Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

January 7, 2021

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

RE: **Notice of Exempt Modification for T-Mobile:**
876362 - T-Mobile Site ID: CTNH518A
338 Oxford Road, Oxford, CT 06478
Latitude: 41° 25′ 40.77″ / Longitude: -73° 6′ 30.75″

Dear Ms. Bachman:

T-Mobile as Metro PCS currently maintains three (3) antennas at the 117-foot mount on the existing 150-foot Monopole Tower, located at 338 Oxford Road, Oxford, CT. The tower is owned by Crown Castle and the property is owned by John & Gina Kapusta. T-Mobile now intends to add three (3) new antennas 600/700 MHz antennas. The new antennas will be installed at the 117-ft level of the tower and will be capable of providing 5G services. T-Mobile is also proposing a mount replacement as shown on the enclosed Mount Analysis Report.

Planned Modifications:
Tower:

Install New:
(3) RFS-APXVAARR24_43-U-NA20 Antenna 600/700 MHz
(3) Radio 4449 B71/B12
(1) 1 5/8" Hybrid Fiber Line

Existing to Remain:
(6) 1 5/8" Coax
(3) RFSAPXV18-206517S-C-A20 Antenna 1900/2100 MHz

Ground:

Upgrade to existing ground cabinet. (Internally)

This facility was originally approved by the Town of Oxford through diligent inquiry was not fruitful in obtaining or producing the original zoning approval. Metro PCS was approved for tower sharing by the Siting Council on August 11, 2011. Unfortunately, the Council's tower share decision is not available online currently.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to The Honorable George Temple, First Selectman for the Town of Oxford, Steven S. Macary, Zoning Enforcement Official, Crown Castle as the tower owner, and John & Gina Kapusta as the property owners.

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

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

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

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

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

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

For the foregoing reasons, T-Mobile respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Anne Marie Zsamba.

Sincerely,

Anne Marie Zsamba
Site Acquisition Specialist
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
(201) 236-9224
AnneMarie.Zsamba@crowncastle.com

Attachments
cc:

The Honorable George Temple, First Selectman (*via email only to selectman@oxford-ct.gov*)
Oxford Town Hall
486 Oxford Road
Oxford, CT 06478

Steven S. Macary, Zoning Enforcement Official (*via email only to zoningenforce@oxford-ct.gov*)
Oxford Town Hall
486 Oxford Road
Oxford, CT 06478

John & Gina Kapusta, Property Owner (*via email only to gnrbraley@yahoo.com*)
338 Oxford Road
Oxford, CT 06478

Crown Castle, Tower Owner

From: Zsamba, Anne Marie
To: gnrbraley@yahoo.com
Subject: Notice of Exempt Modification - T-Mobile - 338 Oxford Rd, Oxford - 876362
Date: Thursday, January 7, 2021 9:19:00 AM
Attachments: EM-T-MOBILE-338 OXFORD RD_OXFORD-876362-CTNH518A-NOTICE.pdf

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Dear Mr. and Mrs. Kapusta, as the property owners of 338 Oxford Road:

Attached please find T-Mobile's exempt modification application that is being submitted to the Connecticut Siting Council today, January 7, 2021.

In light of the present circumstances with Covid-19, The Council has advised that electronic notification of this filing is acceptable. If you could kindly confirm receipt. Thank you.

Best,
Anne Marie Zsamba

ANNE MARIE ZSAMBA
Site Acquisition Specialist
T: (201) 236-9224
M: (518) 350-3639
F: (724) 416-6112

CROWN CASTLE
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
CrownCastle.com

From: Zsamba, Anne Marie
To: selectman@oxford-ct.gov
Subject: Notice of Exempt Modification - T-Mobile - 338 Oxford Rd, Oxford - 876362
Date: Thursday, January 7, 2021 9:18:00 AM
Attachments: EM-T-MOBILE-338 OXFORD RD_OXFORD-876362-CTNH518A-NOTICE.pdf

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Dear First Selectman Temple:

Attached please find T-Mobile's exempt modification application that is being submitted to the Connecticut Siting Council today, January 7, 2021.

In light of the present circumstances with Covid-19, The Council has advised that electronic notification of this filing is acceptable. If you could kindly confirm receipt. Thank you.

Best,
Anne Marie Zsamba

ANNE MARIE ZSAMBA
Site Acquisition Specialist
T: (201) 236-9224
M: (518) 350-3639
F: (724) 416-6112

CROWN CASTLE
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
CrownCastle.com

From:	Zsamba, Anne Marie
To:	zoningenforce@oxford-ct.gov
Subject:	Notice of Exempt Modification - T-Mobile - 338 Oxford Rd, Oxford - 876362
Date:	Thursday, January 7, 2021 9:19:00 AM
Attachments:	EM-T-MOBILE-338 OXFORD RD_OXFORD-876362-CTNH518A-NOTICE.pdf

Dear ZEO Macary:

Attached please find T-Mobile's exempt modification application that is being submitted to the Connecticut Siting Council today, January 7, 2021.

In light of the present circumstances with Covid-19, The Council has advised that electronic notification of this filing is acceptable. If you could kindly confirm receipt. Thank you.

Best,
Anne Marie Zsamba

ANNE MARIE ZSAMBA
Site Acquisition Specialist
T: (201) 236-9224
M: (518) 350-3639
F: (724) 416-6112

CROWN CASTLE
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
CrownCastle.com

Exhibit A

Property Card

Town of Oxford
Property Listing Report

Parcel ID 34/9/34A/CELL

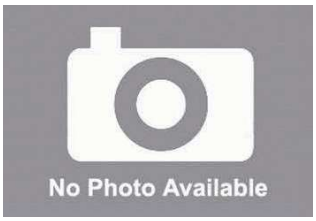
Account T1234567

Property Information

Owner	CROWN CASTLE USA INC
Address	338 OXFORD RD
Mailing Address	PMB 331 MCMURRAY , PA 15317
Land Use	- Cell Tower
Land Class	I

Census Tract	
Neighborhood	
Zoning	
Acreage	0
Utilities	
Lot Setting/ Desc	/

Photo



PARCEL VALUATIONS (Assessed value = 70% of Appraised Value)

	Appraised	Assessed
Buildings	0	0
Outbuildings	691200	483800
Improvements	691200	483800
Extras	0	0
Land	0	0
Total	691200	483800
Previous		

Construction Details

Year Built	
Stories	
Building Style	
Building Use	
Building Condition	
Total Rooms	
Bedrooms	
Full Bathrooms	0
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	Flat
Roof Cover	Concrete Tile

EXTERIOR WALLS:	
Primary	MASONRY
Secondary	Stone/Masonry
INTERIOR WALLS:	
Primary	Minim/Masonry
Secondary	
FLOORS:	
Primary	Concr-Finished
Secondary	
HEATING/AC:	
Heating Type	None
Heating Fuel	Coal or Wood
AC Type	None

BUILDING AREA:	
Effective Building Area	
Gross Building Area	
Total Living Area	

SALES HISTORY:	
Sale Date	10/1/2010
Sale Price	0
Book/ Page	000/ 000

Report Created On 3/26/2018

Exhibit B

Construction Drawings

T-MOBILE SITE NAME:

CROWN OXFORD MONOPOLE

T-MOBILE SITE NUMBER:

CTNH518A

CROWN BU: 876362 / APP#: 482088

67D05F CONFIGURATION

338 OXFORD RD
OXFORD, CT 06478

EXISTING 150'-0" MONOPOLE

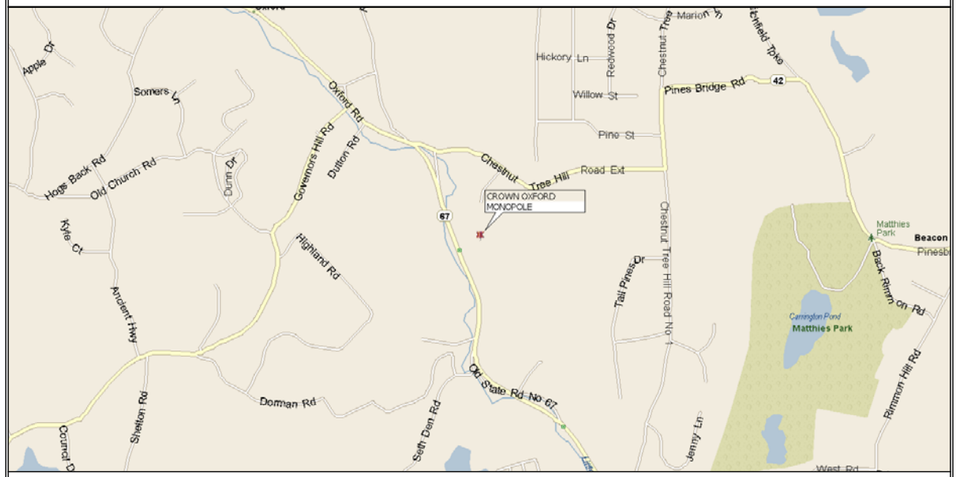
PROJECT SUMMARY

SITE TYPE:	EXISTING EQUIPMENT UPGRADE
SITE ADDRESS:	338 OXFORD RD OXFORD, CT 06478
JURISDICTION:	NEW HAVEN COUNTY

NAD83

LATITUDE:	41.428000° N
LONGITUDE:	73.108500° W
TOWER OWNER:	CROWN CASTLE 3200 HORIZON DRIVE, SUITE 150 KING OF PRUSSIA, PA 19406 JASON SMITH (610) 635-3225
CUSTOMER/APPLICANT:	T-MOBILE 4 SYLVAN WAY PARSIPPANY, NJ 07054 (973) 397-4800
OCCUPANCY TYPE:	UNMANNED
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION

LOCATION MAP



NO SCALE

DRAWING INDEX

SHEET #	SHEET DESCRIPTION	REV. #
T-1	TITLE SHEET	2
A-1	OVERALL SITE PLAN	2
A-2	ANTENNA/CABLE SCHEDULE AND AZIMUTH PLANS	2
A-3	TOWER ELEVATION	2
A-4	ANTENNA AND RRU DETAILS	2
E-1	PANEL SCEHDULE AND ONE-LINE DIAGRAM	2

CONTACT INFORMATION

A&E FIRM:	B+T GROUP 1717 S. BOULDER, STE. 300 TULSA, OK 74119	ELECTRIC PROVIDER:	UNITED ILLUMINATING CO. 203-499-2000
CONTACT:	MIKE OAKES	TELCO PROVIDER:	COMCAST PHONE 800-934-6489
PHONE:	(918) 587-4630		

DRIVING DIRECTIONS

DEPART FROM BRADLEY INTERNATIONAL AIRPORT ON TERMINAL RD. ROAD NAME CHANGES TO BRADLEY FIELD CONNECTOR. ROAD NAME CHANGES TO CT-20 [BRADLEY FIELD CONNECTOR]. TAKE RAMP (RIGHT) ONTO I-91 [RICHARD P HORAN MEMORIAL HWY]. AT EXIT 32A-32B, TURN RIGHT ONTO RAMP. TAKE RAMP (LEFT) ONTO I-84 [US-6]. AT EXIT 16, TURN RIGHT ONTO RAMP. TURN LEFT ONTO CT-188 [STRONGTOWN RD]. BEAR LEFT ONTO CT-188 [CT-67]. KEEP STRAIGHT ONTO CT-67 [SOUTHFORD RD]. KEEP STRAIGHT ONTO CT-67 [OXFORD RD]. TURN LEFT ONTO LOCAL ROAD(S) AND ARRIVE AT CROWN OFXFORD MONOPOLE.

A/E DOCUMENT REVIEW STATUS

TITLE	SIGNATURE	DATE
T-MOBILE PROP:		
T-MOBILE R.F. MGR.:		
T-MOBILE NetOps:		
T-MOBILE CONST. MGR.:		
INTERCONNECT:		
T-MOBILE SITE DEV. MGR.:		
PROPERTY OWNER:		
PLANNING:		

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.

CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS 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 THESE CODES:

CODE TYPE	CODE
BUILDING/DWELLING	2018 CONNECTICUT STATE BUILDING CODE
STRUCTURAL	2018 CONNECTICUT STATE BUILDING CODE
MECHANICAL	2018 CONNECTICUT STATE BUILDING CODE
ELECTRICAL	NEC 2017

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES:

- REMOVE (1) DUS41.
- REMOVE (3) SECTOR FRAMES.
- INSTALL (3) NEW ANTENNAS AT 117'-0".
- INSTALL (3) NEW RRUS AT 117'-0".
- INSTALL (1) NEW 6x12 HCS.
- INSTALL (1) NEW RBS 6102 MU AC ENCLOSURE.
- INSTALL (2) NEW BB 6630s.
- INSTALL (1) NEW XMU.
- INSTALL (1) NEW RMQLP-496-HK PLATFORM MOUNT.

DO NOT SCALE DRAWINGS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11X17. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL CONNECTICUT ONE CALL
(800) 922-4455
CALL 3 WORKING DAYS
BEFORE YOU DIG!

811

CTNH518A
BU #: 876362
CROWN OXFORD MONOPOLE
338 OXFORD RD
OXFORD, CT 06478
EXISTING 150'-0" MONOPOLE

PROJECT NO:	137094.002.02
CHECKED BY:	RMC

ISSUED FOR:

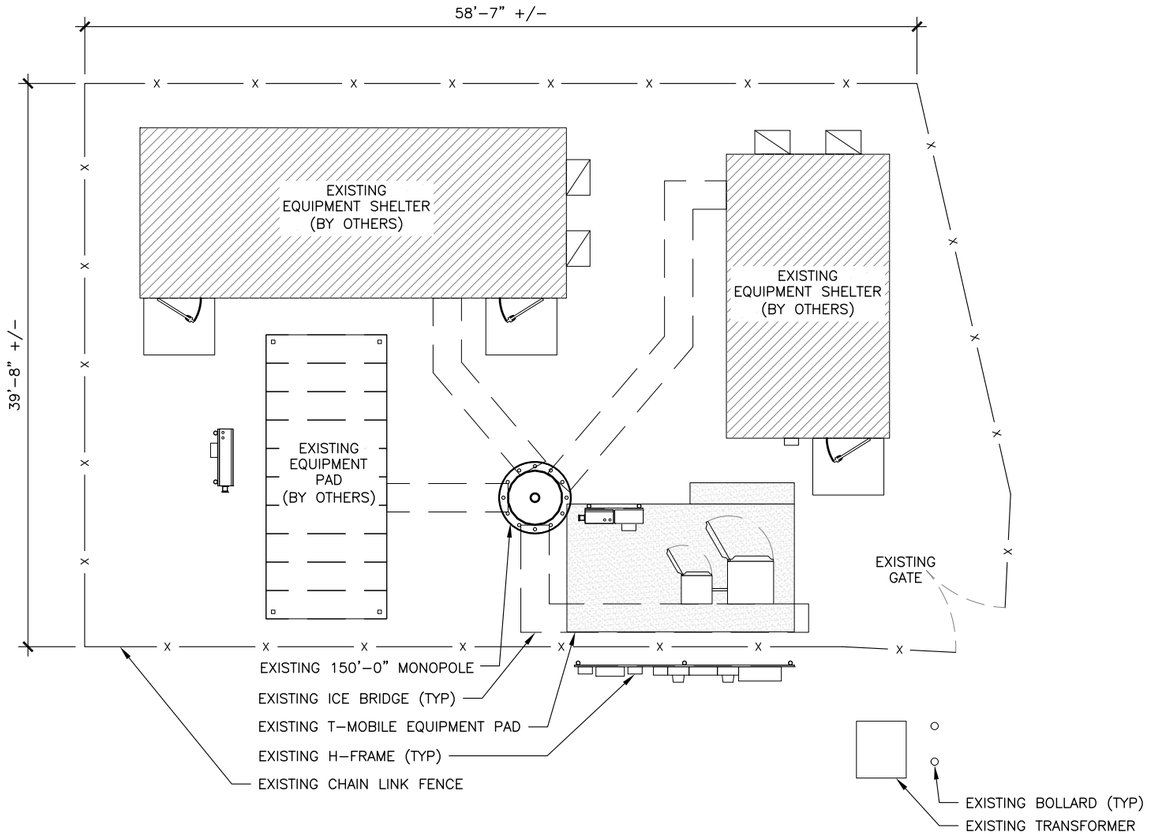
REV	DATE	DRWN	DESCRIPTION
0	8/9/19	RFC	CONSTRUCTION
1	11/30/20	LHT	CONSTRUCTION
2	1/4/21	JJD	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

STATE OF CONNECTICUT
CHAD TUTTLE
No. 23924
LICENSED
PROFESSIONAL ENGINEER
1/4/21

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

SHEET NUMBER:	REVISION:
T-1	2



1 OVERALL SITE PLAN

SCALE: 0' 4' 8' 16' 32'

N

GENERAL NOTES:

1. SUBJECT PROPERTY IS SITUATED AT 338 OXFORD RD, OXFORD, CT 06478.

2. APPLICANT: T-MOBILE
A DELAWARE LIMITED LIABILITY COMPANY
4 SYLVAN WAY
PARSIPPANY, NEW JERSEY 07054
(973) 397-4800

   TOWER OWNER: CROWN CASTLE INTERNATIONAL

- THE APPLICANT IS TO UPDATE THEIR NETWORK BY INSTALLING THREE (3) NEW PANEL ANTENNAS, THREE (3) RRUS, AND ONE (1) ADDITIONAL CABLE MOUNTED ON AN EXISTING MONOPOLE.

3. THIS FACILITY SHALL BE VISITED ON THE AVERAGE OF ONCE A MONTH FOR MAINTENANCE AND SHALL BE MONITORED FROM A REMOTE FACILITY.

4. THE EXISTING SITE IS LOCATED AT LATITUDE OF 41.428000° N± AND LONGITUDE OF 73.108500° W±. THE HORIZONTAL DATUM ARE IN TERMS OF NORTH AMERICAN DATUM OF 1983 (NAD 83).

5. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED AND EACH OF THE DRAWINGS HAVE BEEN REVISED TO INDICATED "ISSUED FOR CONSTRUCTION"

6. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH:

   6.A. CURRENT PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
   6.B. CURRENT PREVAILING UTILITY COMPANY AUTHORITY SPECIFICATIONS, STANDARDS AND REQUIREMENTS.

7. THE CONTRACTOR SHALL NOTIFY B+T GROUP, P.A. IMMEDIATELY IF ANY FIELD-CONDITIONS ENCOUNTERED DIFFER FROM THOSE REPRESENTED HEREON, AND/OR IF SUCH CONDITIONS WOULD OR COULD RENDER THE DESIGNS SHOWN HEREON INAPPROPRIATE AND/OR INEFFECTIVE.

8. THE CONTRACTOR IS RESPONSIBLE TO PROTECT, REPAIR AND/OR REPLACE ANY DAMAGED STRUCTURES, UTILITIES OR LANDSCAPED AREA WHICH MAY BE DISTURBED DURING THE CONSTRUCTION OF THIS FACILITY.

9. THE CONSTRUCTION CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ALL CONSTRUCTION MEANS AND METHODS. THE CONSTRUCTION CONTRACTOR IS ALSO RESPONSIBLE FOR ALL JOB SITE SAFETY.

10. SITE INFORMATION SHOWN TAKEN FROM CROWN SITE PLANS AND FROM CROWN INSPECTION PHOTOS.

B+T GRP

CROWN CASTLE

T-Mobile

CTNH518A
BU #: 876362

CROWN OXFORD MONOPOLE

338 OXFORD RD
OXFORD, CT 06478

EXISTING 150'-0" MONOPOLE

PROJECT NO:	137094.002.02
CHECKED BY:	RMC

ISSUED FOR:

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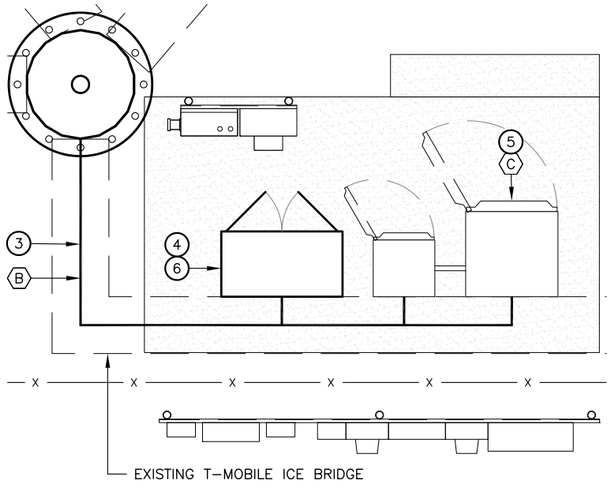
SHEET NUMBER:	REVISION:
A-1	2

LEGEND

EXISTING/DEMOLITION NOTES		INSTALLATION NOTES	
A	EXISTING RFS APXV18-206517S-C-A20 ANTENNA TO REMAIN (TOTAL OF 3)	1	INSTALL RFS APXVAARR24_43-U-NA20 (8 FT) ANTENNAS ON EXISTING MOUNT. PROVIDE NEW 2 7/8" OD SCH.40 PIPE MAST (LENGTH TO BE V.I.F) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
B	EXISTING 1 5/8" COAX TO REMAIN (TOTAL OF 6)	2	INSTALL RADIO 4449 B12/B71 (TYP. OF 1 PER SECTOR, TOTAL OF 3)
C	REMOVE (1) DUS41	3	INSTALL (1) 6x12 HCS FIBER. RUN FROM EQUIPMENT TO ANTENNAS FOLLOWING EXISTING ROUTING
D	PLATFORM MOUNT TO BE REMOVED	4	INSTALL NEW RBS 6102 MU AC
		5	INSTALL (2) NEW BB 6630s
		6	INSTALL (1) NEW XMU

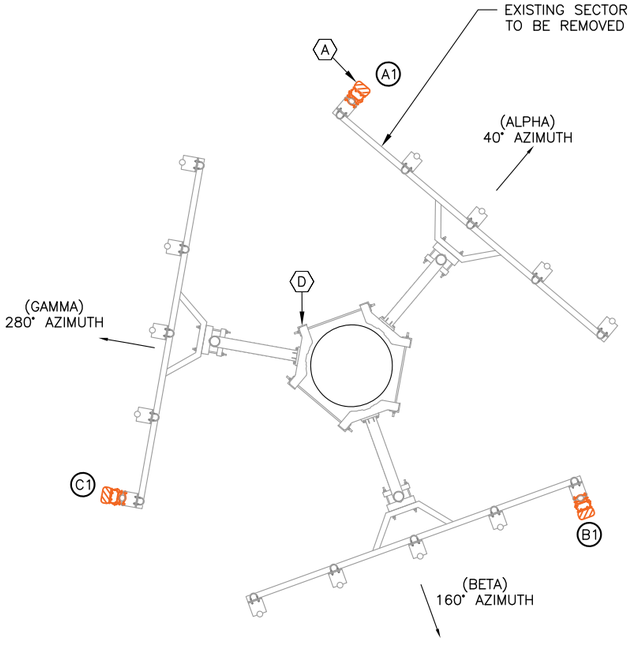
ANTENNA AND CABLE SCHEDULE

SECTOR	POSITION	EXISTING ANTENNAS	PROPOSED ANTENNA CONFIGURATION		E-TILT	M-TILT	ANTENNA CENTERLINE	TMA/RRU	CABLES	JUMPER TYPE	CABLE LENGTH
40° – ALPHA	A1	RFS APXV18-206517S-C-A20	LTE UMTS	–	2°	0°	117'-0"	0/0	(2) 1 5/8" COAX (1) 3/8" RET	DC/FIBER	167'-0"
	A2	**RFS APXVAARR24_43-U-NA20**	**LTE**	**B71 B12**	–	**0°**		**0/1**	**(1) 6x12 HCS FIBER**	**DC/FIBER & 1/2" COAX**	**167'-0"**
160° – BETA	B1	RFS APXV18-206517S-C-A20	LTE UMTS	–	2°	0°	117'-0"	0/0	(2) 1 5/8" COAX (1) 3/8" RET	DC/FIBER	167'-0"
	B2	**RFS APXVAARR24_43-U-NA20**	**LTE**	**B71 B12**	–	**0°**		**0/1**	**(1) 6x12 HCS FIBER (SHARED)**	**DC/FIBER & 1/2" COAX**	**167'-0"**
280° – GAMMA	C1	RFS APXV18-206517S-C-A20	LTE UMTS	–	2°	0°	117'-0"	0/0	(2) 1 5/8" COAX (1) 3/8" RET	DC/FIBER	167'-0"
	C2	**RFS APXVAARR24_43-U-NA20**	**LTE**	**B71 B12**	–	**0°**		**0/1**	**(1) 6x12 HCS FIBER (SHARED)**	**DC/FIBER & 1/2" COAX**	**167'-0"**



1 ENLARGED AREA PLAN

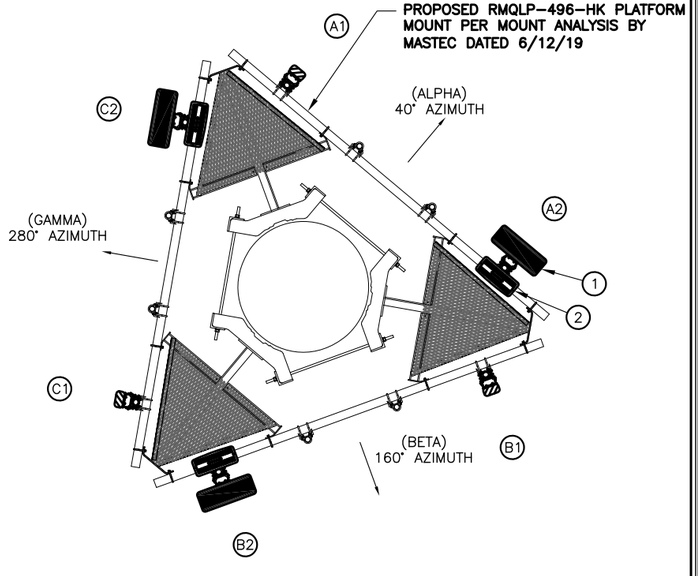
SCALE: 0' 1' 4' 8' 16'



2 EXISTING ANTENNA ORIENTATION

SCALE: 0' 1' 4' 8' 16'

N



3 PROPOSED ANTENNA ORIENTATION

SCALE: 0' 1' 4' 8' 16'

N

B+T GRP

CROWN CASTLE

T-Mobile

CTNH518A
BU #: 876362

CROWN OXFORD MONOPOLE

338 OXFORD RD
OXFORD, CT 06478

EXISTING 150'-0" MONOPOLE

PROJECT NO:	137094.002.02
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STATE OF CONNECTICUT ★ CHAD LITTLE ★ No. 23924 LICENSED PROFESSIONAL ENGINEER

1/4/21

SHEET NUMBER: A-2

REVISION: 2

LEGEND

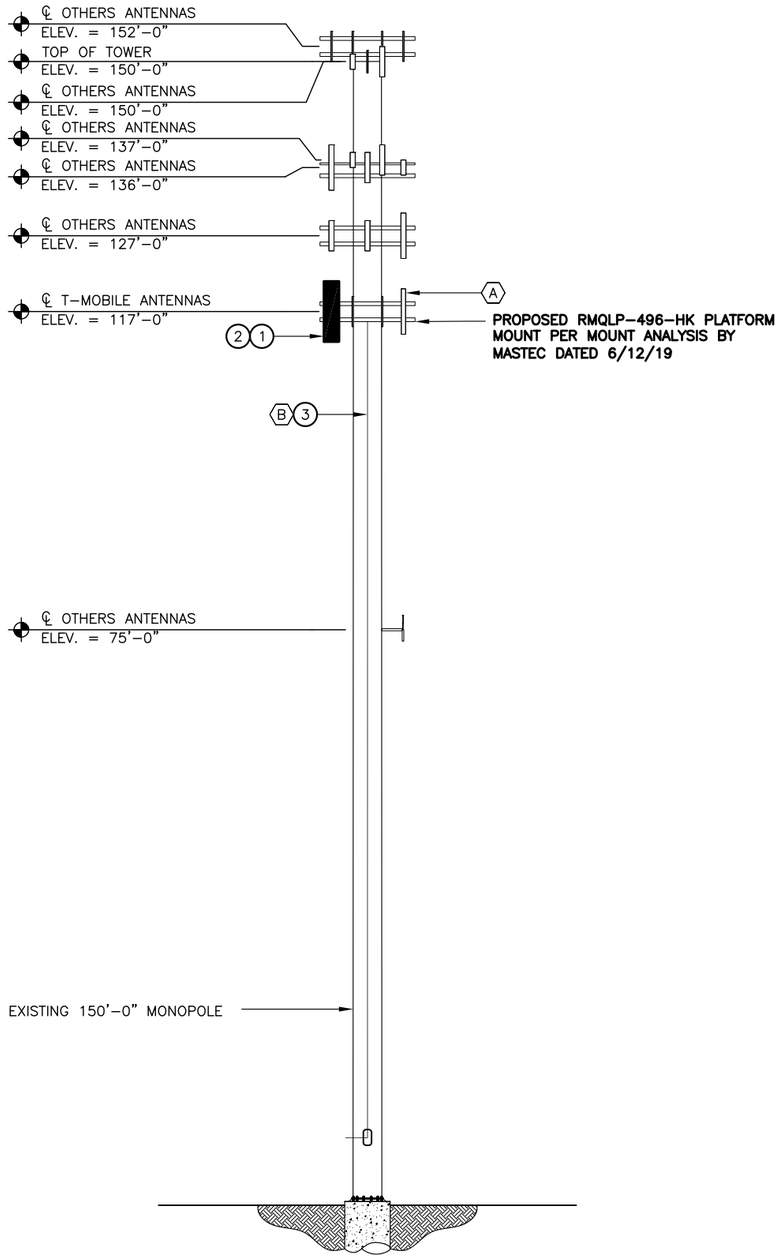
EXISTING/DEMOLITION NOTES		INSTALLATION NOTES	
A	EXISTING RFS APXV18-206517S-C-A20 ANTENNA TO REMAIN (TOTAL OF 3)	1	INSTALL RFS APXVAARR24_43-U-NA20 (8 FT) ANTENNAS ON EXISTING MOUNT. PROVIDE NEW 2 7/8" OD SCH.40 PIPE MAST (LENGTH TO BE V.I.F) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
B	EXISTING 1 5/8" COAX TO REMAIN (TOTAL OF 6)	2	INSTALL RADIO 4449 B12/B71 (TYP. OF 1 PER SECTOR, TOTAL OF 3)
		3	INSTALL (1) 6x12 HCS FIBER. RUN FROM EQUIPMENT TO ANTENNAS FOLLOWING EXISTING ROUTING

EXISTING TOWER IS SUFFICIENT PER STRUCTURAL ANALYSIS BY PAUL J. FORD DATED 6/18/19.

PROPOSED MOUNT IS SUFFICIENT PER MOUNT ANALYSIS BY MASTEC NETWORK SOLUTIONS DATED 6/12/19.

LEGEND:

- **NEW**
- EXISTING
- FUTURE



1 TOWER ELEVATION

SCALE: 0' 10' 20' 30' 40' 1"=20'

B+T GRP

CROWN CASTLE

T-Mobile

CTNH518A
BU #: 876362
CROWN OXFORD MONOPOLE
338 OXFORD RD
OXFORD, CT 06478
EXISTING 150'-0" MONOPOLE

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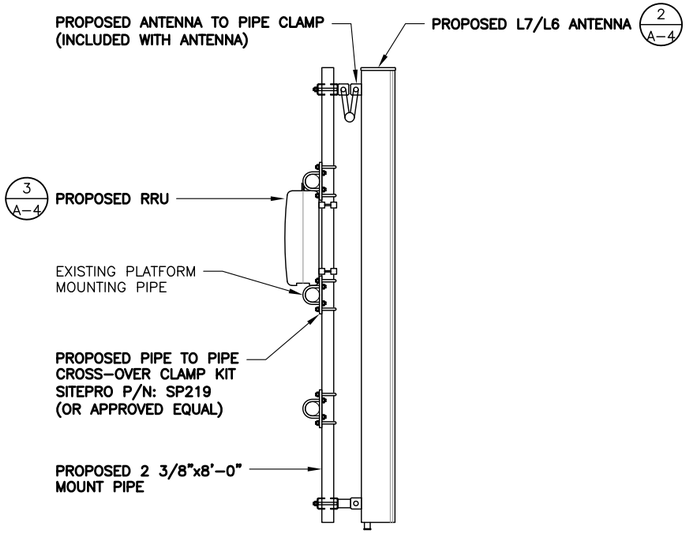
STATE OF CONNECTICUT CHAD TUTTLE No. 23924 LICENSED PROFESSIONAL ENGINEER

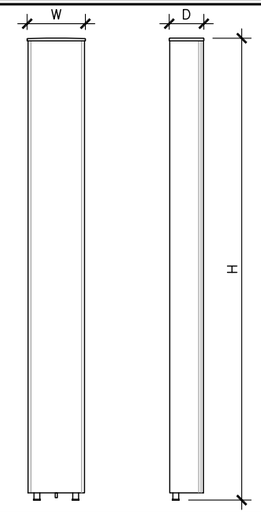
1/4/21

SHEET NUMBER:	REVISION:
A-3	2



1 PROPOSED L7/L6 ANTENNA & RRU MOUNTING DETAIL

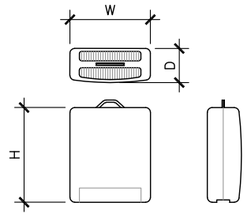
SCALE: 3/8" = 1'-0"



ANTENNA SPECS	
MANUFACTURER	RFS
MODEL #	APXVAARR24_43-U-NA20
WIDTH	24.0"
DEPTH	8.7"
HEIGHT	95.9"
WEIGHT	128.0 LBS

2 L7/L6 ANTENNA DETAIL

SCALE: 3/8" = 1'-0"

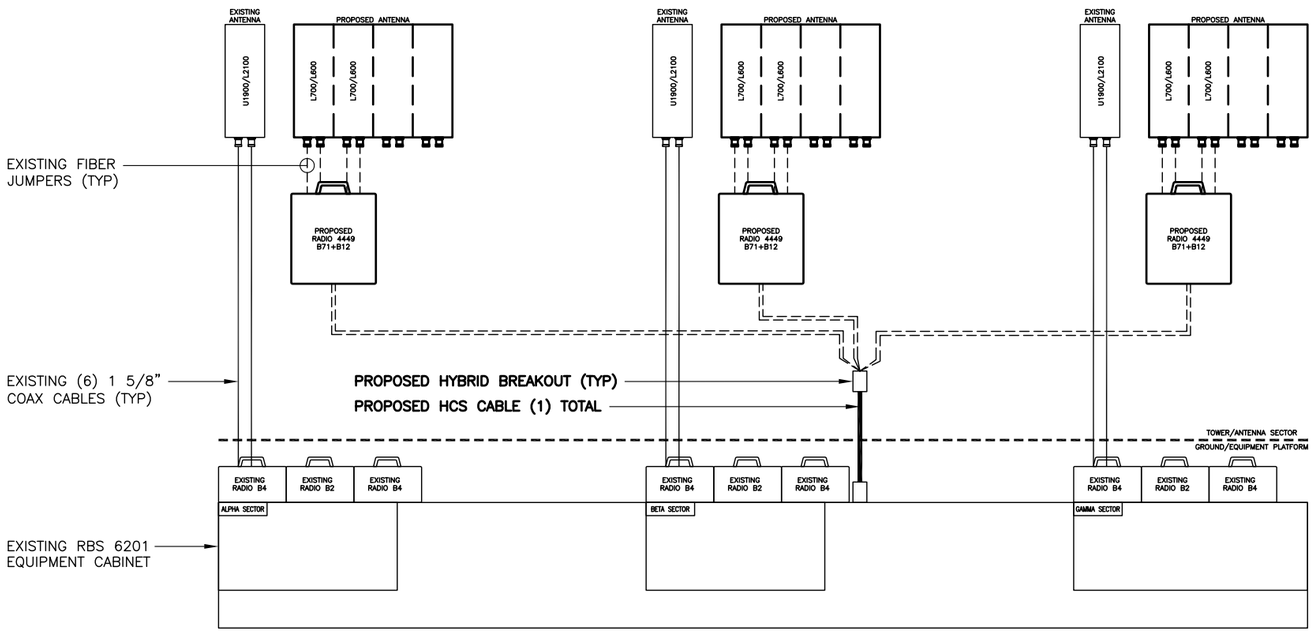


RRU SPECIFICATIONS	
MANUFACTURER	ERICSSON
MODEL #	4449
WIDTH	13.2"
DEPTH	9.3"
HEIGHT	14.9"
WEIGHT	75 LBS

3 REMOTE RADIO UNIT (RRU)

SCALE: 3/8" = 1'-0"

NOTES:
1. TAG ALL EXISTING AND PROPOSED CABLES/JUMPERS PER T-MOBILE SPECIFICATIONS.
2. SEE RF SCHEDULE FOR CABLE AND JUMPER LENGTHS.
3. REFER TO ANTENNA ORIENTATION ON SHEET A-2 FOR EXACT ANTENNA POSITIONING.



4 ANTENNA & CABLING SCHEMATIC

SCALE: N.T.S.

B+T GRP

CROWN CASTLE

T-Mobile

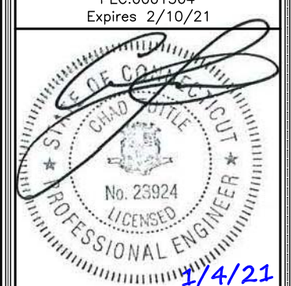
CTNH518A
BU #: 876362
CROWN OXFORD MONOPOLE
338 OXFORD RD
OXFORD, CT 06478
EXISTING 150'-0" MONOPOLE

PROJECT NO:	137094.002.02
CHECKED BY:	RMC

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	8/9/19	RFC	CONSTRUCTION
1	11/30/20	LHT	CONSTRUCTION
2	1/4/21	JJD	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21



SHEET NUMBER: A-4

REVISION: 2

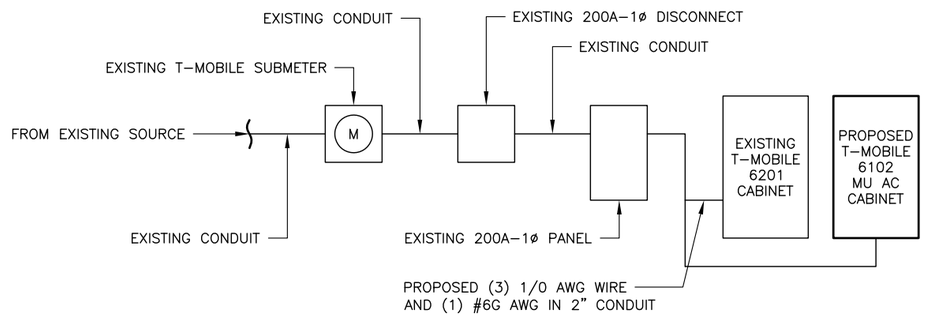
FINAL PANEL SCHEDULE							
LOAD	POLES	AMPS	BUS L1	BUS L2	AMPS	POLES	LOAD
SURGE	2	30A	1	2	20A	1	LIGHT
			3	4	20A	1	FIBER
RBS 6201 ODE	2	**100A**	5	6	**100A**	2	RBS 6102 MU AC
			7	8			

RATED VOLTAGE: ■120/240 □_____. 1 PHASE, 3 WIRE		BRANCH POLES: □12 ■24 □30 □42	APPROVED MF'RS
RATED AMPS: □100 ■200 □400 □_____.		CABINET: ■SURFACE □FLUSH	NEMA □1 ■3R □4X
□MAIN LUGS ONLY	MAIN 200 AMPS ■BREAKER □FUSED SWITCH	■HINGED DOOR	■KEYED DOOR LATCH
□FUSED ■CIRCUIT BREAKER	BRANCH DEVICES	□_____ TO BE GFCI BREAKERS	FULL NEUTRAL BUS / GROUND BAR
ALL BREAKERS MUST BE RATED TO INTERRUPT A SHORT CIRCUIT ISC OF 10,000 AMPS SYMMETRICAL			

REPLACE EXISTING BREAKER IN POSITION 5 AND 7 WITH A NEW 2P 100A BREAKER
INSTALL NEW 100A BREAKER IN POSITION 6 AND 8 FOR PROPOSED 6102 MU AC CABINET
REPLACE EXISTING WIRES FOR EXISTING 6201 CABINET WITH (3) 1/0 AWG THWN (COPPER) AND (1) #6G AWG. MINIMUM CONDUIT SIZE TO BE 2".
IF 100A BREAKER WILL NOT PROPERLY FIT IN EXISTING PANEL, REPLACE (E) PANEL WITH SQUARE D PANEL QO12040M200RB (OR APPROVED EQUAL).
UPGRADE FEEDER WIRES TO MEET AMPACITY IF NEW PANEL IS REQUIRED.
FINAL PANEL DESIGN AND CALCULATIONS FOR WIRE SIZE WERE BASED OFF OF EXISTING PHOTOS

1 FINAL T-MOBILE PANEL DETAIL

SCALE: N.T.S.



2 ONE-LINE DIAGRAM

SCALE: N.T.S.

B+T GRP

CROWN CASTLE

T···Mobile

CTNH518A
BU #: 876362
CROWN OXFORD MONOPOLE
338 OXFORD RD
OXFORD, CT 06478
EXISTING 150'-0" MONOPOLE

PROJECT NO: 137094.002.02
CHECKED BY: RMC

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	8/9/19	RFC	CONSTRUCTION
1	11/30/20	LHT	CONSTRUCTION
2	1/4/21	JJD	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

STATE OF CONNECTICUT ★ CHAD C. TUTTLE ★ No. 23924 LICENSED PROFESSIONAL ENGINEER
1/4/21

SHEET NUMBER: E-1
REVISION: 2

Exhibit C

Structural Analysis Report

PAUL J. FORD & COMPANY

Date: **June 18, 2019**

Darcy Tarr
Crown Castle
3530 Toringdon Way Suite 300
Charlotte, NC 28277

Paul J Ford and Company
250 East Broad St., Suite 600
Columbus, OH 43215
(614) 221-6679

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Metro PCS* Co-Locate**	
	Carrier Site Number:	CTNH518A
	Carrier Site Name:	Crown Oxford Monopole
Crown Castle Designation:	**Crown Castle BU Number:**	876362
	Crown Castle Site Name:	OXFORD / FRITZ PROPERTY
	Crown Castle JDE Job Number:	561012
	Crown Castle Work Order Number:	1749128
	Crown Castle Order Number:	482088 Rev. 0
Engineering Firm Designation:	**Paul J Ford and Company Project Number:**	37519-2642.001.7805
Site Data:	**338 Oxford Rd., OXFORD, New Haven County, CT** **Latitude *41° 25' 40.77"*, Longitude *-73° 6' 30.75"*** **150 Foot - Monopole Tower**	

Dear Darcy Tarr,

Paul J Ford and Company is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity (79.4%)**

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building Code and Appendix N. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Respectfully submitted by:

Jared Forbes, E.I.
Structural Designer
jforbes@pauljford.com

STATE OF CONNECTICUT JUSTIN T. KLINE No. 30301 LICENSED PROFESSIONAL ENGINEER

2019.06.19 13:04:29-04'00'

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 150 ft Monopole tower designed by ENGINEERED ENDEAVORS, INC. in September of 1999.

The tower has been modified multiple times to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	125 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
117.0	117.0	3	ericsson	RADIO 4449 B12/B71	7 1	1-5/8 3/8
		3	rfs celwave	APXV18-206517S-C-A20		
		3	rfs celwave	APXVAARR24_43-U-NA20		
		1	SitePro1	RMQLP-496-HK		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
152.0	152.0	3	alcatel lucent	800 EXTERNAL NOTCH FILTER	4	1-1/4
		9	rfs celwave	ACU-A20-N		
		1	tower mounts	Platform Mount [LP 602-1]		
	150.0	3	alcatel lucent	TD-RRH8x20-25		
		3	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe		
		3	rfs celwave	APXVTM14-ALU-I20 w/ Mount Pipe		
150.0	150.0	3	alcatel lucent	1900MHz RRH (65MHz) w/ Mount Pipe	-	-
		3	alcatel lucent	800MHZ RRH		
		1	tower mounts	Side Arm Mount [SO 102-3]		
137.0	139.0	4	andrew	SBNH-1D6565C w/ Mount Pipe	12 1 2	1-1/4 3/8 3/4
		3	ericsson	RRUS 12		
		2	kmw communications	AM-X-CD-16-65-00T-RET w/ Mount Pipe		
		3	powerwave technologies	7770.00 w/ Mount Pipe		
		1	raycap	DC6-48-60-18-8F		
		6	communication components inc.	DTMABP7819VG12A		
		3	powerwave technologies	7020.00		
	137.0	1	tower mounts	Platform Mount [LP 712-1]		
136.0	137.0	3	ericsson	RRUS 11	-	-
	136.0	1	tower mounts	Side Arm Mount [SO 102-3]		
	135.0	1	raycap	DC6-48-60-18-8F		
127.0	129.0	3	alcatel lucent	RRH2X60-AWS	13 1	1-5/8 1/2
		3	alcatel lucent	RRH2X60-PCS		
		1	antel	BXA-70040/4CF w/ Mount Pipe		
		2	antel	BXA-70063-4CF-EDIN-X w/ Mount Pipe		
		6	commscope	HBXX-6517DS-A2M w/ Mount Pipe		
		1	gps	GPS_A		
		6	rfs celwave	APL866513-42T0 w/ Mount Pipe		
		1	rfs celwave	DB-T1-6Z-8AB-0Z		
		6	rfs celwave	FD9R6004/2C-3L		
	127.0	1	tower mounts	Platform Mount [LP 712-1]		
75.0	76.0	1	kathrein	OG-860/1920/GPS-A	1	1/2
	75.0	1	tower mounts	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	TEP, 25611.19662, 10/08/2014	1531939	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	EEI, 5724, 12/09/99	1440552	CCISITES
4-TOWER MANUFACTURER DRAWINGS	EEI, 99-1188, 09/21/99	1441271	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	VSI, MR-1259, 10/29/2008	2364904	CCISITES
4-POST-MODIFICATION INSPECTION	VSI, 080876.07 Rev0, 12/01/08	2364903	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	PJF, 37511-1194, 12/21/2011	3041498	CCISITES
4-POST-MODIFICATION INSPECTION	PJF, 41712-0018, 05/18/12	3192205	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	PJF, 37512-1027, 07/06/2012	3274216	CCISITES
4-POST-MODIFICATION INSPECTION	TEP, 127765, 05/15/13	3872724	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	PJF, 37513-1747, 04/22/2014	4870951	CCISITES
4-POST-MODIFICATION INSPECTION	TEP, 25611.19662, 09/18/2014	5301920	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	PJF, 37515-0074.003.7700, 04/09/2015	5632043	CCISITES
4-POST-MODIFICATION INSPECTION	SGS, 155891, 02/26/2016	6119183	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the pole and in the reinforcing elements. These calculations are presented in Appendix C.

3.2) Assumptions

1) Tower and structures were built in accordance with the manufacturer's specifications.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
4) Monopole was modified in conformance with the referenced modification drawings.
5) Base plate grout was not installed at the time of the analysis and has not been considered.

This analysis may be affected if any assumptions are not valid or have been made in error. Paul J Ford and Company should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
150 - 145	Pole	TP16.08x15x0.1875	Pole	10.4%	Pass
145 - 140	Pole	TP17.16x16.08x0.1875	Pole	17.1%	Pass
140 - 135	Pole	TP18.239x17.16x0.1875	Pole	26.5%	Pass
135 - 130	Pole	TP19.319x18.239x0.1875	Pole	36.5%	Pass
130 - 126.59	Pole	TP20.74x19.319x0.1875	Pole	45.2%	Pass
126.59 - 122.25	Pole	TP20.603x19.68x0.25	Pole	42.8%	Pass
122.25 - 122	Pole + Reinf.	TP20.656x20.603x0.4125	Reinf. 18 Tension Rupture	49.0%	Pass
122 - 120.25	Pole + Reinf.	TP21.029x20.656x0.4125	Reinf. 18 Tension Rupture	52.6%	Pass
120.25 - 120	Pole + Reinf.	TP21.082x21.029x0.575	Reinf. 18 Tension Rupture	38.7%	Pass
120 - 115.5	Pole + Reinf.	TP22.039x21.082x0.5625	Reinf. 18 Tension Rupture	46.4%	Pass
115.5 - 115.25	Pole + Reinf.	TP22.092x22.039x0.4	Reinf. 16 Tension Rupture	63.8%	Pass
115.25 - 115	Pole + Reinf.	TP22.145x22.092x0.4	Reinf. 16 Tension Rupture	64.5%	Pass
115 - 114.75	Pole + Reinf.	TP22.198x22.145x0.55	Reinf. 16 Tension Rupture	47.8%	Pass
114.75 - 109.75	Pole + Reinf.	TP23.261x22.198x0.5375	Reinf. 16 Tension Rupture	57.0%	Pass
109.75 - 105.25	Pole + Reinf.	TP24.218x23.261x0.525	Reinf. 16 Tension Rupture	64.4%	Pass
105.25 - 105	Pole + Reinf.	TP24.271x24.218x0.7375	Reinf. 3 Tension Rupture	52.7%	Pass
105 - 100.4	Pole + Reinf.	TP25.249x24.271x0.7125	Reinf. 3 Tension Rupture	58.6%	Pass
100.4 - 100.15	Pole + Reinf.	TP25.303x25.249x0.7375	Reinf. 2 Tension Rupture	52.7%	Pass
100.15 - 95.15	Pole + Reinf.	TP26.366x25.303x0.7125	Reinf. 2 Tension Rupture	58.1%	Pass
95.15 - 90.15	Pole + Reinf.	TP27.429x26.366x0.7	Reinf. 2 Tension Rupture	63.0%	Pass
90.15 - 90.04	Pole + Reinf.	TP28.32x27.429x0.7	Reinf. 2 Tension Rupture	63.1%	Pass
90.04 - 85.04	Pole + Reinf.	TP28.018x26.952x0.75	Reinf. 2 Tension Rupture	63.5%	Pass
85.04 - 82	Pole + Reinf.	TP28.665x28.018x0.7375	Reinf. 2 Tension Rupture	65.8%	Pass
82 - 81.75	Pole + Reinf.	TP28.719x28.665x0.925	Reinf. 2 Tension Rupture	53.6%	Pass
81.75 - 77.25	Pole + Reinf.	TP29.677x28.719x0.9	Reinf. 2 Tension Rupture	56.5%	Pass
77.25 - 77	Pole + Reinf.	TP29.731x29.677x0.7875	Reinf. 2 Tension Rupture	64.4%	Pass
77 - 75	Pole + Reinf.	TP30.157x29.731x0.775	Reinf. 2 Tension Rupture	65.7%	Pass
75 - 74.75	Pole + Reinf.	TP30.21x30.157x0.825	Reinf. 2 Tension Rupture	61.9%	Pass
74.75 - 71.25	Pole + Reinf.	TP30.956x30.21x0.8125	Reinf. 2 Tension Rupture	64.0%	Pass
71.25 - 71	Pole + Reinf.	TP31.009x30.956x0.9375	Reinf. 2 Tension Rupture	56.6%	Pass
71 - 70.4	Pole + Reinf.	TP31.137x31.009x0.925	Reinf. 2 Tension Rupture	57.0%	Pass
70.4 - 70.15	Pole + Reinf.	TP31.19x31.137x0.9375	Reinf. 1 Tension Rupture	53.9%	Pass
70.15 - 65.15	Pole + Reinf.	TP32.255x31.19x0.9125	Reinf. 1 Tension Rupture	56.4%	Pass
65.15 - 60.15	Pole + Reinf.	TP33.32x32.255x0.8875	Reinf. 1 Tension Rupture	58.7%	Pass
60.15 - 55.15	Pole + Reinf.	TP34.386x33.32x0.8625	Reinf. 1 Tension Rupture	61.0%	Pass
55.15 - 50.15	Pole + Reinf.	TP35.451x34.386x0.85	Reinf. 1 Tension Rupture	63.1%	Pass
50.15 - 47.58	Pole + Reinf.	TP37.1x35.451x0.8375	Reinf. 1 Tension Rupture	64.1%	Pass
47.58 - 41.41	Pole + Reinf.	TP36.687x35.374x0.725	Reinf. 15 Tension Rupture	68.1%	Pass
41.41 - 36.41	Pole + Reinf.	TP37.751x36.687x0.7125	Reinf. 15 Tension Rupture	69.7%	Pass
36.41 - 36.25	Pole + Reinf.	TP37.785x37.751x0.7125	Reinf. 15 Tension Rupture	69.7%	Pass
36.25 - 36	Pole + Reinf.	TP37.838x37.785x0.75	Reinf. 11 Tension Rupture	69.2%	Pass

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
36 - 31.25	Pole + Reinf.	TP38.849x37.838x0.75	Reinf. 11 Tension Rupture	70.6%	Pass
31.25 - 31	Pole + Reinf.	TP38.902x38.849x0.7375	Reinf. 11 Tension Rupture	70.7%	Pass
31 - 26	Pole + Reinf.	TP39.966x38.902x0.725	Reinf. 11 Tension Rupture	72.1%	Pass
26 - 21	Pole + Reinf.	TP41.031x39.966x0.725	Reinf. 11 Tension Rupture	73.3%	Pass
21 - 18.5	Pole + Reinf.	TP41.563x41.031x0.7125	Reinf. 11 Tension Rupture	73.9%	Pass
18.5 - 18.25	Pole + Reinf.	TP41.616x41.563x0.7	Reinf. 12 Tension Rupture	73.7%	Pass
18.25 - 15	Pole + Reinf.	TP42.308x41.616x0.6875	Reinf. 12 Tension Rupture	74.4%	Pass
15 - 14.75	Pole + Reinf.	TP42.361x42.308x0.65	Reinf. 12 Tension Rupture	76.6%	Pass
14.75 - 9.75	Pole + Reinf.	TP43.425x42.361x0.65	Reinf. 12 Tension Rupture	77.6%	Pass
9.75 - 4.75	Pole + Reinf.	TP44.489x43.425x0.6375	Reinf. 12 Tension Rupture	78.6%	Pass
4.75 - 0	Pole + Reinf.	TP45.5x44.489x0.6375	Reinf. 12 Tension Rupture	79.4%	Pass
				Summary	
			Pole	55.8%	Pass
			Reinforcement	79.4%	Pass
			Overall	79.4%	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	57.6	Pass
1	Base Plate	0	57.3	Pass
1	Base Foundation	0	28.0	Pass

Structure Rating (max from all components) =	79.4%

Notes:

- All structural ratings are per TIA-222-H Section 15.5

1) See additional documentation in “Appendix C – Additional Calculations” for calculations supporting the % capacity consumed.

