10 Industrial Ave,
Suite 3
Mahwah NJ 07430

Phone: 201.684.0055
Fax: 201.684.0066

Transcend Wireless

October 15, 2021

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

RE: Notice of Exempt Modification
89 Dr. Nott Road, North Franklin, CT, 06254 (AKA 99 Dr. Nott Road)
Latitude: 41.59766
Longitude: -72.14497
T-Mobile Site#: CTNL313A - Sprint Keep Project - Refiling of Site with new antenna loadout**

Dear Ms. Bachman:

T-Mobile/Sprint currently maintains six (6) antennas at the 180-foot level of the existing 300-foot Guyed Tower at 89 Dr. Nott Road, North Franklin, Connecticut. The 300-foot Guyed Tower is owned and operated by American Tower. The ground space is owned by Penske Aitchison Victoria L Etal. T-Mobile now intends to remove all Sprint equipment including antennas, cables, and ground equipment. T-mobile will be adding nine (9) antennas. The new antennas will be installed at the same 180-foot level. The new antennas support 5G services.

Planned Modifications:
Tower:
Remove
(6) Sprint Antennas
(12) Sprint RRHs
(4) Sprint Hybrid Cables
(9) 1 ⅝" Sprint Coax Cables

Install New:
(3) APXVAALL24 43-U-NA20 Antennas
(3) AIR6449 Antennas
(3) Ericsson Radio 4480 B71+B85
(3) Ericsson 4460 B25+B66
(3) 6/24 Hybrid Cables

Ground:
Install New:
(1) B160s
(3) BB 6648s
(1) DUG20
(1) RBS6601
(1) PSU 4813
(1) CSR IXRE V2s

To Be Removed:
All Sprint Ground Equipment

This facility was originally approved by the Town of Franklin in 1999. The zoning department was not able to locate the original approval for the tower.

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 - Charles Grant, Elected Official, and Ronald Chalecki, Zoning Enforcement Officer, 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: Charles Grant – as First Selectman of Franklin
Ronald Chalecki - Zoning Enforcement Officer
American Tower - Tower Owner
Penske Aitchison Victoria L ETAL - Land Owner

ERIC BREUN
2016587728
10 INDUSTRIAL AVE
MAHWAH NJ 07430

1 LBS

1 OF 1

SHIP TO:
FIRST SELECTMAN CHARLES GRANT
7 MEETING HOUSE HILL ROAD
FRANKLIN CT 06254

CT 063 0-03

UPS GROUND

TRACKING #: 1Z V25 742 03 9969 5915

BILLING: P/P

Reference #1: CTNL313A

XOL 21.09.12 NV45 42.0A 10/2021*

ERIC BREUN
2016587728
10 INDUSTRIAL AVE
MAHWAH NJ 07430

1 LBS

1 OF 1

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

MA 018 9-04

UPS GROUND

TRACKING #: 1Z V25 742 03 9786 5904

BILLING: P/P

Reference #1: CTNL313A

XOL 21.09.12 NV45 42.0A 10/2021*

ERIC BREUN
2016587728
10 INDUSTRIAL AVE
MAHWAH NJ 07430

1 LBS

1 OF 1

SHIP TO:
PENSKE AITCHISON VICTORIA L
89 DOCTOR NOTT ROAD
FRANKLIN CT 06254

CT 063 0-03

UPS GROUND

TRACKING #: 1Z V25 742 03 9841 5933

BILLING: P/P

Reference #1: CTNL313A

XOL 21.09.12 NV45 42.0A 10/2021*

ERIC BREUN
2016587728
10 INDUSTRIAL AVE
MAHWAH NJ 07430

1 LBS

1 OF 1

SHIP TO:
RONALD CHALECKI
7 MEETING HOUSE HILL ROAD
FRANKLIN CT 06254

CT 063 0-03

UPS GROUND

TRACKING #: 1Z V25 742 03 9654 5921

BILLING: P/P

Reference #1: CTNL313A

XOL 21.09.12 NV45 42.0A 10/2021*

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Delivery Time: 2:26 PM

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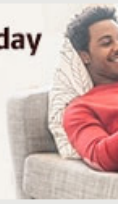


Set Delivery Instructions | Manage Preferences

TRANSCEND WIRELESS

Tracking Number:	1ZV257420398415933
Ship To:	PENSKE AITCHISON VICTORIA L 89 DOCTOR NOTT ROAD FRANKLIN, CT 06254 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CTNL313A

Hello, your package has been delivered.

Delivery Date: Wednesday, 10/13/2021

Delivery Time: 2:19 PM

Left At: OFFICE

Signed by: HEATHER

TRANSCEND WIRELESS

Tracking Number:	1ZV257420396545921
Ship To:	RONALD CHALECKI 7 MEETING HOUSE HILL ROAD FRANKLIN, CT 06254 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CTNL313A

Hello, your package has been delivered.

Delivery Date: Wednesday, 10/13/2021

Delivery Time: 2:19 PM

Left At: OFFICE

Signed by: HEATHER

TRANSCEND WIRELESS

Tracking Number:	1ZV257420399695915
Ship To:	FIRST SELECTMAN CHARLES GRANT 7 MEETING HOUSE HILL ROAD FRANKLIN, CT 06254 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CTNL313A

Hello, your package has been delivered.

Delivery Date: Wednesday, 10/13/2021

Delivery Time: 11:53 AM

Left At: FRONT DESK

Signed by: ANCRI

TRANSCEND WIRELESS

Tracking Number:	1ZV257420397865904
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:	CTNL313A

Parcel Information

Location:	89 DR NOTT RD	Property Use:	Residential	Primary Use:	Residential
Unique ID:	S1080900	Map Block Lot:	36 8	Acres:	44.16
490 Acres:	0.00	Zone:	R080	Volume / Page:	103/ 226
Developers Map / Lot:		Census:			

Value Information

	Appraised Value	Assessed Value
Land	138,500	96,940
Buildings	221,367	154,960
Detached Outbuildings	293,995	205,800
Total	653,862	457,700

Owner's Information

Owner's Data
PENSKE AITCHISON VICTORIA L ETAL PO BOX 1128 BETHLEHEM PA 18016

Building 1

Building Use:	Single Family	Style:	Colonial	Living Area:	2,786
Stories:	2.00	Construction:	Wood Frame	Year Built:	1986
Total Rooms:	8	Bedrooms:	3	Full Baths:	2
Half Baths:	1	Fireplaces:	0	Heating:	Hot Water
Fuel:	Oil	Cooling Percent:	0	Basement Area:	816
Basement Finished Area:	0	Basement Garages:	0	Roof Material:	Asphalt
Siding:	Clapboards	Units:			

Special Features

Attached Components

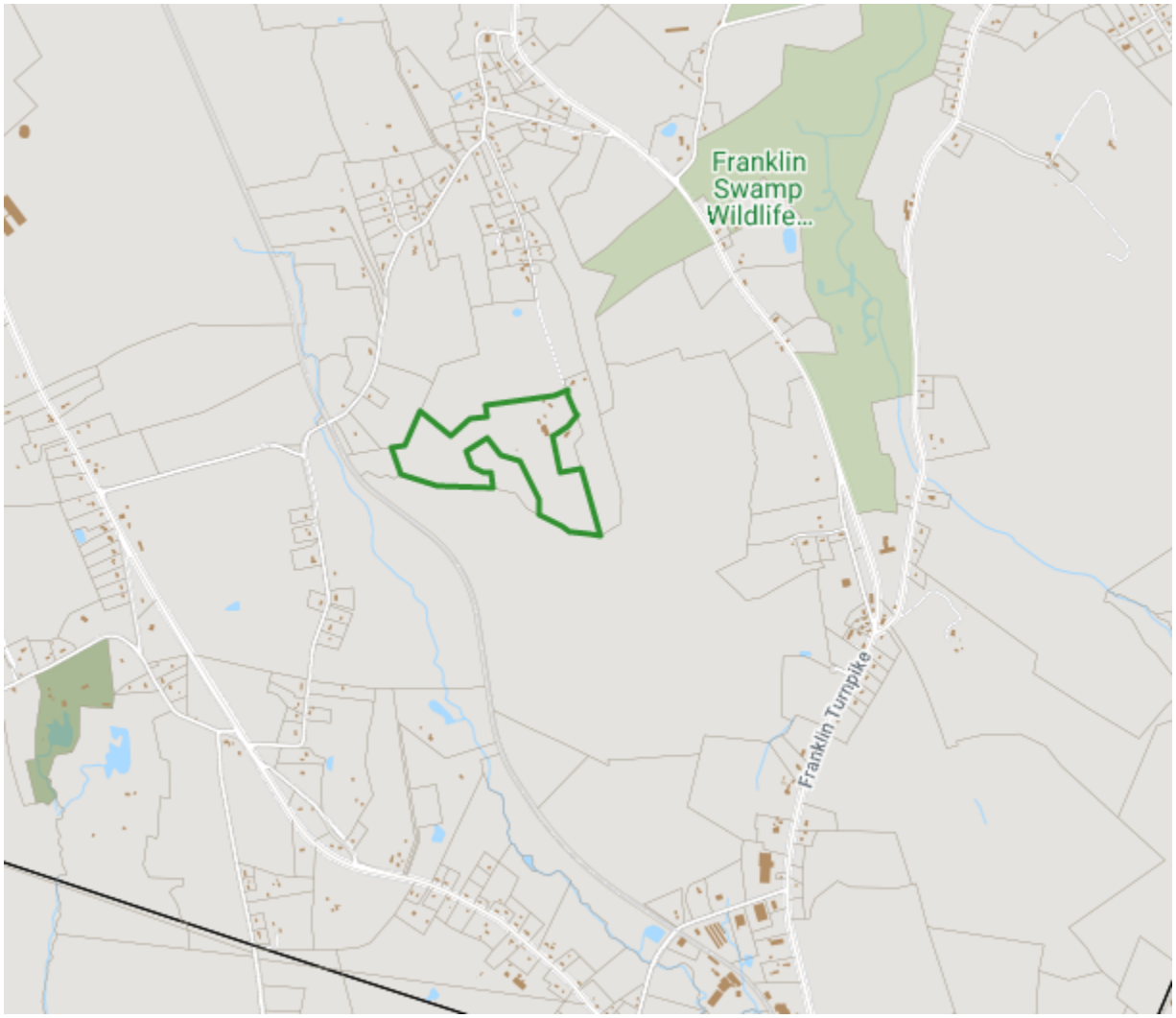
Type:	Year Built:	Area:
Wood Deck	1986	112
Wood Deck	1986	25
Attatched Frame Garage	1986	576
Open Porch	1986	44

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
Barn w/Loft	1986	0.00	0.00	768
Barn w/Loft	2007	30.00	60.00	1,800
Pole Barn	2000	0.00	0.00	7,200
Canopy	1986	0.00	0.00	345
Farm Utility Storage Shed	2000	0.00	0.00	408
Farm Utility Storage Shed	1999	0.00	0.00	200
Farm Utility Storage Shed	1999	0.00	0.00	480
6 Ft Chain Fence	0000	1,000.00	0.00	1,000
Detached 1 Story Garage	1986	0.00	0.00	925
Site Value	1986	0.00	0.00	1
Lean To Shed	1986	0.00	0.00	288
Cell Tower	1999	0.00	0.00	1

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
PENSKE AITCHISON VICTORIA L ETAL	103	226	05/27/2020	Warranty Deed	No	$653,862
HIDDEN BROOK FARMS LLC	0091	0719	08/29/2013		Yes	$650,000
SHAKUN THOMAS J	0091	0030	05/14/2013		No	$0
SHAKUN THOMAS J AND	0084	0530	01/14/2010		No	$0
SHAKUN THOMAS J	0066	0180	01/16/2003		No	$0
SHAKUN THOMAS J AND DOROTHY M	0032	0115			No	$0


Franklin
Swamp
Wildlife...
Franklin Turnpike

RE: [Franklin CT] Dr. Nott Road Cell Site Zoning Approval (Sent by Eric Breun, ebreun@transcendwireless.com)

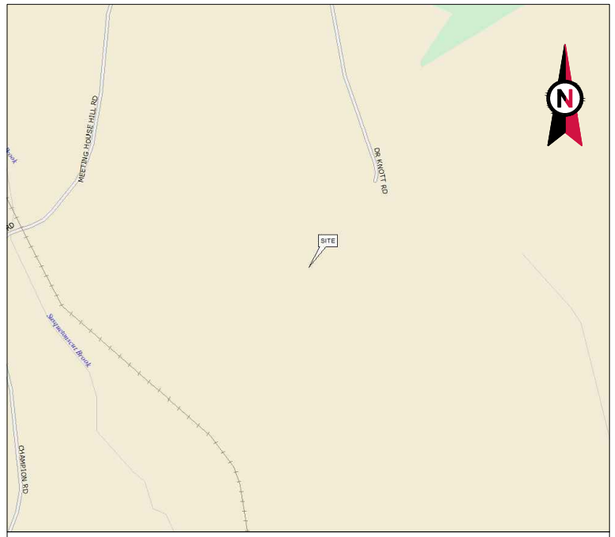
External Inbox ×

Ron Chalecki <zeo@franklinct.com> 7:19 PM (0 minutes ago)

to me

Eric,
I am having trouble locating the original approval for the tower.....I started to research it and it looks like that it dates back to around 1999.
Records being that old are archived in our basement files and require extra time to research.
I will continue to look it up for you.

Ron Chalecki
Town Of Franklin
Zoning Enforcement Offical
7 Meetinghouse Hill Road
Franklin, CT 06254
860-642-6055, ext. 13



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: FRANKLIN CT
ATC SITE NUMBER: 6310
T-MOBILE SITE NAME: CTNL313A
T-MOBILE SITE NUMBER: CTNL313A
SITE ADDRESS: 89 DR. NOTT RD
NORTH FRANKLIN, CT 06254-1316

LOCATION MAP

T-MOBILE SPRINT RETAIN ANTENNA AMENDMENT PLAN
67D5A998C 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. 2015 INTERNATIONAL BUILDING CODE (IBC)
2. 2017 NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: EVERSOURCE ENERGY
PHONE: (800) 286-2000

TELEPHONE COMPANY: SOUTHERN NEW ENGLAND
PHONE: (877) 713-2084

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

PROJECT SUMMARY

SITE ADDRESS:

89 DR. NOTT RD

NORTH FRANKLIN, CT 06254-1316

COUNTY: NEW LONDON

GEOGRAPHIC COORDINATES:

LATITUDE: 41.59766

LONGITUDE: -72.14497

GROUND ELEVATION: 499' AMSL

PROJECT TEAM

TOWER OWNER:
AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:
T-MOBILE

ENGINEER:
TOWER ENGINEERING PROFESSIONALS
326 TYRON ROAD
RALEIGH, NC 27603-3530

PROPERTY OWNER:
HIDDEN BROOK FARMS LLC
248 ROUTE 32
FRANKLIN, CT 6254

PROJECT LOCATION DIRECTIONS

395 SOUTH TO 608 WEST. FOLLOW TO 32 NORTH TO LEFT ON POUND HILL RD. LEFT ON DR. NOTT RD. SITE IS BEHIND FARM.

PROJECT DESCRIPTION

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

TOWER WORK:

REMOVE (6) ANTENNA(S), (12) RRH(s), (9) 1-5/8" COAX CABLE(S), AND (4) 1-1/4" HYBRIFLEX CABLE(S).

INSTALL (6) ANTENNA(S), (6) RRU(s), (3) DUAL SWIVEL MOUNT(S), AND (3) 6/24 4AWG HYBRID TRUNK(S).

GROUND WORK:

REMOVE (1) EQUIPMENT RACK(S), (1) MM BTS CABINET(S), (1) BATTERY RACK(S), AND (1) FIBER JUNCTION BOX(ES).

INSTALL (1) ENCLOSURE 6160(s), (1) B160(s), (1) RBS 6601(s), (1) PSU 4813(s), (3) BB6648(s), (1) DUG 20(s), AND (1) CSR IXRE V2(s).

NOTE: THIS CONSTRUCTION DRAWING SET IS NOT INTENDED TO ADDRESS ANY ELECTRICAL UPGRADES NEEDED. ANY ELECTRICAL UPGRADES WILL BE SHOWN IN A SEPARATE CONSTRUCTION DRAWING SET.

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.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	1	08/24/21	SRZ
G-002	GENERAL NOTES	0	06/04/21	GV
C-101	DETAILED SITE PLAN	1	08/24/21	SRZ
C-102	DETAILED EQUIPMENT LAYOUT	1	08/24/21	SRZ
C-201	TOWER ELEVATION	1	08/24/21	SRZ
C-401	ANTENNA INFORMATION & SCHEDULE	1	08/24/21	SRZ
C-501	CONSTRUCTION DETAILS	1	08/24/21	SRZ
C-502	CONSTRUCTION DETAILS	0	06/04/21	GV
E-501	GROUNDING DETAILS	1	08/24/21	SRZ
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			
R-606	SUPPLEMENTAL			
R-607	SUPPLEMENTAL			

AMERICAN TOWER

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	05/13/21
0	100% CONSTRUCTION	GV	06/04/21
1	100% CONSTRUCTION	SRZ	08/24/21

ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

T-MOBILE SITE NAME:
CTNL313A

SITE ADDRESS:
89 DR. NOTT RD
NORTH FRANKLIN, CT 06254-1316

SEAL:

08/24/21

T-Mobile

DATE DRAWN:	08/24/21
ATC JOB NO:	13653965
CUSTOMER NAME:	CTNL313A
CUSTOMER ID:	CTNL313A

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	1

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.

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)

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.

AMERICAN TOWER

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	05/13/21
0	100% CONSTRUCTION	GV	06/04/21

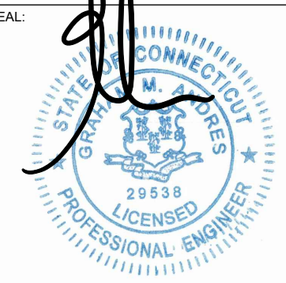
ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

T-MOBILE SITE NAME:
CTNL313A

SITE ADDRESS:
89 N. NOTT RD
NORTH FRANKLIN, CT 06254-1316

SEAL:



06/04/21

T-Mobile

DATE DRAWN:	06/04/21
ATC JOB NO:	13653965
CUSTOMER NAME:	CTNL313A
CUSTOMER ID:	CTNL313A

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

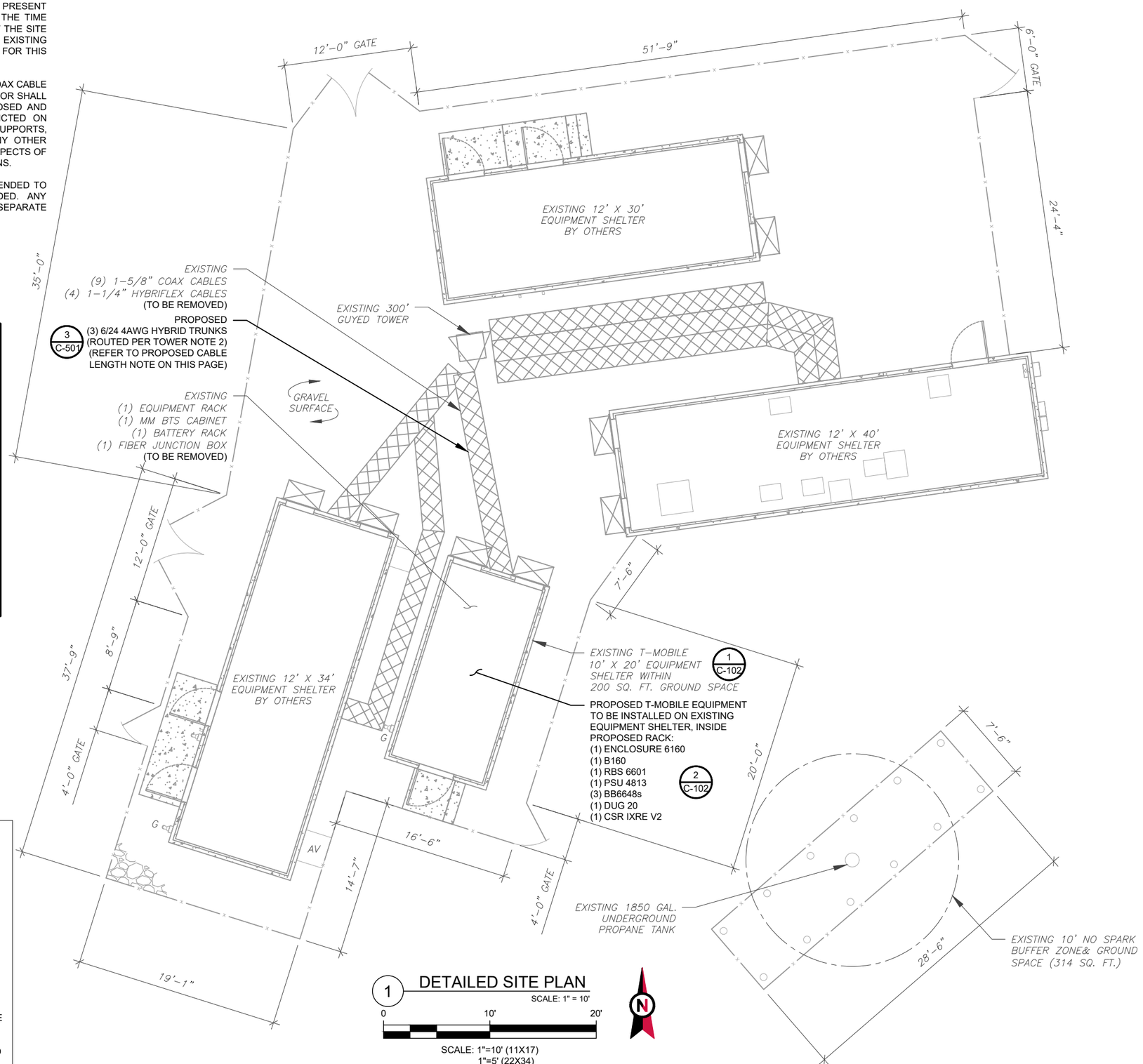
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

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. THIS CONSTRUCTION DRAWING SET IS NOT INTENDED TO ADDRESS ANY ELECTRICAL UPGRADES NEEDED. ANY ELECTRICAL UPGRADES WILL BE SHOWN IN A SEPARATE CONSTRUCTION DRAWING SET.

LEGEND

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



1 DETAILED SITE PLAN
SCALE: 1" = 10'
0 10' 20'
SCALE: 1"=10' (11X17)
1"=5' (22X34)

PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **240'**. 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. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).

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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	05/13/21
0	100% CONSTRUCTION	GV	06/04/21
1	100% CONSTRUCTION	SRZ	08/24/21

ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

T-MOBILE SITE NAME:
CTNL313A

SITE ADDRESS:
29 BRANOTT RD
NORTH FRANKLIN, CT 06254-1316

SEAL:

08/24/21

T-Mobile

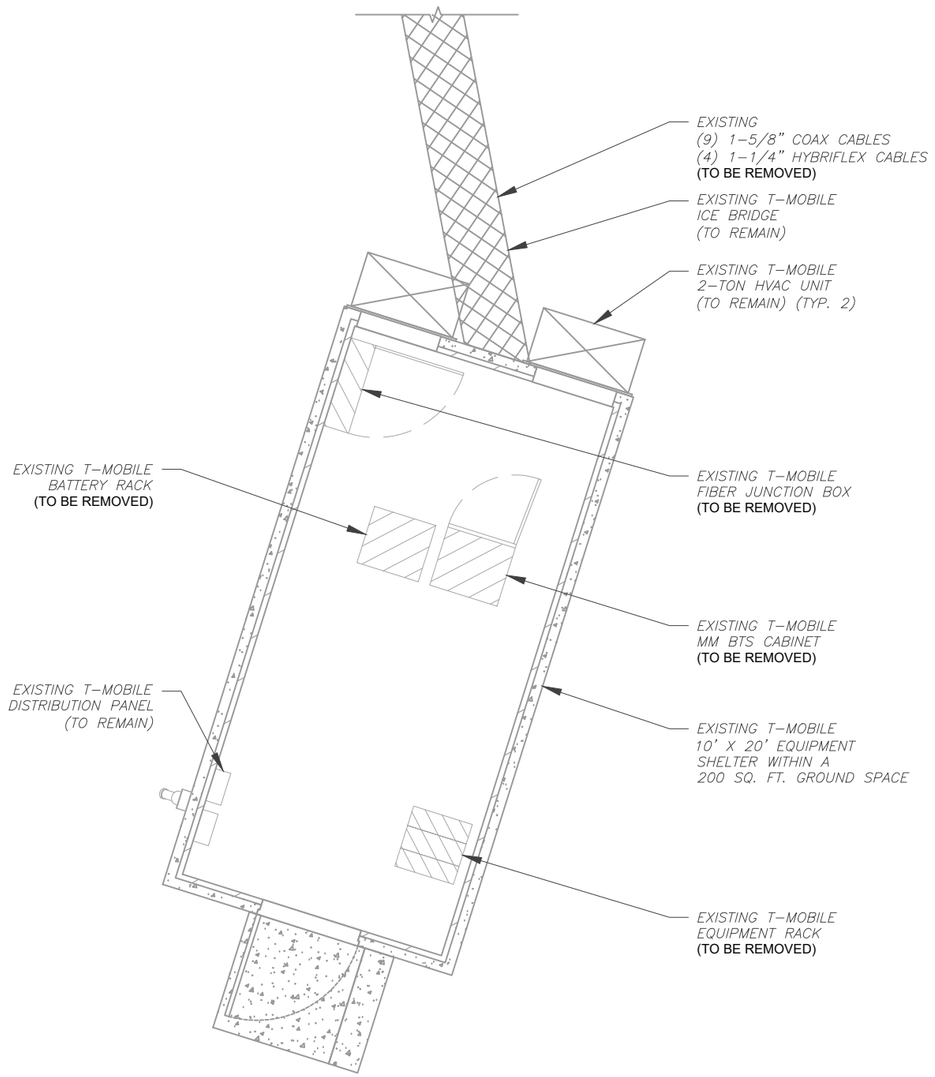
DATE DRAWN:	08/24/21
ATC JOB NO:	13653965
CUSTOMER NAME:	CTNL313A
CUSTOMER ID:	CTNL313A

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	1

SITE PLAN NOTES:

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



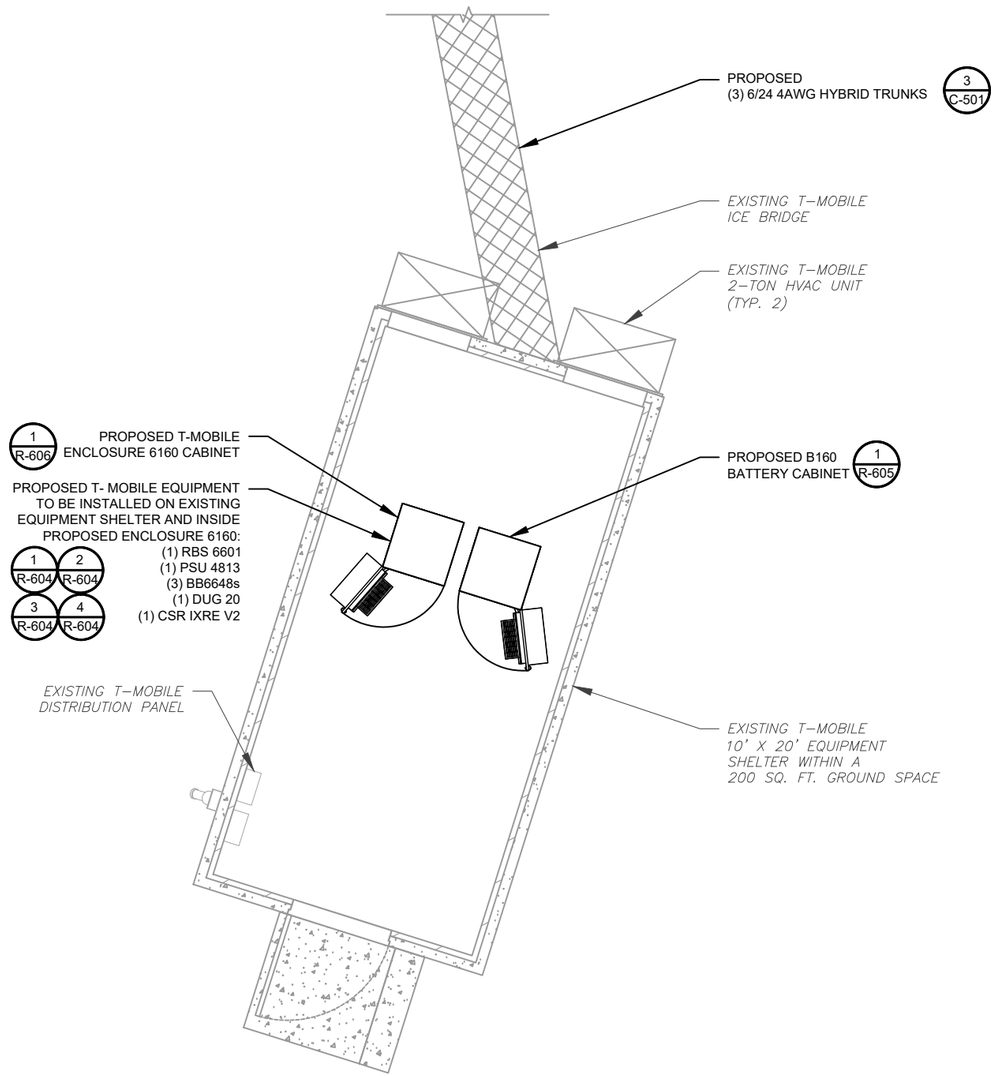
1 EXISTING GROUND EQUIPMENT LAYOUT

SCALE: 1" = 5'

0 5' 10'

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

T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



2 PROPOSED GROUND EQUIPMENT LAYOUT

SCALE: 1" = 5'

0 5' 10'

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

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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	05/13/21
0	100% CONSTRUCTION	GV	06/04/21
1	100% CONSTRUCTION	SRZ	08/24/21

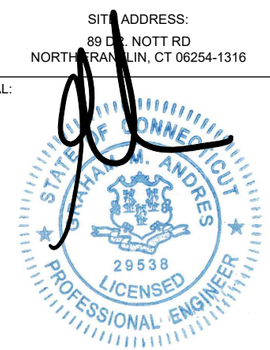
ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

T-MOBILE SITE NAME:
CTNL313A

SITE ADDRESS:
89 DR. NOTT RD
NORTH FRANKLIN, CT 06254-1316

SEAL:



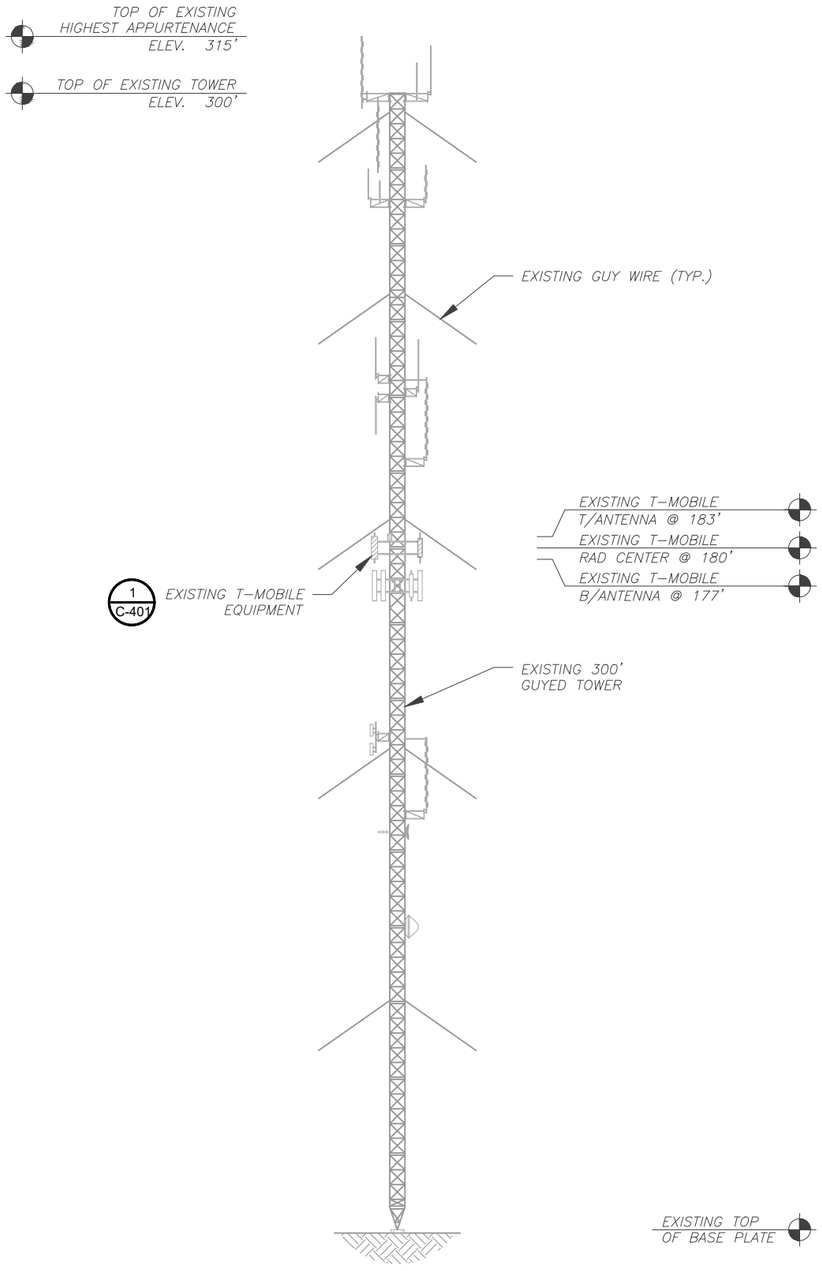
08/24/21

T-Mobile

DATE DRAWN:	08/24/21
ATC JOB NO:	13653965
CUSTOMER NAME:	CTNL313A
CUSTOMER ID:	CTNL313A

DETAILED EQUIPMENT LAYOUT

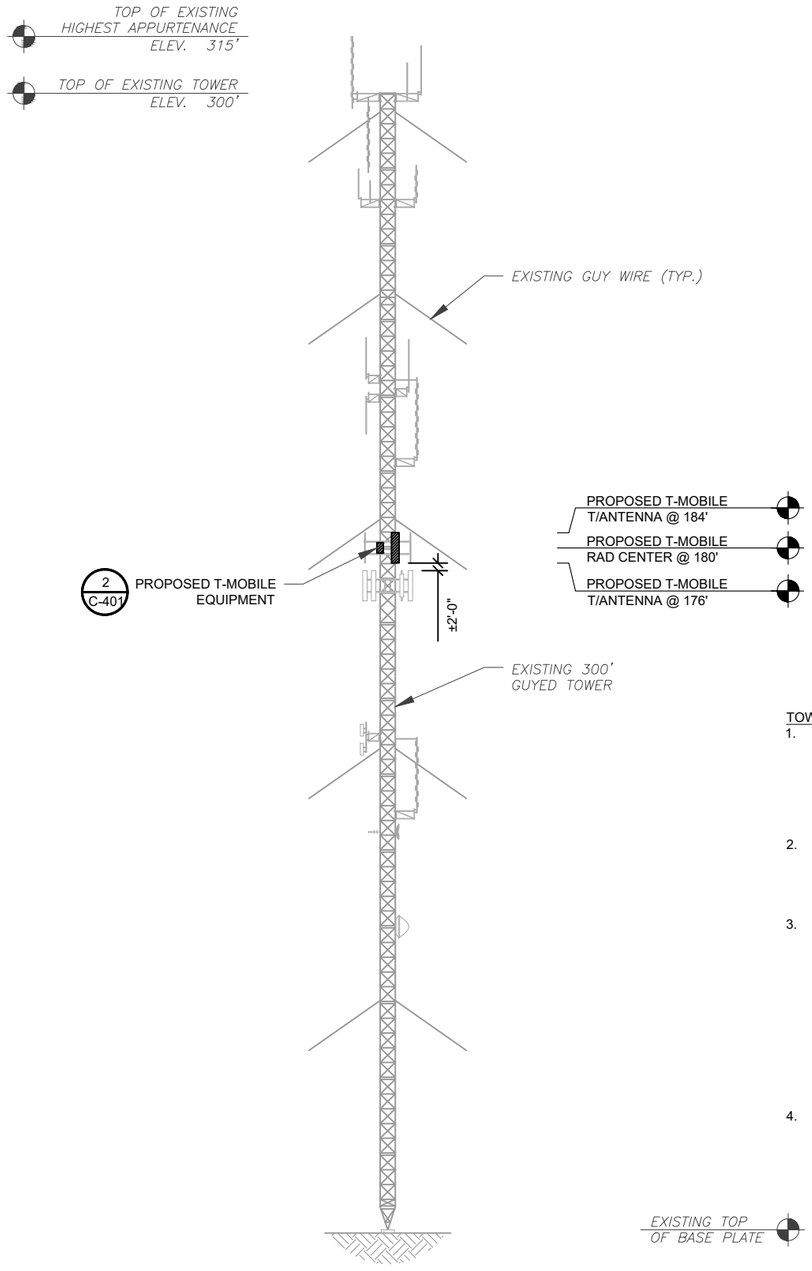
SHEET NUMBER:	REVISION:
C-102	1



1 EXISTING TOWER ELEVATION

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED AUGUST 17, 2021 THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING



2 PROPOSED 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. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
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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A	PRELIMINARY	RRG	05/13/21
0	100% CONSTRUCTION	GV	06/04/21
1	100% CONSTRUCTION	SRZ	08/24/21

ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

T-MOBILE SITE NAME:
CTNL313A

SITE ADDRESS:
[redacted] DEVOTT RD
NORTH FRANKLIN, CT 06254-1316

SEAL:

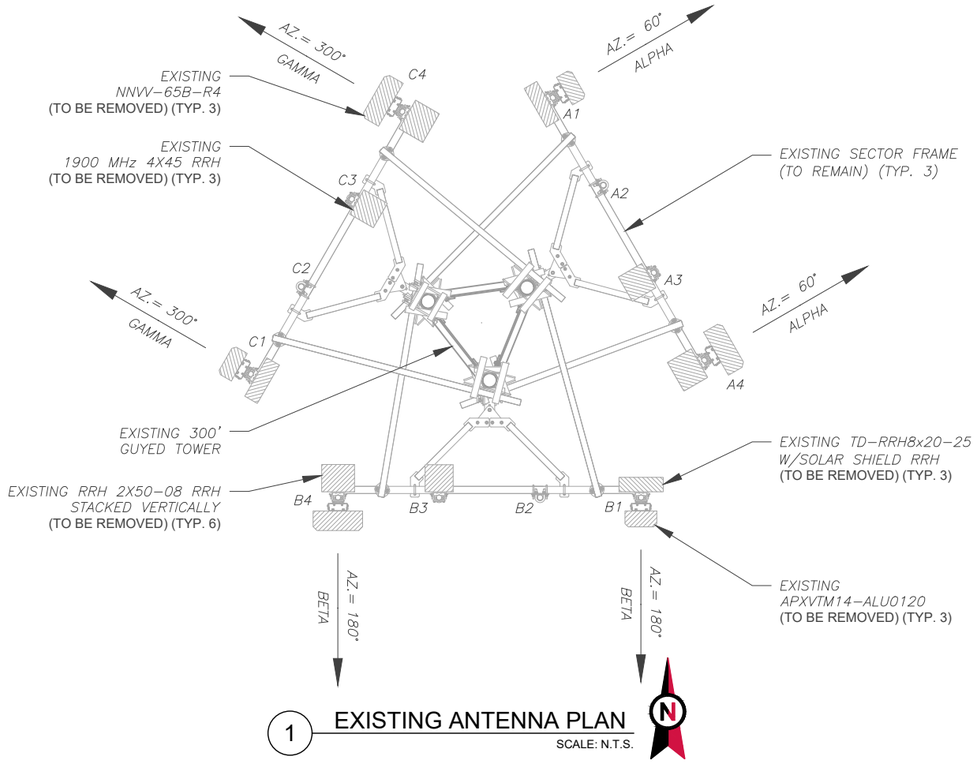
08/24/21

T-Mobile

DATE DRAWN:	08/24/21
ATC JOB NO:	13653965
CUSTOMER NAME:	CTNL313A
CUSTOMER ID:	CTNL313A

TOWER ELEVATION

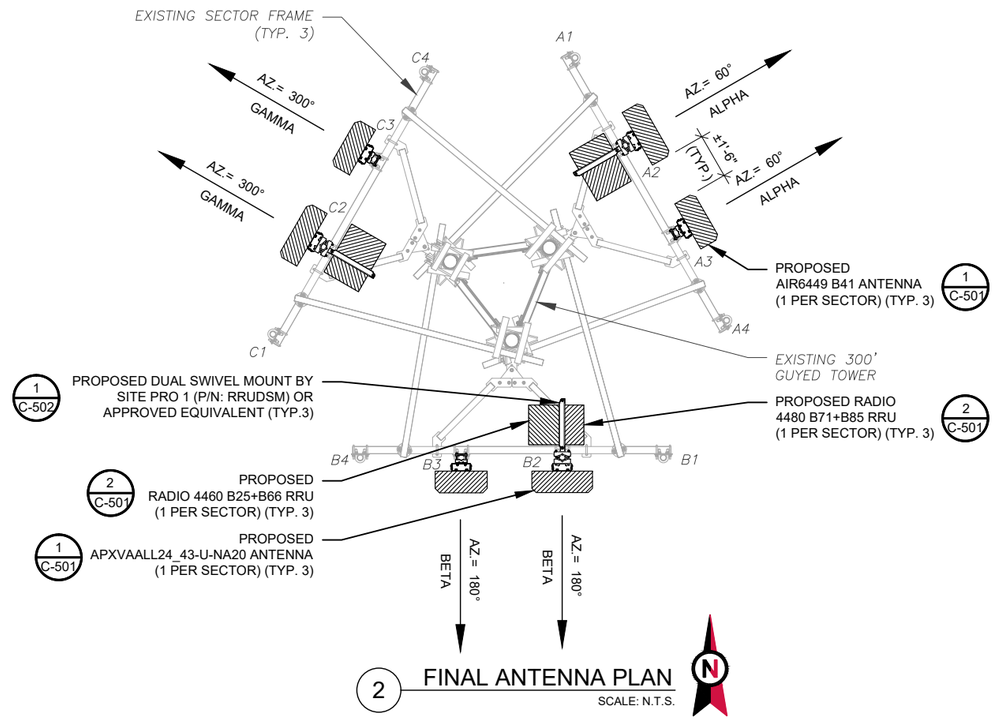
SHEET NUMBER:	REVISION:
C-201	1



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED AUGUST 17, 2021 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	180'	60°	A1	APXVTM14-ALU0120	–	–	RMV	(1) TD-RRH8X20-25 W/SOLAR SHIELD	RMV
			A2	–	–	–	–	–	
			A3	–	–	–	–	(1) 1900 MHZ 4X45	RMV
			A4	NNVV-65B-R4	–	–	RMV	(2) RRH2X50-08	RMV
BETA	180'	180°	B1	APXVTM14-ALU0120	–	–	RMV	(1) TD-RRH8X20-25 W/SOLAR SHIELD	RMV
			B2	–	–	–	–	–	
			B3	–	–	–	–	(1) 1900 MHZ 4X45	RMV
			B4	NNVV-65B-R4	–	–	RMV	(2) RRH2X50-08	RMV
GAMMA	180'	300°	C1	APXVTM14-ALU0120	–	–	RMV	(1) TD-RRH8X20-25 W/SOLAR SHIELD	RMV
			C2	–	–	–	–	–	
			C3	–	–	–	–	(1) 1900 MHZ 4X45	RMV
			C4	NNVV-65B-R4	–	–	RMV	(2) RRH2X50-08	RMV

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.
3. TEP DID NOT VERIFY THE EXISTING LOADING. LOADING DATA PROVIDED BY ATC AND T-MOBILE.

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	180'	60°	A1	-	-	-	-	-	-
			A2	APXVAALL24_43-U-NA20	L600/L700/N600/ L1900/G1900/L2100	0°/2°	ADD	(1) RADIO 4480 B71+B85 (1) RADIO 4460 B25+B66	ADD ADD
			A3	AIR6449 B41	L2500/N2500	0°/2°	ADD	-	-
			A4	-	-	-	-	-	-
BETA	180'	180°	B1	-	-	-	-	-	-
			B2	APXVAALL24_43-U-NA20	L600/L700/N600/ L1900/G1900/L2100	0°/2°	ADD	(1) RADIO 4480 B71+B85 (1) RADIO 4460 B25+B66	ADD ADD
			B3	AIR6449 B41	L2500/N2500	0°/2°	ADD	-	-
			B4	-	-	-	-	-	-
GAMMA	180'	300°	C1	-	-	-	-	-	-
			C2	APXVAALL24_43-U-NA20	L600/L700/N600/ L1900/G1900/L2100	0°/2°	ADD	(1) RADIO 4480 B71+B85 (1) RADIO 4460 B25+B66	ADD ADD
			C3	AIR6449 B41	L2500/N2500	0°/2°	ADD	-	-
			C4	-	-	-	-	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
–	–	(9) 1-5/8"	(4) 1-1/4"	RMV

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	-	(3) 6/24 HCS 4AWG	ADD

3 EQUIPMENT SCHEDULES

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A	PRELIMINARY	RRG	05/13/21
0	100% CONSTRUCTION	GV	06/04/21
1	100% CONSTRUCTION	SRZ	08/24/21

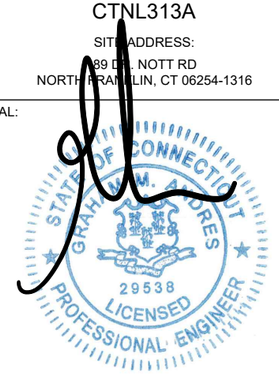
ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

T-MOBILE SITE NAME:
CTNL313A

SITE ADDRESS:
89 DEL. NOTT RD
NORTH FRANKLIN, CT 06254-1316

SEAL:



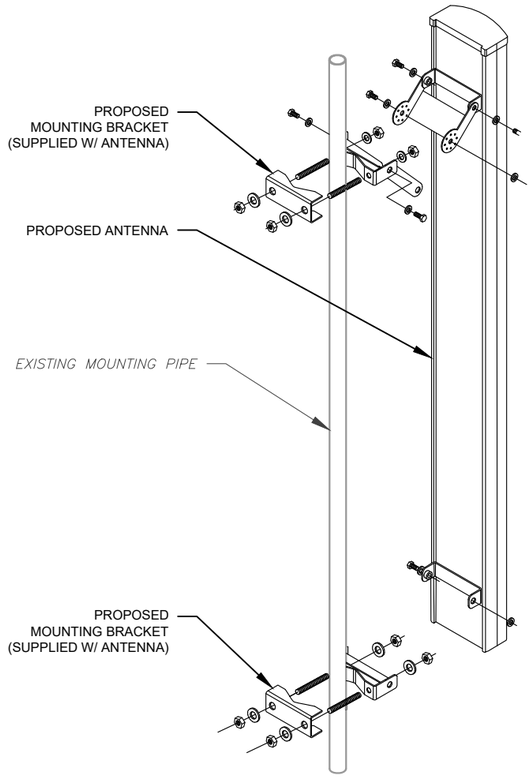
08/24/21

T-Mobile

DATE DRAWN:	08/24/21
ATC JOB NO:	13653965
CUSTOMER NAME:	CTNL313A
CUSTOMER ID:	CTNL313A

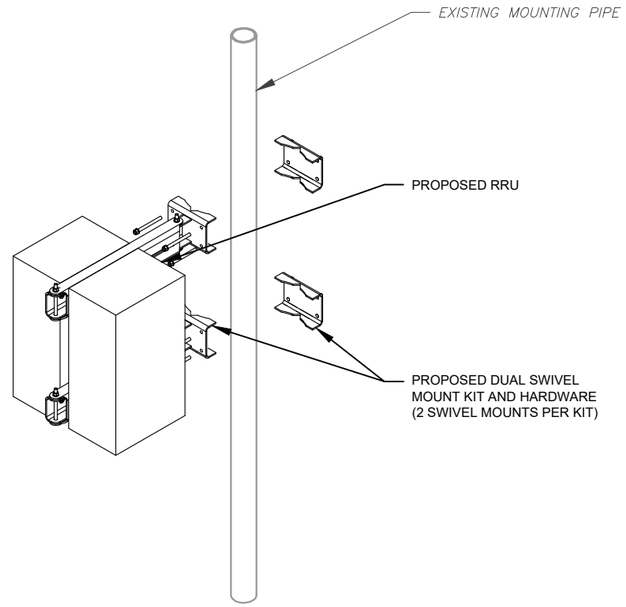
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	1



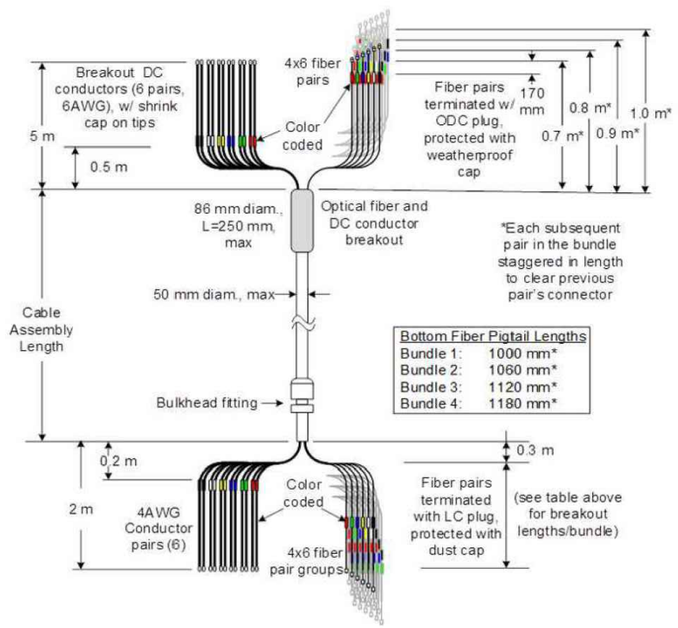
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



3 PROPOSED HCS DETAIL - TYPICAL

SCALE: N.T.S.

