

10 INDUSTRIAL AVE,  
SUITE 3  
MAHWAH NJ 07430  
PHONE: 201.684.0055  
FAX: 201.684.0066



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June 24, 2021

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

RE: Notice of Exempt Modification  
330 Middletown Road (AKA Route 66 South), Columbia, CT  
Latitude: 41.68986389  
Longitude: -73.32518611  
T-Mobile Site#: CTHA803A - Sprint Keep Project

Dear Ms. Bachman:

T-Mobile/Sprint currently maintain six (6) antennas at the 108-foot level of the existing 148-foot monopole at 330 Middletown Road, Columbia, CT. The property is owned by John and Myra Pekarski. The tower is owned by American Tower. T-Mobile now intends to remove all existing Sprint equipment. T-Mobile will then be adding (9) antennas to the monopole. The antennas support 5G services and will be installed at the same 108-foot level of the monopole.

**Planned Modifications:**

**Tower:**

Remove

- (6) Sprint Antennas
- (12) Sprint RRHs
- (6) Sprint Coax Cables
- (4) Sprint Hybrid Cables

Install New:

- (3) APX16DWV Antennas
- (3) APXVAALL24 Antennas
- (3) AIR 6449 B41 Antennas
- (3) Radio 4415 RRUs
- (3) Radio 4449 RRUs
- (3) Radio 4424 RRUs

(3) 6/24 HCS 4AWG Cables

**Ground:**

To Be Removed:

All Sprint Ground Equipment

Install New:

(1) 6160 Cabinet and (1) B160 Battery Cabinet

(1) RBS 6601

(1) PSU 4813

(4) BB6648

(1) DUG 20

(1) CSR IXRE V2

The construction of the tower was originally approved by the Town of Columbia via special permit on January 11, 2000, according to previous filings. The Connecticut Siting Council approved an extension of the Tower under Petition No. 586 on February 11, 2003.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to First Selectman Steven Everett, Elected Official, and Paula Stahl, Town Planner, as well as the property and tower 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](mailto:ebreun@transcendwireless.com)

Attachments

cc: Steven Everett - First Selectman of Columbia

Paula Stahl - Town Planner

John and Myra Pekarski - Property Owner

American Tower - Tower Owner

ERIC BREUN  
2016587728  
10 INDUSTRIAL AVE  
MAHWAH NJ 07430

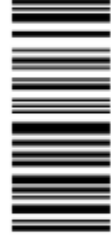
1 LBS

1 OF 1

**SHIP TO:**  
FIRST SELECTMAN  
STEVEN EVERETT  
323 CONNECTICUT 87  
COLUMBIA CT 06237



**CT 063 0-01**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9291 9043



BILLING: P/P

Reference #1: CTHA803A

XOL 21.06.14 NV45 25.0A 06/2021\*



TM

ERIC BREUN  
2016587728  
10 INDUSTRIAL AVE  
MAHWAH NJ 07430

1 LBS

1 OF 1

**SHIP TO:**  
TOWN PLANNER  
PAULA STAHL  
323 CONNECTICUT 87  
COLUMBIA CT 06237



**CT 063 0-01**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9250 1038



BILLING: P/P

Reference #1: CTHA803A

XOL 21.06.14 NV45 25.0A 06/2021\*



TM



ERIC BREUN  
2016587728  
10 INDUSTRIAL AVE  
MAHWAH NJ 07430

1 LBS

1 OF 1

**SHIP TO:**  
JOHN AND MYRA PEKARSKI  
330 CONNECTICUT 66  
COLUMBIA CT 06237

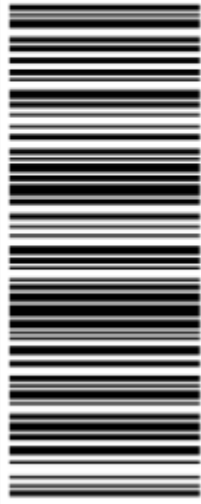


**CT 063 0-01**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9054 1052



BILLING: P/P

Reference #1: CTHA803A

XOL 21.06.14 NV45 25.0A 06/2021\*



TM

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

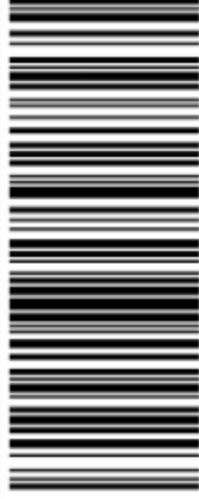


**MA 018 9-04**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9730 4144



BILLING: P/P

Reference #1: CTHA803A

XOL 21.06.14 NV45 25.0A 06/2021\*



TM

The Assessor's office is responsible for the maintenance of records on the ownership of properties.

Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2016.



Information on the Property Records for the Municipality of Columbia was last updated on 6/24/2021.

## Property Summary Information

Parcel Data And Values

Building ▾

Outbuildings

Sales

Permits

### Parcel Information

Location:	330 RT 66 SOUTH	Property Use:	Residential	Primary Use:	Residential
Unique ID:	00165000	Map Block Lot:	028 019	Acres:	26.27
490 Acres:	24.12	Zone:	LCR	Volume / Page:	0227/0002
Developers Map / Lot:		Census:	8601		


### Value Information

	Appraised Value	Assessed Value
Land	177,900	39,820
Buildings	178,800	125,200
Detached Outbuildings	16,100	11,400
Total	372,800	176,420

### Owner's Information

Owner's Data
PEKARSKI JOHN & MYRAJ SHUTT MARY J 330 RT 66 COLUMBIA, CT 06237

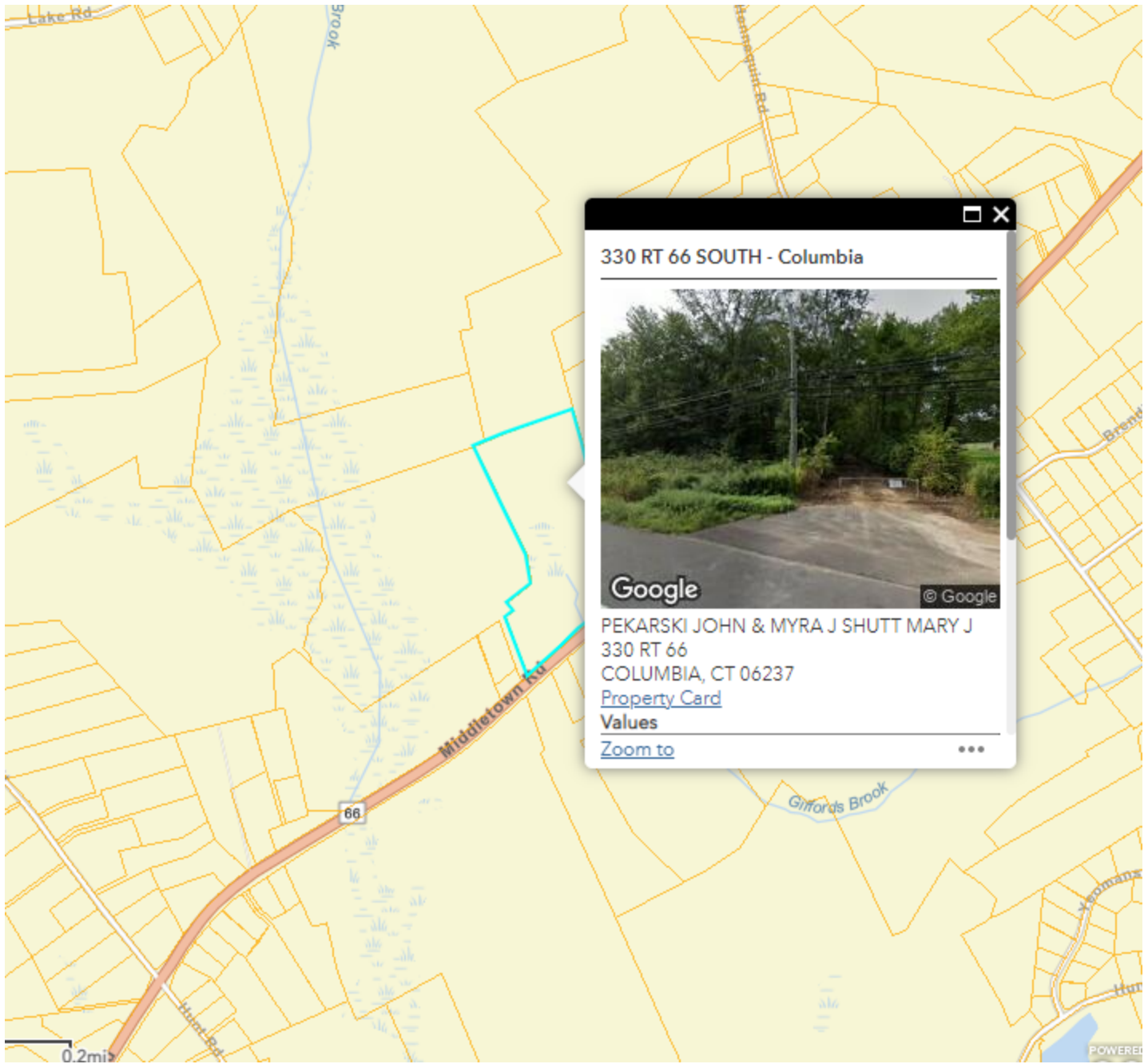
330 RT 66 SOUTH - Columbia




Google © Google

PEKARSKI JOHN & MYRA J SHUTT MARY J  
330 RT 66  
COLUMBIA, CT 06237

[Property Card](#)  
[Values](#)  
[Zoom to](#)



**PETITION NO. 586** - SpectraSite Communications, Inc., d/b/a SpectraSite petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to an existing telecommunications facility located at 330 Middletown Road, **Columbia**, Connecticut. [Staff Report.](#)  **Approved 2/11/03.**

Petition No. 586  
SpectraSite Communications, Inc.  
Columbia, Connecticut  
Staff Report  
November 12, 2002

On October 16, 2002 Connecticut Siting Council (Council) member Colin C. Tait with Robert Mercier of Council staff met SpectraSite Communications, Inc. (SpectraSite) representatives Julie Donaldson Kohler, Jason Catalini, David Trace, and Ray Vergati, and Town of Columbia Zoning Enforcement Official Carl Fontneau at 330 Middletown Road in Columbia for a field review of this petition. SpectraSite is petitioning the Council for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) would be required for the extension of an existing 120-foot monopole owned by SpectraSite.

SpectraSite proposes to install a 30-foot extension on an existing 120-foot monopole to accommodate the needs of AT&T Wireless PCS, LLC (AT&T). AT&T seeks to install six panel antennas on the extension at a centerline height of 150 feet above ground level (agl). The total height of the structure would be approximately 153 feet agl. AT&T would install equipment cabinets on a concrete pad within the existing compound.

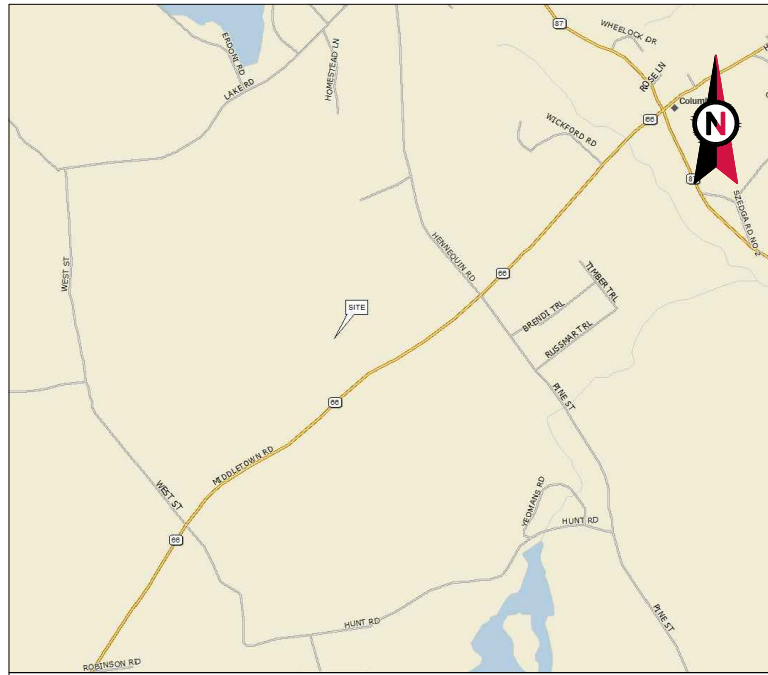
Propagation models indicate adequate coverage on Route 66 between the proposed site and AT&T site CT-861 in Columbia with antennas located at 150 feet agl. According to the models, a coverage gap of approximately 0.25 miles would result if antennas were placed at the proposed site at 130 feet agl.

The cumulative worst-case power density for the telecommunications operations at the site has been calculated to be 18.7% of the applicable standard for uncontrolled environments.

The tower is located in the northeastern portion of a 26-acre wooded parcel. Adjacent properties include five residential properties, privately owned and town owned vacant land and the town recreation area.

The town issued a special permit for the construction of the facility on January 11, 2000. The permit limited the height of the structure to 120 feet. The Town contends that Council jurisdiction regarding modifications to municipally approved towers is unclear and requests that SpectraSite file a special permit application for the proposed extension. In addition, the Town is requesting a public hearing in Columbia to allow for a discussion on Council jurisdiction and the merits of the application.

SpectraSite contends that the proposed modification of the structure would not cause a substantial adverse environmental impact and would prevent the construction of a new tower in the area



VICINITY MAP



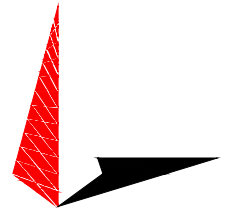
**AMERICAN TOWER®**

ATC SITE NAME: COLUMBIA CENTRAL  
 ATC SITE NUMBER: 30528  
 T-MOBILE SITE NAME: CTHA803A  
 T-MOBILE SITE NUMBER: CTHA803A  
 SITE ADDRESS: 330 MIDDLETOWN ROAD  
 COLUMBIA, CT 06237-1528



LOCATION MAP

**T-MOBILE SPRINT RETAIN ANTENNA AMENDMENT PLAN  
 67D5998C CONFIGURATION**



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

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

ATC SITE NUMBER:  
**30528**  
 ATC SITE NAME:  
**COLUMBIA CENTRAL**  
 T-MOBILE SITE NAME:  
**CTHA803A**  
 SITE ADDRESS:  
 330 MIDDLETOWN ROAD  
 COLUMBIA, CT 06237-1528



DATE DRAWN:	06/04/21
ATC JOB NO:	13653962
CUSTOMER NAME:	CTHA803A
CUSTOMER ID:	CTHA803A

**TITLE SHEET**

SHEET NUMBER:  
**G-001**  
 REVISION:  
**0**

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.  1. 2015 INTERNATIONAL BUILDING CODE (IBC) 2. 2017 NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 330 MIDDLETOWN ROAD COLUMBIA, CT 06237-1528 COUNTY: TOLLAND  <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.68986 LONGITUDE: -72.32518 GROUND ELEVATION: 638' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (6) ANTENNA(S), (12) RRH(S), (4) 1-1/4" HYBRIFLEX CABLE(S), AND (6) 1-1/4" COAX CABLE(S).  INSTALL (9) ANTENNA(S), (9) RRH(S), AND (3) 6/24 4AWG HYBRID TRUNK(S).  <u>GROUND WORK:</u> REMOVE (2) EQUIPMENT CABINET(S) AND (1) FIBER JUNCTION BOX(ES).  INSTALL (1) ENCLOSURE 6160(S), (1) B160 BATTERY CABINET(S), (1) RBS 6601(S), (1) PSU 4813(S), (4) BB6648(S), (1) DUG 20(S), AND (1) CSR IXRE V2(S).  EXISTING (1) PPC CABINET(S) AND (1) TELCO BOX(ES) TO REMAIN.	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u>  <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801  <u>ENGINEER:</u> TOWER ENGINEERING PROFESSIONALS 326 TYRON ROAD RALEIGH, NC 27603-3530  <u>APPLICANT:</u> T-MOBILE  <u>PROPERTY OWNER:</u> AMERICAN TOWER CORPORATION SPECTRASITE COMMUNICATIONS INC. P.O. BOX 723597 ATLANTA, GA 31139		G-001	TITLE SHEET	0	06/04/21	GV
	<u>UTILITY COMPANIES</u>  POWER COMPANY: ITRON PHONE: (866) 374-8766  TELEPHONE COMPANY: SOUTHERN NEW ENGLAND TELEPHONE CO. PHONE: (860) 947-7383		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.	G-002	GENERAL NOTES	0	06/04/21
	<u>PROJECT LOCATION DIRECTIONS</u>  TAKE RT 2 TO EXIT 12 (RT 66 EAST). FOLLOW INTO COLUMBIA PAST JCT W/RT 85. JUST BEFORE THE JCT W / RT 87, ACCESS ROAD WILL BE ON LEFT SIDE OF ROAD.	<u>PROJECT NOTES</u>  1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED.	C-101	DETAILED SITE PLAN	0	06/04/21	GV
			C-102	DETAILED EQUIPMENT LAYOUT	0	06/04/21	GV
			C-201	TOWER ELEVATION	0	06/04/21	GV
			C-401	ANTENNA INFORMATION & SCHEDULE	0	06/04/21	GV
			C-501	CONSTRUCTION DETAILS	0	06/04/21	GV
			C-502	CONSTRUCTION DETAILS	0	06/04/21	GV
			E-501	GROUNDING DETAILS	0	06/04/21	GV
	R-601	SUPPLEMENTAL					
	R-602	SUPPLEMENTAL					
	R-603	SUPPLEMENTAL					
	R-604	SUPPLEMENTAL					
	R-605	SUPPLEMENTAL					
	R-606	SUPPLEMENTAL					
	R-607	SUPPLEMENTAL					



**GENERAL CONSTRUCTION NOTES:**

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

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.

23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.

24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.

26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.

28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.

29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.

30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.

31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.

32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.

33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

**SPECIAL CONSTRUCTION  
ANTENNA INSTALLATION NOTES:**

1. WORK INCLUDED:

A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND

B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND T-MOBILE SPECIFICATIONS.

C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS

D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.

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.

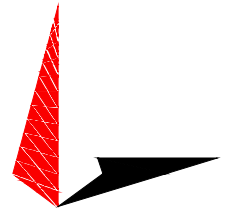
F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.

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.**

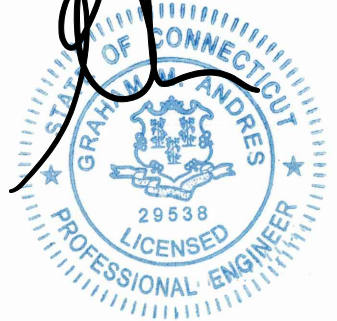


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RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net

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

ATC SITE NUMBER:  
**302528**  
ATC SITE NAME:  
**COLUMBIA CENTRAL**  
T-MOBILE SITE NAME:  
**CTHA803A**  
SITE ADDRESS:  
330 MIDDLETOWN ROAD  
COLUMBIA, CT 06237-1528

SEAL:



06/04/21



DATE DRAWN:	06/04/21
ATC JOB NO:	13653962
CUSTOMER NAME:	CTHA803A
CUSTOMER ID:	CTHA803A

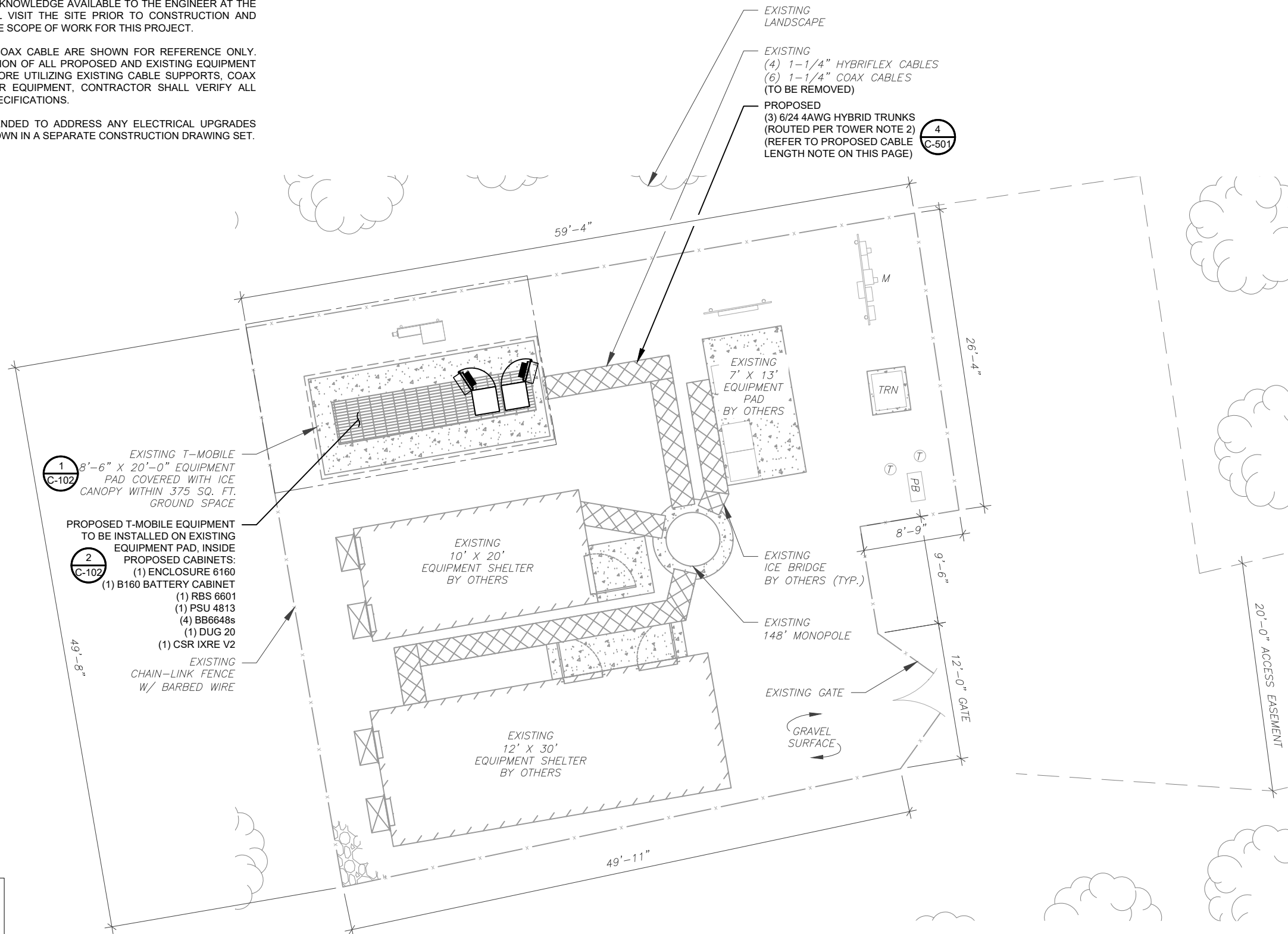
**GENERAL NOTES**

SHEET NUMBER: <b>G-002</b>	REVISION: <b>0</b>
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**SITE PLAN NOTES:**

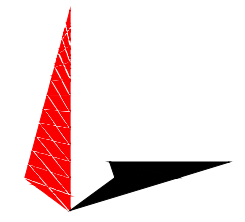
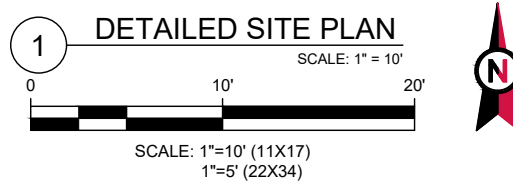
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. 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



**PROPOSED CABLE LENGTH:**

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **170'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES). CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.



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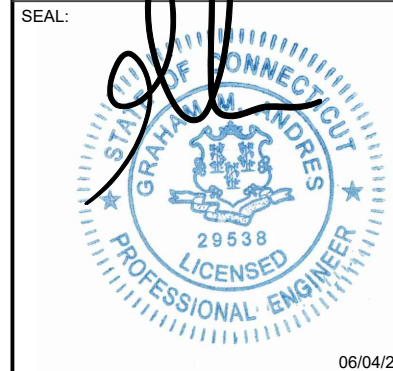
REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SSP	05/13/21
0	100% CONSTRUCTION	GV	06/04/21

ATC SITE NUMBER:  
**302528**

ATC SITE NAME:  
**COLUMBIA CENTRAL**

T-MOBILE SITE NAME:  
**CTHA803A**

SITE ADDRESS:  
 330 MIDDLE TOWN ROAD  
 COLUMBIA, CT 06237-1528



DATE DRAWN:	06/04/21
ATC JOB NO:	13653962
CUSTOMER NAME:	CTHA803A
CUSTOMER ID:	CTHA803A

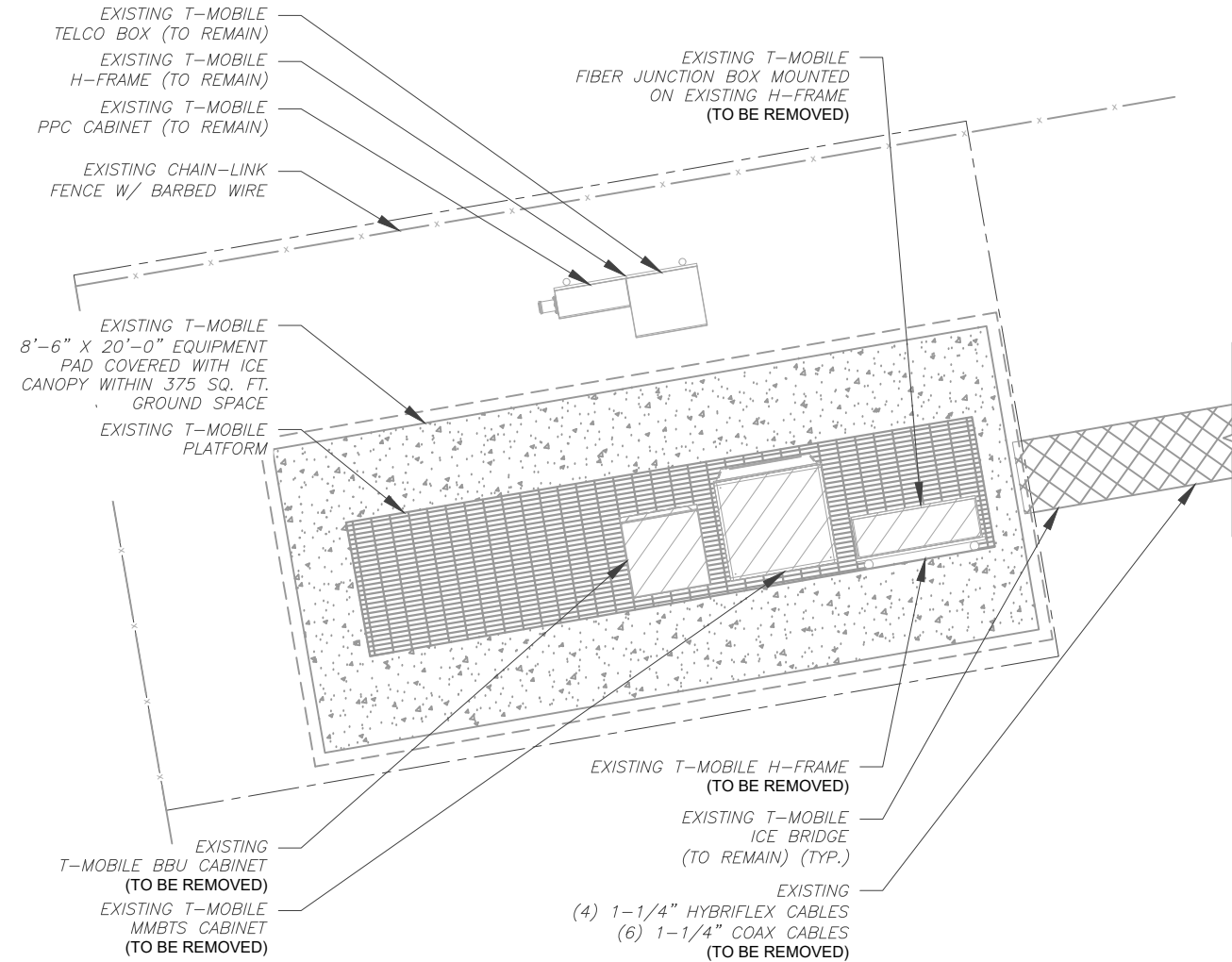
**DETAILED SITE PLAN**

SHEET NUMBER:	REVISION:
<b>C-101</b>	<b>0</b>



**SITE PLAN NOTES:**

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



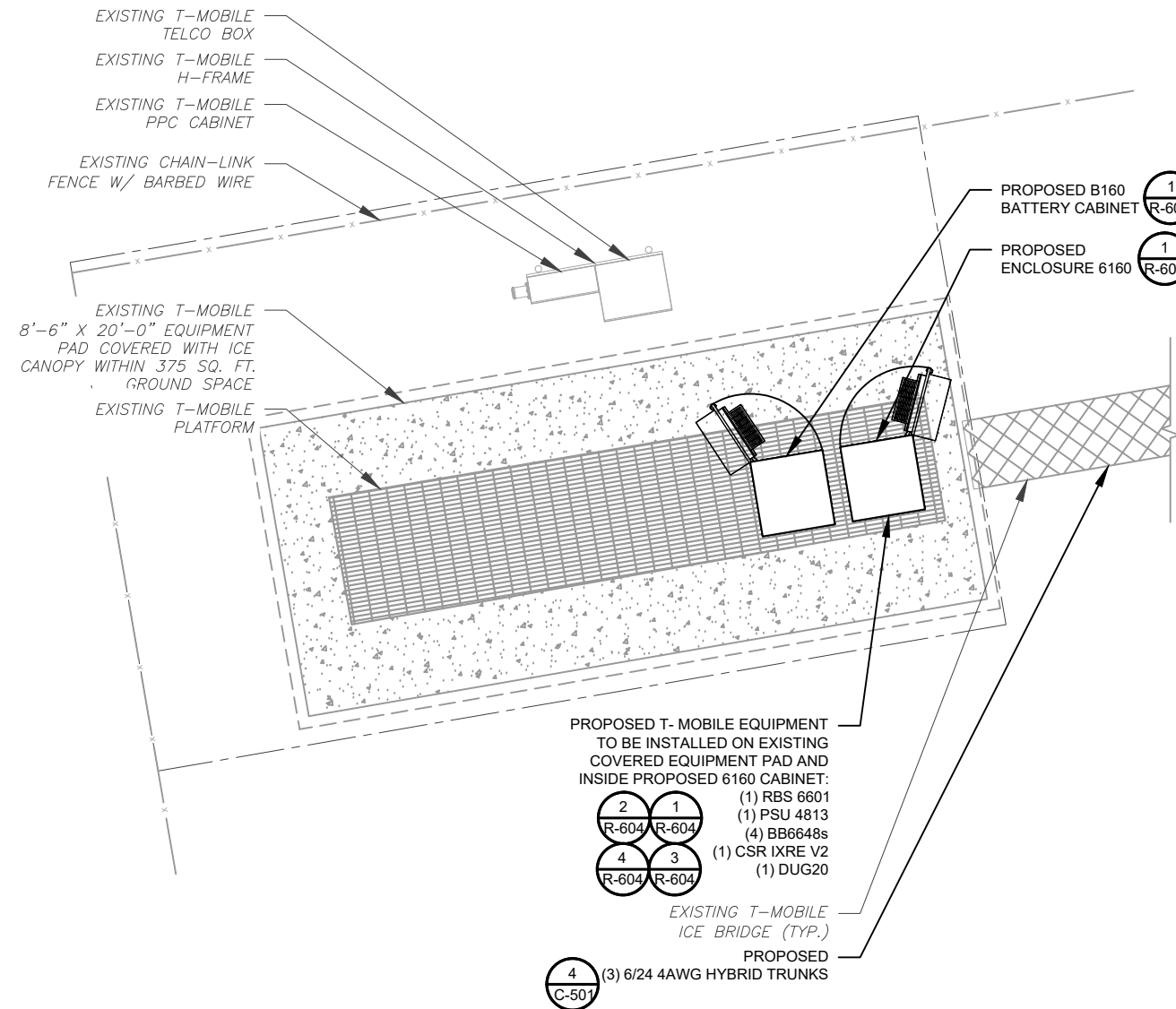
1 EXISTING GROUND EQUIPMENT LAYOUT



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



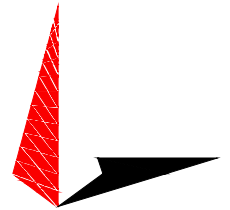
T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



2 PROPOSED GROUND EQUIPMENT LAYOUT



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



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

ATC SITE NUMBER:  
**302528**

ATC SITE NAME:  
**COLUMBIA CENTRAL**

T-MOBILE SITE NAME:  
**CTHA803A**

SITE ADDRESS:  
330 MIDDLETOWN ROAD  
COLUMBIA, CT 06237-1528

SEAL:



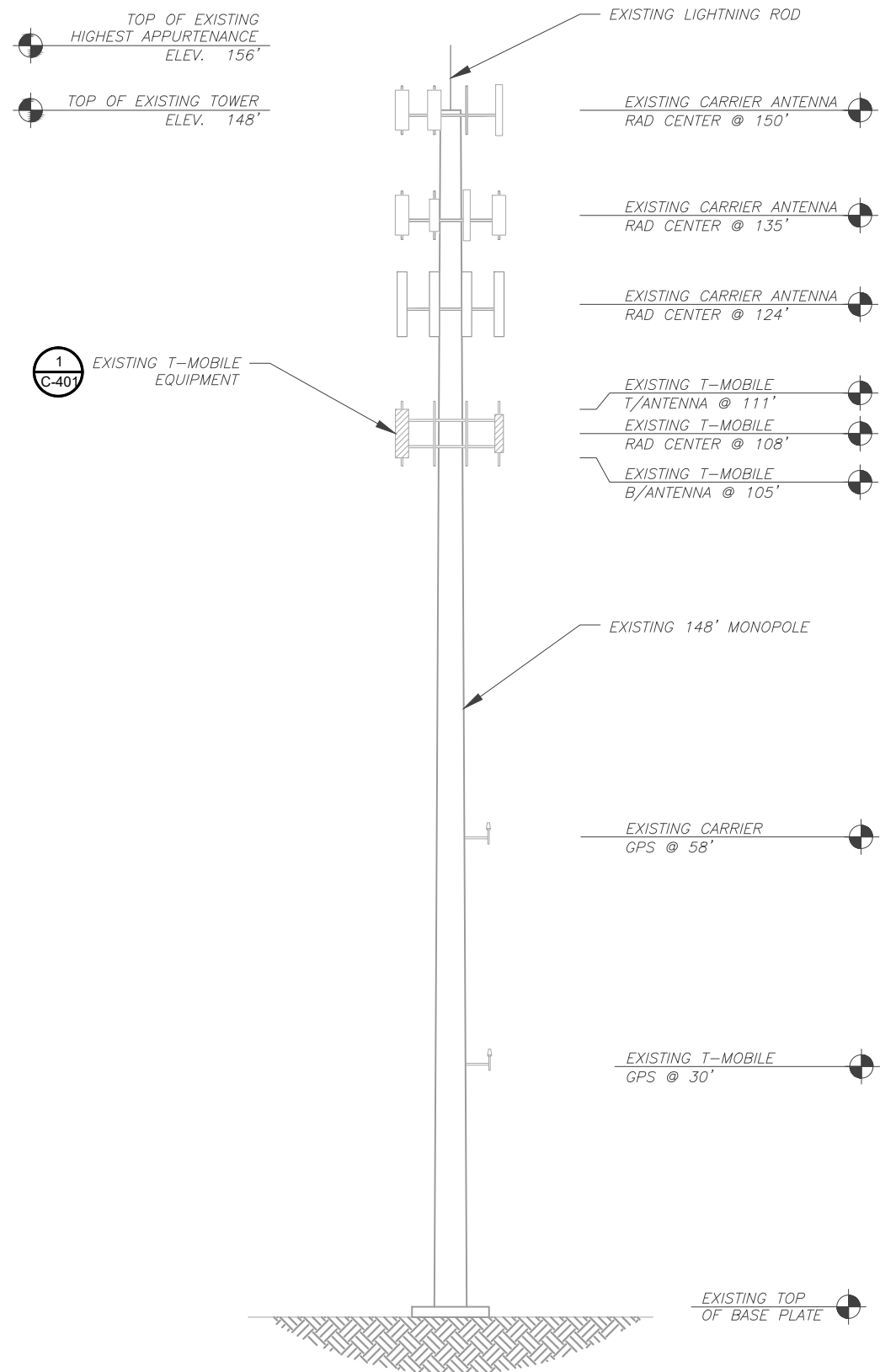
06/04/21



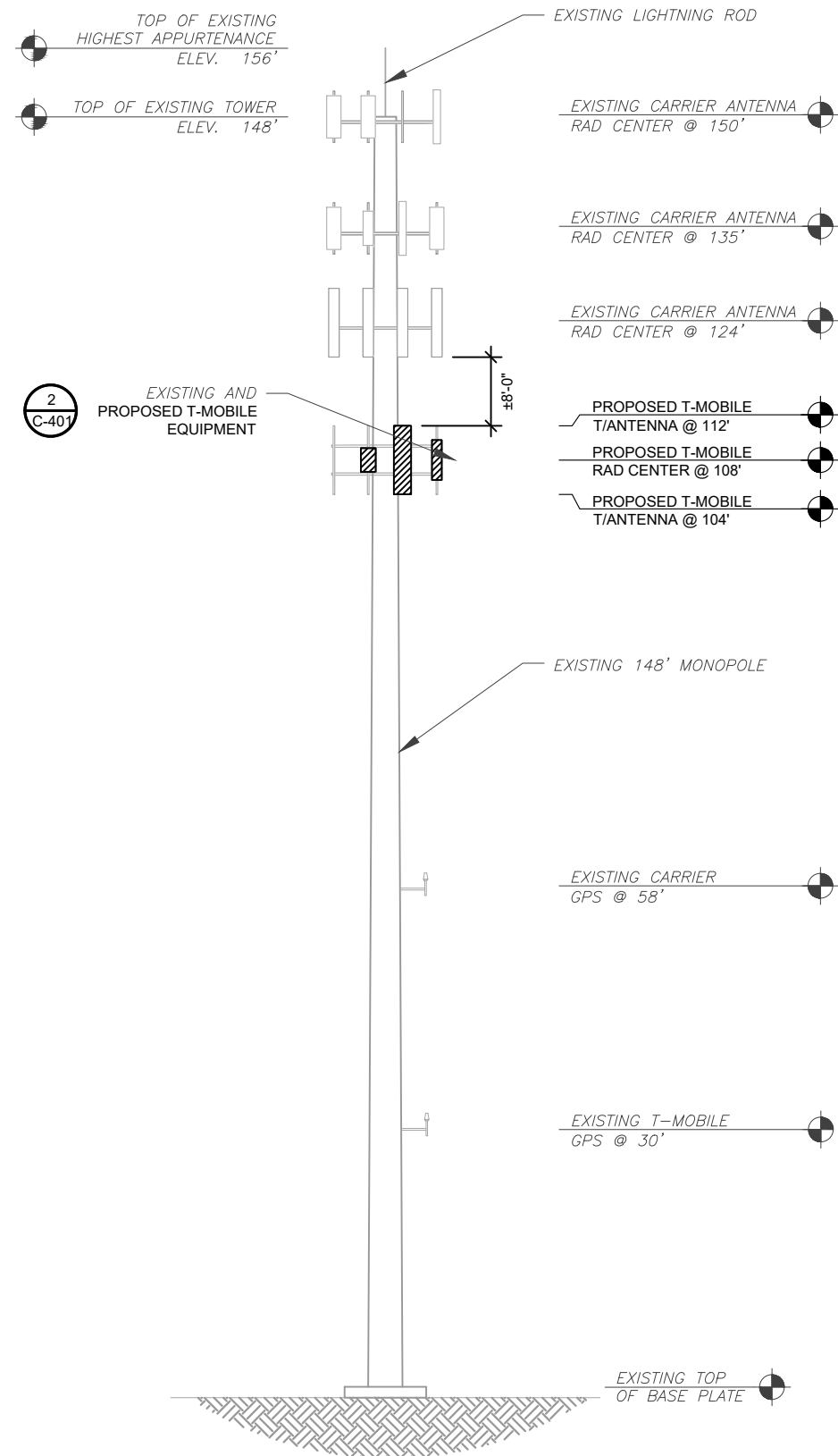
DATE DRAWN:	06/04/21
ATC JOB NO:	13653962
CUSTOMER NAME:	CTHA803A
CUSTOMER ID:	CTHA803A

**DETAILED EQUIPMENT LAYOUT**

SHEET NUMBER:	REVISION:
<b>C-102</b>	<b>0</b>



1 EXISTING TOWER ELEVATION  
SCALE: N.T.S.

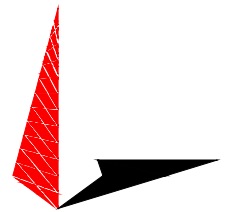


2 PROPOSED TOWER ELEVATION  
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY TOWER ENGINEERING PROFESSIONALS, DATED APRIL 29, 2021, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING

**TOWER NOTE:**

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



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A	PRELIMINARY	SSP	05/13/21
0	100% CONSTRUCTION	GV	06/04/21

ATC SITE NUMBER:  
**302528**  
ATC SITE NAME:  
**COLUMBIA CENTRAL**  
T-MOBILE SITE NAME:  
**CTHA803A**  
SITE ADDRESS:  
310 MIDDLETOWN ROAD  
COLUMBIA, CT 06237-1528

SEAL:



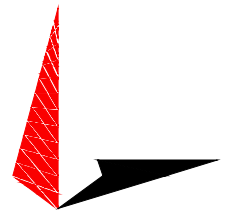
06/04/21



DATE DRAWN:	06/04/21
ATC JOB NO:	13653962
CUSTOMER NAME:	CTHA803A
CUSTOMER ID:	CTHA803A

**TOWER ELEVATION**

SHEET NUMBER:	REVISION:
<b>C-201</b>	<b>0</b>



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

ATC SITE NUMBER:  
**302528**  
 ATC SITE NAME:  
**COLUMBIA CENTRAL**  
 T-MOBILE SITE NAME:  
**CTHA803A**  
 SITE ADDRESS:  
 330 MIDLETTOWN ROAD  
 COLUMBIA, CT 06237-1528

SEAL:

06/04/21

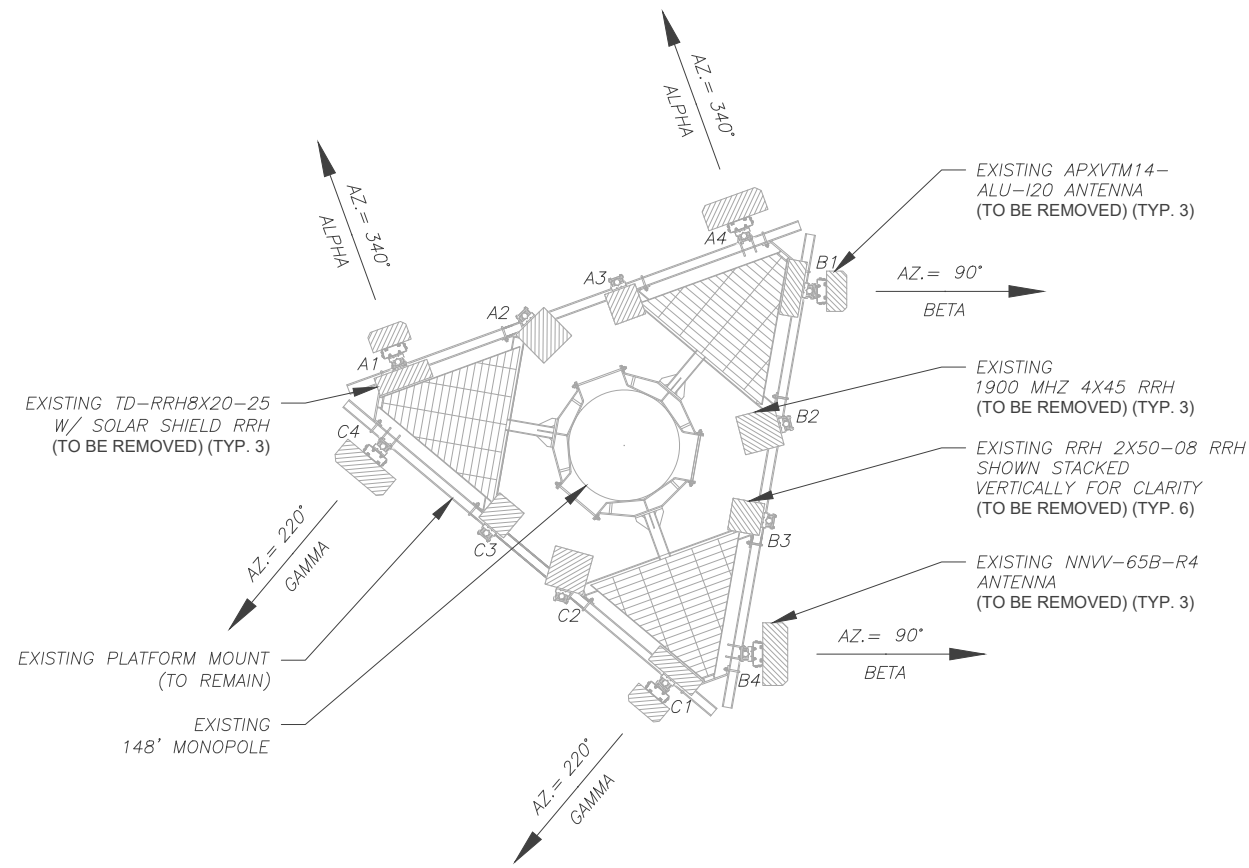


DATE DRAWN:	06/04/21
ATC JOB NO:	13653962
CUSTOMER NAME:	CTHA803A
CUSTOMER ID:	CTHA803A

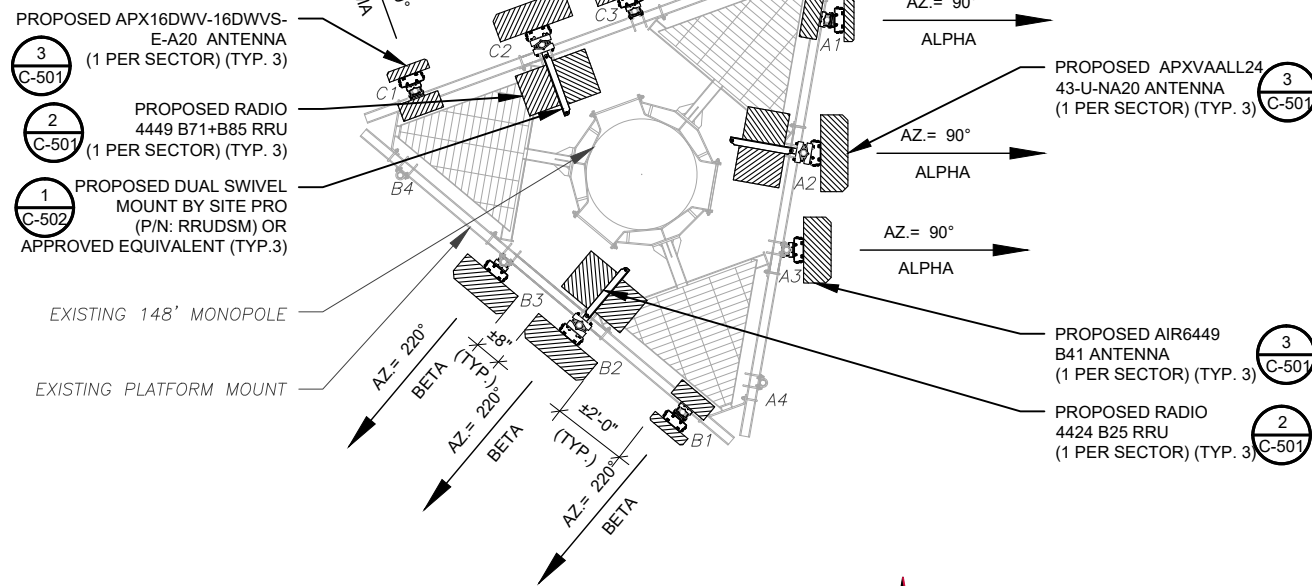
**ANTENNA INFORMATION & SCHEDULE**

SHEET NUMBER:	REVISION:
<b>C-401</b>	<b>0</b>

PER MOUNT ANALYSIS COMPLETED BY TOWER ENGINEERING PROFESSIONALS, DATED APRIL 29, 2021, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING



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



**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	108'	340°	A1	APXVTM14-ALU-I20	-	-	RMV	(1) TD-RRH 8X20-25 W/ SOLAR SHIELD	RMV
			A2	-	-	-	(1) 1900 MHZ 4X45 RRH	RMV	
			A3	-	-	-	(2) RRH2X50-08	RMV	
			A4	NNVV-65B-R4	-	-	RMV	-	
BETA	108'	90°	B1	APXVTM14-ALU-I20	-	-	RMV	(1) TD-RRH 8X20-25 W/ SOLAR SHIELD	RMV
			B2	-	-	-	(1) 1900 MHZ 4X45 RRH	RMV	
			B3	-	-	-	(2) RRH2X50-08	RMV	
			B4	NNVV-65B-R4	-	-	RMV	-	
GAMMA	108'	220°	C1	APXVTM14-ALU-I20	-	-	RMV	(1) TD-RRH 8X20-25 W/ SOLAR SHIELD	RMV
			C2	-	-	-	(1) 1900 MHZ 4X45 RRH	RMV	
			C3	-	-	-	(2) RRH2X50-08	RMV	
			C4	NNVV-65B-R4	-	-	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.
<b>STATUS ABBREVIATIONS</b>
RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

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	108'	90°	A1	APX16DWV-16DWV-S-E-A20	L2100	0°/2°	ADD	(1) RADIO 4415 B66A	ADD
			A2	APXVAALL24_43-U-NA20	L600/L700/N600/L1900/G1900	0°/2°	ADD	(1) RADIO 4449 B71+B85A (1) RADIO 4424 B25	ADD ADD
			A3	AIR 6449 B41	L2500/N2500	0°/2°	ADD	-	-
			A4	-	-	-	-	-	-
BETA	108'	220°	B1	APX16DWV-16DWV-S-E-A20	L2100	0°/2°	ADD	(1) RADIO 4415 B66A	ADD
			B2	APXVAALL24_43-U-NA20	L600/L700/N600/L1900/G1900	0°/2°	ADD	(1) RADIO 4449 B71+B85A (1) RADIO 4424 B25	ADD ADD
			B3	AIR 6449 B41	L2500/N2500	0°/2°	ADD	-	-
			B4	-	-	-	-	-	-
GAMMA	108'	340°	C1	APX16DWV-16DWV-S-E-A20	L2100	0°/2°	ADD	(1) RADIO 4415 B66A	ADD
			C2	APXVAALL24_43-U-NA20	L600/L700/N600/L1900/G1900	0°/2°	ADD	(1) RADIO 4449 B71+B85A (1) RADIO 4424 B25	ADD ADD
			C3	AIR 6449 B41	L2500/N2500	0°/2°	ADD	-	-
			C4	-	-	-	-	-	-

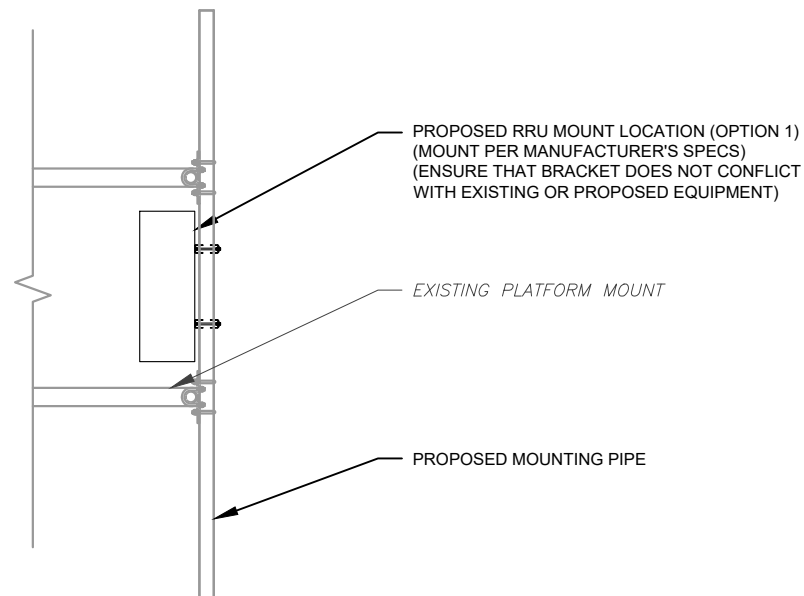
CABLE LENGTHS FOR JUMPERS  
 JUNCTION BOX TO RRU: 15'  
 RRU TO ANTENNA: 10'

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRIFLEX	STATUS
-	-	(6) 1-1/4"	(4) 1-1/4"	RMV

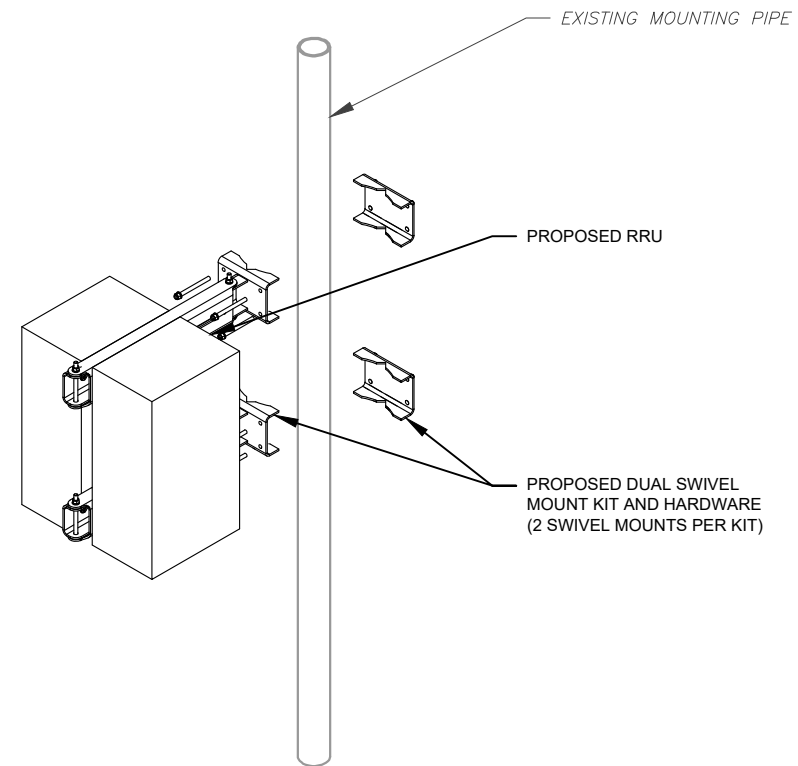
**3 EQUIPMENT SCHEDULES**

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

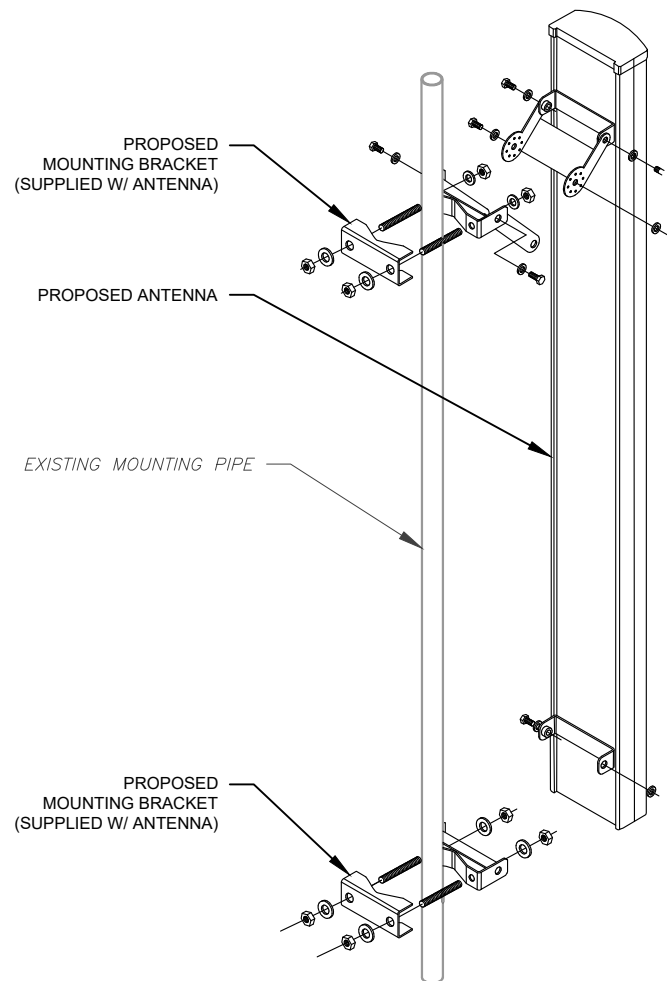




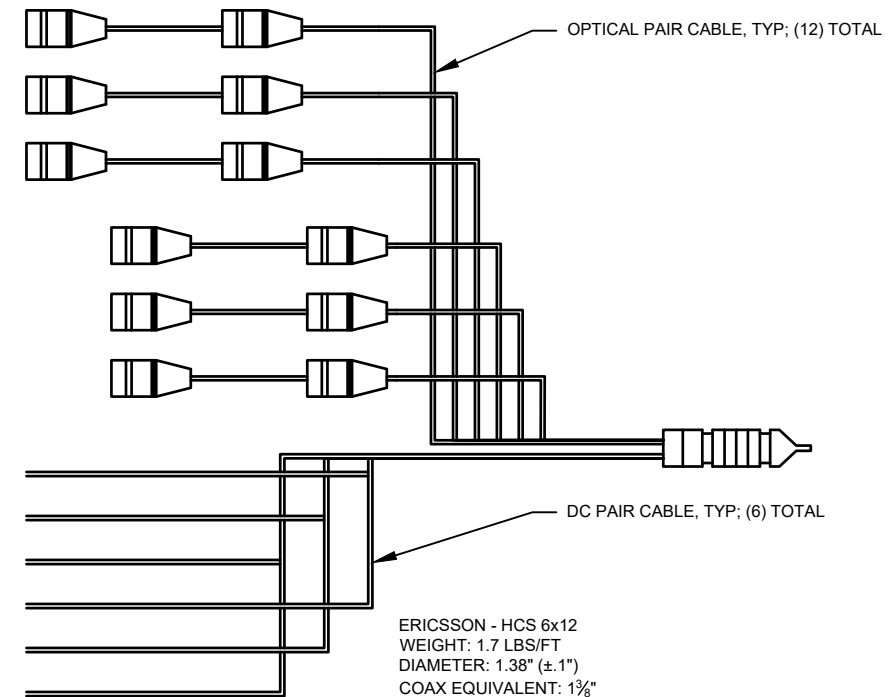
1 PROPOSED RRU MOUNTING DETAIL - TYPICAL  
SCALE: N.T.S.



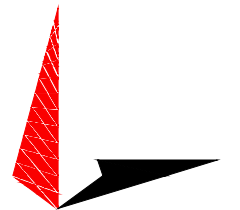
2 PROPOSED RRU MOUNTING DETAIL - TYPICAL  
SCALE: N.T.S.



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



4 PROPOSED HCS DETAIL - TYPICAL  
SCALE: N.T.S.

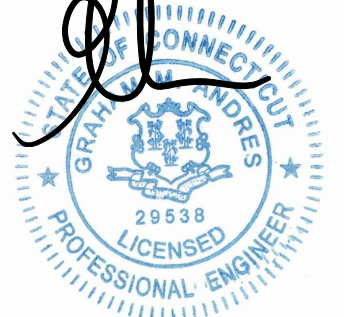


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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	SSP	05/13/21
0	100% CONSTRUCTION	GV	06/04/21

ATC SITE NUMBER:  
302528  
ATC SITE NAME:  
**COLUMBIA CENTRAL**  
T-MOBILE SITE NAME:  
**CTHA803A**  
SITE ADDRESS:  
330 MIDDLETOWN ROAD  
COLUMBIA, CT 06237-1528

SEAL:



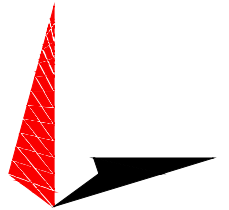
06/04/21



DATE DRAWN:	06/04/21
ATC JOB NO:	13653962
CUSTOMER NAME:	CTHA803A
CUSTOMER ID:	CTHA803A

**CONSTRUCTION  
DETAILS**

SHEET NUMBER: <b>C-501</b>	REVISION: <b>0</b>
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A	PRELIMINARY	SSP	05/13/21
B	100% CONSTRUCTION	GV	06/04/21

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 302528  
 ATC SITE NAME:  
**COLUMBIA CENTRAL**  
 T-MOBILE SITE NAME:  
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 SITE ADDRESS:  
 330 MIDDLETOWN ROAD  
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06/04/21

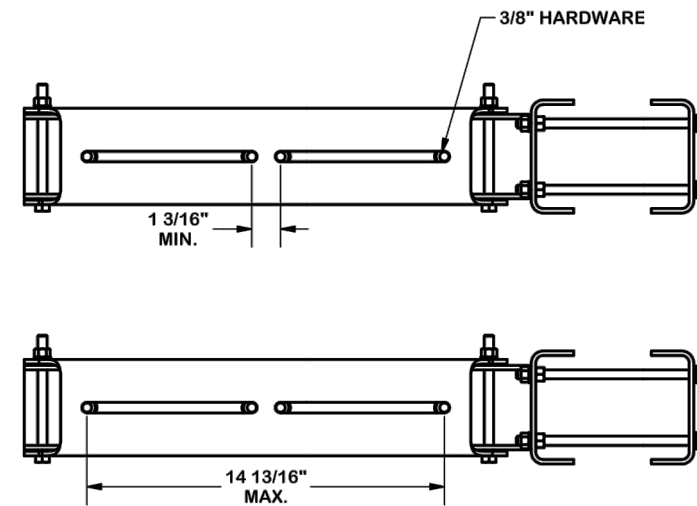
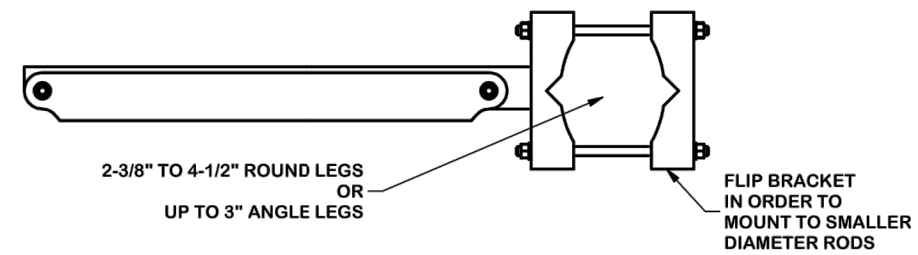
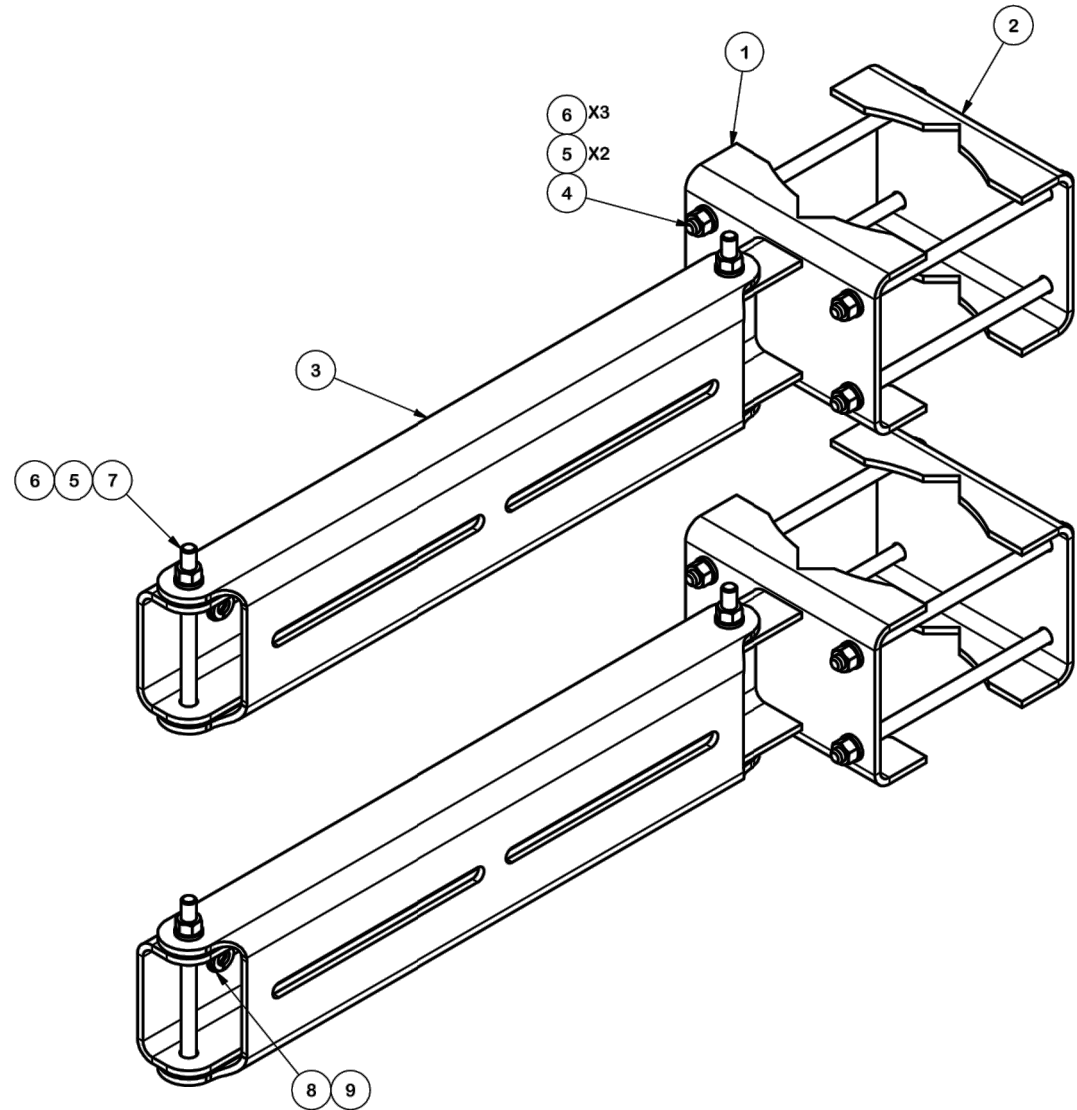


DATE DRAWN:	06/04/21
ATC JOB NO:	13653962
CUSTOMER NAME:	CTHA803A
CUSTOMER ID:	CTHA803A

**CONSTRUCTION  
 DETAILS**

SHEET NUMBER:	REVISION:
<b>C-502</b>	<b>0</b>

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	



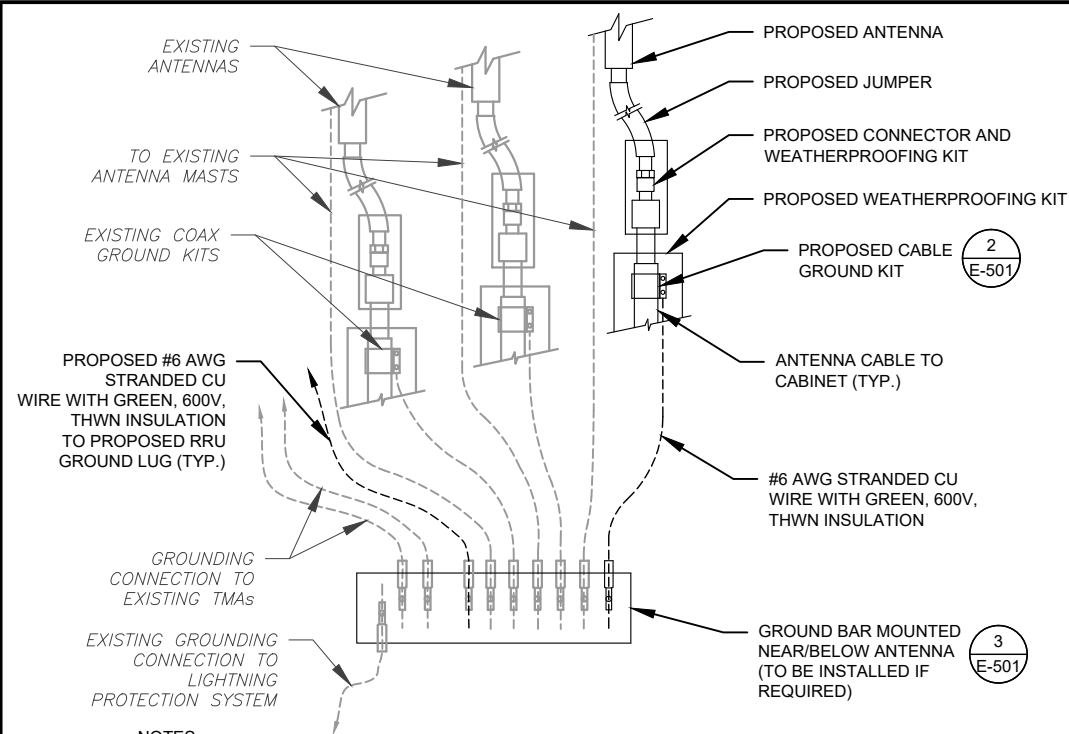
**TOLERANCE NOTES**

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

PROPRIETARY NOTE:  
 THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION				Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX	
RRU DUAL SWIVEL MOUNT				Engineering Support Team: 1-888-753-7446	
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	RRUDSM	
	CEK 1/12/2015			1 OF 1	
CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	RRUDSM
81	01	SHOP	BMC 2/3/2015		

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



**NOTES:**

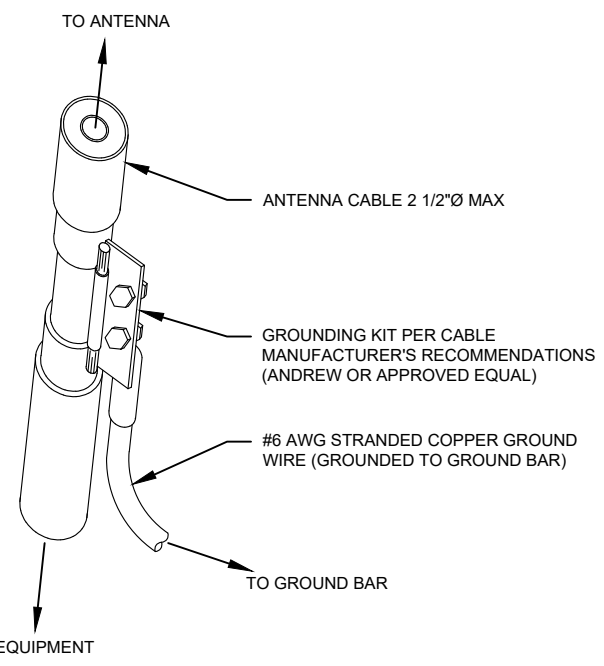
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING 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.

