STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

January 7, 2022

Eric Breun
Transcend Wireless
10 Industrial Avenue, Suite 3
Mahwah, NJ 07430
ebreun@transcendwireless.com

RE: **TS-T-MOBILE-025-211006** – T-Mobile request for an order to approve tower sharing at an existing telecommunications facility located at 1325 Cheshire Street, Cheshire, Connecticut.

Dear Mr. Breun:

The Connecticut Siting Council (Council) is in receipt of your correspondence of January 7, 2022 submitted in response to the Council's November 4, 2021 notification of an incomplete request for tower sharing with regard to the above-referenced matter.

The submission renders the request for tower sharing complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/FOC/emr

Transcend Wireless

10 Industrial Ave,
Suite 3
Mahwah NJ 07430

Phone: 201.684.0055
Fax: 201.684.0066

January 6, 2021

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

T-Mobile Northeast LLC – CTNH568A – Response to Incomplete Modification – TS-T-MOBILE-025-211006
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

Hello, your package has been delivered.

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
Reference Number:	CTNH568A

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Delivery Time: 11:12 AM

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Signed by: DONNA

TRANSCEND WIRELESS

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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Signed by: CD

TRANSCEND WIRELESS

Tracking Number:	1ZV257420394488523
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:	CTNH548A

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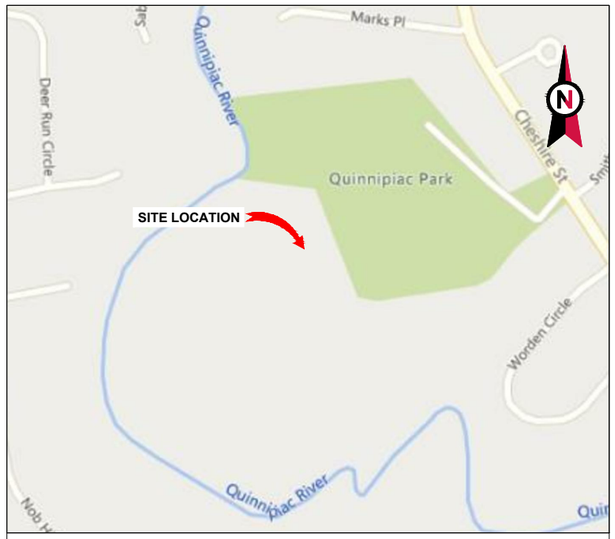
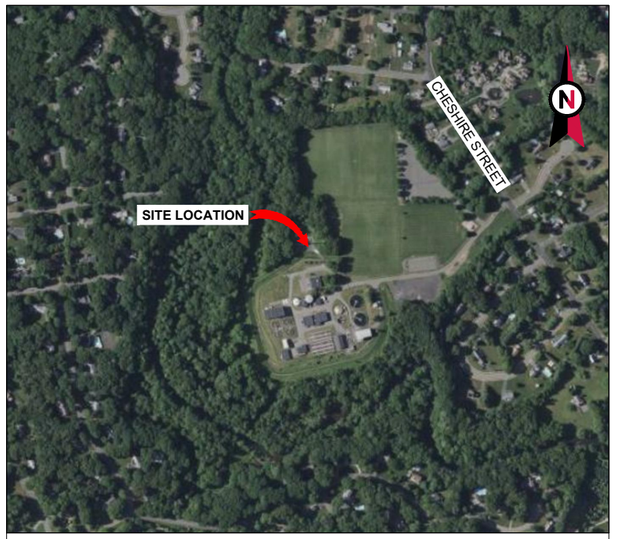


VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: CHESHIRE
ATC SITE NUMBER: 208478
T-MOBILE SITE NAME: CTNH568A
T-MOBILE SITE NUMBER:CTNH568A
SITE ADDRESS: 1325 CHESHIRE STREET CHESHIRE, CT 06410



LOCATION MAP

T-MOBILE COVERAGE STRATEGY COLOCATION PLAN
67E5A998E 6160 CONFIGURATION

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: ITRON
PHONE: (203) 874-9381

TELEPHONE COMPANY: T-MOBILE
PHONE: (800) 937-8997

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

PROJECT SUMMARY

SITE ADDRESS:

1325 CHESHIRE STREET

CHESHIRE, CT 06410

COUNTY: NEW HAVEN

GEOGRAPHIC COORDINATES:

LATITUDE: 41.53258889

LONGITUDE: -72.87047222

GROUND ELEVATION: -170' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:

COLLIERS ENGINEERING & DESIGN CT, P.C.
135 NEW ROAD
MADISON, CT 06443

PROJECT #:
21904211A

PROPERTY OWNER:

AMERICAN TOWER
116 HUNTINGTON AVE
BOSTON, MA 02116

APPLICANT:

T-MOBILE

PLANNING / APPLICANT'S REPRESENTATIVE:

THE DERNA GROUP
22431 ANTONIO PARKWAY
SUITE B160-234
RANCHO SANTA MARGARITA, CA 92688
CONTACT: RACHEL BRUIN
PHONE: (805) 215-9444
EMAIL: RBRUIN@DERNAGRP.COM

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES INSTALLING EQUIPMENT CABINETS ON A PROPOSED CONCRETE PAD INSIDE A 10' X 15' GROUND SPACE WITHIN THE EXISTING COMPOUND, AND INSTALLING NEW EQUIPMENT AND MOUNTS ON THE EXISTING TOWER.

PROJECT NOTES

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

PROJECT LOCATION DIRECTIONS

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	2	01/03/22	RMD
G-002	GENERAL NOTES	2	01/03/22	RMD
C-001	OVERALL SITE PLAN	2	01/03/22	RMD
C-101	DETAILED SITE PLAN	2	01/03/22	RMD
C-201	TOWER ELEVATION	2	01/03/22	RMD
C-401	ANTENNA INFORMATION & SCHEDULE	2	01/03/22	RMD
C-501	MOUNT DETAILS	2	01/03/22	RMD
C-502	CONSTRUCTION DETAILS	2	01/03/22	RMD
C-503	CONSTRUCTION DETAILS	2	01/03/22	RMD
E-101	GROUNDING DETAILS & ELECTRICAL SCHEMATIC	2	01/03/22	RMD
E-501	GROUNDING DETAILS	2	01/03/22	RMD
E-601	PANEL SCHEDULE	2	01/03/22	RMD
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			
R-606	SUPPLEMENTAL			
R-607	SUPPLEMENTAL			

AMERICAN TOWER®

Colliers Engineering & Design
www.colliersengineering.com
Doing Business as MASER CONSULTING
MADISON
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
0	FOR CONSTRUCTION	AMN	08/06/21
1	FOR CONSTRUCTION	RMD	09/01/21
2	FOR CONSTRUCTION	AMN	01/03/22

ATC SITE NUMBER:
208478

ATC SITE NAME:
CHESHIRE

T-MOBILE SITE NAME:
CTNH568A

SITE ADDRESS:
1325 CHESHIRE STREET
CHESHIRE, CT 06410

SEAL:

STATE OF CONNECTICUT · ERIC M. ANDERSON · 32224 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Eric Anderson
Date: 2022.01.04 12:37:04-05'00'

T-Mobile

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

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	2

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

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 ½" 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 OD COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
   - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
   - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
   - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
   - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

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.

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/02/21
0	FOR CONSTRUCTION	AMN	08/06/21
1	FOR CONSTRUCTION	RMD	09/01/21
2	FOR CONSTRUCTION	AMN	01/03/22

ATC SITE NUMBER:
208478

ATC SITE NAME:
CHESHIRE

T-MOBILE SITE NAME:
CTNH568A

SITE ADDRESS:
1325 CHESHIRE STREET
CHESHIRE, CT 06410

SEAL:

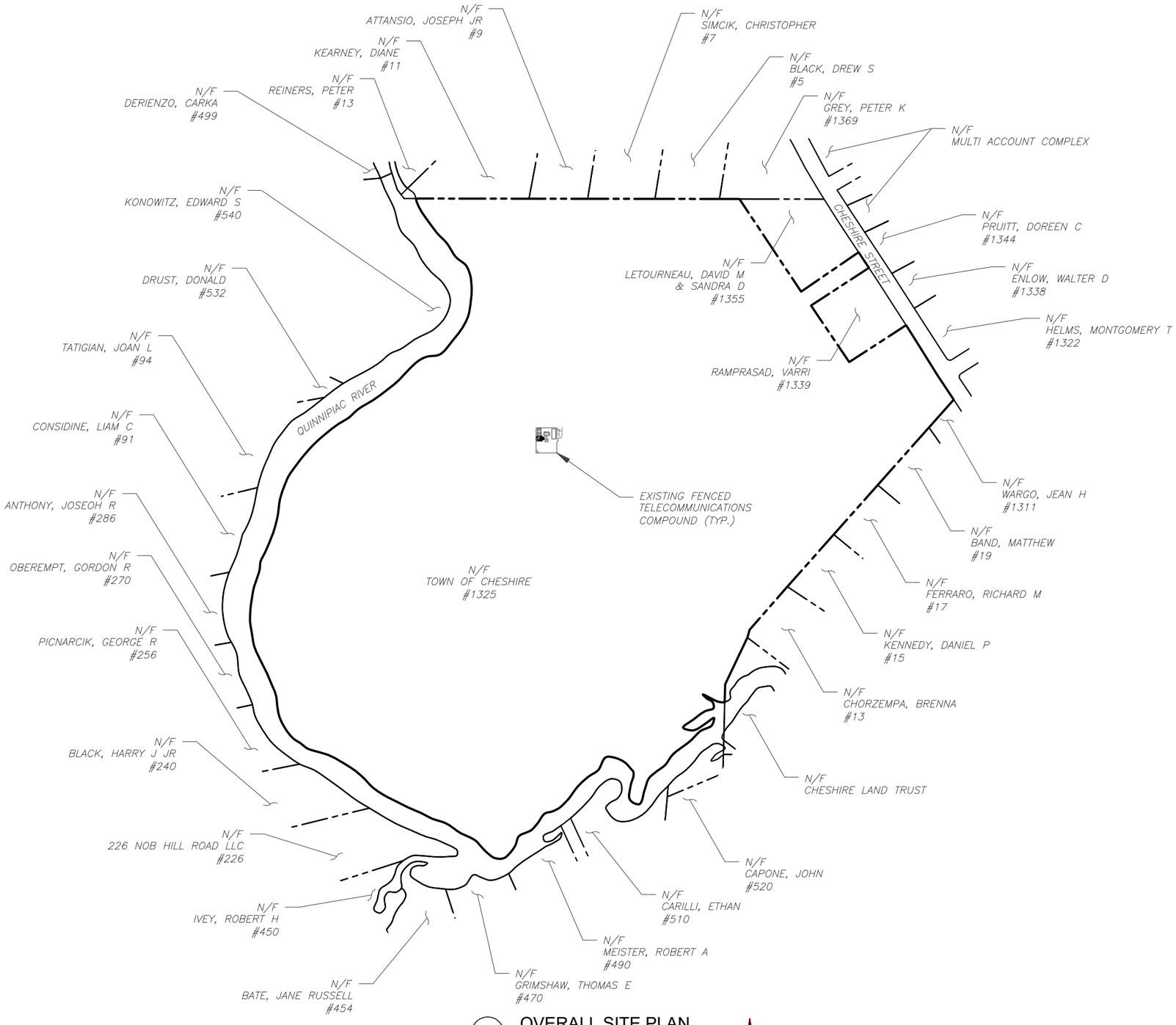
Digitally signed by Eric Anderson
Date: 2022.01.04 12:37:07-05'00'

T-Mobile

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

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	2



1 OVERALL SITE PLAN

GRAPHIC SCALE

0 ##

(IN FEET)

1 UNIT = ### FEET

N

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SEAL:

STATE OF CONNECTICUT · ERIC J. ANDERSON · 32224 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Eric Anderson
Date: 2022.01.04 12:37:10-05'00'

T-Mobile

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

OVERALL SITE PLAN

SHEET NUMBER:	REVISION:
C-001	2

SITE PLAN NOTES:

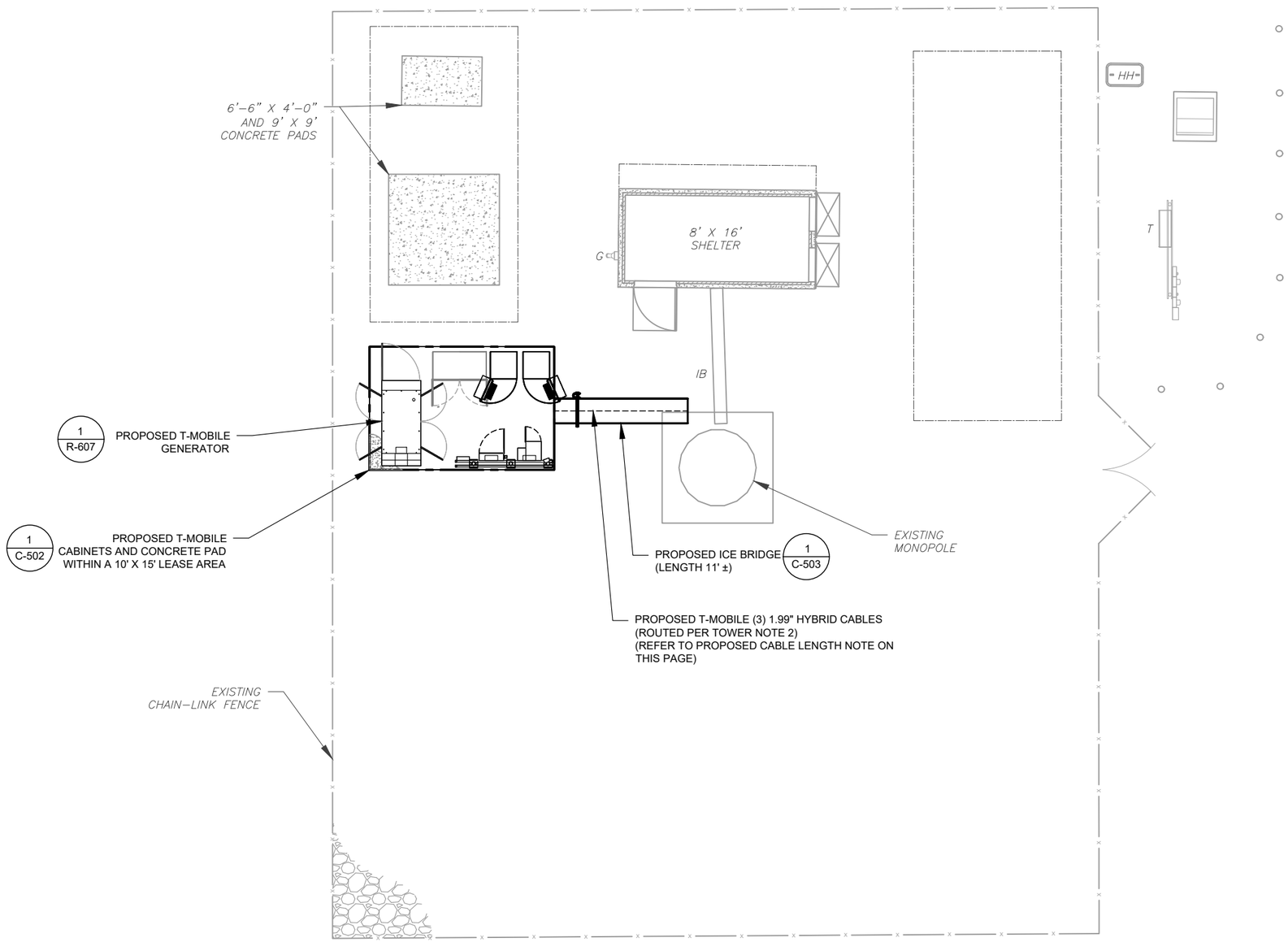
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

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



1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

N

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.

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T-Mobile

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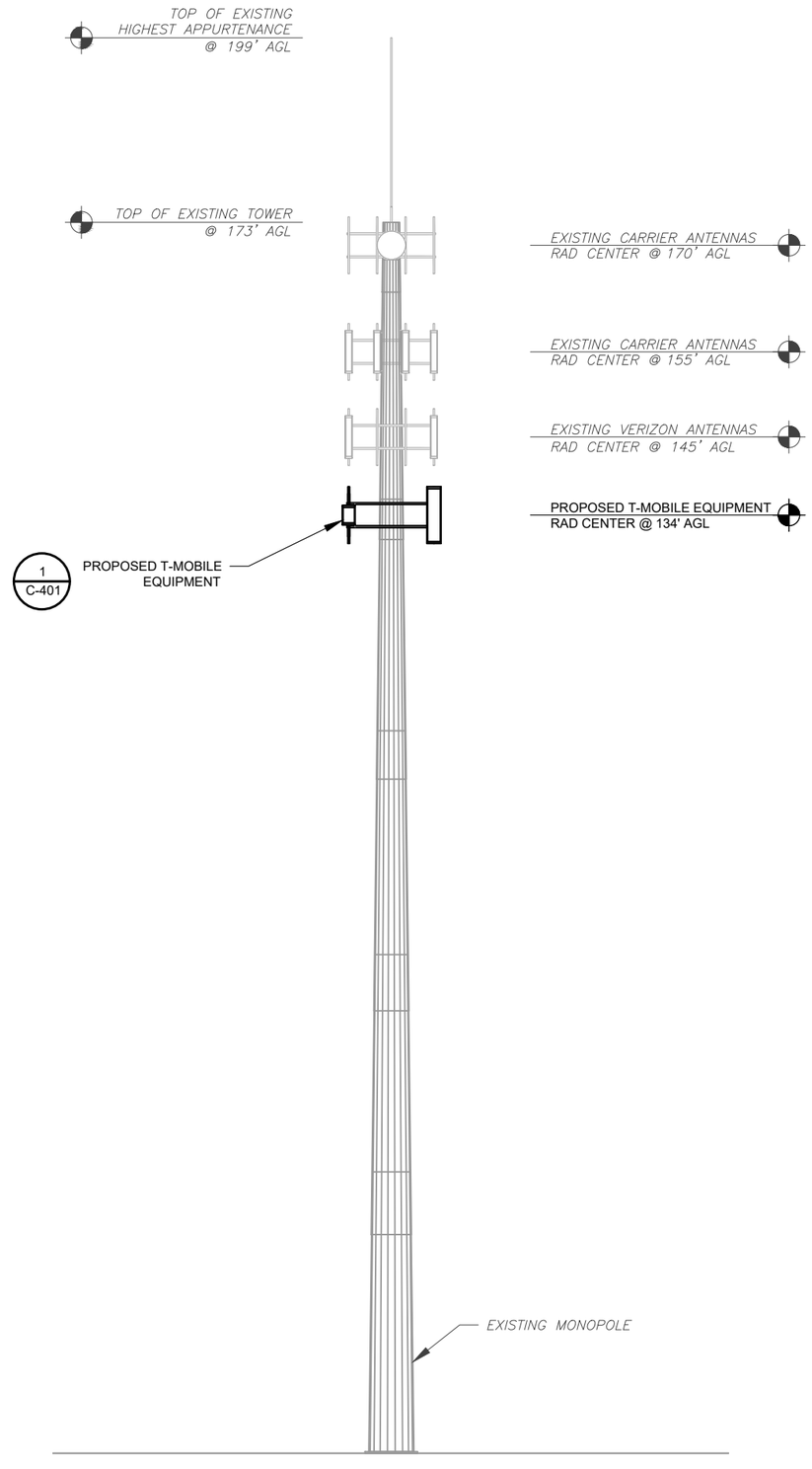
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	2



1 TOWER ELEVATION
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY CENTEK, DATED 01/03/22, THE PROPOSED MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

TOWER NOTE:

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

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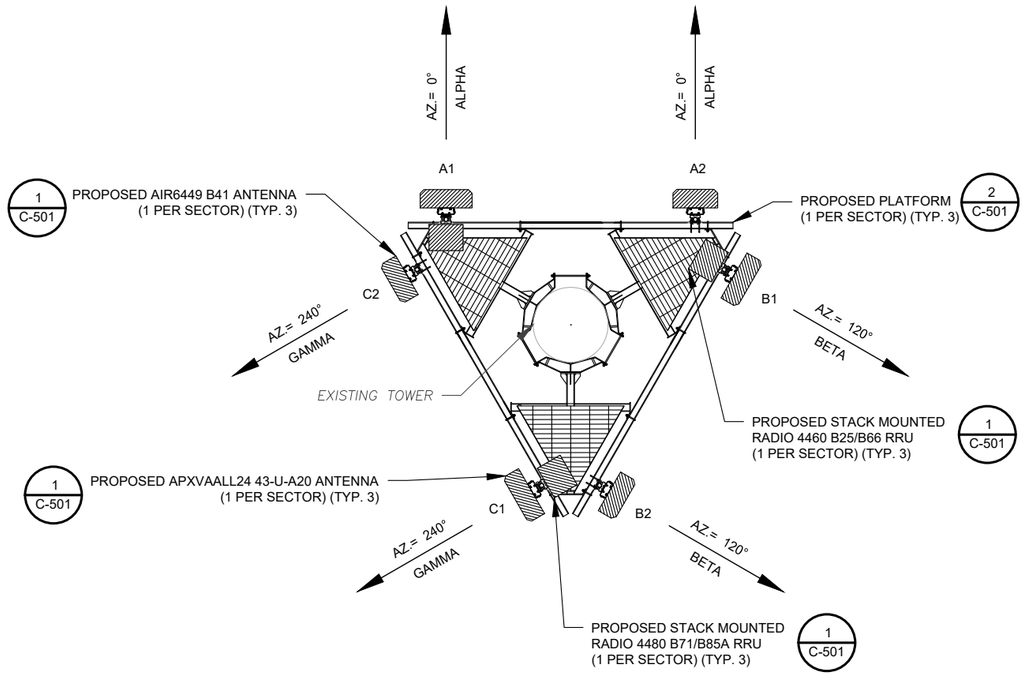
ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	2

PER MOUNT ANALYSIS COMPLETED BY CENTEK, DATED 01/03/22, 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	134'	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	134'	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	134'	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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T-Mobile

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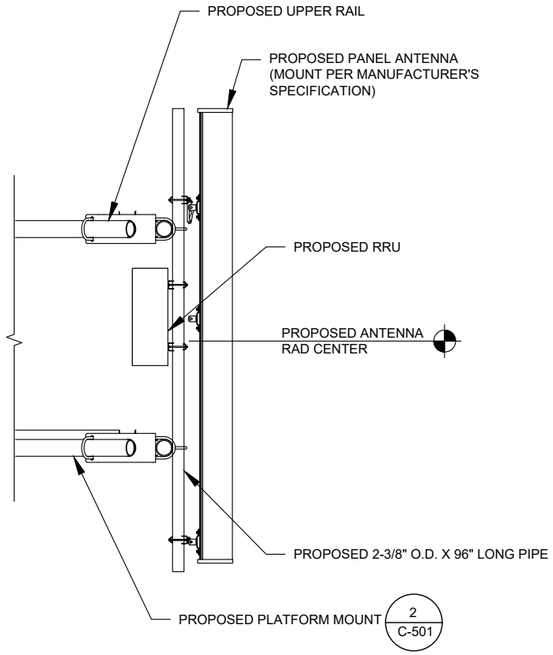
CUSTOMER #:	CTNH568A

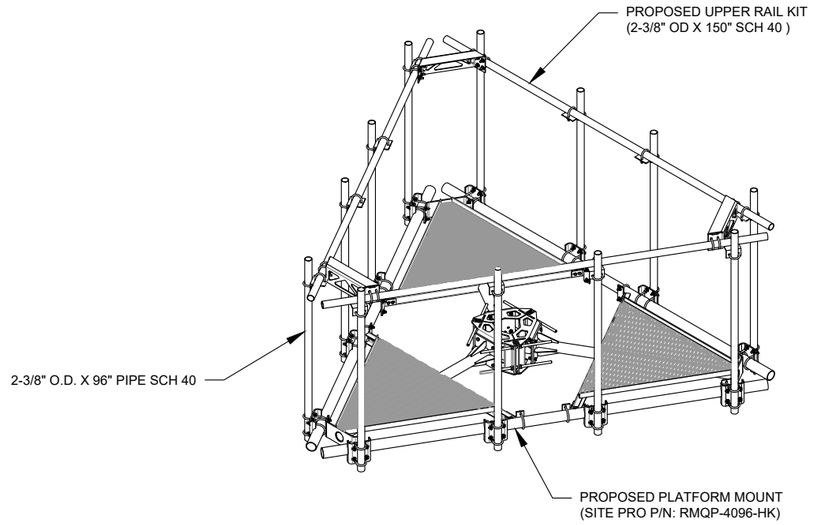
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	2



1 PROPOSED ANTENNA MOUNTING DETAIL (ELEVATION)

SCALE: NOT TO SCALE



2 ISOMETRIC PLATFORM DETAIL

SCALE: N.T.S.

