



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

April 24, 2019

Michelle Scharath
Site Acquisition Specialist
Empire Telecom USA, LLC
16 Esquire Road
Billerica, MA 01862

RE: **EM-AT&T-124-190328** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 6 Progress Avenue, Seymour, Connecticut.

Dear Ms. Scharath:

The Connecticut Siting Council (Council) received a notice of intent to modify the above-referenced facility on March 28, 2019. On April 1, 2019, the Council issued a letter (enclosed) stating that the request for exempt modification was incomplete because the Structural Analysis titled: "Self-Support Tower Feasibility Analysis" (SA) did not account for T-Mobile's most current and approved equipment configuration. The Council recommended that Empire Telecom provide an updated SA for the facility that includes proposed and approved equipment by T-Mobile and other entities that are located at this facility on or before May 3, 2019.

On April 18, 2019, the Council received a SA dated November 2, 2018 which does not account for T-Mobile's proposed and approved equipment. Staff also observed that the SA is identical to that provided in the original submittal.

Therefore, the exempt modification request remains incomplete at this time. The Council recommends that Empire Telecom provide an updated SA for the facility that includes proposed and approved equipment by T-Mobile and other entities that are located at this facility, on or before June 3, 2019. If additional time is needed to gather the requested information, please submit a written request for an extension of time prior to June 3, 2019. **Please provide an electronic version and one hard copy of the SA for the incomplete request to be rendered complete and processed.**

This notice of incompleteness shall have the effect of tolling the Federal Communications Commission (FCC) 60-day timeframe in accordance with Paragraph 217 of the FCC Wireless Infrastructure Report and Order issued on October 21, 2014 (FCC 14-153).

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 860-827-2951.

Sincerely,

Melanie Bachman
Executive Director

MAB/IN/emr

Enclosure: Incomplete Letter dated April 1, 2019

c: Kristen White, Site Acquisition Specialist, Empire Telecom USA, LLC
The Honorable W. Kurt Miller, First Selectman, Town of Seymour
Bill Paecht, Zoning Enforcement Officer, Town of Seymour

S:\EMS_TS\1_BYTOWN\Seymour\ProgressAve\AT&T_CSC\EM-AT&T-124-190328_2ndincompletetr_ProgressAve.docx



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Michelle Scharath
Site Acquisition Specialist
Empire Telecom USA, LLC
16 Esquire Road
Billerica, MA 01862

RE: **EM-AT&T-124-190328** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 6 Progress Avenue, Seymour, Connecticut.

Dear Ms. Scharath:

The Connecticut Siting Council (Council) received a notice of intent to modify the above-referenced facility on March 28, 2019.

According to Section 16-50j-71 of the Regulations of Connecticut State Agencies, "...any modification, as defined in Section 16-50j-2a of the Regulations of Connecticut State Agencies, to an existing tower site, except as specified in Sections 16-50j-72 and 16-50j-88 of the Regulations of Connecticut State Agencies, may have a substantial adverse environmental effect."

Staff has reviewed this exempt modification request for completeness and has identified a deficiency in the Self-Support Tower Feasibility Analysis provided with the filing. The Self-Support Tower Feasibility Analysis provided is dated November 2, 2018. The Council had received a request for exempt modification from T-Mobile for the same facility in July of 2018. The above-referenced request for exempt modification does not include T-Mobile's approved equipment. Please see T-Mobile's exempt modification filing for this facility, which may be found on the Council's website under the Decisions page in Seymour under the filing number EM-T-MOBILE-124-180731 or by following the link:

https://www.ct.gov/csc/lib/csc/ems/seymour/progressave/t_mobile/em-t-mobile-124-180731_filing_progressave.pdf

Therefore, the exempt modification request is incomplete at this time. The Council recommends that Empire Telecom provide an updated Self-Support Tower Feasibility Analysis for the facility that includes proposed and approved equipment by T-Mobile and other entities that are located at this facility on or before May 3, 2019. If additional time is needed to gather the requested information, please submit a written request for an extension of time prior to May 3, 2019. **Please provide an electronic version and one hard copy of the updated Self-Support Tower Feasibility Analysis for the incomplete request to be rendered complete and processed.**

This notice of incompleteness shall have the effect of tolling the Federal Communications Commission (FCC) 60-day timeframe in accordance with Paragraph 217 of the FCC Wireless Infrastructure Report and Order issued on October 21, 2014 (FCC 14-153).

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 860-827-2951.

Sincerely,

Melanie Bachman
Executive Director

MAB/IN/emr

c: The Honorable W. Kurt Miller, First Selectman, Town of Seymour
Bill Paecht, Zoning Enforcement Officer, Town of Seymour

S: EMS_TS_1_BYTOWN_Seymour_ProgressAve_AT&T_CN [redacted] 124-190328_incomplete_tr_ProgressAve.docx





April 17, 2019

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

Regarding: EM-AT&T-124-190328; AT&T Notice of
Exempt Modification – Equipment Modifications
Property Address: 6 Progress Avenue, Seymour, CT 06483(the “Property”)
Applicant: AT&T Mobility (“AT&T”, Site # CT5633)

Dear Ms. Bachman:

I am in receipt of the Council’s letter dated April 1, 2019, requesting a revision to the Self-Support Structural Analysis Report provided with AT&T’s request for Exempt Modification at the above-referenced property. Attached please find a revised report by Maser Consulting Connecticut, which takes into account the approved equipment for Sprint at this facility pursuant to the Council’s filing number EM-MOBILE-124-180731.

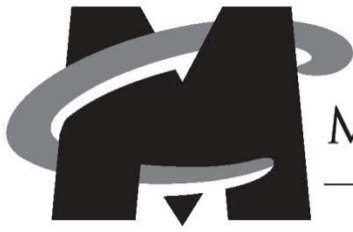
Please accept this letter and the attached revised report to supplement AT&T’s notice received on March 28, 2019. If you require anything further for this filing to be deemed complete, please don’t hesitate to contact me.

Sincerely,

Michelle Scharath

Michelle Scharath
Site Acquisition Specialist
Empire Telecom USA, LLC
mscharath@empiretelecomm.com

Enclosure: Revised Monopole Structural Analysis



MASER CONSULTING
— CONNECTICUT —

Self-Support Tower Feasibility Analysis

FOR
CT5633 – Seymour East

FA #: 10099965
6 Progress Avenue
Seymour, CT 06483
New Haven County

LTE 4C - MRCTB032000
LTE 5C - MRCTB031387
LTE 6C - MRCTB031657

Tower Utilization: 65.0%

November 2, 2018

Prepared For

AT&T
550 Cochituate Road
Framingham, MA 01701

Prepared By

Maser Consulting Connecticut
331 Newman Springs Road, Suite 203
Red Bank, NJ 07701
Tel: 908.383.1950



Petros E. Tsoukalas, P.E.
Geographic Discipline Leader
Connecticut License No. 32557



Objective:

The objective of this report is to determine the utilization of the existing 280' self-support tower structure at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

Introduction:

Maser Consulting P.A. has performed limited field observations on May 31, 2018 to verify the existing condition of the structure and to locate and quantify the existing wireless appurtenances where possible, from ground level. Maser Consulting P.A. has reviewed the following documents in completing this report:

- Structural Modification Report, prepared by EMAC Communications, dated November 14, 2016
- Structural Analysis, prepared by Destek Engineering, dated August 7, 2015
- RFDS 2285405 Version 3.00, provided by Smartlink LLC, dated September 10, 2018

The proposed **AT&T** equipment is to be supported on an existing 280' self-support tower structure. The main legs are constructed of pipes and the diagonals and horizontals are constructed of angle members. This report is based upon this information.

Discrete and Linear Appurtenances:

Maser Consulting P.A. understands the existing and proposed **AT&T** loading to be as follows:

- (3) 80010121 Antennas (Existing)
- (3) QS66512-2 Antennas (Existing)
- **(3) HPA65R-BU6A Antennas (Proposed)**
- (3) RRUS 11 (Existing)
- (3) RRUS 32 (Existing)
- (3) RRUS 32 B2 (Existing)
- **(3) RRUS 4478 B5**
- **(3) RRUS B14 4478 (Proposed)**
- **(3) RRUS 4426 B66 (Proposed)**
- **(3) DC6s (Existing/Proposed)**
- (6) LGP 21401 TMAs (Existing)

Note: The overall antenna loading is found in the appendix A of this report.

Codes, Standards and Loading:

Maser Consulting P.A. utilized the following codes and standards:

- 2018 Connecticut State Building Code, Incorporating the 2015 IBC
- Structural Standards for Antenna Supporting Structures and Antennas ANSI/TIA-222-G
 - Ultimate Wind Speed – 125 mph
 - Nominal Wind Speed – 97 mph
 - Exposure Category – B
 - Structure Class – II
 - Ice Thickness – 0.75"
 - Ice Wind Speed – 50 mph

Analysis Approach & Assumptions:

The analysis approach used in this structural analysis is based on the premise that if the existing self-support tower is structurally adequate to support the existing and proposed equipment per the aforementioned codes and standards, or if the increase in the forces in the structure are deemed to be negligible or acceptable, then the proposed equipment can be installed as intended. TNX, a 3D finite element modeling and analysis program, was used to determine the capacity and usage of the existing self-support tower.

The following assumptions were utilized in this report:

- Structural steel tower legs are constructed of A572-50 grade steel
- Structural steel tower diagonals and horizontals are constructed of A36 Grade Steel
- The existing tower is constructed to plumb and is properly maintained with no structural deficiencies and deteriorations.
- It is assumed that the telecommunication equipment supports, antenna supports, and existing structure have been designed by a registered licensed professional engineer for the existing loads acting on the structure, as required by all applicable codes.
- It is assumed that information provided by the client regarding the structure itself, the antenna models, feed lines, and other relevant information is current and correct.
- It is assumed all other existing appurtenances, antennas, cables, etc. belonging to others have been installed and supported per code and per specifications so as not to damage any existing structural support members, and that any contributing loads from adjacent equipment has been taken into consideration for their design.
- The modifications of the tower was taken from the Modification Report by EMAC Communications; however, the tower assembly was taken from the structural analysis report by Destek Engineering

Calculations:

The Tower Analysis calculations are found in **Appendix A** of this report.

Conclusion:

The existing tower structure was analyzed for the loading in the applicable codes and standards. The tower structure has been determined to be structurally **ADEQUATE** to support the proposed and existing antennas, based upon the aforementioned assumptions. The tower structure has been determined to be stressed to a maximum of **65.0%** of its structural capacity with the maximum usage occurring at the diagonals within section height 0'-20'. The bolted connections are stressed to a maximum of **63.0%** of their capacity. Therefore, the proposed installation **CAN** be installed as intended.

Maser Consulting P.A. reserves the right to amend this report if additional information about the existing structure is provided. The conclusions reached by Maser Consulting P.A. in this report are only valid for the equipment listed in this report. Any change to the installation will require a revision to this structural analysis.

We appreciate the opportunity to be of service on this project. If you should have any questions or require any additional information, please do not hesitate to call our office.

Sincerely,
Maser Consulting P.A.



Petros E. Tsoukalas, P.E.
Geographic Discipline Leader



Vincent DiGirolamo
Engineer



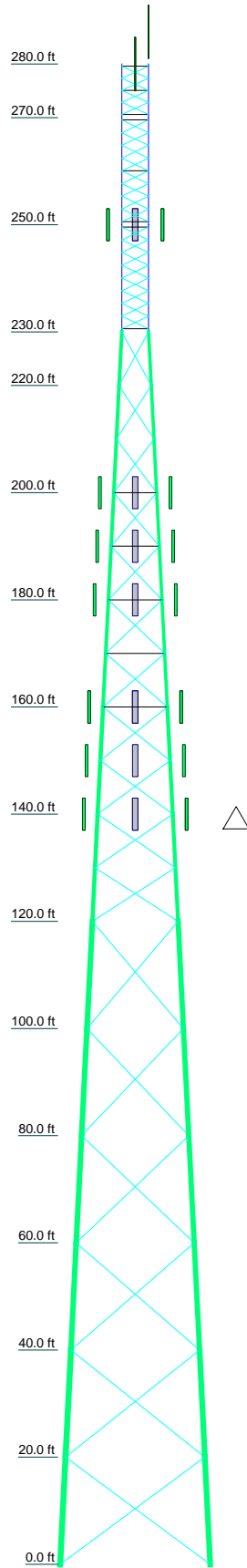
APPENDIX A

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Flash Beacon Lighting	280	80010121 9' Mount Pipe	160
15' Lightning Rod	280	80010121 9' Mount Pipe	160
DB420-A	280	QS66512-2	160
DB420-A	280	QS66512-2	160
Sector Mount [SM 412-1]	280	QS66512-2	160
RR90-17-02DP	250	HPA65R-BU6A	160
RR90-17-02DP	250	HPA65R-BU6A	160
RR90-17-02DP	250	HPA65R-BU6A	160
LNx-6515DS-VTM	250	RRUS-11	160
LNx-6515DS-VTM	250	RRUS-11	160
LNx-6515DS-VTM	250	RRUS-11	160
TMA	250	RRUS 32	160
TMA	250	RRUS 32	160
TMA	250	RRUS 32	160
Pirod 15' T-Frame Sector Mount (1)	250	RRUS 32 B2	160
Pirod 15' T-Frame Sector Mount (1)	250	RRUS 32 B2	160
Pirod 15' T-Frame Sector Mount (1)	250	RRUS 32 B2	160
DB420-A	245	RRUS 4478 B5	160
DB225-2-F	235	RRUS 4478 B5	160
Sector Mount [SM 412-1]	235	RRUS 4478 B5	160
(3) DB980H120E-M	200	RRU B14 4478	160
(3) DB980H120E-M	200	RRU B14 4478	160
(3) DB980H120E-M	200	RRU B14 4478	160
Pirod 12' T-Frame Sector Mount (1)	200	RRUS 4426 B66	160
Pirod 12' T-Frame Sector Mount (1)	200	RRUS 4426 B66	160
Pirod 12' T-Frame Sector Mount (1)	200	RRUS 4426 B66	160
(3) DB980H120E-M	190	LGP 21401	160
(3) DB980H120E-M	190	LGP 21401	160
(3) DB980H120E-M	190	LGP 21401	160
Pirod 12' T-Frame Sector Mount (1)	190	DC6-48-06-18-8F	160
Pirod 12' T-Frame Sector Mount (1)	190	DC6-48-06-18-8F	160
Pirod 12' T-Frame Sector Mount (1)	190	DC6-48-06-18-8F	160
(3) DB980H120E-M	180	Pirod 15' T-Frame Sector Mount (1)	160
(3) DB980H120E-M	180	Pirod 15' T-Frame Sector Mount (1)	160
(3) DB980H120E-M	180	Pirod 15' T-Frame Sector Mount (1)	160
Pirod 12' T-Frame Sector Mount (1)	180	APXV18-206517S-ACU	150
Pirod 12' T-Frame Sector Mount (1)	180	APXV18-206517S-ACU	150
Pirod 12' T-Frame Sector Mount (1)	180	APXV18-206517S-ACU	150
APXVSP18-C-A20	170	(2) HBXX-6517DS-A2M	140
APXVSP18-C-A20	170	(2) HBXX-6517DS-A2M	140
APXVSP18-C-A20	170	(2) HBXX-6517DS-A2M	140
APXVTM14-ALU-I20	170	(2) LNx-6514DS-VTM	140
APXVTM14-ALU-I20	170	(2) LNx-6514DS-VTM	140
APXVTM14-ALU-I20	170	(2) LNx-6514DS-VTM	140
FD-RRH-2X50-800	170	(2) FD9R6004/2C-3L	140
FD-RRH-2X50-800	170	(2) FD9R6004/2C-3L	140
FD-RRH-2X50-800	170	(2) FD9R6004/2C-3L	140
FD-RRH-4X40-1900	170	RRH2X60-AWS	140
FD-RRH-4X40-1900	170	RRH2X60-AWS	140
FD-RRH-4X40-1900	170	RRH2X60-AWS	140
TD-RRH-8x20-25	170	RRH2X60-PCS	140
TD-RRH-8x20-25	170	RRH2X60-PCS	140
TD-RRH-8x20-25	170	RRH2X60-PCS	140
Pirod 15' T-Frame Sector Mount (1)	170	DB-T1-6Z-8AB-0Z	140
Pirod 15' T-Frame Sector Mount (1)	170	Pirod 12' T-Frame Sector Mount (1)	140
Pirod 15' T-Frame Sector Mount (1)	170	Pirod 12' T-Frame Sector Mount (1)	140
80010121 9' Mount Pipe	160	Pirod 12' T-Frame Sector Mount (1)	140

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	Pirod 105245	C	L3 1/2x3 1/2x5/16
B	L3x3x5/16		



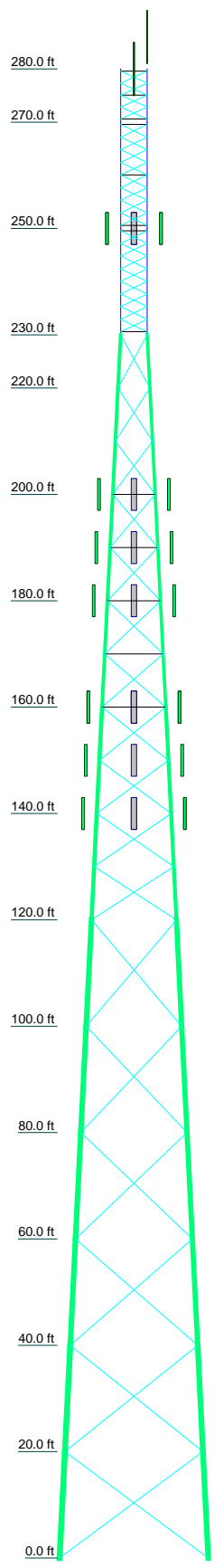
Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15
Legs	SR 1 3/4	SR 2	SR 2 1/2	A											
Leg Grade															
Diagonals															
Diagonal Grade															
Top Girts															
Mid Girts															
Bottom Girts															
Face Width (ft)	5														
# Panels @ (ft)	4 @ 2.25														
Weight (K)	0.7	1.3	1.9	1.4	2.8	3.4	4.3	5.0	4.9	7.3	7.4	8.2	8.3	9.3	9.4

Maser Consulting Connecticut
 331 Newman Springs Road, Suite 203
 Red Bank, NJ 07701
 Phone: 732 383-1950
 FAX:

Job: **CT5633**
 Project: **18963021A**
 Client: **AT&T**
 Code: **TIA-222-G**
 Path: R:\Projects\2018\18963000A\18963021A\StructuralTower_Analysis\Rev 0\TNX\Self_Support_Tower.et

Drawn by:
 Date: **11/02/18**
 App'd:
 Scale: **NTS**
 Dwg No. **E-1**

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	
Legs	SR 1 3/4	SR 2	SR 2 1/2	A	Pitrod 105218	Pitrod 105219	Pitrod 105220	Pitrod 112743	Pitrod 112744	Pitrod 112745	Pitrod 112740					
Leg Grade	SR 7/8			B	L3x3x3/16	L3x3x5/16	L3 1/2x3 1/2x5/16	A572-50	2L3 1/2x3 1/2x5/16x3/8							
Diagonals																
Diagonal Grade	A572-50															
Top Girts	SR 1				N.A.	L4x4x1/4	C									
Mid Girts	SR 1			N.A.	L3x3x3/16	L4x4x1/4										
Bottom Girts	SR 1															
Face Width (ft)	5			6	8	10	12	14	16	18	20	22	24	26	28	
# Panels @ (ft)	4 @ 2.25			1.4	2.8	4.3	5.0	4.9	7.3	7.4	8.2	8.3	9.3	9.4		
Weight (K)	0.7	1.3	1.9	1.4	2.8	4.3	5.0	4.9	7.3	7.4	8.2	8.3	9.3	9.4		



SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	Pitrod 105245	C	L3 1/2x3 1/2x5/16
B	L3x3x5/16		

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

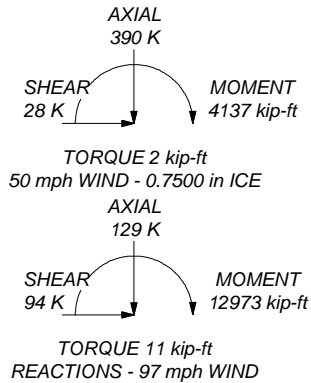
1. Tower designed for Exposure B to the TIA-222-G Standard.
2. Tower designed for a 97 mph basic wind in accordance with the TIA-222-G Standard.
3. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Structure Class II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. Weld together tower sections have flange connections.
8. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
9. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
10. Welds are fabricated with ER-70S-6 electrodes.
11. TOWER RATING: 65%

ALL REACTIONS
ARE FACTORED

MAX. CORNER REACTIONS AT BASE:

