above (the "Tower Facility"), do hereby authorize **Transcend Wireless** its successors and assigns, to act as American Tower's non-exclusive agent for the purpose of filing and securing any zoning, land-use, building permit and/or electrical permit application(s) and approvals of the applicable jurisdiction for and to conduct the construction of the installation of antennas and related telecommunications equipment on the Tower Facility located at the above address. This installation shall not affect adjoining lands and will occur only within the area leased by American Tower.

American Tower understands that the application may be denied, modified or approved with conditions. The above authorization is limited to the acceptance by American Tower of conditions related to American Tower's installation. Any such conditions of approval or modifications will not be effective unless approved in writing by American Tower.

The above authorization does not permit **Transcend Wireless** to modify or alter any existing permit(s) and/or zoning or land-use conditions or impose any additional conditions unrelated to American Tower's installation of telecommunications equipment without the prior written approval of American Tower.

Signature: _____

Margaret Robinson, Senior Counsel
US Tower Division

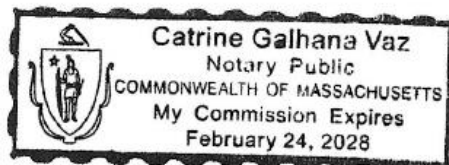
NOTARY BLOCK

COMMONWEALTH OF MASSACHUSETTS
County of Middlesex

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

WITNESS my hand and official seal, this 29th day of September 2021.

NOTARY SEAL



Notary Public _____

My Commission Expires: February 24, 2028

* American Tower as used herein is defined as American Tower Corporation and any of its affiliates or subsidiaries.

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

T-Mobile Existing Facility

Site ID: CTNH568A

1325 Cheshire Street
Cheshire, Connecticut 06410

August 20, 2021

EBI Project Number: 6221004546

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	22.35%

August 20, 2021

T-Mobile

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

Emissions Analysis for Site: CTNH568A

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **1325 Cheshire Street** in **Cheshire, 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 1325 Cheshire Street in Cheshire, 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 power density calculations, the broadcast footprint of the AIR6449 antenna has been considered. Due to the beamforming nature of this antenna, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

For all calculations, 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 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.

- 6) 2 UMTS channels (AWS Band - 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 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) 1 LTE Traffic channel (LTE IC and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 60 Watts.
- 9) 1 LTE Broadcast channel (LTE IC and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 20 Watts.
- 10) 1 NR Traffic channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.
- 11) 1 NR Broadcast channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 40 Watts.
- 12) 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.
- 13) 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.
- 14) The antennas used in this modeling are the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector A, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector B, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated

antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

- 15) The antenna mounting height centerline of the proposed antennas is 129 feet above ground level (AGL).
- 16) 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.
- 17) 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:	RFS APXVAALL24_43- U-NA20	Make / Model:	RFS APXVAALL24_43- U-NA20	Make / Model:	RFS APXVAALL24_43- U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd / 16.45 dBd
Height (AGL):	129 feet	Height (AGL):	129 feet	Height (AGL):	129 feet
Channel Count:	16	Channel Count:	16	Channel Count:	16
Total TX Power (W):	700 Watts	Total TX Power (W):	700 Watts	Total TX Power (W):	700 Watts
ERP (W):	22,096.08	ERP (W):	22,096.08	ERP (W):	22,096.08
Antenna A1 MPE %:	7.17%	Antenna B1 MPE %:	7.17%	Antenna C1 MPE %:	7.17%
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 / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd
Height (AGL):	129 feet	Height (AGL):	129 feet	Height (AGL):	129 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):	36,356.09	ERP (W):	36,356.09	ERP (W):	36,356.09
Antenna A2 MPE %:	8.64%	Antenna B2 MPE %:	8.64%	Antenna C2 MPE %:	8.64%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	15.81%
AT&T	6.54%
Site Total MPE % :	22.35%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	15.81%
T-Mobile Sector B Total:	15.81%
T-Mobile Sector C Total:	15.81%
Site Total MPE % :	22.35%

