Robinson+Cole

KENNETH C. BALDWIN

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Also admitted in Massachusetts
and New York

July 16, 2024

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification**
11 Munn Road (a/k/a 63 Windham Avenue), Colchester, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to a tower and related equipment on the ground, near the base of the tower. Based on prior filings with the Siting Council ("Council"), it is our understanding that the Connecticut State Police ("CSP") filed an "Exempt" filing with the Council in 1985 for the existing tower. My office did reach out to Council staff to obtain a copy of the original CSP approval letter but, given its age, a copy of the CSP approval letter is not available. Cellco's use of the tower was approved by the Council in May of 1990 (Metro Mobile CTS of New London, Inc.). A copy of the Council's approval of Cellco's shared use of the tower is included in Attachment 1.

Cellco now intends to modify its facility by removing three (3) antennas and three (3) remote radio heads ("RRHs") and installing three (3) new antennas and three (3) new RRHs on its existing antenna mounts. A set of project plans showing Cellco's proposed facility modifications and the specifications for Cellco's new antennas and RRHs are included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 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 Colchester's Chief Elected Official and Land Use Officer. A copy of this letter is also being sent to the owner of the Property.

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 tower. Cellco's new antennas and RRHs will be installed at the same height on the tower.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, 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 installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Included in Attachment 3 is a Calculated Radio Frequency Emissions Report demonstrating that the proposed modified facility will comply with the FCC safety standards. The modified facility will be capable of providing Cellco's 5G wireless service.

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

6. According to the attached Structural Analysis Report ("SA") and Antenna Mount Analysis Report ("MA"), the existing tower, tower foundation and antenna mounts, with certain modifications, can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

A copy of the parcel map and Property owner information is included in Attachment 5. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 6.

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Bernie Dennler, First Selectman
Demian Sorrentino, Planning Director
State of Connecticut, Property and Tower Owner
Aleksey Tyurin

ATTACHMENT 1

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

136 Main Street, Suite 401
New Britain, Connecticut 06051
Phone: 827-7682

May 1, 1990

Mr. David S. Malko, P.E.
Manager, Engineering & Regulatory Services
METRO MOBILE
50 Rockland Road
South Norwalk, CT 06854

RE: Metro Mobile CTS of New London, Inc., Notice of Intent to Install Cellular Antennas and Related Equipment on a tower Owned by the State of Connecticut, Department of Public Safety in the Town of Colchester, Connecticut.

Dear Mr. Malko:

At a meeting on April 30, 1990, the Connecticut Siting Council acknowledged your notice of intent to install cellular antennas and related equipment on an existing tower facility owned by the State of Connecticut, Department of Public Safety, in Colchester, Connecticut, pursuant to Section 16-50j-73 of the Regulations of State Agencies (RSA).

The proposed modifications are to be implemented as specified in your notices dated April 16 and 30, 1990. As proposed, the modifications are in compliance with the exception criteria specified in RSA 16-50j-72 as changes to an existing facility site that do not increase the tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary 6 decibels, and add radio frequency sending or receiving capability which increases the total radio frequency electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to Section 22a-162 of the Connecticut General Statutes.

The Council is pleased to note that the shared use of an existing tower meets the Council's long-term goal and the public interest to avoid proliferation of additional tower structures.

Please notify the Council upon completion of construction.

Very truly yours,

Gloria Dibble Pond/R

Gloria Dibble Pond
Chairperson

GDP/JMR/bd

4380E

ATTACHMENT 2

verizon

SITE NAME: COLCHESTER CT
MDG NUMBER: 5000246052
FUZE I.D. NUMBER: 16281612

11 MUNN ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

PROJECT NOTES

1. SITE INFORMATION OBTAINED FROM THE FOLLOWING
   - A. PLAN ENTITLED "BSOLTE CARRIER ADD CABLE DRAWINGS" PREPARED BY ON-AIR ENGINEERING, LLC OF COLD SPRING, NY DATED 06/15/2021
   - B. ANTENNA MOUNT ANALYSIS REPORT WITH HARDWARE UPGRADES AND PMI REQUIREMENTS PREPARED BY COLLIERS ENGINEERING & DESIGN, INC OF STAMFORD, CT DATED 12/8/2023
   - C. STRUCTURAL ANALYSIS PREPARED BY CENTEK OF BRANFORD, CT DATED 01/07/2024
   - D. COLLIERS ENGINEERING & DESIGN, CT, P.C. DID NOT VISIT THE SITE TO VERIFY THE EXISTING CONDITIONS. ANY CONFLICT WITH PROPOSED DESIGN MUST BE DISCUSSED WITH CONSTRUCTION MANAGER
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS
10. THE PROPOSED FACILITY WILL COMPLY WITH ALL STATE AND LOCAL STORMWATER ORDINANCES.
11. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE
12. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED)
13. THE FACILITY DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE
14. CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTHS WITH RF ENGINEERING PRIOR TO INSTALLATION
15. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
16. CONTRACTOR MUST FIELD LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION
17. CONSTRUCTION SHALL NOT COMMENCE UNTIL COMPLETION OF A PASSING STRUCTURAL ANALYSIS CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. THE STRUCTURAL ANALYSIS IS TO BE PERFORMED BY OTHERS.
18. CONTRACTOR SHALL CONTACT STATE SPECIFIC ONE CALL SYSTEM THREE WORKING DAYS PRIOR TO ANY EARTH MOVING ACTIVITIES

VICINITY MAP

SOURCE: BING MAPS

CODE COMPLIANCE

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

1. 2022 CONNECTICUT STATE BUILDING CODE, INCORPORATING THE 2021 IBC
2. 2020 NATIONAL ELECTRICAL CODE (NFPA 70)
3. 2020 NFPA 101
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION 360-16
5. AMERICAN CONCRETE INSTITUTE
6. TIA-222-H
7. TIA 607 FOR GROUNDING
8. INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS 81 IEEE C2 LATEST EDITION
9. TELCORDIA GR-1275
10. ANSI T1.311
11. PROPOSED USE: UNMANNED TELECOM FACILITY
12. HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED
13. CONSTRUCTION TYPE: IIB
14. USE GROUP: U

PROJECT INFORMATION

SITE INFORMATION

LATITUDE:	41.592638889° (RFDS)
LONGITUDE:	-72.321169444° (RFDS)
GROUND ELEVATION:	591.52± AMSL
JURISDICTION:	CONNECTICUT SITING COUNCIL

APPLICANT

COMPANY:	VERIZON WIRELESS
ADDRESS:	118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP:	WESTBOROUGH, MA 01581

PROPERTY OWNER

OWNER:	STATE OF CONNECTICUT
ADDRESS:	165 CAPITOL AVENUE
CITY, STATE, ZIP:	HARTFORD CT, 06106

SITE ACQUISITION

COMPANY:	STRUCTURE CONSULTING GROUP
ADDRESS:	49 BRATTLE STREET
CITY, STATE, ZIP:	ARLINGTON, MA 02474

ENGINEERING COMPANY

COMPANY:	COLLIERS ENGINEERING & DESIGN
CONTACT:	PETE ALBANO, PE
PHONE:	(856) 797-0412
E-MAIL:	PETER.ALBANO@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENT

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT #:	10210697
MDG NUMBER:	5000246052
ANALYSIS DATE:	12/8/2023

*** PMI AND REQUIREMENTS ARE EMBEDDED IN MOUNT ANALYSIS REPORT

HARDWARE UPGRADES REQUIRED :	YES

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VZW SMART KIT APPROVED VENDORS

PROJECT DESCRIPTION/ SCOPE OF WORK

THE PROPOSED PROJECT SCOPE INCLUDES MODIFYING TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW.

- REMOVE (3) EXISTING ANTENNAS
- REMOVE (3) EXISTING RRH'S
- INSTALL (3) PROPOSED RRH'S
- INSTALL (3) PROPOSED ANTENNAS
- INSTALL HARDWARE UPGRADES AS REQUIRED
- RETAIN (9) EXISTING ANTENNAS
- RETAIN (6) EXISTING RRH'S
- RETAIN (1) EXISTING OVP
- RETAIN (12) 1-5/8" COAX CABLES
- RETAIN (2) 6x12 HYBRIFLEX CABLES

SHEET INDEX

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REV	DATE	DESCRIPTION	BY	CHK'D
3	07/01/24	ISSUED FOR CONSTRUCTION	MC	PMA
2	12/12/23	REVISED PER CLIENT COMMENTS	MC	PMA
1	12/08/23	REVISED PER CLIENT COMMENTS	MC	PMA
0	06/06/22	ISSUED FOR CONSTRUCTION	MC	PMA
-	06/06/22	ISSUED FOR REVIEW	MC	PMA
0	02/02/22	ISSUED FOR REVIEW	CMP	PMA
A	12/13/21	ISSUED FOR REVIEW	MB	PMA
REV.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY

Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
07/01/2024

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:
COLCHESTER CT
MDG NUMBER: 5000246052
FUZE I.D. NUMBER: 16281612
11 MUNN ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

Colliers Engineering & Design
VERIZON
1599 Hamilton Road
Windsor, CT 06095
Phone: 860.298.1700
www.verizonwireless.com

TITLE SHEET

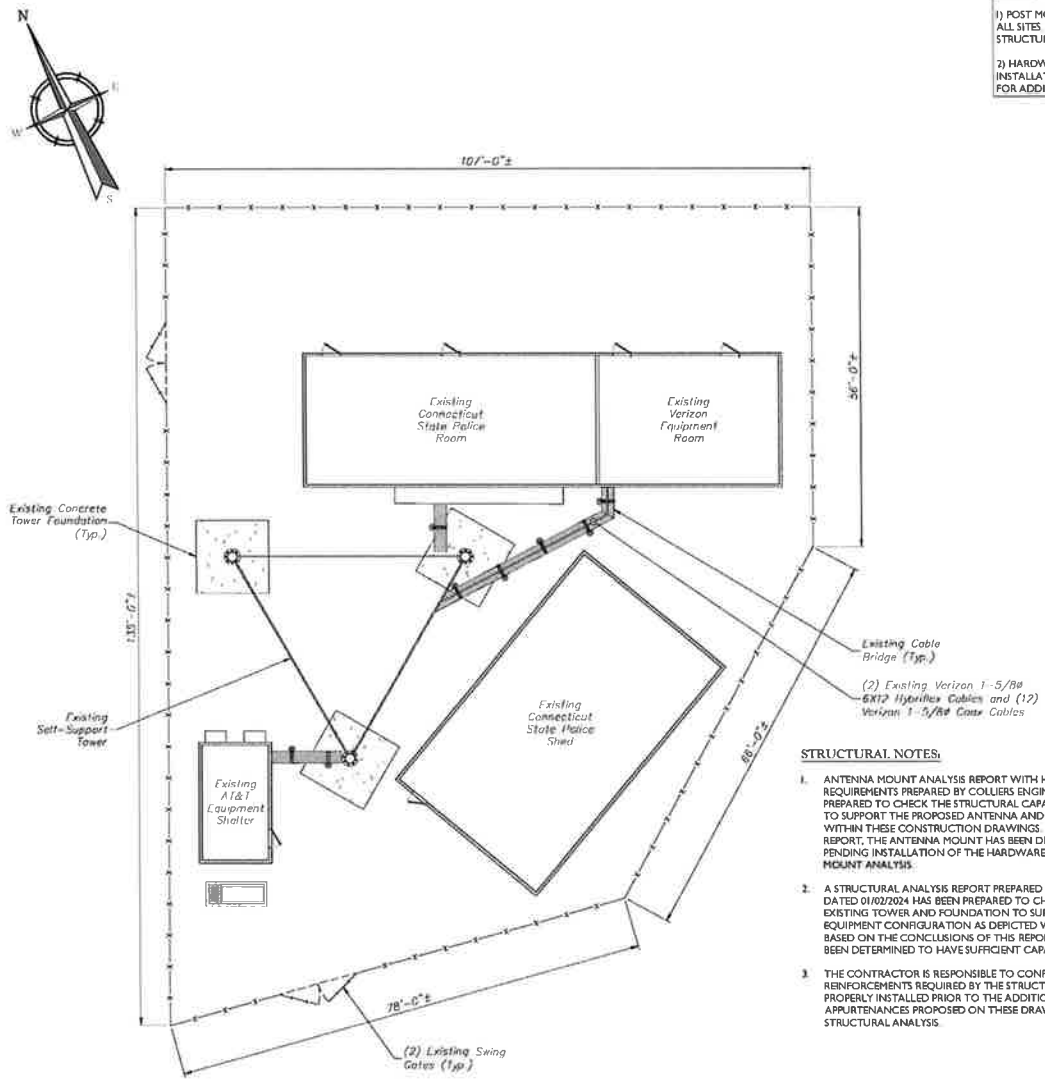
T-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

NOTES:

1) POST MODIFICATION INSPECTION (PMI) REQUIRED ON ALL SITES. REFER TO MOUNT ANALYSIS REFERENCED IN STRUCTURAL NOTE 1 FOR ADDITIONAL DETAILS.

2) HARDWARE UPGRADES ARE REQUIRED BEFORE ANY INSTALLATION CAN OCCUR. PLEASE REFER TO PMI NOTES FOR ADDITIONAL DETAILS.

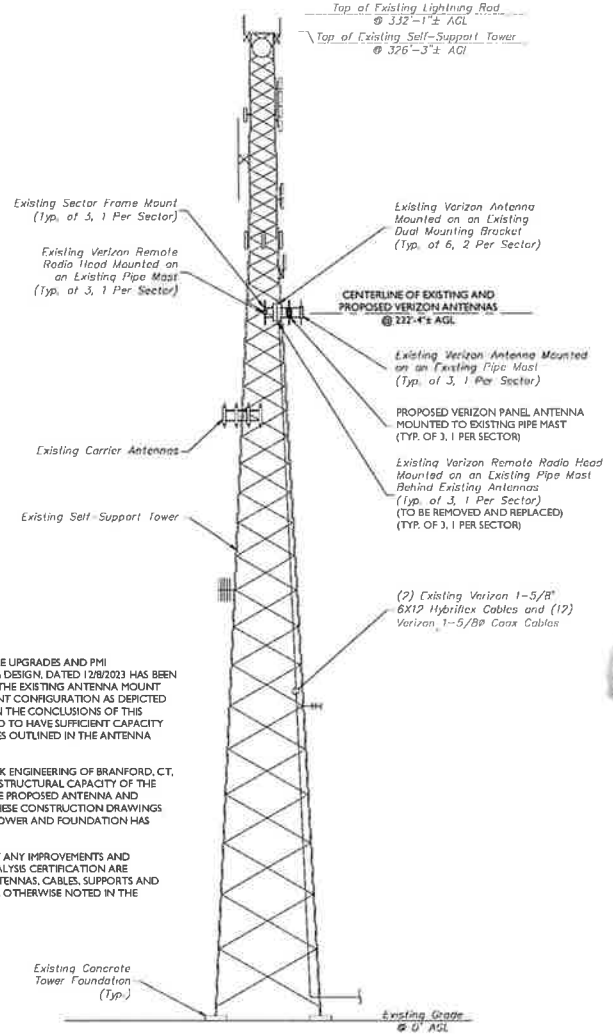


COMPOUND LAYOUT

SCALE : 1" = 10' FOR 22"X34"
(SCALE : 1" = 20' FOR 11"X17")

STRUCTURAL NOTES:

1. ANTENNA MOUNT ANALYSIS REPORT WITH HARDWARE UPGRADES AND PMI REQUIREMENTS PREPARED BY COLLIERS ENGINEERING & DESIGN, DATED 12/8/2023 HAS BEEN PREPARED TO CHECK THE STRUCTURAL CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED ANTENNA AND EQUIPMENT CONFIGURATION AS DEPICTED WITHIN THESE CONSTRUCTION DRAWINGS. BASED ON THE CONCLUSIONS OF THIS REPORT, THE ANTENNA MOUNT HAS BEEN DETERMINED TO HAVE SUFFICIENT CAPACITY PENDING INSTALLATION OF THE HARDWARE UPGRADES OUTLINED IN THE ANTENNA MOUNT ANALYSIS.
2. A STRUCTURAL ANALYSIS REPORT PREPARED BY CENTEK ENGINEERING OF BRANFORD, CT, DATED 01/02/2024 HAS BEEN PREPARED TO CHECK THE STRUCTURAL CAPACITY OF THE EXISTING TOWER AND FOUNDATION TO SUPPORT THE PROPOSED ANTENNA AND EQUIPMENT CONFIGURATION AS DEPICTED WITHIN THESE CONSTRUCTION DRAWINGS BASED ON THE CONCLUSIONS OF THIS REPORT, THE TOWER AND FOUNDATION HAS BEEN DETERMINED TO HAVE SUFFICIENT CAPACITY.
3. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY IMPROVEMENTS AND REINFORCEMENTS REQUIRED BY THE STRUCTURAL ANALYSIS CERTIFICATION ARE PROPERLY INSTALLED PRIOR TO THE ADDITION OF ANTENNAS, CABLES, SUPPORTS AND APPURTENANCES PROPOSED ON THESE DRAWINGS OR OTHERWISE NOTED IN THE STRUCTURAL ANALYSIS.



ELEVATION VIEW

SCALE : 1" = 20' FOR 22"X34"
(SCALE : 1" = 40' FOR 11"X17")

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SCALE	DRAWING
AS SHOWN	3172272466

5	01/09/24	ISSUED FOR CONSTRUCTION	HC	PMA
4	01/02/24	REVISED PER COMMENTS	HC	PMA
3	12/19/23	REVISED PER COMMENTS	HC	PMA
2	06/13/23	ISSUED FOR CONSTRUCTION	HC	PMA
1	05/19/23	ISSUED FOR CONSTRUCTION	HC	PMA
0	03/31/23	ISSUED FOR CONSTRUCTION	DM	PMA
A	[illegible]	ISSUED FOR REVIEW	MB	PMA
REV.	DATE	ISSUE/REVISION	DRAWN BY	CHECKED BY

Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: [illegible]
01/10/2024

SITE NAME:
COLCHESTER CT
MDG NUMBER: 5000246052
FUZE I.D. NUMBER: 16281612

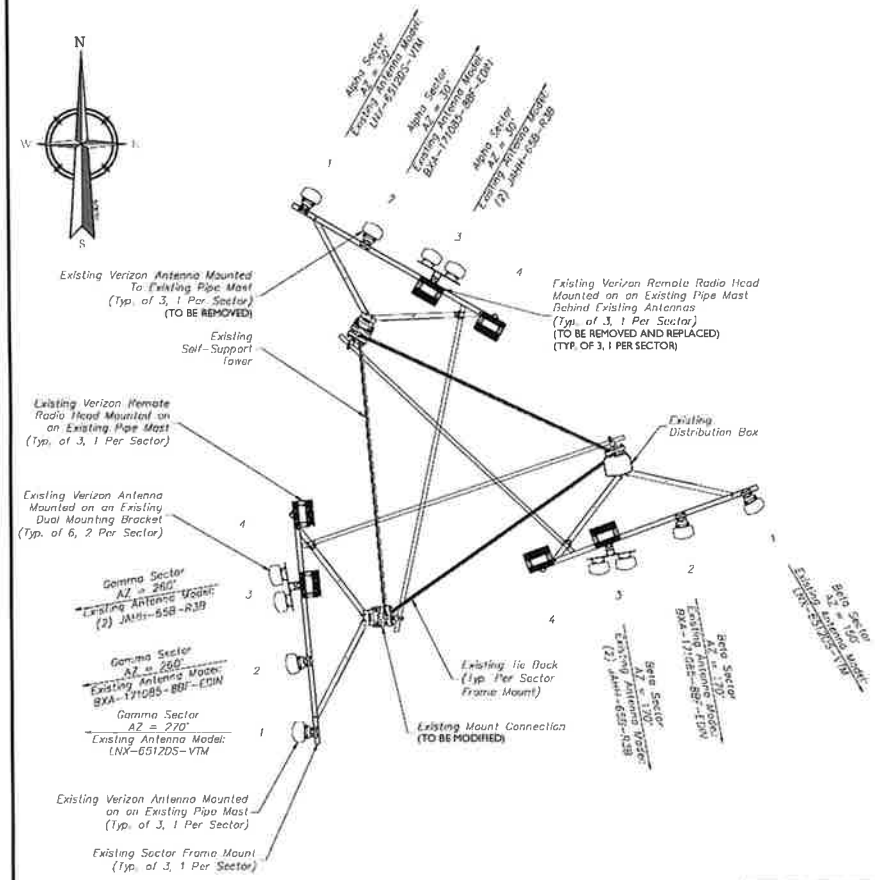
11 MUNN ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

Colliers Engineering & Design
Madison, CT 06443
Phone: 860.399.0050

SHEET TITLE
COMPOUND LAYOUT AND ELEVATION VIEW

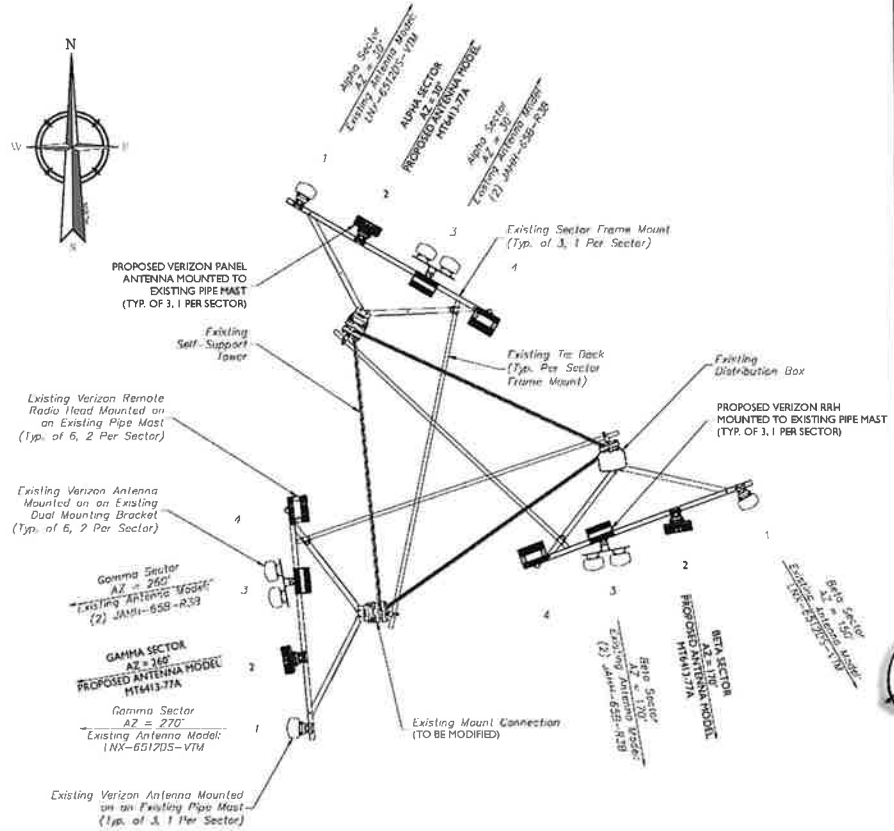
SHEET NUMBER
C-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



EXISTING ANTENNA LAYOUT

NOT TO SCALE



PROPOSED ANTENNA LAYOUT

NOT TO SCALE

NOTES:

1) POST MODIFICATION INSPECTION (PMI) REQUIRED ON ALL SITES. REFER TO MOUNT ANALYSIS REFERENCED IN STRUCTURAL NOTE 1 ON SHEET C-1 FOR ADDITIONAL DETAILS.

2) HARDWARE UPGRADES ARE REQUIRED BEFORE ANY INSTALLATION CAN OCCUR. PLEASE REFER TO PMI NOTES FOR ADDITIONAL DETAILS.

FINAL CABLE INFORMATION

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	CABLE	STATUS	LENGTH *
OVP-12	EXISTING	(2) HYBRIFLEX LOW INDUCTIVE (12) 1 5/8" COAX	EXISTING	338'±

* ESTIMATED LENGTH OF CABLE WAS 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 25% (OF THE TWO PREVIOUS VALUES). LENGTHS REFLECTED IN THE TABLE DEFER TO THE GREATEST LENGTH.

PMI NOTE

Contractor shall install R5 Reinforcement kit on all mount to tower connections.

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PROJECT YOURSELF

ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANYONE PREPARING TO DISTURB THE EARTH'S SURFACE 48 HOURS BEFORE START

FOR STATE SPECIFIC NOTIFICATION NUMBERS VISIT WWW.CALL811.COM

SCALE	JOB NUMBER
AS SHOWN	21777349A

3	07/01/24	REVISED FOR CONSTRUCTION	RC	PMA
2	06/07/24	REVISED PER CLIENT COMMENTS	RC	PMA
1	05/31/24	REVISED PER CLIENT COMMENTS	RC	PMA
0	04/19/24	ISSUED FOR CONSTRUCTION	RC	PMA
-	04/08/24	ISSUED FOR CONSTRUCTION	RC	PMA
0	02/07/24	ISSUED FOR REVIEW	DFP	PMA
A	01/31/24	REVISED PER CLIENT COMMENTS	DFP	PMA
REV	DATE	DESCRIPTION	DRAWN BY	CHK BY

Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 31813
07/10/2024

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:
COLCHESTER CT
MDG NUMBER: 5000246052
FUZE I.D. NUMBER: 16281612

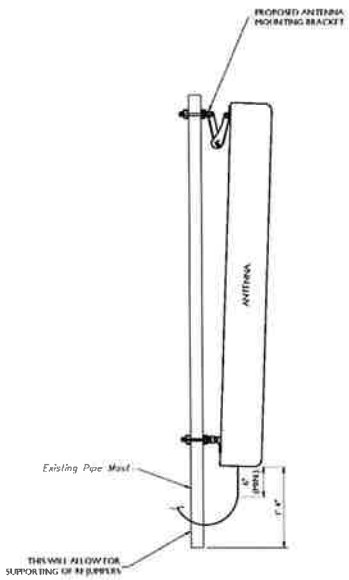
11 MUNN ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

Colliers Engineering & Design
CONTACT INFO
1979 Marcus Blvd
Hauppauge, NY 11788
Phone: 631.549.7500
LICENSED PROFESSIONAL ENGINEER
LICENSED LANDSCAPE ARCHITECTURE
LICENSED ARCHITECTURE

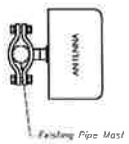
DRAWING TITLE
ANTENNA LAYOUTS

DRAWING NUMBER
C-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

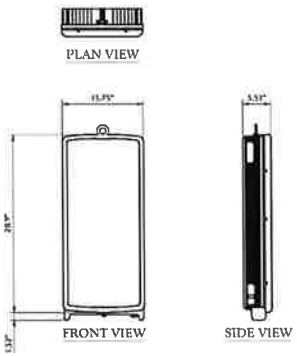


ELEVATION VIEW



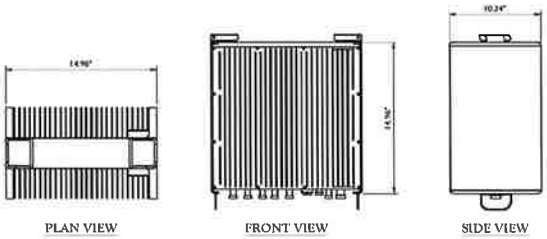
PLAN VIEW

ANTENNA MOUNTING DETAIL
NOT TO SCALE



WEIGHT = 81.57 LBS
VOLUME = 1.9 FT³

SAMSUNG MT6413-77A
NOT TO SCALE



WEIGHT = 78.33 LBS
VOLUME = 1.373 FT³

SAMSUNG RF4461d-13A REMOTE RADIO HEAD
NOT TO SCALE

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www.colliersengineering.com

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verizon

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811 Call Before You Dig

AS SHOWN | 21777249A

Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
07/10/2021

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:
COLCHESTER CT
MDG NUMBER: 5000246052
FUZE I.D. NUMBER: 16281612
11 MUNN ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

Colliers Engineering & Design

CONSTRUCTION DETAILS

A-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Antenna Summary

Added Antenna

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
				5G	Samsung	MT6413-77A	232	233.2	30(A),170(B),26 0(C)	PHYSICAL	3

Removed Antenna

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
					AMPHENOL	BXA-171065-8CF-EDIN	232	222	30(A),150(B),27 0(C)	SPARE	3

Retained Antenna

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
LTE	5G LTE	LTE	LTE		COMMSCOPE/ANDREW	JAHH-65B-R3B	232	233	30(A),170(B),26 0(C)	PHYSICAL	6
					ANDREW	[illegible]	232	222	30(A),150(B),27 0(C)	SPARE	3

Added: 3	Removed: 3	Remain: 6

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
RRU	Tower					5G	Samsung	RF9431-26A			PHYSICAL	3	
RRU	Tower	LTE	LTE 5G				Samsung	RF4401-33A			PHYSICAL	6	

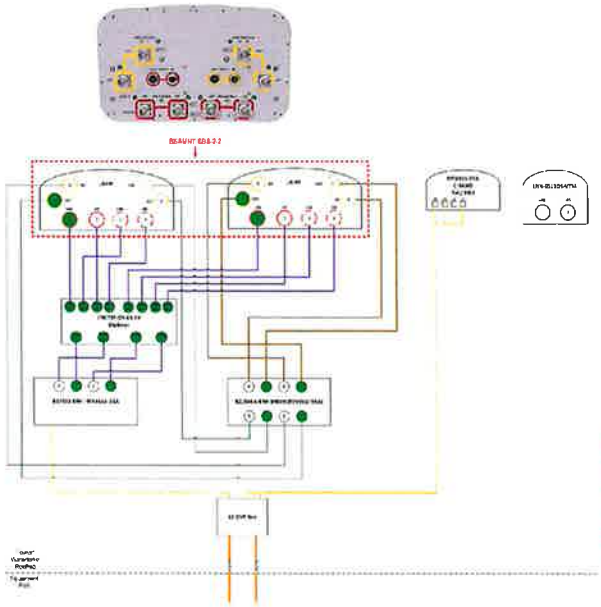
Removed

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
RRU	Tower	LTE	LTE				Samsung	RS/DS RRH (RRU4G (RFV01U-D2A)			PHYSICAL	3	

Retained

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
RRU	Tower			LTE	LTE		Samsung	RS/DS RRH (RRU4G (RFV01U-D1A)			PHYSICAL	3	
Coaxial Cables	Tower						N/A	1-5/8" Coax			SPARE	12	
Diplexer	Tower	LTE	LTE				Commscope	CBCTBT DS-43-2X			PHYSICAL	3	
Hybrid Cable	Tower	LTE	LTE 5G	LTE	LTE	5G	N/A	6x12 Hybrflex			PHYSICAL	2	
Mount	Tower						Commscope	SSAMNT-SBS-2-2			PHYSICAL	1	
OVP Box	Tower	LTE	LTE 5G	LTE	LTE	5G	N/A	12 OVP			PHYSICAL	1	

ANTENNA SCHEDULE



RF PLUMBING DIAGRAM

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5	[illegible]	[illegible]	[illegible]	[illegible]
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	DATE	ISSUE	BY	REV

Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
07/10/2024

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SITE NAME:
COLCHESTER CT
MDG NUMBER: 5000246052
FUZE I.D. NUMBER: 16281612

11 MUNN ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

Colliers Engineering & Design

CONSTRUCTION DETAILS

A-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

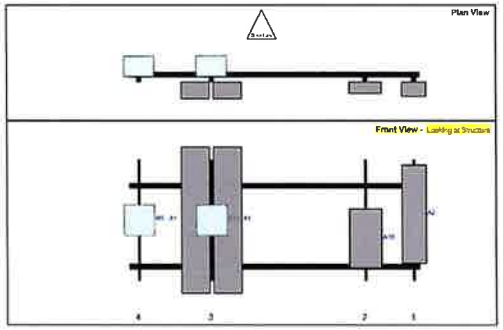
Structure: 5000246052-VZW - COLCHESTER CT

Sector A

Structure Type: Self Support

Mount Elev 219.00

Page 1



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MW	[illegible]	[illegible]	[illegible]	Mounts						Retained	[illegible]

ALPHA SECTOR

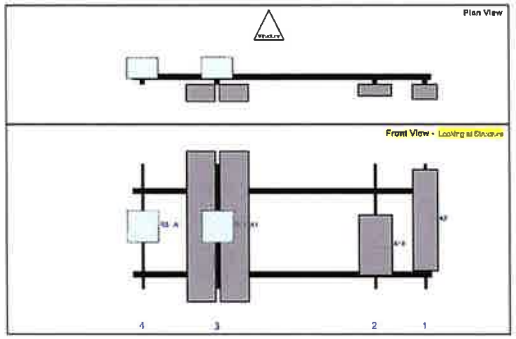
Structure: 5000246052-VZW - COLCHESTER CT

Sector B

Structure Type: Self Support

Mount Elev 219.00

Page 2



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R6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Behind	[illegible]	[illegible]	Retained	[illegible]

BETA SECTOR

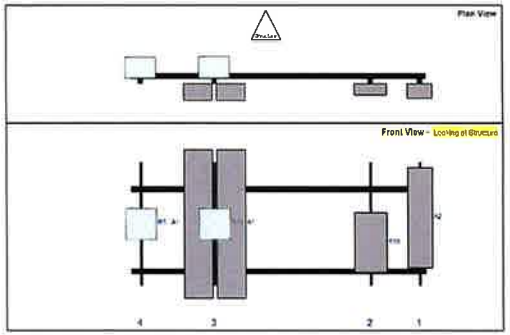
Structure: 5000246052-VZW - COLCHESTER CT

Sector C

Structure Type: Self Support

Mount Elev 219.00

Page 3



Refs	Model	Height (ft)	Width (in)	H Ext (in)	Type #	Plat Pos	Ant Pos	C Ant Frm T	Ant H OF	Status	Validation
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R6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Behind	[illegible]	[illegible]	Retained	[illegible]

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REV	DATE	ISSUE/REVISION	DRAWN BY	CHECKED BY

Peter M. Albano

CONNECTICUT LICENSED PROFESSIONAL ENGINEER

NO. 28,856

07/07/2021

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SITE NAME:

COLCHESTER CT

MDG NUMBER: 5000246052

FUZE I.D. NUMBER: 16281612

11 MUNN ROAD

COLCHESTER, CT 06415

NEW LONDON COUNTY

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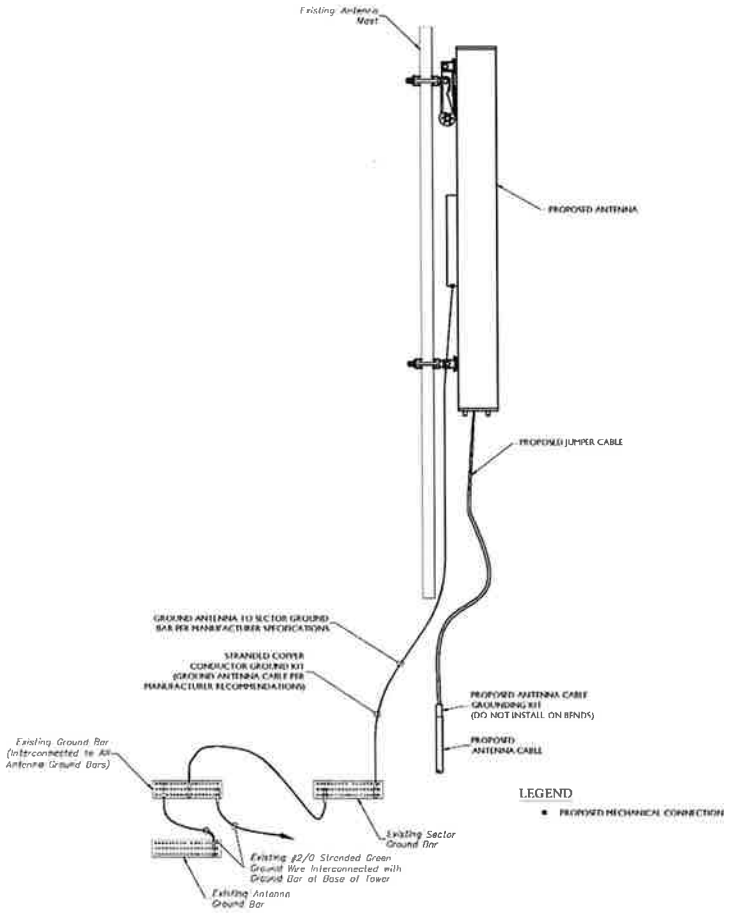
EQUIPMENT PLACEMENT DIAGRAMS

A-3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



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A	12/19/22	[illegible]	WB	PMA
REV	DATE	ISSUE PURPOSE	DRAWN BY	CHECKED BY

Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
07/10/2024

SITE NAME:
COLCHESTER CT
MDG NUMBER: 500024,6052
FUZE I.D. NUMBER: 16281612

11 MUNN ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

Colliers Engineering & Design
Madison, CT 06443
Phone: 860.399.1000

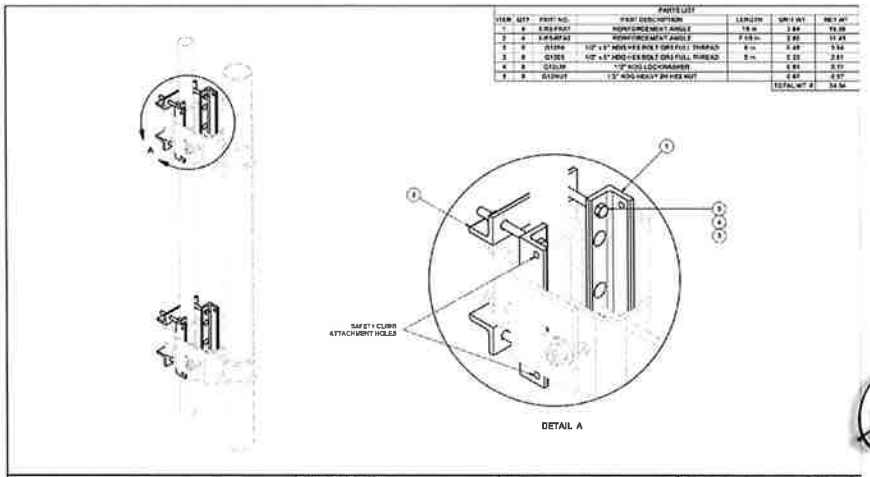
SHEET TITLE: GROUNDING DETAILS

SHEET NUMBER: G-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

POST-MODIFICATION INSPECTION (PMI) REQUIREMENTS

1. PMI REQUIRED FOR ALL SITES, REFER TO VERIZON NSTD-446 SECTION 1.5 AND 2.3 FOR MORE INFORMATION.
2. CONTRACTOR SHALL REFER TO THE MOUNT ANALYSIS BY COLLIERS ENGINEERING & DESIGN, INC DATED 10/27/2023 FOR ADDITIONAL DETAILS.
3. GENERAL CONTRACTOR SHALL PROVIDE THE BELOW DOCUMENTATION TO THE STRUCTURAL ENGINEER OF RECORD VIA EMAIL, DROPBOX, OR OTHER FILE SHARE METHOD. PROVIDE HIGH RESOLUTION PHOTO'S (DO NOT COMPRESS).
4. STRUCTURAL ENGINEER OF RECORD WILL CONDUCT A REVIEW OF THE PROVIDED DOCUMENTS TO PREPARE A PMI REPORT. STRUCTURAL ENGINEER OF RECORD WILL NOTIFY GENERAL CONTRACTOR IF ANY ADDITIONAL DOCUMENTATION IS REQUIRED TO COMPLETE THE PMI.
5. PMI DOCUMENTATION SHALL BE SUFFICIENT TO CONFIRM THE UPGRADE WAS BUILT AS DESIGNED, INCLUDING EQUIPMENT CHANGES AND STRUCTURAL MODIFICATIONS, AND IS IN ADDITION TO ANY OTHER REQUIRED CLOSEOUT PACKAGE DOCUMENTATION.
6. REQUIRED DOCUMENTATION FOR PMI INCLUDES THE FOLLOWING AT A MINIMUM. REFER TO THE MOUNT ANALYSIS FOR POSSIBLE ADDITIONAL INFORMATION. IF STRUCTURAL MODIFICATIONS ARE REQUIRED, REFER TO THE MODIFICATION DRAWINGS FOR POSSIBLE ADDITIONAL REQUIREMENTS.
   a. PROVIDE PRE-AND-POST CONSTRUCTION PHOTOS OF EACH SECTOR FROM THE MOUNT ELEVATION AND THE GROUND. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE PHOTO'S PROVIDED PROVIDE POSITIVE CONFIRMATION THAT THE MODIFICATION/UPGRADE WAS COMPLETED IN ACCORDANCE WITH THESE CONSTRUCTION DRAWINGS AND ANY STRUCTURAL/MOUNT MODIFICATION DRAWINGS. CONTRACTOR SHALL RELAY ANY DATA THAT CAN IMPACT THE PERFORMANCE OF THE MOUNT OR MOUNT MODIFICATION, INCLUDING SAFETY ISSUES, PHOTOS SHALL HAVE A DATE/TIME STAMP IN THE PHOTO. REFER TO THE MOUNT ANALYSIS FOR SCHEDULE OF REQUIRED PHOTOS. PROVIDE PHOTOS OF THE GATE SIGNS AND CARRIER SHELTER TO IDENTIFY THE TOWER OWNER, SITE NAME, SITE NUMBER, ETC.
   b. VERIFICATION OF THE MEMBER CONNECTIONS, BRACING, AND RELEVANT DIMENSIONS.
   c. VERIFICATION OF THE ANTENNA AND OTHER EQUIPMENT CONFIGURATION (PHOTOS OF MODEL NUMBERS/TAGS FOR ALL EQUIPMENT, AS WELL AS THE FEEDLINE CONFIGURATION). TAKE PHOTOS OF THE BACK SIDE OF EACH SECTOR AS WELL AS CLOSE-UPS OF ALL EQUIPMENT. PHOTOS SHOULD CONFIRM THE HORIZONTAL AND VERTICAL POSITIONING OF THE ANTENNAS AND EQUIPMENT AND SHALL HAVE TAPE MEASURES IN THE PHOTOS TO CONFIRM.
   d. FOR TIEBACKS, STRUTS, MOUNT PIPES, PHOTOS TO CONFIRM THE ANGLES AND LOCATIONS OF ATTACHMENT POINT AT BOTH ENDS OF MEMBER, AS WELL AS DIMENSIONS, THICKNESS, AND LENGTHS OF THE MEMBERS. REFER TO THE CHECKLIST IN THE MOUNT ANALYSIS OR MOUNT MOD DRAWINGS FOR ADDITIONAL INFORMATION.
   e. MATERIALS USED (TYPE, STRENGTH, DIMENSIONS, ETC.). PROVIDE BILL OF MATERIAL AND MATERIAL SPEC TO CONFIRM MATERIAL GRADES AND SIZES. PROVIDE DOCUMENTATION FOR GALVANIZATION OF MEMBERS WHETHER HOT-DIPPED OR COLD-GALVANIZED. IF MATERIALS DIFFER FROM THOSE SPECIFIED ON THESE DRAWINGS, PROVIDE DOCUMENTATION THAT THE "EQUIVALENT" MATERIAL HAS THE SAME SPECIFICATIONS.
   f. MOUNT ORIENTATION/AZIMUTH AND ELEVATION. PROVIDE TAPE DROP OF ANTENNA CENTERLINE(S) AND MOUNT ATTACHMENT POINTS TO THE SUPPORTING STRUCTURE. IF THERE ARE MULTIPLE RAD CENTERS, PROVIDE PHOTOS OF ALL ELEVATIONS.
   g. VERIFICATION THAT THE INSTALL HAS NOT CAUSED DAMAGE TO OR UNPLANNED OBSTRUCTION OF THE FOLLOWING:
      - CLIMBING FACILITIES
      - SAFETY CLIMB IF PRESENT, INCLUDING PHOTOS ABOVE AND BELOW THE MOUNT
      - LIGHTING SYSTEMS
      - OTHER INSTALLED SYSTEMS ON THE STRUCTURE
      - CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS SUPPORTED AND NOT ADVERSELY AFFECTED BY THE INSTALLATION OF NEW COMPONENTS. THIS MAY INVOLVE THE INSTALLATION OF WIRE ROPE GUIDES OR OTHER ITEMS TO PROTECT THE WIRE ROPE .
   i. OTHER ITEMS DETERMINED BY THE STRUCTURAL ENGINEER TO ENSURE THE MOUNT WILL PERFORM AS DESIGNED. PHOTOS OF RELEVANT MEASUREMENTS, WITH SUFFICIENT DETAILS TO CONFIRM CONNECTION DETAILS, PLACEMENT OF EQUIPMENT, WALL ANCHOR DETAILS, BALLAST QUANTITIES, STRUCTURAL MODIFICATION ETC. DIAMETERS AND THICKNESS OF BOLTS/THREADED RODS/ANGLES/TUBES ETC. SHALL HAVE PHOTOS CONFIRMING CALIPER MEASUREMENTS.
      - CONFIRMATION THAT ALL HARDWARE WAS PROPERLY INSTALLED, AND EXISTING HARDWARE WAS INSPECTED FOR ANY ISSUES
      - FOR BALLAST SLEDS, DOCUMENTATION OF THE WEIGHT OF BALLAST IN EACH SECTOR
      - FOR WALL ANCHORS, PHOTOS, AND MEASUREMENTS OF OUTSIDE AND INSIDE OF CONNECTIONS, DOCUMENTATIONS OF ADHESIVE USED, SIZE AND LENGTH OF ANCHORS, EFFECTIVE EMBEDMENT DEPTH OF THE ANCHORS, GROUTING OF HOLLOW WALLS, SPACING AND EDGE DISTANCE MEASUREMENTS, AND ANY THROUGH-BOLTS OR BACKING PLATES.
      - FOR STUD WELD CONNECTION, DOCUMENTATION TO CONFIRM SURFACE PREPARATION, STUD WELD SIZE, GRADE, LENGTH, AND SPACING.
      - FOR FABRICATED PARTS, SHOP DRAWINGS TO BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION
      - FOR WELD PARTS, CERTIFIED WELD INSPECTION
      - FOR BOLTED PARTS, BOLT INSTALLATION AND TORQUE
7. CONTRACTOR SHALL PROVIDE, IN ADDITION TO THE ABOVE, AS-BUILT CDS WITH REDLINES IDENTIFYING ANY CHANGES. THE AS-BUILTS SHALL HAVE THE CONTRACTOR'S NAME, PREPARER'S SIGNATURE, AND DATE.
8. IF THE MODIFICATION INSTALLATION WOULD FAIL THE PMI ("FAILED PMI"), THE CONTRACTOR SHALL WORK WITH THE ENGINEER OF RECORD TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:
   a. CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENTAL PMI.
   b. OR, WITH EOR'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT/UPGRADE USING THE AS-BUILT CONDITION
9. NOTE: IF LOADING IS DIFFERENT THAN THAT SHOWN IN THESE CONSTRUCTION DRAWINGS OR STRUCTURAL/ MOUNT MODIFICATION DRAWINGS, CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY FOR RESOLUTION.
10. THE ENGINEERING FIRM PERFORMING AN ANALYSIS SHALL PROVIDE A CONTRACTOR'S PHOTO LOG AND CHECKLIST TO BE COMPLETED BY THE INSTALLING CONTRACTOR. THE CONTRACTOR SHALL THEN PROVIDE POST-INSTALLATION INFORMATION TO THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER SHALL REVIEW THE DOCUMENTS FOR ANY DEFICIENCIES THAT CAN BE DETERMINED FROM THE DESKTOP REVIEW OF THE DATA. THE ENGINEERING FIRM SHALL THEN PROVIDE DOCUMENTATION TO VZW THAT THE SITE IS COMPLETED, AND THE PMI REPORT IS APPROVED.



FOR REFERENCE ONLY

TOLERANCE NOTES

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Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
07/10/2024

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SITE NAME:
COLCHESTER CT
MDG NUMBER: 5000246052
FUZE I.D. NUMBER: 16281612

11 MUNN ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

Colliers Engineering & Design
Madison CT 06443
Phone 860.399.0050

PMI REQUIREMENTS

GN-1

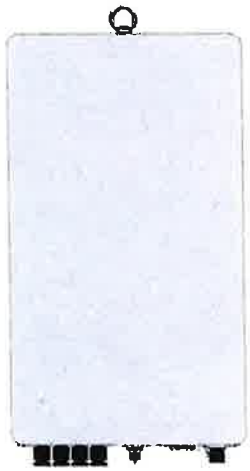
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

C-band 64T64R

SAMSUNG

Gen 2

Gen 2 : Higher conducted power radio with reduced size/volume/weight vs Gen 1 and also SOC embedded for flexibility to support new features



※ Preliminary Design: External appearance and mechanical design can be subject to change

Gen 2. 64T64R C-band MMU Dimensions	
Size (WxHxD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Weight	**26kg (57.3 lb)**

Item	Gen 2 64T64R (MT6413-77A)
Air Technology	NR n77/TDD
Frequency	3700 – 3980 MHz
IBW	200 MHz
OBW	200 MHz
Carrier Bandwidth	20(HW ready)/40/60/80/100 MHz
# of Carriers	2 carriers
Layer	DL : 16L, UL : 16RX (8L)
RF Chain	64T64R
Antenna Configuration	4V16H with 192 AE
EIRP	80.5 dBm @320W (55 dBm + 25.5 dBi)
Conductive Power	320W
Spectrum Analyzer	TX/RX support
RX Sensitivity	Typical -97.8dBm @(1Rx, 18.36MHz with 30kHz,51RBs)
Modulation	DL 256QAM support, (DL 1024QAM with 1~2dB power back-off)
Function Split	DL/UL option 7-2x
Input Power	-48 VDC (-38 VDC to -57 VDC)
Power Consumption	1,287W (100% load, room temp.)
Size (WHD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Volume	**41.1L**
Weight	**26kg (57.3 lb)**
Operating Temperature	-40°C - 55°C (w/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 38.104 FCC 47 CFR 27.53 : < -13dBm/MHz < -40 dBm/MHz @ above 4 GHz <-50 dBm /MHz @ 4,040 ~ 4,050 MHz, <-60 dBm /MHz @ above 4,050 MHz
Optic Interface	15km, 4 ports (25Gbps x 4), SFP28, single mode, Bi-di (Option: Duplex)
Mounting Options	Pole, wall
NB-IoT	Not support
External Alarm	4RX
Fronthaul Interface	eCPRI

700/850 4T4R Macro 320W ORU - New Filter (RF4461d-13A)

SAMSUNG

Specifications

Item	Specification	
Air Interface	LTE, NR(HW resource ready)	
Band	Band13 (700MHz)	Band5 (850MHz)
Frequency	DL: 746~756MHz UL: 777~787MHz	DL: 869~894MHz UL: 824~849MHz
IBW	10MHz	25MHz
OBW	10MHz	25MHz
Carrier Bandwidth	LTE/NR 5*/10MHz	LTE 5/10MHz NR 5/10/15/20MHz
# of carriers	2C*	3C
Total # of carriers	4C + B13 (SDL) 1C	
RF Chain	4T4R/2T4R/2T2R/1T2R 2T2R+2T2R bi-sector	
RF Output Power	Total : 320W	
	4 x 40W or 2 x 60W	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support	
RX Sensitivity	Typ. -104.5dBm @1Rx (25RBs 5MHz)	
Modulation	256QAM support, (1024QAM with 1~2dB power back-off)	
Input Power	-48VDC (-38VDC to -57VDC)	
Power Consumption	1,165 Watt @ 100% RF load, room temperature	
Size (WHD)	380 x 380 x 260 mm (14.96 x 14.96 x 10.23 inch)	
Volume	37.5 L	
Weight (W/o Solar Shield & finger guard)	35.9 kg (79.1 lb)	
Operating Temperature	-40℃ (-40°F) ~ 55℃ (131°F) (Without solar load)	
Cooling	Natural convection	
Unwanted Emission	3GPP 36.104	3GPP 36.104
	FCC 47 CFR 27.53 c), f)	FCC 47 CFR 22.917
	-	-69 dBm/100 kHz per path @ 896 ~901MHz
CPRI Cascade	Not supported	
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP+, single mode, Duplex (Option: Bi-di)	
RET & TMA Interface	AISG 3.0	
Bias-T	4 ports (2 ports per band)	
Mounting Options	Pole, wall	
NB-IoT	2GB+2IB or 4IB	2SA+2GB or 2GB+2IB or 4GB
PIM Cancellation	Support	
# of antenna port	4	
External Alarm	4	
Fronthaul Interface	Opt. 8 CPRI / Opt. 7-2x selectable (not simultaneous support)	
CPRI compression	Not Support	

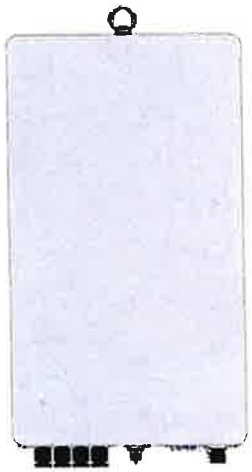
* 5MHz supporting in B13(700MHz) depends on 3GPP std. and UE capability. External filters in interferer and victim sides for Mexican boarder to support 5MHz service need to be considered
** Finger guard is not needed.

C-band 64T64R

SAMSUNG

Gen 2

Gen 2 : Higher conducted power radio with reduced size/volume/weight vs Gen 1 and also SOC embedded for flexibility to support new features



※ Preliminary Design: External appearance and mechanical design can be subject to change

Gen 2. 64T64R C-band MMU Dimensions	
Size (WxHxD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Weight	**26kg (57.3 lb)**

Item	Gen 2 64T64R (MT6413-77A)
Air Technology	NR n77/TDD
Frequency	3700 – 3980 MHz
IBW	200 MHz
OBW	200 MHz
Carrier Bandwidth	20(HW ready)/40/60/80/100 MHz
# of Carriers	2 carriers
Layer	DL : 16L, UL : 16RX (8L)
RF Chain	64T64R
Antenna Configuration	4V16H with 192 AE
EIRP	80.5 dBm @320W (55 dBm + 25.5 dBi)
Conductive Power	320W
Spectrum Analyzer	TX/RX support
RX Sensitivity	Typical -97.8dBm @(1Rx, 18.36MHz with 30kHz,51RBs)
Modulation	DL 256QAM support, (DL 1024QAM with 1~2dB power back-off)
Function Split	DL/UL option 7-2x
Input Power	-48 VDC (-38 VDC to -57 VDC)
Power Consumption	1,287W (100% load, room temp.)
Size (WHD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Volume	**41.1L**
Weight	**26kg (57.3 lb)**
Operating Temperature	-40°C - 55°C (w/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 38.104 FCC 47 CFR 27.53 : < -13dBm/MHz < -40 dBm/MHz @ above 4 GHz <-50 dBm /MHz @ 4,040 ~ 4,050 MHz, <-60 dBm /MHz @ above 4,050 MHz
Optic Interface	15km, 4 ports (25Gbps x 4), SFP28, single mode, Bi-di (Option: Duplex)
Mounting Options	Pole, wall
NB-IoT	Not support
External Alarm	4RX
Fronthaul Interface	eCPRI

700/850 4T4R Macro 320W ORU - New Filter (RF4461d-13A)

SAMSUNG

Specifications

Item	Specification	
Air Interface	LTE, NR(HW resource ready)	
Band	Band13 (700MHz)	Band5 (850MHz)
Frequency	DL: 746~756MHz UL: 777~787MHz	DL: 869~894MHz UL: 824~849MHz
IBW	10MHz	25MHz
OBW	10MHz	25MHz
Carrier Bandwidth	LTE/NR 5*/10MHz	LTE 5/10MHz NR 5/10/15/20MHz
# of carriers	2C*	3C
Total # of carriers	4C + B13 (SDL) 1C	
RF Chain	4T4R/2T4R/2T2R/1T2R 2T2R+2T2R bi-sector	
RF Output Power	Total : 320W 4 x 40W or 2 x 60W	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support	
RX Sensitivity	Typ. -104.5dBm @1Rx (25RBs 5MHz)	
Modulation	256QAM support, (1024QAM with 1~2dB power back-off)	
Input Power	-48VDC (-38VDC to -57VDC)	
Power Consumption	1,165 Watt @ 100% RF load, room temperature	
Size (WHD)	380 x 380 x 260 mm (14.96 x 14.96 x 10.23 inch)	
Volume	37.5 L	
Weight (W/o Solar Shield & finger guard)	35.9 kg (79.1 lb)	
Operating Temperature	-40℃ (-40°F) ~ 55℃ (131°F) (Without solar load)	
Cooling	Natural convection	
Unwanted Emission	3GPP 36.104 FCC 47 CFR 27.53 c), f) -	3GPP 36.104 FCC 47 CFR 22.917 -69 dBm/100 kHz per path @ 896 ~901MHz
CPRI Cascade	Not supported	
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP+, single mode, Duplex (Option: Bi-di)	
RET & TMA Interface	AISG 3.0	
Bias-T	4 ports (2 ports per band)	
Mounting Options	Pole, wall	
NB-IoT	2GB+2IB or 4IB	2SA+2GB or 2GB+2IB or 4GB
PIM Cancellation	Support	
# of antenna port	4	
External Alarm	4	
Fronthaul Interface	Opt. 8 CPRI / Opt. 7-2x selectable (not simultaneous support)	
CPRI compression	Not Support	

* 5MHz supporting in B13(700MHz) depends on 3GPP std. and UE capability. External filters in interferer and victim sides for Mexican boarder to support 5MHz service need to be considered
** Finger guard is not needed.

ATTACHMENT 3

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Auburn, NH 03032
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support@csquaredsystems.com

Calculated Radio Frequency Emissions Report

Colchester

63 Windham Ave, Colchester, CT

July 15, 2024

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List of Figures

List of Tables

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modification of Verizon's antenna arrays mounted at 232' on an existing self-support tower located at 63 Windham Ave in Colchester, CT. The coordinates of the tower are 41° 35' 33.504" N, 72° 19' 16.212" W.

Verizon is proposing the following:

1) Retain nine (6) multi-band antennas, three (3) per sector to support its commercial LTE and 5G network.
2) Retain three (3) multi-band antennas.
3) Install three (3) C-Band Antennas.

This report considers the planned antenna configuration for Verizon[1] as well as existing antenna configuration[2,3] for AT&T and CSP, ECI, FBI, DEHMS, NEU, Eversource, and CTT to derive the resulting % MPE of its proposed modification.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment C of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment C contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

[1] As referenced to Verizon's Radio Frequency Design Sheet updated 2/20/2024.

[2] As referenced to AT&T's Connecticut Siting Council Notice of Exempt Modification, dated 4/30/2019.

[3] As referenced to Verizon's Connecticut Siting Council Notice of Exempt Modification, dated 7/19/2021.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{\text{GRF}^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2}\right) \text{X Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor (GRF) of 1.6

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.

4. Antenna Inventory

Table 1 below outlines Verizon's proposed antenna configuration for the site. The associated data sheets and antenna patterns for these specific antenna models are included in Attachment C.

Operator	Sector / Azimuth	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)
Verizon	Alpha / 30°	700	160	14.5	4509	JAHH-65B-R2B	67	0	6	232
		850	160	15.8	6083		65			
		1900	160	18.4	11069		63			
		2100	240	18.5	16991		65			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	232
	Beta / 170°	700	160	14.9	4509	JAHH-65B-R2B	67	0	6	232
		850	160	15.0	6083		65			
		1900	160	17.9	11069		63			
		2100	240	18.4	16991		65			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	232
	Gamma / 260°	700	160	14.9	4509	JAHH-65B-R2B	67	0	6	232
		850	160	15.0	6083		65			
		1900	160	17.9	11069		63			
		2100	240	18.4	16991		65			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	232

Table 1: Proposed Antenna Inventory[4, 5]

[4] Antenna heights are in referenced to Verizon's Radio Frequency Design Sheet updated 02/20/2024.

[5] Transmit power assumes 0 dB of cable loss.

5. Calculation Results

The calculated power density results are shown in Figure 1 below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within ± 5 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.

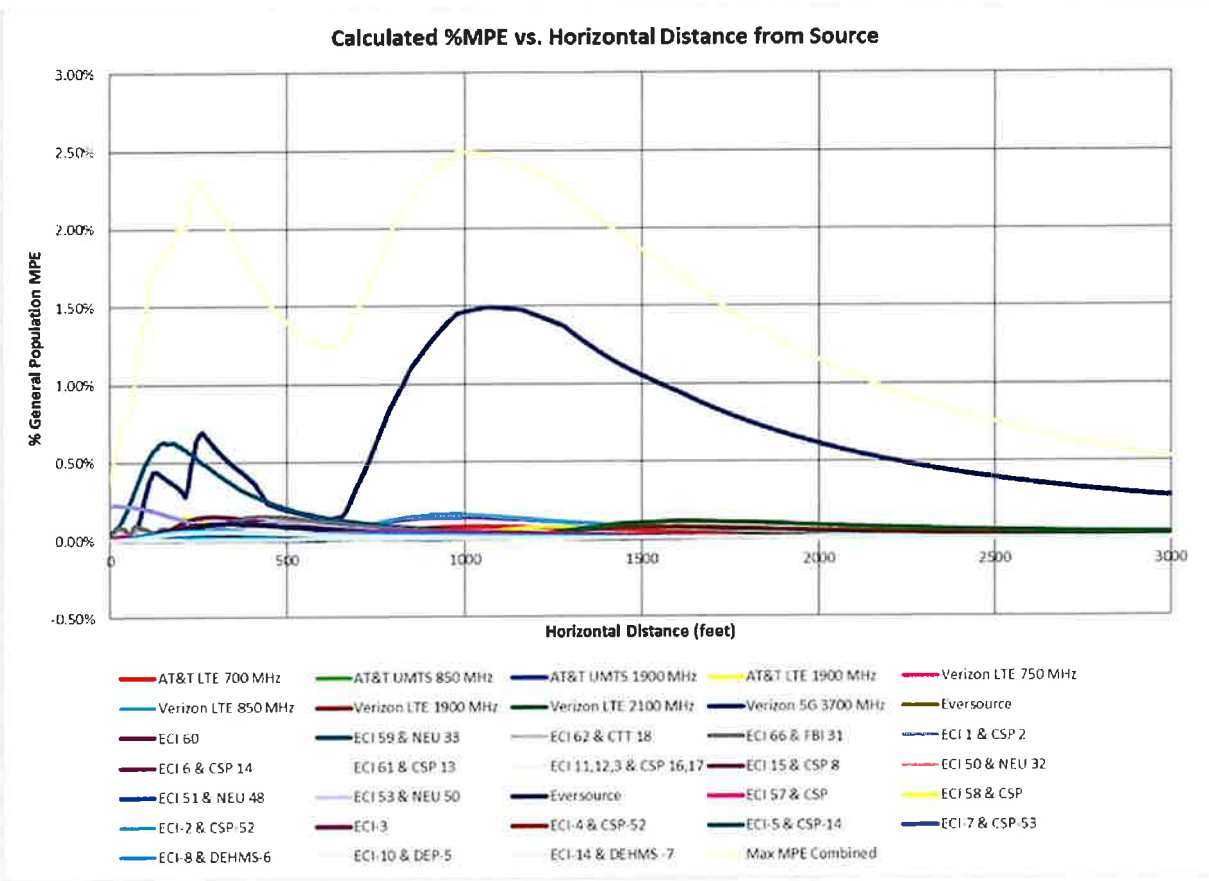


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (2.50% of the General Population limit) is calculated to occur at a horizontal distance of 979 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1500 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 979 feet from the site (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, a six foot height offset was considered in this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the final configuration. The results presented in Figure 1 and Table 2 assume level ground elevation from the base of the tower out to the horizontal distances calculated.

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm^2)	Limit (mW/cm^2)	% MPE
AT&T LTE 1900 MHz	1	160.0	200.0	979	0.000276	1.000	0.03%
AT&T LTE 700 MHz	1	80.0	200.0	979	0.000379	0.467	0.08%
AT&T UMTS 1900 MHz	1	60.0	200.0	979	0.000177	1.000	0.02%
AT&T UMTS 850 MHz	1	60.0	200.0	979	0.000269	0.567	0.05%
ECI 1 & CSP 2	1	100.0	325.0	979	0.000010	0.200	0.01%
ECI 11,12,3 & CSP 16,17	1	100.0	245.0	979	0.000033	0.500	0.01%
ECI 15 & CSP 8	1	100.0	238.0	979	0.000067	0.200	0.03%
ECI 50 & NEU 32	1	100.0	179.0	979	0.000113	0.300	0.04%
ECI 51 & NEU 48	1	100.0	177.0	979	0.000115	0.600	0.02%
ECI 53 & NEU 50	1	100.0	175.0	979	0.000116	0.600	0.02%
ECI 57 & CSP	1	100.0	154.0	979	0.000133	0.300	0.04%
ECI 58 & CSP	1	1.0	154.0	979	0.000000	1.000	0.00%
ECI 59 & NEU 33	1	100.0	139.0	979	0.000117	0.200	0.06%
ECI 6 & CSP 14	1	100.0	286.0	979	0.000028	0.567	0.00%
ECI 60	1	100.0	139.0	979	0.000065	0.200	0.03%
ECI 61 & CSP 13	1	1.0	112.0	979	0.000000	1.000	0.00%
ECI 62 & CTT 18	1	100.0	106.0	979	0.000156	0.300	0.05%
ECI 66 & FBI 31	1	100.0	94.0	979	0.000157	0.300	0.05%
ECI-10 & DEP-5	1	100.0	251.0	979	0.000033	0.500	0.01%
ECI-14 & DEHMS -7	1	100.0	248.0	979	0.000033	0.200	0.02%
ECI-2 & CSP-52	1	100.0	320.0	979	0.000029	0.200	0.01%
ECI-3	1	100.0	318.0	979	0.000012	0.300	0.00%
ECI-4 & CSP-52	1	100.0	300.0	979	0.000021	0.533	0.00%
ECI-5 & CSP-14	1	100.0	290.0	979	0.000057	0.200	0.03%
ECI-7 & CSP-53	1	100.0	283.0	979	0.000028	0.500	0.01%
ECI-8 & DEHMS-6	1	100.0	264.0	979	0.000061	0.200	0.03%
Eversource	1	100.0	163.0	979	0.000063	0.200	0.03%
Eversource	1	100.0	163.0	979	0.000063	0.200	0.03%
Verizon 5G 3700 MHz	1	320.0	232.0	979	0.014525	1.000	1.45%
Verizon LTE 1900 MHz	1	160.0	232.0	979	0.000091	1.000	0.01%
Verizon LTE 2100 MHz	1	240.0	232.0	979	0.000141	1.000	0.01%
Verizon LTE 750 MHz	1	160.0	232.0	979	0.000728	0.500	0.15%
Verizon LTE 850 MHz	1	160.0	232.0	979	0.000914	0.567	0.16%
						Total	2.50%

Table 2: Maximum Percent of General Population Exposure Values[6,7,8,9]

[6] Frequencies listed are representative of the operating band and are not the specific operating frequency.

[7] The total % MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

[8] In the case where antenna pattern data was unavailable, generic antenna pattern was used based on the frequency, bandwidth and gain of the antenna.

[9] Reasonable assumptions for the frequency and power were used in the calculation for absolute worst case %MPE for CSP, ECI, FBI, DEHMS, NEU, Eversource, and CTT.

6. Conclusion

The above analysis verifies that RF exposure levels from the site with Verizon's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be **2.50%** of the FCC limit (General Population/Uncontrolled). This maximum cumulative percent of MPE value is calculated to occur 979 feet away from the site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

Report Prepared By: Ram Acharya
RF Engineer
C Squared Systems, LLC

July 12, 2024
Date

Reviewed/Approved By: Martin Lavin
Senior RF Engineer
C Squared Systems, LLC

July 15, 2024
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2019, IEEE Standard Safety Levels With Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2021, IEEE Recommended Practice for Measurements and Computations of Electric, Magnetic, and Electromagnetic Fields with Respect to Human Exposure to Such Fields, 0 Hz-300 GHz IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure[10]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure[11]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 3: FCC Limits for Maximum Permissible Exposure

[10] Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

[11] General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

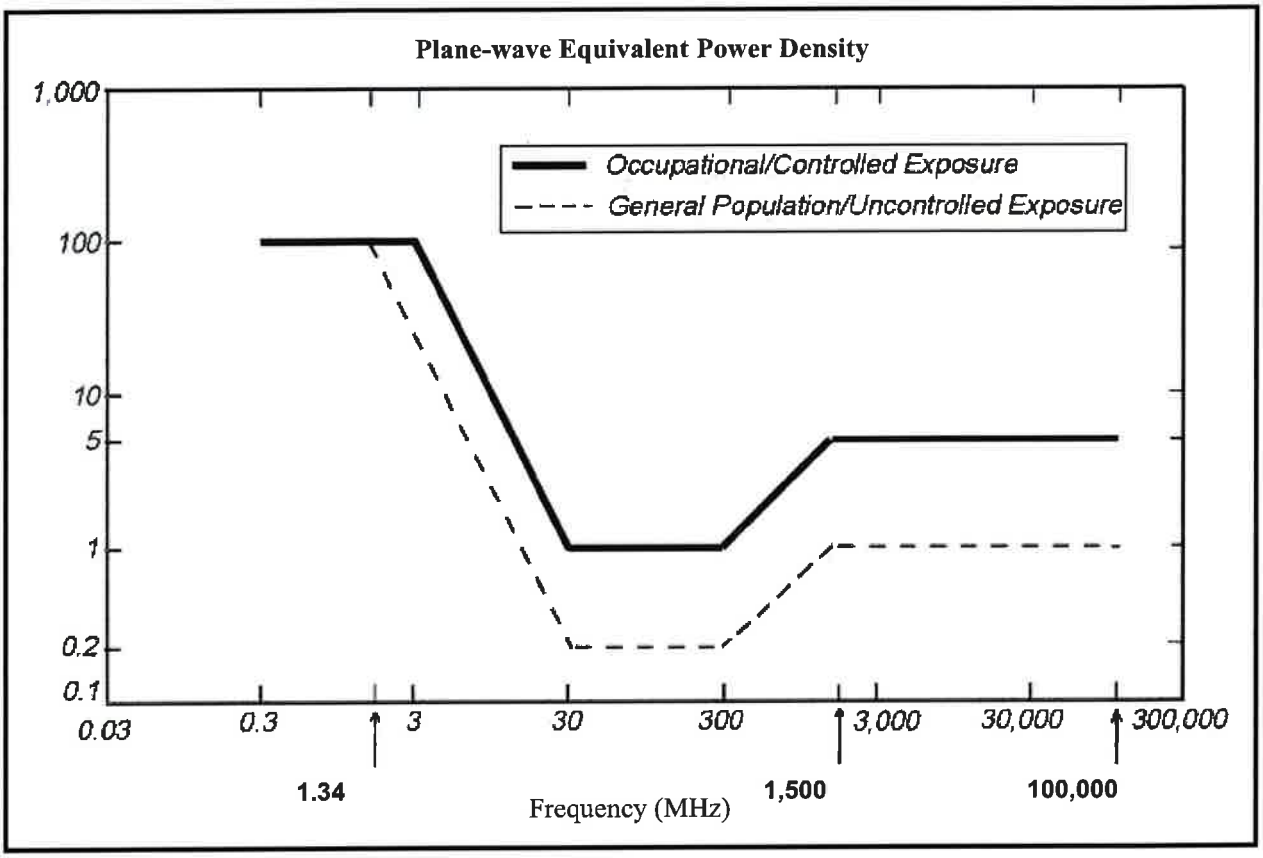
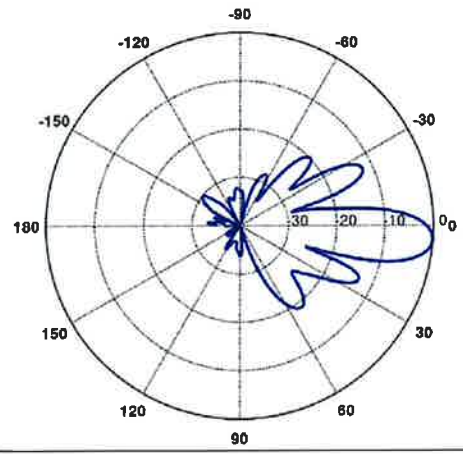


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Verizon Antenna Model Data Sheets and Electrical Patterns

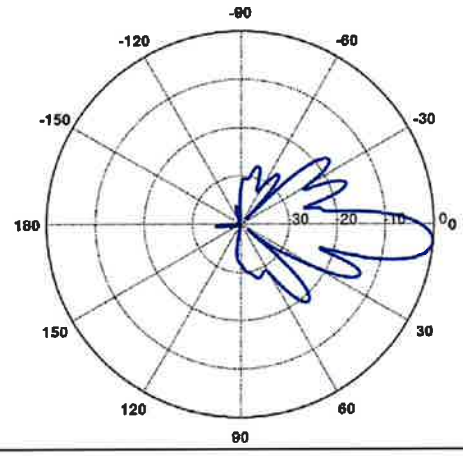
750 MHz

Manufacturer:	COMMSCOPE
Model #:	JAHH-65B-R3B
Frequency Band:	698-787 MHz
Gain:	14.5 dBi
Vertical Beamwidth:	12.4°
Horizontal Beamwidth:	67°
Polarization:	±45°
Dimensions (L x W x D):	71.9" x 13.78" x 7.1"



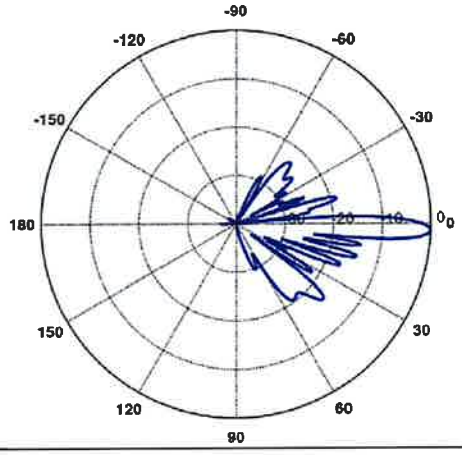
850 MHz

Manufacturer:	COMMSCOPE
Model #:	JAHH-65B-R3B
Frequency Band:	824-894 MHz
Gain:	15.8 dBi
Vertical Beamwidth:	10.5°
Horizontal Beamwidth:	65°
Polarization:	±45°
Dimensions (L x W x D):	71.9" x 13.78" x 7.1"



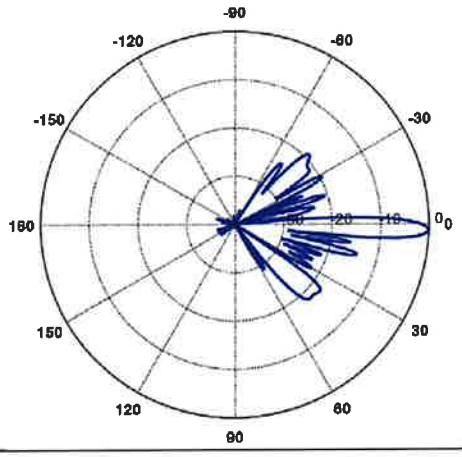
1900 MHz

Manufacturer:	COMMSCOPE
Model #:	JAHH-65B-R3B
Frequency Band:	1850-1990 MHz
Gain:	18.4 dBi
Vertical Beamwidth:	5.2°
Horizontal Beamwidth:	63°
Polarization:	±45°
Dimensions (L x W x D):	71.9" x 13.78" x 7.1"



2100 MHz

Manufacturer:	COMMSCOPE
Model #:	JAHH-65B-R3B
Frequency Band:	1920-2200 MHz
Gain:	18.5 dBi
Vertical Beamwidth:	4.9°
Horizontal Beamwidth:	65°
Polarization:	±45°
Dimensions (L x W x D):	71.9" x 13.78" x 7.1"



ATTACHMENT 4

CENTEK engineering

Centered on Solutions™

Structural Analysis Report

320' Existing Lattice Tower

Verizon Antenna Installation

CSP Tower Ref: #50

11 Munn Road
Colchester, CT

CENTEK Project No. 21007.82

~~Date: March 24, 2022~~
Rev 3: January 2, 2024

Max Stress Ratio = 96.3%

STATE OF CONNECTICUT
TIMOTHY J. LYNN
No. 29038
LICENSED
PROFESSIONAL ENGINEER

Prepared for:

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Table of Contents

Introduction

The purpose of this report is to summarize the results of the non-linear, P-Δ structural analysis of the antenna installation by Verizon on the existing lattice tower located in Colchester, Connecticut.

The host tower is a 320-ft, three legged, lattice tower originally designed and manufactured by Rohn Industries. File no. 43233AE dated May 10, 2001. The tower geometry, structure member sizes and foundation information were taken from a previous structural analysis report prepared by AECOM job no. EVS-010/VZ5-217/EMP-008 60626930 dated May 21, 2020. The tower has been previously reinforced. All previous reinforcements are assumed to be installed. See Primary Assumptions Section below for detailed reinforcement reference reports.

Antenna and appurtenance inventory was taken from the aforementioned structural analysis and information provided by Verizon.

The tower consists of fifteen (15) vertical sections consisting of steel pipe legs conforming to ASTM A572-50 and steel angle/pipe lateral bracing. The vertical tower sections are connected by bolted flange plates with the diagonal and horizontal bracing to pipe legs consisting of bolted connections. The width of the tower face is 6.8-ft at the top and 40.7-ft at the bottom.

Antenna and Appurtenance Summary

The existing and proposed loads considered in the analysis consist of the following:

Antenna Type	Carrier	Mount	Antenna Centerline Elevation	Cable
(1) Lightning Rod	Tower (existing)	Leg Mount	329'	N/A
(1) Lighted Beacon	Tower (existing)	Tower Mount	325'	(1) 1/2" coax cable
(1) PD-128 Omni/Dipole Antenna	ECI-1 CSP-2 (existing)	6' Side Arm Mount	325'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) BA-1012 Omni Antenna	ECI-2 CSP-1 (existing)	6' Side Arm Mount	320'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) ANT450F6 Antenna	ECI-3 (existing)	Pipe Mounted to tower Leg	318'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) SC479-HF1LDF Omni Antenna	ECI-4 CSP-52 (existing)	6' Side Arm Mount	300'	(1) 1-5/8" coax cable (AVA7-50A)
(1) PD-340 Dipole Antenna	ECI-5 CSP-4 (existing)	6' Side Arm Mount	290'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) DB-809T3 Omni Antenna	ECI-6 CSP-14 (existing)	*Shared with ECI-7 Mount*	286'	(1) 1-5/8" coax cable (AVA7-50A)
(1) (inverted) SC479-HF1LDF (D00I-E6085) Omni Antenna	ECI-7 CSP-53 (existing)	6' Side Arm Mount @ 284'	283'	(1) 1-5/8" coax cable (AVA7-50A)

Antenna Type	Carrier	Mount	Antenna Centerline Elevation	Cable
(1) PD-440 Dipole Antenna	ECI-8 DEHMS-6 (existing)	6' Side Arm Mount @ 260'	264'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) SC479-HF1LDF Omni Antenna	ECI-10 DEP-5 (existing)	*Shared with below T-Frame Mount*	251'	(1) 1-5/8" coax cable (AVA7-50A)
(1) PD-1142 Omni Antenna	ECI-14 DEHMS-7 (existing)	6' Side Arm Mount	248'	(1) 7/8" coax cable (LCF78-50JA-A7)
(2) (inverted) SC479-HF1LDF Omni Antennas (1) TMA Unit @ 247' (EL.)	ECI-11,12,13 CSP-16,17 (existing)	(1)T-Arm Frame Mount @ 246'	245'	(2) 1-5/8" coax cable (AVA7-50A) (1) 1/2" coax cable
(1) 531-70 Dipole Antenna	ECI-15 CSP-8 (existing)	6' Side Arm Mount	238'	(1) 7/8" coax cable (LCF78-50JA-A7)
(3) BXA-171085-8BF (3) B5/B13 RRHs	**VZW (To be Removed)**	-	**232'**	-
(3) Samsung MT6413-77A (3) Samsung RF4461d-13A	**VZW (Proposed)**	**See Below Mount**	**232'**	*See Below Cables*
(3) LNX-6512DS-VTM (6) JAHH-65B-R3B (3) B2/B66A RRHs (3) CBC78T-DS-43-2X Diplexers (1) OVP-RVZDC-6627-PF-48 OVP Units	VZW (existing)	(3) V-frames (existing)	232'	(12) 1 5/8" coax cables (existing) (2) HB158-1-08U8-S8J18 Fiber Optic Cable
(2) CCI HPA-65R-BUU-H8 (1A, 1B) (1) CCI HPA-65R-BUU-H6 (1C) (3) RRUS-11 RRH Units (3) RRUS-32 B2 RRH Units (1) DC6-48-60-0-8C Surge Arrestor	AT&T (existing)	(3) SitePro1 STK-U Mount Stiff-Arm Kits added to Existing Mounts (*indicated below*)	200'	*See Below Cables*
(3) Powerwave 7770 Panel Antennas	AT&T (existing)	(3) T-Arm mounts with (1) Stiff-Arm connected to Tower Structure	200'	(6) 1 5/8" coax cables (1) Fiber Optic Cable & (2) DC Cables within 2" Flex Conduit

Antenna Type	Carrier	Mount	Antenna Centerline Elevation	Cable
3) Commscope FFVV-65B-R2 (3) Samsung RF4450t-71A (3) Samsung RF4451d-70A (1) Raycap RDIDC-9181-PF-48	**Dish (proposed)**	**(3) SitePro VFA8-HD V-Frames**	**190'**	**(1) 1-3/4" Hybrid Cable**
(1) 1151-3N Omni Antenna	ECI-50 NEU-32 (existing)	4' Side Arm Mount	179'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) DB586-Y Omni Antenna	ECI-51 NEU-48 (existing)	*Shared with Below Mount*	177'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) TTA Unit	ECI-52 NEU-49 (existing)	*Shared with Below Mount*	176'	(1) ½" coax cable (LDF4-50A)
(1) (inverted) DB586-Y Omni Antenna	ECI-53 NEU-50 (existing)	6' Side Arm Mount @ 176'	175'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) Small Lighted Tower Beacon Light	ECI-54 Tower (existing)	Mounted to Leg	168'	(1) 3/8" coax cable
(1) Small Lighted Tower Beacon Light	ECI-55 Tower (existing)	Mounted to Leg	165'	(1) 3/8" coax cable
(1) Small Lighted Tower Beacon Light	ECI-56 Tower (existing)	Mounted to Leg	164'	(1) 3/8" coax cable
(1) Telewave ANT220F2 Omni Antenna	Eversource (existing)	(1) SitePro1 USF-4U Mount @ Elevation 160'	163'	(1) LCF78-50JA-A7
(1) ANT450F6 Antenna	ECI-57 CSP (existing)	Pipe Mounted to Leg	154'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) 6' Dish with Radome (PAR6-59W-PXA)	ECI-58 CSP (existing)	Pipe Mounted to Leg	154'	(1) EW63 elliptical cable

Antenna Type	Carrier	Mount	Antenna Centerline Elevation	Cable
(1) Telewave ANT220F2 Omni Antenna	Eversource (existing)	(1) SitePro1 USF-4U Mount @ Elevation 160'	163'	(1) LCF78-50JA-A7
(1) PD-156S Yagi Antenna	ECI-60 "DEAD" Carrier (existing)	*Shared with ECI-59 Mount*	139'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) DB-212 Dipole Antenna	ECI-59 NEU-33 (existing)	4' Side Arm Mount	139'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) 3' Ice Shield (for ECI-61 Dish)	ECI-61 CSP (existing)	Pipe Mounted to Leg	117'	N/A
(1) Ice Shield (for ECI-63 Dish)	ECI-63 CSP (existing)	Pipe Mounted to Leg	115'	N/A
(1) 3' Dish with Radome	ECI-61 CSP-13 (existing)	Pipe Mount to Leg	112'	(1) EW90 coax cable
(1) 8' "Drum" Dish Antenna w/ Shroud	ECI-63 CSP (existing)	Pipe mounted to Leg	107'	(1) EW63 Elliptical Cable
(1) PD-458 Omni Antenna	ECI-62 CTT-18 (existing)	4' Side Arm Mount	106'	(1) 7/8" coax cable (LCF78-50JA-A7)
(1) PD-688 Yagi Antenna	ECI-66 FBI-31 (existing)	Pipe Mount to Leg	94'	(1) 7/8" coax cable (LCF78-50JA-A7)

Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All coax cables should be routed as specified in section 3 of this report.
- **All previous reinforcements per the below listed structural analysis and modification reports are assumed to be installed.**
  - **Structural report prepared by AECOM Corp for Verizon project no. VZ5-183 / 36917452 dated 8/6/15.**
  - **Structural report prepared by AECOM Corp for AT&T project no. SAI-095 / 60529362 dated 2/6/17.**
- **The tower geometry, structure member sizes and foundation information were taken from a previous structural analysis report prepared by AECOM job no. EVS-010/VZ5-217/EMP-008 60626930 dated May 21, 2020.**
- **The Verizon antenna mount information was taken from the mount analysis report prepared by Maser Consulting job no. 21777749A dated December 8, 2023.**

Analysis

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower, and the model assumes that the tower members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed with no ice and the applicable wind and ice combination to determine stresses in members as per guidelines of TIA-222-H entitled "Structural Standard for Antenna Support Structures, Antennas and Small Wind Turbine Support Structures", the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Load and Resistance Factor Design (LRFD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix P of the CSBC[1] and the wind speed data available in the TIA-222-H Standard.

Tower Loading

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA-222-H, gravity loads of the tower structure and its components, and the application of 1.0" radial ice on the tower structure and its components.

Load Cases:	Load Case 1; 135 mph (Risk Cat IV) wind speed w/ no ice plus gravity load – used in calculation of tower stresses and rotation.	*[Appendix P of the 2022 CT Building Code]*
	Load Case 2; 50 mph wind speed w/ 1.00" radial ice plus gravity load – used in calculation of tower stresses.	*[Annex B of TIA-222-H]*
	Load Case 3; 90 mph wind speed w/ 0.5" radial ice plus gravity load – used in calculation of tower twist and sway.	*[TIA-222-F used for calculation of tower twist and sway per the requirements of the CSP]*

[1] The 2021 International Building Code as amended by the 2022 Connecticut State Building Code (CSBC).

Tower Capacity

- Calculated stresses **were found to be within allowable limits**.

Tower Section	Elevation	Stress Ratio (percentage of capacity)	Result
Leg (T16)	30.0' - 60.0'	63.6%	**PASS**
Diagonal (T15)	60.0' - 80.0'	96.3%	**PASS**
Horizontal (T16)	30.0' - 60.0'	92.6%	**PASS**

- The tower combined deflection **was found to be within allowable limits**.

Deflection Criteria	Proposed (degrees)	Allowable (degrees)	Result
Sway (Tilt)	0.3731	n/a	**n/a**
Twist	0.2261	n/a	**n/a**
Combined	0.5992	0.75	**PASS**

TIA-222-F standard used for calculation of tower twist and sway per the requirements of the CSP.

NOTE: Per the Department of Energy Services and Public Protection (DESPP) / Connecticut State Police (CSP) directive, required twist and sway for this location is permitted to be measured from the highest service dishes @ 154-ft AGL. The DESPP / CSP reserves the right to update the requirements of tower Twist and Sway for this site and shall be coordinated with the Department prior to any antenna equipment installation.

Foundation and Anchors

The existing foundation consists of three (3) 7.5-ft diameter x 35.5-ft long reinforced concrete caissons. The base of the tower is connected to the foundation by means of (24) 1.00"∅ anchor bolts per leg embedded into the concrete foundation structure.