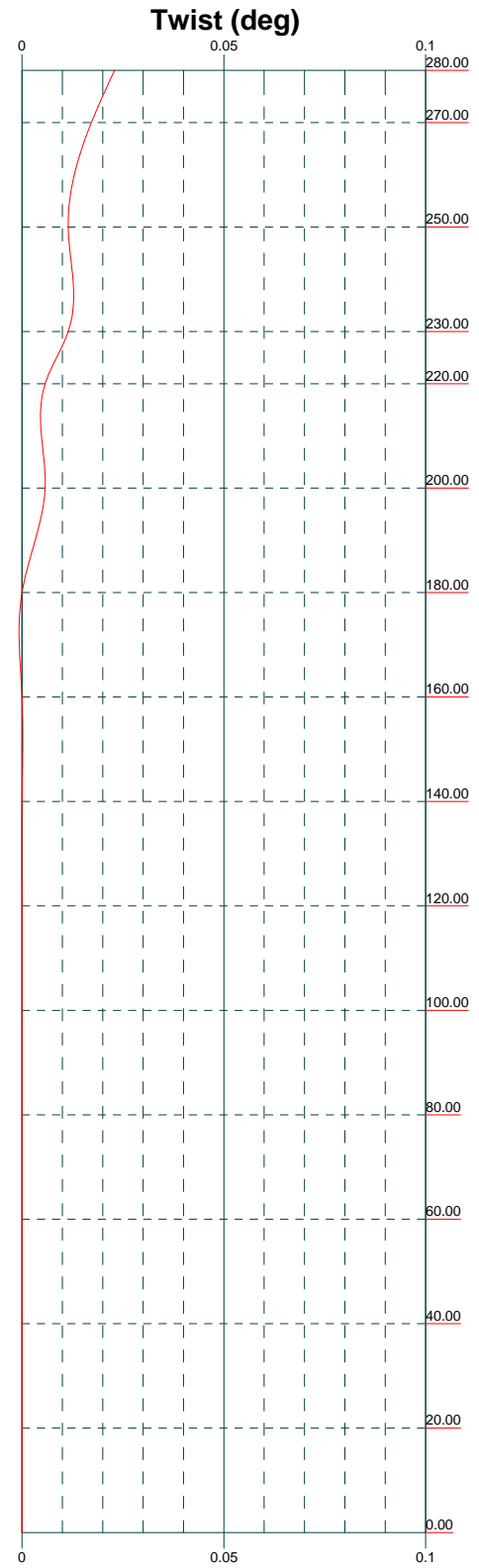
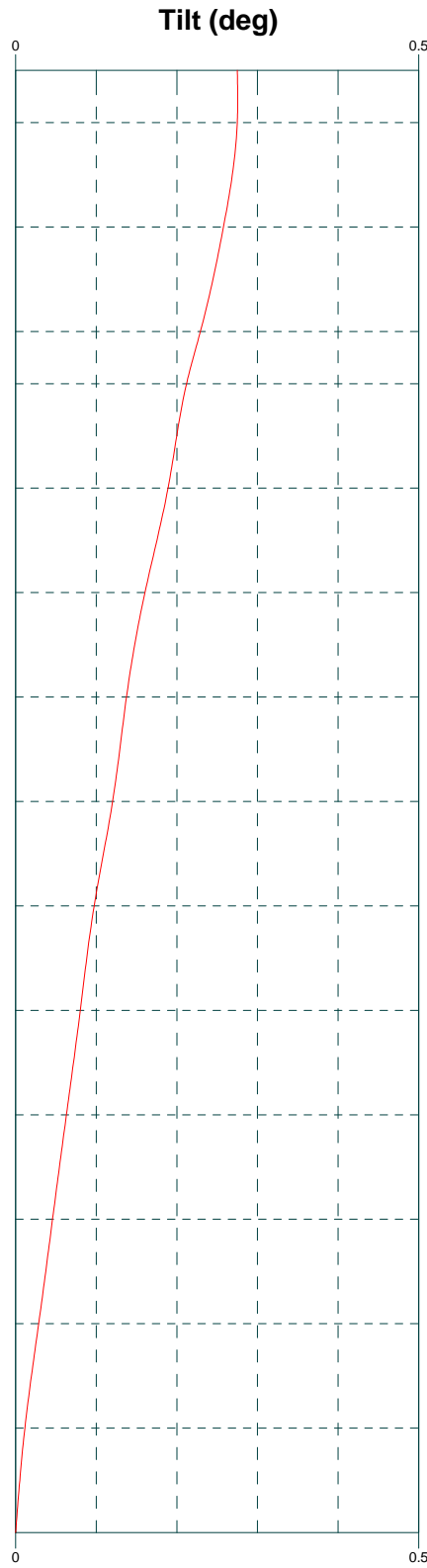
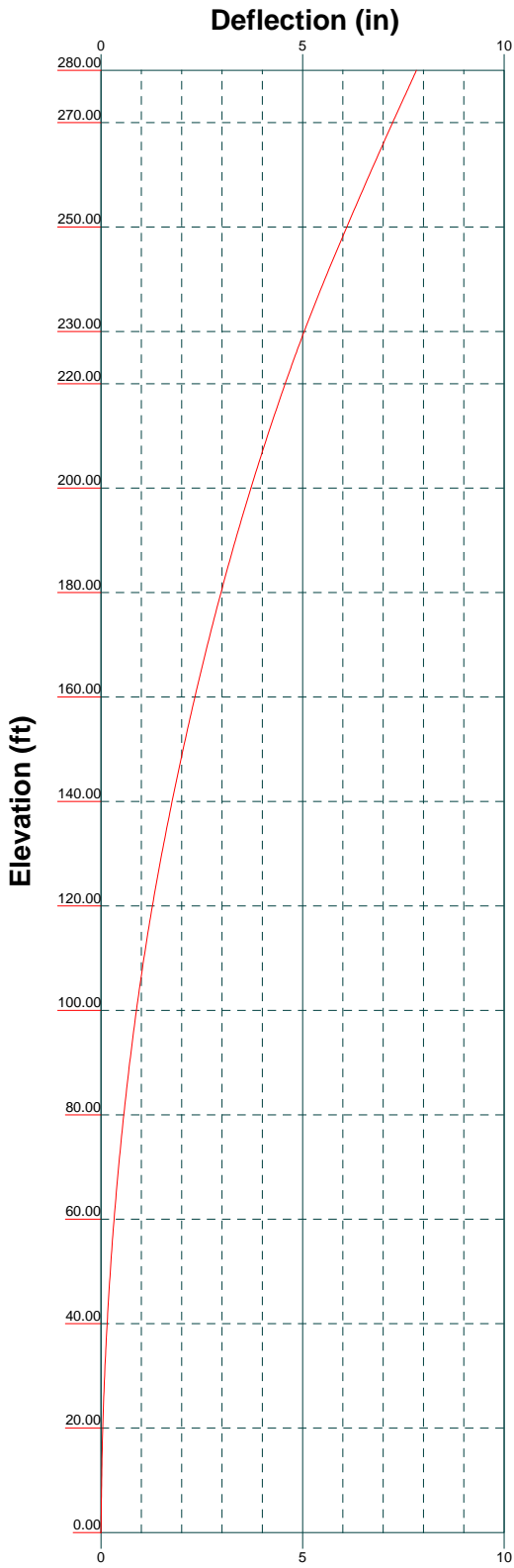
DOWN: 578 K
SHEAR: 62 K

UPLIFT: -488 K
SHEAR: 55 K



Maser Consulting Connecticut
331 Newman Springs Road, Suite 203
Red Bank, NJ 07701
Phone: 732 383-1950
FAX:

Job:	CT5633		
Project:	18963021A		
Client:	AT&T	Drawn by:	App'd:
Code:	TIA-222-G	Date:	11/02/18
Path:	R:\Projects\2018\18963000A\18963021A\StructuralTower Analysis\Rev 0\TNX\Self Support Tower.dwg		Dwg No. E-1
		Scale:	NTS



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 331 Newman Springs Road, Suite 203
 Red Bank, NJ 07701
 Phone: 732 383-1950
 FAX:

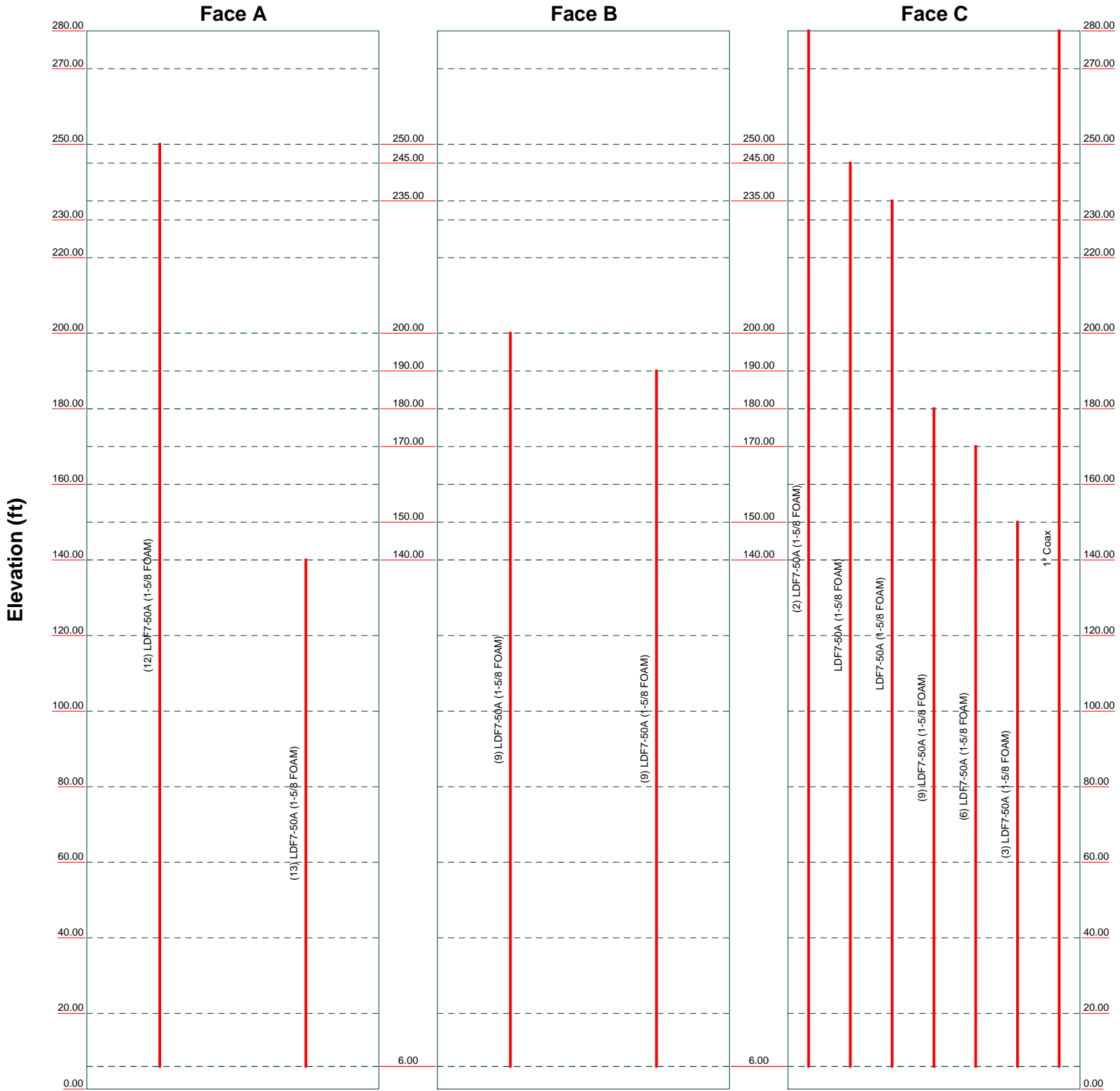
Job: CT5633		
Project: 18963021A		
Client: AT&T	Drawn by:	App'd:
Code: TIA-222-G	Date: 11/02/18	Scale: NTS
Path:		Dwg No. E-5

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Feed Line Distribution Chart

0' - 280'

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



Maser Consulting Connecticut
 331 Newman Springs Road, Suite 203
 Red Bank, NJ 07701
 Phone: 732 383-1950
 FAX:

Job: CT5633		
Project: 18963021A		
Client: AT&T	Drawn by:	App'd:
Code: TIA-222-G	Date: 11/02/18	Scale: NTS
Path:	Dwg No. E-7	

R:\Projects\2018\18963000A\18963021A\StructuralTower Analysis\Rev 0\TNX\Self Support Tower.dwg

tnxTower Maser Consulting Connecticut 331 Newman Springs Road, Suite 203 Red Bank, NJ 07701 Phone: 732 383-1950 FAX:	Job	CT5633	Page	1 of 53
	Project	18963021A	Date	15:34:57 11/02/18
	Client	AT&T	Designed by	

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 280.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 5.00 ft at the top and 28.00 ft at the base.

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

ASCE 7-10 Wind Data is used (wind speeds converted to nominal values).

Basic wind speed of 97 mph.

Structure Class II.

Exposure Category B.

Topographic Category 1.

Crest Height 0.00 ft.

Nominal ice thickness of 0.7500 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

Weld together tower sections have flange connections..

Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications..

Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..

Welds are fabricated with ER-70S-6 electrodes..

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

<ul style="list-style-type: none"> Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification √ Use Code Stress Ratios √ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile Include Bolts In Member Capacity Leg Bolts Are At Top Of Section Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric 	<ul style="list-style-type: none"> Distribute Leg Loads As Uniform Assume Legs Pinned √ Assume Rigid Index Plate √ Use Clear Spans For Wind Area √ Use Clear Spans For KL/r Retension Guys To Initial Tension Bypass Mast Stability Checks Use Azimuth Dish Coefficients √ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder 	<ul style="list-style-type: none"> Use ASCE 10 X-Brace Ly Rules Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation √ Consider Feed Line Torque √ Include Angle Block Shear Check Use TIA-222-G Bracing Resist. Exemption Use TIA-222-G Tension Splice Exemption <li style="background-color: #e0e0e0;">Poles Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets
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tnxTower Maser Consulting Connecticut 331 Newman Springs Road, Suite 203 Red Bank, NJ 07701 Phone: 732 383-1950 FAX:	Job	CT5633	Page	3 of 53
	Project	18963021A	Date	15:34:57 11/02/18
	Client	AT&T	Designed by	

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	280.00-270.00	2.25	X Brace	No	Steps	5.5000	6.5000
T2	270.00-250.00	2.38	X Brace	No	Steps	5.5000	6.5000
T3	250.00-230.00	2.38	X Brace	No	Steps	5.5000	6.5000
T4	230.00-220.00	10.00	X Brace	No	No	0.0000	0.0000
T5	220.00-200.00	10.00	X Brace	No	No	0.0000	0.0000
T6	200.00-180.00	10.00	X Brace	No	No	0.0000	0.0000
T7	180.00-160.00	10.00	X Brace	No	No	0.0000	0.0000
T8	160.00-140.00	10.00	X Brace	No	No	0.0000	0.0000
T9	140.00-120.00	10.00	X Brace	No	No	0.0000	0.0000
T10	120.00-100.00	20.00	X Brace	No	No	0.0000	0.0000
T11	100.00-80.00	20.00	X Brace	No	No	0.0000	0.0000
T12	80.00-60.00	20.00	X Brace	No	No	0.0000	0.0000
T13	60.00-40.00	20.00	X Brace	No	No	0.0000	0.0000
T14	40.00-20.00	20.00	X Brace	No	No	0.0000	0.0000
T15	20.00-0.00	20.00	X Brace	No	No	0.0000	0.0000

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 280.00-270.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T2 270.00-250.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T3 250.00-230.00	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T4 230.00-220.00	Truss Leg	Pirod 105245	A572-50 (50 ksi)	Equal Angle	L3x3x5/16	A36 (36 ksi)
T5 220.00-200.00	Truss Leg	Pirod 105218	A572-50 (50 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T6 200.00-180.00	Truss Leg	Pirod 105218	A572-50 (50 ksi)	Equal Angle	L3x3x5/16	A36 (36 ksi)
T7 180.00-160.00	Truss Leg	Pirod 105219	A572-50 (50 ksi)	Equal Angle	L3x3x5/16	A36 (36 ksi)
T8 160.00-140.00	Truss Leg	Pirod 105220	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x5/16	A36 (36 ksi)
T9 140.00-120.00	Truss Leg	Pirod 105220	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x5/16	A36 (36 ksi)
T10 120.00-100.00	Truss Leg	Pirod 112743	A572-50 (50 ksi)	Double Angle	2L3 1/2x3 1/2x5/16x3/8	A36 (36 ksi)
T11 100.00-80.00	Truss Leg	Pirod 112743	A572-50 (50 ksi)	Double Angle	2L3 1/2x3 1/2x5/16x3/8	A36 (36 ksi)
T12 80.00-60.00	Truss Leg	Pirod 112744	A572-50 (50 ksi)	Double Angle	2L3 1/2x3 1/2x5/16x3/8	A36 (36 ksi)
T13 60.00-40.00	Truss Leg	Pirod 112744	A572-50 (50 ksi)	Double Angle	2L3 1/2x3 1/2x5/16x3/8	A36 (36 ksi)
T14 40.00-20.00	Truss Leg	Pirod 112745	A572-50 (50 ksi)	Double Angle	2L3 1/2x3 1/2x5/16x3/8	A36 (36 ksi)
T15 20.00-0.00	Truss Leg	Pirod 112740	A572-50 (50 ksi)	Double Angle	2L3 1/2x3 1/2x5/16x3/8	A36 (36 ksi)

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Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 280.00-270.00	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T2 270.00-250.00	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T3 250.00-230.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T6 200.00-180.00	Equal Angle	L3x3x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T7 180.00-160.00	Equal Angle	L4x4x1/4	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T8 160.00-140.00	Equal Angle	L3 1/2x3 1/2x5/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 280.00-270.00	1	Solid Round	1	A572-50 (50 ksi)	Solid Round		A572-50 (50 ksi)
T2 270.00-250.00	1	Solid Round	1	A572-50 (50 ksi)	Solid Round		A572-50 (50 ksi)
T6 200.00-180.00	1	Equal Angle	L3x3x3/16	A36 (36 ksi)	Pipe		A572-50 (50 ksi)
T7 180.00-160.00	1	Equal Angle	L4x4x1/4	A36 (36 ksi)	Pipe		A572-50 (50 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
280.00-270.00 T1	0.00	0.0000	A36 (36 ksi)	1	1	1.03	36.0000	36.0000	36.0000
270.00-250.00 T2	0.00	0.0000	A36 (36 ksi)	1	1	1.03	36.0000	36.0000	36.0000
250.00-230.00 T3	0.00	0.0000	A36 (36 ksi)	1	1	1.03	36.0000	36.0000	36.0000
230.00-220.00 T4	0.00	0.0000	A36 (36 ksi)	1	1	1.03	36.0000	36.0000	36.0000
220.00-200.00 T5	0.00	0.0000	A36 (36 ksi)	1	1	1.03	36.0000	36.0000	36.0000
200.00-180.00 T6	0.00	0.0000	A36 (36 ksi)	1	1	1.03	36.0000	36.0000	36.0000
180.00-160.00 T7	0.00	0.0000	A36	1	1	1.03	36.0000	36.0000	36.0000

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Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T3 250.00-230.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 230.00-220.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 220.00-200.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 200.00-180.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 180.00-160.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 160.00-140.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 140.00-120.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 120.00-100.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T11 100.00-80.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T12 80.00-60.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T13 60.00-40.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T14 40.00-20.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T15 20.00-0.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 280.00-270.00	Sleeve DS	0.6250	5	0.0000	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T2 270.00-250.00	Sleeve DS	0.7500	5	0.0000	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T3 250.00-230.00	Flange	1.0000	6	0.0000	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T4 230.00-220.00	Flange	1.0000	6	1.0000	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T5 220.00-200.00	Flange	1.0000	6	1.0000	1	0.7500	0	0.6250	0	0.6250	0	0.7500	0	0.6250	0
T6 200.00-180.00	Flange	1.0000	6	1.0000	1	1.0000	1	0.6250	0	0.6250	0	0.7500	0	0.6250	0
T7 180.00-160.00	Flange	1.2500	6	1.2500	1	1.2500	1	0.6250	0	0.6250	0	1.0000	1	0.6250	0
T8 160.00-140.00	Flange	1.2500	6	1.2500	1	1.2500	1	0.6250	0	0.6250	0	1.2500	1	0.6250	0
T9 140.00-120.00	Flange	1.2500	6	1.2500	1	0.7500	0	0.6250	0	0.6250	0	1.2500	1	0.6250	0