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 600 MHz LTE	2	591.73	129.0	2.81	600 MHz LTE	400	0.70%
T-Mobile 600 MHz NR	2	1577.94	129.0	7.50	600 MHz NR	400	1.87%
T-Mobile 700 MHz LTE	2	695.22	129.0	3.30	700 MHz LTE	467	0.71%
T-Mobile 1900 MHz GSM	4	1052.26	129.0	10.00	1900 MHz GSM	1000	1.00%
T-Mobile 1900 MHz LTE	2	2104.51	129.0	10.00	1900 MHz LTE	1000	1.00%
T-Mobile 2100 MHz UMTS	2	1324.71	129.0	6.30	2100 MHz UMTS	1000	0.63%
T-Mobile 2100 MHz LTE	2	2649.42	129.0	12.59	2100 MHz LTE	1000	1.26%
T-Mobile 2500 MHz LTE IC & 2C Traffic	1	11044.63	129.0	26.25	2500 MHz LTE IC & 2C Traffic	1000	2.62%
T-Mobile 2500 MHz LTE IC & 2C Broadcast	1	1074.06	129.0	2.55	2500 MHz LTE IC & 2C Broadcast	1000	0.26%
T-Mobile 2500 MHz NR Traffic	1	22089.26	129.0	52.49	2500 MHz NR Traffic	1000	5.25%
T-Mobile 2500 MHz NR Broadcast	1	2148.13	129.0	5.10	2500 MHz NR Broadcast	1000	0.51%
						Total:	15.81%

• 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:	15.81%
Sector B:	15.81%
Sector C:	15.81%
T-Mobile Maximum MPE % (Sector A):	15.81%
Site Total:	22.35%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **22.35%** 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.

RAN Template: 67E5A998E 6160	A&L Template: 67E5998E_1xAIR+1OP
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Section 1 - Site Information

Site ID: CTNH568A
Status: Draft
Version: 1
Project Type: Coverage Strategy
Approved: Not Approved
Approved By: Not Approved
Last Modified: 6/9/2021 1:44:46 PM
Last Modified By: ANKIT.JAISWAL20@T-Mobile.com

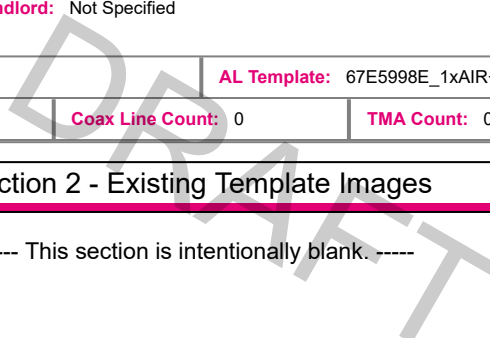
Site Name: CTNH568A
Site Class: Monopole
Site Type: Structure Non Building
Plan Year: 2021
Market: CONNECTICUT CT
Vendor: Ericsson
Landlord: Not Specified

Latitude: 41.53257000
Longitude: -72.87040000
Address: 1325 Cheshire St
City, State: Cheshire, CT
Region: NORTHEAST

RAN Template: 67E5A998E 6160		AL Template: 67E5998E_1xAIR+1OP		
Sector Count: 3	Antenna Count: 6	Coax Line Count: 0	TMA Count: 0	RRU Count: 6

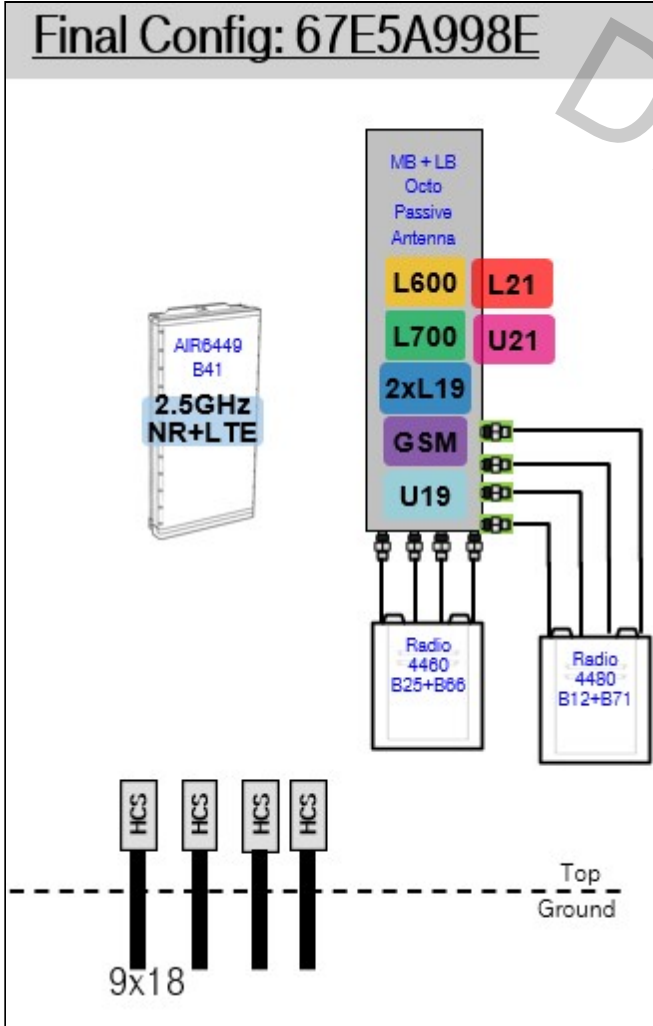
Section 2 - Existing Template Images

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Section 3 - Proposed Template Images