**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.

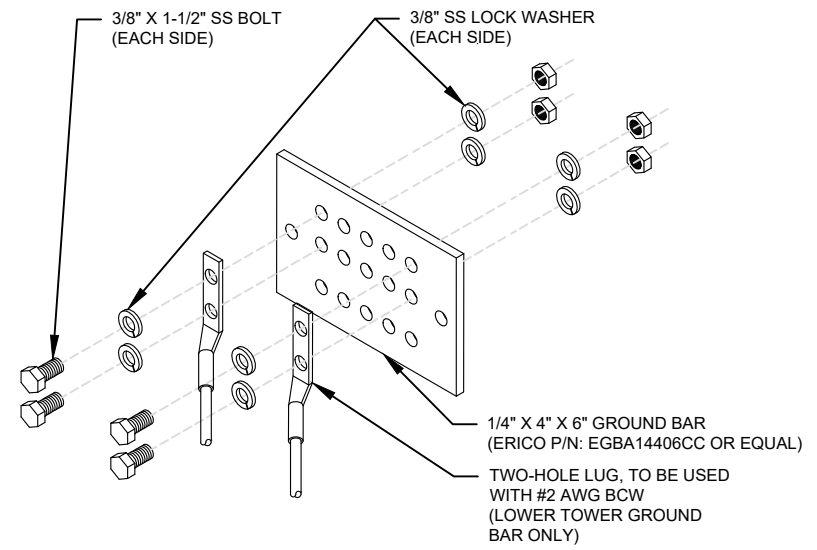
OCPD SIZE	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
80A/2P	2#3 AWG	#8 AWG	1-1/4"
100/2P	2#2 AWG	#8 AWG	1-1/4"
125A/2P	2#1 AWG	#8 AWG	1-1/2"
150A/2P	2#1/0 AWG	#8 AWG	1-1/2"



**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.

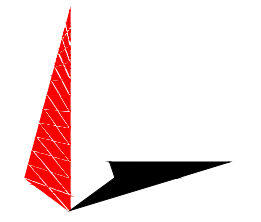
**2 CABLE GROUND KIT CONNECTION DETAIL**  
SCALE: N.T.S.



**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.



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

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

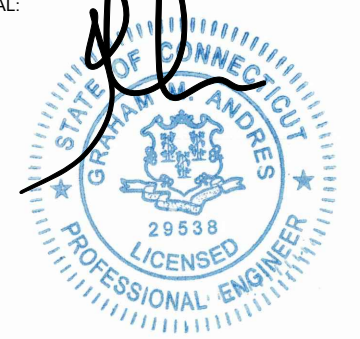
ATC SITE NUMBER:  
**302528**

ATC SITE NAME:  
**COLUMBIA CENTRAL**

T-MOBILE SITE NAME:  
**CTHA803A**

SITE ADDRESS:  
330 MIDDLETOWN ROAD  
COLUMBIA, CT 06237-1528

SEAL:



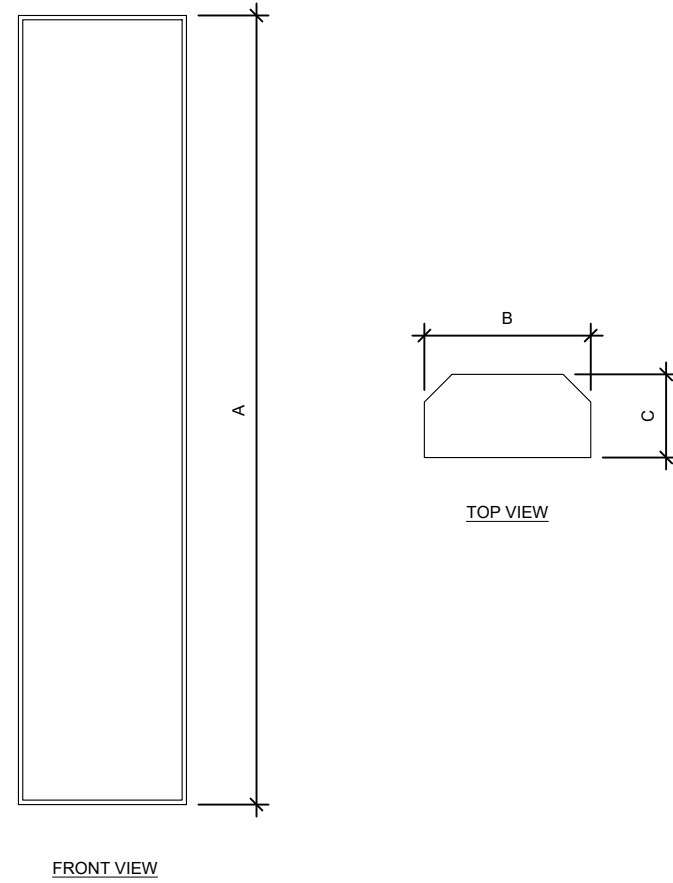
06/04/21



DATE DRAWN:	06/04/21
ATC JOB NO:	13653962
CUSTOMER NAME:	CTHA803A
CUSTOMER ID:	CTHA803A

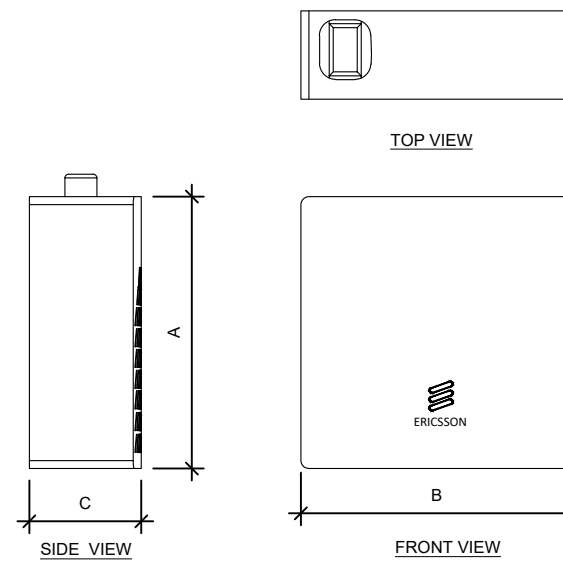
**GROUNDING DETAILS**

SHEET NUMBER:	REVISION:
<b>E-501</b>	<b>0</b>



**1 ANTENNA SPECIFICATIONS**  
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
APX16DWV-16DWVS-E-A20	55.9"	13.3"	3.1"	40.7
APXVAALL24 43-U-NA20	95.9"	24"	8.5"	122.8
AIR 6449 B41	33.1"	20.6"	8.6"	104



**2 RRU SPECIFICATIONS**  
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RADIO 4449 B71+B85A	15"	13.2"	10.5"	75
RRUS 4415 B66	15"	13.2"	5.4"	46
4424 B25	17.1"	14.4"	11.3"	86.0

SUPPLEMENTAL

SHEET NUMBER:  
**R-601**

REVISION:  
-

3/22/2021

CTHA803A\_Sprint Retain\_1\_draft\_2021-03-22

<b>RAN Template:</b> 67D5A998C 6160 (GSM only)	<b>A&amp;L Template:</b> 67D5998C_1xAIR+1QP+1OP (GSM only)
---	---

CTHA803A\_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:** 67D5A998C 6160 (GSM only)

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

**RAN Scope of Work:**

CT33XC014  
Existing & planned azimuth: 90/220/340  
Existing power 200A

① **CABINET CONFIGURATION**  
SCALE: NOT TO SCALE

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

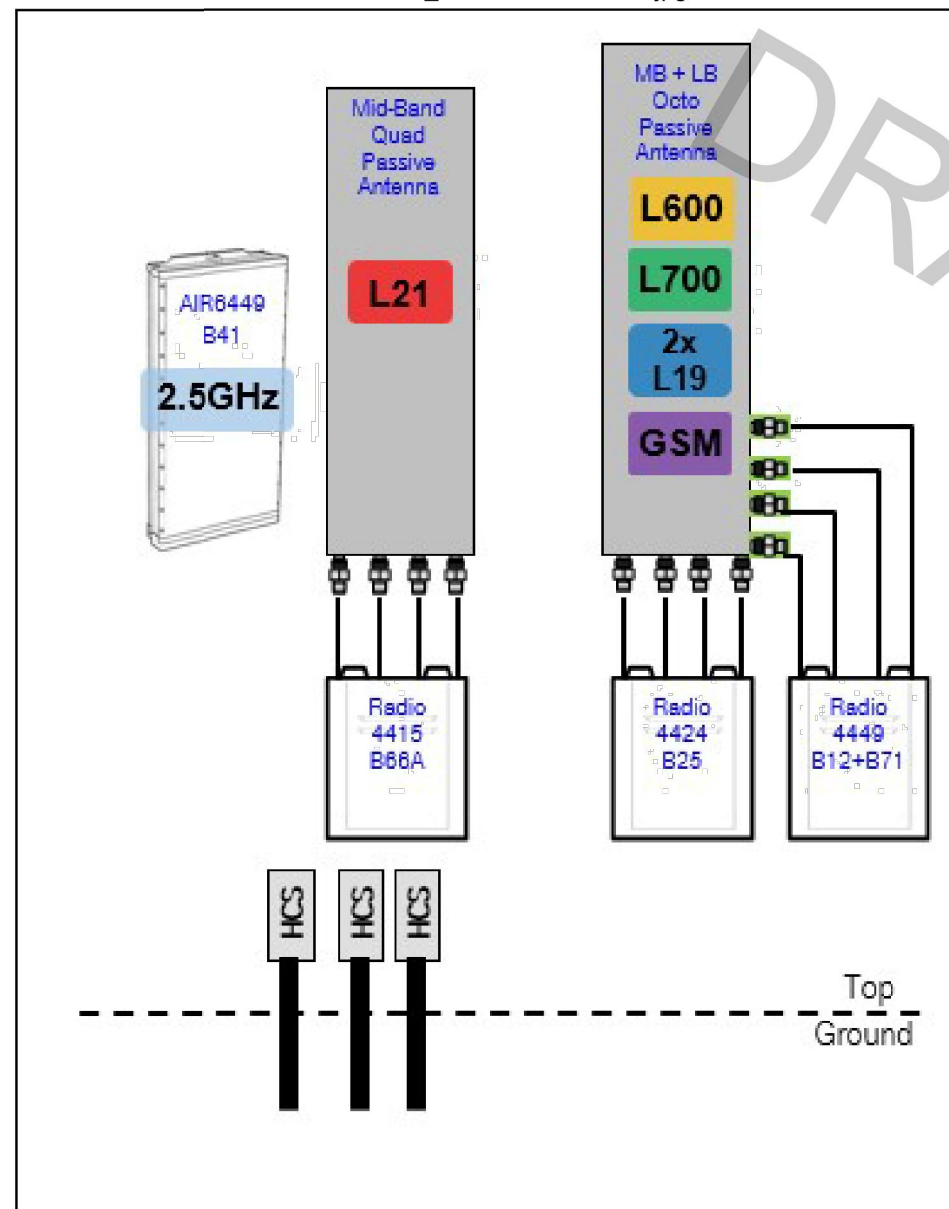
SUPPLEMENTAL

<small>SHEET NUMBER:</small> <b>R-602</b>	<small>REVISION:</small> -
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Section 3 - Proposed Template Images

67D5A998C\_1xAIR+1xQP+1xOP.jpg



Notes:

1 PROPOSED ANTENNA CONFIGURATION  
SCALE: NOT TO SCALE

SUPPLEMENTAL

SHEET NUMBER:  
**R-603**

REVISION:  
-

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

# Hardware Architecture

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

Figure 5 Baseband 6648 Hardware Architecture

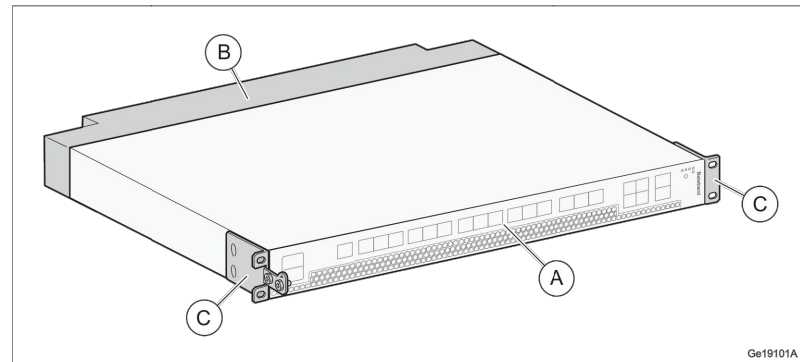


Table 6 19-Inch Baseband Hardware Units

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.](#)



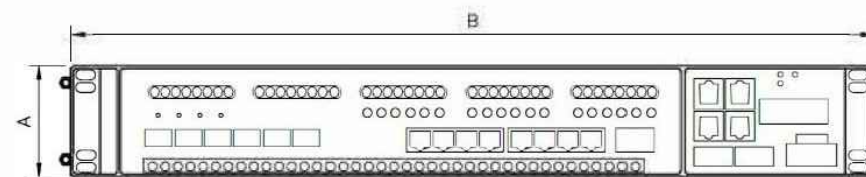
Attribute	Value
Min Input Voltage	-38 VDC
Output Voltage	3x -58 V DC ports
CB rating	30A/40A/50A
Efficiency	96%
Total output power	6000 Watts (2000 W/port)
Operating Temp	-40°C to +60°C
Alarms	Output fault, DC SPD failure
Mechanical	1 U 19", 13" depth
Certification	IEC 62368-1, UL 62368-1
MTBF	143 Years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

[Voltage Booster Design Doc from Cell Site Innovations](#)

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

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

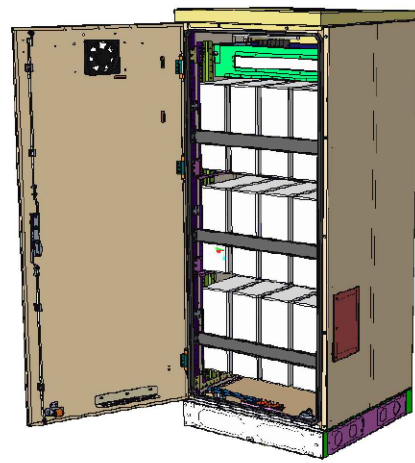
\*INSTALLATION INTO EXISTING CABINET OR RACK REQUIRES NO SPECIAL INSPECTIONS.



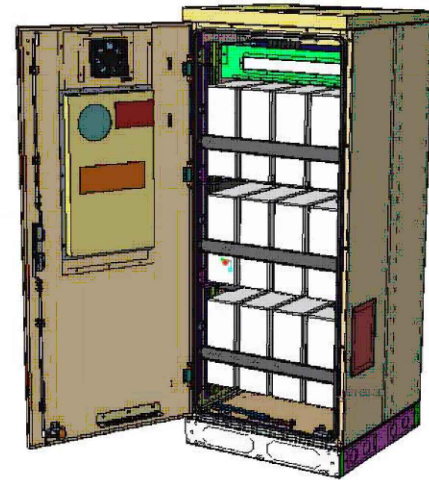
4 PROPOSED DUG20 DETAIL  
SCALE: N.T.S.

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

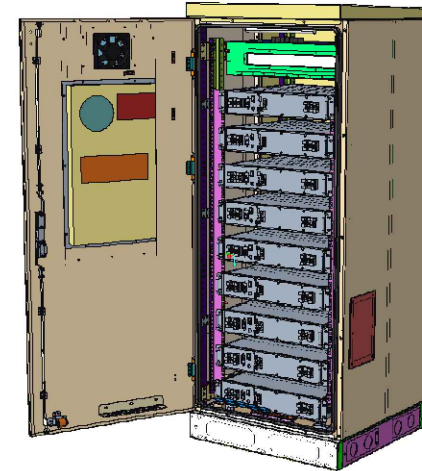
# Enclosure B160



Enclosure B160  
AirCon + VRLA



Enclosure B160  
AirCon + Li-Ion



Enclosure B160  
Convection Cooling  
+ VRLA

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

# Enclosure B160

## Capacity

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

## Electrical specification

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

## Mechanical specification

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

## Environmental specification

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

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

1 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: <b>R-605</b>	REVISION: -
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# Enclosure 6160 AC

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

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

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

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

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

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



## Preliminary technical specification for Enclosure 6160 AC

### CAPACITY

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

### MECHANICAL SPECIFICATION

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

### POWER SYSTEM

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

1 PROPOSED ENCLOSURE 6160 AC  
SCALE: N.T.S.

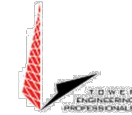
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: <b>R-606</b>	REVISION: -
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This report was prepared for American Tower Corporation by



Eng. Number 13653962\_C8\_02  
 April 29, 2021  
 Page 1

## Antenna Mount Analysis Report

**ATC Site Name** : Columbia Central, CT  
**ATC Site Number** : 302528  
**Engineering Number** : 13653962\_C8\_02  
**Mount Elevation** : 108 ft  
**Carrier** : SPRINT NEXTEL  
**Carrier Site Name** : CTHA803A  
**Carrier Site Number** : CTHA803A  
**Site Location** : 330 Middletown Road  
 Columbia, CT 06237-1528  
 41.689900, -72.325200  
**County** : Tolland  
**Date** : April 29, 2021  
**Max Usage** : 43%  
**Result** : Pass

Prepared By:  
 Austin J. Wilson  
 TEP No. 94015.534062

Reviewed By:



04/29/2021

### Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for SPRINT NEXTEL at 108 ft.

### Supporting Documents

<b>Spec. Sheet</b>	Spec Sheet for SitePro RMQP
<b>RFDS</b>	RFDS dated March 1, 2021
<b>Photos</b>	Site photos from 2021

### Analysis

This antenna mount was analyzed using RISA-3D v17 analysis software.

<b>Basic Wind Speed:</b>	120 mph (3-Second Gust)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1.00 in. radial ice
<b>Codes:</b>	ANSI/TIA-222-H
<b>Risk Category:</b>	II
<b>Exposure Category:</b>	B
<b>Topographic Factor Procedure:</b>	Method 2
<b>Kzt:</b>	1.000
<b>Spectral Response:</b>	S <sub>s</sub> = 0.196, S <sub>1</sub> = 0.055
<b>Site Class:</b>	D - Stiff Soil
<b>Live Loads:</b>	L <sub>m</sub> = 500 lbs, L <sub>v</sub> = 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 the load differs from that described in this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.

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



**AMERICAN TOWER®**  
CORPORATION

---

## Structural Analysis Report

**Structure** : 148 ft Monopole  
**ATC Site Name** : Columbia Central, CT  
**ATC Asset Number** : 302528  
**Engineering Number** : 13653962\_C3\_03  
**Proposed Carrier** : SPRINT NEXTEL  
**Carrier Site Name** : CTHA803A  
**Carrier Site Number** : CTHA803A  
**Site Location** : 330 Middletown Road  
Columbia, CT 06237-1528  
41.689900,-72.325200  
**County** : Tolland  
**Date** : April 26, 2021  
**Max Usage** : 55%  
**Result** : Pass

Prepared By:  
Christopher Jolly  
Structural Engineer III

Reviewed By:



Authorized by "EOR"  
26 Apr 2021 08:53:56

**COA: PEC.0001553**



**Table of Contents**

Introduction .....	1
Supporting Documents .....	1
Analysis .....	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	2
Proposed Equipment .....	2
Standard Conditions .....	3
Calculations .....	Attached



## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 148 ft monopole to reflect the change in loading by SPRINT NEXTEL.

## Supporting Documents

<b>Tower Drawings</b>	Summit Manufacturing Design #13998, dated May 2, 2001
<b>Foundation Drawing</b>	Summit Manufacturing Design #13998, dated April 30, 2001
<b>Geotechnical Report</b>	Tectonic Engineering Consultants Report #1170-C878B, dated January 26, 2001

## 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.

<b>Basic Wind Speed:</b>	120 mph (3-Second Gust)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Risk Category:</b>	II
<b>Topographic Factor Procedure:</b>	Method 1
<b>Topographic Category:</b>	1
<b>Crest Height (H):</b>	0 ft
<b>Spectral Response:</b>	$S_s = 0.20, S_1 = 0.05$
<b>Site Class:</b>	D - Stiff Soil

## Conclusion

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

If you have any questions or require additional information, please contact American Tower via email at [Engineering@americantower.com](mailto: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. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
150.0	6	Powerwave Allgon LGP21401	Platform w/ Handrails	(2) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax (2) 2" conduit	AT&T MOBILITY
	2	Raycap DC6-48-60-18-8F ("Squid")			
	3	CCI OPA65R-BU6D			
	3	CCI DMP65R-BU6DA			
	3	Powerwave Allgon 7770.00			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 8843 B2, B66A			
135.0	3	Antel BXA-70063/6CF_	Low Profile Platform	(12) 1 5/8" Coax	VERIZON WIRELESS
	6	Antel LPA-80063/4CF			
	3	Amphenol Antel BXA-171063-8CF-EDIN-X			
	6	RFS FD9R6004/2C-3L			
124.0	12	Decibel DB844H90E-XY	Low Profile Platform	(12) 1 1/4" Coax	SPRINT NEXTEL
58.0	1	Generic GPS	Flush	-	
30.0	1	Generic GPS	Flush	(1) 1/2" Coax	VERIZON WIRELESS

**Equipment to be Removed**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
108.0	6	Alcatel-Lucent RRH2x50-08	-	(6) 1 1/4" Coax (4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
	3	Alcatel-Lucent 1900 MHz 4X45 RRH			
	3	Commscope NNVV-65B-R4			
	3	RFS APXVTM14-ALU-I20			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			

**Proposed Equipment**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
108.0	3	Ericsson RRUS 4415 B66	Platform w/ Handrails	(3) 1 5/8" Hybriflex	SPRINT NEXTEL
	3	Ericsson Radio 4449 B71 B85A			
	3	Ericsson 4424 B25			
	3	Ericsson Air6449 B41			
	3	RFS APX16DWV-16DWVS-E-A20			
	3	RFS APXVAALL24 43-U-NA20			

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

Install proposed coax inside the pole shaft.



## 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:

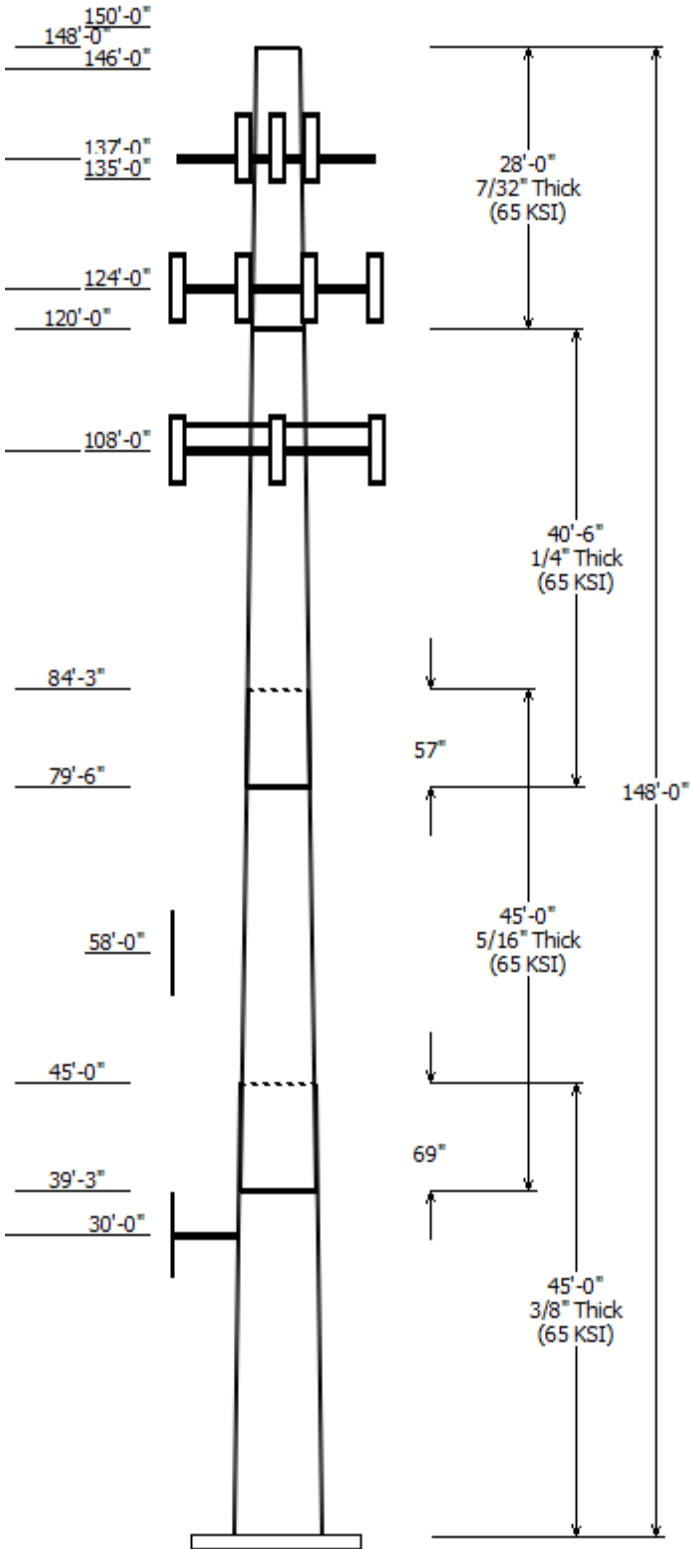
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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	
Client : SPRINT NEXTEL	Code: ANSI/TIA-222-H
Pole : 302528	
Location : Columbia Central, CT	
Description : 148' Summit Monopole	Risk Category : II
Shape : 18 Sides	Exposure : B
Height : 148.00 (ft)	Topo Method : Method 1
Base Elev (ft): 0.00	Topographic Category : 1
Taper: 0.181424(in/ft)	

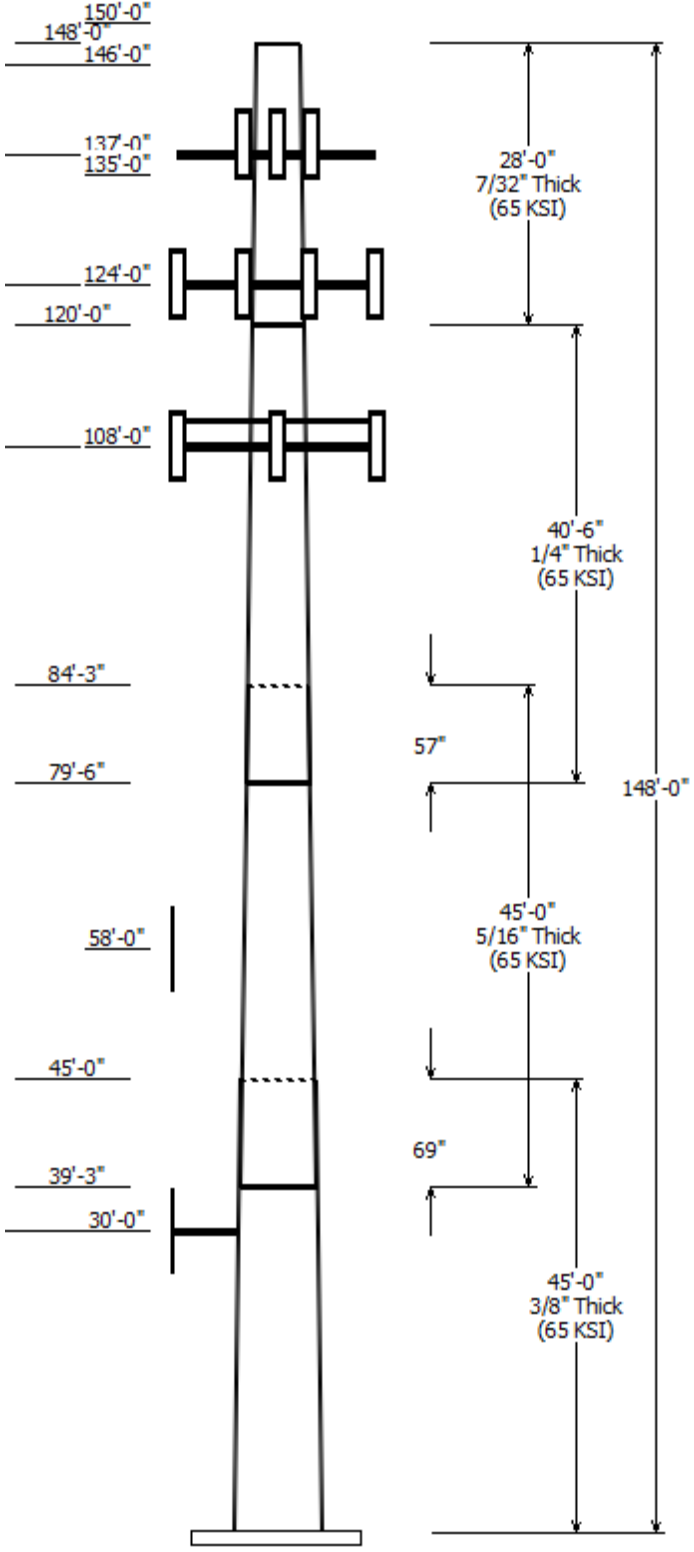
Sections Properties							
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Grade
		Across Flats Top	Across Flats Bottom				
1	45.000	43.56	51.72	0.375		0.000	18 Sides 65
2	45.000	37.06	45.23	0.313	Slip Joint	69.000	18 Sides 65
3	40.500	31.08	38.42	0.250	Slip Joint	57.000	18 Sides 65
4	28.000	26.00	31.08	0.219	Butt Joint	0.000	18 Sides 65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
150.000	150.000	3	CCI OPA65R-BU6D
150.000	150.000	3	CCI DMP65R-BU6DA
150.000	146.000	3	Powerwave Allgon 7770.00
150.000	150.000	3	Ericsson RRUS 4478 B14
150.000	150.000	3	Ericsson RRUS 8843 B2, B66A
150.000	146.000	2	Raycap DC6-48-60-18-8F
150.000	150.000	3	Ericsson RRUS 4449 B5, B12
150.000	146.000	6	Powerwave Allgon LGP21401
146.000	146.000	1	Generic Round Platform with
137.000	137.000	1	Round Low Profile Platform
135.000	137.000	3	Antel BXA-70063/6CF_
135.000	137.000	6	Antel LPA-80063/4CF
135.000	137.000	3	Amphenol Antel BXA-171063-
135.000	137.000	6	RFS FD9R6004/2C-3L
124.000	124.000	1	Round Low Profile Platform
124.000	124.000	12	Decibel DB844H90E-XY
108.000	108.000	1	Generic Round Platform with
108.000	108.000	3	RFS APXVAALL24 43-U-NA20
108.000	108.000	3	RFS APX16DWV-16DWVS-E-A20
108.000	108.000	3	Ericsson Air6449 B41
108.000	108.000	3	Ericsson 4424 B25
108.000	108.000	3	Ericsson Radio 4449 B71 B85A
108.000	108.000	3	Ericsson RRUS 4415 B66
58.000	58.000	1	Generic GPS
30.000	30.000	1	Stand-Off
30.000	30.000	1	Generic GPS

Linear Appurtenance			
Elev (ft) From	To	Description	Exposed To Wind
0.000	30.000	1/2" Coax	No
0.000	108.0	1 5/8" Hybriflex	No
0.000	124.0	1 1/4" Coax	No
0.000	135.0	1 5/8" Coax	No
0.000	150.0	0.39" (10mm)	No
0.000	150.0	0.78" (19.7mm) 8	No
0.000	150.0	1 5/8" Coax	No
0.000	150.0	2" conduit	No

Load Cases

1.2D + 1.0W	120 mph with No Ice
0.9D + 1.0W	120 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph



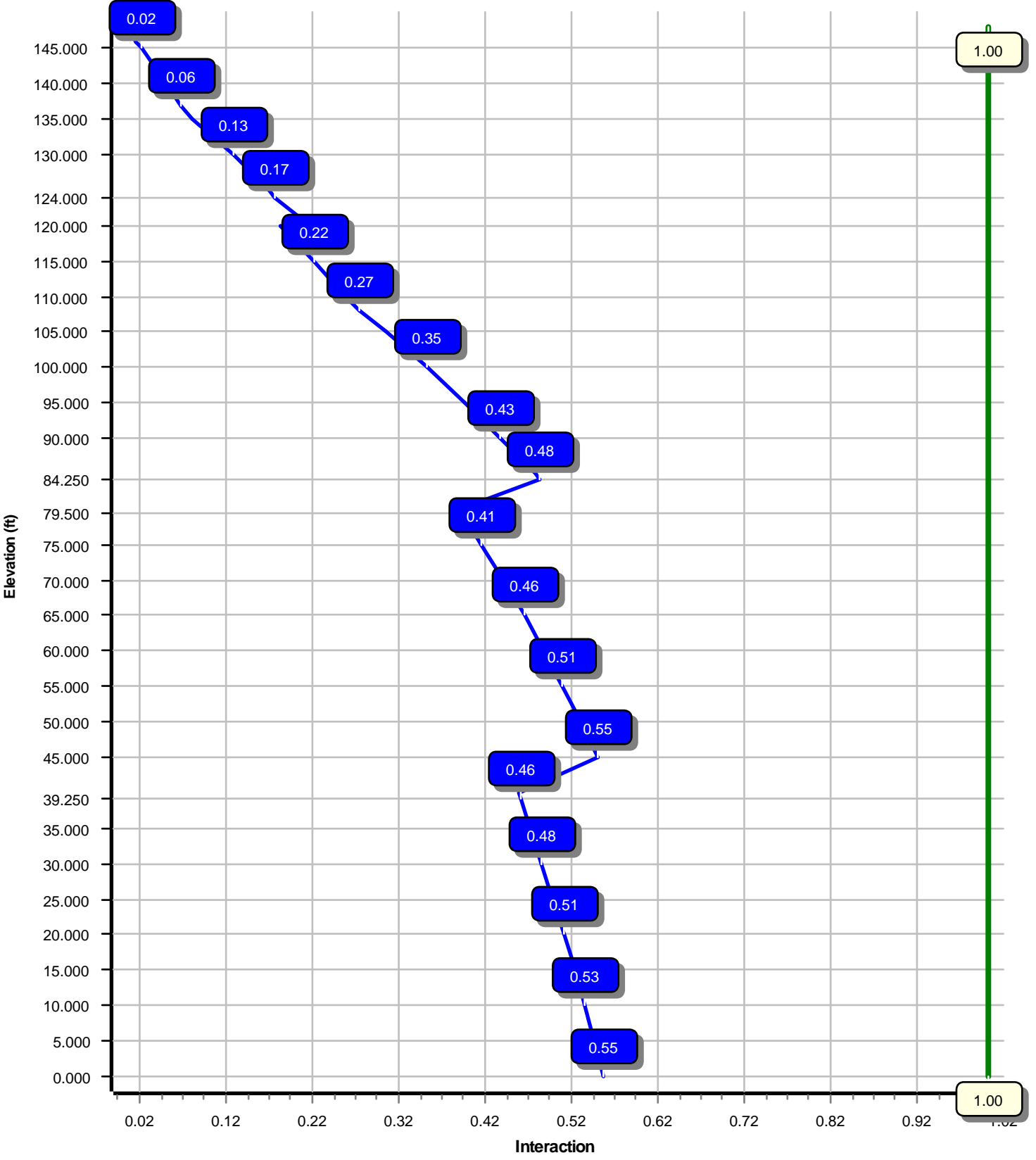
### Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	2362.66	22.41	43.83
0.9D + 1.0W	2334.00	22.40	32.86
1.2D + 1.0Di + 1.0Wi	618.17	5.95	58.52
1.2D + 1.0Ev + 1.0Eh	135.96	1.10	43.88
0.9D - 1.0Ev + 1.0Eh	133.85	1.10	30.33
1.0D + 1.0W	524.54	5.01	36.55

### Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000

Load Case : 1.2D + 1.0W  
Max Ratio 55.38% at 0.0 ft



Site Number: 302528

Code: ANSI/TIA-222-H

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Site Name: Columbia Central, CT

Engineering Number: 13653962\_C3\_03

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Customer: SPRINT NEXTEL

Analysis Parameters

Location :	Tolland County, CT	Height (ft) :	148
Code :	ANSI/TIA-222-H	Base Diameter (in) :	51.73
Shape :	18 Sides	Top Diameter (in) :	26.00
Pole Type :	Taper	Taper (in/ft) :	0.181
Pole Manufacturer :	Summit Manufacturing	Rotation (deg) :	0.00
Kd (non-service) :	0.95	Ke :	0.98

Ice & Wind Parameters

Exposure Category:	B	Design Wind Speed Without Ice:	120 mph
Risk Category:	II	Design Wind Speed With Ice:	50 mph
Topographic Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
Topographic Category:	1	Design Ice Thickness:	1.00 in
Crest Height:	0 ft	HMSL:	638.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	2.41		
$T_L$ (sec):	6	$p$ :	1
$S_s$ :	0.196	$S_1$ :	0.055
$F_a$ :	1.600	$F_v$ :	2.400
$S_{ds}$ :	0.209	$S_{d1}$ :	0.088
		$C_s$ :	0.030
		$C_s$ Max:	0.030
		$C_s$ Min:	0.030

Load Cases

1.2D + 1.0W	120 mph with No Ice
0.9D + 1.0W	120 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302528

Code: ANSI/TIA-222-H

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Site Name: Columbia Central, CT

Engineering Number: 13653962\_C3\_03

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Customer: SPRINT NEXTEL

**Shaft Section Properties**

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top							
							Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	45.000	0.3750	65		0.00	8,615	51.72	0.00	61.12	20361.7	22.56	137.94	43.56	45.00	51.40	12112.2	18.72	116.16	0.181424	
2-18	45.000	0.3125	65	Slip	69.00	6,202	45.23	39.25	44.55	11356.3	23.76	144.74	37.06	84.25	36.45	6221.3	19.15	118.61	0.181424	
3-18	40.500	0.2500	65	Slip	57.00	3,773	38.42	79.50	30.29	5578.4	25.34	153.71	31.08	120.00	24.46	2937.6	20.16	124.32	0.181424	
4-18	28.000	0.2187	65	Butt	0.00	1,873	31.08	120.00	21.42	2577.7	23.29	142.11	26.00	148.00	17.90	1502.8	19.20	118.88	0.181424	
Shaft Weight						20,463														

**Discrete Appurtenance Properties**

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor
150.00	Powerwave Allgon LGP21401	6	0.75	-4.000	14.10	1.104	0.50	30.73	1.580	0.50
150.00	Raycap DC6-48-60-18-8F	2	0.75	-4.000	31.80	1.470	1.00	72.93	1.936	1.00
150.00	Ericsson RRUS 8843 B2, B66A	3	0.75	0.000	72.00	1.639	0.50	112.86	2.202	0.50
150.00	Ericsson RRUS 4478 B14	3	0.75	0.000	59.90	1.842	0.50	96.76	2.440	0.50
150.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.969	0.50	113.97	2.591	0.50
150.00	Powerwave Allgon 7770.00	3	0.75	-4.000	35.00	5.508	0.65	118.18	6.194	0.65
150.00	CCI DMP65R-BU6DA	3	0.75	0.000	79.40	12.709	0.63	251.14	14.568	0.63
150.00	CCI OPA65R-BU6D	3	0.75	0.000	63.20	12.871	0.63	237.44	14.736	0.63
146.00	Generic Round Platform with	1	1.00	0.000	2,500.00	27.200	1.00	3,578.74	43.480	1.00
137.00	Round Low Profile Platform	1	1.00	0.000	1,500.00	21.700	1.00	1,928.59	34.401	1.00
135.00	RFS FD9R6004/2C-3L	6	0.80	2.000	2.60	0.314	0.50	7.88	0.569	0.50
135.00	Amphenol Antel BXA-171063-	3	0.80	2.000	10.50	2.940	0.67	53.66	4.032	0.67
135.00	Antel LPA-80063/4CF	6	0.80	2.000	20.00	6.142	0.76	148.58	6.813	0.76
135.00	Antel BXA-70063/6CF_	3	0.80	2.000	17.00	7.569	0.65	110.31	9.389	0.65
124.00	Decibel DB844H90E-XY	12	0.80	0.000	14.00	3.615	0.73	80.16	3.604	0.73
124.00	Round Low Profile Platform	1	1.00	0.000	1,500.00	21.700	1.00	1,923.96	34.263	1.00
108.00	Ericsson RRUS 4415 B66	3	0.75	0.000	46.00	1.650	0.50	73.95	2.198	0.50
108.00	Ericsson Radio 4449 B71 B85A	3	0.75	0.000	75.00	1.650	0.50	113.82	2.198	0.50
108.00	Ericsson 4424 B25	3	0.75	0.000	86.00	2.052	0.67	133.07	2.661	0.67
108.00	Ericsson Air6449 B41	3	0.75	0.000	104.00	5.682	0.63	191.98	6.707	0.63
108.00	RFS APX16DWV-16DWVS-E-A20	3	0.75	0.000	40.70	6.586	0.60	116.11	7.984	0.60
108.00	RFS APXVAALL24 43-U-NA20	3	0.75	0.000	122.80	20.243	0.63	374.24	22.637	0.63
108.00	Generic Round Platform with	1	1.00	0.000	2,500.00	27.200	1.00	3,545.60	42.980	1.00
58.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	27.73	1.287	1.00
30.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	26.50	1.261	1.00
30.00	Stand-Off	1	1.00	0.000	100.00	3.000	1.00	127.49	3.884	1.00
Totals	Num Loadings:26	81			11,219.30			19,682.05		

**Linear Appurtenance Properties** Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Max Coax / Flat Row	Dist Between Rows (in)	Dist Between Cols (in)	Dist Azimuth (deg)	Dist From Face (in)	Exposed To Wind Carrier
0.00	150.00	2	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	AT&T MOBILITY
0.00	150.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	AT&T MOBILITY
0.00	150.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	AT&T MOBILITY
0.00	150.00	2	2" conduit	2.38	3.65	N	0	0.00	0.00	0	AT&T MOBILITY
0.00	135.00	12	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	VERIZON WIRELESS
0.00	124.00	12	1 1/4" Coax	1.55	0.63	N	0	0.00	0.00	0	SPRINT NEXTEL
0.00	108.00	3	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	SPRINT NEXTEL
0.00	30.00	1	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	VERIZON WIRELESS

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Site Number: 302528

Code: ANSI/TIA-222-H

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Site Name: Columbia Central, CT

Engineering Number: 13653962\_C3\_03

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Customer: SPRINT NEXTEL

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Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	F'y (ksi)	S (in <sup>3</sup> )	Z (in <sup>3</sup> )	Weight (lb)
0.00		0.3750	51.726	61.118	20,361.7	22.56	137.94	74.9	775.3	0.0	0.0
5.00		0.3750	50.819	60.038	19,301.6	22.13	135.52	75.4	748.1	0.0	1,030.7
10.00		0.3750	49.911	58.959	18,278.9	21.71	133.10	75.9	721.3	0.0	1,012.3
15.00		0.3750	49.004	57.879	17,293.0	21.28	130.68	76.4	695.1	0.0	993.9
20.00		0.3750	48.097	56.799	16,343.2	20.85	128.26	76.9	669.3	0.0	975.6
25.00		0.3750	47.190	55.720	15,428.9	20.43	125.84	77.4	644.0	0.0	957.2
30.00		0.3750	46.283	54.640	14,549.2	20.00	123.42	77.9	619.2	0.0	938.8
35.00		0.3750	45.376	53.560	13,703.7	19.57	121.00	78.4	594.8	0.0	920.5
39.25	Bot - Section 2	0.3750	44.605	52.643	13,011.3	19.21	118.95	78.8	574.5	0.0	767.9
40.00		0.3750	44.469	52.481	12,891.6	19.15	118.58	78.9	571.0	0.0	247.7
45.00	Top - Section 1	0.3125	44.187	43.516	10,583.3	23.17	141.40	74.1	471.7	0.0	1,631.7
50.00		0.3125	43.280	42.616	9,940.3	22.66	138.49	74.8	452.4	0.0	732.7
55.00		0.3125	42.372	41.717	9,323.9	22.15	135.59	75.4	433.4	0.0	717.4
58.00		0.3125	41.828	41.177	8,966.6	21.84	133.85	75.7	422.2	0.0	423.1
60.00		0.3125	41.465	40.817	8,733.6	21.63	132.69	76.0	414.8	0.0	279.0
65.00		0.3125	40.558	39.917	8,168.7	21.12	129.79	76.6	396.7	0.0	686.8
70.00		0.3125	39.651	39.018	7,628.7	20.61	126.88	77.2	378.9	0.0	671.5
75.00		0.3125	38.744	38.118	7,113.0	20.10	123.98	77.8	361.6	0.0	656.2
79.50	Bot - Section 3	0.3125	37.928	37.308	6,669.3	19.64	121.37	78.3	346.3	0.0	577.5
80.00		0.3125	37.837	37.218	6,621.1	19.59	121.08	78.4	344.7	0.0	114.9
84.25	Top - Section 2	0.2500	37.566	29.609	5,209.1	24.73	150.26	72.3	273.1	0.0	965.3
85.00		0.2500	37.430	29.501	5,152.3	24.64	149.72	72.4	271.1	0.0	75.4
90.00		0.2500	36.523	28.781	4,784.3	24.00	146.09	73.2	258.0	0.0	495.8
95.00		0.2500	35.615	28.061	4,434.3	23.36	142.46	73.9	245.2	0.0	483.6
100.0		0.2500	34.708	27.342	4,101.7	22.72	138.83	74.7	232.8	0.0	471.3
105.0		0.2500	33.801	26.622	3,786.3	22.08	135.20	75.4	220.6	0.0	459.1
108.0		0.2500	33.257	26.190	3,605.0	21.69	133.03	75.9	213.5	0.0	269.6
110.0		0.2500	32.894	25.902	3,487.4	21.44	131.58	76.2	208.8	0.0	177.3
115.0		0.2500	31.987	25.182	3,204.7	20.80	127.95	76.9	197.3	0.0	434.6
120.0	Top - Section 3	0.2500	31.080	24.463	2,937.6	20.16	124.32	77.7	186.2	0.0	422.3
120.0	Bot - Section 4	0.2187	31.080	21.422	2,577.7	23.29	142.11	74.0	163.4	0.0	
124.0		0.2187	30.354	20.918	2,400.1	22.71	138.79	74.7	155.7	0.0	288.1
125.0		0.2187	30.173	20.792	2,357.0	22.56	137.96	74.9	153.9	0.0	71.0
130.0		0.2187	29.266	20.162	2,149.3	21.83	133.82	75.7	144.6	0.0	348.4
135.0		0.2187	28.359	19.533	1,954.1	21.10	129.67	76.6	135.7	0.0	337.7
137.0		0.2187	27.996	19.281	1,879.5	20.81	128.01	76.9	132.2	0.0	132.1
140.0		0.2187	27.451	18.903	1,771.2	20.37	125.52	77.4	127.1	0.0	194.9
145.0		0.2187	26.544	18.273	1,600.0	19.64	121.37	78.3	118.7	0.0	316.3
146.0		0.2187	26.363	18.147	1,567.2	19.49	120.54	78.5	117.1	0.0	62.0
148.0		0.2187	26.000	17.896	1,502.8	19.20	118.88	78.8	113.8	0.0	122.6
											20,462.6

<b>Load Case: 1.2D + 1.0W</b>	<b>120 mph with No Ice</b>	<b>24 Iterations</b>
Gust Response Factor :1.10		
Dead Load Factor :1.20		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		208.6	0.0					0.0	0.0	208.6	0.0	0.0	0.0
5.00		413.6	1,236.8					0.0	216.9	413.6	1,453.7	0.0	0.0
10.00		406.2	1,214.8					0.0	216.9	406.2	1,431.7	0.0	0.0
15.00		398.8	1,192.7					0.0	216.9	398.8	1,409.6	0.0	0.0
20.00		391.4	1,170.7					0.0	216.9	391.4	1,387.6	0.0	0.0
25.00		384.1	1,148.6					0.0	216.9	384.1	1,365.5	0.0	0.0
30.00	Appurtenance(s)	381.2	1,126.6	102.9	0.0	0.0	132.0	0.0	216.9	484.0	1,475.5	0.0	0.0
35.00		356.5	1,104.5					0.0	216.0	356.5	1,320.5	0.0	0.0
39.25	Bot - Section 2	195.4	921.5					0.0	183.6	195.4	1,105.1	0.0	0.0
40.00		230.7	297.2					0.0	32.4	230.7	329.6	0.0	0.0
45.00	Top - Section 1	403.9	1,958.1					0.0	216.0	403.9	2,174.1	0.0	0.0
50.00		407.8	879.3					0.0	216.0	407.8	1,095.3	0.0	0.0
55.00		327.9	860.9					0.0	216.0	327.9	1,076.9	0.0	0.0
58.00	Appurtenance(s)	205.6	507.7	28.7	0.0	0.0	12.0	0.0	129.6	234.2	649.3	0.0	0.0
60.00		288.3	334.8					0.0	86.4	288.3	421.2	0.0	0.0
65.00		411.9	824.2					0.0	216.0	411.9	1,040.2	0.0	0.0
70.00		411.3	805.8					0.0	216.0	411.3	1,021.8	0.0	0.0
75.00		389.5	787.4					0.0	216.0	389.5	1,003.4	0.0	0.0
79.50	Bot - Section 3	204.8	693.0					0.0	194.4	204.8	887.4	0.0	0.0
80.00		195.9	137.9					0.0	21.6	195.9	159.5	0.0	0.0
84.25	Top - Section 2	206.0	1,158.4					0.0	183.6	206.0	1,342.0	0.0	0.0
85.00		235.3	90.5					0.0	32.4	235.3	122.9	0.0	0.0
90.00		407.1	595.0					0.0	216.0	407.1	811.0	0.0	0.0
95.00		403.2	580.3					0.0	216.0	403.2	796.3	0.0	0.0
100.00		398.7	565.6					0.0	216.0	398.7	781.6	0.0	0.0
105.00		315.9	550.9					0.0	216.0	315.9	766.9	0.0	0.0
108.00	Appurtenance(s)	195.6	323.5	3,028.7	0.0	0.0	4,708.2	0.0	129.6	3,224.3	5,161.3	0.0	0.0
110.00		270.6	212.7					0.0	77.0	270.6	289.7	0.0	0.0
115.00		382.4	521.5					0.0	192.6	382.4	714.1	0.0	0.0
120.00	Top - Section 3	339.1	506.8					0.0	192.6	339.1	699.4	0.0	0.0
124.00	Appurtenance(s)	186.4	345.8	1,860.6	0.0	0.0	2,001.6	0.0	154.1	2,047.0	2,501.5	0.0	0.0
125.00		220.0	85.2					0.0	29.4	220.0	114.6	0.0	0.0
130.00		362.4	418.1					0.0	147.2	362.4	565.3	0.0	0.0
135.00	Appurtenance(s)	250.1	405.2	1,615.6	0.0	3,231.3	261.7	0.0	147.2	1,865.7	814.2	0.0	0.0
137.00	Appurtenance(s)	175.6	158.5	883.2	0.0	0.0	1,800.0	0.0	35.3	1,058.8	1,993.8	0.0	0.0
140.00		276.5	233.9					0.0	52.9	276.5	286.8	0.0	0.0
145.00		205.4	379.5					0.0	88.2	205.4	467.7	0.0	0.0
146.00	Appurtenance(s)	101.0	74.4	1,127.4	0.0	0.0	3,000.0	0.0	17.6	1,228.4	3,092.0	0.0	0.0
148.00		67.2	147.2					0.0	35.3	67.2	182.5	0.0	0.0
<b>Totals:</b>										<b>20,259.0</b>	<b>42,311.2</b>	<b>0.00</b>	<b>0.00</b>

**Load Case: 1.2D + 1.0W**

120 mph with No Ice

24 Iterations

Gust Response Factor :1.10  
 Dead Load Factor :1.20  
 Wind Load Factor :1.00

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-43.83	-22.41	0.00	-2,362.66	0.00	2,362.66	4,118.20	1,072.62	4,974.87	4,353.59	0.00	0.00	0.554
5.00	-42.31	-22.12	0.00	-2,250.61	0.00	2,250.61	4,072.56	1,053.67	4,800.67	4,228.73	0.09	-0.16	0.543
10.00	-40.82	-21.82	0.00	-2,140.04	0.00	2,140.04	4,025.94	1,034.72	4,629.59	4,104.60	0.34	-0.32	0.532
15.00	-39.35	-21.52	0.00	-2,030.95	0.00	2,030.95	3,978.35	1,015.78	4,461.60	3,981.24	0.77	-0.49	0.520
20.00	-37.91	-21.22	0.00	-1,923.34	0.00	1,923.34	3,929.78	996.83	4,296.72	3,858.72	1.36	-0.65	0.509
25.00	-36.49	-20.93	0.00	-1,817.23	0.00	1,817.23	3,880.24	977.88	4,134.95	3,737.09	2.13	-0.81	0.496
30.00	-34.96	-20.52	0.00	-1,712.60	0.00	1,712.60	3,829.73	958.93	3,976.28	3,616.40	3.07	-0.97	0.483
35.00	-33.60	-20.23	0.00	-1,610.01	0.00	1,610.01	3,778.24	939.98	3,820.71	3,496.71	4.17	-1.14	0.470
39.25	-32.47	-20.05	0.00	-1,524.05	0.00	1,524.05	3,733.70	923.88	3,690.92	3,395.80	5.25	-1.27	0.458
40.00	-32.11	-19.87	0.00	-1,509.01	0.00	1,509.01	3,725.77	921.04	3,668.25	3,378.07	5.45	-1.30	0.456
45.00	-29.89	-19.50	0.00	-1,409.67	0.00	1,409.67	2,904.05	763.71	3,026.37	2,623.51	6.90	-1.46	0.548
50.00	-28.75	-19.14	0.00	-1,312.20	0.00	1,312.20	2,867.09	747.92	2,902.54	2,536.20	8.51	-1.62	0.528
55.00	-27.64	-18.85	0.00	-1,216.48	0.00	1,216.48	2,829.16	732.13	2,781.29	2,449.43	10.30	-1.80	0.507
58.00	-26.97	-18.64	0.00	-1,159.92	0.00	1,159.92	2,805.94	722.65	2,709.78	2,397.65	11.47	-1.91	0.494
60.00	-26.52	-18.40	0.00	-1,122.64	0.00	1,122.64	2,790.26	716.34	2,662.62	2,363.26	12.29	-1.98	0.485
65.00	-25.44	-18.02	0.00	-1,030.66	0.00	1,030.66	2,750.38	700.55	2,546.55	2,277.75	14.46	-2.16	0.462
70.00	-24.38	-17.65	0.00	-940.54	0.00	940.54	2,709.53	684.76	2,433.06	2,192.95	16.81	-2.33	0.439
75.00	-23.35	-17.28	0.00	-852.31	0.00	852.31	2,667.70	668.97	2,322.16	2,108.92	19.34	-2.50	0.414
79.50	-22.44	-17.07	0.00	-774.56	0.00	774.56	2,629.23	654.76	2,224.56	2,033.99	21.76	-2.64	0.390
80.00	-22.27	-16.89	0.00	-766.03	0.00	766.03	2,624.90	653.18	2,213.84	2,025.71	22.04	-2.66	0.387
84.25	-20.92	-16.65	0.00	-694.24	0.00	694.24	1,926.96	519.64	1,751.35	1,481.22	24.47	-2.79	0.481
85.00	-20.78	-16.45	0.00	-681.76	0.00	681.76	1,922.93	517.74	1,738.61	1,472.69	24.91	-2.82	0.475
90.00	-19.94	-16.06	0.00	-599.53	0.00	599.53	1,895.51	505.11	1,654.81	1,416.03	27.95	-2.99	0.435
95.00	-19.12	-15.67	0.00	-519.24	0.00	519.24	1,867.11	492.48	1,573.09	1,359.70	31.18	-3.16	0.393
100.00	-18.33	-15.27	0.00	-440.91	0.00	440.91	1,837.73	479.85	1,493.43	1,303.74	34.57	-3.31	0.349
105.00	-17.55	-14.94	0.00	-364.55	0.00	364.55	1,807.38	467.21	1,415.85	1,248.21	38.11	-3.45	0.303
108.00	-12.58	-11.42	0.00	-319.72	0.00	319.72	1,788.71	459.64	1,370.29	1,215.12	40.31	-3.53	0.271
110.00	-12.30	-11.15	0.00	-296.87	0.00	296.87	1,776.06	454.58	1,340.33	1,193.17	41.79	-3.58	0.256
115.00	-11.59	-10.75	0.00	-241.10	0.00	241.10	1,743.76	441.95	1,266.88	1,138.67	45.60	-3.69	0.219
120.00	-10.90	-10.38	0.00	-187.37	0.00	187.37	1,710.49	429.32	1,195.51	1,084.77	49.51	-3.78	0.180
120.00	-10.90	-10.38	0.00	-187.37	0.00	187.37	1,426.71	375.95	1,047.92	906.64	49.51	-3.78	0.215
124.00	-8.53	-8.18	0.00	-145.85	0.00	145.85	1,406.12	367.11	999.22	872.40	52.71	-3.85	0.174
125.00	-8.43	-7.96	0.00	-137.68	0.00	137.68	1,400.87	364.90	987.23	863.87	53.52	-3.86	0.166
130.00	-7.88	-7.56	0.00	-97.90	0.00	97.90	1,374.06	353.85	928.35	821.49	57.60	-3.94	0.125
135.00	-7.19	-5.65	0.00	-56.85	0.00	56.85	1,346.27	342.80	871.27	779.55	61.75	-3.99	0.079
137.00	-5.28	-4.46	0.00	-45.55	0.00	45.55	1,334.88	338.38	848.95	762.91	63.42	-4.00	0.064
140.00	-5.01	-4.16	0.00	-32.18	0.00	32.18	1,317.51	331.75	816.01	738.11	65.94	-4.02	0.048
145.00	-4.56	-3.93	0.00	-11.37	0.00	11.37	1,287.77	320.70	762.56	697.23	70.16	-4.04	0.020
146.00	-1.56	-2.48	0.00	-7.45	0.00	7.45	1,281.70	318.49	752.09	689.12	71.01	-4.04	0.012
148.00	0.00	-2.37	0.00	-2.48	0.00	2.48	1,269.46	314.07	731.36	672.99	72.70	-4.04	0.004

<b>Load Case:</b> 0.9D + 1.0W	120 mph with No Ice (Reduced DL)	24 Iterations
Gust Response Factor :1.10		
Dead Load Factor :0.90		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		208.6	0.0					0.0	0.0	208.6	0.0	0.0	0.0
5.00		413.6	927.6					0.0	162.7	413.6	1,090.3	0.0	0.0
10.00		406.2	911.1					0.0	162.7	406.2	1,073.7	0.0	0.0
15.00		398.8	894.5					0.0	162.7	398.8	1,057.2	0.0	0.0
20.00		391.4	878.0					0.0	162.7	391.4	1,040.7	0.0	0.0
25.00		384.1	861.5					0.0	162.7	384.1	1,024.1	0.0	0.0
30.00	Appurtenance(s)	381.2	844.9	102.9	0.0	0.0	99.0	0.0	162.7	484.0	1,106.6	0.0	0.0
35.00		356.5	828.4					0.0	162.0	356.5	990.4	0.0	0.0
39.25	Bot - Section 2	195.4	691.1					0.0	137.7	195.4	828.8	0.0	0.0
40.00		230.7	222.9					0.0	24.3	230.7	247.2	0.0	0.0
45.00	Top - Section 1	403.9	1,468.6					0.0	162.0	403.9	1,630.6	0.0	0.0
50.00		407.8	659.5					0.0	162.0	407.8	821.5	0.0	0.0
55.00		327.9	645.7					0.0	162.0	327.9	807.7	0.0	0.0
58.00	Appurtenance(s)	205.6	380.8	28.7	0.0	0.0	9.0	0.0	97.2	234.2	487.0	0.0	0.0
60.00		288.3	251.1					0.0	64.8	288.3	315.9	0.0	0.0
65.00		411.9	618.1					0.0	162.0	411.9	780.1	0.0	0.0
70.00		411.3	604.3					0.0	162.0	411.3	766.3	0.0	0.0
75.00		389.5	590.6					0.0	162.0	389.5	752.6	0.0	0.0
79.50	Bot - Section 3	204.8	519.7					0.0	145.8	204.8	665.5	0.0	0.0
80.00		195.9	103.4					0.0	16.2	195.9	119.6	0.0	0.0
84.25	Top - Section 2	206.0	868.8					0.0	137.7	206.0	1,006.5	0.0	0.0
85.00		235.3	67.9					0.0	24.3	235.3	92.2	0.0	0.0
90.00		407.1	446.2					0.0	162.0	407.1	608.2	0.0	0.0
95.00		403.2	435.2					0.0	162.0	403.2	597.2	0.0	0.0
100.00		398.7	424.2					0.0	162.0	398.7	586.2	0.0	0.0
105.00		315.9	413.2					0.0	162.0	315.9	575.2	0.0	0.0
108.00	Appurtenance(s)	195.6	242.6	3,028.7	0.0	0.0	3,531.1	0.0	97.2	3,224.3	3,871.0	0.0	0.0
110.00		270.6	159.5					0.0	57.8	270.6	217.3	0.0	0.0
115.00		382.4	391.1					0.0	144.4	382.4	535.6	0.0	0.0
120.00	Top - Section 3	339.1	380.1					0.0	144.4	339.1	524.5	0.0	0.0
124.00	Appurtenance(s)	186.4	259.3	1,860.6	0.0	0.0	1,501.2	0.0	115.6	2,047.0	1,876.1	0.0	0.0
125.00		220.0	63.9					0.0	22.1	220.0	86.0	0.0	0.0
130.00		362.4	313.6					0.0	110.4	362.4	424.0	0.0	0.0
135.00	Appurtenance(s)	250.1	303.9	1,615.6	0.0	3,231.3	196.3	0.0	110.4	1,865.7	610.6	0.0	0.0
137.00	Appurtenance(s)	175.6	118.9	883.2	0.0	0.0	1,350.0	0.0	26.5	1,058.8	1,495.3	0.0	0.0
140.00		276.5	175.4					0.0	39.7	276.5	215.1	0.0	0.0
145.00		205.4	284.6					0.0	66.1	205.4	350.8	0.0	0.0
146.00	Appurtenance(s)	101.0	55.8	1,127.4	0.0	0.0	2,250.0	0.0	13.2	1,228.4	2,319.0	0.0	0.0
148.00		67.2	110.4					0.0	26.5	67.2	136.8	0.0	0.0
<b>Totals:</b>										20,259.0	31,733.4	0.00	0.00

**Load Case: 0.9D + 1.0W**

120 mph with No Ice (Reduced DL)