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Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T10 120.00-100.00	Flange	1.2500	12	1.0000	2	0.7500	0	0.6250	0	0.6250	0	1.2500	1	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T11 100.00-80.00	Flange	1.2500	12	1.0000	2	0.7500	0	0.6250	0	0.6250	0	0.7500	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T12 80.00-60.00	Flange	1.2500	12	1.0000	2	0.7500	0	0.6250	0	0.6250	0	0.7500	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T13 60.00-40.00	Flange	1.2500	12	1.0000	2	0.7500	0	0.6250	0	0.6250	0	0.7500	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T14 40.00-20.00	Flange	1.2500	12	1.0000	2	0.7500	0	0.6250	0	0.6250	0	0.7500	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T15 20.00-0.00	Flange	1.2500	12	1.0000	2	0.7500	0	0.6250	0	0.6250	0	0.7500	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
LDF7-50A (1-5/8 FOAM)	C	No	Ar (CaAa)	280.00 - 6.00	0.0000	0.45	2	2	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	A	No	Ar (CaAa)	250.00 - 6.00	0.0000	0.45	12	6	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	C	No	Ar (CaAa)	245.00 - 6.00	0.0000	0.45	1	1	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	C	No	Ar (CaAa)	235.00 - 6.00	0.0000	0.45	1	1	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	B	No	Ar (CaAa)	200.00 - 6.00	0.0000	0.45	9	5	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	B	No	Ar (CaAa)	190.00 - 6.00	0.0000	0.45	9	5	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	C	No	Ar (CaAa)	180.00 - 6.00	0.0000	0.45	9	5	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	C	No	Ar (CaAa)	170.00 - 6.00	0.0000	0.45	6	3	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	C	No	Ar (CaAa)	150.00 - 6.00	0.0000	0.45	3	3	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	A	No	Ar (CaAa)	140.00 - 6.00	0.0000	0.45	13	6	1.9800	1.9800		0.82
1" Coax	C	No	Ar (CaAa)	280.00 - 6.00	0.0000	0.45	1	1	1.0000	1.0000		0.00

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	280.00-270.00	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	4.960	0.000	0.02
T2	270.00-250.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00

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<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face</i>	<i>A_R ft²</i>	<i>A_F ft²</i>	<i>C_{AA} In Face ft²</i>	<i>C_{AA} Out Face ft²</i>	<i>Weight K</i>
T3	250.00-230.00	C	0.000	0.000	9.920	0.000	0.03
		A	0.000	0.000	47.520	0.000	0.20
		B	0.000	0.000	0.000	0.000	0.00
T4	230.00-220.00	C	0.000	0.000	13.880	0.000	0.05
		A	0.000	0.000	23.760	0.000	0.10
		B	0.000	0.000	0.000	0.000	0.00
T5	220.00-200.00	C	0.000	0.000	8.920	0.000	0.03
		A	0.000	0.000	47.520	0.000	0.20
		B	0.000	0.000	0.000	0.000	0.00
T6	200.00-180.00	C	0.000	0.000	17.840	0.000	0.07
		A	0.000	0.000	47.520	0.000	0.20
		B	0.000	0.000	53.460	0.000	0.22
T7	180.00-160.00	C	0.000	0.000	17.840	0.000	0.07
		A	0.000	0.000	47.520	0.000	0.20
		B	0.000	0.000	71.280	0.000	0.30
T8	160.00-140.00	C	0.000	0.000	65.360	0.000	0.26
		A	0.000	0.000	47.520	0.000	0.20
		B	0.000	0.000	71.280	0.000	0.30
T9	140.00-120.00	C	0.000	0.000	83.180	0.000	0.34
		A	0.000	0.000	99.000	0.000	0.41
		B	0.000	0.000	71.280	0.000	0.30
T10	120.00-100.00	C	0.000	0.000	89.120	0.000	0.36
		A	0.000	0.000	99.000	0.000	0.41
		B	0.000	0.000	71.280	0.000	0.30
T11	100.00-80.00	C	0.000	0.000	89.120	0.000	0.36
		A	0.000	0.000	99.000	0.000	0.41
		B	0.000	0.000	71.280	0.000	0.30
T12	80.00-60.00	C	0.000	0.000	89.120	0.000	0.36
		A	0.000	0.000	99.000	0.000	0.41
		B	0.000	0.000	71.280	0.000	0.30
T13	60.00-40.00	C	0.000	0.000	89.120	0.000	0.36
		A	0.000	0.000	99.000	0.000	0.41
		B	0.000	0.000	71.280	0.000	0.30
T14	40.00-20.00	C	0.000	0.000	89.120	0.000	0.36
		A	0.000	0.000	99.000	0.000	0.41
		B	0.000	0.000	71.280	0.000	0.30
T15	20.00-0.00	C	0.000	0.000	89.120	0.000	0.36
		A	0.000	0.000	69.300	0.000	0.29
		B	0.000	0.000	49.896	0.000	0.21
		C	0.000	0.000	62.384	0.000	0.25

Feed Line/Linear Appurtenances Section Areas - With Ice

<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face or Leg</i>	<i>Ice Thickness in</i>	<i>A_R ft²</i>	<i>A_F ft²</i>	<i>C_{AA} In Face ft²</i>	<i>C_{AA} Out Face ft²</i>	<i>Weight K</i>
T1	280.00-270.00	A	1.854	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	18.709	0.000	0.24
T2	270.00-250.00	A	1.844	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	37.306	0.000	0.48
T3	250.00-230.00	A	1.829	0.000	0.000	67.972	0.000	1.76
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	48.424	0.000	0.67
T4	230.00-220.00	A	1.817	0.000	0.000	33.948	0.000	0.87
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	29.739	0.000	0.42

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Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T5	220.00-200.00	A	1.805	0.000	0.000	67.816	0.000	1.74
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	59.243	0.000	0.84
T6	200.00-180.00	A	1.787	0.000	0.000	67.700	0.000	1.73
		B		0.000	0.000	87.802	0.000	1.99
		C		0.000	0.000	58.905	0.000	0.83
T7	180.00-160.00	A	1.767	0.000	0.000	67.573	0.000	1.72
		B		0.000	0.000	116.809	0.000	2.64
		C		0.000	0.000	137.486	0.000	2.58
T8	160.00-140.00	A	1.745	0.000	0.000	67.432	0.000	1.71
		B		0.000	0.000	116.519	0.000	2.62
		C		0.000	0.000	175.403	0.000	3.25
T9	140.00-120.00	A	1.720	0.000	0.000	138.602	0.000	3.55
		B		0.000	0.000	116.192	0.000	2.60
		C		0.000	0.000	192.520	0.000	3.46
T10	120.00-100.00	A	1.692	0.000	0.000	138.226	0.000	3.52
		B		0.000	0.000	115.816	0.000	2.58
		C		0.000	0.000	191.411	0.000	3.41
T11	100.00-80.00	A	1.658	0.000	0.000	137.783	0.000	3.48
		B		0.000	0.000	115.373	0.000	2.55
		C		0.000	0.000	190.104	0.000	3.36
T12	80.00-60.00	A	1.617	0.000	0.000	137.241	0.000	3.44
		B		0.000	0.000	114.832	0.000	2.51
		C		0.000	0.000	188.505	0.000	3.30
T13	60.00-40.00	A	1.564	0.000	0.000	136.537	0.000	3.38
		B		0.000	0.000	114.128	0.000	2.47
		C		0.000	0.000	186.426	0.000	3.22
T14	40.00-20.00	A	1.486	0.000	0.000	135.513	0.000	3.30
		B		0.000	0.000	113.104	0.000	2.40
		C		0.000	0.000	183.405	0.000	3.10
T15	20.00-0.00	A	1.331	0.000	0.000	93.439	0.000	2.20
		B		0.000	0.000	77.754	0.000	1.59
		C		0.000	0.000	124.191	0.000	2.01

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
T1	280.00-270.00	-2.3907	1.6126	-0.9191	0.6151
T2	270.00-250.00	-2.4290	1.6384	-1.0560	0.7068
T3	250.00-230.00	-1.7345	-4.0903	-1.2929	-1.4309
T4	230.00-220.00	-1.6652	-3.1663	-0.9920	-0.7011
T5	220.00-200.00	-2.0144	-3.9396	-1.4687	-1.0562
T6	200.00-180.00	2.6468	-1.2772	0.7094	-0.0667
T7	180.00-160.00	0.4697	1.4848	-0.2731	1.3949
T8	160.00-140.00	-0.6570	2.3999	-1.0578	2.0897
T9	140.00-120.00	-1.3455	-1.4290	-1.6034	-0.0244
T10	120.00-100.00	-1.4805	-1.5795	-1.7452	-0.0307
T11	100.00-80.00	-1.6363	-1.7522	-1.9281	-0.0416
T12	80.00-60.00	-1.7793	-1.9110	-2.0996	-0.0577
T13	60.00-40.00	-1.9307	-2.0788	-2.2661	-0.0823
T14	40.00-20.00	-2.0638	-2.2268	-2.4139	-0.1220
T15	20.00-0.00	-1.9909	-2.1515	-2.2161	-0.1831

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Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T1	1	LDF7-50A (1-5/8 FOAM)	270.00 - 280.00	0.6000	0.4303
T1	11	1" Coax	270.00 - 280.00	0.6000	0.4303
T2	1	LDF7-50A (1-5/8 FOAM)	250.00 - 270.00	0.6000	0.4777
T2	11	1" Coax	250.00 - 270.00	0.6000	0.4777
T3	1	LDF7-50A (1-5/8 FOAM)	230.00 - 250.00	0.6000	0.4795
T3	2	LDF7-50A (1-5/8 FOAM)	230.00 - 250.00	0.6000	0.4795
T3	3	LDF7-50A (1-5/8 FOAM)	230.00 - 245.00	0.6000	0.4795
T3	4	LDF7-50A (1-5/8 FOAM)	230.00 - 235.00	0.6000	0.4795
T3	11	1" Coax	230.00 - 250.00	0.6000	0.4795
T4	1	LDF7-50A (1-5/8 FOAM)	220.00 - 230.00	0.6000	0.2978
T4	2	LDF7-50A (1-5/8 FOAM)	220.00 - 230.00	0.6000	0.2978
T4	3	LDF7-50A (1-5/8 FOAM)	220.00 - 230.00	0.6000	0.2978
T4	4	LDF7-50A (1-5/8 FOAM)	220.00 - 230.00	0.6000	0.2978
T4	11	1" Coax	220.00 - 230.00	0.6000	0.2978
T5	1	LDF7-50A (1-5/8 FOAM)	200.00 - 220.00	0.6000	0.4038
T5	2	LDF7-50A (1-5/8 FOAM)	200.00 - 220.00	0.6000	0.4038
T5	3	LDF7-50A (1-5/8 FOAM)	200.00 - 220.00	0.6000	0.4038
T5	4	LDF7-50A (1-5/8 FOAM)	200.00 - 220.00	0.6000	0.4038
T5	11	1" Coax	200.00 - 220.00	0.6000	0.4038
T6	1	LDF7-50A (1-5/8 FOAM)	180.00 - 200.00	0.6000	0.4642
T6	2	LDF7-50A (1-5/8 FOAM)	180.00 - 200.00	0.6000	0.4642
T6	3	LDF7-50A (1-5/8 FOAM)	180.00 - 200.00	0.6000	0.4642
T6	4	LDF7-50A (1-5/8 FOAM)	180.00 - 200.00	0.6000	0.4642
T6	5	LDF7-50A (1-5/8 FOAM)	180.00 - 200.00	0.6000	0.4642
T6	6	LDF7-50A (1-5/8 FOAM)	180.00 - 190.00	0.6000	0.4642
T6	11	1" Coax	180.00 - 200.00	0.6000	0.4642
T7	1	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.5206
T7	2	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.5206

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T7	3	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.5206
T7	4	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.5206
T7	5	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.5206
T7	6	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.5206
T7	7	LDF7-50A (1-5/8 FOAM)	160.00 - 180.00	0.6000	0.5206
T7	8	LDF7-50A (1-5/8 FOAM)	160.00 - 170.00	0.6000	0.5206
T7	11	1" Coax	160.00 - 180.00	0.6000	0.5206
T8	1	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.5841
T8	2	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.5841
T8	3	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.5841
T8	4	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.5841
T8	5	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.5841
T8	6	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.5841
T8	7	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.5841
T8	8	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	0.6000	0.5841
T8	9	LDF7-50A (1-5/8 FOAM)	140.00 - 150.00	0.6000	0.5841
T8	11	1" Coax	140.00 - 160.00	0.6000	0.5841
T9	1	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T9	2	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T9	3	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T9	4	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T9	5	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T9	6	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T9	7	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T9	8	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T9	9	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T9	10	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
T9	11	1" Coax	120.00 - 140.00	0.6000	0.6000
T10	1	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T10	2	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T10	3	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T10	4	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T10	5	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T10	6	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T10	7	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T10	8	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T10	9	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T10	10	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	0.6000	0.6000
T10	11	1" Coax	100.00 - 120.00	0.6000	0.6000
T11	1	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T11	2	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T11	3	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T11	4	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T11	5	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T11	6	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T11	7	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T11	8	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T11	9	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T11	10	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T11	11	1" Coax	80.00 - 100.00	0.6000	0.6000
T12	1	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T12	2	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T12	3	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T12	4	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T12	5	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T12	6	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T12	7	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T12	8	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T12	9	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T12	10	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T12	11	1" Coax	60.00 - 80.00	0.6000	0.6000
T13	1	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T13	2	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T13	3	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T13	4	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T13	5	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T13	6	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T13	7	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T13	8	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T13	9	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T13	10	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T13	11	1" Coax	40.00 - 60.00	0.6000	0.6000
T14	1	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T14	2	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T14	3	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T14	4	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T14	5	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T14	6	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T14	7	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T14	8	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T14	9	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T14	10	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T14	11	1" Coax	20.00 - 40.00	0.6000	0.6000
T15	1	LDF7-50A (1-5/8 FOAM)	6.00 - 20.00	0.6000	0.6000
T15	2	LDF7-50A (1-5/8 FOAM)	6.00 - 20.00	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T15	3	LDF7-50A (1-5/8 FOAM)	6.00 - 20.00	0.6000	0.6000
T15	4	LDF7-50A (1-5/8 FOAM)	6.00 - 20.00	0.6000	0.6000
T15	5	LDF7-50A (1-5/8 FOAM)	6.00 - 20.00	0.6000	0.6000
T15	6	LDF7-50A (1-5/8 FOAM)	6.00 - 20.00	0.6000	0.6000
T15	7	LDF7-50A (1-5/8 FOAM)	6.00 - 20.00	0.6000	0.6000
T15	8	LDF7-50A (1-5/8 FOAM)	6.00 - 20.00	0.6000	0.6000
T15	9	LDF7-50A (1-5/8 FOAM)	6.00 - 20.00	0.6000	0.6000
T15	10	LDF7-50A (1-5/8 FOAM)	6.00 - 20.00	0.6000	0.6000
T15	11	1" Coax	6.00 - 20.00	0.6000	0.6000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	C _A A _A Front	C _A A _A Side	Weight
			ft ft ft	°	ft	ft ²	ft ²	K
Flash Beacon Lighting	B	None		0.0000	280.00	No Ice	2.70	0.05
						1/2" Ice	3.10	0.07
						1" Ice	3.50	0.09
15' Lightning Rod	B	From Leg	0.00	0.0000	280.00	No Ice	3.00	0.08
						1/2" Ice	4.53	0.10
						1" Ice	6.06	0.12
DB420-A	B	From Centroid-Face	8.00	0.0000	280.00	No Ice	3.33	0.03
						1/2" Ice	5.99	0.04
						1" Ice	8.65	0.05
DB420-A	A	From Centroid-Face	8.00	0.0000	280.00	No Ice	3.33	0.03
						1/2" Ice	5.99	0.04
						1" Ice	8.65	0.05
Sector Mount [SM 412-1]	C	None		0.0000	280.00	No Ice	70.47	3.08
						1/2" Ice	100.14	4.50
						1" Ice	129.81	5.92
RR90-17-02DP	A	From Leg	3.00	0.0000	250.00	No Ice	4.91	0.04
						1/2" Ice	5.57	0.08
						1" Ice	6.23	0.12
RR90-17-02DP	B	From Leg	3.00	0.0000	250.00	No Ice	4.91	0.04
						1/2" Ice	5.57	0.08
						1" Ice	6.23	0.12
RR90-17-02DP	C	From Leg	3.00	0.0000	250.00	No Ice	4.91	0.04
						1/2" Ice	5.57	0.08
						1" Ice	6.23	0.12
LNX-6515DS-VTM	A	From Leg	3.00	0.0000	250.00	No Ice	11.45	0.08
						1/2" Ice	12.06	0.17
						1" Ice	12.69	0.26
LNX-6515DS-VTM	B	From Leg	3.00	0.0000	250.00	No Ice	11.45	0.08
						1/2" Ice	12.06	0.17
						1" Ice	12.69	0.26
LNX-6515DS-VTM	C	From Leg	3.00	0.0000	250.00	No Ice	11.45	0.08
						1/2" Ice	12.06	0.17
						1" Ice	12.69	0.26
TMA	A	From Leg	3.00	0.0000	250.00	No Ice	0.78	0.02
						1/2" Ice	0.90	0.03
						1" Ice	1.02	0.04

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral Vert					
TMA	B	From Leg	3.00	0.00	0.0000	250.00	No Ice 0.78	0.29	0.02
			0.00	0.00			1/2" Ice 0.90	0.38	0.03
			0.00	0.00			1" Ice 1.02	0.47	0.04
TMA	C	From Leg	3.00	0.00	0.0000	250.00	No Ice 0.78	0.29	0.02
			0.00	0.00			1/2" Ice 0.90	0.38	0.03
			0.00	0.00			1" Ice 1.02	0.47	0.04
Pirot 15' T-Frame Sector Mount (1)	A	None			0.0000	250.00	No Ice 15.00	15.00	0.50
							1/2" Ice 20.60	20.60	0.65
							1" Ice 26.20	26.20	0.80
Pirot 15' T-Frame Sector Mount (1)	B	None			0.0000	250.00	No Ice 15.00	15.00	0.50
							1/2" Ice 20.60	20.60	0.65
							1" Ice 26.20	26.20	0.80
Pirot 15' T-Frame Sector Mount (1)	C	None			0.0000	250.00	No Ice 15.00	15.00	0.50
							1/2" Ice 20.60	20.60	0.65
							1" Ice 26.20	26.20	0.80
DB420-A	B	From Centroid-Face	8.00	0.00	0.0000	245.00	No Ice 3.33	3.33	0.03
			0.00	9.00			1/2" Ice 5.99	5.99	0.04
			0.00	0.00			1" Ice 8.65	8.65	0.05
DB225-2-F	A	From Centroid-Face	8.00	0.00	0.0000	235.00	No Ice 1.36	1.36	0.05
			0.00	0.00			1/2" Ice 2.45	2.45	0.07
			0.00	0.00			1" Ice 3.54	3.54	0.09
Sector Mount [SM 412-1]	C	None			0.0000	235.00	No Ice 70.47	70.47	3.08
							1/2" Ice 100.14	100.14	4.50
							1" Ice 129.81	129.81	5.92
(3) DB980H120E-M	A	From Leg	3.00	0.00	0.0000	200.00	No Ice 4.22	3.83	0.03
			0.00	0.00			1/2" Ice 4.81	4.92	0.07
			0.00	0.00			1" Ice 5.40	6.01	0.11
(3) DB980H120E-M	B	From Leg	3.00	0.00	0.0000	200.00	No Ice 4.22	3.83	0.03
			0.00	0.00			1/2" Ice 4.81	4.92	0.07
			0.00	0.00			1" Ice 5.40	6.01	0.11
(3) DB980H120E-M	C	From Leg	3.00	0.00	0.0000	200.00	No Ice 4.22	3.83	0.03
			0.00	0.00			1/2" Ice 4.81	4.92	0.07
			0.00	0.00			1" Ice 5.40	6.01	0.11
Pirot 12' T-Frame Sector Mount (1)	A	None			0.0000	200.00	No Ice 13.60	13.60	0.47
							1/2" Ice 18.40	18.40	0.60
							1" Ice 23.20	23.20	0.73
Pirot 12' T-Frame Sector Mount (1)	B	None			0.0000	200.00	No Ice 13.60	13.60	0.47
							1/2" Ice 18.40	18.40	0.60
							1" Ice 23.20	23.20	0.73
Pirot 12' T-Frame Sector Mount (1)	C	None			0.0000	200.00	No Ice 13.60	13.60	0.47
							1/2" Ice 18.40	18.40	0.60
							1" Ice 23.20	23.20	0.73
(3) DB980H120E-M	A	From Leg	3.00	0.00	0.0000	190.00	No Ice 4.22	3.83	0.03
			0.00	0.00			1/2" Ice 4.81	4.92	0.07
			0.00	0.00			1" Ice 5.40	6.01	0.11
(3) DB980H120E-M	B	From Leg	3.00	0.00	0.0000	190.00	No Ice 4.22	3.83	0.03
			0.00	0.00			1/2" Ice 4.81	4.92	0.07
			0.00	0.00			1" Ice 5.40	6.01	0.11
(3) DB980H120E-M	C	From Leg	3.00	0.00	0.0000	190.00	No Ice 4.22	3.83	0.03
			0.00	0.00			1/2" Ice 4.81	4.92	0.07
			0.00	0.00			1" Ice 5.40	6.01	0.11
Pirot 12' T-Frame Sector Mount (1)	A	None			0.0000	190.00	No Ice 13.60	13.60	0.47
							1/2" Ice 18.40	18.40	0.60
							1" Ice 23.20	23.20	0.73
Pirot 12' T-Frame Sector Mount (1)	B	None			0.0000	190.00	No Ice 13.60	13.60	0.47
							1/2" Ice 18.40	18.40	0.60
							1" Ice 23.20	23.20	0.73