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T-Mobile

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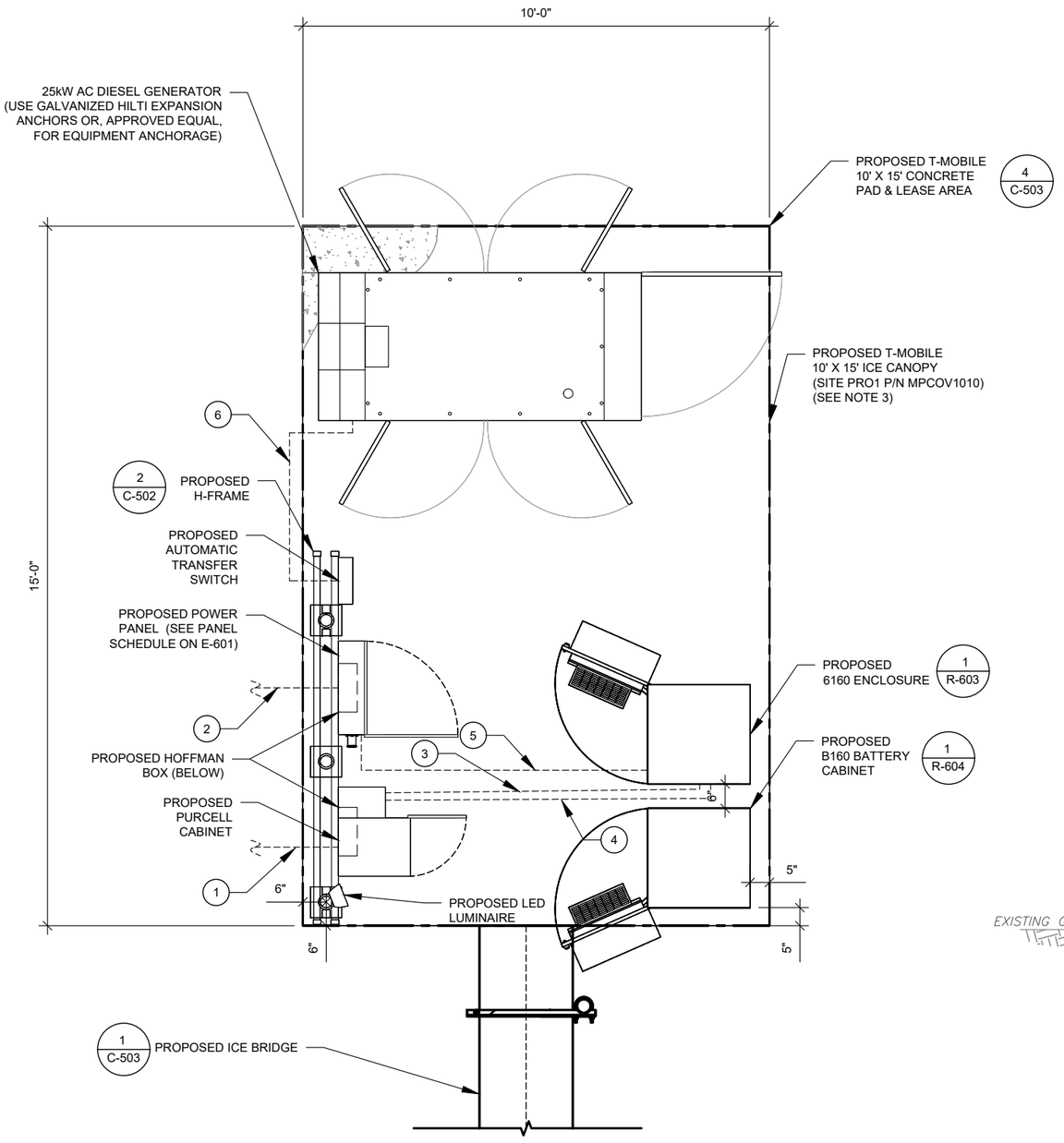
MOUNT DETAILS

SHEET NUMBER:	REVISION:
C-501	2



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

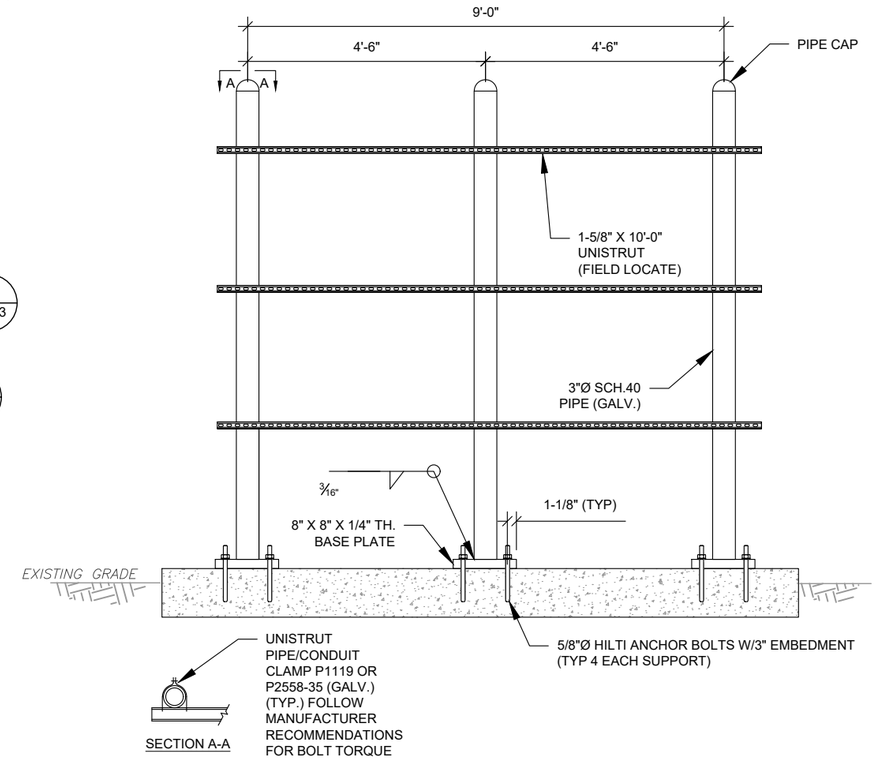
1 DETAILED EQUIPMENT LAYOUT
SCALE: NOT TO SCALE

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

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

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	RMD	08/02/21
0	FOR CONSTRUCTION	AMN	08/06/21
1	FOR CONSTRUCTION	RMD	09/01/21
2	FOR CONSTRUCTION	AMN	01/03/22

ATC SITE NUMBER:
208478

ATC SITE NAME:
CHESHIRE

T-MOBILE SITE NAME:
CTNH568A

SITE ADDRESS:
1325 CHESHIRE STREET
CHESHIRE, CT 06410

SEAL:

STATE OF CONNECTICUT · ERIC A. ANDERSON · 32224 · LICENSED PROFESSIONAL ENGINEER

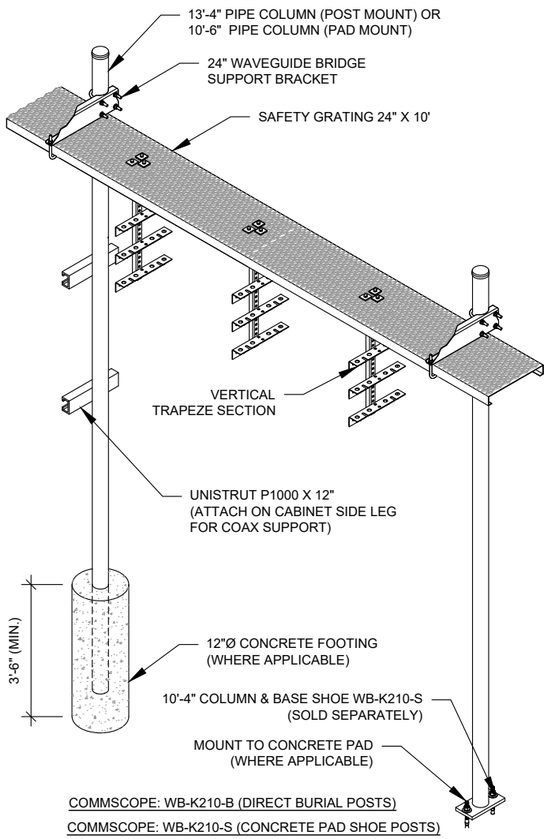
Digitally signed by Eric Anderson
Date: 2022.01.04 12:37:21-05'00'

T-Mobile

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

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-502	2

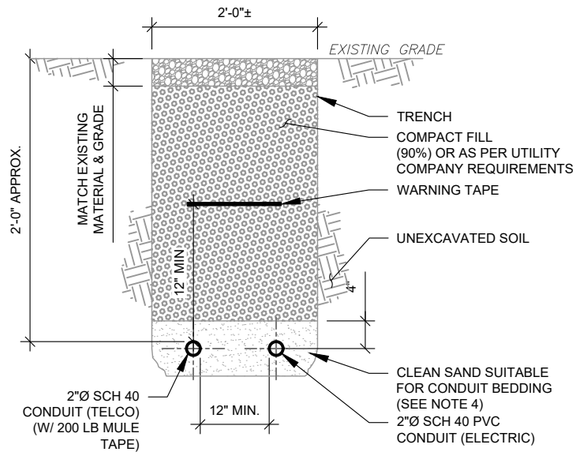


CONSTRUCTION NOTE:

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

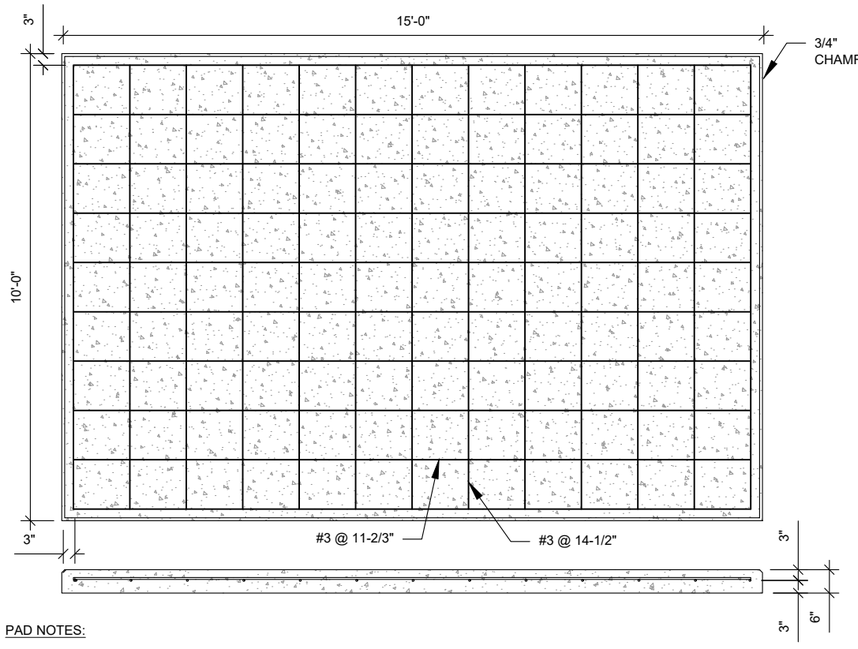


TRENCH NOTES:

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.

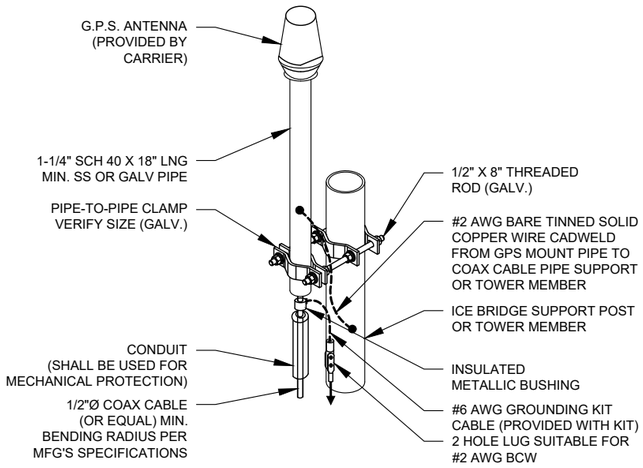


PAD NOTES:

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

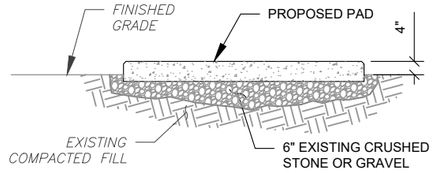
SCALE: NOT TO SCALE



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: 2022.01.04 12:37:23-05'00'

T-Mobile

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ATC JOB NO:	13704270_D3
CUSTOMER ID:	CTNH568A
CUSTOMER #:	CTNH568A

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-503	2

GROUNDING NOTES:

1. 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.

2. GROUNDING CONDUCTORS SHALL:
   - A. BE #2 AWG SOLID BARE TINNED COPPER (SBTC) FOR ALL GROUNDING SYSTEM WIRE UNLESS OTHERWISE NOTED, OR OTHERWISE REQUIRED BY CODE.
   - B. BE MINIMUM 12" BEND RADIUS. KEEP NUMBER OF BENDS TO A MINIMUM.
   - C. AVOID LONG BONDING CONNECTION RUNS. MAKE DIRECT AS POSSIBLE.
   - D. NOT HAVE ANY U-SHAPED RUNS.
   - E. BE IN NON-METALLIC CONDUIT ONLY, IF IN CONDUIT.
   - F. BE PLACED THROUGH NON-METALLIC SLEEVES IN FLOORS, WALLS, CEILINGS, ETC.
   - G. PROTECTED IN NON-METALLIC CONDUIT WHERE EXPOSED ABOVE GRADE.

2. 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.

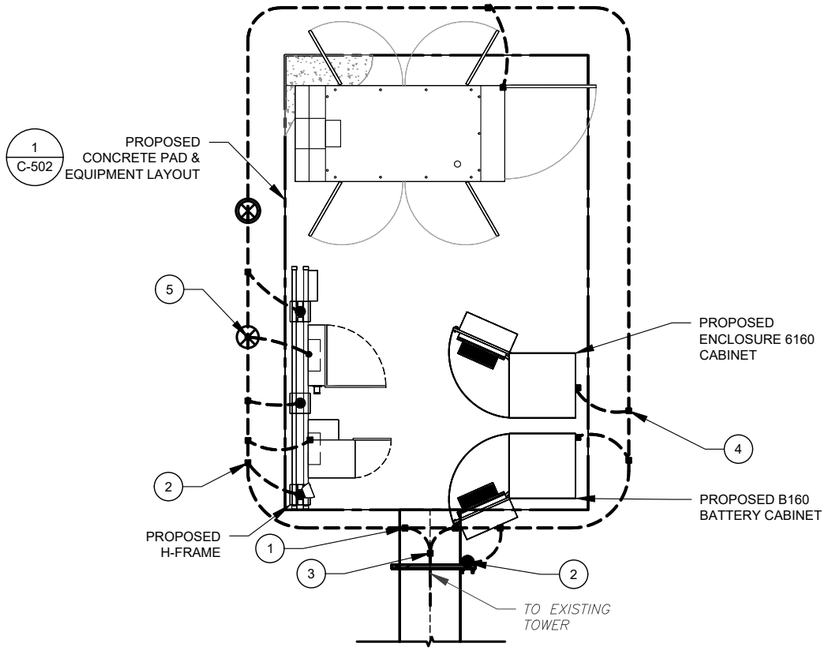
3. GROUND RINGS SHALL BE:
   - A. MINIMUM 30" BELOW GRADE, OR BELOW FROST LINE WHICHEVER IS DEEPER.
   - B. MINIMUM 2' FROM FOUNDATIONS, FOOTINGS, OTHER GROUNDING SYSTEMS AND ALL CONDUCTIVE OBJECTS.
   - C. WITH MINIMUM 12" BEND RADII.
   - D. WITH ALL CONNECTIONS IN CONTACT WITH EARTH, BONDED BY EXOTHERMIC WELDING.
   - E. BONDED TO A SINGLE POINT GROUND (SPG) WITH A SINGLE WIRE AS INDICATED ON DRAWINGS.

4. GROUND RODS SHALL BE:
   - A. MINIMUM 5/8" DIAMETER.
   - B. MINIMUM 10' LONG.
   - C. COPPER-CLAD GALVANIZED STEEL OR STAINLESS STEEL.
   - D. PLACED IN UNDISTURBED SOIL AND BELOW THE FROST LINE.
   - E. INSTALLED WITH MINIMUM SEPARATION DISTANCE OF TWICE THE DEPTH OF THE ROD(S), OR AS INDICATED ON DRAWINGS.
   - F. 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.

5. 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:

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



1 DETAILED GROUNDING PLAN

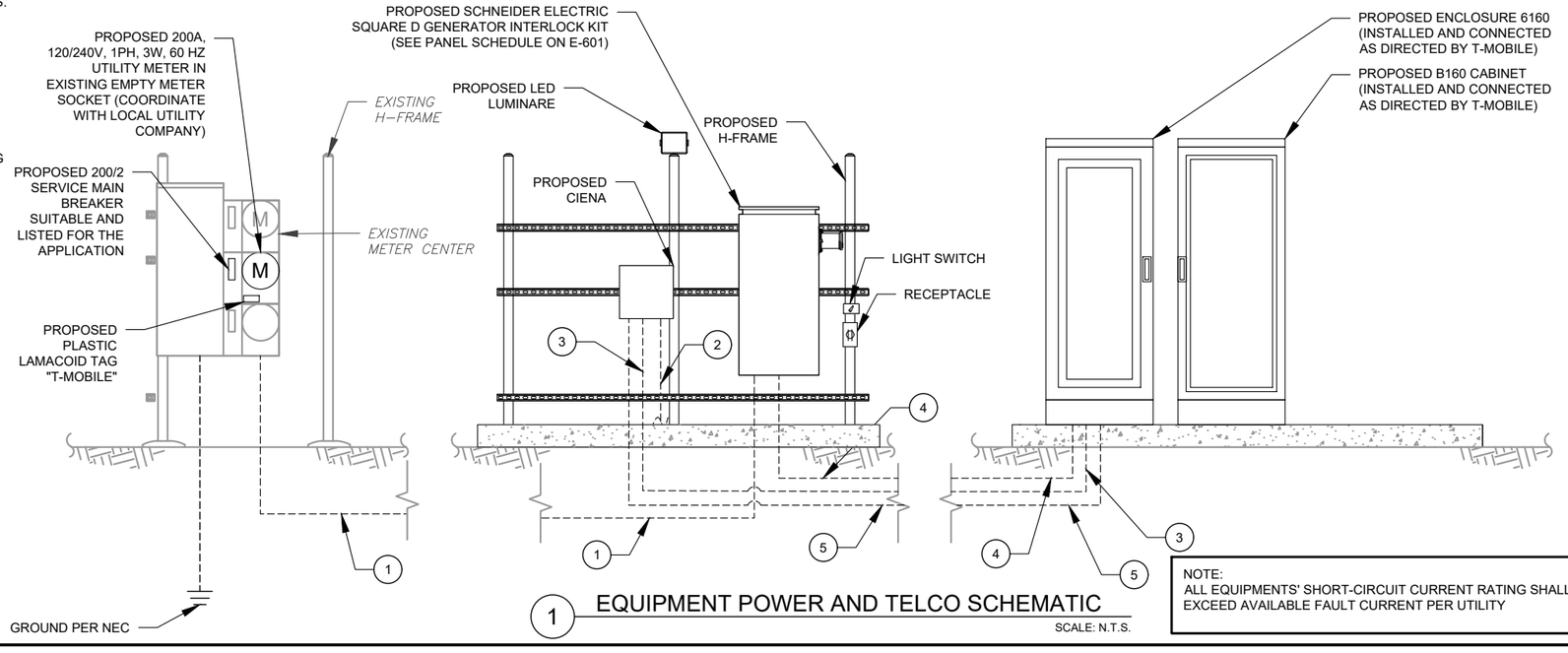
SCALE: NOT TO SCALE

GROUNDING PLAN LEGEND:

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

GROUNDING KEYED NOTES:

1. BOND TO TOWER GROUND RING
2. #2 AWG BOND FROM VERTICAL H-FRAME AND ICE BRIDGE POST TO EXTERNAL GROUND RING (TYP. EVERY POST).
3. #2 AWG SBTC BOND FROM TOWER GROUND RING TO EQUIPMENT.
4. EQUIPMENT BOND TO GROUND RING (TYP.)
5. 5/8Ø" X 10 FT GROUND ROD.



1 EQUIPMENT POWER AND TELCO SCHEMATIC

SCALE: N.T.S.

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

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T-MOBILE SITE NAME:
CTNH568A

SITE ADDRESS:
1325 CHESHIRE STREET
CHESHIRE, CT 06410

SEAL:

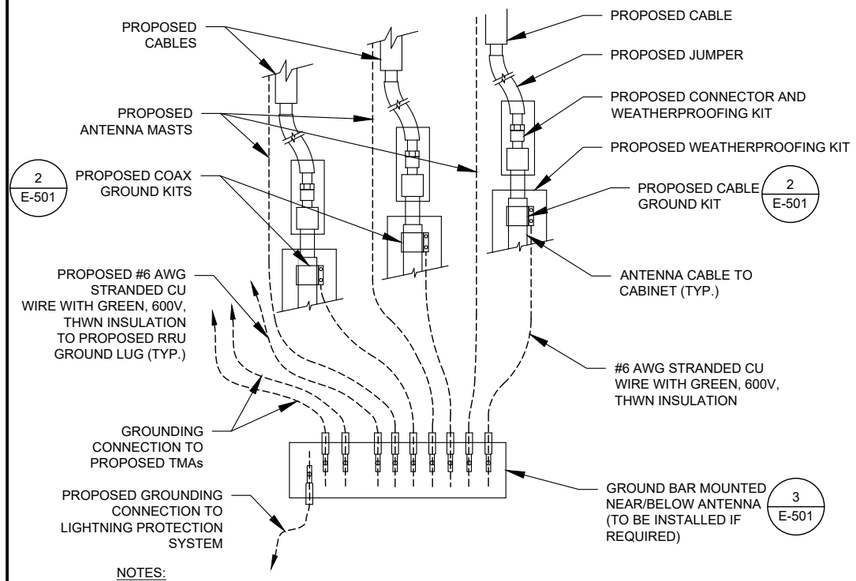
Digitally signed by Eric Anderson
Date: 2022.01.04 12:37:25-05'00'

T-Mobile

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

GROUNDING DETAILS & ELECTRICAL SCHEMATIC

SHEET NUMBER:	REVISION:
E-101	2

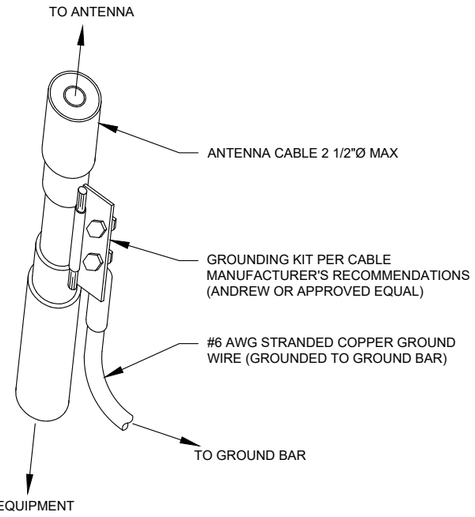


NOTES:

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.

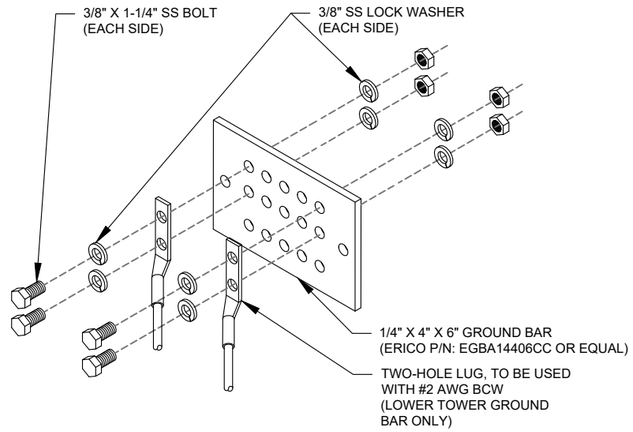


GROUND KIT NOTES:

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.

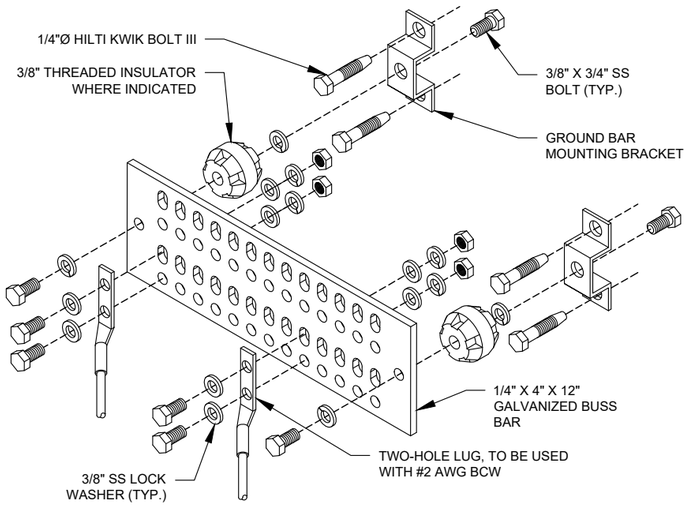


GROUND BAR NOTES:

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.

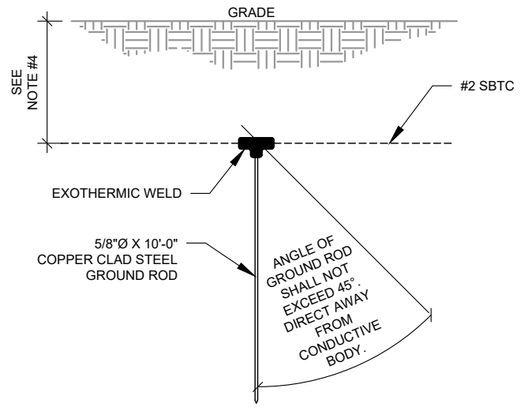


GROUND BAR NOTES

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.

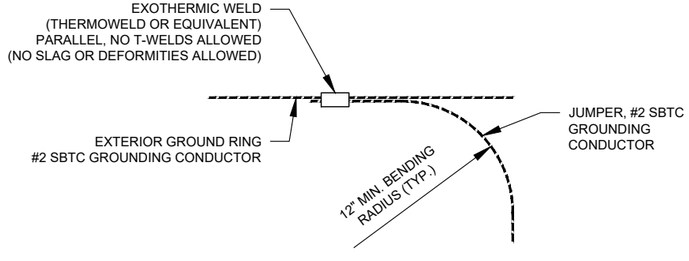


NOTES:

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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GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	2

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								FEEDER OR BRANCH CIRCUIT							BRIEF DESCRIPTION	CONNECTED LOAD (kVA)	
			BREAKER		CIRCUIT			POLE	CIRC.		CIRC.	POLE	CIRCUIT			BREAKER				
A	B		AMPS	POLES	WIRE	GND	COND.	NO.	NOTES		NOTES	NO.	COND.	GND	WIRE	POLES	AMPS		A	B
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		0.50
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
0.00								9				10							0.00	
	0.00							11				12								0.00
0.00								13				14							0.00	
	0.00							15				16								0.00
0.00								17				18							0.00	
	0.00							19				20								0.00
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

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STATE OF CONNECTICUT · ERIC J. ANDERSON · 32224 · LICENSED PROFESSIONAL ENGINEER

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T-Mobile

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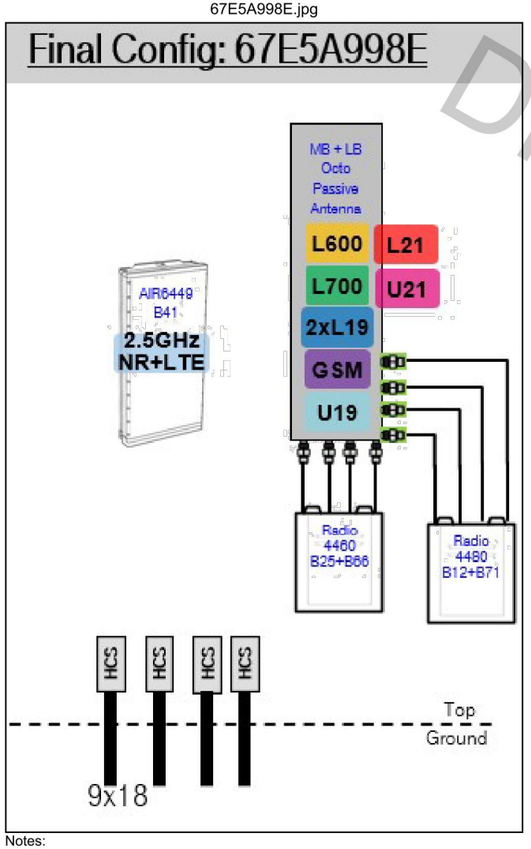
PANEL SCHEDULE

SHEET NUMBER:	REVISION:
E-601	2

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:			

67E5A998E.jpg



Notes:

1 CABINET CONFIGURATION
SCALE: NOT TO SCALE

2 ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

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

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: -

CENTEK engineering
Centered on Solutions℠

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~~
Rev 1: January 3, 2022

Max Stress Ratio = 67%

Prepared for:

T-Mobile USA
35 Griffin Road
Bloomfield, CT 06002

63-2 North Branford Road, Branford, CT 06405 203.488.0580 Fax 203.488.8587 www.CentekEng.com

CENTEK engineering
Centered on Solutions℠

January 3, 2022

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:

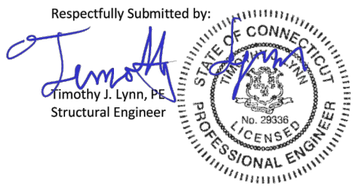
- **T-Mobile:**
  Low Profile Platform:Three (3) RFS APXVAALL24_43-U-NA20 panel antennas, three (3) Ericsson AIR6449 b41 panel antennas, three (3) Ericsson 4480 B71+B85 remote radio heads and three (3) Ericsson 4460 B25+B66 remote radio heads on the proposed mount with a RAD center elevation of 134-ft +/- 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

63-2 North Branford Road, Branford, CT 06405 203.488.0580 Fax 203.488.8587 www.CentekEng.com

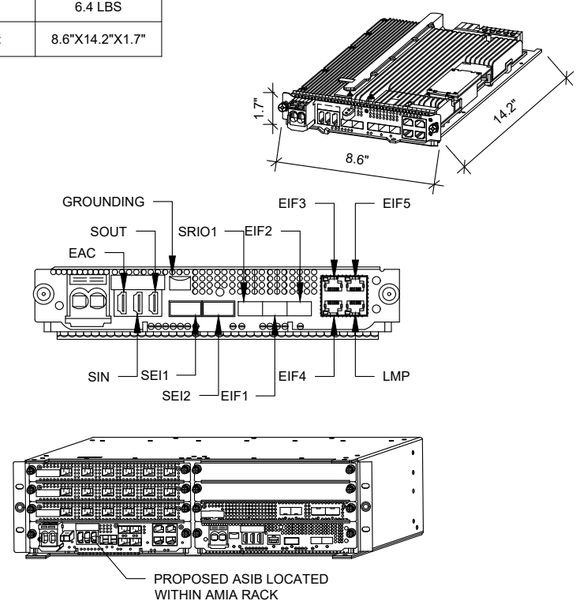
1 MOUNT ANALYSIS

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

SUPPLEMENTAL

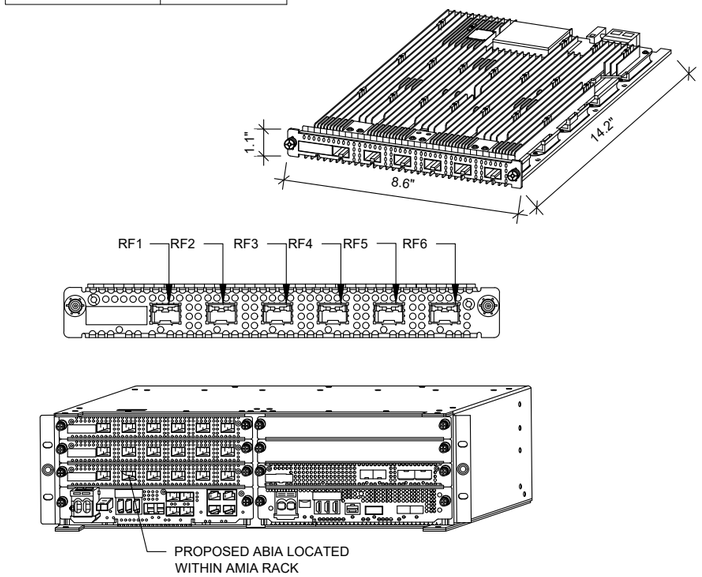
SHEET NUMBER:	REVISION:
R-602	-

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



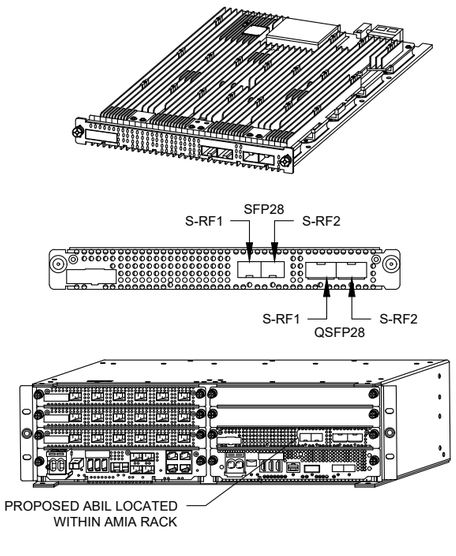
1 ASIB DETAIL
SCALE: N.T.S.