24 Iterations

Gust Response Factor :1.10

Dead Load Factor :0.90

Wind Load Factor :1.00

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-32.86	-22.40	0.00	-2,334.00	0.00	2,334.00	4,118.20	1,072.62	4,974.87	4,353.59	0.00	0.00	0.545
5.00	-31.71	-22.07	0.00	-2,222.02	0.00	2,222.02	4,072.56	1,053.67	4,800.67	4,228.73	0.09	-0.16	0.534
10.00	-30.58	-21.74	0.00	-2,111.68	0.00	2,111.68	4,025.94	1,034.72	4,629.59	4,104.60	0.34	-0.32	0.523
15.00	-29.46	-21.42	0.00	-2,002.97	0.00	2,002.97	3,978.35	1,015.78	4,461.60	3,981.24	0.76	-0.48	0.511
20.00	-28.37	-21.10	0.00	-1,895.87	0.00	1,895.87	3,929.78	996.83	4,296.72	3,858.72	1.35	-0.64	0.499
25.00	-27.29	-20.78	0.00	-1,790.39	0.00	1,790.39	3,880.24	977.88	4,134.95	3,737.09	2.10	-0.80	0.487
30.00	-26.14	-20.35	0.00	-1,686.51	0.00	1,686.51	3,829.73	958.93	3,976.28	3,616.40	3.03	-0.96	0.474
35.00	-25.10	-20.04	0.00	-1,584.76	0.00	1,584.76	3,778.24	939.98	3,820.71	3,496.71	4.12	-1.12	0.460
39.25	-24.25	-19.86	0.00	-1,499.60	0.00	1,499.60	3,733.70	923.88	3,690.92	3,395.80	5.18	-1.26	0.449
40.00	-23.97	-19.66	0.00	-1,484.70	0.00	1,484.70	3,725.77	921.04	3,668.25	3,378.07	5.38	-1.28	0.446
45.00	-22.30	-19.28	0.00	-1,386.39	0.00	1,386.39	2,904.05	763.71	3,026.37	2,623.51	6.80	-1.44	0.537
50.00	-21.44	-18.92	0.00	-1,289.98	0.00	1,289.98	2,867.09	747.92	2,902.54	2,536.20	8.39	-1.60	0.517
55.00	-20.59	-18.61	0.00	-1,195.40	0.00	1,195.40	2,829.16	732.13	2,781.29	2,449.43	10.16	-1.77	0.496
58.00	-20.08	-18.40	0.00	-1,139.56	0.00	1,139.56	2,805.94	722.65	2,709.78	2,397.65	11.31	-1.88	0.483
60.00	-19.74	-18.14	0.00	-1,102.77	0.00	1,102.77	2,790.26	716.34	2,662.62	2,363.26	12.11	-1.95	0.474
65.00	-18.92	-17.76	0.00	-1,012.07	0.00	1,012.07	2,750.38	700.55	2,546.55	2,277.75	14.25	-2.12	0.452
70.00	-18.12	-17.37	0.00	-923.29	0.00	923.29	2,709.53	684.76	2,433.06	2,192.95	16.56	-2.29	0.428
75.00	-17.34	-17.00	0.00	-836.44	0.00	836.44	2,667.70	668.97	2,322.16	2,108.92	19.05	-2.46	0.404
79.50	-16.66	-16.78	0.00	-759.96	0.00	759.96	2,629.23	654.76	2,224.56	2,033.99	21.44	-2.60	0.381
80.00	-16.53	-16.60	0.00	-751.57	0.00	751.57	2,624.90	653.18	2,213.84	2,025.71	21.71	-2.62	0.378
84.25	-15.51	-16.37	0.00	-681.00	0.00	681.00	1,926.96	519.64	1,751.35	1,481.22	24.10	-2.75	0.469
85.00	-15.40	-16.16	0.00	-668.72	0.00	668.72	1,922.93	517.74	1,738.61	1,472.69	24.53	-2.77	0.463
90.00	-14.77	-15.77	0.00	-587.93	0.00	587.93	1,895.51	505.11	1,654.81	1,416.03	27.53	-2.94	0.424
95.00	-14.15	-15.37	0.00	-509.10	0.00	509.10	1,867.11	492.48	1,573.09	1,359.70	30.70	-3.11	0.383
100.00	-13.55	-14.97	0.00	-432.24	0.00	432.24	1,837.73	479.85	1,493.43	1,303.74	34.04	-3.26	0.340
105.00	-12.97	-14.65	0.00	-357.37	0.00	357.37	1,807.38	467.21	1,415.85	1,248.21	37.52	-3.39	0.294
108.00	-9.29	-11.21	0.00	-313.42	0.00	313.42	1,788.71	459.64	1,370.29	1,215.12	39.68	-3.47	0.264
110.00	-9.07	-10.94	0.00	-291.00	0.00	291.00	1,776.06	454.58	1,340.33	1,193.17	41.14	-3.52	0.250
115.00	-8.54	-10.54	0.00	-236.31	0.00	236.31	1,743.76	441.95	1,266.88	1,138.67	44.88	-3.63	0.213
120.00	-8.03	-10.18	0.00	-183.62	0.00	183.62	1,710.49	429.32	1,195.51	1,084.77	48.73	-3.72	0.175
120.00	-8.03	-10.18	0.00	-183.62	0.00	183.62	1,426.71	375.95	1,047.92	906.64	48.73	-3.72	0.209
124.00	-6.28	-8.02	0.00	-142.91	0.00	142.91	1,406.12	367.11	999.22	872.40	51.87	-3.78	0.169
125.00	-6.20	-7.80	0.00	-134.90	0.00	134.90	1,400.87	364.90	987.23	863.87	52.67	-3.80	0.161
130.00	-5.80	-7.41	0.00	-95.92	0.00	95.92	1,374.06	353.85	928.35	821.49	56.68	-3.87	0.121
135.00	-5.31	-5.51	0.00	-55.63	0.00	55.63	1,346.27	342.80	871.27	779.55	60.76	-3.92	0.076
137.00	-3.89	-4.35	0.00	-44.61	0.00	44.61	1,334.88	338.38	848.95	762.91	62.41	-3.93	0.062
140.00	-3.70	-4.06	0.00	-31.54	0.00	31.54	1,317.51	331.75	816.01	738.11	64.88	-3.95	0.046
145.00	-3.36	-3.84	0.00	-11.22	0.00	11.22	1,287.77	320.70	762.56	697.23	69.03	-3.97	0.019
146.00	-1.13	-2.45	0.00	-7.39	0.00	7.39	1,281.70	318.49	752.09	689.12	69.86	-3.97	0.012
148.00	0.00	-2.37	0.00	-2.48	0.00	2.48	1,269.46	314.07	731.36	672.99	71.52	-3.97	0.004

<b>Load Case:</b> 1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice	23 Iterations
Gust Response Factor :1.10	Ice Dead Load Factor :1.00	
Dead Load Factor :1.20		Ice Importance Factor :1.00
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		61.3	0.0					0.0	0.0	61.3	0.0	0.0	0.0
5.00		121.8	1,486.5					0.0	216.9	121.8	1,703.4	0.0	0.0
10.00		120.0	1,489.1					0.0	216.9	120.0	1,706.0	0.0	0.0
15.00		118.0	1,476.5					0.0	216.9	118.0	1,693.4	0.0	0.0
20.00		116.1	1,459.0					0.0	216.9	116.1	1,675.9	0.0	0.0
25.00		114.1	1,439.0					0.0	216.9	114.1	1,655.9	0.0	0.0
30.00	Appurtenance(s)	113.4	1,417.3	23.6	0.0	0.0	164.8	0.0	216.9	136.9	1,799.0	0.0	0.0
35.00		106.2	1,394.6					0.0	216.0	106.2	1,610.6	0.0	0.0
39.25	Bot - Section 2	58.2	1,167.3					0.0	183.6	58.2	1,350.9	0.0	0.0
40.00		68.8	341.3					0.0	32.4	68.8	373.7	0.0	0.0
45.00	Top - Section 1	120.6	2,248.6					0.0	216.0	120.6	2,464.6	0.0	0.0
50.00		121.9	1,167.2					0.0	216.0	121.9	1,383.2	0.0	0.0
55.00		98.1	1,145.8					0.0	216.0	98.1	1,361.8	0.0	0.0
58.00	Appurtenance(s)	61.6	677.8	7.1	0.0	0.0	25.5	0.0	129.6	68.7	832.9	0.0	0.0
60.00		86.5	447.7					0.0	86.4	86.5	534.1	0.0	0.0
65.00		123.7	1,102.1					0.0	216.0	123.7	1,318.1	0.0	0.0
70.00		123.7	1,079.8					0.0	216.0	123.7	1,295.8	0.0	0.0
75.00		117.3	1,057.3					0.0	216.0	117.3	1,273.3	0.0	0.0
79.50	Bot - Section 3	61.7	932.5					0.0	194.4	61.7	1,126.9	0.0	0.0
80.00		59.1	164.8					0.0	21.6	59.1	186.4	0.0	0.0
84.25	Top - Section 2	62.1	1,383.9					0.0	183.6	62.1	1,567.5	0.0	0.0
85.00		71.1	130.3					0.0	32.4	71.1	162.7	0.0	0.0
90.00		123.1	854.8					0.0	216.0	123.1	1,070.8	0.0	0.0
95.00		122.1	835.3					0.0	216.0	122.1	1,051.3	0.0	0.0
100.00		121.0	815.6					0.0	216.0	121.0	1,031.6	0.0	0.0
105.00		96.0	795.9					0.0	216.0	96.0	1,011.9	0.0	0.0
108.00	Appurtenance(s)	59.5	468.7	688.7	0.0	0.0	6,754.6	0.0	129.6	748.2	7,353.0	0.0	0.0
110.00		82.5	308.8					0.0	77.0	82.5	385.8	0.0	0.0
115.00		116.8	756.0					0.0	192.6	116.8	948.6	0.0	0.0
120.00	Top - Section 3	103.7	735.9					0.0	192.6	103.7	928.5	0.0	0.0
124.00	Appurtenance(s)	57.1	525.6	408.8	0.0	0.0	3,126.5	0.0	154.1	465.9	3,806.2	0.0	0.0
125.00		67.5	130.0					0.0	29.4	67.5	159.4	0.0	0.0
130.00		111.4	636.1					0.0	147.2	111.4	783.3	0.0	0.0
135.00	Appurtenance(s)	77.0	617.6	334.6	0.0	669.1	1,378.3	0.0	147.2	411.6	2,143.1	0.0	0.0
137.00	Appurtenance(s)	54.2	242.6	243.1	0.0	0.0	2,135.6	0.0	35.3	297.3	2,413.5	0.0	0.0
140.00		85.5	357.9					0.0	52.9	85.5	410.9	0.0	0.0
145.00		63.6	580.3					0.0	88.2	63.6	668.5	0.0	0.0
146.00	Appurtenance(s)	31.3	114.3	312.9	0.0	0.0	3,846.2	0.0	17.6	344.2	3,978.2	0.0	0.0
148.00		20.8	226.2					0.0	35.3	20.8	261.5	0.0	0.0
								<b>Totals:</b>	5,517.03	55,482.2	0.00	0.00	

<b>Load Case:</b> 1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice	23 Iterations
Gust Response Factor :1.10	Ice Dead Load Factor :1.00	
Dead Load Factor :1.20		Ice Importance Factor :1.00
Wind Load Factor :1.00		

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-58.52	-5.95	0.00	-618.17	0.00	618.17	4,118.20	1,072.62	4,974.87	4,353.59	0.00	0.00	0.156
5.00	-56.81	-5.87	0.00	-588.43	0.00	588.43	4,072.56	1,053.67	4,800.67	4,228.73	0.02	-0.04	0.153
10.00	-55.10	-5.79	0.00	-559.09	0.00	559.09	4,025.94	1,034.72	4,629.59	4,104.60	0.09	-0.08	0.150
15.00	-53.40	-5.71	0.00	-530.16	0.00	530.16	3,978.35	1,015.78	4,461.60	3,981.24	0.20	-0.13	0.147
20.00	-51.72	-5.62	0.00	-501.63	0.00	501.63	3,929.78	996.83	4,296.72	3,858.72	0.36	-0.17	0.143
25.00	-50.06	-5.54	0.00	-473.52	0.00	473.52	3,880.24	977.88	4,134.95	3,737.09	0.56	-0.21	0.140
30.00	-48.26	-5.43	0.00	-445.81	0.00	445.81	3,829.73	958.93	3,976.28	3,616.40	0.80	-0.25	0.136
35.00	-46.65	-5.35	0.00	-418.65	0.00	418.65	3,778.24	939.98	3,820.71	3,496.71	1.09	-0.30	0.132
39.25	-45.30	-5.30	0.00	-395.92	0.00	395.92	3,733.70	923.88	3,690.92	3,395.80	1.37	-0.33	0.129
40.00	-44.92	-5.25	0.00	-391.94	0.00	391.94	3,725.77	921.04	3,668.25	3,378.07	1.42	-0.34	0.128
45.00	-42.45	-5.14	0.00	-365.69	0.00	365.69	2,904.05	763.71	3,026.37	2,623.51	1.80	-0.38	0.154
50.00	-41.07	-5.04	0.00	-339.98	0.00	339.98	2,867.09	747.92	2,902.54	2,536.20	2.22	-0.42	0.148
55.00	-39.70	-4.96	0.00	-314.76	0.00	314.76	2,829.16	732.13	2,781.29	2,449.43	2.69	-0.47	0.143
58.00	-38.87	-4.90	0.00	-299.87	0.00	299.87	2,805.94	722.65	2,709.78	2,397.65	2.99	-0.50	0.139
60.00	-38.33	-4.83	0.00	-290.07	0.00	290.07	2,790.26	716.34	2,662.62	2,363.26	3.20	-0.52	0.137
65.00	-37.01	-4.72	0.00	-265.91	0.00	265.91	2,750.38	700.55	2,546.55	2,277.75	3.77	-0.56	0.130
70.00	-35.71	-4.62	0.00	-242.29	0.00	242.29	2,709.53	684.76	2,433.06	2,192.95	4.38	-0.61	0.124
75.00	-34.44	-4.51	0.00	-219.22	0.00	219.22	2,667.70	668.97	2,322.16	2,108.92	5.04	-0.65	0.117
79.50	-33.31	-4.45	0.00	-198.93	0.00	198.93	2,629.23	654.76	2,224.56	2,033.99	5.67	-0.69	0.111
80.00	-33.12	-4.40	0.00	-196.71	0.00	196.71	2,624.90	653.18	2,213.84	2,025.71	5.74	-0.69	0.110
84.25	-31.55	-4.32	0.00	-178.03	0.00	178.03	1,926.96	519.64	1,751.35	1,481.22	6.37	-0.72	0.137
85.00	-31.39	-4.27	0.00	-174.79	0.00	174.79	1,922.93	517.74	1,738.61	1,472.69	6.48	-0.73	0.135
90.00	-30.32	-4.15	0.00	-153.46	0.00	153.46	1,895.51	505.11	1,654.81	1,416.03	7.27	-0.78	0.124
95.00	-29.27	-4.04	0.00	-132.70	0.00	132.70	1,867.11	492.48	1,573.09	1,359.70	8.11	-0.82	0.113
100.00	-28.23	-3.92	0.00	-112.52	0.00	112.52	1,837.73	479.85	1,493.43	1,303.74	8.99	-0.86	0.102
105.00	-27.22	-3.82	0.00	-92.93	0.00	92.93	1,807.38	467.21	1,415.85	1,248.21	9.90	-0.89	0.090
108.00	-19.88	-2.96	0.00	-81.47	0.00	81.47	1,788.71	459.64	1,370.29	1,215.12	10.47	-0.91	0.078
110.00	-19.50	-2.88	0.00	-75.54	0.00	75.54	1,776.06	454.58	1,340.33	1,193.17	10.86	-0.93	0.074
115.00	-18.55	-2.76	0.00	-61.14	0.00	61.14	1,743.76	441.95	1,266.88	1,138.67	11.84	-0.95	0.064
120.00	-17.62	-2.64	0.00	-47.37	0.00	47.37	1,710.49	429.32	1,195.51	1,084.77	12.85	-0.98	0.054
120.00	-17.62	-2.64	0.00	-47.37	0.00	47.37	1,426.71	375.95	1,047.92	906.64	12.85	-0.98	0.065
124.00	-13.82	-2.11	0.00	-36.79	0.00	36.79	1,406.12	367.11	999.22	872.40	13.68	-0.99	0.052
125.00	-13.66	-2.05	0.00	-34.68	0.00	34.68	1,400.87	364.90	987.23	863.87	13.89	-1.00	0.050
130.00	-12.88	-1.92	0.00	-24.45	0.00	24.45	1,374.06	353.85	928.35	821.49	14.94	-1.02	0.039
135.00	-10.75	-1.48	0.00	-14.16	0.00	14.16	1,346.27	342.80	871.27	779.55	16.01	-1.03	0.026
137.00	-8.34	-1.14	0.00	-11.20	0.00	11.20	1,334.88	338.38	848.95	762.91	16.45	-1.03	0.021
140.00	-7.93	-1.04	0.00	-7.79	0.00	7.79	1,317.51	331.75	816.01	738.11	17.10	-1.04	0.017
145.00	-7.26	-0.97	0.00	-2.57	0.00	2.57	1,287.77	320.70	762.56	697.23	18.18	-1.04	0.009
146.00	-3.29	-0.55	0.00	-1.60	0.00	1.60	1,281.70	318.49	752.09	689.12	18.40	-1.04	0.005
148.00	0.00	-0.49	0.00	-0.50	0.00	0.50	1,269.46	314.07	731.36	672.99	18.84	-1.04	0.001

<b>Load Case:</b> 1.0D + 1.0W	Serviceability 60 mph	23 Iterations
Gust Response Factor :1.10		
Dead Load Factor :1.00		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		46.7	0.0					0.0	0.0	46.7	0.0	0.0	0.0
5.00		92.5	1,030.7					0.0	180.7	92.5	1,211.4	0.0	0.0
10.00		90.9	1,012.3					0.0	180.7	90.9	1,193.1	0.0	0.0
15.00		89.2	993.9					0.0	180.7	89.2	1,174.7	0.0	0.0
20.00		87.6	975.6					0.0	180.7	87.6	1,156.3	0.0	0.0
25.00		85.9	957.2					0.0	180.7	85.9	1,137.9	0.0	0.0
30.00	Appurtenance(s)	85.3	938.8	23.0	0.0	0.0	110.0	0.0	180.7	108.3	1,229.6	0.0	0.0
35.00		79.7	920.5					0.0	180.0	79.7	1,100.5	0.0	0.0
39.25	Bot - Section 2	43.7	767.9					0.0	153.0	43.7	920.9	0.0	0.0
40.00		51.6	247.7					0.0	27.0	51.6	274.7	0.0	0.0
45.00	Top - Section 1	90.4	1,631.7					0.0	180.0	90.4	1,811.7	0.0	0.0
50.00		91.2	732.7					0.0	180.0	91.2	912.7	0.0	0.0
55.00		73.4	717.4					0.0	180.0	73.4	897.4	0.0	0.0
58.00	Appurtenance(s)	46.0	423.1	6.4	0.0	0.0	10.0	0.0	108.0	52.4	541.1	0.0	0.0
60.00		64.5	279.0					0.0	72.0	64.5	351.0	0.0	0.0
65.00		92.1	686.8					0.0	180.0	92.1	866.8	0.0	0.0
70.00		92.0	671.5					0.0	180.0	92.0	851.5	0.0	0.0
75.00		87.1	656.2					0.0	180.0	87.1	836.2	0.0	0.0
79.50	Bot - Section 3	45.8	577.5					0.0	162.0	45.8	739.5	0.0	0.0
80.00		43.8	114.9					0.0	18.0	43.8	132.9	0.0	0.0
84.25	Top - Section 2	46.1	965.3					0.0	153.0	46.1	1,118.3	0.0	0.0
85.00		52.6	75.4					0.0	27.0	52.6	102.4	0.0	0.0
90.00		91.1	495.8					0.0	180.0	91.1	675.8	0.0	0.0
95.00		90.2	483.6					0.0	180.0	90.2	663.6	0.0	0.0
100.00		89.2	471.3					0.0	180.0	89.2	651.3	0.0	0.0
105.00		70.7	459.1					0.0	180.0	70.7	639.1	0.0	0.0
108.00	Appurtenance(s)	43.7	269.6	677.5	0.0	0.0	3,923.5	0.0	108.0	721.2	4,301.1	0.0	0.0
110.00		60.5	177.3					0.0	64.2	60.5	241.5	0.0	0.0
115.00		85.5	434.6					0.0	160.5	85.5	595.1	0.0	0.0
120.00	Top - Section 3	75.9	422.3					0.0	160.5	75.9	582.8	0.0	0.0
124.00	Appurtenance(s)	41.7	288.1	416.2	0.0	0.0	1,668.0	0.0	128.4	457.9	2,084.5	0.0	0.0
125.00		49.2	71.0					0.0	24.5	49.2	95.5	0.0	0.0
130.00		81.1	348.4					0.0	122.7	81.1	471.1	0.0	0.0
135.00	Appurtenance(s)	55.9	337.7	361.4	0.0	722.8	218.1	0.0	122.7	417.3	678.5	0.0	0.0
137.00	Appurtenance(s)	39.3	132.1	197.6	0.0	0.0	1,500.0	0.0	29.4	236.8	1,661.5	0.0	0.0
140.00		61.8	194.9					0.0	44.1	61.8	239.0	0.0	0.0
145.00		46.0	316.3					0.0	73.5	46.0	389.8	0.0	0.0
146.00	Appurtenance(s)	22.6	62.0	252.2	0.0	0.0	2,500.0	0.0	14.7	274.8	2,576.7	0.0	0.0
148.00		15.0	122.6					0.0	29.4	15.0	152.0	0.0	0.0
								<b>Totals:</b>		4,531.62	35,259.3	0.00	0.00



**Load Case: 1.0D + 1.0W**

Serviceability 60 mph

23 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.00

Wind Load Factor :1.00

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-36.55	-5.01	0.00	-524.54	0.00	524.54	4,118.20	1,072.62	4,974.87	4,353.59	0.00	0.00	0.129
5.00	-35.33	-4.94	0.00	-499.49	0.00	499.49	4,072.56	1,053.67	4,800.67	4,228.73	0.02	-0.04	0.127
10.00	-34.14	-4.87	0.00	-474.79	0.00	474.79	4,025.94	1,034.72	4,629.59	4,104.60	0.08	-0.07	0.124
15.00	-32.96	-4.80	0.00	-450.45	0.00	450.45	3,978.35	1,015.78	4,461.60	3,981.24	0.17	-0.11	0.121
20.00	-31.80	-4.73	0.00	-426.45	0.00	426.45	3,929.78	996.83	4,296.72	3,858.72	0.30	-0.14	0.119
25.00	-30.66	-4.66	0.00	-402.81	0.00	402.81	3,880.24	977.88	4,134.95	3,737.09	0.47	-0.18	0.116
30.00	-29.43	-4.56	0.00	-379.52	0.00	379.52	3,829.73	958.93	3,976.28	3,616.40	0.68	-0.22	0.113
35.00	-28.32	-4.50	0.00	-356.70	0.00	356.70	3,778.24	939.98	3,820.71	3,496.71	0.93	-0.25	0.110
39.25	-27.40	-4.46	0.00	-337.58	0.00	337.58	3,733.70	923.88	3,690.92	3,395.80	1.16	-0.28	0.107
40.00	-27.13	-4.41	0.00	-334.24	0.00	334.24	3,725.77	921.04	3,668.25	3,378.07	1.21	-0.29	0.106
45.00	-25.31	-4.33	0.00	-312.17	0.00	312.17	2,904.05	763.71	3,026.37	2,623.51	1.53	-0.32	0.128
50.00	-24.40	-4.25	0.00	-290.52	0.00	290.52	2,867.09	747.92	2,902.54	2,536.20	1.89	-0.36	0.123
55.00	-23.50	-4.18	0.00	-269.27	0.00	269.27	2,829.16	732.13	2,781.29	2,449.43	2.29	-0.40	0.118
58.00	-22.96	-4.13	0.00	-256.72	0.00	256.72	2,805.94	722.65	2,709.78	2,397.65	2.54	-0.42	0.115
60.00	-22.60	-4.08	0.00	-248.46	0.00	248.46	2,790.26	716.34	2,662.62	2,363.26	2.72	-0.44	0.113
65.00	-21.74	-3.99	0.00	-228.06	0.00	228.06	2,750.38	700.55	2,546.55	2,277.75	3.21	-0.48	0.108
70.00	-20.88	-3.91	0.00	-208.09	0.00	208.09	2,709.53	684.76	2,433.06	2,192.95	3.73	-0.52	0.103
75.00	-20.04	-3.83	0.00	-188.55	0.00	188.55	2,667.70	668.97	2,322.16	2,108.92	4.29	-0.55	0.097
79.50	-19.30	-3.78	0.00	-171.33	0.00	171.33	2,629.23	654.76	2,224.56	2,033.99	4.82	-0.59	0.092
80.00	-19.17	-3.74	0.00	-169.44	0.00	169.44	2,624.90	653.18	2,213.84	2,025.71	4.89	-0.59	0.091
84.25	-18.05	-3.69	0.00	-153.55	0.00	153.55	1,926.96	519.64	1,751.35	1,481.22	5.42	-0.62	0.113
85.00	-17.95	-3.64	0.00	-150.79	0.00	150.79	1,922.93	517.74	1,738.61	1,472.69	5.52	-0.62	0.112
90.00	-17.27	-3.55	0.00	-132.59	0.00	132.59	1,895.51	505.11	1,654.81	1,416.03	6.20	-0.66	0.103
95.00	-16.61	-3.46	0.00	-114.83	0.00	114.83	1,867.11	492.48	1,573.09	1,359.70	6.91	-0.70	0.093
100.00	-15.95	-3.38	0.00	-97.50	0.00	97.50	1,837.73	479.85	1,493.43	1,303.74	7.66	-0.73	0.084
105.00	-15.32	-3.30	0.00	-80.62	0.00	80.62	1,807.38	467.21	1,415.85	1,248.21	8.45	-0.76	0.073
108.00	-11.02	-2.53	0.00	-70.71	0.00	70.71	1,788.71	459.64	1,370.29	1,215.12	8.93	-0.78	0.064
110.00	-10.78	-2.47	0.00	-65.65	0.00	65.65	1,776.06	454.58	1,340.33	1,193.17	9.26	-0.79	0.061
115.00	-10.19	-2.38	0.00	-53.32	0.00	53.32	1,743.76	441.95	1,266.88	1,138.67	10.11	-0.82	0.053
120.00	-9.61	-2.30	0.00	-41.43	0.00	41.43	1,710.49	429.32	1,195.51	1,084.77	10.97	-0.84	0.044
120.00	-9.61	-2.30	0.00	-41.43	0.00	41.43	1,426.71	375.95	1,047.92	906.64	10.97	-0.84	0.052
124.00	-7.53	-1.81	0.00	-32.25	0.00	32.25	1,406.12	367.11	999.22	872.40	11.68	-0.85	0.042
125.00	-7.43	-1.76	0.00	-30.44	0.00	30.44	1,400.87	364.90	987.23	863.87	11.86	-0.86	0.041
130.00	-6.96	-1.67	0.00	-21.65	0.00	21.65	1,374.06	353.85	928.35	821.49	12.77	-0.87	0.031
135.00	-6.29	-1.25	0.00	-12.56	0.00	12.56	1,346.27	342.80	871.27	779.55	13.69	-0.88	0.021
137.00	-4.63	-0.98	0.00	-10.07	0.00	10.07	1,334.88	338.38	848.95	762.91	14.06	-0.89	0.017
140.00	-4.39	-0.92	0.00	-7.12	0.00	7.12	1,317.51	331.75	816.01	738.11	14.61	-0.89	0.013
145.00	-4.01	-0.87	0.00	-2.53	0.00	2.53	1,287.77	320.70	762.56	697.23	15.55	-0.89	0.007
146.00	-1.43	-0.55	0.00	-1.66	0.00	1.66	1,281.70	318.49	752.09	689.12	15.74	-0.89	0.004
148.00	0.00	-0.53	0.00	-0.56	0.00	0.56	1,269.46	314.07	731.36	672.99	16.11	-0.89	0.001

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.20
Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.05
Long-Period Transition Period ( $T_L$ ):	6
Importance Factor ( $I_E$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.21
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):	2.41
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	1.96
Total Unfactored Dead Load:	36.55 k
Seismic Base Shear (E):	1.10 k

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Segment	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
38	147.00	152	2,648	0.010	11	189
37	145.50	77	1,309	0.005	6	95
36	142.50	390	6,387	0.025	27	484
35	138.50	239	3,704	0.014	16	297
34	136.00	161	2,415	0.009	10	201
33	132.50	460	6,543	0.025	28	572
32	127.50	471	6,210	0.024	26	585
31	124.50	96	1,202	0.005	5	119
30	122.00	417	5,037	0.020	21	517
29	117.50	583	6,548	0.025	28	724
28	112.50	595	6,140	0.024	26	739
27	109.00	241	2,342	0.009	10	300
26	106.50	378	3,500	0.014	15	469
25	102.50	639	5,496	0.021	23	794
24	97.50	651	5,079	0.020	22	809
23	92.50	664	4,668	0.018	20	824
22	87.50	676	4,265	0.017	18	839
21	84.63	102	605	0.002	3	127
20	82.13	1,118	6,234	0.024	27	1,389
19	79.75	133	699	0.003	3	165
18	77.25	739	3,657	0.014	16	918
17	72.50	836	3,652	0.014	16	1,038
16	67.50	851	3,234	0.013	14	1,057
15	62.50	867	2,832	0.011	12	1,076
14	59.00	351	1,024	0.004	4	436

13	56.50	531	1,424	0.006	6	660
12	52.50	897	2,084	0.008	9	1,114
11	47.50	913	1,743	0.007	7	1,133
10	42.50	1,812	2,783	0.011	12	2,250
9	39.63	275	368	0.001	2	341
8	37.13	921	1,086	0.004	5	1,144
7	32.50	1,100	1,000	0.004	4	1,367
6	27.50	1,120	734	0.003	3	1,390
5	22.50	1,138	504	0.002	2	1,413
4	17.50	1,156	313	0.001	1	1,436
3	12.50	1,175	165	0.001	1	1,459
2	7.50	1,193	62	0.000	0	1,482
1	2.50	1,211	7	0.000	0	1,504
Powerwave Allgon LGP	148.00	85	1,493	0.006	6	105
Raycap DC6-48-60-18-	148.00	64	1,122	0.004	5	79
Ericsson RRUS 8843 B	148.00	216	3,812	0.015	16	268
Ericsson RRUS 4478 B	148.00	180	3,171	0.012	13	223
Ericsson RRUS 4449 B	148.00	213	3,759	0.015	16	265
Powerwave Allgon 777	148.00	105	1,853	0.007	8	130
CCI DMP65R-BU6DA	148.00	238	4,204	0.016	18	296
CCI OPA65R-BU6D	148.00	190	3,346	0.013	14	235
Generic Round Platfo	146.00	2,500	42,960	0.167	183	3,105
Round Low Profile PI	137.00	1,500	22,759	0.088	97	1,863
RFS FD9R6004/2C-3L	135.00	16	230	0.001	1	19
Amphenol Antel BXA-1	135.00	32	464	0.002	2	39
Antel LPA-80063/4CF	135.00	120	1,769	0.007	8	149
Antel BXA-70063/6CF_	135.00	51	752	0.003	3	63
Decibel DB844H90E-XY	124.00	168	2,097	0.008	9	209
Round Low Profile PI	124.00	1,500	18,725	0.073	80	1,863
Ericsson RRUS 4415 B	108.00	138	1,315	0.005	6	171
Ericsson Radio 4449	108.00	225	2,143	0.008	9	279
Ericsson 4424 B25	108.00	258	2,458	0.010	10	320
Ericsson Air6449 B41	108.00	312	2,972	0.012	13	387
RFS APX16DWV-16DWVS-	108.00	122	1,163	0.005	5	152
RFS APXVAALL24 43-U-	108.00	368	3,510	0.014	15	457
Generic Round Platfo	108.00	2,500	23,816	0.092	101	3,105
Generic GPS	58.00	10	28	0.000	0	12
Generic GPS	30.00	10	8	0.000	0	12
Stand-Off	30.00	100	78	0.000	0	124
		36,549	257,707	1.000	1,096	45,387

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
38	147.00	152	2,648	0.010	11	130
37	145.50	77	1,309	0.005	6	66
36	142.50	390	6,387	0.025	27	334
35	138.50	239	3,704	0.014	16	205
34	136.00	161	2,415	0.009	10	139
33	132.50	460	6,543	0.025	28	395
32	127.50	471	6,210	0.024	26	404
31	124.50	96	1,202	0.005	5	82
30	122.00	417	5,037	0.020	21	357
29	117.50	583	6,548	0.025	28	500
28	112.50	595	6,140	0.024	26	511
27	109.00	241	2,342	0.009	10	207
26	106.50	378	3,500	0.014	15	324
25	102.50	639	5,496	0.021	23	548
24	97.50	651	5,079	0.020	22	559
23	92.50	664	4,668	0.018	20	569

Site Number: 302528

Code: ANSI/TIA-222-H

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Site Name: Columbia Central, CT

Engineering Number: 13653962\_C3\_03

4/26/2021 1:54:39 PM

Customer: SPRINT NEXTEL

22	87.50	676	4,265	0.017	18	580
21	84.63	102	605	0.002	3	88
20	82.13	1,118	6,234	0.024	27	960
19	79.75	133	699	0.003	3	114
18	77.25	739	3,657	0.014	16	635
17	72.50	836	3,652	0.014	16	718
16	67.50	851	3,234	0.013	14	731
15	62.50	867	2,832	0.011	12	744
14	59.00	351	1,024	0.004	4	301
13	56.50	531	1,424	0.006	6	456
12	52.50	897	2,084	0.008	9	770
11	47.50	913	1,743	0.007	7	783
10	42.50	1,812	2,783	0.011	12	1,555
9	39.63	275	368	0.001	2	236
8	37.13	921	1,086	0.004	5	790
7	32.50	1,100	1,000	0.004	4	944
6	27.50	1,120	734	0.003	3	961
5	22.50	1,138	504	0.002	2	977
4	17.50	1,156	313	0.001	1	992
3	12.50	1,175	165	0.001	1	1,008
2	7.50	1,193	62	0.000	0	1,024
1	2.50	1,211	7	0.000	0	1,040
Powerwave Allgon LGP	148.00	85	1,493	0.006	6	73
Raycap DC6-48-60-18-	148.00	64	1,122	0.004	5	55
Ericsson RRUS 8843 B	148.00	216	3,812	0.015	16	185
Ericsson RRUS 4478 B	148.00	180	3,171	0.012	13	154
Ericsson RRUS 4449 B	148.00	213	3,759	0.015	16	183
Powerwave Allgon 777	148.00	105	1,853	0.007	8	90
CCI DMP65R-BU6DA	148.00	238	4,204	0.016	18	204
CCI OPA65R-BU6D	148.00	190	3,346	0.013	14	163
Generic Round Platfo	146.00	2,500	42,960	0.167	183	2,145
Round Low Profile PI	137.00	1,500	22,759	0.088	97	1,287
RFS FD9R6004/2C-3L	135.00	16	230	0.001	1	13
Amphenol Antel BXA-1	135.00	32	464	0.002	2	27
Antel LPA-80063/4CF	135.00	120	1,769	0.007	8	103
Antel BXA-70063/6CF_	135.00	51	752	0.003	3	44
Decibel DB844H90E-XY	124.00	168	2,097	0.008	9	144
Round Low Profile PI	124.00	1,500	18,725	0.073	80	1,287
Ericsson RRUS 4415 B	108.00	138	1,315	0.005	6	118
Ericsson Radio 4449	108.00	225	2,143	0.008	9	193
Ericsson 4424 B25	108.00	258	2,458	0.010	10	221
Ericsson Air6449 B41	108.00	312	2,972	0.012	13	268
RFS APX16DWV-16DWVS-	108.00	122	1,163	0.005	5	105
RFS APXVAALL24 43-U-	108.00	368	3,510	0.014	15	316
Generic Round Platfo	108.00	2,500	23,816	0.092	101	2,145
Generic GPS	58.00	10	28	0.000	0	9
Generic GPS	30.00	10	8	0.000	0	9
Stand-Off	30.00	100	78	0.000	0	86
		36,549	257,707	1.000	1,096	31,366

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-43.88	-1.10	0.00	-135.96	0.00	135.96	4,118.20	1,072.62	4,974.87	4,353.59	0.00	0.00	0.042
5.00	-42.40	-1.11	0.00	-130.46	0.00	130.46	4,072.56	1,053.67	4,800.67	4,228.73	0.00	-0.01	0.041
10.00	-40.94	-1.11	0.00	-124.93	0.00	124.93	4,025.94	1,034.72	4,629.59	4,104.60	0.02	-0.02	0.041
15.00	-39.51	-1.12	0.00	-119.37	0.00	119.37	3,978.35	1,015.78	4,461.60	3,981.24	0.04	-0.03	0.040
20.00	-38.09	-1.12	0.00	-113.79	0.00	113.79	3,929.78	996.83	4,296.72	3,858.72	0.08	-0.04	0.039
25.00	-36.70	-1.12	0.00	-108.19	0.00	108.19	3,880.24	977.88	4,134.95	3,737.09	0.12	-0.05	0.038
30.00	-35.20	-1.12	0.00	-102.58	0.00	102.58	3,829.73	958.93	3,976.28	3,616.40	0.18	-0.06	0.038
35.00	-34.05	-1.12	0.00	-96.98	0.00	96.98	3,778.24	939.98	3,820.71	3,496.71	0.24	-0.07	0.037
39.25	-33.71	-1.12	0.00	-92.21	0.00	92.21	3,733.70	923.88	3,690.92	3,395.80	0.31	-0.08	0.036
40.00	-31.46	-1.11	0.00	-91.37	0.00	91.37	3,725.77	921.04	3,668.25	3,378.07	0.32	-0.08	0.035
45.00	-30.33	-1.11	0.00	-85.81	0.00	85.81	2,904.05	763.71	3,026.37	2,623.51	0.41	-0.09	0.043
50.00	-29.22	-1.10	0.00	-80.28	0.00	80.28	2,867.09	747.92	2,902.54	2,536.20	0.50	-0.10	0.042
55.00	-28.56	-1.10	0.00	-74.77	0.00	74.77	2,829.16	732.13	2,781.29	2,449.43	0.61	-0.11	0.041
58.00	-28.11	-1.10	0.00	-71.48	0.00	71.48	2,805.94	722.65	2,709.78	2,397.65	0.68	-0.11	0.040
60.00	-27.03	-1.09	0.00	-69.29	0.00	69.29	2,790.26	716.34	2,662.62	2,363.26	0.73	-0.12	0.039
65.00	-25.97	-1.07	0.00	-63.86	0.00	63.86	2,750.38	700.55	2,546.55	2,277.75	0.86	-0.13	0.037
70.00	-24.93	-1.06	0.00	-58.49	0.00	58.49	2,709.53	684.76	2,433.06	2,192.95	1.00	-0.14	0.036
75.00	-24.02	-1.05	0.00	-53.18	0.00	53.18	2,667.70	668.97	2,322.16	2,108.92	1.15	-0.15	0.034
79.50	-23.85	-1.05	0.00	-48.47	0.00	48.47	2,629.23	654.76	2,224.56	2,033.99	1.30	-0.16	0.033
80.00	-22.46	-1.02	0.00	-47.95	0.00	47.95	2,624.90	653.18	2,213.84	2,025.71	1.31	-0.16	0.032
84.25	-22.34	-1.02	0.00	-43.63	0.00	43.63	1,926.96	519.64	1,751.35	1,481.22	1.46	-0.17	0.041
85.00	-21.50	-1.00	0.00	-42.87	0.00	42.87	1,922.93	517.74	1,738.61	1,472.69	1.49	-0.17	0.040
90.00	-20.67	-0.98	0.00	-37.88	0.00	37.88	1,895.51	505.11	1,654.81	1,416.03	1.67	-0.18	0.038
95.00	-19.86	-0.96	0.00	-32.98	0.00	32.98	1,867.11	492.48	1,573.09	1,359.70	1.87	-0.19	0.035
100.00	-19.07	-0.94	0.00	-28.18	0.00	28.18	1,837.73	479.85	1,493.43	1,303.74	2.07	-0.20	0.032
105.00	-18.60	-0.92	0.00	-23.51	0.00	23.51	1,807.38	467.21	1,415.85	1,248.21	2.29	-0.21	0.029
108.00	-13.43	-0.73	0.00	-20.74	0.00	20.74	1,788.71	459.64	1,370.29	1,215.12	2.42	-0.22	0.025
110.00	-12.69	-0.71	0.00	-19.27	0.00	19.27	1,776.06	454.58	1,340.33	1,193.17	2.52	-0.22	0.023
115.00	-11.97	-0.68	0.00	-15.74	0.00	15.74	1,743.76	441.95	1,266.88	1,138.67	2.75	-0.23	0.021
120.00	-11.45	-0.65	0.00	-12.35	0.00	12.35	1,710.49	429.32	1,195.51	1,084.77	2.99	-0.23	0.018
120.00	-11.45	-0.65	0.00	-12.35	0.00	12.35	1,426.71	375.95	1,047.92	906.64	2.99	-0.23	0.022
124.00	-9.26	-0.55	0.00	-9.74	0.00	9.74	1,406.12	367.11	999.22	872.40	3.19	-0.24	0.018
125.00	-8.67	-0.52	0.00	-9.18	0.00	9.18	1,400.87	364.90	987.23	863.87	3.24	-0.24	0.017
130.00	-8.10	-0.49	0.00	-6.56	0.00	6.56	1,374.06	353.85	928.35	821.49	3.49	-0.24	0.014
135.00	-7.63	-0.47	0.00	-4.09	0.00	4.09	1,346.27	342.80	871.27	779.55	3.74	-0.25	0.011
137.00	-5.47	-0.35	0.00	-3.15	0.00	3.15	1,334.88	338.38	848.95	762.91	3.85	-0.25	0.008
140.00	-4.99	-0.32	0.00	-2.11	0.00	2.11	1,317.51	331.75	816.01	738.11	4.00	-0.25	0.007
145.00	-4.89	-0.31	0.00	-0.52	0.00	0.52	1,287.77	320.70	762.56	697.23	4.26	-0.25	0.005
146.00	-1.60	-0.10	0.00	-0.21	0.00	0.21	1,281.70	318.49	752.09	689.12	4.32	-0.25	0.002
148.00	0.00	-0.10	0.00	0.00	0.00	0.00	1,269.46	314.07	731.36	672.99	4.42	-0.25	0.000

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-30.33	-1.10	0.00	-133.85	0.00	133.85	4,118.20	1,072.62	4,974.87	4,353.59	0.00	0.00	0.038
5.00	-29.30	-1.10	0.00	-128.36	0.00	128.36	4,072.56	1,053.67	4,800.67	4,228.73	0.00	-0.01	0.038
10.00	-28.29	-1.11	0.00	-122.85	0.00	122.85	4,025.94	1,034.72	4,629.59	4,104.60	0.02	-0.02	0.037
15.00	-27.30	-1.11	0.00	-117.31	0.00	117.31	3,978.35	1,015.78	4,461.60	3,981.24	0.04	-0.03	0.036
20.00	-26.32	-1.11	0.00	-111.77	0.00	111.77	3,929.78	996.83	4,296.72	3,858.72	0.08	-0.04	0.036
25.00	-25.36	-1.11	0.00	-106.21	0.00	106.21	3,880.24	977.88	4,134.95	3,737.09	0.12	-0.05	0.035
30.00	-24.32	-1.11	0.00	-100.66	0.00	100.66	3,829.73	958.93	3,976.28	3,616.40	0.18	-0.06	0.034
35.00	-23.53	-1.11	0.00	-95.11	0.00	95.11	3,778.24	939.98	3,820.71	3,496.71	0.24	-0.07	0.033
39.25	-23.30	-1.11	0.00	-90.40	0.00	90.40	3,733.70	923.88	3,690.92	3,395.80	0.30	-0.07	0.033
40.00	-21.74	-1.10	0.00	-89.57	0.00	89.57	3,725.77	921.04	3,668.25	3,378.07	0.31	-0.08	0.032
45.00	-20.96	-1.09	0.00	-84.09	0.00	84.09	2,904.05	763.71	3,026.37	2,623.51	0.40	-0.09	0.039
50.00	-20.19	-1.08	0.00	-78.63	0.00	78.63	2,867.09	747.92	2,902.54	2,536.20	0.49	-0.09	0.038
55.00	-19.73	-1.08	0.00	-73.21	0.00	73.21	2,829.16	732.13	2,781.29	2,449.43	0.60	-0.11	0.037
58.00	-19.42	-1.08	0.00	-69.97	0.00	69.97	2,805.94	722.65	2,709.78	2,397.65	0.67	-0.11	0.036
60.00	-18.68	-1.07	0.00	-67.81	0.00	67.81	2,790.26	716.34	2,662.62	2,363.26	0.71	-0.12	0.035
65.00	-17.95	-1.05	0.00	-62.48	0.00	62.48	2,750.38	700.55	2,546.55	2,277.75	0.84	-0.13	0.034
70.00	-17.23	-1.04	0.00	-57.21	0.00	57.21	2,709.53	684.76	2,433.06	2,192.95	0.98	-0.14	0.032
75.00	-16.60	-1.03	0.00	-52.00	0.00	52.00	2,667.70	668.97	2,322.16	2,108.92	1.13	-0.15	0.031
79.50	-16.48	-1.02	0.00	-47.39	0.00	47.39	2,629.23	654.76	2,224.56	2,033.99	1.27	-0.16	0.030
80.00	-15.52	-1.00	0.00	-46.88	0.00	46.88	2,624.90	653.18	2,213.84	2,025.71	1.29	-0.16	0.029
84.25	-15.43	-0.99	0.00	-42.64	0.00	42.64	1,926.96	519.64	1,751.35	1,481.22	1.43	-0.17	0.037
85.00	-14.85	-0.98	0.00	-41.89	0.00	41.89	1,922.93	517.74	1,738.61	1,472.69	1.46	-0.17	0.036
90.00	-14.28	-0.96	0.00	-37.01	0.00	37.01	1,895.51	505.11	1,654.81	1,416.03	1.64	-0.18	0.034
95.00	-13.73	-0.94	0.00	-32.22	0.00	32.22	1,867.11	492.48	1,573.09	1,359.70	1.83	-0.19	0.031
100.00	-13.18	-0.91	0.00	-27.54	0.00	27.54	1,837.73	479.85	1,493.43	1,303.74	2.03	-0.20	0.028
105.00	-12.85	-0.90	0.00	-22.97	0.00	22.97	1,807.38	467.21	1,415.85	1,248.21	2.25	-0.21	0.026
108.00	-9.28	-0.72	0.00	-20.27	0.00	20.27	1,788.71	459.64	1,370.29	1,215.12	2.38	-0.21	0.022
110.00	-8.77	-0.69	0.00	-18.84	0.00	18.84	1,776.06	454.58	1,340.33	1,193.17	2.47	-0.21	0.021
115.00	-8.27	-0.66	0.00	-15.38	0.00	15.38	1,743.76	441.95	1,266.88	1,138.67	2.70	-0.22	0.018
120.00	-7.91	-0.64	0.00	-12.08	0.00	12.08	1,710.49	429.32	1,195.51	1,084.77	2.93	-0.23	0.016
120.00	-7.91	-0.64	0.00	-12.08	0.00	12.08	1,426.71	375.95	1,047.92	906.64	2.93	-0.23	0.019
124.00	-6.40	-0.54	0.00	-9.52	0.00	9.52	1,406.12	367.11	999.22	872.40	3.12	-0.23	0.015
125.00	-5.99	-0.51	0.00	-8.98	0.00	8.98	1,400.87	364.90	987.23	863.87	3.17	-0.23	0.015
130.00	-5.60	-0.48	0.00	-6.42	0.00	6.42	1,374.06	353.85	928.35	821.49	3.42	-0.24	0.012
135.00	-5.27	-0.46	0.00	-4.00	0.00	4.00	1,346.27	342.80	871.27	779.55	3.67	-0.24	0.009
137.00	-3.78	-0.34	0.00	-3.08	0.00	3.08	1,334.88	338.38	848.95	762.91	3.77	-0.24	0.007
140.00	-3.45	-0.31	0.00	-2.06	0.00	2.06	1,317.51	331.75	816.01	738.11	3.92	-0.24	0.005
145.00	-3.38	-0.31	0.00	-0.51	0.00	0.51	1,287.77	320.70	762.56	697.23	4.18	-0.24	0.003
146.00	-1.11	-0.10	0.00	-0.20	0.00	0.20	1,281.70	318.49	752.09	689.12	4.23	-0.24	0.001
148.00	0.00	-0.10	0.00	0.00	0.00	0.00	1,269.46	314.07	731.36	672.99	4.33	-0.24	0.000

Site Number: 302528

Code: ANSI/TIA-222-H

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Site Name: Columbia Central, CT

Engineering Number: 13653962\_C3\_03

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Customer: SPRINT NEXTEL

## Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	22.41	0.00	43.83	0.00	0.00	2362.66	0.00	0.55
0.9D + 1.0W	22.40	0.00	32.86	0.00	0.00	2334.00	0.00	0.54
1.2D + 1.0Di + 1.0Wi	5.95	0.00	58.52	0.00	0.00	618.17	0.00	0.16
1.2D + 1.0Ev + 1.0Eh	1.10	0.00	43.88	0.00	0.00	135.96	45.00	0.04
0.9D - 1.0Ev + 1.0Eh	1.10	0.00	30.33	0.00	0.00	133.85	45.00	0.04
1.0D + 1.0W	5.01	0.00	36.55	0.00	0.00	524.54	0.00	0.13



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ENGINEERING  
PROFESSIONALS**

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## Antenna Mount Analysis Report

ATC Site Name : Columbia Central, CT  
ATC Site Number : 302528  
Engineering Number : 13653962\_C8\_02  
Mount Elevation : 108 ft  
Carrier : SPRINT NEXTEL  
Carrier Site Name : CTHA803A  
Carrier Site Number : CTHA803A  
Site Location : 330 Middletown Road  
Columbia, CT 06237-1528  
41.689900, -72.325200  
County : Tolland  
Date : April 29, 2021  
Max Usage : 43%  
Result : Pass

Prepared By:  
Austin J. Wilson  
TEP No. 94015.534062

Reviewed By:



04/29/2021





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Mount Layout..... 3

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Calculations..... Attached



## Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for SPRINT NEXTEL at 108 ft.

## Supporting Documents

Spec. Sheet	Spec Sheet for SitePro RMQP
RFDS	RFDS dated March 1, 2021
Photos	Site photos from 2021

## Analysis

This antenna mount was analyzed using RISA-3D v17 analysis software.

Basic Wind Speed:	120 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1.00 in. radial ice
Codes:	ANSI/TIA-222-H
Risk Category:	II
Exposure Category:	B
Topographic Factor Procedure:	Method 2
Kzt:	1.000
Spectral Response:	$S_s = 0.196, S_1 = 0.055$
Site Class:	D - Stiff Soil
Live Loads:	$L_m = 500 \text{ lbs}, L_v = 250 \text{ lbs}$

## 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 the load differs from that described in this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.

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



Antenna Loading

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
108	108	3	RFS APX16DWV-16DWVS-E-A20
		3	RFS APXVAALL24_43-U-NA20
		3	Ericsson AIR6449 B41
		3	Ericsson RRUS 4415 B66
		3	Ericsson Radio 4449 B71 B85A
		3	Ericsson 4424 B25

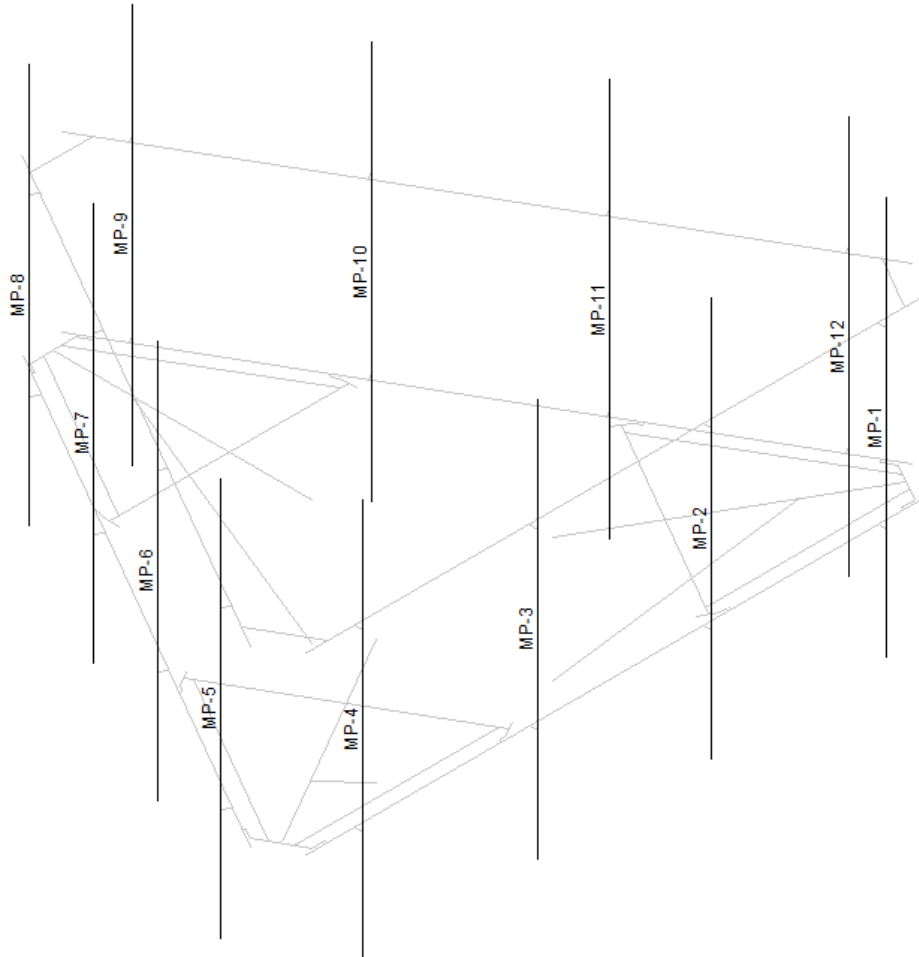
Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Face Horizontals	11%	Pass
Support Arms	16%	Pass
Internals	16%	Pass
Corner Plates	41%	Pass
Support Rail	43%	Pass
Mount Pipes	43%	Pass
Connection Bolts	12%	Pass
Connection Plate	11%	Pass



Mount Layout

MFR	Model	Member Label	Location #1 (ft,%)	Location #2 (ft,%)
	<b>**ALPHA**</b>			
RFS/CELWAVE	APX16DWV-16DWV-S-E-A20	MP-1	2.00	6.00
ERICSSON	RADIO 4415 B66A	MP-1	3.00	
RFS/CELWAVE	APXVAALL24_43-U-NA20	MP-2	0.50	7.50
ERICSSON	RADIO 4449 B71+B85	MP-2	3.00	
ERICSSON	RADIO 4424 B25	MP-2	3.00	
ERICSSON	AIR6449 B41	MP-3	3.00	5.00
	<b>**BETA**</b>			
RFS/CELWAVE	APX16DWV-16DWV-S-E-A20	MP-5	2.00	6.00
ERICSSON	RADIO 4415 B66A	MP-5	3.00	
RFS/CELWAVE	APXVAALL24_43-U-NA20	MP-6	0.50	7.50
ERICSSON	RADIO 4449 B71+B85	MP-6	3.00	
ERICSSON	RADIO 4424 B25	MP-6	3.00	
ERICSSON	AIR6449 B41	MP-7	3.00	5.00
	<b>**GAMMA**</b>			
RFS/CELWAVE	APX16DWV-16DWV-S-E-A20	MP-9	2.00	6.00
ERICSSON	RADIO 4415 B66A	MP-9	3.00	
RFS/CELWAVE	APXVAALL24_43-U-NA20	MP-10	0.50	7.50
ERICSSON	RADIO 4449 B71+B85	MP-10	3.00	
ERICSSON	RADIO 4424 B25	MP-10	3.00	
ERICSSON	AIR6449 B41	MP-11	3.00	5.00





## Standard Conditions

All engineering services performed by TEP 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 TEP

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

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

TEP assumes that the mount has been maintained in accordance with the manufacturer's specification.

TEP assumes that all mount components are in sufficient condition to carry their full design capacity for this analysis.

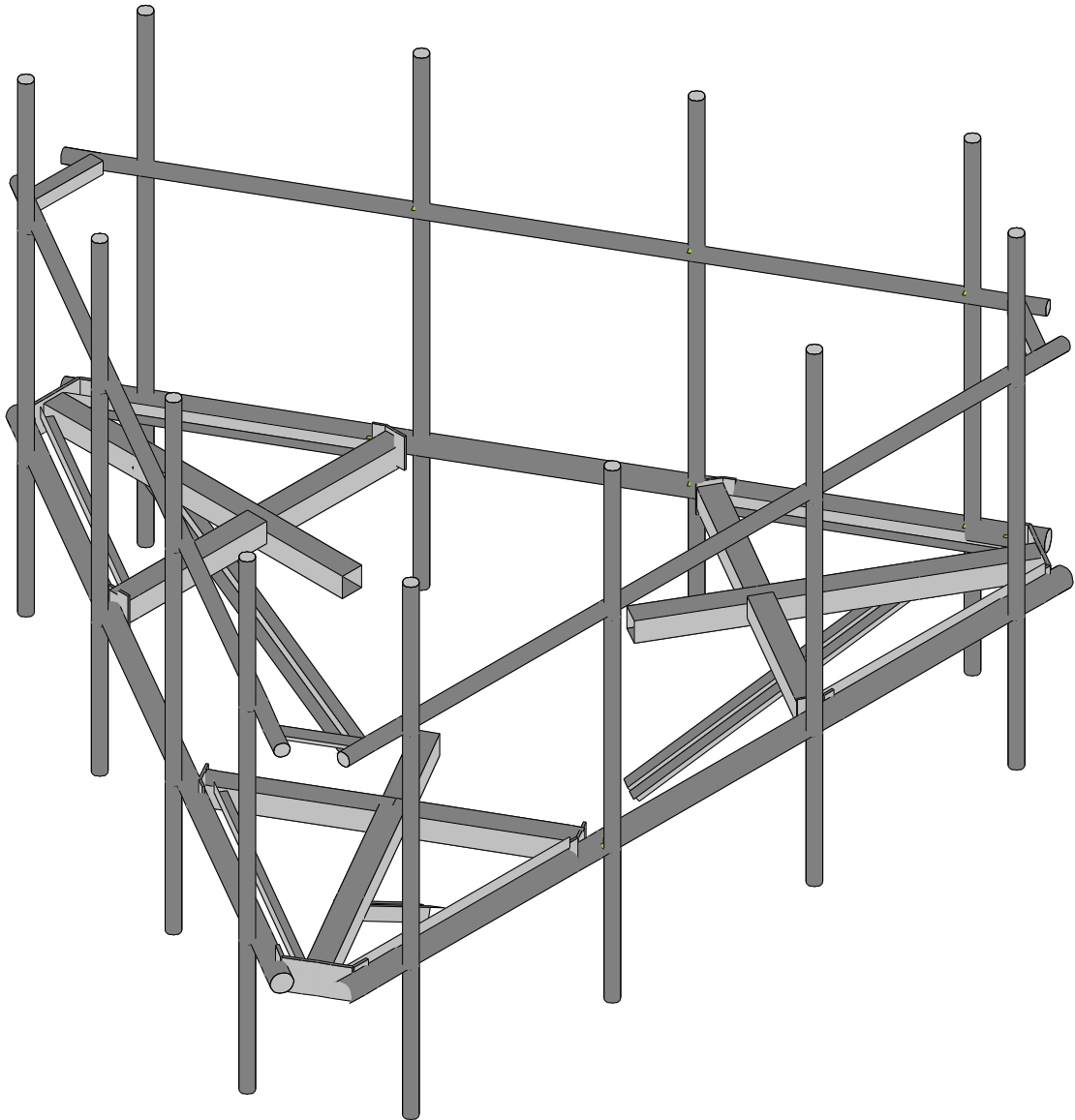
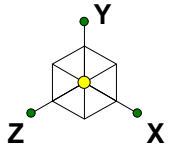
Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance.

All material grades used for this analysis, unless verified by mount manufacturer design, were assumed per AISC Table 2-4, 15<sup>th</sup> Edition. See RISA 3-D output for confirmation on grades used in this analysis.