67E5A998E.jpg



Notes:

Section 4 - Siteplan Images

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DRAFT

RAN Template: 67E5A998E 6160	A&L Template: 67E5998E_1xAIR+1OP
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Section 5 - RAN Equipment

Existing RAN Equipment

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

Proposed RAN Equipment

Template: 67E5A998E 6160

Enclosure	1	2	3
Enclosure Type	Enclosure 6160	RBS 6601	B160
Baseband	BB 6648 L700 BB 6648 L2500 BB 6648 L2100 BB 6648 N2500 BB 6648 L1900 DUW30 U2100	DUG20 G1900	
Hybrid Cable System	PSU 4813 Ericsson Hybrid Trunk 6/24 4AWG 100m (x 3)		
Transport System	CSR IXRe V2 (Gen2)		

RAN Scope of Work:

RAN Template: 67E5A998E 6160	A&L Template: 67E5998E_1xAIR+1OP
--	--

Section 6 - A&L Equipment

Existing Template: Custom
Proposed Template: 67E5998E_1xAIR+1OP

Sector 1 (Proposed) view from behind

Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APXVAALL24_43-U-NA20 (Octo)			Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)		
Azimuth	0/120/240			0/120/240		
M. Tilt						
Height	135 129'			135 129'		
Ports	P1	P2	P3	P4	P5	P6
Active Tech.	L700 L600 N600	L700 L600 N600	U2100 L2100 L1900 G1900	U2100 L2100 L1900 G1900	L2500 N2500	L2500 N2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMA's						
Diplexers / Combiners						
Radio	Radio 4480 B71+B85 (At Antenna)	SHARED Radio 4480 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

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

RAN Template: 67E5A998E 6160	A&L Template: 67E5998E_1xAIR+1OP
--	--

Sector 2 (Proposed) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APXVAALL24_43-U-NA20 (Octo)			Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)		
Azimuth	0/120/240			0/120/240		
M. Tilt						
Height	135 129'			135 129'		
Ports	P1	P2	P3	P4	P5	P6
Active Tech.	L700 L600 N600	L700 L600 N600	U2100 L2100 L1900 G1900	U2100 L2100 L1900 G1900	L2500 N2500	L2500 N2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMA's						
Diplexers / Combiners						
Radio	Radio 4480 B71+B85 (At Antenna)	SHARED Radio 4480 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:						

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

RAN Template: 67E5A998E 6160	A&L Template: 67E5998E_1xAIR+1OP
--	--

Sector 3 (Proposed) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1			2		
Antenna Model	RFS - APXVAALL24_43-U-NA20 (Octo)			Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)		
Azimuth	0/120/240			0/120/240		
M. Tilt						
Height	135 129'			135 129'		
Ports	P1	P2	P3	P4	P5	P6
Active Tech.	L700 L600 N600	L700 L600 N600	U2100 L2100 L1900 G1900	U2100 L2100 L1900 G1900	L2500 N2500	L2500 N2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt						
Cables	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
TMA's						
Diplexers / Combiners						
Radio	Radio 4480 B71+B85 (At Antenna)	SHARED Radio 4480 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						
Unconnected Equipment:						
Scope of Work:						

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

RAN Template: 67E5A998E 6160	A&L Template: 67E5998E_1xAIR+1OP
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Section 7 - Power Systems Equipment

Existing Power Systems Equipment

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

Proposed Power Systems Equipment

Enclosure	1
Enclosure Type	Enclosure 6160



Town of Cheshire, CT

Property Listing Report

Map Block Lot **38180**

Building # **1** Unique Identifier **00258300**

Property Information

Property Location	1325 CHESHIRE ST
Mailing Address	CHESHIRE CT 06410
Land Use	Light Industrial
Zoning Code	R-40
Neighborhood	I-1B

Owner	CHESHIRE TOWN OF
Co-Owner	SEWER FILTRATION PLANT
Book / Page	0150/0376
Land Class	Industrial
Census Tract	3431
Acreage	59

