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

December 28, 2021

Eric Breun
Transcend Wireless
10 Industrial Ave., Suite 3
Mahwah, N.J. 07430
ebreun@transcendwireless.com

RE: **EM-T-MOBILE-097-211112** – T-Mobile notice of intent to modify an existing telecommunications facility located at 25 Meridian Ridge Drive, Newtown, Connecticut.

Dear Mr. Breun:

The Connecticut Siting Council (Council) is in receipt of your correspondence of December 28, 2021 submitted in response to the Council's December 16, 2021 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification 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 Bachman
Executive Director

MAB/CMW/laf

From: Breun, Eric <ebreun@transcendwireless.com>
Sent: Tuesday, December 28, 2021 1:29 PM
To: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: EM-T-Mobile-097-211112 Response to Incomplete (CT11105F)

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Good Afternoon,

Please see the completed modification request with the correct property card listed and the delivery confirmation requested. The incomplete letter is also attached. A set of hard copies should arrive tomorrow.

--
Eric Breun
Site Acquisition Agent
Transcend Wireless
10 Industrial Ave Suite 3
Mahwah NJ 07430
201-658-7728

10 Industrial Ave,
Suite 3
Mahwah NJ 07430

Phone: 201.684.0055
Fax: 201.684.0066

Transcend Wireless

December 27, 2021

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

RE: Notice of Exempt Modification
25 Meridian Ridge Drive, Newtown, Connecticut, 06470
Latitude: 41.4252778
Longitude: -73.37404722
T-Mobile Site#: CT11105F - Anchor

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 134-foot level of the existing 152-foot monopole at 25 Meridian Ridge Drive, Newtown, CT. The 152-foot monopole is owned and operated by American Tower Corporation. The property is owned by Constantine Macricostas. T-Mobile now intends to remove three (3) existing antennas and add three (3) new 5G antennas. The new antennas will be installed at the same 134-foot level of the tower.

Planned Modifications:
Tower:
Remove
(3) AIR21 B2P B4A Antennas
(6) 1-5/8" Coax Cables
(3) 1 ¼" Hybrid
(3) Radio 4449 B71 B85
(3) Twin Style TMAs

Install New:
(3) AIR6449 B41 Antennas
(3) Radio 4460 B25+B66
(3) Radio 4449 B71 B85
(1) 1.99" Hybrid Cable
(2) 1 ¼" Fiber Cables

Existing to Remain:
(3) RFS APRXVAARR24 43-U-NA20 Antennas

Ground:
Install New:
(1) Enclosure 6160 and (1) B160

Remove:
(1) 6102 Cabinet

This tower was originally approved by the Connecticut Siting Council in Docket #75 dated May 13, 1987. T-Mobile has been approved for subsequent modifications at their facility. This proposed modification complies with the original approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies§ 16- SOj-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.SA. § 16-SOj-73, a copy of this letter is being sent to First Selectman - Daniel Rosenthal, Elected Official, and George Benson, Director of Planning, as well as the tower and property owner.

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

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

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Eric Breun
Transcend Wireless
Cell: 201-658-7728
Email: ebreun@transcendwireless.com

Attachments
cc: Daniel Rosenthal - First Selectman of Newtown
George Benson - Director of Planning
American Tower Corporation – Tower Owner
Constantine Macricostas - Property Owner

ERIC BREUN
2016587728
10 INDUSTRIAL AVE
MAHWAH NJ 07430

1 LBS

1 OF 1

SHIP TO:
CONTACTS MANAGEMENT
AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN MA 01801

MA 018 9-04

UPS GROUND

TRACKING #: 1Z V25 742 03 9224 9320

BILLING: P/P

Reference #1: CT11105F

XOL 21.11.05 NV45 46.0A 11/2021*

ERIC BREUN
2016587728
10 INDUSTRIAL AVE
MAHWAH NJ 07430

1 LBS

1 OF 1

SHIP TO:
GEORGE BENSON
3 PRIMROSE STREET
NEWTOWN CT 06470

CT 068 0-02

UPS GROUND

TRACKING #: 1Z V25 742 03 9914 6526

BILLING: P/P

Reference #1: CT11105F

XOL 21.11.05 NV45 46.0A 11/2021*

ERIC BREUN
2016587728
10 INDUSTRIAL AVE
MAHWAH NJ 07430

1 LBS 1 OF 1

SHIP TO:
DANIEL ROSENTHAL
3 PRIMROSE STREET
NEWTOWN CT 06470

CT 068 0-02

UPS GROUND
TRACKING #: 1Z V25 742 03 9032 1343

BILLING: P/P

Reference #1: CT11105F

XOL 21.11.05 NV45 46.0A 11/2021*

ERIC BREUN
2016587728
10 INDUSTRIAL AVE
MAHWAH NJ 07430

1 LBS 1 OF 1

SHIP TO:
CONSTANTINE MACRICOSTAS
5509 PENNOCK POINT ROAD
JUPITER FL 33458

FL 334 0-05

UPS GROUND
TRACKING #: 1Z V25 742 03 9055 9874

BILLING: P/P

Reference #1: CT11105F

XOL 21.11.24 NV45 52.0A 12/2021*

Hello, your package has been delivered.

Delivery Date: Wednesday, 11/10/2021

Delivery Time: 11:13 AM

Left At: FRONT DESK

Signed by: ANCRI

TRANSCEND WIRELESS

Tracking Number:	1ZV257420392249320
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:	CT11105F

Hello, your package has been delivered.

Delivery Date: Wednesday, 11/10/2021

Delivery Time: 1:27 PM

Left At: INSIDE DELIV

Signed by: GAINES

TRANSCEND WIRELESS

Tracking Number:	1ZV257420390321343
Ship To:	DANIEL ROSENTHAL 3 PRIMROSE STREET NEWTOWN, CT 06470 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT11105F

Hello, your package has been delivered.

Delivery Date: Wednesday, 11/10/2021

Delivery Time: 1:27 PM

Left At: INSIDE DELIV

Signed by: GAINES

TRANSCEND WIRELESS

Tracking Number:	1ZV257420399146526
Ship To:	GEORGE BENSON 3 PRIMROSE STREET NEWTOWN, CT 06470 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT11105F

Hello, your package has been delivered.

Delivery Date: Tuesday, 12/28/2021

Delivery Time: 12:22 PM

Left At: FRONT DOOR

Experience UPS My Choice® Premium Today

Be in total control of how, when and where your packages are delivered.

Upgrade to Premium Now

Set Delivery Instructions | Manage Preferences | View My Packages

TRANSCEND WIRELESS

Tracking Number:	1ZV257420390559874
Ship To:	CONSTANTINE MACRICOSTAS 5509 PENNOCK POINT ROAD JUPITER, FL 33458 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT11105F

Town of Newtown, CT

Property Listing Report

Map Block Lot **2-9-1.23-C** Account **00141100C**

Property Information

Property Location	25 MERIDIAN RIDGE DRIVE
Owner	MACRICOSTAS CONSTANTINE
Co-Owner	C/O PROPERTY TAX DEPT
Mailing Address	P.O. BOX 723597 ATLANTA GA 31139
Land Use	4310 CELL SITE
Land Class	I
Zoning Code	R-1
Census Tract	23
Sub Lot	

Neighborhood	
Acreage	0
Utilities	Well,Septic
Lot Setting/Desc	
Survey Map	
TC Survey Numbers	

Photo

Sketch

Primary Construction Details

Year Built	
Stories	
Building Style	
Building Use	
Building Condition	
Floors	
Total Rooms	

Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

Exterior Walls	
Interior Walls	
Heating Type	
Heating Fuel	
AC Type	
Gross Bldg Area	
Total Living Area	

Report Created On **12/22/2021**

Town of Newtown, CT

Property Listing Report | Map Block Lot **2-9-1.23-C** | Account **00141100C**

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings		
Extras		
Outbuildings		
Land		
Total		

Outbuilding and Extra Items

Type	Description
Cellular Shed	405 S.F.
Fence	300 L.F.
Cellular Shed	552 S.F.
Cell Tower	1 Units

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area		0

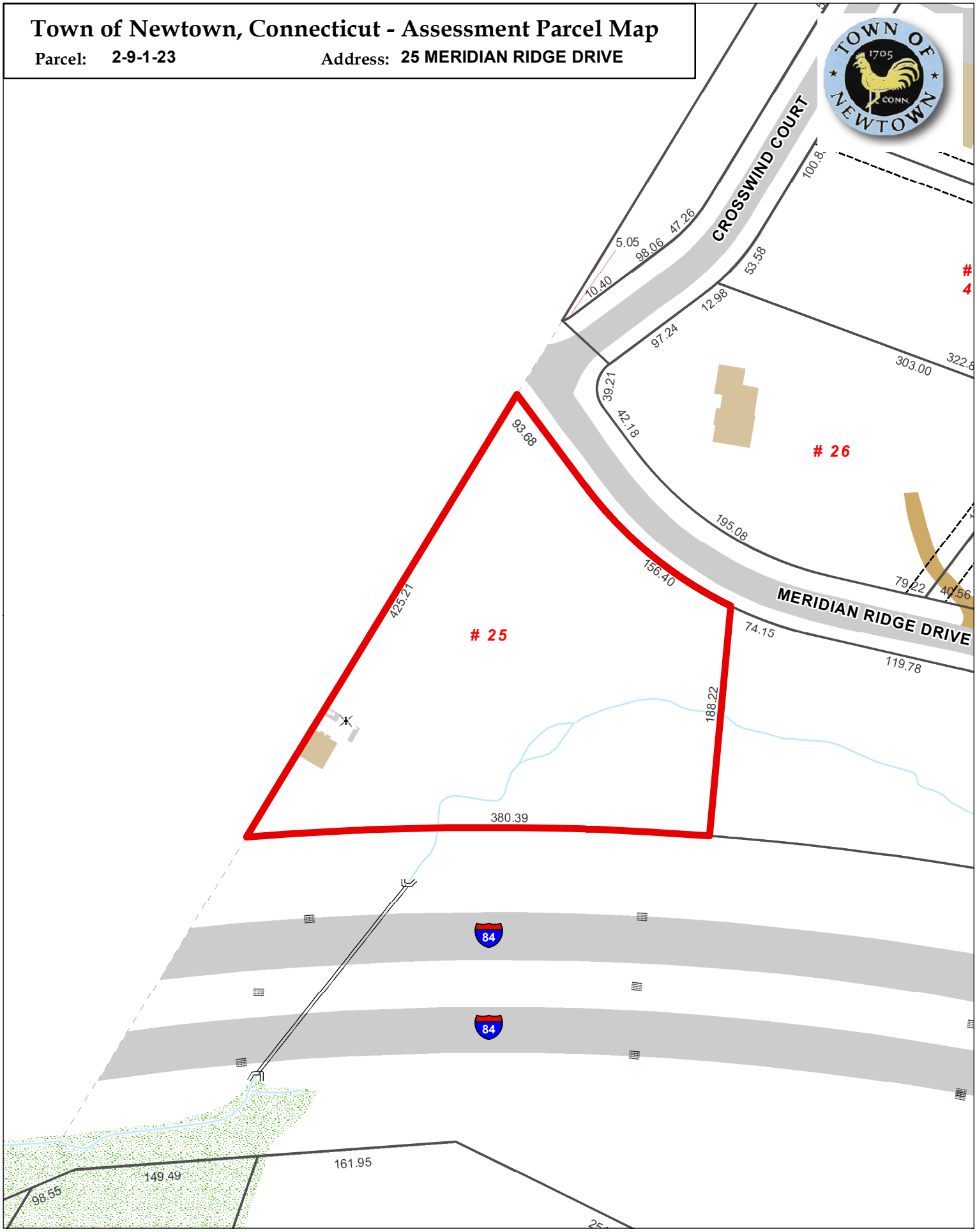
Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
MACRICOSTAS CONSTANTINE	713/ 565	6/20/2002	

Report Created On **12/22/2021**

Town of Newtown, Connecticut - Assessment Parcel Map

Parcel: 2-9-1-23 **Address:** 25 MERIDIAN RIDGE DRIVE



Approximate Scale:

0 25 50 75 100 Feet

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

Map Produced Nov 2020

DOCKET NO. 75

AN APPLICATION OF THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR CELLULAR TELEPHONE FACILITIES IN THE CITY OF DANBURY AND EITHER THE TOWN OF BROOKFIELD OR TOWN OF NEWTOWN, CONNECTICUT.	:	CONNECTICUT SITING COUNCIL
	:	MAY 13, 1987

DECISION AND ORDER

Pursuant to the foregoing opinion, the Connecticut Siting Council (Council) hereby directs that a Certificate of Environmental Compatibility and Public Need, as provided by Section 16-50k of the General Statutes of Connecticut (CGS), be issued to Southern New England Telephone Cellular, Inc., (SNET) for the construction, operation, and maintenance of cellular mobile telephone facilities in the City of Danbury and Town of Newtown, Connecticut. The proposed Brookfield site is rejected.

The facilities shall be constructed, operated, and maintained as specified in the Council's record on this matter, and subject to the following conditions.

1. The Danbury tower, including antennas, shall be no taller than necessary to provide the proposed service, and in no event shall exceed 37 feet.

2. Unless necessary to comply with condition number three, below, no lights shall be installed on these towers.

3. The facilities shall be constructed in accordance with all applicable federal, state, and municipal laws and regulations.

4. The Newtown tower, including antennas, shall be no taller than necessary to provide the proposed service, and in no event shall exceed 167 feet.

5. The certificate holder shall prepare a development and management (D&M) plan for the Newtown site in compliance with sections 16-50j-75 through 16-50j-77 of the Regulations of State Agencies. The D&M plan shall provide for evergreen screening around the outside perimeter of the eight-foot chain link fence which will surround this site.

6. No construction activities shall take place outside the hours of 7:00 A.M. to 7:00 P.M., Monday through Saturday.

7. The certificate holder or its successor shall notify the Council if and when directional antennas or any equipment other than that listed in this application is added to these facilities.

8. The certificate holder or it successor shall permit public or private entities to share space on the Newtown tower, for due consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

9. If these facilities do not provide or permanently cease to provide cellular service following the completion of construction, this Decision and Order shall be void, and the tower and all associated equipment in this application shall be dismantled and removed or reapplication for any new use shall be made to the Council before any such new use is made.

10. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the issuance of this Decision and Order, or within three years of the completion of any appeal taken in this Decision.

11. The certificate holder shall comply with any future radio frequency (RF) standards promulgated by state or federal regulatory agencies. Upon the establishment of any new govermental RF standards, the Certificate holder shall bring the facilities granted approval in this Decision into compliance with such standards.

Pursuant to CGS section 16-50p, we hereby direct that a copy of the Decision and Order be served on each person listed below. A notice of the issuance shall be published in the Danbury News-Times, the Brookfield Journal, and the Newtown Bee.

The parties to the proceeding are:

SNET Cellular, Inc. (Applicant)
c/o Peter J. Tyrrell
Senior Attorney
Room 1021
227 Church Street
New Haven, Connecticut 06506

Town of Newtown
Planning and Zoning Commission
represented by:
Theodore G. Whippie, Chairman
Chairman
Planning and Zoning
Commission
Edmond Town Hall
45 Main Street
Newtown, Connecticut 06470

Metro Mobile CTS of Fairfield
County
(INTERVENOR)
represented by:

Howard L. Slater
Jennifer Young Gaudet
Byrne, Slater, Sandler,
Shulman & Rouse, P.C.
330 Main Street
P.O. Box 3216
Hartford, Connecticut 06103
its attorneys

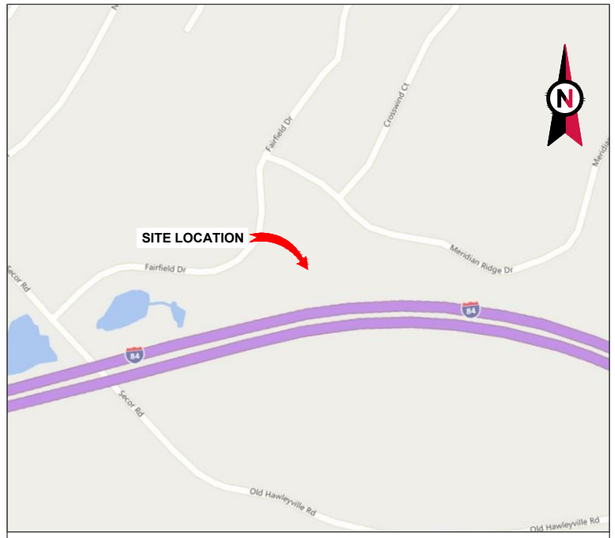
Fergus W. O'Donnell
28 Whisconier Road
Brookfield, Center, Connecticut 06805

CERTIFICATION

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut, this 13th day of May 1987.

Council Members	Vote Cast
Gloria Dibble Pond Gloria Dibble Pond Chairperson	Yes
Commissioner John Downey Designee: Commissioner Peter G. Boucher	Absent
Brian J. Emerick Acting Commissioner John Anderson Designee: Brian Emerick	Yes
Owen L. Clark Owen L. Clark	Yes
Fred J. Doocy Fred J. Doocy	Yes
Mortimer A. Gelston	Absent
James R. Horsfall James G. Horsfall	Yes
William Smith William Smith	Yes
Colin C. Tait	Absent



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: NEWTOWN CT 3
ATC SITE NUMBER: 302518
T-MOBILE SITE NAME: BETHEL-SNET MOBILITY
T-MOBILE SITE NUMBER: CT11105F
SITE ADDRESS: 6 FAIRFIELD DR (BRKFLD)
NEWTOWN, CT 06470

LOCATION MAP

T-MOBILE ANCHOR ANTENNA AMENDMENT PLAN
67D5A998E 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. 2018 CONNECTICUT STATE BUILDING CODE, INCORPORATING THE IBC
2. 2017 NATIONAL ELECTRIC CODE - NFPA 70
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: EVER SOURCE
PHONE: (877) 659-6326

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 376-6843

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

PROJECT SUMMARY

SITE ADDRESS:

6 FAIRFIELD DR (BRKFLD)

NEWTOWN, CT 06470

COUNTY: FAIRFIELD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.42552778

LONGITUDE: -73.37404722

GROUND ELEVATION: 426' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:

COLLIERS ENGINEERING & DESIGN CT, P.C.
D/B/A MASER CONSULTING
135 NEW ROAD
MADISON, CT 06443

PROJECT #:
21904529A

PROPERTY OWNER:

CONSTANTINE MACRICOSTAS
6 FAIRFIELD DR (BRKFLD)
NEWTOWN, CT 06470

APPLICANT:

T-MOBILE

PROJECT DESCRIPTION

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

TOWER WORK:

REMOVE (3) ANTENNA(s), (3) RRH(s), (3) TMA(s), (3) HYBRIFLEX CABLE(s) AND (6) COAX CABLE(s)

INSTALL (3) ANTENNA(s), (6) RRH(s), (1) HYBRID CABLE AND (2) FIBER CABLE(s)

EXISTING (3) ANTENNA(s) AND (3) RRH(s) TO REMAIN

GROUND WORK:

REMOVE (1) 6102 CABINET

INSTALL (1) ENCLOSURE 6160 CABINET AND (1) B160 CABINET

EXISTING (1) RBS 6131 CABINET TO REMAIN

PROJECT NOTES

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

PROJECT LOCATION DIRECTIONS

I-84 W TO EXIT 9. TURN RIGHT OFF EXIT THEN LEFT ON OLD HAWLEYVILLE RD. AT FORK STAY TO THE RIGHT ONTO SECOR RD. AFTER BRIDGE TURN RIGHT ON FAIRFIELD DR. TOWER IS AHEAD ON RIGHT.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	10/06/21	MLH
G-002	GENERAL NOTES	0	10/06/21	MLH
C-101	DETAILED SITE PLAN	0	10/06/21	MLH
C-102	DETAILED GROUND PLAN	0	10/06/21	MLH
C-201	TOWER ELEVATION	0	10/06/21	MLH
C-401	ANTENNA INFORMATION & SCHEDULE	0	10/06/21	MLH
C-501	CONSTRUCTION DETAILS	0	10/06/21	MLH
E-501	GROUNDING DETAILS	0	10/06/21	MLH
E-502	ELECTRICAL DETAILS	0	10/06/21	MLH
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	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

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	MLH	09/30/21
0	FOR CONSTRUCTION	RMD	10/06/21

ATC SITE NUMBER:
302518

ATC SITE NAME:
NEWTOWN CT 3

T-MOBILE SITE NAME:
BETHEL-SNET MOBILITY

SITE ADDRESS:
6 FAIRFIELD DR (BRKFLD)
NEWTOWN, CT 06470

SEAL:

STATE OF CONNECTICUT · ALEC S. NORRIS · 32588 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Alec Norris
Date: 2021.10.06 13:17:58-04'00'

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

T-Mobile

DATE DRAWN:	09/30/21
ATC JOB NO:	13732453_G3
CUSTOMER ID:	BETHEL-SNET MOBILITY
CUSTOMER #:	CT11105F

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

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GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY 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.

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)

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	MLH	09/30/21
0	FOR CONSTRUCTION	RMD	10/06/21

ATC SITE NUMBER:
302518

ATC SITE NAME:
NEWTOWN CT 3

T-MOBILE SITE NAME:
BETHEL-SNET MOBILITY

SITE ADDRESS:
6 FAIRFIELD DR (BRKFLD)
NEWTOWN, CT 06470

SEAL:

STATE OF CONNECTICUT · ALEC S. NORRIS · 32588 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Alec Norris
Date: 2021.10.06 13:18:00-04'00'

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

T-Mobile

DATE DRAWN:	09/30/21
ATC JOB NO:	13732453_G3
CUSTOMER ID:	BETHEL-SNET MOBILITY
CUSTOMER #:	CT11105F

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

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SITE PLAN NOTES:

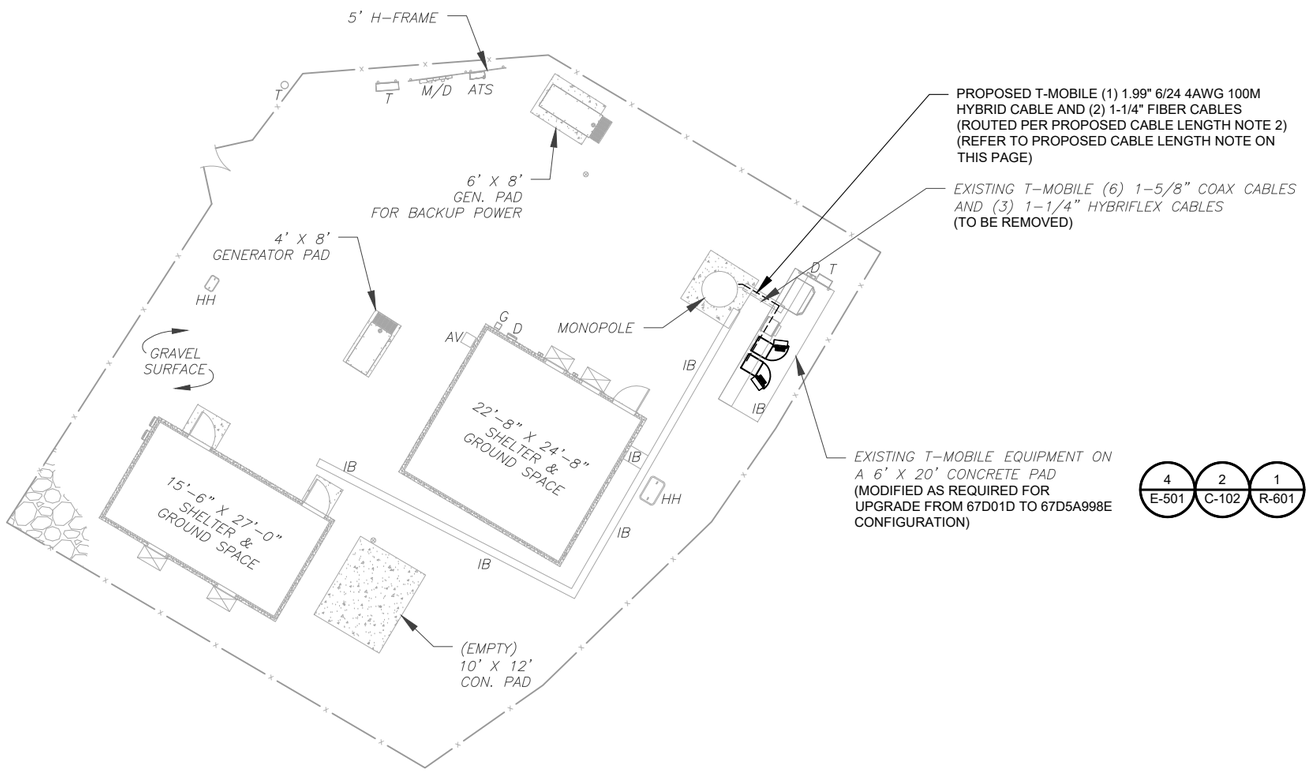
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

LEGEND

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



PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **160'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

1 DETAILED SITE PLAN

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 UNIT = 20 FEET

N

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302518

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NEWTOWN CT 3

T-MOBILE SITE NAME:
BETHEL-SNET MOBILITY

SITE ADDRESS:
6 FAIRFIELD DR (BRKFLD)
NEWTOWN, CT 06470

SEAL:

STATE OF CONNECTICUT ALEC S. NORRIS 32588 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Alec Norris
Date: 2021.10.06 13:18:02-04'00'

Alec S. Norris
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LICENSE NUMBER: 32588
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C.T. JPC.0000131

T-Mobile

DATE DRAWN:	09/30/21
ATC JOB NO:	13732453_G3
CUSTOMER ID:	BETHEL-SNET MOBILITY
CUSTOMER #:	CT11105F

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

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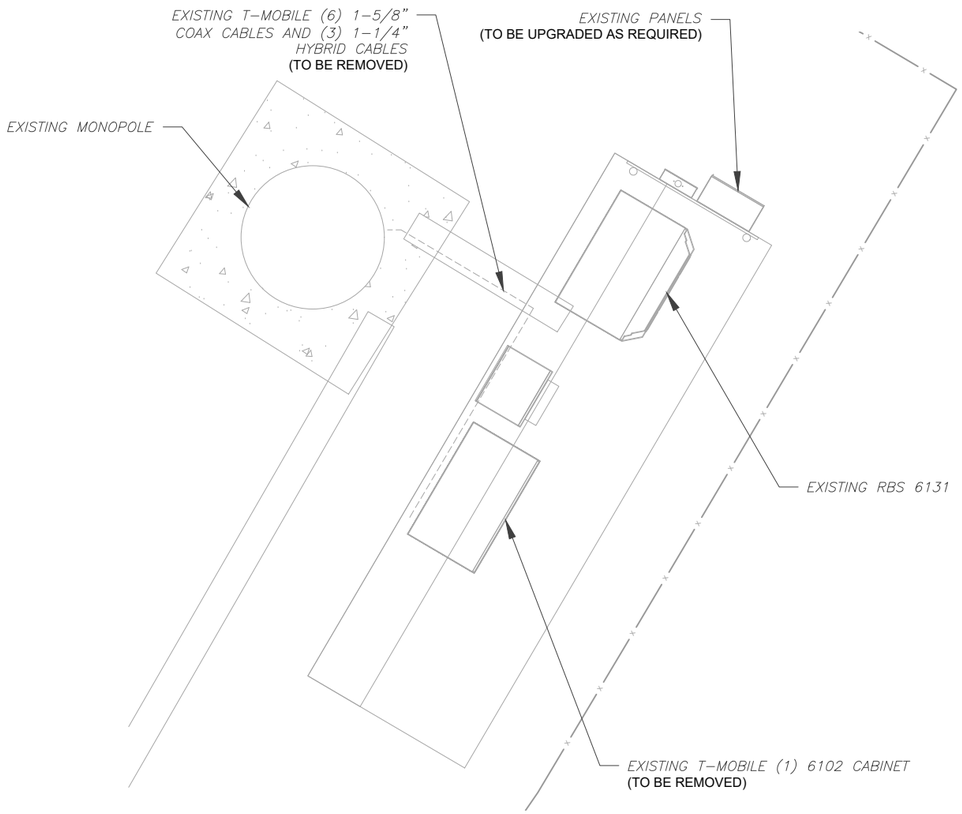
SITE PLAN NOTES:

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

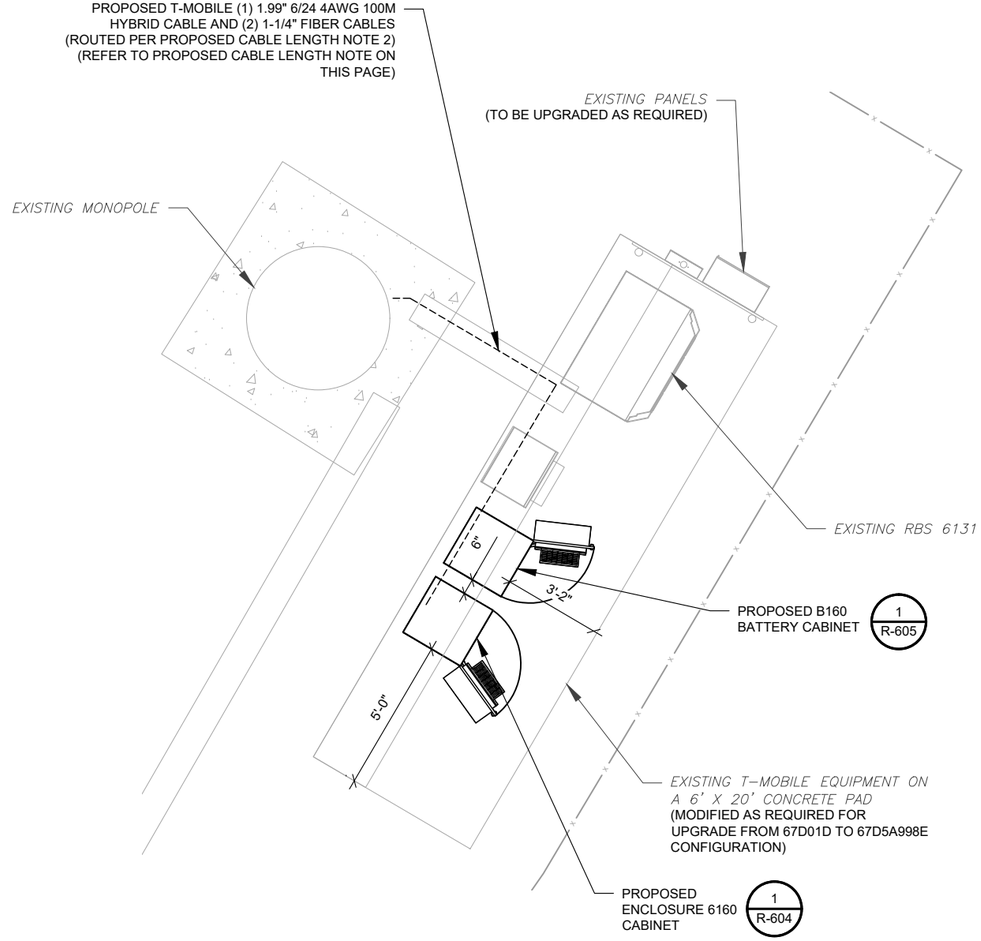


1 EXISTING GROUND EQUIPMENT LAYOUT

0 5' 10'

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

T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



2 PROPOSED GROUND EQUIPMENT LAYOUT

0 5' 10'

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

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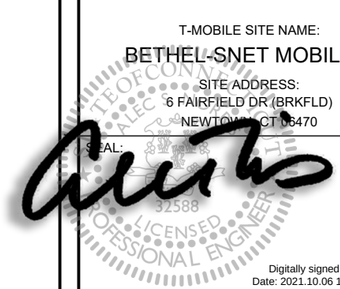
T-MOBILE SITE NAME:
BETHEL-SNET MOBILITY

SITE ADDRESS:
6 FAIRFIELD DR (BRKFLD)
NEWTOWN, CT 06470

SEAL:



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CUSTOMER #:	CT11105F

DETAILED GROUND PLAN

SHEET NUMBER:	REVISION:
C-102	0

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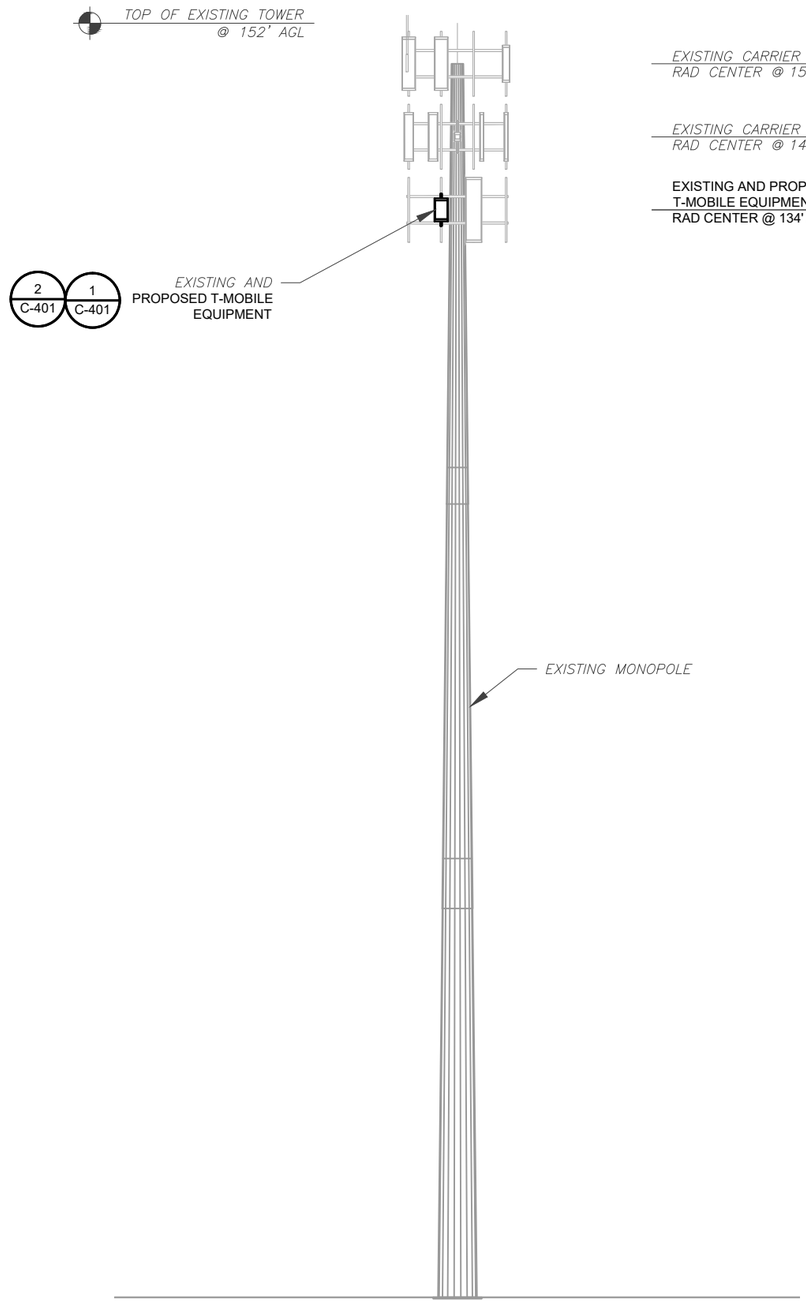
PER MOUNT ANALYSIS COMPLETED BY EFI GLOBAL, DATED 09/27/21, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



1 TOWER ELEVATION
SCALE: N.T.S.

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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NEWTOWN, CT 06470

SEAL:

STATE OF CONNECTICUT ALEC S. NORRIS 32588 LICENSED PROFESSIONAL ENGINEER

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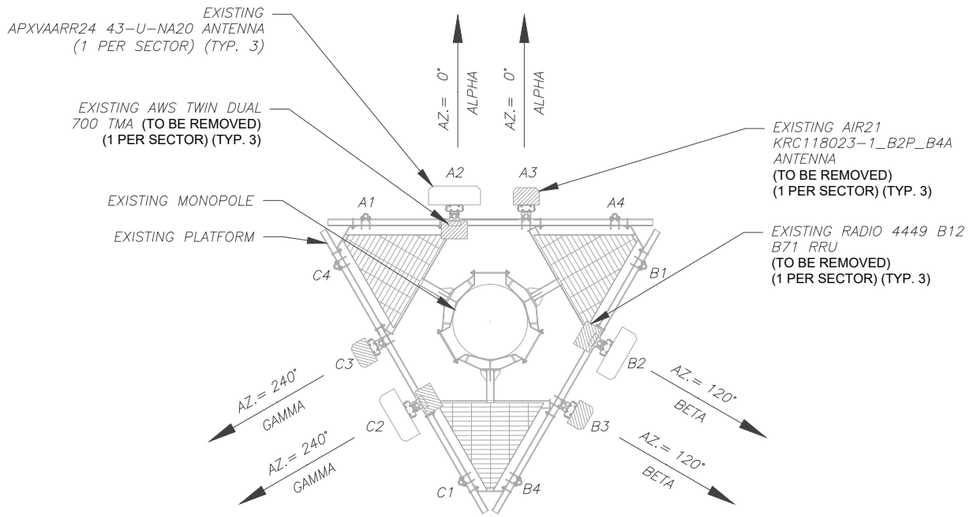
C.T. JPC.0000131

T-Mobile

DATE DRAWN:	09/30/21
ATC JOB NO:	13732453_G3
CUSTOMER ID:	BETHEL-SNET MOBILITY
CUSTOMER #:	CT11105F

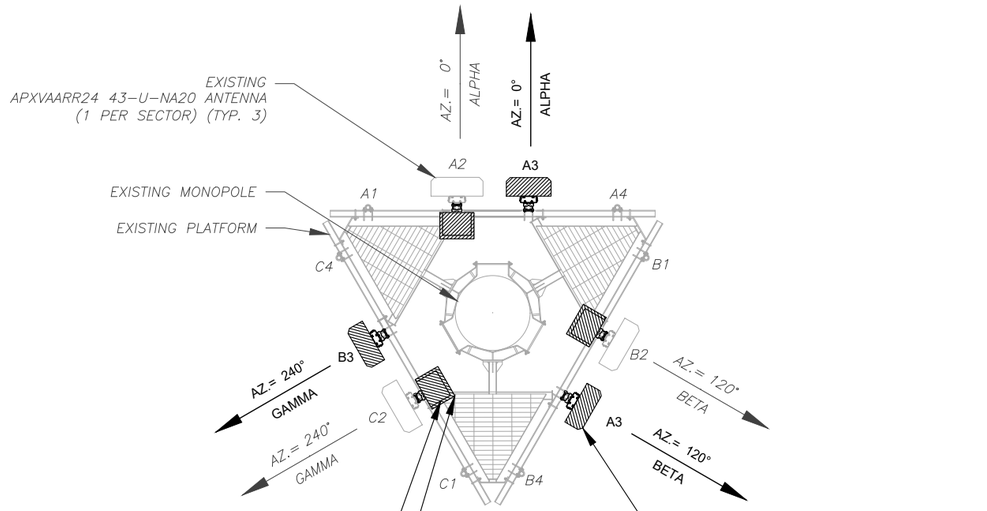
TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.