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



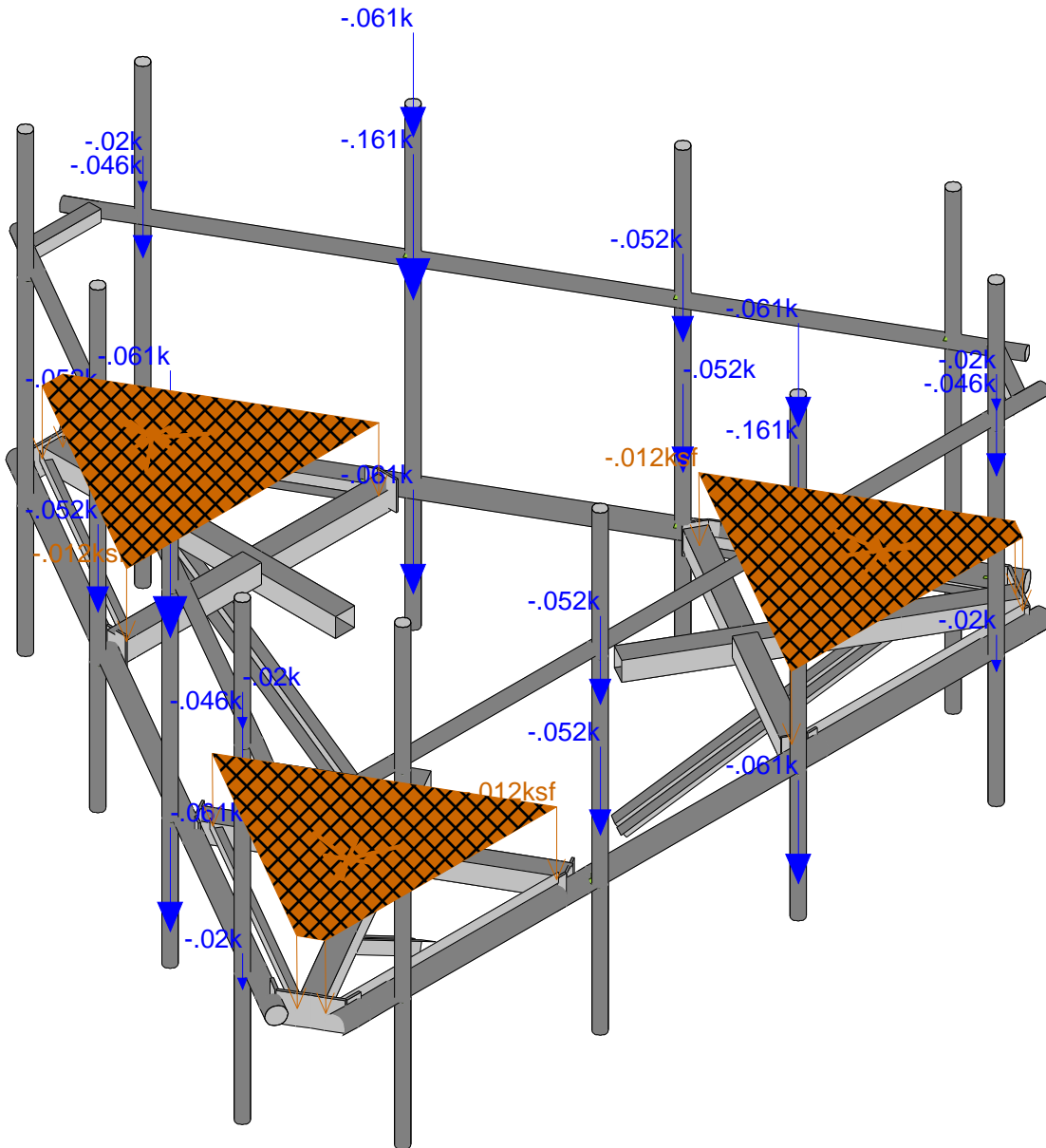
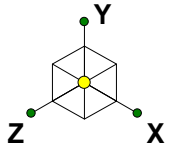
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AJW  
TEP No. 94015.534062

302528 - Columbia Central

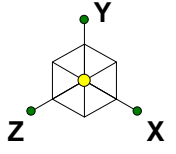
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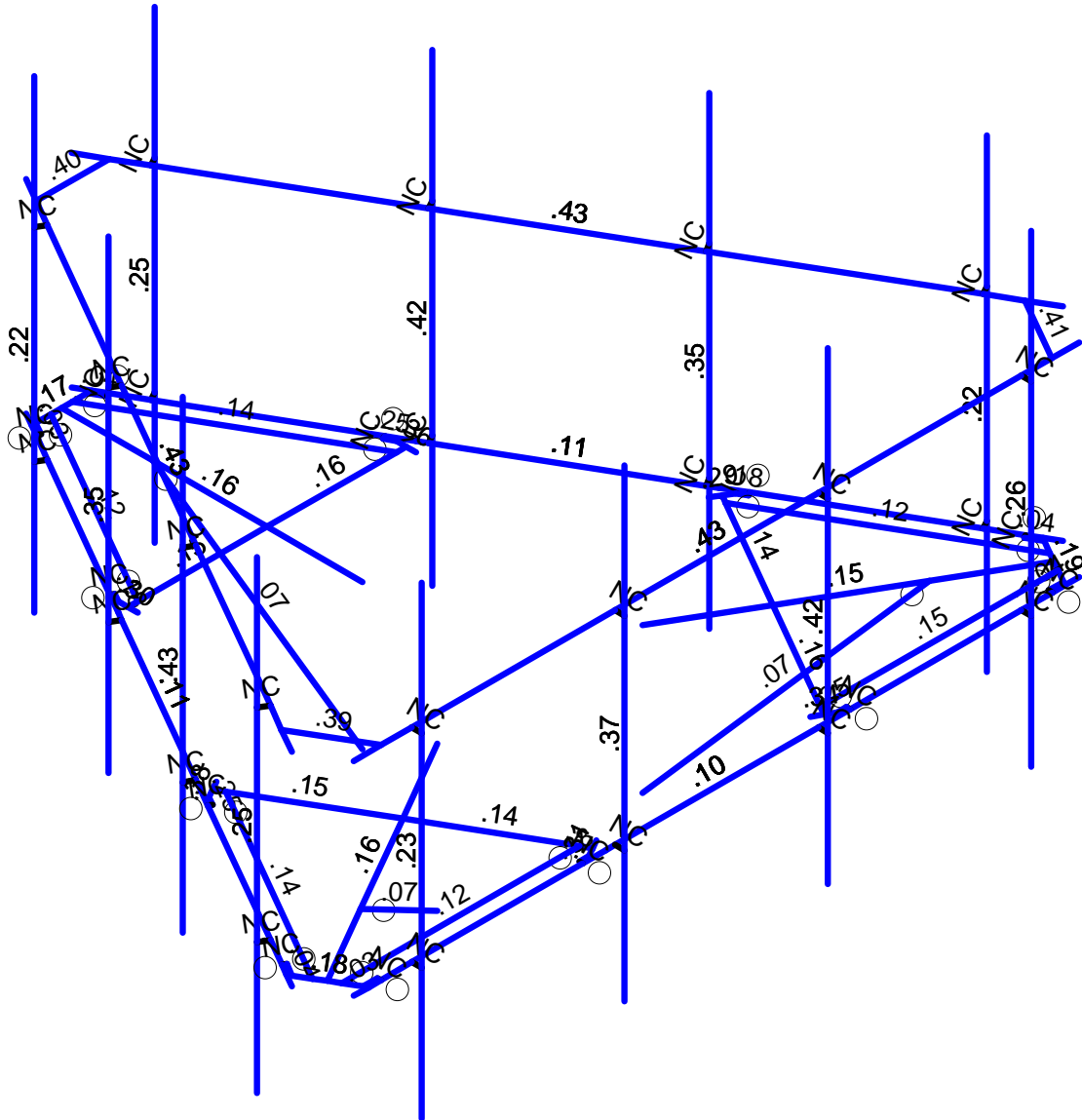
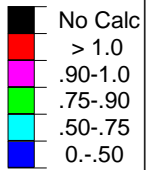


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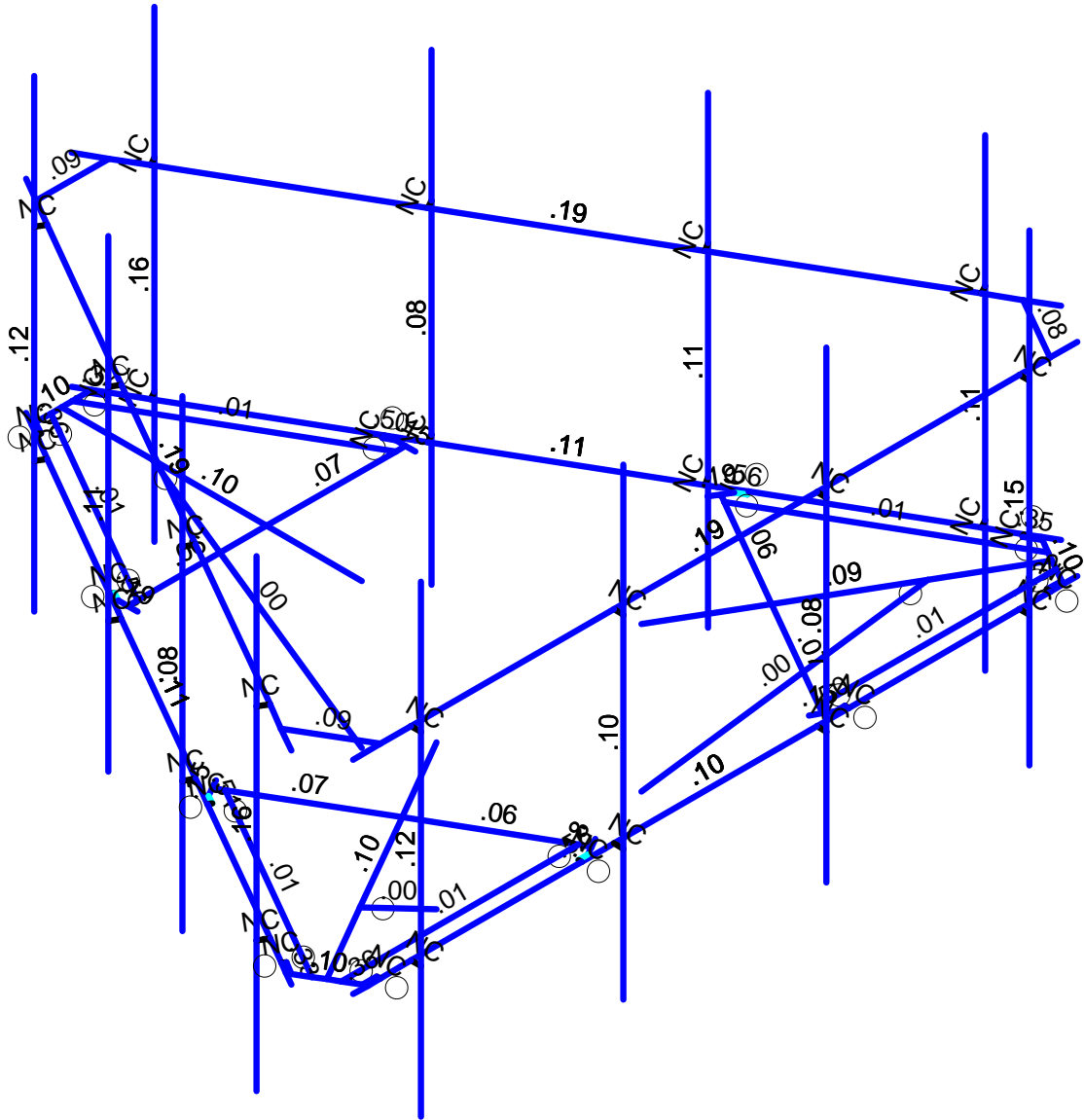
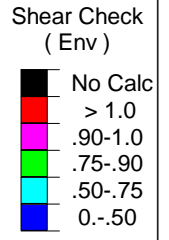
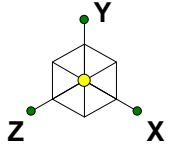
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Member Code Checks Displayed (Enveloped)  
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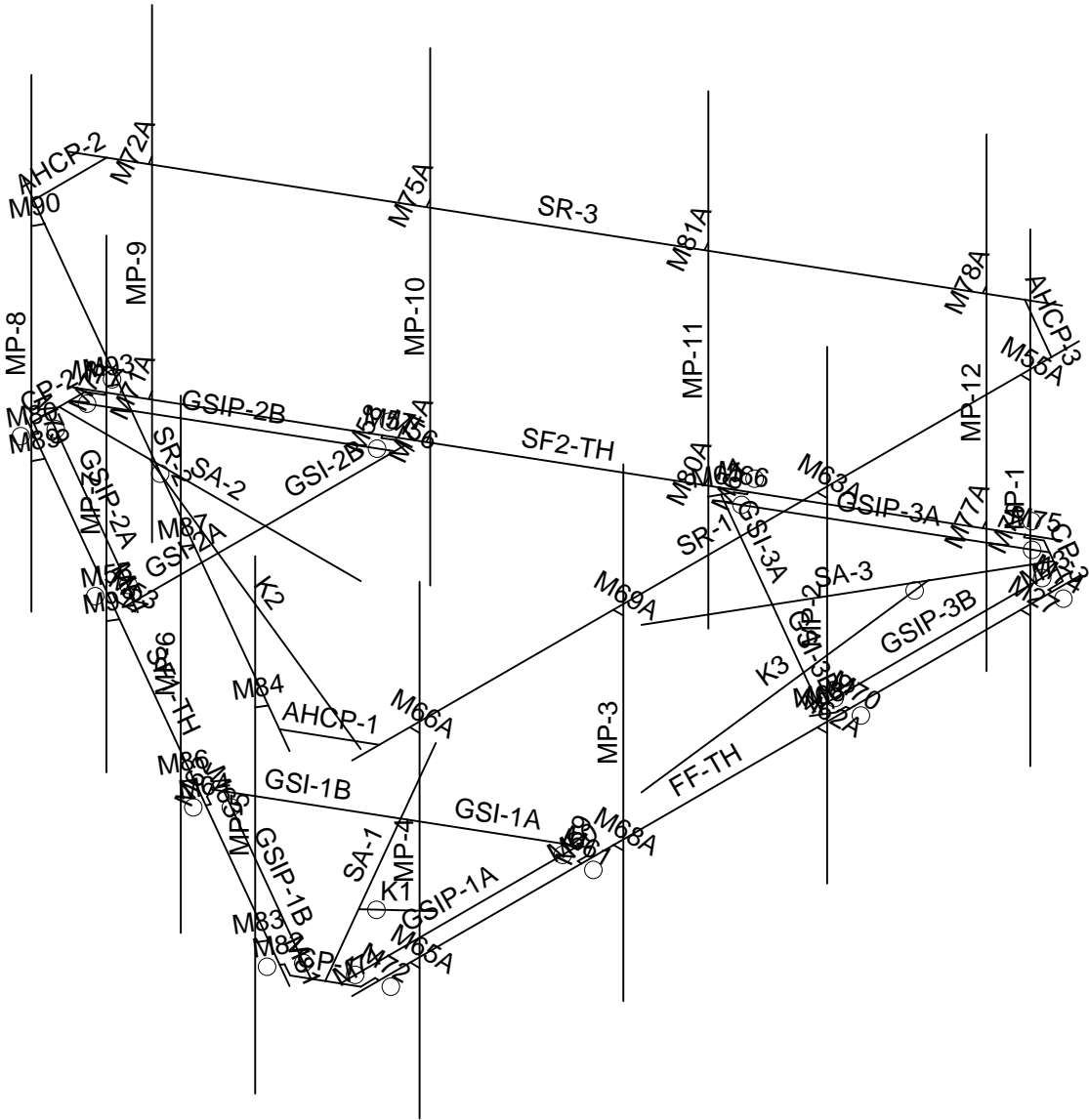
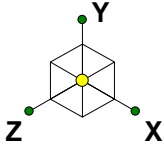
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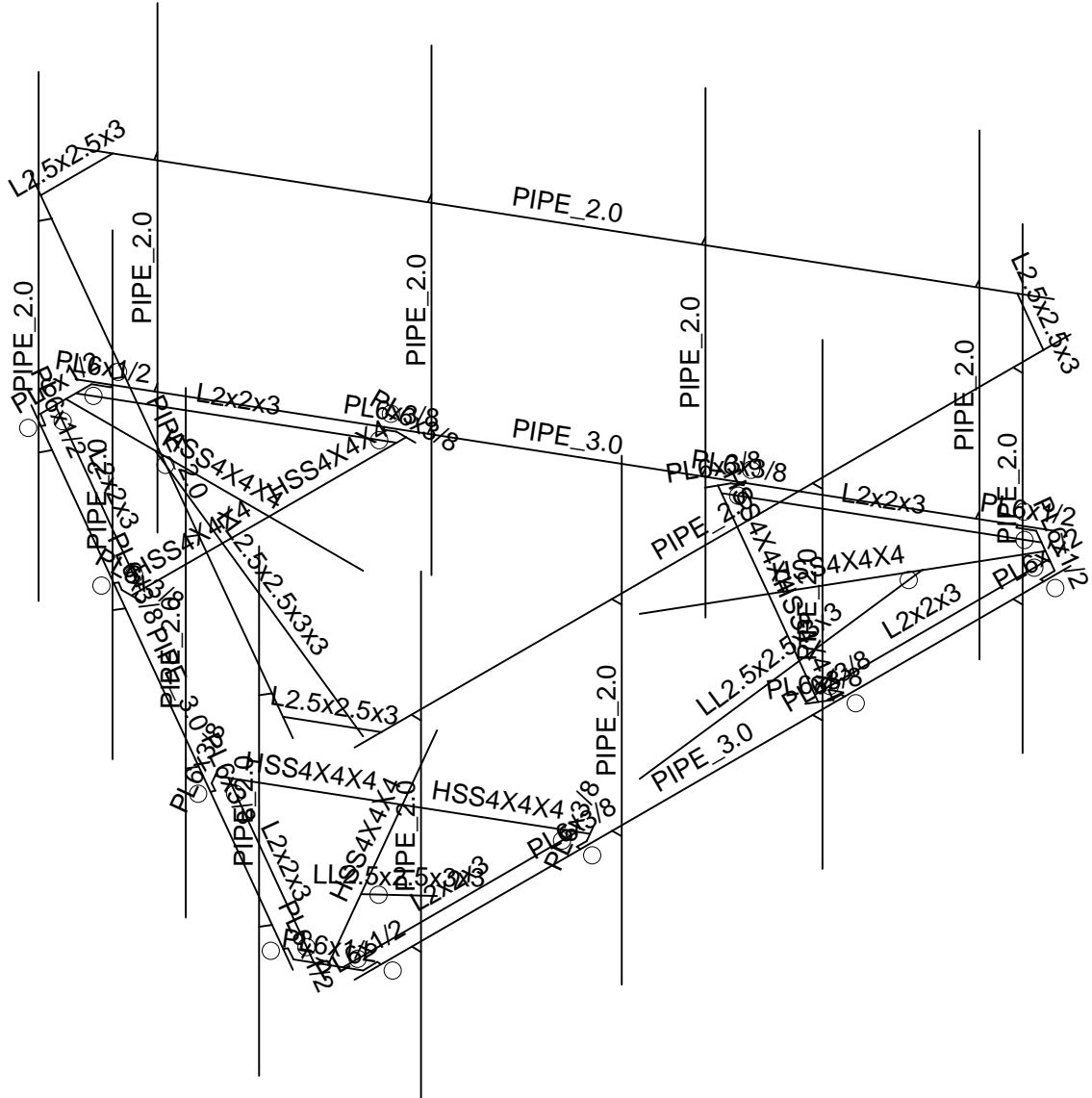
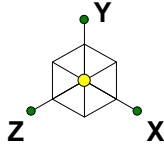
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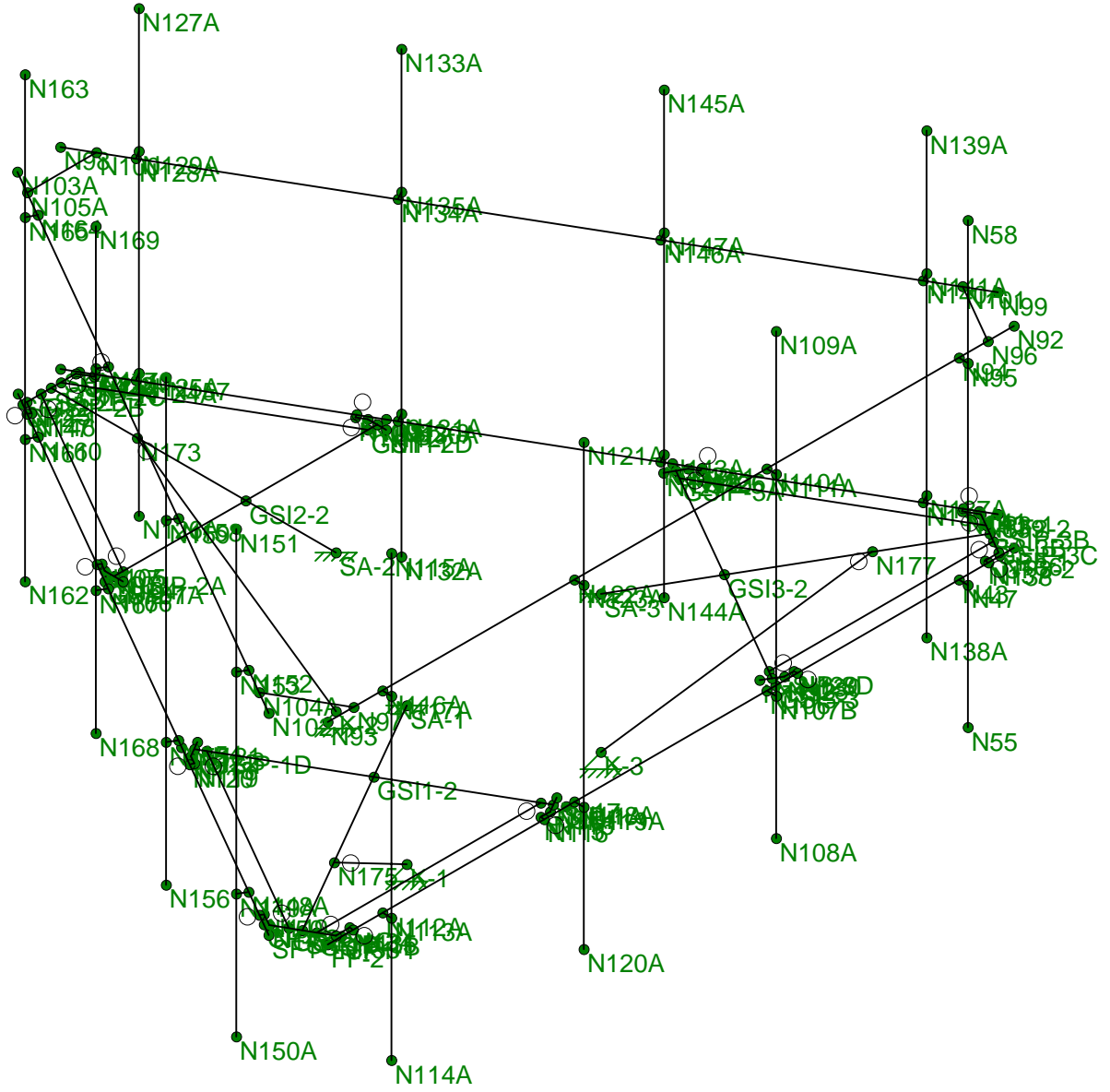
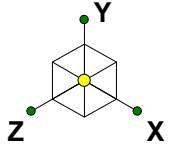
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 Designer : AJW  
 Job Number : TEP No. 94015.534062  
 Model Name : 302528 - Columbia Central

Apr 29, 2021  
 12:05 PM  
 Checked By: -

**(Global) Model Settings**

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	No
RISACONNECTION CODE	None
Cold Formed Steel Code	None
Wood Code	None
Wood Temperature	< 100F
Concrete Code	None
Masonry Code	None
Aluminum Code	None - Building
Stainless Steel Code	None

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



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**(Global) Model Settings, Continued**

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	1
Cd X	1
Rho Z	1
Rho X	1

**Hot Rolled Steel Properties**

	Label	E [ksi]	G [ksi]	Nu	Therm (1/E..Density[k/ft... Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65 .49 50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65 .49 36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65 .49 50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65 .527 42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65 .527 46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65 .49 35	1.6	60	1.2
7	A1085	29000	11154	.3	.65 .49 50	1.4	65	1.3

**Hot Rolled Steel Section Sets**

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iy [in4]	Izz [in4]	J [in4]
1	Face Horiz	PIPE 3.0	None	None	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Support Arm	HSS4X4X4	None	None	A53 Gr.B	Typical	3.37	7.8	7.8	12.8
3	Internal	HSS4X4X4	None	None	A53 Gr.B	Typical	3.37	7.8	7.8	12.8
4	Grating Support	L2x2x3	None	None	A53 Gr.B	Typical	.722	.271	.271	.009
5	Corner Plate	PL6x 1/2	None	None	A53 Gr.B	Typical	3	.063	9	.237
6	Mount Pipe	PIPE 2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
7	Internal Plate	PL6x3/8	None	None	A53 Gr.B	Typical	2.25	.026	6.75	.101
8	Support Rail	PIPE 2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
9	AHCP	L2.5x2.5x3	None	None	A36 Gr.36	Typical	.901	.535	.535	.011
10	PRK-1245	LL2.5x2.5x3x3	None	None	A36 Gr.36	Typical	1.8	2.46	1.07	.023



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**Cold Formed Steel Section Sets**

Label	Shape	Type	Design ...	Material	Design ...	A [in/2]	Iyy [in/4]	Izz [in/4]	J [in/4]
1	CF1A	Beam	None	A653 SS Gr33	Typical	.581	.057	4.41	.00063

**Material Takeoff**

	Material	Size	Pieces	Length(ft)	Weight(K)
1	General				
2	RIGID		36	4.7	0
3	Total General		36	4.7	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	L2.5x2.5x3	3	3.8	0
7	A36 Gr.36	LL2.5x2.5x3x3	3	13.2	0
8	A53 Gr.B	HSS4X4X4	9	29.9	.3
9	A53 Gr.B	L2x2x3	6	24.5	0
10	A53 Gr.B	PIPE 2.0	15	133.5	.5
11	A53 Gr.B	PIPE 3.0	3	37.5	.3
12	A53 Gr.B	PL6x1/2	9	4.2	0
13	A53 Gr.B	PL6x3/8	12	3	0
14	Total HR Steel		60	249.6	1.3

**Joint Boundary Conditions**

Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	K-1	Reaction	Reaction	Reaction		
2	K-2	Reaction	Reaction	Reaction		
3	K-3	Reaction	Reaction	Reaction		
4	SA-1	Reaction	Reaction	Reaction	Reaction	Reaction
5	SA-2	Reaction	Reaction	Reaction	Reaction	Reaction
6	SA-3	Reaction	Reaction	Reaction	Reaction	Reaction

**Member Primary Data**

Label	I Joint	J Joint	K Joint	Rotate(d...)	Section/Shape	Type	Design List	Material	Design Ru...
1	AHCP-1	N97	N104A		AHCP	None	None	A36 Gr.36	Typical
2	AHCP-2	N105A	N100	180	AHCP	None	None	A36 Gr.36	Typical
3	AHCP-3	N101	N96	180	AHCP	None	None	A36 Gr.36	Typical
4	CP-1	N133	N148		Corner Plate	None	None	A53 Gr.B	Typical
5	CP-2	N145	N142		Corner Plate	None	None	A53 Gr.B	Typical
6	CP-3	N139	N136		Corner Plate	None	None	A53 Gr.B	Typical
7	M71	N133	N134		Corner Plate	None	None	A53 Gr.B	Typical
8	M73	N136	N137		Corner Plate	None	None	A53 Gr.B	Typical
9	M75	N139	N140		Corner Plate	None	None	A53 Gr.B	Typical
10	M77	N142	N143		Corner Plate	None	None	A53 Gr.B	Typical
11	M79	N145	N146		Corner Plate	None	None	A53 Gr.B	Typical
12	M81	N148	N149		Corner Plate	None	None	A53 Gr.B	Typical
13	FF-TH	FF-1	FF-2		Face Horiz	None	None	A53 Gr.B	Typical
14	SF1-TH	SF1-1	SF1-2		Face Horiz	None	None	A53 Gr.B	Typical
15	SF2-TH	SF2-1	SF2-2		Face Horiz	None	None	A53 Gr.B	Typical
16	GSIP-1A	GSIP-1A	GSIP-1B		Grating Support	None	None	A53 Gr.B	Typical



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**Member Primary Data (Continued)**

Label	I Joint	J Joint	K Joint	Rotate(d...)	Section/Shape	Type	Design List	Material	Design Ru...
17	GSIP-1B	GSIP-1C	GSIP-1D		Grating Support	None	None	A53 Gr.B	Typical
18	GSIP-2A	GSIP-2A	GSIP-2B		Grating Support	None	None	A53 Gr.B	Typical
19	GSIP-2B	GSIP-2C	GSIP-2D		Grating Support	None	None	A53 Gr.B	Typical
20	GSIP-3A	GSIP-3A	GSIP-3B		Grating Support	None	None	A53 Gr.B	Typical
21	GSIP-3B	GSIP-3C	GSIP-3D		Grating Support	None	None	A53 Gr.B	Typical
22	GSI-1A	N114	GSI1-2		Internal	None	None	A53 Gr.B	Typical
23	GSI-1B	GSI1-2	N122		Internal	None	None	A53 Gr.B	Typical
24	GSI-2A	N104	GSI2-2		Internal	None	None	A53 Gr.B	Typical
25	GSI-2B	GSI2-2	N112		Internal	None	None	A53 Gr.B	Typical
26	GSI-3A	N124	GSI3-2		Internal	None	None	A53 Gr.B	Typical
27	GSI-3B	GSI3-2	N132		Internal	None	None	A53 Gr.B	Typical
28	M53	N107A	N103		Internal Plate	None	None	A53 Gr.B	Typical
29	M54	N103	N105		Internal Plate	None	None	A53 Gr.B	Typical
30	M56	N111	N108		Internal Plate	None	None	A53 Gr.B	Typical
31	M57	N108	N109		Internal Plate	None	None	A53 Gr.B	Typical
32	M59	N117	N113		Internal Plate	None	None	A53 Gr.B	Typical
33	M60	N113	N115		Internal Plate	None	None	A53 Gr.B	Typical
34	M62	N121	N118		Internal Plate	None	None	A53 Gr.B	Typical
35	M63	N118	N119		Internal Plate	None	None	A53 Gr.B	Typical
36	M65	N127	N123		Internal Plate	None	None	A53 Gr.B	Typical
37	M66	N123	N125		Internal Plate	None	None	A53 Gr.B	Typical
38	M68	N131	N128		Internal Plate	None	None	A53 Gr.B	Typical
39	M69	N128	N129		Internal Plate	None	None	A53 Gr.B	Typical
40	MP-1	N58	N55		Mount Pipe	None	None	A53 Gr.B	Typical
41	MP-2	N109A	N108A		Mount Pipe	None	None	A53 Gr.B	Typical
42	MP-3	N121A	N120A		Mount Pipe	None	None	A53 Gr.B	Typical
43	MP-4	N115A	N114A		Mount Pipe	None	None	A53 Gr.B	Typical
44	MP-5	N151	N150A		Mount Pipe	None	None	A53 Gr.B	Typical
45	MP-6	N157	N156		Mount Pipe	None	None	A53 Gr.B	Typical
46	MP-7	N169	N168		Mount Pipe	None	None	A53 Gr.B	Typical
47	MP-8	N163	N162		Mount Pipe	None	None	A53 Gr.B	Typical
48	MP-9	N127A	N126A		Mount Pipe	None	None	A53 Gr.B	Typical
49	MP-10	N133A	N132A		Mount Pipe	None	None	A53 Gr.B	Typical
50	MP-11	N145A	N144A		Mount Pipe	None	None	A53 Gr.B	Typical
51	MP-12	N139A	N138A		Mount Pipe	None	None	A53 Gr.B	Typical
52	K1	K-1	N175		PRK-1245	None	None	A36 Gr.36	Typical
53	K2	K-2	N173		PRK-1245	None	None	A36 Gr.36	Typical
54	K3	K-3	N177		PRK-1245	None	None	A36 Gr.36	Typical
55	M27	N43	N47		RIGID	None	None	RIGID	Typical
56	M55	N107	N105		RIGID	None	None	RIGID	Typical
57	M55A	N94	N95		RIGID	None	None	RIGID	Typical
58	M58	N110	N109		RIGID	None	None	RIGID	Typical
59	M61	N116	N115		RIGID	None	None	RIGID	Typical
60	M62A	N106	N107B		RIGID	None	None	RIGID	Typical
61	M63A	N110A	N111A		RIGID	None	None	RIGID	Typical
62	M64	N120	N119		RIGID	None	None	RIGID	Typical
63	M65A	N112A	N113A		RIGID	None	None	RIGID	Typical
64	M66A	N116A	N117A		RIGID	None	None	RIGID	Typical
65	M67	N126	N125		RIGID	None	None	RIGID	Typical
66	M68A	N118A	N119A		RIGID	None	None	RIGID	Typical
67	M69A	N122A	N123A		RIGID	None	None	RIGID	Typical
68	M70	N130	N129		RIGID	None	None	RIGID	Typical



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**Member Primary Data (Continued)**

Label	I Joint	J Joint	K Joint	Rotate(d...)	Section/Shape	Type	Design List	Material	Design Rul...
69	M71A	N124A	N125A		RIGID	None	None	RIGID	Typical
70	M72	N134	N135		RIGID	None	None	RIGID	Typical
71	M72A	N128A	N129A		RIGID	None	None	RIGID	Typical
72	M74	N137	N138		RIGID	None	None	RIGID	Typical
73	M74A	N130A	N131A		RIGID	None	None	RIGID	Typical
74	M75A	N134A	N135A		RIGID	None	None	RIGID	Typical
75	M76	N140	N141		RIGID	None	None	RIGID	Typical
76	M77A	N136A	N137A		RIGID	None	None	RIGID	Typical
77	M78	N143	N144		RIGID	None	None	RIGID	Typical
78	M78A	N140A	N141A		RIGID	None	None	RIGID	Typical
79	M80	N146	N147		RIGID	None	None	RIGID	Typical
80	M80A	N142A	N143A		RIGID	None	None	RIGID	Typical
81	M81A	N146A	N147A		RIGID	None	None	RIGID	Typical
82	M82	N149	N150		RIGID	None	None	RIGID	Typical
83	M83	N148A	N149A		RIGID	None	None	RIGID	Typical
84	M84	N152	N153		RIGID	None	None	RIGID	Typical
85	M86	N154	N155		RIGID	None	None	RIGID	Typical
86	M87	N158	N159		RIGID	None	None	RIGID	Typical
87	M89	N160	N161		RIGID	None	None	RIGID	Typical
88	M90	N164	N165		RIGID	None	None	RIGID	Typical
89	M92	N166	N167		RIGID	None	None	RIGID	Typical
90	M93	N170	N171		RIGID	None	None	RIGID	Typical
91	SA-1	SA-1	SA-1B		Support Arm	None	None	A53 Gr.B	Typical
92	SA-2	SA-2	SA-2B		Support Arm	None	None	A53 Gr.B	Typical
93	SA-3	SA-3	SA-3B		Support Arm	None	None	A53 Gr.B	Typical
94	SR-1	N92	N93		Support Rail	None	None	A53 Gr.B	Typical
95	SR-2	N102	N103A		Support Rail	None	None	A53 Gr.B	Typical
96	SR-3	N98	N99		Support Rail	None	None	A53 Gr.B	Typical

**Member Advanced Data**

Label	I Release	J Release	I Offset(in)	J Offset(in)	T/C Only	Physical	Defl Ra...Analysis...	Inactive	Seismi...
1	AHCP-1					Yes	** NA **		None
2	AHCP-2					Yes	** NA **		None
3	AHCP-3					Yes	** NA **		None
4	CP-1					Yes	** NA **		None
5	CP-2					Yes	** NA **		None
6	CP-3					Yes	** NA **		None
7	M71					Yes	** NA **		None
8	M73					Yes	** NA **		None
9	M75					Yes	** NA **		None
10	M77					Yes	** NA **		None
11	M79					Yes	** NA **		None
12	M81					Yes	** NA **		None
13	FF-TH					Yes	** NA **		None
14	SF1-TH					Yes	** NA **		None
15	SF2-TH					Yes	** NA **		None
16	GSIP-1A	BenPIN	BenPIN			Yes	** NA **		None
17	GSIP-1B	BenPIN	BenPIN			Yes	** NA **		None
18	GSIP-2A	BenPIN	BenPIN			Yes	** NA **		None
19	GSIP-2B	BenPIN	BenPIN			Yes	** NA **		None



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**Member Advanced Data (Continued)**

Label	I Release	J Release	I Offset(in)	J Offset(in)	T/C Only	Physical	Defl Ra...Analysis...	Inactive	Seismi...
20	GSIP-3A	BenPIN	BenPIN			Yes	** NA **		None
21	GSIP-3B	BenPIN	BenPIN			Yes	** NA **		None
22	GSI-1A					Yes	** NA **		None
23	GSI-1B					Yes	** NA **		None
24	GSI-2A					Yes	** NA **		None
25	GSI-2B					Yes	** NA **		None
26	GSI-3A					Yes	** NA **		None
27	GSI-3B					Yes	** NA **		None
28	M53					Yes	** NA **		None
29	M54					Yes	** NA **		None
30	M56					Yes	** NA **		None
31	M57					Yes	** NA **		None
32	M59					Yes	** NA **		None
33	M60					Yes	** NA **		None
34	M62					Yes	** NA **		None
35	M63					Yes	** NA **		None
36	M65					Yes	** NA **		None
37	M66					Yes	** NA **		None
38	M68					Yes	** NA **		None
39	M69					Yes	** NA **		None
40	MP-1					Yes	** NA **		None
41	MP-2					Yes	** NA **		None
42	MP-3					Yes	** NA **		None
43	MP-4					Yes	** NA **		None
44	MP-5					Yes	** NA **		None
45	MP-6					Yes	** NA **		None
46	MP-7					Yes	** NA **		None
47	MP-8					Yes	** NA **		None
48	MP-9					Yes	** NA **		None
49	MP-10					Yes	** NA **		None
50	MP-11					Yes	** NA **		None
51	MP-12					Yes	** NA **		None
52	K1		BenPIN			Yes	** NA **		None
53	K2		BenPIN			Yes	** NA **		None
54	K3		BenPIN			Yes	** NA **		None
55	M27					Yes	** NA **		None
56	M55		000000			Yes	** NA **		None
57	M55A					Yes	** NA **		None
58	M58		000000			Yes	** NA **		None
59	M61		000000			Yes	** NA **		None
60	M62A					Yes	** NA **		None
61	M63A					Yes	** NA **		None
62	M64		000000			Yes	** NA **		None
63	M65A					Yes	** NA **		None
64	M66A					Yes	** NA **		None
65	M67		000000			Yes	** NA **		None
66	M68A					Yes	** NA **		None
67	M69A					Yes	** NA **		None
68	M70		000000			Yes	** NA **		None
69	M71A					Yes	** NA **		None
70	M72		0000X0			Yes	** NA **		None
71	M72A					Yes	** NA **		None





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**Member Advanced Data (Continued)**

Label	I Release	J Release	I Offset(in)	J Offset(in)	T/C Only	Physical	Defl Ra...	Analysis...	Inactive	Seism...
72	M74	OOOXXO				Yes	** NA **			None
73	M74A					Yes	** NA **			None
74	M75A					Yes	** NA **			None
75	M76	OOOXXO				Yes	** NA **			None
76	M77A					Yes	** NA **			None
77	M78	OOOXXO				Yes	** NA **			None
78	M78A					Yes	** NA **			None
79	M80	OOOXXO				Yes	** NA **			None
80	M80A					Yes	** NA **			None
81	M81A					Yes	** NA **			None
82	M82	OOOXXO				Yes	** NA **			None
83	M83					Yes	** NA **			None
84	M84					Yes	** NA **			None
85	M86					Yes	** NA **			None
86	M87					Yes	** NA **			None
87	M89					Yes	** NA **			None
88	M90					Yes	** NA **			None
89	M92					Yes	** NA **			None
90	M93					Yes	** NA **			None
91	SA-1					Yes	** NA **			None
92	SA-2					Yes	** NA **			None
93	SA-3					Yes	** NA **			None
94	SR-1					Yes	** NA **			None
95	SR-2					Yes	** NA **			None
96	SR-3					Yes	** NA **			None

**Hot Rolled Steel Design Parameters**

Label	Shape	Length...	Lbvy(ft)	Lbzz(ft)	Lcomp top...	Lcomp bot...	L-torq...	Kyy	Kzz	Cb	Funct...
1	AHCP-1	AHCP	1.259					1	1		Lateral
2	AHCP-2	AHCP	1.259					1	1		Lateral
3	AHCP-3	AHCP	1.259					1	1		Lateral
4	CP-1	Corner Plate	.893	.5	.5			1	1		Lateral
5	CP-2	Corner Plate	.893	.5	.5			1	1		Lateral
6	CP-3	Corner Plate	.893	.5	.5			1	1		Lateral
7	M71	Corner Plate	.25					1	1		Lateral
8	M73	Corner Plate	.25					1	1		Lateral
9	M75	Corner Plate	.25					1	1		Lateral
10	M77	Corner Plate	.25					1	1		Lateral
11	M79	Corner Plate	.25					1	1		Lateral
12	M81	Corner Plate	.25					1	1		Lateral
13	FF-TH	Face Horiz	12.5	4.9				2.1	2.1		Lateral
14	SF1-TH	Face Horiz	12.5	4.9				2.1	2.1		Lateral
15	SF2-TH	Face Horiz	12.5	4.9				2.1	2.1		Lateral
16	GSIP-1A	Grating Support	4.091					1	1		Lateral
17	GSIP-1B	Grating Support	4.091					1	1		Lateral
18	GSIP-2A	Grating Support	4.091					1	1		Lateral
19	GSIP-2B	Grating Support	4.091					1	1		Lateral
20	GSIP-3A	Grating Support	4.091					1	1		Lateral
21	GSIP-3B	Grating Support	4.091					1	1		Lateral
22	GSI-1A	Internal	2.395					.8	.8		Lateral



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**Hot Rolled Steel Design Parameters (Continued)**

Label	Shape	Length...	Lbvy(ft)	Lbzz(ft)	Lcomp top...	Lcomp bot...	L-torq...	Kyy	Kzz	Cb	Funct...
23	GSI-1B	Internal	2.395					.8	.8		Lateral
24	GSI-2A	Internal	2.395					.8	.8		Lateral
25	GSI-2B	Internal	2.395					.8	.8		Lateral
26	GSI-3A	Internal	2.395					.8	.8		Lateral
27	GSI-3B	Internal	2.395					.8	.8		Lateral
28	M53	Internal Plate	.334	.167	.167			1	1		Lateral
29	M54	Internal Plate	.167					1	1		Lateral
30	M56	Internal Plate	.334	.167	.167			1	1		Lateral
31	M57	Internal Plate	.167					1	1		Lateral
32	M59	Internal Plate	.334	.167	.167			1	1		Lateral
33	M60	Internal Plate	.167					1	1		Lateral
34	M62	Internal Plate	.334	.167	.167			1	1		Lateral
35	M63	Internal Plate	.167					1	1		Lateral
36	M65	Internal Plate	.334	.167	.167			1	1		Lateral
37	M66	Internal Plate	.167					1	1		Lateral
38	M68	Internal Plate	.334	.167	.167			1	1		Lateral
39	M69	Internal Plate	.167					1	1		Lateral
40	MP-1	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
41	MP-2	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
42	MP-3	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
43	MP-4	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
44	MP-5	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
45	MP-6	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
46	MP-7	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
47	MP-8	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
48	MP-9	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
49	MP-10	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
50	MP-11	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
51	MP-12	Mount Pipe	8	Segment	Segment			2.1	2.1		Lateral
52	K1	PRK-1245	4.398					1	1		Lateral
53	K2	PRK-1245	4.398					1	1		Lateral
54	K3	PRK-1245	4.398					1	1		Lateral
55	SA-1	Support Arm	5.187	3.54				1	1		Lateral
56	SA-2	Support Arm	5.187	3.54				1	1		Lateral
57	SA-3	Support Arm	5.187	3.54				1	1		Lateral
58	SR-1	Support Rail	12.5					2.1	2.1		Lateral
59	SR-2	Support Rail	12.5					2.1	2.1		Lateral
60	SR-3	Support Rail	12.5					2.1	2.1		Lateral

**Cold Formed Steel Design Parameters**

Label	Shape	Length...	Lbvy(ft)	Lbzz(ft)	Lcomp to...	Lcomp bo...	Kyy	Kzz	Cr-yy	Cr-zz	Cb	R	y sway	z sway
No Data to Print ...														

**Basic Load Cases**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
1	Dead	None	-1			27		3
2	0 Wind - No Ice	None				27	60	
3	30 Wind - No Ice	None				54	120	
4	45 Wind - No Ice	None				54	120	





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**Basic Load Cases (Continued)**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...)	Surface(P...
5	60 Wind - No Ice	None				54	120	
6	90 Wind - No Ice	None				27	60	
7	120 Wind - No Ice	None				54	120	
8	135 Wind - No Ice	None				54	120	
9	150 Wind - No Ice	None				54	120	
10	180 Wind - No Ice	None				27	60	
11	210 Wind - No Ice	None				54	120	
12	225 Wind - No Ice	None				54	120	
13	240 Wind - No Ice	None				54	120	
14	270 Wind - No Ice	None				27	60	
15	300 Wind - No Ice	None				54	120	
16	315 Wind - No Ice	None				54	120	
17	330 Wind - No Ice	None				54	120	
18	Ice Weight	None				27	60	3
19	0 Wind - Ice	None				27	60	
20	30 Wind - Ice	None				54	120	
21	45 Wind - Ice	None				54	120	
22	60 Wind - Ice	None				54	120	
23	90 Wind - Ice	None				27	60	
24	120 Wind - Ice	None				54	120	
25	135 Wind - Ice	None				54	120	
26	150 Wind - Ice	None				54	120	
27	180 Wind - Ice	None				27	60	
28	210 Wind - Ice	None				54	120	
29	225 Wind - Ice	None				54	120	
30	240 Wind - Ice	None				54	120	
31	270 Wind - Ice	None				27	60	
32	300 Wind - Ice	None				54	120	
33	315 Wind - Ice	None				54	120	
34	330 Wind - Ice	None				54	120	
35	Lm	None				1		
36	Lv	None				1		
37	Seismic Load X	ELX	-1			27		
38	Seismic Load Z	ELZ		-1		27		
39	BLC 1 Transient Area..	None					54	
40	BLC 18 Transient Are..	None					54	

**Load Combinations**

Description	So..P...	S...	BLCFac..	BLC Fac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..
1	1.4D	Yes	Y	1	1.4							
2	0.9D+1.0 0-Wind	Yes	Y	1	.9	2	1					
3	0.9D+1.0 30-Wind	Yes	Y	1	.9	3	1					
4	0.9D+1.0 45-Wind	Yes	Y	1	.9	4	1					
5	0.9D+1.0 60-Wind	Yes	Y	1	.9	5	1					
6	0.9D+1.0 90-Wind	Yes	Y	1	.9	6	1					
7	0.9D+1.0 120-Wind	Yes	Y	1	.9	7	1					
8	0.9D+1.0 135-Wind	Yes	Y	1	.9	8	1					
9	0.9D+1.0 150-Wind	Yes	Y	1	.9	9	1					
10	0.9D+1.0 180-Wind	Yes	Y	1	.9	10	1					
11	0.9D+1.0 210-Wind	Yes	Y	1	.9	11	1					



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**Load Combinations (Continued)**

Description	So..P...	S...	BLCFac..	BLC Fac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..
12	0.9D+1.0 225-Wind	Yes	Y	1	.9	12	1					
13	0.9D+1.0 240-Wind	Yes	Y	1	.9	13	1					
14	0.9D+1.0 270-Wind	Yes	Y	1	.9	14	1					
15	0.9D+1.0 300-Wind	Yes	Y	1	.9	15	1					
16	0.9D+1.0 315-Wind	Yes	Y	1	.9	16	1					
17	0.9D+1.0 330-Wind	Yes	Y	1	.9	17	1					
18	1.2D+1.0 0-Wind	Yes	Y	1	1.2	2	1					
19	1.2D+1.0 30-Wind	Yes	Y	1	1.2	3	1					
20	1.2D+1.0 45-Wind	Yes	Y	1	1.2	4	1					
21	1.2D+1.0 60-Wind	Yes	Y	1	1.2	5	1					
22	1.2D+1.0 90-Wind	Yes	Y	1	1.2	6	1					
23	1.2D+1.0 120-Wind	Yes	Y	1	1.2	7	1					
24	1.2D+1.0 135-Wind	Yes	Y	1	1.2	8	1					
25	1.2D+1.0 150-Wind	Yes	Y	1	1.2	9	1					
26	1.2D+1.0 180-Wind	Yes	Y	1	1.2	10	1					
27	1.2D+1.0 210-Wind	Yes	Y	1	1.2	11	1					
28	1.2D+1.0 225-Wind	Yes	Y	1	1.2	12	1					
29	1.2D+1.0 240-Wind	Yes	Y	1	1.2	13	1					
30	1.2D+1.0 270-Wind	Yes	Y	1	1.2	14	1					
31	1.2D+1.0 300-Wind	Yes	Y	1	1.2	15	1					
32	1.2D+1.0 315-Wind	Yes	Y	1	1.2	16	1					
33	1.2D+1.0 330-Wind	Yes	Y	1	1.2	17	1					
34	1.2D+1.0Di+1.0 0-Wi...	Yes	Y	1	1.2	18	1	19	1			
35	1.2D+1.0Di+1.0 30-W...	Yes	Y	1	1.2	18	1	20	1			
36	1.2D+1.0Di+1.0 45-W...	Yes	Y	1	1.2	18	1	21	1			
37	1.2D+1.0Di+1.0 60-W...	Yes	Y	1	1.2	18	1	22	1			
38	1.2D+1.0Di+1.0 90-W...	Yes	Y	1	1.2	18	1	23	1			
39	1.2D+1.0Di+1.0 120-...	Yes	Y	1	1.2	18	1	24	1			
40	1.2D+1.0Di+1.0 135-...	Yes	Y	1	1.2	18	1	25	1			
41	1.2D+1.0Di+1.0 150-...	Yes	Y	1	1.2	18	1	26	1			
42	1.2D+1.0Di+1.0 180-...	Yes	Y	1	1.2	18	1	27	1			
43	1.2D+1.0Di+1.0 210-...	Yes	Y	1	1.2	18	1	28	1			
44	1.2D+1.0Di+1.0 225-...	Yes	Y	1	1.2	18	1	29	1			
45	1.2D+1.0Di+1.0 240-...	Yes	Y	1	1.2	18	1	30	1			
46	1.2D+1.0Di+1.0 270-...	Yes	Y	1	1.2	18	1	31	1			
47	1.2D+1.0Di+1.0 300-...	Yes	Y	1	1.2	18	1	32	1			
48	1.2D+1.0Di+1.0 315-...	Yes	Y	1	1.2	18	1	33	1			
49	1.2D+1.0Di+1.0 330-...	Yes	Y	1	1.2	18	1	34	1			
50	1.2D+1.5Lv	Yes	Y	36	1.5	1	1.2					
51	1.2D+1.5Lm+1.0 0-W...	Yes	Y	1	1.2	2	.063	35	1.5			
52	1.2D+1.5Lm+1.0 30-...	Yes	Y	1	1.2	3	.063	35	1.5			
53	1.2D+1.5Lm+1.0 45-...	Yes	Y	1	1.2	4	.063	35	1.5			
54	1.2D+1.5Lm+1.0 60-...	Yes	Y	1	1.2	5	.063	35	1.5			
55	1.2D+1.5Lm+1.0 90-...	Yes	Y	1	1.2	6	.063	35	1.5			
56	1.2D+1.5Lm+1.0 120-...	Yes	Y	1	1.2	7	.063	35	1.5			
57	1.2D+1.5Lm+1.0 135-...	Yes	Y	1	1.2	8	.063	35	1.5			
58	1.2D+1.5Lm+1.0 150-...	Yes	Y	1	1.2	9	.063	35	1.5			
59	1.2D+1.5Lm+1.0 180-...	Yes	Y	1	1.2	10	.063	35	1.5			
60	1.2D+1.5Lm+1.0 210-...	Yes	Y	1	1.2	11	.063	35	1.5			
61	1.2D+1.5Lm+1.0 225-...	Yes	Y	1	1.2	12	.063	35	1.5			
62	1.2D+1.5Lm+1.0 240-...	Yes	Y	1	1.2	13	.063	35	1.5			
63	1.2D+1.5Lm+1.0 270-...	Yes	Y	1	1.2	14	.063	35	1.5			



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**Load Combinations (Continued)**

Description	So.	P...	S...	BLC Fac.	BLC Fac.	BLC Fac.	BLC Fac.	BLC Fac.	BLC Fac.	BLC Fac.	BLC Fac.	BLC Fac.	BLC Fac.	BLC Fac.	BLC Fac.
64	1.2D+1.5Lm+1.0 300...	Yes	Y	1	1.2	15	.063	35	1.5						
65	1.2D+1.5Lm+1.0 315-...	Yes	Y	1	1.2	16	.063	35	1.5						
66	1.2D+1.5Lm+1.0 330-...	Yes	Y	1	1.2	17	.063	35	1.5						
67	(1.2+0.2Sds)D+1.0 0 ...	Y	Y	1	1.2	ELX	.034	0							
68	(1.2+0.2Sds)D+1.0 3...	Y	Y	1	1.2	ELX	.029	ELZ	.017						
69	(1.2+0.2Sds)D+1.0 4...	Y	Y	1	1.2	ELX	.024	ELZ	.024						
70	(1.2+0.2Sds)D+1.0 6...	Y	Y	1	1.2	ELX	.017	ELZ	.029						
71	(1.2+0.2Sds)D+1.0 9...	Y	Y	1	1.2	0		ELZ	.034						
72	(1.2+0.2Sds)D+1.0 1...	Y	Y	1	1.2	ELX	-.017	ELZ	.029						
73	(1.2+0.2Sds)D+1.0 1...	Y	Y	1	1.2	ELX	-.024	ELZ	.024						
74	(1.2+0.2Sds)D+1.0 1...	Y	Y	1	1.2	ELX	-.029	ELZ	.017						
75	(1.2+0.2Sds)D+1.0 1...	Y	Y	1	1.2	ELX	-.034	0							
76	(1.2+0.2Sds)D+1.0 2...	Y	Y	1	1.2	ELX	-.029	ELZ	.017						
77	(1.2+0.2Sds)D+1.0 2...	Y	Y	1	1.2	ELX	-.024	ELZ	.024						
78	(1.2+0.2Sds)D+1.0 2...	Y	Y	1	1.2	ELX	-.017	ELZ	.029						
79	(1.2+0.2Sds)D+1.0 2...	Y	Y	1	1.2	0		ELZ	.034						
80	(1.2+0.2Sds)D+1.0 3...	Y	Y	1	1.2	ELX	.017	ELZ	.029						
81	(1.2+0.2Sds)D+1.0 3...	Y	Y	1	1.2	ELX	.024	ELZ	.024						
82	(1.2+0.2Sds)D+1.0 3...	Y	Y	1	1.2	ELX	.029	ELZ	.017						
83	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	.034	0							
84	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	.029	ELZ	.017						
85	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	.024	ELZ	.024						
86	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	.017	ELZ	.029						
87	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	0		ELZ	.034						
88	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	-.017	ELZ	.029						
89	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	-.024	ELZ	.024						
90	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	-.029	ELZ	.017						
91	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	-.034	0							
92	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	-.029	ELZ	.017						
93	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	-.024	ELZ	.024						
94	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	-.017	ELZ	.029						
95	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	0		ELZ	.034						
96	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	.017	ELZ	.029						
97	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	.024	ELZ	.024						
98	(0.9-0.2Sds)*DL+1.0 ...	Y	Y	1	.887	ELX	.029	ELZ	.017						

**Joint Loads and Enforced Displacements (BLC 35 : Lm)**

Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N43	L	Y -5

**Joint Loads and Enforced Displacements (BLC 36 : Lv)**

Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	FF-1	L	Y -.25

**Member Point Loads (BLC 1 : Dead)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	Y	-.02 2
2	MP-1	Y	-.046 3



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**Member Point Loads (BLC 1 : Dead) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
3	MP-2	Y	-.061 .5
4	MP-2	Y	-.075 3
5	MP-2	Y	-.086 3
6	MP-3	Y	-.052 3
7	MP-5	Y	-.02 2
8	MP-5	Y	-.046 3
9	MP-6	Y	-.061 .5
10	MP-6	Y	-.075 3
11	MP-6	Y	-.086 3
12	MP-7	Y	-.052 3
13	MP-9	Y	-.02 2
14	MP-9	Y	-.046 3
15	MP-10	Y	-.061 .5
16	MP-10	Y	-.075 3
17	MP-10	Y	-.086 3
18	MP-11	Y	-.052 3
19	MP-1	Y	-.02 6
20	MP-2	Y	-.061 7.5
21	MP-3	Y	-.052 5
22	MP-5	Y	-.02 6
23	MP-6	Y	-.061 7.5
24	MP-7	Y	-.052 5
25	MP-9	Y	-.02 6
26	MP-10	Y	-.061 7.5
27	MP-11	Y	-.052 5

**Member Point Loads (BLC 2 : 0 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	X	-.1 2
2	MP-1	X	-.05 3
3	MP-2	X	-.31 .5
4	MP-2	X	-.041 3
5	MP-2	X	-.051 3
6	MP-3	X	-.087 3
7	MP-5	X	-.05 2
8	MP-5	X	-.029 3
9	MP-6	X	-.181 .5
10	MP-6	X	-.049 3
11	MP-6	X	-.06 3
12	MP-7	X	-.051 3
13	MP-9	X	-.05 2
14	MP-9	X	-.029 3
15	MP-10	X	-.181 .5
16	MP-10	X	-.049 3
17	MP-10	X	-.06 3
18	MP-11	X	-.051 3
19	MP-1	X	-.1 6
20	MP-2	X	-.31 7.5
21	MP-3	X	-.087 5
22	MP-5	X	-.05 6
23	MP-6	X	-.181 7.5



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**Member Point Loads (BLC 2 : 0 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
24	MP-7	X	-.051	5
25	MP-9	X	-.05	6
26	MP-10	X	-.181	7.5
27	MP-11	X	-.051	5

**Member Point Loads (BLC 3 : 30 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	-.064	2
2	MP-1	X	-.034	3
3	MP-2	X	-.209	.5
4	MP-2	X	-.039	3
5	MP-2	X	-.048	3
6	MP-3	X	-.059	3
7	MP-5	X	-.029	2
8	MP-5	X	-.018	3
9	MP-6	X	-.118	.5
10	MP-6	X	-.044	3
11	MP-6	X	-.055	3
12	MP-7	X	-.034	3
13	MP-9	X	-.074	2
14	MP-9	X	-.038	3
15	MP-10	X	-.234	.5
16	MP-10	X	-.038	3
17	MP-10	X	-.046	3
18	MP-11	X	-.066	3
19	MP-1	X	-.064	6
20	MP-2	X	-.209	7.5
21	MP-3	X	-.059	5
22	MP-5	X	-.029	6
23	MP-6	X	-.118	7.5
24	MP-7	X	-.034	5
25	MP-9	X	-.074	6
26	MP-10	X	-.234	7.5
27	MP-11	X	-.066	5
28	MP-1	Z	-.037	2
29	MP-1	Z	-.019	3
30	MP-2	Z	-.12	.5
31	MP-2	Z	-.023	3
32	MP-2	Z	-.028	3
33	MP-3	Z	-.034	3
34	MP-5	Z	-.017	2
35	MP-5	Z	-.011	3
36	MP-6	Z	-.068	.5
37	MP-6	Z	-.026	3
38	MP-6	Z	-.032	3
39	MP-7	Z	-.019	3
40	MP-9	Z	-.043	2
41	MP-9	Z	-.022	3
42	MP-10	Z	-.135	.5
43	MP-10	Z	-.022	3
44	MP-10	Z	-.027	3



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**Member Point Loads (BLC 3 : 30 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
45	MP-11	Z	-.038	3
46	MP-1	Z	-.037	6
47	MP-2	Z	-.12	7.5
48	MP-3	Z	-.034	5
49	MP-5	Z	-.017	6
50	MP-6	Z	-.068	7.5
51	MP-7	Z	-.019	5
52	MP-9	Z	-.043	6
53	MP-10	Z	-.135	7.5
54	MP-11	Z	-.038	5

**Member Point Loads (BLC 4 : 45 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	-.04	2
2	MP-1	X	-.022	3
3	MP-2	X	-.138	.5
4	MP-2	X	-.034	3
5	MP-2	X	-.042	3
6	MP-3	X	-.039	3
7	MP-5	X	-.027	2
8	MP-5	X	-.016	3
9	MP-6	X	-.105	.5
10	MP-6	X	-.036	3
11	MP-6	X	-.045	3
12	MP-7	X	-.03	3
13	MP-9	X	-.069	2
14	MP-9	X	-.035	3
15	MP-10	X	-.214	.5
16	MP-10	X	-.029	3
17	MP-10	X	-.036	3
18	MP-11	X	-.06	3
19	MP-1	X	-.04	6
20	MP-2	X	-.138	7.5
21	MP-3	X	-.039	5
22	MP-5	X	-.027	6
23	MP-6	X	-.105	7.5
24	MP-7	X	-.03	5
25	MP-9	X	-.069	6
26	MP-10	X	-.214	7.5
27	MP-11	X	-.06	5
28	MP-1	Z	-.04	2
29	MP-1	Z	-.022	3
30	MP-2	Z	-.138	.5
31	MP-2	Z	-.034	3
32	MP-2	Z	-.042	3
33	MP-3	Z	-.039	3
34	MP-5	Z	-.027	2
35	MP-5	Z	-.016	3
36	MP-6	Z	-.105	.5
37	MP-6	Z	-.036	3
38	MP-6	Z	-.045	3



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**Member Point Loads (BLC 4 : 45 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
39	MP-7	Z	-.03	3
40	MP-9	Z	-.069	2
41	MP-9	Z	-.035	3
42	MP-10	Z	-.214	.5
43	MP-10	Z	-.029	3
44	MP-10	Z	-.036	3
45	MP-11	Z	-.06	3
46	MP-1	Z	-.04	6
47	MP-2	Z	-.138	7.5
48	MP-3	Z	-.039	5
49	MP-5	Z	-.027	6
50	MP-6	Z	-.105	7.5
51	MP-7	Z	-.03	5
52	MP-9	Z	-.069	6
53	MP-10	Z	-.214	7.5
54	MP-11	Z	-.06	5

**Member Point Loads (BLC 5 : 60 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
1	MP-1	X	-.021	2
2	MP-1	X	-.012	3
3	MP-2	X	-.078	.5
4	MP-2	X	-.025	3
5	MP-2	X	-.031	3
6	MP-3	X	-.022	3
7	MP-5	X	-.025	2
8	MP-5	X	-.014	3
9	MP-6	X	-.09	.5
10	MP-6	X	-.024	3
11	MP-6	X	-.03	3
12	MP-7	X	-.026	3
13	MP-9	X	-.051	2
14	MP-9	X	-.026	3
15	MP-10	X	-.157	.5
16	MP-10	X	-.02	3
17	MP-10	X	-.025	3
18	MP-11	X	-.044	3
19	MP-1	X	-.021	6
20	MP-2	X	-.078	7.5
21	MP-3	X	-.022	5
22	MP-5	X	-.025	6
23	MP-6	X	-.09	7.5
24	MP-7	X	-.026	5
25	MP-9	X	-.051	6
26	MP-10	X	-.157	7.5
27	MP-11	X	-.044	5
28	MP-1	Z	-.036	2
29	MP-1	Z	-.021	3
30	MP-2	Z	-.136	.5
31	MP-2	Z	-.043	3
32	MP-2	Z	-.054	3



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**Member Point Loads (BLC 5 : 60 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
33	MP-3	Z	-.039	3
34	MP-5	Z	-.044	2
35	MP-5	Z	-.025	3
36	MP-6	Z	-.156	.5
37	MP-6	Z	-.042	3
38	MP-6	Z	-.052	3
39	MP-7	Z	-.044	3
40	MP-9	Z	-.089	2
41	MP-9	Z	-.044	3
42	MP-10	Z	-.273	.5
43	MP-10	Z	-.035	3
44	MP-10	Z	-.043	3
45	MP-11	Z	-.077	3
46	MP-1	Z	-.036	6
47	MP-2	Z	-.136	7.5
48	MP-3	Z	-.039	5
49	MP-5	Z	-.044	6
50	MP-6	Z	-.156	7.5
51	MP-7	Z	-.044	5
52	MP-9	Z	-.089	6
53	MP-10	Z	-.273	7.5
54	MP-11	Z	-.077	5

**Member Point Loads (BLC 6 : 90 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
1	MP-1	Z	-.035	2
2	MP-1	Z	-.022	3
3	MP-2	Z	-.141	.5
4	MP-2	Z	-.051	3
5	MP-2	Z	-.063	3
6	MP-3	Z	-.04	3
7	MP-5	Z	-.085	2
8	MP-5	Z	-.044	3
9	MP-6	Z	-.27	.5
10	MP-6	Z	-.043	3
11	MP-6	Z	-.054	3
12	MP-7	Z	-.076	3
13	MP-9	Z	-.085	2
14	MP-9	Z	-.044	3
15	MP-10	Z	-.27	.5
16	MP-10	Z	-.043	3
17	MP-10	Z	-.054	3
18	MP-11	Z	-.076	3
19	MP-1	Z	-.035	6
20	MP-2	Z	-.141	7.5
21	MP-3	Z	-.04	5
22	MP-5	Z	-.085	6
23	MP-6	Z	-.27	7.5
24	MP-7	Z	-.076	5
25	MP-9	Z	-.085	6
26	MP-10	Z	-.27	7.5



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**Member Point Loads (BLC 6 : 90 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
27	MP-11	Z	-.076 5

**Member Point Loads (BLC 7 : 120 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.031 2
2	MP-1	X	.017 3
3	MP-2	X	.105 .5
4	MP-2	X	.024 3
5	MP-2	X	.029 3
6	MP-3	X	.03 3
7	MP-5	X	.051 2
8	MP-5	X	.026 3
9	MP-6	X	.157 .5
10	MP-6	X	.02 3
11	MP-6	X	.025 3
12	MP-7	X	.044 3
13	MP-9	X	.025 2
14	MP-9	X	.014 3
15	MP-10	X	.09 .5
16	MP-10	X	.024 3
17	MP-10	X	.03 3
18	MP-11	X	.026 3
19	MP-1	X	.031 6
20	MP-2	X	.105 7.5
21	MP-3	X	.03 5
22	MP-5	X	.051 6
23	MP-6	X	.157 7.5
24	MP-7	X	.044 5
25	MP-9	X	.025 6
26	MP-10	X	.09 7.5
27	MP-11	X	.026 5
28	MP-1	Z	-.053 2
29	MP-1	Z	-.029 3
30	MP-2	Z	-.182 .5
31	MP-2	Z	-.041 3
32	MP-2	Z	-.05 3
33	MP-3	Z	-.051 3
34	MP-5	Z	-.089 2
35	MP-5	Z	-.044 3
36	MP-6	Z	-.273 .5
37	MP-6	Z	-.035 3
38	MP-6	Z	-.043 3
39	MP-7	Z	-.077 3
40	MP-9	Z	-.044 2
41	MP-9	Z	-.025 3
42	MP-10	Z	-.156 .5
43	MP-10	Z	-.042 3
44	MP-10	Z	-.052 3
45	MP-11	Z	-.044 3
46	MP-1	Z	-.053 6
47	MP-2	Z	-.182 7.5



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**Member Point Loads (BLC 7 : 120 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
48	MP-3	Z	-.051 5
49	MP-5	Z	-.089 6
50	MP-6	Z	-.273 7.5
51	MP-7	Z	-.077 5
52	MP-9	Z	-.044 6
53	MP-10	Z	-.156 7.5
54	MP-11	Z	-.044 5

**Member Point Loads (BLC 8 : 135 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.056 2
2	MP-1	X	.029 3
3	MP-2	X	.181 .5
4	MP-2	X	.031 3
5	MP-2	X	.039 3
6	MP-3	X	.051 3
7	MP-5	X	.069 2
8	MP-5	X	.035 3
9	MP-6	X	.214 .5
10	MP-6	X	.029 3
11	MP-6	X	.036 3
12	MP-7	X	.06 3
13	MP-9	X	.027 2
14	MP-9	X	.016 3
15	MP-10	X	.105 .5
16	MP-10	X	.036 3
17	MP-10	X	.045 3
18	MP-11	X	.03 3
19	MP-1	X	.056 6
20	MP-2	X	.181 7.5
21	MP-3	X	.051 5
22	MP-5	X	.069 6
23	MP-6	X	.214 7.5
24	MP-7	X	.06 5
25	MP-9	X	.027 6
26	MP-10	X	.105 7.5
27	MP-11	X	.03 5
28	MP-1	Z	-.056 2
29	MP-1	Z	-.029 3
30	MP-2	Z	-.181 .5
31	MP-2	Z	-.031 3
32	MP-2	Z	-.039 3
33	MP-3	Z	-.051 3
34	MP-5	Z	-.069 2
35	MP-5	Z	-.035 3
36	MP-6	Z	-.214 .5
37	MP-6	Z	-.029 3
38	MP-6	Z	-.036 3
39	MP-7	Z	-.06 3
40	MP-9	Z	-.027 2
41	MP-9	Z	-.016 3



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**Member Point Loads (BLC 8 : 135 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
42	MP-10	Z	-.105	5
43	MP-10	Z	-.036	3
44	MP-10	Z	-.045	3
45	MP-11	Z	-.03	3
46	MP-1	Z	-.056	6
47	MP-2	Z	-.181	7.5
48	MP-3	Z	-.051	5
49	MP-5	Z	-.069	6
50	MP-6	Z	-.214	7.5
51	MP-7	Z	-.06	5
52	MP-9	Z	-.027	6
53	MP-10	Z	-.105	7.5
54	MP-11	Z	-.03	5

**Member Point Loads (BLC 9 : 150 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	.082	2
2	MP-1	X	.041	3
3	MP-2	X	.255	.5
4	MP-2	X	.036	3
5	MP-2	X	.045	3
6	MP-3	X	.072	3
7	MP-5	X	.074	2
8	MP-5	X	.038	3
9	MP-6	X	.234	.5
10	MP-6	X	.038	3
11	MP-6	X	.046	3
12	MP-7	X	.066	3
13	MP-9	X	.029	2
14	MP-9	X	.018	3
15	MP-10	X	.118	.5
16	MP-10	X	.044	3
17	MP-10	X	.055	3
18	MP-11	X	.034	3
19	MP-1	X	.082	6
20	MP-2	X	.255	7.5
21	MP-3	X	.072	5
22	MP-5	X	.074	6
23	MP-6	X	.234	7.5
24	MP-7	X	.066	5
25	MP-9	X	.029	6
26	MP-10	X	.118	7.5
27	MP-11	X	.034	5
28	MP-1	Z	-.047	2
29	MP-1	Z	-.024	3
30	MP-2	Z	-.147	5
31	MP-2	Z	-.021	3
32	MP-2	Z	-.026	3
33	MP-3	Z	-.041	3
34	MP-5	Z	-.043	2
35	MP-5	Z	-.022	3



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**Member Point Loads (BLC 9 : 150 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
36	MP-6	Z	-.135	.5
37	MP-6	Z	-.022	3
38	MP-6	Z	-.027	3
39	MP-7	Z	-.038	3
40	MP-9	Z	-.017	2
41	MP-9	Z	-.011	3
42	MP-10	Z	-.068	.5
43	MP-10	Z	-.026	3
44	MP-10	Z	-.032	3
45	MP-11	Z	-.019	3
46	MP-1	Z	-.047	6
47	MP-2	Z	-.147	7.5
48	MP-3	Z	-.041	5
49	MP-5	Z	-.043	6
50	MP-6	Z	-.135	7.5
51	MP-7	Z	-.038	5
52	MP-9	Z	-.017	6
53	MP-10	Z	-.068	7.5
54	MP-11	Z	-.019	5

**Member Point Loads (BLC 10 : 180 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	.1	2
2	MP-1	X	.05	3
3	MP-2	X	.31	.5
4	MP-2	X	.041	3
5	MP-2	X	.051	3
6	MP-3	X	.087	3
7	MP-5	X	.05	2
8	MP-5	X	.029	3
9	MP-6	X	.181	.5
10	MP-6	X	.049	3
11	MP-6	X	.06	3
12	MP-7	X	.051	3
13	MP-9	X	.05	2
14	MP-9	X	.029	3
15	MP-10	X	.181	.5
16	MP-10	X	.049	3
17	MP-10	X	.06	3
18	MP-11	X	.051	3
19	MP-1	X	.1	6
20	MP-2	X	.31	7.5
21	MP-3	X	.087	5
22	MP-5	X	.05	6
23	MP-6	X	.181	7.5
24	MP-7	X	.051	5
25	MP-9	X	.05	6
26	MP-10	X	.181	7.5
27	MP-11	X	.051	5



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**Member Point Loads (BLC 11 : 210 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	X	.064 2
2	MP-1	X	.034 3
3	MP-2	X	.209 5
4	MP-2	X	.039 3
5	MP-2	X	.048 3
6	MP-3	X	.059 3
7	MP-5	X	.029 2
8	MP-5	X	.018 3
9	MP-6	X	.118 5
10	MP-6	X	.044 3
11	MP-6	X	.055 3
12	MP-7	X	.034 3
13	MP-9	X	.074 2
14	MP-9	X	.038 3
15	MP-10	X	.234 .5
16	MP-10	X	.038 3
17	MP-10	X	.046 3
18	MP-11	X	.066 3
19	MP-1	X	.064 6
20	MP-2	X	.209 7.5
21	MP-3	X	.059 5
22	MP-5	X	.029 6
23	MP-6	X	.118 7.5
24	MP-7	X	.034 5
25	MP-9	X	.074 6
26	MP-10	X	.234 7.5
27	MP-11	X	.066 5
28	MP-1	Z	.037 2
29	MP-1	Z	.019 3
30	MP-2	Z	.12 5
31	MP-2	Z	.023 3
32	MP-2	Z	.028 3
33	MP-3	Z	.034 3
34	MP-5	Z	.017 2
35	MP-5	Z	.011 3
36	MP-6	Z	.068 .5
37	MP-6	Z	.026 3
38	MP-6	Z	.032 3
39	MP-7	Z	.019 3
40	MP-9	Z	.043 2
41	MP-9	Z	.022 3
42	MP-10	Z	.135 5
43	MP-10	Z	.022 3
44	MP-10	Z	.027 3
45	MP-11	Z	.038 3
46	MP-1	Z	.037 6
47	MP-2	Z	.12 7.5
48	MP-3	Z	.034 5
49	MP-5	Z	.017 6
50	MP-6	Z	.068 7.5
51	MP-7	Z	.019 5
52	MP-9	Z	.043 6



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**Member Point Loads (BLC 11 : 210 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
53	MP-10	Z	.135 7.5
54	MP-11	Z	.038 5

**Member Point Loads (BLC 12 : 225 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	X	.04 2
2	MP-1	X	.022 3
3	MP-2	X	.138 5
4	MP-2	X	.034 3
5	MP-2	X	.042 3
6	MP-3	X	.039 3
7	MP-5	X	.027 2
8	MP-5	X	.016 3
9	MP-6	X	.105 .5
10	MP-6	X	.036 3
11	MP-6	X	.045 3
12	MP-7	X	.03 3
13	MP-9	X	.069 2
14	MP-9	X	.035 3
15	MP-10	X	.214 5
16	MP-10	X	.029 3
17	MP-10	X	.036 3
18	MP-11	X	.06 3
19	MP-1	X	.04 6
20	MP-2	X	.138 7.5
21	MP-3	X	.039 5
22	MP-5	X	.027 6
23	MP-6	X	.105 7.5
24	MP-7	X	.03 5
25	MP-9	X	.069 6
26	MP-10	X	.214 7.5
27	MP-11	X	.06 5
28	MP-1	Z	.04 2
29	MP-1	Z	.022 3
30	MP-2	Z	.138 5
31	MP-2	Z	.034 3
32	MP-2	Z	.042 3
33	MP-3	Z	.039 3
34	MP-5	Z	.027 2
35	MP-5	Z	.016 3
36	MP-6	Z	.105 5
37	MP-6	Z	.036 3
38	MP-6	Z	.045 3
39	MP-7	Z	.03 3
40	MP-9	Z	.069 2
41	MP-9	Z	.035 3
42	MP-10	Z	.214 5
43	MP-10	Z	.029 3
44	MP-10	Z	.036 3
45	MP-11	Z	.06 3
46	MP-1	Z	.04 6