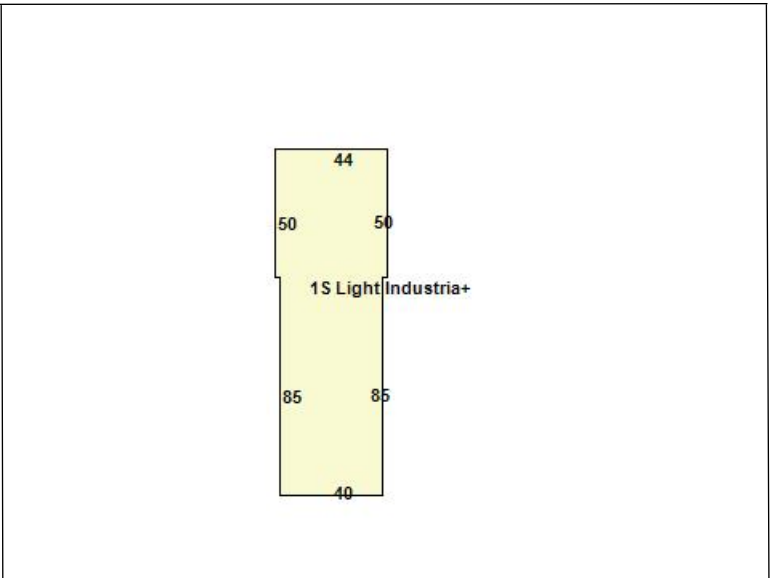
Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	4106621	2874630
Outbuildings	19282346	13497640
Land	1914679	1340280
Total	25303646	17712550

Utility Information

Electric	No
Gas	No
Sewer	No
Public Water	No
Well	No



Primary Construction Details

Year Built	1971
Building Desc.	Commercial
Building Style	
Stories	1.00
Exterior Walls	B. V. Solid
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	Composite
Interior Floors 2	

Heating Fuel	Oil
Heating Type	FHA
AC Type	Central
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	
Occupancy	0

Building Use	Light Industrial
Building Condition	Good
Frame Type	Excellent
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	0
Roof Style	Flat
Roof Cover	Composite Built Up

Report Created On

9/23/2021



Town of Cheshire, CT

Property Listing Report

Map Block Lot **38180**

Building # **1**

Unique Identifier

00258300

Detached Outbuildings

Type	Description	Area (sq ft)	Condition	Year Built
Porch	Open	880	Average	1991
Poles	Light Fixtures	7	Average	1971
Lump Sum	Lump Sum	0	Average	1971
Fencing	Fencing	4000	Average	1971
Garage	Concrete Block/Frame	720	Average	1994
Patio	Concrete	200	Average	1971
Fencing	Fencing	4000	Average	1971
Loading Dock	Loading Dock	248	Average	1971
Shed	Average Shed	316	Average	1995
Paving	Paving	25000	Average	1971

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price



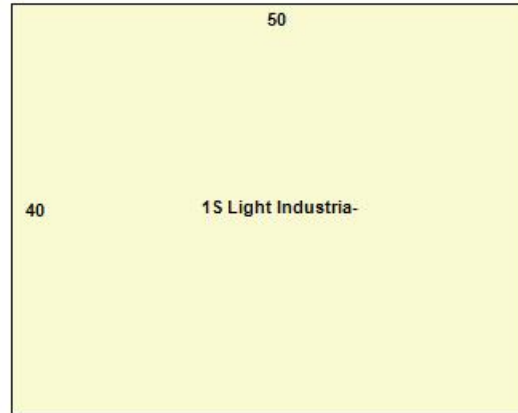
Town of Cheshire, CT

Property Listing Report

Map Block Lot **38180**

Building # **2**

Unique Identifier **00258300**



Primary Construction Details

Year Built	1971
Building Desc.	Light Industrial
Building Style	
Stories	1.00
Exterior Walls	B. V. Solid
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	Concrete
Interior Floors 2	

Heating Fuel	
Heating Type	
AC Type	
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	
Occupancy	0

Building Use	Commercial
Building Condition	Average
Frame Type	Excellent
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	0
Roof Style	Flat
Roof Cover	Composite Built Up