PER MOUNT ANALYSIS COMPLETED BY EFI GLOBAL, DATED 09/27/21, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

2 FINAL ANTENNA PLAN

SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	134'	0°	A1	–	–	–	–	–	–
			A2	APXVAARR24 43-U-NA20	L700/L600/N600	0/2/2	RMN	RADIO 4449 B71+B85 TWIN STYLE TMA	RMV
			A3	AIR21 KRC118023-1_B2P_B4A	L2100	0/2	RMV	–	–
			A4	–	–	–	–	–	–
BETA	134'	120°	B1	–	–	–	–	–	–
			B2	APXVAARR24 43-U-NA20	L700/L600/N600	0/2/2	RMN	RADIO 4449 B71+B85 TWIN STYLE TMA	RMV
			B3	AIR21 KRC118023-1_B2P_B4A	L2100	0/2	RMV	–	–
			B4	–	–	–	–	–	–
GAMMA	134'	240°	C1	–	–	–	–	–	–
			C2	APXVAARR24 43-U-NA20	L700/L600/N600	0/2/2	RMN	RADIO 4449 B71+B85 TWIN STYLE TMA	RMV
			C3	AIR21 KRC118023-1_B2P_B4A	L2100	0/2	RMV	–	–
			C4	–	–	–	–	–	–

NOTES

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

STATUS ABBREVIATIONS

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

CABLE LENGTHS FOR JUMPERS

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

FINAL ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	134'	0°	A1	-	-	-	-	-	-
			A2	APXVAARR24 43-U-NA20	L700/L600/N600	0/2/2	RMN	RADIO 4449 B71+B85 RADIO 4460 B25+B66	ADD
			A3	AIR6449 B41	L2500/N2500	0/0	ADD	-	-
			A4	-	-	-	-	-	-
BETA	134'	120°	B1	-	-	-	-	-	-
			B2	APXVAARR24 43-U-NA20	L700/L600/N600	0/2/2	RMN	RADIO 4449 B71+B85 RADIO 4460 B25+B66	ADD
			B3	AIR6449 B41	L2500/N2500	0/0	ADD	-	-
			B4	-	-	-	-	-	-
GAMMA	134'	240°	C1	-	-	-	-	-	-
			C2	APXVAARR24 43-U-NA20	L700/L600/N600	0/2/2	RMN	RADIO 4449 B71+B85 RADIO 4460 B25+B66	ADD
			C3	AIR6449 B41	L2500/N2500	0/0	ADD	-	-
			C4	-	-	-	-	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
–	–	(6) 1-5/8"	(3) 1-1/4"	RMV

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	-	(2) 1-1/4" FIBER	ADD
-	-	-	(1) 1.99" 6/24 4AWG 50M	ADD

3 EQUIPMENT SCHEDULES

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	MLH	09/30/21
0	FOR CONSTRUCTION	RMD	10/06/21

ATC SITE NUMBER:
302518

ATC SITE NAME:
NEWTOWN CT 3

T-MOBILE SITE NAME:
BETHEL-SNET MOBILITY

SITE ADDRESS:
6 FAIRFIELD DR (BRKFLD)
NEWTOWN, CT 06470

SEAL:

STATE OF CONNECTICUT · ALEC S. NORRIS · 32588 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Alec Norris
Date: 2021.10.06 13:18:09-04'00'

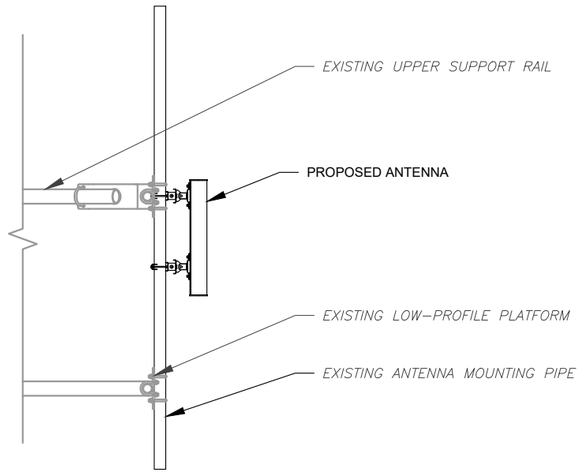
Alec S. Norris
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 32588
COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T. JPC.0000131

T-Mobile

DATE DRAWN:	09/30/21
ATC JOB NO:	13732453_G3
CUSTOMER ID:	BETHEL-SNET MOBILITY
CUSTOMER #:	CT11105F

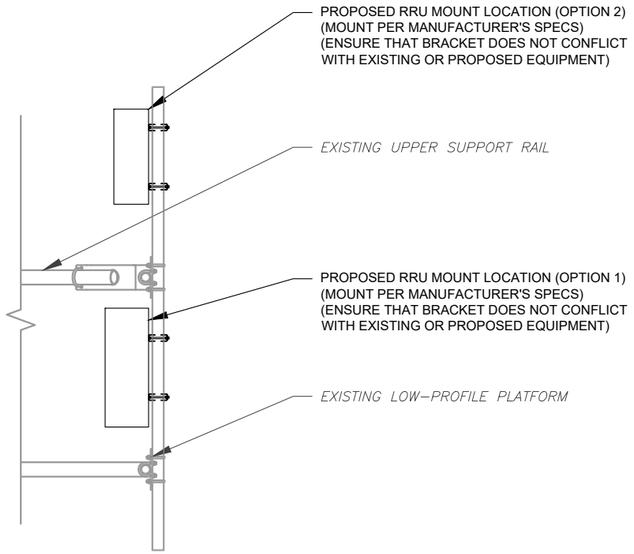
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0



1 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	MLH	09/30/21
0	FOR CONSTRUCTION	RMD	10/06/21

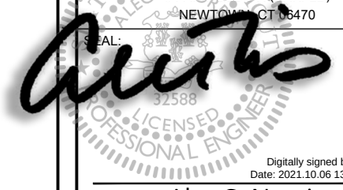
ATC SITE NUMBER:
302518

ATC SITE NAME:
NEWTOWN CT 3

T-MOBILE SITE NAME:
BETHEL-SNET MOBILITY

SITE ADDRESS:
6 FAIRFIELD DR (BRKFLD)
NEWTOWN, CT 06470

SEAL:



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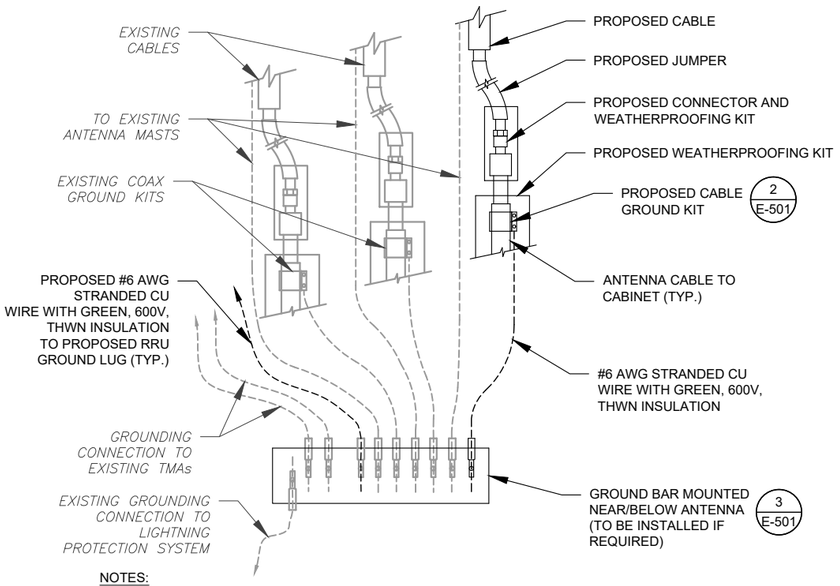
T-Mobile

DATE DRAWN:	09/30/21
ATC JOB NO:	13732453_G3
CUSTOMER ID:	BETHEL-SNET MOBILITY
CUSTOMER #:	CT11105F

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

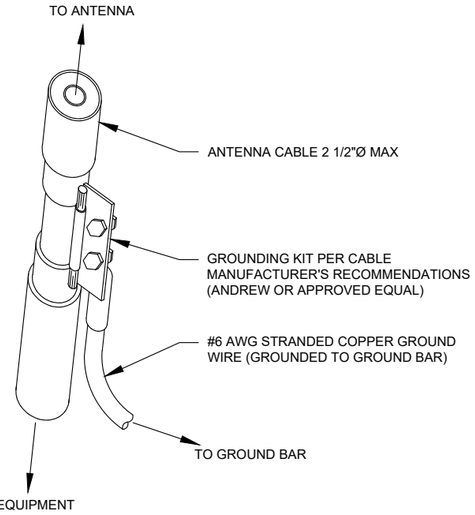


NOTES:

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

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

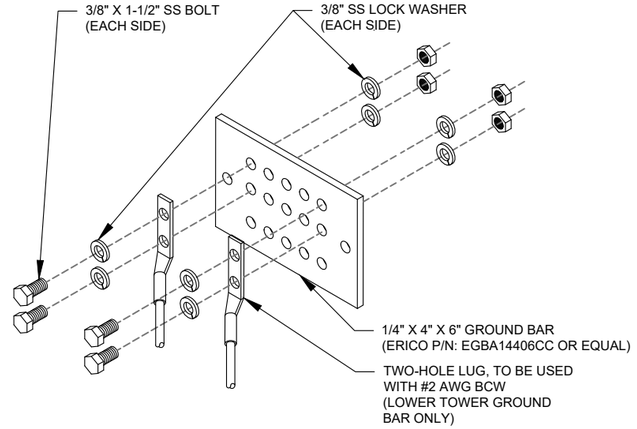


GROUND KIT NOTES:

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

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.



GROUND BAR NOTES:

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

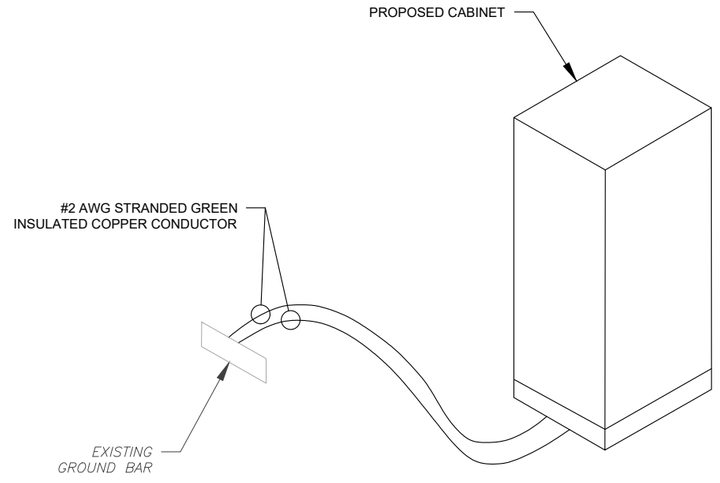
3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

ELECTRICAL NOTES:

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

OCPD SIZE	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
80A/2P	2#3 AWG	#8 AWG	1-1/4"
100/2P	2#2 AWG	#8 AWG	1-1/4"
125A/2P	2#1 AWG	#8 AWG	1-1/2"
150A/2P	2#1/0 AWG	#8 AWG	1-1/2"



4 CABINET GROUNDING DETAIL

SCALE: N.T.S.

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REV.	DESCRIPTION	BY	DATE
A	PRELIM	MLH	09/30/21
0	FOR CONSTRUCTION	RMD	10/06/21

ATC SITE NUMBER:
302518

ATC SITE NAME:
NEWTOWN CT 3

T-MOBILE SITE NAME:
BETHEL-SNET MOBILITY

SITE ADDRESS:
6 FAIRFIELD DR (BRKFLD)
NEWTOWN, CT 06470

SEAL:

STATE OF CONNECTICUT · ALEC S. NORRIS · 32588 · LICENSED PROFESSIONAL ENGINEER

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T-Mobile

DATE DRAWN:	09/30/21
ATC JOB NO:	13732453_G3
CUSTOMER ID:	BETHEL-SNET MOBILITY
CUSTOMER #:	CT11105F

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

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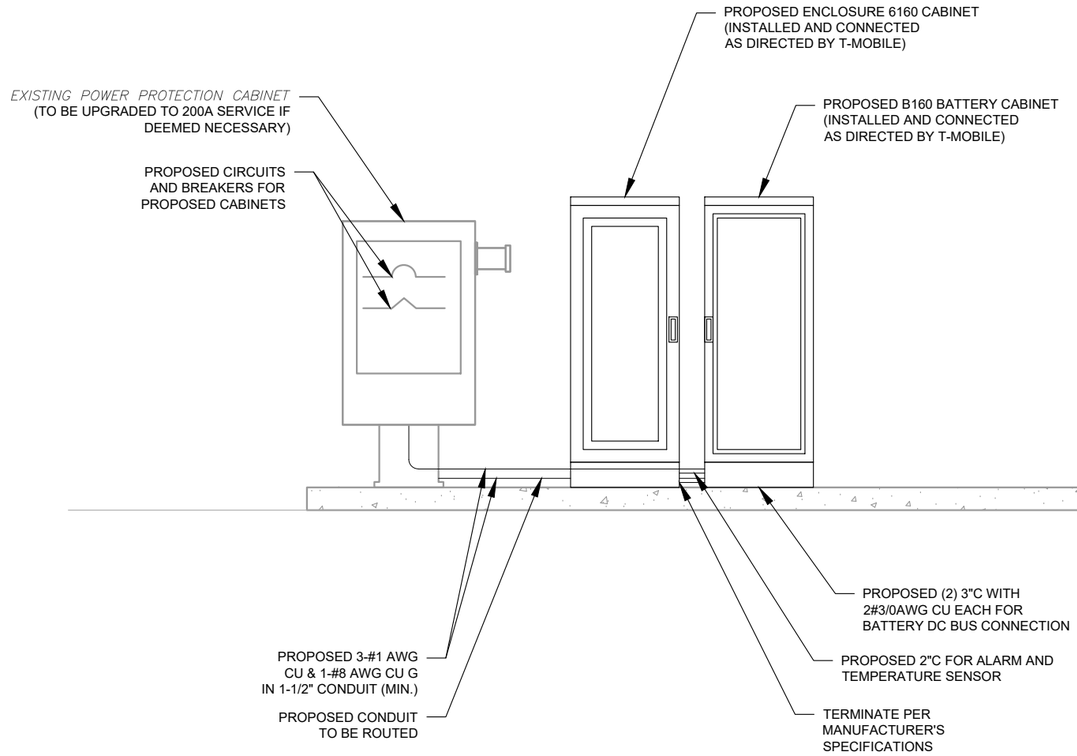
NOTES:

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTSOF THE 2017 EDITION OF NATIONAL ELECTRICAL CODE (NEC), NATIONAL ELECTRICAL SAFETY CODE, NAPA, NETA, OSHA, AND ALL OTHER EXISTING CODES AND REGULATIONS OF AUTHORITIES WHICH WOULD HAVE JURISDICTION.
2. ALL NEW WIRING SHALL BE WITH THWN-2 OR XHHW-2 INSULATION AND RATED FOR 75 DEG CELSIUS.
3. ALL UNDERGROUND CONDUIT SHALL BE PVC SCH40. ALL ABOVE GROUND CONDUIT SHALL BE PVC SCH80 OR RMC.



1 ELECTRICAL UPGRADE DIAGRAM

SCALE: NOT TO SCALE

ELECTRICAL NOTES:

1. THIS DIAGRAM 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. 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.
3. ATC HAS NOT YET VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER.

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0	FOR CONSTRUCTION	RMD	10/06/21

ATC SITE NUMBER:
302518

ATC SITE NAME:
NEWTOWN CT 3

T-MOBILE SITE NAME:
BETHEL-SNET MOBILITY

SITE ADDRESS:
6 FAIRFIELD DR (BRKFLD)
NEWTOWN, CT 06470

SEAL:

STATE OF CONNECTICUT · ALEC S. NORRIS · 32588 · LICENSED PROFESSIONAL ENGINEER

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LICENSE NUMBER: 32588
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T-Mobile

DATE DRAWN:	09/30/21
ATC JOB NO:	13732453_G3
CUSTOMER ID:	BETHEL-SNET MOBILITY
CUSTOMER #:	CT11105F

ELECTRICAL DETAILS

SHEET NUMBER:	REVISION:
E-502	0

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CORPORATION

This report was prepared for American Tower Corporation by

efi global

Antenna Mount Analysis Report

ATC Site Name	:	**Newtown CT 3**
ATC Site Number	:	**302518**
Engineering Number	:	**13732453_C8_01**
Mount Elevation	:	**134 ft**
Carrier	:	**T-MOBILE**
Carrier Site Name	:	**Bethel - SNET Mobility**
Carrier Site Number	:	**CT11105F**
Site Location	:	**25 Meridian Ridge Drive** **Newtown, CT 06470-1216** **41.42552778, -73.37404722**
County	:	**Fairfield**
Date	:	**September 27, 2021**
Max Usage	:	**39%**
Result	:	**Pass**

Prepared By:
Arda Güray
EFI Global, Inc.

Reviewed By:
Richard L. Peterman, P.E.
EFI Global, Inc.

STATE OF CONNECTICUT · RICHARD L. PETERMAN · No. 30077 · LICENSED PROFESSIONAL ENGINEER
9/27/2021

COA#: 00807

Antenna Loading

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
134	134	3	Ericsson Air6449 B41
		3	RFS APXVAARR24 43-U-NA20
		3	Ericsson Radio 4449 B71+B85A
		3	Ericsson Radio 4460 BAND 2/25

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Platform Base Face Channels	34%	Pass
Platform Base Standoff Channels	33%	Pass
Support Rail Pipes	33%	Pass
Support Rail Corner Angles	39%	Pass
Mount Pipes	39%	Pass

EFI Global, Inc. – 1117 Perimeter Center West, Suite E500, Atlanta, GA 30338 – (470) 990-6593 – telecom@efiglobal.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: R-601

REVISION: -

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Section 5 - RAN Equipment

DRAFT

Existing RAN Equipment

Template: 67D01D

Enclosure	1	2
Enclosure Type	RBS 6131	Tower Top Mount (Ericsson)
Baseband	DUW30 U2100; BB 6630 L700 L600 N600; BB 6630 L2100	
Hybrid Cable System		Ericsson 9x18 HCS *Select Length*; Ericsson 6x12 HCS *Select AWG & Length* **(x 2)**
Radio	RU22 **(x 6)** U2100	

Proposed RAN Equipment

Template: 67D5A998E Outdoor

Enclosure	1	2	3
Enclosure Type	RBS 6131	Enclosure 6160	B160
Baseband	DUW30 U2100; BB 6630 L700 L600 N600; BB 6630 L2100 L1900	BB 6648 L2500 N2500	
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* **(x 2)**	PSU 4813; Ericsson Hybrid Trunk 6/24 4AWG 50m	
Transport System		CSR IXRe V2 (Gen2)	

RAN Scope of Work:

Remove 6102 (DARK) Cabinet and Add new Anchor Cabinets.

Remove and return all cabinet radios from existing base station cabinet.

Add (1) Enclosure 6160.

Add (1) iXRe Router to new Enclosure 6160.

Add (1) BB6648 for L2500 and N2500 (MMBB - Mixed Mode Baseband) to new Enclosure 6160.

Add (1) PSU4813 Voltage Booster to new Enclosure 6160.

Add (1) Battery Cabinet B160.

Existing : (2) 6X12 and (1) 9X18 - Remove 1 - 9x18

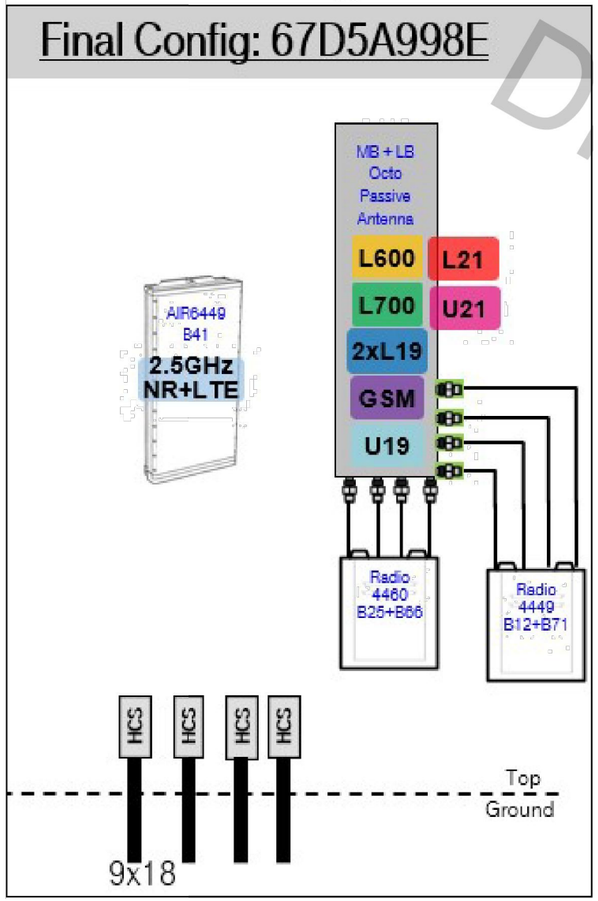
Add (1) 6X24 HCS terminating at the Enclosure 6160. Connect DC for the AIR6449 B41 to the PSU4813 Voltage Booster.

** L1900-C1 will be new layer ***

1 CABINET CONFIGURATION

SCALE: NOT TO SCALE

67D5A998E.jpg



2 ANTENNA CONFIGURATION

SCALE: NOT TO SCALE

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SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	-

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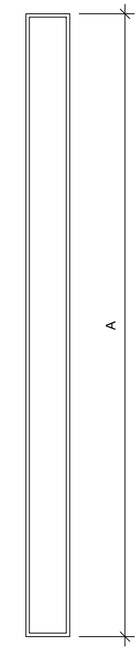
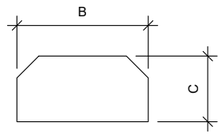


FRONT VIEW

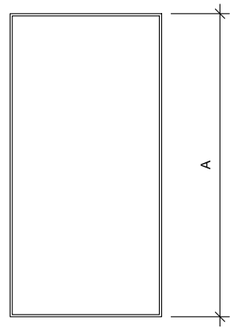


TOP VIEW

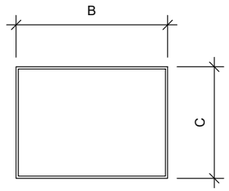
1 ANTENNA SPECIFICATIONS

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



FRONT VIEW



TOP VIEW

2 RRU SPECIFICATIONS

FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RADIO 4449 B71 B85A	15.0"	13.2"	10.5"	75.0
4460 BAND 2/25 ODU	16.5"	15.7"	12.1"	109.0

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SUPPLEMENTAL

SHEET NUMBER: R-603

REVISION: -

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

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SUPPLEMENTAL

SHEET NUMBER: R-604

REVISION: -

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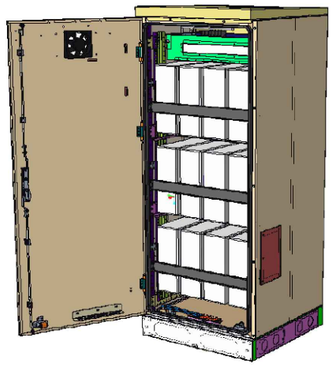
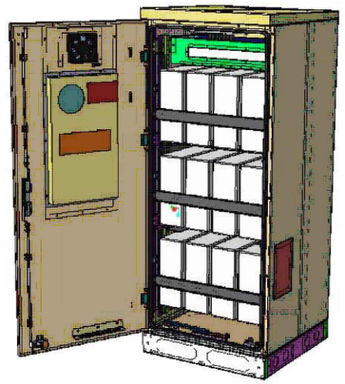
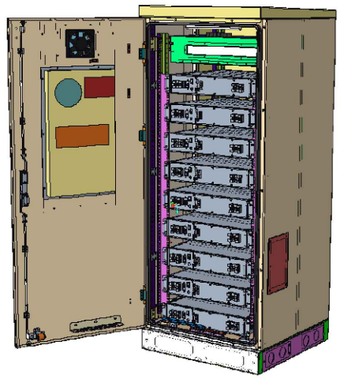
Enclosure B160



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

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

SUPPLEMENTAL

SHEET NUMBER: R-605

REVISION: -

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AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

efi global

Antenna Mount Analysis Report

ATC Site Name	:	**Newtown CT 3**
ATC Site Number	:	**302518**
Engineering Number	:	**13732453_C8_01**
Mount Elevation	:	**134 ft**
Carrier	:	**T-MOBILE**
Carrier Site Name	:	**Bethel - SNET Mobility**
Carrier Site Number	:	**CT11105F**
Site Location	:	**25 Meridian Ridge Drive** **Newtown, CT 06470-1216** **41.42552778, -73.37404722**
County	:	**Fairfield**
Date	:	**September 27, 2021**
Max Usage	:	**39%**
Result	:	**Pass**

Prepared By:
Arda Güray
EFI Global, Inc.

Reviewed By:
Richard L. Peterman, P.E.
EFI Global, Inc.

9/27/2021

STATE OF CONNECTICUT
RICHARD L. PETERMAN
No. 30077
LICENSED
PROFESSIONAL ENGINEER

COA#: 00807

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Calculations ..... Attached

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for T-Mobile at 134 ft.

Supporting Documents

RFDS	RFDS dated August 16, 2021
Photos	Site photos from 2020

Analysis

This antenna mount was analyzed using RISA-3D v19 analysis software

Basic Wind Speed:	115 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1.00" radial ice concurrent
Codes:	ANSI/TIA-222-H
Risk Category:	II
Exposure Category:	B
Topographic Factor Procedure:	Method 2
Feature:	Flat
Spectral Response:	Ss = 0.214, S_1 = 0.055
Seismic Design Category	B
Site Class:	D – Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

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

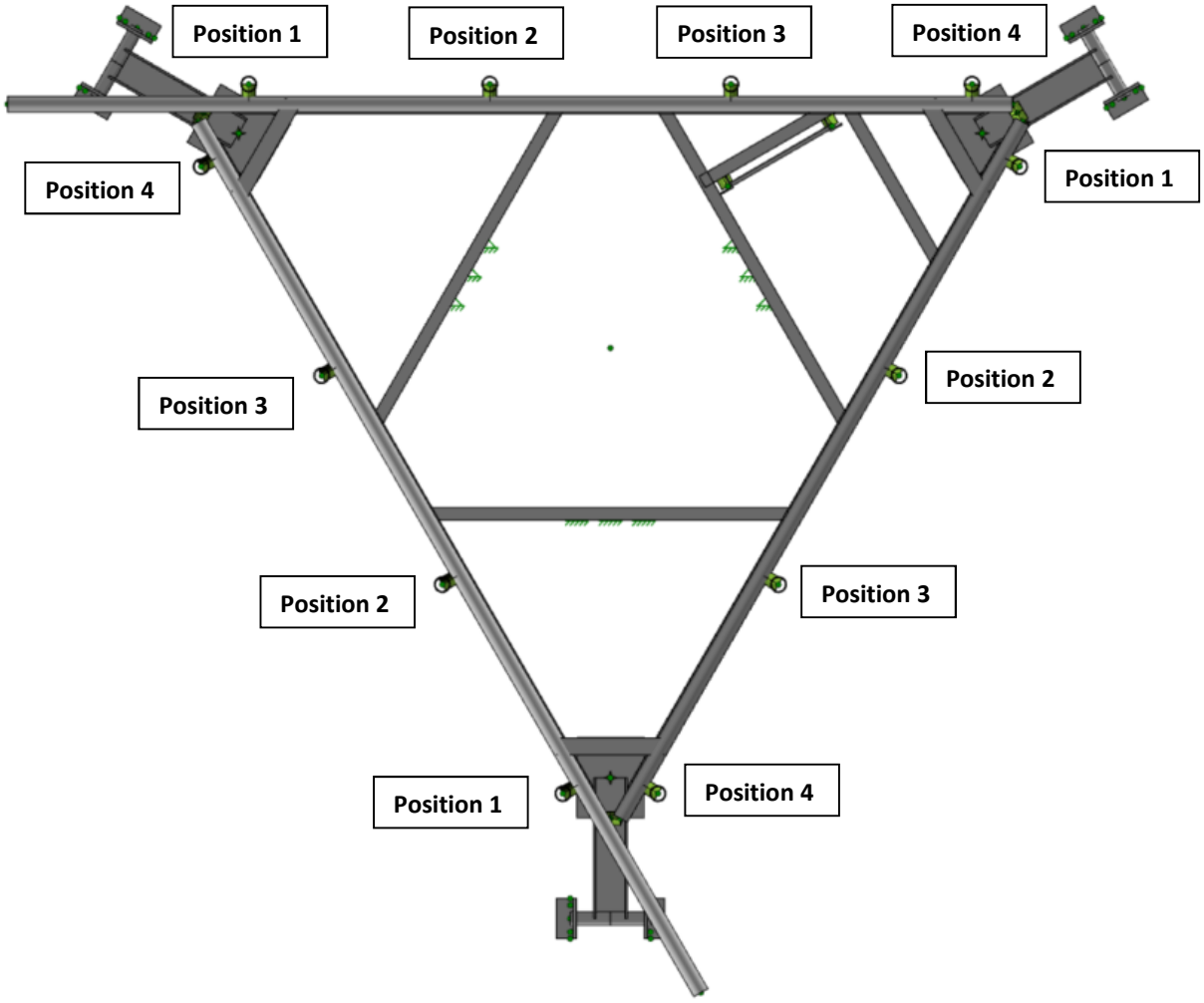
Antenna Loading

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
134	134	3	Ericsson Air6449 B41
		3	RFS APXVAARR24 43-U-NA20
		3	Ericsson Radio 4449 B71+B85A
		3	Ericsson Radio 4460 BAND 2/25

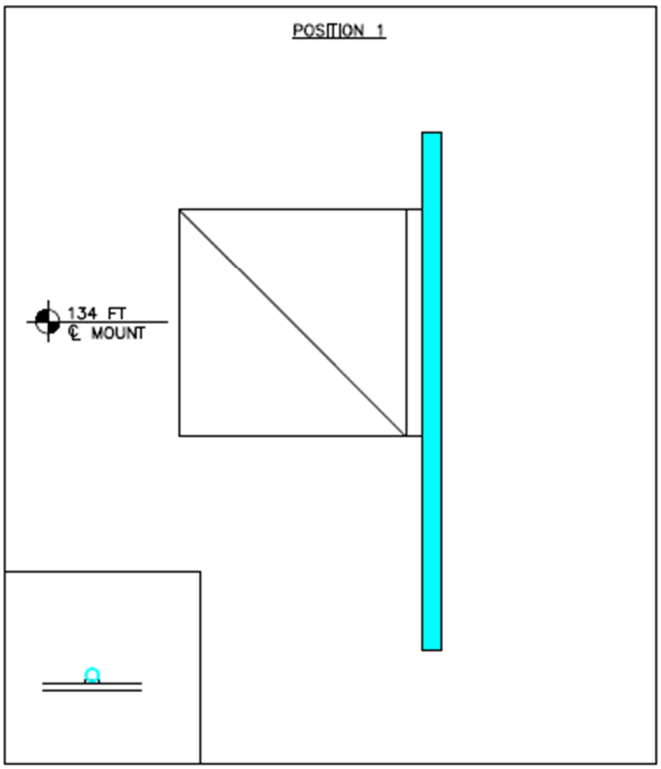
Structure Usages

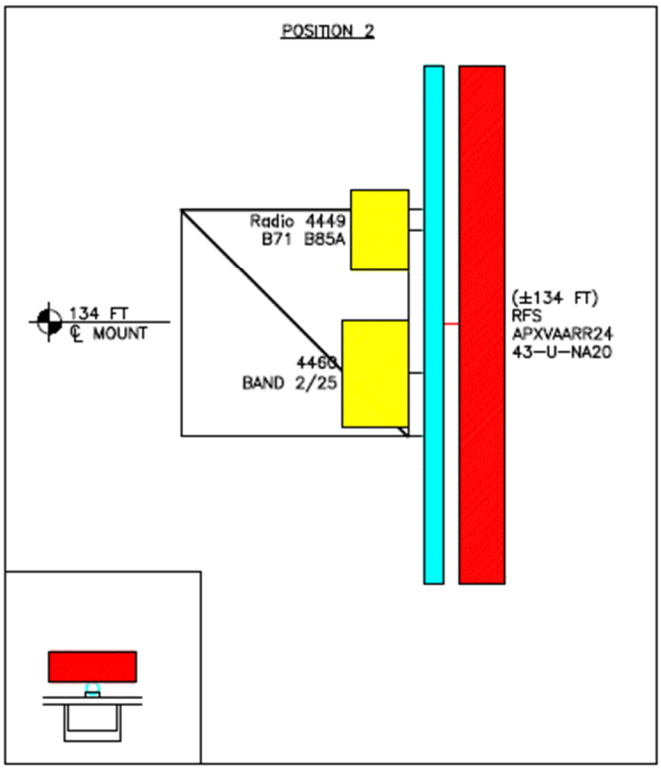
Structural Component	Controlling Usage	Pass/Fail
Platform Base Face Channels	34%	Pass
Platform Base Standoff Channels	33%	Pass
Support Rail Pipes	33%	Pass
Support Rail Corner Angles	39%	Pass
Mount Pipes	39%	Pass

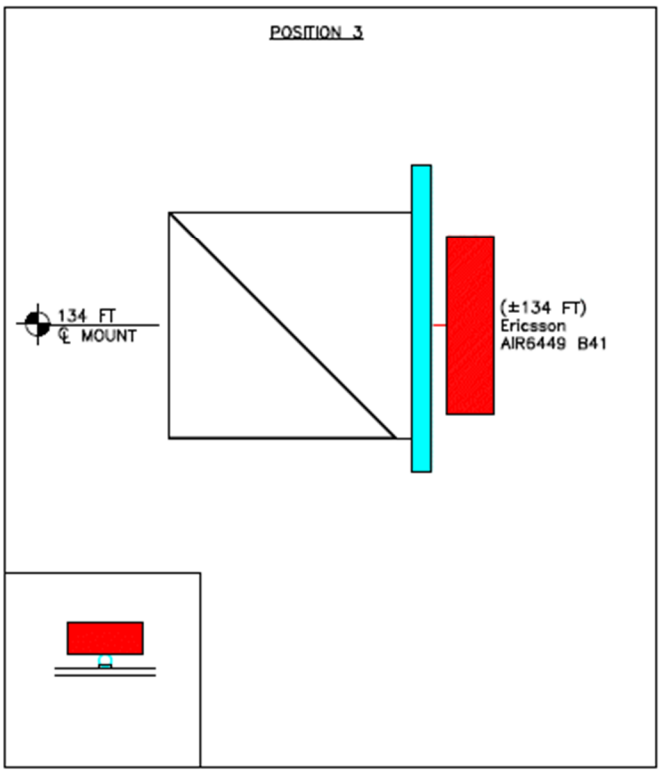
Mount Layout

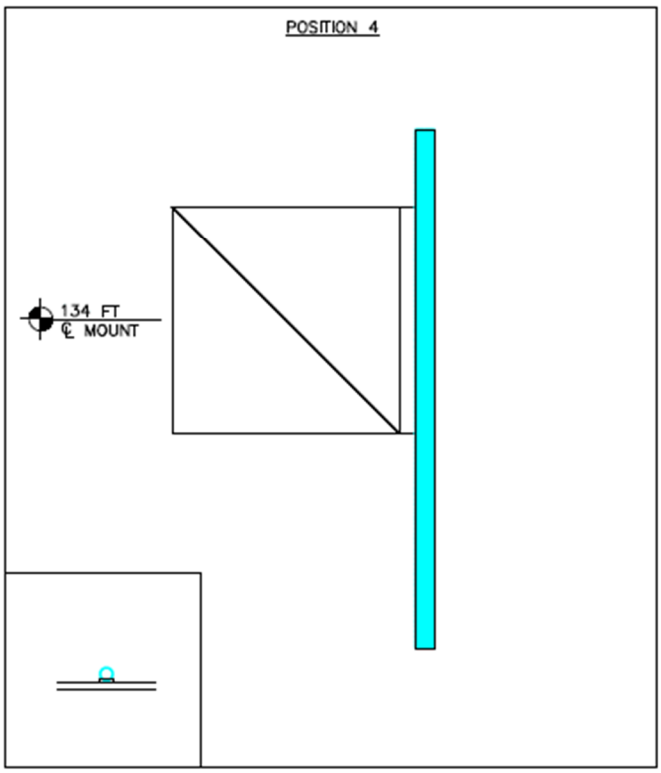


Equipment Layout









Standard Conditions

All engineering services performed by EFI Global, Inc. (EFI) 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 EFI

It is the responsibility of the client to ensure that the information provided to EFI and used in the performance of our engineering services is correct and complete.

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

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

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

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

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

CLIENT: ATC

PROJECT: 302518_13732453_T-MOBILE

SUBJECT: Antenna Loads - TIA 222 H Standard

Tower Height	151.40	ft	Type of Mount	Platform
Basic Wind Speed, V	115	mph		
Basic Wind Speed w/ Ice, V_i	50	mph		
Maintanence Load Factor, L_{FM}	0.0681	Load Factor for Maint. Load Cases (Basic Wind Speed=30 mph)		
Ultimate Ice Thickness, t_i		1	inches	

Table 2-3 Importance Factors

Structure Classification	Wind Load Without Ice	Wind Load With Ice	Ice Thickness	Earthquake
II	1	1	1	1

Table 2-4 Exposure Category Coefficients

Exposure Category	Zg	α	Kzmin	Ke	m
B	1200	7	0.7	0.9	0.55

Ground elevation factor, Ke

Zs	426	**ft**
Ke	0.98	

Table 2-5 Topographic Categories

Kzt 1.000

Table 2-2 Wind Directionality Factor, Kd

Structure Type	Kd	
2 Monopole	0.95	DOES NOT CHANGE

Gust Effect Factor Gh

Structure Type	Gh	
2 Monopole	1.00	DOES NOT CHANGE

Shielding Factor, Ka

Structure Type	Ka	
Monopole	0.90	DOES NOT CHANGE

Seismic Factors

Ss	0.214	
S1	0.055	
Fa	1.6	
Fv	2.4	
R	2	Truss or Pole

Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.07	
Topographic Factor	K_{zt}	1.00	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	0.98	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	115	mph
Velocity Pressure	q_z	34.0	psf
Height Escalation Factor	K_{iz}	1.15	
Thickness of Radial Glaze Ice	T_{iz}	1.15	in

Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.23	
1 Second DSRAP	S_{D1}	0.09	
Importance Factor	I	1.00	
Response Modification Coefficient	R	2.00	
Seismic Response Coefficient	C_S	0.05	
Amplification Factor	A	1.00	
Seismic Design Category	SDC	B	

CLIENT: ATC

PROJECT: 302518_13732453_T-MOBILE

SUBJECT: Antenna Loads - TIA 222 H Standard

Rad Center **134.00** ft

Antenna AND Mount Without Ice

Mounting Pole	Height (ft)	Model Number	#	Weight (lbs)	H (in)	*W (in)	D (in)	Ka	**A_N (ft2)	***A_T (ft2)	Aspect (FRONT)	Aspect (SIDE)	Ca (FRONT)	Ca (SIDE)	K_z	q_z (psf)	Pounds: Wind Load (Front)	Wind Load (Side)	Dead Load	Total Wind Load (Front)	Total Wind Load (Side)	Total Dead Load	Lateral Load (Seismic)	Vertical Load (Seismic)
Pos. 1		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0	0	0	0	0	0
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				0	0	0	0	0
Pos. 2	**134.00**	RFS APXVAARR24 43-U-NA20	1	127.9	95.9	24.0	8.7	0.90	15.98	5.79	4.00	11.02	1.27	1.53	1.074	34.0	619.9	272.2	127.9	620	373	312	16	14
	134.00	Radio 4449 B71 B85A	1	75.0	15.0	N/A	10.5	0.90	-	1.09	-	1.43	-	1.20	1.074	34.0	0.0	40.2	75					
	134.00	4460 BAND 2/25	1	109.0	19.6	N/A	12.1	0.90	-	1.65	-	1.62	-	1.20	1.074	34.0	0.0	60.5	109					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				310	187	156	8	7
Pos. 3	**134.00**	Ericsson Air6449 B41	1	104.0	33.1	20.6	8.6	0.90	4.74	1.98	1.61	3.85	1.20	1.26	1.074	34.0	174.0	76.3	104	174	76	104	5	5
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				88	39	52	3	2
Pos. 4		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0	0	0	0	0	0
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				0	0	0	0	0

* Enter N/A in the W column for front sheilded apurtanances.

** A_N is the product of H and W

*** A_T is the product of H and D

DL #REF!

Mount	Height (ft)	Member	*L (in)	**W (in)	D (in)	Weight (lb/ft)	*** Ca	K_z	q_z (psf)	Wind Load (PLF)	Lateral Load (Seismic)	Vertical Load (Seismic)
	134.00	4.0 STD Pipe	0.00	4.50	0.00		-	-	-	-	-	-
	134.00	2.5 STD Pipe	0.00	2.88	0.00		-	-	-	-	-	-
	134.00	2.0 STD Pipe	12.00	2.38	0.00		1.20	1.074	30.6	7	-	-
	134.00	0.625" SR	12.00	0.63	0.00		1.20	1.074	30.6	2	-	-
	134.00	(L2x2)	12.00	2.00	2.00		2.00	1.074	30.6	10	-	-
	134.00	(L2.5x2.5)	12.00	2.50	2.50		2.00	1.074	30.6	13	-	-
	134.00	(L3x3)	12.00	3.00	3.00		2.00	1.074	30.6	15	-	-
	134.00	Plate (PL0.25x12)	12.00	0.25	12.00		2.00	1.074	30.6	1	-	-
	134.00	Plate (PL5x3/8)	0.00	0.38	5.00		-	-	-	-	-	-
	134.00	HSS2x2	12.00	2.00	2.00		2.00	1.074	30.6	10	-	-
	134.00	Double Angle	0.00	0.00	0.00		-	-	-	-	-	-
	134.00	Channel (C5x9)	12.00	5.00	2.00		2.00	1.074	30.6	26	-	-
	134.00	Channel (C2x1)	0.00	2.00	1.00		-	-	-	-	-	-

* The dimension L is the longest dimension of the member

** The dimension W is the height or width of the member that resists wind load

*** Ca will equal 1.2 for round members and 2.0 for flat members

CLIENT: ATC

PROJECT: 302518_13732453_T-MOBILE

SUBJECT: Antenna Loads - TIA 222 H Standard

ti (in) 1.150427 Kiz 1.1504271 reduction 0.18904

Antenna AND Mount With Ice

Mounting Pole	Height (ft)	Model Number	#	H (in)	W (in)	D (in)	Ka	*A_N (ft2)	*A_T (ft2)	*Volume Ice (ft3)	*Weight Ice (lbs)	**Ca (FRONT)	**Ca (SIDE)	Kz	q_z (psf)	Pounds: Ice Wind Load (Front)	Ice Wind Load (Side)	Combined Wind Load (Front)	Combined Wind Load (Side)	Ice Dead Load	**Total Wind Load (Front)	**Total Wind Load (Side)	Total Ice Load
Pos. 1		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					0	0	0
Pos. 2	**134.00**	RFS APXVAARR24 43-U-NA20	1	95.9	24.0	8.7	0.90	1.95	1.71	4.85	271.86	0.73	0.84	1.074	6.4	8.2	8.3	125.4	59.8	272	125	83	379
	134.00	Radio 4449 B71 B85A	1	15.0	13.2	10.5	0.90	-	0.44	0.78	43.88	0.70	0.70	1.074	6.4	0.0	1.8	0.0	9.4	44			
	134.00	4460 BAND 2/25	1	19.6	15.7	12.1	0.90	-	0.54	1.13	63.32	0.70	0.70	1.074	6.4	0.0	2.2	0.0	13.6	63			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					63	42	190
Pos. 3	**134.00**	Ericsson Air6449 B41	1	33.1	20.6	8.6	0.90	0.89	0.70	1.72	96.36	0.70	0.72	1.074	6.4	3.6	2.9	36.5	17.3	96	37	17	96
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					19	9	49
Pos. 4		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0	0	0	0
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					0	0	0

* A_N ,A_T, Volume Ice and Weight Ice are calculated per unit

** Ca will equal 1.2 for all ice load calculations

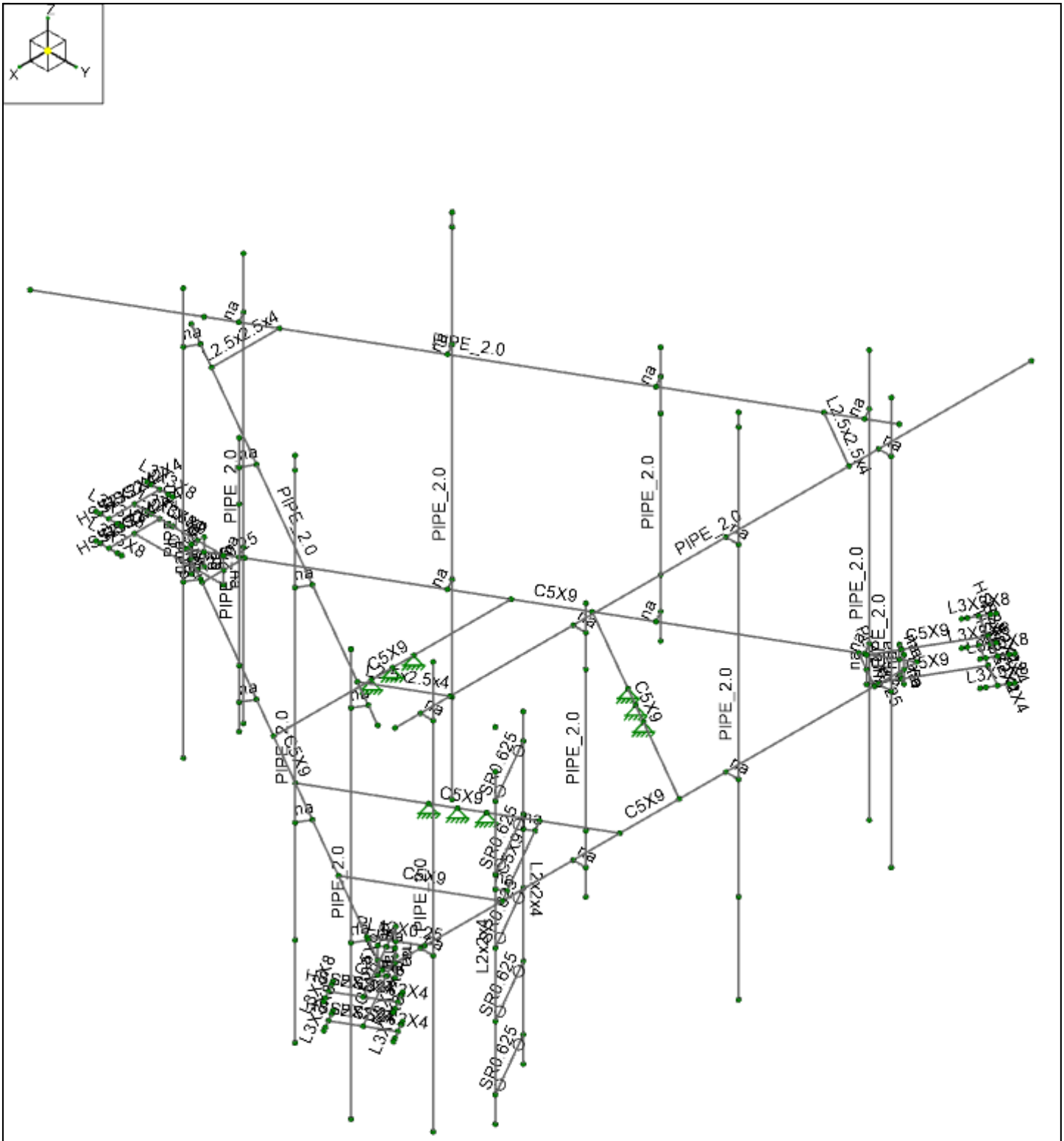
Mount	Height (ft)	Member	*L (in)	**W (in)	D (in)	***A_N (ft2)	Volume Ice (ft3)	Weight Ice (lbs)	****Ca (FRONT)	Kz	q_z (psf)	PLF: Ice Wind Load (Front)	Combined Wind Load (Front)	Ice Dead Load
	134.00	4.0 STD Pipe	0.00	4.50	0.00	-	-	-	-	-	-	-	-	-
	134.00	2.5 STD Pipe	0.00	2.88	0.00	-	-	-	-	-	-	-	-	-
	134.00	2.0 STD Pipe	12.00	2.38	0.00	0.27	0.09	4.96	1.20	1.074	5.8	1.9	3.2	5
	134.00	0.625" SR	12.00	0.63	0.00	0.24	0.04	2.50	1.20	1.074	5.8	1.7	2.0	2
	134.00	(L2x2)	12.00	2.00	2.00	0.26	0.06	3.58	1.20	1.074	5.8	1.8	3.7	4
	134.00	(L2.5x2.5)	12.00	2.50	2.50	0.27	0.08	4.47	1.20	1.074	5.8	1.9	4.3	4
	134.00	(L3x3)	12.00	3.00	3.00	0.28	0.10	5.37	1.20	1.074	5.8	1.9	4.8	5
	134.00	Plate (PL0.25x12)	12.00	0.25	12.00	0.23	0.28	15.74	1.20	1.074	5.8	1.6	1.9	16
	134.00	Plate (PL5x3/8)	0.00	0.38	5.00	-	-	-	-	-	-	-	-	-
	134.00	HSS2x2	12.00	2.00	2.00	0.26	0.13	7.02	1.20	1.074	5.8	1.8	3.7	7
	134.00	Double Angle	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-
	134.00	Channel (C5x9)	12.00	5.00	2.00	0.31	0.19	10.74	1.20	1.074	5.8	2.1	7.0	11
	134.00	Channel (C2x1)	0.00	2.00	1.00	-	-	-	-	-	-	-	-	-