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



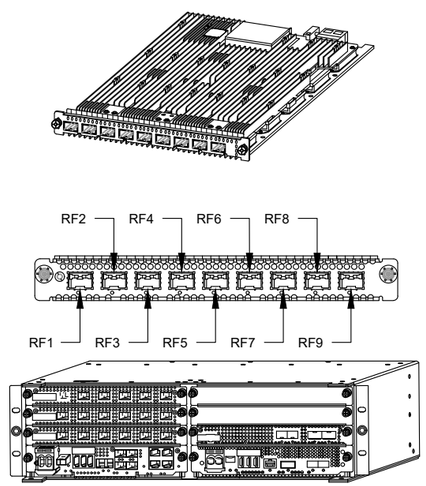
2 ABIA DETAIL
SCALE: N.T.S.

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



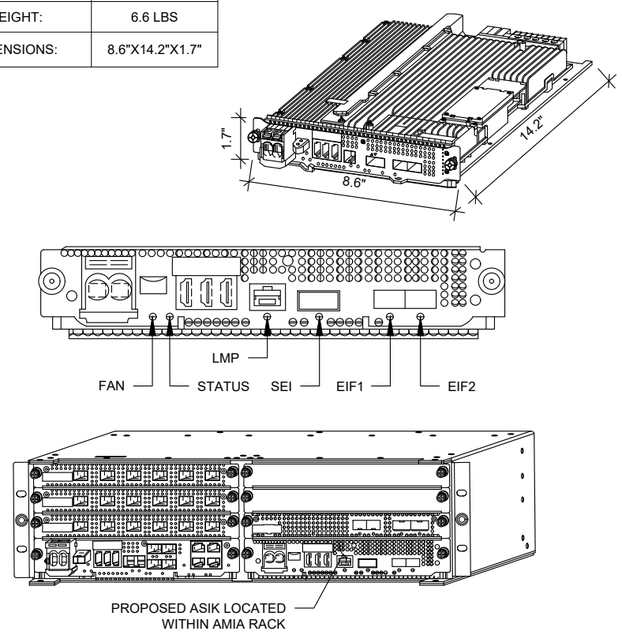
3 ABIL DETAIL
SCALE: N.T.S.

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



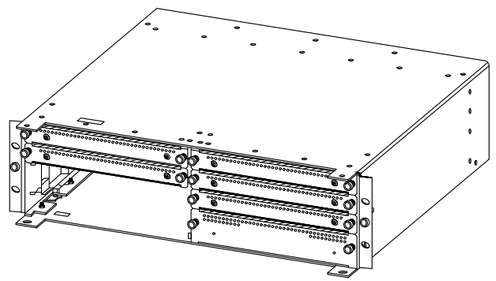
4 ABIC DETAIL
SCALE: N.T.S.

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



5 ASIK DETAIL
SCALE: N.T.S.

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

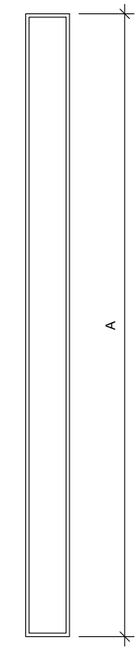


6 AMIA DETAIL
SCALE: N.T.S.

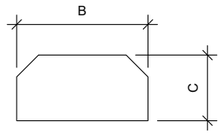
SUPPLEMENTAL

SHEET NUMBER: R-603

REVISION: -



FRONT VIEW

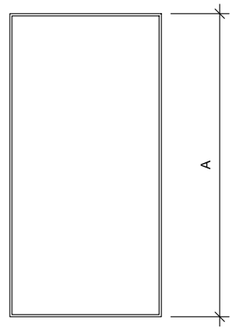


TOP VIEW

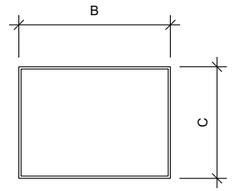
1 ANTENNA SPECIFICATIONS

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

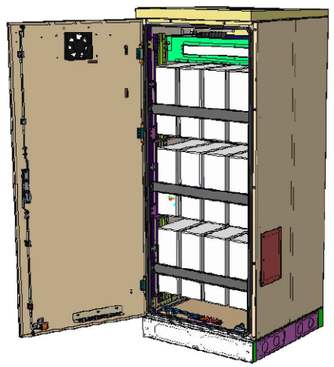
RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RADIO 4460 B25/B66	19.6"	15.7"	12.1"	109.0
RADIO 4480 B71/B85A	21.8"	15.7"	7.5"	46

SUPPLEMENTAL

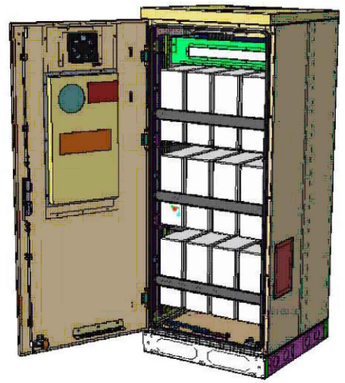
SHEET NUMBER: R-604

REVISION: -

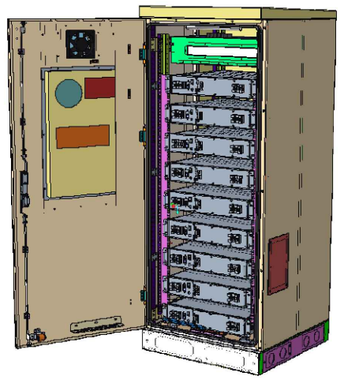
Enclosure B160



Enclosure B160
AirCon + VRLA



Enclosure B160
AirCon + Li-Ion



Enclosure B160
Convection Cooling
+ VRLA

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/m^2)
- 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

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SUPPLEMENTAL

SHEET NUMBER: R-605

REVISION: -

ERICSSON

Enclosure 6160 AC

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

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

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

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

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

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

Preliminary technical specification for Enclosure 6160 AC

CAPACITY	
Rack space user equipment	19U (19" rack)
Hardware capabilities	Power and CPRI support for multi-standard remote radios (RRU or AIR) ERS Baseband and Transport units Li-Ion batteries 3PP equipment Additional power feed available as option
MECHANICAL SPECIFICATION	
Weight	145 kg (excluding active equipment) 320 lbs (excluding active equipment)
Dimension (H x W x D)	1600 x 650 x 650 mm (incl. Base frame) 63 x 26 x 26 in. (incl. Base frame)
Base frame height	150 mm 6 in.
Mounting position	Ground
Enclosure material	Aluminum
Color	Power paint NCS 2002-B
Door	Front access
Rack type	19" (IEC 60297-3-100)
Locking type	Pad lock or Cylinder
POWER SYSTEM	
Input voltage	3P+N+PE: 346/200-415/240 VAC 2P+N+PE: 208/120-220/127 VAC 1P+N+PE: 200-250 VAC
Input power	<33kW
Output load (-48VDC)	24kW
Total capacity (-48VDC)	31.5kW
AC SPD	Class 2/Type 2
DC SPD	Class 2/Type 2
PSU Slots	9x
Service outlet	Optional
Priority load	8x Circuit Breaker
LLVD 1	6x Circuit Breaker
LLVD 2	6x Circuit Breaker
CB ratings	3A / 5A / 10A / 15A / 20A / 25A / 30A / 40A / 50A / 60A / 80A / 100A
Battery Interface	2x Circuit Breaker
Battery Circuit Breaker rating	125A 2pol (200A)
PSU capacity	3500W

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

SUPPLEMENTAL

SHEET NUMBER: R-606

REVISION: -

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
EPA Emission Compliance	Stationary Emergency
Cylinder #	4
Type	In-Line
Displacement - in³ (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

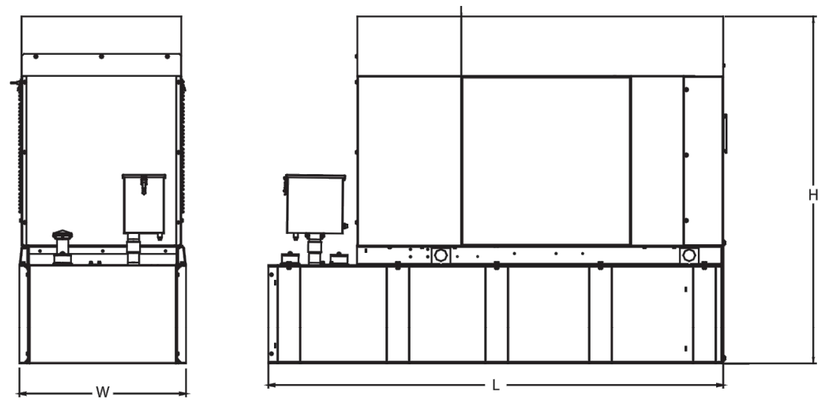
ALTERNATOR SPECIFICATIONS

Standard Model	Generac
Poles	4
Field Type	Rotating
Insulation Class - Rotor	F
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Direct
Bearings	Sealed Ball
Coupling	Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Regulation Accuracy (Steady State)	±1.0%

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

* All measurements are approximate and for estimation purposes only.
Drawing is for illustration purposes only, not to scale.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

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.

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53189
P: (262) 544-4811

Part No 10000035933
Rev. 8 07/16/18

SUPPLEMENTAL

SHEET NUMBER: R-607

REVISION: -

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**170 ft Monopole**
ATC Site Name	:	**Cheshire,CT**
ATC Site Number	:	**208478**
Engineering Number	:	**13704270_C3_07**
Proposed Carrier	:	**T-MOBILE**
Carrier Site Name	:	**CTNH568A**
Carrier Site Number	:	**CTNH568A**
Site Location	:	**1325 Cheshire Street** **Cheshire, CT 06410** **41.5326, -72.8705**
County	:	**New Haven**
Date	:	**January 6, 2022**
Max Usage	:	**43%**
Result	:	**Pass**

Prepared By:

Kyle MacPetrie
Structural Engineer I

Reviewed By:

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32593
LICENSED
PROFESSIONAL ENGINEER

Authorized by "EOR"
06 Jan 2022 05:13:52 cosign

COA : PEC.0001553

Table of Contents

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
Modifications	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:	118 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Spectral Response:	Ss = 0.20, S_1 = 0.06
Site Class:	D - Stiff Soil - Default

Conclusion

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

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

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
181.2	2	RFS SC3-W100AC	Stand-Off	-	CITY OF CHESHIRE, CT
170.0	2	dbSpectra DS1F03F36D-N	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 4478 Band 14 (15" Height)			
	6	Ericsson RRU22			
	3	Ericsson RRUS 12			
	3	Ericsson 8843			
	6	CCI HPA-65R-BUU-H8			
	3	CCI DMP65R-BU8D			
	3	CCI TPA65R-BU8D			
	3	Ericsson RRUS 4415 B30			
	6	Ericsson RRUS A2			
	3	Ericsson RRUS 4449 B5, B12			
	1	Raycap DC9-48-60-24-8C-EV			
145.0	3	Samsung B2/B66A RRH-BR049	Sector Frame	(2) 1.25" (31.8mm) Hybrid	VERIZON WIRELESS
	3	Samsung B5/B13 RRH-BR04C			
	1	RFS DB-C1-12C-24AB-0Z			
	6	JMA Wireless MX10FIT665-xx			
	3	Samsung RT4401-48A			

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
134.0	3	Ericsson Radio 4460 B25+B66	Triangular Platform with Handrails	(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	43%	Pass
Shaft	38%	Pass
Base Plate	20%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	4657.1	42%
Axial (Kips)	76.4	25%
Shear (Kips)	40.5	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	1.009	0.620
134.0	RFS APXVAALL24 43-U-NA20	T-MOBILE	0.631	0.560
	Ericsson Air6449 B41			
	Ericsson Radio 4460 B25+B66			
	Ericsson Radio 4480 B71+B85A			

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

Standard Conditions

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

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

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

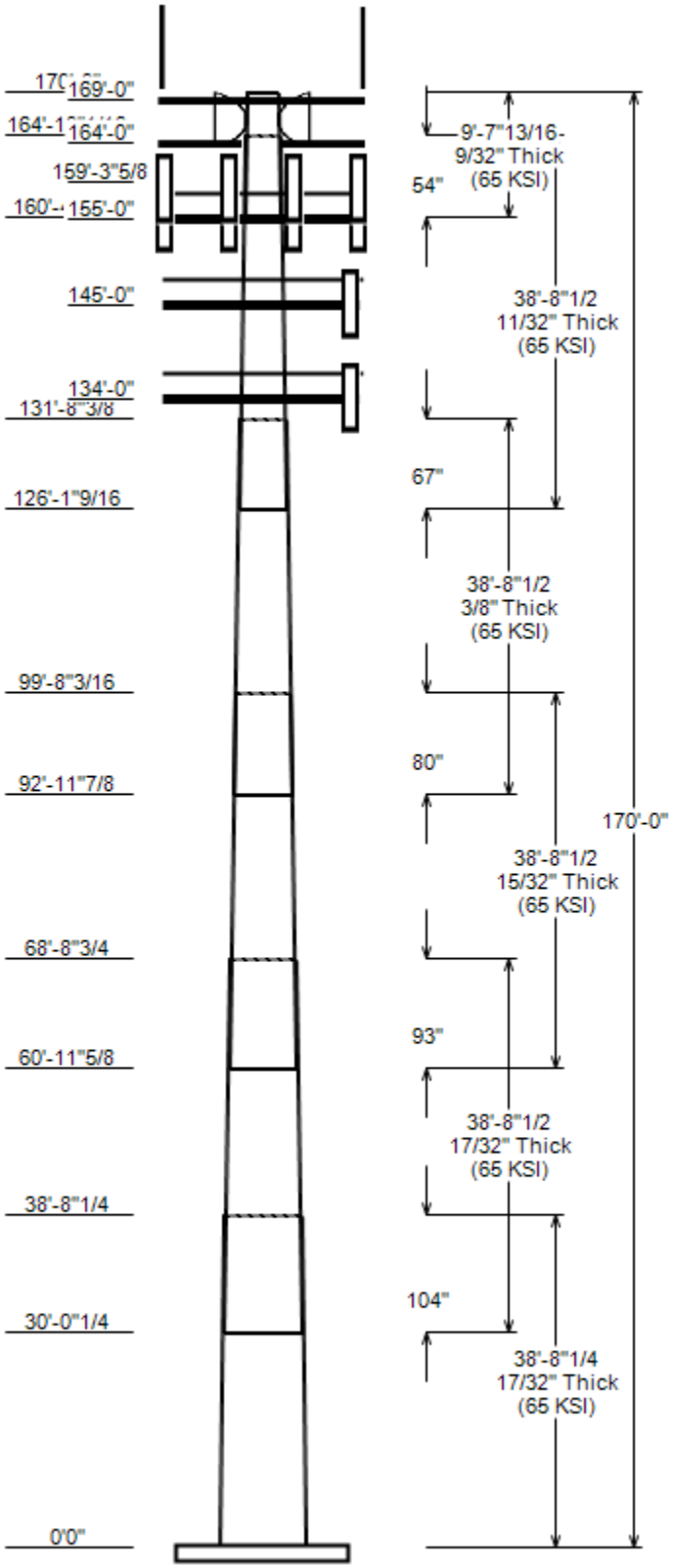
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

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

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

JOB INFORMATION

Asset :	208478, Cheshire	Height :	170 ft
Client :	T-MOBILE	Base Width :	73.69
Code :	ANSI/TIA-222-H	Shape :	18 Sides



SITE PARAMETERS

Base Elev (ft):	0.00	Structure Class:	II
Taper :	0.29800 (In/ft)	Exposure :	C
Topographic Category :	1	Topographic Feature:	
Topo Method :	Method 1		

SECTION PROPERTIES

Shaft Section	Length (ft)	Diameter (in) Across Flats Top	Diameter (in) Across Flats Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	38.690	62.17	73.69	0.531		0.000	18 Sides	65
2	38.710	54.30	65.82	0.531	Slip Joint	104.030	18 Sides	65
3	38.710	46.02	57.54	0.469	Slip Joint	93.130	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	66.840	18 Sides	65
6	9.650	27.09	29.96	0.281	Slip Joint	53.880	18 Sides	65

DISCRETE APPURTENANCE

Attach Elev (ft)	Force Elev (ft)	Qty	Description
170.0	181.0	2	dbSpectra DS1F03F36D-N
170.0	167.5	2	RFS SC3-W100AC
169.0	169.0	4	Generic Flat Stand-Off
164.0	164.0	2	Generic Flat Stand-Off
159.3	159.3	1	Raycap DC6-48-60-18-8C-EV
155.0	155.0	6	Ericsson RRUS A2
155.0	155.0	3	Ericsson 4478 Band 14 (15" Hei
155.0	155.0	3	Ericsson RRUS 4415 B30
155.0	155.0	3	Ericsson RRUS 4449 B5, B12
155.0	155.0	6	Ericsson RRU22
155.0	155.6	3	Ericsson RRUS 12
155.0	155.0	3	Ericsson 8843
155.0	155.0	1	Raycap DC9-48-60-24-8C-EV
155.0	155.0	6	CCI HPA-65R-BUU-H8
155.0	155.0	3	Generic Round Sector Frame
155.0	155.0	3	CCI DMP65R-BU8D
155.0	156.9	3	CCI TPA65R-BU8D
145.0	145.0	3	Samsung RT4401-48A
145.0	145.0	3	Samsung B5/B13 RRH-BR04C
145.0	145.0	3	Samsung B2/B66A RRH-BR049
145.0	145.0	1	RFS DB-C1-12C-24AB-0Z
145.0	145.0	6	JMA Wireless MX10FIT665-xx
145.0	145.0	3	Generic Flat Light Sector Fram
134.0	134.0	3	Ericsson Radio 4460 B25+B66
134.0	134.0	3	Ericsson Radio 4480 B71+B85A
134.0	134.0	3	Ericsson Air6449 B41
134.0	134.0	3	RFS APXVAALL24 43-U-NA20
134.0	134.0	1	Generic Flat Platform with Han

LINEAR APPURTENANCE

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
0.0	170.0	E105	No
0.0	170.0	7/8" Coax	No
0.0	155.0	2" conduit	No
0.0	155.0	0.96" (24.3mm) Cable	No
0.0	155.0	0.51" (13mm) Hybrid	No
0.0	145.0	1.25" (31.8mm) Hybrid	No
0.0	134.0	1.99" (50.7mm) Hybrid	No

LOAD CASES

1.2D + 1.0W	118 mph wind with no ice

JOB INFORMATION			
Asset :	208478, Cheshire	Height :	170 ft
Client :	T-MOBILE	Base Width :	73.69
Code :	ANSI/TIA-222-H	Shape :	18 Sides

0.9D + 1.0W	118 mph wind with no ice
1.2D + 1.0Di + 1.0Wi	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

REACTIONS

Load Case	Moment (kip-ft)	Shear (Kip)	Axial (Kip)
1.2D + 1.0W	4657.08	40.45	76.44
0.9D + 1.0W	4630.59	40.43	57.32
1.2D + 1.0Di + 1.0Wi	1240.75	11.10	95.44
1.2D + 1.0Ev + 1.0Eh	270.21	2.19	76.49
0.9D - 1.0Ev + 1.0Eh	268.37	2.19	52.77
1.0D + 1.0W	1073.38	9.35	63.72

DISH DEFLECTIONS

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	170.00	12.109	0.621

ANALYSIS PARAMETERS

Location:	New Haven County,CT	**Height:**	170 ft
Type and Shape:	Taper, 18 Sides	**Base Diameter:**	73.69 in
Manufacturer:	Undetermined	**Top Diameter:**	27.09 in
K_d (non-service):	0.95	**Taper:**	0.2980 in/ft
K_e:	1.00	**Rotation:**	0.000°

ICE & WIND PARAMETERS

Exposure Category:	C	**Design Wind Speed w/o Ice:**	118 mph
Risk Category:	II	**Design Wind Speed w/Ice:**	50 mph
Topo Factor Procedure:	Method 1	**Operational Wind Speed:**	60 mph
Topographic Category:	1	**Design Ice Thickness:**	1.00 in
Crest Height:	0 ft	**HMSL:**	116.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil			**Period Based on Rayleigh Method (sec):**	1.71
T_L (sec):	6	**P:**	1	**C_s:**	0.034
S_s:	0.200	**S_1:**	0.055	**C_s Max:**	0.034
F_a:	1.600	**F_v:**	2.400	**C_s Min:**	0.030
S_{ds}:	0.213	**S_{d1}:**	0.088		

LOAD CASES

1.2D + 1.0W	118 mph wind with no ice
0.9D + 1.0W	118 mph wind with no ice
1.2D + 1.0Di + 1.0Wi	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

SHAFT SECTION PROPERTIES

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in^2)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (in)	Top Area (in^2)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	38.69	0.5313	65		0.00	14,962	73.69	0.000	123.37	83,422.3	22.69	138.70	62.17	38.69	103.95	49,903.5	18.87	117.02	0.2976
2-18	38.71	0.5313	65	Slip	104.03	13,220	65.82	30.020	110.09	59,284.2	20.08	123.88	54.30	68.73	90.66	33,109.7	16.26	102.19	0.2976
3-18	38.71	0.4688	65	Slip	93.13	10,056	57.54	60.970	84.92	34,949.6	19.88	122.74	46.02	99.68	67.78	17,768.5	15.55	98.17	0.2976
4-18	38.71	0.3750	65	Slip	80.28	6,683	48.76	92.990	57.59	17,035.7	21.16	130.03	37.24	131.70	43.88	7,533.9	15.75	99.31	0.2976
5-18	38.71	0.3438	65	Slip	66.84	4,812	39.58	126.13 0	42.82	8,331.0	18.54	115.14	28.06	164.84	30.25	2,936.5	12.63	81.63	0.2976
6-18	9.65	0.2813	65	Slip	53.88	828	29.96	160.35 0	26.50	2,949.6	17.02	106.51	27.09	170.00	23.94	2,173.5	15.22	96.30	0.2976

Shaft Weight 50,561

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
170.00	dbSpectra DS1F03F36D-N	2	1.00	11.000	71.00	6.750	1.00	185.26	12.127	1.00
170.00	RFS SC3-W100AC	2	1.00	-2.500	40.00	10.737	1.00	187.52	12.032	1.00
169.00	Generic Flat Stand-Off	4	1.00	0.000	187.50	6.300	0.67	277.47	8.404	0.67
164.00	Generic Flat Stand-Off	2	1.00	0.000	187.50	6.300	0.90	277.20	8.398	0.90
159.30	Raycap DC6-48-60-18-8C-EV	1	0.80	0.000	16.00	4.788	0.50	102.67	5.775	0.50
155.00	Ericsson 4478 Band 14 (15" Hei	3	0.80	0.000	59.90	1.842	0.50	96.90	2.442	0.50
155.00	CCI TPA65R-BU8D	3	0.80	1.900	82.50	18.089	0.63	313.21	20.560	0.63
155.00	CCI DMP65R-BU8D	3	0.80	0.000	95.70	17.871	0.63	323.13	20.337	0.63
155.00	Generic Round Sector Frame	3	0.75	0.000	300.00	14.400	0.67	546.13	25.476	0.67
155.00	CCI HPA-65R-BUU-H8	6	0.80	0.000	68.00	12.976	0.67	239.93	15.371	0.67
155.00	Raycap DC9-48-60-24-8C-EV	1	0.80	0.000	16.00	4.788	0.50	102.39	5.772	0.50
155.00	Ericsson 8843	3	0.80	0.000	85.00	3.500	0.50	153.27	4.355	0.50
155.00	Ericsson RRUS 12	3	0.80	0.600	50.00	3.145	0.50	104.12	3.921	0.50
155.00	Ericsson RRU22	6	0.80	0.000	52.90	2.222	0.50	93.56	2.890	0.50
155.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	114.13	2.593	0.50
155.00	Ericsson RRUS 4415 B30	3	0.80	0.000	46.00	1.842	0.50	78.81	2.442	0.50
155.00	Ericsson RRUS A2	6	0.80	0.000	15.00	1.600	0.50	39.29	2.159	0.50
145.00	Generic Flat Light Sector Fram	3	0.75	0.000	400.00	17.900	0.75	600.02	27.928	0.75
145.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	126.80	2.475	0.50
145.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	108.32	2.475	0.50
145.00	RFS DB-C1-12C-24AB-0Z	1	0.80	0.000	32.00	4.056	1.00	116.47	4.963	1.00
145.00	JMA Wireless MX10FIT665-xx	6	0.80	0.000	53.40	8.092	0.69	171.93	9.913	0.69
145.00	Samsung RT4401-48A	3	0.80	0.000	18.60	0.996	0.50	36.55	1.451	0.50
134.00	Ericsson Air6449 B41	3	0.75	0.000	104.00	5.682	0.63	193.94	6.730	0.63
134.00	Ericsson Radio 4480 B71+B85A	3	0.75	0.000	84.00	2.852	0.50	133.86	3.589	0.50
134.00	Generic Flat Platform with Han	1	1.00	0.000	2500.00	42.400	1.00	3672.42	56.241	1.00
134.00	Ericsson Radio 4460 B25+B66	3	0.75	0.000	109.00	2.564	0.50	167.33	3.260	0.50
134.00	RFS APXVAALL24 43-U-NA20	3	0.75	0.000	122.80	20.243	0.63	379.86	22.691	0.63
Totals	Num Loadings: 28	86			10,396.40			20,101.19		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg) : 0.00