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral					
Pirod 12' T-Frame Sector Mount (1)	C	None			0.0000	190.00	No Ice 13.60 1/2" Ice 18.40 1" Ice 23.20	13.60 18.40 23.20	0.47 0.60 0.73
(3) DB980H120E-M	A	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 4.22 1/2" Ice 4.81 1" Ice 5.40	3.83 4.92 6.01	0.03 0.07 0.11
(3) DB980H120E-M	B	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 4.22 1/2" Ice 4.81 1" Ice 5.40	3.83 4.92 6.01	0.03 0.07 0.11
(3) DB980H120E-M	C	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 4.22 1/2" Ice 4.81 1" Ice 5.40	3.83 4.92 6.01	0.03 0.07 0.11
Pirod 12' T-Frame Sector Mount (1)	A	None			0.0000	180.00	No Ice 13.60 1/2" Ice 18.40 1" Ice 23.20	13.60 18.40 23.20	0.47 0.60 0.73
Pirod 12' T-Frame Sector Mount (1)	B	None			0.0000	180.00	No Ice 13.60 1/2" Ice 18.40 1" Ice 23.20	13.60 18.40 23.20	0.47 0.60 0.73
Pirod 12' T-Frame Sector Mount (1)	C	None			0.0000	180.00	No Ice 13.60 1/2" Ice 18.40 1" Ice 23.20	13.60 18.40 23.20	0.47 0.60 0.73
APXVSP18-C-A20	A	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 0.00 1/2" Ice 0.00 1" Ice 0.00	0.00 0.00 0.00	0.00 0.00 0.00
APXVSP18-C-A20	B	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 0.00 1/2" Ice 0.00 1" Ice 0.00	0.00 0.00 0.00	0.00 0.00 0.00
APXVSP18-C-A20	C	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 0.00 1/2" Ice 0.00 1" Ice 0.00	0.00 0.00 0.00	0.00 0.00 0.00
APXVTM14-ALU-I20	A	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 7.13 1/2" Ice 7.66 1" Ice 8.19	4.96 5.75 6.54	0.08 0.13 0.18
APXVTM14-ALU-I20	B	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 7.13 1/2" Ice 7.66 1" Ice 8.19	4.96 5.75 6.54	0.08 0.13 0.18
APXVTM14-ALU-I20	C	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 7.13 1/2" Ice 7.66 1" Ice 8.19	4.96 5.75 6.54	0.08 0.13 0.18
FD-RRH-2X50-800	A	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 2.13 1/2" Ice 2.32 1" Ice 2.51	2.46 2.66 2.86	0.06 0.09 0.12
FD-RRH-2X50-800	B	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 2.13 1/2" Ice 2.32 1" Ice 2.51	2.46 2.66 2.86	0.06 0.09 0.12
FD-RRH-2X50-800	C	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 2.13 1/2" Ice 2.32 1" Ice 2.51	2.46 2.66 2.86	0.06 0.09 0.12
FD-RRH-4X40-1900	A	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 2.49 1/2" Ice 2.70 1" Ice 2.91	3.26 3.48 3.72	0.09 0.12 0.15
FD-RRH-4X40-1900	B	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 2.49 1/2" Ice 2.70 1" Ice 2.91	3.26 3.48 3.72	0.09 0.12 0.15
FD-RRH-4X40-1900	C	From Leg	3.00 0.00 0.00		0.0000	170.00	No Ice 2.49 1/2" Ice 2.70 1" Ice 2.91	3.26 3.48 3.72	0.09 0.12 0.15

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft ²	ft ²	K
TD-RRH-8x20-25	A	From Leg	3.00	0.0000	170.00	No Ice	3.70	1.29	0.07
			0.00			1/2" Ice	3.95	1.46	0.09
			0.00			1" Ice	4.20	1.64	0.12
TD-RRH-8x20-25	B	From Leg	3.00	0.0000	170.00	No Ice	3.70	1.29	0.07
			0.00			1/2" Ice	3.95	1.46	0.09
			0.00			1" Ice	4.20	1.64	0.12
TD-RRH-8x20-25	C	From Leg	3.00	0.0000	170.00	No Ice	3.70	1.29	0.07
			0.00			1/2" Ice	3.95	1.46	0.09
			0.00			1" Ice	4.20	1.64	0.12
Pirod 15' T-Frame Sector Mount (1)	A	From Leg	3.00	0.0000	170.00	No Ice	15.00	15.00	0.50
			0.00			1/2" Ice	20.60	20.60	0.65
			0.00			1" Ice	26.20	26.20	0.80
Pirod 15' T-Frame Sector Mount (1)	B	From Leg	3.00	0.0000	170.00	No Ice	15.00	15.00	0.50
			0.00			1/2" Ice	20.60	20.60	0.65
			0.00			1" Ice	26.20	26.20	0.80
Pirod 15' T-Frame Sector Mount (1)	C	From Leg	3.00	0.0000	170.00	No Ice	15.00	15.00	0.50
			0.00			1/2" Ice	20.60	20.60	0.65
			0.00			1" Ice	26.20	26.20	0.80
80010121 9' Mount Pipe	A	From Leg	3.00	0.0000	160.00	No Ice	6.22	5.43	0.09
			0.00			1/2" Ice	7.03	6.71	0.15
			0.00			1" Ice	7.86	8.00	0.21
80010121 9' Mount Pipe	B	From Leg	3.00	0.0000	160.00	No Ice	6.22	5.43	0.09
			0.00			1/2" Ice	7.03	6.71	0.15
			0.00			1" Ice	7.86	8.00	0.21
80010121 9' Mount Pipe	C	From Leg	3.00	0.0000	160.00	No Ice	6.22	5.43	0.09
			0.00			1/2" Ice	7.03	6.71	0.15
			0.00			1" Ice	7.86	8.00	0.21
QS66512-2	A	From Leg	3.00	0.0000	160.00	No Ice	8.13	6.80	0.11
			0.00			1/2" Ice	8.59	7.27	0.17
			0.00			1" Ice	9.05	7.72	0.23
QS66512-2	B	From Leg	3.00	0.0000	160.00	No Ice	8.13	6.80	0.11
			0.00			1/2" Ice	8.59	7.27	0.17
			0.00			1" Ice	9.05	7.72	0.23
QS66512-2	C	From Leg	3.00	0.0000	160.00	No Ice	8.13	6.80	0.11
			0.00			1/2" Ice	8.59	7.27	0.17
			0.00			1" Ice	9.05	7.72	0.23
HPA65R-BU6A	A	From Leg	3.00	0.0000	160.00	No Ice	7.87	6.97	0.08
			0.00			1/2" Ice	8.32	7.92	0.15
			0.00			1" Ice	8.79	8.75	0.22
HPA65R-BU6A	B	From Leg	3.00	0.0000	160.00	No Ice	7.87	6.97	0.08
			0.00			1/2" Ice	8.32	7.92	0.15
			0.00			1" Ice	8.79	8.75	0.22
HPA65R-BU6A	C	From Leg	3.00	0.0000	160.00	No Ice	7.87	6.97	0.08
			0.00			1/2" Ice	8.32	7.92	0.15
			0.00			1" Ice	8.79	8.75	0.22
RRUS-11	A	From Leg	3.00	0.0000	160.00	No Ice	2.52	1.02	0.06
			0.00			1/2" Ice	2.72	1.16	0.07
			0.00			1" Ice	2.92	1.30	0.10
RRUS-11	B	From Leg	3.00	0.0000	160.00	No Ice	2.52	1.02	0.06
			0.00			1/2" Ice	2.72	1.16	0.07
			0.00			1" Ice	2.92	1.30	0.10
RRUS-11	C	From Leg	3.00	0.0000	160.00	No Ice	2.52	1.02	0.06
			0.00			1/2" Ice	2.72	1.16	0.07
			0.00			1" Ice	2.92	1.30	0.10
RRUS 32	A	From Leg	3.00	0.0000	160.00	No Ice	2.72	1.67	0.05
			0.00			1/2" Ice	2.94	1.86	0.07
			0.00			1" Ice	3.17	2.05	0.10

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft ²	ft ²	K
RRUS 32	B	From Leg	3.00	0.00	0.0000	160.00	No Ice 2.72	1.67	0.05
			0.00	0.00			1/2" Ice 2.94	1.86	0.07
			0.00	0.00			1" Ice 3.17	2.05	0.10
RRUS 32	C	From Leg	3.00	0.00	0.0000	160.00	No Ice 2.72	1.67	0.05
			0.00	0.00			1/2" Ice 2.94	1.86	0.07
			0.00	0.00			1" Ice 3.17	2.05	0.10
RRUS 32 B2	A	From Leg	3.00	0.00	0.0000	160.00	No Ice 2.72	1.67	0.05
			0.00	0.00			1/2" Ice 2.94	1.86	0.07
			0.00	0.00			1" Ice 3.17	2.05	0.10
RRUS 32 B2	B	From Leg	3.00	0.00	0.0000	160.00	No Ice 2.72	1.67	0.05
			0.00	0.00			1/2" Ice 2.94	1.86	0.07
			0.00	0.00			1" Ice 3.17	2.05	0.10
RRUS 32 B2	C	From Leg	3.00	0.00	0.0000	160.00	No Ice 2.72	1.67	0.05
			0.00	0.00			1/2" Ice 2.94	1.86	0.07
			0.00	0.00			1" Ice 3.17	2.05	0.10
RRUS 4478 B5	A	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.84	1.06	0.06
			0.00	0.00			1/2" Ice 2.01	1.20	0.08
			0.00	0.00			1" Ice 2.19	1.34	0.09
RRUS 4478 B5	B	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.84	1.06	0.06
			0.00	0.00			1/2" Ice 2.01	1.20	0.08
			0.00	0.00			1" Ice 2.19	1.34	0.09
RRUS 4478 B5	C	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.84	1.06	0.06
			0.00	0.00			1/2" Ice 2.01	1.20	0.08
			0.00	0.00			1" Ice 2.19	1.34	0.09
RRU B14 4478	A	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.86	0.82	0.05
			0.00	0.00			1/2" Ice 2.03	0.94	0.06
			0.00	0.00			1" Ice 2.20	1.07	0.08
RRU B14 4478	B	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.86	0.82	0.05
			0.00	0.00			1/2" Ice 2.03	0.94	0.06
			0.00	0.00			1" Ice 2.20	1.07	0.08
RRU B14 4478	C	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.86	0.82	0.05
			0.00	0.00			1/2" Ice 2.03	0.94	0.06
			0.00	0.00			1" Ice 2.20	1.07	0.08
RRUS 4426 B66	A	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.65	0.68	0.05
			0.00	0.00			1/2" Ice 1.81	0.79	0.06
			0.00	0.00			1" Ice 1.98	0.92	0.07
RRUS 4426 B66	B	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.65	0.68	0.05
			0.00	0.00			1/2" Ice 1.81	0.79	0.06
			0.00	0.00			1" Ice 1.98	0.92	0.07
RRUS 4426 B66	C	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.65	0.68	0.05
			0.00	0.00			1/2" Ice 1.81	0.79	0.06
			0.00	0.00			1" Ice 1.98	0.92	0.07
LGP 21401	A	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.66	0.44	0.03
			0.00	0.00			1/2" Ice 1.82	0.54	0.04
			0.00	0.00			1" Ice 1.98	0.65	0.05
LGP 21401	B	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.66	0.44	0.03
			0.00	0.00			1/2" Ice 1.82	0.54	0.04
			0.00	0.00			1" Ice 1.98	0.65	0.05
LGP 21401	C	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.66	0.44	0.03
			0.00	0.00			1/2" Ice 1.82	0.54	0.04
			0.00	0.00			1" Ice 1.98	0.65	0.05
DC6-48-06-18-8F	A	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.20	1.20	0.03
			0.00	0.00			1/2" Ice 1.88	1.88	0.05
			0.00	0.00			1" Ice 2.09	2.09	0.08
DC6-48-06-18-8F	B	From Leg	3.00	0.00	0.0000	160.00	No Ice 1.20	1.20	0.03
			0.00	0.00			1/2" Ice 1.88	1.88	0.05
			0.00	0.00			1" Ice 2.09	2.09	0.08

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<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert</i> <i>ft ft ft</i>	<i>Azimuth Adjustment</i> <i>°</i>	<i>Placement</i> <i>ft</i>	<i>CAAA Front</i> <i>ft²</i>	<i>CAAA Side</i> <i>ft²</i>	<i>Weight</i> <i>K</i>
DC6-48-06-18-8F	C	From Leg	3.00 0.00 0.00	0.0000	160.00	No Ice 1.20 1/2" Ice 1.88 1" Ice 2.09	1.20 1.88 2.09	0.03 0.05 0.08
Pirod 15' T-Frame Sector Mount (1)	A	None		0.0000	160.00	No Ice 15.00 1/2" Ice 20.60 1" Ice 26.20	15.00 20.60 26.20	0.50 0.65 0.80
Pirod 15' T-Frame Sector Mount (1)	B	None		0.0000	160.00	No Ice 15.00 1/2" Ice 20.60 1" Ice 26.20	15.00 20.60 26.20	0.50 0.65 0.80
Pirod 15' T-Frame Sector Mount (1)	C	None		0.0000	160.00	No Ice 15.00 1/2" Ice 20.60 1" Ice 26.20	15.00 20.60 26.20	0.50 0.65 0.80
APXV18-206517S-ACU	A	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 5.40 1/2" Ice 5.96 1" Ice 6.52	4.70 5.86 7.02	0.05 0.10 0.15
APXV18-206517S-ACU	B	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 5.40 1/2" Ice 5.96 1" Ice 6.52	4.70 5.86 7.02	0.05 0.10 0.15
APXV18-206517S-ACU	C	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 5.40 1/2" Ice 5.96 1" Ice 6.52	4.70 5.86 7.02	0.05 0.10 0.15
(2) HBXX-6517DS-A2M	A	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 8.53 1/2" Ice 9.00 1" Ice 9.48	5.24 5.71 6.18	0.04 0.09 0.15
(2) HBXX-6517DS-A2M	B	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 8.53 1/2" Ice 9.00 1" Ice 9.48	5.24 5.71 6.18	0.04 0.09 0.15
(2) HBXX-6517DS-A2M	C	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 8.53 1/2" Ice 9.00 1" Ice 9.48	5.24 5.71 6.18	0.04 0.09 0.15
(2) LNX-6514DS-VTM	A	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 8.65 1/2" Ice 9.31 1" Ice 9.97	7.08 8.27 9.46	0.06 0.13 0.20
(2) LNX-6514DS-VTM	B	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 8.65 1/2" Ice 9.31 1" Ice 9.97	7.08 8.27 9.46	0.06 0.13 0.20
(2) LNX-6514DS-VTM	C	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 8.65 1/2" Ice 9.31 1" Ice 9.97	7.08 8.27 9.46	0.06 0.13 0.20
(2) FD9R6004/2C-3L	A	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 0.37 1/2" Ice 0.45 1" Ice 0.53	0.08 0.14 0.20	0.00 0.01 0.00
(2) FD9R6004/2C-3L	B	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 0.37 1/2" Ice 0.45 1" Ice 0.53	0.08 0.14 0.20	0.00 0.01 0.00
(2) FD9R6004/2C-3L	C	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 0.37 1/2" Ice 0.45 1" Ice 0.53	0.08 0.14 0.20	0.00 0.01 0.00
RRH2X60-AWS	A	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1.87 1/2" Ice 2.04 1" Ice 2.23	1.23 1.38 1.53	0.04 0.06 0.08
RRH2X60-AWS	B	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1.87 1/2" Ice 2.04 1" Ice 2.23	1.23 1.38 1.53	0.04 0.06 0.08
RRH2X60-AWS	C	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1.87 1/2" Ice 2.04 1" Ice 2.23	1.23 1.38 1.53	0.04 0.06 0.08

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	Client	AT&T	Designed by	

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral Vert					
			ft	ft	°	ft	ft ²	ft ²	K
RRH2X60-PCS	A	From Leg	3.00	0.0000	140.00	No Ice	2.20	1.72	0.06
			0.00			1/2" Ice	2.39	1.90	0.08
			0.00			1" Ice	2.59	2.09	0.10
RRH2X60-PCS	B	From Leg	3.00	0.0000	140.00	No Ice	2.20	1.72	0.06
			0.00			1/2" Ice	2.39	1.90	0.08
			0.00			1" Ice	2.59	2.09	0.10
RRH2X60-PCS	C	From Leg	3.00	0.0000	140.00	No Ice	2.20	1.72	0.06
			0.00			1/2" Ice	2.39	1.90	0.08
			0.00			1" Ice	2.59	2.09	0.10
DB-T1-6Z-8AB-0Z	C	From Leg	3.00	0.0000	140.00	No Ice	5.60	2.33	0.04
			0.00			1/2" Ice	5.60	2.33	0.08
			0.00			1" Ice	5.60	2.33	0.12
Pirod 12' T-Frame Sector Mount (1)	A	None		0.0000	140.00	No Ice	13.60	13.60	0.47
						1/2" Ice	18.40	18.40	0.60
						1" Ice	23.20	23.20	0.73
Pirod 12' T-Frame Sector Mount (1)	B	None		0.0000	140.00	No Ice	13.60	13.60	0.47
						1/2" Ice	18.40	18.40	0.60
						1" Ice	23.20	23.20	0.73
Pirod 12' T-Frame Sector Mount (1)	C	None		0.0000	140.00	No Ice	13.60	13.60	0.47
						1/2" Ice	18.40	18.40	0.60
						1" Ice	23.20	23.20	0.73

Truss-Leg Properties

Section Designation	Area	Area Ice	Self Weight	Ice Weight	Equiv. Diameter	Equiv. Diameter Ice	Leg Area
	in ²	in ²	K	K	in	in	in ²
Pirod 105245	1090.3344	3227.9386	0.66	1.11	7.5718	22.4162	5.3014
Pirod 105218	2263.4687	6700.6084	0.74	2.32	7.8593	23.2660	7.2158
Pirod 105218	2263.4687	6684.7191	0.74	2.31	7.8593	23.2108	7.2158
Pirod 105219	2441.8688	6739.2465	0.93	2.34	8.4787	23.4002	9.4248
Pirod 105220	2578.8005	6791.8153	1.10	2.36	8.9542	23.5827	11.9282
Pirod 105220	2578.8005	6769.8954	1.10	2.35	8.9542	23.5066	11.9282
Pirod 112743	3466.5160	8923.4288	1.66	4.28	12.0365	30.9841	14.7262
Pirod 112743	3466.5160	8898.2322	1.66	4.26	12.0365	30.8966	14.7262
Pirod 112744	3599.5585	8939.3815	1.87	4.19	12.4985	31.0395	17.8187
Pirod 112744	3599.5585	8899.2724	1.87	3.96	12.4985	30.9003	17.8187
Pirod 112745	3789.3331	8912.9018	2.15	3.71	13.1574	30.9476	21.2058
Pirod 112740	3789.3331	8797.0272	2.15	3.10	13.1574	30.5452	21.2058