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**Member Point Loads (BLC 12 : 225 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
47	MP-2	Z	.138	7.5
48	MP-3	Z	.039	5
49	MP-5	Z	.027	6
50	MP-6	Z	.105	7.5
51	MP-7	Z	.03	5
52	MP-9	Z	.069	6
53	MP-10	Z	.214	7.5
54	MP-11	Z	.06	5

**Member Point Loads (BLC 13 : 240 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	.021	2
2	MP-1	X	.012	3
3	MP-2	X	.078	.5
4	MP-2	X	.025	3
5	MP-2	X	.031	3
6	MP-3	X	.022	3
7	MP-5	X	.025	2
8	MP-5	X	.014	3
9	MP-6	X	.09	5
10	MP-6	X	.024	3
11	MP-6	X	.03	3
12	MP-7	X	.026	3
13	MP-9	X	.051	2
14	MP-9	X	.026	3
15	MP-10	X	.157	.5
16	MP-10	X	.02	3
17	MP-10	X	.025	3
18	MP-11	X	.044	3
19	MP-1	X	.021	6
20	MP-2	X	.078	7.5
21	MP-3	X	.022	5
22	MP-5	X	.025	6
23	MP-6	X	.09	7.5
24	MP-7	X	.026	5
25	MP-9	X	.051	6
26	MP-10	X	.157	7.5
27	MP-11	X	.044	5
28	MP-1	Z	.036	2
29	MP-1	Z	.021	3
30	MP-2	Z	.136	.5
31	MP-2	Z	.043	3
32	MP-2	Z	.054	3
33	MP-3	Z	.039	3
34	MP-5	Z	.044	2
35	MP-5	Z	.025	3
36	MP-6	Z	.156	.5
37	MP-6	Z	.042	3
38	MP-6	Z	.052	3
39	MP-7	Z	.044	3
40	MP-9	Z	.089	2



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**Member Point Loads (BLC 13 : 240 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
41	MP-9	Z	.044	3
42	MP-10	Z	.273	.5
43	MP-10	Z	.035	3
44	MP-10	Z	.043	3
45	MP-11	Z	.077	3
46	MP-1	Z	.036	6
47	MP-2	Z	.136	7.5
48	MP-3	Z	.039	5
49	MP-5	Z	.044	6
50	MP-6	Z	.156	7.5
51	MP-7	Z	.044	5
52	MP-9	Z	.089	6
53	MP-10	Z	.273	7.5
54	MP-11	Z	.077	5

**Member Point Loads (BLC 14 : 270 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	Z	.035	2
2	MP-1	Z	.022	3
3	MP-2	Z	.141	.5
4	MP-2	Z	.051	3
5	MP-2	Z	.063	3
6	MP-3	Z	.04	3
7	MP-5	Z	.085	2
8	MP-5	Z	.044	3
9	MP-6	Z	.27	.5
10	MP-6	Z	.043	3
11	MP-6	Z	.054	3
12	MP-7	Z	.076	3
13	MP-9	Z	.085	2
14	MP-9	Z	.044	3
15	MP-10	Z	.27	.5
16	MP-10	Z	.043	3
17	MP-10	Z	.054	3
18	MP-11	Z	.076	3
19	MP-1	Z	.035	6
20	MP-2	Z	.141	7.5
21	MP-3	Z	.04	5
22	MP-5	Z	.085	6
23	MP-6	Z	.27	7.5
24	MP-7	Z	.076	5
25	MP-9	Z	.085	6
26	MP-10	Z	.27	7.5
27	MP-11	Z	.076	5

**Member Point Loads (BLC 15 : 300 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	-.031	2
2	MP-1	X	-.017	3
3	MP-2	X	-.105	.5
4	MP-2	X	-.024	3





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**Member Point Loads (BLC 15 : 300 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
5	MP-2	X	-.029	3
6	MP-3	X	-.03	3
7	MP-5	X	-.051	2
8	MP-5	X	-.026	3
9	MP-6	X	-.157	.5
10	MP-6	X	-.02	3
11	MP-6	X	-.025	3
12	MP-7	X	-.044	3
13	MP-9	X	-.025	2
14	MP-9	X	-.014	3
15	MP-10	X	-.09	.5
16	MP-10	X	-.024	3
17	MP-10	X	-.03	3
18	MP-11	X	-.026	3
19	MP-1	X	-.031	6
20	MP-2	X	-.105	7.5
21	MP-3	X	-.03	5
22	MP-5	X	-.051	6
23	MP-6	X	-.157	7.5
24	MP-7	X	-.044	5
25	MP-9	X	-.025	6
26	MP-10	X	-.09	7.5
27	MP-11	X	-.026	5
28	MP-1	Z	.053	2
29	MP-1	Z	.029	3
30	MP-2	Z	.182	.5
31	MP-2	Z	.041	3
32	MP-2	Z	.05	3
33	MP-3	Z	.051	3
34	MP-5	Z	.089	2
35	MP-5	Z	.044	3
36	MP-6	Z	.273	.5
37	MP-6	Z	.035	3
38	MP-6	Z	.043	3
39	MP-7	Z	.077	3
40	MP-9	Z	.044	2
41	MP-9	Z	.025	3
42	MP-10	Z	.156	.5
43	MP-10	Z	.042	3
44	MP-10	Z	.052	3
45	MP-11	Z	.044	3
46	MP-1	Z	.053	6
47	MP-2	Z	.182	7.5
48	MP-3	Z	.051	5
49	MP-5	Z	.089	6
50	MP-6	Z	.273	7.5
51	MP-7	Z	.077	5
52	MP-9	Z	.044	6
53	MP-10	Z	.156	7.5
54	MP-11	Z	.044	5



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**Member Point Loads (BLC 16 : 315 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	-.056	2
2	MP-1	X	-.029	3
3	MP-2	X	-.181	.5
4	MP-2	X	-.031	3
5	MP-2	X	-.039	3
6	MP-3	X	-.051	3
7	MP-5	X	-.069	2
8	MP-5	X	-.035	3
9	MP-6	X	-.214	.5
10	MP-6	X	-.029	3
11	MP-6	X	-.036	3
12	MP-7	X	-.06	3
13	MP-9	X	-.027	2
14	MP-9	X	-.016	3
15	MP-10	X	-.105	.5
16	MP-10	X	-.036	3
17	MP-10	X	-.045	3
18	MP-11	X	-.03	3
19	MP-1	X	-.056	6
20	MP-2	X	-.181	7.5
21	MP-3	X	-.051	5
22	MP-5	X	-.069	6
23	MP-6	X	-.214	7.5
24	MP-7	X	-.06	5
25	MP-9	X	-.027	6
26	MP-10	X	-.105	7.5
27	MP-11	X	-.03	5
28	MP-1	Z	.056	2
29	MP-1	Z	.029	3
30	MP-2	Z	.181	.5
31	MP-2	Z	.031	3
32	MP-2	Z	.039	3
33	MP-3	Z	.051	3
34	MP-5	Z	.069	2
35	MP-5	Z	.035	3
36	MP-6	Z	.214	.5
37	MP-6	Z	.029	3
38	MP-6	Z	.036	3
39	MP-7	Z	.06	3
40	MP-9	Z	.027	2
41	MP-9	Z	.016	3
42	MP-10	Z	.105	.5
43	MP-10	Z	.036	3
44	MP-10	Z	.045	3
45	MP-11	Z	.03	3
46	MP-1	Z	.056	6
47	MP-2	Z	.181	7.5
48	MP-3	Z	.051	5
49	MP-5	Z	.069	6
50	MP-6	Z	.214	7.5
51	MP-7	Z	.06	5
52	MP-9	Z	.027	6



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**Member Point Loads (BLC 16 : 315 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
53	MP-10	Z	.105 7.5
54	MP-11	Z	.03 5

**Member Point Loads (BLC 17 : 330 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	X	-.082 2
2	MP-1	X	-.041 3
3	MP-2	X	-.255 .5
4	MP-2	X	-.036 3
5	MP-2	X	-.045 3
6	MP-3	X	-.072 3
7	MP-5	X	-.074 2
8	MP-5	X	-.038 3
9	MP-6	X	-.234 .5
10	MP-6	X	-.038 3
11	MP-6	X	-.046 3
12	MP-7	X	-.066 3
13	MP-9	X	-.029 2
14	MP-9	X	-.018 3
15	MP-10	X	-.118 .5
16	MP-10	X	-.044 3
17	MP-10	X	-.055 3
18	MP-11	X	-.034 3
19	MP-1	X	-.082 6
20	MP-2	X	-.255 7.5
21	MP-3	X	-.072 5
22	MP-5	X	-.074 6
23	MP-6	X	-.234 7.5
24	MP-7	X	-.066 5
25	MP-9	X	-.029 6
26	MP-10	X	-.118 7.5
27	MP-11	X	-.034 5
28	MP-1	Z	.047 2
29	MP-1	Z	.024 3
30	MP-2	Z	.147 .5
31	MP-2	Z	.021 3
32	MP-2	Z	.026 3
33	MP-3	Z	.041 3
34	MP-5	Z	.043 2
35	MP-5	Z	.022 3
36	MP-6	Z	.135 .5
37	MP-6	Z	.022 3
38	MP-6	Z	.027 3
39	MP-7	Z	.038 3
40	MP-9	Z	.017 2
41	MP-9	Z	.011 3
42	MP-10	Z	.068 .5
43	MP-10	Z	.026 3
44	MP-10	Z	.032 3
45	MP-11	Z	.019 3
46	MP-1	Z	.047 6



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**Member Point Loads (BLC 17 : 330 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
47	MP-2	Z	.147 7.5
48	MP-3	Z	.041 5
49	MP-5	Z	.043 6
50	MP-6	Z	.135 7.5
51	MP-7	Z	.038 5
52	MP-9	Z	.017 6
53	MP-10	Z	.068 7.5
54	MP-11	Z	.019 5

**Member Point Loads (BLC 18 : Ice Weight)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	Y	-.041 2
2	MP-1	Y	-.031 3
3	MP-2	Y	-.132 .5
4	MP-2	Y	-.043 3
5	MP-2	Y	-.051 3
6	MP-3	Y	-.047 3
7	MP-5	Y	-.041 2
8	MP-5	Y	-.031 3
9	MP-6	Y	-.132 .5
10	MP-6	Y	-.043 3
11	MP-6	Y	-.051 3
12	MP-7	Y	-.047 3
13	MP-9	Y	-.041 2
14	MP-9	Y	-.031 3
15	MP-10	Y	-.132 .5
16	MP-10	Y	-.043 3
17	MP-10	Y	-.051 3
18	MP-11	Y	-.047 3
19	MP-1	Y	-.041 6
20	MP-2	Y	-.132 7.5
21	MP-3	Y	-.047 5
22	MP-5	Y	-.041 6
23	MP-6	Y	-.132 7.5
24	MP-7	Y	-.047 5
25	MP-9	Y	-.041 6
26	MP-10	Y	-.132 7.5
27	MP-11	Y	-.047 5

**Member Point Loads (BLC 19 : 0 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	X	-.021 2
2	MP-1	X	-.012 3
3	MP-2	X	-.061 .5
4	MP-2	X	-.012 3
5	MP-2	X	-.015 3
6	MP-3	X	-.018 3
7	MP-5	X	-.021 2
8	MP-5	X	-.012 3
9	MP-6	X	-.061 5
10	MP-6	X	-.012 3



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**Member Point Loads (BLC 19 : 0 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
11	MP-6	X	-.015	3
12	MP-7	X	-.018	3
13	MP-9	X	-.021	2
14	MP-9	X	-.012	3
15	MP-10	X	-.061	.5
16	MP-10	X	-.012	3
17	MP-10	X	-.015	3
18	MP-11	X	-.018	3
19	MP-1	X	-.021	6
20	MP-2	X	-.061	7.5
21	MP-3	X	-.018	5
22	MP-5	X	-.021	6
23	MP-6	X	-.061	7.5
24	MP-7	X	-.018	5
25	MP-9	X	-.021	6
26	MP-10	X	-.061	7.5
27	MP-11	X	-.018	5

**Member Point Loads (BLC 20 : 30 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	-.014	2
2	MP-1	X	-.008	3
3	MP-2	X	-.041	.5
4	MP-2	X	-.009	3
5	MP-2	X	-.011	3
6	MP-3	X	-.012	3
7	MP-5	X	-.008	2
8	MP-5	X	-.005	3
9	MP-6	X	-.025	.5
10	MP-6	X	-.01	3
11	MP-6	X	-.013	3
12	MP-7	X	-.008	3
13	MP-9	X	-.016	2
14	MP-9	X	-.009	3
15	MP-10	X	-.046	.5
16	MP-10	X	-.009	3
17	MP-10	X	-.011	3
18	MP-11	X	-.014	3
19	MP-1	X	-.014	6
20	MP-2	X	-.041	7.5
21	MP-3	X	-.012	5
22	MP-5	X	-.008	6
23	MP-6	X	-.025	7.5
24	MP-7	X	-.008	5
25	MP-9	X	-.016	6
26	MP-10	X	-.046	7.5
27	MP-11	X	-.014	5
28	MP-1	Z	-.008	2
29	MP-1	Z	-.005	3
30	MP-2	Z	-.024	.5
31	MP-2	Z	-.005	3



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**Member Point Loads (BLC 20 : 30 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
32	MP-2	Z	-.006	3
33	MP-3	Z	-.007	3
34	MP-5	Z	-.004	2
35	MP-5	Z	-.003	3
36	MP-6	Z	-.015	.5
37	MP-6	Z	-.006	3
38	MP-6	Z	-.007	3
39	MP-7	Z	-.004	3
40	MP-9	Z	-.009	2
41	MP-9	Z	-.005	3
42	MP-10	Z	-.026	.5
43	MP-10	Z	-.005	3
44	MP-10	Z	-.006	3
45	MP-11	Z	-.008	3
46	MP-1	Z	-.008	6
47	MP-2	Z	-.024	7.5
48	MP-3	Z	-.007	5
49	MP-5	Z	-.004	6
50	MP-6	Z	-.015	7.5
51	MP-7	Z	-.004	5
52	MP-9	Z	-.009	6
53	MP-10	Z	-.026	7.5
54	MP-11	Z	-.008	5

**Member Point Loads (BLC 21 : 45 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	-.009	2
2	MP-1	X	-.006	3
3	MP-2	X	-.028	.5
4	MP-2	X	-.008	3
5	MP-2	X	-.01	3
6	MP-3	X	-.008	3
7	MP-5	X	-.007	2
8	MP-5	X	-.004	3
9	MP-6	X	-.022	.5
10	MP-6	X	-.008	3
11	MP-6	X	-.01	3
12	MP-7	X	-.007	3
13	MP-9	X	-.014	2
14	MP-9	X	-.008	3
15	MP-10	X	-.041	.5
16	MP-10	X	-.007	3
17	MP-10	X	-.008	3
18	MP-11	X	-.012	3
19	MP-1	X	-.009	6
20	MP-2	X	-.028	7.5
21	MP-3	X	-.008	5
22	MP-5	X	-.007	6
23	MP-6	X	-.022	7.5
24	MP-7	X	-.007	5
25	MP-9	X	-.014	6



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**Member Point Loads (BLC 21 : 45 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
26	MP-10	X	7.5
27	MP-11	X	5
28	MP-1	Z	2
29	MP-1	Z	3
30	MP-2	Z	.5
31	MP-2	Z	3
32	MP-2	Z	3
33	MP-3	Z	3
34	MP-5	Z	2
35	MP-5	Z	3
36	MP-6	Z	.5
37	MP-6	Z	3
38	MP-6	Z	3
39	MP-7	Z	3
40	MP-9	Z	2
41	MP-9	Z	3
42	MP-10	Z	.5
43	MP-10	Z	3
44	MP-10	Z	3
45	MP-11	Z	3
46	MP-1	Z	6
47	MP-2	Z	7.5
48	MP-3	Z	5
49	MP-5	Z	6
50	MP-6	Z	7.5
51	MP-7	Z	5
52	MP-9	Z	6
53	MP-10	Z	7.5
54	MP-11	Z	5

**Member Point Loads (BLC 22 : 60 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	2
2	MP-1	X	3
3	MP-2	X	.5
4	MP-2	X	3
5	MP-2	X	3
6	MP-3	X	3
7	MP-5	X	2
8	MP-5	X	3
9	MP-6	X	.5
10	MP-6	X	3
11	MP-6	X	3
12	MP-7	X	3
13	MP-9	X	2
14	MP-9	X	3
15	MP-10	X	.5
16	MP-10	X	3
17	MP-10	X	3
18	MP-11	X	3
19	MP-1	X	6



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**Member Point Loads (BLC 22 : 60 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
20	MP-2	X	7.5
21	MP-3	X	5
22	MP-5	X	6
23	MP-6	X	7.5
24	MP-7	X	5
25	MP-9	X	6
26	MP-10	X	7.5
27	MP-11	X	5
28	MP-1	Z	2
29	MP-1	Z	3
30	MP-2	Z	.5
31	MP-2	Z	3
32	MP-2	Z	3
33	MP-3	Z	3
34	MP-5	Z	2
35	MP-5	Z	3
36	MP-6	Z	.5
37	MP-6	Z	3
38	MP-6	Z	3
39	MP-7	Z	3
40	MP-9	Z	2
41	MP-9	Z	3
42	MP-10	Z	.5
43	MP-10	Z	3
44	MP-10	Z	3
45	MP-11	Z	3
46	MP-1	Z	6
47	MP-2	Z	7.5
48	MP-3	Z	5
49	MP-5	Z	6
50	MP-6	Z	7.5
51	MP-7	Z	5
52	MP-9	Z	6
53	MP-10	Z	7.5
54	MP-11	Z	5

**Member Point Loads (BLC 23 : 90 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	2
2	MP-1	Z	3
3	MP-2	Z	.5
4	MP-2	Z	3
5	MP-2	Z	3
6	MP-3	Z	3
7	MP-5	Z	2
8	MP-5	Z	3
9	MP-6	Z	.5
10	MP-6	Z	3
11	MP-6	Z	3
12	MP-7	Z	3
13	MP-9	Z	2



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**Member Point Loads (BLC 23 : 90 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
14	MP-9	Z	3
15	MP-10	Z	.5
16	MP-10	Z	3
17	MP-10	Z	3
18	MP-11	Z	3
19	MP-1	Z	6
20	MP-2	Z	7.5
21	MP-3	Z	5
22	MP-5	Z	6
23	MP-6	Z	7.5
24	MP-7	Z	5
25	MP-9	Z	6
26	MP-10	Z	7.5
27	MP-11	Z	5

**Member Point Loads (BLC 24 : 120 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	2
2	MP-1	X	3
3	MP-2	X	5
4	MP-2	X	3
5	MP-2	X	3
6	MP-3	X	3
7	MP-5	X	2
8	MP-5	X	3
9	MP-6	X	.5
10	MP-6	X	3
11	MP-6	X	3
12	MP-7	X	3
13	MP-9	X	2
14	MP-9	X	3
15	MP-10	X	.5
16	MP-10	X	3
17	MP-10	X	3
18	MP-11	X	3
19	MP-1	X	6
20	MP-2	X	7.5
21	MP-3	X	5
22	MP-5	X	6
23	MP-6	X	7.5
24	MP-7	X	5
25	MP-9	X	6
26	MP-10	X	7.5
27	MP-11	X	5
28	MP-1	Z	2
29	MP-1	Z	3
30	MP-2	Z	.5
31	MP-2	Z	3
32	MP-2	Z	3
33	MP-3	Z	3
34	MP-5	Z	2



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**Member Point Loads (BLC 24 : 120 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
35	MP-5	Z	3
36	MP-6	Z	.5
37	MP-6	Z	3
38	MP-6	Z	3
39	MP-7	Z	3
40	MP-9	Z	2
41	MP-9	Z	3
42	MP-10	Z	.5
43	MP-10	Z	3
44	MP-10	Z	3
45	MP-11	Z	3
46	MP-1	Z	6
47	MP-2	Z	7.5
48	MP-3	Z	5
49	MP-5	Z	6
50	MP-6	Z	7.5
51	MP-7	Z	5
52	MP-9	Z	6
53	MP-10	Z	7.5
54	MP-11	Z	5

**Member Point Loads (BLC 25 : 135 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	2
2	MP-1	X	3
3	MP-2	X	.5
4	MP-2	X	3
5	MP-2	X	3
6	MP-3	X	3
7	MP-5	X	2
8	MP-5	X	3
9	MP-6	X	.5
10	MP-6	X	3
11	MP-6	X	3
12	MP-7	X	3
13	MP-9	X	2
14	MP-9	X	3
15	MP-10	X	.5
16	MP-10	X	3
17	MP-10	X	3
18	MP-11	X	3
19	MP-1	X	6
20	MP-2	X	7.5
21	MP-3	X	5
22	MP-5	X	6
23	MP-6	X	7.5
24	MP-7	X	5
25	MP-9	X	6
26	MP-10	X	7.5
27	MP-11	X	5
28	MP-1	Z	2



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**Member Point Loads (BLC 25 : 135 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
29	MP-1	Z	-.007	3
30	MP-2	Z	-.036	.5
31	MP-2	Z	-.007	3
32	MP-2	Z	-.009	3
33	MP-3	Z	-.011	3
34	MP-5	Z	-.014	2
35	MP-5	Z	-.008	3
36	MP-6	Z	-.041	.5
37	MP-6	Z	-.007	3
38	MP-6	Z	-.008	3
39	MP-7	Z	-.012	3
40	MP-9	Z	-.007	2
41	MP-9	Z	-.004	3
42	MP-10	Z	-.022	.5
43	MP-10	Z	-.008	3
44	MP-10	Z	-.01	3
45	MP-11	Z	-.007	3
46	MP-1	Z	-.012	6
47	MP-2	Z	-.036	7.5
48	MP-3	Z	-.011	5
49	MP-5	Z	-.014	6
50	MP-6	Z	-.041	7.5
51	MP-7	Z	-.012	5
52	MP-9	Z	-.007	6
53	MP-10	Z	-.022	7.5
54	MP-11	Z	-.007	5

**Member Point Loads (BLC 26 : 150 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
1	MP-1	X	.017	2
2	MP-1	X	.01	3
3	MP-2	X	.049	.5
4	MP-2	X	.009	3
5	MP-2	X	.01	3
6	MP-3	X	.015	3
7	MP-5	X	.016	2
8	MP-5	X	.009	3
9	MP-6	X	.046	.5
10	MP-6	X	.009	3
11	MP-6	X	.011	3
12	MP-7	X	.014	3
13	MP-9	X	.008	2
14	MP-9	X	.005	3
15	MP-10	X	.025	.5
16	MP-10	X	.01	3
17	MP-10	X	.013	3
18	MP-11	X	.008	3
19	MP-1	X	.017	6
20	MP-2	X	.049	7.5
21	MP-3	X	.015	5
22	MP-5	X	.016	6



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**Member Point Loads (BLC 26 : 150 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
23	MP-6	X	.046	7.5
24	MP-7	X	.014	5
25	MP-9	X	.008	6
26	MP-10	X	.025	7.5
27	MP-11	X	.008	5
28	MP-1	Z	-.01	2
29	MP-1	Z	-.006	3
30	MP-2	Z	-.028	.5
31	MP-2	Z	-.005	3
32	MP-2	Z	-.006	3
33	MP-3	Z	-.009	3
34	MP-5	Z	-.009	2
35	MP-5	Z	-.005	3
36	MP-6	Z	-.026	.5
37	MP-6	Z	-.005	3
38	MP-6	Z	-.006	3
39	MP-7	Z	-.008	3
40	MP-9	Z	-.004	2
41	MP-9	Z	-.003	3
42	MP-10	Z	-.015	.5
43	MP-10	Z	-.006	3
44	MP-10	Z	-.007	3
45	MP-11	Z	-.004	3
46	MP-1	Z	-.01	6
47	MP-2	Z	-.028	7.5
48	MP-3	Z	-.009	5
49	MP-5	Z	-.009	6
50	MP-6	Z	-.026	7.5
51	MP-7	Z	-.008	5
52	MP-9	Z	-.004	6
53	MP-10	Z	-.015	7.5
54	MP-11	Z	-.004	5

**Member Point Loads (BLC 27 : 180 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
1	MP-1	X	.021	2
2	MP-1	X	.012	3
3	MP-2	X	.061	.5
4	MP-2	X	.012	3
5	MP-2	X	.015	3
6	MP-3	X	.018	3
7	MP-5	X	.021	2
8	MP-5	X	.012	3
9	MP-6	X	.061	.5
10	MP-6	X	.012	3
11	MP-6	X	.015	3
12	MP-7	X	.018	3
13	MP-9	X	.021	2
14	MP-9	X	.012	3
15	MP-10	X	.061	.5
16	MP-10	X	.012	3



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**Member Point Loads (BLC 27 : 180 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
17	MP-10	X	.015	3
18	MP-11	X	.018	3
19	MP-1	X	.021	6
20	MP-2	X	.061	7.5
21	MP-3	X	.018	5
22	MP-5	X	.021	6
23	MP-6	X	.061	7.5
24	MP-7	X	.018	5
25	MP-9	X	.021	6
26	MP-10	X	.061	7.5
27	MP-11	X	.018	5

**Member Point Loads (BLC 28 : 210 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	.014	2
2	MP-1	X	.008	3
3	MP-2	X	.041	.5
4	MP-2	X	.009	3
5	MP-2	X	.011	3
6	MP-3	X	.012	3
7	MP-5	X	.008	2
8	MP-5	X	.005	3
9	MP-6	X	.025	.5
10	MP-6	X	.01	3
11	MP-6	X	.013	3
12	MP-7	X	.008	3
13	MP-9	X	.016	2
14	MP-9	X	.009	3
15	MP-10	X	.046	.5
16	MP-10	X	.009	3
17	MP-10	X	.011	3
18	MP-11	X	.014	3
19	MP-1	X	.014	6
20	MP-2	X	.041	7.5
21	MP-3	X	.012	5
22	MP-5	X	.008	6
23	MP-6	X	.025	7.5
24	MP-7	X	.008	5
25	MP-9	X	.016	6
26	MP-10	X	.046	7.5
27	MP-11	X	.014	5
28	MP-1	Z	.008	2
29	MP-1	Z	.005	3
30	MP-2	Z	.024	.5
31	MP-2	Z	.005	3
32	MP-2	Z	.006	3
33	MP-3	Z	.007	3
34	MP-5	Z	.004	2
35	MP-5	Z	.003	3
36	MP-6	Z	.015	.5
37	MP-6	Z	.006	3



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**Member Point Loads (BLC 28 : 210 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
38	MP-6	Z	.007	3
39	MP-7	Z	.004	3
40	MP-9	Z	.009	2
41	MP-9	Z	.005	3
42	MP-10	Z	.026	.5
43	MP-10	Z	.005	3
44	MP-10	Z	.006	3
45	MP-11	Z	.008	3
46	MP-1	Z	.008	6
47	MP-2	Z	.024	7.5
48	MP-3	Z	.007	5
49	MP-5	Z	.004	6
50	MP-6	Z	.015	7.5
51	MP-7	Z	.004	5
52	MP-9	Z	.009	6
53	MP-10	Z	.026	7.5
54	MP-11	Z	.008	5

**Member Point Loads (BLC 29 : 225 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	.009	2
2	MP-1	X	.006	3
3	MP-2	X	.028	.5
4	MP-2	X	.008	3
5	MP-2	X	.01	3
6	MP-3	X	.008	3
7	MP-5	X	.007	2
8	MP-5	X	.004	3
9	MP-6	X	.022	.5
10	MP-6	X	.008	3
11	MP-6	X	.01	3
12	MP-7	X	.007	3
13	MP-9	X	.014	2
14	MP-9	X	.008	3
15	MP-10	X	.041	.5
16	MP-10	X	.007	3
17	MP-10	X	.008	3
18	MP-11	X	.012	3
19	MP-1	X	.009	6
20	MP-2	X	.028	7.5
21	MP-3	X	.008	5
22	MP-5	X	.007	6
23	MP-6	X	.022	7.5
24	MP-7	X	.007	5
25	MP-9	X	.014	6
26	MP-10	X	.041	7.5
27	MP-11	X	.012	5
28	MP-1	Z	.009	2
29	MP-1	Z	.006	3
30	MP-2	Z	.028	.5
31	MP-2	Z	.008	3



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**Member Point Loads (BLC 29 : 225 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
32	MP-2	Z	.01	3
33	MP-3	Z	.008	3
34	MP-5	Z	.007	2
35	MP-5	Z	.004	3
36	MP-6	Z	.022	.5
37	MP-6	Z	.008	3
38	MP-6	Z	.01	3
39	MP-7	Z	.007	3
40	MP-9	Z	.014	2
41	MP-9	Z	.008	3
42	MP-10	Z	.041	.5
43	MP-10	Z	.007	3
44	MP-10	Z	.008	3
45	MP-11	Z	.012	3
46	MP-1	Z	.009	6
47	MP-2	Z	.028	7.5
48	MP-3	Z	.008	5
49	MP-5	Z	.007	6
50	MP-6	Z	.022	7.5
51	MP-7	Z	.007	5
52	MP-9	Z	.014	6
53	MP-10	Z	.041	7.5
54	MP-11	Z	.012	5

**Member Point Loads (BLC 30 : 240 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	.005	2
2	MP-1	X	.003	3
3	MP-2	X	.016	.5
4	MP-2	X	.006	3
5	MP-2	X	.007	3
6	MP-3	X	.005	3
7	MP-5	X	.006	2
8	MP-5	X	.004	3
9	MP-6	X	.019	.5
10	MP-6	X	.006	3
11	MP-6	X	.007	3
12	MP-7	X	.006	3
13	MP-9	X	.011	2
14	MP-9	X	.006	3
15	MP-10	X	.03	.5
16	MP-10	X	.005	3
17	MP-10	X	.006	3
18	MP-11	X	.009	3
19	MP-1	X	.005	6
20	MP-2	X	.016	7.5
21	MP-3	X	.005	5
22	MP-5	X	.006	6
23	MP-6	X	.019	7.5
24	MP-7	X	.006	5
25	MP-9	X	.011	6



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**Member Point Loads (BLC 30 : 240 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
26	MP-10	X	.03	7.5
27	MP-11	X	.009	5
28	MP-1	Z	.009	2
29	MP-1	Z	.006	3
30	MP-2	Z	.028	.5
31	MP-2	Z	.01	3
32	MP-2	Z	.012	3
33	MP-3	Z	.009	3
34	MP-5	Z	.01	2
35	MP-5	Z	.006	3
36	MP-6	Z	.032	.5
37	MP-6	Z	.01	3
38	MP-6	Z	.012	3
39	MP-7	Z	.01	3
40	MP-9	Z	.018	2
41	MP-9	Z	.01	3
42	MP-10	Z	.053	.5
43	MP-10	Z	.009	3
44	MP-10	Z	.01	3
45	MP-11	Z	.016	3
46	MP-1	Z	.009	6
47	MP-2	Z	.028	7.5
48	MP-3	Z	.009	5
49	MP-5	Z	.01	6
50	MP-6	Z	.032	7.5
51	MP-7	Z	.01	5
52	MP-9	Z	.018	6
53	MP-10	Z	.053	7.5
54	MP-11	Z	.016	5

**Member Point Loads (BLC 31 : 270 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	Z	.009	2
2	MP-1	Z	.006	3
3	MP-2	Z	.029	.5
4	MP-2	Z	.01	3
5	MP-2	Z	.012	3
6	MP-3	Z	.009	3
7	MP-5	Z	.009	2
8	MP-5	Z	.006	3
9	MP-6	Z	.029	.5
10	MP-6	Z	.01	3
11	MP-6	Z	.012	3
12	MP-7	Z	.009	3
13	MP-9	Z	.009	2
14	MP-9	Z	.006	3
15	MP-10	Z	.029	.5
16	MP-10	Z	.01	3
17	MP-10	Z	.012	3
18	MP-11	Z	.009	3
19	MP-1	Z	.009	6





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**Member Point Loads (BLC 31 : 270 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
20	MP-2	Z	.029	7.5
21	MP-3	Z	.009	5
22	MP-5	Z	.009	6
23	MP-6	Z	.029	7.5
24	MP-7	Z	.009	5
25	MP-9	Z	.009	6
26	MP-10	Z	.029	7.5
27	MP-11	Z	.009	5

**Member Point Loads (BLC 32 : 300 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	-.007	2
2	MP-1	X	-.004	3
3	MP-2	X	-.021	.5
4	MP-2	X	-.006	3
5	MP-2	X	-.007	3
6	MP-3	X	-.006	3
7	MP-5	X	-.011	2
8	MP-5	X	-.006	3
9	MP-6	X	-.03	5
10	MP-6	X	-.005	3
11	MP-6	X	-.006	3
12	MP-7	X	-.009	3
13	MP-9	X	-.006	2
14	MP-9	X	-.004	3
15	MP-10	X	-.019	.5
16	MP-10	X	-.006	3
17	MP-10	X	-.007	3
18	MP-11	X	-.006	3
19	MP-1	X	-.007	6
20	MP-2	X	-.021	7.5
21	MP-3	X	-.006	5
22	MP-5	X	-.011	6
23	MP-6	X	-.03	7.5
24	MP-7	X	-.009	5
25	MP-9	X	-.006	6
26	MP-10	X	-.019	7.5
27	MP-11	X	-.006	5
28	MP-1	Z	.012	2
29	MP-1	Z	.007	3
30	MP-2	Z	.037	.5
31	MP-2	Z	.01	3
32	MP-2	Z	.012	3
33	MP-3	Z	.011	3
34	MP-5	Z	.018	2
35	MP-5	Z	.01	3
36	MP-6	Z	.053	.5
37	MP-6	Z	.009	3
38	MP-6	Z	.01	3
39	MP-7	Z	.016	3
40	MP-9	Z	.01	2



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**Member Point Loads (BLC 32 : 300 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
41	MP-9	Z	.006	3
42	MP-10	Z	.032	.5
43	MP-10	Z	.01	3
44	MP-10	Z	.012	3
45	MP-11	Z	.01	3
46	MP-1	Z	.012	6
47	MP-2	Z	.037	7.5
48	MP-3	Z	.011	5
49	MP-5	Z	.018	6
50	MP-6	Z	.053	7.5
51	MP-7	Z	.016	5
52	MP-9	Z	.01	6
53	MP-10	Z	.032	7.5
54	MP-11	Z	.01	5

**Member Point Loads (BLC 33 : 315 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	-.012	2
2	MP-1	X	-.007	3
3	MP-2	X	-.036	.5
4	MP-2	X	-.007	3
5	MP-2	X	-.009	3
6	MP-3	X	-.011	3
7	MP-5	X	-.014	2
8	MP-5	X	-.008	3
9	MP-6	X	-.041	.5
10	MP-6	X	-.007	3
11	MP-6	X	-.008	3
12	MP-7	X	-.012	3
13	MP-9	X	-.007	2
14	MP-9	X	-.004	3
15	MP-10	X	-.022	.5
16	MP-10	X	-.008	3
17	MP-10	X	-.01	3
18	MP-11	X	-.007	3
19	MP-1	X	-.012	6
20	MP-2	X	-.036	7.5
21	MP-3	X	-.011	5
22	MP-5	X	-.014	6
23	MP-6	X	-.041	7.5
24	MP-7	X	-.012	5
25	MP-9	X	-.007	6
26	MP-10	X	-.022	7.5
27	MP-11	X	-.007	5
28	MP-1	Z	.012	2
29	MP-1	Z	.007	3
30	MP-2	Z	.036	.5
31	MP-2	Z	.007	3
32	MP-2	Z	.009	3
33	MP-3	Z	.011	3
34	MP-5	Z	.014	2



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**Member Point Loads (BLC 33 : 315 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
35	MP-5	Z	.008	3
36	MP-6	Z	.041	.5
37	MP-6	Z	.007	3
38	MP-6	Z	.008	3
39	MP-7	Z	.012	3
40	MP-9	Z	.007	2
41	MP-9	Z	.004	3
42	MP-10	Z	.022	.5
43	MP-10	Z	.008	3
44	MP-10	Z	.01	3
45	MP-11	Z	.007	3
46	MP-1	Z	.012	6
47	MP-2	Z	.036	7.5
48	MP-3	Z	.011	5
49	MP-5	Z	.014	6
50	MP-6	Z	.041	7.5
51	MP-7	Z	.012	5
52	MP-9	Z	.007	6
53	MP-10	Z	.022	7.5
54	MP-11	Z	.007	5

**Member Point Loads (BLC 34 : 330 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
1	MP-1	X	-.017	2
2	MP-1	X	-.01	3
3	MP-2	X	-.049	.5
4	MP-2	X	-.009	3
5	MP-2	X	-.01	3
6	MP-3	X	-.015	3
7	MP-5	X	-.016	2
8	MP-5	X	-.009	3
9	MP-6	X	-.046	.5
10	MP-6	X	-.009	3
11	MP-6	X	-.011	3
12	MP-7	X	-.014	3
13	MP-9	X	-.008	2
14	MP-9	X	-.005	3
15	MP-10	X	-.025	.5
16	MP-10	X	-.01	3
17	MP-10	X	-.013	3
18	MP-11	X	-.008	3
19	MP-1	X	-.017	6
20	MP-2	X	-.049	7.5
21	MP-3	X	-.015	5
22	MP-5	X	-.016	6
23	MP-6	X	-.046	7.5
24	MP-7	X	-.014	5
25	MP-9	X	-.008	6
26	MP-10	X	-.025	7.5
27	MP-11	X	-.008	5
28	MP-1	Z	.01	2



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**Member Point Loads (BLC 34 : 330 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
29	MP-1	Z	.006	3
30	MP-2	Z	.028	.5
31	MP-2	Z	.005	3
32	MP-2	Z	.006	3
33	MP-3	Z	.009	3
34	MP-5	Z	.009	2
35	MP-5	Z	.005	3
36	MP-6	Z	.026	.5
37	MP-6	Z	.005	3
38	MP-6	Z	.006	3
39	MP-7	Z	.008	3
40	MP-9	Z	.004	2
41	MP-9	Z	.003	3
42	MP-10	Z	.015	.5
43	MP-10	Z	.006	3
44	MP-10	Z	.007	3
45	MP-11	Z	.004	3
46	MP-1	Z	.01	6
47	MP-2	Z	.028	7.5
48	MP-3	Z	.009	5
49	MP-5	Z	.009	6
50	MP-6	Z	.026	7.5
51	MP-7	Z	.008	5
52	MP-9	Z	.004	6
53	MP-10	Z	.015	7.5
54	MP-11	Z	.004	5

**Member Point Loads (BLC 37 : Seismic Load X)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]	
1	MP-1	X	-.02	2
2	MP-1	X	-.046	3
3	MP-2	X	-.061	.5
4	MP-2	X	-.075	3
5	MP-2	X	-.086	3
6	MP-3	X	-.052	3
7	MP-5	X	-.02	2
8	MP-5	X	-.046	3
9	MP-6	X	-.061	.5
10	MP-6	X	-.075	3
11	MP-6	X	-.086	3
12	MP-7	X	-.052	3
13	MP-9	X	-.02	2
14	MP-9	X	-.046	3
15	MP-10	X	-.061	.5
16	MP-10	X	-.075	3
17	MP-10	X	-.086	3
18	MP-11	X	-.052	3
19	MP-1	X	-.02	6
20	MP-2	X	-.061	7.5
21	MP-3	X	-.052	5
22	MP-5	X	-.02	6



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**Member Point Loads (BLC 37 : Seismic Load X) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
23	MP-6	X	7.5
24	MP-7	X	5
25	MP-9	X	6
26	MP-10	X	7.5
27	MP-11	X	5

**Member Point Loads (BLC 38 : Seismic Load Z)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	2
2	MP-1	Z	3
3	MP-2	Z	.5
4	MP-2	Z	3
5	MP-2	Z	3
6	MP-3	Z	3
7	MP-5	Z	2
8	MP-5	Z	3
9	MP-6	Z	.5
10	MP-6	Z	3
11	MP-6	Z	3
12	MP-7	Z	3
13	MP-9	Z	2
14	MP-9	Z	3
15	MP-10	Z	.5
16	MP-10	Z	3
17	MP-10	Z	3
18	MP-11	Z	3
19	MP-1	Z	6
20	MP-2	Z	7.5
21	MP-3	Z	5
22	MP-5	Z	6
23	MP-6	Z	7.5
24	MP-7	Z	5
25	MP-9	Z	6
26	MP-10	Z	7.5
27	MP-11	Z	5

**Member Distributed Loads (BLC 2 : 0 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	-0.004	0 %100
2	AHCP-2	X	-0.009	0 %100
3	AHCP-3	X	-0.004	0 %100
4	CP-1	X	-0.009	0 %100
5	CP-2	X	-0.019	0 %100
6	CP-3	X	-0.009	0 %100
7	M71	X	-0.019	0 %100
8	M73	X	-0.019	0 %100
9	M75	X	-0.009	0 %100
10	M77	X	-0.009	0 %100
11	M79	X	-0.009	0 %100
12	M81	X	-0.009	0 %100



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**Member Distributed Loads (BLC 2 : 0 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location[ft,%]	End Location[ft,%]
13	FF-TH	X	-0.01	0 %100
14	SF1-TH	X	-0.005	0 %100
15	SF2-TH	X	-0.005	0 %100
16	GSIP-1A	X	-0.01	0 %100
17	GSIP-1B	X	-0.004	0 %100
18	GSIP-2A	X	-0.004	0 %100
19	GSIP-2B	X	-0.004	0 %100
20	GSIP-3A	X	-0.004	0 %100
21	GSIP-3B	X	-0.01	0 %100
22	GSI-1A	X	-0.006	0 %100
23	GSI-1B	X	-0.006	0 %100
24	GSI-2A	X	-0.015	0 %100
25	GSI-2B	X	-0.015	0 %100
26	GSI-3A	X	-0.006	0 %100
27	GSI-3B	X	-0.006	0 %100
28	M53	X	0	0 %100
29	M54	X	-0.009	0 %100
30	M56	X	0	0 %100
31	M57	X	-0.009	0 %100
32	M59	X	-0.016	0 %100
33	M60	X	-0.019	0 %100
34	M62	X	-0.016	0 %100
35	M63	X	-0.009	0 %100
36	M65	X	-0.016	0 %100
37	M66	X	-0.009	0 %100
38	M68	X	-0.016	0 %100
39	M69	X	-0.019	0 %100
40	MP-1	X	-0.007	0 %100
41	MP-2	X	-0.007	0 %100
42	MP-3	X	-0.007	0 %100
43	MP-4	X	-0.007	0 %100
44	MP-5	X	-0.007	0 %100
45	MP-6	X	-0.007	0 %100
46	MP-7	X	-0.007	0 %100
47	MP-8	X	-0.007	0 %100
48	MP-9	X	-0.007	0 %100
49	MP-10	X	-0.007	0 %100
50	MP-11	X	-0.007	0 %100
51	MP-12	X	-0.007	0 %100
52	K1	X	-0.012	0 %100
53	K2	X	-0.012	0 %100
54	K3	X	-0.012	0 %100
55	SA-1	X	-0.015	0 %100
56	SA-2	X	0	0 %100
57	SA-3	X	-0.015	0 %100
58	SR-1	X	-0.007	0 %100
59	SR-2	X	-0.004	0 %100
60	SR-3	X	-0.004	0 %100

**Member Distributed Loads (BLC 3 : 30 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location[ft,%]	End Location[ft,%]
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**Member Distributed Loads (BLC 3 : 30 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)		
1	AHCP-1	X	-0.006	0	%100	
2	AHCP-2	X	-0.007	0	%100	
3	AHCP-3	X	0	0	%100	
4	CP-1	X	-0.014	0	%100	
5	CP-2	X	-0.014	0	%100	
6	CP-3	X	0	0	%100	
7	M71	X	-0.014	0	%100	
8	M73	X	-0.014	0	%100	
9	M75	X	-0.014	0	%100	
10	M77	X	-0.014	0	%100	
11	M79	X	0	0	%100	
12	M81	X	0	0	%100	
13	FF-TH	X	-0.007	0	%100	
14	SF1-TH	X	0	0	%100	
15	SF2-TH	X	-0.007	0	%100	
16	GSIP-1A	X	-0.008	0	%100	
17	GSIP-1B	X	0	0	%100	
18	GSIP-2A	X	0	0	%100	
19	GSIP-2B	X	-0.006	0	%100	
20	GSIP-3A	X	-0.006	0	%100	
21	GSIP-3B	X	-0.008	0	%100	
22	GSI-1A	X	-0.01	0	%100	
23	GSI-1B	X	-0.01	0	%100	
24	GSI-2A	X	-0.011	0	%100	
25	GSI-2B	X	-0.011	0	%100	
26	GSI-3A	X	0	0	%100	
27	GSI-3B	X	0	0	%100	
28	M53	X	-0.008	0	%100	
29	M54	X	-2.8e-5	-2.8e-5	0	%100
30	M56	X	-0.008	0	%100	
31	M57	X	-0.014	0	%100	
32	M59	X	-0.008	0	%100	
33	M60	X	-0.014	0	%100	
34	M62	X	-0.008	0	%100	
35	M63	X	-2.8e-5	-2.8e-5	0	%100
36	M65	X	-0.016	0	%100	
37	M66	X	-0.014	0	%100	
38	M68	X	-0.016	0	%100	
39	M69	X	-0.014	0	%100	
40	MP-1	X	-0.006	0	%100	
41	MP-2	X	-0.006	0	%100	
42	MP-3	X	-0.006	0	%100	
43	MP-4	X	-0.006	0	%100	
44	MP-5	X	-0.006	0	%100	
45	MP-6	X	-0.006	0	%100	
46	MP-7	X	-0.006	0	%100	
47	MP-8	X	-0.006	0	%100	
48	MP-9	X	-0.006	0	%100	
49	MP-10	X	-0.006	0	%100	
50	MP-11	X	-0.006	0	%100	
51	MP-12	X	-0.006	0	%100	
52	K1	X	-0.011	0	%100	



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**Member Distributed Loads (BLC 3 : 30 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)		
53	K2	X	-0.011	0	%100	
54	K3	X	-0.011	0	%100	
55	SA-1	X	-0.007	0	%100	
56	SA-2	X	-0.005	0	%100	
57	SA-3	X	-0.015	0	%100	
58	SR-1	X	-0.006	0	%100	
59	SR-2	X	0	0	%100	
60	SR-3	X	-0.006	0	%100	
61	AHCP-1	Z	-0.004	0	%100	
62	AHCP-2	Z	-0.004	0	%100	
63	AHCP-3	Z	0	0	%100	
64	CP-1	Z	-0.008	0	%100	
65	CP-2	Z	-0.008	0	%100	
66	CP-3	Z	0	0	%100	
67	M71	Z	-0.008	0	%100	
68	M73	Z	-0.008	0	%100	
69	M75	Z	-0.008	0	%100	
70	M77	Z	-0.008	0	%100	
71	M79	Z	0	0	%100	
72	M81	Z	0	0	%100	
73	FF-TH	Z	-0.004	-0.004	0	%100
74	SF1-TH	Z	0	0	%100	
75	SF2-TH	Z	-0.004	-0.004	0	%100
76	GSIP-1A	Z	-0.004	-0.004	0	%100
77	GSIP-1B	Z	0	0	%100	
78	GSIP-2A	Z	0	0	%100	
79	GSIP-2B	Z	-0.004	-0.004	0	%100
80	GSIP-3A	Z	-0.004	-0.004	0	%100
81	GSIP-3B	Z	-0.004	-0.004	0	%100
82	GSI-1A	Z	-0.006	-0.006	0	%100
83	GSI-1B	Z	-0.006	-0.006	0	%100
84	GSI-2A	Z	-0.006	-0.006	0	%100
85	GSI-2B	Z	-0.006	-0.006	0	%100
86	GSI-3A	Z	0	0	%100	
87	GSI-3B	Z	0	0	%100	
88	M53	Z	-0.005	-0.005	0	%100
89	M54	Z	-1.6e-5	-1.6e-5	0	%100
90	M56	Z	-0.005	-0.005	0	%100
91	M57	Z	-0.008	-0.008	0	%100
92	M59	Z	-0.005	-0.005	0	%100
93	M60	Z	-0.008	-0.008	0	%100
94	M62	Z	-0.005	-0.005	0	%100
95	M63	Z	-1.6e-5	-1.6e-5	0	%100
96	M65	Z	-0.009	-0.009	0	%100
97	M66	Z	-0.008	-0.008	0	%100
98	M68	Z	-0.009	-0.009	0	%100
99	M69	Z	-0.008	-0.008	0	%100
100	MP-1	Z	-0.004	-0.004	0	%100
101	MP-2	Z	-0.004	-0.004	0	%100
102	MP-3	Z	-0.004	-0.004	0	%100
103	MP-4	Z	-0.004	-0.004	0	%100
104	MP-5	Z	-0.004	-0.004	0	%100



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**Member Distributed Loads (BLC 3 : 30 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)	
105	MP-6	Z	-0.04	0	%100
106	MP-7	Z	-0.04	0	%100
107	MP-8	Z	-0.04	0	%100
108	MP-9	Z	-0.04	0	%100
109	MP-10	Z	-0.04	0	%100
110	MP-11	Z	-0.04	0	%100
111	MP-12	Z	-0.04	0	%100
112	K1	Z	-0.06	0	%100
113	K2	Z	-0.06	0	%100
114	K3	Z	-0.06	0	%100
115	SA-1	Z	-0.04	0	%100
116	SA-2	Z	-0.04	0	%100
117	SA-3	Z	-0.07	0	%100
118	SR-1	Z	-0.03	0	%100
119	SR-2	Z	0	0	%100
120	SR-3	Z	-0.03	0	%100

**Member Distributed Loads (BLC 4 : 45 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)	
1	AHCP-1	X	-0.05	0	%100
2	AHCP-2	X	-0.04	0	%100
3	AHCP-3	X	-0.01	0	%100
4	CP-1	X	-0.13	0	%100
5	CP-2	X	-0.09	0	%100
6	CP-3	X	-0.03	0	%100
7	M71	X	-0.09	0	%100
8	M73	X	-0.09	0	%100
9	M75	X	-0.13	0	%100
10	M77	X	-0.13	0	%100
11	M79	X	-0.03	0	%100
12	M81	X	-0.03	0	%100
13	FF-TH	X	-0.05	0	%100
14	SF1-TH	X	-0.02	0	%100
15	SF2-TH	X	-0.06	0	%100
16	GSIP-1A	X	-0.05	0	%100
17	GSIP-1B	X	-0.01	0	%100
18	GSIP-2A	X	-0.01	0	%100
19	GSIP-2B	X	-0.06	0	%100
20	GSIP-3A	X	-0.06	0	%100
21	GSIP-3B	X	-0.05	0	%100
22	GSI-1A	X	-0.09	0	%100
23	GSI-1B	X	-0.09	0	%100
24	GSI-2A	X	-0.07	0	%100
25	GSI-2B	X	-0.07	0	%100
26	GSI-3A	X	-0.02	0	%100
27	GSI-3B	X	-0.02	0	%100
28	M53	X	-0.09	0	%100
29	M54	X	-0.03	0	%100
30	M56	X	-0.09	0	%100
31	M57	X	-0.13	0	%100
32	M59	X	-0.03	0	%100



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**Member Distributed Loads (BLC 4 : 45 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)	
33	M60	X	-0.09	0	%100
34	M62	X	-0.03	0	%100
35	M63	X	-0.03	0	%100
36	M65	X	-0.13	0	%100
37	M66	X	-0.13	0	%100
38	M68	X	-0.13	0	%100
39	M69	X	-0.09	0	%100
40	MP-1	X	-0.05	0	%100
41	MP-2	X	-0.05	0	%100
42	MP-3	X	-0.05	0	%100
43	MP-4	X	-0.05	0	%100
44	MP-5	X	-0.05	0	%100
45	MP-6	X	-0.05	0	%100
46	MP-7	X	-0.05	0	%100
47	MP-8	X	-0.05	0	%100
48	MP-9	X	-0.05	0	%100
49	MP-10	X	-0.05	0	%100
50	MP-11	X	-0.05	0	%100
51	MP-12	X	-0.05	0	%100
52	K1	X	-0.09	0	%100
53	K2	X	-0.09	0	%100
54	K3	X	-0.09	0	%100
55	SA-1	X	-0.03	0	%100
56	SA-2	X	-0.06	0	%100
57	SA-3	X	-0.11	0	%100
58	SR-1	X	-0.04	0	%100
59	SR-2	X	-0.01	0	%100
60	SR-3	X	-0.05	0	%100
61	AHCP-1	Z	-0.06	0	%100
62	AHCP-2	Z	-0.04	0	%100
63	AHCP-3	Z	-0.02	0	%100
64	CP-1	Z	-0.13	0	%100
65	CP-2	Z	-0.09	0	%100
66	CP-3	Z	-0.03	0	%100
67	M71	Z	-0.09	0	%100
68	M73	Z	-0.09	0	%100
69	M75	Z	-0.13	0	%100
70	M77	Z	-0.13	0	%100
71	M79	Z	-0.03	0	%100
72	M81	Z	-0.03	0	%100
73	FF-TH	Z	-0.05	0	%100
74	SF1-TH	Z	-0.02	0	%100
75	SF2-TH	Z	-0.07	0	%100
76	GSIP-1A	Z	-0.05	0	%100
77	GSIP-1B	Z	-0.02	0	%100
78	GSIP-2A	Z	-0.02	0	%100
79	GSIP-2B	Z	-0.07	0	%100
80	GSIP-3A	Z	-0.07	0	%100
81	GSIP-3B	Z	-0.05	0	%100
82	GSI-1A	Z	-0.1	0	%100
83	GSI-1B	Z	-0.1	0	%100
84	GSI-2A	Z	-0.07	0	%100



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**Member Distributed Loads (BLC 4 : 45 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)	
85	GSI-2B	Z	-0.07	0	%100
86	GSI-3A	Z	-0.03	0	%100
87	GSI-3B	Z	-0.03	0	%100
88	M53	Z	-0.09	0	%100
89	M54	Z	-0.03	0	%100
90	M56	Z	-0.09	0	%100
91	M57	Z	-0.13	0	%100
92	M59	Z	-0.03	0	%100
93	M60	Z	-0.09	0	%100
94	M62	Z	-0.03	0	%100
95	M63	Z	-0.03	0	%100
96	M65	Z	-0.13	0	%100
97	M66	Z	-0.13	0	%100
98	M68	Z	-0.13	0	%100
99	M69	Z	-0.09	0	%100
100	MP-1	Z	-0.05	0	%100
101	MP-2	Z	-0.05	0	%100
102	MP-3	Z	-0.05	0	%100
103	MP-4	Z	-0.05	0	%100
104	MP-5	Z	-0.05	0	%100
105	MP-6	Z	-0.05	0	%100
106	MP-7	Z	-0.05	0	%100
107	MP-8	Z	-0.05	0	%100
108	MP-9	Z	-0.05	0	%100
109	MP-10	Z	-0.05	0	%100
110	MP-11	Z	-0.05	0	%100
111	MP-12	Z	-0.05	0	%100
112	K1	Z	-0.09	0	%100
113	K2	Z	-0.09	0	%100
114	K3	Z	-0.09	0	%100
115	SA-1	Z	-0.03	0	%100
116	SA-2	Z	-0.09	0	%100
117	SA-3	Z	-0.01	0	%100
118	SR-1	Z	-0.04	0	%100
119	SR-2	Z	-0.01	0	%100
120	SR-3	Z	-0.05	0	%100

**Member Distributed Loads (BLC 5 : 60 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)	
1	AHCP-1	X	-0.04	0	%100
2	AHCP-2	X	-0.02	0	%100
3	AHCP-3	X	-0.02	0	%100
4	CP-1	X	-0.09	0	%100
5	CP-2	X	-0.05	0	%100
6	CP-3	X	-0.05	0	%100
7	M71	X	-0.05	0	%100
8	M73	X	-0.05	0	%100
9	M75	X	-0.09	0	%100
10	M77	X	-0.09	0	%100
11	M79	X	-0.05	0	%100
12	M81	X	-0.05	0	%100



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**Member Distributed Loads (BLC 5 : 60 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)	
13	FF-TH	X	-0.02	0	%100
14	SF1-TH	X	-0.02	0	%100
15	SF2-TH	X	-0.05	0	%100
16	GSIP-1A	X	-0.03	0	%100
17	GSIP-1B	X	-0.02	0	%100
18	GSIP-2A	X	-0.02	0	%100
19	GSIP-2B	X	-0.04	0	%100
20	GSIP-3A	X	-0.04	0	%100
21	GSIP-3B	X	-0.03	0	%100
22	GSI-1A	X	-0.06	0	%100
23	GSI-1B	X	-0.06	0	%100
24	GSI-2A	X	-0.04	0	%100
25	GSI-2B	X	-0.04	0	%100
26	GSI-3A	X	-0.03	0	%100
27	GSI-3B	X	-0.03	0	%100
28	M53	X	-0.08	0	%100
29	M54	X	-0.05	0	%100
30	M56	X	-0.08	0	%100
31	M57	X	-0.09	0	%100
32	M59	X	0	0	%100
33	M60	X	-0.05	0	%100
34	M62	X	0	0	%100
35	M63	X	-0.05	0	%100
36	M65	X	-0.08	0	%100
37	M66	X	-0.09	0	%100
38	M68	X	-0.08	0	%100
39	M69	X	-0.05	0	%100
40	MP-1	X	-0.04	0	%100
41	MP-2	X	-0.04	0	%100
42	MP-3	X	-0.04	0	%100
43	MP-4	X	-0.04	0	%100
44	MP-5	X	-0.04	0	%100
45	MP-6	X	-0.04	0	%100
46	MP-7	X	-0.04	0	%100
47	MP-8	X	-0.04	0	%100
48	MP-9	X	-0.04	0	%100
49	MP-10	X	-0.04	0	%100
50	MP-11	X	-0.04	0	%100
51	MP-12	X	-0.04	0	%100
52	K1	X	-0.06	0	%100
53	K2	X	-0.06	0	%100
54	K3	X	-0.06	0	%100
55	SA-1	X	0	0	%100
56	SA-2	X	-0.05	0	%100
57	SA-3	X	-0.07	0	%100
58	SR-1	X	-0.02	0	%100
59	SR-2	X	-0.02	0	%100
60	SR-3	X	-0.04	0	%100
61	AHCP-1	Z	-0.07	0	%100
62	AHCP-2	Z	-0.04	0	%100
63	AHCP-3	Z	-0.04	0	%100
64	CP-1	Z	-0.16	0	%100



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**Member Distributed Loads (BLC 5 : 60 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
65	CP-2	Z	-0.008	0 %100
66	CP-3	Z	-0.008	0 %100
67	M71	Z	-0.008	0 %100
68	M73	Z	-0.008	0 %100
69	M75	Z	-0.016	0 %100
70	M77	Z	-0.016	0 %100
71	M79	Z	-0.008	0 %100
72	M81	Z	-0.008	0 %100
73	FF-TH	Z	-0.004	0 %100
74	SF1-TH	Z	-0.004	0 %100
75	SF2-TH	Z	-0.009	0 %100
76	GSIP-1A	Z	-0.004	0 %100
77	GSIP-1B	Z	-0.004	0 %100
78	GSIP-2A	Z	-0.004	0 %100
79	GSIP-2B	Z	-0.008	0 %100
80	GSIP-3A	Z	-0.008	0 %100
81	GSIP-3B	Z	-0.004	0 %100
82	GSI-1A	Z	-0.012	0 %100
83	GSI-1B	Z	-0.012	0 %100
84	GSI-2A	Z	-0.006	0 %100
85	GSI-2B	Z	-0.006	0 %100
86	GSI-3A	Z	-0.006	0 %100
87	GSI-3B	Z	-0.006	0 %100
88	M53	Z	-0.014	0 %100
89	M54	Z	-0.008	0 %100
90	M56	Z	-0.014	0 %100
91	M57	Z	-0.016	0 %100
92	M59	Z	0	0 %100
93	M60	Z	-0.008	0 %100
94	M62	Z	0	0 %100
95	M63	Z	-0.008	0 %100
96	M65	Z	-0.014	0 %100
97	M66	Z	-0.016	0 %100
98	M68	Z	-0.014	0 %100
99	M69	Z	-0.008	0 %100
100	MP-1	Z	-0.006	0 %100
101	MP-2	Z	-0.006	0 %100
102	MP-3	Z	-0.006	0 %100
103	MP-4	Z	-0.006	0 %100
104	MP-5	Z	-0.006	0 %100
105	MP-6	Z	-0.006	0 %100
106	MP-7	Z	-0.006	0 %100
107	MP-8	Z	-0.006	0 %100
108	MP-9	Z	-0.006	0 %100
109	MP-10	Z	-0.006	0 %100
110	MP-11	Z	-0.006	0 %100
111	MP-12	Z	-0.006	0 %100
112	K1	Z	-0.011	0 %100
113	K2	Z	-0.011	0 %100
114	K3	Z	-0.011	0 %100
115	SA-1	Z	0	0 %100
116	SA-2	Z	-0.013	0 %100



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**Member Distributed Loads (BLC 5 : 60 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
117	SA-3	Z	-0.011	0 %100
118	SR-1	Z	-0.003	0 %100
119	SR-2	Z	-0.003	0 %100
120	SR-3	Z	-0.006	0 %100

**Member Distributed Loads (BLC 6 : 90 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
1	AHCP-1	Z	-0.007	0 %100
2	AHCP-2	Z	0	0 %100
3	AHCP-3	Z	-0.007	0 %100
4	CP-1	Z	-0.016	0 %100
5	CP-2	Z	0	0 %100
6	CP-3	Z	-0.016	0 %100
7	M71	Z	0	0 %100
8	M73	Z	0	0 %100
9	M75	Z	-0.016	0 %100
10	M77	Z	-0.016	0 %100
11	M79	Z	-0.016	0 %100
12	M81	Z	-0.016	0 %100
13	FF-TH	Z	0	0 %100
14	SF1-TH	Z	-0.009	0 %100
15	SF2-TH	Z	-0.009	0 %100
16	GSIP-1A	Z	0	0 %100
17	GSIP-1B	Z	-0.008	0 %100
18	GSIP-2A	Z	-0.008	0 %100
19	GSIP-2B	Z	-0.008	0 %100
20	GSIP-3A	Z	-0.008	0 %100
21	GSIP-3B	Z	0	0 %100
22	GSI-1A	Z	-0.012	0 %100
23	GSI-1B	Z	-0.012	0 %100
24	GSI-2A	Z	0	0 %100
25	GSI-2B	Z	0	0 %100
26	GSI-3A	Z	-0.012	0 %100
27	GSI-3B	Z	-0.012	0 %100
28	M53	Z	-0.019	0 %100
29	M54	Z	-0.016	0 %100
30	M56	Z	-0.019	0 %100
31	M57	Z	-0.016	0 %100
32	M59	Z	-0.009	0 %100
33	M60	Z	-3.2e-5	0 %100
34	M62	Z	-0.009	0 %100
35	M63	Z	-0.016	0 %100
36	M65	Z	-0.009	0 %100
37	M66	Z	-0.016	0 %100
38	M68	Z	-0.009	0 %100
39	M69	Z	-3.2e-5	0 %100
40	MP-1	Z	-0.007	0 %100
41	MP-2	Z	-0.007	0 %100
42	MP-3	Z	-0.007	0 %100
43	MP-4	Z	-0.007	0 %100
44	MP-5	Z	-0.007	0 %100



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**Member Distributed Loads (BLC 6 : 90 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)	
45	MP-6	Z	-0.07	0	%100
46	MP-7	Z	-0.07	0	%100
47	MP-8	Z	-0.07	0	%100
48	MP-9	Z	-0.07	0	%100
49	MP-10	Z	-0.07	0	%100
50	MP-11	Z	-0.07	0	%100
51	MP-12	Z	-0.07	0	%100
52	K1	Z	-0.12	0	%100
53	K2	Z	-0.12	0	%100
54	K3	Z	-0.12	0	%100
55	SA-1	Z	-0.07	0	%100
56	SA-2	Z	-0.17	0	%100
57	SA-3	Z	-0.07	0	%100
58	SR-1	Z	0	0	%100
59	SR-2	Z	-0.06	0	%100
60	SR-3	Z	-0.06	0	%100

**Member Distributed Loads (BLC 7 : 120 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)	
1	AHCP-1	X	.002	0	%100
2	AHCP-2	X	.002	0	%100
3	AHCP-3	X	.004	0	%100
4	CP-1	X	.005	0	%100
5	CP-2	X	.005	0	%100
6	CP-3	X	.009	0	%100
7	M71	X	.005	0	%100
8	M73	X	.005	0	%100
9	M75	X	.005	0	%100
10	M77	X	.005	0	%100
11	M79	X	.009	0	%100
12	M81	X	.009	0	%100
13	FF-TH	X	.002	0	%100
14	SF1-TH	X	.005	0	%100
15	SF2-TH	X	.002	0	%100
16	GSIP-1A	X	.003	0	%100
17	GSIP-1B	X	.004	0	%100
18	GSIP-2A	X	.004	0	%100
19	GSIP-2B	X	.002	0	%100
20	GSIP-3A	X	.002	0	%100
21	GSIP-3B	X	.003	0	%100
22	GSI-1A	X	.003	0	%100
23	GSI-1B	X	.003	0	%100
24	GSI-2A	X	.004	0	%100
25	GSI-2B	X	.004	0	%100
26	GSI-3A	X	.006	0	%100
27	GSI-3B	X	.006	0	%100
28	M53	X	.008	0	%100
29	M54	X	.009	0	%100
30	M56	X	.008	0	%100
31	M57	X	.005	0	%100
32	M59	X	.008	0	%100



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**Member Distributed Loads (BLC 7 : 120 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)		
33	M60	X	.005	0	%100	
34	M62	X	.008	0	%100	
35	M63	X	.009	0	%100	
36	M65	X	0	0	%100	
37	M66	X	.005	.005	0	%100
38	M68	X	0	0	%100	
39	M69	X	.005	.005	0	%100
40	MP-1	X	.004	.004	0	%100
41	MP-2	X	.004	.004	0	%100
42	MP-3	X	.004	.004	0	%100
43	MP-4	X	.004	.004	0	%100
44	MP-5	X	.004	.004	0	%100
45	MP-6	X	.004	.004	0	%100
46	MP-7	X	.004	.004	0	%100
47	MP-8	X	.004	.004	0	%100
48	MP-9	X	.004	.004	0	%100
49	MP-10	X	.004	.004	0	%100
50	MP-11	X	.004	.004	0	%100
51	MP-12	X	.004	.004	0	%100
52	K1	X	.006	.006	0	%100
53	K2	X	.006	.006	0	%100
54	K3	X	.006	.006	0	%100
55	SA-1	X	.007	.007	0	%100
56	SA-2	X	.005	.005	0	%100
57	SA-3	X	0	0	0	%100
58	SR-1	X	.002	.002	0	%100
59	SR-2	X	.004	.004	0	%100
60	SR-3	X	.002	.002	0	%100
61	AHCP-1	Z	-.004	-.004	0	%100
62	AHCP-2	Z	-.004	-.004	0	%100
63	AHCP-3	Z	-.007	-.007	0	%100
64	CP-1	Z	-.008	-.008	0	%100
65	CP-2	Z	-.008	-.008	0	%100
66	CP-3	Z	-.016	-.016	0	%100
67	M71	Z	-.008	-.008	0	%100
68	M73	Z	-.008	-.008	0	%100
69	M75	Z	-.008	-.008	0	%100
70	M77	Z	-.008	-.008	0	%100
71	M79	Z	-.016	-.016	0	%100
72	M81	Z	-.016	-.016	0	%100
73	FF-TH	Z	-.004	-.004	0	%100
74	SF1-TH	Z	-.009	-.009	0	%100
75	SF2-TH	Z	-.004	-.004	0	%100
76	GSIP-1A	Z	-.004	-.004	0	%100
77	GSIP-1B	Z	-.008	-.008	0	%100
78	GSIP-2A	Z	-.008	-.008	0	%100
79	GSIP-2B	Z	-.004	-.004	0	%100
80	GSIP-3A	Z	-.004	-.004	0	%100
81	GSIP-3B	Z	-.004	-.004	0	%100
82	GSI-1A	Z	-.006	-.006	0	%100
83	GSI-1B	Z	-.006	-.006	0	%100
84	GSI-2A	Z	-.006	-.006	0	%100