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax/ Row	Dist Between Rows(in)	Dist Between Cols(in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	170.00	4	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	CITY OF CHESH
0.00	170.00	2	E105	1.3	0.4	N	0	0	0	0	0	N	CITY OF CHESH
0.00	155.00	2	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	155.00	1	0.51" (13mm) Hybrid	0.51	0.14	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	155.00	1	0.96" (24.3mm) Cable	0.96	0.88	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	145.00	2	1.25" (31.8mm) Hybrid	1.25	1.21	N	0	0	0	0	0	N	VERIZON WIREL
0.00	134.00	3	1.99" (50.7mm) Hybrid	1.99	1.9	N	0	0	0	0	0	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	123.366	83,422.30	22.69	138.70	74.7	2229.7	0.0	0.0
5.00		0.5313	72.202	120.857	78,434.10	22.20	135.90	75.3	2139.6	0.0	2,077.6
10.00		0.5313	70.714	118.347	73,648.80	21.71	133.10	75.9	2051.4	0.0	2,034.9
15.00		0.5313	69.225	115.838	69,062.30	21.21	130.29	76.5	1965.0	0.0	1,992.2
20.00		0.5313	67.737	113.328	64,670.20	20.72	127.49	77	1880.4	0.0	1,949.5
25.00		0.5313	66.249	110.819	60,468.40	20.22	124.69	77.6	1797.8	0.0	1,906.8
30.00		0.5313	64.761	108.309	56,452.60	19.73	121.89	78.2	1716.9	0.0	1,864.1
30.02	Bot - Section 2	0.5313	64.754	108.299	56,436.30	19.73	121.88	78.2	1716.6	0.0	7.7
35.00		0.5313	63.272	105.799	52,618.70	19.24	119.09	78.8	1638.0	0.0	3,657.8
38.69	Top - Section 1	0.5313	63.237	105.739	52,528.90	19.22	119.02	78.8	1636.1	0.0	2,656.1
40.00		0.5313	62.847	105.082	51,555.10	19.09	118.29	78.9	1615.7	0.0	469.9
45.00		0.5313	61.359	102.572	47,948.80	18.60	115.49	79.5	1539.2	0.0	1,766.5
50.00		0.5313	59.870	100.062	44,514.80	18.11	112.69	80.1	1464.5	0.0	1,723.8
55.00		0.5313	58.382	97.553	41,248.80	17.61	109.89	80.7	1391.6	0.0	1,681.1
60.00		0.5313	56.894	95.043	38,146.60	17.12	107.08	81.3	1320.6	0.0	1,638.4
60.97	Bot - Section 3	0.5313	56.605	94.556	37,563.10	17.02	106.54	81.4	1307.0	0.0	313.0
65.00		0.5313	55.406	92.534	35,203.90	16.62	104.28	81.8	1251.5	0.0	2,434.9
68.73	Top - Section 2	0.4688	55.233	81.484	30,875.60	19.01	117.82	79	1101.0	0.0	2,207.8
70.00		0.4688	54.855	80.922	30,241.10	18.87	117.01	79.2	1085.8	0.0	350.7
75.00		0.4688	53.367	78.708	27,825.80	18.31	113.84	79.9	1027.0	0.0	1,358.0
80.00		0.4688	51.879	76.493	25,542.70	17.75	110.66	80.5	969.8	0.0	1,320.3
85.00		0.4688	50.390	74.279	23,388.10	17.19	107.49	81.2	914.2	0.0	1,282.6
90.00		0.4688	48.902	72.065	21,358.10	16.63	104.31	81.8	860.2	0.0	1,244.9
92.99	Bot - Section 4	0.4688	48.012	70.740	20,202.10	16.30	102.41	82.2	828.8	0.0	726.6
95.00		0.4688	47.414	69.850	19,449.10	16.07	101.14	82.5	807.9	0.0	872.1
99.68	Top - Section 3	0.3750	46.771	55.220	15,017.90	20.23	124.72	77.6	632.4	0.0	1,988.6
100.00		0.3750	46.676	55.107	14,925.70	20.18	124.47	77.7	629.8	0.0	60.0
105.00		0.3750	45.187	53.336	13,532.20	19.48	120.50	78.5	589.8	0.0	922.5
110.00		0.3750	43.699	51.565	12,228.30	18.78	116.53	79.3	551.2	0.0	892.4
115.00		0.3750	42.211	49.793	11,010.90	18.08	112.56	80.1	513.8	0.0	862.2
120.00		0.3750	40.723	48.022	9,877.10	17.38	108.59	81	477.7	0.0	832.1
125.00		0.3750	39.234	46.251	8,824.00	16.68	104.63	81.8	443.0	0.0	802.0
126.13	Bot - Section 5	0.3750	38.898	45.850	8,596.80	16.53	103.73	82	435.3	0.0	177.1
130.00		0.3750	37.746	44.479	7,848.50	15.99	100.66	82.6	409.5	0.0	1,150.4
131.70	Top - Section 4	0.3438	37.928	41.011	7,319.10	17.69	110.32	80.6	380.1	0.0	494.5
134.00		0.3438	37.243	40.264	6,926.40	17.34	108.33	81	366.3	0.0	318.0
135.00		0.3438	36.946	39.939	6,760.10	17.19	107.46	81.2	360.4	0.0	136.5
140.00		0.3438	35.457	38.315	5,968.60	16.42	103.13	82.1	331.6	0.0	665.7
145.00		0.3438	33.969	36.691	5,241.40	15.66	98.80	82.6	303.9	0.0	638.1
150.00		0.3438	32.481	35.067	4,575.80	14.90	94.48	82.6	277.5	0.0	610.4
155.00		0.3438	30.993	33.443	3,969.10	14.13	90.15	82.6	252.2	0.0	582.8
159.30		0.3438	29.713	32.047	3,492.30	13.48	86.42	82.6	231.5	0.0	479.1
160.00		0.3438	29.504	31.820	3,418.50	13.37	85.82	82.6	228.2	0.0	76.1
160.35	Bot - Section 6	0.3438	29.400	31.706	3,382.00	13.32	85.52	82.6	226.6	0.0	37.9
164.00		0.3438	28.314	30.520	3,016.70	12.76	82.36	82.6	209.9	0.0	709.4
164.84	Top - Section 5	0.2813	28.626	25.307	2,568.90	16.18	101.76	82.4	176.8	0.0	159.5
165.00		0.2813	28.579	25.264	2,556.00	16.15	101.60	82.4	176.2	0.0	13.8
169.00		0.2813	27.388	24.201	2,246.70	15.40	97.36	82.6	161.6	0.0	336.6
170.00		0.2813	27.091	23.936	2,173.50	15.22	96.30	82.6	158.0	0.0	81.9
									Totals:		50,564.9

Load Case: 1.2D + 1.0W 118 mph wind with no ice 21 Iterations
Gust Response Factor: 1.10
Dead load Factor: 1.20
Wind Load Factor: 1.00

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-76.44	-40.45	0.00	-4,657.1	0.00	4,657.08	8,295.02	2,165.08	14,306.35	12,493.79	0	0	0.382
5.00	-73.78	-39.84	0.00	-4,454.8	0.00	4,454.85	8,189.47	2,121.04	13,730.28	12,082.08	0.04	-0.08	0.378
10.00	-71.18	-39.25	0.00	-4,255.6	0.00	4,255.64	8,081.29	2,076.99	13,166.04	11,673.09	0.17	-0.16	0.374
15.00	-68.62	-38.65	0.00	-4,059.4	0.00	4,059.40	7,970.49	2,032.95	12,613.65	11,267.07	0.37	-0.24	0.369
20.00	-66.12	-38.04	0.00	-3,866.2	0.00	3,866.15	7,857.06	1,988.91	12,073.09	10,864.26	0.67	-0.32	0.365
25.00	-63.67	-37.40	0.00	-3,676.0	0.00	3,675.98	7,741.01	1,944.87	11,544.37	10,464.90	1.05	-0.4	0.360
30.00	-61.30	-37.06	0.00	-3,489.0	0.00	3,488.99	7,622.33	1,900.82	11,027.49	10,069.24	1.51	-0.49	0.355
30.02	-61.27	-36.73	0.00	-3,488.2	0.00	3,488.22	7,621.83	1,900.64	11,025.36	10,067.60	1.51	-0.49	0.355
35.00	-56.72	-36.12	0.00	-3,305.3	0.00	3,305.32	7,501.03	1,856.78	10,522.45	9,677.52	2.07	-0.57	0.349
38.69	-53.43	-35.75	0.00	-3,172.0	0.00	3,172.04	7,498.09	1,855.72	10,510.47	9,668.17	2.54	-0.64	0.336
40.00	-52.81	-35.32	0.00	-3,125.2	0.00	3,125.21	7,465.86	1,844.18	10,380.18	9,566.25	2.71	-0.66	0.334
45.00	-50.54	-34.61	0.00	-2,948.6	0.00	2,948.62	7,341.18	1,800.14	9,890.36	9,179.95	3.45	-0.74	0.328
50.00	-48.32	-33.91	0.00	-2,775.6	0.00	2,775.55	7,213.88	1,756.10	9,412.38	8,798.15	4.27	-0.83	0.323
55.00	-46.15	-33.20	0.00	-2,606.0	0.00	2,606.02	7,083.96	1,712.05	8,946.23	8,421.09	5.19	-0.91	0.316
60.00	-44.05	-32.76	0.00	-2,440.0	0.00	2,440.03	6,951.42	1,668.01	8,491.93	8,049.01	6.19	-1	0.310
60.97	-43.64	-32.41	0.00	-2,408.2	0.00	2,408.24	6,925.39	1,659.46	8,405.13	7,977.39	6.4	-1.02	0.309
65.00	-40.60	-31.83	0.00	-2,277.6	0.00	2,277.63	6,816.24	1,623.97	8,049.46	7,682.15	7.29	-1.09	0.303
68.73	-37.85	-31.43	0.00	-2,158.9	0.00	2,158.89	5,796.47	1,430.05	7,073.77	6,526.94	8.17	-1.16	0.338
70.00	-37.38	-31.00	0.00	-2,119.0	0.00	2,119.00	5,768.66	1,420.18	6,976.53	6,450.44	8.48	-1.18	0.335
75.00	-35.60	-30.30	0.00	-1,964.0	0.00	1,963.99	5,657.44	1,381.32	6,599.99	6,151.49	9.77	-1.28	0.326
80.00	-33.87	-29.60	0.00	-1,812.5	0.00	1,812.51	5,543.60	1,342.46	6,233.89	5,856.63	11.16	-1.37	0.316
85.00	-32.19	-28.91	0.00	-1,664.5	0.00	1,664.52	5,427.13	1,303.60	5,878.24	5,566.11	12.65	-1.47	0.305
90.00	-30.56	-28.35	0.00	-1,520.0	0.00	1,520.00	5,308.04	1,264.74	5,533.04	5,280.17	14.24	-1.57	0.294
92.99	-29.61	-28.00	0.00	-1,435.2	0.00	1,435.23	5,235.56	1,241.49	5,331.57	5,111.44	15.24	-1.63	0.287
95.00	-28.50	-27.54	0.00	-1,379.0	0.00	1,378.96	5,186.33	1,225.87	5,198.28	4,999.05	15.94	-1.67	0.282
99.68	-26.00	-27.15	0.00	-1,250.0	0.00	1,250.04	3,857.01	969.12	4,061.20	3,681.17	17.61	-1.76	0.347
100.00	-25.90	-26.82	0.00	-1,241.4	0.00	1,241.37	3,851.71	967.13	4,044.57	3,668.51	17.73	-1.76	0.346
105.00	-24.65	-26.17	0.00	-1,107.3	0.00	1,107.28	3,767.41	936.05	3,788.77	3,471.96	19.64	-1.87	0.326
110.00	-23.45	-25.52	0.00	-976.5	0.00	976.46	3,680.49	904.96	3,541.33	3,278.28	21.66	-1.98	0.305
115.00	-22.28	-24.89	0.00	-848.8	0.00	848.84	3,590.95	873.87	3,302.24	3,087.70	23.8	-2.09	0.282
120.00	-21.15	-24.28	0.00	-724.4	0.00	724.38	3,498.78	842.79	3,071.51	2,900.48	26.04	-2.19	0.257
125.00	-20.07	-23.88	0.00	-603.0	0.00	603.00	3,403.98	811.70	2,849.13	2,716.85	28.39	-2.29	0.229
126.13	-19.82	-23.59	0.00	-576.0	0.00	576.01	3,382.19	804.67	2,800.03	2,675.87	28.93	-2.31	0.222
130.00	-18.35	-23.22	0.00	-484.7	0.00	484.71	3,304.60	780.61	2,635.11	2,535.56	30.83	-2.38	0.198
131.70	-17.72	-22.97	0.00	-445.2	0.00	445.23	2,974.75	719.74	2,443.38	2,297.47	31.68	-2.4	0.201
134.00	-12.96	-18.32	0.00	-392.4	0.00	392.41	2,935.54	706.63	2,355.21	2,225.52	32.85	-2.44	0.181
135.00	-12.78	-17.99	0.00	-374.1	0.00	374.09	2,918.31	700.93	2,317.37	2,194.45	33.37	-2.46	0.176
140.00	-11.91	-17.41	0.00	-284.1	0.00	284.14	2,830.61	672.43	2,132.78	2,041.16	35.98	-2.53	0.144
145.00	-8.75	-13.39	0.00	-197.1	0.00	197.08	2,725.98	643.93	1,955.84	1,881.59	38.66	-2.58	0.108
150.00	-7.97	-12.85	0.00	-130.1	0.00	130.11	2,605.33	615.43	1,786.57	1,717.91	41.39	-2.63	0.079
155.00	-3.73	-4.79	0.00	-63.0	0.00	63.05	2,484.68	586.93	1,624.96	1,561.69	44.16	-2.66	0.042
159.30	-3.14	-4.42	0.00	-42.5	0.00	42.46	2,380.92	562.42	1,492.10	1,433.29	46.56	-2.67	0.031
160.00	-3.05	-4.37	0.00	-39.4	0.00	39.36	2,364.03	558.43	1,471.01	1,412.90	46.95	-2.68	0.029
160.35	-3.01	-4.18	0.00	-37.8	0.00	37.83	2,355.57	556.43	1,460.51	1,402.75	47.15	-2.68	0.028
164.00	-1.74	-3.32	0.00	-22.6	0.00	22.58	2,267.51	535.63	1,353.36	1,299.24	49.2	-2.69	0.018
164.84	-1.55	-3.26	0.00	-19.8	0.00	19.80	1,876.06	444.14	1,137.15	1,091.91	49.67	-2.69	0.019
165.00	-1.54	-3.07	0.00	-19.3	0.00	19.28	1,873.71	443.39	1,133.33	1,088.70	49.76	-2.69	0.019
169.00	-0.28	-1.90	0.00	-7.0	0.00	6.99	1,798.04	424.73	1,039.99	1,000.34	52.01	-2.7	0.007
170.00	0.00	-1.89	0.00	-5.1	0.00	5.09	1,778.30	420.07	1,017.28	978.39	52.58	-2.7	0.005

Load Case: 0.9D + 1.0W 118 mph wind with no ice 21 Iterations
Gust Response Factor: 1.10
Dead load Factor: 0.90
Wind Load Factor: 1.00

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-57.32	-40.43	0.00	-4,630.6	0.00	4,630.59	8,295.02	2,165.08	14,306.35	12,493.79	0	0	0.378
5.00	-55.32	-39.80	0.00	-4,428.4	0.00	4,428.42	8,189.47	2,121.04	13,730.28	12,082.08	0.04	-0.08	0.374
10.00	-53.35	-39.19	0.00	-4,229.4	0.00	4,229.41	8,081.29	2,076.99	13,166.04	11,673.09	0.17	-0.16	0.369
15.00	-51.42	-38.57	0.00	-4,033.5	0.00	4,033.49	7,970.49	2,032.95	12,613.65	11,267.07	0.37	-0.24	0.365
20.00	-49.53	-37.93	0.00	-3,840.7	0.00	3,840.66	7,857.06	1,988.91	12,073.09	10,864.26	0.66	-0.32	0.360
25.00	-47.68	-37.27	0.00	-3,651.0	0.00	3,651.02	7,741.01	1,944.87	11,544.37	10,464.90	1.04	-0.4	0.355
30.00	-45.90	-36.93	0.00	-3,464.7	0.00	3,464.67	7,622.33	1,900.82	11,027.49	10,069.24	1.5	-0.48	0.350
30.02	-45.87	-36.59	0.00	-3,463.9	0.00	3,463.90	7,621.83	1,900.64	11,025.36	10,067.60	1.51	-0.48	0.350
35.00	-42.45	-35.97	0.00	-3,281.7	0.00	3,281.72	7,501.03	1,856.78	10,522.45	9,677.52	2.05	-0.57	0.345
38.69	-39.98	-35.60	0.00	-3,149.0	0.00	3,149.01	7,498.09	1,855.72	10,510.47	9,668.17	2.52	-0.63	0.331
40.00	-39.50	-35.15	0.00	-3,102.4	0.00	3,102.38	7,465.86	1,844.18	10,380.18	9,566.25	2.7	-0.66	0.330
45.00	-37.79	-34.44	0.00	-2,926.6	0.00	2,926.62	7,341.18	1,800.14	9,890.36	9,179.95	3.43	-0.74	0.324
50.00	-36.12	-33.72	0.00	-2,754.4	0.00	2,754.44	7,213.88	1,756.10	9,412.38	8,798.15	4.25	-0.82	0.318
55.00	-34.48	-33.00	0.00	-2,585.9	0.00	2,585.86	7,083.96	1,712.05	8,946.23	8,421.09	5.16	-0.91	0.312
60.00	-32.90	-32.56	0.00	-2,420.9	0.00	2,420.87	6,951.42	1,668.01	8,491.93	8,049.01	6.15	-0.99	0.306
60.97	-32.59	-32.21	0.00	-2,389.3	0.00	2,389.27	6,925.39	1,659.46	8,405.13	7,977.39	6.36	-1.01	0.305
65.00	-30.30	-31.62	0.00	-2,259.5	0.00	2,259.50	6,816.24	1,623.97	8,049.46	7,682.15	7.24	-1.08	0.299
68.73	-28.23	-31.23	0.00	-2,141.5	0.00	2,141.53	5,796.47	1,430.05	7,073.77	6,526.94	8.12	-1.15	0.333
70.00	-27.87	-30.79	0.00	-2,101.9	0.00	2,101.89	5,768.66	1,420.18	6,976.53	6,450.44	8.42	-1.17	0.331
75.00	-26.53	-30.08	0.00	-1,947.9	0.00	1,947.92	5,657.44	1,381.32	6,599.99	6,151.49	9.7	-1.27	0.322
80.00	-25.23	-29.38	0.00	-1,797.5	0.00	1,797.51	5,543.60	1,342.46	6,233.89	5,856.63	11.08	-1.36	0.312
85.00	-23.96	-28.68	0.00	-1,650.6	0.00	1,650.62	5,427.13	1,303.60	5,878.24	5,566.11	12.56	-1.46	0.301
90.00	-22.74	-28.12	0.00	-1,507.2	0.00	1,507.22	5,308.04	1,264.74	5,533.04	5,280.17	14.14	-1.56	0.290
92.99	-22.02	-27.78	0.00	-1,423.1	0.00	1,423.11	5,235.56	1,241.49	5,331.57	5,111.44	15.14	-1.61	0.283
95.00	-21.18	-27.32	0.00	-1,367.3	0.00	1,367.29	5,186.33	1,225.87	5,198.28	4,999.05	15.83	-1.65	0.278
99.68	-19.30	-26.94	0.00	-1,239.4	0.00	1,239.42	3,857.01	969.12	4,061.20	3,681.17	17.49	-1.74	0.342
100.00	-19.23	-26.60	0.00	-1,230.8	0.00	1,230.81	3,851.71	967.13	4,044.57	3,668.51	17.61	-1.75	0.341
105.00	-18.28	-25.95	0.00	-1,097.8	0.00	1,097.81	3,767.41	936.05	3,788.77	3,471.96	19.5	-1.86	0.322
110.00	-17.37	-25.30	0.00	-968.1	0.00	968.08	3,680.49	904.96	3,541.33	3,278.28	21.51	-1.97	0.301
115.00	-16.49	-24.67	0.00	-841.6	0.00	841.57	3,590.95	873.87	3,302.24	3,087.70	23.63	-2.07	0.278
120.00	-15.64	-24.05	0.00	-718.2	0.00	718.22	3,498.78	842.79	3,071.51	2,900.48	25.85	-2.17	0.253
125.00	-14.83	-23.67	0.00	-597.9	0.00	597.94	3,403.98	811.70	2,849.13	2,716.85	28.18	-2.27	0.225
126.13	-14.64	-23.38	0.00	-571.2	0.00	571.20	3,382.19	804.67	2,800.03	2,675.87	28.72	-2.29	0.219
130.00	-13.54	-23.01	0.00	-480.7	0.00	480.73	3,304.60	780.61	2,635.11	2,535.56	30.61	-2.36	0.195
131.70	-13.06	-22.77	0.00	-441.6	0.00	441.60	2,974.75	719.74	2,443.38	2,297.47	31.45	-2.39	0.198
134.00	-9.54	-18.17	0.00	-389.2	0.00	389.25	2,935.54	706.63	2,355.21	2,225.52	32.61	-2.42	0.179
135.00	-9.40	-17.84	0.00	-371.1	0.00	371.07	2,918.31	700.93	2,317.37	2,194.45	33.12	-2.44	0.173
140.00	-8.75	-17.27	0.00	-281.9	0.00	281.89	2,830.61	672.43	2,132.78	2,041.16	35.71	-2.51	0.142
145.00	-6.42	-13.29	0.00	-195.6	0.00	195.55	2,725.98	643.93	1,955.84	1,881.59	38.37	-2.56	0.107
150.00	-5.84	-12.75	0.00	-129.1	0.00	129.12	2,605.33	615.43	1,786.57	1,717.91	41.08	-2.61	0.078
155.00	-2.74	-4.74	0.00	-62.6	0.00	62.56	2,484.68	586.93	1,624.96	1,561.69	43.83	-2.64	0.041
159.30	-2.31	-4.38	0.00	-42.2	0.00	42.17	2,380.92	562.42	1,492.10	1,433.29	46.21	-2.65	0.030
160.00	-2.24	-4.33	0.00	-39.1	0.00	39.10	2,364.03	558.43	1,471.01	1,412.90	46.6	-2.66	0.029
160.35	-2.21	-4.14	0.00	-37.6	0.00	37.58	2,355.57	556.43	1,460.51	1,402.75	46.8	-2.66	0.028
164.00	-1.27	-3.29	0.00	-22.5	0.00	22.48	2,267.51	535.63	1,353.36	1,299.24	48.83	-2.67	0.018
164.84	-1.12	-3.24	0.00	-19.7	0.00	19.71	1,876.06	444.14	1,137.15	1,091.91	49.3	-2.67	0.019
165.00	-1.12	-3.05	0.00	-19.2	0.00	19.19	1,873.71	443.39	1,133.33	1,088.70	49.39	-2.67	0.018
169.00	-0.19	-1.90	0.00	-7.0	0.00	6.99	1,798.04	424.73	1,039.99	1,000.34	51.63	-2.67	0.007
170.00	0.00	-1.89	0.00	-5.1	0.00	5.09	1,778.30	420.07	1,017.28	978.39	52.19	-2.67	0.005

Load Case: 1.2D + 1.0Di + 1.0Wi		50 mph wind with 1" radial ice			21 Iterations
Gust Response Factor:	1.10	Ice Dead Load Factor	1.00		
Dead load Factor:	1.20			Ice Importance Factor	1.00
Wind Load Factor:	1.00				

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-95.44	-11.10	0.00	-1,240.8	0.00	1,240.75	8,295.02	2,165.08	14,306.35	12,493.79	0	0	0.111
5.00	-92.48	-10.92	0.00	-1,185.3	0.00	1,185.26	8,189.47	2,121.04	13,730.28	12,082.08	0.01	-0.02	0.109
10.00	-89.54	-10.74	0.00	-1,130.7	0.00	1,130.67	8,081.29	2,076.99	13,166.04	11,673.09	0.04	-0.04	0.108
15.00	-86.63	-10.57	0.00	-1,077.0	0.00	1,076.95	7,970.49	2,032.95	12,613.65	11,267.07	0.1	-0.06	0.106
20.00	-83.77	-10.38	0.00	-1,024.1	0.00	1,024.13	7,857.06	1,988.91	12,073.09	10,864.26	0.18	-0.08	0.105
25.00	-80.96	-10.19	0.00	-972.2	0.00	972.23	7,741.01	1,944.87	11,544.37	10,464.90	0.28	-0.11	0.103
30.00	-78.21	-10.09	0.00	-921.3	0.00	921.28	7,622.33	1,900.82	11,027.49	10,069.24	0.4	-0.13	0.102
30.02	-78.20	-9.99	0.00	-921.1	0.00	921.07	7,621.83	1,900.64	11,025.36	10,067.60	0.4	-0.13	0.102
35.00	-73.29	-9.81	0.00	-871.3	0.00	871.32	7,501.03	1,856.78	10,522.45	9,677.52	0.55	-0.15	0.100
38.69	-69.72	-9.70	0.00	-835.1	0.00	835.13	7,498.09	1,855.72	10,510.47	9,668.17	0.67	-0.17	0.096
40.00	-69.01	-9.57	0.00	-822.4	0.00	822.42	7,465.86	1,844.18	10,380.18	9,566.25	0.72	-0.17	0.095
45.00	-66.38	-9.36	0.00	-774.6	0.00	774.59	7,341.18	1,800.14	9,890.36	9,179.95	0.92	-0.2	0.093
50.00	-63.80	-9.14	0.00	-727.8	0.00	727.81	7,213.88	1,756.10	9,412.38	8,798.15	1.13	-0.22	0.092
55.00	-61.28	-8.93	0.00	-682.1	0.00	682.09	7,083.96	1,712.05	8,946.23	8,421.09	1.37	-0.24	0.090
60.00	-58.82	-8.80	0.00	-637.4	0.00	637.45	6,951.42	1,668.01	8,491.93	8,049.01	1.64	-0.26	0.088
60.97	-58.34	-8.69	0.00	-628.9	0.00	628.91	6,925.39	1,659.46	8,405.13	7,977.39	1.69	-0.27	0.087
65.00	-55.02	-8.52	0.00	-593.9	0.00	593.89	6,816.24	1,623.97	8,049.46	7,682.15	1.93	-0.29	0.085
68.73	-52.00	-8.40	0.00	-562.1	0.00	562.12	5,796.47	1,430.05	7,073.77	6,526.94	2.16	-0.3	0.095
70.00	-51.46	-8.27	0.00	-551.5	0.00	551.47	5,768.66	1,420.18	6,976.53	6,450.44	2.24	-0.31	0.094
75.00	-49.35	-8.05	0.00	-510.1	0.00	510.14	5,657.44	1,381.32	6,599.99	6,151.49	2.58	-0.34	0.092
80.00	-47.29	-7.84	0.00	-469.9	0.00	469.87	5,543.60	1,342.46	6,233.89	5,856.63	2.95	-0.36	0.089
85.00	-45.28	-7.63	0.00	-430.7	0.00	430.67	5,427.13	1,303.60	5,878.24	5,566.11	3.34	-0.39	0.086
90.00	-43.33	-7.46	0.00	-392.5	0.00	392.52	5,308.04	1,264.74	5,533.04	5,280.17	3.76	-0.41	0.083
92.99	-42.19	-7.35	0.00	-370.2	0.00	370.22	5,235.56	1,241.49	5,331.57	5,111.44	4.02	-0.43	0.081
95.00	-40.96	-7.22	0.00	-355.4	0.00	355.44	5,186.33	1,225.87	5,198.28	4,999.05	4.2	-0.44	0.079
99.68	-38.15	-7.10	0.00	-321.7	0.00	321.67	3,857.01	969.12	4,061.20	3,681.17	4.64	-0.46	0.097
100.00	-38.05	-7.00	0.00	-319.4	0.00	319.40	3,851.71	967.13	4,044.57	3,668.51	4.67	-0.46	0.097
105.00	-36.51	-6.80	0.00	-284.4	0.00	284.43	3,767.41	936.05	3,788.77	3,471.96	5.17	-0.49	0.092
110.00	-35.01	-6.60	0.00	-250.4	0.00	250.45	3,680.49	904.96	3,541.33	3,278.28	5.7	-0.52	0.086
115.00	-33.55	-6.40	0.00	-217.5	0.00	217.46	3,590.95	873.87	3,302.24	3,087.70	6.26	-0.55	0.080
120.00	-32.14	-6.21	0.00	-185.4	0.00	185.43	3,498.78	842.79	3,071.51	2,900.48	6.85	-0.57	0.073
125.00	-30.78	-6.09	0.00	-154.4	0.00	154.36	3,403.98	811.70	2,849.13	2,716.85	7.46	-0.6	0.066
126.13	-30.48	-6.00	0.00	-147.5	0.00	147.48	3,382.19	804.67	2,800.03	2,675.87	7.6	-0.6	0.064
130.00	-28.79	-5.89	0.00	-124.2	0.00	124.25	3,304.60	780.61	2,635.11	2,535.56	8.09	-0.62	0.058
131.70	-28.07	-5.81	0.00	-114.2	0.00	114.23	2,974.75	719.74	2,443.38	2,297.47	8.32	-0.63	0.059
134.00	-21.02	-4.73	0.00	-100.9	0.00	100.87	2,935.54	706.63	2,355.21	2,225.52	8.62	-0.64	0.053
135.00	-20.79	-4.63	0.00	-96.1	0.00	96.14	2,918.31	700.93	2,317.37	2,194.45	8.75	-0.64	0.051
140.00	-19.65	-4.44	0.00	-73.0	0.00	73.01	2,830.61	672.43	2,132.78	2,041.16	9.43	-0.66	0.043
145.00	-14.75	-3.39	0.00	-50.8	0.00	50.79	2,725.98	643.93	1,955.84	1,881.59	10.13	-0.67	0.032
150.00	-13.71	-3.22	0.00	-33.8	0.00	33.85	2,605.33	615.43	1,786.57	1,717.91	10.84	-0.68	0.025
155.00	-5.49	-1.28	0.00	-17.2	0.00	17.20	2,484.68	586.93	1,624.96	1,561.69	11.56	-0.69	0.013
159.30	-4.63	-1.17	0.00	-11.7	0.00	11.69	2,380.92	562.42	1,492.10	1,433.29	12.19	-0.7	0.010
160.00	-4.50	-1.15	0.00	-10.9	0.00	10.87	2,364.03	558.43	1,471.01	1,412.90	12.29	-0.7	0.010
160.35	-4.44	-1.09	0.00	-10.5	0.00	10.47	2,355.57	556.43	1,460.51	1,402.75	12.34	-0.7	0.009
164.00	-2.83	-0.87	0.00	-6.5	0.00	6.48	2,267.51	535.63	1,353.36	1,299.24	12.88	-0.7	0.006
164.84	-2.60	-0.85	0.00	-5.8	0.00	5.75	1,876.06	444.14	1,137.15	1,091.91	13	-0.7	0.007
165.00	-2.58	-0.79	0.00	-5.6	0.00	5.61	1,873.71	443.39	1,133.33	1,088.70	13.02	-0.7	0.007
169.00	-0.82	-0.48	0.00	-2.5	0.00	2.46	1,798.04	424.73	1,039.99	1,000.34	13.61	-0.7	0.003
170.00	0.00	-0.47	0.00	-2.0	0.00	1.98	1,778.30	420.07	1,017.28	978.39	13.76	-0.7	0.002