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built



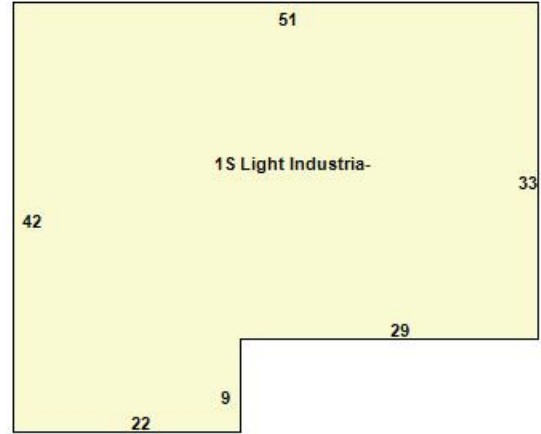
Town of Cheshire, CT

Property Listing Report

Map Block Lot **38180**

Building # **3**

Unique Identifier **00258300**



Primary Construction Details

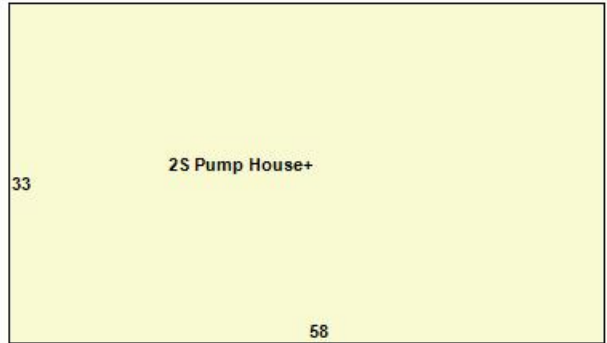
Year Built	1982
Building Desc.	Light Industrial
Building Style	
Stories	1.00
Exterior Walls	B. V. Solid
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	Concrete
Interior Floors 2	

Heating Fuel	Oil
Heating Type	FHA
AC Type	
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	
Occupancy	0

Building Use	Commercial
Building Condition	Average
Frame Type	Excellent
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	0
Roof Style	Flat
Roof Cover	Composite Built Up

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built



Primary Construction Details

Year Built	1971
Building Desc.	Pump House
Building Style	
Stories	2.00
Exterior Walls	B. V. Solid
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	Concrete
Interior Floors 2	

Heating Fuel	
Heating Type	
AC Type	
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	
Occupancy	0

Building Use	Commercial
Building Condition	Good
Frame Type	Excellent
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	0
Roof Style	Flat
Roof Cover	Composite Built Up

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built



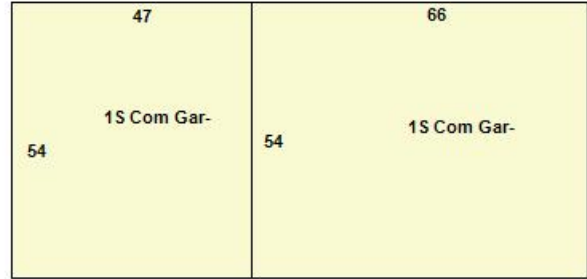
Town of Cheshire, CT

Property Listing Report

Map Block Lot **38180**

Building # **5**

Unique Identifier **00258300**



Primary Construction Details

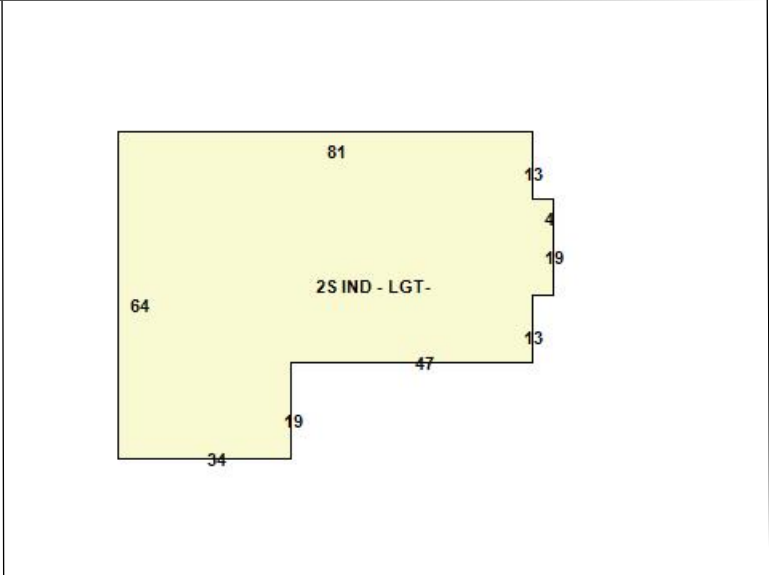
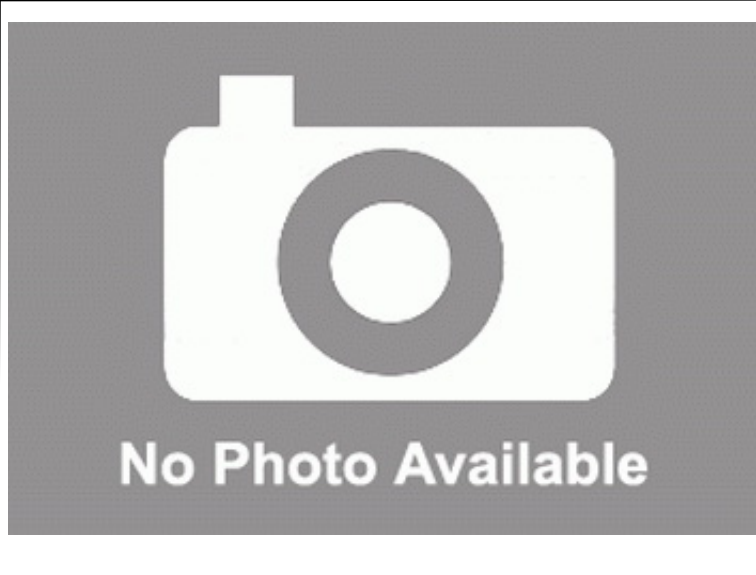
Year Built	1990
Building Desc.	Light Industrial
Building Style	
Stories	1.00
Exterior Walls	B. V. Solid
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	Concrete
Interior Floors 2	