4.1) Recommendations

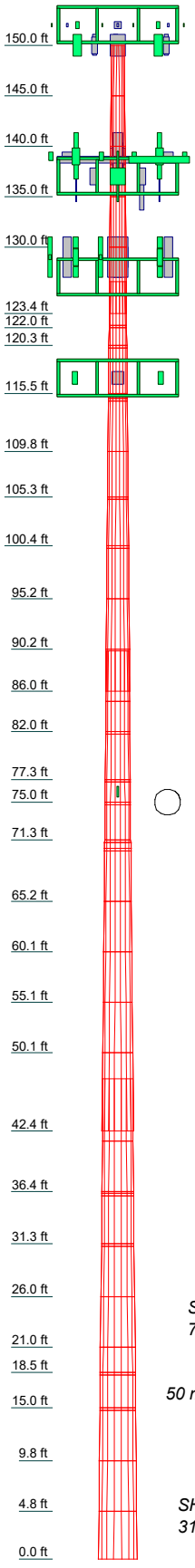
The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

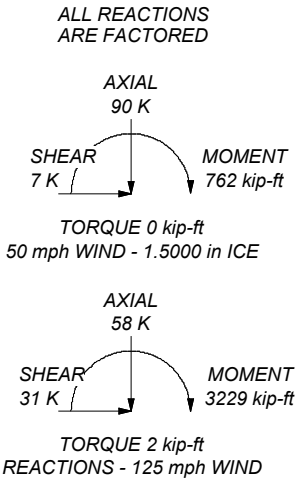
APPENDIX A

TNXTOWER OUTPUT

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	5.0000	18	0.1875		15.0000	16.0798		0.2
2	5.0000	18	0.1875		16.0798	17.1595		0.2
3	5.0000	18	0.1875		17.1595	18.2393		0.2
4	5.0000	18	0.1875		18.2393	19.3190		0.2
5	5.0000	18	0.1875	3.1700	19.3190	20.3988		0.3
6	5.0000	18	0.1875		20.3988	21.4785		0.3
7	5.0000	18	0.1875		21.4785	22.5583		0.3
8	5.0000	18	0.1875		22.5583	23.6380		0.3
9	5.0000	18	0.1875		23.6380	24.7178		0.3
10	5.0000	18	0.1875		24.7178	25.7975		0.5
11	5.0000	18	0.1875		25.7975	26.8773		0.5
12	5.0000	18	0.1875		26.8773	27.9570		0.5
13	5.0000	18	0.1875		27.9570	29.0368		0.5
14	5.0000	18	0.5300		29.0368	30.1165		0.6
15	5.0000	18	0.5250		30.1165	31.1963		0.6
16	5.0000	18	0.5200		31.1963	32.2760		0.6
17	5.0000	18	0.5150		32.2760	33.3558		0.8
18	5.0000	18	0.5100		33.3558	34.4355		0.8
19	5.0000	18	0.7125		34.4355	35.5153		0.9
20	5.0000	18	0.7000		35.5153	36.5950		0.9
21	5.0000	18	0.7000	4.0800	36.5950	37.6748		0.8
22	5.0000	18	0.7000		37.6748	38.7545		1.0
23	5.0000	18	0.7000		38.7545	39.8343		0.6
24	5.0000	18	0.7000		39.8343	40.9140		1.1
25	5.0000	18	0.7000		40.9140	41.9938		1.1
26	5.0000	18	0.7000		41.9938	43.0735		1.2
27	5.0000	18	0.7000		43.0735	44.1533		1.2
28	5.0000	18	0.7000		44.1533	45.2330		1.2
29	5.0000	18	0.7000		45.2330	46.3128		0.8
30	5.0000	18	0.7000		46.3128	47.3925		0.8
31	5.0000	18	0.7000		47.3925	48.4723		0.8
32	5.0000	18	0.7000		48.4723	49.5520		0.8
33	5.0000	18	0.9125		49.5520	50.6318		1.4
34	5.0000	18	0.8875		50.6318	51.7115		1.4
35	5.0000	18	0.8625		51.7115	52.7913		1.4
36	5.0000	18	0.8500		52.7913	53.8710		1.4
37	6.1700	18	0.8375	5.1700	53.8710	55.4510		2.3
38	6.1700	18	0.7250		55.4510	56.8867		1.6
39	5.0000	18	0.7125		56.8867	57.9665		1.3
40	5.0000	18	0.7000		57.9665	59.0462		0.0
42	5.0000	18	0.7000		59.0462	60.1260		1.4
43	5.0000	18	0.7000		60.1260	61.2057		0.1
44	5.0000	18	0.7250		61.2057	62.2855		1.5
45	5.0000	18	0.7250		62.2855	63.3652		1.5
46	5.0000	18	0.7250		63.3652	64.4450		0.8
47	5.0000	18	0.7250		64.4450	65.5247		0.8
48	5.0000	18	0.7250		65.5247	66.6045		1.1
49	5.0000	18	0.7250		66.6045	67.6842		1.1
50	5.0000	18	0.6500		67.6842	68.7640		1.6
51	5.0000	18	0.6375		68.7640	69.8437		1.6
52	4.7500	18	0.6375		69.8437	70.9235		1.5

A572-65





MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 125 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.0000 ft
8. TIA-222-H Annex S

Paul J Ford and Company
250 East Broad st., Suite 600
Columbus, OH 43215
Phone: (614) 221-6679
FAX:

Job: 150' Monopole / Oxford / Fritz Property			
Project: PJF 37519-2642 / BU 876362			
Client: Crown Castle	Drawn by: jforbes	App'd:	
Code: TIA-222-H	Date: 06/18/19	Scale: NTS	
Path:		Dwg No. E-1	

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

1) Tower is located in New Haven County, Connecticut.
2) Tower base elevation above sea level: 372.7500 ft.
3) Basic wind speed of 125 mph.
4) Risk Category II.
5) Exposure Category B.
6) Simplified Topographic Factor Procedure for wind speed-up calculations is used.
7) Topographic Category: 1.
8) Crest Height: 0.0000 ft.
9) Nominal ice thickness of 1.5000 in.
10) Ice thickness is considered to increase with height.
11) Ice density of 56.00 pcf.
12) A wind speed of 50 mph is used in combination with ice.
13) Temperature drop of 50 °F.
14) Deflections calculated using a wind speed of 60 mph.
15) TIA-222-H Annex S.
16) A non-linear (P-delta) analysis was used.
17) Pressures are calculated at each section.
18) Stress ratio used in pole design is 1.05.
19) Tower analysis based on target reliabilities in accordance with Annex S.
20) Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
21) Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned		Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
	Use Code Stress Ratios		Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
	Secondary Horizontal Braces Leg		Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known

Tapered Pole Section Geometry

Section	*Elevation ft*	*Section Length ft*	*Splice Length ft*	*Number of Sides*	*Top Diameter in*	*Bottom Diameter in*	*Wall Thickness in*	*Bend Radius in*	*Pole Grade*
L1	150.0000-145.0000	5.0000	0.00	18	15.0000	16.0798	0.1875	0.7500	A572-65 (65 ksi)
L2	145.0000-140.0000	5.0000	0.00	18	16.0798	17.1595	0.1875	0.7500	A572-65 (65 ksi)
L3	140.0000-135.0000	5.0000	0.00	18	17.1595	18.2393	0.1875	0.7500	A572-65 (65 ksi)
L4	135.0000-130.0000	5.0000	0.00	18	18.2393	19.3190	0.1875	0.7500	A572-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L5	130.0000-123.4200	6.5800	3.17	18	19.3190	20.7400	0.1875	0.7500	A572-65 (65 ksi)
L6	123.4200-122.2500	4.3400	0.00	18	19.6804	20.6033	0.2500	1.0000	A572-65 (65 ksi)
L7	122.2500-122.0000	0.2500	0.00	18	20.6033	20.6565	0.4125	1.6500	A572-65 (65 ksi)
L8	122.0000-120.2500	1.7500	0.00	18	20.6565	21.0286	0.4125	1.6500	A572-65 (65 ksi)
L9	120.2500-120.0000	0.2500	0.00	18	21.0286	21.0817	0.5750	2.3000	A572-65 (65 ksi)
L10	120.0000-115.5000	4.5000	0.00	18	21.0817	22.0386	0.5625	2.2500	A572-65 (65 ksi)
L11	115.5000-115.2500	0.2500	0.00	18	22.0386	22.0918	0.4000	1.6000	A572-65 (65 ksi)
L12	115.2500-115.0000	0.2500	0.00	18	22.0918	22.1449	0.4000	1.6000	A572-65 (65 ksi)
L13	115.0000-114.7500	0.2500	0.00	18	22.1449	22.1981	0.5500	2.2000	A572-65 (65 ksi)
L14	114.7500-109.7500	5.0000	0.00	18	22.1981	23.2613	0.5375	2.1500	A572-65 (65 ksi)
L15	109.7500-105.2500	4.5000	0.00	18	23.2613	24.2182	0.5250	2.1000	A572-65 (65 ksi)
L16	105.2500-105.0000	0.2500	0.00	18	24.2182	24.2713	0.7375	2.9500	A572-65 (65 ksi)
L17	105.0000-100.4000	4.6000	0.00	18	24.2713	25.2495	0.7125	2.8500	A572-65 (65 ksi)
L18	100.4000-100.1500	0.2500	0.00	18	25.2495	25.3026	0.7375	2.9500	A572-65 (65 ksi)
L19	100.1500-95.1500	5.0000	0.00	18	25.3026	26.3658	0.7125	2.8500	A572-65 (65 ksi)
L20	95.1500-90.1500	5.0000	0.00	18	26.3658	27.4290	0.7000	2.8000	A572-65 (65 ksi)
L21	90.1500-85.9600	4.1900	4.08	18	27.4290	28.3200	0.7000	2.8000	A572-65 (65 ksi)
L22	85.9600-85.0400	5.0000	0.00	18	26.9524	28.0177	0.7500	3.0000	A572-65 (65 ksi)
L23	85.0400-82.0000	3.0400	0.00	18	28.0177	28.6654	0.7375	2.9500	A572-65 (65 ksi)
L24	82.0000-81.7500	0.2500	0.00	18	28.6654	28.7186	0.9250	3.7000	A572-65 (65 ksi)
L25	81.7500-77.2500	4.5000	0.00	18	28.7186	29.6773	0.9000	3.6000	A572-65 (65 ksi)
L26	77.2500-77.0000	0.2500	0.00	18	29.6773	29.7306	0.7875	3.1500	A572-65 (65 ksi)
L27	77.0000-75.0000	2.0000	0.00	18	29.7306	30.1567	0.7750	3.1000	A572-65 (65 ksi)
L28	75.0000-74.7500	0.2500	0.00	18	30.1567	30.2100	0.8250	3.3000	A572-65 (65 ksi)
L29	74.7500-71.2500	3.5000	0.00	18	30.2100	30.9556	0.8125	3.2500	A572-65 (65 ksi)
L30	71.2500-71.0000	0.2500	0.00	18	30.9556	31.0089	0.9375	3.7500	A572-65 (65 ksi)
L31	71.0000-70.4000	0.6000	0.00	18	31.0089	31.1367	0.9250	3.7000	A572-65 (65 ksi)
L32	70.4000-70.1500	0.2500	0.00	18	31.1367	31.1900	0.9375	3.7500	A572-65 (65 ksi)
L33	70.1500-65.1500	5.0000	0.00	18	31.1900	32.2552	0.9125	3.6500	A572-65 (65 ksi)
L34	65.1500-60.1500	5.0000	0.00	18	32.2552	33.3205	0.8875	3.5500	A572-65 (65 ksi)
L35	60.1500-55.1500	5.0000	0.00	18	33.3205	34.3857	0.8625	3.4500	A572-65 (65 ksi)
L36	55.1500-50.1500	5.0000	0.00	18	34.3857	35.4510	0.8500	3.4000	A572-65 (65 ksi)
L37	50.1500-42.4100	7.7400	5.17	18	35.4510	37.1000	0.8375	3.3500	A572-65 (65 ksi)
L38	42.4100-41.4100	6.1700	0.00	18	35.3735	36.6867	0.7250	2.9000	A572-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L39	41.4100-36.4100	5.0000	0.00	18	36.6867	37.7508	0.7125	2.8500	A572-65 (65 ksi)
L40	36.4100-36.2500	0.1600	0.00	18	37.7508	37.7849	0.7125	2.8500	A572-65 (65 ksi)
L41	36.2500-36.0000	0.2500	0.00	18	37.7849	37.8381	0.7500	3.0000	A572-65 (65 ksi)
L42	36.0000-31.2500	4.7500	0.00	18	37.8381	38.8491	0.7500	3.0000	A572-65 (65 ksi)
L43	31.2500-31.0000	0.2500	0.00	18	38.8491	38.9023	0.7375	2.9500	A572-65 (65 ksi)
L44	31.0000-26.0000	5.0000	0.00	18	38.9023	39.9664	0.7250	2.9000	A572-65 (65 ksi)
L45	26.0000-21.0000	5.0000	0.00	18	39.9664	41.0306	0.7250	2.9000	A572-65 (65 ksi)
L46	21.0000-18.5000	2.5000	0.00	18	41.0306	41.5626	0.7125	2.8500	A572-65 (65 ksi)
L47	18.5000-18.2500	0.2500	0.00	18	41.5626	41.6158	0.7000	2.8000	A572-65 (65 ksi)
L48	18.2500-15.0000	3.2500	0.00	18	41.6158	42.3075	0.6875	2.7500	A572-65 (65 ksi)
L49	15.0000-14.7500	0.2500	0.00	18	42.3075	42.3608	0.6500	2.6000	A572-65 (65 ksi)
L50	14.7500-9.7500	5.0000	0.00	18	42.3608	43.4249	0.6500	2.6000	A572-65 (65 ksi)
L51	9.7500-4.7500	5.0000	0.00	18	43.4249	44.4891	0.6375	2.5500	A572-65 (65 ksi)
L52	4.7500-0.0000	4.7500		18	44.4891	45.5000	0.6375	2.5500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	15.2025	8.8153	244.3603	5.2584	7.6200	32.0683	489.0422	4.4085	2.3100	12.32
	16.2989	9.4579	301.7884	5.6418	8.1685	36.9453	603.9739	4.7298	2.5000	13.334
L2	16.2989	9.4579	301.7884	5.6418	8.1685	36.9453	603.9739	4.7298	2.5000	13.334
	17.3953	10.1005	367.5751	6.0251	8.7170	42.1674	735.6339	5.0512	2.6901	14.347
L3	17.3953	10.1005	367.5751	6.0251	8.7170	42.1674	735.6339	5.0512	2.6901	14.347
	18.4917	10.7431	442.2884	6.4084	9.2656	47.7347	885.1588	5.3726	2.8801	15.361
L4	18.4917	10.7431	442.2884	6.4084	9.2656	47.7347	885.1588	5.3726	2.8801	15.361
	19.5881	11.3857	526.4962	6.7917	9.8141	53.6471	1053.6851	5.6939	3.0702	16.374
L5	19.5881	11.3857	526.4962	6.7917	9.8141	53.6471	1053.6851	5.6939	3.0702	16.374
	21.0310	12.2313	652.7391	7.2961	10.5359	61.9537	1306.3371	6.1168	3.3202	17.708
L6	20.6299	15.4180	735.4138	6.8978	9.9977	73.5586	1471.7953	7.7105	3.0238	12.095
	20.8826	16.1503	845.2560	7.2254	10.4665	80.7585	1691.6243	8.0767	3.1862	12.745
L7	20.8575	26.4353	1361.5334	7.1677	10.4665	130.0852	2724.8584	13.2202	2.9002	7.031
	20.9115	26.5049	1372.3160	7.1866	10.4935	130.7780	2746.4378	13.2550	2.9095	7.053
L8	20.9115	26.5049	1372.3160	7.1866	10.4935	130.7780	2746.4378	13.2550	2.9095	7.053
	21.2893	26.9921	1449.3925	7.3187	10.6825	135.6790	2900.6922	13.4986	2.9750	7.212
L9	21.2643	37.3288	1972.9662	7.2610	10.6825	184.6912	3948.5284	18.6679	2.6890	4.677
	21.3182	37.4258	1988.3898	7.2799	10.7095	185.6656	3979.3959	18.7165	2.6984	4.693
L10	21.3202	36.6345	1948.7231	7.2843	10.7095	181.9618	3900.0104	18.3207	2.7204	4.836
	22.2918	38.3429	2234.2607	7.6240	11.1956	199.5657	4471.4613	19.1751	2.8888	5.136
L11	22.3169	27.4724	1625.1465	7.6817	11.1956	145.1592	3252.4315	13.7388	3.1748	7.937
	22.3709	27.5399	1637.1536	7.7006	11.2226	145.8798	3276.4614	13.7726	3.1842	7.96
L12	22.3709	27.5399	1637.1536	7.7006	11.2226	145.8798	3276.4614	13.7726	3.1842	7.96
	22.4248	27.6074	1649.2196	7.7195	11.2496	146.6022	3300.6093	13.8063	3.1935	7.984
L13	22.4017	37.6983	2221.0716	7.6662	11.2496	197.4352	4445.0657	18.8527	2.9295	5.326
	22.4557	37.7911	2237.5147	7.6851	11.2766	198.4205	4477.9737	18.8991	2.9389	5.343
L14	22.4576	36.9535	2190.4522	7.6895	11.2766	194.2470	4383.7866	18.4803	2.9609	5.509
	23.5372	38.7674	2529.0957	8.0669	11.8167	214.0266	5061.5192	19.3874	3.1480	5.857
L15	23.5391	37.8866	2474.3583	8.0714	11.8167	209.3944	4951.9724	18.9469	3.1700	6.038
	24.5108	39.4811	2800.0986	8.4111	12.3028	227.5979	5603.8816	19.7443	3.3384	6.359
L16	24.4780	54.9641	3828.5823	8.3356	12.3028	311.1952	7662.2023	27.4873	2.9644	4.02
	24.5320	55.0886	3854.6448	8.3545	12.3298	312.6274	7714.3617	27.5495	2.9738	4.032
L17	24.5358	53.2777	3735.8595	8.3634	12.3298	302.9934	7476.6347	26.6439	3.0178	4.235
	25.5291	55.4898	4220.7770	8.7106	12.8267	329.0609	8447.1078	27.7502	3.1899	4.477

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L18	25.5252	57.3782	4355.5341	8.7018	12.8267	339.5669	8716.7993	28.6946	3.1459	4.266
	25.5792	57.5027	4383.9336	8.7206	12.8537	341.0629	8773.6357	28.7568	3.1553	4.278
L19	25.5831	55.6100	4248.2697	8.7295	12.8537	330.5085	8502.1295	27.8103	3.1993	4.49
	26.6627	58.0144	4823.4842	9.1069	13.3938	360.1269	9653.3153	29.0127	3.3864	4.753
L20	26.6646	57.0244	4745.7923	9.1114	13.3938	354.3263	9497.8293	28.5176	3.4084	4.869
	27.7442	59.3866	5360.3407	9.4888	13.9340	384.6964	10727.7347	29.6989	3.5955	5.136
L21	27.7442	59.3866	5360.3407	9.4888	13.9340	384.6964	10727.7347	29.6989	3.5955	5.136
	28.6489	61.3661	5914.4373	9.8051	14.3866	411.1085	11836.6571	30.6889	3.7523	5.36
L22	28.1352	62.3749	5410.4111	9.3019	13.6918	395.1561	10827.9413	31.1934	3.4236	4.565
	28.3342	64.9107	6097.4764	9.6800	14.2330	428.4047	12202.9759	32.4615	3.6111	4.815
L23	28.3361	63.8581	6004.1014	9.6845	14.2330	421.8443	12016.1031	31.9351	3.6331	4.926
	28.9938	65.3742	6441.9734	9.9144	14.5620	442.3825	12892.4233	32.6933	3.7471	5.081
L24	28.9649	81.4443	7918.1173	9.8478	14.5620	543.7521	15846.6535	40.7299	3.4171	3.694
	29.0189	81.6007	7963.8142	9.8667	14.5891	545.8759	15938.1074	40.8081	3.4265	3.704
L25	29.0228	79.4666	7769.5040	9.8756	14.5891	532.5570	15549.2314	39.7409	3.4705	3.856
	29.9963	82.2053	8600.7977	10.2160	15.0761	570.4927	17212.9125	41.1105	3.6392	4.044
L26	30.0137	72.2109	7614.3047	10.2559	15.0761	505.0584	15238.6285	36.1123	3.8372	4.873
	30.0678	72.3440	7656.4965	10.2748	15.1031	506.9472	15323.0676	36.1789	3.8466	4.885
L27	30.0697	71.2264	7544.7317	10.2792	15.1031	499.5471	15099.3909	35.6200	3.8686	4.992
	30.5024	72.2746	7882.7337	10.4305	15.3196	514.5521	15775.8397	36.1442	3.9436	5.088
L28	30.4946	76.8065	8348.5306	10.4128	15.3196	544.9573	16708.0464	38.4106	3.8556	4.673
	30.5487	76.9460	8394.0927	10.4317	15.3467	546.9654	16799.2306	38.4803	3.8650	4.685
L29	30.5507	75.8124	8277.4639	10.4361	15.3467	539.3658	16565.8195	37.9134	3.8870	4.784
	31.3078	77.7354	8923.4568	10.7008	15.7255	567.4527	17858.6553	38.8751	4.0182	4.945
L30	31.2886	89.3227	10168.7342	10.6564	15.7255	646.6413	20350.8487	44.6698	3.7982	4.051
	31.3426	89.4812	10222.9588	10.6753	15.7525	648.9729	20459.3692	44.7491	3.8076	4.061
L31	31.3446	88.3248	10099.2363	10.6798	15.7525	641.1187	20211.7614	44.1708	3.8296	4.14
	31.4744	88.7001	10228.5226	10.7252	15.8175	646.6603	20470.5041	44.3585	3.8521	4.164
L32	31.4724	89.8616	10353.8836	10.7207	15.8175	654.5858	20721.3910	44.9393	3.8301	4.085
	31.5265	90.0201	10408.7638	10.7396	15.8445	656.9316	20831.2237	45.0186	3.8394	4.095
L33	31.5304	87.6919	10156.3341	10.7485	15.8445	640.9999	20326.0322	43.8543	3.8834	4.256
	32.6121	90.7772	11266.4800	11.1267	16.3857	687.5816	22547.7846	45.3972	4.0709	4.461
L34	32.6159	88.3606	10984.0511	11.1355	16.3857	670.3452	21982.5553	44.1887	4.1149	4.637
	33.6976	91.3613	12141.5412	11.5137	16.9268	717.2965	24299.0585	45.6893	4.3024	4.848
L35	33.7015	88.8562	11826.8329	11.5226	16.9268	698.7042	23669.2279	44.4365	4.3464	5.039
	34.7831	91.7724	13029.9140	11.9008	17.4680	745.9323	26076.9732	45.8949	4.5339	5.257
L36	34.7851	90.4761	12855.4444	11.9052	17.4680	735.9443	25727.8044	45.2466	4.5559	5.36

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
	35.8668	93.3500	14119.8143	12.2834	18.0091	784.0376	28258.2078	46.6839	4.7434	5.58
L37	35.8687	92.0105	13927.2532	12.2878	18.0091	773.3451	27872.8323	46.0140	4.7654	5.69
	37.5431	96.3939	16014.0955	12.8732	18.8468	849.6984	32049.2627	48.2061	5.0556	6.037
L38	36.9247	79.7315	12093.0786	12.3002	17.9698	672.9685	24202.0697	39.8733	4.9497	6.827
	37.1408	82.7533	13520.8138	12.7664	18.6368	725.4885	27059.4187	41.3845	5.1809	7.146
L39	37.1427	81.3547	13301.5572	12.7708	18.6368	713.7238	26620.6170	40.6851	5.2029	7.302
	38.2233	83.7613	14517.2386	13.1486	19.1774	756.9960	29053.5794	41.8886	5.3901	7.565
L40	38.2233	83.7613	14517.2386	13.1486	19.1774	756.9960	29053.5794	41.8886	5.3901	7.565
	38.2579	83.8383	14557.3167	13.1607	19.1947	758.4018	29133.7882	41.9271	5.3961	7.574
L41	38.2521	88.1616	15277.0375	13.1474	19.1947	795.8975	30574.1770	44.0892	5.3301	7.107
	38.3061	88.2882	15342.9772	13.1663	19.2218	798.2088	30706.1431	44.1525	5.3395	7.119
L42	38.3061	88.2882	15342.9772	13.1663	19.2218	798.2088	30706.1431	44.1525	5.3395	7.119
	39.3327	90.6948	16632.1395	13.5252	19.7353	842.7601	33286.1640	45.3560	5.5174	7.357
L43	39.3346	89.2125	16371.0402	13.5296	19.7353	829.5301	32763.6219	44.6147	5.5394	7.511
	39.3886	89.3370	16439.7029	13.5485	19.7623	831.8699	32901.0376	44.6770	5.5488	7.524
L44	39.3905	87.8516	16176.9487	13.5529	19.7623	818.5742	32375.1833	43.9341	5.5708	7.684
	40.4711	90.3004	17567.7528	13.9307	20.3029	865.2814	35158.6217	45.1588	5.7581	7.942
L45	40.4711	90.3004	17567.7528	13.9307	20.3029	865.2814	35158.6217	45.1588	5.7581	7.942
	41.5517	92.7491	19036.0719	14.3085	20.8435	913.2846	38097.1920	46.3834	5.9454	8.201
L46	41.5536	91.1783	18725.2748	14.3129	20.8435	898.3737	37475.1889	45.5978	5.9674	8.375
	42.0939	92.3816	19476.4516	14.5018	21.1138	922.4504	38978.5309	46.1996	6.0610	8.507
L47	42.0958	90.7886	19152.3304	14.5062	21.1138	907.0992	38329.8619	45.4029	6.0830	8.69
	42.1499	90.9068	19227.2431	14.5251	21.1408	909.4830	38479.7858	45.4621	6.0924	8.703
L48	42.1518	89.3108	18901.2121	14.5296	21.1408	894.0611	37827.2949	44.6639	6.1144	8.894
	42.8541	90.8201	19875.8037	14.7751	21.4922	924.7901	39777.7605	45.4187	6.2361	9.071
L49	42.8599	85.9437	18842.5091	14.7884	21.4922	876.7125	37709.8116	42.9800	6.3021	9.696
	42.9140	86.0535	18914.8018	14.8073	21.5193	878.9707	37854.4922	43.0349	6.3115	9.71
L50	42.9140	86.0535	18914.8018	14.8073	21.5193	878.9707	37854.4922	43.0349	6.3115	9.71
	43.9945	88.2489	20399.7507	15.1851	22.0599	924.7456	40826.3439	44.1328	6.4988	9.998
L51	43.9965	86.5771	20024.9931	15.1895	22.0599	907.7574	40076.3356	43.2968	6.5208	10.229
	45.0770	88.7303	21556.5661	15.5673	22.6004	953.8118	43141.4969	44.3736	6.7081	10.522
L52	45.0770	88.7303	21556.5661	15.5673	22.6004	953.8118	43141.4969	44.3736	6.7081	10.522
	46.1036	90.7759	23082.0818	15.9262	23.1140	998.6191	46194.5356	45.3966	6.8860	10.802

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
L1 150.0000-145.0000				1	1	1			
L2 145.0000-140.0000				1	1	1			
L3 140.0000-135.0000				1	1	1			
L4 135.0000-130.0000				1	1	1			
L5 130.0000-123.4200				1	1	1			
L6 123.4200-122.2500				1	1	1			
L7 122.2500-122.0000				1	1	0.950498			
L8 122.0000-120.2500				1	1	0.944281			
L9 120.2500-120.0000				1	1	0.922642			
L10 120.0000-115.5000				1	1	0.920376			
L11 115.5000-115.2500				1	1	0.956133			
L12 115.2500-115.0000				1	1	0.955323			
L13 115.0000-114.7500				1	1	0.930814			
L14 114.7500-109.7500				1	1	0.929135			
L15 109.7500-105.2500				1	1	0.931569			
L16 105.2500-105.0000				1	1	0.898158			
L17 105.0000-100.4000				1	1	0.905652			
L18 100.4000-100.1500				1	1	0.907291			
L19 100.1500-95.1500				1	1	0.913831			
L20 95.1500-90.1500				1	1	0.906922			
L21 90.1500-85.9600				1	1	0.906441			
L22 85.9600-85.0400				1	1	0.920842			
L23 85.0400-82.0000				1	1	0.92414			
L24 82.0000-81.7500				1	1	0.906466			
L25 81.7500-77.2500				1	1	0.911366			
L26 77.2500-77.0000				1	1	0.915234			
L27 77.0000-75.0000				1	1	0.92196			
L28 75.0000-74.7500				1	1	0.918921			

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
L29 74.7500-71.2500				1	1	0.919104			
L30 71.2500-71.0000				1	1	0.899631			
L31 71.0000-70.4000				1	1	0.908982			
L32 70.4000-70.1500				1	1	0.911863			
L33 70.1500-65.1500				1	1	0.915897			
L34 65.1500-60.1500				1	1	0.921606			
L35 60.1500-55.1500				1	1	0.928991			
L36 55.1500-50.1500				1	1	0.92461			
L37 50.1500-42.4100				1	1	0.929274			
L38 42.4100-41.4100				1	1	0.944631			
L39 41.4100-36.4100				1	1	0.948384			
L40 36.4100-36.2500				1	1	0.947996			
L41 36.2500-36.0000				1	1	0.958983			
L42 36.0000-31.2500				1	1	0.946804			
L43 31.2500-31.0000				1	1	0.961903			
L44 31.0000-26.0000				1	1	0.965667			
L45 26.0000-21.0000				1	1	0.953828			
L46 21.0000-18.5000				1	1	0.964478			
L47 18.5000-18.2500				1	1	0.980821			
L48 18.2500-15.0000				1	1	0.990823			
L49 15.0000-14.7500				1	1	1.08276			
L50 14.7500-9.7500				1	1	1.07017			
L51 9.7500-4.7500				1	1	1.07864			
L52 4.7500-0.0000				1	1	1.06759			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
**										
4.25x1.25	A	No	Surface Af (CaAa)	42.1500 - 42.4000	1	1	0.333 0.333	4.2500	11.0000	0.00
4.25x1.25	C	No	Surface Af (CaAa)	42.1500 - 42.4000	1	1	0.333 0.333	4.2500	11.0000	0.00
4.25x1.25	B	No	Surface Af (CaAa)	42.1500 - 42.4000	1	1	0.333 0.333	4.2500	11.0000	0.00
3.875x1.25	A	No	Surface Af (CaAa)	101.9000 - 72.1500	1	1	0.333 0.333	3.8750	10.2500	0.00
3.875x1.25	C	No	Surface Af (CaAa)	101.9000 - 72.1500	1	1	0.333 0.333	3.8750	10.2500	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
3.875x1.25	B	No	Surface Af (CaAa)	101.9000 - 72.1500	1	1	0.333 0.333	3.8750	10.2500	0.00
3.375x1.25	A	No	Surface Af (CaAa)	106.5000 - 101.9000	1	1	0.333 0.333	3.3750	9.2500	0.00
3.375x1.25	C	No	Surface Af (CaAa)	106.5000 - 101.9000	1	1	0.333 0.333	3.3750	9.2500	0.00
3.375x1.25	B	No	Surface Af (CaAa)	106.5000 - 101.9000	1	1	0.333 0.333	3.3750	9.2500	0.00
***										
MP3-03 (L)	A	No	Surface Af (CaAa)	76.0000 - 46.0000	1	1	-0.333 -0.333	4.0600	11.2600	0.00
MP3-03 (L)	C	No	Surface Af (CaAa)	76.0000 - 46.0000	1	1	-0.333 -0.333	4.0600	11.2600	0.00
MP3-03 (L)	B	No	Surface Af (CaAa)	76.0000 - 46.0000	1	1	-0.333 -0.333	4.0600	11.2600	0.00
***										
MP3-05 (L)	A	No	Surface Af (CaAa)	21.2500 - 1.2500	1	1	0.333 0.333	5.3300	14.8400	0.00
MP3-05 (L)	A	No	Surface Af (CaAa)	46.2500 - 16.2500	1	1	0.000 0.000	5.3300	14.8400	0.00
MP3-05 (L)	C	No	Surface Af (CaAa)	31.2500 - 1.2500	1	1	0.000 0.000	5.3300	14.8400	0.00
MP3-05 (L)	B	No	Surface Af (CaAa)	31.2500 - 1.2500	1	1	0.000 0.000	5.3300	14.8400	0.00
MP3-05 (L)	C	No	Surface Af (CaAa)	43.2500 - 31.2500	1	1	0.000 0.000	5.3300	14.8400	0.00
MP3-05 (L)	B	No	Surface Af (CaAa)	43.2500 - 31.2500	1	1	0.000 0.000	5.3300	14.8400	0.00
MP3-03 (L)	A	No	Surface Af (CaAa)	76.2500 - 46.2500	1	1	0.000 0.000	4.0600	11.2600	0.00
MP3-03 (L)	B	No	Surface Af (CaAa)	76.2500 - 46.2500	1	1	-0.500 -0.500	4.0600	11.2600	0.00
MP3-03 (L)	B	No	Surface Af (CaAa)	76.2500 - 46.2500	1	1	0.000 0.000	4.0600	11.2600	0.00
MP3-03 (L)	A	No	Surface Af (CaAa)	116.2500 - 76.2500	1	1	0.000 0.000	4.0600	11.2600	0.00
MP3-03 (L)	C	No	Surface Af (CaAa)	116.2500 - 76.2500	1	1	0.000 0.000	4.0600	11.2600	0.00
MP3-03 (L)	B	No	Surface Af (CaAa)	116.2500 - 76.2500	1	1	0.000 0.000	4.0600	11.2600	0.00
***										
5.5x1.25	B	No	Surface Af (CaAa)	36.2500 - 1.2500	1	1	-0.500 -0.500	5.5000	13.5000	0.00
6.5x1.25	A	No	Surface Af (CaAa)	36.2500 - 1.2500	1	1	-0.500 -0.500	6.5000	15.5000	0.00
6.5x1.25	C	No	Surface Af (CaAa)	36.2500 - 11.5000	1	1	-0.500 -0.500	6.5000	15.5000	0.00
6x1	B	No	Surface Af (CaAa)	71.2500 - 36.2500	1	1	-0.500 -0.500	6.0000	14.0000	0.00
6x1	A	No	Surface Af (CaAa)	71.2500 - 36.2500	1	1	-0.500 -0.500	6.0000	14.0000	0.00
6x1	C	No	Surface Af (CaAa)	71.2500 - 36.2500	1	1	-0.500 -0.500	6.0000	14.0000	0.00
4x0.75	B	No	Surface Af (CaAa)	121.2500 - 71.2500	1	1	-0.500 -0.500	4.0000	9.5000	0.00
4x0.75	A	No	Surface Af (CaAa)	121.2500 - 71.2500	1	1	-0.500 -0.500	4.0000	9.5000	0.00
4x0.75	C	No	Surface Af (CaAa)	121.2500 - 71.2500	1	1	-0.500 -0.500	4.0000	9.5000	0.00
***										
4.5x1	A	No	Surface Af (CaAa)	83.5000 - 73.5000	1	1	-0.167 -0.167	4.5000	11.0000	0.00
4.5x1	C	No	Surface Af (CaAa)	83.5000 - 73.5000	1	1	-0.167 -0.167	4.5000	11.0000	0.00
4.5x1	B	No	Surface Af (CaAa)	83.5000 - 73.5000	1	1	-0.167 -0.167	4.5000	11.0000	0.00
4x0.75	A	No	Surface Af (CaAa)	123.7500 - 113.7500	1	1	-0.167 -0.167	4.0000	9.5000	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
4x0.75	C	No	Surface Af (CaAa)	123.7500 - 113.7500	1	1	-0.167 -0.167	4.0000	9.5000	0.00
4x0.75	B	No	Surface Af (CaAa)	123.7500 - 113.7500	1	1	-0.167 -0.167	4.0000	9.5000	0.00

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
**									
HB114-21U3M12-XXXF(1-1/4)	C	No	No	Inside Pole	150.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	1.22 1.22 1.22 1.22
HB114-1-0813U4-M5J(1-1/4)	C	No	No	Inside Pole	150.0000 - 0.0000	3	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	1.20 1.20 1.20 1.20
**									
FB-L98B-002-75000(3/8)	C	No	No	Inside Pole	137.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.06 0.06 0.06 0.06
WR-VG86ST-BRD(3/4)	C	No	No	Inside Pole	137.0000 - 0.0000	2	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.58 0.58 0.58 0.58
LDF6-50A(1-1/4)	C	No	No	Inside Pole	137.0000 - 0.0000	12	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.60 0.60 0.60 0.60
**									
HB158-1-08U8-S8J18(1-5/8)	C	No	No	Inside Pole	127.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	1.30 1.30 1.30 1.30
LDF4-50A(1/2)	C	No	No	Inside Pole	127.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.15 0.15 0.15 0.15
AVA7-50(1-5/8)	C	No	No	Inside Pole	127.0000 - 0.0000	12	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.70 0.70 0.70 0.70
**									
860 10033(3/8)	C	No	No	Inside Pole	117.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.00 0.00 0.00 0.00
FXL-1873(1-5/8)	C	No	No	Inside Pole	117.0000 - 0.0000	6	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.67 0.67 0.67 0.67
HCS 6X12 4AWG(1-5/8")	C	No	No	Inside Pole	117.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	2.40 2.40 2.40 2.40
LDF4-50A(1/2)	C	No	No	Inside Pole	75.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.15 0.15 0.15 0.15

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 K
L1	150.0000-145.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.02
L2	145.0000-140.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.02
L3	140.0000-135.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.04
L4	135.0000-130.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.07
L5	130.0000-123.4200	A	0.000	0.000	0.220	0.000	0.00
		B	0.000	0.000	0.220	0.000	0.00
		C	0.000	0.000	0.220	0.000	0.12
L6	123.4200-122.2500	A	0.000	0.000	0.780	0.000	0.00
		B	0.000	0.000	0.780	0.000	0.00
		C	0.000	0.000	0.780	0.000	0.03
L7	122.2500-122.0000	A	0.000	0.000	0.167	0.000	0.00
		B	0.000	0.000	0.167	0.000	0.00
		C	0.000	0.000	0.167	0.000	0.01
L8	122.0000-120.2500	A	0.000	0.000	1.833	0.000	0.00
		B	0.000	0.000	1.833	0.000	0.00
		C	0.000	0.000	1.833	0.000	0.04
L9	120.2500-120.0000	A	0.000	0.000	0.333	0.000	0.00
		B	0.000	0.000	0.333	0.000	0.00
		C	0.000	0.000	0.333	0.000	0.01
L10	120.0000-115.5000	A	0.000	0.000	6.508	0.000	0.00
		B	0.000	0.000	6.508	0.000	0.00
		C	0.000	0.000	6.508	0.000	0.11
L11	115.5000-115.2500	A	0.000	0.000	0.502	0.000	0.00
		B	0.000	0.000	0.502	0.000	0.00
		C	0.000	0.000	0.502	0.000	0.01
L12	115.2500-115.0000	A	0.000	0.000	0.502	0.000	0.00
		B	0.000	0.000	0.502	0.000	0.00
		C	0.000	0.000	0.502	0.000	0.01
L13	115.0000-114.7500	A	0.000	0.000	0.502	0.000	0.00
		B	0.000	0.000	0.502	0.000	0.00
		C	0.000	0.000	0.502	0.000	0.01
L14	114.7500-109.7500	A	0.000	0.000	7.383	0.000	0.00
		B	0.000	0.000	7.383	0.000	0.00
		C	0.000	0.000	7.383	0.000	0.15
L15	109.7500-105.2500	A	0.000	0.000	6.635	0.000	0.00
		B	0.000	0.000	6.635	0.000	0.00
		C	0.000	0.000	6.635	0.000	0.13
L16	105.2500-105.0000	A	0.000	0.000	0.454	0.000	0.00
		B	0.000	0.000	0.454	0.000	0.00
		C	0.000	0.000	0.454	0.000	0.01
L17	105.0000-100.4000	A	0.000	0.000	8.611	0.000	0.00
		B	0.000	0.000	8.611	0.000	0.00
		C	0.000	0.000	8.611	0.000	0.14
L18	100.4000-100.1500	A	0.000	0.000	0.497	0.000	0.00
		B	0.000	0.000	0.497	0.000	0.00
		C	0.000	0.000	0.497	0.000	0.01
L19	100.1500-95.1500	A	0.000	0.000	9.946	0.000	0.00
		B	0.000	0.000	9.946	0.000	0.00
		C	0.000	0.000	9.946	0.000	0.15
L20	95.1500-90.1500	A	0.000	0.000	9.946	0.000	0.00
		B	0.000	0.000	9.946	0.000	0.00
		C	0.000	0.000	9.946	0.000	0.15
L21	90.1500-85.9600	A	0.000	0.000	8.335	0.000	0.00
		B	0.000	0.000	8.335	0.000	0.00
		C	0.000	0.000	8.335	0.000	0.12
L22	85.9600-85.0400	A	0.000	0.000	1.830	0.000	0.00
		B	0.000	0.000	1.830	0.000	0.00
		C	0.000	0.000	1.830	0.000	0.03
L23	85.0400-82.0000	A	0.000	0.000	7.172	0.000	0.00
		B	0.000	0.000	7.172	0.000	0.00

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 K
		C	0.000	0.000	7.172	0.000	0.09
L24	82.0000-81.7500	A	0.000	0.000	0.685	0.000	0.00
		B	0.000	0.000	0.685	0.000	0.00
		C	0.000	0.000	0.685	0.000	0.01
L25	81.7500-77.2500	A	0.000	0.000	12.326	0.000	0.00
		B	0.000	0.000	12.326	0.000	0.00
		C	0.000	0.000	12.326	0.000	0.13
L26	77.2500-77.0000	A	0.000	0.000	0.685	0.000	0.00
		B	0.000	0.000	0.685	0.000	0.00
		C	0.000	0.000	0.685	0.000	0.01
L27	77.0000-75.0000	A	0.000	0.000	6.155	0.000	0.00
		B	0.000	0.000	7.001	0.000	0.00
		C	0.000	0.000	5.309	0.000	0.06
L28	75.0000-74.7500	A	0.000	0.000	0.854	0.000	0.00
		B	0.000	0.000	1.023	0.000	0.00
		C	0.000	0.000	0.685	0.000	0.01
L29	74.7500-71.2500	A	0.000	0.000	9.687	0.000	0.00
		B	0.000	0.000	12.055	0.000	0.00
		C	0.000	0.000	7.318	0.000	0.10
L30	71.2500-71.0000	A	0.000	0.000	0.588	0.000	0.00
		B	0.000	0.000	0.757	0.000	0.00
		C	0.000	0.000	0.419	0.000	0.01
L31	71.0000-70.4000	A	0.000	0.000	1.412	0.000	0.00
		B	0.000	0.000	1.818	0.000	0.00
		C	0.000	0.000	1.006	0.000	0.02
L32	70.4000-70.1500	A	0.000	0.000	0.588	0.000	0.00
		B	0.000	0.000	0.757	0.000	0.00
		C	0.000	0.000	0.419	0.000	0.01
L33	70.1500-65.1500	A	0.000	0.000	11.767	0.000	0.00
		B	0.000	0.000	15.150	0.000	0.00
		C	0.000	0.000	8.383	0.000	0.15
L34	65.1500-60.1500	A	0.000	0.000	11.767	0.000	0.00
		B	0.000	0.000	15.150	0.000	0.00
		C	0.000	0.000	8.383	0.000	0.15
L35	60.1500-55.1500	A	0.000	0.000	11.767	0.000	0.00
		B	0.000	0.000	15.150	0.000	0.00
		C	0.000	0.000	8.383	0.000	0.15
L36	55.1500-50.1500	A	0.000	0.000	11.767	0.000	0.00
		B	0.000	0.000	15.150	0.000	0.00
		C	0.000	0.000	8.383	0.000	0.15
L37	50.1500-42.4100	A	0.000	0.000	16.598	0.000	0.00
		B	0.000	0.000	16.572	0.000	0.00
		C	0.000	0.000	11.294	0.000	0.23
L38	42.4100-41.4100	A	0.000	0.000	1.995	0.000	0.00
		B	0.000	0.000	1.995	0.000	0.00
		C	0.000	0.000	1.995	0.000	0.03
L39	41.4100-36.4100	A	0.000	0.000	9.442	0.000	0.00
		B	0.000	0.000	9.442	0.000	0.00
		C	0.000	0.000	9.442	0.000	0.15
L40	36.4100-36.2500	A	0.000	0.000	0.302	0.000	0.00
		B	0.000	0.000	0.302	0.000	0.00
		C	0.000	0.000	0.302	0.000	0.00
L41	36.2500-36.0000	A	0.000	0.000	0.493	0.000	0.00
		B	0.000	0.000	0.451	0.000	0.00
		C	0.000	0.000	0.493	0.000	0.01
L42	36.0000-31.2500	A	0.000	0.000	9.365	0.000	0.00
		B	0.000	0.000	8.574	0.000	0.00
		C	0.000	0.000	9.365	0.000	0.14
L43	31.2500-31.0000	A	0.000	0.000	0.493	0.000	0.00
		B	0.000	0.000	0.451	0.000	0.00
		C	0.000	0.000	0.493	0.000	0.01
L44	31.0000-26.0000	A	0.000	0.000	9.858	0.000	0.00
		B	0.000	0.000	9.025	0.000	0.00
		C	0.000	0.000	9.858	0.000	0.15
L45	26.0000-21.0000	A	0.000	0.000	10.080	0.000	0.00
		B	0.000	0.000	9.025	0.000	0.00
		C	0.000	0.000	9.858	0.000	0.15
L46	21.0000-18.5000	A	0.000	0.000	7.150	0.000	0.00
		B	0.000	0.000	4.513	0.000	0.00

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 K
		C	0.000	0.000	4.929	0.000	0.07
L47	18.5000-18.2500	A	0.000	0.000	0.715	0.000	0.00
		B	0.000	0.000	0.451	0.000	0.00
		C	0.000	0.000	0.493	0.000	0.01
L48	18.2500-15.0000	A	0.000	0.000	8.185	0.000	0.00
		B	0.000	0.000	5.866	0.000	0.00
		C	0.000	0.000	6.408	0.000	0.10
L49	15.0000-14.7500	A	0.000	0.000	0.493	0.000	0.00
		B	0.000	0.000	0.451	0.000	0.00
		C	0.000	0.000	0.493	0.000	0.01
L50	14.7500-9.7500	A	0.000	0.000	9.858	0.000	0.00
		B	0.000	0.000	9.025	0.000	0.00
		C	0.000	0.000	7.962	0.000	0.15
L51	9.7500-4.7500	A	0.000	0.000	9.858	0.000	0.00
		B	0.000	0.000	9.025	0.000	0.00
		C	0.000	0.000	4.442	0.000	0.15
L52	4.7500-0.0000	A	0.000	0.000	6.901	0.000	0.00
		B	0.000	0.000	6.317	0.000	0.00
		C	0.000	0.000	3.109	0.000	0.14

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 K
L1	150.0000-145.0000	A	1.481	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.02
L2	145.0000-140.0000	A	1.476	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.02
L3	140.0000-135.0000	A	1.471	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.04
L4	135.0000-130.0000	A	1.465	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.07
L5	130.0000-123.4200	A	1.459	0.000	0.000	0.286	0.000	0.00
		B		0.000	0.000	0.286	0.000	0.00
		C		0.000	0.000	0.286	0.000	0.13
L6	123.4200-122.2500	A	1.454	0.000	0.000	1.013	0.000	0.01
		B		0.000	0.000	1.013	0.000	0.01
		C		0.000	0.000	1.013	0.000	0.04
L7	122.2500-122.0000	A	1.453	0.000	0.000	0.216	0.000	0.00
		B		0.000	0.000	0.216	0.000	0.00
		C		0.000	0.000	0.216	0.000	0.01
L8	122.0000-120.2500	A	1.452	0.000	0.000	2.471	0.000	0.02
		B		0.000	0.000	2.471	0.000	0.02
		C		0.000	0.000	2.471	0.000	0.06
L9	120.2500-120.0000	A	1.451	0.000	0.000	0.455	0.000	0.00
		B		0.000	0.000	0.455	0.000	0.00
		C		0.000	0.000	0.455	0.000	0.01
L10	120.0000-115.5000	A	1.448	0.000	0.000	8.919	0.000	0.08
		B		0.000	0.000	8.919	0.000	0.08
		C		0.000	0.000	8.919	0.000	0.20
L11	115.5000-115.2500	A	1.445	0.000	0.000	0.696	0.000	0.01
		B		0.000	0.000	0.696	0.000	0.01
		C		0.000	0.000	0.696	0.000	0.01
L12	115.2500-115.0000	A	1.445	0.000	0.000	0.696	0.000	0.01
		B		0.000	0.000	0.696	0.000	0.01
		C		0.000	0.000	0.696	0.000	0.01
L13	115.0000-114.7500	A	1.444	0.000	0.000	0.696	0.000	0.01
		B		0.000	0.000	0.696	0.000	0.01
		C		0.000	0.000	0.696	0.000	0.01
L14	114.7500-109.7500	A	1.441	0.000	0.000	10.463	0.000	0.10
		B		0.000	0.000	10.463	0.000	0.10
		C		0.000	0.000	10.463	0.000	0.24

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 K
L15	109.7500-105.2500	A	1.435	0.000	0.000	9.411	0.000	0.09
		B		0.000	0.000	9.411	0.000	0.09
		C		0.000	0.000	9.411	0.000	0.22
L16	105.2500-105.0000	A	1.432	0.000	0.000	0.636	0.000	0.01
		B		0.000	0.000	0.636	0.000	0.01
		C		0.000	0.000	0.636	0.000	0.01
L17	105.0000-100.4000	A	1.428	0.000	0.000	12.146	0.000	0.12
		B		0.000	0.000	12.146	0.000	0.12
		C		0.000	0.000	12.146	0.000	0.25
L18	100.4000-100.1500	A	1.425	0.000	0.000	0.711	0.000	0.01
		B		0.000	0.000	0.711	0.000	0.01
		C		0.000	0.000	0.711	0.000	0.01
L19	100.1500-95.1500	A	1.421	0.000	0.000	14.209	0.000	0.13
		B		0.000	0.000	14.209	0.000	0.13
		C		0.000	0.000	14.209	0.000	0.28
L20	95.1500-90.1500	A	1.414	0.000	0.000	14.187	0.000	0.13
		B		0.000	0.000	14.187	0.000	0.13
		C		0.000	0.000	14.187	0.000	0.28
L21	90.1500-85.9600	A	1.406	0.000	0.000	11.870	0.000	0.11
		B		0.000	0.000	11.870	0.000	0.11
		C		0.000	0.000	11.870	0.000	0.23
L22	85.9600-85.0400	A	1.402	0.000	0.000	2.606	0.000	0.02
		B		0.000	0.000	2.606	0.000	0.02
		C		0.000	0.000	2.606	0.000	0.05
L23	85.0400-82.0000	A	1.399	0.000	0.000	9.962	0.000	0.09
		B		0.000	0.000	9.962	0.000	0.09
		C		0.000	0.000	9.962	0.000	0.18
L24	82.0000-81.7500	A	1.396	0.000	0.000	0.934	0.000	0.01
		B		0.000	0.000	0.934	0.000	0.01
		C		0.000	0.000	0.934	0.000	0.02
L25	81.7500-77.2500	A	1.392	0.000	0.000	16.797	0.000	0.15
		B		0.000	0.000	16.797	0.000	0.15
		C		0.000	0.000	16.797	0.000	0.29
L26	77.2500-77.0000	A	1.388	0.000	0.000	0.932	0.000	0.01
		B		0.000	0.000	0.932	0.000	0.01
		C		0.000	0.000	0.932	0.000	0.02
L27	77.0000-75.0000	A	1.386	0.000	0.000	8.410	0.000	0.08
		B		0.000	0.000	9.603	0.000	0.09
		C		0.000	0.000	7.218	0.000	0.12
L28	75.0000-74.7500	A	1.384	0.000	0.000	1.170	0.000	0.01
		B		0.000	0.000	1.408	0.000	0.01
		C		0.000	0.000	0.932	0.000	0.02
L29	74.7500-71.2500	A	1.380	0.000	0.000	13.499	0.000	0.12
		B		0.000	0.000	16.834	0.000	0.15
		C		0.000	0.000	10.165	0.000	0.19
L30	71.2500-71.0000	A	1.377	0.000	0.000	0.795	0.000	0.01
		B		0.000	0.000	1.033	0.000	0.01
		C		0.000	0.000	0.557	0.000	0.01
L31	71.0000-70.4000	A	1.376	0.000	0.000	1.907	0.000	0.02
		B		0.000	0.000	2.478	0.000	0.02
		C		0.000	0.000	1.336	0.000	0.03
L32	70.4000-70.1500	A	1.375	0.000	0.000	0.795	0.000	0.01
		B		0.000	0.000	1.033	0.000	0.01
		C		0.000	0.000	0.557	0.000	0.01
L33	70.1500-65.1500	A	1.370	0.000	0.000	15.876	0.000	0.14
		B		0.000	0.000	20.629	0.000	0.18
		C		0.000	0.000	11.123	0.000	0.24
L34	65.1500-60.1500	A	1.359	0.000	0.000	15.845	0.000	0.14
		B		0.000	0.000	20.588	0.000	0.18
		C		0.000	0.000	11.102	0.000	0.24
L35	60.1500-55.1500	A	1.348	0.000	0.000	15.811	0.000	0.14
		B		0.000	0.000	20.542	0.000	0.18
		C		0.000	0.000	11.080	0.000	0.24
L36	55.1500-50.1500	A	1.336	0.000	0.000	15.774	0.000	0.13
		B		0.000	0.000	20.494	0.000	0.18
		C		0.000	0.000	11.055	0.000	0.24
L37	50.1500-42.4100	A	1.319	0.000	0.000	21.776	0.000	0.18
		B		0.000	0.000	21.888	0.000	0.18
		C		0.000	0.000	14.553	0.000	0.35

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 K
L38	42.4100-41.4100	A	1.306	0.000	0.000	2.561	0.000	0.02
		B		0.000	0.000	2.443	0.000	0.02
		C		0.000	0.000	2.443	0.000	0.05
L39	41.4100-36.4100	A	1.296	0.000	0.000	12.034	0.000	0.10
		B		0.000	0.000	11.454	0.000	0.10
		C		0.000	0.000	11.454	0.000	0.25
L40	36.4100-36.2500	A	1.287	0.000	0.000	0.385	0.000	0.00
		B		0.000	0.000	0.366	0.000	0.00
		C		0.000	0.000	0.366	0.000	0.01
L41	36.2500-36.0000	A	1.287	0.000	0.000	0.622	0.000	0.01
		B		0.000	0.000	0.551	0.000	0.00
		C		0.000	0.000	0.593	0.000	0.01
L42	36.0000-31.2500	A	1.277	0.000	0.000	11.792	0.000	0.09
		B		0.000	0.000	10.458	0.000	0.09
		C		0.000	0.000	11.250	0.000	0.24
L43	31.2500-31.0000	A	1.268	0.000	0.000	0.620	0.000	0.00
		B		0.000	0.000	0.578	0.000	0.00
		C		0.000	0.000	0.620	0.000	0.01
L44	31.0000-26.0000	A	1.256	0.000	0.000	12.371	0.000	0.10
		B		0.000	0.000	11.538	0.000	0.09
		C		0.000	0.000	12.371	0.000	0.25
L45	26.0000-21.0000	A	1.232	0.000	0.000	12.607	0.000	0.10
		B		0.000	0.000	11.490	0.000	0.09
		C		0.000	0.000	12.323	0.000	0.24
L46	21.0000-18.5000	A	1.211	0.000	0.000	8.967	0.000	0.07
		B		0.000	0.000	5.724	0.000	0.04
		C		0.000	0.000	6.140	0.000	0.12
L47	18.5000-18.2500	A	1.202	0.000	0.000	0.895	0.000	0.01
		B		0.000	0.000	0.571	0.000	0.00
		C		0.000	0.000	0.613	0.000	0.01
L48	18.2500-15.0000	A	1.190	0.000	0.000	10.208	0.000	0.08
		B		0.000	0.000	7.414	0.000	0.06
		C		0.000	0.000	7.956	0.000	0.16
L49	15.0000-14.7500	A	1.177	0.000	0.000	0.611	0.000	0.00
		B		0.000	0.000	0.569	0.000	0.00
		C		0.000	0.000	0.611	0.000	0.01
L50	14.7500-9.7500	A	1.155	0.000	0.000	12.168	0.000	0.09
		B		0.000	0.000	11.334	0.000	0.08
		C		0.000	0.000	9.868	0.000	0.22
L51	9.7500-4.7500	A	1.096	0.000	0.000	12.049	0.000	0.08
		B		0.000	0.000	11.216	0.000	0.08
		C		0.000	0.000	5.537	0.000	0.19
L52	4.7500-0.0000	A	0.980	0.000	0.000	8.272	0.000	0.05
		B		0.000	0.000	7.689	0.000	0.05
		C		0.000	0.000	3.795	0.000	0.17

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	150.0000-145.0000	0.0000	0.0000	0.0000	0.0000
L2	145.0000-140.0000	0.0000	0.0000	0.0000	0.0000
L3	140.0000-135.0000	0.0000	0.0000	0.0000	0.0000
L4	135.0000-130.0000	0.0000	0.0000	0.0000	0.0000
L5	130.0000-123.4200	0.0000	0.0000	0.0000	0.0000
L6	123.4200-122.2500	0.0000	0.0000	0.0000	0.0000
L7	122.2500-122.0000	0.0000	0.0000	0.0000	0.0000
L8	122.0000-120.2500	0.0000	0.0000	0.0000	0.0000

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L9	120.2500-120.0000	0.0000	0.0000	0.0000	0.0000
L10	120.0000-115.5000	0.0000	0.0000	0.0000	0.0000
L11	115.5000-115.2500	0.0000	0.0000	0.0000	0.0000
L12	115.2500-115.0000	0.0000	0.0000	0.0000	0.0000
L13	115.0000-114.7500	0.0000	0.0000	0.0000	0.0000
L14	114.7500-109.7500	0.0000	0.0000	0.0000	0.0000
L15	109.7500-105.2500	0.0000	0.0000	0.0000	0.0000
L16	105.2500-105.0000	0.0000	0.0000	0.0000	0.0000
L17	105.0000-100.4000	0.0000	0.0000	0.0000	0.0000
L18	100.4000-100.1500	0.0000	0.0000	0.0000	0.0000
L19	100.1500-95.1500	0.0000	0.0000	0.0000	0.0000
L20	95.1500-90.1500	0.0000	0.0000	0.0000	0.0000
L21	90.1500-85.9600	0.0000	0.0000	0.0000	0.0000
L22	85.9600-85.0400	0.0000	0.0000	0.0000	0.0000
L23	85.0400-82.0000	0.0000	0.0000	0.0000	0.0000
L24	82.0000-81.7500	0.0000	0.0000	0.0000	0.0000
L25	81.7500-77.2500	0.0000	0.0000	0.0000	0.0000
L26	77.2500-77.0000	0.0000	0.0000	0.0000	0.0000
L27	77.0000-75.0000	-0.4929	-1.0375	-0.5392	-1.1349
L28	75.0000-74.7500	-0.7297	-1.5352	-0.7937	-1.6700
L29	74.7500-71.2500	-0.8669	-1.8227	-0.9382	-1.9727
L30	71.2500-71.0000	-0.9866	-2.0732	-1.0993	-2.3099
L31	71.0000-70.4000	-0.9887	-2.0773	-1.1017	-2.3147
L32	70.4000-70.1500	-0.9908	-2.0814	-1.1042	-2.3196
L33	70.1500-65.1500	-1.0035	-2.1063	-1.1193	-2.3493
L34	65.1500-60.1500	-1.0274	-2.1532	-1.1476	-2.4051
L35	60.1500-55.1500	-1.0509	-2.1993	-1.1753	-2.4597
L36	55.1500-50.1500	-1.0740	-2.2445	-1.2026	-2.5132
L37	50.1500-42.4100	-1.2231	-1.6567	-1.3752	-1.8837
L38	42.4100-41.4100	0.0000	0.0000	-0.1663	-0.0960
L39	41.4100-36.4100	0.0000	0.0000	-0.1742	-0.1006
L40	36.4100-36.2500	0.0000	0.0000	-0.1747	-0.1009
L41	36.2500-36.0000	0.3180	0.3285	0.1010	0.1831
L42	36.0000-31.2500	0.3208	0.3313	0.1035	0.1858
L43	31.2500-31.0000	0.3236	0.3340	0.2744	0.2832
L44	31.0000-26.0000	0.3265	0.3369	0.2775	0.2863
L45	26.0000-21.0000	0.3543	0.2323	0.3080	0.1726
L46	21.0000-18.5000	0.7492	-1.6842	0.7392	-1.8969
L47	18.5000-18.2500	0.7528	-1.6913	0.7432	-1.9045
L48	18.2500-15.0000	1.3846	-1.4056	1.4285	-1.6012
L49	15.0000-14.7500	2.4797	-0.9023	2.6241	-1.0633
L50	14.7500-9.7500	1.4654	-0.6605	1.5633	-0.8150
L51	9.7500-4.7500	-0.7061	-0.1412	-0.7161	-0.2776
L52	4.7500-0.0000	-0.7871	-0.1559	-0.6267	-0.2307