- The tower reactions developed from the governing Load Case were used in the verification of the foundation and anchor bolts:

Load Effect	Proposed Tower Reactions
Leg Shear	128 kips
Leg Compression	927 kips
Leg Tension	729 kips
Base Moment	30,610 ft-kips
Base Shear	216 kips

- The anchor bolts **were found** to be within allowable limits.

Tower Section	Component	Stress Ratio (percentage of capacity)	Result
Anchor Bolts	Combined Compression and Shear	52.5%	**PASS**

- The foundation was found to be within allowable limits.

Foundation	Design Limit	(percentage of capacity)	Result
(3) Reinforced Concrete Caisson	Uplift	81%	**PASS**
	Bearing	85%	**PASS**

Conclusion

This analysis shows that the subject tower **is adequate** to support the proposed antenna configuration.

The analysis is based, in part, on the information provided to this office by Verizon and the CSP. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:

Timothy J. Lynn, PE
Structural Engineer

STATE OF CONNECTICUT
TIMOTHY J. LYNN
No. 29316
LICENSED
PROFESSIONAL ENGINEER

Standard Conditions for Furnishing of Professional Engineering Services on Existing Structures

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

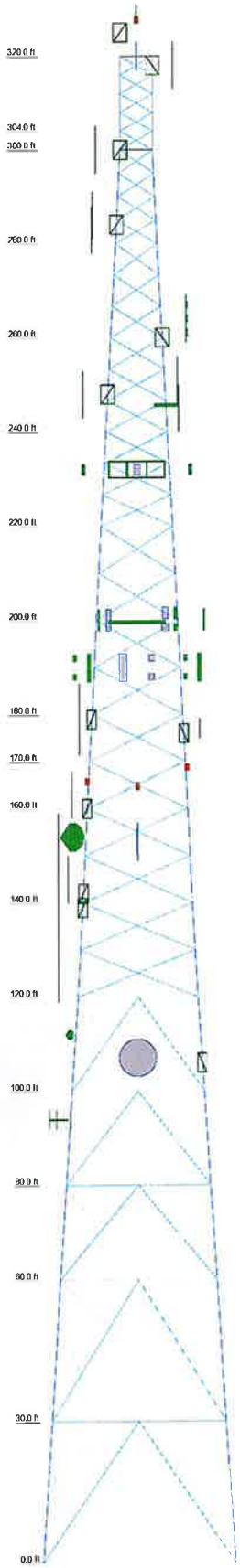
- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the "as new" condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

tnxTower, is an integrated structural analysis and design software package for Designed specifically for the telecommunications industry, tnxTower, formerly RISA Tower, automates much of the tower analysis and design required by the TIA/EIA 222 Standard.

tnxTower Features:

- tnxTower can analyze and design 3- and 4-sided guyed towers, 3- and 4-sided self-supporting towers and either round or tapered ground mounted poles with or without guys.
- The program analyzes towers using the TIA-222-H standard or any of the previous TIA/EIA standards back to RS-222 (1959). Steel design is checked using the AISC ASD or the AISC LRFD specifications.
- Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated.
- Extensive graphics plots include material take-off, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots.
- tnxTower contains unique features such as True Cable behavior, hog rod take-up, foundation stiffness and much more.



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod 5/8x8' (Lightning Rod)	329	RRUS-11 (ATT)	200
Dual Lights (Beacon)	327	7770.00 (ATT)	200
PD126-1 (ECI-1)	325	HPA 65R-BUU-H8 Panel (ATT)	200
6' Side Mount Standoff (ECI-1)	325	RRUS-32 (ATT)	200
BA1012-0 (ECI 2)	320	RRUS 11 (ATT)	200
6' Side Mount Standoff (ECI 2)	320	7770.00 (ATT)	200
ANT450F6 (ECI 3)	318	HPA 65R BUU H6 Panel (ATT)	200
4x4" Pipe Mount (ECI-3)	318	RRUS-32 (ATT)	200
SC479-HF1LDF (ECI-4)	300	RRUS 11 (ATT)	200
6' Side Mount Standoff (ECI 4)	300	DC6-48-60-0-8C Squid / Surge Arrestor (ATT)	200
PD340-1 (ECI 5)	290	STK U Stiffener Side Arm Attachment (ATT)	200
6' Side Mount Standoff (ECI-5)	290	STK U Stiffener Side Arm Attachment (ATT)	200
DB809T3E-XC (ECI-6)	286	STK U Stiffener Side Arm Attachment (ATT)	200
6' Side Mount Standoff (ECI-7)	284	STK U Stiffener Side Arm Attachment (ATT)	200
SC479-HF1LDF(DOOR EQUIP) (Inverted) (ECI 7)	283	STK U Stiffener Side Arm Attachment (ATT)	200
PD440-2 (ECI 8)	264	STK U Stiffener Side Arm Attachment (ATT)	200
6' Side Mount Standoff (ECI-8)	260	FFVV-650 R2 (Dish)	190
SC479-HF1LDF (ECI-10)	251	FFVV-650 R2 (Dish)	190
PD1142-1 (ECI 14)	248	FFVV 650 R2 (Dish)	190
6' Side Mount Standoff (ECI 14)	248	RF4450t 71A (Dish)	190
400-94C-00168-M-11048 T1A (ECI-11)	247	RF4450t-71A (Dish)	190
Satire T-Room (1) (ECI 10,11,12,13)	246	RF4450t 71A (Dish)	190
SC479-HF1LDF(DOOR EQUIP) (Inverted) (ECI 13)	245	RF4451d 70A (Dish)	190
SC479-HF1LDF(DOOR EQUIP) (Inverted) (ECI 12)	245	RF4451d 70A (Dish)	190
6' Side Mount Standoff (ECI 15)	238	RF4451d 70A (Dish)	190
531-70HD Exposed Dipole Antenna (ECI-15)	238	RD1DC-0101-PF-48 (Dish)	190
Valmont VFA-10-U V-Frame (Verizon)	232	SitePro VFA8-HD (Dish)	190
Valmont VFA-10-U V-Frame (Verizon)	232	SitePro VFA8-HD (Dish)	190
Valmont VFA-10-U V-Frame (Verizon)	232	SitePro VFA8-HD (Dish)	190
JAHH-65B-R3B Panel Antenna (Verizon AWS)	232	Pipe4 4' Side Mount Standoff (1) (ECI 50)	179
JAHH-65B-R3B Panel Antenna (Verizon PCS)	232	1151.3 (ECI 50)	179
LNX-6512DS-VTM (Verizon 850)	232	DB586-Y (ECI-51)	177
MT6413-77A (Verizon - Proposed)	232	400-94C-00168-M-11048 T1A (ECI-52)	176
RSAMNT-SBS-2-2 (JAHH Antenna Bracket (for 2)) (Verizon PCS/AWS)	232	Pipe4 4' Side Mount Standoff (1) (ECI-52,52,51)	176
B2/B66A RRH (Verizon RRH)	232	DB586-Y (inverted) (ECI-50)	175
RF4461d-13A (Verizon RRH)	232	L 810 Obstruction Lighting (1) (ECI 54)	168
RVZDC-6627-PF-48 (Verizon)	232	L 810 Obstruction Lighting (1) (ECI 55)	165
JAHH-65B-R3B Panel Antenna (Verizon AWS)	232	L 810 Obstruction Lighting (1) (ECI 56)	164
JAHH-65B-R3B Panel Antenna (Verizon PCS)	232	Tubewire ANT220F2 - Omni Antenna (Evensource)	163
LNX-6512DS-VTM (Verizon 850)	232	Sitepro1 USF-8U Mount Assembly (Ca = 1.4 assumed) (Evensource)	160
MT6413-77A (Verizon - Proposed)	232	5"x4" Pipe Mount (ECI-58a (Dish Support))	154
RSAMNT-SBS-2-2 (JAHH Antenna Bracket (for 2)) (Verizon PCS/AWS)	232	Commscope PWR6-59W-P3/V/A (ECI 58)	154
		5"x4" Pipe Mount (ECI 57)	153
B2/B66A RRH (Verizon RRH)	232	ANT450F6 (ECI 57)	153
RF4461d-13A (Verizon RRH)	232	Tubewire ANT220F2 - Omni Antenna (Evensource)	145
JAHH-65B-R3B Panel Antenna (Verizon AWS)	232	Sitepro1 USF-8U Mount Assembly (Ca = 1.4 assumed) (Evensource)	142
JAHH-65B-R3B Panel Antenna (Verizon PCS)	232		
LNX-6512DS-VTM (Verizon 850)	232	PD1505 (ECI 60)	139
MT6413-77A (Verizon - Proposed)	232	DB212-1 (ECI-59)	139
RSAMNT-SBS-2-2 (JAHH Antenna Bracket (for 2)) (Verizon PCS/AWS)	232	4' Side Mount Standoff (ECI 60, 59)	139
		3' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0) (ECI-61a)	117
B2/B66A RRH (Verizon RRH)	232		
RF4461d-13A (Verizon RRH)	232	6' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0) (ECI-61a (Dish Ice Shield))	115
CBC78T-DS-43-2X Diplexer (Verizon)	232	5"x4" Pipe Mount (ECI 61a (Dish Support))	112
CBC78T-DS-43-2X Diplexer (Verizon)	232	Andrew 2' w/Radome (ECI-61)	112
CBC78T-DS-43-2X Diplexer (Verizon)	232	5"x4" Pipe Mount (ECI-63 (Dish Support))	107
PiROD 12' Lightweight T-Frame (ATT)	200	PA8-65 (ECI-63)	107
PiROD 12' Lightweight T-Frame (ATT)	200	PD458 (ECI-62)	106
PiROD 12' Lightweight T-Frame (ATT)	200	Pipe4 4' Side Mount Standoff (1) (ECI 62)	106
7770.00 (ATT)	200	4x4" Pipe Mount (ECI 66)	94
HPA 65R-BUU-H8 Panel (ATT)	200	PD6888-4 (ECI 66)	94
RRUS-32 (ATT)	200		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

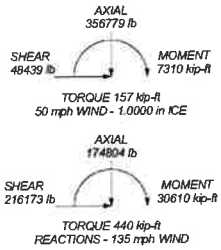
TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 135 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category IV.
6. Topographic Category 3 with Crest Height of 66.50 ft
7. P-Delta Displacement Effects are not applicable to this tower for this case (TIA-222-H Section 3.5)
8. TOWER RATING: 96.3%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 926906 lb
SHEAR: 127428 lb

UPLIFT: -728584 lb
SHEAR: 105274 lb

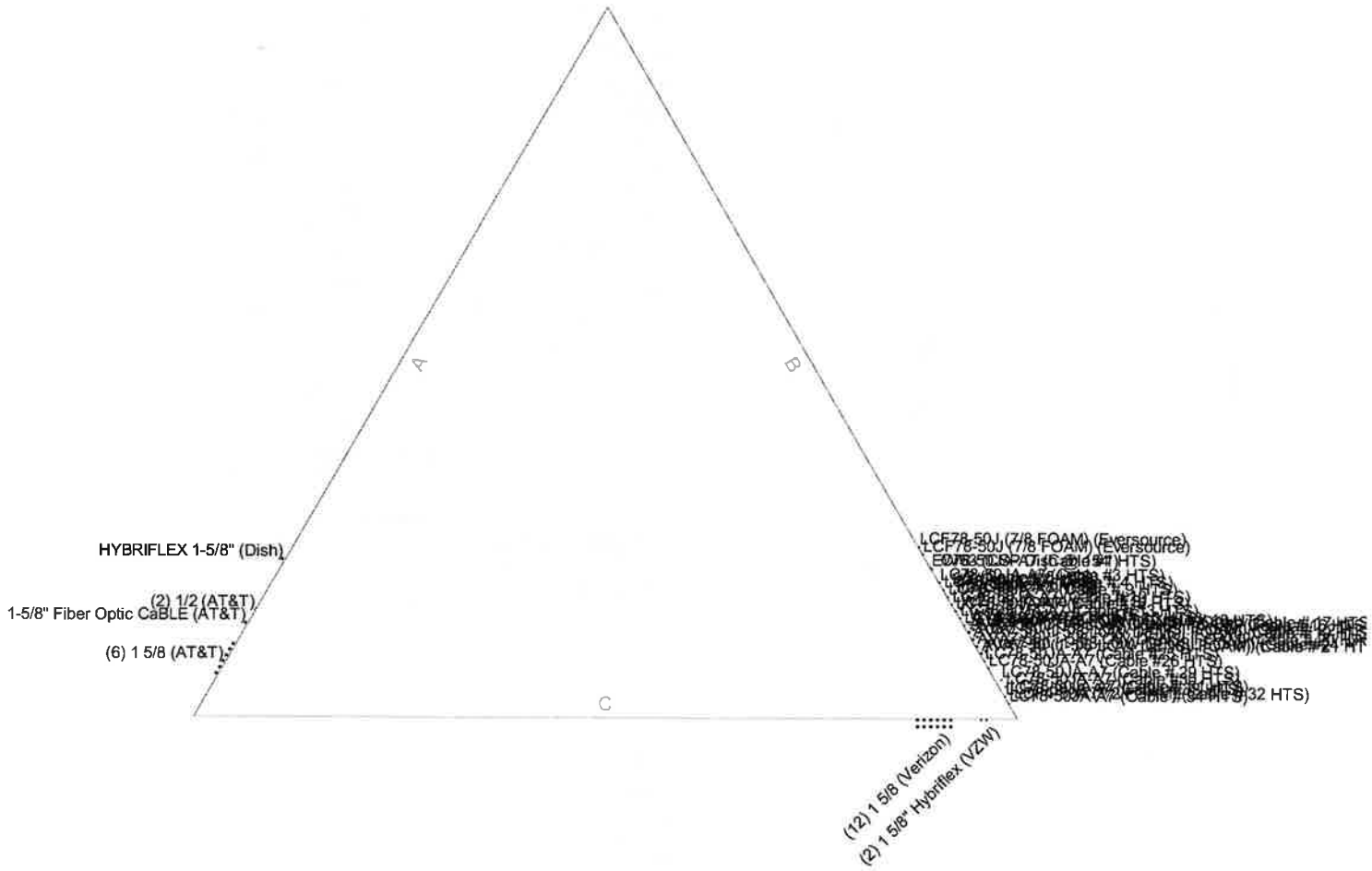


Centek Engineering Inc.
63-2 North Branford Rd.
Branford, CT 06405
Phone: (203) 488-0580
FAX: (203) 488-8587

Job: 21007.82 - Colchester			
Project: 320-ft Lattice Tower (CSP #50)			
Client: Verizon	Drawn by: TJL	Appd:	
Code: TIA-222-H	Date: 11/10/23	Scale: NTS	
Path:		Dwg No. E-1	

Feed Line Plan

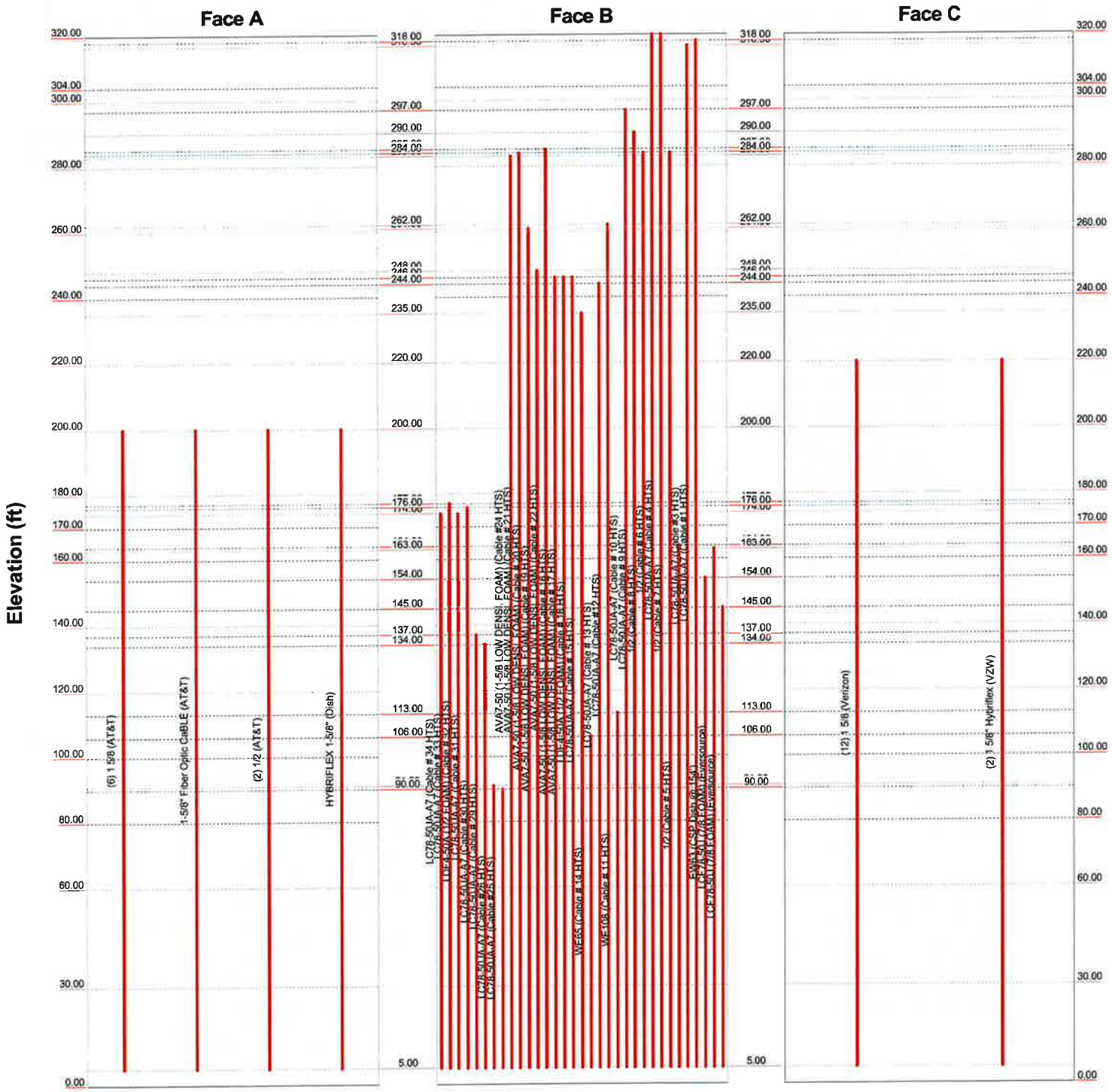
_____ Round _____ Flat _____ App In Face App Out Face



Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job: **21007.82 - Colchester**		
	Project: ***320-ft Lattice Tower (CSP #50)***		
	Client: Verizon	Drawn by: TJL	App'd:
	Code: TIA-222-H	Date: 11/10/23	Scale: NTS
	Path:		Dwg No. E-7

Feed Line Distribution Chart
0' - 320'

Round | Flat | App In Face | App Out Face | Truss Leg



Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job: 21007.82 - Colchester		
	Project: 320-ft Lattice Tower (CSP #50)		
	Client: Verizon	Drawn by: TJL	App'd:
	Code: TIA-222-H	Date: 11/10/23	Scale: NTS
	Path:		Dwg No. E-7

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 320.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 6.81 ft at the top and 40.69 ft at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower base elevation above sea level: 0.00 ft.
Basic wind speed of 135 mph.
Risk Category IV.
Exposure Category C.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 3.
Crest Height: 66.50 ft.
Nominal ice thickness of 1.0000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
P-Delta Displacement Effects are not applicable to this tower for this case (TIA-222-H Section 3.5).
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

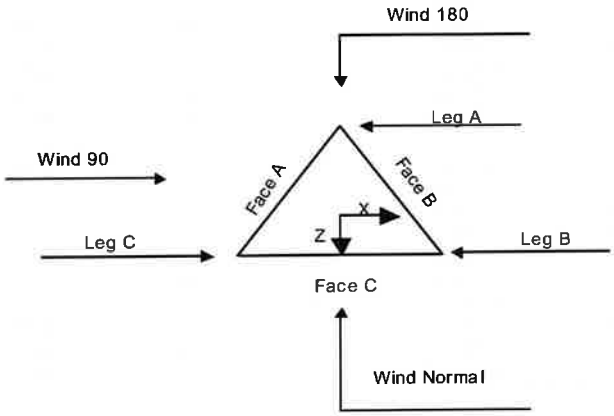
Consider Moments - Legs
Consider Moments - Horizontals
Consider Moments - Diagonals
Use Moment Magnification
√ Use Code Stress Ratios
√ Use Code Safety Factors - Guys
Escalate Ice
Always Use Max Kz
Use Special Wind Profile
√ Include Bolts In Member Capacity
Leg Bolts Are At Top Of Section
√ Secondary Horizontal Braces Leg
Use Diamond Inner Bracing (4 Sided)
√ SR Members Have Cut Ends
SR Members Are Concentric

Distribute Leg Loads As Uniform
Assume Legs Pinned
√ Assume Rigid Index Plate
√ Use Clear Spans For Wind Area
√ Use Clear Spans For KL/r
Retension Guys To Initial Tension
√ Bypass Mast Stability Checks
Use Azimuth Dish Coefficients
Project Wind Area of Appurt.
Autocalc Torque Arm Areas
Add IBC .6D+W Combination
√ Sort Capacity Reports By Component
Triangulate Diamond Inner Bracing
Treat Feed Line Bundles As Cylinder
Ignore KL/ry For 60 Deg. Angle Legs

Use ASCE 10 X-Brace Ly Rules
√ Calculate Redundant Bracing Forces
Ignore Redundant Members in FEA
√ SR Leg Bolts Resist Compression
√ All Leg Panels Have Same Allowable
Offset Girt At Foundation
√ Consider Feed Line Torque
√ Include Angle Block Shear Check
Use TIA-222-H Bracing Resist. Exemption
Use TIA-222-H Tension Splice Exemption

Poles

Include Shear-Torsion Interaction
Always Use Sub-Critical Flow
Use Top Mounted Sockets
Pole Without Linear Attachments
Pole With Shroud Or No Appurtenances
Outside and Inside Corner Radii Are Known



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation ft	Assembly Database	Description	Section Width ft	Number of Sections	Section Length ft
T1	320.00-304.00			6.81	1	16.00
T2	304.00-300.00			6.81	1	4.00
T3	300.00-280.00			6.81	1	20.00
T4	280.00-260.00			8.85	1	20.00
T5	260.00-240.00			11.04	1	20.00
T6	240.00-220.00			13.08	1	20.00
T7	220.00-200.00			15.09	1	20.00
T8	200.00-180.00			17.09	1	20.00
T9	180.00-170.00			19.22	1	10.00
T10	170.00-160.00			20.26	1	10.00
T11	160.00-140.00			21.30	1	20.00
T12	140.00-120.00			23.21	1	20.00
T13	120.00-100.00			25.39	1	20.00
T14	100.00-80.00			27.97	1	20.00
T15	80.00-60.00			30.47	1	20.00
T16	60.00-30.00			33.14	1	30.00
T17	30.00-0.00			36.80	1	30.00

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	320.00-304.00	4.00	X Brace	No	No	0.0000	0.0000
T2	304.00-300.00	4.00	X Brace	No	No	0.0000	0.0000
T3	300.00-280.00	5.00	X Brace	No	No	0.0000	0.0000
T4	280.00-260.00	6.67	X Brace	No	No	0.0000	0.0000
T5	260.00-240.00	6.67	X Brace	No	No	0.0000	0.0000
T6	240.00-220.00	6.67	X Brace	No	No	0.0000	0.0000
T7	220.00-200.00	10.00	X Brace	No	No	0.0000	0.0000
T8	200.00-180.00	10.00	X Brace	No	No	0.0000	0.0000
T9	180.00-170.00	10.00	X Brace	No	No	0.0000	0.0000
T10	170.00-160.00	10.00	X Brace	No	No	0.0000	0.0000
T11	160.00-140.00	10.00	X Brace	No	No	0.0000	0.0000
T12	140.00-120.00	10.00	X Brace	No	No	0.0000	0.0000
T13	120.00-100.00	20.00	K1 Down	No	Yes	0.0000	0.0000
T14	100.00-80.00	20.00	K1 Down	No	Yes	0.0000	0.0000
T15	80.00-60.00	20.00	K1 Down	No	Yes	0.0000	0.0000
T16	60.00-30.00	30.00	K2 Down	No	Yes	0.0000	0.0000
T17	30.00-0.00	30.00	K2 Down	No	Yes	0.0000	0.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 320.00-304.00	Pipe	ROHN 5 EH	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T2 304.00-300.00	Pipe	ROHN 5 EH	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T3 300.00-280.00	Pipe	ROHN 6 EH	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T4 280.00-260.00	Arbitrary Shape	ROHN 8 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T5 260.00-240.00	Arbitrary Shape	ROHN 8 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A572-50 (50 ksi)
T6 240.00-220.00	Arbitrary Shape	ROHN 8 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Equal Angle	L4x4x5/16	A572-50 (50 ksi)
T7 220.00-200.00	Arbitrary Shape	ROHN 8 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Equal Angle	L4x4x3/8	A572-50 (50 ksi)
T8 200.00-180.00	Arbitrary Shape	ROHN 10 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Equal Angle	L4x4x3/8	A572-50 (50 ksi)
T9 180.00-170.00	Arbitrary Shape	ROHN 10 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Equal Angle	L4x4x3/8	A572-50 (50 ksi)
T10 170.00-160.00	Arbitrary Shape	ROHN 10 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Equal Angle	L4x4x3/8	A572-50 (50 ksi)
T11 160.00-140.00	Arbitrary Shape	ROHN 10 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Equal Angle	L5x5x1/2	A572-50 (50 ksi)
T12 140.00-120.00	Arbitrary Shape	ROHN 10 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Equal Angle	L5x5x1/2	A572-50 (50 ksi)
T13 120.00-100.00	Arbitrary Shape	ROHN 10 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Pipe	ROHN 3 XXS	A572-50 (50 ksi)
T14 100.00-80.00	Arbitrary Shape	ROHN 10 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Pipe	ROHN 3 XXS	A572-50 (50 ksi)
T15 80.00-60.00	Arbitrary Shape	ROHN 12 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Pipe	ROHN 3 XXS	A572-50 (50 ksi)
T16 60.00-30.00	Arbitrary Shape	ROHN 12 EH w/ angle 8x8x0.5	A572-50 (50 ksi)	Pipe	ROHN 4 EH	A572-50 (50 ksi)
T17 30.00-0.00	Arbitrary Shape	ROHN 12 EHS w Angle	A572-50	Pipe	ROHN 4 EH	A572-50

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
		8x8x0.625	(50 ksi)			(50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 320.00-304.00	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T3 300.00-280.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T13 120.00-100.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T14 100.00-80.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 3 EH	A572-50 (50 ksi)
T15 80.00-60.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 3 XXS	A572-50 (50 ksi)
T16 60.00-30.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 3.5 EH	A572-50 (50 ksi)
T17 30.00-0.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 4 EH	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T13 120.00-100.00	Pipe		A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T14 100.00-80.00	Pipe		A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T15 80.00-60.00	Pipe		A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T16 60.00-30.00	Pipe		A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T17 30.00-0.00	Pipe		A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Redundant Bracing Grade		Redundant Type	Redundant Size	K Factor
T13	A572-50	Horizontal (1)	Pipe	ROHN 1.5 STD	1
120.00-100.00	(50 ksi)	Diagonal (1)	Pipe	ROHN 2 STD	1
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip Diagonal (1)	Pipe	ROHN 2.5 STD	1
T14	A572-50	Horizontal (1)	Pipe	P1.5x.145	1
100.00-80.00	(50 ksi)	Diagonal (1)	Pipe	ROHN 2 EH	1
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip Diagonal (1)	Pipe	ROHN 2.5 STD	1
T15	A572-50	Horizontal (1)	Pipe	ROHN 2 STD	1
80.00-60.00	(50 ksi)	Diagonal (1)	Pipe	ROHN 2 EH	1
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip Diagonal (1)	Pipe	ROHN 3 STD	1
T16	A572-50	Horizontal (1)	Pipe	ROHN 1.5 STD	1
60.00-30.00	(50 ksi)	Horizontal (2)		ROHN 2 XXS	
		Diagonal (1)	Pipe	ROHN 2 EH	1
		Diagonal (2)		ROHN 2.5 STD	
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip (2)		ROHN 2 STD	
		Hip Diagonal (1)	Pipe	ROHN 2 STD	1
		Hip Diagonal (2)		ROHN 2 STD	1
T17	A572-50	Horizontal (1)	Pipe	P1.5x.145	1
30.00-0.00	(50 ksi)	Horizontal (2)		ROHN 2.5 EH	
		Diagonal (1)	Pipe	ROHN 2.5 STD	1
		Diagonal (2)		ROHN 2.5 STD	
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip (2)		ROHN 2 STD	
		Hip Diagonal (1)	Pipe	ROHN 2.5 STD	1
		Hip Diagonal (2)		ROHN 2.5 STD	1

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
320.00-304.00			(36 ksi)						
T2	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
304.00-300.00			(36 ksi)						
T3	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
300.00-280.00			(36 ksi)						
T4	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
280.00-260.00			(36 ksi)						
T5	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
260.00-240.00			(36 ksi)						
T6	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
240.00-220.00			(36 ksi)						
T7	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
220.00-200.00			(36 ksi)						
T8	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
200.00-180.00 T9	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
180.00-170.00 T10	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
170.00-160.00 T11	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
160.00-140.00 T12	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
140.00-120.00 T13	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
120.00-100.00 T14	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
100.00-80.00 T15	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
80.00-60.00 T16	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
60.00-30.00 T17 30.00-0.00	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1	Yes	No	1	1	1	1	1	1	1	1
320.00-304.00				1	1	1	1	1	1	1
T2	Yes	No	1	1	1	1	1	1	1	1
304.00-300.00				1	1	1	1	1	1	1
T3	Yes	No	1	1	1	1	1	1	1	1
300.00-280.00				1	1	1	1	1	1	1
T4	Yes	No	1	1	1	1	1	1	1	1
280.00-260.00				1	1	1	1	1	1	1
T5	Yes	No	1	1	1	1	1	1	1	1
260.00-240.00				1	1	1	1	1	1	1
T6	Yes	No	1	1	1	1	1	1	1	1
240.00-220.00				1	1	1	1	1	1	1
T7	Yes	No	1	1	1	1	1	1	1	1
220.00-200.00				1	1	1	1	1	1	1
T8	Yes	No	1	1	1	1	1	1	1	1
200.00-180.00				1	1	1	1	1	1	1
T9	Yes	No	1	1	1	1	1	1	1	1
180.00-170.00				1	1	1	1	1	1	1
T10	Yes	No	1	1	1	1	1	1	1	1
170.00-160.00				1	1	1	1	1	1	1
T11	Yes	No	1	1	1	1	1	1	1	1
160.00-140.00				1	1	1	1	1	1	1
T12	Yes	No	1	1	1	1	1	1	1	1
140.00-120.00				1	1	1	1	1	1	1
T13	No	No	1	1	1	1	1	1	1	1
120.00-100.00				1	1	1	1	1	1	1
T14	No	No	1	1	1	1	1	1	1	1

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
100.00-80.00				1	1	1	1	1	1	1
T15	No	No	1	1	1	1	1	1	1	1
80.00-60.00				1	1	1	1	1	1	1
T16	No	No	1	1	1	1	1	1	1	1
60.00-30.00				1	1	1	1	1	1	1
T17	No	No	1	1	1	1	1	1	1	1
30.00-0.00				1	1	1	1	1	1	1

[1]Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Net Width Deduct in	Leg U	Diagonal Net Width Deduct in	Diagonal U	Top Girt Net Width Deduct in	Top Girt U	Bottom Girt Net Width Deduct in	Bottom Girt U	Mid Girt Net Width Deduct in	Mid Girt U	Long Horizontal Net Width Deduct in	Long Horizontal U	Short Horizontal Net Width Deduct in	Short Horizontal U
T1 320.00-304.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T2 304.00-300.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T3 300.00-280.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 280.00-260.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 260.00-240.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 240.00-220.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 220.00-200.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 200.00-180.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 180.00-170.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 170.00-160.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T11 160.00-140.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T12 140.00-120.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T13 120.00-100.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T14 100.00-80.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T15 80.00-60.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T16 60.00-30.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T17 30.00-0.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 320.00-304.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T2 304.00-300.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T3 300.00-280.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 280.00-260.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 260.00-240.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 240.00-220.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 220.00-200.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 200.00-180.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 180.00-170.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 170.00-160.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T11 160.00-140.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T12 140.00-120.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T13 120.00-100.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T14 100.00-80.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T15 80.00-60.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T16 60.00-30.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T17 30.00-0.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 320.00-304.00	Flange	1.0000 A325N	0	0.6250 A325X	1	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T2 304.00-300.00	Flange	1.0000 A325N	6	0.6250 A325X	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T3 300.00-280.00	Flange	1.0000 A325N	8	0.6250 A325X	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T4 280.00-260.00	Flange	1.0000 A325N	8	0.7500 A325X	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T5 260.00-240.00	Flange	1.0000 A325N	8	0.7500 A325X	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0

Tower Elevation ft	Leg Connection Type	Leg Bolt Size in	Leg No.	Diagonal Bolt Size in	Diagonal No.	Top Girt Bolt Size in	Top Girt No.	Bottom Girt Bolt Size in	Bottom Girt No.	Mid Girt Bolt Size in	Mid Girt No.	Long Horizontal Bolt Size in	Long Horizontal No.	Short Horizontal Bolt Size in	Short Horizontal No.
T6 240.00-220.00	Flange	1.0000 A325N	8	0.7500 A325X	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T7 220.00-200.00	Flange	1.0000 A325N	12	0.7500 A325X	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T8 200.00-180.00	Flange	1.0000 A325N	12	0.8750 A325X	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T9 180.00-170.00	Flange	1.0000 A325N	12	0.8750 A325X	1	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T10 170.00-160.00	Flange	1.0000 A325N	0	0.8750 A325X	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T11 160.00-140.00	Flange	1.0000 A325N	12	0.8750 A325X	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T12 140.00-120.00	Flange	1.0000 A325N	12	0.8750 A325X	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T13 120.00-100.00	Flange	1.0000 A325N	12	0.7500 A325X	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325X	2	0.6250 A325N	0
T14 100.00-80.00	Flange	1.0000 A325N	16	0.7500 A325X	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325X	2	0.6250 A325N	0
T15 80.00-60.00	Flange	1.0000 A325N	16	0.7500 A325X	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325X	2	0.6250 A325N	0
T16 60.00-30.00	Flange	1.0000 A325N	16	0.8750 A325X	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325X	2	0.6250 A325N	0
T17 30.00-0.00	Flange	1.0000 A325N	24	0.8750 A325X	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325X	2	0.6250 A325N	0

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
1 5/8 (AT&T)	A	No	No	Ar (CaAa)	200.00 - 5.00	0.0000	-0.42	6	6	1.9800	1.9800		1.04
1 5/8 (Verizon)	C	No	No	Ar (CaAa)	220.00 - 5.00	0.0000	-0.4	12	6	1.9800	1.9800		1.04
1 5/8" Hybriflex (VZW)	C	No	No	Ar (CaAa)	220.00 - 5.00	0.0000	-0.46	2	2	1.6000	1.6000		1.85
LC78-50JA-A 7 (Cable # 34 HTS)	B	No	No	Ar (CaAa)	174.00 - 5.00	0.0000	0.48	1	1	1.0900	1.0900		0.28
LC78-50JA-A 7 (Cable # 33 HTS)	B	No	No	Ar (CaAa)	177.00 - 5.00	0.0000	0.47	1	1	1.0900	1.0900		0.28
LDF4-50A (1/2 FOAM) (Cable # 32 HTS)	B	No	No	Ar (CaAa)	174.00 - 5.00	3.0000	0.48	1	1	0.6300	0.6300		0.15
LC78-50JA-A 7 (Cable # 31 HTS)	B	No	No	Ar (CaAa)	176.00 - 5.00	3.0000	0.47	1	1	1.0900	1.0900		0.28

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
LC78-50JA-A 7 (Cable #30 HTS)	B	No	No	Ar (CaAa)	137.00 - 5.00	3.0000	0.46	1	1	1.0900	1.0900		0.28
LC78-50JA-A 7 (Cable # 29 HTS)	B	No	No	Ar (CaAa)	134.00 - 5.00	3.0000	0.45	1	1	1.0900	1.0900		0.28
LC78-50JA-A 7 (Cable #26 HTS)	B	No	No	Ar (CaAa)	91.00 - 5.00	0.0000	0.43	1	1	1.0900	1.0900		0.28
LC78-50JA-A 7 (Cable #25 HTS)	B	No	No	Ar (CaAa)	90.00 - 5.00	0.0000	0.42	1	1	1.0900	1.0900		0.28
AVA7-50 (1-5/8 LOW DENSI. FOAM) (Cable #24 HTS)	B	No	No	Ar (CaAa)	283.00 - 5.00	3.0000	0.41	1	1	1.9800	1.9800		0.72
AVA7-50 (1-5/8 LOW DENSI. FOAM) (Cable # 21 HTS)	B	No	No	Ar (CaAa)	284.00 - 5.00	0.0000	0.41	1	1	1.9800	1.9800		0.72
AVA7-50 (1-5/8 LOW DENSI. FOAM) (Cable # 20 HTS)	B	No	No	Ar (CaAa)	261.00 - 5.00	0.0000	0.4	1	1	1.9800	1.9800		0.72
AVA7-50 (1-5/8 LOW DENSI. FOAM) (Cable # 19 HTS)	B	No	No	Ar (CaAa)	248.00 - 5.00	0.0000	0.39	1	1	1.9800	1.9800		0.72
AVA7-50 (1-5/8 LOW DENSI. FOAM) (Cable # 22 HTS)	B	No	No	Ar (CaAa)	285.00 - 5.00	3.0000	0.39	1	1	1.9800	1.9800		0.72
AVA7-50 (1-5/8 LOW DENSI. FOAM) (Cable # 16 HTS)	B	No	No	Ar (CaAa)	246.00 - 5.00	0.0000	0.38	1	1	1.9800	1.9800		0.72
AVA7-50 (1-5/8 LOW DENSI. FOAM) (Cable # 17 HTS)	B	No	No	Ar (CaAa)	246.00 - 5.00	3.0000	0.38	1	1	1.9800	1.9800		0.72
LDF4-50A (1/2 FOAM)	B	No	No	Ar (CaAa)	246.00 - 5.00	6.0000	0.38	1	1	0.6300	0.6300		0.15

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
(Cable # 18 HTS)													
LC78-50JA-A 7 (Cable # 15 HTS)	B	No	No	Ar (CaAa)	235.00 - 5.00	0.0000	0.37	1	1	1.0900	1.0900		0.28
WE65 (Cable # 14 HTS)	B	No	No	Af (CaAa)	106.00 - 5.00	3.0000	0.37	1	1	1.5836	1.5836		0.53
LC78-50JA-A 7 (Cable # 13 HTS)	B	No	No	Ar (CaAa)	244.00 - 5.00	0.0000	0.36	1	1	1.0900	1.0900		0.28
LC78-50JA-A 7 (Cable #12 HTS)	B	No	No	Ar (CaAa)	262.00 - 5.00	0.0000	0.35	1	1	1.0900	1.0900		0.28
WE108 (Cable # 11 HTS)	B	No	No	Af (CaAa)	113.00 - 5.00	3.0000	0.35	1	1	1.0149	1.0149		0.35
LC78-50JA-A 7 (Cable # 10 HTS)	B	No	No	Ar (CaAa)	297.00 - 5.00	0.0000	0.34	1	1	1.0900	1.0900		0.28
LC78-50JA-A 7 (Cable # 9 HTS)	B	No	No	Ar (CaAa)	290.00 - 5.00	0.0000	0.33	1	1	1.0900	1.0900		0.28
1/2 (Cable # 8 HTS)	B	No	No	Ar (CaAa)	284.00 - 5.00	3.0000	0.33	1	1	0.5800	0.5800		0.25
1/2 (Cable # 6 HTS)	B	No	No	Ar (CaAa)	320.00 - 5.00	6.0000	0.33	1	1	0.5800	0.5800		0.25
LC78-50JA-A 7 (Cable # 4 HTS)	B	No	No	Ar (CaAa)	320.00 - 5.00	0.0000	0.32	1	1	1.0900	1.0900		0.28
1/2 (Cable # 7 HTS)	B	No	No	Ar (CaAa)	284.00 - 5.00	3.0000	0.32	1	1	0.5800	0.5800		0.25
1/2 (Cable # 5 HTS)	B	No	No	Ar (CaAa)	164.00 - 5.00	6.0000	0.32	1	1	0.5800	0.5800		0.25
LC78-50JA-A 7 (Cable #3 HTS)	B	No	No	Ar (CaAa)	316.50 - 5.00	0.0000	0.31	1	1	1.0900	1.0900		0.28
LC78-50JA-A 7 (Cable #1 HTS) * CSP Proposed Cables	B	No	No	Ar (CaAa)	318.00 - 5.00	0.0000	0.29	1	1	1.0900	1.0900		0.28
EW63 (CSP Dish @ 154')	B	No	No	Af (CaAa)	154.00 - 5.00	0.0000	0.29	1	1	1.5742	1.5742		0.51
1-5/8" Fiber Optic CaBLE	A	No	No	Ar (CaAa)	200.00 - 5.00	0.0000	-0.37	1	1	1.9800	1.9800		1.85

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
(AT&T) 1/2 (AT&T)	A	No	No	Ar (CaAa)	200.00 - 5.00	0.0000	-0.35	2	2	0.5800	0.5800		0.25
* Eversource LCF78-50J (7/8 FOAM) (Eversource)	B	No	No	Ar (CaAa)	163.00 - 5.00	0.0000	0.27	1	1	1.1000	1.1000		0.53
LCF78-50J (7/8 FOAM) (Eversource)	B	No	No	Ar (CaAa)	145.00 - 5.00	0.0000	0.26	1	1	1.1000	1.1000		0.53
HYBRIFLEX 1-5/8" (Dish)	A	No	No	Ar (CaAa)	200.00 - 5.00	0.0000	-0.28	1	1	1.9800	1.9800		1.90

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
T1	320.00-304.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	5.561	0.000	15.90
		C	0.000	0.000	0.000	0.000	0.00
T2	304.00-300.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	1.540	0.000	4.36
		C	0.000	0.000	0.000	0.000	0.00
T3	300.00-280.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	13.483	0.000	40.00
		C	0.000	0.000	0.000	0.000	0.00
T4	280.00-260.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	26.676	0.000	87.48
		C	0.000	0.000	0.000	0.000	0.00
T5	260.00-240.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	37.174	0.000	122.62
		C	0.000	0.000	0.000	0.000	0.00
T6	240.00-220.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	49.355	0.000	162.20
		C	0.000	0.000	0.000	0.000	0.00
T7	220.00-200.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	49.900	0.000	163.60
		C	0.000	0.000	53.920	0.000	323.60
T8	200.00-180.00	A	0.000	0.000	34.000	0.000	209.80
		B	0.000	0.000	49.900	0.000	163.60
		C	0.000	0.000	53.920	0.000	323.60
T9	180.00-170.00	A	0.000	0.000	17.000	0.000	104.90
		B	0.000	0.000	27.055	0.000	87.16
		C	0.000	0.000	26.960	0.000	161.80
T10	170.00-160.00	A	0.000	0.000	17.000	0.000	104.90
		B	0.000	0.000	29.412	0.000	94.29
		C	0.000	0.000	26.960	0.000	161.80
T11	160.00-140.00	A	0.000	0.000	34.000	0.000	209.80
		B	0.000	0.000	65.283	0.000	208.79
		C	0.000	0.000	53.920	0.000	323.60
T12	140.00-120.00	A	0.000	0.000	34.000	0.000	209.80
		B	0.000	0.000	71.886	0.000	228.48
		C	0.000	0.000	53.920	0.000	323.60
T13	120.00-100.00	A	0.000	0.000	34.000	0.000	209.80

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
		B	0.000	0.000	76.650	0.000	238.73
		C	0.000	0.000	53.920	0.000	323.60
T14	100.00-80.00	A	0.000	0.000	34.000	0.000	209.80
		B	0.000	0.000	83.818	0.000	254.48
		C	0.000	0.000	53.920	0.000	323.60
T15	80.00-60.00	A	0.000	0.000	34.000	0.000	209.80
		B	0.000	0.000	85.889	0.000	259.80
		C	0.000	0.000	53.920	0.000	323.60
T16	60.00-30.00	A	0.000	0.000	51.000	0.000	314.70
		B	0.000	0.000	128.833	0.000	389.70
		C	0.000	0.000	80.880	0.000	485.40
T17	30.00-0.00	A	0.000	0.000	42.500	0.000	262.25
		B	0.000	0.000	107.361	0.000	324.75
		C	0.000	0.000	67.400	0.000	404.50

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
T1	320.00-304.00	A	1.565	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	23.870	0.000	297.24
		C		0.000	0.000	0.000	0.000	0.00
T2	304.00-300.00	A	1.560	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	6.531	0.000	81.27
		C		0.000	0.000	0.000	0.000	0.00
T3	300.00-280.00	A	1.554	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	52.943	0.000	670.39
		C		0.000	0.000	0.000	0.000	0.00
T4	280.00-260.00	A	1.543	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	95.474	0.000	1238.50
		C		0.000	0.000	0.000	0.000	0.00
T5	260.00-240.00	A	1.531	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	125.965	0.000	1648.23
		C		0.000	0.000	0.000	0.000	0.00
T6	240.00-220.00	A	1.518	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	163.236	0.000	2134.09
		C		0.000	0.000	0.000	0.000	0.00
T7	220.00-200.00	A	1.505	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	164.289	0.000	2132.91
		C		0.000	0.000	88.565	0.000	1933.68
T8	200.00-180.00	A	1.491	0.000	0.000	97.770	0.000	1339.07
		B		0.000	0.000	163.213	0.000	2104.57
		C		0.000	0.000	88.377	0.000	1924.43
T9	180.00-170.00	A	1.480	0.000	0.000	48.768	0.000	665.20
		B		0.000	0.000	89.502	0.000	1140.76
		C		0.000	0.000	44.114	0.000	958.57
T10	170.00-160.00	A	1.472	0.000	0.000	48.688	0.000	662.22
		B		0.000	0.000	99.189	0.000	1250.72
		C		0.000	0.000	44.064	0.000	956.06
T11	160.00-140.00	A	1.460	0.000	0.000	97.129	0.000	1315.32
		B		0.000	0.000	216.859	0.000	2707.80
		C		0.000	0.000	87.971	0.000	1904.45
T12	140.00-120.00	A	1.444	0.000	0.000	96.796	0.000	1303.06
		B		0.000	0.000	236.829	0.000	2927.01
		C		0.000	0.000	87.760	0.000	1894.10
T13	120.00-100.00	A	1.429	0.000	0.000	96.477	0.000	1291.33
		B		0.000	0.000	247.845	0.000	3032.24

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
		C		0.000	0.000	87.557	0.000	1884.19
T14	100.00-80.00	A	1.416	0.000	0.000	96.204	0.000	1281.37
		B		0.000	0.000	265.345	0.000	3214.77
		C		0.000	0.000	87.385	0.000	1875.76
T15	80.00-60.00	A	1.408	0.000	0.000	96.037	0.000	1275.27
		B		0.000	0.000	271.739	0.000	3275.98
		C		0.000	0.000	87.279	0.000	1870.60
T16	60.00-30.00	A	1.411	0.000	0.000	144.138	0.000	1915.89
		B		0.000	0.000	408.126	0.000	4926.92
		C		0.000	0.000	130.970	0.000	2808.43
T17	30.00-0.00	A	1.416	0.000	0.000	120.258	0.000	1601.82
		B		0.000	0.000	341.014	0.000	4128.55
		C		0.000	0.000	109.233	0.000	2344.80

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	320.00-304.00	2.5585	0.7653	5.6930	1.5791
T2	304.00-300.00	2.9423	0.8782	6.4727	1.7993
T3	300.00-280.00	5.1084	1.7478	10.3539	3.2633
T4	280.00-260.00	5.9347	2.4163	14.4778	5.3608
T5	260.00-240.00	8.6793	3.7103	19.6937	7.6938
T6	240.00-220.00	11.2158	4.8855	24.7940	9.9453
T7	220.00-200.00	22.5644	14.2440	36.7309	19.4107
T8	200.00-180.00	13.7596	16.7762	19.6476	23.4997
T9	180.00-170.00	15.4786	18.2108	22.9856	25.9059
T10	170.00-160.00	16.9997	19.2547	26.2154	27.6785
T11	160.00-140.00	17.9610	19.2805	28.5332	28.2903
T12	140.00-120.00	20.2400	20.7575	32.6330	30.6629
T13	120.00-100.00	28.7885	27.5665	41.4429	36.9493
T14	100.00-80.00	32.9367	30.2640	47.1419	40.4797
T15	80.00-60.00	33.4528	30.6237	49.6742	42.3889
T16	60.00-30.00	36.1620	33.0876	53.5295	45.6914
T17	30.00-0.00	34.0925	31.3302	52.1357	44.6900

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	31	1/2	304.00 - 320.00	0.6000	0.5877
T1	32	LC78-50JA-A7	304.00 - 320.00	0.6000	0.5877
T1	35	LC78-50JA-A7	304.00 - 316.50	0.6000	0.5877
T1	36	LC78-50JA-A7	304.00 - 318.00	0.6000	0.5877
T2	31	1/2	300.00 - 304.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T2	32	LC78-50JA-A7	300.00 - 304.00	0.6000	0.6000
T2	35	LC78-50JA-A7	300.00 - 304.00	0.6000	0.6000
T2	36	LC78-50JA-A7	300.00 - 304.00	0.6000	0.6000
T3	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	280.00 - 283.00	0.6000	0.6000
T3	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	280.00 - 284.00	0.6000	0.6000
T3	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	280.00 - 285.00	0.6000	0.6000
T3	28	LC78-50JA-A7	280.00 - 297.00	0.6000	0.6000
T3	29	LC78-50JA-A7	280.00 - 290.00	0.6000	0.6000
T3	30	1/2	280.00 - 284.00	0.6000	0.6000
T3	31	1/2	280.00 - 300.00	0.6000	0.6000
T3	32	LC78-50JA-A7	280.00 - 300.00	0.6000	0.6000
T3	33	1/2	280.00 - 284.00	0.6000	0.6000
T3	35	LC78-50JA-A7	280.00 - 300.00	0.6000	0.6000
T3	36	LC78-50JA-A7	280.00 - 300.00	0.6000	0.6000
T4	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	260.00 - 280.00	0.6000	0.6000
T4	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	260.00 - 280.00	0.6000	0.6000
T4	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	260.00 - 261.00	0.6000	0.6000
T4	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	260.00 - 280.00	0.6000	0.6000
T4	26	LC78-50JA-A7	260.00 - 262.00	0.6000	0.6000
T4	28	LC78-50JA-A7	260.00 - 280.00	0.6000	0.6000
T4	29	LC78-50JA-A7	260.00 - 280.00	0.6000	0.6000
T4	30	1/2	260.00 - 280.00	0.6000	0.6000
T4	31	1/2	260.00 - 280.00	0.6000	0.6000
T4	32	LC78-50JA-A7	260.00 - 280.00	0.6000	0.6000
T4	33	1/2	260.00 - 280.00	0.6000	0.6000
T4	35	LC78-50JA-A7	260.00 - 280.00	0.6000	0.6000
T4	36	LC78-50JA-A7	260.00 - 280.00	0.6000	0.6000
T5	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	240.00 - 260.00	0.6000	0.6000
T5	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	240.00 - 260.00	0.6000	0.6000
T5	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	240.00 - 260.00	0.6000	0.6000
T5	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	240.00 - 248.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T5	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	240.00 - 260.00	0.6000	0.6000
T5	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	240.00 - 246.00	0.6000	0.6000
T5	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	240.00 - 246.00	0.6000	0.6000
T5	22	LDF4-50A (1/2 FOAM)	240.00 - 246.00	0.6000	0.6000
T5	25	LC78-50JA-A7	240.00 - 244.00	0.6000	0.6000
T5	26	LC78-50JA-A7	240.00 - 260.00	0.6000	0.6000
T5	28	LC78-50JA-A7	240.00 - 260.00	0.6000	0.6000
T5	29	LC78-50JA-A7	240.00 - 260.00	0.6000	0.6000
T5	30	1/2	240.00 - 260.00	0.6000	0.6000
T5	31	1/2	240.00 - 260.00	0.6000	0.6000
T5	32	LC78-50JA-A7	240.00 - 260.00	0.6000	0.6000
T5	33	1/2	240.00 - 260.00	0.6000	0.6000
T5	35	LC78-50JA-A7	240.00 - 260.00	0.6000	0.6000
T5	36	LC78-50JA-A7	240.00 - 260.00	0.6000	0.6000
T6	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	220.00 - 240.00	0.6000	0.6000
T6	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	220.00 - 240.00	0.6000	0.6000
T6	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	220.00 - 240.00	0.6000	0.6000
T6	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	220.00 - 240.00	0.6000	0.6000
T6	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	220.00 - 240.00	0.6000	0.6000
T6	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	220.00 - 240.00	0.6000	0.6000
T6	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	220.00 - 240.00	0.6000	0.6000
T6	22	LDF4-50A (1/2 FOAM)	220.00 - 240.00	0.6000	0.6000
T6	23	LC78-50JA-A7	220.00 - 235.00	0.6000	0.6000
T6	25	LC78-50JA-A7	220.00 - 240.00	0.6000	0.6000
T6	26	LC78-50JA-A7	220.00 - 240.00	0.6000	0.6000
T6	28	LC78-50JA-A7	220.00 - 240.00	0.6000	0.6000
T6	29	LC78-50JA-A7	220.00 - 240.00	0.6000	0.6000
T6	30	1/2	220.00 - 240.00	0.6000	0.6000
T6	31	1/2	220.00 - 240.00	0.6000	0.6000
T6	32	LC78-50JA-A7	220.00 - 240.00	0.6000	0.6000
T6	33	1/2	220.00 - 240.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T6	35	LC78-50JA-A7	220.00 - 240.00	0.6000	0.6000
T6	36	LC78-50JA-A7	220.00 - 240.00	0.6000	0.6000
T7	2	1 5/8	200.00 - 220.00	0.6000	0.6000
T7	3	1 5/8" Hybriflex	200.00 - 220.00	0.6000	0.6000
T7	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	200.00 - 220.00	0.6000	0.6000
T7	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	200.00 - 220.00	0.6000	0.6000
T7	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	200.00 - 220.00	0.6000	0.6000
T7	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	200.00 - 220.00	0.6000	0.6000
T7	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	200.00 - 220.00	0.6000	0.6000
T7	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	200.00 - 220.00	0.6000	0.6000
T7	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	200.00 - 220.00	0.6000	0.6000
T7	22	LDF4-50A (1/2 FOAM)	200.00 - 220.00	0.6000	0.6000
T7	23	LC78-50JA-A7	200.00 - 220.00	0.6000	0.6000
T7	25	LC78-50JA-A7	200.00 - 220.00	0.6000	0.6000
T7	26	LC78-50JA-A7	200.00 - 220.00	0.6000	0.6000
T7	28	LC78-50JA-A7	200.00 - 220.00	0.6000	0.6000
T7	29	LC78-50JA-A7	200.00 - 220.00	0.6000	0.6000
T7	30	1/2	200.00 - 220.00	0.6000	0.6000
T7	31	1/2	200.00 - 220.00	0.6000	0.6000
T7	32	LC78-50JA-A7	200.00 - 220.00	0.6000	0.6000
T7	33	1/2	200.00 - 220.00	0.6000	0.6000
T7	35	LC78-50JA-A7	200.00 - 220.00	0.6000	0.6000
T7	36	LC78-50JA-A7	200.00 - 220.00	0.6000	0.6000
T8	1	1 5/8	180.00 - 200.00	0.6000	0.6000
T8	2	1 5/8	180.00 - 200.00	0.6000	0.6000
T8	3	1 5/8" Hybriflex	180.00 - 200.00	0.6000	0.6000
T8	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	180.00 - 200.00	0.6000	0.6000
T8	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	180.00 - 200.00	0.6000	0.6000
T8	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	180.00 - 200.00	0.6000	0.6000
T8	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	180.00 - 200.00	0.6000	0.6000
T8	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	180.00 - 200.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T8	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	180.00 - 200.00	0.6000	0.6000
T8	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	180.00 - 200.00	0.6000	0.6000
T8	22	LDF4-50A (1/2 FOAM)	180.00 - 200.00	0.6000	0.6000
T8	23	LC78-50JA-A7	180.00 - 200.00	0.6000	0.6000
T8	25	LC78-50JA-A7	180.00 - 200.00	0.6000	0.6000
T8	26	LC78-50JA-A7	180.00 - 200.00	0.6000	0.6000
T8	28	LC78-50JA-A7	180.00 - 200.00	0.6000	0.6000
T8	29	LC78-50JA-A7	180.00 - 200.00	0.6000	0.6000
T8	30	1/2	180.00 - 200.00	0.6000	0.6000
T8	31	1/2	180.00 - 200.00	0.6000	0.6000
T8	32	LC78-50JA-A7	180.00 - 200.00	0.6000	0.6000
T8	33	1/2	180.00 - 200.00	0.6000	0.6000
T8	35	LC78-50JA-A7	180.00 - 200.00	0.6000	0.6000
T8	36	LC78-50JA-A7	180.00 - 200.00	0.6000	0.6000
T8	41	1-5/8" Fiber Optic CaBLE	180.00 - 200.00	0.6000	0.6000
T8	42	1/2	180.00 - 200.00	0.6000	0.6000
T8	46	HYBRIFLEX 1-5/8"	180.00 - 200.00	0.6000	0.6000
T9	1	1 5/8	170.00 - 180.00	0.6000	0.6000
T9	2	1 5/8	170.00 - 180.00	0.6000	0.6000
T9	3	1 5/8" Hybriflex	170.00 - 180.00	0.6000	0.6000
T9	4	LC78-50JA-A7	170.00 - 174.00	0.6000	0.6000
T9	5	LC78-50JA-A7	170.00 - 177.00	0.6000	0.6000
T9	6	LDF4-50A (1/2 FOAM)	170.00 - 174.00	0.6000	0.6000
T9	7	LC78-50JA-A7	170.00 - 176.00	0.6000	0.6000
T9	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	170.00 - 180.00	0.6000	0.6000
T9	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	170.00 - 180.00	0.6000	0.6000
T9	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	170.00 - 180.00	0.6000	0.6000
T9	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	170.00 - 180.00	0.6000	0.6000
T9	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	170.00 - 180.00	0.6000	0.6000
T9	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	170.00 - 180.00	0.6000	0.6000
T9	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	170.00 - 180.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T9	22	LDF4-50A (1/2 FOAM)	170.00 - 180.00	0.6000	0.6000
T9	23	LC78-50JA-A7	170.00 - 180.00	0.6000	0.6000
T9	25	LC78-50JA-A7	170.00 - 180.00	0.6000	0.6000
T9	26	LC78-50JA-A7	170.00 - 180.00	0.6000	0.6000
T9	28	LC78-50JA-A7	170.00 - 180.00	0.6000	0.6000
T9	29	LC78-50JA-A7	170.00 - 180.00	0.6000	0.6000
T9	30	1/2	170.00 - 180.00	0.6000	0.6000
T9	31	1/2	170.00 - 180.00	0.6000	0.6000
T9	32	LC78-50JA-A7	170.00 - 180.00	0.6000	0.6000
T9	33	1/2	170.00 - 180.00	0.6000	0.6000
T9	35	LC78-50JA-A7	170.00 - 180.00	0.6000	0.6000
T9	36	LC78-50JA-A7	170.00 - 180.00	0.6000	0.6000
T9	41	1-5/8" Fiber Optic CaBLE	170.00 - 180.00	0.6000	0.6000
T9	42	1/2	170.00 - 180.00	0.6000	0.6000
T9	46	HYBRIFLEX 1-5/8"	170.00 - 180.00	0.6000	0.6000
T10	1	1 5/8	160.00 - 170.00	0.6000	0.6000
T10	2	1 5/8	160.00 - 170.00	0.6000	0.6000
T10	3	1 5/8" Hybriflex	160.00 - 170.00	0.6000	0.6000
T10	4	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000
T10	5	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000
T10	6	LDF4-50A (1/2 FOAM)	160.00 - 170.00	0.6000	0.6000
T10	7	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000
T10	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	160.00 - 170.00	0.6000	0.6000
T10	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	160.00 - 170.00	0.6000	0.6000
T10	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	160.00 - 170.00	0.6000	0.6000
T10	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	160.00 - 170.00	0.6000	0.6000
T10	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	160.00 - 170.00	0.6000	0.6000
T10	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	160.00 - 170.00	0.6000	0.6000
T10	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	160.00 - 170.00	0.6000	0.6000
T10	22	LDF4-50A (1/2 FOAM)	160.00 - 170.00	0.6000	0.6000
T10	23	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T10	25	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000
T10	26	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000
T10	28	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000
T10	29	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000
T10	30	1/2	160.00 - 170.00	0.6000	0.6000
T10	31	1/2	160.00 - 170.00	0.6000	0.6000
T10	32	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000
T10	33	1/2	160.00 - 170.00	0.6000	0.6000
T10	34	1/2	160.00 - 164.00	0.6000	0.6000
T10	35	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000
T10	36	LC78-50JA-A7	160.00 - 170.00	0.6000	0.6000
T10	41	1-5/8" Fiber Optic CaBLE	160.00 - 170.00	0.6000	0.6000
T10	42	1/2	160.00 - 170.00	0.6000	0.6000
T10	44	LCF78-50J (7/8 FOAM)	160.00 - 163.00	0.6000	0.6000
T10	46	HYBRIFLEX 1-5/8"	160.00 - 170.00	0.6000	0.6000
T11	1	1 5/8	140.00 - 160.00	0.6000	0.6000
T11	2	1 5/8	140.00 - 160.00	0.6000	0.6000
T11	3	1 5/8" Hybriflex	140.00 - 160.00	0.6000	0.6000
T11	4	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000
T11	5	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000
T11	6	LDF4-50A (1/2 FOAM)	140.00 - 160.00	0.6000	0.6000
T11	7	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000
T11	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	140.00 - 160.00	0.6000	0.6000
T11	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	140.00 - 160.00	0.6000	0.6000
T11	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	140.00 - 160.00	0.6000	0.6000
T11	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	140.00 - 160.00	0.6000	0.6000
T11	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	140.00 - 160.00	0.6000	0.6000
T11	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	140.00 - 160.00	0.6000	0.6000
T11	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	140.00 - 160.00	0.6000	0.6000
T11	22	LDF4-50A (1/2 FOAM)	140.00 - 160.00	0.6000	0.6000
T11	23	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T11	25	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000
T11	26	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000
T11	28	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000
T11	29	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000
T11	30	1/2	140.00 - 160.00	0.6000	0.6000
T11	31	1/2	140.00 - 160.00	0.6000	0.6000
T11	32	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000
T11	33	1/2	140.00 - 160.00	0.6000	0.6000
T11	34	1/2	140.00 - 160.00	0.6000	0.6000
T11	35	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000
T11	36	LC78-50JA-A7	140.00 - 160.00	0.6000	0.6000
T11	39	EW63	140.00 - 154.00	0.6000	0.6000
T11	41	1-5/8" Fiber Optic CaBLE	140.00 - 160.00	0.6000	0.6000
T11	42	1/2	140.00 - 160.00	0.6000	0.6000
T11	44	LCF78-50J (7/8 FOAM)	140.00 - 160.00	0.6000	0.6000
T11	45	LCF78-50J (7/8 FOAM)	140.00 - 145.00	0.6000	0.6000
T11	46	HYBRIFLEX 1-5/8"	140.00 - 160.00	0.6000	0.6000
T12	1	1 5/8	120.00 - 140.00	0.6000	0.6000
T12	2	1 5/8	120.00 - 140.00	0.6000	0.6000
T12	3	1 5/8" Hybriflex	120.00 - 140.00	0.6000	0.6000
T12	4	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	5	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	6	LDF4-50A (1/2 FOAM)	120.00 - 140.00	0.6000	0.6000
T12	7	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	8	LC78-50JA-A7	120.00 - 137.00	0.6000	0.6000
T12	9	LC78-50JA-A7	120.00 - 134.00	0.6000	0.6000
T12	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	120.00 - 140.00	0.6000	0.6000
T12	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	120.00 - 140.00	0.6000	0.6000
T12	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	120.00 - 140.00	0.6000	0.6000
T12	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	120.00 - 140.00	0.6000	0.6000
T12	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	120.00 - 140.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T12	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	120.00 - 140.00	0.6000	0.6000
T12	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	120.00 - 140.00	0.6000	0.6000
T12	22	LDF4-50A (1/2 FOAM)	120.00 - 140.00	0.6000	0.6000
T12	23	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	25	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	26	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	28	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	29	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	30	1/2	120.00 - 140.00	0.6000	0.6000
T12	31	1/2	120.00 - 140.00	0.6000	0.6000
T12	32	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	33	1/2	120.00 - 140.00	0.6000	0.6000
T12	34	1/2	120.00 - 140.00	0.6000	0.6000
T12	35	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	36	LC78-50JA-A7	120.00 - 140.00	0.6000	0.6000
T12	39	EW63	120.00 - 140.00	0.6000	0.6000
T12	41	1-5/8" Fiber Optic CaBLE	120.00 - 140.00	0.6000	0.6000
T12	42	1/2	120.00 - 140.00	0.6000	0.6000
T12	44	LCF78-50J (7/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T12	45	LCF78-50J (7/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T12	46	HYBRIFLEX 1-5/8"	120.00 - 140.00	0.6000	0.6000
T13	1	1 5/8	100.00 - 120.00	0.6000	0.6000
T13	2	1 5/8	100.00 - 120.00	0.6000	0.6000
T13	3	1 5/8" Hybriflex	100.00 - 120.00	0.6000	0.6000
T13	4	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	5	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	6	LDF4-50A (1/2 FOAM)	100.00 - 120.00	0.6000	0.6000
T13	7	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	8	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	9	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	100.00 - 120.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T13	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	100.00 - 120.00	0.6000	0.6000
T13	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	100.00 - 120.00	0.6000	0.6000
T13	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	100.00 - 120.00	0.6000	0.6000
T13	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	100.00 - 120.00	0.6000	0.6000
T13	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	100.00 - 120.00	0.6000	0.6000
T13	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	100.00 - 120.00	0.6000	0.6000
T13	22	LDF4-50A (1/2 FOAM)	100.00 - 120.00	0.6000	0.6000
T13	23	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	24	WE65	100.00 - 106.00	0.6000	0.6000
T13	25	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	26	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	27	WE108	100.00 - 113.00	0.6000	0.6000
T13	28	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	29	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	30	1/2	100.00 - 120.00	0.6000	0.6000
T13	31	1/2	100.00 - 120.00	0.6000	0.6000
T13	32	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	33	1/2	100.00 - 120.00	0.6000	0.6000
T13	34	1/2	100.00 - 120.00	0.6000	0.6000
T13	35	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	36	LC78-50JA-A7	100.00 - 120.00	0.6000	0.6000
T13	39	EW63	100.00 - 120.00	0.6000	0.6000
T13	41	1-5/8" Fiber Optic CaBLE	100.00 - 120.00	0.6000	0.6000
T13	42	1/2	100.00 - 120.00	0.6000	0.6000
T13	44	LCF78-50J (7/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T13	45	LCF78-50J (7/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T13	46	HYBRIFLEX 1-5/8"	100.00 - 120.00	0.6000	0.6000
T14	1	1 5/8	80.00 - 100.00	0.6000	0.6000
T14	2	1 5/8	80.00 - 100.00	0.6000	0.6000
T14	3	1 5/8" Hybriflex	80.00 - 100.00	0.6000	0.6000
T14	4	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	5	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	6	LDF4-50A (1/2 FOAM)	80.00 - 100.00	0.6000	0.6000
T14	7	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	8	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T14	9	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	12	LC78-50JA-A7	80.00 - 91.00	0.6000	0.6000
T14	13	LC78-50JA-A7	80.00 - 90.00	0.6000	0.6000
T14	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	80.00 - 100.00	0.6000	0.6000
T14	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	80.00 - 100.00	0.6000	0.6000
T14	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	80.00 - 100.00	0.6000	0.6000
T14	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	80.00 - 100.00	0.6000	0.6000
T14	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	80.00 - 100.00	0.6000	0.6000
T14	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	80.00 - 100.00	0.6000	0.6000
T14	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	80.00 - 100.00	0.6000	0.6000
T14	22	LDF4-50A (1/2 FOAM)	80.00 - 100.00	0.6000	0.6000
T14	23	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	24	WE65	80.00 - 100.00	0.6000	0.6000
T14	25	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	26	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	27	WE108	80.00 - 100.00	0.6000	0.6000
T14	28	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	29	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	30	1/2	80.00 - 100.00	0.6000	0.6000
T14	31	1/2	80.00 - 100.00	0.6000	0.6000
T14	32	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	33	1/2	80.00 - 100.00	0.6000	0.6000
T14	34	1/2	80.00 - 100.00	0.6000	0.6000
T14	35	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	36	LC78-50JA-A7	80.00 - 100.00	0.6000	0.6000
T14	39	EW63	80.00 - 100.00	0.6000	0.6000
T14	41	1-5/8" Fiber Optic CaBLE	80.00 - 100.00	0.6000	0.6000
T14	42	1/2	80.00 - 100.00	0.6000	0.6000
T14	44	LCF78-50J (7/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T14	45	LCF78-50J (7/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T14	46	HYBRIFLEX 1-5/8"	80.00 - 100.00	0.6000	0.6000
T15	1	1 5/8	60.00 - 80.00	0.6000	0.6000
T15	2	1 5/8	60.00 - 80.00	0.6000	0.6000
T15	3	1 5/8" Hybriflex	60.00 - 80.00	0.6000	0.6000
T15	4	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	5	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	6	LDF4-50A (1/2 FOAM)	60.00 - 80.00	0.6000	0.6000
T15	7	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	8	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	9	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	12	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	13	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	60.00 - 80.00	0.6000	0.6000
T15	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	60.00 - 80.00	0.6000	0.6000
T15	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	60.00 - 80.00	0.6000	0.6000
T15	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	60.00 - 80.00	0.6000	0.6000
T15	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	60.00 - 80.00	0.6000	0.6000
T15	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	60.00 - 80.00	0.6000	0.6000
T15	21	AVA7-50 (1-5/8 LOW	60.00 - 80.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		DENSI. FOAM)			
T15	22	LDF4-50A (1/2 FOAM)	60.00 - 80.00	0.6000	0.6000
T15	23	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	24	WE65	60.00 - 80.00	0.6000	0.6000
T15	25	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	26	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	27	WE108	60.00 - 80.00	0.6000	0.6000
T15	28	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	29	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	30	1/2	60.00 - 80.00	0.6000	0.6000
T15	31	1/2	60.00 - 80.00	0.6000	0.6000
T15	32	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	33	1/2	60.00 - 80.00	0.6000	0.6000
T15	34	1/2	60.00 - 80.00	0.6000	0.6000
T15	35	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	36	LC78-50JA-A7	60.00 - 80.00	0.6000	0.6000
T15	39	EW63	60.00 - 80.00	0.6000	0.6000
T15	41	1-5/8" Fiber Optic CaBLE	60.00 - 80.00	0.6000	0.6000
T15	42	1/2	60.00 - 80.00	0.6000	0.6000
T15	44	LCF78-50J (7/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T15	45	LCF78-50J (7/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T15	46	HYBRIFLEX 1-5/8"	60.00 - 80.00	0.6000	0.6000
T16	1	1 5/8	30.00 - 60.00	0.6000	0.6000
T16	2	1 5/8	30.00 - 60.00	0.6000	0.6000
T16	3	1 5/8" Hybriflex	30.00 - 60.00	0.6000	0.6000
T16	4	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	5	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	6	LDF4-50A (1/2 FOAM)	30.00 - 60.00	0.6000	0.6000
T16	7	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	8	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	9	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	12	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	13	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	30.00 - 60.00	0.6000	0.6000
T16	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	30.00 - 60.00	0.6000	0.6000
T16	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	30.00 - 60.00	0.6000	0.6000
T16	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	30.00 - 60.00	0.6000	0.6000
T16	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	30.00 - 60.00	0.6000	0.6000
T16	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	30.00 - 60.00	0.6000	0.6000
T16	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	30.00 - 60.00	0.6000	0.6000
T16	22	LDF4-50A (1/2 FOAM)	30.00 - 60.00	0.6000	0.6000
T16	23	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	24	WE65	30.00 - 60.00	0.6000	0.6000
T16	25	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	26	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	27	WE108	30.00 - 60.00	0.6000	0.6000
T16	28	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	29	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	30	1/2	30.00 - 60.00	0.6000	0.6000
T16	31	1/2	30.00 - 60.00	0.6000	0.6000
T16	32	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	33	1/2	30.00 - 60.00	0.6000	0.6000
T16	34	1/2	30.00 - 60.00	0.6000	0.6000
T16	35	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000
T16	36	LC78-50JA-A7	30.00 - 60.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T16	39	EW63	30.00 - 60.00	0.6000	0.6000
T16	41	1-5/8" Fiber Optic CaBLE	30.00 - 60.00	0.6000	0.6000
T16	42	1/2	30.00 - 60.00	0.6000	0.6000
T16	44	LCF78-50J (7/8 FOAM)	30.00 - 60.00	0.6000	0.6000
T16	45	LCF78-50J (7/8 FOAM)	30.00 - 60.00	0.6000	0.6000
T16	46	HYBRIFLEX 1-5/8"	30.00 - 60.00	0.6000	0.6000
T17	1	1 5/8	5.00 - 30.00	0.6000	0.6000
T17	2	1 5/8	5.00 - 30.00	0.6000	0.6000
T17	3	1 5/8" Hybriflex	5.00 - 30.00	0.6000	0.6000
T17	4	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	5	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	6	LDF4-50A (1/2 FOAM)	5.00 - 30.00	0.6000	0.6000
T17	7	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	8	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	9	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	12	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	13	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	14	AVA7-50 (1-5/8 LOW DENSI. FOAM)	5.00 - 30.00	0.6000	0.6000
T17	15	AVA7-50 (1-5/8 LOW DENSI. FOAM)	5.00 - 30.00	0.6000	0.6000
T17	16	AVA7-50 (1-5/8 LOW DENSI. FOAM)	5.00 - 30.00	0.6000	0.6000
T17	18	AVA7-50 (1-5/8 LOW DENSI. FOAM)	5.00 - 30.00	0.6000	0.6000
T17	19	AVA7-50 (1-5/8 LOW DENSI. FOAM)	5.00 - 30.00	0.6000	0.6000
T17	20	AVA7-50 (1-5/8 LOW DENSI. FOAM)	5.00 - 30.00	0.6000	0.6000
T17	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	5.00 - 30.00	0.6000	0.6000
T17	22	LDF4-50A (1/2 FOAM)	5.00 - 30.00	0.6000	0.6000
T17	23	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	24	WE65	5.00 - 30.00	0.6000	0.6000
T17	25	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	26	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	27	WE108	5.00 - 30.00	0.6000	0.6000
T17	28	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	29	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	30	1/2	5.00 - 30.00	0.6000	0.6000
T17	31	1/2	5.00 - 30.00	0.6000	0.6000
T17	32	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	33	1/2	5.00 - 30.00	0.6000	0.6000
T17	34	1/2	5.00 - 30.00	0.6000	0.6000
T17	35	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	36	LC78-50JA-A7	5.00 - 30.00	0.6000	0.6000
T17	39	EW63	5.00 - 30.00	0.6000	0.6000
T17	41	1-5/8" Fiber Optic CaBLE	5.00 - 30.00	0.6000	0.6000
T17	42	1/2	5.00 - 30.00	0.6000	0.6000
T17	44	LCF78-50J (7/8 FOAM)	5.00 - 30.00	0.6000	0.6000
T17	45	LCF78-50J (7/8 FOAM)	5.00 - 30.00	0.6000	0.6000
T17	46	HYBRIFLEX 1-5/8"	5.00 - 30.00	0.6000	0.6000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
* CSP Antenna Inventory - via Eastern Communications Climb/Mapping									
PD688S-4	C	From Leg	0.50	0.0000	94.00	No Ice	0.35	0.35	3.75
(ECI-66)			0.00			1/2" Ice	0.63	0.63	4.88
			0.00			1" Ice	0.91	0.91	6.00
4'x4" Pipe Mount	C	From Leg	0.00	0.0000	94.00	No Ice	1.05	1.05	44.00
(ECI-66)			0.00			1/2" Ice	1.58	1.58	56.99
			0.00			1" Ice	1.84	1.84	73.03
Pirod 4' Side Mount Standoff	B	From Leg	0.00	0.0000	106.00	No Ice	2.72	2.72	50.00
(1)			0.00			1/2" Ice	4.91	4.91	89.00
(ECI-62)			0.00			1" Ice	7.10	7.10	128.00
PD458	B	From Leg	3.00	0.0000	106.00	No Ice	2.88	2.88	20.00
(ECI-62)			0.00			1/2" Ice	4.34	4.34	46.22
			0.00			1" Ice	5.83	5.83	77.59
5'3"x4" Pipe Mount	A	From Leg	0.00	0.0000	107.00	No Ice	1.42	1.42	57.00
(ECI-63 (Dish Support))			0.00			1/2" Ice	2.21	2.21	73.81
			0.00			1" Ice	2.54	2.54	94.43
8' Wide Ice Shield (for Dish	A	From Leg	0.00	0.0000	115.00	No Ice	8.34	4.76	400.00
Antennas) (Assume Ca=2.0)			0.00			1/2" Ice	11.01	6.71	756.25
(ECI-63a (Dish Ice Shield))			0.00			1" Ice	13.59	8.62	1103.65
3' Wide Ice Shield (for Dish	C	From Leg	0.00	0.0000	117.00	No Ice	8.34	4.76	400.00
Antennas) (Assume Ca=2.0)			0.00			1/2" Ice	11.01	6.71	756.25
(ECI-61a)			0.00			1" Ice	13.59	8.62	1103.65
5'3"x4" Pipe Mount	C	From Leg	0.00	0.0000	112.00	No Ice	1.42	1.42	57.00
(ECI-61a (Dish Support))			0.00			1/2" Ice	2.21	2.21	73.81
			0.00			1" Ice	2.54	2.54	94.43
DB212-1	C	From Leg	6.00	0.0000	139.00	No Ice	4.40	4.40	31.00
(ECI-59)			0.00			1/2" Ice	8.42	8.42	70.21
			0.00			1" Ice	12.45	12.45	134.11
4' Side Mount Standoff	C	From Leg	0.00	0.0000	139.00	No Ice	6.50	6.50	100.00
(ECI-60 & 59)			0.00			1/2" Ice	8.50	8.50	170.00
			0.00			1" Ice	10.50	10.50	240.00
PD156S	C	From Leg	6.00	0.0000	139.00	No Ice	0.44	0.44	5.00
(ECI-60)			0.00			1/2" Ice	0.79	0.79	6.50
			0.00			1" Ice	1.14	1.14	8.00
5'3"x4" Pipe Mount	C	From Leg	0.00	0.0000	154.00	No Ice	1.40	1.40	57.00
(ECI-58a (Dish Support))			0.00			1/2" Ice	2.21	2.21	73.81
			0.00			1" Ice	2.54	2.54	94.43
ANT450F6	A	From Leg	0.50	0.0000	153.00	No Ice	1.90	1.90	8.00
(ECI-57)			0.00			1/2" Ice	2.73	2.73	22.34
			0.00			1" Ice	3.40	3.40	41.96
5'3"x4" Pipe Mount	A	From Leg	0.00	0.0000	153.00	No Ice	1.40	1.40	57.00
(ECI-57)			0.00			1/2" Ice	2.21	2.21	73.81
			0.00			1" Ice	2.54	2.54	94.43
L-810 Obstruction Lighting	A	From Leg	0.25	0.0000	164.00	No Ice	0.36	0.36	6.65
(1)			0.00			1/2" Ice	0.52	0.52	12.44
(ECI-56)			0.00			1" Ice	0.70	0.70	19.93
L-810 Obstruction Lighting	B	From Leg	0.25	0.0000	168.00	No Ice	0.36	0.36	6.65
(1)			0.00			1/2" Ice	0.52	0.52	12.44
(ECI-54)			0.00			1" Ice	0.70	0.70	19.93
L-810 Obstruction Lighting	C	From Leg	0.25	0.0000	165.00	No Ice	0.36	0.36	6.65
(1)			0.00			1/2" Ice	0.52	0.52	12.44
(ECI-55)			0.00			1" Ice	0.70	0.70	19.93
DB586-Y (inverted)	B	From Leg	4.00	0.0000	175.00	No Ice	1.01	1.01	8.25
(ECI-53)			0.00			1/2" Ice	1.28	1.28	16.59
			0.00			1" Ice	1.56	1.56	28.01

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Pirod 4' Side Mount Standoff (1) (ECI-53,52,51)	B	From Leg	0.00	0.0000	176.00	No Ice	2.72	2.72	50.00
			0.00			1/2" Ice	4.91	4.91	89.00
			0.00			1" Ice	7.10	7.10	128.00
430-94C-09168-M-11048 TTA (ECI-52)	B	From Leg	2.00	0.0000	176.00	No Ice	1.63	0.95	30.00
			0.00			1/2" Ice	1.81	1.09	37.44
			0.00			1" Ice	1.99	1.24	52.22
DB586-Y (ECI-51)	B	From Leg	4.00	0.0000	177.00	No Ice	1.01	1.01	8.25
			0.00			1/2" Ice	1.28	1.28	16.59
			0.00			1" Ice	1.56	1.56	28.01
1151-3 (ECI-50)	C	From Leg	3.00	0.0000	179.00	No Ice	4.18	4.18	16.00
			0.00			1/2" Ice	5.73	5.73	46.53
			0.00			1" Ice	7.30	7.30	86.79
Pirod 4' Side Mount Standoff (1) (ECI-50)	C	From Leg	0.00	0.0000	179.00	No Ice	2.72	2.72	50.00
			0.00			1/2" Ice	4.91	4.91	89.00
			0.00			1" Ice	7.10	7.10	128.00
531-70HD Exposed Dipole Antenna (ECI-15)	A	From Leg	6.00	0.0000	238.00	No Ice	5.91	5.91	50.00
			0.00			1/2" Ice	7.68	7.68	79.03
			0.00			1" Ice	9.47	9.47	125.80
6' Side Mount Standoff (ECI-15)	A	From Leg	0.00	0.0000	238.00	No Ice	6.50	6.50	100.00
			0.00			1/2" Ice	8.50	8.50	170.00
			0.00			1" Ice	10.50	10.50	240.00
PD1142-1 (ECI-14)	C	From Leg	6.00	0.0000	248.00	No Ice	1.32	1.32	10.00
			0.00			1/2" Ice	3.21	3.21	23.85
			0.00			1" Ice	5.12	5.12	49.42
6' Side Mount Standoff (ECI-14)	C	From Leg	0.00	0.0000	248.00	No Ice	6.50	6.50	100.00
			0.00			1/2" Ice	8.50	8.50	170.00
			0.00			1" Ice	10.50	10.50	240.00
SC479-HF1LDF(D00I-E6085) (Inverted) (ECI-13)	B	From Leg	3.00	0.0000	245.00	No Ice	5.06	5.06	34.00
			0.00			1/2" Ice	6.54	6.54	69.82
			0.00			1" Ice	8.04	8.04	114.98
SC479-HF1LDF(D00I-E6085) (Inverted) (ECI-12)	B	From Leg	3.00	0.0000	245.00	No Ice	5.06	5.06	34.00
			0.00			1/2" Ice	6.54	6.54	69.82
			0.00			1" Ice	8.04	8.04	114.98
Sabre T-Boom (1) (ECI-10,11,12,13)	B	From Leg	0.00	0.0000	246.00	No Ice	35.40	35.40	471.00
			0.00			1/2" Ice	46.90	46.90	690.00
			0.00			1" Ice	58.40	58.40	909.00
430-94C-09168-M-11048 TTA (ECI-11)	B	From Leg	2.00	0.0000	247.00	No Ice	1.63	0.95	30.00
			0.00			1/2" Ice	1.81	1.09	37.44
			0.00			1" Ice	1.99	1.24	52.22
SC479-HF1LDF (ECI-10)	B	From Leg	3.00	0.0000	251.00	No Ice	4.04	4.04	34.00
			0.00			1/2" Ice	6.54	6.54	69.82
			0.00			1" Ice	8.04	8.04	114.98
6' Side Mount Standoff (ECI-8)	B	From Leg	0.00	0.0000	260.00	No Ice	6.50	6.50	100.00
			0.00			1/2" Ice	8.50	8.50	170.00
			0.00			1" Ice	10.50	10.50	240.00
PD440-2 (ECI-8)	B	From Leg	6.00	0.0000	264.00	No Ice	1.38	1.38	19.00
			0.00			1/2" Ice	2.48	2.48	24.70
			0.00			1" Ice	3.59	3.59	30.40
SC479-HF1LDF(D00I-E6085) (Inverted) (ECI-7)	C	From Leg	6.00	0.0000	283.00	No Ice	5.06	5.06	34.00
			0.00			1/2" Ice	6.54	6.54	69.82
			0.00			1" Ice	8.04	8.04	114.98
6' Side Mount Standoff (ECI-7)	C	From Leg	0.00	0.0000	284.00	No Ice	6.50	6.50	100.00
			0.00			1/2" Ice	8.50	8.50	170.00
			0.00			1" Ice	10.50	10.50	240.00
DB809T3E-XC (ECI-6)	C	From Leg	6.00	0.0000	286.00	No Ice	3.91	3.91	39.00
			0.00			1/2" Ice	5.70	5.70	69.70
			0.00			1" Ice	7.17	7.17	109.50