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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	05/13/21
0	100% CONSTRUCTION	GV	06/04/21
1	100% CONSTRUCTION	SRZ	08/24/21

ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

T-MOBILE SITE NAME:
CTNL313A

SITE ADDRESS:
89 DR. NOTT RD
NORTH FRANKLIN, CT 06254-1316

SEAL:

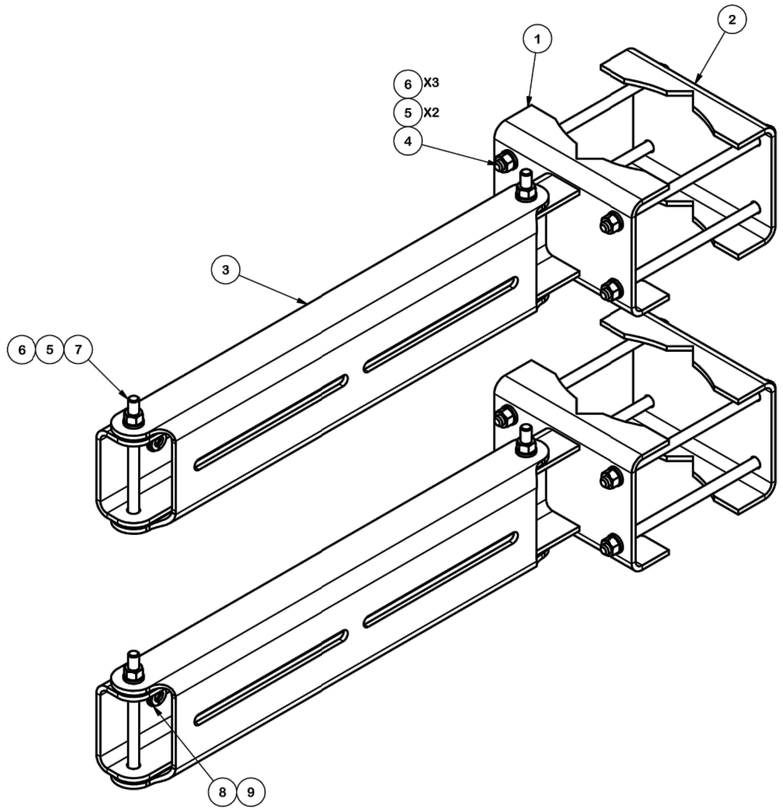
08/24/21

T-Mobile

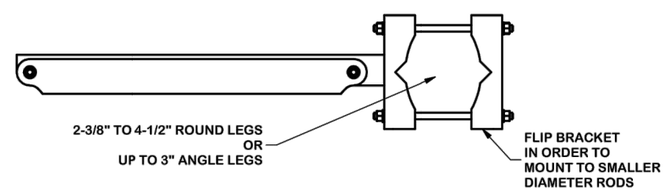
DATE DRAWN:	08/24/21
ATC JOB NO:	13653965
CUSTOMER NAME:	CTNL313A
CUSTOMER ID:	CTNL313A

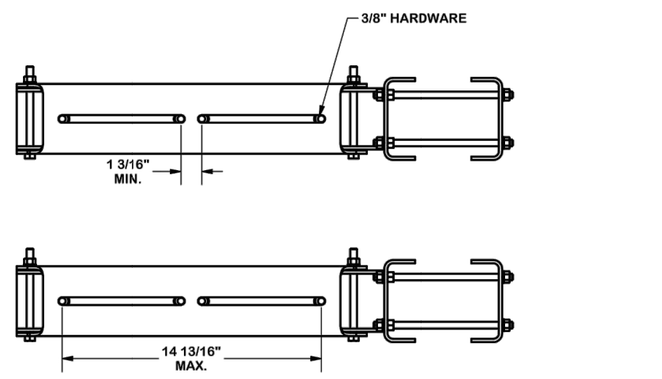
CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	1



PARTS LIST					
ITEM	QTY	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	MOUNTING ARM		8.99	17.97
2	2	CLAMP PLATE		2.35	4.69
3	2	SWIVEL MOUNT		6.65	13.30
4	8	3/8"-16 UNC X 8" GALV. THREADED ROD		0.25	2.00
5	20	3/8" GALV LOCK WASHER		0.01	0.13
6	28	3/8"-16 UNC GALV HEX NUT		0.02	0.52
7	4	3/8" X 5" GALV BOLT		0.18	0.71
8	8	3/8" SS FLAT WASHER		0.01	0.06
9	8	3/8" SS LOCK WASHER		0.01	0.05
				TOTAL WT. #	39.43





TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION	CPD NO.	CLASS	SUB	DRAWN BY	ENG. APPROVAL	CHECKED BY	PART NO.	DWG. NO.	PAGE
RRU DUAL SWIVEL MOUNT		81	01	CEK 1/12/2015		BMC 2/3/2015	RRUDSM	RRUDSM	1 OF 1

SITE PRO 1 — A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

1 PROPOSED RRU DUAL SWIVEL MOUNT DETAIL
SCALE: N.T.S.

AMERICAN TOWER

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	05/13/21
0	100% CONSTRUCTION	GV	06/04/21

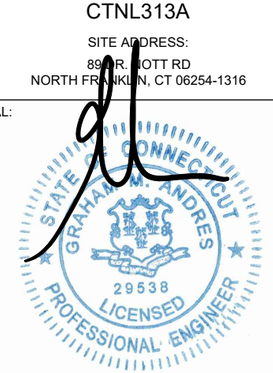
ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

T-MOBILE SITE NAME:
CTNL313A

SITE ADDRESS:
89[illegible] R. SCOTT RD
NORTH FRANKLIN, CT 06254-1316

SEAL:



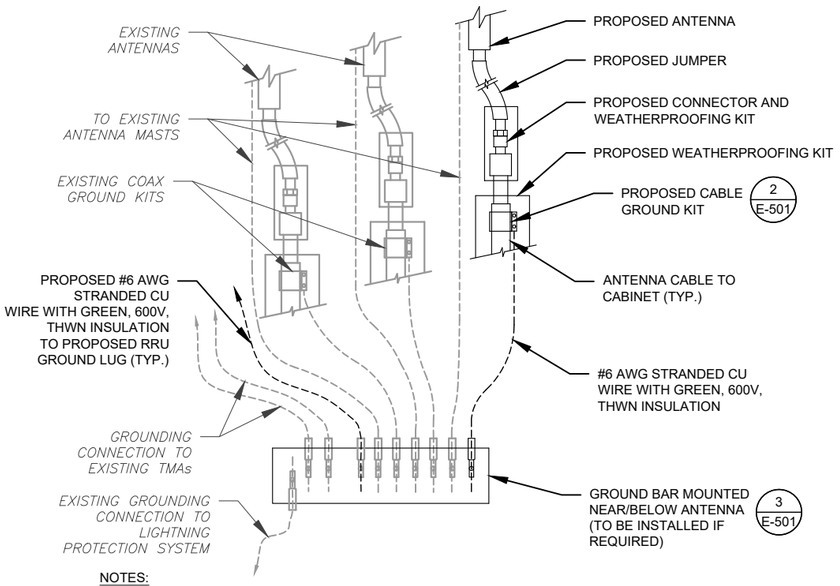
06/04/21

T-Mobile

DATE DRAWN:	06/04/21
ATC JOB NO:	13653965
CUSTOMER NAME:	CTNL313A
CUSTOMER ID:	CTNL313A

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-502	0

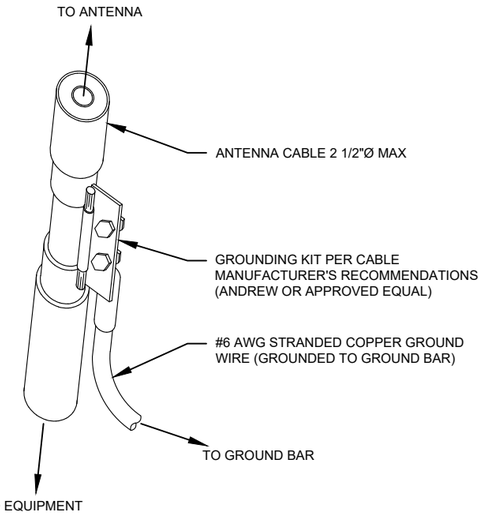


NOTES:

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.

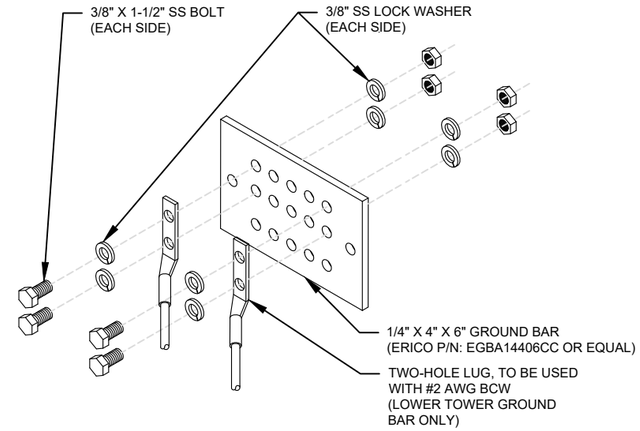


GROUND KIT NOTES:

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.

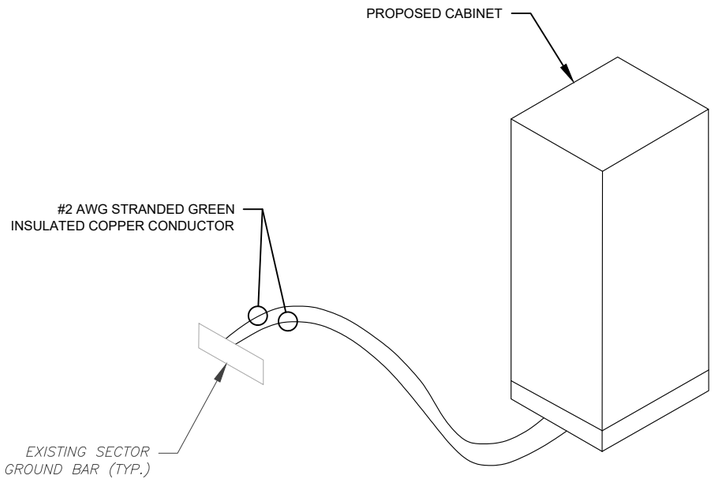


GROUND BAR NOTES:

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.



4 CABINET GROUNDING 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 PREFERENCE 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"

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www.tepgroup.net

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	RRG	05/13/21
0	100% CONSTRUCTION	GV	06/04/21
1	100% CONSTRUCTION	SRZ	08/24/21

ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

T-MOBILE SITE NAME:
CTNL313A

SITE ADDRESS:
39 DR SCOTT RD
NORTH FRANKLIN, CT 06254-1316

SEAL:

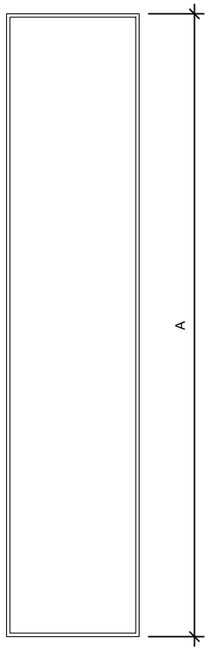
08/24/21

T-Mobile

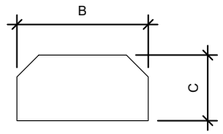
DATE DRAWN:	08/24/21
ATC JOB NO:	13653965
CUSTOMER NAME:	CTNL313A
CUSTOMER ID:	CTNL313A

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	1

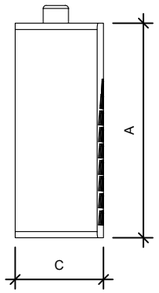


FRONT VIEW

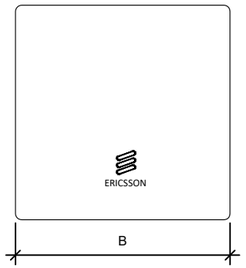


TOP VIEW

TOP VIEW



SIDE VIEW



FRONT VIEW

ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
APXVAALL24_43-U-NA20	95.9"	24"	8.5"	122.8
AIR 6449 B41	33.1"	20.6"	8.6"	104

RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RADIO 4480 B71+B85	21.8"	15.7"	7.5"	84.0
RADIO 4460 B25+B66	19.6"	15.7	12.1	109.0

- EQUIPMENT SPECIFICATIONS

SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: -

Proposed RAN Equipment

Template: 67E5A998E 6160

Enclosure	1	2	3	4
Enclosure Type	Ancillary Equipment (Ericsson)	Enclosure 6160	B160	RBS 6601
Baseband		BB 6648 N2500 L2500 / BB 6648 L1900 L2100 / BB 6648 L700 L600 N600		DUG20 G1900
Hybrid Cable System	PSU 4813			
Transport System		CSR IXRe V2 (Gen2)		
Functionality Groups	Ericsson Hybrid Trunk 6/24 4AWG *Select Length* **(x 3)**			

RAN Scope of Work:

CT73XC005
Existing & planned azimuth: 60/180/300
Existing power 200A

- PROPOSED CABINET CONFIGURATION

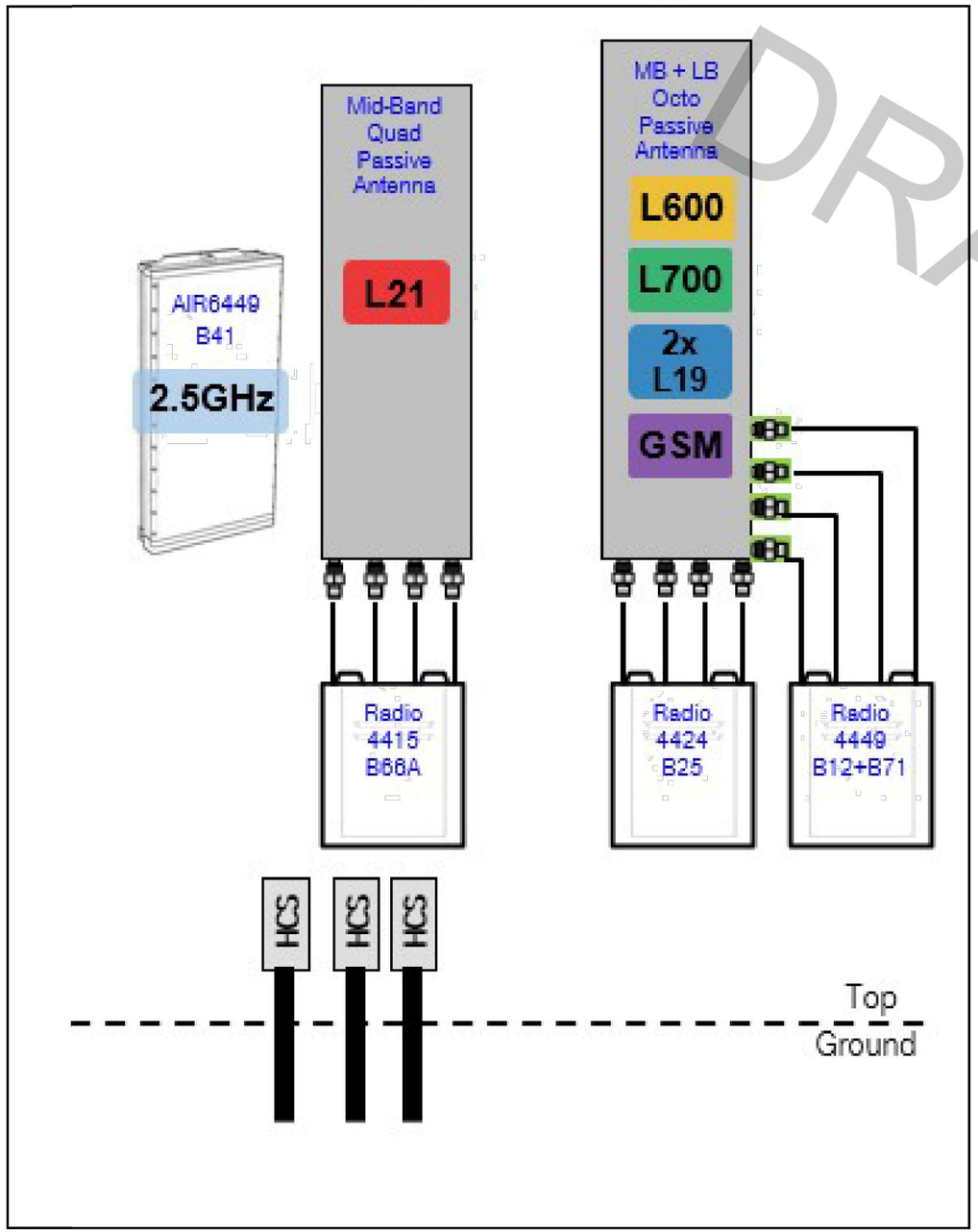
SCALE: NOT TO SCALE

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	-

67D5A998C_1xAIR+1xQP+1xOP.jpg



Notes:

- PROPOSED ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	-

Hardware Architecture

This section contains an overview of the hardware units of the 19-inch baseband unit.

Figure 5 Baseband 6648 Hardware Architecture

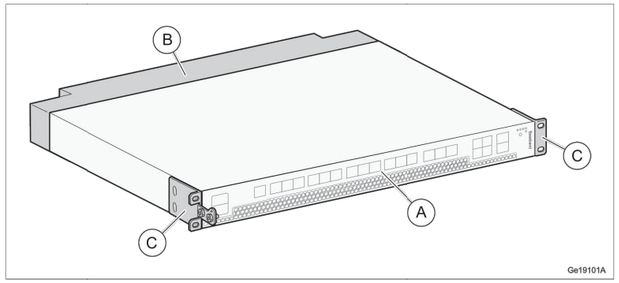


Table 6 19-Inch Baseband Hardware Units

Position	Name of Units	Number of Units
A	19-inch baseband unit	1
B	Fan module	1
C	Movable Brackets	2

1 PROPOSED BB 6648 DETAIL
SCALE: N.T.S.

RBS 6601 Hardware Architecture

The Main–Remote solution has the similar architecture as the other products in the RBS 6000 family.

The main Remote Solution is divided into a Main Unit (MU) and multiple Remote Radio Unit (RRU) that are connected to the MU through optical fiber cables.

Figure 2 RBS 6601, Main Unit (MU) and Remote Radio Unit (RRU)

2 PROPOSED RBS 6601 DETAIL
SCALE: N.T.S.

Voltage Booster specs

- The Voltage Booster will be required at certain HCS lengths for our AAS Antennas. See the HCS Guidelines for this.

Voltage Booster Design Doc from Cell Site Innovations

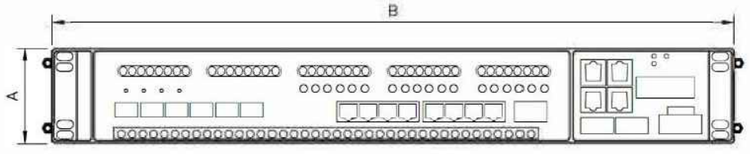
Attribute	Value
Min Input Voltage	-38 VDC
Output Voltage	3x -58 V DC ports
CB rating	30A/40A/50A
Efficiency	96%
Total output power	6000 Watts (2000 W/port)
Operating Temp	-40°C to +60°C
Alarms	Output fault, DC SPD failure
Mechanical	1 U 19", 13" depth
Certification	IEC 62368-1, UL 62368-1
MTBF	143 Years
Air Flow	Front to Back

Slide / 1 T-Mobile Confidential

3 PROPOSED PSU 4813 DETAIL
SCALE: N.T.S.

MANUFACTURER:		ERICSSON
MODEL NO.:		DUG 20
DIMENSIONS:		TOTAL WEIGHT :
A	2.8"	
B	19"	23 LBS
DEPTH	13.78"	

*INSTALLATION INTO EXISTING CABINET OR RACK REQUIRES NO SPECIAL INSPECTIONS.



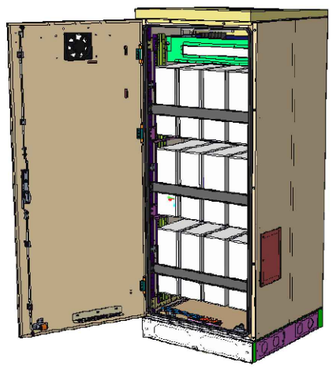
4 PROPOSED DUG20 DETAIL
SCALE: N.T.S.

SUPPLEMENTAL

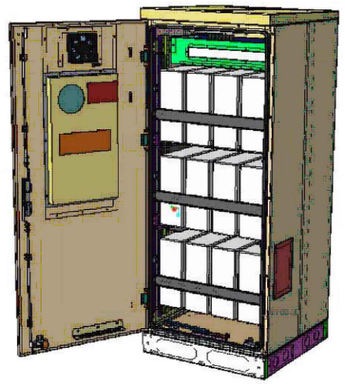
SHEET NUMBER: R-604

REVISION: -

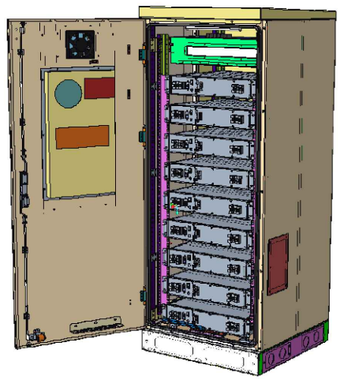
Enclosure B160



Enclosure B160
AirCon + VRLA



Enclosure B160
AirCon + Li-Ion



Enclosure B160
Convection Cooling
+ VRLA

Enclosure B160

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

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

Mechanical specification
- Weight: 134kg
- Dimensions: 63 x 26 x 26 in. (incl. Base frame)
- Base frame height: 6 in.
- Material: Galvanized steel (180g/m^2)
- Color: Powder paint NCS 2002-B
- Door: Front access
- Locking type: Pad lock / cylinder

Environmental specification
- Ingress protection: VRLA/Sodium IP44
Li-Ion IP55
- Relative humidity: 15-100%

Climate system
- Air Conditioner
  - Fan type: DC
  - Cooling capacity: 500W @L35/L35
- Convection cooling
  - Emergency fan

- PROPOSED ENCLOSURE B160 BATTERY CABINET
SCALE: N.T.S.

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-605	-

ERICSSON

Enclosure 6160 AC

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

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

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

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

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

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

Preliminary technical specification for Enclosure 6160 AC

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

- ENCLOSURE 6160 DETAIL
SCALE: NOT TO SCALE

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

SUPPLEMENTAL

SHEET NUMBER: R-606

REVISION: -

AMERICAN TOWER®
CORPORATION

Mount Analysis Report

ATC Site Name	:	**FRANKLIN CT, CT**
ATC Site Number	:	**6310**
Engineering Number	:	**13653965_C8_05**
Mount Elevation	:	**180 ft**
Carrier	:	**Sprint Nextel**
Carrier Site Name	:	**CTNL313A**
Carrier Site Number	:	**CTNL313A**
Site Location	:	**89 Dr. Nott Road** **North Franklin, CT 06254-1316** **41.59766388 , -72.14497375**
County	:	**New London**
Date	:	**August 17, 2021**
Max Usage	:	**51%**
Result	:	**Pass**

Prepared By:
Michael Ellis
Structural Engineer I

Reviewed By:

STATE OF CONNECTICUT · ESHA KAUSHAL MODI · 32593 · LICENSED PROFESSIONAL ENGINEER

Authorized by "EOR"
17 Aug 2021 09:19:33 cosign

COA: PEC.0001553

Introduction

The purpose of this report is to summarize results of the mount analysis performed for Sprint Nextel at 180 ft.

Supporting Documents

Specifications Sheet	Site Pro 1 VFA12-HD, dated June 29, 2018
Radio Frequency Data Sheet	RFDS ID #CTNL313A, dated July 20, 2021
Reference Photos	Site photos from 2019

Analysis

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

Basic Wind Speed:	123 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Hill
Crest Height (H):	344 ft
Crest Length (L):	1850 ft
Spectral Response:	Ss = 0.195, S1 = 0.054
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. 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.

A.T. Engineering Service, PLLC - 3500 Regency Parkway, Suite 100 - Cary, NC 27518 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

- MOUNT ANALYSIS

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-607	-

AMERICAN TOWER®
CORPORATION

Mount Analysis Report

ATC Site Name	:	**FRANKLIN CT, CT**
ATC Site Number	:	**6310**
Engineering Number	:	**13653965_C8_05**
Mount Elevation	:	**180 ft**
Carrier	:	**Sprint Nextel**
Carrier Site Name	:	**CTNL313A**
Carrier Site Number	:	**CTNL313A**
Site Location	:	**89 Dr. Nott Road** **North Franklin, CT 06254-1316** **41.59766388 , -72.14497375**
County	:	**New London**
Date	:	**August 17, 2021**
Max Usage	:	**51%**
Result	:	**Pass**

Prepared By:
Michael Ellis
Structural Engineer I

Reviewed By:

Authorized by "EOR"
17 Aug 2021 09:19:33 cosign

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

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Codes:	ANSI/TIA-222-H
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Hill
Crest Height (H):	344 ft
Crest Length (L):	1850 ft
Spectral Response:	Ss = 0.195, S1 = 0.054
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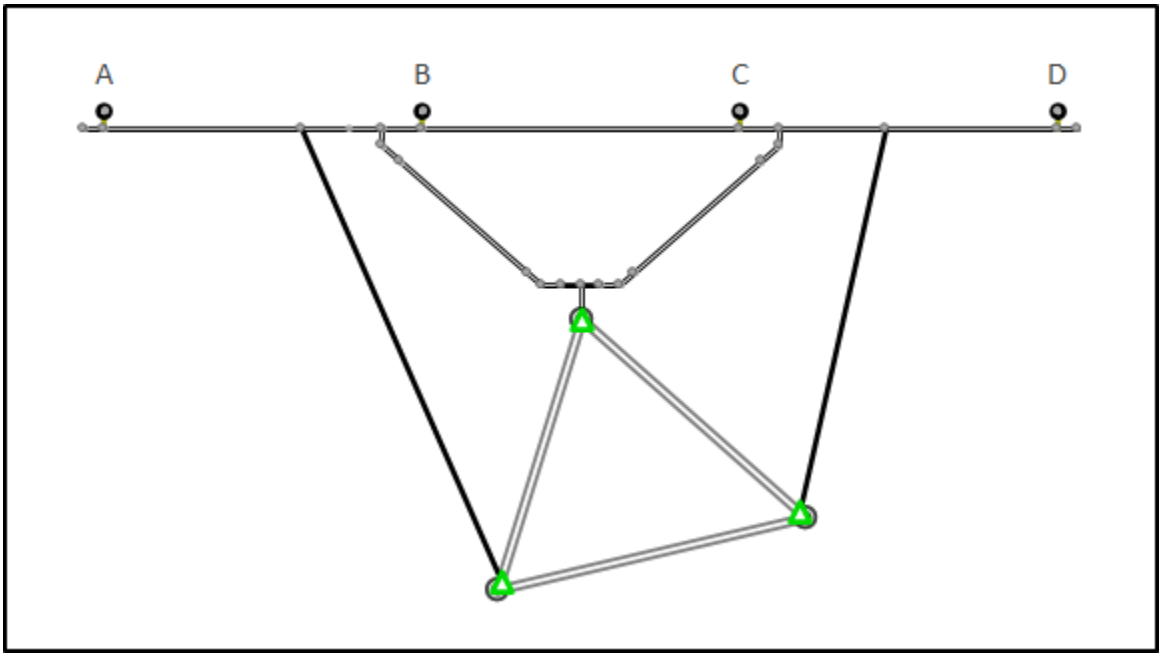
Application Loading

Mount Centerline (ft)	Equipment Centerline (ft)	Qty	Equipment Manufacturer & Model
180.0	180.0	3	RFS APXVAALL24 43-U-NA20
		3	Ericsson Air6449 B41
		3	Ericsson Radio 4480 B71+B85A
		3	Ericsson Radio 4460 B25+B66

Structure Usages

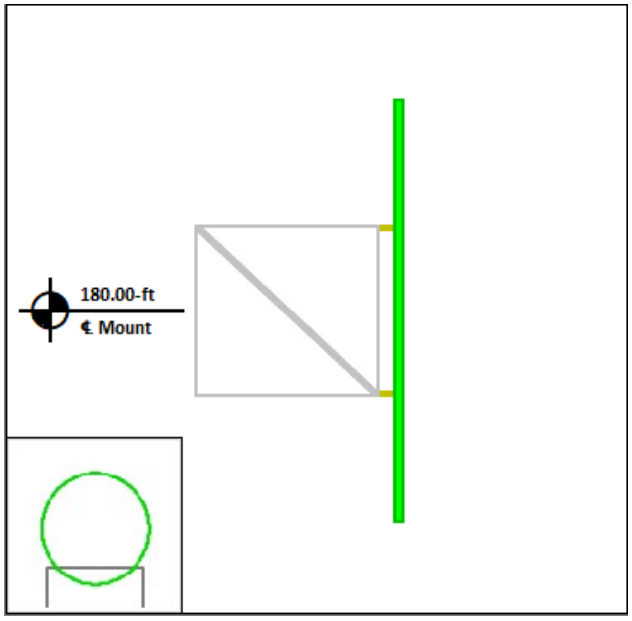
Structural Component	Controlling Usage	Pass/Fail
Horizontals	38%	Pass
Verticals	51%	Pass
Diagonals	19%	Pass
Tie-Backs	4%	Pass
Mount Pipes	46%	Pass

Mount Layout

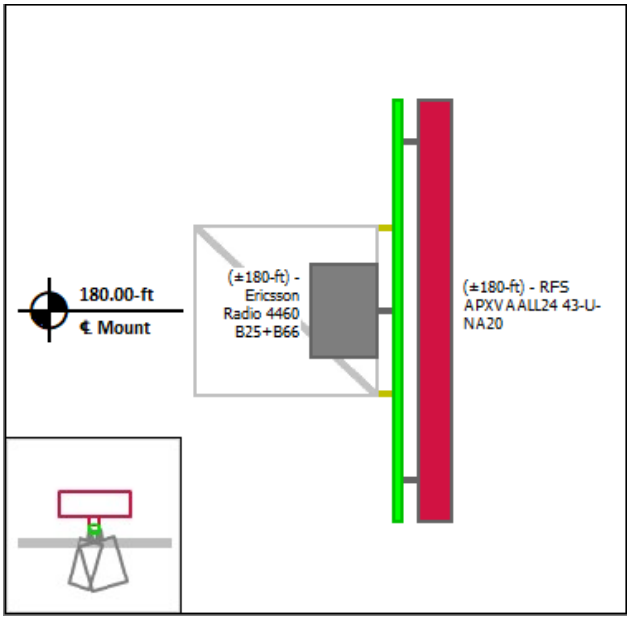


Equipment Layout

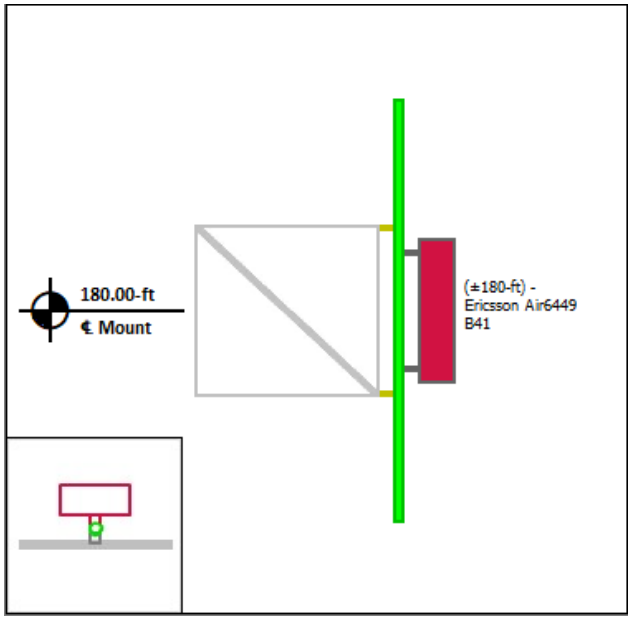
Mount Pipe A



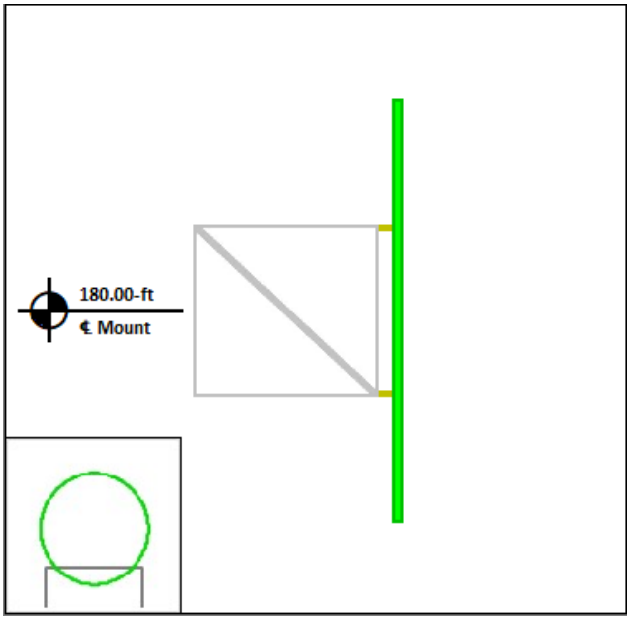
Mount Pipe B



Mount Pipe C



Mount Pipe D



Standard Conditions

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

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

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

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

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

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

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

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

AMERICAN TOWER®
CORPORATION

Site Number:	*6310*
Project Number:	*13653965_C8_05*
Carrier:	*Sprint Nextel*
Mount Elevation:	*180 ft*
Date:	8/17/2021

Mount Analysis Force Calculations

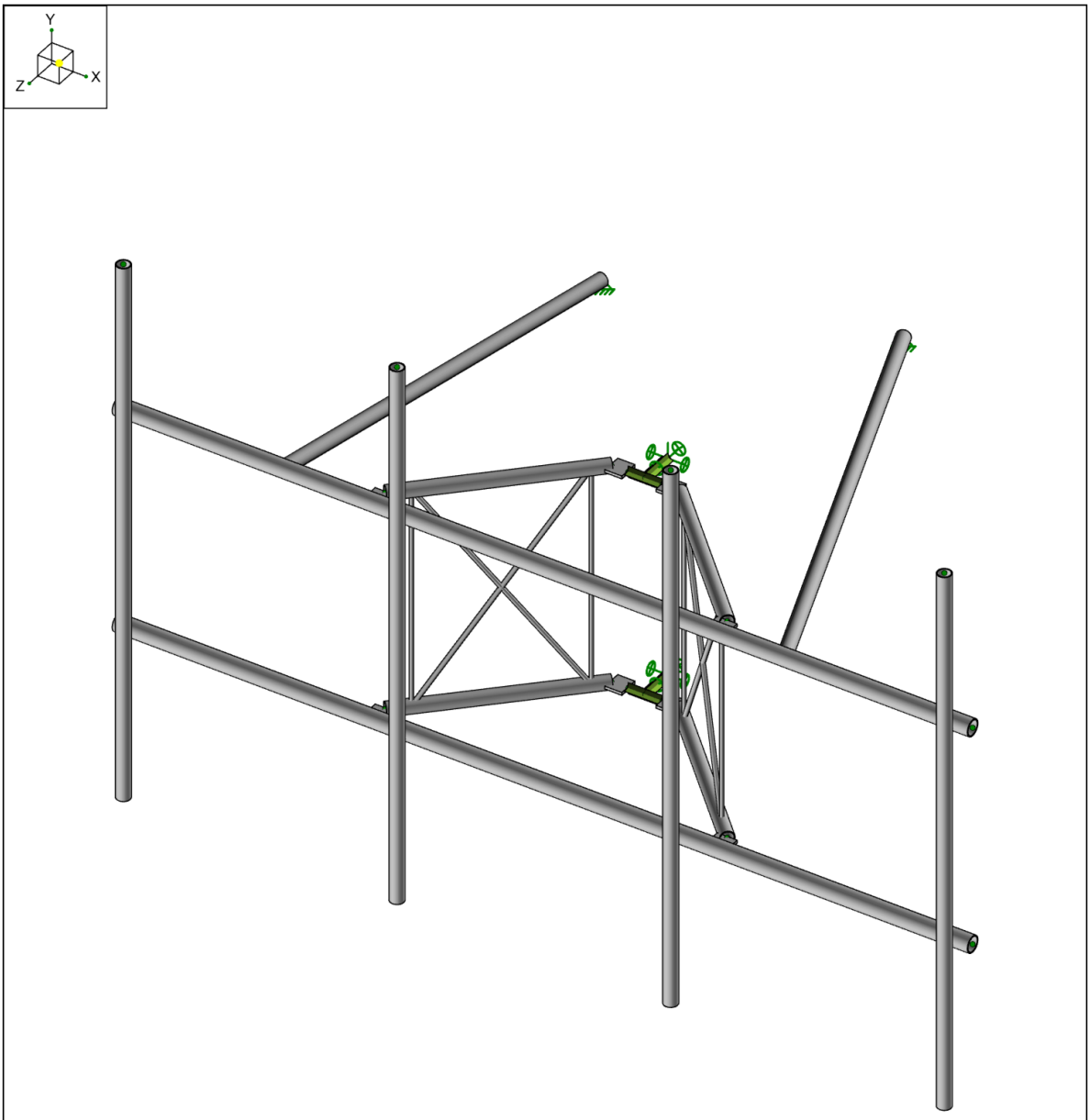
Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.17	
Topographic Factor	K_{zt}	1.35	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	0.98	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	123	mph
Velocity Pressure	q_z	57.2	psf
Height Escalation Factor	K_{iz}	1.18	
Thickness of Radial Glaze Ice	T_{iz}	1.32	in

Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.208	
1 Second DSRAP	S_{D1}	0.086	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_S	0.104	
Amplification Factor	A	1.0	
Total Weight	W	940.4	lbs
Total Shear Force	V_S	97.8	lbs
Horizontal Seismic Load	Eh	97.8	lbs
Vertical Seismic Load	Ev	39.1	lbs

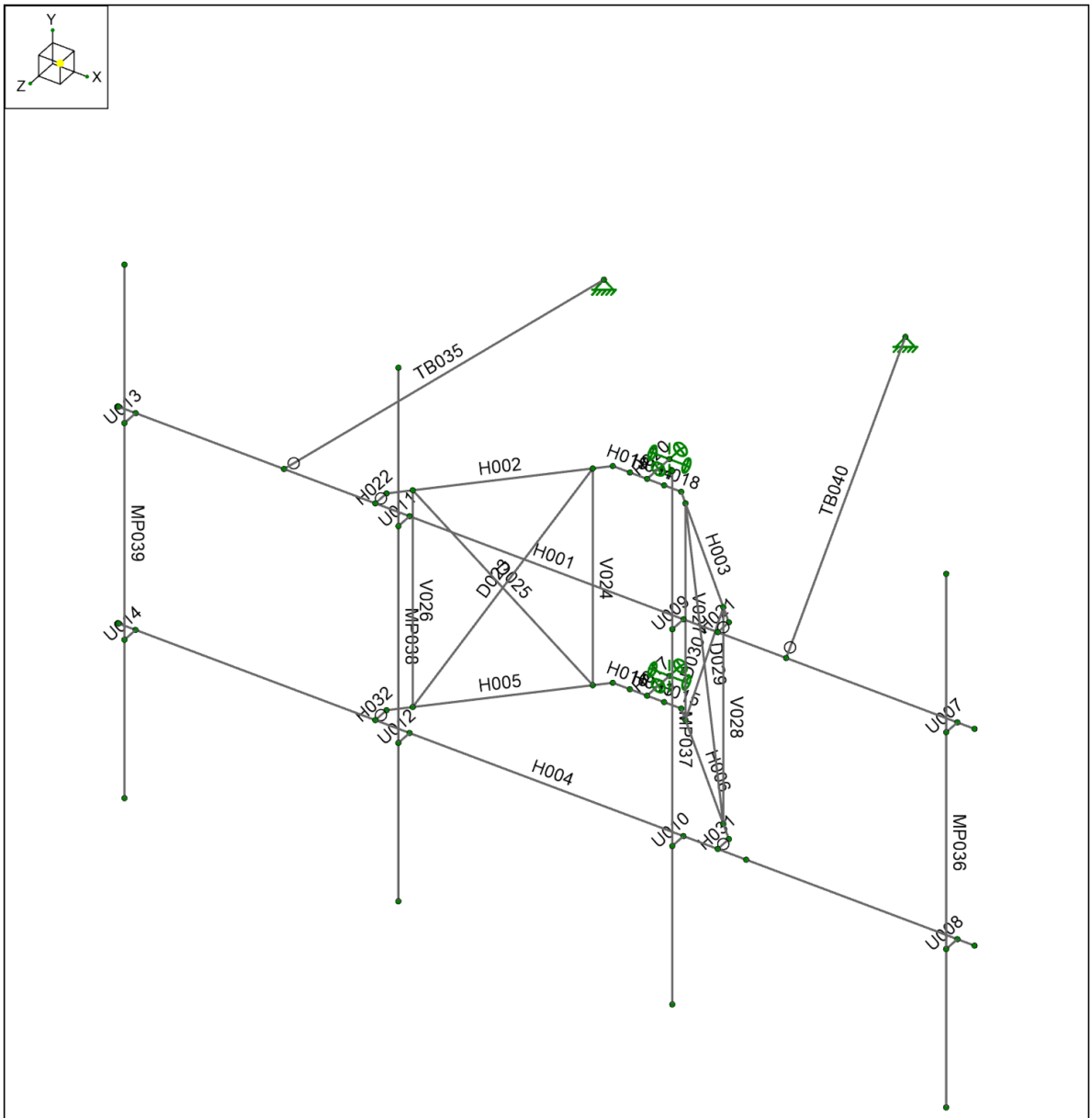
Antenna Calculations (Elevations per Application/RFDS)*

Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
RFS APXVAALL24 43-U-NA20	95.9	24.0	8.5	122.8	20.24	3.40	23.08	4.57
Ericsson Air6449 B41	33.1	20.6	8.6	104.0	5.68	1.56	6.92	2.20
Ericsson Radio 4480 B71+B85A	21.8	15.7	7.5	84.0	2.85	1.38	3.73	2.09
Ericsson Radio 4460 B25+B66	19.6	15.7	12.1	109.0	2.56	1.98	3.40	2.73

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



American Tower Corp.	6310, FRANKLIN CT	SK-1
Michael.Ellis		Aug 17, 2021
13653965_C8_05		R3D. SPRINT NEXTEL @ 6310, F…



American Tower Corp.	6310, FRANKLIN CT	SK-2
Michael.Ellis		Aug 17, 2021
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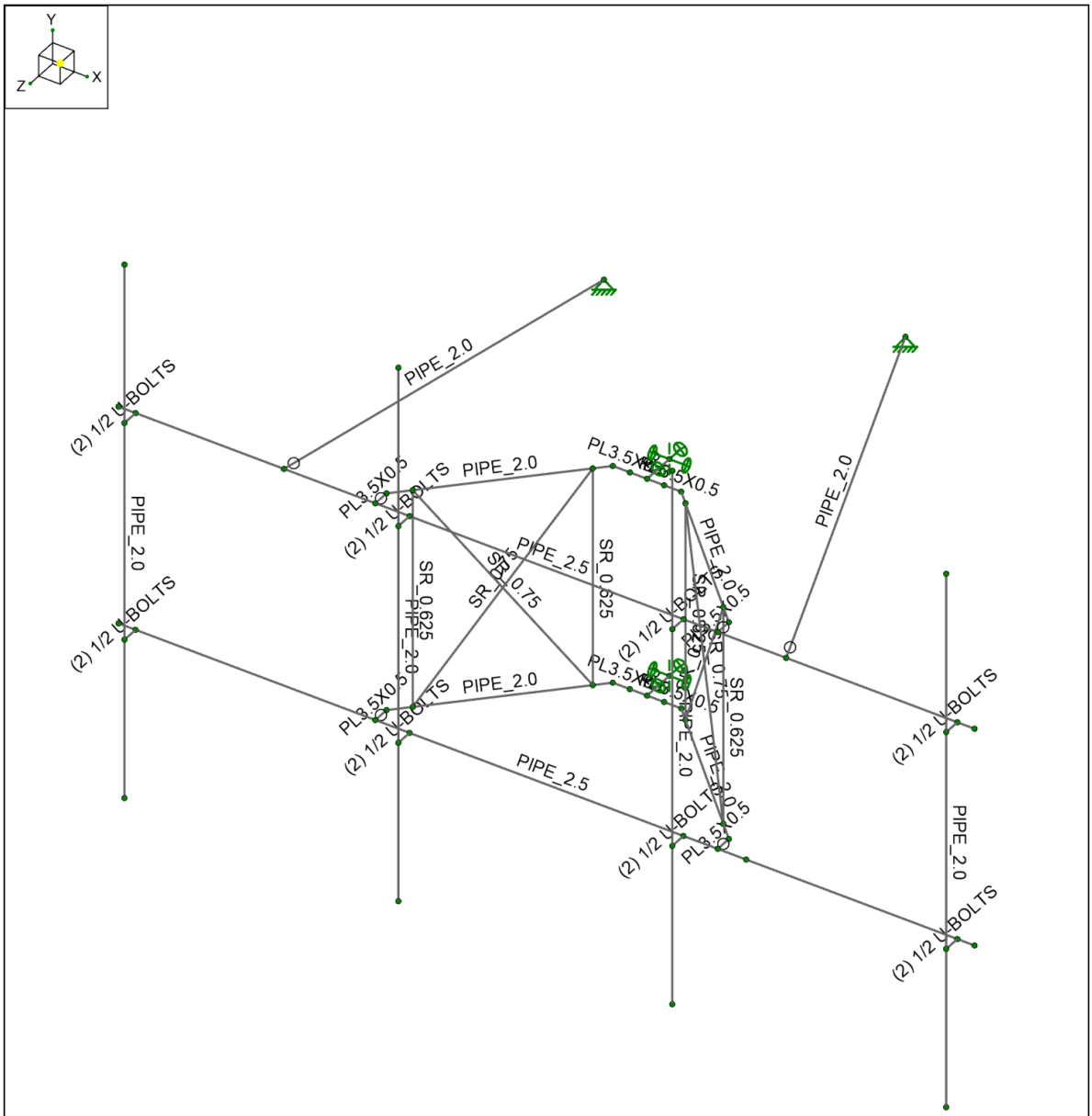