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L5	63	4x0.75	123.42 - 123.75	1.0000	1.0000
L5	64	4x0.75	123.42 - 123.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L5	65	4x0.75	123.42 - 123.75	1.0000	1.0000
L7	63	4x0.75	122.00 - 122.25	1.0000	1.0000
L7	64	4x0.75	122.00 - 122.25	1.0000	1.0000
L7	65	4x0.75	122.00 - 122.25	1.0000	1.0000
L8	56	4x0.75	120.25 - 121.25	1.0000	1.0000
L8	57	4x0.75	120.25 - 121.25	1.0000	1.0000
L8	58	4x0.75	120.25 - 121.25	1.0000	1.0000
L8	63	4x0.75	120.25 - 122.00	1.0000	1.0000
L8	64	4x0.75	120.25 - 122.00	1.0000	1.0000
L8	65	4x0.75	120.25 - 122.00	1.0000	1.0000
L9	56	4x0.75	120.00 - 120.25	1.0000	1.0000
L9	57	4x0.75	120.00 - 120.25	1.0000	1.0000
L9	58	4x0.75	120.00 - 120.25	1.0000	1.0000
L9	63	4x0.75	120.00 - 120.25	1.0000	1.0000
L9	64	4x0.75	120.00 - 120.25	1.0000	1.0000
L9	65	4x0.75	120.00 - 120.25	1.0000	1.0000
L10	46	MP3-03 (L)	115.50 - 116.25	1.0000	1.0000
L10	47	MP3-03 (L)	115.50 - 116.25	1.0000	1.0000
L10	48	MP3-03 (L)	115.50 - 116.25	1.0000	1.0000
L10	56	4x0.75	115.50 - 120.00	1.0000	1.0000
L10	57	4x0.75	115.50 - 120.00	1.0000	1.0000
L10	58	4x0.75	115.50 - 120.00	1.0000	1.0000
L10	63	4x0.75	115.50 - 120.00	1.0000	1.0000
L10	64	4x0.75	115.50 - 120.00	1.0000	1.0000
L10	65	4x0.75	115.50 - 120.00	1.0000	1.0000
L11	46	MP3-03 (L)	115.25 - 115.50	1.0000	1.0000
L11	47	MP3-03 (L)	115.25 - 115.50	1.0000	1.0000
L11	48	MP3-03 (L)	115.25 - 115.50	1.0000	1.0000
L11	56	4x0.75	115.25 - 115.50	1.0000	1.0000
L11	57	4x0.75	115.25 - 115.50	1.0000	1.0000
L11	58	4x0.75	115.25 - 115.50	1.0000	1.0000
L11	63	4x0.75	115.25 - 115.50	1.0000	1.0000
L11	64	4x0.75	115.25 - 115.50	1.0000	1.0000
L11	65	4x0.75	115.25 - 115.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L12	46	MP3-03 (L)	115.00 - 115.25	1.0000	1.0000
L12	47	MP3-03 (L)	115.00 - 115.25	1.0000	1.0000
L12	48	MP3-03 (L)	115.00 - 115.25	1.0000	1.0000
L12	56	4x0.75	115.00 - 115.25	1.0000	1.0000
L12	57	4x0.75	115.00 - 115.25	1.0000	1.0000
L12	58	4x0.75	115.00 - 115.25	1.0000	1.0000
L12	63	4x0.75	115.00 - 115.25	1.0000	1.0000
L12	64	4x0.75	115.00 - 115.25	1.0000	1.0000
L12	65	4x0.75	115.00 - 115.25	1.0000	1.0000
L13	46	MP3-03 (L)	114.75 - 115.00	1.0000	1.0000
L13	47	MP3-03 (L)	114.75 - 115.00	1.0000	1.0000
L13	48	MP3-03 (L)	114.75 - 115.00	1.0000	1.0000
L13	56	4x0.75	114.75 - 115.00	1.0000	1.0000
L13	57	4x0.75	114.75 - 115.00	1.0000	1.0000
L13	58	4x0.75	114.75 - 115.00	1.0000	1.0000
L13	63	4x0.75	114.75 - 115.00	1.0000	1.0000
L13	64	4x0.75	114.75 - 115.00	1.0000	1.0000
L13	65	4x0.75	114.75 - 115.00	1.0000	1.0000
L14	46	MP3-03 (L)	109.75 - 114.75	1.0000	1.0000
L14	47	MP3-03 (L)	109.75 - 114.75	1.0000	1.0000
L14	48	MP3-03 (L)	109.75 - 114.75	1.0000	1.0000
L14	56	4x0.75	109.75 - 114.75	1.0000	1.0000
L14	57	4x0.75	109.75 - 114.75	1.0000	1.0000
L14	58	4x0.75	109.75 - 114.75	1.0000	1.0000
L14	63	4x0.75	113.75 - 114.75	1.0000	1.0000
L14	64	4x0.75	113.75 - 114.75	1.0000	1.0000
L14	65	4x0.75	113.75 - 114.75	1.0000	1.0000
L15	29	3.375x1.25	105.25 - 106.50	1.0000	1.0000
L15	30	3.375x1.25	105.25 - 106.50	1.0000	1.0000
L15	31	3.375x1.25	105.25 - 106.50	1.0000	1.0000
L15	46	MP3-03 (L)	105.25 - 109.75	1.0000	1.0000
L15	47	MP3-03 (L)	105.25 - 109.75	1.0000	1.0000
L15	48	MP3-03 (L)	105.25 - 109.75	1.0000	1.0000
L15	56	4x0.75	105.25 - 109.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L15	57	4x0.75	105.25 - 109.75	1.0000	1.0000
L15	58	4x0.75	105.25 - 109.75	1.0000	1.0000
L16	29	3.375x1.25	105.00 - 105.25	1.0000	1.0000
L16	30	3.375x1.25	105.00 - 105.25	1.0000	1.0000
L16	31	3.375x1.25	105.00 - 105.25	1.0000	1.0000
L16	46	MP3-03 (L)	105.00 - 105.25	1.0000	1.0000
L16	47	MP3-03 (L)	105.00 - 105.25	1.0000	1.0000
L16	48	MP3-03 (L)	105.00 - 105.25	1.0000	1.0000
L16	56	4x0.75	105.00 - 105.25	1.0000	1.0000
L16	57	4x0.75	105.00 - 105.25	1.0000	1.0000
L16	58	4x0.75	105.00 - 105.25	1.0000	1.0000
L17	26	3.875x1.25	100.40 - 101.90	1.0000	1.0000
L17	27	3.875x1.25	100.40 - 101.90	1.0000	1.0000
L17	28	3.875x1.25	100.40 - 101.90	1.0000	1.0000
L17	29	3.375x1.25	101.90 - 105.00	1.0000	1.0000
L17	30	3.375x1.25	101.90 - 105.00	1.0000	1.0000
L17	31	3.375x1.25	101.90 - 105.00	1.0000	1.0000
L17	46	MP3-03 (L)	100.40 - 105.00	1.0000	1.0000
L17	47	MP3-03 (L)	100.40 - 105.00	1.0000	1.0000
L17	48	MP3-03 (L)	100.40 - 105.00	1.0000	1.0000
L17	56	4x0.75	100.40 - 105.00	1.0000	1.0000
L17	57	4x0.75	100.40 - 105.00	1.0000	1.0000
L17	58	4x0.75	100.40 - 105.00	1.0000	1.0000
L18	26	3.875x1.25	100.15 - 100.40	1.0000	1.0000
L18	27	3.875x1.25	100.15 - 100.40	1.0000	1.0000
L18	28	3.875x1.25	100.15 - 100.40	1.0000	1.0000
L18	46	MP3-03 (L)	100.15 - 100.40	1.0000	1.0000
L18	47	MP3-03 (L)	100.15 - 100.40	1.0000	1.0000
L18	48	MP3-03 (L)	100.15 - 100.40	1.0000	1.0000
L18	56	4x0.75	100.15 - 100.40	1.0000	1.0000
L18	57	4x0.75	100.15 - 100.40	1.0000	1.0000
L18	58	4x0.75	100.15 - 100.40	1.0000	1.0000
L19	26	3.875x1.25	95.15 - 100.15	1.0000	1.0000
L19	27	3.875x1.25	95.15 - 100.15	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L19	28	3.875x1.25	95.15 - 100.15	1.0000	1.0000
L19	46	MP3-03 (L)	95.15 - 100.15	1.0000	1.0000
L19	47	MP3-03 (L)	95.15 - 100.15	1.0000	1.0000
L19	48	MP3-03 (L)	95.15 - 100.15	1.0000	1.0000
L19	56	4x0.75	95.15 - 100.15	1.0000	1.0000
L19	57	4x0.75	95.15 - 100.15	1.0000	1.0000
L19	58	4x0.75	95.15 - 100.15	1.0000	1.0000
L20	26	3.875x1.25	90.15 - 95.15	1.0000	1.0000
L20	27	3.875x1.25	90.15 - 95.15	1.0000	1.0000
L20	28	3.875x1.25	90.15 - 95.15	1.0000	1.0000
L20	46	MP3-03 (L)	90.15 - 95.15	1.0000	1.0000
L20	47	MP3-03 (L)	90.15 - 95.15	1.0000	1.0000
L20	48	MP3-03 (L)	90.15 - 95.15	1.0000	1.0000
L20	56	4x0.75	90.15 - 95.15	1.0000	1.0000
L20	57	4x0.75	90.15 - 95.15	1.0000	1.0000
L20	58	4x0.75	90.15 - 95.15	1.0000	1.0000
L21	26	3.875x1.25	85.96 - 90.15	1.0000	1.0000
L21	27	3.875x1.25	85.96 - 90.15	1.0000	1.0000
L21	28	3.875x1.25	85.96 - 90.15	1.0000	1.0000
L21	46	MP3-03 (L)	85.96 - 90.15	1.0000	1.0000
L21	47	MP3-03 (L)	85.96 - 90.15	1.0000	1.0000
L21	48	MP3-03 (L)	85.96 - 90.15	1.0000	1.0000
L21	56	4x0.75	85.96 - 90.15	1.0000	1.0000
L21	57	4x0.75	85.96 - 90.15	1.0000	1.0000
L21	58	4x0.75	85.96 - 90.15	1.0000	1.0000
L23	26	3.875x1.25	82.00 - 85.04	1.0000	1.0000
L23	27	3.875x1.25	82.00 - 85.04	1.0000	1.0000
L23	28	3.875x1.25	82.00 - 85.04	1.0000	1.0000
L23	46	MP3-03 (L)	82.00 - 85.04	1.0000	1.0000
L23	47	MP3-03 (L)	82.00 - 85.04	1.0000	1.0000
L23	48	MP3-03 (L)	82.00 - 85.04	1.0000	1.0000
L23	56	4x0.75	82.00 - 85.04	1.0000	1.0000
L23	57	4x0.75	82.00 - 85.04	1.0000	1.0000
L23	58	4x0.75	82.00 - 85.04	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L23	60	4.5x1	82.00 - 83.50	1.0000	1.0000
L23	61	4.5x1	82.00 - 83.50	1.0000	1.0000
L23	62	4.5x1	82.00 - 83.50	1.0000	1.0000
L24	26	3.875x1.25	81.75 - 82.00	1.0000	1.0000
L24	27	3.875x1.25	81.75 - 82.00	1.0000	1.0000
L24	28	3.875x1.25	81.75 - 82.00	1.0000	1.0000
L24	46	MP3-03 (L)	81.75 - 82.00	1.0000	1.0000
L24	47	MP3-03 (L)	81.75 - 82.00	1.0000	1.0000
L24	48	MP3-03 (L)	81.75 - 82.00	1.0000	1.0000
L24	56	4x0.75	81.75 - 82.00	1.0000	1.0000
L24	57	4x0.75	81.75 - 82.00	1.0000	1.0000
L24	58	4x0.75	81.75 - 82.00	1.0000	1.0000
L24	60	4.5x1	81.75 - 82.00	1.0000	1.0000
L24	61	4.5x1	81.75 - 82.00	1.0000	1.0000
L24	62	4.5x1	81.75 - 82.00	1.0000	1.0000
L25	26	3.875x1.25	77.25 - 81.75	1.0000	1.0000
L25	27	3.875x1.25	77.25 - 81.75	1.0000	1.0000
L25	28	3.875x1.25	77.25 - 81.75	1.0000	1.0000
L25	46	MP3-03 (L)	77.25 - 81.75	1.0000	1.0000
L25	47	MP3-03 (L)	77.25 - 81.75	1.0000	1.0000
L25	48	MP3-03 (L)	77.25 - 81.75	1.0000	1.0000
L25	56	4x0.75	77.25 - 81.75	1.0000	1.0000
L25	57	4x0.75	77.25 - 81.75	1.0000	1.0000
L25	58	4x0.75	77.25 - 81.75	1.0000	1.0000
L25	60	4.5x1	77.25 - 81.75	1.0000	1.0000
L25	61	4.5x1	77.25 - 81.75	1.0000	1.0000
L25	62	4.5x1	77.25 - 81.75	1.0000	1.0000
L26	26	3.875x1.25	77.00 - 77.25	1.0000	1.0000
L26	27	3.875x1.25	77.00 - 77.25	1.0000	1.0000
L26	28	3.875x1.25	77.00 - 77.25	1.0000	1.0000
L26	46	MP3-03 (L)	77.00 - 77.25	1.0000	1.0000
L26	47	MP3-03 (L)	77.00 - 77.25	1.0000	1.0000
L26	48	MP3-03 (L)	77.00 - 77.25	1.0000	1.0000
L26	56	4x0.75	77.00 - 77.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L26	57	4x0.75	77.00 - 77.25	1.0000	1.0000
L26	58	4x0.75	77.00 - 77.25	1.0000	1.0000
L26	60	4.5x1	77.00 - 77.25	1.0000	1.0000
L26	61	4.5x1	77.00 - 77.25	1.0000	1.0000
L26	62	4.5x1	77.00 - 77.25	1.0000	1.0000
L27	26	3.875x1.25	75.00 - 77.00	1.0000	1.0000
L27	27	3.875x1.25	75.00 - 77.00	1.0000	1.0000
L27	28	3.875x1.25	75.00 - 77.00	1.0000	1.0000
L27	33	MP3-03 (L)	75.00 - 76.00	1.0000	1.0000
L27	34	MP3-03 (L)	75.00 - 76.00	1.0000	1.0000
L27	35	MP3-03 (L)	75.00 - 76.00	1.0000	1.0000
L27	43	MP3-03 (L)	75.00 - 76.25	1.0000	1.0000
L27	44	MP3-03 (L)	75.00 - 76.25	1.0000	1.0000
L27	45	MP3-03 (L)	75.00 - 76.25	1.0000	1.0000
L27	46	MP3-03 (L)	76.25 - 77.00	1.0000	1.0000
L27	47	MP3-03 (L)	76.25 - 77.00	1.0000	1.0000
L27	48	MP3-03 (L)	76.25 - 77.00	1.0000	1.0000
L27	56	4x0.75	75.00 - 77.00	1.0000	1.0000
L27	57	4x0.75	75.00 - 77.00	1.0000	1.0000
L27	58	4x0.75	75.00 - 77.00	1.0000	1.0000
L27	60	4.5x1	75.00 - 77.00	1.0000	1.0000
L27	61	4.5x1	75.00 - 77.00	1.0000	1.0000
L27	62	4.5x1	75.00 - 77.00	1.0000	1.0000
L28	26	3.875x1.25	74.75 - 75.00	1.0000	1.0000
L28	27	3.875x1.25	74.75 - 75.00	1.0000	1.0000
L28	28	3.875x1.25	74.75 - 75.00	1.0000	1.0000
L28	33	MP3-03 (L)	74.75 - 75.00	1.0000	1.0000
L28	34	MP3-03 (L)	74.75 - 75.00	1.0000	1.0000
L28	35	MP3-03 (L)	74.75 - 75.00	1.0000	1.0000
L28	43	MP3-03 (L)	74.75 - 75.00	1.0000	1.0000
L28	44	MP3-03 (L)	74.75 - 75.00	1.0000	1.0000
L28	45	MP3-03 (L)	74.75 - 75.00	1.0000	1.0000
L28	56	4x0.75	74.75 - 75.00	1.0000	1.0000
L28	57	4x0.75	74.75 - 75.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L28	58	4x0.75	74.75 - 75.00	1.0000	1.0000
L28	60	4.5x1	74.75 - 75.00	1.0000	1.0000
L28	61	4.5x1	74.75 - 75.00	1.0000	1.0000
L28	62	4.5x1	74.75 - 75.00	1.0000	1.0000
L29	26	3.875x1.25	72.15 - 74.75	1.0000	1.0000
L29	27	3.875x1.25	72.15 - 74.75	1.0000	1.0000
L29	28	3.875x1.25	72.15 - 74.75	1.0000	1.0000
L29	33	MP3-03 (L)	71.25 - 74.75	1.0000	1.0000
L29	34	MP3-03 (L)	71.25 - 74.75	1.0000	1.0000
L29	35	MP3-03 (L)	71.25 - 74.75	1.0000	1.0000
L29	43	MP3-03 (L)	71.25 - 74.75	1.0000	1.0000
L29	44	MP3-03 (L)	71.25 - 74.75	1.0000	1.0000
L29	45	MP3-03 (L)	71.25 - 74.75	1.0000	1.0000
L29	56	4x0.75	71.25 - 74.75	1.0000	1.0000
L29	57	4x0.75	71.25 - 74.75	1.0000	1.0000
L29	58	4x0.75	71.25 - 74.75	1.0000	1.0000
L29	60	4.5x1	73.50 - 74.75	1.0000	1.0000
L29	61	4.5x1	73.50 - 74.75	1.0000	1.0000
L29	62	4.5x1	73.50 - 74.75	1.0000	1.0000
L30	33	MP3-03 (L)	71.00 - 71.25	1.0000	1.0000
L30	34	MP3-03 (L)	71.00 - 71.25	1.0000	1.0000
L30	35	MP3-03 (L)	71.00 - 71.25	1.0000	1.0000
L30	43	MP3-03 (L)	71.00 - 71.25	1.0000	1.0000
L30	44	MP3-03 (L)	71.00 - 71.25	1.0000	1.0000
L30	45	MP3-03 (L)	71.00 - 71.25	1.0000	1.0000
L30	53	6x1	71.00 - 71.25	1.0000	1.0000
L30	54	6x1	71.00 - 71.25	1.0000	1.0000
L30	55	6x1	71.00 - 71.25	1.0000	1.0000
L31	33	MP3-03 (L)	70.40 - 71.00	1.0000	1.0000
L31	34	MP3-03 (L)	70.40 - 71.00	1.0000	1.0000
L31	35	MP3-03 (L)	70.40 - 71.00	1.0000	1.0000
L31	43	MP3-03 (L)	70.40 - 71.00	1.0000	1.0000
L31	44	MP3-03 (L)	70.40 - 71.00	1.0000	1.0000
L31	45	MP3-03 (L)	70.40 - 71.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L31	53	6x1	70.40 - 71.00	1.0000	1.0000
L31	54	6x1	70.40 - 71.00	1.0000	1.0000
L31	55	6x1	70.40 - 71.00	1.0000	1.0000
L32	33	MP3-03 (L)	70.15 - 70.40	1.0000	1.0000
L32	34	MP3-03 (L)	70.15 - 70.40	1.0000	1.0000
L32	35	MP3-03 (L)	70.15 - 70.40	1.0000	1.0000
L32	43	MP3-03 (L)	70.15 - 70.40	1.0000	1.0000
L32	44	MP3-03 (L)	70.15 - 70.40	1.0000	1.0000
L32	45	MP3-03 (L)	70.15 - 70.40	1.0000	1.0000
L32	53	6x1	70.15 - 70.40	1.0000	1.0000
L32	54	6x1	70.15 - 70.40	1.0000	1.0000
L32	55	6x1	70.15 - 70.40	1.0000	1.0000
L33	33	MP3-03 (L)	65.15 - 70.15	1.0000	1.0000
L33	34	MP3-03 (L)	65.15 - 70.15	1.0000	1.0000
L33	35	MP3-03 (L)	65.15 - 70.15	1.0000	1.0000
L33	43	MP3-03 (L)	65.15 - 70.15	1.0000	1.0000
L33	44	MP3-03 (L)	65.15 - 70.15	1.0000	1.0000
L33	45	MP3-03 (L)	65.15 - 70.15	1.0000	1.0000
L33	53	6x1	65.15 - 70.15	1.0000	1.0000
L33	54	6x1	65.15 - 70.15	1.0000	1.0000
L33	55	6x1	65.15 - 70.15	1.0000	1.0000
L34	33	MP3-03 (L)	60.15 - 65.15	1.0000	1.0000
L34	34	MP3-03 (L)	60.15 - 65.15	1.0000	1.0000
L34	35	MP3-03 (L)	60.15 - 65.15	1.0000	1.0000
L34	43	MP3-03 (L)	60.15 - 65.15	1.0000	1.0000
L34	44	MP3-03 (L)	60.15 - 65.15	1.0000	1.0000
L34	45	MP3-03 (L)	60.15 - 65.15	1.0000	1.0000
L34	53	6x1	60.15 - 65.15	1.0000	1.0000
L34	54	6x1	60.15 - 65.15	1.0000	1.0000
L34	55	6x1	60.15 - 65.15	1.0000	1.0000
L35	33	MP3-03 (L)	55.15 - 60.15	1.0000	1.0000
L35	34	MP3-03 (L)	55.15 - 60.15	1.0000	1.0000
L35	35	MP3-03 (L)	55.15 - 60.15	1.0000	1.0000
L35	43	MP3-03 (L)	55.15 - 60.15	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L35	44	MP3-03 (L)	55.15 - 60.15	1.0000	1.0000
L35	45	MP3-03 (L)	55.15 - 60.15	1.0000	1.0000
L35	53	6x1	55.15 - 60.15	1.0000	1.0000
L35	54	6x1	55.15 - 60.15	1.0000	1.0000
L35	55	6x1	55.15 - 60.15	1.0000	1.0000
L36	33	MP3-03 (L)	50.15 - 55.15	1.0000	1.0000
L36	34	MP3-03 (L)	50.15 - 55.15	1.0000	1.0000
L36	35	MP3-03 (L)	50.15 - 55.15	1.0000	1.0000
L36	43	MP3-03 (L)	50.15 - 55.15	1.0000	1.0000
L36	44	MP3-03 (L)	50.15 - 55.15	1.0000	1.0000
L36	45	MP3-03 (L)	50.15 - 55.15	1.0000	1.0000
L36	53	6x1	50.15 - 55.15	1.0000	1.0000
L36	54	6x1	50.15 - 55.15	1.0000	1.0000
L36	55	6x1	50.15 - 55.15	1.0000	1.0000
L37	33	MP3-03 (L)	46.00 - 50.15	1.0000	1.0000
L37	34	MP3-03 (L)	46.00 - 50.15	1.0000	1.0000
L37	35	MP3-03 (L)	46.00 - 50.15	1.0000	1.0000
L37	38	MP3-05 (L)	42.41 - 46.25	1.0000	1.0000
L37	41	MP3-05 (L)	42.41 - 43.25	1.0000	1.0000
L37	42	MP3-05 (L)	42.41 - 43.25	1.0000	1.0000
L37	43	MP3-03 (L)	46.25 - 50.15	1.0000	1.0000
L37	44	MP3-03 (L)	46.25 - 50.15	1.0000	1.0000
L37	45	MP3-03 (L)	46.25 - 50.15	1.0000	1.0000
L37	53	6x1	42.41 - 50.15	1.0000	1.0000
L37	54	6x1	42.41 - 50.15	1.0000	1.0000
L37	55	6x1	42.41 - 50.15	1.0000	1.0000
L37	23	4.25x1.25	42.41 - 42.40	1.0000	1.0000
L37	24	4.25x1.25	42.41 - 42.40	1.0000	1.0000
L37	25	4.25x1.25	42.41 - 42.40	1.0000	1.0000
L39	38	MP3-05 (L)	36.41 - 41.41	1.0000	1.0000
L39	41	MP3-05 (L)	36.41 - 41.41	1.0000	1.0000
L39	42	MP3-05 (L)	36.41 - 41.41	1.0000	1.0000
L39	53	6x1	36.41 - 41.41	1.0000	1.0000
L39	54	6x1	36.41 - 41.41	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L39	55	6x1	36.41 - 41.41	1.0000	1.0000
L40	38	MP3-05 (L)	36.25 - 36.41	1.0000	1.0000
L40	41	MP3-05 (L)	36.25 - 36.41	1.0000	1.0000
L40	42	MP3-05 (L)	36.25 - 36.41	1.0000	1.0000
L40	53	6x1	36.25 - 36.41	1.0000	1.0000
L40	54	6x1	36.25 - 36.41	1.0000	1.0000
L40	55	6x1	36.25 - 36.41	1.0000	1.0000
L41	38	MP3-05 (L)	36.00 - 36.25	1.0000	1.0000
L41	41	MP3-05 (L)	36.00 - 36.25	1.0000	1.0000
L41	42	MP3-05 (L)	36.00 - 36.25	1.0000	1.0000
L41	50	5.5x1.25	36.00 - 36.25	1.0000	1.0000
L41	51	6.5x1.25	36.00 - 36.25	1.0000	1.0000
L41	52	6.5x1.25	36.00 - 36.25	1.0000	1.0000
L42	38	MP3-05 (L)	31.25 - 36.00	1.0000	1.0000
L42	41	MP3-05 (L)	31.25 - 36.00	1.0000	1.0000
L42	42	MP3-05 (L)	31.25 - 36.00	1.0000	1.0000
L42	50	5.5x1.25	31.25 - 36.00	1.0000	1.0000
L42	51	6.5x1.25	31.25 - 36.00	1.0000	1.0000
L42	52	6.5x1.25	31.25 - 36.00	1.0000	1.0000
L43	38	MP3-05 (L)	31.00 - 31.25	1.0000	1.0000
L43	39	MP3-05 (L)	31.00 - 31.25	1.0000	1.0000
L43	40	MP3-05 (L)	31.00 - 31.25	1.0000	1.0000
L43	50	5.5x1.25	31.00 - 31.25	1.0000	1.0000
L43	51	6.5x1.25	31.00 - 31.25	1.0000	1.0000
L43	52	6.5x1.25	31.00 - 31.25	1.0000	1.0000
L44	38	MP3-05 (L)	26.00 - 31.00	1.0000	1.0000
L44	39	MP3-05 (L)	26.00 - 31.00	1.0000	1.0000
L44	40	MP3-05 (L)	26.00 - 31.00	1.0000	1.0000
L44	50	5.5x1.25	26.00 - 31.00	1.0000	1.0000
L44	51	6.5x1.25	26.00 - 31.00	1.0000	1.0000
L44	52	6.5x1.25	26.00 - 31.00	1.0000	1.0000
L45	37	MP3-05 (L)	21.00 - 21.25	1.0000	1.0000
L45	38	MP3-05 (L)	21.00 - 26.00	1.0000	1.0000
L45	39	MP3-05 (L)	21.00 - 26.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L45	40	MP3-05 (L)	21.00 - 26.00	1.0000	1.0000
L45	50	5.5x1.25	21.00 - 26.00	1.0000	1.0000
L45	51	6.5x1.25	21.00 - 26.00	1.0000	1.0000
L45	52	6.5x1.25	21.00 - 26.00	1.0000	1.0000
L46	37	MP3-05 (L)	18.50 - 21.00	1.0000	1.0000
L46	38	MP3-05 (L)	18.50 - 21.00	1.0000	1.0000
L46	39	MP3-05 (L)	18.50 - 21.00	1.0000	1.0000
L46	40	MP3-05 (L)	18.50 - 21.00	1.0000	1.0000
L46	50	5.5x1.25	18.50 - 21.00	1.0000	1.0000
L46	51	6.5x1.25	18.50 - 21.00	1.0000	1.0000
L46	52	6.5x1.25	18.50 - 21.00	1.0000	1.0000
L47	37	MP3-05 (L)	18.25 - 18.50	1.0000	1.0000
L47	38	MP3-05 (L)	18.25 - 18.50	1.0000	1.0000
L47	39	MP3-05 (L)	18.25 - 18.50	1.0000	1.0000
L47	40	MP3-05 (L)	18.25 - 18.50	1.0000	1.0000
L47	50	5.5x1.25	18.25 - 18.50	1.0000	1.0000
L47	51	6.5x1.25	18.25 - 18.50	1.0000	1.0000
L47	52	6.5x1.25	18.25 - 18.50	1.0000	1.0000
L48	37	MP3-05 (L)	15.00 - 18.25	1.0000	1.0000
L48	38	MP3-05 (L)	16.25 - 18.25	1.0000	1.0000
L48	39	MP3-05 (L)	15.00 - 18.25	1.0000	1.0000
L48	40	MP3-05 (L)	15.00 - 18.25	1.0000	1.0000
L48	50	5.5x1.25	15.00 - 18.25	1.0000	1.0000
L48	51	6.5x1.25	15.00 - 18.25	1.0000	1.0000
L48	52	6.5x1.25	15.00 - 18.25	1.0000	1.0000
L49	37	MP3-05 (L)	14.75 - 15.00	1.0000	1.0000
L49	39	MP3-05 (L)	14.75 - 15.00	1.0000	1.0000
L49	40	MP3-05 (L)	14.75 - 15.00	1.0000	1.0000
L49	50	5.5x1.25	14.75 - 15.00	1.0000	1.0000
L49	51	6.5x1.25	14.75 - 15.00	1.0000	1.0000
L49	52	6.5x1.25	14.75 - 15.00	1.0000	1.0000
L50	37	MP3-05 (L)	9.75 - 14.75	1.0000	1.0000
L50	39	MP3-05 (L)	9.75 - 14.75	1.0000	1.0000
L50	40	MP3-05 (L)	9.75 - 14.75	1.0000	1.0000
L50	50	5.5x1.25	9.75 - 14.75	1.0000	1.0000
L50	51	6.5x1.25	9.75 - 14.75	1.0000	1.0000
L50	52	6.5x1.25	11.50 - 14.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L51	37	MP3-05 (L)	4.75 - 9.75	1.0000	1.0000
L51	39	MP3-05 (L)	4.75 - 9.75	1.0000	1.0000
L51	40	MP3-05 (L)	4.75 - 9.75	1.0000	1.0000
L51	50	5.5x1.25	4.75 - 9.75	1.0000	1.0000
L51	51	6.5x1.25	4.75 - 9.75	1.0000	1.0000
L52	37	MP3-05 (L)	1.25 - 4.75	1.0000	1.0000
L52	39	MP3-05 (L)	1.25 - 4.75	1.0000	1.0000
L52	40	MP3-05 (L)	1.25 - 4.75	1.0000	1.0000
L52	50	5.5x1.25	1.25 - 4.75	1.0000	1.0000
L52	51	6.5x1.25	1.25 - 4.75	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
APXVSPP18-C-A20 w/ Mount Pipe	A	From Leg	4.0000 0.00 -2.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.6000 5.0500 5.5000 6.4400	4.0100 4.4500 4.8900 5.8200	0.10 0.16 0.23 0.42
APXVSPP18-C-A20 w/ Mount Pipe	B	From Leg	4.0000 0.00 -2.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.6000 5.0500 5.5000 6.4400	4.0100 4.4500 4.8900 5.8200	0.10 0.16 0.23 0.42
APXVSPP18-C-A20 w/ Mount Pipe	C	From Leg	4.0000 0.00 -2.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.6000 5.0500 5.5000 6.4400	4.0100 4.4500 4.8900 5.8200	0.10 0.16 0.23 0.42
APXVTM14-ALU-I20 w/ Mount Pipe	A	From Leg	4.0000 0.00 -2.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.0900 4.4800 4.8800 5.7100	2.8600 3.2300 3.6100 4.4000	0.08 0.13 0.19 0.33
APXVTM14-ALU-I20 w/ Mount Pipe	B	From Leg	4.0000 0.00 -2.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.0900 4.4800 4.8800 5.7100	2.8600 3.2300 3.6100 4.4000	0.08 0.13 0.19 0.33
APXVTM14-ALU-I20 w/ Mount Pipe	C	From Leg	4.0000 0.00 -2.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.0900 4.4800 4.8800 5.7100	2.8600 3.2300 3.6100 4.4000	0.08 0.13 0.19 0.33
(3) ACU-A20-N	A	From Leg	4.0000 0.00 0.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.0667 0.1037 0.1481 0.2593	0.1167 0.1620 0.2148 0.3426	0.00 0.00 0.00 0.01
(3) ACU-A20-N	B	From Leg	4.0000 0.00 0.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.0667 0.1037 0.1481 0.2593	0.1167 0.1620 0.2148 0.3426	0.00 0.00 0.00 0.01
(3) ACU-A20-N	C	From Leg	4.0000 0.00 0.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.0667 0.1037 0.1481 0.2593	0.1167 0.1620 0.2148 0.3426	0.00 0.00 0.00 0.01

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
800 EXTERNAL NOTCH FILTER	A	From Leg	4.0000 0.00 0.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.6601 0.7627 0.8727 1.1149	0.3211 0.3983 0.4830 0.6744	0.01 0.02 0.02 0.04
800 EXTERNAL NOTCH FILTER	B	From Leg	4.0000 0.00 0.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.6601 0.7627 0.8727 1.1149	0.3211 0.3983 0.4830 0.6744	0.01 0.02 0.02 0.04
800 EXTERNAL NOTCH FILTER	C	From Leg	4.0000 0.00 0.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.6601 0.7627 0.8727 1.1149	0.3211 0.3983 0.4830 0.6744	0.01 0.02 0.02 0.04
TD-RRH8x20-25	A	From Leg	4.0000 0.00 -2.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.0455 4.2975 4.5570 5.0981	1.5345 1.7142 1.9008 2.2951	0.07 0.10 0.13 0.20
TD-RRH8x20-25	B	From Leg	4.0000 0.00 -2.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.0455 4.2975 4.5570 5.0981	1.5345 1.7142 1.9008 2.2951	0.07 0.10 0.13 0.20
TD-RRH8x20-25	C	From Leg	4.0000 0.00 -2.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.0455 4.2975 4.5570 5.0981	1.5345 1.7142 1.9008 2.2951	0.07 0.10 0.13 0.20
Platform Mount [LP 602-1]	C	None		0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	32.0300 38.7100 45.3900 58.7500	32.0300 38.7100 45.3900 58.7500	1.34 1.80 2.26 3.17
8-ft Ladder	C	From Face	2.0000 0.00 -2.00	0.00	152.0000	No Ice 1/2" Ice 1" Ice 2" Ice	7.0700 9.7300 11.1900 13.9800	7.0700 9.7300 11.1900 13.9800	0.04 0.07 0.08 0.11
**									
1900MHz RRH (65MHz) w/ Mount Pipe	A	From Face	2.0000 0.00 0.00	0.00	150.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.7273 3.0489 3.3824 4.0848	3.2407 3.6916 4.1590 5.1440	0.07 0.11 0.15 0.24
(2) 1900MHz RRH (65MHz) w/ Mount Pipe	B	From Face	2.0000 0.00 0.00	0.00	150.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.7273 3.0489 3.3824 4.0848	3.2407 3.6916 4.1590 5.1440	0.07 0.11 0.15 0.24
800MHZ RRH	A	From Face	2.0000 0.00 0.00	0.00	150.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.1342 2.3195 2.5123 2.9201	1.7730 1.9461 2.1267 2.5100	0.05 0.07 0.10 0.16
(2) 800MHZ RRH	B	From Face	2.0000 0.00 0.00	0.00	150.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.1342 2.3195 2.5123 2.9201	1.7730 1.9461 2.1267 2.5100	0.05 0.07 0.10 0.16
Side Arm Mount [SO 102-3]	C	None		0.00	150.0000	No Ice 1/2" Ice 1" Ice	3.0000 3.4800 3.9600 4.9200	3.0000 3.4800 3.9600 4.9200	0.08 0.11 0.14 0.20

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice			
**									
7770.00 w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	5.7460 6.1791 6.6067 7.4880	4.2543 5.0137 5.7109 7.1553	0.06 0.10 0.16 0.29
7770.00 w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	5.7460 6.1791 6.6067 7.4880	4.2543 5.0137 5.7109 7.1553	0.06 0.10 0.16 0.29
7770.00 w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	5.7460 6.1791 6.6067 7.4880	4.2543 5.0137 5.7109 7.1553	0.06 0.10 0.16 0.29
AM-X-CD-16-65-00T-RET w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.6300 5.0600 5.5100 6.4300	3.2700 3.6900 4.1200 5.0000	0.07 0.13 0.20 0.38
AM-X-CD-16-65-00T-RET w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.6300 5.0600 5.5100 6.4300	3.2700 3.6900 4.1200 5.0000	0.07 0.13 0.20 0.38
SBNH-1D6565C w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	5.5600 6.0700 6.5900 7.6500	4.4700 4.9700 5.4700 6.5200	0.08 0.17 0.26 0.50
SBNH-1D6565C w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	5.5600 6.0700 6.5900 7.6500	4.4700 4.9700 5.4700 6.5200	0.08 0.17 0.26 0.50
(2) SBNH-1D6565C w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	5.5600 6.0700 6.5900 7.6500	4.4700 4.9700 5.4700 6.5200	0.08 0.17 0.26 0.50
7020.00	A	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.1021 0.1469 0.1991 0.3258	0.1750 0.2393 0.3109 0.4765	0.00 0.01 0.01 0.02
7020.00	B	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.1021 0.1469 0.1991 0.3258	0.1750 0.2393 0.3109 0.4765	0.00 0.01 0.01 0.02
7020.00	C	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.1021 0.1469 0.1991 0.3258	0.1750 0.2393 0.3109 0.4765	0.00 0.01 0.01 0.02
(2) DTMABP7819VG12A	A	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.9762 1.1002 1.2316 1.5166	0.3387 0.4192 0.5098 0.7143	0.02 0.03 0.04 0.06
(2) DTMABP7819VG12A	B	From Leg	4.0000 0.00 2.00	0.00	137.0000	No Ice 1/2" Ice Ice	0.9762 1.1002 1.2316	0.3387 0.4192 0.5098	0.02 0.03 0.04

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
								1" Ice	1.5166	0.7143	0.06
								2" Ice			
(2) DTMABP7819VG12A	C	From Leg	4.0000			0.00	137.0000	No Ice	0.9762	0.3387	0.02
			0.00					1/2" Ice	1.1002	0.4192	0.03
			2.00					1" Ice	1.2316	0.5098	0.04
								2" Ice	1.5166	0.7143	0.06
DC6-48-60-18-8F	A	From Leg	4.0000			0.00	137.0000	No Ice	1.2117	1.2117	0.03
			0.00					1/2" Ice	1.8924	1.8924	0.05
			2.00					1" Ice	2.1051	2.1051	0.08
								2" Ice	2.5703	2.5703	0.14
RRUS 12	A	From Leg	4.0000			0.00	137.0000	No Ice	3.1450	1.2854	0.06
			0.00					1/2" Ice	3.3648	1.4379	0.08
			2.00					1" Ice	3.5920	1.5998	0.11
								2" Ice	4.0687	1.9543	0.17
RRUS 12	B	From Leg	4.0000			0.00	137.0000	No Ice	3.1450	1.2854	0.06
			0.00					1/2" Ice	3.3648	1.4379	0.08
			2.00					1" Ice	3.5920	1.5998	0.11
								2" Ice	4.0687	1.9543	0.17
RRUS 12	C	From Leg	4.0000			0.00	137.0000	No Ice	3.1450	1.2854	0.06
			0.00					1/2" Ice	3.3648	1.4379	0.08
			2.00					1" Ice	3.5920	1.5998	0.11
								2" Ice	4.0687	1.9543	0.17
Platform Mount [LP 712-1]	C	None				0.00	137.0000	No Ice	24.5300	24.5300	1.34
								1/2" Ice	29.9400	29.9400	1.65
								1" Ice	35.3500	35.3500	1.96
								2" Ice	46.1700	46.1700	2.58
2.375" OD x 5' Mount Pipe	A	From Face	4.0000			0.00	137.0000	No Ice	1.1875	1.1875	0.02
			0.00					1/2" Ice	1.4956	1.4956	0.03
			0.00					1" Ice	1.8071	1.8071	0.04
								2" Ice	2.4580	2.4580	0.08
2.375" OD x 5' Mount Pipe	B	From Face	4.0000			0.00	137.0000	No Ice	1.1875	1.1875	0.02
			0.00					1/2" Ice	1.4956	1.4956	0.03
			0.00					1" Ice	1.8071	1.8071	0.04
								2" Ice	2.4580	2.4580	0.08
2.375" OD x 5' Mount Pipe	C	From Face	4.0000			0.00	137.0000	No Ice	1.1875	1.1875	0.02
			0.00					1/2" Ice	1.4956	1.4956	0.03
			0.00					1" Ice	1.8071	1.8071	0.04
								2" Ice	2.4580	2.4580	0.08
**											
RRUS 11	A	From Face	2.0000			0.00	136.0000	No Ice	2.7908	1.1923	0.05
			0.00					1/2" Ice	2.9984	1.3395	0.07
			1.00					1" Ice	3.2134	1.4957	0.10
								2" Ice	3.6656	1.8390	0.15
RRUS 11	B	From Face	2.0000			0.00	136.0000	No Ice	2.7908	1.1923	0.05
			0.00					1/2" Ice	2.9984	1.3395	0.07
			1.00					1" Ice	3.2134	1.4957	0.10
								2" Ice	3.6656	1.8390	0.15
RRUS 11	C	From Face	2.0000			0.00	136.0000	No Ice	2.7908	1.1923	0.05
			0.00					1/2" Ice	2.9984	1.3395	0.07
			1.00					1" Ice	3.2134	1.4957	0.10
								2" Ice	3.6656	1.8390	0.15
DC6-48-60-18-8F	B	From Face	2.0000			0.00	136.0000	No Ice	1.2117	1.2117	0.03
			0.00						1.8924	1.8924	0.05

Description	*Face or Leg*	*Offset Type*	*Offsets: Horz Lateral ft* / *Vert ft* / *Azimuth Adjustment °* / *Placement ft*				C_AA_A *Front* ft^2	C_AA_A *Side* ft^2	*Weight K*
			-1.00			1/2" Ice	2.1051	2.1051	0.08
						1" Ice	2.5703	2.5703	0.14
						2" Ice			
Side Arm Mount [SO 102-3]	C	None		0.00	136.0000	No Ice	3.0000	3.0000	0.08
						1/2" Ice	3.4800	3.4800	0.11
						1" Ice	3.9600	3.9600	0.14
						2" Ice	4.9200	4.9200	0.20
**									
(3) APL866513-42T0 w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	4.2879	4.8023	0.03
						1/2" Ice	4.6611	5.4160	0.08
						1" Ice	5.0420	6.0401	0.13
						2" Ice	5.8304	7.3370	0.25
APL866513-42T0 w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	4.2879	4.8023	0.03
						1/2" Ice	4.6611	5.4160	0.08
						1" Ice	5.0420	6.0401	0.13
						2" Ice	5.8304	7.3370	0.25
(2) APL866513-42T0 w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	4.2879	4.8023	0.03
						1/2" Ice	4.6611	5.4160	0.08
						1" Ice	5.0420	6.0401	0.13
						2" Ice	5.8304	7.3370	0.25
BXA-70040/4CF w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	9.6378	4.6773	0.04
						1/2" Ice	10.0970	5.2764	0.11
						1" Ice	10.5655	5.8919	0.19
						2" Ice	11.5304	7.1715	0.37
(2) HBXX-6517DS-A2M w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	7.9700	5.9900	0.08
						1/2" Ice	8.7300	6.7200	0.14
						1" Ice	9.5000	7.4700	0.22
						2" Ice	11.1100	9.0200	0.40
(2) HBXX-6517DS-A2M w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	7.9700	5.9900	0.08
						1/2" Ice	8.7300	6.7200	0.14
						1" Ice	9.5000	7.4700	0.22
						2" Ice	11.1100	9.0200	0.40
(2) HBXX-6517DS-A2M w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	7.9700	5.9900	0.08
						1/2" Ice	8.7300	6.7200	0.14
						1" Ice	9.5000	7.4700	0.22
						2" Ice	11.1100	9.0200	0.40
GPS_A	A	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	0.2550	0.2550	0.00
						1/2" Ice	0.3205	0.3205	0.00
						1" Ice	0.3934	0.3934	0.01
						2" Ice	0.5614	0.5614	0.02
BXA-70063-4CF-EDIN-X w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	4.9453	3.6927	0.03
						1/2" Ice	5.3243	4.2947	0.07
						1" Ice	5.7120	4.9133	0.12
						2" Ice	6.5142	6.1810	0.23
BXA-70063-4CF-EDIN-X w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	4.9453	3.6927	0.03
						1/2" Ice	5.3243	4.2947	0.07
						1" Ice	5.7120	4.9133	0.12
						2" Ice	6.5142	6.1810	0.23
(3) FD9R6004/2C-3L	A	From Leg	4.0000 0.00 2.00	0.00	127.0000	No Ice	0.3142	0.0762	0.00
						1/2" Ice	0.3862	0.1189	0.01
						1" Ice	0.4656	0.1685	0.01
						2" Ice	0.6468	0.2940	0.02

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
FD9R6004/2C-3L	B	From Leg	4.0000 0.00 2.00			0.00	127.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.3142 0.3862 0.4656 0.6468	0.0762 0.1189 0.1685 0.2940	0.00 0.01 0.01 0.02
(2) FD9R6004/2C-3L	C	From Leg	4.0000 0.00 2.00			0.00	127.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.3142 0.3862 0.4656 0.6468	0.0762 0.1189 0.1685 0.2940	0.00 0.01 0.01 0.02
DB-T1-6Z-8AB-0Z	A	From Leg	4.0000 0.00 2.00			0.00	127.0000	No Ice 1/2" Ice 1" Ice 2" Ice	4.8000 5.0704 5.3481 5.9259	2.0000 2.1926 2.3926 2.8148	0.04 0.08 0.12 0.21
RRH2X60-PCS	A	From Leg	4.0000 0.00 2.00			0.00	127.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.2000 2.3926 2.5926 3.0148	1.7233 1.9015 2.0870 2.4804	0.06 0.08 0.10 0.16
RRH2X60-PCS	B	From Leg	4.0000 0.00 2.00			0.00	127.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.2000 2.3926 2.5926 3.0148	1.7233 1.9015 2.0870 2.4804	0.06 0.08 0.10 0.16
RRH2X60-PCS	C	From Leg	4.0000 0.00 2.00			0.00	127.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.2000 2.3926 2.5926 3.0148	1.7233 1.9015 2.0870 2.4804	0.06 0.08 0.10 0.16
RRH2X60-AWS	A	From Leg	4.0000 0.00 2.00			0.00	127.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.8775 2.0551 2.2401 2.6323	1.2359 1.3858 1.5441 1.8930	0.04 0.06 0.08 0.13
RRH2X60-AWS	B	From Leg	4.0000 0.00 2.00			0.00	127.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.8775 2.0551 2.2401 2.6323	1.2359 1.3858 1.5441 1.8930	0.04 0.06 0.08 0.13
RRH2X60-AWS	C	From Leg	4.0000 0.00 2.00			0.00	127.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.8775 2.0551 2.2401 2.6323	1.2359 1.3858 1.5441 1.8930	0.04 0.06 0.08 0.13
Platform Mount [LP 712-1]	C	None				0.00	127.0000	No Ice 1/2" Ice 1" Ice 2" Ice	24.5300 29.9400 35.3500 46.1700	24.5300 29.9400 35.3500 46.1700	1.34 1.65 1.96 2.58
**											
APXV18-206517S-C-A20	A	From Leg	4.0000 0.00 0.00			0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	3.8300 4.4600 5.1100 6.4400	1.8100 2.4100 3.0300 4.3100	0.03 0.05 0.09 0.17
APXV18-206517S-C-A20	B	From Leg	4.0000 0.00 0.00			0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	3.8300 4.4600 5.1100 6.4400	1.8100 2.4100 3.0300 4.3100	0.03 0.05 0.09 0.17
APXV18-206517S-C-A20	C	From Leg	4.0000 0.00 0.00			0.00	117.0000	No Ice 1/2" Ice 1" Ice	3.8300 4.4600 5.1100 6.4400	1.8100 2.4100 3.0300 4.3100	0.03 0.05 0.09 0.17

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice			
APXVAARR24_43-U-NA20	A	From Leg	4.0000 0.00 0.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	14.6700 15.4300 16.2100 17.8100	5.3200 5.9900 6.6800 8.0800	0.15 0.27 0.39 0.66
APXVAARR24_43-U-NA20	B	From Leg	4.0000 0.00 0.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	14.6700 15.4300 16.2100 17.8100	5.3200 5.9900 6.6800 8.0800	0.15 0.27 0.39 0.66
APXVAARR24_43-U-NA20	C	From Leg	4.0000 0.00 0.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	14.6700 15.4300 16.2100 17.8100	5.3200 5.9900 6.6800 8.0800	0.15 0.27 0.39 0.66
RADIO 4449 B12/B71	A	From Leg	4.0000 0.00 0.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.6500 1.8104 1.9781 2.3359	1.1625 1.3012 1.4473 1.7618	0.07 0.09 0.11 0.16
RADIO 4449 B12/B71	B	From Leg	4.0000 0.00 0.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.6500 1.8104 1.9781 2.3359	1.1625 1.3012 1.4473 1.7618	0.07 0.09 0.11 0.16
RADIO 4449 B12/B71	C	From Leg	4.0000 0.00 0.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.6500 1.8104 1.9781 2.3359	1.1625 1.3012 1.4473 1.7618	0.07 0.09 0.11 0.16
Platform Mount [LP 1302-1] **	C	None		0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	56.4000 67.5000 78.6000 100.8000	56.4000 67.5000 78.6000 100.8000	2.41 3.13 3.85 5.29
OG-860/1920/GPS-A	C	From Face	4.0000 0.00 1.00	0.00	75.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.3077 0.3952 0.4897 0.6997	0.3667 0.4572 0.5548 0.7708	0.00 0.01 0.01 0.02
Side Arm Mount [SO 701-1] **	C	None		0.00	75.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.8500 1.1400 1.4300 2.0100	1.6700 2.3400 3.0100 4.3500	0.07 0.08 0.09 0.12

Tower Pressures - No Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg %	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
L1 150.0000-145.0000	147.4710	1.104	0.04	6.563	A	0.000	6.563	6.563	100.00	0.000	0.000
					B	0.000	6.563		100.00	0.000	0.000
					C	0.000	6.563		100.00	0.000	0.000
L2 145.0000-140.0000	142.4729	1.093	0.04	7.020	A	0.000	7.020	7.020	100.00	0.000	0.000
					B	0.000	7.020		100.00	0.000	0.000
					C	0.000	7.020		100.00	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	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
L3 140.0000-135.0000	137.4746	1.082	0.04	7.476	A	0.000	7.476	7.476	100.00	0.000	0.000
					B	0.000	7.476		100.00	0.000	0.000
					C	0.000	7.476		100.00	0.000	0.000
L4 135.0000-130.0000	132.4760	1.071	0.04	7.933	A	0.000	7.933	7.933	100.00	0.000	0.000
					B	0.000	7.933		100.00	0.000	0.000
					C	0.000	7.933		100.00	0.000	0.000
L5 130.0000-123.4200	126.6711	1.057	0.04	11.136	A	0.000	11.136	11.136	100.00	0.220	0.000
					B	0.000	11.136		100.00	0.220	0.000
					C	0.000	11.136		100.00	0.220	0.000
L6 123.4200-122.2500	122.8338	1.048	0.04	2.024	A	0.000	2.024	2.024	100.00	0.780	0.000
					B	0.000	2.024		100.00	0.780	0.000
					C	0.000	2.024		100.00	0.780	0.000
L7 122.2500-122.0000	122.1249	1.046	0.04	0.435	A	0.000	0.435	0.435	100.00	0.167	0.000
					B	0.000	0.435		100.00	0.167	0.000
					C	0.000	0.435		100.00	0.167	0.000
L8 122.0000-120.2500	121.1224	1.044	0.04	3.077	A	0.000	3.077	3.077	100.00	1.833	0.000
					B	0.000	3.077		100.00	1.833	0.000
					C	0.000	3.077		100.00	1.833	0.000
L9 120.2500-120.0000	120.1249	1.041	0.04	0.444	A	0.000	0.444	0.444	100.00	0.333	0.000
					B	0.000	0.444		100.00	0.333	0.000
					C	0.000	0.444		100.00	0.333	0.000
L10 120.0000-115.5000	117.7334	1.035	0.04	8.177	A	0.000	8.177	8.177	100.00	6.508	0.000
					B	0.000	8.177		100.00	6.508	0.000
					C	0.000	8.177		100.00	6.508	0.000
L11 115.5000-115.2500	115.3749	1.029	0.04	0.465	A	0.000	0.465	0.465	100.00	0.502	0.000
					B	0.000	0.465		100.00	0.502	0.000
					C	0.000	0.465		100.00	0.502	0.000
L12 115.2500-115.0000	115.1249	1.029	0.04	0.467	A	0.000	0.467	0.467	100.00	0.502	0.000
					B	0.000	0.467		100.00	0.502	0.000
					C	0.000	0.467		100.00	0.502	0.000
L13 115.0000-114.7500	114.8750	1.028	0.04	0.467	A	0.000	0.467	0.467	100.00	0.502	0.000
					B	0.000	0.467		100.00	0.502	0.000
					C	0.000	0.467		100.00	0.502	0.000
L14 114.7500-109.7500	112.2305	1.021	0.04	9.582	A	0.000	9.582	9.582	100.00	7.383	0.000
					B	0.000	9.582		100.00	7.383	0.000
					C	0.000	9.582		100.00	7.383	0.000
L15 109.7500-105.2500	107.4849	1.009	0.04	9.009	A	0.000	9.009	9.009	100.00	6.635	0.000
					B	0.000	9.009		100.00	6.635	0.000
					C	0.000	9.009		100.00	6.635	0.000
L16 105.2500-105.0000	105.1250	1.002	0.04	0.511	A	0.000	0.511	0.511	100.00	0.454	0.000
					B	0.000	0.511		100.00	0.454	0.000
					C	0.000	0.511		100.00	0.454	0.000
L17 105.0000-100.4000	102.6849	0.996	0.04	9.596	A	0.000	9.596	9.596	100.00	8.611	0.000
					B	0.000	9.596		100.00	8.611	0.000
					C	0.000	9.596		100.00	8.611	0.000
L18 100.4000-100.1500	100.2750	0.989	0.04	0.532	A	0.000	0.532	0.532	100.00	0.497	0.000
					B	0.000	0.532		100.00	0.497	0.000
					C	0.000	0.532		100.00	0.497	0.000
L19 100.1500-95.1500	97.6329	0.981	0.03	10.885	A	0.000	10.885	10.885	100.00	9.946	0.000
					B	0.000	10.885		100.00	9.946	0.000
					C	0.000	10.885		100.00	9.946	0.000
L20 95.1500-90.1500	92.6335	0.967	0.03	11.335	A	0.000	11.335	11.335	100.00	9.946	0.000
					B	0.000	11.335		100.00	9.946	0.000
					C	0.000	11.335		100.00	9.946	0.000
L21 90.1500-85.9600	88.0438	0.953	0.03	9.845	A	0.000	9.845	9.845	100.00	8.335	0.000
					B	0.000	9.845		100.00	8.335	0.000
					C	0.000	9.845		100.00	8.335	0.000
L22 85.9600-85.0400	85.4995	0.945	0.03	2.165	A	0.000	2.165	2.165	100.00	1.830	0.000
					B	0.000	2.165		100.00	1.830	0.000
					C	0.000	2.165		100.00	1.830	0.000
L23 85.0400-82.0000	83.5142	0.939	0.03	7.262	A	0.000	7.262	7.262	100.00	7.172	0.000
					B	0.000	7.262		100.00	7.172	0.000
					C	0.000	7.262		100.00	7.172	0.000
L24 82.0000-81.7500	81.8750	0.933	0.03	0.604	A	0.000	0.604	0.604	100.00	0.685	0.000
					B	0.000	0.604		100.00	0.685	0.000
					C	0.000	0.604		100.00	0.685	0.000
L25 81.7500-77.2500	79.4877	0.925	0.03	11.066	A	0.000	11.066	11.066	100.00	12.326	0.000
					B	0.000	11.066		100.00	12.326	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	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	0.000	11.066		100.00	12.326	0.000
L26 77.2500-77.0000	77.1250	0.918	0.03	0.626	A	0.000	0.626	0.626	100.00	0.685	0.000
					B	0.000	0.626		100.00	0.685	0.000
					C	0.000	0.626		100.00	0.685	0.000
L27 77.0000-75.0000	75.9976	0.914	0.03	5.048	A	0.000	5.048	5.048	100.00	6.155	0.000
					B	0.000	5.048		100.00	7.001	0.000
					C	0.000	5.048		100.00	5.309	0.000
L28 75.0000-74.7500	74.8750	0.91	0.03	0.636	A	0.000	0.636	0.636	100.00	0.854	0.000
					B	0.000	0.636		100.00	1.023	0.000
					C	0.000	0.636		100.00	0.685	0.000
L29 74.7500-71.2500	72.9929	0.903	0.03	9.021	A	0.000	9.021	9.021	100.00	9.687	0.000
					B	0.000	9.021		100.00	12.055	0.000
					C	0.000	9.021		100.00	7.318	0.000
L30 71.2500-71.0000	71.1250	0.897	0.03	0.652	A	0.000	0.652	0.652	100.00	0.588	0.000
					B	0.000	0.652		100.00	0.757	0.000
					C	0.000	0.652		100.00	0.419	0.000
L31 71.0000-70.4000	70.6998	0.895	0.03	1.570	A	0.000	1.570	1.570	100.00	1.412	0.000
					B	0.000	1.570		100.00	1.818	0.000
					C	0.000	1.570		100.00	1.006	0.000
L32 70.4000-70.1500	70.2750	0.893	0.03	0.656	A	0.000	0.656	0.656	100.00	0.588	0.000
					B	0.000	0.656		100.00	0.757	0.000
					C	0.000	0.656		100.00	0.419	0.000
L33 70.1500-65.1500	67.6360	0.884	0.03	13.363	A	0.000	13.363	13.363	100.00	11.767	0.000
					B	0.000	13.363		100.00	15.150	0.000
					C	0.000	13.363		100.00	8.383	0.000
L34 65.1500-60.1500	62.6365	0.865	0.03	13.815	A	0.000	13.815	13.815	100.00	11.767	0.000
					B	0.000	13.815		100.00	15.150	0.000
					C	0.000	13.815		100.00	8.383	0.000
L35 60.1500-55.1500	57.6369	0.844	0.03	14.268	A	0.000	14.268	14.268	100.00	11.767	0.000
					B	0.000	14.268		100.00	15.150	0.000
					C	0.000	14.268		100.00	8.383	0.000
L36 55.1500-50.1500	52.6373	0.823	0.03	14.719	A	0.000	14.719	14.719	100.00	11.767	0.000
					B	0.000	14.719		100.00	15.150	0.000
					C	0.000	14.719		100.00	8.383	0.000
L37 50.1500-42.4100	46.2507	0.793	0.03	23.675	A	0.000	23.675	23.675	100.00	16.598	0.000
					B	0.000	23.675		100.00	16.572	0.000
					C	0.000	23.675		100.00	11.294	0.000
L38 42.4100-41.4100	41.9095	0.771	0.03	3.086	A	0.000	3.086	3.086	100.00	1.995	0.000
					B	0.000	3.086		100.00	1.995	0.000
					C	0.000	3.086		100.00	1.995	0.000
L39 41.4100-36.4100	38.8981	0.755	0.03	15.701	A	0.000	15.701	15.701	100.00	9.442	0.000
					B	0.000	15.701		100.00	9.442	0.000
					C	0.000	15.701		100.00	9.442	0.000
L40 36.4100-36.2500	36.3300	0.74	0.03	0.510	A	0.000	0.510	0.510	100.00	0.302	0.000
					B	0.000	0.510		100.00	0.302	0.000
					C	0.000	0.510		100.00	0.302	0.000
L41 36.2500-36.0000	36.1250	0.739	0.03	0.797	A	0.000	0.797	0.797	100.00	0.493	0.000
					B	0.000	0.797		100.00	0.451	0.000
					C	0.000	0.797		100.00	0.493	0.000
L42 36.0000-31.2500	33.6146	0.724	0.03	15.366	A	0.000	15.366	15.366	100.00	9.365	0.000
					B	0.000	15.366		100.00	8.574	0.000
					C	0.000	15.366		100.00	9.365	0.000
L43 31.2500-31.0000	31.1250	0.708	0.03	0.820	A	0.000	0.820	0.820	100.00	0.493	0.000
					B	0.000	0.820		100.00	0.451	0.000
					C	0.000	0.820		100.00	0.493	0.000
L44 31.0000-26.0000	28.4888	0.7	0.02	16.638	A	0.000	16.638	16.638	100.00	9.858	0.000
					B	0.000	16.638		100.00	9.025	0.000
					C	0.000	16.638		100.00	9.858	0.000
L45 26.0000-21.0000	23.4891	0.7	0.02	17.088	A	0.000	17.088	17.088	100.00	10.080	0.000
					B	0.000	17.088		100.00	9.025	0.000
					C	0.000	17.088		100.00	9.858	0.000
L46 21.0000-18.5000	19.7473	0.7	0.02	8.713	A	0.000	8.713	8.713	100.00	7.150	0.000
					B	0.000	8.713		100.00	4.513	0.000
					C	0.000	8.713		100.00	4.929	0.000
L47 18.5000-18.2500	18.3750	0.7	0.02	0.878	A	0.000	0.878	0.878	100.00	0.715	0.000
					B	0.000	0.878		100.00	0.451	0.000
					C	0.000	0.878		100.00	0.493	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	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
L48 18.2500-15.0000	16.6205	0.7	0.02	11.511	A	0.000	11.511	11.511	100.00	8.185	0.000
					B	0.000	11.511		100.00	5.866	0.000
					C	0.000	11.511		100.00	6.408	0.000
L49 15.0000-14.7500	14.8750	0.7	0.02	0.893	A	0.000	0.893	0.893	100.00	0.493	0.000
					B	0.000	0.893		100.00	0.451	0.000
					C	0.000	0.893		100.00	0.493	0.000
L50 14.7500-9.7500	12.2397	0.7	0.02	18.106	A	0.000	18.106	18.106	100.00	9.858	0.000
					B	0.000	18.106		100.00	9.025	0.000
					C	0.000	18.106		100.00	7.962	0.000
L51 9.7500-4.7500	7.2399	0.7	0.02	18.557	A	0.000	18.557	18.557	100.00	9.858	0.000
					B	0.000	18.557		100.00	9.025	0.000
					C	0.000	18.557		100.00	4.442	0.000
L52 4.7500-0.0000	2.3661	0.7	0.02	18.046	A	0.000	18.046	18.046	100.00	6.901	0.000
					B	0.000	18.046		100.00	6.317	0.000
					C	0.000	18.046		100.00	3.109	0.000

Tower Pressure - With Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z ksf	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
L1 150.0000-145.0000	147.4710	1.104	0.01	1.4809	7.797	A	0.000	7.797	7.797	100.00	0.000	0.000
						B	0.000	7.797		100.00	0.000	0.000
						C	0.000	7.797		100.00	0.000	0.000
L2 145.0000-140.0000	142.4729	1.093	0.01	1.4758	8.249	A	0.000	8.249	8.249	100.00	0.000	0.000
						B	0.000	8.249		100.00	0.000	0.000
						C	0.000	8.249		100.00	0.000	0.000
L3 140.0000-135.0000	137.4746	1.082	0.01	1.4706	8.702	A	0.000	8.702	8.702	100.00	0.000	0.000
						B	0.000	8.702		100.00	0.000	0.000
						C	0.000	8.702		100.00	0.000	0.000
L4 135.0000-130.0000	132.4760	1.071	0.01	1.4651	9.154	A	0.000	9.154	9.154	100.00	0.000	0.000
						B	0.000	9.154		100.00	0.000	0.000
						C	0.000	9.154		100.00	0.000	0.000
L5 130.0000-123.4200	126.6711	1.057	0.01	1.4586	12.736	A	0.000	12.736	12.736	100.00	0.286	0.000
						B	0.000	12.736		100.00	0.286	0.000
						C	0.000	12.736		100.00	0.286	0.000
L6 123.4200-122.2500	122.8338	1.048	0.01	1.4541	2.308	A	0.000	2.308	2.308	100.00	1.013	0.000
						B	0.000	2.308		100.00	1.013	0.000
						C	0.000	2.308		100.00	1.013	0.000
L7 122.2500-122.0000	122.1249	1.046	0.01	1.4532	0.496	A	0.000	0.496	0.496	100.00	0.216	0.000
						B	0.000	0.496		100.00	0.216	0.000
						C	0.000	0.496		100.00	0.216	0.000
L8 122.0000-120.2500	121.1224	1.044	0.01	1.4520	3.501	A	0.000	3.501	3.501	100.00	2.471	0.000
						B	0.000	3.501		100.00	2.471	0.000
						C	0.000	3.501		100.00	2.471	0.000
L9 120.2500-120.0000	120.1249	1.041	0.01	1.4508	0.504	A	0.000	0.504	0.504	100.00	0.455	0.000
						B	0.000	0.504		100.00	0.455	0.000
						C	0.000	0.504		100.00	0.455	0.000
L10 120.0000-115.5000	117.7334	1.035	0.01	1.4479	9.263	A	0.000	9.263	9.263	100.00	8.919	0.000
						B	0.000	9.263		100.00	8.919	0.000
						C	0.000	9.263		100.00	8.919	0.000
L11 115.5000-115.2500	115.3749	1.029	0.01	1.4450	0.526	A	0.000	0.526	0.526	100.00	0.696	0.000
						B	0.000	0.526		100.00	0.696	0.000
						C	0.000	0.526		100.00	0.696	0.000
L12 115.2500-115.0000	115.1249	1.029	0.01	1.4447	0.527	A	0.000	0.527	0.527	100.00	0.696	0.000
						B	0.000	0.527		100.00	0.696	0.000
						C	0.000	0.527		100.00	0.696	0.000
L13 115.0000-114.7500	114.8750	1.028	0.01	1.4444	0.527	A	0.000	0.527	0.527	100.00	0.696	0.000
						B	0.000	0.527		100.00	0.696	0.000
						C	0.000	0.527		100.00	0.696	0.000
L14 114.7500-109.7500	112.2305	1.021	0.01	1.4410	10.783	A	0.000	10.783	10.783	100.00	10.463	0.000
						B	0.000	10.783		100.00	10.463	0.000
						C	0.000	10.783		100.00	10.463	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	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
L15 109.7500-105.2500	107.4849	1.009	0.01	1.4348	10.085	A	0.000	10.085	10.085	100.00	9.411	0.000
						B	0.000	10.085		100.00	9.411	0.000
						C	0.000	10.085		100.00	9.411	0.000
L16 105.2500-105.0000	105.1250	1.002	0.01	1.4316	0.570	A	0.000	0.570	0.570	100.00	0.636	0.000
						B	0.000	0.570		100.00	0.636	0.000
						C	0.000	0.570		100.00	0.636	0.000
L17 105.0000-100.4000	102.6849	0.996	0.01	1.4283	10.691	A	0.000	10.691	10.691	100.00	12.146	0.000
						B	0.000	10.691		100.00	12.146	0.000
						C	0.000	10.691		100.00	12.146	0.000
L18 100.4000-100.1500	100.2750	0.989	0.01	1.4249	0.592	A	0.000	0.592	0.592	100.00	0.711	0.000
						B	0.000	0.592		100.00	0.711	0.000
						C	0.000	0.592		100.00	0.711	0.000
L19 100.1500-95.1500	97.6329	0.981	0.01	1.4211	12.069	A	0.000	12.069	12.069	100.00	14.209	0.000
						B	0.000	12.069		100.00	14.209	0.000
						C	0.000	12.069		100.00	14.209	0.000
L20 95.1500-90.1500	92.6335	0.967	0.01	1.4136	12.513	A	0.000	12.513	12.513	100.00	14.187	0.000
						B	0.000	12.513		100.00	14.187	0.000
						C	0.000	12.513		100.00	14.187	0.000
L21 90.1500-85.9600	88.0438	0.953	0.01	1.4065	10.827	A	0.000	10.827	10.827	100.00	11.870	0.000
						B	0.000	10.827		100.00	11.870	0.000
						C	0.000	10.827		100.00	11.870	0.000
L22 85.9600-85.0400	85.4995	0.945	0.01	1.4023	2.380	A	0.000	2.380	2.380	100.00	2.606	0.000
						B	0.000	2.380		100.00	2.606	0.000
						C	0.000	2.380		100.00	2.606	0.000
L23 85.0400-82.0000	83.5142	0.939	0.01	1.3991	7.971	A	0.000	7.971	7.971	100.00	9.962	0.000
						B	0.000	7.971		100.00	9.962	0.000
						C	0.000	7.971		100.00	9.962	0.000
L24 82.0000-81.7500	81.8750	0.933	0.01	1.3963	0.662	A	0.000	0.662	0.662	100.00	0.934	0.000
						B	0.000	0.662		100.00	0.934	0.000
						C	0.000	0.662		100.00	0.934	0.000
L25 81.7500-77.2500	79.4877	0.925	0.01	1.3922	12.110	A	0.000	12.110	12.110	100.00	16.797	0.000
						B	0.000	12.110		100.00	16.797	0.000
						C	0.000	12.110		100.00	16.797	0.000
L26 77.2500-77.0000	77.1250	0.918	0.01	1.3880	0.684	A	0.000	0.684	0.684	100.00	0.932	0.000
						B	0.000	0.684		100.00	0.932	0.000
						C	0.000	0.684		100.00	0.932	0.000
L27 77.0000-75.0000	75.9976	0.914	0.01	1.3859	5.510	A	0.000	5.510	5.510	100.00	8.410	0.000
						B	0.000	5.510		100.00	9.603	0.000
						C	0.000	5.510		100.00	7.218	0.000
L28 75.0000-74.7500	74.8750	0.91	0.01	1.3839	0.694	A	0.000	0.694	0.694	100.00	1.170	0.000
						B	0.000	0.694		100.00	1.408	0.000
						C	0.000	0.694		100.00	0.932	0.000
L29 74.7500-71.2500	72.9929	0.903	0.01	1.3803	9.826	A	0.000	9.826	9.826	100.00	13.499	0.000
						B	0.000	9.826		100.00	16.834	0.000
						C	0.000	9.826		100.00	10.165	0.000
L30 71.2500-71.0000	71.1250	0.897	0.01	1.3768	0.710	A	0.000	0.710	0.710	100.00	0.795	0.000
						B	0.000	0.710		100.00	1.033	0.000
						C	0.000	0.710		100.00	0.557	0.000
L31 71.0000-70.4000	70.6998	0.895	0.01	1.3759	1.708	A	0.000	1.708	1.708	100.00	1.907	0.000
						B	0.000	1.708		100.00	2.478	0.000
						C	0.000	1.708		100.00	1.336	0.000
L32 70.4000-70.1500	70.2750	0.893	0.01	1.3751	0.714	A	0.000	0.714	0.714	100.00	0.795	0.000
						B	0.000	0.714		100.00	1.033	0.000
						C	0.000	0.714		100.00	0.557	0.000
L33 70.1500-65.1500	67.6360	0.884	0.01	1.3699	14.505	A	0.000	14.505	14.505	100.00	15.876	0.000
						B	0.000	14.505		100.00	20.629	0.000
						C	0.000	14.505		100.00	11.123	0.000
L34 65.1500-60.1500	62.6365	0.865	0.00	1.3594	14.948	A	0.000	14.948	14.948	100.00	15.845	0.000
						B	0.000	14.948		100.00	20.588	0.000
						C	0.000	14.948		100.00	11.102	0.000
L35 60.1500-55.1500	57.6369	0.844	0.00	1.3481	15.391	A	0.000	15.391	15.391	100.00	15.811	0.000
						B	0.000	15.391		100.00	20.542	0.000
						C	0.000	15.391		100.00	11.080	0.000
L36 55.1500-50.1500	52.6373	0.823	0.00	1.3359	15.832	A	0.000	15.832	15.832	100.00	15.774	0.000
						B	0.000	15.832		100.00	20.494	0.000
						C	0.000	15.832		100.00	11.055	0.000
L37 50.1500-42.4100	46.2507	0.793	0.00	1.3188	25.377	A	0.000	25.377	25.377	100.00	21.776	0.000
						B	0.000	25.377		100.00	21.888	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	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
						C	0.000	25.377		100.00	14.553	0.000
L38 42.4100-41.4100	41.9095	0.771	0.00	1.3058	3.306	A	0.000	3.306	3.306	100.00	2.561	0.000
						B	0.000	3.306		100.00	2.443	0.000
						C	0.000	3.306		100.00	2.443	0.000
L39 41.4100-36.4100	38.8981	0.755	0.00	1.2961	16.781	A	0.000	16.781	16.781	100.00	12.034	0.000
						B	0.000	16.781		100.00	11.454	0.000
						C	0.000	16.781		100.00	11.454	0.000
L40 36.4100-36.2500	36.3300	0.74	0.00	1.2873	0.544	A	0.000	0.544	0.544	100.00	0.385	0.000
						B	0.000	0.544		100.00	0.366	0.000
						C	0.000	0.544		100.00	0.366	0.000
L41 36.2500-36.0000	36.1250	0.739	0.00	1.2866	0.851	A	0.000	0.851	0.851	100.00	0.622	0.000
						B	0.000	0.851		100.00	0.551	0.000
						C	0.000	0.851		100.00	0.593	0.000
L42 36.0000-31.2500	33.6146	0.724	0.00	1.2774	16.377	A	0.000	16.377	16.377	100.00	11.792	0.000
						B	0.000	16.377		100.00	10.458	0.000
						C	0.000	16.377		100.00	11.250	0.000
L43 31.2500-31.0000	31.1250	0.708	0.00	1.2676	0.873	A	0.000	0.873	0.873	100.00	0.620	0.000
						B	0.000	0.873		100.00	0.578	0.000
						C	0.000	0.873		100.00	0.620	0.000
L44 31.0000-26.0000	28.4888	0.7	0.00	1.2564	17.685	A	0.000	17.685	17.685	100.00	12.371	0.000
						B	0.000	17.685		100.00	11.538	0.000
						C	0.000	17.685		100.00	12.371	0.000
L45 26.0000-21.0000	23.4891	0.7	0.00	1.2324	18.115	A	0.000	18.115	18.115	100.00	12.607	0.000
						B	0.000	18.115		100.00	11.490	0.000
						C	0.000	18.115		100.00	12.323	0.000
L46 21.0000-18.5000	19.7473	0.7	0.00	1.2112	9.218	A	0.000	9.218	9.218	100.00	8.967	0.000
						B	0.000	9.218		100.00	5.724	0.000
						C	0.000	9.218		100.00	6.140	0.000
L47 18.5000-18.2500	18.3750	0.7	0.00	1.2025	0.928	A	0.000	0.928	0.928	100.00	0.895	0.000
						B	0.000	0.928		100.00	0.571	0.000
						C	0.000	0.928		100.00	0.613	0.000
L48 18.2500-15.0000	16.6205	0.7	0.00	1.1905	12.156	A	0.000	12.156	12.156	100.00	10.208	0.000
						B	0.000	12.156		100.00	7.414	0.000
						C	0.000	12.156		100.00	7.956	0.000
L49 15.0000-14.7500	14.8750	0.7	0.00	1.1773	0.943	A	0.000	0.943	0.943	100.00	0.611	0.000
						B	0.000	0.943		100.00	0.569	0.000
						C	0.000	0.943		100.00	0.611	0.000
L50 14.7500-9.7500	12.2397	0.7	0.00	1.1546	19.068	A	0.000	19.068	19.068	100.00	12.168	0.000
						B	0.000	19.068		100.00	11.334	0.000
						C	0.000	19.068		100.00	9.868	0.000
L51 9.7500-4.7500	7.2399	0.7	0.00	1.0955	19.470	A	0.000	19.470	19.470	100.00	12.049	0.000
						B	0.000	19.470		100.00	11.216	0.000
						C	0.000	19.470		100.00	5.537	0.000
L52 4.7500-0.0000	2.3661	0.7	0.00	0.9796	18.822	A	0.000	18.822	18.822	100.00	8.272	0.000
						B	0.000	18.822		100.00	7.689	0.000
						C	0.000	18.822		100.00	3.795	0.000