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
PD340-1	A	From Leg	6.00	0.0000	290.00	No Ice	3.30	3.30	40.00
(ECI-5)			0.00			1/2" Ice	5.94	5.94	52.00
			0.00			1" Ice	8.58	8.58	64.00
6' Side Mount Standoff	A	From Leg	0.00	0.0000	290.00	No Ice	6.50	6.50	100.00
(ECI-5)			0.00			1/2" Ice	8.50	8.50	170.00
			0.00			1" Ice	10.50	10.50	240.00
SC479-HF1LDF	C	From Leg	6.00	0.0000	300.00	No Ice	3.97	3.97	34.00
(ECI-4)			0.00			1/2" Ice	6.54	6.54	69.82
			0.00			1" Ice	8.04	8.04	114.98
6' Side Mount Standoff	C	From Leg	0.00	0.0000	300.00	No Ice	6.50	6.50	100.00
(ECI-4)			0.00			1/2" Ice	8.50	8.50	170.00
			0.00			1" Ice	10.50	10.50	240.00
ANT450F6	B	From Leg	5.00	0.0000	318.00	No Ice	1.90	1.90	8.00
(ECI-3)			0.00			1/2" Ice	2.73	2.73	22.34
			0.00			1" Ice	3.40	3.40	41.96
4'x4" Pipe Mount	B	From Leg	0.00	0.0000	318.00	No Ice	1.00	1.00	44.00
(ECI-3)			0.00			1/2" Ice	1.58	1.58	56.99
			0.00			1" Ice	1.84	1.84	73.03
BA1012-0	A	From Leg	6.00	0.0000	320.00	No Ice	0.47	0.47	2.20
(ECI-2)			0.00			1/2" Ice	0.96	0.96	6.61
			0.00			1" Ice	1.31	1.31	14.14
6' Side Mount Standoff	A	From Leg	0.00	0.0000	320.00	No Ice	6.50	6.50	100.00
(ECI-2)			0.00			1/2" Ice	8.50	8.50	170.00
			0.00			1" Ice	10.50	10.50	240.00
PD128-1	C	From Leg	6.00	0.0000	325.00	No Ice	1.00	1.00	13.00
(ECI-1)			0.00			1/2" Ice	1.80	1.80	16.90
			0.00			1" Ice	2.60	2.60	20.80
6' Side Mount Standoff	C	From Leg	0.00	0.0000	325.00	No Ice	6.50	6.50	100.00
(ECI-1)			0.00			1/2" Ice	8.50	8.50	170.00
			0.00			1" Ice	10.50	10.50	240.00
Dual Lights	A	None		0.0000	327.00	No Ice	4.00	4.00	250.00
(Beacon)						1/2" Ice	4.80	4.80	400.00
						1" Ice	5.60	5.60	550.00
Lightning Rod 5/8x4'	C	None		0.0000	329.00	No Ice	0.25	0.25	31.00
(Lightning Rod)						1/2" Ice	0.66	0.66	33.82
						1" Ice	0.97	0.97	39.29
* VZW Proposed 12/07/2018									
Valmont VFA-10-U V-Frame	A	None		0.0000	232.00	No Ice	7.95	4.45	285.00
(Verizon)						1/2" Ice	8.33	4.74	343.57
						1" Ice	8.71	5.04	407.08
Valmont VFA-10-U V-Frame	B	None		0.0000	232.00	No Ice	7.95	4.45	285.00
(Verizon)						1/2" Ice	8.33	4.74	343.57
						1" Ice	8.71	5.04	407.08
Valmont VFA-10-U V-Frame	C	None		0.0000	232.00	No Ice	7.95	4.45	285.00
(Verizon)						1/2" Ice	8.33	4.74	343.57
						1" Ice	8.71	5.04	407.08
JAHH-65B-R3B Panel	A	From Leg	5.00	0.0000	232.00	No Ice	9.66	5.98	126.30
Antenna			6.00			1/2" Ice	10.22	6.44	184.38
(Verizon-AWS)			0.00			1" Ice	10.79	6.91	248.75
JAHH-65B-R3B Panel	A	From Leg	5.00	0.0000	232.00	No Ice	9.66	5.98	126.30
Antenna			5.50			1/2" Ice	10.22	6.44	184.38
(Verizon-PCS)			0.00			1" Ice	10.79	6.91	248.75
LNX-6512DS-VTM	A	From Leg	5.00	0.0000	232.00	No Ice	5.61	3.30	30.00
(Verizon-850)			-3.00			1/2" Ice	6.01	3.66	63.32
			0.00			1" Ice	6.41	4.04	102.51
MT6413-77A	A	From Leg	5.00	0.0000	232.00	No Ice	3.79	1.46	60.00
(Verizon - Proposed)			0.00			1/2" Ice	4.04	1.65	84.38

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			0.00			1" Ice	4.30	1.85	112.21
BSAMNT-SBS-2-2 (JAHH Antenna Bracket (for 2)) (Verizon-PCS/AWS)	A	From Leg	5.00	0.0000	232.00	No Ice	3.78	3.56	116.83
			6.00			1/2" Ice	4.84	4.62	175.06
			0.00			1" Ice	5.64	5.41	240.44
B2/B66A RRH (Verizon RRH)	A	From Leg	5.00	0.0000	232.00	No Ice	2.54	1.61	60.00
			0.00			1/2" Ice	2.75	1.79	80.12
			0.00			1" Ice	2.97	1.98	103.35
RF4461d-13A (Verizon RRH)	A	From Leg	5.00	0.0000	232.00	No Ice	1.87	1.28	80.00
			0.00			1/2" Ice	2.03	1.42	98.51
			0.00			1" Ice	2.21	1.57	119.81
RVZDC-6627-PF-48 (Verizon)	A	From Leg	5.00	0.0000	232.00	No Ice	3.25	2.15	30.00
			0.00			1/2" Ice	3.48	2.35	58.35
			0.00			1" Ice	3.71	2.55	90.19
JAHH-65B-R3B Panel Antenna (Verizon-AWS)	B	From Leg	5.00	0.0000	232.00	No Ice	9.66	5.98	126.30
			6.00			1/2" Ice	10.22	6.44	184.38
			0.00			1" Ice	10.79	6.91	248.75
JAHH-65B-R3B Panel Antenna (Verizon-PCS)	B	From Leg	5.00	0.0000	232.00	No Ice	9.66	5.98	126.30
			5.50			1/2" Ice	10.22	6.44	184.38
			0.00			1" Ice	10.79	6.91	248.75
LNX-6512DS-VTM (Verizon-850)	B	From Leg	5.00	0.0000	232.00	No Ice	5.61	3.30	30.00
			-3.00			1/2" Ice	6.01	3.66	63.32
			0.00			1" Ice	6.41	4.04	102.51
MT6413-77A (Verizon - Proposed)	B	From Leg	5.00	0.0000	232.00	No Ice	3.79	1.46	60.00
			0.00			1/2" Ice	4.04	1.65	84.38
			0.00			1" Ice	4.30	1.85	112.21
BSAMNT-SBS-2-2 (JAHH Antenna Bracket (for 2)) (Verizon-PCS/AWS)	B	From Leg	5.00	0.0000	232.00	No Ice	3.78	3.56	116.83
			6.00			1/2" Ice	4.84	4.62	175.06
			0.00			1" Ice	5.64	5.41	240.44
B2/B66A RRH (Verizon RRH)	B	From Leg	5.00	0.0000	232.00	No Ice	2.54	1.61	60.00
			0.00			1/2" Ice	2.75	1.79	80.12
			0.00			1" Ice	2.97	1.98	103.35
RF4461d-13A (Verizon RRH)	B	From Leg	5.00	0.0000	232.00	No Ice	1.87	1.28	80.00
			0.00			1/2" Ice	2.03	1.42	98.51
			0.00			1" Ice	2.21	1.57	119.81
JAHH-65B-R3B Panel Antenna (Verizon-AWS)	C	From Leg	5.00	0.0000	232.00	No Ice	9.66	5.98	126.30
			6.00			1/2" Ice	10.22	6.44	184.38
			0.00			1" Ice	10.79	6.91	248.75
JAHH-65B-R3B Panel Antenna (Verizon-PCS)	C	From Leg	5.00	0.0000	232.00	No Ice	9.66	5.98	126.30
			5.50			1/2" Ice	10.22	6.44	184.38
			0.00			1" Ice	10.79	6.91	248.75
LNX-6512DS-VTM (Verizon-850)	C	From Leg	5.00	0.0000	232.00	No Ice	5.61	3.30	30.00
			-3.00			1/2" Ice	6.01	3.66	63.32
			0.00			1" Ice	6.41	4.04	102.51
MT6413-77A (Verizon - Proposed)	C	From Leg	5.00	0.0000	232.00	No Ice	3.79	1.46	60.00
			0.00			1/2" Ice	4.04	1.65	84.38
			0.00			1" Ice	4.30	1.85	112.21
BSAMNT-SBS-2-2 (JAHH Antenna Bracket (for 2)) (Verizon-PCS/AWS)	C	From Leg	5.00	0.0000	232.00	No Ice	3.78	3.56	116.83
			6.00			1/2" Ice	4.84	4.62	175.06
			0.00			1" Ice	5.64	5.41	240.44
B2/B66A RRH (Verizon RRH)	C	From Leg	5.00	0.0000	232.00	No Ice	2.54	1.61	60.00
			0.00			1/2" Ice	2.75	1.79	80.12
			0.00			1" Ice	2.97	1.98	103.35
RF4461d-13A (Verizon RRH)	C	From Leg	5.00	0.0000	232.00	No Ice	1.87	1.28	80.00
			0.00			1/2" Ice	2.03	1.42	98.51
			0.00			1" Ice	2.21	1.57	119.81
CBC78T-DS-43-2X Diplexer (Verizon)	A	From Leg	5.00	0.0000	232.00	No Ice	0.37	0.51	22.00
			0.00			1/2" Ice	0.45	0.60	28.34

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			0.00			1" Ice	0.53	0.70	36.37
CBC78T-DS-43-2X Diplexer (Verizon)	B	From Leg	5.00	0.0000	232.00	No Ice	0.37	0.51	22.00
			0.00			1/2" Ice	0.45	0.60	28.34
			0.00			1" Ice	0.53	0.70	36.37
CBC78T-DS-43-2X Diplexer (Verizon)	C	From Leg	5.00	0.0000	232.00	No Ice	0.37	0.51	22.00
			0.00			1/2" Ice	0.45	0.60	28.34
			0.00			1" Ice	0.53	0.70	36.37
* VZW Proposed 12/07/2018 *** EMP-005 AT&T Inventory 08/2019 Updates									
PiROD 12' Lightweight T-Frame (AT&T)	A	None		0.0000	200.00	No Ice	10.20	10.20	253.00
						1/2" Ice	16.20	16.20	355.00
						1" Ice	22.20	22.20	457.00
PiROD 12' Lightweight T-Frame (AT&T)	B	None		0.0000	200.00	No Ice	10.20	10.20	253.00
						1/2" Ice	16.20	16.20	355.00
						1" Ice	22.20	22.20	457.00
PiROD 12' Lightweight T-Frame (AT&T)	C	None		0.0000	200.00	No Ice	10.20	10.20	253.00
						1/2" Ice	16.20	16.20	355.00
						1" Ice	22.20	22.20	457.00
7770.00 (AT&T)	A	From Leg	3.00	0.0000	200.00	No Ice	5.51	2.93	35.00
			-6.00			1/2" Ice	5.87	3.27	67.63
			0.00			1" Ice	6.23	3.63	105.06
HPA-65R-BUU-H8 Panel (AT&T)	A	From Leg	3.00	0.0000	200.00	No Ice	12.99	7.48	68.00
			6.00			1/2" Ice	13.69	8.06	140.41
			0.00			1" Ice	14.40	8.64	220.44
RRUS-32 (AT&T)	A	From Leg	3.00	0.0000	200.00	No Ice	3.31	2.42	77.00
			6.00			1/2" Ice	3.56	2.64	104.93
			1.50			1" Ice	3.81	2.86	136.47
RRUS-11 (AT&T)	A	From Leg	3.00	0.0000	200.00	No Ice	2.57	1.07	50.00
			6.00			1/2" Ice	2.76	1.21	69.57
			-1.50			1" Ice	2.97	1.36	92.08
7770.00 (AT&T)	B	From Leg	3.00	0.0000	200.00	No Ice	5.51	2.93	35.00
			-6.00			1/2" Ice	5.87	3.27	67.63
			0.00			1" Ice	6.23	3.63	105.06
HPA-65R-BUU-H8 Panel (AT&T)	B	From Leg	3.00	0.0000	200.00	No Ice	12.99	7.48	68.00
			6.00			1/2" Ice	13.69	8.06	140.41
			0.00			1" Ice	14.40	8.64	220.44
RRUS-32 (AT&T)	B	From Leg	3.00	0.0000	200.00	No Ice	3.31	2.42	77.00
			6.00			1/2" Ice	3.56	2.64	104.93
			1.50			1" Ice	3.81	2.86	136.47
RRUS-11 (AT&T)	B	From Leg	3.00	0.0000	200.00	No Ice	2.57	1.07	50.00
			6.00			1/2" Ice	2.76	1.21	69.57
			-1.50			1" Ice	2.97	1.36	92.08
7770.00 (AT&T)	C	From Leg	3.00	0.0000	200.00	No Ice	5.51	2.93	35.00
			-6.00			1/2" Ice	5.87	3.27	67.63
			0.00			1" Ice	6.23	3.63	105.06
HPA-65R-BUU-H6 Panel (AT&T)	C	From Leg	3.00	0.0000	200.00	No Ice	10.12	5.49	48.00
			6.00			1/2" Ice	10.69	5.94	105.33
			0.00			1" Ice	11.26	6.41	168.95
RRUS-32 (AT&T)	B	From Leg	3.00	0.0000	200.00	No Ice	3.31	2.42	77.00
			6.00			1/2" Ice	3.56	2.64	104.93
			1.50			1" Ice	3.81	2.86	136.47
RRUS-11 (AT&T)	B	From Leg	3.00	0.0000	200.00	No Ice	2.57	1.07	50.00
			6.00			1/2" Ice	2.76	1.21	69.57
			-1.50			1" Ice	2.97	1.36	92.08
DC6-48-60-0-8C Squid / Surge Arrestor	C	None		0.0000	200.00	No Ice	1.79	1.79	27.00
						1/2" Ice	2.02	2.02	47.39

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(AT&T)						1" Ice	2.27	2.27	70.57
STK-U Stiffener Side Arm Attachment	A	None		0.0000	200.00	No Ice	0.07	4.01	63.79
						1/2" Ice	0.11	5.00	95.84
(AT&T)						1" Ice	0.16	6.01	138.17
STK-U Stiffener Side Arm Attachment	B	None		0.0000	200.00	No Ice	0.07	4.01	63.79
						1/2" Ice	0.11	5.00	95.84
(AT&T)						1" Ice	0.16	6.01	138.17
STK-U Stiffener Side Arm Attachment	C	None		0.0000	200.00	No Ice	0.07	4.01	63.79
						1/2" Ice	0.11	5.00	95.84
(AT&T)						1" Ice	0.16	6.01	138.17
STK-U Stiffener Side Arm Attachment	A	None		0.0000	200.00	No Ice	0.07	4.01	63.79
						1/2" Ice	0.11	5.00	95.84
(AT&T)						1" Ice	0.16	6.01	138.17
STK-U Stiffener Side Arm Attachment	B	None		0.0000	200.00	No Ice	0.07	4.01	63.79
						1/2" Ice	0.11	5.00	95.84
(AT&T)						1" Ice	0.16	6.01	138.17
STK-U Stiffener Side Arm Attachment	C	None		0.0000	200.00	No Ice	0.07	4.01	63.79
						1/2" Ice	0.11	5.00	95.84
(AT&T)						1" Ice	0.16	6.01	138.17
*** EMP-005 AT&T Inventory 08/2019 Updates									
* Eversource Proposed									
Telewave ANT220F2 - Omni Antenna	C	From Leg	4.00	0.0000	163.00	No Ice	1.03	1.03	14.00
			0.00			1/2" Ice	1.29	1.29	22.80
(Eversource)			0.00			1" Ice	1.56	1.56	34.62
Siteprol USF-4U Mount Assembly (Ca = 1.4 assumed)	C	From Leg	0.00	0.0000	160.00	No Ice	2.48	5.14	165.00
			0.00			1/2" Ice	3.25	6.91	318.00
(Eversource)			0.00			1" Ice	4.03	8.67	474.00
Telewave ANT220F2 - Omni Antenna	C	From Leg	4.00	0.0000	145.00	No Ice	1.03	1.03	14.00
			0.00			1/2" Ice	1.29	1.29	22.80
(Eversource)			0.00			1" Ice	1.56	1.56	34.62
Siteprol USF-4U Mount Assembly (Ca = 1.4 assumed)	C	From Leg	0.00	0.0000	142.00	No Ice	2.48	5.14	165.00
			0.00			1/2" Ice	3.25	6.91	318.00
(Eversource)			0.00			1" Ice	4.03	8.67	474.00
FFVV-65B-R2 (Dish)	A	From Leg	3.00	0.0000	190.00	No Ice	12.27	5.72	75.00
			-3.00			1/2" Ice	12.76	6.18	147.00
			0.00			1" Ice	13.26	6.64	225.63
FFVV-65B-R2 (Dish)	B	From Leg	3.00	0.0000	190.00	No Ice	12.27	5.72	75.00
			-3.00			1/2" Ice	12.76	6.18	147.00
			0.00			1" Ice	13.26	6.64	225.63
FFVV-65B-R2 (Dish)	C	From Leg	3.00	0.0000	190.00	No Ice	12.27	5.72	75.00
			-3.00			1/2" Ice	12.76	6.18	147.00
			0.00			1" Ice	13.26	6.64	225.63
RF4450t-71A (Dish)	A	From Leg	3.00	0.0000	190.00	No Ice	2.06	1.51	100.00
			3.00			1/2" Ice	2.24	1.67	120.66
			2.00			1" Ice	2.43	1.83	144.27
RF4450t-71A (Dish)	B	From Leg	3.00	0.0000	190.00	No Ice	2.06	1.51	100.00
			3.00			1/2" Ice	2.24	1.67	120.66
			2.00			1" Ice	2.43	1.83	144.27
RF4450t-71A (Dish)	C	From Leg	3.00	0.0000	190.00	No Ice	2.06	1.51	100.00
			3.00			1/2" Ice	2.24	1.67	120.66
			2.00			1" Ice	2.43	1.83	144.27
RF4451d-70A (Dish)	A	From Leg	3.00	0.0000	190.00	No Ice	1.88	1.11	70.00
			3.00			1/2" Ice	2.05	1.25	87.24
			-2.00			1" Ice	2.22	1.39	107.19
RF4451d-70A (Dish)	B	From Leg	3.00	0.0000	190.00	No Ice	1.88	1.11	70.00
			3.00			1/2" Ice	2.05	1.25	87.24

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			-2.00			1" Ice	2.22	1.39	107.19
RF4451d-70A (Dish)	C	From Leg	3.00	0.0000	190.00	No Ice	1.88	1.11	70.00
			3.00			1/2" Ice	2.05	1.25	87.24
			-2.00			1" Ice	2.22	1.39	107.19
RD1DC-9181-PF-48 (Dish)	A	From Leg	3.00	0.0000	190.00	No Ice	1.87	1.07	22.00
			3.00			1/2" Ice	2.04	1.20	38.30
			-2.00			1" Ice	2.21	1.35	57.26
SitePro VFA8-HD (Dish)	A	From Leg	1.50	0.0000	190.00	No Ice	15.00	15.00	700.00
			0.00			1/2" Ice	20.00	20.00	850.00
			0.00			1" Ice	25.00	25.00	1000.00
SitePro VFA8-HD (Dish)	B	From Leg	1.50	0.0000	190.00	No Ice	15.00	15.00	700.00
			0.00			1/2" Ice	20.00	20.00	850.00
			0.00			1" Ice	25.00	25.00	1000.00
SitePro VFA8-HD (Dish)	C	From Leg	1.50	0.0000	190.00	No Ice	15.00	15.00	700.00
			0.00			1/2" Ice	20.00	20.00	850.00
			0.00			1" Ice	25.00	25.00	1000.00

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight lb
* CSP Inventory from HighTower Solutions Climb											
PA8-65 (ECI-63)	A	Paraboloid w/Shroud (HP)	From Leg	0.50	Worst		107.00	8.00	No Ice	50.27	285.00
				0.00					1/2" Ice	51.29	548.30
				0.00					1" Ice	52.31	811.60
Andrew 2' w/Radome (ECI-61)	C	Paraboloid w/Radome	From Leg	0.50	Worst		112.00	2.00	No Ice	3.14	70.00
				0.00					1/2" Ice	3.41	282.00
				0.00					1" Ice	3.68	494.00
* CSP Proposed											
Commscope PAR6-59W-PXA/A (ECI-58)	C	Paraboloid w/Radome	From Leg	0.50	Worst		154.00	6.00	No Ice	28.27	310.00
				0.00					1/2" Ice	29.07	460.00
				0.00					1" Ice	29.86	610.00

222-H Verification Constants

Constant	Value
K_d	0.85
Ice Thickness Importance Factor	1.25
Z_g	900
α	9.5
$K_{z\min}$	0.85
K_e	1
K_t	0.53

Constant	Value
f	2
K_e	1

222-H Section Verification ArRr By Element

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
T1	1	ROHN 5 EH	79.369	45.934	C	0.209	0.412	7.417	11.590	3.346	7.437
320.00-304.00											
	1	ROHN 5 EH	79.369	45.934	A	0.209	0.412	7.417	11.590	3.346	7.437
	2	ROHN 5 EH	79.369	45.934	C	0.209	0.412	7.417	11.590	3.346	7.437
	2	ROHN 5 EH	79.369	45.934	B	0.209	0.412	7.417	11.590	3.346	7.437
	3	ROHN 5 EH	79.369	45.934	B	0.209	0.412	7.417	11.590	3.346	7.437
	3	ROHN 5 EH	79.369	45.934	A	0.209	0.412	7.417	11.590	3.346	7.437
					A		Sum:	14.835	23.181	6.692	14.874
					B			14.835	23.181	6.692	14.874
					C			14.835	23.181	6.692	14.874
T2	31	ROHN 5 EH	79.098	45.724	C	0.201	0.39	1.854	2.894	0.828	1.829
304.00-300.00											
	31	ROHN 5 EH	79.098	45.724	A	0.201	0.39	1.854	2.894	0.828	1.829
	32	ROHN 5 EH	79.098	45.724	C	0.201	0.39	1.854	2.894	0.828	1.829
	32	ROHN 5 EH	79.098	45.724	B	0.201	0.39	1.854	2.894	0.828	1.829
	33	ROHN 5 EH	79.098	45.724	B	0.201	0.39	1.854	2.894	0.828	1.829
	33	ROHN 5 EH	79.098	45.724	A	0.201	0.39	1.854	2.894	0.828	1.829
					A		Sum:	3.709	5.788	1.656	3.659
					B			3.709	5.788	1.656	3.659
					C			3.709	5.788	1.656	3.659
T3	40	ROHN 6 EH	93.8	51.034	C	0.207	0.374	11.061	16.248	4.974	10.159
300.00-280.00											
	40	ROHN 6 EH	93.8	51.034	A	0.207	0.374	11.061	16.248	4.974	10.159
	41	ROHN 6 EH	93.8	51.034	C	0.207	0.374	11.061	16.248	4.974	10.159
	41	ROHN 6 EH	93.8	51.034	B	0.207	0.374	11.061	16.248	4.974	10.159
	42	ROHN 6 EH	93.8	51.034	B	0.207	0.374	11.061	16.248	4.974	10.159
	42	ROHN 6 EH	93.8	51.034	A	0.207	0.374	11.061	16.248	4.974	10.159
					A		Sum:	22.122	32.497	9.949	20.318
					B			22.122	32.497	9.949	20.318
					C			22.122	32.497	9.949	20.318
T4					A		Sum:	0.000	0.000	0.000	0.000
280.00-260.00					B			0.000	0.000	0.000	0.000
					C			0.000	0.000	0.000	0.000
T5					A		Sum:	0.000	0.000	0.000	0.000
260.00-240.00					B			0.000	0.000	0.000	0.000
					C			0.000	0.000	0.000	0.000
T6					A		Sum:	0.000	0.000	0.000	0.000
240.00-220.00					B			0.000	0.000	0.000	0.000
					C			0.000	0.000	0.000	0.000
T7					A		Sum:	0.000	0.000	0.000	0.000
220.00-200.00					B			0.000	0.000	0.000	0.000
					C			0.000	0.000	0.000	0.000
T8					A		Sum:	0.000	0.000	0.000	0.000
200.00-180.00					B			0.000	0.000	0.000	0.000
					C			0.000	0.000	0.000	0.000
T9					A		Sum:	0.000	0.000	0.000	0.000
180.00-170.00					B			0.000	0.000	0.000	0.000
					C			0.000	0.000	0.000	0.000
T10					A		Sum:	0.000	0.000	0.000	0.000
170.00-160.00					B			0.000	0.000	0.000	0.000
					C			0.000	0.000	0.000	0.000

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
T11					A		Sum:	0.000	0.000	0.000	0.000
160.00-140.00					B			0.000	0.000	0.000	0.000
					C			0.000	0.000	0.000	0.000
T12					A		Sum:	0.000	0.000	0.000	0.000
140.00-120.00					B			0.000	0.000	0.000	0.000
					C			0.000	0.000	0.000	0.000
T13	214	ROHN 3 STD	45.611	30.687	C	0.131	0.185	7.130	12.953	3.845	7.410
120.00-100.00											
	215	ROHN 3 XXS	45.611	30.687	C	0.131	0.185	6.882	12.501	3.711	7.151
	216	ROHN 1.5 STD	24.76	22.965	C	0.131	0.185	0.930	2.330	0.526	1.333
	217	ROHN 2 STD	30.95	25.257	C	0.131	0.185	2.092	4.608	1.183	2.636
	218	ROHN 3 XXS	45.611	30.687	C	0.131	0.185	6.882	12.501	3.711	7.151
	219	ROHN 1.5 STD	24.76	22.965	C	0.131	0.185	0.930	2.330	0.526	1.333
	220	ROHN 2 STD	30.95	25.257	C	0.131	0.185	2.092	4.608	1.183	2.636
	221	ROHN 3 STD	45.611	30.687	B	0.131	0.185	7.130	12.953	3.845	7.410
	222	ROHN 3 XXS	45.611	30.687	B	0.131	0.185	6.882	12.501	3.711	7.151
	223	ROHN 1.5 STD	24.76	22.965	B	0.131	0.185	0.930	2.330	0.526	1.333
	224	ROHN 2 STD	30.95	25.257	B	0.131	0.185	2.092	4.608	1.183	2.636
	225	ROHN 3 XXS	45.611	30.687	B	0.131	0.185	6.882	12.501	3.711	7.151
	226	ROHN 1.5 STD	24.76	22.965	B	0.131	0.185	0.930	2.330	0.526	1.333
	227	ROHN 2 STD	30.95	25.257	B	0.131	0.185	2.092	4.608	1.183	2.636
	230	ROHN 3 STD	45.611	30.687	A	0.131	0.185	7.130	12.953	3.845	7.410
	231	ROHN 3 XXS	45.611	30.687	A	0.131	0.185	6.882	12.501	3.711	7.151
	232	ROHN 1.5 STD	24.76	22.965	A	0.131	0.185	0.930	2.330	0.526	1.333
	233	ROHN 2 STD	30.95	25.257	A	0.131	0.185	2.092	4.608	1.183	2.636
	234	ROHN 3 XXS	45.611	30.687	A	0.131	0.185	6.882	12.501	3.711	7.151
	235	ROHN 1.5 STD	24.76	22.965	A	0.131	0.185	0.930	2.330	0.526	1.333
	236	ROHN 2 STD	30.95	25.257	A	0.131	0.185	2.092	4.608	1.183	2.636
					A		Sum:	26.937	51.831	14.688	29.651
					B			26.937	51.831	14.688	29.651
					C			26.937	51.831	14.688	29.651
T14	247	ROHN 3 EH	45.358	30.392	C	0.122	0.175	7.883	14.261	4.250	8.136
100.00-80.00											
	248	ROHN 3 XXS	45.358	30.392	C	0.122	0.175	7.109	12.862	3.833	7.337
	249	P1.5x.145	24.623	22.712	C	0.122	0.175	1.033	2.571	0.584	1.467
	250	ROHN 2 EH	30.843	25.016	C	0.122	0.175	2.178	4.771	1.232	2.722
	251	ROHN 3 XXS	45.358	30.392	C	0.122	0.175	7.109	12.862	3.833	7.337
	252	P1.5x.145	24.623	22.712	C	0.122	0.175	1.033	2.571	0.584	1.467
	253	ROHN 2 EH	30.843	25.016	C	0.122	0.175	2.178	4.771	1.232	2.722
	254	ROHN 3 EH	45.358	30.392	B	0.122	0.175	7.883	14.261	4.250	8.136
	255	ROHN 3 XXS	45.358	30.392	B	0.122	0.175	7.109	12.862	3.833	7.337
	256	P1.5x.145	24.623	22.712	B	0.122	0.175	1.033	2.571	0.584	1.467
	257	ROHN 2 EH	30.843	25.016	B	0.122	0.175	2.178	4.771	1.232	2.722
	258	ROHN 3 XXS	45.358	30.392	B	0.122	0.175	7.109	12.862	3.833	7.337
	259	P1.5x.145	24.623	22.712	B	0.122	0.175	1.033	2.571	0.584	1.467
	260	ROHN 2 EH	30.843	25.016	B	0.122	0.175	2.178	4.771	1.232	2.722
	263	ROHN 3 EH	45.358	30.392	A	0.122	0.175	7.883	14.261	4.250	8.136
	264	ROHN 3 XXS	45.358	30.392	A	0.122	0.175	7.109	12.862	3.833	7.337
	265	P1.5x.145	24.623	22.712	A	0.122	0.175	1.033	2.571	0.584	1.467
	266	ROHN 2 EH	30.843	25.016	A	0.122	0.175	2.178	4.771	1.232	2.722
	267	ROHN 3 XXS	45.358	30.392	A	0.122	0.175	7.109	12.862	3.833	7.337
	268	P1.5x.145	24.623	22.712	A	0.122	0.175	1.033	2.571	0.584	1.467
	269	ROHN 2 EH	30.843	25.016	A	0.122	0.175	2.178	4.771	1.232	2.722
					A		Sum:	28.523	54.668	15.547	31.187
					B			28.523	54.668	15.547	31.187
					C			28.523	54.668	15.547	31.187
T15 80.00-60.00	280	ROHN 3 XXS	45.419	30.356	C	0.127	0.177	8.577	15.478	4.628	8.835
	281	ROHN 3 XXS	45.419	30.356	C	0.127	0.177	7.336	13.238	3.958	7.556
	282	ROHN 2 STD	30.82	24.949	C	0.127	0.177	1.402	3.065	0.793	1.750
	283	ROHN 2 EH	30.885	24.973	C	0.127	0.177	2.232	4.873	1.262	2.781

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	284	ROHN 3 XXS	45.419	30.356	C	0.127	0.177	7.336	13.238	3.958	7.556
	285	ROHN 2 STD	30.82	24.949	C	0.127	0.177	1.402	3.065	0.793	1.750
	286	ROHN 2 EH	30.885	24.973	C	0.127	0.177	2.232	4.873	1.262	2.781
	287	ROHN 3 XXS	45.419	30.356	B	0.127	0.177	8.577	15.478	4.628	8.835
	288	ROHN 3 XXS	45.419	30.356	B	0.127	0.177	7.336	13.238	3.958	7.556
	289	ROHN 2 STD	30.82	24.949	B	0.127	0.177	1.402	3.065	0.793	1.750
	290	ROHN 2 EH	30.885	24.973	B	0.127	0.177	2.232	4.873	1.262	2.781
	291	ROHN 3 XXS	45.419	30.356	B	0.127	0.177	7.336	13.238	3.958	7.556
	292	ROHN 2 STD	30.82	24.949	B	0.127	0.177	1.402	3.065	0.793	1.750
	293	ROHN 2 EH	30.885	24.973	B	0.127	0.177	2.232	4.873	1.262	2.781
	296	ROHN 3 XXS	45.419	30.356	A	0.127	0.177	8.577	15.478	4.628	8.835
	297	ROHN 3 XXS	45.419	30.356	A	0.127	0.177	7.336	13.238	3.958	7.556
	298	ROHN 2 STD	30.82	24.949	A	0.127	0.177	1.402	3.065	0.793	1.750
	299	ROHN 2 EH	30.885	24.973	A	0.127	0.177	2.232	4.873	1.262	2.781
	300	ROHN 3 XXS	45.419	30.356	A	0.127	0.177	7.336	13.238	3.958	7.556
	301	ROHN 2 STD	30.82	24.949	A	0.127	0.177	1.402	3.065	0.793	1.750
	302	ROHN 2 EH	30.885	24.973	A	0.127	0.177	2.232	4.873	1.262	2.781
					A		Sum:	30.518	57.830	16.656	33.009
					B			30.518	57.830	16.656	33.009
					C			30.518	57.830	16.656	33.009
T16 60.00-30.00	313	ROHN 3.5 EH	52.917	33.422	C	0.122	0.169	10.693	18.234	5.434	10.388
	314	ROHN 4 EH	59.532	35.872	C	0.122	0.169	12.823	20.862	6.168	11.885
	315	ROHN 1.5 STD	25.136	23.132	C	0.122	0.169	0.790	1.964	0.447	1.119
	316	ROHN 2 XXS	31.419	25.46	C	0.122	0.169	2.081	4.553	1.176	2.594
	317	ROHN 2 EH	31.486	25.484	C	0.122	0.169	1.972	4.311	1.115	2.456
	318	ROHN 2.5 STD	38.034	27.909	C	0.122	0.169	3.288	6.514	1.859	3.711
	319	ROHN 4 EH	59.532	35.872	C	0.122	0.169	12.823	20.862	6.168	11.885
	320	ROHN 1.5 STD	25.136	23.132	C	0.122	0.169	0.790	1.964	0.447	1.119
	321	ROHN 2 XXS	31.419	25.46	C	0.122	0.169	2.081	4.553	1.176	2.594
	322	ROHN 2 EH	31.486	25.484	C	0.122	0.169	1.972	4.311	1.115	2.456
	323	ROHN 2.5 STD	38.034	27.909	C	0.122	0.169	3.288	6.514	1.859	3.711
	324	ROHN 3.5 EH	52.917	33.422	B	0.122	0.169	10.693	18.234	5.434	10.388
	325	ROHN 4 EH	59.532	35.872	B	0.122	0.169	12.823	20.862	6.168	11.885
	326	ROHN 1.5 STD	25.136	23.132	B	0.122	0.169	0.790	1.964	0.447	1.119
	327	ROHN 2 XXS	31.419	25.46	B	0.122	0.169	2.081	4.553	1.176	2.594
	328	ROHN 2 EH	31.486	25.484	B	0.122	0.169	1.972	4.311	1.115	2.456
	329	ROHN 2.5 STD	38.034	27.909	B	0.122	0.169	3.288	6.514	1.859	3.711
	330	ROHN 4 EH	59.532	35.872	B	0.122	0.169	12.823	20.862	6.168	11.885
	331	ROHN 1.5 STD	25.136	23.132	B	0.122	0.169	0.790	1.964	0.447	1.119
	332	ROHN 2 XXS	31.419	25.46	B	0.122	0.169	2.081	4.553	1.176	2.594
	333	ROHN 2 EH	31.486	25.484	B	0.122	0.169	1.972	4.311	1.115	2.456
	334	ROHN 2.5 STD	38.034	27.909	B	0.122	0.169	3.288	6.514	1.859	3.711
	339	ROHN 3.5 EH	52.917	33.422	A	0.122	0.169	10.693	18.234	5.434	10.388
	340	ROHN 4 EH	59.532	35.872	A	0.122	0.169	12.823	20.862	6.168	11.885
	341	ROHN 1.5 STD	25.136	23.132	A	0.122	0.169	0.790	1.964	0.447	1.119
	342	ROHN 2 XXS	31.419	25.46	A	0.122	0.169	2.081	4.553	1.176	2.594
	343	ROHN 2 EH	31.486	25.484	A	0.122	0.169	1.972	4.311	1.115	2.456
	344	ROHN 2.5 STD	38.034	27.909	A	0.122	0.169	3.288	6.514	1.859	3.711
	345	ROHN 4 EH	59.532	35.872	A	0.122	0.169	12.823	20.862	6.168	11.885
	346	ROHN 1.5 STD	25.136	23.132	A	0.122	0.169	0.790	1.964	0.447	1.119
	347	ROHN 2 XXS	31.419	25.46	A	0.122	0.169	2.081	4.553	1.176	2.594
	348	ROHN 2 EH	31.486	25.484	A	0.122	0.169	1.972	4.311	1.115	2.456
	349	ROHN 2.5 STD	38.034	27.909	A	0.122	0.169	3.288	6.514	1.859	3.711
					A		Sum:	52.602	94.641	26.963	53.916
					B			52.602	94.641	26.963	53.916
					C			52.602	94.641	26.963	53.916
T17 30.00-0.00	364	ROHN 4 EH	62.429	37.674	C	0.117	0.161	13.402	21.836	6.265	12.420
	365	ROHN 4 EH	62.429	37.674	C	0.117	0.161	13.245	21.581	6.192	12.275
	366	P1.5x.145	26.359	24.315	C	0.117	0.161	0.887	2.209	0.501	1.257
	367	ROHN 2.5 EH	39.885	29.325	C	0.117	0.161	2.812	5.581	1.578	3.175

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	368	ROHN 2.5 STD	39.885	29.325	C	0.117	0.161	2.470	4.903	1.386	2.789
	369	ROHN 2.5 STD	39.885	29.325	C	0.117	0.161	3.506	6.959	1.968	3.959
	370	ROHN 4 EH	62.429	37.674	C	0.117	0.161	13.245	21.581	6.192	12.275
	371	P1.5x.145	26.359	24.315	C	0.117	0.161	0.887	2.209	0.501	1.257
	372	ROHN 2.5 EH	39.885	29.325	C	0.117	0.161	2.812	5.581	1.578	3.175
	373	ROHN 2.5 STD	39.885	29.325	C	0.117	0.161	2.470	4.903	1.386	2.789
	374	ROHN 2.5 STD	39.885	29.325	C	0.117	0.161	3.506	6.959	1.968	3.959
	375	ROHN 4 EH	62.429	37.674	B	0.117	0.161	13.402	21.836	6.265	12.420
	376	ROHN 4 EH	62.429	37.674	B	0.117	0.161	13.245	21.581	6.192	12.275
	377	P1.5x.145	26.359	24.315	B	0.117	0.161	0.887	2.209	0.501	1.257
	378	ROHN 2.5 EH	39.885	29.325	B	0.117	0.161	2.812	5.581	1.578	3.175
	379	ROHN 2.5 STD	39.885	29.325	B	0.117	0.161	2.470	4.903	1.386	2.789
	380	ROHN 2.5 STD	39.885	29.325	B	0.117	0.161	3.506	6.959	1.968	3.959
	381	ROHN 4 EH	62.429	37.674	B	0.117	0.161	13.245	21.581	6.192	12.275
	382	P1.5x.145	26.359	24.315	B	0.117	0.161	0.887	2.209	0.501	1.257
	383	ROHN 2.5 EH	39.885	29.325	B	0.117	0.161	2.812	5.581	1.578	3.175
	384	ROHN 2.5 STD	39.885	29.325	B	0.117	0.161	2.470	4.903	1.386	2.789
	385	ROHN 2.5 STD	39.885	29.325	B	0.117	0.161	3.506	6.959	1.968	3.959
	390	ROHN 4 EH	62.429	37.674	A	0.117	0.161	13.402	21.836	6.265	12.420
	391	ROHN 4 EH	62.429	37.674	A	0.117	0.161	13.245	21.581	6.192	12.275
	392	P1.5x.145	26.359	24.315	A	0.117	0.161	0.887	2.209	0.501	1.257
	393	ROHN 2.5 EH	39.885	29.325	A	0.117	0.161	2.812	5.581	1.578	3.175
	394	ROHN 2.5 STD	39.885	29.325	A	0.117	0.161	2.470	4.903	1.386	2.789
	395	ROHN 2.5 STD	39.885	29.325	A	0.117	0.161	3.506	6.959	1.968	3.959
	396	ROHN 4 EH	62.429	37.674	A	0.117	0.161	13.245	21.581	6.192	12.275
	397	P1.5x.145	26.359	24.315	A	0.117	0.161	0.887	2.209	0.501	1.257
	398	ROHN 2.5 EH	39.885	29.325	A	0.117	0.161	2.812	5.581	1.578	3.175
	399	ROHN 2.5 STD	39.885	29.325	A	0.117	0.161	2.470	4.903	1.386	2.789
	400	ROHN 2.5 STD	39.885	29.325	A	0.117	0.161	3.506	6.959	1.968	3.959
					A		Sum:	59.240	104.303	29.517	59.328
					B			59.240	104.303	29.517	59.328
					C			59.240	104.303	29.517	59.328

222-H Section Verification Tables - No Ice

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft^2
T1 320.00-304.00	312.00		1.608	11890.1	1		64	A	0.209	6.692
								B	0.209	6.692
								C	0.209	6.692
T2 304.00-300.00	302.00		1.597	8801.76	1		63	A	0.201	1.656
								B	0.201	1.656
								C	0.201	1.656
T3 300.00-280.00	290.00		1.584	6135.24	1		63	A	0.207	9.949
								B	0.207	9.949
								C	0.207	9.949
T4 280.00-260.00	270.00		1.56	3362.03	1		62	A	0.237	0.000
								B	0.237	0.000
								C	0.237	0.000
T5 260.00-240.00	250.00		1.535	1842.35	1.001		61	A	0.219	0.000
								B	0.219	0.000

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft²
								C	0.219	0.000
T6 240.00-220.00	230.00		1.508	1009.58	1.001		60	A	0.223	0.000
								B	0.223	0.000
								C	0.223	0.000
T7 220.00-200.00	210.00		1.48	553.239	1.002		59	A	0.181	0.000
								B	0.181	0.000
								C	0.181	0.000
T8 200.00-180.00	190.00		1.449	303.168	1.003		58	A	0.187	0.000
								B	0.187	0.000
								C	0.187	0.000
T9 180.00-170.00	175.00		1.424	193.09	1.005		57	A	0.177	0.000
								B	0.177	0.000
								C	0.177	0.000
T10 170.00-160.00	165.00		1.406	142.937	1.007		56	A	0.171	0.000
								B	0.171	0.000
								C	0.171	0.000
T11 160.00-140.00	150.00		1.378	91.038	1.012		55	A	0.181	0.000
								B	0.181	0.000
								C	0.181	0.000
T12 140.00-120.00	130.00		1.337	49.888	1.021		54	A	0.173	0.000
								B	0.173	0.000
								C	0.173	0.000
T13 120.00-100.00	110.00		1.291	27.338	1.039		53	A	0.131	14.688
								B	0.131	14.688
								C	0.131	14.688
T14 100.00-80.00	90.00		1.238	14.981	1.072		53	A	0.122	15.547
								B	0.122	15.547
								C	0.122	15.547
T15 80.00-60.00	70.00		1.174	8.209	1.133		53	A	0.127	16.656
								B	0.127	16.656
								C	0.127	16.656
T16 60.00-30.00	45.00		1.07	3.87	1.293		55	A	0.122	26.963
								B	0.122	26.963
								C	0.122	26.963
T17 30.00-0.00	15.00		0.85	1.57	1.789		60	A	0.117	29.517
								B	0.117	29.517
								C	0.117	29.517

222-H Section Verification Tables - Ice

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft²
T1 320.00-304.00	312.00	312.00	1.608	11890.1	1	1.5649	9	A	0.412	25.791
								B	0.412	25.791
								C	0.412	25.791
T2 304.00-300.00	302.00	302.00	1.597	8801.76	1	1.5598	9	A	0.39	6.078
								B	0.39	6.078
								C	0.39	6.078
T3 300.00-280.00	290.00	290.00	1.584	6135.24	1	1.5535	9	A	0.374	32.520
								B	0.374	32.520
								C	0.374	32.520
T4 280.00-260.00	270.00	270.00	1.56	3362.03	1	1.5426	8	A	0.338	10.250
								B	0.338	10.250
								C	0.338	10.250
T5 260.00-240.00	250.00	250.00	1.535	1842.35	1.001	1.5309	8	A	0.315	11.761

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft²
								B	0.315	11.761
								C	0.315	11.761
T6 240.00-220.00	230.00	230.00	1.508	1009.58	1.001	1.5184	8	A	0.314	13.345
								B	0.314	13.345
								C	0.314	13.345
T7 220.00-200.00	210.00	210.00	1.48	553.239	1.002	1.5051	8	A	0.25	10.484
								B	0.25	10.484
								C	0.25	10.484
T8 200.00-180.00	190.00	190.00	1.449	303.168	1.003	1.4910	8	A	0.251	11.435
								B	0.251	11.435
								C	0.251	11.435
T9 180.00-170.00	175.00	175.00	1.424	193.09	1.005	1.4798	8	A	0.24	6.056
								B	0.24	6.056
								C	0.24	6.056
T10 170.00-160.00	165.00	165.00	1.406	142.937	1.007	1.4721	8	A	0.233	6.277
								B	0.233	6.277
								C	0.233	6.277
T11 160.00-140.00	150.00	150.00	1.378	91.038	1.012	1.4603	8	A	0.241	13.260
								B	0.241	13.260
								C	0.241	13.260
T12 140.00-120.00	130.00	130.00	1.337	49.888	1.021	1.4443	7	A	0.231	14.122
								B	0.231	14.122
								C	0.231	14.122
T13 120.00-100.00	110.00	110.00	1.291	27.338	1.039	1.4290	7	A	0.185	29.651
								B	0.185	29.651
								C	0.185	29.651
T14 100.00-80.00	90.00	90.00	1.238	14.981	1.072	1.4160	7	A	0.175	31.187
								B	0.175	31.187
								C	0.175	31.187
T15 80.00-60.00	70.00	70.00	1.174	8.209	1.133	1.4080	7	A	0.177	33.009
								B	0.177	33.009
								C	0.177	33.009
T16 60.00-30.00	45.00	45.00	1.07	3.87	1.293	1.4106	8	A	0.169	53.916
								B	0.169	53.916
								C	0.169	53.916
T17 30.00-0.00	15.00	15.00	0.85	1.57	1.789	1.4161	8	A	0.161	59.328
								B	0.161	59.328
								C	0.161	59.328

222-H Section Verification Tables - Service

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft²
T1 320.00-304.00	312.00		1.608	11890.1	1		13	A	0.209	8.547
								B	0.209	8.547
								C	0.209	8.547
T2 304.00-300.00	302.00		1.597	8801.76	1		13	A	0.201	2.131
								B	0.201	2.131
								C	0.201	2.131
T3 300.00-280.00	290.00		1.584	6135.24	1		12	A	0.207	12.544
								B	0.207	12.544
								C	0.207	12.544
T4 280.00-260.00	270.00		1.56	3362.03	1		12	A	0.237	0.000
								B	0.237	0.000
								C	0.237	0.000

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft²
T5 260.00-240.00	250.00		1.535	1842.35	1.001		12	A	0.219	0.000
								B	0.219	0.000
								C	0.219	0.000
T6 240.00-220.00	230.00		1.508	1009.58	1.001		12	A	0.223	0.000
								B	0.223	0.000
								C	0.223	0.000
T7 220.00-200.00	210.00		1.48	553.239	1.002		12	A	0.181	0.000
								B	0.181	0.000
								C	0.181	0.000
T8 200.00-180.00	190.00		1.449	303.168	1.003		11	A	0.187	0.000
								B	0.187	0.000
								C	0.187	0.000
T9 180.00-170.00	175.00		1.424	193.09	1.005		11	A	0.177	0.000
								B	0.177	0.000
								C	0.177	0.000
T10 170.00-160.00	165.00		1.406	142.937	1.007		11	A	0.171	0.000
								B	0.171	0.000
								C	0.171	0.000
T11 160.00-140.00	150.00		1.378	91.038	1.012		11	A	0.181	0.000
								B	0.181	0.000
								C	0.181	0.000
T12 140.00-120.00	130.00		1.337	49.888	1.021		11	A	0.173	0.000
								B	0.173	0.000
								C	0.173	0.000
T13 120.00-100.00	110.00		1.291	27.338	1.039		11	A	0.131	15.243
								B	0.131	15.243
								C	0.131	15.243
T14 100.00-80.00	90.00		1.238	14.981	1.072		10	A	0.122	16.124
								B	0.122	16.124
								C	0.122	16.124
T15 80.00-60.00	70.00		1.174	8.209	1.133		10	A	0.127	17.261
								B	0.127	17.261
								C	0.127	17.261
T16 60.00-30.00	45.00		1.07	3.87	1.293		11	A	0.122	29.736
								B	0.122	29.736
								C	0.122	29.736
T17 30.00-0.00	15.00		0.85	1.57	1.789		12	A	0.117	33.471
								B	0.117	33.471
								C	0.117	33.471

Tower Pressures - No Ice

$G_H = 0.850$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	312.00	1.608	64	116.377	A	9.512	14.835	14.835	60.93	0.000	0.000
320.00-304.00					B	9.512	14.835		60.93	5.561	0.000
					C	9.512	14.835		60.93	0.000	0.000
T2	302.00	1.597	63	29.094	A	2.147	3.709	3.709	63.34	0.000	0.000
304.00-300.00					B	2.147	3.709		63.34	1.540	0.000
					C	2.147	3.709		63.34	0.000	0.000
T3	290.00	1.584	63	167.656	A	12.563	22.122	22.122	63.78	0.000	0.000
300.00-280.00					B	12.563	22.122		63.78	13.483	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
					C	12.563	22.122		63.78	0.000	0.000
T4	270.00	1.56	62	216.829	A	51.368	0.000	37.788	73.56	0.000	0.000
280.00-260.00					B	51.368	0.000		73.56	26.676	0.000
					C	51.368	0.000		73.56	0.000	0.000
T5	250.00	1.535	61	259.126	A	56.868	0.000	37.778	66.43	0.000	0.000
260.00-240.00					B	56.868	0.000		66.43	37.174	0.000
					C	56.868	0.000		66.43	0.000	0.000
T6	230.00	1.508	60	299.625	A	66.901	0.000	37.776	56.46	0.000	0.000
240.00-220.00					B	66.901	0.000		56.46	49.355	0.000
					C	66.901	0.000		56.46	0.000	0.000
T7	210.00	1.48	59	339.725	A	61.588	0.000	37.775	61.34	0.000	0.000
220.00-200.00					B	61.588	0.000		61.34	49.900	0.000
					C	61.588	0.000		61.34	53.920	0.000
T8	190.00	1.449	58	385.076	A	71.839	0.000	45.633	63.52	34.000	0.000
200.00-180.00					B	71.839	0.000		63.52	49.900	0.000
					C	71.839	0.000		63.52	53.920	0.000
T9	175.00	1.424	57	208.387	A	36.864	0.000	22.815	61.89	17.000	0.000
180.00-170.00					B	36.864	0.000		61.89	27.055	0.000
					C	36.864	0.000		61.89	26.960	0.000
T10	165.00	1.406	56	218.787	A	37.492	0.000	22.815	60.85	17.000	0.000
170.00-160.00					B	37.492	0.000		60.85	29.412	0.000
					C	37.492	0.000		60.85	26.960	0.000
T11	150.00	1.378	55	467.070	A	84.562	0.000	45.617	53.94	34.000	0.000
160.00-140.00					B	84.562	0.000		53.94	65.283	0.000
					C	84.562	0.000		53.94	53.920	0.000
T12	130.00	1.337	54	507.978	A	87.738	0.000	45.637	52.02	34.000	0.000
140.00-120.00					B	87.738	0.000		52.02	71.886	0.000
					C	87.738	0.000		52.02	53.920	0.000
T13	110.00	1.291	53	555.591	A	45.673	26.937	45.673	62.90	34.000	0.000
120.00-100.00					B	45.673	26.937		62.90	76.650	0.000
					C	45.673	26.937		62.90	53.920	0.000
T14	90.00	1.238	53	606.388	A	45.666	28.523	45.666	61.55	34.000	0.000
100.00-80.00					B	45.666	28.523		61.55	83.818	0.000
					C	45.666	28.523		61.55	53.920	0.000
T15	70.00	1.174	53	662.098	A	53.708	30.518	53.708	63.77	34.000	0.000
80.00-60.00					B	53.708	30.518		63.77	85.889	0.000
					C	53.708	30.518		63.77	53.920	0.000
T16	45.00	1.07	55	1088.08	A	80.523	52.602	80.523	60.49	51.000	0.000
60.00-30.00				3	B	80.523	52.602		60.49	128.833	0.000
					C	80.523	52.602		60.49	80.880	0.000
T17 30.00-0.00	15.00	0.85	60	1202.12	A	81.480	59.240	81.480	57.90	42.500	0.000
				2	B	81.480	59.240		57.90	107.361	0.000
					C	81.480	59.240		57.90	67.400	0.000

Tower Pressure - With Ice

$G_H = 0.850$

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	312.00	1.608	9	1.5649	120.550	A	9.512	40.193	23.181	46.64	0.000	0.000
320.00-304.00						B	9.512	40.193		46.64	23.870	0.000
						C	9.512	40.193		46.64	0.000	0.000
T2	302.00	1.597	9	1.5598	30.134	A	2.147	9.615	5.788	49.21	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
304.00-300.00						B	2.147	9.615		49.21	6.531	0.000
						C	2.147	9.615		49.21	0.000	0.000
T3	290.00	1.584	9	1.5535	172.841	A	12.563	52.014	32.497	50.32	0.000	0.000
300.00-280.00						B	12.563	52.014		50.32	52.943	0.000
						C	12.563	52.014		50.32	0.000	0.000
T4	270.00	1.56	8	1.5426	221.979	A	58.238	16.759	44.657	59.54	0.000	0.000
280.00-260.00						B	58.238	16.759		59.54	95.474	0.000
						C	58.238	16.759		59.54	0.000	0.000
T5	250.00	1.535	8	1.5309	264.235	A	63.684	19.483	44.593	53.62	0.000	0.000
260.00-240.00						B	63.684	19.483		53.62	125.965	0.000
						C	63.684	19.483		53.62	0.000	0.000
T6	230.00	1.508	8	1.5184	304.693	A	73.661	22.112	44.536	46.50	0.000	0.000
240.00-220.00						B	73.661	22.112		46.50	163.236	0.000
						C	73.661	22.112		46.50	0.000	0.000
T7	210.00	1.48	8	1.5051	344.748	A	68.288	17.920	44.476	51.59	0.000	0.000
220.00-200.00						B	68.288	17.920		51.59	164.289	0.000
						C	68.288	17.920		51.59	88.565	0.000
T8	190.00	1.449	8	1.4910	390.053	A	78.478	19.536	52.272	53.33	97.770	0.000
200.00-180.00						B	78.478	19.536		53.33	163.213	0.000
						C	78.478	19.536		53.33	88.377	0.000
T9	175.00	1.424	8	1.4798	210.857	A	40.158	10.395	26.109	51.65	48.768	0.000
180.00-170.00						B	40.158	10.395		51.65	89.502	0.000
						C	40.158	10.395		51.65	44.114	0.000
T10	165.00	1.406	8	1.4721	221.244	A	40.770	10.803	26.092	50.59	48.688	0.000
170.00-160.00						B	40.770	10.803		50.59	99.189	0.000
						C	40.770	10.803		50.59	44.064	0.000
T11	150.00	1.378	8	1.4603	471.943	A	91.062	22.748	52.116	45.79	97.129	0.000
160.00-140.00						B	91.062	22.748		45.79	216.859	0.000
						C	91.062	22.748		45.79	87.971	0.000
T12	130.00	1.337	7	1.4443	512.799	A	94.170	24.323	52.069	43.94	96.796	0.000
140.00-120.00						B	94.170	24.323		43.94	236.829	0.000
						C	94.170	24.323		43.94	87.760	0.000
T13	110.00	1.291	7	1.4290	560.364	A	52.042	51.831	52.042	50.10	96.477	0.000
120.00-100.00						B	52.042	51.831		50.10	247.845	0.000
						C	52.042	51.831		50.10	87.557	0.000
T14	90.00	1.238	7	1.4160	611.117	A	51.975	54.668	51.975	48.74	96.204	0.000
100.00-80.00						B	51.975	54.668		48.74	265.345	0.000
						C	51.975	54.668		48.74	87.385	0.000
T15 80.00-60.00	70.00	1.174	7	1.4080	666.802	A	59.984	57.830	59.984	50.91	96.037	0.000
						B	59.984	57.830		50.91	271.739	0.000
						C	59.984	57.830		50.91	87.279	0.000
T16 60.00-30.00	45.00	1.07	8	1.4106	1095.149	A	89.950	94.641	89.950	48.73	144.138	0.000
						B	89.950	94.641		48.73	408.126	0.000
						C	89.950	94.641		48.73	130.970	0.000
T17 30.00-0.00	15.00	0.85	8	1.4161	1209.217	A	90.947	104.303	90.947	46.58	120.258	0.000
						B	90.947	104.303		46.58	341.014	0.000
						C	90.947	104.303		46.58	109.233	0.000

Tower Pressure - Service

$G_H = 0.850$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	312.00	1.608	13	116.377	A	9.512	14.835	14.835	60.93	0.000	0.000
320.00-304.00					B	9.512	14.835		60.93	5.561	0.000
					C	9.512	14.835		60.93	0.000	0.000
T2	302.00	1.597	13	29.094	A	2.147	3.709	3.709	63.34	0.000	0.000
304.00-300.00					B	2.147	3.709		63.34	1.540	0.000
					C	2.147	3.709		63.34	0.000	0.000
T3	290.00	1.584	12	167.656	A	12.563	22.122	22.122	63.78	0.000	0.000
300.00-280.00					B	12.563	22.122		63.78	13.483	0.000
					C	12.563	22.122		63.78	0.000	0.000
T4	270.00	1.56	12	216.829	A	51.368	0.000	37.788	73.56	0.000	0.000
280.00-260.00					B	51.368	0.000		73.56	26.676	0.000
					C	51.368	0.000		73.56	0.000	0.000
T5	250.00	1.535	12	259.126	A	56.868	0.000	37.778	66.43	0.000	0.000
260.00-240.00					B	56.868	0.000		66.43	37.174	0.000
					C	56.868	0.000		66.43	0.000	0.000
T6	230.00	1.508	12	299.625	A	66.901	0.000	37.776	56.46	0.000	0.000
240.00-220.00					B	66.901	0.000		56.46	49.355	0.000
					C	66.901	0.000		56.46	0.000	0.000
T7	210.00	1.48	12	339.725	A	61.588	0.000	37.775	61.34	0.000	0.000
220.00-200.00					B	61.588	0.000		61.34	49.900	0.000
					C	61.588	0.000		61.34	53.920	0.000
T8	190.00	1.449	11	385.076	A	71.839	0.000	45.633	63.52	34.000	0.000
200.00-180.00					B	71.839	0.000		63.52	49.900	0.000
					C	71.839	0.000		63.52	53.920	0.000
T9	175.00	1.424	11	208.387	A	36.864	0.000	22.815	61.89	17.000	0.000
180.00-170.00					B	36.864	0.000		61.89	27.055	0.000
					C	36.864	0.000		61.89	26.960	0.000
T10	165.00	1.406	11	218.787	A	37.492	0.000	22.815	60.85	17.000	0.000
170.00-160.00					B	37.492	0.000		60.85	29.412	0.000
					C	37.492	0.000		60.85	26.960	0.000
T11	150.00	1.378	11	467.070	A	84.562	0.000	45.617	53.94	34.000	0.000
160.00-140.00					B	84.562	0.000		53.94	65.283	0.000
					C	84.562	0.000		53.94	53.920	0.000
T12	130.00	1.337	11	507.978	A	87.738	0.000	45.637	52.02	34.000	0.000
140.00-120.00					B	87.738	0.000		52.02	71.886	0.000
					C	87.738	0.000		52.02	53.920	0.000
T13	110.00	1.291	11	555.591	A	45.673	26.937	45.673	62.90	34.000	0.000
120.00-100.00					B	45.673	26.937		62.90	76.650	0.000
					C	45.673	26.937		62.90	53.920	0.000
T14	90.00	1.238	10	606.388	A	45.666	28.523	45.666	61.55	34.000	0.000
100.00-80.00					B	45.666	28.523		61.55	83.818	0.000
					C	45.666	28.523		61.55	53.920	0.000
T15	70.00	1.174	10	662.098	A	53.708	30.518	53.708	63.77	34.000	0.000
80.00-60.00					B	53.708	30.518		63.77	85.889	0.000
					C	53.708	30.518		63.77	53.920	0.000
T16	45.00	1.07	11	1088.08	A	80.523	52.602	80.523	60.49	51.000	0.000
60.00-30.00				3	B	80.523	52.602		60.49	128.833	0.000
					C	80.523	52.602		60.49	80.880	0.000
T17 30.00-0.00	15.00	0.85	12	1202.12	A	81.480	59.240	81.480	57.90	42.500	0.000
				2	B	81.480	59.240		57.90	107.361	0.000
					C	81.480	59.240		57.90	67.400	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	15.90	1442.07	A	0.209	2.566	64	1	1	16.204	2434.71	152.17	C
320.00-304.00			B	0.209	2.566		1	1	16.204			
			C	0.209	2.566		1	1	16.204			
T2	4.36	349.72	A	0.201	2.592	63	1	1	3.803	580.44	145.11	C
304.00-300.00			B	0.201	2.592		1	1	3.803			
			C	0.201	2.592		1	1	3.803			
T3	40.00	2496.34	A	0.207	2.573	63	1	1	22.512	3524.72	176.24	C
300.00-280.00			B	0.207	2.573		1	1	22.512			
			C	0.207	2.573		1	1	22.512			
T4	87.48	5067.66	A	0.237	2.477	62	1	1	51.368	7535.90	376.79	C
280.00-260.00			B	0.237	2.477		1	1	51.368			
			C	0.237	2.477		1	1	51.368			
T5	122.62	5409.17	A	0.219	2.532	61	1	1	56.868	8609.84	430.49	C
260.00-240.00			B	0.219	2.532		1	1	56.868			
			C	0.219	2.532		1	1	56.868			
T6	162.20	6484.36	A	0.223	2.52	60	1	1	66.901	10087.46	504.37	C
240.00-220.00			B	0.223	2.52		1	1	66.901			
			C	0.223	2.52		1	1	66.901			
T7	487.20	6406.00	A	0.181	2.66	59	1	1	61.588	11298.21	564.91	C
220.00-200.00			B	0.181	2.66		1	1	61.588			
			C	0.181	2.66		1	1	61.588			
T8	697.00	7298.65	A	0.187	2.642	58	1	1	71.839	13351.98	667.60	C
200.00-180.00			B	0.187	2.642		1	1	71.839			
			C	0.187	2.642		1	1	71.839			
T9	353.86	3730.84	A	0.177	2.675	57	1	1	36.864	6815.32	681.53	C
180.00-170.00			B	0.177	2.675		1	1	36.864			
			C	0.177	2.675		1	1	36.864			
T10	360.99	3785.29	A	0.171	2.694	56	1	1	37.492	6927.06	692.71	C
170.00-160.00			B	0.171	2.694		1	1	37.492			
			C	0.171	2.694		1	1	37.492			
T11	742.19	9608.59	A	0.181	2.661	55	1	1	84.562	14896.52	744.83	C
160.00-140.00			B	0.181	2.661		1	1	84.562			
			C	0.181	2.661		1	1	84.562			
T12	761.88	9975.29	A	0.173	2.69	54	1	1	87.738	15282.01	764.10	C
140.00-120.00			B	0.173	2.69		1	1	87.738			
			C	0.173	2.69		1	1	87.738			
T13	772.13	9144.95	A	0.131	2.844	53	1	1	60.361	12230.52	611.53	C
120.00-100.00			B	0.131	2.844		1	1	60.361			
			C	0.131	2.844		1	1	60.361			
T14	787.88	9675.54	A	0.122	2.876	53	1	1	61.213	12483.85	624.19	C
100.00-80.00			B	0.122	2.876		1	1	61.213			
			C	0.122	2.876		1	1	61.213			
T15	793.20	11450.50	A	0.127	2.857	53	1	1	70.364	13694.37	684.72	C
80.00-60.00			B	0.127	2.857		1	1	70.364			
			C	0.127	2.857		1	1	70.364			
T16	1189.80	15115.36	A	0.122	2.876	55	1	1	107.486	21700.53	723.35	C
60.00-30.00			B	0.122	2.876		1	1	107.486			
			C	0.122	2.876		1	1	107.486			
T17	991.50	17941.94	A	0.117	2.896	60	1	1	110.997	23162.54	772.08	C
30.00-0.00			B	0.117	2.896		1	1	110.997			
			C	0.117	2.896		1	1	110.997			
Sum Weight:	8370.19	125382.28						OTM	24682.11 kip-ft	184615.95		

Tower Forces - No Ice - Wind 45 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	15.90	1442.07	A	0.209	2.566	64	0.825	1	14.539	2203.17	137.70	C
320.00-304.00			B	0.209	2.566		0.825	1	14.539			
			C	0.209	2.566		0.825	1	14.539			
T2	4.36	349.72	A	0.201	2.592	63	0.825	1	3.427	528.01	132.00	C
304.00-300.00			B	0.201	2.592		0.825	1	3.427			
			C	0.201	2.592		0.825	1	3.427			
T3	40.00	2496.34	A	0.207	2.573	63	0.825	1	20.313	3222.67	161.13	C
300.00-280.00			B	0.207	2.573		0.825	1	20.313			
			C	0.207	2.573		0.825	1	20.313			
T4	87.48	5067.66	A	0.237	2.477	62	0.825	1	42.379	6364.45	318.22	C
280.00-260.00			B	0.237	2.477		0.825	1	42.379			
			C	0.237	2.477		0.825	1	42.379			
T5	122.62	5409.17	A	0.219	2.532	61	0.825	1	46.916	7305.19	365.26	C
260.00-240.00			B	0.219	2.532		0.825	1	46.916			
			C	0.219	2.532		0.825	1	46.916			
T6	162.20	6484.36	A	0.223	2.52	60	0.825	1	55.194	8585.90	429.29	C
240.00-220.00			B	0.223	2.52		0.825	1	55.194			
			C	0.223	2.52		0.825	1	55.194			
T7	487.20	6406.00	A	0.181	2.66	59	0.825	1	50.810	9865.76	493.29	C
220.00-200.00			B	0.181	2.66		0.825	1	50.810			
			C	0.181	2.66		0.825	1	50.810			
T8	697.00	7298.65	A	0.187	2.642	58	0.825	1	59.267	11724.55	586.23	C
200.00-180.00			B	0.187	2.642		0.825	1	59.267			
			C	0.187	2.642		0.825	1	59.267			
T9	353.86	3730.84	A	0.177	2.675	57	0.825	1	30.413	5982.50	598.25	C
180.00-170.00			B	0.177	2.675		0.825	1	30.413			
			C	0.177	2.675		0.825	1	30.413			
T10	360.99	3785.29	A	0.171	2.694	56	0.825	1	30.931	6082.75	608.28	C
170.00-160.00			B	0.171	2.694		0.825	1	30.931			
			C	0.171	2.694		0.825	1	30.931			
T11	742.19	9608.59	A	0.181	2.661	55	0.825	1	69.763	13045.80	652.29	C
160.00-140.00			B	0.181	2.661		0.825	1	69.763			
			C	0.181	2.661		0.825	1	69.763			
T12	761.88	9975.29	A	0.173	2.69	54	0.825	1	72.384	13380.33	669.02	C
140.00-120.00			B	0.173	2.69		0.825	1	72.384			
			C	0.173	2.69		0.825	1	72.384			
T13	772.13	9144.95	A	0.131	2.844	53	0.825	1	52.368	11202.39	560.12	C
120.00-100.00			B	0.131	2.844		0.825	1	52.368			
			C	0.131	2.844		0.825	1	52.368			
T14	787.88	9675.54	A	0.122	2.876	53	0.825	1	53.222	11455.81	572.79	C
100.00-80.00			B	0.122	2.876		0.825	1	53.222			
			C	0.122	2.876		0.825	1	53.222			
T15	793.20	11450.50	A	0.127	2.857	53	0.825	1	60.966	12489.93	624.50	C
80.00-60.00			B	0.127	2.857		0.825	1	60.966			
			C	0.127	2.857		0.825	1	60.966			
T16	1189.80	15115.36	A	0.122	2.876	55	0.825	1	93.395	19811.51	660.38	C
60.00-30.00			B	0.122	2.876		0.825	1	93.395			
			C	0.122	2.876		0.825	1	93.395			
T17	991.50	17941.94	A	0.117	2.896	60	0.825	1	96.738	21045.44	701.51	C
30.00-0.00			B	0.117	2.896		0.825	1	96.738			
			C	0.117	2.896		0.825	1	96.738			
Sum Weight:	8370.19	125382.28						OTM	21692.04 kip-ft	164296.16		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T1	15.90	1442.07	A	0.209	2.566	64	0.8	1	14.302	2170.09	135.63	C
320.00-304.00			B	0.209	2.566		0.8	1	14.302			
			C	0.209	2.566		0.8	1	14.302			
T2	4.36	349.72	A	0.201	2.592	63	0.8	1	3.373	520.52	130.13	C
304.00-300.00			B	0.201	2.592		0.8	1	3.373			
			C	0.201	2.592		0.8	1	3.373			
T3	40.00	2496.34	A	0.207	2.573	63	0.8	1	19.999	3179.52	158.98	C
300.00-280.00			B	0.207	2.573		0.8	1	19.999			
			C	0.207	2.573		0.8	1	19.999			
T4	87.48	5067.66	A	0.237	2.477	62	0.8	1	41.095	6197.10	309.86	C
280.00-260.00			B	0.237	2.477		0.8	1	41.095			
			C	0.237	2.477		0.8	1	41.095			
T5	122.62	5409.17	A	0.219	2.532	61	0.8	1	45.494	7118.81	355.94	C
260.00-240.00			B	0.219	2.532		0.8	1	45.494			
			C	0.219	2.532		0.8	1	45.494			
T6	162.20	6484.36	A	0.223	2.52	60	0.8	1	53.521	8371.39	418.57	C
240.00-220.00			B	0.223	2.52		0.8	1	53.521			
			C	0.223	2.52		0.8	1	53.521			
T7	487.20	6406.00	A	0.181	2.66	59	0.8	1	49.270	9661.12	483.06	C
220.00-200.00			B	0.181	2.66		0.8	1	49.270			
			C	0.181	2.66		0.8	1	49.270			
T8	697.00	7298.65	A	0.187	2.642	58	0.8	1	57.471	11492.06	574.60	C
200.00-180.00			B	0.187	2.642		0.8	1	57.471			
			C	0.187	2.642		0.8	1	57.471			
T9	353.86	3730.84	A	0.177	2.675	57	0.8	1	29.491	5863.53	586.35	C
180.00-170.00			B	0.177	2.675		0.8	1	29.491			
			C	0.177	2.675		0.8	1	29.491			
T10	360.99	3785.29	A	0.171	2.694	56	0.8	1	29.994	5962.14	596.21	C
170.00-160.00			B	0.171	2.694		0.8	1	29.994			
			C	0.171	2.694		0.8	1	29.994			
T11	742.19	9608.59	A	0.181	2.661	55	0.8	1	67.649	12781.41	639.07	C
160.00-140.00			B	0.181	2.661		0.8	1	67.649			
			C	0.181	2.661		0.8	1	67.649			
T12	761.88	9975.29	A	0.173	2.69	54	0.8	1	70.190	13108.67	655.43	C
140.00-120.00			B	0.173	2.69		0.8	1	70.190			
			C	0.173	2.69		0.8	1	70.190			
T13	772.13	9144.95	A	0.131	2.844	53	0.8	1	51.226	11055.52	552.78	C
120.00-100.00			B	0.131	2.844		0.8	1	51.226			
			C	0.131	2.844		0.8	1	51.226			
T14	787.88	9675.54	A	0.122	2.876	53	0.8	1	52.080	11308.94	565.45	C
100.00-80.00			B	0.122	2.876		0.8	1	52.080			
			C	0.122	2.876		0.8	1	52.080			
T15	793.20	11450.50	A	0.127	2.857	53	0.8	1	59.623	12317.86	615.89	C
80.00-60.00			B	0.127	2.857		0.8	1	59.623			
			C	0.127	2.857		0.8	1	59.623			
T16	1189.80	15115.36	A	0.122	2.876	55	0.8	1	91.382	19541.65	651.39	C
60.00-30.00			B	0.122	2.876		0.8	1	91.382			
			C	0.122	2.876		0.8	1	91.382			
T17	991.50	17941.94	A	0.117	2.896	60	0.8	1	94.701	20743.00	691.43	C
30.00-0.00			B	0.117	2.896		0.8	1	94.701			
			C	0.117	2.896		0.8	1	94.701			
Sum Weight:	8370.19	125382.28						OTM	21264.88 kip-ft	161393.33		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	15.90	1442.07	A	0.209	2.566	64	0.85	1	14.777	2236.24	139.77	C
320.00-304.00			B	0.209	2.566		0.85	1	14.777			
			C	0.209	2.566		0.85	1	14.777			
T2	4.36	349.72	A	0.201	2.592	63	0.85	1	3.481	535.50	133.87	C
304.00-300.00			B	0.201	2.592		0.85	1	3.481			
			C	0.201	2.592		0.85	1	3.481			
T3	40.00	2496.34	A	0.207	2.573	63	0.85	1	20.627	3265.82	163.29	C
300.00-280.00			B	0.207	2.573		0.85	1	20.627			
			C	0.207	2.573		0.85	1	20.627			
T4	87.48	5067.66	A	0.237	2.477	62	0.85	1	43.663	6531.80	326.59	C
280.00-260.00			B	0.237	2.477		0.85	1	43.663			
			C	0.237	2.477		0.85	1	43.663			
T5	122.62	5409.17	A	0.219	2.532	61	0.85	1	48.338	7491.57	374.58	C
260.00-240.00			B	0.219	2.532		0.85	1	48.338			
			C	0.219	2.532		0.85	1	48.338			
T6	162.20	6484.36	A	0.223	2.52	60	0.85	1	56.866	8800.41	440.02	C
240.00-220.00			B	0.223	2.52		0.85	1	56.866			
			C	0.223	2.52		0.85	1	56.866			
T7	487.20	6406.00	A	0.181	2.66	59	0.85	1	52.350	10070.39	503.52	C
220.00-200.00			B	0.181	2.66		0.85	1	52.350			
			C	0.181	2.66		0.85	1	52.350			
T8	697.00	7298.65	A	0.187	2.642	58	0.85	1	61.063	11957.04	597.85	C
200.00-180.00			B	0.187	2.642		0.85	1	61.063			
			C	0.187	2.642		0.85	1	61.063			
T9	353.86	3730.84	A	0.177	2.675	57	0.85	1	31.334	6101.47	610.15	C
180.00-170.00			B	0.177	2.675		0.85	1	31.334			
			C	0.177	2.675		0.85	1	31.334			
T10	360.99	3785.29	A	0.171	2.694	56	0.85	1	31.869	6203.37	620.34	C
170.00-160.00			B	0.171	2.694		0.85	1	31.869			
			C	0.171	2.694		0.85	1	31.869			
T11	742.19	9608.59	A	0.181	2.661	55	0.85	1	71.877	13310.19	665.51	C
160.00-140.00			B	0.181	2.661		0.85	1	71.877			
			C	0.181	2.661		0.85	1	71.877			
T12	761.88	9975.29	A	0.173	2.69	54	0.85	1	74.577	13652.00	682.60	C
140.00-120.00			B	0.173	2.69		0.85	1	74.577			
			C	0.173	2.69		0.85	1	74.577			
T13	772.13	9144.95	A	0.131	2.844	53	0.85	1	53.510	11349.27	567.46	C
120.00-100.00			B	0.131	2.844		0.85	1	53.510			
			C	0.131	2.844		0.85	1	53.510			
T14	787.88	9675.54	A	0.122	2.876	53	0.85	1	54.363	11602.67	580.13	C
100.00-80.00			B	0.122	2.876		0.85	1	54.363			
			C	0.122	2.876		0.85	1	54.363			
T15	793.20	11450.50	A	0.127	2.857	53	0.85	1	62.308	12661.99	633.10	C
80.00-60.00			B	0.127	2.857		0.85	1	62.308			
			C	0.127	2.857		0.85	1	62.308			
T16	1189.80	15115.36	A	0.122	2.876	55	0.85	1	95.408	20081.37	669.38	C
60.00-30.00			B	0.122	2.876		0.85	1	95.408			
			C	0.122	2.876		0.85	1	95.408			
T17	991.50	17941.94	A	0.117	2.896	60	0.85	1	98.775	21347.88	711.60	C
30.00-0.00			B	0.117	2.896		0.85	1	98.775			
			C	0.117	2.896		0.85	1	98.775			
Sum Weight:	8370.19	125382.28						OTM	22119.19 kip-ft	167198.98		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	297.24	3718.00	A	0.412	2.04	9	1	1	35.303	639.94	40.00	C
320.00-304.00			B	0.412	2.04		1	1	35.303			
			C	0.412	2.04		1	1	35.303			
T2	81.27	876.97	A	0.39	2.083	9	1	1	8.225	155.52	38.88	C
304.00-300.00			B	0.39	2.083		1	1	8.225			
			C	0.39	2.083		1	1	8.225			
T3	670.39	5454.93	A	0.374	2.119	9	1	1	45.084	932.19	46.61	C
300.00-280.00			B	0.374	2.119		1	1	45.084			
			C	0.374	2.119		1	1	45.084			
T4	1238.50	9993.41	A	0.338	2.2	8	1	1	68.488	1500.63	75.03	C
280.00-260.00			B	0.338	2.2		1	1	68.488			
			C	0.338	2.2		1	1	68.488			
T5	1648.23	10928.10	A	0.315	2.258	8	1	1	75.445	1746.23	87.31	C
260.00-240.00			B	0.315	2.258		1	1	75.445			
			C	0.315	2.258		1	1	75.445			
T6	2134.09	13035.17	A	0.314	2.259	8	1	1	87.006	2055.63	102.78	C
240.00-220.00			B	0.314	2.259		1	1	87.006			
			C	0.314	2.259		1	1	87.006			
T7	4066.59	12192.34	A	0.25	2.437	8	1	1	78.772	2355.99	117.80	C
220.00-200.00			B	0.25	2.437		1	1	78.772			
			C	0.25	2.437		1	1	78.772			
T8	5368.07	13769.83	A	0.251	2.434	8	1	1	89.912	2880.08	144.00	C
200.00-180.00			B	0.251	2.434		1	1	89.912			
			C	0.251	2.434		1	1	89.912			
T9	2764.53	7047.87	A	0.24	2.469	8	1	1	46.214	1479.69	147.97	C
180.00-170.00			B	0.24	2.469		1	1	46.214			
			C	0.24	2.469		1	1	46.214			
T10	2869.01	7154.97	A	0.233	2.489	8	1	1	47.047	1521.66	152.17	C
170.00-160.00			B	0.233	2.489		1	1	47.047			
			C	0.233	2.489		1	1	47.047			
T11	5927.57	17229.75	A	0.241	2.464	8	1	1	104.321	3212.82	160.64	C
160.00-140.00			B	0.241	2.464		1	1	104.321			
			C	0.241	2.464		1	1	104.321			
T12	6124.18	17845.28	A	0.231	2.496	7	1	1	108.292	3304.08	165.20	C
140.00-120.00			B	0.231	2.496		1	1	108.292			
			C	0.231	2.496		1	1	108.292			
T13	6207.75	15622.00	A	0.185	2.646	7	1	1	81.693	2948.77	147.44	C
120.00-100.00			B	0.185	2.646		1	1	81.693			
			C	0.185	2.646		1	1	81.693			
T14	6371.90	16285.71	A	0.175	2.683	7	1	1	83.163	3022.08	151.10	C
100.00-80.00			B	0.175	2.683		1	1	83.163			
			C	0.175	2.683		1	1	83.163			
T15	6421.84	18682.36	A	0.177	2.676	7	1	1	92.993	3210.71	160.54	C
80.00-60.00			B	0.177	2.676		1	1	92.993			
			C	0.177	2.676		1	1	92.993			
T16	9651.24	26398.48	A	0.169	2.704	8	1	1	143.866	5108.99	170.30	C
60.00-30.00			B	0.169	2.704		1	1	143.866			
			C	0.169	2.704		1	1	143.866			
T17	8075.17	29982.17	A	0.161	2.73	8	1	1	150.275	5291.52	176.38	C
30.00-0.00			B	0.161	2.73		1	1	150.275			
			C	0.161	2.73		1	1	150.275			
Sum Weight:	69917.56	226217.32						OTM	5425.31 kip-ft	41366.52		

Tower Forces - With Ice - Wind 45 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	297.24	3718.00	A	0.412	2.04	9	0.825	1	33.638	614.69	38.42	C
320.00-304.00			B	0.412	2.04		0.825	1	33.638			
			C	0.412	2.04		0.825	1	33.638			
T2	81.27	876.97	A	0.39	2.083	9	0.825	1	7.849	149.74	37.43	C
304.00-300.00			B	0.39	2.083		0.825	1	7.849			
			C	0.39	2.083		0.825	1	7.849			
T3	670.39	5454.93	A	0.374	2.119	9	0.825	1	42.885	898.07	44.90	C
300.00-280.00			B	0.374	2.119		0.825	1	42.885			
			C	0.374	2.119		0.825	1	42.885			
T4	1238.50	9993.41	A	0.338	2.2	8	0.825	1	58.297	1338.83	66.94	C
280.00-260.00			B	0.338	2.2		0.825	1	58.297			
			C	0.338	2.2		0.825	1	58.297			
T5	1648.23	10928.10	A	0.315	2.258	8	0.825	1	64.300	1567.56	78.38	C
260.00-240.00			B	0.315	2.258		0.825	1	64.300			
			C	0.315	2.258		0.825	1	64.300			
T6	2134.09	13035.17	A	0.314	2.259	8	0.825	1	74.116	1852.38	92.62	C
240.00-220.00			B	0.314	2.259		0.825	1	74.116			
			C	0.314	2.259		0.825	1	74.116			
T7	4066.59	12192.34	A	0.25	2.437	8	0.825	1	66.822	2156.33	107.82	C
220.00-200.00			B	0.25	2.437		0.825	1	66.822			
			C	0.25	2.437		0.825	1	66.822			
T8	5368.07	13769.83	A	0.251	2.434	8	0.825	1	76.179	2655.40	132.77	C
200.00-180.00			B	0.251	2.434		0.825	1	76.179			
			C	0.251	2.434		0.825	1	76.179			
T9	2764.53	7047.87	A	0.24	2.469	8	0.825	1	39.186	1364.84	136.48	C
180.00-170.00			B	0.24	2.469		0.825	1	39.186			
			C	0.24	2.469		0.825	1	39.186			
T10	2869.01	7154.97	A	0.233	2.489	8	0.825	1	39.912	1405.31	140.53	C
170.00-160.00			B	0.233	2.489		0.825	1	39.912			
			C	0.233	2.489		0.825	1	39.912			
T11	5927.57	17229.75	A	0.241	2.464	8	0.825	1	88.385	2959.60	147.98	C
160.00-140.00			B	0.241	2.464		0.825	1	88.385			
			C	0.241	2.464		0.825	1	88.385			
T12	6124.18	17845.28	A	0.231	2.496	7	0.825	1	91.812	3044.31	152.22	C
140.00-120.00			B	0.231	2.496		0.825	1	91.812			
			C	0.231	2.496		0.825	1	91.812			
T13	6207.75	15622.00	A	0.185	2.646	7	0.825	1	72.586	2799.27	139.96	C
120.00-100.00			B	0.185	2.646		0.825	1	72.586			
			C	0.185	2.646		0.825	1	72.586			
T14	6371.90	16285.71	A	0.175	2.683	7	0.825	1	74.067	2872.32	143.62	C
100.00-80.00			B	0.175	2.683		0.825	1	74.067			
			C	0.175	2.683		0.825	1	74.067			
T15	6421.84	18682.36	A	0.177	2.676	7	0.825	1	82.496	3037.91	151.90	C
80.00-60.00			B	0.177	2.676		0.825	1	82.496			
			C	0.177	2.676		0.825	1	82.496			
T16	9651.24	26398.48	A	0.169	2.704	8	0.825	1	128.124	4836.78	161.23	C
60.00-30.00			B	0.169	2.704		0.825	1	128.124			
			C	0.169	2.704		0.825	1	128.124			
T17	8075.17	29982.17	A	0.161	2.73	8	0.825	1	134.360	4986.02	166.20	C
30.00-0.00			B	0.161	2.73		0.825	1	134.360			
			C	0.161	2.73		0.825	1	134.360			
Sum Weight:	69917.56	226217.32						OTM	5016.17 kip-ft	38539.35		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	297.24	3718.00	A	0.412	2.04	9	0.8	1	33.400	611.08	38.19	C
320.00-304.00			B	0.412	2.04		0.8	1	33.400			
			C	0.412	2.04		0.8	1	33.400			
T2	81.27	876.97	A	0.39	2.083	9	0.8	1	7.795	148.91	37.23	C
304.00-300.00			B	0.39	2.083		0.8	1	7.795			
			C	0.39	2.083		0.8	1	7.795			
T3	670.39	5454.93	A	0.374	2.119	9	0.8	1	42.571	893.20	44.66	C
300.00-280.00			B	0.374	2.119		0.8	1	42.571			
			C	0.374	2.119		0.8	1	42.571			
T4	1238.50	9993.41	A	0.338	2.2	8	0.8	1	56.841	1315.71	65.79	C
280.00-260.00			B	0.338	2.2		0.8	1	56.841			
			C	0.338	2.2		0.8	1	56.841			
T5	1648.23	10928.10	A	0.315	2.258	8	0.8	1	62.708	1542.03	77.10	C
260.00-240.00			B	0.315	2.258		0.8	1	62.708			
			C	0.315	2.258		0.8	1	62.708			
T6	2134.09	13035.17	A	0.314	2.259	8	0.8	1	72.274	1823.34	91.17	C
240.00-220.00			B	0.314	2.259		0.8	1	72.274			
			C	0.314	2.259		0.8	1	72.274			
T7	4066.59	12192.34	A	0.25	2.437	8	0.8	1	65.114	2127.81	106.39	C
220.00-200.00			B	0.25	2.437		0.8	1	65.114			
			C	0.25	2.437		0.8	1	65.114			
T8	5368.07	13769.83	A	0.251	2.434	8	0.8	1	74.217	2623.30	131.17	C
200.00-180.00			B	0.251	2.434		0.8	1	74.217			
			C	0.251	2.434		0.8	1	74.217			
T9	2764.53	7047.87	A	0.24	2.469	8	0.8	1	38.182	1348.44	134.84	C
180.00-170.00			B	0.24	2.469		0.8	1	38.182			
			C	0.24	2.469		0.8	1	38.182			
T10	2869.01	7154.97	A	0.233	2.489	8	0.8	1	38.893	1388.69	138.87	C
170.00-160.00			B	0.233	2.489		0.8	1	38.893			
			C	0.233	2.489		0.8	1	38.893			
T11	5927.57	17229.75	A	0.241	2.464	8	0.8	1	86.109	2923.42	146.17	C
160.00-140.00			B	0.241	2.464		0.8	1	86.109			
			C	0.241	2.464		0.8	1	86.109			
T12	6124.18	17845.28	A	0.231	2.496	7	0.8	1	89.458	3007.20	150.36	C
140.00-120.00			B	0.231	2.496		0.8	1	89.458			
			C	0.231	2.496		0.8	1	89.458			
T13	6207.75	15622.00	A	0.185	2.646	7	0.8	1	71.285	2777.91	138.90	C
120.00-100.00			B	0.185	2.646		0.8	1	71.285			
			C	0.185	2.646		0.8	1	71.285			
T14	6371.90	16285.71	A	0.175	2.683	7	0.8	1	72.768	2850.92	142.55	C
100.00-80.00			B	0.175	2.683		0.8	1	72.768			
			C	0.175	2.683		0.8	1	72.768			
T15	6421.84	18682.36	A	0.177	2.676	7	0.8	1	80.996	3013.22	150.66	C
80.00-60.00			B	0.177	2.676		0.8	1	80.996			
			C	0.177	2.676		0.8	1	80.996			
T16	9651.24	26398.48	A	0.169	2.704	8	0.8	1	125.876	4797.90	159.93	C
60.00-30.00			B	0.169	2.704		0.8	1	125.876			
			C	0.169	2.704		0.8	1	125.876			
T17	8075.17	29982.17	A	0.161	2.73	8	0.8	1	132.086	4942.38	164.75	C
30.00-0.00			B	0.161	2.73		0.8	1	132.086			
			C	0.161	2.73		0.8	1	132.086			
Sum Weight:	69917.56	226217.32						OTM	4957.72	38135.47		