American Tower Corp.	6310, FRANKLIN CT	SK-3
Michael.Ellis		Aug 17, 2021
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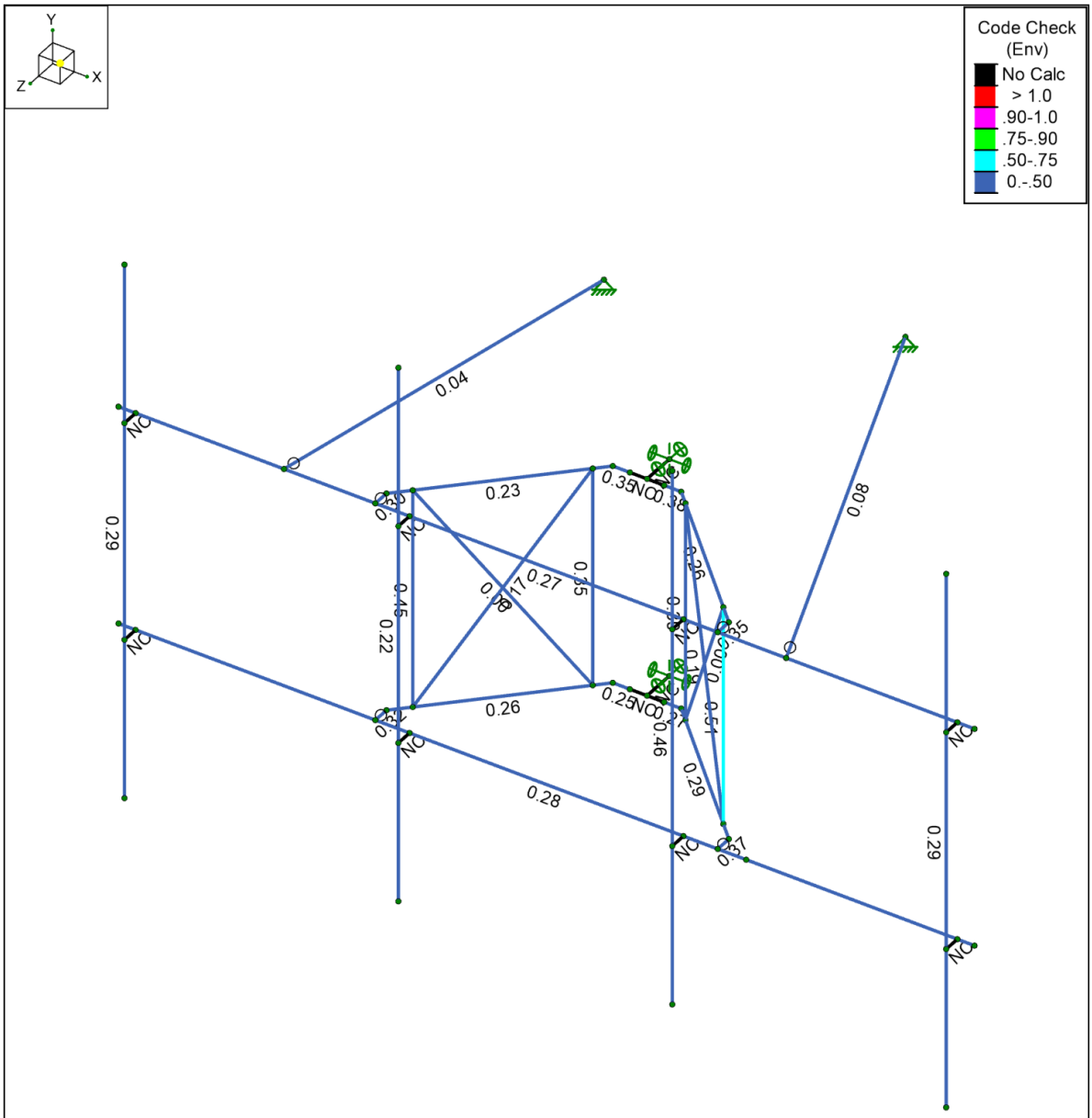
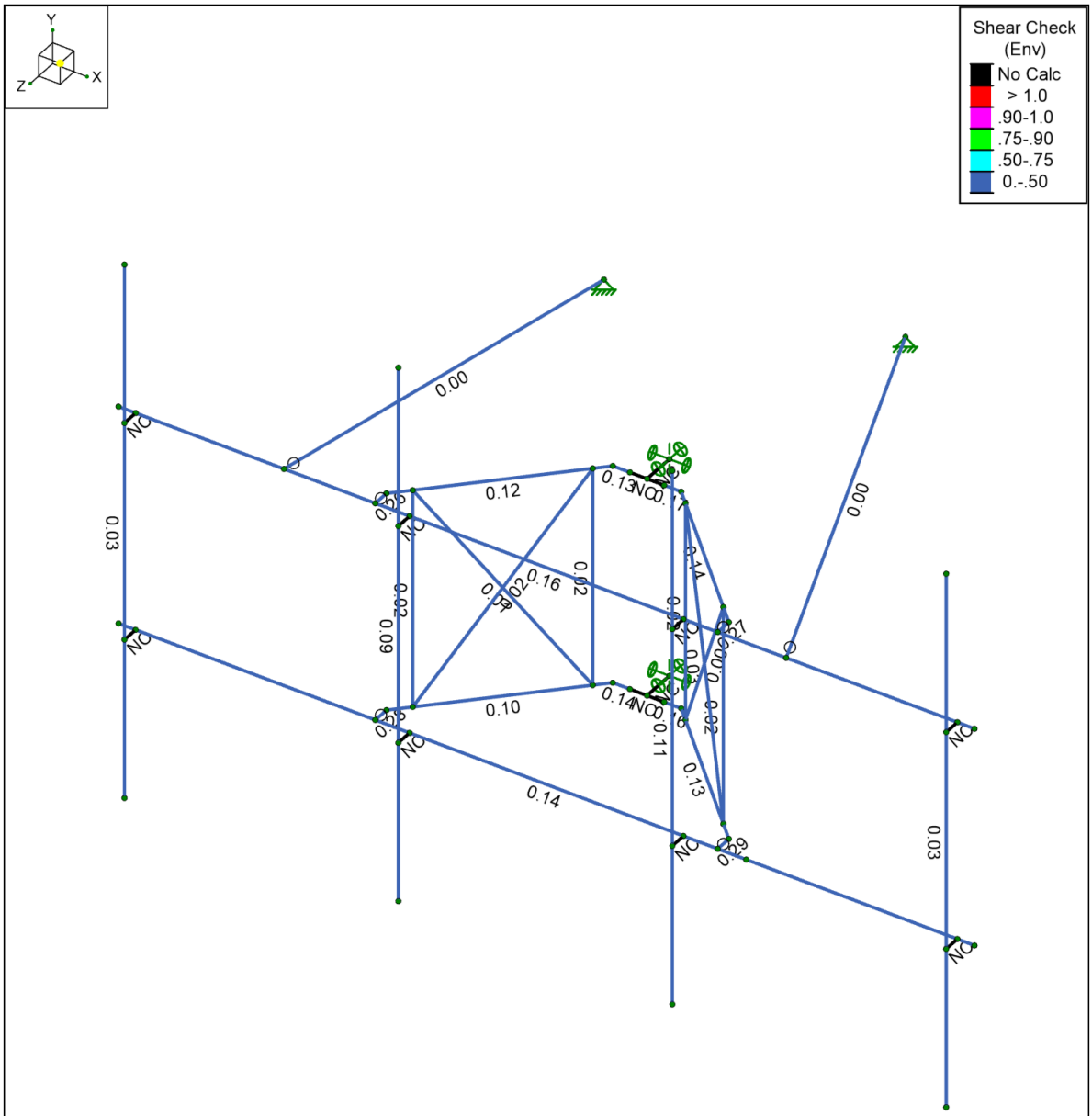


Member Code Checks Displayed (Enveloped)

American Tower Corp.	6310, FRANKLIN CT	SK-4
Michael.Ellis		Aug 17, 2021
13653965_C8_05		R3D. SPRINT NEXTEL @ 6310, F…



American Tower Corp.	6310, FRANKLIN CT	SK-5
Michael.Ellis		Aug 17, 2021
13653965_C8_05		R3D. SPRINT NEXTEL @ 6310, F…

Node Boundary Conditions

	Node Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot [k-in/rad]	Z Rot [k-in/rad]
1	N001	Reaction	Reaction	Reaction	Reaction	Reaction
2	N006	Reaction	Reaction	Reaction	Reaction	Reaction
3	N050	Reaction	Reaction	Reaction		
4	N061	Reaction	Reaction	Reaction		

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	H001	N003	N002		PIPE_2.5	Beam	None	A53 Gr. B	Typical
2	H002	N032	N004		PIPE_2.0	Beam	None	A53 Gr. B	Typical
3	H003	N031	N005		PIPE_2.0	Beam	None	A53 Gr. B	Typical
4	H004	N008	N007		PIPE_2.5	Beam	None	A53 Gr. B	Typical
5	H005	N029	N009		PIPE_2.0	Beam	None	A53 Gr. B	Typical
6	H006	N028	N010		PIPE_2.0	Beam	None	A53 Gr. B	Typical
7	U007	N011	N015		(2) 1/2 U-BOLTS	Beam	None	SAE J429 Gr. 2	Typical
8	U008	N016	N017		(2) 1/2 U-BOLTS	Beam	None	SAE J429 Gr. 2	Typical
9	U009	N012	N018		(2) 1/2 U-BOLTS	Beam	None	SAE J429 Gr. 2	Typical
10	U010	N019	N020		(2) 1/2 U-BOLTS	Beam	None	SAE J429 Gr. 2	Typical
11	U011	N013	N021		(2) 1/2 U-BOLTS	Beam	None	SAE J429 Gr. 2	Typical
12	U012	N022	N023		(2) 1/2 U-BOLTS	Beam	None	SAE J429 Gr. 2	Typical
13	U013	N014	N024		(2) 1/2 U-BOLTS	Beam	None	SAE J429 Gr. 2	Typical
14	U014	N025	N026		(2) 1/2 U-BOLTS	Beam	None	SAE J429 Gr. 2	Typical
15	H015	N047	N028	90	PL3.5X0.5	Beam	None	A36	Typical
16	H016	N048	N029	90	PL3.5X0.5	Beam	None	A36	Typical
17	H017	N006	N027		RIGID	None	None	RIGID	Typical
18	H018	N045	N031	90	PL3.5X0.5	Beam	None	A36	Typical
19	H019	N046	N032	90	PL3.5X0.5	Beam	None	A36	Typical
20	H020	N001	N030		RIGID	None	None	RIGID	Typical
21	H021	N005	N034	90	PL3.5X0.5	Beam	None	A36	Typical
22	H022	N004	N033	90	PL3.5X0.5	Beam	None	A36	Typical
23	D023	N038	N035		SR_0.75	Column	None	A36	Typical
24	V024	N035	N036		SR_0.625	Column	None	A36	Typical
25	D025	N036	N037		SR_0.75	Column	None	A36	Typical
26	V026	N037	N038		SR_0.625	Column	None	A36	Typical
27	V027	N039	N040		SR_0.625	Column	None	A36	Typical
28	V028	N041	N042		SR_0.625	Column	None	A36	Typical
29	D029	N042	N039		SR_0.75	Column	None	A36	Typical
30	D030	N040	N041		SR_0.75	Column	None	A36	Typical
31	H031	N010	N044	90	PL3.5X0.5	Beam	None	A36	Typical
32	H032	N009	N043	90	PL3.5X0.5	Beam	None	A36	Typical
33	H033	N047	N048		RIGID	None	None	RIGID	Typical
34	H034	N045	N046		RIGID	None	None	RIGID	Typical
35	TB035	N050	N049		PIPE_2.0	Beam	None	A53 Gr. B	Typical
36	MP036	N052	N053		PIPE_2.0	Column	None	A53 Gr. B	Typical
37	MP037	N054	N055		PIPE_2.0	Column	None	A53 Gr. B	Typical
38	MP038	N056	N057		PIPE_2.0	Column	None	A53 Gr. B	Typical
39	MP039	N058	N059		PIPE_2.0	Column	None	A53 Gr. B	Typical
40	TB040	N060	N061		PIPE_2.0	Beam	None	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	T/C Only	Physical	Deflection Ratio Options	Activation	Seismic DR
1	H001				Yes	N/A		None
2	H002				Yes	N/A		None

Member Advanced Data (Continued)

	Label	I Release	J Release	T/C Only	Physical	Deflection Ratio Options	Activation	Seismic DR
3	H003				Yes	N/A		None
4	H004				Yes	N/A		None
5	H005				Yes	N/A		None
6	H006				Yes	N/A		None
7	U007				Yes	N/A	Exclude	None
8	U008				Yes	N/A	Exclude	None
9	U009				Yes	N/A	Exclude	None
10	U010				Yes	N/A	Exclude	None
11	U011				Yes	N/A	Exclude	None
12	U012				Yes	N/A	Exclude	None
13	U013				Yes	N/A	Exclude	None
14	U014				Yes	N/A	Exclude	None
15	H015				Yes	N/A		None
16	H016				Yes	N/A		None
17	H017				Yes	** NA **		None
18	H018				Yes	N/A		None
19	H019				Yes	N/A		None
20	H020				Yes	** NA **		None
21	H021		BenPIN		Yes	N/A		None
22	H022		BenPIN		Yes	N/A		None
23	D023			Tension Only	Yes	** NA **		None
24	V024				Yes	** NA **		None
25	D025			Tension Only	Yes	** NA **		None
26	V026				Yes	** NA **		None
27	V027				Yes	** NA **		None
28	V028				Yes	** NA **		None
29	D029			Tension Only	Yes	** NA **		None
30	D030			Tension Only	Yes	** NA **		None
31	H031		BenPIN		Yes	N/A		None
32	H032		BenPIN		Yes	N/A		None
33	H033				Yes	** NA **		None
34	H034				Yes	** NA **		None
35	TB035		BenPIN		Yes	N/A		None
36	MP036				Yes	** NA **		None
37	MP037				Yes	** NA **		None
38	MP038				Yes	** NA **		None
39	MP039				Yes	** NA **		None
40	TB040	BenPIN			Yes	N/A		None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lcomp top [in]	K y-y	K z-z	Function
1	H001	PIPE_2.5	150	Lbyy	1	1	Lateral
2	H002	PIPE_2.0	33.941	Lbyy	0.8	0.8	Lateral
3	H003	PIPE_2.0	33.941	Lbyy	0.8	0.8	Lateral
4	H004	PIPE_2.5	150	Lbyy	1	1	Lateral
5	H005	PIPE_2.0	33.941	Lbyy	0.8	0.8	Lateral
6	H006	PIPE_2.0	33.941	Lbyy	0.8	0.8	Lateral
7	U007	(2) 1/2 U-BOLTS	3	Lbyy	0.5	0.5	Lateral
8	U008	(2) 1/2 U-BOLTS	3	Lbyy	0.5	0.5	Lateral
9	U009	(2) 1/2 U-BOLTS	3	Lbyy	0.5	0.5	Lateral
10	U010	(2) 1/2 U-BOLTS	3	Lbyy	0.5	0.5	Lateral
11	U011	(2) 1/2 U-BOLTS	3	Lbyy	0.5	0.5	Lateral
12	U012	(2) 1/2 U-BOLTS	3	Lbyy	0.5	0.5	Lateral
13	U013	(2) 1/2 U-BOLTS	3	Lbyy	0.5	0.5	Lateral
14	U014	(2) 1/2 U-BOLTS	3	Lbyy	0.5	0.5	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lcomp top [in]	K y-y	K z-z	Function
15	H015	PL3.5X0.5	3	Lbyy	2.1	2.1	Lateral
16	H016	PL3.5X0.5	3	Lbyy	2.1	2.1	Lateral
17	H018	PL3.5X0.5	3	Lbyy	2.1	2.1	Lateral
18	H019	PL3.5X0.5	3	Lbyy	2.1	2.1	Lateral
19	H021	PL3.5X0.5	3	Lbyy	2.1	2.1	Lateral
20	H022	PL3.5X0.5	3	Lbyy	2.1	2.1	Lateral
21	D023	SR_0.75	47.434	Lbyy	0.65	0.65	Lateral
22	V024	SR_0.625	39	Lbyy	0.65	0.65	Lateral
23	D025	SR_0.75	47.434	Lbyy	0.65	0.65	Lateral
24	V026	SR_0.625	39	Lbyy	0.65	0.65	Lateral
25	V027	SR_0.625	39	Lbyy	0.65	0.65	Lateral
26	V028	SR_0.625	39	Lbyy	0.65	0.65	Lateral
27	D029	SR_0.75	47.434	Lbyy	0.65	0.65	Lateral
28	D030	SR_0.75	47.434	Lbyy	0.65	0.65	Lateral
29	H031	PL3.5X0.5	3	Lbyy	2.1	2.1	Lateral
30	H032	PL3.5X0.5	3	Lbyy	2.1	2.1	Lateral
31	TB035	PIPE_2.0	67.268	Lbyy	1	1	Lateral
32	MP036	PIPE_2.0	96	Lbyy	2.1	2.1	Lateral
33	MP037	PIPE_2.0	96	Lbyy	2.1	2.1	Lateral
34	MP038	PIPE_2.0	96	Lbyy	2.1	2.1	Lateral
35	MP039	PIPE_2.0	96	Lbyy	2.1	2.1	Lateral
36	TB040	PIPE_2.0	83.57	Lbyy	1	1	Lateral

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [lb/ft³]	Yield [psi]	Ry	Fu [psi]	Rt
1	A53 Gr. B	2.9e+07	1.115e+07	0.3	0.65	490	35000	1.6	60000	1.2
2	SAE J429 Gr. 2	2.9e+07	1.115e+07	0.3	0.65	490	57000	1.1	74000	1.1
3	A36	2.9e+07	1.115e+07	0.3	0.65	490	36000	1.5	58000	1.2

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N001	max	1528.387	18	1257.521	26	439.844	15	-107.281	20	0	117	417.204	74
2		min	-1764.259	12	238.712	20	-1535.083	9	-710.39	26	0	1	-325.177	116
3	N006	max	1380.742	72	891.586	32	1802.053	2	-51.812	14	0	117	271.628	75
4		min	-1109.665	114	113.052	14	-684.993	20	-531.241	32	0	1	-213.72	117
5	N050	max	133.814	12	28.495	34	776.332	18	0	117	0	117	0	117
6		min	-133.864	18	8.714	15	-784.339	12	0	1	0	1	0	1
7	N061	max	460.913	25	35.488	30	1300.275	24	0	117	0	117	0	117
8		min	-460.8	7	10.616	25	-1310.399	6	0	1	0	1	0	1
9	Totals:	max	1803.427	16	2139.618	26	2435.323	14						
10		min	-1803.427	10	724.743	19	-2435.323	20						

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
1	H001	PIPE_2.5	0.269	106.25	107	0.158	34.375		7	14558.792	50715	3596.25	3596.25	2.131	H1-1b
2	H002	PIPE_2.0	0.23	30.052	117	0.117	0		117	30216.926	32130	1871.625	1871.625	1.965	H1-1b
3	H003	PIPE_2.0	0.258	30.052	81	0.138	0		70	30216.926	32130	1871.625	1871.625	1.964	H1-1b
4	H004	PIPE_2.5	0.282	106.25	116	0.135	98.438		13	14558.792	50715	3596.25	3596.25	2.14	H1-1b
5	H005	PIPE_2.0	0.256	29.698	116	0.104	30.052		104	30216.926	32130	1871.625	1871.625	1.988	H1-1b
6	H006	PIPE_2.0	0.289	29.698	75	0.125	30.052		87	30216.926	32130	1871.625	1871.625	1.986	H1-1b
7	H015	PL3.5X0.5	0.274	0	71	0.162	3	y	87	51289.202	56700	590.625	4134.375	1.67	H1-1b
8	H016	PL3.5X0.5	0.25	0	117	0.138	3	y	102	51289.202	56700	590.625	4134.375	1.667	H1-1b

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 [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
9	H018	PL3.5X0.5	0.385	0	77	0.165	3	y	36	51289.202	56700	590.625	4134.375	1.69	H1-1b
10	H019	PL3.5X0.5	0.346	0	112	0.135	3	y	96	51289.202	56700	590.625	4134.375	1.692	H1-1b
11	H021	PL3.5X0.5	0.346	0	81	0.268	0	y	80	51289.202	56700	590.625	4134.375	1.667	H1-1b
12	H022	PL3.5X0.5	0.301	0	110	0.259	0.031	y	111	51289.202	56700	590.625	4134.375	1.667	H1-1b
13	D023	SR_0.75	0.172	47.434	116	0.024	0		12	3691.013	14313.882	178.924	178.924	2.52	H1-1b*
14	V024	SR_0.625	0.346	0	113	0.023	0		6	2633.14	9940.196	103.544	103.544	2.173	H1-1a
15	D025	SR_0.75	0.002	47.434	18	0.009	0		19	3691.013	14313.882	178.924	178.924	2.367	H1-1b*
16	V026	SR_0.625	0.454	39	117	0.016	0		12	2633.14	9940.196	103.544	103.544	2.21	H1-1a
17	V027	SR_0.625	0.393	0	75	0.025	0		12	2633.14	9940.196	103.544	103.544	2.164	H1-1a
18	V028	SR_0.625	0.513	39	71	0.015	0		6	2633.14	9940.196	103.544	103.544	2.213	H1-1a
19	D029	SR_0.75	0.194	47.434	74	0.027	47.434		6	3691.013	14313.882	178.924	178.924	2.486	H1-1b*
20	D030	SR_0.75	0	47.434	117	0	47.434		117	3691.013	14313.882	178.924	178.924	1	H1-1a
21	H031	PL3.5X0.5	0.366	0	75	0.289	0	y	74	51289.202	56700	590.625	4134.375	1.667	H1-1b
22	H032	PL3.5X0.5	0.321	0	116	0.28	0.031	y	117	51289.202	56700	590.625	4134.375	1.667	H1-1b
23	TB035	PIPE_2.0	0.041	33.634	4	0.004	67.268		11	22043.689	32130	1871.625	1871.625	1.136	H1-1b
24	MP036	PIPE_2.0	0.289	67	81	0.032	29		80	3485.189	32130	1871.625	1871.625	3	H1-1b
25	MP037	PIPE_2.0	0.456	28	8	0.107	29		6	3485.189	32130	1871.625	1871.625	3	H1-1b
26	MP038	PIPE_2.0	0.22	28	100	0.088	29		12	3485.189	32130	1871.625	1871.625	3	H1-1a
27	MP039	PIPE_2.0	0.286	29	110	0.031	29		110	3485.189	32130	1871.625	1871.625	3	H1-1b
28	TB040	PIPE_2.0	0.079	41.785	12	0.005	83.57		12	17962.447	32130	1871.625	1871.625	1.136	H1-1b

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**300 ft Guyed Tower**
ATC Site Name	:	**FRANKLIN CT,CT**
ATC Site Number	:	**6310**
Engineering Number	:	**13714294_C3_01**
Proposed Carrier	:	**SPRINT NEXTEL**
Carrier Site Name	:	**CTNL313A**
Carrier Site Number	:	**CTNL313A**
Site Location	:	**89 Dr. Nott Road** **North Franklin, CT 06254-1316** **41.5977, -72.145**
County	:	**New London**
Date	:	**August 30, 2021**
Max Usage	:	**83%**
Result	:	**Pass**

Prepared By:

Rebecca Malz
Structural Engineer I

Reviewed By:

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32593
LICENSED
PROFESSIONAL ENGINEER

Authorized by "EOR"
30 Aug 2021 04:00:47 cosign

COA : PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 300 ft Guyed tower to reflect the change in loading by SPRINT NEXTEL.

Supporting Documents

Tower Drawings	FWT Job #18504, dated January, 20, 1999
Foundation Drawing	FWT Job #18504, dated January, 20, 1999
Geotechnical Report	Tectonic Engineering Consultants P.C. dated October 26, 1998
Modifications	ATC Project #430070H1, dated March 5, 1999

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:	123 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 2
Crest Height (H):	344 ft
Crest Length (L):	1850 ft
Spectral Response:	Ss = 0.20, S_1 = 0.05
Site Class:	D - Stiff Soil - Default

Conclusion

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

If you have any questions or require additional information, please 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
307.0	1	Generic 10' Omni	Side Arm	(3) 7/8" Coax	OTHER
306.0	1	Generic 20' Dipole			
303.0	1	Generic 13' Omni			
302.0	1	Generic 6' Yagi			
288.0	1	Generic 18' Dipole		(2) 1 1/4" Coax	
277.0	1	Generic 10' Dipole	Side Arm	(2) 7/8" Coax	
276.0	1	Generic 24" x 24" Junction Box			
	1	Generic 8' Omni			
274.0	1	Generic 6' Omni			
263.0	1	Scala OGT9-840N	Side Arm	(1) 1 5/8" Coax	STATE OF CT
241.0	1	Generic 13' Omni	Side Arm	-	OTHER
235.0	1	Bird 432E-83I-01-T	Side Arm	(2) 1 5/8" Coax	STATE OF CT
	3	Sinclair SC479-HF1LDF(E5765)			
230.0	1	Generic 11' Omni	Side Arm	-	OTHER
229.5	1	Scala OGT9-840	Side Arm	(1) 1 5/8" Coax	STATE OF CT
228.0	1	Generic 14' Omni	Side Arm	-	OTHER
215.0	1	Decibel DB224	Side Arm	(1) 7/8" Coax	NEW ENGLAND CENTRAL RAILROAD
213.0	1	Generic 22' Dipole	Side Arm	-	OTHER
	1	Andrew DB224	Leg	(1) 1/2" Coax	PROV & WORCESTER RR
196.0	3	CCI TPA65R-BU8D	Sector Frame	(2) 0.39" (10mm) Fiber Trunk (4) 0.92" (23.4mm) Cable	AT&T MOBILITY
	3	CCI DMP65R-BU8D			
	2	Raycap DC9-48-60-24-8C-EV			
	3	Ericsson AIR 6449 B77D/ C-Band			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 8843 B2, B66A			
180.0	3	RFS APXVAALL24 43-U-NA20	Sector Frame	-	SPRINT NEXTEL
	3	Ericsson Air6449 B41			
170.0	3	Samsung B5/B13 RRH-BR04C	Sector Frame	(1) 1 1/4" (1.25"-31.8mm) Fiber (11) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Commscope CBC78T-DS-43-2X			
	3	Commscope LNX-8513DS-A1M			
	1	Raycap RCMDC-6627-PF-48			
	3	Samsung MT6407-77A			
	6	Commscope JAHH-65B-R3B			
	3	Samsung B2/B66A RRH-BR049			
160.0	1	Procom CXL 900-3LW	Side Arm	(1) 1/2" Coax	SIGFOX S.A.
	1	Generic 5" x 3" x 2" Cavity Filter			
	1	Generic Low Noise Amplifier			
130.0	2	Scala AP7-850/065	Side Arm	(4) 0.41" (10.3mm) LMR-400 (2) 1 5/8" Coax	AT&T MOBILITY
	1	Generic 24" x 24" Junction Box			
125.0	1	Bird 432E-83I-01-T	Side Arm	(2) 1 5/8" Coax	STATE OF CT
	3	Generic 24" X 12" Panel			
115.0	1	Generic 20' Dipole	Side Arm	(1) 1/2" Coax	NEW ENGLAND CENTRAL RAILROAD
105.0	1	Generic 5' Yagi	Leg	-	OTHER
	1	Generic 2' x 4' Rectangular Grid Dish			

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
84.0	1	Generic 6' Ice Shield	Leg	-	STATE OF CT
82.0	1	Generic 6' Ice Shield	Leg	(1) EW52	AT&T MOBILITY
80.0	1	RFS PA6-65AC w/ Radome			
	1	RFS PA6-65AC w/ Radome	Stand-Off	(1) WE65	STATE OF CT

Equipment to be Removed

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
180.0	3	Ericsson Radio 4449 B71 B85A	-	(3) 1 5/8" Hybriflex	SPRINT NEXTEL
	3	RFS APX16DWV-16DWVS-E-A20			
	3	Ericsson 4424 B25			
	3	Ericsson RRUS 4415 B66			

Proposed Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
180.0	3	Ericsson Radio 4460 B25+B66	Sector Frame	(3) 1.99" (50.7mm) Hybrid	SPRINT NEXTEL
	3	Ericsson Radio 4480 B71+B85A			

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

Install proposed lines in place of the existing SPRINT NEXTEL lines.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	70%	Pass
Diagonals	63%	Pass
Horizontals	44%	Pass
Guys	83%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Base Axial (kips)	208.2	281.1	200.9	71%
Anchor 1 Uplift (kips)	73.5	99.2	69.3	70%
Anchor 1 Shear (kips)	85.9	116.0	85.8	74%
* The design reactions are factored by 1.35 per ANSI/TIA-222-H, Sec. 15.6.2				

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

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
263.0	Scala OGT9-840N	STATE OF CT	0.173	0.062	0.075
235.0	Bird 432E-83I-01-T	STATE OF CT	0.186	0.062	0.081
	Sinclair SC479-HF1LDF(E5765)				
229.5	Scala OGT9-840	STATE OF CT	0.191	0.061	0.078
196.0	CCI DMP65R-BU8D	AT&T MOBILITY	0.197	0.060	0.021
	CCI TPA65R-BU8D				
	Ericsson AIR 6449 B77D/ C-Band				
	Ericsson RRUS 4449 B5, B12				
	Ericsson RRUS 4478 B14				
	Ericsson RRUS 8843 B2, B66A				
	Raycap DC9-48-60-24-8C-EV				
180.0	Ericsson Radio 4460 B25+B66	SPRINT NEXTEL	0.198	0.060	0.051
	Ericsson Radio 4480 B71+B85A				
125.0	Bird 432E-83I-01-T	STATE OF CT	0.155	0.058	0.063
	Generic 24" X 12" Panel				
105.0	Generic 2' x 4' Rectangular Grid Dish	Other	0.141	0.056	0.052
84.0	Generic 6' Ice Shield	STATE OF CT	0.119	0.055	0.072
80.0	RFS PA6-65AC w/ Radome	AT&T MOBILITY	0.114	0.055	0.100
	RFS PA6-65AC w/ Radome	STATE OF CT	0.114	0.055	0.100

***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.

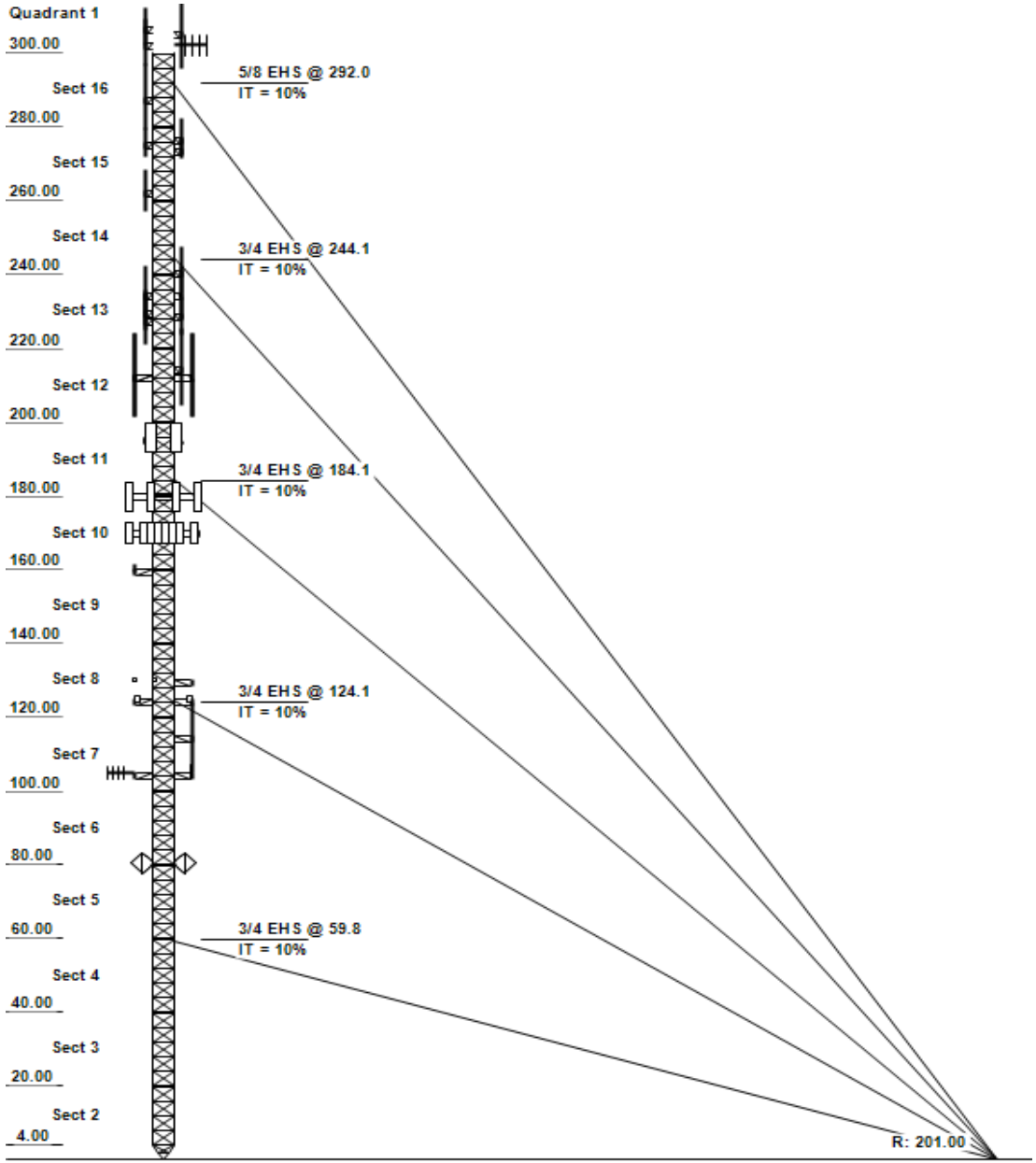
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with 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:	6310, FRANKLIN CT	Height :	300 ft
Client	SPRINT NEXTEL	Base Width :	4 ft
Code:	ANSI/TIA-222-H	Shape :	Triangle



SITE PARAMETERS

Nominal Wind : 123 mph wind with no ice — Exposure : B — Site Class : D

Ice Wind: 50 mph wind with 1" radial — Topo Method: Method 2 — Risk Cat : II

Service Wind : 60 mph Serviceability — Topo Feature : Hill — S_s : 0.195 — S_1 : 0.054

SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	SOL 50 ksi 2 1/4" SOL	PL 36 ksi PL 2 x 0.5"	SAE 36 ksi 3X3X0.3125
2 - 10	SOL 50 ksi 2 1/4" SOL	SOL 50 ksi 5/8" SOLID	SAE 36 ksi 2X2X0.1875
11 - 16	SOL 50 ksi 2" SOLID	SOL 50 ksi 5/8" SOLID	SAE 36 ksi 2X2X0.1875

REDUNDANT SECONDARY BRACING

Section	Sub Diag 1	Sub Horiz 1	Sub Diag 2	Sub Horiz 2	Sub Diag 3	Sub Horiz 3
1 - 16	-	-	-	-	-	-

DISCRETE APPURTENANCE

Elev (ft)	Type	Qty	Description
307.00	OMNI	1	Generic 10' Omni
306.00	DIPOLE	1	Generic 20' Dipole
303.00	OMNI	1	Generic 13' Omni
302.00	YAGI	1	Generic 6' Yagi
294.00	T-Arm	3	Round Side Arm
288.00	DIPOLE	1	Generic 18' Dipole
277.00	DIPOLE	1	Generic 10' Dipole
276.00	BOB/SSB	1	Generic 24" x 24" Junction Box
276.00	OMNI	1	Generic 8' Omni
274.00	OMNI	1	Generic 6' Omni
268.00	T-Arm	3	Round Side Arm
263.00	OMNI	1	Scala OGT9-840N
241.00	OMNI	1	Generic 13' Omni
235.00	OMNI	3	Sinclair SC479-HF1LDF(E5765)
235.00	TTA	1	Bird 432E-83I-01-T
233.00	T-Arm	3	Round Side Arm
230.00	OMNI	1	Generic 11' Omni
229.50	OMNI	1	Scala OGT9-840
228.00	OMNI	1	Generic 14' Omni
215.00	DIPOLE	1	Decibel DB224
213.00	DIPOLE	1	Generic 22' Dipole
213.00	DIPOLE	1	Andrew DB224
213.00	T-Arm	2	Side Arm
196.00	BOB/SSB	2	Raycap DC9-48-60-24-8C-EV
196.00	Other	3	Sabre C10857001C Sector Frame
196.00	PANEL	3	Ericsson AIR 6449 B77D/ C-Band
196.00	PANEL	3	CCI DMP65R-BU8D
196.00	PANEL	3	CCI TPA65R-BU8D
196.00	RRU/RRH	3	Ericsson RRUS 4449 B5, B12
196.00	RRU/RRH	3	Ericsson RRUS 4478 B14
196.00	RRU/RRH	3	Ericsson RRUS 8843 B2, B66A
180.00	PANEL	3	Ericsson Air6449 B41
180.00	PANEL	3	RFS APXVAALL24 43-U-NA20
180.00	RRU/RRH	3	Ericsson Radio 4480 B71+B85A
180.00	RRU/RRH	3	Ericsson Radio 4460 B25+B66

JOB INFORMATION

Asset:	6310, FRANKLIN CT	Height :	300 ft
Client	SPRINT NEXTEL	Base Width :	4 ft
Code:	ANSI/TIA-222-H	Shape :	Triangle

DISCRETE APPURTENANCE

Elev (ft)	Type	Qty	Description
180.00	Sector Frame	3	Round Sector Frame
170.00	BOB/SSB	1	Raycap RCMDC-6627-PF-48
170.00	DIPLEXER/DUAL COUPLER	3	Commscope CBC78T-DS-43-2X
170.00	PANEL	3	Commscope LNX-8513DS-A1M
170.00	PANEL	3	Samsung MT6407-77A
170.00	PANEL	6	Commscope JAHH-65B-R3B
170.00	RRU/RRH	3	Samsung B5/B13 RRH-BR04C
170.00	RRU/RRH	3	Samsung B2/B66A RRH-BR049
170.00	Sector Frame	3	Flat Light Sector Frame
160.00	DIPLEXER/DUAL COUPLER	1	Generic Low Noise Amplifier
160.00	Filter	1	Generic 5" x 3" x 2" Cavity Fi
160.00	OMNI	1	Procom CXL 900-3LW
160.00	T-Arm	1	Flat Side Arm
130.00	BOB/SSB	1	Generic 24" x 24" Junction Box
130.00	PANEL	2	Scala AP7-850/065
130.00	T-Arm	1	Round Side Arm
125.00	PANEL	3	Generic 24" X 12" Panel
125.00	T-Arm	3	Flat Side Arm
125.00	TTA	1	Bird 432E-83I-01-T
115.00	DIPOLE	1	Generic 20' Dipole
115.00	T-Arm	1	Round Side Arm
105.00	DISH-GRID	1	Generic 2' x 4' Rectangular Gr
105.00	T-Arm	1	Round Side Arm
105.00	YAGI	1	Generic 5' Yagi
84.00	ICE SHIELD	1	Generic 6' Ice Shield
82.00	ICE SHIELD	1	Generic 6' Ice Shield
80.00	DISH-RADOME	1	RFS PA6-65AC w/ Radome
80.00	DISH-RADOME	1	RFS PA6-65AC w/ Radome

LINEAR APPURTENANCE

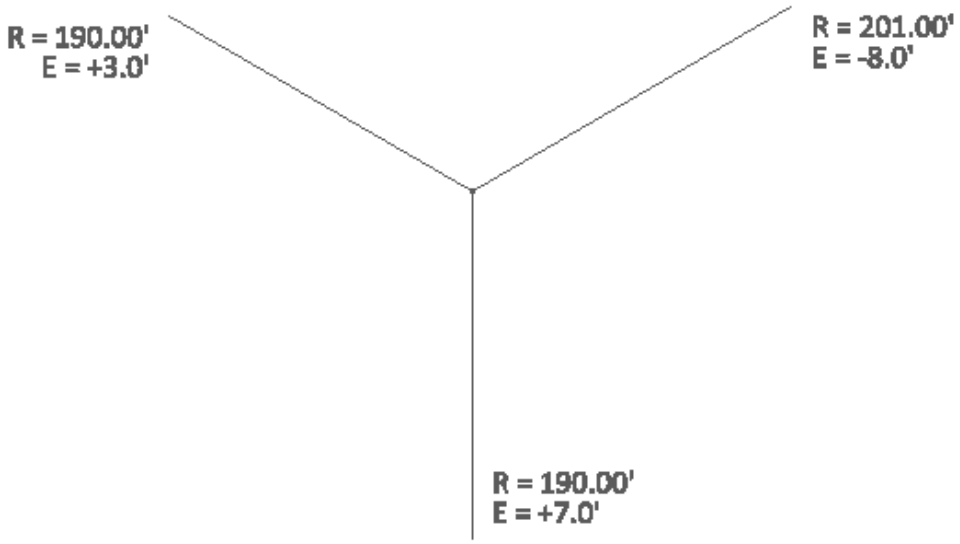
Elev (ft) From	To	Qty	Description
5.00	307.00	1	7/8" Coax
5.00	306.00	1	7/8" Coax
5.00	303.00	1	7/8" Coax
0.00	300.00	1	Climbing Ladder
5.00	288.00	2	1 1/4" Coax
0.00	276.00	1	7/8" Coax
0.00	274.00	1	7/8" Coax
0.00	263.00	1	1 5/8" Coax
0.00	235.00	2	1 5/8" Coax
0.00	229.50	1	1 5/8" Coax
0.00	215.00	1	7/8" Coax
5.00	213.00	1	1/2" Coax
0.00	196.00	4	0.92" (23.4mm) Cable
0.00	196.00	2	0.39" (10mm) Fiber Trunk
0.00	180.00	3	1.99" (50.7mm) Hybrid
0.00	170.00	2	1 5/8" Hybriflex
0.00	170.00	11	1 5/8" Coax
0.00	170.00	1	1 1/4" (1.25"- 31.8mm) Fiber
0.00	160.00	1	1/2" Coax
0.00	130.00	2	1 5/8" Coax

JOB INFORMATION

Asset:	6310, FRANKLIN CT	Height :	300 ft
Client	SPRINT NEXTEL	Base Width :	4 ft
Code:	ANSI/TIA-222-H	Shape :	Triangle

LINEAR APPURTENANCE

Elev (ft) From	To	Qty	Description
5.00	130.00	4	0.41" (10.3mm) LMR-400
0.00	125.00	2	1 5/8" Coax
5.00	115.00	1	1/2" Coax
0.00	80.00	1	WE65
0.00	80.00	1	EW52



GUY ANCHOR DESIGN LOADS

Radius (ft)	Drop (ft)	Azimuth (o)	Uplift (kip)	Shear (kip)
190.00	7.00	0	66.95	85.52
190.00	3.00	240	68.91	85.79
201.00	-8.00	120	69.26	85.41

GLOBAL BASE FOUNDATION DESIGN LOADS

Vertical (kip)	Horizontal (kip)
200.91	2.95

ANALYSIS PARAMETERS

Location:	New London County, CT	Height:	300 ft
Type and Shape:	Guyed, Triangle	Base Elevation:	0.00 ft
Manufacturer:	Undetermined	Bottom Face Width:	4.00 ft
Kd	0.85	Top Face Width:	4.00 ft
Ke:	0.98		

ICE & WIND PARAMETERS

Exposure Category:	B	Design Wind Speed Without Ice:	123 mph
Risk Category:	II	Design Wind Speed with Ice:	50 mph
Topographic Factor Procedure:	Method 2	Operational Windspeed:	60 mph
		Design Ice Thickness:	1.00 in
		HMSL:	499 ft
Crest Height(H):	344 ft		
Crest Length(L):	1850 ft	Distance from Apex (x):	0
Feature:	Hill	Upwind/Downwind:	Upwind

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil			Period Based on Rayleigh Method (sec):	0.89
T_L (sec):	6	P:	1.3	$C_{s:}$	0.032
$S_{s:}$	0.195	$S_{1:}$	0.054	$C_{s,}$ Max:	0.032
$F_{a:}$	1.600	$F_{v:}$	2.400	$C_{s,}$ Min:	0.030
$S_{ds:}$	0.208	S_{d1}:	0.086		

LOAD CASES

1.2D + 1.0W Normal	123 mph wind with no ice
1.2D + 1.0W 60°	123 mph wind with no ice
1.2D + 1.0W 90°	123 mph wind with no ice
1.2D + 1.0W 120°	123 mph wind with no ice
1.2D + 1.0W 180°	123 mph wind with no ice
1.2D + 1.0W 210°	123 mph wind with no ice
1.2D + 1.0W 240°	123 mph wind with no ice
1.2D + 1.0W 300°	123 mph wind with no ice
1.2D + 1.0W 330°	123 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Normal	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 60°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 90°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 120°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 180°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 210°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 240°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 300°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 330°	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic
1.2D + 1.0Ev + 1.0Eh 60°	Seismic
1.2D + 1.0Ev + 1.0Eh 90°	Seismic
1.2D + 1.0Ev + 1.0Eh 120°	Seismic
1.2D + 1.0Ev + 1.0Eh 180°	Seismic
1.2D + 1.0Ev + 1.0Eh 210°	Seismic
1.2D + 1.0Ev + 1.0Eh 240°	Seismic
1.2D + 1.0Ev + 1.0Eh 300°	Seismic
1.2D + 1.0Ev + 1.0Eh 330°	Seismic
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 60°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 90°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 120°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 180°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 210°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 240°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 300°	Seismic (Reduced DL)

LOAD CASES	
0.9D - 1.0Ev + 1.0Eh 330°	Seismic (Reduced DL)
1.0D + 1.0W Service Normal	60 mph Wind with No Ice
1.0D + 1.0W Service 60°	60 mph Wind with No Ice
1.0D + 1.0W Service 90°	60 mph Wind with No Ice
1.0D + 1.0W Service 120°	60 mph Wind with No Ice
1.0D + 1.0W Service 180°	60 mph Wind with No Ice
1.0D + 1.0W Service 210°	60 mph Wind with No Ice
1.0D + 1.0W Service 240°	60 mph Wind with No Ice
1.0D + 1.0W Service 300°	60 mph Wind with No Ice
1.0D + 1.0W Service 330°	60 mph Wind with No Ice