Tower Pressure - Service

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z ksf	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
L1 150.0000-145.0000	147.4710	1.104	0.01	6.563	A	0.000	6.563	6.563	100.00	0.000	0.000
					B	0.000	6.563		100.00	0.000	0.000
					C	0.000	6.563		100.00	0.000	0.000
L2 145.0000-140.0000	142.4729	1.093	0.01	7.020	A	0.000	7.020	7.020	100.00	0.000	0.000
					B	0.000	7.020		100.00	0.000	0.000
					C	0.000	7.020		100.00	0.000	0.000
L3 140.0000-135.0000	137.4746	1.082	0.01	7.476	A	0.000	7.476	7.476	100.00	0.000	0.000
					B	0.000	7.476		100.00	0.000	0.000
					C	0.000	7.476		100.00	0.000	0.000
L4 135.0000-130.0000	132.4760	1.071	0.01	7.933	A	0.000	7.933	7.933	100.00	0.000	0.000
					B	0.000	7.933		100.00	0.000	0.000
					C	0.000	7.933		100.00	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	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
L5 130.0000-123.4200	126.6711	1.057	0.01	11.136	A	0.000	11.136	11.136	100.00	0.220	0.000
					B	0.000	11.136		100.00	0.220	0.000
					C	0.000	11.136		100.00	0.220	0.000
L6 123.4200-122.2500	122.8338	1.048	0.01	2.024	A	0.000	2.024	2.024	100.00	0.780	0.000
					B	0.000	2.024		100.00	0.780	0.000
					C	0.000	2.024		100.00	0.780	0.000
L7 122.2500-122.0000	122.1249	1.046	0.01	0.435	A	0.000	0.435	0.435	100.00	0.167	0.000
					B	0.000	0.435		100.00	0.167	0.000
					C	0.000	0.435		100.00	0.167	0.000
L8 122.0000-120.2500	121.1224	1.044	0.01	3.077	A	0.000	3.077	3.077	100.00	1.833	0.000
					B	0.000	3.077		100.00	1.833	0.000
					C	0.000	3.077		100.00	1.833	0.000
L9 120.2500-120.0000	120.1249	1.041	0.01	0.444	A	0.000	0.444	0.444	100.00	0.333	0.000
					B	0.000	0.444		100.00	0.333	0.000
					C	0.000	0.444		100.00	0.333	0.000
L10 120.0000-115.5000	117.7334	1.035	0.01	8.177	A	0.000	8.177	8.177	100.00	6.508	0.000
					B	0.000	8.177		100.00	6.508	0.000
					C	0.000	8.177		100.00	6.508	0.000
L11 115.5000-115.2500	115.3749	1.029	0.01	0.465	A	0.000	0.465	0.465	100.00	0.502	0.000
					B	0.000	0.465		100.00	0.502	0.000
					C	0.000	0.465		100.00	0.502	0.000
L12 115.2500-115.0000	115.1249	1.029	0.01	0.467	A	0.000	0.467	0.467	100.00	0.502	0.000
					B	0.000	0.467		100.00	0.502	0.000
					C	0.000	0.467		100.00	0.502	0.000
L13 115.0000-114.7500	114.8750	1.028	0.01	0.467	A	0.000	0.467	0.467	100.00	0.502	0.000
					B	0.000	0.467		100.00	0.502	0.000
					C	0.000	0.467		100.00	0.502	0.000
L14 114.7500-109.7500	112.2305	1.021	0.01	9.582	A	0.000	9.582	9.582	100.00	7.383	0.000
					B	0.000	9.582		100.00	7.383	0.000
					C	0.000	9.582		100.00	7.383	0.000
L15 109.7500-105.2500	107.4849	1.009	0.01	9.009	A	0.000	9.009	9.009	100.00	6.635	0.000
					B	0.000	9.009		100.00	6.635	0.000
					C	0.000	9.009		100.00	6.635	0.000
L16 105.2500-105.0000	105.1250	1.002	0.01	0.511	A	0.000	0.511	0.511	100.00	0.454	0.000
					B	0.000	0.511		100.00	0.454	0.000
					C	0.000	0.511		100.00	0.454	0.000
L17 105.0000-100.4000	102.6849	0.996	0.01	9.596	A	0.000	9.596	9.596	100.00	8.611	0.000
					B	0.000	9.596		100.00	8.611	0.000
					C	0.000	9.596		100.00	8.611	0.000
L18 100.4000-100.1500	100.2750	0.989	0.01	0.532	A	0.000	0.532	0.532	100.00	0.497	0.000
					B	0.000	0.532		100.00	0.497	0.000
					C	0.000	0.532		100.00	0.497	0.000
L19 100.1500-95.1500	97.6329	0.981	0.01	10.885	A	0.000	10.885	10.885	100.00	9.946	0.000
					B	0.000	10.885		100.00	9.946	0.000
					C	0.000	10.885		100.00	9.946	0.000
L20 95.1500-90.1500	92.6335	0.967	0.01	11.335	A	0.000	11.335	11.335	100.00	9.946	0.000
					B	0.000	11.335		100.00	9.946	0.000
					C	0.000	11.335		100.00	9.946	0.000
L21 90.1500-85.9600	88.0438	0.953	0.01	9.845	A	0.000	9.845	9.845	100.00	8.335	0.000
					B	0.000	9.845		100.00	8.335	0.000
					C	0.000	9.845		100.00	8.335	0.000
L22 85.9600-85.0400	85.4995	0.945	0.01	2.165	A	0.000	2.165	2.165	100.00	1.830	0.000
					B	0.000	2.165		100.00	1.830	0.000
					C	0.000	2.165		100.00	1.830	0.000
L23 85.0400-82.0000	83.5142	0.939	0.01	7.262	A	0.000	7.262	7.262	100.00	7.172	0.000
					B	0.000	7.262		100.00	7.172	0.000
					C	0.000	7.262		100.00	7.172	0.000
L24 82.0000-81.7500	81.8750	0.933	0.01	0.604	A	0.000	0.604	0.604	100.00	0.685	0.000
					B	0.000	0.604		100.00	0.685	0.000
					C	0.000	0.604		100.00	0.685	0.000
L25 81.7500-77.2500	79.4877	0.925	0.01	11.066	A	0.000	11.066	11.066	100.00	12.326	0.000
					B	0.000	11.066		100.00	12.326	0.000
					C	0.000	11.066		100.00	12.326	0.000
L26 77.2500-77.0000	77.1250	0.918	0.01	0.626	A	0.000	0.626	0.626	100.00	0.685	0.000
					B	0.000	0.626		100.00	0.685	0.000
					C	0.000	0.626		100.00	0.685	0.000
L27 77.0000-75.0000	75.9976	0.914	0.01	5.048	A	0.000	5.048	5.048	100.00	6.155	0.000
					B	0.000	5.048		100.00	7.001	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	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	0.000	5.048		100.00	5.309	0.000
L28 75.0000-74.7500	74.8750	0.91	0.01	0.636	A	0.000	0.636	0.636	100.00	0.854	0.000
					B	0.000	0.636		100.00	1.023	0.000
					C	0.000	0.636		100.00	0.685	0.000
L29 74.7500-71.2500	72.9929	0.903	0.01	9.021	A	0.000	9.021	9.021	100.00	9.687	0.000
					B	0.000	9.021		100.00	12.055	0.000
					C	0.000	9.021		100.00	7.318	0.000
L30 71.2500-71.0000	71.1250	0.897	0.01	0.652	A	0.000	0.652	0.652	100.00	0.588	0.000
					B	0.000	0.652		100.00	0.757	0.000
					C	0.000	0.652		100.00	0.419	0.000
L31 71.0000-70.4000	70.6998	0.895	0.01	1.570	A	0.000	1.570	1.570	100.00	1.412	0.000
					B	0.000	1.570		100.00	1.818	0.000
					C	0.000	1.570		100.00	1.006	0.000
L32 70.4000-70.1500	70.2750	0.893	0.01	0.656	A	0.000	0.656	0.656	100.00	0.588	0.000
					B	0.000	0.656		100.00	0.757	0.000
					C	0.000	0.656		100.00	0.419	0.000
L33 70.1500-65.1500	67.6360	0.884	0.01	13.363	A	0.000	13.363	13.363	100.00	11.767	0.000
					B	0.000	13.363		100.00	15.150	0.000
					C	0.000	13.363		100.00	8.383	0.000
L34 65.1500-60.1500	62.6365	0.865	0.01	13.815	A	0.000	13.815	13.815	100.00	11.767	0.000
					B	0.000	13.815		100.00	15.150	0.000
					C	0.000	13.815		100.00	8.383	0.000
L35 60.1500-55.1500	57.6369	0.844	0.01	14.268	A	0.000	14.268	14.268	100.00	11.767	0.000
					B	0.000	14.268		100.00	15.150	0.000
					C	0.000	14.268		100.00	8.383	0.000
L36 55.1500-50.1500	52.6373	0.823	0.01	14.719	A	0.000	14.719	14.719	100.00	11.767	0.000
					B	0.000	14.719		100.00	15.150	0.000
					C	0.000	14.719		100.00	8.383	0.000
L37 50.1500-42.4100	46.2507	0.793	0.01	23.675	A	0.000	23.675	23.675	100.00	16.598	0.000
					B	0.000	23.675		100.00	16.572	0.000
					C	0.000	23.675		100.00	11.294	0.000
L38 42.4100-41.4100	41.9095	0.771	0.01	3.086	A	0.000	3.086	3.086	100.00	1.995	0.000
					B	0.000	3.086		100.00	1.995	0.000
					C	0.000	3.086		100.00	1.995	0.000
L39 41.4100-36.4100	38.8981	0.755	0.01	15.701	A	0.000	15.701	15.701	100.00	9.442	0.000
					B	0.000	15.701		100.00	9.442	0.000
					C	0.000	15.701		100.00	9.442	0.000
L40 36.4100-36.2500	36.3300	0.74	0.01	0.510	A	0.000	0.510	0.510	100.00	0.302	0.000
					B	0.000	0.510		100.00	0.302	0.000
					C	0.000	0.510		100.00	0.302	0.000
L41 36.2500-36.0000	36.1250	0.739	0.01	0.797	A	0.000	0.797	0.797	100.00	0.493	0.000
					B	0.000	0.797		100.00	0.451	0.000
					C	0.000	0.797		100.00	0.493	0.000
L42 36.0000-31.2500	33.6146	0.724	0.01	15.366	A	0.000	15.366	15.366	100.00	9.365	0.000
					B	0.000	15.366		100.00	8.574	0.000
					C	0.000	15.366		100.00	9.365	0.000
L43 31.2500-31.0000	31.1250	0.708	0.01	0.820	A	0.000	0.820	0.820	100.00	0.493	0.000
					B	0.000	0.820		100.00	0.451	0.000
					C	0.000	0.820		100.00	0.493	0.000
L44 31.0000-26.0000	28.4888	0.7	0.01	16.638	A	0.000	16.638	16.638	100.00	9.858	0.000
					B	0.000	16.638		100.00	9.025	0.000
					C	0.000	16.638		100.00	9.858	0.000
L45 26.0000-21.0000	23.4891	0.7	0.01	17.088	A	0.000	17.088	17.088	100.00	10.080	0.000
					B	0.000	17.088		100.00	9.025	0.000
					C	0.000	17.088		100.00	9.858	0.000
L46 21.0000-18.5000	19.7473	0.7	0.01	8.713	A	0.000	8.713	8.713	100.00	7.150	0.000
					B	0.000	8.713		100.00	4.513	0.000
					C	0.000	8.713		100.00	4.929	0.000
L47 18.5000-18.2500	18.3750	0.7	0.01	0.878	A	0.000	0.878	0.878	100.00	0.715	0.000
					B	0.000	0.878		100.00	0.451	0.000
					C	0.000	0.878		100.00	0.493	0.000
L48 18.2500-15.0000	16.6205	0.7	0.01	11.511	A	0.000	11.511	11.511	100.00	8.185	0.000
					B	0.000	11.511		100.00	5.866	0.000
					C	0.000	11.511		100.00	6.408	0.000
L49 15.0000-14.7500	14.8750	0.7	0.01	0.893	A	0.000	0.893	0.893	100.00	0.493	0.000
					B	0.000	0.893		100.00	0.451	0.000
					C	0.000	0.893		100.00	0.493	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	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
L50 14.7500-9.7500	12.2397	0.7	0.01	18.106	A	0.000	18.106	18.106	100.00	9.858	0.000
					B	0.000	18.106		100.00	9.025	0.000
					C	0.000	18.106		100.00	7.962	0.000
L51 9.7500-4.7500	7.2399	0.7	0.01	18.557	A	0.000	18.557	18.557	100.00	9.858	0.000
					B	0.000	18.557		100.00	9.025	0.000
					C	0.000	18.557		100.00	4.442	0.000
L52 4.7500-0.0000	2.3661	0.7	0.01	18.046	A	0.000	18.046	18.046	100.00	6.901	0.000
					B	0.000	18.046		100.00	6.317	0.000
					C	0.000	18.046		100.00	3.109	0.000

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 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	150 - 145	Pole	Max Tension	1	0.00	0.00	-0.00
			Max. Compression	26	-7.22	-0.79	1.12
			Max. Mx	8	-2.91	-23.80	0.46
			Max. My	2	-2.90	-0.28	23.98
			Max. Vy	20	-4.21	23.14	0.48
			Max. Vx	2	-4.22	-0.28	23.98
			Max. Torque	2			-0.43
L2	145 - 140	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-7.61	-0.79	1.15
			Max. Mx	8	-3.13	-45.42	0.45
			Max. My	2	-3.12	-0.27	45.67
			Max. Vy	20	-4.44	44.77	0.50
			Max. Vx	2	-4.46	-0.27	45.67
			Max. Torque	2			-0.43
L3	140 - 135	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-15.20	-0.70	1.67
			Max. Mx	8	-6.24	-79.17	0.61
			Max. My	2	-6.22	-0.28	79.66
			Max. Vy	20	-8.38	78.45	0.72
			Max. Vx	2	-8.40	-0.28	79.66
			Max. Torque	2			-0.43
L4	135 - 130	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-15.69	-0.70	1.72
			Max. Mx	8	-6.56	-121.64	0.59
			Max. My	2	-6.55	-0.24	122.25
			Max. Vy	20	-8.62	120.93	0.77
			Max. Vx	2	-8.64	-0.24	122.25
			Max. Torque	12			0.36
L5	130 - 123.42	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-23.26	0.16	4.64
			Max. Mx	8	-9.37	-159.42	1.01
			Max. My	2	-9.33	-0.10	161.33
			Max. Vy	20	-13.28	159.04	1.25
			Max. Vx	2	-13.50	-0.10	161.33
			Max. Torque	20			-1.77
L6	123.42 - 122.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-24.13	0.16	4.69
			Max. Mx	8	-9.94	-217.53	0.98
			Max. My	2	-9.90	-0.06	220.44
			Max. Vy	20	-13.56	217.19	1.31
			Max. Vx	14	13.78	-0.39	-217.99
			Max. Torque	20			-1.77
L7	122.25 - 122	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-24.18	0.16	4.70
			Max. Mx	8	-9.98	-220.91	0.98
			Max. My	2	-9.94	-0.05	223.88
			Max. Vy	20	-13.58	220.58	1.32
			Max. Vx	14	13.80	-0.39	-221.43
			Max. Torque	20			-1.77
L8	122 - 120.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-24.55	0.16	4.72
			Max. Mx	8	-10.21	-244.71	0.97
			Max. My	2	-10.17	-0.03	248.08
			Max. Vy	20	-13.75	244.48	1.34
			Max. Vx	14	13.98	-0.41	-245.73
			Max. Torque	20			-1.77
L9	120.25 - 120	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-24.61	0.16	4.72
			Max. Mx	8	-10.26	-248.13	0.97
			Max. My	2	-10.22	-0.03	251.56
			Max. Vy	20	-13.77	247.92	1.34
			Max. Vx	14	14.00	-0.41	-249.22
			Max. Torque	20			-1.77
L10	120 - 115.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-33.22	0.16	4.77

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	20	-14.52	316.86	1.41
			Max. My	2	-14.49	0.02	321.27
			Max. Vy	20	-18.19	316.86	1.41
			Max. Vx	14	18.43	-0.46	-319.20
			Max. Torque	20			-1.77
L11	115.5 - 115.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-33.29	0.16	4.77
			Max. Mx	20	-14.56	321.41	1.41
			Max. My	2	-14.53	0.02	325.86
			Max. Vy	20	-18.22	321.41	1.41
			Max. Vx	14	18.46	-0.46	-323.81
			Max. Torque	20			-1.77
L12	115.25 - 115	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-33.36	0.16	4.77
			Max. Mx	20	-14.60	325.96	1.42
			Max. My	2	-14.57	0.02	330.46
			Max. Vy	20	-18.24	325.96	1.42
			Max. Vx	14	18.48	-0.46	-328.42
			Max. Torque	20			-1.77
L13	115 - 114.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-33.43	0.16	4.78
			Max. Mx	20	-14.65	330.53	1.42
			Max. My	2	-14.61	0.03	335.07
			Max. Vy	20	-18.27	330.53	1.42
			Max. Vx	14	18.51	-0.47	-333.04
			Max. Torque	20			-1.77
L14	114.75 - 109.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-34.83	0.17	4.83
			Max. Mx	20	-15.57	423.09	1.49
			Max. My	2	-15.54	0.08	428.55
			Max. Vy	20	-18.77	423.09	1.49
			Max. Vx	14	19.03	-0.52	-426.86
			Max. Torque	20			-1.77
L15	109.75 - 105.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-36.12	0.17	4.88
			Max. Mx	20	-16.43	508.52	1.55
			Max. My	2	-16.40	0.13	514.91
			Max. Vy	20	-19.21	508.52	1.55
			Max. Vx	14	19.50	-0.57	-513.53
			Max. Torque	20			-1.77
L16	105.25 - 105	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-36.21	0.17	4.89
			Max. Mx	20	-16.50	513.32	1.56
			Max. My	2	-16.47	0.14	519.77
			Max. Vy	20	-19.24	513.32	1.56
			Max. Vx	14	19.53	-0.57	-518.41
			Max. Torque	20			-1.77
L17	105 - 100.4	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-37.87	0.17	4.93
			Max. Mx	20	-17.61	602.95	1.62
			Max. My	2	-17.57	0.19	610.53
			Max. Vy	20	-19.74	602.95	1.62
			Max. Vx	14	20.06	-0.62	-609.41
			Max. Torque	20			-1.77
L18	100.4 - 100.15	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-37.96	0.17	4.93
			Max. Mx	20	-17.68	607.88	1.62
			Max. My	2	-17.64	0.19	615.54
			Max. Vy	20	-19.77	607.88	1.62
			Max. Vx	14	20.08	-0.62	-614.43
			Max. Torque	20			-1.77
L19	100.15 - 95.15	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-39.83	0.17	4.97
			Max. Mx	20	-18.95	708.08	1.69

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	2	-18.91	0.24	717.20
			Max. Vy	20	-20.32	708.08	1.69
			Max. Vx	14	20.66	-0.68	-716.26
			Max. Torque	20			-1.77
L20	95.15 - 90.15	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-41.72	0.17	5.01
			Max. Mx	20	-20.24	811.05	1.75
			Max. My	2	-20.20	0.30	821.87
			Max. Vy	20	-20.88	811.05	1.75
			Max. Vx	2	-21.24	0.30	821.87
			Max. Torque	20			-1.77
L21	90.15 - 85.96	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-41.76	0.17	5.02
			Max. Mx	20	-20.28	813.35	1.76
			Max. My	2	-20.24	0.30	824.21
			Max. Vy	20	-20.89	813.35	1.76
			Max. Vx	14	21.29	-0.73	-823.31
			Max. Torque	20			-1.77
L22	85.96 - 85.04	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-44.90	0.17	5.06
			Max. Mx	20	-22.57	919.42	1.82
			Max. My	2	-22.53	0.35	932.22
			Max. Vy	20	-21.53	919.42	1.82
			Max. Vx	2	-21.95	0.35	932.22
			Max. Torque	20			-1.77
L23	85.04 - 82	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-46.17	0.17	5.08
			Max. Mx	20	-23.45	985.39	1.86
			Max. My	2	-23.41	0.39	999.47
			Max. Vy	8	21.89	-983.30	0.65
			Max. Vx	2	-22.32	0.39	999.47
			Max. Torque	20			-1.77
L24	82 - 81.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-46.30	0.17	5.08
			Max. Mx	20	-23.54	990.86	1.86
			Max. My	2	-23.50	0.39	1005.06
			Max. Vy	8	21.91	-988.77	0.65
			Max. Vx	2	-22.35	0.39	1005.06
			Max. Torque	20			-1.77
L25	81.75 - 77.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-48.51	0.17	5.11
			Max. Mx	20	-25.08	1090.72	1.92
			Max. My	2	-25.04	0.44	1106.90
			Max. Vy	20	-22.48	1090.72	1.92
			Max. Vx	2	-22.93	0.44	1106.90
			Max. Torque	20			-1.77
L26	77.25 - 77	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-48.62	0.17	5.12
			Max. Mx	20	-25.16	1096.34	1.92
			Max. My	2	-25.12	0.44	1112.64
			Max. Vy	20	-22.51	1096.34	1.92
			Max. Vx	2	-22.96	0.44	1112.64
			Max. Torque	20			-1.77
L27	77 - 75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-49.57	0.17	5.16
			Max. Mx	20	-25.79	1141.60	1.95
			Max. My	2	-25.75	0.46	1158.80
			Max. Vy	20	-22.77	1141.60	1.95
			Max. Vx	2	-23.22	0.46	1158.80
			Max. Torque	20			-1.77
L28	75 - 74.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-49.83	0.17	5.09
			Max. Mx	20	-25.95	1147.33	1.94
			Max. My	2	-25.91	0.47	1164.63
			Max. Vy	20	-22.87	1147.33	1.94

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	2	-23.32	0.47	1164.63
			Max. Torque	20			-1.76
L29	74.75 - 71.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51.52	0.15	5.21
			Max. Mx	20	-27.11	1228.12	1.99
			Max. My	2	-27.07	0.51	1247.01
			Max. Vy	20	-23.31	1228.12	1.99
			Max. Vx	2	-23.77	0.51	1247.01
			Max. Torque	20			-1.70
L30	71.25 - 71	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51.65	0.15	5.22
			Max. Mx	20	-27.21	1233.95	1.99
			Max. My	2	-27.18	0.51	1252.95
			Max. Vy	20	-23.33	1233.95	1.99
			Max. Vx	2	-23.80	0.51	1252.95
			Max. Torque	20			-1.70
L31	71 - 70.4	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51.95	0.15	5.24
			Max. Mx	20	-27.43	1247.97	2.00
			Max. My	2	-27.40	0.51	1267.25
			Max. Vy	20	-23.41	1247.97	2.00
			Max. Vx	2	-23.87	0.51	1267.25
			Max. Torque	20			-1.70
L32	70.4 - 70.15	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-52.08	0.14	5.25
			Max. Mx	20	-27.53	1253.82	2.00
			Max. My	2	-27.49	0.52	1273.22
			Max. Vy	20	-23.44	1253.82	2.00
			Max. Vx	14	23.90	-0.95	-1271.96
			Max. Torque	20			-1.70
L33	70.15 - 65.15	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-54.62	0.12	5.42
			Max. Mx	20	-29.42	1372.53	2.06
			Max. My	2	-29.38	0.57	1394.24
			Max. Vy	20	-24.06	1372.53	2.06
			Max. Vx	14	24.54	-1.00	-1392.99
			Max. Torque	20			-1.70
L34	65.15 - 60.15	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-57.19	0.10	5.60
			Max. Mx	20	-31.33	1494.27	2.12
			Max. My	2	-31.30	0.63	1518.36
			Max. Vy	20	-24.66	1494.27	2.12
			Max. Vx	14	25.16	-1.06	-1517.18
			Max. Torque	20			-1.69
L35	60.15 - 55.15	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-59.78	0.07	5.76
			Max. Mx	20	-33.28	1619.02	2.18
			Max. My	2	-33.24	0.68	1645.52
			Max. Vy	20	-25.26	1619.02	2.18
			Max. Vx	14	25.78	-1.11	-1644.47
			Max. Torque	20			-1.69
L36	55.15 - 50.15	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-62.39	0.05	5.90
			Max. Mx	20	-35.25	1746.71	2.24
			Max. My	2	-35.22	0.73	1775.68
			Max. Vy	20	-25.84	1746.71	2.24
			Max. Vx	14	26.38	-1.17	-1774.81
			Max. Torque	20			-1.69
L37	50.15 - 42.41	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-63.71	0.06	5.95
			Max. Mx	20	-36.27	1813.45	2.27
			Max. My	2	-36.24	0.76	1843.72
			Max. Vy	20	-26.12	1813.45	2.27

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	14	26.67	-1.20	-1842.95
			Max. Torque	20			-1.69
L38	42.41 - 41.41	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-68.80	0.07	6.05
			Max. Mx	20	-40.33	1976.99	2.35
			Max. My	2	-40.30	0.83	2010.46
			Max. Vy	20	-26.89	1976.99	2.35
			Max. Vx	14	27.47	-1.26	-2009.96
			Max. Torque	20			-1.69
L39	41.41 - 36.41	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-71.18	0.07	6.05
			Max. Mx	20	-42.19	2112.53	2.41
			Max. My	2	-42.16	0.88	2148.74
			Max. Vy	20	-27.36	2112.53	2.41
			Max. Vx	14	27.96	-1.32	-2148.46
			Max. Torque	20			-1.69
L40	36.41 - 36.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-71.26	0.07	6.05
			Max. Mx	20	-42.26	2116.90	2.41
			Max. My	2	-42.23	0.88	2153.21
			Max. Vy	20	-27.37	2116.90	2.41
			Max. Vx	14	28.00	-1.32	-2152.93
			Max. Torque	20			-1.69
L41	36.25 - 36	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-71.38	0.07	6.05
			Max. Mx	20	-42.35	2123.75	2.41
			Max. My	2	-42.33	0.89	2160.19
			Max. Vy	20	-27.39	2123.75	2.41
			Max. Vx	14	28.00	-1.32	-2159.92
			Max. Torque	20			-1.69
L42	36 - 31.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-73.77	0.07	6.03
			Max. Mx	20	-44.23	2254.87	2.47
			Max. My	2	-44.21	0.94	2294.04
			Max. Vy	20	-27.84	2254.87	2.47
			Max. Vx	14	28.46	-1.37	-2293.95
			Max. Torque	20			-1.69
L43	31.25 - 31	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-73.90	0.07	6.04
			Max. Mx	20	-44.34	2261.82	2.47
			Max. My	2	-44.32	0.94	2301.15
			Max. Vy	20	-27.85	2261.82	2.47
			Max. Vx	14	28.48	-1.38	-2301.06
			Max. Torque	20			-1.69
L44	31 - 26	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-76.43	0.08	6.02
			Max. Mx	20	-46.36	2402.18	2.52
			Max. My	14	-46.33	-1.43	-2444.56
			Max. Vy	20	-28.31	2402.18	2.52
			Max. Vx	14	28.95	-1.43	-2444.56
			Max. Torque	20			-1.69
L45	26 - 21	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-78.99	0.08	6.01
			Max. Mx	20	-48.40	2544.77	2.58
			Max. My	14	-48.38	-1.48	-2590.39
			Max. Vy	20	-28.76	2544.77	2.58
			Max. Vx	14	29.42	-1.48	-2590.39
			Max. Torque	20			-1.69
L46	21 - 18.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-80.31	0.11	6.05
			Max. Mx	20	-49.44	2616.92	2.61
			Max. My	14	-49.42	-1.51	-2664.19
			Max. Vy	20	-28.99	2616.92	2.61
			Max. Vx	14	29.67	-1.51	-2664.19
			Max. Torque	20			-1.69
L47	18.5 - 18.25	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-80.44	0.11	6.06
			Max. Mx	20	-49.55	2624.16	2.61
			Max. My	14	-49.54	-1.51	-2671.61
			Max. Vy	20	-29.00	2624.16	2.61
			Max. Vx	14	29.68	-1.51	-2671.61
			Max. Torque	20			-1.69
L48	18.25 - 15	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-82.14	0.12	6.09
			Max. Mx	20	-50.90	2718.86	2.64
			Max. My	14	-50.89	-1.55	-2768.54
			Max. Vy	20	-29.30	2718.86	2.64
			Max. Vx	14	30.00	-1.55	-2768.54
			Max. Torque	20			-1.69
L49	15 - 14.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-82.27	0.12	6.10
			Max. Mx	20	-51.02	2726.18	2.65
			Max. My	14	-51.01	-1.55	-2776.04
			Max. Vy	20	-29.31	2726.18	2.65
			Max. Vx	14	30.02	-1.55	-2776.04
			Max. Torque	20			-1.69
L50	14.75 - 9.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-84.91	0.13	6.16
			Max. Mx	20	-53.19	2873.80	2.70
			Max. My	14	-53.18	-1.60	-2927.20
			Max. Vy	20	-29.76	2873.80	2.70
			Max. Vx	14	30.48	-1.60	-2927.20
			Max. Torque	20			-1.69
L51	9.75 - 4.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-87.52	0.18	6.27
			Max. Mx	20	-55.41	3022.97	2.75
			Max. My	14	-55.40	-1.65	-3080.65
			Max. Vy	8	30.13	-3015.64	-0.12
			Max. Vx	14	30.94	-1.65	-3080.65
			Max. Torque	20			-1.69
L52	4.75 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-89.94	0.22	6.34
			Max. Mx	20	-57.53	3165.57	2.80
			Max. My	14	-57.53	-1.70	-3228.51
			Max. Vy	8	30.31	-3159.08	-0.17
			Max. Vx	14	31.36	-1.70	-3228.51
			Max. Torque	20			-1.69

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	89.94	0.00	-0.00
	Max. H_x	20	57.54	30.11	0.01
	Max. H_z	2	57.54	0.01	31.05
	Max. M_x	2	3227.20	0.01	31.05
	Max. M_z	8	3159.08	-30.29	-0.01
	Max. Torsion	8	1.69	-30.29	-0.01
	Min. Vert	3	43.16	0.01	31.05
	Min. H_x	8	57.54	-30.29	-0.01
	Min. H_z	15	43.16	-0.01	-31.34
	Min. M_x	14	-3228.51	-0.01	-31.34
	Min. M_z	20	-3165.57	30.11	0.01
	Min. Torsion	20	-1.69	30.11	0.01

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	47.95	-0.00	0.00	-1.00	-0.16	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	57.54	-0.01	-31.05	-3227.20	1.26	-0.31
0.9 Dead+1.0 Wind 0 deg - No Ice	43.16	-0.01	-31.05	-3189.42	1.30	-0.32
1.2 Dead+1.0 Wind 30 deg - No Ice	57.54	15.11	-26.37	-2762.23	-1578.77	-1.11
0.9 Dead+1.0 Wind 30 deg - No Ice	43.16	15.11	-26.37	-2729.75	-1560.35	-1.11
1.2 Dead+1.0 Wind 60 deg - No Ice	57.54	26.48	-15.39	-1606.54	-2756.73	-1.61
0.9 Dead+1.0 Wind 60 deg - No Ice	43.16	26.48	-15.39	-1587.54	-2724.67	-1.61
1.2 Dead+1.0 Wind 90 deg - No Ice	57.54	30.29	0.01	0.17	-3159.08	-1.69
0.9 Dead+1.0 Wind 90 deg - No Ice	43.16	30.29	0.01	0.50	-3122.30	-1.68
1.2 Dead+1.0 Wind 120 deg - No Ice	57.54	27.19	15.81	1621.55	-2784.30	-1.32
0.9 Dead+1.0 Wind 120 deg - No Ice	43.16	27.19	15.81	1603.13	-2752.07	-1.30
1.2 Dead+1.0 Wind 150 deg - No Ice	57.54	15.26	26.61	2775.47	-1589.64	-0.58
0.9 Dead+1.0 Wind 150 deg - No Ice	43.16	15.26	26.61	2743.57	-1571.13	-0.57
1.2 Dead+1.0 Wind 180 deg - No Ice	57.54	0.01	31.34	3228.51	-1.70	0.31
0.9 Dead+1.0 Wind 180 deg - No Ice	43.16	0.01	31.34	3191.48	-1.63	0.32
1.2 Dead+1.0 Wind 210 deg - No Ice	57.54	-15.33	26.74	2765.71	1581.85	1.12
0.9 Dead+1.0 Wind 210 deg - No Ice	43.16	-15.33	26.74	2733.91	1563.54	1.12
1.2 Dead+1.0 Wind 240 deg - No Ice	57.54	-27.17	15.79	1618.73	2781.95	1.63
0.9 Dead+1.0 Wind 240 deg - No Ice	43.16	-27.17	15.79	1600.35	2749.86	1.62
1.2 Dead+1.0 Wind 270 deg - No Ice	57.54	-30.11	-0.01	-2.80	3165.57	1.69
0.9 Dead+1.0 Wind 270 deg - No Ice	43.16	-30.11	-0.01	-2.43	3128.82	1.68
1.2 Dead+1.0 Wind 300 deg - No Ice	57.54	-26.49	-15.41	-1608.86	2757.34	1.30
0.9 Dead+1.0 Wind 300 deg - No Ice	43.16	-26.49	-15.41	-1589.83	2725.38	1.29
1.2 Dead+1.0 Wind 330 deg - No Ice	57.54	-14.94	-26.05	-2753.34	1574.91	0.57
0.9 Dead+1.0 Wind 330 deg - No Ice	43.16	-14.94	-26.05	-2720.92	1556.62	0.56
1.2 Dead+1.0 Ice+1.0 Temp	89.94	-0.00	0.00	-6.34	0.22	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	89.94	-0.00	-6.58	-762.33	0.83	-0.04
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	89.94	3.21	-5.60	-654.02	-370.72	-0.21
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	89.94	5.62	-3.26	-382.21	-646.69	-0.32
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	89.94	6.45	0.00	-5.94	-743.64	-0.34
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	89.94	5.72	3.32	373.34	-652.79	-0.28
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	89.94	3.24	5.64	644.09	-373.25	-0.14
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	89.94	0.00	6.58	748.76	-0.39	0.04
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	89.94	-3.23	5.64	642.85	372.27	0.21
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	89.94	-5.71	3.31	372.24	652.54	0.32

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	89.94	-6.45	-0.00	-7.16	744.55	0.35
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	89.94	-5.62	-3.27	-383.22	647.66	0.28
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	89.94	-3.21	-5.59	-653.98	371.84	0.14
Dead+Wind 0 deg - Service	47.95	-0.00	-6.74	-696.33	0.14	-0.07
Dead+Wind 30 deg - Service	47.95	3.28	-5.72	-596.15	-340.40	-0.24
Dead+Wind 60 deg - Service	47.95	5.75	-3.34	-347.08	-594.30	-0.35
Dead+Wind 90 deg - Service	47.95	6.57	0.00	-0.77	-680.92	-0.37
Dead+Wind 120 deg - Service	47.95	5.90	3.43	348.70	-600.26	-0.29
Dead+Wind 150 deg - Service	47.95	3.31	5.77	597.41	-342.76	-0.12
Dead+Wind 180 deg - Service	47.95	0.00	6.80	695.01	-0.50	0.07
Dead+Wind 210 deg - Service	47.95	-3.33	5.80	595.30	340.82	0.24
Dead+Wind 240 deg - Service	47.95	-5.90	3.43	348.09	599.49	0.35
Dead+Wind 270 deg - Service	47.95	-6.53	-0.00	-1.41	682.06	0.37
Dead+Wind 300 deg - Service	47.95	-5.75	-3.34	-347.58	594.18	0.28
Dead+Wind 330 deg - Service	47.95	-3.24	-5.65	-594.23	339.31	0.12

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.00	-47.95	0.00	0.00	47.95	-0.00	0.001%
2	-0.01	-57.54	-31.05	0.01	57.54	31.05	0.001%
3	-0.01	-43.16	-31.05	0.01	43.16	31.05	0.002%
4	15.11	-57.54	-26.37	-15.11	57.54	26.37	0.000%
5	15.11	-43.16	-26.37	-15.11	43.16	26.37	0.000%
6	26.48	-57.54	-15.39	-26.48	57.54	15.39	0.000%
7	26.48	-43.16	-15.39	-26.48	43.16	15.39	0.000%
8	30.29	-57.54	0.01	-30.29	57.54	-0.01	0.000%
9	30.29	-43.16	0.01	-30.29	43.16	-0.01	0.000%
10	27.19	-57.54	15.81	-27.19	57.54	-15.81	0.000%
11	27.19	-43.16	15.81	-27.19	43.16	-15.81	0.000%
12	15.26	-57.54	26.61	-15.26	57.54	-26.61	0.000%
13	15.26	-43.16	26.61	-15.26	43.16	-26.61	0.000%
14	0.01	-57.54	31.34	-0.01	57.54	-31.34	0.002%
15	0.01	-43.16	31.34	-0.01	43.16	-31.34	0.002%
16	-15.33	-57.54	26.74	15.33	57.54	-26.74	0.000%
17	-15.33	-43.16	26.74	15.33	43.16	-26.74	0.000%
18	-27.17	-57.54	15.79	27.17	57.54	-15.79	0.000%
19	-27.17	-43.16	15.79	27.17	43.16	-15.79	0.000%
20	-30.11	-57.54	-0.01	30.11	57.54	0.01	0.000%
21	-30.11	-43.16	-0.01	30.11	43.16	0.01	0.000%
22	-26.49	-57.54	-15.41	26.49	57.54	15.41	0.000%
23	-26.49	-43.16	-15.41	26.49	43.16	15.41	0.000%
24	-14.94	-57.54	-26.05	14.94	57.54	26.05	0.000%
25	-14.94	-43.16	-26.05	14.94	43.16	26.05	0.000%
26	0.00	-89.94	0.00	0.00	89.94	-0.00	0.000%
27	-0.00	-89.94	-6.58	0.00	89.94	6.58	0.000%
28	3.21	-89.94	-5.60	-3.21	89.94	5.60	0.000%
29	5.62	-89.94	-3.26	-5.62	89.94	3.26	0.000%
30	6.45	-89.94	0.00	-6.45	89.94	-0.00	0.000%
31	5.72	-89.94	3.32	-5.72	89.94	-3.32	0.000%
32	3.24	-89.94	5.64	-3.24	89.94	-5.64	0.000%
33	0.00	-89.94	6.58	-0.00	89.94	-6.58	0.000%
34	-3.23	-89.94	5.64	3.23	89.94	-5.64	0.000%
35	-5.71	-89.94	3.31	5.71	89.94	-3.31	0.000%
36	-6.45	-89.94	-0.00	6.45	89.94	0.00	0.000%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
37	-5.62	-89.94	-3.27	5.62	89.94	3.27	0.000%
38	-3.21	-89.94	-5.59	3.21	89.94	5.59	0.000%
39	-0.00	-47.95	-6.74	0.00	47.95	6.74	0.002%
40	3.28	-47.95	-5.72	-3.28	47.95	5.72	0.000%
41	5.75	-47.95	-3.34	-5.75	47.95	3.34	0.000%
42	6.57	-47.95	0.00	-6.57	47.95	-0.00	0.002%
43	5.90	-47.95	3.43	-5.90	47.95	-3.43	0.000%
44	3.31	-47.95	5.77	-3.31	47.95	-5.77	0.000%
45	0.00	-47.95	6.80	-0.00	47.95	-6.80	0.002%
46	-3.33	-47.95	5.80	3.33	47.95	-5.80	0.000%
47	-5.90	-47.95	3.43	5.90	47.95	-3.43	0.000%
48	-6.53	-47.95	-0.00	6.53	47.95	0.00	0.002%
49	-5.75	-47.95	-3.34	5.75	47.95	3.34	0.000%
50	-3.24	-47.95	-5.65	3.24	47.95	5.65	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000471
2	Yes	19	0.00000001	0.00008475
3	Yes	18	0.00000001	0.00012138
4	Yes	25	0.00000001	0.00008222
5	Yes	24	0.00000001	0.00012098
6	Yes	25	0.00000001	0.00008678
7	Yes	24	0.00000001	0.00012788
8	Yes	21	0.00000001	0.00008027
9	Yes	20	0.00000001	0.00012396
10	Yes	25	0.00000001	0.00008336
11	Yes	24	0.00000001	0.00012255
12	Yes	25	0.00000001	0.00008495
13	Yes	24	0.00000001	0.00012514
14	Yes	18	0.00002536	0.00014597
15	Yes	18	0.00000001	0.00010428
16	Yes	25	0.00000001	0.00008490
17	Yes	24	0.00000001	0.00012524
18	Yes	25	0.00000001	0.00008266
19	Yes	24	0.00000001	0.00012154
20	Yes	21	0.00000001	0.00008374
21	Yes	20	0.00000001	0.00012928
22	Yes	25	0.00000001	0.00008650
23	Yes	24	0.00000001	0.00012744
24	Yes	25	0.00000001	0.00008261
25	Yes	24	0.00000001	0.00012173
26	Yes	15	0.00000001	0.00013810
27	Yes	22	0.00000001	0.00012440
28	Yes	22	0.00000001	0.00014426
29	Yes	22	0.00000001	0.00014516
30	Yes	22	0.00000001	0.00012090
31	Yes	22	0.00000001	0.00014123
32	Yes	22	0.00000001	0.00014073
33	Yes	22	0.00000001	0.00012013
34	Yes	22	0.00000001	0.00014041
35	Yes	22	0.00000001	0.00014084
36	Yes	22	0.00000001	0.00012094
37	Yes	22	0.00000001	0.00014541
38	Yes	22	0.00000001	0.00014458
39	Yes	16	0.00000001	0.00009019
40	Yes	18	0.00000001	0.00014000
41	Yes	19	0.00000001	0.00008498
42	Yes	16	0.00000001	0.00014728
43	Yes	18	0.00000001	0.00014054
44	Yes	19	0.00000001	0.00007838
45	Yes	16	0.00000001	0.00008933
46	Yes	19	0.00000001	0.00008028
47	Yes	18	0.00000001	0.00013812
48	Yes	16	0.00000001	0.00014832
49	Yes	19	0.00000001	0.00008321
50	Yes	18	0.00000001	0.00014279

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	150 - 145	19.80	39	1.28	0.00
L2	145 - 140	18.46	39	1.27	0.00
L3	140 - 135	17.15	39	1.24	0.00
L4	135 - 130	15.88	39	1.19	0.00
L5	130 - 123.42	14.66	39	1.12	0.00
L6	126.59 - 122.25	13.88	39	1.07	0.00
L7	122.25 - 122	12.92	39	1.03	0.00
L8	122 - 120.25	12.87	39	1.03	0.00
L9	120.25 - 120	12.49	39	1.01	0.00
L10	120 - 115.5	12.44	39	1.01	0.00
L11	115.5 - 115.25	11.51	39	0.97	0.00
L12	115.25 - 115	11.46	39	0.96	0.00

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L13	115 - 114.75	11.41	39	0.96	0.00
L14	114.75 - 109.75	11.36	39	0.96	0.00
L15	109.75 - 105.25	10.38	39	0.91	0.00
L16	105.25 - 105	9.55	39	0.86	0.00
L17	105 - 100.4	9.50	39	0.86	0.00
L18	100.4 - 100.15	8.70	39	0.82	0.00
L19	100.15 - 95.15	8.65	39	0.82	0.00
L20	95.15 - 90.15	7.82	39	0.77	0.00
L21	90.15 - 85.96	7.04	39	0.72	0.00
L22	90.04 - 85.04	7.03	39	0.72	0.00
L23	85.04 - 82	6.28	39	0.69	0.00
L24	82 - 81.75	5.85	39	0.67	0.00
L25	81.75 - 77.25	5.81	39	0.66	0.00
L26	77.25 - 77	5.21	39	0.63	0.00
L27	77 - 75	5.17	39	0.63	0.00
L28	75 - 74.75	4.92	39	0.61	0.00
L29	74.75 - 71.25	4.88	39	0.61	0.00
L30	71.25 - 71	4.45	39	0.58	0.00
L31	71 - 70.4	4.42	39	0.57	0.00
L32	70.4 - 70.15	4.35	39	0.57	0.00
L33	70.15 - 65.15	4.32	39	0.57	0.00
L34	65.15 - 60.15	3.75	39	0.53	0.00
L35	60.15 - 55.15	3.21	39	0.49	0.00
L36	55.15 - 50.15	2.72	39	0.45	0.00
L37	50.15 - 42.41	2.27	39	0.41	0.00
L38	47.58 - 41.41	2.05	39	0.39	0.00
L39	41.41 - 36.41	1.56	39	0.36	0.00
L40	36.41 - 36.25	1.21	39	0.32	0.00
L41	36.25 - 36	1.20	39	0.31	0.00
L42	36 - 31.25	1.18	39	0.31	0.00
L43	31.25 - 31	0.89	39	0.27	0.00
L44	31 - 26	0.88	39	0.27	0.00
L45	26 - 21	0.62	39	0.23	0.00
L46	21 - 18.5	0.41	39	0.18	0.00
L47	18.5 - 18.25	0.31	39	0.16	0.00
L48	18.25 - 15	0.31	39	0.16	0.00
L49	15 - 14.75	0.21	39	0.13	0.00
L50	14.75 - 9.75	0.20	39	0.13	0.00
L51	9.75 - 4.75	0.09	39	0.09	0.00
L52	4.75 - 0	0.02	39	0.04	0.00

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
152.0000	APXVSPP18-C-A20 w/ Mount Pipe	39	19.80	1.28	0.00	11238
150.0000	1900MHz RRH (65MHz) w/ Mount Pipe	39	19.80	1.28	0.00	11238
137.0000	7770.00 w/ Mount Pipe	39	16.38	1.21	0.00	5922
136.0000	RRUS 11	39	16.13	1.20	0.00	5514
127.0000	(3) APL866513-42T0 w/ Mount Pipe	39	13.97	1.08	0.00	4642
117.0000	APXV18-206517S-C-A20	39	11.82	0.98	0.00	6354
75.0000	OG-860/1920/GPS-A	39	4.92	0.61	0.00	6653

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	150 - 145	91.59	2	5.92	0.01
L2	145 - 140	85.42	2	5.85	0.01
L3	140 - 135	79.38	2	5.71	0.01

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L4	135 - 130	73.51	2	5.50	0.01
L5	130 - 123.42	67.92	2	5.20	0.01
L6	126.59 - 122.25	64.29	2	4.96	0.01
L7	122.25 - 122	59.86	2	4.76	0.01
L8	122 - 120.25	59.62	2	4.75	0.01
L9	120.25 - 120	57.89	2	4.66	0.01
L10	120 - 115.5	57.65	2	4.66	0.01
L11	115.5 - 115.25	53.35	2	4.48	0.01
L12	115.25 - 115	53.11	2	4.47	0.01
L13	115 - 114.75	52.88	2	4.45	0.01
L14	114.75 - 109.75	52.65	2	4.44	0.01
L15	109.75 - 105.25	48.12	2	4.21	0.01
L16	105.25 - 105	44.26	2	3.98	0.01
L17	105 - 100.4	44.05	2	3.97	0.01
L18	100.4 - 100.15	40.31	2	3.79	0.01
L19	100.15 - 95.15	40.11	2	3.78	0.01
L20	95.15 - 90.15	36.27	2	3.57	0.00
L21	90.15 - 85.96	32.65	2	3.35	0.00
L22	90.04 - 85.04	32.57	2	3.35	0.00
L23	85.04 - 82	29.12	2	3.22	0.00
L24	82 - 81.75	27.12	2	3.08	0.00
L25	81.75 - 77.25	26.96	2	3.08	0.00
L26	77.25 - 77	24.14	2	2.91	0.00
L27	77 - 75	23.99	2	2.90	0.00
L28	75 - 74.75	22.79	2	2.82	0.00
L29	74.75 - 71.25	22.64	2	2.81	0.00
L30	71.25 - 71	20.64	2	2.67	0.00
L31	71 - 70.4	20.50	2	2.66	0.00
L32	70.4 - 70.15	20.16	14	2.64	0.00
L33	70.15 - 65.15	20.03	14	2.63	0.00
L34	65.15 - 60.15	17.37	14	2.45	0.00
L35	60.15 - 55.15	14.90	14	2.27	0.00
L36	55.15 - 50.15	12.61	14	2.09	0.00
L37	50.15 - 42.41	10.52	14	1.91	0.00
L38	47.58 - 41.41	9.52	14	1.82	0.00
L39	41.41 - 36.41	7.25	14	1.67	0.00
L40	36.41 - 36.25	5.61	14	1.46	0.00
L41	36.25 - 36	5.56	14	1.46	0.00
L42	36 - 31.25	5.48	14	1.45	0.00
L43	31.25 - 31	4.14	14	1.26	0.00
L44	31 - 26	4.07	14	1.25	0.00
L45	26 - 21	2.87	14	1.05	0.00
L46	21 - 18.5	1.88	14	0.85	0.00
L47	18.5 - 18.25	1.46	14	0.75	0.00
L48	18.25 - 15	1.42	14	0.74	0.00
L49	15 - 14.75	0.96	14	0.61	0.00
L50	14.75 - 9.75	0.93	14	0.60	0.00
L51	9.75 - 4.75	0.40	14	0.40	0.00
L52	4.75 - 0	0.09	14	0.19	0.00

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
152.0000	APXVSPP18-C-A20 w/ Mount Pipe	2	91.59	5.92	0.01	2644
150.0000	1900MHz RRH (65MHz) w/ Mount Pipe	2	91.59	5.92	0.01	2644
137.0000	7770.00 w/ Mount Pipe	2	75.83	5.59	0.01	1334
136.0000	RRUS 11	2	74.67	5.54	0.01	1240
127.0000	(3) APL866513-42T0 w/ Mount Pipe	2	64.72	4.99	0.01	1030
117.0000	APXV18-206517S-C-A20	2	54.76	4.55	0.01	1400
75.0000	OG-860/1920/GPS-A	2	22.79	2.82	0.00	1442

Compression Checks
Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K
L1	150 - 145 (1)	TP16.0798x15x0.1875	5.0000	0.0000	0.0	9.4579	-2.91
L2	145 - 140 (2)	TP17.1595x16.0798x0.1875	5.0000	0.0000	0.0	10.1005	-3.12
L3	140 - 135 (3)	TP18.2393x17.1595x0.1875	5.0000	0.0000	0.0	10.7431	-6.22
L4	135 - 130 (4)	TP19.319x18.2393x0.1875	5.0000	0.0000	0.0	11.3857	-6.55
L5	130 - 123.42 (5)	TP20.74x19.319x0.1875	6.5800	0.0000	0.0	11.8239	-9.33
L6	123.42 - 122.25 (6)	TP20.6033x19.6804x0.25	4.3400	0.0000	0.0	16.1503	-9.90
L7	122.25 - 122 (7)	TP20.6565x20.6033x0.4125	0.2500	0.0000	0.0	26.5049	-9.94
L8	122 - 120.25 (8)	TP21.0286x20.6565x0.4125	1.7500	0.0000	0.0	26.9921	-10.17
L9	120.25 - 120 (9)	TP21.0817x21.0286x0.575	0.2500	0.0000	0.0	37.4258	-10.22
L10	120 - 115.5 (10)	TP22.0386x21.0817x0.5625	4.5000	0.0000	0.0	38.3429	-14.49
L11	115.5 - 115.25 (11)	TP22.0918x22.0386x0.4	0.2500	0.0000	0.0	27.5399	-14.53
L12	115.25 - 115 (12)	TP22.1449x22.0918x0.4	0.2500	0.0000	0.0	27.6074	-14.57
L13	115 - 114.75 (13)	TP22.1981x22.1449x0.55	0.2500	0.0000	0.0	37.7911	-14.61
L14	114.75 - 109.75 (14)	TP23.2613x22.1981x0.5375	5.0000	0.0000	0.0	38.7674	-15.54
L15	109.75 - 105.25 (15)	TP24.2182x23.2613x0.525	4.5000	0.0000	0.0	39.4811	-16.40
L16	105.25 - 105 (16)	TP24.2713x24.2182x0.7375	0.2500	0.0000	0.0	55.0886	-16.47
L17	105 - 100.4 (17)	TP25.2495x24.2713x0.7125	4.6000	0.0000	0.0	55.4898	-17.57
L18	100.4 - 100.15 (18)	TP25.3026x25.2495x0.7375	0.2500	0.0000	0.0	57.5027	-17.64
L19	100.15 - 95.15 (19)	TP26.3658x25.3026x0.7125	5.0000	0.0000	0.0	58.0144	-18.91
L20	95.15 - 90.15 (20)	TP27.429x26.3658x0.7	5.0000	0.0000	0.0	59.3866	-20.20
L21	90.15 - 85.96 (21)	TP28.32x27.429x0.7	4.1900	0.0000	0.0	59.4385	-20.24
L22	85.96 - 85.04 (22)	TP28.0177x26.9524x0.75	5.0000	0.0000	0.0	64.9107	-22.53
L23	85.04 - 82 (23)	TP28.6654x28.0177x0.7375	3.0400	0.0000	0.0	65.3742	-23.41
L24	82 - 81.75 (24)	TP28.7186x28.6654x0.925	0.2500	0.0000	0.0	81.6007	-23.50
L25	81.75 - 77.25 (25)	TP29.6773x28.7186x0.9	4.5000	0.0000	0.0	82.2053	-25.04
L26	77.25 - 77 (26)	TP29.7306x29.6773x0.7875	0.2500	0.0000	0.0	72.3440	-25.12
L27	77 - 75 (27)	TP30.1567x29.7306x0.775	2.0000	0.0000	0.0	72.2746	-25.75
L28	75 - 74.75 (28)	TP30.21x30.1567x0.825	0.2500	0.0000	0.0	76.9460	-25.91
L29	74.75 - 71.25 (29)	TP30.9556x30.21x0.8125	3.5000	0.0000	0.0	77.7354	-27.07
L30	71.25 - 71 (30)	TP31.0089x30.9556x0.9375	0.2500	0.0000	0.0	89.4812	-27.18
L31	71 - 70.4 (31)	TP31.1367x31.0089x0.925	0.6000	0.0000	0.0	88.7001	-27.40
L32	70.4 - 70.15 (32)	TP31.19x31.1367x0.9375	0.2500	0.0000	0.0	90.0201	-27.49
L33	70.15 - 65.15 (33)	TP32.2552x31.19x0.9125	5.0000	0.0000	0.0	90.7772	-29.38
L34	65.15 - 60.15 (34)	TP33.3205x32.2552x0.8875	5.0000	0.0000	0.0	91.3613	-31.30
L35	60.15 - 55.15 (35)	TP34.3857x33.3205x0.8625	5.0000	0.0000	0.0	91.7724	-33.24
L36	55.15 - 50.15 (36)	TP35.451x34.3857x0.85	5.0000	0.0000	0.0	93.3500	-35.22
L37	50.15 - 42.41 (37)	TP37.1x35.451x0.8375	7.7400	0.0000	0.0	93.4659	-36.24
L38	42.41 - 41.41 (38)	TP36.6867x35.3735x0.725	6.1700	0.0000	0.0	82.7533	-40.30
L39	41.41 - 36.41 (39)	TP37.7508x36.6867x0.7125	5.0000	0.0000	0.0	83.7613	-42.16
L40	36.41 - 36.25 (40)	TP37.7849x37.7508x0.7125	0.1600	0.0000	0.0	83.8383	-42.23
L41	36.25 - 36 (41)	TP37.8381x37.7849x0.75	0.2500	0.0000	0.0	88.2882	-42.33
L42	36 - 31.25 (42)	TP38.8491x37.8381x0.75	4.7500	0.0000	0.0	90.6948	-44.21
L43	31.25 - 31 (43)	TP38.9023x38.8491x0.7375	0.2500	0.0000	0.0	89.3370	-44.32
L44	31 - 26 (44)	TP39.9664x38.9023x0.725	5.0000	0.0000	0.0	90.3004	-46.33
L45	26 - 21 (45)	TP41.0306x39.9664x0.725	5.0000	0.0000	0.0	92.7491	-48.38
L46	21 - 18.5 (46)	TP41.5626x41.0306x0.7125	2.5000	0.0000	0.0	92.3816	-49.42
L47	18.5 - 18.25 (47)	TP41.6158x41.5626x0.7	0.2500	0.0000	0.0	90.9068	-49.54
L48	18.25 - 15 (48)	TP42.3075x41.6158x0.6875	3.2500	0.0000	0.0	90.8201	-50.89
L49	15 - 14.75 (49)	TP42.3608x42.3075x0.65	0.2500	0.0000	0.0	86.0535	-51.01
L50	14.75 - 9.75 (50)	TP43.4249x42.3608x0.65	5.0000	0.0000	0.0	88.2489	-53.18
L51	9.75 - 4.75 (51)	TP44.4891x43.4249x0.6375	5.0000	0.0000	0.0	88.7303	-55.40
L52	4.75 - 0 (52)	TP45.5x44.4891x0.6375	4.7500	0.0000	0.0	90.7759	-57.53

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft
L1	150 - 145 (1)	TP16.0798x15x0.1875	24.06
L2	145 - 140 (2)	TP17.1595x16.0798x0.1875	45.71
L3	140 - 135 (3)	TP18.2393x17.1595x0.1875	79.66
L4	135 - 130 (4)	TP19.319x18.2393x0.1875	122.25

Section No.	Elevation ft	Size	M_{ux} kip-ft
L5	130 - 123.42 (5)	TP20.74x19.319x0.1875	161.33
L6	123.42 - 122.25 (6)	TP20.6033x19.6804x0.25	220.44
L7	122.25 - 122 (7)	TP20.6565x20.6033x0.4125	223.88
L8	122 - 120.25 (8)	TP21.0286x20.6565x0.4125	248.08
L9	120.25 - 120 (9)	TP21.0817x21.0286x0.575	251.56
L10	120 - 115.5 (10)	TP22.0386x21.0817x0.5625	321.27
L11	115.5 - 115.25 (11)	TP22.0918x22.0386x0.4	325.86
L12	115.25 - 115 (12)	TP22.1449x22.0918x0.4	330.46
L13	115 - 114.75 (13)	TP22.1981x22.1449x0.55	335.07
L14	114.75 - 109.75 (14)	TP23.2613x22.1981x0.5375	428.55
L15	109.75 - 105.25 (15)	TP24.2182x23.2613x0.525	514.91
L16	105.25 - 105 (16)	TP24.2713x24.2182x0.7375	519.77
L17	105 - 100.4 (17)	TP25.2495x24.2713x0.7125	610.53
L18	100.4 - 100.15 (18)	TP25.3026x25.2495x0.7375	615.54
L19	100.15 - 95.15 (19)	TP26.3658x25.3026x0.7125	717.20
L20	95.15 - 90.15 (20)	TP27.429x26.3658x0.7	821.87
L21	90.15 - 85.96 (21)	TP28.32x27.429x0.7	824.21
L22	85.96 - 85.04 (22)	TP28.0177x26.9524x0.75	932.22
L23	85.04 - 82 (23)	TP28.6654x28.0177x0.7375	999.48
L24	82 - 81.75 (24)	TP28.7186x28.6654x0.925	1005.06
L25	81.75 - 77.25 (25)	TP29.6773x28.7186x0.9	1106.90
L26	77.25 - 77 (26)	TP29.7306x29.6773x0.7875	1112.63
L27	77 - 75 (27)	TP30.1567x29.7306x0.775	1158.80
L28	75 - 74.75 (28)	TP30.21x30.1567x0.825	1164.63
L29	74.75 - 71.25 (29)	TP30.9556x30.21x0.8125	1247.01
L30	71.25 - 71 (30)	TP31.0089x30.9556x0.9375	1252.95
L31	71 - 70.4 (31)	TP31.1367x31.0089x0.925	1267.24
L32	70.4 - 70.15 (32)	TP31.19x31.1367x0.9375	1273.22
L33	70.15 - 65.15 (33)	TP32.2552x31.19x0.9125	1394.24
L34	65.15 - 60.15 (34)	TP33.3205x32.2552x0.8875	1518.36
L35	60.15 - 55.15 (35)	TP34.3857x33.3205x0.8625	1645.53
L36	55.15 - 50.15 (36)	TP35.451x34.3857x0.85	1775.68
L37	50.15 - 42.41 (37)	TP37.1x35.451x0.8375	1843.72
L38	42.41 - 41.41 (38)	TP36.6867x35.3735x0.725	2010.46
L39	41.41 - 36.41 (39)	TP37.7508x36.6867x0.7125	2148.74
L40	36.41 - 36.25 (40)	TP37.7849x37.7508x0.7125	2153.21
L41	36.25 - 36 (41)	TP37.8381x37.7849x0.75	2160.19
L42	36 - 31.25 (42)	TP38.8491x37.8381x0.75	2294.04
L43	31.25 - 31 (43)	TP38.9023x38.8491x0.7375	2301.15
L44	31 - 26 (44)	TP39.9664x38.9023x0.725	2444.56
L45	26 - 21 (45)	TP41.0306x39.9664x0.725	2590.39
L46	21 - 18.5 (46)	TP41.5626x41.0306x0.7125	2664.19
L47	18.5 - 18.25 (47)	TP41.6158x41.5626x0.7	2671.61
L48	18.25 - 15 (48)	TP42.3075x41.6158x0.6875	2768.54
L49	15 - 14.75 (49)	TP42.3608x42.3075x0.65	2776.03
L50	14.75 - 9.75 (50)	TP43.4249x42.3608x0.65	2927.20
L51	9.75 - 4.75 (51)	TP44.4891x43.4249x0.6375	3080.65
L52	4.75 - 0 (52)	TP45.5x44.4891x0.6375	3228.51