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
									kip-ft			

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	297.24	3718.00	A	0.412	2.04	9	0.85	1	33.876	618.30	38.64	C
320.00-304.00			B	0.412	2.04		0.85	1	33.876			
			C	0.412	2.04		0.85	1	33.876			
T2	81.27	876.97	A	0.39	2.083	9	0.85	1	7.903	150.56	37.64	C
304.00-300.00			B	0.39	2.083		0.85	1	7.903			
			C	0.39	2.083		0.85	1	7.903			
T3	670.39	5454.93	A	0.374	2.119	9	0.85	1	43.199	902.95	45.15	C
300.00-280.00			B	0.374	2.119		0.85	1	43.199			
			C	0.374	2.119		0.85	1	43.199			
T4	1238.50	9993.41	A	0.338	2.2	8	0.85	1	59.752	1361.94	68.10	C
280.00-260.00			B	0.338	2.2		0.85	1	59.752			
			C	0.338	2.2		0.85	1	59.752			
T5	1648.23	10928.10	A	0.315	2.258	8	0.85	1	65.892	1593.08	79.65	C
260.00-240.00			B	0.315	2.258		0.85	1	65.892			
			C	0.315	2.258		0.85	1	65.892			
T6	2134.09	13035.17	A	0.314	2.259	8	0.85	1	75.957	1881.41	94.07	C
240.00-220.00			B	0.314	2.259		0.85	1	75.957			
			C	0.314	2.259		0.85	1	75.957			
T7	4066.59	12192.34	A	0.25	2.437	8	0.85	1	68.529	2184.86	109.24	C
220.00-200.00			B	0.25	2.437		0.85	1	68.529			
			C	0.25	2.437		0.85	1	68.529			
T8	5368.07	13769.83	A	0.251	2.434	8	0.85	1	78.141	2687.50	134.37	C
200.00-180.00			B	0.251	2.434		0.85	1	78.141			
			C	0.251	2.434		0.85	1	78.141			
T9	2764.53	7047.87	A	0.24	2.469	8	0.85	1	40.190	1381.25	138.13	C
180.00-170.00			B	0.24	2.469		0.85	1	40.190			
			C	0.24	2.469		0.85	1	40.190			
T10	2869.01	7154.97	A	0.233	2.489	8	0.85	1	40.932	1421.93	142.19	C
170.00-160.00			B	0.233	2.489		0.85	1	40.932			
			C	0.233	2.489		0.85	1	40.932			
T11	5927.57	17229.75	A	0.241	2.464	8	0.85	1	90.662	2995.77	149.79	C
160.00-140.00			B	0.241	2.464		0.85	1	90.662			
			C	0.241	2.464		0.85	1	90.662			
T12	6124.18	17845.28	A	0.231	2.496	7	0.85	1	94.166	3081.42	154.07	C
140.00-120.00			B	0.231	2.496		0.85	1	94.166			
			C	0.231	2.496		0.85	1	94.166			
T13	6207.75	15622.00	A	0.185	2.646	7	0.85	1	73.887	2820.63	141.03	C
120.00-100.00			B	0.185	2.646		0.85	1	73.887			
			C	0.185	2.646		0.85	1	73.887			
T14	6371.90	16285.71	A	0.175	2.683	7	0.85	1	75.366	2893.71	144.69	C
100.00-80.00			B	0.175	2.683		0.85	1	75.366			
			C	0.175	2.683		0.85	1	75.366			
T15	6421.84	18682.36	A	0.177	2.676	7	0.85	1	83.996	3062.59	153.13	C
80.00-60.00			B	0.177	2.676		0.85	1	83.996			
			C	0.177	2.676		0.85	1	83.996			
T16	9651.24	26398.48	A	0.169	2.704	8	0.85	1	130.373	4875.67	162.52	C

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
60.00-30.00			B	0.169	2.704		0.85	1	130.373			
			C	0.169	2.704		0.85	1	130.373			
T17	8075.17	29982.17	A	0.161	2.73	8	0.85	1	136.633	5029.66	167.66	C
30.00-0.00			B	0.161	2.73		0.85	1	136.633			
			C	0.161	2.73		0.85	1	136.633			
Sum Weight:	69917.56	226217.32						OTM	5074.62 kip-ft	38943.23		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T1	15.90	1442.07	A	0.209	2.566	13	1	1	18.059	531.91	33.24	C
320.00-304.00			B	0.209	2.566		1	1	18.059			
			C	0.209	2.566		1	1	18.059			
T2	4.36	349.72	A	0.201	2.592	13	1	1	4.278	127.76	31.94	C
304.00-300.00			B	0.201	2.592		1	1	4.278			
			C	0.201	2.592		1	1	4.278			
T3	40.00	2496.34	A	0.207	2.573	12	1	1	25.107	766.66	38.33	C
300.00-280.00			B	0.207	2.573		1	1	25.107			
			C	0.207	2.573		1	1	25.107			
T4	87.48	5067.66	A	0.237	2.477	12	1	1	51.368	1488.57	74.43	C
280.00-260.00			B	0.237	2.477		1	1	51.368			
			C	0.237	2.477		1	1	51.368			
T5	122.62	5409.17	A	0.219	2.532	12	1	1	56.868	1700.71	85.04	C
260.00-240.00			B	0.219	2.532		1	1	56.868			
			C	0.219	2.532		1	1	56.868			
T6	162.20	6484.36	A	0.223	2.52	12	1	1	66.901	1992.59	99.63	C
240.00-220.00			B	0.223	2.52		1	1	66.901			
			C	0.223	2.52		1	1	66.901			
T7	487.20	6406.00	A	0.181	2.66	12	1	1	61.588	2231.74	111.59	C
220.00-200.00			B	0.181	2.66		1	1	61.588			
			C	0.181	2.66		1	1	61.588			
T8	697.00	7298.65	A	0.187	2.642	11	1	1	71.839	2637.43	131.87	C
200.00-180.00			B	0.187	2.642		1	1	71.839			
			C	0.187	2.642		1	1	71.839			
T9	353.86	3730.84	A	0.177	2.675	11	1	1	36.864	1346.24	134.62	C
180.00-170.00			B	0.177	2.675		1	1	36.864			
			C	0.177	2.675		1	1	36.864			
T10	360.99	3785.29	A	0.171	2.694	11	1	1	37.492	1368.31	136.83	C
170.00-160.00			B	0.171	2.694		1	1	37.492			
			C	0.171	2.694		1	1	37.492			
T11	742.19	9608.59	A	0.181	2.661	11	1	1	84.562	2942.52	147.13	C
160.00-140.00			B	0.181	2.661		1	1	84.562			
			C	0.181	2.661		1	1	84.562			
T12	761.88	9975.29	A	0.173	2.69	11	1	1	87.738	3018.67	150.93	C
140.00-120.00			B	0.173	2.69		1	1	87.738			
			C	0.173	2.69		1	1	87.738			
T13	772.13	9144.95	A	0.131	2.844	11	1	1	60.916	2430.01	121.50	C
120.00-100.00			B	0.131	2.844		1	1	60.916			
			C	0.131	2.844		1	1	60.916			
T14	787.88	9675.54	A	0.122	2.876	10	1	1	61.790	2480.61	124.03	C

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
100.00-80.00			B	0.122	2.876		1	1	61.790			
			C	0.122	2.876		1	1	61.790			
T15	793.20	11450.50	A	0.127	2.857	10	1	1	70.970	2720.38	136.02	C
80.00-60.00			B	0.127	2.857		1	1	70.970			
			C	0.127	2.857		1	1	70.970			
T16	1189.80	15115.36	A	0.122	2.876	11	1	1	110.259	4359.95	145.33	C
60.00-30.00			B	0.122	2.876		1	1	110.259			
			C	0.122	2.876		1	1	110.259			
T17	991.50	17941.94	A	0.117	2.896	12	1	1	114.951	4691.28	156.38	C
30.00-0.00			B	0.117	2.896		1	1	114.951			
			C	0.117	2.896		1	1	114.951			
Sum Weight:	8370.19	125382.28						OTM	4924.75 kip-ft	36835.33		

Tower Forces - Service - Wind 45 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	15.90	1442.07	A	0.209	2.566	13	0.825	1	16.395	486.17	30.39	C
320.00-304.00			B	0.209	2.566		0.825	1	16.395			
			C	0.209	2.566		0.825	1	16.395			
T2	4.36	349.72	A	0.201	2.592	13	0.825	1	3.902	117.41	29.35	C
304.00-300.00			B	0.201	2.592		0.825	1	3.902			
			C	0.201	2.592		0.825	1	3.902			
T3	40.00	2496.34	A	0.207	2.573	12	0.825	1	22.908	707.00	35.35	C
300.00-280.00			B	0.207	2.573		0.825	1	22.908			
			C	0.207	2.573		0.825	1	22.908			
T4	87.48	5067.66	A	0.237	2.477	12	0.825	1	42.379	1257.18	62.86	C
280.00-260.00			B	0.237	2.477		0.825	1	42.379			
			C	0.237	2.477		0.825	1	42.379			
T5	122.62	5409.17	A	0.219	2.532	12	0.825	1	46.916	1443.00	72.15	C
260.00-240.00			B	0.219	2.532		0.825	1	46.916			
			C	0.219	2.532		0.825	1	46.916			
T6	162.20	6484.36	A	0.223	2.52	12	0.825	1	55.194	1695.98	84.80	C
240.00-220.00			B	0.223	2.52		0.825	1	55.194			
			C	0.223	2.52		0.825	1	55.194			
T7	487.20	6406.00	A	0.181	2.66	12	0.825	1	50.810	1948.79	97.44	C
220.00 200.00			B	0.181	2.66		0.825	1	50.810			
			C	0.181	2.66		0.825	1	50.810			
T8	697.00	7298.65	A	0.187	2.642	11	0.825	1	59.267	2315.96	115.80	C
200.00-180.00			B	0.187	2.642		0.825	1	59.267			
			C	0.187	2.642		0.825	1	59.267			
T9	353.86	3730.84	A	0.177	2.675	11	0.825	1	30.413	1181.73	118.17	C
180.00-170.00			B	0.177	2.675		0.825	1	30.413			
			C	0.177	2.675		0.825	1	30.413			
T10	360.99	3785.29	A	0.171	2.694	11	0.825	1	30.931	1201.53	120.15	C
170.00-160.00			B	0.171	2.694		0.825	1	30.931			
			C	0.171	2.694		0.825	1	30.931			
T11	742.19	9608.59	A	0.181	2.661	11	0.825	1	69.763	2576.95	128.85	C
160.00-140.00			B	0.181	2.661		0.825	1	69.763			
			C	0.181	2.661		0.825	1	69.763			
T12	761.88	9975.29	A	0.173	2.69	11	0.825	1	72.384	2643.03	132.15	C

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
140.00-120.00			B	0.173	2.69		0.825	1	72.384			
			C	0.173	2.69		0.825	1	72.384			
T13	772.13	9144.95	A	0.131	2.844	11	0.825	1	52.923	2226.92	111.35	C
120.00-100.00			B	0.131	2.844		0.825	1	52.923			
			C	0.131	2.844		0.825	1	52.923			
T14	787.88	9675.54	A	0.122	2.876	10	0.825	1	53.799	2277.54	113.88	C
100.00-80.00			B	0.122	2.876		0.825	1	53.799			
			C	0.122	2.876		0.825	1	53.799			
T15	793.20	11450.50	A	0.127	2.857	10	0.825	1	61.571	2482.46	124.12	C
80.00-60.00			B	0.127	2.857		0.825	1	61.571			
			C	0.127	2.857		0.825	1	61.571			
T16	1189.80	15115.36	A	0.122	2.876	11	0.825	1	96.168	3986.81	132.89	C
60.00-30.00			B	0.122	2.876		0.825	1	96.168			
			C	0.122	2.876		0.825	1	96.168			
T17	991.50	17941.94	A	0.117	2.896	12	0.825	1	100.692	4273.09	142.44	C
30.00-0.00			B	0.117	2.896		0.825	1	100.692			
			C	0.117	2.896		0.825	1	100.692			
Sum Weight:	8370.19	125382.28						OTM	4334.12 kip-ft	32821.55		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	15.90	1442.07	A	0.209	2.566	13	0.8	1	16.157	479.64	29.98	C
320.00-304.00			B	0.209	2.566		0.8	1	16.157			
			C	0.209	2.566		0.8	1	16.157			
T2	4.36	349.72	A	0.201	2.592	13	0.8	1	3.849	115.93	28.98	C
304.00-300.00			B	0.201	2.592		0.8	1	3.849			
			C	0.201	2.592		0.8	1	3.849			
T3	40.00	2496.34	A	0.207	2.573	12	0.8	1	22.594	698.48	34.92	C
300.00-280.00			B	0.207	2.573		0.8	1	22.594			
			C	0.207	2.573		0.8	1	22.594			
T4	87.48	5067.66	A	0.237	2.477	12	0.8	1	41.095	1224.12	61.21	C
280.00-260.00			B	0.237	2.477		0.8	1	41.095			
			C	0.237	2.477		0.8	1	41.095			
T5	122.62	5409.17	A	0.219	2.532	12	0.8	1	45.494	1406.19	70.31	C
260.00-240.00			B	0.219	2.532		0.8	1	45.494			
			C	0.219	2.532		0.8	1	45.494			
T6	162.20	6484.36	A	0.223	2.52	12	0.8	1	53.521	1653.61	82.68	C
240.00-220.00			B	0.223	2.52		0.8	1	53.521			
			C	0.223	2.52		0.8	1	53.521			
T7	487.20	6406.00	A	0.181	2.66	12	0.8	1	49.270	1908.37	95.42	C
220.00-200.00			B	0.181	2.66		0.8	1	49.270			
			C	0.181	2.66		0.8	1	49.270			
T8	697.00	7298.65	A	0.187	2.642	11	0.8	1	57.471	2270.04	113.50	C
200.00-180.00			B	0.187	2.642		0.8	1	57.471			
			C	0.187	2.642		0.8	1	57.471			
T9	353.86	3730.84	A	0.177	2.675	11	0.8	1	29.491	1158.23	115.82	C
180.00-170.00			B	0.177	2.675		0.8	1	29.491			
			C	0.177	2.675		0.8	1	29.491			
T10	360.99	3785.29	A	0.171	2.694	11	0.8	1	29.994	1177.71	117.77	C

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
170.00-160.00			B	0.171	2.694		0.8	1	29.994			
			C	0.171	2.694		0.8	1	29.994			
T11	742.19	9608.59	A	0.181	2.661	11	0.8	1	67.649	2524.72	126.24	C
160.00-140.00			B	0.181	2.661		0.8	1	67.649			
			C	0.181	2.661		0.8	1	67.649			
T12	761.88	9975.29	A	0.173	2.69	11	0.8	1	70.190	2589.37	129.47	C
140.00-120.00			B	0.173	2.69		0.8	1	70.190			
			C	0.173	2.69		0.8	1	70.190			
T13	772.13	9144.95	A	0.131	2.844	11	0.8	1	51.781	2197.91	109.90	C
120.00-100.00			B	0.131	2.844		0.8	1	51.781			
			C	0.131	2.844		0.8	1	51.781			
T14	787.88	9675.54	A	0.122	2.876	10	0.8	1	52.657	2248.53	112.43	C
100.00-80.00			B	0.122	2.876		0.8	1	52.657			
			C	0.122	2.876		0.8	1	52.657			
T15	793.20	11450.50	A	0.127	2.857	10	0.8	1	60.228	2448.48	122.42	C
80.00-60.00			B	0.127	2.857		0.8	1	60.228			
			C	0.127	2.857		0.8	1	60.228			
T16	1189.80	15115.36	A	0.122	2.876	11	0.8	1	94.154	3933.50	131.12	C
60.00-30.00			B	0.122	2.876		0.8	1	94.154			
			C	0.122	2.876		0.8	1	94.154			
T17	991.50	17941.94	A	0.117	2.896	12	0.8	1	98.655	4213.35	140.44	C
30.00-0.00			B	0.117	2.896		0.8	1	98.655			
			C	0.117	2.896		0.8	1	98.655			
Sum Weight:	8370.19	125382.28						OTM	4249.74 kip-ft	32248.15		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	15.90	1442.07	A	0.209	2.566	13	0.85	1	16.633	492.70	30.79	C
320.00-304.00			B	0.209	2.566		0.85	1	16.633			
			C	0.209	2.566		0.85	1	16.633			
T2	4.36	349.72	A	0.201	2.592	13	0.85	1	3.956	118.89	29.72	C
304.00-300.00			B	0.201	2.592		0.85	1	3.956			
			C	0.201	2.592		0.85	1	3.956			
T3	40.00	2496.34	A	0.207	2.573	12	0.85	1	23.222	715.52	35.78	C
300.00-280.00			B	0.207	2.573		0.85	1	23.222			
			C	0.207	2.573		0.85	1	23.222			
T4	87.48	5067.66	A	0.237	2.477	12	0.85	1	43.663	1290.23	64.51	C
280.00-260.00			B	0.237	2.477		0.85	1	43.663			
			C	0.237	2.477		0.85	1	43.663			
T5	122.62	5409.17	A	0.219	2.532	12	0.85	1	48.338	1479.82	73.99	C
260.00-240.00			B	0.219	2.532		0.85	1	48.338			
			C	0.219	2.532		0.85	1	48.338			
T6	162.20	6484.36	A	0.223	2.52	12	0.85	1	56.866	1738.35	86.92	C
240.00-220.00			B	0.223	2.52		0.85	1	56.866			
			C	0.223	2.52		0.85	1	56.866			
T7	487.20	6406.00	A	0.181	2.66	12	0.85	1	52.350	1989.21	99.46	C
220.00-200.00			B	0.181	2.66		0.85	1	52.350			
			C	0.181	2.66		0.85	1	52.350			
T8	697.00	7298.65	A	0.187	2.642	11	0.85	1	61.063	2361.88	118.09	C

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
200.00-180.00			B	0.187	2.642		0.85	1	61.063			
			C	0.187	2.642		0.85	1	61.063			
T9	353.86	3730.84	A	0.177	2.675	11	0.85	1	31.334	1205.23	120.52	C
180.00-170.00			B	0.177	2.675		0.85	1	31.334			
			C	0.177	2.675		0.85	1	31.334			
T10	360.99	3785.29	A	0.171	2.694	11	0.85	1	31.869	1225.36	122.54	C
170.00-160.00			B	0.171	2.694		0.85	1	31.869			
			C	0.171	2.694		0.85	1	31.869			
T11	742.19	9608.59	A	0.181	2.661	11	0.85	1	71.877	2629.17	131.46	C
160.00-140.00			B	0.181	2.661		0.85	1	71.877			
			C	0.181	2.661		0.85	1	71.877			
T12	761.88	9975.29	A	0.173	2.69	11	0.85	1	74.577	2696.69	134.83	C
140.00-120.00			B	0.173	2.69		0.85	1	74.577			
			C	0.173	2.69		0.85	1	74.577			
T13	772.13	9144.95	A	0.131	2.844	11	0.85	1	54.065	2255.93	112.80	C
120.00-100.00			B	0.131	2.844		0.85	1	54.065			
			C	0.131	2.844		0.85	1	54.065			
T14	787.88	9675.54	A	0.122	2.876	10	0.85	1	54.940	2306.55	115.33	C
100.00-80.00			B	0.122	2.876		0.85	1	54.940			
			C	0.122	2.876		0.85	1	54.940			
T15	793.20	11450.50	A	0.127	2.857	10	0.85	1	62.913	2516.45	125.82	C
80.00-60.00			B	0.127	2.857		0.85	1	62.913			
			C	0.127	2.857		0.85	1	62.913			
T16	1189.80	15115.36	A	0.122	2.876	11	0.85	1	98.181	4040.12	134.67	C
60.00-30.00			B	0.122	2.876		0.85	1	98.181			
			C	0.122	2.876		0.85	1	98.181			
T17	991.50	17941.94	A	0.117	2.896	12	0.85	1	102.729	4332.83	144.43	C
30.00-0.00			B	0.117	2.896		0.85	1	102.729			
			C	0.117	2.896		0.85	1	102.729			
Sum Weight:	8370.19	125382.28						OTM	4418.50 kip-ft	33394.94		

Force Totals

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Leg Weight	73044.53					
Bracing Weight	52337.75					
Total Member Self-Weight	125382.28			52.83	-34.55	
Total Weight	145669.90			52.83	-34.55	
Wind 0 deg - No Ice		0.00	-216172.89	-31117.48	-34.55	342.39
Wind 30 deg - No Ice		99377.96	-172127.68	-24721.90	-14338.25	436.71
Wind 45 deg - No Ice		138489.05	-138489.05	-19873.61	-19960.99	440.37
Wind 60 deg - No Ice		167099.84	-96475.13	-13823.71	-24069.43	414.02
Wind 90 deg - No Ice		198755.93	0.00	52.83	-28641.94	280.39
Wind 120 deg - No Ice		187211.22	108086.45	15637.99	-27028.83	71.63
Wind 135 deg - No Ice		146699.49	146699.49	21187.44	-21169.16	-43.84
Wind 150 deg - No Ice		99377.96	172127.68	24827.56	-14338.25	-156.32
Wind 180 deg - No Ice		0.00	192950.27	27805.91	-34.55	-342.39
Wind 210 deg - No Ice		-99377.96	172127.68	24827.56	14269.15	-436.71
Wind 225 deg - No Ice		-138489.05	138489.05	19979.27	19891.89	-440.37
Wind 240 deg - No Ice		-187211.22	108086.45	15637.99	26959.73	-414.02

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Wind 270 deg - No Ice		-198755.93	0.00	52.83	28572.84	-280.39
Wind 300 deg - No Ice		-167099.84	-96475.13	-13823.71	24000.33	-71.63
Wind 315 deg - No Ice		-138489.05	-138489.05	-19873.61	19891.89	43.84
Wind 330 deg - No Ice		-99377.96	-172127.68	-24721.90	14269.15	156.32
Member Ice	100835.04					
Total Weight Ice	327645.07			400.47	-432.53	
Wind 0 deg - Ice		0.00	-48438.91	-6510.21	-432.53	121.73
Wind 30 deg - Ice		23007.81	-39850.70	-5280.65	-3712.53	155.85
Wind 45 deg - Ice		32252.37	-32252.37	-4196.82	-5029.82	157.39
Wind 60 deg - Ice		39151.15	-22603.93	-2821.08	-6012.42	148.20
Wind 90 deg - Ice		46015.62	0.00	400.47	-6992.53	100.85
Wind 120 deg - Ice		41949.33	24219.46	3855.81	-6417.36	26.47
Wind 135 deg - Ice		33394.72	33394.72	5163.07	-5195.14	-14.77
Wind 150 deg - Ice		23007.81	39850.70	6081.59	-3712.53	-55.00
Wind 180 deg - Ice		0.00	45207.86	6843.57	-432.53	-121.73
Wind 210 deg - Ice		-23007.81	39850.70	6081.59	2847.46	-155.85
Wind 225 deg - Ice		-32252.37	32252.37	4997.76	4164.75	-157.39
Wind 240 deg - Ice		-41949.33	24219.46	3855.81	5552.29	-148.20
Wind 270 deg - Ice		-46015.62	0.00	400.47	6127.46	-100.85
Wind 300 deg - Ice		-39151.15	-22603.93	-2821.08	5147.35	-26.47
Wind 315 deg - Ice		-32252.37	-32252.37	-4196.82	4164.75	14.77
Wind 330 deg - Ice		-23007.81	-39850.70	-5280.65	2847.46	55.00
Total Weight	145669.90			52.83	-34.55	
Wind 0 deg - Service		0.00	-43117.32	-6215.25	10.86	67.46
Wind 30 deg - Service		19838.46	-34361.23	-4943.88	-2844.55	86.17
Wind 45 deg - Service		27650.37	-27650.37	-3976.66	-3967.64	86.93
Wind 60 deg - Service		33368.07	-19265.07	-2769.20	-4788.72	81.78
Wind 90 deg - Service		39676.93	0.00	1.83	-5699.97	55.48
Wind 120 deg - Service		37340.69	21558.66	3110.38	-5373.29	14.32
Wind 135 deg - Service		29272.19	29272.19	4218.99	-4206.29	-8.47
Wind 150 deg - Service		19838.46	34361.23	4947.55	-2844.55	-30.68
Wind 180 deg - Service		0.00	38530.13	5543.91	10.86	-67.46
Wind 210 deg - Service		-19838.46	34361.23	4947.55	2866.27	-86.17
Wind 225 deg - Service		-27650.37	27650.37	3980.33	3989.36	-86.93
Wind 240 deg - Service		-37340.69	21558.66	3110.38	5395.01	-81.78
Wind 270 deg - Service		-39676.93	0.00	1.83	5721.68	-55.48
Wind 300 deg - Service		-33368.07	-19265.07	-2769.20	4810.43	-14.32
Wind 315 deg - Service		-27650.37	-27650.37	-3976.66	3989.36	8.47
Wind 330 deg - Service		-19838.46	-34361.23	-4943.88	2866.27	30.68

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 45 deg - No Ice
7	0.9 Dead+1.0 Wind 45 deg - No Ice
8	1.2 Dead+1.0 Wind 60 deg - No Ice
9	0.9 Dead+1.0 Wind 60 deg - No Ice
10	1.2 Dead+1.0 Wind 90 deg - No Ice
11	0.9 Dead+1.0 Wind 90 deg - No Ice
12	1.2 Dead+1.0 Wind 120 deg - No Ice

Comb. No.	Description
13	0.9 Dead+1.0 Wind 120 deg - No Ice
14	1.2 Dead+1.0 Wind 135 deg - No Ice
15	0.9 Dead+1.0 Wind 135 deg - No Ice
16	1.2 Dead+1.0 Wind 150 deg - No Ice
17	0.9 Dead+1.0 Wind 150 deg - No Ice
18	1.2 Dead+1.0 Wind 180 deg - No Ice
19	0.9 Dead+1.0 Wind 180 deg - No Ice
20	1.2 Dead+1.0 Wind 210 deg - No Ice
21	0.9 Dead+1.0 Wind 210 deg - No Ice
22	1.2 Dead+1.0 Wind 225 deg - No Ice
23	0.9 Dead+1.0 Wind 225 deg - No Ice
24	1.2 Dead+1.0 Wind 240 deg - No Ice
25	0.9 Dead+1.0 Wind 240 deg - No Ice
26	1.2 Dead+1.0 Wind 270 deg - No Ice
27	0.9 Dead+1.0 Wind 270 deg - No Ice
28	1.2 Dead+1.0 Wind 300 deg - No Ice
29	0.9 Dead+1.0 Wind 300 deg - No Ice
30	1.2 Dead+1.0 Wind 315 deg - No Ice
31	0.9 Dead+1.0 Wind 315 deg - No Ice
32	1.2 Dead+1.0 Wind 330 deg - No Ice
33	0.9 Dead+1.0 Wind 330 deg - No Ice
34	1.2 Dead+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
39	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
40	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
41	1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp
42	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
43	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
44	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
45	1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp
46	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
47	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
48	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
49	1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp
50	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
51	Dead+Wind 0 deg - Service
52	Dead+Wind 30 deg - Service
53	Dead+Wind 45 deg - Service
54	Dead+Wind 60 deg - Service
55	Dead+Wind 90 deg - Service
56	Dead+Wind 120 deg - Service
57	Dead+Wind 135 deg - Service
58	Dead+Wind 150 deg - Service
59	Dead+Wind 180 deg - Service
60	Dead+Wind 210 deg - Service
61	Dead+Wind 225 deg - Service
62	Dead+Wind 240 deg - Service
63	Dead+Wind 270 deg - Service
64	Dead+Wind 300 deg - Service
65	Dead+Wind 315 deg - Service
66	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	320 - 304	Leg	Max Tension	29	5137.85	0.03	0.02
			Max. Compression	24	-6715.19	-0.01	-0.01
			Max. Mx	24	-1436.07	-0.13	-0.00
			Max. My	3	288.79	-0.01	-0.16
			Max. Vy	10	-441.86	0.00	0.00
			Max. Vx	3	499.01	0.00	0.00
		Diagonal	Max Tension	20	1247.46	0.00	0.00
			Max. Compression	4	-1239.64	0.00	0.00
			Max. Mx	40	341.20	0.02	-0.00
			Max. My	20	-635.33	0.00	-0.00
			Max. Vy	40	-21.87	0.02	-0.00
			Max. Vx	20	0.11	0.00	-0.00
		Top Girt	Max Tension	13	169.15	0.00	0.00
			Max. Compression	8	-180.73	0.00	0.00
			Max. Mx	34	-33.06	-0.06	0.00
			Max. Vy	34	34.93	0.00	0.00
T2	304 - 300	Leg	Max Tension	29	7268.29	0.01	0.00
			Max. Compression	24	-9246.22	0.30	-0.05
			Max. Mx	24	-9246.22	0.30	-0.05
			Max. My	2	-9219.60	0.09	0.28
			Max. Vy	24	-128.81	0.30	-0.05
			Max. Vx	2	-129.08	0.09	0.28
		Diagonal	Max Tension	4	1453.14	0.00	0.00
			Max. Compression	4	-1474.77	0.00	0.00
			Max. Mx	40	339.14	0.02	-0.00
			Max. My	20	-786.28	0.00	-0.00
			Max. Vy	40	-21.86	0.02	-0.00
			Max. Vx	20	0.04	0.00	0.00
T3	300 - 280	Leg	Max Tension	29	20274.87	-0.15	-0.01
			Max. Compression	24	-25461.81	0.49	-0.00
			Max. Mx	3	-24661.53	0.49	0.13
			Max. My	32	-2347.87	-0.00	0.53
			Max. Vy	2	310.91	0.28	-0.09
			Max. Vx	16	-489.18	0.02	0.11
		Diagonal	Max Tension	4	2863.60	0.00	0.00
			Max. Compression	2	-2894.71	0.00	0.00
			Max. Mx	48	490.85	0.03	0.00
			Max. My	35	417.05	0.03	0.00
			Max. Vy	48	33.58	0.03	0.00
			Max. Vx	35	-1.85	0.00	0.00
		Top Girt	Max Tension	23	41.22	0.00	0.00
			Max. Compression	28	-60.95	0.00	0.00
			Max. Mx	34	-18.57	-0.07	0.00
			Max. My	34	-21.68	0.00	0.00
			Max. Vy	34	41.34	0.00	0.00
			Max. Vx	34	1.22	0.00	0.00
T4	280 - 260	Leg	Max Tension	29	37931.87	-0.31	0.00
			Max. Compression	24	-48441.87	0.75	-0.11
			Max. Mx	13	-47166.91	0.76	-0.03
			Max. My	2	17783.82	-0.40	0.76
			Max. Vy	3	-339.53	0.76	0.13
			Max. Vx	20	-326.98	-0.02	0.52
		Diagonal	Max Tension	10	4404.12	0.00	0.00
			Max. Compression	12	-4473.34	0.00	0.00
			Max. Mx	43	779.67	0.06	-0.01
			Max. My	39	-1211.02	0.06	-0.01
			Max. Vy	43	49.72	0.06	-0.01
			Max. Vx	39	2.92	0.00	0.00
T5	260 - 240	Leg	Max Tension	19	62817.26	-0.30	-0.33
			Max. Compression	12	-81883.99	2.20	-0.08
			Max. Mx	24	-81253.92	2.21	0.45

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	20	-7153.94	-0.00	2.78
			Max. Vy	28	-706.03	-0.30	-0.04
			Max. Vx	4	-1219.84	-0.02	0.41
		Diagonal	Max Tension	26	7655.66	0.00	0.00
			Max. Compression	24	-7899.73	0.00	0.00
			Max. Mx	43	951.76	0.10	0.01
			Max. My	37	-1607.70	0.10	-0.01
			Max. Vy	43	68.11	0.10	0.01
			Max. Vx	37	3.82	0.00	0.00
T6	240 - 220	Leg	Max Tension	9	100903.35	-1.00	0.03
			Max. Compression	12	-131955.81	2.29	0.01
			Max. Mx	3	-128724.19	2.30	-0.28
			Max. My	20	-7376.15	-0.00	2.78
			Max. Vy	18	-2189.68	-1.09	-0.03
			Max. Vx	10	2091.68	-0.08	0.66
		Diagonal	Max Tension	32	12483.18	0.00	0.00
			Max. Compression	32	-12465.75	0.00	0.00
			Max. Mx	38	1562.32	0.18	-0.02
			Max. My	36	-1397.50	0.16	-0.03
			Max. Vy	38	108.61	0.18	-0.02
			Max. Vx	36	5.95	0.00	0.00
T7	220 - 200	Leg	Max Tension	9	144014.40	-0.97	-0.24
			Max. Compression	12	-185460.91	1.97	-0.05
			Max. Mx	3	-151681.29	2.30	-0.28
			Max. My	4	-12239.25	-0.11	-2.43
			Max. Vy	3	530.85	2.30	-0.28
			Max. Vx	4	-773.52	-0.11	-2.43
		Diagonal	Max Tension	32	15763.43	0.00	0.00
			Max. Compression	2	-16371.91	0.00	0.00
			Max. Mx	37	2059.21	0.27	-0.04
			Max. My	36	2525.59	0.25	-0.04
			Max. Vy	37	132.92	0.27	-0.04
			Max. Vx	36	7.60	0.00	0.00
T8	200 - 180	Leg	Max Tension	19	198384.13	-1.77	0.10
			Max. Compression	12	-254952.83	2.85	-0.03
			Max. Mx	13	-250152.39	2.86	-0.03
			Max. My	20	-19201.63	-0.04	2.50
			Max. Vy	28	-2559.88	-1.63	0.05
			Max. Vx	4	-2819.49	0.02	-0.43
		Diagonal	Max Tension	32	21256.29	0.00	0.00
			Max. Compression	2	-21645.06	0.00	0.00
			Max. Mx	38	2594.18	0.32	-0.05
			Max. My	44	-3143.90	0.31	0.05
			Max. Vy	38	148.33	0.32	-0.05
			Max. Vx	44	-8.62	0.00	0.00
T9	180 - 170	Leg	Max Tension	19	228138.75	-2.57	0.17
			Max. Compression	12	-292297.20	1.94	-0.04
			Max. Mx	13	-286044.42	2.86	-0.03
			Max. My	20	-19824.45	-0.04	2.50
			Max. Vy	3	721.60	2.86	-0.16
			Max. Vx	25	872.61	-1.48	2.38
		Diagonal	Max Tension	26	23024.08	0.00	0.00
			Max. Compression	24	-23206.35	0.00	0.00
			Max. Mx	43	2836.59	0.35	0.05
			Max. My	44	-4043.03	0.34	0.05
			Max. Vy	43	155.66	0.35	0.05
			Max. Vx	44	-8.71	0.00	0.00
T10	170 - 160	Leg	Max Tension	19	258864.21	-1.89	0.04
			Max. Compression	12	-329680.39	7.27	-0.26
			Max. Mx	2	-327497.84	7.27	-0.53
			Max. My	4	-22711.70	0.15	-5.26

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	2	-1014.15	7.27	-0.53
			Max. Vx	4	958.69	0.15	-5.26
		Diagonal	Max Tension	26	23692.50	0.00	0.00
			Max. Compression	24	-24111.07	0.00	0.00
			Max. Mx	43	2787.81	0.39	0.05
			Max. My	36	-2994.67	0.35	-0.05
			Max. Vy	43	163.18	0.39	0.05
			Max. Vx	36	9.00	0.00	0.00
T11	160 - 140	Leg	Max Tension	19	323236.48	-2.14	-0.21
			Max. Compression	12	-409410.18	5.77	-0.07
			Max. Mx	2	-365465.94	7.27	-0.53
			Max. My	4	-23587.95	0.15	-5.26
			Max. Vy	2	1259.03	7.27	-0.53
			Max. Vx	25	951.98	-3.45	5.06
		Diagonal	Max Tension	26	28630.74	0.00	0.00
			Max. Compression	24	-29387.96	0.00	0.00
			Max. Mx	43	4835.32	0.65	-0.07
			Max. My	45	3247.50	0.64	0.08
			Max. Vy	43	251.87	0.65	-0.07
			Max. Vx	45	-12.71	0.00	0.00
T12	140 - 120	Leg	Max Tension	19	387654.96	-2.88	0.11
			Max. Compression	12	-490282.98	-2.55	0.28
			Max. Mx	12	-449908.67	5.77	-0.07
			Max. My	10	-28517.47	-1.08	6.64
			Max. Vy	2	988.72	2.91	-0.10
			Max. Vx	20	-1124.36	-0.22	5.55
		Diagonal	Max Tension	26	30361.54	0.00	0.00
			Max. Compression	24	-31178.43	0.00	0.00
			Max. Mx	42	5181.21	0.76	-0.10
			Max. My	45	4694.95	0.74	0.11
			Max. Vy	42	274.20	0.76	-0.10
			Max. Vx	45	-15.56	0.00	0.00
T13	120 - 100	Leg	Max Tension	19	398729.37	0.50	0.24
			Max. Compression	12	-506925.75	-14.96	0.32
			Max. Mx	12	-506131.11	21.58	-0.02
			Max. My	20	-34190.13	-2.61	14.23
			Max. Vy	12	4735.73	21.58	-0.02
			Max. Vx	20	-2833.92	-2.61	14.23
		Diagonal	Max Tension	27	48584.80	-0.22	-0.04
			Max. Compression	24	-51210.66	0.00	0.00
			Max. Mx	26	15971.43	-0.37	0.03
			Max. My	26	-49945.64	-0.16	-0.19
			Max. Vy	42	-135.37	-0.33	-0.00
			Max. Vx	26	15.28	-0.16	-0.19
		Horizontal	Max Tension	26	27122.81	-0.19	0.00
			Max. Compression	25	-27367.81	-0.19	-0.03
			Max. Mx	43	-1441.43	-0.39	-0.01
			Max. My	2	-1637.86	-0.12	0.06
			Max. Vy	43	143.40	-0.39	-0.01
			Max. Vx	2	-4.88	0.00	0.00
		Redund Horz 1 Bracing	Max Tension	24	4986.26	0.00	0.00
			Max. Compression	11	-4139.21	0.00	0.00
			Max. Mx	34	929.64	0.05	0.00
			Max. Vy	34	-28.81	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	11	4003.12	0.00	0.00
			Max. Compression	24	-4284.30	0.00	0.00
			Max. Mx	34	-178.77	0.09	0.00
			Max. Vy	34	31.51	0.00	0.00
		Redund Hip 1	Max Tension	27	23.30	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Bracing					
			Max. Compression	10	-49.00	0.00	0.00
			Max. Mx	34	-21.24	0.05	0.00
			Max. Vy	34	-28.81	0.00	0.00
		Redund Hip Diagonal 1 Bracing	Max Tension	2	99.38	0.00	0.00
			Max. Compression	18	-98.29	0.00	0.00
			Max. Mx	34	66.93	0.31	0.00
			Max. Vy	34	-82.38	0.00	0.00
		Inner Bracing	Max Tension	27	7.98	0.00	0.00
			Max. Compression	2	-28.11	0.00	0.00
			Max. Mx	34	-20.56	0.36	0.00
			Max. Vy	34	-112.38	0.00	0.00
T14	100 - 80	Leg	Max Tension	19	453454.94	9.17	1.71
			Max. Compression	12	-576804.72	-17.32	-0.43
			Max. Mx	12	-575619.58	24.84	0.20
			Max. My	20	-38316.25	-2.85	14.95
			Max. Vy	12	4567.70	24.84	0.20
			Max. Vx	20	-2756.01	-2.85	14.95
		Diagonal	Max Tension	27	50042.59	-0.26	-0.04
			Max. Compression	24	-53631.10	0.00	0.00
			Max. Mx	26	22102.89	-0.41	0.04
			Max. My	26	-49385.82	-0.17	-0.18
			Max. Vy	43	147.23	-0.37	0.01
			Max. Vx	26	-14.47	-0.17	-0.18
		Horizontal	Max Tension	26	29627.56	-0.31	0.00
			Max. Compression	24	-30822.79	-0.36	-0.03
			Max. Mx	43	796.32	-0.55	-0.01
			Max. My	2	5994.24	-0.22	0.06
			Max. Vy	43	-185.07	-0.55	-0.01
			Max. Vx	2	-4.52	0.00	0.00
		Redund Horz 1 Bracing	Max Tension	16	5799.68	0.00	0.00
			Max. Compression	15	-4906.23	0.00	0.00
			Max. Mx	34	1272.34	0.06	0.00
			Max. Vy	34	31.47	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	15	4412.60	0.00	0.00
			Max. Compression	32	-4678.67	0.00	0.00
			Max. Mx	34	-349.02	0.12	0.00
			Max. Vy	34	40.22	0.00	0.00
		Redund Hip 1 Bracing	Max Tension	27	21.25	0.00	0.00
			Max. Compression	10	-47.97	0.00	0.00
			Max. Mx	34	-21.95	0.06	0.00
			Max. Vy	34	-31.47	0.00	0.00
		Redund Hip Diagonal 1 Bracing	Max Tension	2	92.04	0.00	0.00
			Max. Compression	18	-92.08	0.00	0.00
			Max. Mx	34	66.50	0.36	0.00
			Max. Vy	34	-89.80	0.00	0.00
		Inner Bracing	Max Tension	27	4.41	0.00	0.00
			Max. Compression	2	-27.83	0.00	0.00
			Max. Mx	34	-22.19	0.43	0.00
			Max. Vy	34	-123.10	0.00	0.00
T15	80 - 60	Leg	Max Tension	19	509534.77	10.96	1.97
			Max. Compression	12	-647902.32	-23.96	-0.40
			Max. Mx	12	-647423.35	32.59	0.32
			Max. My	20	-43018.43	-4.03	20.48
			Max. Vy	12	6067.89	32.59	0.32
			Max. Vx	20	-3488.40	-4.03	20.48

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Diagonal	Max Tension	27	49004.07	-0.29	-0.04
			Max. Compression	24	-53642.06	0.00	0.00
			Max. Mx	26	21519.02	-0.43	0.03
			Max. My	26	-48354.65	-0.20	-0.17
			Max. Vy	43	159.93	-0.42	0.01
			Max. Vx	26	-12.81	0.00	0.00
		Horizontal	Max Tension	27	30363.78	-0.49	0.00
			Max. Compression	24	-31878.22	-0.72	-0.02
			Max. Mx	43	798.59	-0.95	-0.01
			Max. My	2	-616.26	-0.55	0.05
			Max. Vy	43	-296.40	-0.95	-0.01
			Max. Vx	2	-3.29	0.00	0.00
		Redund Horz 1 Bracing	Max Tension	10	7378.55	0.00	0.00
			Max. Compression	27	-6141.07	0.00	0.00
			Max. Mx	34	1341.14	0.08	0.00
			Max. Vy	34	41.50	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	11	5207.06	0.00	0.00
			Max. Compression	10	-5668.80	0.00	0.00
			Max. Mx	34	-470.68	0.13	0.00
			Max. Vy	34	-43.72	0.00	0.00
		Redund Hip 1 Bracing	Max Tension	27	15.96	0.00	0.00
			Max. Compression	2	-47.10	0.00	0.00
			Max. Mx	34	-25.87	0.06	0.00
			Max. Vy	34	34.11	0.00	0.00
		Redund Hip Diagonal 1 Bracing	Max Tension	2	94.45	0.00	0.00
			Max. Compression	47	-107.59	0.00	0.00
			Max. Mx	34	80.42	0.50	0.00
			Max. Vy	34	-119.25	0.00	0.00
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	35	-32.11	0.00	0.00
			Max. Mx	34	-29.06	0.51	0.00
			Max. Vy	34	133.63	0.00	0.00
T16	60 - 30	Leg	Max Tension	19	565058.44	14.95	2.06
			Max. Compression	12	-719328.87	5.94	0.42
			Max. Mx	12	-709486.33	36.75	0.54
			Max. My	4	-48944.86	-5.83	-37.28
			Max. Vy	12	6681.37	36.75	0.54
			Max. Vx	4	5610.02	-5.83	-37.28
		Diagonal	Max Tension	27	68704.07	-0.36	-0.08
			Max. Compression	24	-75381.17	0.00	0.00
			Max. Mx	18	49109.25	-0.50	0.37
			Max. My	26	-68429.93	0.24	-0.69
			Max. Vy	24	-113.09	-0.34	0.43
			Max. Vx	24	93.52	-0.34	0.43
		Horizontal	Max Tension	26	35326.78	-0.53	-0.00
			Max. Compression	25	-35479.46	-0.49	-0.04
			Max. Mx	43	-1907.17	-0.91	-0.02
			Max. My	3	-2313.08	-0.24	0.08
			Max. Vy	43	256.91	-0.91	-0.02
			Max. Vx	3	-4.69	0.00	0.00
		Redund Horz 1 Bracing	Max Tension	10	6815.92	0.00	0.00
			Max. Compression	25	-5736.68	0.00	0.00
			Max. Mx	34	1247.97	0.03	0.00
			Max. Vy	34	24.77	0.00	0.00
		Redund Horz 2 Bracing	Max Tension	8	4580.14	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	25	-4454.54	0.00	0.00
			Max. Mx	34	705.33	0.26	0.00
			Max. Vy	34	-95.93	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	25	5982.20	0.00	0.00
			Max. Compression	10	-6851.54	0.00	0.00
			Max. Mx	34	-458.25	0.09	0.00
			Max. Vy	34	-30.98	0.00	0.00
		Redund Diag 2 Bracing	Max Tension	25	4076.32	0.00	0.00
			Max. Compression	18	-3792.00	0.00	0.00
			Max. Mx	34	-50.28	0.27	0.00
			Max. Vy	34	-74.89	0.00	0.00
		Redund Hip 1 Bracing	Max Tension	25	171.26	0.00	0.00
			Max. Compression	10	-176.64	0.00	0.00
			Max. Mx	34	-9.53	0.03	0.00
			Max. Vy	34	-24.77	0.00	0.00
		Redund Hip 2 Bracing	Max Tension	25	71.63	0.00	0.00
			Max. Compression	10	-96.48	0.00	0.00
			Max. Mx	34	-28.29	0.17	0.00
			Max. Vy	34	-60.27	0.00	0.00
		Redund Hip Diagonal 1 Bracing	Max Tension	2	357.57	0.00	0.00
			Max. Compression	26	-365.19	0.00	0.00
			Max. Mx	34	48.24	0.19	0.00
			Max. Vy	34	-54.22	0.00	0.00
		Redund Hip Diagonal 2 Bracing	Max Tension	8	121.64	0.00	0.00
			Max. Compression	24	-141.83	0.00	0.00
			Max. Mx	34	45.63	0.36	0.00
			Max. Vy	34	-81.07	0.00	0.00
		Inner Bracing	Max Tension	25	43.70	0.00	0.00
			Max. Compression	8	-60.11	0.00	0.00
			Max. Mx	34	-22.21	0.60	0.00
			Max. Vy	34	-145.50	0.00	0.00
T17	30 - 0	Leg	Max Tension	19	648572.20	13.78	5.68
			Max. Compression	12	-825945.10	4.38	0.51
			Max. Mx	12	-821127.88	32.85	0.75
			Max. My	4	-53044.27	-5.82	-37.27
			Max. Vy	12	3748.96	32.85	0.75
			Max. Vx	4	-5434.72	-5.82	-37.27
		Diagonal	Max Tension	27	70168.54	-0.29	-0.08
			Max. Compression	24	-74629.28	0.00	0.00
			Max. Mx	18	42757.65	-0.46	0.30
			Max. My	26	-72312.38	0.13	-0.63
			Max. Vy	47	119.16	-0.28	0.08
			Max. Vx	24	82.70	-0.36	0.40
		Horizontal	Max Tension	27	38047.86	-0.58	0.00
			Max. Compression	24	-42129.79	-0.88	-0.05
			Max. Mx	43	73.59	-1.22	-0.02
			Max. My	2	1343.60	-0.60	0.11
			Max. Vy	43	-325.82	-1.22	-0.02
			Max. Vx	2	6.06	-0.60	0.11
		Redund Horz 1 Bracing	Max Tension	24	4291.51	0.00	0.00
			Max. Compression	9	-3391.62	0.00	0.00
			Max. Mx	34	677.60	0.04	0.00
			Max. Vy	34	-27.60	0.00	0.00
		Redund Horz 2	Max Tension	8	4061.72	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Bracing					
			Max. Compression	25	-3984.92	0.00	0.00
			Max. Mx	34	405.44	0.31	0.00
			Max. Vy	34	101.97	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	18	3422.45	0.00	0.00
			Max. Compression	2	-3920.40	0.00	0.00
			Max. Mx	34	-7.32	0.11	0.00
			Max. Vy	34	-39.53	0.00	0.00
		Redund Diag 2 Bracing	Max Tension	24	3571.05	0.00	0.00
			Max. Compression	9	-3117.98	0.00	0.00
			Max. Mx	34	331.94	0.32	0.00
			Max. Vy	34	-83.59	0.00	0.00
		Redund Hip 1 Bracing	Max Tension	25	148.24	0.00	0.00
			Max. Compression	10	-158.33	0.00	0.00
			Max. Mx	34	-13.59	0.04	0.00
			Max. Vy	34	-27.60	0.00	0.00
		Redund Hip 2 Bracing	Max Tension	25	62.63	0.00	0.00
			Max. Compression	10	-90.70	0.00	0.00
			Max. Mx	34	-31.14	0.21	0.00
			Max. Vy	34	-67.14	0.00	0.00
		Redund Hip Diagonal 1 Bracing	Max Tension	2	324.54	0.00	0.00
			Max. Compression	26	-331.48	0.00	0.00
			Max. Mx	34	65.10	0.29	0.00
			Max. Vy	34	-79.22	0.00	0.00
		Redund Hip Diagonal 2 Bracing	Max Tension	8	117.69	0.00	0.00
			Max. Compression	24	-139.36	0.00	0.00
			Max. Mx	34	60.53	0.57	0.00
			Max. Vy	34	-118.56	0.00	0.00
		Inner Bracing	Max Tension	25	39.56	0.00	0.00
			Max. Compression	8	-62.40	0.00	0.00
			Max. Mx	34	-27.65	0.75	0.00
			Max. Vy	34	-161.96	0.00	0.00

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Leg C	Max. Vert	24	924868.14	113278.12	-58573.57
	Max. H_x	24	924868.14	113278.12	-58573.57
	Max. H_z	7	-712620.20	-89752.85	50588.20
	Min. Vert	9	-727324.16	-93975.89	47507.49
	Min. H_x	9	-727324.16	-93975.89	47507.49
	Min. H_z	24	924868.14	113278.12	-58573.57
Leg B	Max. Vert	12	926906.05	-110869.26	-62817.19
	Max. H_x	29	-725795.73	91530.89	51688.20
	Max. H_z	33	-643247.80	74699.92	57362.77
	Min. Vert	29	-725795.73	91530.89	51688.20
	Min. H_x	12	926906.05	-110869.26	-62817.19
	Min. H_z	14	862678.19	-99570.69	-64472.25
Leg A	Max. Vert	2	923188.51	4877.06	127357.25

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
	Max. H_x	26	56468.90	16235.02	5121.76
	Max. H_z	2	923188.51	4877.06	127357.25
	Min. Vert	19	-728583.88	-4840.92	-105162.19
	Min. H_x	13	-391008.12	-17916.67	-57275.00
	Min. H_z	19	-728583.88	-4840.92	-105162.19

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	145669.90	0.00	0.00	52.83	-34.55	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	174803.88	-0.00	-216172.91	-30478.57	-41.46	342.39
0.9 Dead+1.0 Wind 0 deg - No Ice	131102.91	-0.00	-216172.91	-30494.42	-31.10	342.39
1.2 Dead+1.0 Wind 30 deg - No Ice	174803.88	99377.97	-172127.69	-24194.40	-14046.71	436.72
0.9 Dead+1.0 Wind 30 deg - No Ice	131102.91	99377.97	-172127.69	-24210.25	-14036.34	436.72
1.2 Dead+1.0 Wind 45 deg - No Ice	174803.88	138489.06	-138489.06	-19444.68	-19549.53	440.38
0.9 Dead+1.0 Wind 45 deg - No Ice	131102.91	138489.06	-138489.06	-19460.53	-19539.17	440.38
1.2 Dead+1.0 Wind 60 deg - No Ice	174803.88	167099.85	-96475.14	-13519.94	-23568.49	414.02
0.9 Dead+1.0 Wind 60 deg - No Ice	131102.91	167099.85	-96475.14	-13535.79	-23558.12	414.02
1.2 Dead+1.0 Wind 90 deg - No Ice	174803.88	198755.94	-0.00	63.40	-28051.95	280.39
0.9 Dead+1.0 Wind 90 deg - No Ice	131102.91	198755.94	-0.00	47.55	-28041.59	280.39
1.2 Dead+1.0 Wind 120 deg - No Ice	174803.88	187211.23	108086.46	15334.38	-26491.58	71.63
0.9 Dead+1.0 Wind 120 deg - No Ice	131102.91	187211.23	108086.46	15318.53	-26481.21	71.63
1.2 Dead+1.0 Wind 135 deg - No Ice	174803.88	146699.50	146699.50	20764.82	-20742.88	-43.84
0.9 Dead+1.0 Wind 135 deg - No Ice	131102.91	146699.50	146699.50	20748.97	-20732.52	-43.84
1.2 Dead+1.0 Wind 150 deg - No Ice	174803.88	99377.97	172127.69	24321.19	-14046.71	-156.32
0.9 Dead+1.0 Wind 150 deg - No Ice	131102.91	99377.97	172127.69	24305.35	-14036.34	-156.32
1.2 Dead+1.0 Wind 180 deg - No Ice	174803.88	0.00	192950.29	27230.07	-41.46	-342.39
0.9 Dead+1.0 Wind 180 deg - No Ice	131102.91	0.00	192950.29	27214.22	-31.10	-342.39
1.2 Dead+1.0 Wind 210 deg - No Ice	174803.88	-99377.97	172127.69	24321.19	13963.79	-436.72
0.9 Dead+1.0 Wind 210 deg - No Ice	131102.91	-99377.97	172127.69	24305.35	13974.15	-436.72
1.2 Dead+1.0 Wind 225 deg - No Ice	174803.88	-138489.06	138489.06	19571.47	19466.61	-440.38
0.9 Dead+1.0 Wind 225 deg - No Ice	131102.91	-138489.06	138489.06	19555.62	19476.98	-440.38
1.2 Dead+1.0 Wind 240 deg -	174803.88	-187211.23	108086.46	15334.38	26408.65	-414.02

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
No Ice						
0.9 Dead+1.0 Wind 240 deg - No Ice	131102.91	-187211.23	108086.46	15318.53	26419.02	-414.02
1.2 Dead+1.0 Wind 270 deg - No Ice	174803.88	-198755.94	0.00	63.40	27969.03	-280.39
0.9 Dead+1.0 Wind 270 deg - No Ice	131102.91	-198755.94	0.00	47.55	27979.40	-280.39
1.2 Dead+1.0 Wind 300 deg - No Ice	174803.88	-167099.85	-96475.14	-13519.94	23485.56	-71.63
0.9 Dead+1.0 Wind 300 deg - No Ice	131102.91	-167099.85	-96475.14	-13535.79	23495.93	-71.63
1.2 Dead+1.0 Wind 315 deg - No Ice	174803.88	-138489.06	-138489.06	-19444.68	19466.61	43.84
0.9 Dead+1.0 Wind 315 deg - No Ice	131102.91	-138489.06	-138489.06	-19460.53	19476.98	43.84
1.2 Dead+1.0 Wind 330 deg - No Ice	174803.88	-99377.97	-172127.69	-24194.40	13963.79	156.32
0.9 Dead+1.0 Wind 330 deg - No Ice	131102.91	-99377.97	-172127.69	-24210.25	13974.15	156.32
1.2 Dead+1.0 Ice+1.0 Temp	356779.05	0.00	0.00	411.04	-439.45	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	356779.05	0.00	-48438.92	-6311.35	-439.45	121.74
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	356779.05	23007.81	-39850.70	-5112.14	-3628.26	155.85
1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp	356779.05	32252.37	-32252.37	-4057.99	-4908.47	157.39
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	356779.05	39151.16	-22603.93	-2720.31	-5863.10	148.20
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	356779.05	46015.63	0.00	411.04	-6817.06	100.85
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	356779.05	41949.33	24219.46	3772.23	-6261.21	26.47
1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp	356779.05	33394.72	33394.72	5042.59	-5071.00	-14.77
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	356779.05	23007.81	39850.70	5934.21	-3628.26	-55.00
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	356779.05	0.00	45207.86	6673.72	-439.45	-121.74
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	356779.05	-23007.81	39850.70	5934.21	2749.36	-155.85
1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp	356779.05	-32252.37	32252.37	4880.06	4029.57	-157.39
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	356779.05	-41949.33	24219.46	3772.23	5382.31	-148.20
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	356779.05	-46015.62	0.00	411.04	5938.16	-100.85
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	356779.05	-39151.16	-22603.93	-2720.31	4984.20	-26.47
1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp	356779.05	-32252.37	-32252.37	-4057.99	4029.57	14.77
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	356779.05	-23007.81	-39850.70	-5112.14	2749.36	55.00
Dead+Wind 0 deg - Service	145669.90	-0.00	-43117.32	-6038.80	-34.55	67.46
Dead+Wind 30 deg - Service	145669.90	19838.47	-34361.23	-4789.63	-2830.34	86.17
Dead+Wind 45 deg - Service	145669.90	27650.37	-27650.37	-3842.09	-3929.47	86.94
Dead+Wind 60 deg - Service	145669.90	33368.08	-19265.07	-2659.62	-4732.66	81.78
Dead+Wind 90 deg - Service	145669.90	39676.93	-0.00	52.83	-5626.14	55.48
Dead+Wind 120 deg - Service	145669.90	37340.70	21558.66	3098.64	-5310.06	14.32
Dead+Wind 135 deg - Service	145669.90	29272.19	29272.19	4183.47	-4165.19	-8.47
Dead+Wind 150 deg - Service	145669.90	19838.47	34361.23	4895.29	-2830.34	-30.68
Dead+Wind 180 deg - Service	145669.90	0.00	38530.14	5477.74	-34.55	-67.46

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead+Wind 210 deg - Service	145669.90	-19838.47	34361.23	4895.29	2761.24	-86.17
Dead+Wind 225 deg - Service	145669.90	-27650.37	27650.37	3947.75	3860.37	-86.94
Dead+Wind 240 deg - Service	145669.90	-37340.70	21558.66	3098.65	5240.95	-81.78
Dead+Wind 270 deg - Service	145669.90	-39676.93	0.00	52.83	5557.04	-55.48
Dead+Wind 300 deg - Service	145669.90	-33368.08	-19265.07	-2659.62	4663.55	-14.32
Dead+Wind 315 deg - Service	145669.90	-27650.37	-27650.37	-3842.09	3860.37	8.47
Dead+Wind 330 deg - Service	145669.90	-19838.47	-34361.23	-4789.63	2761.24	30.68

Solution Summary

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
1	0.00	-145669.90	0.00	-0.00	145669.90	-0.00	0.000%
2	0.00	-174803.88	-216172.89	0.00	174803.88	216172.91	0.000%
3	0.00	-131102.91	-216172.89	0.00	131102.91	216172.91	0.000%
4	99377.96	-174803.88	-172127.68	-99377.97	174803.88	172127.69	0.000%
5	99377.96	-131102.91	-172127.68	-99377.97	131102.91	172127.69	0.000%
6	138489.05	-174803.88	-138489.05	-138489.06	174803.88	138489.06	0.000%
7	138489.05	-131102.91	-138489.05	-138489.06	131102.91	138489.06	0.000%
8	167099.84	-174803.88	-96475.13	-167099.85	174803.88	96475.14	0.000%
9	167099.84	-131102.91	-96475.13	-167099.85	131102.91	96475.14	0.000%
10	198755.93	-174803.88	0.00	-198755.94	174803.88	0.00	0.000%
11	198755.93	-131102.91	0.00	-198755.94	131102.91	0.00	0.000%
12	187211.22	-174803.88	108086.45	-187211.23	174803.88	-108086.46	0.000%
13	187211.22	-131102.91	108086.45	-187211.23	131102.91	-108086.46	0.000%
14	146699.49	-174803.88	146699.49	-146699.50	174803.88	-146699.50	0.000%
15	146699.49	-131102.91	146699.49	-146699.50	131102.91	-146699.50	0.000%
16	99377.96	-174803.88	172127.68	-99377.97	174803.88	-172127.69	0.000%
17	99377.96	-131102.91	172127.68	-99377.97	131102.91	-172127.69	0.000%
18	-0.00	-174803.88	192950.27	-0.00	174803.88	-192950.29	0.000%
19	-0.00	-131102.91	192950.27	-0.00	131102.91	-192950.29	0.000%
20	-99377.96	-174803.88	172127.68	99377.97	174803.88	-172127.69	0.000%
21	-99377.96	-131102.91	172127.68	99377.97	131102.91	-172127.69	0.000%
22	-138489.05	-174803.88	138489.05	138489.06	174803.88	-138489.06	0.000%
23	-138489.05	-131102.91	138489.05	138489.06	131102.91	-138489.06	0.000%
24	-187211.22	-174803.88	108086.45	187211.23	174803.88	-108086.46	0.000%
25	-187211.22	-131102.91	108086.45	187211.23	131102.91	-108086.46	0.000%
26	-198755.93	-174803.88	0.00	198755.94	174803.88	-0.00	0.000%
27	-198755.93	-131102.91	0.00	198755.94	131102.91	-0.00	0.000%
28	-167099.84	-174803.88	-96475.13	167099.85	174803.88	96475.14	0.000%
29	-167099.84	-131102.91	-96475.13	167099.85	131102.91	96475.14	0.000%
30	-138489.05	-174803.88	-138489.05	138489.06	174803.88	138489.06	0.000%
31	-138489.05	-131102.91	-138489.05	138489.06	131102.91	138489.06	0.000%
32	-99377.96	-174803.88	-172127.68	99377.97	174803.88	172127.69	0.000%
33	-99377.96	-131102.91	-172127.68	99377.97	131102.91	172127.69	0.000%
34	0.00	-356779.05	0.00	-0.00	356779.05	-0.00	0.000%
35	0.00	-356779.05	-48438.91	-0.00	356779.05	48438.92	0.000%
36	23007.81	-356779.05	-39850.70	-23007.81	356779.05	39850.70	0.000%
37	32252.37	-356779.05	-32252.37	-32252.37	356779.05	32252.37	0.000%
38	39151.15	-356779.05	-22603.93	-39151.16	356779.05	22603.93	0.000%
39	46015.62	-356779.05	0.00	-46015.63	356779.05	-0.00	0.000%
40	41949.33	-356779.05	24219.46	-41949.33	356779.05	-24219.46	0.000%
41	33394.72	-356779.05	33394.72	-33394.72	356779.05	-33394.72	0.000%
42	23007.81	-356779.05	39850.70	-23007.81	356779.05	-39850.70	0.000%
43	-0.00	-356779.05	45207.86	-0.00	356779.05	-45207.86	0.000%
44	-23007.81	-356779.05	39850.70	23007.81	356779.05	-39850.70	0.000%
45	-32252.37	-356779.05	32252.37	32252.37	356779.05	-32252.37	0.000%

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
46	-41949.33	-356779.05	24219.46	41949.33	356779.05	-24219.46	0.000%
47	-46015.62	-356779.05	0.00	46015.62	356779.05	-0.00	0.000%
48	-39151.15	-356779.05	-22603.93	39151.16	356779.05	22603.93	0.000%
49	-32252.37	-356779.05	-32252.37	32252.37	356779.05	32252.37	0.000%
50	-23007.81	-356779.05	-39850.70	23007.81	356779.05	39850.70	0.000%
51	0.00	-145669.90	-43117.32	0.00	145669.90	43117.32	0.000%
52	19838.46	-145669.90	-34361.23	-19838.47	145669.90	34361.23	0.000%
53	27650.37	-145669.90	-27650.37	-27650.37	145669.90	27650.37	0.000%
54	33368.07	-145669.90	-19265.07	-33368.08	145669.90	19265.07	0.000%
55	39676.93	-145669.90	0.00	-39676.93	145669.90	0.00	0.000%
56	37340.69	-145669.90	21558.66	-37340.70	145669.90	-21558.66	0.000%
57	29272.19	-145669.90	29272.19	-29272.19	145669.90	-29272.19	0.000%
58	19838.46	-145669.90	34361.23	-19838.47	145669.90	-34361.23	0.000%
59	-0.00	-145669.90	38530.13	-0.00	145669.90	-38530.14	0.000%
60	-19838.46	-145669.90	34361.23	19838.47	145669.90	-34361.23	0.000%
61	-27650.37	-145669.90	27650.37	27650.37	145669.90	-27650.37	0.000%
62	-37340.69	-145669.90	21558.66	37340.70	145669.90	-21558.66	0.000%
63	-39676.93	-145669.90	0.00	39676.93	145669.90	-0.00	0.000%
64	-33368.07	-145669.90	-19265.07	33368.08	145669.90	19265.07	0.000%
65	-27650.37	-145669.90	-27650.37	27650.37	145669.90	27650.37	0.000%
66	-19838.46	-145669.90	-34361.23	19838.47	145669.90	34361.23	0.000%

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	320 - 304	4.770	56	0.1079	0.0410
T2	304 - 300	4.405	56	0.1071	0.0414
T3	300 - 280	4.313	56	0.1065	0.0415
T4	280 - 260	3.864	56	0.1035	0.0427
T5	260 - 240	3.421	56	0.1016	0.0434
T6	240 - 220	2.984	56	0.0986	0.0413
T7	220 - 200	2.560	56	0.0941	0.0386
T8	200 - 180	2.159	56	0.0879	0.0362
T9	180 - 170	1.776	56	0.0815	0.0329
T10	170 - 160	1.593	56	0.0778	0.0310
T11	160 - 140	1.417	56	0.0739	0.0292
T12	140 - 120	1.102	56	0.0648	0.0267
T13	120 - 100	0.824	56	0.0549	0.0241
T14	100 - 80	0.593	56	0.0450	0.0202
T15	80 - 60	0.405	56	0.0347	0.0169
T16	60 - 30	0.264	51	0.0252	0.0141
T17	30 - 0	0.097	51	0.0115	0.0071

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
329.00	Lightning Rod 5/8x4'	56	4.770	0.1079	0.0410	Inf
327.00	Dual Lights	56	4.770	0.1079	0.0410	Inf

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
325.00	PD128-1	56	4.770	0.1079	0.0410	Inf
320.00	BA1012-0	56	4.770	0.1079	0.0410	Inf
318.00	ANT450F6	56	4.724	0.1079	0.0410	Inf
300.00	SC479-HF1LDF	56	4.313	0.1065	0.0415	362157
290.00	PD340-1	56	4.087	0.1049	0.0420	386789
286.00	DB809T3E-XC	56	3.997	0.1043	0.0423	467476
284.00	6' Side Mount Standoff	56	3.953	0.1040	0.0424	521798
283.00	SC479-HF1LDF(D00I-E6085) (Inverted)	56	3.930	0.1039	0.0425	550275
264.00	PD440-2	56	3.509	0.1020	0.0435	Inf
260.00	6' Side Mount Standoff	56	3.421	0.1016	0.0434	Inf
251.00	SC479-HF1LDF	56	3.223	0.1005	0.0427	668931
248.00	PD1142-1	56	3.158	0.1000	0.0424	551788
247.00	430-94C-09168-M-11048 TTA	56	3.136	0.0998	0.0422	521357
246.00	Sabre T-Boom (1)	56	3.114	0.0997	0.0421	494103
245.00	SC479-HF1LDF(D00I-E6085) (Inverted)	56	3.092	0.0995	0.0420	469559
238.00	531-70HD Exposed Dipole Antenna	56	2.941	0.0982	0.0410	336244
232.00	Valmont VFA-10-U V-Frame	56	2.812	0.0970	0.0401	257335
200.00	PiROD 12' Lightweight T-Frame	56	2.159	0.0879	0.0362	302294
190.00	FFVV-65B-R2	56	1.965	0.0848	0.0346	243838
179.00	1151-3	56	1.758	0.0811	0.0327	202695
177.00	DB586-Y	56	1.721	0.0804	0.0323	206374
176.00	Pirod 4' Side Mount Standoff (1)	56	1.702	0.0801	0.0322	209332
175.00	DB586-Y (inverted)	56	1.684	0.0797	0.0320	212693
168.00	L-810 Obstruction Lighting (1)	56	1.557	0.0771	0.0307	163524
165.00	L-810 Obstruction Lighting (1)	56	1.504	0.0759	0.0301	118933
164.00	L-810 Obstruction Lighting (1)	56	1.486	0.0755	0.0299	108480
163.00	Telewave ANT220F2 - Omni Antenna	56	1.469	0.0751	0.0297	100175
160.00	Siteprol USF-4U Mount Assembly (Ca = 1.4 assumed)	56	1.417	0.0739	0.0292	86667
154.00	Commscope PAR6-59W-PXA/A	56	1.318	0.0713	0.0283	95254
153.00	ANT450F6	56	1.302	0.0709	0.0281	98377
145.00	Telewave ANT220F2 - Omni Antenna	56	1.177	0.0672	0.0272	133353
142.00	Siteprol USF-4U Mount Assembly (Ca = 1.4 assumed)	56	1.131	0.0658	0.0269	151324
139.00	DB212-1	56	1.087	0.0643	0.0266	157112
117.00	3' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0)	56	0.786	0.0534	0.0235	93110
115.00	8' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0)	56	0.761	0.0524	0.0232	96095
112.00	Andrew 2' w/Radome	56	0.726	0.0509	0.0226	101319
107.00	PA8-65	56	0.668	0.0485	0.0216	111415
106.00	Pirod 4' Side Mount Standoff (1)	56	0.657	0.0480	0.0214	113681
94.00	PD688S-4	56	0.532	0.0419	0.0191	111651

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	320 - 304	23.578	12	0.5301	0.2070
T2	304 - 300	21.784	12	0.5259	0.2097
T3	300 - 280	21.335	12	0.5232	0.2103

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T4	280 - 260	19.130	12	0.5083	0.2159
T5	260 - 240	16.958	12	0.4994	0.2193
T6	240 - 220	14.806	12	0.4852	0.2085
T7	220 - 200	12.717	12	0.4638	0.1951
T8	200 - 180	10.737	12	0.4339	0.1830
T9	180 - 170	8.844	12	0.4028	0.1664
T10	170 - 160	7.937	12	0.3850	0.1572
T11	160 - 140	7.064	12	0.3657	0.1476
T12	140 - 120	5.498	12	0.3212	0.1352
T13	120 - 100	4.117	12	0.2719	0.1219
T14	100 - 80	2.967	12	0.2234	0.1022
T15	80 - 60	2.031	12	0.1722	0.0856
T16	60 - 30	1.324	2	0.1252	0.0710
T17	30 - 0	0.482	2	0.0569	0.0356

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
329.00	Lightning Rod 5/8x4'	12	23.578	0.5301	0.2070	Inf
327.00	Dual Lights	12	23.578	0.5301	0.2070	Inf
325.00	PD128-1	12	23.578	0.5301	0.2070	Inf
320.00	BA1012-0	12	23.578	0.5301	0.2070	Inf
318.00	ANT450F6	12	23.354	0.5299	0.2074	Inf
300.00	SC479-HF1LDF	12	21.335	0.5232	0.2103	76929
290.00	PD340-1	12	20.226	0.5153	0.2126	85368
286.00	DB809T3E-XC	12	19.786	0.5123	0.2139	105840
284.00	6' Side Mount Standoff	12	19.567	0.5109	0.2146	120224
283.00	SC479-HF1LDF(D00I-E6085) (Inverted)	12	19.458	0.5102	0.2149	128734
264.00	PD440-2	12	17.391	0.5012	0.2196	297712
260.00	6' Side Mount Standoff	12	16.958	0.4994	0.2193	320410
251.00	SC479-HF1LDF	12	15.986	0.4939	0.2158	156241
248.00	PD1142-1	12	15.663	0.4918	0.2140	126389
247.00	430-94C-09168-M-11048 TTA	12	15.555	0.4910	0.2133	118821
246.00	Sabre T-Boom (1)	12	15.448	0.4902	0.2127	112108
245.00	SC479-HF1LDF(D00I-E6085) (Inverted)	12	15.341	0.4894	0.2120	106113
238.00	531-70HD Exposed Dipole Antenna	12	14.594	0.4834	0.2071	73672
232.00	Valmont VFA-10-U V-Frame	12	13.959	0.4777	0.2029	54768
200.00	PiROD 12' Lightweight T-Frame	12	10.737	0.4339	0.1830	65256
190.00	FFVV-65B-R2	12	9.779	0.4187	0.1752	51475
179.00	1151-3	12	8.752	0.4011	0.1655	42136
177.00	DB586-Y	12	8.569	0.3976	0.1637	42952
176.00	Pirod 4' Side Mount Standoff (1)	12	8.478	0.3959	0.1628	43610
175.00	DB586-Y (inverted)	12	8.387	0.3941	0.1619	44360
168.00	L-810 Obstruction Lighting (1)	12	7.759	0.3812	0.1552	33672
165.00	L-810 Obstruction Lighting (1)	12	7.495	0.3755	0.1523	24190
164.00	L-810 Obstruction Lighting (1)	12	7.407	0.3736	0.1513	22000
163.00	Telewave ANT220F2 - Omni Antenna	12	7.321	0.3716	0.1503	20269
160.00	Sitepro1 USF-4U Mount Assembly (Ca = 1.4 assumed)	12	7.064	0.3657	0.1476	17468
154.00	Commscope PAR6-59W-PXA/A	12	6.570	0.3531	0.1431	19215
153.00	ANT450F6	12	6.490	0.3510	0.1425	19855
145.00	Telewave ANT220F2 - Omni	12	5.871	0.3330	0.1379	27067

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
	Antenna					
142.00	Siteprol USF-4U Mount Assembly (Ca = 1.4 assumed)	12	5.646	0.3260	0.1363	30812
139.00	DB212-1	12	5.425	0.3188	0.1347	32074
117.00	3' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0)	12	3.930	0.2647	0.1192	19004
115.00	8' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0)	12	3.808	0.2598	0.1173	19586
112.00	Andrew 2' w/Radome	12	3.630	0.2526	0.1144	20602
107.00	PA8-65	12	3.345	0.2406	0.1092	22551
106.00	Pirod 4' Side Mount Standoff (1)	12	3.289	0.2382	0.1082	22986
94.00	PD688S-4	12	2.662	0.2080	0.0966	22407

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	320	Diagonal	A325X	0.6250	1	1247.46	5811.33	0.215 ✔	1	Member Block Shear
T2	304	Leg	A325N	1.0000	6	1211.38	54517.00	0.022 ✔	1	Bolt Tension
		Diagonal	A325X	0.6250	1	1453.14	5811.33	0.250 ✔	1	Member Block Shear
T3	300	Leg	A325N	1.0000	8	2534.36	54517.00	0.046 ✔	1	Bolt Tension
		Diagonal	A325X	0.6250	1	2863.60	9107.81	0.314 ✔	1	Member Block Shear
T4	280	Leg	A325N	1.0000	8	4741.48	54517.00	0.087 ✔	1	Bolt Tension
		Diagonal	A325X	0.7500	1	4404.12	11962.50	0.368 ✔	1	Member Block Shear
T5	260	Leg	A325N	1.0000	8	7852.16	54517.00	0.144 ✔	1	Bolt Tension
		Diagonal	A325X	0.7500	1	7655.66	14137.50	0.542 ✔	1	Member Bearing
T6	240	Leg	A325N	1.0000	8	12612.90	54517.00	0.231 ✔	1	Bolt Tension
		Diagonal	A325X	0.7500	1	12483.20	17671.90	0.706 ✔	1	Member Bearing
T7	220	Leg	A325N	1.0000	12	12001.20	54517.00	0.220 ✔	1	Bolt Tension
		Diagonal	A325X	0.7500	1	15763.40	21206.30	0.743 ✔	1	Member Bearing
T8	200	Leg	A325N	1.0000	12	16465.70	54517.00	0.302 ✔	1	Bolt Tension
		Diagonal	A325X	0.8750	1	21256.30	24862.50	0.855 ✔	1	Member Bearing
T9	180	Leg	A325N	1.0000	12	19011.60	54517.00	0.349 ✔	1	Bolt Tension
		Diagonal	A325X	0.8750	1	23024.10	24862.50	0.926 ✔	1	Member Bearing
T10	170	Diagonal	A325X	0.8750	1	23692.50	24862.50	0.953 ✔	1	Member Bearing
T11	160	Leg	A325N	1.0000	12	26936.40	54517.00	0.494 ✔	1	Bolt Tension
		Diagonal	A325X	0.8750	1	29388.00	33824.30	0.869 ✔	1	Bolt Shear
T12	140	Leg	A325N	1.0000	12	32304.60	54517.00	0.593 ✔	1	Bolt Tension
		Diagonal	A325X	0.8750	1	31178.40	33824.30	0.922 ✔	1	Bolt Shear
T13	120	Leg	A325N	1.0000	12	33113.60	54517.00	0.607 ✔	1	Bolt Tension

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load / Allowable	Allowable Ratio	Criteria
		Diagonal	A325X	0.7500	3	17070.20	24850.50	0.687 ✓	1	Bolt Shear
		Horizontal	A325X	0.7500	2	13683.90	24850.50	0.551 ✓	1	Bolt Shear
T14	100	Leg	A325N	1.0000	16	28274.50	54517.00	0.519 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	3	17877.00	24850.50	0.719 ✓	1	Bolt Shear
		Horizontal	A325X	0.7500	2	15411.40	24850.50	0.620 ✓	1	Bolt Shear
T15	80	Leg	A325N	1.0000	16	31763.00	54517.00	0.583 ✓	1	Bolt Tension
		Diagonal	A325X	0.7500	3	17880.70	24850.50	0.720 ✓	1	Bolt Shear
		Horizontal	A325X	0.7500	2	15939.10	24850.50	0.641 ✓	1	Bolt Shear
T16	60	Leg	A325N	1.0000	16	34687.00	54517.00	0.636 ✓	1	Bolt Tension
		Diagonal	A325X	0.8750	3	25127.10	33824.30	0.743 ✓	1	Bolt Shear
		Horizontal	A325X	0.7500	2	17739.70	24850.50	0.714 ✓	1	Bolt Shear
T17	30	Leg	A325N	1.0000	24	26690.60	54517.00	0.490 ✓	1	Bolt Tension
		Diagonal	A325X	0.8750	3	24876.40	33824.30	0.735 ✓	1	Bolt Shear
		Horizontal	A325X	0.7500	2	21064.90	24850.50	0.848 ✓	1	Bolt Shear

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	320 - 304	ROHN 5 EH	16.00	4.00	26.1 K=1.00	6.1120	-6715.19	261674.00	0.026 [1] ✓
T2	304 - 300	ROHN 5 EH	4.00	4.00	26.1 K=1.00	6.1120	-9246.22	261674.00	0.035 [1] ✓
T3	300 - 280	ROHN 6 EH	20.03	5.01	27.4 K=1.00	8.4049	-25461.80	358043.00	0.071 [1] ✓
T4	280 - 260	ROHN 8 EH w/ angle 8x8x0.5	20.04	6.68	27.0 K=1.00	20.5036	-48441.90	874859.00	0.055 [1] ✓
T5	260 - 240	ROHN 8 EH w/ angle 8x8x0.5	20.03	6.68	27.0 K=1.00	20.5036	-81884.00	874884.00	0.094 [1] ✓
T6	240 - 220	ROHN 8 EH w/ angle 8x8x0.5	20.03	6.68	27.0 K=1.00	20.5036	-131956.00	874888.00	0.151 [1] ✓
T7	220 - 200	ROHN 8 EH w/ angle 8x8x0.5	20.03	10.02	40.4 K=1.00	20.5036	-185461.00	818638.00	0.227 [1] ✓
T8	200 - 180	ROHN 10 EH w/ angle 8x8x0.5	20.04	10.02	34.6 K=1.00	23.8453	-254953.00	982914.00	0.259 [1] ✓
T9	180 - 170	ROHN 10 EH w/ angle 8x8x0.5	10.02	10.02	34.6 K=1.00	23.8453	-292297.00	982929.00	0.297 [1] ✓
T10	170 - 160	ROHN 10 EH w/ angle 8x8x0.5	10.02	10.02	34.6 K=1.00	23.8453	-329680.00	982929.00	0.335 [1] ✓

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T11	160 - 140	ROHN 10 EH w/ angle 8x8x0.5	20.03	10.02	34.6 K=1.00	23.8453	-409410.00	982978.00	0.417 [1] ✔
T12	140 - 120	ROHN 10 EH w/ angle 8x8x0.5	20.04	10.02	34.6 K=1.00	23.8453	-490283.00	982899.00	0.499 [1] ✔
T13	120 - 100	ROHN 10 EH w/ angle 8x8x0.5	20.06	10.03	34.7 K=1.00	23.8453	-506926.00	982763.00	0.516 [1] ✔
T14	100 - 80	ROHN 10 EH w/ angle 8x8x0.5	20.05	10.03	34.7 K=1.00	23.8453	-576805.00	982792.00	0.587 [1] ✔
T15	80 - 60	ROHN 12 EH w/ angle 8x8x0.5	20.06	10.03	29.9 K=1.00	26.9670	-647902.00	1136630.00	0.570 [1] ✔
T16	60 - 30	ROHN 12 EH w/ angle 8x8x0.5	30.07	10.02	29.9 K=1.00	26.9670	-719329.00	1136700.00	0.633 [1] ✔
T17	30 - 0	ROHN 12 EHS w Angle 8x8x0.625	30.08	10.03	30.2 K=1.00	33.3120	-825945.00	1402320.00	0.589 [1] ✔

[1] P_u / ϕP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	320 - 304	L1 3/4x1 3/4x3/16	7.90	3.56	124.4 K=1.00	0.6211	-1239.64	11479.60	0.108 [1] ✔
T2	304 - 300	L1 3/4x1 3/4x3/16	7.90	3.56	124.4 K=1.00	0.6211	-1474.77	11479.60	0.128 [1] ✔
T3	300 - 280	L2x2x1/4	9.94	4.68	143.7 K=1.00	0.9380	-2894.71	13009.80	0.223 [1] ✔
T4	280 - 260	L2 1/2x2 1/2x1/4	12.59	5.83	142.4 K=1.00	1.1900	-4473.33	16785.10	0.267 [1] ✔
T5	260 - 240	L3x3x1/4	14.38	6.72	136.3 K=1.00	1.4400	-7899.73	22180.60	0.356 [1] ✔
T6	240 - 220	L4x4x5/16	16.19	7.64	116.9 K=1.01	2.4000	-12465.80	50268.80	0.248 [1] ✔
T7	220 - 200	L4x4x3/8	19.37	9.30	141.7 K=1.00	2.8600	-16371.90	40783.20	0.401 [1] ✔
T8	200 - 180	L4x4x3/8	21.20	10.21	155.6 K=1.00	2.8600	-21645.10	33828.90	0.640 [1] ✔
T9	180 - 170	L4x4x3/8	22.13	10.68	162.6 K=1.00	2.8600	-23206.30	30962.40	0.750 [1] ✔
T10	170 - 160	L4x4x3/8	23.06	11.15	169.7 K=1.00	2.8600	-24111.10	28413.70	0.849 [1] ✔
T11	160 - 140	L5x5x1/2	24.84	12.01	146.6 K=1.00	4.7500	-29388.00	63217.20	0.465 [1] ✔
T12	140 - 120	L5x5x1/2	26.78	13.03	159.0 K=1.00	4.7500	-31178.40	53762.80	0.580 [1] ✔
T13	120 - 100	ROHN 3 XXS	24.42	12.21	139.9 K=1.00	5.4664	-51210.70	63081.40	0.812 [1] ✔
T14	100 - 80	ROHN 3 XXS	25.15	12.58	144.1 K=1.00	5.4664	-53631.10	59442.80	0.902 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T15	80 - 60	ROHN 3 XXS	25.98	12.99	148.9 K=1.00	5.4664	-53642.10	55698.10	0.963 [1]
T16	60 - 30	ROHN 4 EH	35.21	11.74	95.4 K=1.00	4.4074	-75381.20	101988.00	0.739 [1]
T17	30 - 0	ROHN 4 EH	36.27	12.09	98.2 K=1.00	4.4074	-74629.30	97939.00	0.762 [1]

[1] P_u / ϕP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 3 STD	25.39	12.22	126.1 K=1.00	2.2285	-27367.80	31679.40	0.864 [1]
T14	100 - 80	ROHN 3 EH	27.97	13.51	142.7 K=1.00	3.0159	-30822.80	33455.50	0.921 [1]
T15	80 - 60	ROHN 3 XXS	30.47	14.70	168.5 K=1.00	5.4664	-31878.20	43484.00	0.733 [1]
T16	60 - 30	ROHN 3.5 EH	33.14	16.04	147.3 K=1.00	3.6784	-35479.50	38300.30	0.926 [1]
T17	30 - 0	ROHN 4 EH	36.80	17.87	145.2 K=1.00	4.4074	-42129.80	47220.90	0.892 [1]

[1] P_u / ϕP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	320 - 304	L1 3/4x1 3/4x3/16	6.81	6.35	182.6 K=0.82	0.6211	-180.73	5333.23	0.034 [1]
T3	300 - 280	L2x2x1/4	6.81	6.26	164.3 K=0.86	0.9380	-441.58	9943.51	0.044 [1]

[1] P_u / ϕP_n controls

Redundant Horizontal (1) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 1.5 STD	6.35	5.88	113.3 K=1.00	0.7995	-8798.43	14083.10	0.625 [1] ✔
T14	100 - 80	P1.5x.145	6.99	6.52	125.7 K=1.00	0.7995	-10010.00	11432.70	0.876 [1] ✔
T15	80 - 60	ROHN 2 STD	7.62	7.09	108.0 K=1.00	1.0745	-11246.90	20598.10	0.546 [1] ✔
T16	60 - 30	ROHN 1.5 STD	5.52	4.99	96.2 K=1.00	0.7995	-12482.30	18282.30	0.683 [1] ✔
T17	30 - 0	P1.5x.145	6.13	5.60	108.0 K=1.00	0.7995	-14335.80	15339.00	0.935 [1] ✔

[1] P_u / ϕP_n controls

Redundant Horizontal (2) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T16	60 - 30	ROHN 2 XXS	11.05	10.52	179.6 K=1.00	2.6559	-12482.30	18604.80	0.671 [1] ✔
T17	30 - 0	ROHN 2.5 EH	12.27	11.74	152.4 K=1.00	2.2535	-14335.80	21919.90	0.654 [1] ✔

[1] P_u / ϕP_n controls

Redundant Diagonal (1) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 2 STD	11.52	10.57	161.1 K=1.00	1.0745	-7982.48	9352.65	0.853 [1] ✔
T14	100 - 80	ROHN 2 EH	11.86	10.98	171.6 K=1.00	1.4807	-8489.48	11364.10	0.747 [1] ✔
T15	80 - 60	ROHN 2 EH	12.18	11.25	175.8 K=1.00	1.4807	-8994.63	10825.00	0.831 [1] ✔
T16	60 - 30	ROHN 2 EH	11.15	9.95	155.3 K=1.00	1.4807	-12596.10	13862.10	0.909 [1] ✔
T17	30 - 0	ROHN 2.5 STD	11.41	10.31	130.6 K=1.00	1.7040	-13336.50	22579.60	0.591 [1] ✔