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**Member Distributed Loads (BLC 7 : 120 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
85	GSI-2B	Z	-0.006	-0.006	0 %100
86	GSI-3A	Z	-0.012	-0.012	0 %100
87	GSI-3B	Z	-0.012	-0.012	0 %100
88	M53	Z	-0.014	-0.014	0 %100
89	M54	Z	-0.016	-0.016	0 %100
90	M56	Z	-0.014	-0.014	0 %100
91	M57	Z	-0.008	-0.008	0 %100
92	M59	Z	-0.014	-0.014	0 %100
93	M60	Z	-0.008	-0.008	0 %100
94	M62	Z	-0.014	-0.014	0 %100
95	M63	Z	-0.016	-0.016	0 %100
96	M65	Z	0	0	0 %100
97	M66	Z	-0.008	-0.008	0 %100
98	M68	Z	0	0	0 %100
99	M69	Z	-0.008	-0.008	0 %100
100	MP-1	Z	-0.006	-0.006	0 %100
101	MP-2	Z	-0.006	-0.006	0 %100
102	MP-3	Z	-0.006	-0.006	0 %100
103	MP-4	Z	-0.006	-0.006	0 %100
104	MP-5	Z	-0.006	-0.006	0 %100
105	MP-6	Z	-0.006	-0.006	0 %100
106	MP-7	Z	-0.006	-0.006	0 %100
107	MP-8	Z	-0.006	-0.006	0 %100
108	MP-9	Z	-0.006	-0.006	0 %100
109	MP-10	Z	-0.006	-0.006	0 %100
110	MP-11	Z	-0.006	-0.006	0 %100
111	MP-12	Z	-0.006	-0.006	0 %100
112	K1	Z	-0.011	-0.011	0 %100
113	K2	Z	-0.011	-0.011	0 %100
114	K3	Z	-0.011	-0.011	0 %100
115	SA-1	Z	-0.011	-0.011	0 %100
116	SA-2	Z	-0.013	-0.013	0 %100
117	SA-3	Z	0	0	0 %100
118	SR-1	Z	-0.003	-0.003	0 %100
119	SR-2	Z	-0.006	-0.006	0 %100
120	SR-3	Z	-0.003	-0.003	0 %100

**Member Distributed Loads (BLC 8 : 135 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	.001	.001	0 %100
2	AHCP-2	X	.004	.004	0 %100
3	AHCP-3	X	.005	.005	0 %100
4	CP-1	X	.003	.003	0 %100
5	CP-2	X	.009	.009	0 %100
6	CP-3	X	.013	.013	0 %100
7	M71	X	.009	.009	0 %100
8	M73	X	.009	.009	0 %100
9	M75	X	.003	.003	0 %100
10	M77	X	.003	.003	0 %100
11	M79	X	.013	.013	0 %100
12	M81	X	.013	.013	0 %100



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**Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
13	FF-TH	X	.005	.005	0 %100
14	SF1-TH	X	.006	.006	0 %100
15	SF2-TH	X	.002	.002	0 %100
16	GSIP-1A	X	.005	.005	0 %100
17	GSIP-1B	X	.006	.006	0 %100
18	GSIP-2A	X	.006	.006	0 %100
19	GSIP-2B	X	.001	.001	0 %100
20	GSIP-3A	X	.001	.001	0 %100
21	GSIP-3B	X	.005	.005	0 %100
22	GSI-1A	X	.002	.002	0 %100
23	GSI-1B	X	.002	.002	0 %100
24	GSI-2A	X	.007	.007	0 %100
25	GSI-2B	X	.007	.007	0 %100
26	GSI-3A	X	.009	.009	0 %100
27	GSI-3B	X	.009	.009	0 %100
28	M53	X	.009	.009	0 %100
29	M54	X	.013	.013	0 %100
30	M56	X	.009	.009	0 %100
31	M57	X	.003	.003	0 %100
32	M59	X	.013	.013	0 %100
33	M60	X	.009	.009	0 %100
34	M62	X	.013	.013	0 %100
35	M63	X	.013	.013	0 %100
36	M65	X	.003	.003	0 %100
37	M66	X	.003	.003	0 %100
38	M68	X	.003	.003	0 %100
39	M69	X	.009	.009	0 %100
40	MP-1	X	.005	.005	0 %100
41	MP-2	X	.005	.005	0 %100
42	MP-3	X	.005	.005	0 %100
43	MP-4	X	.005	.005	0 %100
44	MP-5	X	.005	.005	0 %100
45	MP-6	X	.005	.005	0 %100
46	MP-7	X	.005	.005	0 %100
47	MP-8	X	.005	.005	0 %100
48	MP-9	X	.005	.005	0 %100
49	MP-10	X	.005	.005	0 %100
50	MP-11	X	.005	.005	0 %100
51	MP-12	X	.005	.005	0 %100
52	K1	X	.009	.009	0 %100
53	K2	X	.009	.009	0 %100
54	K3	X	.009	.009	0 %100
55	SA-1	X	.011	.011	0 %100
56	SA-2	X	.006	.006	0 %100
57	SA-3	X	.003	.003	0 %100
58	SR-1	X	.004	.004	0 %100
59	SR-2	X	.005	.005	0 %100
60	SR-3	X	.001	.001	0 %100
61	AHCP-1	Z	-.002	-.002	0 %100
62	AHCP-2	Z	-.004	-.004	0 %100
63	AHCP-3	Z	-.006	-.006	0 %100
64	CP-1	Z	-.003	-.003	0 %100



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**Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
65	CP-2	Z	-0.009	-0.009	0 %100
66	CP-3	Z	-0.013	-0.013	0 %100
67	M71	Z	-0.009	-0.009	0 %100
68	M73	Z	-0.009	-0.009	0 %100
69	M75	Z	-0.003	-0.003	0 %100
70	M77	Z	-0.003	-0.003	0 %100
71	M79	Z	-0.013	-0.013	0 %100
72	M81	Z	-0.013	-0.013	0 %100
73	FF-TH	Z	-0.005	-0.005	0 %100
74	SF1-TH	Z	-0.007	-0.007	0 %100
75	SF2-TH	Z	-0.002	-0.002	0 %100
76	GSIP-1A	Z	-0.005	-0.005	0 %100
77	GSIP-1B	Z	-0.007	-0.007	0 %100
78	GSIP-2A	Z	-0.007	-0.007	0 %100
79	GSIP-2B	Z	-0.002	-0.002	0 %100
80	GSIP-3A	Z	-0.002	-0.002	0 %100
81	GSIP-3B	Z	-0.005	-0.005	0 %100
82	GSI-1A	Z	-0.003	-0.003	0 %100
83	GSI-1B	Z	-0.003	-0.003	0 %100
84	GSI-2A	Z	-0.007	-0.007	0 %100
85	GSI-2B	Z	-0.007	-0.007	0 %100
86	GSI-3A	Z	-0.01	-0.01	0 %100
87	GSI-3B	Z	-0.01	-0.01	0 %100
88	M53	Z	-0.009	-0.009	0 %100
89	M54	Z	-0.013	-0.013	0 %100
90	M56	Z	-0.009	-0.009	0 %100
91	M57	Z	-0.003	-0.003	0 %100
92	M59	Z	-0.013	-0.013	0 %100
93	M60	Z	-0.009	-0.009	0 %100
94	M62	Z	-0.013	-0.013	0 %100
95	M63	Z	-0.013	-0.013	0 %100
96	M65	Z	-0.003	-0.003	0 %100
97	M66	Z	-0.003	-0.003	0 %100
98	M68	Z	-0.003	-0.003	0 %100
99	M69	Z	-0.009	-0.009	0 %100
100	MP-1	Z	-0.005	-0.005	0 %100
101	MP-2	Z	-0.005	-0.005	0 %100
102	MP-3	Z	-0.005	-0.005	0 %100
103	MP-4	Z	-0.005	-0.005	0 %100
104	MP-5	Z	-0.005	-0.005	0 %100
105	MP-6	Z	-0.005	-0.005	0 %100
106	MP-7	Z	-0.005	-0.005	0 %100
107	MP-8	Z	-0.005	-0.005	0 %100
108	MP-9	Z	-0.005	-0.005	0 %100
109	MP-10	Z	-0.005	-0.005	0 %100
110	MP-11	Z	-0.005	-0.005	0 %100
111	MP-12	Z	-0.005	-0.005	0 %100
112	K1	Z	-0.009	-0.009	0 %100
113	K2	Z	-0.009	-0.009	0 %100
114	K3	Z	-0.009	-0.009	0 %100
115	SA-1	Z	-0.01	-0.01	0 %100
116	SA-2	Z	-0.009	-0.009	0 %100



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**Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
117	SA-3	Z	-0.003	-0.003	0 %100
118	SR-1	Z	-0.004	-0.004	0 %100
119	SR-2	Z	-0.005	-0.005	0 %100
120	SR-3	Z	-0.001	-0.001	0 %100

**Member Distributed Loads (BLC 9 : 150 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	0	0	0 %100
2	AHCP-2	X	.007	.007	0 %100
3	AHCP-3	X	.006	.006	0 %100
4	CP-1	X	0	0	0 %100
5	CP-2	X	.014	.014	0 %100
6	CP-3	X	.014	.014	0 %100
7	M71	X	.014	.014	0 %100
8	M73	X	.014	.014	0 %100
9	M75	X	0	0	0 %100
10	M77	X	0	0	0 %100
11	M79	X	.014	.014	0 %100
12	M81	X	.014	.014	0 %100
13	FF-TH	X	.007	.007	0 %100
14	SF1-TH	X	.007	.007	0 %100
15	SF2-TH	X	0	0	0 %100
16	GSIP-1A	X	.008	.008	0 %100
17	GSIP-1B	X	.006	.006	0 %100
18	GSIP-2A	X	.006	.006	0 %100
19	GSIP-2B	X	0	0	0 %100
20	GSIP-3A	X	0	0	0 %100
21	GSIP-3B	X	.008	.008	0 %100
22	GSI-1A	X	0	0	0 %100
23	GSI-1B	X	0	0	0 %100
24	GSI-2A	X	.011	.011	0 %100
25	GSI-2B	X	.011	.011	0 %100
26	GSI-3A	X	.01	.01	0 %100
27	GSI-3B	X	.01	.01	0 %100
28	M53	X	.008	.008	0 %100
29	M54	X	.014	.014	0 %100
30	M56	X	.008	.008	0 %100
31	M57	X	2.8e-5	2.8e-5	0 %100
32	M59	X	.016	.016	0 %100
33	M60	X	.014	.014	0 %100
34	M62	X	.016	.016	0 %100
35	M63	X	.014	.014	0 %100
36	M65	X	.008	.008	0 %100
37	M66	X	2.8e-5	2.8e-5	0 %100
38	M68	X	.008	.008	0 %100
39	M69	X	.014	.014	0 %100
40	MP-1	X	.006	.006	0 %100
41	MP-2	X	.006	.006	0 %100
42	MP-3	X	.006	.006	0 %100
43	MP-4	X	.006	.006	0 %100
44	MP-5	X	.006	.006	0 %100



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**Member Distributed Loads (BLC 9 : 150 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
45	MP-6	X	.006	.006	0 %100
46	MP-7	X	.006	.006	0 %100
47	MP-8	X	.006	.006	0 %100
48	MP-9	X	.006	.006	0 %100
49	MP-10	X	.006	.006	0 %100
50	MP-11	X	.006	.006	0 %100
51	MP-12	X	.006	.006	0 %100
52	K1	X	.011	.011	0 %100
53	K2	X	.011	.011	0 %100
54	K3	X	.011	.011	0 %100
55	SA-1	X	.015	.015	0 %100
56	SA-2	X	.005	.005	0 %100
57	SA-3	X	.007	.007	0 %100
58	SR-1	X	.006	.006	0 %100
59	SR-2	X	.006	.006	0 %100
60	SR-3	X	0	0	0 %100
61	AHCP-1	Z	0	0	0 %100
62	AHCP-2	Z	-.004	-.004	0 %100
63	AHCP-3	Z	-.004	-.004	0 %100
64	CP-1	Z	0	0	0 %100
65	CP-2	Z	-.008	-.008	0 %100
66	CP-3	Z	-.008	-.008	0 %100
67	M71	Z	-.008	-.008	0 %100
68	M73	Z	-.008	-.008	0 %100
69	M75	Z	0	0	0 %100
70	M77	Z	0	0	0 %100
71	M79	Z	-.008	-.008	0 %100
72	M81	Z	-.008	-.008	0 %100
73	FF-TH	Z	-.004	-.004	0 %100
74	SF1-TH	Z	-.004	-.004	0 %100
75	SF2-TH	Z	0	0	0 %100
76	GSIP-1A	Z	-.004	-.004	0 %100
77	GSIP-1B	Z	-.004	-.004	0 %100
78	GSIP-2A	Z	-.004	-.004	0 %100
79	GSIP-2B	Z	0	0	0 %100
80	GSIP-3A	Z	0	0	0 %100
81	GSIP-3B	Z	-.004	-.004	0 %100
82	GSI-1A	Z	0	0	0 %100
83	GSI-1B	Z	0	0	0 %100
84	GSI-2A	Z	-.006	-.006	0 %100
85	GSI-2B	Z	-.006	-.006	0 %100
86	GSI-3A	Z	-.006	-.006	0 %100
87	GSI-3B	Z	-.006	-.006	0 %100
88	M53	Z	-.005	-.005	0 %100
89	M54	Z	-.008	-.008	0 %100
90	M56	Z	-.005	-.005	0 %100
91	M57	Z	-1.6e-5	-1.6e-5	0 %100
92	M59	Z	-.009	-.009	0 %100
93	M60	Z	-.008	-.008	0 %100
94	M62	Z	-.009	-.009	0 %100
95	M63	Z	-.008	-.008	0 %100
96	M65	Z	-.005	-.005	0 %100



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**Member Distributed Loads (BLC 9 : 150 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
97	M66	Z	-1.6e-5	-1.6e-5	0 %100
98	M68	Z	-.005	-.005	0 %100
99	M69	Z	-.008	-.008	0 %100
100	MP-1	Z	-.004	-.004	0 %100
101	MP-2	Z	-.004	-.004	0 %100
102	MP-3	Z	-.004	-.004	0 %100
103	MP-4	Z	-.004	-.004	0 %100
104	MP-5	Z	-.004	-.004	0 %100
105	MP-6	Z	-.004	-.004	0 %100
106	MP-7	Z	-.004	-.004	0 %100
107	MP-8	Z	-.004	-.004	0 %100
108	MP-9	Z	-.004	-.004	0 %100
109	MP-10	Z	-.004	-.004	0 %100
110	MP-11	Z	-.004	-.004	0 %100
111	MP-12	Z	-.004	-.004	0 %100
112	K1	Z	-.006	-.006	0 %100
113	K2	Z	-.006	-.006	0 %100
114	K3	Z	-.006	-.006	0 %100
115	SA-1	Z	-.007	-.007	0 %100
116	SA-2	Z	-.004	-.004	0 %100
117	SA-3	Z	-.004	-.004	0 %100
118	SR-1	Z	-.003	-.003	0 %100
119	SR-2	Z	-.003	-.003	0 %100
120	SR-3	Z	0	0	0 %100

**Member Distributed Loads (BLC 10 : 180 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
1	AHCP-1	X	.004	.004	0 %100
2	AHCP-2	X	.009	.009	0 %100
3	AHCP-3	X	.004	.004	0 %100
4	CP-1	X	.009	.009	0 %100
5	CP-2	X	.019	.019	0 %100
6	CP-3	X	.009	.009	0 %100
7	M71	X	.019	.019	0 %100
8	M73	X	.019	.019	0 %100
9	M75	X	.009	.009	0 %100
10	M77	X	.009	.009	0 %100
11	M79	X	.009	.009	0 %100
12	M81	X	.009	.009	0 %100
13	FF-TH	X	.01	.01	0 %100
14	SF1-TH	X	.005	.005	0 %100
15	SF2-TH	X	.005	.005	0 %100
16	GSIP-1A	X	.01	.01	0 %100
17	GSIP-1B	X	.004	.004	0 %100
18	GSIP-2A	X	.004	.004	0 %100
19	GSIP-2B	X	.004	.004	0 %100
20	GSIP-3A	X	.004	.004	0 %100
21	GSIP-3B	X	.01	.01	0 %100
22	GSI-1A	X	.006	.006	0 %100
23	GSI-1B	X	.006	.006	0 %100
24	GSI-2A	X	.015	.015	0 %100



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**Member Distributed Loads (BLC 10 : 180 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
25	GSI-2B	X	.015	.015	0 %100
26	GSI-3A	X	.006	.006	0 %100
27	GSI-3B	X	.006	.006	0 %100
28	M53	X	0	0	0 %100
29	M54	X	.009	.009	0 %100
30	M56	X	0	0	0 %100
31	M57	X	.009	.009	0 %100
32	M59	X	.016	.016	0 %100
33	M60	X	.019	.019	0 %100
34	M62	X	.016	.016	0 %100
35	M63	X	.009	.009	0 %100
36	M65	X	.016	.016	0 %100
37	M66	X	.009	.009	0 %100
38	M68	X	.016	.016	0 %100
39	M69	X	.019	.019	0 %100
40	MP-1	X	.007	.007	0 %100
41	MP-2	X	.007	.007	0 %100
42	MP-3	X	.007	.007	0 %100
43	MP-4	X	.007	.007	0 %100
44	MP-5	X	.007	.007	0 %100
45	MP-6	X	.007	.007	0 %100
46	MP-7	X	.007	.007	0 %100
47	MP-8	X	.007	.007	0 %100
48	MP-9	X	.007	.007	0 %100
49	MP-10	X	.007	.007	0 %100
50	MP-11	X	.007	.007	0 %100
51	MP-12	X	.007	.007	0 %100
52	K1	X	.012	.012	0 %100
53	K2	X	.012	.012	0 %100
54	K3	X	.012	.012	0 %100
55	SA-1	X	.015	.015	0 %100
56	SA-2	X	0	0	0 %100
57	SA-3	X	.015	.015	0 %100
58	SR-1	X	.007	.007	0 %100
59	SR-2	X	.004	.004	0 %100
60	SR-3	X	.004	.004	0 %100

**Member Distributed Loads (BLC 11 : 210 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	.006	.006	0 %100
2	AHCP-2	X	.007	.007	0 %100
3	AHCP-3	X	0	0	0 %100
4	CP-1	X	.014	.014	0 %100
5	CP-2	X	.014	.014	0 %100
6	CP-3	X	0	0	0 %100
7	M71	X	.014	.014	0 %100
8	M73	X	.014	.014	0 %100
9	M75	X	.014	.014	0 %100
10	M77	X	.014	.014	0 %100
11	M79	X	0	0	0 %100
12	M81	X	0	0	0 %100



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**Member Distributed Loads (BLC 11 : 210 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
13	FF-TH	X	.007	.007	0 %100
14	SF1-TH	X	0	0	0 %100
15	SF2-TH	X	.007	.007	0 %100
16	GSIP-1A	X	.008	.008	0 %100
17	GSIP-1B	X	0	0	0 %100
18	GSIP-2A	X	0	0	0 %100
19	GSIP-2B	X	.006	.006	0 %100
20	GSIP-3A	X	.006	.006	0 %100
21	GSIP-3B	X	.008	.008	0 %100
22	GSI-1A	X	.01	.01	0 %100
23	GSI-1B	X	.01	.01	0 %100
24	GSI-2A	X	.011	.011	0 %100
25	GSI-2B	X	.011	.011	0 %100
26	GSI-3A	X	0	0	0 %100
27	GSI-3B	X	0	0	0 %100
28	M53	X	.008	.008	0 %100
29	M54	X	2.8e-5	2.8e-5	0 %100
30	M56	X	.008	.008	0 %100
31	M57	X	.014	.014	0 %100
32	M59	X	.008	.008	0 %100
33	M60	X	.014	.014	0 %100
34	M62	X	.008	.008	0 %100
35	M63	X	2.8e-5	2.8e-5	0 %100
36	M65	X	.016	.016	0 %100
37	M66	X	.014	.014	0 %100
38	M68	X	.016	.016	0 %100
39	M69	X	.014	.014	0 %100
40	MP-1	X	.006	.006	0 %100
41	MP-2	X	.006	.006	0 %100
42	MP-3	X	.006	.006	0 %100
43	MP-4	X	.006	.006	0 %100
44	MP-5	X	.006	.006	0 %100
45	MP-6	X	.006	.006	0 %100
46	MP-7	X	.006	.006	0 %100
47	MP-8	X	.006	.006	0 %100
48	MP-9	X	.006	.006	0 %100
49	MP-10	X	.006	.006	0 %100
50	MP-11	X	.006	.006	0 %100
51	MP-12	X	.006	.006	0 %100
52	K1	X	.011	.011	0 %100
53	K2	X	.011	.011	0 %100
54	K3	X	.011	.011	0 %100
55	SA-1	X	.007	.007	0 %100
56	SA-2	X	.005	.005	0 %100
57	SA-3	X	.015	.015	0 %100
58	SR-1	X	.006	.006	0 %100
59	SR-2	X	0	0	0 %100
60	SR-3	X	.006	.006	0 %100
61	AHCP-1	Z	.004	.004	0 %100
62	AHCP-2	Z	.004	.004	0 %100
63	AHCP-3	Z	0	0	0 %100
64	CP-1	Z	.008	.008	0 %100



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**Member Distributed Loads (BLC 11 : 210 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
65	CP-2	Z	.008	.008	0 %100
66	CP-3	Z	0	0	0 %100
67	M71	Z	.008	.008	0 %100
68	M73	Z	.008	.008	0 %100
69	M75	Z	.008	.008	0 %100
70	M77	Z	.008	.008	0 %100
71	M79	Z	0	0	0 %100
72	M81	Z	0	0	0 %100
73	FF-TH	Z	.004	.004	0 %100
74	SF1-TH	Z	0	0	0 %100
75	SF2-TH	Z	.004	.004	0 %100
76	GSIP-1A	Z	.004	.004	0 %100
77	GSIP-1B	Z	0	0	0 %100
78	GSIP-2A	Z	0	0	0 %100
79	GSIP-2B	Z	.004	.004	0 %100
80	GSIP-3A	Z	.004	.004	0 %100
81	GSIP-3B	Z	.004	.004	0 %100
82	GSI-1A	Z	.006	.006	0 %100
83	GSI-1B	Z	.006	.006	0 %100
84	GSI-2A	Z	.006	.006	0 %100
85	GSI-2B	Z	.006	.006	0 %100
86	GSI-3A	Z	0	0	0 %100
87	GSI-3B	Z	0	0	0 %100
88	M53	Z	.005	.005	0 %100
89	M54	Z	1.6e-5	1.6e-5	0 %100
90	M56	Z	.005	.005	0 %100
91	M57	Z	.008	.008	0 %100
92	M59	Z	.005	.005	0 %100
93	M60	Z	.008	.008	0 %100
94	M62	Z	.005	.005	0 %100
95	M63	Z	1.6e-5	1.6e-5	0 %100
96	M65	Z	.009	.009	0 %100
97	M66	Z	.008	.008	0 %100
98	M68	Z	.009	.009	0 %100
99	M69	Z	.008	.008	0 %100
100	MP-1	Z	.004	.004	0 %100
101	MP-2	Z	.004	.004	0 %100
102	MP-3	Z	.004	.004	0 %100
103	MP-4	Z	.004	.004	0 %100
104	MP-5	Z	.004	.004	0 %100
105	MP-6	Z	.004	.004	0 %100
106	MP-7	Z	.004	.004	0 %100
107	MP-8	Z	.004	.004	0 %100
108	MP-9	Z	.004	.004	0 %100
109	MP-10	Z	.004	.004	0 %100
110	MP-11	Z	.004	.004	0 %100
111	MP-12	Z	.004	.004	0 %100
112	K1	Z	.006	.006	0 %100
113	K2	Z	.006	.006	0 %100
114	K3	Z	.006	.006	0 %100
115	SA-1	Z	.004	.004	0 %100
116	SA-2	Z	.004	.004	0 %100



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**Member Distributed Loads (BLC 11 : 210 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
117	SA-3	Z	.007	.007	0 %100
118	SR-1	Z	.003	.003	0 %100
119	SR-2	Z	0	0	0 %100
120	SR-3	Z	.003	.003	0 %100

**Member Distributed Loads (BLC 12 : 225 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	.005	.005	0 %100
2	AHCP-2	X	.004	.004	0 %100
3	AHCP-3	X	.001	.001	0 %100
4	CP-1	X	.013	.013	0 %100
5	CP-2	X	.009	.009	0 %100
6	CP-3	X	.003	.003	0 %100
7	M71	X	.009	.009	0 %100
8	M73	X	.009	.009	0 %100
9	M75	X	.013	.013	0 %100
10	M77	X	.013	.013	0 %100
11	M79	X	.003	.003	0 %100
12	M81	X	.003	.003	0 %100
13	FF-TH	X	.005	.005	0 %100
14	SF1-TH	X	.002	.002	0 %100
15	SF2-TH	X	.006	.006	0 %100
16	GSIP-1A	X	.005	.005	0 %100
17	GSIP-1B	X	.001	.001	0 %100
18	GSIP-2A	X	.001	.001	0 %100
19	GSIP-2B	X	.006	.006	0 %100
20	GSIP-3A	X	.006	.006	0 %100
21	GSIP-3B	X	.005	.005	0 %100
22	GSI-1A	X	.009	.009	0 %100
23	GSI-1B	X	.009	.009	0 %100
24	GSI-2A	X	.007	.007	0 %100
25	GSI-2B	X	.007	.007	0 %100
26	GSI-3A	X	.002	.002	0 %100
27	GSI-3B	X	.002	.002	0 %100
28	M53	X	.009	.009	0 %100
29	M54	X	.003	.003	0 %100
30	M56	X	.009	.009	0 %100
31	M57	X	.013	.013	0 %100
32	M59	X	.003	.003	0 %100
33	M60	X	.009	.009	0 %100
34	M62	X	.003	.003	0 %100
35	M63	X	.003	.003	0 %100
36	M65	X	.013	.013	0 %100
37	M66	X	.013	.013	0 %100
38	M68	X	.013	.013	0 %100
39	M69	X	.009	.009	0 %100
40	MP-1	X	.005	.005	0 %100
41	MP-2	X	.005	.005	0 %100
42	MP-3	X	.005	.005	0 %100
43	MP-4	X	.005	.005	0 %100
44	MP-5	X	.005	.005	0 %100



Company : Tower Engineering Professionals, Inc.  
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**Member Distributed Loads (BLC 12 : 225 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
45	MP-6	X	.005	.005	0 %100
46	MP-7	X	.005	.005	0 %100
47	MP-8	X	.005	.005	0 %100
48	MP-9	X	.005	.005	0 %100
49	MP-10	X	.005	.005	0 %100
50	MP-11	X	.005	.005	0 %100
51	MP-12	X	.005	.005	0 %100
52	K1	X	.009	.009	0 %100
53	K2	X	.009	.009	0 %100
54	K3	X	.009	.009	0 %100
55	SA-1	X	.003	.003	0 %100
56	SA-2	X	.006	.006	0 %100
57	SA-3	X	.011	.011	0 %100
58	SR-1	X	.004	.004	0 %100
59	SR-2	X	.001	.001	0 %100
60	SR-3	X	.005	.005	0 %100
61	AHCP-1	Z	.006	.006	0 %100
62	AHCP-2	Z	.004	.004	0 %100
63	AHCP-3	Z	.002	.002	0 %100
64	CP-1	Z	.013	.013	0 %100
65	CP-2	Z	.009	.009	0 %100
66	CP-3	Z	.003	.003	0 %100
67	M71	Z	.009	.009	0 %100
68	M73	Z	.009	.009	0 %100
69	M75	Z	.013	.013	0 %100
70	M77	Z	.013	.013	0 %100
71	M79	Z	.003	.003	0 %100
72	M81	Z	.003	.003	0 %100
73	FF-TH	Z	.005	.005	0 %100
74	SF1-TH	Z	.002	.002	0 %100
75	SF2-TH	Z	.007	.007	0 %100
76	GSIP-1A	Z	.005	.005	0 %100
77	GSIP-1B	Z	.002	.002	0 %100
78	GSIP-2A	Z	.002	.002	0 %100
79	GSIP-2B	Z	.007	.007	0 %100
80	GSIP-3A	Z	.007	.007	0 %100
81	GSIP-3B	Z	.005	.005	0 %100
82	GSI-1A	Z	.01	.01	0 %100
83	GSI-1B	Z	.01	.01	0 %100
84	GSI-2A	Z	.007	.007	0 %100
85	GSI-2B	Z	.007	.007	0 %100
86	GSI-3A	Z	.003	.003	0 %100
87	GSI-3B	Z	.003	.003	0 %100
88	M53	Z	.009	.009	0 %100
89	M54	Z	.003	.003	0 %100
90	M56	Z	.009	.009	0 %100
91	M57	Z	.013	.013	0 %100
92	M59	Z	.003	.003	0 %100
93	M60	Z	.009	.009	0 %100
94	M62	Z	.003	.003	0 %100
95	M63	Z	.003	.003	0 %100
96	M65	Z	.013	.013	0 %100



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**Member Distributed Loads (BLC 12 : 225 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
97	M66	Z	.013	.013	0 %100
98	M68	Z	.013	.013	0 %100
99	M69	Z	.009	.009	0 %100
100	MP-1	Z	.005	.005	0 %100
101	MP-2	Z	.005	.005	0 %100
102	MP-3	Z	.005	.005	0 %100
103	MP-4	Z	.005	.005	0 %100
104	MP-5	Z	.005	.005	0 %100
105	MP-6	Z	.005	.005	0 %100
106	MP-7	Z	.005	.005	0 %100
107	MP-8	Z	.005	.005	0 %100
108	MP-9	Z	.005	.005	0 %100
109	MP-10	Z	.005	.005	0 %100
110	MP-11	Z	.005	.005	0 %100
111	MP-12	Z	.005	.005	0 %100
112	K1	Z	.009	.009	0 %100
113	K2	Z	.009	.009	0 %100
114	K3	Z	.009	.009	0 %100
115	SA-1	Z	.003	.003	0 %100
116	SA-2	Z	.009	.009	0 %100
117	SA-3	Z	.01	.01	0 %100
118	SR-1	Z	.004	.004	0 %100
119	SR-2	Z	.001	.001	0 %100
120	SR-3	Z	.005	.005	0 %100

**Member Distributed Loads (BLC 13 : 240 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
1	AHCP-1	X	.004	.004	0 %100
2	AHCP-2	X	.002	.002	0 %100
3	AHCP-3	X	.002	.002	0 %100
4	CP-1	X	.009	.009	0 %100
5	CP-2	X	.005	.005	0 %100
6	CP-3	X	.005	.005	0 %100
7	M71	X	.005	.005	0 %100
8	M73	X	.005	.005	0 %100
9	M75	X	.009	.009	0 %100
10	M77	X	.009	.009	0 %100
11	M79	X	.005	.005	0 %100
12	M81	X	.005	.005	0 %100
13	FF-TH	X	.002	.002	0 %100
14	SF1-TH	X	.002	.002	0 %100
15	SF2-TH	X	.005	.005	0 %100
16	GSIP-1A	X	.003	.003	0 %100
17	GSIP-1B	X	.002	.002	0 %100
18	GSIP-2A	X	.002	.002	0 %100
19	GSIP-2B	X	.004	.004	0 %100
20	GSIP-3A	X	.004	.004	0 %100
21	GSIP-3B	X	.003	.003	0 %100
22	GSI-1A	X	.006	.006	0 %100
23	GSI-1B	X	.006	.006	0 %100
24	GSI-2A	X	.004	.004	0 %100



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**Member Distributed Loads (BLC 13 : 240 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft, %]	End Location[ft, %]
25	GSI-2B	X	.004	.004	0 %100
26	GSI-3A	X	.003	.003	0 %100
27	GSI-3B	X	.003	.003	0 %100
28	M53	X	.008	.008	0 %100
29	M54	X	.005	.005	0 %100
30	M56	X	.008	.008	0 %100
31	M57	X	.009	.009	0 %100
32	M59	X	0	0	0 %100
33	M60	X	.005	.005	0 %100
34	M62	X	0	0	0 %100
35	M63	X	.005	.005	0 %100
36	M65	X	.008	.008	0 %100
37	M66	X	.009	.009	0 %100
38	M68	X	.008	.008	0 %100
39	M69	X	.005	.005	0 %100
40	MP-1	X	.004	.004	0 %100
41	MP-2	X	.004	.004	0 %100
42	MP-3	X	.004	.004	0 %100
43	MP-4	X	.004	.004	0 %100
44	MP-5	X	.004	.004	0 %100
45	MP-6	X	.004	.004	0 %100
46	MP-7	X	.004	.004	0 %100
47	MP-8	X	.004	.004	0 %100
48	MP-9	X	.004	.004	0 %100
49	MP-10	X	.004	.004	0 %100
50	MP-11	X	.004	.004	0 %100
51	MP-12	X	.004	.004	0 %100
52	K1	X	.006	.006	0 %100
53	K2	X	.006	.006	0 %100
54	K3	X	.006	.006	0 %100
55	SA-1	X	0	0	0 %100
56	SA-2	X	.005	.005	0 %100
57	SA-3	X	.007	.007	0 %100
58	SR-1	X	.002	.002	0 %100
59	SR-2	X	.002	.002	0 %100
60	SR-3	X	.004	.004	0 %100
61	AHCP-1	Z	.007	.007	0 %100
62	AHCP-2	Z	.004	.004	0 %100
63	AHCP-3	Z	.004	.004	0 %100
64	CP-1	Z	.016	.016	0 %100
65	CP-2	Z	.008	.008	0 %100
66	CP-3	Z	.008	.008	0 %100
67	M71	Z	.008	.008	0 %100
68	M73	Z	.008	.008	0 %100
69	M75	Z	.016	.016	0 %100
70	M77	Z	.016	.016	0 %100
71	M79	Z	.008	.008	0 %100
72	M81	Z	.008	.008	0 %100
73	FF-TH	Z	.004	.004	0 %100
74	SF1-TH	Z	.004	.004	0 %100
75	SF2-TH	Z	.009	.009	0 %100
76	GSIP-1A	Z	.004	.004	0 %100



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**Member Distributed Loads (BLC 13 : 240 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft, %]	End Location[ft, %]
77	GSIP-1B	Z	.004	.004	0 %100
78	GSIP-2A	Z	.004	.004	0 %100
79	GSIP-2B	Z	.008	.008	0 %100
80	GSIP-3A	Z	.008	.008	0 %100
81	GSIP-3B	Z	.004	.004	0 %100
82	GSI-1A	Z	.012	.012	0 %100
83	GSI-1B	Z	.012	.012	0 %100
84	GSI-2A	Z	.006	.006	0 %100
85	GSI-2B	Z	.006	.006	0 %100
86	GSI-3A	Z	.006	.006	0 %100
87	GSI-3B	Z	.006	.006	0 %100
88	M53	Z	.014	.014	0 %100
89	M54	Z	.008	.008	0 %100
90	M56	Z	.014	.014	0 %100
91	M57	Z	.016	.016	0 %100
92	M59	Z	0	0	0 %100
93	M60	Z	.008	.008	0 %100
94	M62	Z	0	0	0 %100
95	M63	Z	.008	.008	0 %100
96	M65	Z	.014	.014	0 %100
97	M66	Z	.016	.016	0 %100
98	M68	Z	.014	.014	0 %100
99	M69	Z	.008	.008	0 %100
100	MP-1	Z	.006	.006	0 %100
101	MP-2	Z	.006	.006	0 %100
102	MP-3	Z	.006	.006	0 %100
103	MP-4	Z	.006	.006	0 %100
104	MP-5	Z	.006	.006	0 %100
105	MP-6	Z	.006	.006	0 %100
106	MP-7	Z	.006	.006	0 %100
107	MP-8	Z	.006	.006	0 %100
108	MP-9	Z	.006	.006	0 %100
109	MP-10	Z	.006	.006	0 %100
110	MP-11	Z	.006	.006	0 %100
111	MP-12	Z	.006	.006	0 %100
112	K1	Z	.011	.011	0 %100
113	K2	Z	.011	.011	0 %100
114	K3	Z	.011	.011	0 %100
115	SA-1	Z	0	0	0 %100
116	SA-2	Z	.013	.013	0 %100
117	SA-3	Z	.011	.011	0 %100
118	SR-1	Z	.003	.003	0 %100
119	SR-2	Z	.003	.003	0 %100
120	SR-3	Z	.006	.006	0 %100

**Member Distributed Loads (BLC 14 : 270 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft, %]	End Location[ft, %]
1	AHCP-1	Z	.007	.007	0 %100
2	AHCP-2	Z	0	0	0 %100
3	AHCP-3	Z	.007	.007	0 %100
4	CP-1	Z	.016	.016	0 %100



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**Member Distributed Loads (BLC 14 : 270 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft,%]	End Location[ft,%]
5	CP-2	Z	0	0	%100
6	CP-3	Z	.016	.016	%100
7	M71	Z	0	0	%100
8	M73	Z	0	0	%100
9	M75	Z	.016	.016	%100
10	M77	Z	.016	.016	%100
11	M79	Z	.016	.016	%100
12	M81	Z	.016	.016	%100
13	FF-TH	Z	0	0	%100
14	SF1-TH	Z	.009	.009	%100
15	SF2-TH	Z	.009	.009	%100
16	GSIP-1A	Z	0	0	%100
17	GSIP-1B	Z	.008	.008	%100
18	GSIP-2A	Z	.008	.008	%100
19	GSIP-2B	Z	.008	.008	%100
20	GSIP-3A	Z	.008	.008	%100
21	GSIP-3B	Z	0	0	%100
22	GSI-1A	Z	.012	.012	%100
23	GSI-1B	Z	.012	.012	%100
24	GSI-2A	Z	0	0	%100
25	GSI-2B	Z	0	0	%100
26	GSI-3A	Z	.012	.012	%100
27	GSI-3B	Z	.012	.012	%100
28	M53	Z	.019	.019	%100
29	M54	Z	.016	.016	%100
30	M56	Z	.019	.019	%100
31	M57	Z	.016	.016	%100
32	M59	Z	.009	.009	%100
33	M60	Z	3.2e-5	3.2e-5	%100
34	M62	Z	.009	.009	%100
35	M63	Z	.016	.016	%100
36	M65	Z	.009	.009	%100
37	M66	Z	.016	.016	%100
38	M68	Z	.009	.009	%100
39	M69	Z	3.2e-5	3.2e-5	%100
40	MP-1	Z	.007	.007	%100
41	MP-2	Z	.007	.007	%100
42	MP-3	Z	.007	.007	%100
43	MP-4	Z	.007	.007	%100
44	MP-5	Z	.007	.007	%100
45	MP-6	Z	.007	.007	%100
46	MP-7	Z	.007	.007	%100
47	MP-8	Z	.007	.007	%100
48	MP-9	Z	.007	.007	%100
49	MP-10	Z	.007	.007	%100
50	MP-11	Z	.007	.007	%100
51	MP-12	Z	.007	.007	%100
52	K1	Z	.012	.012	%100
53	K2	Z	.012	.012	%100
54	K3	Z	.012	.012	%100
55	SA-1	Z	.007	.007	%100
56	SA-2	Z	.017	.017	%100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
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**Member Distributed Loads (BLC 14 : 270 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft,%]	End Location[ft,%]
57	SA-3	Z	.007	.007	%100
58	SR-1	Z	0	0	%100
59	SR-2	Z	.006	.006	%100
60	SR-3	Z	.006	.006	%100

**Member Distributed Loads (BLC 15 : 300 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	-.002	-.002	%100
2	AHCP-2	X	-.002	-.002	%100
3	AHCP-3	X	-.004	-.004	%100
4	CP-1	X	-.005	-.005	%100
5	CP-2	X	-.005	-.005	%100
6	CP-3	X	-.009	-.009	%100
7	M71	X	-.005	-.005	%100
8	M73	X	-.005	-.005	%100
9	M75	X	-.005	-.005	%100
10	M77	X	-.005	-.005	%100
11	M79	X	-.009	-.009	%100
12	M81	X	-.009	-.009	%100
13	FF-TH	X	-.002	-.002	%100
14	SF1-TH	X	-.005	-.005	%100
15	SF2-TH	X	-.002	-.002	%100
16	GSIP-1A	X	-.003	-.003	%100
17	GSIP-1B	X	-.004	-.004	%100
18	GSIP-2A	X	-.004	-.004	%100
19	GSIP-2B	X	-.002	-.002	%100
20	GSIP-3A	X	-.002	-.002	%100
21	GSIP-3B	X	-.003	-.003	%100
22	GSI-1A	X	-.003	-.003	%100
23	GSI-1B	X	-.003	-.003	%100
24	GSI-2A	X	-.004	-.004	%100
25	GSI-2B	X	-.004	-.004	%100
26	GSI-3A	X	-.006	-.006	%100
27	GSI-3B	X	-.006	-.006	%100
28	M53	X	-.008	-.008	%100
29	M54	X	-.009	-.009	%100
30	M56	X	-.008	-.008	%100
31	M57	X	-.005	-.005	%100
32	M59	X	-.008	-.008	%100
33	M60	X	-.005	-.005	%100
34	M62	X	-.008	-.008	%100
35	M63	X	-.009	-.009	%100
36	M65	X	0	0	%100
37	M66	X	-.005	-.005	%100
38	M68	X	0	0	%100
39	M69	X	-.005	-.005	%100
40	MP-1	X	-.004	-.004	%100
41	MP-2	X	-.004	-.004	%100
42	MP-3	X	-.004	-.004	%100
43	MP-4	X	-.004	-.004	%100
44	MP-5	X	-.004	-.004	%100





Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
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**Member Distributed Loads (BLC 15 : 300 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
45	MP-6	X	-0.04	-0.04	0 %100
46	MP-7	X	-0.04	-0.04	0 %100
47	MP-8	X	-0.04	-0.04	0 %100
48	MP-9	X	-0.04	-0.04	0 %100
49	MP-10	X	-0.04	-0.04	0 %100
50	MP-11	X	-0.04	-0.04	0 %100
51	MP-12	X	-0.04	-0.04	0 %100
52	K1	X	-0.06	-0.06	0 %100
53	K2	X	-0.06	-0.06	0 %100
54	K3	X	-0.06	-0.06	0 %100
55	SA-1	X	-0.07	-0.07	0 %100
56	SA-2	X	-0.05	-0.05	0 %100
57	SA-3	X	0	0	0 %100
58	SR-1	X	-0.02	-0.02	0 %100
59	SR-2	X	-0.04	-0.04	0 %100
60	SR-3	X	-0.02	-0.02	0 %100
61	AHCP-1	Z	.004	.004	0 %100
62	AHCP-2	Z	.004	.004	0 %100
63	AHCP-3	Z	.007	.007	0 %100
64	CP-1	Z	.008	.008	0 %100
65	CP-2	Z	.008	.008	0 %100
66	CP-3	Z	.016	.016	0 %100
67	M71	Z	.008	.008	0 %100
68	M73	Z	.008	.008	0 %100
69	M75	Z	.008	.008	0 %100
70	M77	Z	.008	.008	0 %100
71	M79	Z	.016	.016	0 %100
72	M81	Z	.016	.016	0 %100
73	FF-TH	Z	.004	.004	0 %100
74	SF1-TH	Z	.009	.009	0 %100
75	SF2-TH	Z	.004	.004	0 %100
76	GSIP-1A	Z	.004	.004	0 %100
77	GSIP-1B	Z	.008	.008	0 %100
78	GSIP-2A	Z	.008	.008	0 %100
79	GSIP-2B	Z	.004	.004	0 %100
80	GSIP-3A	Z	.004	.004	0 %100
81	GSIP-3B	Z	.004	.004	0 %100
82	GSI-1A	Z	.006	.006	0 %100
83	GSI-1B	Z	.006	.006	0 %100
84	GSI-2A	Z	.006	.006	0 %100
85	GSI-2B	Z	.006	.006	0 %100
86	GSI-3A	Z	.012	.012	0 %100
87	GSI-3B	Z	.012	.012	0 %100
88	M53	Z	.014	.014	0 %100
89	M54	Z	.016	.016	0 %100
90	M56	Z	.014	.014	0 %100
91	M57	Z	.008	.008	0 %100
92	M59	Z	.014	.014	0 %100
93	M60	Z	.008	.008	0 %100
94	M62	Z	.014	.014	0 %100
95	M63	Z	.016	.016	0 %100
96	M65	Z	0	0	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
 Model Name : 302528 - Columbia Central

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**Member Distributed Loads (BLC 15 : 300 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
97	M66	Z	.008	.008	0 %100
98	M68	Z	0	0	0 %100
99	M69	Z	.008	.008	0 %100
100	MP-1	Z	.006	.006	0 %100
101	MP-2	Z	.006	.006	0 %100
102	MP-3	Z	.006	.006	0 %100
103	MP-4	Z	.006	.006	0 %100
104	MP-5	Z	.006	.006	0 %100
105	MP-6	Z	.006	.006	0 %100
106	MP-7	Z	.006	.006	0 %100
107	MP-8	Z	.006	.006	0 %100
108	MP-9	Z	.006	.006	0 %100
109	MP-10	Z	.006	.006	0 %100
110	MP-11	Z	.006	.006	0 %100
111	MP-12	Z	.006	.006	0 %100
112	K1	Z	.011	.011	0 %100
113	K2	Z	.011	.011	0 %100
114	K3	Z	.011	.011	0 %100
115	SA-1	Z	.011	.011	0 %100
116	SA-2	Z	.013	.013	0 %100
117	SA-3	Z	0	0	0 %100
118	SR-1	Z	.003	.003	0 %100
119	SR-2	Z	.006	.006	0 %100
120	SR-3	Z	.003	.003	0 %100

**Member Distributed Loads (BLC 16 : 315 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
1	AHCP-1	X	-0.01	-0.01	0 %100
2	AHCP-2	X	-0.04	-0.04	0 %100
3	AHCP-3	X	-0.05	-0.05	0 %100
4	CP-1	X	-0.03	-0.03	0 %100
5	CP-2	X	-0.09	-0.09	0 %100
6	CP-3	X	-0.13	-0.13	0 %100
7	M71	X	-0.09	-0.09	0 %100
8	M73	X	-0.09	-0.09	0 %100
9	M75	X	-0.03	-0.03	0 %100
10	M77	X	-0.03	-0.03	0 %100
11	M79	X	-0.13	-0.13	0 %100
12	M81	X	-0.13	-0.13	0 %100
13	FF-TH	X	-0.05	-0.05	0 %100
14	SF1-TH	X	-0.06	-0.06	0 %100
15	SF2-TH	X	-0.02	-0.02	0 %100
16	GSIP-1A	X	-0.05	-0.05	0 %100
17	GSIP-1B	X	-0.06	-0.06	0 %100
18	GSIP-2A	X	-0.06	-0.06	0 %100
19	GSIP-2B	X	-0.01	-0.01	0 %100
20	GSIP-3A	X	-0.01	-0.01	0 %100
21	GSIP-3B	X	-0.05	-0.05	0 %100
22	GSI-1A	X	-0.02	-0.02	0 %100
23	GSI-1B	X	-0.02	-0.02	0 %100
24	GSI-2A	X	-0.07	-0.07	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
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 Model Name : 302528 - Columbia Central

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**Member Distributed Loads (BLC 16 : 315 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
25	GSI-2B	X	-0.07	-0.07	0 %100
26	GSI-3A	X	-0.09	-0.09	0 %100
27	GSI-3B	X	-0.09	-0.09	0 %100
28	M53	X	-0.09	-0.09	0 %100
29	M54	X	-0.13	-0.13	0 %100
30	M56	X	-0.09	-0.09	0 %100
31	M57	X	-0.03	-0.03	0 %100
32	M59	X	-0.13	-0.13	0 %100
33	M60	X	-0.09	-0.09	0 %100
34	M62	X	-0.13	-0.13	0 %100
35	M63	X	-0.13	-0.13	0 %100
36	M65	X	-0.03	-0.03	0 %100
37	M66	X	-0.03	-0.03	0 %100
38	M68	X	-0.03	-0.03	0 %100
39	M69	X	-0.09	-0.09	0 %100
40	MP-1	X	-0.05	-0.05	0 %100
41	MP-2	X	-0.05	-0.05	0 %100
42	MP-3	X	-0.05	-0.05	0 %100
43	MP-4	X	-0.05	-0.05	0 %100
44	MP-5	X	-0.05	-0.05	0 %100
45	MP-6	X	-0.05	-0.05	0 %100
46	MP-7	X	-0.05	-0.05	0 %100
47	MP-8	X	-0.05	-0.05	0 %100
48	MP-9	X	-0.05	-0.05	0 %100
49	MP-10	X	-0.05	-0.05	0 %100
50	MP-11	X	-0.05	-0.05	0 %100
51	MP-12	X	-0.05	-0.05	0 %100
52	K1	X	-0.09	-0.09	0 %100
53	K2	X	-0.09	-0.09	0 %100
54	K3	X	-0.09	-0.09	0 %100
55	SA-1	X	-0.11	-0.11	0 %100
56	SA-2	X	-0.06	-0.06	0 %100
57	SA-3	X	-0.03	-0.03	0 %100
58	SR-1	X	-0.04	-0.04	0 %100
59	SR-2	X	-0.05	-0.05	0 %100
60	SR-3	X	-0.01	-0.01	0 %100
61	AHCP-1	Z	.002	.002	0 %100
62	AHCP-2	Z	.004	.004	0 %100
63	AHCP-3	Z	.006	.006	0 %100
64	CP-1	Z	.003	.003	0 %100
65	CP-2	Z	.009	.009	0 %100
66	CP-3	Z	.013	.013	0 %100
67	M71	Z	.009	.009	0 %100
68	M73	Z	.009	.009	0 %100
69	M75	Z	.003	.003	0 %100
70	M77	Z	.003	.003	0 %100
71	M79	Z	.013	.013	0 %100
72	M81	Z	.013	.013	0 %100
73	FF-TH	Z	.005	.005	0 %100
74	SF1-TH	Z	.007	.007	0 %100
75	SF2-TH	Z	.002	.002	0 %100
76	GSIP-1A	Z	.005	.005	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
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**Member Distributed Loads (BLC 16 : 315 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
77	GSIP-1B	Z	.007	.007	0 %100
78	GSIP-2A	Z	.007	.007	0 %100
79	GSIP-2B	Z	.002	.002	0 %100
80	GSIP-3A	Z	.002	.002	0 %100
81	GSIP-3B	Z	.005	.005	0 %100
82	GSI-1A	Z	.003	.003	0 %100
83	GSI-1B	Z	.003	.003	0 %100
84	GSI-2A	Z	.007	.007	0 %100
85	GSI-2B	Z	.007	.007	0 %100
86	GSI-3A	Z	.01	.01	0 %100
87	GSI-3B	Z	.01	.01	0 %100
88	M53	Z	.009	.009	0 %100
89	M54	Z	.013	.013	0 %100
90	M56	Z	.009	.009	0 %100
91	M57	Z	.003	.003	0 %100
92	M59	Z	.013	.013	0 %100
93	M60	Z	.009	.009	0 %100
94	M62	Z	.013	.013	0 %100
95	M63	Z	.013	.013	0 %100
96	M65	Z	.003	.003	0 %100
97	M66	Z	.003	.003	0 %100
98	M68	Z	.003	.003	0 %100
99	M69	Z	.009	.009	0 %100
100	MP-1	Z	.005	.005	0 %100
101	MP-2	Z	.005	.005	0 %100
102	MP-3	Z	.005	.005	0 %100
103	MP-4	Z	.005	.005	0 %100
104	MP-5	Z	.005	.005	0 %100
105	MP-6	Z	.005	.005	0 %100
106	MP-7	Z	.005	.005	0 %100
107	MP-8	Z	.005	.005	0 %100
108	MP-9	Z	.005	.005	0 %100
109	MP-10	Z	.005	.005	0 %100
110	MP-11	Z	.005	.005	0 %100
111	MP-12	Z	.005	.005	0 %100
112	K1	Z	.009	.009	0 %100
113	K2	Z	.009	.009	0 %100
114	K3	Z	.009	.009	0 %100
115	SA-1	Z	.01	.01	0 %100
116	SA-2	Z	.009	.009	0 %100
117	SA-3	Z	.003	.003	0 %100
118	SR-1	Z	.004	.004	0 %100
119	SR-2	Z	.005	.005	0 %100
120	SR-3	Z	.001	.001	0 %100

**Member Distributed Loads (BLC 17 : 330 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	0	0	0 %100
2	AHCP-2	X	-.007	-.007	0 %100
3	AHCP-3	X	-.006	-.006	0 %100
4	CP-1	X	0	0	0 %100



Company : Tower Engineering Professionals, Inc.  
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**Member Distributed Loads (BLC 17 : 330 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
5	CP-2	X	-0.14	-0.14	0 %100
6	CP-3	X	-0.14	-0.14	0 %100
7	M71	X	-0.14	-0.14	0 %100
8	M73	X	-0.14	-0.14	0 %100
9	M75	X	0	0	0 %100
10	M77	X	0	0	0 %100
11	M79	X	-0.14	-0.14	0 %100
12	M81	X	-0.14	-0.14	0 %100
13	FF-TH	X	-0.007	-0.007	0 %100
14	SF1-TH	X	-0.007	-0.007	0 %100
15	SF2-TH	X	0	0	0 %100
16	GSIP-1A	X	-0.008	-0.008	0 %100
17	GSIP-1B	X	-0.006	-0.006	0 %100
18	GSIP-2A	X	-0.006	-0.006	0 %100
19	GSIP-2B	X	0	0	0 %100
20	GSIP-3A	X	0	0	0 %100
21	GSIP-3B	X	-0.008	-0.008	0 %100
22	GSI-1A	X	0	0	0 %100
23	GSI-1B	X	0	0	0 %100
24	GSI-2A	X	-0.11	-0.11	0 %100
25	GSI-2B	X	-0.11	-0.11	0 %100
26	GSI-3A	X	-0.1	-0.1	0 %100
27	GSI-3B	X	-0.1	-0.1	0 %100
28	M53	X	-0.008	-0.008	0 %100
29	M54	X	-0.14	-0.14	0 %100
30	M56	X	-0.008	-0.008	0 %100
31	M57	X	-2.8e-5	-2.8e-5	0 %100
32	M59	X	-0.16	-0.16	0 %100
33	M60	X	-0.14	-0.14	0 %100
34	M62	X	-0.16	-0.16	0 %100
35	M63	X	-0.14	-0.14	0 %100
36	M65	X	-0.008	-0.008	0 %100
37	M66	X	-2.8e-5	-2.8e-5	0 %100
38	M68	X	-0.008	-0.008	0 %100
39	M69	X	-0.14	-0.14	0 %100
40	MP-1	X	-0.006	-0.006	0 %100
41	MP-2	X	-0.006	-0.006	0 %100
42	MP-3	X	-0.006	-0.006	0 %100
43	MP-4	X	-0.006	-0.006	0 %100
44	MP-5	X	-0.006	-0.006	0 %100
45	MP-6	X	-0.006	-0.006	0 %100
46	MP-7	X	-0.006	-0.006	0 %100
47	MP-8	X	-0.006	-0.006	0 %100
48	MP-9	X	-0.006	-0.006	0 %100
49	MP-10	X	-0.006	-0.006	0 %100
50	MP-11	X	-0.006	-0.006	0 %100
51	MP-12	X	-0.006	-0.006	0 %100
52	K1	X	-0.11	-0.11	0 %100
53	K2	X	-0.11	-0.11	0 %100
54	K3	X	-0.11	-0.11	0 %100
55	SA-1	X	-0.015	-0.015	0 %100
56	SA-2	X	-0.005	-0.005	0 %100



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**Member Distributed Loads (BLC 17 : 330 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
57	SA-3	X	-0.007	-0.007	0 %100
58	SR-1	X	-0.006	-0.006	0 %100
59	SR-2	X	-0.006	-0.006	0 %100
60	SR-3	X	0	0	0 %100
61	AHCP-1	Z	0	0	0 %100
62	AHCP-2	Z	.004	.004	0 %100
63	AHCP-3	Z	.004	.004	0 %100
64	CP-1	Z	0	0	0 %100
65	CP-2	Z	.008	.008	0 %100
66	CP-3	Z	.008	.008	0 %100
67	M71	Z	.008	.008	0 %100
68	M73	Z	.008	.008	0 %100
69	M75	Z	0	0	0 %100
70	M77	Z	0	0	0 %100
71	M79	Z	.008	.008	0 %100
72	M81	Z	.008	.008	0 %100
73	FF-TH	Z	.004	.004	0 %100
74	SF1-TH	Z	.004	.004	0 %100
75	SF2-TH	Z	0	0	0 %100
76	GSIP-1A	Z	.004	.004	0 %100
77	GSIP-1B	Z	.004	.004	0 %100
78	GSIP-2A	Z	.004	.004	0 %100
79	GSIP-2B	Z	0	0	0 %100
80	GSIP-3A	Z	0	0	0 %100
81	GSIP-3B	Z	.004	.004	0 %100
82	GSI-1A	Z	0	0	0 %100
83	GSI-1B	Z	0	0	0 %100
84	GSI-2A	Z	.006	.006	0 %100
85	GSI-2B	Z	.006	.006	0 %100
86	GSI-3A	Z	.006	.006	0 %100
87	GSI-3B	Z	.006	.006	0 %100
88	M53	Z	.005	.005	0 %100
89	M54	Z	.008	.008	0 %100
90	M56	Z	.005	.005	0 %100
91	M57	Z	1.6e-5	1.6e-5	0 %100
92	M59	Z	.009	.009	0 %100
93	M60	Z	.008	.008	0 %100
94	M62	Z	.009	.009	0 %100
95	M63	Z	.008	.008	0 %100
96	M65	Z	.005	.005	0 %100
97	M66	Z	1.6e-5	1.6e-5	0 %100
98	M68	Z	.005	.005	0 %100
99	M69	Z	.008	.008	0 %100
100	MP-1	Z	.004	.004	0 %100
101	MP-2	Z	.004	.004	0 %100
102	MP-3	Z	.004	.004	0 %100
103	MP-4	Z	.004	.004	0 %100
104	MP-5	Z	.004	.004	0 %100
105	MP-6	Z	.004	.004	0 %100
106	MP-7	Z	.004	.004	0 %100
107	MP-8	Z	.004	.004	0 %100
108	MP-9	Z	.004	.004	0 %100



Company : Tower Engineering Professionals, Inc.  
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**Member Distributed Loads (BLC 17 : 330 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location[ft,%]	End Location[ft,%]
109	MP-10	Z	.004	.004 0 %100
110	MP-11	Z	.004	.004 0 %100
111	MP-12	Z	.004	.004 0 %100
112	K1	Z	.006	.006 0 %100
113	K2	Z	.006	.006 0 %100
114	K3	Z	.006	.006 0 %100
115	SA-1	Z	.007	.007 0 %100
116	SA-2	Z	.004	.004 0 %100
117	SA-3	Z	.004	.004 0 %100
118	SR-1	Z	.003	.003 0 %100
119	SR-2	Z	.003	.003 0 %100
120	SR-3	Z	0	0 0 %100

**Member Distributed Loads (BLC 18 : Ice Weight)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	Y	-.005	-.005 0 %100
2	AHCP-2	Y	-.005	-.005 0 %100
3	AHCP-3	Y	-.005	-.005 0 %100
4	CP-1	Y	-.007	-.007 0 %100
5	CP-2	Y	-.007	-.007 0 %100
6	CP-3	Y	-.007	-.007 0 %100
7	M71	Y	-.01	-.01 0 %100
8	M73	Y	-.01	-.01 0 %100
9	M75	Y	-.01	-.01 0 %100
10	M77	Y	-.01	-.01 0 %100
11	M79	Y	-.01	-.01 0 %100
12	M81	Y	-.01	-.01 0 %100
13	FF-TH	Y	-.006	-.006 0 %100
14	SF1-TH	Y	-.006	-.006 0 %100
15	SF2-TH	Y	-.006	-.006 0 %100
16	GSIP-1A	Y	-.004	-.004 0 %100
17	GSIP-1B	Y	-.004	-.004 0 %100
18	GSIP-2A	Y	-.004	-.004 0 %100
19	GSIP-2B	Y	-.004	-.004 0 %100
20	GSIP-3A	Y	-.004	-.004 0 %100
21	GSIP-3B	Y	-.004	-.004 0 %100
22	GSI-1A	Y	-.008	-.008 0 %100
23	GSI-1B	Y	-.008	-.008 0 %100
24	GSI-2A	Y	-.008	-.008 0 %100
25	GSI-2B	Y	-.008	-.008 0 %100
26	GSI-3A	Y	-.008	-.008 0 %100
27	GSI-3B	Y	-.008	-.008 0 %100
28	M53	Y	-.009	-.009 0 %100
29	M54	Y	-.012	-.012 0 %100
30	M56	Y	-.009	-.009 0 %100
31	M57	Y	-.012	-.012 0 %100
32	M59	Y	-.009	-.009 0 %100
33	M60	Y	-.012	-.012 0 %100
34	M62	Y	-.009	-.009 0 %100
35	M63	Y	-.012	-.012 0 %100
36	M65	Y	-.009	-.009 0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
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**Member Distributed Loads (BLC 18 : Ice Weight) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location[ft,%]	End Location[ft,%]
37	M66	Y	-.012	-.012 0 %100
38	M68	Y	-.009	-.009 0 %100
39	M69	Y	-.012	-.012 0 %100
40	MP-1	Y	-.005	-.005 0 %100
41	MP-2	Y	-.005	-.005 0 %100
42	MP-3	Y	-.005	-.005 0 %100
43	MP-4	Y	-.005	-.005 0 %100
44	MP-5	Y	-.005	-.005 0 %100
45	MP-6	Y	-.005	-.005 0 %100
46	MP-7	Y	-.005	-.005 0 %100
47	MP-8	Y	-.005	-.005 0 %100
48	MP-9	Y	-.005	-.005 0 %100
49	MP-10	Y	-.005	-.005 0 %100
50	MP-11	Y	-.005	-.005 0 %100
51	MP-12	Y	-.005	-.005 0 %100
52	K1	Y	-.007	-.007 0 %100
53	K2	Y	-.007	-.007 0 %100
54	K3	Y	-.007	-.007 0 %100
55	SA-1	Y	-.007	-.007 0 %100
56	SA-2	Y	-.007	-.007 0 %100
57	SA-3	Y	-.007	-.007 0 %100
58	SR-1	Y	-.005	-.005 0 %100
59	SR-2	Y	-.005	-.005 0 %100
60	SR-3	Y	-.005	-.005 0 %100

**Member Distributed Loads (BLC 19 : 0 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	-.003	-.003 0 %100
2	AHCP-2	X	-.003	-.003 0 %100
3	AHCP-3	X	-.003	-.003 0 %100
4	CP-1	X	-.005	-.005 0 %100
5	CP-2	X	-.005	-.005 0 %100
6	CP-3	X	-.005	-.005 0 %100
7	M71	X	-.008	-.008 0 %100
8	M73	X	-.008	-.008 0 %100
9	M75	X	-.008	-.008 0 %100
10	M77	X	-.008	-.008 0 %100
11	M79	X	-.008	-.008 0 %100
12	M81	X	-.008	-.008 0 %100
13	FF-TH	X	-.003	-.003 0 %100
14	SF1-TH	X	-.002	-.002 0 %100
15	SF2-TH	X	-.002	-.002 0 %100
16	GSIP-1A	X	-.003	-.003 0 %100
17	GSIP-1B	X	-.003	-.003 0 %100
18	GSIP-2A	X	-.003	-.003 0 %100
19	GSIP-2B	X	-.003	-.003 0 %100
20	GSIP-3A	X	-.003	-.003 0 %100
21	GSIP-3B	X	-.003	-.003 0 %100
22	GSI-1A	X	-.004	-.004 0 %100
23	GSI-1B	X	-.004	-.004 0 %100
24	GSI-2A	X	-.004	-.004 0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
 Model Name : 302528 - Columbia Central

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**Member Distributed Loads (BLC 19 : 0 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
25	GSI-2B	X	-0.004	-0.004	0 %100
26	GSI-3A	X	-0.004	-0.004	0 %100
27	GSI-3B	X	-0.004	-0.004	0 %100
28	M53	X	-0.007	-0.007	0 %100
29	M54	X	-0.009	-0.009	0 %100
30	M56	X	-0.007	-0.007	0 %100
31	M57	X	-0.009	-0.009	0 %100
32	M59	X	-0.007	-0.007	0 %100
33	M60	X	-0.009	-0.009	0 %100
34	M62	X	-0.007	-0.007	0 %100
35	M63	X	-0.009	-0.009	0 %100
36	M65	X	-0.007	-0.007	0 %100
37	M66	X	-0.009	-0.009	0 %100
38	M68	X	-0.007	-0.007	0 %100
39	M69	X	-0.009	-0.009	0 %100
40	MP-1	X	-0.002	-0.002	0 %100
41	MP-2	X	-0.002	-0.002	0 %100
42	MP-3	X	-0.002	-0.002	0 %100
43	MP-4	X	-0.002	-0.002	0 %100
44	MP-5	X	-0.002	-0.002	0 %100
45	MP-6	X	-0.002	-0.002	0 %100
46	MP-7	X	-0.002	-0.002	0 %100
47	MP-8	X	-0.002	-0.002	0 %100
48	MP-9	X	-0.002	-0.002	0 %100
49	MP-10	X	-0.002	-0.002	0 %100
50	MP-11	X	-0.002	-0.002	0 %100
51	MP-12	X	-0.002	-0.002	0 %100
52	K1	X	-0.003	-0.003	0 %100
53	K2	X	-0.003	-0.003	0 %100
54	K3	X	-0.003	-0.003	0 %100
55	SA-1	X	-0.004	-0.004	0 %100
56	SA-2	X	-0.004	-0.004	0 %100
57	SA-3	X	-0.004	-0.004	0 %100
58	SR-1	X	-0.003	-0.003	0 %100
59	SR-2	X	-0.002	-0.002	0 %100
60	SR-3	X	-0.002	-0.002	0 %100