Heating Fuel	
Heating Type	
AC Type	
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	
Occupancy	0

Building Use	Commercial
Building Condition	Average
Frame Type	Excellent
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	0
Roof Style	Flat
Roof Cover	Composite Built Up

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built



Primary Construction Details

Table with 2 columns: Field (Year Built, Building Desc, etc.) and Value (2006, Light Industrial, etc.)

Table with 2 columns: Field (Heating Fuel, Bedrooms, etc.) and Value (Blank, 0, NA, etc.)

Table with 2 columns: Field (Building Use, Building Condition, etc.) and Value (Commercial, Average, etc.)

Attached Extra Features

Table with 5 columns: Type, Description, Area (sq ft), Condition, Year Built



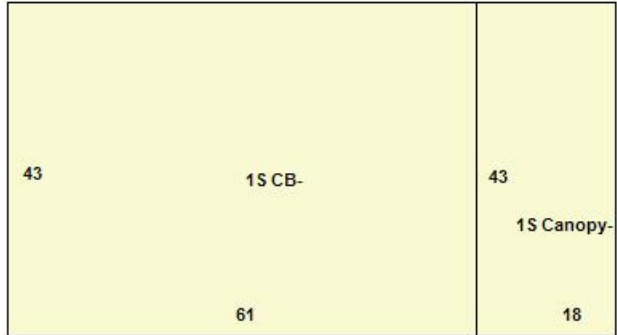
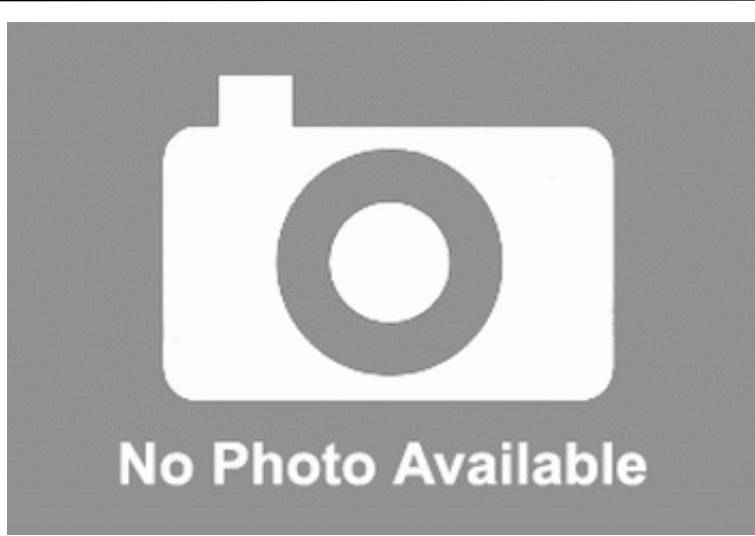
Town of Cheshire, CT