[1] P_u / ϕP_n controls

Redundant Diagonal (2) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T16	60 - 30	ROHN 2.5 STD	14.46	13.72	173.8 K=1.00	1.7040	-8168.75	12742.30	0.641 [1] ✔
T17	30 - 0	ROHN 2.5 STD	15.33	14.63	185.3 K=1.00	1.7040	-8960.14	11206.60	0.800 [1] ✔

[1] P_u / ϕP_n controls

Redundant Hip (1) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 1.5 STD	6.35	6.35	122.3 K=1.00	0.7995	-49.00	12066.60	0.004 [1] ✔
T14	100 - 80	ROHN 1.5 STD	6.99	6.99	134.8 K=1.00	0.7995	-47.97	9943.20	0.005 [1] ✔
T15	80 - 60	ROHN 1.5 STD	7.62	7.62	146.8 K=1.00	0.7995	-47.10	8378.50	0.006 [1] ✔
T16	60 - 30	ROHN 1.5 STD	5.52	5.52	106.5 K=1.00	0.7995	-176.64	15708.50	0.011 [1] ✔
T17	30 - 0	ROHN 1.5 STD	6.13	6.13	118.2 K=1.00	0.7995	-158.33	12924.00	0.012 [1] ✔

[1] P_u / ϕP_n controls

Redundant Hip (2) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T16	60 - 30	ROHN 2 STD	11.05	11.05	168.4 K=1.00	1.0745	-96.48	8559.02	0.011 [1] ✔
T17	30 - 0	ROHN 2 STD	12.27	12.27	187.0 K=1.00	1.0745	-90.70	6941.18	0.013 [1] ✔

[1] P_u / ϕP_n controls

Redundant Hip Diagonal (1) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 2.5 STD	15.15	15.15	191.9 K=1.00	1.7040	-98.29	10450.60	0.009 [1] ✔
T14	100 - 80	ROHN 2.5 STD	16.00	16.00	202.6 K=1.00	1.7040	-92.08	9375.46	0.010 [1] ✔
T15	80 - 60	ROHN 3 STD	16.88	16.88	174.1 K=1.00	2.2285	-107.59	16617.70	0.006 [1] ✔
T16	60 - 30	ROHN 2 STD	14.10	14.10	214.9 K=1.00	1.0745	-365.19	5254.92	0.069 [1] ✔
T17	30 - 0	ROHN 2.5 STD	14.88	14.88	188.4 K=1.00	1.7040	-331.48	10840.00	0.031 [1] ✔

[1] P_u / ϕP_n controls

Redundant Hip Diagonal (2) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T16	60 - 30	ROHN 2 STD	17.91	17.91	273.1 K=1.00	1.0745	-141.83	3255.91	0.044 [1] ✔
T17	30 - 0	KL/R > 250 (C) - 357 ROHN 2.5 STD	19.28	19.28	244.2 K=1.00	1.7040	-139.36	6453.40	0.022 [1] ✔

[1] P_u / ϕP_n controls

Inner Bracing Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 3 STD	12.69	12.69	130.9 K=1.00	2.2285	-28.11	29370.40	0.001 [1] ✔
T14	100 - 80	ROHN 3 STD	13.99	13.99	144.2 K=1.00	2.2285	-27.83	24201.90	0.001 [1] ✔
T15	80 - 60	ROHN 3 STD	15.24	15.24	157.1 K=1.00	2.2285	-32.11	20393.40	0.002 [1] ✔
T16	60 - 30	ROHN 3 STD	16.57	16.57	170.9 K=1.00	2.2285	-60.11	17239.70	0.003 [1] ✔
T17	30 - 0	ROHN 3 STD	18.40	18.40	189.8 K=1.00	2.2285	-62.40	13981.00	0.004 [1] ✔

[1] P_u / ϕP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	320 - 304	ROHN 5 EH	16.00	4.00	26.1	6.1120	5137.85	275039.00	0.019 [1] ✔
T2	304 - 300	ROHN 5 EH	4.00	4.00	26.1	6.1120	7268.29	275039.00	0.026 [1] ✔
T3	300 - 280	ROHN 6 EH	20.03	5.01	27.4	8.4049	20274.90	378222.00	0.054 [1] ✔
T4	280 - 260	ROHN 8 EH w/ angle 8x8x0.5	20.04	6.68	27.0	20.5036	37931.90	922662.00	0.041 [1] ✔
T5	260 - 240	ROHN 8 EH w/ angle 8x8x0.5	20.03	6.68	27.0	20.5036	62817.30	922662.00	0.068 [1] ✔
T6	240 - 220	ROHN 8 EH w/ angle 8x8x0.5	20.03	6.68	27.0	20.5036	100903.00	922662.00	0.109 [1] ✔
T7	220 - 200	ROHN 8 EH w/ angle 8x8x0.5	20.03	10.02	40.4	20.5036	144014.00	922662.00	0.156 [1] ✔
T8	200 - 180	ROHN 10 EH w/ angle 8x8x0.5	20.04	10.02	34.6	23.8453	197589.00	1073040.00	0.184 [1] ✔
T9	180 - 170	ROHN 10 EH w/ angle 8x8x0.5	10.02	10.02	34.6	23.8453	228139.00	1073040.00	0.213 [1] ✔
T10	170 - 160	ROHN 10 EH w/ angle 8x8x0.5	10.02	10.02	34.6	23.8453	258864.00	1073040.00	0.241 [1] ✔
T11	160 - 140	ROHN 10 EH w/ angle 8x8x0.5	20.03	10.02	34.6	23.8453	323236.00	1073040.00	0.301 [1] ✔
T12	140 - 120	ROHN 10 EH w/ angle 8x8x0.5	20.04	10.02	34.6	23.8453	387655.00	1073040.00	0.361 [1] ✔
T13	120 - 100	ROHN 10 EH w/ angle 8x8x0.5	20.06	10.03	34.7	23.8453	398729.00	1073040.00	0.372 [1] ✔
T14	100 - 80	ROHN 10 EH w/ angle 8x8x0.5	20.05	10.03	34.7	23.8453	453455.00	1073040.00	0.423 [1] ✔
T15	80 - 60	ROHN 12 EH w/ angle 8x8x0.5	20.06	10.03	29.9	26.9670	509535.00	1213520.00	0.420 [1] ✔
T16	60 - 30	ROHN 12 EH w/ angle 8x8x0.5	30.07	10.02	29.9	26.9670	565058.00	1213520.00	0.466 [1] ✔
T17	30 - 0	ROHN 12 EHS w Angle 8x8x0.625	30.08	10.03	30.2	33.3120	648572.00	1499040.00	0.433 [1] ✔

[1] P_u / ϕP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	320 - 304	L1 3/4x1 3/4x3/16	7.90	3.56	82.2	0.3604	1247.46	15675.30	0.080 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T2	304 - 300	L1 3/4x1 3/4x3/16	7.90	3.56	82.2	0.3604	1453.14	15675.30	0.093 [1] ✔
T3	300 - 280	L2x2x1/4	9.94	4.68	94.6	0.5629	2863.60	24485.10	0.117 [1] ✔
T4	280 - 260	L2 1/2x2 1/2x1/4	12.59	5.83	93.1	0.7284	4404.12	31687.00	0.139 [1] ✔
T5	260 - 240	L3x3x1/4	14.38	6.72	88.5	0.9159	7655.66	44652.00	0.171 [1] ✔
T6	240 - 220	L4x4x5/16	16.19	7.64	75.2	1.5949	12483.20	77752.40	0.161 [1] ✔
T7	220 - 200	L4x4x3/8	19.37	9.30	92.1	1.8989	15763.40	92571.70	0.170 [1] ✔
T8	200 - 180	L4x4x3/8	21.20	10.21	101.1	1.8637	21256.30	90857.80	0.234 [1] ✔
T9	180 - 170	L4x4x3/8	22.13	10.68	105.6	1.8637	23024.10	90857.80	0.253 [1] ✔
T10	170 - 160	L4x4x3/8	23.06	11.15	110.2	1.8637	23692.50	90857.80	0.261 [1] ✔
T11	160 - 140	L5x5x1/2	24.84	12.01	94.8	3.1875	28630.70	155391.00	0.184 [1] ✔
T12	140 - 120	L5x5x1/2	26.78	13.03	102.7	3.1875	30361.50	155391.00	0.195 [1] ✔
T13	120 - 100	ROHN 3 XXS	24.42	12.21	139.9	5.4664	48584.80	245987.00	0.198 [1] ✔
T14	100 - 80	ROHN 3 XXS	25.15	12.58	144.1	5.4664	50042.60	245987.00	0.203 [1] ✔
T15	80 - 60	ROHN 3 XXS	25.98	12.99	148.9	5.4664	49004.10	245987.00	0.199 [1] ✔
T16	60 - 30	ROHN 4 EH	35.21	11.74	95.4	4.4074	68704.10	198335.00	0.346 [1] ✔
T17	30 - 0	ROHN 4 EH	36.27	12.09	98.2	4.4074	70168.50	198335.00	0.354 [1] ✔

[1] P_u / ϕP_n controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 3 STD	25.39	12.22	126.1	2.2285	27122.80	100281.00	0.270 [1] ✔
T14	100 - 80	ROHN 3 EH	27.97	13.51	142.7	3.0159	29627.60	135717.00	0.218 [1] ✔
T15	80 - 60	ROHN 3 XXS	30.47	14.70	168.5	5.4664	30363.80	245987.00	0.123 [1] ✔
T16	60 - 30	ROHN 3.5 EH	33.14	16.04	147.3	3.6784	35326.80	165529.00	0.213 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T17	30 - 0	ROHN 4 EH	36.80	17.87	145.2	4.4074	38047.90	198335.00	0.192 [1] ✔

[1] P_u / ϕP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	320 - 304	L1 3/4x1 3/4x3/16	6.81	6.35	141.8	0.6211	169.15	20123.40	0.008 [1] ✔
T3	300 - 280	L2x2x1/4	6.81	6.26	123.3	0.9380	441.58	30391.20	0.015 [1] ✔

[1] P_u / ϕP_n controls

Redundant Horizontal (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 1.5 STD	6.35	5.88	113.3	0.7995	8798.43	35975.60	0.245 [1] ✔
T14	100 - 80	P1.5x.145	6.99	6.52	125.7	0.7995	10010.00	35975.60	0.278 [1] ✔
T15	80 - 60	ROHN 2 STD	7.62	7.09	108.0	1.0745	11246.90	48353.90	0.233 [1] ✔
T16	60 - 30	ROHN 1.5 STD	5.52	4.99	96.2	0.7995	12482.30	35975.60	0.347 [1] ✔
T17	30 - 0	P1.5x.145	6.13	5.60	108.0	0.7995	14335.80	35975.60	0.398 [1] ✔

[1] P_u / ϕP_n controls

Redundant Horizontal (2) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T16	60 - 30	ROHN 2 XXS	11.05	10.52	179.6	2.6559	12482.30	119516.00	0.104 [1] ✔
T17	30 - 0	ROHN 2.5 EH	12.27	11.74	152.4	2.2535	14335.80	101409.00	0.141 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
									✔

[1] P_u / ϕP_n controls

Redundant Diagonal (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 2 STD	11.52	10.57	161.1	1.0745	7982.48	48353.90	0.165 [1] ✔
T14	100 - 80	ROHN 2 EH	11.86	10.98	171.6	1.4807	8489.48	66630.70	0.127 [1] ✔
T15	80 - 60	ROHN 2 EH	12.18	11.25	175.8	1.4807	8994.63	66630.70	0.135 [1] ✔
T16	60 - 30	ROHN 2 EH	11.15	9.95	155.3	1.4807	12596.10	66630.70	0.189 [1] ✔
T17	30 - 0	ROHN 2.5 STD	11.41	10.31	130.6	1.7040	13336.50	76682.30	0.174 [1] ✔

[1] P_u / ϕP_n controls

Redundant Diagonal (2) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T16	60 - 30	ROHN 2.5 STD	14.46	13.72	173.8	1.7040	8168.75	76682.30	0.107 [1] ✔
T17	30 - 0	ROHN 2.5 STD	15.33	14.63	185.3	1.7040	8960.14	76682.30	0.117 [1] ✔

[1] P_u / ϕP_n controls

Redundant Hip (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 1.5 STD	6.35	6.35	122.3	0.7995	23.30	35975.60	0.001 [1] ✔
T14	100 - 80	ROHN 1.5 STD	6.99	6.99	134.8	0.7995	21.25	35975.60	0.001 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T15	80 - 60	ROHN 1.5 STD	7.62	7.62	146.8	0.7995	15.96	35975.60	0.000 [1] ✔
T16	60 - 30	ROHN 1.5 STD	5.52	5.52	106.5	0.7995	171.26	35975.60	0.005 [1] ✔
T17	30 - 0	ROHN 1.5 STD	6.13	6.13	118.2	0.7995	148.24	35975.60	0.004 [1] ✔

[1] P_u / ϕP_n controls

Redundant Hip (2) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T16	60 - 30	ROHN 2 STD	11.05	11.05	168.4	1.0745	71.63	48353.90	0.001 [1] ✔
T17	30 - 0	ROHN 2 STD	12.27	12.27	187.0	1.0745	62.63	48353.90	0.001 [1] ✔

[1] P_u / ϕP_n controls

Redundant Hip Diagonal (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 2.5 STD	15.15	15.15	191.9	1.7040	99.38	76682.30	0.001 [1] ✔
T14	100 - 80	ROHN 2.5 STD	16.00	16.00	202.6	1.7040	92.04	76682.30	0.001 [1] ✔
T15	80 - 60	ROHN 3 STD	16.88	16.88	174.1	2.2285	94.45	100281.00	0.001 [1] ✔
T16	60 - 30	ROHN 2 STD	14.10	14.10	214.9	1.0745	357.57	48353.90	0.007 [1] ✔
T17	30 - 0	ROHN 2.5 STD	14.88	14.88	188.4	1.7040	324.54	76682.30	0.004 [1] ✔

[1] P_u / ϕP_n controls

Redundant Hip Diagonal (2) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T16	60 - 30	ROHN 2 STD	17.91	17.91	273.1	1.0745	121.64	48353.90	0.003 [1] ✔
T17	30 - 0	ROHN 2.5 STD	19.28	19.28	244.2	1.7040	117.69	76682.30	0.002 [1] ✔

[1] P_u / ϕP_n controls

Inner Bracing Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	120 - 100	ROHN 3 STD	12.69	12.69	130.9	2.2285	7.98	100281.00	0.000 [1] ✔
T14	100 - 80	ROHN 3 STD	13.99	13.99	144.2	2.2285	4.41	100281.00	0.000 [1] ✔
T16	60 - 30	ROHN 3 STD	16.57	16.57	170.9	2.2285	43.70	100281.00	0.000 [1] ✔
T17	30 - 0	ROHN 3 STD	18.40	18.40	189.8	2.2285	39.56	100281.00	0.000 [1] ✔

[1] P_u / ϕP_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T1	320 - 304	Leg	ROHN 5 EH	1	-6715.19	261674.00	2.6	Pass
		Leg	ROHN 5 EH	2	-6646.83	261674.00	2.5	Pass
		Leg	ROHN 5 EH	3	-6686.90	261674.00	2.6	Pass
T2	304 - 300	Leg	ROHN 5 EH	31	-9246.22	261674.00	3.5	Pass
		Leg	ROHN 5 EH	32	-9183.09	261674.00	3.5	Pass
		Leg	ROHN 5 EH	33	-9219.60	261674.00	3.5	Pass
T3	300 - 280	Leg	ROHN 6 EH	40	-25461.80	358043.00	7.1	Pass
		Leg	ROHN 6 EH	41	-24967.40	358043.00	7.0	Pass
		Leg	ROHN 6 EH	42	-25177.40	358043.00	7.0	Pass
T4	280 - 260	Leg	ROHN 8 EH w/ angle 8x8x0.5	70	-48441.90	874859.00	5.5 8.6 (b)	Pass
		Leg	ROHN 8 EH w/ angle 8x8x0.5	71	-48172.40	874859.00	5.5 8.7 (b)	Pass
		Leg	ROHN 8 EH w/ angle 8x8x0.5	72	-48227.10	874859.00	5.5 8.7 (b)	Pass
T5	260 - 240	Leg	ROHN 8 EH w/ angle 8x8x0.5	91	-81253.90	874884.00	9.3 14.4 (b)	Pass
		Leg	ROHN 8 EH w/ angle 8x8x0.5	92	-81884.00	874884.00	9.4 14.4 (b)	Pass
		Leg	ROHN 8 EH w/ angle 8x8x0.5	93	-80959.20	874884.00	9.3 14.4 (b)	Pass
T6	240 - 220	Leg	ROHN 8 EH w/ angle 8x8x0.5	112	-131242.00	874888.00	15.0	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
							23.1 (b)	
		Leg	ROHN 8 EH w/ angle 8x8x0.5	113	-131956.00	874888.00	15.1	Pass
							23.0 (b)	
		Leg	ROHN 8 EH w/ angle 8x8x0.5	114	-131274.00	874888.00	15.0	Pass
							23.1 (b)	
T7	220 - 200	Leg	ROHN 8 EH w/ angle 8x8x0.5	133	-184349.00	818638.00	22.5	Pass
		Leg	ROHN 8 EH w/ angle 8x8x0.5	134	-185461.00	818638.00	22.7	Pass
		Leg	ROHN 8 EH w/ angle 8x8x0.5	135	-184366.00	818638.00	22.5	Pass
T8	200 - 180	Leg	ROHN 10 EH w/ angle 8x8x0.5	148	-253289.00	982914.00	25.8	Pass
							30.2 (b)	
		Leg	ROHN 10 EH w/ angle 8x8x0.5	149	-254953.00	982914.00	25.9	Pass
							30.0 (b)	
		Leg	ROHN 10 EH w/ angle 8x8x0.5	150	-253199.00	982914.00	25.8	Pass
							30.2 (b)	
T9	180 - 170	Leg	ROHN 10 EH w/ angle 8x8x0.5	163	-290537.00	982929.00	29.6	Pass
							34.9 (b)	
		Leg	ROHN 10 EH w/ angle 8x8x0.5	164	-292297.00	982929.00	29.7	Pass
							34.7 (b)	
		Leg	ROHN 10 EH w/ angle 8x8x0.5	165	-290267.00	982929.00	29.5	Pass
							34.9 (b)	
T10	170 - 160	Leg	ROHN 10 EH w/ angle 8x8x0.5	172	-327878.00	982929.00	33.4	Pass
		Leg	ROHN 10 EH w/ angle 8x8x0.5	173	-329680.00	982929.00	33.5	Pass
		Leg	ROHN 10 EH w/ angle 8x8x0.5	174	-327498.00	982929.00	33.3	Pass
T11	160 - 140	Leg	ROHN 10 EH w/ angle 8x8x0.5	181	-408295.00	982978.00	41.5	Pass
							49.3 (b)	
		Leg	ROHN 10 EH w/ angle 8x8x0.5	182	-409410.00	982978.00	41.7	Pass
							49.2 (b)	
		Leg	ROHN 10 EH w/ angle 8x8x0.5	183	-406989.00	982978.00	41.4	Pass
							49.4 (b)	
T12	140 - 120	Leg	ROHN 10 EH w/ angle 8x8x0.5	196	-489106.00	982899.00	49.8	Pass
							59.1 (b)	
		Leg	ROHN 10 EH w/ angle 8x8x0.5	197	-490283.00	982899.00	49.9	Pass
							59.0 (b)	
		Leg	ROHN 10 EH w/ angle 8x8x0.5	198	-487546.00	982899.00	49.6	Pass
							59.3 (b)	
T13	120 - 100	Leg	ROHN 10 EH w/ angle 8x8x0.5	211	-505989.00	982763.00	51.5	Pass
							60.5 (b)	
		Leg	ROHN 10 EH w/ angle 8x8x0.5	212	-506926.00	982763.00	51.6	Pass
							60.5 (b)	
		Leg	ROHN 10 EH w/ angle 8x8x0.5	213	-504577.00	982763.00	51.3	Pass
							60.7 (b)	
T14	100 - 80	Leg	ROHN 10 EH w/ angle 8x8x0.5	244	-575628.00	982792.00	58.6	Pass
		Leg	ROHN 10 EH w/ angle 8x8x0.5	245	-576805.00	982792.00	58.7	Pass
		Leg	ROHN 10 EH w/ angle 8x8x0.5	246	-574099.00	982792.00	58.4	Pass
T15	80 - 60	Leg	ROHN 12 EH w/ angle 8x8x0.5	277	-646440.00	1136630.00	56.9	Pass
							58.1 (b)	
		Leg	ROHN 12 EH w/ angle 8x8x0.5	278	-647902.00	1136630.00	57.0	Pass
							58.0 (b)	
		Leg	ROHN 12 EH w/ angle 8x8x0.5	279	-644847.00	1136630.00	56.7	Pass
							58.3 (b)	
T16	60 - 30	Leg	ROHN 12 EH w/ angle 8x8x0.5	310	-717767.00	1136700.00	63.1	Pass
							63.5 (b)	
		Leg	ROHN 12 EH w/ angle 8x8x0.5	311	-719329.00	1136700.00	63.3	Pass
							63.3 (b)	
		Leg	ROHN 12 EH w/ angle 8x8x0.5	312	-716184.00	1136700.00	63.0	Pass
							63.6 (b)	
T17	30 - 0	Leg	ROHN 12 EHS w Angle 8x8x0.625	361	-824015.00	1402320.00	58.8	Pass
		Leg	ROHN 12 EHS w Angle 8x8x0.625	362	-825945.00	1402320.00	58.9	Pass
		Leg	ROHN 12 EHS w Angle	363	-822324.00	1402320.00	58.6	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$øP_{allow}$ lb	% Capacity	Pass Fail
T1	320 - 304	Diagonal	8x8x0.625 L1 3/4x1 3/4x3/16	7	-1227.97	11479.60	10.7 21.3 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	8	-1227.12	11479.60	10.7 21.2 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	9	-1216.92	11479.60	10.6 20.9 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	10	-1203.79	11479.60	10.5 20.8 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	11	-1239.64	11479.60	10.8 21.5 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	12	-1239.00	11479.60	10.8 21.5 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	13	-1003.21	11479.60	8.7 17.2 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	14	-1003.58	11479.60	8.7 17.2 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	15	-983.83	11479.60	8.6 16.7 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	16	-974.96	11479.60	8.5 16.7 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	17	-1038.97	11479.60	9.1 17.8 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	18	-1039.25	11479.60	9.1 17.8 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	19	-794.48	11479.60	6.9 13.7 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	20	-794.30	11479.60	6.9 13.7 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	21	-771.52	11479.60	6.7 13.1 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	22	-759.95	11479.60	6.6 13.1 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	23	-839.21	11479.60	7.3 14.5 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	24	-839.23	11479.60	7.3 14.5 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	25	-502.43	11479.60	4.4 8.6 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	26	-553.57	11479.60	4.8 9.2 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	27	-506.87	11479.60	4.4 8.4 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	28	-461.98	11479.60	4.0 7.9 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	29	-658.87	11479.60	5.7 11.2 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	30	-658.75	11479.60	5.7 11.2 (b)	Pass
T2	304 - 300	Diagonal	L1 3/4x1 3/4x3/16	34	-1417.97	11479.60	12.4 24.0 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	35	-1418.07	11479.60	12.4 24.0 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	36	-1439.55	11479.60	12.5 23.8 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	37	-1404.20	11479.60	12.2 23.8 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	38	-1474.77	11479.60	12.8 25.0 (b)	Pass
		Diagonal	L1 3/4x1 3/4x3/16	39	-1473.85	11479.60	12.8 25.0 (b)	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T3	300 - 280	Diagonal	L2x2x1/4	46	-2613.68	13009.80	20.1 28.6 (b)	Pass
		Diagonal	L2x2x1/4	47	-2747.44	13009.80	21.1 28.4 (b)	Pass
		Diagonal	L2x2x1/4	48	-2172.33	13009.80	16.7 22.5 (b)	Pass
		Diagonal	L2x2x1/4	49	-2072.50	13009.80	15.9 22.6 (b)	Pass
		Diagonal	L2x2x1/4	50	-2894.71	13009.80	22.3 31.3 (b)	Pass
		Diagonal	L2x2x1/4	51	-2880.36	13009.80	22.1 31.4 (b)	Pass
		Diagonal	L2x2x1/4	52	-2115.65	14300.60	14.8 23.2 (b)	Pass
		Diagonal	L2x2x1/4	53	-2130.66	14300.60	14.9 23.1 (b)	Pass
		Diagonal	L2x2x1/4	54	-2104.85	14300.60	14.7 22.1 (b)	Pass
		Diagonal	L2x2x1/4	55	-2025.61	14300.60	14.2 22.2 (b)	Pass
		Diagonal	L2x2x1/4	56	-2406.37	14300.60	16.8 26.3 (b)	Pass
		Diagonal	L2x2x1/4	57	-2406.84	14300.60	16.8 26.3 (b)	Pass
		Diagonal	L2x2x1/4	58	-1967.55	15762.10	12.5 21.7 (b)	Pass
		Diagonal	L2x2x1/4	59	-1994.89	15762.10	12.7 21.6 (b)	Pass
		Diagonal	L2x2x1/4	60	-1583.47	15762.10	10.0 16.9 (b)	Pass
		Diagonal	L2x2x1/4	61	-1549.38	15762.10	9.8 16.9 (b)	Pass
		Diagonal	L2x2x1/4	62	-1983.65	15762.10	12.6 21.3 (b)	Pass
		Diagonal	L2x2x1/4	63	-1947.61	15762.10	12.4 21.4 (b)	Pass
		Diagonal	L2x2x1/4	64	-1852.78	17400.80	10.6 20.0 (b)	Pass
		Diagonal	L2x2x1/4	65	-1921.41	17400.80	11.0 19.9 (b)	Pass
		Diagonal	L2x2x1/4	66	-1349.21	17400.80	7.8 14.0 (b)	Pass
		Diagonal	L2x2x1/4	67	-1334.08	17400.80	7.7 14.0 (b)	Pass
		Diagonal	L2x2x1/4	68	-1875.39	17400.80	10.8 19.0 (b)	Pass
		Diagonal	L2x2x1/4	69	-1773.60	17400.80	10.2 19.1 (b)	Pass
T4	280 - 260	Diagonal	L2 1/2x2 1/2x1/4	73	-4424.03	16785.10	26.4 36.8 (b)	Pass
		Diagonal	L2 1/2x2 1/2x1/4	74	-4473.33	16785.10	26.7 36.7 (b)	Pass
		Diagonal	L2 1/2x2 1/2x1/4	75	-3989.41	16785.10	23.8 32.1 (b)	Pass
		Diagonal	L2 1/2x2 1/2x1/4	76	-3905.08	16785.10	23.3 32.1 (b)	Pass
		Diagonal	L2 1/2x2 1/2x1/4	77	-4384.27	16785.10	26.1 35.5 (b)	Pass
		Diagonal	L2 1/2x2 1/2x1/4	78	-4274.25	16785.10	25.5 35.6 (b)	Pass
		Diagonal	L2 1/2x2 1/2x1/4	79	-3919.47	18668.80	21.0	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$øP_{allow}$ lb	% Capacity	Pass Fail
							32.6 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	80	-4044.02	18668.80	21.7	Pass
							32.4 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	81	-3402.09	18668.80	18.2	Pass
							27.0 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	82	-3272.58	18668.80	17.5	Pass
							27.1 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	83	-4066.26	18668.80	21.8	Pass
							32.8 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	84	-3967.16	18668.80	21.3	Pass
							32.9 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	85	-3412.03	20825.20	16.4	Pass
							28.4 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	86	-3585.21	20825.20	17.2	Pass
							28.3 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	87	-2737.27	20825.20	13.1	Pass
							21.6 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	88	-2620.19	20825.20	12.6	Pass
							21.7 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	89	-3680.91	20825.20	17.7	Pass
							29.7 (b)	
		Diagonal	L2 1/2x2 1/2x1/4	90	-3589.53	20825.20	17.2	Pass
							29.8 (b)	
T5	260 - 240	Diagonal	L3x3x1/4	94	-7899.73	22180.60	35.6	Pass
							54.0 (b)	
		Diagonal	L3x3x1/4	95	-7698.37	22180.60	34.7	Pass
							54.2 (b)	
		Diagonal	L3x3x1/4	96	-7113.99	22180.60	32.1	Pass
							50.1 (b)	
		Diagonal	L3x3x1/4	97	-7571.29	22180.60	34.1	Pass
							49.9 (b)	
		Diagonal	L3x3x1/4	98	-6035.84	22180.60	27.2	Pass
							40.7 (b)	
		Diagonal	L3x3x1/4	99	-5801.53	22180.60	26.2	Pass
							40.8 (b)	
		Diagonal	L3x3x1/4	100	-6255.97	24277.90	25.8	Pass
							43.8 (b)	
		Diagonal	L3x3x1/4	101	-6235.24	24277.90	25.7	Pass
							43.8 (b)	
		Diagonal	L3x3x1/4	102	-5828.49	24277.90	24.0	Pass
							40.4 (b)	
		Diagonal	L3x3x1/4	103	-5974.59	24277.90	24.6	Pass
							40.3 (b)	
		Diagonal	L3x3x1/4	104	-5593.55	24277.90	23.0	Pass
							38.0 (b)	
		Diagonal	L3x3x1/4	105	-5405.93	24277.90	22.3	Pass
							38.1 (b)	
		Diagonal	L3x3x1/4	106	-5405.98	26649.70	20.3	Pass
							38.0 (b)	
		Diagonal	L3x3x1/4	107	-5410.14	26649.70	20.3	Pass
							38.0 (b)	
		Diagonal	L3x3x1/4	108	-5024.82	26649.70	18.9	Pass
							34.5 (b)	
		Diagonal	L3x3x1/4	109	-5032.68	26649.70	18.9	Pass
							34.5 (b)	
		Diagonal	L3x3x1/4	110	-5106.41	26649.70	19.2	Pass
							34.9 (b)	
		Diagonal	L3x3x1/4	111	-4968.12	26649.70	18.6	Pass
							35.0 (b)	
T6	240 - 220	Diagonal	L4x4x5/16	115	-12301.80	50268.80	24.5	Pass
							69.6 (b)	

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Diagonal	L4x4x5/16	116	-12277.50	50268.80	24.4 69.7 (b)	Pass
		Diagonal	L4x4x5/16	117	-12442.20	50268.80	24.8 70.6 (b)	Pass
		Diagonal	L4x4x5/16	118	-12465.80	50268.80	24.8 70.5 (b)	Pass
		Diagonal	L4x4x5/16	119	-10423.30	50268.80	20.7 59.1 (b)	Pass
		Diagonal	L4x4x5/16	120	-10424.40	50268.80	20.7 59.1 (b)	Pass
		Diagonal	L4x4x5/16	121	-11732.10	53365.30	22.0 64.0 (b)	Pass
		Diagonal	L4x4x5/16	122	-11408.10	53365.30	21.4 64.1 (b)	Pass
		Diagonal	L4x4x5/16	123	-11531.70	53365.30	21.6 64.8 (b)	Pass
		Diagonal	L4x4x5/16	124	-11801.70	53365.30	22.1 64.6 (b)	Pass
		Diagonal	L4x4x5/16	125	-9562.66	53365.30	17.9 53.5 (b)	Pass
		Diagonal	L4x4x5/16	126	-9576.22	53365.30	17.9 53.5 (b)	Pass
		Diagonal	L4x4x5/16	127	-9726.01	56723.40	17.1 51.5 (b)	Pass
		Diagonal	L4x4x5/16	128	-9182.17	56723.40	16.2 51.7 (b)	Pass
		Diagonal	L4x4x5/16	129	-8934.06	56723.40	15.8 50.3 (b)	Pass
		Diagonal	L4x4x5/16	130	-9587.33	56723.40	16.9 50.1 (b)	Pass
		Diagonal	L4x4x5/16	131	-7306.24	56723.40	12.9 39.1 (b)	Pass
		Diagonal	L4x4x5/16	132	-7158.12	56723.40	12.6 39.1 (b)	Pass
T7	220 - 200	Diagonal	L4x4x3/8	136	-16253.50	40783.20	39.9 73.2 (b)	Pass
		Diagonal	L4x4x3/8	137	-15605.30	40783.20	38.3 73.4 (b)	Pass
		Diagonal	L4x4x3/8	138	-15811.50	40783.20	38.8 74.3 (b)	Pass
		Diagonal	L4x4x3/8	139	-16371.90	40783.20	40.1 74.2 (b)	Pass
		Diagonal	L4x4x3/8	140	-12586.70	40783.20	30.9 58.9 (b)	Pass
		Diagonal	L4x4x3/8	141	-12706.40	40783.20	31.2 58.9 (b)	Pass
		Diagonal	L4x4x3/8	142	-14795.20	44725.40	33.1 68.0 (b)	Pass
		Diagonal	L4x4x3/8	143	-14516.00	44725.40	32.5 68.2 (b)	Pass
		Diagonal	L4x4x3/8	144	-14715.10	44725.40	32.9 69.1 (b)	Pass
		Diagonal	L4x4x3/8	145	-14908.90	44725.40	33.3 68.9 (b)	Pass
		Diagonal	L4x4x3/8	146	-12042.10	44725.40	26.9 56.4 (b)	Pass
		Diagonal	L4x4x3/8	147	-12042.90	44725.40	26.9 56.4 (b)	Pass
T8	200 - 180	Diagonal	L4x4x3/8	151	-21632.20	33828.90	63.9 85.1 (b)	Pass
		Diagonal	L4x4x3/8	152	-21269.50	33828.90	62.9	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Diagonal	L4x4x3/8	153	-21291.90	33828.90	85.4 (b) 62.9	Pass
		Diagonal	L4x4x3/8	154	-21645.10	33828.90	85.5 (b) 64.0	Pass
		Diagonal	L4x4x3/8	155	-17010.50	33828.90	85.2 (b) 50.3	Pass
		Diagonal	L4x4x3/8	156	-17008.30	33828.90	68.0 (b) 50.3	Pass
		Diagonal	L4x4x3/8	157	-19640.80	37111.10	68.0 (b) 52.9	Pass
		Diagonal	L4x4x3/8	158	-18771.70	37111.10	74.8 (b) 50.6	Pass
		Diagonal	L4x4x3/8	159	-18968.40	37111.10	75.0 (b) 51.1	Pass
		Diagonal	L4x4x3/8	160	-19754.00	37111.10	75.8 (b) 53.2	Pass
		Diagonal	L4x4x3/8	161	-14935.10	37111.10	75.6 (b) 40.2	Pass
		Diagonal	L4x4x3/8	162	-15049.80	37111.10	59.1 (b) 40.6	Pass
T9	180 - 170	Diagonal	L4x4x3/8	166	-23206.30	30962.40	59.1 (b) 75.0	Pass
		Diagonal	L4x4x3/8	167	-22992.50	30962.40	92.3 (b) 74.3	Pass
		Diagonal	L4x4x3/8	168	-22624.40	30962.40	92.6 (b) 73.1	Pass
		Diagonal	L4x4x3/8	169	-23000.40	30962.40	91.2 (b) 74.3	Pass
		Diagonal	L4x4x3/8	170	-18184.70	30962.40	90.9 (b) 58.7	Pass
		Diagonal	L4x4x3/8	171	-18176.40	30962.40	73.0 (b) 58.7	Pass
T10	170 - 160	Diagonal	L4x4x3/8	175	-24111.10	28413.70	73.0 (b) 84.9	Pass
		Diagonal	L4x4x3/8	176	-23812.50	28413.70	95.0 (b) 83.8	Pass
		Diagonal	L4x4x3/8	177	-23274.70	28413.70	95.3 (b) 81.9	Pass
		Diagonal	L4x4x3/8	178	-23809.20	28413.70	93.2 (b) 83.8	Pass
		Diagonal	L4x4x3/8	179	-18680.50	28413.70	92.9 (b) 65.7	Pass
		Diagonal	L4x4x3/8	180	-18669.60	28413.70	74.4 (b) 65.7	Pass
T11	160 - 140	Diagonal	L5x5x1/2	184	-29388.00	63217.20	74.4 (b) 46.5	Pass
		Diagonal	L5x5x1/2	185	-28924.40	63217.20	86.9 (b) 45.8	Pass
		Diagonal	L5x5x1/2	186	-27222.10	63217.20	86.4 (b) 43.1	Pass
		Diagonal	L5x5x1/2	187	-28436.20	63217.20	81.4 (b) 45.0	Pass
		Diagonal	L5x5x1/2	188	-23387.50	63217.20	84.1 (b) 37.0	Pass
		Diagonal	L5x5x1/2	189	-22891.60	63217.20	69.1 (b) 36.2	Pass
		Diagonal	L5x5x1/2	190	-27301.30	68040.50	68.2 (b) 40.1	Pass
		Diagonal	L5x5x1/2	191	-27248.80	68040.50	82.0 (b) 40.0	Pass
							82.2 (b)	

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Diagonal	L5x5x1/2	192	-26108.00	68040.50	38.4 78.9 (b)	Pass
		Diagonal	L5x5x1/2	193	-26628.70	68040.50	39.1 78.7 (b)	Pass
		Diagonal	L5x5x1/2	194	-21456.50	68040.50	31.5 64.5 (b)	Pass
		Diagonal	L5x5x1/2	195	-21427.70	68040.50	31.5 64.5 (b)	Pass
T12	140 - 120	Diagonal	L5x5x1/2	199	-31178.40	53762.80	58.0 92.2 (b)	Pass
		Diagonal	L5x5x1/2	200	-30521.10	53762.80	56.8 91.6 (b)	Pass
		Diagonal	L5x5x1/2	201	-28181.30	53762.80	52.4 84.7 (b)	Pass
		Diagonal	L5x5x1/2	202	-29874.80	53762.80	55.6 88.3 (b)	Pass
		Diagonal	L5x5x1/2	203	-24503.00	53762.80	45.6 72.4 (b)	Pass
		Diagonal	L5x5x1/2	204	-23574.40	53762.80	43.8 70.7 (b)	Pass
		Diagonal	L5x5x1/2	205	-28766.60	58159.10	49.5 86.6 (b)	Pass
		Diagonal	L5x5x1/2	206	-28726.20	58159.10	49.4 86.7 (b)	Pass
		Diagonal	L5x5x1/2	207	-26566.50	58159.10	45.7 81.9 (b)	Pass
		Diagonal	L5x5x1/2	208	-27045.70	58159.10	46.5 80.1 (b)	Pass
		Diagonal	L5x5x1/2	209	-22284.20	58159.10	38.3 67.0 (b)	Pass
		Diagonal	L5x5x1/2	210	-22222.90	58159.10	38.2 67.1 (b)	Pass
T13	120 - 100	Diagonal	ROHN 3 XXS	215	-51210.70	63081.40	81.2	Pass
		Diagonal	ROHN 3 XXS	218	-50168.50	63081.40	79.5	Pass
		Diagonal	ROHN 3 XXS	222	-47655.90	63081.40	75.5	Pass
		Diagonal	ROHN 3 XXS	225	-49911.90	63081.40	79.1	Pass
		Diagonal	ROHN 3 XXS	231	-40518.90	63081.40	64.2	Pass
		Diagonal	ROHN 3 XXS	234	-39662.40	63081.40	62.9	Pass
T14	100 - 80	Diagonal	ROHN 3 XXS	248	-53631.10	59442.80	90.2	Pass
		Diagonal	ROHN 3 XXS	251	-51950.80	59442.80	87.4	Pass
		Diagonal	ROHN 3 XXS	255	-50290.20	59442.80	84.6	Pass
		Diagonal	ROHN 3 XXS	258	-52807.60	59442.80	88.8	Pass
		Diagonal	ROHN 3 XXS	264	-42675.60	59442.80	71.8	Pass
		Diagonal	ROHN 3 XXS	267	-41736.20	59442.80	70.2	Pass
T15	80 - 60	Diagonal	ROHN 3 XXS	281	-53642.10	55698.10	96.3	Pass
		Diagonal	ROHN 3 XXS	284	-51430.10	55698.10	92.3	Pass
		Diagonal	ROHN 3 XXS	288	-49565.10	55698.10	89.0	Pass
		Diagonal	ROHN 3 XXS	291	-52685.80	55698.10	94.6	Pass
		Diagonal	ROHN 3 XXS	297	-41882.20	55698.10	75.2	Pass
		Diagonal	ROHN 3 XXS	300	-40806.40	55698.10	73.3	Pass
T16	60 - 30	Diagonal	ROHN 4 EH	314	-75381.20	101988.00	73.9 74.3 (b)	Pass
		Diagonal	ROHN 4 EH	319	-71708.50	101988.00	70.3 70.7 (b)	Pass
		Diagonal	ROHN 4 EH	325	-69564.50	101988.00	68.2 68.6 (b)	Pass
		Diagonal	ROHN 4 EH	330	-74210.50	101988.00	72.8 73.1 (b)	Pass
		Diagonal	ROHN 4 EH	340	-59765.10	101988.00	58.6 58.9 (b)	Pass
		Diagonal	ROHN 4 EH	345	-58481.70	101988.00	57.3	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
							57.6 (b)	
T17	30 - 0	Diagonal	ROHN 4 EH	365	-74629.30	97939.00	76.2	Pass
		Diagonal	ROHN 4 EH	370	-72502.80	97939.00	74.0	Pass
		Diagonal	ROHN 4 EH	376	-69213.30	97939.00	70.7	Pass
		Diagonal	ROHN 4 EH	381	-73102.00	97939.00	74.6	Pass
		Diagonal	ROHN 4 EH	391	-55802.40	97939.00	57.0	Pass
		Diagonal	ROHN 4 EH	396	-54684.00	97939.00	55.8	Pass
T13	120 - 100	Horizontal	ROHN 3 STD	214	-27367.80	31679.40	86.4	Pass
		Horizontal	ROHN 3 STD	221	-26342.10	31679.40	83.2	Pass
		Horizontal	ROHN 3 STD	230	-20876.90	31679.40	65.9	Pass
T14	100 - 80	Horizontal	ROHN 3 EH	247	-30822.80	33455.50	92.1	Pass
		Horizontal	ROHN 3 EH	254	-30305.80	33455.50	90.6	Pass
		Horizontal	ROHN 3 EH	263	-23893.40	33455.50	71.4	Pass
T15	80 - 60	Horizontal	ROHN 3 XXS	280	-31878.20	43484.00	73.3	Pass
		Horizontal	ROHN 3 XXS	287	-31185.60	43484.00	71.7	Pass
		Horizontal	ROHN 3 XXS	296	-23917.00	43484.00	55.0	Pass
T16	60 - 30	Horizontal	ROHN 3.5 EH	313	-35479.50	38300.30	92.6	Pass
		Horizontal	ROHN 3.5 EH	324	-34681.60	38300.30	90.6	Pass
		Horizontal	ROHN 3.5 EH	339	-26451.90	38300.30	69.1	Pass
T17	30 - 0	Horizontal	ROHN 4 EH	364	-42129.80	47220.90	89.2	Pass
		Horizontal	ROHN 4 EH	375	-41146.70	47220.90	87.1	Pass
		Horizontal	ROHN 4 EH	390	-30991.30	47220.90	65.6	Pass
T1	320 - 304	Top Girt	L1 3/4x1 3/4x3/16	4	-180.57	5333.23	3.4	Pass
		Top Girt	L1 3/4x1 3/4x3/16	5	-180.73	5333.23	3.4	Pass
		Top Girt	L1 3/4x1 3/4x3/16	6	-180.06	5333.23	3.4	Pass
T3	300 - 280	Top Girt	L2x2x1/4	43	-433.01	9943.51	4.4	Pass
		Top Girt	L2x2x1/4	44	-436.65	9943.51	4.4	Pass
		Top Girt	L2x2x1/4	45	-441.58	9943.51	4.4	Pass
T13	120 - 100	Redund Horz 1 Bracing	ROHN 1.5 STD	216	-8782.17	14083.10	62.4	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	219	-8798.43	14083.10	62.5	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	223	-8798.43	14083.10	62.5	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	226	-8757.66	14083.10	62.2	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	232	-8757.66	14083.10	62.2	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	235	-8782.17	14083.10	62.4	Pass
T14	100 - 80	Redund Horz 1 Bracing	P1.5x.145	249	-9989.60	11432.70	87.4	Pass
		Redund Horz 1 Bracing	P1.5x.145	252	-10010.00	11432.70	87.6	Pass
		Redund Horz 1 Bracing	P1.5x.145	256	-10010.00	11432.70	87.6	Pass
		Redund Horz 1 Bracing	P1.5x.145	259	-9963.06	11432.70	87.1	Pass
		Redund Horz 1 Bracing	P1.5x.145	265	-9963.06	11432.70	87.1	Pass
		Redund Horz 1 Bracing	P1.5x.145	268	-9989.60	11432.70	87.4	Pass
T15	80 - 60	Redund Horz 1 Bracing	ROHN 2 STD	282	-11221.50	20598.10	54.5	Pass
		Redund Horz 1 Bracing	ROHN 2 STD	285	-11246.90	20598.10	54.6	Pass
		Redund Horz 1 Bracing	ROHN 2 STD	289	-11246.90	20598.10	54.6	Pass
		Redund Horz 1 Bracing	ROHN 2 STD	292	-11193.90	20598.10	54.3	Pass
		Redund Horz 1 Bracing	ROHN 2 STD	298	-11193.90	20598.10	54.3	Pass

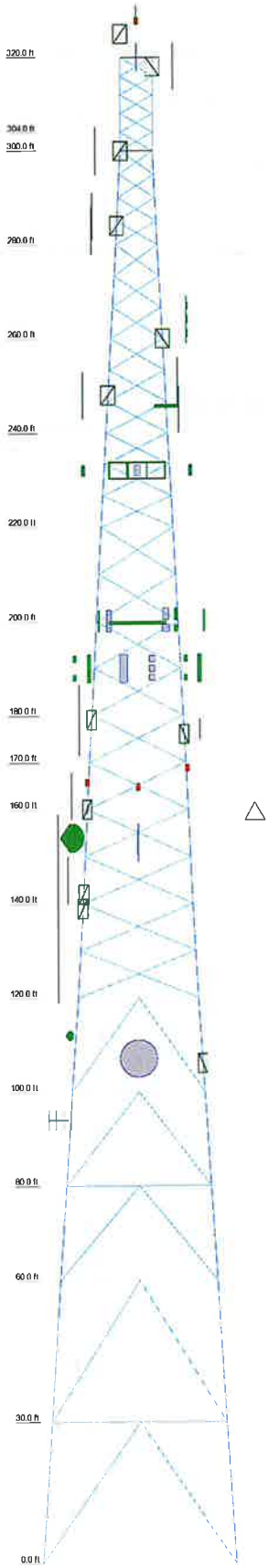
Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Bracing						
		Redund Horz 1 Bracing	ROHN 2 STD	301	-11221.50	20598.10	54.5	Pass
T16	60 - 30	Redund Horz 1 Bracing	ROHN 1.5 STD	315	-12455.20	18282.30	68.1	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	320	-12482.30	18282.30	68.3	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	326	-12482.30	18282.30	68.3	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	331	-12427.70	18282.30	68.0	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	341	-12427.70	18282.30	68.0	Pass
		Redund Horz 1 Bracing	ROHN 1.5 STD	346	-12455.20	18282.30	68.1	Pass
T17	30 - 0	Redund Horz 1 Bracing	P1.5x.145	366	-14302.30	15339.00	93.2	Pass
		Redund Horz 1 Bracing	P1.5x.145	371	-14335.80	15339.00	93.5	Pass
		Redund Horz 1 Bracing	P1.5x.145	377	-14335.80	15339.00	93.5	Pass
		Redund Horz 1 Bracing	P1.5x.145	382	-14272.90	15339.00	93.0	Pass
		Redund Horz 1 Bracing	P1.5x.145	392	-14272.90	15339.00	93.0	Pass
		Redund Horz 1 Bracing	P1.5x.145	397	-14302.30	15339.00	93.2	Pass
T16	60 - 30	Redund Horz 2 Bracing	ROHN 2 XXS	316	-12455.20	18604.80	66.9	Pass
		Redund Horz 2 Bracing	ROHN 2 XXS	321	-12482.30	18604.80	67.1	Pass
		Redund Horz 2 Bracing	ROHN 2 XXS	327	-12482.30	18604.80	67.1	Pass
		Redund Horz 2 Bracing	ROHN 2 XXS	332	-12427.70	18604.80	66.8	Pass
		Redund Horz 2 Bracing	ROHN 2 XXS	342	-12427.70	18604.80	66.8	Pass
		Redund Horz 2 Bracing	ROHN 2 XXS	347	-12455.20	18604.80	66.9	Pass
T17	30 - 0	Redund Horz 2 Bracing	ROHN 2.5 EH	367	-14302.30	21919.90	65.2	Pass
		Redund Horz 2 Bracing	ROHN 2.5 EH	372	-14335.80	21919.90	65.4	Pass
		Redund Horz 2 Bracing	ROHN 2.5 EH	378	-14335.80	21919.90	65.4	Pass
		Redund Horz 2 Bracing	ROHN 2.5 EH	383	-14272.90	21919.90	65.1	Pass
		Redund Horz 2 Bracing	ROHN 2.5 EH	393	-14272.90	21919.90	65.1	Pass
		Redund Horz 2 Bracing	ROHN 2.5 EH	398	-14302.30	21919.90	65.2	Pass
T13	120 - 100	Redund Diag 1 Bracing	ROHN 2 STD	217	-7967.73	9352.65	85.2	Pass
		Redund Diag 1 Bracing	ROHN 2 STD	220	-7982.48	9352.65	85.3	Pass
		Redund Diag 1 Bracing	ROHN 2 STD	224	-7982.48	9352.65	85.3	Pass
		Redund Diag 1 Bracing	ROHN 2 STD	227	-7945.49	9352.65	85.0	Pass
		Redund Diag 1 Bracing	ROHN 2 STD	233	-7945.49	9352.65	85.0	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$øP_{allow}$ lb	% Capacity	Pass Fail
		Redund Diag 1 Bracing	ROHN 2 STD	236	-7967.73	9352.65	85.2	Pass
T14	100 - 80	Redund Diag 1 Bracing	ROHN 2 EH	250	-8472.17	11364.10	74.6	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	253	-8489.48	11364.10	74.7	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	257	-8489.48	11364.10	74.7	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	260	-8449.66	11364.10	74.4	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	266	-8449.66	11364.10	74.4	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	269	-8472.17	11364.10	74.6	Pass
T15	80 - 60	Redund Diag 1 Bracing	ROHN 2 EH	283	-8974.33	10825.00	82.9	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	286	-8994.63	10825.00	83.1	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	290	-8994.63	10825.00	83.1	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	293	-8952.21	10825.00	82.7	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	299	-8952.21	10825.00	82.7	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	302	-8974.33	10825.00	82.9	Pass
T16	60 - 30	Redund Diag 1 Bracing	ROHN 2 EH	317	-12568.80	13862.10	90.7	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	322	-12596.10	13862.10	90.9	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	328	-12596.10	13862.10	90.9	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	333	-12541.00	13862.10	90.5	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	343	-12541.00	13862.10	90.5	Pass
		Redund Diag 1 Bracing	ROHN 2 EH	348	-12568.80	13862.10	90.7	Pass
T17	30 - 0	Redund Diag 1 Bracing	ROHN 2.5 STD	368	-13305.40	22579.60	58.9	Pass
		Redund Diag 1 Bracing	ROHN 2.5 STD	373	-13336.50	22579.60	59.1	Pass
		Redund Diag 1 Bracing	ROHN 2.5 STD	379	-13336.50	22579.60	59.1	Pass
		Redund Diag 1 Bracing	ROHN 2.5 STD	384	-13278.00	22579.60	58.8	Pass
		Redund Diag 1 Bracing	ROHN 2.5 STD	394	-13278.00	22579.60	58.8	Pass
		Redund Diag 1 Bracing	ROHN 2.5 STD	399	-13305.40	22579.60	58.9	Pass
T16	60 - 30	Redund Diag 2 Bracing	ROHN 2.5 STD	318	-8151.01	12742.30	64.0	Pass
		Redund Diag 2 Bracing	ROHN 2.5 STD	323	-8168.75	12742.30	64.1	Pass
		Redund Diag 2 Bracing	ROHN 2.5 STD	329	-8168.75	12742.30	64.1	Pass
		Redund Diag 2 Bracing	ROHN 2.5 STD	334	-8133.04	12742.30	63.8	Pass
		Redund Diag 2 Bracing	ROHN 2.5 STD	344	-8133.04	12742.30	63.8	Pass
		Redund Diag 2	ROHN 2.5 STD	349	-8151.01	12742.30	64.0	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Bracing						
T17	30 - 0	Redund Diag 2 Bracing	ROHN 2.5 STD	369	-8939.21	11206.60	79.8	Pass
		Redund Diag 2 Bracing	ROHN 2.5 STD	374	-8960.14	11206.60	80.0	Pass
		Redund Diag 2 Bracing	ROHN 2.5 STD	380	-8960.14	11206.60	80.0	Pass
		Redund Diag 2 Bracing	ROHN 2.5 STD	385	-8920.86	11206.60	79.6	Pass
		Redund Diag 2 Bracing	ROHN 2.5 STD	395	-8920.86	11206.60	79.6	Pass
		Redund Diag 2 Bracing	ROHN 2.5 STD	400	-8939.21	11206.60	79.8	Pass
T13	120 - 100	Redund Hip 1 Bracing	ROHN 1.5 STD	228	-48.69	12066.60	0.4	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	237	-39.58	12066.60	0.3	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	239	-49.00	12066.60	0.4	Pass
T14	100 - 80	Redund Hip 1 Bracing	ROHN 1.5 STD	261	-47.95	9943.20	0.5	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	270	-40.26	9943.20	0.4	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	272	-47.97	9943.20	0.5	Pass
T15	80 - 60	Redund Hip 1 Bracing	ROHN 1.5 STD	294	-47.10	8378.50	0.6	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	303	-38.75	8378.50	0.5	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	305	-46.75	8378.50	0.6	Pass
T16	60 - 30	Redund Hip 1 Bracing	ROHN 1.5 STD	335	-170.62	15708.50	1.1	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	350	-139.48	15708.50	0.9	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	354	-176.64	15708.50	1.1	Pass
T17	30 - 0	Redund Hip 1 Bracing	ROHN 1.5 STD	386	-152.15	12924.00	1.2	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	401	-121.13	12924.00	0.9	Pass
		Redund Hip 1 Bracing	ROHN 1.5 STD	405	-158.33	12924.00	1.2	Pass
T16	60 - 30	Redund Hip 2 Bracing	ROHN 2 STD	336	-93.49	8559.02	1.1	Pass
		Redund Hip 2 Bracing	ROHN 2 STD	351	-76.67	8559.02	0.9	Pass
		Redund Hip 2 Bracing	ROHN 2 STD	355	-96.48	8559.02	1.1	Pass
T17	30 - 0	Redund Hip 2 Bracing	ROHN 2 STD	387	-88.09	6941.18	1.3	Pass
		Redund Hip 2 Bracing	ROHN 2 STD	402	-71.15	6941.18	1.0	Pass
		Redund Hip 2 Bracing	ROHN 2 STD	406	-90.70	6941.18	1.3	Pass
T13	120 - 100	Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	229	-98.29	10450.60	0.9	Pass
		Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	238	-85.49	10450.60	0.8	Pass
		Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	240	-98.02	10450.60	0.9	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T14	100 - 80	Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	262	-92.08	9375.46	1.0	Pass
		Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	271	-84.18	9375.46	0.9	Pass
		Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	273	-91.28	9375.46	1.0	Pass
T15	80 - 60	Redund Hip Diagonal 1 Bracing	ROHN 3 STD	295	-107.18	16617.70	0.6	Pass
		Redund Hip Diagonal 1 Bracing	ROHN 3 STD	304	-100.70	16617.70	0.6	Pass
		Redund Hip Diagonal 1 Bracing	ROHN 3 STD	306	-107.59	16617.70	0.6	Pass
T16	60 - 30	Redund Hip Diagonal 1 Bracing	ROHN 2 STD	337	-348.29	5254.92	6.6	Pass
		Redund Hip Diagonal 1 Bracing	ROHN 2 STD	352	-269.61	5254.92	5.1	Pass
		Redund Hip Diagonal 1 Bracing	ROHN 2 STD	356	-365.19	5254.92	6.9	Pass
T17	30 - 0	Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	388	-314.90	10840.00	2.9	Pass
		Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	403	-240.51	10840.00	2.2	Pass
		Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	407	-331.48	10840.00	3.1	Pass
T16	60 - 30	Redund Hip Diagonal 2 Bracing	ROHN 2 STD	338	-140.14	3255.91	4.3	Pass
		Redund Hip Diagonal 2 Bracing	ROHN 2 STD	353	-139.66	3255.91	4.3	Pass
		Redund Hip Diagonal 2 Bracing	ROHN 2 STD	357	-141.83	3255.91	4.4	Pass
T17	30 - 0	Redund Hip Diagonal 2 Bracing	ROHN 2.5 STD	389	-138.11	6453.40	2.1	Pass
		Redund Hip Diagonal 2 Bracing	ROHN 2.5 STD	404	-137.91	6453.40	2.1	Pass
		Redund Hip Diagonal 2 Bracing	ROHN 2.5 STD	408	-139.36	6453.40	2.2	Pass
T13	120 - 100	Inner Bracing	ROHN 3 STD	241	-28.11	29370.40	0.4	Pass
		Inner Bracing	ROHN 3 STD	242	-23.24	29370.40	0.4	Pass
		Inner Bracing	ROHN 3 STD	243	-27.90	29370.40	0.4	Pass
T14	100 - 80	Inner Bracing	ROHN 3 STD	274	-27.83	24201.90	0.4	Pass
		Inner Bracing	ROHN 3 STD	275	-23.51	24201.90	0.4	Pass
		Inner Bracing	ROHN 3 STD	276	-26.92	24201.90	0.4	Pass
T15	80 - 60	Inner Bracing	ROHN 3 STD	307	-32.11	20393.40	0.5	Pass
		Inner Bracing	ROHN 3 STD	308	-29.76	20393.40	0.5	Pass
		Inner Bracing	ROHN 3 STD	309	-31.07	20393.40	0.5	Pass
T16	60 - 30	Inner Bracing	ROHN 3 STD	358	-59.75	17239.70	0.5	Pass
		Inner Bracing	ROHN 3 STD	359	-59.30	17239.70	0.5	Pass
		Inner Bracing	ROHN 3 STD	360	-60.11	17239.70	0.5	Pass
T17	30 - 0	Inner Bracing	ROHN 3 STD	409	-62.17	13981.00	0.6	Pass
		Inner Bracing	ROHN 3 STD	410	-61.79	13981.00	0.6	Pass
		Inner Bracing	ROHN 3 STD	411	-62.40	13981.00	0.6	Pass
							Summary	
						Leg (T16)	63.6	Pass
						Diagonal (T15)	96.3	Pass
						Horizontal (T16)	92.6	Pass
						Top Girt (T3)	4.4	Pass
						Redund Horz 1	93.5	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
						Bracing (T17) Redund Horz 2	67.1	Pass
						Bracing (T16) Redund Diag 1	90.9	Pass
						Bracing (T16) Redund Diag 2	80.0	Pass
						Bracing (T17) Redund Hip 1	1.2	Pass
						Bracing (T17) Redund Hip 2	1.3	Pass
						Bracing (T17) Redund Hip Diagonal 1	6.9	Pass
						Bracing (T16) Redund Hip Diagonal 2	4.4	Pass
						Bracing (T16) Inner Bracing (T17)	0.6	Pass
						Bolt Checks	95.3	Pass
						RATING =	**96.3**	**Pass**



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod 5/8x8' (Lightning Rod)	329	RRUS-11 (ATT)	200
Dual Lights (Rohcon)	327	7770.00 (ATT)	200
PD120-1 (ECI-1)	325	HPA-65R-BUU-H8 Panel (ATT)	200
6' Side Mount Standoff (ECI-1)	325	RRUS-32 (ATT)	200
RA1012-0 (ECI-2)	320	RRUS-11 (ATT)	200
6' Side Mount Standoff (ECI-2)	320	7770.00 (ATT)	200
ANT450F6 (ECI-3)	318	HPA-65R-BUU-H8 Panel (ATT)	200
4x4" Pipe Mount (ECI-3)	318	RRUS-32 (ATT)	200
SC479-HF1LDF (ECI-4)	300	RRUS-11 (ATT)	200
6' Side Mount Standoff (ECI-4)	300	DC6-48-60-0-8C Squid / Surge Arrestor (ATT)	200
PD340-1 (ECI-5)	290	STK-U Stiffener Side Arm Attachment (ATT)	200
6' Side Mount Standoff (ECI-5)	290	STK-U Stiffener Side Arm Attachment (ATT)	200
DB809-13E-XC (ECI-6)	286	STK-U Stiffener Side Arm Attachment (ATT)	200
6' Side Mount Standoff (ECI-7)	284	STK-U Stiffener Side Arm Attachment (ATT)	200
SC479-HF1LDF(DB0-1-E-606) (Inverted) (ECI-7)	283	STK-U Stiffener Side Arm Attachment (ATT)	200
PD440-2 (ECI-8)	264	STK-U Stiffener Side Arm Attachment (ATT)	200
6' Side Mount Standoff (ECI-8)	260	FVV-65B-R2 (Dish)	190
SC479-HF1LDF (ECI-10)	251	FVV-65B-R2 (Dish)	190
PD1142-1 (ECI-14)	248	FVV-65B-R2 (Dish)	190
6' Side Mount Standoff (ECI-14)	248	RF4450t-71A (Dish)	190
430-94C-09168-M-11048-1-1A (ECI-11)	247	RF4450t-71A (Dish)	190
Sabre T-Boom (1) (ECI-10,11,12,13)	246	RF4450t-71A (Dish)	190
SC479-HF1LDF(DB0-1-E-606) (Inverted) (ECI-13)	245	RF4451d-70A (Dish)	190
SC479-HF1LDF(DB0-1-E-606) (Inverted) (ECI-12)	245	RF4451d-70A (Dish)	190
6' Side Mount Standoff (ECI-15)	238	RF4451d-70A (Dish)	190
531-70HD Exposed Dipole Antenna (ECI-15)	239	RD10C-9181-PF-48 (Dish)	190
Valmont VFA-10-U V-Frame (Verizon)	232	SitePro VFA8-HD (Dish)	190
Valmont VFA-10-U V-Frame (Verizon)	232	SitePro VFA8-HD (Dish)	190
Valmont VFA-10-U V-Frame (Verizon)	232	SitePro VFA8-HD (Dish)	190
JAHH-65B-R3B Panel Antenna (Verizon AWS)	232	Pipe 4' Side Mount Standoff (1) (ECI-50)	179
JAHH-65B-R3B Panel Antenna (Verizon PCS)	232	1151-3 (ECI-50)	179
LNX-6512DS-VTM (Verizon 850)	232	DB586-Y (ECI-51)	177
MT6413-77A (Verizon - Proposed)	232	430-94C-09168-M-11048-1-1A (ECI-52)	176
RSAMNT-SBS-2-2 (JAHH Antenna Bracket (for 2)) (Verizon PCS/AWS)	232	Pipe 4' Side Mount Standoff (1) (ECI-53,52,51)	176
B2/B66A RRH (Verizon RRH)	232	DB586-Y (inverted) (ECI-53)	175
RF4461d-13A (Verizon - Proposed)	232	L-810 Obstruction Lighting (1) (ECI-54)	168
RVZDC-6627-PF-48 (Verizon)	232	L-810 Obstruction Lighting (1) (ECI-55)	165
JAHH-65B-R3B Panel Antenna (Verizon AWS)	232	L-810 Obstruction Lighting (1) (ECI-56)	164
JAHH-65B-R3B Panel Antenna (Verizon PCS)	232	Telewave ANT220F2 - Omni Antenna (Eversource)	163
LNX-6512DS-VTM (Verizon 850)	232	Sitepro1 USF-4U Mount Assembly (Ca = 1.4 assumed) (Eversource)	160
MT6413-77A (Verizon - Proposed)	232	5"x4" Pipe Mount (ECI-58a (Dish Support))	154
RSAMNT-SBS-2-2 (JAHH Antenna Bracket (for 2)) (Verizon PCS/AWS)	232	Commscope PA86-59W PXA/A (ECI-58)	154
B2/B66A RRH (Verizon RRH)	232	5"x4" Pipe Mount (ECI-57)	153
RF4461d-13A (Verizon - Proposed)	232	ANT450F6 (ECI-57)	153
JAHH-65B-R3B Panel Antenna (Verizon AWS)	232	Telewave ANT220F2 - Omni Antenna (Eversource)	145
JAHH-65B-R3B Panel Antenna (Verizon PCS)	232	Sitepro1 USF-4U Mount Assembly (Ca = 1.4 assumed) (Eversource)	142
LNX-6512DS-VTM (Verizon 850)	232	PD1505 (ECI-60)	139
MT6413-77A (Verizon - Proposed)	232	DB212-1 (ECI-60)	139
RSAMNT-SBS-2-2 (JAHH Antenna Bracket (for 2)) (Verizon PCS/AWS)	232	4' Side Mount Standoff (ECI-60,59)	139
B2/B66A RRH (Verizon RRH)	232	2' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0) (ECI-61a)	117
RF4461d-13A (Verizon - Proposed)	232	8' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0) (ECI-62a (Dish Ice Shields))	115
CBC78T-DS-43-2X Diplexer (Verizon)	232	5"x4" Pipe Mount (ECI-61a (Dish Support))	112
CBC78T-DS-43-2X Diplexer (Verizon)	232	Andrew 2' x-Radome (ECI-61)	112
CBC78T-DS-43-2X Diplexer (Verizon)	232	5"x4" Pipe Mount (ECI-63 (Dish Support))	107
PROD 12' Lightweight T-Frame (ATT)	200	PA8-65 (ECI-63)	107
PROD 12' Lightweight T-Frame (ATT)	200	PD458 (ECI-62)	106
PROD 12' Lightweight T-Frame (ATT)	200	Pipe 4' Side Mount Standoff (1) (ECI-62)	106
7770.00 (ATT)	200	4x4" Pipe Mount (ECI-66)	94
HPA-65R-BUU-H8 Panel (ATT)	200	PD6805-4 (ECI-66)	94
RRUS-32 (ATT)	200		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower designed for a 90 mph basic wind in accordance with the TIA/EIA-222-F Standard.
2. Tower is also designed for a 90 mph basic wind with 0.50 in Ice.
3. Deflections are based upon a 90 mph wind.
4. P-Delta Displacement Effects are not applicable to this tower for this case (TIA-222-H Section 3.5)

Centek Engineering Inc.
63-2 North Branford Rd.
Branford, CT 06405
Phone: (203) 488-0580
FAX: (203) 488-8587

Job: 21007.82 - Colchester			
Project: 320-ft Lattice Tower (CSP #50)			
Client: Verizon	Drawn by: TJL		App'd:
Code: TIA/EIA-222-F	Date: 11/10/23		Scale: NTS
Path:			Dwg No. E-1

Load Combinations

Comb. No.	Description
1	Dead Only
2	Dead+Wind 0 deg - No Ice
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 45 deg - No Ice
5	Dead+Wind 60 deg - No Ice
6	Dead+Wind 90 deg - No Ice
7	Dead+Wind 120 deg - No Ice
8	Dead+Wind 135 deg - No Ice
9	Dead+Wind 150 deg - No Ice
10	Dead+Wind 180 deg - No Ice
11	Dead+Wind 210 deg - No Ice
12	Dead+Wind 225 deg - No Ice
13	Dead+Wind 240 deg - No Ice
14	Dead+Wind 270 deg - No Ice
15	Dead+Wind 300 deg - No Ice
16	Dead+Wind 315 deg - No Ice
17	Dead+Wind 330 deg - No Ice
18	Dead+Ice+Temp
19	Dead+Wind 0 deg+Ice+Temp
20	Dead+Wind 30 deg+Ice+Temp
21	Dead+Wind 45 deg+Ice+Temp
22	Dead+Wind 60 deg+Ice+Temp
23	Dead+Wind 90 deg+Ice+Temp
24	Dead+Wind 120 deg+Ice+Temp
25	Dead+Wind 135 deg+Ice+Temp
26	Dead+Wind 150 deg+Ice+Temp
27	Dead+Wind 180 deg+Ice+Temp
28	Dead+Wind 210 deg+Ice+Temp
29	Dead+Wind 225 deg+Ice+Temp
30	Dead+Wind 240 deg+Ice+Temp
31	Dead+Wind 270 deg+Ice+Temp
32	Dead+Wind 300 deg+Ice+Temp
33	Dead+Wind 315 deg+Ice+Temp
34	Dead+Wind 330 deg+Ice+Temp
35	Dead+Wind 0 deg - Service
36	Dead+Wind 30 deg - Service
37	Dead+Wind 45 deg - Service
38	Dead+Wind 60 deg - Service
39	Dead+Wind 90 deg - Service
40	Dead+Wind 120 deg - Service
41	Dead+Wind 135 deg - Service
42	Dead+Wind 150 deg - Service
43	Dead+Wind 180 deg - Service
44	Dead+Wind 210 deg - Service
45	Dead+Wind 225 deg - Service
46	Dead+Wind 240 deg - Service
47	Dead+Wind 270 deg - Service
48	Dead+Wind 300 deg - Service
49	Dead+Wind 315 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	320 - 304	20.182	40	0.4552	0.2356
T2	304 - 300	18.641	40	0.4517	0.2365
T3	300 - 280	18.256	40	0.4493	0.2367
T4	280 - 260	16.360	40	0.4364	0.2368
T5	260 - 240	14.495	40	0.4284	0.2345
T6	240 - 220	12.650	40	0.4159	0.2222
T7	220 - 200	10.862	40	0.3974	0.2098
T8	200 - 180	9.167	40	0.3717	0.1979
T9	180 - 170	7.546	40	0.3452	0.1810
T10	170 - 160	6.768	40	0.3301	0.1713
T11	160 - 140	6.018	40	0.3136	0.1612
T12	140 - 120	4.675	40	0.2755	0.1473
T13	120 - 100	3.491	40	0.2333	0.1321
T14	100 - 80	2.501	40	0.1918	0.1090
T15	80 - 60	1.698	40	0.1480	0.0895
T16	60 - 30	1.091	35	0.1077	0.0729
T17	30 - 0	0.378	35	0.0491	0.0352

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
329.00	Lightning Rod 5/8x4'	40	20.182	0.4552	0.2356	Inf
327.00	Dual Lights	40	20.182	0.4552	0.2356	Inf
325.00	PD128-1	40	20.182	0.4552	0.2356	Inf
320.00	BA1012-0	40	20.182	0.4552	0.2356	Inf
318.00	ANT450F6	40	19.990	0.4551	0.2357	Inf
300.00	SC479-HF1LDF	40	18.256	0.4493	0.2367	91622
290.00	PD340-1	40	17.302	0.4425	0.2368	97517
286.00	DB809T3E-XC	40	16.924	0.4399	0.2368	118694
284.00	6' Side Mount Standoff	40	16.736	0.4386	0.2368	133119
283.00	SC479-HF1LDF(D00I-E6085) (Inverted)	40	16.642	0.4380	0.2368	141492
264.00	PD440-2	40	14.867	0.4300	0.2357	303281
260.00	6' Side Mount Standoff	40	14.495	0.4284	0.2345	321734
251.00	SC479-HF1LDF	40	13.661	0.4236	0.2298	162347
248.00	PD1142-1	40	13.384	0.4217	0.2278	132942
247.00	430-94C-09168-M-11048 TTA	40	13.292	0.4210	0.2271	125373
246.00	Sabre T-Boom (1)	40	13.200	0.4203	0.2264	118619
245.00	SC479-HF1LDF(D00I-E6085) (Inverted)	40	13.108	0.4196	0.2257	112555
238.00	531-70HD Exposed Dipole Antenna	40	12.468	0.4144	0.2208	80565
232.00	Valmont VFA-10-U V-Frame	40	11.925	0.4094	0.2169	62234
200.00	PiROD 12' Lightweight T-Frame	40	9.167	0.3717	0.1979	76721
190.00	FFVV-65B-R2	40	8.346	0.3588	0.1900	61633
179.00	1151-3	40	7.467	0.3438	0.1800	50892
177.00	DB586-Y	40	7.310	0.3409	0.1782	51687
176.00	Pirod 4' Side Mount Standoff (1)	40	7.232	0.3394	0.1772	52352
175.00	DB586-Y (inverted)	40	7.154	0.3378	0.1763	53110
168.00	L-810 Obstruction Lighting (1)	40	6.615	0.3269	0.1692	39523
165.00	L-810 Obstruction Lighting (1)	40	6.388	0.3220	0.1661	28285
164.00	L-810 Obstruction Lighting (1)	40	6.313	0.3204	0.1651	25704
163.00	Telewave ANT220F2 - Omni Antenna	40	6.238	0.3187	0.1641	23667
160.00	Sitepro1 USF-4U Mount Assembly (Ca = 1.4 assumed)	40	6.018	0.3136	0.1612	20365

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
154.00	Commscope PAR6-59W-PXA/A	40	5.595	0.3029	0.1563	22332
153.00	ANT450F6	40	5.526	0.3010	0.1555	23060
145.00	Telewave ANT220F2 - Omni Antenna	40	4.994	0.2856	0.1504	31205
142.00	Sitepro1 USF-4U Mount Assembly (Ca = 1.4 assumed)	40	4.802	0.2796	0.1486	35401
139.00	DB212-1	40	4.612	0.2735	0.1467	36915
117.00	3' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0)	40	3.330	0.2271	0.1290	22605
115.00	8' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0)	40	3.225	0.2230	0.1268	23208
112.00	Andrew 2' w/Radome	40	3.072	0.2168	0.1233	24254
107.00	PA8-65	40	2.826	0.2065	0.1173	26225
106.00	Pirod 4' Side Mount Standoff (1)	40	2.779	0.2045	0.1161	26658
94.00	PD688S-4	40	2.240	0.1787	0.1024	25745

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	320 - 304	24.921	24	0.5654	0.3481
T2	304 - 300	23.007	24	0.5607	0.3489
T3	300 - 280	22.528	24	0.5577	0.3488
T4	280 - 260	20.176	24	0.5408	0.3475
T5	260 - 240	17.865	24	0.5304	0.3423
T6	240 - 220	15.582	24	0.5143	0.3227
T7	220 - 200	13.374	24	0.4906	0.3032
T8	200 - 180	11.285	24	0.4585	0.2850
T9	180 - 170	9.290	24	0.4255	0.2609
T10	170 - 160	8.333	24	0.4067	0.2473
T11	160 - 140	7.412	24	0.3863	0.2330
T12	140 - 120	5.759	24	0.3394	0.2136
T13	120 - 100	4.302	24	0.2874	0.1921
T14	100 - 80	3.086	24	0.2362	0.1589
T15	80 - 60	2.097	24	0.1823	0.1304
T16	60 - 30	1.352	19	0.1327	0.1061
T17	30 - 0	0.471	19	0.0605	0.0512

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
329.00	Lightning Rod 5/8x4'	24	24.921	0.5654	0.3481	Inf
327.00	Dual Lights	24	24.921	0.5654	0.3481	Inf
325.00	PD128-1	24	24.921	0.5654	0.3481	Inf
320.00	BA1012-0	24	24.921	0.5654	0.3481	Inf
318.00	ANT450F6	24	24.682	0.5652	0.3483	Inf
300.00	SC479-HF1LDF	24	22.528	0.5577	0.3488	71284
290.00	PD340-1	24	21.344	0.5488	0.3483	74463
286.00	DB809T3E-XC	24	20.875	0.5453	0.3480	88942

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
284.00	6' Side Mount Standoff	24	20.642	0.5437	0.3478	98501
283.00	SC479-HF1LDF(D00I-E6085) (Inverted)	24	20.525	0.5429	0.3477	103908
264.00	PD440-2	24	18.325	0.5325	0.3445	214973
260.00	6' Side Mount Standoff	24	17.865	0.5304	0.3423	227865
251.00	SC479-HF1LDF	24	16.833	0.5242	0.3347	117903
248.00	PD1142-1	24	16.490	0.5217	0.3315	97525
247.00	430-94C-09168-M-11048 TTA	24	16.376	0.5208	0.3304	92213
246.00	Sabre T-Boom (1)	24	16.262	0.5200	0.3293	87449
245.00	SC479-HF1LDF(D00I-E6085) (Inverted)	24	16.148	0.5191	0.3282	83154
238.00	531-70HD Exposed Dipole Antenna	24	15.357	0.5123	0.3206	60713
232.00	Valmont VFA-10-U V-Frame	24	14.686	0.5059	0.3144	47978
200.00	PiROD 12' Lightweight T-Frame	24	11.285	0.4585	0.2850	59994
190.00	FFVV-65B-R2	24	10.275	0.4423	0.2736	49052
179.00	1151-3	24	9.193	0.4237	0.2596	41046
177.00	DB586-Y	24	9.000	0.4200	0.2569	41749
176.00	Pirod 4' Side Mount Standoff (1)	24	8.904	0.4182	0.2556	42317
175.00	DB586-Y (inverted)	24	8.808	0.4163	0.2542	42962
168.00	L-810 Obstruction Lighting (1)	24	8.145	0.4027	0.2443	32121
165.00	L-810 Obstruction Lighting (1)	24	7.866	0.3967	0.2399	23002
164.00	L-810 Obstruction Lighting (1)	24	7.774	0.3947	0.2385	20906
163.00	Telewave ANT220F2 - Omni Antenna	24	7.682	0.3926	0.2371	19251
160.00	Sitepro1 USF-4U Mount Assembly (Ca = 1.4 assumed)	24	7.412	0.3863	0.2330	16569
154.00	Commscope PAR6-59W-PXA/A	24	6.890	0.3731	0.2261	18179
153.00	ANT450F6	24	6.806	0.3708	0.2251	18774
145.00	Telewave ANT220F2 - Omni Antenna	24	6.152	0.3518	0.2178	25435
142.00	Sitepro1 USF-4U Mount Assembly (Ca = 1.4 assumed)	24	5.915	0.3444	0.2152	28870
139.00	DB212-1	24	5.681	0.3368	0.2127	30079
117.00	3' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0)	24	4.104	0.2797	0.1877	18260
115.00	8' Wide Ice Shield (for Dish Antennas) (Assume Ca=2.0)	24	3.975	0.2747	0.1845	18774
112.00	Andrew 2' w/Radome	24	3.787	0.2671	0.1796	19667
107.00	PA8-65	24	3.485	0.2544	0.1710	21362
106.00	Pirod 4' Side Mount Standoff (1)	24	3.427	0.2518	0.1692	21737
94.00	PD688S-4	24	2.764	0.2201	0.1494	21082

Anchor Bolt Analysis:

Input Data:

Tower Reactions:

Tension Force =	Tension := 729·kips	(Input From tnxTower)
Compression Force =	Compression := 927·kips	(Input From tnxTower)
Shear Force =	Shear := 128·kips	(Input From tnxTower)

Anchor Bolt Data:

ASTM A354 Grade BC	Per ROHN Drawing A971600 dated 9/23/1999	
Number of Anchor Bolts =	N := 24	(User Input)
Bolt Ultimate Strength =	$F_u := 125 \cdot ksi$	(User Input)
Bolt Yield Strength =	$F_y := 109 \cdot ksi$	(User Input)
Bolt Modulus =	E := 29000·ksi	(User Input)
Diameter of Anchor Bolts =	D := 1.00·in	(User Input)
Threads per Inch =	n := 8	(User Input)
Length from Top of Pier to Bottom of Leveling Nut =	$L_{ar} := 0 \cdot in$	(User Input)

Anchor Bolt Analysis:

Calculated Anchor Bolt Properties:

Gross Area of Bolt = $A_g := \frac{\pi}{4} \cdot D^2 = 0.785 \cdot in^2$

Net Area of Bolt = $A_n := \frac{\pi}{4} \cdot \left(D - \frac{0.9743 \cdot in}{n}\right)^2 = 0.606 \cdot in^2$

Net Diameter = $D_n := \frac{2 \cdot \sqrt{A_n}}{\sqrt{\pi}} = 0.878 \cdot in$

Radius of Gyration of Bolt = $r := \frac{D_n}{4} = 0.22 \cdot in$

Elastic Section Modulus of Bolt = $S_x := \frac{\pi \cdot D_n^3}{32} = 0.066 \cdot in^3$

Plastic Section Modulus of Bolt = $Z_x := \frac{D_n^3}{6} = 0.113 \cdot in^3$

Anchor Bolt Design Strength:

Resistance Factor for Flexure = $\phi_f := 0.9$

Resistance Factor for Compression = $\phi_c := 0.9$

Resistance Factor for Tension = $\phi_t := 0.75$

Resistance Factor for Shear = $\phi_v := 0.75$

Design Tensile Strength = $\Phi R_{nt} := \phi_t \cdot F_u \cdot A_n = 56.8 \cdot k$

Design Compression Strength = $\Phi R_{nc} := \phi_c \cdot F_y \cdot A_g = 77 \cdot k$

Design Shear Strength (Tension) = $\Phi R_{nv} := \phi_v \cdot 0.5 F_u \cdot A_g = 36.8 \cdot k$

Design Shear Strength (Compression) = $\Phi R_{nvc} := \phi_c \cdot 0.6 F_y \cdot A_g \cdot 0.75 = 34.7 \cdot k$

Check Anchor Bolt Tension Force:

Maximum Tensile Force = $P_{ut} := \frac{Tension}{N} = 30.4 \cdot kips$

Maximum Compressive Force = $P_{uc} := \frac{Compression}{N} = 38.6 \cdot kips$

Maximum Shear Force = $V_u := \frac{Shear}{N} = 5.3 \cdot kips$

Condition1 = $Condition1 := if\left[\left[\left(\frac{P_{ut}}{\Phi R_{nt}}\right)^2 + \left(\frac{V_u}{\Phi R_{nv}}\right)^2\right] \le 1.00, "OK", "Overstressed"\right]$

Condition1 = "OK"

Condition2 = $Condition2 := if\left[\left[\left(\frac{P_{uc}}{\Phi R_{nc}}\right) + \left(\frac{V_u}{\Phi R_{nvc}}\right)^2\right] \le 1.00, "OK", "Overstressed"\right]$

Condition2 = "OK"

Bolt % of Capacity = $\max\left[\left(\frac{P_{ut}}{\Phi R_{nt}}\right)^2 + \left(\frac{V_u}{\Phi R_{nv}}\right)^2, \left(\frac{P_{uc}}{\Phi R_{nc}}\right) + \left(\frac{V_u}{\Phi R_{nvc}}\right)^2\right] = 52.5 \cdot \%$

Caisson Foundation:

Input Data:

Tower Data

Uplift =	$Uplift := 729 \cdot kips$	(User Input)
Compression =	$Comp := 927 \cdot kips$	(User Input)
Shear Force =	$Shear := 128 \cdot kips$	(User Input)
Tower Height =	$H_t := 320 \cdot ft$	(User Input)

Footing Data:

Length of Caisson =	$L_c := 35.5 \cdot ft$	(User Input)
Extension of Caisson Above Grade =	$L_{cag} := 0.5 \cdot ft$	(User Input)
Diameter of Caisson =	$d_c := 7.5 \cdot ft$	(User Input)
Length of Caisson Above Wate Table =	$L_{c.AWT} := 10.5 \cdot ft$	(User Input)
Length of Caisson Above Wate Table =	$L_{c.BWT} := 25 \cdot ft$	(User Input)
Conrete Pad Width =	$Pad_w := 12 \cdot ft$	(User Input - URS Mod 7/13/12)
Conrete Pad Depth =	$Pad_d := 4 \cdot ft$	(User Input - URS Mod 7/13/12)

Material Properties:

Concrete Compressive Strength =	$f_c := 4000 \cdot psi$	(User Input)
Steel Reinforcment Yield Strength =	$f_y := 60000 \cdot psi$	(User Input)
Ultimate Skin Friction (Above Water Table) =	$\mu_1 := 0.76 \cdot ksf$	(User Input)
Ultimate Skin Friction (Below Water Table) =	$\mu_2 := 1.4 \cdot ksf$	(User Input)
Ultimate Soil Bearing Capacity (at Bot of Caisson) =	$q_{u1} := 13400 \cdot psf$	(User Input)
Ultimate Soil Bearing Capacity (at Bot of Pad) =	$q_{u2} := 4000 \cdot psf$	(User Input)
Unit Weight of Soil =	$\gamma_{soil} := 120 \cdot pcf$	(User Input)
Unit Weight of Concrete =	$\gamma_{conc} := 150 \cdot pcf$	(User Input)
Depth to Neglect =	$n := 4 \cdot ft$	(User Input)
Resistance Factor for Bearing =	$\Phi_{sBearing} := 0.75$	(TIA-222-H 9.7)
Resistance Factor for Friction =	$\Phi_{sFriction} := 0.75$	(TIA-222-H 9.7)

Calculated Properties:

Adjusted Concrete Unit Weight = $\gamma_c := \gamma_{conc} - 62.4pcf = 87.6 \cdot pcf$

Weight of Concrete Caisson (no water) = $WT_{c.comp} := \frac{\pi}{4} \cdot \left(d_c^2 L_c\right) \cdot \gamma_{conc} = 235.251 \cdot kip$

Weight of Concrete Caisson (water) = $WT_{c.uplift} := \frac{\pi}{4} \cdot \left[\left(d_c^2 L_{c.AWT}\right) \cdot \gamma_{conc} + \left(d_c^2 L_{c.BWT}\right) \cdot \gamma_c\right] = 166.333 \cdot kip$

Weight of Concrete Pad = $WT_{pad} := \left[Pad_w^2 - \frac{\pi}{4} \cdot \left(d_c^2\right)\right] \cdot Pad_d \cdot \gamma_{conc} = 59.893 \cdot kip$

Bearing Area of Concrete Pad = $A_{pad} := \left[Pad_w^2 - \frac{\pi}{4} \cdot \left(d_c^2\right)\right] = 99.821$

Check Uplift:

Uplift Resistance from Concrete Weight = $Uplift_{conc} := \left(WT_{c.uplift} + WT_{pad}\right) \cdot 0.9 = 203.603 \cdot kips$

Uplift Resistance from Skin Friction = $Uplift_{SF} := \Phi_{sFriction} \cdot \pi \cdot d_c \cdot \left[\left(L_{c.AWT} - L_{cag} - n\right) \cdot \mu_1 + L_{c.BWT} \cdot \mu_2\right] = 699 \cdot kips$

Total Uplift Resistance = $Uplift_R := Uplift_{conc} + Uplift_{SF} = 902.686 \cdot kips$

Uplift Check = $\frac{Uplift}{Uplift_R} = 80.76 \cdot \%$

$Uplift\_Check := if\left(\frac{Uplift_R}{Uplift} \geq 1.0, "Okay", "No\ Good"\right)$

$Uplift\_Check = "Okay"$

Check Compression:

Total Compression Force = $Comp_{tot} := WT_{c.comp} + Comp + WT_{pad} = 1222 \cdot kips$

Compression Resistance from Bearing = $Comp_{bearing} := \Phi_{sBearing} \cdot \left(\frac{\pi}{4} \cdot d_c^2 \cdot q_{u1} + A_{pad} \cdot q_{u2}\right) = 743 \cdot kips$

Compression Resistance from Skin Friction = $Comp_{SF} := \Phi_{sFriction} \cdot \pi \cdot d_c \cdot \left[\left(L_{c.AWT} - L_{cag} - n\right) \cdot \mu_1 + L_{c.BWT} \cdot \mu_2\right] = 699 \cdot kips$

Total Compression Resistance = $Comp_R := Comp_{bearing} + Comp_{SF} = 1443 \cdot kips$

Compression Check = $\frac{Comp_{tot}}{Comp_R} = 84.72 \cdot \%$

$Compression\_Check := if\left(\frac{Comp_R}{Comp_{tot}} \geq 1.0, "Okay", "No\ Good"\right)$

$Compression\_Check = "Okay"$

verizon
fuze | RFDS

NORTHEAST > North East > New England > New England West > COLCHESTER CT

RF Submit by: Summers, Melissa - melissa.summers@verizonwireless.com - 12/13/2022, 7:25:02 AM

EE Submit by: , - -

Project Details

FUZE Project ID: 16281612
Project Name: 5G L-Sub6 - Carrier Add
Project Alt Name: COLCHESTER CT - MKT 64 - MODIFICATION
Project Type: Modification
Modification Type: RF
Designed Sector Carrier 4G: 18
Designed Sector Carrier 5G: 3
Additional Sector Carrier 4G: N/A
Additional Sector Carrier 5G: N/A
FP Solution Type & Tech Type: MODIFICATION;4G_4TX,5G_850,5G_L-Sub6
Carrier Aggregation: false
MPT Id:
eCIP-0: false
Suffix: REV5

Location Information

Site ID: 323606
E-NodeB ID: 0649403,064147
MDG Location ID: 5000246052
PSLC: 467126
Switch Name: Wallingford 1
Tower Owner:
Tower Type: Self Support (Lattice Tower)
Site Type: MACRO
Site Sub Type: HUB
Street Address: 63 Windham Ave.
City: Colchester
State: CT
Zip Code: 06415
County: New London
Latitude: 41.59263889 / 41° 35' 33.5" N
Longitude: -72.32116944 / 72° 19' 16.21" W

RFDS Project Scope: RFDS SOW: 850A 5GNR/ L-Sub6 carrier add, Samsung dual band RRH swap

REV1 (2/15/21): Updates the RFDS to reflect the activation of the previous project (2558754)
REV2 (6/17/21): Updates L-SUB6 details and adds 850 5GNR carrier (no material changes)
REV3 (5/12/22): Updated LS6 Regulatory to get LS6 ISAs (no material changes)
REV4 (12/13/22): Refreshed to get proper LS6 Call Signs (no material changes)
REV5 (9/22/23): Upgrades LB/ C-Band RRH and adds second C-Band carrier

1- Retain 700/ 850/ AWS/ PCS carriers and add 850A 5GNR/ L-Sub6 carrier
2- Replace (3) Spare antennas in position 2 with (3) L-Sub6 All-in-One antenna/ RRHs
3- Replace (3) existing Samsung LB RRHs on tower with (3) new Samsung B5/B13 RRH- RF4461d-13A
4- Plumb 700/ 850/ PCS/ AWS/ L-Sub6 according to the plumbing diagram
5- Use RF ports on dual band RRHs to communicate with RETs via Smart bias-T built into the antenna
6- Cap and weatherproof unused ports/connectors

Antenna Summary

Added

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
				5G	Samsung	MT6413-77A	220	221.2	170(B) 260(C) 30(A)		false	PHYSICAL	3	

Removed

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
					AMPHENOL	BXA-171085-8BF-EDIN	220	222	170(B) 260(C) 30(A)		false	SPARE	3	

Retained

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
LTE	LTE 5G	LTE	LTE		ANDREW	JAHH-65B-R3B	220	223	170(B) 260(C) 30(A)		true	PHYSICAL	6	
					COMMSCOPE	LNX-6512DS-VTM	220	222	150(B) 270(C) 30(A)		false	SPARE	3	

Added: 3 Removed: 3 Retained: 9

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
RRU	Tower					5G	Samsung	MT6413-77A			PHYSICAL	3	
RRU	Tower	LTE	LTE 5G				Samsung	RF4461d-13A			PHYSICAL	3	

Removed

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
RRU	Tower	LTE	LTE				Samsung	B5/B13 RRH-BR04C (RFV01U-D2A)			PHYSICAL	3	

Retained

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
RRU	Tower			LTE	LTE		Samsung	B2/B66A RRH-BR049 (RFV01U-D1A)			PHYSICAL	3	
Coaxial Cables	Tower						N/A	1-5/8" Coax			SPARE	12	
Diplexer	Tower	LTE	LTE				Commscope	CBC78T-DS-43-2X			PHYSICAL	3	
Hybrid Cable	Tower	LTE	LTE 5G	LTE	LTE	5G	N/A	6x12 Hybriflex			PHYSICAL	2	
Mount	Tower						Commscope	BSAMNT-SBS-2-2			PHYSICAL	3	
OVP Box	Tower	LTE	LTE 5G	LTE	LTE	5G	N/A	12 OVP			PHYSICAL	1	

Service Info

700 MHz LTE

	0000			5GLS		
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	30	170	260	30	170	260
Cell / ENode B ID	064147	064147	064147	064147	064147	064147
Antenna Model	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B
Antenna Make	COMMSCOPE	COMMSCOPE	ANDREW	COMMSCOPE	COMMSCOPE	ANDREW
Antenna Centerline(Ft)	220	220	220	220	220	220
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	5	4	3	5	4	3
Tip Height	223	223	223	223	223	223
Regulatory Power	69.75	69.75	70.4	69.75	69.75	70.4
DLEARFCN	5230	5230	5230	5230	5230	5230
Channel Bandwidth(MHz)	10	10	10	10	10	10
Total ERP (W)	627.77	627.77	633.58	627.77	627.77	633.58
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	RF4461d-13A	RF4461d-13A	RF4461d-13A
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position	3L,3R	3L,3R	3L,3R	3L,3R	3L,3R	3L,3R
Transmitter Id	1959002	1959004	1959009	9835895	9835898	9835901
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

850 MHz LTE

	0000			5GLS		
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	30	170	260	30	170	260
Cell / ENode B ID	064147	064147	064147	064147	064147	064147
Antenna Model	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B
Antenna Make	ANDREW	COMMSCOPE	ANDREW	ANDREW	COMMSCOPE	ANDREW
Antenna Centerline(Ft)	220	220	220	220	220	220
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	5	4	3	5	4	3
Tip Height	223	223	223	223	223	223
Regulatory Power	203.43	203.43	203.43	322.42	322.42	322.42
DLEARFCN	2450	2450	2450	2450	2450	2450
Channel Bandwidth(MHz)	10	10	10	10	10	10
Total ERP (W)	457.72	457.72	457.72	725.44	725.44	725.44
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	RF4461d-13A	RF4461d-13A	RF4461d-13A
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position	3L,3R	3L,3R	3L,3R	3L,3R	3L,3R	3L,3R
Transmitter Id	1951028	1951030	1951114	10282966	10282967	10282968
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

850 MHz 5GNR

				5GLS		
Sector				**0109**	**0110**	**0111**
Azimuth				30	170	260
Cell / ENode B ID				0649403	0649403	0649403
Antenna Model				JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B
Antenna Make				ANDREW	COMMSCOPE	ANDREW
Antenna Centerline(Ft)				220	220	220
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				5	4	3
Tip Height				223	223	223
Regulatory Power				322.42	322.42	322.42
DLEARFCN				2450	2450	2450
Channel Bandwidth(MHz)				10	10	10
Total ERP (W)				725.44	725.44	725.44
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				RF4461d-13A	RF4461d-13A	RF4461d-13A
Number of Tx, Rx Lines				4,4	4,4	4,4
Position				3L,3R	3L,3R	3L,3R
Transmitter Id				10282966	10282967	10282968
Source				ATOLL_API	ATOLL_API	ATOLL_API

1900 MHz LTE

		0000		5GLS		
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	30	170	260	30	170	260
Cell / ENode B ID	064147	064147	064147	064147	064147	064147
Antenna Model	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	220	220	220	220	220	220
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	2	2	2	2	2	2
Tip Height	223	223	223	223	223	223
Regulatory Power	290.37	290.37	290.37	290.37	290.37	290.37
DLEARFCN	1050	1050	1050	1050	1050	1050
Channel Bandwidth(MHz)	10	10	10	10	10	10
Total ERP (W)	1592.94	1592.94	1592.94	1592.94	1592.94	1592.94
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position	3R	3R	3R	3R	3R	3R
Transmitter Id	1961246	1961247	1961248	9835896	9835899	9835902
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

2100 MHz LTE

	0000			5GLS		
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	30	170	260	30	170	260
Cell / ENode B ID	064147	064147	064147	064147	064147	064147
Antenna Model	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B	JAHH-65B-R3B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	220	220	220	220	220	220
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	2	2	2	2	2	2
Tip Height	223	223	223	223	223	223
Regulatory Power	148.88	148.88	148.88	148.88	148.88	148.88
DLEARFCN	2050	2050	2050	2050	2050	2050
Channel Bandwidth(MHz)	20	20	20	20	20	20
Total ERP (W)	1633.43	1633.43	1633.43	1633.43	1633.43	1633.43
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position	3L	3L	3L	3L	3L	3L
Transmitter Id	1959003	1959008	1959721	9835897	9835900	9835903
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

nL-Sub6

				5GLS		
Sector				**0109**	**0110**	**0111**
Azimuth				30	170	260
Cell / ENode B ID				0649403	0649403	0649403
Antenna Model				MT6413-77A	MT6413-77A	MT6413-77A
Antenna Make				Samsung	Samsung	Samsung
Antenna Centerline(Ft)				220	220	220
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				3	3	3
Tip Height				221.2	221.2	221.2
Regulatory Power				1622.95	1622.95	1622.95
DLEARFCN				650006, 655324	650006, 655324	650006, 655324
Channel Bandwidth(MHz)				60,100	60,100	60,100
Total ERP (W)				62089.68	62089.68	62089.68
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				MT6413-77A	MT6413-77A	MT6413-77A
Number of Tx, Rx Lines				2,2	2,2	2,2
Position				2	2	2
Transmitter Id				9835980	9835981	9835982
Source				ATOLL_API	ATOLL_API	ATOLL_API

Service Comments

Callsigns Per Antenna

Sector	Antenna Make	Antenna Model	Ant CL Height AGL	Tip Height	Azimuth (TN)	Elec Tilt	Mech Tilt	Gain	Beam Width	Regulatory Power	Callsigns						
											700	850	1900	2100	28 GHz	31 GHz	39 GHz

No data available.