Tower Pressures - No Ice

$$G_H = 0.850$$

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Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	
T1 280.00-270.00	275.00	1.319	27	51.458	A	0.000	7.235	2.917	40.31	0.000	0.000	
					B	0.000	7.235			0.000	0.000	
					C	0.000	7.235			40.31	4.960	0.000
T2 270.00-250.00	260.00	1.298	27	103.333	A	0.000	14.118	6.667	47.22	0.000	0.000	
					B	0.000	14.118			47.22	0.000	0.000
					C	0.000	14.118			47.22	9.920	0.000
T3 250.00-230.00	240.00	1.269	26	104.167	A	0.000	16.405	8.333	50.80	47.520	0.000	
					B	0.000	16.405			50.80	0.000	0.000
					C	0.000	16.405			50.80	13.880	0.000
T4 230.00-220.00	225.00	1.246	26	66.264	A	5.082	12.641	12.641	71.32	23.760	0.000	
					B	5.082	12.641			71.32	0.000	0.000
					C	5.082	12.641			71.32	8.920	0.000
T5 220.00-200.00	210.00	1.222	25	162.945	A	10.467	26.241	26.241	71.49	47.520	0.000	
					B	10.467	26.241			71.49	0.000	0.000
					C	10.467	26.241			71.49	17.840	0.000
T6 200.00-180.00	190.00	1.187	24	202.945	A	15.714	26.241	26.241	62.55	47.520	0.000	
					B	15.714	26.241			62.55	53.460	0.000
					C	15.714	26.241			62.55	17.840	0.000
T7 180.00-160.00	170.00	1.15	24	243.362	A	19.853	28.309	28.309	58.78	47.520	0.000	
					B	19.853	28.309			58.78	71.280	0.000
					C	19.853	28.309			58.78	65.360	0.000
T8 160.00-140.00	150.00	1.11	23	283.780	A	20.877	29.897	29.897	58.88	47.520	0.000	
					B	20.877	29.897			58.88	71.280	0.000
					C	20.877	29.897			58.88	83.180	0.000
T9 140.00-120.00	130.00	1.065	22	323.780	A	19.635	29.897	29.897	60.36	99.000	0.000	
					B	19.635	29.897			60.36	71.280	0.000
					C	19.635	29.897			60.36	89.120	0.000
T10 120.00-100.00	110.00	1.016	21	374.209	A	14.190	40.189	40.189	73.91	99.000	0.000	
					B	14.190	40.189			73.91	71.280	0.000
					C	14.190	40.189			73.91	89.120	0.000
T11 100.00-80.00	90.00	0.959	20	414.209	A	14.825	40.189	40.189	73.05	99.000	0.000	
					B	14.825	40.189			73.05	71.280	0.000
					C	14.825	40.189			73.05	89.120	0.000
T12 80.00-60.00	70.00	0.892	18	454.627	A	15.712	41.731	41.731	72.65	99.000	0.000	
					B	15.712	41.731			72.65	71.280	0.000
					C	15.712	41.731			72.65	89.120	0.000
T13 60.00-40.00	50.00	0.811	17	494.627	A	16.624	41.731	41.731	71.51	99.000	0.000	
					B	16.624	41.731			71.51	71.280	0.000
					C	16.624	41.731			71.51	89.120	0.000
T14 40.00-20.00	30.00	0.701	14	535.044	A	17.558	43.931	43.931	71.44	99.000	0.000	
					B	17.558	43.931			71.44	71.280	0.000
					C	17.558	43.931			71.44	89.120	0.000
T15 20.00-0.00	10.00	0.7	14	575.044	A	18.514	43.931	43.931	70.35	69.300	0.000	
					B	18.514	43.931			70.35	49.896	0.000
					C	18.514	43.931			70.35	62.384	0.000

Tower Pressure - With Ice

$G_H = 0.850$

Section Elevation ft	z ft	K _Z	q _z psf	t _z in	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _{AA} In Face ft ²	C _{AA} Out Face ft ²
T1 280.00-270.00	275.00	1.319	7	1.8543	54.549	A	0.000	31.077	9.098	29.27	0.000	0.000
						B	0.000	31.077			29.27	0.000

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Section Elevation ft	z ft	K _Z	q _z psf	t _z in	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _{AA} In Face ft ²	C _{AA} Out Face ft ²
T2 270.00-250.00	260.00	1.298	7	1.8439	109.480	C	0.000	31.077		29.27	18.709	0.000
						A	0.000	57.177	18.959	33.16	0.000	0.000
						B	0.000	57.177		33.16	0.000	0.000
						C	0.000	57.177		33.16	37.306	0.000
T3 250.00-230.00	240.00	1.269	7	1.8292	110.264	A	0.000	57.397	20.528	35.77	67.972	0.000
						B	0.000	57.397		35.77	0.000	0.000
						C	0.000	57.397		35.77	48.424	0.000
T4 230.00-220.00	225.00	1.246	7	1.8174	69.297	A	5.082	43.580	37.423	76.90	33.948	0.000
						B	5.082	43.580		76.90	0.000	0.000
						C	5.082	43.580		76.90	29.739	0.000
T5 220.00-200.00	210.00	1.222	7	1.8049	168.969	A	10.467	90.277	77.682	77.11	67.816	0.000
						B	10.467	90.277		77.11	0.000	0.000
						C	10.467	90.277		77.11	59.243	0.000
T6 200.00-180.00	190.00	1.187	6	1.7870	208.909	A	15.714	96.219	77.498	69.24	67.700	0.000
						B	15.714	96.219		69.24	87.802	0.000
						C	15.714	96.219		69.24	58.905	0.000
T7 180.00-160.00	170.00	1.15	6	1.7672	249.260	A	19.853	99.655	78.130	65.38	67.573	0.000
						B	19.853	99.655		65.38	116.809	0.000
						C	19.853	99.655		65.38	137.486	0.000
T8 160.00-140.00	150.00	1.11	6	1.7452	289.604	A	20.877	99.559	78.740	65.38	67.432	0.000
						B	20.877	99.559		65.38	116.519	0.000
						C	20.877	99.559		65.38	175.403	0.000
T9 140.00-120.00	130.00	1.065	6	1.7204	329.522	A	19.635	97.789	78.486	66.84	138.602	0.000
						B	19.635	97.789		66.84	116.192	0.000
						C	19.635	97.789		66.84	192.520	0.000
T10 120.00-100.00	110.00	1.016	6	1.6919	379.856	A	14.190	117.171	103.452	78.75	138.226	0.000
						B	14.190	117.171		78.75	115.816	0.000
						C	14.190	117.171		78.75	191.411	0.000
T11 100.00-80.00	90.00	0.959	5	1.6583	419.744	A	14.825	117.209	103.160	78.13	137.783	0.000
						B	14.825	117.209		78.13	115.373	0.000
						C	14.825	117.209		78.13	190.104	0.000
T12 80.00-60.00	70.00	0.892	5	1.6171	460.024	A	15.712	118.156	103.637	77.42	137.241	0.000
						B	15.712	118.156		77.42	114.832	0.000
						C	15.712	118.156		77.42	188.505	0.000
T13 60.00-40.00	50.00	0.811	4	1.5636	499.845	A	16.624	118.026	103.172	76.62	136.537	0.000
						B	16.624	118.026		76.62	114.128	0.000
						C	16.624	118.026		76.62	186.426	0.000
T14 40.00-20.00	30.00	0.701	4	1.4858	540.002	A	17.558	118.238	103.330	76.09	135.513	0.000
						B	17.558	118.238		76.09	113.104	0.000
						C	17.558	118.238		76.09	183.405	0.000
T15 20.00-0.00	10.00	0.7	4	1.3312	579.487	A	18.514	116.071	101.987	75.78	93.439	0.000
						B	18.514	116.071		75.78	77.754	0.000
						C	18.514	116.071		75.78	124.191	0.000

Tower Pressure - Service

$G_H = 0.850$

Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _{AA} In Face ft ²	C _{AA} Out Face ft ²
T1 280.00-270.00	275.00	1.319	10	51.458	A	0.000	7.235	2.917	40.31	0.000	0.000
					B	0.000	7.235		40.31	0.000	0.000
					C	0.000	7.235		40.31	4.960	0.000

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Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F _a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _{AA} In Face ft ²	C _{AA} Out Face ft ²
T2 270.00-250.00	260.00	1.298	10	103.333	A	0.000	14.118	6.667	47.22	0.000	0.000
					B	0.000	14.118		47.22	0.000	0.000
					C	0.000	14.118		47.22	9.920	0.000
T3 250.00-230.00	240.00	1.269	10	104.167	A	0.000	16.405	8.333	50.80	47.520	0.000
					B	0.000	16.405		50.80	0.000	0.000
					C	0.000	16.405		50.80	13.880	0.000
T4 230.00-220.00	225.00	1.246	10	66.264	A	5.082	12.641	12.641	71.32	23.760	0.000
					B	5.082	12.641		71.32	0.000	0.000
					C	5.082	12.641		71.32	8.920	0.000
T5 220.00-200.00	210.00	1.222	10	162.945	A	10.467	26.241	26.241	71.49	47.520	0.000
					B	10.467	26.241		71.49	0.000	0.000
					C	10.467	26.241		71.49	17.840	0.000
T6 200.00-180.00	190.00	1.187	9	202.945	A	15.714	26.241	26.241	62.55	47.520	0.000
					B	15.714	26.241		62.55	53.460	0.000
					C	15.714	26.241		62.55	17.840	0.000
T7 180.00-160.00	170.00	1.15	9	243.362	A	19.853	28.309	28.309	58.78	47.520	0.000
					B	19.853	28.309		58.78	71.280	0.000
					C	19.853	28.309		58.78	65.360	0.000
T8 160.00-140.00	150.00	1.11	9	283.780	A	20.877	29.897	29.897	58.88	47.520	0.000
					B	20.877	29.897		58.88	71.280	0.000
					C	20.877	29.897		58.88	83.180	0.000
T9 140.00-120.00	130.00	1.065	8	323.780	A	19.635	29.897	29.897	60.36	99.000	0.000
					B	19.635	29.897		60.36	71.280	0.000
					C	19.635	29.897		60.36	89.120	0.000
T10 120.00-100.00	110.00	1.016	8	374.209	A	14.190	40.189	40.189	73.91	99.000	0.000
					B	14.190	40.189		73.91	71.280	0.000
					C	14.190	40.189		73.91	89.120	0.000
T11 100.00-80.00	90.00	0.959	8	414.209	A	14.825	40.189	40.189	73.05	99.000	0.000
					B	14.825	40.189		73.05	71.280	0.000
					C	14.825	40.189		73.05	89.120	0.000
T12 80.00-60.00	70.00	0.892	7	454.627	A	15.712	41.731	41.731	72.65	99.000	0.000
					B	15.712	41.731		72.65	71.280	0.000
					C	15.712	41.731		72.65	89.120	0.000
T13 60.00-40.00	50.00	0.811	6	494.627	A	16.624	41.731	41.731	71.51	99.000	0.000
					B	16.624	41.731		71.51	71.280	0.000
					C	16.624	41.731		71.51	89.120	0.000
T14 40.00-20.00	30.00	0.701	5	535.044	A	17.558	43.931	43.931	71.44	99.000	0.000
					B	17.558	43.931		71.44	71.280	0.000
					C	17.558	43.931		71.44	89.120	0.000
T15 20.00-0.00	10.00	0.7	5	575.044	A	18.514	43.931	43.931	70.35	69.300	0.000
					B	18.514	43.931		70.35	49.896	0.000
					C	18.514	43.931		70.35	62.384	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F _a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 280.00-270.00	0.02	0.65	A	0.141	2.806	27	1	1	4.100	0.33	33.25	C
			B	0.141	2.806		1	1	4.100			
			C	0.141	2.806		1	1	4.100			
T2 270.00-250.00	0.03	1.34	A	0.137	2.821	27	1	1	7.995	0.64	32.21	C
			B	0.137	2.821		1	1	7.995			
			C	0.137	2.821		1	1	7.995			
T3 250.00-230.00	0.25	1.89	A	0.157	2.744	26	1	1	9.323	1.38	68.94	C
			B	0.157	2.744		1	1	9.323			

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T4 230.00-220.00	0.13	1.42	C	0.157	2.744	26	1	1	9.323	1.07	107.36	C
			A	0.267	2.386				12.533			
			B	0.267	2.386				12.533			
T5 220.00-200.00	0.26	2.78	C	0.267	2.386	25	1	1	25.670	2.21	110.27	C
			A	0.225	2.514				25.670			
			B	0.225	2.514				25.670			
T6 200.00-180.00	0.48	3.43	C	0.225	2.514	24	1	1	30.821	3.11	155.58	C
			A	0.207	2.574				30.821			
			B	0.207	2.574				30.821			
T7 180.00-160.00	0.75	4.33	C	0.207	2.574	24	1	1	36.106	4.09	204.62	C
			A	0.198	2.603				36.106			
			B	0.198	2.603				36.106			
T8 160.00-140.00	0.83	5.01	C	0.198	2.603	23	1	1	37.951	4.30	214.77	C
			A	0.179	2.668				37.951			
			B	0.179	2.668				37.951			
T9 140.00-120.00	1.07	4.89	C	0.179	2.668	22	1	1	36.612	4.76	237.93	C
			A	0.153	2.761				36.612			
			B	0.153	2.761				36.612			
T10 120.00-100.00	1.07	7.29	C	0.153	2.761	21	1	1	36.980	4.57	228.66	C
			A	0.145	2.789				36.980			
			B	0.145	2.789				36.980			
T11 100.00-80.00	1.07	7.41	C	0.145	2.789	20	1	1	37.573	4.38	218.77	C
			A	0.133	2.836				37.573			
			B	0.133	2.836				37.573			
T12 80.00-60.00	1.07	8.16	C	0.133	2.836	18	1	1	39.313	4.16	208.20	C
			A	0.126	2.86				39.313			
			B	0.126	2.86				39.313			
T13 60.00-40.00	1.07	8.29	C	0.126	2.86	17	1	1	40.204	3.84	191.83	C
			A	0.118	2.893				40.204			
			B	0.118	2.893				40.204			
T14 40.00-20.00	1.07	9.28	C	0.118	2.893	14	1	1	42.375	3.40	169.92	C
			A	0.115	2.905				42.375			
			B	0.115	2.905				42.375			
T15 20.00-0.00	0.75	9.42	C	0.115	2.905	14	1	1	43.319	2.87	143.66	C
			A	0.109	2.93				43.319			
			B	0.109	2.93				43.319			
Sum Weight:	9.90	75.61						OTM	5355.21 kip-ft	45.11		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 280.00-270.00	0.02	0.65	A	0.141	2.806	27	0.8	1	4.100	0.33	33.25	C
			B	0.141	2.806				4.100			
			C	0.141	2.806				4.100			
T2 270.00-250.00	0.03	1.34	A	0.137	2.821	27	0.8	1	7.995	0.64	32.21	C
			B	0.137	2.821				7.995			
			C	0.137	2.821				7.995			
T3 250.00-230.00	0.25	1.89	A	0.157	2.744	26	0.8	1	9.323	1.38	68.94	C
			B	0.157	2.744				9.323			

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Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
T4 230.00-220.00	0.13	1.42	C	0.157	2.744		0.8	1	9.323			
			A	0.267	2.386	26	0.8	1	11.517	1.02	102.10	C
			B	0.267	2.386		0.8	1	11.517			
T5 220.00-200.00	0.26	2.78	C	0.267	2.386		0.8	1	11.517			
			A	0.225	2.514	25	0.8	1	23.577	2.09	104.68	C
			B	0.225	2.514		0.8	1	23.577			
T6 200.00-180.00	0.48	3.43	C	0.225	2.514		0.8	1	23.577			
			A	0.207	2.574	24	0.8	1	27.678	2.94	147.23	C
			B	0.207	2.574		0.8	1	27.678			
T7 180.00-160.00	0.75	4.33	C	0.207	2.574		0.8	1	27.678			
			A	0.198	2.603	24	0.8	1	32.135	3.89	194.28	C
			B	0.198	2.603		0.8	1	32.135			
T8 160.00-140.00	0.83	5.01	C	0.198	2.603		0.8	1	32.135			
			A	0.179	2.668	23	0.8	1	33.776	4.08	204.01	C
			B	0.179	2.668		0.8	1	33.776			
T9 140.00-120.00	1.07	4.89	C	0.179	2.668		0.8	1	33.776			
			A	0.153	2.761	22	0.8	1	32.685	4.56	227.88	C
			B	0.153	2.761		0.8	1	32.685			
T10 120.00-100.00	1.07	7.29	C	0.153	2.761		0.8	1	32.685			
			A	0.145	2.789	21	0.8	1	34.142	4.43	221.67	C
			B	0.145	2.789		0.8	1	34.142			
T11 100.00-80.00	1.07	7.41	C	0.145	2.789		0.8	1	34.142			
			A	0.133	2.836	20	0.8	1	34.608	4.24	211.75	C
			B	0.133	2.836		0.8	1	34.608			
T12 80.00-60.00	1.07	8.16	C	0.133	2.836		0.8	1	34.608			
			A	0.126	2.86	18	0.8	1	36.171	4.02	201.22	C
			B	0.126	2.86		0.8	1	36.171			
T13 60.00-40.00	1.07	8.29	C	0.126	2.86		0.8	1	36.171			
			A	0.118	2.893	17	0.8	1	36.879	3.70	185.05	C
			B	0.118	2.893		0.8	1	36.879			
T14 40.00-20.00	1.07	9.28	C	0.118	2.893		0.8	1	36.879			
			A	0.115	2.905	14	0.8	1	38.864	3.27	163.70	C
			B	0.115	2.905		0.8	1	38.864			
T15 20.00-0.00	0.75	9.42	C	0.115	2.905		0.8	1	38.864			
			A	0.109	2.93	14	0.8	1	39.616	2.74	137.06	C
			B	0.109	2.93		0.8	1	39.616			
Sum Weight:	9.90	75.61						OTM	5144.95 kip-ft	43.35		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
T1 280.00-270.00	0.02	0.65	A	0.141	2.806	27	0.85	1	4.100	0.33	33.25	C
			B	0.141	2.806		0.85	1	4.100			
			C	0.141	2.806		0.85	1	4.100			
T2 270.00-250.00	0.03	1.34	A	0.137	2.821	27	0.85	1	7.995	0.64	32.21	C
			B	0.137	2.821		0.85	1	7.995			
			C	0.137	2.821		0.85	1	7.995			
T3 250.00-230.00	0.25	1.89	A	0.157	2.744	26	0.85	1	9.323	1.38	68.94	C
			B	0.157	2.744		0.85	1	9.323			

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T4 230.00-220.00	0.13	1.42	C	0.157	2.744		0.85	1	9.323			
			A	0.267	2.386	26	0.85	1	11.771	1.03	103.42	C
			B	0.267	2.386		0.85	1	11.771			
			C	0.267	2.386		0.85	1	11.771			
T5 220.00-200.00	0.26	2.78	A	0.225	2.514	25	0.85	1	24.100	2.12	106.08	C
			B	0.225	2.514		0.85	1	24.100			
			C	0.225	2.514		0.85	1	24.100			
T6 200.00-180.00	0.48	3.43	A	0.207	2.574	24	0.85	1	28.464	2.99	149.32	C
			B	0.207	2.574		0.85	1	28.464			
			C	0.207	2.574		0.85	1	28.464			
T7 180.00-160.00	0.75	4.33	A	0.198	2.603	24	0.85	1	33.128	3.94	196.86	C
			B	0.198	2.603		0.85	1	33.128			
			C	0.198	2.603		0.85	1	33.128			
T8 160.00-140.00	0.83	5.01	A	0.179	2.668	23	0.85	1	34.819	4.13	206.70	C
			B	0.179	2.668		0.85	1	34.819			
			C	0.179	2.668		0.85	1	34.819			
T9 140.00-120.00	1.07	4.89	A	0.153	2.761	22	0.85	1	33.667	4.61	230.39	C
			B	0.153	2.761		0.85	1	33.667			
			C	0.153	2.761		0.85	1	33.667			
T10 120.00-100.00	1.07	7.29	A	0.145	2.789	21	0.85	1	34.852	4.47	223.42	C
			B	0.145	2.789		0.85	1	34.852			
			C	0.145	2.789		0.85	1	34.852			
T11 100.00-80.00	1.07	7.41	A	0.133	2.836	20	0.85	1	35.349	4.27	213.51	C
			B	0.133	2.836		0.85	1	35.349			
			C	0.133	2.836		0.85	1	35.349			
T12 80.00-60.00	1.07	8.16	A	0.126	2.86	18	0.85	1	36.956	4.06	202.96	C
			B	0.126	2.86		0.85	1	36.956			
			C	0.126	2.86		0.85	1	36.956			
T13 60.00-40.00	1.07	8.29	A	0.118	2.893	17	0.85	1	37.710	3.73	186.74	C
			B	0.118	2.893		0.85	1	37.710			
			C	0.118	2.893		0.85	1	37.710			
T14 40.00-20.00	1.07	9.28	A	0.115	2.905	14	0.85	1	39.741	3.31	165.25	C
			B	0.115	2.905		0.85	1	39.741			
			C	0.115	2.905		0.85	1	39.741			
T15 20.00-0.00	0.75	9.42	A	0.109	2.93	14	0.85	1	40.542	2.77	138.71	C
			B	0.109	2.93		0.85	1	40.542			
			C	0.109	2.93		0.85	1	40.542			
Sum Weight:	9.90	75.61						OTM	5197.52 kip-ft	43.79		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 280.00-270.00	0.24	2.00	A	0.57	1.826	7	1	1	22.531	0.30	30.01	C
			B	0.57	1.826		1	1	22.531			
			C	0.57	1.826		1	1	22.531			
T2 270.00-250.00	0.48	3.78	A	0.522	1.873	7	1	1	39.868	0.56	27.76	C
			B	0.522	1.873		1	1	39.868			
			C	0.522	1.873		1	1	39.868			
T3 250.00-230.00	2.42	4.36	A	0.521	1.875	7	1	1	39.965	0.77	38.36	C
			B	0.521	1.875		1	1	39.965			