Load Case: 1.0D + 1.0W 60 mph Wind with No Ice 20 Iterations
Gust Response Factor: 1.10
Dead load Factor: 1.00
Wind Load Factor: 1.00

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-63.72	-9.35	0.00	-1,073.4	0.00	1,073.38	8,295.02	2,165.08	14,306.35	12,493.79	0	0	0.094
5.00	-61.55	-9.21	0.00	-1,026.6	0.00	1,026.61	8,189.47	2,121.04	13,730.28	12,082.08	0.01	-0.02	0.093
10.00	-59.42	-9.07	0.00	-980.6	0.00	980.57	8,081.29	2,076.99	13,166.04	11,673.09	0.04	-0.04	0.091
15.00	-57.33	-8.93	0.00	-935.2	0.00	935.23	7,970.49	2,032.95	12,613.65	11,267.07	0.09	-0.05	0.090
20.00	-55.29	-8.78	0.00	-890.6	0.00	890.59	7,857.06	1,988.91	12,073.09	10,864.26	0.15	-0.07	0.089
25.00	-53.29	-8.63	0.00	-846.7	0.00	846.68	7,741.01	1,944.87	11,544.37	10,464.90	0.24	-0.09	0.088
30.00	-51.33	-8.55	0.00	-803.5	0.00	803.53	7,622.33	1,900.82	11,027.49	10,069.24	0.35	-0.11	0.087
30.02	-51.32	-8.47	0.00	-803.4	0.00	803.35	7,621.83	1,900.64	11,025.36	10,067.60	0.35	-0.11	0.087
35.00	-47.57	-8.33	0.00	-761.2	0.00	761.16	7,501.03	1,856.78	10,522.45	9,677.52	0.48	-0.13	0.085
38.69	-44.84	-8.25	0.00	-730.4	0.00	730.42	7,498.09	1,855.72	10,510.47	9,668.17	0.58	-0.15	0.082
40.00	-44.34	-8.14	0.00	-719.6	0.00	719.62	7,465.86	1,844.18	10,380.18	9,566.25	0.63	-0.15	0.081
45.00	-42.48	-7.98	0.00	-678.9	0.00	678.90	7,341.18	1,800.14	9,890.36	9,179.95	0.79	-0.17	0.080
50.00	-40.66	-7.81	0.00	-639.0	0.00	639.00	7,213.88	1,756.10	9,412.38	8,798.15	0.98	-0.19	0.078
55.00	-38.89	-7.65	0.00	-599.9	0.00	599.93	7,083.96	1,712.05	8,946.23	8,421.09	1.2	-0.21	0.077
60.00	-37.16	-7.55	0.00	-561.7	0.00	561.69	6,951.42	1,668.01	8,491.93	8,049.01	1.43	-0.23	0.075
60.97	-36.82	-7.47	0.00	-554.4	0.00	554.36	6,925.39	1,659.46	8,405.13	7,977.39	1.47	-0.23	0.075
65.00	-34.31	-7.33	0.00	-524.3	0.00	524.28	6,816.24	1,623.97	8,049.46	7,682.15	1.68	-0.25	0.073
68.73	-32.03	-7.24	0.00	-496.9	0.00	496.93	5,796.47	1,430.05	7,073.77	6,526.94	1.88	-0.27	0.082
70.00	-31.66	-7.14	0.00	-487.7	0.00	487.74	5,768.66	1,420.18	6,976.53	6,450.44	1.95	-0.27	0.081
75.00	-30.21	-6.98	0.00	-452.0	0.00	452.04	5,657.44	1,381.32	6,599.99	6,151.49	2.25	-0.29	0.079
80.00	-28.79	-6.81	0.00	-417.2	0.00	417.16	5,543.60	1,342.46	6,233.89	5,856.63	2.57	-0.32	0.076
85.00	-27.41	-6.65	0.00	-383.1	0.00	383.09	5,427.13	1,303.60	5,878.24	5,566.11	2.91	-0.34	0.074
90.00	-26.08	-6.52	0.00	-349.8	0.00	349.82	5,308.04	1,264.74	5,533.04	5,280.17	3.28	-0.36	0.071
92.99	-25.29	-6.44	0.00	-330.3	0.00	330.31	5,235.56	1,241.49	5,331.57	5,111.44	3.51	-0.37	0.069
95.00	-24.38	-6.34	0.00	-317.4	0.00	317.36	5,186.33	1,225.87	5,198.28	4,999.05	3.67	-0.38	0.068
99.68	-22.31	-6.25	0.00	-287.7	0.00	287.69	3,857.01	969.12	4,061.20	3,681.17	4.06	-0.4	0.084
100.00	-22.24	-6.17	0.00	-285.7	0.00	285.70	3,851.71	967.13	4,044.57	3,668.51	4.08	-0.41	0.084
105.00	-21.22	-6.02	0.00	-254.8	0.00	254.84	3,767.41	936.05	3,788.77	3,471.96	4.52	-0.43	0.079
110.00	-20.24	-5.87	0.00	-224.7	0.00	224.73	3,680.49	904.96	3,541.33	3,278.28	4.99	-0.46	0.074
115.00	-19.28	-5.73	0.00	-195.4	0.00	195.37	3,590.95	873.87	3,302.24	3,087.70	5.48	-0.48	0.069
120.00	-18.35	-5.58	0.00	-166.7	0.00	166.73	3,498.78	842.79	3,071.51	2,900.48	6	-0.5	0.063
125.00	-17.46	-5.50	0.00	-138.8	0.00	138.81	3,403.98	811.70	2,849.13	2,716.85	6.54	-0.53	0.056
126.13	-17.26	-5.43	0.00	-132.6	0.00	132.60	3,382.19	804.67	2,800.03	2,675.87	6.66	-0.53	0.055
130.00	-16.04	-5.34	0.00	-111.6	0.00	111.60	3,304.60	780.61	2,635.11	2,535.56	7.1	-0.55	0.049
131.70	-15.51	-5.29	0.00	-102.5	0.00	102.51	2,974.75	719.74	2,443.38	2,297.47	7.3	-0.55	0.050
134.00	-11.40	-4.22	0.00	-90.4	0.00	90.35	2,935.54	706.63	2,355.21	2,225.52	7.57	-0.56	0.045
135.00	-11.25	-4.14	0.00	-86.1	0.00	86.14	2,918.31	700.93	2,317.37	2,194.45	7.68	-0.57	0.043
140.00	-10.52	-4.01	0.00	-65.4	0.00	65.43	2,830.61	672.43	2,132.78	2,041.16	8.29	-0.58	0.036
145.00	-7.76	-3.08	0.00	-45.4	0.00	45.39	2,725.98	643.93	1,955.84	1,881.59	8.9	-0.59	0.027
150.00	-7.09	-2.96	0.00	-30.0	0.00	29.97	2,605.33	615.43	1,786.57	1,717.91	9.53	-0.61	0.020
155.00	-3.28	-1.10	0.00	-14.5	0.00	14.52	2,484.68	586.93	1,624.96	1,561.69	10.17	-0.61	0.011
159.30	-2.77	-1.02	0.00	-9.8	0.00	9.78	2,380.92	562.42	1,492.10	1,433.29	10.72	-0.62	0.008
160.00	-2.70	-1.01	0.00	-9.1	0.00	9.07	2,364.03	558.43	1,471.01	1,412.90	10.81	-0.62	0.008
160.35	-2.66	-0.96	0.00	-8.7	0.00	8.72	2,355.57	556.43	1,460.51	1,402.75	10.86	-0.62	0.007
164.00	-1.57	-0.76	0.00	-5.2	0.00	5.21	2,267.51	535.63	1,353.36	1,299.24	11.33	-0.62	0.005
164.84	-1.41	-0.75	0.00	-4.6	0.00	4.57	1,876.06	444.14	1,137.15	1,091.91	11.44	-0.62	0.005
165.00	-1.39	-0.71	0.00	-4.4	0.00	4.45	1,873.71	443.39	1,133.33	1,088.70	11.46	-0.62	0.005
169.00	-0.30	-0.44	0.00	-1.6	0.00	1.62	1,798.04	424.73	1,039.99	1,000.34	11.98	-0.62	0.002
170.00	0.00	-0.44	0.00	-1.2	0.00	1.18	1,778.30	420.07	1,017.28	978.39	12.11	-0.62	0.001

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

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

Spectral Response Acceleration for Short Period (S_S):	0.200
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.055
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.000
Site Coefficient F_a:	1.600
Site Coefficient F_v:	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.213
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.088
Seismic Response Coefficient (C_s):	0.034
Upper Limit C_S:	0.034
Lower Limit C_S:	0.030
Period based on Rayleigh Method (sec):	1.710
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.600
Total Unfactored Dead Load:	63.730 k
Seismic Base Shear (E):	2.190 k

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
48	169.5	84	317	0.004	8	104
47	167	345	1,272	0.015	33	429
46	164.92	14	51	0.001	1	18
45	164.42	161	580	0.007	15	200
44	162.1753	717	2,522	0.030	65	891
43	160.1753	39	133	0.002	3	48
42	159.65	78	266	0.003	7	96
41	157.15	488	1,632	0.019	42	607
40	152.5	635	2,023	0.024	52	789
39	147.5	663	2,001	0.024	52	823
38	142.5	702	2,007	0.024	52	873
37	137.5	730	1,970	0.023	51	907
36	134.5	149	389	0.005	10	186
35	132.8502	361	921	0.011	24	448
34	130.8502	526	1,311	0.015	34	654
33	128.065	1,222	2,942	0.035	76	1,519
32	125.565	198	462	0.005	12	246
31	122.5	895	2,006	0.024	52	1,112
30	117.5	925	1,939	0.023	50	1,149
29	112.5	955	1,867	0.022	48	1,187
28	107.5	985	1,791	0.021	46	1,224
27	102.5	1,015	1,710	0.020	44	1,262
26	99.8402	66	106	0.001	3	82
25	97.3402	2,075	3,217	0.038	83	2,579
24	93.9952	909	1,333	0.016	34	1,130
23	91.4952	782	1,098	0.013	28	972
22	87.5	1,338	1,748	0.021	45	1,662
21	82.5	1,375	1,635	0.019	42	1,709
20	77.5	1,413	1,519	0.018	39	1,756
19	72.5	1,451	1,402	0.016	36	1,803
18	69.3654	374	337	0.004	9	465
17	66.8654	2,277	1,932	0.023	50	2,830
16	62.9852	2,510	1,935	0.023	50	3,119
15	60.4852	331	239	0.003	6	411

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
14	57.5	1,731	1,153	0.014	30	2,151
13	52.5	1,774	1,021	0.012	26	2,204
12	47.5	1,817	891	0.010	23	2,257
11	42.5	1,859	762	0.009	20	2,310
10	39.345	494	179	0.002	5	614
9	36.845	2,725	889	0.010	23	3,386
8	32.5104	3,750	1,000	0.012	26	4,660
7	30.0104	8	2	0.000	0	10
6	27.5	1,957	399	0.005	10	2,432
5	22.5	2,000	296	0.004	8	2,485
4	17.5	2,042	202	0.002	5	2,538
3	12.5	2,085	120	0.001	3	2,591
2	7.5	2,128	54	0.001	1	2,644
1	2.5	2,170	9	0.000	0	2,697
dbSpectra DS1F03F36D-N	170	142	539	0.006	14	176
RFS SC3-W100AC	170	80	303	0.004	8	99
Generic Flat Stand-Off	169	750	2,818	0.033	73	932
Generic Flat Stand-Off	164	375	1,343	0.016	35	466
Raycap DC6-48-60-18-8C-EV	159.3	16	55	0.001	1	20
Ericsson RRUS A2	155	90	294	0.004	8	112
Ericsson RRUS 4415 B30	155	138	451	0.005	12	171
Ericsson 4478 Band 14 (15" Height)	155	180	588	0.007	15	223
Ericsson RRUS 4449 B5, B12	155	213	697	0.008	18	265
Ericsson RRU22	155	317	1,038	0.012	27	394
Ericsson RRUS 12	155	150	491	0.006	13	186
Ericsson 8843	155	255	834	0.010	21	317
Raycap DC9-48-60-24-8C-EV	155	16	52	0.001	1	20
CCI HPA-65R-BUU-H8	155	408	1,334	0.016	34	507
Generic Round Sector Frame	155	900	2,943	0.035	76	1,118
CCI DMP65R-BU8D	155	287	939	0.011	24	357
CCI TPA65R-BU8D	155	248	809	0.010	21	308
Samsung RT4401-48A	145	56	164	0.002	4	69
Samsung B2/B66A RRH-BR049	145	253	744	0.009	19	315
Samsung B5/B13 RRH-BR04C	145	211	620	0.007	16	262
RFS DB-C1-12C-24AB-0Z	145	32	94	0.001	2	40
JMA Wireless MX10FIT665-xx	145	320	941	0.011	24	398
Generic Flat Light Sector Frame	145	1,200	3,526	0.042	91	1,491
Ericsson Radio 4460 B25+B66	134	327	847	0.010	22	406
Ericsson Radio 4480 B71+B85A	134	252	652	0.008	17	313
Ericsson Air6449 B41	134	312	808	0.010	21	388
RFS APXVAALL24 43-U-NA20	134	368	954	0.011	25	458
Generic Flat Platform with Handrails	134	2,500	6,472	0.076	167	3,107
		63,726	84,937	1.000	2,187	79,190

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
48	169.5	84	317	0.004	8	72
47	167	345	1,272	0.015	33	296
46	164.92	14	51	0.001	1	12
45	164.42	161	580	0.007	15	138
44	162.1753	717	2,522	0.030	65	615
43	160.1753	39	133	0.002	3	33
42	159.65	78	266	0.003	7	66
41	157.15	488	1,632	0.019	42	419
40	152.5	635	2,023	0.024	52	544
39	147.5	663	2,001	0.024	52	568
38	142.5	702	2,007	0.024	52	602
37	137.5	730	1,970	0.023	51	626
36	134.5	149	389	0.005	10	128
35	132.8502	361	921	0.011	24	309
34	130.8502	526	1,311	0.015	34	451

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
33	128.065	1,222	2,942	0.035	76	1,048
32	125.565	198	462	0.005	12	170
31	122.5	895	2,006	0.024	52	767
30	117.5	925	1,939	0.023	50	793
29	112.5	955	1,867	0.022	48	819
28	107.5	985	1,791	0.021	46	845
27	102.5	1,015	1,710	0.020	44	870
26	99.8402	66	106	0.001	3	57
25	97.3402	2,075	3,217	0.038	83	1,779
24	93.9952	909	1,333	0.016	34	780
23	91.4952	782	1,098	0.013	28	670
22	87.5	1,338	1,748	0.021	45	1,147
21	82.5	1,375	1,635	0.019	42	1,179
20	77.5	1,413	1,519	0.018	39	1,211
19	72.5	1,451	1,402	0.016	36	1,244
18	69.3654	374	337	0.004	9	321
17	66.8654	2,277	1,932	0.023	50	1,952
16	62.9852	2,510	1,935	0.023	50	2,152
15	60.4852	331	239	0.003	6	284
14	57.5	1,731	1,153	0.014	30	1,484
13	52.5	1,774	1,021	0.012	26	1,521
12	47.5	1,817	891	0.010	23	1,557
11	42.5	1,859	762	0.009	20	1,594
10	39.345	494	179	0.002	5	424
9	36.845	2,725	889	0.010	23	2,336
8	32.5104	3,750	1,000	0.012	26	3,215
7	30.0104	8	2	0.000	0	7
6	27.5	1,957	399	0.005	10	1,678
5	22.5	2,000	296	0.004	8	1,714
4	17.5	2,042	202	0.002	5	1,751
3	12.5	2,085	120	0.001	3	1,788
2	7.5	2,128	54	0.001	1	1,824
1	2.5	2,170	9	0.000	0	1,861
dbSpectra DS1F03F36D-N	170	142	539	0.006	14	122
RFS SC3-W100AC	170	80	303	0.004	8	69
Generic Flat Stand-Off	169	750	2,818	0.033	73	643
Generic Flat Stand-Off	164	375	1,343	0.016	35	322
Raycap DC6-48-60-18-8C-EV	159.3	16	55	0.001	1	14
Ericsson RRUS A2	155	90	294	0.004	8	77
Ericsson RRUS 4415 B30	155	138	451	0.005	12	118
Ericsson 4478 Band 14 (15" Height)	155	180	588	0.007	15	154
Ericsson RRUS 4449 B5, B12	155	213	697	0.008	18	183
Ericsson RRU22	155	317	1,038	0.012	27	272
Ericsson RRUS 12	155	150	491	0.006	13	129
Ericsson 8843	155	255	834	0.010	21	219
Raycap DC9-48-60-24-8C-EV	155	16	52	0.001	1	14
CCI HPA-65R-BUU-H8	155	408	1,334	0.016	34	350
Generic Round Sector Frame	155	900	2,943	0.035	76	772
CCI DMP65R-BU8D	155	287	939	0.011	24	246
CCI TPA65R-BU8D	155	248	809	0.010	21	212
Samsung RT4401-48A	145	56	164	0.002	4	48
Samsung B2/B66A RRH-BR049	145	253	744	0.009	19	217
Samsung B5/B13 RRH-BR04C	145	211	620	0.007	16	181
RFS DB-C1-12C-24AB-0Z	145	32	94	0.001	2	27
JMA Wireless MX10FIT665-xx	145	320	941	0.011	24	275
Generic Flat Light Sector Frame	145	1,200	3,526	0.042	91	1,029
Ericsson Radio 4460 B25+B66	134	327	847	0.010	22	280
Ericsson Radio 4480 B71+B85A	134	252	652	0.008	17	216
Ericsson Air6449 B41	134	312	808	0.010	21	267
RFS APXVAALL24 43-U-NA20	134	368	954	0.011	25	316
Generic Flat Platform with Handrails	134	2,500	6,472	0.076	167	2,143
		63,726	84,937	1.000	2,187	54,634

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

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-76.49	-2.19	0.00	-270.21	0.00	270.21	8,295.02	2,165.08	14,306	12,493.79	0.00	0.00	0.03
5.00	-73.85	-2.19	0.00	-259.27	0.00	259.27	8,189.47	2,121.04	13,730	12,082.08	0.00	0.00	0.03
10.00	-71.26	-2.20	0.00	-248.30	0.00	248.30	8,081.29	2,076.99	13,166	11,673.09	0.01	-0.01	0.03
15.00	-68.72	-2.20	0.00	-237.32	0.00	237.32	7,970.49	2,032.95	12,614	11,267.07	0.02	-0.01	0.03
20.00	-66.23	-2.19	0.00	-226.35	0.00	226.35	7,857.06	1,988.91	12,073	10,864.26	0.04	-0.02	0.03
25.00	-63.80	-2.19	0.00	-215.38	0.00	215.38	7,741.01	1,944.87	11,544	10,464.90	0.06	-0.02	0.03
30.00	-63.79	-2.19	0.00	-204.45	0.00	204.45	7,622.33	1,900.82	11,027	10,069.24	0.09	-0.03	0.03
30.02	-59.13	-2.16	0.00	-204.40	0.00	204.40	7,621.83	1,900.64	11,025	10,067.60	0.09	-0.03	0.03
35.00	-55.75	-2.14	0.00	-193.62	0.00	193.62	7,501.03	1,856.78	10,522	9,677.52	0.12	-0.03	0.03
38.69	-55.13	-2.14	0.00	-185.71	0.00	185.71	7,498.09	1,855.72	10,510	9,668.17	0.15	-0.04	0.03
40.00	-52.82	-2.12	0.00	-182.91	0.00	182.91	7,465.86	1,844.18	10,380	9,566.25	0.16	-0.04	0.03
45.00	-50.56	-2.10	0.00	-172.29	0.00	172.29	7,341.18	1,800.14	9,890	9,179.95	0.20	-0.04	0.03
50.00	-48.36	-2.08	0.00	-161.78	0.00	161.78	7,213.88	1,756.10	9,412	8,798.15	0.25	-0.05	0.03
55.00	-46.21	-2.05	0.00	-151.38	0.00	151.38	7,083.96	1,712.05	8,946	8,421.09	0.30	-0.05	0.03
60.00	-45.80	-2.05	0.00	-141.12	0.00	141.12	6,951.42	1,668.01	8,492	8,049.01	0.36	-0.06	0.02
60.97	-42.68	-2.00	0.00	-139.14	0.00	139.14	6,925.39	1,659.46	8,405	7,977.39	0.37	-0.06	0.02
65.00	-39.85	-1.95	0.00	-131.09	0.00	131.09	6,816.24	1,623.97	8,049	7,682.15	0.43	-0.06	0.02
68.73	-39.38	-1.94	0.00	-123.83	0.00	123.83	5,796.47	1,430.05	7,074	6,526.94	0.48	-0.07	0.03
70.00	-37.58	-1.90	0.00	-121.37	0.00	121.37	5,768.66	1,420.18	6,977	6,450.44	0.50	-0.07	0.03
75.00	-35.82	-1.87	0.00	-111.86	0.00	111.86	5,657.44	1,381.32	6,600	6,151.49	0.57	-0.07	0.03
80.00	-34.11	-1.82	0.00	-102.53	0.00	102.53	5,543.60	1,342.46	6,234	5,856.63	0.65	-0.08	0.02
85.00	-32.45	-1.78	0.00	-93.41	0.00	93.41	5,427.13	1,303.60	5,878	5,566.11	0.74	-0.09	0.02
90.00	-31.48	-1.75	0.00	-84.52	0.00	84.52	5,308.04	1,264.74	5,533	5,280.17	0.83	-0.09	0.02
92.99	-30.35	-1.72	0.00	-79.28	0.00	79.28	5,235.56	1,241.49	5,332	5,111.44	0.89	-0.09	0.02
95.00	-27.77	-1.63	0.00	-75.82	0.00	75.82	5,186.33	1,225.87	5,198	4,999.05	0.93	-0.10	0.02
99.68	-27.69	-1.63	0.00	-68.19	0.00	68.19	3,857.01	969.12	4,061	3,681.17	1.02	-0.10	0.03
100.00	-26.43	-1.59	0.00	-67.66	0.00	67.66	3,851.71	967.13	4,045	3,668.51	1.03	-0.10	0.03
105.00	-25.20	-1.54	0.00	-59.74	0.00	59.74	3,767.41	936.05	3,789	3,471.96	1.14	-0.11	0.02
110.00	-24.02	-1.49	0.00	-52.04	0.00	52.04	3,680.49	904.96	3,541	3,278.28	1.26	-0.11	0.02
115.00	-22.87	-1.44	0.00	-44.57	0.00	44.57	3,590.95	873.87	3,302	3,087.70	1.38	-0.12	0.02
120.00	-21.75	-1.39	0.00	-37.36	0.00	37.36	3,498.78	842.79	3,072	2,900.48	1.51	-0.12	0.02
125.00	-21.51	-1.38	0.00	-30.41	0.00	30.41	3,403.98	811.70	2,849	2,716.85	1.64	-0.13	0.02
126.13	-19.99	-1.30	0.00	-28.86	0.00	28.86	3,382.19	804.67	2,800	2,675.87	1.67	-0.13	0.02
130.00	-19.34	-1.27	0.00	-23.82	0.00	23.82	3,304.60	780.61	2,635	2,535.56	1.78	-0.13	0.02
131.70	-18.89	-1.24	0.00	-21.67	0.00	21.67	2,974.75	719.74	2,443	2,297.47	1.82	-0.13	0.02
134.00	-14.03	-0.97	0.00	-18.82	0.00	18.82	2,935.54	706.63	2,355	2,225.52	1.89	-0.14	0.01
135.00	-13.12	-0.92	0.00	-17.85	0.00	17.85	2,918.31	700.93	2,317	2,194.45	1.92	-0.14	0.01
140.00	-12.25	-0.86	0.00	-13.26	0.00	13.26	2,830.61	672.43	2,133	2,041.16	2.06	-0.14	0.01
145.00	-8.85	-0.65	0.00	-8.94	0.00	8.94	2,725.98	643.93	1,956	1,881.59	2.21	-0.14	0.01
150.00	-8.06	-0.59	0.00	-5.70	0.00	5.70	2,605.33	615.43	1,787	1,717.91	2.36	-0.15	0.01
155.00	-3.48	-0.27	0.00	-2.73	0.00	2.73	2,484.68	586.93	1,625	1,561.69	2.52	-0.15	0.00
159.30	-3.36	-0.26	0.00	-1.56	0.00	1.56	2,380.92	562.42	1,492	1,433.29	2.65	-0.15	0.00
160.00	-3.32	-0.26	0.00	-1.38	0.00	1.38	2,364.03	558.43	1,471	1,412.90	2.67	-0.15	0.00
160.35	-2.42	-0.19	0.00	-1.29	0.00	1.29	2,355.57	556.43	1,461	1,402.75	2.68	-0.15	0.00
164.00	-1.76	-0.14	0.00	-0.59	0.00	0.59	2,267.51	535.63	1,353	1,299.24	2.79	-0.15	0.00
164.84	-1.74	-0.14	0.00	-0.47	0.00	0.47	1,876.06	444.14	1,137	1,091.91	2.82	-0.15	0.00
165.00	-1.31	-0.11	0.00	-0.44	0.00	0.44	1,873.71	443.39	1,133	1,088.70	2.83	-0.15	0.00
169.00	-0.28	-0.02	0.00	-0.02	0.00	0.02	1,798.04	424.73	1,040	1,000.34	2.95	-0.15	0.00
170.00	0.00	-0.02	0.00	0.00	0.00	0.00	1,778.30	420.07	1,017	978.39	2.98	-0.15	0.00