Callsigns

Callsign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs /Sq Mi	Status	Action	Approved for Insvc
WRNE584	New York, NY	PM	PEA001	A4	9011	New London	Cellco Partnership	Yes	20.000	3760.000-3780.000	.000-.000	.000-.000	.000-.000	1170.73	1640	403.90	Active	added	Yes
WRHD614	New York, NY	UU	PEA001	M5	9011	New London	Cellco Partnership	Yes	100.000	38000.000-38100.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WQGD494	New London-Norwich, CT	AW	CMA154	A	9011	New London	Cellco Partnership	Yes	20.000	1710.000-1720.000	2110.000-2120.000	.000-.000	.000-.000	148.88	1640	403.90	Active	retained	Yes
WRHD616	New York, NY	UU	PEA001	M7	9011	New London	Cellco Partnership	Yes	100.000	38200.000-38300.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WQEM954	New London-Norwich, CT	CW	BTA319	C	9011	New London	Cellco Partnership	Yes	10.000	1895.000-1900.000	1975.000-1980.000	.000-.000	.000-.000	290.37	1640	403.90	Active	retained	Yes
WQGA906	New York-No. New Jer.-Long Island, NY-NJ-CT-PA-MA-	AW	BEA010	B	9011	New London	Cellco Partnership	Yes	20.000	1720.000-1730.000	2120.000-2130.000	.000-.000	.000-.000	148.88	1640	403.90	Active	retained	Yes
WRNE587	New York, NY	PM	PEA001	B2	9011	New London	Cellco Partnership	Yes	20.000	3820.000-3840.000	.000-.000	.000-.000	.000-.000	1622.95	1640	403.90	Active	added	Yes
WRHD609	New York, NY	UU	PEA001	M1	9011	New London	Cellco Partnership	Yes	100.000	37600.000-37700.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
KNKA745	New London-Norwich, CT	CL	CMA154	A	9011	New London	Cellco Partnership	Yes	25.000	824.000-835.000	869.000-880.000	845.000-846.500	890.000-891.500	322.42 - PSD	400	403.90	Active	added	Yes
WRHD610	New York, NY	UU	PEA001	M10	9011	New London	Cellco Partnership	Yes	100.000	38500.000-38600.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WRNE581	New York, NY	PM	PEA001	A1	9011	New London	Cellco Partnership	Yes	20.000	3700.000-3720.000	.000-.000	.000-.000	.000-.000	1170.73	1640	403.90	Active	added	Yes
WRNE588	New York, NY	PM	PEA001	B3	9011	New London	Cellco Partnership	Yes	20.000	3840.000-3860.000	.000-.000	.000-.000	.000-.000	1622.95	1640	403.90	Active	added	Yes
WRHD612	New York, NY	UU	PEA001	M3	9011	New London	Cellco Partnership	Yes	100.000	37800.000-37900.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WREE836	C09011 - New London, CT	UU	C09011	L2	9011	New London	Cellco Partnership	Yes	425.000	27925.000-28350.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WRHD615	New York, NY	UU	PEA001	M6	9011	New London	Cellco Partnership	Yes	100.000	38100.000-38200.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WQJQ689	Northeast	WU	REA001	C	9011	New London	Cellco Partnership	Yes	22.000	746.000-757.000	776.000-787.000	.000-.000	.000-.000	70.4	1000	403.90	Active	retained	Yes
WRNE582	New York, NY	PM	PEA001	A2	9011	New London	Cellco Partnership	Yes	20.000	3720.000-3740.000	.000-.000	.000-.000	.000-.000	1170.73	1640	403.90	Active	added	Yes
WRNE585	New York, NY	PM	PEA001	A5	9011	New London	Cellco Partnership	Yes	20.000	3780.000-3800.000	.000-.000	.000-.000	.000-.000	1622.95	1640	403.90	Active	added	Yes
KNLH263	New London-Norwich, CT	CW	BTA319	F	9011	New London	Cellco Partnership	Yes	10.000	1890.000-1895.000	1970.000-1975.000	.000-.000	.000-.000	290.37	1640	403.90	Active	retained	Yes
WRHD611	New York, NY	UU	PEA001	M2	9011	New London	Cellco Partnership	Yes	100.000	37700.000-37800.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WRHD613	New York, NY	UU	PEA001	M4	9011	New London	Cellco Partnership	Yes	100.000	37900.000-38000.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes

WRHD617	New York, NY	UU	PEA001	M8	9011	New London	Cellco Partnership	Yes	100.000	38300.000-38400.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WREE835	C09011 - New London, CT	UU	C09011	L1	9011	New London	Cellco Partnership	Yes	425.000	27500.000-27925.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WRNE586	New York, NY	PM	PEA001	B1	9011	New London	Cellco Partnership	Yes	20.000	3800.000-3820.000	.000-.000	.000-.000	.000-.000	1622.95	1640	403.90	Active	added	Yes
WQDU931	New London-Norwich, CT	CW	BTA319	C	9011	New London	Cellco Partnership	Yes	10.000	1900.000-1905.000	1980.000-1985.000	.000-.000	.000-.000		1640	403.90	Active		Yes
WRHD618	New York, NY	UU	PEA001	M9	9011	New London	Cellco Partnership	Yes	100.000	38400.000-38500.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WRHD619	New York, NY	UU	PEA001	N1	9011	New London	Cellco Partnership	Yes	100.000	38600.000-38700.000	.000-.000	.000-.000	.000-.000		0	403.90	Active		Yes
WRNE583	New York, NY	PM	PEA001	A3	9011	New London	Cellco Partnership	Yes	20.000	3740.000-3760.000	.000-.000	.000-.000	.000-.000	1170.73	1640	403.90	Active	added	Yes

Band	Sector 1 (Alpha) Color Codes							
850 CDMA		R						
		R	R					
700		R	P					
		R	R	P				
		R	R	R	P			
		R	R	R	R	P		
850 LTE		R	P	P				
		R	R	P	P			
		R	R	R	P	P		
		R	R	R	R	P	P	
700 / 850		R	P	P	P			
		R	R	P	P	P		
		R	R	R	P	P	P	
		R	R	R	R	P	P	P
AWS		R	W					
		R	R	W				
		R	R	R	W			
		R	R	R	R	W		
PCS		R	W	W				
		R	R	W	W			
		R	R	R	W	W		
		R	R	R	R	W	W	
AWS / PCS		R	W	W	W			
		R	R	W	W	W		
		R	R	R	W	W	W	
		R	R	R	R	W	W	W
CBRS		R	Y					
		R	R	Y				
		R	R	R	Y			
		R	R	R	R	Y		
LAA		R	Y	Y				
		R	R	Y	Y			

Sector 2 (Beta) Color Codes							
	B						
	B	B					
	B	P					
	B	B	P				
	B	B	B	P			
	B	B	B	B	P		
	B	P	P				
	B	B	P	P			
	B	B	B	P	P		
	B	B	B	B	P	P	
	B	P	P	P			
	B	B	P	P	P		
	B	B	B	P	P	P	
	B	B	B	B	P	P	P
	B	W					
	B	B	W				
	B	B	B	W			
	B	B	B	B	W		
	B	W	W				
	B	B	W	W			
	B	B	B	W	W		
	B	B	B	B	W	W	
	B	W	W	W			
	B	B	W	W	W		
	B	B	B	W	W	W	
	B	B	B	B	W	W	W
	B	Y					
	B	B	Y				
	B	B	B	Y			
	B	B	B	B	Y		
	B	Y	Y				
	B	B	Y	Y			

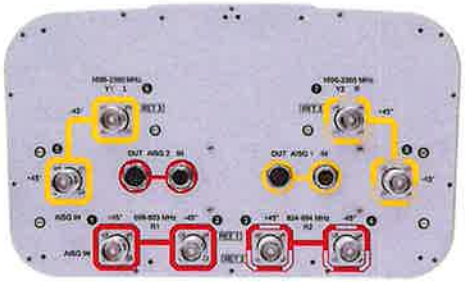
Sector 3 (Gamma) Color Codes							
	G						
	G	G					
	G	P					
	G	G	P				
	G	G	G	P			
	G	G	G	G	P		
	G	P	P				
	G	G	P	P			
	G	G	G	P	P		
	G	G	G	G	P	P	
	G	P	P	P			
	G	G	P	P	P		
	G	G	G	P	P	P	
	G	G	G	G	P	P	P
	G	W					
	G	G	W				
	G	G	G	W			
	G	G	G	G	W		
	G	W	W				
	G	G	W	W			
	G	G	G	W	W		
	G	G	G	G	W	W	
	G	W	W	W			
	G	G	W	W	W		
	G	G	G	W	W	W	
	G	G	G	G	W	W	W
	G	Y					
	G	G	Y				
	G	G	G	Y			
	G	G	G	G	Y		
	G	Y	Y				
	G	G	Y	Y			

Sector 4 (Delta) Color Codes								
850 CDMA	Gray	R						
	Gray	R	R					
700	Gray	R	P					
	Gray	R	R	P				
	Gray	R	R	R	P			
	Gray	R	R	R	R	P		
850 LTE	Gray	R	P	P				
	Gray	R	R	P	P			
	Gray	R	R	R	P	P		
	Gray	R	R	R	R	P	P	
700 / 850	Gray	R	P	P	P			
	Gray	R	R	P	P	P		
	Gray	R	R	R	P	P	P	
	Gray	R	R	R	R	P	P	P
AWS	Gray	R	W					
	Gray	R	R	W				
	Gray	R	R	R	W			
	Gray	R	R	R	R	W		
PCS	Gray	R	W	W				
	Gray	R	R	W	W			
	Gray	R	R	R	W	W		
	Gray	R	R	R	R	W	W	
AWS / PCS	Gray	R	W	W	W			
	Gray	R	R	W	W	W		
	Gray	R	R	R	W	W	W	
	Gray	R	R	R	R	W	W	W
CBRS	Gray	R	Y					
	Gray	R	R	Y				
	Gray	R	R	R	Y			
	Gray	R	R	R	R	Y		
LAA	Gray	R	Y	Y				
	Gray	R	R	Y	Y			

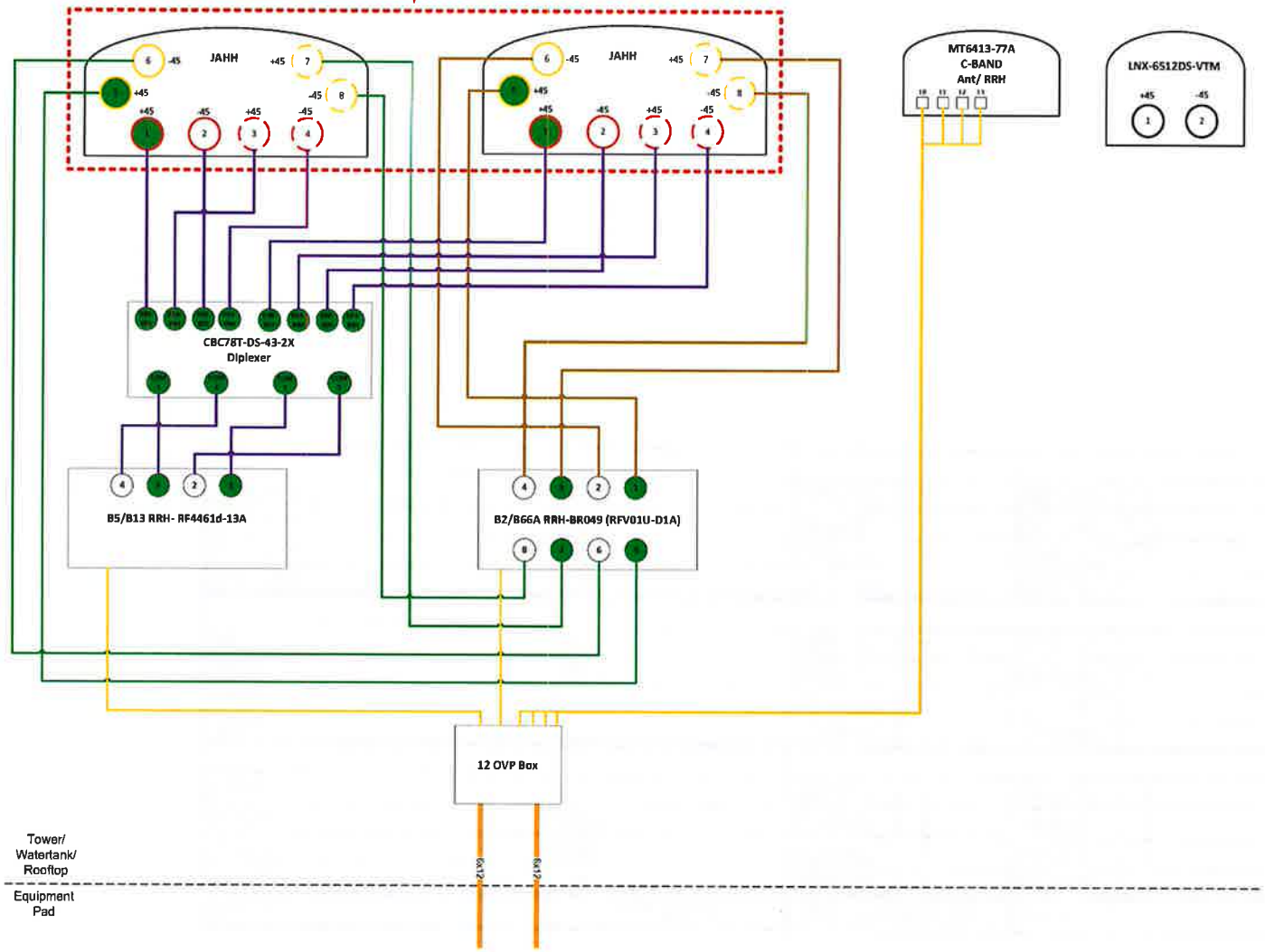
Sector 5 (Epsilon) Color Codes								
	Gray	B						
	Gray	B	B					
	Gray	B	P					
	Gray	B	B	P				
	Gray	B	B	B	P			
	Gray	B	B	B	B	P		
	Gray	B	P	P				
	Gray	B	B	P	P			
	Gray	B	B	B	P	P		
	Gray	B	B	B	B	P	P	
	Gray	B	P	P	P			
	Gray	B	B	P	P	P		
	Gray	B	B	B	P	P	P	
	Gray	B	B	B	B	P	P	P
	Gray	B	W					
	Gray	B	B	W				
	Gray	B	B	B	W			
	Gray	B	B	B	B	W		
	Gray	B	W	W				
	Gray	B	B	W	W			
	Gray	B	B	B	W	W		
	Gray	B	B	B	B	W	W	
	Gray	B	W	W	W			
	Gray	B	B	W	W	W		
	Gray	B	B	B	W	W	W	
	Gray	B	B	B	B	W	W	W
	Gray	B	Y					
	Gray	B	B	Y				
	Gray	B	B	B	Y			
	Gray	B	B	B	B	Y		
	Gray	B	Y	Y				
	Gray	B	B	Y	Y			

Sector 6 (Zeta) Color Codes								
	Gray	G						
	Gray	G	G					
	Gray	G	P					
	Gray	G	G	P				
	Gray	G	G	G	P			
	Gray	G	G	G	G	P		
	Gray	G	P	P				
	Gray	G	G	P	P			
	Gray	G	G	G	P	P		
	Gray	G	G	G	G	P	P	
	Gray	G	P	P	P			
	Gray	G	G	P	P	P		
	Gray	G	G	G	P	P	P	
	Gray	G	G	G	G	P	P	P
	Gray	G	W					
	Gray	G	G	W				
	Gray	G	G	G	W			
	Gray	G	G	G	G	W		
	Gray	G	W	W				
	Gray	G	G	W	W			
	Gray	G	G	G	W	W		
	Gray	G	G	G	G	W	W	
	Gray	G	W	W	W			
	Gray	G	G	W	W	W		
	Gray	G	G	G	W	W	W	
	Gray	G	G	G	G	W	W	W
	Gray	G	Y					
	Gray	G	G	Y				
	Gray	G	G	G	Y			
	Gray	G	G	G	G	Y		
	Gray	G	Y	Y				
	Gray	G	G	Y	Y			

Sector	Antenna Desc	Base Station ID	Sector ID
Alpha	700	064147_1_1	064147_1
Alpha	850	064147_1_6	064147_1_6
Alpha	AWS	064147_1_2	064147_1_2
Alpha	PCS	064147_1_4	064147_1_4
Beta	700	064147_2_1	064147_2
Beta	850	064147_2_6	064147_2_6
Beta	AWS	064147_2_2	064147_2_2
Beta	PCS	064147_2_4	064147_2_4
Gamma	700	064147_3_1	064147_3
Gamma	850	064147_3_6	064147_3_6
Gamma	AWS	064147_3_2	064147_3_2
Gamma	PCS	064147_3_4	064147_3_4



BSAMNT-SBS-2-2



- Port 1 & 2 are for low band (698-896 MHz).
- Port 3,4,5, & 6 are for high band (1695-2360 MHz).
- Smart Bias Tee (SBT) is through port 1 & 3 for low band and port 1 for high band.
- AISG cable is only needed when drawn in the diagrams below, if it is not drawn then SBT is enough to control all RET motors.
- Not all SBT ports are needed to control RET, only green port connection to green port will control RET.

RET DC signal pass for RET
(Port that will control RET)

DC signal capable Port

AISG Cable

RET DC signal pass for RET
(Port that will control RET)

Hybriflex cables

Comments:

Diagram shows antenna port configuration as viewed from below antennas.

Antenna positions are indicated as viewed from IN FRONT of antennas.

Cap and weatherproof unused antenna ports.

All plumbing diagram colors are irrelevant except for AISG & Hybriflex cable. (For the coax colors follow Coax Colors guide above)

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Antenna Mount Analysis Report with Hardware Upgrades and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10215050
Colliers Engineering & Design Project #: 21777749A (Rev.3)

December 8, 2023

Site Information	*Site ID:*	*5000246052-VZW / COLCHESTER CT*
	Site Name:	*COLCHESTER CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*63 Windham Ave.* *Colchester, Connecticut 06415* *New London County*
	Latitude:	*41.592500°*
	Longitude:	*-72.321111°*
Structure Information	*Tower Type:*	*300-Ft Self Support*
	Mount Type:	*12.00-Ft Sector Frame*

FUZE ID # 16281612

Analysis Results

Sector Frame: **67.1 % Pass w/ Hardware Upgrades***

*** Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

******Contractor PMI Requirements:***
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Cody Sherman

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED
PROFESSIONAL ENGINEER
12/19/2023

Executive Summary:

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 323606, dated September 22, 2023*
Mount Mapping Report	*Elite ICT, Site ID: 50, dated April 22, 2021*
FAA 2C Certification	*Centek Engineering, Site Name: Colchester CT, dated November 8, 2023*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H Connecticut State Building Code, Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	125 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.979
Seismic Parameters:	S_S:	0.205 g
	S_1:	0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
231.89	232.39	6	Commscope	JAHH-65B-R3B	Retained
		3	Andrew	LNX-6512DS-VTM	
		1	Commscope	CBC78T-DS-43-2X	
		3	Samsung	B2/B66A RRH-BR049	
		1	Raycap	RHSDC-6627-PF-48*	
		3	Samsung	MT6413-77A	Added
		3	Samsung	RF4461d-13A	

* Equipment to be flush mounted directly to the Self Support. They are not mounted on the sector mounts and are not included in this mount analysis.

Any proposed antennas not currently installed should be mounted such that the centerline of the antennas does not exceed 6 inches vertically from the center of the antenna mount(s).

It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

   Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

   The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design.

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontal	18.0 %	Pass
Antenna Pipe	18.4 %	Pass
Standoff Plate	56.7 %	Pass
Standoff Horizontal	26.0 %	Pass
Mast Pipe	15.5 %	Pass
Standoff Diagonal	27.1 %	Pass
Standoff Vertical	21.9 %	Pass
Tie Back	67.1 %	Pass
Connection Check	45.4 %	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**67.1%***

* Results valid after hardware upgrades noted in the PMI Requirements are installed.

Mount Connection Envelope Reactions:

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Sector A Top Standoff	234	N51	546	2447	1.244	0.854	1155	2790	0.944	0.662
Sector A Bottom Standoff	229	N52	518	2657	1.366	0.750	1081	2850	1.018	0.641

Notes:
- Axial loads act along the axis of the tower leg
- Lateral reactions act perpendicular to the tower leg
- Moment loads introduce bending moment to the tower leg
- Torsion loads introduce twisting moment to the tower leg
- Batch solutions by individual load cases are included at the end of this document

Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	22.9	19.4	28.9	25.4
0.5	33.4	29.2	42.0	37.6
1	42.6	37.8	53.9	48.5

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mounts will be **SUFFICIENT** for the final loading configuration shown in Attachment 2 upon the completion of the requirements listed below.

Contractor shall install R5 Reinforcement kit on all mount to tower connections.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Photos
4. Mount Mapping Report (for reference only)
5. Analysis Calculations

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

Passing Mount Analysis requires a PMI due to a modification in loading.
Electronic pdf version of this can be downloaded at https://pmi.vzwsmart.com.
For additional questions and support, please reach out to pmisupport@colliersengineering.com

MDG #: 5000246052 SMART Project #: 10210697 Fuze Project ID: 16281612

Purpose – to provide SMART Tool structural vendor the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

Base Requirements:

- If installation will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide "as built mount drawings" showing contractor's name, contact information, preparer's signature, and date. Any deviations from the drawings (Proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: ***https://pmi.vzwsmart.com***

Photo Requirements:

- *Photos taken at ground level*
  - Photo of Gate Signs showing the tower owner, site name, and number.
  - Overall tower structure after installation.
  - Photos of the mount after installation; if the mounts are at different rad elevations, pictures must be provided for all elevations that equipment was installed.
- *Photos taken at Mount Elevation*
  - Photos showing the safety climb wire rope above and below the mount prior to installation.
  - Photos showing the climbing facility and safety climb if present.
  - Photos showing each individual sector after installation. Each entire sector shall be in one photo to show the interconnection of members.

        - These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
    - Photos that show the model number of each antenna and piece of equipment installed per sector.

Antenna & equipment placement and Geometry Confirmation:

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

☐ The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

Special Instructions / Validation as required from the MA or any other information the contractor deems necessary to share that was identified:

Issue:

Contractor shall install R5 Reinforcement kit on all mount to tower connections.

Response:

Special Instruction Confirmation:

☐ The contractor has read and acknowledges the above special instructions.

☐ All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.

☐ The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR

☐ The material utilized was approved by a SMART Tool engineering vendor as an "equivalent" and this approval is included as part of the contractor submission.

Comments:

Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:

☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

☐ Yes ☐ No

Contractor to certify the condition of the safety climb and verify no damage when leaving the site:

☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Certifying Individual:

Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	

Structure: 5000246052-VZW - COLCHESTER CT

Sector: **A**

Structure Type: Self Support

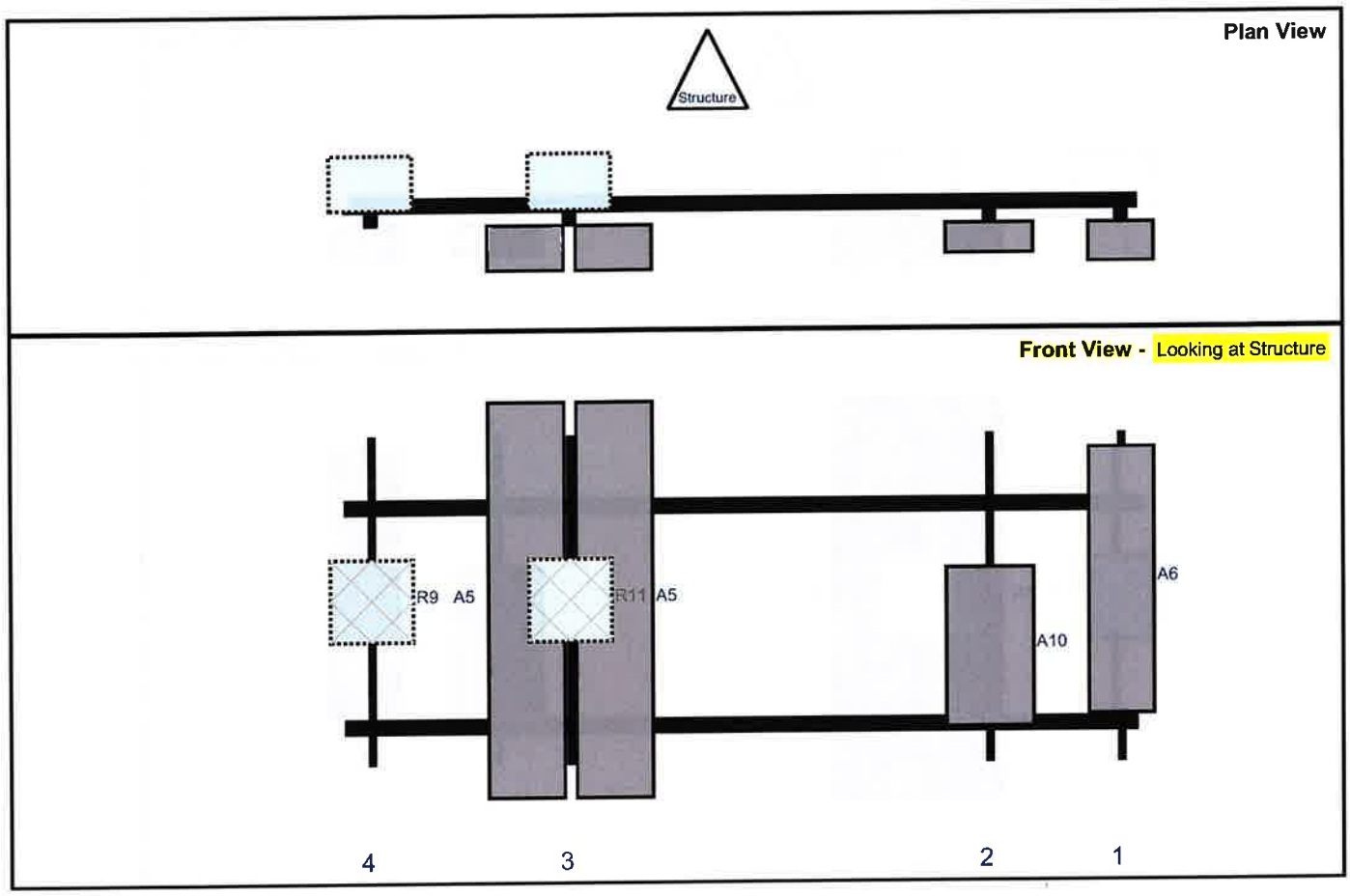
Mount Elev: 231.89

10215050

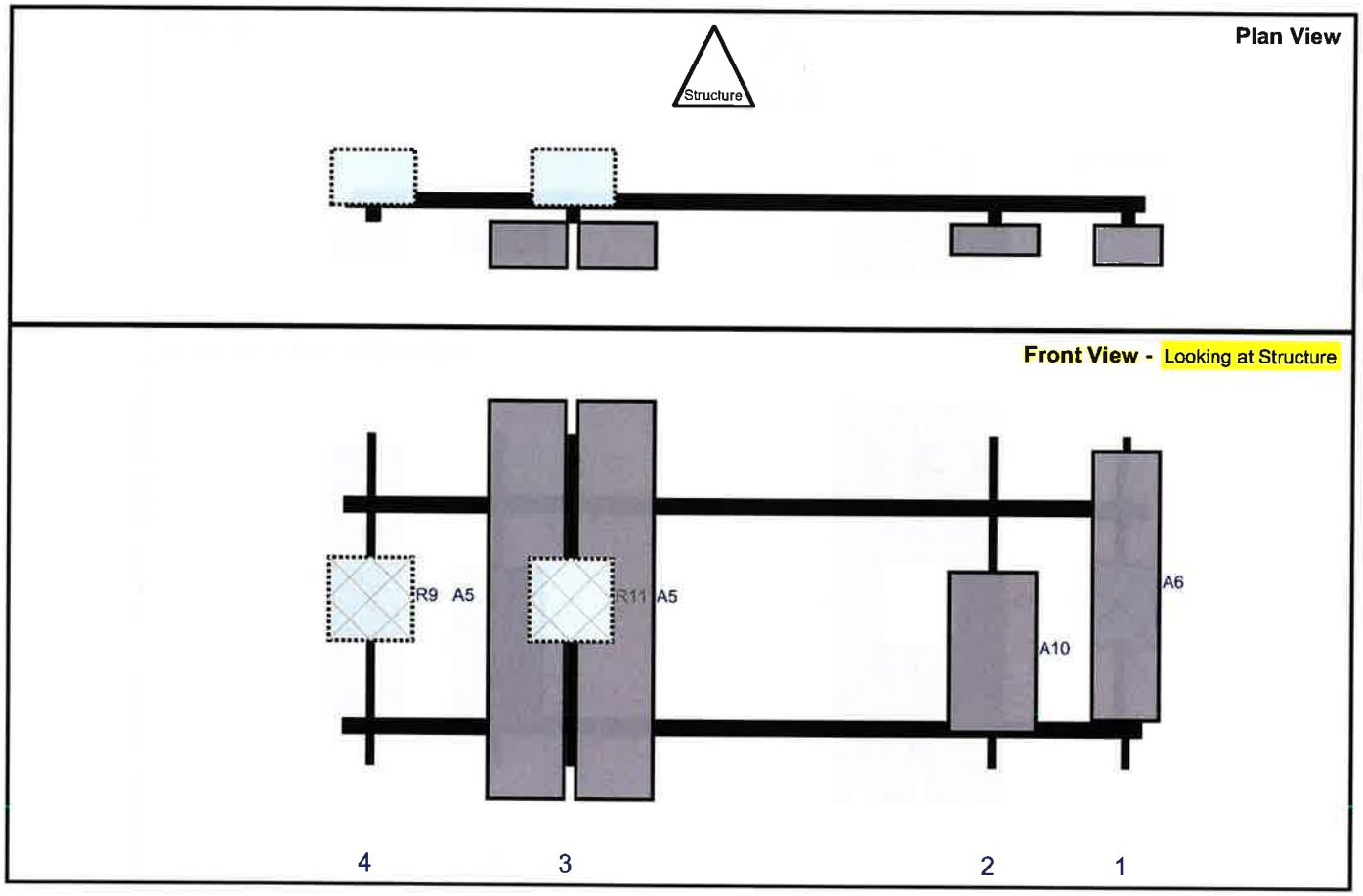
12/8/2023

Colliers Engineering & Design

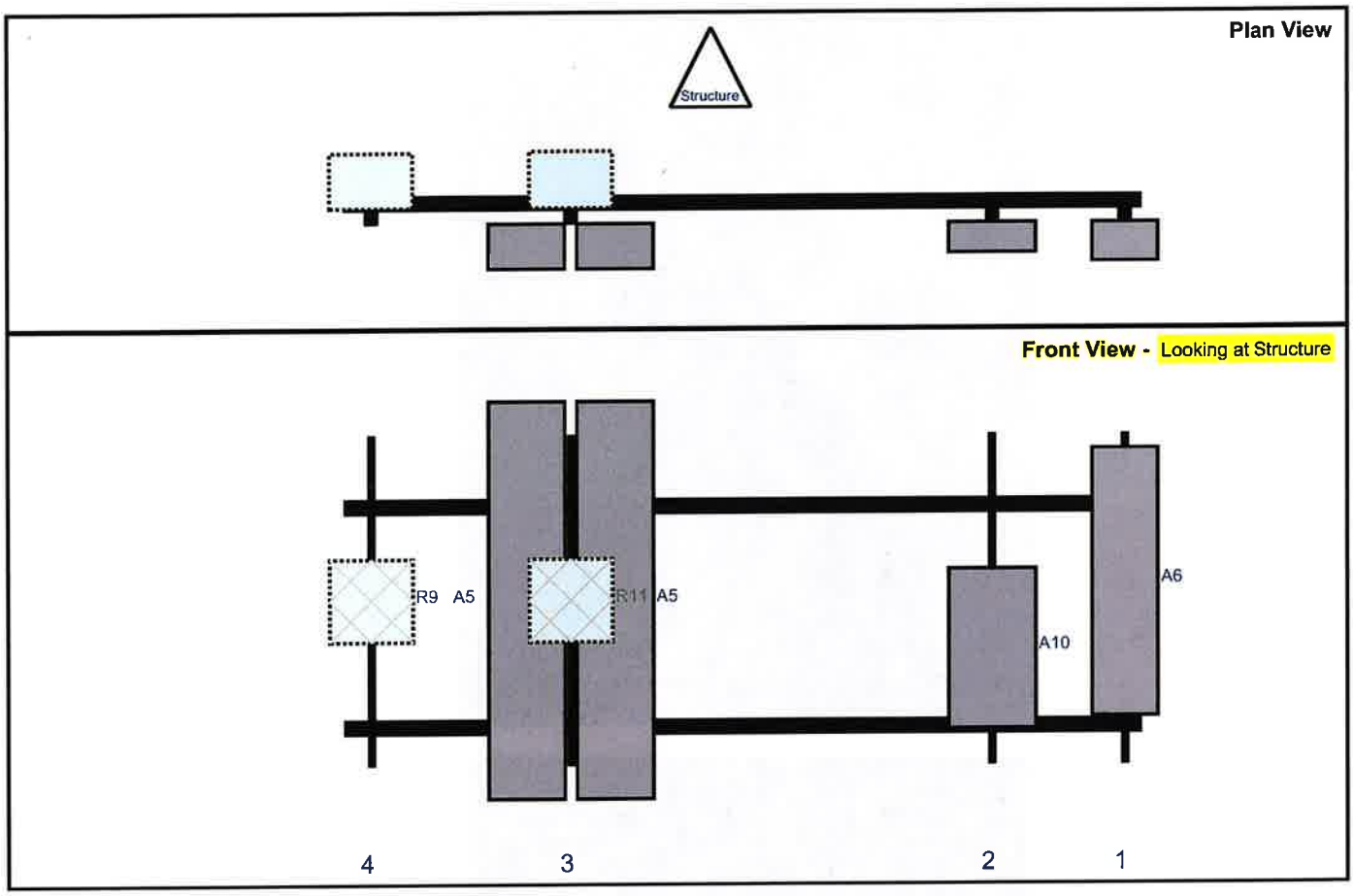
Page: 1



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LNX-6512DS-VTM	48.5	11.9	141	1	a	Front	27	0	Retained	04/22/2021
A10	MT6413-77A	28.9	15.8	117	2	a	Front	39	0	Added	
A5	JAHH-65B-R3B	72	13.8	41	3	a	Front	30	-8	Retained	04/22/2021
A5	JAHH-65B-R3B	72	13.8	41	3	b	Front	30	8	Retained	04/22/2021
R11	RF4461d-13A	15	15	41	3	a	Behind	30	0	Added	
R9	B2/B66A RRH-BR049	15	15	5	4	a	Behind	30	0	Retained	04/22/2021
M32	CBC78T-DS-43-2X	6.4	6.9		Member					Retained	04/22/2021

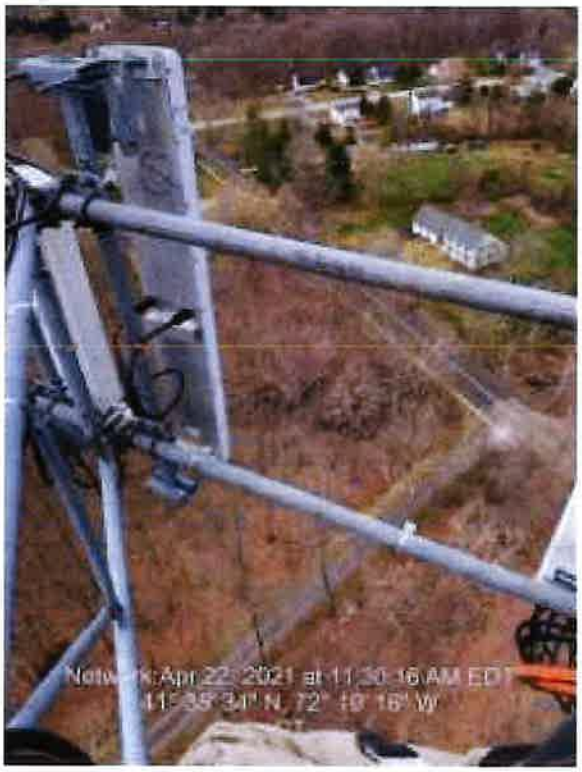


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LNX-6512DS-VTM	48.5	11.9	141	1	a	Front	27	0	Retained	04/22/2021
A10	MT6413-77A	28.9	15.8	117	2	a	Front	39	0	Added	
A5	JAHH-65B-R3B	72	13.8	41	3	a	Front	30	-8	Retained	04/22/2021
A5	JAHH-65B-R3B	72	13.8	41	3	b	Front	30	8	Retained	04/22/2021
R11	RF4461d-13A	15	15	41	3	a	Behind	30	0	Added	
R9	B2/B66A RRH-BR049	15	15	5	4	a	Behind	30	0	Retained	04/22/2021



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LNX-6512DS-VTM	48.5	11.9	141	1	a	Front	27	0	Retained	04/22/2021
A10	MT6413-77A	28.9	15.8	117	2	a	Front	39	0	Added	
A5	JAHH-65B-R3B	72	13.8	41	3	a	Front	30	-8	Retained	04/22/2021
A5	JAHH-65B-R3B	72	13.8	41	3	b	Front	30	8	Retained	04/22/2021
R11	RF4461d-13A	15	15	41	3	a	Behind	30	0	Added	
R9	B2/B66A RRH-BR049	15	15	5	4	a	Behind	30	0	Retained	04/22/2021


Network:Apr 22, 20
41° 35' 33"


Network:Apr 22, 2021 at 11:30:16 AM EDT
41° 35' 34" N, 72° 19' 16" W

V4.0 Updated on 3-31-2021

Antenna Mount Mapping Form (PATENT PENDING)

FCC #	1045079		
Tower Owner:	UNKOWN	Mapping Date:	4/22/2021
Site Name:	COLCHESTER	Tower Type:	Self Support
Site Number or ID:	50	Tower Height (Ft.):	300
Mapping Contractor:	ELITE ICT	Mount Elevation (Ft.):	233

Please insert the sketches of the antenna mount from the "Sketches" tab with dimensions and members here.

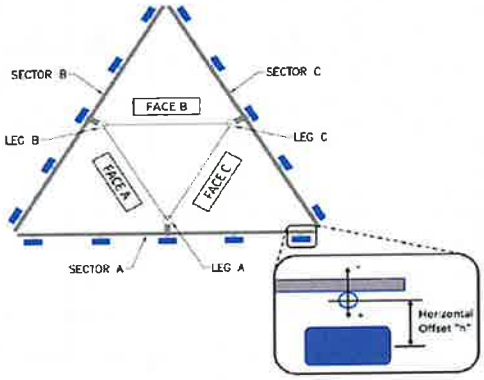
Mount Pipe Configuration and Geometries [Unit = Inches]

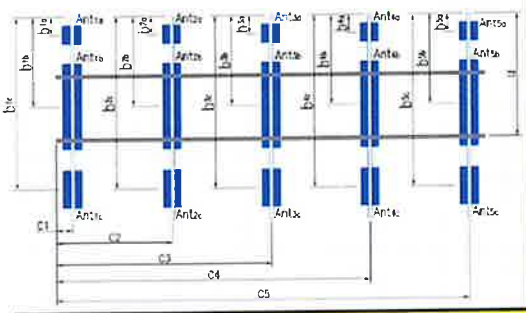
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	60 X 2.38 STD P	53.00	3.00	C1	60 X 2.38 STD P	53.00	3.00
A2	72 X 2.38 STD P	55.00	27.00	C2	72 X 2.38 STD P	55.00	27.00
A3	60 X 2.38 STD P	53.00	103.00	C3	60 X 2.38 STD P	53.00	103.00
A4	60 X 2.38 STD P	53.00	139.00	C4	60 X 2.38 STD P	53.00	139.00
A5				C5			
A6				C6			
B1	60 X 2.38 STD P	53.00	3.00	D1			
B2	72 X 2.38 STD P	55.00	27.00	D2			
B3	60 X 2.38 STD P	53.00	103.00	D3			
B4	60 X 2.38 STD P	53.00	139.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	20.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	

Please enter additional infomation or comments below.

Tower Face Width at Mount Elev. (ft.):	14	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	10.5
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.			8-Mar





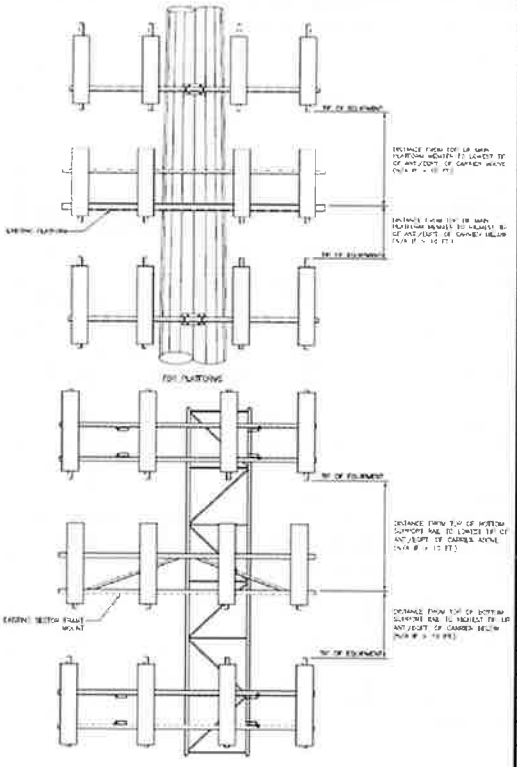
Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances "b_{1a}, b_{2a}, b_{3a}, b_{1b}..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}	LNX-6512DS-A1M	11.00	7.00	48.00		233.583	26.00	10.00	130.00	282
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	UNKNOWN	11.00	4.00	72.00		232.917	36.00	12.00	85.00	286
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	SBNHH-1D65B	11.00	7.00	72.00		234.083	20.00	9.00	30.00	292
Ant_{3b}	B13-RRH	11.00	5.00	20.00		233.583	26.00	10.00		
Ant_{3c}										
Ant_{4a}	B66A-RRH	12.00	7.00	25.00		233.417	28.00	6.00		313
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

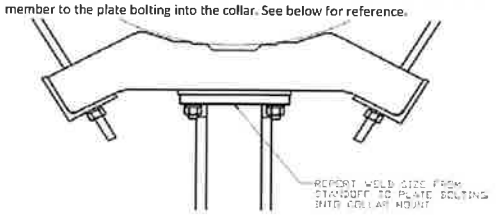
Mount Azimuth (Degree) for Each Sector			Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	60.00	Deg	Leg A: 30.00	Deg
Sector B:	90.00	Deg	Leg B: 80.00	Deg
Sector C:	320.00	Deg	Leg C: 330.00	Deg
Sector D:		Deg	Leg D:	Deg

Climbing Facility Information			
Location:	60.00	Deg	Sector A
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was unobstructed.
	Condition:		Good condition.

Please insert a photo of the mount centerline measurement here.



For T-Arms/Platforms on monopoles, record the weld size from the main standoff member to the plate bolting into the collar. See below for reference.



Sector B										
Ant_{1a}	LNX-6512DS-A1M	11.00	7.00	48.00		233.583	26.00	10.00	140.00	16
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	UNKNOWN	11.00	4.00	72.00		232.917	36.00	9.00	130.00	32
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	SBNHH-1D65B	11.00	7.00	72.00		234.083	20.00	9.00	85.00	62
Ant_{3b}	SBNHH-1D65B	11.00	7.00	72.00		234.083	20.00	9.00	85.00	5
Ant_{3c}	B13-RRH	11.00	7.50	20.00		233.583	26.00	-7.00		77
Ant_{4a}	B66A-RRH	12.00	7.00	25.00		233.417	28.00	-6.00		90
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	RHSDC-6627-PF-48	15.00	9.00	18.00						
Ant on Tower										
Sector C										
Ant_{1a}	LNX-6512DS-A1M	11.00	7.00	48.00		233.083	32.00	10.00	335.00	131
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	UNKNOWN	11.00	4.00	72.00		232.917	36.00	9.00	320.00	134
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	SBNHH-1D65B	11.00	7.00	72.00		233.917	22.00	9.00	270.00	155
Ant_{3b}	B13-RRH	11.00	5.00	20.00		233.833	23.00	10.00		
Ant_{3c}										
Ant_{4a}	B66A-RRH	12.00	7.00	25.00		233.417	28.00	6.00		278
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #
1		
2		
3		
4		
5		
6		
7		
8		

Observed Obstructions to Tower Lighting System					
If the tower lighting system is being obstructed by the carrier's equipment (for example: a light nested by the antennas), please provide photos and fill in the information below.					Photo #
Description of Obstruction:					
Type of Light:		Photo #		Additional Comments:	
Lighting Technology:		Photo #			
Elevation (AGL) at base of light (Ft.):		Photo #			
Is a service loop available?		Photo #			
Is beacon installed on an extension?		Photo #			

Mapping Notes

1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions

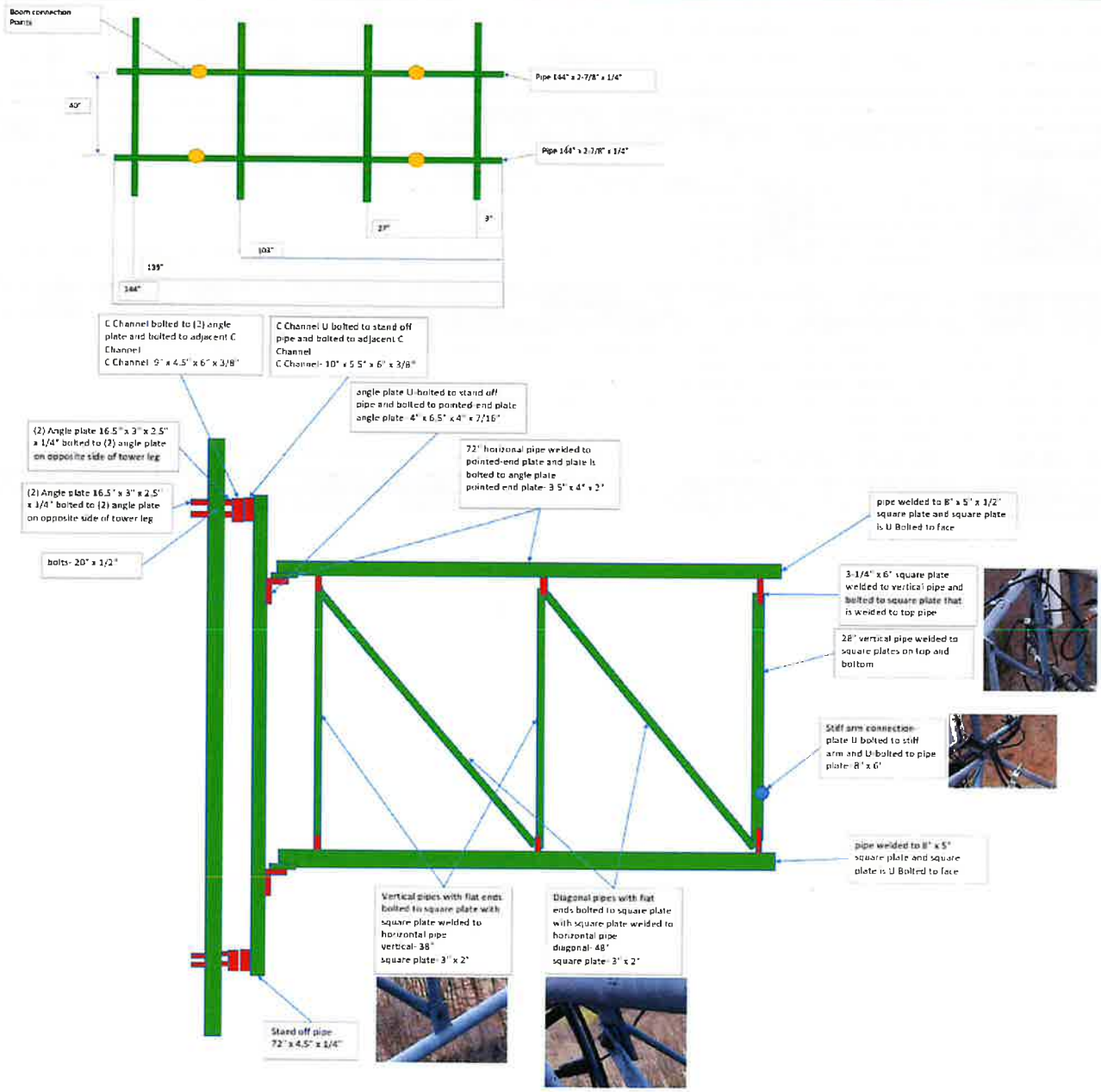
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.

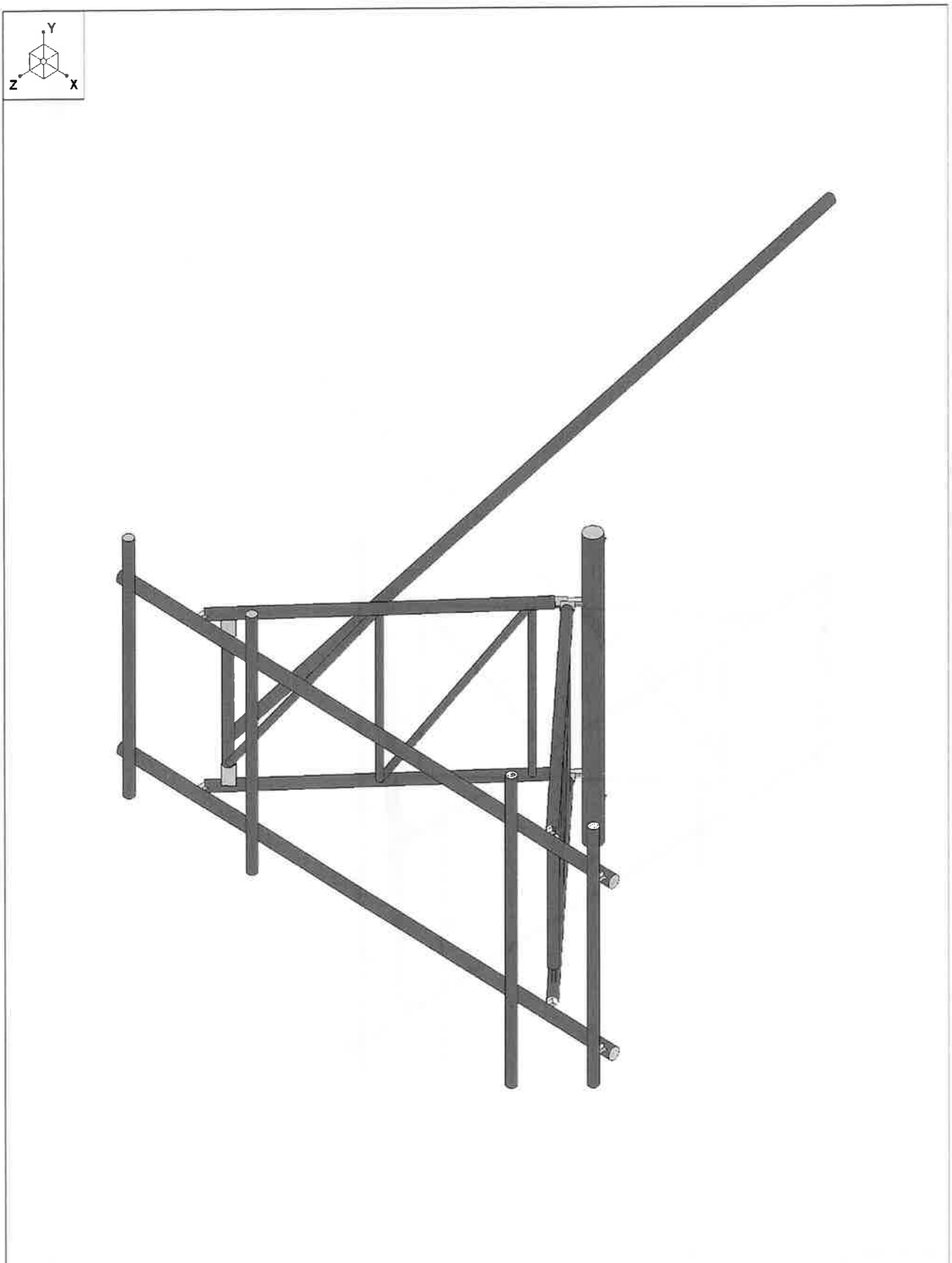
V4.0 Updated on 3.31.2021

Antenna Mount Mapping Form (PATENT PENDING)

			FCC #
			1045079
Tower Owner:	UNKOWN	Mapping Date:	4/22/2021
Site Name:	COLCHESTER	Tower Type:	Self Support
Site Number or ID:	50	Tower Height (Ft.):	300
Mapping Contractor:	ELITE ICT	Mount Elevation (Ft.):	233

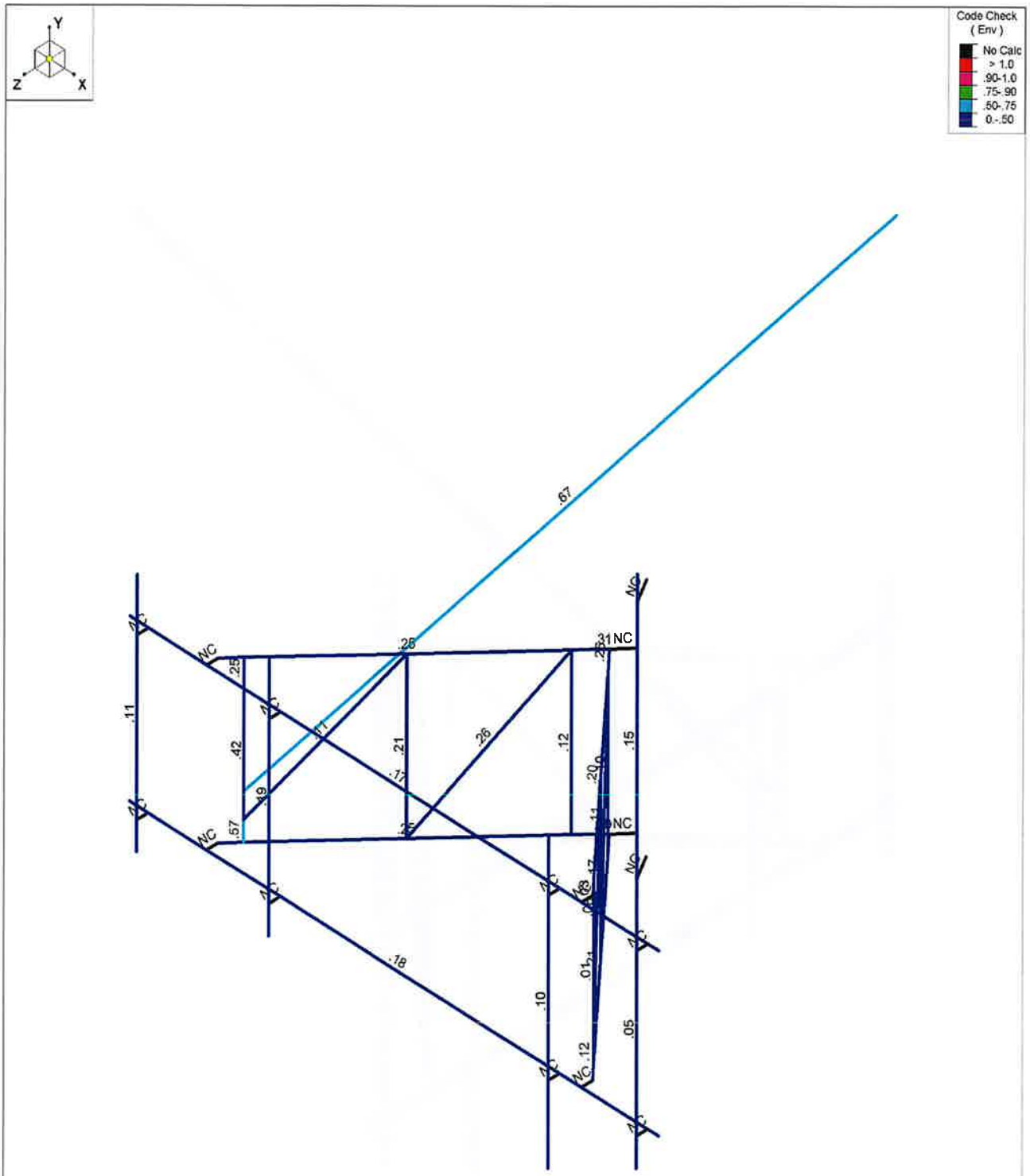
Please Insert Sketches of the Antenna Mount





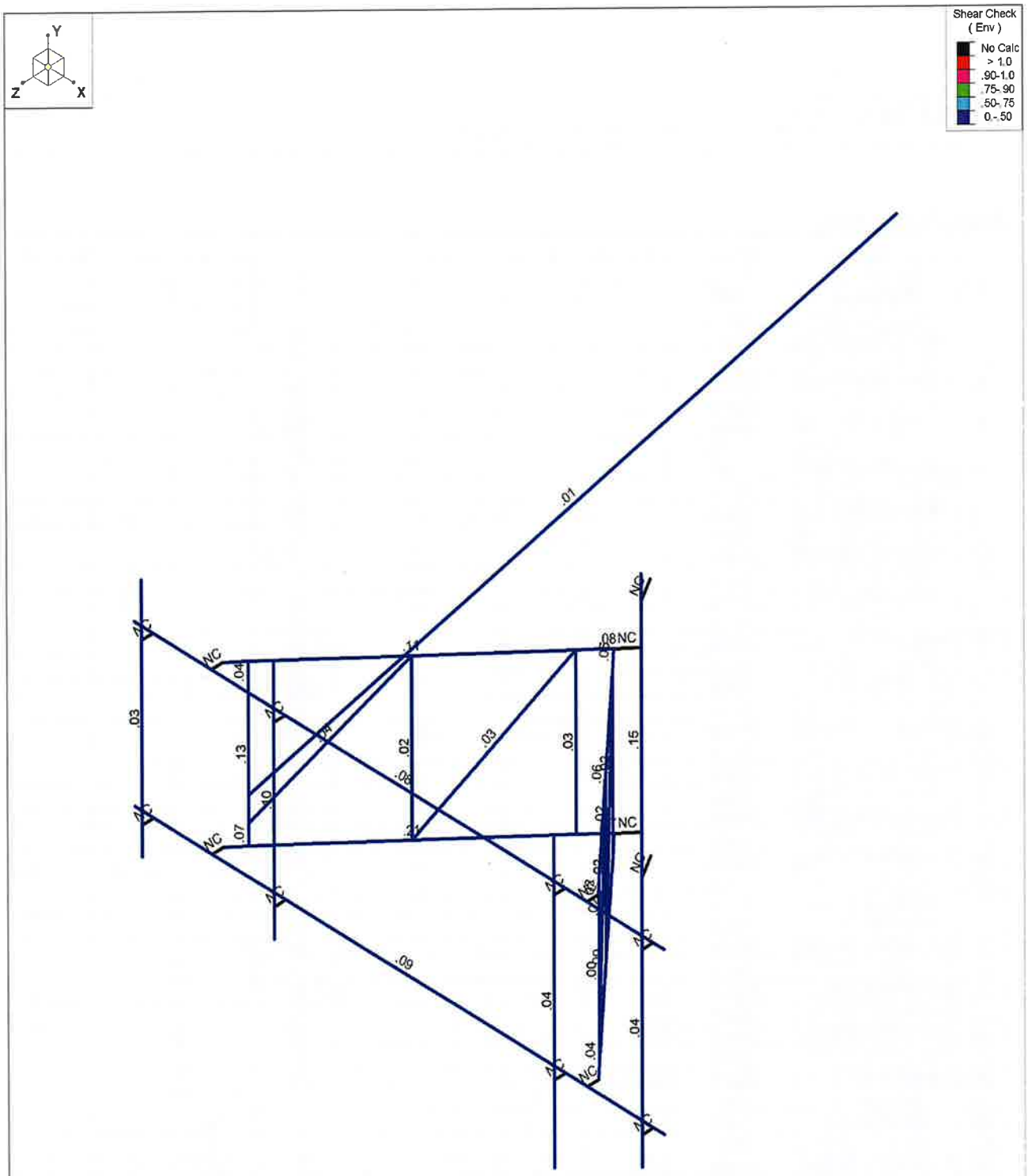
Envelope Only Solution

Colliers Engineering & Des...	5000246052-VZW_MT_LOT_SectorA_H	SK - 1
DC		Dec 6, 2023 at 6:10 PM
		5000246052-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & Des...		SK - 2
DC	5000246052-VZW_MT_LOT_SectorA_H	Dec 8, 2023 at 3:53 PM
		5000246052-VZW_MT_LOT_A_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

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DC		Dec 8, 2023 at 3:53 PM
		5000246052-VZW_MT_LOT_A_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					33			
2	Antenna Di	None					33			
3	Antenna Wo (0 Deg)	None					33			
4	Antenna Wo (30 Deg)	None					33			
5	Antenna Wo (60 Deg)	None					33			
6	Antenna Wo (90 Deg)	None					33			
7	Antenna Wo (120 Deg)	None					33			
8	Antenna Wo (150 Deg)	None					33			
9	Antenna Wo (180 Deg)	None					33			
10	Antenna Wo (210 Deg)	None					33			
11	Antenna Wo (240 Deg)	None					33			
12	Antenna Wo (270 Deg)	None					33			
13	Antenna Wo (300 Deg)	None					33			
14	Antenna Wo (330 Deg)	None					33			
15	Antenna Wi (0 Deg)	None					33			
16	Antenna Wi (30 Deg)	None					33			
17	Antenna Wi (60 Deg)	None					33			
18	Antenna Wi (90 Deg)	None					33			
19	Antenna Wi (120 Deg)	None					33			
20	Antenna Wi (150 Deg)	None					33			
21	Antenna Wi (180 Deg)	None					33			
22	Antenna Wi (210 Deg)	None					33			
23	Antenna Wi (240 Deg)	None					33			
24	Antenna Wi (270 Deg)	None					33			
25	Antenna Wi (300 Deg)	None					33			
26	Antenna Wi (330 Deg)	None					33			
27	Antenna Wm (0 Deg)	None					33			
28	Antenna Wm (30 Deg)	None					33			
29	Antenna Wm (60 Deg)	None					33			
30	Antenna Wm (90 Deg)	None					33			
31	Antenna Wm (120 De...	None					33			
32	Antenna Wm (150 De...	None					33			
33	Antenna Wm (180 De...	None					33			
34	Antenna Wm (210 De...	None					33			
35	Antenna Wm (240 De...	None					33			
36	Antenna Wm (270 De...	None					33			
37	Antenna Wm (300 De...	None					33			
38	Antenna Wm (330 De...	None					33			
39	Structure D	None		-1						
40	Structure Di	None						30		
41	Structure Wo (0 Deg)	None						60		
42	Structure Wo (30 Deg)	None						60		
43	Structure Wo (60 Deg)	None						60		
44	Structure Wo (90 Deg)	None						60		
45	Structure Wo (120 D...	None						60		
46	Structure Wo (150 D...	None						60		
47	Structure Wo (180 D...	None						60		
48	Structure Wo (210 D...	None						60		
49	Structure Wo (240 D...	None						60		
50	Structure Wo (270 D...	None						60		
51	Structure Wo (300 D...	None						60		
52	Structure Wo (330 D...	None						60		
53	Structure Wi (0 Deg)	None						60		
54	Structure Wi (30 Deg)	None						60		
55	Structure Wi (60 Deg)	None						60		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
56	Structure Wi (90 Deg)	None						60		
57	Structure Wi (120 De..	None						60		
58	Structure Wi (150 De..	None						60		
59	Structure Wi (180 De..	None						60		
60	Structure Wi (210 De..	None						60		
61	Structure Wi (240 De..	None						60		
62	Structure Wi (270 De..	None						60		
63	Structure Wi (300 De..	None						60		
64	Structure Wi (330 De..	None						60		
65	Structure Wm (0 Deg)	None						60		
66	Structure Wm (30 De...	None						60		
67	Structure Wm (60 De...	None						60		
68	Structure Wm (90 De...	None						60		
69	Structure Wm (120 D...	None						60		
70	Structure Wm (150 D...	None						60		
71	Structure Wm (180 D...	None						60		
72	Structure Wm (210 D...	None						60		
73	Structure Wm (240 D...	None						60		
74	Structure Wm (270 D...	None						60		
75	Structure Wm (300 D...	None						60		
76	Structure Wm (330 D...	None						60		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					33			
82	Antenna Eh (0 Deg)	None					22			
83	Antenna Eh (90 Deg)	None					22			
84	Structure Ev	ELY		-.044						
85	Structure Eh (0 Deg)	ELZ			-.109					
86	Structure Eh (90 Deg)	ELX	.109							

Load Combinations

	Description	Sol...	PDe...	S...	BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...	
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (120 Deg)	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 Deg)	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 Deg)	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 Deg)	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 Deg)	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 Deg)	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 Deg)	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 Deg)	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								

Load Combinations (Continued)

	Description	Sol...	PDe...	S...	BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...		BLCFa...	
24	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	1	83		ELZ	1	ELX					
53	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	.5	ELZ	.866	ELX	.5				
54	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	.866	ELZ	.5	ELX	.866				
55	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1				
56	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	.866	ELZ	-.5	ELX	.866				
57	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	.5	ELZ	-.866	ELX	.5				
58	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX					
59	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5				
60	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866				
61	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1				
62	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	-.866	ELZ	.5	ELX	-.866				
63	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	-.5	ELZ	.866	ELX	-.5				
64	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX					
65	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	.5	ELZ	.866	ELX	.5				
66	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	.866	ELZ	.5	ELX	.866				
67	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1				
68	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	.866	ELZ	-.5	ELX	.866				
69	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	.5	ELZ	-.866	ELX	.5				
70	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX					
71	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5				
72	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866				
73	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1				
74	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	-.866	ELZ	.5	ELX	-.866				
75	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	-.5	ELZ	.866	ELX	-.5				

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	0	0	
2	N2	0	3.333333	0	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
3	N3	6	0	0	0	
4	N4	6	3.333333	0	0	
5	N5	-6	0	0	0	
6	N6	-6	3.333333	0	0	
7	N7	5.75	0	0	0	
8	N8	5.75	3.333333	0	0	
9	N9	3.75	0	0	0	
10	N10	3.75	3.333333	0	0	
11	N11	-2.583333	0	0	0	
12	N12	-2.583333	3.333333	0	0	
13	N13	-5.583333	0	0	0	
14	N14	-5.583333	3.333333	0	0	
15	N15	5.75	0	.25	0	
16	N16	5.75	3.333333	.25	0	
17	N17	3.75	0	.25	0	
18	N18	3.75	3.333333	.25	0	
19	N19	-2.583333	0	.25	0	
20	N20	-2.583333	3.333333	.25	0	
21	N21	-5.583333	0	.25	0	
22	N22	-5.583333	3.333333	.25	0	
23	N23	5.75	4.416667	.25	0	
24	N24	3.75	4.416667	.25	0	
25	N25	-5.583333	4.416667	.25	0	
26	N26	5.75	-0.583333	.25	0	
27	N27	3.75	-1.583333	.25	0	
28	N28	-5.583333	-0.583333	.25	0	
29	N29	-2.583333	4.416667	.25	0	
30	N30	-2.583333	-0.583333	.25	0	
31	N31	4.25	0	0	0	
32	N32	4.25	3.333333	0	0	
33	N33	-4.25	0	0	0	
34	N34	-4.25	3.333333	0	0	
35	N35	0	0	-4.875	0	
36	N36	0	3.333333	-4.875	0	
37	N37	4.25	0	-.25	0	
38	N38	4.25	3.333333	-.25	0	
39	N39	-4.25	0	-.25	0	
40	N40	-4.25	3.333333	-.25	0	
41	N41	0.150366	3.333333	-4.714315	0	
42	N42	-0.150366	3.333333	-4.714315	0	
43	N43	-0.150366	0	-4.714315	0	
44	N44	0.150366	0	-4.714315	0	
45	N45	0.291667	0	-5.203152	0	
46	N46	0.291667	3.333333	-5.203152	0	
47	N47	0.291667	4.666667	-5.203152	0	
48	N48	0.291667	-1.333333	-5.203152	0	
49	N49	0.291667	4.166667	-5.203152	0	
50	N50	0.291667	-0.833333	-5.203152	0	
51	N51	0	4.166667	-5.708333	0	
52	N52	0	-0.833333	-5.708333	0	
53	N53	3.970617	3.333333	-0.554235	0	
54	N54	-3.970617	3.333333	-0.554235	0	
55	N55	-3.970617	0	-0.554235	0	
56	N56	3.970617	0	-0.554235	0	
57	N57	3.965303	2.916667	-0.554235	0	
58	N58	-3.965303	2.916667	-0.554235	0	
59	N59	-3.965303	0.416667	-0.554235	0	
60	N60	3.965303	0.416667	-0.554235	0	
61	N69	-3.965303	0.916667	-0.554235	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
62	N73	-7.000372	0.916667	-18.333333	0	
63	N71	2.200183	3.333333	-2.482157	0	
64	N72	-2.200183	3.333333	-2.482157	0	
65	N73A	-2.200183	0	-2.482157	0	
66	N74	2.200183	0	-2.482157	0	
67	N75	0.417164	3.333333	-4.423784	0	
68	N76	-0.417164	3.333333	-4.423784	0	
69	N77	-0.417164	0	-4.423784	0	
70	N78	0.417164	0	-4.423784	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	PIPE 2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
3	Standoff Horizontal	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
4	Standoff Vertical	1.5x0.06	Column	Pipe	A53 Gr. B	Typical	.271	.07	.07	.141
5	Standoff Diagonal	1.5x0.06	Column	Pipe	A53 Gr. B	Typical	.271	.07	.07	.141
6	TES Pipe	PIPE 1.25	Column	Pipe	A53 Gr. B	Typical	.625	.184	.184	.368
7	Standoff Mast Pipe	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
8	Mast Pipe	PIPE 4.0	Column	Pipe	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
9	Tie Back	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
10	Standoff Plate	PL1/2x3	Column	RECT	A36 Gr.36	Typical	1.5	.031	1.125	.112
11	Back Angle	L4X3X6	Column	Single Angle	A36 Gr.36	Typical	2.49	1.89	3.94	.123

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N6	N4			Face Horizontal	Column	Pipe	A53 Gr. B	Typical
2	M2	N5	N3			Face Horizontal	Column	Pipe	A53 Gr. B	Typical
3	M3	N14	N22			RIGID	None	None	RIGID	Typical
4	M4	N12	N20			RIGID	None	None	RIGID	Typical
5	M5	N13	N21			RIGID	None	None	RIGID	Typical
6	M6	N11	N19			RIGID	None	None	RIGID	Typical
7	M7	N10	N18			RIGID	None	None	RIGID	Typical
8	M8	N9	N17			RIGID	None	None	RIGID	Typical
9	M9	N8	N16			RIGID	None	None	RIGID	Typical
10	M10	N7	N15			RIGID	None	None	RIGID	Typical
11	MP4A	N25	N28			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
12	MP3A	N29	N30			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
13	MP2A	N24	N27			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
14	MP1A	N23	N26			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
15	M15	N34	N40			RIGID	None	None	RIGID	Typical
16	M16	N33	N39			RIGID	None	None	RIGID	Typical
17	M17	N32	N38			RIGID	None	None	RIGID	Typical
18	M18	N31	N37			RIGID	None	None	RIGID	Typical
19	M23	N41	N36		90	Standoff Plate	Column	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
20	M24	N42	N36		90	Standoff Plate	Column	RECT	A36 Gr.36	Typical
21	M25	N43	N35		90	Standoff Plate	Column	RECT	A36 Gr.36	Typical
22	M26	N44	N35		90	Standoff Plate	Column	RECT	A36 Gr.36	Typical
23	M27	N36	N46			RIGID	None	None	RIGID	Typical
24	M28	N35	N45			RIGID	None	None	RIGID	Typical
25	M29	N47	N48			Mast Pipe	Column	Pipe	A53 Gr. B	Typical
26	M30	N49	N51			RIGID	None	None	RIGID	Typical
27	M31	N50	N52			RIGID	None	None	RIGID	Typical
28	M32	N38	N41			Standoff Horiz...	Column	Pipe	A53 Gr. B	Typical
29	M33	N40	N42			Standoff Horiz...	Column	Pipe	A53 Gr. B	Typical
30	M34	N39	N43			Standoff Horiz...	Column	Pipe	A53 Gr. B	Typical
31	M35	N37	N44			Standoff Horiz...	Column	Pipe	A53 Gr. B	Typical
32	M36	N54	N58		135	Standoff Plate	Column	RECT	A36 Gr.36	Typical
33	M37	N53	N57		230	Standoff Plate	Column	RECT	A36 Gr.36	Typical
34	M38	N60	N56		230	Standoff Plate	Column	RECT	A36 Gr.36	Typical
35	M39	N59	N55		135	Standoff Plate	Column	RECT	A36 Gr.36	Typical
36	M40	N59	N58			Standoff Mast ...	Column	Pipe	A53 Gr. B	Typical
37	M41	N60	N57			Standoff Mast ...	Column	Pipe	A53 Gr. B	Typical
38	M42	N75	N74			Standoff Diago...	Column	Pipe	A53 Gr. B	Typical
39	M43	N71	N60			Standoff Diago...	Column	Pipe	A53 Gr. B	Typical
40	M44	N72	N59			Standoff Diago...	Column	Pipe	A53 Gr. B	Typical
41	M45	N76	N73A			Standoff Diago...	Column	Pipe	A53 Gr. B	Typical
42	M46	N72	N73A			Standoff Vertical	Column	Pipe	A53 Gr. B	Typical
43	M47	N76	N77			Standoff Vertical	Column	Pipe	A53 Gr. B	Typical
44	M48	N75	N78			Standoff Vertical	Column	Pipe	A53 Gr. B	Typical
45	M49	N71	N74			Standoff Vertical	Column	Pipe	A53 Gr. B	Typical
46	M50	N69	N73			Tie Back	Column	Pipe	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes	** NA **			None
2	M2						Yes	** NA **			None
3	M3						Yes	** NA **			None
4	M4						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M6						Yes	** NA **			None
7	M7						Yes	** NA **			None
8	M8						Yes	** NA **			None
9	M9						Yes	** NA **			None
10	M10						Yes	** NA **			None
11	MP4A						Yes	** NA **			None
12	MP3A						Yes	** NA **			None
13	MP2A						Yes	** NA **			None
14	MP1A						Yes	** NA **			None
15	M15						Yes	** NA **			None
16	M16						Yes	** NA **			None
17	M17						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M23		BenPIN				Yes	** NA **			None
20	M24		BenPIN				Yes	** NA **			None
21	M25		BenPIN				Yes	** NA **			None
22	M26		BenPIN				Yes	** NA **			None
23	M27						Yes	** NA **			None
24	M28						Yes	** NA **			None
25	M29						Yes	** NA **			None
26	M30						Yes	** NA **			None
27	M31						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
28	M32						Yes	** NA **			None
29	M33						Yes	** NA **			None
30	M34						Yes	** NA **			None
31	M35						Yes	** NA **			None
32	M36		OOOOOO				Yes	** NA **			None
33	M37		OOOOOO				Yes	** NA **			None
34	M38	OOOOOX					Yes	** NA **			None
35	M39	OOOOOX					Yes	** NA **			None
36	M40						Yes	** NA **			None
37	M41						Yes	** NA **			None
38	M42	BenPIN	BenPIN				Yes	** NA **			None
39	M43	BenPIN	BenPIN				Yes	** NA **			None
40	M44	BenPIN	BenPIN				Yes	** NA **			None
41	M45	BenPIN	BenPIN				Yes	** NA **			None
42	M46	BenPIN	BenPIN				Yes	** NA **			None
43	M47	BenPIN	BenPIN				Yes	** NA **			None
44	M48	BenPIN	BenPIN				Yes	** NA **			None
45	M49	BenPIN	BenPIN				Yes	** NA **			None
46	M50	OOOOXO					Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-31.65	.25
2	MP3A	My	-.016	.25
3	MP3A	Mz	-.021	.25
4	MP3A	Y	-31.65	4.75
5	MP3A	My	-.016	4.75
6	MP3A	Mz	-.021	4.75
7	MP3A	Y	-31.65	.25
8	MP3A	My	-.016	.25
9	MP3A	Mz	.021	.25
10	MP3A	Y	-31.65	4.75
11	MP3A	My	-.016	4.75
12	MP3A	Mz	.021	4.75
13	MP1A	Y	-13.9	.5
14	MP1A	My	-.007	.5
15	MP1A	Mz	0	.5
16	MP1A	Y	-13.9	4
17	MP1A	My	-.007	4
18	MP1A	Mz	0	4
19	M32	Y	-10.4	2
20	M32	My	0	2
21	M32	Mz	0	2
22	MP4A	Y	-84.4	2.5
23	MP4A	My	.042	2.5
24	MP4A	Mz	0	2.5
25	MP2A	Y	-28.65	2.25
26	MP2A	My	-.014	2.25
27	MP2A	Mz	0	2.25
28	MP2A	Y	-28.65	4.25
29	MP2A	My	-.014	4.25
30	MP2A	Mz	0	4.25
31	MP3A	Y	-79.1	2.5
32	MP3A	My	.04	2.5
33	MP3A	Mz	0	2.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-74.03	.25
2	MP3A	My	-.037	.25
3	MP3A	Mz	-.049	.25
4	MP3A	Y	-74.03	4.75
5	MP3A	My	-.037	4.75
6	MP3A	Mz	-.049	4.75
7	MP3A	Y	-74.03	.25
8	MP3A	My	-.037	.25
9	MP3A	Mz	.049	.25
10	MP3A	Y	-74.03	4.75
11	MP3A	My	-.037	4.75
12	MP3A	Mz	.049	4.75
13	MP1A	Y	-44.817	.5
14	MP1A	My	-.022	.5
15	MP1A	Mz	0	.5
16	MP1A	Y	-44.817	4
17	MP1A	My	-.022	4
18	MP1A	Mz	0	4
19	M32	Y	-11.472	2
20	M32	My	0	2
21	M32	Mz	0	2
22	MP4A	Y	-47.612	2.5
23	MP4A	My	.024	2.5
24	MP4A	Mz	0	2.5
25	MP2A	Y	-31.562	2.25
26	MP2A	My	-.016	2.25
27	MP2A	Mz	0	2.25
28	MP2A	Y	-31.562	4.25
29	MP2A	My	-.016	4.25
30	MP2A	Mz	0	4.25
31	MP3A	Y	-48.114	2.5
32	MP3A	My	.024	2.5
33	MP3A	Mz	0	2.5