**Member Distributed Loads (BLC 20 : 30 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	-0.002	-0.002	0 %100
2	AHCP-2	X	-0.002	-0.002	0 %100
3	AHCP-3	X	0	0	0 %100
4	CP-1	X	-0.004	-0.004	0 %100
5	CP-2	X	-0.004	-0.004	0 %100
6	CP-3	X	0	0	0 %100
7	M71	X	-0.006	-0.006	0 %100
8	M73	X	-0.006	-0.006	0 %100
9	M75	X	-0.006	-0.006	0 %100
10	M77	X	-0.006	-0.006	0 %100
11	M79	X	0	0	0 %100
12	M81	X	0	0	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
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**Member Distributed Loads (BLC 20 : 30 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
13	FF-TH	X	-0.002	-0.002	0 %100
14	SF1-TH	X	0	0	0 %100
15	SF2-TH	X	-0.002	-0.002	0 %100
16	GSIP-1A	X	-0.002	-0.002	0 %100
17	GSIP-1B	X	0	0	0 %100
18	GSIP-2A	X	0	0	0 %100
19	GSIP-2B	X	-0.002	-0.002	0 %100
20	GSIP-3A	X	-0.002	-0.002	0 %100
21	GSIP-3B	X	-0.002	-0.002	0 %100
22	GSI-1A	X	-0.003	-0.003	0 %100
23	GSI-1B	X	-0.003	-0.003	0 %100
24	GSI-2A	X	-0.003	-0.003	0 %100
25	GSI-2B	X	-0.003	-0.003	0 %100
26	GSI-3A	X	0	0	0 %100
27	GSI-3B	X	0	0	0 %100
28	M53	X	-0.003	-0.003	0 %100
29	M54	X	-1.4e-5	-1.4e-5	0 %100
30	M56	X	-0.003	-0.003	0 %100
31	M57	X	-0.007	-0.007	0 %100
32	M59	X	-0.003	-0.003	0 %100
33	M60	X	-0.007	-0.007	0 %100
34	M62	X	-0.003	-0.003	0 %100
35	M63	X	-1.4e-5	-1.4e-5	0 %100
36	M65	X	-0.006	-0.006	0 %100
37	M66	X	-0.007	-0.007	0 %100
38	M68	X	-0.006	-0.006	0 %100
39	M69	X	-0.007	-0.007	0 %100
40	MP-1	X	-0.002	-0.002	0 %100
41	MP-2	X	-0.002	-0.002	0 %100
42	MP-3	X	-0.002	-0.002	0 %100
43	MP-4	X	-0.002	-0.002	0 %100
44	MP-5	X	-0.002	-0.002	0 %100
45	MP-6	X	-0.002	-0.002	0 %100
46	MP-7	X	-0.002	-0.002	0 %100
47	MP-8	X	-0.002	-0.002	0 %100
48	MP-9	X	-0.002	-0.002	0 %100
49	MP-10	X	-0.002	-0.002	0 %100
50	MP-11	X	-0.002	-0.002	0 %100
51	MP-12	X	-0.002	-0.002	0 %100
52	K1	X	-0.003	-0.003	0 %100
53	K2	X	-0.003	-0.003	0 %100
54	K3	X	-0.003	-0.003	0 %100
55	SA-1	X	-0.002	-0.002	0 %100
56	SA-2	X	-0.002	-0.002	0 %100
57	SA-3	X	-0.004	-0.004	0 %100
58	SR-1	X	-0.002	-0.002	0 %100
59	SR-2	X	0	0	0 %100
60	SR-3	X	-0.002	-0.002	0 %100
61	AHCP-1	Z	-0.001	-0.001	0 %100
62	AHCP-2	Z	-0.001	-0.001	0 %100
63	AHCP-3	Z	0	0	0 %100
64	CP-1	Z	-0.002	-0.002	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
 Model Name : 302528 - Columbia Central

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**Member Distributed Loads (BLC 20 : 30 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
65	CP-2	Z	-0.002	-0.002	0 %100
66	CP-3	Z	0	0	0 %100
67	M71	Z	-0.003	-0.003	0 %100
68	M73	Z	-0.003	-0.003	0 %100
69	M75	Z	-0.003	-0.003	0 %100
70	M77	Z	-0.003	-0.003	0 %100
71	M79	Z	0	0	0 %100
72	M81	Z	0	0	0 %100
73	FF-TH	Z	-0.001	-0.001	0 %100
74	SF1-TH	Z	0	0	0 %100
75	SF2-TH	Z	-0.001	-0.001	0 %100
76	GSIP-1A	Z	-0.001	-0.001	0 %100
77	GSIP-1B	Z	0	0	0 %100
78	GSIP-2A	Z	0	0	0 %100
79	GSIP-2B	Z	-0.001	-0.001	0 %100
80	GSIP-3A	Z	-0.001	-0.001	0 %100
81	GSIP-3B	Z	-0.001	-0.001	0 %100
82	GSI-1A	Z	-0.002	-0.002	0 %100
83	GSI-1B	Z	-0.002	-0.002	0 %100
84	GSI-2A	Z	-0.002	-0.002	0 %100
85	GSI-2B	Z	-0.002	-0.002	0 %100
86	GSI-3A	Z	0	0	0 %100
87	GSI-3B	Z	0	0	0 %100
88	M53	Z	-0.002	-0.002	0 %100
89	M54	Z	-8e-6	-8e-6	0 %100
90	M56	Z	-0.002	-0.002	0 %100
91	M57	Z	-0.004	-0.004	0 %100
92	M59	Z	-0.002	-0.002	0 %100
93	M60	Z	-0.004	-0.004	0 %100
94	M62	Z	-0.002	-0.002	0 %100
95	M63	Z	-8e-6	-8e-6	0 %100
96	M65	Z	-0.003	-0.003	0 %100
97	M66	Z	-0.004	-0.004	0 %100
98	M68	Z	-0.003	-0.003	0 %100
99	M69	Z	-0.004	-0.004	0 %100
100	MP-1	Z	-0.001	-0.001	0 %100
101	MP-2	Z	-0.001	-0.001	0 %100
102	MP-3	Z	-0.001	-0.001	0 %100
103	MP-4	Z	-0.001	-0.001	0 %100
104	MP-5	Z	-0.001	-0.001	0 %100
105	MP-6	Z	-0.001	-0.001	0 %100
106	MP-7	Z	-0.001	-0.001	0 %100
107	MP-8	Z	-0.001	-0.001	0 %100
108	MP-9	Z	-0.001	-0.001	0 %100
109	MP-10	Z	-0.001	-0.001	0 %100
110	MP-11	Z	-0.001	-0.001	0 %100
111	MP-12	Z	-0.001	-0.001	0 %100
112	K1	Z	-0.002	-0.002	0 %100
113	K2	Z	-0.002	-0.002	0 %100
114	K3	Z	-0.002	-0.002	0 %100
115	SA-1	Z	-0.00967	-0.00967	0 %100
116	SA-2	Z	-0.001	-0.001	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
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**Member Distributed Loads (BLC 20 : 30 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
117	SA-3	Z	-0.002	-0.002	0 %100
118	SR-1	Z	-0.00989	-0.00989	0 %100
119	SR-2	Z	0	0	0 %100
120	SR-3	Z	-0.001	-0.001	0 %100

**Member Distributed Loads (BLC 21 : 45 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	-0.002	-0.002	0 %100
2	AHCP-2	X	-0.002	-0.002	0 %100
3	AHCP-3	X	-0.0054	-0.0054	0 %100
4	CP-1	X	-0.004	-0.004	0 %100
5	CP-2	X	-0.003	-0.003	0 %100
6	CP-3	X	-0.00987	-0.00987	0 %100
7	M71	X	-0.004	-0.004	0 %100
8	M73	X	-0.004	-0.004	0 %100
9	M75	X	-0.005	-0.005	0 %100
10	M77	X	-0.005	-0.005	0 %100
11	M79	X	-0.001	-0.001	0 %100
12	M81	X	-0.001	-0.001	0 %100
13	FF-TH	X	-0.002	-0.002	0 %100
14	SF1-TH	X	-0.00454	-0.00454	0 %100
15	SF2-TH	X	-0.002	-0.002	0 %100
16	GSIP-1A	X	-0.002	-0.002	0 %100
17	GSIP-1B	X	-0.00502	-0.00502	0 %100
18	GSIP-2A	X	-0.00502	-0.00502	0 %100
19	GSIP-2B	X	-0.002	-0.002	0 %100
20	GSIP-3A	X	-0.002	-0.002	0 %100
21	GSIP-3B	X	-0.002	-0.002	0 %100
22	GSI-1A	X	-0.003	-0.003	0 %100
23	GSI-1B	X	-0.003	-0.003	0 %100
24	GSI-2A	X	-0.002	-0.002	0 %100
25	GSI-2B	X	-0.002	-0.002	0 %100
26	GSI-3A	X	-0.00671	-0.00671	0 %100
27	GSI-3B	X	-0.00671	-0.00671	0 %100
28	M53	X	-0.003	-0.003	0 %100
29	M54	X	-0.002	-0.002	0 %100
30	M56	X	-0.003	-0.003	0 %100
31	M57	X	-0.006	-0.006	0 %100
32	M59	X	-0.001	-0.001	0 %100
33	M60	X	-0.005	-0.005	0 %100
34	M62	X	-0.001	-0.001	0 %100
35	M63	X	-0.002	-0.002	0 %100
36	M65	X	-0.005	-0.005	0 %100
37	M66	X	-0.006	-0.006	0 %100
38	M68	X	-0.005	-0.005	0 %100
39	M69	X	-0.005	-0.005	0 %100
40	MP-1	X	-0.002	-0.002	0 %100
41	MP-2	X	-0.002	-0.002	0 %100
42	MP-3	X	-0.002	-0.002	0 %100
43	MP-4	X	-0.002	-0.002	0 %100
44	MP-5	X	-0.002	-0.002	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
 Model Name : 302528 - Columbia Central

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**Member Distributed Loads (BLC 21 : 45 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
45	MP-6	X	-0.002	-0.002 0 %100
46	MP-7	X	-0.002	-0.002 0 %100
47	MP-8	X	-0.002	-0.002 0 %100
48	MP-9	X	-0.002	-0.002 0 %100
49	MP-10	X	-0.002	-0.002 0 %100
50	MP-11	X	-0.002	-0.002 0 %100
51	MP-12	X	-0.002	-0.002 0 %100
52	K1	X	-0.002	-0.002 0 %100
53	K2	X	-0.002	-0.002 0 %100
54	K3	X	-0.002	-0.002 0 %100
55	SA-1	X	-0.000783	-0.000783 0 %100
56	SA-2	X	-0.002	-0.002 0 %100
57	SA-3	X	-0.003	-0.003 0 %100
58	SR-1	X	-0.001	-0.001 0 %100
59	SR-2	X	-0.000393	-0.000393 0 %100
60	SR-3	X	-0.001	-0.001 0 %100
61	AHCP-1	Z	-0.002	-0.002 0 %100
62	AHCP-2	Z	-0.001	-0.001 0 %100
63	AHCP-3	Z	-0.000554	-0.000554 0 %100
64	CP-1	Z	-0.004	-0.004 0 %100
65	CP-2	Z	-0.002	-0.002 0 %100
66	CP-3	Z	-0.000987	-0.000987 0 %100
67	M71	Z	-0.004	-0.004 0 %100
68	M73	Z	-0.004	-0.004 0 %100
69	M75	Z	-0.005	-0.005 0 %100
70	M77	Z	-0.005	-0.005 0 %100
71	M79	Z	-0.001	-0.001 0 %100
72	M81	Z	-0.001	-0.001 0 %100
73	FF-TH	Z	-0.001	-0.001 0 %100
74	SF1-TH	Z	-0.000556	-0.000556 0 %100
75	SF2-TH	Z	-0.002	-0.002 0 %100
76	GSIP-1A	Z	-0.001	-0.001 0 %100
77	GSIP-1B	Z	-0.000556	-0.000556 0 %100
78	GSIP-2A	Z	-0.000556	-0.000556 0 %100
79	GSIP-2B	Z	-0.002	-0.002 0 %100
80	GSIP-3A	Z	-0.002	-0.002 0 %100
81	GSIP-3B	Z	-0.001	-0.001 0 %100
82	GSI-1A	Z	-0.003	-0.003 0 %100
83	GSI-1B	Z	-0.003	-0.003 0 %100
84	GSI-2A	Z	-0.002	-0.002 0 %100
85	GSI-2B	Z	-0.002	-0.002 0 %100
86	GSI-3A	Z	-0.000712	-0.000712 0 %100
87	GSI-3B	Z	-0.000712	-0.000712 0 %100
88	M53	Z	-0.003	-0.003 0 %100
89	M54	Z	-0.002	-0.002 0 %100
90	M56	Z	-0.003	-0.003 0 %100
91	M57	Z	-0.006	-0.006 0 %100
92	M59	Z	-0.001	-0.001 0 %100
93	M60	Z	-0.005	-0.005 0 %100
94	M62	Z	-0.001	-0.001 0 %100
95	M63	Z	-0.002	-0.002 0 %100
96	M65	Z	-0.005	-0.005 0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
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**Member Distributed Loads (BLC 21 : 45 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
97	M66	Z	-0.006	-0.006 0 %100
98	M68	Z	-0.005	-0.005 0 %100
99	M69	Z	-0.005	-0.005 0 %100
100	MP-1	Z	-0.002	-0.002 0 %100
101	MP-2	Z	-0.002	-0.002 0 %100
102	MP-3	Z	-0.002	-0.002 0 %100
103	MP-4	Z	-0.002	-0.002 0 %100
104	MP-5	Z	-0.002	-0.002 0 %100
105	MP-6	Z	-0.002	-0.002 0 %100
106	MP-7	Z	-0.002	-0.002 0 %100
107	MP-8	Z	-0.002	-0.002 0 %100
108	MP-9	Z	-0.002	-0.002 0 %100
109	MP-10	Z	-0.002	-0.002 0 %100
110	MP-11	Z	-0.002	-0.002 0 %100
111	MP-12	Z	-0.002	-0.002 0 %100
112	K1	Z	-0.002	-0.002 0 %100
113	K2	Z	-0.002	-0.002 0 %100
114	K3	Z	-0.002	-0.002 0 %100
115	SA-1	Z	-0.000708	-0.000708 0 %100
116	SA-2	Z	-0.002	-0.002 0 %100
117	SA-3	Z	-0.003	-0.003 0 %100
118	SR-1	Z	-0.001	-0.001 0 %100
119	SR-2	Z	-0.000464	-0.000464 0 %100
120	SR-3	Z	-0.002	-0.002 0 %100

**Member Distributed Loads (BLC 22 : 60 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
1	AHCP-1	X	-0.001	-0.001 0 %100
2	AHCP-2	X	-0.000769	-0.000769 0 %100
3	AHCP-3	X	-0.000737	-0.000737 0 %100
4	CP-1	X	-0.003	-0.003 0 %100
5	CP-2	X	-0.001	-0.001 0 %100
6	CP-3	X	-0.001	-0.001 0 %100
7	M71	X	-0.002	-0.002 0 %100
8	M73	X	-0.002	-0.002 0 %100
9	M75	X	-0.004	-0.004 0 %100
10	M77	X	-0.004	-0.004 0 %100
11	M79	X	-0.002	-0.002 0 %100
12	M81	X	-0.002	-0.002 0 %100
13	FF-TH	X	-0.000789	-0.000789 0 %100
14	SF1-TH	X	-0.00062	-0.00062 0 %100
15	SF2-TH	X	-0.001	-0.001 0 %100
16	GSIP-1A	X	-0.000785	-0.000785 0 %100
17	GSIP-1B	X	-0.000685	-0.000685 0 %100
18	GSIP-2A	X	-0.000685	-0.000685 0 %100
19	GSIP-2B	X	-0.001	-0.001 0 %100
20	GSIP-3A	X	-0.001	-0.001 0 %100
21	GSIP-3B	X	-0.000785	-0.000785 0 %100
22	GSI-1A	X	-0.002	-0.002 0 %100
23	GSI-1B	X	-0.002	-0.002 0 %100
24	GSI-2A	X	-0.000993	-0.000993 0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
 Model Name : 302528 - Columbia Central

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**Member Distributed Loads (BLC 22 : 60 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
25	GSI-2B	X	-0.00993	-0.00993	0 %100
26	GSI-3A	X	-0.00916	-0.00916	0 %100
27	GSI-3B	X	-0.00916	-0.00916	0 %100
28	M53	X	-0.003	-0.003	0 %100
29	M54	X	-0.002	-0.002	0 %100
30	M56	X	-0.003	-0.003	0 %100
31	M57	X	-0.005	-0.005	0 %100
32	M59	X	0	0	0 %100
33	M60	X	-0.002	-0.002	0 %100
34	M62	X	0	0	0 %100
35	M63	X	-0.002	-0.002	0 %100
36	M65	X	-0.003	-0.003	0 %100
37	M66	X	-0.005	-0.005	0 %100
38	M68	X	-0.003	-0.003	0 %100
39	M69	X	-0.002	-0.002	0 %100
40	MP-1	X	-0.001	-0.001	0 %100
41	MP-2	X	-0.001	-0.001	0 %100
42	MP-3	X	-0.001	-0.001	0 %100
43	MP-4	X	-0.001	-0.001	0 %100
44	MP-5	X	-0.001	-0.001	0 %100
45	MP-6	X	-0.001	-0.001	0 %100
46	MP-7	X	-0.001	-0.001	0 %100
47	MP-8	X	-0.001	-0.001	0 %100
48	MP-9	X	-0.001	-0.001	0 %100
49	MP-10	X	-0.001	-0.001	0 %100
50	MP-11	X	-0.001	-0.001	0 %100
51	MP-12	X	-0.001	-0.001	0 %100
52	K1	X	-0.002	-0.002	0 %100
53	K2	X	-0.002	-0.002	0 %100
54	K3	X	-0.002	-0.002	0 %100
55	SA-1	X	0	0	0 %100
56	SA-2	X	-0.002	-0.002	0 %100
57	SA-3	X	-0.002	-0.002	0 %100
58	SR-1	X	-0.00634	-0.00634	0 %100
59	SR-2	X	-0.00537	-0.00537	0 %100
60	SR-3	X	-0.001	-0.001	0 %100
61	AHCP-1	Z	-0.003	-0.003	0 %100
62	AHCP-2	Z	-0.001	-0.001	0 %100
63	AHCP-3	Z	-0.001	-0.001	0 %100
64	CP-1	Z	-0.005	-0.005	0 %100
65	CP-2	Z	-0.002	-0.002	0 %100
66	CP-3	Z	-0.002	-0.002	0 %100
67	M71	Z	-0.003	-0.003	0 %100
68	M73	Z	-0.003	-0.003	0 %100
69	M75	Z	-0.007	-0.007	0 %100
70	M77	Z	-0.007	-0.007	0 %100
71	M79	Z	-0.003	-0.003	0 %100
72	M81	Z	-0.003	-0.003	0 %100
73	FF-TH	Z	-0.001	-0.001	0 %100
74	SF1-TH	Z	-0.001	-0.001	0 %100
75	SF2-TH	Z	-0.003	-0.003	0 %100
76	GSIP-1A	Z	-0.001	-0.001	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
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**Member Distributed Loads (BLC 22 : 60 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
77	GSIP-1B	Z	-0.001	-0.001	0 %100
78	GSIP-2A	Z	-0.001	-0.001	0 %100
79	GSIP-2B	Z	-0.003	-0.003	0 %100
80	GSIP-3A	Z	-0.003	-0.003	0 %100
81	GSIP-3B	Z	-0.001	-0.001	0 %100
82	GSI-1A	Z	-0.003	-0.003	0 %100
83	GSI-1B	Z	-0.003	-0.003	0 %100
84	GSI-2A	Z	-0.002	-0.002	0 %100
85	GSI-2B	Z	-0.002	-0.002	0 %100
86	GSI-3A	Z	-0.002	-0.002	0 %100
87	GSI-3B	Z	-0.002	-0.002	0 %100
88	M53	Z	-0.005	-0.005	0 %100
89	M54	Z	-0.004	-0.004	0 %100
90	M56	Z	-0.005	-0.005	0 %100
91	M57	Z	-0.008	-0.008	0 %100
92	M59	Z	0	0	0 %100
93	M60	Z	-0.004	-0.004	0 %100
94	M62	Z	0	0	0 %100
95	M63	Z	-0.004	-0.004	0 %100
96	M65	Z	-0.005	-0.005	0 %100
97	M66	Z	-0.008	-0.008	0 %100
98	M68	Z	-0.005	-0.005	0 %100
99	M69	Z	-0.004	-0.004	0 %100
100	MP-1	Z	-0.002	-0.002	0 %100
101	MP-2	Z	-0.002	-0.002	0 %100
102	MP-3	Z	-0.002	-0.002	0 %100
103	MP-4	Z	-0.002	-0.002	0 %100
104	MP-5	Z	-0.002	-0.002	0 %100
105	MP-6	Z	-0.002	-0.002	0 %100
106	MP-7	Z	-0.002	-0.002	0 %100
107	MP-8	Z	-0.002	-0.002	0 %100
108	MP-9	Z	-0.002	-0.002	0 %100
109	MP-10	Z	-0.002	-0.002	0 %100
110	MP-11	Z	-0.002	-0.002	0 %100
111	MP-12	Z	-0.002	-0.002	0 %100
112	K1	Z	-0.003	-0.003	0 %100
113	K2	Z	-0.003	-0.003	0 %100
114	K3	Z	-0.003	-0.003	0 %100
115	SA-1	Z	0	0	0 %100
116	SA-2	Z	-0.003	-0.003	0 %100
117	SA-3	Z	-0.003	-0.003	0 %100
118	SR-1	Z	-0.00989	-0.00989	0 %100
119	SR-2	Z	-0.001	-0.001	0 %100
120	SR-3	Z	-0.002	-0.002	0 %100

**Member Distributed Loads (BLC 23 : 90 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	Z	-0.003	-0.003	0 %100
2	AHCP-2	Z	0	0	0 %100
3	AHCP-3	Z	-0.003	-0.003	0 %100
4	CP-1	Z	-0.005	-0.005	0 %100





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**Member Distributed Loads (BLC 23 : 90 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]	
5	CP-2	Z	0	0	%100	
6	CP-3	Z	-0.005	-0.005	0	%100
7	M71	Z	0	0	0	%100
8	M73	Z	0	0	0	%100
9	M75	Z	-0.007	-0.007	0	%100
10	M77	Z	-0.007	-0.007	0	%100
11	M79	Z	-0.007	-0.007	0	%100
12	M81	Z	-0.007	-0.007	0	%100
13	FF-TH	Z	0	0	0	%100
14	SF1-TH	Z	-0.003	-0.003	0	%100
15	SF2-TH	Z	-0.003	-0.003	0	%100
16	GSIP-1A	Z	0	0	0	%100
17	GSIP-1B	Z	-0.003	-0.003	0	%100
18	GSIP-2A	Z	-0.003	-0.003	0	%100
19	GSIP-2B	Z	-0.003	-0.003	0	%100
20	GSIP-3A	Z	-0.003	-0.003	0	%100
21	GSIP-3B	Z	0	0	0	%100
22	GSI-1A	Z	-0.003	-0.003	0	%100
23	GSI-1B	Z	-0.003	-0.003	0	%100
24	GSI-2A	Z	0	0	0	%100
25	GSI-2B	Z	0	0	0	%100
26	GSI-3A	Z	-0.003	-0.003	0	%100
27	GSI-3B	Z	-0.003	-0.003	0	%100
28	M53	Z	-0.007	-0.007	0	%100
29	M54	Z	-0.008	-0.008	0	%100
30	M56	Z	-0.007	-0.007	0	%100
31	M57	Z	-0.008	-0.008	0	%100
32	M59	Z	-0.003	-0.003	0	%100
33	M60	Z	-1.6e-5	-1.6e-5	0	%100
34	M62	Z	-0.003	-0.003	0	%100
35	M63	Z	-0.008	-0.008	0	%100
36	M65	Z	-0.003	-0.003	0	%100
37	M66	Z	-0.008	-0.008	0	%100
38	M68	Z	-0.003	-0.003	0	%100
39	M69	Z	-1.6e-5	-1.6e-5	0	%100
40	MP-1	Z	-0.002	-0.002	0	%100
41	MP-2	Z	-0.002	-0.002	0	%100
42	MP-3	Z	-0.002	-0.002	0	%100
43	MP-4	Z	-0.002	-0.002	0	%100
44	MP-5	Z	-0.002	-0.002	0	%100
45	MP-6	Z	-0.002	-0.002	0	%100
46	MP-7	Z	-0.002	-0.002	0	%100
47	MP-8	Z	-0.002	-0.002	0	%100
48	MP-9	Z	-0.002	-0.002	0	%100
49	MP-10	Z	-0.002	-0.002	0	%100
50	MP-11	Z	-0.002	-0.002	0	%100
51	MP-12	Z	-0.002	-0.002	0	%100
52	K1	Z	-0.003	-0.003	0	%100
53	K2	Z	-0.003	-0.003	0	%100
54	K3	Z	-0.003	-0.003	0	%100
55	SA-1	Z	-0.002	-0.002	0	%100
56	SA-2	Z	-0.004	-0.004	0	%100



Company : Tower Engineering Professionals, Inc.  
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**Member Distributed Loads (BLC 23 : 90 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]	
57	SA-3	Z	-0.002	-0.002	0	%100
58	SR-1	Z	0	0	0	%100
59	SR-2	Z	-0.002	-0.002	0	%100
60	SR-3	Z	-0.002	-0.002	0	%100

**Member Distributed Loads (BLC 24 : 120 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]	
1	AHCP-1	X	.000737	.000737	0	%100
2	AHCP-2	X	.000769	.000769	0	%100
3	AHCP-3	X	.001	.001	0	%100
4	CP-1	X	.001	.001	0	%100
5	CP-2	X	.001	.001	0	%100
6	CP-3	X	.003	.003	0	%100
7	M71	X	.002	.002	0	%100
8	M73	X	.002	.002	0	%100
9	M75	X	.002	.002	0	%100
10	M77	X	.002	.002	0	%100
11	M79	X	.004	.004	0	%100
12	M81	X	.004	.004	0	%100
13	FF-TH	X	.000789	.000789	0	%100
14	SF1-TH	X	.001	.001	0	%100
15	SF2-TH	X	.00062	.00062	0	%100
16	GSIP-1A	X	.000785	.000785	0	%100
17	GSIP-1B	X	.001	.001	0	%100
18	GSIP-2A	X	.001	.001	0	%100
19	GSIP-2B	X	.000685	.000685	0	%100
20	GSIP-3A	X	.000685	.000685	0	%100
21	GSIP-3B	X	.000785	.000785	0	%100
22	GSI-1A	X	.000916	.000916	0	%100
23	GSI-1B	X	.000916	.000916	0	%100
24	GSI-2A	X	.000993	.000993	0	%100
25	GSI-2B	X	.000993	.000993	0	%100
26	GSI-3A	X	.002	.002	0	%100
27	GSI-3B	X	.002	.002	0	%100
28	M53	X	.003	.003	0	%100
29	M54	X	.005	.005	0	%100
30	M56	X	.003	.003	0	%100
31	M57	X	.002	.002	0	%100
32	M59	X	.003	.003	0	%100
33	M60	X	.002	.002	0	%100
34	M62	X	.003	.003	0	%100
35	M63	X	.005	.005	0	%100
36	M65	X	0	0	0	%100
37	M66	X	.002	.002	0	%100
38	M68	X	0	0	0	%100
39	M69	X	.002	.002	0	%100
40	MP-1	X	.001	.001	0	%100
41	MP-2	X	.001	.001	0	%100
42	MP-3	X	.001	.001	0	%100
43	MP-4	X	.001	.001	0	%100
44	MP-5	X	.001	.001	0	%100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
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**Member Distributed Loads (BLC 24 : 120 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
45	MP-6	X	.001	.001 0 %100
46	MP-7	X	.001	.001 0 %100
47	MP-8	X	.001	.001 0 %100
48	MP-9	X	.001	.001 0 %100
49	MP-10	X	.001	.001 0 %100
50	MP-11	X	.001	.001 0 %100
51	MP-12	X	.001	.001 0 %100
52	K1	X	.002	.002 0 %100
53	K2	X	.002	.002 0 %100
54	K3	X	.002	.002 0 %100
55	SA-1	X	.002	.002 0 %100
56	SA-2	X	.002	.002 0 %100
57	SA-3	X	0	0 0 %100
58	SR-1	X	.000634	.000634 0 %100
59	SR-2	X	.001	.001 0 %100
60	SR-3	X	.000537	.000537 0 %100
61	AHCP-1	Z	-.001	-.001 0 %100
62	AHCP-2	Z	-.001	-.001 0 %100
63	AHCP-3	Z	-.003	-.003 0 %100
64	CP-1	Z	-.002	-.002 0 %100
65	CP-2	Z	-.002	-.002 0 %100
66	CP-3	Z	-.005	-.005 0 %100
67	M71	Z	-.003	-.003 0 %100
68	M73	Z	-.003	-.003 0 %100
69	M75	Z	-.003	-.003 0 %100
70	M77	Z	-.003	-.003 0 %100
71	M79	Z	-.007	-.007 0 %100
72	M81	Z	-.007	-.007 0 %100
73	FF-TH	Z	-.001	-.001 0 %100
74	SF1-TH	Z	-.003	-.003 0 %100
75	SF2-TH	Z	-.001	-.001 0 %100
76	GSIP-1A	Z	-.001	-.001 0 %100
77	GSIP-1B	Z	-.003	-.003 0 %100
78	GSIP-2A	Z	-.003	-.003 0 %100
79	GSIP-2B	Z	-.001	-.001 0 %100
80	GSIP-3A	Z	-.001	-.001 0 %100
81	GSIP-3B	Z	-.001	-.001 0 %100
82	GSI-1A	Z	-.002	-.002 0 %100
83	GSI-1B	Z	-.002	-.002 0 %100
84	GSI-2A	Z	-.002	-.002 0 %100
85	GSI-2B	Z	-.002	-.002 0 %100
86	GSI-3A	Z	-.003	-.003 0 %100
87	GSI-3B	Z	-.003	-.003 0 %100
88	M53	Z	-.005	-.005 0 %100
89	M54	Z	-.008	-.008 0 %100
90	M56	Z	-.005	-.005 0 %100
91	M57	Z	-.004	-.004 0 %100
92	M59	Z	-.005	-.005 0 %100
93	M60	Z	-.004	-.004 0 %100
94	M62	Z	-.005	-.005 0 %100
95	M63	Z	-.008	-.008 0 %100
96	M65	Z	0	0 0 %100



Company : Tower Engineering Professionals, Inc.  
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**Member Distributed Loads (BLC 24 : 120 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
97	M66	Z	-.004	-.004 0 %100
98	M68	Z	0	0 0 %100
99	M69	Z	-.004	-.004 0 %100
100	MP-1	Z	-.002	-.002 0 %100
101	MP-2	Z	-.002	-.002 0 %100
102	MP-3	Z	-.002	-.002 0 %100
103	MP-4	Z	-.002	-.002 0 %100
104	MP-5	Z	-.002	-.002 0 %100
105	MP-6	Z	-.002	-.002 0 %100
106	MP-7	Z	-.002	-.002 0 %100
107	MP-8	Z	-.002	-.002 0 %100
108	MP-9	Z	-.002	-.002 0 %100
109	MP-10	Z	-.002	-.002 0 %100
110	MP-11	Z	-.002	-.002 0 %100
111	MP-12	Z	-.002	-.002 0 %100
112	K1	Z	-.003	-.003 0 %100
113	K2	Z	-.003	-.003 0 %100
114	K3	Z	-.003	-.003 0 %100
115	SA-1	Z	-.003	-.003 0 %100
116	SA-2	Z	-.003	-.003 0 %100
117	SA-3	Z	0	0 0 %100
118	SR-1	Z	-.000989	-.000989 0 %100
119	SR-2	Z	-.002	-.002 0 %100
120	SR-3	Z	-.001	-.001 0 %100

**Member Distributed Loads (BLC 25 : 135 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
1	AHCP-1	X	.00054	.00054 0 %100
2	AHCP-2	X	.002	.002 0 %100
3	AHCP-3	X	.002	.002 0 %100
4	CP-1	X	.000987	.000987 0 %100
5	CP-2	X	.003	.003 0 %100
6	CP-3	X	.004	.004 0 %100
7	M71	X	.004	.004 0 %100
8	M73	X	.004	.004 0 %100
9	M75	X	.001	.001 0 %100
10	M77	X	.001	.001 0 %100
11	M79	X	.005	.005 0 %100
12	M81	X	.005	.005 0 %100
13	FF-TH	X	.002	.002 0 %100
14	SF1-TH	X	.002	.002 0 %100
15	SF2-TH	X	.000454	.000454 0 %100
16	GSIP-1A	X	.002	.002 0 %100
17	GSIP-1B	X	.002	.002 0 %100
18	GSIP-2A	X	.002	.002 0 %100
19	GSIP-2B	X	.000502	.000502 0 %100
20	GSIP-3A	X	.000502	.000502 0 %100
21	GSIP-3B	X	.002	.002 0 %100
22	GSI-1A	X	.000671	.000671 0 %100
23	GSI-1B	X	.000671	.000671 0 %100
24	GSI-2A	X	.002	.002 0 %100



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**Member Distributed Loads (BLC 25 : 135 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
25	GSI-2B	X	.002	0	%100
26	GSI-3A	X	.003	0	%100
27	GSI-3B	X	.003	0	%100
28	M53	X	.003	0	%100
29	M54	X	.006	0	%100
30	M56	X	.003	0	%100
31	M57	X	.002	0	%100
32	M59	X	.005	0	%100
33	M60	X	.005	0	%100
34	M62	X	.005	0	%100
35	M63	X	.006	0	%100
36	M65	X	.001	0	%100
37	M66	X	.002	0	%100
38	M68	X	.001	0	%100
39	M69	X	.005	0	%100
40	MP-1	X	.002	0	%100
41	MP-2	X	.002	0	%100
42	MP-3	X	.002	0	%100
43	MP-4	X	.002	0	%100
44	MP-5	X	.002	0	%100
45	MP-6	X	.002	0	%100
46	MP-7	X	.002	0	%100
47	MP-8	X	.002	0	%100
48	MP-9	X	.002	0	%100
49	MP-10	X	.002	0	%100
50	MP-11	X	.002	0	%100
51	MP-12	X	.002	0	%100
52	K1	X	.002	0	%100
53	K2	X	.002	0	%100
54	K3	X	.002	0	%100
55	SA-1	X	.003	0	%100
56	SA-2	X	.002	0	%100
57	SA-3	X	.000783	0	%100
58	SR-1	X	.001	0	%100
59	SR-2	X	.001	0	%100
60	SR-3	X	.000393	0	%100
61	AHCP-1	Z	-0.00554	0	%100
62	AHCP-2	Z	-0.001	0	%100
63	AHCP-3	Z	-0.002	0	%100
64	CP-1	Z	-0.00987	0	%100
65	CP-2	Z	-0.002	0	%100
66	CP-3	Z	-0.004	0	%100
67	M71	Z	-0.004	0	%100
68	M73	Z	-0.004	0	%100
69	M75	Z	-0.001	0	%100
70	M77	Z	-0.001	0	%100
71	M79	Z	-0.005	0	%100
72	M81	Z	-0.005	0	%100
73	FF-TH	Z	-0.001	0	%100
74	SF1-TH	Z	-0.002	0	%100
75	SF2-TH	Z	-0.00556	0	%100
76	GSIP-1A	Z	-0.001	0	%100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
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**Member Distributed Loads (BLC 25 : 135 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
77	GSIP-1B	Z	-0.002	0	%100
78	GSIP-2A	Z	-0.002	0	%100
79	GSIP-2B	Z	-0.00556	0	%100
80	GSIP-3A	Z	-0.00556	0	%100
81	GSIP-3B	Z	-0.001	0	%100
82	GSI-1A	Z	-0.00712	0	%100
83	GSI-1B	Z	-0.00712	0	%100
84	GSI-2A	Z	-0.002	0	%100
85	GSI-2B	Z	-0.002	0	%100
86	GSI-3A	Z	-0.003	0	%100
87	GSI-3B	Z	-0.003	0	%100
88	M53	Z	-0.003	0	%100
89	M54	Z	-0.006	0	%100
90	M56	Z	-0.003	0	%100
91	M57	Z	-0.002	0	%100
92	M59	Z	-0.005	0	%100
93	M60	Z	-0.005	0	%100
94	M62	Z	-0.005	0	%100
95	M63	Z	-0.006	0	%100
96	M65	Z	-0.001	0	%100
97	M66	Z	-0.002	0	%100
98	M68	Z	-0.001	0	%100
99	M69	Z	-0.005	0	%100
100	MP-1	Z	-0.002	0	%100
101	MP-2	Z	-0.002	0	%100
102	MP-3	Z	-0.002	0	%100
103	MP-4	Z	-0.002	0	%100
104	MP-5	Z	-0.002	0	%100
105	MP-6	Z	-0.002	0	%100
106	MP-7	Z	-0.002	0	%100
107	MP-8	Z	-0.002	0	%100
108	MP-9	Z	-0.002	0	%100
109	MP-10	Z	-0.002	0	%100
110	MP-11	Z	-0.002	0	%100
111	MP-12	Z	-0.002	0	%100
112	K1	Z	-0.002	0	%100
113	K2	Z	-0.002	0	%100
114	K3	Z	-0.002	0	%100
115	SA-1	Z	-0.003	0	%100
116	SA-2	Z	-0.002	0	%100
117	SA-3	Z	-0.00708	0	%100
118	SR-1	Z	-0.001	0	%100
119	SR-2	Z	-0.002	0	%100
120	SR-3	Z	-0.00464	0	%100

**Member Distributed Loads (BLC 26 : 150 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	0	0	%100
2	AHCP-2	X	.002	0	%100
3	AHCP-3	X	.002	0	%100
4	CP-1	X	0	0	%100



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**Member Distributed Loads (BLC 26 : 150 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
5	CP-2	X	.004	.004	0 %100
6	CP-3	X	.004	.004	0 %100
7	M71	X	.006	.006	0 %100
8	M73	X	.006	.006	0 %100
9	M75	X	0	0	0 %100
10	M77	X	0	0	0 %100
11	M79	X	.006	.006	0 %100
12	M81	X	.006	.006	0 %100
13	FF-TH	X	.002	.002	0 %100
14	SF1-TH	X	.002	.002	0 %100
15	SF2-TH	X	0	0	0 %100
16	GSIP-1A	X	.002	.002	0 %100
17	GSIP-1B	X	.002	.002	0 %100
18	GSIP-2A	X	.002	.002	0 %100
19	GSIP-2B	X	0	0	0 %100
20	GSIP-3A	X	0	0	0 %100
21	GSIP-3B	X	.002	.002	0 %100
22	GSI-1A	X	0	0	0 %100
23	GSI-1B	X	0	0	0 %100
24	GSI-2A	X	.003	.003	0 %100
25	GSI-2B	X	.003	.003	0 %100
26	GSI-3A	X	.003	.003	0 %100
27	GSI-3B	X	.003	.003	0 %100
28	M53	X	.003	.003	0 %100
29	M54	X	.007	.007	0 %100
30	M56	X	.003	.003	0 %100
31	M57	X	1.4e-5	1.4e-5	0 %100
32	M59	X	.006	.006	0 %100
33	M60	X	.007	.007	0 %100
34	M62	X	.006	.006	0 %100
35	M63	X	.007	.007	0 %100
36	M65	X	.003	.003	0 %100
37	M66	X	1.4e-5	1.4e-5	0 %100
38	M68	X	.003	.003	0 %100
39	M69	X	.007	.007	0 %100
40	MP-1	X	.002	.002	0 %100
41	MP-2	X	.002	.002	0 %100
42	MP-3	X	.002	.002	0 %100
43	MP-4	X	.002	.002	0 %100
44	MP-5	X	.002	.002	0 %100
45	MP-6	X	.002	.002	0 %100
46	MP-7	X	.002	.002	0 %100
47	MP-8	X	.002	.002	0 %100
48	MP-9	X	.002	.002	0 %100
49	MP-10	X	.002	.002	0 %100
50	MP-11	X	.002	.002	0 %100
51	MP-12	X	.002	.002	0 %100
52	K1	X	.003	.003	0 %100
53	K2	X	.003	.003	0 %100
54	K3	X	.003	.003	0 %100
55	SA-1	X	.004	.004	0 %100
56	SA-2	X	.002	.002	0 %100



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**Member Distributed Loads (BLC 26 : 150 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
57	SA-3	X	.002	.002	0 %100
58	SR-1	X	.002	.002	0 %100
59	SR-2	X	.002	.002	0 %100
60	SR-3	X	0	0	0 %100
61	AHCP-1	Z	0	0	0 %100
62	AHCP-2	Z	-.001	-.001	0 %100
63	AHCP-3	Z	-.001	-.001	0 %100
64	CP-1	Z	0	0	0 %100
65	CP-2	Z	-.002	-.002	0 %100
66	CP-3	Z	-.002	-.002	0 %100
67	M71	Z	-.003	-.003	0 %100
68	M73	Z	-.003	-.003	0 %100
69	M75	Z	0	0	0 %100
70	M77	Z	0	0	0 %100
71	M79	Z	-.003	-.003	0 %100
72	M81	Z	-.003	-.003	0 %100
73	FF-TH	Z	-.001	-.001	0 %100
74	SF1-TH	Z	-.001	-.001	0 %100
75	SF2-TH	Z	0	0	0 %100
76	GSIP-1A	Z	-.001	-.001	0 %100
77	GSIP-1B	Z	-.001	-.001	0 %100
78	GSIP-2A	Z	-.001	-.001	0 %100
79	GSIP-2B	Z	0	0	0 %100
80	GSIP-3A	Z	0	0	0 %100
81	GSIP-3B	Z	-.001	-.001	0 %100
82	GSI-1A	Z	0	0	0 %100
83	GSI-1B	Z	0	0	0 %100
84	GSI-2A	Z	-.002	-.002	0 %100
85	GSI-2B	Z	-.002	-.002	0 %100
86	GSI-3A	Z	-.002	-.002	0 %100
87	GSI-3B	Z	-.002	-.002	0 %100
88	M53	Z	-.002	-.002	0 %100
89	M54	Z	-.004	-.004	0 %100
90	M56	Z	-.002	-.002	0 %100
91	M57	Z	-8e-6	-8e-6	0 %100
92	M59	Z	-.003	-.003	0 %100
93	M60	Z	-.004	-.004	0 %100
94	M62	Z	-.003	-.003	0 %100
95	M63	Z	-.004	-.004	0 %100
96	M65	Z	-.002	-.002	0 %100
97	M66	Z	-8e-6	-8e-6	0 %100
98	M68	Z	-.002	-.002	0 %100
99	M69	Z	-.004	-.004	0 %100
100	MP-1	Z	-.001	-.001	0 %100
101	MP-2	Z	-.001	-.001	0 %100
102	MP-3	Z	-.001	-.001	0 %100
103	MP-4	Z	-.001	-.001	0 %100
104	MP-5	Z	-.001	-.001	0 %100
105	MP-6	Z	-.001	-.001	0 %100
106	MP-7	Z	-.001	-.001	0 %100
107	MP-8	Z	-.001	-.001	0 %100
108	MP-9	Z	-.001	-.001	0 %100



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**Member Distributed Loads (BLC 26 : 150 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
109	MP-10	Z	-.001	0	%100
110	MP-11	Z	-.001	0	%100
111	MP-12	Z	-.001	0	%100
112	K1	Z	-.002	0	%100
113	K2	Z	-.002	0	%100
114	K3	Z	-.002	0	%100
115	SA-1	Z	-.002	0	%100
116	SA-2	Z	-.001	0	%100
117	SA-3	Z	-.000967	0	%100
118	SR-1	Z	-.000989	0	%100
119	SR-2	Z	-.001	0	%100
120	SR-3	Z	0	0	%100

**Member Distributed Loads (BLC 27 : 180 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	.003	0	%100
2	AHCP-2	X	.003	0	%100
3	AHCP-3	X	.003	0	%100
4	CP-1	X	.005	0	%100
5	CP-2	X	.005	0	%100
6	CP-3	X	.005	0	%100
7	M71	X	.008	0	%100
8	M73	X	.008	0	%100
9	M75	X	.008	0	%100
10	M77	X	.008	0	%100
11	M79	X	.008	0	%100
12	M81	X	.008	0	%100
13	FF-TH	X	.003	0	%100
14	SF1-TH	X	.002	0	%100
15	SF2-TH	X	.002	0	%100
16	GSIP-1A	X	.003	0	%100
17	GSIP-1B	X	.003	0	%100
18	GSIP-2A	X	.003	0	%100
19	GSIP-2B	X	.003	0	%100
20	GSIP-3A	X	.003	0	%100
21	GSIP-3B	X	.003	0	%100
22	GSI-1A	X	.004	0	%100
23	GSI-1B	X	.004	0	%100
24	GSI-2A	X	.004	0	%100
25	GSI-2B	X	.004	0	%100
26	GSI-3A	X	.004	0	%100
27	GSI-3B	X	.004	0	%100
28	M53	X	.007	0	%100
29	M54	X	.009	0	%100
30	M56	X	.007	0	%100
31	M57	X	.009	0	%100
32	M59	X	.007	0	%100
33	M60	X	.009	0	%100
34	M62	X	.007	0	%100
35	M63	X	.009	0	%100
36	M65	X	.007	0	%100



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 Designer : AJW  
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**Member Distributed Loads (BLC 27 : 180 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
37	M66	X	.009	0	%100
38	M68	X	.007	0	%100
39	M69	X	.009	0	%100
40	MP-1	X	.002	0	%100
41	MP-2	X	.002	0	%100
42	MP-3	X	.002	0	%100
43	MP-4	X	.002	0	%100
44	MP-5	X	.002	0	%100
45	MP-6	X	.002	0	%100
46	MP-7	X	.002	0	%100
47	MP-8	X	.002	0	%100
48	MP-9	X	.002	0	%100
49	MP-10	X	.002	0	%100
50	MP-11	X	.002	0	%100
51	MP-12	X	.002	0	%100
52	K1	X	.003	0	%100
53	K2	X	.003	0	%100
54	K3	X	.003	0	%100
55	SA-1	X	.004	0	%100
56	SA-2	X	.004	0	%100
57	SA-3	X	.004	0	%100
58	SR-1	X	.003	0	%100
59	SR-2	X	.002	0	%100
60	SR-3	X	.002	0	%100

**Member Distributed Loads (BLC 28 : 210 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	.002	0	%100
2	AHCP-2	X	.002	0	%100
3	AHCP-3	X	0	0	%100
4	CP-1	X	.004	0	%100
5	CP-2	X	.004	0	%100
6	CP-3	X	0	0	%100
7	M71	X	.006	0	%100
8	M73	X	.006	0	%100
9	M75	X	.006	0	%100
10	M77	X	.006	0	%100
11	M79	X	0	0	%100
12	M81	X	0	0	%100
13	FF-TH	X	.002	0	%100
14	SF1-TH	X	0	0	%100
15	SF2-TH	X	.002	0	%100
16	GSIP-1A	X	.002	0	%100
17	GSIP-1B	X	0	0	%100
18	GSIP-2A	X	0	0	%100
19	GSIP-2B	X	.002	0	%100
20	GSIP-3A	X	.002	0	%100
21	GSIP-3B	X	.002	0	%100
22	GSI-1A	X	.003	0	%100
23	GSI-1B	X	.003	0	%100
24	GSI-2A	X	.003	0	%100



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 Designer : AJW  
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**Member Distributed Loads (BLC 28 : 210 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft, %]	End Location[ft, %]
25	GSI-2B	X	.003	.003	0 %100
26	GSI-3A	X	0	0	0 %100
27	GSI-3B	X	0	0	0 %100
28	M53	X	.003	.003	0 %100
29	M54	X	1.4e-5	1.4e-5	0 %100
30	M56	X	.003	.003	0 %100
31	M57	X	.007	.007	0 %100
32	M59	X	.003	.003	0 %100
33	M60	X	.007	.007	0 %100
34	M62	X	.003	.003	0 %100
35	M63	X	1.4e-5	1.4e-5	0 %100
36	M65	X	.006	.006	0 %100
37	M66	X	.007	.007	0 %100
38	M68	X	.006	.006	0 %100
39	M69	X	.007	.007	0 %100
40	MP-1	X	.002	.002	0 %100
41	MP-2	X	.002	.002	0 %100
42	MP-3	X	.002	.002	0 %100
43	MP-4	X	.002	.002	0 %100
44	MP-5	X	.002	.002	0 %100
45	MP-6	X	.002	.002	0 %100
46	MP-7	X	.002	.002	0 %100
47	MP-8	X	.002	.002	0 %100
48	MP-9	X	.002	.002	0 %100
49	MP-10	X	.002	.002	0 %100
50	MP-11	X	.002	.002	0 %100
51	MP-12	X	.002	.002	0 %100
52	K1	X	.003	.003	0 %100
53	K2	X	.003	.003	0 %100
54	K3	X	.003	.003	0 %100
55	SA-1	X	.002	.002	0 %100
56	SA-2	X	.002	.002	0 %100
57	SA-3	X	.004	.004	0 %100
58	SR-1	X	.002	.002	0 %100
59	SR-2	X	0	0	0 %100
60	SR-3	X	.002	.002	0 %100
61	AHCP-1	Z	.001	.001	0 %100
62	AHCP-2	Z	.001	.001	0 %100
63	AHCP-3	Z	0	0	0 %100
64	CP-1	Z	.002	.002	0 %100
65	CP-2	Z	.002	.002	0 %100
66	CP-3	Z	0	0	0 %100
67	M71	Z	.003	.003	0 %100
68	M73	Z	.003	.003	0 %100
69	M75	Z	.003	.003	0 %100
70	M77	Z	.003	.003	0 %100
71	M79	Z	0	0	0 %100
72	M81	Z	0	0	0 %100
73	FF-TH	Z	.001	.001	0 %100
74	SF1-TH	Z	0	0	0 %100
75	SF2-TH	Z	.001	.001	0 %100
76	GSIP-1A	Z	.001	.001	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
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**Member Distributed Loads (BLC 28 : 210 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft, %]	End Location[ft, %]
77	GSIP-1B	Z	0	0	0 %100
78	GSIP-2A	Z	0	0	0 %100
79	GSIP-2B	Z	.001	.001	0 %100
80	GSIP-3A	Z	.001	.001	0 %100
81	GSIP-3B	Z	.001	.001	0 %100
82	GSI-1A	Z	.002	.002	0 %100
83	GSI-1B	Z	.002	.002	0 %100
84	GSI-2A	Z	.002	.002	0 %100
85	GSI-2B	Z	.002	.002	0 %100
86	GSI-3A	Z	0	0	0 %100
87	GSI-3B	Z	0	0	0 %100
88	M53	Z	.002	.002	0 %100
89	M54	Z	8e-6	8e-6	0 %100
90	M56	Z	.002	.002	0 %100
91	M57	Z	.004	.004	0 %100
92	M59	Z	.002	.002	0 %100
93	M60	Z	.004	.004	0 %100
94	M62	Z	.002	.002	0 %100
95	M63	Z	8e-6	8e-6	0 %100
96	M65	Z	.003	.003	0 %100
97	M66	Z	.004	.004	0 %100
98	M68	Z	.003	.003	0 %100
99	M69	Z	.004	.004	0 %100
100	MP-1	Z	.001	.001	0 %100
101	MP-2	Z	.001	.001	0 %100
102	MP-3	Z	.001	.001	0 %100
103	MP-4	Z	.001	.001	0 %100
104	MP-5	Z	.001	.001	0 %100
105	MP-6	Z	.001	.001	0 %100
106	MP-7	Z	.001	.001	0 %100
107	MP-8	Z	.001	.001	0 %100
108	MP-9	Z	.001	.001	0 %100
109	MP-10	Z	.001	.001	0 %100
110	MP-11	Z	.001	.001	0 %100
111	MP-12	Z	.001	.001	0 %100
112	K1	Z	.002	.002	0 %100
113	K2	Z	.002	.002	0 %100
114	K3	Z	.002	.002	0 %100
115	SA-1	Z	.000967	.000967	0 %100
116	SA-2	Z	.001	.001	0 %100
117	SA-3	Z	.002	.002	0 %100
118	SR-1	Z	.000989	.000989	0 %100
119	SR-2	Z	0	0	0 %100
120	SR-3	Z	.001	.001	0 %100

**Member Distributed Loads (BLC 29 : 225 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location[ft, %]	End Location[ft, %]
1	AHCP-1	X	.002	.002	0 %100
2	AHCP-2	X	.002	.002	0 %100
3	AHCP-3	X	.00054	.00054	0 %100
4	CP-1	X	.004	.004	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
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**Member Distributed Loads (BLC 29 : 225 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
5	CP-2	X	.003	.003	0 %100
6	CP-3	X	.000987	.000987	0 %100
7	M71	X	.004	.004	0 %100
8	M73	X	.004	.004	0 %100
9	M75	X	.005	.005	0 %100
10	M77	X	.005	.005	0 %100
11	M79	X	.001	.001	0 %100
12	M81	X	.001	.001	0 %100
13	FF-TH	X	.002	.002	0 %100
14	SF1-TH	X	.000454	.000454	0 %100
15	SF2-TH	X	.002	.002	0 %100
16	GSIP-1A	X	.002	.002	0 %100
17	GSIP-1B	X	.000502	.000502	0 %100
18	GSIP-2A	X	.000502	.000502	0 %100
19	GSIP-2B	X	.002	.002	0 %100
20	GSIP-3A	X	.002	.002	0 %100
21	GSIP-3B	X	.002	.002	0 %100
22	GSI-1A	X	.003	.003	0 %100
23	GSI-1B	X	.003	.003	0 %100
24	GSI-2A	X	.002	.002	0 %100
25	GSI-2B	X	.002	.002	0 %100
26	GSI-3A	X	.000671	.000671	0 %100
27	GSI-3B	X	.000671	.000671	0 %100
28	M53	X	.003	.003	0 %100
29	M54	X	.002	.002	0 %100
30	M56	X	.003	.003	0 %100
31	M57	X	.006	.006	0 %100
32	M59	X	.001	.001	0 %100
33	M60	X	.005	.005	0 %100
34	M62	X	.001	.001	0 %100
35	M63	X	.002	.002	0 %100
36	M65	X	.005	.005	0 %100
37	M66	X	.006	.006	0 %100
38	M68	X	.005	.005	0 %100
39	M69	X	.005	.005	0 %100
40	MP-1	X	.002	.002	0 %100
41	MP-2	X	.002	.002	0 %100
42	MP-3	X	.002	.002	0 %100
43	MP-4	X	.002	.002	0 %100
44	MP-5	X	.002	.002	0 %100
45	MP-6	X	.002	.002	0 %100
46	MP-7	X	.002	.002	0 %100
47	MP-8	X	.002	.002	0 %100
48	MP-9	X	.002	.002	0 %100
49	MP-10	X	.002	.002	0 %100
50	MP-11	X	.002	.002	0 %100
51	MP-12	X	.002	.002	0 %100
52	K1	X	.002	.002	0 %100
53	K2	X	.002	.002	0 %100
54	K3	X	.002	.002	0 %100
55	SA-1	X	.000783	.000783	0 %100
56	SA-2	X	.002	.002	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
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**Member Distributed Loads (BLC 29 : 225 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
57	SA-3	X	.003	.003	0 %100
58	SR-1	X	.001	.001	0 %100
59	SR-2	X	.000393	.000393	0 %100
60	SR-3	X	.001	.001	0 %100
61	AHCP-1	Z	.002	.002	0 %100
62	AHCP-2	Z	.001	.001	0 %100
63	AHCP-3	Z	.000554	.000554	0 %100
64	CP-1	Z	.004	.004	0 %100
65	CP-2	Z	.002	.002	0 %100
66	CP-3	Z	.000987	.000987	0 %100
67	M71	Z	.004	.004	0 %100
68	M73	Z	.004	.004	0 %100
69	M75	Z	.005	.005	0 %100
70	M77	Z	.005	.005	0 %100
71	M79	Z	.001	.001	0 %100
72	M81	Z	.001	.001	0 %100
73	FF-TH	Z	.001	.001	0 %100
74	SF1-TH	Z	.000556	.000556	0 %100
75	SF2-TH	Z	.002	.002	0 %100
76	GSIP-1A	Z	.001	.001	0 %100
77	GSIP-1B	Z	.000556	.000556	0 %100
78	GSIP-2A	Z	.000556	.000556	0 %100
79	GSIP-2B	Z	.002	.002	0 %100
80	GSIP-3A	Z	.002	.002	0 %100
81	GSIP-3B	Z	.001	.001	0 %100
82	GSI-1A	Z	.003	.003	0 %100
83	GSI-1B	Z	.003	.003	0 %100
84	GSI-2A	Z	.002	.002	0 %100
85	GSI-2B	Z	.002	.002	0 %100
86	GSI-3A	Z	.000712	.000712	0 %100
87	GSI-3B	Z	.000712	.000712	0 %100
88	M53	Z	.003	.003	0 %100
89	M54	Z	.002	.002	0 %100
90	M56	Z	.003	.003	0 %100
91	M57	Z	.006	.006	0 %100
92	M59	Z	.001	.001	0 %100
93	M60	Z	.005	.005	0 %100
94	M62	Z	.001	.001	0 %100
95	M63	Z	.002	.002	0 %100
96	M65	Z	.005	.005	0 %100
97	M66	Z	.006	.006	0 %100
98	M68	Z	.005	.005	0 %100
99	M69	Z	.005	.005	0 %100
100	MP-1	Z	.002	.002	0 %100
101	MP-2	Z	.002	.002	0 %100
102	MP-3	Z	.002	.002	0 %100
103	MP-4	Z	.002	.002	0 %100
104	MP-5	Z	.002	.002	0 %100
105	MP-6	Z	.002	.002	0 %100
106	MP-7	Z	.002	.002	0 %100
107	MP-8	Z	.002	.002	0 %100
108	MP-9	Z	.002	.002	0 %100



Company : Tower Engineering Professionals, Inc.  
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**Member Distributed Loads (BLC 29 : 225 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location[ft,%]	End Location[ft,%]
109	MP-10	Z	.002	.002 0 %100
110	MP-11	Z	.002	.002 0 %100
111	MP-12	Z	.002	.002 0 %100
112	K1	Z	.002	.002 0 %100
113	K2	Z	.002	.002 0 %100
114	K3	Z	.002	.002 0 %100
115	SA-1	Z	.000708	.000708 0 %100
116	SA-2	Z	.002	.002 0 %100
117	SA-3	Z	.003	.003 0 %100
118	SR-1	Z	.001	.001 0 %100
119	SR-2	Z	.000464	.000464 0 %100
120	SR-3	Z	.002	.002 0 %100

**Member Distributed Loads (BLC 30 : 240 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location[ft,%]	End Location[ft,%]
1	AHCP-1	X	.001	.001 0 %100
2	AHCP-2	X	.000769	.000769 0 %100
3	AHCP-3	X	.000737	.000737 0 %100
4	CP-1	X	.003	.003 0 %100
5	CP-2	X	.001	.001 0 %100
6	CP-3	X	.001	.001 0 %100
7	M71	X	.002	.002 0 %100
8	M73	X	.002	.002 0 %100
9	M75	X	.004	.004 0 %100
10	M77	X	.004	.004 0 %100
11	M79	X	.002	.002 0 %100
12	M81	X	.002	.002 0 %100
13	FF-TH	X	.000789	.000789 0 %100
14	SF1-TH	X	.00062	.00062 0 %100
15	SF2-TH	X	.001	.001 0 %100
16	GSIP-1A	X	.000785	.000785 0 %100
17	GSIP-1B	X	.000685	.000685 0 %100
18	GSIP-2A	X	.000685	.000685 0 %100
19	GSIP-2B	X	.001	.001 0 %100
20	GSIP-3A	X	.001	.001 0 %100
21	GSIP-3B	X	.000785	.000785 0 %100
22	GSI-1A	X	.002	.002 0 %100
23	GSI-1B	X	.002	.002 0 %100
24	GSI-2A	X	.000993	.000993 0 %100
25	GSI-2B	X	.000993	.000993 0 %100
26	GSI-3A	X	.000916	.000916 0 %100
27	GSI-3B	X	.000916	.000916 0 %100
28	M53	X	.003	.003 0 %100
29	M54	X	.002	.002 0 %100
30	M56	X	.003	.003 0 %100
31	M57	X	.005	.005 0 %100
32	M59	X	0	0 %100
33	M60	X	.002	.002 0 %100
34	M62	X	0	0 %100
35	M63	X	.002	.002 0 %100
36	M65	X	.003	.003 0 %100



Company : Tower Engineering Professionals, Inc.  
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**Member Distributed Loads (BLC 30 : 240 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location[ft,%]	End Location[ft,%]
37	M66	X	.005	.005 0 %100
38	M68	X	.003	.003 0 %100
39	M69	X	.002	.002 0 %100
40	MP-1	X	.001	.001 0 %100
41	MP-2	X	.001	.001 0 %100
42	MP-3	X	.001	.001 0 %100
43	MP-4	X	.001	.001 0 %100
44	MP-5	X	.001	.001 0 %100
45	MP-6	X	.001	.001 0 %100
46	MP-7	X	.001	.001 0 %100
47	MP-8	X	.001	.001 0 %100
48	MP-9	X	.001	.001 0 %100
49	MP-10	X	.001	.001 0 %100
50	MP-11	X	.001	.001 0 %100
51	MP-12	X	.001	.001 0 %100
52	K1	X	.002	.002 0 %100
53	K2	X	.002	.002 0 %100
54	K3	X	.002	.002 0 %100
55	SA-1	X	0	0 %100
56	SA-2	X	.002	.002 0 %100
57	SA-3	X	.002	.002 0 %100
58	SR-1	X	.000634	.000634 0 %100
59	SR-2	X	.000537	.000537 0 %100
60	SR-3	X	.001	.001 0 %100
61	AHCP-1	Z	.003	.003 0 %100
62	AHCP-2	Z	.001	.001 0 %100
63	AHCP-3	Z	.001	.001 0 %100
64	CP-1	Z	.005	.005 0 %100
65	CP-2	Z	.002	.002 0 %100
66	CP-3	Z	.002	.002 0 %100
67	M71	Z	.003	.003 0 %100
68	M73	Z	.003	.003 0 %100
69	M75	Z	.007	.007 0 %100
70	M77	Z	.007	.007 0 %100
71	M79	Z	.003	.003 0 %100
72	M81	Z	.003	.003 0 %100
73	FF-TH	Z	.001	.001 0 %100
74	SF1-TH	Z	.001	.001 0 %100
75	SF2-TH	Z	.003	.003 0 %100
76	GSIP-1A	Z	.001	.001 0 %100
77	GSIP-1B	Z	.001	.001 0 %100
78	GSIP-2A	Z	.001	.001 0 %100
79	GSIP-2B	Z	.003	.003 0 %100
80	GSIP-3A	Z	.003	.003 0 %100
81	GSIP-3B	Z	.001	.001 0 %100
82	GSI-1A	Z	.003	.003 0 %100
83	GSI-1B	Z	.003	.003 0 %100
84	GSI-2A	Z	.002	.002 0 %100
85	GSI-2B	Z	.002	.002 0 %100
86	GSI-3A	Z	.002	.002 0 %100
87	GSI-3B	Z	.002	.002 0 %100
88	M53	Z	.005	.005 0 %100





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**Member Distributed Loads (BLC 30 : 240 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
89	M54	Z	.004	.004 0 %100
90	M56	Z	.005	.005 0 %100
91	M57	Z	.008	.008 0 %100
92	M59	Z	0	0 0 %100
93	M60	Z	.004	.004 0 %100
94	M62	Z	0	0 0 %100
95	M63	Z	.004	.004 0 %100
96	M65	Z	.005	.005 0 %100
97	M66	Z	.008	.008 0 %100
98	M68	Z	.005	.005 0 %100
99	M69	Z	.004	.004 0 %100
100	MP-1	Z	.002	.002 0 %100
101	MP-2	Z	.002	.002 0 %100
102	MP-3	Z	.002	.002 0 %100
103	MP-4	Z	.002	.002 0 %100
104	MP-5	Z	.002	.002 0 %100
105	MP-6	Z	.002	.002 0 %100
106	MP-7	Z	.002	.002 0 %100
107	MP-8	Z	.002	.002 0 %100
108	MP-9	Z	.002	.002 0 %100
109	MP-10	Z	.002	.002 0 %100
110	MP-11	Z	.002	.002 0 %100
111	MP-12	Z	.002	.002 0 %100
112	K1	Z	.003	.003 0 %100
113	K2	Z	.003	.003 0 %100
114	K3	Z	.003	.003 0 %100
115	SA-1	Z	0	0 0 %100
116	SA-2	Z	.003	.003 0 %100
117	SA-3	Z	.003	.003 0 %100
118	SR-1	Z	.000989	.000989 0 %100
119	SR-2	Z	.001	.001 0 %100
120	SR-3	Z	.002	.002 0 %100

**Member Distributed Loads (BLC 31 : 270 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
1	AHCP-1	Z	.003	.003 0 %100
2	AHCP-2	Z	0	0 0 %100
3	AHCP-3	Z	.003	.003 0 %100
4	CP-1	Z	.005	.005 0 %100
5	CP-2	Z	0	0 0 %100
6	CP-3	Z	.005	.005 0 %100
7	M71	Z	0	0 0 %100
8	M73	Z	0	0 0 %100
9	M75	Z	.007	.007 0 %100
10	M77	Z	.007	.007 0 %100
11	M79	Z	.007	.007 0 %100
12	M81	Z	.007	.007 0 %100
13	FF-TH	Z	0	0 0 %100
14	SF1-TH	Z	.003	.003 0 %100
15	SF2-TH	Z	.003	.003 0 %100
16	GSIP-1A	Z	0	0 0 %100



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 Designer : AJW  
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**Member Distributed Loads (BLC 31 : 270 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
17	GSIP-1B	Z	.003	.003 0 %100
18	GSIP-2A	Z	.003	.003 0 %100
19	GSIP-2B	Z	.003	.003 0 %100
20	GSIP-3A	Z	.003	.003 0 %100
21	GSIP-3B	Z	0	0 0 %100
22	GSI-1A	Z	.003	.003 0 %100
23	GSI-1B	Z	.003	.003 0 %100
24	GSI-2A	Z	0	0 0 %100
25	GSI-2B	Z	0	0 0 %100
26	GSI-3A	Z	.003	.003 0 %100
27	GSI-3B	Z	.003	.003 0 %100
28	M53	Z	.007	.007 0 %100
29	M54	Z	.008	.008 0 %100
30	M56	Z	.007	.007 0 %100
31	M57	Z	.008	.008 0 %100
32	M59	Z	.003	.003 0 %100
33	M60	Z	1.6e-5	1.6e-5 0 %100
34	M62	Z	.003	.003 0 %100
35	M63	Z	.008	.008 0 %100
36	M65	Z	.003	.003 0 %100
37	M66	Z	.008	.008 0 %100
38	M68	Z	.003	.003 0 %100
39	M69	Z	1.6e-5	1.6e-5 0 %100
40	MP-1	Z	.002	.002 0 %100
41	MP-2	Z	.002	.002 0 %100
42	MP-3	Z	.002	.002 0 %100
43	MP-4	Z	.002	.002 0 %100
44	MP-5	Z	.002	.002 0 %100
45	MP-6	Z	.002	.002 0 %100
46	MP-7	Z	.002	.002 0 %100
47	MP-8	Z	.002	.002 0 %100
48	MP-9	Z	.002	.002 0 %100
49	MP-10	Z	.002	.002 0 %100
50	MP-11	Z	.002	.002 0 %100
51	MP-12	Z	.002	.002 0 %100
52	K1	Z	.003	.003 0 %100
53	K2	Z	.003	.003 0 %100
54	K3	Z	.003	.003 0 %100
55	SA-1	Z	.002	.002 0 %100
56	SA-2	Z	.004	.004 0 %100
57	SA-3	Z	.002	.002 0 %100
58	SR-1	Z	0	0 0 %100
59	SR-2	Z	.002	.002 0 %100
60	SR-3	Z	.002	.002 0 %100

**Member Distributed Loads (BLC 32 : 300 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
1	AHCP-1	X	-.000737	-.000737 0 %100
2	AHCP-2	X	-.000769	-.000769 0 %100
3	AHCP-3	X	-.001	-.001 0 %100
4	CP-1	X	-.001	-.001 0 %100