* The dimension L is the longest dimension of the member

** The dimension W is the height or width of the member that resists wind load

*** A_N is the area of ice built up on the LW plane

**** Ca will equal 1.2 for all ice load calculations



Envelope Only Solution

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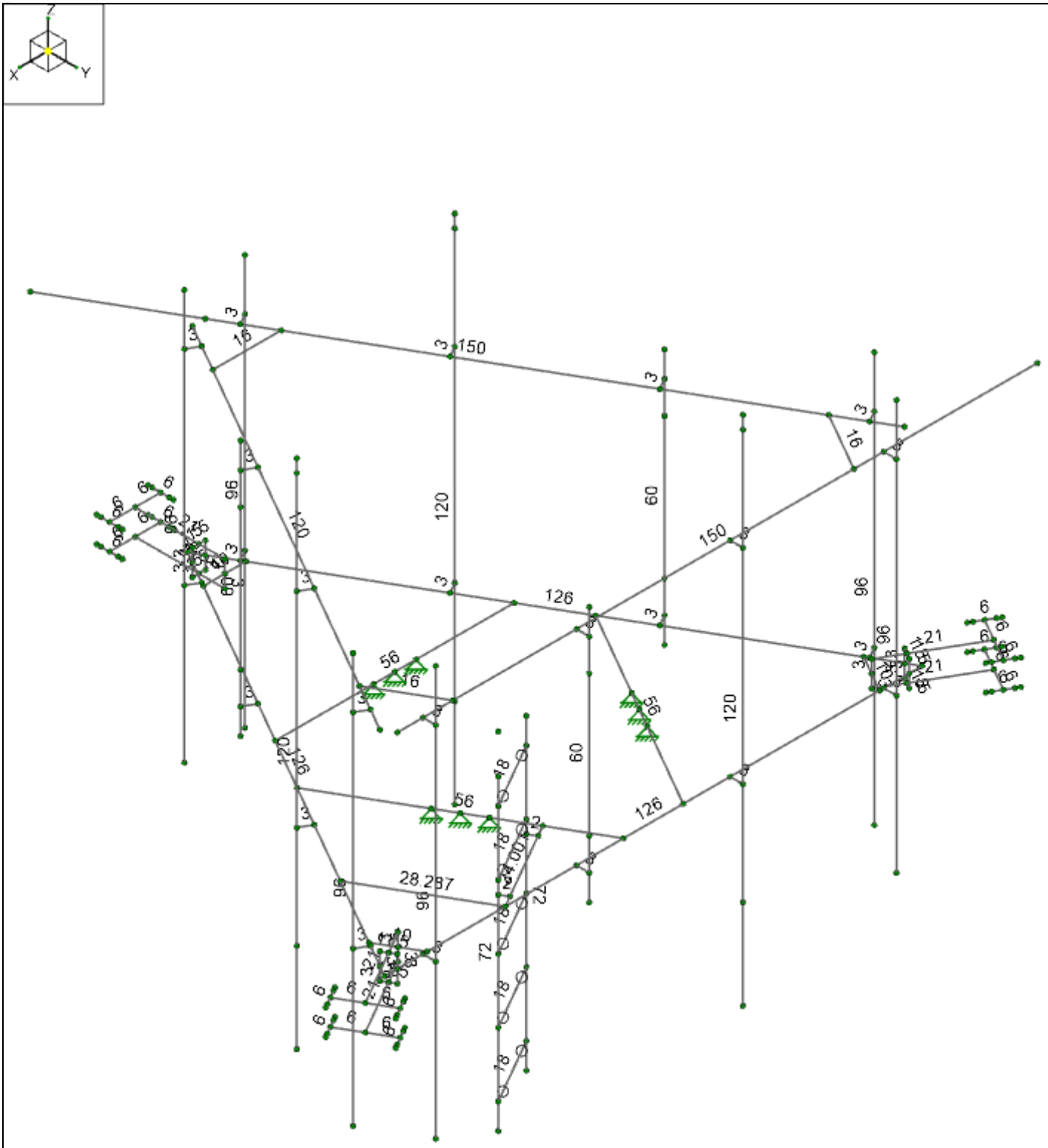
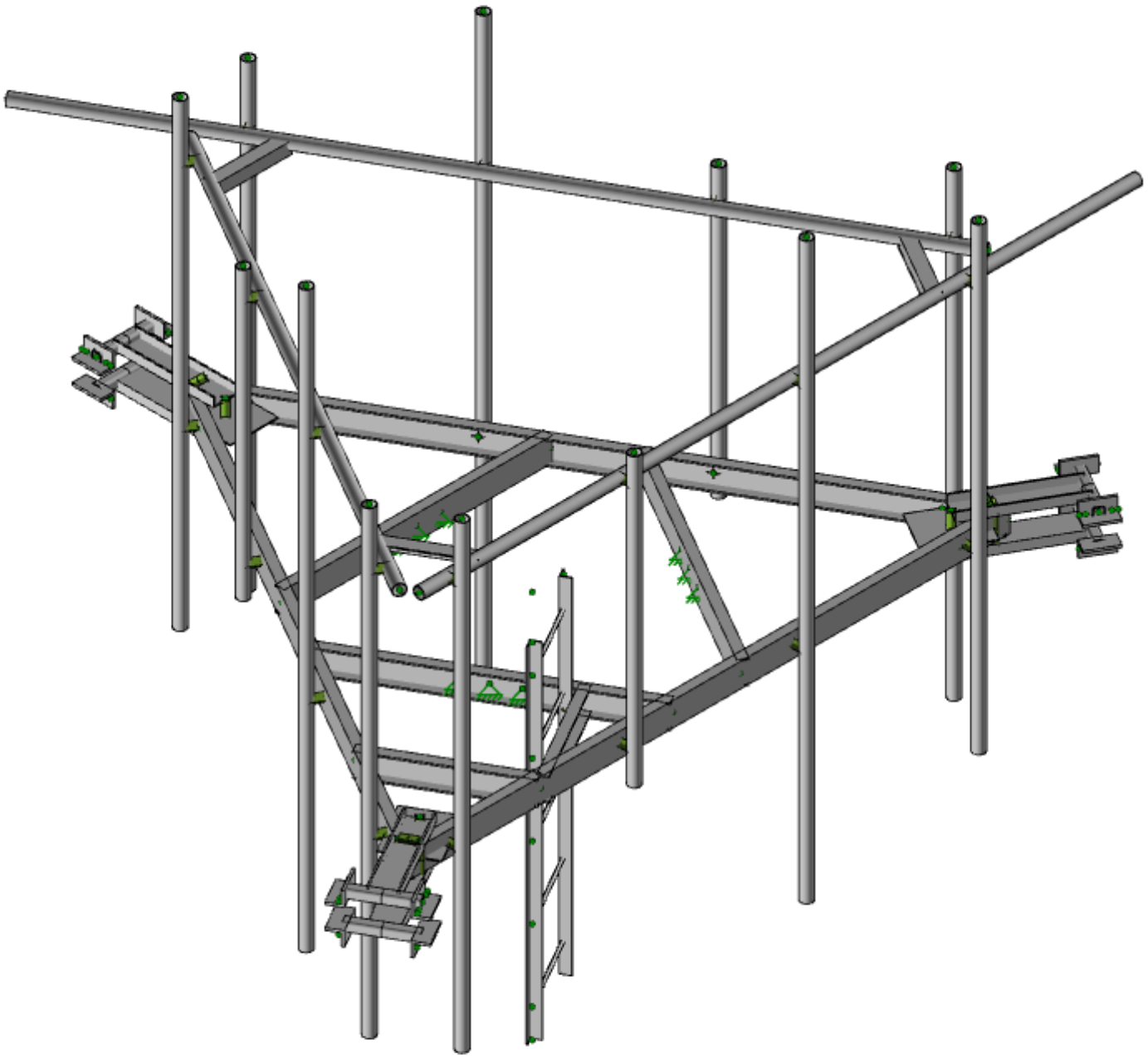


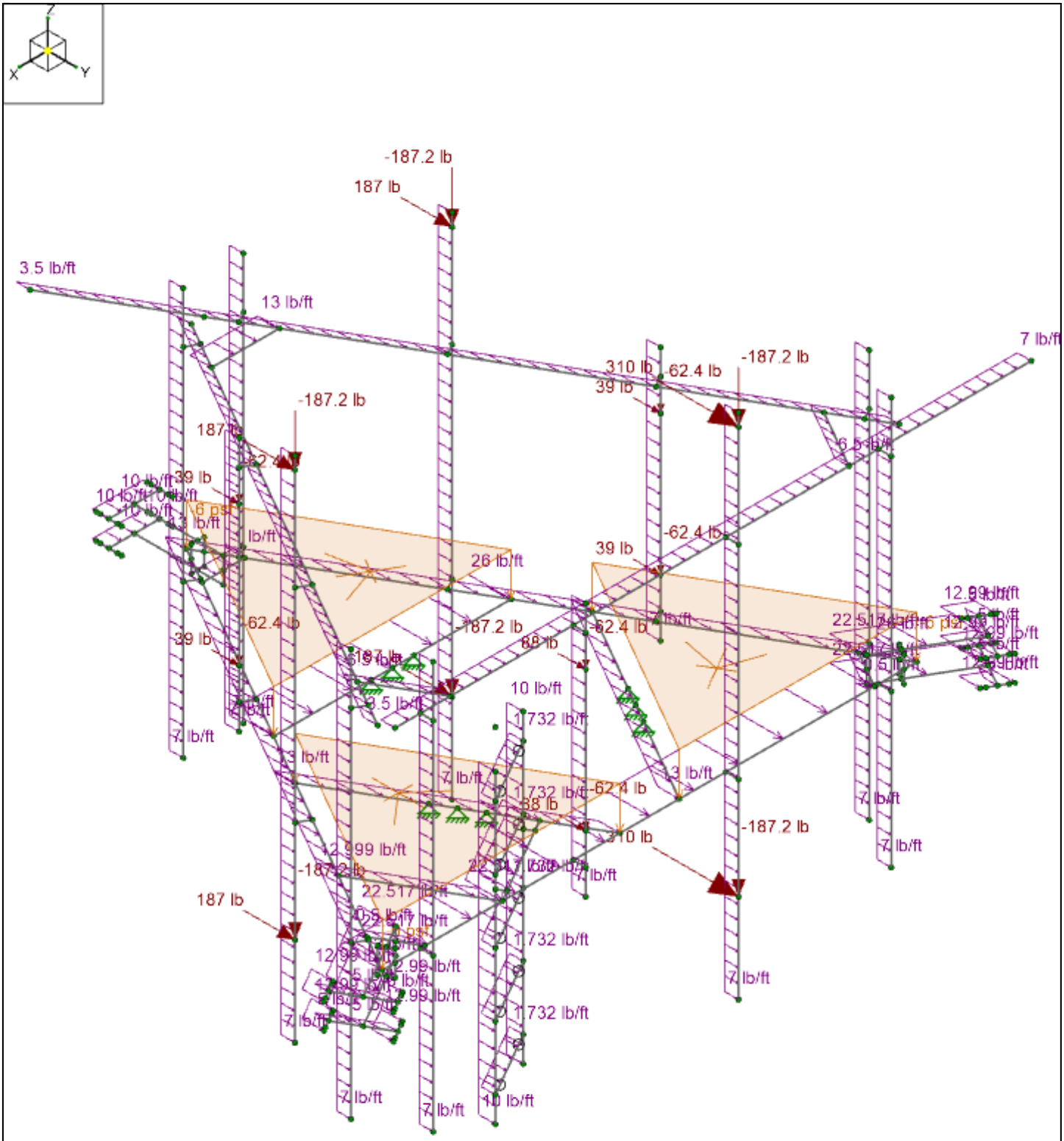
Member Length (in) Displayed
Envelope Only Solution

ATC/EFI	302518_13732453_T-MOBILE	SK-2
AG		Sep 24, 2021
049.022279 - 2110451		302518_13732453_T-MOBILE.r3d



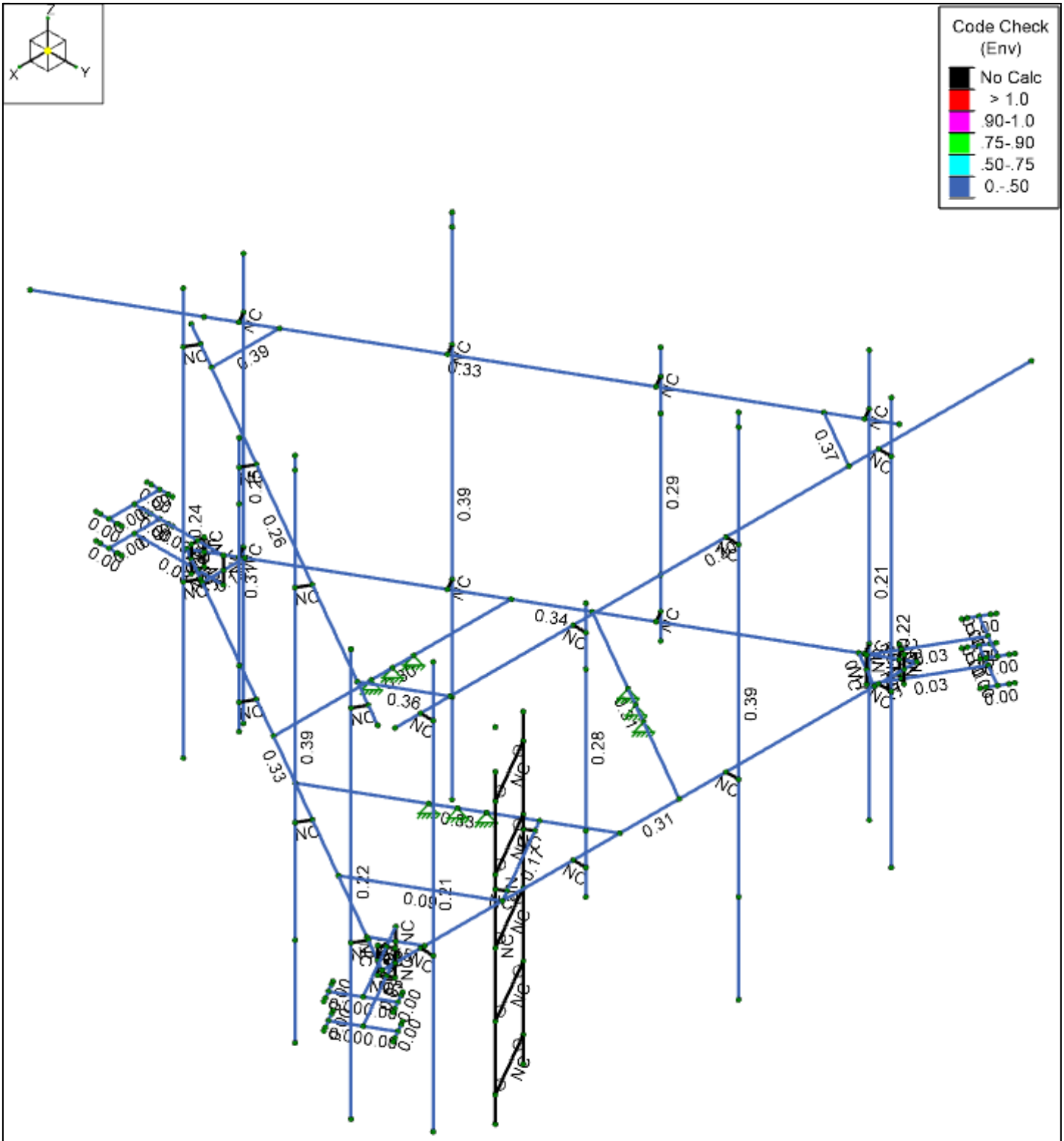
Member Length (in) Displayed
Envelope Only Solution

ATC/EFI	302518_13732453_T-MOBILE	SK-3
AG		Sep 24, 2021
049.022279 - 2110451		302518_13732453_T-MOBILE.r3d

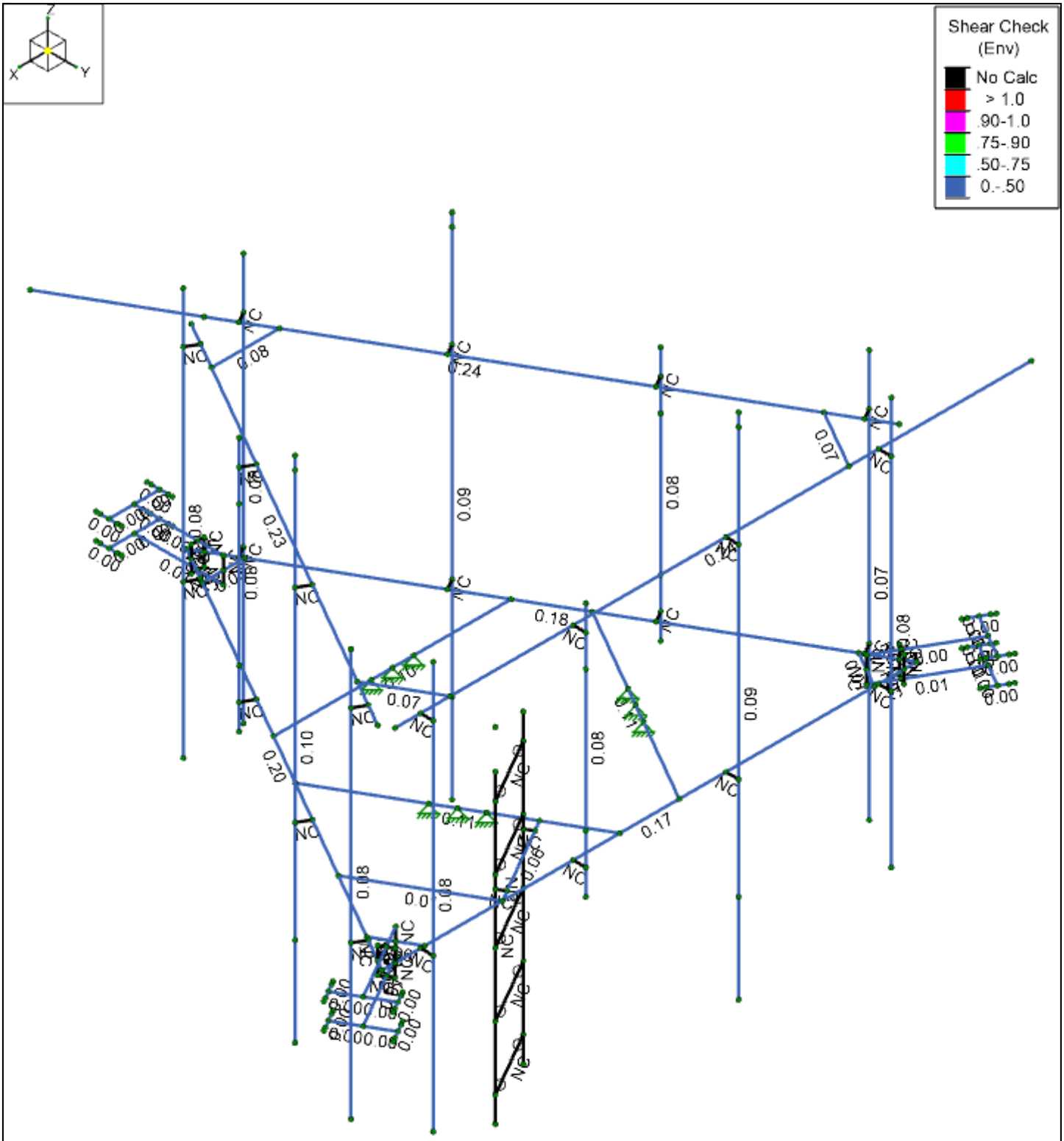


Loads: LC 1, DL + WL (NO ICE) 0 Degree
Envelope Only Solution

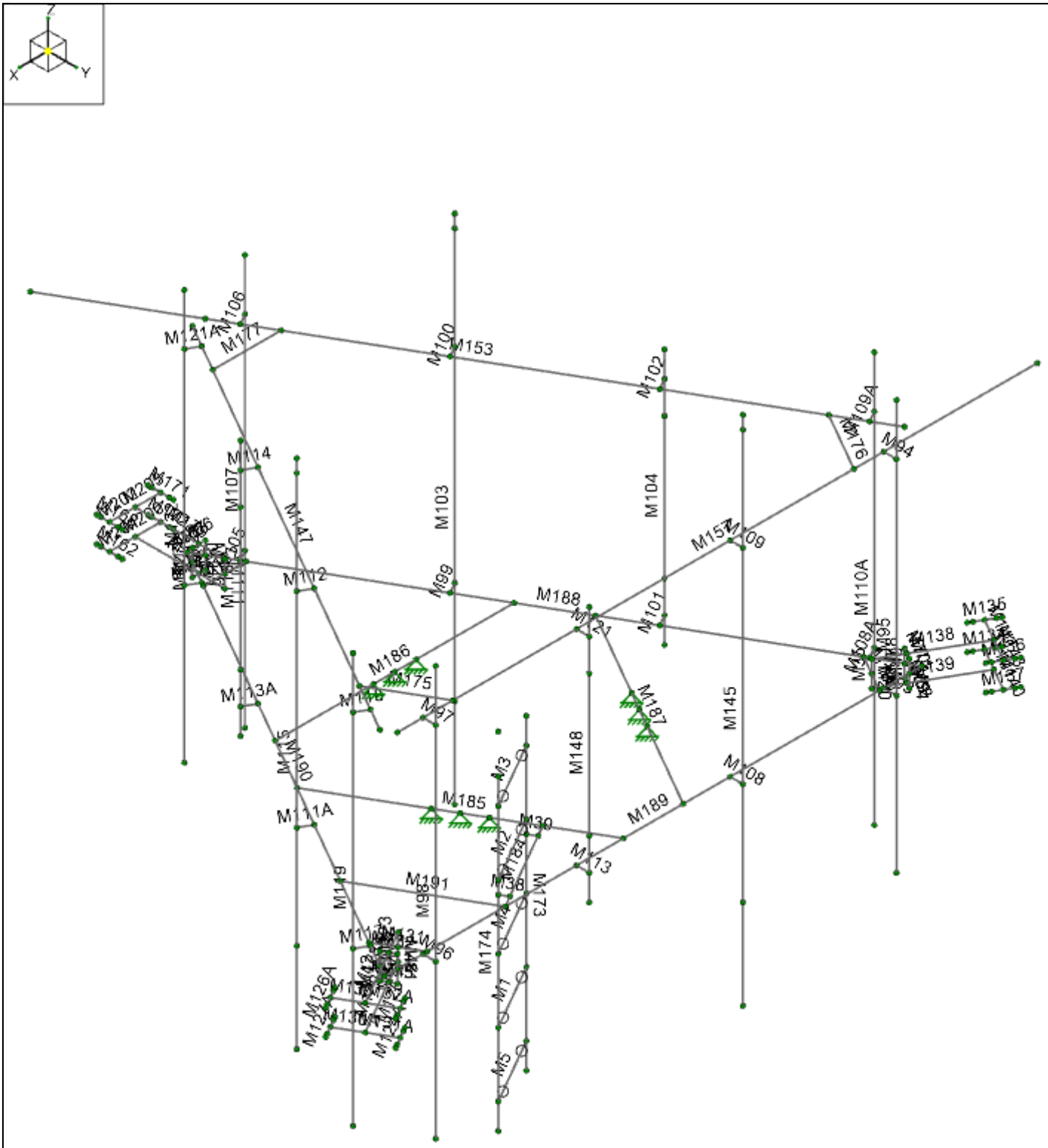
ATC/EFI	302518_13732453_T-MOBILE	SK-4
AG		Sep 24, 2021
049.022279 - 2110451		302518_13732453_T-MOBILE.r3d



ATC/EFI	302518_13732453_T-MOBILE	SK-5
AG		Sep 24, 2021
049.022279 - 2110451		302518_13732453_T-MOBILE.r3d

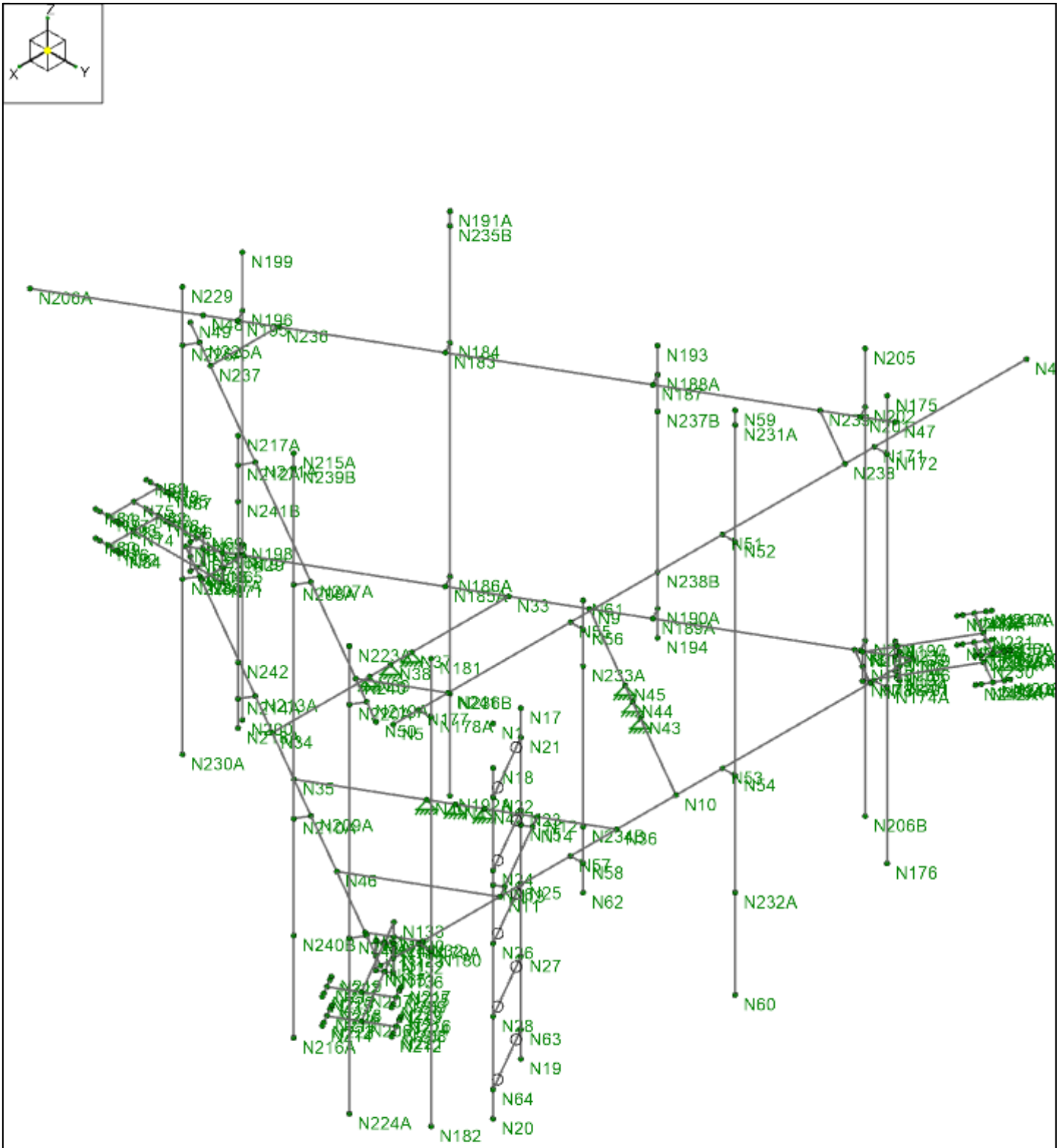


ATC/EFI	302518_13732453_T-MOBILE	SK-6
AG		Sep 24, 2021
049.022279 - 2110451		302518_13732453_T-MOBILE.r3d



Envelope Only Solution

ATC/EFI	302518_13732453_T-MOBILE	SK-7
AG		Sep 24, 2021
049.022279 - 2110451		302518_13732453_T-MOBILE.r3d



Envelope Only Solution

ATC/EFI	302518_13732453_T-MOBILE	SK-8
AG		Sep 24, 2021
049.022279 - 2110451		302518_13732453_T-MOBILE.r3d

Model Settings

Solution

Members

Number of Reported Sections	5
Number of Internal Sections	100
Member Area Load Mesh Size (in^2)	144
Consider Shear Deformation	Yes
Consider Torsional Warping	Yes

Wall Panels

Approximate Mesh Size (in)	12
Transfer Forces Between Intersecting Wood Walls	Yes
Increase Wood Wall Nailing Capacity for Wind Loads	Yes
Include P-Delta for Walls	Yes
Optimize Masonry and Wood Walls	No
Maximum Number of Iterations	3

Processor Core Utilization

Single	No
Multiple (Optimum)	Yes
Maximum	No

Axis

Vertical Global Axis

Global Axis corresponding to vertical direction	Z
Convert Existing Data	Yes

Default Member Orientation

Default Global Plane for z-axis	XZ

Plate Axis

Plate Local Axis Orientation	Nodal

Codes

Hot Rolled Steel	AISC 15th (360-16): LRFD
Stiffness Adjustment	Yes (Iterative)
Notional Annex	None
Connections	AISC 15th (360-16): LRFD
Cold Formed Steel	AISI NAS-01: ASD
Stiffness Adjustment	Yes (Iterative)
Wood	AF&PA NDS-05/08: ASD
Temperature	< 100F
Concrete	ACI 318-05
Masonry	ACI 530-05: ASD
Aluminum	AA ADM1-05: ASD
Structure Type	Building
Stiffness Adjustment	Yes (Iterative)
Stainless	AISC 14th (360-10): ASD
Stiffness Adjustment	Yes (Iterative)

Concrete

Column Design

Analysis Methodology	Exact Integration Method
Parme Beta Factor	0.65

Compression Stress Block	Rectangular Stress Block
Analyze using Cracked Sections	Yes
Leave room for horizontal rebar splices (2*d bar spacing)	No
List forces which were ignored for design in the Detail Report	Yes

Rebar

Column Min Steel	1
Column Max Steel	8
Rebar Material Spec	ASTM A615
Warn if beam-column framing arrangement is not understood	No

Model Settings (Continued)

Shear Reinforcement

Number of Shear Regions	4
Region 2 & 3 Spacing Increase Increment (in)	4

Seismic

RISA-3D Seismic Load Options

Code	ASCE 7-05
Occupancy Cat	I or II
Drift Cat	Other
Base Elevation (ft)	
Include the weight of the structure in base shear calcs	Yes

Site Parameters

S_1 (g)	1
SD_1 (g)	1
SD_S (g)	1
T_L (sec)	-1

Structure Characteristics

T Z (sec)	
T X (sec)	
C_tX	0.035
C_tExp. Z	0.75
C_tExp. X	0.75
R Z	8.5
R X	8.5
Ω_0Z	1
Ω_0X	1
C_dZ	4
C_dX	4
ρ Z	1
ρ X	1

Project Grid Lines

No Data to Print...

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{5}°F^{-1}]	Density [k/ft^{3}]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.2
3	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.2
4	A500 Gr.42	29000	11154	0.3	0.65	0.49	42	1.3	58	1.1
5	A500 Gr.46	29000	11154	0.3	0.65	0.49	46	1.2	58	1.1
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.5	60	1.2
7	A529 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.2

Member Primary Data

	Label	I Node	J Node	K Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N27	N28			SR0.625	Beam	BAR	A36 Gr.36	Typical
2	M2	N23	N24			SR0.625	Beam	BAR	A36 Gr.36	Typical
3	M3	N21	N22			SR0.625	Beam	BAR	A36 Gr.36	Typical
4	M4	N25	N26			SR0.625	Beam	BAR	A36 Gr.36	Typical
5	M5	N63	N64			SR0.625	Beam	BAR	A36 Gr.36	Typical
6	M20	N185	N178			RIGID	None	None	LINK	Typical
7	M35	N185	N189			RIGID	None	None	LINK	Typical
8	M38	N13	N16			RIGID	None	None	LINK	Typical
9	M39	N14	N15			RIGID	None	None	LINK	Typical
10	M41	N136	N132			RIGID	None	None	LINK	Typical
11	M42	N131	N135			RIGID	None	None	LINK	Typical
12	M43	N131	N124			RIGID	None	None	LINK	Typical
13	M46	N130	N123			RIGID	None	None	LINK	Typical
14	M49	N186	N179			RIGID	None	None	LINK	Typical
15	M50	N192	N188			RIGID	None	None	LINK	Typical
16	M64	N186	N191			RIGID	None	None	LINK	Typical
17	M65	N118	N73			RIGID	None	None	LINK	Typical
18	M66	N119	N69			RIGID	None	None	LINK	Typical
19	M67	N70	N119			RIGID	None	None	LINK	Typical
20	M68	N234	N191			RIGID	None	None	LINK	Typical
21	M69	N192	N234			RIGID	None	None	LINK	Typical
22	M70	N235	N190			RIGID	None	None	LINK	Typical
23	M71	N179	N235			RIGID	None	None	LINK	Typical
24	M72	N174	N134			RIGID	None	None	LINK	Typical
25	M73	N124	N174			RIGID	None	None	LINK	Typical
26	M74	N173	N135			RIGID	None	None	LINK	Typical
27	M75	N136	N173			RIGID	None	None	LINK	Typical
28	M78	N188	N190			RIGID	None	None	LINK	Typical
29	M79	N72	N118			RIGID	None	None	LINK	Typical
30	M81	N132	N134			RIGID	None	None	LINK	Typical
31	M108	N53	N54			RIGID	None	None	LINK	Typical
32	M109	N51	N52			RIGID	None	None	LINK	Typical
33	M110	N65	N68			RIGID	None	None	LINK	Typical
34	M111	N65	N71			RIGID	None	None	LINK	Typical
35	M113	N57	N58			RIGID	None	None	LINK	Typical
36	M121	N55	N56			RIGID	None	None	LINK	Typical
37	M123	N130	N133			RIGID	None	None	LINK	Typical
38	M126	N66	N72			RIGID	None	None	LINK	Typical
39	M127	N73	N67			RIGID	None	None	LINK	Typical
40	M128	N67	N70			RIGID	None	None	LINK	Typical
41	M129	N66	N69			RIGID	None	None	LINK	Typical
42	M93	N173A	N174A			RIGID	None	None	LINK	Typical
43	M94	N171	N172			RIGID	None	None	LINK	Typical
44	M96	N179A	N180			RIGID	None	None	LINK	Typical
45	M97	N177	N178A			RIGID	None	None	LINK	Typical
46	M99	N185A	N186A		180	RIGID	None	None	LINK	Typical
47	M100	N183	N184		180	RIGID	None	None	LINK	Typical
48	M101	N189A	N190A		180	RIGID	None	None	LINK	Typical
49	M102	N187	N188A		180	RIGID	None	None	LINK	Typical
50	M105	N197	N198		180	RIGID	None	None	LINK	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	K Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
51	M106	N195	N196		180	RIGID	None	None	LINK	Typical
52	M108A	N203	N204		180	RIGID	None	None	LINK	Typical
53	M109A	N201	N202		180	RIGID	None	None	LINK	Typical
54	M111A	N209A	N210A			RIGID	None	None	LINK	Typical
55	M112	N207A	N208A			RIGID	None	None	LINK	Typical
56	M113A	N213A	N214A			RIGID	None	None	LINK	Typical
57	M114	N211A	N212A			RIGID	None	None	LINK	Typical
58	M117	N221A	N222A			RIGID	None	None	LINK	Typical
59	M118	N219A	N220A			RIGID	None	None	LINK	Typical
60	M120	N227A	N228			RIGID	None	None	LINK	Typical
61	M121A	N225A	N226A			RIGID	None	None	LINK	Typical
62	M130	N7	N8			PL12X0.25	Beam	RECT	A36 Gr.36	Typical
63	M131	N31	N32			PL12X0.25	Beam	RECT	A36 Gr.36	Typical
64	M132	N29	N30			PL12X0.25	Beam	RECT	A36 Gr.36	Typical
65	M145	N60	N59			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
66	M147	N50	N49			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
67	M148	N62	N61			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
68	M153	N206A	N47			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
69	M157	N4	N5			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
70	M95	N176	N175			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
71	M98	N182	N181			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
72	M103	N192A	N191A			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
73	M104	N194	N193			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
74	M107	N200	N199			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
75	M110A	N206B	N205			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
76	M115	N216A	N215A			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
77	M116	N218A	N217A			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
78	M119	N224A	N223A			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
79	M122	N230A	N229			PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
80	M162	N84	N80		90	L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
81	M168	N85	N81		180	L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
82	M171	N87	N83		270	L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
83	M172	N86	N82			L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
84	M124A	N216	N212		270	L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
85	M125	N217	N213			L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
86	M126A	N219	N215		90	L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
87	M127A	N218	N214		180	L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
88	M134	N240A	N236A		90	L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
89	M135	N241A	N237A		180	L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
90	M136	N243A	N239A		270	L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
91	M137	N242A	N238A			L3X3X8	Beam	Single Angle	A36 Gr.36	Typical
92	M173	N17	N19	N1	25	L2x2x4	Beam	Single Angle	A36 Gr.36	Typical
93	M174	N20	N18	N1	165	L2x2x4	Beam	Single Angle	A36 Gr.36	Typical
94	M175	N240	N241			L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical
95	M176	N238	N239			L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical
96	M177	N236	N237		180	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical
97	M200	N78	N74			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
98	M201	N74	N76			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
99	M202	N77	N75			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
100	M203	N75	N79			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
101	M130A	N210	N206			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
102	M131A	N206	N208			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
103	M132A	N209	N207			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
104	M133	N207	N211			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
105	M140	N234A	N230			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
106	M141	N230	N232			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
107	M142	N233	N231			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
108	M143	N231	N235A			HSS2X2X4	Beam	Tube	A500 Gr.46	Typical
109	M179	N68	N75		180	C5X9	Beam	Channel	A36 Gr.36	Typical
110	M180	N71	N74			C5X9	Beam	Channel	A36 Gr.36	Typical
111	M184	N11	N12		270	C5X9	Beam	Channel	A36 Gr.36	Typical
112	M185	N35	N36		270	C5X9	Beam	Channel	A36 Gr.36	Typical
113	M186	N33	N34		90	C5X9	Beam	Channel	A36 Gr.36	Typical
114	M187	N10	N9		270	C5X9	Beam	Channel	A36 Gr.36	Typical
115	M188	N6	N2		270	C5X9	Beam	Channel	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	K Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
116	M189	N2	N3		90	C5X9	Beam	Channel	A36 Gr.36	Typical
117	M190	N3	N6		270	C5X9	Beam	Channel	A36 Gr.36	Typical
118	M191	N46	N11		270	C5X9	Beam	Channel	A36 Gr.36	Typical
119	M128A	N133	N207			C5X9	Beam	Channel	A36 Gr.36	Typical
120	M129A	N123	N206		180	C5X9	Beam	Channel	A36 Gr.36	Typical
121	M138	N189	N231		180	C5X9	Beam	Channel	A36 Gr.36	Typical
122	M139	N178	N230			C5X9	Beam	Channel	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	Physical	Deflection Ratio Options	Activation	Seismic DR
1	M1	BenPIN	BenPIN	Yes	Default	Exclude	None
2	M2	BenPIN	BenPIN	Yes	Default	Exclude	None
3	M3	BenPIN	BenPIN	Yes	Default	Exclude	None
4	M4	BenPIN	BenPIN	Yes	Default	Exclude	None
5	M5	BenPIN	BenPIN	Yes	Default	Exclude	None
6	M20			Yes	** NA **		None
7	M35			Yes	** NA **		None
8	M38			Yes	** NA **		None
9	M39			Yes	** NA **		None
10	M41			Yes	** NA **		None
11	M42			Yes	** NA **		None
12	M43			Yes	** NA **		None
13	M46			Yes	** NA **		None
14	M49			Yes	** NA **		None
15	M50			Yes	** NA **		None
16	M64			Yes	** NA **		None
17	M65			Yes	** NA **		None
18	M66			Yes	** NA **		None
19	M67			Yes	** NA **		None
20	M68			Yes	** NA **		None
21	M69			Yes	** NA **		None
22	M70			Yes	** NA **		None
23	M71			Yes	** NA **		None
24	M72			Yes	** NA **		None
25	M73			Yes	** NA **		None
26	M74			Yes	** NA **		None
27	M75			Yes	** NA **		None
28	M78			Yes	** NA **		None
29	M79			Yes	** NA **		None
30	M81			Yes	** NA **		None
31	M108			Yes	** NA **		None
32	M109			Yes	** NA **		None
33	M110			Yes	** NA **		None
34	M111			Yes	** NA **		None
35	M113			Yes	** NA **		None
36	M121			Yes	** NA **		None
37	M123			Yes	** NA **		None
38	M126			Yes	** NA **		None
39	M127			Yes	** NA **		None
40	M128			Yes	** NA **		None
41	M129			Yes	** NA **		None
42	M93			Yes	** NA **		None
43	M94			Yes	** NA **		None
44	M96			Yes	** NA **		None
45	M97			Yes	** NA **		None
46	M99			Yes	** NA **		None
47	M100			Yes	** NA **		None
48	M101			Yes	** NA **		None
49	M102			Yes	** NA **		None
50	M105			Yes	** NA **		None
51	M106			Yes	** NA **		None
52	M108A			Yes	** NA **		None
53	M109A			Yes	** NA **		None
54	M111A			Yes	** NA **		None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Activation	Seismic DR
55	M112			Yes	** NA **		None
56	M113A			Yes	** NA **		None
57	M114			Yes	** NA **		None
58	M117			Yes	** NA **		None
59	M118			Yes	** NA **		None
60	M120			Yes	** NA **		None
61	M121A			Yes	** NA **		None
62	M130			Yes	Default		None
63	M131			Yes	Default		None
64	M132			Yes	Default		None
65	M145			Yes	Default		None
66	M147			Yes	Default		None
67	M148			Yes	Default		None
68	M153			Yes	Default		None
69	M157			Yes	Default		None
70	M95			Yes	Default		None
71	M98			Yes	Default		None
72	M103			Yes	Default		None
73	M104			Yes	Default		None
74	M107			Yes	Default		None
75	M110A			Yes	Default		None
76	M115			Yes	Default		None
77	M116			Yes	Default		None
78	M119			Yes	Default		None
79	M122			Yes	Default		None
80	M162			Yes	Default		None
81	M168			Yes	Default		None
82	M171			Yes	Default		None
83	M172			Yes	Default		None
84	M124A			Yes	Default		None
85	M125			Yes	Default		None
86	M126A			Yes	Default		None
87	M127A			Yes	Default		None
88	M134			Yes	Default		None
89	M135			Yes	Default		None
90	M136			Yes	Default		None
91	M137			Yes	Default		None
92	M173			Yes	Default	Exclude	None
93	M174			Yes	Default	Exclude	None
94	M175			Yes	Default		None
95	M176			Yes	Default		None
96	M177			Yes	Default		None
97	M200			Yes	Default		None
98	M201			Yes	Default		None
99	M202			Yes	Default		None
100	M203			Yes	Default		None
101	M130A			Yes	Default		None
102	M131A			Yes	Default		None
103	M132A			Yes	Default		None
104	M133			Yes	Default		None
105	M140			Yes	Default		None
106	M141			Yes	Default		None
107	M142			Yes	Default		None
108	M143			Yes	Default		None
109	M179			Yes	Default		None
110	M180			Yes	Default		None
111	M184			Yes	Default		None
112	M185			Yes	Default		None
113	M186			Yes	Default		None
114	M187			Yes	Default		None
115	M188			Yes	Default		None
116	M189			Yes	Default		None
117	M190			Yes	Default		None
118	M191			Yes	Default		None
119	M128A			Yes	Default		None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Activation	Seismic DR
120	M129A			Yes	Default		None
121	M138			Yes	Default		None
122	M139			Yes	Default		None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lcomp top [in]	Function
1	M1	SR0.625	18	Lbyy	Lateral
2	M2	SR0.625	18	Lbyy	Lateral
3	M3	SR0.625	18	Lbyy	Lateral
4	M4	SR0.625	18	Lbyy	Lateral
5	M5	SR0.625	18	Lbyy	Lateral
6	M130	PL12X0.25	10	Lbyy	Lateral
7	M131	PL12X0.25	10	Lbyy	Lateral
8	M132	PL12X0.25	10	Lbyy	Lateral
9	M145	PIPE_2.0	120	Lbyy	Lateral
10	M147	PIPE_2.0	120	Lbyy	Lateral
11	M148	PIPE_2.0	60	Lbyy	Lateral
12	M153	PIPE_2.0	150	Lbyy	Lateral
13	M157	PIPE_2.0	150	Lbyy	Lateral
14	M95	PIPE_2.0	96	Lbyy	Lateral
15	M98	PIPE_2.0	96	Lbyy	Lateral
16	M103	PIPE_2.0	120	Lbyy	Lateral
17	M104	PIPE_2.0	60	Lbyy	Lateral
18	M107	PIPE_2.0	96	Lbyy	Lateral
19	M110A	PIPE_2.0	96	Lbyy	Lateral
20	M115	PIPE_2.0	120	Lbyy	Lateral
21	M116	PIPE_2.0	60	Lbyy	Lateral
22	M119	PIPE_2.0	96	Lbyy	Lateral
23	M122	PIPE_2.0	96	Lbyy	Lateral
24	M162	L3X3X8	6	Lbyy	Lateral
25	M168	L3X3X8	6	Lbyy	Lateral
26	M171	L3X3X8	6	Lbyy	Lateral
27	M172	L3X3X8	6	Lbyy	Lateral
28	M124A	L3X3X8	6	Lbyy	Lateral
29	M125	L3X3X8	6	Lbyy	Lateral
30	M126A	L3X3X8	6	Lbyy	Lateral
31	M127A	L3X3X8	6	Lbyy	Lateral
32	M134	L3X3X8	6	Lbyy	Lateral
33	M135	L3X3X8	6	Lbyy	Lateral
34	M136	L3X3X8	6	Lbyy	Lateral
35	M137	L3X3X8	6	Lbyy	Lateral
36	M173	L2x2x4	72	Lbyy	Lateral
37	M174	L2x2x4	72	Lbyy	Lateral
38	M175	L2.5x2.5x4	16	Lbyy	Lateral
39	M176	L2.5x2.5x4	16	Lbyy	Lateral
40	M177	L2.5x2.5x4	16	Lbyy	Lateral
41	M200	HSS2X2X4	6	Lbyy	Lateral
42	M201	HSS2X2X4	6	Lbyy	Lateral
43	M202	HSS2X2X4	6	Lbyy	Lateral
44	M203	HSS2X2X4	6	Lbyy	Lateral
45	M130A	HSS2X2X4	6	Lbyy	Lateral
46	M131A	HSS2X2X4	6	Lbyy	Lateral
47	M132A	HSS2X2X4	6	Lbyy	Lateral
48	M133	HSS2X2X4	6	Lbyy	Lateral
49	M140	HSS2X2X4	6	Lbyy	Lateral
50	M141	HSS2X2X4	6	Lbyy	Lateral
51	M142	HSS2X2X4	6	Lbyy	Lateral
52	M143	HSS2X2X4	6	Lbyy	Lateral
53	M179	C5X9	21	Lbyy	Lateral
54	M180	C5X9	21	Lbyy	Lateral
55	M184	C5X9	24.001	Lbyy	Lateral
56	M185	C5X9	56	Lbyy	Lateral
57	M186	C5X9	56	Lbyy	Lateral
58	M187	C5X9	56	Lbyy	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lcomp top [in]	Function
59	M188	C5X9	126	Lbyy	Lateral
60	M189	C5X9	126	Lbyy	Lateral
61	M190	C5X9	126	Lbyy	Lateral
62	M191	C5X9	28.287	Lbyy	Lateral
63	M128A	C5X9	21	Lbyy	Lateral
64	M129A	C5X9	21	Lbyy	Lateral
65	M138	C5X9	21	Lbyy	Lateral
66	M139	C5X9	21	Lbyy	Lateral