Property Listing Report

Map Block Lot **38180**

Building # **7**

Unique Identifier **00258300**



Primary Construction Details

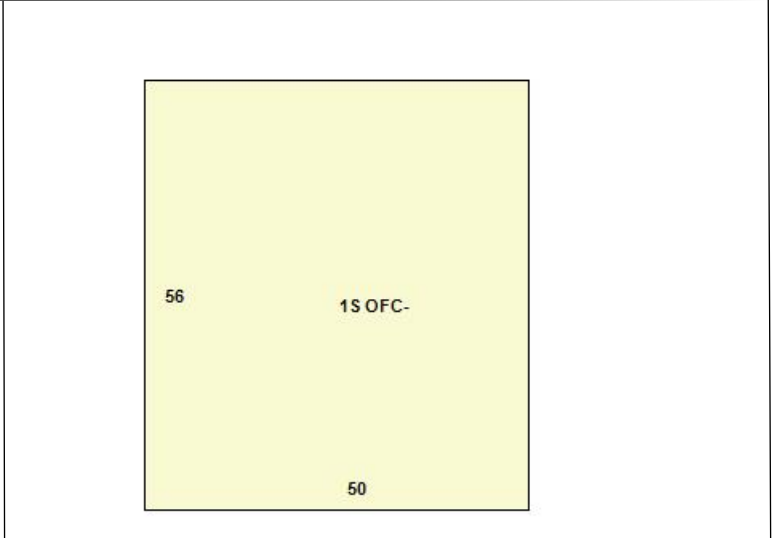
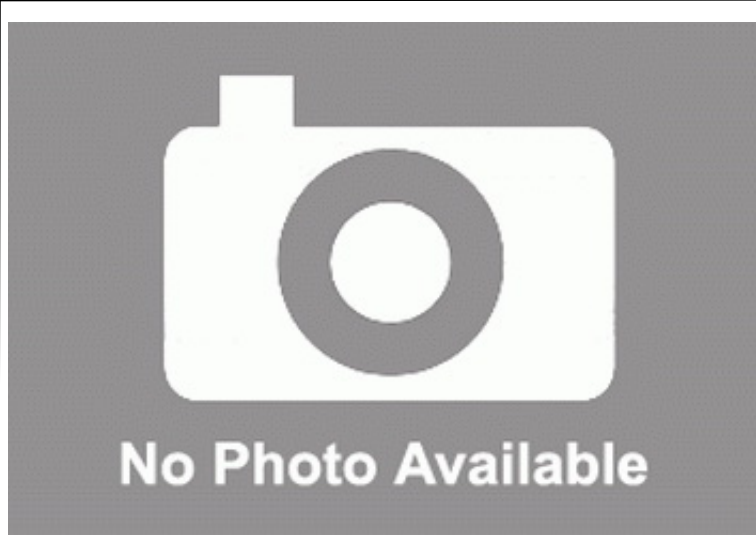
Year Built	2014
Building Desc.	Pump House
Building Style	
Stories	0.00
Exterior Walls	Concrete Block
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	
Interior Floors 2	

Heating Fuel	Oil
Heating Type	FHA
AC Type	Central
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	
Occupancy	0

Building Use	Commercial
Building Condition	Average
Frame Type	Good
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	0
Roof Style	
Roof Cover	Metal

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built
Canopy	Metal	774	Very Good	1971



Primary Construction Details

Year Built	2014
Building Desc.	Office Building
Building Style	
Stories	0.00
Exterior Walls	B. V. Solid
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	
Interior Floors 2	

Heating Fuel	Oil
Heating Type	FHA
AC Type	Central
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	
Occupancy	0

Building Use	Commercial
Building Condition	Average
Frame Type	Good
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	0
Roof Style	
Roof Cover	

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built



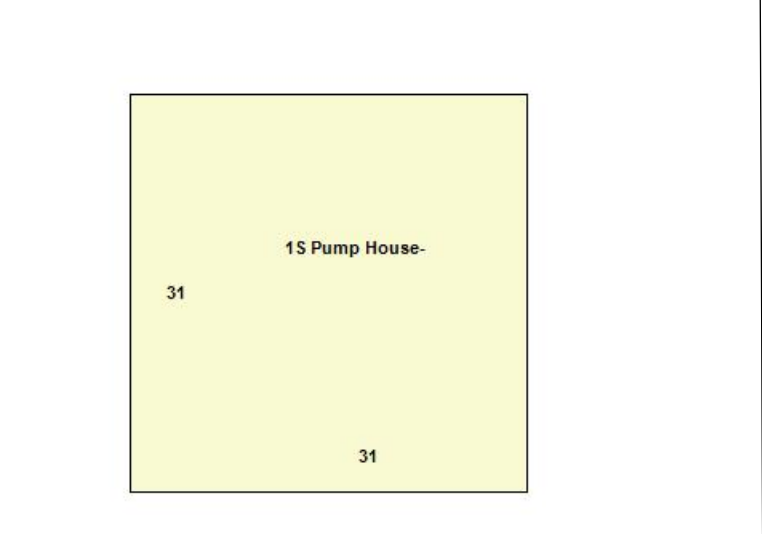
Town of Cheshire, CT

Property Listing Report

Map Block Lot **38180**

Building # **9**

Unique Identifier **00258300**



Primary Construction Details

Year Built	2014
Building Desc.	Pump House
Building Style	
Stories	0.00
Exterior Walls	Concrete Block
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	
Interior Floors 2	