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**Member Distributed Loads (BLC 32 : 300 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
5	CP-2	X	-0.001	-0.001	0 %100
6	CP-3	X	-0.003	-0.003	0 %100
7	M71	X	-0.002	-0.002	0 %100
8	M73	X	-0.002	-0.002	0 %100
9	M75	X	-0.002	-0.002	0 %100
10	M77	X	-0.002	-0.002	0 %100
11	M79	X	-0.004	-0.004	0 %100
12	M81	X	-0.004	-0.004	0 %100
13	FF-TH	X	-0.000789	-0.000789	0 %100
14	SF1-TH	X	-0.001	-0.001	0 %100
15	SF2-TH	X	-0.00062	-0.00062	0 %100
16	GSIP-1A	X	-0.000785	-0.000785	0 %100
17	GSIP-1B	X	-0.001	-0.001	0 %100
18	GSIP-2A	X	-0.001	-0.001	0 %100
19	GSIP-2B	X	-0.000685	-0.000685	0 %100
20	GSIP-3A	X	-0.000685	-0.000685	0 %100
21	GSIP-3B	X	-0.000785	-0.000785	0 %100
22	GSI-1A	X	-0.000916	-0.000916	0 %100
23	GSI-1B	X	-0.000916	-0.000916	0 %100
24	GSI-2A	X	-0.000993	-0.000993	0 %100
25	GSI-2B	X	-0.000993	-0.000993	0 %100
26	GSI-3A	X	-0.002	-0.002	0 %100
27	GSI-3B	X	-0.002	-0.002	0 %100
28	M53	X	-0.003	-0.003	0 %100
29	M54	X	-0.005	-0.005	0 %100
30	M56	X	-0.003	-0.003	0 %100
31	M57	X	-0.002	-0.002	0 %100
32	M59	X	-0.003	-0.003	0 %100
33	M60	X	-0.002	-0.002	0 %100
34	M62	X	-0.003	-0.003	0 %100
35	M63	X	-0.005	-0.005	0 %100
36	M65	X	0	0	0 %100
37	M66	X	-0.002	-0.002	0 %100
38	M68	X	0	0	0 %100
39	M69	X	-0.002	-0.002	0 %100
40	MP-1	X	-0.001	-0.001	0 %100
41	MP-2	X	-0.001	-0.001	0 %100
42	MP-3	X	-0.001	-0.001	0 %100
43	MP-4	X	-0.001	-0.001	0 %100
44	MP-5	X	-0.001	-0.001	0 %100
45	MP-6	X	-0.001	-0.001	0 %100
46	MP-7	X	-0.001	-0.001	0 %100
47	MP-8	X	-0.001	-0.001	0 %100
48	MP-9	X	-0.001	-0.001	0 %100
49	MP-10	X	-0.001	-0.001	0 %100
50	MP-11	X	-0.001	-0.001	0 %100
51	MP-12	X	-0.001	-0.001	0 %100
52	K1	X	-0.002	-0.002	0 %100
53	K2	X	-0.002	-0.002	0 %100
54	K3	X	-0.002	-0.002	0 %100
55	SA-1	X	-0.002	-0.002	0 %100
56	SA-2	X	-0.002	-0.002	0 %100



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**Member Distributed Loads (BLC 32 : 300 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...]	Start Location(ft,%)	End Location(ft,%)
57	SA-3	X	0	0	0 %100
58	SR-1	X	-0.000634	-0.000634	0 %100
59	SR-2	X	-0.001	-0.001	0 %100
60	SR-3	X	-0.000537	-0.000537	0 %100
61	AHCP-1	Z	.001	.001	0 %100
62	AHCP-2	Z	.001	.001	0 %100
63	AHCP-3	Z	.003	.003	0 %100
64	CP-1	Z	.002	.002	0 %100
65	CP-2	Z	.002	.002	0 %100
66	CP-3	Z	.005	.005	0 %100
67	M71	Z	.003	.003	0 %100
68	M73	Z	.003	.003	0 %100
69	M75	Z	.003	.003	0 %100
70	M77	Z	.003	.003	0 %100
71	M79	Z	.007	.007	0 %100
72	M81	Z	.007	.007	0 %100
73	FF-TH	Z	.001	.001	0 %100
74	SF1-TH	Z	.003	.003	0 %100
75	SF2-TH	Z	.001	.001	0 %100
76	GSIP-1A	Z	.001	.001	0 %100
77	GSIP-1B	Z	.003	.003	0 %100
78	GSIP-2A	Z	.003	.003	0 %100
79	GSIP-2B	Z	.001	.001	0 %100
80	GSIP-3A	Z	.001	.001	0 %100
81	GSIP-3B	Z	.001	.001	0 %100
82	GSI-1A	Z	.002	.002	0 %100
83	GSI-1B	Z	.002	.002	0 %100
84	GSI-2A	Z	.002	.002	0 %100
85	GSI-2B	Z	.002	.002	0 %100
86	GSI-3A	Z	.003	.003	0 %100
87	GSI-3B	Z	.003	.003	0 %100
88	M53	Z	.005	.005	0 %100
89	M54	Z	.008	.008	0 %100
90	M56	Z	.005	.005	0 %100
91	M57	Z	.004	.004	0 %100
92	M59	Z	.005	.005	0 %100
93	M60	Z	.004	.004	0 %100
94	M62	Z	.005	.005	0 %100
95	M63	Z	.008	.008	0 %100
96	M65	Z	0	0	0 %100
97	M66	Z	.004	.004	0 %100
98	M68	Z	0	0	0 %100
99	M69	Z	.004	.004	0 %100
100	MP-1	Z	.002	.002	0 %100
101	MP-2	Z	.002	.002	0 %100
102	MP-3	Z	.002	.002	0 %100
103	MP-4	Z	.002	.002	0 %100
104	MP-5	Z	.002	.002	0 %100
105	MP-6	Z	.002	.002	0 %100
106	MP-7	Z	.002	.002	0 %100
107	MP-8	Z	.002	.002	0 %100
108	MP-9	Z	.002	.002	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
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**Member Distributed Loads (BLC 32 : 300 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
109	MP-10	Z	.002	0 %100
110	MP-11	Z	.002	0 %100
111	MP-12	Z	.002	0 %100
112	K1	Z	.003	0 %100
113	K2	Z	.003	0 %100
114	K3	Z	.003	0 %100
115	SA-1	Z	.003	0 %100
116	SA-2	Z	.003	0 %100
117	SA-3	Z	0	0 %100
118	SR-1	Z	.000989	0 %100
119	SR-2	Z	.002	0 %100
120	SR-3	Z	.001	0 %100

**Member Distributed Loads (BLC 33 : 315 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
1	AHCP-1	X	-.00054	0 %100
2	AHCP-2	X	-.002	0 %100
3	AHCP-3	X	-.002	0 %100
4	CP-1	X	-.000987	0 %100
5	CP-2	X	-.003	0 %100
6	CP-3	X	-.004	0 %100
7	M71	X	-.004	0 %100
8	M73	X	-.004	0 %100
9	M75	X	-.001	0 %100
10	M77	X	-.001	0 %100
11	M79	X	-.005	0 %100
12	M81	X	-.005	0 %100
13	FF-TH	X	-.002	0 %100
14	SF1-TH	X	-.002	0 %100
15	SF2-TH	X	-.000454	0 %100
16	GSIP-1A	X	-.002	0 %100
17	GSIP-1B	X	-.002	0 %100
18	GSIP-2A	X	-.002	0 %100
19	GSIP-2B	X	-.000502	0 %100
20	GSIP-3A	X	-.000502	0 %100
21	GSIP-3B	X	-.002	0 %100
22	GSI-1A	X	-.000671	0 %100
23	GSI-1B	X	-.000671	0 %100
24	GSI-2A	X	-.002	0 %100
25	GSI-2B	X	-.002	0 %100
26	GSI-3A	X	-.003	0 %100
27	GSI-3B	X	-.003	0 %100
28	M53	X	-.003	0 %100
29	M54	X	-.006	0 %100
30	M56	X	-.003	0 %100
31	M57	X	-.002	0 %100
32	M59	X	-.005	0 %100
33	M60	X	-.005	0 %100
34	M62	X	-.005	0 %100
35	M63	X	-.006	0 %100
36	M65	X	-.001	0 %100



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**Member Distributed Loads (BLC 33 : 315 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
37	M66	X	-.002	0 %100
38	M68	X	-.001	0 %100
39	M69	X	-.005	0 %100
40	MP-1	X	-.002	0 %100
41	MP-2	X	-.002	0 %100
42	MP-3	X	-.002	0 %100
43	MP-4	X	-.002	0 %100
44	MP-5	X	-.002	0 %100
45	MP-6	X	-.002	0 %100
46	MP-7	X	-.002	0 %100
47	MP-8	X	-.002	0 %100
48	MP-9	X	-.002	0 %100
49	MP-10	X	-.002	0 %100
50	MP-11	X	-.002	0 %100
51	MP-12	X	-.002	0 %100
52	K1	X	-.002	0 %100
53	K2	X	-.002	0 %100
54	K3	X	-.002	0 %100
55	SA-1	X	-.003	0 %100
56	SA-2	X	-.002	0 %100
57	SA-3	X	-.000783	0 %100
58	SR-1	X	-.001	0 %100
59	SR-2	X	-.001	0 %100
60	SR-3	X	-.000393	0 %100
61	AHCP-1	Z	.000554	0 %100
62	AHCP-2	Z	.001	0 %100
63	AHCP-3	Z	.002	0 %100
64	CP-1	Z	.000987	0 %100
65	CP-2	Z	.002	0 %100
66	CP-3	Z	.004	0 %100
67	M71	Z	.004	0 %100
68	M73	Z	.004	0 %100
69	M75	Z	.001	0 %100
70	M77	Z	.001	0 %100
71	M79	Z	.005	0 %100
72	M81	Z	.005	0 %100
73	FF-TH	Z	.001	0 %100
74	SF1-TH	Z	.002	0 %100
75	SF2-TH	Z	.000556	0 %100
76	GSIP-1A	Z	.001	0 %100
77	GSIP-1B	Z	.002	0 %100
78	GSIP-2A	Z	.002	0 %100
79	GSIP-2B	Z	.000556	0 %100
80	GSIP-3A	Z	.000556	0 %100
81	GSIP-3B	Z	.001	0 %100
82	GSI-1A	Z	.000712	0 %100
83	GSI-1B	Z	.000712	0 %100
84	GSI-2A	Z	.002	0 %100
85	GSI-2B	Z	.002	0 %100
86	GSI-3A	Z	.003	0 %100
87	GSI-3B	Z	.003	0 %100
88	M53	Z	.003	0 %100



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**Member Distributed Loads (BLC 33 : 315 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
89	M54	Z	.006	.006 0 %100
90	M56	Z	.003	.003 0 %100
91	M57	Z	.002	.002 0 %100
92	M59	Z	.005	.005 0 %100
93	M60	Z	.005	.005 0 %100
94	M62	Z	.005	.005 0 %100
95	M63	Z	.006	.006 0 %100
96	M65	Z	.001	.001 0 %100
97	M66	Z	.002	.002 0 %100
98	M68	Z	.001	.001 0 %100
99	M69	Z	.005	.005 0 %100
100	MP-1	Z	.002	.002 0 %100
101	MP-2	Z	.002	.002 0 %100
102	MP-3	Z	.002	.002 0 %100
103	MP-4	Z	.002	.002 0 %100
104	MP-5	Z	.002	.002 0 %100
105	MP-6	Z	.002	.002 0 %100
106	MP-7	Z	.002	.002 0 %100
107	MP-8	Z	.002	.002 0 %100
108	MP-9	Z	.002	.002 0 %100
109	MP-10	Z	.002	.002 0 %100
110	MP-11	Z	.002	.002 0 %100
111	MP-12	Z	.002	.002 0 %100
112	K1	Z	.002	.002 0 %100
113	K2	Z	.002	.002 0 %100
114	K3	Z	.002	.002 0 %100
115	SA-1	Z	.003	.003 0 %100
116	SA-2	Z	.002	.002 0 %100
117	SA-3	Z	.000708	.000708 0 %100
118	SR-1	Z	.001	.001 0 %100
119	SR-2	Z	.002	.002 0 %100
120	SR-3	Z	.000464	.000464 0 %100

**Member Distributed Loads (BLC 34 : 330 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
1	AHCP-1	X	0	0 0 %100
2	AHCP-2	X	-.002	-.002 0 %100
3	AHCP-3	X	-.002	-.002 0 %100
4	CP-1	X	0	0 0 %100
5	CP-2	X	-.004	-.004 0 %100
6	CP-3	X	-.004	-.004 0 %100
7	M71	X	-.006	-.006 0 %100
8	M73	X	-.006	-.006 0 %100
9	M75	X	0	0 0 %100
10	M77	X	0	0 0 %100
11	M79	X	-.006	-.006 0 %100
12	M81	X	-.006	-.006 0 %100
13	FF-TH	X	-.002	-.002 0 %100
14	SF1-TH	X	-.002	-.002 0 %100
15	SF2-TH	X	0	0 0 %100
16	GSIP-1A	X	-.002	-.002 0 %100



Company : Tower Engineering Professionals, Inc.  
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**Member Distributed Loads (BLC 34 : 330 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
17	GSIP-1B	X	-.002	-.002 0 %100
18	GSIP-2A	X	-.002	-.002 0 %100
19	GSIP-2B	X	0	0 0 %100
20	GSIP-3A	X	0	0 0 %100
21	GSIP-3B	X	-.002	-.002 0 %100
22	GSI-1A	X	0	0 0 %100
23	GSI-1B	X	0	0 0 %100
24	GSI-2A	X	-.003	-.003 0 %100
25	GSI-2B	X	-.003	-.003 0 %100
26	GSI-3A	X	-.003	-.003 0 %100
27	GSI-3B	X	-.003	-.003 0 %100
28	M53	X	-.003	-.003 0 %100
29	M54	X	-.007	-.007 0 %100
30	M56	X	-.003	-.003 0 %100
31	M57	X	-1.4e-5	-1.4e-5 0 %100
32	M59	X	-.006	-.006 0 %100
33	M60	X	-.007	-.007 0 %100
34	M62	X	-.006	-.006 0 %100
35	M63	X	-.007	-.007 0 %100
36	M65	X	-.003	-.003 0 %100
37	M66	X	-1.4e-5	-1.4e-5 0 %100
38	M68	X	-.003	-.003 0 %100
39	M69	X	-.007	-.007 0 %100
40	MP-1	X	-.002	-.002 0 %100
41	MP-2	X	-.002	-.002 0 %100
42	MP-3	X	-.002	-.002 0 %100
43	MP-4	X	-.002	-.002 0 %100
44	MP-5	X	-.002	-.002 0 %100
45	MP-6	X	-.002	-.002 0 %100
46	MP-7	X	-.002	-.002 0 %100
47	MP-8	X	-.002	-.002 0 %100
48	MP-9	X	-.002	-.002 0 %100
49	MP-10	X	-.002	-.002 0 %100
50	MP-11	X	-.002	-.002 0 %100
51	MP-12	X	-.002	-.002 0 %100
52	K1	X	-.003	-.003 0 %100
53	K2	X	-.003	-.003 0 %100
54	K3	X	-.003	-.003 0 %100
55	SA-1	X	-.004	-.004 0 %100
56	SA-2	X	-.002	-.002 0 %100
57	SA-3	X	-.002	-.002 0 %100
58	SR-1	X	-.002	-.002 0 %100
59	SR-2	X	-.002	-.002 0 %100
60	SR-3	X	0	0 0 %100
61	AHCP-1	Z	0	0 0 %100
62	AHCP-2	Z	.001	.001 0 %100
63	AHCP-3	Z	.001	.001 0 %100
64	CP-1	Z	0	0 0 %100
65	CP-2	Z	.002	.002 0 %100
66	CP-3	Z	.002	.002 0 %100
67	M71	Z	.003	.003 0 %100
68	M73	Z	.003	.003 0 %100



Company : Tower Engineering Professionals, Inc.  
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**Member Distributed Loads (BLC 34 : 330 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)		
69	M75	Z	0	0	%100	
70	M77	Z	0	0	%100	
71	M79	Z	.003	.003	0	%100
72	M81	Z	.003	.003	0	%100
73	FF-TH	Z	.001	.001	0	%100
74	SF1-TH	Z	.001	.001	0	%100
75	SF2-TH	Z	0	0	0	%100
76	GSIP-1A	Z	.001	.001	0	%100
77	GSIP-1B	Z	.001	.001	0	%100
78	GSIP-2A	Z	.001	.001	0	%100
79	GSIP-2B	Z	0	0	0	%100
80	GSIP-3A	Z	0	0	0	%100
81	GSIP-3B	Z	.001	.001	0	%100
82	GSI-1A	Z	0	0	0	%100
83	GSI-1B	Z	0	0	0	%100
84	GSI-2A	Z	.002	.002	0	%100
85	GSI-2B	Z	.002	.002	0	%100
86	GSI-3A	Z	.002	.002	0	%100
87	GSI-3B	Z	.002	.002	0	%100
88	M53	Z	.002	.002	0	%100
89	M54	Z	.004	.004	0	%100
90	M56	Z	.002	.002	0	%100
91	M57	Z	8e-6	8e-6	0	%100
92	M59	Z	.003	.003	0	%100
93	M60	Z	.004	.004	0	%100
94	M62	Z	.003	.003	0	%100
95	M63	Z	.004	.004	0	%100
96	M65	Z	.002	.002	0	%100
97	M66	Z	8e-6	8e-6	0	%100
98	M68	Z	.002	.002	0	%100
99	M69	Z	.004	.004	0	%100
100	MP-1	Z	.001	.001	0	%100
101	MP-2	Z	.001	.001	0	%100
102	MP-3	Z	.001	.001	0	%100
103	MP-4	Z	.001	.001	0	%100
104	MP-5	Z	.001	.001	0	%100
105	MP-6	Z	.001	.001	0	%100
106	MP-7	Z	.001	.001	0	%100
107	MP-8	Z	.001	.001	0	%100
108	MP-9	Z	.001	.001	0	%100
109	MP-10	Z	.001	.001	0	%100
110	MP-11	Z	.001	.001	0	%100
111	MP-12	Z	.001	.001	0	%100
112	K1	Z	.002	.002	0	%100
113	K2	Z	.002	.002	0	%100
114	K3	Z	.002	.002	0	%100
115	SA-1	Z	.002	.002	0	%100
116	SA-2	Z	.001	.001	0	%100
117	SA-3	Z	.000967	.000967	0	%100
118	SR-1	Z	.000989	.000989	0	%100
119	SR-2	Z	.001	.001	0	%100
120	SR-3	Z	0	0	0	%100



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**Member Distributed Loads (BLC 39 : BLC 1 Transient Area Loads)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)		
1	CP-1	Y	-.001	-.001	.34	.553
2	GSIP-1A	Y	-.00017	-.007	.409	1.146
3	GSIP-1A	Y	-.007	-.009	1.146	1.882
4	GSIP-1A	Y	-.009	-.005	1.882	2.618
5	GSIP-1A	Y	-.005	-.004	2.618	3.355
6	GSIP-1A	Y	-.004	-.0007068	3.355	4.091
7	GSIP-1B	Y	-.0007093	-.004	0	.736
8	GSIP-1B	Y	-.004	-.005	.736	1.473
9	GSIP-1B	Y	-.005	-.009	1.473	2.209
10	GSIP-1B	Y	-.009	-.007	2.209	2.946
11	GSIP-1B	Y	-.007	-.00017	2.946	3.682
12	GSI-1A	Y	-.008	-.008	.369	2.395
13	GSI-1B	Y	-.008	-.008	0	2.027
14	SA-1	Y	-.0003559	-.008	1.556	2.282
15	SA-1	Y	-.008	-.017	2.282	3.009
16	SA-1	Y	-.017	-.015	3.009	3.735
17	SA-1	Y	-.015	-.008	3.735	4.461
18	SA-1	Y	-.008	-.001	4.461	5.187
19	CP-2	Y	-.001	-.001	.34	.553
20	GSIP-2A	Y	-.00017	-.007	.409	1.146
21	GSIP-2A	Y	-.007	-.009	1.146	1.882
22	GSIP-2A	Y	-.009	-.005	1.882	2.618
23	GSIP-2A	Y	-.005	-.004	2.618	3.355
24	GSIP-2A	Y	-.004	-.0007068	3.355	4.091
25	GSIP-2B	Y	-.0007093	-.004	0	.736
26	GSIP-2B	Y	-.004	-.005	.736	1.473
27	GSIP-2B	Y	-.005	-.009	1.473	2.209
28	GSIP-2B	Y	-.009	-.007	2.209	2.946
29	GSIP-2B	Y	-.007	-.00017	2.946	3.682
30	GSI-2A	Y	-.008	-.008	.369	2.395
31	GSI-2B	Y	-.008	-.008	0	2.027
32	SA-2	Y	-.0003559	-.008	1.556	2.282
33	SA-2	Y	-.008	-.017	2.282	3.009
34	SA-2	Y	-.017	-.015	3.009	3.735
35	SA-2	Y	-.015	-.008	3.735	4.461
36	SA-2	Y	-.008	-.001	4.461	5.187
37	CP-3	Y	-.001	-.001	.34	.553
38	GSIP-3A	Y	-.00017	-.007	.409	1.146
39	GSIP-3A	Y	-.007	-.009	1.146	1.882
40	GSIP-3A	Y	-.009	-.005	1.882	2.618
41	GSIP-3A	Y	-.005	-.004	2.618	3.355
42	GSIP-3A	Y	-.004	-.0007068	3.355	4.091
43	GSIP-3B	Y	-.0007068	-.004	0	.736
44	GSIP-3B	Y	-.004	-.005	.736	1.473
45	GSIP-3B	Y	-.005	-.009	1.473	2.209
46	GSIP-3B	Y	-.009	-.007	2.209	2.946
47	GSIP-3B	Y	-.007	-.00017	2.946	3.682
48	GSI-3A	Y	-.008	-.008	.369	2.395
49	GSI-3B	Y	-.008	-.008	0	2.027
50	SA-3	Y	-.0003559	-.008	1.556	2.282
51	SA-3	Y	-.008	-.017	2.282	3.009
52	SA-3	Y	-.017	-.015	3.009	3.735



Company : Tower Engineering Professionals, Inc.  
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**Member Distributed Loads (BLC 39 : BLC 1 Transient Area Loads) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
53	SA-3	Y	-0.015	-0.008 3.735 4.461
54	SA-3	Y	-0.008	-0.001 4.461 5.187

**Member Distributed Loads (BLC 40 : BLC 18 Transient Area Loads)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
1	CP-1	Y	-0.005361	.34 .553
2	GSIP-1A	Y	-7.439e-5	-0.003 .409 1.146
3	GSIP-1A	Y	-0.003	-0.004 1.146 1.882
4	GSIP-1A	Y	-0.004	-0.002 1.882 2.618
5	GSIP-1A	Y	-0.002	-0.002 2.618 3.355
6	GSIP-1A	Y	-0.002	-0.003092 3.355 4.091
7	GSIP-1B	Y	-0.003103	-0.002 0 .736
8	GSIP-1B	Y	-0.002	-0.002 .736 1.473
9	GSIP-1B	Y	-0.002	-0.004 1.473 2.209
10	GSIP-1B	Y	-0.004	-0.003 2.209 2.946
11	GSIP-1B	Y	-0.003	-7.439e-5 2.946 3.682
12	GSI-1A	Y	-0.003	-0.003 .369 2.395
13	GSI-1B	Y	-0.003	-0.003 0 2.027
14	SA-1	Y	-0.001557	-0.003 1.556 2.282
15	SA-1	Y	-0.003	-0.007 2.282 3.009
16	SA-1	Y	-0.007	-0.007 3.009 3.735
17	SA-1	Y	-0.007	-0.004 3.735 4.461
18	SA-1	Y	-0.004	-0.004458 4.461 5.187
19	CP-2	Y	-0.005106	-0.005106 .34 .553
20	GSIP-2A	Y	-7.085e-5	-0.003 .409 1.146
21	GSIP-2A	Y	-0.003	-0.004 1.146 1.882
22	GSIP-2A	Y	-0.004	-0.002 1.882 2.618
23	GSIP-2A	Y	-0.002	-0.002 2.618 3.355
24	GSIP-2A	Y	-0.002	-0.002945 3.355 4.091
25	GSIP-2B	Y	-0.002955	-0.002 0 .736
26	GSIP-2B	Y	-0.002	-0.002 .736 1.473
27	GSIP-2B	Y	-0.002	-0.004 1.473 2.209
28	GSIP-2B	Y	-0.004	-0.003 2.209 2.946
29	GSIP-2B	Y	-0.003	-7.085e-5 2.946 3.682
30	GSI-2A	Y	-0.003	-0.003 .369 2.395
31	GSI-2B	Y	-0.003	-0.003 0 2.027
32	SA-2	Y	-0.001483	-0.003 1.556 2.282
33	SA-2	Y	-0.003	-0.007 2.282 3.009
34	SA-2	Y	-0.007	-0.006 3.009 3.735
35	SA-2	Y	-0.006	-0.003 3.735 4.461
36	SA-2	Y	-0.003	-0.004245 4.461 5.187
37	CP-3	Y	-0.005105	-0.005105 .34 .553
38	GSIP-3A	Y	-7.085e-5	-0.003 .409 1.146
39	GSIP-3A	Y	-0.003	-0.004 1.146 1.882
40	GSIP-3A	Y	-0.004	-0.002 1.882 2.618
41	GSIP-3A	Y	-0.002	-0.002 2.618 3.355
42	GSIP-3A	Y	-0.002	-0.002945 3.355 4.091
43	GSIP-3B	Y	-0.002945	-0.002 0 .736
44	GSIP-3B	Y	-0.002	-0.002 .736 1.473
45	GSIP-3B	Y	-0.002	-0.004 1.473 2.209
46	GSIP-3B	Y	-0.004	-0.003 2.209 2.946



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
 Model Name : 302528 - Columbia Central

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**Member Distributed Loads (BLC 40 : BLC 18 Transient Area Loads) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...Start Location(ft,%)	End Location(ft,%)
47	GSIP-3B	Y	-0.003	-7.085e-5 2.946 3.682
48	GSI-3A	Y	-0.003	-0.003 .369 2.395
49	GSI-3B	Y	-0.003	-0.003 0 2.027
50	SA-3	Y	-0.001483	-0.003 1.556 2.282
51	SA-3	Y	-0.003	-0.007 2.282 3.009
52	SA-3	Y	-0.007	-0.006 3.009 3.735
53	SA-3	Y	-0.006	-0.003 3.735 4.461
54	SA-3	Y	-0.003	-0.004239 4.461 5.187

**Member Area Loads (BLC 1 : Dead)**

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	GSIP-1A	GSIP-1B	GSIP-1C	GSIP-1D	Y	Two Way -.012
2	GSIP-2A	GSIP-2B	GSIP-2C	GSIP-2D	Y	Two Way -.012
3	GSIP-3A	GSIP-3B	GSIP-3C	GSIP-3D	Y	Two Way -.012

**Member Area Loads (BLC 18 : Ice Weight)**

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	GSIP-1A	GSIP-1B	GSIP-1C	GSIP-1D	Y	Two Way -.005
2	GSIP-2A	GSIP-2B	GSIP-2C	GSIP-2D	Y	Two Way -.005
3	GSIP-3A	GSIP-3B	GSIP-3C	GSIP-3D	Y	Two Way -.005

**Envelope Joint Reactions**

Joint	X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC	
1	K-1	max	1.182	45	1.669	45	2.047	45	0	66	0	66	
2		min	-1.118	5	-1.169	5	-2.05	5	0	1	0	1	
3	K-2	max	.257	10	1.719	34	.026	6	0	66	0	66	
4		min	-2.437	34	-1.184	10	-0.26	14	0	1	0	1	
5	K-3	max	1.243	56	1.735	56	.253	15	0	66	0	66	
6		min	-1.146	15	-2.08	15	-2.154	56	0	1	0	1	
7	SA-1	max	1.045	4	.827	37	1.84	6	-0.055	9	1.472	33	.601
8		min	-1.924	28	.202	13	-3.359	30	-.868	49	-1.465	9	-.357
9	SA-2	max	3.9	18	.839	42	1.174	6	.603	22	1.454	22	-.302
10		min	-2.145	10	.197	2	-1.176	30	-.441	14	-1.447	14	-.827
11	SA-3	max	1.347	17	.829	47	3.453	23	.674	34	1.348	27	.724
12		min	-2.222	25	.193	7	-1.932	15	.004	10	-1.341	3	-.201
13	Totals:	max	4.372	18	6.834	39	4.344	22					
14		min	-4.372	10	2.718	14	-4.344	14					

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

Member	Shape	Code Check	Loc[ft]	LC	Shear Ch...	Loc...	Dir	LC	phi*	phi*	phi*	phi*	Cb	Egn	
1	SR-2	PIPE 2.0	.431	11.5...	13	.191	1.0...	31	1.4...	32...	1.8...	1.8...	3.421	H1...	
2	SR-1	PIPE 2.0	.430	11.5...	7	.189	1.0...	26	1.4...	32...	1.8...	1.8...	3.366	H1...	
3	SR-3	PIPE 2.0	.427	11.5...	2	.190	1.0...	21	1.4...	32...	1.8...	1.8...	3.427	H1...	
4	MP-6	PIPE 2.0	.425	5.75	23	.077	2.25	30	16...	32...	1.8...	1.8...	1.362	H1...	
5	MP-10	PIPE 2.0	.423	5.75	29	.076	2.25	20	16...	32...	1.8...	1.8...	1.582	H1...	
6	MP-2	PIPE 2.0	.419	5.75	18	.081	2.25	25	16...	32...	1.8...	1.8...	1.482	H1...	
7	AHCP-3	L2.5x2.5x3	.407	0	25	.082	0	y	19	27...	29...	.873	1.9...	1.672	H2...



Company : Tower Engineering Professionals, Inc.  
 Designer : AJW  
 Job Number : TEP No. 94015.534062  
 Model Name : 302528 - Columbia Central

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

Member	Shape	Code Check	Locft	LC	Shear Ch...	Loc...	Dir	LC	phi*	phi*	phi*	phi*	Cb	Eqn	
8	AHCP-2	L2.5x2.5x3	.400	0	20	.086	0	y	30	27...	29...	.873	1.9...	1.817	H2...
9	AHCP-1	L2.5x2.5x3	.386	0	30	.089	0	y	24	27...	29...	.873	1.9...	1.666	H2...
10	M62	PL6x3/8	.382	.167	32	.151	.167	y	22	69...	70...	.554	8.8...	1.345	H1...
11	MP-3	PIPE 2.0	.372	5.75	32	.103	5.75		26	16...	32...	1.8...	1.8...	3.136	H1...
12	M56	PL6x3/8	.357	.167	22	.148	.167	y	27	69...	70...	.554	8.8...	1.345	H1...
13	MP-7	PIPE 2.0	.352	5.75	22	.110	5.75		32	16...	32...	1.8...	1.8...	2.992	H1...
14	MP-11	PIPE 2.0	.349	5.75	26	.106	5.75		21	16...	32...	1.8...	1.8...	4.091	H1...
15	M68	PL6x3/8	.342	.167	26	.154	.167	y	33	69...	70...	.554	8.8...	1.349	H1...
16	M59	PL6x3/8	.313	.167	25	.185	.167	y	26	69...	70...	.554	8.8...	1.342	H1...
17	M53	PL6x3/8	.299	.167	30	.188	.167	y	31	69...	70...	.554	8.8...	1.343	H1...
18	M65	PL6x3/8	.290	.167	19	.185	.167	y	21	69...	70...	.554	8.8...	1.344	H1...
19	MP-1	PIPE 2.0	.255	5.75	23	.155	2.25		26	16...	32...	1.8...	1.8...	4.197	H1...
20	M63	PL6x3/8	.252	0	23	.507	0	y	23	69...	70...	.554	8.8...	1.067	H1...
21	M57	PL6x3/8	.251	0	29	.496	0	y	29	69...	70...	.554	8.8...	1.069	H1...
22	MP-9	PIPE 2.0	.250	5.75	33	.156	2.25		21	16...	32...	1.8...	1.8...	4.389	H1...
23	MP-5	PIPE 2.0	.249	5.75	28	.157	2.25		31	16...	32...	1.8...	1.8...	4.227	H1...
24	M69	PL6x3/8	.246	0	18	.497	0	y	18	69...	70...	.554	8.8...	1.069	H1...
25	MP-4	PIPE 2.0	.228	5.75	31	.120	5.75		25	16...	32...	1.8...	1.8...	4.196	H1...
26	MP-8	PIPE 2.0	.220	5.75	20	.116	5.75		30	16...	32...	1.8...	1.8...	4.565	H1...
27	MP-12	PIPE 2.0	.220	5.75	26	.114	5.75		20	16...	32...	1.8...	1.8...	4.548	H1...
28	CP-3	PL6x1/2	.189	.446	32	.097	.446	y	26	86...	94.5	.984	11...	1.334	H1...
29	M60	PL6x3/8	.181	0	33	.557	0	y	18	69...	70...	.554	8.8...	1.066	H1...
30	M66	PL6x3/8	.180	0	28	.556	0	y	28	69...	70...	.554	8.8...	1.061	H1...
31	M54	PL6x3/8	.175	0	22	.565	0	y	23	69...	70...	.554	8.8...	1.068	H1...
32	CP-1	PL6x1/2	.175	.446	22	.101	.446	y	32	86...	94.5	.984	11...	1.256	H1...
33	CP-2	PL6x1/2	.174	.446	26	.097	.446	y	21	86...	94.5	.984	11...	1.1	H1...
34	SA-1	HSS4X4X4	.162	0	32	.101	0	z	32	97...	106.	.12...	.12...	2.097	H1...
35	SA-2	HSS4X4X4	.159	0	22	.098	0	z	22	97...	106.	.12...	.12...	2.106	H1...
36	GSI-2B	HSS4X4X4	.158	0	34	.068	2.2...	z	20	104.	106.	.12...	.12...	1.697	H1...
37	GSI-3B	HSS4X4X4	.157	0	41	.068	2.2...	z	26	104.	106.	.12...	.12...	1.696	H1...
38	GSI-1B	HSS4X4X4	.154	0	45	.070	2.2...	z	31	104.	106.	.12...	.12...	1.698	H1...
39	SA-3	HSS4X4X4	.150	0	27	.094	0	z	27	97...	106.	.12...	.12...	2.099	H1...
40	GSI-2A	HSS4X4X4	.145	2.395	34	.058	.15	z	32	104.	106.	.12...	.12...	1.68	H1...
41	GSIP-3B	L2x2x3	.145	2.088	25	.007	0	y	34	10...	22...	.542	1.0...	1.259	H2...
42	GSI-1A	HSS4X4X4	.144	2.395	43	.056	.15	z	26	104.	106.	.12...	.12...	1.677	H1...
43	GSI-3A	HSS4X4X4	.142	2.395	39	.055	.15	z	21	104.	106.	.12...	.12...	1.681	H1...
44	GSIP-1B	L2x2x3	.141	2.088	30	.007	0	y	40	10...	22...	.542	1.0...	1.237	H2...
45	GSIP-2B	L2x2x3	.141	2.088	20	.007	0	y	45	10...	22...	.542	1.0...	1.347	H2...
46	GSIP-3A	L2x2x3	.122	2.003	22	.007	4.0...	y	42	10...	22...	.542	1.0...	1.237	H2...
47	GSIP-2A	L2x2x3	.120	2.003	33	.007	4.0...	y	37	10...	22...	.542	1.0...	1.217	H2...
48	GSIP-1A	L2x2x3	.120	2.003	27	.007	4.0...	y	48	10...	22...	.542	1.0...	1.259	H2...
49	SF1-TH	PIPE 3.0	.107	8.464	17	.106	8.4...		31	6.4...	65...	.57...	.57...	2.766	H1...
50	SF2-TH	PIPE 3.0	.107	8.464	6	.105	8.4...		21	6.4...	65...	.57...	.57...	2.755	H1...
51	FF-TH	PIPE 3.0	.102	8.464	11	.105	8.4...		26	6.4...	65...	.57...	.57...	2.717	H1...
52	K3	LL2.5x2.5x3x3	.068	0	56	.002	0	y	39	44...	58...	.39...	2.55	1	H1...
53	K2	LL2.5x2.5x3x3	.067	0	34	.002	4.3...	y	34	44...	58...	.39...	2.55	1	H1...
54	K1	LL2.5x2.5x3x3	.065	0	45	.002	4.3...	y	45	44...	58...	.39...	2.55	1.136	H1...
55	M77	PL6x1/2	.040	0	33	.318	0	y	21	92...	94.5	.984	11...	1.665	H1...
56	M73	PL6x1/2	.039	0	22	.319	0	y	26	92...	94.5	.984	11...	1.673	H1...
57	M81	PL6x1/2	.038	0	27	.326	0	y	31	92...	94.5	.984	11...	1.683	H1...
58	M75	PL6x1/2	.035	0	24	.351	0	y	21	92...	94.5	.984	11...	1.27	H1...
59	M79	PL6x1/2	.034	0	18	.360	0	y	31	92...	94.5	.984	11...	1.296	H1...



Company : Tower Engineering Professionals, Inc.  
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 Model Name : 302528 - Columbia Central

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

Member	Shape	Code Check	Locft	LC	Shear Ch...	Loc...	Dir	LC	phi*	phi*	phi*	phi*	Cb	Eqn	
60	M71	PL6x1/2	.033	0	29	.355	0	y	26	92...	94.5	.984	11...	1.29	H1...

**Envelope None Cold Formed Steel Code Checks**

Member	Shape	Code Check	Locft	LC	Shear Ch...	Loc...	Dir	LC	Pn[k]	Tn[k]	Mnyy[...]	Mnzz[...]	Cb	Cmyy	Cmzz	Eqn
No Data to Print ...																



Code Revisions:	TIA-222-H	IBC 2018
Tower Type:	Monopole	

Wind Inputs:		
Ult. Wind Velocity:	120.0	mph
Live Load Velocity:	30.0	mph
Ice Wind Velocity:	50.0	mph
Base Ice Thickness:	1.00	inches
Mount Centerline:	108.0	ft
Antenna Centerline:	108.0	ft
Exposure Category:	B	
Topo Category:	1	
Risk Category:	II	
Ground Elevation:	632	ft

Wind Calculations:		
$K_{zt}$ :	1.000	Section 2.6.6
$K_d$ :	0.950	
$K_{z-Mount}$ :	1.010	Section 2.6.5.2
$K_{z-Antenna}$ :	1.010	Section 2.6.5.2
$K_{iz}$ :	1.126	Section 2.6.10
Ice Thickness:	1.126	inches - Section 2.6.10

Without Ice - (psf)		With Ice - (psf)	
$(q_z G_h)_{Mount}$ :	34.58	$(q_z G_h)_{Mount}$ :	6.00
$(q_z G_h)_{Antenna}$ :	34.58	$(q_z G_h)_{Antenna}$ :	6.00





302528 - Columbia Central  
 TEP No. 94015.534062  
 Analysis By: AJW 4/29/2021  
 Checked By: - 4/29/2021

Antenna Loads are Calculated in Accordance with TIA-222-H  
 Azimuth is the absolute angle measured clockwise from RISA-3D global X-axis.

MFR	Model	Height (in)	Width (in)	Depth (in)	Wt. (lbs)	Azimuth°	Qty	Shape	Member Label	Distance from start node of the member		
										Location #1 (ft,%)	Location #2 (ft,%)	Location #3 (ft,%)
**ALPHA**												
RFS/CELWAVE	APX16DWW-16DWW-S-E-A20	55.90	13.30	3.10	40.70	350.00	1	Flat	MP-1	2.00	6.00	
ERICSSON	RADIO 4415 B66A	15.00	13.20	5.40	46.00	350.00	1	Flat	MP-1	3.00		
RFS/CELWAVE	APXVAALL24_43-U-NA20	95.90	24.00	8.50	122.80	350.00	1	Flat	MP-2	0.50	7.50	
ERICSSON	RADIO 4449 B71+B85	15.00	13.20	10.50	75.00	80.00	1	Flat	MP-2	3.00		
ERICSSON	RADIO 4424 B25	17.10	14.40	11.30	86.00	80.00	1	Flat	MP-2	3.00		
ERICSSON	AIR6449 B41	33.10	20.60	8.60	104.00	350.00	1	Flat	MP-3	3.00	5.00	
**BETA**												
RFS/CELWAVE	APX16DWW-16DWW-S-E-A20	55.90	13.30	3.10	40.70	120.00	1	Flat	MP-5	2.00	6.00	
ERICSSON	RADIO 4415 B66A	15.00	13.20	5.40	46.00	120.00	1	Flat	MP-5	3.00		
RFS/CELWAVE	APXVAALL24_43-U-NA20	95.90	24.00	8.50	122.80	120.00	1	Flat	MP-6	0.50	7.50	
ERICSSON	RADIO 4449 B71+B85	15.00	13.20	10.50	75.00	210.00	1	Flat	MP-6	3.00		
ERICSSON	RADIO 4424 B25	17.10	14.40	11.30	86.00	210.00	1	Flat	MP-6	3.00		
ERICSSON	AIR6449 B41	33.10	20.60	8.60	104.00	120.00	1	Flat	MP-7	3.00	5.00	
**GAMMA**												
RFS/CELWAVE	APX16DWW-16DWW-S-E-A20	55.90	13.30	3.10	40.70	240.00	1	Flat	MP-9	2.00	6.00	
ERICSSON	RADIO 4415 B66A	15.00	13.20	5.40	46.00	240.00	1	Flat	MP-9	3.00		
RFS/CELWAVE	APXVAALL24_43-U-NA20	95.90	24.00	8.50	122.80	240.00	1	Flat	MP-10	0.50	7.50	
ERICSSON	RADIO 4449 B71+B85	15.00	13.20	10.50	75.00	330.00	1	Flat	MP-10	3.00		
ERICSSON	RADIO 4424 B25	17.10	14.40	11.30	86.00	330.00	1	Flat	MP-10	3.00		
ERICSSON	AIR6449 B41	33.10	20.60	8.60	104.00	240.00	1	Flat	MP-11	3.00	5.00	



Member Forces are Calculated in Accordance with TIA-222-H

Member Name	Wind Proj. (in)	Length (in)	Shape	$\theta$ (°)	Perimeter (in)
AHCP-1	2.500	15.11	Flat	30.00	10.00
AHCP-2	2.500	15.11	Flat	90.00	10.00
AHCP-3	2.500	15.11	Flat	-30.00	10.00
CP-1	6.000	10.71	Flat	30.00	13.00
CP-2	6.000	10.71	Flat	90.00	13.00
CP-3	6.000	10.71	Flat	-30.00	13.00
M71	6.000	3.00	Flat	90.00	13.00
M73	6.000	3.00	Flat	90.00	13.00
M75	6.000	3.00	Flat	30.00	13.00
M77	6.000	3.00	Flat	30.00	13.00
M79	6.000	3.00	Flat	-30.00	13.00
M81	6.000	3.00	Flat	-30.00	13.00
FF-TH	3.500	150.00	Round	90.00	11.00
SF1-TH	3.500	150.00	Round	-30.00	11.00
SF2-TH	3.500	150.00	Round	30.00	11.00
GSIP-1A	2.000	49.09	Flat	90.00	8.00
GSIP-1B	2.000	49.09	Flat	-30.00	8.00
GSIP-2A	2.000	49.09	Flat	-30.00	8.00
GSIP-2B	2.000	49.09	Flat	30.00	8.00
GSIP-3A	2.000	49.09	Flat	30.00	8.00
GSIP-3B	2.000	49.09	Flat	90.00	8.00
GSI-1A	4.000	28.75	Flat	30.00	16.00
GSI-1B	4.000	28.75	Flat	30.00	16.00
GSI-2A	4.000	28.75	Flat	90.00	16.00
GSI-2B	4.000	28.75	Flat	90.00	16.00
GSI-3A	4.000	28.75	Flat	-30.00	16.00
GSI-3B	4.000	28.75	Flat	-30.00	16.00
M53	6.000	4.01	Flat	0.00	12.75
M54	6.000	2.00	Flat	-29.90	12.75
M56	6.000	4.01	Flat	0.00	12.75
M57	6.000	2.00	Flat	29.90	12.75
M59	6.000	4.01	Flat	-60.00	12.75
M60	6.000	2.00	Flat	-89.90	12.75
M62	6.000	4.01	Flat	-60.00	12.75
M63	6.000	2.00	Flat	-30.10	12.75
M65	6.000	4.01	Flat	60.00	12.75
M66	6.000	2.00	Flat	30.10	12.75
M68	6.000	4.01	Flat	60.00	12.75

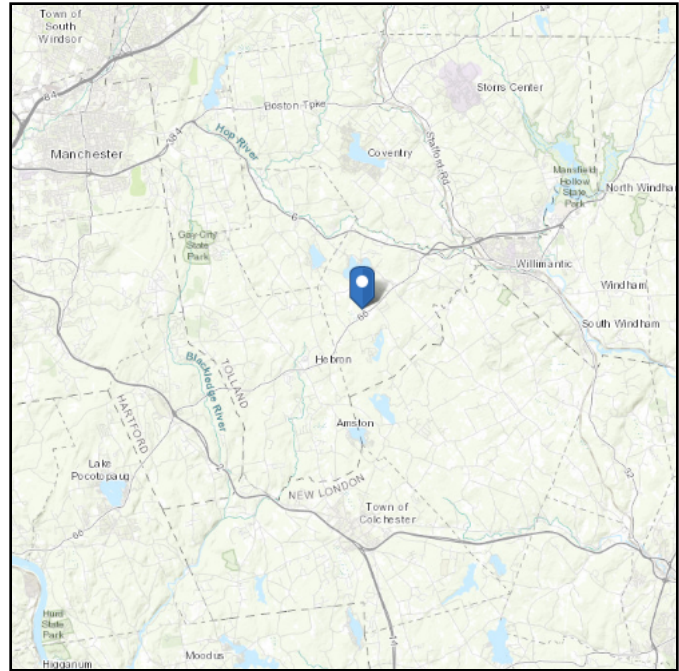
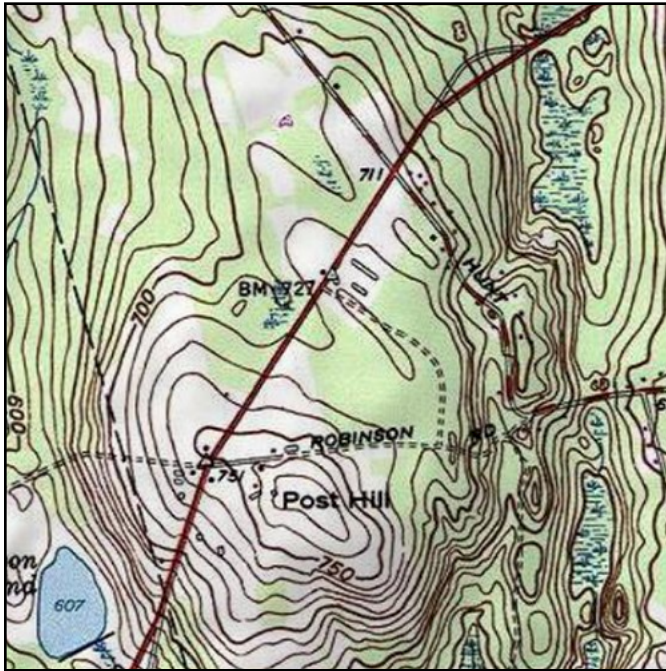
M69	6.000	2.00	Flat	89.90	12.75
MP-1	2.375	96.00	Round		7.46
MP-2	2.375	96.00	Round		7.46
MP-3	2.375	96.00	Round		7.46
MP-4	2.375	96.00	Round		7.46
MP-5	2.375	96.00	Round		7.46
MP-6	2.375	96.00	Round		7.46
MP-7	2.375	96.00	Round		7.46
MP-8	2.375	96.00	Round		7.46
MP-9	2.375	96.00	Round		7.46
MP-10	2.375	96.00	Round		7.46
MP-11	2.375	96.00	Round		7.46
MP-12	2.375	96.00	Round		7.46
K1	2.500	52.78	Flat		15.00
K2	2.500	52.78	Flat		15.00
K3	2.500	52.78	Flat		15.00
SA-1	4.000	62.25	Flat	-60.00	16.00
SA-2	4.000	62.25	Flat	0.00	16.00
SA-3	4.000	62.25	Flat	60.00	16.00
SR-1	2.375	150.00	Round	90.00	7.46
SR-2	2.375	150.00	Round	-30.00	7.46
SR-3	2.375	150.00	Round	30.00	7.46

# ASCE 7 Hazards Report

**Address:**  
No Address at This Location

**Standard:** ASCE/SEI 7-16  
**Risk Category:** II  
**Soil Class:** D - Stiff Soil

**Elevation:** 631.9 ft (NAVD 88)  
**Latitude:** 41.6899  
**Longitude:** -72.3252



## Wind

### Results:

Wind Speed:	120 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	92 Vmph
100-year MRI	99 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2  
Date Accessed: Thu Apr 29 2021

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

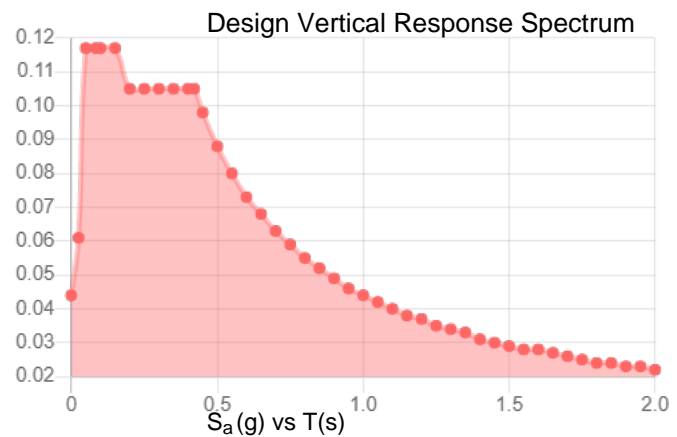
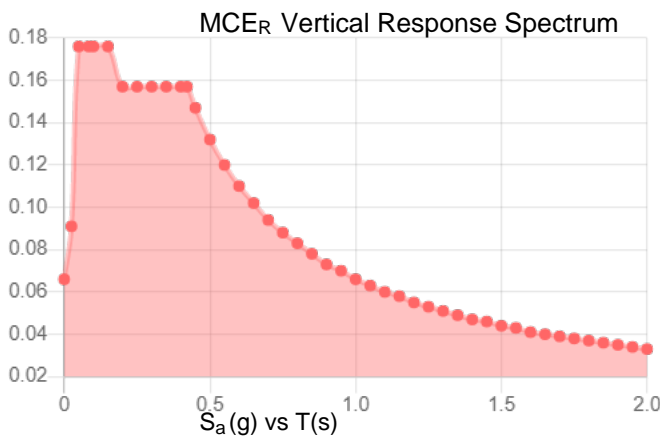
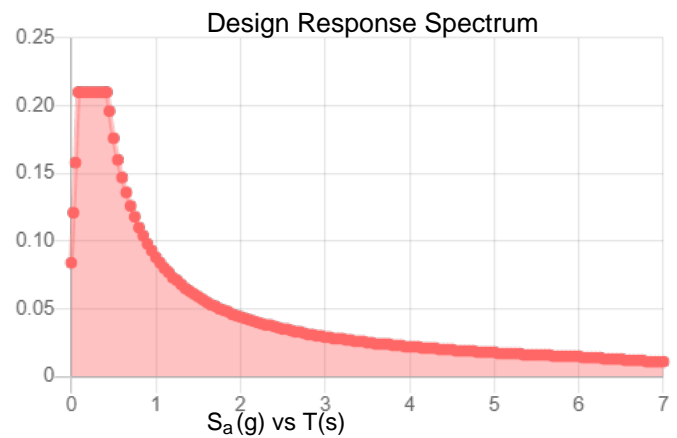
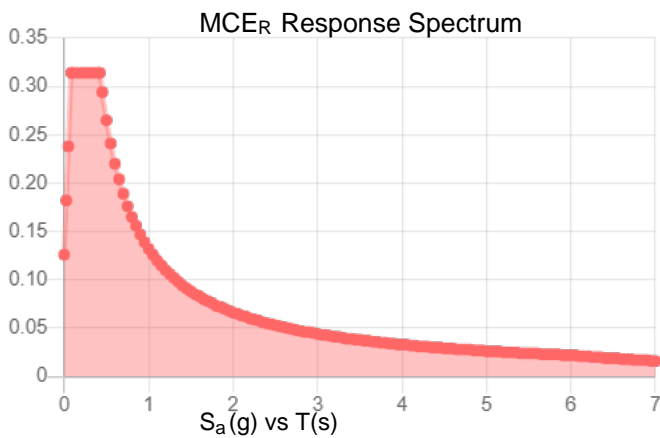
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

**Site Soil Class:** D - Stiff Soil

**Results:**

$S_s$ :	0.196	$S_{D1}$ :	0.088
$S_1$ :	0.055	$T_L$ :	6
$F_a$ :	1.6	PGA :	0.107
$F_v$ :	2.4	PGA <sub>M</sub> :	0.17
$S_{MS}$ :	0.314	$F_{PGA}$ :	1.585
$S_{M1}$ :	0.132	$I_e$ :	1
$S_{DS}$ :	0.21	$C_v$ :	0.7

**Seismic Design Category** B



**Data Accessed:**

Thu Apr 29 2021

**Date Source:**

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

## Ice

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**Results:**

Ice Thickness: 1.00 in.

Concurrent Temperature: 15 F

Gust Speed: 50 mph

**Data Source:** Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

**Date Accessed:** Thu Apr 29 2021

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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302528 - Columbia Central

TEP No. 94015.534062

Analysis By: AJW 4/29/2021

Checked By: - 4/29/2021

## Moment Bolt Group - Support Arm Connection

Code Revisions:	ANSI/TIA-222-H
Bolt Type:	Headed Bolts

### Connection Inputs:

Bolt Size:	0.625	in
# Bolts:	4	
Plate Width:	8.00	in
Plate Height:	8.00	in
Bolt H Gap:	6.00	in
Bolt V Gap:	6.00	in
Plate T:	0.750	in
Slip Member Ø:	-	in
Bolt Grade:	A325N	

### Capacities:

Bolt Capacity=	11.7%	PASS
Plate Capacity=	11.0%	PASS

### Bolt Properties:

$F_{y_{bolt}}$ :	92.0	ksi
$F_{u_{bolt}}$ :	120.0	ksi
r:	4.2	in
J:	72.0	in <sup>4</sup> /in <sup>2</sup>
$A_{bolt}$ :	0.3	in <sup>2</sup>
$A_{bolt, Net Tensile}$ :	0.2	in <sup>2</sup>
Pretension:	19.0	kips

### Member Properties:

Member Shape:	Flat	
Plate $F_y$ :	35.0	ksi
Plate $F_u$ :	60.0	ksi
Member Height:	4.0	in
Member Width:	4.0	in

<b>RAN Template:</b> 67D5A998C 6160 (GSM only)	<b>A&amp;L Template:</b> 67D5998C_1xAIR+1QP+1OP (GSM only)
---	---

### Section 1 - Site Information

**Site ID:** CTHA803A  
**Status:** Draft  
**Version:** 1  
**Project Type:** Sprint Retain  
**Approved:** Not Approved  
**Approved By:** Not Approved  
**Last Modified:** 4/12/2021 7:45:37 PM  
**Last Modified By:** MARIA.ROMASHENKOVA@T-MOBILE.COM

**Site Name:** CTHA803A  
**Site Class:** Monopole  
**Site Type:** Structure Non Building  
**Plan Year:** 2021  
**Market:** CONNECTICUT CT  
**Vendor:** Ericsson  
**Landlord:** Not Specified

**Latitude:** 41.68987900  
**Longitude:** -72.32518300  
**Address:** 330 Route 66  
**City, State:** Columbia, CT  
**Region:** NORTHEAST

<b>RAN Template:</b> 67D5A998C 6160 (GSM only)		<b>AL Template:</b> 67D5998C_1xAIR+1QP+1OP (GSM only)		
<b>Sector Count:</b> 3	<b>Antenna Count:</b> 9	<b>Coax Line Count:</b> 0	<b>TMA Count:</b> 0	<b>RRU Count:</b> 9

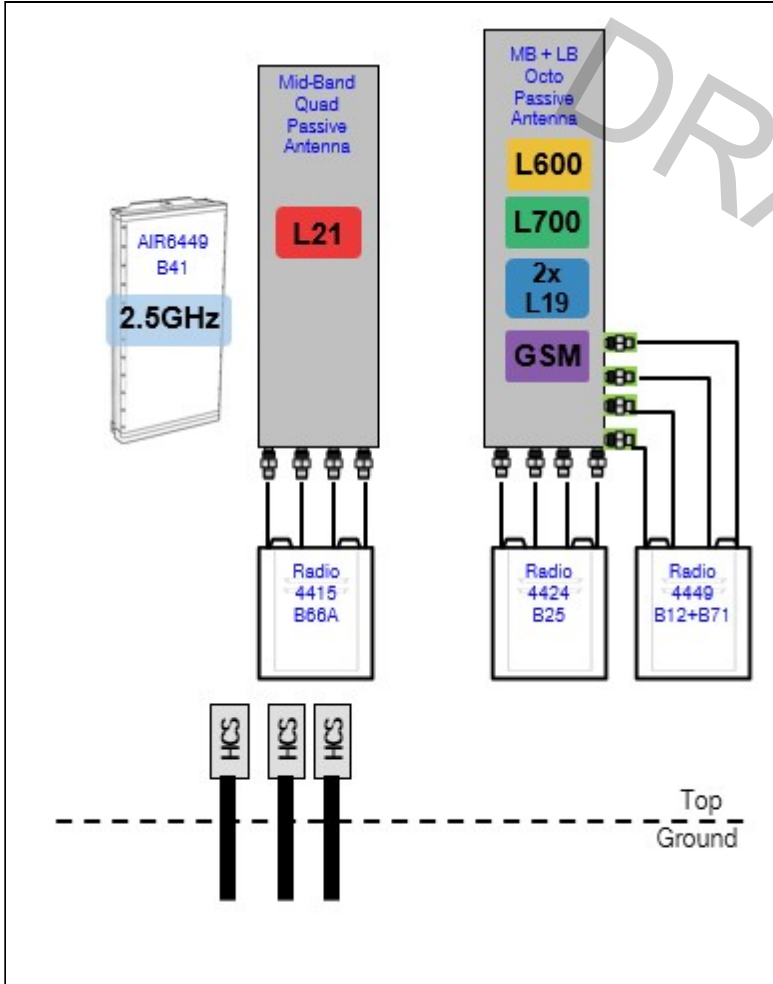
### Section 2 - Existing Template Images

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



Section 3 - Proposed Template Images

67D5A998C\_1xAIR+1xQP+1xOP.jpg



Notes:

Section 4 - Siteplan Images

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

DRAFT

<b>RAN Template:</b> 67D5A998C 6160 (GSM only)	<b>A&amp;L Template:</b> 67D5998C_1xAIR+1QP+1OP (GSM only)
---	---

Section 5 - RAN Equipment

**Existing RAN Equipment**

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

**Proposed RAN Equipment**

Template: 67D5A998C 6160 (GSM only)

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

**RAN Scope of Work:**

CT33XC014  
Existing & planned azimuth: 90/220/340  
Existing power 200A

<b>RAN Template:</b> 67D5A998C 6160 (GSM only)	<b>A&amp;L Template:</b> 67D5998C_1xAIR+1QP+1OP (GSM only)
---	---

Section 6 - A&L Equipment

Existing Template: Custom  
Proposed Template: 67D5998C\_1xAIR+1QP+1OP (GSM only)

Sector 1 (Proposed) view from behind

<b>Coverage Type</b>	A - Outdoor Macro							
<b>Antenna</b>	1		2			3		
<b>Antenna Model</b>	RFS - APX16DWV-16DWV-S-E-A20 (Quad)		RFS - APXVAALL24_43-U-NA20 (Octo)			Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)		
<b>Azimuth</b>	90		90			90		
<b>M. Tilt</b>	0		0			0		
<b>Height</b>	108		108			108		
<b>Ports</b>	P1	P2	P3	P4	P5	P6	P7	P8
<b>Active Tech.</b>	L2100	L2100	L700 L600 N600	L700 L600 N600	L1900 G1900	L1900 G1900	L2500 N2500	L2500 N2500
<b>Dark Tech.</b>								
<b>Restricted Tech.</b>								
<b>Decomm. Tech.</b>								
<b>E. Tilt</b>	2	2	2	2	2	2	2	2
<b>Cables</b>	Coax Jumper (x4)	SHARED Coax Jumper (x4)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)		
<b>TMA's</b>								
<b>Diplexers / Combiners</b>								
<b>Radio</b>	Radio 4415 B66A (At Antenna)	SHARED Radio 4415 B66A (At Antenna)	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)	Radio 4424 B25 (At Antenna)	SHARED Radio 4424 B25 (At Antenna)		
<b>Sector Equipment</b>								

Unconnected Equipment:

Scope of Work:

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

<b>RAN Template:</b> 67D5A998C 6160 (GSM only)	<b>A&amp;L Template:</b> 67D5998C_1xAIR+1QP+1OP (GSM only)
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Sector 2 (Proposed) view from behind									
<b>Coverage Type</b>	A - Outdoor Macro								
<b>Antenna</b>	1		2			3			
<b>Antenna Model</b>	RFS - APX16DWV-16DWV-S-E-A20 (Quad)		RFS - APXVAALL24_43-U-NA20 (Octo)			Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)			
<b>Azimuth</b>	220		220			220			
<b>M. Tilt</b>	0		0			0			
<b>Height</b>	108		108			108			
<b>Ports</b>	P1	P2	P3	P4	P5	P6	P7	P8	
<b>Active Tech.</b>	L2100	L2100	L700 L600 N600	L700 L600 N600	L1900 G1900	L1900 G1900	L2500 N2500	L2500 N2500	
<b>Dark Tech.</b>									
<b>Restricted Tech.</b>									
<b>Decomm. Tech.</b>									
<b>E. Tilt</b>	2	2	2	2	2	2	2	2	
<b>Cables</b>	Coax Jumper (x4)	SHARED Coax Jumper (x4)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)			
<b>TMA's</b>									
<b>Diplexers / Combiners</b>									
<b>Radio</b>	Radio 4415 B66A (At Antenna)	SHARED Radio 4415 B66A (At Antenna)	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)	Radio 4424 B25 (At Antenna)	SHARED Radio 4424 B25 (At Antenna)			
<b>Sector Equipment</b>									

**Unconnected Equipment:**

**Scope of Work:**

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

<b>RAN Template:</b> 67D5A998C 6160 (GSM only)	<b>A&amp;L Template:</b> 67D5998C_1xAIR+1QP+1OP (GSM only)
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Sector 3 (Proposed) view from behind									
Coverage Type	A - Outdoor Macro								
Antenna	1		2			3			
Antenna Model	RFS - APX16DWV-16DWV-S-E-A20 (Quad)		RFS - APXVAALL24_43-U-NA20 (Octo)			Ericsson - AIR6449 B41 (Active Antenna - Massive MIMO)			
Azimuth	340		340			340			
M. Tilt	0		0			0			
Height	108		108			108			
Ports	P1	P2	P3	P4	P5	P6	P7	P8	
Active Tech.	L2100	L2100	L700 L600 N600	L700 L600 N600	L1900 G1900	L1900 G1900	L2500 N2500	L2500 N2500	
Dark Tech.									
Restricted Tech.									
Decomm. Tech.									
E. Tilt	2	2	2	2	2	2	2	2	
Cables	Coax Jumper (x4)	SHARED Coax Jumper (x4)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)			
TMA's									
Diplexers / Combiners									
Radio	Radio 4415 B66A (At Antenna)	SHARED Radio 4415 B66A (At Antenna)	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)	Radio 4424 B25 (At Antenna)	SHARED Radio 4424 B25 (At Antenna)			
Sector Equipment									

Unconnected Equipment:

Scope of Work:

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

<b>RAN Template:</b> 67D5A998C 6160 (GSM only)	<b>A&amp;L Template:</b> 67D5998C_1xAIR+1QP+1OP (GSM only)
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**Section 7 - Power Systems Equipment**

**Existing Power Systems Equipment**

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

**Proposed Power Systems Equipment**

**Enclosure**

1

**Enclosure Type**

Enclosure 6160

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

T-Mobile Existing Facility

Site ID: CTHA803A

330 Middletown Road  
Columbia, Connecticut 06237

**June 23, 2021**

**EBI Project Number: 6221003173**

<b>Site Compliance Summary</b>	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general population allowable limit:	<b>28.18%</b>



June 23, 2021

T-Mobile

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

Emissions Analysis for Site: CTHA803A

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **330 Middletown Road in Columbia, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

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

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

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

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

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

Additional details can be found in FCC OET 65.

## **CALCULATIONS**

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 330 Middletown Road in Columbia, 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 IC and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 60 Watts.
- 8) 1 LTE Broadcast channel (LTE IC and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 20 Watts.
- 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 APX16DWV-16DWV-S-E-A20 for the 2100 MHz channel(s), the RFS APXVAALL24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector A, the RFS APX16DWV-16DWV-S-E-A20 for the 2100 MHz channel(s), the RFS APXVAALL24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector B, the RFS APX16DWV-16DWV-S-E-A20 for the 2100 MHz channel(s), the RFS APXVAALL24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 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 108 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 APX16DWV-16DWV-S-E-A20	Make / Model:	RFS APX16DWV-16DWV-S-E-A20	Make / Model:	RFS APX16DWV-16DWV-S-E-A20
Frequency Bands:	2100 MHz	Frequency Bands:	2100 MHz	Frequency Bands:	2100 MHz
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	108 feet	Height (AGL):	108 feet	Height (AGL):	108 feet
Channel Count:	2	Channel Count:	2	Channel Count:	2
Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts
ERP (W):	4,668.54	ERP (W):	4,668.54	ERP (W):	4,668.54
Antenna AI MPE %:	1.61%	Antenna BI MPE %:	1.61%	Antenna CI MPE %:	1.61%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVAALL24_43-UNA20	Make / Model:	RFS APXVAALL24_43-UNA20	Make / Model:	RFS APXVAALL24_43-UNA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd
Height (AGL):	108 feet	Height (AGL):	108 feet	Height (AGL):	108 feet
Channel Count:	11	Channel Count:	11	Channel Count:	11
Total TX Power (W):	440 Watts	Total TX Power (W):	440 Watts	Total TX Power (W):	440 Watts
ERP (W):	12,569.87	ERP (W):	12,569.87	ERP (W):	12,569.87
Antenna A2 MPE %:	6.32%	Antenna B2 MPE %:	6.32%	Antenna C2 MPE %:	6.32%
Antenna #:	3	Antenna #:	3	Antenna #:	3
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):	108 feet	Height (AGL):	108 feet	Height (AGL):	108 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 A3 MPE %:	12.56%	Antenna B3 MPE %:	12.56%	Antenna C3 MPE %:	12.56%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	20.50%
Verizon	2.33%
Nextel	0.45%
AT&T	4.9%
<b>Site Total MPE % :</b>	<b>28.18%</b>

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	20.50%
T-Mobile Sector B Total:	20.50%
T-Mobile Sector C Total:	20.50%
<b>Site Total MPE % :</b>	<b>28.18%</b>

T-Mobile Maximum MPE Power Values (Sector A)							
T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ( $\mu\text{W}/\text{cm}^2$ )	Frequency (MHz)	Allowable MPE ( $\mu\text{W}/\text{cm}^2$ )	Calculated % MPE
T-Mobile 2100 MHz LTE	2	2334.27	108.0	16.13	2100 MHz LTE	1000	1.61%
T-Mobile 600 MHz LTE	2	591.73	108.0	4.09	600 MHz LTE	400	1.02%
T-Mobile 600 MHz NR	1	1577.94	108.0	5.45	600 MHz NR	400	1.36%
T-Mobile 700 MHz LTE	2	695.22	108.0	4.80	700 MHz LTE	467	1.03%
T-Mobile 1900 MHz GSM	4	1052.26	108.0	14.54	1900 MHz GSM	1000	1.45%
T-Mobile 1900 MHz LTE	2	2104.51	108.0	14.54	1900 MHz LTE	1000	1.45%
T-Mobile 2500 MHz LTE IC & 2C Traffic	1	11044.63	108.0	38.17	2500 MHz LTE IC & 2C Traffic	1000	3.82%
T-Mobile 2500 MHz LTE IC & 2C Broadcast	1	1074.06	108.0	3.71	2500 MHz LTE IC & 2C Broadcast	1000	0.37%
T-Mobile 2500 MHz NR Traffic	1	22089.26	108.0	76.33	2500 MHz NR Traffic	1000	7.63%
T-Mobile 2500 MHz NR Broadcast	1	2148.13	108.0	7.42	2500 MHz NR Broadcast	1000	0.74%
						<b>Total:</b>	<b>20.50%</b>

• 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:	20.50%
Sector B:	20.50%
Sector C:	20.50%
T-Mobile Maximum MPE % (Sector A):	20.50%
Site Total:	28.18%
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite MPE value for this site assuming all carriers present is **28.18%** 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.