TOWER LOADING

Discrete Appurtenance Properties 1.2D + 1.0W

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
307.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	52.75	135	30
306.0	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	52.74	337	72
303.0	Generic 13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	52.71	175	48
302.0	Generic 6' Yagi	1	25	9.0	6.0	60.0	3.0	1.00	1.00	0.0	0.00	52.70	401	30
294.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	52.62	468	540
288.0	Generic 18' Dipole	1	55	6.8	18.0	3.0	3.0	1.00	1.00	0.0	0.00	52.57	302	66
277.0	Generic 10' Dipole	1	30	3.8	10.0	3.0	3.0	1.00	1.00	0.0	0.00	52.46	168	36
276.0	Generic 8' Omni	1	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	52.45	107	30
276.0	Generic 24" x 24" Junction Box	1	20	4.8	2.0	24.0	8.0	0.80	0.67	0.0	0.00	52.45	115	24
274.0	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.00	52.43	78	30
268.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	52.37	465	540
263.0	Scala OGT9-840N	1	19	2.3	11.4	2.0	2.0	1.00	1.00	0.0	0.00	52.31	101	22
241.0	Generic 13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	52.08	173	48
235.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	1.00	1.00	0.0	0.00	52.01	53	30
235.0	Sinclair SC479-HF1LDF(E5765)	3	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	52.01	667	122
233.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	51.98	462	540
230.0	Generic 11' Omni	1	40	3.3	11.0	3.0	3.0	1.00	1.00	0.0	0.00	51.95	146	48
229.5	Scala OGT9-840	1	19	2.3	11.4	2.0	2.0	1.00	1.00	0.0	0.00	51.94	100	22
228.0	Generic 14' Omni	1	40	4.2	14.0	3.0	3.0	1.00	1.00	0.0	0.00	51.92	185	48
215.0	Decibel DB224	1	32	5.4	21.3	2.0	2.0	1.00	1.00	0.0	0.00	51.76	240	38
213.0	Andrew DB224	1	38	6.0	23.0	0.0	0.0	1.00	1.00	0.0	0.00	51.73	266	46
213.0	Side Arm	2	150	6.3	0.0	0.0	0.0	1.00	0.90	0.0	0.00	51.73	499	360
213.0	Generic 22' Dipole	1	66	8.3	22.0	3.0	3.0	1.00	1.00	0.0	0.00	51.73	364	79
196.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	51.48	86	259
196.0	Ericsson RRUS 4478 B14	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	51.48	97	216
196.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	51.48	103	256
196.0	Ericsson AIR 6449 B77D/ C-Band	3	82	4.0	2.5	15.9	10.6	0.80	0.70	0.0	0.00	51.48	296	294
196.0	Raycap DC9-48-60-24-8C-EV	2	16	4.8	2.6	18.3	10.2	0.80	0.75	0.0	0.00	51.48	251	38
196.0	Sabre C10857001C Sector Frame	3	462	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	51.48	950	1663
196.0	CCI DMP65R-BU8D	3	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.00	51.48	1182	345
196.0	CCI TPA65R-BU8D	3	83	18.1	8.0	21.0	7.8	0.80	0.63	0.0	0.00	51.48	1197	297
180.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	51.20	179	392
180.0	Ericsson Radio 4480 B71+B85A	3	84	2.9	1.8	15.7	7.5	0.80	0.67	0.0	0.00	51.20	200	302
180.0	Ericsson Air6449 B41	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	51.20	374	374
180.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	51.20	1058	1080
180.0	RFS APXVAALL24 43-U-NA20	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.00	51.20	1332	442
170.0	Commscope CBC78T-DS-43-2X	3	21	0.6	0.8	6.9	6.4	0.80	0.50	0.0	0.00	51.00	29	75
170.0	Samsung B5/B13 RRH-BR04C	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.00	51.00	98	253
170.0	Samsung B2/B66A RRH-BR049	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	51.00	98	304
170.0	Raycap RCMDC-6627-PF-48	1	32	4.1	2.5	16.5	12.6	0.80	1.00	0.0	0.00	51.00	141	38
170.0	Samsung MT6407-77A	3	82	4.7	2.9	16.1	5.5	0.80	0.61	0.0	0.00	51.00	299	294
170.0	Commscope LNX-8513DS-A1M	3	39	8.2	6.1	11.9	7.1	0.80	0.69	0.0	0.00	51.00	587	141
170.0	Commscope JAHH-65B-R3B	6	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.00	51.00	1308	436
170.0	Flat Light Sector Frame	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	51.00	1170	1440
160.0	Procom CXL 900-3LW	1	2	0.1	2.3	0.6	0.6	1.00	1.00	0.0	0.00	50.77	6	2
160.0	Generic 5" x 3" x 2" Cavity Fi	1	2	0.1	0.4	3.2	1.9	1.00	0.50	0.0	0.00	50.77	3	2
160.0	Generic Low Noise Amplifier	1	2	0.2	0.4	4.0	2.0	1.00	0.50	0.0	0.00	50.77	4	2
160.0	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	50.77	272	180
130.0	Scala AP7-850/065	2	3	1.1	1.1	10.0	4.0	0.90	0.62	0.0	0.00	49.88	52	7
130.0	Generic 24" x 24" Junction Box	1	20	4.8	2.0	24.0	8.0	0.90	0.67	0.0	0.00	49.88	123	24
130.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	49.88	220	180
125.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	1.00	1.00	0.0	0.00	49.69	51	30
125.0	Generic 24" X 12" Panel	3	20	2.4	2.0	12.0	6.0	1.00	0.67	0.0	0.00	49.69	204	72
125.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.00	49.69	535	540
115.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	49.26	218	180
115.0	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	49.26	315	72
105.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	48.76	216	180
105.0	Generic 5' Yagi	1	20	7.3	5.0	60.0	3.0	1.00	1.00	0.0	0.00	48.76	302	24
105.0	Generic 2' x 4' Rectangular Gr	1	40	7.5	4.0	48.0	24.0	1.00	1.00	0.0	0.00	48.76	309	48
84.0	Generic 6' Ice Shield	1	450	3.9	1.2	100.0	48.0	1.00	1.00	0.0	0.00	47.37	157	540
82.0	Generic 6' Ice Shield	1	450	3.9	1.2	100.0	48.0	1.00	1.00	0.0	0.00	47.20	156	540
80.0	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	47.04	976	370
80.0	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	47.04	976	370
	Totals	119	12,627	780.1									22,131	15,152

TOWER LOADING

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
307.0	Generic 10' Omni	1	83	5.8	10.0	3.0	3.0	1.00	1.00	0.0	0.00	8.72	43	88
306.0	Generic 20' Dipole	1	230	16.6	20.0	3.0	3.0	1.00	1.00	0.0	0.00	8.72	123	242
303.0	Generic 13' Omni	1	115	7.5	13.0	3.0	3.0	1.00	1.00	0.0	0.00	8.71	55	123
302.0	Generic 6' Yagi	1	220	27.3	6.0	60.0	3.0	1.00	1.00	0.0	0.00	8.71	202	225
294.0	Round Side Arm	3	206	7.3	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.70	108	709
288.0	Generic 18' Dipole	1	208	15.0	18.0	3.0	3.0	1.00	1.00	0.0	0.00	8.69	111	219
277.0	Generic 10' Dipole	1	115	8.4	10.0	3.0	3.0	1.00	1.00	0.0	0.00	8.67	62	121
276.0	Generic 8' Omni	1	72	4.5	8.0	3.0	3.0	1.00	1.00	0.0	0.00	8.67	33	77
276.0	Generic 24" x 24" Junction Box	1	108	5.9	2.0	24.0	8.0	0.80	0.67	0.0	0.00	8.67	23	112
274.0	Generic 6' Omni	1	60	2.7	6.0	3.0	3.0	1.00	1.00	0.0	0.00	8.66	20	65
268.0	Round Side Arm	3	206	7.3	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.65	108	708
263.0	Scala OGT9-840N	1	99	5.4	11.4	2.0	2.0	1.00	1.00	0.0	0.00	8.64	40	103
241.0	Generic 13' Omni	1	115	7.5	13.0	3.0	3.0	1.00	1.00	0.0	0.00	8.61	55	123
235.0	Bird 432E-83I-01-T	1	56	1.8	1.0	12.0	7.5	1.00	1.00	0.0	0.00	8.59	13	61
235.0	Sinclair SC479-HF1LDF(E5765)	3	129	9.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	8.59	196	408
233.0	Round Side Arm	3	206	7.3	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.59	107	708
230.0	Generic 11' Omni	1	104	6.3	11.0	3.0	3.0	1.00	1.00	0.0	0.00	8.58	46	112
229.5	Scala OGT9-840	1	99	5.4	11.4	2.0	2.0	1.00	1.00	0.0	0.00	8.58	39	103
228.0	Generic 14' Omni	1	121	8.0	14.0	3.0	3.0	1.00	1.00	0.0	0.00	8.58	59	129
215.0	Decibel DB224	1	159	17.8	21.3	2.0	2.0	1.00	1.00	0.0	0.00	8.55	129	166
213.0	Andrew DB224	1	180	20.0	23.0	0.0	0.0	1.00	1.00	0.0	0.00	8.55	146	188
213.0	Side Arm	2	206	8.2	0.0	0.0	0.0	1.00	0.90	0.0	0.00	8.55	107	472
213.0	Generic 22' Dipole	1	252	18.2	22.0	3.0	3.0	1.00	1.00	0.0	0.00	8.55	133	265
196.0	Ericsson RRUS 8843 B2, B66A	3	119	2.3	1.2	13.2	10.9	0.80	0.50	0.0	0.00	8.51	20	400
196.0	Ericsson RRUS 4478 B14	3	102	2.5	1.4	13.4	7.7	0.80	0.50	0.0	0.00	8.51	22	342
196.0	Ericsson RRUS 4449 B5, B12	3	120	2.7	1.5	13.2	9.4	0.80	0.50	0.0	0.00	8.51	23	403
196.0	Ericsson AIR 6449 B77D/ C-Band	3	171	5.1	2.5	15.9	10.6	0.80	0.70	0.0	0.00	8.51	62	561
196.0	Raycap DC9-48-60-24-8C-EV	2	115	5.9	2.6	18.3	10.2	0.80	0.75	0.0	0.00	8.51	51	236
196.0	Sabre C10857001C Sector Frame	3	708	22.1	0.0	0.0	0.0	0.75	0.67	0.0	0.00	8.51	241	2401
196.0	CCI DMP65R-BU8D	3	355	20.7	8.0	20.7	7.7	0.80	0.63	0.0	0.00	8.51	226	1124
196.0	CCI TPA65R-BU8D	3	346	20.9	8.0	21.0	7.8	0.80	0.63	0.0	0.00	8.51	229	1087
180.0	Ericsson Radio 4460 B25+B66	3	176	3.4	1.6	15.7	12.1	0.80	0.67	0.0	0.00	8.46	39	595
180.0	Ericsson Radio 4480 B71+B85A	3	142	3.7	1.8	15.7	7.5	0.80	0.67	0.0	0.00	8.46	43	475
180.0	Ericsson Air6449 B41	3	208	6.9	2.8	20.6	8.6	0.80	0.63	0.0	0.00	8.46	75	686
180.0	Round Sector Frame	3	580	27.0	0.0	0.0	0.0	0.75	0.75	0.0	0.00	8.46	328	1921
180.0	RFS APXVAALL24 43-U-NA20	3	420	23.1	8.0	24.0	8.5	0.80	0.63	0.0	0.00	8.46	251	1333
170.0	Commscope CBC78T-DS-43-2X	3	38	0.9	0.8	6.9	6.4	0.80	0.50	0.0	0.00	8.43	8	125
170.0	Samsung B5/B13 RRH-BR04C	3	114	2.6	1.3	15.0	8.1	0.80	0.50	0.0	0.00	8.43	22	384
170.0	Samsung B2/B66A RRH-BR049	3	133	2.6	1.3	15.0	10.0	0.80	0.50	0.0	0.00	8.43	22	450
170.0	Raycap RCMDC-6627-PF-48	1	129	5.1	2.5	16.5	12.6	0.80	1.00	0.0	0.00	8.43	29	135
170.0	Samsung MT6407-77A	3	159	5.9	2.9	16.1	5.5	0.80	0.61	0.0	0.00	8.43	62	527
170.0	Commscope LNX-8513DS-A1M	3	173	10.3	6.1	11.9	7.1	0.80	0.69	0.0	0.00	8.43	122	544
170.0	Commscope JAHH-65B-R3B	6	215	11.2	6.0	13.8	8.2	0.80	0.69	0.0	0.00	8.43	266	1362
170.0	Flat Light Sector Frame	3	629	29.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	8.43	318	2128
160.0	Procom CXL 900-3LW	1	6	0.7	2.3	0.6	0.6	1.00	1.00	0.0	0.00	8.39	5	6
160.0	Generic 5" x 3" x 2" Cavity Fi	1	5	0.4	0.4	3.2	1.9	1.00	0.50	0.0	0.00	8.39	1	6
160.0	Generic Low Noise Amplifier	1	6	0.4	0.4	4.0	2.0	1.00	0.50	0.0	0.00	8.39	1	7
160.0	Flat Side Arm	1	206	8.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	8.39	58	236
130.0	Scala AP7-850/065	2	29	1.4	1.1	10.0	4.0	0.90	0.62	0.0	0.00	8.24	11	59
130.0	Generic 24" x 24" Junction Box	1	107	5.9	2.0	24.0	8.0	0.90	0.67	0.0	0.00	8.24	25	111
130.0	Round Side Arm	1	205	7.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	8.24	51	235
125.0	Bird 432E-83I-01-T	1	56	1.8	1.0	12.0	7.5	1.00	1.00	0.0	0.00	8.21	12	60
125.0	Generic 24" X 12" Panel	3	67	3.2	2.0	12.0	6.0	1.00	0.67	0.0	0.00	8.21	45	212
125.0	Flat Side Arm	3	205	8.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.21	115	706
115.0	Round Side Arm	1	205	7.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	8.14	50	235
115.0	Generic 20' Dipole	1	227	16.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	8.14	114	239
105.0	Round Side Arm	1	205	7.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	8.06	50	235
105.0	Generic 5' Yagi	1	180	22.3	5.0	60.0	3.0	1.00	1.00	0.0	0.00	8.06	153	184
105.0	Generic 2' x 4' Rectangular Gr	1	209	45.1	4.0	48.0	24.0	1.00	1.00	0.0	0.00	8.06	309	217
84.0	Generic 6' Ice Shield	1	918	6.6	1.2	100.0	48.0	1.00	1.00	0.0	0.00	7.83	44	1008
82.0	Generic 6' Ice Shield	1	918	6.6	1.2	100.0	48.0	1.00	1.00	0.0	0.00	7.80	43	1008
80.0	RFS PA6-65AC w/ Radome	1	832	26.2	6.0	72.0	0.0	1.00	1.00	0.0	0.00	7.77	173	893
80.0	RFS PA6-65AC w/ Radome	1	832	26.2	6.0	72.0	0.0	1.00	1.00	0.0	0.00	7.77	173	893
	Totals	119	26,774	1178.2									5847	29,299

TOWER LOADING

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert Ecc (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
307.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	12.55	32	25
306.0	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	12.55	80	60
303.0	Generic 13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	12.54	42	40
302.0	Generic 6' Yagi	1	25	9.0	6.0	60.0	3.0	1.00	1.00	0.0	0.00	12.54	95	25
294.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	12.52	111	450
288.0	Generic 18' Dipole	1	55	6.8	18.0	3.0	3.0	1.00	1.00	0.0	0.00	12.51	72	55
277.0	Generic 10' Dipole	1	30	3.8	10.0	3.0	3.0	1.00	1.00	0.0	0.00	12.48	40	30
276.0	Generic 8' Omni	1	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	12.48	25	25
276.0	Generic 24" x 24" Junction Box	1	20	4.8	2.0	24.0	8.0	0.80	0.67	0.0	0.00	12.48	27	20
274.0	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.00	12.48	19	25
268.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	12.46	111	450
263.0	Scala OGT9-840N	1	19	2.3	11.4	2.0	2.0	1.00	1.00	0.0	0.00	12.45	24	18
241.0	Generic 13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	12.39	41	40
235.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	1.00	1.00	0.0	0.00	12.38	13	25
235.0	Sinclair SC479-HF1LDF(E5765)	3	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	12.38	159	102
233.0	Round Side Arm	3	150	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	12.37	110	450
230.0	Generic 11' Omni	1	40	3.3	11.0	3.0	3.0	1.00	1.00	0.0	0.00	12.36	35	40
229.5	Scala OGT9-840	1	19	2.3	11.4	2.0	2.0	1.00	1.00	0.0	0.00	12.36	24	18
228.0	Generic 14' Omni	1	40	4.2	14.0	3.0	3.0	1.00	1.00	0.0	0.00	12.36	44	40
215.0	Decibel DB224	1	32	5.4	21.3	2.0	2.0	1.00	1.00	0.0	0.00	12.32	57	32
213.0	Andrew DB224	1	38	6.0	23.0	0.0	0.0	1.00	1.00	0.0	0.00	12.31	63	38
213.0	Side Arm	2	150	6.3	0.0	0.0	0.0	1.00	0.90	0.0	0.00	12.31	119	300
213.0	Generic 22' Dipole	1	66	8.3	22.0	3.0	3.0	1.00	1.00	0.0	0.00	12.31	87	66
196.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	12.25	20	216
196.0	Ericsson RRUS 4478 B14	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	12.25	23	180
196.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	12.25	25	213
196.0	Ericsson AIR 6449 B77D/ C-Band	3	82	4.0	2.5	15.9	10.6	0.80	0.70	0.0	0.00	12.25	70	245
196.0	Raycap DC9-48-60-24-8C-EV	2	16	4.8	2.6	18.3	10.2	0.80	0.75	0.0	0.00	12.25	60	32
196.0	Sabre C10857001C Sector Frame	3	462	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	12.25	226	1386
196.0	CCI DMP65R-BU8D	3	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.00	12.25	281	287
196.0	CCI TPA65R-BU8D	3	83	18.1	8.0	21.0	7.8	0.80	0.63	0.0	0.00	12.25	285	248
180.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	12.18	43	327
180.0	Ericsson Radio 4480 B71+B85A	3	84	2.9	1.8	15.7	7.5	0.80	0.67	0.0	0.00	12.18	47	252
180.0	Ericsson Air6449 B41	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	12.18	89	312
180.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	12.18	252	900
180.0	RFS APXVAALL24 43-U-NA20	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.00	12.18	317	368
170.0	Commscope CBC78T-DS-43-2X	3	21	0.6	0.8	6.9	6.4	0.80	0.50	0.0	0.00	12.14	7	62
170.0	Samsung B5/B13 RRH-BR04C	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.00	12.14	23	211
170.0	Samsung B2/B66A RRH-BR049	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	12.14	23	253
170.0	Raycap RCMDC-6627-PF-48	1	32	4.1	2.5	16.5	12.6	0.80	1.00	0.0	0.00	12.14	33	32
170.0	Samsung MT6407-77A	3	82	4.7	2.9	16.1	5.5	0.80	0.61	0.0	0.00	12.14	71	245
170.0	Commscope LNX-8513DS-A1M	3	39	8.2	6.1	11.9	7.1	0.80	0.69	0.0	0.00	12.14	140	118
170.0	Commscope JAHH-65B-R3B	6	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.00	12.14	311	364
170.0	Flat Light Sector Frame	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	12.14	278	1200
160.0	Procom CXL 900-3LW	1	2	0.1	2.3	0.6	0.6	1.00	1.00	0.0	0.00	12.08	1	2
160.0	Generic 5" x 3" x 2" Cavity Fi	1	2	0.1	0.4	3.2	1.9	1.00	0.50	0.0	0.00	12.08	1	2
160.0	Generic Low Noise Amplifier	1	2	0.2	0.4	4.0	2.0	1.00	0.50	0.0	0.00	12.08	1	2
160.0	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	12.08	65	150
130.0	Scala AP7-850/065	2	3	1.1	1.1	10.0	4.0	0.90	0.62	0.0	0.00	11.87	12	6
130.0	Generic 24" x 24" Junction Box	1	20	4.8	2.0	24.0	8.0	0.90	0.67	0.0	0.00	11.87	29	20
130.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.87	52	150
125.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	1.00	1.00	0.0	0.00	11.82	12	25
125.0	Generic 24" X 12" Panel	3	20	2.4	2.0	12.0	6.0	1.00	0.67	0.0	0.00	11.82	48	60
125.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.00	11.82	127	450
115.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.72	52	150
115.0	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	11.72	75	60
105.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.60	51	150
105.0	Generic 5' Yagi	1	20	7.3	5.0	60.0	3.0	1.00	1.00	0.0	0.00	11.60	72	20
105.0	Generic 2' x 4' Rectangular Gr	1	40	7.5	4.0	48.0	24.0	1.00	1.00	0.0	0.00	11.60	74	40
84.0	Generic 6' Ice Shield	1	450	3.9	1.2	100.0	48.0	1.00	1.00	0.0	0.00	11.27	37	450
82.0	Generic 6' Ice Shield	1	450	3.9	1.2	100.0	48.0	1.00	1.00	0.0	0.00	11.23	37	450
80.0	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	11.19	232	308
80.0	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	11.19	232	308

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
	Totals	119	12,627	780.1									5,266	12,627

TOWER LOADING

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	% In Wind	Spread On Faces	Bundling	Cluster Dia (in)	Out of Zone	Spacing (in)	Orient Factor	K_a Override
5.0	307.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
5.0	306.0	7/8" Coax	1	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
5.0	303.0	7/8" Coax	1	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
5.0	288.0	1 1/4" Coax	2	1.55	0.63	100	3	Individual	0.00	N	1.00	1.00	0.00
5.0	213.0	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00
5.0	130.0	0.41" (10.3mm) LMR-400	4	0.41	0.07	100	3	Individual	0.00	N	1.00	1.00	0.00
5.0	115.0	1/2" Coax	1	0.63	0.15	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	300.0	Climbing Ladder	1	2.00	6.90	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.0	276.0	7/8" Coax	1	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	274.0	7/8" Coax	1	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	263.0	1 5/8" Coax	1	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	235.0	1 5/8" Coax	2	1.98	0.82	50	2	Block	0.00	N	1.00	1.00	0.00
0.0	229.5	1 5/8" Coax	1	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	215.0	7/8" Coax	1	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	196.0	0.39" (10mm) Fiber Trunk	2	0.39	0.06	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	196.0	0.92" (23.4mm) Cable	4	0.92	0.89	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	180.0	1.99" (50.7mm) Hybrid	3	1.99	1.90	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	170.0	1 5/8" Hybriflex	2	1.98	1.30	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	170.0	1 5/8" Coax	11	1.98	0.82	54	1	Block	0.00	N	1.00	1.00	0.00
0.0	170.0	1 1/4" (1.25"- 31.8mm) Fiber	1	1.25	1.05	100	1	Individual	0.00	N	1.00	1.00	0.01
0.0	160.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	130.0	1 5/8" Coax	2	1.98	0.82	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	125.0	1 5/8" Coax	2	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.01
0.0	80.0	WE65	1	2.03	0.53	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	80.0	EW52	1	2.25	0.59	100	2	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.0W Normal
123 mph wind with no ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	52.58	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1440	0	1225	421	1646	
15	270	52.39	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1425	0	1131	622	1752	
14	250	52.18	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1494	0	1215	738	1953	
13	230	51.95	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1485	0	1121	883	2004	
12	210	51.69	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1513	0	1115	1030	2146	
11	190	51.38	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1635	0	1197	1237	2434	
10	170	51.00	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2098	0	1142	2237	3380	
9	150	50.52	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2254	0	1132	2895	4026	
8	130	49.88	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2334	0	1202	3002	4203	
7	110	49.02	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2342	0	1098	3116	4214	
6	90	47.82	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2343	0	1071	3047	4118	
5	70	46.09	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2370	0	1032	3138	4170	
4	50	43.45	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2417	0	1047	2959	4006	
3	30	39.08	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2370	0	876	2661	3537	
2	12	40.58	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	1899	0	737	2191	2928	
1	2	41.49	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	627	0	252	413	648	**
** = Section Force Exceeds Solidity Ratio Criteria														30,048	0			47,165	

1.2D + 1.0W 60°
123 mph wind with no ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	52.58	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1440	0	1112	421	1532	
15	270	52.39	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1425	0	1037	622	1659	
14	250	52.18	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1494	0	1103	738	1841	
13	230	51.95	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1485	0	1029	883	1911	
12	210	51.69	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1513	0	1023	1030	2054	
11	190	51.38	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1635	0	1086	1237	2323	
10	170	51.00	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2098	0	1053	2237	3290	
9	150	50.52	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2254	0	1043	2895	3938	
8	130	49.88	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2334	0	1096	3002	4098	
7	110	49.02	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2342	0	1012	3116	4128	
6	90	47.82	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2343	0	987	3047	4035	
5	70	46.09	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2370	0	952	3138	4090	
4	50	43.45	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2417	0	955	2959	3914	
3	30	39.08	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2370	0	807	2661	3468	
2	12	40.58	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	1899	0	678	2191	2869	
1	2	41.49	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	627	0	218	413	631	
** = Section Force Exceeds Solidity Ratio Criteria														30,048	0			45,780	

1.2D + 1.0W 90°
123 mph wind with no ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	52.58	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1440	0	1140	421	1561
15	270	52.39	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1425	0	1061	622	1682
14	250	52.18	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1494	0	1131	738	1869
13	230	51.95	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1485	0	1052	883	1934
12	210	51.69	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1513	0	1046	1030	2077
11	190	51.38	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1635	0	1114	1237	2351

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
10	170	51.00	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2098	0	1075	2237	3313
9	150	50.52	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2254	0	1065	2895	3960
8	130	49.88	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2334	0	1122	3002	4124
7	110	49.02	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2342	0	1034	3116	4149
6	90	47.82	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2343	0	1008	3047	4056
5	70	46.09	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2370	0	972	3138	4110
4	50	43.45	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2417	0	978	2959	3937
3	30	39.08	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2370	0	824	2661	3485
2	12	40.58	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	1899	0	693	2191	2884
1	2	41.49	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	627	0	226	413	639
** = Section Force Exceeds Solidity Ratio Criteria														30,048	0			46,131

1.2D + 1.0W 120° Gust Response Factor (Gh): 0.85
123 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	52.58	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1440	0	1225	421	1646	
15	270	52.39	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1425	0	1131	622	1752	
14	250	52.18	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1494	0	1215	738	1953	
13	230	51.95	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1485	0	1121	883	2004	
12	210	51.69	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1513	0	1115	1030	2146	
11	190	51.38	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1635	0	1197	1237	2434	
10	170	51.00	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2098	0	1142	2237	3380	
9	150	50.52	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2254	0	1132	2895	4026	
8	130	49.88	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2334	0	1202	3002	4203	
7	110	49.02	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2342	0	1098	3116	4214	
6	90	47.82	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2343	0	1071	3047	4118	
5	70	46.09	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2370	0	1032	3138	4170	
4	50	43.45	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2417	0	1047	2959	4006	
3	30	39.08	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2370	0	876	2661	3537	
2	12	40.58	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	1899	0	737	2191	2928	
1	2	41.49	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	627	0	252	413	648	**
** = Section Force Exceeds Solidity Ratio Criteria														30,048	0			47,165	

1.2D + 1.0W 180° Gust Response Factor (Gh): 0.85
123 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	52.58	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1440	0	1112	421	1532
15	270	52.39	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1425	0	1037	622	1659
14	250	52.18	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1494	0	1103	738	1841
13	230	51.95	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1485	0	1029	883	1911
12	210	51.69	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1513	0	1023	1030	2054
11	190	51.38	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1635	0	1086	1237	2323
10	170	51.00	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2098	0	1053	2237	3290
9	150	50.52	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2254	0	1043	2895	3938
8	130	49.88	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2334	0	1096	3002	4098
7	110	49.02	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2342	0	1012	3116	4128
6	90	47.82	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2343	0	987	3047	4035
5	70	46.09	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2370	0	952	3138	4090
4	50	43.45	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2417	0	955	2959	3914
3	30	39.08	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2370	0	807	2661	3468
2	12	40.58	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	1899	0	678	2191	2869
1	2	41.49	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	627	0	218	413	631
** = Section Force Exceeds Solidity Ratio Criteria														30,048	0			45,780

1.2D + 1.0W 210° Gust Response Factor (Gh): 0.85

SECTION FORCES

123 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	52.58	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1440	0	1140	421	1561
15	270	52.39	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1425	0	1061	622	1682
14	250	52.18	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1494	0	1131	738	1869
13	230	51.95	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1485	0	1052	883	1934
12	210	51.69	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1513	0	1046	1030	2077
11	190	51.38	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1635	0	1114	1237	2351
10	170	51.00	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2098	0	1075	2237	3313
9	150	50.52	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2254	0	1065	2895	3960
8	130	49.88	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2334	0	1122	3002	4124
7	110	49.02	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2342	0	1034	3116	4149
6	90	47.82	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2343	0	1008	3047	4056
5	70	46.09	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2370	0	972	3138	4110
4	50	43.45	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2417	0	978	2959	3937
3	30	39.08	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2370	0	824	2661	3485
2	12	40.58	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	1899	0	693	2191	2884
1	2	41.49	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	627	0	226	413	639
** = Section Force Exceeds Solidity Ratio Criteria														30,048	0			46,131

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
123 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	52.58	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1440	0	1225	421	1646	
15	270	52.39	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1425	0	1131	622	1752	
14	250	52.18	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1494	0	1215	738	1953	
13	230	51.95	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1485	0	1121	883	2004	
12	210	51.69	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1513	0	1115	1030	2146	
11	190	51.38	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1635	0	1197	1237	2434	
10	170	51.00	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2098	0	1142	2237	3380	
9	150	50.52	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2254	0	1132	2895	4026	
8	130	49.88	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2334	0	1202	3002	4203	
7	110	49.02	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2342	0	1098	3116	4214	
6	90	47.82	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2343	0	1071	3047	4118	
5	70	46.09	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2370	0	1032	3138	4170	
4	50	43.45	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2417	0	1047	2959	4006	
3	30	39.08	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2370	0	876	2661	3537	
2	12	40.58	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	1899	0	737	2191	2928	
1	2	41.49	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	627	0	252	413	648	**
** = Section Force Exceeds Solidity Ratio Criteria														30,048	0			47,165	

1.2D + 1.0W 300° Gust Response Factor (Gh): 0.85
123 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	52.58	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1440	0	1112	421	1532
15	270	52.39	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1425	0	1037	622	1659
14	250	52.18	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1494	0	1103	738	1841
13	230	51.95	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1485	0	1029	883	1911
12	210	51.69	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1513	0	1023	1030	2054
11	190	51.38	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1635	0	1086	1237	2323
10	170	51.00	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2098	0	1053	2237	3290
9	150	50.52	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2254	0	1043	2895	3938
8	130	49.88	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2334	0	1096	3002	4098
7	110	49.02	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2342	0	1012	3116	4128

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
6	90	47.82	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2343	0	987	3047	4035	
5	70	46.09	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2370	0	952	3138	4090	
4	50	43.45	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2417	0	955	2959	3914	
3	30	39.08	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2370	0	807	2661	3468	
2	12	40.58	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	1899	0	678	2191	2869	
1	2	41.49	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	627	0	218	413	631	
** = Section Force Exceeds Solidity Ratio Criteria														30,048	0			45,780	

1.2D + 1.0W 330° Gust Response Factor (Gh): 0.85
123 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	52.58	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1440	0	1140	421	1561
15	270	52.39	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1425	0	1061	622	1682
14	250	52.18	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1494	0	1131	738	1869
13	230	51.95	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1485	0	1052	883	1934
12	210	51.69	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1513	0	1046	1030	2077
11	190	51.38	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1635	0	1114	1237	2351
10	170	51.00	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2098	0	1075	2237	3313
9	150	50.52	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2254	0	1065	2895	3960
8	130	49.88	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2334	0	1122	3002	4124
7	110	49.02	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2342	0	1034	3116	4149
6	90	47.82	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2343	0	1008	3047	4056
5	70	46.09	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2370	0	972	3138	4110
4	50	43.45	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2417	0	978	2959	3937
3	30	39.08	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2370	0	824	2661	3485
2	12	40.58	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	1899	0	693	2191	2884
1	2	41.49	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	627	0	226	413	639
** = Section Force Exceeds Solidity Ratio Criteria														30,048	0			46,131

1.2D + 1.0Di + 1.0Wi Normal Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.69	4.694	36.255	26.76	0.466	1.95	1.00	1.00	1.3	28.95	56.38	26.76	3062	1622	416	177	594	
15	270	8.66	3.833	36.232	26.74	0.456	1.96	1.00	1.00	1.3	27.89	54.76	26.74	3361	1935	403	271	674	
14	250	8.62	4.694	36.208	26.71	0.466	1.95	1.00	1.00	1.3	28.91	56.32	26.71	3491	1998	413	311	723	
13	230	8.58	3.833	36.182	26.68	0.456	1.96	1.00	1.00	1.3	27.85	54.70	26.68	3741	2256	399	367	766	
12	210	8.54	3.833	36.150	26.65	0.456	1.96	1.00	1.00	1.3	27.82	54.66	26.65	3971	2458	397	435	832	
11	190	8.49	4.694	36.111	26.61	0.465	1.95	1.00	1.00	1.3	28.83	56.21	26.61	4387	2752	406	567	973	
10	170	8.43	3.812	36.882	26.56	0.462	1.96	1.00	1.00	1.3	28.40	55.53	26.56	5706	3607	398	835	1233	
9	150	8.35	3.812	36.812	26.49	0.461	1.96	1.00	1.00	1.3	28.34	55.44	26.49	6279	4025	393	981	1314	**
8	130	8.24	4.677	36.714	26.39	0.470	1.94	1.00	1.00	1.3	29.30	56.93	26.39	6544	4210	399	1031	1297	**
7	110	8.10	3.812	36.574	26.25	0.458	1.96	1.00	1.00	1.3	28.14	55.16	26.25	7006	4664	380	1130	1274	**
6	90	7.90	3.812	36.368	26.05	0.456	1.96	1.00	1.00	1.3	27.96	54.91	26.05	6969	4626	369	1108	1242	**
5	70	7.62	3.812	36.056	25.74	0.453	1.97	1.00	1.00	1.3	27.70	54.53	25.74	7132	4762	353	1133	1197	**
4	50	7.18	4.677	35.555	25.24	0.457	1.96	1.00	1.00	1.3	28.31	55.54	25.24	6984	4567	339	1048	1127	**
3	30	6.46	3.812	34.622	24.30	0.438	1.99	1.00	1.00	1.2	26.50	52.84	24.30	6756	4386	290	955	1012	**
2	12	6.70	3.177	26.256	18.01	0.421	2.02	1.00	1.00	1.1	20.17	40.84	18.01	4995	3096	233	769	838	**
1	2	6.86	2.561	5.055	3.32	0.815	1.83	1.00	1.00	0.9	7.10	12.98	3.32	1098	471	76	44	114	**
** = Section Force Exceeds Solidity Ratio Criteria														81,483	51,435			15,210	

1.2D + 1.0Di + 1.0Wi 60° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.69	4.694	36.255	26.76	0.466	1.95	0.80	1.00	1.3	28.01	54.55	26.76	3062	1622	403	177	580	
15	270	8.66	3.833	36.232	26.74	0.456	1.96	0.80	1.00	1.3	27.13	53.25	26.74	3361	1935	392	271	663	
14	250	8.62	4.694	36.208	26.71	0.466	1.95	0.80	1.00	1.3	27.97	54.49	26.71	3491	1998	399	311	710	
13	230	8.58	3.833	36.182	26.68	0.456	1.96	0.80	1.00	1.3	27.08	53.19	26.68	3741	2256	388	367	755	
12	210	8.54	3.833	36.150	26.65	0.456	1.96	0.80	1.00	1.3	27.06	53.15	26.65	3971	2458	386	435	821	
11	190	8.49	4.694	36.111	26.61	0.465	1.95	0.80	1.00	1.3	27.89	54.38	26.61	4387	2752	392	567	959	
10	170	8.43	3.812	36.882	26.56	0.462	1.96	0.80	1.00	1.3	27.64	54.04	26.56	5706	3607	387	835	1222	
9	150	8.35	3.812	36.812	26.49	0.461	1.96	0.80	1.00	1.3	27.58	53.95	26.49	6279	4025	383	981	1314	**
8	130	8.24	4.677	36.714	26.39	0.470	1.94	0.80	1.00	1.3	28.37	55.11	26.39	6544	4210	386	1031	1297	**
7	110	8.10	3.812	36.574	26.25	0.458	1.96	0.80	1.00	1.3	27.38	53.66	26.25	7006	4664	369	1130	1274	**
6	90	7.90	3.812	36.368	26.05	0.456	1.96	0.80	1.00	1.3	27.20	53.41	26.05	6969	4626	359	1108	1242	**
5	70	7.62	3.812	36.056	25.74	0.453	1.97	0.80	1.00	1.3	26.94	53.03	25.74	7132	4762	343	1133	1197	**
4	50	7.18	4.677	35.555	25.24	0.457	1.96	0.80	1.00	1.3	27.38	53.70	25.24	6984	4567	328	1048	1127	**
3	30	6.46	3.812	34.622	24.30	0.438	1.99	0.80	1.00	1.2	25.73	51.32	24.30	6756	4386	282	955	1012	**
2	12	6.70	3.177	26.256	18.01	0.421	2.02	0.80	1.00	1.1	19.54	39.56	18.01	4995	3096	225	769	838	**
1	2	6.86	2.561	5.055	3.32	0.815	1.83	0.80	1.00	0.9	6.59	12.04	3.32	1098	471	70	44	114	
** = Section Force Exceeds Solidity Ratio Criteria														81,483	51,435			15,126	

1.2D + 1.0Di + 1.0Wi 90° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.69	4.694	36.255	26.76	0.466	1.95	0.85	1.00	1.3	28.25	55.01	26.76	3062	1622	406	177	583	
15	270	8.66	3.833	36.232	26.74	0.456	1.96	0.85	1.00	1.3	27.32	53.63	26.74	3361	1935	395	271	666	
14	250	8.62	4.694	36.208	26.71	0.466	1.95	0.85	1.00	1.3	28.21	54.95	26.71	3491	1998	403	311	713	
13	230	8.58	3.833	36.182	26.68	0.456	1.96	0.85	1.00	1.3	27.27	53.57	26.68	3741	2256	391	367	758	
12	210	8.54	3.833	36.150	26.65	0.456	1.96	0.85	1.00	1.3	27.25	53.53	26.65	3971	2458	389	435	824	
11	190	8.49	4.694	36.111	26.61	0.465	1.95	0.85	1.00	1.3	28.12	54.83	26.61	4387	2752	396	567	963	
10	170	8.43	3.812	36.882	26.56	0.462	1.96	0.85	1.00	1.3	27.83	54.41	26.56	5706	3607	390	835	1225	
9	150	8.35	3.812	36.812	26.49	0.461	1.96	0.85	1.00	1.3	27.77	54.33	26.49	6279	4025	385	981	1314	**
8	130	8.24	4.677	36.714	26.39	0.470	1.94	0.85	1.00	1.3	28.60	55.57	26.39	6544	4210	389	1031	1297	**
7	110	8.10	3.812	36.574	26.25	0.458	1.96	0.85	1.00	1.3	27.57	54.04	26.25	7006	4664	372	1130	1274	**
6	90	7.90	3.812	36.368	26.05	0.456	1.96	0.85	1.00	1.3	27.39	53.79	26.05	6969	4626	361	1108	1242	**
5	70	7.62	3.812	36.056	25.74	0.453	1.97	0.85	1.00	1.3	27.13	53.41	25.74	7132	4762	346	1133	1197	**
4	50	7.18	4.677	35.555	25.24	0.457	1.96	0.85	1.00	1.3	27.61	54.16	25.24	6984	4567	331	1048	1127	**
3	30	6.46	3.812	34.622	24.30	0.438	1.99	0.85	1.00	1.2	25.93	51.70	24.30	6756	4386	284	955	1012	**
2	12	6.70	3.177	26.256	18.01	0.421	2.02	0.85	1.00	1.1	19.70	39.88	18.01	4995	3096	227	769	838	**
1	2	6.86	2.561	5.055	3.32	0.815	1.83	0.85	1.00	0.9	6.71	12.27	3.32	1098	471	72	44	114	**
** = Section Force Exceeds Solidity Ratio Criteria														81,483	51,435			15,147	

1.2D + 1.0Di + 1.0Wi 120° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.69	4.694	36.255	26.76	0.466	1.95	1.00	1.00	1.3	28.95	56.38	26.76	3062	1622	416	177	594	
15	270	8.66	3.833	36.232	26.74	0.456	1.96	1.00	1.00	1.3	27.89	54.76	26.74	3361	1935	403	271	674	
14	250	8.62	4.694	36.208	26.71	0.466	1.95	1.00	1.00	1.3	28.91	56.32	26.71	3491	1998	413	311	723	
13	230	8.58	3.833	36.182	26.68	0.456	1.96	1.00	1.00	1.3	27.85	54.70	26.68	3741	2256	399	367	766	
12	210	8.54	3.833	36.150	26.65	0.456	1.96	1.00	1.00	1.3	27.82	54.66	26.65	3971	2458	397	435	832	
11	190	8.49	4.694	36.111	26.61	0.465	1.95	1.00	1.00	1.3	28.83	56.21	26.61	4387	2752	406	567	973	
10	170	8.43	3.812	36.882	26.56	0.462	1.96	1.00	1.00	1.3	28.40	55.53	26.56	5706	3607	398	835	1233	
9	150	8.35	3.812	36.812	26.49	0.461	1.96	1.00	1.00	1.3	28.34	55.44	26.49	6279	4025	393	981	1314	**
8	130	8.24	4.677	36.714	26.39	0.470	1.94	1.00	1.00	1.3	29.30	56.93	26.39	6544	4210	399	1031	1297	**
7	110	8.10	3.812	36.574	26.25	0.458	1.96	1.00	1.00	1.3	28.14	55.16	26.25	7006	4664	380	1130	1274	**
6	90	7.90	3.812	36.368	26.05	0.456	1.96	1.00	1.00	1.3	27.96	54.91	26.05	6969	4626	369	1108	1242	**
5	70	7.62	3.812	36.056	25.74	0.453	1.97	1.00	1.00	1.3	27.70	54.53	25.74	7132	4762	353	1133	1197	**
4	50	7.18	4.677	35.555	25.24	0.457	1.96	1.00	1.00	1.3	28.31	55.54	25.24	6984	4567	339	1048	1127	**

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
3	30	6.46	3.812	34.622	24.30	0.438	1.99	1.00	1.00	1.2	26.50	52.84	24.30	6756	4386	290	955	1012	**
2	12	6.70	3.177	26.256	18.01	0.421	2.02	1.00	1.00	1.1	20.17	40.84	18.01	4995	3096	233	769	838	**
1	2	6.86	2.561	5.055	3.32	0.815	1.83	1.00	1.00	0.9	7.10	12.98	3.32	1098	471	76	44	114	**
** = Section Force Exceeds Solidity Ratio Criteria														81,483	51,435			15,210	

1.2D + 1.0Di + 1.0Wi 180° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.69	4.694	36.255	26.76	0.466	1.95	0.80	1.00	1.3	28.01	54.55	26.76	3062	1622	403	177	580	
15	270	8.66	3.833	36.232	26.74	0.456	1.96	0.80	1.00	1.3	27.13	53.25	26.74	3361	1935	392	271	663	
14	250	8.62	4.694	36.208	26.71	0.466	1.95	0.80	1.00	1.3	27.97	54.49	26.71	3491	1998	399	311	710	
13	230	8.58	3.833	36.182	26.68	0.456	1.96	0.80	1.00	1.3	27.08	53.19	26.68	3741	2256	388	367	755	
12	210	8.54	3.833	36.150	26.65	0.456	1.96	0.80	1.00	1.3	27.06	53.15	26.65	3971	2458	386	435	821	
11	190	8.49	4.694	36.111	26.61	0.465	1.95	0.80	1.00	1.3	27.89	54.38	26.61	4387	2752	392	567	959	
10	170	8.43	3.812	36.882	26.56	0.462	1.96	0.80	1.00	1.3	27.64	54.04	26.56	5706	3607	387	835	1222	
9	150	8.35	3.812	36.812	26.49	0.461	1.96	0.80	1.00	1.3	27.58	53.95	26.49	6279	4025	383	981	1314	**
8	130	8.24	4.677	36.714	26.39	0.470	1.94	0.80	1.00	1.3	28.37	55.11	26.39	6544	4210	386	1031	1297	**
7	110	8.10	3.812	36.574	26.25	0.458	1.96	0.80	1.00	1.3	27.38	53.66	26.25	7006	4664	369	1130	1274	**
6	90	7.90	3.812	36.368	26.05	0.456	1.96	0.80	1.00	1.3	27.20	53.41	26.05	6969	4626	359	1108	1242	**
5	70	7.62	3.812	36.056	25.74	0.453	1.97	0.80	1.00	1.3	26.94	53.03	25.74	7132	4762	343	1133	1197	**
4	50	7.18	4.677	35.555	25.24	0.457	1.96	0.80	1.00	1.3	27.38	53.70	25.24	6984	4567	328	1048	1127	**
3	30	6.46	3.812	34.622	24.30	0.438	1.99	0.80	1.00	1.2	25.73	51.32	24.30	6756	4386	282	955	1012	**
2	12	6.70	3.177	26.256	18.01	0.421	2.02	0.80	1.00	1.1	19.54	39.56	18.01	4995	3096	225	769	838	**
1	2	6.86	2.561	5.055	3.32	0.815	1.83	0.80	1.00	0.9	6.59	12.04	3.32	1098	471	70	44	114	
** = Section Force Exceeds Solidity Ratio Criteria														81,483	51,435			15,126	

1.2D + 1.0Di + 1.0Wi 210° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.69	4.694	36.255	26.76	0.466	1.95	0.85	1.00	1.3	28.25	55.01	26.76	3062	1622	406	177	583	
15	270	8.66	3.833	36.232	26.74	0.456	1.96	0.85	1.00	1.3	27.32	53.63	26.74	3361	1935	395	271	666	
14	250	8.62	4.694	36.208	26.71	0.466	1.95	0.85	1.00	1.3	28.21	54.95	26.71	3491	1998	403	311	713	
13	230	8.58	3.833	36.182	26.68	0.456	1.96	0.85	1.00	1.3	27.27	53.57	26.68	3741	2256	391	367	758	
12	210	8.54	3.833	36.150	26.65	0.456	1.96	0.85	1.00	1.3	27.25	53.53	26.65	3971	2458	389	435	824	
11	190	8.49	4.694	36.111	26.61	0.465	1.95	0.85	1.00	1.3	28.12	54.83	26.61	4387	2752	396	567	963	
10	170	8.43	3.812	36.882	26.56	0.462	1.96	0.85	1.00	1.3	27.83	54.41	26.56	5706	3607	390	835	1225	
9	150	8.35	3.812	36.812	26.49	0.461	1.96	0.85	1.00	1.3	27.77	54.33	26.49	6279	4025	385	981	1314	**
8	130	8.24	4.677	36.714	26.39	0.470	1.94	0.85	1.00	1.3	28.60	55.57	26.39	6544	4210	389	1031	1297	**
7	110	8.10	3.812	36.574	26.25	0.458	1.96	0.85	1.00	1.3	27.57	54.04	26.25	7006	4664	372	1130	1274	**
6	90	7.90	3.812	36.368	26.05	0.456	1.96	0.85	1.00	1.3	27.39	53.79	26.05	6969	4626	361	1108	1242	**
5	70	7.62	3.812	36.056	25.74	0.453	1.97	0.85	1.00	1.3	27.13	53.41	25.74	7132	4762	346	1133	1197	**
4	50	7.18	4.677	35.555	25.24	0.457	1.96	0.85	1.00	1.3	27.61	54.16	25.24	6984	4567	331	1048	1127	**
3	30	6.46	3.812	34.622	24.30	0.438	1.99	0.85	1.00	1.2	25.93	51.70	24.30	6756	4386	284	955	1012	**
2	12	6.70	3.177	26.256	18.01	0.421	2.02	0.85	1.00	1.1	19.70	39.88	18.01	4995	3096	227	769	838	**
1	2	6.86	2.561	5.055	3.32	0.815	1.83	0.85	1.00	0.9	6.71	12.27	3.32	1098	471	72	44	114	**
** = Section Force Exceeds Solidity Ratio Criteria														81,483	51,435			15,147	

1.2D + 1.0Di + 1.0Wi 240° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	8.69	4.694	36.255	26.76	0.466	1.95	1.00	1.00	1.3	28.95	56.38	26.76	3062	1622	416	177	594
15	270	8.66	3.833	36.232	26.74	0.456	1.96	1.00	1.00	1.3	27.89	54.76	26.74	3361	1935	403	271	674
14	250	8.62	4.694	36.208	26.71	0.466	1.95	1.00	1.00	1.3	28.91	56.32	26.71	3491	1998	413	311	723

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
13	230	8.58	3.833	36.182	26.68	0.456	1.96	1.00	1.00	1.3	27.85	54.70	26.68	3741	2256	399	367	766	
12	210	8.54	3.833	36.150	26.65	0.456	1.96	1.00	1.00	1.3	27.82	54.66	26.65	3971	2458	397	435	832	
11	190	8.49	4.694	36.111	26.61	0.465	1.95	1.00	1.00	1.3	28.83	56.21	26.61	4387	2752	406	567	973	
10	170	8.43	3.812	36.882	26.56	0.462	1.96	1.00	1.00	1.3	28.40	55.53	26.56	5706	3607	398	835	1233	
9	150	8.35	3.812	36.812	26.49	0.461	1.96	1.00	1.00	1.3	28.34	55.44	26.49	6279	4025	393	981	1314	**
8	130	8.24	4.677	36.714	26.39	0.470	1.94	1.00	1.00	1.3	29.30	56.93	26.39	6544	4210	399	1031	1297	**
7	110	8.10	3.812	36.574	26.25	0.458	1.96	1.00	1.00	1.3	28.14	55.16	26.25	7006	4664	380	1130	1274	**
6	90	7.90	3.812	36.368	26.05	0.456	1.96	1.00	1.00	1.3	27.96	54.91	26.05	6969	4626	369	1108	1242	**
5	70	7.62	3.812	36.056	25.74	0.453	1.97	1.00	1.00	1.3	27.70	54.53	25.74	7132	4762	353	1133	1197	**
4	50	7.18	4.677	35.555	25.24	0.457	1.96	1.00	1.00	1.3	28.31	55.54	25.24	6984	4567	339	1048	1127	**
3	30	6.46	3.812	34.622	24.30	0.438	1.99	1.00	1.00	1.2	26.50	52.84	24.30	6756	4386	290	955	1012	**
2	12	6.70	3.177	26.256	18.01	0.421	2.02	1.00	1.00	1.1	20.17	40.84	18.01	4995	3096	233	769	838	**
1	2	6.86	2.561	5.055	3.32	0.815	1.83	1.00	1.00	0.9	7.10	12.98	3.32	1098	471	76	44	114	**
** = Section Force Exceeds Solidity Ratio Criteria														81,483	51,435			15,210	