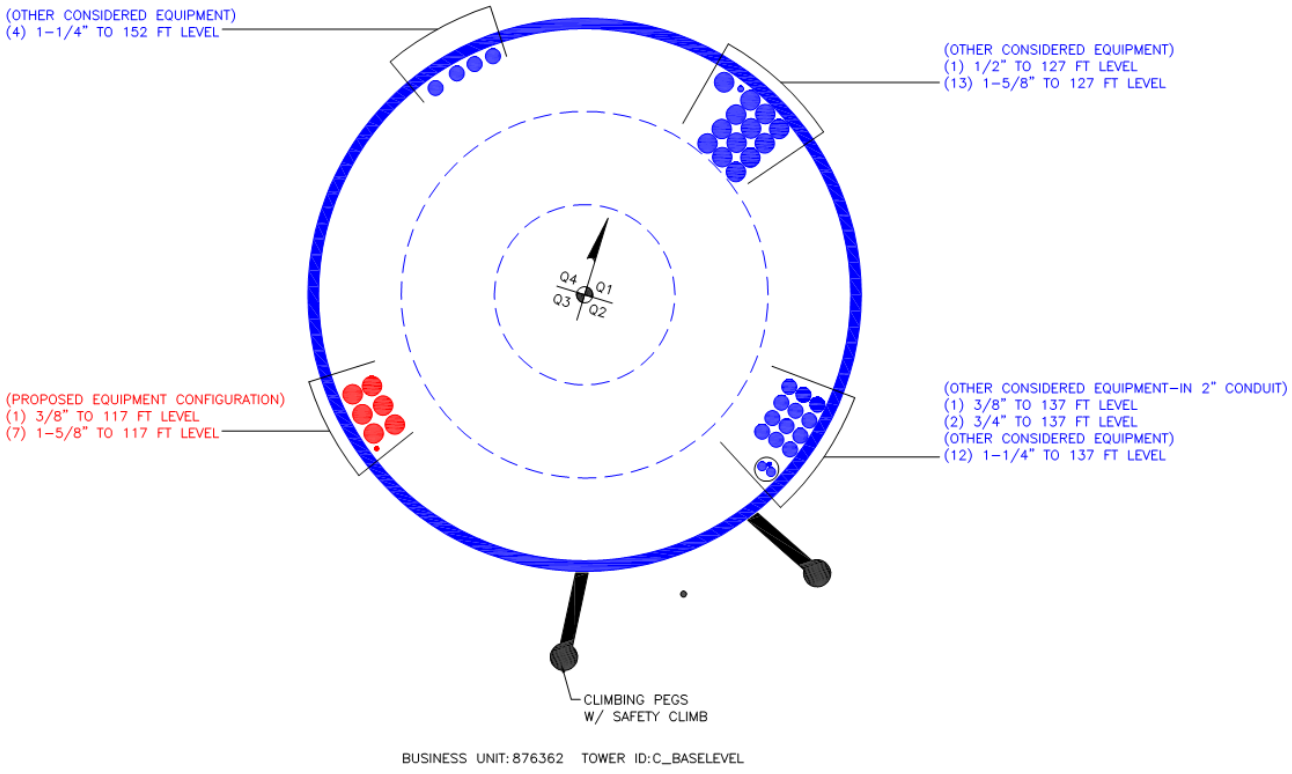
Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K
L1	150 - 145 (1)	TP16.0798x15x0.1875	4.22
L2	145 - 140 (2)	TP17.1595x16.0798x0.1875	4.45
L3	140 - 135 (3)	TP18.2393x17.1595x0.1875	8.40
L4	135 - 130 (4)	TP19.319x18.2393x0.1875	8.64
L5	130 - 123.42 (5)	TP20.74x19.319x0.1875	13.50
L6	123.42 - 122.25 (6)	TP20.6033x19.6804x0.25	13.74
L7	122.25 - 122 (7)	TP20.6565x20.6033x0.4125	13.75
L8	122 - 120.25 (8)	TP21.0286x20.6565x0.4125	13.92
L9	120.25 - 120 (9)	TP21.0817x21.0286x0.575	13.94
L10	120 - 115.5 (10)	TP22.0386x21.0817x0.5625	18.37
L11	115.5 - 115.25 (11)	TP22.0918x22.0386x0.4	18.39
L12	115.25 - 115 (12)	TP22.1449x22.0918x0.4	18.42
L13	115 - 114.75 (13)	TP22.1981x22.1449x0.55	18.44
L14	114.75 - 109.75 (14)	TP23.2613x22.1981x0.5375	18.96

Section No.	Elevation ft	Size	Actual V_u K
L15	109.75 - 105.25 (15)	TP24.2182x23.2613x0.525	19.44
L16	105.25 - 105 (16)	TP24.2713x24.2182x0.7375	19.46
L17	105 - 100.4 (17)	TP25.2495x24.2713x0.7125	20.01
L18	100.4 - 100.15 (18)	TP25.3026x25.2495x0.7375	20.04
L19	100.15 - 95.15 (19)	TP26.3658x25.3026x0.7125	20.64
L20	95.15 - 90.15 (20)	TP27.429x26.3658x0.7	21.24
L21	90.15 - 85.96 (21)	TP28.32x27.429x0.7	21.27
L22	85.96 - 85.04 (22)	TP28.0177x26.9524x0.75	21.95
L23	85.04 - 82 (23)	TP28.6654x28.0177x0.7375	22.32
L24	82 - 81.75 (24)	TP28.7186x28.6654x0.925	22.35
L25	81.75 - 77.25 (25)	TP29.6773x28.7186x0.9	22.93
L26	77.25 - 77 (26)	TP29.7306x29.6773x0.7875	22.96
L27	77 - 75 (27)	TP30.1567x29.7306x0.775	23.22
L28	75 - 74.75 (28)	TP30.21x30.1567x0.825	23.32
L29	74.75 - 71.25 (29)	TP30.9556x30.21x0.8125	23.77
L30	71.25 - 71 (30)	TP31.0089x30.9556x0.9375	23.80
L31	71 - 70.4 (31)	TP31.1367x31.0089x0.925	23.87
L32	70.4 - 70.15 (32)	TP31.19x31.1367x0.9375	23.90
L33	70.15 - 65.15 (33)	TP32.2552x31.19x0.9125	24.53
L34	65.15 - 60.15 (34)	TP33.3205x32.2552x0.8875	25.14
L35	60.15 - 55.15 (35)	TP34.3857x33.3205x0.8625	25.75
L36	55.15 - 50.15 (36)	TP35.451x34.3857x0.85	26.34
L37	50.15 - 42.41 (37)	TP37.1x35.451x0.8375	26.63
L38	42.41 - 41.41 (38)	TP36.6867x35.3735x0.725	27.42
L39	41.41 - 36.41 (39)	TP37.7508x36.6867x0.7125	27.92
L40	36.41 - 36.25 (40)	TP37.7849x37.7508x0.7125	27.94
L41	36.25 - 36 (41)	TP37.8381x37.7849x0.75	27.96
L42	36 - 31.25 (42)	TP38.8491x37.8381x0.75	28.43
L43	31.25 - 31 (43)	TP38.9023x38.8491x0.7375	28.45
L44	31 - 26 (44)	TP39.9664x38.9023x0.725	28.95
L45	26 - 21 (45)	TP41.0306x39.9664x0.725	29.42
L46	21 - 18.5 (46)	TP41.5626x41.0306x0.7125	29.67
L47	18.5 - 18.25 (47)	TP41.6158x41.5626x0.7	29.68
L48	18.25 - 15 (48)	TP42.3075x41.6158x0.6875	30.00
L49	15 - 14.75 (49)	TP42.3608x42.3075x0.65	30.02
L50	14.75 - 9.75 (50)	TP43.4249x42.3608x0.65	30.48
L51	9.75 - 4.75 (51)	TP44.4891x43.4249x0.6375	30.94
L52	4.75 - 0 (52)	TP45.5x44.4891x0.6375	31.36

APPENDIX B

BASE LEVEL DRAWING


(OTHER CONSIDERED EQUIPMENT)
(4) 1-1/4" TO 152 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 1/2" TO 127 FT LEVEL
(13) 1-5/8" TO 127 FT LEVEL
Q4
Q1
Q3
Q2
(PROPOSED EQUIPMENT CONFIGURATION)
(1) 3/8" TO 117 FT LEVEL
(7) 1-5/8" TO 117 FT LEVEL
(OTHER CONSIDERED EQUIPMENT-IN 2" CONDUIT)
(1) 3/8" TO 137 FT LEVEL
(2) 3/4" TO 137 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(12) 1-1/4" TO 137 FT LEVEL
CLIMBING PEGS
W/ SAFETY CLIMB
BUSINESS UNIT: 876362 TOWER ID: C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 876362

Work Order: _____

Pole Geometry

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	150	26.58	3.17	18	15	20.74	0.1875	Auto	A572-65
2	126.59	40.63	4.08	18	19.68	28.32	0.25	Auto	A572-65
3	90.04	47.63	5.17	18	26.95	37.1	0.3125	Auto	A572-65
4	47.58	47.58	0	18	35.37	45.5	0.375	Auto	A572-65

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	44.17	70.4	plate	1.25 x 1.25; (1) (1.1875	3		o						o						o				
2	70.4	100.4	plate	.875 x 1.25; (1) (1.187	3		o						o						o				
3	100.4	105.25	plate	.375 x 1.25; (1) (1.187	3		o						o						o				
4	47	75	channel	MP3-03 (1.1875")	3						o						o						o
5	0	18.5	channel	MP3-05 (1.1875")	1		o																
6	0	31.25	channel	MP3-05 (1.1875")	2										o						o		
7	18.5	46.25	channel	MP3-05 (1.1875")	1				o														
8	31.25	46.25	channel	MP3-05 (1.1875")	2										o						o		
9	46.25	75	channel	MP3-03 (1.1875")	3				o						o						o		
10	77.25	115	channel	MP3-03 (1.1875")	3				o						o						o		
11	0	36.25	plate	5.5 x 1.25; (1) (1.1875	1	o																	
12	0	36.25	plate	6.5 x 1.25; (1) (1.1875	1							o											
13	15	36.25	plate	6.5 x 1.25; (1) (1.1875	1													o					
14	0	15	plate	FP 1.25 x 9_1	1												o						
15	36.25	71.25	plate	FP 6 x 1; (1) (1.1875)_1	3	o						o						o					
16	71.25	120.25	plate	P 4 x 0.75; (1) (1.1875)	3	o						o						o					
17	75	82	plate	P 4.5 x 1; (1) (1.1875)_	3					o						o						o	
18	115.5	122.25	plate	P 4 x 0.75; (1) (1.1875)	3					o						o						o	
19																							

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Length (in)	Top Termination Length (in)	L_u (in)	Net Area (in^2)	Bolt Hole Size (in)	Reinforcement Material
1	4.25	1.25	5.3125	0.625	21.000	21.000	21.000	3.750	1.1875	A572-65
2	3.875	1.25	4.84375	0.625	n/a	18.000	21.000	3.281	1.1875	A572-65
3	3.375	1.25	4.21875	0.625	n/a	15.000	21.000	2.656	1.1875	A572-65
4	4.06	1.57	2.92	0.59	14.000	14.000	18.000	2.545	1.1875	A572-65
5	5.33	2.09	5.65	0.79	29.000	29.000	18.000	5.025	1.1875	A572-65
6	5.33	2.09	5.65	0.79	29.000	29.000	18.000	5.025	1.1875	A572-65
7	5.33	2.09	5.65	0.79	29.000	29.000	18.000	5.025	1.1875	A572-65
8	5.33	2.09	5.65	0.79	29.000	29.000	18.000	5.025	1.1875	A572-65
9	4.06	1.57	2.92	0.59	14.000	14.000	18.000	2.545	1.1875	A572-65
10	4.06	1.57	2.92	0.59	14.000	14.000	18.000	2.545	1.1875	A572-65
11	5.5	1.25	6.875	0.625	42.000	42.000	19.000	5.313	1.1875	A572-65
12	6.5	1.25	8.125	0.625	42.000	42.000	19.000	6.563	1.1875	A572-65
13	6.5	1.25	8.125	0.625	42.000	42.000	19.000	6.563	1.1875	A572-65
14	1.25	9	11.25	4.5	n/a	n/a	0.000	11.250	0.0000	A572-65
15	6	1	6	0.5	30.000	30.000	16.000	4.750	1.1875	A572-65
16	4	0.75	3	0.375	12.000	12.000	16.000	2.063	1.1875	A572-65
17	4.5	1	4.5	0.5	18.000	18.000	20.000	3.250	1.1875	A572-65
18	4	0.75	3	0.375	18.000	18.000	16.000	2.063	1.1875	A572-65

TNX Geometry Input

Increment (ft): 5

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	150 - 145	5		18	15.000	16.080	0.1875	A572-65	1.000
2	145 - 140	5		18	16.080	17.160	0.1875	A572-65	1.000
3	140 - 135	5		18	17.160	18.239	0.1875	A572-65	1.000
4	135 - 130	5		18	18.239	19.319	0.1875	A572-65	1.000
5	130 - 126.59	6.58	3.17	18	19.319	20.740	0.1875	A572-65	1.000
6	126.59 - 122.25	4.34		18	19.680	20.603	0.25	A572-65	1.000
7	122.25 - 122	0.25		18	20.603	20.656	0.4125	A572-65	0.950
8	122 - 120.25	1.75		18	20.656	21.029	0.4125	A572-65	0.944
9	120.25 - 120	0.25		18	21.029	21.082	0.575	A572-65	0.923
10	120 - 115.5	4.5		18	21.082	22.039	0.5625	A572-65	0.920
11	115.5 - 115.25	0.25		18	22.039	22.092	0.4	A572-65	0.956
12	115.25 - 115	0.25		18	22.092	22.145	0.4	A572-65	0.955
13	115 - 114.75	0.25		18	22.145	22.198	0.55	A572-65	0.931
14	114.75 - 109.75	5		18	22.198	23.261	0.5375	A572-65	0.929
15	109.75 - 105.25	4.5		18	23.261	24.218	0.525	A572-65	0.932
16	105.25 - 105	0.25		18	24.218	24.271	0.7375	A572-65	0.898
17	105 - 100.4	4.6		18	24.271	25.249	0.7125	A572-65	0.906
18	100.4 - 100.15	0.25		18	25.249	25.303	0.7375	A572-65	0.907
19	100.15 - 95.15	5		18	25.303	26.366	0.7125	A572-65	0.914
20	95.15 - 90.15	5		18	26.366	27.429	0.7	A572-65	0.907
21	90.15 - 90.04	4.19	4.08	18	27.429	28.320	0.7	A572-65	0.906
22	90.04 - 85.04	5		18	26.952	28.018	0.75	A572-65	0.921
23	85.04 - 82	3.04		18	28.018	28.665	0.7375	A572-65	0.924
24	82 - 81.75	0.25		18	28.665	28.719	0.925	A572-65	0.906
25	81.75 - 77.25	4.5		18	28.719	29.677	0.9	A572-65	0.911
26	77.25 - 77	0.25		18	29.677	29.731	0.7875	A572-65	0.915
27	77 - 75	2		18	29.731	30.157	0.775	A572-65	0.922
28	75 - 74.75	0.25		18	30.157	30.210	0.825	A572-65	0.919
29	74.75 - 71.25	3.5		18	30.210	30.956	0.8125	A572-65	0.919
30	71.25 - 71	0.25		18	30.956	31.009	0.9375	A572-65	0.900
31	71 - 70.4	0.6		18	31.009	31.137	0.925	A572-65	0.909
32	70.4 - 70.15	0.25		18	31.137	31.190	0.9375	A572-65	0.912
33	70.15 - 65.15	5		18	31.190	32.255	0.9125	A572-65	0.916
34	65.15 - 60.15	5		18	32.255	33.320	0.8875	A572-65	0.922
35	60.15 - 55.15	5		18	33.320	34.386	0.8625	A572-65	0.929
36	55.15 - 50.15	5		18	34.386	35.451	0.85	A572-65	0.925
37	50.15 - 47.58	7.74	5.17	18	35.451	37.100	0.8375	A572-65	0.929
38	47.58 - 41.41	6.17		18	35.374	36.687	0.725	A572-65	0.945
39	41.41 - 36.41	5		18	36.687	37.751	0.7125	A572-65	0.948
40	36.41 - 36.25	0.16		18	37.751	37.785	0.7125	A572-65	0.948
41	36.25 - 36	0.25		18	37.785	37.838	0.75	A572-65	0.959
42	36 - 31.25	4.75		18	37.838	38.849	0.75	A572-65	0.947
43	31.25 - 31	0.25		18	38.849	38.902	0.7375	A572-65	0.962
44	31 - 26	5		18	38.902	39.966	0.725	A572-65	0.966
45	26 - 21	5		18	39.966	41.031	0.725	A572-65	0.954
46	21 - 18.5	2.5		18	41.031	41.563	0.7125	A572-65	0.964
47	18.5 - 18.25	0.25		18	41.563	41.616	0.7	A572-65	0.981
48	18.25 - 15	3.25		18	41.616	42.308	0.6875	A572-65	0.991
49	15 - 14.75	0.25		18	42.308	42.361	0.65	A572-65	1.083
50	14.75 - 9.75	5		18	42.361	43.425	0.65	A572-65	1.070
51	9.75 - 4.75	5		18	43.425	44.489	0.6375	A572-65	1.079
52	4.75 - 0	4.75		18	44.489	45.500	0.6375	A572-65	1.068

TNX Section Forces

Increment (ft):	5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	150 - 145	2.91	24.06	4.22
2	145 - 140	3.12	45.71	4.45
3	140 - 135	6.22	79.66	8.40
4	135 - 130	6.55	122.25	8.64
5	130 - 126.59	9.33	161.33	13.50
6	126.59 - 122.25	9.90	220.44	13.74
7	122.25 - 122	9.94	223.88	13.75
8	122 - 120.25	10.17	248.08	13.92
9	120.25 - 120	10.22	251.56	13.94
10	120 - 115.5	14.49	321.27	18.37
11	115.5 - 115.25	14.53	325.86	18.39
12	115.25 - 115	14.57	330.46	18.42
13	115 - 114.75	14.61	335.07	18.44
14	114.75 - 109.75	15.54	428.55	18.96
15	109.75 - 105.25	16.40	514.91	19.44
16	105.25 - 105	16.47	519.77	19.46
17	105 - 100.4	17.57	610.53	20.01
18	100.4 - 100.15	17.64	615.54	20.04
19	100.15 - 95.15	18.91	717.20	20.64
20	95.15 - 90.15	20.20	821.87	21.24
21	90.15 - 90.04	20.24	824.21	21.27
22	90.04 - 85.04	22.53	932.22	21.95
23	85.04 - 82	23.41	999.47	22.32
24	82 - 81.75	23.50	1005.06	22.35
25	81.75 - 77.25	25.04	1106.90	22.93
26	77.25 - 77	25.12	1112.64	22.96
27	77 - 75	25.75	1158.80	23.22
28	75 - 74.75	25.91	1164.63	23.32
29	74.75 - 71.25	27.07	1247.01	23.77
30	71.25 - 71	27.18	1252.95	23.80
31	71 - 70.4	27.40	1267.25	23.87
32	70.4 - 70.15	27.49	1273.22	23.90
33	70.15 - 65.15	29.38	1394.24	24.53
34	65.15 - 60.15	31.30	1518.36	25.14
35	60.15 - 55.15	33.24	1645.52	25.75
36	55.15 - 50.15	35.22	1775.68	26.34
37	50.15 - 47.58	36.24	1843.72	26.63
38	47.58 - 41.41	40.30	2010.46	27.42
39	41.41 - 36.41	42.16	2148.74	27.92
40	36.41 - 36.25	42.23	2153.21	27.94
41	36.25 - 36	42.33	2160.19	27.96
42	36 - 31.25	44.21	2294.04	28.43
43	31.25 - 31	44.32	2301.15	28.45
44	31 - 26	46.33	2444.56	28.95
45	26 - 21	48.38	2590.39	29.42
46	21 - 18.5	49.42	2664.19	29.67
47	18.5 - 18.25	49.54	2671.61	29.68
48	18.25 - 15	50.89	2768.54	30.00
49	15 - 14.75	51.01	2776.04	30.02
50	14.75 - 9.75	53.18	2927.20	30.48
51	9.75 - 4.75	55.40	3080.65	30.94
52	4.75 - 0	57.53	3228.51	31.36

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
150 - 145	Pole	TP16.08x15x0.1875	Pole	10.4%	Pass
145 - 140	Pole	TP17.16x16.08x0.1875	Pole	17.1%	Pass
140 - 135	Pole	TP18.239x17.16x0.1875	Pole	26.5%	Pass
135 - 130	Pole	TP19.319x18.239x0.1875	Pole	36.5%	Pass
130 - 126.59	Pole	TP20.74x19.319x0.1875	Pole	45.2%	Pass
126.59 - 122.25	Pole	TP20.603x19.68x0.25	Pole	42.8%	Pass
122.25 - 122	Pole + Reinf.	TP20.656x20.603x0.4125	Reinf. 18 Tension Rupture	49.0%	Pass
122 - 120.25	Pole + Reinf.	TP21.029x20.656x0.4125	Reinf. 18 Tension Rupture	52.6%	Pass
120.25 - 120	Pole + Reinf.	TP21.082x21.029x0.575	Reinf. 18 Tension Rupture	38.7%	Pass
120 - 115.5	Pole + Reinf.	TP22.039x21.082x0.5625	Reinf. 18 Tension Rupture	46.4%	Pass
115.5 - 115.25	Pole + Reinf.	TP22.092x22.039x0.4	Reinf. 16 Tension Rupture	63.8%	Pass
115.25 - 115	Pole + Reinf.	TP22.145x22.092x0.4	Reinf. 16 Tension Rupture	64.5%	Pass
115 - 114.75	Pole + Reinf.	TP22.198x22.145x0.55	Reinf. 16 Tension Rupture	47.8%	Pass
114.75 - 109.75	Pole + Reinf.	TP23.261x22.198x0.5375	Reinf. 16 Tension Rupture	57.0%	Pass
109.75 - 105.25	Pole + Reinf.	TP24.218x23.261x0.525	Reinf. 16 Tension Rupture	64.4%	Pass
105.25 - 105	Pole + Reinf.	TP24.271x24.218x0.7375	Reinf. 3 Tension Rupture	52.7%	Pass
105 - 100.4	Pole + Reinf.	TP25.249x24.271x0.7125	Reinf. 3 Tension Rupture	58.6%	Pass
100.4 - 100.15	Pole + Reinf.	TP25.303x25.249x0.7375	Reinf. 2 Tension Rupture	52.7%	Pass
100.15 - 95.15	Pole + Reinf.	TP26.366x25.303x0.7125	Reinf. 2 Tension Rupture	58.1%	Pass
95.15 - 90.15	Pole + Reinf.	TP27.429x26.366x0.7	Reinf. 2 Tension Rupture	63.0%	Pass
90.15 - 90.04	Pole + Reinf.	TP28.32x27.429x0.7	Reinf. 2 Tension Rupture	63.1%	Pass
90.04 - 85.04	Pole + Reinf.	TP28.018x26.952x0.75	Reinf. 2 Tension Rupture	63.5%	Pass
85.04 - 82	Pole + Reinf.	TP28.665x28.018x0.7375	Reinf. 2 Tension Rupture	65.8%	Pass
82 - 81.75	Pole + Reinf.	TP28.719x28.665x0.925	Reinf. 2 Tension Rupture	53.6%	Pass
81.75 - 77.25	Pole + Reinf.	TP29.677x28.719x0.9	Reinf. 2 Tension Rupture	56.5%	Pass
77.25 - 77	Pole + Reinf.	TP29.731x29.677x0.7875	Reinf. 2 Tension Rupture	64.4%	Pass
77 - 75	Pole + Reinf.	TP30.157x29.731x0.775	Reinf. 2 Tension Rupture	65.7%	Pass
75 - 74.75	Pole + Reinf.	TP30.21x30.157x0.825	Reinf. 2 Tension Rupture	61.9%	Pass
74.75 - 71.25	Pole + Reinf.	TP30.956x30.21x0.8125	Reinf. 2 Tension Rupture	64.0%	Pass
71.25 - 71	Pole + Reinf.	TP31.009x30.956x0.9375	Reinf. 2 Tension Rupture	56.6%	Pass
71 - 70.4	Pole + Reinf.	TP31.137x31.009x0.925	Reinf. 2 Tension Rupture	57.0%	Pass
70.4 - 70.15	Pole + Reinf.	TP31.19x31.137x0.9375	Reinf. 1 Tension Rupture	53.9%	Pass
70.15 - 65.15	Pole + Reinf.	TP32.255x31.19x0.9125	Reinf. 1 Tension Rupture	56.4%	Pass
65.15 - 60.15	Pole + Reinf.	TP33.32x32.255x0.8875	Reinf. 1 Tension Rupture	58.7%	Pass
60.15 - 55.15	Pole + Reinf.	TP34.386x33.32x0.8625	Reinf. 1 Tension Rupture	61.0%	Pass
55.15 - 50.15	Pole + Reinf.	TP35.451x34.386x0.85	Reinf. 1 Tension Rupture	63.1%	Pass
50.15 - 47.58	Pole + Reinf.	TP37.1x35.451x0.8375	Reinf. 1 Tension Rupture	64.1%	Pass
47.58 - 41.41	Pole + Reinf.	TP36.687x35.374x0.725	Reinf. 15 Tension Rupture	68.1%	Pass
41.41 - 36.41	Pole + Reinf.	TP37.751x36.687x0.7125	Reinf. 15 Tension Rupture	69.7%	Pass
36.41 - 36.25	Pole + Reinf.	TP37.785x37.751x0.7125	Reinf. 15 Tension Rupture	69.7%	Pass
36.25 - 36	Pole + Reinf.	TP37.838x37.785x0.75	Reinf. 11 Tension Rupture	69.2%	Pass
36 - 31.25	Pole + Reinf.	TP38.849x37.838x0.75	Reinf. 11 Tension Rupture	70.6%	Pass
31.25 - 31	Pole + Reinf.	TP38.902x38.849x0.7375	Reinf. 11 Tension Rupture	70.7%	Pass
31 - 26	Pole + Reinf.	TP39.966x38.902x0.725	Reinf. 11 Tension Rupture	72.1%	Pass
26 - 21	Pole + Reinf.	TP41.031x39.966x0.725	Reinf. 11 Tension Rupture	73.3%	Pass
21 - 18.5	Pole + Reinf.	TP41.563x41.031x0.7125	Reinf. 11 Tension Rupture	73.9%	Pass
18.5 - 18.25	Pole + Reinf.	TP41.616x41.563x0.7	Reinf. 12 Tension Rupture	73.7%	Pass
18.25 - 15	Pole + Reinf.	TP42.308x41.616x0.6875	Reinf. 12 Tension Rupture	74.4%	Pass
15 - 14.75	Pole + Reinf.	TP42.361x42.308x0.65	Reinf. 12 Tension Rupture	76.6%	Pass
14.75 - 9.75	Pole + Reinf.	TP43.425x42.361x0.65	Reinf. 12 Tension Rupture	77.6%	Pass
9.75 - 4.75	Pole + Reinf.	TP44.489x43.425x0.6375	Reinf. 12 Tension Rupture	78.6%	Pass
4.75 - 0	Pole + Reinf.	TP45.5x44.489x0.6375	Reinf. 12 Tension Rupture	79.4%	Pass
				Summary	
			Pole	55.8%	Pass
			Reinforcement	79.4%	Pass
			Overall	79.4%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity*																	
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18
150 - 145	302	n/a	302	9.46	n/a	9.46	10.4%																		
145 - 140	367	n/a	367	10.10	n/a	10.10	17.1%																		
140 - 135	442	n/a	442	10.74	n/a	10.74	26.5%																		
135 - 130	526	n/a	526	11.39	n/a	11.39	36.5%																		
130 - 126.59	589	n/a	589	11.82	n/a	11.82	45.2%																		
126.59 - 122.25	845	n/a	845	16.15	n/a	16.15	42.8%																		
122.25 - 122	852	522	1373	16.19	9.00	25.19	26.5%																		49.0%
122 - 120.25	899	540	1439	16.49	9.00	25.49	28.5%																		52.6%
120.25 - 120	906	1085	1991	16.53	18.00	34.53	21.0%																38.7%		38.7%
120 - 115.5	1037	1181	2218	17.29	18.00	35.29	25.3%																46.4%		46.4%
115.5 - 115.25	1044	593	1637	17.33	9.00	26.33	34.7%																63.8%		
115.25 - 115	1052	596	1648	17.37	9.00	26.37	35.0%																64.5%		
115 - 114.75	1060	1200	2259	17.42	17.76	35.18	26.0%										40.5%						47.8%		
114.75 - 109.75	1221	1312	2533	18.26	17.76	36.02	31.0%										48.2%						57.0%		
109.75 - 105.25	1380	1417	2797	19.02	17.76	36.78	35.1%										54.5%						64.4%		
105.25 - 105	1389	2460	3849	19.06	30.42	49.48	25.9%			52.7%							40.1%						47.4%		
105 - 100.4	1566	2652	4218	19.84	30.42	50.25	29.1%			58.6%							44.6%						52.7%		
100.4 - 100.15	1576	2831	4407	19.88	32.29	52.17	28.1%		52.7%								43.1%						51.0%		
100.15 - 95.15	1785	3062	4847	20.72	32.29	53.01	31.4%		58.1%								47.5%						56.2%		
95.15 - 90.15	2012	3303	5315	21.57	32.29	53.86	34.4%		63.0%								51.5%						61.0%		
90.15 - 90.04	2017	3308	5325	21.58	32.29	53.88	34.5%		63.1%								51.6%						61.1%		
90.04 - 85.04	2664	3439	6103	27.48	32.29	59.77	33.5%		63.5%								51.9%						61.5%		
85.04 - 82	2855	3593	6449	28.12	32.29	60.41	34.8%		65.8%								53.8%						63.8%		
82 - 81.75	2871	5108	7980	28.17	45.79	73.97	28.4%		53.6%								43.8%						52.0%	49.9%	
81.75 - 77.25	3172	5441	8613	29.13	45.79	74.92	29.9%		56.5%								46.1%						54.7%	52.6%	
77.25 - 77	3189	4410	7600	29.18	37.03	66.21	34.1%		64.4%														62.5%	60.0%	
77 - 75	3330	4533	7862	29.60	37.03	66.63	34.9%		65.7%														63.7%	61.2%	
75 - 74.75	3348	5056	8403	29.65	41.05	70.70	32.9%		61.9%		50.6%					50.6%							60.0%		
74.75 - 71.25	3604	5298	8903	30.39	41.05	71.44	34.2%		64.0%		52.4%					52.4%							62.1%		
71.25 - 71	3623	6508	10131	30.45	50.05	80.50	30.3%		56.6%		46.3%					46.3%						48.2%			
71 - 70.4	3669	6559	10228	30.57	50.05	80.62	30.5%		57.0%		46.6%					46.6%						48.5%			
70.4 - 70.15	3688	6769	10457	30.63	51.46	82.08	30.1%	53.9%			45.9%					45.9%						47.7%			
70.15 - 65.15	4083	7219	11302	31.68	51.46	83.14	31.8%	56.4%			48.0%					48.0%						49.9%			
65.15 - 60.15	4505	7684	12189	32.74	51.46	84.20	33.4%	58.7%			50.0%					50.0%						52.1%			
60.15 - 55.15	4955	8164	13119	33.80	51.46	85.25	35.0%	61.0%			51.9%					51.9%						54.0%			
55.15 - 50.15	5435	8658	14093	34.85	51.46	86.31	36.6%	63.1%			53.7%					53.7%						55.9%			
50.15 - 47.58	5693	8917	14610	35.39	51.46	86.85	37.4%	64.1%			54.6%					54.6%						56.9%			
47.58 - 41.41	7197	6337	13534	43.22	34.95	78.17	42.9%							63.5%	63.5%							68.1%			
41.41 - 36.41	7849	6695	14543	44.48	34.95	79.43	44.2%							64.9%	64.9%							69.7%			
36.41 - 36.25	7870	6706	14577	44.53	34.95	79.48	44.3%							65.0%	65.0%							69.7%			
36.25 - 36	7908	7514	15422	44.59	40.08	84.66	42.7%							60.7%	60.8%			69.2%	63.4%	63.4%					
36 - 31.25	8565	7904	16469	45.79	40.08	85.87	43.9%							62.0%	62.0%			70.6%	64.7%	64.7%					
31.25 - 31	8601	7924	16525	45.86	40.08	85.93	43.9%						62.1%	62.0%				70.7%	64.8%	64.8%					
31 - 26	9333	8346	17679	47.12	40.08	87.20	45.1%						63.3%	63.2%				72.1%	66.1%	66.1%					
26 - 21	10106	8778	18884	48.39	40.08	88.46	46.3%						64.4%	64.4%				73.3%	67.3%	67.3%					
21 - 18.5	10508	8998	19506	49.02	40.08	89.10	46.9%						65.0%	64.9%				73.9%	67.9%	67.9%					
18.5 - 18.25	10574	8566	19140	49.09	40.08	89.16	49.6%					62.9%	64.7%					66.6%	73.7%	71.0%					
18.25 - 15	11114	8843	19957	49.91	40.08	89.98	50.3%					63.6%	65.4%					67.3%	74.4%	71.7%					
15 - 14.75	11143	7951	19094	49.97	43.20	93.17	52.6%					56.8%	69.0%					62.9%	76.6%		56.0%				
14.75 - 9.75	12012	8335	20347	51.24	43.20	94.44	53.7%					57.8%	70.0%					64.0%	77.6%		56.9%				
9.75 - 4.75	12924	8728	21652	52.50	43.20	95.70	54.8%					58.8%	70.9%					65.0%	78.6%		57.8%				
4.75 - 0	13832	9111	22943	53.71	43.20	96.91	55.8%					59.6%	71.7%					65.9%	79.4%		58.5%				

Note: Section capacity checked in 5 degree increments.
Rating per TIA-222-H Section 15.5.

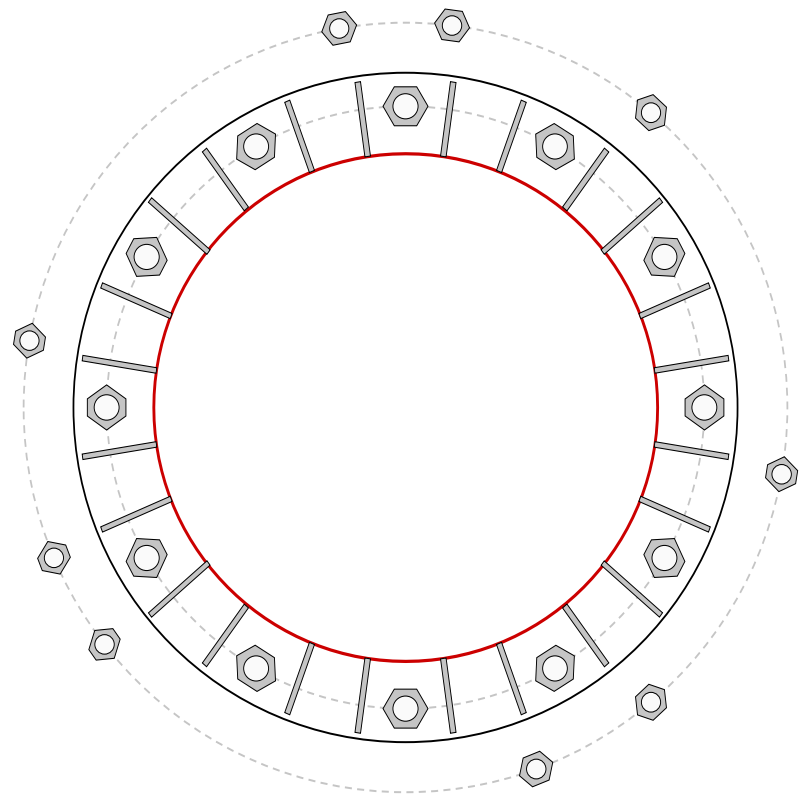
Monopole Base Plate Connection

Site Info	
BU #	876362
Site Name	KFORD / FRITZ PROPER
Order #	

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	1.75

Applied Loads	
Moment (kip-ft)	3228.51
Axial Force (kips)	57.53
Shear Force (kips)	31.36

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

GROUP 1: (12) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 54" BC

GROUP 2: (9) 1-3/4" ø bolts (A193 Gr. B7 N; Fy=105 ksi, Fu=125 ksi) on 69" BC

pos. (deg): 50, 170, 290, 100, 218, 350, 83, 203, 310

Base Plate Data

60" OD x 1.75" Plate (A572-60; Fy=60 ksi, Fu=75 ksi)

Stiffener Data

(24) 13.75"H x 6.75"W x 0.5"T, Notch: 0.75"
plate: Fy= 50 ksi ; weld: Fy= 80 ksi
horiz. weld: 0.25" groove, 45° dbl bevel, 0.375" fillet
vert. weld: 0.375" fillet

Pole Data

45.5" x 0.375" 18-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

GROUP 1:		
Pu_c = 147.07	ϕPn_c = 243.75	**Stress Rating**
Vu = 2.61	ϕVn = 73.13	**57.6%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_c = 105.94	ϕPn_c = 199.5	**Stress Rating**
Vu = 0	ϕVn = 59.85	**50.6%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	32.51	(Roark's Flexural)
Allowable Stress (ksi):	54	
Stress Rating:	**57.3%**	**Pass**

Stiffener Summary

Horizontal Weld:	**36.9%**	**Pass**
Vertical Weld:	**23.2%**	**Pass**
Plate Flexure+Shear:	**17.8%**	**Pass**
Plate Tension+Shear:	**38.3%**	**Pass**
Plate Compression:	**51.2%**	**Pass**

Pole Summary

Punching Shear:	**9.3%**	**Pass**

PAUL J. FORD & COMPANY

Date:	6/18/2019	**Page:**	1 of 2
Job Number:	37519-2642.001.7805		
Engineer:	KAT		
Site Number:	876362		
Site Name:	Oxford / Fritz Property		
Version:	2.9	**Effective:**	4/18/2019

Flexible Foundation Analysis

Applied Reactions for RISA-3D

TNX Moment =	3228.51	k-ft
TNX Axial =	57.53	kips
TNX Shear =	31.36	kips
Total Unfactored Axial =	47.9	kips
TIA Standard =	H	

Passive Pressure on Pad/Mat

Horiz Subgr Modulus =	1105	kcf
Plate Width =	0.5	ft
Depth to Ignore =	3.3333333	ft
Pad Thickness =	4.5	ft
k (side) =	76.74	k/in
k (corner) =	38.37	k/in

Pad/Mat & Pier Input

Pier Number Sides =	Round	
Pier Width/Diameter =	6	ft
Pier Height =	1.5	ft
Ht Above Grade =	1	ft (Pier or Pad)
Pad Thickness =	4.5	ft
Pad Width =	22.75	ft
Pad Length =	22.75	ft
Concrete Density =	150	pcf
Concrete f'c =	4	ksi
β1 =	0.85	
Rebar Fy =	60	ksi

	Width	Length	
Location =			
Top Bar Quantity =	31		
Top Bar Size #	8		
Top Clear Cover =	3		in
Bottom Bar Quantity =	31		
Bottom Bar Size #	8		
Bottom Clear Cover =	3		in
As, min =	26.54	26.54	in^2
Use Comp Side Rebar?	No	No	
Mu (Comp Top) =	1575.4		k-ft
Mu (Comp Bot) =	660.5		k-ft

Pad/Mat Analysis

Location	Comp Side	c, in	d, in	εt, in/in	Mu, k-ft	Φ	ΦMn, k-ft	Ratio
Width	Top	1.86	49.50	-0.077	1575.4	0.90	5367.9	28.0%
Width	Bot	1.86	49.50	-0.077	660.5	0.90	5367.9	11.7%
Length	Top	0.00	0.00	0.000	0.0	0.90	0.0	#DIV/0!
Length	Bot	0.00	0.00	0.000	0.0	0.90	0.0	#DIV/0!

Soil Weight

Soil Unit Weight=	100	pcf
Apply Soil Weight =	Surface Load	
Volume =	244.6	ft^3
Weight =	24.5	kips
Weight per Sq Ft =	0.05	ksf

Soil Modulus by Layer

Layer	Start, ft	End, ft	Vert, pci	Horiz, pci
1	0.0	4.5	639.6	639.6
2	4.5	5	717.6	717.6
3	5.0	7.5	726.6	726.6
4				
5				
6				
7				
8				
9				

Rock Anchor Capacity

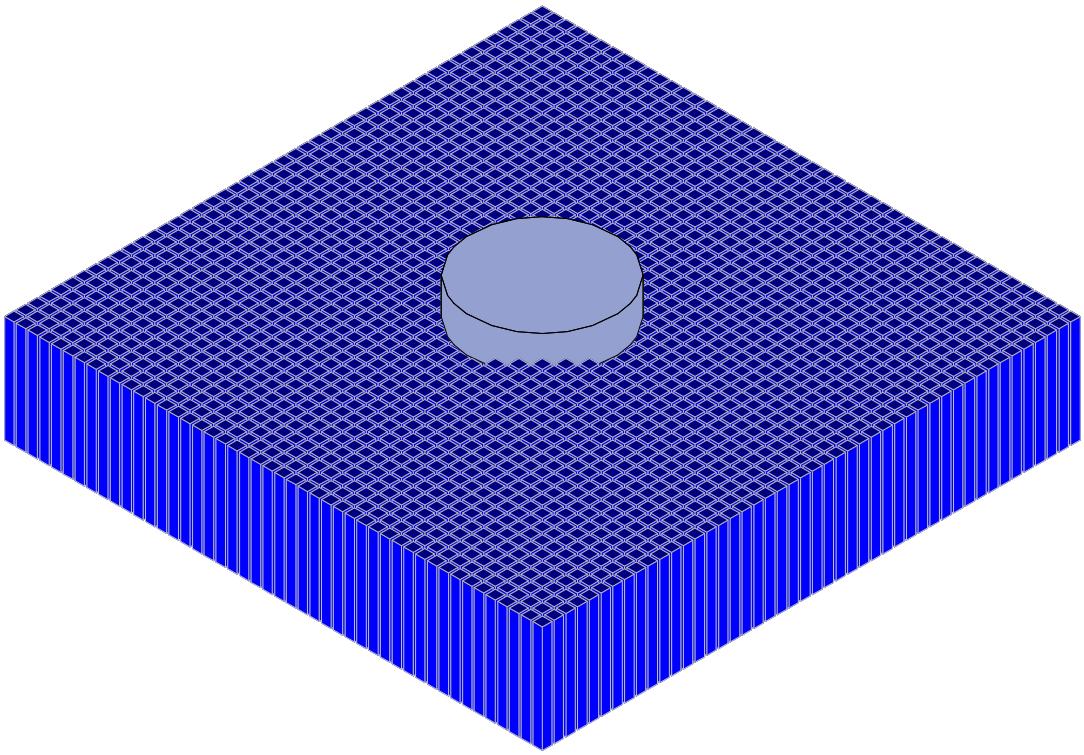
Anchor Type =	Rock Anchor	
Pile Type =	1.25" WILLIAMS R71	
Ag =	1.33	in^2
Ag Override =		in^2
E =	29000	ksi
Lu =	15	ft
k = An (E) / Lu =	213.5	k/in
Pu =	187.5	ksi
Capacity = 0.8 (Pu) =	150.0	kips
Capacity Override =		kips
Max Tension from RISA =	13.2	kips
Ratio =	8.4%	**OK**

Bearing Check

Max Bearing Load =	1.104	kip
Plate Width =	0.494565	ft
Plate Length =	0.5	ft
Design Brg Capacity =	60.55	ksf = Φqn
Bearing Pressure =	4.5	ksf
Ratio =	9.5%	**OK**

Subgrade Modulus Conversion

Subgrade Modulus =	726.6	pci
ks =	1255.6	kcf



Paul J. Ford and Company	Oxford / Fritz Property / BU 876362	SK - 1
KAT		June 18, 2019 at 5:16 PM
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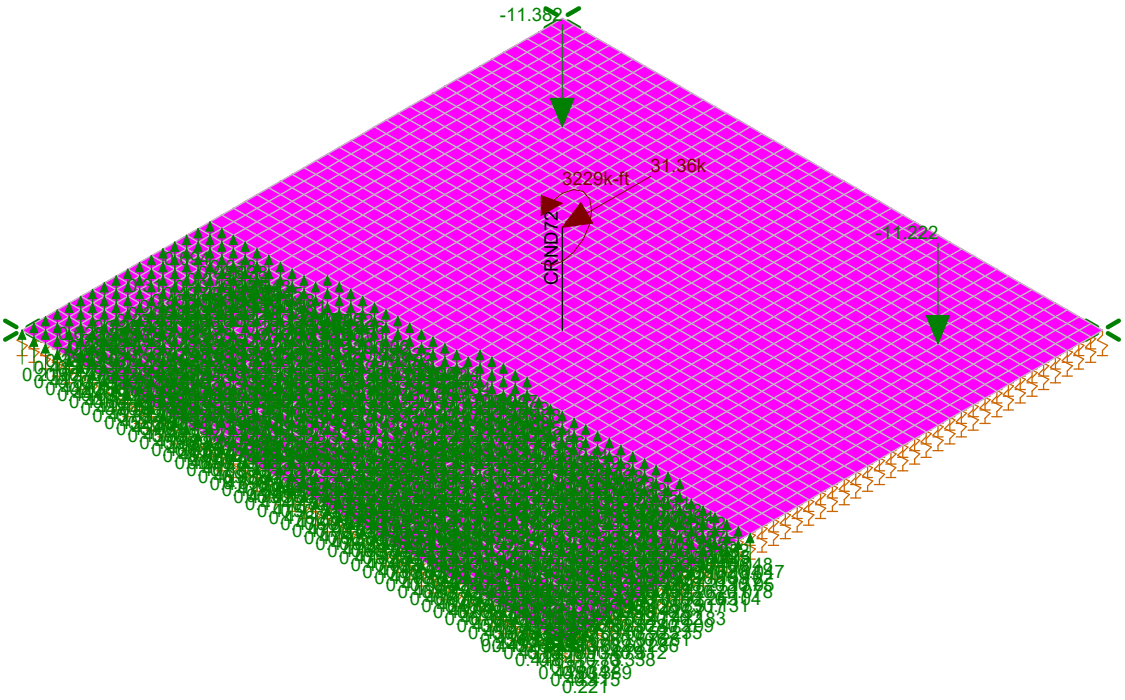

Loads: BLC 2, Wind 0
Y-direction Reaction Units are k and k-ft

Paul J. Ford and Company	Oxford / Fritz Property / BU 876362	SK - 2
KAT		June 18, 2019 at 5:18 PM
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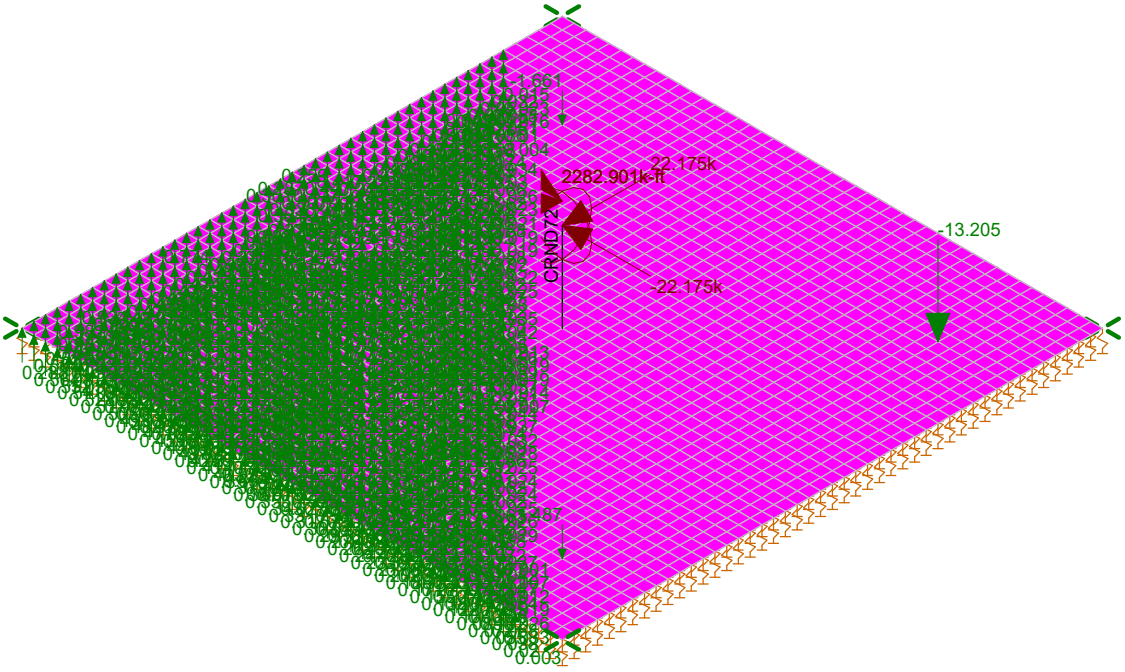


Loads: BLC 3, Wind 45
Y-direction Reaction Units are k and k-ft

Paul J. Ford and Company	Oxford / Fritz Property / BU 876362	SK - 3
KAT		June 18, 2019 at 5:18 PM
37519-2642.001.7805		37519-2642.001.7805_Flexible Fo...

(Global) Model Settings

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

Hot Rolled Steel Code	None
RISAConnection Code	None
Cold Formed Steel Code	None
Wood Code	None
Wood Temperature	< 100F
Concrete Code	ACI 318-14
Masonry Code	None
Aluminum Code	None - Building
Stainless Steel Code	AISC 14th(360-10): ASD
Adjust Stiffness?	Yes(Iterative)

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

(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	4
Cd X	4
Rho Z	1
Rho X	1

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	Dead	None		-1		1				
2	Wind 0	None				2				
3	Wind 45	None				4				
4	Wind 90	None				2				
5	Wind 135	None				4				

Load Combinations

	Description	Solve	PDelta	SRSS	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2 Dead + Wind 0	Yes	Y		1	1.2	2	1																		
2	0.9 Dead + Wind 0	Yes	Y		1	.9	2	1																		
3	1.2 Dead + Wind 45	Yes	Y		1	1.2	3	1																		
4	0.9 Dead + Wind 45	Yes	Y		1	.9	3	1																		
5	1.2 Dead + Wind 90		Y		1	1.2	4	1																		
6	0.9 Dead + Wind 90		Y		1	.9	4	1																		
7	1.2 Dead + Wind 135		Y		1	1.2	5	1																		
8	0.9 Dead + Wind 135		Y		1	.9	5	1																		
9	1.2 Dead + Wind 180		Y		1	1.2	2	-1																		
10	0.9 Dead + Wind 180		Y		1	.9	2	-1																		
11	1.2 Dead + Wind 225		Y		1	1.2	3	-1																		
12	0.9 Dead + Wind 225		Y		1	.9	3	-1																		
13	1.2 Dead + Wind 270		Y		1	1.2	4	-1																		
14	0.9 Dead + Wind 270		Y		1	.9	4	-1																		
15	1.2 Dead + Wind 315		Y		1	1.2	5	-1																		
16	0.9 Dead + Wind 315		Y		1	.9	5	-1																		

Joint Loads and Enforced Displacements (BLC 1 : Dead)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	CENTER	L	Y	-47.94

Joint Loads and Enforced Displacements (BLC 2 : Wind 0)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	CENTER	L	Mx	3229
2	CENTER	L	Z	31.36

Joint Loads and Enforced Displacements (BLC 3 : Wind 45)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	CENTER	L	Mz	2282.901
2	CENTER	L	Mx	2282.901
3	CENTER	L	X	-22.175
4	CENTER	L	Z	22.175

Joint Loads and Enforced Displacements (BLC 4 : Wind 90)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	CENTER	L	Mz	3228.51
2	CENTER	L	X	-31

Joint Loads and Enforced Displacements (BLC 5 : Wind 135)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	CENTER	L	Mz	2282.901
2	CENTER	L	Mx	-2282.901
3	CENTER	L	X	-22.175
4	CENTER	L	Z	-22.175

Concrete Properties

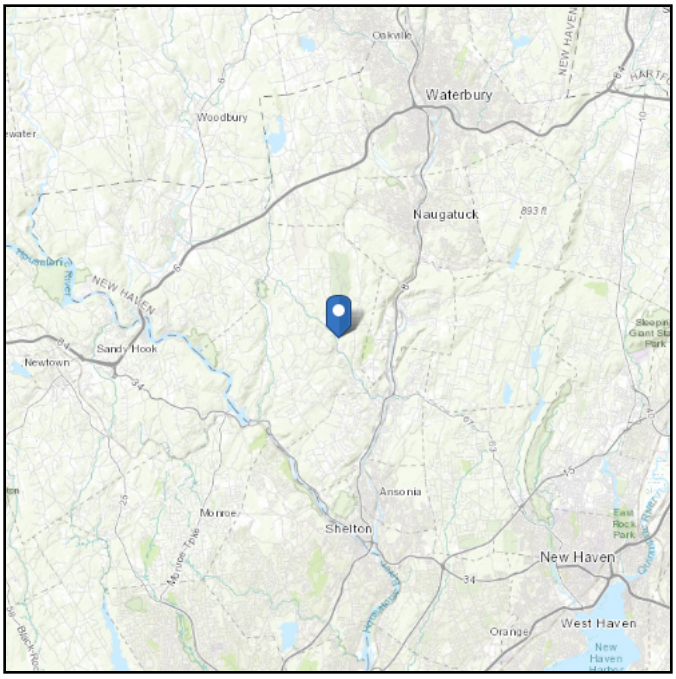
	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[k/ft^3]	f'c[ksi]	Lambda	Flex Steel[ksi]	Shear Steel[ksi]
1	Conc3000NW	3156	1372	.15	.6	.145	3	1	60	60
2	Conc3500NW	3409	1482	.15	.6	.145	3.5	1	60	60
3	Conc4000NW	3644	1584	.15	.6	.145	4	1	60	60
4	Conc3000LW	2085	907	.15	.6	.11	3	.75	60	60
5	Conc3500LW	2252	979	.15	.6	.11	3.5	.75	60	60
6	Conc4000LW	2408	1047	.15	.6	.11	4	.75	60	60

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 372.75 ft (NAVD 88)
Latitude: 41.427992
Longitude: -73.108542



Wind

Results:

Wind Speed:	121 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	92 Vmph
100-year MRI	99 Vmph
Data Source:	ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014
Date Accessed:	Mon Jun 17 2019

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

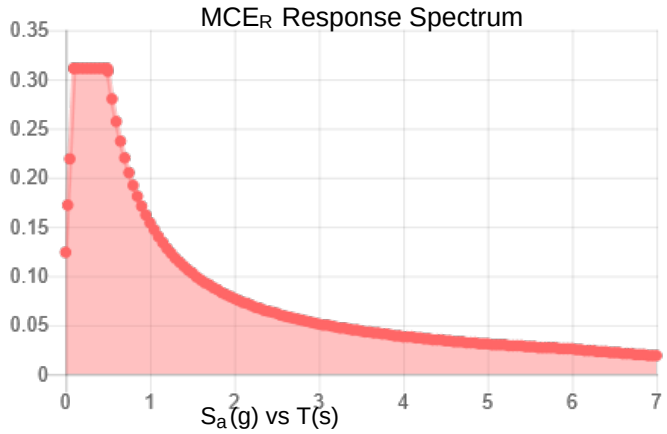
Seismic

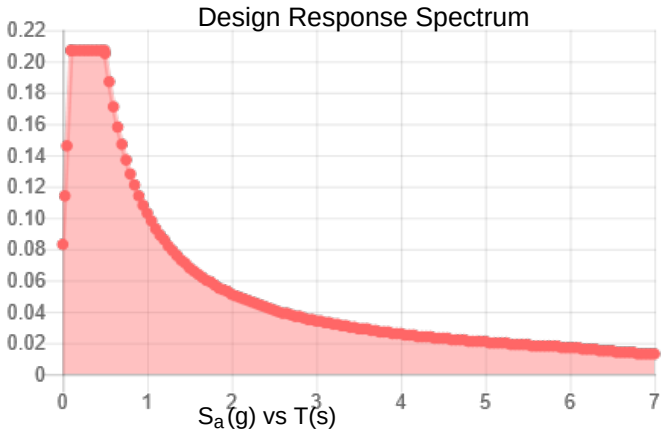
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.194	S_{DS} :	0.207
S_1 :	0.064	S_{D1} :	0.103
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.102
S_{MS} :	0.311	PGA_M :	0.163
S_{M1} :	0.154	F_{PGA} :	1.595
		I_e :	1

Seismic Design Category B





Data Accessed: Mon Jun 17 2019

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Mon Jun 17 2019

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Exhibit D

Mount Analysis

Date: **June 12, 2019**

Charles McGuirt
Crown Castle
3530 Torington Way Suite, 300
Charlotte, NC 28277

MasTec
507 Airport Blvd Suite 111
Morrisville, NC 27560
(919) 674-5866

Subject:	**Mount Analysis**	
Carrier Designation:	**Metro PCS Equipment Change-Out**	
	Carrier Site Number:	CTNH518A
	Carrier Site Name:	CROWN OXFORD MONOPOLE
Crown Castle Designation:	**Crown Castle BU Number:**	876362
	Crown Castle Site Name:	OXFORD/FRITZ PROPERTY
	Crown Castle JDE Number:	561012
	Crown Castle Order Number:	482088 Revision 0
Engineering Firm Designation:	**MasTec Project Number:**	18808-MNT2
Site Data:	**338 Oxford Road, Oxford, New Haven, CT, 06478** **Latitude: 41° 25' 40.77'' Longitude: -73° 6' 31''**	
Structure Information	**Tower Height & Type:**	150 ft Monopole
	Mount Elevation:	117 ft
	Mount Width & Type:	12.5 ft Platform Mount

Dear Charles McGuirt,

MasTec is pleased to submit this **"Mount Analysis Report"** to determine the structural integrity of Metro PCS's antenna mounting system with the proposed appurtenance and equipment addition on the above mentioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

Platform Mount SitePro1 RMQLP-496-HK **Sufficient**

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Noah Noxon, EI

Respectfully Submitted by:

Raphael Mohamed, PE, PEng
Senior Director of Engineering
CT PE License No. 25112

Raphael Mohamed

Digitally signed by Raphael Mohamed
DN: E=Raphael.Mohamed@mastec.com, CN=Raphael Mohamed, OU=Users, OU=MasTec Network Solutions, OU=Service Lines, DC=mastec, DC=local
Date: 2019.06.12 17:33:04-04'00'

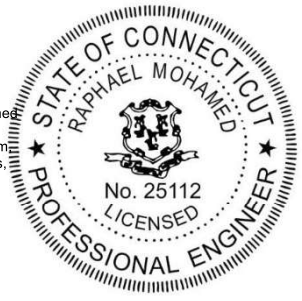


TABLE OF CONTENTS

1) INTRODUCTION

This is a 12.5 ft Platform Mount designed by Site Pro1.

2) ANALYSIS CRITERIA

Building Code:	2015 IBC
TIA-222 Revision:	TIA-222-H
Risk Category	II
an ultimate:	125 mph
Exposure Category:	C
Topographic Category at Base:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic Ss:	0.196
Seismic S1:	0.064
Live Loading Wind Speed:	30 mph
Live Loading at Mid/End-Points:	250 lb
Man Live Loading at Mount Pipes	500 lb

Table 1 - Proposed Loading Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
117.0	117.0	3	rfs/celwave	APXV18-206517S-CA20	12.5' Platform [Sitepro1 RMQP-4096-HK]
		3	rfs/celwave	APXVAARR24_43-UNA20	
		3	ericsson	RADIO 4449 B12/B71	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
4-MOUNT MANUFACTURER DRAWING	SitePro1	RMQP-4096-HK	On File
4-ORDER INFORMATION	CROWN CASTLE	Order ID 482088 Rev 0	CCIsites

3.1) Analysis Method

RISA-3D (Version No. 17.0.2), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Tower Mount Analysis* (Revision C).

3.2) Assumptions

1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specifications.

2) The configuration of antennas, mounts, and other appurtenances are as specified in Tables 1 and the referenced drawings.

3) 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.
4) Steel grades have been assumed as follows, unless noted otherwise:

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM 500 (GR B-46)
Pipe	ASTM A53 (GR B-35)
Connection Bolts	ASTM A325

This analysis may be affected if any assumptions are not valid or have been made in error. MasTec should be notified to determine the effect on the structural integrity of the antenna mounting system.