Node Coordinates

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
1	N1	0	0	0	
2	N2	-63.	36.373326	0	
3	N3	63.	36.373326	0	
4	N4	-90.	36.373326	48	
5	N5	60.	36.373326	48	
6	N6	-0.000225	-72.746264	0	
7	N7	-53.	36.373326	0	
8	N8	-58.000018	27.713041	0	
9	N9	-35.000042	-12.12437	0	
10	N10	-7.	36.373326	0	
11	N11	34.713711	36.373326	0	
12	N12	13.928362	24.372899	0	
13	N13	32.114961	34.872937	0	
14	N14	16.526504	25.872937	0	
15	N15	17.526504	24.140886	0	
16	N16	33.114961	33.140887	0	
17	N17	17.526504	24.140886	24	
18	N18	33.114961	33.140887	24	
19	N19	17.526504	24.140886	-48	
20	N20	33.114961	33.140887	-48	
21	N21	17.526504	24.140886	18	
22	N22	33.114961	33.140887	18	
23	N23	17.526504	24.140886	3	
24	N24	33.114961	33.140887	3	
25	N25	17.526504	24.140886	-12	
26	N26	33.114961	33.140887	-12	
27	N27	17.526504	24.140886	-27	
28	N28	33.114961	33.140887	-27	
29	N29	-5.000189	-64.086009	0	
30	N30	4.999775	-64.086009	0	
31	N31	58.	27.713072	0	
32	N32	53.	36.373326	0	
33	N33	-28.000025	-24.248841	0	
34	N34	27.999775	-24.248841	0	
35	N35	35.	-12.124096	0	
36	N36	6.999884	36.373326	0	
37	N37	-5.000225	-24.248841	0	
38	N38	-0.000225	-24.248841	0	
39	N39	4.999775	-24.248841	0	
40	N40	23.500225	7.794099	0	
41	N41	21.000225	12.124226	0	
42	N42	18.500225	16.454353	0	
43	N43	-18.5	16.454742	0	
44	N44	-21.	12.124615	0	
45	N45	-23.5	7.794488	0	
46	N46	48.856406	11.875904	0	
47	N47	-61.500225	33.774861	48	
48	N48	-1.500225	-70.148187	48	
49	N49	1.500225	-70.148187	48	
50	N50	61.500225	33.774861	48	
51	N51	-18.	36.373326	48	
52	N52	-18.	39.373326	48	
53	N53	-18.	36.373326	0	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
54	N54	-18.	39.373326	0	
55	N55	18.	36.373326	48	
56	N56	18.	39.373326	48	
57	N57	18.	36.373326	0	
58	N58	18.	39.373326	0	
59	N59	-18	39.373326	75	
60	N60	-18.	39.373326	-45	
61	N61	18	39.373326	54	
62	N62	18	39.373326	-6	
63	N63	17.526504	24.140886	-42	
64	N64	33.114961	33.140887	-42	
65	N65	-0.000207	-64.086009	0	
66	N66	-1.500217	-70.148183	0	
67	N67	1.5	-70.147798	0	
68	N68	-0.000207	-64.086009	3	
69	N69	-1.500217	-70.148183	3	
70	N70	1.5	-70.147798	3	
71	N71	-0.000207	-64.086009	-3	
72	N72	-1.500217	-70.148183	-3	
73	N73	1.5	-70.147798	-3	
74	N74	-0.000207	-85.086009	-3	
75	N75	-0.000207	-85.086009	3	
76	N76	5.999793	-85.086009	-3	
77	N77	5.999793	-85.086009	3	
78	N78	-6.000207	-85.086009	-3	
79	N79	-6.000207	-85.086009	3	
80	N80	5.999793	-88.086009	-3	
81	N81	5.999793	-88.086009	3	
82	N82	-6.000207	-88.086009	-3	
83	N83	-6.000207	-88.086009	3	
84	N84	5.999793	-82.086009	-3	
85	N85	5.999793	-82.086009	3	
86	N86	-6.000207	-82.086009	-3	
87	N87	-6.000207	-82.086009	3	
88	N88	5.999793	-87.086009	3	
89	N89	5.999793	-87.086009	-3	
90	N90	-6.000207	-87.086009	-3	
91	N91	-6.000207	-87.086009	3	
92	N92	5.999793	-83.086009	-3	
93	N93	5.999793	-83.086009	3	
94	N94	-6.000207	-83.086009	-3	
95	N95	-6.000207	-83.086009	3	
96	N118	-0.000207	-70.148183	-3	
97	N119	-0.000207	-70.147798	3	
98	N123	55.500216	32.042826	-3	
99	N124	61.500216	33.774866	3	
100	N130	55.500216	32.042826	0	
101	N131	61.499778	33.774866	0	
102	N132	59.999775	36.373326	0	
103	N133	55.500216	32.042826	3	
104	N134	59.999775	36.372937	3	
105	N135	61.500216	33.774866	-3	
106	N136	59.999775	36.372937	-3	
107	N173	60.750212	35.073912	-3	
108	N174	60.749879	35.07372	3	
109	N178	-55.500009	32.043184	-3	
110	N179	-60.	36.373317	3	
111	N185	-55.500009	32.043184	0	
112	N186	-60.	36.373326	0	
113	N188	-61.499786	33.774861	0	
114	N189	-55.500009	32.043184	3	
115	N190	-61.499775	33.774861	3	
116	N191	-60.	36.373317	-3	
117	N192	-61.499775	33.774861	-3	
118	N234	-60.750005	35.07427	-3	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
119	N235	-60.749672	35.074078	3	
120	N236	-8.000225	-58.889857	48	
121	N237	8.000225	-58.889857	48	
122	N238	-47.	36.373326	48	
123	N239	-55.000225	22.516531	48	
124	N240	55.000225	22.516531	48	
125	N241	47.	36.373326	48	
126	N206	73.686749	42.542826	-3	
127	N207	73.686749	42.542826	3	
128	N208	70.686749	47.738978	-3	
129	N209	70.686749	47.738978	3	
130	N210	76.686749	37.346673	-3	
131	N211	76.686749	37.346673	3	
132	N212	73.284825	49.238978	-3	
133	N213	73.284825	49.238978	3	
134	N214	79.284825	38.846673	-3	
135	N215	79.284825	38.846673	3	
136	N216	68.088673	46.238978	-3	
137	N217	68.088673	46.238978	3	
138	N218	74.088673	35.846673	-3	
139	N219	74.088673	35.846673	3	
140	N220	72.4188	48.738978	3	
141	N221	72.4188	48.738978	-3	
142	N222	78.4188	38.346673	-3	
143	N223	78.4188	38.346673	3	
144	N224	68.954698	46.738978	-3	
145	N225	68.954698	46.738978	3	
146	N226	74.954698	36.346673	-3	
147	N227	74.954698	36.346673	3	
148	N230	-73.686542	42.543184	-3	
149	N231	-73.686542	42.543184	3	
150	N232	-76.686542	37.347031	-3	
151	N233	-76.686542	37.347031	3	
152	N234A	-70.686542	47.739336	-3	
153	N235A	-70.686542	47.739336	3	
154	N236A	-79.284619	38.847031	-3	
155	N237A	-79.284619	38.847031	3	
156	N238A	-73.284619	49.239336	-3	
157	N239A	-73.284619	49.239336	3	
158	N240A	-74.088466	35.847031	-3	
159	N241A	-74.088466	35.847031	3	
160	N242A	-68.088466	46.239336	-3	
161	N243A	-68.088466	46.239336	3	
162	N244A	-78.418593	38.347031	3	
163	N245A	-78.418593	38.347031	-3	
164	N246A	-72.418593	48.739336	-3	
165	N247A	-72.418593	48.739336	3	
166	N248A	-74.954492	36.347031	-3	
167	N249A	-74.954492	36.347031	3	
168	N250A	-68.954492	46.739336	-3	
169	N251A	-68.954492	46.739336	3	
170	N206A	13.499775	-96.128949	48	
171	N171	-54.	36.373326	48	
172	N172	-54.	39.373326	48	
173	N173A	-54.	36.373326	0	
174	N174A	-54.	39.373326	0	
175	N175	-54.	39.373326	60	
176	N176	-54.	39.373326	-36	
177	N177	54.	36.373326	48	
178	N178A	54.	39.373326	48	
179	N179A	54.	36.373326	0	
180	N180	54.	39.373326	0	
181	N181	54.	39.373326	60	
182	N182	54.	39.373326	-36	
183	N183	-22.500225	-33.77512	48	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
184	N184	-25.098301	-35.27512	48	
185	N185A	-22.500225	-33.77512	0	
186	N186A	-25.098301	-35.27512	0	
187	N187	-40.500225	-2.598206	48	
188	N188A	-43.098301	-4.098206	48	
189	N189A	-40.500225	-2.598206	0	
190	N190A	-43.098301	-4.098206	0	
191	N191A	-25.098301	-35.27512	75	
192	N192A	-25.098301	-35.27512	-45	
193	N193	-43.098301	-4.098206	54	
194	N194	-43.098301	-4.098206	-6	
195	N195	-4.500225	-64.952035	48	
196	N196	-7.098301	-66.452035	48	
197	N197	-4.500225	-64.952035	0	
198	N198	-7.098301	-66.452035	0	
199	N199	-7.098301	-66.452035	60	
200	N200	-7.098301	-66.452035	-36	
201	N201	-58.500225	28.578709	48	
202	N202	-61.098301	27.078709	48	
203	N203	-58.500225	28.578709	0	
204	N204	-61.098301	27.078709	0	
205	N205	-61.098301	27.078709	60	
206	N206B	-61.098301	27.078709	-36	
207	N207A	40.500225	-2.598206	48	
208	N208A	43.098301	-4.098206	48	
209	N209A	40.500225	-2.598206	0	
210	N210A	43.098301	-4.098206	0	
211	N211A	22.500225	-33.77512	48	
212	N212A	25.098301	-35.27512	48	
213	N213A	22.500225	-33.77512	0	
214	N214A	25.098301	-35.27512	0	
215	N215A	43.098301	-4.098206	75	
216	N216A	43.098301	-4.098206	-45	
217	N217A	25.098301	-35.27512	54	
218	N218A	25.098301	-35.27512	-6	
219	N219A	58.500225	28.578709	48	
220	N220A	61.098301	27.078709	48	
221	N221A	58.500225	28.578709	0	
222	N222A	61.098301	27.078709	0	
223	N223A	61.098301	27.078709	60	
224	N224A	61.098301	27.078709	-36	
225	N225A	4.500225	-64.952035	48	
226	N226A	7.098301	-66.452035	48	
227	N227A	4.500225	-64.952035	0	
228	N228	7.098301	-66.452035	0	
229	N229	7.098301	-66.452035	60	
230	N230A	7.098301	-66.452035	-36	
231	N231A	-18	39.373326	72	
232	N232A	-18	39.373326	-24	
233	N233A	18.	39.373326	40.5	
234	N234B	18.	39.373326	7.5	
235	N235B	-25.098301	-35.27512	72	
236	N236B	-25.098301	-35.27512	-24	
237	N237B	-43.098301	-4.098206	40.5	
238	N238B	-43.098301	-4.098206	7.5	
239	N239B	43.098301	-4.098206	72	
240	N240B	43.098301	-4.098206	-24	
241	N241B	25.098301	-35.27512	40.5	
242	N242	25.098301	-35.27512	7.5	

Node Boundary Conditions

	Y [k/in]	X [k/in]	Z [k/in]	Node Label
1	Reaction	Reaction	Reaction	N37
2	Reaction	Reaction	Reaction	N38

Node Boundary Conditions (Continued)

	Y [k/in]	X [k/in]	Z [k/in]	Node Label
3	Reaction	Reaction	Reaction	N39
4	Reaction	Reaction	Reaction	N40
5	Reaction	Reaction	Reaction	N41
6	Reaction	Reaction	Reaction	N42
7	Reaction	Reaction	Reaction	N43
8	Reaction	Reaction	Reaction	N44
9	Reaction	Reaction	Reaction	N45

Basic Load Cases

	BLC Description	Category	Z Gravity	Nodal	Distributed	Area(Member)
1	DEAD LOAD	None	-1	12		3
2	DEAD LOAD ICE	None		12	66	3
3	WIND LOAD (NO ICE) FRONT	None		12	66	
4	WIND LOAD (NO ICE) SIDE	None		12	66	
5	WIND LOAD (ICE) FRONT	None		12	66	
6	WIND LOAD (ICE) SIDE	None		12	66	
7	LIVE LOAD1	None		1		
8	LIVE LOAD2	None		1		
9	LIVE LOAD3	None		1		
10	MAINTENANCE LOAD 1	None		1		
11	MAINTENANCE LOAD 2	None		1		
12	MAINTENANCE LOAD 3	None		1		
13	MAINTENANCE LOAD 4	None		1		
14	BLC 1 Transient Area Loads	None			53	
15	BLC 2 Transient Area Loads	None			53	

Node Loads and Enforced Displacements (BLC 1 : DEAD LOAD)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N231A	L	Z	-156
2	N232A	L	Z	-156
3	N239B	L	Z	-156
4	N240B	L	Z	-156
5	N235B	L	Z	-156
6	N236B	L	Z	-156
7	N233A	L	Z	-52
8	N234B	L	Z	-52
9	N241B	L	Z	-52
10	N242	L	Z	-52
11	N237B	L	Z	-52
12	N238B	L	Z	-52

Node Loads and Enforced Displacements (BLC 2 : DEAD LOAD ICE)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N231A	L	Z	-190
2	N232A	L	Z	-190
3	N239B	L	Z	-190
4	N240B	L	Z	-190
5	N235B	L	Z	-190
6	N236B	L	Z	-190
7	N233A	L	Z	-49
8	N234B	L	Z	-49
9	N241B	L	Z	-49
10	N242	L	Z	-49
11	N237B	L	Z	-49
12	N238B	L	Z	-49

Node Loads and Enforced Displacements (BLC 3 : WIND LOAD (NO ICE) FRONT)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N231A	L	Y	310
2	N232A	L	Y	310
3	N239B	L	Y	187
4	N240B	L	Y	187
5	N235B	L	Y	187
6	N236B	L	Y	187
7	N233A	L	Y	88
8	N234B	L	Y	88
9	N241B	L	Y	39
10	N242	L	Y	39
11	N237B	L	Y	39
12	N238B	L	Y	39

Node Loads and Enforced Displacements (BLC 4 : WIND LOAD (NO ICE) SIDE)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N231A	L	X	187
2	N232A	L	X	187
3	N239B	L	X	310
4	N240B	L	X	310
5	N235B	L	X	310
6	N236B	L	X	310
7	N233A	L	X	39
8	N234B	L	X	39
9	N241B	L	X	88
10	N242	L	X	88
11	N237B	L	X	88
12	N238B	L	X	88

Node Loads and Enforced Displacements (BLC 5 : WIND LOAD (ICE) FRONT)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N231A	L	Y	63
2	N232A	L	Y	63
3	N239B	L	Y	42
4	N240B	L	Y	42
5	N235B	L	Y	42
6	N236B	L	Y	42
7	N233A	L	Y	19
8	N234B	L	Y	19
9	N241B	L	Y	9
10	N242	L	Y	9
11	N237B	L	Y	9
12	N238B	L	Y	9

Node Loads and Enforced Displacements (BLC 6 : WIND LOAD (ICE) SIDE)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N231A	L	X	42
2	N232A	L	X	42
3	N239B	L	X	63
4	N240B	L	X	63
5	N235B	L	X	63
6	N236B	L	X	63
7	N233A	L	X	9
8	N234B	L	X	9
9	N241B	L	X	19
10	N242	L	X	19
11	N237B	L	X	19
12	N238B	L	X	19

Node Loads and Enforced Displacements (BLC 7 : LIVE LOAD1)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N2	L	Z	-250

Node Loads and Enforced Displacements (BLC 8 : LIVE LOAD2)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N3	L	Z	-250

Node Loads and Enforced Displacements (BLC 9 : LIVE LOAD3)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N6	L	Z	-250

Node Loads and Enforced Displacements (BLC 10 : MAINTENANCE LOAD 1)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N176	L	Z	-500

Node Loads and Enforced Displacements (BLC 11 : MAINTENANCE LOAD 2)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N60	L	Z	-500

Node Loads and Enforced Displacements (BLC 12 : MAINTENANCE LOAD 3)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N62	L	Z	-500

Node Loads and Enforced Displacements (BLC 13 : MAINTENANCE LOAD 4)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft), (in, rad), (lb*s²/in, lb*s²*in)]
1	N182	L	Z	-500

Member Point Loads

No Data to Print...

Member Distributed Loads (BLC 2 : DEAD LOAD ICE)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M1	Z	-2	-2	0	%100
2	M2	Z	-2	-2	0	%100
3	M3	Z	-2	-2	0	%100
4	M4	Z	-2	-2	0	%100
5	M5	Z	-2	-2	0	%100
6	M130	Z	-16	-16	0	%100
7	M131	Z	-16	-16	0	%100
8	M132	Z	-16	-16	0	%100
9	M145	Z	-5	-5	0	%100
10	M147	Z	-5	-5	0	%100
11	M148	Z	-5	-5	0	%100
12	M153	Z	-5	-5	0	%100
13	M157	Z	-5	-5	0	%100
14	M95	Z	-5	-5	0	%100
15	M98	Z	-5	-5	0	%100
16	M103	Z	-5	-5	0	%100
17	M104	Z	-5	-5	0	%100
18	M107	Z	-5	-5	0	%100
19	M110A	Z	-5	-5	0	%100
20	M115	Z	-5	-5	0	%100
21	M116	Z	-5	-5	0	%100
22	M119	Z	-5	-5	0	%100
23	M122	Z	-5	-5	0	%100

Member Distributed Loads (BLC 2 : DEAD LOAD ICE) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
24	M162	Z	-5	-5	0	%100
25	M168	Z	-5	-5	0	%100
26	M171	Z	-5	-5	0	%100
27	M172	Z	-5	-5	0	%100
28	M124A	Z	-5	-5	0	%100
29	M125	Z	-5	-5	0	%100
30	M126A	Z	-5	-5	0	%100
31	M127A	Z	-5	-5	0	%100
32	M134	Z	-5	-5	0	%100
33	M135	Z	-5	-5	0	%100
34	M136	Z	-5	-5	0	%100
35	M137	Z	-5	-5	0	%100
36	M173	Z	-4	-4	0	%100
37	M174	Z	-4	-4	0	%100
38	M175	Z	-4	-4	0	%100
39	M176	Z	-4	-4	0	%100
40	M177	Z	-4	-4	0	%100
41	M200	Z	-7	-7	0	%100
42	M201	Z	-7	-7	0	%100
43	M202	Z	-7	-7	0	%100
44	M203	Z	-7	-7	0	%100
45	M130A	Z	-7	-7	0	%100
46	M131A	Z	-7	-7	0	%100
47	M132A	Z	-7	-7	0	%100
48	M133	Z	-7	-7	0	%100
49	M140	Z	-7	-7	0	%100
50	M141	Z	-7	-7	0	%100
51	M142	Z	-7	-7	0	%100
52	M143	Z	-7	-7	0	%100
53	M179	Z	-11	-11	0	%100
54	M180	Z	-11	-11	0	%100
55	M184	Z	-11	-11	0	%100
56	M185	Z	-11	-11	0	%100
57	M186	Z	-11	-11	0	%100
58	M187	Z	-11	-11	0	%100
59	M188	Z	-11	-11	0	%100
60	M189	Z	-11	-11	0	%100
61	M190	Z	-11	-11	0	%100
62	M191	Z	-11	-11	0	%100
63	M128A	Z	-11	-11	0	%100
64	M129A	Z	-11	-11	0	%100
65	M138	Z	-11	-11	0	%100
66	M139	Z	-11	-11	0	%100

Member Distributed Loads (BLC 3 : WIND LOAD (NO ICE) FRONT)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M1	PY	2	2	0	%100
2	M2	PY	2	2	0	%100
3	M3	PY	2	2	0	%100
4	M4	PY	2	2	0	%100
5	M5	PY	2	2	0	%100
6	M130	PY	1	1	0	%100
7	M131	PY	1	1	0	%100
8	M132	PY	1	1	0	%100
9	M145	PY	7	7	0	%100
10	M147	PY	7	7	0	%100
11	M148	PY	7	7	0	%100
12	M153	PY	7	7	0	%100
13	M157	PY	7	7	0	%100
14	M95	PY	7	7	0	%100
15	M98	PY	7	7	0	%100
16	M103	PY	7	7	0	%100
17	M104	PY	7	7	0	%100
18	M107	PY	7	7	0	%100

Member Distributed Loads (BLC 3 : WIND LOAD (NO ICE) FRONT) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
19	M110A	PY	7	7	0	%100
20	M115	PY	7	7	0	%100
21	M116	PY	7	7	0	%100
22	M119	PY	7	7	0	%100
23	M122	PY	7	7	0	%100
24	M162	PY	15	15	0	%100
25	M168	PY	15	15	0	%100
26	M171	PY	15	15	0	%100
27	M172	PY	15	15	0	%100
28	M124A	PY	15	15	0	%100
29	M125	PY	15	15	0	%100
30	M126A	PY	15	15	0	%100
31	M127A	PY	15	15	0	%100
32	M134	PY	15	15	0	%100
33	M135	PY	15	15	0	%100
34	M136	PY	15	15	0	%100
35	M137	PY	15	15	0	%100
36	M173	PY	10	10	0	%100
37	M174	PY	10	10	0	%100
38	M175	PY	13	13	0	%100
39	M176	PY	13	13	0	%100
40	M177	PY	13	13	0	%100
41	M200	PY	10	10	0	%100
42	M201	PY	10	10	0	%100
43	M202	PY	10	10	0	%100
44	M203	PY	10	10	0	%100
45	M130A	PY	10	10	0	%100
46	M131A	PY	10	10	0	%100
47	M132A	PY	10	10	0	%100
48	M133	PY	10	10	0	%100
49	M140	PY	10	10	0	%100
50	M141	PY	10	10	0	%100
51	M142	PY	10	10	0	%100
52	M143	PY	10	10	0	%100
53	M179	PY	26	26	0	%100
54	M180	PY	26	26	0	%100
55	M184	PY	26	26	0	%100
56	M185	PY	26	26	0	%100
57	M186	PY	26	26	0	%100
58	M187	PY	26	26	0	%100
59	M188	PY	26	26	0	%100
60	M189	PY	26	26	0	%100
61	M190	PY	26	26	0	%100
62	M191	PY	26	26	0	%100
63	M128A	PY	26	26	0	%100
64	M129A	PY	26	26	0	%100
65	M138	PY	26	26	0	%100
66	M139	PY	26	26	0	%100

Member Distributed Loads (BLC 4 : WIND LOAD (NO ICE) SIDE)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M1	PX	2	2	0	%100
2	M2	PX	2	2	0	%100
3	M3	PX	2	2	0	%100
4	M4	PX	2	2	0	%100
5	M5	PX	2	2	0	%100
6	M130	PX	1	1	0	%100
7	M131	PX	1	1	0	%100
8	M132	PX	1	1	0	%100
9	M145	PX	7	7	0	%100
10	M147	PX	7	7	0	%100
11	M148	PX	7	7	0	%100
12	M153	PX	7	7	0	%100
13	M157	PX	7	7	0	%100

Member Distributed Loads (BLC 4 : WIND LOAD (NO ICE) SIDE) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
14	M95	PX	7	7	0	%100
15	M98	PX	7	7	0	%100
16	M103	PX	7	7	0	%100
17	M104	PX	7	7	0	%100
18	M107	PX	7	7	0	%100
19	M110A	PX	7	7	0	%100
20	M115	PX	7	7	0	%100
21	M116	PX	7	7	0	%100
22	M119	PX	7	7	0	%100
23	M122	PX	7	7	0	%100
24	M162	PX	15	15	0	%100
25	M168	PX	15	15	0	%100
26	M171	PX	15	15	0	%100
27	M172	PX	15	15	0	%100
28	M124A	PX	15	15	0	%100
29	M125	PX	15	15	0	%100
30	M126A	PX	15	15	0	%100
31	M127A	PX	15	15	0	%100
32	M134	PX	15	15	0	%100
33	M135	PX	15	15	0	%100
34	M136	PX	15	15	0	%100
35	M137	PX	15	15	0	%100
36	M173	PX	10	10	0	%100
37	M174	PX	10	10	0	%100
38	M175	PX	13	13	0	%100
39	M176	PX	13	13	0	%100
40	M177	PX	13	13	0	%100
41	M200	PX	10	10	0	%100
42	M201	PX	10	10	0	%100
43	M202	PX	10	10	0	%100
44	M203	PX	10	10	0	%100
45	M130A	PX	10	10	0	%100
46	M131A	PX	10	10	0	%100
47	M132A	PX	10	10	0	%100
48	M133	PX	10	10	0	%100
49	M140	PX	10	10	0	%100
50	M141	PX	10	10	0	%100
51	M142	PX	10	10	0	%100
52	M143	PX	10	10	0	%100
53	M179	PX	26	26	0	%100
54	M180	PX	26	26	0	%100
55	M184	PX	26	26	0	%100
56	M185	PX	26	26	0	%100
57	M186	PX	26	26	0	%100
58	M187	PX	26	26	0	%100
59	M188	PX	26	26	0	%100
60	M189	PX	26	26	0	%100
61	M190	PX	26	26	0	%100
62	M191	PX	26	26	0	%100
63	M128A	PX	26	26	0	%100
64	M129A	PX	26	26	0	%100
65	M138	PX	26	26	0	%100
66	M139	PX	26	26	0	%100

Member Distributed Loads (BLC 5 : WIND LOAD (ICE) FRONT)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M1	PY	2	2	0	%100
2	M2	PY	2	2	0	%100
3	M3	PY	2	2	0	%100
4	M4	PY	2	2	0	%100
5	M5	PY	2	2	0	%100
6	M130	PY	1.9	1.9	0	%100
7	M131	PY	1.9	1.9	0	%100
8	M132	PY	1.9	1.9	0	%100

Member Distributed Loads (BLC 5 : WIND LOAD (ICE) FRONT) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
9	M145	PY	3.2	3.2	0	%100
10	M147	PY	3.2	3.2	0	%100
11	M148	PY	3.2	3.2	0	%100
12	M153	PY	3.2	3.2	0	%100
13	M157	PY	3.2	3.2	0	%100
14	M95	PY	3.2	3.2	0	%100
15	M98	PY	3.2	3.2	0	%100
16	M103	PY	3.2	3.2	0	%100
17	M104	PY	3.2	3.2	0	%100
18	M107	PY	3.2	3.2	0	%100
19	M110A	PY	3.2	3.2	0	%100
20	M115	PY	3.2	3.2	0	%100
21	M116	PY	3.2	3.2	0	%100
22	M119	PY	3.2	3.2	0	%100
23	M122	PY	3.2	3.2	0	%100
24	M162	PY	4.8	4.8	0	%100
25	M168	PY	4.8	4.8	0	%100
26	M171	PY	4.8	4.8	0	%100
27	M172	PY	4.8	4.8	0	%100
28	M124A	PY	4.8	4.8	0	%100
29	M125	PY	4.8	4.8	0	%100
30	M126A	PY	4.8	4.8	0	%100
31	M127A	PY	4.8	4.8	0	%100
32	M134	PY	4.8	4.8	0	%100
33	M135	PY	4.8	4.8	0	%100
34	M136	PY	4.8	4.8	0	%100
35	M137	PY	4.8	4.8	0	%100
36	M173	PY	3.7	3.7	0	%100
37	M174	PY	3.7	3.7	0	%100
38	M175	PY	4.3	4.3	0	%100
39	M176	PY	4.3	4.3	0	%100
40	M177	PY	4.3	4.3	0	%100
41	M200	PY	3.7	3.7	0	%100
42	M201	PY	3.7	3.7	0	%100
43	M202	PY	3.7	3.7	0	%100
44	M203	PY	3.7	3.7	0	%100
45	M130A	PY	3.7	3.7	0	%100
46	M131A	PY	3.7	3.7	0	%100
47	M132A	PY	3.7	3.7	0	%100
48	M133	PY	3.7	3.7	0	%100
49	M140	PY	3.7	3.7	0	%100
50	M141	PY	3.7	3.7	0	%100
51	M142	PY	3.7	3.7	0	%100
52	M143	PY	3.7	3.7	0	%100
53	M179	PY	7	7	0	%100
54	M180	PY	7	7	0	%100
55	M184	PY	7	7	0	%100
56	M185	PY	7	7	0	%100
57	M186	PY	7	7	0	%100
58	M187	PY	7	7	0	%100
59	M188	PY	7	7	0	%100
60	M189	PY	7	7	0	%100
61	M190	PY	7	7	0	%100
62	M191	PY	7	7	0	%100
63	M128A	PY	7	7	0	%100
64	M129A	PY	7	7	0	%100
65	M138	PY	7	7	0	%100
66	M139	PY	7	7	0	%100

Member Distributed Loads (BLC 6 : WIND LOAD (ICE) SIDE)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M1	PX	2	2	0	%100
2	M2	PX	2	2	0	%100
3	M3	PX	2	2	0	%100

Member Distributed Loads (BLC 6 : WIND LOAD (ICE) SIDE) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
4	M4	PX	2	2	0	%100
5	M5	PX	2	2	0	%100
6	M130	PX	1.9	1.9	0	%100
7	M131	PX	1.9	1.9	0	%100
8	M132	PX	1.9	1.9	0	%100
9	M145	PX	3.2	3.2	0	%100
10	M147	PX	3.2	3.2	0	%100
11	M148	PX	3.2	3.2	0	%100
12	M153	PX	3.2	3.2	0	%100
13	M157	PX	3.2	3.2	0	%100
14	M95	PX	3.2	3.2	0	%100
15	M98	PX	3.2	3.2	0	%100
16	M103	PX	3.2	3.2	0	%100
17	M104	PX	3.2	3.2	0	%100
18	M107	PX	3.2	3.2	0	%100
19	M110A	PX	3.2	3.2	0	%100
20	M115	PX	3.2	3.2	0	%100
21	M116	PX	3.2	3.2	0	%100
22	M119	PX	3.2	3.2	0	%100
23	M122	PX	3.2	3.2	0	%100
24	M162	PX	4.8	4.8	0	%100
25	M168	PX	4.8	4.8	0	%100
26	M171	PX	4.8	4.8	0	%100
27	M172	PX	4.8	4.8	0	%100
28	M124A	PX	4.8	4.8	0	%100
29	M125	PX	4.8	4.8	0	%100
30	M126A	PX	4.8	4.8	0	%100
31	M127A	PX	4.8	4.8	0	%100
32	M134	PX	4.8	4.8	0	%100
33	M135	PX	4.8	4.8	0	%100
34	M136	PX	4.8	4.8	0	%100
35	M137	PX	4.8	4.8	0	%100
36	M173	PX	3.7	3.7	0	%100
37	M174	PX	3.7	3.7	0	%100
38	M175	PX	4.3	4.3	0	%100
39	M176	PX	4.3	4.3	0	%100
40	M177	PX	4.3	4.3	0	%100
41	M200	PX	3.7	3.7	0	%100
42	M201	PX	3.7	3.7	0	%100
43	M202	PX	3.7	3.7	0	%100
44	M203	PX	3.7	3.7	0	%100
45	M130A	PX	3.7	3.7	0	%100
46	M131A	PX	3.7	3.7	0	%100
47	M132A	PX	3.7	3.7	0	%100
48	M133	PX	3.7	3.7	0	%100
49	M140	PX	3.7	3.7	0	%100
50	M141	PX	3.7	3.7	0	%100
51	M142	PX	3.7	3.7	0	%100
52	M143	PX	3.7	3.7	0	%100
53	M179	PX	7	7	0	%100
54	M180	PX	7	7	0	%100
55	M184	PX	7	7	0	%100
56	M185	PX	7	7	0	%100
57	M186	PX	7	7	0	%100
58	M187	PX	7	7	0	%100
59	M188	PX	7	7	0	%100
60	M189	PX	7	7	0	%100
61	M190	PX	7	7	0	%100
62	M191	PX	7	7	0	%100
63	M128A	PX	7	7	0	%100
64	M129A	PX	7	7	0	%100
65	M138	PX	7	7	0	%100
66	M139	PX	7	7	0	%100

Member Distributed Loads (BLC 14 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M130	Z	-2.362	-2.362	0	10
2	M187	Z	-0.88	-6.367	0	18.667
3	M187	Z	-6.367	-6.327	18.667	37.334
4	M187	Z	-6.327	-0.88	37.334	56
5	M188	Z	-2.38	-3.288	75.6	88.2
6	M188	Z	-3.288	-3.954	88.2	100.8
7	M188	Z	-3.954	-2.38	100.8	113.4
8	M188	Z	-2.38	-0.116	113.4	126
9	M189	Z	-0.163	-2.855	0	12.6
10	M189	Z	-2.855	-4.368	12.6	25.2
11	M189	Z	-4.368	-3.496	25.2	37.8
12	M189	Z	-3.496	-2.5	37.8	50.4
13	M38	Z	-8.473	-2.855	0	2
14	M39	Z	1.02	-4.021	0	1
15	M39	Z	-4.021	-13.139	1	2
16	M113	Z	-1.56	-1.56	0	3
17	M131	Z	-2.662	-2.909	0	5
18	M131	Z	-2.909	-3.155	5	10
19	M184	Z	-0.178	-1.992	0	4.8
20	M184	Z	-1.992	-4.79	4.8	9.6
21	M184	Z	-4.79	-5.366	9.6	14.401
22	M184	Z	-5.366	-3.184	14.401	19.201
23	M184	Z	-3.184	-0.707	19.201	24.001
24	M185	Z	-0.13	-2.562	0	11.2
25	M185	Z	-2.562	-3.993	11.2	22.4
26	M185	Z	-3.993	-2.769	22.4	33.6
27	M185	Z	-2.769	-1.249	33.6	44.8
28	M185	Z	-1.249	-0.936	44.8	56
29	M189	Z	-0.284	-0.873	63	75.6
30	M189	Z	-0.873	-0.904	75.6	88.2
31	M189	Z	-0.904	-1.739	88.2	100.8
32	M189	Z	-1.739	-1.697	100.8	113.4
33	M189	Z	-1.697	-0.077	113.4	126
34	M190	Z	-0.059	-0.942	0	12.6
35	M190	Z	-0.942	-2.295	12.6	25.2
36	M190	Z	-2.295	-2.657	25.2	37.8
37	M190	Z	-2.657	-1.961	37.8	50.4
38	M190	Z	-1.961	-0.783	50.4	63
39	M191	Z	-2.217	-5.683	0	5.657
40	M191	Z	-5.683	-7.268	5.657	11.315
41	M191	Z	-7.268	-6.485	11.315	16.972
42	M191	Z	-6.485	-3.745	16.972	22.629
43	M191	Z	-3.745	-0.307	22.629	28.287
44	M132	Z	-3.555	-3.478	0	5
45	M132	Z	-3.478	-3.401	5	10
46	M186	Z	-0.877	-6.239	0	18.667
47	M186	Z	-6.239	-6.259	18.667	37.333
48	M186	Z	-6.259	-0.877	37.333	56
49	M188	Z	-0.537	-3.902	0	16.8
50	M188	Z	-3.902	-4.045	16.8	33.6
51	M188	Z	-4.045	-0.863	33.6	50.4
52	M190	Z	-4.829	-2.7	75.6	100.8
53	M190	Z	-2.7	-0.571	100.8	126

Member Distributed Loads (BLC 15 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M130	Z	-2.535	-2.535	0	10
2	M187	Z	-0.945	-6.834	0	18.667
3	M187	Z	-6.834	-6.791	18.667	37.334
4	M187	Z	-6.791	-0.945	37.334	56
5	M188	Z	-2.554	-3.529	75.6	88.2
6	M188	Z	-3.529	-4.244	88.2	100.8
7	M188	Z	-4.244	-2.554	100.8	113.4

Member Distributed Loads (BLC 15 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [lb/ft, F, psf, k-ft/in]	End Magnitude [lb/ft, F, psf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
8	M188	Z	-2.554	-0.125	113.4	126
9	M189	Z	-0.175	-3.065	0	12.6
10	M189	Z	-3.065	-4.688	12.6	25.2
11	M189	Z	-4.688	-3.752	25.2	37.8
12	M189	Z	-3.752	-2.683	37.8	50.4
13	M38	Z	-9.094	-3.065	0	2
14	M39	Z	1.094	-4.316	0	1
15	M39	Z	-4.316	-14.103	1	2
16	M113	Z	-1.674	-1.674	0	3
17	M131	Z	-2.857	-3.122	0	5
18	M131	Z	-3.122	-3.387	5	10
19	M184	Z	-0.191	-2.139	0	4.8
20	M184	Z	-2.139	-5.141	4.8	9.6
21	M184	Z	-5.141	-5.76	9.6	14.401
22	M184	Z	-5.76	-3.417	14.401	19.201
23	M184	Z	-3.417	-0.759	19.201	24.001
24	M185	Z	-0.139	-2.75	0	11.2
25	M185	Z	-2.75	-4.286	11.2	22.4
26	M185	Z	-4.286	-2.973	22.4	33.6
27	M185	Z	-2.973	-1.341	33.6	44.8
28	M185	Z	-1.341	-1.004	44.8	56
29	M189	Z	-0.305	-0.937	63	75.6
30	M189	Z	-0.937	-0.97	75.6	88.2
31	M189	Z	-0.97	-1.866	88.2	100.8
32	M189	Z	-1.866	-1.822	100.8	113.4
33	M189	Z	-1.822	-0.083	113.4	126
34	M190	Z	-0.063	-1.011	0	12.6
35	M190	Z	-1.011	-2.463	12.6	25.2
36	M190	Z	-2.463	-2.852	25.2	37.8
37	M190	Z	-2.852	-2.105	37.8	50.4
38	M190	Z	-2.105	-0.841	50.4	63
39	M191	Z	-2.38	-6.099	0	5.657
40	M191	Z	-6.099	-7.801	5.657	11.315
41	M191	Z	-7.801	-6.96	11.315	16.972
42	M191	Z	-6.96	-4.02	16.972	22.629
43	M191	Z	-4.02	-0.329	22.629	28.287
44	M132	Z	-3.816	-3.733	0	5
45	M132	Z	-3.733	-3.651	5	10
46	M186	Z	-0.942	-6.697	0	18.667
47	M186	Z	-6.697	-6.718	18.667	37.333
48	M186	Z	-6.718	-0.942	37.333	56
49	M188	Z	-0.576	-4.188	0	16.8
50	M188	Z	-4.188	-4.341	16.8	33.6
51	M188	Z	-4.341	-0.926	33.6	50.4
52	M190	Z	-5.183	-2.898	75.6	100.8
53	M190	Z	-2.898	-0.613	100.8	126