1.2D + 1.0Di + 1.0Wi 300° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.69	4.694	36.255	26.76	0.466	1.95	0.80	1.00	1.3	28.01	54.55	26.76	3062	1622	403	177	580	
15	270	8.66	3.833	36.232	26.74	0.456	1.96	0.80	1.00	1.3	27.13	53.25	26.74	3361	1935	392	271	663	
14	250	8.62	4.694	36.208	26.71	0.466	1.95	0.80	1.00	1.3	27.97	54.49	26.71	3491	1998	399	311	710	
13	230	8.58	3.833	36.182	26.68	0.456	1.96	0.80	1.00	1.3	27.08	53.19	26.68	3741	2256	388	367	755	
12	210	8.54	3.833	36.150	26.65	0.456	1.96	0.80	1.00	1.3	27.06	53.15	26.65	3971	2458	386	435	821	
11	190	8.49	4.694	36.111	26.61	0.465	1.95	0.80	1.00	1.3	27.89	54.38	26.61	4387	2752	392	567	959	
10	170	8.43	3.812	36.882	26.56	0.462	1.96	0.80	1.00	1.3	27.64	54.04	26.56	5706	3607	387	835	1222	
9	150	8.35	3.812	36.812	26.49	0.461	1.96	0.80	1.00	1.3	27.58	53.95	26.49	6279	4025	383	981	1314	**
8	130	8.24	4.677	36.714	26.39	0.470	1.94	0.80	1.00	1.3	28.37	55.11	26.39	6544	4210	386	1031	1297	**
7	110	8.10	3.812	36.574	26.25	0.458	1.96	0.80	1.00	1.3	27.38	53.66	26.25	7006	4664	369	1130	1274	**
6	90	7.90	3.812	36.368	26.05	0.456	1.96	0.80	1.00	1.3	27.20	53.41	26.05	6969	4626	359	1108	1242	**
5	70	7.62	3.812	36.056	25.74	0.453	1.97	0.80	1.00	1.3	26.94	53.03	25.74	7132	4762	343	1133	1197	**
4	50	7.18	4.677	35.555	25.24	0.457	1.96	0.80	1.00	1.3	27.38	53.70	25.24	6984	4567	328	1048	1127	**
3	30	6.46	3.812	34.622	24.30	0.438	1.99	0.80	1.00	1.2	25.73	51.32	24.30	6756	4386	282	955	1012	**
2	12	6.70	3.177	26.256	18.01	0.421	2.02	0.80	1.00	1.1	19.54	39.56	18.01	4995	3096	225	769	838	**
1	2	6.86	2.561	5.055	3.32	0.815	1.83	0.80	1.00	0.9	6.59	12.04	3.32	1098	471	70	44	114	
** = Section Force Exceeds Solidity Ratio Criteria														81,483	51,435			15,126	

1.2D + 1.0Di + 1.0Wi 330° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.69	4.694	36.255	26.76	0.466	1.95	0.85	1.00	1.3	28.25	55.01	26.76	3062	1622	406	177	583	
15	270	8.66	3.833	36.232	26.74	0.456	1.96	0.85	1.00	1.3	27.32	53.63	26.74	3361	1935	395	271	666	
14	250	8.62	4.694	36.208	26.71	0.466	1.95	0.85	1.00	1.3	28.21	54.95	26.71	3491	1998	403	311	713	
13	230	8.58	3.833	36.182	26.68	0.456	1.96	0.85	1.00	1.3	27.27	53.57	26.68	3741	2256	391	367	758	
12	210	8.54	3.833	36.150	26.65	0.456	1.96	0.85	1.00	1.3	27.25	53.53	26.65	3971	2458	389	435	824	
11	190	8.49	4.694	36.111	26.61	0.465	1.95	0.85	1.00	1.3	28.12	54.83	26.61	4387	2752	396	567	963	
10	170	8.43	3.812	36.882	26.56	0.462	1.96	0.85	1.00	1.3	27.83	54.41	26.56	5706	3607	390	835	1225	
9	150	8.35	3.812	36.812	26.49	0.461	1.96	0.85	1.00	1.3	27.77	54.33	26.49	6279	4025	385	981	1314	**
8	130	8.24	4.677	36.714	26.39	0.470	1.94	0.85	1.00	1.3	28.60	55.57	26.39	6544	4210	389	1031	1297	**
7	110	8.10	3.812	36.574	26.25	0.458	1.96	0.85	1.00	1.3	27.57	54.04	26.25	7006	4664	372	1130	1274	**
6	90	7.90	3.812	36.368	26.05	0.456	1.96	0.85	1.00	1.3	27.39	53.79	26.05	6969	4626	361	1108	1242	**
5	70	7.62	3.812	36.056	25.74	0.453	1.97	0.85	1.00	1.3	27.13	53.41	25.74	7132	4762	346	1133	1197	**
4	50	7.18	4.677	35.555	25.24	0.457	1.96	0.85	1.00	1.3	27.61	54.16	25.24	6984	4567	331	1048	1127	**
3	30	6.46	3.812	34.622	24.30	0.438	1.99	0.85	1.00	1.2	25.93	51.70	24.30	6756	4386	284	955	1012	**
2	12	6.70	3.177	26.256	18.01	0.421	2.02	0.85	1.00	1.1	19.70	39.88	18.01	4995	3096	227	769	838	**
1	2	6.86	2.561	5.055	3.32	0.815	1.83	0.85	1.00	0.9	6.71	12.27	3.32	1098	471	72	44	114	**

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
** = Section Force Exceeds Solidity Ratio Criteria														81,483	51,435			15,147	

1.0D + 1.0W Service Normal — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	12.51	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1200	0	291	100	392	
15	270	12.47	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1188	0	269	148	417	
14	250	12.42	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1245	0	289	176	465	
13	230	12.36	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1237	0	267	210	477	
12	210	12.30	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1261	0	265	245	511	
11	190	12.23	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1362	0	285	294	579	
10	170	12.14	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1749	0	272	532	804	
9	150	12.02	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1878	0	269	689	958	
8	130	11.87	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	1945	0	286	714	1000	
7	110	11.66	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1952	0	261	741	1003	
6	90	11.38	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1952	0	255	725	980	
5	70	10.97	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1975	0	246	747	992	
4	50	10.34	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2014	0	249	704	953	
3	30	9.30	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1975	0	208	633	842	
2	12	9.66	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	1583	0	175	521	697	
1	2	9.87	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	523	0	60	98	154	**
** = Section Force Exceeds Solidity Ratio Criteria														25,040	0			11,223	

1.0D + 1.0W Service 60° — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.51	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1200	0	265	100	365
15	270	12.47	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1188	0	247	148	395
14	250	12.42	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1245	0	262	176	438
13	230	12.36	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1237	0	245	210	455
12	210	12.30	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1261	0	244	245	489
11	190	12.23	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1362	0	258	294	553
10	170	12.14	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1749	0	251	532	783
9	150	12.02	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1878	0	248	689	937
8	130	11.87	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	1945	0	261	714	975
7	110	11.66	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1952	0	241	741	982
6	90	11.38	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1952	0	235	725	960
5	70	10.97	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1975	0	226	747	973
4	50	10.34	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2014	0	227	704	931
3	30	9.30	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1975	0	192	633	825
2	12	9.66	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	1583	0	161	521	683
1	2	9.87	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	523	0	52	98	150
** = Section Force Exceeds Solidity Ratio Criteria														25,040	0			10,893

1.0D + 1.0W Service 90° — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.51	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1200	0	271	100	371
15	270	12.47	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1188	0	252	148	400
14	250	12.42	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1245	0	269	176	445
13	230	12.36	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1237	0	250	210	460
12	210	12.30	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1261	0	249	245	494
11	190	12.23	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1362	0	265	294	559

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
10	170	12.14	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1749	0	256	532	788
9	150	12.02	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1878	0	253	689	942
8	130	11.87	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	1945	0	267	714	981
7	110	11.66	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1952	0	246	741	987
6	90	11.38	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1952	0	240	725	965
5	70	10.97	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1975	0	231	747	978
4	50	10.34	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2014	0	233	704	937
3	30	9.30	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1975	0	196	633	829
2	12	9.66	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	1583	0	165	521	686
1	2	9.87	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	523	0	54	98	152
** = Section Force Exceeds Solidity Ratio Criteria														25,040	0			10,977

1.0D + 1.0W Service 120° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	12.51	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1200	0	291	100	392	
15	270	12.47	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1188	0	269	148	417	
14	250	12.42	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1245	0	289	176	465	
13	230	12.36	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1237	0	267	210	477	
12	210	12.30	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1261	0	265	245	511	
11	190	12.23	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1362	0	285	294	579	
10	170	12.14	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1749	0	272	532	804	
9	150	12.02	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1878	0	269	689	958	
8	130	11.87	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	1945	0	286	714	1000	
7	110	11.66	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1952	0	261	741	1003	
6	90	11.38	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1952	0	255	725	980	
5	70	10.97	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1975	0	246	747	992	
4	50	10.34	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2014	0	249	704	953	
3	30	9.30	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1975	0	208	633	842	
2	12	9.66	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	1583	0	175	521	697	
1	2	9.87	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	523	0	60	98	154	**
** = Section Force Exceeds Solidity Ratio Criteria														25,040	0			11,223	

1.0D + 1.0W Service 180° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.51	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1200	0	265	100	365
15	270	12.47	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1188	0	247	148	395
14	250	12.42	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1245	0	262	176	438
13	230	12.36	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1237	0	245	210	455
12	210	12.30	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1261	0	244	245	489
11	190	12.23	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1362	0	258	294	553
10	170	12.14	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1749	0	251	532	783
9	150	12.02	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1878	0	248	689	937
8	130	11.87	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	1945	0	261	714	975
7	110	11.66	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1952	0	241	741	982
6	90	11.38	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1952	0	235	725	960
5	70	10.97	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1975	0	226	747	973
4	50	10.34	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2014	0	227	704	931
3	30	9.30	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1975	0	192	633	825
2	12	9.66	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	1583	0	161	521	683
1	2	9.87	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	523	0	52	98	150
** = Section Force Exceeds Solidity Ratio Criteria														25,040	0			10,893

1.0D + 1.0W Service 210° Gust Response Factor (Gh): 0.85

SECTION FORCES

60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.51	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1200	0	271	100	371
15	270	12.47	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1188	0	252	148	400
14	250	12.42	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1245	0	269	176	445
13	230	12.36	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1237	0	250	210	460
12	210	12.30	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1261	0	249	245	494
11	190	12.23	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1362	0	265	294	559
10	170	12.14	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1749	0	256	532	788
9	150	12.02	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1878	0	253	689	942
8	130	11.87	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	1945	0	267	714	981
7	110	11.66	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1952	0	246	741	987
6	90	11.38	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1952	0	240	725	965
5	70	10.97	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1975	0	231	747	978
4	50	10.34	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2014	0	233	704	937
3	30	9.30	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1975	0	196	633	829
2	12	9.66	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	1583	0	165	521	686
1	2	9.87	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	523	0	54	98	152
** = Section Force Exceeds Solidity Ratio Criteria														25,040	0			10,977

1.0D + 1.0W Service 240° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	12.51	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1200	0	291	100	392	
15	270	12.47	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1188	0	269	148	417	
14	250	12.42	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1245	0	289	176	465	
13	230	12.36	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1237	0	267	210	477	
12	210	12.30	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1261	0	265	245	511	
11	190	12.23	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1362	0	285	294	579	
10	170	12.14	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1749	0	272	532	804	
9	150	12.02	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1878	0	269	689	958	
8	130	11.87	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	1945	0	286	714	1000	
7	110	11.66	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1952	0	261	741	1003	
6	90	11.38	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1952	0	255	725	980	
5	70	10.97	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1975	0	246	747	992	
4	50	10.34	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2014	0	249	704	953	
3	30	9.30	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1975	0	208	633	842	
2	12	9.66	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	1583	0	175	521	697	
1	2	9.87	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	523	0	60	98	154	**
** = Section Force Exceeds Solidity Ratio Criteria														25,040	0			11,223	

1.0D + 1.0W Service 300° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.51	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1200	0	265	100	365
15	270	12.47	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1188	0	247	148	395
14	250	12.42	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1245	0	262	176	438
13	230	12.36	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1237	0	245	210	455
12	210	12.30	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1261	0	244	245	489
11	190	12.23	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1362	0	258	294	553
10	170	12.14	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1749	0	251	532	783
9	150	12.02	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1878	0	248	689	937
8	130	11.87	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	1945	0	261	714	975
7	110	11.66	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1952	0	241	741	982

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
6	90	11.38	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1952	0	235	725	960
5	70	10.97	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1975	0	226	747	973
4	50	10.34	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2014	0	227	704	931
3	30	9.30	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1975	0	192	633	825
2	12	9.66	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	1583	0	161	521	683
1	2	9.87	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	523	0	52	98	150
** = Section Force Exceeds Solidity Ratio Criteria														25,040	0			10,893

1.0D + 1.0W Service 330° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.51	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1200	0	271	100	371
15	270	12.47	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1188	0	252	148	400
14	250	12.42	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1245	0	269	176	445
13	230	12.36	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1237	0	250	210	460
12	210	12.30	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1261	0	249	245	494
11	190	12.23	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1362	0	265	294	559
10	170	12.14	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1749	0	256	532	788
9	150	12.02	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1878	0	253	689	942
8	130	11.87	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	1945	0	267	714	981
7	110	11.66	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1952	0	246	741	987
6	90	11.38	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1952	0	240	725	965
5	70	10.97	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1975	0	231	747	978
4	50	10.34	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2014	0	233	704	937
3	30	9.30	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1975	0	196	633	829
2	12	9.66	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	1583	0	165	521	686
1	2	9.87	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	523	0	54	98	152
** = Section Force Exceeds Solidity Ratio Criteria														25,040	0			10,977

EQUIVALENT LATERAL FORCE METHOD

Spectral Response Acceleration for Short Period (S_S):	0.20
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.21
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_S:	0.03
Lower Limit C_S:	0.03
Period based on Rayleigh Method (sec):	0.89
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.20
Total Unfactored Dead Load:	37.67 k
Seismic Base Shear (E):	1.58 k

SEISMIC

Load Case: 0.9D - 1.0Ev + 1.0Eh Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
16	290.00	1,200	1,055,185	0.069	109	1,030
15	270.00	1,188	958,989	0.062	99	1,020
14	250.00	1,245	916,538	0.060	94	1,068
13	230.00	1,237	824,765	0.054	85	1,062
12	210.00	1,261	753,936	0.049	78	1,083
11	190.00	1,362	722,569	0.047	74	1,169
10	170.00	1,749	811,927	0.053	84	1,501
9	150.00	1,878	750,929	0.049	77	1,612
8	130.00	1,945	655,411	0.043	67	1,670
7	110.00	1,952	538,526	0.035	55	1,675
6	90.00	1,952	423,811	0.028	44	1,676
5	70.00	1,975	317,416	0.021	33	1,695
4	50.00	2,014	216,537	0.014	22	1,729
3	30.00	1,975	115,255	0.008	12	1,695
2	12.00	1,583	30,881	0.002	3	1,358
1	2.00	523	1,198	0.000	0	449
Generic 10' Omni	300.00	25	22,893	0.002	2	21
Generic 20' Dipole	300.00	60	54,943	0.004	6	52
Generic 13' Omni	300.00	40	36,629	0.002	4	34
Generic 6' Yagi	300.00	25	22,893	0.002	2	21
Round Side Arm	294.00	450	402,239	0.026	41	386
Generic 18' Dipole	288.00	55	47,965	0.003	5	47
Generic 10' Dipole	277.00	30	24,973	0.002	3	26
Generic 8' Omni	276.00	25	20,721	0.001	2	21
Generic 24" x 24" Junction Box	276.00	20	16,577	0.001	2	17
Generic 6' Omni	274.00	25	20,541	0.001	2	21
Round Side Arm	268.00	450	360,084	0.023	37	386
Scala OGT9-840N	263.00	18	14,474	0.001	1	16
Generic 13' Omni	241.00	40	28,191	0.002	3	34
Bird 432E-83I-01-T	235.00	25	17,096	0.001	2	21
Sinclair SC479-HF1LDF(E5765)	235.00	102	69,752	0.004	7	88
Round Side Arm	233.00	450	304,603	0.020	31	386

Generic 11' Omni	230.00	40	26,660	0.002	3	34
Scala OGT9-840	229.50	18	12,298	0.001	1	16
Generic 14' Omni	228.00	40	26,383	0.002	3	34
Decibel DB224	215.00	32	19,675	0.001	2	27
Andrew DB224	213.00	38	23,105	0.002	2	33
Side Arm	213.00	300	182,407	0.012	19	258
Generic 22' Dipole	213.00	66	40,129	0.003	4	57
Ericsson RRUS 8843 B2, B66A	196.00	216	118,900	0.008	12	185
Ericsson RRUS 4478 B14	196.00	180	98,918	0.006	10	154
Ericsson RRUS 4449 B5, B12	196.00	213	117,249	0.008	12	183
Ericsson AIR 6449 B77D/ C-Band	196.00	245	134,753	0.009	14	210
Raycap DC9-48-60-24-8C-EV	196.00	32	17,615	0.001	2	27
Sabre C10857001C Sector Frame	196.00	1,386	762,942	0.050	79	1,190
CCI DMP65R-BU8D	196.00	287	158,038	0.010	16	246
CCI TPA65R-BU8D	196.00	248	136,240	0.009	14	212
Ericsson Radio 4460 B25+B66	180.00	327	162,576	0.011	17	281
Ericsson Radio 4480 B71+B85A	180.00	252	125,288	0.008	13	216
Ericsson Air6449 B41	180.00	312	155,119	0.010	16	268
Round Sector Frame	180.00	900	447,457	0.029	46	773
RFS APXVAALL24 43-U-NA20	180.00	368	183,159	0.012	19	316
Commscope CBC78T-DS-43-2X	170.00	62	28,835	0.002	3	53
Samsung B5/B13 RRH-BR04C	170.00	211	97,928	0.006	10	181
Samsung B2/B66A RRH-BR049	170.00	253	117,569	0.008	12	217
Raycap RCMDC-6627-PF-48	170.00	32	14,859	0.001	2	27
Samsung MT6407-77A	170.00	245	113,669	0.007	12	210
Commscope LNX-8513DS-A1M	170.00	118	54,605	0.004	6	101
Commscope JAHH-65B-R3B	170.00	364	168,831	0.011	17	312
Flat Light Sector Frame	170.00	1,200	557,199	0.036	57	1,030
Procom CXL 900-3LW	160.00	2	648	0.000	0	1
Generic 5" x 3" x 2" Cavity Filter	160.00	2	648	0.000	0	1
Generic Low Noise Amplifier	160.00	2	864	0.000	0	2
Flat Side Arm	160.00	150	64,780	0.004	7	129
Scala AP7-850/065	130.00	6	2,022	0.000	0	5
Generic 24" x 24" Junction Box	130.00	20	6,738	0.000	1	17
Round Side Arm	130.00	150	50,538	0.003	5	129
Bird 432E-83I-01-T	125.00	25	8,037	0.000	1	21
Generic 24" X 12" Panel	125.00	60	19,289	0.001	2	52
Flat Side Arm	125.00	450	144,669	0.009	15	386
Round Side Arm	115.00	150	43,647	0.003	4	129
Generic 20' Dipole	115.00	60	17,459	0.001	2	52
Round Side Arm	105.00	150	39,149	0.002	4	129
Generic 5' Yagi	105.00	20	5,220	0.000	1	17
Generic 2' x 4' Rectangular Grid Dish	105.00	40	10,440	0.001	1	34
Generic 6' Ice Shield	84.00	450	89,944	0.006	9	386
Generic 6' Ice Shield	82.00	450	87,389	0.006	9	386
RFS PA6-65AC w/ Radome	80.00	308	58,073	0.004	6	264
RFS PA6-65AC w/ Radome	80.00	308	58,073	0.004	6	264
Totals		37,666	15,368,479	1.000	1,582	32,333

SEISMIC

Load Case: 1.2D + 1.0Ev + 1.0Eh

Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
16	290.00	1,200	1,055,185	0.069	109	1,490
15	270.00	1,188	958,989	0.062	99	1,475
14	250.00	1,245	916,538	0.060	94	1,545
13	230.00	1,237	824,765	0.054	85	1,536
12	210.00	1,261	753,936	0.049	78	1,566
11	190.00	1,362	722,569	0.047	74	1,692
10	170.00	1,749	811,927	0.053	84	2,171
9	150.00	1,878	750,929	0.049	77	2,332
8	130.00	1,945	655,411	0.043	67	2,415
7	110.00	1,952	538,526	0.035	55	2,423
6	90.00	1,952	423,811	0.028	44	2,424
5	70.00	1,975	317,416	0.021	33	2,452
4	50.00	2,014	216,537	0.014	22	2,501
3	30.00	1,975	115,255	0.008	12	2,452
2	12.00	1,583	30,881	0.002	3	1,965
1	2.00	523	1,198	0.000	0	649

Generic 10' Omni	300.00	25	22,893	0.002	2	31
Generic 20' Dipole	300.00	60	54,943	0.004	6	74
Generic 13' Omni	300.00	40	36,629	0.002	4	50
Generic 6' Yagi	300.00	25	22,893	0.002	2	31
Round Side Arm	294.00	450	402,239	0.026	41	559
Generic 18' Dipole	288.00	55	47,965	0.003	5	68
Generic 10' Dipole	277.00	30	24,973	0.002	3	37
Generic 8' Omni	276.00	25	20,721	0.001	2	31
Generic 24" x 24" Junction Box	276.00	20	16,577	0.001	2	25
Generic 6' Omni	274.00	25	20,541	0.001	2	31
Round Side Arm	268.00	450	360,084	0.023	37	559
Scala OGT9-840N	263.00	18	14,474	0.001	1	23
Generic 13' Omni	241.00	40	28,191	0.002	3	50
Bird 432E-83I-01-T	235.00	25	17,096	0.001	2	31
Sinclair SC479-HF1LDF(E5765)	235.00	102	69,752	0.004	7	127
Round Side Arm	233.00	450	304,603	0.020	31	559
Generic 11' Omni	230.00	40	26,660	0.002	3	50
Scala OGT9-840	229.50	18	12,298	0.001	1	23
Generic 14' Omni	228.00	40	26,383	0.002	3	50
Decibel DB224	215.00	32	19,675	0.001	2	40
Andrew DB224	213.00	38	23,105	0.002	2	47
Side Arm	213.00	300	182,407	0.012	19	372
Generic 22' Dipole	213.00	66	40,129	0.003	4	82
Ericsson RRUS 8843 B2, B66A	196.00	216	118,900	0.008	12	268
Ericsson RRUS 4478 B14	196.00	180	98,918	0.006	10	223
Ericsson RRUS 4449 B5, B12	196.00	213	117,249	0.008	12	264
Ericsson AIR 6449 B77D/ C-Band	196.00	245	134,753	0.009	14	304
Raycap DC9-48-60-24-8C-EV	196.00	32	17,615	0.001	2	40
Sabre C10857001C Sector Frame	196.00	1,386	762,942	0.050	79	1,721
CCI DMP65R-BU8D	196.00	287	158,038	0.010	16	356
CCI TPA65R-BU8D	196.00	248	136,240	0.009	14	307
Ericsson Radio 4460 B25+B66	180.00	327	162,576	0.011	17	406
Ericsson Radio 4480 B71+B85A	180.00	252	125,288	0.008	13	313
Ericsson Air6449 B41	180.00	312	155,119	0.010	16	387
Round Sector Frame	180.00	900	447,457	0.029	46	1,117
RFS APXVAALL24 43-U-NA20	180.00	368	183,159	0.012	19	457
Commscope CBC78T-DS-43-2X	170.00	62	28,835	0.002	3	77
Samsung B5/B13 RRH-BR04C	170.00	211	97,928	0.006	10	262
Samsung B2/B66A RRH-BR049	170.00	253	117,569	0.008	12	314
Raycap RCMDC-6627-PF-48	170.00	32	14,859	0.001	2	40
Samsung MT6407-77A	170.00	245	113,669	0.007	12	304
Commscope LNX-8513DS-A1M	170.00	118	54,605	0.004	6	146
Commscope JAHH-65B-R3B	170.00	364	168,831	0.011	17	451
Flat Light Sector Frame	170.00	1,200	557,199	0.036	57	1,490
Procom CXL 900-3LW	160.00	2	648	0.000	0	2
Generic 5" x 3" x 2" Cavity Filter	160.00	2	648	0.000	0	2
Generic Low Noise Amplifier	160.00	2	864	0.000	0	2
Flat Side Arm	160.00	150	64,780	0.004	7	186
Scala AP7-850/065	130.00	6	2,022	0.000	0	7
Generic 24" x 24" Junction Box	130.00	20	6,738	0.000	1	25
Round Side Arm	130.00	150	50,538	0.003	5	186
Bird 432E-83I-01-T	125.00	25	8,037	0.000	1	31
Generic 24" X 12" Panel	125.00	60	19,289	0.001	2	74
Flat Side Arm	125.00	450	144,669	0.009	15	559
Round Side Arm	115.00	150	43,647	0.003	4	186
Generic 20' Dipole	115.00	60	17,459	0.001	2	74
Round Side Arm	105.00	150	39,149	0.002	4	186
Generic 5' Yagi	105.00	20	5,220	0.000	1	25
Generic 2' x 4' Rectangular Grid Dish	105.00	40	10,440	0.001	1	50
Generic 6' Ice Shield	84.00	450	89,944	0.006	9	559
Generic 6' Ice Shield	82.00	450	87,389	0.006	9	559
RFS PA6-65AC w/ Radome	80.00	308	58,073	0.004	6	382
RFS PA6-65AC w/ Radome	80.00	308	58,073	0.004	6	382
Totals		37,666	15,368,479	1.000	1,582	46,767

FORCE/STRESS SUMMARY

Section 1 – Bolt Elevation 0.0 (ft) and Height 4.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-78.85	1.2D + 1.0Di + 1.0Wi 60	2.309	100	100	100	49.27	50.0	149.83	0.00	0.00	0	0	52	Member X
D PL - PL 2 x 0.5"	-2.92	1.2D + 1.0W N	3.652	50	50	50	136.65	36.0	15.33	0.00	0.00	0	0	0	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 3X3X0.3125	19.67	1.2D + 1.0Di + 1.0Wi N	36.0	58	57.67	0.00	0.00	0.00	0	0	34	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 2 – Bolt Elevation 4.0 (ft) and Height 16.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-70.12	1.2D + 1.0Di + 1.0Wi 60	3.9	100	100	100	83.20	50.0	107.86	0.00	0.00	0	0	65	Member X
H SAE - 2X2X0.1875	-1.96	1.2D + 1.0W 330°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	14	Member Z
D SOL - 5/8" SOLID	-1.62	1.2D + 1.0W N	5.587	50	50	50	193.38	50.0	1.85	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	4.88	1.2D + 1.0Di + 1.0Wi 60°	36.0	58	23.17	0.00	0.00	0.00	0	0	21	Member
D SOL - 5/8" SOLID	2.78	1.2D + 1.0W 210°	50.0	65	13.81	0.00	0.00	0.00	0	0	20	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 3 – Bolt Elevation 20.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-69.65	1.2D + 1.0Di + 1.0Wi 60	3.92	100	100	100	83.63	50.0	107.30	0.00	0.00	0	0	64	Member X
H SAE - 2X2X0.1875	-1.50	1.2D + 1.0W 90°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	10	Member Z
D SOL - 5/8" SOLID	-1.74	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.20	1.2D + 1.0W 60°	36.0	58	23.17	0.00	0.00	0.00	0	0	9	Member
D SOL - 5/8" SOLID	2.46	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	17	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 4 – Bolt Elevation 40.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-75.18	1.2D + 1.0W 120°	3.92	100	100	100	83.63	50.0	107.30	0.00	0.00	0	0	70	Member X
H SAE - 2X2X0.1875	-3.75	1.2D + 1.0W 90°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	27	Member Z
D SOL - 5/8" SOLID	-1.82	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

FORCE/STRESS SUMMARY

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.54	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	10	Member
D SOL - 5/8" SOLID	5.59	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	40	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 5 – Bolt Elevation 60.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-74.20	1.2D + 1.0W N	3.92	100	100	100	83.63	50.0	107.30	0.00	0.00	0	0	69	Member X
H SAE - 2X2X0.1875	-5.39	1.2D + 1.0W 330°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	39	Member Z
D SOL - 5/8" SOLID	-1.32	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.46	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	10	Member
D SOL - 5/8" SOLID	7.88	1.2D + 1.0W 330°	50.0	65	13.81	0.00	0.00	0.00	0	0	57	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 6 – Bolt Elevation 80.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-62.39	1.2D + 1.0W 330°	3.92	100	100	100	83.63	50.0	107.30	0.00	0.00	0	0	58	Member X
H SAE - 2X2X0.1875	-0.98	1.2D + 1.0W 330°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	7	Member Z
D SOL - 5/8" SOLID	-1.75	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.63	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	11	Member
D SOL - 5/8" SOLID	1.96	1.2D + 1.0W 330°	50.0	65	13.81	0.00	0.00	0.00	0	0	14	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 7 – Bolt Elevation 100.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-60.40	1.2D + 1.0W 330°	3.92	100	100	100	83.63	50.0	107.30	0.00	0.00	0	0	56	Member X
H SAE - 2X2X0.1875	-4.29	1.2D + 1.0W 90°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	31	Member Z
D SOL - 5/8" SOLID	-1.70	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.66	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	11	Member
D SOL - 5/8" SOLID	6.85	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	49	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

FORCE/STRESS SUMMARY

Section 8 – Bolt Elevation 120.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-68.34	1.2D + 1.0W 120°	3.92	100	100	100	83.63	50.0	107.30	0.00	0.00	0	0	63	Member X
H SAE - 2X2X0.1875	-6.08	1.2D + 1.0W 90°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	44	Member Z
D SOL - 5/8" SOLID	-0.83	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	1.93	1.2D + 1.0W 60°	36.0	58	23.17	0.00	0.00	0.00	0	0	8	Member
D SOL - 5/8" SOLID	8.77	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	63	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 9 – Bolt Elevation 140.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-63.09	1.2D + 1.0W 330°	3.92	100	100	100	83.63	50.0	107.30	0.00	0.00	0	0	58	Member X
H SAE - 2X2X0.1875	-3.78	1.2D + 1.0W 90°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	27	Member Z
D SOL - 5/8" SOLID	-1.48	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	3.92	1.2D + 1.0W N	50.0	65	178.92	0.00	0.00		0	0	2	Member
H SAE - 2X2X0.1875	2.46	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	10	Member
D SOL - 5/8" SOLID	5.80	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	41	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	3.92	1.2D + 1.0W N	0.00	0	0	

Section 10 – Bolt Elevation 160.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-64.07	1.2D + 1.0W 330°	3.92	100	100	100	83.63	50.0	107.30	0.00	0.00	0	0	59	Member X
H SAE - 2X2X0.1875	-3.03	1.2D + 1.0W 90°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	22	Member Z
D SOL - 5/8" SOLID	-1.47	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	7.81	1.2D + 1.0W N	50.0	65	178.92	0.00	0.00		0	0	4	Member
H SAE - 2X2X0.1875	3.04	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	13	Member
D SOL - 5/8" SOLID	4.84	1.2D + 1.0W 210°	50.0	65	13.81	0.00	0.00	0.00	0	0	35	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	3.92	1.2D + 1.0W N	0.00	0	0	

Section 11 – Bolt Elevation 180.0 (ft) and Height 20.00 (ft)

FORCE/STRESS SUMMARY

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-48.84	1.2D + 1.0W N	3.92	100	100	100	94.08	50.0	74.01	0.00	0.00	0	0	65	Member X
H SAE - 2X2X0.1875	-4.71	1.2D + 1.0W 90°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	34	Member Z
D SOL - 5/8" SOLID	-1.53	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	11.52	1.2D + 1.0W N	50.0	65	141.37	0.00	0.00		0	0	8	Member
H SAE - 2X2X0.1875	2.69	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	11	Member
D SOL - 5/8" SOLID	8.51	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	61	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	11.74	1.2D + 1.0W N	0.00	0	0	

Section 12 – Bolt Elevation 200.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-41.08	1.2D + 1.0W 330°	3.92	100	100	100	94.08	50.0	74.01	0.00	0.00	0	0	55	Member X
D SOL - 5/8" SOLID	-0.83	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	14.31	1.2D + 1.0W N	50.0	65	141.37	0.00	0.00		0	0	10	Member
H SAE - 2X2X0.1875	2.16	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	9	Member
D SOL - 5/8" SOLID	0.36	1.2D + 1.0W N	50.0	65	13.81	0.00	0.00	0.00	0	0	2	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	10.36	1.2D + 1.0W N	0.00	0	0	
Bot Tension	11.74	1.2D + 1.0W N	0.00	0	0	

Section 13 – Bolt Elevation 220.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-38.03	1.2D + 1.0W 330°	3.92	100	100	100	94.08	50.0	74.01	0.00	0.00	0	0	51	Member X
H SAE - 2X2X0.1875	-3.35	1.2D + 1.0W 90°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	24	Member Z
D SOL - 5/8" SOLID	-1.31	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	10.44	1.2D + 1.0W N	50.0	65	141.37	0.00	0.00		0	0	7	Member
H SAE - 2X2X0.1875	1.82	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	7	Member
D SOL - 5/8" SOLID	5.40	1.2D + 1.0W 330°	50.0	65	13.81	0.00	0.00	0.00	0	0	39	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	10.36	1.2D + 1.0W N	0.00	0	0	

Section 14 – Bolt Elevation 240.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-26.05	1.2D + 1.0W 210°	3.92	100	100	100	94.08	50.0	74.01	0.00	0.00	0	0	35	Member X

FORCE/STRESS SUMMARY

H SAE - 2X2X0.1875	-2.28	1.2D + 1.0W N	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	16	Member Z
D SOL - 5/8" SOLID	-0.65	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	7.33	1.2D + 1.0W 60°	50.0	65	141.37	0.00	0.00		0	0	5	Member
H SAE - 2X2X0.1875	1.14	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	4	Member
D SOL - 5/8" SOLID	6.13	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	44	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 15 – Bolt Elevation 260.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-11.16	1.2D + 1.0W N	3.92	100	100	100	94.08	50.0	74.01	0.00	0.00	0	0	15	Member X
D SOL - 5/8" SOLID	-0.98	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	0.72	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	3	Member
D SOL - 5/8" SOLID	0.62	1.2D + 1.0W 60°	50.0	65	13.81	0.00	0.00	0.00	0	0	4	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 16 – Bolt Elevation 280.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-10.41	1.2D + 1.0W N	3.92	100	100	100	94.08	50.0	74.01	0.00	0.00	0	0	14	Member X
H SAE - 2X2X0.1875	-0.26	1.2D + 1.0W 60°	4	100	100	100	121.83	36.0	13.73	0.00	0.00	0	0	1	Member Z
D SOL - 5/8" SOLID	-0.41	1.2D + 1.0W N	5.601	50	50	50	193.87	50.0	1.84	0.00	0.00	0	0	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	2.33	1.2D + 1.0W 60°	50.0	65	141.37	0.00	0.00		0	0	1	Member
H SAE - 2X2X0.1875	0.57	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	2	Member
D SOL - 5/8" SOLID	1.01	1.2D + 1.0W 60°	50.0	65	13.81	0.00	0.00	0.00	0	0	7	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down *F_X (kip)	*F_Y (kip)	*F_Z (kip)
1.2D + 1.0W Normal	0.00	0.00		1	-0.04	172.05	-2.12
	190.00	7.00	0	A1	0.00	-3.24	2.45
	190.00	3.00	240	A1a	-62.80	-59.15	-38.49
	201.00	-8.00	120	A1b	62.81	-59.77	-38.53
1.2D + 1.0W 60°	0.00	0.00		1	-2.50	141.49	-1.49
	190.00	7.00	0	A1	-1.53	-12.42	13.33
	190.00	3.00	240	A1a	-71.95	-67.30	-41.52
	201.00	-8.00	120	A1b	10.72	-12.74	-8.03
1.2D + 1.0W 90°	0.00	0.00		1	-2.39	160.12	-0.45
	190.00	7.00	0	A1	-2.10	-36.31	45.35
	190.00	3.00	240	A1a	-74.83	-68.91	-41.96
	201.00	-8.00	120	A1b	3.66	-5.51	-2.98
1.2D + 1.0W 120°	0.00	0.00		1	-1.91	170.39	1.10
	190.00	7.00	0	A1	-1.92	-57.78	73.74
	190.00	3.00	240	A1a	-64.83	-59.32	-35.21
	201.00	-8.00	120	A1b	2.27	-3.52	-1.31
1.2D + 1.0W 180°	0.00	0.00		1	0.03	140.47	2.95
	190.00	7.00	0	A1	-0.01	-65.72	83.16
	190.00	3.00	240	A1a	-12.43	-12.86	-5.40
	201.00	-8.00	120	A1b	12.45	-12.90	-5.35
1.2D + 1.0W 210°	0.00	0.00		1	0.80	159.12	2.34
	190.00	7.00	0	A1	1.07	-66.95	85.51
	190.00	3.00	240	A1a	-4.19	-5.31	-1.59
	201.00	-8.00	120	A1b	40.16	-37.42	-20.70
1.2D + 1.0W 240°	0.00	0.00		1	1.84	170.84	1.13
	190.00	7.00	0	A1	1.93	-57.71	73.65
	190.00	3.00	240	A1a	-2.15	-3.40	-1.24
	201.00	-8.00	120	A1b	64.82	-59.86	-35.16
1.2D + 1.0W 300°	0.00	0.00		1	2.50	140.63	-1.46
	190.00	7.00	0	A1	1.53	-11.93	12.66
	190.00	3.00	240	A1a	-10.18	-12.21	-7.65
	201.00	-8.00	120	A1b	71.32	-67.38	-41.17
1.2D + 1.0W 330°	0.00	0.00		1	1.58	160.69	-1.80
	190.00	7.00	0	A1	0.71	-5.02	4.27
	190.00	3.00	240	A1a	-37.90	-36.89	-24.32
	201.00	-8.00	120	A1b	73.42	-69.26	-43.65
1.2D + 1.0Di + 1.0Wi Normal	0.00	0.00		1	0.01	199.98	-0.61
	190.00	7.00	0	A1	0.00	-10.82	16.42
	190.00	3.00	240	A1a	-34.61	-30.41	-21.33
	201.00	-8.00	120	A1b	34.57	-30.59	-21.36
1.2D + 1.0Di + 1.0Wi 60°	0.00	0.00		1	-0.53	200.91	-0.36
	190.00	7.00	0	A1	-1.15	-17.70	24.58
	190.00	3.00	240	A1a	-42.17	-37.38	-24.34
	201.00	-8.00	120	A1b	20.66	-18.31	-13.30
1.2D + 1.0Di + 1.0Wi 90°	0.00	0.00		1	-0.60	200.43	-0.04
	190.00	7.00	0	A1	-1.43	-23.73	32.79
	190.00	3.00	240	A1a	-40.77	-35.51	-22.87
	201.00	-8.00	120	A1b	16.00	-13.42	-9.90
1.2D + 1.0Di + 1.0Wi 120°	0.00	0.00		1	-0.49	200.00	0.29
	190.00	7.00	0	A1	-1.17	-29.81	41.07
	190.00	3.00	240	A1a	-36.17	-30.65	-19.53
	201.00	-8.00	120	A1b	14.58	-11.48	-8.42
1.2D + 1.0Di + 1.0Wi 180°	0.00	0.00		1	0.03	200.63	0.65
	190.00	7.00	0	A1	-0.01	-36.49	48.76
	190.00	3.00	240	A1a	-21.92	-18.27	-11.32
	201.00	-8.00	120	A1b	21.92	-18.38	-11.28
1.2D + 1.0Di + 1.0Wi 210°	0.00	0.00		1	0.32	200.08	0.55
	190.00	7.00	0	A1	0.56	-34.51	46.55
	190.00	3.00	240	A1a	-16.42	-13.28	-8.84
	201.00	-8.00	120	A1b	28.96	-24.48	-15.01
1.2D + 1.0Di + 1.0Wi 240°	0.00	0.00		1	0.53	199.54	0.31
	190.00	7.00	0	A1	1.16	-29.61	40.64
	190.00	3.00	240	A1a	-14.23	-11.19	-8.22
	201.00	-8.00	120	A1b	35.81	-30.61	-19.28
1.2D + 1.0Di + 1.0Wi 300°	0.00	0.00		1	0.55	200.08	-0.32
	190.00	7.00	0	A1	1.15	-17.40	24.11
	190.00	3.00	240	A1a	-20.29	-17.89	-13.04
	201.00	-8.00	120	A1b	41.73	-37.21	-24.10

DETAILED REACTIONS

*(-) Uplift and (+) Down

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*Fx (kip)	*Fy (kip)	*Fz (kip)
1.2D + 1.0Di + 1.0Wi 330°	0.00	0.00		1	0.34	199.94	-0.52
	190.00	7.00	0	A1	0.55	-12.63	18.31
	190.00	3.00	240	A1a	-27.23	-24.07	-17.37
	201.00	-8.00	120	A1b	39.72	-35.37	-23.62
1.2D + 1.0Ev + 1.0Eh Normal	0.00	0.00		1	0.01	94.05	0.02
	190.00	7.00	0	A1	0.00	-13.06	17.63
	190.00	3.00	240	A1a	-16.59	-14.92	-9.58
	201.00	-8.00	120	A1b	16.58	-15.08	-9.58
1.2D + 1.0Ev + 1.0Eh 60°	0.00	0.00		1	0.03	94.11	0.00
	190.00	7.00	0	A1	0.00	-13.57	18.16
	190.00	3.00	240	A1a	-17.05	-15.44	-9.85
	201.00	-8.00	120	A1b	15.73	-14.11	-9.08
1.2D + 1.0Ev + 1.0Eh 90°	0.00	0.00		1	0.04	94.14	-0.01
	190.00	7.00	0	A1	0.00	-14.07	18.69
	190.00	3.00	240	A1a	-16.95	-15.32	-9.78
	201.00	-8.00	120	A1b	15.42	-13.76	-8.90
1.2D + 1.0Ev + 1.0Eh 120°	0.00	0.00		1	0.03	94.15	-0.02
	190.00	7.00	0	A1	0.00	-14.57	19.21
	190.00	3.00	240	A1a	-16.63	-14.96	-9.60
	201.00	-8.00	120	A1b	15.31	-13.63	-8.84
1.2D + 1.0Ev + 1.0Eh 180°	0.00	0.00		1	0.01	94.12	-0.03
	190.00	7.00	0	A1	0.00	-15.06	19.71
	190.00	3.00	240	A1a	-15.73	-13.95	-9.08
	201.00	-8.00	120	A1b	15.74	-14.12	-9.08
1.2D + 1.0Ev + 1.0Eh 210°	0.00	0.00		1	0.00	94.08	-0.03
	190.00	7.00	0	A1	0.00	-14.89	19.54
	190.00	3.00	240	A1a	-15.42	-13.60	-8.90
	201.00	-8.00	120	A1b	16.17	-14.60	-9.33
1.2D + 1.0Ev + 1.0Eh 240°	0.00	0.00		1	-0.01	94.05	-0.02
	190.00	7.00	0	A1	0.00	-14.52	19.16
	190.00	3.00	240	A1a	-15.29	-13.46	-8.83
	201.00	-8.00	120	A1b	16.58	-15.07	-9.57
1.2D + 1.0Ev + 1.0Eh 300°	0.00	0.00		1	-0.01	94.01	0.01
	190.00	7.00	0	A1	0.00	-13.58	18.16
	190.00	3.00	240	A1a	-15.72	-13.94	-9.08
	201.00	-8.00	120	A1b	16.97	-15.51	-9.80
1.2D + 1.0Ev + 1.0Eh 330°	0.00	0.00		1	0.00	94.02	0.02
	190.00	7.00	0	A1	0.00	-13.21	17.78
	190.00	3.00	240	A1a	-16.13	-14.41	-9.32
	201.00	-8.00	120	A1b	16.88	-15.41	-9.75
0.9D - 1.0Ev + 1.0Eh Normal	0.00	0.00		1	0.01	80.36	0.02
	190.00	7.00	0	A1	0.00	-13.32	17.90
	190.00	3.00	240	A1a	-16.78	-15.14	-9.69
	201.00	-8.00	120	A1b	16.78	-15.31	-9.69
0.9D - 1.0Ev + 1.0Eh 60°	0.00	0.00		1	0.03	80.43	0.00
	190.00	7.00	0	A1	0.00	-13.80	18.41
	190.00	3.00	240	A1a	-17.27	-15.69	-9.97
	201.00	-8.00	120	A1b	15.94	-14.35	-9.20
0.9D - 1.0Ev + 1.0Eh 90°	0.00	0.00		1	0.04	80.46	-0.01
	190.00	7.00	0	A1	0.00	-14.31	18.93
	190.00	3.00	240	A1a	-17.16	-15.56	-9.90
	201.00	-8.00	120	A1b	15.63	-14.00	-9.02
0.9D - 1.0Ev + 1.0Eh 120°	0.00	0.00		1	0.03	80.47	-0.02
	190.00	7.00	0	A1	0.00	-14.81	19.45
	190.00	3.00	240	A1a	-16.84	-15.20	-9.72
	201.00	-8.00	120	A1b	15.52	-13.87	-8.96
0.9D - 1.0Ev + 1.0Eh 180°	0.00	0.00		1	0.01	80.43	-0.03
	190.00	7.00	0	A1	0.00	-15.26	19.93
	190.00	3.00	240	A1a	-15.95	-14.20	-9.21
	201.00	-8.00	120	A1b	15.96	-14.38	-9.21
0.9D - 1.0Ev + 1.0Eh 210°	0.00	0.00		1	0.00	80.40	-0.03
	190.00	7.00	0	A1	0.00	-15.12	19.78
	190.00	3.00	240	A1a	-15.63	-13.84	-9.02
	201.00	-8.00	120	A1b	16.38	-14.85	-9.45
0.9D - 1.0Ev + 1.0Eh 240°	0.00	0.00		1	-0.01	80.37	-0.02
	190.00	7.00	0	A1	0.00	-14.76	19.40
	190.00	3.00	240	A1a	-15.50	-13.70	-8.95
	201.00	-8.00	120	A1b	16.79	-15.32	-9.69
0.9D - 1.0Ev + 1.0Eh 300°	0.00	0.00		1	-0.01	80.33	0.00

DETAILED REACTIONS

*(-) Uplift and (+) Down

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*Fx (kip)	*Fy (kip)	*Fz (kip)
	190.00	7.00	0	A1	0.00	-13.81	18.41
	190.00	3.00	240	A1a	-15.93	-14.18	-9.20
	201.00	-8.00	120	A1b	17.18	-15.75	-9.92
0.9D - 1.0Ev + 1.0Eh 330°	0.00	0.00		1	0.00	80.34	0.01
	190.00	7.00	0	A1	0.00	-13.44	18.02
	190.00	3.00	240	A1a	-16.35	-14.65	-9.44
	201.00	-8.00	120	A1b	17.09	-15.66	-9.87
1.0D + 1.0W Service Normal	0.00	0.00		1	0.01	88.31	-0.82
	190.00	7.00	0	A1	0.00	-6.50	8.74
	190.00	3.00	240	A1a	-21.82	-19.79	-13.02
	201.00	-8.00	120	A1b	21.80	-20.00	-13.03
1.0D + 1.0W Service 60°	0.00	0.00		1	-0.70	88.56	-0.42
	190.00	7.00	0	A1	-0.36	-11.04	14.40
	190.00	3.00	240	A1a	-26.69	-24.25	-15.41
	201.00	-8.00	120	A1b	12.28	-11.46	-7.52
1.0D + 1.0W Service 90°	0.00	0.00		1	-0.80	88.49	-0.02
	190.00	7.00	0	A1	-0.45	-15.22	20.03
	190.00	3.00	240	A1a	-25.69	-23.12	-14.62
	201.00	-8.00	120	A1b	9.01	-8.24	-5.41
1.0D + 1.0W Service 120°	0.00	0.00		1	-0.70	88.48	0.40
	190.00	7.00	0	A1	-0.37	-19.49	25.77
	190.00	3.00	240	A1a	-22.50	-20.02	-12.57
	201.00	-8.00	120	A1b	7.89	-6.99	-4.55
1.0D + 1.0W Service 180°	0.00	0.00		1	0.01	88.46	0.81
	190.00	7.00	0	A1	0.00	-23.69	30.91
	190.00	3.00	240	A1a	-12.73	-11.42	-6.93
	201.00	-8.00	120	A1b	12.73	-11.54	-6.92
1.0D + 1.0W Service 210°	0.00	0.00		1	0.41	88.25	0.70
	190.00	7.00	0	A1	0.18	-22.50	29.45
	190.00	3.00	240	A1a	-9.06	-8.09	-5.03
	201.00	-8.00	120	A1b	17.46	-15.75	-9.55
1.0D + 1.0W Service 240°	0.00	0.00		1	0.71	88.13	0.40
	190.00	7.00	0	A1	0.37	-19.33	25.47
	190.00	3.00	240	A1a	-7.62	-6.74	-4.40
	201.00	-8.00	120	A1b	22.24	-20.06	-12.40
1.0D + 1.0W Service 300°	0.00	0.00		1	0.72	88.06	-0.42
	190.00	7.00	0	A1	0.36	-10.83	14.07
	190.00	3.00	240	A1a	-12.00	-11.13	-7.35
	201.00	-8.00	120	A1b	26.39	-24.26	-15.23
1.0D + 1.0W Service 330°	0.00	0.00		1	0.43	88.09	-0.70
	190.00	7.00	0	A1	0.17	-7.69	10.11
	190.00	3.00	240	A1a	-16.77	-15.38	-10.20
	201.00	-8.00	120	A1b	25.14	-23.09	-14.73