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T4 230.00-220.00	1.30	4.01	C	0.521	1.875		1	1	39.965			
			A	0.702	1.776	7	1	1	40.498	0.52	52.36	C
			B	0.702	1.776		1	1	40.498			
			C	0.702	1.776		1	1	40.498			
T5 220.00-200.00	2.58	11.70	A	0.596	1.806	7	1	1	77.397	1.08	53.98	C
			B	0.596	1.806		1	1	77.397			
			C	0.596	1.806		1	1	77.397			
T6 200.00-180.00	4.56	13.15	A	0.536	1.858	6	1	1	83.545	1.40	69.92	C
			B	0.536	1.858		1	1	83.545			
			C	0.536	1.858		1	1	83.545			
T7 180.00-160.00	6.95	14.67	A	0.479	1.928	6	1	1	87.032	1.78	89.17	C
			B	0.479	1.928		1	1	87.032			
			C	0.479	1.928		1	1	87.032			
T8 160.00-140.00	7.58	15.44	A	0.416	2.033	6	1	1	84.918	1.96	98.15	C
			B	0.416	2.033		1	1	84.918			
			C	0.416	2.033		1	1	84.918			
T9 140.00-120.00	9.61	14.99	A	0.356	2.157	6	1	1	80.113	2.17	108.65	C
			B	0.356	2.157		1	1	80.113			
			C	0.356	2.157		1	1	80.113			
T10 120.00-100.00	9.51	23.11	A	0.346	2.181	6	1	1	86.193	2.14	106.89	C
			B	0.346	2.181		1	1	86.193			
			C	0.346	2.181		1	1	86.193			
T11 100.00-80.00	9.39	23.24	A	0.315	2.258	5	1	1	85.571	2.04	101.80	C
			B	0.315	2.258		1	1	85.571			
			C	0.315	2.258		1	1	85.571			
T12 80.00-60.00	9.25	23.84	A	0.291	2.32	5	1	1	86.154	1.92	95.79	C
			B	0.291	2.32		1	1	86.154			
			C	0.291	2.32		1	1	86.154			
T13 60.00-40.00	9.07	23.31	A	0.269	2.381	4	1	1	86.259	1.75	87.64	C
			B	0.269	2.381		1	1	86.259			
			C	0.269	2.381		1	1	86.259			
T14 40.00-20.00	8.80	23.51	A	0.251	2.433	4	1	1	86.770	1.52	76.18	C
			B	0.251	2.433		1	1	86.770			
			C	0.251	2.433		1	1	86.770			
T15 20.00-0.00	5.80	21.60	A	0.232	2.492	4	1	1	85.936	1.27	63.34	C
			B	0.232	2.492		1	1	85.936			
			C	0.232	2.492		1	1	85.936			
Sum Weight:	87.55	222.73						OTM	2599.86 kip-ft	21.18		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 280.00-270.00	0.24	2.00	A	0.57	1.826	7	0.8	1	22.531	0.30	30.01	C
			B	0.57	1.826		0.8	1	22.531			
			C	0.57	1.826		0.8	1	22.531			
T2 270.00-250.00	0.48	3.78	A	0.522	1.873	7	0.8	1	39.868	0.56	27.76	C
			B	0.522	1.873		0.8	1	39.868			
			C	0.522	1.873		0.8	1	39.868			
T3 250.00-230.00	2.42	4.36	A	0.521	1.875	7	0.8	1	39.965	0.77	38.36	C
			B	0.521	1.875		0.8	1	39.965			

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T4 230.00-220.00	1.30	4.01	C	0.521	1.875		0.8	1	39.965			
			A	0.702	1.776	7	0.8	1	39.482	0.51	51.32	C
			B	0.702	1.776		0.8	1	39.482			
			C	0.702	1.776		0.8	1	39.482			
T5 220.00-200.00	2.58	11.70	A	0.596	1.806	7	0.8	1	75.304	1.06	52.91	C
			B	0.596	1.806		0.8	1	75.304			
			C	0.596	1.806		0.8	1	75.304			
T6 200.00-180.00	4.56	13.15	A	0.536	1.858	6	0.8	1	80.402	1.37	68.32	C
			B	0.536	1.858		0.8	1	80.402			
			C	0.536	1.858		0.8	1	80.402			
T7 180.00-160.00	6.95	14.67	A	0.479	1.928	6	0.8	1	83.061	1.74	87.13	C
			B	0.479	1.928		0.8	1	83.061			
			C	0.479	1.928		0.8	1	83.061			
T8 160.00-140.00	7.58	15.44	A	0.416	2.033	6	0.8	1	80.743	1.92	95.97	C
			B	0.416	2.033		0.8	1	80.743			
			C	0.416	2.033		0.8	1	80.743			
T9 140.00-120.00	9.61	14.99	A	0.356	2.157	6	0.8	1	76.186	2.13	106.56	C
			B	0.356	2.157		0.8	1	76.186			
			C	0.356	2.157		0.8	1	76.186			
T10 120.00-100.00	9.51	23.11	A	0.346	2.181	6	0.8	1	83.355	2.11	105.44	C
			B	0.346	2.181		0.8	1	83.355			
			C	0.346	2.181		0.8	1	83.355			
T11 100.00-80.00	9.39	23.24	A	0.315	2.258	5	0.8	1	82.606	2.01	100.32	C
			B	0.315	2.258		0.8	1	82.606			
			C	0.315	2.258		0.8	1	82.606			
T12 80.00-60.00	9.25	23.84	A	0.291	2.32	5	0.8	1	83.011	1.89	94.29	C
			B	0.291	2.32		0.8	1	83.011			
			C	0.291	2.32		0.8	1	83.011			
T13 60.00-40.00	9.07	23.31	A	0.269	2.381	4	0.8	1	82.934	1.72	86.16	C
			B	0.269	2.381		0.8	1	82.934			
			C	0.269	2.381		0.8	1	82.934			
T14 40.00-20.00	8.80	23.51	A	0.251	2.433	4	0.8	1	83.259	1.50	74.80	C
			B	0.251	2.433		0.8	1	83.259			
			C	0.251	2.433		0.8	1	83.259			
T15 20.00-0.00	5.80	21.60	A	0.232	2.492	4	0.8	1	82.233	1.24	61.85	C
			B	0.232	2.492		0.8	1	82.233			
			C	0.232	2.492		0.8	1	82.233			
Sum Weight:	87.55	222.73						OTM	2557.48 kip-ft	20.81		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 280.00-270.00	0.24	2.00	A	0.57	1.826	7	0.85	1	22.531	0.30	30.01	C
			B	0.57	1.826		0.85	1	22.531			
			C	0.57	1.826		0.85	1	22.531			
T2 270.00-250.00	0.48	3.78	A	0.522	1.873	7	0.85	1	39.868	0.56	27.76	C
			B	0.522	1.873		0.85	1	39.868			
			C	0.522	1.873		0.85	1	39.868			
T3 250.00-230.00	2.42	4.36	A	0.521	1.875	7	0.85	1	39.965	0.77	38.36	C
			B	0.521	1.875		0.85	1	39.965			

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T4 230.00-220.00	1.30	4.01	C	0.521	1.875		0.85	1	39.965			
			A	0.702	1.776	7	0.85	1	39.736	0.52	51.58	C
			B	0.702	1.776		0.85	1	39.736			
			C	0.702	1.776		0.85	1	39.736			
T5 220.00-200.00	2.58	11.70	A	0.596	1.806	7	0.85	1	75.827	1.06	53.17	C
			B	0.596	1.806		0.85	1	75.827			
			C	0.596	1.806		0.85	1	75.827			
T6 200.00-180.00	4.56	13.15	A	0.536	1.858	6	0.85	1	81.188	1.37	68.72	C
			B	0.536	1.858		0.85	1	81.188			
			C	0.536	1.858		0.85	1	81.188			
T7 180.00-160.00	6.95	14.67	A	0.479	1.928	6	0.85	1	84.054	1.75	87.64	C
			B	0.479	1.928		0.85	1	84.054			
			C	0.479	1.928		0.85	1	84.054			
T8 160.00-140.00	7.58	15.44	A	0.416	2.033	6	0.85	1	81.786	1.93	96.52	C
			B	0.416	2.033		0.85	1	81.786			
			C	0.416	2.033		0.85	1	81.786			
T9 140.00-120.00	9.61	14.99	A	0.356	2.157	6	0.85	1	77.168	2.14	107.08	C
			B	0.356	2.157		0.85	1	77.168			
			C	0.356	2.157		0.85	1	77.168			
T10 120.00-100.00	9.51	23.11	A	0.346	2.181	6	0.85	1	84.064	2.12	105.80	C
			B	0.346	2.181		0.85	1	84.064			
			C	0.346	2.181		0.85	1	84.064			
T11 100.00-80.00	9.39	23.24	A	0.315	2.258	5	0.85	1	83.347	2.01	100.69	C
			B	0.315	2.258		0.85	1	83.347			
			C	0.315	2.258		0.85	1	83.347			
T12 80.00-60.00	9.25	23.84	A	0.291	2.32	5	0.85	1	83.797	1.89	94.66	C
			B	0.291	2.32		0.85	1	83.797			
			C	0.291	2.32		0.85	1	83.797			
T13 60.00-40.00	9.07	23.31	A	0.269	2.381	4	0.85	1	83.765	1.73	86.53	C
			B	0.269	2.381		0.85	1	83.765			
			C	0.269	2.381		0.85	1	83.765			
T14 40.00-20.00	8.80	23.51	A	0.251	2.433	4	0.85	1	84.137	1.50	75.14	C
			B	0.251	2.433		0.85	1	84.137			
			C	0.251	2.433		0.85	1	84.137			
T15 20.00-0.00	5.80	21.60	A	0.232	2.492	4	0.85	1	83.159	1.24	62.22	C
			B	0.232	2.492		0.85	1	83.159			
			C	0.232	2.492		0.85	1	83.159			
Sum Weight:	87.55	222.73						OTM	2568.07 kip-ft	20.90		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 280.00-270.00	0.02	0.65	A	0.141	2.806	10	1	1	4.100	0.13	12.72	C
			B	0.141	2.806		1	1	4.100			
			C	0.141	2.806		1	1	4.100			
T2 270.00-250.00	0.03	1.34	A	0.137	2.821	10	1	1	7.995	0.25	12.32	C
			B	0.137	2.821		1	1	7.995			
			C	0.137	2.821		1	1	7.995			
T3 250.00-230.00	0.25	1.89	A	0.157	2.744	10	1	1	9.323	0.53	26.38	C
			B	0.157	2.744		1	1	9.323			

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T4 230.00-220.00	0.13	1.42	C	0.157	2.744		1	1	9.323			
			A	0.267	2.386	10	1	1	12.533	0.41	41.08	C
			B	0.267	2.386		1	1	12.533			
			C	0.267	2.386		1	1	12.533			
T5 220.00-200.00	0.26	2.78	A	0.225	2.514	10	1	1	25.670	0.84	42.19	C
			B	0.225	2.514		1	1	25.670			
			C	0.225	2.514		1	1	25.670			
T6 200.00-180.00	0.48	3.43	A	0.207	2.574	9	1	1	30.821	1.19	59.53	C
			B	0.207	2.574		1	1	30.821			
			C	0.207	2.574		1	1	30.821			
T7 180.00-160.00	0.75	4.33	A	0.198	2.603	9	1	1	36.106	1.57	78.29	C
			B	0.198	2.603		1	1	36.106			
			C	0.198	2.603		1	1	36.106			
T8 160.00-140.00	0.83	5.01	A	0.179	2.668	9	1	1	37.951	1.64	82.17	C
			B	0.179	2.668		1	1	37.951			
			C	0.179	2.668		1	1	37.951			
T9 140.00-120.00	1.07	4.89	A	0.153	2.761	8	1	1	36.612	1.82	91.03	C
			B	0.153	2.761		1	1	36.612			
			C	0.153	2.761		1	1	36.612			
T10 120.00-100.00	1.07	7.29	A	0.145	2.789	8	1	1	36.980	1.75	87.49	C
			B	0.145	2.789		1	1	36.980			
			C	0.145	2.789		1	1	36.980			
T11 100.00-80.00	1.07	7.41	A	0.133	2.836	8	1	1	37.573	1.67	83.70	C
			B	0.133	2.836		1	1	37.573			
			C	0.133	2.836		1	1	37.573			
T12 80.00-60.00	1.07	8.16	A	0.126	2.86	7	1	1	39.313	1.59	79.66	C
			B	0.126	2.86		1	1	39.313			
			C	0.126	2.86		1	1	39.313			
T13 60.00-40.00	1.07	8.29	A	0.118	2.893	6	1	1	40.204	1.47	73.40	C
			B	0.118	2.893		1	1	40.204			
			C	0.118	2.893		1	1	40.204			
T14 40.00-20.00	1.07	9.28	A	0.115	2.905	5	1	1	42.375	1.30	65.01	C
			B	0.115	2.905		1	1	42.375			
			C	0.115	2.905		1	1	42.375			
T15 20.00-0.00	0.75	9.42	A	0.109	2.93	5	1	1	43.319	1.10	54.97	C
			B	0.109	2.93		1	1	43.319			
			C	0.109	2.93		1	1	43.319			
Sum Weight:	9.90	75.61						OTM	2048.97 kip-ft	17.26		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 280.00-270.00	0.02	0.65	A	0.141	2.806	10	0.8	1	4.100	0.13	12.72	C
			B	0.141	2.806		0.8	1	4.100			
			C	0.141	2.806		0.8	1	4.100			
T2 270.00-250.00	0.03	1.34	A	0.137	2.821	10	0.8	1	7.995	0.25	12.32	C
			B	0.137	2.821		0.8	1	7.995			
			C	0.137	2.821		0.8	1	7.995			
T3 250.00-230.00	0.25	1.89	A	0.157	2.744	10	0.8	1	9.323	0.53	26.38	C
			B	0.157	2.744		0.8	1	9.323			

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Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
T4 230.00-220.00	0.13	1.42	C	0.157	2.744		0.8	1	9.323			
			A	0.267	2.386	10	0.8	1	11.517	0.39	39.06	C
			B	0.267	2.386		0.8	1	11.517			
			C	0.267	2.386		0.8	1	11.517			
T5 220.00-200.00	0.26	2.78	A	0.225	2.514	10	0.8	1	23.577	0.80	40.05	C
			B	0.225	2.514		0.8	1	23.577			
			C	0.225	2.514		0.8	1	23.577			
T6 200.00-180.00	0.48	3.43	A	0.207	2.574	9	0.8	1	27.678	1.13	56.33	C
			B	0.207	2.574		0.8	1	27.678			
			C	0.207	2.574		0.8	1	27.678			
T7 180.00-160.00	0.75	4.33	A	0.198	2.603	9	0.8	1	32.135	1.49	74.33	C
			B	0.198	2.603		0.8	1	32.135			
			C	0.198	2.603		0.8	1	32.135			
T8 160.00-140.00	0.83	5.01	A	0.179	2.668	9	0.8	1	33.776	1.56	78.06	C
			B	0.179	2.668		0.8	1	33.776			
			C	0.179	2.668		0.8	1	33.776			
T9 140.00-120.00	1.07	4.89	A	0.153	2.761	8	0.8	1	32.685	1.74	87.19	C
			B	0.153	2.761		0.8	1	32.685			
			C	0.153	2.761		0.8	1	32.685			
T10 120.00-100.00	1.07	7.29	A	0.145	2.789	8	0.8	1	34.142	1.70	84.81	C
			B	0.145	2.789		0.8	1	34.142			
			C	0.145	2.789		0.8	1	34.142			
T11 100.00-80.00	1.07	7.41	A	0.133	2.836	8	0.8	1	34.608	1.62	81.02	C
			B	0.133	2.836		0.8	1	34.608			
			C	0.133	2.836		0.8	1	34.608			
T12 80.00-60.00	1.07	8.16	A	0.126	2.86	7	0.8	1	36.171	1.54	76.99	C
			B	0.126	2.86		0.8	1	36.171			
			C	0.126	2.86		0.8	1	36.171			
T13 60.00-40.00	1.07	8.29	A	0.118	2.893	6	0.8	1	36.879	1.42	70.80	C
			B	0.118	2.893		0.8	1	36.879			
			C	0.118	2.893		0.8	1	36.879			
T14 40.00-20.00	1.07	9.28	A	0.115	2.905	5	0.8	1	38.864	1.25	62.63	C
			B	0.115	2.905		0.8	1	38.864			
			C	0.115	2.905		0.8	1	38.864			
T15 20.00-0.00	0.75	9.42	A	0.109	2.93	5	0.8	1	39.616	1.05	52.44	C
			B	0.109	2.93		0.8	1	39.616			
			C	0.109	2.93		0.8	1	39.616			
Sum Weight:	9.90	75.61						OTM	1968.52 kip-ft	16.59		

Tower Forces - Service - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
T1 280.00-270.00	0.02	0.65	A	0.141	2.806	10	0.85	1	4.100	0.13	12.72	C
			B	0.141	2.806		0.85	1	4.100			
			C	0.141	2.806		0.85	1	4.100			
T2 270.00-250.00	0.03	1.34	A	0.137	2.821	10	0.85	1	7.995	0.25	12.32	C
			B	0.137	2.821		0.85	1	7.995			
			C	0.137	2.821		0.85	1	7.995			
T3 250.00-230.00	0.25	1.89	A	0.157	2.744	10	0.85	1	9.323	0.53	26.38	C
			B	0.157	2.744		0.85	1	9.323			

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T4 230.00-220.00	0.13	1.42	C	0.157	2.744	10	0.85	1	9.323	0.40	39.57	C
			A	0.267	2.386		0.85	1	11.771			
			B	0.267	2.386		0.85	1	11.771			
			C	0.267	2.386		0.85	1	11.771			
T5 220.00-200.00	0.26	2.78	A	0.225	2.514	10	0.85	1	24.100	0.81	40.59	C
			B	0.225	2.514		0.85	1	24.100			
			C	0.225	2.514		0.85	1	24.100			
T6 200.00-180.00	0.48	3.43	A	0.207	2.574	9	0.85	1	28.464	1.14	57.13	C
			B	0.207	2.574		0.85	1	28.464			
			C	0.207	2.574		0.85	1	28.464			
T7 180.00-160.00	0.75	4.33	A	0.198	2.603	9	0.85	1	33.128	1.51	75.32	C
			B	0.198	2.603		0.85	1	33.128			
			C	0.198	2.603		0.85	1	33.128			
T8 160.00-140.00	0.83	5.01	A	0.179	2.668	9	0.85	1	34.819	1.58	79.09	C
			B	0.179	2.668		0.85	1	34.819			
			C	0.179	2.668		0.85	1	34.819			
T9 140.00-120.00	1.07	4.89	A	0.153	2.761	8	0.85	1	33.667	1.76	88.15	C
			B	0.153	2.761		0.85	1	33.667			
			C	0.153	2.761		0.85	1	33.667			
T10 120.00-100.00	1.07	7.29	A	0.145	2.789	8	0.85	1	34.852	1.71	85.48	C
			B	0.145	2.789		0.85	1	34.852			
			C	0.145	2.789		0.85	1	34.852			
T11 100.00-80.00	1.07	7.41	A	0.133	2.836	8	0.85	1	35.349	1.63	81.69	C
			B	0.133	2.836		0.85	1	35.349			
			C	0.133	2.836		0.85	1	35.349			
T12 80.00-60.00	1.07	8.16	A	0.126	2.86	7	0.85	1	36.956	1.55	77.66	C
			B	0.126	2.86		0.85	1	36.956			
			C	0.126	2.86		0.85	1	36.956			
T13 60.00-40.00	1.07	8.29	A	0.118	2.893	6	0.85	1	37.710	1.43	71.45	C
			B	0.118	2.893		0.85	1	37.710			
			C	0.118	2.893		0.85	1	37.710			
T14 40.00-20.00	1.07	9.28	A	0.115	2.905	5	0.85	1	39.741	1.26	63.23	C
			B	0.115	2.905		0.85	1	39.741			
			C	0.115	2.905		0.85	1	39.741			
T15 20.00-0.00	0.75	9.42	A	0.109	2.93	5	0.85	1	40.542	1.06	53.07	C
			B	0.109	2.93		0.85	1	40.542			
			C	0.109	2.93		0.85	1	40.542			
Sum Weight:	9.90	75.61						OTM	1988.63 kip-ft	16.75		

Force Totals

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M _x kip-ft	Sum of Overturning Moments, M _z kip-ft	Sum of Torques kip-ft
Leg Weight	50.91					
Bracing Weight	24.70					
Total Member Self-Weight	75.61					
Total Weight	107.21			-6.60	5.20	
Wind 0 deg - No Ice		0.03	-59.11	-8099.93	1.45	-4.23
Wind 30 deg - No Ice		28.93	-50.05	-6880.94	-3968.03	-6.16
Wind 60 deg - No Ice		49.70	-28.69	-3951.39	-6827.37	-6.49
Wind 90 deg - No Ice		57.81	-0.03	-10.35	-7934.76	-5.17