Member Area Loads (BLC 1 : DEAD LOAD)

	Node A	Node B	Node C	Direction	Load Direction	Magnitude [psf]
1	N2	N9	N10	Z	Two Way	-5
2	N3	N36	N35	Z	Two Way	-5
3	N6	N34	N33	Z	Two Way	-5

Member Area Loads (BLC 2 : DEAD LOAD ICE)

	Node A	Node B	Node C	Direction	Load Direction	Magnitude [psf]
1	N2	N9	N10	Z	Two Way	-5.367
2	N3	N36	N35	Z	Two Way	-5.367
3	N6	N34	N33	Z	Two Way	-5.367

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DL + WL (NO ICE) 0 Degree	Yes	Y	1	1.2			3	1		
2	DL + WL (NO ICE) 30 Degree	Yes	Y	1	1.2			3	0.866	4	0.5
3	DL + WL (NO ICE) 60 Degree	Yes	Y	1	1.2			3	0.5	4	0.866
4	DL + WL (NO ICE) 90 Degree	Yes	Y	1	1.2					4	1
5	DL + WL (NO ICE) 120 Degree	Yes	Y	1	1.2			3	-0.5	4	0.866
6	DL + WL (NO ICE) 150 Degree	Yes	Y	1	1.2			3	-0.866	4	0.5
7	DL + WL (NO ICE) 180 Degree	Yes	Y	1	1.2			3	-1		
8	DL + WL (NO ICE) 210 Degree	Yes	Y	1	1.2			3	-0.866	4	-0.5
9	DL + WL (NO ICE) 240 Degree	Yes	Y	1	1.2			3	-0.5	4	-0.866
10	DL + WL (NO ICE) 270 Degree	Yes	Y	1	1.2					4	-1
11	DL + WL (NO ICE) 300 Degree	Yes	Y	1	1.2			3	0.5	4	-0.866
12	DL + WL (NO ICE) 330 Degree	Yes	Y	1	1.2			3	0.866	4	-0.5
13	DL + DL ICE + WL (ICE) 0 Degree	Yes	Y	1	1.2	2	1	5	1		
14	DL + DL ICE + WL (ICE) 30 Degree	Yes	Y	1	1.2	2	1	5	0.866	6	0.5
15	DL + DL ICE + WL (ICE) 60 Degree	Yes	Y	1	1.2	2	1	5	0.5	6	0.866
16	DL + DL ICE + WL (ICE) 90 Degree	Yes	Y	1	1.2	2	1			6	1
17	DL + DL ICE + WL (ICE) 120 Degree	Yes	Y	1	1.2	2	1	5	-0.5	6	0.866
18	DL + DL ICE + WL (ICE) 150 Degree	Yes	Y	1	1.2	2	1	5	-0.866	6	0.5
19	DL + DL ICE + WL (ICE) 180 Degree	Yes	Y	1	1.2	2	1	5	-1		
20	DL + DL ICE + WL (ICE) 210 Degree	Yes	Y	1	1.2	2	1	5	-0.866	6	-0.5
21	DL + DL ICE + WL (ICE) 240 Degree	Yes	Y	1	1.2	2	1	5	-0.5	6	-0.866
22	DL + DL ICE + WL (ICE) 270 Degree	Yes	Y	1	1.2	2	1			6	-1
23	DL + DL ICE + WL (ICE) 300 Degree	Yes	Y	1	1.2	2	1	5	0.5	6	-0.866
24	DL + DL ICE + WL (ICE) 330 Degree	Yes	Y	1	1.2	2	1	5	0.866	6	-0.5
25	DEAD LOAD + LIVE LOAD1	Yes	Y	1	1.2					7	1.5
26	DEAD LOAD + LIVE LOAD2	Yes	Y	1	1.2					8	1.5
27	DEAD LOAD + LIVE LOAD3	Yes	Y	1	1.2					9	1.5
28	DL + MAIN L1+30MPH WL FRONT	Yes	Y	1	1.2	10	1.5	3	0.068		
29	DL + MAIN L2+30MPH WL FRONT	Yes	Y	1	1.2	11	1.5	3	0.068		
30	DL + MAIN L3+30MPH WL FRONT	Yes	Y	1	1.2	12	1.5	3	0.068		
31	DL + MAIN L4+30MPH WL FRONT	Yes	Y	1	1.2	13	1.5	3	0.068		
32	DL + MAIN L1+30MPH WL SIDE	Yes	Y	1	1.2	10	1.5	4	0.068		
33	DL + MAIN L2+30MPH WL SIDE	Yes	Y	1	1.2	11	1.5	4	0.068		
34	DL + MAIN L3+30MPH WL SIDE	Yes	Y	1	1.2	12	1.5	4	0.068		
35	DL + MAIN L4+30MPH WL SIDE	Yes	Y	1	1.2	13	1.5	4	0.068		
36	DL + MAIN L1+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	10	1.5	3	-0.068		
37	DL + MAIN L2+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	11	1.5	3	-0.068		
38	DL + MAIN L3+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	12	1.5	3	-0.068		
39	DL + MAIN L4+30MPH WL FRONT (REVERSED)	Yes	Y	1	1.2	13	1.5	3	-0.068		
40	DL + MAIN L1+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	10	1.5	4	-0.068		
41	DL + MAIN L2+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	11	1.5	4	-0.068		
42	DL + MAIN L3+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	12	1.5	4	-0.068		
43	DL + MAIN L4+30MPH WL SIDE (REVERSED)	Yes	Y	1	1.2	13	1.5	4	-0.068		

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N37	max	1361.22	11	1054.256	7	4421.736	20	0	43	0	43	0	43
2		min	-1401.456	5	-1099.544	1	-758.56	2	0	1	0	1	0	1
3	N38	max	0	10	1366.343	1	522.579	1	0	43	0	43	0	43
4		min	0	4	-1340.47	7	-5727.363	19	0	1	0	1	0	1
5	N39	max	1257.819	9	1046.052	8	3822.114	6	0	43	0	43	0	43
6		min	-1223.256	3	-1042.853	2	-696.442	12	0	1	0	1	0	1
7	N40	max	871.541	10	1409.451	8	4573.031	4	0	43	0	43	0	43
8		min	-827.245	4	-1413.829	2	-850.994	10	0	1	0	1	0	1
9	N41	max	1492.254	3	863.539	3	498.177	9	0	43	0	43	0	43
10		min	-1502.176	9	-869.268	9	-6208.481	35	0	1	0	1	0	1
11	N42	max	1658.382	10	879.399	6	4670.392	31	0	43	0	43	0	43
12		min	-1681.835	4	-874.154	12	-357.903	8	0	1	0	1	0	1
13	N43	max	1275.845	11	814.749	8	4765.644	28	0	43	0	43	0	43
14		min	-1289.452	5	-754.181	2	-835.961	6	0	1	0	1	0	1
15	N44	max	1304.537	5	743.78	11	771.991	5	0	43	0	43	0	43
16		min	-1284.836	11	-755.154	5	-6154.709	40	0	1	0	1	0	1
17	N45	max	446.833	11	1543.752	6	3940.808	10	0	43	0	43	0	43

Envelope Node Reactions (Continued)

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
18		min	-458.924	5	-1570.742	12	-794.577	4	0	1	0	1	0	1
19	Totals:	max	4029.106	10	3800.482	7	6142.195	15						
20		min	-4029.104	4	-3800.484	1	3061.343	9						

Envelope Node Displacements

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1	N1	max	0	43	0	43	0	43	0	43	0	43	0	43
2		min	0	1	0	1	0	1	0	1	0	1	0	1
3	N2	max	0.016	5	0.016	1	0.117	5	1.238e-3	5	2.359e-3	5	1.007e-3	2
4		min	-0.015	11	-0.016	7	-0.228	40	-2.691e-3	40	-3.501e-3	11	-1.044e-3	8
5	N3	max	0.016	5	0.019	2	0.104	9	1.265e-3	8	3.763e-3	35	7.653e-4	4
6		min	-0.016	11	-0.02	8	-0.236	35	-2.595e-3	31	-2.083e-3	9	-7.907e-4	10
7	N4	max	0.266	4	0.123	12	0.22	5	4.831e-3	7	3.48e-3	5	4.798e-3	2
8		min	-0.259	10	-0.126	6	-0.324	11	-5.141e-3	1	-4.199e-3	11	-4.51e-3	8
9	N5	max	0.266	4	0.24	1	0.104	9	3.858e-3	8	4.606e-3	4	4.477e-3	6
10		min	-0.258	10	-0.247	7	-0.222	35	-3.993e-3	2	-3.967e-3	10	-4.743e-3	12
11	N6	max	0.023	4	0.017	1	0.104	1	3.904e-3	7	6.348e-4	4	7.868e-4	10
12		min	-0.024	10	-0.017	7	-0.195	7	-2.409e-3	1	-9.632e-4	10	-8.291e-4	4
13	N7	max	0.016	5	0.025	1	0.093	5	3.895e-3	7	2.35e-3	5	1.01e-3	2
14		min	-0.015	11	-0.025	7	-0.193	40	-4.479e-3	1	-3.541e-3	40	-1.048e-3	8
15	N8	max	0.019	4	0.021	1	0.094	5	2.183e-3	7	4.713e-3	3	1.006e-3	2
16		min	-0.019	10	-0.02	7	-0.187	40	-3.398e-3	1	-5.462e-3	9	-1.041e-3	8
17	N9	max	0.017	6	0.011	12	0.006	4	1.06e-3	7	1.808e-3	5	6.286e-4	11
18		min	-0.018	12	-0.011	6	-0.033	40	-3.613e-4	1	-3.865e-3	40	-6.527e-4	5
19	N10	max	0.016	5	0.009	11	0.005	6	1.113e-3	5	1.475e-3	5	1.016e-3	6
20		min	-0.015	11	-0.009	5	-0.038	28	-3.764e-3	40	-2.362e-3	40	-9.491e-4	12
21	N11	max	0.016	5	0.014	12	0.048	9	1.057e-3	9	3.929e-3	35	4.486e-4	1
22		min	-0.016	11	-0.014	6	-0.126	35	-2.543e-3	35	-1.757e-3	9	-4.437e-4	7
23	N12	max	0.008	4	0.004	4	0.001	8	1.051e-3	9	3.513e-3	35	1.056e-3	11
24		min	-0.008	10	-0.004	10	-0.01	31	-3.698e-3	35	-1.647e-3	9	-1.084e-3	5
25	N13	max	0.015	5	0.013	12	0.042	9	1.159e-3	10	3.902e-3	35	5.556e-4	12
26		min	-0.015	11	-0.013	6	-0.112	35	-2.7e-3	35	-1.685e-3	9	-5.38e-4	6
27	N14	max	0.01	4	0.002	3	0.006	9	1.048e-3	10	3.615e-3	35	1.001e-3	11
28		min	-0.009	10	-0.002	9	-0.025	35	-3.518e-3	35	-1.654e-3	9	-1.039e-3	5
29	N15	max	0.008	4	0.002	2	0.006	9	1.048e-3	10	3.615e-3	35	1.001e-3	11
30		min	-0.008	10	-0.002	8	-0.022	35	-3.518e-3	35	-1.654e-3	9	-1.039e-3	5
31	N16	max	0.015	5	0.013	12	0.042	9	1.159e-3	10	3.902e-3	35	5.556e-4	12
32		min	-0.014	11	-0.013	6	-0.111	35	-2.7e-3	35	-1.685e-3	9	-5.38e-4	6
33	N17	max	0.089	3	0.084	35	0.006	9	1.048e-3	9	3.564e-3	35	1.001e-3	11
34		min	-0.056	9	-0.027	9	-0.022	35	-3.495e-3	35	-2.108e-3	9	-1.039e-3	5
35	N18	max	0.097	3	0.067	35	0.042	9	1.488e-3	9	3.977e-3	35	5.556e-4	12
36		min	-0.054	9	-0.031	9	-0.111	35	-2.85e-3	35	-1.899e-3	9	-5.38e-4	6
37	N19	max	0.014	6	0.081	11	0.006	9	2.059e-3	11	3.568e-3	43	1.001e-3	11
38		min	-0.168	31	-0.169	35	-0.022	35	-3.823e-3	5	-7.235e-4	5	-1.039e-3	5
39	N20	max	0.03	7	0.08	12	0.042	9	2.034e-3	1	3.9e-3	31	5.556e-4	12
40		min	-0.188	31	-0.139	39	-0.111	35	-3.253e-3	7	-5.383e-4	7	-5.38e-4	6
41	N21	max	0.068	3	0.063	35	0.006	9	1.048e-3	9	3.563e-3	35	1.001e-3	11
42		min	-0.044	9	-0.021	9	-0.022	35	-3.495e-3	35	-2.102e-3	9	-1.039e-3	5
43	N22	max	0.074	3	0.05	35	0.042	9	1.482e-3	9	3.976e-3	35	5.556e-4	12
44		min	-0.043	9	-0.023	9	-0.111	35	-2.85e-3	35	-1.895e-3	9	-5.38e-4	6
45	N23	max	0.017	3	0.01	35	0.006	9	1.041e-3	9	3.574e-3	35	1.001e-3	11
46		min	-0.013	9	-0.005	9	-0.022	35	-3.511e-3	35	-1.949e-3	9	-1.039e-3	5
47	N24	max	0.023	4	0.014	1	0.042	9	1.116e-3	9	3.938e-3	35	5.556e-4	12
48		min	-0.018	10	-0.011	7	-0.111	35	-2.769e-3	35	-1.684e-3	9	-5.38e-4	6
49	N25	max	0.004	36	0.015	10	0.006	9	1.524e-3	10	3.464e-3	31	1.001e-3	11
50		min	-0.042	31	-0.042	35	-0.022	35	-3.525e-3	35	-2.761e-4	36	-1.039e-3	5
51	N26	max	0.011	7	0.022	11	0.042	9	1.098e-3	12	3.911e-3	31	5.556e-4	12
52		min	-0.047	31	-0.036	5	-0.111	35	-2.835e-3	39	-8.24e-4	8	-5.38e-4	6
53	N27	max	0.007	36	0.04	10	0.006	9	1.942e-3	11	3.542e-3	43	1.001e-3	11
54		min	-0.094	31	-0.095	35	-0.022	35	-3.716e-3	5	-5.174e-4	5	-1.039e-3	5
55	N28	max	0.019	8	0.042	12	0.042	9	1.827e-3	1	3.896e-3	31	5.556e-4	12
56		min	-0.106	31	-0.077	39	-0.111	35	-3.014e-3	7	-5.429e-4	7	-5.38e-4	6
57	N29	max	0.03	4	0.019	2	0.083	1	4.467e-3	8	4.092e-3	4	7.894e-4	10
58		min	-0.031	10	-0.019	8	-0.162	7	-3.25e-3	2	-3.941e-3	10	-8.324e-4	4

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
59	N30	max	0.03	4	0.016	1	0.084	1	4.835e-3	6	4.345e-3	4	7.855e-4	10
60		min	-0.031	10	-0.016	7	-0.161	7	-3.528e-3	12	-4.955e-3	10	-8.267e-4	4
61	N31	max	0.022	4	0.018	1	0.083	9	1.837e-3	7	4.97e-3	4	7.67e-4	4
62		min	-0.022	10	-0.019	7	-0.195	35	-2.985e-3	31	-3.835e-3	10	-7.924e-4	10
63	N32	max	0.016	5	0.018	1	0.083	9	4.119e-3	7	3.83e-3	35	7.657e-4	4
64		min	-0.016	11	-0.018	7	-0.199	35	-4.314e-3	1	-2.062e-3	9	-7.908e-4	10
65	N33	max	0.001	5	0.021	12	0.005	2	3.271e-3	7	2.578e-4	2	8.752e-4	2
66		min	-0.001	11	-0.02	6	-0.035	20	-1.574e-3	1	-1.955e-3	20	-8.019e-4	8
67	N34	max	0	3	0.021	3	0.005	12	2.936e-3	7	1.765e-3	18	4.677e-4	7
68		min	0	9	-0.021	9	-0.032	18	-1.841e-3	1	-2.858e-4	12	-4.86e-4	1
69	N35	max	0.018	3	0.011	3	0.005	10	8.729e-4	7	4.213e-3	35	1.034e-3	10
70		min	-0.018	9	-0.011	9	-0.036	16	-3.351e-4	1	-1.474e-3	9	-9.818e-4	4
71	N36	max	0.016	5	0.009	5	0.003	8	1.021e-3	9	2.262e-3	35	4.513e-4	2
72		min	-0.015	11	-0.008	11	-0.036	31	-3.558e-3	35	-1.619e-3	10	-4.612e-4	8
73	N37	max	0	5	0	1	0	2	3.133e-3	7	7.013e-5	2	3.551e-4	6
74		min	0	11	0	7	0	20	-1.684e-3	1	-4.728e-4	20	-3.706e-4	12
75	N38	max	0	4	0	7	0	19	3.104e-3	7	4.582e-5	4	5.218e-5	10
76		min	0	10	0	1	0	1	-1.708e-3	1	-5.589e-5	10	-4.891e-5	4
77	N39	max	0	3	0	2	0	12	3.074e-3	7	4.17e-4	18	3.539e-4	2
78		min	0	9	0	8	0	6	-1.731e-3	1	-6.64e-5	12	-3.586e-4	8
79	N40	max	0	4	0	2	0	10	8.513e-4	9	4.021e-3	35	4.173e-4	3
80		min	0	10	0	8	0	4	-1.789e-3	35	-1.578e-3	9	-4.311e-4	9
81	N41	max	0	9	0	9	0	35	9.116e-4	9	3.904e-3	35	2.231e-5	7
82		min	0	3	0	3	0	9	-2.261e-3	35	-1.591e-3	9	-1.914e-5	1
83	N42	max	0	4	0	12	0	8	9.582e-4	9	3.779e-3	35	3.827e-4	10
84		min	0	10	0	6	0	31	-2.745e-3	35	-1.612e-3	9	-3.918e-4	4
85	N43	max	0	5	0	2	0	6	9.951e-4	5	1.599e-3	5	3.513e-4	11
86		min	0	11	0	8	0	28	-2.297e-3	40	-2.965e-3	40	-3.662e-4	5
87	N44	max	0	11	0	5	0	40	9.478e-4	5	1.638e-3	5	1.985e-5	2
88		min	0	5	0	11	0	5	-1.849e-3	40	-3.171e-3	40	-1.682e-5	8
89	N45	max	0	5	0	12	0	4	9.045e-4	5	1.675e-3	5	3.644e-4	6
90		min	0	11	0	6	0	10	-1.437e-3	40	-3.356e-3	40	-3.69e-4	12
91	N46	max	0.028	4	0.015	1	0.046	9	1.112e-3	9	3.656e-3	35	4.346e-4	2
92		min	-0.028	10	-0.015	7	-0.123	35	-2.203e-3	35	-1.737e-3	9	-4.813e-4	8
93	N47	max	0.262	4	0.27	1	0.117	5	3.387e-3	7	4.519e-3	4	4.61e-3	3
94		min	-0.251	10	-0.259	7	-0.206	40	-3.803e-3	1	-4.69e-3	10	-4.907e-3	9
95	N48	max	0.315	4	0.247	1	0.104	1	4.72e-3	8	4.7e-3	4	4.945e-3	9
96		min	-0.316	10	-0.243	7	-0.188	7	-4.125e-3	2	-4.601e-3	10	-4.61e-3	3
97	N49	max	0.313	4	0.244	1	0.105	1	4.434e-3	7	4.096e-3	4	4.657e-3	10
98		min	-0.32	10	-0.239	7	-0.185	7	-4.098e-3	1	-4.263e-3	10	-4.877e-3	4
99	N50	max	0.26	4	0.253	1	0.106	9	3.094e-3	7	5.685e-3	4	5.503e-3	5
100		min	-0.255	10	-0.254	7	-0.214	35	-3.232e-3	1	-5.163e-3	10	-5.198e-3	11
101	N51	max	0.266	4	0.474	1	0.009	3	1.397e-2	7	3.795e-3	4	2.991e-3	12
102		min	-0.259	10	-0.447	7	-0.077	40	-1.349e-2	1	-4.224e-3	10	-2.608e-3	6
103	N52	max	0.27	4	0.474	1	0.017	5	1.397e-2	7	3.795e-3	4	2.991e-3	12
104		min	-0.263	10	-0.447	7	-0.079	40	-1.349e-2	1	-4.224e-3	10	-2.608e-3	6
105	N53	max	0.016	5	0.02	12	0.021	5	-3.825e-4	8	1.662e-3	5	1.639e-3	8
106		min	-0.015	11	-0.022	6	-0.069	40	-4.339e-3	29	-3.074e-3	40	-1.575e-3	2
107	N54	max	0.017	4	0.02	12	0.017	5	-3.825e-4	8	1.662e-3	5	1.639e-3	8
108		min	-0.017	10	-0.022	6	-0.079	40	-4.339e-3	29	-3.074e-3	40	-1.575e-3	2
109	N55	max	0.266	4	0.441	1	0.015	9	8.694e-3	7	2.954e-3	3	3.006e-3	7
110		min	-0.258	10	-0.424	7	-0.073	35	-8.187e-3	1	-2.44e-3	9	-3.753e-3	1
111	N56	max	0.27	4	0.441	1	0.033	8	8.694e-3	7	2.954e-3	3	3.006e-3	7
112		min	-0.26	10	-0.424	7	-0.075	31	-8.187e-3	1	-2.44e-3	9	-3.753e-3	1
113	N57	max	0.016	5	0.005	3	0.019	9	7.468e-3	7	3.098e-3	35	1.046e-3	11
114		min	-0.016	11	-0.005	9	-0.066	35	-9.331e-3	1	-1.697e-3	9	-1.078e-3	5
115	N58	max	0.019	5	0.005	3	0.033	8	7.468e-3	7	3.098e-3	35	1.046e-3	11
116		min	-0.019	11	-0.005	9	-0.075	31	-9.331e-3	1	-1.697e-3	9	-1.078e-3	5
117	N59	max	0.446	4	0.96	1	0.017	5	2.031e-2	7	7.654e-3	4	2.991e-3	12
118		min	-0.451	10	-0.946	7	-0.079	40	-1.983e-2	1	-8.084e-3	10	-2.608e-3	6
119	N60	max	0.138	32	0.15	1	0.017	5	4.096e-3	1	2.002e-3	9	1.639e-3	8
120		min	-0.073	9	-0.292	7	-0.079	40	-7.226e-3	7	-3.089e-3	32	-1.575e-3	2
121	N61	max	0.286	4	0.49	1	0.033	8	8.696e-3	7	2.955e-3	3	3.006e-3	7
122		min	-0.273	10	-0.476	7	-0.075	31	-8.188e-3	1	-2.441e-3	9	-3.753e-3	1
123	N62	max	0.01	6	0.041	7	0.033	8	7.467e-3	7	3.098e-3	35	1.046e-3	11

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
124		min	-0.019	31	-0.053	1	-0.075	31	-9.329e-3	1	-1.695e-3	9	-1.078e-3	5
125	N63	max	0.011	6	0.069	11	0.006	9	2.056e-3	11	3.568e-3	43	1.001e-3	11
126		min	-0.147	31	-0.148	35	-0.022	35	-3.82e-3	5	-7.151e-4	5	-1.039e-3	5
127	N64	max	0.027	7	0.069	12	0.042	9	2.026e-3	1	3.9e-3	31	5.556e-4	12
128		min	-0.164	31	-0.121	39	-0.111	35	-3.244e-3	7	-5.4e-4	7	-5.38e-4	6
129	N65	max	0.03	4	0.017	1	0.083	1	3.905e-3	7	6.07e-4	4	7.904e-4	10
130		min	-0.031	10	-0.017	7	-0.161	7	-2.411e-3	1	-9.362e-4	10	-8.326e-4	4
131	N66	max	0.025	4	0.017	1	0.098	1	3.904e-3	7	6.348e-4	4	7.868e-4	10
132		min	-0.026	10	-0.017	7	-0.185	7	-2.409e-3	1	-9.632e-4	10	-8.291e-4	4
133	N67	max	0.025	4	0.016	1	0.098	1	3.904e-3	7	6.348e-4	4	7.868e-4	10
134		min	-0.026	10	-0.016	7	-0.185	7	-2.409e-3	1	-9.632e-4	10	-8.291e-4	4
135	N68	max	0.032	4	0.024	1	0.083	1	3.905e-3	7	6.07e-4	4	7.904e-4	10
136		min	-0.033	10	-0.028	7	-0.161	7	-2.411e-3	1	-9.362e-4	10	-8.326e-4	4
137	N69	max	0.027	4	0.024	1	0.098	1	3.904e-3	7	6.348e-4	4	7.868e-4	10
138		min	-0.029	10	-0.029	7	-0.185	7	-2.409e-3	1	-9.632e-4	10	-8.291e-4	4
139	N70	max	0.027	4	0.024	1	0.098	1	3.904e-3	7	6.348e-4	4	7.868e-4	10
140		min	-0.029	10	-0.028	7	-0.185	7	-2.409e-3	1	-9.632e-4	10	-8.291e-4	4
141	N71	max	0.028	4	0.01	2	0.083	1	3.905e-3	7	6.07e-4	4	7.904e-4	10
142		min	-0.028	10	-0.006	8	-0.161	7	-2.411e-3	1	-9.362e-4	10	-8.326e-4	4
143	N72	max	0.023	4	0.011	2	0.098	1	3.904e-3	7	6.348e-4	4	7.868e-4	10
144		min	-0.023	10	-0.006	8	-0.185	7	-2.409e-3	1	-9.632e-4	10	-8.291e-4	4
145	N73	max	0.023	4	0.009	2	0.098	1	3.904e-3	7	6.348e-4	4	7.868e-4	10
146		min	-0.023	10	-0.005	8	-0.185	7	-2.409e-3	1	-9.632e-4	10	-8.291e-4	4
147	N74	max	0.012	5	0.01	2	0.132	1	4.073e-3	7	6.347e-4	4	7.728e-4	10
148		min	-0.013	11	-0.006	8	-0.245	7	-2.24e-3	1	-9.632e-4	10	-8.152e-4	4
149	N75	max	0.016	5	0.024	1	0.132	1	4.073e-3	7	6.347e-4	4	7.728e-4	10
150		min	-0.018	11	-0.028	7	-0.245	7	-2.24e-3	1	-9.632e-4	10	-8.152e-4	4
151	N76	max	0.012	5	0.009	27	0.133	1	4.073e-3	7	6.417e-4	4	7.728e-4	10
152		min	-0.013	11	-0.004	7	-0.244	7	-2.24e-3	1	-9.563e-4	10	-8.152e-4	4
153	N77	max	0.016	5	0.023	1	0.133	1	4.073e-3	7	6.417e-4	4	7.728e-4	10
154		min	-0.018	11	-0.027	7	-0.244	7	-2.24e-3	1	-9.563e-4	10	-8.152e-4	4
155	N78	max	0.012	5	0.014	2	0.131	1	4.073e-3	7	6.278e-4	4	7.728e-4	10
156		min	-0.013	11	-0.009	8	-0.246	7	-2.24e-3	1	-9.701e-4	10	-8.152e-4	4
157	N79	max	0.016	5	0.025	1	0.131	1	4.073e-3	7	6.278e-4	4	7.728e-4	10
158		min	-0.018	11	-0.029	7	-0.246	7	-2.24e-3	1	-9.701e-4	10	-8.152e-4	4
159	N80	max	0.01	5	0.009	27	0.14	1	4.073e-3	7	6.417e-4	4	7.727e-4	10
160		min	-0.011	11	-0.004	7	-0.257	7	-2.24e-3	1	-9.563e-4	10	-8.149e-4	4
161	N81	max	0.014	5	0.023	1	0.14	1	4.073e-3	7	6.417e-4	4	7.726e-4	10
162		min	-0.016	11	-0.027	7	-0.257	7	-2.24e-3	1	-9.563e-4	10	-8.151e-4	4
163	N82	max	0.01	5	0.014	2	0.138	1	4.073e-3	7	6.278e-4	4	7.726e-4	10
164		min	-0.011	11	-0.009	8	-0.258	7	-2.24e-3	1	-9.701e-4	10	-8.151e-4	4
165	N83	max	0.014	5	0.025	1	0.138	1	4.073e-3	7	6.278e-4	4	7.727e-4	10
166		min	-0.016	11	-0.029	7	-0.258	7	-2.24e-3	1	-9.701e-4	10	-8.149e-4	4
167	N84	max	0.014	5	0.009	27	0.127	1	4.072e-3	7	6.417e-4	4	7.729e-4	10
168		min	-0.014	11	-0.004	7	-0.232	7	-2.24e-3	1	-9.563e-4	10	-8.154e-4	4
169	N85	max	0.017	5	0.023	1	0.127	1	4.072e-3	7	6.417e-4	4	7.731e-4	10
170		min	-0.02	10	-0.027	7	-0.232	7	-2.24e-3	1	-9.563e-4	10	-8.153e-4	4
171	N86	max	0.014	5	0.014	2	0.124	1	4.072e-3	7	6.278e-4	4	7.731e-4	10
172		min	-0.014	11	-0.009	8	-0.234	7	-2.24e-3	1	-9.701e-4	10	-8.153e-4	4
173	N87	max	0.017	5	0.025	1	0.124	1	4.072e-3	7	6.278e-4	4	7.729e-4	10
174		min	-0.02	10	-0.029	7	-0.234	7	-2.24e-3	1	-9.701e-4	10	-8.154e-4	4
175	N88	max	0.014	5	0.023	1	0.138	1	4.073e-3	7	6.417e-4	4	7.726e-4	10
176		min	-0.017	11	-0.027	7	-0.253	7	-2.24e-3	1	-9.563e-4	10	-8.151e-4	4
177	N89	max	0.011	5	0.009	27	0.138	1	4.073e-3	7	6.417e-4	4	7.727e-4	10
178		min	-0.011	11	-0.004	7	-0.253	7	-2.24e-3	1	-9.563e-4	10	-8.149e-4	4
179	N90	max	0.011	5	0.014	2	0.136	1	4.073e-3	7	6.278e-4	4	7.726e-4	10
180		min	-0.011	11	-0.009	8	-0.254	7	-2.24e-3	1	-9.701e-4	10	-8.151e-4	4
181	N91	max	0.014	5	0.025	1	0.136	1	4.073e-3	7	6.278e-4	4	7.727e-4	10
182		min	-0.017	11	-0.029	7	-0.254	7	-2.24e-3	1	-9.701e-4	10	-8.15e-4	4
183	N92	max	0.014	5	0.009	27	0.129	1	4.072e-3	7	6.417e-4	4	7.729e-4	10
184		min	-0.014	11	-0.004	7	-0.236	7	-2.24e-3	1	-9.563e-4	10	-8.154e-4	4
185	N93	max	0.017	5	0.023	1	0.129	1	4.073e-3	7	6.417e-4	4	7.731e-4	10
186		min	-0.019	11	-0.027	7	-0.236	7	-2.24e-3	1	-9.563e-4	10	-8.153e-4	4
187	N94	max	0.014	5	0.014	2	0.127	1	4.072e-3	7	6.278e-4	4	7.73e-4	10
188		min	-0.014	11	-0.009	8	-0.238	7	-2.24e-3	1	-9.701e-4	10	-8.153e-4	4

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
189	N95	max	0.017	5	0.025	1	0.127	1	4.073e-3	7	6.278e-4	4	7.729e-4	10
190		min	-0.019	11	-0.029	7	-0.238	7	-2.24e-3	1	-9.701e-4	10	-8.154e-4	4
191	N118	max	0.023	4	0.01	2	0.098	1	3.904e-3	7	6.348e-4	4	7.868e-4	10
192		min	-0.023	10	-0.006	8	-0.185	7	-2.409e-3	1	-9.632e-4	10	-8.291e-4	4
193	N119	max	0.027	4	0.024	1	0.098	1	3.904e-3	7	6.348e-4	4	7.868e-4	10
194		min	-0.029	10	-0.028	7	-0.185	7	-2.409e-3	1	-9.632e-4	10	-8.291e-4	4
195	N123	max	0.011	5	0.013	1	0.083	9	1.263e-3	9	3.762e-3	35	7.675e-4	4
196		min	-0.016	11	-0.016	7	-0.197	35	-2.592e-3	35	-2.084e-3	9	-7.928e-4	10
197	N124	max	0.028	4	0.025	2	0.098	9	1.265e-3	8	3.762e-3	35	7.653e-4	4
198		min	-0.023	10	-0.023	8	-0.224	35	-2.595e-3	31	-2.082e-3	9	-7.906e-4	10
199	N130	max	0.019	5	0.018	1	0.083	9	1.263e-3	9	3.762e-3	35	7.675e-4	4
200		min	-0.019	11	-0.019	7	-0.197	35	-2.592e-3	35	-2.084e-3	9	-7.928e-4	10
201	N131	max	0.018	5	0.019	2	0.098	9	1.265e-3	8	3.762e-3	35	7.653e-4	4
202		min	-0.018	11	-0.019	8	-0.224	35	-2.595e-3	31	-2.082e-3	9	-7.906e-4	10
203	N132	max	0.016	5	0.018	1	0.098	9	1.265e-3	8	3.762e-3	35	7.653e-4	4
204		min	-0.016	11	-0.019	7	-0.225	35	-2.595e-3	31	-2.082e-3	9	-7.906e-4	10
205	N133	max	0.029	4	0.023	1	0.083	9	1.263e-3	9	3.762e-3	35	7.675e-4	4
206		min	-0.024	10	-0.021	7	-0.197	35	-2.592e-3	35	-2.084e-3	9	-7.928e-4	10
207	N134	max	0.026	4	0.024	2	0.098	9	1.265e-3	8	3.762e-3	35	7.653e-4	4
208		min	-0.021	10	-0.023	8	-0.225	35	-2.595e-3	31	-2.082e-3	9	-7.906e-4	10
209	N135	max	0.01	5	0.014	1	0.098	9	1.265e-3	8	3.762e-3	35	7.653e-4	4
210		min	-0.015	11	-0.016	7	-0.224	35	-2.595e-3	31	-2.082e-3	9	-7.906e-4	10
211	N136	max	0.009	6	0.013	1	0.098	9	1.265e-3	8	3.762e-3	35	7.653e-4	4
212		min	-0.014	12	-0.016	7	-0.225	35	-2.595e-3	31	-2.082e-3	9	-7.906e-4	10
213	N173	max	0.009	6	0.013	1	0.098	9	1.265e-3	8	3.762e-3	35	7.653e-4	4
214		min	-0.014	12	-0.016	7	-0.224	35	-2.595e-3	31	-2.082e-3	9	-7.906e-4	10
215	N174	max	0.027	4	0.024	2	0.098	9	1.265e-3	8	3.762e-3	35	7.653e-4	4
216		min	-0.022	10	-0.023	8	-0.224	35	-2.595e-3	31	-2.082e-3	9	-7.906e-4	10
217	N178	max	0.011	4	0.018	2	0.093	5	1.239e-3	5	2.361e-3	5	1.011e-3	2
218		min	-0.007	10	-0.021	8	-0.19	40	-2.689e-3	40	-3.501e-3	11	-1.047e-3	8
219	N179	max	0.023	5	0.024	1	0.109	5	1.238e-3	5	2.359e-3	5	1.007e-3	2
220		min	-0.026	11	-0.021	7	-0.218	40	-2.691e-3	40	-3.501e-3	11	-1.044e-3	8
221	N185	max	0.017	4	0.023	1	0.093	5	1.239e-3	5	2.361e-3	5	1.011e-3	2
222		min	-0.017	10	-0.023	7	-0.19	40	-2.689e-3	40	-3.501e-3	11	-1.047e-3	8
223	N186	max	0.016	5	0.019	1	0.109	5	1.238e-3	5	2.359e-3	5	1.007e-3	2
224		min	-0.015	11	-0.018	7	-0.218	40	-2.691e-3	40	-3.501e-3	11	-1.044e-3	8
225	N188	max	0.017	4	0.018	1	0.11	5	1.238e-3	5	2.359e-3	5	1.007e-3	2
226		min	-0.016	10	-0.017	7	-0.216	40	-2.691e-3	40	-3.501e-3	11	-1.044e-3	8
227	N189	max	0.024	4	0.028	1	0.093	5	1.239e-3	5	2.361e-3	5	1.011e-3	2
228		min	-0.027	10	-0.025	7	-0.19	40	-2.689e-3	40	-3.501e-3	11	-1.047e-3	8
229	N190	max	0.023	4	0.023	1	0.11	5	1.238e-3	5	2.359e-3	5	1.007e-3	2
230		min	-0.026	10	-0.019	7	-0.216	40	-2.691e-3	40	-3.501e-3	11	-1.044e-3	8
231	N191	max	0.011	32	0.014	1	0.109	5	1.238e-3	5	2.359e-3	5	1.007e-3	2
232		min	-0.005	11	-0.016	7	-0.218	40	-2.691e-3	40	-3.501e-3	11	-1.044e-3	8
233	N192	max	0.011	32	0.012	1	0.11	5	1.238e-3	5	2.359e-3	5	1.007e-3	2
234		min	-0.006	10	-0.015	7	-0.216	40	-2.691e-3	40	-3.501e-3	11	-1.044e-3	8
235	N234	max	0.011	32	0.013	1	0.11	5	1.238e-3	5	2.359e-3	5	1.007e-3	2
236		min	-0.005	10	-0.015	7	-0.217	40	-2.691e-3	40	-3.501e-3	11	-1.044e-3	8
237	N235	max	0.023	5	0.024	1	0.11	5	1.238e-3	5	2.359e-3	5	1.007e-3	2
238		min	-0.026	11	-0.02	7	-0.217	40	-2.691e-3	40	-3.501e-3	11	-1.044e-3	8
239	N236	max	0.369	4	0.255	1	0.064	1	5.241e-3	8	3.364e-3	3	5.62e-3	9
240		min	-0.374	10	-0.253	7	-0.141	7	-4.478e-3	2	-3.345e-3	9	-5.28e-3	3
241	N237	max	0.369	4	0.246	1	0.066	1	4.156e-3	7	2.638e-3	5	4.99e-3	10
242		min	-0.374	10	-0.243	7	-0.139	7	-3.332e-3	1	-3.011e-3	11	-5.17e-3	4
243	N238	max	0.266	4	0.325	1	0.071	5	4.864e-3	7	2.92e-3	5	5.586e-3	1
244		min	-0.259	10	-0.314	7	-0.179	40	-5.294e-3	1	-3.586e-3	12	-5.305e-3	8
245	N239	max	0.302	4	0.291	1	0.072	5	1.481e-3	7	4.318e-3	4	5.077e-3	3
246		min	-0.295	10	-0.282	7	-0.171	40	-2.433e-3	28	-4.804e-3	10	-5.351e-3	9
247	N240	max	0.315	4	0.27	1	0.061	9	1.162e-3	7	6.286e-3	4	6.07e-3	5
248		min	-0.307	10	-0.273	7	-0.178	35	-2.265e-3	31	-5.455e-3	10	-5.78e-3	11
249	N241	max	0.266	4	0.297	1	0.062	9	3.763e-3	8	3.575e-3	3	4.904e-3	6
250		min	-0.258	10	-0.3	7	-0.182	35	-3.977e-3	2	-2.389e-3	9	-5.135e-3	12
251	N206	max	0.007	7	0.018	2	0.132	9	1.181e-3	8	3.909e-3	35	7.595e-4	4
252		min	-0.012	1	-0.021	8	-0.294	35	-2.679e-3	31	-1.937e-3	9	-7.848e-4	10
253	N207	max	0.021	4	0.03	2	0.132	9	1.181e-3	8	3.909e-3	35	7.595e-4	4