GUY ANCHOR DESIGN LOADS

Radius (ft)	Drop (ft)	Azimuth (deg)	Uplift (kip)	Shear (kip)
190.00	7.00	0	66.95	85.52
190.00	3.00	240	68.91	85.79
201.00	-8.00	120	69.26	85.41

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0W Normal	59.80	3/4 EHS	A1	22	34.98	0.78	2
		3/4 EHS	A1b	22a	34.98	17.95	51
		3/4 EHS	A1a	22b	34.98	17.64	50
	124.12	3/4 EHS	A1	46	34.98	0.24	1
		3/4 EHS	A1b	46a	34.98	24.39	70
		3/4 EHS	A1a	46b	34.98	24.23	69
	184.12	3/4 EHS	A1	67	34.98	0.55	2
		3/4 EHS	A1b	67a	34.98	24.51	70
		3/4 EHS	A1a	67b	34.98	24.54	70
	244.12	3/4 EHS	A1	88	34.98	1.48	4
		3/4 EHS	A1b	88a	34.98	19.33	55
		3/4 EHS	A1a	88b	34.98	19.48	56
	291.96	5/8 EHS	A1	104	25.44	2.2	9
		5/8 EHS	A1b	104a	25.44	11.89	47
		5/8 EHS	A1a	104b	25.44	12.01	47
1.2D + 1.0W 60°	59.80	3/4 EHS	A1	22	34.98	3.17	9
		3/4 EHS	A1b	22a	34.98	3.21	9
		3/4 EHS	A1a	22b	34.98	19.3	55
	124.12	3/4 EHS	A1	46	34.98	3.01	9
		3/4 EHS	A1b	46a	34.98	3.08	9
		3/4 EHS	A1a	46b	34.98	26.5	76
	184.12	3/4 EHS	A1	67	34.98	3.61	10
		3/4 EHS	A1b	67a	34.98	3.69	11
		3/4 EHS	A1a	67b	34.98	28.2	81
	244.12	3/4 EHS	A1	88	34.98	5	14
		3/4 EHS	A1b	88a	34.98	5.02	14
		3/4 EHS	A1a	88b	34.98	22.69	65
	291.96	5/8 EHS	A1	104	25.44	5.08	20
		5/8 EHS	A1b	104a	25.44	5.06	20
		5/8 EHS	A1a	104b	25.44	13.9	55
1.2D + 1.0W 90°	59.80	3/4 EHS	A1	22	34.98	10.96	31
		3/4 EHS	A1b	22a	34.98	1.04	3
		3/4 EHS	A1a	22b	34.98	20.22	58
	124.12	3/4 EHS	A1	46	34.98	14.39	41
		3/4 EHS	A1b	46a	34.98	0.86	2
		3/4 EHS	A1a	46b	34.98	28.03	80
	184.12	3/4 EHS	A1	67	34.98	14.33	41
		3/4 EHS	A1b	67a	34.98	1.32	4
		3/4 EHS	A1a	67b	34.98	29.04	83
	244.12	3/4 EHS	A1	88	34.98	12.37	35
		3/4 EHS	A1b	88a	34.98	2.34	7
		3/4 EHS	A1a	88b	34.98	22.82	65
	291.96	5/8 EHS	A1	104	25.44	8.71	34
		5/8 EHS	A1b	104a	25.44	2.96	12
		5/8 EHS	A1a	104b	25.44	13.69	54
1.2D + 1.0W 120°	59.80	3/4 EHS	A1	22	34.98	17.52	50
		3/4 EHS	A1b	22a	34.98	0.85	2
		3/4 EHS	A1a	22b	34.98	17.61	50
	124.12	3/4 EHS	A1	46	34.98	23.98	69
		3/4 EHS	A1b	46a	34.98	0.23	1
		3/4 EHS	A1a	46b	34.98	24.24	69
	184.12	3/4 EHS	A1	67	34.98	24.37	70
		3/4 EHS	A1b	67a	34.98	0.63	2
		3/4 EHS	A1a	67b	34.98	24.61	70
	244.12	3/4 EHS	A1	88	34.98	19.37	55
		3/4 EHS	A1b	88a	34.98	1.6	5
		3/4 EHS	A1a	88b	34.98	19.57	56
	291.96	5/8 EHS	A1	104	25.44	11.96	47
		5/8 EHS	A1b	104a	25.44	2.31	9
		5/8 EHS	A1a	104b	25.44	12.07	47
1.2D + 1.0W 180°	59.80	3/4 EHS	A1	22	34.98	19.14	55
		3/4 EHS	A1b	22a	34.98	3.23	9
		3/4 EHS	A1a	22b	34.98	3.2	9
	124.12	3/4 EHS	A1	46	34.98	26.28	75
		3/4 EHS	A1b	46a	34.98	3.12	9
		3/4 EHS	A1a	46b	34.98	3.09	9

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
	184.12	3/4 EHS	A1	67	34.98	28	80
		3/4 EHS	A1b	67a	34.98	3.74	11
		3/4 EHS	A1a	67b	34.98	3.71	11
	244.12	3/4 EHS	A1	88	34.98	22.51	64
		3/4 EHS	A1b	88a	34.98	5.08	15
		3/4 EHS	A1a	88b	34.98	5.12	15
	291.96	5/8 EHS	A1	104	25.44	13.8	54
		5/8 EHS	A1b	104a	25.44	5.11	20
		5/8 EHS	A1a	104b	25.44	5.16	20
1.2D + 1.0W 210°	59.80	3/4 EHS	A1	22	34.98	20	57
		3/4 EHS	A1b	22a	34.98	11.16	32
		3/4 EHS	A1a	22b	34.98	0.95	3
	124.12	3/4 EHS	A1	46	34.98	27.68	79
		3/4 EHS	A1b	46a	34.98	14.56	42
		3/4 EHS	A1a	46b	34.98	0.79	2
	184.12	3/4 EHS	A1	67	34.98	28.7	82
		3/4 EHS	A1b	67a	34.98	14.39	41
		3/4 EHS	A1a	67b	34.98	1.24	4
	244.12	3/4 EHS	A1	88	34.98	22.52	64
		3/4 EHS	A1b	88a	34.98	12.33	35
		3/4 EHS	A1a	88b	34.98	2.27	6
	291.96	5/8 EHS	A1	104	25.44	13.53	53
		5/8 EHS	A1b	104a	25.44	8.68	34
		5/8 EHS	A1a	104b	25.44	2.93	12
1.2D + 1.0W 240°	59.80	3/4 EHS	A1	22	34.98	17.47	50
		3/4 EHS	A1b	22a	34.98	17.92	51
		3/4 EHS	A1a	22b	34.98	0.78	2
	124.12	3/4 EHS	A1	46	34.98	23.99	69
		3/4 EHS	A1b	46a	34.98	24.37	70
		3/4 EHS	A1a	46b	34.98	0.22	1
	184.12	3/4 EHS	A1	67	34.98	24.34	70
		3/4 EHS	A1b	67a	34.98	24.54	70
		3/4 EHS	A1a	67b	34.98	0.59	2
	244.12	3/4 EHS	A1	88	34.98	19.33	55
		3/4 EHS	A1b	88a	34.98	19.4	55
		3/4 EHS	A1a	88b	34.98	1.54	4
	291.96	5/8 EHS	A1	104	25.44	11.94	47
		5/8 EHS	A1b	104a	25.44	11.93	47
		5/8 EHS	A1a	104b	25.44	2.27	9
1.2D + 1.0W 300°	59.80	3/4 EHS	A1	22	34.98	2.93	8
		3/4 EHS	A1b	22a	34.98	19.35	55
		3/4 EHS	A1a	22b	34.98	2.93	8
	124.12	3/4 EHS	A1	46	34.98	2.81	8
		3/4 EHS	A1b	46a	34.98	26.48	76
		3/4 EHS	A1a	46b	34.98	2.84	8
	184.12	3/4 EHS	A1	67	34.98	3.44	10
		3/4 EHS	A1b	67a	34.98	27.94	80
		3/4 EHS	A1a	67b	34.98	3.49	10
	244.12	3/4 EHS	A1	88	34.98	4.84	14
		3/4 EHS	A1b	88a	34.98	22.36	64
		3/4 EHS	A1a	88b	34.98	4.9	14
	291.96	5/8 EHS	A1	104	25.44	4.98	20
		5/8 EHS	A1b	104a	25.44	13.64	54
		5/8 EHS	A1a	104b	25.44	5.02	20
1.2D + 1.0W 330°	59.80	3/4 EHS	A1	22	34.98	0.93	3
		3/4 EHS	A1b	22a	34.98	20.45	58
		3/4 EHS	A1a	22b	34.98	11	31
	124.12	3/4 EHS	A1	46	34.98	0.75	2
		3/4 EHS	A1b	46a	34.98	28.14	80
		3/4 EHS	A1a	46b	34.98	14.43	41
	184.12	3/4 EHS	A1	67	34.98	1.18	3
		3/4 EHS	A1b	67a	34.98	28.87	83
		3/4 EHS	A1a	67b	34.98	14.33	41
	244.12	3/4 EHS	A1	88	34.98	2.16	6
		3/4 EHS	A1b	88a	34.98	22.52	64
		3/4 EHS	A1a	88b	34.98	12.35	35
	291.96	5/8 EHS	A1	104	25.44	2.82	11
		5/8 EHS	A1b	104a	25.44	13.45	53

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		5/8 EHS	A1a	104b	25.44	8.69	34
1.2D + 1.0Di + 1.0Wi Normal	59.80	3/4 EHS	A1	22	34.98	5.98	17
		3/4 EHS	A1b	22a	34.98	11.33	32
		3/4 EHS	A1a	22b	34.98	11.16	32
	124.12	3/4 EHS	A1	46	34.98	4.69	13
		3/4 EHS	A1b	46a	34.98	12.27	35
		3/4 EHS	A1a	46b	34.98	12.16	35
	184.12	3/4 EHS	A1	67	34.98	4.31	12
		3/4 EHS	A1b	67a	34.98	12.03	34
		3/4 EHS	A1a	67b	34.98	12.03	34
	244.12	3/4 EHS	A1	88	34.98	4.8	14
		3/4 EHS	A1b	88a	34.98	11.26	32
		3/4 EHS	A1a	88b	34.98	11.35	32
	291.96	5/8 EHS	A1	104	25.44	4.4	17
		5/8 EHS	A1b	104a	25.44	9.29	37
		5/8 EHS	A1a	104b	25.44	9.34	37
1.2D + 1.0Di + 1.0Wi 60°	59.80	3/4 EHS	A1	22	34.98	7.67	22
		3/4 EHS	A1b	22a	34.98	7.79	22
		3/4 EHS	A1a	22b	34.98	12.54	36
	124.12	3/4 EHS	A1	46	34.98	6.84	20
		3/4 EHS	A1b	46a	34.98	6.99	20
		3/4 EHS	A1a	46b	34.98	14.37	41
	184.12	3/4 EHS	A1	67	34.98	6.71	19
		3/4 EHS	A1b	67a	34.98	6.83	20
		3/4 EHS	A1a	67b	34.98	14.81	42
	244.12	3/4 EHS	A1	88	34.98	7.27	21
		3/4 EHS	A1b	88a	34.98	7.31	21
		3/4 EHS	A1a	88b	34.98	14.06	40
	291.96	5/8 EHS	A1	104	25.44	6.65	26
		5/8 EHS	A1b	104a	25.44	6.68	26
		5/8 EHS	A1a	104b	25.44	11.1	44
1.2D + 1.0Di + 1.0Wi 90°	59.80	3/4 EHS	A1	22	34.98	9.5	27
		3/4 EHS	A1b	22a	34.98	6.64	19
		3/4 EHS	A1a	22b	34.98	12.3	35
	124.12	3/4 EHS	A1	46	34.98	9.53	27
		3/4 EHS	A1b	46a	34.98	5.42	16
		3/4 EHS	A1a	46b	34.98	13.93	40
	184.12	3/4 EHS	A1	67	34.98	9.3	27
		3/4 EHS	A1b	67a	34.98	5.08	15
		3/4 EHS	A1a	67b	34.98	14.12	40
	244.12	3/4 EHS	A1	88	34.98	9.23	26
		3/4 EHS	A1b	88a	34.98	5.58	16
		3/4 EHS	A1a	88b	34.98	13.26	38
	291.96	5/8 EHS	A1	104	25.44	7.98	31
		5/8 EHS	A1b	104a	25.44	5.19	20
		5/8 EHS	A1a	104b	25.44	10.53	41
1.2D + 1.0Di + 1.0Wi 120°	59.80	3/4 EHS	A1	22	34.98	11.26	32
		3/4 EHS	A1b	22a	34.98	6.29	18
		3/4 EHS	A1a	22b	34.98	11.35	32
	124.12	3/4 EHS	A1	46	34.98	12.27	35
		3/4 EHS	A1b	46a	34.98	5.01	14
		3/4 EHS	A1a	46b	34.98	12.39	35
	184.12	3/4 EHS	A1	67	34.98	12.04	34
		3/4 EHS	A1b	67a	34.98	4.55	13
		3/4 EHS	A1a	67b	34.98	12.17	35
	244.12	3/4 EHS	A1	88	34.98	11.23	32
		3/4 EHS	A1b	88a	34.98	4.92	14
		3/4 EHS	A1a	88b	34.98	11.35	32
	291.96	5/8 EHS	A1	104	25.44	9.2	36
		5/8 EHS	A1b	104a	25.44	4.32	17
		5/8 EHS	A1a	104b	25.44	9.28	36
1.2D + 1.0Di + 1.0Wi 180°	59.80	3/4 EHS	A1	22	34.98	12.46	36
		3/4 EHS	A1b	22a	34.98	7.82	22
		3/4 EHS	A1a	22b	34.98	7.72	22
	124.12	3/4 EHS	A1	46	34.98	14.25	41
		3/4 EHS	A1b	46a	34.98	7.02	20
		3/4 EHS	A1a	46b	34.98	6.94	20
	184.12	3/4 EHS	A1	67	34.98	14.69	42

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		3/4 EHS	A1b	67a	34.98	6.85	20
		3/4 EHS	A1a	67b	34.98	6.82	19
	244.12	3/4 EHS	A1	88	34.98	13.95	40
		3/4 EHS	A1b	88a	34.98	7.33	21
		3/4 EHS	A1a	88b	34.98	7.37	21
	291.96	5/8 EHS	A1	104	25.44	11.02	43
		5/8 EHS	A1b	104a	25.44	6.69	26
		5/8 EHS	A1a	104b	25.44	6.73	26
1.2D + 1.0Di + 1.0Wi 210°	59.80	3/4 EHS	A1	22	34.98	12.12	35
		3/4 EHS	A1b	22a	34.98	9.61	27
		3/4 EHS	A1a	22b	34.98	6.45	18
	124.12	3/4 EHS	A1	46	34.98	13.67	39
		3/4 EHS	A1b	46a	34.98	9.58	27
		3/4 EHS	A1a	46b	34.98	5.25	15
	184.12	3/4 EHS	A1	67	34.98	13.9	40
		3/4 EHS	A1b	67a	34.98	9.38	27
		3/4 EHS	A1a	67b	34.98	4.96	14
	244.12	3/4 EHS	A1	88	34.98	13.15	38
		3/4 EHS	A1b	88a	34.98	9.29	27
		3/4 EHS	A1a	88b	34.98	5.61	16
	291.96	5/8 EHS	A1	104	25.44	10.51	41
		5/8 EHS	A1b	104a	25.44	8.07	32
		5/8 EHS	A1a	104b	25.44	5.3	21
1.2D + 1.0Di + 1.0Wi 240°	59.80	3/4 EHS	A1	22	34.98	11.08	32
		3/4 EHS	A1b	22a	34.98	11.34	32
		3/4 EHS	A1a	22b	34.98	6.03	17
	124.12	3/4 EHS	A1	46	34.98	12.03	34
		3/4 EHS	A1b	46a	34.98	12.28	35
		3/4 EHS	A1a	46b	34.98	4.75	14
	184.12	3/4 EHS	A1	67	34.98	11.91	34
		3/4 EHS	A1b	67a	34.98	12.03	34
		3/4 EHS	A1a	67b	34.98	4.36	12
	244.12	3/4 EHS	A1	88	34.98	11.24	32
		3/4 EHS	A1b	88a	34.98	11.27	32
		3/4 EHS	A1a	88b	34.98	4.86	14
	291.96	5/8 EHS	A1	104	25.44	9.26	36
		5/8 EHS	A1b	104a	25.44	9.29	37
		5/8 EHS	A1a	104b	25.44	4.45	18
1.2D + 1.0Di + 1.0Wi 300°	59.80	3/4 EHS	A1	22	34.98	7.49	21
		3/4 EHS	A1b	22a	34.98	12.61	36
		3/4 EHS	A1a	22b	34.98	7.54	22
	124.12	3/4 EHS	A1	46	34.98	6.66	19
		3/4 EHS	A1b	46a	34.98	14.31	41
		3/4 EHS	A1a	46b	34.98	6.73	19
	184.12	3/4 EHS	A1	67	34.98	6.57	19
		3/4 EHS	A1b	67a	34.98	14.63	42
		3/4 EHS	A1a	67b	34.98	6.65	19
	244.12	3/4 EHS	A1	88	34.98	7.19	21
		3/4 EHS	A1b	88a	34.98	13.84	40
		3/4 EHS	A1a	88b	34.98	7.27	21
	291.96	5/8 EHS	A1	104	25.44	6.64	26
		5/8 EHS	A1b	104a	25.44	10.99	43
		5/8 EHS	A1a	104b	25.44	6.69	26
1.2D + 1.0Di + 1.0Wi 330°	59.80	3/4 EHS	A1	22	34.98	6.29	18
		3/4 EHS	A1b	22a	34.98	12.3	35
		3/4 EHS	A1a	22b	34.98	9.39	27
	124.12	3/4 EHS	A1	46	34.98	5.09	15
		3/4 EHS	A1b	46a	34.98	13.83	40
		3/4 EHS	A1a	46b	34.98	9.36	27
	184.12	3/4 EHS	A1	67	34.98	4.81	14
		3/4 EHS	A1b	67a	34.98	13.92	40
		3/4 EHS	A1a	67b	34.98	9.26	26
	244.12	3/4 EHS	A1	88	34.98	5.46	16
		3/4 EHS	A1b	88a	34.98	13.09	37
		3/4 EHS	A1a	88b	34.98	9.27	27
	291.96	5/8 EHS	A1	104	25.44	5.2	20
		5/8 EHS	A1b	104a	25.44	10.49	41
		5/8 EHS	A1a	104b	25.44	8.06	32

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0Ev + 1.0Eh Normal	59.80	3/4 EHS	A1	22	34.98	5.56	16
		3/4 EHS	A1b	22a	34.98	5.78	17
		3/4 EHS	A1a	22b	34.98	5.72	16
	124.12	3/4 EHS	A1	46	34.98	5.04	14
		3/4 EHS	A1b	46a	34.98	5.59	16
		3/4 EHS	A1a	46b	34.98	5.53	16
	184.12	3/4 EHS	A1	67	34.98	4.71	13
		3/4 EHS	A1b	67a	34.98	5.45	16
		3/4 EHS	A1a	67b	34.98	5.45	16
	244.12	3/4 EHS	A1	88	34.98	4.73	14
		3/4 EHS	A1b	88a	34.98	5.34	15
		3/4 EHS	A1a	88b	34.98	5.37	15
	291.96	5/8 EHS	A1	104	25.44	3.54	14
		5/8 EHS	A1b	104a	25.44	3.88	15
		5/8 EHS	A1a	104b	25.44	3.92	15
1.2D + 1.0Ev + 1.0Eh 60°	59.80	3/4 EHS	A1	22	34.98	5.61	16
		3/4 EHS	A1b	22a	34.98	5.7	16
		3/4 EHS	A1a	22b	34.98	5.76	16
	124.12	3/4 EHS	A1	46	34.98	5.2	15
		3/4 EHS	A1b	46a	34.98	5.3	15
		3/4 EHS	A1a	46b	34.98	5.69	16
	184.12	3/4 EHS	A1	67	34.98	4.95	14
		3/4 EHS	A1b	67a	34.98	5.02	14
		3/4 EHS	A1a	67b	34.98	5.69	16
	244.12	3/4 EHS	A1	88	34.98	4.93	14
		3/4 EHS	A1b	88a	34.98	4.96	14
		3/4 EHS	A1a	88b	34.98	5.57	16
	291.96	5/8 EHS	A1	104	25.44	3.66	14
		5/8 EHS	A1b	104a	25.44	3.66	14
		5/8 EHS	A1a	104b	25.44	4.04	16
1.2D + 1.0Ev + 1.0Eh 90°	59.80	3/4 EHS	A1	22	34.98	5.65	16
		3/4 EHS	A1b	22a	34.98	5.67	16
		3/4 EHS	A1a	22b	34.98	5.75	16
	124.12	3/4 EHS	A1	46	34.98	5.35	15
		3/4 EHS	A1b	46a	34.98	5.2	15
		3/4 EHS	A1a	46b	34.98	5.66	16
	184.12	3/4 EHS	A1	67	34.98	5.18	15
		3/4 EHS	A1b	67a	34.98	4.86	14
		3/4 EHS	A1a	67b	34.98	5.63	16
	244.12	3/4 EHS	A1	88	34.98	5.13	15
		3/4 EHS	A1b	88a	34.98	4.83	14
		3/4 EHS	A1a	88b	34.98	5.52	16
	291.96	5/8 EHS	A1	104	25.44	3.78	15
		5/8 EHS	A1b	104a	25.44	3.58	14
		5/8 EHS	A1a	104b	25.44	4.01	16
1.2D + 1.0Ev + 1.0Eh 120°	59.80	3/4 EHS	A1	22	34.98	5.69	16
		3/4 EHS	A1b	22a	34.98	5.66	16
		3/4 EHS	A1a	22b	34.98	5.73	16
	124.12	3/4 EHS	A1	46	34.98	5.5	16
		3/4 EHS	A1b	46a	34.98	5.16	15
		3/4 EHS	A1a	46b	34.98	5.55	16
	184.12	3/4 EHS	A1	67	34.98	5.41	15
		3/4 EHS	A1b	67a	34.98	4.8	14
		3/4 EHS	A1a	67b	34.98	5.46	16
	244.12	3/4 EHS	A1	88	34.98	5.33	15
		3/4 EHS	A1b	88a	34.98	4.78	14
		3/4 EHS	A1a	88b	34.98	5.38	15
	291.96	5/8 EHS	A1	104	25.44	3.89	15
		5/8 EHS	A1b	104a	25.44	3.55	14
		5/8 EHS	A1a	104b	25.44	3.92	15
1.2D + 1.0Ev + 1.0Eh 180°	59.80	3/4 EHS	A1	22	34.98	5.73	16
		3/4 EHS	A1b	22a	34.98	5.7	16
		3/4 EHS	A1a	22b	34.98	5.64	16
	124.12	3/4 EHS	A1	46	34.98	5.64	16
		3/4 EHS	A1b	46a	34.98	5.3	15
		3/4 EHS	A1a	46b	34.98	5.25	15
	184.12	3/4 EHS	A1	67	34.98	5.63	16
		3/4 EHS	A1b	67a	34.98	5.02	14

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		3/4 EHS	A1a	67b	34.98	5.01	14
	244.12	3/4 EHS	A1	88	34.98	5.52	16
		3/4 EHS	A1b	88a	34.98	4.96	14
		3/4 EHS	A1a	88b	34.98	4.99	14
	291.96	5/8 EHS	A1	104	25.44	4.01	16
		5/8 EHS	A1b	104a	25.44	3.66	14
		5/8 EHS	A1a	104b	25.44	3.69	15
1.2D + 1.0Ev + 1.0Eh 210°	59.80	3/4 EHS	A1	22	34.98	5.71	16
		3/4 EHS	A1b	22a	34.98	5.74	16
		3/4 EHS	A1a	22b	34.98	5.61	16
	124.12	3/4 EHS	A1	46	34.98	5.59	16
		3/4 EHS	A1b	46a	34.98	5.45	16
		3/4 EHS	A1a	46b	34.98	5.14	15
	184.12	3/4 EHS	A1	67	34.98	5.56	16
		3/4 EHS	A1b	67a	34.98	5.24	15
		3/4 EHS	A1a	67b	34.98	4.84	14
	244.12	3/4 EHS	A1	88	34.98	5.45	16
		3/4 EHS	A1b	88a	34.98	5.15	15
		3/4 EHS	A1a	88b	34.98	4.85	14
	291.96	5/8 EHS	A1	104	25.44	3.97	16
		5/8 EHS	A1b	104a	25.44	3.77	15
		5/8 EHS	A1a	104b	25.44	3.61	14
1.2D + 1.0Ev + 1.0Eh 240°	59.80	3/4 EHS	A1	22	34.98	5.68	16
		3/4 EHS	A1b	22a	34.98	5.78	17
		3/4 EHS	A1a	22b	34.98	5.6	16
	124.12	3/4 EHS	A1	46	34.98	5.48	16
		3/4 EHS	A1b	46a	34.98	5.59	16
		3/4 EHS	A1a	46b	34.98	5.1	15
	184.12	3/4 EHS	A1	67	34.98	5.39	15
		3/4 EHS	A1b	67a	34.98	5.45	16
		3/4 EHS	A1a	67b	34.98	4.78	14
	244.12	3/4 EHS	A1	88	34.98	5.31	15
		3/4 EHS	A1b	88a	34.98	5.33	15
		3/4 EHS	A1a	88b	34.98	4.8	14
	291.96	5/8 EHS	A1	104	25.44	3.88	15
		5/8 EHS	A1b	104a	25.44	3.88	15
		5/8 EHS	A1a	104b	25.44	3.58	14
1.2D + 1.0Ev + 1.0Eh 300°	59.80	3/4 EHS	A1	22	34.98	5.6	16
		3/4 EHS	A1b	22a	34.98	5.82	17
		3/4 EHS	A1a	22b	34.98	5.64	16
	124.12	3/4 EHS	A1	46	34.98	5.19	15
		3/4 EHS	A1b	46a	34.98	5.72	16
		3/4 EHS	A1a	46b	34.98	5.24	15
	184.12	3/4 EHS	A1	67	34.98	4.95	14
		3/4 EHS	A1b	67a	34.98	5.65	16
		3/4 EHS	A1a	67b	34.98	5	14
	244.12	3/4 EHS	A1	88	34.98	4.94	14
		3/4 EHS	A1b	88a	34.98	5.5	16
		3/4 EHS	A1a	88b	34.98	4.99	14
	291.96	5/8 EHS	A1	104	25.44	3.67	14
		5/8 EHS	A1b	104a	25.44	3.97	16
		5/8 EHS	A1a	104b	25.44	3.7	15
1.2D + 1.0Ev + 1.0Eh 330°	59.80	3/4 EHS	A1	22	34.98	5.57	16
		3/4 EHS	A1b	22a	34.98	5.81	17
		3/4 EHS	A1a	22b	34.98	5.68	16
	124.12	3/4 EHS	A1	46	34.98	5.08	15
		3/4 EHS	A1b	46a	34.98	5.69	16
		3/4 EHS	A1a	46b	34.98	5.38	15
	184.12	3/4 EHS	A1	67	34.98	4.78	14
		3/4 EHS	A1b	67a	34.98	5.61	16
		3/4 EHS	A1a	67b	34.98	5.21	15
	244.12	3/4 EHS	A1	88	34.98	4.8	14
		3/4 EHS	A1b	88a	34.98	5.47	16
		3/4 EHS	A1a	88b	34.98	5.17	15
	291.96	5/8 EHS	A1	104	25.44	3.58	14
		5/8 EHS	A1b	104a	25.44	3.96	16
		5/8 EHS	A1a	104b	25.44	3.8	15
0.9D - 1.0Ev + 1.0Eh Normal	59.80	3/4 EHS	A1	22	34.98	5.58	16

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		3/4 EHS	A1b	22a	34.98	5.81	17
		3/4 EHS	A1a	22b	34.98	5.74	16
	124.12	3/4 EHS	A1	46	34.98	5.11	15
		3/4 EHS	A1b	46a	34.98	5.65	16
		3/4 EHS	A1a	46b	34.98	5.6	16
	184.12	3/4 EHS	A1	67	34.98	4.82	14
		3/4 EHS	A1b	67a	34.98	5.54	16
		3/4 EHS	A1a	67b	34.98	5.53	16
	244.12	3/4 EHS	A1	88	34.98	4.85	14
		3/4 EHS	A1b	88a	34.98	5.43	16
		3/4 EHS	A1a	88b	34.98	5.46	16
	291.96	5/8 EHS	A1	104	25.44	3.62	14
		5/8 EHS	A1b	104a	25.44	3.95	16
		5/8 EHS	A1a	104b	25.44	3.98	16
0.9D - 1.0Ev + 1.0Eh 60°	59.80	3/4 EHS	A1	22	34.98	5.63	16
		3/4 EHS	A1b	22a	34.98	5.72	16
		3/4 EHS	A1a	22b	34.98	5.79	17
	124.12	3/4 EHS	A1	46	34.98	5.26	15
		3/4 EHS	A1b	46a	34.98	5.37	15
		3/4 EHS	A1a	46b	34.98	5.76	16
	184.12	3/4 EHS	A1	67	34.98	5.04	14
		3/4 EHS	A1b	67a	34.98	5.11	15
		3/4 EHS	A1a	67b	34.98	5.78	17
	244.12	3/4 EHS	A1	88	34.98	5.03	14
		3/4 EHS	A1b	88a	34.98	5.06	14
		3/4 EHS	A1a	88b	34.98	5.67	16
	291.96	5/8 EHS	A1	104	25.44	3.73	15
		5/8 EHS	A1b	104a	25.44	3.72	15
		5/8 EHS	A1a	104b	25.44	4.11	16
0.9D - 1.0Ev + 1.0Eh 90°	59.80	3/4 EHS	A1	22	34.98	5.67	16
		3/4 EHS	A1b	22a	34.98	5.69	16
		3/4 EHS	A1a	22b	34.98	5.78	17
	124.12	3/4 EHS	A1	46	34.98	5.42	15
		3/4 EHS	A1b	46a	34.98	5.26	15
		3/4 EHS	A1a	46b	34.98	5.72	16
	184.12	3/4 EHS	A1	67	34.98	5.27	15
		3/4 EHS	A1b	67a	34.98	4.95	14
		3/4 EHS	A1a	67b	34.98	5.72	16
	244.12	3/4 EHS	A1	88	34.98	5.23	15
		3/4 EHS	A1b	88a	34.98	4.92	14
		3/4 EHS	A1a	88b	34.98	5.62	16
	291.96	5/8 EHS	A1	104	25.44	3.84	15
		5/8 EHS	A1b	104a	25.44	3.64	14
		5/8 EHS	A1a	104b	25.44	4.08	16
0.9D - 1.0Ev + 1.0Eh 120°	59.80	3/4 EHS	A1	22	34.98	5.71	16
		3/4 EHS	A1b	22a	34.98	5.68	16
		3/4 EHS	A1a	22b	34.98	5.75	16
	124.12	3/4 EHS	A1	46	34.98	5.56	16
		3/4 EHS	A1b	46a	34.98	5.23	15
		3/4 EHS	A1a	46b	34.98	5.62	16
	184.12	3/4 EHS	A1	67	34.98	5.5	16
		3/4 EHS	A1b	67a	34.98	4.89	14
		3/4 EHS	A1a	67b	34.98	5.56	16
	244.12	3/4 EHS	A1	88	34.98	5.43	16
		3/4 EHS	A1b	88a	34.98	4.87	14
		3/4 EHS	A1a	88b	34.98	5.48	16
	291.96	5/8 EHS	A1	104	25.44	3.96	16
		5/8 EHS	A1b	104a	25.44	3.61	14
		5/8 EHS	A1a	104b	25.44	3.99	16
0.9D - 1.0Ev + 1.0Eh 180°	59.80	3/4 EHS	A1	22	34.98	5.75	16
		3/4 EHS	A1b	22a	34.98	5.73	16
		3/4 EHS	A1a	22b	34.98	5.67	16
	124.12	3/4 EHS	A1	46	34.98	5.7	16
		3/4 EHS	A1b	46a	34.98	5.37	15
		3/4 EHS	A1a	46b	34.98	5.32	15
	184.12	3/4 EHS	A1	67	34.98	5.71	16
		3/4 EHS	A1b	67a	34.98	5.12	15
		3/4 EHS	A1a	67b	34.98	5.1	15

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
	244.12	3/4 EHS	A1	88	34.98	5.61	16
		3/4 EHS	A1b	88a	34.98	5.07	14
		3/4 EHS	A1a	88b	34.98	5.09	15
	291.96	5/8 EHS	A1	104	25.44	4.06	16
		5/8 EHS	A1b	104a	25.44	3.73	15
		5/8 EHS	A1a	104b	25.44	3.76	15
0.9D - 1.0Ev + 1.0Eh 210°	59.80	3/4 EHS	A1	22	34.98	5.74	16
		3/4 EHS	A1b	22a	34.98	5.77	16
		3/4 EHS	A1a	22b	34.98	5.63	16
	124.12	3/4 EHS	A1	46	34.98	5.66	16
		3/4 EHS	A1b	46a	34.98	5.51	16
		3/4 EHS	A1a	46b	34.98	5.21	15
	184.12	3/4 EHS	A1	67	34.98	5.65	16
		3/4 EHS	A1b	67a	34.98	5.33	15
		3/4 EHS	A1a	67b	34.98	4.94	14
	244.12	3/4 EHS	A1	88	34.98	5.55	16
		3/4 EHS	A1b	88a	34.98	5.25	15
		3/4 EHS	A1a	88b	34.98	4.95	14
	291.96	5/8 EHS	A1	104	25.44	4.03	16
		5/8 EHS	A1b	104a	25.44	3.84	15
		5/8 EHS	A1a	104b	25.44	3.68	14
0.9D - 1.0Ev + 1.0Eh 240°	59.80	3/4 EHS	A1	22	34.98	5.71	16
		3/4 EHS	A1b	22a	34.98	5.81	17
		3/4 EHS	A1a	22b	34.98	5.62	16
	124.12	3/4 EHS	A1	46	34.98	5.55	16
		3/4 EHS	A1b	46a	34.98	5.65	16
		3/4 EHS	A1a	46b	34.98	5.17	15
	184.12	3/4 EHS	A1	67	34.98	5.48	16
		3/4 EHS	A1b	67a	34.98	5.54	16
		3/4 EHS	A1a	67b	34.98	4.87	14
	244.12	3/4 EHS	A1	88	34.98	5.41	15
		3/4 EHS	A1b	88a	34.98	5.43	16
		3/4 EHS	A1a	88b	34.98	4.9	14
	291.96	5/8 EHS	A1	104	25.44	3.95	16
		5/8 EHS	A1b	104a	25.44	3.95	16
		5/8 EHS	A1a	104b	25.44	3.65	14
0.9D - 1.0Ev + 1.0Eh 300°	59.80	3/4 EHS	A1	22	34.98	5.62	16
		3/4 EHS	A1b	22a	34.98	5.85	17
		3/4 EHS	A1a	22b	34.98	5.66	16
	124.12	3/4 EHS	A1	46	34.98	5.26	15
		3/4 EHS	A1b	46a	34.98	5.79	17
		3/4 EHS	A1a	46b	34.98	5.31	15
	184.12	3/4 EHS	A1	67	34.98	5.04	14
		3/4 EHS	A1b	67a	34.98	5.74	16
		3/4 EHS	A1a	67b	34.98	5.09	15
	244.12	3/4 EHS	A1	88	34.98	5.04	14
		3/4 EHS	A1b	88a	34.98	5.6	16
		3/4 EHS	A1a	88b	34.98	5.08	15
	291.96	5/8 EHS	A1	104	25.44	3.74	15
		5/8 EHS	A1b	104a	25.44	4.04	16
		5/8 EHS	A1a	104b	25.44	3.76	15
0.9D - 1.0Ev + 1.0Eh 330°	59.80	3/4 EHS	A1	22	34.98	5.59	16
		3/4 EHS	A1b	22a	34.98	5.84	17
		3/4 EHS	A1a	22b	34.98	5.7	16
	124.12	3/4 EHS	A1	46	34.98	5.15	15
		3/4 EHS	A1b	46a	34.98	5.75	16
		3/4 EHS	A1a	46b	34.98	5.45	16
	184.12	3/4 EHS	A1	67	34.98	4.87	14
		3/4 EHS	A1b	67a	34.98	5.7	16
		3/4 EHS	A1a	67b	34.98	5.31	15
	244.12	3/4 EHS	A1	88	34.98	4.89	14
		3/4 EHS	A1b	88a	34.98	5.56	16
		3/4 EHS	A1a	88b	34.98	5.26	15
	291.96	5/8 EHS	A1	104	25.44	3.65	14
		5/8 EHS	A1b	104a	25.44	4.02	16
		5/8 EHS	A1a	104b	25.44	3.87	15
1.0D + 1.0W Service Normal	59.80	3/4 EHS	A1	22	34.98	3.2	9
		3/4 EHS	A1b	22a	34.98	7.3	21

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		3/4 EHS	A1a	22b	34.98	7.21	21
	124.12	3/4 EHS	A1	46	34.98	2.17	6
		3/4 EHS	A1b	46a	34.98	7.78	22
		3/4 EHS	A1a	46b	34.98	7.72	22
	184.12	3/4 EHS	A1	67	34.98	1.85	5
		3/4 EHS	A1b	67a	34.98	7.51	21
		3/4 EHS	A1a	67b	34.98	7.52	21
	244.12	3/4 EHS	A1	88	34.98	2.42	7
		3/4 EHS	A1b	88a	34.98	6.75	19
		3/4 EHS	A1a	88b	34.98	6.8	19
	291.96	5/8 EHS	A1	104	25.44	2.63	10
		5/8 EHS	A1b	104a	25.44	4.81	19
		5/8 EHS	A1a	104b	25.44	4.86	19
1.0D + 1.0W Service 60°	59.80	3/4 EHS	A1	22	34.98	4.56	13
		3/4 EHS	A1b	22a	34.98	4.63	13
		3/4 EHS	A1a	22b	34.98	8.37	24
	124.12	3/4 EHS	A1	46	34.98	3.83	11
		3/4 EHS	A1b	46a	34.98	3.91	11
		3/4 EHS	A1a	46b	34.98	9.45	27
	184.12	3/4 EHS	A1	67	34.98	3.68	11
		3/4 EHS	A1b	67a	34.98	3.74	11
		3/4 EHS	A1a	67b	34.98	9.47	27
	244.12	3/4 EHS	A1	88	34.98	4.16	12
		3/4 EHS	A1b	88a	34.98	4.18	12
		3/4 EHS	A1a	88b	34.98	8.32	24
	291.96	5/8 EHS	A1	104	25.44	3.5	14
		5/8 EHS	A1b	104a	25.44	3.5	14
		5/8 EHS	A1a	104b	25.44	5.67	22
1.0D + 1.0W Service 90°	59.80	3/4 EHS	A1	22	34.98	5.92	17
		3/4 EHS	A1b	22a	34.98	3.72	11
		3/4 EHS	A1a	22b	34.98	8.14	23
	124.12	3/4 EHS	A1	46	34.98	5.79	17
		3/4 EHS	A1b	46a	34.98	2.71	8
		3/4 EHS	A1a	46b	34.98	9.09	26
	184.12	3/4 EHS	A1	67	34.98	5.58	16
		3/4 EHS	A1b	67a	34.98	2.44	7
		3/4 EHS	A1a	67b	34.98	9	26
	244.12	3/4 EHS	A1	88	34.98	5.45	16
		3/4 EHS	A1b	88a	34.98	3.05	9
		3/4 EHS	A1a	88b	34.98	7.89	23
	291.96	5/8 EHS	A1	104	25.44	4.16	16
		5/8 EHS	A1b	104a	25.44	2.88	11
		5/8 EHS	A1a	104b	25.44	5.42	21
1.0D + 1.0W Service 120°	59.80	3/4 EHS	A1	22	34.98	7.29	21
		3/4 EHS	A1b	22a	34.98	3.41	10
		3/4 EHS	A1a	22b	34.98	7.35	21
	124.12	3/4 EHS	A1	46	34.98	7.81	22
		3/4 EHS	A1b	46a	34.98	2.37	7
		3/4 EHS	A1a	46b	34.98	7.89	23
	184.12	3/4 EHS	A1	67	34.98	7.56	22
		3/4 EHS	A1b	67a	34.98	2.01	6
		3/4 EHS	A1a	67b	34.98	7.63	22
	244.12	3/4 EHS	A1	88	34.98	6.76	19
		3/4 EHS	A1b	88a	34.98	2.5	7
		3/4 EHS	A1a	88b	34.98	6.83	20
	291.96	5/8 EHS	A1	104	25.44	4.8	19
		5/8 EHS	A1b	104a	25.44	2.6	10
		5/8 EHS	A1a	104b	25.44	4.85	19
1.0D + 1.0W Service 180°	59.80	3/4 EHS	A1	22	34.98	8.32	24
		3/4 EHS	A1b	22a	34.98	4.65	13
		3/4 EHS	A1a	22b	34.98	4.6	13
	124.12	3/4 EHS	A1	46	34.98	9.39	27
		3/4 EHS	A1b	46a	34.98	3.94	11
		3/4 EHS	A1a	46b	34.98	3.9	11
	184.12	3/4 EHS	A1	67	34.98	9.42	27
		3/4 EHS	A1b	67a	34.98	3.78	11
		3/4 EHS	A1a	67b	34.98	3.76	11
	244.12	3/4 EHS	A1	88	34.98	8.26	24

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		3/4 EHS	A1b	88a	34.98	4.21	12
		3/4 EHS	A1a	88b	34.98	4.23	12
	291.96	5/8 EHS	A1	104	25.44	5.63	22
		5/8 EHS	A1b	104a	25.44	3.51	14
		5/8 EHS	A1a	104b	25.44	3.54	14
1.0D + 1.0W Service 210°	59.80	3/4 EHS	A1	22	34.98	8.02	23
		3/4 EHS	A1b	22a	34.98	5.97	17
		3/4 EHS	A1a	22b	34.98	3.62	10
	124.12	3/4 EHS	A1	46	34.98	8.93	26
		3/4 EHS	A1b	46a	34.98	5.83	17
		3/4 EHS	A1a	46b	34.98	2.61	7
	184.12	3/4 EHS	A1	67	34.98	8.88	25
		3/4 EHS	A1b	67a	34.98	5.61	16
		3/4 EHS	A1a	67b	34.98	2.37	7
	244.12	3/4 EHS	A1	88	34.98	7.84	22
		3/4 EHS	A1b	88a	34.98	5.49	16
		3/4 EHS	A1a	88b	34.98	3.06	9
	291.96	5/8 EHS	A1	104	25.44	5.41	21
		5/8 EHS	A1b	104a	25.44	4.18	16
		5/8 EHS	A1a	104b	25.44	2.94	12
1.0D + 1.0W Service 240°	59.80	3/4 EHS	A1	22	34.98	7.17	21
		3/4 EHS	A1b	22a	34.98	7.31	21
		3/4 EHS	A1a	22b	34.98	3.24	9
	124.12	3/4 EHS	A1	46	34.98	7.67	22
		3/4 EHS	A1b	46a	34.98	7.8	22
		3/4 EHS	A1a	46b	34.98	2.21	6
	184.12	3/4 EHS	A1	67	34.98	7.46	21
		3/4 EHS	A1b	67a	34.98	7.54	22
		3/4 EHS	A1a	67b	34.98	1.89	5
	244.12	3/4 EHS	A1	88	34.98	6.75	19
		3/4 EHS	A1b	88a	34.98	6.77	19
		3/4 EHS	A1a	88b	34.98	2.47	7
	291.96	5/8 EHS	A1	104	25.44	4.83	19
		5/8 EHS	A1b	104a	25.44	4.82	19
		5/8 EHS	A1a	104b	25.44	2.67	10
1.0D + 1.0W Service 300°	59.80	3/4 EHS	A1	22	34.98	4.44	13
		3/4 EHS	A1b	22a	34.98	8.35	24
		3/4 EHS	A1a	22b	34.98	4.46	13
	124.12	3/4 EHS	A1	46	34.98	3.69	11
		3/4 EHS	A1b	46a	34.98	9.39	27
		3/4 EHS	A1a	46b	34.98	3.73	11
	184.12	3/4 EHS	A1	67	34.98	3.59	10
		3/4 EHS	A1b	67a	34.98	9.36	27
		3/4 EHS	A1a	67b	34.98	3.63	10
	244.12	3/4 EHS	A1	88	34.98	4.11	12
		3/4 EHS	A1b	88a	34.98	8.21	23
		3/4 EHS	A1a	88b	34.98	4.16	12
	291.96	5/8 EHS	A1	104	25.44	3.49	14
		5/8 EHS	A1b	104a	25.44	5.6	22
		5/8 EHS	A1a	104b	25.44	3.52	14
1.0D + 1.0W Service 330°	59.80	3/4 EHS	A1	22	34.98	3.51	10
		3/4 EHS	A1b	22a	34.98	8.09	23
		3/4 EHS	A1a	22b	34.98	5.82	17
	124.12	3/4 EHS	A1	46	34.98	2.49	7
		3/4 EHS	A1b	46a	34.98	8.99	26
		3/4 EHS	A1a	46b	34.98	5.67	16
	184.12	3/4 EHS	A1	67	34.98	2.27	6
		3/4 EHS	A1b	67a	34.98	8.86	25
		3/4 EHS	A1a	67b	34.98	5.51	16
	244.12	3/4 EHS	A1	88	34.98	2.97	8
		3/4 EHS	A1b	88a	34.98	7.79	22
		3/4 EHS	A1a	88b	34.98	5.47	16
	291.96	5/8 EHS	A1	104	25.44	2.9	11
		5/8 EHS	A1b	104a	25.44	5.37	21
		5/8 EHS	A1a	104b	25.44	4.19	16

MAXIMUM CABLE FORCES SUMMARY

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Allowed Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.0W 90°	59.80	3/4 EHS	A1a	22b	34.98	20.22	58
1.2D + 1.0W 90°	124.12	3/4 EHS	A1a	46b	34.98	28.03	80
1.2D + 1.0W 90°	184.12	3/4 EHS	A1a	67b	34.98	29.04	83
1.2D + 1.0W 60°	244.12	3/4 EHS	A1a	88b	34.98	22.69	65
1.2D + 1.0W 60°	291.96	5/8 EHS	A1a	104b	25.44	13.90	55

MAXIMUM TORQUE ARM STRESS SUMMARY

Load Case	Elevation (ft)	Member	Type	Compression %	Tension %
1.2D + 1.0W Normal	59.80	PL 4.5 x 0.375"	Horiz	0	20
1.2D + 1.0W Normal	124.00	PL 4.5 x 0.375"	Horiz	0	23
1.2D + 1.0W Normal	184.00	PL 4.5 x 0.375"	Horiz	0	21
1.2D + 1.0W Normal	244.00	PL 4.5 x 0.375"	Horiz	0	13
1.2D + 1.0W Normal	292.00	PL 4.5 x 0.375"	Horiz	0	7