4) ANALYSIS RESULTS

Table 3- Mount Component Stresses vs. Capacity (Platform Mount, Alpha Sector)

Notes	Component	Beam No.	Centerline (ft)	% Capacity	Pass / Fail
1	Horizontal	--	117	11.8	Pass
1	Handrail	--	117	37.4	Pass
1	Pipe Mount	--	117	29.7	Pass
1	Standoff	--	117	14.8	Pass
1	Grating Angle	--	117	25.9	Pass
1	Handrail Angle	--	117	31.0	Pass
1	Kicker Angle	--	117	11.9	Pass
1	End Plate	--	117	20.0	Pass
1	Connection Bolts	--	117	13.6	Pass
1	Connection Plates	--	117	13.7	Pass

Structure Rating (max from all components) =	**37.4%**

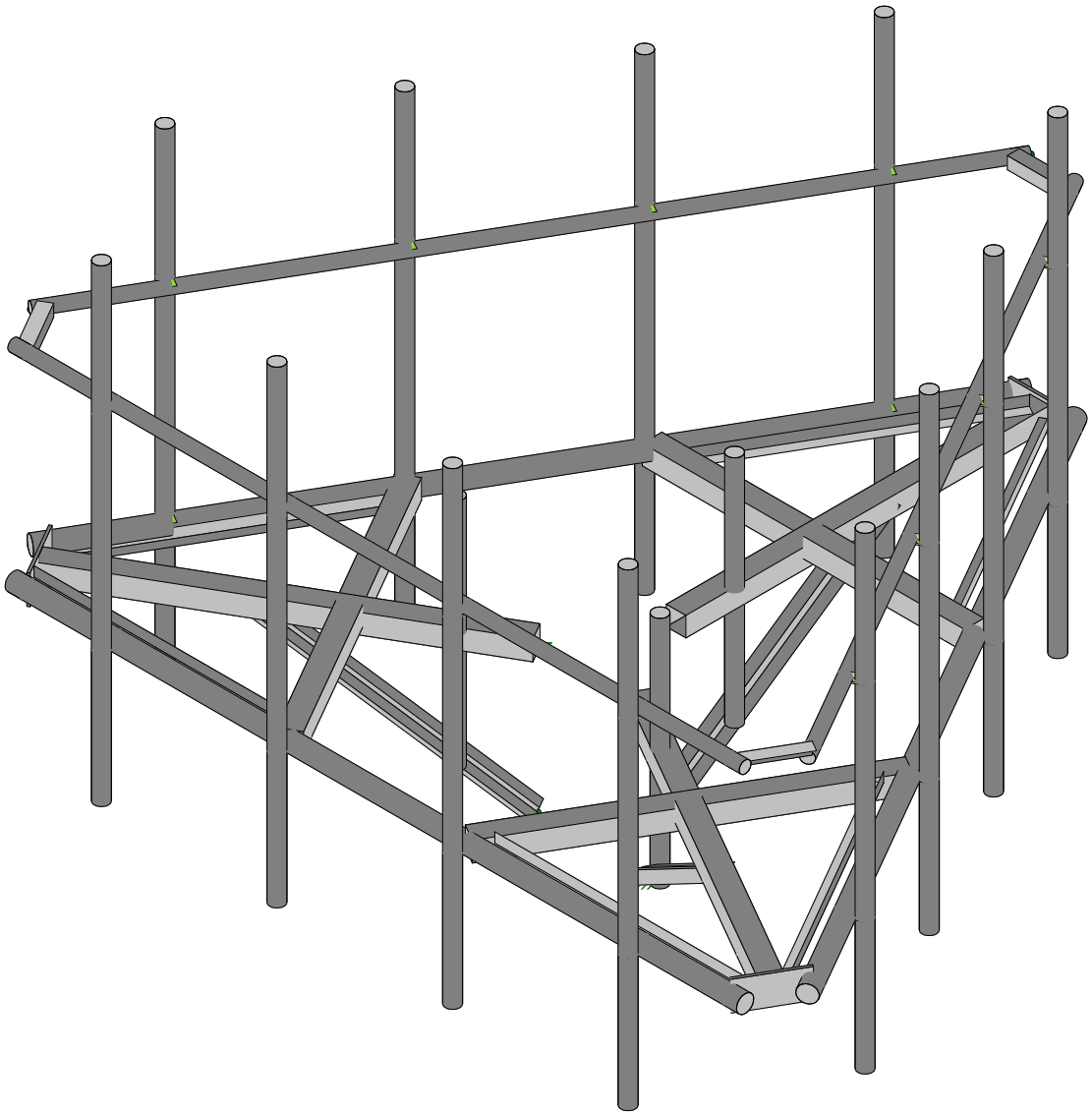
Notes:
1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
2) All sectors are typical

4.1) Recommendations

The mount has sufficient capacity to carry the proposed configuration. No modifications are required at this time.

APPENDIX A

WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

MasTec	876362 Oxford Fritz Property	Render
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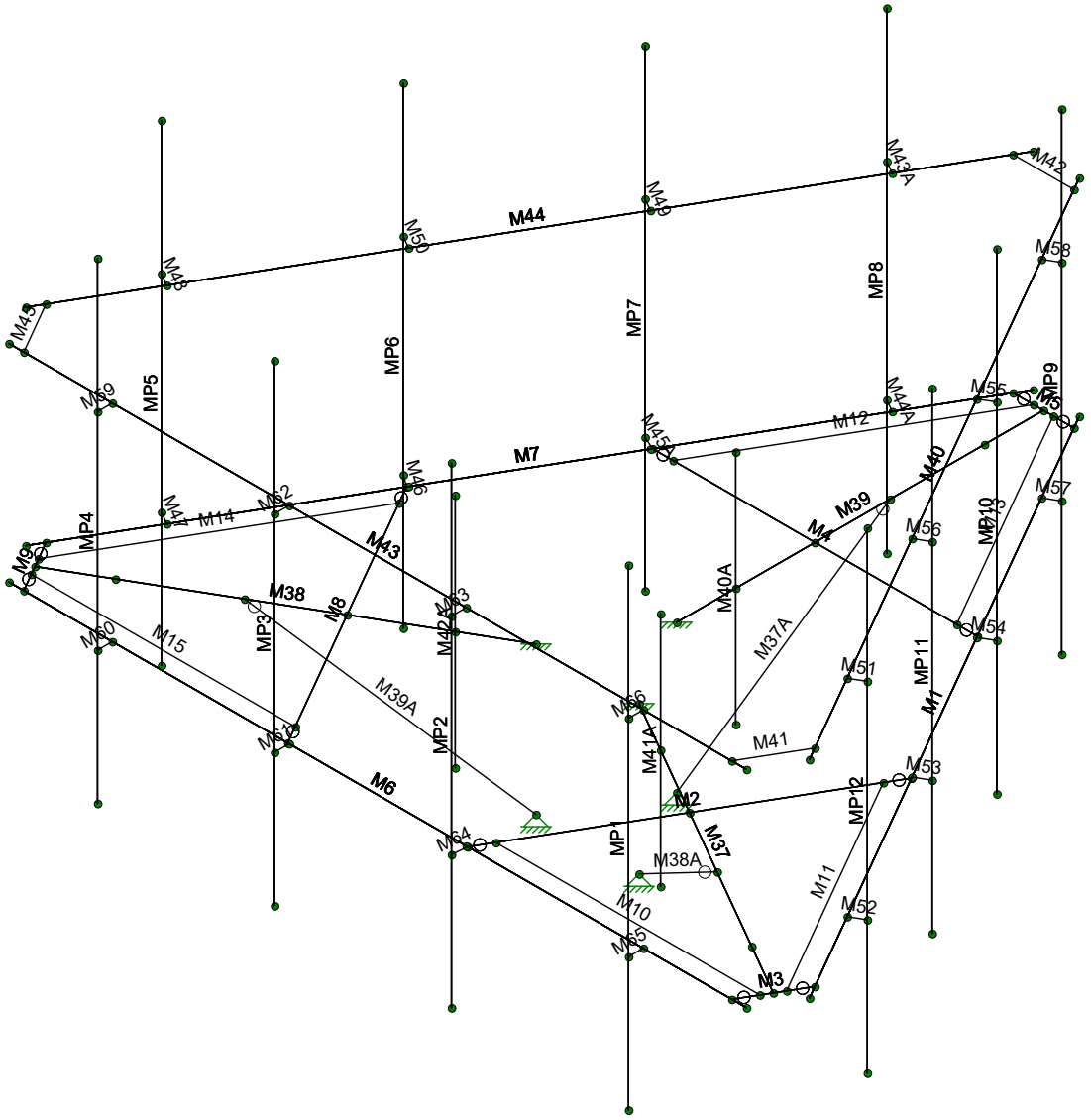
18808-MNT1		RMQP-4096-HK.r3d



Envelope Only Solution

MasTec	876362 Oxford Fritz Property	Member Labels
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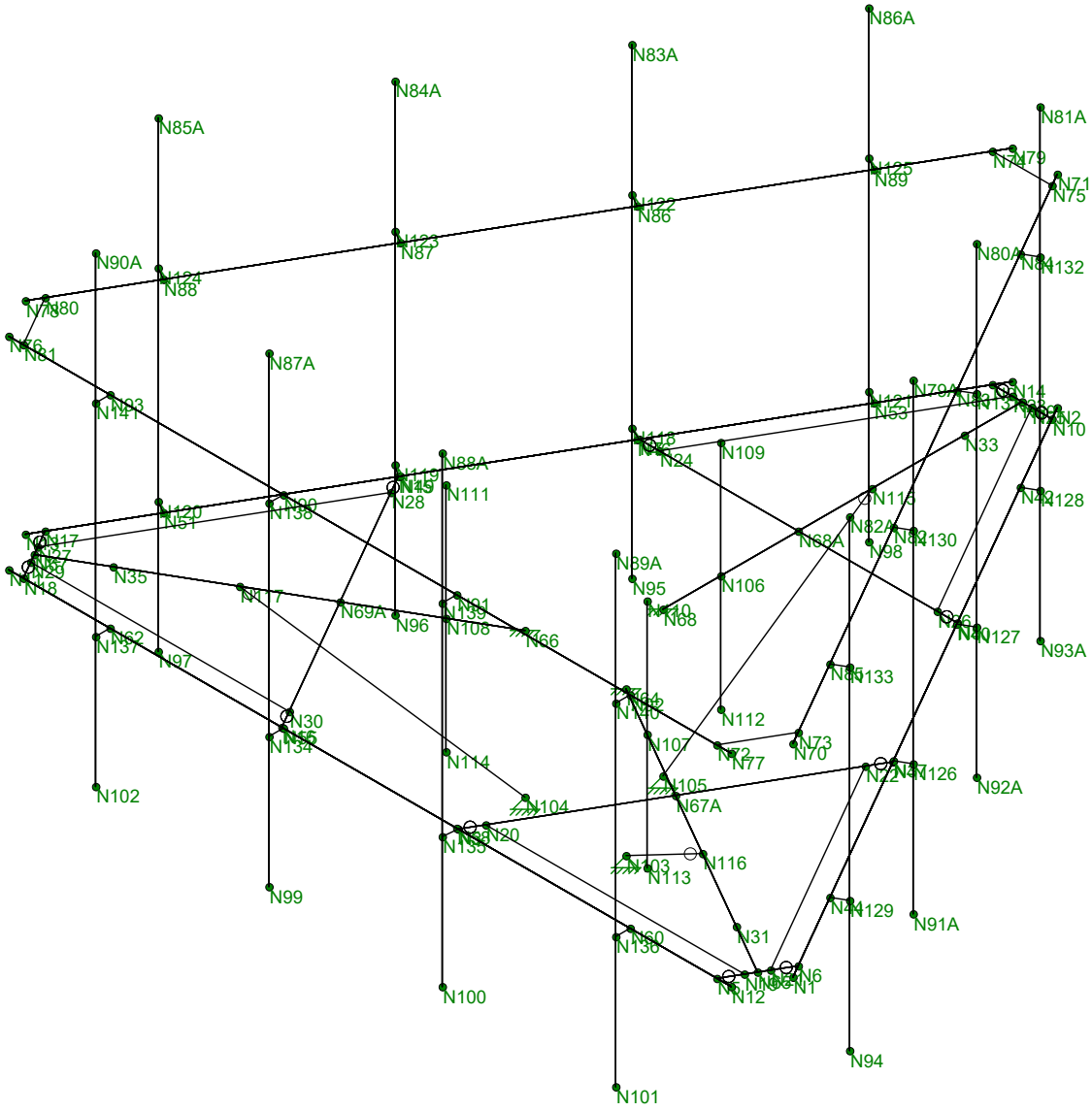

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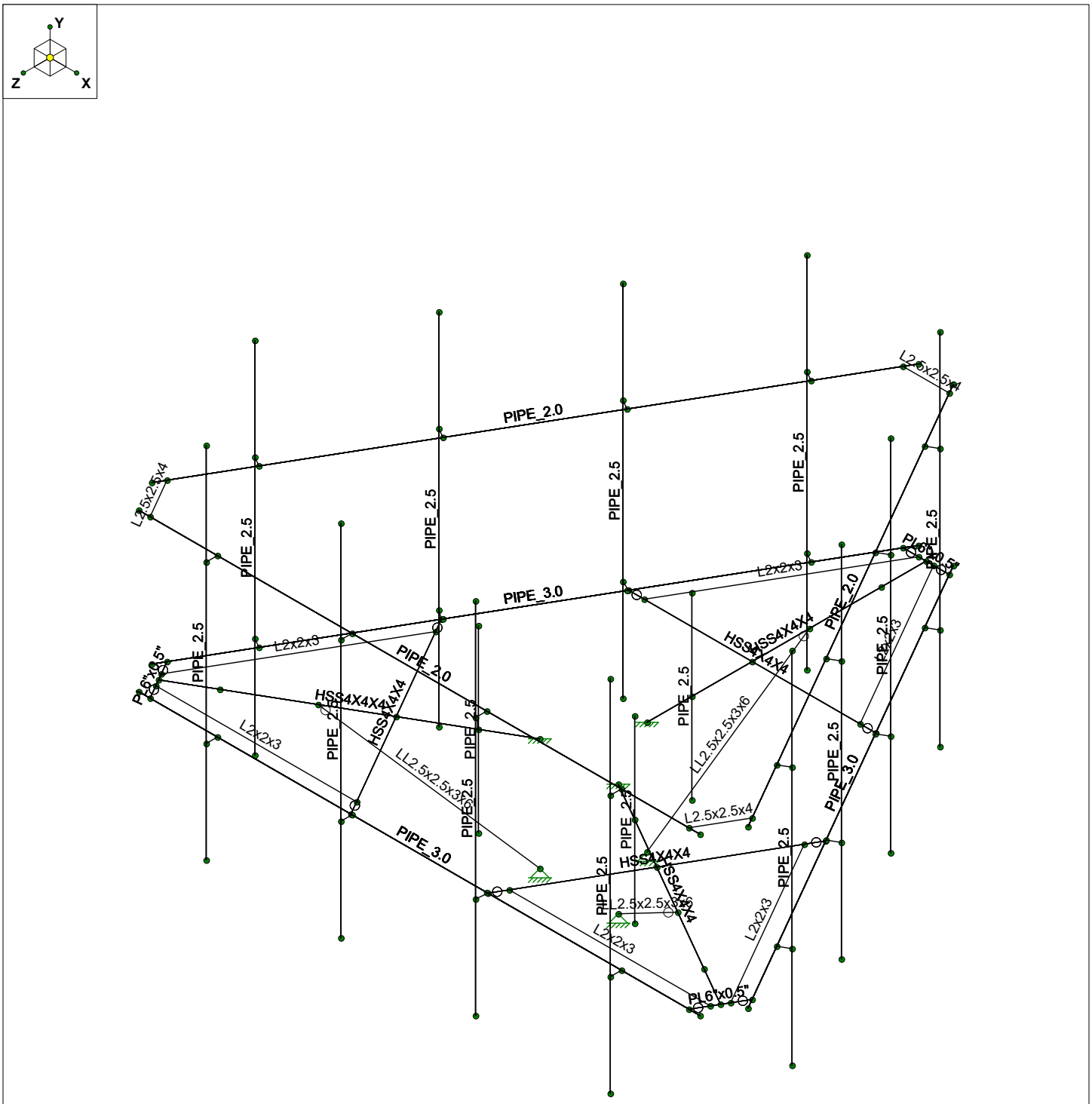

Envelope Only Solution

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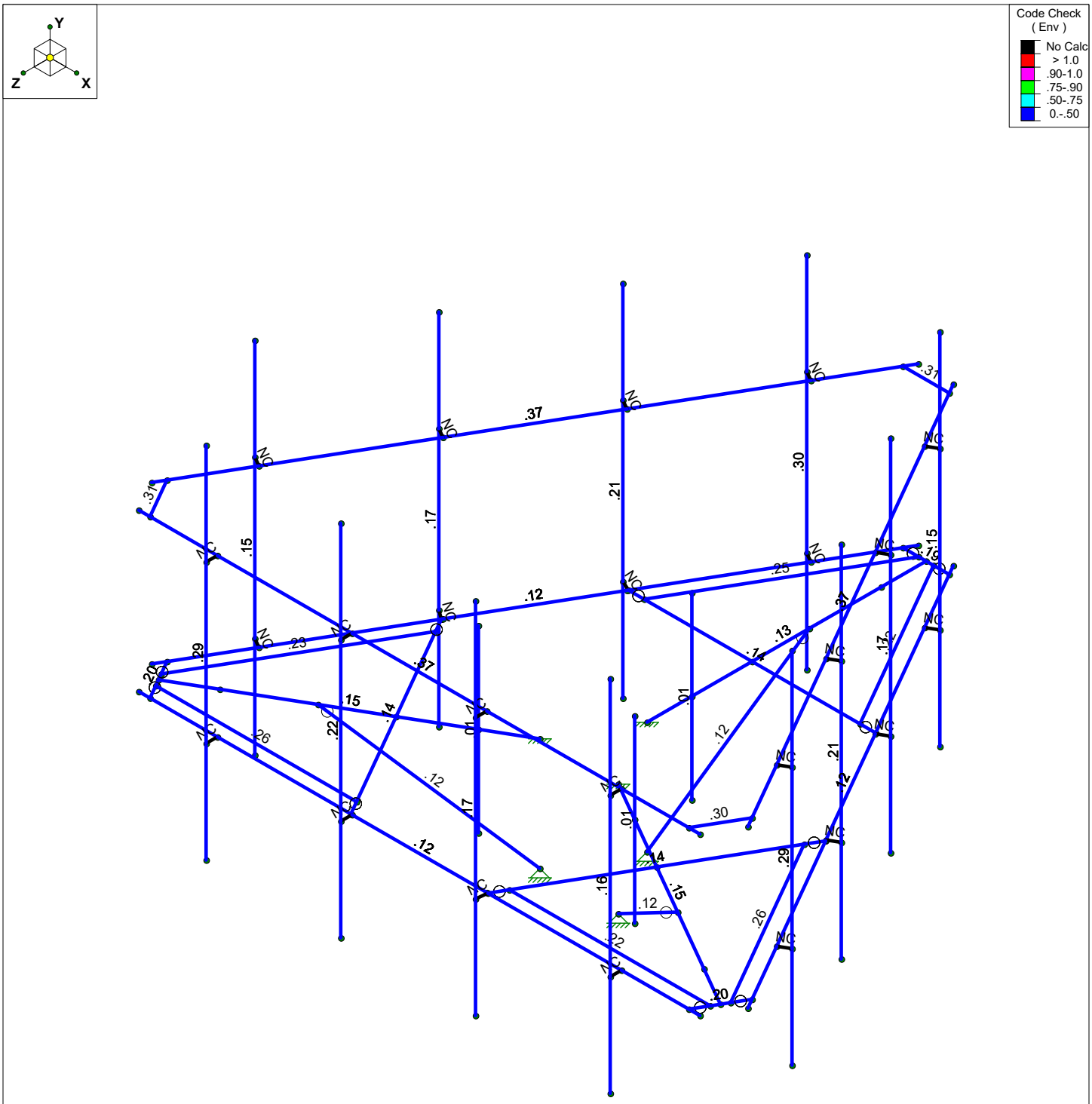

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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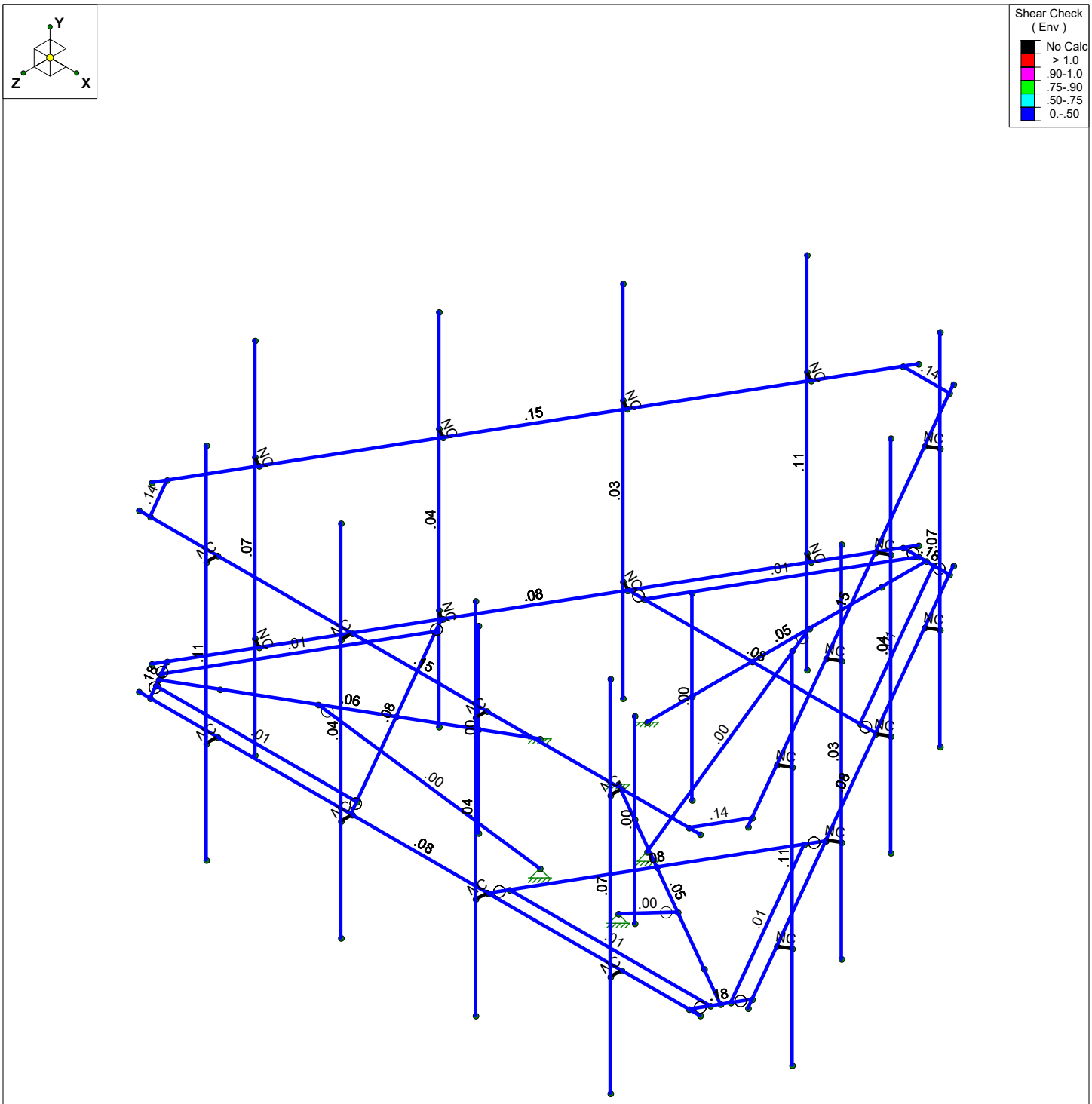

Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

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APPENDIX B

SOFTWARE INPUT CALCULATIONS

MasTec Network Solutions

Mount Analysis Tool

Site Name	Oxford Fritz Property		
Site ID	876362		
Job Number	18808-MNT2	Mount Existing?	Crown
Code	H	Risk Category	II

Legend
Input
Calculated
Notes

Maximum Capacity		
Controlling Capacity	37.4%	PASS

Analysis Parameters		
Mount Height	117	ft
Exposure Category	C	(B,C, or D)
Ultimate Wind Speed	125	mph
Ice Wind Speed	50	mph
Design Ice Thickness, t_i	1.5	in
Maintenance Wind Speed	30	mph
Run Earthquake Analysis?	Yes	
Ground Elevation	372.75	ft, Google Earth
S_1	0.196	USGS
S_{DS}	0.207	2.7.5
Vertical Seismic Loads, E_v	0.041	2.7.6
Seismic Response Coefficient, C_s	0.104	2.7.7.1.1
C_s Min	0.030	2.7.7.1.1

Wind Parameters					
Gust Effect Factor, G_h	1.000	2.6.9	K_s	1.000	2.6.7
K_Z	1.308	2.6.5.2	K_e	0.987	2.6.8
K_{Zt}	1.000	2.6.6	K_a	0.900	16.6
K_d	0.950	Table 2-2	*Note for Rooftop Structures greater than 50', unobstructed for 90 deg and protruding 50' above surrounding buildings Ks must be calculated.		
q_z	44.277	psf, 2.6.11.6			
C/D	142.968	Table 2-9			
t_{iz}	1.702	in, 2.6.10			
q_{iz}	7.084	psf, 2.6.9.6	I, Ice	1.000	Table 2-3
C/D_{iz}	57.187	Table 2-9	I, EQ	1.000	Table 2-3
$q_{Maintenance}$	2.577	psf, 2.6.9.6	$K_{es\ (Wind)}$	1.000	Table S-1
$C/D_{Maintenance}$	34.312	Table 2-9	$K_{es\ (ice)}$	1.000	Table S-1
Ice Dead, Grating	0.015888951	ksf			

Pipe Mounts (Orientation Drawn Top-Down)			
Risa 3D Label	Elevation (ft)	Length (in)	Diameter (in)
MP1	117	96	2.875
MP4	117	96	2.875
MP5	117	96	2.875
MP8	117	96	2.875
MP9	117	96	2.875
MP12	117	96	2.875

Appurtenances					
Model	Type	Height (in)	Width (in)	Depth (in)	Weight (lbs)
RFS CELWAVE APXVAARR24-43-U-N	Antenna	95.9	24	8.7	128
RFS CELWAVE APXV18-206517S-C-	Antenna	72	6.8	3.15	26.4
Ericsson RADIO 4449 B12/B71	RRU, TMA, Etc.	14.95	13.19	9.25	75

Pipe Mount	Antenna	Elevation (ft)	Quantity	Orientation (deg)	Front Exposed (%)	Side Exposed (%)	Type	Height (in)	Width (in)	Depth (in)	Weight (lbs)	Front CaAa (ft^2)	Side CaAa (ft^2)	Front F_A (kips)	Side F_A (kips)	Top %	Bottom %
MP1	CELWAVE APXV18-206517S-C	117	1	0	100.0%	100.0%	Antenna	72.000	6.800	3.150	26.400	5.167	3.038	0.229	0.134	12.5%	87.5%
MP1	Ericsson RADIO 4449 B12/B71	117	1	0	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	75.000	1.643	1.152	0.036	0.051	42.2%	57.8%
MP1																	
MP1																	
MP1																	
MP1																	
MP4	CELWAVE APXVAARR24-43-U-	117	1	0	100.0%	100.0%	Antenna	95.900	24.000	8.700	128.000	20.243	8.889	0.896	0.394	0.1%	99.9%
MP4																	
MP4																	
MP4																	
MP4																	
MP4																	
MP5	CELWAVE APXV18-206517S-C	117	1	120	100.0%	100.0%	Antenna	72.000	6.800	3.150	26.400	5.167	3.038	0.158	0.205	12.5%	87.5%
MP5	Ericsson RADIO 4449 B12/B71	117	1	120	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	75.000	1.643	1.152	0.028	0.067	42.2%	57.8%
MP5																	
MP5																	
MP5																	
MP5																	
MP8	CELWAVE APXVAARR24-43-U-	117	1	120	100.0%	100.0%	Antenna	95.900	24.000	8.700	128.000	20.243	8.889	0.519	0.771	0.1%	99.9%
MP8																	
MP8																	
MP8																	
MP8																	
MP8																	
MP9	CELWAVE APXV18-206517S-C	117	1	240	100.0%	100.0%	Antenna	72.000	6.800	3.150	26.400	5.167	3.038	0.158	0.205	12.5%	87.5%
MP9	Ericsson RADIO 4449 B12/B71	117	1	240	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	75.000	1.643	1.152	0.028	0.067	42.2%	57.8%
MP9																	
MP9																	
MP9																	
MP9																	
MP12	CELWAVE APXVAARR24-43-U-	117	1	240	100.0%	100.0%	Antenna	95.900	24.000	8.700	128.000	20.243	8.889	0.519	0.771	0.1%	99.9%
MP12																	
MP12																	
MP12																	
MP12																	
MP12																	

Member	Section Set	Member Length (ft)	Flat/Round	Wind Projection (in)	D_c (in)	A_{I_y} (in^2)	C_F	Front Wind (klf)	Side Wind (klf)	Front Ice Wind (klf)	Side Ice Wind (klf)	Ice Dead (klf)	Front Maint Wind (klf)	Side Maint Wind (klf)
M1	Horizontal	12.49999953	Round	3.500	3.500	27.823	1.200	0.004	0.012	0.001	0.002	0.011	0.000	0.001
M2	Standoff	5.505714702	Flat	4.000	5.657	39.359	2.000	0.007	0.022	0.002	0.004	0.015	0.000	0.001
M3	End Plate	1.031250262	Flat	6.000	8.484	54.479	2.000	0.011	0.033	0.003	0.006	0.021	0.001	0.002
M4	Standoff	5.505714	Flat	4.000	5.657	39.359	2.000	0.030	0.000	0.007	0.003	0.015	0.002	0.000
M5	End Plate	1.03125	Flat	6.000	8.484	54.479	2.000	0.044	0.000	0.011	0.004	0.021	0.003	0.000
M6	Horizontal	12.5	Round	3.500	3.500	27.823	1.200	0.015	0.000	0.005	0.003	0.011	0.001	0.000
M7	Horizontal	12.49999953	Round	3.500	3.500	27.823	1.200	0.004	0.012	0.001	0.002	0.011	0.000	0.001
M8	Standoff	5.505715202	Flat	4.000	5.657	39.359	2.000	0.007	0.022	0.002	0.004	0.015	0.000	0.001
M9	End Plate	1.031250262	Flat	6.000	8.484	54.479	2.000	0.011	0.033	0.003	0.006	0.021	0.001	0.002
M10	Grating Angle	4.474464	Flat	2.000	2.828	24.232	2.000	0.015	0.000	0.005	0.003	0.009	0.001	0.000
M11	Grating Angle	4.47446444	Flat	2.000	2.828	24.232	2.000	0.004	0.011	0.001	0.002	0.009	0.000	0.001
M12	Grating Angle	4.47446444	Flat	2.000	2.828	24.232	2.000	0.004	0.011	0.001	0.002	0.009	0.000	0.001
M13	Grating Angle	4.47446444	Flat	2.000	2.828	24.232	2.000	0.004	0.011	0.001	0.002	0.009	0.000	0.001
M14	Grating Angle	4.47446494	Flat	2.000	2.828	24.232	2.000	0.004	0.011	0.001	0.002	0.009	0.000	0.001
M15	Grating Angle	4.474465	Flat	2.000	2.828	24.232	2.000	0.015	0.000	0.005	0.003	0.009	0.001	0.000
M37	Standoff	6.216524254	Flat	4.000	5.657	39.359	2.000	0.022	0.007	0.006	0.003	0.015	0.001	0.000
M38	Standoff	6.216524254	Flat	4.000	5.657	39.359	2.000	0.022	0.007	0.006	0.003	0.015	0.001	0.000
M39	Standoff	6.216525	Flat	4.000	5.657	39.359	2.000	0.000	0.030	0.000	0.005	0.015	0.000	0.002
M40	Handrail	12.49999953	Round	2.380	2.380	21.833	1.200	0.003	0.008	0.001	0.002	0.008	0.000	0.000
M41	Handrail Angle	1.031250262	Flat	2.500	3.536	28.013	2.000	0.005	0.014	0.002	0.003	0.011	0.000	0.001
M42	Handrail Angle	1.03125	Flat	2.500	3.536	28.013	2.000	0.018	0.000	0.007	0.004	0.011	0.001	0.000
M43	Handrail	12.5	Round	2.380	2.380	21.833	1.200	0.011	0.000	0.004	0.003	0.008	0.001	0.000
M44	Handrail	12.49999953	Round	2.380	2.380	21.833	1.200	0.003	0.008	0.001	0.002	0.008	0.000	0.000
M45	Handrail Angle	1.031250262	Flat	2.500	3.536	28.013	2.000	0.005	0.014	0.002	0.003	0.011	0.000	0.001
MP5	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP6	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP7	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP8	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP9	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP10	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP11	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP12	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP1	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP2	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP3	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
MP4	Pipe Mount	8	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
M37A	Kicker Angle	4.39582603	Flat	5.000	5.750	39.857	2.000	0.021	0.037	0.005	0.009	0.015	0.001	0.002
M38A	Kicker Angle	4.395825993	Flat	5.000	5.750	39.857	2.000	0.033	0.025	0.008	0.006	0.015	0.002	0.001
M39A	Kicker Angle	4.395825993	Flat	5.000	5.750	39.857	2.000	0.033	0.025	0.008	0.006	0.015	0.002	0.001
M40A	Pipe Mount	4	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
M41A	Pipe Mount	4	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
M42A	Pipe Mount	4	Round	2.880	2.880	24.508	1.200	0.013	0.013	0.005	0.005	0.010	0.001	0.001
M43A	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M44A	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M45A	RIGID	0.251300808	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M46	RIGID	0.251300023	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.003	0.003	0.004	0.000	0.000
M47	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M48	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M49	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M50	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M51	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M52	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M53	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M54	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M55	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M56	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M57	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M58	RIGID	0.249999696	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.004	0.004	0.004	0.000	0.000
M59	RIGID	0.25	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M60	RIGID	0.25	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M61	RIGID	0.25	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M62	RIGID	0.25	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M63	RIGID	0.25	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M64	RIGID	0.25130079	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M65	RIGID	0.25	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M66	RIGID	0.25	Flat	0.000	0.000	9.105	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

Hot Rolled Steel Properties

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

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Handrail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
3	Pipe Mount	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
4	Standoff	HSS4X4X4	Beam	Tube	A500 Gr....	Typical	3.37	7.8	7.8	12.8
5	Grating Angle	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
6	Handrail Angle	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
7	Kicker Angle	LL2.5x2.5x...	Beam	Single Angle	A36 Gr.36	Typical	1.8	3.09	1.07	.023
8	End Plate	PL6"x0.5"	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	7.495903	0	10.822787	0	
2	N2	1.245903	0	-0.00253	0	
3	N3	2.380814	0	11.49937	0	
4	N4	5.133671	0	6.731281	0	
5	N5	6.855278	0	11.49937	0	
6	N6	7.370903	0	10.606281	0	
7	N7	-1.897579	0	4.088976	0	
8	N8	3.608135	0	4.088976	0	
9	N9	0.339653	0	0.213976	0	
10	N10	1.370903	0	0.213976	0	
11	N11	-5.394722	0	11.49937	0	
12	N12	7.105278	0	11.49937	0	
13	N13	-5.785347	0	10.822787	0	
14	N14	0.464653	0	-0.00253	0	
15	N15	-3.423115	0	6.731281	0	
16	N16	-0.670257	0	11.49937	0	
17	N17	-5.660347	0	10.606281	0	
18	N18	-5.144722	0	11.49937	0	
19	N19	7.029757	0	11.197163	0	
20	N20	2.555293	0	11.197163	0	
21	N21	7.196424	0	10.908488	0	
22	N22	4.959192	0	7.033488	0	
23	N23	0.688611	0	0.213976	0	
24	N24	-1.548621	0	4.088976	0	
25	N25	1.021945	0	0.213976	0	
26	N26	3.259177	0	4.088976	0	
27	N27	-5.485868	0	10.908488	0	
28	N28	-3.248635	0	7.033488	0	
29	N29	-5.319201	0	11.197163	0	
30	N30	-0.844736	0	11.197163	0	
31	N31	6.247065	0	10.552825	0	
32	N33	0.855278	0	1.213976	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
33	N35	-4.536509	0	10.552825	0	
34	N37	5.120903	0	6.709167	0	
35	N40	3.620903	0	4.11109	0	
36	N42	2.120903	0	1.513014	0	
37	N44	6.620903	0	9.307243	0	
38	N46	-1.910347	0	4.11109	0	
39	N49	-3.410347	0	6.709167	0	
40	N51	-4.910347	0	9.307243	0	
41	N53	-0.410347	0	1.513014	0	
42	N55	-0.644722	0	11.49937	0	
43	N58	2.355278	0	11.49937	0	
44	N60	5.355278	0	11.49937	0	
45	N62	-3.644722	0	11.49937	0	
46	N64	1.729423	0	7.944563	0	
47	N65	7.113091	0	11.052825	0	
48	N66	-0.018866	0	7.944563	0	
49	N67	-5.402534	0	11.052825	0	
50	N68	0.855278	0	6.430501	0	
51	N69	0.855278	0	0.213976	0	
52	N67A	3.757242	0	9.115325	0	
53	N68A	0.855278	0	4.088976	0	
54	N69A	-2.046686	0	9.115325	0	
55	N70	7.495903	3.5	10.822787	0	
56	N71	1.245903	3.5	-0.00253	0	
57	N72	6.855278	3.5	11.49937	0	
58	N73	7.370903	3.5	10.606281	0	
59	N74	0.339653	3.5	0.213976	0	
60	N75	1.370903	3.5	0.213976	0	
61	N76	-5.394722	3.5	11.49937	0	
62	N77	7.105278	3.5	11.49937	0	
63	N78	-5.785347	3.5	10.822787	0	
64	N79	0.464653	3.5	-0.00253	0	
65	N80	-5.660347	3.5	10.606281	0	
66	N81	-5.144722	3.5	11.49937	0	
67	N82	5.120903	3.5	6.709167	0	
68	N83	3.620903	3.5	4.11109	0	
69	N84	2.120903	3.5	1.513014	0	
70	N85	6.620903	3.5	9.307243	0	
71	N86	-1.910347	3.5	4.11109	0	
72	N87	-3.410347	3.5	6.709167	0	
73	N88	-4.910347	3.5	9.307243	0	
74	N89	-0.410347	3.5	1.513014	0	
75	N90	-0.644722	3.5	11.49937	0	
76	N91	2.355278	3.5	11.49937	0	
77	N92	5.355278	3.5	11.49937	0	
78	N93	-3.644722	3.5	11.49937	0	
79	N79A	5.337409	5.75	6.584167	0	
80	N80A	3.837409	5.75	3.98609	0	
81	N81A	2.337409	5.75	1.388014	0	
82	N82A	6.837409	5.75	9.182243	0	
83	N83A	-2.126853	5.75	3.98609	0	
84	N84A	-3.626853	5.75	6.584167	0	
85	N85A	-5.126853	5.75	9.182243	0	
86	N86A	-0.626853	5.75	1.388014	0	
87	N87A	-0.644722	5.75	11.74937	0	
88	N88A	2.355278	5.75	11.74937	0	
89	N89A	5.355278	5.75	11.74937	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
90	N90A	-3.644722	5.75	11.74937	0	
91	N91A	5.337409	-2.25	6.584167	0	
92	N92A	3.837409	-2.25	3.98609	0	
93	N93A	2.337409	-2.25	1.388014	0	
94	N94	6.837409	-2.25	9.182243	0	
95	N95	-2.126853	-2.25	3.98609	0	
96	N96	-3.626853	-2.25	6.584167	0	
97	N97	-5.126853	-2.25	9.182243	0	
98	N98	-0.626853	-2.25	1.388014	0	
99	N99	-0.644722	-2.25	11.74937	0	
100	N100	2.355278	-2.25	11.74937	0	
101	N101	5.355278	-2.25	11.74937	0	
102	N102	-3.644722	-2.25	11.74937	0	
103	N103	1.729423	-2.5	7.944563	0	
104	N104	-0.018866	-2.5	7.944563	0	
105	N105	0.855278	-2.5	6.430501	0	
106	N106	0.855278	0	5.430501	0	
107	N107	2.595448	0	8.444563	0	
108	N108	-0.884892	0	8.444563	0	
109	N109	0.855278	2	5.430501	0	
110	N110	2.595448	2	8.444563	0	
111	N111	-0.884892	2	8.444563	0	
112	N112	0.855278	-2	5.430501	0	
113	N113	2.595448	-2	8.444563	0	
114	N114	-0.884892	-2	8.444563	0	
115	N115	0.855278	0	2.814801	0	
116	N116	4.860711	0	9.752413	0	
117	N117	-3.150154	0	9.752413	0	
118	N118	-2.126853	0	3.98609	0	
119	N119	-3.626853	0	6.584167	0	
120	N120	-5.126853	0	9.182243	0	
121	N121	-0.626853	0	1.388014	0	
122	N122	-2.126853	3.5	3.98609	0	
123	N123	-3.626853	3.5	6.584167	0	
124	N124	-5.126853	3.5	9.182243	0	
125	N125	-0.626853	3.5	1.388014	0	
126	N126	5.337409	0	6.584167	0	
127	N127	3.837409	0	3.98609	0	
128	N128	2.337409	0	1.388014	0	
129	N129	6.837409	0	9.182243	0	
130	N130	5.337409	3.5	6.584167	0	
131	N131	3.837409	3.5	3.98609	0	
132	N132	2.337409	3.5	1.388014	0	
133	N133	6.837409	3.5	9.182243	0	
134	N134	-0.644722	0	11.74937	0	
135	N135	2.355278	0	11.74937	0	
136	N136	5.355278	0	11.74937	0	
137	N137	-3.644722	0	11.74937	0	
138	N138	-0.644722	3.5	11.74937	0	
139	N139	2.355278	3.5	11.74937	0	
140	N140	5.355278	3.5	11.74937	0	
141	N141	-3.644722	3.5	11.74937	0	

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N68	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N64	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N66	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N103	Reaction	Reaction	Reaction			
5	N104	Reaction	Reaction	Reaction			
6	N105	Reaction	Reaction	Reaction			

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Horizontal	Beam	Pipe	A53 Gr.B	Typical
2	M2	N3	N4			Standoff	Beam	Tube	A500 Gr.B...	Typical
3	M3	N5	N6			End Plate	Beam	RECT	A36 Gr.36	Typical
4	M4	N7	N8			Standoff	Beam	Tube	A500 Gr.B...	Typical
5	M5	N9	N10			End Plate	Beam	RECT	A36 Gr.36	Typical
6	M6	N11	N12			Horizontal	Beam	Pipe	A53 Gr.B	Typical
7	M7	N13	N14			Horizontal	Beam	Pipe	A53 Gr.B	Typical
8	M8	N15	N16			Standoff	Beam	Tube	A500 Gr.B...	Typical
9	M9	N17	N18			End Plate	Beam	RECT	A36 Gr.36	Typical
10	M10	N19	N20			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
11	M11	N21	N22		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
12	M12	N23	N24		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
13	M13	N25	N26			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
14	M14	N27	N28			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
15	M15	N29	N30		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
16	M37	N64	N65			Standoff	Beam	Tube	A500 Gr.B...	Typical
17	M38	N66	N67			Standoff	Beam	Tube	A500 Gr.B...	Typical
18	M39	N68	N69			Standoff	Beam	Tube	A500 Gr.B...	Typical
19	M40	N70	N71			Handrail	Beam	Pipe	A53 Gr.B	Typical
20	M41	N72	N73		90	Handrail Angle	Beam	Single Angle	A36 Gr.36	Typical
21	M42	N74	N75		180	Handrail Angle	Beam	Single Angle	A36 Gr.36	Typical
22	M43	N76	N77			Handrail	Beam	Pipe	A53 Gr.B	Typical
23	M44	N78	N79			Handrail	Beam	Pipe	A53 Gr.B	Typical
24	M45	N80	N81		90	Handrail Angle	Beam	Single Angle	A36 Gr.36	Typical
25	MP5	N85A	N97			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
26	MP6	N84A	N96			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
27	MP7	N83A	N95			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
28	MP8	N86A	N98			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
29	MP9	N81A	N93A			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
30	MP10	N80A	N92A			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
31	MP11	N79A	N91A			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
32	MP12	N82A	N94			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
33	MP1	N89A	N101			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
34	MP2	N88A	N100			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
35	MP3	N87A	N99			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
36	MP4	N90A	N102			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
37	M37A	N115	N105			Kicker Angle	Beam	Single Angle	A36 Gr.36	Typical
38	M38A	N116	N103			Kicker Angle	Beam	Single Angle	A36 Gr.36	Typical
39	M39A	N117	N104			Kicker Angle	Beam	Single Angle	A36 Gr.36	Typical
40	M40A	N109	N112			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
41	M41A	N110	N113			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
42	M42A	N111	N114			Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
43	M43A	N125	N89			RIGID	None	None	RIGID	Typical
44	M44A	N121	N53			RIGID	None	None	RIGID	Typical
45	M45A	N118	N7			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
46	M46	N119	N15			RIGID	None	None	RIGID	Typical
47	M47	N120	N51			RIGID	None	None	RIGID	Typical
48	M48	N124	N88			RIGID	None	None	RIGID	Typical
49	M49	N122	N86			RIGID	None	None	RIGID	Typical
50	M50	N123	N87			RIGID	None	None	RIGID	Typical
51	M51	N133	N85			RIGID	None	None	RIGID	Typical
52	M52	N129	N44			RIGID	None	None	RIGID	Typical
53	M53	N126	N37			RIGID	None	None	RIGID	Typical
54	M54	N127	N40			RIGID	None	None	RIGID	Typical
55	M55	N131	N83			RIGID	None	None	RIGID	Typical
56	M56	N130	N82			RIGID	None	None	RIGID	Typical
57	M57	N128	N42			RIGID	None	None	RIGID	Typical
58	M58	N132	N84			RIGID	None	None	RIGID	Typical
59	M59	N141	N93			RIGID	None	None	RIGID	Typical
60	M60	N137	N62			RIGID	None	None	RIGID	Typical
61	M61	N134	N55			RIGID	None	None	RIGID	Typical
62	M62	N138	N90			RIGID	None	None	RIGID	Typical
63	M63	N139	N91			RIGID	None	None	RIGID	Typical
64	M64	N135	N3			RIGID	None	None	RIGID	Typical
65	M65	N136	N60			RIGID	None	None	RIGID	Typical
66	M66	N140	N92			RIGID	None	None	RIGID	Typical

Joint Loads and Enforced Displacements (BLC 42 : Man 1 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N44	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 43 : Man 2 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N62	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 44 : Man 3 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N53	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 45 : Man 4 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N11	L	Y	-.25

Joint Loads and Enforced Displacements (BLC 46 : Man 5 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N1	L	Y	-.25

Joint Loads and Enforced Displacements (BLC 47 : Man 6 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N14	L	Y	-.25

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Y	-.026	%50
2	MP1	Y	-.075	%50
3	MP4	Y	-.128	%50

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
4	MP5	Y	-.026	%50
5	MP5	Y	-.075	%50
6	MP8	Y	-.128	%50
7	MP9	Y	-.026	%50
8	MP9	Y	-.075	%50
9	MP12	Y	-.128	%50

Member Point Loads (BLC 2 : Ice Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Y	-.115	%50
2	MP1	Y	-.046	%50
3	MP4	Y	-.453	%50
4	MP5	Y	-.115	%50
5	MP5	Y	-.046	%50
6	MP8	Y	-.453	%50
7	MP9	Y	-.115	%50
8	MP9	Y	-.046	%50
9	MP12	Y	-.453	%50

Member Point Loads (BLC 3 : Full Wind Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.114	%12.5
2	MP1	Z	-.036	%50
3	MP4	Z	-.448	%.1
4	MP5	Z	-.079	%12.5
5	MP5	Z	-.028	%50
6	MP8	Z	-.26	%.1
7	MP9	Z	-.079	%12.5
8	MP9	Z	-.028	%50
9	MP12	Z	-.26	%.1
10	MP1	Z	-.114	%87.5
11	MP4	Z	-.448	%99.9
12	MP5	Z	-.079	%87.5
13	MP8	Z	-.26	%99.9
14	MP9	Z	-.079	%87.5
15	MP12	Z	-.26	%99.9

Member Point Loads (BLC 4 : Full Wind Antenna (30 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.089	%12.5
2	MP1	Z	-.029	%50
3	MP4	Z	-.334	%.1
4	MP5	Z	-.058	%12.5
5	MP5	Z	-.022	%50
6	MP8	Z	-.17	%.1
7	MP9	Z	-.089	%12.5
8	MP9	Z	-.029	%50
9	MP12	Z	-.334	%.1
10	MP1	Z	-.089	%87.5
11	MP4	Z	-.334	%99.9
12	MP5	Z	-.058	%87.5
13	MP8	Z	-.17	%99.9
14	MP9	Z	-.089	%87.5
15	MP12	Z	-.334	%99.9
16	MP1	X	.051	%12.5

Member Point Loads (BLC 4 : Full Wind Antenna (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
17	MP1	X	.02	%50
18	MP4	X	.193	%.1
19	MP5	X	.034	%12.5
20	MP5	X	.026	%50
21	MP8	X	.098	%.1
22	MP9	X	.051	%12.5
23	MP9	X	.02	%50
24	MP12	X	.193	%.1
25	MP1	X	.051	%87.5
26	MP4	X	.193	%99.9
27	MP5	X	.034	%87.5
28	MP8	X	.098	%99.9
29	MP9	X	.051	%87.5
30	MP12	X	.193	%99.9

Member Point Loads (BLC 5 : Full Wind Antenna (60 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.04	%12.5
2	MP1	Z	-.014	%50
3	MP4	Z	-.13	%.1
4	MP5	Z	-.04	%12.5
5	MP5	Z	-.014	%50
6	MP8	Z	-.13	%.1
7	MP9	Z	-.057	%12.5
8	MP9	Z	-.018	%50
9	MP12	Z	-.224	%.1
10	MP1	Z	-.04	%87.5
11	MP4	Z	-.13	%99.9
12	MP5	Z	-.04	%87.5
13	MP8	Z	-.13	%99.9
14	MP9	Z	-.057	%87.5
15	MP12	Z	-.224	%99.9
16	MP1	X	.068	%12.5
17	MP1	X	.041	%50
18	MP4	X	.225	%.1
19	MP5	X	.068	%12.5
20	MP5	X	.041	%50
21	MP8	X	.225	%.1
22	MP9	X	.099	%12.5
23	MP9	X	.032	%50
24	MP12	X	.388	%.1
25	MP1	X	.068	%87.5
26	MP4	X	.225	%99.9
27	MP5	X	.068	%87.5
28	MP8	X	.225	%99.9
29	MP9	X	.099	%87.5
30	MP12	X	.388	%99.9

Member Point Loads (BLC 6 : Full Wind Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	0	%12.5
2	MP1	Z	0	%50
3	MP4	Z	0	%.1
4	MP5	Z	0	%12.5
5	MP5	Z	0	%50
6	MP8	Z	0	%.1

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
7	MP9	Z	0	%12.5
8	MP9	Z	0	%50
9	MP12	Z	0	%.1
10	MP1	Z	0	%87.5
11	MP4	Z	0	%99.9
12	MP5	Z	0	%87.5
13	MP8	Z	0	%99.9
14	MP9	Z	0	%87.5
15	MP12	Z	0	%99.9
16	MP1	X	.067	%12.5
17	MP1	X	.051	%50
18	MP4	X	.197	%.1
19	MP5	X	.103	%12.5
20	MP5	X	.04	%50
21	MP8	X	.385	%.1
22	MP9	X	.103	%12.5
23	MP9	X	.04	%50
24	MP12	X	.385	%.1
25	MP1	X	.067	%87.5
26	MP4	X	.197	%99.9
27	MP5	X	.103	%87.5
28	MP8	X	.385	%99.9
29	MP9	X	.103	%87.5
30	MP12	X	.385	%99.9

Member Point Loads (BLC 7 : Full Wind Antenna (120 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	.04	%12.5
2	MP1	Z	.014	%50
3	MP4	Z	.13	%.1
4	MP5	Z	.057	%12.5
5	MP5	Z	.018	%50
6	MP8	Z	.224	%.1
7	MP9	Z	.04	%12.5
8	MP9	Z	.014	%50
9	MP12	Z	.13	%.1
10	MP1	Z	.04	%87.5
11	MP4	Z	.13	%99.9
12	MP5	Z	.057	%87.5
13	MP8	Z	.224	%99.9
14	MP9	Z	.04	%87.5
15	MP12	Z	.13	%99.9
16	MP1	X	.068	%12.5
17	MP1	X	.041	%50
18	MP4	X	.225	%.1
19	MP5	X	.099	%12.5
20	MP5	X	.032	%50
21	MP8	X	.388	%.1
22	MP9	X	.068	%12.5
23	MP9	X	.041	%50
24	MP12	X	.225	%.1
25	MP1	X	.068	%87.5
26	MP4	X	.225	%99.9
27	MP5	X	.099	%87.5
28	MP8	X	.388	%99.9
29	MP9	X	.068	%87.5

Member Point Loads (BLC 7 : Full Wind Antenna (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
30	MP12	X	.225	%99.9

Member Point Loads (BLC 8 : Full Wind Antenna (150 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	.089	%12.5
2	MP1	Z	.029	%50
3	MP4	Z	.334	%.1
4	MP5	Z	.089	%12.5
5	MP5	Z	.029	%50
6	MP8	Z	.334	%.1
7	MP9	Z	.058	%12.5
8	MP9	Z	.022	%50
9	MP12	Z	.17	%.1
10	MP1	Z	.089	%87.5
11	MP4	Z	.334	%99.9
12	MP5	Z	.089	%87.5
13	MP8	Z	.334	%99.9
14	MP9	Z	.058	%87.5
15	MP12	Z	.17	%99.9
16	MP1	X	.051	%12.5
17	MP1	X	.02	%50
18	MP4	X	.193	%.1
19	MP5	X	.051	%12.5
20	MP5	X	.02	%50
21	MP8	X	.193	%.1
22	MP9	X	.034	%12.5
23	MP9	X	.026	%50
24	MP12	X	.098	%.1
25	MP1	X	.051	%87.5
26	MP4	X	.193	%99.9
27	MP5	X	.051	%87.5
28	MP8	X	.193	%99.9
29	MP9	X	.034	%87.5
30	MP12	X	.098	%99.9

Member Point Loads (BLC 15 : Ice Wind Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.027	%12.5
2	MP1	Z	-.009	%50
3	MP4	Z	-.084	%.1
4	MP5	Z	-.021	%12.5
5	MP5	Z	-.007	%50
6	MP8	Z	-.053	%.1
7	MP9	Z	-.021	%12.5
8	MP9	Z	-.007	%50
9	MP12	Z	-.053	%.1
10	MP1	Z	-.027	%87.5
11	MP4	Z	-.084	%99.9
12	MP5	Z	-.021	%87.5
13	MP8	Z	-.053	%99.9
14	MP9	Z	-.021	%87.5
15	MP12	Z	-.053	%99.9

Member Point Loads (BLC 16 : Ice Wind Antenna (30 Deg))

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

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.021	%12.5
2	MP1	Z	-.007	%50
3	MP4	Z	-.064	%.1
4	MP5	Z	-.016	%12.5
5	MP5	Z	-.006	%50
6	MP8	Z	-.037	%.1
7	MP9	Z	-.021	%12.5
8	MP9	Z	-.007	%50
9	MP12	Z	-.064	%.1
10	MP1	Z	-.021	%87.5
11	MP4	Z	-.064	%99.9
12	MP5	Z	-.016	%87.5
13	MP8	Z	-.037	%99.9
14	MP9	Z	-.021	%87.5
15	MP12	Z	-.064	%99.9
16	MP1	X	.012	%12.5
17	MP1	X	.005	%50
18	MP4	X	.037	%.1
19	MP5	X	.009	%12.5
20	MP5	X	.007	%50
21	MP8	X	.021	%.1
22	MP9	X	.012	%12.5
23	MP9	X	.005	%50
24	MP12	X	.037	%.1
25	MP1	X	.012	%87.5
26	MP4	X	.037	%99.9
27	MP5	X	.009	%87.5
28	MP8	X	.021	%99.9
29	MP9	X	.012	%87.5
30	MP12	X	.037	%99.9

Member Point Loads (BLC 17 : Ice Wind Antenna (60 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.01	%12.5
2	MP1	Z	-.004	%50
3	MP4	Z	-.026	%.1
4	MP5	Z	-.01	%12.5
5	MP5	Z	-.004	%50
6	MP8	Z	-.026	%.1
7	MP9	Z	-.013	%12.5
8	MP9	Z	-.004	%50
9	MP12	Z	-.042	%.1
10	MP1	Z	-.01	%87.5
11	MP4	Z	-.026	%99.9
12	MP5	Z	-.01	%87.5
13	MP8	Z	-.026	%99.9
14	MP9	Z	-.013	%87.5
15	MP12	Z	-.042	%99.9
16	MP1	X	.018	%12.5
17	MP1	X	.011	%50
18	MP4	X	.046	%.1
19	MP5	X	.018	%12.5
20	MP5	X	.011	%50
21	MP8	X	.046	%.1
22	MP9	X	.023	%12.5
23	MP9	X	.008	%50

Member Point Loads (BLC 17 : Ice Wind Antenna (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
24	MP12	X	.072	%.1
25	MP1	X	.018	%87.5
26	MP4	X	.046	%99.9
27	MP5	X	.018	%87.5
28	MP8	X	.046	%99.9
29	MP9	X	.023	%87.5
30	MP12	X	.072	%99.9

Member Point Loads (BLC 18 : Ice Wind Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	0	%12.5
2	MP1	Z	0	%50
3	MP4	Z	0	%.1
4	MP5	Z	0	%12.5
5	MP5	Z	0	%50
6	MP8	Z	0	%.1
7	MP9	Z	0	%12.5
8	MP9	Z	0	%50
9	MP12	Z	0	%.1
10	MP1	Z	0	%87.5
11	MP4	Z	0	%99.9
12	MP5	Z	0	%87.5
13	MP8	Z	0	%99.9
14	MP9	Z	0	%87.5
15	MP12	Z	0	%99.9
16	MP1	X	.019	%12.5
17	MP1	X	.014	%50
18	MP4	X	.043	%.1
19	MP5	X	.025	%12.5
20	MP5	X	.01	%50
21	MP8	X	.073	%.1
22	MP9	X	.025	%12.5
23	MP9	X	.01	%50
24	MP12	X	.073	%.1
25	MP1	X	.019	%87.5
26	MP4	X	.043	%99.9
27	MP5	X	.025	%87.5
28	MP8	X	.073	%99.9
29	MP9	X	.025	%87.5
30	MP12	X	.073	%99.9

Member Point Loads (BLC 19 : Ice Wind Antenna (120 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	.01	%12.5
2	MP1	Z	.004	%50
3	MP4	Z	.026	%.1
4	MP5	Z	.013	%12.5
5	MP5	Z	.004	%50
6	MP8	Z	.042	%.1
7	MP9	Z	.01	%12.5
8	MP9	Z	.004	%50
9	MP12	Z	.026	%.1
10	MP1	Z	.01	%87.5
11	MP4	Z	.026	%99.9
12	MP5	Z	.013	%87.5
13	MP8	Z	.042	%99.9

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
14	MP9	Z	.01	%87.5
15	MP12	Z	.026	%99.9
16	MP1	X	.018	%12.5
17	MP1	X	.011	%50
18	MP4	X	.046	%.1
19	MP5	X	.023	%12.5
20	MP5	X	.008	%50
21	MP8	X	.072	%.1
22	MP9	X	.018	%12.5
23	MP9	X	.011	%50
24	MP12	X	.046	%.1
25	MP1	X	.018	%87.5
26	MP4	X	.046	%99.9
27	MP5	X	.023	%87.5
28	MP8	X	.072	%99.9
29	MP9	X	.018	%87.5
30	MP12	X	.046	%99.9

Member Point Loads (BLC 20 : Ice Wind Antenna (150 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	.021	%12.5
2	MP1	Z	.004	%50
3	MP4	Z	.026	%.1
4	MP5	Z	.013	%12.5
5	MP5	Z	.004	%50
6	MP8	Z	.042	%.1
7	MP9	Z	.01	%12.5
8	MP9	Z	.004	%50
9	MP12	Z	.026	%.1
10	MP1	Z	.021	%87.5
11	MP4	Z	.026	%99.9
12	MP5	Z	.013	%87.5
13	MP8	Z	.042	%99.9
14	MP9	Z	.01	%87.5
15	MP12	Z	.026	%99.9
16	MP1	X	.012	%12.5
17	MP1	X	.011	%50
18	MP4	X	.046	%.1
19	MP5	X	.023	%12.5
20	MP5	X	.008	%50
21	MP8	X	.072	%.1
22	MP9	X	.018	%12.5
23	MP9	X	.011	%50
24	MP12	X	.046	%.1
25	MP1	X	.012	%87.5
26	MP4	X	.046	%99.9
27	MP5	X	.023	%87.5
28	MP8	X	.072	%99.9
29	MP9	X	.018	%87.5
30	MP12	X	.046	%99.9

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.003	%50
2	MP1	Z	-.008	%50
3	MP4	Z	-.013	%50

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
4	MP5	Z	-.003	%50
5	MP5	Z	-.008	%50
6	MP8	Z	-.013	%50
7	MP9	Z	-.003	%50
8	MP9	Z	-.008	%50
9	MP12	Z	-.013	%50

Member Point Loads (BLC 28 : Seismic Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	X	.003	%50
2	MP1	X	.008	%50
3	MP4	X	.013	%50
4	MP5	X	.003	%50
5	MP5	X	.008	%50
6	MP8	X	.013	%50
7	MP9	X	.003	%50
8	MP9	X	.008	%50
9	MP12	X	.013	%50

Member Point Loads (BLC 41 : Seismic Vertical Antennas)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Y	-.005	%50
2	MP1	Y	-.015	%50
3	MP4	Y	-.026	%50
4	MP5	Y	-.005	%50
5	MP5	Y	-.015	%50
6	MP8	Y	-.026	%50
7	MP9	Y	-.005	%50
8	MP9	Y	-.015	%50
9	MP12	Y	-.026	%50

Member Distributed Loads (BLC 2 : Ice Dead)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Y	-.011	-.011	0	%100
2	M2	Y	-.015	-.015	0	%100
3	M3	Y	-.021	-.021	0	%100
4	M4	Y	-.015	-.015	0	%100
5	M5	Y	-.021	-.021	0	%100
6	M6	Y	-.011	-.011	0	%100
7	M7	Y	-.011	-.011	0	%100
8	M8	Y	-.015	-.015	0	%100
9	M9	Y	-.021	-.021	0	%100
10	M10	Y	-.009	-.009	0	%100
11	M11	Y	-.009	-.009	0	%100
12	M12	Y	-.009	-.009	0	%100
13	M13	Y	-.009	-.009	0	%100
14	M14	Y	-.009	-.009	0	%100
15	M15	Y	-.009	-.009	0	%100
16	M37	Y	-.015	-.015	0	%100
17	M38	Y	-.015	-.015	0	%100
18	M39	Y	-.015	-.015	0	%100
19	M40	Y	-.008	-.008	0	%100
20	M41	Y	-.011	-.011	0	%100
21	M42	Y	-.011	-.011	0	%100