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
254		min	-0.016	10	-0.029	8	-0.294	35	-2.679e-3	31	-1.937e-3	9	-7.848e-4	10
255	N208	max	0.008	7	0.017	2	0.132	9	1.175e-3	8	3.905e-3	35	7.548e-4	4
256		min	-0.012	1	-0.02	8	-0.296	35	-2.685e-3	31	-1.94e-3	9	-7.802e-4	10
257	N209	max	0.017	4	0.029	2	0.132	9	1.175e-3	8	3.905e-3	35	7.548e-4	4
258		min	-0.012	10	-0.027	8	-0.296	35	-2.685e-3	31	-1.94e-3	9	-7.802e-4	10
259	N210	max	0.009	6	0.019	2	0.132	9	1.187e-3	8	3.912e-3	35	7.641e-4	4
260		min	-0.013	12	-0.022	8	-0.292	35	-2.673e-3	31	-1.933e-3	9	-7.895e-4	10
261	N211	max	0.025	4	0.031	2	0.132	9	1.187e-3	8	3.912e-3	35	7.641e-4	4
262		min	-0.02	10	-0.03	8	-0.292	35	-2.673e-3	31	-1.933e-3	9	-7.895e-4	10
263	N212	max	0.008	8	0.018	2	0.139	9	1.175e-3	8	3.905e-3	35	7.548e-4	4
264		min	-0.012	2	-0.021	8	-0.311	35	-2.685e-3	31	-1.94e-3	9	-7.8e-4	10
265	N213	max	0.016	4	0.03	2	0.139	9	1.175e-3	8	3.905e-3	35	7.547e-4	4
266		min	-0.011	10	-0.029	8	-0.311	35	-2.685e-3	31	-1.94e-3	9	-7.802e-4	10
267	N214	max	0.008	6	0.02	2	0.139	9	1.187e-3	8	3.912e-3	35	7.64e-4	4
268		min	-0.013	12	-0.024	9	-0.306	35	-2.673e-3	31	-1.933e-3	9	-7.895e-4	10
269	N215	max	0.024	4	0.032	2	0.139	9	1.187e-3	8	3.912e-3	35	7.642e-4	4
270		min	-0.019	10	-0.031	9	-0.306	35	-2.674e-3	31	-1.933e-3	9	-7.894e-4	10
271	N216	max	0.007	7	0.016	2	0.126	9	1.175e-3	8	3.905e-3	35	7.548e-4	4
272		min	-0.012	1	-0.019	8	-0.282	35	-2.685e-3	31	-1.94e-3	9	-7.803e-4	10
273	N217	max	0.018	4	0.028	2	0.126	9	1.175e-3	8	3.905e-3	35	7.549e-4	4
274		min	-0.013	10	-0.026	8	-0.282	35	-2.685e-3	31	-1.94e-3	9	-7.801e-4	10
275	N218	max	0.009	6	0.018	2	0.125	9	1.187e-3	8	3.912e-3	35	7.643e-4	4
276		min	-0.014	12	-0.021	8	-0.278	35	-2.673e-3	31	-1.933e-3	9	-7.895e-4	10
277	N219	max	0.026	4	0.03	2	0.125	9	1.187e-3	8	3.912e-3	35	7.641e-4	4
278		min	-0.021	10	-0.029	8	-0.278	35	-2.673e-3	31	-1.933e-3	9	-7.896e-4	10
279	N220	max	0.017	4	0.029	2	0.137	9	1.175e-3	8	3.905e-3	35	7.547e-4	4
280		min	-0.011	10	-0.028	8	-0.306	35	-2.685e-3	31	-1.94e-3	9	-7.802e-4	10
281	N221	max	0.008	7	0.017	2	0.137	9	1.175e-3	8	3.905e-3	35	7.548e-4	4
282		min	-0.012	1	-0.021	8	-0.306	35	-2.685e-3	31	-1.94e-3	9	-7.8e-4	10
283	N222	max	0.008	6	0.02	2	0.136	9	1.187e-3	8	3.912e-3	35	7.64e-4	4
284		min	-0.013	12	-0.023	8	-0.302	35	-2.673e-3	31	-1.933e-3	9	-7.895e-4	10
285	N223	max	0.024	4	0.032	2	0.136	9	1.187e-3	8	3.912e-3	35	7.642e-4	4
286		min	-0.019	10	-0.031	8	-0.302	35	-2.674e-3	31	-1.933e-3	9	-7.894e-4	10
287	N224	max	0.007	7	0.016	2	0.128	9	1.175e-3	8	3.905e-3	35	7.548e-4	4
288		min	-0.012	1	-0.019	8	-0.287	35	-2.685e-3	31	-1.94e-3	9	-7.803e-4	10
289	N225	max	0.018	4	0.028	2	0.128	9	1.175e-3	8	3.905e-3	35	7.549e-4	4
290		min	-0.013	10	-0.027	8	-0.287	35	-2.685e-3	31	-1.94e-3	9	-7.801e-4	10
291	N226	max	0.009	6	0.019	2	0.127	9	1.187e-3	8	3.912e-3	35	7.642e-4	4
292		min	-0.014	12	-0.022	8	-0.283	35	-2.673e-3	31	-1.933e-3	9	-7.895e-4	10
293	N227	max	0.026	4	0.031	2	0.127	9	1.187e-3	8	3.912e-3	35	7.641e-4	4
294		min	-0.021	10	-0.029	8	-0.283	35	-2.673e-3	31	-1.933e-3	9	-7.896e-4	10
295	N230	max	0.011	36	0.002	12	0.148	5	1.154e-3	5	2.214e-3	5	9.93e-4	2
296		min	-0.007	12	-0.007	32	-0.283	40	-2.776e-3	40	-3.647e-3	11	-1.03e-3	8
297	N231	max	0.024	5	0.016	12	0.148	5	1.154e-3	5	2.214e-3	5	9.93e-4	2
298		min	-0.026	11	-0.011	5	-0.283	40	-2.776e-3	40	-3.647e-3	11	-1.03e-3	8
299	N232	max	0.011	32	0.003	10	0.148	5	1.16e-3	5	2.21e-3	5	9.921e-4	2
300		min	-0.005	11	-0.007	32	-0.28	40	-2.77e-3	40	-3.65e-3	11	-1.029e-3	8
301	N233	max	0.023	5	0.015	11	0.148	5	1.16e-3	5	2.21e-3	5	9.921e-4	2
302		min	-0.026	11	-0.011	5	-0.28	40	-2.77e-3	40	-3.65e-3	11	-1.029e-3	8
303	N234A	max	0.015	7	0.004	1	0.147	5	1.148e-3	5	2.217e-3	5	9.94e-4	2
304		min	-0.01	1	-0.007	36	-0.287	40	-2.782e-3	40	-3.643e-3	11	-1.031e-3	8
305	N235A	max	0.024	5	0.017	12	0.147	5	1.148e-3	5	2.217e-3	5	9.94e-4	2
306		min	-0.027	11	-0.013	6	-0.287	40	-2.782e-3	40	-3.643e-3	11	-1.031e-3	8
307	N236A	max	0.011	32	0.005	9	0.156	5	1.16e-3	5	2.21e-3	5	9.92e-4	2
308		min	-0.005	11	-0.006	32	-0.294	40	-2.77e-3	40	-3.65e-3	11	-1.029e-3	8
309	N237A	max	0.023	5	0.015	11	0.156	5	1.16e-3	5	2.21e-3	5	9.919e-4	2
310		min	-0.026	11	-0.011	5	-0.294	40	-2.77e-3	40	-3.65e-3	11	-1.029e-3	8
311	N238A	max	0.016	7	0.002	12	0.154	5	1.148e-3	5	2.217e-3	5	9.938e-4	2
312		min	-0.012	1	-0.007	36	-0.301	40	-2.782e-3	40	-3.643e-3	11	-1.031e-3	8
313	N239A	max	0.025	6	0.016	12	0.154	5	1.148e-3	5	2.217e-3	5	9.939e-4	2
314		min	-0.028	12	-0.012	6	-0.301	40	-2.782e-3	40	-3.643e-3	11	-1.031e-3	8
315	N240A	max	0.011	32	0.002	11	0.141	5	1.16e-3	5	2.21e-3	5	9.921e-4	2
316		min	-0.005	10	-0.007	32	-0.266	40	-2.77e-3	40	-3.65e-3	11	-1.029e-3	8
317	N241A	max	0.023	5	0.015	11	0.141	5	1.16e-3	5	2.21e-3	5	9.923e-4	2
318		min	-0.026	11	-0.011	5	-0.266	40	-2.77e-3	40	-3.65e-3	11	-1.029e-3	8

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
319	N242A	max	0.013	7	0.006	1	0.139	5	1.148e-3	5	2.217e-3	5	9.942e-4	2
320		min	-0.009	1	-0.008	7	-0.274	40	-2.782e-3	40	-3.643e-3	11	-1.031e-3	8
321	N243A	max	0.024	5	0.019	12	0.139	5	1.148e-3	5	2.217e-3	5	9.94e-4	2
322		min	-0.027	11	-0.015	6	-0.274	40	-2.782e-3	40	-3.643e-3	11	-1.031e-3	8
323	N244A	max	0.023	5	0.015	11	0.153	5	1.16e-3	5	2.21e-3	5	9.919e-4	2
324		min	-0.026	11	-0.011	5	-0.289	40	-2.77e-3	40	-3.65e-3	11	-1.029e-3	8
325	N245A	max	0.011	32	0.004	9	0.153	5	1.16e-3	5	2.21e-3	5	9.92e-4	2
326		min	-0.005	11	-0.007	32	-0.289	40	-2.77e-3	40	-3.65e-3	11	-1.029e-3	8
327	N246A	max	0.016	7	0.003	12	0.152	5	1.148e-3	5	2.217e-3	5	9.938e-4	2
328		min	-0.011	1	-0.007	36	-0.296	40	-2.782e-3	40	-3.643e-3	11	-1.031e-3	8
329	N247A	max	0.025	6	0.016	12	0.152	5	1.148e-3	5	2.217e-3	5	9.939e-4	2
330		min	-0.027	12	-0.012	6	-0.296	40	-2.782e-3	40	-3.643e-3	11	-1.031e-3	8
331	N248A	max	0.011	32	0.002	11	0.143	5	1.16e-3	5	2.21e-3	5	9.921e-4	2
332		min	-0.005	11	-0.007	32	-0.271	40	-2.77e-3	40	-3.65e-3	11	-1.029e-3	8
333	N249A	max	0.023	5	0.015	11	0.143	5	1.16e-3	5	2.21e-3	5	9.923e-4	2
334		min	-0.026	11	-0.011	5	-0.271	40	-2.77e-3	40	-3.65e-3	11	-1.029e-3	8
335	N250A	max	0.014	7	0.006	1	0.142	5	1.148e-3	5	2.217e-3	5	9.942e-4	2
336		min	-0.009	1	-0.008	7	-0.278	40	-2.782e-3	40	-3.643e-3	11	-1.031e-3	8
337	N251A	max	0.024	5	0.018	12	0.142	5	1.148e-3	5	2.217e-3	5	9.94e-4	2
338		min	-0.027	11	-0.014	6	-0.278	40	-2.782e-3	40	-3.643e-3	11	-1.031e-3	8
339	N206A	max	0.199	5	0.23	1	0.199	1	4.812e-3	8	4.754e-3	4	4.806e-3	9
340		min	-0.192	11	-0.222	7	-0.304	7	-4.032e-3	2	-4.548e-3	10	-4.47e-3	3
341	N171	max	0.266	4	0.288	1	0.093	5	4.831e-3	7	3.666e-3	5	5.068e-3	2
342		min	-0.259	10	-0.28	7	-0.2	40	-5.141e-3	1	-4.014e-3	11	-4.78e-3	8
343	N172	max	0.261	4	0.288	1	0.102	5	4.831e-3	7	3.666e-3	5	5.068e-3	2
344		min	-0.254	10	-0.28	7	-0.205	40	-5.141e-3	1	-4.014e-3	11	-4.78e-3	8
345	N173A	max	0.016	5	0.024	1	0.095	5	4.581e-3	7	2.363e-3	5	1.04e-3	2
346		min	-0.015	11	-0.024	7	-0.197	40	-5.023e-3	1	-3.518e-3	40	-1.082e-3	8
347	N174A	max	0.016	5	0.024	1	0.102	5	4.581e-3	7	2.363e-3	5	1.04e-3	2
348		min	-0.016	11	-0.024	7	-0.205	40	-5.023e-3	1	-3.518e-3	40	-1.082e-3	8
349	N175	max	0.305	4	0.35	1	0.102	5	4.842e-3	7	3.676e-3	5	5.068e-3	2
350		min	-0.302	10	-0.338	7	-0.205	40	-5.152e-3	1	-4.024e-3	11	-4.78e-3	8
351	N176	max	0.123	40	0.132	7	0.102	5	4.268e-3	7	2.093e-3	5	1.04e-3	2
352		min	-0.061	5	-0.148	1	-0.206	40	-4.71e-3	1	-3.381e-3	40	-1.082e-3	8
353	N177	max	0.266	4	0.266	1	0.083	9	3.858e-3	8	4.606e-3	4	4.478e-3	6
354		min	-0.258	10	-0.271	7	-0.205	35	-3.993e-3	2	-3.968e-3	10	-4.744e-3	12
355	N178A	max	0.26	4	0.266	1	0.091	9	3.858e-3	8	4.606e-3	4	4.478e-3	6
356		min	-0.252	10	-0.271	7	-0.21	35	-3.993e-3	2	-3.968e-3	10	-4.744e-3	12
357	N179A	max	0.016	5	0.018	1	0.085	9	4.905e-3	7	3.806e-3	35	7.681e-4	4
358		min	-0.016	11	-0.018	7	-0.202	35	-4.971e-3	1	-2.077e-3	9	-7.872e-4	10
359	N180	max	0.014	5	0.018	1	0.091	9	4.905e-3	7	3.806e-3	35	7.681e-4	4
360		min	-0.014	11	-0.018	7	-0.21	35	-4.971e-3	1	-2.077e-3	9	-7.872e-4	10
361	N181	max	0.316	4	0.313	1	0.091	9	3.869e-3	8	4.617e-3	4	4.478e-3	6
362		min	-0.299	10	-0.317	7	-0.21	35	-4.003e-3	2	-3.979e-3	10	-4.744e-3	12
363	N182	max	0.059	9	0.15	7	0.091	9	4.592e-3	7	3.66e-3	35	7.681e-4	4
364		min	-0.133	35	-0.152	1	-0.211	35	-4.658e-3	1	-1.807e-3	9	-7.872e-4	10
365	N183	max	0.459	4	0.298	2	0.008	12	7.451e-3	8	1.224e-2	4	2.724e-3	8
366		min	-0.478	10	-0.305	8	-0.062	18	-7.345e-3	2	-1.15e-2	10	-2.349e-3	2
367	N184	max	0.457	4	0.304	2	0.018	2	7.451e-3	8	1.224e-2	4	2.724e-3	8
368		min	-0.476	10	-0.312	8	-0.068	8	-7.345e-3	2	-1.15e-2	10	-2.349e-3	2
369	N185A	max	0.015	3	0.021	1	0.018	1	3.758e-3	8	9.905e-4	4	1.843e-3	4
370		min	-0.014	10	-0.02	7	-0.058	7	-1.377e-3	2	-3.074e-3	10	-1.772e-3	10
371	N186A	max	0.018	4	0.022	12	0.018	2	3.758e-3	8	9.905e-4	4	1.843e-3	4
372		min	-0.017	10	-0.021	6	-0.067	8	-1.377e-3	2	-3.074e-3	10	-1.772e-3	10
373	N187	max	0.41	4	0.311	1	0.019	5	3.273e-3	8	8.23e-3	3	3.374e-3	4
374		min	-0.42	10	-0.311	7	-0.067	40	-3.899e-3	2	-7.881e-3	9	-4.137e-3	10
375	N188A	max	0.415	4	0.311	1	0.041	4	3.273e-3	8	8.23e-3	3	3.374e-3	4
376		min	-0.426	10	-0.31	7	-0.08	10	-3.899e-3	2	-7.881e-3	9	-4.137e-3	10
377	N189A	max	0.018	5	0.013	1	0.023	5	4.37e-3	8	7.656e-3	3	9.946e-4	8
378		min	-0.018	11	-0.012	7	-0.061	40	-4.246e-3	2	-9.537e-3	9	-1.059e-3	2
379	N190A	max	0.018	5	0.015	1	0.041	4	4.37e-3	8	7.656e-3	3	9.946e-4	8
380		min	-0.018	11	-0.015	7	-0.08	10	-4.246e-3	2	-9.537e-3	9	-1.059e-3	2
381	N191A	max	0.909	4	0.567	2	0.018	2	1.081e-2	8	1.857e-2	4	2.724e-3	8
382		min	-0.908	10	-0.578	8	-0.068	8	-1.07e-2	2	-1.783e-2	10	-2.349e-3	2
383	N192A	max	0.222	4	0.146	12	0.018	2	3.442e-3	12	3.667e-3	10	1.843e-3	4

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
384		min	-0.127	10	-0.04	6	-0.067	8	-1.103e-3	6	-5.741e-3	4	-1.772e-3	10
385	N193	max	0.462	4	0.332	1	0.041	4	3.274e-3	8	8.232e-3	3	3.374e-3	4
386		min	-0.471	10	-0.327	7	-0.08	10	-3.9e-3	2	-7.882e-3	9	-4.137e-3	10
387	N194	max	0.051	8	0.017	9	0.041	4	4.369e-3	8	7.655e-3	3	9.946e-4	8
388		min	-0.04	2	-0.016	3	-0.08	10	-4.245e-3	2	-9.536e-3	9	-1.059e-3	2
389	N195	max	0.339	4	0.25	1	0.084	1	4.652e-3	8	4.661e-3	4	5.047e-3	9
390		min	-0.342	10	-0.248	7	-0.165	7	-4.192e-3	2	-4.641e-3	10	-4.712e-3	3
391	N196	max	0.332	4	0.254	1	0.091	1	4.652e-3	8	4.661e-3	4	5.047e-3	9
392		min	-0.334	10	-0.252	7	-0.173	7	-4.192e-3	2	-4.641e-3	10	-4.712e-3	3
393	N197	max	0.03	4	0.019	2	0.085	1	4.646e-3	8	4.824e-3	4	8.197e-4	9
394		min	-0.03	10	-0.018	8	-0.166	7	-3.513e-3	2	-4.534e-3	10	-8.704e-4	3
395	N198	max	0.028	4	0.02	2	0.091	1	4.646e-3	8	4.824e-3	4	8.197e-4	9
396		min	-0.029	10	-0.02	8	-0.172	7	-3.513e-3	2	-4.534e-3	10	-8.704e-4	3
397	N199	max	0.388	4	0.302	1	0.091	1	4.662e-3	8	4.673e-3	4	5.047e-3	9
398		min	-0.39	10	-0.305	7	-0.173	7	-4.202e-3	2	-4.652e-3	10	-4.712e-3	3
399	N200	max	0.126	10	0.14	8	0.091	1	4.375e-3	8	4.511e-3	4	8.197e-4	9
400		min	-0.137	4	-0.099	2	-0.172	7	-3.242e-3	2	-4.221e-3	10	-8.704e-4	3
401	N201	max	0.28	4	0.28	1	0.094	5	3.387e-3	7	4.52e-3	4	4.611e-3	3
402		min	-0.271	10	-0.27	7	-0.191	40	-3.802e-3	1	-4.69e-3	10	-4.908e-3	9
403	N202	max	0.285	4	0.272	1	0.103	5	3.387e-3	7	4.52e-3	4	4.611e-3	3
404		min	-0.276	10	-0.261	7	-0.194	40	-3.802e-3	1	-4.69e-3	10	-4.908e-3	9
405	N203	max	0.019	4	0.02	1	0.096	5	2.437e-3	7	5.205e-3	3	1.043e-3	2
406		min	-0.019	10	-0.02	7	-0.191	40	-3.714e-3	1	-5.849e-3	9	-1.074e-3	8
407	N204	max	0.019	4	0.018	1	0.103	5	2.437e-3	7	5.205e-3	3	1.043e-3	2
408		min	-0.019	10	-0.017	7	-0.194	40	-3.714e-3	1	-5.849e-3	9	-1.074e-3	8
409	N205	max	0.34	4	0.317	1	0.103	5	3.399e-3	7	4.531e-3	4	4.611e-3	3
410		min	-0.333	10	-0.301	7	-0.194	40	-3.814e-3	1	-4.701e-3	10	-4.908e-3	9
411	N206B	max	0.185	9	0.062	7	0.103	5	2.125e-3	7	4.933e-3	3	1.043e-3	2
412		min	-0.161	3	-0.113	28	-0.194	40	-3.401e-3	1	-5.577e-3	9	-1.074e-3	8
413	N207A	max	0.457	4	0.285	1	-0.004	7	5.832e-3	6	1.229e-2	4	3.864e-3	4
414		min	-0.435	10	-0.296	7	-0.073	31	-6.666e-3	12	-1.243e-2	10	-3.517e-3	10
415	N208A	max	0.463	4	0.286	1	0.015	10	5.832e-3	6	1.229e-2	4	3.864e-3	4
416		min	-0.44	10	-0.296	7	-0.074	35	-6.666e-3	12	-1.243e-2	10	-3.517e-3	10
417	N209A	max	0.025	3	0.01	1	0.018	9	2.346e-3	8	4.222e-3	17	1.056e-3	12
418		min	-0.026	9	-0.01	7	-0.065	35	-1.826e-3	2	-6.611e-4	11	-1.052e-3	6
419	N210A	max	0.025	3	0.013	1	0.016	10	2.346e-3	8	4.222e-3	17	1.056e-3	12
420		min	-0.026	9	-0.012	7	-0.074	35	-1.826e-3	2	-6.611e-4	11	-1.052e-3	6
421	N211A	max	0.475	4	0.271	12	0.017	1	5.51e-3	5	6.77e-3	4	2.213e-3	11
422		min	-0.463	10	-0.278	6	-0.058	7	-5.496e-3	11	-7.419e-3	10	-2.97e-3	5
423	N212A	max	0.472	4	0.277	12	0.037	12	5.51e-3	5	6.77e-3	4	2.213e-3	11
424		min	-0.461	10	-0.285	6	-0.076	6	-5.496e-3	11	-7.419e-3	10	-2.97e-3	5
425	N213A	max	0.009	4	0.019	2	0.02	1	6.31e-3	5	8.69e-3	4	1.259e-3	4
426		min	-0.009	10	-0.019	8	-0.053	7	-4.716e-3	11	-7.558e-3	10	-1.313e-3	10
427	N214A	max	0.011	4	0.021	2	0.037	12	6.31e-3	5	8.69e-3	4	1.259e-3	4
428		min	-0.011	10	-0.021	8	-0.076	6	-4.716e-3	11	-7.558e-3	10	-1.313e-3	10
429	N215A	max	0.916	4	0.524	12	0.015	10	9.183e-3	6	1.863e-2	4	3.864e-3	4
430		min	-0.897	10	-0.511	6	-0.075	35	-1.002e-2	12	-1.877e-2	10	-3.517e-3	10
431	N216A	max	0.118	3	0.106	12	0.015	10	2.79e-3	12	6.4e-3	10	1.056e-3	12
432		min	-0.264	9	-0.082	6	-0.074	35	-2.254e-3	6	-3.129e-3	4	-1.052e-3	6
433	N217A	max	0.513	4	0.309	12	0.037	12	5.51e-3	5	6.771e-3	4	2.213e-3	11
434		min	-0.505	10	-0.317	6	-0.076	6	-5.496e-3	11	-7.42e-3	10	-2.97e-3	5
435	N218A	max	0.034	10	0.045	4	0.037	12	6.309e-3	5	8.689e-3	4	1.259e-3	4
436		min	-0.042	5	-0.036	10	-0.076	6	-4.716e-3	11	-7.556e-3	10	-1.313e-3	10
437	N219A	max	0.285	4	0.261	1	0.083	9	3.095e-3	7	5.685e-3	4	5.504e-3	5
438		min	-0.278	10	-0.263	7	-0.199	35	-3.232e-3	1	-5.163e-3	10	-5.199e-3	11
439	N220A	max	0.292	4	0.254	1	0.091	9	3.095e-3	7	5.685e-3	4	5.504e-3	5
440		min	-0.284	10	-0.255	7	-0.203	35	-3.232e-3	1	-5.163e-3	10	-5.199e-3	11
441	N221A	max	0.021	4	0.018	1	0.085	9	2.121e-3	7	5.45e-3	5	8.199e-4	4
442		min	-0.021	10	-0.019	7	-0.199	35	-3.236e-3	1	-4.424e-3	11	-8.495e-4	10
443	N222A	max	0.022	4	0.019	2	0.091	9	2.121e-3	7	5.45e-3	5	8.199e-4	4
444		min	-0.022	10	-0.019	8	-0.203	35	-3.236e-3	1	-4.424e-3	11	-8.495e-4	10
445	N223A	max	0.36	4	0.293	1	0.091	9	3.107e-3	7	5.696e-3	4	5.504e-3	5
446		min	-0.347	10	-0.293	7	-0.203	35	-3.243e-3	1	-5.175e-3	10	-5.199e-3	11
447	N224A	max	0.13	11	0.049	7	0.091	9	1.809e-3	7	5.179e-3	5	8.199e-4	4
448		min	-0.167	5	-0.11	31	-0.203	35	-3.075e-3	31	-4.153e-3	11	-8.495e-4	10

Envelope Node Displacements (Continued)

	Node Label		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
449	N225A	max	0.339	4	0.245	1	0.086	1	4.433e-3	7	4.097e-3	4	4.658e-3	10
450		min	-0.344	10	-0.241	7	-0.163	7	-4.099e-3	1	-4.263e-3	10	-4.878e-3	4
451	N226A	max	0.331	4	0.246	1	0.093	1	4.433e-3	7	4.097e-3	4	4.658e-3	10
452		min	-0.337	10	-0.242	7	-0.171	7	-4.099e-3	1	-4.263e-3	10	-4.878e-3	4
453	N227A	max	0.03	4	0.016	1	0.086	1	4.999e-3	6	4.919e-3	4	8.237e-4	10
454		min	-0.03	10	-0.016	7	-0.164	7	-3.742e-3	12	-5.616e-3	10	-8.591e-4	4
455	N228	max	0.028	4	0.015	1	0.093	1	4.999e-3	6	4.919e-3	4	8.237e-4	10
456		min	-0.029	10	-0.015	7	-0.171	7	-3.742e-3	12	-5.616e-3	10	-8.591e-4	4
457	N229	max	0.381	4	0.295	1	0.093	1	4.445e-3	7	4.108e-3	4	4.658e-3	10
458		min	-0.389	10	-0.295	7	-0.171	7	-4.111e-3	1	-4.275e-3	10	-4.878e-3	4
459	N230A	max	0.165	10	0.158	6	0.093	1	4.728e-3	6	4.606e-3	4	8.237e-4	10
460		min	-0.14	4	-0.113	12	-0.171	7	-3.47e-3	12	-5.303e-3	10	-8.591e-4	4
461	N231A	max	0.423	4	0.901	1	0.017	5	2.031e-2	7	7.653e-3	4	2.991e-3	12
462		min	-0.427	10	-0.886	7	-0.079	40	-1.983e-2	1	-8.083e-3	10	-2.608e-3	6
463	N232A	max	0.073	32	0.064	1	0.017	5	4.035e-3	1	1.948e-3	9	1.639e-3	8
464		min	-0.032	9	-0.141	7	-0.079	40	-7.165e-3	7	-3.085e-3	32	-1.575e-3	2
465	N233A	max	0.242	4	0.379	1	0.033	8	8.88e-3	7	4.598e-3	4	2.517e-3	8
466		min	-0.235	10	-0.358	7	-0.075	31	-8.491e-3	1	-4.442e-3	10	-3.138e-3	2
467	N234B	max	0.046	4	0.075	1	0.033	8	8.339e-3	7	4.741e-3	4	8.541e-4	10
468		min	-0.041	10	-0.063	7	-0.075	31	-9.581e-3	1	-4.258e-3	10	-9.905e-4	4
469	N235B	max	0.854	4	0.535	2	0.018	2	1.081e-2	8	1.857e-2	4	2.724e-3	8
470		min	-0.855	10	-0.545	8	-0.068	8	-1.07e-2	2	-1.783e-2	10	-2.349e-3	2
471	N236B	max	0.102	4	0.074	11	0.018	2	3.389e-3	12	3.605e-3	10	1.843e-3	4
472		min	-0.051	10	-0.017	6	-0.067	8	-1.05e-3	6	-5.68e-3	4	-1.772e-3	10
473	N237B	max	0.354	4	0.277	1	0.041	4	5.145e-3	7	8.337e-3	4	2.786e-3	4
474		min	-0.368	10	-0.279	7	-0.08	10	-5.474e-3	1	-7.922e-3	10	-3.44e-3	10
475	N238B	max	0.07	4	0.051	2	0.041	4	5.944e-3	8	8.159e-3	3	7.464e-4	6
476		min	-0.081	10	-0.052	8	-0.08	10	-5.742e-3	2	-9.289e-3	9	-9.11e-4	12
477	N239B	max	0.861	4	0.494	12	0.015	10	9.182e-3	6	1.863e-2	4	3.864e-3	4
478		min	-0.841	10	-0.484	6	-0.075	35	-1.002e-2	12	-1.877e-2	10	-3.517e-3	10
479	N240B	max	0.053	3	0.048	12	0.015	10	2.736e-3	12	6.338e-3	10	1.056e-3	12
480		min	-0.131	9	-0.035	6	-0.074	35	-2.201e-3	6	-3.067e-3	4	-1.052e-3	6
481	N241B	max	0.415	4	0.235	12	0.037	12	5.472e-3	6	8.39e-3	4	1.702e-3	12
482		min	-0.4	10	-0.245	6	-0.076	6	-5.709e-3	12	-8.759e-3	10	-2.346e-3	5
483	N242	max	0.082	4	0.044	1	0.037	12	6.074e-3	6	1.001e-2	4	7.784e-4	3
484		min	-0.075	10	-0.053	7	-0.076	6	-5.222e-3	12	-9.157e-3	10	-9.354e-4	9

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	M130	PL12X0.25	0.173	10	2	0.067	5	y	2	35298.543	97200	0.506	24.3	2.188	H1-1b
2	M131	PL12X0.25	0.148	10	6	0.057	10	y	6	35298.794	97200	0.506	24.3	2.211	H1-1b
3	M132	PL12X0.25	0.195	10	10	0.075	10	y	10	35299.046	97200	0.506	24.3	2.194	H1-1b
4	M145	PIPE_2.0	0.392	45	1	0.094	45		1	9836.597	32130	1.872	1.872	2.026	H1-1b
5	M147	PIPE_2.0	0.259	42.5	3	0.235	13.75		11	9836.597	32130	1.872	1.872	1.662	H1-1b
6	M148	PIPE_2.0	0.279	6.25	10	0.08	6.25		12	23808.54	32130	1.872	1.872	1.531	H1-1b
7	M153	PIPE_2.0	0.333	71.875	10	0.239	43.75		4	6295.422	32130	1.872	1.872	1.695	H1-1b
8	M157	PIPE_2.0	0.299	71.875	2	0.242	43.75		7	6295.422	32130	1.872	1.872	1.718	H1-1b
9	M95	PIPE_2.0	0.223	36	3	0.076	36		2	14916.096	32130	1.872	1.872	2.209	H1-1b
10	M98	PIPE_2.0	0.214	36	11	0.079	36		12	14916.096	32130	1.872	1.872	2.603	H1-1b
11	M103	PIPE_2.0	0.387	45	10	0.088	45		9	9836.597	32130	1.872	1.872	2.351	H1-1b
12	M104	PIPE_2.0	0.288	6.25	6	0.08	6.25		10	23808.54	32130	1.872	1.872	1.974	H1-1b
13	M107	PIPE_2.0	0.247	36	11	0.081	36		10	14916.096	32130	1.872	1.872	2.171	H1-1b
14	M110A	PIPE_2.0	0.215	36	7	0.069	36		8	14916.096	32130	1.872	1.872	2.135	H1-1b
15	M115	PIPE_2.0	0.387	45	4	0.101	45		4	9836.597	32130	1.872	1.872	1.644	H1-1b
16	M116	PIPE_2.0	0.305	6.25	3	0.084	6.25		4	23808.54	32130	1.872	1.872	2.033	H1-1b
17	M119	PIPE_2.0	0.219	36	7	0.08	36		6	14916.096	32130	1.872	1.872	2.133	H1-1b
18	M122	PIPE_2.0	0.236	36	3	0.077	36		4	14916.096	32130	1.872	1.872	2.346	H1-1b
19	M162	L3X3X8	0	3	4	0	3	y	21	88921.622	89424	2.862	6.628	1.5	H2-1
20	M168	L3X3X8	0	3	10	0	3	z	24	88921.622	89424	2.862	6.628	1.5	H2-1
21	M171	L3X3X8	0	3	4	0	3	y	22	88921.622	89424	2.862	6.628	1.5	H2-1
22	M172	L3X3X8	0	3	10	0	3	z	13	88921.622	89424	2.862	6.628	1.5	H2-1
23	M124A	L3X3X8	0	3	13	0	3	y	20	88921.622	89424	2.862	6.628	1.5	H2-1
24	M125	L3X3X8	0	3	19	0	3	z	20	88921.622	89424	2.862	6.628	1.5	H2-1
25	M126A	L3X3X8	0	3	13	0	3	y	20	88921.622	89424	2.862	6.628	1.5	H2-1

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
26	M127A	L3X3X8	0	3	19	0	3	z	20	88921.622	89424	2.862	6.628	1.5	H2-1
27	M134	L3X3X8	0	3	19	0	3	y	19	88921.622	89424	2.862	6.628	1.5	H2-1
28	M135	L3X3X8	0	3	13	0	3	z	19	88921.622	89424	2.862	6.628	1.5	H2-1
29	M136	L3X3X8	0	3	19	0	3	y	19	88921.622	89424	2.862	6.628	1.5	H2-1
30	M137	L3X3X8	0	3	13	0	3	z	19	88921.622	89424	2.862	6.628	1.5	H2-1
31	M175	L2.5x2.5x4	0.359	0	11	0.069	16	z	12	36382.907	38556	1.114	2.537	1.5	H2-1
32	M176	L2.5x2.5x4	0.366	0	7	0.072	16	z	8	36382.907	38556	1.114	2.537	1.5	H2-1
33	M177	L2.5x2.5x4	0.39	0	4	0.081	16	z	4	36382.907	38556	1.114	2.537	1.5	H2-1
34	M200	HSS2X2X4	0.002	6	13	0.001	6	z	15	62208.732	62514	3.326	3.326	2.326	H1-1b
35	M201	HSS2X2X4	0.002	0	19	0.001	0	z	15	62208.732	62514	3.326	3.326	2.326	H1-1b
36	M202	HSS2X2X4	0.002	6	13	0.001	6	z	15	62208.732	62514	3.326	3.326	2.326	H1-1b
37	M203	HSS2X2X4	0.002	0	13	0.001	0	z	15	62208.732	62514	3.326	3.326	2.326	H1-1b
38	M130A	HSS2X2X4	0.002	6	3	0.001	6	z	14	62208.732	62514	3.326	3.326	1.824	H1-1b
39	M131A	HSS2X2X4	0.002	0	3	0.001	0	z	14	62208.732	62514	3.326	3.326	1.824	H1-1b
40	M132A	HSS2X2X4	0.002	6	3	0.001	6	z	14	62208.732	62514	3.326	3.326	1.824	H1-1b
41	M133	HSS2X2X4	0.002	0	3	0.001	0	z	14	62208.732	62514	3.326	3.326	1.824	H1-1b
42	M140	HSS2X2X4	0.002	6	5	0.001	6	z	19	62208.732	62514	3.326	3.326	1.824	H1-1b
43	M141	HSS2X2X4	0.002	0	5	0.001	0	z	19	62208.732	62514	3.326	3.326	1.824	H1-1b
44	M142	HSS2X2X4	0.002	6	5	0.001	6	z	19	62208.732	62514	3.326	3.326	1.824	H1-1b
45	M143	HSS2X2X4	0.002	0	5	0.001	0	z	19	62208.732	62514	3.326	3.326	1.824	H1-1b
46	M179	C5X9	0.029	6.125	16	0.005	5.906	y	4	77533.878	85536	1.909	11.853	1.818	H1-1b
47	M180	C5X9	0.029	6.125	16	0.008	5.906	y	4	77533.878	85536	1.909	11.853	1.771	H1-1b
48	M184	C5X9	0.169	24.001	1	0.062	21.001	z	12	75236.597	85536	1.909	11.853	2.03	H1-1b
49	M185	C5X9	0.335	22.75	3	0.112	23.333	y	4	42540.89	85536	1.909	11.853	1.68	H1-1b
50	M186	C5X9	0.303	22.75	7	0.105	23.333	y	20	42541.164	85536	1.909	11.853	1.633	H1-1b
51	M187	C5X9	0.311	22.75	11	0.112	23.333	y	28	42540.678	85536	1.909	11.853	1.635	H1-1b
52	M188	C5X9	0.34	56.438	11	0.18	70.875	y	9	8879.363	85536	1.909	11.853	1.731	H1-1b
53	M189	C5X9	0.306	69.562	12	0.168	70.875	y	12	8879.394	85536	1.909	11.853	1.583	H1-1b
54	M190	C5X9	0.326	69.563	8	0.199	70.875	y	4	8879.331	85536	1.909	11.853	1.768	H1-1b
55	M191	C5X9	0.093	28.287	5	0.009	15.617	y	30	71573.514	85536	1.909	11.853	1.595	H1-1b
56	M128A	C5X9	0.029	6.125	18	0.003	5.906	y	12	77533.878	85536	1.909	11.853	2.126	H1-1b
57	M129A	C5X9	0.029	6.125	18	0.007	5.906	y	12	77533.878	85536	1.909	11.853	1.694	H1-1b
58	M138	C5X9	0.029	6.125	20	0.004	5.906	y	2	77533.878	85536	1.909	11.853	1.904	H1-1b
59	M139	C5X9	0.029	6.125	20	0.007	5.906	y	2	77533.878	85536	1.909	11.853	1.674	H1-1b

AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

TOWER ENGINEERING PROFESSIONALS

Structural Analysis Report

Structure	:	**152 ft Monopole**
ATC Site Name	:	**Newtown CT 3,CT**
ATC Site Number	:	**302518**
Engineering Number	:	**13732453_C3_03**
Proposed Carrier	:	**T-MOBILE**
Carrier Site Name	:	**Bethel - SNET Mobility**
Carrier Site Number	:	**CT11105F**
Site Location	:	**25 Meridian Ridge Drive** **Newtown, CT 06470-1216** **41.4255, -73.374**
County	:	**Fairfield**
Date	:	**October 4, 2021**
Max Usage	:	**63%**
Result	:	**Pass**

Prepared By:

Ayoub Sabor
TEP

Ayoub Sabor

Reviewed By:

STATE OF CONNECTICUT
AARON THOMAS TRUCKER
32608
LICENSED PROFESSIONAL ENGINEER

10/04/2021

COA : PEC.0001553

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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 152 ft Monopole to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower Drawings	EEI Job #8238 Rev 2, dated January 30, 2001
Foundation Drawing	EEI Job #8238, dated November 17, 2000
Geotechnical Report	Soiltesting Project #G128-5268-98, dated September 8, 1999
Mount Analysis	EFI Globals for ATC Job #049.02279 – 2110451, dated September 27, 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:	115 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:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	Ss = 0.21, 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
152.0	6	Powerwave Allgon LGP21901	Platform with Handrails	(2) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (3) 2" conduit	AT&T MOBILITY
	12	Powerwave Allgon 7020.00 Dual Band RET			
	3	CCI DTMABP7819VG12A			
	6	Powerwave Allgon LGP21401			
	1	Raycap DC6-48-60-18-8F			
	3	Ericsson RRUS 4415 B30			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	1	Raycap DC6-48-60-18-8C			
	3	Ericsson RRUS-12 1900 MHz			
	1	Raycap DC6-48-60-18-8C-EV			
	3	Powerwave Allgon 7770.00			
	6	Kathrein Scala 80010965			
151.0	1	Generic 15' Omni		(1) 7/8" Coax	SPOK HOLDINGS, INC.
140.0	1	Generic 2" x 4" GPS	Platform with Handrails	(6) 1 5/8" Coax (1) 1/2" Coax (1) 2.02 (51.2mm) Hybrid	VERIZON WIRELESS
	6	Commscope JAHH-65B-R3B			
	6	Andrew DB846H80E-SX			
	3	Samsung MT6407-77A			
	1	RFS DB-C1-12C-24AB-0Z			
	3	Commscope CBC78T-DS-43-2X			
	3	Samsung Outdoor CBRS 20W RRH			
	3	Samsung Outdoor CBRS 20W RRH –Clip-on Antenna			
	3	Samsung B5/B13 RRH-BR04C			
	3	Samsung B2/B66A RRH-BR049			
134.0	3	RFS APXVAARR24_43-U-NA20	Platform with Handrails	-	T-MOBILE
121.0	1	Commscope RDIDC-9181-PF-48	Platform with Handrails	(1) 1.75" (44.5mm) Hybrid	DISH WIRELESS L.L.C.
	3	JMA Wireless MX08FRO665-21			
	3	Fujitsu TA08025-B604			
	3	Fujitsu TA08025-B605			

Equipment to be Removed

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
134.0	3	KMW AWS Twin Dual 700 Bypass	-	(6) 1 5/8" Coax (3) 1.58" (40.1mm) Hybrid	T-MOBILE
	3	Ericsson AIR 21			
	3	Ericsson Radio 4449 B12,B71			

Proposed Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
134.0	3	Ericsson Radio 4449 B71 B85A	Platform with Handrails	(2) 1 1/4" (1.25"-31.8mm) Fiber (1) 1.99" (50.7mm) Hybrid	T-MOBILE
	3	Ericsson 4460 BAND 2/25			
	3	Ericsson Air6449 B41			

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

Install proposed coax outside the pole shaft. Stacking coax is not allowed.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	57%	Pass
Shaft	63%	Pass
Base Plate	31%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	3859.3	5210.1	2853.6	55%
Shear (Kips)	34.7	46.8	24.5	52%
* The design reactions are factored by 1.35 per ANSI/TIA-222-H, Sec. 15.6.2				

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

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
134.0	Ericsson Radio 4449 B71 B85A	T-MOBILE	1.282	1.240
	Ericsson Air6449 B41			
	Ericsson 4460 BAND 2/25			

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

Standard Conditions

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

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

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

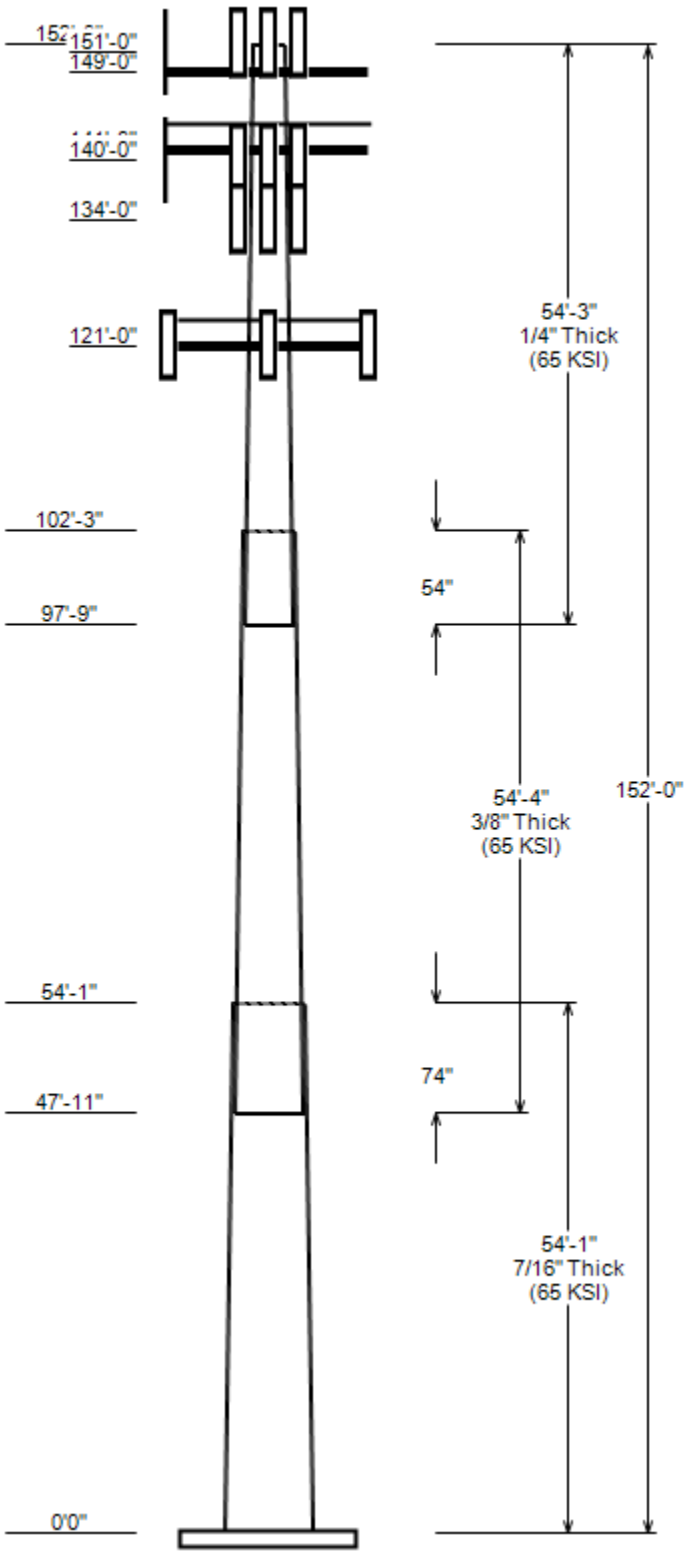
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

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

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

JOB INFORMATION

Asset :	302518, Newtown CT 3	Height :	152 ft
Client :	T-MOBILE	Base Width :	56.75
Code :	ANSI/TIA-222-H	Shape :	18 Sides



SITE PARAMETERS

Base Elev (ft):	0.00	Structure Class:	II
Taper :	0.26800 (In/ft)	Exposure :	B
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	54.083	42.25	56.75	0.438		0.000	18 Sides	65
2	54.333	30.09	44.65	0.375	Slip Joint	74.000	18 Sides	65
3	54.250	17.25	31.79	0.250	Slip Joint	54.000	18 Sides	65