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Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Wind 120 deg - No Ice		51.20	29.53	4036.81	-7005.70	-2.46
Wind 150 deg - No Ice		28.88	50.03	6863.98	-3961.53	0.99
Wind 180 deg - No Ice		-0.03	57.34	7876.47	8.96	4.09
Wind 210 deg - No Ice		-28.93	50.05	6867.74	3978.44	6.16
Wind 240 deg - No Ice		-51.23	29.58	4043.31	7019.86	6.69
Wind 270 deg - No Ice		-57.81	0.03	-2.85	7945.17	5.17
Wind 300 deg - No Ice		-49.67	-28.65	-3944.89	6834.02	2.40
Wind 330 deg - No Ice		-28.88	-50.03	-6877.18	3971.94	-0.99
Member Ice	147.12					
Total Weight Ice	368.23			-37.43	61.32	
Wind 0 deg - Ice		0.01	-28.54	-4132.11	60.32	-2.25
Wind 30 deg - Ice		14.14	-24.48	-3556.50	-1971.57	-2.24
Wind 60 deg - Ice		24.41	-14.09	-2064.44	-3449.58	-1.67
Wind 90 deg - Ice		28.27	-0.01	-38.42	-4002.74	-0.65
Wind 120 deg - Ice		24.72	14.26	2009.06	-3485.29	0.56
Wind 150 deg - Ice		14.13	24.47	3480.65	-1969.85	1.59
Wind 180 deg - Ice		-0.01	28.17	4014.88	62.31	2.20
Wind 210 deg - Ice		-14.14	24.48	3481.65	2094.21	2.24
Wind 240 deg - Ice		-24.73	14.28	2010.78	3608.92	1.68
Wind 270 deg - Ice		-28.27	0.01	-36.43	4125.37	0.65
Wind 300 deg - Ice		-24.40	-14.08	-2062.71	3571.22	-0.53
Wind 330 deg - Ice		-14.13	-24.47	-3555.50	2092.48	-1.59
Total Weight	107.21			-6.60	5.20	
Wind 0 deg - Service		0.01	-22.61	-3096.83	-1.11	-1.62
Wind 30 deg - Service		11.07	-19.15	-2630.43	-1519.89	-2.36
Wind 60 deg - Service		19.01	-10.98	-1509.55	-2613.90	-2.48
Wind 90 deg - Service		22.12	-0.01	-1.66	-3037.61	-1.98
Wind 120 deg - Service		19.59	11.30	1546.84	-2682.14	-0.94
Wind 150 deg - Service		11.05	19.14	2628.55	-1517.40	0.38
Wind 180 deg - Service		-0.01	21.94	3015.94	1.76	1.57
Wind 210 deg - Service		-11.07	19.15	2629.98	1520.53	2.36
Wind 240 deg - Service		-19.60	11.32	1549.32	2684.22	2.56
Wind 270 deg - Service		-22.12	0.01	1.21	3038.25	1.98
Wind 300 deg - Service		-19.00	-10.96	-1507.06	2613.11	0.92
Wind 330 deg - Service		-11.05	-19.14	-2628.99	1518.04	-0.38

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice

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<i>Comb. No.</i>	<i>Description</i>
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 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

<i>Section No.</i>	<i>Elevation ft</i>	<i>Component Type</i>	<i>Condition</i>	<i>Gov. Load Comb.</i>	<i>Axial K</i>	<i>Major Axis Moment kip-ft</i>	<i>Minor Axis Moment kip-ft</i>	
T1	280 - 270	Leg	Max Tension	7	5.57	0.36	-0.24	
			Max. Compression	2	-8.30	0.00	0.16	
			Max. Mx	20	-1.36	0.43	-0.00	
			Max. My	2	-8.29	-0.01	-0.43	
			Max. Vy	8	1.00	-0.13	0.00	
		Diagonal	Max. Vx	2	-1.08	0.00	0.16	
			Max Tension	24	1.40	0.00	0.00	
			Max. Compression	24	-1.40	0.00	0.00	
			Max. Mx	29	0.63	-0.01	-0.00	
			Max. My	22	-0.14	-0.00	0.00	
		Top Girt	Max. Vy	38	0.01	-0.01	0.00	
			Max. Vx	22	-0.00	-0.00	0.00	
			Max Tension	18	0.58	0.00	0.00	
			Max. Compression	6	-0.60	0.00	0.00	
			Max. Mx	26	-0.03	0.03	0.00	
			Max. My	20	0.00	0.00	-0.00	
			Max. Vy	26	-0.02	0.00	0.00	
			Max. Vx	20	0.00	0.00	0.00	
			Bottom Girt	Max Tension	6	0.59	0.00	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T2	270 - 250	Mid Girt	Max. Compression	3	-0.57	0.00	0.00	
			Max. Mx	26	0.03	0.03	0.00	
			Max. My	20	0.03	0.00	-0.00	
			Max. Vy	26	-0.02	0.00	0.00	
			Max. Vx	20	0.00	0.00	0.00	
			Max Tension	38	0.01	0.00	0.00	
			Max. Compression	15	-0.00	0.00	0.00	
			Max. Mx	26	0.01	0.03	0.00	
			Max. My	20	0.01	0.00	-0.00	
			Max. Vy	26	-0.02	0.00	0.00	
			Max. Vx	20	0.00	0.00	0.00	
			Max Tension	7	21.00	0.49	-0.31	
		Leg	Max. Compression	10	-24.71	-0.21	-0.13	
			Max. Mx	8	-7.40	-0.60	-0.09	
			Max. My	2	-8.30	0.01	0.65	
			Max. Vy	21	-1.40	0.21	-0.06	
			Max. Vx	3	-1.54	-0.00	0.25	
			Max Tension	17	1.80	0.00	0.00	
			Diagonal	Max. Compression	5	-1.80	0.00	0.00
				Max. Mx	36	0.76	-0.01	-0.00
				Max. My	20	-0.81	-0.00	0.00
				Max. Vy	36	0.01	-0.01	-0.00
				Max. Vx	20	-0.00	-0.00	0.00
				Max Tension	18	0.66	0.00	0.00
		Top Girt	Max. Compression	22	-0.66	0.00	0.00	
			Max. Mx	26	-0.01	0.03	0.00	
			Max. My	20	-0.02	0.00	-0.00	
			Max. Vy	26	-0.02	0.00	0.00	
			Max. Vx	20	0.00	0.00	0.00	
			Max Tension	6	0.73	0.00	0.00	
		Bottom Girt	Max. Compression	11	-0.73	0.00	0.00	
			Max. Mx	26	0.04	0.03	0.00	
			Max. My	20	0.06	0.00	-0.00	
Max. Vy	26		-0.02	0.00	0.00			
Max. Vx	20		0.00	0.00	0.00			
Max Tension	6		0.09	0.00	0.00			
Mid Girt	Max. Compression	3	-0.07	0.00	0.00			
	Max. Mx	26	0.03	0.03	0.00			
	Max. My	20	0.01	0.00	-0.00			
	Max. Vy	26	-0.02	0.00	0.00			
	Max. Vx	20	0.00	0.00	0.00			
	Max Tension	6	0.09	0.00	0.00			
T3	250 - 230	Leg	Max. Compression	3	-0.07	0.00	0.00	
			Max. Mx	26	0.03	0.03	0.00	
			Max. My	20	0.01	0.00	-0.00	
			Max. Vy	26	-0.02	0.00	0.00	
			Max. Vx	20	0.00	0.00	0.00	
			Max Tension	23	55.76	-0.22	-0.14	
			Diagonal	Max. Compression	2	-64.63	0.01	2.17
				Max. Mx	8	-56.22	-1.88	-0.50
				Max. My	3	-63.34	0.01	2.17
				Max. Vy	9	3.89	-1.88	-0.50
				Max. Vx	14	4.44	-0.01	-2.13
				Max Tension	13	4.23	0.00	0.00
		Top Girt		Max. Compression	24	-4.29	0.00	0.00
				Max. Mx	27	1.35	-0.01	0.00
				Max. My	20	-1.69	-0.00	0.00
				Max. Vy	27	0.02	-0.01	-0.00
				Max. Vx	20	-0.00	-0.00	0.00
				Max Tension	18	1.23	0.00	0.00
		Bottom Girt	Max. Compression	23	-1.21	0.00	0.00	
			Max. Mx	26	0.01	0.04	0.00	
			Max. My	20	-0.03	0.00	-0.00	
			Max. Vy	26	-0.03	0.00	0.00	
			Max. Vx	20	0.00	0.00	0.00	
			Max Tension	22	1.29	0.00	0.00	
				Max. Compression	3	-1.17	0.00	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T4	230 - 220	Leg	Max. Mx	26	0.22	0.04	0.00
			Max. My	20	0.05	0.00	-0.00
			Max. Vy	26	-0.03	0.00	0.00
			Max. Vx	20	0.00	0.00	0.00
			Max Tension	23	58.64	-2.13	-0.10
			Max. Compression	2	-66.89	2.23	-0.00
			Max. Mx	22	57.22	-2.81	0.04
		Diagonal	Max. My	24	-4.65	-0.30	5.57
			Max. Vy	14	0.20	-2.79	-0.01
			Max. Vx	24	-0.56	-0.30	5.57
			Max Tension	21	5.11	0.00	0.00
			Max. Compression	10	-5.89	0.00	0.00
			Max. Mx	22	4.04	0.13	0.01
			Max. My	24	-4.36	-0.09	-0.04
T5	220 - 200	Leg	Max. Vy	37	0.04	0.08	-0.00
			Max. Vx	24	0.01	0.00	0.00
			Max Tension	23	82.61	-3.49	-0.03
			Max. Compression	2	-94.15	4.49	0.02
			Max. Mx	2	-94.15	4.49	0.02
			Max. My	24	-5.87	-0.30	5.57
			Max. Vy	10	-0.25	3.54	0.02
		Diagonal	Max. Vx	20	-0.33	-0.29	-5.45
			Max Tension	18	4.75	0.00	0.00
			Max. Compression	18	-4.93	0.00	0.00
			Max. Mx	27	2.02	0.09	-0.01
			Max. My	36	0.78	0.08	-0.01
			Max. Vy	38	0.05	0.07	0.01
			Max. Vx	36	0.00	0.00	0.00
T6	200 - 180	Leg	Max Tension	23	106.76	-2.99	-0.02
			Max. Compression	2	-122.46	3.81	-0.01
			Max. Mx	2	-104.36	4.49	0.02
			Max. My	4	-6.86	-0.13	-4.18
			Max. Vy	22	-0.97	-4.21	-0.10
			Max. Vx	4	-0.93	-0.13	-4.18
			Diagonal	Max Tension	23	7.63	0.00
		Max. Compression		10	-9.03	0.00	0.00
		Max. Mx		27	-0.90	0.12	-0.02
		Max. My		37	-3.84	0.08	-0.02
		Max. Vy		37	0.07	0.11	0.02
		Max. Vx		37	0.00	0.00	0.00
		Top Girt		Max Tension	22	3.69	0.00
			Max. Compression	3	-2.89	0.00	0.00
			Max. Mx	26	1.41	-0.14	0.00
			Max. My	28	0.12	0.00	0.00
			Max. Vy	26	0.07	0.00	0.00
			Max. Vx	28	0.00	0.00	0.00
			Mid Girt	Max Tension	22	5.42	0.00
		Max. Compression		3	-4.14	0.00	0.00
		Max. Mx		26	2.16	-0.18	0.00
		Max. My		28	0.44	0.00	0.01
Max. Vy	26	-0.08		0.00	0.00		
Max. Vx	28	-0.00		0.00	0.00		
T7	180 - 160	Leg		Max Tension	7	141.03	-3.32
			Max. Compression	2	-163.93	4.91	-0.01
			Max. Mx	2	-163.93	4.91	-0.01
			Max. My	4	-10.15	-0.13	-4.13
			Max. Vy	22	-0.87	-3.64	-0.02
			Max. Vx	4	-1.06	-0.13	-4.13
			Diagonal	Max Tension	23	9.53	0.00
		Max. Compression		10	-10.99	0.00	0.00
		Max. Mx		27	-0.10	0.13	0.02

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T8	160 - 140	Top Girt	Max. My	37	-3.59	0.11	-0.02	
			Max. Vy	37	0.08	0.13	0.02	
			Max. Vx	37	0.01	0.00	0.00	
			Max Tension	22	5.78	0.00	0.00	
			Max. Compression	3	-4.43	0.00	0.00	
			Max. Mx	26	2.34	-0.30	0.00	
			Max. My	26	2.26	0.00	0.01	
			Max. Vy	26	-0.12	0.00	0.00	
			Max. Vx	26	-0.00	0.00	0.00	
			Max Tension	6	5.16	0.00	0.00	
			Max. Compression	3	-3.85	0.00	0.00	
			Max. Mx	26	2.32	-0.37	0.00	
		Mid Girt	Max. My	26	2.26	0.00	0.01	
			Max. Vy	26	-0.12	0.00	0.00	
			Max. Vx	26	-0.00	0.00	0.00	
			Max Tension	6	5.16	0.00	0.00	
			Max. Compression	3	-3.85	0.00	0.00	
			Max. Mx	26	2.32	-0.37	0.00	
			Max. My	26	2.26	0.00	0.01	
			Max. Vy	26	0.13	0.00	0.00	
			Max. Vx	26	0.00	0.00	0.00	
			Max Tension	7	183.98	-3.59	-0.01	
			Max. Compression	2	-216.88	4.21	-0.03	
			Leg	Max. Mx	2	-188.73	4.91	-0.01
		Max. My		24	-15.16	-0.28	6.13	
		Max. Vy		6	-1.51	-4.41	0.01	
		Max. Vx		12	-0.97	0.20	-2.22	
		Max Tension		12	11.44	0.00	0.00	
		Max. Compression		12	-11.40	0.00	0.00	
		Max. Mx		35	3.49	0.20	0.02	
		Max. My		38	-4.09	0.11	-0.03	
		Max. Vy		37	0.10	0.18	0.02	
		Max. Vx		37	0.01	0.00	0.00	
Max Tension	6	4.11		0.00	0.00			
Max. Compression	3	-3.11		0.00	0.00			
Top Girt	Max. Mx	26	1.80	-0.41	0.00			
	Max. My	26	1.77	0.00	0.01			
	Max. Vy	26	-0.14	0.00	0.00			
	Max. Vx	26	-0.00	0.00	0.00			
	Max Tension	7	230.84	-4.13	0.00			
	Max. Compression	2	-271.03	10.01	0.03			
	Max. Mx	18	-271.03	10.02	-0.06			
	Max. My	20	-20.21	0.07	-9.10			
	Max. Vy	6	-1.41	-4.20	0.00			
	Max. Vx	24	1.57	-0.05	3.95			
	Max Tension	5	12.95	0.00	0.00			
	Max. Compression	16	-13.46	0.00	0.00			
Diagonal	Max. Mx	35	4.13	0.22	-0.02			
	Max. My	37	-2.70	0.18	-0.03			
	Max. Vy	37	0.11	0.22	0.03			
	Max. Vx	37	0.01	0.00	0.00			
	Max Tension	7	262.27	-9.62	0.06			
	Max. Compression	18	-306.11	9.76	-0.05			
	Max. Mx	6	255.29	-11.56	0.07			
	Max. My	20	-22.61	-1.08	-17.66			
	Max. Vy	14	0.49	-11.55	-0.05			
	Max. Vx	20	0.79	-1.08	-17.66			
	Max Tension	17	17.82	0.00	0.00			
	Max. Compression	16	-19.02	0.00	0.00			
Leg	Max. Mx	37	3.73	-0.58	0.08			
	Max. My	4	-18.62	-0.08	-0.12			
	Max. Vy	37	-0.21	-0.58	0.08			
	Max. Vx	37	-0.02	0.00	0.00			
	Max Tension	7	308.97	-11.29	0.07			
	Max. Compression	18	-361.01	14.48	-0.05			
	Max. Mx	18	-361.01	14.48	-0.05			
	Max. My	20	-24.42	-1.08	-17.66			
	T10	120 - 100	Leg	Max. My	20	-24.42	-1.08	-17.66
				Max. Vy	14	0.49	-11.55	-0.05
				Max. Vx	20	0.79	-1.08	-17.66
	T11	100 - 80	Leg	Max Tension	7	308.97	-11.29	0.07
Max. Compression				18	-361.01	14.48	-0.05	
Max. Mx				18	-361.01	14.48	-0.05	

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T12	80 - 60	Diagonal	Max. Vy	10	-0.53	14.47	0.01
			Max. Vx	20	-0.82	-1.08	-17.66
			Max Tension	16	19.03	0.00	0.00
			Max. Compression	16	-19.69	0.00	0.00
			Max. Mx	37	4.88	-0.67	0.11
			Max. My	33	4.95	-0.67	0.11
			Max. Vy	37	-0.23	-0.67	0.11
		Leg	Max. Vx	34	0.02	0.00	0.00
			Max Tension	7	351.99	-12.95	0.06
			Max. Compression	18	-411.87	10.54	-0.04
			Max. Mx	18	-409.58	14.48	-0.05
			Max. My	20	-30.11	-1.25	-16.28
			Max. Vy	33	-0.52	-5.40	-0.06
			Max. Vx	20	0.74	-1.25	-16.28
T13	60 - 40	Diagonal	Max Tension	16	18.94	0.00	0.00
			Max. Compression	16	-19.56	0.00	0.00
			Max. Mx	37	3.57	-0.76	0.11
			Max. My	27	-1.01	-0.73	-0.12
			Max. Vy	37	-0.24	-0.76	0.11
			Max. Vx	27	-0.02	0.00	0.00
			Max Tension	7	392.46	-12.20	0.06
		Leg	Max. Compression	18	-459.74	15.33	-0.04
			Max. Mx	18	-459.74	15.33	-0.04
			Max. My	20	-31.19	-1.25	-16.28
			Max. Vy	33	0.84	-12.19	-0.05
			Max. Vx	20	-0.81	-1.25	-16.28
			Max Tension	17	19.44	0.00	0.00
			Max. Compression	16	-20.59	0.00	0.00
T14	40 - 20	Diagonal	Max. Mx	37	5.67	-0.82	0.11
			Max. My	33	5.77	-0.82	0.12
			Max. Vy	37	-0.26	-0.82	0.11
			Max. Vx	34	0.02	0.00	0.00
			Max Tension	7	434.15	-13.23	0.04
			Max. Compression	18	-511.07	10.99	-0.02
			Max. Mx	18	-508.44	15.33	-0.04
		Leg	Max. My	20	-38.39	-1.81	-25.20
			Max. Vy	33	-1.14	-12.19	-0.05
			Max. Vx	20	1.23	-1.81	-25.20
			Max Tension	16	19.34	0.00	0.00
			Max. Compression	16	-19.46	0.00	0.00
			Max. Mx	37	1.75	-0.95	0.14
			Max. My	38	-5.17	-0.80	-0.15
T15	20 - 0	Diagonal	Max. Vy	37	-0.28	-0.95	0.14
			Max. Vx	38	-0.02	0.00	0.00
			Max Tension	7	468.31	-13.58	0.05
			Max. Compression	18	-552.20	0.00	0.00
			Max. Mx	6	458.66	-14.02	0.06
			Max. My	20	-38.88	-1.81	-25.20
			Max. Vy	14	-1.04	-14.01	-0.05
		Leg	Max. Vx	20	-1.54	-1.81	-25.20
			Max Tension	17	20.33	0.00	0.00
			Max. Compression	18	-22.33	0.00	0.00
			Max. Mx	36	7.78	-0.93	0.13
			Max. My	27	6.18	-0.92	-0.13
			Max. Vy	36	-0.28	-0.93	0.13
			Max. Vx	27	-0.02	0.00	0.00

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Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	18	577.87	53.91	-31.39
	Max. H _x	18	577.87	53.91	-31.39
	Max. H _z	7	-488.35	-47.21	27.50
	Min. Vert	7	-488.35	-47.21	27.50
	Min. H _x	7	-488.35	-47.21	27.50
	Min. H _z	18	577.87	53.91	-31.39
Leg B	Max. Vert	10	577.00	-53.94	-31.23
	Max. H _x	23	-488.25	47.24	27.36
	Max. H _z	23	-488.25	47.24	27.36
	Min. Vert	23	-488.25	47.24	27.36
	Min. H _x	10	577.00	-53.94	-31.23
	Min. H _z	10	577.00	-53.94	-31.23
Leg A	Max. Vert	2	577.71	-0.15	62.34
	Max. H _x	21	31.94	4.05	2.58
	Max. H _z	2	577.71	-0.15	62.34
	Min. Vert	15	-487.72	0.14	-54.58
	Min. H _x	9	32.44	-4.05	2.64
	Min. H _z	15	-487.72	0.14	-54.58