Member Point Loads (BLC 3 : Antenna Wo (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.25
2	MP3A	Z	-191.62	.25
3	MP3A	Mx	.128	.25
4	MP3A	X	0	4.75
5	MP3A	Z	-191.62	4.75
6	MP3A	Mx	.128	4.75
7	MP3A	X	0	.25
8	MP3A	Z	-191.62	.25
9	MP3A	Mx	-.128	.25
10	MP3A	X	0	4.75
11	MP3A	Z	-191.62	4.75
12	MP3A	Mx	-.128	4.75
13	MP1A	X	0	.5
14	MP1A	Z	-107.063	.5
15	MP1A	Mx	0	.5
16	MP1A	X	0	4
17	MP1A	Z	-107.063	4
18	MP1A	Mx	0	4
19	M32	X	0	2
20	M32	Z	-14.366	2
21	M32	Mx	0	2
22	MP4A	X	0	2.5

Member Point Loads (BLC 3 : Antenna Wo (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP4A	Z	-65.205	2.5
24	MP4A	Mx	0	2.5
25	MP2A	X	0	2.25
26	MP2A	Z	-79.719	2.25
27	MP2A	Mx	0	2.25
28	MP2A	X	0	4.25
29	MP2A	Z	-79.719	4.25
30	MP2A	Mx	0	4.25
31	MP3A	X	0	2.5
32	MP3A	Z	-78.667	2.5
33	MP3A	Mx	0	2.5

Member Point Loads (BLC 4 : Antenna Wo (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	87.589	.25
2	MP3A	Z	-151.709	.25
3	MP3A	Mx	.057	.25
4	MP3A	X	87.589	4.75
5	MP3A	Z	-151.709	4.75
6	MP3A	Mx	.057	4.75
7	MP3A	X	87.589	.25
8	MP3A	Z	-151.709	.25
9	MP3A	Mx	-.145	.25
10	MP3A	X	87.589	4.75
11	MP3A	Z	-151.709	4.75
12	MP3A	Mx	-.145	4.75
13	MP1A	X	48.904	.5
14	MP1A	Z	-84.704	.5
15	MP1A	Mx	-.024	.5
16	MP1A	X	48.904	4
17	MP1A	Z	-84.704	4
18	MP1A	Mx	-.024	4
19	M32	X	5.984	2
20	M32	Z	-10.365	2
21	M32	Mx	0	2
22	MP4A	X	29.921	2.5
23	MP4A	Z	-51.824	2.5
24	MP4A	Mx	.015	2.5
25	MP2A	X	33.732	2.25
26	MP2A	Z	-58.426	2.25
27	MP2A	Mx	-.017	2.25
28	MP2A	X	33.732	4.25
29	MP2A	Z	-58.426	4.25
30	MP2A	Mx	-.017	4.25
31	MP3A	X	36.205	2.5
32	MP3A	Z	-62.708	2.5
33	MP3A	Mx	.018	2.5

Member Point Loads (BLC 5 : Antenna Wo (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	123.231	.25
2	MP3A	Z	-71.147	.25
3	MP3A	Mx	-.014	.25
4	MP3A	X	123.231	4.75
5	MP3A	Z	-71.147	4.75
6	MP3A	Mx	-.014	4.75
7	MP3A	X	123.231	.25
8	MP3A	Z	-71.147	.25

Member Point Loads (BLC 5 : Antenna Wo (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP3A	Mx	-.109	.25
10	MP3A	X	123.231	4.75
11	MP3A	Z	-71.147	4.75
12	MP3A	Mx	-.109	4.75
13	MP1A	X	68.673	.5
14	MP1A	Z	-39.648	.5
15	MP1A	Mx	-.034	.5
16	MP1A	X	68.673	4
17	MP1A	Z	-39.648	4
18	MP1A	Mx	-.034	4
19	M32	X	9.327	2
20	M32	Z	-5.385	2
21	M32	Mx	0	2
22	MP4A	X	42.534	2.5
23	MP4A	Z	-24.557	2.5
24	MP4A	Mx	.021	2.5
25	MP2A	X	37.202	2.25
26	MP2A	Z	-21.479	2.25
27	MP2A	Mx	-.019	2.25
28	MP2A	X	37.202	4.25
29	MP2A	Z	-21.479	4.25
30	MP2A	Mx	-.019	4.25
31	MP3A	X	51.87	2.5
32	MP3A	Z	-29.947	2.5
33	MP3A	Mx	.026	2.5

Member Point Loads (BLC 6 : Antenna Wo (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	125.853	.25
2	MP3A	Z	0	.25
3	MP3A	Mx	-.063	.25
4	MP3A	X	125.853	4.75
5	MP3A	Z	0	4.75
6	MP3A	Mx	-.063	4.75
7	MP3A	X	125.853	.25
8	MP3A	Z	0	.25
9	MP3A	Mx	-.063	.25
10	MP3A	X	125.853	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	-.063	4.75
13	MP1A	X	70.041	.5
14	MP1A	Z	0	.5
15	MP1A	Mx	-.035	.5
16	MP1A	X	70.041	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.035	4
19	M32	X	11.968	2
20	M32	Z	0	2
21	M32	Mx	0	2
22	MP4A	X	43.751	2.5
23	MP4A	Z	0	2.5
24	MP4A	Mx	.022	2.5
25	MP2A	X	30.704	2.25
26	MP2A	Z	0	2.25
27	MP2A	Mx	-.015	2.25
28	MP2A	X	30.704	4.25
29	MP2A	Z	0	4.25
30	MP2A	Mx	-.015	4.25

Member Point Loads (BLC 6 : Antenna Wo (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP3A	X	53.637	2.5
32	MP3A	Z	0	2.5
33	MP3A	Mx	.027	2.5

Member Point Loads (BLC 7 : Antenna Wo (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	123.231	.25
2	MP3A	Z	71.147	.25
3	MP3A	Mx	-.109	.25
4	MP3A	X	123.231	4.75
5	MP3A	Z	71.147	4.75
6	MP3A	Mx	-.109	4.75
7	MP3A	X	123.231	.25
8	MP3A	Z	71.147	.25
9	MP3A	Mx	-.014	.25
10	MP3A	X	123.231	4.75
11	MP3A	Z	71.147	4.75
12	MP3A	Mx	-.014	4.75
13	MP1A	X	68.673	.5
14	MP1A	Z	39.648	.5
15	MP1A	Mx	-.034	.5
16	MP1A	X	68.673	4
17	MP1A	Z	39.648	4
18	MP1A	Mx	-.034	4
19	M32	X	12.441	2
20	M32	Z	7.183	2
21	M32	Mx	0	2
22	MP4A	X	42.534	2.5
23	MP4A	Z	24.557	2.5
24	MP4A	Mx	.021	2.5
25	MP2A	X	37.202	2.25
26	MP2A	Z	21.479	2.25
27	MP2A	Mx	-.019	2.25
28	MP2A	X	37.202	4.25
29	MP2A	Z	21.479	4.25
30	MP2A	Mx	-.019	4.25
31	MP3A	X	51.87	2.5
32	MP3A	Z	29.947	2.5
33	MP3A	Mx	.026	2.5

Member Point Loads (BLC 8 : Antenna Wo (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	87.589	.25
2	MP3A	Z	151.709	.25
3	MP3A	Mx	-.145	.25
4	MP3A	X	87.589	4.75
5	MP3A	Z	151.709	4.75
6	MP3A	Mx	-.145	4.75
7	MP3A	X	87.589	.25
8	MP3A	Z	151.709	.25
9	MP3A	Mx	.057	.25
10	MP3A	X	87.589	4.75
11	MP3A	Z	151.709	4.75
12	MP3A	Mx	.057	4.75
13	MP1A	X	48.904	.5
14	MP1A	Z	84.704	.5
15	MP1A	Mx	-.024	.5
16	MP1A	X	48.904	4

Member Point Loads (BLC 8 : Antenna Wo (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP1A	Z	84.704	4
18	MP1A	Mx	-.024	4
19	M32	X	7.783	2
20	M32	Z	13.48	2
21	M32	Mx	0	2
22	MP4A	X	29.921	2.5
23	MP4A	Z	51.824	2.5
24	MP4A	Mx	.015	2.5
25	MP2A	X	33.732	2.25
26	MP2A	Z	58.426	2.25
27	MP2A	Mx	-.017	2.25
28	MP2A	X	33.732	4.25
29	MP2A	Z	58.426	4.25
30	MP2A	Mx	-.017	4.25
31	MP3A	X	36.205	2.5
32	MP3A	Z	62.708	2.5
33	MP3A	Mx	.018	2.5

Member Point Loads (BLC 9 : Antenna Wo (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.25
2	MP3A	Z	191.62	.25
3	MP3A	Mx	-.128	.25
4	MP3A	X	0	4.75
5	MP3A	Z	191.62	4.75
6	MP3A	Mx	-.128	4.75
7	MP3A	X	0	.25
8	MP3A	Z	191.62	.25
9	MP3A	Mx	.128	.25
10	MP3A	X	0	4.75
11	MP3A	Z	191.62	4.75
12	MP3A	Mx	.128	4.75
13	MP1A	X	0	.5
14	MP1A	Z	107.063	.5
15	MP1A	Mx	0	.5
16	MP1A	X	0	4
17	MP1A	Z	107.063	4
18	MP1A	Mx	0	4
19	M32	X	0	2
20	M32	Z	14.366	2
21	M32	Mx	0	2
22	MP4A	X	0	2.5
23	MP4A	Z	65.205	2.5
24	MP4A	Mx	0	2.5
25	MP2A	X	0	2.25
26	MP2A	Z	79.719	2.25
27	MP2A	Mx	0	2.25
28	MP2A	X	0	4.25
29	MP2A	Z	79.719	4.25
30	MP2A	Mx	0	4.25
31	MP3A	X	0	2.5
32	MP3A	Z	78.667	2.5
33	MP3A	Mx	0	2.5

Member Point Loads (BLC 10 : Antenna Wo (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-87.589	.25
2	MP3A	Z	151.709	.25

Member Point Loads (BLC 10 : Antenna Wo (210 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP3A	Mx	-.057	.25
4	MP3A	X	-87.589	4.75
5	MP3A	Z	151.709	4.75
6	MP3A	Mx	-.057	4.75
7	MP3A	X	-87.589	.25
8	MP3A	Z	151.709	.25
9	MP3A	Mx	.145	.25
10	MP3A	X	-87.589	4.75
11	MP3A	Z	151.709	4.75
12	MP3A	Mx	.145	4.75
13	MP1A	X	-48.904	.5
14	MP1A	Z	84.704	.5
15	MP1A	Mx	.024	.5
16	MP1A	X	-48.904	4
17	MP1A	Z	84.704	4
18	MP1A	Mx	.024	4
19	M32	X	-5.984	2
20	M32	Z	10.365	2
21	M32	Mx	0	2
22	MP4A	X	-29.921	2.5
23	MP4A	Z	51.824	2.5
24	MP4A	Mx	-.015	2.5
25	MP2A	X	-33.732	2.25
26	MP2A	Z	58.426	2.25
27	MP2A	Mx	.017	2.25
28	MP2A	X	-33.732	4.25
29	MP2A	Z	58.426	4.25
30	MP2A	Mx	.017	4.25
31	MP3A	X	-36.205	2.5
32	MP3A	Z	62.708	2.5
33	MP3A	Mx	-.018	2.5

Member Point Loads (BLC 11 : Antenna Wo (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-123.231	.25
2	MP3A	Z	71.147	.25
3	MP3A	Mx	.014	.25
4	MP3A	X	-123.231	4.75
5	MP3A	Z	71.147	4.75
6	MP3A	Mx	.014	4.75
7	MP3A	X	-123.231	.25
8	MP3A	Z	71.147	.25
9	MP3A	Mx	.109	.25
10	MP3A	X	-123.231	4.75
11	MP3A	Z	71.147	4.75
12	MP3A	Mx	.109	4.75
13	MP1A	X	-68.673	.5
14	MP1A	Z	39.648	.5
15	MP1A	Mx	.034	.5
16	MP1A	X	-68.673	4
17	MP1A	Z	39.648	4
18	MP1A	Mx	.034	4
19	M32	X	-9.327	2
20	M32	Z	5.385	2
21	M32	Mx	0	2
22	MP4A	X	-42.534	2.5
23	MP4A	Z	24.557	2.5
24	MP4A	Mx	-.021	2.5

Member Point Loads (BLC 11 : Antenna Wo (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP2A	X	-37.202	2.25
26	MP2A	Z	21.479	2.25
27	MP2A	Mx	.019	2.25
28	MP2A	X	-37.202	4.25
29	MP2A	Z	21.479	4.25
30	MP2A	Mx	.019	4.25
31	MP3A	X	-51.87	2.5
32	MP3A	Z	29.947	2.5
33	MP3A	Mx	-.026	2.5

Member Point Loads (BLC 12 : Antenna Wo (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-125.853	.25
2	MP3A	Z	0	.25
3	MP3A	Mx	.063	.25
4	MP3A	X	-125.853	4.75
5	MP3A	Z	0	4.75
6	MP3A	Mx	.063	4.75
7	MP3A	X	-125.853	.25
8	MP3A	Z	0	.25
9	MP3A	Mx	.063	.25
10	MP3A	X	-125.853	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	.063	4.75
13	MP1A	X	-70.041	.5
14	MP1A	Z	0	.5
15	MP1A	Mx	.035	.5
16	MP1A	X	-70.041	4
17	MP1A	Z	0	4
18	MP1A	Mx	.035	4
19	M32	X	-11.968	2
20	M32	Z	0	2
21	M32	Mx	0	2
22	MP4A	X	-43.751	2.5
23	MP4A	Z	0	2.5
24	MP4A	Mx	-.022	2.5
25	MP2A	X	-30.704	2.25
26	MP2A	Z	0	2.25
27	MP2A	Mx	.015	2.25
28	MP2A	X	-30.704	4.25
29	MP2A	Z	0	4.25
30	MP2A	Mx	.015	4.25
31	MP3A	X	-53.637	2.5
32	MP3A	Z	0	2.5
33	MP3A	Mx	-.027	2.5

Member Point Loads (BLC 13 : Antenna Wo (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-123.231	.25
2	MP3A	Z	-71.147	.25
3	MP3A	Mx	.109	.25
4	MP3A	X	-123.231	4.75
5	MP3A	Z	-71.147	4.75
6	MP3A	Mx	.109	4.75
7	MP3A	X	-123.231	.25
8	MP3A	Z	-71.147	.25
9	MP3A	Mx	.014	.25
10	MP3A	X	-123.231	4.75

Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP3A	Z	-71.147	4.75
12	MP3A	Mx	.014	4.75
13	MP1A	X	-68.673	.5
14	MP1A	Z	-39.648	.5
15	MP1A	Mx	.034	.5
16	MP1A	X	-68.673	4
17	MP1A	Z	-39.648	4
18	MP1A	Mx	.034	4
19	M32	X	-12.441	2
20	M32	Z	-7.183	2
21	M32	Mx	0	2
22	MP4A	X	-42.534	2.5
23	MP4A	Z	-24.557	2.5
24	MP4A	Mx	-.021	2.5
25	MP2A	X	-37.202	2.25
26	MP2A	Z	-21.479	2.25
27	MP2A	Mx	.019	2.25
28	MP2A	X	-37.202	4.25
29	MP2A	Z	-21.479	4.25
30	MP2A	Mx	.019	4.25
31	MP3A	X	-51.87	2.5
32	MP3A	Z	-29.947	2.5
33	MP3A	Mx	-.026	2.5

Member Point Loads (BLC 14 : Antenna Wo (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-87.589	.25
2	MP3A	Z	-151.709	.25
3	MP3A	Mx	.145	.25
4	MP3A	X	-87.589	4.75
5	MP3A	Z	-151.709	4.75
6	MP3A	Mx	.145	4.75
7	MP3A	X	-87.589	.25
8	MP3A	Z	-151.709	.25
9	MP3A	Mx	-.057	.25
10	MP3A	X	-87.589	4.75
11	MP3A	Z	-151.709	4.75
12	MP3A	Mx	-.057	4.75
13	MP1A	X	-48.904	.5
14	MP1A	Z	-84.704	.5
15	MP1A	Mx	.024	.5
16	MP1A	X	-48.904	4
17	MP1A	Z	-84.704	4
18	MP1A	Mx	.024	4
19	M32	X	-7.783	2
20	M32	Z	-13.48	2
21	M32	Mx	0	2
22	MP4A	X	-29.921	2.5
23	MP4A	Z	-51.824	2.5
24	MP4A	Mx	-.015	2.5
25	MP2A	X	-33.732	2.25
26	MP2A	Z	-58.426	2.25
27	MP2A	Mx	.017	2.25
28	MP2A	X	-33.732	4.25
29	MP2A	Z	-58.426	4.25
30	MP2A	Mx	.017	4.25
31	MP3A	X	-36.205	2.5
32	MP3A	Z	-62.708	2.5

Member Point Loads (BLC 14 : Antenna Wo (330 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3A	Mx	-.018	2.5

Member Point Loads (BLC 15 : Antenna Wi (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.25
2	MP3A	Z	-33.759	.25
3	MP3A	Mx	.023	.25
4	MP3A	X	0	4.75
5	MP3A	Z	-33.759	4.75
6	MP3A	Mx	.023	4.75
7	MP3A	X	0	.25
8	MP3A	Z	-33.759	.25
9	MP3A	Mx	-.023	.25
10	MP3A	X	0	4.75
11	MP3A	Z	-33.759	4.75
12	MP3A	Mx	-.023	4.75
13	MP1A	X	0	.5
14	MP1A	Z	-19.4	.5
15	MP1A	Mx	0	.5
16	MP1A	X	0	4
17	MP1A	Z	-19.4	4
18	MP1A	Mx	0	4
19	M32	X	0	2
20	M32	Z	-3.498	2
21	M32	Mx	0	2
22	MP4A	X	0	2.5
23	MP4A	Z	-15.199	2.5
24	MP4A	Mx	0	2.5
25	MP2A	X	0	2.25
26	MP2A	Z	-14.68	2.25
27	MP2A	Mx	0	2.25
28	MP2A	X	0	4.25
29	MP2A	Z	-14.68	4.25
30	MP2A	Mx	0	4.25
31	MP3A	X	0	2.5
32	MP3A	Z	-15.199	2.5
33	MP3A	Mx	0	2.5

Member Point Loads (BLC 16 : Antenna Wi (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	15.544	.25
2	MP3A	Z	-26.923	.25
3	MP3A	Mx	.01	.25
4	MP3A	X	15.544	4.75
5	MP3A	Z	-26.923	4.75
6	MP3A	Mx	.01	4.75
7	MP3A	X	15.544	.25
8	MP3A	Z	-26.923	.25
9	MP3A	Mx	-.026	.25
10	MP3A	X	15.544	4.75
11	MP3A	Z	-26.923	4.75
12	MP3A	Mx	-.026	4.75
13	MP1A	X	8.924	.5
14	MP1A	Z	-15.457	.5
15	MP1A	Mx	-.004	.5
16	MP1A	X	8.924	4
17	MP1A	Z	-15.457	4
18	MP1A	Mx	-.004	4

Member Point Loads (BLC 16 : Antenna Wi (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	M32	X	1.519	2
20	M32	Z	-2.63	2
21	M32	Mx	0	2
22	MP4A	X	7.024	2.5
23	MP4A	Z	-12.166	2.5
24	MP4A	Mx	.004	2.5
25	MP2A	X	6.284	2.25
26	MP2A	Z	-10.884	2.25
27	MP2A	Mx	-.003	2.25
28	MP2A	X	6.284	4.25
29	MP2A	Z	-10.884	4.25
30	MP2A	Mx	-.003	4.25
31	MP3A	X	7.047	2.5
32	MP3A	Z	-12.206	2.5
33	MP3A	Mx	.004	2.5

Member Point Loads (BLC 17 : Antenna Wi (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	22.296	.25
2	MP3A	Z	-12.872	.25
3	MP3A	Mx	-.003	.25
4	MP3A	X	22.296	4.75
5	MP3A	Z	-12.872	4.75
6	MP3A	Mx	-.003	4.75
7	MP3A	X	22.296	.25
8	MP3A	Z	-12.872	.25
9	MP3A	Mx	-.02	.25
10	MP3A	X	22.296	4.75
11	MP3A	Z	-12.872	4.75
12	MP3A	Mx	-.02	4.75
13	MP1A	X	12.768	.5
14	MP1A	Z	-7.371	.5
15	MP1A	Mx	-.006	.5
16	MP1A	X	12.768	4
17	MP1A	Z	-7.371	4
18	MP1A	Mx	-.006	4
19	M32	X	2.431	2
20	M32	Z	-1.404	2
21	M32	Mx	0	2
22	MP4A	X	10.172	2.5
23	MP4A	Z	-5.873	2.5
24	MP4A	Mx	.005	2.5
25	MP2A	X	7.224	2.25
26	MP2A	Z	-4.171	2.25
27	MP2A	Mx	-.004	2.25
28	MP2A	X	7.224	4.25
29	MP2A	Z	-4.171	4.25
30	MP2A	Mx	-.004	4.25
31	MP3A	X	10.292	2.5
32	MP3A	Z	-5.942	2.5
33	MP3A	Mx	.005	2.5

Member Point Loads (BLC 18 : Antenna Wi (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	23.074	.25
2	MP3A	Z	0	.25
3	MP3A	Mx	-.012	.25
4	MP3A	X	23.074	4.75

Member Point Loads (BLC 18 : Antenna Wi (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP3A	Z	0	4.75
6	MP3A	Mx	-.012	4.75
7	MP3A	X	23.074	.25
8	MP3A	Z	0	.25
9	MP3A	Mx	-.012	.25
10	MP3A	X	23.074	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	-.012	4.75
13	MP1A	X	13.19	.5
14	MP1A	Z	0	.5
15	MP1A	Mx	-.007	.5
16	MP1A	X	13.19	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.007	4
19	M32	X	3.037	2
20	M32	Z	0	2
21	M32	Mx	0	2
22	MP4A	X	10.595	2.5
23	MP4A	Z	0	2.5
24	MP4A	Mx	.005	2.5
25	MP2A	X	6.229	2.25
26	MP2A	Z	0	2.25
27	MP2A	Mx	-.003	2.25
28	MP2A	X	6.229	4.25
29	MP2A	Z	0	4.25
30	MP2A	Mx	-.003	4.25
31	MP3A	X	10.779	2.5
32	MP3A	Z	0	2.5
33	MP3A	Mx	.005	2.5

Member Point Loads (BLC 19 : Antenna Wi (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	22.296	.25
2	MP3A	Z	12.872	.25
3	MP3A	Mx	-.02	.25
4	MP3A	X	22.296	4.75
5	MP3A	Z	12.872	4.75
6	MP3A	Mx	-.02	4.75
7	MP3A	X	22.296	.25
8	MP3A	Z	12.872	.25
9	MP3A	Mx	-.003	.25
10	MP3A	X	22.296	4.75
11	MP3A	Z	12.872	4.75
12	MP3A	Mx	-.003	4.75
13	MP1A	X	12.768	.5
14	MP1A	Z	7.371	.5
15	MP1A	Mx	-.006	.5
16	MP1A	X	12.768	4
17	MP1A	Z	7.371	4
18	MP1A	Mx	-.006	4
19	M32	X	3.029	2
20	M32	Z	1.749	2
21	M32	Mx	0	2
22	MP4A	X	10.172	2.5
23	MP4A	Z	5.873	2.5
24	MP4A	Mx	.005	2.5
25	MP2A	X	7.224	2.25
26	MP2A	Z	4.171	2.25

Member Point Loads (BLC 19 : Antenna Wi (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP2A	Mx	-.004	2.25
28	MP2A	X	7.224	4.25
29	MP2A	Z	4.171	4.25
30	MP2A	Mx	-.004	4.25
31	MP3A	X	10.292	2.5
32	MP3A	Z	5.942	2.5
33	MP3A	Mx	.005	2.5

Member Point Loads (BLC 20 : Antenna Wi (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	15.544	.25
2	MP3A	Z	26.923	.25
3	MP3A	Mx	-.026	.25
4	MP3A	X	15.544	4.75
5	MP3A	Z	26.923	4.75
6	MP3A	Mx	-.026	4.75
7	MP3A	X	15.544	.25
8	MP3A	Z	26.923	.25
9	MP3A	Mx	.01	.25
10	MP3A	X	15.544	4.75
11	MP3A	Z	26.923	4.75
12	MP3A	Mx	.01	4.75
13	MP1A	X	8.924	.5
14	MP1A	Z	15.457	.5
15	MP1A	Mx	-.004	.5
16	MP1A	X	8.924	4
17	MP1A	Z	15.457	4
18	MP1A	Mx	-.004	4
19	M32	X	1.864	2
20	M32	Z	3.229	2
21	M32	Mx	0	2
22	MP4A	X	7.024	2.5
23	MP4A	Z	12.166	2.5
24	MP4A	Mx	.004	2.5
25	MP2A	X	6.284	2.25
26	MP2A	Z	10.884	2.25
27	MP2A	Mx	-.003	2.25
28	MP2A	X	6.284	4.25
29	MP2A	Z	10.884	4.25
30	MP2A	Mx	-.003	4.25
31	MP3A	X	7.047	2.5
32	MP3A	Z	12.206	2.5
33	MP3A	Mx	.004	2.5

Member Point Loads (BLC 21 : Antenna Wi (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.25
2	MP3A	Z	33.759	.25
3	MP3A	Mx	-.023	.25
4	MP3A	X	0	4.75
5	MP3A	Z	33.759	4.75
6	MP3A	Mx	-.023	4.75
7	MP3A	X	0	.25
8	MP3A	Z	33.759	.25
9	MP3A	Mx	.023	.25
10	MP3A	X	0	4.75
11	MP3A	Z	33.759	4.75
12	MP3A	Mx	.023	4.75

Member Point Loads (BLC 21 : Antenna Wi (180 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP1A	X	0	.5
14	MP1A	Z	19.4	.5
15	MP1A	Mx	0	.5
16	MP1A	X	0	4
17	MP1A	Z	19.4	4
18	MP1A	Mx	0	4
19	M32	X	0	2
20	M32	Z	3.498	2
21	M32	Mx	0	2
22	MP4A	X	0	2.5
23	MP4A	Z	15.199	2.5
24	MP4A	Mx	0	2.5
25	MP2A	X	0	2.25
26	MP2A	Z	14.68	2.25
27	MP2A	Mx	0	2.25
28	MP2A	X	0	4.25
29	MP2A	Z	14.68	4.25
30	MP2A	Mx	0	4.25
31	MP3A	X	0	2.5
32	MP3A	Z	15.199	2.5
33	MP3A	Mx	0	2.5

Member Point Loads (BLC 22 : Antenna Wi (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-15.544	.25
2	MP3A	Z	26.923	.25
3	MP3A	Mx	-.01	.25
4	MP3A	X	-15.544	4.75
5	MP3A	Z	26.923	4.75
6	MP3A	Mx	-.01	4.75
7	MP3A	X	-15.544	.25
8	MP3A	Z	26.923	.25
9	MP3A	Mx	.026	.25
10	MP3A	X	-15.544	4.75
11	MP3A	Z	26.923	4.75
12	MP3A	Mx	.026	4.75
13	MP1A	X	-8.924	.5
14	MP1A	Z	15.457	.5
15	MP1A	Mx	.004	.5
16	MP1A	X	-8.924	4
17	MP1A	Z	15.457	4
18	MP1A	Mx	.004	4
19	M32	X	-1.519	2
20	M32	Z	2.63	2
21	M32	Mx	0	2
22	MP4A	X	-7.024	2.5
23	MP4A	Z	12.166	2.5
24	MP4A	Mx	-.004	2.5
25	MP2A	X	-6.284	2.25
26	MP2A	Z	10.884	2.25
27	MP2A	Mx	.003	2.25
28	MP2A	X	-6.284	4.25
29	MP2A	Z	10.884	4.25
30	MP2A	Mx	.003	4.25
31	MP3A	X	-7.047	2.5
32	MP3A	Z	12.206	2.5
33	MP3A	Mx	-.004	2.5

Member Point Loads (BLC 23 : Antenna Wi (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-22.296	.25
2	MP3A	Z	12.872	.25
3	MP3A	Mx	.003	.25
4	MP3A	X	-22.296	4.75
5	MP3A	Z	12.872	4.75
6	MP3A	Mx	.003	4.75
7	MP3A	X	-22.296	.25
8	MP3A	Z	12.872	.25
9	MP3A	Mx	.02	.25
10	MP3A	X	-22.296	4.75
11	MP3A	Z	12.872	4.75
12	MP3A	Mx	.02	4.75
13	MP1A	X	-12.768	.5
14	MP1A	Z	7.371	.5
15	MP1A	Mx	.006	.5
16	MP1A	X	-12.768	4
17	MP1A	Z	7.371	4
18	MP1A	Mx	.006	4
19	M32	X	-2.431	2
20	M32	Z	1.404	2
21	M32	Mx	0	2
22	MP4A	X	-10.172	2.5
23	MP4A	Z	5.873	2.5
24	MP4A	Mx	-.005	2.5
25	MP2A	X	-7.224	2.25
26	MP2A	Z	4.171	2.25
27	MP2A	Mx	.004	2.25
28	MP2A	X	-7.224	4.25
29	MP2A	Z	4.171	4.25
30	MP2A	Mx	.004	4.25
31	MP3A	X	-10.292	2.5
32	MP3A	Z	5.942	2.5
33	MP3A	Mx	-.005	2.5

Member Point Loads (BLC 24 : Antenna Wi (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-23.074	.25
2	MP3A	Z	0	.25
3	MP3A	Mx	.012	.25
4	MP3A	X	-23.074	4.75
5	MP3A	Z	0	4.75
6	MP3A	Mx	.012	4.75
7	MP3A	X	-23.074	.25
8	MP3A	Z	0	.25
9	MP3A	Mx	.012	.25
10	MP3A	X	-23.074	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	.012	4.75
13	MP1A	X	-13.19	.5
14	MP1A	Z	0	.5
15	MP1A	Mx	.007	.5
16	MP1A	X	-13.19	4
17	MP1A	Z	0	4
18	MP1A	Mx	.007	4
19	M32	X	-3.037	2
20	M32	Z	0	2
21	M32	Mx	0	2
22	MP4A	X	-10.595	2.5

Member Point Loads (BLC 24 : Antenna Wi (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP4A	Z	0	2.5
24	MP4A	Mx	-.005	2.5
25	MP2A	X	-6.229	2.25
26	MP2A	Z	0	2.25
27	MP2A	Mx	.003	2.25
28	MP2A	X	-6.229	4.25
29	MP2A	Z	0	4.25
30	MP2A	Mx	.003	4.25
31	MP3A	X	-10.779	2.5
32	MP3A	Z	0	2.5
33	MP3A	Mx	-.005	2.5

Member Point Loads (BLC 25 : Antenna Wi (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-22.296	.25
2	MP3A	Z	-12.872	.25
3	MP3A	Mx	.02	.25
4	MP3A	X	-22.296	4.75
5	MP3A	Z	-12.872	4.75
6	MP3A	Mx	.02	4.75
7	MP3A	X	-22.296	.25
8	MP3A	Z	-12.872	.25
9	MP3A	Mx	.003	.25
10	MP3A	X	-22.296	4.75
11	MP3A	Z	-12.872	4.75
12	MP3A	Mx	.003	4.75
13	MP1A	X	-12.768	.5
14	MP1A	Z	-7.371	.5
15	MP1A	Mx	.006	.5
16	MP1A	X	-12.768	4
17	MP1A	Z	-7.371	4
18	MP1A	Mx	.006	4
19	M32	X	-3.029	2
20	M32	Z	-1.749	2
21	M32	Mx	0	2
22	MP4A	X	-10.172	2.5
23	MP4A	Z	-5.873	2.5
24	MP4A	Mx	-.005	2.5
25	MP2A	X	-7.224	2.25
26	MP2A	Z	-4.171	2.25
27	MP2A	Mx	.004	2.25
28	MP2A	X	-7.224	4.25
29	MP2A	Z	-4.171	4.25
30	MP2A	Mx	.004	4.25
31	MP3A	X	-10.292	2.5
32	MP3A	Z	-5.942	2.5
33	MP3A	Mx	-.005	2.5

Member Point Loads (BLC 26 : Antenna Wi (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-15.544	.25
2	MP3A	Z	-26.923	.25
3	MP3A	Mx	.026	.25
4	MP3A	X	-15.544	4.75
5	MP3A	Z	-26.923	4.75
6	MP3A	Mx	.026	4.75
7	MP3A	X	-15.544	.25
8	MP3A	Z	-26.923	.25

Member Point Loads (BLC 26 : Antenna Wi (330 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP3A	Mx	-.01	.25
10	MP3A	X	-15.544	4.75
11	MP3A	Z	-26.923	4.75
12	MP3A	Mx	-.01	4.75
13	MP1A	X	-8.924	.5
14	MP1A	Z	-15.457	.5
15	MP1A	Mx	.004	.5
16	MP1A	X	-8.924	4
17	MP1A	Z	-15.457	4
18	MP1A	Mx	.004	4
19	M32	X	-1.864	2
20	M32	Z	-3.229	2
21	M32	Mx	0	2
22	MP4A	X	-7.024	2.5
23	MP4A	Z	-12.166	2.5
24	MP4A	Mx	-.004	2.5
25	MP2A	X	-6.284	2.25
26	MP2A	Z	-10.884	2.25
27	MP2A	Mx	.003	2.25
28	MP2A	X	-6.284	4.25
29	MP2A	Z	-10.884	4.25
30	MP2A	Mx	.003	4.25
31	MP3A	X	-7.047	2.5
32	MP3A	Z	-12.206	2.5
33	MP3A	Mx	-.004	2.5

Member Point Loads (BLC 27 : Antenna Wm (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.25
2	MP3A	Z	-11.037	.25
3	MP3A	Mx	.007	.25
4	MP3A	X	0	4.75
5	MP3A	Z	-11.037	4.75
6	MP3A	Mx	.007	4.75
7	MP3A	X	0	.25
8	MP3A	Z	-11.037	.25
9	MP3A	Mx	-.007	.25
10	MP3A	X	0	4.75
11	MP3A	Z	-11.037	4.75
12	MP3A	Mx	-.007	4.75
13	MP1A	X	0	.5
14	MP1A	Z	-6.167	.5
15	MP1A	Mx	0	.5
16	MP1A	X	0	4
17	MP1A	Z	-6.167	4
18	MP1A	Mx	0	4
19	M32	X	0	2
20	M32	Z	-.827	2
21	M32	Mx	0	2
22	MP4A	X	0	2.5
23	MP4A	Z	-3.756	2.5
24	MP4A	Mx	0	2.5
25	MP2A	X	0	2.25
26	MP2A	Z	-4.592	2.25
27	MP2A	Mx	0	2.25
28	MP2A	X	0	4.25
29	MP2A	Z	-4.592	4.25
30	MP2A	Mx	0	4.25

Member Point Loads (BLC 27 : Antenna Wm (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP3A	X	0	2.5
32	MP3A	Z	-4.531	2.5
33	MP3A	Mx	0	2.5

Member Point Loads (BLC 28 : Antenna Wm (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	5.045	.25
2	MP3A	Z	-8.738	.25
3	MP3A	Mx	.003	.25
4	MP3A	X	5.045	4.75
5	MP3A	Z	-8.738	4.75
6	MP3A	Mx	.003	4.75
7	MP3A	X	5.045	.25
8	MP3A	Z	-8.738	.25
9	MP3A	Mx	-.008	.25
10	MP3A	X	5.045	4.75
11	MP3A	Z	-8.738	4.75
12	MP3A	Mx	-.008	4.75
13	MP1A	X	2.817	.5
14	MP1A	Z	-4.879	.5
15	MP1A	Mx	-.001	.5
16	MP1A	X	2.817	4
17	MP1A	Z	-4.879	4
18	MP1A	Mx	-.001	4
19	M32	X	.345	2
20	M32	Z	-.597	2
21	M32	Mx	0	2
22	MP4A	X	1.723	2.5
23	MP4A	Z	-2.985	2.5
24	MP4A	Mx	.000862	2.5
25	MP2A	X	1.943	2.25
26	MP2A	Z	-3.365	2.25
27	MP2A	Mx	-.000972	2.25
28	MP2A	X	1.943	4.25
29	MP2A	Z	-3.365	4.25
30	MP2A	Mx	-.000972	4.25
31	MP3A	X	2.085	2.5
32	MP3A	Z	-3.612	2.5
33	MP3A	Mx	.001	2.5

Member Point Loads (BLC 29 : Antenna Wm (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	7.098	.25
2	MP3A	Z	-4.098	.25
3	MP3A	Mx	-.000817	.25
4	MP3A	X	7.098	4.75
5	MP3A	Z	-4.098	4.75
6	MP3A	Mx	-.000817	4.75
7	MP3A	X	7.098	.25
8	MP3A	Z	-4.098	.25
9	MP3A	Mx	-.006	.25
10	MP3A	X	7.098	4.75
11	MP3A	Z	-4.098	4.75
12	MP3A	Mx	-.006	4.75
13	MP1A	X	3.956	.5
14	MP1A	Z	-2.284	.5
15	MP1A	Mx	-.002	.5
16	MP1A	X	3.956	4

Member Point Loads (BLC 29 : Antenna Wm (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP1A	Z	-2.284	4
18	MP1A	Mx	-.002	4
19	M32	X	.537	2
20	M32	Z	-.31	2
21	M32	Mx	0	2
22	MP4A	X	2.45	2.5
23	MP4A	Z	-1.414	2.5
24	MP4A	Mx	.001	2.5
25	MP2A	X	2.143	2.25
26	MP2A	Z	-1.237	2.25
27	MP2A	Mx	-.001	2.25
28	MP2A	X	2.143	4.25
29	MP2A	Z	-1.237	4.25
30	MP2A	Mx	-.001	4.25
31	MP3A	X	2.988	2.5
32	MP3A	Z	-1.725	2.5
33	MP3A	Mx	.001	2.5

Member Point Loads (BLC 30 : Antenna Wm (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	7.249	.25
2	MP3A	Z	0	.25
3	MP3A	Mx	-.004	.25
4	MP3A	X	7.249	4.75
5	MP3A	Z	0	4.75
6	MP3A	Mx	-.004	4.75
7	MP3A	X	7.249	.25
8	MP3A	Z	0	.25
9	MP3A	Mx	-.004	.25
10	MP3A	X	7.249	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	-.004	4.75
13	MP1A	X	4.034	.5
14	MP1A	Z	0	.5
15	MP1A	Mx	-.002	.5
16	MP1A	X	4.034	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.002	4
19	M32	X	.689	2
20	M32	Z	0	2
21	M32	Mx	0	2
22	MP4A	X	2.52	2.5
23	MP4A	Z	0	2.5
24	MP4A	Mx	.001	2.5
25	MP2A	X	1.769	2.25
26	MP2A	Z	0	2.25
27	MP2A	Mx	-.000884	2.25
28	MP2A	X	1.769	4.25
29	MP2A	Z	0	4.25
30	MP2A	Mx	-.000884	4.25
31	MP3A	X	3.089	2.5
32	MP3A	Z	0	2.5
33	MP3A	Mx	.002	2.5

Member Point Loads (BLC 31 : Antenna Wm (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	7.098	.25
2	MP3A	Z	4.098	.25

Member Point Loads (BLC 31 : Antenna Wm (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP3A	Mx	-.006	.25
4	MP3A	X	7.098	4.75
5	MP3A	Z	4.098	4.75
6	MP3A	Mx	-.006	4.75
7	MP3A	X	7.098	.25
8	MP3A	Z	4.098	.25
9	MP3A	Mx	-.000817	.25
10	MP3A	X	7.098	4.75
11	MP3A	Z	4.098	4.75
12	MP3A	Mx	-.000817	4.75
13	MP1A	X	3.956	.5
14	MP1A	Z	2.284	.5
15	MP1A	Mx	-.002	.5
16	MP1A	X	3.956	4
17	MP1A	Z	2.284	4
18	MP1A	Mx	-.002	4
19	M32	X	.717	2
20	M32	Z	.414	2
21	M32	Mx	0	2
22	MP4A	X	2.45	2.5
23	MP4A	Z	1.414	2.5
24	MP4A	Mx	.001	2.5
25	MP2A	X	2.143	2.25
26	MP2A	Z	1.237	2.25
27	MP2A	Mx	-.001	2.25
28	MP2A	X	2.143	4.25
29	MP2A	Z	1.237	4.25
30	MP2A	Mx	-.001	4.25
31	MP3A	X	2.988	2.5
32	MP3A	Z	1.725	2.5
33	MP3A	Mx	.001	2.5

Member Point Loads (BLC 32 : Antenna Wm (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	5.045	.25
2	MP3A	Z	8.738	.25
3	MP3A	Mx	-.008	.25
4	MP3A	X	5.045	4.75
5	MP3A	Z	8.738	4.75
6	MP3A	Mx	-.008	4.75
7	MP3A	X	5.045	.25
8	MP3A	Z	8.738	.25
9	MP3A	Mx	.003	.25
10	MP3A	X	5.045	4.75
11	MP3A	Z	8.738	4.75
12	MP3A	Mx	.003	4.75
13	MP1A	X	2.817	.5
14	MP1A	Z	4.879	.5
15	MP1A	Mx	-.001	.5
16	MP1A	X	2.817	4
17	MP1A	Z	4.879	4
18	MP1A	Mx	-.001	4
19	M32	X	.448	2
20	M32	Z	.776	2
21	M32	Mx	0	2
22	MP4A	X	1.723	2.5
23	MP4A	Z	2.985	2.5
24	MP4A	Mx	.000862	2.5

Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP2A	X	1.943	2.25
26	MP2A	Z	3.365	2.25
27	MP2A	Mx	-.000972	2.25
28	MP2A	X	1.943	4.25
29	MP2A	Z	3.365	4.25
30	MP2A	Mx	-.000972	4.25
31	MP3A	X	2.085	2.5
32	MP3A	Z	3.612	2.5
33	MP3A	Mx	.001	2.5

Member Point Loads (BLC 33 : Antenna Wm (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.25
2	MP3A	Z	11.037	.25
3	MP3A	Mx	-.007	.25
4	MP3A	X	0	4.75
5	MP3A	Z	11.037	4.75
6	MP3A	Mx	-.007	4.75
7	MP3A	X	0	.25
8	MP3A	Z	11.037	.25
9	MP3A	Mx	.007	.25
10	MP3A	X	0	4.75
11	MP3A	Z	11.037	4.75
12	MP3A	Mx	.007	4.75
13	MP1A	X	0	.5
14	MP1A	Z	6.167	.5
15	MP1A	Mx	0	.5
16	MP1A	X	0	4
17	MP1A	Z	6.167	4
18	MP1A	Mx	0	4
19	M32	X	0	2
20	M32	Z	.827	2
21	M32	Mx	0	2
22	MP4A	X	0	2.5
23	MP4A	Z	3.756	2.5
24	MP4A	Mx	0	2.5
25	MP2A	X	0	2.25
26	MP2A	Z	4.592	2.25
27	MP2A	Mx	0	2.25
28	MP2A	X	0	4.25
29	MP2A	Z	4.592	4.25
30	MP2A	Mx	0	4.25
31	MP3A	X	0	2.5
32	MP3A	Z	4.531	2.5
33	MP3A	Mx	0	2.5

Member Point Loads (BLC 34 : Antenna Wm (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-5.045	.25
2	MP3A	Z	8.738	.25
3	MP3A	Mx	-.003	.25
4	MP3A	X	-5.045	4.75
5	MP3A	Z	8.738	4.75
6	MP3A	Mx	-.003	4.75
7	MP3A	X	-5.045	.25
8	MP3A	Z	8.738	.25
9	MP3A	Mx	.008	.25
10	MP3A	X	-5.045	4.75

Member Point Loads (BLC 34 : Antenna Wm (210 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP3A	Z	8.738	4.75
12	MP3A	Mx	.008	4.75
13	MP1A	X	-2.817	.5
14	MP1A	Z	4.879	.5
15	MP1A	Mx	.001	.5
16	MP1A	X	-2.817	4
17	MP1A	Z	4.879	4
18	MP1A	Mx	.001	4
19	M32	X	-.345	2
20	M32	Z	.597	2
21	M32	Mx	0	2
22	MP4A	X	-1.723	2.5
23	MP4A	Z	2.985	2.5
24	MP4A	Mx	-.000862	2.5
25	MP2A	X	-1.943	2.25
26	MP2A	Z	3.365	2.25
27	MP2A	Mx	.000972	2.25
28	MP2A	X	-1.943	4.25
29	MP2A	Z	3.365	4.25
30	MP2A	Mx	.000972	4.25
31	MP3A	X	-2.085	2.5
32	MP3A	Z	3.612	2.5
33	MP3A	Mx	-.001	2.5

Member Point Loads (BLC 35 : Antenna Wm (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-7.098	.25
2	MP3A	Z	4.098	.25
3	MP3A	Mx	.000817	.25
4	MP3A	X	-7.098	4.75
5	MP3A	Z	4.098	4.75
6	MP3A	Mx	.000817	4.75
7	MP3A	X	-7.098	.25
8	MP3A	Z	4.098	.25
9	MP3A	Mx	.006	.25
10	MP3A	X	-7.098	4.75
11	MP3A	Z	4.098	4.75
12	MP3A	Mx	.006	4.75
13	MP1A	X	-3.956	.5
14	MP1A	Z	2.284	.5
15	MP1A	Mx	.002	.5
16	MP1A	X	-3.956	4
17	MP1A	Z	2.284	4
18	MP1A	Mx	.002	4
19	M32	X	-.537	2
20	M32	Z	.31	2
21	M32	Mx	0	2
22	MP4A	X	-2.45	2.5
23	MP4A	Z	1.414	2.5
24	MP4A	Mx	-.001	2.5
25	MP2A	X	-2.143	2.25
26	MP2A	Z	1.237	2.25
27	MP2A	Mx	.001	2.25
28	MP2A	X	-2.143	4.25
29	MP2A	Z	1.237	4.25
30	MP2A	Mx	.001	4.25
31	MP3A	X	-2.988	2.5
32	MP3A	Z	1.725	2.5

Member Point Loads (BLC 35 : Antenna Wm (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3A	Mx	-.001	2.5

Member Point Loads (BLC 36 : Antenna Wm (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-7.249	.25
2	MP3A	Z	0	.25
3	MP3A	Mx	.004	.25
4	MP3A	X	-7.249	4.75
5	MP3A	Z	0	4.75
6	MP3A	Mx	.004	4.75
7	MP3A	X	-7.249	.25
8	MP3A	Z	0	.25
9	MP3A	Mx	.004	.25
10	MP3A	X	-7.249	4.75
11	MP3A	Z	0	4.75
12	MP3A	Mx	.004	4.75
13	MP1A	X	-4.034	.5
14	MP1A	Z	0	.5
15	MP1A	Mx	.002	.5
16	MP1A	X	-4.034	4
17	MP1A	Z	0	4
18	MP1A	Mx	.002	4
19	M32	X	-.689	2
20	M32	Z	0	2
21	M32	Mx	0	2
22	MP4A	X	-2.52	2.5
23	MP4A	Z	0	2.5
24	MP4A	Mx	-.001	2.5
25	MP2A	X	-1.769	2.25
26	MP2A	Z	0	2.25
27	MP2A	Mx	.000884	2.25
28	MP2A	X	-1.769	4.25
29	MP2A	Z	0	4.25
30	MP2A	Mx	.000884	4.25
31	MP3A	X	-3.089	2.5
32	MP3A	Z	0	2.5
33	MP3A	Mx	-.002	2.5

Member Point Loads (BLC 37 : Antenna Wm (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-7.098	.25
2	MP3A	Z	-4.098	.25
3	MP3A	Mx	.006	.25
4	MP3A	X	-7.098	4.75
5	MP3A	Z	-4.098	4.75
6	MP3A	Mx	.006	4.75
7	MP3A	X	-7.098	.25
8	MP3A	Z	-4.098	.25
9	MP3A	Mx	.000817	.25
10	MP3A	X	-7.098	4.75
11	MP3A	Z	-4.098	4.75
12	MP3A	Mx	.000817	4.75
13	MP1A	X	-3.956	.5
14	MP1A	Z	-2.284	.5
15	MP1A	Mx	.002	.5
16	MP1A	X	-3.956	4
17	MP1A	Z	-2.284	4
18	MP1A	Mx	.002	4

Member Point Loads (BLC 37 : Antenna Wm (300 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	M32	X	-.717	2
20	M32	Z	-.414	2
21	M32	Mx	0	2
22	MP4A	X	-2.45	2.5
23	MP4A	Z	-1.414	2.5
24	MP4A	Mx	-.001	2.5
25	MP2A	X	-2.143	2.25
26	MP2A	Z	-1.237	2.25
27	MP2A	Mx	.001	2.25
28	MP2A	X	-2.143	4.25
29	MP2A	Z	-1.237	4.25
30	MP2A	Mx	.001	4.25
31	MP3A	X	-2.988	2.5
32	MP3A	Z	-1.725	2.5
33	MP3A	Mx	-.001	2.5

Member Point Loads (BLC 38 : Antenna Wm (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-5.045	.25
2	MP3A	Z	-8.738	.25
3	MP3A	Mx	.008	.25
4	MP3A	X	-5.045	4.75
5	MP3A	Z	-8.738	4.75
6	MP3A	Mx	.008	4.75
7	MP3A	X	-5.045	.25
8	MP3A	Z	-8.738	.25
9	MP3A	Mx	-.003	.25
10	MP3A	X	-5.045	4.75
11	MP3A	Z	-8.738	4.75
12	MP3A	Mx	-.003	4.75
13	MP1A	X	-2.817	.5
14	MP1A	Z	-4.879	.5
15	MP1A	Mx	.001	.5
16	MP1A	X	-2.817	4
17	MP1A	Z	-4.879	4
18	MP1A	Mx	.001	4
19	M32	X	-.448	2
20	M32	Z	-.776	2
21	M32	Mx	0	2
22	MP4A	X	-1.723	2.5
23	MP4A	Z	-2.985	2.5
24	MP4A	Mx	-.000862	2.5
25	MP2A	X	-1.943	2.25
26	MP2A	Z	-3.365	2.25
27	MP2A	Mx	.000972	2.25
28	MP2A	X	-1.943	4.25
29	MP2A	Z	-3.365	4.25
30	MP2A	Mx	.000972	4.25
31	MP3A	X	-2.085	2.5
32	MP3A	Z	-3.612	2.5
33	MP3A	Mx	-.001	2.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M8	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]

Member Point Loads (BLC 78 : Lm2) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M6	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-250	0

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-1.384	.25
2	MP3A	My	-.000692	.25
3	MP3A	Mz	-.000923	.25
4	MP3A	Y	-1.384	4.75
5	MP3A	My	-.000692	4.75
6	MP3A	Mz	-.000923	4.75
7	MP3A	Y	-1.384	.25
8	MP3A	My	-.000692	.25
9	MP3A	Mz	.000923	.25
10	MP3A	Y	-1.384	4.75
11	MP3A	My	-.000692	4.75
12	MP3A	Mz	.000923	4.75
13	MP1A	Y	-.608	.5
14	MP1A	My	-.000304	.5
15	MP1A	Mz	0	.5
16	MP1A	Y	-.608	4
17	MP1A	My	-.000304	4
18	MP1A	Mz	0	4
19	M32	Y	-.455	2
20	M32	My	0	2
21	M32	Mz	0	2
22	MP4A	Y	-3.691	2.5
23	MP4A	My	.002	2.5
24	MP4A	Mz	0	2.5
25	MP2A	Y	-1.253	2.25
26	MP2A	My	-.000626	2.25
27	MP2A	Mz	0	2.25
28	MP2A	Y	-1.253	4.25
29	MP2A	My	-.000626	4.25
30	MP2A	Mz	0	4.25
31	MP3A	Y	-3.459	2.5
32	MP3A	My	.002	2.5
33	MP3A	Mz	0	2.5

Member Point Loads (BLC 82 : Antenna Eh (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Z	-3.46	.25
2	MP3A	Mx	.002	.25
3	MP3A	Z	-3.46	4.75
4	MP3A	Mx	.002	4.75
5	MP3A	Z	-3.46	.25
6	MP3A	Mx	-.002	.25
7	MP3A	Z	-3.46	4.75
8	MP3A	Mx	-.002	4.75
9	MP1A	Z	-1.52	.5

Member Point Loads (BLC 82 : Antenna Eh (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP1A	Mx	0	.5
11	MP1A	Z	-1.52	4
12	MP1A	Mx	0	4
13	M32	Z	-1.137	2
14	M32	Mx	0	2
15	MP4A	Z	-9.228	2.5
16	MP4A	Mx	0	2.5
17	MP2A	Z	-3.132	2.25
18	MP2A	Mx	0	2.25
19	MP2A	Z	-3.132	4.25
20	MP2A	Mx	0	4.25
21	MP3A	Z	-8.648	2.5
22	MP3A	Mx	0	2.5

Member Point Loads (BLC 83 : Antenna Eh (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	3.46	.25
2	MP3A	Mx	-.002	.25
3	MP3A	X	3.46	4.75
4	MP3A	Mx	-.002	4.75
5	MP3A	X	3.46	.25
6	MP3A	Mx	-.002	.25
7	MP3A	X	3.46	4.75
8	MP3A	Mx	-.002	4.75
9	MP1A	X	1.52	.5
10	MP1A	Mx	-.00076	.5
11	MP1A	X	1.52	4
12	MP1A	Mx	-.00076	4
13	M32	X	1.137	2
14	M32	Mx	0	2
15	MP4A	X	9.228	2.5
16	MP4A	Mx	.005	2.5
17	MP2A	X	3.132	2.25
18	MP2A	Mx	-.002	2.25
19	MP2A	X	3.132	4.25
20	MP2A	Mx	-.002	4.25
21	MP3A	X	8.648	2.5
22	MP3A	Mx	.004	2.5

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-6.073	-6.073	0	%100
2	M2	Y	-6.073	-6.073	0	%100
3	MP4A	Y	-5.331	-5.331	0	%100
4	MP3A	Y	-5.331	-5.331	0	%100
5	MP2A	Y	-5.331	-5.331	0	%100
6	MP1A	Y	-5.331	-5.331	0	%100
7	M23	Y	-6.32	-6.32	0	%100
8	M24	Y	-6.32	-6.32	0	%100
9	M25	Y	-6.32	-6.32	0	%100
10	M26	Y	-6.32	-6.32	0	%100
11	M29	Y	-8.486	-8.486	0	%100
12	M32	Y	-5.331	-5.331	0	%100
13	M33	Y	-5.331	-5.331	0	%100
14	M34	Y	-5.331	-5.331	0	%100
15	M35	Y	-5.331	-5.331	0	%100
16	M36	Y	-6.32	-6.32	0	%100

Member Distributed Loads (BLC 40 : Structure Di) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
17	M37	Y	-6.32	-6.32	0	%100
18	M38	Y	-6.32	-6.32	0	%100
19	M39	Y	-6.32	-6.32	0	%100
20	M40	Y	-5.331	-5.331	0	%100
21	M41	Y	-5.331	-5.331	0	%100
22	M42	Y	-4.269	-4.269	0	%100
23	M43	Y	-4.269	-4.269	0	%100
24	M44	Y	-4.269	-4.269	0	%100
25	M45	Y	-4.269	-4.269	0	%100
26	M46	Y	-4.269	-4.269	0	%100
27	M47	Y	-4.269	-4.269	0	%100
28	M48	Y	-4.269	-4.269	0	%100
29	M49	Y	-4.269	-4.269	0	%100
30	M50	Y	-5.331	-5.331	0	%100

Member Distributed Loads (BLC 41 : Structure Wo (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-12.095	-12.095	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-12.095	-12.095	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	-9.991	-9.991	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	-9.991	-9.991	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-9.991	-9.991	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	-9.991	-9.991	0	%100
13	M23	X	0	0	0	%100
14	M23	Z	-.982	-.982	0	%100
15	M24	X	0	0	0	%100
16	M24	Z	-.982	-.982	0	%100
17	M25	X	0	0	0	%100
18	M25	Z	-.982	-.982	0	%100
19	M26	X	0	0	0	%100
20	M26	Z	-.982	-.982	0	%100
21	M29	X	0	0	0	%100
22	M29	Z	-12.702	-12.702	0	%100
23	M32	X	0	0	0	%100
24	M32	Z	-4.571	-4.571	0	%100
25	M33	X	0	0	0	%100
26	M33	Z	-4.571	-4.571	0	%100
27	M34	X	0	0	0	%100
28	M34	Z	-4.571	-4.571	0	%100
29	M35	X	0	0	0	%100
30	M35	Z	-4.571	-4.571	0	%100
31	M36	X	0	0	0	%100
32	M36	Z	-12.62	-12.62	0	%100
33	M37	X	0	0	0	%100
34	M37	Z	-12.62	-12.62	0	%100
35	M38	X	0	0	0	%100
36	M38	Z	-12.62	-12.62	0	%100
37	M39	X	0	0	0	%100
38	M39	Z	-12.62	-12.62	0	%100
39	M40	X	0	0	0	%100
40	M40	Z	-7.703	-7.703	0	%100
41	M41	X	0	0	0	%100

Member Distributed Loads (BLC 41 : Structure Wo (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
42	M41	Z	-7.703	-7.703	0	%100
43	M42	X	0	0	0	%100
44	M42	Z	-5.526	-5.526	0	%100
45	M43	X	0	0	0	%100
46	M43	Z	-5.291	-5.291	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	-5.291	-5.291	0	%100
49	M45	X	0	0	0	%100
50	M45	Z	-5.526	-5.526	0	%100
51	M46	X	0	0	0	%100
52	M46	Z	-6.866	-6.866	0	%100
53	M47	X	0	0	0	%100
54	M47	Z	-6.866	-6.866	0	%100
55	M48	X	0	0	0	%100
56	M48	Z	-6.866	-6.866	0	%100
57	M49	X	0	0	0	%100
58	M49	Z	-6.866	-6.866	0	%100
59	M50	X	0	0	0	%100
60	M50	Z	-.283	-.283	0	%100

Member Distributed Loads (BLC 42 : Structure Wo (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	4.535	4.535	0	%100
2	M1	Z	-7.856	-7.856	0	%100
3	M2	X	4.535	4.535	0	%100
4	M2	Z	-7.856	-7.856	0	%100
5	MP4A	X	4.996	4.996	0	%100
6	MP4A	Z	-8.653	-8.653	0	%100
7	MP3A	X	4.996	4.996	0	%100
8	MP3A	Z	-8.653	-8.653	0	%100
9	MP2A	X	4.996	4.996	0	%100
10	MP2A	Z	-8.653	-8.653	0	%100
11	MP1A	X	4.996	4.996	0	%100
12	MP1A	Z	-8.653	-8.653	0	%100
13	M23	X	.963	.963	0	%100
14	M23	Z	-1.668	-1.668	0	%100
15	M24	X	.054	.054	0	%100
16	M24	Z	-.094	-.094	0	%100
17	M25	X	.054	.054	0	%100
18	M25	Z	-.094	-.094	0	%100
19	M26	X	.963	.963	0	%100
20	M26	Z	-1.668	-1.668	0	%100
21	M29	X	6.351	6.351	0	%100
22	M29	Z	-11.001	-11.001	0	%100
23	M32	X	4.547	4.547	0	%100
24	M32	Z	-7.876	-7.876	0	%100
25	M33	X	.236	.236	0	%100
26	M33	Z	-.409	-.409	0	%100
27	M34	X	.236	.236	0	%100
28	M34	Z	-.409	-.409	0	%100
29	M35	X	4.547	4.547	0	%100
30	M35	Z	-7.876	-7.876	0	%100
31	M36	X	5.061	5.061	0	%100
32	M36	Z	-8.766	-8.766	0	%100
33	M37	X	5.061	5.061	0	%100
34	M37	Z	-8.766	-8.766	0	%100
35	M38	X	5.061	5.061	0	%100
36	M38	Z	-8.766	-8.766	0	%100

Member Distributed Loads (BLC 42 : Structure Wo (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
37	M39	X	5.061	5.061	0	%100
38	M39	Z	-8.766	-8.766	0	%100
39	M40	X	3.851	3.851	0	%100
40	M40	Z	-6.671	-6.671	0	%100
41	M41	X	3.851	3.851	0	%100
42	M41	Z	-6.671	-6.671	0	%100
43	M42	X	3.371	3.371	0	%100
44	M42	Z	-5.839	-5.839	0	%100
45	M43	X	3.351	3.351	0	%100
46	M43	Z	-5.803	-5.803	0	%100
47	M44	X	2.009	2.009	0	%100
48	M44	Z	-3.48	-3.48	0	%100
49	M45	X	2.212	2.212	0	%100
50	M45	Z	-3.831	-3.831	0	%100
51	M46	X	3.433	3.433	0	%100
52	M46	Z	-5.946	-5.946	0	%100
53	M47	X	3.433	3.433	0	%100
54	M47	Z	-5.946	-5.946	0	%100
55	M48	X	3.433	3.433	0	%100
56	M48	Z	-5.946	-5.946	0	%100
57	M49	X	3.433	3.433	0	%100
58	M49	Z	-5.946	-5.946	0	%100
59	M50	X	2.037	2.037	0	%100
60	M50	Z	-3.529	-3.529	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.619	2.619	0	%100
2	M1	Z	-1.512	-1.512	0	%100
3	M2	X	2.619	2.619	0	%100
4	M2	Z	-1.512	-1.512	0	%100
5	MP4A	X	8.653	8.653	0	%100
6	MP4A	Z	-4.996	-4.996	0	%100
7	MP3A	X	8.653	8.653	0	%100
8	MP3A	Z	-4.996	-4.996	0	%100
9	MP2A	X	8.653	8.653	0	%100
10	MP2A	Z	-4.996	-4.996	0	%100
11	MP1A	X	8.653	8.653	0	%100
12	MP1A	Z	-4.996	-4.996	0	%100
13	M23	X	1.728	1.728	0	%100
14	M23	Z	-.998	-.998	0	%100
15	M24	X	.154	.154	0	%100
16	M24	Z	-.089	-.089	0	%100
17	M25	X	.154	.154	0	%100
18	M25	Z	-.089	-.089	0	%100
19	M26	X	1.728	1.728	0	%100
20	M26	Z	-.998	-.998	0	%100
21	M29	X	11.001	11.001	0	%100
22	M29	Z	-6.351	-6.351	0	%100
23	M32	X	8.243	8.243	0	%100
24	M32	Z	-4.759	-4.759	0	%100
25	M33	X	.777	.777	0	%100
26	M33	Z	-.449	-.449	0	%100
27	M34	X	.777	.777	0	%100
28	M34	Z	-.449	-.449	0	%100
29	M35	X	8.243	8.243	0	%100
30	M35	Z	-4.759	-4.759	0	%100
31	M36	X	4.44	4.44	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
32	M36	Z	-2.563	-2.563	0	%100
33	M37	X	4.44	4.44	0	%100
34	M37	Z	-2.563	-2.563	0	%100
35	M38	X	4.44	4.44	0	%100
36	M38	Z	-2.563	-2.563	0	%100
37	M39	X	4.44	4.44	0	%100
38	M39	Z	-2.563	-2.563	0	%100
39	M40	X	6.671	6.671	0	%100
40	M40	Z	-3.851	-3.851	0	%100
41	M41	X	6.671	6.671	0	%100
42	M41	Z	-3.851	-3.851	0	%100
43	M42	X	5.938	5.938	0	%100
44	M42	Z	-3.428	-3.428	0	%100
45	M43	X	5.922	5.922	0	%100
46	M43	Z	-3.419	-3.419	0	%100
47	M44	X	3.598	3.598	0	%100
48	M44	Z	-2.077	-2.077	0	%100
49	M45	X	3.93	3.93	0	%100
50	M45	Z	-2.269	-2.269	0	%100
51	M46	X	5.946	5.946	0	%100
52	M46	Z	-3.433	-3.433	0	%100
53	M47	X	5.946	5.946	0	%100
54	M47	Z	-3.433	-3.433	0	%100
55	M48	X	5.946	5.946	0	%100
56	M48	Z	-3.433	-3.433	0	%100
57	M49	X	5.946	5.946	0	%100
58	M49	Z	-3.433	-3.433	0	%100
59	M50	X	7.61	7.61	0	%100
60	M50	Z	-4.394	-4.394	0	%100

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP4A	X	9.991	9.991	0	%100
6	MP4A	Z	0	0	0	%100
7	MP3A	X	9.991	9.991	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	9.991	9.991	0	%100
10	MP2A	Z	0	0	0	%100
11	MP1A	X	9.991	9.991	0	%100
12	MP1A	Z	0	0	0	%100
13	M23	X	1.121	1.121	0	%100
14	M23	Z	0	0	0	%100
15	M24	X	1.121	1.121	0	%100
16	M24	Z	0	0	0	%100
17	M25	X	1.121	1.121	0	%100
18	M25	Z	0	0	0	%100
19	M26	X	1.121	1.121	0	%100
20	M26	Z	0	0	0	%100
21	M29	X	12.702	12.702	0	%100
22	M29	Z	0	0	0	%100
23	M32	X	5.42	5.42	0	%100
24	M32	Z	0	0	0	%100
25	M33	X	5.42	5.42	0	%100
26	M33	Z	0	0	0	%100

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
27	M34	X	5.42	5.42	0	%100
28	M34	Z	0	0	0	%100
29	M35	X	5.42	5.42	0	%100
30	M35	Z	0	0	0	%100
31	M36	X	2.629	2.629	0	%100
32	M36	Z	0	0	0	%100
33	M37	X	2.629	2.629	0	%100
34	M37	Z	0	0	0	%100
35	M38	X	2.629	2.629	0	%100
36	M38	Z	0	0	0	%100
37	M39	X	2.629	2.629	0	%100
38	M39	Z	0	0	0	%100
39	M40	X	7.703	7.703	0	%100
40	M40	Z	0	0	0	%100
41	M41	X	7.703	7.703	0	%100
42	M41	Z	0	0	0	%100
43	M42	X	5.754	5.754	0	%100
44	M42	Z	0	0	0	%100
45	M43	X	5.565	5.565	0	%100
46	M43	Z	0	0	0	%100
47	M44	X	5.565	5.565	0	%100
48	M44	Z	0	0	0	%100
49	M45	X	5.754	5.754	0	%100
50	M45	Z	0	0	0	%100
51	M46	X	6.866	6.866	0	%100
52	M46	Z	0	0	0	%100
53	M47	X	6.866	6.866	0	%100
54	M47	Z	0	0	0	%100
55	M48	X	6.866	6.866	0	%100
56	M48	Z	0	0	0	%100
57	M49	X	6.866	6.866	0	%100
58	M49	Z	0	0	0	%100
59	M50	X	9.708	9.708	0	%100
60	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 45 : Structure Wo (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.619	2.619	0	%100
2	M1	Z	1.512	1.512	0	%100
3	M2	X	2.619	2.619	0	%100
4	M2	Z	1.512	1.512	0	%100
5	MP4A	X	8.653	8.653	0	%100
6	MP4A	Z	4.996	4.996	0	%100
7	MP3A	X	8.653	8.653	0	%100
8	MP3A	Z	4.996	4.996	0	%100
9	MP2A	X	8.653	8.653	0	%100
10	MP2A	Z	4.996	4.996	0	%100
11	MP1A	X	8.653	8.653	0	%100
12	MP1A	Z	4.996	4.996	0	%100
13	M23	X	.154	.154	0	%100
14	M23	Z	.089	.089	0	%100
15	M24	X	1.728	1.728	0	%100
16	M24	Z	.998	.998	0	%100
17	M25	X	1.728	1.728	0	%100
18	M25	Z	.998	.998	0	%100
19	M26	X	.154	.154	0	%100
20	M26	Z	.089	.089	0	%100
21	M29	X	11.001	11.001	0	%100

Member Distributed Loads (BLC 45 : Structure Wo (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
22	M29	Z	6.351	6.351	0	%100
23	M32	X	.777	.777	0	%100
24	M32	Z	.449	.449	0	%100
25	M33	X	8.243	8.243	0	%100
26	M33	Z	4.759	4.759	0	%100
27	M34	X	8.243	8.243	0	%100
28	M34	Z	4.759	4.759	0	%100
29	M35	X	.777	.777	0	%100
30	M35	Z	.449	.449	0	%100
31	M36	X	4.44	4.44	0	%100
32	M36	Z	2.563	2.563	0	%100
33	M37	X	4.44	4.44	0	%100
34	M37	Z	2.563	2.563	0	%100
35	M38	X	4.44	4.44	0	%100
36	M38	Z	2.563	2.563	0	%100
37	M39	X	4.44	4.44	0	%100
38	M39	Z	2.563	2.563	0	%100
39	M40	X	6.671	6.671	0	%100
40	M40	Z	3.851	3.851	0	%100
41	M41	X	6.671	6.671	0	%100
42	M41	Z	3.851	3.851	0	%100
43	M42	X	3.93	3.93	0	%100
44	M42	Z	2.269	2.269	0	%100
45	M43	X	3.598	3.598	0	%100
46	M43	Z	2.077	2.077	0	%100
47	M44	X	5.922	5.922	0	%100
48	M44	Z	3.419	3.419	0	%100
49	M45	X	5.938	5.938	0	%100
50	M45	Z	3.428	3.428	0	%100
51	M46	X	5.946	5.946	0	%100
52	M46	Z	3.433	3.433	0	%100
53	M47	X	5.946	5.946	0	%100
54	M47	Z	3.433	3.433	0	%100
55	M48	X	5.946	5.946	0	%100
56	M48	Z	3.433	3.433	0	%100
57	M49	X	5.946	5.946	0	%100
58	M49	Z	3.433	3.433	0	%100
59	M50	X	5.124	5.124	0	%100
60	M50	Z	2.958	2.958	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	4.535	4.535	0	%100
2	M1	Z	7.856	7.856	0	%100
3	M2	X	4.535	4.535	0	%100
4	M2	Z	7.856	7.856	0	%100
5	MP4A	X	4.996	4.996	0	%100
6	MP4A	Z	8.653	8.653	0	%100
7	MP3A	X	4.996	4.996	0	%100
8	MP3A	Z	8.653	8.653	0	%100
9	MP2A	X	4.996	4.996	0	%100
10	MP2A	Z	8.653	8.653	0	%100
11	MP1A	X	4.996	4.996	0	%100
12	MP1A	Z	8.653	8.653	0	%100
13	M23	X	.054	.054	0	%100
14	M23	Z	.094	.094	0	%100
15	M24	X	.963	.963	0	%100
16	M24	Z	1.668	1.668	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
17	M25	X	.963	.963	0	%100
18	M25	Z	1.668	1.668	0	%100
19	M26	X	.054	.054	0	%100
20	M26	Z	.094	.094	0	%100
21	M29	X	6.351	6.351	0	%100
22	M29	Z	11.001	11.001	0	%100
23	M32	X	.236	.236	0	%100
24	M32	Z	.409	.409	0	%100
25	M33	X	4.547	4.547	0	%100
26	M33	Z	7.876	7.876	0	%100
27	M34	X	4.547	4.547	0	%100
28	M34	Z	7.876	7.876	0	%100
29	M35	X	.236	.236	0	%100
30	M35	Z	.409	.409	0	%100
31	M36	X	5.061	5.061	0	%100
32	M36	Z	8.766	8.766	0	%100
33	M37	X	5.061	5.061	0	%100
34	M37	Z	8.766	8.766	0	%100
35	M38	X	5.061	5.061	0	%100
36	M38	Z	8.766	8.766	0	%100
37	M39	X	5.061	5.061	0	%100
38	M39	Z	8.766	8.766	0	%100
39	M40	X	3.851	3.851	0	%100
40	M40	Z	6.671	6.671	0	%100
41	M41	X	3.851	3.851	0	%100
42	M41	Z	6.671	6.671	0	%100
43	M42	X	2.212	2.212	0	%100
44	M42	Z	3.831	3.831	0	%100
45	M43	X	2.009	2.009	0	%100
46	M43	Z	3.48	3.48	0	%100
47	M44	X	3.351	3.351	0	%100
48	M44	Z	5.803	5.803	0	%100
49	M45	X	3.371	3.371	0	%100
50	M45	Z	5.839	5.839	0	%100
51	M46	X	3.433	3.433	0	%100
52	M46	Z	5.946	5.946	0	%100
53	M47	X	3.433	3.433	0	%100
54	M47	Z	5.946	5.946	0	%100
55	M48	X	3.433	3.433	0	%100
56	M48	Z	5.946	5.946	0	%100
57	M49	X	3.433	3.433	0	%100
58	M49	Z	5.946	5.946	0	%100
59	M50	X	.602	.602	0	%100
60	M50	Z	1.043	1.043	0	%100

Member Distributed Loads (BLC 47 : Structure Wo (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	12.095	12.095	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	12.095	12.095	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	9.991	9.991	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	9.991	9.991	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	9.991	9.991	0	%100
11	MP1A	X	0	0	0	%100

Member Distributed Loads (BLC 47 : Structure Wo (180 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
12	MP1A	Z	9.991	9.991	0	%100
13	M23	X	0	0	0	%100
14	M23	Z	.982	.982	0	%100
15	M24	X	0	0	0	%100
16	M24	Z	.982	.982	0	%100
17	M25	X	0	0	0	%100
18	M25	Z	.982	.982	0	%100
19	M26	X	0	0	0	%100
20	M26	Z	.982	.982	0	%100
21	M29	X	0	0	0	%100
22	M29	Z	12.702	12.702	0	%100
23	M32	X	0	0	0	%100
24	M32	Z	4.571	4.571	0	%100
25	M33	X	0	0	0	%100
26	M33	Z	4.571	4.571	0	%100
27	M34	X	0	0	0	%100
28	M34	Z	4.571	4.571	0	%100
29	M35	X	0	0	0	%100
30	M35	Z	4.571	4.571	0	%100
31	M36	X	0	0	0	%100
32	M36	Z	12.62	12.62	0	%100
33	M37	X	0	0	0	%100
34	M37	Z	12.62	12.62	0	%100
35	M38	X	0	0	0	%100
36	M38	Z	12.62	12.62	0	%100
37	M39	X	0	0	0	%100
38	M39	Z	12.62	12.62	0	%100
39	M40	X	0	0	0	%100
40	M40	Z	7.703	7.703	0	%100
41	M41	X	0	0	0	%100
42	M41	Z	7.703	7.703	0	%100
43	M42	X	0	0	0	%100
44	M42	Z	5.526	5.526	0	%100
45	M43	X	0	0	0	%100
46	M43	Z	5.291	5.291	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	5.291	5.291	0	%100
49	M45	X	0	0	0	%100
50	M45	Z	5.526	5.526	0	%100
51	M46	X	0	0	0	%100
52	M46	Z	6.866	6.866	0	%100
53	M47	X	0	0	0	%100
54	M47	Z	6.866	6.866	0	%100
55	M48	X	0	0	0	%100
56	M48	Z	6.866	6.866	0	%100
57	M49	X	0	0	0	%100
58	M49	Z	6.866	6.866	0	%100
59	M50	X	0	0	0	%100
60	M50	Z	.283	.283	0	%100

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-4.535	-4.535	0	%100
2	M1	Z	7.856	7.856	0	%100
3	M2	X	-4.535	-4.535	0	%100
4	M2	Z	7.856	7.856	0	%100
5	MP4A	X	-4.996	-4.996	0	%100
6	MP4A	Z	8.653	8.653	0	%100

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
7	MP3A	X	-4.996	-4.996	0	%100
8	MP3A	Z	8.653	8.653	0	%100
9	MP2A	X	-4.996	-4.996	0	%100
10	MP2A	Z	8.653	8.653	0	%100
11	MP1A	X	-4.996	-4.996	0	%100
12	MP1A	Z	8.653	8.653	0	%100
13	M23	X	-.963	-.963	0	%100
14	M23	Z	1.668	1.668	0	%100
15	M24	X	-.054	-.054	0	%100
16	M24	Z	.094	.094	0	%100
17	M25	X	-.054	-.054	0	%100
18	M25	Z	.094	.094	0	%100
19	M26	X	-.963	-.963	0	%100
20	M26	Z	1.668	1.668	0	%100
21	M29	X	-6.351	-6.351	0	%100
22	M29	Z	11.001	11.001	0	%100
23	M32	X	-4.547	-4.547	0	%100
24	M32	Z	7.876	7.876	0	%100
25	M33	X	-.236	-.236	0	%100
26	M33	Z	.409	.409	0	%100
27	M34	X	-.236	-.236	0	%100
28	M34	Z	.409	.409	0	%100
29	M35	X	-4.547	-4.547	0	%100
30	M35	Z	7.876	7.876	0	%100
31	M36	X	-5.061	-5.061	0	%100
32	M36	Z	8.766	8.766	0	%100
33	M37	X	-5.061	-5.061	0	%100
34	M37	Z	8.766	8.766	0	%100
35	M38	X	-5.061	-5.061	0	%100
36	M38	Z	8.766	8.766	0	%100
37	M39	X	-5.061	-5.061	0	%100
38	M39	Z	8.766	8.766	0	%100
39	M40	X	-3.851	-3.851	0	%100
40	M40	Z	6.671	6.671	0	%100
41	M41	X	-3.851	-3.851	0	%100
42	M41	Z	6.671	6.671	0	%100
43	M42	X	-3.371	-3.371	0	%100
44	M42	Z	5.839	5.839	0	%100
45	M43	X	-3.351	-3.351	0	%100
46	M43	Z	5.803	5.803	0	%100
47	M44	X	-2.009	-2.009	0	%100
48	M44	Z	3.48	3.48	0	%100
49	M45	X	-2.212	-2.212	0	%100
50	M45	Z	3.831	3.831	0	%100
51	M46	X	-3.433	-3.433	0	%100
52	M46	Z	5.946	5.946	0	%100
53	M47	X	-3.433	-3.433	0	%100
54	M47	Z	5.946	5.946	0	%100
55	M48	X	-3.433	-3.433	0	%100
56	M48	Z	5.946	5.946	0	%100
57	M49	X	-3.433	-3.433	0	%100
58	M49	Z	5.946	5.946	0	%100
59	M50	X	-2.037	-2.037	0	%100
60	M50	Z	3.529	3.529	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.619	-2.619	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
2	M1	Z	1.512	1.512	0	%100
3	M2	X	-2.619	-2.619	0	%100
4	M2	Z	1.512	1.512	0	%100
5	MP4A	X	-8.653	-8.653	0	%100
6	MP4A	Z	4.996	4.996	0	%100
7	MP3A	X	-8.653	-8.653	0	%100
8	MP3A	Z	4.996	4.996	0	%100
9	MP2A	X	-8.653	-8.653	0	%100
10	MP2A	Z	4.996	4.996	0	%100
11	MP1A	X	-8.653	-8.653	0	%100
12	MP1A	Z	4.996	4.996	0	%100
13	M23	X	-1.728	-1.728	0	%100
14	M23	Z	.998	.998	0	%100
15	M24	X	-.154	-.154	0	%100
16	M24	Z	.089	.089	0	%100
17	M25	X	-.154	-.154	0	%100
18	M25	Z	.089	.089	0	%100
19	M26	X	-1.728	-1.728	0	%100
20	M26	Z	.998	.998	0	%100
21	M29	X	-11.001	-11.001	0	%100
22	M29	Z	6.351	6.351	0	%100
23	M32	X	-8.243	-8.243	0	%100
24	M32	Z	4.759	4.759	0	%100
25	M33	X	-.777	-.777	0	%100
26	M33	Z	.449	.449	0	%100
27	M34	X	-.777	-.777	0	%100
28	M34	Z	.449	.449	0	%100
29	M35	X	-8.243	-8.243	0	%100
30	M35	Z	4.759	4.759	0	%100
31	M36	X	-4.44	-4.44	0	%100
32	M36	Z	2.563	2.563	0	%100
33	M37	X	-4.44	-4.44	0	%100
34	M37	Z	2.563	2.563	0	%100
35	M38	X	-4.44	-4.44	0	%100
36	M38	Z	2.563	2.563	0	%100
37	M39	X	-4.44	-4.44	0	%100
38	M39	Z	2.563	2.563	0	%100
39	M40	X	-6.671	-6.671	0	%100
40	M40	Z	3.851	3.851	0	%100
41	M41	X	-6.671	-6.671	0	%100
42	M41	Z	3.851	3.851	0	%100
43	M42	X	-5.938	-5.938	0	%100
44	M42	Z	3.428	3.428	0	%100
45	M43	X	-5.922	-5.922	0	%100
46	M43	Z	3.419	3.419	0	%100
47	M44	X	-3.598	-3.598	0	%100
48	M44	Z	2.077	2.077	0	%100
49	M45	X	-3.93	-3.93	0	%100
50	M45	Z	2.269	2.269	0	%100
51	M46	X	-5.946	-5.946	0	%100
52	M46	Z	3.433	3.433	0	%100
53	M47	X	-5.946	-5.946	0	%100
54	M47	Z	3.433	3.433	0	%100
55	M48	X	-5.946	-5.946	0	%100
56	M48	Z	3.433	3.433	0	%100
57	M49	X	-5.946	-5.946	0	%100
58	M49	Z	3.433	3.433	0	%100
59	M50	X	-7.61	-7.61	0	%100
60	M50	Z	4.394	4.394	0	%100

Member Distributed Loads (BLC 50 : Structure Wo (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP4A	X	-9.991	-9.991	0	%100
6	MP4A	Z	0	0	0	%100
7	MP3A	X	-9.991	-9.991	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	-9.991	-9.991	0	%100
10	MP2A	Z	0	0	0	%100
11	MP1A	X	-9.991	-9.991	0	%100
12	MP1A	Z	0	0	0	%100
13	M23	X	-1.121	-1.121	0	%100
14	M23	Z	0	0	0	%100
15	M24	X	-1.121	-1.121	0	%100
16	M24	Z	0	0	0	%100
17	M25	X	-1.121	-1.121	0	%100
18	M25	Z	0	0	0	%100
19	M26	X	-1.121	-1.121	0	%100
20	M26	Z	0	0	0	%100
21	M29	X	-12.702	-12.702	0	%100
22	M29	Z	0	0	0	%100
23	M32	X	-5.42	-5.42	0	%100
24	M32	Z	0	0	0	%100
25	M33	X	-5.42	-5.42	0	%100
26	M33	Z	0	0	0	%100
27	M34	X	-5.42	-5.42	0	%100
28	M34	Z	0	0	0	%100
29	M35	X	-5.42	-5.42	0	%100
30	M35	Z	0	0	0	%100
31	M36	X	-2.629	-2.629	0	%100
32	M36	Z	0	0	0	%100
33	M37	X	-2.629	-2.629	0	%100
34	M37	Z	0	0	0	%100
35	M38	X	-2.629	-2.629	0	%100
36	M38	Z	0	0	0	%100
37	M39	X	-2.629	-2.629	0	%100
38	M39	Z	0	0	0	%100
39	M40	X	-7.703	-7.703	0	%100
40	M40	Z	0	0	0	%100
41	M41	X	-7.703	-7.703	0	%100
42	M41	Z	0	0	0	%100
43	M42	X	-5.754	-5.754	0	%100
44	M42	Z	0	0	0	%100
45	M43	X	-5.565	-5.565	0	%100
46	M43	Z	0	0	0	%100
47	M44	X	-5.565	-5.565	0	%100
48	M44	Z	0	0	0	%100
49	M45	X	-5.754	-5.754	0	%100
50	M45	Z	0	0	0	%100
51	M46	X	-6.866	-6.866	0	%100
52	M46	Z	0	0	0	%100
53	M47	X	-6.866	-6.866	0	%100
54	M47	Z	0	0	0	%100
55	M48	X	-6.866	-6.866	0	%100
56	M48	Z	0	0	0	%100
57	M49	X	-6.866	-6.866	0	%100
58	M49	Z	0	0	0	%100
59	M50	X	-9.708	-9.708	0	%100

Member Distributed Loads (BLC 50 : Structure Wo (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
60	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 51 : Structure Wo (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.619	-2.619	0	%100
2	M1	Z	-1.512	-1.512	0	%100
3	M2	X	-2.619	-2.619	0	%100
4	M2	Z	-1.512	-1.512	0	%100
5	MP4A	X	-8.653	-8.653	0	%100
6	MP4A	Z	-4.996	-4.996	0	%100
7	MP3A	X	-8.653	-8.653	0	%100
8	MP3A	Z	-4.996	-4.996	0	%100
9	MP2A	X	-8.653	-8.653	0	%100
10	MP2A	Z	-4.996	-4.996	0	%100
11	MP1A	X	-8.653	-8.653	0	%100
12	MP1A	Z	-4.996	-4.996	0	%100
13	M23	X	-.154	-.154	0	%100
14	M23	Z	-.089	-.089	0	%100
15	M24	X	-1.728	-1.728	0	%100
16	M24	Z	-.998	-.998	0	%100
17	M25	X	-1.728	-1.728	0	%100
18	M25	Z	-.998	-.998	0	%100
19	M26	X	-.154	-.154	0	%100
20	M26	Z	-.089	-.089	0	%100
21	M29	X	-11.001	-11.001	0	%100
22	M29	Z	-6.351	-6.351	0	%100
23	M32	X	-.777	-.777	0	%100
24	M32	Z	-.449	-.449	0	%100
25	M33	X	-8.243	-8.243	0	%100
26	M33	Z	-4.759	-4.759	0	%100
27	M34	X	-8.243	-8.243	0	%100
28	M34	Z	-4.759	-4.759	0	%100
29	M35	X	-.777	-.777	0	%100
30	M35	Z	-.449	-.449	0	%100
31	M36	X	-4.44	-4.44	0	%100
32	M36	Z	-2.563	-2.563	0	%100
33	M37	X	-4.44	-4.44	0	%100
34	M37	Z	-2.563	-2.563	0	%100
35	M38	X	-4.44	-4.44	0	%100
36	M38	Z	-2.563	-2.563	0	%100
37	M39	X	-4.44	-4.44	0	%100
38	M39	Z	-2.563	-2.563	0	%100
39	M40	X	-6.671	-6.671	0	%100
40	M40	Z	-3.851	-3.851	0	%100
41	M41	X	-6.671	-6.671	0	%100
42	M41	Z	-3.851	-3.851	0	%100
43	M42	X	-3.93	-3.93	0	%100
44	M42	Z	-2.269	-2.269	0	%100
45	M43	X	-3.598	-3.598	0	%100
46	M43	Z	-2.077	-2.077	0	%100
47	M44	X	-5.922	-5.922	0	%100
48	M44	Z	-3.419	-3.419	0	%100
49	M45	X	-5.938	-5.938	0	%100
50	M45	Z	-3.428	-3.428	0	%100
51	M46	X	-5.946	-5.946	0	%100
52	M46	Z	-3.433	-3.433	0	%100
53	M47	X	-5.946	-5.946	0	%100
54	M47	Z	-3.433	-3.433	0	%100