Heating Fuel	Oil
Heating Type	FHA
AC Type	Central
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	
Occupancy	0

Building Use	Commercial
Building Condition	Good
Frame Type	Very Good
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	0
Roof Style	
Roof Cover	Metal

Attached Extra Features

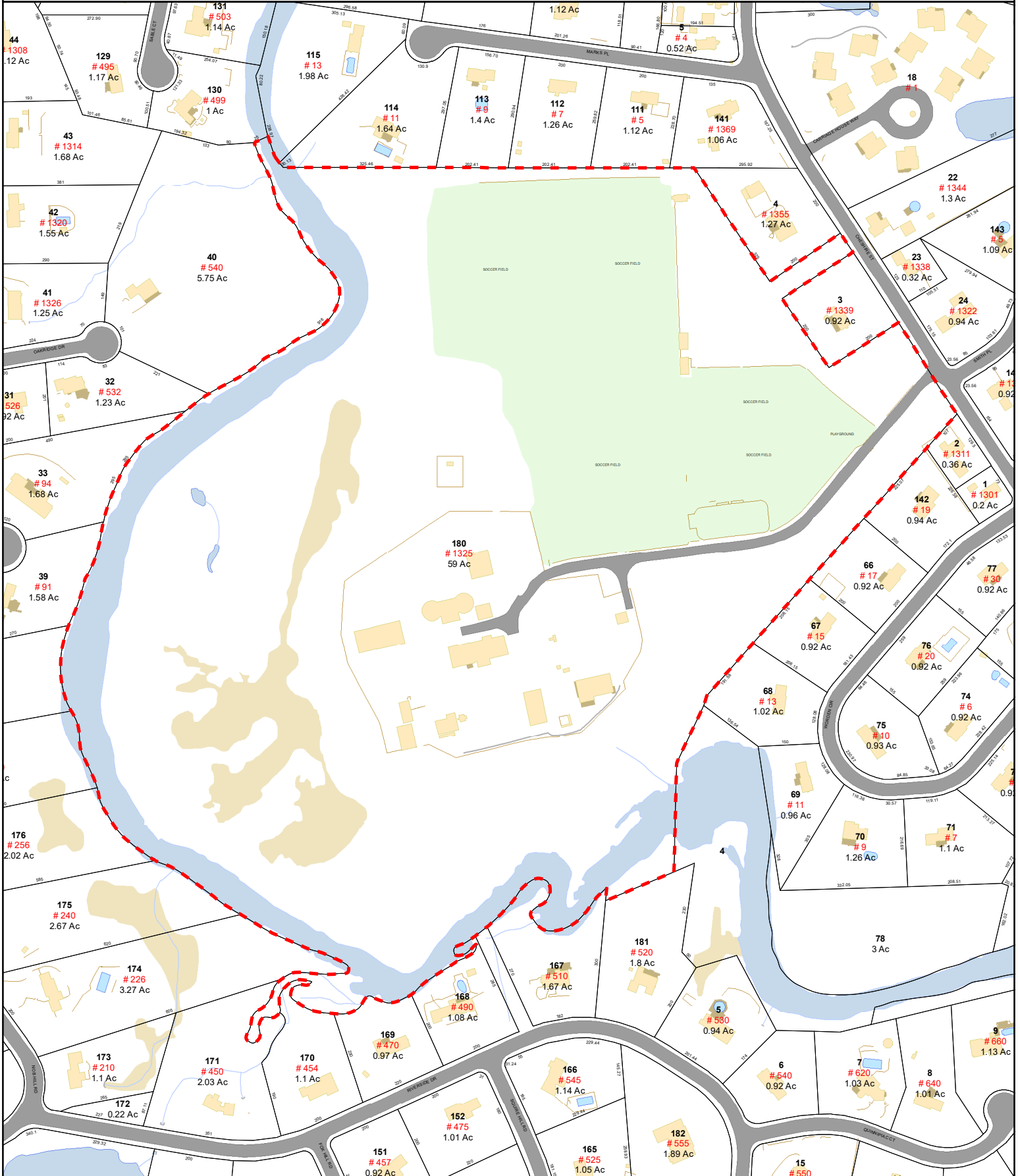
Type	Description	Area (sq ft)	Condition	Year Built

Town of Cheshire, Connecticut - Assessment Parcel Map

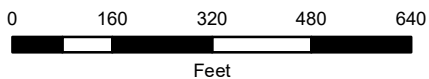


Parcel: 00258300

Location: 1325 CHESHIRE ST



Approximate Scale: 1 inch = 308 feet



Map Produced: July 2021

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