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

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-52.77	-2.19	0.00	-268.37	0.00	268.37	8,295.02	2,165.08	14,306	12,493.79	0.00	0.00	0.03
5.00	-50.95	-2.19	0.00	-257.43	0.00	257.43	8,189.47	2,121.04	13,730	12,082.08	0.00	0.00	0.03
10.00	-49.16	-2.19	0.00	-246.48	0.00	246.48	8,081.29	2,076.99	13,166	11,673.09	0.01	-0.01	0.03
15.00	-47.41	-2.19	0.00	-235.52	0.00	235.52	7,970.49	2,032.95	12,614	11,267.07	0.02	-0.01	0.03
20.00	-45.70	-2.19	0.00	-224.57	0.00	224.57	7,857.06	1,988.91	12,073	10,864.26	0.04	-0.02	0.03
25.00	-44.02	-2.18	0.00	-213.65	0.00	213.65	7,741.01	1,944.87	11,544	10,464.90	0.06	-0.02	0.03
30.00	-44.01	-2.18	0.00	-202.76	0.00	202.76	7,622.33	1,900.82	11,027	10,069.24	0.09	-0.03	0.03
30.02	-40.80	-2.15	0.00	-202.71	0.00	202.71	7,621.83	1,900.64	11,025	10,067.60	0.09	-0.03	0.03
35.00	-38.46	-2.13	0.00	-191.98	0.00	191.98	7,501.03	1,856.78	10,522	9,677.52	0.12	-0.03	0.03
38.69	-38.04	-2.13	0.00	-184.11	0.00	184.11	7,498.09	1,855.72	10,510	9,668.17	0.15	-0.04	0.02
40.00	-36.44	-2.11	0.00	-181.32	0.00	181.32	7,465.86	1,844.18	10,380	9,566.25	0.16	-0.04	0.02
45.00	-34.88	-2.09	0.00	-170.77	0.00	170.77	7,341.18	1,800.14	9,890	9,179.95	0.20	-0.04	0.02

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
50.00	-33.36	-2.07	0.00	-160.32	0.00	160.32	7,213.88	1,756.10	9,412	8,798.15	0.25	-0.05	0.02
55.00	-31.88	-2.04	0.00	-149.99	0.00	149.99	7,083.96	1,712.05	8,946	8,421.09	0.30	-0.05	0.02
60.00	-31.59	-2.03	0.00	-139.80	0.00	139.80	6,951.42	1,668.01	8,492	8,049.01	0.36	-0.06	0.02
60.97	-29.44	-1.98	0.00	-137.83	0.00	137.83	6,925.39	1,659.46	8,405	7,977.39	0.37	-0.06	0.02
65.00	-27.49	-1.93	0.00	-129.84	0.00	129.84	6,816.24	1,623.97	8,049	7,682.15	0.42	-0.06	0.02
68.73	-27.17	-1.92	0.00	-122.64	0.00	122.64	5,796.47	1,430.05	7,074	6,526.94	0.47	-0.07	0.02
70.00	-25.93	-1.89	0.00	-120.19	0.00	120.19	5,768.66	1,420.18	6,977	6,450.44	0.49	-0.07	0.02
75.00	-24.71	-1.85	0.00	-110.75	0.00	110.75	5,657.44	1,381.32	6,600	6,151.49	0.57	-0.07	0.02
80.00	-23.54	-1.81	0.00	-101.50	0.00	101.50	5,543.60	1,342.46	6,234	5,856.63	0.65	-0.08	0.02
85.00	-22.39	-1.76	0.00	-92.46	0.00	92.46	5,427.13	1,303.60	5,878	5,566.11	0.73	-0.08	0.02
90.00	-21.72	-1.74	0.00	-83.64	0.00	83.64	5,308.04	1,264.74	5,533	5,280.17	0.82	-0.09	0.02
92.99	-20.94	-1.70	0.00	-78.45	0.00	78.45	5,235.56	1,241.49	5,332	5,111.44	0.88	-0.09	0.02
95.00	-19.16	-1.62	0.00	-75.03	0.00	75.03	5,186.33	1,225.87	5,198	4,999.05	0.92	-0.10	0.02
99.68	-19.10	-1.62	0.00	-67.46	0.00	67.46	3,857.01	969.12	4,061	3,681.17	1.02	-0.10	0.02
100.00	-18.23	-1.57	0.00	-66.95	0.00	66.95	3,851.71	967.13	4,045	3,668.51	1.02	-0.10	0.02
105.00	-17.39	-1.52	0.00	-59.09	0.00	59.09	3,767.41	936.05	3,789	3,471.96	1.13	-0.11	0.02
110.00	-16.57	-1.48	0.00	-51.47	0.00	51.47	3,680.49	904.96	3,541	3,278.28	1.25	-0.11	0.02
115.00	-15.78	-1.43	0.00	-44.09	0.00	44.09	3,590.95	873.87	3,302	3,087.70	1.37	-0.12	0.02
120.00	-15.01	-1.37	0.00	-36.95	0.00	36.95	3,498.78	842.79	3,072	2,900.48	1.49	-0.12	0.02
125.00	-14.84	-1.36	0.00	-30.08	0.00	30.08	3,403.98	811.70	2,849	2,716.85	1.62	-0.13	0.02
126.13	-13.79	-1.29	0.00	-28.54	0.00	28.54	3,382.19	804.67	2,800	2,675.87	1.65	-0.13	0.02
130.00	-13.34	-1.25	0.00	-23.56	0.00	23.56	3,304.60	780.61	2,635	2,535.56	1.76	-0.13	0.01
131.70	-13.03	-1.23	0.00	-21.43	0.00	21.43	2,974.75	719.74	2,443	2,297.47	1.81	-0.13	0.01
134.00	-9.68	-0.96	0.00	-18.61	0.00	18.61	2,935.54	706.63	2,355	2,225.52	1.87	-0.14	0.01
135.00	-9.05	-0.91	0.00	-17.65	0.00	17.65	2,918.31	700.93	2,317	2,194.45	1.90	-0.14	0.01
140.00	-8.45	-0.85	0.00	-13.12	0.00	13.12	2,830.61	672.43	2,133	2,041.16	2.05	-0.14	0.01
145.00	-6.11	-0.64	0.00	-8.84	0.00	8.84	2,725.98	643.93	1,956	1,881.59	2.19	-0.14	0.01
150.00	-5.56	-0.59	0.00	-5.64	0.00	5.64	2,605.33	615.43	1,787	1,717.91	2.34	-0.14	0.01
155.00	-2.40	-0.27	0.00	-2.70	0.00	2.70	2,484.68	586.93	1,625	1,561.69	2.49	-0.15	0.00
159.30	-2.32	-0.26	0.00	-1.54	0.00	1.54	2,380.92	562.42	1,492	1,433.29	2.63	-0.15	0.00
160.00	-2.29	-0.26	0.00	-1.36	0.00	1.36	2,364.03	558.43	1,471	1,412.90	2.65	-0.15	0.00
160.35	-1.67	-0.19	0.00	-1.27	0.00	1.27	2,355.57	556.43	1,461	1,402.75	2.66	-0.15	0.00
164.00	-1.21	-0.14	0.00	-0.58	0.00	0.58	2,267.51	535.63	1,353	1,299.24	2.77	-0.15	0.00
164.84	-1.20	-0.14	0.00	-0.46	0.00	0.46	1,876.06	444.14	1,137	1,091.91	2.80	-0.15	0.00
165.00	-0.91	-0.10	0.00	-0.44	0.00	0.44	1,873.71	443.39	1,133	1,088.70	2.80	-0.15	0.00
169.00	-0.19	-0.02	0.00	-0.02	0.00	0.02	1,798.04	424.73	1,040	1,000.34	2.92	-0.15	0.00
170.00	0.00	-0.02	0.00	0.00	0.00	0.00	1,778.30	420.07	1,017	978.39	2.95	-0.15	0.00

ANALYSIS SUMMARY

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	40.45	0.00	76.44	0.00	0.00	4657.08	0.00	0.38
0.9D + 1.0W	40.43	0.00	57.32	0.00	0.00	4630.59	0.00	0.38
1.2D + 1.0Di + 1.0Wi	11.10	0.00	95.44	0.00	0.00	1240.75	0.00	0.11
1.2D + 1.0Ev + 1.0Eh	2.20	0.00	76.49	0.00	0.00	270.21	0.00	0.03
0.9D - 1.0Ev + 1.0Eh	2.19	0.00	52.77	0.00	0.00	268.37	0.00	0.03
1.0D + 1.0W	9.35	0.00	63.72	0.00	0.00	1073.38	0.00	0.09

Base Plate & Anchor Rod Analysis

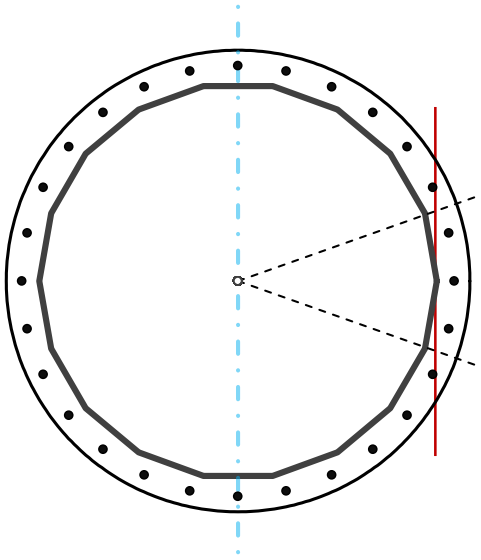
Pole Dimensions		
Number of Sides	18	-
Diameter	73.69	in
Thickness	17/32	in
Orientation Offset		°

Base Reactions		
Moment, Mu	4,657.1	k-ft
Axial, Pu	76.4	k
Shear, Vu	40.5	k
Neutral Axis	270	°

Report Capacities		
Component	Capacity	Result
Base Plate	20%	Pass
Anchor Rods	43%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ø	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	η=0.5
Clear Distance	4 1/8	in
Applied Moment, Mu	619.8	k
Bending Stress, ϕMn	3142.8	k

Original Anchor Rods		
Arrangement	Radial	-
Quantity	28	-
Diameter, ø	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	103.5	k
Anchor Rods, ϕPn	243.6	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	40.5	4657.1	1.00
Anchor Rod Forces	40.5	4657.1	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	103.5	k
Applied Shear, Vu	0.5	k
Compressive Capacity, ϕPn	243.6	k
Tensile Capacity, ϕRnt	0.425	OK
Interaction Capacity	0.429	OK

External Base Plate		
Chord Length AA	40.217	in
Additional AA	5.840	in
Section Modulus, Z	103.629	in^3
Applied Moment, Mu	619.8	k-ft
Bending Capacity, ϕMn	4663.3	k-ft
Capacity, Mu/ϕMn	0.133	OK
Chord Length AB	38.053	in
Additional AB	5.840	in
Section Modulus, Z	98.759	in^3
Applied Moment, Mu	445.8	k-ft
Bending Capacity, ϕMn	4444.2	k-ft
Capacity, Mu/ϕMn	0.100	OK
Bend Line Length	31.040	in
Additional Bend Line	0.000	in
Section Modulus, Z	69.839	in^3
Applied Moment, Mu	619.8	k-ft
Bending Capacity, ϕMn	3142.8	k-ft
Capacity, Mu/ϕMn	0.197	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, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

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

Monolithic Mat & Pier Foundation Analysis

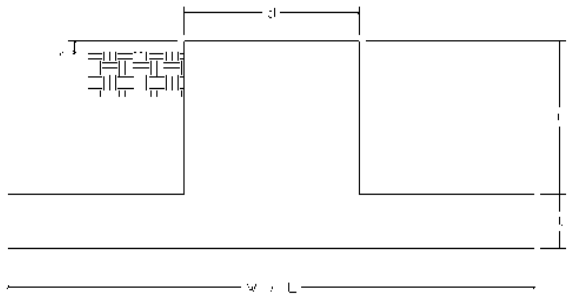
Foundation Analysis Parameters		
Design / Analysis / Mapping:	Analysis	-
Compression/Leg:	76.4	k
Uplift/Leg:	0.0	k
Total Shear:	40.5	k
Moment:	4,657.1	k-ft
Tower + Appurtenance Weight:	76.4	k
Depth to Base of Foundation (l + t - h):	6	ft
Diameter of Pier (d):	9	ft
Length of Pier (l):	4	ft
Height of Pier 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:	15	°
Coefficient of Shear Friction:	0.5	-
Ultimate Compressive Bearing Pressure:	10,000	psf
Ultimate Passive Pressure on Pad Face:	0	psf
$f_{Soil\ and\ Concrete\ Weight}$:	0.9	-
f_{Soil}:	0.75	-

Overturning Moment Usage		
Design OTM:	4920.0	k-ft
OTM Resistance:	14644.7	k-ft
Design OTM / OTM Resistance:	34%	Pass

Soil Bearing Pressure Usage		
Net Bearing Pressure:	1870	psf
Factored Nominal Bearing Pressure:	7500	psf
Factored Nominal (Net) Bearing Pressure:	25%	Pass
Load Direction Controling Design Bearing Pressure:	*Diagonal to Pad Edge*	

Sliding Factor of Safety		
Ultimate Friction Resistance:	479.4	k
Ultimate Passive Pressure Resistance:	0.0	k
Total Factored Sliding Resistance:	359.6	k
Sliding Design / Sliding Resistance:	11%	Pass

Foundation Steel Parameters		
Shear/Leg (Compression):	27.0	k
Shear/Leg (Uplift):	22.2	k
Concrete Strength (f'_c):	3,000	psi
Pad Tension Steel Depth:	26.44	in
Dead Load Factor:	0.9	-
f_{Shear}:	0.75	-
$f_{Flexure\ /\ Tension}$:	0.9	-
$f_{Compression:}$	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:	99.5	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
Clear Cover:	3	in



Pad Strength Capacity			
Factored One Way Shear (V_u):	343.9	k	
One Way Shear Capacity (fV_c):	860.1	k	*ACI 318-14 25.5.5.1*
V_u / fV_c:	40%	Pass	
Load Direction Controling Shear Capacity:	*Parallel to Pad Edge*		
Lower Steel Pad Factored Moment (M_u):	2666.6	k-ft	
Lower Steel Pad Moment Capacity (fM_n):	6305.9	k-ft	*ACI 318-14 22.3.1.1*
M_u / fM_n:	42%	Pass	
Load Direction Controling Flexural Capacity:	*Parallel to Pad Edge*		
Upper Steel Pad Factored Moment (M_u):	1357.4	k-ft	
Upper Steel Pad Moment Capacity (fM_n):	6305.9	k-ft	
M_u / fM_n:	22%	Pass	
Lower Pad Flexural Reinforcement Ratio:	0.0053		*OK - ACI 318-14 7.6.1.1 & 8.6.1.1*
Upper Pad Flexural Reinforcement Ratio:	0.0053		*OK - ACI 318-14 7.6.1.1 & 8.6.1.1*
Pad Shrinkage Reinforcement Ratio:	0.0107		*OK - ACI 318-14 24.4.3.2*
Lower Pad Reinforcement Spacing:	7.1	in	*OK - ACI 318-14 7.7.2.3, 8.7.2.2, & 24.4.3.3*
Upper Pad Reinforcement Spacing:	7.1	in	*OK - ACI 318-14 7.7.2.3, 8.7.2.2, & 24.4.3.3*
Ultimate Punching Shear Stress, v_u:	49.45	psi	*ACI 318-14 R8.4.4.2.3*
Nominal Punching Shear Capacity (f_cv_c):	164.3	psi	*ACI 318-14 22.6.5.2*
v_u / f_cv_c:	30%	Pass	
Pier Moment Pad Flexure Transfer Ratio, γ_f:	0.60		*TIA-222-H 9.4.2*
Moment Transfer Effective Flexural Width, B_{eff}:	16.50	ft	*TIA-222-H 9.4.2*
Moment Transfer Through Pad Flexure:	34695.94	k-in	*TIA-222-H 9.4.2*
Moment Transfer Flexural Capacity ($fM_{sc,f}$):	39061.03	k-in	
g_fM_{sc} / $fM_{sc,f}$:	0%	Pass	

Pier Strength Capacity			
Factored Moment in Pier (M_u):	4818.9	k-ft	
Pier Moment Capacity (fM_n):	13347.0	k-ft	
M_u / fM_n:	36%	Pass	
Factored Shear in Pier (V_u):	40.5	k	
Pier Shear Capacity (fV_n):	1157.5	k	*ACI 318-14 22.5.1.1*
V_u / fV_c:	3%	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):	76.4	k	
Pier Compression Capacity (fP_n):	12106.1	k	*ACI 318-14 22.4.2.1*
P_u / fP_n:	1%	Pass	
Pier Compression Reinforcement Ratio:	0.007		*OK - TIA-222-H 9.4.1*
Minimum Depth to Develop Vertical Rebar:	52	in	*ACI 318-14 25.4.2.3*
Minimum Hook Development Length:	28	in	*ACI 318-14 25.4.3.1*
Minimum Mat Thickness / Edge Distance from Pier:	31.0	in	
Minimum Foundation Depth:	7.18	ft	
$M_u/f_BM_n + T_u/f_TT_n$:	36%	Pass	

CENTEK engineering
Centered on Solutions℠

Structural Analysis Report

Antenna Mount Analysis

Proposed T-Mobile Upgrade

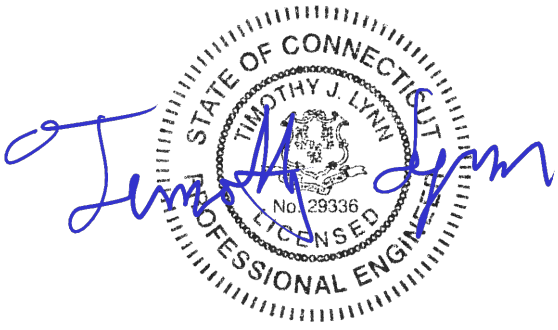
T-Mobile Site #: CTNH568A

1325 Cheshire Street
Cheshire, CT

Centek Project No. 21085.03

~~Date: July 21, 2021~~
Rev 1: January 3, 2022

Max Stress Ratio = 67%



Prepared for:

T-Mobile USA
35 Griffin Road
Bloomfield, CT 06002

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CENTEK engineering

Centered on Solutions℠

January 3, 2022

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 134-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

STATE OF CONNECTICUT
TIMOTHY J. LYNN
No. 29336
LICENSED
PROFESSIONAL ENGINEER

Prepared by:

Fernando J. Palacios
Engineer

Section 2 - Calculations

CENTEK engineering
Centered on Solutions℠ www.centekeng.com
63-2 North Branford Road P: (203) 488-0580
Branford, CT 06405 F: (203) 488-8587

Subject: Loads on Equipment

Location: Cheshire,CT

Rev. 1: 01/03/2022

Prepared by: F.J.P.. Checked by: T.J.L.
Job No. 21085.03

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 =	$SC := II$		(User Input)
Exposure Category =	$Exp := C$		(User Input)
Structure Height =	$h := 170.0$	ft	(User Input)
Height to Center of Antennas =	$z := 134$	ft	(User Input)
Radial Ice Thickness =	$t_i := .75$	in	(User Input per Annex B of TIA-222-G)
Radial Ice Density =	$Id := 56.00$	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 =

$$K_d := \begin{cases} 0.95 & \text{if } Structure\_Type = Pole \\ 0.85 & \text{if } Structure\_Type = Lattice \end{cases} = 0.95$$

(Per Table 2-2 of TIA-222-G)

(Per Table 3-3 of TIA-222-G)

Importance Factors =

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

$$I_{Wind\_w\_Ice} := \begin{cases} 0 & \text{if } SC = 1 \\ 1.00 & \text{if } SC = 2 \\ 1.00 & \text{if } SC = 3 \end{cases} = 1$$

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

$$K_{iz} := \left(\frac{z}{33}\right)^{0.1} = 1.15$$

Velocity Pressure Coefficient Antennas =

$$t_{iz} := 2.0 \cdot t_i \cdot I_{ice} \cdot K_{iz} \cdot K_{zt}^{0.35} = 1.726$$

$$Kz := 2.01 \cdot \left(\left(\frac{z}{zg}\right)\right)^{\overline{\alpha}} = 1.346$$

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

Velocity Pressure with Ice Antennas = $qz_{ice} := 0.00256 \cdot K_d \cdot Kz \cdot V_i^2 \cdot I_{Wind} = 8$ 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 =	$F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antF} = 686$	lbs
Surface Area for One Antenna =	$SA_{antS} := \frac{L_{ant} \cdot T_{ant}}{144} = 5.7$	sf
Total Antenna Wind Force Side =	$F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antS} = 243$	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 =	$Fi_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantF} = 216$	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 =	$Fi_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantS} = 94$	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 =	$V_{ice} := (L_{ant} + 2 \cdot t_{iz}) \cdot (W_{ant} + 2 \cdot t_{iz}) \cdot (T_{ant} + 2 \cdot t_{iz}) - V_{ant} = 1 \cdot 10^4$	cu in
Weight of Ice on Each Antenna =	$W_{ICEant} := \frac{V_{ice}}{1728} \cdot Id = 422$	lbs
Weight of Ice on All Antennas =	$W_{ICEant} \cdot N_{ant} = 422$	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 =	$F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antF} = 192$	lbs
Surface Area for One Antenna =	$SA_{antS} := \frac{L_{ant} \cdot T_{ant}}{144} = 1.9$	sf
Total Antenna Wind Force Side =	$F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antS} = 78$	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 =	$Fi_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantF} = 66$	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 =	$Fi_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantS} = 32$	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 =	$V_{ice} := (L_{ant} + 2 \cdot t_{iz}) \cdot (W_{ant} + 2 \cdot t_{iz}) \cdot (T_{ant} + 2 \cdot t_{iz}) - V_{ant} = 4656$	cu in
Weight of Ice on Each Antenna =	$W_{ICEant} := \frac{V_{ice}}{1728} \cdot Id = 151$	lbs
Weight of Ice on All Antennas =	$W_{ICEant} \cdot N_{ant} = 151$	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 =	$F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSF} = 97$	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 =	$Fi_{RRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSF} = 36$	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 =	$Fi_{RRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSS} = 21$	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 =	$V_{ice} := (L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz}) - V_{RRUS} = 2729$	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 =	$F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSF} = 87$	lbs
Surface Area for One RRUS =	$SA_{RRUSS} := \frac{L_{RRUS} \cdot T_{RRUS}}{144} = 1.6$	sf
Total RRUS Wind Force =	$F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSS} = 67$	lbs

Wind Load (with ice)

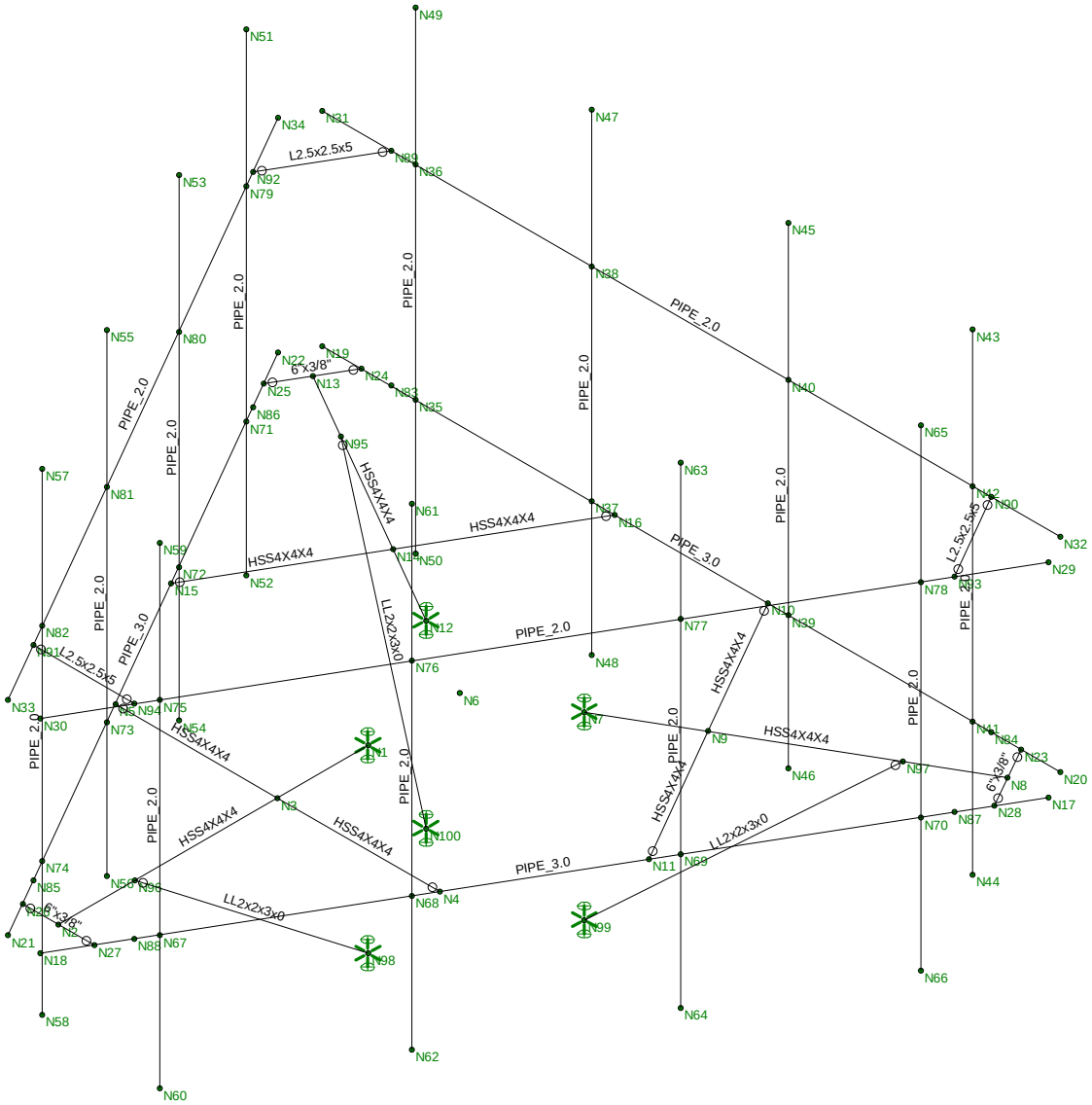
Surface Area for One RRUS w/ Ice =	$SA_{ICERRUSF} := \frac{(L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz})}{144} = 3.1$	sf
Total RRUS Wind Force w/ Ice =	$Fi_{RRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSF} = 33$	lbs
Surface Area for One RRUS w/ Ice =	$SA_{ICERRUSS} := \frac{(L_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz})}{144} = 2.5$	sf
Total RRUS Wind Force w/ Ice =	$Fi_{RRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSS} = 27$	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 =	$V_{ice} := (L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz}) - V_{RRUS} = 3142$	cu in
Weight of Ice on Each RRUS =	$W_{ICERRUS} := \frac{V_{ice}}{1728} \cdot Id = 102$	lbs
Weight of Ice on All RRUSs =	$W_{ICERRUS} \cdot N_{RRUS} = 102$	lbs