Member Distributed Loads (BLC 2 : Ice Dead) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
22	M43	Y	-.008	-.008	0	%100
23	M44	Y	-.008	-.008	0	%100
24	M45	Y	-.011	-.011	0	%100
25	MP5	Y	-.01	-.01	0	%100
26	MP6	Y	-.01	-.01	0	%100
27	MP7	Y	-.01	-.01	0	%100
28	MP8	Y	-.01	-.01	0	%100
29	MP9	Y	-.01	-.01	0	%100
30	MP10	Y	-.01	-.01	0	%100
31	MP11	Y	-.01	-.01	0	%100
32	MP12	Y	-.01	-.01	0	%100
33	MP1	Y	-.01	-.01	0	%100
34	MP2	Y	-.01	-.01	0	%100
35	MP3	Y	-.01	-.01	0	%100
36	MP4	Y	-.01	-.01	0	%100
37	M37A	Y	-.016	-.016	0	%100
38	M38A	Y	-.016	-.016	0	%100
39	M39A	Y	-.016	-.016	0	%100
40	M40A	Y	-.01	-.01	0	%100
41	M41A	Y	-.01	-.01	0	%100
42	M42A	Y	-.01	-.01	0	%100
43	M43A	Y	-.004	-.004	0	%100
44	M44A	Y	-.004	-.004	0	%100
45	M45A	Y	-.004	-.004	0	%100
46	M46	Y	-.004	-.004	0	%100
47	M47	Y	-.004	-.004	0	%100
48	M48	Y	-.004	-.004	0	%100
49	M49	Y	-.004	-.004	0	%100
50	M50	Y	-.004	-.004	0	%100
51	M51	Y	-.004	-.004	0	%100
52	M52	Y	-.004	-.004	0	%100
53	M53	Y	-.004	-.004	0	%100
54	M54	Y	-.004	-.004	0	%100
55	M55	Y	-.004	-.004	0	%100
56	M56	Y	-.004	-.004	0	%100
57	M57	Y	-.004	-.004	0	%100
58	M58	Y	-.004	-.004	0	%100
59	M59	Y	-.004	-.004	0	%100
60	M60	Y	-.004	-.004	0	%100
61	M61	Y	-.004	-.004	0	%100
62	M62	Y	-.004	-.004	0	%100
63	M63	Y	-.004	-.004	0	%100
64	M64	Y	-.004	-.004	0	%100
65	M65	Y	-.004	-.004	0	%100
66	M66	Y	-.004	-.004	0	%100

Member Distributed Loads (BLC 9 : Full Wind Members (0 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.004	-.004	0	%100
2	M2	Z	-.007	-.007	0	%100
3	M3	Z	-.011	-.011	0	%100
4	M4	Z	-.03	-.03	0	%100
5	M5	Z	-.044	-.044	0	%100
6	M6	Z	-.015	-.015	0	%100
7	M7	Z	-.004	-.004	0	%100
8	M8	Z	-.007	-.007	0	%100

Member Distributed Loads (BLC 9 : Full Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
9	M9	Z	-.011	-.011	0	%100
10	M10	Z	-.015	-.015	0	%100
11	M11	Z	-.004	-.004	0	%100
12	M12	Z	-.004	-.004	0	%100
13	M13	Z	-.004	-.004	0	%100
14	M14	Z	-.004	-.004	0	%100
15	M15	Z	-.015	-.015	0	%100
16	M37	Z	-.022	-.022	0	%100
17	M38	Z	-.022	-.022	0	%100
18	M39	Z	0	0	0	%100
19	M40	Z	-.003	-.003	0	%100
20	M41	Z	-.005	-.005	0	%100
21	M42	Z	-.018	-.018	0	%100
22	M43	Z	-.011	-.011	0	%100
23	M44	Z	-.003	-.003	0	%100
24	M45	Z	-.005	-.005	0	%100
25	MP5	Z	-.013	-.013	0	%12.5
26	MP6	Z	-.013	-.013	0	%100
27	MP7	Z	-.013	-.013	0	%100
28	MP8	Z	-.013	-.013	0	%.1
29	MP9	Z	-.013	-.013	0	%12.5
30	MP10	Z	-.013	-.013	0	%100
31	MP11	Z	-.013	-.013	0	%100
32	MP12	Z	-.013	-.013	0	%.1
33	MP1	Z	-.013	-.013	0	%12.5
34	MP2	Z	-.013	-.013	0	%100
35	MP3	Z	-.013	-.013	0	%100
36	MP4	Z	-.013	-.013	0	%.1
37	M37A	Z	-.021	-.021	0	%100
38	M38A	Z	-.033	-.033	0	%100
39	M39A	Z	-.033	-.033	0	%100
40	M40A	Z	-.013	-.013	0	%100
41	M41A	Z	-.013	-.013	0	%100
42	M42A	Z	-.013	-.013	0	%100
43	MP5	Z	-.013	-.013	%87.5	%100
44	MP8	Z	-.013	-.013	%99.9	%100
45	MP9	Z	-.013	-.013	%87.5	%100
46	MP12	Z	-.013	-.013	%99.9	%100
47	MP1	Z	-.013	-.013	%87.5	%100
48	MP4	Z	-.013	-.013	%99.9	%100
49	M1	X	0	0	0	%100
50	M2	X	0	0	0	%100
51	M3	X	0	0	0	%100
52	M4	X	0	0	0	%100
53	M5	X	0	0	0	%100
54	M6	X	0	0	0	%100
55	M7	X	0	0	0	%100
56	M8	X	0	0	0	%100
57	M9	X	0	0	0	%100
58	M10	X	0	0	0	%100
59	M11	X	0	0	0	%100
60	M12	X	0	0	0	%100
61	M13	X	0	0	0	%100
62	M14	X	0	0	0	%100
63	M15	X	0	0	0	%100
64	M37	X	0	0	0	%100
65	M38	X	0	0	0	%100

Member Distributed Loads (BLC 9 : Full Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
66	M39	X	0	0	0	%100
67	M40	X	0	0	0	%100
68	M41	X	0	0	0	%100
69	M42	X	0	0	0	%100
70	M43	X	0	0	0	%100
71	M44	X	0	0	0	%100
72	M45	X	0	0	0	%100
73	MP5	X	0	0	0	%12.5
74	MP6	X	0	0	0	%100
75	MP7	X	0	0	0	%100
76	MP8	X	0	0	0	%.1
77	MP9	X	0	0	0	%12.5
78	MP10	X	0	0	0	%100
79	MP11	X	0	0	0	%100
80	MP12	X	0	0	0	%.1
81	MP1	X	0	0	0	%100
82	MP2	X	0	0	0	%100
83	MP3	X	0	0	0	%100
84	MP4	X	0	0	0	%100
85	M37A	X	0	0	0	%100
86	M38A	X	0	0	0	%100
87	M39A	X	0	0	0	%100
88	M40A	X	0	0	0	%100
89	M41A	X	0	0	0	%100
90	M42A	X	0	0	0	%100
91	MP5	X	0	0	%87.5	%100
92	MP8	X	0	0	%99.9	%100
93	MP9	X	0	0	%87.5	%100
94	MP12	X	0	0	%99.9	%100

Member Distributed Loads (BLC 10 : Full Wind Members (30 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.01	-.01	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	-.019	-.019	0	%100
5	M5	Z	-.029	-.029	0	%100
6	M6	Z	-.01	-.01	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	-.019	-.019	0	%100
9	M9	Z	-.029	-.029	0	%100
10	M10	Z	-.01	-.01	0	%100
11	M11	Z	-.01	-.01	0	%100
12	M12	Z	0	0	0	%100
13	M13	Z	-.01	-.01	0	%100
14	M14	Z	0	0	0	%100
15	M15	Z	-.01	-.01	0	%100
16	M37	Z	-.026	-.026	0	%100
17	M38	Z	-.006	-.006	0	%100
18	M39	Z	-.006	-.006	0	%100
19	M40	Z	-.007	-.007	0	%100
20	M41	Z	0	0	0	%100
21	M42	Z	-.012	-.012	0	%100
22	M43	Z	-.007	-.007	0	%100
23	M44	Z	0	0	0	%100
24	M45	Z	-.012	-.012	0	%100

Member Distributed Loads (BLC 10 : Full Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
25	MP5	Z	-.011	-.011	0	%12.5
26	MP6	Z	-.011	-.011	0	%100
27	MP7	Z	-.011	-.011	0	%100
28	MP8	Z	-.011	-.011	0	%.1
29	MP9	Z	-.011	-.011	0	%12.5
30	MP10	Z	-.011	-.011	0	%100
31	MP11	Z	-.011	-.011	0	%100
32	MP12	Z	-.011	-.011	0	%.1
33	MP1	Z	-.011	-.011	0	%12.5
34	MP2	Z	-.011	-.011	0	%100
35	MP3	Z	-.011	-.011	0	%100
36	MP4	Z	-.011	-.011	0	%.1
37	M37A	Z	-.022	-.022	0	%100
38	M38A	Z	-.032	-.032	0	%100
39	M39A	Z	-.022	-.022	0	%100
40	M40A	Z	-.011	-.011	0	%100
41	M41A	Z	-.011	-.011	0	%100
42	M42A	Z	-.011	-.011	0	%100
43	MP5	Z	-.011	-.011	%87.5	%100
44	MP8	Z	-.011	-.011	%99.9	%100
45	MP9	Z	-.011	-.011	%87.5	%100
46	MP12	Z	-.011	-.011	%99.9	%100
47	MP1	Z	-.011	-.011	%87.5	%100
48	MP4	Z	-.011	-.011	%99.9	%100
49	M1	X	.006	.006	0	%100
50	M2	X	0	0	0	%100
51	M3	X	0	0	0	%100
52	M4	X	.011	.011	0	%100
53	M5	X	.017	.017	0	%100
54	M6	X	.006	.006	0	%100
55	M7	X	0	0	0	%100
56	M8	X	.011	.011	0	%100
57	M9	X	.017	.017	0	%100
58	M10	X	.006	.006	0	%100
59	M11	X	.006	.006	0	%100
60	M12	X	0	0	0	%100
61	M13	X	.006	.006	0	%100
62	M14	X	0	0	0	%100
63	M15	X	.006	.006	0	%100
64	M37	X	.015	.015	0	%100
65	M38	X	.004	.004	0	%100
66	M39	X	.004	.004	0	%100
67	M40	X	.004	.004	0	%100
68	M41	X	0	0	0	%100
69	M42	X	.007	.007	0	%100
70	M43	X	.004	.004	0	%100
71	M44	X	0	0	0	%100
72	M45	X	.007	.007	0	%100
73	MP5	X	.006	.006	0	%12.5
74	MP6	X	.006	.006	0	%100
75	MP7	X	.006	.006	0	%100
76	MP8	X	.006	.006	0	%.1
77	MP9	X	.006	.006	0	%12.5
78	MP10	X	.006	.006	0	%100
79	MP11	X	.006	.006	0	%100
80	MP12	X	.006	.006	0	%.1
81	MP1	X	.006	.006	0	%100

Member Distributed Loads (BLC 10 : Full Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
82	MP2	X	.006	.006	0	%100
83	MP3	X	.006	.006	0	%100
84	MP4	X	.006	.006	0	%100
85	M37A	X	.012	.012	0	%100
86	M38A	X	.018	.018	0	%100
87	M39A	X	.012	.012	0	%100
88	M40A	X	.006	.006	0	%100
89	M41A	X	.006	.006	0	%100
90	M42A	X	.006	.006	0	%100
91	MP5	X	.006	.006	%87.5	%100
92	MP8	X	.006	.006	%99.9	%100
93	MP9	X	.006	.006	%87.5	%100
94	MP12	X	.006	.006	%99.9	%100

Member Distributed Loads (BLC 11 : Full Wind Members (60 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.008	-.008	0	%100
2	M2	Z	-.004	-.004	0	%100
3	M3	Z	-.006	-.006	0	%100
4	M4	Z	-.004	-.004	0	%100
5	M5	Z	-.006	-.006	0	%100
6	M6	Z	-.002	-.002	0	%100
7	M7	Z	-.002	-.002	0	%100
8	M8	Z	-.015	-.015	0	%100
9	M9	Z	-.022	-.022	0	%100
10	M10	Z	-.002	-.002	0	%100
11	M11	Z	-.007	-.007	0	%100
12	M12	Z	-.002	-.002	0	%100
13	M13	Z	-.007	-.007	0	%100
14	M14	Z	-.002	-.002	0	%100
15	M15	Z	-.002	-.002	0	%100
16	M37	Z	-.011	-.011	0	%100
17	M38	Z	0	0	0	%100
18	M39	Z	-.011	-.011	0	%100
19	M40	Z	-.005	-.005	0	%100
20	M41	Z	-.002	-.002	0	%100
21	M42	Z	-.002	-.002	0	%100
22	M43	Z	-.001	-.001	0	%100
23	M44	Z	-.001	-.001	0	%100
24	M45	Z	-.009	-.009	0	%100
25	MP5	Z	-.006	-.006	0	%12.5
26	MP6	Z	-.006	-.006	0	%100
27	MP7	Z	-.006	-.006	0	%100
28	MP8	Z	-.006	-.006	0	%.1
29	MP9	Z	-.006	-.006	0	%12.5
30	MP10	Z	-.006	-.006	0	%100
31	MP11	Z	-.006	-.006	0	%100
32	MP12	Z	-.006	-.006	0	%.1
33	MP1	Z	-.006	-.006	0	%12.5
34	MP2	Z	-.006	-.006	0	%100
35	MP3	Z	-.006	-.006	0	%100
36	MP4	Z	-.006	-.006	0	%.1
37	M37A	Z	-.016	-.016	0	%100
38	M38A	Z	-.016	-.016	0	%100
39	M39A	Z	-.01	-.01	0	%100
40	M40A	Z	-.006	-.006	0	%100

Member Distributed Loads (BLC 11 : Full Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
41	M41A	Z	-.006	-.006	0	%100
42	M42A	Z	-.006	-.006	0	%100
43	MP5	Z	-.006	-.006	%87.5	%100
44	MP8	Z	-.006	-.006	%99.9	%100
45	MP9	Z	-.006	-.006	%87.5	%100
46	MP12	Z	-.006	-.006	%99.9	%100
47	MP1	Z	-.006	-.006	%87.5	%100
48	MP4	Z	-.006	-.006	%99.9	%100
49	M1	X	.013	.013	0	%100
50	M2	X	.006	.006	0	%100
51	M3	X	.01	.01	0	%100
52	M4	X	.006	.006	0	%100
53	M5	X	.01	.01	0	%100
54	M6	X	.003	.003	0	%100
55	M7	X	.003	.003	0	%100
56	M8	X	.026	.026	0	%100
57	M9	X	.038	.038	0	%100
58	M10	X	.003	.003	0	%100
59	M11	X	.013	.013	0	%100
60	M12	X	.003	.003	0	%100
61	M13	X	.013	.013	0	%100
62	M14	X	.003	.003	0	%100
63	M15	X	.003	.003	0	%100
64	M37	X	.019	.019	0	%100
65	M38	X	0	0	0	%100
66	M39	X	.019	.019	0	%100
67	M40	X	.009	.009	0	%100
68	M41	X	.004	.004	0	%100
69	M42	X	.004	.004	0	%100
70	M43	X	.002	.002	0	%100
71	M44	X	.002	.002	0	%100
72	M45	X	.016	.016	0	%100
73	MP5	X	.011	.011	0	%12.5
74	MP6	X	.011	.011	0	%100
75	MP7	X	.011	.011	0	%100
76	MP8	X	.011	.011	0	%.1
77	MP9	X	.011	.011	0	%12.5
78	MP10	X	.011	.011	0	%100
79	MP11	X	.011	.011	0	%100
80	MP12	X	.011	.011	0	%.1
81	MP1	X	.011	.011	0	%100
82	MP2	X	.011	.011	0	%100
83	MP3	X	.011	.011	0	%100
84	MP4	X	.011	.011	0	%100
85	M37A	X	.029	.029	0	%100
86	M38A	X	.029	.029	0	%100
87	M39A	X	.018	.018	0	%100
88	M40A	X	.011	.011	0	%100
89	M41A	X	.011	.011	0	%100
90	M42A	X	.011	.011	0	%100
91	MP5	X	.011	.011	%87.5	%100
92	MP8	X	.011	.011	%99.9	%100
93	MP9	X	.011	.011	%87.5	%100
94	MP12	X	.011	.011	%99.9	%100

Member Distributed Loads (BLC 12 : Full Wind Members (90 Deg))

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]

Member Distributed Loads (BLC 12 : Full Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	0	0	0	%100
12	M12	Z	0	0	0	%100
13	M13	Z	0	0	0	%100
14	M14	Z	0	0	0	%100
15	M15	Z	0	0	0	%100
16	M37	Z	0	0	0	%100
17	M38	Z	0	0	0	%100
18	M39	Z	0	0	0	%100
19	M40	Z	0	0	0	%100
20	M41	Z	0	0	0	%100
21	M42	Z	0	0	0	%100
22	M43	Z	0	0	0	%100
23	M44	Z	0	0	0	%100
24	M45	Z	0	0	0	%100
25	MP5	Z	0	0	0	%12.5
26	MP6	Z	0	0	0	%100
27	MP7	Z	0	0	0	%100
28	MP8	Z	0	0	0	%.1
29	MP9	Z	0	0	0	%12.5
30	MP10	Z	0	0	0	%100
31	MP11	Z	0	0	0	%100
32	MP12	Z	0	0	0	%.1
33	MP1	Z	0	0	0	%12.5
34	MP2	Z	0	0	0	%100
35	MP3	Z	0	0	0	%100
36	MP4	Z	0	0	0	%.1
37	M37A	Z	0	0	0	%100
38	M38A	Z	0	0	0	%100
39	M39A	Z	0	0	0	%100
40	M40A	Z	0	0	0	%100
41	M41A	Z	0	0	0	%100
42	M42A	Z	0	0	0	%100
43	MP5	Z	0	0	%87.5	%100
44	MP8	Z	0	0	%99.9	%100
45	MP9	Z	0	0	%87.5	%100
46	MP12	Z	0	0	%99.9	%100
47	MP1	Z	0	0	%87.5	%100
48	MP4	Z	0	0	%99.9	%100
49	M1	X	.012	.012	0	%100
50	M2	X	.022	.022	0	%100
51	M3	X	.033	.033	0	%100
52	M4	X	0	0	0	%100
53	M5	X	0	0	0	%100
54	M6	X	0	0	0	%100
55	M7	X	.012	.012	0	%100
56	M8	X	.022	.022	0	%100
57	M9	X	.033	.033	0	%100

Member Distributed Loads (BLC 12 : Full Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
58	M10	X	0	0	0	%100
59	M11	X	.011	.011	0	%100
60	M12	X	.011	.011	0	%100
61	M13	X	.011	.011	0	%100
62	M14	X	.011	.011	0	%100
63	M15	X	0	0	0	%100
64	M37	X	.007	.007	0	%100
65	M38	X	.007	.007	0	%100
66	M39	X	.03	.03	0	%100
67	M40	X	.008	.008	0	%100
68	M41	X	.014	.014	0	%100
69	M42	X	0	0	0	%100
70	M43	X	0	0	0	%100
71	M44	X	.008	.008	0	%100
72	M45	X	.014	.014	0	%100
73	MP5	X	.013	.013	0	%12.5
74	MP6	X	.013	.013	0	%100
75	MP7	X	.013	.013	0	%100
76	MP8	X	.013	.013	0	%.1
77	MP9	X	.013	.013	0	%12.5
78	MP10	X	.013	.013	0	%100
79	MP11	X	.013	.013	0	%100
80	MP12	X	.013	.013	0	%.1
81	MP1	X	.013	.013	0	%100
82	MP2	X	.013	.013	0	%100
83	MP3	X	.013	.013	0	%100
84	MP4	X	.013	.013	0	%100
85	M37A	X	.037	.037	0	%100
86	M38A	X	.025	.025	0	%100
87	M39A	X	.025	.025	0	%100
88	M40A	X	.013	.013	0	%100
89	M41A	X	.013	.013	0	%100
90	M42A	X	.013	.013	0	%100
91	MP5	X	.013	.013	%87.5	%100
92	MP8	X	.013	.013	%99.9	%100
93	MP9	X	.013	.013	%87.5	%100
94	MP12	X	.013	.013	%99.9	%100

Member Distributed Loads (BLC 13 : Full Wind Members (120 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	.002	.002	0	%100
2	M2	Z	.015	.015	0	%100
3	M3	Z	.022	.022	0	%100
4	M4	Z	.004	.004	0	%100
5	M5	Z	.006	.006	0	%100
6	M6	Z	.002	.002	0	%100
7	M7	Z	.008	.008	0	%100
8	M8	Z	.004	.004	0	%100
9	M9	Z	.006	.006	0	%100
10	M10	Z	.002	.002	0	%100
11	M11	Z	.002	.002	0	%100
12	M12	Z	.007	.007	0	%100
13	M13	Z	.002	.002	0	%100
14	M14	Z	.007	.007	0	%100
15	M15	Z	.002	.002	0	%100
16	M37	Z	0	0	0	%100

Member Distributed Loads (BLC 13 : Full Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
17	M38	Z	.011	.011	0	%100
18	M39	Z	.011	.011	0	%100
19	M40	Z	.001	.001	0	%100
20	M41	Z	.009	.009	0	%100
21	M42	Z	.002	.002	0	%100
22	M43	Z	.001	.001	0	%100
23	M44	Z	.005	.005	0	%100
24	M45	Z	.002	.002	0	%100
25	MP5	Z	.006	.006	0	%12.5
26	MP6	Z	.006	.006	0	%100
27	MP7	Z	.006	.006	0	%100
28	MP8	Z	.006	.006	0	%.1
29	MP9	Z	.006	.006	0	%12.5
30	MP10	Z	.006	.006	0	%100
31	MP11	Z	.006	.006	0	%100
32	MP12	Z	.006	.006	0	%.1
33	MP1	Z	.006	.006	0	%12.5
34	MP2	Z	.006	.006	0	%100
35	MP3	Z	.006	.006	0	%100
36	MP4	Z	.006	.006	0	%.1
37	M37A	Z	.016	.016	0	%100
38	M38A	Z	.01	.01	0	%100
39	M39A	Z	.016	.016	0	%100
40	M40A	Z	.006	.006	0	%100
41	M41A	Z	.006	.006	0	%100
42	M42A	Z	.006	.006	0	%100
43	MP5	Z	.006	.006	%87.5	%100
44	MP8	Z	.006	.006	%99.9	%100
45	MP9	Z	.006	.006	%87.5	%100
46	MP12	Z	.006	.006	%99.9	%100
47	MP1	Z	.006	.006	%87.5	%100
48	MP4	Z	.006	.006	%99.9	%100
49	M1	X	.003	.003	0	%100
50	M2	X	.026	.026	0	%100
51	M3	X	.038	.038	0	%100
52	M4	X	.006	.006	0	%100
53	M5	X	.01	.01	0	%100
54	M6	X	.003	.003	0	%100
55	M7	X	.013	.013	0	%100
56	M8	X	.006	.006	0	%100
57	M9	X	.01	.01	0	%100
58	M10	X	.003	.003	0	%100
59	M11	X	.003	.003	0	%100
60	M12	X	.013	.013	0	%100
61	M13	X	.003	.003	0	%100
62	M14	X	.013	.013	0	%100
63	M15	X	.003	.003	0	%100
64	M37	X	0	0	0	%100
65	M38	X	.019	.019	0	%100
66	M39	X	.019	.019	0	%100
67	M40	X	.002	.002	0	%100
68	M41	X	.016	.016	0	%100
69	M42	X	.004	.004	0	%100
70	M43	X	.002	.002	0	%100
71	M44	X	.009	.009	0	%100
72	M45	X	.004	.004	0	%100
73	MP5	X	.011	.011	0	%12.5

Member Distributed Loads (BLC 13 : Full Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
74	MP6	X	.011	.011	0	%100
75	MP7	X	.011	.011	0	%100
76	MP8	X	.011	.011	0	%.1
77	MP9	X	.011	.011	0	%12.5
78	MP10	X	.011	.011	0	%100
79	MP11	X	.011	.011	0	%100
80	MP12	X	.011	.011	0	%.1
81	MP1	X	.011	.011	0	%100
82	MP2	X	.011	.011	0	%100
83	MP3	X	.011	.011	0	%100
84	MP4	X	.011	.011	0	%100
85	M37A	X	.029	.029	0	%100
86	M38A	X	.018	.018	0	%100
87	M39A	X	.029	.029	0	%100
88	M40A	X	.011	.011	0	%100
89	M41A	X	.011	.011	0	%100
90	M42A	X	.011	.011	0	%100
91	MP5	X	.011	.011	%87.5	%100
92	MP8	X	.011	.011	%99.9	%100
93	MP9	X	.011	.011	%87.5	%100
94	MP12	X	.011	.011	%99.9	%100

Member Distributed Loads (BLC 14 : Full Wind Members (150 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	0	0	0	%100
2	M2	Z	.019	.019	0	%100
3	M3	Z	.029	.029	0	%100
4	M4	Z	.019	.019	0	%100
5	M5	Z	.029	.029	0	%100
6	M6	Z	.01	.01	0	%100
7	M7	Z	.01	.01	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	.01	.01	0	%100
11	M11	Z	0	0	0	%100
12	M12	Z	.01	.01	0	%100
13	M13	Z	0	0	0	%100
14	M14	Z	.01	.01	0	%100
15	M15	Z	.01	.01	0	%100
16	M37	Z	.006	.006	0	%100
17	M38	Z	.026	.026	0	%100
18	M39	Z	.006	.006	0	%100
19	M40	Z	0	0	0	%100
20	M41	Z	.012	.012	0	%100
21	M42	Z	.012	.012	0	%100
22	M43	Z	.007	.007	0	%100
23	M44	Z	.007	.007	0	%100
24	M45	Z	0	0	0	%100
25	MP5	Z	.011	.011	0	%12.5
26	MP6	Z	.011	.011	0	%100
27	MP7	Z	.011	.011	0	%100
28	MP8	Z	.011	.011	0	%.1
29	MP9	Z	.011	.011	0	%12.5
30	MP10	Z	.011	.011	0	%100
31	MP11	Z	.011	.011	0	%100
32	MP12	Z	.011	.011	0	%.1

Member Distributed Loads (BLC 14 : Full Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
33	MP1	Z	.011	.011	0	%12.5
34	MP2	Z	.011	.011	0	%100
35	MP3	Z	.011	.011	0	%100
36	MP4	Z	.011	.011	0	%.1
37	M37A	Z	.022	.022	0	%100
38	M38A	Z	.022	.022	0	%100
39	M39A	Z	.032	.032	0	%100
40	M40A	Z	.011	.011	0	%100
41	M41A	Z	.011	.011	0	%100
42	M42A	Z	.011	.011	0	%100
43	MP5	Z	.011	.011	%87.5	%100
44	MP8	Z	.011	.011	%99.9	%100
45	MP9	Z	.011	.011	%87.5	%100
46	MP12	Z	.011	.011	%99.9	%100
47	MP1	Z	.011	.011	%87.5	%100
48	MP4	Z	.011	.011	%99.9	%100
49	M1	X	0	0	0	%100
50	M2	X	.011	.011	0	%100
51	M3	X	.017	.017	0	%100
52	M4	X	.011	.011	0	%100
53	M5	X	.017	.017	0	%100
54	M6	X	.006	.006	0	%100
55	M7	X	.006	.006	0	%100
56	M8	X	0	0	0	%100
57	M9	X	0	0	0	%100
58	M10	X	.006	.006	0	%100
59	M11	X	0	0	0	%100
60	M12	X	.006	.006	0	%100
61	M13	X	0	0	0	%100
62	M14	X	.006	.006	0	%100
63	M15	X	.006	.006	0	%100
64	M37	X	.004	.004	0	%100
65	M38	X	.015	.015	0	%100
66	M39	X	.004	.004	0	%100
67	M40	X	0	0	0	%100
68	M41	X	.007	.007	0	%100
69	M42	X	.007	.007	0	%100
70	M43	X	.004	.004	0	%100
71	M44	X	.004	.004	0	%100
72	M45	X	0	0	0	%100
73	MP5	X	.006	.006	0	%12.5
74	MP6	X	.006	.006	0	%100
75	MP7	X	.006	.006	0	%100
76	MP8	X	.006	.006	0	%.1
77	MP9	X	.006	.006	0	%12.5
78	MP10	X	.006	.006	0	%100
79	MP11	X	.006	.006	0	%100
80	MP12	X	.006	.006	0	%.1
81	MP1	X	.006	.006	0	%100
82	MP2	X	.006	.006	0	%100
83	MP3	X	.006	.006	0	%100
84	MP4	X	.006	.006	0	%100
85	M37A	X	.012	.012	0	%100
86	M38A	X	.012	.012	0	%100
87	M39A	X	.018	.018	0	%100
88	M40A	X	.006	.006	0	%100
89	M41A	X	.006	.006	0	%100

Member Distributed Loads (BLC 14 : Full Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
90	M42A	X	.006	.006	0	%100
91	MP5	X	.006	.006	%87.5	%100
92	MP8	X	.006	.006	%99.9	%100
93	MP9	X	.006	.006	%87.5	%100
94	MP12	X	.006	.006	%99.9	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.001	-.001	0	%100
2	M2	Z	-.002	-.002	0	%100
3	M3	Z	-.003	-.003	0	%100
4	M4	Z	-.007	-.007	0	%100
5	M5	Z	-.011	-.011	0	%100
6	M6	Z	-.005	-.005	0	%100
7	M7	Z	-.001	-.001	0	%100
8	M8	Z	-.002	-.002	0	%100
9	M9	Z	-.003	-.003	0	%100
10	M10	Z	-.005	-.005	0	%100
11	M11	Z	-.001	-.001	0	%100
12	M12	Z	-.001	-.001	0	%100
13	M13	Z	-.001	-.001	0	%100
14	M14	Z	-.001	-.001	0	%100
15	M15	Z	-.005	-.005	0	%100
16	M37	Z	-.006	-.006	0	%100
17	M38	Z	-.006	-.006	0	%100
18	M39	Z	0	0	0	%100
19	M40	Z	-.001	-.001	0	%100
20	M41	Z	-.002	-.002	0	%100
21	M42	Z	-.007	-.007	0	%100
22	M43	Z	-.004	-.004	0	%100
23	M44	Z	-.001	-.001	0	%100
24	M45	Z	-.002	-.002	0	%100
25	MP5	Z	-.005	-.005	0	%12.5
26	MP6	Z	-.005	-.005	0	%100
27	MP7	Z	-.005	-.005	0	%100
28	MP8	Z	-.005	-.005	0	%.1
29	MP9	Z	-.005	-.005	0	%12.5
30	MP10	Z	-.005	-.005	0	%100
31	MP11	Z	-.005	-.005	0	%100
32	MP12	Z	-.005	-.005	0	%.1
33	MP1	Z	-.005	-.005	0	%12.5
34	MP2	Z	-.005	-.005	0	%100
35	MP3	Z	-.005	-.005	0	%100
36	MP4	Z	-.005	-.005	0	%.1
37	M37A	Z	-.005	-.005	0	%100
38	M38A	Z	-.008	-.008	0	%100
39	M39A	Z	-.008	-.008	0	%100
40	M40A	Z	-.005	-.005	0	%100
41	M41A	Z	-.005	-.005	0	%100
42	M42A	Z	-.005	-.005	0	%100
43	M43A	Z	-.004	-.004	0	%100
44	M44A	Z	-.004	-.004	0	%100
45	M45A	Z	-.004	-.004	0	%100
46	M46	Z	-.003	-.003	0	%100
47	M47	Z	-.004	-.004	0	%100
48	M48	Z	-.004	-.004	0	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
49	M49	Z	-.004	-.004	0	%100
50	M50	Z	-.004	-.004	0	%100
51	M51	Z	-.004	-.004	0	%100
52	M52	Z	-.004	-.004	0	%100
53	M53	Z	-.004	-.004	0	%100
54	M54	Z	-.004	-.004	0	%100
55	M55	Z	-.004	-.004	0	%100
56	M56	Z	-.004	-.004	0	%100
57	M57	Z	-.004	-.004	0	%100
58	M58	Z	-.004	-.004	0	%100
59	M59	Z	0	0	0	%100
60	M60	Z	0	0	0	%100
61	M61	Z	0	0	0	%100
62	M62	Z	0	0	0	%100
63	M63	Z	0	0	0	%100
64	M64	Z	0	0	0	%100
65	M65	Z	0	0	0	%100
66	M66	Z	0	0	0	%100
67	MP5	Z	-.005	-.005	%87.5	%100
68	MP8	Z	-.005	-.005	%99.9	%100
69	MP9	Z	-.005	-.005	%87.5	%100
70	MP12	Z	-.005	-.005	%99.9	%100
71	MP1	Z	-.005	-.005	%87.5	%100
72	MP4	Z	-.005	-.005	%99.9	%100
73	M1	X	0	0	0	%100
74	M2	X	0	0	0	%100
75	M3	X	0	0	0	%100
76	M4	X	0	0	0	%100
77	M5	X	0	0	0	%100
78	M6	X	0	0	0	%100
79	M7	X	0	0	0	%100
80	M8	X	0	0	0	%100
81	M9	X	0	0	0	%100
82	M10	X	0	0	0	%100
83	M11	X	0	0	0	%100
84	M12	X	0	0	0	%100
85	M13	X	0	0	0	%100
86	M14	X	0	0	0	%100
87	M15	X	0	0	0	%100
88	M37	X	0	0	0	%100
89	M38	X	0	0	0	%100
90	M39	X	0	0	0	%100
91	M40	X	0	0	0	%100
92	M41	X	0	0	0	%100
93	M42	X	0	0	0	%100
94	M43	X	0	0	0	%100
95	M44	X	0	0	0	%100
96	M45	X	0	0	0	%100
97	MP5	X	0	0	0	%12.5
98	MP6	X	0	0	0	%100
99	MP7	X	0	0	0	%100
100	MP8	X	0	0	0	%.1
101	MP9	X	0	0	0	%12.5
102	MP10	X	0	0	0	%100
103	MP11	X	0	0	0	%100
104	MP12	X	0	0	0	%.1
105	MP1	X	0	0	0	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
106	MP2	X	0	0	0	%100
107	MP3	X	0	0	0	%100
108	MP4	X	0	0	0	%100
109	M37A	X	0	0	0	%100
110	M38A	X	0	0	0	%100
111	M39A	X	0	0	0	%100
112	M40A	X	0	0	0	%100
113	M41A	X	0	0	0	%100
114	M42A	X	0	0	0	%100
115	M43A	X	0	0	0	%100
116	M44A	X	0	0	0	%100
117	M45A	X	0	0	0	%100
118	M46	X	0	0	0	%100
119	M47	X	0	0	0	%100
120	M48	X	0	0	0	%100
121	M49	X	0	0	0	%100
122	M50	X	0	0	0	%100
123	M51	X	0	0	0	%100
124	M52	X	0	0	0	%100
125	M53	X	0	0	0	%100
126	M54	X	0	0	0	%100
127	M55	X	0	0	0	%100
128	M56	X	0	0	0	%100
129	M57	X	0	0	0	%100
130	M58	X	0	0	0	%100
131	M59	X	0	0	0	%100
132	M60	X	0	0	0	%100
133	M61	X	0	0	0	%100
134	M62	X	0	0	0	%100
135	M63	X	0	0	0	%100
136	M64	X	0	0	0	%100
137	M65	X	0	0	0	%100
138	M66	X	0	0	0	%100
139	MP5	X	0	0	%87.5	%100
140	MP8	X	0	0	%99.9	%100
141	MP9	X	0	0	%87.5	%100
142	MP12	X	0	0	%99.9	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.002	-.002	0	%100
2	M2	Z	-.001	-.001	0	%100
3	M3	Z	-.001	-.001	0	%100
4	M4	Z	-.005	-.005	0	%100
5	M5	Z	-.008	-.008	0	%100
6	M6	Z	-.004	-.004	0	%100
7	M7	Z	-.001	-.001	0	%100
8	M8	Z	-.004	-.004	0	%100
9	M9	Z	-.006	-.006	0	%100
10	M10	Z	-.004	-.004	0	%100
11	M11	Z	-.002	-.002	0	%100
12	M12	Z	-.001	-.001	0	%100
13	M13	Z	-.002	-.002	0	%100
14	M14	Z	-.001	-.001	0	%100
15	M15	Z	-.004	-.004	0	%100
16	M37	Z	-.006	-.006	0	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
17	M38	Z	-.003	-.003	0	%100
18	M39	Z	-.001	-.001	0	%100
19	M40	Z	-.002	-.002	0	%100
20	M41	Z	-.001	-.001	0	%100
21	M42	Z	-.005	-.005	0	%100
22	M43	Z	-.003	-.003	0	%100
23	M44	Z	-.001	-.001	0	%100
24	M45	Z	-.003	-.003	0	%100
25	MP5	Z	-.004	-.004	0	%12.5
26	MP6	Z	-.004	-.004	0	%100
27	MP7	Z	-.004	-.004	0	%100
28	MP8	Z	-.004	-.004	0	%.1
29	MP9	Z	-.004	-.004	0	%12.5
30	MP10	Z	-.004	-.004	0	%100
31	MP11	Z	-.004	-.004	0	%100
32	MP12	Z	-.004	-.004	0	%.1
33	MP1	Z	-.004	-.004	0	%12.5
34	MP2	Z	-.004	-.004	0	%100
35	MP3	Z	-.004	-.004	0	%100
36	MP4	Z	-.004	-.004	0	%.1
37	M37A	Z	-.006	-.006	0	%100
38	M38A	Z	-.008	-.008	0	%100
39	M39A	Z	-.006	-.006	0	%100
40	M40A	Z	-.004	-.004	0	%100
41	M41A	Z	-.004	-.004	0	%100
42	M42A	Z	-.004	-.004	0	%100
43	M43A	Z	-.003	-.003	0	%100
44	M44A	Z	-.003	-.003	0	%100
45	M45A	Z	-.004	-.004	0	%100
46	M46	Z	-.003	-.003	0	%100
47	M47	Z	-.003	-.003	0	%100
48	M48	Z	-.003	-.003	0	%100
49	M49	Z	-.003	-.003	0	%100
50	M50	Z	-.003	-.003	0	%100
51	M51	Z	-.003	-.003	0	%100
52	M52	Z	-.003	-.003	0	%100
53	M53	Z	-.003	-.003	0	%100
54	M54	Z	-.003	-.003	0	%100
55	M55	Z	-.003	-.003	0	%100
56	M56	Z	-.003	-.003	0	%100
57	M57	Z	-.003	-.003	0	%100
58	M58	Z	-.003	-.003	0	%100
59	M59	Z	0	0	0	%100
60	M60	Z	0	0	0	%100
61	M61	Z	0	0	0	%100
62	M62	Z	0	0	0	%100
63	M63	Z	0	0	0	%100
64	M64	Z	0	0	0	%100
65	M65	Z	0	0	0	%100
66	M66	Z	0	0	0	%100
67	MP5	Z	-.004	-.004	%87.5	%100
68	MP8	Z	-.004	-.004	%99.9	%100
69	MP9	Z	-.004	-.004	%87.5	%100
70	MP12	Z	-.004	-.004	%99.9	%100
71	MP1	Z	-.004	-.004	%87.5	%100
72	MP4	Z	-.004	-.004	%99.9	%100
73	M1	X	.001	.001	0	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
74	M2	X	0	0	0	%100
75	M3	X	.001	.001	0	%100
76	M4	X	.003	.003	0	%100
77	M5	X	.005	.005	0	%100
78	M6	X	.002	.002	0	%100
79	M7	X	0	0	0	%100
80	M8	X	.002	.002	0	%100
81	M9	X	.003	.003	0	%100
82	M10	X	.002	.002	0	%100
83	M11	X	.001	.001	0	%100
84	M12	X	0	0	0	%100
85	M13	X	.001	.001	0	%100
86	M14	X	0	0	0	%100
87	M15	X	.002	.002	0	%100
88	M37	X	.003	.003	0	%100
89	M38	X	.002	.002	0	%100
90	M39	X	.001	.001	0	%100
91	M40	X	.001	.001	0	%100
92	M41	X	0	0	0	%100
93	M42	X	.003	.003	0	%100
94	M43	X	.002	.002	0	%100
95	M44	X	0	0	0	%100
96	M45	X	.002	.002	0	%100
97	MP5	X	.002	.002	0	%12.5
98	MP6	X	.002	.002	0	%100
99	MP7	X	.002	.002	0	%100
100	MP8	X	.002	.002	0	%.1
101	MP9	X	.002	.002	0	%12.5
102	MP10	X	.002	.002	0	%100
103	MP11	X	.002	.002	0	%100
104	MP12	X	.002	.002	0	%.1
105	MP1	X	.002	.002	0	%100
106	MP2	X	.002	.002	0	%100
107	MP3	X	.002	.002	0	%100
108	MP4	X	.002	.002	0	%100
109	M37A	X	.003	.003	0	%100
110	M38A	X	.005	.005	0	%100
111	M39A	X	.003	.003	0	%100
112	M40A	X	.003	.003	0	%100
113	M41A	X	.003	.003	0	%100
114	M42A	X	.003	.003	0	%100
115	M43A	X	.002	.002	0	%100
116	M44A	X	.002	.002	0	%100
117	M45A	X	.002	.002	0	%100
118	M46	X	.002	.002	0	%100
119	M47	X	.002	.002	0	%100
120	M48	X	.002	.002	0	%100
121	M49	X	.002	.002	0	%100
122	M50	X	.002	.002	0	%100
123	M51	X	.002	.002	0	%100
124	M52	X	.002	.002	0	%100
125	M53	X	.002	.002	0	%100
126	M54	X	.002	.002	0	%100
127	M55	X	.002	.002	0	%100
128	M56	X	.002	.002	0	%100
129	M57	X	.002	.002	0	%100
130	M58	X	.002	.002	0	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
131	M59	X	0	0	0	%100
132	M60	X	0	0	0	%100
133	M61	X	0	0	0	%100
134	M62	X	0	0	0	%100
135	M63	X	0	0	0	%100
136	M64	X	0	0	0	%100
137	M65	X	0	0	0	%100
138	M66	X	0	0	0	%100
139	MP5	X	.002	.002	%87.5	%100
140	MP8	X	.002	.002	%99.9	%100
141	MP9	X	.002	.002	%87.5	%100
142	MP12	X	.002	.002	%99.9	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.002	-.002	0	%100
2	M2	Z	-.001	-.001	0	%100
3	M3	Z	-.001	-.001	0	%100
4	M4	Z	-.002	-.002	0	%100
5	M5	Z	-.003	-.003	0	%100
6	M6	Z	-.002	-.002	0	%100
7	M7	Z	-.001	-.001	0	%100
8	M8	Z	-.003	-.003	0	%100
9	M9	Z	-.004	-.004	0	%100
10	M10	Z	-.002	-.002	0	%100
11	M11	Z	-.002	-.002	0	%100
12	M12	Z	-.001	-.001	0	%100
13	M13	Z	-.002	-.002	0	%100
14	M14	Z	-.001	-.001	0	%100
15	M15	Z	-.002	-.002	0	%100
16	M37	Z	-.003	-.003	0	%100
17	M38	Z	-.001	-.001	0	%100
18	M39	Z	-.002	-.002	0	%100
19	M40	Z	-.001	-.001	0	%100
20	M41	Z	-.001	-.001	0	%100
21	M42	Z	-.002	-.002	0	%100
22	M43	Z	-.001	-.001	0	%100
23	M44	Z	-.001	-.001	0	%100
24	M45	Z	-.002	-.002	0	%100
25	MP5	Z	-.002	-.002	0	%12.5
26	MP6	Z	-.002	-.002	0	%100
27	MP7	Z	-.002	-.002	0	%100
28	MP8	Z	-.002	-.002	0	%.1
29	MP9	Z	-.002	-.002	0	%12.5
30	MP10	Z	-.002	-.002	0	%100
31	MP11	Z	-.002	-.002	0	%100
32	MP12	Z	-.002	-.002	0	%.1
33	MP1	Z	-.002	-.002	0	%12.5
34	MP2	Z	-.002	-.002	0	%100
35	MP3	Z	-.002	-.002	0	%100
36	MP4	Z	-.002	-.002	0	%.1
37	M37A	Z	-.004	-.004	0	%100
38	M38A	Z	-.004	-.004	0	%100
39	M39A	Z	-.003	-.003	0	%100
40	M40A	Z	-.003	-.003	0	%100
41	M41A	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
42	M42A	Z	-.003	-.003	0	%100
43	M43A	Z	-.002	-.002	0	%100
44	M44A	Z	-.002	-.002	0	%100
45	M45A	Z	-.002	-.002	0	%100
46	M46	Z	-.002	-.002	0	%100
47	M47	Z	-.002	-.002	0	%100
48	M48	Z	-.002	-.002	0	%100
49	M49	Z	-.002	-.002	0	%100
50	M50	Z	-.002	-.002	0	%100
51	M51	Z	-.002	-.002	0	%100
52	M52	Z	-.002	-.002	0	%100
53	M53	Z	-.002	-.002	0	%100
54	M54	Z	-.002	-.002	0	%100
55	M55	Z	-.002	-.002	0	%100
56	M56	Z	-.002	-.002	0	%100
57	M57	Z	-.002	-.002	0	%100
58	M58	Z	-.002	-.002	0	%100
59	M59	Z	0	0	0	%100
60	M60	Z	0	0	0	%100
61	M61	Z	0	0	0	%100
62	M62	Z	0	0	0	%100
63	M63	Z	0	0	0	%100
64	M64	Z	0	0	0	%100
65	M65	Z	0	0	0	%100
66	M66	Z	0	0	0	%100
67	MP5	Z	-.002	-.002	%87.5	%100
68	MP8	Z	-.002	-.002	%99.9	%100
69	MP9	Z	-.002	-.002	%87.5	%100
70	MP12	Z	-.002	-.002	%99.9	%100
71	MP1	Z	-.002	-.002	%87.5	%100
72	MP4	Z	-.002	-.002	%99.9	%100
73	M1	X	.003	.003	0	%100
74	M2	X	.002	.002	0	%100
75	M3	X	.002	.002	0	%100
76	M4	X	.003	.003	0	%100
77	M5	X	.005	.005	0	%100
78	M6	X	.003	.003	0	%100
79	M7	X	.001	.001	0	%100
80	M8	X	.005	.005	0	%100
81	M9	X	.007	.007	0	%100
82	M10	X	.003	.003	0	%100
83	M11	X	.003	.003	0	%100
84	M12	X	.001	.001	0	%100
85	M13	X	.003	.003	0	%100
86	M14	X	.001	.001	0	%100
87	M15	X	.003	.003	0	%100
88	M37	X	.005	.005	0	%100
89	M38	X	.002	.002	0	%100
90	M39	X	.003	.003	0	%100
91	M40	X	.002	.002	0	%100
92	M41	X	.001	.001	0	%100
93	M42	X	.004	.004	0	%100
94	M43	X	.003	.003	0	%100
95	M44	X	.001	.001	0	%100
96	M45	X	.003	.003	0	%100
97	MP5	X	.004	.004	0	%12.5
98	MP6	X	.004	.004	0	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
99	MP7	X	.004	.004	0	%100
100	MP8	X	.004	.004	0	%.1
101	MP9	X	.004	.004	0	%12.5
102	MP10	X	.004	.004	0	%100
103	MP11	X	.004	.004	0	%100
104	MP12	X	.004	.004	0	%.1
105	MP1	X	.004	.004	0	%100
106	MP2	X	.004	.004	0	%100
107	MP3	X	.004	.004	0	%100
108	MP4	X	.004	.004	0	%100
109	M37A	X	.007	.007	0	%100
110	M38A	X	.007	.007	0	%100
111	M39A	X	.005	.005	0	%100
112	M40A	X	.004	.004	0	%100
113	M41A	X	.004	.004	0	%100
114	M42A	X	.004	.004	0	%100
115	M43A	X	.003	.003	0	%100
116	M44A	X	.003	.003	0	%100
117	M45A	X	.004	.004	0	%100
118	M46	X	.003	.003	0	%100
119	M47	X	.003	.003	0	%100
120	M48	X	.003	.003	0	%100
121	M49	X	.003	.003	0	%100
122	M50	X	.003	.003	0	%100
123	M51	X	.003	.003	0	%100
124	M52	X	.003	.003	0	%100
125	M53	X	.003	.003	0	%100
126	M54	X	.003	.003	0	%100
127	M55	X	.003	.003	0	%100
128	M56	X	.003	.003	0	%100
129	M57	X	.003	.003	0	%100
130	M58	X	.003	.003	0	%100
131	M59	X	0	0	0	%100
132	M60	X	0	0	0	%100
133	M61	X	0	0	0	%100
134	M62	X	0	0	0	%100
135	M63	X	0	0	0	%100
136	M64	X	0	0	0	%100
137	M65	X	0	0	0	%100
138	M66	X	0	0	0	%100
139	MP5	X	.004	.004	%87.5	%100
140	MP8	X	.004	.004	%99.9	%100
141	MP9	X	.004	.004	%87.5	%100
142	MP12	X	.004	.004	%99.9	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
10	M10	Z	0	0	0	%100
11	M11	Z	0	0	0	%100
12	M12	Z	0	0	0	%100
13	M13	Z	0	0	0	%100
14	M14	Z	0	0	0	%100
15	M15	Z	0	0	0	%100
16	M37	Z	0	0	0	%100
17	M38	Z	0	0	0	%100
18	M39	Z	0	0	0	%100
19	M40	Z	0	0	0	%100
20	M41	Z	0	0	0	%100
21	M42	Z	0	0	0	%100
22	M43	Z	0	0	0	%100
23	M44	Z	0	0	0	%100
24	M45	Z	0	0	0	%100
25	MP5	Z	0	0	0	%12.5
26	MP6	Z	0	0	0	%100
27	MP7	Z	0	0	0	%100
28	MP8	Z	0	0	0	%.1
29	MP9	Z	0	0	0	%12.5
30	MP10	Z	0	0	0	%100
31	MP11	Z	0	0	0	%100
32	MP12	Z	0	0	0	%.1
33	MP1	Z	0	0	0	%12.5
34	MP2	Z	0	0	0	%100
35	MP3	Z	0	0	0	%100
36	MP4	Z	0	0	0	%.1
37	M37A	Z	0	0	0	%100
38	M38A	Z	0	0	0	%100
39	M39A	Z	0	0	0	%100
40	M40A	Z	0	0	0	%100
41	M41A	Z	0	0	0	%100
42	M42A	Z	0	0	0	%100
43	M43A	Z	0	0	0	%100
44	M44A	Z	0	0	0	%100
45	M45A	Z	0	0	0	%100
46	M46	Z	0	0	0	%100
47	M47	Z	0	0	0	%100
48	M48	Z	0	0	0	%100
49	M49	Z	0	0	0	%100
50	M50	Z	0	0	0	%100
51	M51	Z	0	0	0	%100
52	M52	Z	0	0	0	%100
53	M53	Z	0	0	0	%100
54	M54	Z	0	0	0	%100
55	M55	Z	0	0	0	%100
56	M56	Z	0	0	0	%100
57	M57	Z	0	0	0	%100
58	M58	Z	0	0	0	%100
59	M59	Z	0	0	0	%100
60	M60	Z	0	0	0	%100
61	M61	Z	0	0	0	%100
62	M62	Z	0	0	0	%100
63	M63	Z	0	0	0	%100
64	M64	Z	0	0	0	%100
65	M65	Z	0	0	0	%100
66	M66	Z	0	0	0	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
67	MP5	Z	0	0	%87.5	%100
68	MP8	Z	0	0	%99.9	%100
69	MP9	Z	0	0	%87.5	%100
70	MP12	Z	0	0	%99.9	%100
71	MP1	Z	0	0	%87.5	%100
72	MP4	Z	0	0	%99.9	%100
73	M1	X	.002	.002	0	%100
74	M2	X	.004	.004	0	%100
75	M3	X	.006	.006	0	%100
76	M4	X	.003	.003	0	%100
77	M5	X	.004	.004	0	%100
78	M6	X	.003	.003	0	%100
79	M7	X	.002	.002	0	%100
80	M8	X	.004	.004	0	%100
81	M9	X	.006	.006	0	%100
82	M10	X	.003	.003	0	%100
83	M11	X	.002	.002	0	%100
84	M12	X	.002	.002	0	%100
85	M13	X	.002	.002	0	%100
86	M14	X	.002	.002	0	%100
87	M15	X	.003	.003	0	%100
88	M37	X	.003	.003	0	%100
89	M38	X	.003	.003	0	%100
90	M39	X	.005	.005	0	%100
91	M40	X	.002	.002	0	%100
92	M41	X	.003	.003	0	%100
93	M42	X	.004	.004	0	%100
94	M43	X	.003	.003	0	%100
95	M44	X	.002	.002	0	%100
96	M45	X	.003	.003	0	%100
97	MP5	X	.005	.005	0	%12.5
98	MP6	X	.005	.005	0	%100
99	MP7	X	.005	.005	0	%100
100	MP8	X	.005	.005	0	%.1
101	MP9	X	.005	.005	0	%12.5
102	MP10	X	.005	.005	0	%100
103	MP11	X	.005	.005	0	%100
104	MP12	X	.005	.005	0	%.1
105	MP1	X	.005	.005	0	%100
106	MP2	X	.005	.005	0	%100
107	MP3	X	.005	.005	0	%100
108	MP4	X	.005	.005	0	%100
109	M37A	X	.009	.009	0	%100
110	M38A	X	.006	.006	0	%100
111	M39A	X	.006	.006	0	%100
112	M40A	X	.005	.005	0	%100
113	M41A	X	.005	.005	0	%100
114	M42A	X	.005	.005	0	%100
115	M43A	X	.004	.004	0	%100
116	M44A	X	.004	.004	0	%100
117	M45A	X	.004	.004	0	%100
118	M46	X	.003	.003	0	%100
119	M47	X	.004	.004	0	%100
120	M48	X	.004	.004	0	%100
121	M49	X	.004	.004	0	%100
122	M50	X	.004	.004	0	%100
123	M51	X	.004	.004	0	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
124	M52	X	.004	.004	0	%100
125	M53	X	.004	.004	0	%100
126	M54	X	.004	.004	0	%100
127	M55	X	.004	.004	0	%100
128	M56	X	.004	.004	0	%100
129	M57	X	.004	.004	0	%100
130	M58	X	.004	.004	0	%100
131	M59	X	0	0	0	%100
132	M60	X	0	0	0	%100
133	M61	X	0	0	0	%100
134	M62	X	0	0	0	%100
135	M63	X	0	0	0	%100
136	M64	X	0	0	0	%100
137	M65	X	0	0	0	%100
138	M66	X	0	0	0	%100
139	MP5	X	.005	.005	%87.5	%100
140	MP8	X	.005	.005	%99.9	%100
141	MP9	X	.005	.005	%87.5	%100
142	MP12	X	.005	.005	%99.9	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	.001	.001	0	%100
2	M2	Z	.003	.003	0	%100
3	M3	Z	.004	.004	0	%100
4	M4	Z	.002	.002	0	%100
5	M5	Z	.003	.003	0	%100
6	M6	Z	.002	.002	0	%100
7	M7	Z	.002	.002	0	%100
8	M8	Z	.001	.001	0	%100
9	M9	Z	.001	.001	0	%100
10	M10	Z	.002	.002	0	%100
11	M11	Z	.001	.001	0	%100
12	M12	Z	.002	.002	0	%100
13	M13	Z	.001	.001	0	%100
14	M14	Z	.002	.002	0	%100
15	M15	Z	.002	.002	0	%100
16	M37	Z	.001	.001	0	%100
17	M38	Z	.003	.003	0	%100
18	M39	Z	.002	.002	0	%100
19	M40	Z	.001	.001	0	%100
20	M41	Z	.002	.002	0	%100
21	M42	Z	.002	.002	0	%100
22	M43	Z	.001	.001	0	%100
23	M44	Z	.001	.001	0	%100
24	M45	Z	.001	.001	0	%100
25	MP5	Z	.002	.002	0	%12.5
26	MP6	Z	.002	.002	0	%100
27	MP7	Z	.002	.002	0	%100
28	MP8	Z	.002	.002	0	%.1
29	MP9	Z	.002	.002	0	%12.5
30	MP10	Z	.002	.002	0	%100
31	MP11	Z	.002	.002	0	%100
32	MP12	Z	.002	.002	0	%.1
33	MP1	Z	.002	.002	0	%12.5
34	MP2	Z	.002	.002	0	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
35	MP3	Z	.002	.002	0	%100
36	MP4	Z	.002	.002	0	%.1
37	M37A	Z	.004	.004	0	%100
38	M38A	Z	.003	.003	0	%100
39	M39A	Z	.004	.004	0	%100
40	M40A	Z	.003	.003	0	%100
41	M41A	Z	.003	.003	0	%100
42	M42A	Z	.003	.003	0	%100
43	M43A	Z	.002	.002	0	%100
44	M44A	Z	.002	.002	0	%100
45	M45A	Z	.002	.002	0	%100
46	M46	Z	.002	.002	0	%100
47	M47	Z	.002	.002	0	%100
48	M48	Z	.002	.002	0	%100
49	M49	Z	.002	.002	0	%100
50	M50	Z	.002	.002	0	%100
51	M51	Z	.002	.002	0	%100
52	M52	Z	.002	.002	0	%100
53	M53	Z	.002	.002	0	%100
54	M54	Z	.002	.002	0	%100
55	M55	Z	.002	.002	0	%100
56	M56	Z	.002	.002	0	%100
57	M57	Z	.002	.002	0	%100
58	M58	Z	.002	.002	0	%100
59	M59	Z	0	0	0	%100
60	M60	Z	0	0	0	%100
61	M61	Z	0	0	0	%100
62	M62	Z	0	0	0	%100
63	M63	Z	0	0	0	%100
64	M64	Z	0	0	0	%100
65	M65	Z	0	0	0	%100
66	M66	Z	0	0	0	%100
67	MP5	Z	.002	.002	%87.5	%100
68	MP8	Z	.002	.002	%99.9	%100
69	MP9	Z	.002	.002	%87.5	%100
70	MP12	Z	.002	.002	%99.9	%100
71	MP1	Z	.002	.002	%87.5	%100
72	MP4	Z	.002	.002	%99.9	%100
73	M1	X	.001	.001	0	%100
74	M2	X	.005	.005	0	%100
75	M3	X	.007	.007	0	%100
76	M4	X	.003	.003	0	%100
77	M5	X	.005	.005	0	%100
78	M6	X	.003	.003	0	%100
79	M7	X	.003	.003	0	%100
80	M8	X	.002	.002	0	%100
81	M9	X	.002	.002	0	%100
82	M10	X	.003	.003	0	%100
83	M11	X	.001	.001	0	%100
84	M12	X	.003	.003	0	%100
85	M13	X	.001	.001	0	%100
86	M14	X	.003	.003	0	%100
87	M15	X	.003	.003	0	%100
88	M37	X	.002	.002	0	%100
89	M38	X	.005	.005	0	%100
90	M39	X	.003	.003	0	%100
91	M40	X	.001	.001	0	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
92	M41	X	.003	.003	0	%100
93	M42	X	.004	.004	0	%100
94	M43	X	.003	.003	0	%100
95	M44	X	.002	.002	0	%100
96	M45	X	.001	.001	0	%100
97	MP5	X	.004	.004	0	%12.5
98	MP6	X	.004	.004	0	%100
99	MP7	X	.004	.004	0	%100
100	MP8	X	.004	.004	0	%.1
101	MP9	X	.004	.004	0	%12.5
102	MP10	X	.004	.004	0	%100
103	MP11	X	.004	.004	0	%100
104	MP12	X	.004	.004	0	%.1
105	MP1	X	.004	.004	0	%100
106	MP2	X	.004	.004	0	%100
107	MP3	X	.004	.004	0	%100
108	MP4	X	.004	.004	0	%100
109	M37A	X	.007	.007	0	%100
110	M38A	X	.005	.005	0	%100
111	M39A	X	.007	.007	0	%100
112	M40A	X	.004	.004	0	%100
113	M41A	X	.004	.004	0	%100
114	M42A	X	.004	.004	0	%100
115	M43A	X	.003	.003	0	%100
116	M44A	X	.003	.003	0	%100
117	M45A	X	.004	.004	0	%100
118	M46	X	.003	.003	0	%100
119	M47	X	.003	.003	0	%100
120	M48	X	.003	.003	0	%100
121	M49	X	.003	.003	0	%100
122	M50	X	.003	.003	0	%100
123	M51	X	.003	.003	0	%100
124	M52	X	.003	.003	0	%100
125	M53	X	.003	.003	0	%100
126	M54	X	.003	.003	0	%100
127	M55	X	.003	.003	0	%100
128	M56	X	.003	.003	0	%100
129	M57	X	.003	.003	0	%100
130	M58	X	.003	.003	0	%100
131	M59	X	0	0	0	%100
132	M60	X	0	0	0	%100
133	M61	X	0	0	0	%100
134	M62	X	0	0	0	%100
135	M63	X	0	0	0	%100
136	M64	X	0	0	0	%100
137	M65	X	0	0	0	%100
138	M66	X	0	0	0	%100
139	MP5	X	.004	.004	%87.5	%100
140	MP8	X	.004	.004	%99.9	%100
141	MP9	X	.004	.004	%87.5	%100
142	MP12	X	.004	.004	%99.9	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	.001	.001	0	%100
2	M2	Z	.004	.004	0	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
3	M3	Z	.006	.006	0	%100
4	M4	Z	.005	.005	0	%100
5	M5	Z	.008	.008	0	%100
6	M6	Z	.004	.004	0	%100
7	M7	Z	.002	.002	0	%100
8	M8	Z	.001	.001	0	%100
9	M9	Z	.001	.001	0	%100
10	M10	Z	.004	.004	0	%100
11	M11	Z	.001	.001	0	%100
12	M12	Z	.002	.002	0	%100
13	M13	Z	.001	.001	0	%100
14	M14	Z	.002	.002	0	%100
15	M15	Z	.004	.004	0	%100
16	M37	Z	.003	.003	0	%100
17	M38	Z	.006	.006	0	%100
18	M39	Z	.001	.001	0	%100
19	M40	Z	.001	.001	0	%100
20	M41	Z	.003	.003	0	%100
21	M42	Z	.005	.005	0	%100
22	M43	Z	.003	.003	0	%100
23	M44	Z	.002	.002	0	%100
24	M45	Z	.001	.001	0	%100
25	MP5	Z	.004	.004	0	%12.5
26	MP6	Z	.004	.004	0	%100
27	MP7	Z	.004	.004	0	%100
28	MP8	Z	.004	.004	0	%.1
29	MP9	Z	.004	.004	0	%12.5
30	MP10	Z	.004	.004	0	%100
31	MP11	Z	.004	.004	0	%100
32	MP12	Z	.004	.004	0	%.1
33	MP1	Z	.004	.004	0	%12.5
34	MP2	Z	.004	.004	0	%100
35	MP3	Z	.004	.004	0	%100
36	MP4	Z	.004	.004	0	%.1
37	M37A	Z	.006	.006	0	%100
38	M38A	Z	.006	.006	0	%100
39	M39A	Z	.008	.008	0	%100
40	M40A	Z	.004	.004	0	%100
41	M41A	Z	.004	.004	0	%100
42	M42A	Z	.004	.004	0	%100
43	M43A	Z	.003	.003	0	%100
44	M44A	Z	.003	.003	0	%100
45	M45A	Z	.004	.004	0	%100
46	M46	Z	.003	.003	0	%100
47	M47	Z	.003	.003	0	%100
48	M48	Z	.003	.003	0	%100
49	M49	Z	.003	.003	0	%100
50	M50	Z	.003	.003	0	%100
51	M51	Z	.003	.003	0	%100
52	M52	Z	.003	.003	0	%100
53	M53	Z	.003	.003	0	%100
54	M54	Z	.003	.003	0	%100
55	M55	Z	.003	.003	0	%100
56	M56	Z	.003	.003	0	%100
57	M57	Z	.003	.003	0	%100
58	M58	Z	.003	.003	0	%100
59	M59	Z	0	0	0	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
60	M60	Z	0	0	0	%100
61	M61	Z	0	0	0	%100
62	M62	Z	0	0	0	%100
63	M63	Z	0	0	0	%100
64	M64	Z	0	0	0	%100
65	M65	Z	0	0	0	%100
66	M66	Z	0	0	0	%100
67	MP5	Z	.004	.004	%87.5	%100
68	MP8	Z	.004	.004	%99.9	%100
69	MP9	Z	.004	.004	%87.5	%100
70	MP12	Z	.004	.004	%99.9	%100
71	MP1	Z	.004	.004	%87.5	%100
72	MP4	Z	.004	.004	%99.9	%100
73	M1	X	0	0	0	%100
74	M2	X	.002	.002	0	%100
75	M3	X	.003	.003	0	%100
76	M4	X	.003	.003	0	%100
77	M5	X	.005	.005	0	%100
78	M6	X	.002	.002	0	%100
79	M7	X	.001	.001	0	%100
80	M8	X	0	0	0	%100
81	M9	X	.001	.001	0	%100
82	M10	X	.002	.002	0	%100
83	M11	X	0	0	0	%100
84	M12	X	.001	.001	0	%100
85	M13	X	0	0	0	%100
86	M14	X	.001	.001	0	%100
87	M15	X	.002	.002	0	%100
88	M37	X	.002	.002	0	%100
89	M38	X	.003	.003	0	%100
90	M39	X	.001	.001	0	%100
91	M40	X	0	0	0	%100
92	M41	X	.002	.002	0	%100
93	M42	X	.003	.003	0	%100
94	M43	X	.002	.002	0	%100
95	M44	X	.001	.001	0	%100
96	M45	X	0	0	0	%100
97	MP5	X	.002	.002	0	%12.5
98	MP6	X	.002	.002	0	%100
99	MP7	X	.002	.002	0	%100
100	MP8	X	.002	.002	0	%.1
101	MP9	X	.002	.002	0	%12.5
102	MP10	X	.002	.002	0	%100
103	MP11	X	.002	.002	0	%100
104	MP12	X	.002	.002	0	%.1
105	MP1	X	.002	.002	0	%100
106	MP2	X	.002	.002	0	%100
107	MP3	X	.002	.002	0	%100
108	MP4	X	.002	.002	0	%100
109	M37A	X	.003	.003	0	%100
110	M38A	X	.003	.003	0	%100
111	M39A	X	.005	.005	0	%100
112	M40A	X	.003	.003	0	%100
113	M41A	X	.003	.003	0	%100
114	M42A	X	.003	.003	0	%100
115	M43A	X	.002	.002	0	%100
116	M44A	X	.002	.002	0	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
117	M45A	X	.002	.002	0	%100
118	M46	X	.002	.002	0	%100
119	M47	X	.002	.002	0	%100
120	M48	X	.002	.002	0	%100
121	M49	X	.002	.002	0	%100
122	M50	X	.002	.002	0	%100
123	M51	X	.002	.002	0	%100
124	M52	X	.002	.002	0	%100
125	M53	X	.002	.002	0	%100
126	M54	X	.002	.002	0	%100
127	M55	X	.002	.002	0	%100
128	M56	X	.002	.002	0	%100
129	M57	X	.002	.002	0	%100
130	M58	X	.002	.002	0	%100
131	M59	X	0	0	0	%100
132	M60	X	0	0	0	%100
133	M61	X	0	0	0	%100
134	M62	X	0	0	0	%100
135	M63	X	0	0	0	%100
136	M64	X	0	0	0	%100
137	M65	X	0	0	0	%100
138	M66	X	0	0	0	%100
139	MP5	X	.002	.002	%87.5	%100
140	MP8	X	.002	.002	%99.9	%100
141	MP9	X	.002	.002	%87.5	%100
142	MP12	X	.002	.002	%99.9	%100