DISCRETE APPURTENANCE

Attach Elev (ft)	Force Elev (ft)	Qty	Description
152.0	152.0	6	Powerwave Allgon LGP21901
152.0	152.0	12	Powerwave Allgon 7020.00 Dual
152.0	152.0	3	CCI DTMABP7819VG12A
152.0	152.0	6	Powerwave Allgon LGP21401
152.0	152.0	1	Raycap DC6-48-60-18-8F
152.0	152.0	3	Ericsson RRUS 4415 B30
152.0	152.0	3	Ericsson RRUS 4449 B5, B12
152.0	152.0	3	Ericsson RRUS 4478 B14
152.0	152.0	1	Raycap DC6-48-60-18-8C
152.0	152.0	3	Ericsson RRUS-12 1900 MHz
152.0	152.0	1	Raycap DC6-48-60-18-8C-EV
152.0	152.0	3	Powerwave Allgon 7770.00
152.0	152.0	6	Kathrein Scala 80010965
151.0	151.0	1	Generic 15' Omni
149.0	149.0	1	Site Pro1 RMQP-496-HK
141.0	141.0	1	Generic Flat Platform with Han
140.0	140.0	1	Generic 2" x 4" GPS
140.0	140.0	3	Commscope CBC78T-DS-43-2X
140.0	140.0	3	Samsung Outdoor CBRS 20W RRH
140.0	140.0	3	Samsung Outdoor CBRS 20W RRH –
140.0	140.0	3	Samsung B5/B13 RRH-BR04C
140.0	140.0	3	Samsung B2/B66A RRH-BR049
140.0	140.0	1	RFS DB-C1-12C-24AB-0Z
140.0	140.0	3	Samsung MT6407-77A
140.0	140.0	6	Andrew DB846H80E-SX
140.0	140.0	6	Commscope JAHH-65B-R3B
134.0	134.0	3	Ericsson Radio 4449 B71 B85A
134.0	134.0	3	Ericsson 4460 BAND 2/25
134.0	134.0	3	Ericsson Air6449 B41
134.0	134.0	3	RFS APXVAARR24_43-U-NA20
134.0	134.0	1	Flat Platform with Round Handr
121.0	121.0	1	Commscope RDIDC-9181-PF-48
121.0	121.0	3	Fujitsu TA08025-B604
121.0	121.0	3	Fujitsu TA08025-B605
121.0	121.0	3	JMA Wireless MX08FRO665-21
121.0	121.0	1	Generic Flat Platform with Han

LINEAR APPURTENANCE

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
0.0	152.0	2" conduit	No
0.0	152.0	1 5/8" Coax	Yes
0.0	152.0	0.78" (19.7mm) 8 AWG 6	No
0.0	152.0	0.39" (10mm) Fiber Trunk	No

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JOB INFORMATION

Asset :	302518, Newtown CT 3	Height :	152 ft
Client :	T-MOBILE	Base Width :	56.75
Code :	ANSI/TIA-222-H	Shape :	18 Sides

LINEAR APPURTENANCE

Elev From (ft)	Elev To (ft)	Description	Exp To Wind
0.0	151.0	7/8" Coax	No
0.0	140.0	2.02 (51.2mm) Hybrid	No
0.0	140.0	1/2" Coax	No
0.0	140.0	1 5/8" Coax	No
0.0	134.0	1.99" (50.7mm) Hybrid	Yes
0.0	134.0	1 1/4" (1.25"- 31.8mm) Fiber	Yes
0.0	121.0	1.75" (44.5mm) Hybrid	No

LOAD CASES

1.2D + 1.0W Normal	115 mph wind with no ice
0.9D + 1.0W Normal	115 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Nor	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Nor	Seismic
0.9D - 1.0Ev + 1.0Eh Nor	Seismic (Reduced DL)
1.0D + 1.0W Service Norm	60 mph Wind with No Ice

REACTIONS

Load Case	Moment (kip-ft)	Shear (Kip)	Axial (Kip)
1.2D + 1.0W Normal	2853.60	24.53	53.20
0.9D + 1.0W Normal	2813.96	24.52	39.90
1.2D + 1.0Di + 1.0Wi Normal	839.71	7.25	72.12
1.2D + 1.0Ev + 1.0Eh Normal	175.76	1.33	53.37
0.9D - 1.0Ev + 1.0Eh Normal	172.61	1.33	36.61
1.0D + 1.0W Service Normal	689.13	5.97	44.36

DISH DEFLECTIONS

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)

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ANALYSIS PARAMETERS

Location:	Fairfield County,CT	Height:	152 ft
Type and Shape:	Taper, 18 Sides	Base Diameter:	56.75 in
Manufacturer:	EEI	Top Diameter:	17.25 in
K_d (non-service):	0.95	Taper:	0.2680 in/ft
K_e:	0.98	Rotation:	0.000°

ICE & WIND PARAMETERS

Exposure Category:	B	Design Wind Speed w/o Ice:	115 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:	426.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil			Period Based on Rayleigh Method (sec):	2.63
T_L (sec):	6	P:	1	$C_{s:}$	0.030
$S_{s:}$	0.214	$S_{1:}$	0.055	C_s Max:	0.030
$F_{a:}$	1.600	$F_{v:}$	2.400	C_s Min:	0.030
$S_{ds:}$	0.228	$S_{d1:}$	0.088		

LOAD CASES

1.2D + 1.0W Normal	115 mph wind with no ice
0.9D + 1.0W Normal	115 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Normal	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL)
1.0D + 1.0W Service Normal	60 mph Wind with No Ice

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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 (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (in)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	54.08	0.4375	65		0.00	12,538	56.75	-0.003	78.19	31,328.3	21.46	129.71	42.25	54.08	58.06	12,825.1	15.62	96.57	0.2681
2-18	54.33	0.3750	65	Slip	74.00	8,141	44.65	47.917	52.70	13,054.7	19.59	119.08	30.09	102.25	35.36	3,944.6	12.74	80.23	0.2681
3-18	54.25	0.2500	65	Slip	54.00	3,555	31.79	97.750	25.03	3,146.6	21.01	127.18	17.25	152.00	13.49	492.5	10.76	69.00	0.2681
				Shaft Weight		24,234													

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
152.00	Powerwave Allgon 7020.00 Dual	12	0.75	0.000	2.20	0.339	0.50	9.03	0.613	0.50
152.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.969	0.50	114.10	2.593	0.50
152.00	Powerwave Allgon LGP21901	6	0.75	0.000	5.50	0.200	0.50	10.63	0.414	0.50
152.00	Ericsson RRUS 4478 B14	3	0.75	0.000	59.40	2.021	0.67	100.44	2.652	0.67
152.00	Raycap DC6-48-60-18-8C	1	0.75	0.000	16.00	2.030	1.00	54.93	2.538	1.00
152.00	Powerwave Allgon LGP21401	6	0.75	0.000	14.10	1.104	0.50	30.78	1.581	0.50
152.00	Raycap DC6-48-60-18-8F	1	0.75	0.000	20.00	1.260	1.00	55.21	1.700	1.00
152.00	Kathrein Scala 80010965	6	0.75	0.000	97.60	13.814	0.62	275.88	15.854	0.62
152.00	Ericsson RRUS 4415 B30	3	0.75	0.000	46.00	1.842	0.50	78.79	2.442	0.50
152.00	CCI DTMABP7819VG12A	3	0.75	0.000	19.20	0.972	0.50	36.23	1.410	0.50
152.00	Powerwave Allgon 7770.00	3	0.75	0.000	35.00	5.508	0.65	111.01	6.930	0.65
152.00	Raycap DC6-48-60-18-8C-EV	1	0.75	0.000	16.00	4.788	1.00	102.35	5.772	1.00
152.00	Ericsson RRUS-12 1900 MHz	3	0.75	0.000	60.00	2.700	0.67	109.59	3.418	0.67
151.00	Generic 15' Omni	1	1.00	0.000	40.00	4.500	1.00	115.60	8.070	1.00
149.00	Site Pro1 RMQP-496-HK	1	1.00	0.000	2448.70	42.400	1.00	3608.75	56.382	1.00
141.00	Generic Flat Platform with Han	1	1.00	0.000	2500.00	42.400	1.00	3679.01	56.319	1.00
140.00	Commscope JAHH-65B-R3B	6	0.80	0.000	60.60	9.113	0.69	194.58	10.950	0.69
140.00	Andrew DB846H80E-SX	6	0.80	0.000	16.00	5.867	0.73	113.25	5.783	0.73
140.00	RFS DB-C1-12C-24AB-0Z	1	0.80	0.000	32.00	4.056	1.00	116.17	4.960	1.00
140.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	126.65	2.473	0.50
140.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	108.18	2.473	0.50
140.00	Samsung Outdoor CBRS 20W RRH –	3	0.80	0.000	4.40	0.892	0.50	16.32	1.315	0.50
140.00	Samsung Outdoor CBRS 20W RRH	3	0.80	0.000	18.60	0.857	0.50	34.49	1.272	0.50
140.00	Commscope CBC78T-DS-43-2X	3	0.80	0.000	20.70	0.552	0.50	35.33	0.888	0.50
140.00	Generic 2" x 4" GPS	1	0.80	0.000	5.00	0.040	1.00	6.70	0.121	1.00
140.00	Samsung MT6407-77A	3	0.75	0.000	81.60	4.709	0.61	149.10	5.715	0.61
134.00	Ericsson Radio 4449 B71 B85A	3	0.75	0.000	75.00	1.650	0.50	114.66	2.210	0.50
134.00	Ericsson 4460 BAND 2/25	3	0.75	0.000	109.00	2.564	0.67	167.30	3.259	0.67
134.00	Ericsson Air6449 B41	3	0.75	0.000	104.00	5.682	0.63	193.89	6.729	0.63
134.00	RFS APXVAARR24_43-U-NA20	3	0.75	0.000	127.90	20.243	0.63	386.83	22.689	0.63
134.00	Flat Platform with Round Handr	1	1.00	0.000	2000.00	34.800	1.00	2918.96	50.790	1.00
121.00	Commscope RDIDC-9181-PF-48	1	0.75	0.000	21.90	1.867	1.00	59.09	2.455	1.00
121.00	Fujitsu TA08025-B604	3	0.75	0.000	63.90	1.962	0.50	102.01	2.563	0.50
121.00	Fujitsu TA08025-B605	3	0.75	0.000	75.00	1.962	0.50	115.94	2.563	0.50
121.00	JMA Wireless MX08FRO665-21	3	0.75	0.000	64.50	12.489	0.64	232.48	14.326	0.64
121.00	Generic Flat Platform with Han	1	1.00	0.000	2500.00	42.400	1.00	3661.04	56.107	1.00
Totals	Num Loadings: 36	110			14,358.50			25,236.91		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg) : _

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	152.00	12	1 5/8" Coax	1.98	0.82	N	6	0	0	200	1	Y	AT&T MOBILITY
0.00	152.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	152.00	3	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	152.00	2	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	151.00	1	7/8" Coax	1.09	0.33	N	0	0	0	0	0	N	SPOK HOLDINGS
0.00	140.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIREL
0.00	140.00	1	2.02 (51.2mm) Hybrid	2.02	3.04	N	0	0	0	0	0	N	VERIZON WIREL
0.00	140.00	1	1/2" Coax	0.63	0.15	N	0	0	0	0	0	N	VERIZON WIREL
0.00	134.00	2	1 1/4" (1.25"- 31.8mm	1.25	1.05	N	1	1	1	80	1	Y	T-MOBILE
0.00	134.00	1	1.99" (50.7mm) Hybrid	1.99	1.9	N	1	1	1	80	1	Y	T-MOBILE

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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	121.00	1	1.75" (44.5mm) Hybrid	1.75	2.72	N	0	0	0	0	0	N	DISH WIRELESS

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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		0.4375	56.750	78.194	31,328.30	21.46	129.71	76.2	1087.3	0.0	0.0
5.00		0.4375	55.410	76.333	29,143.90	20.92	126.65	76.8	1036.0	0.0	1,314.6
10.00		0.4375	54.069	74.471	27,063.50	20.38	123.59	77.4	985.9	0.0	1,282.9
15.00		0.4375	52.729	72.610	25,084.50	19.84	120.52	78.1	937.0	0.0	1,251.2
20.00		0.4375	51.388	70.749	23,204.50	19.30	117.46	78.7	889.4	0.0	1,219.5
25.00		0.4375	50.048	68.887	21,420.80	18.76	114.39	79.3	843.0	0.0	1,187.9
30.00		0.4375	48.707	67.026	19,730.90	18.22	111.33	80	797.9	0.0	1,156.2
35.00		0.4375	47.367	65.165	18,132.30	17.68	108.27	80.6	754.0	0.0	1,124.5
40.00		0.4375	46.026	63.303	16,622.50	17.14	105.20	81.2	711.3	0.0	1,092.9
45.00		0.4375	44.686	61.442	15,199.00	16.60	102.14	81.9	669.9	0.0	1,061.2
47.92	Bot - Section 2	0.4375	43.904	60.356	14,407.40	16.28	100.35	82.2	646.3	0.0	604.4
50.00		0.4375	43.345	59.581	13,859.10	16.06	99.08	82.5	629.8	0.0	796.4
54.08	Top - Section 1	0.3750	43.001	50.733	11,646.40	18.81	114.67	79.3	533.5	0.0	1,531.3
55.00		0.3750	42.755	50.441	11,446.10	18.69	114.01	79.4	527.3	0.0	157.8
60.00		0.3750	41.414	48.845	10,394.00	18.06	110.44	80.2	494.3	0.0	844.6
65.00		0.3750	40.074	47.250	9,408.40	17.43	106.86	80.9	462.4	0.0	817.5
70.00		0.3750	38.734	45.655	8,487.20	16.80	103.29	81.6	431.6	0.0	790.3
75.00		0.3750	37.393	44.059	7,628.10	16.17	99.71	82.4	401.8	0.0	763.2
80.00		0.3750	36.053	42.464	6,829.10	15.54	96.14	82.6	373.1	0.0	736.0
85.00		0.3750	34.712	40.868	6,087.90	14.91	92.57	82.6	345.4	0.0	708.9
90.00		0.3750	33.372	39.273	5,402.40	14.28	88.99	82.6	318.9	0.0	681.8
95.00		0.3750	32.031	37.677	4,770.40	13.65	85.42	82.6	293.3	0.0	654.6
97.75	Bot - Section 3	0.3750	31.294	36.800	4,444.80	13.30	83.45	82.6	279.8	0.0	348.5
100.00		0.3750	30.691	36.082	4,189.70	13.02	81.84	82.6	268.9	0.0	468.8
102.25	Top - Section 2	0.2500	30.588	24.072	2,799.20	20.16	122.35	77.7	180.2	0.0	459.6
105.00		0.2500	29.850	23.487	2,600.00	19.64	119.40	78.3	171.6	0.0	222.5
110.00		0.2500	28.510	22.423	2,262.50	18.70	114.04	79.4	156.3	0.0	390.6
115.00		0.2500	27.169	21.360	1,955.60	17.75	108.68	80.5	141.8	0.0	372.5
120.00		0.2500	25.829	20.296	1,677.80	16.81	103.32	81.6	127.9	0.0	354.4
121.00		0.2500	25.561	20.083	1,625.60	16.62	102.24	81.9	125.3	0.0	68.7
125.00		0.2500	24.488	19.233	1,427.60	15.86	97.95	82.6	114.8	0.0	267.6
130.00		0.2500	23.148	18.169	1,203.60	14.92	92.59	82.6	102.4	0.0	318.2
134.00		0.2500	22.076	17.318	1,042.30	14.16	88.30	82.6	93.0	0.0	241.5
135.00		0.2500	21.808	17.105	1,004.30	13.97	87.23	82.6	90.7	0.0	58.6
140.00		0.2500	20.467	16.042	828.40	13.02	81.87	82.6	79.7	0.0	282.0
141.00		0.2500	20.199	15.829	795.90	12.84	80.80	82.6	77.6	0.0	54.2
145.00		0.2500	19.127	14.978	674.30	12.08	76.51	82.6	69.4	0.0	209.7
149.00		0.2500	18.054	14.127	565.80	11.32	72.22	82.6	61.7	0.0	198.1
150.00		0.2500	17.786	13.914	540.60	11.13	71.14	82.6	59.9	0.0	47.7
151.00		0.2500	17.518	13.702	516.20	10.95	70.07	82.6	58.0	0.0	47.0
152.00		0.2500	17.250	13.489	492.50	10.76	69.00	82.6	56.2	0.0	46.3
								Totals:			24,234.2

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Load Case: 1.2D + 1.0W Normal 115 mph wind with no ice 25 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	-53.20	-24.53	0.00	-2,853.6	0.00	2,853.60	5,359.60	1,372.31	6,979.93	6,210.55	0	0	0.470
5.00	-51.33	-24.23	0.00	-2,730.9	0.00	2,730.93	5,275.68	1,339.64	6,651.63	5,966.65	0.07	-0.13	0.468
10.00	-49.50	-23.93	0.00	-2,609.8	0.00	2,609.78	5,189.62	1,306.97	6,331.23	5,725.07	0.27	-0.26	0.466
15.00	-47.71	-23.64	0.00	-2,490.1	0.00	2,490.13	5,101.44	1,274.31	6,018.74	5,485.99	0.61	-0.39	0.464
20.00	-45.96	-23.35	0.00	-2,372.0	0.00	2,371.95	5,011.12	1,241.64	5,714.16	5,249.58	1.1	-0.53	0.461
25.00	-44.24	-23.07	0.00	-2,255.2	0.00	2,255.20	4,918.68	1,208.98	5,417.48	5,016.02	1.73	-0.67	0.459
30.00	-42.56	-22.78	0.00	-2,139.9	0.00	2,139.88	4,824.11	1,176.31	5,128.72	4,785.49	2.51	-0.82	0.456
35.00	-40.92	-22.49	0.00	-2,026.0	0.00	2,025.96	4,727.41	1,143.64	4,847.86	4,558.17	3.44	-0.97	0.454
40.00	-39.32	-22.20	0.00	-1,913.5	0.00	1,913.49	4,628.58	1,110.98	4,574.91	4,334.22	4.54	-1.12	0.450
45.00	-37.76	-21.95	0.00	-1,802.5	0.00	1,802.50	4,527.62	1,078.31	4,309.87	4,113.84	5.8	-1.28	0.447
47.92	-36.87	-21.79	0.00	-1,738.5	0.00	1,738.48	4,467.74	1,059.25	4,158.91	3,987.00	6.61	-1.38	0.445
50.00	-35.78	-21.60	0.00	-1,693.1	0.00	1,693.08	4,424.53	1,045.64	4,052.73	3,897.20	7.23	-1.45	0.443
54.08	-33.73	-21.40	0.00	-1,604.9	0.00	1,604.89	3,619.86	890.37	3,428.08	3,171.85	8.53	-1.59	0.516
55.00	-33.46	-21.23	0.00	-1,585.3	0.00	1,585.27	3,605.16	885.24	3,388.67	3,140.59	8.83	-1.62	0.515
60.00	-32.15	-20.92	0.00	-1,479.1	0.00	1,479.10	3,523.72	857.24	3,177.73	2,971.70	10.63	-1.81	0.507
65.00	-30.87	-20.61	0.00	-1,374.5	0.00	1,374.48	3,440.15	829.24	2,973.56	2,805.61	12.63	-2	0.499
70.00	-29.63	-20.30	0.00	-1,271.4	0.00	1,271.41	3,354.45	801.24	2,776.17	2,642.48	14.84	-2.2	0.491
75.00	-28.42	-19.99	0.00	-1,169.9	0.00	1,169.89	3,266.62	773.24	2,585.56	2,482.50	17.25	-2.41	0.481
80.00	-27.24	-19.69	0.00	-1,069.9	0.00	1,069.92	3,154.85	745.24	2,401.72	2,309.86	19.89	-2.62	0.473
85.00	-26.10	-19.38	0.00	-971.5	0.00	971.49	3,036.31	717.24	2,224.67	2,138.69	22.74	-2.83	0.464
90.00	-24.99	-19.08	0.00	-874.6	0.00	874.59	2,917.78	689.24	2,054.39	1,974.10	25.82	-3.05	0.452
95.00	-23.93	-18.83	0.00	-779.2	0.00	779.20	2,799.25	661.24	1,890.90	1,816.10	29.13	-3.26	0.438
97.75	-23.35	-18.68	0.00	-727.4	0.00	727.42	2,734.06	645.84	1,803.86	1,732.01	31.05	-3.39	0.429
100.00	-22.66	-18.52	0.00	-685.4	0.00	685.40	2,680.72	633.24	1,734.18	1,664.69	32.67	-3.49	0.421
102.25	-21.98	-18.36	0.00	-643.7	0.00	643.73	1,683.04	422.46	1,157.64	1,050.18	34.33	-3.59	0.628
105.00	-21.53	-18.15	0.00	-593.2	0.00	593.24	1,655.06	412.20	1,102.06	1,007.42	36.44	-3.71	0.604
110.00	-20.76	-17.88	0.00	-502.5	0.00	502.47	1,602.55	393.53	1,004.52	930.92	40.49	-4.01	0.555
115.00	-20.01	-17.60	0.00	-413.1	0.00	413.07	1,547.92	374.86	911.50	856.15	44.84	-4.3	0.498
120.00	-19.32	-17.40	0.00	-325.1	0.00	325.10	1,491.15	356.20	822.99	783.31	49.49	-4.57	0.430
121.00	-15.62	-14.56	0.00	-307.7	0.00	307.70	1,479.54	352.46	805.83	768.99	50.45	-4.62	0.412
125.00	-15.10	-14.28	0.00	-249.5	0.00	249.47	1,428.88	337.53	739.01	710.88	54.41	-4.82	0.363
130.00	-14.48	-13.96	0.00	-178.1	0.00	178.10	1,349.86	318.86	659.54	634.05	59.57	-5.03	0.294
134.00	-10.39	-10.54	0.00	-122.2	0.00	122.24	1,286.64	303.93	599.22	575.75	63.84	-5.17	0.222
135.00	-10.28	-10.40	0.00	-111.7	0.00	111.70	1,270.84	300.20	584.59	561.61	64.93	-5.2	0.208
140.00	-8.39	-7.49	0.00	-59.7	0.00	59.71	1,191.82	281.53	514.16	493.57	70.44	-5.33	0.129
141.00	-5.47	-5.48	0.00	-52.2	0.00	52.22	1,176.01	277.80	500.62	480.48	71.56	-5.35	0.114
145.00	-5.11	-5.26	0.00	-30.3	0.00	30.29	1,112.80	262.87	448.26	429.91	76.06	-5.4	0.075
149.00	-2.00	-3.20	0.00	-9.2	0.00	9.25	1,049.58	247.93	398.78	382.15	80.6	-5.44	0.026
150.00	-1.91	-3.14	0.00	-6.0	0.00	6.05	1,033.77	244.20	386.86	370.65	81.74	-5.44	0.018
151.00	-1.80	-2.91	0.00	-2.9	0.00	2.91	1,017.97	240.47	375.13	359.33	82.87	-5.44	0.010
152.00	0.00	-2.73	0.00	0.0	0.00	0.00	1,002.17	236.73	363.57	348.18	84.01	-5.44	0.000

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Load Case: 0.9D + 1.0W Normal — 115 mph wind with no ice — 25 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	-39.90	-24.52	0.00	-2,814.0	0.00	2,813.96	5,359.60	1,372.31	6,979.93	6,210.55	0	0	0.461
5.00	-38.48	-24.18	0.00	-2,691.4	0.00	2,691.37	5,275.68	1,339.64	6,651.63	5,966.65	0.07	-0.12	0.459
10.00	-37.10	-23.86	0.00	-2,570.4	0.00	2,570.45	5,189.62	1,306.97	6,331.23	5,725.07	0.27	-0.25	0.456
15.00	-35.74	-23.54	0.00	-2,451.2	0.00	2,451.17	5,101.44	1,274.31	6,018.74	5,485.99	0.6	-0.39	0.454
20.00	-34.41	-23.22	0.00	-2,333.5	0.00	2,333.48	5,011.12	1,241.64	5,714.16	5,249.58	1.08	-0.52	0.452
25.00	-33.11	-22.91	0.00	-2,217.4	0.00	2,217.37	4,918.68	1,208.98	5,417.48	5,016.02	1.7	-0.66	0.449
30.00	-31.84	-22.61	0.00	-2,102.8	0.00	2,102.81	4,824.11	1,176.31	5,128.72	4,785.49	2.47	-0.8	0.446
35.00	-30.60	-22.30	0.00	-1,989.8	0.00	1,989.76	4,727.41	1,143.64	4,847.86	4,558.17	3.39	-0.95	0.443
40.00	-29.38	-21.98	0.00	-1,878.3	0.00	1,878.28	4,628.58	1,110.98	4,574.91	4,334.22	4.47	-1.1	0.440
45.00	-28.21	-21.72	0.00	-1,768.4	0.00	1,768.39	4,527.62	1,078.31	4,309.87	4,113.84	5.71	-1.26	0.436
47.92	-27.53	-21.55	0.00	-1,705.0	0.00	1,705.04	4,467.74	1,059.25	4,158.91	3,987.00	6.51	-1.35	0.434
50.00	-26.71	-21.34	0.00	-1,660.1	0.00	1,660.14	4,424.53	1,045.64	4,052.73	3,897.20	7.11	-1.42	0.432
54.08	-25.16	-21.15	0.00	-1,573.0	0.00	1,572.99	3,619.86	890.37	3,428.08	3,171.85	8.39	-1.56	0.503
55.00	-24.95	-20.97	0.00	-1,553.6	0.00	1,553.60	3,605.16	885.24	3,388.67	3,140.59	8.69	-1.59	0.502
60.00	-23.96	-20.64	0.00	-1,448.8	0.00	1,448.77	3,523.72	857.24	3,177.73	2,971.70	10.46	-1.78	0.495
65.00	-22.99	-20.31	0.00	-1,345.6	0.00	1,345.59	3,440.15	829.24	2,973.56	2,805.61	12.42	-1.97	0.487
70.00	-22.04	-19.98	0.00	-1,244.0	0.00	1,244.05	3,354.45	801.24	2,776.17	2,642.48	14.59	-2.16	0.478
75.00	-21.13	-19.66	0.00	-1,144.1	0.00	1,144.14	3,266.62	773.24	2,585.56	2,482.50	16.96	-2.36	0.468
80.00	-20.23	-19.33	0.00	-1,045.9	0.00	1,045.86	3,154.85	745.24	2,401.72	2,309.86	19.55	-2.57	0.460
85.00	-19.36	-19.01	0.00	-949.2	0.00	949.19	3,036.31	717.24	2,224.67	2,138.69	22.35	-2.78	0.451
90.00	-18.52	-18.70	0.00	-854.1	0.00	854.12	2,917.78	689.24	2,054.39	1,974.10	25.37	-2.99	0.440
95.00	-17.72	-18.45	0.00	-760.6	0.00	760.63	2,799.25	661.24	1,890.90	1,816.10	28.61	-3.2	0.426
97.75	-17.28	-18.29	0.00	-709.9	0.00	709.90	2,734.06	645.84	1,803.86	1,732.01	30.49	-3.32	0.417
100.00	-16.76	-18.14	0.00	-668.8	0.00	668.75	2,680.72	633.24	1,734.18	1,664.69	32.08	-3.42	0.409
102.25	-16.24	-17.97	0.00	-627.9	0.00	627.94	1,683.04	422.46	1,157.64	1,050.18	33.71	-3.52	0.609
105.00	-15.89	-17.75	0.00	-578.5	0.00	578.53	1,655.06	412.20	1,102.06	1,007.42	35.77	-3.64	0.586
110.00	-15.30	-17.46	0.00	-489.8	0.00	489.78	1,602.55	393.53	1,004.52	930.92	39.74	-3.93	0.538
115.00	-14.73	-17.16	0.00	-402.5	0.00	402.50	1,547.92	374.86	911.50	856.15	44.01	-4.21	0.482
120.00	-14.20	-16.96	0.00	-316.7	0.00	316.70	1,491.15	356.20	822.99	783.31	48.56	-4.47	0.416
121.00	-11.47	-14.19	0.00	-299.7	0.00	299.74	1,479.54	352.46	805.83	768.99	49.5	-4.52	0.399
125.00	-11.07	-13.90	0.00	-243.0	0.00	242.97	1,428.88	337.53	739.01	710.88	53.37	-4.71	0.351
130.00	-10.60	-13.60	0.00	-173.4	0.00	173.45	1,349.86	318.86	659.54	634.05	58.42	-4.92	0.283
134.00	-7.60	-10.27	0.00	-119.1	0.00	119.07	1,286.64	303.93	599.22	575.75	62.6	-5.06	0.214
135.00	-7.51	-10.12	0.00	-108.8	0.00	108.80	1,270.84	300.20	584.59	561.61	63.66	-5.09	0.201
140.00	-6.15	-7.27	0.00	-58.2	0.00	58.17	1,191.82	281.53	514.16	493.57	69.06	-5.21	0.124
141.00	-3.99	-5.34	0.00	-50.9	0.00	50.91	1,176.01	277.80	500.62	480.48	70.15	-5.23	0.110
145.00	-3.73	-5.12	0.00	-29.6	0.00	29.56	1,112.80	262.87	448.26	429.91	74.55	-5.29	0.072
149.00	-1.43	-3.14	0.00	-9.1	0.00	9.08	1,049.58	247.93	398.78	382.15	78.99	-5.32	0.025
150.00	-1.37	-3.09	0.00	-5.9	0.00	5.94	1,033.77	244.20	386.86	370.65	80.11	-5.32	0.018
151.00	-1.29	-2.86	0.00	-2.9	0.00	2.86	1,017.97	240.47	375.13	359.33	81.22	-5.32	0.009
152.00	0.00	-2.73	0.00	0.0	0.00	0.00	1,002.17	236.73	363.57	348.18	82.33	-5.33	0.000

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Load Case: 1.2D + 1.0Di + 1.0Wi Normal		50 mph wind with 1" radial ice			24 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	-72.12	-7.25	0.00	-839.7	0.00	839.71	5,359.60	1,372.31	6,979.93	6,210.55	0	0	0.149
5.00	-69.95	-7.16	0.00	-803.5	0.00	803.46	5,275.68	1,339.64	6,651.63	5,966.65	0.02	-0.04	0.148
10.00	-67.79	-7.08	0.00	-767.6	0.00	767.65	5,189.62	1,306.97	6,331.23	5,725.07	0.08	-0.08	0.147
15.00	-65.66	-6.99	0.00	-732.3	0.00	732.27	5,101.44	1,274.31	6,018.74	5,485.99	0.18	-0.12	0.146
20.00	-63.55	-6.91	0.00	-697.3	0.00	697.32	5,011.12	1,241.64	5,714.16	5,249.58	0.32	-0.16	0.146
25.00	-61.49	-6.82	0.00	-662.8	0.00	662.79	4,918.68	1,208.98	5,417.48	5,016.02	0.51	-0.2	0.145
30.00	-59.46	-6.74	0.00	-628.7	0.00	628.67	4,824.11	1,176.31	5,128.72	4,785.49	0.74	-0.24	0.144
35.00	-57.47	-6.66	0.00	-595.0	0.00	594.96	4,727.41	1,143.64	4,847.86	4,558.17	1.01	-0.28	0.143
40.00	-55.53	-6.57	0.00	-561.7	0.00	561.68	4,628.58	1,110.98	4,574.91	4,334.22	1.33	-0.33	0.142
45.00	-53.62	-6.49	0.00	-528.8	0.00	528.84	4,527.62	1,078.31	4,309.87	4,113.84	1.71	-0.38	0.140
47.92	-52.53	-6.45	0.00	-509.9	0.00	509.90	4,467.74	1,059.25	4,158.91	3,987.00	1.94	-0.4	0.140
50.00	-51.31	-6.39	0.00	-496.5	0.00	496.47	4,424.53	1,045.64	4,052.73	3,897.20	2.13	-0.43	0.139
54.08	-48.96	-6.33	0.00	-470.4	0.00	470.38	3,619.86	890.37	3,428.08	3,171.85	2.51	-0.47	0.162
55.00	-48.66	-6.28	0.00	-464.6	0.00	464.58	3,605.16	885.24	3,388.67	3,140.59	2.6	-0.48	0.161
60.00	-47.02	-6.19	0.00	-433.2	0.00	433.17	3,523.72	857.24	3,177.73	2,971.70	3.13	-0.53	0.159
65.00	-45.42	-6.10	0.00	-402.2	0.00	402.22	3,440.15	829.24	2,973.56	2,805.61	3.71	-0.59	0.157
70.00	-43.87	-6.00	0.00	-371.7	0.00	371.74	3,354.45	801.24	2,776.17	2,642.48	4.36	-0.65	0.154
75.00	-42.35	-5.91	0.00	-341.7	0.00	341.73	3,266.62	773.24	2,585.56	2,482.50	5.07	-0.71	0.151
80.00	-40.87	-5.82	0.00	-312.2	0.00	312.18	3,154.85	745.24	2,401.72	2,309.86	5.84	-0.77	0.148
85.00	-39.43	-5.72	0.00	-283.1	0.00	283.10	3,036.31	717.24	2,224.67	2,138.69	6.68	-0.83	0.145
90.00	-38.03	-5.63	0.00	-254.5	0.00	254.49	2,917.78	689.24	2,054.39	1,974.10	7.58	-0.89	0.142
95.00	-36.67	-5.55	0.00	-226.3	0.00	226.34	2,799.25	661.24	1,890.90	1,816.10	8.55	-0.96	0.138
97.75	-35.94	-5.51	0.00	-211.1	0.00	211.07	2,734.06	645.84	1,803.86	1,732.01	9.11	-0.99	0.135
100.00	-35.12	-5.46	0.00	-198.7	0.00	198.68	2,680.72	633.24	1,734.18	1,664.69	9.59	-1.02	0.133
102.25	-34.31	-5.41	0.00	-186.4	0.00	186.40	1,683.04	422.46	1,157.64	1,050.18	10.08	-1.05	0.198
105.00	-33.73	-5.35	0.00	-171.5	0.00	171.52	1,655.06	412.20	1,102.06	1,007.42	10.69	-1.09	0.191
110.00	-32.71	-5.23	0.00	-144.8	0.00	144.76	1,602.55	393.53	1,004.52	930.92	11.88	-1.17	0.176
115.00	-31.72	-5.10	0.00	-118.6	0.00	118.63	1,547.92	374.86	911.50	856.15	13.15	-1.26	0.159
120.00	-30.76	-4.98	0.00	-93.2	0.00	93.16	1,491.15	356.20	822.99	783.31	14.51	-1.33	0.140
121.00	-25.31	-4.23	0.00	-88.2	0.00	88.17	1,479.54	352.46	805.83	768.99	14.79	-1.35	0.132
125.00	-24.58	-4.11	0.00	-71.2	0.00	71.25	1,428.88	337.53	739.01	710.88	15.94	-1.4	0.118
130.00	-23.70	-3.97	0.00	-50.7	0.00	50.70	1,349.86	318.86	659.54	634.05	17.45	-1.46	0.098
134.00	-17.37	-3.01	0.00	-34.8	0.00	34.82	1,286.64	303.93	599.22	575.75	18.69	-1.5	0.074
135.00	-17.22	-2.95	0.00	-31.8	0.00	31.81	1,270.84	300.20	584.59	561.61	19.01	-1.51	0.070
140.00	-13.14	-2.18	0.00	-17.1	0.00	17.06	1,191.82	281.53	514.16	493.57	20.61	-1.55	0.046
141.00	-9.09	-1.61	0.00	-14.9	0.00	14.88	1,176.01	277.80	500.62	480.48	20.94	-1.55	0.039
145.00	-8.55	-1.49	0.00	-8.4	0.00	8.43	1,112.80	262.87	448.26	429.91	22.25	-1.57	0.027
149.00	-4.20	-0.87	0.00	-2.5	0.00	2.47	1,049.58	247.93	398.78	382.15	23.57	-1.58	0.010
150.00	-4.07	-0.84	0.00	-1.6	0.00	1.60	1,033.77	244.20	386.86	370.65	23.9	-1.58	0.008
151.00	-3.84	-0.75	0.00	-0.8	0.00	0.75	1,017.97	240.47	375.13	359.33	24.23	-1.58	0.006
152.00	0.00	-0.65	0.00	0.0	0.00	0.00	1,002.17	236.73	363.57	348.18	24.56	-1.58	0.000

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Load Case: 1.0D + 1.0W Service Normal 60 mph Wind with No Ice 23 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	-44.36	-5.97	0.00	-689.1	0.00	689.13	5,359.60	1,372.31	6,979.93	6,210.55	0	0	0.119
5.00	-42.84	-5.89	0.00	-659.3	0.00	659.27	5,275.68	1,339.64	6,651.63	5,966.65	0.02	-0.03	0.119
10.00	-41.36	-5.82	0.00	-629.8	0.00	629.81	5,189.62	1,306.97	6,331.23	5,725.07	0.07	-0.06	0.118
15.00	-39.91	-5.74	0.00	-600.7	0.00	600.73	5,101.44	1,274.31	6,018.74	5,485.99	0.15	-0.09	0.117
20.00	-38.48	-5.67	0.00	-572.0	0.00	572.03	5,011.12	1,241.64	5,714.16	5,249.58	0.26	-0.13	0.117
25.00	-37.10	-5.59	0.00	-543.7	0.00	543.70	4,918.68	1,208.98	5,417.48	5,016.02	0.42	-0.16	0.116
30.00	-35.74	-5.52	0.00	-515.7	0.00	515.74	4,824.11	1,176.31	5,128.72	4,785.49	0.61	-0.2	0.115
35.00	-34.41	-5.45	0.00	-488.1	0.00	488.14	4,727.41	1,143.64	4,847.86	4,558.17	0.83	-0.23	0.114
40.00	-33.12	-5.37	0.00	-460.9	0.00	460.91	4,628.58	1,110.98	4,574.91	4,334.22	1.1	-0.27	0.114
45.00	-31.86	-5.31	0.00	-434.0	0.00	434.05	4,527.62	1,078.31	4,309.87	4,113.84	1.4	-0.31	0.113
47.92	-31.14	-5.27	0.00	-418.6	0.00	418.57	4,467.74	1,059.25	4,158.91	3,987.00	1.59	-0.33	0.112
50.00	-30.25	-5.22	0.00	-407.6	0.00	407.59	4,424.53	1,045.64	4,052.73	3,897.20	1.74	-0.35	0.111
54.08	-28.56	-5.17	0.00	-386.3	0.00	386.28	3,619.86	890.37	3,428.08	3,171.85	2.06	-0.38	0.130
55.00	-28.36	-5.13	0.00	-381.5	0.00	381.54	3,605.16	885.24	3,388.67	3,140.59	2.13	-0.39	0.129
60.00	-27.32	-5.05	0.00	-355.9	0.00	355.89	3,523.72	857.24	3,177.73	2,971.70	2.56	-0.44	0.128
65.00	-26.30	-4.97	0.00	-330.6	0.00	330.64	3,440.15	829.24	2,973.56	2,805.61	3.05	-0.48	0.126
70.00	-25.31	-4.90	0.00	-305.8	0.00	305.77	3,354.45	801.24	2,776.17	2,642.48	3.58	-0.53	0.123
75.00	-24.34	-4.82	0.00	-281.3	0.00	281.29	3,266.62	773.24	2,585.56	2,482.50	4.16	-0.58	0.121
80.00	-23.41	-4.74	0.00	-257.2	0.00	257.20	3,154.85	745.24	2,401.72	2,309.86	4.79	-0.63	0.119
85.00	-22.50	-4.67	0.00	-233.5	0.00	233.50	3,036.31	717.24	2,224.67	2,138.69	5.48	-0.68	0.117
90.00	-21.61	-4.59	0.00	-210.2	0.00	210.17	2,917.78	689.24	2,054.39	1,974.10	6.22	-0.73	0.114
95.00	-20.76	-4.53	0.00	-187.2	0.00	187.22	2,799.25	661.24	1,890.90	1,816.10	7.02	-0.79	0.111
97.75	-20.30	-4.49	0.00	-174.8	0.00	174.76	2,734.06	645.84	1,803.86	1,732.01	7.48	-0.82	0.108
100.00	-19.74	-4.46	0.00	-164.7	0.00	164.66	2,680.72	633.24	1,734.18	1,664.69	7.87	-0.84	0.106
102.25	-19.19	-4.42	0.00	-154.6	0.00	154.63	1,683.04	422.46	1,157.64	1,050.18	8.27	-0.86	0.159
105.00	-18.85	-4.36	0.00	-142.5	0.00	142.49	1,655.06	412.20	1,102.06	1,007.42	8.78	-0.89	0.153
110.00	-18.26	-4.30	0.00	-120.7	0.00	120.67	1,602.55	393.53	1,004.52	930.92	9.76	-0.97	0.141
115.00	-17.69	-4.23	0.00	-99.2	0.00	99.19	1,547.92	374.86	911.50	856.15	10.81	-1.03	0.127
120.00	-17.13	-4.18	0.00	-78.1	0.00	78.07	1,491.15	356.20	822.99	783.31	11.92	-1.1	0.111
121.00	-13.90	-3.50	0.00	-73.9	0.00	73.89	1,479.54	352.46	805.83	768.99	12.16	-1.11	0.106
125.00	-13.49	-3.43	0.00	-59.9	0.00	59.91	1,428.88	337.53	739.01	710.88	13.11	-1.16	0.094
130.00	-12.98	-3.35	0.00	-42.8	0.00	42.77	1,349.86	318.86	659.54	634.05	14.35	-1.21	0.077
134.00	-9.36	-2.53	0.00	-29.4	0.00	29.36	1,286.64	303.93	599.22	575.75	15.38	-1.24	0.058
135.00	-9.27	-2.50	0.00	-26.8	0.00	26.83	1,270.84	300.20	584.59	561.61	15.64	-1.25	0.055
140.00	-7.50	-1.79	0.00	-14.4	0.00	14.35	1,191.82	281.53	514.16	493.57	16.97	-1.28	0.035
141.00	-4.93	-1.32	0.00	-12.6	0.00	12.55	1,176.01	277.80	500.62	480.48	17.24	-1.29	0.030
145.00	-4.63	-1.26	0.00	-7.3	0.00	7.29	1,112.80	262.87	448.26	429.91	18.32	-1.3	0.021
149.00	-1.89	-0.77	0.00	-2.2	0.00	2.23	1,049.58	247.93	398.78	382.15	19.42	-1.31	0.008
150.00	-1.82	-0.76	0.00	-1.5	0.00	1.46	1,033.77	244.20	386.86	370.65	19.69	-1.31	0.006
151.00	-1.71	-0.70	0.00	-0.7	0.00	0.70	1,017.97	240.47	375.13	359.33	19.96	-1.31	0.004
152.00	0.00	-0.66	0.00	0.0	0.00	0.00	1,002.17	236.73	363.57	348.18	20.24	-1.31	0.000

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EQUIVALENT LATERAL FORCES METHOD ANALYSIS

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

Spectral Response Acceleration for Short Period (S_S):	0.214
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}):	0.228
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.088
Seismic Response Coefficient (C_s):	0.030
Upper Limit C_S:	0.030
Lower Limit C_S:	0.030
Period based on Rayleigh Method (sec):	2.630
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	2.000
Total Unfactored Dead Load:	44.360 k
Seismic Base Shear (E):	1.330 k