Envelope Only Solution

Centek Engineering		
FJP	CTNH568A - Mount	Jan 3, 2022 at 9:51 AM
21085.03	Member Framing	CTNH568A_AMA Rev1.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 ...
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 S...	Column	Pipe	A53 Grade B	Typical
20	PSA.2	N45	N46			Antenna Mast_Pipe 2.0 S...	Column	Pipe	A53 Grade B	Typical
21	PSA.3	N47	N48			Antenna Mast_Pipe 2.0 S...	Column	Pipe	A53 Grade B	Typical
22	PSA.4	N49	N50			Antenna Mast_Pipe 2.0 S...	Column	Pipe	A53 Grade B	Typical
23	PSB.1	N51	N52			Antenna Mast_Pipe 2.0 S...	Column	Pipe	A53 Grade B	Typical
24	PSB.2	N53	N54			Antenna Mast_Pipe 2.0 S...	Column	Pipe	A53 Grade B	Typical
25	PSB.3	N55	N56			Antenna Mast_Pipe 2.0 S...	Column	Pipe	A53 Grade B	Typical
26	PSB.4	N57	N58			Antenna Mast_Pipe 2.0 S...	Column	Pipe	A53 Grade B	Typical
27	PSC.1	N59	N60			Antenna Mast_Pipe 2.0 S...	Column	Pipe	A53 Grade B	Typical
28	PSC.2	N61	N62			Antenna Mast_Pipe 2.0 S...	Column	Pipe	A53 Grade B	Typical
29	PSC.3	N63	N64			Antenna Mast_Pipe 2.0 S...	Column	Pipe	A53 Grade B	Typical
30	PSC.4	N65	N66			Antenna Mast_Pipe 2.0 S...	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	-.076	1.667
4	PSA.4	Y	-.076	4.417
5	PSA.1	Y	-.088	1
6	PSA.1	Y	-.102	7
7	PSC.1	Y	-.211	1.083
8	PSC.1	Y	-.211	5.917
9	PSC.4	Y	-.076	1.667
10	PSC.4	Y	-.076	4.417
11	PSC.1	Y	-.088	1
12	PSC.1	Y	-.102	7
13	PSB.1	Y	-.211	1.083
14	PSB.1	Y	-.211	5.917
15	PSB.4	Y	-.076	1.667
16	PSB.4	Y	-.076	4.417
17	PSB.1	Y	-.088	1
18	PSB.1	Y	-.102	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	.108	1.083
8	PSC.1	X	.108	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	.108	1.083
14	PSB.1	X	.108	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	.122	1.083
2	PSA.1	X	.122	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	.067	7
7	PSC.1	X	.343	1.083
8	PSC.1	X	.343	5.917
9	PSC.4	X	.096	1.667
10	PSC.4	X	.096	4.417
11	PSC.1	X	.097	1
12	PSC.1	X	.087	7
13	PSB.1	X	.343	1.083
14	PSB.1	X	.343	5.917
15	PSB.4	X	.096	1.667
16	PSB.4	X	.096	4.417
17	PSB.1	X	.097	1
18	PSB.1	X	.087	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	.108	1.083
2	PSA.1	Z	.108	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	.108	1.083
8	PSC.1	Z	.108	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	.343	1.083
2	PSA.1	Z	.343	5.917
3	PSA.4	Z	.096	1.667
4	PSA.4	Z	.096	4.417
5	PSA.1	Z	.097	1
6	PSA.1	Z	.087	7
7	PSC.1	Z	.122	1.083
8	PSC.1	Z	.122	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	.067	7
13	PSB.1	Z	.122	1.083
14	PSB.1	Z	.122	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	.067	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	Sol..	PD..	SR..	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
1	1.2D + 1.6..	Yes	Y		1	1.2	2	1.2	5	1.6																
2	0.9D + 1.6..	Yes	Y		1	.9	2	.9	5	1.6																
3	1.2D + 1.0..	Yes	Y		1	1.2	2	1.2	3	1	4	1														
4	1.2D + 1.6..	Yes	Y		1	1.2	2	1.2	7	1.6																
5	0.9D + 1.6..	Yes	Y		1	.9	2	.9	7	1.6																
6	1.2D + 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	.103	1	-1.291	2	0	6	.17	4	0	6
2		min	-2.419	1	-.209	5	-3.707	4	0	1	-3.39	1	0	1
3	N7	max	-.41	5	.278	4	1.914	1	0	6	2.267	4	0	6
4		min	-3.572	1	-.262	2	-1.828	5	0	1	-.038	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	1.802	6	.476	1	.946	3	0	6	.613	1	0	6
6		min	-2.305	2	.115	6	-.736	5	0	1	-1.048	4	0	1
7	N98	max	0	6	2.082	6	2.68	6	0	6	0	6	0	6
8		min	-.019	2	.742	2	.948	2	0	1	-.002	2	0	1
9	N99	max	2.466	1	2.23	1	-.147	5	0	6	.002	4	0	6
10		min	.219	5	.206	5	-1.436	1	0	1	0	2	0	1
11	N100	max	.559	2	1.642	6	.336	2	0	6	0	1	0	6
12		min	-1.827	6	-.506	2	-1.058	6	0	1	0	5	0	1
13	Totals:	max	0	6	5.594	6	0	3						
14		min	-5.291	1	2.477	2	-3.945	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	3.819e-04	4	0	6	-5.572e-04	6
2		min	0	1	0	1	0	1	-9.584e-05	2	0	1	-9.903e-04	1
3	N2	max	.167	2	-.02	2	.002	4	1.942e-03	6	3.468e-03	2	7.795e-04	2
4		min	.003	6	-.04	6	0	2	1.045e-03	2	1.245e-04	6	-2.064e-03	6
5	N3	max	.027	1	.002	2	0	4	5.61e-04	4	1.876e-03	2	-5.572e-04	6
6		min	-.002	4	-.008	4	0	2	-1.619e-04	2	-1.421e-04	4	-9.903e-04	1
7	N4	max	.027	1	-.037	3	.038	4	6.136e-03	1	1.398e-03	2	-1.785e-03	6
8		min	-.002	4	-.05	4	-.031	2	1.615e-03	6	2.86e-04	3	-1.551e-02	2
9	N5	max	.027	2	.034	2	.049	2	1.181e-03	4	8.096e-04	2	2.743e-03	5
10		min	-.001	4	-.014	4	.004	6	-7.534e-03	1	-3.028e-04	5	-2.043e-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	5.509e-04	5	0	6	4.864e-05	3
14		min	0	1	0	1	0	1	-4.465e-04	3	0	1	-4.914e-04	4
15	N8	max	.067	4	-.003	5	.115	5	-7.961e-04	5	-8.225e-05	3	2.96e-04	5
16		min	.003	3	-.038	3	.002	3	-2.638e-03	3	-2.968e-03	4	-6.186e-04	3
17	N9	max	.008	4	-.001	5	.015	5	6.654e-04	5	1.673e-04	2	8.124e-05	6
18		min	0	2	-.01	1	-.001	1	-4.576e-04	1	-1.092e-03	4	-5.54e-04	2
19	N10	max	.015	2	.021	5	.021	5	1.749e-02	4	2.936e-04	2	3.411e-05	2
20		min	-.002	5	-.038	1	-.009	2	-3.058e-03	2	-1.928e-03	5	-3.025e-03	4
21	N11	max	.038	2	-.019	3	.03	4	8.889e-03	4	-9.985e-05	6	-2.05e-03	3
22		min	-.017	5	-.04	4	-.024	2	1.705e-03	3	-8.979e-04	2	-1.068e-02	4
23	N12	max	0	6	0	6	0	6	5.884e-04	4	0	6	2.819e-04	6
24		min	0	1	0	1	0	1	-7.172e-04	2	0	1	-4.129e-04	2
25	N13	max	.036	2	.006	2	.05	5	7.657e-04	3	1.255e-03	5	2.37e-03	6
26		min	-.029	4	-.035	6	-.061	1	-4.222e-04	5	-1.866e-03	1	-1.591e-04	2
27	N14	max	.002	2	.004	5	.007	5	7.048e-04	4	5.208e-04	5	1.941e-04	6
28		min	-.004	4	-.001	3	-.003	1	-5.1e-04	2	-5.196e-05	1	-7.718e-04	2
29	N15	max	.059	2	.033	2	.03	2	3.629e-03	5	3.54e-04	4	4.69e-03	4
30		min	.001	6	-.03	6	.003	6	-1.267e-02	1	-2.225e-03	2	-1.564e-02	1
31	N16	max	.014	2	.025	5	.008	4	1.605e-02	4	6.339e-04	5	2.659e-03	4
32		min	-.002	5	-.03	1	.001	3	-7.889e-03	1	-4.526e-04	1	-1.44e-03	1
33	N17	max	.12	4	.007	5	.109	4	1.122e-02	4	1.545e-04	2	-2.247e-03	3
34		min	.01	3	-.023	3	-.019	2	1.404e-03	3	-3.025e-03	5	-1.843e-02	4
35	N18	max	.189	2	-.014	2	.062	2	1.161e-02	2	3.034e-03	1	-2.704e-03	6
36		min	.002	4	-.047	6	.013	3	2.336e-04	6	-2.633e-04	5	-2.025e-02	1
37	N19	max	.015	2	.011	2	.074	5	1.774e-02	4	1.144e-03	4	-6.787e-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	-.087	1	-1.571e-02	1	-1.612e-03	2	-6.309e-04	1
39	N20	max	.015	1	-.005	5	.171	4	2.198e-02	4	-8.99e-05	3	1.16e-03	6
40		min	-.002	5	-.044	3	.002	3	5.227e-04	3	-1.966e-03	4	5.977e-04	5
41	N21	max	.194	2	-.019	5	.016	4	1.21e-04	5	3.847e-03	2	4.275e-05	4
42		min	.004	6	-.03	1	-.047	2	-1.391e-02	1	9.616e-05	6	-2.431e-02	1
43	N22	max	.13	1	.009	2	.047	5	5.637e-03	4	1.099e-03	5	9.29e-03	5
44		min	-.049	5	-.04	6	-.011	1	-1.059e-02	2	-4.321e-04	1	-1.933e-02	1
45	N23	max	.015	1	-.009	5	.155	4	2.198e-02	4	-8.99e-05	3	1.161e-03	6
46		min	-.002	5	-.054	3	.001	3	5.227e-04	3	-1.965e-03	4	5.985e-04	5
47	N24	max	.015	2	.007	2	.065	5	1.774e-02	4	1.142e-03	4	-6.862e-05	5
48		min	-.002	5	-.023	6	-.074	1	-1.571e-02	1	-1.612e-03	2	-6.319e-04	1
49	N25	max	.127	1	.006	2	.043	5	5.638e-03	4	1.099e-03	5	9.29e-03	5
50		min	-.041	5	-.048	6	-.009	1	-1.059e-02	2	-4.307e-04	1	-1.933e-02	1
51	N26	max	.167	2	-.018	5	.017	4	1.204e-04	5	3.846e-03	2	4.324e-05	4
52		min	.003	6	-.029	1	-.032	2	-1.392e-02	1	9.616e-05	6	-2.431e-02	1
53	N27	max	.168	2	-.014	2	.05	2	1.161e-02	2	3.033e-03	1	-2.704e-03	6
54		min	.003	6	-.056	6	.01	3	2.328e-04	6	-2.633e-04	5	-2.025e-02	1
55	N28	max	.099	4	.004	5	.097	4	1.123e-02	4	1.559e-04	2	-2.246e-03	3
56		min	.01	3	-.024	3	-.018	2	1.405e-03	3	-3.025e-03	5	-1.843e-02	4
57	N29	max	1.393	4	.055	5	.997	4	1.945e-02	4	7.01e-03	1	-2.911e-03	3
58		min	.093	3	-.047	1	.028	3	1.177e-03	3	-1.536e-02	4	-2.778e-02	4
59	N30	max	1.734	1	.066	2	.83	1	1.986e-02	1	1.217e-02	1	-2.826e-03	6
60		min	.084	6	-.102	4	.125	6	3.938e-03	6	-5.201e-03	4	-4.318e-02	1
61	N31	max	.171	1	.06	2	.873	4	2.346e-02	4	-6.417e-04	6	1.4e-03	4
62		min	-.028	5	-.044	4	-1.412	1	-2.656e-02	1	-1.607e-02	1	-3.143e-03	2
63	N32	max	.171	1	-.03	5	1.706	4	4.541e-02	4	-1.812e-03	6	-8.192e-04	5
64		min	-.029	5	-.121	1	.098	3	1.532e-03	3	-9.567e-03	1	-4.174e-03	1
65	N33	max	1.702	1	-.039	6	-.028	5	2.208e-04	4	9.531e-03	1	-1.983e-03	6
66		min	.116	6	-.106	1	-.724	1	-1.675e-02	1	1.879e-03	3	-3.723e-02	1
67	N34	max	1.358	1	.06	2	.593	4	1.331e-02	5	9.207e-03	4	1.682e-02	4
68		min	-.782	4	-.056	3	-.524	1	-1.769e-02	1	-1.563e-03	2	-3.713e-02	1
69	N35	max	.015	2	0	2	.053	5	1.788e-02	4	1.154e-03	5	-1.826e-05	6
70		min	-.002	5	-.024	6	-.055	1	-1.581e-02	1	-1.937e-03	1	-7.106e-04	1
71	N36	max	.171	1	0	2	.909	4	2.354e-02	4	-6.121e-04	6	1.22e-03	4
72		min	-.028	5	-.025	6	-1.107	1	-2.672e-02	1	-1.557e-02	1	-2.896e-03	2
73	N37	max	.015	1	.014	5	.011	4	1.669e-02	4	7.863e-04	5	2.094e-03	4
74		min	-.002	5	-.024	1	0	3	-9.121e-03	1	-9.682e-04	1	-1.323e-03	2
75	N38	max	.17	1	.014	5	.99	4	2.785e-02	4	-9.101e-04	6	7.676e-05	5
76		min	-.029	5	-.024	1	-.56	1	-1.559e-02	1	-1.26e-02	1	-1.415e-03	1
77	N39	max	.015	2	.01	5	.03	5	1.856e-02	4	1.557e-05	2	-3.543e-04	2
78		min	-.002	5	-.039	3	-.01	2	-2.524e-03	2	-2.386e-03	5	-2.349e-03	4
79	N40	max	.17	1	.01	5	1.229	4	3.517e-02	4	-1.944e-03	6	3.448e-04	5
80		min	-.029	5	-.039	3	-.097	1	-2.602e-03	1	-9.774e-03	1	-1.122e-03	1
81	N41	max	.015	1	-.016	5	.135	5	2.213e-02	4	-1.228e-04	3	6.417e-04	6
82		min	-.002	5	-.064	3	-.002	2	5.599e-04	3	-2.384e-03	4	2.958e-04	2
83	N42	max	.171	1	-.016	5	1.575	4	4.554e-02	4	-1.843e-03	6	-5.833e-04	5
84		min	-.029	5	-.065	3	.065	3	1.537e-03	3	-9.399e-03	1	-4.101e-03	1
85	N43	max	.331	1	-.016	5	2.957	4	5.099e-02	4	-1.843e-03	6	-5.844e-04	5
86		min	-.013	5	-.065	3	.108	3	1.547e-03	3	-9.399e-03	1	-6.162e-03	1
87	N44	max	.044	1	-.016	5	-.015	3	2.091e-02	4	-1.228e-04	3	1.23e-03	1
88		min	.013	5	-.064	3	-.435	4	5.561e-04	3	-2.384e-03	4	5.524e-04	5
89	N45	max	.205	1	.01	5	2.204	4	3.537e-02	4	-1.944e-03	6	3.448e-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	-.169	1	-2.602e-03	1	-9.774e-03	1	-1.318e-03	1
91	N46	max	.009	2	.01	5	.058	2	1.837e-02	4	1.557e-05	2	-1.708e-04	2
92		min	-.065	4	-.039	3	-.467	4	-2.524e-03	2	-2.386e-03	5	-2.349e-03	4
93	N47	max	.214	1	.014	5	1.763	4	2.805e-02	4	-9.101e-04	6	7.677e-05	5
94		min	-.031	5	-.024	1	-.991	1	-1.56e-02	1	-1.26e-02	1	-1.611e-03	1
95	N48	max	.054	4	.014	5	.247	1	1.651e-02	4	7.863e-04	5	2.094e-03	4
96		min	-.017	2	-.024	1	-.436	4	-9.12e-03	1	-9.682e-04	1	-1.139e-03	2
97	N49	max	.253	1	0	2	1.567	4	2.387e-02	4	-6.121e-04	6	1.221e-03	4
98		min	-.061	4	-.025	6	-1.845	1	-2.675e-02	1	-1.557e-02	1	-3.022e-03	2
99	N50	max	0	6	0	2	.372	1	1.787e-02	4	1.154e-03	5	-1.826e-05	6
100		min	-.004	1	-.024	6	-.43	4	-1.58e-02	1	-1.937e-03	1	-7.105e-04	1
101	N51	max	2.489	1	0	2	.924	4	1.534e-02	5	9.102e-03	4	1.696e-02	4
102		min	-1.108	4	-.058	6	-.996	1	-1.76e-02	1	-1.775e-03	2	-4.278e-02	1
103	N52	max	.222	5	0	2	.277	2	4.672e-03	4	1.322e-03	4	9.357e-03	5
104		min	-.377	1	-.057	6	-.093	4	-1.049e-02	2	-7.837e-04	1	-1.829e-02	1
105	N53	max	2.14	1	.022	2	.523	4	7.023e-03	5	8.22e-03	4	1.098e-02	4
106		min	-.632	4	-.034	6	-.937	1	-1.738e-02	1	-1.996e-03	1	-3.266e-02	1
107	N54	max	.152	4	.022	2	.354	1	3.749e-03	5	7.064e-04	4	5.402e-03	4
108		min	-.383	1	-.034	6	-.087	5	-1.217e-02	1	-2.237e-03	2	-1.662e-02	1
109	N55	max	2.221	1	.019	2	.253	5	2.872e-03	5	6.794e-03	4	2.851e-03	4
110		min	-.139	4	-.013	6	-.981	1	-1.796e-02	1	1.005e-03	3	-3.383e-02	1
111	N56	max	.059	5	.019	2	.282	1	1.16e-03	4	1.593e-03	2	2.27e-03	5
112		min	-.541	1	-.013	4	-.012	4	-8.737e-03	1	-7.712e-05	5	-2.12e-02	1
113	N57	max	2.581	1	-.017	5	.049	5	2.447e-04	4	9.315e-03	1	-1.972e-03	6
114		min	.136	6	-.029	1	-1.106	1	-1.713e-02	1	1.839e-03	3	-3.757e-02	1
115	N58	max	0	4	-.017	5	.362	1	3.339e-04	5	3.964e-03	2	-1.097e-04	4
116		min	-.534	1	-.028	1	.009	5	-1.378e-02	1	1.385e-04	6	-2.462e-02	1
117	N59	max	2.864	1	-.013	2	1.278	1	2.015e-02	1	1.222e-02	1	-2.858e-03	6
118		min	.171	6	-.067	6	.265	6	4.687e-03	3	-5.061e-03	4	-4.864e-02	1
119	N60	max	-.06	6	-.013	2	.002	6	1.175e-02	2	3.445e-03	1	-2.36e-03	6
120		min	-.379	1	-.066	6	-.283	2	4.863e-04	6	-2.627e-04	4	-1.906e-02	1
121	N61	max	1.927	1	-.03	2	.933	1	1.691e-02	1	1.169e-02	1	-3.735e-03	6
122		min	.211	6	-.047	4	.203	3	2.986e-03	6	-5.914e-03	4	-2.99e-02	1
123	N62	max	-.046	6	-.03	2	-.036	6	7.224e-03	1	2.151e-03	2	-1.711e-03	6
124		min	-.405	2	-.047	4	-.222	1	1.866e-03	6	2.807e-04	6	-1.622e-02	2
125	N63	max	1.311	1	-.018	3	.977	4	1.381e-02	4	7.141e-03	1	-3.958e-03	3
126		min	.259	3	-.03	4	.123	3	2.231e-03	3	-1.098e-02	4	-2.122e-02	4
127	N64	max	-.053	3	-.017	3	-.043	3	9.015e-03	4	-1.398e-04	3	-2.229e-03	3
128		min	-.338	4	-.03	4	-.233	1	1.467e-03	3	-1.522e-03	4	-1.209e-02	4
129	N65	max	1.915	4	0	5	1.388	4	1.946e-02	4	6.76e-03	1	-2.977e-03	3
130		min	.194	3	-.025	3	.073	3	1.201e-03	3	-1.492e-02	4	-2.809e-02	4
131	N66	max	-.053	3	0	5	-.036	3	1.131e-02	4	1.941e-04	2	-2.331e-03	3
132		min	-.431	4	-.025	3	-.226	4	1.242e-03	3	-3.279e-03	4	-1.853e-02	4
133	N67	max	.141	2	-.013	2	.043	5	1.178e-02	2	3.445e-03	1	-2.376e-03	6
134		min	.004	6	-.066	6	.008	3	7.599e-04	6	-2.627e-04	4	-2.027e-02	1
135	N68	max	.034	1	-.03	2	.04	4	7.225e-03	1	2.151e-03	2	-1.711e-03	6
136		min	0	6	-.047	4	-.027	2	1.897e-03	6	2.807e-04	6	-1.641e-02	2
137	N69	max	.042	2	-.017	3	.033	4	9.199e-03	4	-1.398e-04	3	-2.26e-03	3
138		min	-.012	5	-.03	4	-.022	2	1.467e-03	3	-1.522e-03	4	-1.21e-02	4
139	N70	max	.069	4	0	5	.08	4	1.131e-02	4	1.941e-04	2	-2.331e-03	3
140		min	.01	3	-.025	3	-.017	2	1.242e-03	3	-3.279e-03	4	-1.853e-02	4
141	N71	max	.123	2	0	2	.037	5	5.541e-03	4	1.322e-03	4	9.377e-03	5

Envelope Joint Displacements (Continued)

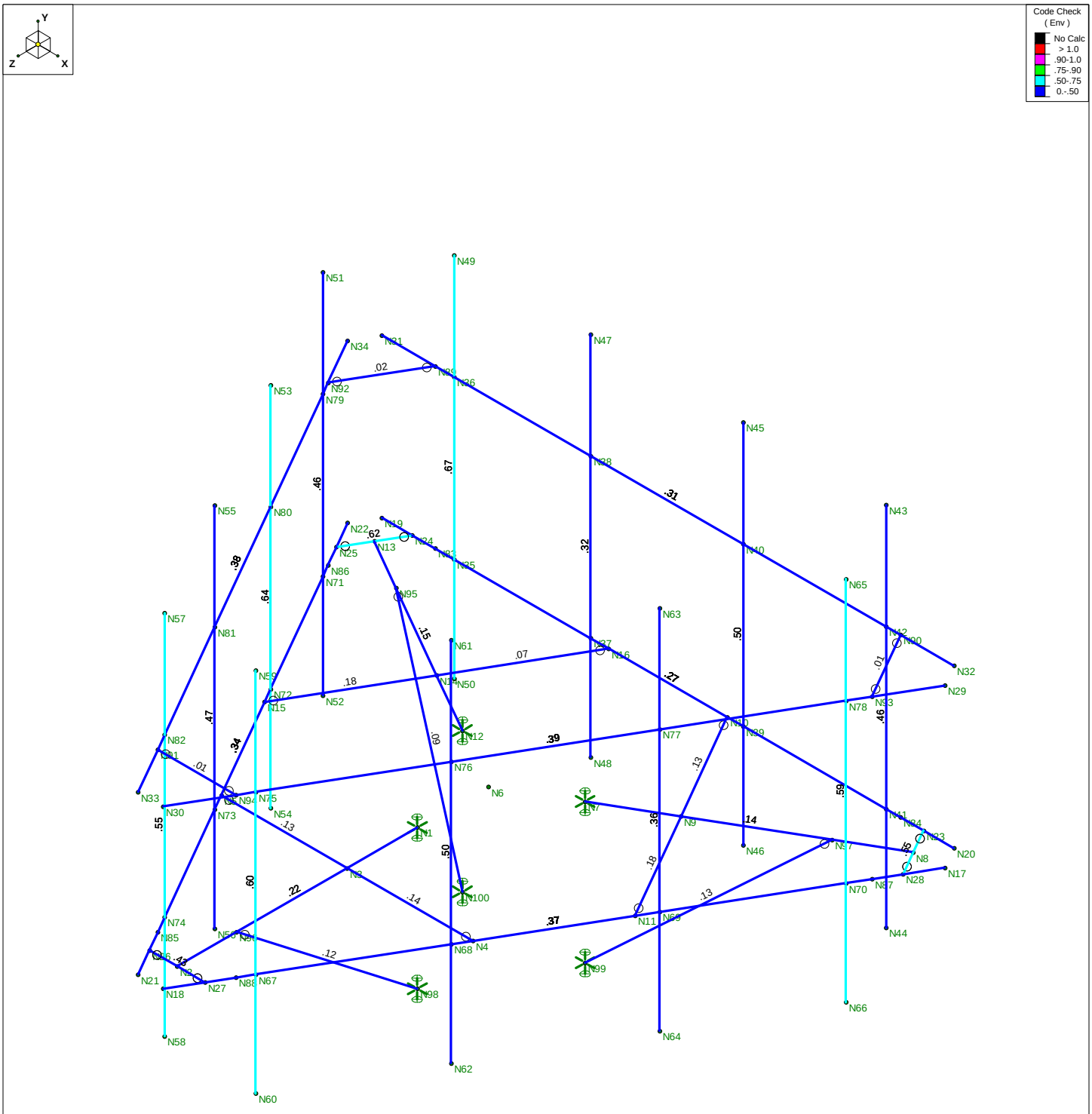
	Joint		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotatio...	LC	Z Rotation [rad]	LC
142		min	-.031	5	-.057	6	-.006	2	-1.052e-02	2	-7.837e-04	1	-1.95e-02	1
143	N72	max	.067	2	.022	2	.026	2	3.933e-03	5	7.064e-04	4	5.403e-03	4
144		min	.001	6	-.034	6	.003	6	-1.217e-02	1	-2.237e-03	2	-1.68e-02	1
145	N73	max	.032	2	.019	2	.046	2	1.343e-03	4	1.593e-03	2	2.271e-03	5
146		min	-.002	5	-.013	4	.004	6	-8.738e-03	1	-7.712e-05	5	-2.138e-02	1
147	N74	max	.131	2	-.017	5	.018	5	3.34e-04	5	3.964e-03	2	-1.098e-04	4
148		min	.002	4	-.028	1	-.01	2	-1.378e-02	1	1.385e-04	6	-2.462e-02	1
149	N75	max	1.547	1	-.013	2	.722	1	2.01e-02	1	1.222e-02	1	-2.839e-03	6
150		min	.093	6	-.067	6	.13	6	3.947e-03	6	-5.061e-03	4	-4.32e-02	1
151	N76	max	1.103	1	-.03	2	.466	1	1.69e-02	1	1.169e-02	1	-3.735e-03	6
152		min	.108	6	-.047	4	.099	3	2.954e-03	6	-5.914e-03	4	-2.97e-02	1
153	N77	max	.764	1	-.018	3	.597	4	1.362e-02	4	7.141e-03	1	-3.925e-03	3
154		min	.15	3	-.03	4	.061	3	2.231e-03	3	-1.098e-02	4	-2.122e-02	4
155	N78	max	1.141	4	0	5	.851	4	1.932e-02	4	6.76e-03	1	-2.905e-03	3
156		min	.112	3	-.025	3	.04	3	1.199e-03	3	-1.492e-02	4	-2.806e-02	4
157	N79	max	1.334	1	0	2	.511	4	1.326e-02	5	9.102e-03	4	1.692e-02	4
158		min	-.641	4	-.058	6	-.51	1	-1.755e-02	1	-1.775e-03	2	-3.735e-02	1
159	N80	max	1.24	1	.022	2	.331	4	6.826e-03	5	8.22e-03	4	1.098e-02	4
160		min	-.329	4	-.034	6	-.458	1	-1.738e-02	1	-1.996e-03	1	-3.246e-02	1
161	N81	max	1.289	1	.019	2	.175	5	2.676e-03	5	6.794e-03	4	2.851e-03	4
162		min	-.06	4	-.013	6	-.486	1	-1.796e-02	1	1.005e-03	3	-3.363e-02	1
163	N82	max	1.545	1	-.017	5	.043	5	1.206e-04	4	9.315e-03	1	-1.968e-03	6
164		min	.082	6	-.029	1	-.634	1	-1.712e-02	1	1.839e-03	3	-3.722e-02	1
165	N83	max	.015	2	.003	2	.058	5	1.782e-02	4	1.144e-03	4	-1.117e-04	5
166		min	-.002	5	-.024	6	-.064	1	-1.576e-02	1	-1.709e-03	2	-6.154e-04	1
167	N84	max	.015	1	-.013	5	.143	5	2.207e-02	4	-1.024e-04	3	9.894e-04	6
168		min	-.002	5	-.061	3	0	2	5.456e-04	3	-2.122e-03	4	5.444e-04	2
169	N85	max	.147	2	-.018	5	.017	5	1.773e-04	5	3.88e-03	2	-2.104e-06	4
170		min	.003	6	-.029	1	-.02	2	-1.398e-02	1	1.088e-04	6	-2.44e-02	1
171	N86	max	.125	2	.003	2	.04	5	5.59e-03	4	1.184e-03	5	9.345e-03	5
172		min	-.035	5	-.054	6	-.008	1	-1.053e-02	2	-5.636e-04	1	-1.945e-02	1
173	N87	max	.083	4	.001	5	.088	4	1.122e-02	4	1.682e-04	2	-2.268e-03	3
174		min	.01	3	-.025	3	-.018	2	1.359e-03	3	-3.101e-03	4	-1.852e-02	4
175	N88	max	.152	2	-.014	2	.042	5	1.173e-02	2	3.188e-03	1	-2.58e-03	6
176		min	.004	6	-.063	6	.009	3	4.226e-04	6	-2.63e-04	5	-2.026e-02	1
177	N89	max	.171	1	.016	2	.899	4	2.346e-02	4	-6.477e-04	6	1.389e-03	4
178		min	-.028	5	-.027	6	-1.187	1	-2.656e-02	1	-1.607e-02	1	-3.151e-03	2
179	N90	max	.171	1	-.019	5	1.603	4	4.541e-02	4	-1.806e-03	6	-8.11e-04	5
180		min	-.029	5	-.071	3	.072	3	1.532e-03	3	-9.567e-03	1	-4.163e-03	1
181	N91	max	1.586	1	-.026	5	.024	5	2.113e-04	4	9.509e-03	1	-1.978e-03	6
182		min	.091	6	-.049	1	-.657	1	-1.676e-02	1	1.876e-03	3	-3.723e-02	1
183	N92	max	1.339	1	.014	2	.528	4	1.332e-02	5	9.207e-03	4	1.681e-02	4
184		min	-.67	4	-.057	6	-.513	1	-1.768e-02	1	-1.541e-03	2	-3.713e-02	1
185	N93	max	1.207	4	.013	5	.889	4	1.946e-02	4	7.032e-03	1	-2.905e-03	3
186		min	.107	3	-.028	1	.037	3	1.186e-03	3	-1.536e-02	4	-2.777e-02	4
187	N94	max	1.586	1	.003	2	.745	1	1.985e-02	1	1.214e-02	1	-2.832e-03	6
188		min	.091	6	-.074	6	.129	6	3.929e-03	6	-5.201e-03	4	-4.318e-02	1
189	N95	max	.021	2	.004	2	.032	5	5.745e-04	3	1.292e-03	5	1.622e-03	6
190		min	-.019	4	-.009	6	-.034	1	-2.094e-04	2	-1.952e-03	1	-1.684e-04	2
191	N96	max	.112	2	-.004	2	.002	4	1.19e-03	6	3.535e-03	2	1.756e-04	2
192		min	0	4	-.012	4	0	2	5.061e-04	5	1.335e-04	6	-1.538e-03	6
193	N97	max	.043	4	0	5	.074	5	-2.957e-04	5	-8.708e-05	3	7.67e-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	-1.798e-03	3	-3.053e-03	4	-2.576e-04	3
195	N98	max	0	6	0	6	0	6	4.587e-04	4	0	6	-2.104e-05	5
196		min	0	1	0	1	0	1	2.728e-04	2	0	1	-3.463e-03	1
197	N99	max	0	6	0	6	0	6	2.284e-03	5	0	6	-4.62e-04	3
198		min	0	1	0	1	0	1	-1.846e-04	3	0	1	-1.472e-03	4
199	N100	max	0	6	0	6	0	6	1.171e-03	5	0	6	8.351e-04	4
200		min	0	1	0	1	0	1	-1.113e-03	1	0	1	-7.465e-04	2