Member Distributed Loads (BLC 48 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M8	Y	-.008	-.008	.568	4.938
2	M9	Y	-.001	-.001	.326	.705
3	M14	Y	-.0008881	-.003	0	.805
4	M14	Y	-.003	-.006	.805	1.611
5	M14	Y	-.006	-.01	1.611	2.416
6	M14	Y	-.01	-.007	2.416	3.222
7	M14	Y	-.007	-.0001273	3.222	4.027
8	M15	Y	-.0008881	-.003	0	.805
9	M15	Y	-.003	-.006	.805	1.611
10	M15	Y	-.006	-.01	1.611	2.416
11	M15	Y	-.01	-.007	2.416	3.222
12	M15	Y	-.007	-.0001273	3.222	4.027
13	M38	Y	-.019	-.014	2.487	3.233
14	M38	Y	-.014	-.013	3.233	3.979
15	M38	Y	-.013	-.012	3.979	4.725
16	M38	Y	-.012	-.007	4.725	5.471
17	M38	Y	-.007	-.002	5.471	6.217
18	M4	Y	-.008	-.008	.568	4.938
19	M5	Y	-.001	-.001	.326	.705
20	M12	Y	-.0008881	-.003	0	.805
21	M12	Y	-.003	-.006	.805	1.611
22	M12	Y	-.006	-.01	1.611	2.416
23	M12	Y	-.01	-.007	2.416	3.222
24	M12	Y	-.007	-.0001273	3.222	4.027
25	M13	Y	-.0008881	-.003	0	.805
26	M13	Y	-.003	-.006	.805	1.611
27	M13	Y	-.006	-.01	1.611	2.416

Member Distributed Loads (BLC 48 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
28	M13	Y	-.01	-.007	2.416	3.222
29	M13	Y	-.007	-.0001273	3.222	4.027
30	M39	Y	-.019	-.014	2.487	3.233
31	M39	Y	-.014	-.013	3.233	3.979
32	M39	Y	-.013	-.012	3.979	4.725
33	M39	Y	-.012	-.007	4.725	5.471
34	M39	Y	-.007	-.002	5.471	6.217
35	M2	Y	-.008	-.008	.568	4.938
36	M3	Y	-.001	-.001	.326	.705
37	M10	Y	-.0008881	-.003	0	.805
38	M10	Y	-.003	-.006	.805	1.611
39	M10	Y	-.006	-.01	1.611	2.416
40	M10	Y	-.01	-.007	2.416	3.222
41	M10	Y	-.007	-.0001273	3.222	4.027
42	M11	Y	-.0008881	-.003	0	.805
43	M11	Y	-.003	-.006	.805	1.611
44	M11	Y	-.006	-.01	1.611	2.416
45	M11	Y	-.01	-.007	2.416	3.222
46	M11	Y	-.007	-.0001273	3.222	4.027
47	M37	Y	-.019	-.014	2.487	3.233
48	M37	Y	-.014	-.013	3.233	3.979
49	M37	Y	-.013	-.012	3.979	4.725
50	M37	Y	-.012	-.007	4.725	5.471
51	M37	Y	-.007	-.002	5.471	6.217

Member Distributed Loads (BLC 49 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M8	Y	-.01	-.01	.568	4.938
2	M9	Y	-.001	-.001	.326	.705
3	M14	Y	-.001	-.005	0	.805
4	M14	Y	-.005	-.008	.805	1.611
5	M14	Y	-.008	-.014	1.611	2.416
6	M14	Y	-.014	-.009	2.416	3.222
7	M14	Y	-.009	-.0001697	3.222	4.027
8	M15	Y	-.001	-.005	0	.805
9	M15	Y	-.005	-.008	.805	1.611
10	M15	Y	-.008	-.014	1.611	2.416
11	M15	Y	-.014	-.009	2.416	3.222
12	M15	Y	-.009	-.0001697	3.222	4.027
13	M38	Y	-.025	-.019	2.487	3.233
14	M38	Y	-.019	-.018	3.233	3.979
15	M38	Y	-.018	-.016	3.979	4.725
16	M38	Y	-.016	-.01	4.725	5.471
17	M38	Y	-.01	-.002	5.471	6.217
18	M4	Y	-.01	-.01	.568	4.938
19	M5	Y	-.001	-.001	.326	.705
20	M12	Y	-.001	-.005	0	.805
21	M12	Y	-.005	-.008	.805	1.611
22	M12	Y	-.008	-.014	1.611	2.416
23	M12	Y	-.014	-.009	2.416	3.222
24	M12	Y	-.009	-.0001697	3.222	4.027
25	M13	Y	-.001	-.005	0	.805
26	M13	Y	-.005	-.008	.805	1.611
27	M13	Y	-.008	-.014	1.611	2.416
28	M13	Y	-.014	-.009	2.416	3.222
29	M13	Y	-.009	-.0001697	3.222	4.027

Member Distributed Loads (BLC 49 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
30	M39	Y	-.025	-.019	2.487	3.233
31	M39	Y	-.019	-.018	3.233	3.979
32	M39	Y	-.018	-.016	3.979	4.725
33	M39	Y	-.016	-.01	4.725	5.471
34	M39	Y	-.01	-.002	5.471	6.217
35	M2	Y	-.01	-.01	.568	4.938
36	M3	Y	-.001	-.001	.326	.705
37	M10	Y	-.001	-.005	0	.805
38	M10	Y	-.005	-.008	.805	1.611
39	M10	Y	-.008	-.014	1.611	2.416
40	M10	Y	-.014	-.009	2.416	3.222
41	M10	Y	-.009	-.0001697	3.222	4.027
42	M11	Y	-.001	-.005	0	.805
43	M11	Y	-.005	-.008	.805	1.611
44	M11	Y	-.008	-.014	1.611	2.416
45	M11	Y	-.014	-.009	2.416	3.222
46	M11	Y	-.009	-.0001697	3.222	4.027
47	M37	Y	-.025	-.019	2.487	3.233
48	M37	Y	-.019	-.018	3.233	3.979
49	M37	Y	-.018	-.016	3.979	4.725
50	M37	Y	-.016	-.01	4.725	5.471
51	M37	Y	-.01	-.002	5.471	6.217

Member Area Loads (BLC 1 : Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N29	N27	N28	N30	Y	Two Way	-.012
2	N24	N23	N25	N26	Y	Two Way	-.012
3	N20	N22	N21	N19	Y	Two Way	-.012

Member Area Loads (BLC 2 : Ice Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N29	N27	N28	N30	Y	Two Way	-.016
2	N24	N23	N25	N26	Y	Two Way	-.016
3	N20	N22	N21	N19	Y	Two Way	-.016

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
1	Dead	None		-1			9		3	
2	Ice Dead	None					9	66	3	
3	Full Wind Antenna (0 Deg)	None					15			
4	Full Wind Antenna (30 Deg)	None					30			
5	Full Wind Antenna (60 Deg)	None					30			
6	Full Wind Antenna (90 Deg)	None					30			
7	Full Wind Antenna (120 Deg)	None					30			
8	Full Wind Antenna (150 Deg)	None					30			
9	Full Wind Members (0 Deg)	None						94		
10	Full Wind Members (30 Deg)	None						94		
11	Full Wind Members (60 Deg)	None						94		
12	Full Wind Members (90 Deg)	None						94		
13	Full Wind Members (120 Deg)	None						94		
14	Full Wind Members (150 Deg)	None						94		
15	Ice Wind Antenna (0 Deg)	None					15			
16	Ice Wind Antenna (30 Deg)	None					30			

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
17	Ice Wind Antenna (60 Deg)	None					30			
18	Ice Wind Antenna (90 Deg)	None					30			
19	Ice Wind Antenna (120 Deg)	None					30			
20	Ice Wind Antenna (150 Deg)	None					30			
21	Ice Wind Members (0 Deg)	None						142		
22	Ice Wind Members (30 Deg)	None						142		
23	Ice Wind Members (60 Deg)	None						142		
24	Ice Wind Members (90 Deg)	None						142		
25	Ice Wind Members (120 Deg)	None						142		
26	Ice Wind Members (150 Deg)	None						142		
27	Seismic Antenna (0 Deg)	None					9			
28	Seismic Antenna (90 Deg)	None					9			
29	Seismic Members (0 Deg)	None		-.041	-.103					
30	Seismic Members (30 Deg)	None	.052	-.041	-.09					
31	Seismic Members (60 Deg)	None	.09	-.041	-.052					
32	Seismic Members (90 Deg)	None	.103	-.041	-6.34e-18					
33	Seismic Members (120 Deg)	None	.09	-.041	.052					
34	Seismic Members (150 Deg)	None	.052	-.041	.09					
35	Seismic Members (180 Deg)	None	1.268e-17	-.041	.103					
36	Seismic Members (210 Deg)	None	-.052	-.041	.09					
37	Seismic Members (240 Deg)	None	-.09	-.041	.052					
38	Seismic Members (270 Deg)	None	-.103	-.041	1.902e-17					
39	Seismic Members (300 Deg)	None	-.09	-.041	-.052					
40	Seismic Members (330 Deg)	None	-.052	-.041	-.09					
41	Seismic Vertical Antennas	None					9			
42	Man 1 (500 lbs)	None				1				
43	Man 2 (500 lbs)	None				1				
44	Man 3 (500 lbs)	None				1				
45	Man 4 (250 lbs)	None				1				
46	Man 5 (250 lbs)	None				1				
47	Man 6 (250 lbs)	None				1				
48	BLC 1 Transient Area Loads	None						51		
49	BLC 2 Transient Area Loads	None						51		

Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4D	Yes	Y		1	1.4																				
2	1.2D + 1.0W 0°	Yes	Y		1	1.2	3	1	9	1																
3	1.2D + 1.0W 30°	Yes	Y		1	1.2	4	1	10	1																
4	1.2D + 1.0W 60°	Yes	Y		1	1.2	5	1	11	1																
5	1.2D + 1.0W 90°	Yes	Y		1	1.2	6	1	12	1																
6	1.2D + 1.0W 120°	Yes	Y		1	1.2	7	1	13	1																
7	1.2D + 1.0W 150°	Yes	Y		1	1.2	8	1	14	1																
8	1.2D + 1.0W 180°	Yes	Y		1	1.2	3	-1	9	-1																
9	1.2D + 1.0W 210°	Yes	Y		1	1.2	4	-1	10	-1																
10	1.2D + 1.0W 240°	Yes	Y		1	1.2	5	-1	11	-1																
11	1.2D + 1.0W 270°	Yes	Y		1	1.2	6	-1	12	-1																
12	1.2D + 1.0W 300°	Yes	Y		1	1.2	7	-1	13	-1																
13	1.2D + 1.0W 330°	Yes	Y		1	1.2	8	-1	14	-1																
14	1.2D + 1.0Di + 1.0Wi 0°	Yes	Y		1	1.2	2	1	15	1	21	1														
15	1.2D + 1.0Di + 1.0Wi 30°	Yes	Y		1	1.2	2	1	16	1	22	1														
16	1.2D + 1.0Di + 1.0Wi 60°	Yes	Y		1	1.2	2	1	17	1	23	1														
17	1.2D + 1.0Di + 1.0Wi 90°	Yes	Y		1	1.2	2	1	18	1	24	1														
18	1.2D + 1.0Di + 1.0Wi 120°	Yes	Y		1	1.2	2	1	19	1	25	1														
19	1.2D + 1.0Di + 1.0Wi 150°	Yes	Y		1	1.2	2	1	20	1	26	1														

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
20	1.2D + 1.0Di + 1.0Wi 180°	Yes	Y		1	1.2	2	1	15	-1	21	-1														
21	1.2D + 1.0Di + 1.0Wi 210°	Yes	Y		1	1.2	2	1	16	-1	22	-1														
22	1.2D + 1.0Di + 1.0Wi 240°	Yes	Y		1	1.2	2	1	17	-1	23	-1														
23	1.2D + 1.0Di + 1.0Wi 270°	Yes	Y		1	1.2	2	1	18	-1	24	-1														
24	1.2D + 1.0Di + 1.0Wi 300°	Yes	Y		1	1.2	2	1	19	-1	25	-1														
25	1.2D + 1.0Di + 1.0Wi 330°	Yes	Y		1	1.2	2	1	20	-1	26	-1														
26	1.2D + 1.5Lm_1 + 1.0Wm 0°	Yes	Y		1	1.2	3	.058	9	.058	42	1.5														
27	1.2D + 1.5Lm_1 + 1.0Wm 30°	Yes	Y		1	1.2	4	.058	10	.058	42	1.5														
28	1.2D + 1.5Lm_1 + 1.0Wm 60°	Yes	Y		1	1.2	5	.058	11	.058	42	1.5														
29	1.2D + 1.5Lm_1 + 1.0Wm 90°	Yes	Y		1	1.2	6	.058	12	.058	42	1.5														
30	1.2D + 1.5Lm_1 + 1.0Wm 120°	Yes	Y		1	1.2	7	.058	13	.058	42	1.5														
31	1.2D + 1.5Lm_1 + 1.0Wm 150°	Yes	Y		1	1.2	8	.058	14	.058	42	1.5														
32	1.2D + 1.5Lm_1 + 1.0Wm 180°	Yes	Y		1	1.2	3	-.0...	9	-.0...	42	1.5														
33	1.2D + 1.5Lm_1 + 1.0Wm 210°	Yes	Y		1	1.2	4	-.0...	10	-.0...	42	1.5														
34	1.2D + 1.5Lm_1 + 1.0Wm 240°	Yes	Y		1	1.2	5	-.0...	11	-.0...	42	1.5														
35	1.2D + 1.5Lm_1 + 1.0Wm 270°	Yes	Y		1	1.2	6	-.0...	12	-.0...	42	1.5														
36	1.2D + 1.5Lm_1 + 1.0Wm 300°	Yes	Y		1	1.2	7	-.0...	13	-.0...	42	1.5														
37	1.2D + 1.5Lm_1 + 1.0Wm 330°	Yes	Y		1	1.2	8	-.0...	14	-.0...	42	1.5														
38	1.2D + 1.5Lm_2 + 1.0Wm 0°	Yes	Y		1	1.2	3	.058	9	.058	43	1.5														
39	1.2D + 1.5Lm_2 + 1.0Wm 30°	Yes	Y		1	1.2	4	.058	10	.058	43	1.5														
40	1.2D + 1.5Lm_2 + 1.0Wm 60°	Yes	Y		1	1.2	5	.058	11	.058	43	1.5														
41	1.2D + 1.5Lm_2 + 1.0Wm 90°	Yes	Y		1	1.2	6	.058	12	.058	43	1.5														
42	1.2D + 1.5Lm_2 + 1.0Wm 120°	Yes	Y		1	1.2	7	.058	13	.058	43	1.5														
43	1.2D + 1.5Lm_2 + 1.0Wm 150°	Yes	Y		1	1.2	8	.058	14	.058	43	1.5														
44	1.2D + 1.5Lm_2 + 1.0Wm 180°	Yes	Y		1	1.2	3	-.0...	9	-.0...	43	1.5														
45	1.2D + 1.5Lm_2 + 1.0Wm 210°	Yes	Y		1	1.2	4	-.0...	10	-.0...	43	1.5														
46	1.2D + 1.5Lm_2 + 1.0Wm 240°	Yes	Y		1	1.2	5	-.0...	11	-.0...	43	1.5														
47	1.2D + 1.5Lm_2 + 1.0Wm 270°	Yes	Y		1	1.2	6	-.0...	12	-.0...	43	1.5														
48	1.2D + 1.5Lm_2 + 1.0Wm 300°	Yes	Y		1	1.2	7	-.0...	13	-.0...	43	1.5														
49	1.2D + 1.5Lm_2 + 1.0Wm 330°	Yes	Y		1	1.2	8	-.0...	14	-.0...	43	1.5														
50	1.2D + 1.5Lm_3 + 1.0Wm 0°	Yes	Y		1	1.2	3	.058	9	.058	44	1.5														
51	1.2D + 1.5Lm_3 + 1.0Wm 30°	Yes	Y		1	1.2	4	.058	10	.058	44	1.5														
52	1.2D + 1.5Lm_3 + 1.0Wm 60°	Yes	Y		1	1.2	5	.058	11	.058	44	1.5														
53	1.2D + 1.5Lm_3 + 1.0Wm 90°	Yes	Y		1	1.2	6	.058	12	.058	44	1.5														
54	1.2D + 1.5Lm_3 + 1.0Wm 120°	Yes	Y		1	1.2	7	.058	13	.058	44	1.5														
55	1.2D + 1.5Lm_3 + 1.0Wm 150°	Yes	Y		1	1.2	8	.058	14	.058	44	1.5														
56	1.2D + 1.5Lm_3 + 1.0Wm 180°	Yes	Y		1	1.2	3	-.0...	9	-.0...	44	1.5														
57	1.2D + 1.5Lm_3 + 1.0Wm 210°	Yes	Y		1	1.2	4	-.0...	10	-.0...	44	1.5														
58	1.2D + 1.5Lm_3 + 1.0Wm 240°	Yes	Y		1	1.2	5	-.0...	11	-.0...	44	1.5														
59	1.2D + 1.5Lm_3 + 1.0Wm 270°	Yes	Y		1	1.2	6	-.0...	12	-.0...	44	1.5														
60	1.2D + 1.5Lm_3 + 1.0Wm 300°	Yes	Y		1	1.2	7	-.0...	13	-.0...	44	1.5														
61	1.2D + 1.5Lm_3 + 1.0Wm 330°	Yes	Y		1	1.2	8	-.0...	14	-.0...	44	1.5														
62	1.2D + 1.5Lv_1 0°	Yes	Y		1	1.2	45	1.5																		
63	1.2D + 1.5Lv_1 30°	Yes	Y		1	1.2	45	1.5																		
64	1.2D + 1.5Lv_1 60°	Yes	Y		1	1.2	45	1.5																		
65	1.2D + 1.5Lv_1 90°	Yes	Y		1	1.2	45	1.5																		
66	1.2D + 1.5Lv_1 120°	Yes	Y		1	1.2	45	1.5																		
67	1.2D + 1.5Lv_1 150°	Yes	Y		1	1.2	45	1.5																		
68	1.2D + 1.5Lv_1 180°	Yes	Y		1	1.2	45	1.5																		
69	1.2D + 1.5Lv_1 210°	Yes	Y		1	1.2	45	1.5																		
70	1.2D + 1.5Lv_1 240°	Yes	Y		1	1.2	45	1.5																		
71	1.2D + 1.5Lv_1 270°	Yes	Y		1	1.2	45	1.5																		
72	1.2D + 1.5Lv_1 300°	Yes	Y		1	1.2	45	1.5																		
73	1.2D + 1.5Lv_1 330°	Yes	Y		1	1.2	45	1.5																		
74	1.2D + 1.5Lv_2 0°	Yes	Y		1	1.2	46	1.5																		
75	1.2D + 1.5Lv_2 30°	Yes	Y		1	1.2	46	1.5																		
76	1.2D + 1.5Lv_2 60°	Yes	Y		1	1.2	46	1.5																		

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
77	1.2D + 1.5Lv_2_90°	Yes	Y		1	1.2	46	1.5																
78	1.2D + 1.5Lv_2_120°	Yes	Y		1	1.2	46	1.5																
79	1.2D + 1.5Lv_2_150°	Yes	Y		1	1.2	46	1.5																
80	1.2D + 1.5Lv_2_180°	Yes	Y		1	1.2	46	1.5																
81	1.2D + 1.5Lv_2_210°	Yes	Y		1	1.2	46	1.5																
82	1.2D + 1.5Lv_2_240°	Yes	Y		1	1.2	46	1.5																
83	1.2D + 1.5Lv_2_270°	Yes	Y		1	1.2	46	1.5																
84	1.2D + 1.5Lv_2_300°	Yes	Y		1	1.2	46	1.5																
85	1.2D + 1.5Lv_2_330°	Yes	Y		1	1.2	46	1.5																
86	1.2D + 1.5Lv_3_0°	Yes	Y		1	1.2	47	1.5																
87	1.2D + 1.5Lv_3_30°	Yes	Y		1	1.2	47	1.5																
88	1.2D + 1.5Lv_3_60°	Yes	Y		1	1.2	47	1.5																
89	1.2D + 1.5Lv_3_90°	Yes	Y		1	1.2	47	1.5																
90	1.2D + 1.5Lv_3_120°	Yes	Y		1	1.2	47	1.5																
91	1.2D + 1.5Lv_3_150°	Yes	Y		1	1.2	47	1.5																
92	1.2D + 1.5Lv_3_180°	Yes	Y		1	1.2	47	1.5																
93	1.2D + 1.5Lv_3_210°	Yes	Y		1	1.2	47	1.5																
94	1.2D + 1.5Lv_3_240°	Yes	Y		1	1.2	47	1.5																
95	1.2D + 1.5Lv_3_270°	Yes	Y		1	1.2	47	1.5																
96	1.2D + 1.5Lv_3_300°	Yes	Y		1	1.2	47	1.5																
97	1.2D + 1.5Lv_3_330°	Yes	Y		1	1.2	47	1.5																
98	1.2D + 1.0EV +1.0 EH 0°	Yes	Y		1	1.2	27	1	28		29	1	40	1										
99	1.2D + 1.0EV +1.0 EH 30°	Yes	Y		1	1.2	27	.866	28	.5	30	1	40	1										
100	1.2D + 1.0EV +1.0 EH 60°	Yes	Y		1	1.2	27	.5	28	.866	31	1	40	1										
101	1.2D + 1.0EV +1.0 EH 90°	Yes	Y		1	1.2	27		28	1	32	1	40	1										
102	1.2D + 1.0EV +1.0 EH 120°	Yes	Y		1	1.2	27	-.5	28	.866	33	1	40	1										
103	1.2D + 1.0EV +1.0 EH 150°	Yes	Y		1	1.2	27	-.8...	28	.5	34	1	40	1										
104	1.2D + 1.0EV +1.0 EH 180°	Yes	Y		1	1.2	27	-1	28		35	1	40	1										
105	1.2D + 1.0EV +1.0 EH 210°	Yes	Y		1	1.2	27	-.8...	28	-.5	36	1	40	1										
106	1.2D + 1.0EV +1.0 EH 240°	Yes	Y		1	1.2	27	-.5	28	-.8...	37	1	40	1										
107	1.2D + 1.0EV +1.0 EH 270°	Yes	Y		1	1.2	27		28	-1	38	1	40	1										
108	1.2D + 1.0EV +1.0 EH 300°	Yes	Y		1	1.2	27	.5	28	-.8...	39	1	40	1										
109	1.2D + 1.0EV +1.0 EH 330°	Yes	Y		1	1.2	27	.866	28	-.5	40	1	40	1										

Envelope Joint Reactions

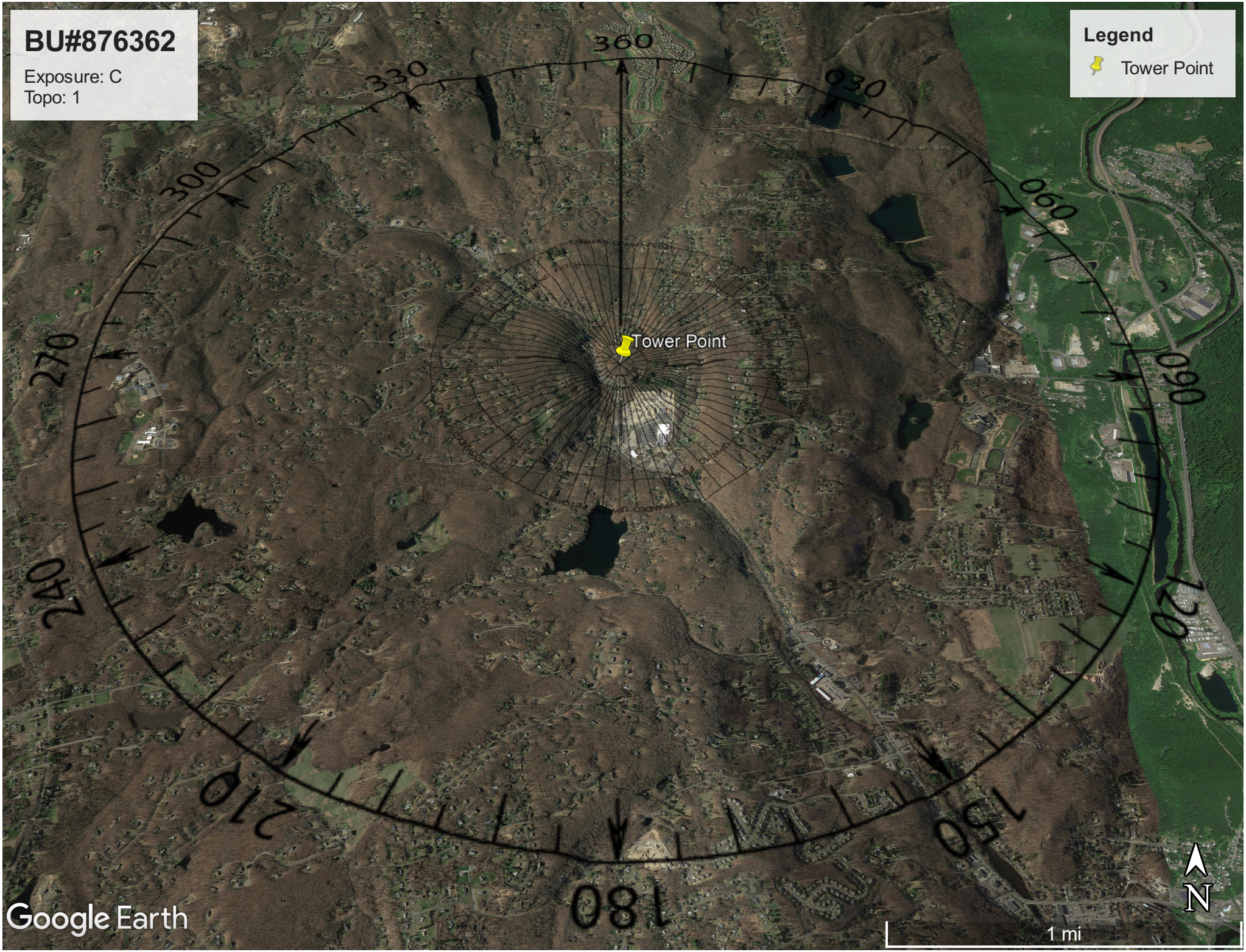
	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N68	max	1.254	11	.385	8	4.965	2	.36	20	1.855	5	.169	6
2		min	-1.253	5	-.207	2	-2.506	8	-.039	86	-1.857	11	-.272	60
3	N64	max	2.292	12	.392	12	1.245	12	.22	28	2.128	9	.338	25
4		min	-4.422	6	-.214	6	-2.474	6	-.288	10	-2.131	3	-.01	7
5	N66	max	4.43	10	.39	4	1.374	2	.035	12	2.113	13	.109	45
6		min	-2.3	4	-.212	10	-2.606	8	-.252	42	-2.116	7	-.329	3
7	N103	max	3.592	18	2.926	18	2.073	18	0	109	0	109	0	109
8		min	-.052	12	-.057	12	-.031	12	0	1	0	1	0	1
9	N104	max	.049	4	2.925	22	2.072	22	0	109	0	109	0	109
10		min	-3.59	22	-.055	4	-.029	4	0	1	0	1	0	1
11	N105	max	.08	11	2.913	14	.025	8	0	109	0	109	0	109
12		min	-.08	5	-.033	8	-4.13	14	0	1	0	1	0	1
13	Totals:	max	5.343	11	8.403	21	5.132	2						
14		min	-5.343	5	3.187	3	-5.132	8						

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Mem...	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	phi*...	phi*...	phi*...	phi*...	Cb	Eqn
1	M1	PIPE_3.0	.116	1.823	5	.082	4.688		4	28.2...	65.2...	5.749	5.749	3.688	H1...
2	M2	HSS4X4X4	.138	2.753	17	.083	5.162	z	5	122....	139....	16.1...	16.1...	1.346	H1...
3	M3	PL6"x0.5"	.200	.516	11	.181	.516	y	19	66.0...	97.2	1.012	12.15	1.459	H1...
4	M4	HSS4X4X4	.137	2.753	15	.081	.344	z	13	122....	139....	16.1...	16.1...	1.348	H1...
5	M5	PL6"x0.5"	.193	.516	7	.177	.516	y	15	66.0...	97.2	1.012	12.15	1.385	H1...
6	M6	PIPE_3.0	.118	1.823	9	.083	4.688		8	28.2...	65.2...	5.749	5.749	3.697	H1...
7	M7	PIPE_3.0	.118	10.677	13	.083	7.813		12	28.2...	65.2...	5.749	5.749	3.661	H1...
8	M8	HSS4X4X4	.138	2.753	23	.081	5.162	z	9	122....	139....	16.1...	16.1...	1.348	H1...
9	M9	PL6"x0.5"	.196	.516	3	.180	.516	y	23	66.0...	97.2	1.012	12.15	1.461	H1...
10	M10	L2x2x3	.223	4.474	7	.011	4.474	y	14	8.561	23.3...	.558	1.225	2.245	H2...
11	M11	L2x2x3	.259	4.474	5	.011	4.474	z	22	8.561	23.3...	.558	1.227	2.27	H2...
12	M12	L2x2x3	.253	4.474	13	.011	4.474	z	18	8.561	23.3...	.558	1.226	2.256	H2...
13	M13	L2x2x3	.221	0	3	.011	4.474	y	22	8.561	23.3...	.558	1.225	2.24	H2...
14	M14	L2x2x3	.229	0	11	.011	4.474	y	18	8.561	23.3...	.558	1.226	2.256	H2...
15	M15	L2x2x3	.255	4.474	9	.011	4.474	z	14	8.561	23.3...	.558	1.226	2.26	H2...
16	M37	HSS4X4X4	.148	0	9	.055	3.562	y	18	118....	139....	16.1...	16.1...	2.202	H1...
17	M38	HSS4X4X4	.147	0	13	.055	3.562	y	22	118....	139....	16.1...	16.1...	2.151	H1...
18	M39	HSS4X4X4	.134	3.562	14	.055	3.562	y	14	118....	139....	16.1...	16.1...	1.903	H1...
19	M40	PIPE_2.0	.370	1.693	4	.155	.26		10	6.295	32.13	1.872	1.872	3.908	H1...
20	M41	L2.5x2.5x4	.304	0	4	.141	0	y	10	37.2...	38.5...	1.114	2.537	2.164	H2...
21	M42	L2.5x2.5x4	.306	1.031	12	.142	1.031	z	6	37.2...	38.5...	1.114	2.537	2.168	H2...
22	M43	PIPE_2.0	.374	1.693	8	.155	.26		2	6.295	32.13	1.872	1.872	3.897	H1...
23	M44	PIPE_2.0	.374	10.807	12	.155	12.24		6	6.295	32.13	1.872	1.872	3.897	H1...
24	M45	L2.5x2.5x4	.310	0	8	.143	0	y	2	37.2...	38.5...	1.114	2.537	2.164	H2...
25	MP5	PIPE_2.5	.149	5.75	2	.067	4		13	30.0...	50.7...	3.596	3.596	4.015	H1...
26	MP6	PIPE_2.5	.166	5.75	5	.040	5.75		5	30.0...	50.7...	3.596	3.596	2.979	H1...
27	MP7	PIPE_2.5	.212	5.75	7	.035	5.75		8	30.0...	50.7...	3.596	3.596	1.964	H1...
28	MP8	PIPE_2.5	.297	2.25	12	.107	2.25		12	30.0...	50.7...	3.596	3.596	1.228	H1...
29	MP9	PIPE_2.5	.149	5.75	6	.068	4		5	30.0...	50.7...	3.596	3.596	2.842	H1...
30	MP10	PIPE_2.5	.165	5.75	8	.041	5.75		9	30.0...	50.7...	3.596	3.596	3.964	H1...
31	MP11	PIPE_2.5	.215	5.75	11	.034	5.75		12	30.0...	50.7...	3.596	3.596	2.936	H1...
32	MP12	PIPE_2.5	.287	5.75	4	.107	2.25		4	30.0...	50.7...	3.596	3.596	1.187	H1...
33	MP1	PIPE_2.5	.162	5.75	10	.069	2.25		8	30.0...	50.7...	3.596	3.596	3.538	H1...
34	MP2	PIPE_2.5	.173	5.75	12	.042	5.75		13	30.0...	50.7...	3.596	3.596	3.958	H1...
35	MP3	PIPE_2.5	.216	5.75	3	.036	5.75		4	30.0...	50.7...	3.596	3.596	4.241	H1...
36	MP4	PIPE_2.5	.294	2.25	8	.109	2.25		8	30.0...	50.7...	3.596	3.596	3.457	H1...
37	M37A	LL2.5x2.5x3x6	.118	4.396	14	.004	0	z	11	42.7...	58.32	4.643	2.55	1	H1...
38	M38A	LL2.5x2.5x3x6	.119	4.396	18	.004	4.396	z	9	42.7...	58.32	4.643	2.55	1.136	H1...
39	M39A	LL2.5x2.5x3x6	.119	4.396	22	.004	0	z	13	42.7...	58.32	4.643	2.55	1.136	H1...
40	M40A	PIPE_2.5	.007	2	11	.002	2		11	44.4...	50.7...	3.596	3.596	1.562	H1...
41	M41A	PIPE_2.5	.007	2	5	.002	2		8	44.4...	50.7...	3.596	3.596	1.562	H1...
42	M42A	PIPE_2.5	.007	2	8	.002	2		8	44.4...	50.7...	3.596	3.596	1	H1...

APPENDIX D

ADDITIONAL CALCUATIONS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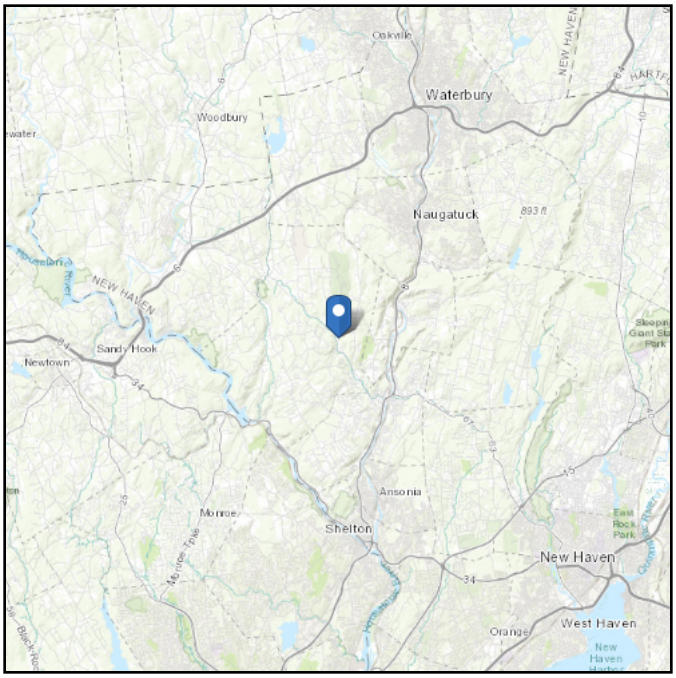
Exposure: C
Topo: 1
Legend
Tower Point
360
030
060
090
120
150
180
210
240
270
300
330
Tower Point
N
1 mi
Google Earth

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 372.75 ft (NAVD 88)
Latitude: 41.427992
Longitude: -73.108542



Wind

Results:

Wind Speed:	121 Vmph **125MPH Per OXFORD MUNICIPALITY
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	92 Vmph
100-year MRI	99 Vmph
Data Source:	ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014
Date Accessed:	Thu Jun 06 2019

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

Seismic

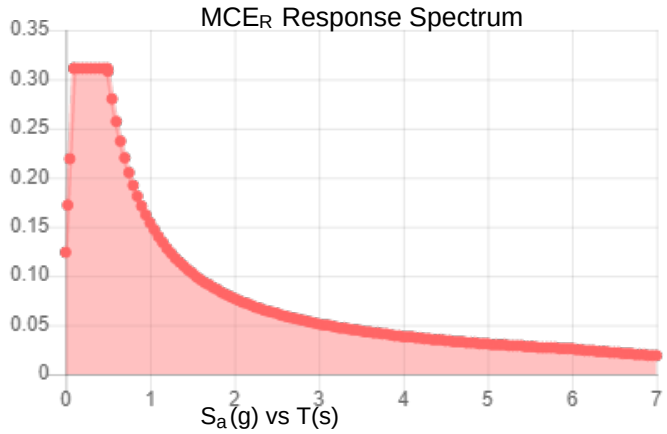
Site Soil Class: D - Stiff Soil

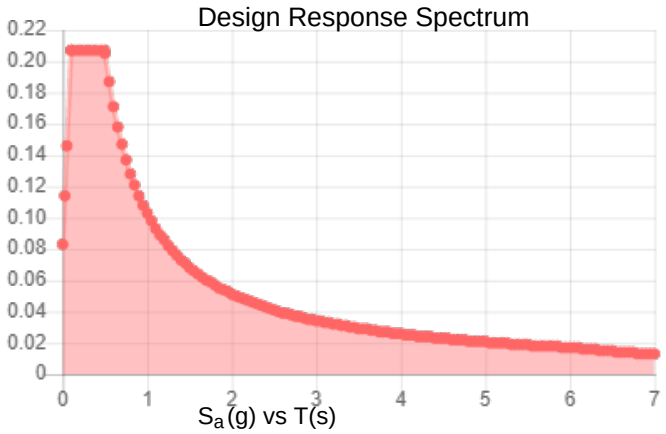
Ss=0.196 PER OXFORD MUNICIPALITY

Results:

S_S :	0.194	S_{DS} :	0.207
S_1 :	0.064	S_{D1} :	0.103
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.102
S_{MS} :	0.311	PGA_M :	0.163
S_{M1} :	0.154	F_{PGA} :	1.595
		I_e :	1

Seismic Design Category B





Data Accessed: Thu Jun 06 2019

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Thu Jun 06 2019

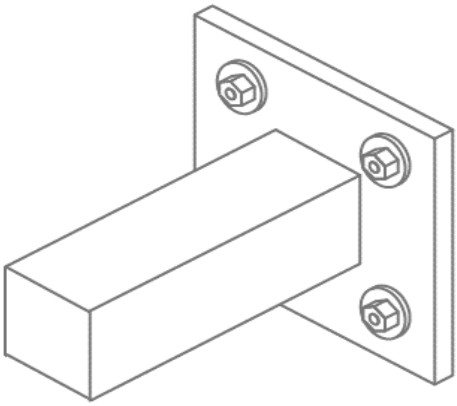
Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

MasTec
Network Solutions

Bolt Calcuations:

Bolt Size:	5/8	in
# Bolts:	4	
Plate Width:	8.25	in
Plate Height:	8.25	in
Bolt H Gap:	6	in
Bolt V Gap:	6	in
Plate T:	0.75	in
Bolt Grade:	A325N	
Fu_{bolt}	120	ksi
r:	4.243	in
J:	72.000	in^4/in^2
Bolt Area, $_{Normal}$:	0.307	
Bolt Area, $_{Net\ Tensile}$:	0.226	in^2



Allowable Shear:	12.4	kip
Allowable Tension:	20.3	kip

Tension Capacity:	13.6%
Shear Capacity:	9.3%
Combined Capacity:	1.9%

Bolt Capacity:	13.6%

Plate Calculations:

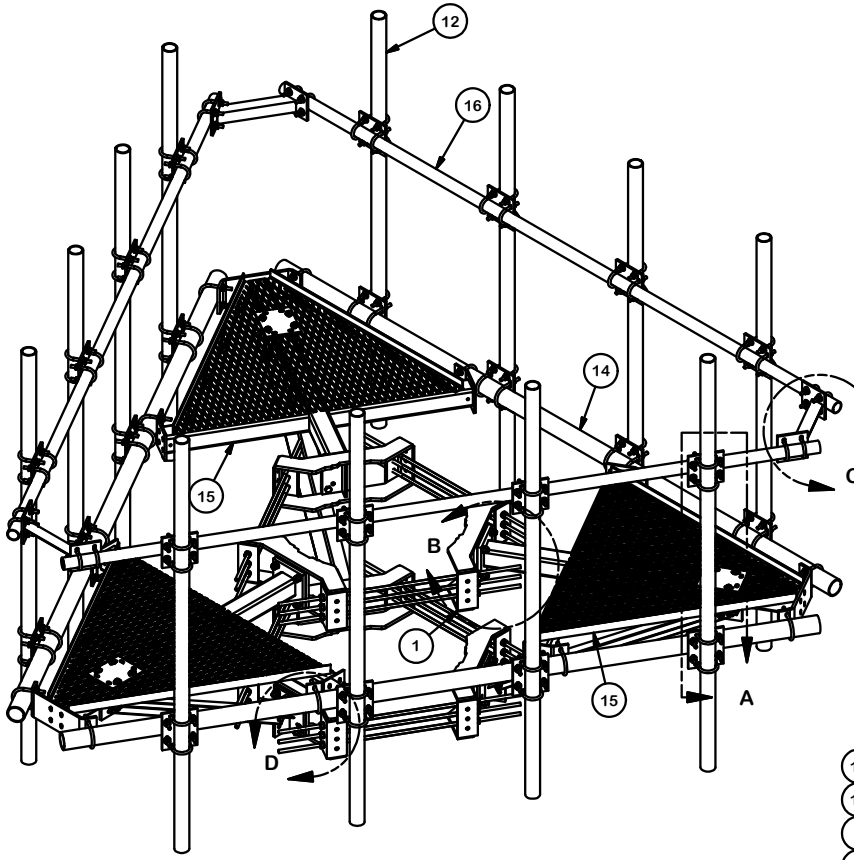
Horizontal Member Height:	4	in
Horizontal Member Width:	4	in
Plate Grade:	A36	
Plate Fy:	36	ksi

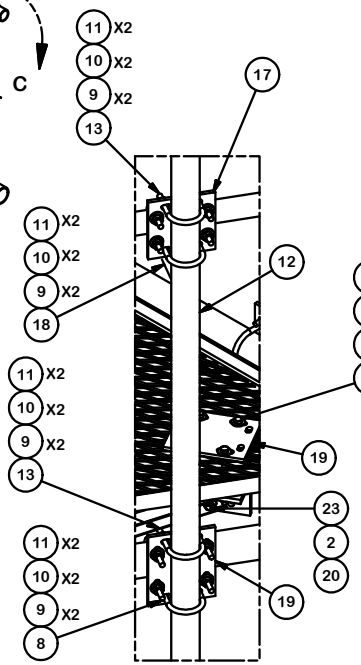
Mx =	5.163	k*in
Mz =	2.688	k*in

Zx =	1.160	in^3
Zz =	1.160	in^3

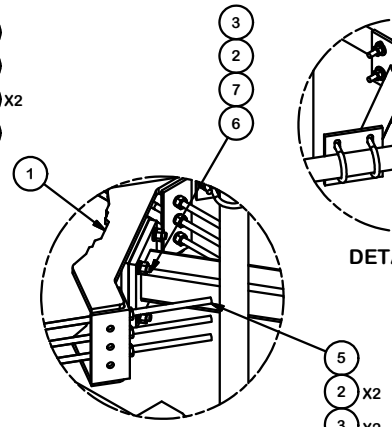
ØMpy (X) =	37.589	k - in
ØMpx (X) =	37.589	k - in

Plate Capacity:	13.7%

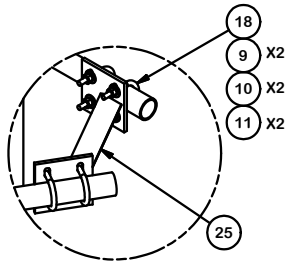




DETAIL A



DETAIL B



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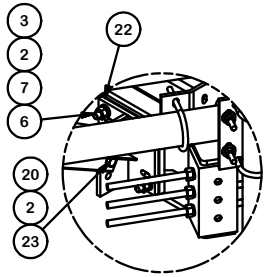

DETAIL D

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	6	X-LWRM	RING MOUNT WELDMENT		68.16	408.95
2	66	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
3	60	A58NUT	5/8" HDG A325 HEX NUT		0.13	7.78
4	18	G58R-24	5/8" x 24" THREADED ROD (HDG.)		0.55	9.88
5	18	G58R-48	5/8" x 48" THREADED ROD (HDG.)		0.55	9.88
6	24	A58234	5/8" x 2-3/4" HDG A325 HEX BOLT	2 3/4 in	0.36	8.53
7	24	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.82
8	36	X-UB1306	1/2" X 3-5/8" X 6" X 3" U-BOLT (HDG.)		0.73	26.34
9	264	G12FW	1/2" HDG USS FLATWASHER		0.03	8.99
10	252	G12LW	1/2" HDG LOCKWASHER		0.01	3.50
11	252	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	18.03
12	12	P3096	2-7/8" OD X 96" Sch 40 Galvanized Pipe		46.45	557.43
13	48	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.73	35.12
14	3	P3150	3-1/2" X 150" SCH 40 GALVANIZED PIPE	150 in	94.80	284.40
15	3	X-SV196	LOW PROFILE PLATFORM CORNER		212.10	636.31
16	3	P2150	2-3/8" OD X 150" SCH 40 GALVANIZED PIPE	150 in	48.06	144.17
17	12	SCX2	CROSSOVER PLATE	7 in	4.80	57.56
18	36	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.73	26.34
19	15	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	90.32
20	6	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	0.78
21	6	X-253993	PLATFORM REINFORCEMENT KIT ANGLE	52 25/32 in	14.33	85.99
22	6	X-253992	T-BRACKET FOR REINFORCEMENT KIT		13.55	81.27
23	6	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.62
24	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	4.91
25	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
					TOTAL WT. #	2645.84

REVISION HISTORY				
REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	REPLACED HCP WITH X-AHCP	4488	CEK	7/14/2014

TOLERANCE NOTES

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

DESCRIPTION
12' 6" LOW PROFILE PLATFORM
WITH TWELVE 2-7/8" ANTENNA MOUTING
PIPES, AND HANDRAIL

SITE PRO 1 — A valmont COMPANY

Engineering Support Team: 1-888-753-7446

Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
4488	CEK 3/24/2014		RMQP-4096-HK	1 OF 3

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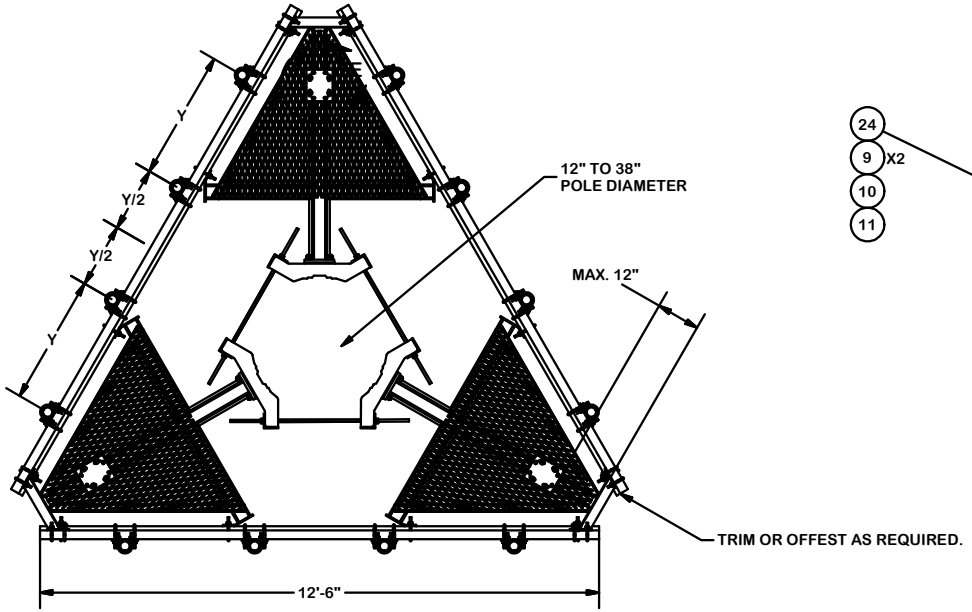
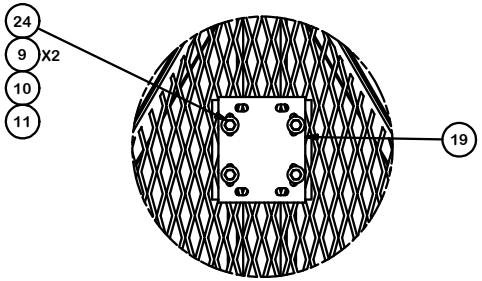
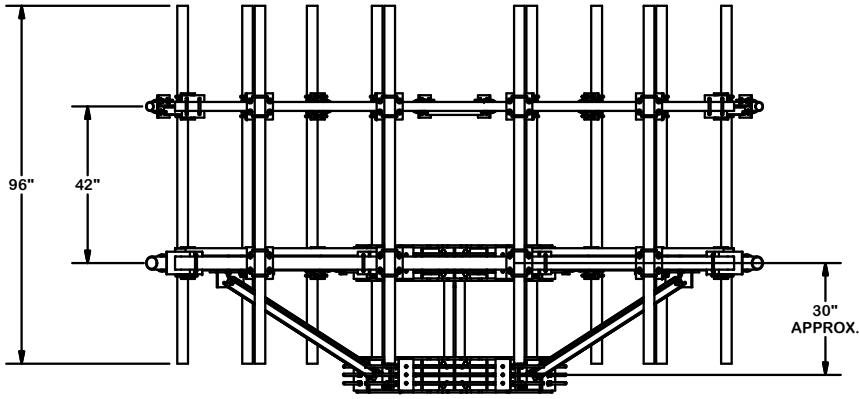
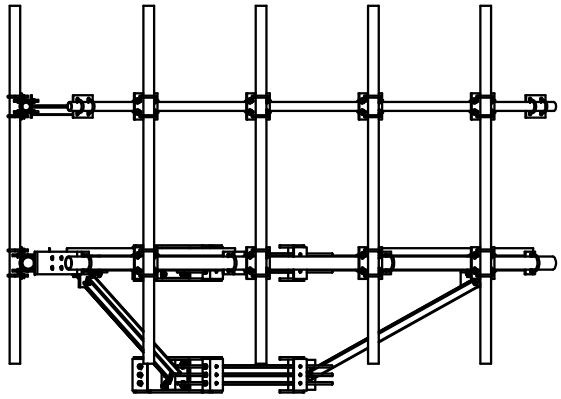
81	02	CUSTOMER	BMC 7/14/2014	RMQP-4096-HK





DETAIL E





TOLERANCE NOTES

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

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	REPLACED HCP WITH X-AHCP	4488	CEK	7/14/2014

REVISION HISTORY

DESCRIPTION
12' 6" LOW PROFILE PLATFORM
WITH TWELVE 2-7/8" ANTENNA MOUTING
PIPES, AND HANDRAIL

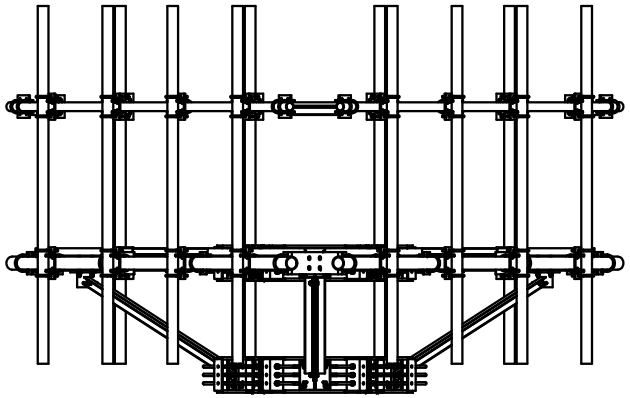
SITE PRO 1
A valmont COMPANY

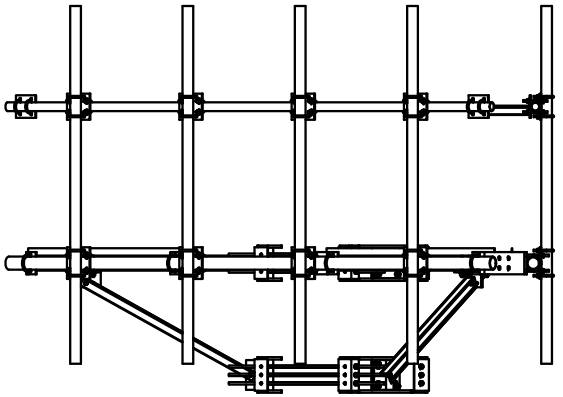
Engineering Support Team:
1-888-753-7446

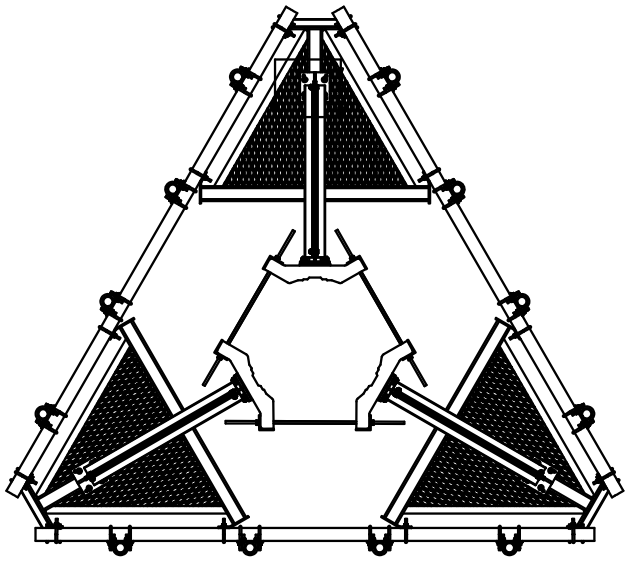
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

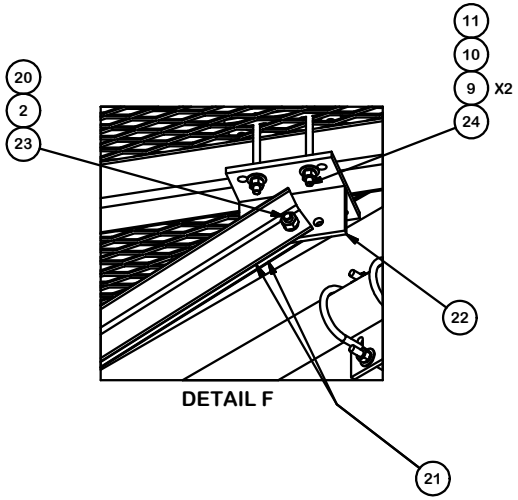
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
4488	CEK 3/24/2014		RMQP-4096-HK

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 7/14/2014	RMQP-4096-HK









DETAIL F

TOLERANCE NOTES

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

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	REPLACED HCP WITH X-AHCP	4488	CEK	7/14/2014

REVISION HISTORY

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CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
4488	CEK 3/24/2014		RMQP-4096-HK

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 7/14/2014	RMQP-4096-HK

Exhibit E

Power Density/RF Emissions Report

Transcom Engineering, Inc.
Wireless Network Design and Deployment

Radio Frequency Emissions Analysis Report

T-MOBILE Existing Facility

Site ID: CTNH518A

Crown Oxford Monopole
340 Oxford Rd
Oxford, CT 06478

June 3, 2019

Transcom Engineering Project Number: 737001-0118

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**9.54 %**

June 3, 2019

T-MOBILE
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 6009

Emissions Analysis for Site: **CTNH518A – Crown Oxford Monopole**

Transcom Engineering, Inc ("Transcom") was directed to analyze the proposed upgrades to the T-MOBILE facility located at **340 Oxford Rd, Oxford, CT**, for the purpose of determining whether the emissions from the Proposed T-MOBILE Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

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

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed upgrades to the T-MOBILE antenna facility located at **340 Oxford Rd, Oxford, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-MOBILE is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
UMTS	1900 MHz (PCS)	1	40
LTE	2100 MHz (AWS)	2	60
LTE / 5G NR	600 MHz	2	40
LTE	700 MHz	2	20

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 600, 700 MHz, 1900 MHz (PCS) and 2100 MHz (AWS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	RFS APXV18-206517S-C-A20	117
A	2	RFS APXVAARR24_43-U-NA20	117
B	1	RFS APXV18-206517S-C-A20	117
B	2	RFS APXVAARR24_43-U-NA20	117
C	1	RFS APXV18-206517S-C-A20	117
C	2	RFS APXVAARR24_43-U-NA20	117

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.

Cable losses were factored in the calculations for this site. Since all **1900 MHz (PCS)** & **2100 MHz (AWS)** radios are ground mounted the following cable loss values were used. For each ground mounted **1900 MHz (PCS)** radio there was **4.20 dB** of cable loss calculated into the system gains / losses for this site. For each ground mounted **2100 MHz (AWS)** radio there was **4.33 dB** of cable loss calculated into the system gains / losses for this site. These values were calculated based upon the manufacturers specifications for **250 feet** of **7/8”** coax.

RESULTS

Per the calculations completed for the proposed T-MOBILE configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	RFS APXV18-206517S-C-A20	1900 MHz (PCS) / 2100 MHz (AWS)	16.65 / 16.65	3	160	2,750.47	0.81
Antenna A2	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.69
						Sector A Composite MPE%	**2.50**
Antenna B1	RFS APXV18-206517S-C-A20	1900 MHz (PCS) / 2100 MHz (AWS)	16.65 / 16.65	3	160	2,750.47	0.81
Antenna B2	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.69
						Sector B Composite MPE%	**2.50**
Antenna C1	RFS APXV18-206517S-C-A20	1900 MHz (PCS) / 2100 MHz (AWS)	16.65 / 16.65	3	160	2,750.47	0.81
Antenna C2	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	1.69
						Sector C Composite MPE%	**2.50**

Table 3: T-MOBILE Emissions Levels

The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum T-MOBILE MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each T-MOBILE Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
T-MOBILE – Max Per Sector Value	**2.50 %**
AT&T	1.72 %
Verizon Wireless	2.76 %
Sprint	2.56 %
Site Total MPE %:	**9.54 %**

Table 4: All Carrier MPE Contributions

T-MOBILE Sector A Total:	2.50 %
T-MOBILE Sector B Total:	2.50 %
T-MOBILE Sector C Total:	2.50 %
Site Total:	9.54 %

Table 5: Site MPE Summary

FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated T-MOBILE sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

T-MOBILE _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile 1900 MHz (PCS) UMTS	1	703.17	117	2.05	1900 MHz (PCS)	1000	0.21%
T-Mobile 2100 MHz (AWS) LTE	2	1,023.65	117	5.97	2100 MHz (AWS)	1000	0.60%
T-Mobile 600 MHz LTE / 5G NR	2	788.97	117	4.60	600 MHz	400	1.15%
T-Mobile 700 MHz LTE	2	432.54	117	2.52	700 MHz	467	0.54%
						Total:	**2.50%**

Table 6: T-MOBILE Maximum Sector MPE Power Values

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-MOBILE facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-MOBILE Sector	Power Density Value (%)
Sector A:	2.50 %
Sector B:	2.50 %
Sector C:	2.50 %
T-MOBILE Maximum Total (per sector):	2.50 %
Site Total:	9.54 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **9.54 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

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