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W Normal 123 mph wind with no ice	80.00	0.8791	-0.0376	0.7879	0.7886
1.2D + 1.0W Normal 123 mph wind with no ice	80.20	0.8817	-0.0374	0.7726	0.7733
1.2D + 1.0W Normal 123 mph wind with no ice	84.12	0.9269	-0.0367	0.6116	0.6127
1.2D + 1.0W Normal 123 mph wind with no ice	104.12	1.116	-0.0409	0.4469	0.4483
1.2D + 1.0W Normal 123 mph wind with no ice	115.88	1.1987	-0.0438	0.4241	0.4256
1.2D + 1.0W Normal 123 mph wind with no ice	124.12	1.2502	-0.0437	0.5534	0.5546
1.2D + 1.0W Normal 123 mph wind with no ice	128.04	1.2967	-0.0461	0.7123	0.7138
1.2D + 1.0W Normal 123 mph wind with no ice	160.00	1.6406	-0.0471	0.5197	0.5216
1.2D + 1.0W Normal 123 mph wind with no ice	168.04	1.6961	-0.0500	0.3290	0.3328
1.2D + 1.0W Normal 123 mph wind with no ice	180.00	1.7428	-0.0513	0.0312	0.0599
1.2D + 1.0W Normal 123 mph wind with no ice	195.88	1.8146	-0.0520	0.2231	0.2278
1.2D + 1.0W Normal 123 mph wind with no ice	211.96	1.8451	-0.0494	0.0282	0.0569
1.2D + 1.0W Normal 123 mph wind with no ice	215.88	1.8453	-0.0493	0.0190	0.0512
1.2D + 1.0W Normal 123 mph wind with no ice	228.04	1.8274	-0.0532	0.1618	0.1702
1.2D + 1.0W Normal 123 mph wind with no ice	231.96	1.8152	-0.0538	0.1970	0.2041
1.2D + 1.0W Normal 123 mph wind with no ice	235.88	1.8009	-0.0539	0.1945	0.201
1.2D + 1.0W Normal 123 mph wind with no ice	240.20	1.7815	-0.0522	0.4026	0.4054
1.2D + 1.0W Normal 123 mph wind with no ice	264.12	1.7208	-0.0481	0.1455	0.1532
1.2D + 1.0W Normal 123 mph wind with no ice	268.04	1.7114	-0.0483	0.1412	0.1491
1.2D + 1.0W Normal 123 mph wind with no ice	275.88	1.6907	-0.0486	0.1585	0.1655
1.2D + 1.0W Normal 123 mph wind with no ice	288.04	1.653	-0.0490	0.1942	0.2003
1.2D + 1.0W Normal 123 mph wind with no ice	295.88	1.6284	-0.0489	0.1744	0.1811
1.2D + 1.0W Normal 123 mph wind with no ice	300.00	1.6164	-0.0493	0.1441	0.1521
1.2D + 1.0W 60° 123 mph wind with no ice	80.00	0.4915	-0.0322	0.4642	0.465
1.2D + 1.0W 60° 123 mph wind with no ice	80.20	0.4931	-0.0321	0.4532	0.4541
1.2D + 1.0W 60° 123 mph wind with no ice	84.12	0.5186	-0.0308	0.3295	0.3309
1.2D + 1.0W 60° 123 mph wind with no ice	104.12	0.6115	-0.0356	0.1982	0.2006
1.2D + 1.0W 60° 123 mph wind with no ice	115.88	0.6446	-0.0384	0.1901	0.1927
1.2D + 1.0W 60° 123 mph wind with no ice	124.12	0.6652	-0.0329	0.3282	0.3297
1.2D + 1.0W 60° 123 mph wind with no ice	128.04	0.6943	-0.0395	0.4653	0.4664
1.2D + 1.0W 60° 123 mph wind with no ice	160.00	0.9307	-0.0363	0.3567	0.3583
1.2D + 1.0W 60° 123 mph wind with no ice	168.04	0.9711	-0.0372	0.2160	0.2188
1.2D + 1.0W 60° 123 mph wind with no ice	180.00	0.9954	-0.0398	0.0892	0.0963
1.2D + 1.0W 60° 123 mph wind with no ice	195.88	1.0535	-0.0407	0.2223	0.226
1.2D + 1.0W 60° 123 mph wind with no ice	211.96	1.09	-0.0395	0.0658	0.0759
1.2D + 1.0W 60° 123 mph wind with no ice	215.88	1.0936	-0.0392	0.0535	0.0664
1.2D + 1.0W 60° 123 mph wind with no ice	228.04	1.089	-0.0424	0.0650	0.0776
1.2D + 1.0W 60° 123 mph wind with no ice	231.96	1.0836	-0.0434	0.0930	0.1026
1.2D + 1.0W 60° 123 mph wind with no ice	235.88	1.0769	-0.0441	0.0790	0.0898
1.2D + 1.0W 60° 123 mph wind with no ice	240.20	1.0671	-0.0426	0.2539	0.2571
1.2D + 1.0W 60° 123 mph wind with no ice	264.12	1.0652	-0.0410	0.0149	0.0433
1.2D + 1.0W 60° 123 mph wind with no ice	268.04	1.0668	-0.0412	0.0236	0.0475
1.2D + 1.0W 60° 123 mph wind with no ice	275.88	1.0689	-0.0416	0.0128	0.0434
1.2D + 1.0W 60° 123 mph wind with no ice	288.04	1.0683	-0.0421	0.0173	0.0451

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 60° 123 mph wind with no ice	295.88	1.0678	-0.0421	0.0085	0.0427
1.2D + 1.0W 60° 123 mph wind with no ice	300.00	1.0684	-0.0424	0.0379	0.0561
1.2D + 1.0W 90° 123 mph wind with no ice	80.00	0.7301	0.2870	0.6743	0.7328
1.2D + 1.0W 90° 123 mph wind with no ice	80.20	0.7324	0.2882	0.6605	0.7206
1.2D + 1.0W 90° 123 mph wind with no ice	84.12	0.7718	0.3077	0.5228	0.6066
1.2D + 1.0W 90° 123 mph wind with no ice	104.12	0.925	0.2497	0.3818	0.4549
1.2D + 1.0W 90° 123 mph wind with no ice	115.88	0.989	0.1683	0.3597	0.3951
1.2D + 1.0W 90° 123 mph wind with no ice	124.12	1.0294	0.1174	0.4810	0.4933
1.2D + 1.0W 90° 123 mph wind with no ice	128.04	1.0708	0.1344	0.6472	0.6608
1.2D + 1.0W 90° 123 mph wind with no ice	160.00	1.3858	0.2884	0.4576	0.5409
1.2D + 1.0W 90° 123 mph wind with no ice	168.04	1.4353	0.2437	0.3054	0.3879
1.2D + 1.0W 90° 123 mph wind with no ice	180.00	1.4763	0.2183	0.1118	0.2412
1.2D + 1.0W 90° 123 mph wind with no ice	195.88	1.5448	0.2501	0.2383	0.3441
1.2D + 1.0W 90° 123 mph wind with no ice	211.96	1.5774	0.2547	0.0418	0.2581
1.2D + 1.0W 90° 123 mph wind with no ice	215.88	1.5786	0.2544	0.0301	0.2554
1.2D + 1.0W 90° 123 mph wind with no ice	228.04	1.5679	0.3233	0.1252	0.3436
1.2D + 1.0W 90° 123 mph wind with no ice	231.96	1.5593	0.3333	0.1590	0.3682
1.2D + 1.0W 90° 123 mph wind with no ice	235.88	1.547	0.3187	0.1703	0.36
1.2D + 1.0W 90° 123 mph wind with no ice	240.20	1.53	0.2978	0.3438	0.4548
1.2D + 1.0W 90° 123 mph wind with no ice	264.12	1.4867	0.2813	0.1117	0.3024
1.2D + 1.0W 90° 123 mph wind with no ice	268.04	1.4808	0.2814	0.1092	0.3018
1.2D + 1.0W 90° 123 mph wind with no ice	275.88	1.4673	0.2813	0.1214	0.3063
1.2D + 1.0W 90° 123 mph wind with no ice	288.04	1.4415	0.2810	0.1487	0.3179
1.2D + 1.0W 90° 123 mph wind with no ice	295.88	1.4248	0.2808	0.1335	0.3106
1.2D + 1.0W 90° 123 mph wind with no ice	300.00	1.4169	0.2813	0.1135	0.3023
1.2D + 1.0W 120° 123 mph wind with no ice	80.00	0.8257	-0.0112	0.7528	0.7528
1.2D + 1.0W 120° 123 mph wind with no ice	80.20	0.8281	-0.0109	0.7378	0.7378
1.2D + 1.0W 120° 123 mph wind with no ice	84.12	0.8711	-0.0096	0.5808	0.5808
1.2D + 1.0W 120° 123 mph wind with no ice	104.12	1.0505	-0.0129	0.4228	0.4229
1.2D + 1.0W 120° 123 mph wind with no ice	115.88	1.1287	-0.0147	0.4054	0.4055
1.2D + 1.0W 120° 123 mph wind with no ice	124.12	1.1777	-0.0141	0.5395	0.5396
1.2D + 1.0W 120° 123 mph wind with no ice	128.04	1.2234	-0.0157	0.7002	0.7003
1.2D + 1.0W 120° 123 mph wind with no ice	160.00	1.5649	-0.0115	0.5238	0.5239
1.2D + 1.0W 120° 123 mph wind with no ice	168.04	1.6211	-0.0138	0.3360	0.3363
1.2D + 1.0W 120° 123 mph wind with no ice	180.00	1.6699	-0.0155	0.0381	0.0383
1.2D + 1.0W 120° 123 mph wind with no ice	195.88	1.7466	-0.0150	0.2439	0.244
1.2D + 1.0W 120° 123 mph wind with no ice	211.96	1.784	-0.0114	0.0515	0.0527
1.2D + 1.0W 120° 123 mph wind with no ice	215.88	1.7862	-0.0112	0.0249	0.0265
1.2D + 1.0W 120° 123 mph wind with no ice	228.04	1.7749	-0.0147	0.1273	0.1282
1.2D + 1.0W 120° 123 mph wind with no ice	231.96	1.765	-0.0153	0.1616	0.1623
1.2D + 1.0W 120° 123 mph wind with no ice	235.88	1.7532	-0.0154	0.1580	0.1588
1.2D + 1.0W 120° 123 mph wind with no ice	240.20	1.7366	-0.0137	0.3639	0.364
1.2D + 1.0W 120° 123 mph wind with no ice	264.12	1.6918	-0.0090	0.1045	0.1049
1.2D + 1.0W 120° 123 mph wind with no ice	268.04	1.6852	-0.0091	0.0994	0.0998
1.2D + 1.0W 120° 123 mph wind with no ice	275.88	1.6701	-0.0092	0.1163	0.1167
1.2D + 1.0W 120° 123 mph wind with no ice	288.04	1.6412	-0.0092	0.1516	0.1518
1.2D + 1.0W 120° 123 mph wind with no ice	295.88	1.6223	-0.0090	0.1320	0.1323
1.2D + 1.0W 120° 123 mph wind with no ice	300.00	1.6132	-0.0094	0.1014	0.1018
1.2D + 1.0W 180° 123 mph wind with no ice	80.00	0.4805	0.0296	0.4524	0.4531
1.2D + 1.0W 180° 123 mph wind with no ice	80.20	0.482	0.0294	0.4415	0.4422
1.2D + 1.0W 180° 123 mph wind with no ice	84.12	0.5068	0.0280	0.3188	0.32
1.2D + 1.0W 180° 123 mph wind with no ice	104.12	0.5959	0.0325	0.1871	0.1892
1.2D + 1.0W 180° 123 mph wind with no ice	115.88	0.6266	0.0351	0.1792	0.1814
1.2D + 1.0W 180° 123 mph wind with no ice	124.12	0.6456	0.0294	0.3176	0.3188
1.2D + 1.0W 180° 123 mph wind with no ice	128.04	0.6742	0.0359	0.4544	0.4553
1.2D + 1.0W 180° 123 mph wind with no ice	160.00	0.9046	0.0317	0.3466	0.3478
1.2D + 1.0W 180° 123 mph wind with no ice	168.04	0.9437	0.0324	0.2077	0.2099
1.2D + 1.0W 180° 123 mph wind with no ice	180.00	0.9664	0.0347	0.0964	0.1013
1.2D + 1.0W 180° 123 mph wind with no ice	195.88	1.0231	0.0354	0.2179	0.2208
1.2D + 1.0W 180° 123 mph wind with no ice	211.96	1.0586	0.0340	0.0632	0.0711
1.2D + 1.0W 180° 123 mph wind with no ice	215.88	1.062	0.0337	0.0513	0.0614
1.2D + 1.0W 180° 123 mph wind with no ice	228.04	1.0571	0.0367	0.0653	0.075
1.2D + 1.0W 180° 123 mph wind with no ice	231.96	1.0517	0.0377	0.0930	0.1003
1.2D + 1.0W 180° 123 mph wind with no ice	235.88	1.045	0.0383	0.0785	0.0868
1.2D + 1.0W 180° 123 mph wind with no ice	240.20	1.0353	0.0368	0.2529	0.2552
1.2D + 1.0W 180° 123 mph wind with no ice	264.12	1.0339	0.0349	0.0158	0.0381
1.2D + 1.0W 180° 123 mph wind with no ice	268.04	1.0356	0.0352	0.0252	0.0432
1.2D + 1.0W 180° 123 mph wind with no ice	275.88	1.038	0.0355	0.0141	0.0381

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 180° 123 mph wind with no ice	288.04	1.0379	0.0359	0.0144	0.0383
1.2D + 1.0W 180° 123 mph wind with no ice	295.88	1.0378	0.0359	0.0092	0.0367
1.2D + 1.0W 180° 123 mph wind with no ice	300.00	1.0386	0.0362	0.0403	0.0535
1.2D + 1.0W 210° 123 mph wind with no ice	80.00	0.7357	0.3452	0.6720	0.7554
1.2D + 1.0W 210° 123 mph wind with no ice	80.20	0.738	0.3463	0.6582	0.7437
1.2D + 1.0W 210° 123 mph wind with no ice	84.12	0.7772	0.3661	0.5201	0.6361
1.2D + 1.0W 210° 123 mph wind with no ice	104.12	0.9293	0.3066	0.3785	0.4855
1.2D + 1.0W 210° 123 mph wind with no ice	115.88	0.9922	0.2241	0.3538	0.4161
1.2D + 1.0W 210° 123 mph wind with no ice	124.12	1.0316	0.1720	0.4711	0.4989
1.2D + 1.0W 210° 123 mph wind with no ice	128.04	1.0722	0.1900	0.6364	0.6638
1.2D + 1.0W 210° 123 mph wind with no ice	160.00	1.379	0.3527	0.4403	0.5641
1.2D + 1.0W 210° 123 mph wind with no ice	168.04	1.4262	0.3101	0.2880	0.4208
1.2D + 1.0W 210° 123 mph wind with no ice	180.00	1.4638	0.2837	0.1069	0.2989
1.2D + 1.0W 210° 123 mph wind with no ice	195.88	1.5268	0.3232	0.2238	0.3929
1.2D + 1.0W 210° 123 mph wind with no ice	211.96	1.5534	0.3584	0.0431	0.361
1.2D + 1.0W 210° 123 mph wind with no ice	215.88	1.5531	0.3582	0.0442	0.3606
1.2D + 1.0W 210° 123 mph wind with no ice	228.04	1.5377	0.4270	0.1520	0.4492
1.2D + 1.0W 210° 123 mph wind with no ice	231.96	1.5275	0.4371	0.1816	0.4726
1.2D + 1.0W 210° 123 mph wind with no ice	235.88	1.5137	0.4224	0.1944	0.4635
1.2D + 1.0W 210° 123 mph wind with no ice	240.20	1.495	0.4012	0.3673	0.5438
1.2D + 1.0W 210° 123 mph wind with no ice	264.12	1.4422	0.3855	0.1458	0.412
1.2D + 1.0W 210° 123 mph wind with no ice	268.04	1.4347	0.3858	0.1443	0.4118
1.2D + 1.0W 210° 123 mph wind with no ice	275.88	1.4181	0.3860	0.1560	0.4162
1.2D + 1.0W 210° 123 mph wind with no ice	288.04	1.3877	0.3862	0.1821	0.4269
1.2D + 1.0W 210° 123 mph wind with no ice	295.88	1.3681	0.3861	0.1675	0.4205
1.2D + 1.0W 210° 123 mph wind with no ice	300.00	1.3587	0.3866	0.1495	0.4136
1.2D + 1.0W 240° 123 mph wind with no ice	80.00	0.867	0.0413	0.7758	0.7767
1.2D + 1.0W 240° 123 mph wind with no ice	80.20	0.8696	0.0411	0.7605	0.7615
1.2D + 1.0W 240° 123 mph wind with no ice	84.12	0.914	0.0405	0.6007	0.6021
1.2D + 1.0W 240° 123 mph wind with no ice	104.12	1.0995	0.0450	0.4373	0.4391
1.2D + 1.0W 240° 123 mph wind with no ice	115.88	1.1803	0.0485	0.4154	0.4174
1.2D + 1.0W 240° 123 mph wind with no ice	124.12	1.2306	0.0488	0.5455	0.5471
1.2D + 1.0W 240° 123 mph wind with no ice	128.04	1.2766	0.0514	0.7048	0.7066
1.2D + 1.0W 240° 123 mph wind with no ice	160.00	1.6172	0.0547	0.5152	0.5178
1.2D + 1.0W 240° 123 mph wind with no ice	168.04	1.6721	0.0575	0.3255	0.3306
1.2D + 1.0W 240° 123 mph wind with no ice	180.00	1.7182	0.0588	0.0325	0.0646
1.2D + 1.0W 240° 123 mph wind with no ice	195.88	1.7898	0.0599	0.2231	0.2295
1.2D + 1.0W 240° 123 mph wind with no ice	211.96	1.8205	0.0574	0.0292	0.0644
1.2D + 1.0W 240° 123 mph wind with no ice	215.88	1.8209	0.0574	0.0175	0.0586
1.2D + 1.0W 240° 123 mph wind with no ice	228.04	1.8036	0.0612	0.1583	0.1697
1.2D + 1.0W 240° 123 mph wind with no ice	231.96	1.7916	0.0617	0.1932	0.2028
1.2D + 1.0W 240° 123 mph wind with no ice	235.88	1.7776	0.0617	0.1904	0.1994
1.2D + 1.0W 240° 123 mph wind with no ice	240.20	1.7585	0.0598	0.3979	0.4017
1.2D + 1.0W 240° 123 mph wind with no ice	264.12	1.6998	0.0557	0.1402	0.1507
1.2D + 1.0W 240° 123 mph wind with no ice	268.04	1.6908	0.0560	0.1357	0.1466
1.2D + 1.0W 240° 123 mph wind with no ice	275.88	1.6709	0.0563	0.1527	0.1625
1.2D + 1.0W 240° 123 mph wind with no ice	288.04	1.6345	0.0567	0.1881	0.1965
1.2D + 1.0W 240° 123 mph wind with no ice	295.88	1.6107	0.0567	0.1683	0.1775
1.2D + 1.0W 240° 123 mph wind with no ice	300.00	1.5992	0.0571	0.1381	0.1492
1.2D + 1.0W 300° 123 mph wind with no ice	80.00	0.5286	0.0042	0.4880	0.488
1.2D + 1.0W 300° 123 mph wind with no ice	80.20	0.5302	0.0041	0.4769	0.4769
1.2D + 1.0W 300° 123 mph wind with no ice	84.12	0.5571	0.0027	0.3506	0.3506
1.2D + 1.0W 300° 123 mph wind with no ice	104.12	0.6571	0.0070	0.2139	0.214
1.2D + 1.0W 300° 123 mph wind with no ice	115.88	0.6934	0.0096	0.2017	0.2017
1.2D + 1.0W 300° 123 mph wind with no ice	124.12	0.7146	0.0039	0.3361	0.3361
1.2D + 1.0W 300° 123 mph wind with no ice	128.04	0.7452	0.0103	0.4717	0.4717
1.2D + 1.0W 300° 123 mph wind with no ice	160.00	0.9808	0.0055	0.3506	0.3506
1.2D + 1.0W 300° 123 mph wind with no ice	168.04	1.0202	0.0061	0.2072	0.2072
1.2D + 1.0W 300° 123 mph wind with no ice	180.00	1.0424	0.0078	0.1015	0.1016
1.2D + 1.0W 300° 123 mph wind with no ice	195.88	1.0957	0.0079	0.2016	0.2018
1.2D + 1.0W 300° 123 mph wind with no ice	211.96	1.1252	0.0063	0.0396	0.0399
1.2D + 1.0W 300° 123 mph wind with no ice	215.88	1.127	0.0059	0.0265	0.0272
1.2D + 1.0W 300° 123 mph wind with no ice	228.04	1.1165	0.0083	0.0942	0.0946
1.2D + 1.0W 300° 123 mph wind with no ice	231.96	1.1091	0.0091	0.1231	0.1234
1.2D + 1.0W 300° 123 mph wind with no ice	235.88	1.1004	0.0095	0.1088	0.1092
1.2D + 1.0W 300° 123 mph wind with no ice	240.20	1.0879	0.0078	0.2871	0.2871
1.2D + 1.0W 300° 123 mph wind with no ice	264.12	1.0722	0.0054	0.0242	0.0248
1.2D + 1.0W 300° 123 mph wind with no ice	268.04	1.0714	0.0056	0.0114	0.0126

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 300° 123 mph wind with no ice	275.88	1.0688	0.0058	0.0237	0.0244
1.2D + 1.0W 300° 123 mph wind with no ice	288.04	1.061	0.0059	0.0490	0.0493
1.2D + 1.0W 300° 123 mph wind with no ice	295.88	1.0559	0.0058	0.0330	0.0335
1.2D + 1.0W 300° 123 mph wind with no ice	300.00	1.0541	0.0061	0.0050	0.0071
1.2D + 1.0W 330° 123 mph wind with no ice	80.00	0.7848	0.2905	0.7044	0.7619
1.2D + 1.0W 330° 123 mph wind with no ice	80.20	0.7872	0.2916	0.6899	0.749
1.2D + 1.0W 330° 123 mph wind with no ice	84.12	0.8287	0.3049	0.5600	0.6365
1.2D + 1.0W 330° 123 mph wind with no ice	104.12	0.9905	0.2204	0.4025	0.4578
1.2D + 1.0W 330° 123 mph wind with no ice	115.88	1.0581	0.1399	0.3747	0.3983
1.2D + 1.0W 330° 123 mph wind with no ice	124.12	1.1003	0.0896	0.4911	0.4978
1.2D + 1.0W 330° 123 mph wind with no ice	128.04	1.1423	0.1062	0.6544	0.6628
1.2D + 1.0W 330° 123 mph wind with no ice	160.00	1.4572	0.2625	0.4513	0.5221
1.2D + 1.0W 330° 123 mph wind with no ice	168.04	1.5069	0.2445	0.2951	0.3797
1.2D + 1.0W 330° 123 mph wind with no ice	180.00	1.5445	0.2177	0.1199	0.2445
1.2D + 1.0W 330° 123 mph wind with no ice	195.88	1.6065	0.2524	0.2107	0.3287
1.2D + 1.0W 330° 123 mph wind with no ice	211.96	1.6305	0.2857	0.0168	0.2862
1.2D + 1.0W 330° 123 mph wind with no ice	215.88	1.6293	0.2852	0.0292	0.2866
1.2D + 1.0W 330° 123 mph wind with no ice	228.04	1.6106	0.3539	0.1631	0.3869
1.2D + 1.0W 330° 123 mph wind with no ice	231.96	1.5992	0.3636	0.2003	0.4135
1.2D + 1.0W 330° 123 mph wind with no ice	235.88	1.5841	0.3484	0.2117	0.4062
1.2D + 1.0W 330° 123 mph wind with no ice	240.20	1.5639	0.3267	0.3880	0.5071
1.2D + 1.0W 330° 123 mph wind with no ice	264.12	1.5023	0.3094	0.1504	0.3438
1.2D + 1.0W 330° 123 mph wind with no ice	268.04	1.4932	0.3094	0.1472	0.3426
1.2D + 1.0W 330° 123 mph wind with no ice	275.88	1.4734	0.3092	0.1611	0.3486
1.2D + 1.0W 330° 123 mph wind with no ice	288.04	1.4378	0.3087	0.1910	0.363
1.2D + 1.0W 330° 123 mph wind with no ice	295.88	1.4147	0.3085	0.1744	0.3541
1.2D + 1.0W 330° 123 mph wind with no ice	300.00	1.4035	0.3089	0.1503	0.3426
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	80.00	0.2072	-0.0321	0.2190	0.2214
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	80.20	0.2079	-0.0327	0.2144	0.2169
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	84.12	0.2199	-0.0354	0.1480	0.1517
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	104.12	0.2599	-0.0361	0.0757	0.0837
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	115.88	0.2681	-0.0374	0.0421	0.0534
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	124.12	0.2708	-0.0359	0.0928	0.0986
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	128.04	0.2808	-0.0375	0.1592	0.1636
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	160.00	0.3357	-0.0357	0.0437	0.056
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	168.04	0.3379	-0.0362	0.0116	0.0377
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	180.00	0.3324	-0.0375	0.1308	0.1355
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	195.88	0.3161	-0.0364	0.0729	0.081
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	211.96	0.2882	-0.0368	0.1366	0.1415
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	215.88	0.2785	-0.0368	0.1501	0.1542
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	228.04	0.2412	-0.0370	0.2005	0.2037
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	231.96	0.2273	-0.0370	0.2152	0.2182
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	235.88	0.2127	-0.0371	0.2145	0.2175
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	240.20	0.1953	-0.0373	0.2856	0.288
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	264.12	0.1041	-0.0375	0.2419	0.2448
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	268.04	0.0894	-0.0376	0.2442	0.247
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	275.88	0.0619	-0.0377	0.2531	0.2559
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	288.04	0.0465	-0.0380	0.2716	0.2742
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	295.88	0.0676	-0.0382	0.2646	0.2674
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	300.00	0.0828	-0.0381	0.2518	0.2547
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	80.00	0.1714	-0.0304	0.1816	0.1836
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	80.20	0.172	-0.0303	0.1787	0.1808
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	84.12	0.1823	-0.0297	0.1262	0.1295
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	104.12	0.2139	-0.0321	0.0436	0.0535
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	115.88	0.2204	-0.0331	0.0416	0.051
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	124.12	0.224	-0.0300	0.1013	0.1052
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	128.04	0.2342	-0.0331	0.1661	0.1686
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	160.00	0.3076	-0.0317	0.0994	0.1042
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	168.04	0.319	-0.0323	0.0725	0.0791
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	180.00	0.3308	-0.0331	0.0265	0.0424
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	195.88	0.3459	-0.0336	0.0618	0.07
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	211.96	0.3599	-0.0344	0.0326	0.0474
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	215.88	0.3618	-0.0345	0.0270	0.0434
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	228.04	0.3635	-0.0350	0.0111	0.0367
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	231.96	0.3631	-0.0351	0.0157	0.0384
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	235.88	0.3623	-0.0353	0.0129	0.0376
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	240.20	0.3607	-0.0356	0.0643	0.0733
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	264.12	0.3618	-0.0361	0.0115	0.0378

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	268.04	0.3622	-0.0363	0.0120	0.0382
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	275.88	0.3624	-0.0366	0.0117	0.0383
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	288.04	0.3608	-0.0371	0.0188	0.0414
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	295.88	0.3595	-0.0371	0.0156	0.04
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	300.00	0.3592	-0.0372	0.0136	0.0391
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	80.00	0.2018	0.2792	0.2168	0.3535
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	80.20	0.2025	0.2806	0.2143	0.3531
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	84.12	0.2152	0.3036	0.1489	0.3382
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	104.12	0.2509	0.3115	0.0629	0.3178
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	115.88	0.2563	0.2564	0.0483	0.2606
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	124.12	0.257	0.2030	0.0990	0.2229
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	128.04	0.2668	0.2019	0.1695	0.2636
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	160.00	0.3348	0.2023	0.0804	0.2169
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	168.04	0.3426	0.2036	0.0522	0.21
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	180.00	0.3474	0.2062	0.0701	0.2178
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	195.88	0.3504	0.1219	0.0608	0.1362
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	211.96	0.3474	0.1202	0.0742	0.141
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	215.88	0.3447	0.1208	0.0818	0.1455
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	228.04	0.3313	0.1230	0.1142	0.1674
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	231.96	0.3258	0.1236	0.1243	0.1749
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	235.88	0.3199	0.1243	0.1224	0.1744
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	240.20	0.3126	0.1252	0.1787	0.2178
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	264.12	0.2832	0.1275	0.1367	0.1868
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	268.04	0.279	0.1279	0.1375	0.1876
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	275.88	0.2707	0.1286	0.1436	0.1926
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	288.04	0.2584	0.1298	0.1567	0.2032
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	295.88	0.252	0.1300	0.1517	0.1997
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	300.00	0.2496	0.1302	0.1418	0.1922
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	80.00	0.2085	-0.0104	0.2217	0.2218
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	80.20	0.2092	-0.0103	0.2172	0.2173
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	84.12	0.2214	-0.0096	0.1515	0.1516
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	104.12	0.2631	-0.0099	0.0816	0.0822
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	115.88	0.2727	-0.0121	0.0496	0.0502
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	124.12	0.2765	-0.0111	0.1020	0.1023
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	128.04	0.2872	-0.0123	0.1689	0.1694
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	160.00	0.3485	-0.0087	0.0556	0.0562
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	168.04	0.3524	-0.0092	0.0121	0.0152
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	180.00	0.3497	-0.0103	0.1159	0.1162
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	195.88	0.3372	-0.0092	0.0571	0.0577
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	211.96	0.313	-0.0093	0.1215	0.1218
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	215.88	0.3042	-0.0092	0.1350	0.1353
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	228.04	0.2694	-0.0091	0.1860	0.1862
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	231.96	0.2562	-0.0090	0.2009	0.2011
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	235.88	0.2422	-0.0090	0.2003	0.2005
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	240.20	0.2256	-0.0090	0.2717	0.2718
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	264.12	0.135	-0.0087	0.2296	0.2297
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	268.04	0.1193	-0.0088	0.2321	0.2323
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	275.88	0.0868	-0.0088	0.2412	0.2414
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	288.04	0.0337	-0.0088	0.2602	0.2603
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	295.88	0.0077	-0.0088	0.2531	0.2532
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	300.00	0.022	-0.0088	0.2402	0.2404
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	80.00	0.1659	0.0202	0.1771	0.1778
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	80.20	0.1665	0.0202	0.1742	0.1749
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	84.12	0.1764	0.0195	0.1222	0.1235
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	104.12	0.2069	0.0224	0.0400	0.0448
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	115.88	0.2126	0.0239	0.0381	0.0427
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	124.12	0.2154	0.0211	0.0978	0.0997
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	128.04	0.2256	0.0242	0.1624	0.1637
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	160.00	0.2968	0.0230	0.0961	0.0987
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	168.04	0.3078	0.0237	0.0697	0.0734
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	180.00	0.3191	0.0245	0.0290	0.038
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	195.88	0.3337	0.0250	0.0602	0.0649
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	211.96	0.3473	0.0258	0.0316	0.0408
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	215.88	0.3491	0.0259	0.0261	0.0364
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	228.04	0.3507	0.0264	0.0119	0.0288
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	231.96	0.3502	0.0265	0.0165	0.0312
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	235.88	0.3494	0.0266	0.0135	0.0299
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	240.20	0.3478	0.0269	0.0649	0.0701

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	264.12	0.3489	0.0274	0.0119	0.0297
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	268.04	0.3493	0.0276	0.0124	0.0301
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	275.88	0.3496	0.0278	0.0120	0.0302
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	288.04	0.3481	0.0283	0.0187	0.0337
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	295.88	0.3469	0.0283	0.0154	0.032
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	300.00	0.3466	0.0285	0.0141	0.0312
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	80.00	0.1924	0.3442	0.2058	0.401
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	80.20	0.1931	0.3456	0.2034	0.401
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	84.12	0.2051	0.3696	0.1377	0.3944
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	104.12	0.2367	0.3792	0.0492	0.3823
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	115.88	0.2397	0.3249	0.0397	0.3273
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	124.12	0.2388	0.2723	0.0871	0.2835
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	128.04	0.2478	0.2672	0.1508	0.3051
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	160.00	0.305	0.1824	0.0792	0.1982
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	168.04	0.3118	0.1850	0.0581	0.1937
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	180.00	0.3156	0.1896	0.0833	0.2071
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	195.88	0.3182	0.2008	0.0709	0.2123
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	211.96	0.3162	0.2045	0.0956	0.2255
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	215.88	0.3139	0.2053	0.1027	0.229
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	228.04	0.3031	0.2079	0.1324	0.246
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	231.96	0.2988	0.2086	0.1417	0.2518
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	235.88	0.2942	0.2094	0.1402	0.2518
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	240.20	0.2887	0.2105	0.1926	0.2848
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	264.12	0.2729	0.2137	0.1545	0.2636
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	268.04	0.2716	0.2142	0.1556	0.2646
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	275.88	0.2698	0.2152	0.1611	0.2686
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	288.04	0.2691	0.2169	0.1730	0.2773
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	295.88	0.271	0.2173	0.1683	0.2748
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	300.00	0.273	0.2174	0.1597	0.2695
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	80.00	0.202	0.0146	0.2141	0.2143
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	80.20	0.2027	0.0140	0.2094	0.2096
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	84.12	0.2144	0.0121	0.1441	0.1446
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	104.12	0.2532	0.0146	0.0722	0.0737
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	115.88	0.2607	0.0189	0.0388	0.0414
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	124.12	0.263	0.0194	0.0897	0.0911
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	128.04	0.2728	0.0216	0.1563	0.1578
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	160.00	0.3262	0.0239	0.0407	0.047
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	168.04	0.328	0.0251	0.0113	0.0271
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	180.00	0.3221	0.0274	0.1326	0.135
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	195.88	0.3053	0.0275	0.0739	0.0785
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	211.96	0.2771	0.0288	0.1374	0.1401
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	215.88	0.2673	0.0290	0.1506	0.1531
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	228.04	0.2298	0.0298	0.2007	0.2027
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	231.96	0.2158	0.0300	0.2152	0.2172
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	235.88	0.2011	0.0302	0.2144	0.2164
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	240.20	0.1837	0.0306	0.2853	0.2869
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	264.12	0.0917	0.0315	0.2412	0.2433
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	268.04	0.0768	0.0316	0.2435	0.2455
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	275.88	0.0493	0.0320	0.2523	0.2543
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	288.04	0.0435	0.0325	0.2706	0.2725
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	295.88	0.0704	0.0327	0.2636	0.2656
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	300.00	0.087	0.0327	0.2507	0.2529
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	80.00	0.1793	0.0119	0.1833	0.1837
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	80.20	0.1799	0.0119	0.1802	0.1806
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	84.12	0.1901	0.0109	0.1263	0.1267
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	104.12	0.2218	0.0126	0.0411	0.043
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	115.88	0.2277	0.0132	0.0371	0.0381
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	124.12	0.2302	0.0099	0.0952	0.0955
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	128.04	0.2404	0.0126	0.1593	0.1595
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	160.00	0.3077	0.0089	0.0860	0.0864
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	168.04	0.3169	0.0091	0.0568	0.0575
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	180.00	0.3255	0.0093	0.0394	0.0403
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	195.88	0.3346	0.0090	0.0386	0.0395
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	211.96	0.3416	0.0092	0.0046	0.0103
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	215.88	0.3415	0.0091	0.0037	0.0099
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	228.04	0.3372	0.0091	0.0332	0.0344
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	231.96	0.3346	0.0090	0.0418	0.0427
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	235.88	0.3317	0.0090	0.0372	0.0382

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	240.20	0.3277	0.0091	0.0956	0.096
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	264.12	0.3145	0.0089	0.0345	0.0356
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	268.04	0.3124	0.0090	0.0314	0.0327
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	275.88	0.3076	0.0090	0.0377	0.0387
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	288.04	0.2982	0.0091	0.0506	0.0513
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	295.88	0.292	0.0090	0.0453	0.0462
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	300.00	0.289	0.0092	0.0332	0.0344
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	80.00	0.2052	0.2966	0.2012	0.3584
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	80.20	0.2059	0.2974	0.1965	0.3564
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	84.12	0.2165	0.2988	0.1323	0.3268
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	104.12	0.2507	0.3025	0.0549	0.3075
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	115.88	0.2569	0.2800	0.0411	0.283
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	124.12	0.2565	0.2287	0.0894	0.2429
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	128.04	0.2656	0.2224	0.1536	0.2674
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	160.00	0.3219	0.1309	0.0686	0.147
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	168.04	0.3279	0.1330	0.0407	0.1389
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	180.00	0.3298	0.1366	0.0826	0.1596
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	195.88	0.3281	0.1466	0.0489	0.1538
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	211.96	0.3197	0.1491	0.0836	0.1707
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	215.88	0.3156	0.1495	0.0923	0.1756
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	228.04	0.2977	0.1512	0.1284	0.1981
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	231.96	0.2907	0.1517	0.1393	0.2057
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	235.88	0.2832	0.1522	0.1373	0.2049
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	240.20	0.2743	0.1529	0.1967	0.2487
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	264.12	0.2355	0.1548	0.1511	0.2162
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	268.04	0.2299	0.1552	0.1514	0.2166
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	275.88	0.219	0.1558	0.1581	0.2219
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	288.04	0.2037	0.1569	0.1724	0.2329
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	295.88	0.1963	0.1570	0.1670	0.2291
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	300.00	0.1937	0.1572	0.1557	0.221
1.2D + 1.0Ev + 1.0Eh Normal Seismic	80.00	0.0061	0.0000	0.0077	0.0077
1.2D + 1.0Ev + 1.0Eh Normal Seismic	80.20	0.0061	0.0000	0.0077	0.0077
1.2D + 1.0Ev + 1.0Eh Normal Seismic	84.12	0.0067	0.0000	0.0079	0.0079
1.2D + 1.0Ev + 1.0Eh Normal Seismic	104.12	0.0094	0.0000	0.0091	0.0091
1.2D + 1.0Ev + 1.0Eh Normal Seismic	115.88	0.0112	0.0000	0.0101	0.0101
1.2D + 1.0Ev + 1.0Eh Normal Seismic	124.12	0.0126	-0.0001	0.0126	0.0126
1.2D + 1.0Ev + 1.0Eh Normal Seismic	128.04	0.0134	0.0000	0.0140	0.014
1.2D + 1.0Ev + 1.0Eh Normal Seismic	160.00	0.021	-0.0001	0.0137	0.0137
1.2D + 1.0Ev + 1.0Eh Normal Seismic	168.04	0.0225	-0.0001	0.0102	0.0102
1.2D + 1.0Ev + 1.0Eh Normal Seismic	180.00	0.0242	-0.0001	0.0041	0.0041
1.2D + 1.0Ev + 1.0Eh Normal Seismic	195.88	0.0264	-0.0001	0.0076	0.0076
1.2D + 1.0Ev + 1.0Eh Normal Seismic	211.96	0.0279	-0.0001	0.0044	0.0044
1.2D + 1.0Ev + 1.0Eh Normal Seismic	215.88	0.0282	-0.0001	0.0042	0.0042
1.2D + 1.0Ev + 1.0Eh Normal Seismic	228.04	0.0286	-0.0001	0.0026	0.0026
1.2D + 1.0Ev + 1.0Eh Normal Seismic	231.96	0.0286	-0.0001	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh Normal Seismic	235.88	0.0286	-0.0001	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh Normal Seismic	240.20	0.0285	-0.0001	0.0057	0.0057
1.2D + 1.0Ev + 1.0Eh Normal Seismic	264.12	0.0292	-0.0001	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh Normal Seismic	268.04	0.0293	-0.0001	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh Normal Seismic	275.88	0.0295	-0.0001	0.0025	0.0025
1.2D + 1.0Ev + 1.0Eh Normal Seismic	288.04	0.0294	-0.0001	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh Normal Seismic	295.88	0.0293	-0.0001	0.0029	0.0029
1.2D + 1.0Ev + 1.0Eh Normal Seismic	300.00	0.0293	-0.0001	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh 60° Seismic	80.00	0.0047	-0.0001	0.0078	0.0078
1.2D + 1.0Ev + 1.0Eh 60° Seismic	80.20	0.0047	-0.0001	0.0076	0.0076
1.2D + 1.0Ev + 1.0Eh 60° Seismic	84.12	0.0052	-0.0001	0.0078	0.0078
1.2D + 1.0Ev + 1.0Eh 60° Seismic	104.12	0.0079	-0.0001	0.0094	0.0094
1.2D + 1.0Ev + 1.0Eh 60° Seismic	115.88	0.0098	-0.0001	0.0114	0.0114
1.2D + 1.0Ev + 1.0Eh 60° Seismic	124.12	0.0114	-0.0001	0.0135	0.0135
1.2D + 1.0Ev + 1.0Eh 60° Seismic	128.04	0.0123	-0.0001	0.0157	0.0157
1.2D + 1.0Ev + 1.0Eh 60° Seismic	160.00	0.0206	-0.0001	0.0157	0.0157
1.2D + 1.0Ev + 1.0Eh 60° Seismic	168.04	0.0224	-0.0001	0.0121	0.0121
1.2D + 1.0Ev + 1.0Eh 60° Seismic	180.00	0.0245	-0.0001	0.0057	0.0057
1.2D + 1.0Ev + 1.0Eh 60° Seismic	195.88	0.0273	-0.0001	0.0098	0.0098
1.2D + 1.0Ev + 1.0Eh 60° Seismic	211.96	0.0295	-0.0001	0.0065	0.0065
1.2D + 1.0Ev + 1.0Eh 60° Seismic	215.88	0.0299	-0.0001	0.0063	0.0063
1.2D + 1.0Ev + 1.0Eh 60° Seismic	228.04	0.0308	-0.0001	0.0038	0.0038
1.2D + 1.0Ev + 1.0Eh 60° Seismic	231.96	0.031	-0.0001	0.0033	0.0033

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 60° Seismic	235.88	0.0312	-0.0001	0.0040	0.004
1.2D + 1.0Ev + 1.0Eh 60° Seismic	240.20	0.0313	-0.0001	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 60° Seismic	264.12	0.0331	-0.0001	0.0042	0.0042
1.2D + 1.0Ev + 1.0Eh 60° Seismic	268.04	0.0333	-0.0001	0.0044	0.0044
1.2D + 1.0Ev + 1.0Eh 60° Seismic	275.88	0.0338	-0.0001	0.0037	0.0037
1.2D + 1.0Ev + 1.0Eh 60° Seismic	288.04	0.0343	-0.0001	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 60° Seismic	295.88	0.0345	-0.0001	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 60° Seismic	300.00	0.0347	-0.0001	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 90° Seismic	80.00	0.0039	0.0000	0.0079	0.0079
1.2D + 1.0Ev + 1.0Eh 90° Seismic	80.20	0.0039	0.0000	0.0077	0.0077
1.2D + 1.0Ev + 1.0Eh 90° Seismic	84.12	0.0045	0.0000	0.0081	0.0081
1.2D + 1.0Ev + 1.0Eh 90° Seismic	104.12	0.0074	-0.0001	0.0101	0.0101
1.2D + 1.0Ev + 1.0Eh 90° Seismic	115.88	0.0094	-0.0001	0.0118	0.0118
1.2D + 1.0Ev + 1.0Eh 90° Seismic	124.12	0.0111	-0.0001	0.0145	0.0145
1.2D + 1.0Ev + 1.0Eh 90° Seismic	128.04	0.012	-0.0001	0.0163	0.0163
1.2D + 1.0Ev + 1.0Eh 90° Seismic	160.00	0.0208	-0.0001	0.0164	0.0164
1.2D + 1.0Ev + 1.0Eh 90° Seismic	168.04	0.0227	-0.0001	0.0128	0.0128
1.2D + 1.0Ev + 1.0Eh 90° Seismic	180.00	0.025	-0.0001	0.0064	0.0064
1.2D + 1.0Ev + 1.0Eh 90° Seismic	195.88	0.028	-0.0001	0.0105	0.0105
1.2D + 1.0Ev + 1.0Eh 90° Seismic	211.96	0.0304	-0.0001	0.0071	0.0071
1.2D + 1.0Ev + 1.0Eh 90° Seismic	215.88	0.0309	-0.0001	0.0068	0.0068
1.2D + 1.0Ev + 1.0Eh 90° Seismic	228.04	0.0319	-0.0001	0.0041	0.0041
1.2D + 1.0Ev + 1.0Eh 90° Seismic	231.96	0.0322	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 90° Seismic	235.88	0.0324	0.0000	0.0042	0.0042
1.2D + 1.0Ev + 1.0Eh 90° Seismic	240.20	0.0326	0.0000	0.0018	0.0018
1.2D + 1.0Ev + 1.0Eh 90° Seismic	264.12	0.0346	0.0000	0.0045	0.0045
1.2D + 1.0Ev + 1.0Eh 90° Seismic	268.04	0.0349	0.0000	0.0047	0.0047
1.2D + 1.0Ev + 1.0Eh 90° Seismic	275.88	0.0355	0.0000	0.0039	0.0039
1.2D + 1.0Ev + 1.0Eh 90° Seismic	288.04	0.036	0.0000	0.0026	0.0026
1.2D + 1.0Ev + 1.0Eh 90° Seismic	295.88	0.0363	0.0000	0.0034	0.0034
1.2D + 1.0Ev + 1.0Eh 90° Seismic	300.00	0.0365	0.0000	0.0036	0.0036
1.2D + 1.0Ev + 1.0Eh 120° Seismic	80.00	0.0032	0.0000	0.0077	0.0077
1.2D + 1.0Ev + 1.0Eh 120° Seismic	80.20	0.0033	0.0000	0.0077	0.0077
1.2D + 1.0Ev + 1.0Eh 120° Seismic	84.12	0.0038	0.0000	0.0081	0.0081
1.2D + 1.0Ev + 1.0Eh 120° Seismic	104.12	0.0068	0.0000	0.0102	0.0102
1.2D + 1.0Ev + 1.0Eh 120° Seismic	115.88	0.0089	0.0000	0.0118	0.0118
1.2D + 1.0Ev + 1.0Eh 120° Seismic	124.12	0.0106	-0.0001	0.0147	0.0147
1.2D + 1.0Ev + 1.0Eh 120° Seismic	128.04	0.0115	0.0000	0.0162	0.0162
1.2D + 1.0Ev + 1.0Eh 120° Seismic	160.00	0.0205	0.0000	0.0164	0.0164
1.2D + 1.0Ev + 1.0Eh 120° Seismic	168.04	0.0224	-0.0001	0.0130	0.013
1.2D + 1.0Ev + 1.0Eh 120° Seismic	180.00	0.0248	-0.0001	0.0062	0.0062
1.2D + 1.0Ev + 1.0Eh 120° Seismic	195.88	0.0278	-0.0001	0.0106	0.0106
1.2D + 1.0Ev + 1.0Eh 120° Seismic	211.96	0.0303	-0.0001	0.0072	0.0072
1.2D + 1.0Ev + 1.0Eh 120° Seismic	215.88	0.0308	-0.0001	0.0068	0.0068
1.2D + 1.0Ev + 1.0Eh 120° Seismic	228.04	0.0319	0.0000	0.0042	0.0042
1.2D + 1.0Ev + 1.0Eh 120° Seismic	231.96	0.0321	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 120° Seismic	235.88	0.0324	0.0000	0.0042	0.0042
1.2D + 1.0Ev + 1.0Eh 120° Seismic	240.20	0.0325	0.0000	0.0015	0.0015
1.2D + 1.0Ev + 1.0Eh 120° Seismic	264.12	0.0346	0.0000	0.0046	0.0046
1.2D + 1.0Ev + 1.0Eh 120° Seismic	268.04	0.035	0.0000	0.0048	0.0048
1.2D + 1.0Ev + 1.0Eh 120° Seismic	275.88	0.0355	0.0000	0.0040	0.004
1.2D + 1.0Ev + 1.0Eh 120° Seismic	288.04	0.0361	0.0000	0.0025	0.0025
1.2D + 1.0Ev + 1.0Eh 120° Seismic	295.88	0.0365	0.0000	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 120° Seismic	300.00	0.0367	0.0000	0.0036	0.0036
1.2D + 1.0Ev + 1.0Eh 180° Seismic	80.00	0.0029	0.0000	0.0067	0.0067
1.2D + 1.0Ev + 1.0Eh 180° Seismic	80.20	0.003	0.0000	0.0065	0.0065
1.2D + 1.0Ev + 1.0Eh 180° Seismic	84.12	0.0034	0.0000	0.0068	0.0068
1.2D + 1.0Ev + 1.0Eh 180° Seismic	104.12	0.0058	0.0000	0.0086	0.0086
1.2D + 1.0Ev + 1.0Eh 180° Seismic	115.88	0.0076	0.0001	0.0106	0.0106
1.2D + 1.0Ev + 1.0Eh 180° Seismic	124.12	0.0091	0.0001	0.0129	0.0129
1.2D + 1.0Ev + 1.0Eh 180° Seismic	128.04	0.01	0.0000	0.0150	0.015
1.2D + 1.0Ev + 1.0Eh 180° Seismic	160.00	0.018	0.0001	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 180° Seismic	168.04	0.0197	0.0001	0.0114	0.0114
1.2D + 1.0Ev + 1.0Eh 180° Seismic	180.00	0.0216	0.0001	0.0052	0.0052
1.2D + 1.0Ev + 1.0Eh 180° Seismic	195.88	0.0243	0.0001	0.0093	0.0093
1.2D + 1.0Ev + 1.0Eh 180° Seismic	211.96	0.0264	0.0001	0.0061	0.0061
1.2D + 1.0Ev + 1.0Eh 180° Seismic	215.88	0.0268	0.0001	0.0059	0.0059
1.2D + 1.0Ev + 1.0Eh 180° Seismic	228.04	0.0276	0.0001	0.0036	0.0036