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

	Memb...	Shape	Code Check	L...	LC	Sh...	L...	Dir	...phi*P...	phi*Pn...	phi*Mn y-y [k-ft]	phi*...	Cb	Eqn
1	PSA.4	PIPE_2.0	.673	5....	1	.280	4.5		1 14.916	32.13	1.872	1.872	4....	H3..
2	PSB.2	PIPE_2.0	.636	5....	1	.152	5....		4 14.916	32.13	1.872	1.872	2....	H1..
3	M14A	6"x3/8"	.619	.6..	2	.347	.6..	y	1 28.164	72.9	.57	9.113	1....	H1..
4	PSC.1	PIPE_2.0	.600	5....	1	.220	5....		1 14.916	32.13	1.872	1.872	1....	H1..
5	PSC.4	PIPE_2.0	.592	5....	4	.244	4.5		4 14.916	32.13	1.872	1.872	3....	H1..
6	M13A	6"x3/8"	.551	.6..	4	.372	.6..	y	4 28.164	72.9	.57	9.113	1....	H1..
7	PSB.4	PIPE_2.0	.549	5....	1	.142	4.5		4 14.916	32.13	1.872	1.872	3....	H1..
8	PSA.2	PIPE_2.0	.500	5....	4	.198	5....		1 14.916	32.13	1.872	1.872	3....	H1..
9	PSC.2	PIPE_2.0	.495	5....	1	.192	5....		1 14.916	32.13	1.872	1.872	2....	H1..
10	PSB.3	PIPE_2.0	.469	5....	1	.139	5....		4 14.916	32.13	1.872	1.872	2....	H1..
11	PSA.1	PIPE_2.0	.460	5....	4	.186	2....		1 14.916	32.13	1.872	1.872	3....	H1..
12	PSB.1	PIPE_2.0	.458	2....	1	.163	5....		4 14.916	32.13	1.872	1.872	1....	H1..
13	M15	6"x3/8"	.425	.6..	1	.473	.6..	y	1 28.164	72.9	.57	9.113	1....	H1..
14	M16	PIPE_2.0	.387	1....	1	.280	7....		1 6.295	32.13	1.872	1.872	3....	H3..
15	M18	PIPE_2.0	.376	1....	1	.181	7....		4 6.295	32.13	1.872	1.872	4....	H1..
16	M10	PIPE_3.0	.370	7....	1	.363	7....		1 28.251	65.205	5.749	5.749	1....	H3..
17	PSC.3	PIPE_2.0	.358	5....	2	.185	5....		4 14.916	32.13	1.872	1.872	2....	H1..
18	M14	PIPE_3.0	.335	4....	2	.343	4....		2 28.251	65.205	5.749	5.749	1....	H3..
19	PSA.3	PIPE_2.0	.318	5....	4	.226	5....		1 14.916	32.13	1.872	1.872	2....	H1..
20	M17	PIPE_2.0	.311	4....	1	.245	4....		1 6.295	32.13	1.872	1.872	3....	H3..
21	M13	PIPE_3.0	.271	7....	5	.294	4....		1 28.251	65.205	5.749	5.749	1....	H3..
22	M1	HSS4X4X4	.215	0	1	.063	0	z	1 124.3...	139.518	16.181	16....	1....	H1..
23	M8	HSS4X4X4	.178	2....	2	.206	0	z	2 135.1...	139.518	16.181	16....	1.5	H1..
24	M6	HSS4X4X4	.177	2....	1	.136	2....	y	4 135.1...	139.518	16.181	16....	1....	H1..
25	M7	HSS4X4X4	.147	1....	2	.056	3....	y	3 124.3...	139.518	16.181	16....	1....	H1..
26	M4	HSS4X4X4	.142	0	5	.062	3....	y	6 124.3...	139.518	16.181	16....	1....	H1..
27	M2	HSS4X4X4	.141	2....	4	.177	0	z	1 135.1...	139.518	16.181	16....	1....	H1..
28	M5	HSS4X4X4	.134	2....	4	.178	0	z	5 135.1...	139.518	16.181	16....	1....	H1..
29	M34	LL2x2x3x0	.129	0	1	.008	4....	z	4 28.249	46.656	2.147	1.607	1....	H1..
30	M3	HSS4X4X4	.127	2....	4	.200	0	z	1 135.1...	139.518	16.181	16....	1....	H1..
31	M36	LL2x2x3x0	.120	4....	6	.009	4....	z	2 28.249	46.656	2.147	1.607	1....	H1..
32	M35	LL2x2x3x0	.095	4....	6	.004	4....	z	5 28.249	46.656	2.147	1.607	1....	H1..
33	M9	HSS4X4X4	.071	2....	6	.149	0	z	4 135.1...	139.518	16.181	16....	1....	H1..
34	M33	L2.5x2.5x5	.017	.8..	1	.247	0	y	1 42.973	47.304	1.316	3.061	1....	H2..
35	M32	L2.5x2.5x5	.015	.8..	4	.264	0	y	4 42.973	47.304	1.316	3.061	1....	H2..
36	M31	L2.5x2.5x5	.009	.8..	4	.267	0	y	1 42.973	47.304	1.316	3.061	1....	H2..



Centek Engineering		
FJP	CTNH568A - Mount	Jan 3, 2022 at 9:51 AM
21085.03	Unity Check	CTNH568A_AMA Rev1.R3D

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

Catrine Galhana Vaz
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
February 24, 2028

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.

EBI Consulting

environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: 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%**

21 B Street, Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

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 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ 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 ($\mu W/cm^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu W/cm^2$. 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 1C 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 1C 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	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	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 (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	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 1C & 2C Traffic	1	11044.63	129.0	26.25	2500 MHz LTE 1C & 2C Traffic	1000	2.62%
T-Mobile 2500 MHz LTE 1C & 2C Broadcast	1	1074.06	129.0	2.55	2500 MHz LTE 1C & 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:	A&L Template:
67E5A998E 6160	67E5998E_1xAIR+1OP

CTNH568A_Coverage Strategy_1_draft

Print Name: Standard

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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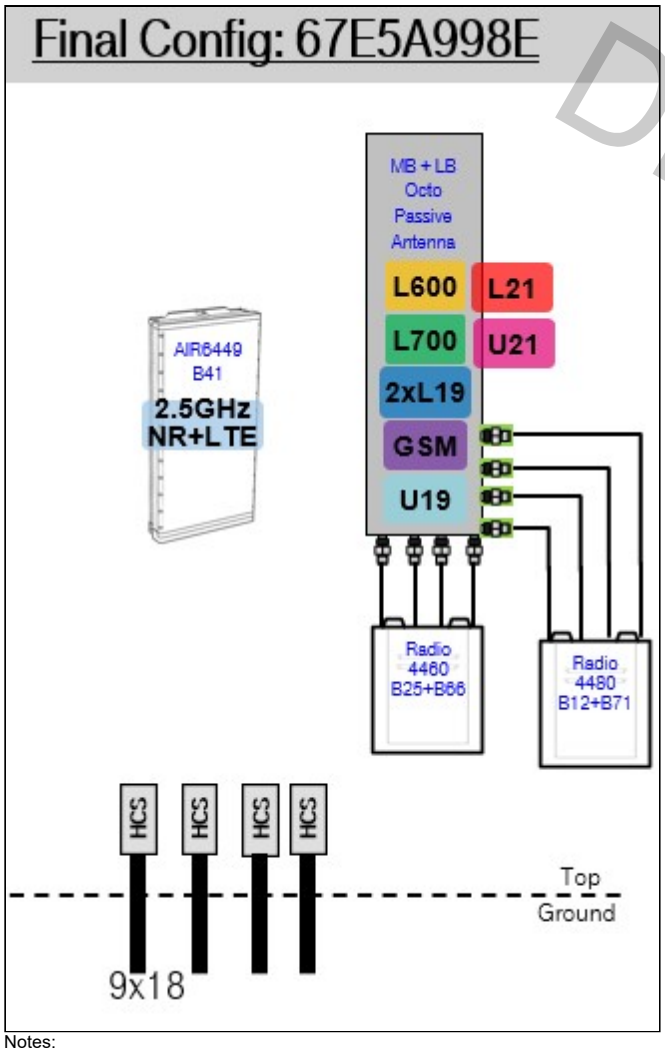
Section 3 - Proposed Template Images

67E5A998E.jpg



Notes:

Section 4 - Siteplan Images

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

CTNH568A_Coverage Strategy_1_draft

Print Name: Standard

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, 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:

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

CTNH568A_Coverage Strategy_1_draft

Print Name: Standard

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)**		
TMAs						
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:	A&L Template:
67E5A998E 6160	67E5998E_1xAIR+1OP

CTNH568A_Coverage Strategy_1_draft

Print Name: Standard

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)**		
TMAs						
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:	A&L Template:
67E5A998E 6160	67E5998E_1xAIR+1OP

CTNH568A_Coverage Strategy_1_draft

Print Name: Standard

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)**		
TMAs						
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:	A&L Template:
67E5A998E 6160	67E5998E_1xAIR+1OP

CTNH568A_Coverage Strategy_1_draft

Print Name: Standard

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

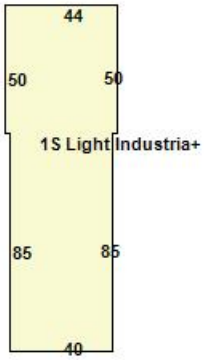
Valuation Summary

(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

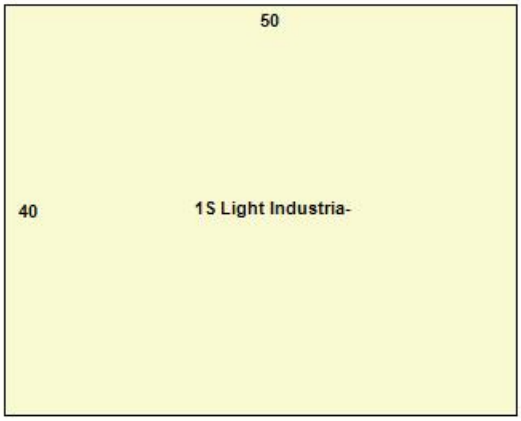
Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price

Report Created On 9/23/2021

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

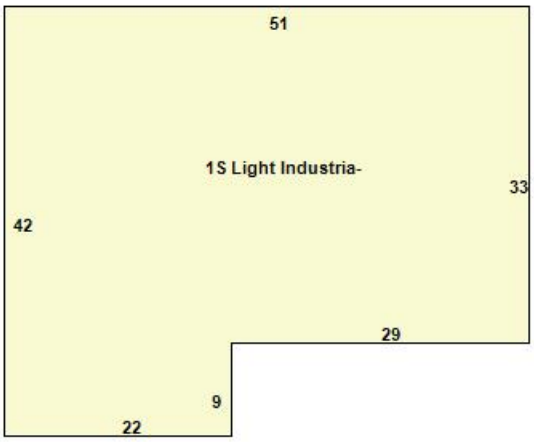
Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built

Report Created On 9/23/2021

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

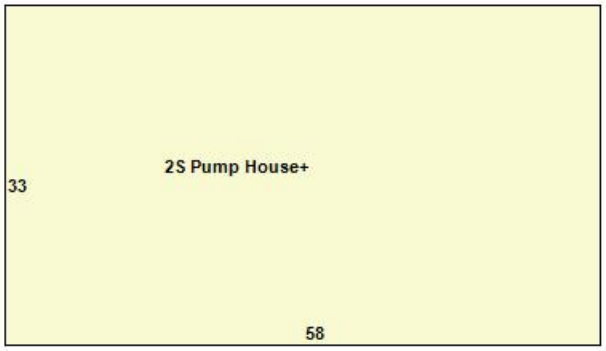
Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built

Report Created On 9/23/2021

Town of Cheshire, CT

Property Listing Report | Map Block Lot 38180 | Building # 4 | Unique Identifier 00258300



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

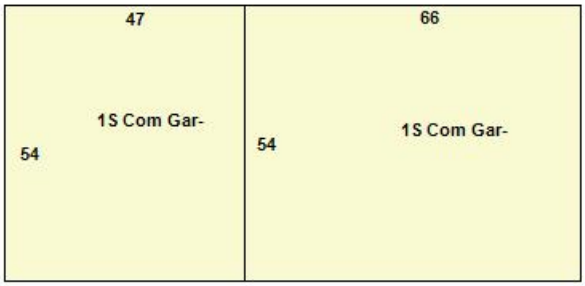
Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built

Report Created On 9/23/2021

Town of Cheshire, CT

Property Listing Report | Map Block Lot 38180 | Building # 5 | Unique Identifier 00258300



Primary Construction Details

Year Built	1990	Heating Fuel		Building Use	Commercial
Building Desc.	Light Industrial	Heating Type		Building Condition	Average
Building Style		AC Type		Frame Type	Excellent
Stories	1.00	Bedrooms	0	Fireplaces	0
Exterior Walls	B. V. Solid	Full Bathrooms	0	Bsmt Gar	0
Exterior Walls 2		Half Bathrooms	0	Fin Bsmt Area	
Interior Walls		Extra Fixtures	0	Fin Bsmt Quality	
Interior Walls 2		Total Rooms	0	Building Grade	0
Interior Floors 1	Concrete	Bath Style	NA	Roof Style	Flat
Interior Floors 2		Kitchen Style		Roof Cover	Composite Built Up
		Occupancy	0		

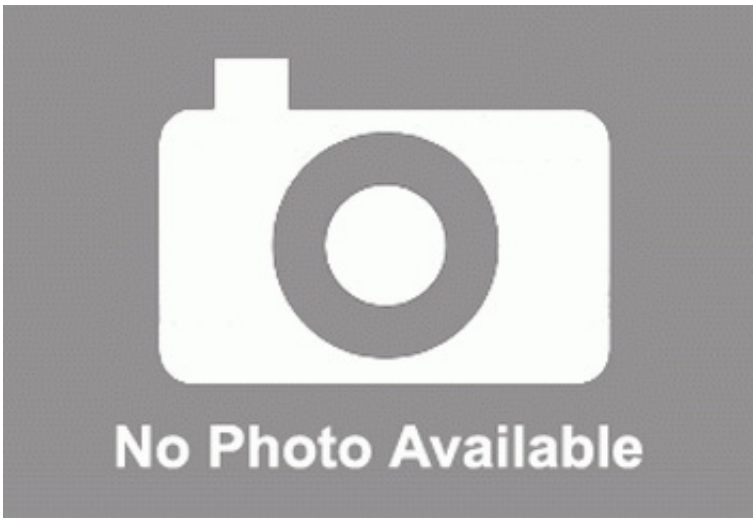
Attached Extra Features

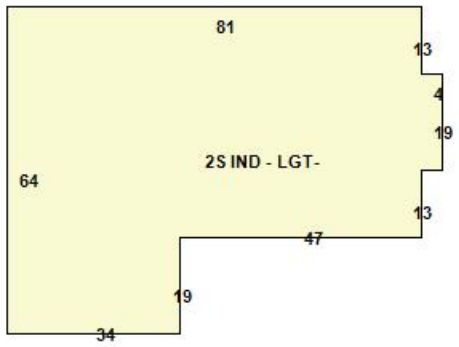
Type	Description	Area (sq ft)	Condition	Year Built

Report Created On 9/23/2021

Town of Cheshire, CT

Property Listing Report | Map Block Lot 38180 | Building # 6 | Unique Identifier 00258300





Primary Construction Details

Year Built	2006
Building Desc.	Light Industrial
Building Style	
Stories	2.00
Exterior Walls	Concrete Block
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	
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	
Roof Cover	Metal

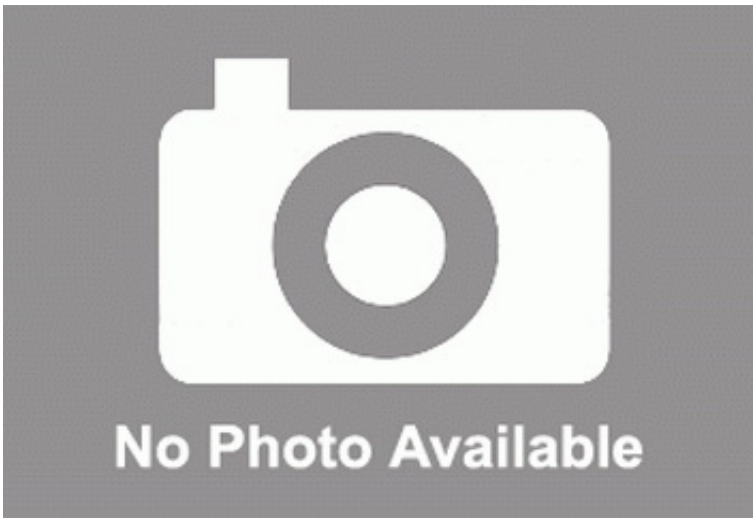
Attached Extra Features

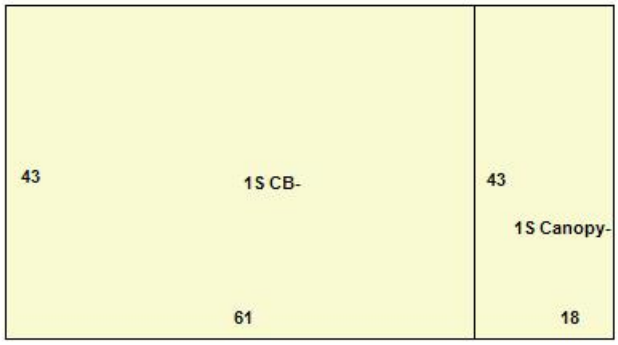
Type	Description	Area (sq ft)	Condition	Year Built

Report Created On 9/23/2021

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

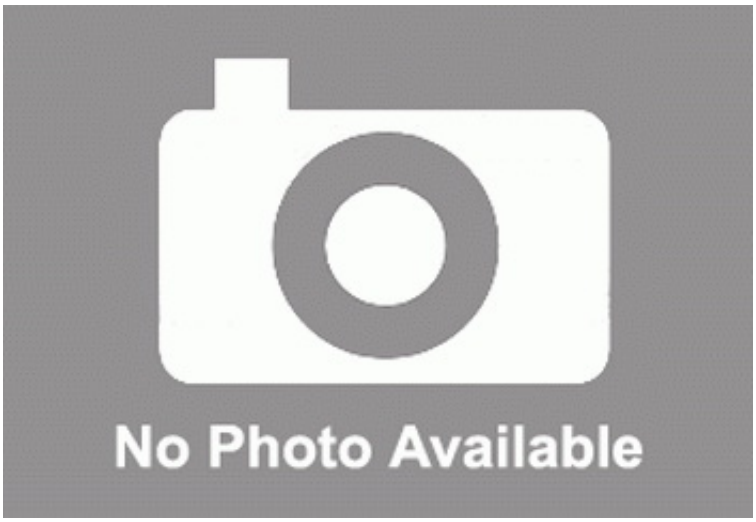
Attached Extra Features

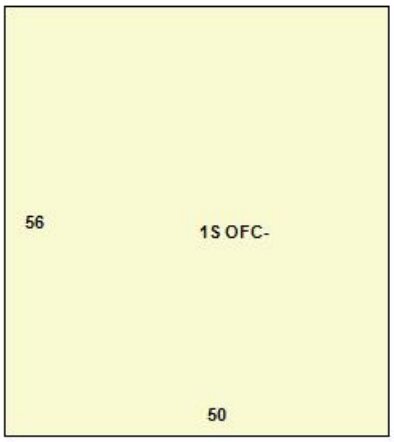
Type	Description	Area (sq ft)	Condition	Year Built
Canopy	Metal	774	Very Good	1971

Report Created On 9/23/2021

Town of Cheshire, CT

Property Listing Report | Map Block Lot 38180 | Building # 8 | Unique Identifier 00258300





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	

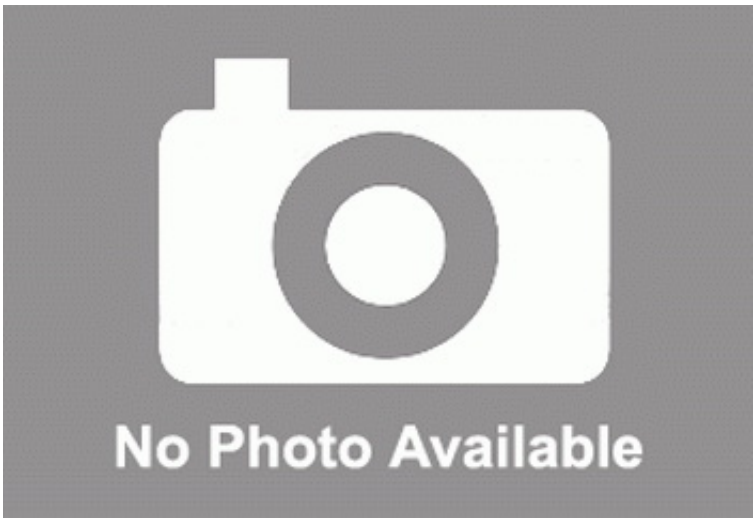
Attached Extra Features

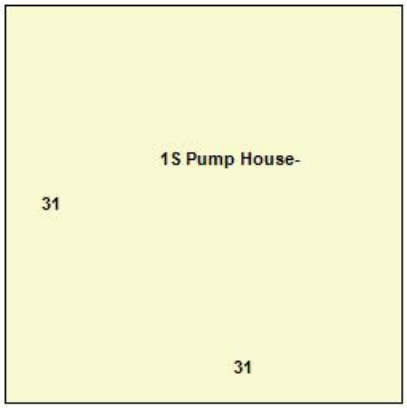
Type	Description	Area (sq ft)	Condition	Year Built

Report Created On 9/23/2021

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

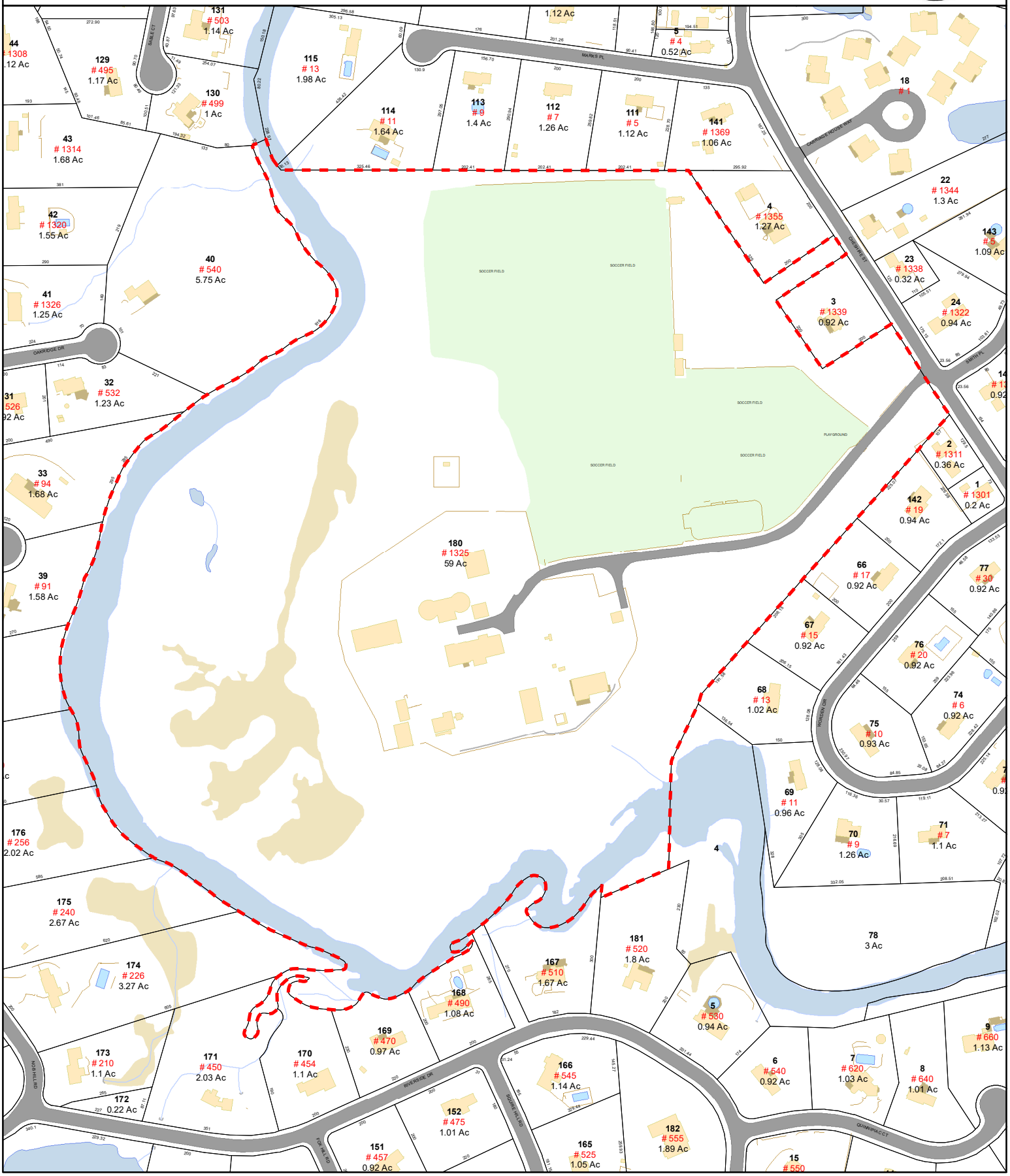
Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built

Report Created On 9/23/2021

Town of Cheshire, Connecticut - Assessment Parcel Map

Parcel: 00258300 **Location: 1325 CHESHIRE ST**



Approximate Scale: 1 inch = 308 feet

0 160 320 480 640

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.