Member Distributed Loads (BLC 51 : Structure Wo (300 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
55	M48	X	-5.946	-5.946	0	%100
56	M48	Z	-3.433	-3.433	0	%100
57	M49	X	-5.946	-5.946	0	%100
58	M49	Z	-3.433	-3.433	0	%100
59	M50	X	-5.124	-5.124	0	%100
60	M50	Z	-2.958	-2.958	0	%100

Member Distributed Loads (BLC 52 : Structure Wo (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-4.535	-4.535	0	%100
2	M1	Z	-7.856	-7.856	0	%100
3	M2	X	-4.535	-4.535	0	%100
4	M2	Z	-7.856	-7.856	0	%100
5	MP4A	X	-4.996	-4.996	0	%100
6	MP4A	Z	-8.653	-8.653	0	%100
7	MP3A	X	-4.996	-4.996	0	%100
8	MP3A	Z	-8.653	-8.653	0	%100
9	MP2A	X	-4.996	-4.996	0	%100
10	MP2A	Z	-8.653	-8.653	0	%100
11	MP1A	X	-4.996	-4.996	0	%100
12	MP1A	Z	-8.653	-8.653	0	%100
13	M23	X	-.054	-.054	0	%100
14	M23	Z	-.094	-.094	0	%100
15	M24	X	-.963	-.963	0	%100
16	M24	Z	-1.668	-1.668	0	%100
17	M25	X	-.963	-.963	0	%100
18	M25	Z	-1.668	-1.668	0	%100
19	M26	X	-.054	-.054	0	%100
20	M26	Z	-.094	-.094	0	%100
21	M29	X	-6.351	-6.351	0	%100
22	M29	Z	-11.001	-11.001	0	%100
23	M32	X	-.236	-.236	0	%100
24	M32	Z	-.409	-.409	0	%100
25	M33	X	-4.547	-4.547	0	%100
26	M33	Z	-7.876	-7.876	0	%100
27	M34	X	-4.547	-4.547	0	%100
28	M34	Z	-7.876	-7.876	0	%100
29	M35	X	-.236	-.236	0	%100
30	M35	Z	-.409	-.409	0	%100
31	M36	X	-5.061	-5.061	0	%100
32	M36	Z	-8.766	-8.766	0	%100
33	M37	X	-5.061	-5.061	0	%100
34	M37	Z	-8.766	-8.766	0	%100
35	M38	X	-5.061	-5.061	0	%100
36	M38	Z	-8.766	-8.766	0	%100
37	M39	X	-5.061	-5.061	0	%100
38	M39	Z	-8.766	-8.766	0	%100
39	M40	X	-3.851	-3.851	0	%100
40	M40	Z	-6.671	-6.671	0	%100
41	M41	X	-3.851	-3.851	0	%100
42	M41	Z	-6.671	-6.671	0	%100
43	M42	X	-2.212	-2.212	0	%100
44	M42	Z	-3.831	-3.831	0	%100
45	M43	X	-2.009	-2.009	0	%100
46	M43	Z	-3.48	-3.48	0	%100
47	M44	X	-3.351	-3.351	0	%100
48	M44	Z	-5.803	-5.803	0	%100
49	M45	X	-3.371	-3.371	0	%100

Member Distributed Loads (BLC 52 : Structure Wo (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
50	M45	Z	-5.839	-5.839	0	%100
51	M46	X	-3.433	-3.433	0	%100
52	M46	Z	-5.946	-5.946	0	%100
53	M47	X	-3.433	-3.433	0	%100
54	M47	Z	-5.946	-5.946	0	%100
55	M48	X	-3.433	-3.433	0	%100
56	M48	Z	-5.946	-5.946	0	%100
57	M49	X	-3.433	-3.433	0	%100
58	M49	Z	-5.946	-5.946	0	%100
59	M50	X	-.602	-.602	0	%100
60	M50	Z	-1.043	-1.043	0	%100

Member Distributed Loads (BLC 53 : Structure Wi (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-3.571	-3.571	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-3.571	-3.571	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	-3.225	-3.225	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	-3.225	-3.225	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-3.235	-3.235	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	-3.225	-3.225	0	%100
13	M23	X	0	0	0	%100
14	M23	Z	-.603	-.603	0	%100
15	M24	X	0	0	0	%100
16	M24	Z	-.603	-.603	0	%100
17	M25	X	0	0	0	%100
18	M25	Z	-.603	-.603	0	%100
19	M26	X	0	0	0	%100
20	M26	Z	-.603	-.603	0	%100
21	M29	X	0	0	0	%100
22	M29	Z	-4.16	-4.16	0	%100
23	M32	X	0	0	0	%100
24	M32	Z	-1.48	-1.48	0	%100
25	M33	X	0	0	0	%100
26	M33	Z	-1.48	-1.48	0	%100
27	M34	X	0	0	0	%100
28	M34	Z	-1.48	-1.48	0	%100
29	M35	X	0	0	0	%100
30	M35	Z	-1.48	-1.48	0	%100
31	M36	X	0	0	0	%100
32	M36	Z	-2.974	-2.974	0	%100
33	M37	X	0	0	0	%100
34	M37	Z	-2.974	-2.974	0	%100
35	M38	X	0	0	0	%100
36	M38	Z	-2.974	-2.974	0	%100
37	M39	X	0	0	0	%100
38	M39	Z	-2.974	-2.974	0	%100
39	M40	X	0	0	0	%100
40	M40	Z	-2.485	-2.485	0	%100
41	M41	X	0	0	0	%100
42	M41	Z	-2.485	-2.485	0	%100
43	M42	X	0	0	0	%100
44	M42	Z	-2.082	-2.082	0	%100

Member Distributed Loads (BLC 53 : Structure Wi (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
45	M43	X	0	0	0	%100
46	M43	Z	-1.956	-1.956	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	-1.956	-1.956	0	%100
49	M45	X	0	0	0	%100
50	M45	Z	-2.082	-2.082	0	%100
51	M46	X	0	0	0	%100
52	M46	Z	-2.476	-2.476	0	%100
53	M47	X	0	0	0	%100
54	M47	Z	-2.476	-2.476	0	%100
55	M48	X	0	0	0	%100
56	M48	Z	-2.476	-2.476	0	%100
57	M49	X	0	0	0	%100
58	M49	Z	-2.476	-2.476	0	%100
59	M50	X	0	0	0	%100
60	M50	Z	-.092	-.092	0	%100

Member Distributed Loads (BLC 54 : Structure Wi (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.339	1.339	0	%100
2	M1	Z	-2.32	-2.32	0	%100
3	M2	X	1.339	1.339	0	%100
4	M2	Z	-2.32	-2.32	0	%100
5	MP4A	X	1.613	1.613	0	%100
6	MP4A	Z	-2.793	-2.793	0	%100
7	MP3A	X	1.613	1.613	0	%100
8	MP3A	Z	-2.793	-2.793	0	%100
9	MP2A	X	1.617	1.617	0	%100
10	MP2A	Z	-2.801	-2.801	0	%100
11	MP1A	X	1.613	1.613	0	%100
12	MP1A	Z	-2.793	-2.793	0	%100
13	M23	X	.591	.591	0	%100
14	M23	Z	-1.023	-1.023	0	%100
15	M24	X	.033	.033	0	%100
16	M24	Z	-.057	-.057	0	%100
17	M25	X	.033	.033	0	%100
18	M25	Z	-.057	-.057	0	%100
19	M26	X	.591	.591	0	%100
20	M26	Z	-1.023	-1.023	0	%100
21	M29	X	2.08	2.08	0	%100
22	M29	Z	-3.603	-3.603	0	%100
23	M32	X	1.472	1.472	0	%100
24	M32	Z	-2.55	-2.55	0	%100
25	M33	X	.076	.076	0	%100
26	M33	Z	-.133	-.133	0	%100
27	M34	X	.076	.076	0	%100
28	M34	Z	-.133	-.133	0	%100
29	M35	X	1.472	1.472	0	%100
30	M35	Z	-2.55	-2.55	0	%100
31	M36	X	1.287	1.287	0	%100
32	M36	Z	-2.229	-2.229	0	%100
33	M37	X	1.287	1.287	0	%100
34	M37	Z	-2.229	-2.229	0	%100
35	M38	X	1.287	1.287	0	%100
36	M38	Z	-2.229	-2.229	0	%100
37	M39	X	1.287	1.287	0	%100
38	M39	Z	-2.229	-2.229	0	%100
39	M40	X	1.242	1.242	0	%100

Member Distributed Loads (BLC 54 : Structure Wi (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
40	M40	Z	-2.152	-2.152	0	%100
41	M41	X	1.242	1.242	0	%100
42	M41	Z	-2.152	-2.152	0	%100
43	M42	X	1.27	1.27	0	%100
44	M42	Z	-2.2	-2.2	0	%100
45	M43	X	1.239	1.239	0	%100
46	M43	Z	-2.146	-2.146	0	%100
47	M44	X	.743	.743	0	%100
48	M44	Z	-1.286	-1.286	0	%100
49	M45	X	.833	.833	0	%100
50	M45	Z	-1.444	-1.444	0	%100
51	M46	X	1.238	1.238	0	%100
52	M46	Z	-2.144	-2.144	0	%100
53	M47	X	1.238	1.238	0	%100
54	M47	Z	-2.144	-2.144	0	%100
55	M48	X	1.238	1.238	0	%100
56	M48	Z	-2.144	-2.144	0	%100
57	M49	X	1.238	1.238	0	%100
58	M49	Z	-2.144	-2.144	0	%100
59	M50	X	.66	.66	0	%100
60	M50	Z	-1.142	-1.142	0	%100

Member Distributed Loads (BLC 55 : Structure Wi (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.773	.773	0	%100
2	M1	Z	-.446	-.446	0	%100
3	M2	X	.773	.773	0	%100
4	M2	Z	-.446	-.446	0	%100
5	MP4A	X	2.793	2.793	0	%100
6	MP4A	Z	-1.613	-1.613	0	%100
7	MP3A	X	2.793	2.793	0	%100
8	MP3A	Z	-1.613	-1.613	0	%100
9	MP2A	X	2.801	2.801	0	%100
10	MP2A	Z	-1.617	-1.617	0	%100
11	MP1A	X	2.793	2.793	0	%100
12	MP1A	Z	-1.613	-1.613	0	%100
13	M23	X	1.06	1.06	0	%100
14	M23	Z	-.612	-.612	0	%100
15	M24	X	.094	.094	0	%100
16	M24	Z	-.055	-.055	0	%100
17	M25	X	.094	.094	0	%100
18	M25	Z	-.055	-.055	0	%100
19	M26	X	1.06	1.06	0	%100
20	M26	Z	-.612	-.612	0	%100
21	M29	X	3.603	3.603	0	%100
22	M29	Z	-2.08	-2.08	0	%100
23	M32	X	2.669	2.669	0	%100
24	M32	Z	-1.541	-1.541	0	%100
25	M33	X	.252	.252	0	%100
26	M33	Z	-.145	-.145	0	%100
27	M34	X	.252	.252	0	%100
28	M34	Z	-.145	-.145	0	%100
29	M35	X	2.669	2.669	0	%100
30	M35	Z	-1.541	-1.541	0	%100
31	M36	X	1.537	1.537	0	%100
32	M36	Z	-.887	-.887	0	%100
33	M37	X	1.537	1.537	0	%100
34	M37	Z	-.887	-.887	0	%100

Member Distributed Loads (BLC 55 : Structure Wi (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
35	M38	X	1.537	1.537	0	%100
36	M38	Z	-.887	-.887	0	%100
37	M39	X	1.537	1.537	0	%100
38	M39	Z	-.887	-.887	0	%100
39	M40	X	2.152	2.152	0	%100
40	M40	Z	-1.242	-1.242	0	%100
41	M41	X	2.152	2.152	0	%100
42	M41	Z	-1.242	-1.242	0	%100
43	M42	X	2.238	2.238	0	%100
44	M42	Z	-1.292	-1.292	0	%100
45	M43	X	2.189	2.189	0	%100
46	M43	Z	-1.264	-1.264	0	%100
47	M44	X	1.33	1.33	0	%100
48	M44	Z	-.768	-.768	0	%100
49	M45	X	1.481	1.481	0	%100
50	M45	Z	-.855	-.855	0	%100
51	M46	X	2.144	2.144	0	%100
52	M46	Z	-1.238	-1.238	0	%100
53	M47	X	2.144	2.144	0	%100
54	M47	Z	-1.238	-1.238	0	%100
55	M48	X	2.144	2.144	0	%100
56	M48	Z	-1.238	-1.238	0	%100
57	M49	X	2.144	2.144	0	%100
58	M49	Z	-1.238	-1.238	0	%100
59	M50	X	2.464	2.464	0	%100
60	M50	Z	-1.422	-1.422	0	%100

Member Distributed Loads (BLC 56 : Structure Wi (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP4A	X	3.225	3.225	0	%100
6	MP4A	Z	0	0	0	%100
7	MP3A	X	3.225	3.225	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	3.235	3.235	0	%100
10	MP2A	Z	0	0	0	%100
11	MP1A	X	3.225	3.225	0	%100
12	MP1A	Z	0	0	0	%100
13	M23	X	.688	.688	0	%100
14	M23	Z	0	0	0	%100
15	M24	X	.688	.688	0	%100
16	M24	Z	0	0	0	%100
17	M25	X	.688	.688	0	%100
18	M25	Z	0	0	0	%100
19	M26	X	.688	.688	0	%100
20	M26	Z	0	0	0	%100
21	M29	X	4.16	4.16	0	%100
22	M29	Z	0	0	0	%100
23	M32	X	1.755	1.755	0	%100
24	M32	Z	0	0	0	%100
25	M33	X	1.755	1.755	0	%100
26	M33	Z	0	0	0	%100
27	M34	X	1.755	1.755	0	%100
28	M34	Z	0	0	0	%100
29	M35	X	1.755	1.755	0	%100

Member Distributed Loads (BLC 56 : Structure Wi (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
30	M35	Z	0	0	0	%100
31	M36	X	1.375	1.375	0	%100
32	M36	Z	0	0	0	%100
33	M37	X	1.375	1.375	0	%100
34	M37	Z	0	0	0	%100
35	M38	X	1.375	1.375	0	%100
36	M38	Z	0	0	0	%100
37	M39	X	1.375	1.375	0	%100
38	M39	Z	0	0	0	%100
39	M40	X	2.485	2.485	0	%100
40	M40	Z	0	0	0	%100
41	M41	X	2.485	2.485	0	%100
42	M41	Z	0	0	0	%100
43	M42	X	2.168	2.168	0	%100
44	M42	Z	0	0	0	%100
45	M43	X	2.057	2.057	0	%100
46	M43	Z	0	0	0	%100
47	M44	X	2.057	2.057	0	%100
48	M44	Z	0	0	0	%100
49	M45	X	2.168	2.168	0	%100
50	M45	Z	0	0	0	%100
51	M46	X	2.476	2.476	0	%100
52	M46	Z	0	0	0	%100
53	M47	X	2.476	2.476	0	%100
54	M47	Z	0	0	0	%100
55	M48	X	2.476	2.476	0	%100
56	M48	Z	0	0	0	%100
57	M49	X	2.476	2.476	0	%100
58	M49	Z	0	0	0	%100
59	M50	X	3.143	3.143	0	%100
60	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 57 : Structure Wi (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.773	.773	0	%100
2	M1	Z	.446	.446	0	%100
3	M2	X	.773	.773	0	%100
4	M2	Z	.446	.446	0	%100
5	MP4A	X	2.793	2.793	0	%100
6	MP4A	Z	1.613	1.613	0	%100
7	MP3A	X	2.793	2.793	0	%100
8	MP3A	Z	1.613	1.613	0	%100
9	MP2A	X	2.801	2.801	0	%100
10	MP2A	Z	1.617	1.617	0	%100
11	MP1A	X	2.793	2.793	0	%100
12	MP1A	Z	1.613	1.613	0	%100
13	M23	X	.094	.094	0	%100
14	M23	Z	.055	.055	0	%100
15	M24	X	1.06	1.06	0	%100
16	M24	Z	.612	.612	0	%100
17	M25	X	1.06	1.06	0	%100
18	M25	Z	.612	.612	0	%100
19	M26	X	.094	.094	0	%100
20	M26	Z	.055	.055	0	%100
21	M29	X	3.603	3.603	0	%100
22	M29	Z	2.08	2.08	0	%100
23	M32	X	.252	.252	0	%100
24	M32	Z	.145	.145	0	%100

Member Distributed Loads (BLC 57 : Structure Wi (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
25	M33	X	2.669	2.669	0	%100
26	M33	Z	1.541	1.541	0	%100
27	M34	X	2.669	2.669	0	%100
28	M34	Z	1.541	1.541	0	%100
29	M35	X	.252	.252	0	%100
30	M35	Z	.145	.145	0	%100
31	M36	X	1.537	1.537	0	%100
32	M36	Z	.887	.887	0	%100
33	M37	X	1.537	1.537	0	%100
34	M37	Z	.887	.887	0	%100
35	M38	X	1.537	1.537	0	%100
36	M38	Z	.887	.887	0	%100
37	M39	X	1.537	1.537	0	%100
38	M39	Z	.887	.887	0	%100
39	M40	X	2.152	2.152	0	%100
40	M40	Z	1.242	1.242	0	%100
41	M41	X	2.152	2.152	0	%100
42	M41	Z	1.242	1.242	0	%100
43	M42	X	1.481	1.481	0	%100
44	M42	Z	.855	.855	0	%100
45	M43	X	1.33	1.33	0	%100
46	M43	Z	.768	.768	0	%100
47	M44	X	2.189	2.189	0	%100
48	M44	Z	1.264	1.264	0	%100
49	M45	X	2.238	2.238	0	%100
50	M45	Z	1.292	1.292	0	%100
51	M46	X	2.144	2.144	0	%100
52	M46	Z	1.238	1.238	0	%100
53	M47	X	2.144	2.144	0	%100
54	M47	Z	1.238	1.238	0	%100
55	M48	X	2.144	2.144	0	%100
56	M48	Z	1.238	1.238	0	%100
57	M49	X	2.144	2.144	0	%100
58	M49	Z	1.238	1.238	0	%100
59	M50	X	1.659	1.659	0	%100
60	M50	Z	.958	.958	0	%100

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.339	1.339	0	%100
2	M1	Z	2.32	2.32	0	%100
3	M2	X	1.339	1.339	0	%100
4	M2	Z	2.32	2.32	0	%100
5	MP4A	X	1.613	1.613	0	%100
6	MP4A	Z	2.793	2.793	0	%100
7	MP3A	X	1.613	1.613	0	%100
8	MP3A	Z	2.793	2.793	0	%100
9	MP2A	X	1.617	1.617	0	%100
10	MP2A	Z	2.801	2.801	0	%100
11	MP1A	X	1.613	1.613	0	%100
12	MP1A	Z	2.793	2.793	0	%100
13	M23	X	.033	.033	0	%100
14	M23	Z	.057	.057	0	%100
15	M24	X	.591	.591	0	%100
16	M24	Z	1.023	1.023	0	%100
17	M25	X	.591	.591	0	%100
18	M25	Z	1.023	1.023	0	%100
19	M26	X	.033	.033	0	%100

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
20	M26	Z	.057	.057	0	%100
21	M29	X	2.08	2.08	0	%100
22	M29	Z	3.603	3.603	0	%100
23	M32	X	.076	.076	0	%100
24	M32	Z	.133	.133	0	%100
25	M33	X	1.472	1.472	0	%100
26	M33	Z	2.55	2.55	0	%100
27	M34	X	1.472	1.472	0	%100
28	M34	Z	2.55	2.55	0	%100
29	M35	X	.076	.076	0	%100
30	M35	Z	.133	.133	0	%100
31	M36	X	1.287	1.287	0	%100
32	M36	Z	2.229	2.229	0	%100
33	M37	X	1.287	1.287	0	%100
34	M37	Z	2.229	2.229	0	%100
35	M38	X	1.287	1.287	0	%100
36	M38	Z	2.229	2.229	0	%100
37	M39	X	1.287	1.287	0	%100
38	M39	Z	2.229	2.229	0	%100
39	M40	X	1.242	1.242	0	%100
40	M40	Z	2.152	2.152	0	%100
41	M41	X	1.242	1.242	0	%100
42	M41	Z	2.152	2.152	0	%100
43	M42	X	.833	.833	0	%100
44	M42	Z	1.444	1.444	0	%100
45	M43	X	.743	.743	0	%100
46	M43	Z	1.286	1.286	0	%100
47	M44	X	1.239	1.239	0	%100
48	M44	Z	2.146	2.146	0	%100
49	M45	X	1.27	1.27	0	%100
50	M45	Z	2.2	2.2	0	%100
51	M46	X	1.238	1.238	0	%100
52	M46	Z	2.144	2.144	0	%100
53	M47	X	1.238	1.238	0	%100
54	M47	Z	2.144	2.144	0	%100
55	M48	X	1.238	1.238	0	%100
56	M48	Z	2.144	2.144	0	%100
57	M49	X	1.238	1.238	0	%100
58	M49	Z	2.144	2.144	0	%100
59	M50	X	.195	.195	0	%100
60	M50	Z	.338	.338	0	%100

Member Distributed Loads (BLC 59 : Structure Wi (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	3.571	3.571	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	3.571	3.571	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	3.225	3.225	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	3.225	3.225	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	3.235	3.235	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	3.225	3.225	0	%100
13	M23	X	0	0	0	%100
14	M23	Z	.603	.603	0	%100

Member Distributed Loads (BLC 59 : Structure Wi (180 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
15	M24	X	0	0	0	%100
16	M24	Z	.603	.603	0	%100
17	M25	X	0	0	0	%100
18	M25	Z	.603	.603	0	%100
19	M26	X	0	0	0	%100
20	M26	Z	.603	.603	0	%100
21	M29	X	0	0	0	%100
22	M29	Z	4.16	4.16	0	%100
23	M32	X	0	0	0	%100
24	M32	Z	1.48	1.48	0	%100
25	M33	X	0	0	0	%100
26	M33	Z	1.48	1.48	0	%100
27	M34	X	0	0	0	%100
28	M34	Z	1.48	1.48	0	%100
29	M35	X	0	0	0	%100
30	M35	Z	1.48	1.48	0	%100
31	M36	X	0	0	0	%100
32	M36	Z	2.974	2.974	0	%100
33	M37	X	0	0	0	%100
34	M37	Z	2.974	2.974	0	%100
35	M38	X	0	0	0	%100
36	M38	Z	2.974	2.974	0	%100
37	M39	X	0	0	0	%100
38	M39	Z	2.974	2.974	0	%100
39	M40	X	0	0	0	%100
40	M40	Z	2.485	2.485	0	%100
41	M41	X	0	0	0	%100
42	M41	Z	2.485	2.485	0	%100
43	M42	X	0	0	0	%100
44	M42	Z	2.082	2.082	0	%100
45	M43	X	0	0	0	%100
46	M43	Z	1.956	1.956	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	1.956	1.956	0	%100
49	M45	X	0	0	0	%100
50	M45	Z	2.082	2.082	0	%100
51	M46	X	0	0	0	%100
52	M46	Z	2.476	2.476	0	%100
53	M47	X	0	0	0	%100
54	M47	Z	2.476	2.476	0	%100
55	M48	X	0	0	0	%100
56	M48	Z	2.476	2.476	0	%100
57	M49	X	0	0	0	%100
58	M49	Z	2.476	2.476	0	%100
59	M50	X	0	0	0	%100
60	M50	Z	.092	.092	0	%100

Member Distributed Loads (BLC 60 : Structure Wi (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.339	-1.339	0	%100
2	M1	Z	2.32	2.32	0	%100
3	M2	X	-1.339	-1.339	0	%100
4	M2	Z	2.32	2.32	0	%100
5	MP4A	X	-1.613	-1.613	0	%100
6	MP4A	Z	2.793	2.793	0	%100
7	MP3A	X	-1.613	-1.613	0	%100
8	MP3A	Z	2.793	2.793	0	%100
9	MP2A	X	-1.617	-1.617	0	%100

Member Distributed Loads (BLC 60 : Structure Wi (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
10	MP2A	Z	2.801	2.801	0	%100
11	MP1A	X	-1.613	-1.613	0	%100
12	MP1A	Z	2.793	2.793	0	%100
13	M23	X	-.591	-.591	0	%100
14	M23	Z	1.023	1.023	0	%100
15	M24	X	-.033	-.033	0	%100
16	M24	Z	.057	.057	0	%100
17	M25	X	-.033	-.033	0	%100
18	M25	Z	.057	.057	0	%100
19	M26	X	-.591	-.591	0	%100
20	M26	Z	1.023	1.023	0	%100
21	M29	X	-2.08	-2.08	0	%100
22	M29	Z	3.603	3.603	0	%100
23	M32	X	-1.472	-1.472	0	%100
24	M32	Z	2.55	2.55	0	%100
25	M33	X	-.076	-.076	0	%100
26	M33	Z	.133	.133	0	%100
27	M34	X	-.076	-.076	0	%100
28	M34	Z	.133	.133	0	%100
29	M35	X	-1.472	-1.472	0	%100
30	M35	Z	2.55	2.55	0	%100
31	M36	X	-1.287	-1.287	0	%100
32	M36	Z	2.229	2.229	0	%100
33	M37	X	-1.287	-1.287	0	%100
34	M37	Z	2.229	2.229	0	%100
35	M38	X	-1.287	-1.287	0	%100
36	M38	Z	2.229	2.229	0	%100
37	M39	X	-1.287	-1.287	0	%100
38	M39	Z	2.229	2.229	0	%100
39	M40	X	-1.242	-1.242	0	%100
40	M40	Z	2.152	2.152	0	%100
41	M41	X	-1.242	-1.242	0	%100
42	M41	Z	2.152	2.152	0	%100
43	M42	X	-1.27	-1.27	0	%100
44	M42	Z	2.2	2.2	0	%100
45	M43	X	-1.239	-1.239	0	%100
46	M43	Z	2.146	2.146	0	%100
47	M44	X	-.743	-.743	0	%100
48	M44	Z	1.286	1.286	0	%100
49	M45	X	-.833	-.833	0	%100
50	M45	Z	1.444	1.444	0	%100
51	M46	X	-1.238	-1.238	0	%100
52	M46	Z	2.144	2.144	0	%100
53	M47	X	-1.238	-1.238	0	%100
54	M47	Z	2.144	2.144	0	%100
55	M48	X	-1.238	-1.238	0	%100
56	M48	Z	2.144	2.144	0	%100
57	M49	X	-1.238	-1.238	0	%100
58	M49	Z	2.144	2.144	0	%100
59	M50	X	-.66	-.66	0	%100
60	M50	Z	1.142	1.142	0	%100

Member Distributed Loads (BLC 61 : Structure Wi (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.773	-.773	0	%100
2	M1	Z	.446	.446	0	%100
3	M2	X	-.773	-.773	0	%100
4	M2	Z	.446	.446	0	%100

Member Distributed Loads (BLC 61 : Structure Wi (240 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
5	MP4A	X	-2.793	-2.793	0	%100
6	MP4A	Z	1.613	1.613	0	%100
7	MP3A	X	-2.793	-2.793	0	%100
8	MP3A	Z	1.613	1.613	0	%100
9	MP2A	X	-2.801	-2.801	0	%100
10	MP2A	Z	1.617	1.617	0	%100
11	MP1A	X	-2.793	-2.793	0	%100
12	MP1A	Z	1.613	1.613	0	%100
13	M23	X	-1.06	-1.06	0	%100
14	M23	Z	.612	.612	0	%100
15	M24	X	-.094	-.094	0	%100
16	M24	Z	.055	.055	0	%100
17	M25	X	-.094	-.094	0	%100
18	M25	Z	.055	.055	0	%100
19	M26	X	-1.06	-1.06	0	%100
20	M26	Z	.612	.612	0	%100
21	M29	X	-3.603	-3.603	0	%100
22	M29	Z	2.08	2.08	0	%100
23	M32	X	-2.669	-2.669	0	%100
24	M32	Z	1.541	1.541	0	%100
25	M33	X	-.252	-.252	0	%100
26	M33	Z	.145	.145	0	%100
27	M34	X	-.252	-.252	0	%100
28	M34	Z	.145	.145	0	%100
29	M35	X	-2.669	-2.669	0	%100
30	M35	Z	1.541	1.541	0	%100
31	M36	X	-1.537	-1.537	0	%100
32	M36	Z	.887	.887	0	%100
33	M37	X	-1.537	-1.537	0	%100
34	M37	Z	.887	.887	0	%100
35	M38	X	-1.537	-1.537	0	%100
36	M38	Z	.887	.887	0	%100
37	M39	X	-1.537	-1.537	0	%100
38	M39	Z	.887	.887	0	%100
39	M40	X	-2.152	-2.152	0	%100
40	M40	Z	1.242	1.242	0	%100
41	M41	X	-2.152	-2.152	0	%100
42	M41	Z	1.242	1.242	0	%100
43	M42	X	-2.238	-2.238	0	%100
44	M42	Z	1.292	1.292	0	%100
45	M43	X	-2.189	-2.189	0	%100
46	M43	Z	1.264	1.264	0	%100
47	M44	X	-1.33	-1.33	0	%100
48	M44	Z	.768	.768	0	%100
49	M45	X	-1.481	-1.481	0	%100
50	M45	Z	.855	.855	0	%100
51	M46	X	-2.144	-2.144	0	%100
52	M46	Z	1.238	1.238	0	%100
53	M47	X	-2.144	-2.144	0	%100
54	M47	Z	1.238	1.238	0	%100
55	M48	X	-2.144	-2.144	0	%100
56	M48	Z	1.238	1.238	0	%100
57	M49	X	-2.144	-2.144	0	%100
58	M49	Z	1.238	1.238	0	%100
59	M50	X	-2.464	-2.464	0	%100
60	M50	Z	1.422	1.422	0	%100

Member Distributed Loads (BLC 62 : Structure Wi (270 Deg))

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 62 : Structure Wi (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP4A	X	-3.225	-3.225	0	%100
6	MP4A	Z	0	0	0	%100
7	MP3A	X	-3.225	-3.225	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	-3.235	-3.235	0	%100
10	MP2A	Z	0	0	0	%100
11	MP1A	X	-3.225	-3.225	0	%100
12	MP1A	Z	0	0	0	%100
13	M23	X	-.688	-.688	0	%100
14	M23	Z	0	0	0	%100
15	M24	X	-.688	-.688	0	%100
16	M24	Z	0	0	0	%100
17	M25	X	-.688	-.688	0	%100
18	M25	Z	0	0	0	%100
19	M26	X	-.688	-.688	0	%100
20	M26	Z	0	0	0	%100
21	M29	X	-4.16	-4.16	0	%100
22	M29	Z	0	0	0	%100
23	M32	X	-1.755	-1.755	0	%100
24	M32	Z	0	0	0	%100
25	M33	X	-1.755	-1.755	0	%100
26	M33	Z	0	0	0	%100
27	M34	X	-1.755	-1.755	0	%100
28	M34	Z	0	0	0	%100
29	M35	X	-1.755	-1.755	0	%100
30	M35	Z	0	0	0	%100
31	M36	X	-1.375	-1.375	0	%100
32	M36	Z	0	0	0	%100
33	M37	X	-1.375	-1.375	0	%100
34	M37	Z	0	0	0	%100
35	M38	X	-1.375	-1.375	0	%100
36	M38	Z	0	0	0	%100
37	M39	X	-1.375	-1.375	0	%100
38	M39	Z	0	0	0	%100
39	M40	X	-2.485	-2.485	0	%100
40	M40	Z	0	0	0	%100
41	M41	X	-2.485	-2.485	0	%100
42	M41	Z	0	0	0	%100
43	M42	X	-2.168	-2.168	0	%100
44	M42	Z	0	0	0	%100
45	M43	X	-2.057	-2.057	0	%100
46	M43	Z	0	0	0	%100
47	M44	X	-2.057	-2.057	0	%100
48	M44	Z	0	0	0	%100
49	M45	X	-2.168	-2.168	0	%100
50	M45	Z	0	0	0	%100
51	M46	X	-2.476	-2.476	0	%100
52	M46	Z	0	0	0	%100
53	M47	X	-2.476	-2.476	0	%100
54	M47	Z	0	0	0	%100
55	M48	X	-2.476	-2.476	0	%100
56	M48	Z	0	0	0	%100
57	M49	X	-2.476	-2.476	0	%100
58	M49	Z	0	0	0	%100
59	M50	X	-3.143	-3.143	0	%100

Member Distributed Loads (BLC 62 : Structure Wi (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
60	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 63 : Structure Wi (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.773	-.773	0	%100
2	M1	Z	-.446	-.446	0	%100
3	M2	X	-.773	-.773	0	%100
4	M2	Z	-.446	-.446	0	%100
5	MP4A	X	-2.793	-2.793	0	%100
6	MP4A	Z	-1.613	-1.613	0	%100
7	MP3A	X	-2.793	-2.793	0	%100
8	MP3A	Z	-1.613	-1.613	0	%100
9	MP2A	X	-2.801	-2.801	0	%100
10	MP2A	Z	-1.617	-1.617	0	%100
11	MP1A	X	-2.793	-2.793	0	%100
12	MP1A	Z	-1.613	-1.613	0	%100
13	M23	X	-.094	-.094	0	%100
14	M23	Z	-.055	-.055	0	%100
15	M24	X	-1.06	-1.06	0	%100
16	M24	Z	-.612	-.612	0	%100
17	M25	X	-1.06	-1.06	0	%100
18	M25	Z	-.612	-.612	0	%100
19	M26	X	-.094	-.094	0	%100
20	M26	Z	-.055	-.055	0	%100
21	M29	X	-3.603	-3.603	0	%100
22	M29	Z	-2.08	-2.08	0	%100
23	M32	X	-.252	-.252	0	%100
24	M32	Z	-.145	-.145	0	%100
25	M33	X	-2.669	-2.669	0	%100
26	M33	Z	-1.541	-1.541	0	%100
27	M34	X	-2.669	-2.669	0	%100
28	M34	Z	-1.541	-1.541	0	%100
29	M35	X	-.252	-.252	0	%100
30	M35	Z	-.145	-.145	0	%100
31	M36	X	-1.537	-1.537	0	%100
32	M36	Z	-.887	-.887	0	%100
33	M37	X	-1.537	-1.537	0	%100
34	M37	Z	-.887	-.887	0	%100
35	M38	X	-1.537	-1.537	0	%100
36	M38	Z	-.887	-.887	0	%100
37	M39	X	-1.537	-1.537	0	%100
38	M39	Z	-.887	-.887	0	%100
39	M40	X	-2.152	-2.152	0	%100
40	M40	Z	-1.242	-1.242	0	%100
41	M41	X	-2.152	-2.152	0	%100
42	M41	Z	-1.242	-1.242	0	%100
43	M42	X	-1.481	-1.481	0	%100
44	M42	Z	-.855	-.855	0	%100
45	M43	X	-1.33	-1.33	0	%100
46	M43	Z	-.768	-.768	0	%100
47	M44	X	-2.189	-2.189	0	%100
48	M44	Z	-1.264	-1.264	0	%100
49	M45	X	-2.238	-2.238	0	%100
50	M45	Z	-1.292	-1.292	0	%100
51	M46	X	-2.144	-2.144	0	%100
52	M46	Z	-1.238	-1.238	0	%100
53	M47	X	-2.144	-2.144	0	%100
54	M47	Z	-1.238	-1.238	0	%100

Member Distributed Loads (BLC 63 : Structure Wi (300 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
55	M48	X	-2.144	-2.144	0	%100
56	M48	Z	-1.238	-1.238	0	%100
57	M49	X	-2.144	-2.144	0	%100
58	M49	Z	-1.238	-1.238	0	%100
59	M50	X	-1.659	-1.659	0	%100
60	M50	Z	-.958	-.958	0	%100

Member Distributed Loads (BLC 64 : Structure Wi (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.339	-1.339	0	%100
2	M1	Z	-2.32	-2.32	0	%100
3	M2	X	-1.339	-1.339	0	%100
4	M2	Z	-2.32	-2.32	0	%100
5	MP4A	X	-1.613	-1.613	0	%100
6	MP4A	Z	-2.793	-2.793	0	%100
7	MP3A	X	-1.613	-1.613	0	%100
8	MP3A	Z	-2.793	-2.793	0	%100
9	MP2A	X	-1.617	-1.617	0	%100
10	MP2A	Z	-2.801	-2.801	0	%100
11	MP1A	X	-1.613	-1.613	0	%100
12	MP1A	Z	-2.793	-2.793	0	%100
13	M23	X	-.033	-.033	0	%100
14	M23	Z	-.057	-.057	0	%100
15	M24	X	-.591	-.591	0	%100
16	M24	Z	-1.023	-1.023	0	%100
17	M25	X	-.591	-.591	0	%100
18	M25	Z	-1.023	-1.023	0	%100
19	M26	X	-.033	-.033	0	%100
20	M26	Z	-.057	-.057	0	%100
21	M29	X	-2.08	-2.08	0	%100
22	M29	Z	-3.603	-3.603	0	%100
23	M32	X	-.076	-.076	0	%100
24	M32	Z	-.133	-.133	0	%100
25	M33	X	-1.472	-1.472	0	%100
26	M33	Z	-2.55	-2.55	0	%100
27	M34	X	-1.472	-1.472	0	%100
28	M34	Z	-2.55	-2.55	0	%100
29	M35	X	-.076	-.076	0	%100
30	M35	Z	-.133	-.133	0	%100
31	M36	X	-1.287	-1.287	0	%100
32	M36	Z	-2.229	-2.229	0	%100
33	M37	X	-1.287	-1.287	0	%100
34	M37	Z	-2.229	-2.229	0	%100
35	M38	X	-1.287	-1.287	0	%100
36	M38	Z	-2.229	-2.229	0	%100
37	M39	X	-1.287	-1.287	0	%100
38	M39	Z	-2.229	-2.229	0	%100
39	M40	X	-1.242	-1.242	0	%100
40	M40	Z	-2.152	-2.152	0	%100
41	M41	X	-1.242	-1.242	0	%100
42	M41	Z	-2.152	-2.152	0	%100
43	M42	X	-.833	-.833	0	%100
44	M42	Z	-1.444	-1.444	0	%100
45	M43	X	-.743	-.743	0	%100
46	M43	Z	-1.286	-1.286	0	%100
47	M44	X	-1.239	-1.239	0	%100
48	M44	Z	-2.146	-2.146	0	%100
49	M45	X	-1.27	-1.27	0	%100

Member Distributed Loads (BLC 64 : Structure Wi (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
50	M45	Z	-2.2	-2.2	0	%100
51	M46	X	-1.238	-1.238	0	%100
52	M46	Z	-2.144	-2.144	0	%100
53	M47	X	-1.238	-1.238	0	%100
54	M47	Z	-2.144	-2.144	0	%100
55	M48	X	-1.238	-1.238	0	%100
56	M48	Z	-2.144	-2.144	0	%100
57	M49	X	-1.238	-1.238	0	%100
58	M49	Z	-2.144	-2.144	0	%100
59	M50	X	-.195	-.195	0	%100
60	M50	Z	-.338	-.338	0	%100

Member Distributed Loads (BLC 65 : Structure Wm (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-.697	-.697	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-.697	-.697	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	-.575	-.575	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	-.575	-.575	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-.575	-.575	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	-.575	-.575	0	%100
13	M23	X	0	0	0	%100
14	M23	Z	-.057	-.057	0	%100
15	M24	X	0	0	0	%100
16	M24	Z	-.057	-.057	0	%100
17	M25	X	0	0	0	%100
18	M25	Z	-.057	-.057	0	%100
19	M26	X	0	0	0	%100
20	M26	Z	-.057	-.057	0	%100
21	M29	X	0	0	0	%100
22	M29	Z	-.732	-.732	0	%100
23	M32	X	0	0	0	%100
24	M32	Z	-.263	-.263	0	%100
25	M33	X	0	0	0	%100
26	M33	Z	-.263	-.263	0	%100
27	M34	X	0	0	0	%100
28	M34	Z	-.263	-.263	0	%100
29	M35	X	0	0	0	%100
30	M35	Z	-.263	-.263	0	%100
31	M36	X	0	0	0	%100
32	M36	Z	-.727	-.727	0	%100
33	M37	X	0	0	0	%100
34	M37	Z	-.727	-.727	0	%100
35	M38	X	0	0	0	%100
36	M38	Z	-.727	-.727	0	%100
37	M39	X	0	0	0	%100
38	M39	Z	-.727	-.727	0	%100
39	M40	X	0	0	0	%100
40	M40	Z	-.444	-.444	0	%100
41	M41	X	0	0	0	%100
42	M41	Z	-.444	-.444	0	%100
43	M42	X	0	0	0	%100
44	M42	Z	-.318	-.318	0	%100

Member Distributed Loads (BLC 65 : Structure Wm (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
45	M43	X	0	0	0	%100
46	M43	Z	-.305	-.305	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	-.305	-.305	0	%100
49	M45	X	0	0	0	%100
50	M45	Z	-.318	-.318	0	%100
51	M46	X	0	0	0	%100
52	M46	Z	-.396	-.396	0	%100
53	M47	X	0	0	0	%100
54	M47	Z	-.396	-.396	0	%100
55	M48	X	0	0	0	%100
56	M48	Z	-.396	-.396	0	%100
57	M49	X	0	0	0	%100
58	M49	Z	-.396	-.396	0	%100
59	M50	X	0	0	0	%100
60	M50	Z	-.016	-.016	0	%100

Member Distributed Loads (BLC 66 : Structure Wm (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.261	.261	0	%100
2	M1	Z	-.452	-.452	0	%100
3	M2	X	.261	.261	0	%100
4	M2	Z	-.452	-.452	0	%100
5	MP4A	X	.288	.288	0	%100
6	MP4A	Z	-.498	-.498	0	%100
7	MP3A	X	.288	.288	0	%100
8	MP3A	Z	-.498	-.498	0	%100
9	MP2A	X	.288	.288	0	%100
10	MP2A	Z	-.498	-.498	0	%100
11	MP1A	X	.288	.288	0	%100
12	MP1A	Z	-.498	-.498	0	%100
13	M23	X	.055	.055	0	%100
14	M23	Z	-.096	-.096	0	%100
15	M24	X	.003	.003	0	%100
16	M24	Z	-.005	-.005	0	%100
17	M25	X	.003	.003	0	%100
18	M25	Z	-.005	-.005	0	%100
19	M26	X	.055	.055	0	%100
20	M26	Z	-.096	-.096	0	%100
21	M29	X	.366	.366	0	%100
22	M29	Z	-.634	-.634	0	%100
23	M32	X	.262	.262	0	%100
24	M32	Z	-.454	-.454	0	%100
25	M33	X	.014	.014	0	%100
26	M33	Z	-.024	-.024	0	%100
27	M34	X	.014	.014	0	%100
28	M34	Z	-.024	-.024	0	%100
29	M35	X	.262	.262	0	%100
30	M35	Z	-.454	-.454	0	%100
31	M36	X	.292	.292	0	%100
32	M36	Z	-.505	-.505	0	%100
33	M37	X	.292	.292	0	%100
34	M37	Z	-.505	-.505	0	%100
35	M38	X	.292	.292	0	%100
36	M38	Z	-.505	-.505	0	%100
37	M39	X	.292	.292	0	%100
38	M39	Z	-.505	-.505	0	%100
39	M40	X	.222	.222	0	%100

Member Distributed Loads (BLC 66 : Structure Wm (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
40	M40	Z	-.384	-.384	0	%100
41	M41	X	.222	.222	0	%100
42	M41	Z	-.384	-.384	0	%100
43	M42	X	.194	.194	0	%100
44	M42	Z	-.336	-.336	0	%100
45	M43	X	.193	.193	0	%100
46	M43	Z	-.334	-.334	0	%100
47	M44	X	.116	.116	0	%100
48	M44	Z	-.2	-.2	0	%100
49	M45	X	.127	.127	0	%100
50	M45	Z	-.221	-.221	0	%100
51	M46	X	.198	.198	0	%100
52	M46	Z	-.343	-.343	0	%100
53	M47	X	.198	.198	0	%100
54	M47	Z	-.343	-.343	0	%100
55	M48	X	.198	.198	0	%100
56	M48	Z	-.343	-.343	0	%100
57	M49	X	.198	.198	0	%100
58	M49	Z	-.343	-.343	0	%100
59	M50	X	.117	.117	0	%100
60	M50	Z	-.203	-.203	0	%100

Member Distributed Loads (BLC 67 : Structure Wm (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.151	.151	0	%100
2	M1	Z	-.087	-.087	0	%100
3	M2	X	.151	.151	0	%100
4	M2	Z	-.087	-.087	0	%100
5	MP4A	X	.498	.498	0	%100
6	MP4A	Z	-.288	-.288	0	%100
7	MP3A	X	.498	.498	0	%100
8	MP3A	Z	-.288	-.288	0	%100
9	MP2A	X	.498	.498	0	%100
10	MP2A	Z	-.288	-.288	0	%100
11	MP1A	X	.498	.498	0	%100
12	MP1A	Z	-.288	-.288	0	%100
13	M23	X	.1	.1	0	%100
14	M23	Z	-.057	-.057	0	%100
15	M24	X	.009	.009	0	%100
16	M24	Z	-.005	-.005	0	%100
17	M25	X	.009	.009	0	%100
18	M25	Z	-.005	-.005	0	%100
19	M26	X	.1	.1	0	%100
20	M26	Z	-.057	-.057	0	%100
21	M29	X	.634	.634	0	%100
22	M29	Z	-.366	-.366	0	%100
23	M32	X	.475	.475	0	%100
24	M32	Z	-.274	-.274	0	%100
25	M33	X	.045	.045	0	%100
26	M33	Z	-.026	-.026	0	%100
27	M34	X	.045	.045	0	%100
28	M34	Z	-.026	-.026	0	%100
29	M35	X	.475	.475	0	%100
30	M35	Z	-.274	-.274	0	%100
31	M36	X	.256	.256	0	%100
32	M36	Z	-.148	-.148	0	%100
33	M37	X	.256	.256	0	%100
34	M37	Z	-.148	-.148	0	%100

Member Distributed Loads (BLC 67 : Structure Wm (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
35	M38	X	.256	.256	0	%100
36	M38	Z	-.148	-.148	0	%100
37	M39	X	.256	.256	0	%100
38	M39	Z	-.148	-.148	0	%100
39	M40	X	.384	.384	0	%100
40	M40	Z	-.222	-.222	0	%100
41	M41	X	.384	.384	0	%100
42	M41	Z	-.222	-.222	0	%100
43	M42	X	.342	.342	0	%100
44	M42	Z	-.197	-.197	0	%100
45	M43	X	.341	.341	0	%100
46	M43	Z	-.197	-.197	0	%100
47	M44	X	.207	.207	0	%100
48	M44	Z	-.12	-.12	0	%100
49	M45	X	.226	.226	0	%100
50	M45	Z	-.131	-.131	0	%100
51	M46	X	.343	.343	0	%100
52	M46	Z	-.198	-.198	0	%100
53	M47	X	.343	.343	0	%100
54	M47	Z	-.198	-.198	0	%100
55	M48	X	.343	.343	0	%100
56	M48	Z	-.198	-.198	0	%100
57	M49	X	.343	.343	0	%100
58	M49	Z	-.198	-.198	0	%100
59	M50	X	.438	.438	0	%100
60	M50	Z	-.253	-.253	0	%100

Member Distributed Loads (BLC 68 : Structure Wm (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP4A	X	.575	.575	0	%100
6	MP4A	Z	0	0	0	%100
7	MP3A	X	.575	.575	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	.575	.575	0	%100
10	MP2A	Z	0	0	0	%100
11	MP1A	X	.575	.575	0	%100
12	MP1A	Z	0	0	0	%100
13	M23	X	.065	.065	0	%100
14	M23	Z	0	0	0	%100
15	M24	X	.065	.065	0	%100
16	M24	Z	0	0	0	%100
17	M25	X	.065	.065	0	%100
18	M25	Z	0	0	0	%100
19	M26	X	.065	.065	0	%100
20	M26	Z	0	0	0	%100
21	M29	X	.732	.732	0	%100
22	M29	Z	0	0	0	%100
23	M32	X	.312	.312	0	%100
24	M32	Z	0	0	0	%100
25	M33	X	.312	.312	0	%100
26	M33	Z	0	0	0	%100
27	M34	X	.312	.312	0	%100
28	M34	Z	0	0	0	%100
29	M35	X	.312	.312	0	%100

Member Distributed Loads (BLC 68 : Structure Wm (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
30	M35	Z	0	0	0	%100
31	M36	X	.151	.151	0	%100
32	M36	Z	0	0	0	%100
33	M37	X	.151	.151	0	%100
34	M37	Z	0	0	0	%100
35	M38	X	.151	.151	0	%100
36	M38	Z	0	0	0	%100
37	M39	X	.151	.151	0	%100
38	M39	Z	0	0	0	%100
39	M40	X	.444	.444	0	%100
40	M40	Z	0	0	0	%100
41	M41	X	.444	.444	0	%100
42	M41	Z	0	0	0	%100
43	M42	X	.331	.331	0	%100
44	M42	Z	0	0	0	%100
45	M43	X	.321	.321	0	%100
46	M43	Z	0	0	0	%100
47	M44	X	.321	.321	0	%100
48	M44	Z	0	0	0	%100
49	M45	X	.331	.331	0	%100
50	M45	Z	0	0	0	%100
51	M46	X	.396	.396	0	%100
52	M46	Z	0	0	0	%100
53	M47	X	.396	.396	0	%100
54	M47	Z	0	0	0	%100
55	M48	X	.396	.396	0	%100
56	M48	Z	0	0	0	%100
57	M49	X	.396	.396	0	%100
58	M49	Z	0	0	0	%100
59	M50	X	.559	.559	0	%100
60	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 69 : Structure Wm (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.151	.151	0	%100
2	M1	Z	.087	.087	0	%100
3	M2	X	.151	.151	0	%100
4	M2	Z	.087	.087	0	%100
5	MP4A	X	.498	.498	0	%100
6	MP4A	Z	.288	.288	0	%100
7	MP3A	X	.498	.498	0	%100
8	MP3A	Z	.288	.288	0	%100
9	MP2A	X	.498	.498	0	%100
10	MP2A	Z	.288	.288	0	%100
11	MP1A	X	.498	.498	0	%100
12	MP1A	Z	.288	.288	0	%100
13	M23	X	.009	.009	0	%100
14	M23	Z	.005	.005	0	%100
15	M24	X	.1	.1	0	%100
16	M24	Z	.057	.057	0	%100
17	M25	X	.1	.1	0	%100
18	M25	Z	.057	.057	0	%100
19	M26	X	.009	.009	0	%100
20	M26	Z	.005	.005	0	%100
21	M29	X	.634	.634	0	%100
22	M29	Z	.366	.366	0	%100
23	M32	X	.045	.045	0	%100
24	M32	Z	.026	.026	0	%100

Member Distributed Loads (BLC 69 : Structure Wm (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
25	M33	X	.475	.475	0	%100
26	M33	Z	.274	.274	0	%100
27	M34	X	.475	.475	0	%100
28	M34	Z	.274	.274	0	%100
29	M35	X	.045	.045	0	%100
30	M35	Z	.026	.026	0	%100
31	M36	X	.256	.256	0	%100
32	M36	Z	.148	.148	0	%100
33	M37	X	.256	.256	0	%100
34	M37	Z	.148	.148	0	%100
35	M38	X	.256	.256	0	%100
36	M38	Z	.148	.148	0	%100
37	M39	X	.256	.256	0	%100
38	M39	Z	.148	.148	0	%100
39	M40	X	.384	.384	0	%100
40	M40	Z	.222	.222	0	%100
41	M41	X	.384	.384	0	%100
42	M41	Z	.222	.222	0	%100
43	M42	X	.226	.226	0	%100
44	M42	Z	.131	.131	0	%100
45	M43	X	.207	.207	0	%100
46	M43	Z	.12	.12	0	%100
47	M44	X	.341	.341	0	%100
48	M44	Z	.197	.197	0	%100
49	M45	X	.342	.342	0	%100
50	M45	Z	.197	.197	0	%100
51	M46	X	.343	.343	0	%100
52	M46	Z	.198	.198	0	%100
53	M47	X	.343	.343	0	%100
54	M47	Z	.198	.198	0	%100
55	M48	X	.343	.343	0	%100
56	M48	Z	.198	.198	0	%100
57	M49	X	.343	.343	0	%100
58	M49	Z	.198	.198	0	%100
59	M50	X	.295	.295	0	%100
60	M50	Z	.17	.17	0	%100

Member Distributed Loads (BLC 70 : Structure Wm (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.261	.261	0	%100
2	M1	Z	.452	.452	0	%100
3	M2	X	.261	.261	0	%100
4	M2	Z	.452	.452	0	%100
5	MP4A	X	.288	.288	0	%100
6	MP4A	Z	.498	.498	0	%100
7	MP3A	X	.288	.288	0	%100
8	MP3A	Z	.498	.498	0	%100
9	MP2A	X	.288	.288	0	%100
10	MP2A	Z	.498	.498	0	%100
11	MP1A	X	.288	.288	0	%100
12	MP1A	Z	.498	.498	0	%100
13	M23	X	.003	.003	0	%100
14	M23	Z	.005	.005	0	%100
15	M24	X	.055	.055	0	%100
16	M24	Z	.096	.096	0	%100
17	M25	X	.055	.055	0	%100
18	M25	Z	.096	.096	0	%100
19	M26	X	.003	.003	0	%100

Member Distributed Loads (BLC 70 : Structure Wm (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
20	M26	Z	.005	.005	0	%100
21	M29	X	.366	.366	0	%100
22	M29	Z	.634	.634	0	%100
23	M32	X	.014	.014	0	%100
24	M32	Z	.024	.024	0	%100
25	M33	X	.262	.262	0	%100
26	M33	Z	.454	.454	0	%100
27	M34	X	.262	.262	0	%100
28	M34	Z	.454	.454	0	%100
29	M35	X	.014	.014	0	%100
30	M35	Z	.024	.024	0	%100
31	M36	X	.292	.292	0	%100
32	M36	Z	.505	.505	0	%100
33	M37	X	.292	.292	0	%100
34	M37	Z	.505	.505	0	%100
35	M38	X	.292	.292	0	%100
36	M38	Z	.505	.505	0	%100
37	M39	X	.292	.292	0	%100
38	M39	Z	.505	.505	0	%100
39	M40	X	.222	.222	0	%100
40	M40	Z	.384	.384	0	%100
41	M41	X	.222	.222	0	%100
42	M41	Z	.384	.384	0	%100
43	M42	X	.127	.127	0	%100
44	M42	Z	.221	.221	0	%100
45	M43	X	.116	.116	0	%100
46	M43	Z	.2	.2	0	%100
47	M44	X	.193	.193	0	%100
48	M44	Z	.334	.334	0	%100
49	M45	X	.194	.194	0	%100
50	M45	Z	.336	.336	0	%100
51	M46	X	.198	.198	0	%100
52	M46	Z	.343	.343	0	%100
53	M47	X	.198	.198	0	%100
54	M47	Z	.343	.343	0	%100
55	M48	X	.198	.198	0	%100
56	M48	Z	.343	.343	0	%100
57	M49	X	.198	.198	0	%100
58	M49	Z	.343	.343	0	%100
59	M50	X	.035	.035	0	%100
60	M50	Z	.06	.06	0	%100

Member Distributed Loads (BLC 71 : Structure Wm (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	.697	.697	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	.697	.697	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	.575	.575	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	.575	.575	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	.575	.575	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	.575	.575	0	%100
13	M23	X	0	0	0	%100
14	M23	Z	.057	.057	0	%100

Member Distributed Loads (BLC 71 : Structure Wm (180 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
15	M24	X	0	0	0	%100
16	M24	Z	.057	.057	0	%100
17	M25	X	0	0	0	%100
18	M25	Z	.057	.057	0	%100
19	M26	X	0	0	0	%100
20	M26	Z	.057	.057	0	%100
21	M29	X	0	0	0	%100
22	M29	Z	.732	.732	0	%100
23	M32	X	0	0	0	%100
24	M32	Z	.263	.263	0	%100
25	M33	X	0	0	0	%100
26	M33	Z	.263	.263	0	%100
27	M34	X	0	0	0	%100
28	M34	Z	.263	.263	0	%100
29	M35	X	0	0	0	%100
30	M35	Z	.263	.263	0	%100
31	M36	X	0	0	0	%100
32	M36	Z	.727	.727	0	%100
33	M37	X	0	0	0	%100
34	M37	Z	.727	.727	0	%100
35	M38	X	0	0	0	%100
36	M38	Z	.727	.727	0	%100
37	M39	X	0	0	0	%100
38	M39	Z	.727	.727	0	%100
39	M40	X	0	0	0	%100
40	M40	Z	.444	.444	0	%100
41	M41	X	0	0	0	%100
42	M41	Z	.444	.444	0	%100
43	M42	X	0	0	0	%100
44	M42	Z	.318	.318	0	%100
45	M43	X	0	0	0	%100
46	M43	Z	.305	.305	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	.305	.305	0	%100
49	M45	X	0	0	0	%100
50	M45	Z	.318	.318	0	%100
51	M46	X	0	0	0	%100
52	M46	Z	.396	.396	0	%100
53	M47	X	0	0	0	%100
54	M47	Z	.396	.396	0	%100
55	M48	X	0	0	0	%100
56	M48	Z	.396	.396	0	%100
57	M49	X	0	0	0	%100
58	M49	Z	.396	.396	0	%100
59	M50	X	0	0	0	%100
60	M50	Z	.016	.016	0	%100

Member Distributed Loads (BLC 72 : Structure Wm (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.261	-.261	0	%100
2	M1	Z	.452	.452	0	%100
3	M2	X	-.261	-.261	0	%100
4	M2	Z	.452	.452	0	%100
5	MP4A	X	-.288	-.288	0	%100
6	MP4A	Z	.498	.498	0	%100
7	MP3A	X	-.288	-.288	0	%100
8	MP3A	Z	.498	.498	0	%100
9	MP2A	X	-.288	-.288	0	%100

Member Distributed Loads (BLC 72 : Structure Wm (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
10	MP2A	Z	.498	.498	0	%100
11	MP1A	X	-.288	-.288	0	%100
12	MP1A	Z	.498	.498	0	%100
13	M23	X	-.055	-.055	0	%100
14	M23	Z	.096	.096	0	%100
15	M24	X	-.003	-.003	0	%100
16	M24	Z	.005	.005	0	%100
17	M25	X	-.003	-.003	0	%100
18	M25	Z	.005	.005	0	%100
19	M26	X	-.055	-.055	0	%100
20	M26	Z	.096	.096	0	%100
21	M29	X	-.366	-.366	0	%100
22	M29	Z	.634	.634	0	%100
23	M32	X	-.262	-.262	0	%100
24	M32	Z	.454	.454	0	%100
25	M33	X	-.014	-.014	0	%100
26	M33	Z	.024	.024	0	%100
27	M34	X	-.014	-.014	0	%100
28	M34	Z	.024	.024	0	%100
29	M35	X	-.262	-.262	0	%100
30	M35	Z	.454	.454	0	%100
31	M36	X	-.292	-.292	0	%100
32	M36	Z	.505	.505	0	%100
33	M37	X	-.292	-.292	0	%100
34	M37	Z	.505	.505	0	%100
35	M38	X	-.292	-.292	0	%100
36	M38	Z	.505	.505	0	%100
37	M39	X	-.292	-.292	0	%100
38	M39	Z	.505	.505	0	%100
39	M40	X	-.222	-.222	0	%100
40	M40	Z	.384	.384	0	%100
41	M41	X	-.222	-.222	0	%100
42	M41	Z	.384	.384	0	%100
43	M42	X	-.194	-.194	0	%100
44	M42	Z	.336	.336	0	%100
45	M43	X	-.193	-.193	0	%100
46	M43	Z	.334	.334	0	%100
47	M44	X	-.116	-.116	0	%100
48	M44	Z	.2	.2	0	%100
49	M45	X	-.127	-.127	0	%100
50	M45	Z	.221	.221	0	%100
51	M46	X	-.198	-.198	0	%100
52	M46	Z	.343	.343	0	%100
53	M47	X	-.198	-.198	0	%100
54	M47	Z	.343	.343	0	%100
55	M48	X	-.198	-.198	0	%100
56	M48	Z	.343	.343	0	%100
57	M49	X	-.198	-.198	0	%100
58	M49	Z	.343	.343	0	%100
59	M50	X	-.117	-.117	0	%100
60	M50	Z	.203	.203	0	%100

Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.151	-.151	0	%100
2	M1	Z	.087	.087	0	%100
3	M2	X	-.151	-.151	0	%100
4	M2	Z	.087	.087	0	%100

Member Distributed Loads (BLC 73 : Structure Wm (240 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
5	MP4A	X	-.498	-.498	0	%100
6	MP4A	Z	.288	.288	0	%100
7	MP3A	X	-.498	-.498	0	%100
8	MP3A	Z	.288	.288	0	%100
9	MP2A	X	-.498	-.498	0	%100
10	MP2A	Z	.288	.288	0	%100
11	MP1A	X	-.498	-.498	0	%100
12	MP1A	Z	.288	.288	0	%100
13	M23	X	-.1	-.1	0	%100
14	M23	Z	.057	.057	0	%100
15	M24	X	-.009	-.009	0	%100
16	M24	Z	.005	.005	0	%100
17	M25	X	-.009	-.009	0	%100
18	M25	Z	.005	.005	0	%100
19	M26	X	-.1	-.1	0	%100
20	M26	Z	.057	.057	0	%100
21	M29	X	-.634	-.634	0	%100
22	M29	Z	.366	.366	0	%100
23	M32	X	-.475	-.475	0	%100
24	M32	Z	.274	.274	0	%100
25	M33	X	-.045	-.045	0	%100
26	M33	Z	.026	.026	0	%100
27	M34	X	-.045	-.045	0	%100
28	M34	Z	.026	.026	0	%100
29	M35	X	-.475	-.475	0	%100
30	M35	Z	.274	.274	0	%100
31	M36	X	-.256	-.256	0	%100
32	M36	Z	.148	.148	0	%100
33	M37	X	-.256	-.256	0	%100
34	M37	Z	.148	.148	0	%100
35	M38	X	-.256	-.256	0	%100
36	M38	Z	.148	.148	0	%100
37	M39	X	-.256	-.256	0	%100
38	M39	Z	.148	.148	0	%100
39	M40	X	-.384	-.384	0	%100
40	M40	Z	.222	.222	0	%100
41	M41	X	-.384	-.384	0	%100
42	M41	Z	.222	.222	0	%100
43	M42	X	-.342	-.342	0	%100
44	M42	Z	.197	.197	0	%100
45	M43	X	-.341	-.341	0	%100
46	M43	Z	.197	.197	0	%100
47	M44	X	-.207	-.207	0	%100
48	M44	Z	.12	.12	0	%100
49	M45	X	-.226	-.226	0	%100
50	M45	Z	.131	.131	0	%100
51	M46	X	-.343	-.343	0	%100
52	M46	Z	.198	.198	0	%100
53	M47	X	-.343	-.343	0	%100
54	M47	Z	.198	.198	0	%100
55	M48	X	-.343	-.343	0	%100
56	M48	Z	.198	.198	0	%100
57	M49	X	-.343	-.343	0	%100
58	M49	Z	.198	.198	0	%100
59	M50	X	-.438	-.438	0	%100
60	M50	Z	.253	.253	0	%100

Member Distributed Loads (BLC 74 : Structure Wm (270 Deg))

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 74 : Structure Wm (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP4A	X	-.575	-.575	0	%100
6	MP4A	Z	0	0	0	%100
7	MP3A	X	-.575	-.575	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	-.575	-.575	0	%100
10	MP2A	Z	0	0	0	%100
11	MP1A	X	-.575	-.575	0	%100
12	MP1A	Z	0	0	0	%100
13	M23	X	-.065	-.065	0	%100
14	M23	Z	0	0	0	%100
15	M24	X	-.065	-.065	0	%100
16	M24	Z	0	0	0	%100
17	M25	X	-.065	-.065	0	%100
18	M25	Z	0	0	0	%100
19	M26	X	-.065	-.065	0	%100
20	M26	Z	0	0	0	%100
21	M29	X	-.732	-.732	0	%100
22	M29	Z	0	0	0	%100
23	M32	X	-.312	-.312	0	%100
24	M32	Z	0	0	0	%100
25	M33	X	-.312	-.312	0	%100
26	M33	Z	0	0	0	%100
27	M34	X	-.312	-.312	0	%100
28	M34	Z	0	0	0	%100
29	M35	X	-.312	-.312	0	%100
30	M35	Z	0	0	0	%100
31	M36	X	-.151	-.151	0	%100
32	M36	Z	0	0	0	%100
33	M37	X	-.151	-.151	0	%100
34	M37	Z	0	0	0	%100
35	M38	X	-.151	-.151	0	%100
36	M38	Z	0	0	0	%100
37	M39	X	-.151	-.151	0	%100
38	M39	Z	0	0	0	%100
39	M40	X	-.444	-.444	0	%100
40	M40	Z	0	0	0	%100
41	M41	X	-.444	-.444	0	%100
42	M41	Z	0	0	0	%100
43	M42	X	-.331	-.331	0	%100
44	M42	Z	0	0	0	%100
45	M43	X	-.321	-.321	0	%100
46	M43	Z	0	0	0	%100
47	M44	X	-.321	-.321	0	%100
48	M44	Z	0	0	0	%100
49	M45	X	-.331	-.331	0	%100
50	M45	Z	0	0	0	%100
51	M46	X	-.396	-.396	0	%100
52	M46	Z	0	0	0	%100
53	M47	X	-.396	-.396	0	%100
54	M47	Z	0	0	0	%100
55	M48	X	-.396	-.396	0	%100
56	M48	Z	0	0	0	%100
57	M49	X	-.396	-.396	0	%100
58	M49	Z	0	0	0	%100
59	M50	X	-.559	-.559	0	%100

Member Distributed Loads (BLC 74 : Structure Wm (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
60	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 75 : Structure Wm (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.151	-.151	0	%100
2	M1	Z	-.087	-.087	0	%100
3	M2	X	-.151	-.151	0	%100
4	M2	Z	-.087	-.087	0	%100
5	MP4A	X	-.498	-.498	0	%100
6	MP4A	Z	-.288	-.288	0	%100
7	MP3A	X	-.498	-.498	0	%100
8	MP3A	Z	-.288	-.288	0	%100
9	MP2A	X	-.498	-.498	0	%100
10	MP2A	Z	-.288	-.288	0	%100
11	MP1A	X	-.498	-.498	0	%100
12	MP1A	Z	-.288	-.288	0	%100
13	M23	X	-.009	-.009	0	%100
14	M23	Z	-.005	-.005	0	%100
15	M24	X	-.1	-.1	0	%100
16	M24	Z	-.057	-.057	0	%100
17	M25	X	-.1	-.1	0	%100
18	M25	Z	-.057	-.057	0	%100
19	M26	X	-.009	-.009	0	%100
20	M26	Z	-.005	-.005	0	%100
21	M29	X	-.634	-.634	0	%100
22	M29	Z	-.366	-.366	0	%100
23	M32	X	-.045	-.045	0	%100
24	M32	Z	-.026	-.026	0	%100
25	M33	X	-.475	-.475	0	%100
26	M33	Z	-.274	-.274	0	%100
27	M34	X	-.475	-.475	0	%100
28	M34	Z	-.274	-.274	0	%100
29	M35	X	-.045	-.045	0	%100
30	M35	Z	-.026	-.026	0	%100
31	M36	X	-.256	-.256	0	%100
32	M36	Z	-.148	-.148	0	%100
33	M37	X	-.256	-.256	0	%100
34	M37	Z	-.148	-.148	0	%100
35	M38	X	-.256	-.256	0	%100
36	M38	Z	-.148	-.148	0	%100
37	M39	X	-.256	-.256	0	%100
38	M39	Z	-.148	-.148	0	%100
39	M40	X	-.384	-.384	0	%100
40	M40	Z	-.222	-.222	0	%100
41	M41	X	-.384	-.384	0	%100
42	M41	Z	-.222	-.222	0	%100
43	M42	X	-.226	-.226	0	%100
44	M42	Z	-.131	-.131	0	%100
45	M43	X	-.207	-.207	0	%100
46	M43	Z	-.12	-.12	0	%100
47	M44	X	-.341	-.341	0	%100
48	M44	Z	-.197	-.197	0	%100
49	M45	X	-.342	-.342	0	%100
50	M45	Z	-.197	-.197	0	%100
51	M46	X	-.343	-.343	0	%100
52	M46	Z	-.198	-.198	0	%100
53	M47	X	-.343	-.343	0	%100
54	M47	Z	-.198	-.198	0	%100

Member Distributed Loads (BLC 75 : Structure Wm (300 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
55	M48	X	-.343	-.343	0	%100
56	M48	Z	-.198	-.198	0	%100
57	M49	X	-.343	-.343	0	%100
58	M49	Z	-.198	-.198	0	%100
59	M50	X	-.295	-.295	0	%100
60	M50	Z	-.17	-.17	0	%100

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.261	-.261	0	%100
2	M1	Z	-.452	-.452	0	%100
3	M2	X	-.261	-.261	0	%100
4	M2	Z	-.452	-.452	0	%100
5	MP4A	X	-.288	-.288	0	%100
6	MP4A	Z	-.498	-.498	0	%100
7	MP3A	X	-.288	-.288	0	%100
8	MP3A	Z	-.498	-.498	0	%100
9	MP2A	X	-.288	-.288	0	%100
10	MP2A	Z	-.498	-.498	0	%100
11	MP1A	X	-.288	-.288	0	%100
12	MP1A	Z	-.498	-.498	0	%100
13	M23	X	-.003	-.003	0	%100
14	M23	Z	-.005	-.005	0	%100
15	M24	X	-.055	-.055	0	%100
16	M24	Z	-.096	-.096	0	%100
17	M25	X	-.055	-.055	0	%100
18	M25	Z	-.096	-.096	0	%100
19	M26	X	-.003	-.003	0	%100
20	M26	Z	-.005	-.005	0	%100
21	M29	X	-.366	-.366	0	%100
22	M29	Z	-.634	-.634	0	%100
23	M32	X	-.014	-.014	0	%100
24	M32	Z	-.024	-.024	0	%100
25	M33	X	-.262	-.262	0	%100
26	M33	Z	-.454	-.454	0	%100
27	M34	X	-.262	-.262	0	%100
28	M34	Z	-.454	-.454	0	%100
29	M35	X	-.014	-.014	0	%100
30	M35	Z	-.024	-.024	0	%100
31	M36	X	-.292	-.292	0	%100
32	M36	Z	-.505	-.505	0	%100
33	M37	X	-.292	-.292	0	%100
34	M37	Z	-.505	-.505	0	%100
35	M38	X	-.292	-.292	0	%100
36	M38	Z	-.505	-.505	0	%100
37	M39	X	-.292	-.292	0	%100
38	M39	Z	-.505	-.505	0	%100
39	M40	X	-.222	-.222	0	%100
40	M40	Z	-.384	-.384	0	%100
41	M41	X	-.222	-.222	0	%100
42	M41	Z	-.384	-.384	0	%100
43	M42	X	-.127	-.127	0	%100
44	M42	Z	-.221	-.221	0	%100
45	M43	X	-.116	-.116	0	%100
46	M43	Z	-.2	-.2	0	%100
47	M44	X	-.193	-.193	0	%100
48	M44	Z	-.334	-.334	0	%100
49	M45	X	-.194	-.194	0	%100

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
50	M45	Z	-.336	-.336	0	%100
51	M46	X	-.198	-.198	0	%100
52	M46	Z	-.343	-.343	0	%100
53	M47	X	-.198	-.198	0	%100
54	M47	Z	-.343	-.343	0	%100
55	M48	X	-.198	-.198	0	%100
56	M48	Z	-.343	-.343	0	%100
57	M49	X	-.198	-.198	0	%100
58	M49	Z	-.343	-.343	0	%100
59	M50	X	-.035	-.035	0	%100
60	M50	Z	-.06	-.06	0	%100

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
No Data to Print ...						

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N51	max	1010.296	10	1155.019	21	157.138	2	1.106	8	.854	10	.728	10
2		min	-474.371	4	362.922	66	-2726.491	20	-.601	2	-.309	4	-.25	4
3	N52	max	443.129	34	1080.854	14	2793.205	14	1.269	2	.213	34	.641	4
4		min	-852.492	50	344.91	72	-408.133	8	-.713	8	-.766	40	-.164	10
5	N73	max	332.335	10	66.585	15	1539.938	11	0	75	0	75	0	75
6		min	-333.166	4	20.713	73	-1539.764	5	0	1	0	1	0	1
7	Totals:	max	1634.734	10	2285.346	23	2230.885	1						
8		min	-1634.734	4	732.026	67	-2230.883	7						

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
1	M1	PIPE 2.5	.173	3.5	8	.077	1.75		1	15797.3	50715	3.596	3.596	2...	H1-1b
2	M2	PIPE 2.5	.183	3.5	8	.085	10.25		29	15797.3	50715	3.596	3.596	2...	H1-1b
3	MP4A	PIPE 2.0	.112	4.375	50	.031	4.375		11	23808.54	32130	1.872	1.872	1...	H1-1b
4	MP3A	PIPE 2.0	.187	1.042	7	.105	1.042		5	23808.54	32130	1.872	1.872	1...	H1-1b
5	MP2A	PIPE 2.0	.104	4.375	5	.045	4.375		5	20866.733	32130	1.872	1.872	2...	H1-1b
6	MP1A	PIPE 2.0	.052	1.094	6	.039	4.375		9	23808.54	32130	1.872	1.872	2...	H1-1b
7	M23	PL1/2x3	.256	0	30	.058	.22	y	11	47751.05	48600	.506	3.038	1...	H1-1b
8	M24	PL1/2x3	.313	0	21	.080	.22	y	41	47751.05	48600	.506	3.038	1...	H1-1b
9	M25	PL1/2x3	.293	0	13	.073	.22	y	45	47751.05	48600	.506	3.038	1...	H1-1b
10	M26	PL1/2x3	.243	0	27	.054	0	y	11	47751.05	48600	.506	3.038	1...	H1-1b
11	M29	PIPE 4.0	.151	5.5	2	.155	5.5		14	83097.932	93240	10.631	10.631	3...	H1-1b
12	M32	PIPE 2.0	.204	5.682	30	.063	6.061		33	20683.13	32130	1.872	1.872	2...	H1-1b
13	M33	PIPE 2.0	.249	5.682	21	.107	.379		11	20683.13	32130	1.872	1.872	2...	H1-1b
14	M34	PIPE 2.0	.253	5.619	14	.211	.379		5	20683.13	32130	1.872	1.872	2...	H1-1b
15	M35	PIPE 2.0	.210	5.619	27	.091	.379		27	20683.13	32130	1.872	1.872	2...	H1-1b
16	M36	PL1/2x3	.250	0	5	.036	0	y	5	45624.276	48600	.506	3.038	1...	H1-1b
17	M37	PL1/2x3	.026	0	6	.018	0	y	11	45624.276	48600	.506	3.038	1...	H1-1b
18	M38	PL1/2x3	.123	.417	27	.042	.417	y	33	45624.276	48600	.506	3.038	1...	H1-1b
19	M39	PL1/2x3	.566	.417	5	.066	.417	y	3	45624.276	48600	.506	3.038	1...	H1-1b
20	M40	PIPE 2.0	.425	.521	5	.130	.495		11	29810.292	32130	1.872	1.872	1...	H1-1b
21	M41	PIPE 2.0	.011	0	30	.005	0		11	29810.292	32130	1.872	1.872	2...	H1-1b
22	M42	1.5x0.06	.110	2.125	14	.022	0		9	5120.798	8550.171	.327	.327	1...	H1-1b
23	M43	1.5x0.06	.076	1.958	14	.022	3.917		8	5531.936	8550.171	.327	.327	1...	H1-1b
24	M44	1.5x0.06	.108	1.958	24	.037	0		7	5531.936	8550.171	.327	.327	1...	H1-1b
25	M45	1.5x0.06	.263	2.081	24	.028	0		12	5120.798	8550.171	.327	.327	1...	H1-1a

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
26	M46	1.5x0.06	.213	1.806	22	.020	0		11	6237.383	8550.171	.327	.327	1...	H1-1a
27	M47	1.5x0.06	.124	3.333	24	.029	0		11	6237.383	8550.171	.327	.327	1...	H1-1b*
28	M48	1.5x0.06	.104	3.333	27	.019	0		11	6237.383	8550.171	.327	.327	1...	H1-1b*
29	M49	1.5x0.06	.173	3.333	29	.017	0		11	6237.383	8550.171	.327	.327	1...	H1-1b*
30	M50	PIPE 2.0	.671	9.394	10	.011	0		22	3023.78	32130	1.872	1.872	2...	H1-1a

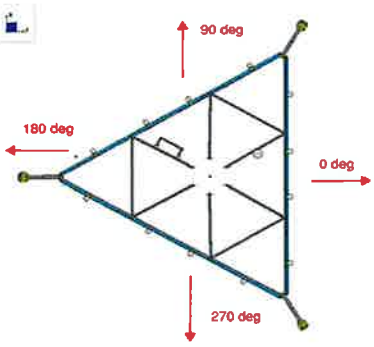
VzW SMART Tool© Vendor			
	Client:	Verizon Wireless	Date: 12/8/2023
	Site Name:	COLCHESTER CT	
	MDG #:	5000246052	
	Fuze ID #:	16281612	Page: 1

Version 2.00

I. Mount-to-Tower Connection Check

Custom Orientation Required — Yes

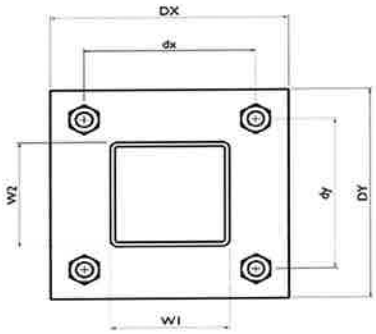
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N51	30
N52	30



Tower Connection Bolt Checks — Yes

Bolt Orientation — Parallel

Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	7
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	2
Bolt Type:	A307
Bolt Diameter (in):	0.5
Required Tensile Strength / bolt (kips):	3.0
Required Shear Strength / bolt (kips):	1.3
Tensile Capacity / bolt (kips):	6.6
Shear Capacity / bolt (kips):	4.0
Bolt Overall Utilization:	**45.4%**

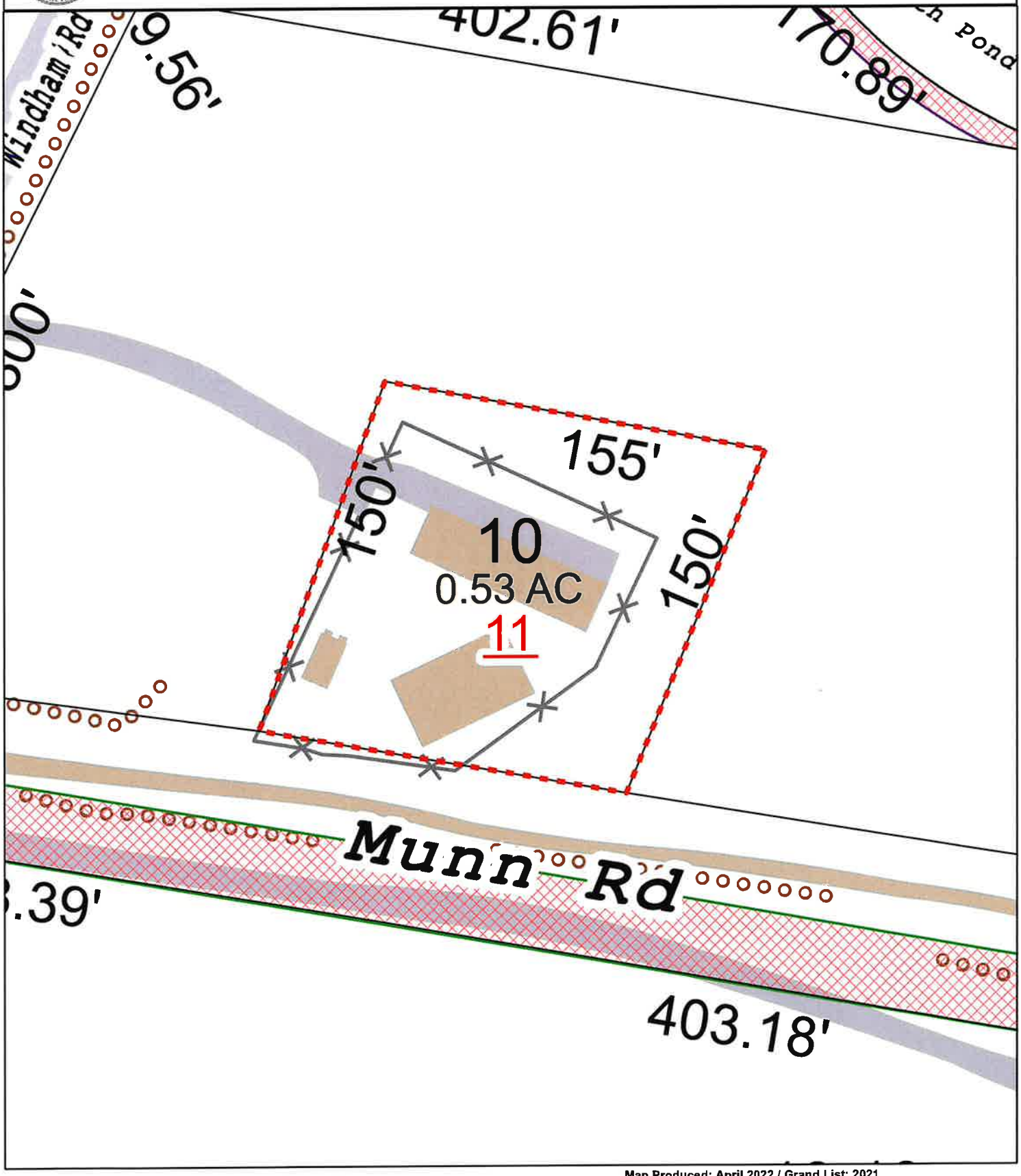


Tower Connection Baseplate Checks — No

Tower Connection Weld Checks | No

ATTACHMENT 5

Town of Colchester, Connecticut - Assessment Parcel Map
Parcel: 06-04-010-000
Address: 11 MUNN RD



Approximate Scale: **1 inch = 50 feet**
0 25 50 75 100 Feet

Map Produced: April 2022 / Grand List: 2021

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

Town of Colchester, CT

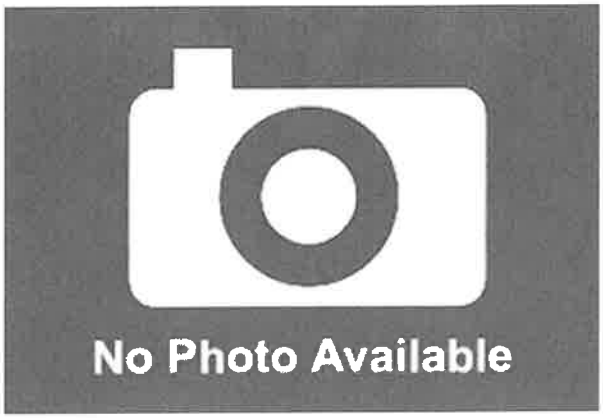
Property Report | Map Block Lot 06-04/010-000 | PID 5602 | Building # 1 | Section # 1 | Account C0515000

Property Information

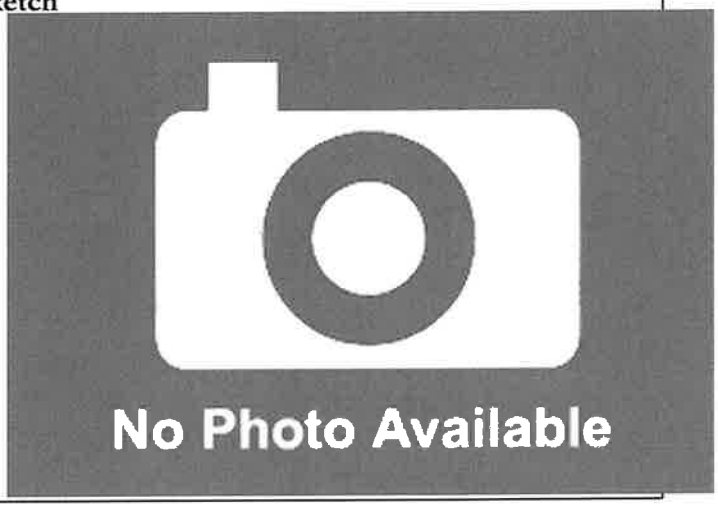
Property Location	11 MUNN RD
Owner	CONNECTICUT STATE OF
Co-Owner	na
Mailing Address	165 CAPITOL AVE HARTFORD CT 06106
Land Use	901V State MDL-00
Land Class	E
Zoning Code	R60
Census Tract	

Neighborhood	
Acreage	0.53
Utilities	UNKNOWN
Lot Setting/Desc	UNKNOWN UNKNOWN
Additional Info	

Photo



Sketch



Primary Construction Details

Year Built	0
Stories	
Building Style	UNKNOWN
Building Use	Vacant
Building Condition	
Interior Floors 1	
Interior Floors 2	NA
Total Rooms	0
Basement Garages	
Occupancy	
Building Grade	

Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	
AC Type	
Fireplaces	0

Exterior Walls	
Exterior Walls 2	NA
Interior Walls	
Interior Walls 2	NA
Heating Type	
Heating Fuel	
Sq. Ft. Basement	
Fin BSMT Quality	
Extra Kitchens	

Report Created On 6/15/2022

Town of Colchester, CT

Property Report | Map Block Lot 06-04/010-000 | PID 5602 | Building # 1 | Section # 1 | Account C0515000

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Improvements		
Outbuildings	0	0
Land	62800	44000
Total	62800	44000

Sub Areas

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

Outbuilding and Extra Features

Type	Description

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
CONNECTICUT STATE OF	0082/0250	1/7/2022	0

Report Created On 6/15/2022

ATTACHMENT 6

Verizon/Colchester (.5593)

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3	3	
	Postmaster, per *(name of receiving employee)*		

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CORRECTION
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07/16/2024 06105101
043M3220660
US POSTAGE
USPS
STATIONERS
OLD STATE HOUSE

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Bernie Dennler, First Selectman Town of Colchester 127 Norwich Avenue Colchester, CT 06415				
2.	Demian Sorrentino, Planning Director Town of Colchester 127 Norwich Avenue Colchester, CT 06415				
3.	State of Connecticut Department of Emergency Services and Public Protection 1111 Country Club Road Middletown, CT 06492				
4.					
5.					
6.					

See Reverse for Instructions