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 180° Seismic	231.96	0.0278	0.0000	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 180° Seismic	235.88	0.0279	0.0000	0.0038	0.0038
1.2D + 1.0Ev + 1.0Eh 180° Seismic	240.20	0.028	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 180° Seismic	264.12	0.0298	0.0000	0.0041	0.0041
1.2D + 1.0Ev + 1.0Eh 180° Seismic	268.04	0.03	0.0000	0.0043	0.0043
1.2D + 1.0Ev + 1.0Eh 180° Seismic	275.88	0.0305	0.0001	0.0037	0.0037
1.2D + 1.0Ev + 1.0Eh 180° Seismic	288.04	0.031	0.0000	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 180° Seismic	295.88	0.0312	0.0000	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 180° Seismic	300.00	0.0314	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 210° Seismic	80.00	0.0039	0.0000	0.0065	0.0065
1.2D + 1.0Ev + 1.0Eh 210° Seismic	80.20	0.0039	0.0000	0.0064	0.0064
1.2D + 1.0Ev + 1.0Eh 210° Seismic	84.12	0.0043	0.0000	0.0067	0.0067
1.2D + 1.0Ev + 1.0Eh 210° Seismic	104.12	0.0066	0.0000	0.0082	0.0082
1.2D + 1.0Ev + 1.0Eh 210° Seismic	115.88	0.0082	0.0000	0.0098	0.0098
1.2D + 1.0Ev + 1.0Eh 210° Seismic	124.12	0.0095	0.0001	0.0121	0.0121
1.2D + 1.0Ev + 1.0Eh 210° Seismic	128.04	0.0103	0.0000	0.0139	0.0139
1.2D + 1.0Ev + 1.0Eh 210° Seismic	160.00	0.0175	0.0001	0.0135	0.0135
1.2D + 1.0Ev + 1.0Eh 210° Seismic	168.04	0.019	0.0001	0.0101	0.0101
1.2D + 1.0Ev + 1.0Eh 210° Seismic	180.00	0.0207	0.0001	0.0041	0.0041
1.2D + 1.0Ev + 1.0Eh 210° Seismic	195.88	0.0228	0.0001	0.0078	0.0078
1.2D + 1.0Ev + 1.0Eh 210° Seismic	211.96	0.0245	0.0001	0.0046	0.0046
1.2D + 1.0Ev + 1.0Eh 210° Seismic	215.88	0.0247	0.0001	0.0045	0.0045
1.2D + 1.0Ev + 1.0Eh 210° Seismic	228.04	0.0252	0.0001	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh 210° Seismic	231.96	0.0252	0.0001	0.0025	0.0025
1.2D + 1.0Ev + 1.0Eh 210° Seismic	235.88	0.0253	0.0001	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 210° Seismic	240.20	0.0252	0.0001	0.0051	0.0051
1.2D + 1.0Ev + 1.0Eh 210° Seismic	264.12	0.0263	0.0001	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh 210° Seismic	268.04	0.0264	0.0001	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 210° Seismic	275.88	0.0267	0.0001	0.0029	0.0029
1.2D + 1.0Ev + 1.0Eh 210° Seismic	288.04	0.0268	0.0001	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 210° Seismic	295.88	0.0269	0.0000	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 210° Seismic	300.00	0.0269	0.0001	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 240° Seismic	80.00	0.005	0.0000	0.0068	0.0068
1.2D + 1.0Ev + 1.0Eh 240° Seismic	80.20	0.005	0.0000	0.0068	0.0068
1.2D + 1.0Ev + 1.0Eh 240° Seismic	84.12	0.0055	0.0000	0.0070	0.007
1.2D + 1.0Ev + 1.0Eh 240° Seismic	104.12	0.0078	0.0000	0.0082	0.0082
1.2D + 1.0Ev + 1.0Eh 240° Seismic	115.88	0.0093	0.0000	0.0093	0.0093
1.2D + 1.0Ev + 1.0Eh 240° Seismic	124.12	0.0107	0.0001	0.0119	0.0119
1.2D + 1.0Ev + 1.0Eh 240° Seismic	128.04	0.0114	0.0000	0.0132	0.0132
1.2D + 1.0Ev + 1.0Eh 240° Seismic	160.00	0.0183	0.0001	0.0127	0.0127
1.2D + 1.0Ev + 1.0Eh 240° Seismic	168.04	0.0197	0.0001	0.0092	0.0092
1.2D + 1.0Ev + 1.0Eh 240° Seismic	180.00	0.0212	0.0001	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh 240° Seismic	195.88	0.0231	0.0001	0.0067	0.0067
1.2D + 1.0Ev + 1.0Eh 240° Seismic	211.96	0.0244	0.0001	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 240° Seismic	215.88	0.0246	0.0001	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 240° Seismic	228.04	0.0247	0.0001	0.0022	0.0022
1.2D + 1.0Ev + 1.0Eh 240° Seismic	231.96	0.0247	0.0001	0.0023	0.0023
1.2D + 1.0Ev + 1.0Eh 240° Seismic	235.88	0.0247	0.0000	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh 240° Seismic	240.20	0.0245	0.0001	0.0061	0.0061
1.2D + 1.0Ev + 1.0Eh 240° Seismic	264.12	0.0249	0.0000	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh 240° Seismic	268.04	0.025	0.0001	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh 240° Seismic	275.88	0.025	0.0001	0.0023	0.0023
1.2D + 1.0Ev + 1.0Eh 240° Seismic	288.04	0.0248	0.0001	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 240° Seismic	295.88	0.0247	0.0000	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 240° Seismic	300.00	0.0246	0.0000	0.0026	0.0026
1.2D + 1.0Ev + 1.0Eh 300° Seismic	80.00	0.0062	0.0000	0.0074	0.0074
1.2D + 1.0Ev + 1.0Eh 300° Seismic	80.20	0.0063	0.0000	0.0072	0.0072
1.2D + 1.0Ev + 1.0Eh 300° Seismic	84.12	0.0068	0.0000	0.0071	0.0071
1.2D + 1.0Ev + 1.0Eh 300° Seismic	104.12	0.0093	0.0000	0.0079	0.0079
1.2D + 1.0Ev + 1.0Eh 300° Seismic	115.88	0.0109	0.0000	0.0092	0.0092
1.2D + 1.0Ev + 1.0Eh 300° Seismic	124.12	0.0121	0.0000	0.0108	0.0108
1.2D + 1.0Ev + 1.0Eh 300° Seismic	128.04	0.0129	0.0000	0.0128	0.0128
1.2D + 1.0Ev + 1.0Eh 300° Seismic	160.00	0.0194	0.0000	0.0118	0.0118
1.2D + 1.0Ev + 1.0Eh 300° Seismic	168.04	0.0206	0.0001	0.0080	0.008
1.2D + 1.0Ev + 1.0Eh 300° Seismic	180.00	0.0219	0.0001	0.0013	0.0013
1.2D + 1.0Ev + 1.0Eh 300° Seismic	195.88	0.0233	0.0000	0.0048	0.0048
1.2D + 1.0Ev + 1.0Eh 300° Seismic	211.96	0.0242	0.0000	0.0012	0.0012
1.2D + 1.0Ev + 1.0Eh 300° Seismic	215.88	0.0242	0.0000	0.0010	0.001

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 300° Seismic	228.04	0.024	0.0000	0.0019	0.0019
1.2D + 1.0Ev + 1.0Eh 300° Seismic	231.96	0.0239	0.0000	0.0025	0.0025
1.2D + 1.0Ev + 1.0Eh 300° Seismic	235.88	0.0237	0.0000	0.0019	0.0019
1.2D + 1.0Ev + 1.0Eh 300° Seismic	240.20	0.0235	0.0000	0.0069	0.0069
1.2D + 1.0Ev + 1.0Eh 300° Seismic	264.12	0.0231	0.0000	0.0014	0.0014
1.2D + 1.0Ev + 1.0Eh 300° Seismic	268.04	0.0231	0.0000	0.0010	0.001
1.2D + 1.0Ev + 1.0Eh 300° Seismic	275.88	0.0229	0.0000	0.0017	0.0017
1.2D + 1.0Ev + 1.0Eh 300° Seismic	288.04	0.0223	0.0000	0.0037	0.0037
1.2D + 1.0Ev + 1.0Eh 300° Seismic	295.88	0.0219	0.0000	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 300° Seismic	300.00	0.0218	0.0000	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh 330° Seismic	80.00	0.0064	0.0000	0.0077	0.0077
1.2D + 1.0Ev + 1.0Eh 330° Seismic	80.20	0.0064	0.0000	0.0076	0.0076
1.2D + 1.0Ev + 1.0Eh 330° Seismic	84.12	0.007	0.0000	0.0076	0.0076
1.2D + 1.0Ev + 1.0Eh 330° Seismic	104.12	0.0096	0.0000	0.0086	0.0086
1.2D + 1.0Ev + 1.0Eh 330° Seismic	115.88	0.0113	0.0000	0.0097	0.0097
1.2D + 1.0Ev + 1.0Eh 330° Seismic	124.12	0.0127	0.0000	0.0117	0.0117
1.2D + 1.0Ev + 1.0Eh 330° Seismic	128.04	0.0134	0.0000	0.0134	0.0134
1.2D + 1.0Ev + 1.0Eh 330° Seismic	160.00	0.0204	0.0000	0.0126	0.0126
1.2D + 1.0Ev + 1.0Eh 330° Seismic	168.04	0.0218	0.0001	0.0089	0.0089
1.2D + 1.0Ev + 1.0Eh 330° Seismic	180.00	0.0233	0.0000	0.0023	0.0023
1.2D + 1.0Ev + 1.0Eh 330° Seismic	195.88	0.025	0.0000	0.0060	0.006
1.2D + 1.0Ev + 1.0Eh 330° Seismic	211.96	0.0262	0.0000	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh 330° Seismic	215.88	0.0263	0.0000	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh 330° Seismic	228.04	0.0263	0.0000	0.0018	0.0018
1.2D + 1.0Ev + 1.0Eh 330° Seismic	231.96	0.0263	0.0000	0.0022	0.0022
1.2D + 1.0Ev + 1.0Eh 330° Seismic	235.88	0.0262	0.0000	0.0019	0.0019
1.2D + 1.0Ev + 1.0Eh 330° Seismic	240.20	0.026	0.0000	0.0063	0.0063
1.2D + 1.0Ev + 1.0Eh 330° Seismic	264.12	0.026	0.0000	0.0016	0.0016
1.2D + 1.0Ev + 1.0Eh 330° Seismic	268.04	0.026	0.0000	0.0015	0.0015
1.2D + 1.0Ev + 1.0Eh 330° Seismic	275.88	0.0259	0.0000	0.0018	0.0018
1.2D + 1.0Ev + 1.0Eh 330° Seismic	288.04	0.0256	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 330° Seismic	295.88	0.0253	0.0000	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh 330° Seismic	300.00	0.0251	0.0000	0.0023	0.0023
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	80.00	0.0061	0.0000	0.0076	0.0076
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	80.20	0.0061	0.0000	0.0076	0.0076
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	84.12	0.0066	0.0000	0.0077	0.0077
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	104.12	0.0093	0.0000	0.0088	0.0088
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	115.88	0.011	0.0000	0.0098	0.0098
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	124.12	0.0124	-0.0001	0.0122	0.0122
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	128.04	0.0132	0.0000	0.0137	0.0137
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	160.00	0.0205	-0.0001	0.0132	0.0132
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	168.04	0.0219	-0.0001	0.0096	0.0096
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	180.00	0.0235	-0.0001	0.0036	0.0036
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	195.88	0.0255	-0.0001	0.0070	0.007
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	211.96	0.027	-0.0001	0.0039	0.0039
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	215.88	0.0272	-0.0001	0.0037	0.0037
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	228.04	0.0274	-0.0001	0.0023	0.0023
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	231.96	0.0274	-0.0001	0.0023	0.0023
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	235.88	0.0274	-0.0001	0.0024	0.0024
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	240.20	0.0273	-0.0001	0.0058	0.0058
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	264.12	0.0279	-0.0001	0.0025	0.0025
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	268.04	0.0279	-0.0001	0.0025	0.0025
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	275.88	0.028	-0.0001	0.0023	0.0023
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	288.04	0.0279	-0.0001	0.0032	0.0032
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	295.88	0.0278	0.0000	0.0028	0.0028
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	300.00	0.0277	0.0000	0.0026	0.0026
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	80.00	0.0046	0.0000	0.0076	0.0076
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	80.20	0.0047	0.0000	0.0075	0.0075
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	84.12	0.0052	-0.0001	0.0076	0.0076
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	104.12	0.0078	-0.0001	0.0092	0.0092
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	115.88	0.0097	-0.0001	0.0111	0.0111
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	124.12	0.0113	-0.0001	0.0133	0.0133
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	128.04	0.0122	-0.0001	0.0155	0.0155
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	160.00	0.0204	-0.0001	0.0154	0.0154
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	168.04	0.0221	-0.0001	0.0118	0.0118
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	180.00	0.0242	-0.0001	0.0055	0.0055
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	195.88	0.0269	-0.0001	0.0096	0.0096
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	211.96	0.0291	-0.0001	0.0064	0.0064

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	215.88	0.0295	-0.0001	0.0062	0.0062
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	228.04	0.0304	-0.0001	0.0037	0.0037
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	231.96	0.0306	-0.0001	0.0032	0.0032
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	235.88	0.0307	-0.0001	0.0039	0.0039
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	240.20	0.0309	-0.0001	0.0030	0.003
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	264.12	0.0326	-0.0001	0.0042	0.0042
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	268.04	0.0329	-0.0001	0.0044	0.0044
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	275.88	0.0334	-0.0001	0.0037	0.0037
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	288.04	0.0338	-0.0001	0.0028	0.0028
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	295.88	0.0341	-0.0001	0.0033	0.0033
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	300.00	0.0342	-0.0001	0.0034	0.0034
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	80.00	0.0039	0.0000	0.0077	0.0077
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	80.20	0.0039	0.0000	0.0076	0.0076
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	84.12	0.0044	0.0000	0.0079	0.0079
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	104.12	0.0072	-0.0001	0.0098	0.0098
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	115.88	0.0092	-0.0001	0.0116	0.0116
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	124.12	0.0109	-0.0001	0.0142	0.0142
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	128.04	0.0118	-0.0001	0.0161	0.0161
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	160.00	0.0205	-0.0001	0.0160	0.016
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	168.04	0.0223	-0.0001	0.0126	0.0126
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	180.00	0.0246	-0.0001	0.0062	0.0062
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	195.88	0.0275	-0.0001	0.0103	0.0103
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	211.96	0.0299	-0.0001	0.0070	0.007
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	215.88	0.0303	-0.0001	0.0066	0.0066
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	228.04	0.0314	-0.0001	0.0040	0.004
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	231.96	0.0316	0.0000	0.0034	0.0034
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	235.88	0.0318	0.0000	0.0041	0.0041
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	240.20	0.032	0.0000	0.0018	0.0018
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	264.12	0.034	0.0000	0.0045	0.0045
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	268.04	0.0343	0.0000	0.0047	0.0047
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	275.88	0.0348	0.0000	0.0039	0.0039
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	288.04	0.0354	0.0000	0.0026	0.0026
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	295.88	0.0357	0.0000	0.0033	0.0033
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	300.00	0.0359	0.0000	0.0036	0.0036
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	80.00	0.0032	0.0000	0.0075	0.0075
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	80.20	0.0032	0.0000	0.0075	0.0075
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	84.12	0.0038	0.0000	0.0079	0.0079
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	104.12	0.0066	0.0000	0.0099	0.0099
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	115.88	0.0087	0.0000	0.0115	0.0115
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	124.12	0.0104	-0.0001	0.0144	0.0144
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	128.04	0.0113	0.0000	0.0159	0.0159
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	160.00	0.0201	0.0000	0.0161	0.0161
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	168.04	0.022	-0.0001	0.0127	0.0127
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	180.00	0.0243	-0.0001	0.0060	0.006
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	195.88	0.0273	-0.0001	0.0104	0.0104
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	211.96	0.0297	-0.0001	0.0071	0.0071
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	215.88	0.0302	-0.0001	0.0067	0.0067
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	228.04	0.0312	0.0000	0.0040	0.004
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	231.96	0.0315	0.0000	0.0034	0.0034
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	235.88	0.0317	0.0000	0.0041	0.0041
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	240.20	0.0319	0.0000	0.0016	0.0016
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	264.12	0.0339	0.0000	0.0045	0.0045
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	268.04	0.0343	0.0000	0.0048	0.0048
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	275.88	0.0348	0.0000	0.0039	0.0039
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	288.04	0.0354	0.0000	0.0025	0.0025
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	295.88	0.0358	0.0000	0.0033	0.0033
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	300.00	0.036	0.0000	0.0036	0.0036
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	80.00	0.0029	0.0000	0.0065	0.0065
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	80.20	0.0029	0.0000	0.0064	0.0064
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	84.12	0.0034	0.0000	0.0066	0.0066
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	104.12	0.0057	0.0000	0.0082	0.0082
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	115.88	0.0074	0.0000	0.0101	0.0101
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	124.12	0.0089	0.0001	0.0124	0.0124
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	128.04	0.0097	0.0000	0.0145	0.0145
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	160.00	0.0174	0.0001	0.0142	0.0142
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	168.04	0.019	0.0001	0.0108	0.0108
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	180.00	0.0208	0.0001	0.0046	0.0046
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	195.88	0.0233	0.0001	0.0086	0.0086

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	211.96	0.0252	0.0001	0.0054	0.0054
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	215.88	0.0255	0.0001	0.0053	0.0053
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	228.04	0.0262	0.0001	0.0031	0.0031
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	231.96	0.0264	0.0000	0.0027	0.0027
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	235.88	0.0265	0.0000	0.0033	0.0033
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	240.20	0.0265	0.0000	0.0037	0.0037
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	264.12	0.028	0.0000	0.0037	0.0037
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	268.04	0.0283	0.0000	0.0038	0.0038
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	275.88	0.0287	0.0000	0.0032	0.0032
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	288.04	0.0291	0.0000	0.0026	0.0026
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	295.88	0.0293	0.0000	0.0030	0.003
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	300.00	0.0294	0.0000	0.0031	0.0031
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	80.00	0.0039	0.0000	0.0064	0.0064
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	80.20	0.0039	0.0000	0.0064	0.0064
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	84.12	0.0043	0.0000	0.0066	0.0066
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	104.12	0.0065	0.0000	0.0080	0.008
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	115.88	0.0081	0.0000	0.0096	0.0096
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	124.12	0.0094	0.0001	0.0119	0.0119
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	128.04	0.0102	0.0000	0.0138	0.0138
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	160.00	0.0173	0.0001	0.0132	0.0132
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	168.04	0.0188	0.0001	0.0099	0.0099
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	180.00	0.0205	0.0001	0.0040	0.004
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	195.88	0.0226	0.0001	0.0077	0.0077
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	211.96	0.0242	0.0001	0.0045	0.0045
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	215.88	0.0244	0.0001	0.0044	0.0044
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	228.04	0.0249	0.0001	0.0026	0.0026
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	231.96	0.0249	0.0001	0.0025	0.0025
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	235.88	0.025	0.0001	0.0029	0.0029
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	240.20	0.0249	0.0001	0.0051	0.0051
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	264.12	0.0259	0.0001	0.0031	0.0031
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	268.04	0.0261	0.0001	0.0032	0.0032
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	275.88	0.0263	0.0001	0.0028	0.0028
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	288.04	0.0265	0.0001	0.0029	0.0029
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	295.88	0.0265	0.0000	0.0029	0.0029
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	300.00	0.0266	0.0001	0.0029	0.0029
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	80.00	0.005	0.0000	0.0067	0.0067
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	80.20	0.005	0.0000	0.0068	0.0068
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	84.12	0.0054	0.0000	0.0069	0.0069
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	104.12	0.0078	0.0000	0.0081	0.0081
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	115.88	0.0093	0.0000	0.0092	0.0092
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	124.12	0.0106	0.0001	0.0117	0.0117
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	128.04	0.0114	0.0000	0.0131	0.0131
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	160.00	0.0182	0.0001	0.0126	0.0126
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	168.04	0.0196	0.0001	0.0091	0.0091
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	180.00	0.0211	0.0001	0.0030	0.003
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	195.88	0.023	0.0001	0.0066	0.0066
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	211.96	0.0243	0.0001	0.0034	0.0034
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	215.88	0.0244	0.0001	0.0032	0.0032
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	228.04	0.0246	0.0001	0.0021	0.0021
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	231.96	0.0246	0.0001	0.0022	0.0022
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	235.88	0.0245	0.0000	0.0023	0.0023
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	240.20	0.0244	0.0001	0.0061	0.0061
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	264.12	0.0248	0.0000	0.0023	0.0023
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	268.04	0.0248	0.0001	0.0023	0.0023
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	275.88	0.0249	0.0001	0.0023	0.0023
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	288.04	0.0247	0.0001	0.0032	0.0032
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	295.88	0.0245	0.0000	0.0028	0.0028
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	300.00	0.0245	0.0000	0.0026	0.0026
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	80.00	0.0062	0.0000	0.0074	0.0074
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	80.20	0.0063	0.0000	0.0072	0.0072
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	84.12	0.0068	0.0000	0.0071	0.0071
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	104.12	0.0093	0.0000	0.0079	0.0079
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	115.88	0.0109	0.0000	0.0091	0.0091
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	124.12	0.0121	0.0000	0.0108	0.0108
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	128.04	0.0129	0.0000	0.0129	0.0129
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	160.00	0.0194	0.0000	0.0118	0.0118
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	168.04	0.0206	0.0001	0.0080	0.008
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	180.00	0.0219	0.0001	0.0013	0.0013

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	195.88	0.0234	0.0000	0.0048	0.0048
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	211.96	0.0242	0.0000	0.0013	0.0013
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	215.88	0.0243	0.0000	0.0011	0.0011
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	228.04	0.0241	0.0000	0.0018	0.0018
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	231.96	0.024	0.0000	0.0024	0.0024
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	235.88	0.0238	0.0000	0.0018	0.0018
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	240.20	0.0236	0.0000	0.0068	0.0068
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	264.12	0.0232	0.0000	0.0013	0.0013
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	268.04	0.0232	0.0000	0.0009	0.0009
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	275.88	0.023	0.0000	0.0016	0.0016
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	288.04	0.0225	0.0000	0.0036	0.0036
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	295.88	0.0221	0.0000	0.0027	0.0027
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	300.00	0.0219	0.0000	0.0024	0.0024
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	80.00	0.0064	0.0000	0.0077	0.0077
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	80.20	0.0064	0.0000	0.0076	0.0076
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	84.12	0.0069	0.0000	0.0076	0.0076
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	104.12	0.0096	0.0000	0.0085	0.0085
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	115.88	0.0113	0.0000	0.0096	0.0096
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	124.12	0.0127	0.0000	0.0117	0.0117
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	128.04	0.0134	0.0000	0.0134	0.0134
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	160.00	0.0204	0.0000	0.0126	0.0126
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	168.04	0.0218	0.0001	0.0089	0.0089
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	180.00	0.0232	0.0000	0.0023	0.0023
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	195.88	0.025	0.0000	0.0060	0.006
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	211.96	0.0261	0.0000	0.0027	0.0027
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	215.88	0.0263	0.0000	0.0024	0.0024
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	228.04	0.0263	0.0000	0.0018	0.0018
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	231.96	0.0263	0.0000	0.0021	0.0021
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	235.88	0.0262	0.0000	0.0018	0.0018
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	240.20	0.026	0.0000	0.0062	0.0062
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	264.12	0.0261	0.0000	0.0016	0.0016
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	268.04	0.0261	0.0000	0.0014	0.0014
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	275.88	0.026	0.0000	0.0017	0.0017
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	288.04	0.0256	0.0000	0.0034	0.0034
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	295.88	0.0253	0.0000	0.0026	0.0026
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	300.00	0.0252	0.0000	0.0023	0.0023
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	80.00	0.1137	-0.0059	0.0995	0.0997
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	80.20	0.114	-0.0059	0.0970	0.0972
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	84.12	0.1193	-0.0060	0.0719	0.0721
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	104.12	0.1411	-0.0061	0.0510	0.0513
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	115.88	0.15	-0.0062	0.0477	0.0481
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	124.12	0.1553	-0.0069	0.0609	0.0613
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	128.04	0.1599	-0.0063	0.0694	0.0697
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	160.00	0.1926	-0.0069	0.0431	0.0436
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	168.04	0.1961	-0.0073	0.0146	0.0162
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	180.00	0.1958	-0.0073	0.0505	0.051
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	195.88	0.1935	-0.0076	0.0171	0.0184
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	211.96	0.1844	-0.0077	0.0500	0.0505
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	215.88	0.1807	-0.0076	0.0553	0.0557
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	228.04	0.1661	-0.0077	0.0784	0.0787
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	231.96	0.1606	-0.0077	0.0848	0.0851
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	235.88	0.1547	-0.0077	0.0806	0.0809
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	240.20	0.1478	-0.0078	0.1260	0.1262
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	264.12	0.1165	-0.0078	0.0751	0.0755
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	268.04	0.1116	-0.0078	0.0730	0.0734
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	275.88	0.1014	-0.0079	0.0764	0.0768
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	288.04	0.0847	-0.0080	0.0833	0.0837
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	295.88	0.0739	-0.0080	0.0794	0.0798
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	300.00	0.0684	-0.0081	0.0718	0.0722
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	80.00	0.0957	-0.0067	0.0848	0.085
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	80.20	0.0959	-0.0066	0.0822	0.0825
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	84.12	0.1005	-0.0067	0.0611	0.0615
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	104.12	0.1189	-0.0069	0.0439	0.0445
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	115.88	0.1269	-0.0069	0.0466	0.0471
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	124.12	0.1321	-0.0077	0.0614	0.0618
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	128.04	0.1368	-0.0071	0.0727	0.073
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	160.00	0.1754	-0.0078	0.0616	0.062
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	168.04	0.1818	-0.0082	0.0368	0.0376

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	180.00	0.1866	-0.0083	0.0235	0.0248
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	195.88	0.1935	-0.0086	0.0210	0.0226
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	211.96	0.1959	-0.0087	0.0056	0.0102
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	215.88	0.1953	-0.0087	0.0101	0.0133
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	228.04	0.1908	-0.0088	0.0290	0.0303
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	231.96	0.1887	-0.0089	0.0344	0.0355
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	235.88	0.1863	-0.0089	0.0305	0.0318
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	240.20	0.1832	-0.0090	0.0712	0.0718
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	264.12	0.1732	-0.0091	0.0237	0.0254
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	268.04	0.1717	-0.0091	0.0212	0.023
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	275.88	0.1686	-0.0092	0.0244	0.0261
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	288.04	0.1627	-0.0094	0.0312	0.0325
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	295.88	0.1589	-0.0094	0.0273	0.0289
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	300.00	0.157	-0.0094	0.0205	0.0225
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	80.00	0.1048	0.0379	0.0908	0.0982
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	80.20	0.1051	0.0378	0.0885	0.0961
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	84.12	0.1101	0.0380	0.0668	0.0768
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	104.12	0.1303	0.0384	0.0482	0.0614
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	115.88	0.1389	0.0387	0.0479	0.0614
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	124.12	0.1443	0.0399	0.0624	0.0734
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	128.04	0.149	0.0391	0.0725	0.0823
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	160.00	0.1857	0.0396	0.0545	0.067
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	168.04	0.1909	0.0401	0.0292	0.0493
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	180.00	0.1937	0.0403	0.0338	0.0521
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	195.88	0.1968	0.0406	0.0151	0.0431
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	211.96	0.1944	0.0406	0.0298	0.0503
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	215.88	0.1925	0.0405	0.0342	0.053
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	228.04	0.1838	0.0407	0.0541	0.0676
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	231.96	0.1803	0.0407	0.0599	0.0724
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	235.88	0.1765	0.0408	0.0565	0.0697
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	240.20	0.1717	0.0409	0.0971	0.1052
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	264.12	0.1531	0.0409	0.0518	0.0659
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	268.04	0.1504	0.0409	0.0501	0.0646
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	275.88	0.1445	0.0410	0.0532	0.0671
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	288.04	0.1348	0.0413	0.0598	0.0726
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	295.88	0.1286	0.0413	0.0562	0.0697
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	300.00	0.1256	0.0413	0.0491	0.064
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	80.00	0.1129	-0.0007	0.0995	0.0995
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	80.20	0.1132	-0.0007	0.0970	0.097
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	84.12	0.1187	-0.0007	0.0723	0.0723
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	104.12	0.1406	-0.0008	0.0520	0.052
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	115.88	0.1498	-0.0007	0.0493	0.0493
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	124.12	0.1554	-0.0014	0.0630	0.063
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	128.04	0.16	-0.0008	0.0716	0.0716
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	160.00	0.1942	-0.0011	0.0462	0.0462
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	168.04	0.1981	-0.0014	0.0174	0.0175
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	180.00	0.1984	-0.0013	0.0470	0.047
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	195.88	0.197	-0.0015	0.0133	0.0133
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	211.96	0.1888	-0.0014	0.0467	0.0467
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	215.88	0.1854	-0.0014	0.0521	0.0521
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	228.04	0.1713	-0.0013	0.0755	0.0755
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	231.96	0.166	-0.0012	0.0820	0.082
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	235.88	0.1603	-0.0012	0.0780	0.078
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	240.20	0.1534	-0.0012	0.1234	0.1234
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	264.12	0.1228	-0.0011	0.0735	0.0735
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	268.04	0.1179	-0.0012	0.0716	0.0716
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	275.88	0.1079	-0.0012	0.0751	0.0751
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	288.04	0.0911	-0.0012	0.0823	0.0823
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	295.88	0.0803	-0.0012	0.0783	0.0783
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	300.00	0.0748	-0.0013	0.0706	0.0706
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	80.00	0.0929	0.0062	0.0823	0.0826
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	80.20	0.0932	0.0062	0.0798	0.08
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	84.12	0.0976	0.0062	0.0589	0.0592
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	104.12	0.1152	0.0063	0.0418	0.0422
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	115.88	0.1228	0.0063	0.0446	0.0451
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	124.12	0.1277	0.0071	0.0596	0.0599
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	128.04	0.1323	0.0065	0.0708	0.0711
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	160.00	0.1699	0.0070	0.0597	0.0601

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	168.04	0.176	0.0074	0.0354	0.036
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	180.00	0.1806	0.0074	0.0249	0.0258
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	195.88	0.1872	0.0076	0.0203	0.0215
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	211.96	0.1895	0.0077	0.0061	0.0097
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	215.88	0.1889	0.0077	0.0105	0.013
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	228.04	0.1843	0.0078	0.0291	0.0301
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	231.96	0.1822	0.0078	0.0344	0.0353
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	235.88	0.1798	0.0078	0.0304	0.0314
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	240.20	0.1766	0.0078	0.0711	0.0715
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	264.12	0.1668	0.0079	0.0234	0.0246
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	268.04	0.1654	0.0080	0.0208	0.0222
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	275.88	0.1623	0.0080	0.0239	0.0252
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	288.04	0.1565	0.0082	0.0306	0.0316
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	295.88	0.1528	0.0082	0.0266	0.0278
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	300.00	0.151	0.0082	0.0198	0.0214
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	80.00	0.1006	0.0549	0.0863	0.102
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	80.20	0.1009	0.0549	0.0841	0.1002
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	84.12	0.1056	0.0551	0.0626	0.0834
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	104.12	0.1243	0.0559	0.0440	0.0709
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	115.88	0.1321	0.0565	0.0440	0.0715
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	124.12	0.137	0.0579	0.0587	0.0816
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	128.04	0.1414	0.0572	0.0689	0.0894
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	160.00	0.1763	0.0585	0.0521	0.0779
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	168.04	0.1812	0.0593	0.0280	0.0654
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	180.00	0.1836	0.0598	0.0369	0.0697
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	195.88	0.1865	0.0605	0.0183	0.063
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	211.96	0.1843	0.0609	0.0317	0.0685
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	215.88	0.1825	0.0609	0.0357	0.0706
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	228.04	0.1741	0.0614	0.0544	0.082
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	231.96	0.1708	0.0615	0.0601	0.0859
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	235.88	0.1672	0.0617	0.0566	0.0837
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	240.20	0.1627	0.0619	0.0965	0.1145
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	264.12	0.1458	0.0623	0.0516	0.0809
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	268.04	0.1434	0.0625	0.0499	0.0799
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	275.88	0.1384	0.0627	0.0528	0.0819
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	288.04	0.1299	0.0632	0.0590	0.0864
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	295.88	0.1248	0.0633	0.0555	0.0841
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	300.00	0.1224	0.0633	0.0488	0.0797
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	80.00	0.1121	0.0063	0.0981	0.0983
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	80.20	0.1124	0.0063	0.0956	0.0958
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	84.12	0.1176	0.0064	0.0707	0.0709
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	104.12	0.139	0.0066	0.0498	0.0502
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	115.88	0.1476	0.0067	0.0467	0.0472
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	124.12	0.1528	0.0075	0.0601	0.0605
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	128.04	0.1573	0.0069	0.0685	0.0689
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	160.00	0.1897	0.0076	0.0426	0.0432
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	168.04	0.1931	0.0080	0.0142	0.0163
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	180.00	0.1927	0.0081	0.0506	0.0512
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	195.88	0.1905	0.0084	0.0166	0.0183
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	211.96	0.1816	0.0085	0.0493	0.05
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	215.88	0.1779	0.0085	0.0546	0.0551
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	228.04	0.1634	0.0086	0.0775	0.0779
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	231.96	0.158	0.0086	0.0838	0.0842
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	235.88	0.1522	0.0087	0.0796	0.08
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	240.20	0.1453	0.0087	0.1249	0.1252
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	264.12	0.1144	0.0088	0.0740	0.0746
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	268.04	0.1096	0.0089	0.0719	0.0725
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	275.88	0.0995	0.0090	0.0753	0.0758
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	288.04	0.0829	0.0091	0.0822	0.0827
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	295.88	0.0722	0.0091	0.0782	0.0787
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	300.00	0.0668	0.0092	0.0706	0.0711
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	80.00	0.1023	0.0007	0.0878	0.0878
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	80.20	0.1026	0.0007	0.0852	0.0852
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	84.12	0.1073	0.0008	0.0635	0.0635
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	104.12	0.1264	0.0008	0.0448	0.0448
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	115.88	0.1344	0.0007	0.0465	0.0465
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	124.12	0.1396	0.0014	0.0604	0.0604
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	128.04	0.1442	0.0007	0.0714	0.0714

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	160.00	0.1814	0.0011	0.0579	0.0579
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	168.04	0.1872	0.0014	0.0325	0.0325
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	180.00	0.1911	0.0012	0.0286	0.0286
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	195.88	0.1963	0.0014	0.0144	0.0144
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	211.96	0.1967	0.0014	0.0131	0.0132
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	215.88	0.1955	0.0013	0.0179	0.0179
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	228.04	0.1893	0.0013	0.0374	0.0375
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	231.96	0.1865	0.0013	0.0430	0.043
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	235.88	0.1836	0.0013	0.0391	0.0391
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	240.20	0.1797	0.0012	0.0804	0.0804
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	264.12	0.1659	0.0012	0.0330	0.033
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	268.04	0.1638	0.0012	0.0305	0.0305
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	275.88	0.1594	0.0013	0.0337	0.0337
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	288.04	0.1515	0.0013	0.0405	0.0405
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	295.88	0.1464	0.0013	0.0365	0.0365
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	300.00	0.1439	0.0013	0.0296	0.0296
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	80.00	0.1086	0.0387	0.0917	0.0994
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	80.20	0.1089	0.0387	0.0895	0.0973
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	84.12	0.1139	0.0388	0.0673	0.0777
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	104.12	0.1341	0.0393	0.0475	0.0614
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	115.88	0.1424	0.0397	0.0464	0.0609
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	124.12	0.1477	0.0409	0.0602	0.0721
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	128.04	0.1522	0.0402	0.0700	0.0806
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	160.00	0.1871	0.0408	0.0503	0.0644
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	168.04	0.1918	0.0414	0.0246	0.0479
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	180.00	0.1936	0.0416	0.0382	0.056
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	195.88	0.1953	0.0420	0.0118	0.0434
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	211.96	0.1913	0.0420	0.0335	0.0537
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	215.88	0.189	0.0420	0.0383	0.0569
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	228.04	0.1789	0.0422	0.0589	0.0724
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	231.96	0.175	0.0423	0.0648	0.0773
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	235.88	0.1707	0.0424	0.0613	0.0745
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	240.20	0.1655	0.0425	0.1025	0.1108
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	264.12	0.1442	0.0425	0.0559	0.0702
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	268.04	0.141	0.0426	0.0540	0.0687
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	275.88	0.1343	0.0428	0.0572	0.0713
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	288.04	0.123	0.0431	0.0639	0.0769
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	295.88	0.1159	0.0431	0.0601	0.0739
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	300.00	0.1125	0.0431	0.0526	0.0679

MAXIMUM REACTIONS SUMMARY

Anchor Group	Uplift	Shear
BASE	200.91	2.95
A1	68.91	85.79

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

CTNL313A_Sprint Retain_1_draft

Print Name: Standard
PORs: New Build_Sprint Keep

Section 1 - Site Information

Site ID: CTNL313A
Status: Draft
Version: 1
Project Type: Sprint Retain
Approved: Not Approved
Approved By: Not Approved
Last Modified: 7/9/2021 2:0:08 PM
Last Modified By: Farhan.Badar@T-Mobile.com

Site Name: CTNL313A
Site Class: Guyed Tower
Site Type: Structure Non Building
Plan Year: 2021
Market: CONNECTICUT CT
Vendor: Ericsson
Landlord: Not Specified

Latitude: 41.59766389
Longitude: -72.14498333
Address: 139 Meeting House Hill Rd
City, State: North Franklin, CT
Region: NORTHEAST

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

Section 2 - Existing Template Images

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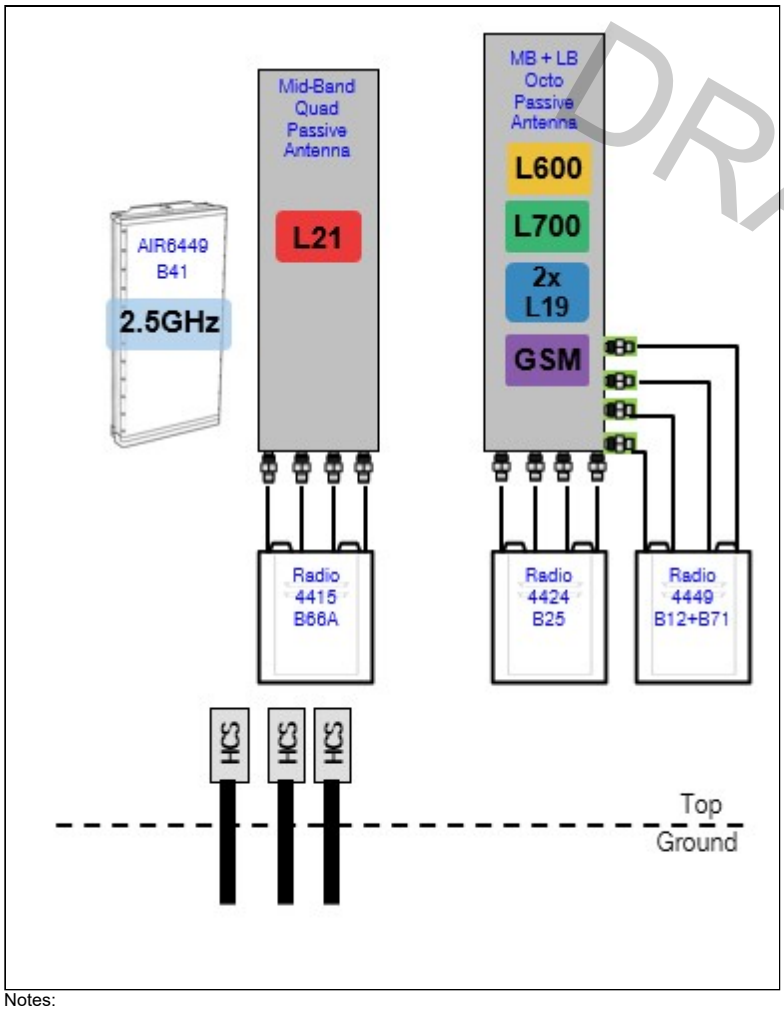
Section 3 - Proposed Template Images

67D5A998C_1xAIR+1xQP+1xOP.jpg



Notes:

Section 4 - Siteplan Images

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

CTNL313A_Sprint Retain_1_draft

Print Name: Standard
PORs: New Build_Sprint Keep

Section 5 - RAN Equipment

Existing RAN Equipment

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

Proposed RAN Equipment

Template: 67E5A998E 6160

Enclosure	1	2	3	4
Enclosure Type	Ancillary Equipment (Ericsson)	Enclosure 6160	B160	RBS 6601
Baseband		BB 6648 N2500 L2500; BB 6648 L1900 L2100; BB 6648 L700 L600 N600		DUG20 G1900
Hybrid Cable System	PSU 4813			
Transport System		CSR IXRe V2 (Gen2)		
Functionality Groups	Ericsson Hybrid Trunk 6/24 4AWG *Select Length* **(x 3)**			

RAN Scope of Work:

CT73XC005
Existing & planned azimuth: 60/180/300
Existing power 200A

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

CTNL313A_Sprint Retain_1_draft

Print Name: Standard
PORs: New Build_Sprint Keep

Section 6 - A&L Equipment

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

Sector 1 (Proposed) view from behind						
Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	RFS - APXVAALL24_43-U-NA20 (Octo)				Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)	
Azimuth	60				60	
M. Tilt	0				0	
Height	180				180	
Ports	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Active Tech.	L700 L600 N600	L700 L600 N600	L1900 G1900 L2100	L1900 G1900 L2100	N2500 L2500	N2500 L2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt	2	2	2	2	2	2
Cables	Coax Jumper **(x2)**	Coax Jumper **(x2)**	Coax Jumper **(x2)**	Coax Jumper **(x2)**		
TMAs						
Diplexers / Combiners						
Radio	Radio 4480 B71+B85 (At Antenna)	SHARED Radio 4480 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

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

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

CTNL313A_Sprint Retain_1_draft

Print Name: Standard
PORs: New Build_Sprint Keep

Sector 2 (Proposed) view from behind

Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	RFS - APXVAALL24_43-U-NA20 (Octo)				Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)	
Azimuth	180				180	
M. Tilt	0				0	
Height	180				180	
Ports	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Active Tech.	L700 L600 N600	L700 L600 N600	L1900 G1900 L2100	L1900 G1900 L2100	N2500 L2500	N2500 L2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt	2	2	2	2	2	2
Cables	Coax Jumper **(x2)**	Coax Jumper **(x2)**	Coax Jumper **(x2)**	Coax Jumper **(x2)**		
TMAs						
Diplexers / Combiners						
Radio	Radio 4480 B71+B85 (At Antenna)	SHARED Radio 4480 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

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

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

CTNL313A_Sprint Retain_1_draft

Print Name: Standard
PORs: New Build_Sprint Keep

Sector 3 (Proposed) view from behind

Coverage Type	A - Outdoor Macro					
Antenna	1				2	
Antenna Model	RFS - APXVAALL24_43-U-NA20 (Octo)				Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)	
Azimuth	300				300	
M. Tilt	0				0	
Height	180				180	
Ports	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Active Tech.	L700 L600 N600	L700 L600 N600	L1900 G1900 L2100	L1900 G1900 L2100	N2500 L2500	N2500 L2500
Dark Tech.						
Restricted Tech.						
Decomm. Tech.						
E. Tilt	2	2	2	2	2	2
Cables	Coax Jumper **(x2)**	Coax Jumper **(x2)**	Coax Jumper **(x2)**	Coax Jumper **(x2)**		
TMAs						
Diplexers / Combiners						
Radio	Radio 4480 B71+B85 (At Antenna)	SHARED Radio 4480 B71+B85 (At Antenna)	Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)		
Sector Equipment						

Unconnected Equipment:

Scope of Work:

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

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

CTNL313A_Sprint Retain_1_draft

Print Name: Standard
PORs: New Build_Sprint Keep

Section 7 - Power Systems Equipment

Existing Power Systems Equipment
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	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: CTNL313A

89 Dr. Nott Road
North Franklin, Connecticut 06254

October 5, 2021

EBI Project Number: 6221005855

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**9.16%**

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

October 5, 2021

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

Emissions Analysis for Site: CTNL313A

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **89 Dr. Nott Road** in **North Franklin, 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 89 Dr. Nott Road in North Franklin, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower. For power density calculations, the broadcast footprint of the AIR6449 antenna has been considered. Due to the beamforming nature of this antenna, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

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

1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.

3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

4) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

5) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

6) 2 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 APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector A, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector B, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz 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 180 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 APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd
Height (AGL):	180 feet	Height (AGL):	180 feet	Height (AGL):	180 feet
Channel Count:	13	Channel Count:	13	Channel Count:	13
Total TX Power (W):	560 Watts	Total TX Power (W):	560 Watts	Total TX Power (W):	560 Watts
ERP (W):	17,868.72	ERP (W):	17,868.72	ERP (W):	17,868.72
Antenna A1 MPE %:	**2.80%**	Antenna B1 MPE %:	**2.80%**	Antenna C1 MPE %:	**2.80%**
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):	180 feet	Height (AGL):	180 feet	Height (AGL):	180 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 %:	**4.32%**	Antenna B2 MPE %:	**4.32%**	Antenna C2 MPE %:	**4.32%**

Site Composite MPE %	
Carrier	**MPE %**
T-Mobile (Max at Sector A):	7.12%
Verizon	1.69%
AT&T	0.35%
Site Total MPE % :	9.16%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	7.12%
T-Mobile Sector B Total:	7.12%
T-Mobile Sector C Total:	7.12%
Site Total MPE % :	9.16%

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	180.0	1.41	600 MHz LTE	400	0.35%
T-Mobile 600 MHz NR	1	1577.94	180.0	1.87	600 MHz NR	400	0.47%
T-Mobile 700 MHz LTE	2	695.22	180.0	1.65	700 MHz LTE	467	0.35%
T-Mobile 1900 MHz GSM	4	1052.26	180.0	5.00	1900 MHz GSM	1000	0.50%
T-Mobile 1900 MHz LTE	2	2104.51	180.0	5.00	1900 MHz LTE	1000	0.50%
T-Mobile 2100 MHz LTE	2	2649.42	180.0	6.29	2100 MHz LTE	1000	0.63%
T-Mobile 2500 MHz LTE 1C & 2C Traffic	1	11044.63	180.0	13.12	2500 MHz LTE 1C & 2C Traffic	1000	1.31%
T-Mobile 2500 MHz LTE 1C & 2C Broadcast	1	1074.06	180.0	1.28	2500 MHz LTE 1C & 2C Broadcast	1000	0.13%
T-Mobile 2500 MHz NR Traffic	1	22089.26	180.0	26.23	2500 MHz NR Traffic	1000	2.62%
T-Mobile 2500 MHz NR Broadcast	1	2148.13	180.0	2.55	2500 MHz NR Broadcast	1000	0.26%
						Total:	**7.12%**

• 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:	7.12%
Sector B:	7.12%
Sector C:	7.12%
T-Mobile Maximum MPE % (Sector A):	7.12%
Site Total:	9.16%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **9.16%** 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.