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
40	151.5	71	1,623	0.004	5	88
39	150.5	72	1,626	0.004	5	89
38	149.5	72	1,620	0.004	5	90
37	147	297	6,422	0.015	20	370
36	143	309	6,314	0.015	20	385
35	140.5	79	1,560	0.004	5	98
34	137.5	446	8,440	0.020	26	556
33	134.5	91	1,654	0.004	5	114
32	132	389	6,779	0.016	21	485
31	127.5	503	8,171	0.019	26	626
30	123	415	6,280	0.015	20	517
29	120.5	108	1,573	0.004	5	135
28	117.5	552	7,627	0.018	24	688
27	112.5	571	7,221	0.017	23	711
26	107.5	589	6,802	0.016	21	733
25	103.625	331	3,559	0.008	11	413
24	101.125	549	5,612	0.013	18	684
23	98.875	558	5,455	0.013	17	695
22	96.375	457	4,248	0.010	13	570
21	92.5	853	7,296	0.017	23	1,062
20	87.5	880	6,736	0.016	21	1,096
19	82.5	907	6,173	0.014	19	1,130
18	77.5	934	5,610	0.013	18	1,164
17	72.5	961	5,053	0.012	16	1,197
16	67.5	988	4,503	0.011	14	1,231
15	62.5	1,016	3,967	0.009	12	1,265
14	57.5	1,043	3,447	0.008	11	1,299
13	54.5417	194	577	0.001	2	242
12	52.0417	1,693	4,585	0.011	14	2,109
11	48.9583	879	2,107	0.005	7	1,095
10	46.4583	720	1,554	0.004	5	897
9	42.5	1,259	2,275	0.005	7	1,569
8	37.5	1,291	1,815	0.004	6	1,608
7	32.5	1,323	1,397	0.003	4	1,647

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Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
6	27.5	1,354	1,024	0.002	3	1,687
5	22.5	1,386	702	0.002	2	1,726
4	17.5	1,418	434	0.001	1	1,766
3	12.5	1,449	226	0.000	1	1,805
2	7.5	1,481	83	0.000	0	1,845
1	2.5	1,513	9	0.000	0	1,884
Powerwave Allgon LGP21901	152	33	762	0.002	2	41
Powerwave Allgon 7020.00 Dual Band RET	152	26	610	0.001	2	33
CCI DTMABP7819VG12A	152	58	1,331	0.003	4	72
Powerwave Allgon LGP21401	152	85	1,955	0.005	6	105
Raycap DC6-48-60-18-8F	152	20	462	0.001	1	25
Ericsson RRUS 4415 B30	152	138	3,188	0.008	10	172
Ericsson RRUS 4449 B5, B12	152	213	4,921	0.012	15	265
Ericsson RRUS 4478 B14	152	178	4,117	0.010	13	222
Raycap DC6-48-60-18-8C	152	16	370	0.001	1	20
Ericsson RRUS-12 1900 MHz	152	180	4,159	0.010	13	224
Raycap DC6-48-60-18-8C-EV	152	16	370	0.001	1	20
Powerwave Allgon 7770.00	152	105	2,426	0.006	8	131
Kathrein Scala 80010965	152	586	13,530	0.032	42	729
Generic 15' Omni	151	40	912	0.002	3	50
Site Pro1 RMQP-496-HK	149	2,449	54,364	0.128	170	3,050
Generic Flat Platform with Handrails	141	2,500	49,702	0.117	155	3,114
Generic Flat Platform with Handrails	121	2,500	36,602	0.086	114	3,114
Generic 2" x 4" GPS	140	5	98	0.000	0	6
Commscope CBC78T-DS-43-2X	140	62	1,217	0.003	4	77
Samsung Outdoor CBRS 20W RRH	140	56	1,094	0.003	3	70
Samsung Outdoor CBRS 20W RRH –Clip-on Antenna	140	13	259	0.001	1	16
Samsung B5/B13 RRH-BR04C	140	211	4,134	0.010	13	263
Samsung B2/B66A RRH-BR049	140	253	4,963	0.012	16	315
RFS DB-C1-12C-24AB-0Z	140	32	627	0.002	2	40
Samsung MT6407-77A	140	245	4,798	0.011	15	305
Andrew DB846H80E-SX	140	96	1,882	0.004	6	120
Commscope JAHH-65B-R3B	140	364	7,127	0.017	22	453
Ericsson Radio 4449 B71 B85A	134	225	4,040	0.010	13	280
Ericsson 4460 BAND 2/25	134	327	5,872	0.014	18	407
Ericsson Air6449 B41	134	312	5,602	0.013	18	389
RFS APXVAARR24_43-U-NA20	134	384	6,890	0.016	22	478
Flat Platform with Round Handrails	134	2,000	35,912	0.084	112	2,491
Commscope RDIDC-9181-PF-48	121	22	321	0.001	1	27
Fujitsu TA08025-B604	121	192	2,807	0.007	9	239
Fujitsu TA08025-B605	121	225	3,294	0.008	10	280
JMA Wireless MX08FRO665-21	121	194	2,833	0.007	9	241
		44,359	425,708	1.001	1,331	55,256

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
40	151.5	71	1,623	0.004	5	60
39	150.5	72	1,626	0.004	5	61
38	149.5	72	1,620	0.004	5	62
37	147	297	6,422	0.015	20	254
36	143	309	6,314	0.015	20	264
35	140.5	79	1,560	0.004	5	67
34	137.5	446	8,440	0.020	26	381
33	134.5	91	1,654	0.004	5	78
32	132	389	6,779	0.016	21	332
31	127.5	503	8,171	0.019	26	429
30	123	415	6,280	0.015	20	355
29	120.5	108	1,573	0.004	5	93
28	117.5	552	7,627	0.018	24	472
27	112.5	571	7,221	0.017	23	487

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Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
26	107.5	589	6,802	0.016	21	503
25	103.625	331	3,559	0.008	11	283
24	101.125	549	5,612	0.013	18	469
23	98.875	558	5,455	0.013	17	477
22	96.375	457	4,248	0.010	13	391
21	92.5	853	7,296	0.017	23	728
20	87.5	880	6,736	0.016	21	752
19	82.5	907	6,173	0.014	19	775
18	77.5	934	5,610	0.013	18	798
17	72.5	961	5,053	0.012	16	821
16	67.5	988	4,503	0.011	14	844
15	62.5	1,016	3,967	0.009	12	868
14	57.5	1,043	3,447	0.008	11	891
13	54.5417	194	577	0.001	2	166
12	52.0417	1,693	4,585	0.011	14	1,446
11	48.9583	879	2,107	0.005	7	751
10	46.4583	720	1,554	0.004	5	615
9	42.5	1,259	2,275	0.005	7	1,076
8	37.5	1,291	1,815	0.004	6	1,103
7	32.5	1,323	1,397	0.003	4	1,130
6	27.5	1,354	1,024	0.002	3	1,157
5	22.5	1,386	702	0.002	2	1,184
4	17.5	1,418	434	0.001	1	1,211
3	12.5	1,449	226	0.000	1	1,238
2	7.5	1,481	83	0.000	0	1,265
1	2.5	1,513	9	0.000	0	1,292
Powerwave Allgon LGP21901	152	33	762	0.002	2	28
Powerwave Allgon 7020.00 Dual Band RET	152	26	610	0.001	2	23
CCI DTMABP7819VG12A	152	58	1,331	0.003	4	49
Powerwave Allgon LGP21401	152	85	1,955	0.005	6	72
Raycap DC6-48-60-18-8F	152	20	462	0.001	1	17
Ericsson RRUS 4415 B30	152	138	3,188	0.008	10	118
Ericsson RRUS 4449 B5, B12	152	213	4,921	0.012	15	182
Ericsson RRUS 4478 B14	152	178	4,117	0.010	13	152
Raycap DC6-48-60-18-8C	152	16	370	0.001	1	14
Ericsson RRUS-12 1900 MHz	152	180	4,159	0.010	13	154
Raycap DC6-48-60-18-8C-EV	152	16	370	0.001	1	14
Powerwave Allgon 7770.00	152	105	2,426	0.006	8	90
Kathrein Scala 80010965	152	586	13,530	0.032	42	500
Generic 15' Omni	151	40	912	0.002	3	34
Site Pro1 RMQP-496-HK	149	2,449	54,364	0.128	170	2,092
Generic Flat Platform with Handrails	141	2,500	49,702	0.117	155	2,136
Generic Flat Platform with Handrails	121	2,500	36,602	0.086	114	2,136
Generic 2" x 4" GPS	140	5	98	0.000	0	4
Commscope CBC78T-DS-43-2X	140	62	1,217	0.003	4	53
Samsung Outdoor CBRS 20W RRH	140	56	1,094	0.003	3	48
Samsung Outdoor CBRS 20W RRH –Clip-on Antenna	140	13	259	0.001	1	11
Samsung B5/B13 RRH-BR04C	140	211	4,134	0.010	13	180
Samsung B2/B66A RRH-BR049	140	253	4,963	0.012	16	216
RFS DB-C1-12C-24AB-0Z	140	32	627	0.002	2	27
Samsung MT6407-77A	140	245	4,798	0.011	15	209
Andrew DB846H80E-SX	140	96	1,882	0.004	6	82
Commscope JAHH-65B-R3B	140	364	7,127	0.017	22	311
Ericsson Radio 4449 B71 B85A	134	225	4,040	0.010	13	192
Ericsson 4460 BAND 2/25	134	327	5,872	0.014	18	279
Ericsson Air6449 B41	134	312	5,602	0.013	18	267
RFS APXVAARR24_43-U-NA20	134	384	6,890	0.016	22	328
Flat Platform with Round Handrails	134	2,000	35,912	0.084	112	1,709
Commscope RDIDC-9181-PF-48	121	22	321	0.001	1	19
Fujitsu TA08025-B604	121	192	2,807	0.007	9	164
Fujitsu TA08025-B605	121	225	3,294	0.008	10	192
JMA Wireless MX08FRO665-21	121	194	2,833	0.007	9	165
		44,359	425,708	1.001	1,331	37,898

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

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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	-53.37	-1.33	0.00	-175.76	0.00	175.76	5,359.60	1,372.31	6,980	6,210.55	0.00	0.00	0.04
5.00	-51.53	-1.34	0.00	-169.09	0.00	169.09	5,275.68	1,339.64	6,652	5,966.65	0.00	-0.01	0.04
10.00	-49.72	-1.35	0.00	-162.39	0.00	162.39	5,189.62	1,306.97	6,331	5,725.07	0.02	-0.02	0.04
15.00	-47.96	-1.35	0.00	-155.66	0.00	155.66	5,101.44	1,274.31	6,019	5,485.99	0.04	-0.02	0.04
20.00	-46.23	-1.36	0.00	-148.90	0.00	148.90	5,011.12	1,241.64	5,714	5,249.58	0.07	-0.03	0.04
25.00	-44.54	-1.36	0.00	-142.12	0.00	142.12	4,918.68	1,208.98	5,417	5,016.02	0.11	-0.04	0.04
30.00	-42.89	-1.36	0.00	-135.33	0.00	135.33	4,824.11	1,176.31	5,129	4,785.49	0.16	-0.05	0.04
35.00	-41.29	-1.36	0.00	-128.53	0.00	128.53	4,727.41	1,143.64	4,848	4,558.17	0.21	-0.06	0.04
40.00	-39.72	-1.36	0.00	-121.74	0.00	121.74	4,628.58	1,110.98	4,575	4,334.22	0.28	-0.07	0.04
45.00	-38.82	-1.36	0.00	-114.95	0.00	114.95	4,527.62	1,078.31	4,310	4,113.84	0.36	-0.08	0.04
47.92	-37.73	-1.35	0.00	-111.00	0.00	111.00	4,467.74	1,059.25	4,159	3,987.00	0.41	-0.09	0.04
50.00	-35.62	-1.34	0.00	-108.18	0.00	108.18	4,424.53	1,045.64	4,053	3,897.20	0.45	-0.09	0.04
54.08	-35.37	-1.34	0.00	-102.71	0.00	102.71	3,619.86	890.37	3,428	3,171.85	0.53	-0.10	0.04
55.00	-34.08	-1.33	0.00	-101.48	0.00	101.48	3,605.16	885.24	3,389	3,140.59	0.55	-0.10	0.04
60.00	-32.81	-1.32	0.00	-94.83	0.00	94.83	3,523.72	857.24	3,178	2,971.70	0.67	-0.11	0.04
65.00	-31.58	-1.31	0.00	-88.21	0.00	88.21	3,440.15	829.24	2,974	2,805.61	0.79	-0.13	0.04
70.00	-30.38	-1.30	0.00	-81.65	0.00	81.65	3,354.45	801.24	2,776	2,642.48	0.93	-0.14	0.04
75.00	-29.22	-1.29	0.00	-75.14	0.00	75.14	3,266.62	773.24	2,586	2,482.50	1.09	-0.15	0.04
80.00	-28.09	-1.27	0.00	-68.70	0.00	68.70	3,154.85	745.24	2,402	2,309.86	1.25	-0.17	0.04
85.00	-26.99	-1.25	0.00	-62.33	0.00	62.33	3,036.31	717.24	2,225	2,138.69	1.44	-0.18	0.04
90.00	-25.93	-1.23	0.00	-56.06	0.00	56.06	2,917.78	689.24	2,054	1,974.10	1.63	-0.19	0.04
95.00	-25.36	-1.22	0.00	-49.89	0.00	49.89	2,799.25	661.24	1,891	1,816.10	1.84	-0.21	0.04
97.75	-24.66	-1.21	0.00	-46.52	0.00	46.52	2,734.06	645.84	1,804	1,732.01	1.96	-0.22	0.04
100.00	-23.98	-1.19	0.00	-43.80	0.00	43.80	2,680.72	633.24	1,734	1,664.69	2.07	-0.22	0.04
102.25	-23.57	-1.18	0.00	-41.13	0.00	41.13	1,683.04	422.46	1,158	1,050.18	2.17	-0.23	0.05
105.00	-22.83	-1.16	0.00	-37.88	0.00	37.88	1,655.06	412.20	1,102	1,007.42	2.31	-0.24	0.05
110.00	-22.12	-1.14	0.00	-32.07	0.00	32.07	1,602.55	393.53	1,005	930.92	2.56	-0.26	0.05
115.00	-21.43	-1.12	0.00	-26.36	0.00	26.36	1,547.92	374.86	912	856.15	2.84	-0.27	0.05
120.00	-21.30	-1.12	0.00	-20.74	0.00	20.74	1,491.15	356.20	823	783.31	3.14	-0.29	0.04
121.00	-16.88	-0.94	0.00	-19.62	0.00	19.62	1,479.54	352.46	806	768.99	3.20	-0.29	0.04
125.00	-16.26	-0.91	0.00	-15.87	0.00	15.87	1,428.88	337.53	739	710.88	3.45	-0.31	0.03
130.00	-15.77	-0.89	0.00	-11.30	0.00	11.30	1,349.86	318.86	660	634.05	3.78	-0.32	0.03
134.00	-11.61	-0.68	0.00	-7.73	0.00	7.73	1,286.64	303.93	599	575.75	4.05	-0.33	0.02
135.00	-11.06	-0.65	0.00	-7.05	0.00	7.05	1,270.84	300.20	585	561.61	4.12	-0.33	0.02
140.00	-9.29	-0.56	0.00	-3.78	0.00	3.78	1,191.82	281.53	514	493.57	4.47	-0.34	0.02
141.00	-5.80	-0.36	0.00	-3.22	0.00	3.22	1,176.01	277.80	501	480.48	4.55	-0.34	0.01
145.00	-5.43	-0.34	0.00	-1.78	0.00	1.78	1,112.80	262.87	448	429.91	4.83	-0.34	0.01
149.00	-2.29	-0.15	0.00	-0.42	0.00	0.42	1,049.58	247.93	399	382.15	5.12	-0.35	0.00
150.00	-2.20	-0.14	0.00	-0.27	0.00	0.27	1,033.77	244.20	387	370.65	5.19	-0.35	0.00
151.00	-2.06	-0.13	0.00	-0.13	0.00	0.13	1,017.97	240.47	375	359.33	5.27	-0.35	0.00
152.00	0.00	-0.12	0.00	0.00	0.00	0.00	1,002.17	236.73	364	348.18	5.34	-0.35	0.00

0.9D - 1.0Ev + 1.0Eh Normal **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	-36.61	-1.33	0.00	-172.61	0.00	172.61	5,359.60	1,372.31	6,980	6,210.55	0.00	0.00	0.04
5.00	-35.34	-1.34	0.00	-165.95	0.00	165.95	5,275.68	1,339.64	6,652	5,966.65	0.00	-0.01	0.04
10.00	-34.10	-1.34	0.00	-159.27	0.00	159.27	5,189.62	1,306.97	6,331	5,725.07	0.02	-0.02	0.03
15.00	-32.89	-1.34	0.00	-152.56	0.00	152.56	5,101.44	1,274.31	6,019	5,485.99	0.04	-0.02	0.03
20.00	-31.71	-1.35	0.00	-145.85	0.00	145.85	5,011.12	1,241.64	5,714	5,249.58	0.07	-0.03	0.03
25.00	-30.55	-1.35	0.00	-139.12	0.00	139.12	4,918.68	1,208.98	5,417	5,016.02	0.11	-0.04	0.03
30.00	-29.42	-1.35	0.00	-132.38	0.00	132.38	4,824.11	1,176.31	5,129	4,785.49	0.15	-0.05	0.03
35.00	-28.32	-1.34	0.00	-125.66	0.00	125.66	4,727.41	1,143.64	4,848	4,558.17	0.21	-0.06	0.03
40.00	-27.24	-1.34	0.00	-118.94	0.00	118.94	4,628.58	1,110.98	4,575	4,334.22	0.28	-0.07	0.03
45.00	-26.62	-1.34	0.00	-112.24	0.00	112.24	4,527.62	1,078.31	4,310	4,113.84	0.36	-0.08	0.03
47.92	-25.87	-1.33	0.00	-108.33	0.00	108.33	4,467.74	1,059.25	4,159	3,987.00	0.41	-0.08	0.03
50.00	-24.43	-1.32	0.00	-105.56	0.00	105.56	4,424.53	1,045.64	4,053	3,897.20	0.44	-0.09	0.03
54.08	-24.26	-1.32	0.00	-100.17	0.00	100.17	3,619.86	890.37	3,428	3,171.85	0.52	-0.10	0.04
55.00	-23.37	-1.31	0.00	-98.96	0.00	98.96	3,605.16	885.24	3,389	3,140.59	0.54	-0.10	0.04
60.00	-22.50	-1.30	0.00	-92.41	0.00	92.41	3,523.72	857.24	3,178	2,971.70	0.65	-0.11	0.04
65.00	-21.66	-1.29	0.00	-85.91	0.00	85.91	3,440.15	829.24	2,974	2,805.61	0.78	-0.12	0.04
70.00	-20.84	-1.28	0.00	-79.46	0.00	79.46	3,354.45	801.24	2,776	2,642.48	0.91	-0.14	0.04
75.00	-20.04	-1.26	0.00	-73.08	0.00	73.08	3,266.62	773.24	2,586	2,482.50	1.06	-0.15	0.04

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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
80.00	-19.26	-1.24	0.00	-66.77	0.00	66.77	3,154.85	745.24	2,402	2,309.86	1.23	-0.16	0.04
85.00	-18.51	-1.23	0.00	-60.55	0.00	60.55	3,036.31	717.24	2,225	2,138.69	1.40	-0.18	0.03
90.00	-17.78	-1.20	0.00	-54.42	0.00	54.42	2,917.78	689.24	2,054	1,974.10	1.59	-0.19	0.03
95.00	-17.39	-1.19	0.00	-48.40	0.00	48.40	2,799.25	661.24	1,891	1,816.10	1.80	-0.20	0.03
97.75	-16.91	-1.18	0.00	-45.12	0.00	45.12	2,734.06	645.84	1,804	1,732.01	1.92	-0.21	0.03
100.00	-16.45	-1.16	0.00	-42.47	0.00	42.47	2,680.72	633.24	1,734	1,664.69	2.02	-0.22	0.03
102.25	-16.16	-1.15	0.00	-39.86	0.00	39.86	1,683.04	422.46	1,158	1,050.18	2.12	-0.22	0.05
105.00	-15.66	-1.13	0.00	-36.70	0.00	36.70	1,655.06	412.20	1,102	1,007.42	2.25	-0.23	0.05
110.00	-15.17	-1.11	0.00	-31.06	0.00	31.06	1,602.55	393.53	1,005	930.92	2.51	-0.25	0.04
115.00	-14.70	-1.09	0.00	-25.51	0.00	25.51	1,547.92	374.86	912	856.15	2.78	-0.27	0.04
120.00	-14.61	-1.09	0.00	-20.07	0.00	20.07	1,491.15	356.20	823	783.31	3.06	-0.28	0.04
121.00	-11.58	-0.91	0.00	-18.98	0.00	18.98	1,479.54	352.46	806	768.99	3.12	-0.29	0.03
125.00	-11.15	-0.88	0.00	-15.35	0.00	15.35	1,428.88	337.53	739	710.88	3.37	-0.30	0.03
130.00	-10.82	-0.86	0.00	-10.93	0.00	10.93	1,349.86	318.86	660	634.05	3.69	-0.31	0.03
134.00	-7.96	-0.66	0.00	-7.48	0.00	7.48	1,286.64	303.93	599	575.75	3.95	-0.32	0.02
135.00	-7.58	-0.63	0.00	-6.82	0.00	6.82	1,270.84	300.20	585	561.61	4.02	-0.32	0.02
140.00	-6.37	-0.54	0.00	-3.66	0.00	3.66	1,191.82	281.53	514	493.57	4.36	-0.33	0.01
141.00	-3.97	-0.35	0.00	-3.12	0.00	3.12	1,176.01	277.80	501	480.48	4.43	-0.33	0.01
145.00	-3.72	-0.33	0.00	-1.72	0.00	1.72	1,112.80	262.87	448	429.91	4.71	-0.33	0.01
149.00	-1.57	-0.14	0.00	-0.41	0.00	0.41	1,049.58	247.93	399	382.15	4.99	-0.34	0.00
150.00	-1.51	-0.14	0.00	-0.26	0.00	0.26	1,033.77	244.20	387	370.65	5.06	-0.34	0.00
151.00	-1.41	-0.13	0.00	-0.13	0.00	0.13	1,017.97	240.47	375	359.33	5.13	-0.34	0.00
152.00	0.00	-0.12	0.00	0.00	0.00	0.00	1,002.17	236.73	364	348.18	5.20	-0.34	0.00

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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 Normal	24.53	0.00	53.20	0.00	0.00	2853.60	102.25	0.63
0.9D + 1.0W Normal	24.52	0.00	39.90	0.00	0.00	2813.96	102.25	0.61
1.2D + 1.0Di + 1.0Wi Normal	7.25	0.00	72.12	0.00	0.00	839.71	102.25	0.2
1.2D + 1.0Ev + 1.0Eh Normal	1.36	0.00	53.37	0.00	0.00	175.76	102.25	0.05
0.9D - 1.0Ev + 1.0Eh Normal	1.35	0.00	36.61	0.00	0.00	172.61	102.25	0.05
1.0D + 1.0W Service Normal	5.97	0.00	44.36	0.00	0.00	689.13	102.25	0.16

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Base Plate & Anchor Rod Analysis

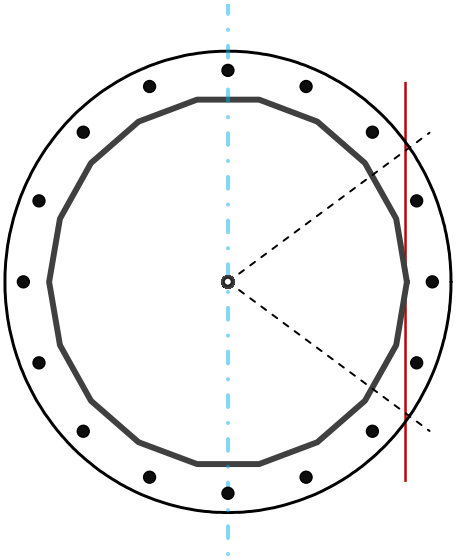
Pole Dimensions		
Number of Sides	18	-
Diameter	56.75	in
Thickness	7/16	in
Orientation Offset	0	°

Base Reactions		
Moment, Mu	2,853.6	k-ft
Axial, Pu	53.2	k
Shear, Vu	24.5	k
Neutral Axis	270	°

Report Capacities		
Component	Capacity	Result
Base Plate	31%	Pass
Anchor Rods	57%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ø	72	in
Thickness	2	in
Grade	A871-60	
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Clip	N/A	in
Orientation Offset	0	°
Anchor Rod Detail	d	η=0.5
Clear Distance	3 1/2	in
Applied Moment, Mu	708.4	k
Bending Stress, ϕMn	2277.6	k

Original Anchor Rods		
Arrangement	Radial	-
Quantity	16	-
Diameter, ø	2 1/4	in
Bolt Circle	66	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	13.0	in
Orientation Offset	0	°
Applied Force, Pu	137.8	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	24.5	2853.6	1.00
Anchor Rod Forces	24.5	2853.6	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	77.0062	4.2781	0.2740		30529.20
Bolt	3.9761	3.2477	0.8393	4.5	26307.64
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	72	in
Thickness, t	2	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Base Plate Chord	44.311	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3.5	-

Anchor Rods		
Anchor Rod Quantity, N	16	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	66	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	137.8	k
Applied Shear, Vu	0.9	k
Compressive Capacity, ϕPn	243.6	k
Tensile Capacity, ϕRnt	0.566	OK
Interaction Capacity	0.573	OK

External Base Plate		
Chord Length AA	38.177	in
Additional AA	4.000	in
Section Modulus, Z	42.177	in^3
Applied Moment, Mu	708.4	k-ft
Bending Capacity, ϕMn	2277.6	k-ft
Capacity, Mu/ϕMn	0.311	OK
Chord Length AB	36.836	in
Additional AB	4.000	in
Section Modulus, Z	40.836	in^3
Applied Moment, Mu	536.0	k-ft
Bending Capacity, ϕMn	2205.2	k-ft
Capacity, Mu/ϕMn	0.243	OK
Bend Line Length	42.221	in
Additional Bend Line	0.000	in
Section Modulus, Z	42.221	in^3
Applied Moment, Mu	708.4	k-ft
Bending Capacity, ϕMn	2279.9	k-ft
Capacity, Mu/ϕMn	0.311	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		

RAN Template:	A&L Template:
67D5A998E Outdoor	67D5998E_1xAIR+1OP

CT11105F_Anchor_3_draft

Print Name: Standard (Scoping_P-RFDS_A)
PORs: Anchor_Phase 3

Section 1 - Site Information

Site ID: CT11105F
Status: Draft
Version: 3
Project Type: Anchor
Approved: Not Approved
Approved By: Not Approved
Last Modified: 8/16/2021 4:15:44 PM
Last Modified By: Hansraj.Rana4@T-Mobile.com

Site Name: Bethel - SNET Mobility
Site Class: Monopole
Site Type: Structure Non Building
Plan Year: 2021
Market: CONNECTICUT CT
Vendor: Ericsson
Landlord: SNET Mobility

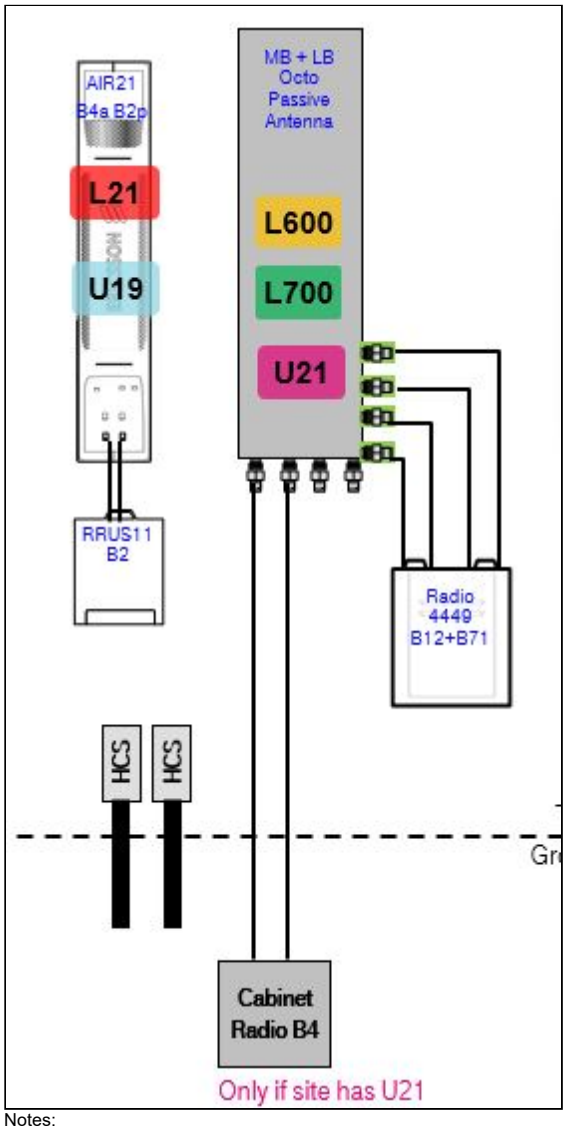
Latitude: 41.42555078
Longitude: -73.37404590
Address: 6 Fairfield Drive
City, State: Brookfield, CT
Region: NORTHEAST

RAN Template: 67D5A998E Outdoor			AL Template: 67D5998E_1xAIR+1OP	
Sector Count: 3	**Antenna Count:** 6	**Coax Line Count:** 0	**TMA Count:** 0	**RRU Count:** 6

DRAFT

Section 2 - Existing Template Images

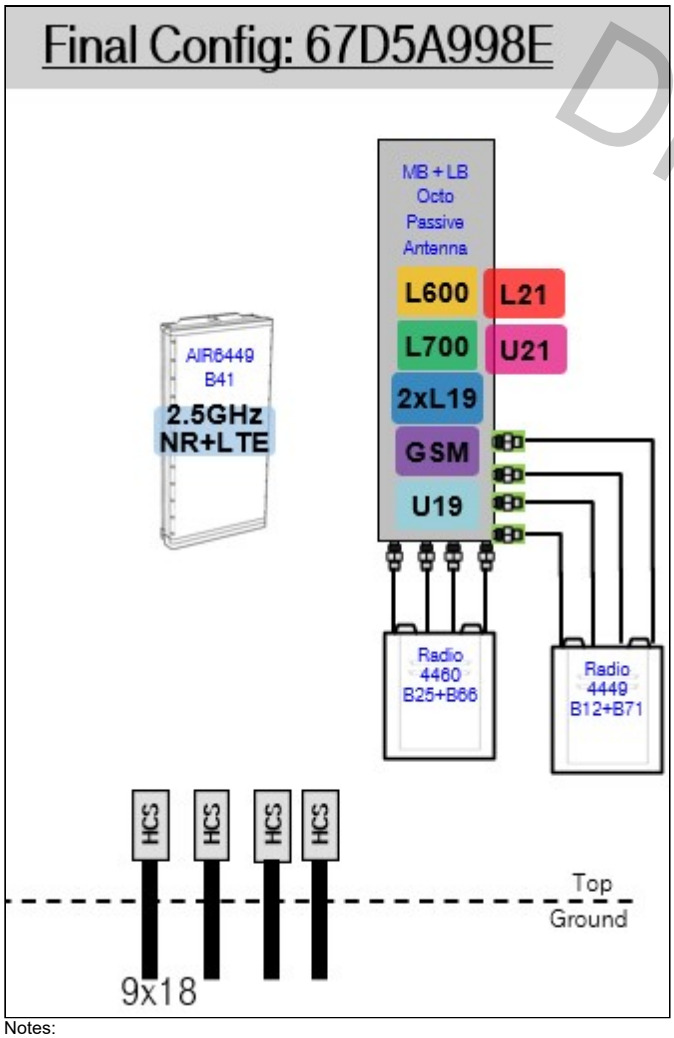
Capture.JPG



Notes:

Section 3 - Proposed Template Images

67D5A998E.jpg



DRAFT

Notes:

Section 4 - Siteplan Images

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DRAFT

RAN Template:	A&L Template:
67D5A998E Outdoor	67D5998E_1xAIR+1OP

CT11105F_Anchor_3_draft

Print Name: Standard (Scoping_P-RFDS_A)
PORs: Anchor_Phase 3

Section 5 - RAN Equipment

DRAFT

Existing RAN Equipment

Template: 67D01D

Enclosure	1	2
Enclosure Type	RBS 6131	Tower Top Mount (Ericsson)
Baseband	DUW30 U2100; BB 6630 L700 L600 N600; BB 6630 L2100	
Hybrid Cable System		Ericsson 9x18 HCS *Select Length* Ericsson 6x12 HCS *Select AWG & Length* **(x 2)**
Radio	RU22 **(x 6)** U2100	

Proposed RAN Equipment

Template: 67D5A998E Outdoor

Enclosure	1	2	3
Enclosure Type	RBS 6131	Enclosure 6160	B160
Baseband	DUW30 U2100; BB 6630 L700 L600 N600; BB 6630 L2100 L1900	BB 6648 L2500 N2500	
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* **(x 2)**	PSU 4813 Ericsson Hybrid Trunk 6/24 4AWG 50m	
Transport System		CSR IXRe V2 (Gen2)	

RAN Scope of Work:

Remove 6102 (DARK) Cabinet and Add new Anchor Cabinets.

Remove and return all cabinet radios from existing base station cabinet.

Add (1) Enclosure 6160.

Add (1) iXRe Router to new Enclosure 6160.

Add (1) BB6648 for L2500 and N2500 (MMBB - Mixed Mode Baseband) to new Enclosure 6160.

Add (1) PSU4813 Voltage Booster to new Enclosure 6160.

Add (1) Battery Cabinet B160.

Existing : (2) 6X12 and (1) 9X18 - Remove 1 - 9x18

Add (1) 6X24 HCS terminating at the Enclosure 6160. Connect DC for the AIR6449 B41 to the PSU4813 Voltage Booster.

** L1900-C1 will be new layer ***

RAN Template:	A&L Template:
67D5A998E Outdoor	67D5998E_1xAIR+1OP

CT11105F_Anchor_3_draft

Print Name: Standard (Scoping_P-RFDS_A)
PORs: Anchor_Phase 3

Section 6 - A&L Equipment

DRAFT

Existing Template: 67D01D_1xAIR+1OP
Proposed Template: 67D5998E_1xAIR+1OP

Sector 1 (Existing) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	RFS - APXVAARR24_43-U-NA20 (Octo)				Ericsson - AIR21 KRC118023-1_B2P_B4A (Quad)	
Azimuth	0				0	
M. Tilt	0				0	
Height	134				134	
Ports	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Active Tech.	L700 L600 N600	L700 L600 N600	U2100			L2100
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt	2	2	2			2
Cables	Coax Jumper **(x2)**	Coax Jumper **(x2)**	1-5/8" Coax - 150 ft. **(x2)**			
TMAs			Generic Twin Style 1B - AWS (AtAntenna)			
Diplexers / Combiners						
Radio	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (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:
67D5A998E Outdoor	67D5998E_1xAIR+1OP

CT11105F_Anchor_3_draft

Print Name: Standard (Scoping_P-RFDS_A)
PORs: Anchor_Phase 3

Sector 1 (Proposed) view from behind

Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	RFS - APXVAARR24_43-U-NA20 (Octo)				Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)	
Azimuth	0				0	
M. Tilt	0				0	
Height	134				134	
Ports	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Active Tech.	L700 L600 N600	L700 L600 N600	U2100 L2100 L1900	U2100 L2100 L1900	L2500 N2500	L2500 N2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt						
Cables	Coax Jumper **(x2)** Fiber Jumper **(x2)**	Coax Jumper **(x2)**	Coax Jumper **(x2)** Fiber Jumper **(x2)**	Coax Jumper **(x2)** Fiber Jumper **(x2)**	Fiber Jumper	Fiber Jumper
TMAs						
Diplexers / Combiners						
Radio	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

There will be Two antennae per sector.

Remove all TMAs.

Remove all Coaxial Lines.

Add (1) Radio 4460 B25+B66 for L2100, L1900, U2100 to Position 1 at antenna.

Remove AIR21 B2P/B4A from Position 2.

Install (1) AIR6449 B41 for L2500 and N2500 in Position 2.

Ensure RET control is enabled for all technology layers according to the Design Documents

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

RAN Template:	A&L Template:
67D5A998E Outdoor	67D5998E_1xAIR+1OP

CT11105F_Anchor_3_draft

Print Name: Standard (Scoping_P-RFDS_A)
PORs: Anchor_Phase 3

Sector 2 (Existing) view from behind

Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	RFS - APXVAARR24_43-U-NA20 (Octo)				Ericsson - AIR21 KRC118023-1_B2P_B4A (Quad)	
Azimuth	120				120	
M. Tilt	0				0	
Height	134				134	
Ports	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Active Tech.	L700 L600 N600	L700 L600 N600	U2100			L2100
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt	2	2	2			2
Cables	Coax Jumper **(x2)**	Coax Jumper **(x2)**	1-5/8" Coax - 150 ft. **(x2)**			
TMAs			Generic Twin Style 1B - AWS (AtAntenna)			
Diplexers / Combiners						
Radio	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (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:
67D5A998E Outdoor	67D5998E_1xAIR+1OP

CT11105F_Anchor_3_draft

Print Name: Standard (Scoping_P-RFDS_A)
PORs: Anchor_Phase 3

Sector 2 (Proposed) view from behind

Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	RFS - APXVAARR24_43-U-NA20 (Octo)				Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)	
Azimuth	120				120	
M. Tilt	0				0	
Height	134				134	
Ports	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Active Tech.	L700 L600 N600	L700 L600 N600	U2100 L2100 L1900	U2100 L2100 L1900	L2500 N2500	L2500 N2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt						
Cables	Coax Jumper **(x2)** Fiber Jumper **(x2)**	Coax Jumper **(x2)**	Coax Jumper **(x2)** Fiber Jumper **(x2)**	Coax Jumper **(x2)** Fiber Jumper **(x2)**	Fiber Jumper	Fiber Jumper
TMAs						
Diplexers / Combiners						
Radio	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

There will be Two antennae per sector.

Remove all TMAs.

Remove all Coaxial Lines.

Add (1) Radio 4460 B25+B66 for L2100, L1900, U2100 to Position 1 at antenna.

Remove AIR21 B2P/B4A from Position 2.

Install (1) AIR6449 B41 for L2500 and N2500 in Position 2.

Ensure RET control is enabled for all technology layers according to the Design Documents

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

RAN Template:	A&L Template:
67D5A998E Outdoor	67D5998E_1xAIR+1OP

CT11105F_Anchor_3_draft

Print Name: Standard (Scoping_P-RFDS_A)
PORs: Anchor_Phase 3

Sector 3 (Existing) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	RFS - APXVAARR24_43-U-NA20 (Octo)				Ericsson - AIR21 KRC118023-1_B2P_B4A (Quad)	
Azimuth	240				240	
M. Tilt	0				0	
Height	134				134	
Ports	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Active Tech.	L700 L600 N600	L700 L600 N600	U2100			L2100
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt	3	3	3			3
Cables	Coax Jumper **(x2)**	Coax Jumper **(x2)**	1-5/8" Coax - 150 ft. **(x2)**			
TMAs			Generic Twin Style 1B - AWS (AtAntenna)			
Diplexers / Combiners						
Radio	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (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:
67D5A998E Outdoor	67D5998E_1xAIR+1OP

CT11105F_Anchor_3_draft

Print Name: Standard (Scoping_P-RFDS_A)
PORs: Anchor_Phase 3

Sector 3 (Proposed) view from behind

Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	RFS - APXVAARR24_43-U-NA20 (Octo)				Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)	
Azimuth	240				240	
M. Tilt	0				0	
Height	134				134	
Ports	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Active Tech.	L700 L600 N600	L700 L600 N600	U2100 L2100 L1900	U2100 L2100 L1900	L2500 N2500	L2500 N2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt						
Cables	Coax Jumper **(x2)** Fiber Jumper **(x2)**	Coax Jumper **(x2)**	Coax Jumper **(x2)** Fiber Jumper **(x2)**	Coax Jumper **(x2)** Fiber Jumper **(x2)**	Fiber Jumper	Fiber Jumper
TMAs						
Diplexers / Combiners						
Radio	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

There will be Two antennae per sector.

Remove all TMAs.

Remove all Coaxial Lines.

Add (1) Radio 4460 B25+B66 for L2100, L1900, U2100 to Position 1 at antenna.

Remove AIR21 B2P/B4A from Position 2.

Install (1) AIR6449 B41 for L2500 and N2500 in Position 2.

Ensure RET control is enabled for all technology layers according to the Design Documents

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

RAN Template:	A&L Template:
67D5A998E Outdoor	67D5998E_1xAIR+1OP

Section 7 - Power Systems Equipment

DRAFT

Existing Power Systems Equipment
----- This section is intentionally blank. -----

	Proposed Power Systems Equipment
Enclosure	1
Enclosure Type	Enclosure 6160

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: CT11105F

Bethel - SNET Mobility
6 Fairfield Drive
Newtown, Connecticut 06470

October 12, 2021

EBI Project Number: 6221006191

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**23.84%**

October 12, 2021

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

Emissions Analysis for Site: CT11105F - Bethel - SNET Mobility

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **6 Fairfield Drive** in **Newtown, 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 6 Fairfield Drive in Newtown, 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) 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.

5) 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.

6) 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.

7) 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.

8) 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.

9) 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.

10) 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.

11) 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.

12) 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.

13) The antennas used in this modeling are the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 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 APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 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 APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 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.

14) The antenna mounting height centerline of the proposed antennas is 134 feet above ground level (AGL).

15) 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.

16) 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 APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 2100 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 2100 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 2100 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 16.35 dBd / 16.35 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 16.35 dBd / 16.35 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 16.35 dBd / 16.35 dBd
Height (AGL):	134 feet	Height (AGL):	134 feet	Height (AGL):	134 feet
Channel Count:	11	Channel Count:	11	Channel Count:	11
Total TX Power (W):	500 Watts	Total TX Power (W):	500 Watts	Total TX Power (W):	500 Watts
ERP (W):	16,233.75	ERP (W):	16,233.75	ERP (W):	16,233.75
Antenna A1 MPE %:	**4.80%**	Antenna B1 MPE %:	**4.80%**	Antenna C1 MPE %:	**4.80%**
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd
Height (AGL):	134 feet	Height (AGL):	134 feet	Height (AGL):	134 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 %:	**7.98%**	Antenna B2 MPE %:	**7.98%**	Antenna C2 MPE %:	**7.98%**

Site Composite MPE %	
Carrier	**MPE %**
T-Mobile (Max at Sector A):	12.77%
AT&T	4.26%
Verizon	6.81%
Site Total MPE % :	23.84%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	12.77%
T-Mobile Sector B Total:	12.77%
T-Mobile Sector C Total:	12.77%
Site Total MPE % :	23.84%

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	134.0	2.60	600 MHz LTE	400	0.65%
T-Mobile 600 MHz NR	1	1577.94	134.0	3.46	600 MHz NR	400	0.87%
T-Mobile 700 MHz LTE	2	648.82	134.0	2.85	700 MHz LTE	467	0.61%
T-Mobile 1900 MHz LTE	2	2203.69	134.0	9.67	1900 MHz LTE	1000	0.97%
T-Mobile 2100 MHz UMTS	2	1294.56	134.0	5.68	2100 MHz UMTS	1000	0.57%
T-Mobile 2100 MHz LTE	2	2589.11	134.0	11.36	2100 MHz LTE	1000	1.14%
T-Mobile 2500 MHz LTE 1C & 2C Traffic	1	11044.63	134.0	24.24	2500 MHz LTE 1C & 2C Traffic	1000	2.42%
T-Mobile 2500 MHz LTE 1C & 2C Broadcast	1	1074.06	134.0	2.36	2500 MHz LTE 1C & 2C Broadcast	1000	0.24%
T-Mobile 2500 MHz NR Traffic	1	22089.26	134.0	48.47	2500 MHz NR Traffic	1000	4.85%
T-Mobile 2500 MHz NR Broadcast	1	2148.13	134.0	4.71	2500 MHz NR Broadcast	1000	0.47%
						Total:	**12.77%**

• 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:	12.77%
Sector B:	12.77%
Sector C:	12.77%
T-Mobile Maximum MPE % (Sector A):	12.77%
Site Total:	23.84%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **23.84%** 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.