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overtuning Moment, M _x kip-ft	Overtuning Moment, M _z kip-ft	Torque kip-ft
Dead Only	107.21	-0.00	-0.00	-6.60	5.20	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	128.64	0.04	-94.27	-12968.95	0.24	-6.79
0.9 Dead+1.6 Wind 0 deg - No Ice	96.48	0.04	-94.35	-12965.48	-1.32	-6.78
1.2 Dead+1.6 Wind 30 deg - No Ice	128.64	46.11	-79.82	-11014.76	-6349.34	-9.86
0.9 Dead+1.6 Wind 30 deg - No Ice	96.48	46.15	-79.89	-11011.56	-6350.20	-9.83
1.2 Dead+1.6 Wind 60 deg - No Ice	128.64	79.23	-45.74	-6320.01	-10926.47	-10.42
0.9 Dead+1.6 Wind 60 deg - No Ice	96.48	79.29	-45.78	-6317.34	-10926.83	-10.42
1.2 Dead+1.6 Wind 90 deg - No Ice	128.64	92.18	-0.02	-8.72	-12703.74	-8.35
0.9 Dead+1.6 Wind 90 deg - No Ice	96.48	92.26	-0.02	-6.75	-12703.90	-8.35
1.2 Dead+1.6 Wind 120 deg - No Ice	128.64	81.66	47.10	6467.34	-11221.37	-3.96
0.9 Dead+1.6 Wind 120 deg - No Ice	96.48	81.73	47.14	6468.57	-11221.64	-3.95
1.2 Dead+1.6 Wind 150 deg - No Ice	128.64	46.07	79.76	10987.60	-6348.14	1.62
0.9 Dead+1.6 Wind 150 deg - No Ice	96.48	46.11	79.83	10988.36	-6349.00	1.63
1.2 Dead+1.6 Wind 180 deg - No Ice	128.64	-0.04	91.41	12605.75	12.27	6.57
0.9 Dead+1.6 Wind 180 deg - No Ice	96.48	-0.04	91.49	12606.34	10.71	6.57
1.2 Dead+1.6 Wind 210 deg - No Ice	128.64	-46.15	79.80	10993.61	6371.08	9.86

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<i>Load Combination</i>	<i>Vertical</i> K	<i>Shear_x</i> K	<i>Shear_z</i> K	<i>Overturning Moment, M_x</i> kip-ft	<i>Overturning Moment, M_z</i> kip-ft	<i>Torque</i> kip-ft
No Ice						
0.9 Dead+1.6 Wind 210 deg - No Ice	96.48	-46.19	79.87	10994.37	6368.81	9.83
1.2 Dead+1.6 Wind 240 deg - No Ice	128.64	-81.71	47.17	6477.76	11239.89	10.76
0.9 Dead+1.6 Wind 240 deg - No Ice	96.48	-81.78	47.21	6479.00	11237.05	10.73
1.2 Dead+1.6 Wind 270 deg - No Ice	128.64	-92.18	0.07	3.32	12716.25	8.35
0.9 Dead+1.6 Wind 270 deg - No Ice	96.48	-92.26	0.07	5.28	12713.28	8.35
1.2 Dead+1.6 Wind 300 deg - No Ice	128.64	-79.18	-45.67	-6309.58	10932.96	3.86
0.9 Dead+1.6 Wind 300 deg - No Ice	96.48	-79.25	-45.71	-6306.92	10930.20	3.86
1.2 Dead+1.6 Wind 330 deg - No Ice	128.64	-46.03	-79.78	-11008.74	6351.43	-1.62
0.9 Dead+1.6 Wind 330 deg - No Ice	96.48	-46.07	-79.85	-11005.54	6349.17	-1.64
1.2 Dead+1.0 Ice+1.0 Temp	389.67	0.00	0.00	-38.57	62.22	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	389.66	0.01	-28.21	-4136.65	61.34	-2.35
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	389.66	13.98	-24.19	-3560.49	-1970.84	-2.39
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	389.66	24.13	-13.92	-2066.57	-3450.13	-1.78
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	389.66	27.95	-0.00	-38.52	-4004.27	-0.70
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	389.66	24.44	14.10	2009.52	-3487.15	0.56
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	389.66	13.97	24.19	3481.13	-1971.06	1.63
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	389.66	-0.00	27.84	4015.52	63.36	2.31
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	389.66	-13.98	24.20	3482.12	2097.52	2.39
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	389.66	-24.44	14.11	2011.26	3612.85	1.79
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	389.66	-27.94	0.01	-36.49	4128.95	0.70
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	389.66	-24.11	-13.91	-2064.81	3573.79	-0.53
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	389.66	-13.96	-24.19	-3559.48	2093.79	-1.63
Dead+Wind 0 deg - Service	107.21	0.01	-22.55	-3104.20	3.77	-1.62
Dead+Wind 30 deg - Service	107.21	11.03	-19.09	-2637.50	-1515.03	-2.36
Dead+Wind 60 deg - Service	107.21	18.96	-10.94	-1516.06	-2609.27	-2.50
Dead+Wind 90 deg - Service	107.21	22.05	-0.01	-7.71	-3033.34	-1.99
Dead+Wind 120 deg - Service	107.21	19.53	11.27	1540.96	-2678.11	-0.95
Dead+Wind 150 deg - Service	107.21	11.02	19.08	2622.55	-1513.11	0.38
Dead+Wind 180 deg - Service	107.21	-0.01	21.87	3009.86	6.64	1.57
Dead+Wind 210 deg - Service	107.21	-11.04	19.09	2623.99	1526.01	2.36
Dead+Wind 240 deg - Service	107.21	-19.54	11.28	1543.45	2689.97	2.57
Dead+Wind 270 deg - Service	107.21	-22.05	0.01	-4.83	3043.76	1.99
Dead+Wind 300 deg - Service	107.21	-18.95	-10.93	-1513.57	2618.24	0.92
Dead+Wind 330 deg - Service	107.21	-11.02	-19.08	-2636.06	1522.95	-0.38

Solution Summary

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-107.21	0.00	0.00	107.21	0.00	0.000%
2	0.04	-128.66	-94.57	-0.04	128.64	94.27	0.186%
3	0.04	-96.49	-94.57	-0.04	96.48	94.35	0.160%
4	46.29	-128.66	-80.09	-46.11	128.64	79.82	0.200%
5	46.29	-96.49	-80.09	-46.15	96.48	79.89	0.177%
6	79.52	-128.66	-45.91	-79.23	128.64	45.74	0.213%
7	79.52	-96.49	-45.91	-79.29	96.48	45.78	0.193%
8	92.50	-128.66	-0.04	-92.18	128.64	0.02	0.200%
9	92.50	-96.49	-0.04	-92.26	96.48	0.02	0.177%
10	81.92	-128.66	47.25	-81.66	128.64	-47.10	0.186%
11	81.92	-96.49	47.25	-81.73	96.48	-47.14	0.160%
12	46.21	-128.66	80.04	-46.07	128.64	-79.76	0.200%
13	46.21	-96.49	80.04	-46.11	96.48	-79.83	0.177%
14	-0.04	-128.66	91.74	0.04	128.64	-91.41	0.213%
15	-0.04	-96.49	91.74	0.04	96.48	-91.49	0.193%
16	-46.29	-128.66	80.09	46.15	128.64	-79.80	0.200%
17	-46.29	-96.49	80.09	46.19	96.48	-79.87	0.177%
18	-81.96	-128.66	47.32	81.71	128.64	-47.17	0.186%
19	-81.96	-96.49	47.32	81.78	96.48	-47.21	0.161%
20	-92.50	-128.66	0.04	92.18	128.64	-0.07	0.200%
21	-92.50	-96.49	0.04	92.26	96.48	-0.07	0.177%
22	-79.47	-128.66	-45.83	79.18	128.64	45.67	0.213%
23	-79.47	-96.49	-45.83	79.25	96.48	45.71	0.193%
24	-46.21	-128.66	-80.04	46.03	128.64	79.78	0.200%
25	-46.21	-96.49	-80.04	46.07	96.48	79.85	0.177%
26	0.00	-389.67	0.00	-0.00	389.67	-0.00	0.001%
27	0.01	-389.67	-28.54	-0.01	389.66	28.21	0.085%
28	14.14	-389.67	-24.48	-13.98	389.66	24.19	0.085%
29	24.41	-389.67	-14.09	-24.13	389.66	13.92	0.085%
30	28.27	-389.67	-0.01	-27.95	389.66	0.00	0.083%
31	24.72	-389.67	14.26	-24.44	389.66	-14.10	0.083%
32	14.13	-389.67	24.47	-13.97	389.66	-24.19	0.083%
33	-0.01	-389.67	28.17	0.00	389.66	-27.84	0.084%
34	-14.14	-389.67	24.48	13.98	389.66	-24.20	0.085%
35	-24.73	-389.67	14.28	24.44	389.66	-14.11	0.085%
36	-28.27	-389.67	0.01	27.94	389.66	-0.01	0.086%
37	-24.40	-389.67	-14.08	24.11	389.66	13.91	0.087%
38	-14.13	-389.67	-24.47	13.96	389.66	24.19	0.086%
39	0.01	-107.21	-22.61	-0.01	107.21	22.55	0.060%
40	11.07	-107.21	-19.15	-11.03	107.21	19.09	0.061%
41	19.01	-107.21	-10.98	-18.96	107.21	10.94	0.062%
42	22.12	-107.21	-0.01	-22.05	107.21	0.01	0.061%
43	19.59	-107.21	11.30	-19.53	107.21	-11.27	0.060%
44	11.05	-107.21	19.14	-11.02	107.21	-19.08	0.060%
45	-0.01	-107.21	21.94	0.01	107.21	-21.87	0.061%
46	-11.07	-107.21	19.15	11.04	107.21	-19.09	0.061%
47	-19.60	-107.21	11.32	19.54	107.21	-11.28	0.060%
48	-22.12	-107.21	0.01	22.05	107.21	-0.01	0.061%
49	-19.00	-107.21	-10.96	18.95	107.21	10.93	0.062%
50	-11.05	-107.21	-19.14	11.02	107.21	19.08	0.061%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
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1	Yes	4	0.00000001	0.00000001
2	Yes	5	0.00025875	0.00027200
3	Yes	5	0.00018973	0.00021880
4	Yes	5	0.00027687	0.00029328
5	Yes	5	0.00020794	0.00023708
6	Yes	5	0.00029349	0.00031257
7	Yes	5	0.00022430	0.00025368
8	Yes	5	0.00027692	0.00029290
9	Yes	5	0.00020797	0.00023662
10	Yes	5	0.00025874	0.00027181
11	Yes	5	0.00018972	0.00021861
12	Yes	5	0.00027687	0.00029315
13	Yes	5	0.00020793	0.00023691
14	Yes	5	0.00029346	0.00031251
15	Yes	5	0.00022427	0.00025359
16	Yes	5	0.00027681	0.00029312
17	Yes	5	0.00020788	0.00023691
18	Yes	5	0.00025871	0.00027183
19	Yes	5	0.00018981	0.00021864
20	Yes	5	0.00027689	0.00029288
21	Yes	5	0.00020793	0.00023660
22	Yes	5	0.00029349	0.00031257
23	Yes	5	0.00022429	0.00025367
24	Yes	5	0.00027690	0.00029328
25	Yes	5	0.00020795	0.00023706
26	Yes	4	0.00000001	0.00002452
27	Yes	4	0.00078622	0.00069411
28	Yes	4	0.00079195	0.00069605
29	Yes	4	0.00079789	0.00070024
30	Yes	4	0.00079186	0.00069186
31	Yes	4	0.00078544	0.00068661
32	Yes	4	0.00079176	0.00069310
33	Yes	4	0.00079783	0.00070230
34	Yes	4	0.00079190	0.00069839
35	Yes	4	0.00078621	0.00069612
36	Yes	4	0.00079273	0.00070270
37	Yes	4	0.00079865	0.00070946
38	Yes	4	0.00079268	0.00070158
39	Yes	4	0.00023214	0.00034156
40	Yes	4	0.00023666	0.00034428
41	Yes	4	0.00024096	0.00034864
42	Yes	4	0.00023668	0.00034340
43	Yes	4	0.00023208	0.00034001
44	Yes	4	0.00023660	0.00034281
45	Yes	4	0.00024089	0.00034766
46	Yes	4	0.00023657	0.00034316
47	Yes	4	0.00023206	0.00034061
48	Yes	4	0.00023666	0.00034399
49	Yes	4	0.00024097	0.00034907
50	Yes	4	0.00023668	0.00034452

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	280 - 270	7.824	39	0.2753	0.0209
T2	270 - 250	7.234	39	0.2728	0.0176
T3	250 - 230	6.096	39	0.2578	0.0141
T4	230 - 220	5.040	39	0.2309	0.0099

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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T5	220 - 200	4.568	39	0.2132	0.0078
T6	200 - 180	3.718	39	0.1873	0.0039
T7	180 - 160	2.976	39	0.1610	0.0023
T8	160 - 140	2.329	39	0.1392	0.0015
T9	140 - 120	1.763	39	0.1201	0.0012
T10	120 - 100	1.275	39	0.0991	0.0010
T11	100 - 80	0.878	39	0.0808	0.0009
T12	80 - 60	0.565	39	0.0616	0.0007
T13	60 - 40	0.324	39	0.0452	0.0005
T14	40 - 20	0.152	39	0.0285	0.0003
T15	20 - 0	0.043	47	0.0142	0.0002

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
280.00	Flash Beacon Lighting	39	7.824	0.2753	0.0209	148738
250.00	RR90-17-02DP	39	6.096	0.2578	0.0141	74174
245.00	DB420-A	39	5.822	0.2522	0.0132	52890
235.00	DB225-2-F	39	5.292	0.2389	0.0110	31085
200.00	(3) DB980H120E-M	39	3.718	0.1873	0.0039	43917
190.00	(3) DB980H120E-M	39	3.334	0.1742	0.0029	46939
180.00	(3) DB980H120E-M	39	2.976	0.1610	0.0023	50543
170.00	APXVSP18-C-A20	39	2.641	0.1494	0.0019	54945
160.00	80010121 9' Mount Pipe	39	2.329	0.1392	0.0015	59941
150.00	APXV18-206517S-ACU	39	2.036	0.1298	0.0014	62832
140.00	(2) HBXX-6517DS-A2M	39	1.763	0.1201	0.0012	64596

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	280 - 270	32.644	2	1.1469	0.0877
T2	270 - 250	30.186	2	1.1367	0.0740
T3	250 - 230	25.447	2	1.0740	0.0590
T4	230 - 220	21.044	2	0.9623	0.0414
T5	220 - 200	19.077	2	0.8893	0.0326
T6	200 - 180	15.529	18	0.7818	0.0164
T7	180 - 160	12.433	18	0.6723	0.0098
T8	160 - 140	9.730	18	0.5816	0.0065
T9	140 - 120	7.366	18	0.5018	0.0052
T10	120 - 100	5.328	18	0.4140	0.0043
T11	100 - 80	3.668	18	0.3376	0.0036
T12	80 - 60	2.361	18	0.2575	0.0029
T13	60 - 40	1.353	18	0.1890	0.0021
T14	40 - 20	0.637	19	0.1192	0.0014
T15	20 - 0	0.179	19	0.0593	0.0007

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Critical Deflections and Radius of Curvature - Design Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection</i>	<i>Tilt</i>	<i>Twist</i>	<i>Radius of Curvature</i>
<i>ft</i>			<i>in</i>	<i>°</i>	<i>°</i>	<i>ft</i>
280.00	Flash Beacon Lighting	2	32.644	1.1469	0.0877	35857
250.00	RR90-17-02DP	2	25.447	1.0740	0.0590	17845
245.00	DB420-A	2	24.302	1.0509	0.0551	12711
235.00	DB225-2-F	2	22.093	0.9957	0.0461	7489
200.00	(3) DB980H120E-M	18	15.529	0.7818	0.0164	10554
190.00	(3) DB980H120E-M	18	13.928	0.7272	0.0122	11283
180.00	(3) DB980H120E-M	18	12.433	0.6723	0.0098	12158
170.00	APXVSPP18-C-A20	18	11.036	0.6240	0.0079	13189
160.00	80010121 9' Mount Pipe	18	9.730	0.5816	0.0065	14351
150.00	APXV18-206517S-ACU	18	8.509	0.5423	0.0057	15033
140.00	(2) HBXX-6517DS-A2M	18	7.366	0.5018	0.0052	15447

Bolt Design Data

<i>Section No.</i>	<i>Elevation</i>	<i>Component Type</i>	<i>Bolt Grade</i>	<i>Bolt Size</i>	<i>Number Of Bolts</i>	<i>Maximum Load per Bolt</i>	<i>Allowable Load</i>	<i>Ratio Load Allowable</i>	<i>Allowable Ratio</i>	<i>Criteria</i>
	<i>ft</i>			<i>in</i>		<i>K</i>	<i>K</i>			
T1	280	Leg	A325N	0.6250	5	1.11	24.85	0.045	✓	1 Bolt DS
T2	270	Leg	A325N	0.7500	5	4.20	35.78	0.117	✓	1 Bolt DS
T3	250	Leg	A325N	1.0000	6	9.29	53.01	0.175	✓	1 Bolt Tension
T4	230	Leg	A325N	1.0000	6	9.77	53.01	0.184	✓	1 Bolt Tension
		Diagonal	A325N	1.0000	1	5.11	16.94	0.302	✓	1 Member Block Shear
T5	220	Leg	A325N	1.0000	6	13.77	53.01	0.260	✓	1 Bolt Tension
		Diagonal	A325N	1.0000	1	4.75	10.16	0.467	✓	1 Member Block Shear
T6	200	Leg	A325N	1.0000	6	17.72	53.01	0.334	✓	1 Bolt Tension
		Diagonal	A325N	1.0000	1	7.63	16.94	0.451	✓	1 Member Block Shear
		Top Girt	A325N	1.0000	1	3.69	10.16	0.363	✓	1 Member Block Shear
T7	180	Leg	A325N	1.2500	6	23.39	82.83	0.282	✓	1 Bolt Tension
		Diagonal	A325N	1.2500	1	9.53	17.14	0.556	✓	1 Member Block Shear
		Top Girt	A325N	1.2500	1	5.78	16.43	0.352	✓	1 Member Block Shear
T8	160	Leg	A325N	1.2500	6	30.66	82.83	0.370	✓	1 Bolt Tension
		Diagonal	A325N	1.2500	1	11.44	20.54	0.557	✓	1 Member Block Shear
		Top Girt	A325N	1.2500	1	4.11	20.54	0.200	✓	1 Member Block Shear
T9	140	Leg	A325N	1.2500	6	38.47	82.83	0.464	✓	1 Bolt Tension
		Diagonal	A325N	1.2500	1	12.95	20.54	0.630	✓	1 Member Block Shear
T10	120	Leg	A325N	1.2500	12	21.86	82.83	0.264	✓	1 Bolt Tension
		Diagonal	A325N	1.0000	2	8.91	35.53	0.251	✓	1 Member Block Shear

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Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load Allowable	Allowable Ratio	Criteria	
T11	100	Leg	A325N	1.2500	12	25.75	82.83	0.311	✓	1	Bolt Tension
		Diagonal	A325N	1.0000	2	9.51	35.53	0.268	✓	1	Member Block Shear
T12	80	Leg	A325N	1.2500	12	29.33	82.83	0.354	✓	1	Bolt Tension
		Diagonal	A325N	1.0000	2	9.47	35.53	0.267	✓	1	Member Block Shear
T13	60	Leg	A325N	1.2500	12	32.70	82.83	0.395	✓	1	Bolt Tension
		Diagonal	A325N	1.0000	2	9.72	35.53	0.274	✓	1	Member Block Shear
T14	40	Leg	A325N	1.2500	12	36.18	82.83	0.437	✓	1	Bolt Tension
		Diagonal	A325N	1.0000	2	9.67	35.53	0.272	✓	1	Member Block Shear
T15	20	Leg	A325N	1.2500	12	39.03	82.83	0.471	✓	1	Bolt Tension
		Diagonal	A325N	1.0000	2	10.17	35.53	0.286	✓	1	Member Block Shear

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	280 - 270	1 3/4	10.00	2.25	61.7 K=1.00	2.4053	-7.33	81.93	0.090 ¹ ✓
T2	270 - 250	2	20.00	2.38	57.0 K=1.00	3.1416	-23.33	111.48	0.209 ¹ ✓
T3	250 - 230	2 1/2	20.00	2.38	45.6 K=1.00	4.9087	-61.47	189.74	0.324 ¹ ✓
T4	230 - 220	Pirod 105245	10.02	10.02	37.8 K=1.00	5.3014	-66.89	214.86	0.311 ¹ ✓
T5	220 - 200	Pirod 105218	20.03	10.02	32.4 K=1.00	7.2158	-94.15	300.68	0.313 ¹ ✓
T6	200 - 180	Pirod 105218	20.03	10.02	32.4 K=1.00	7.2158	-122.46	300.68	0.407 ¹ ✓
T7	180 - 160	Pirod 105219	20.03	10.02	28.4 K=1.00	9.4248	-163.93	399.87	0.410 ¹ ✓
T8	160 - 140	Pirod 105220	20.03	10.02	25.2 K=1.00	11.9282	-216.88	512.38	0.423 ¹ ✓
T9	140 - 120	Pirod 105220	20.03	10.02	25.2 K=1.00	11.9282	-271.03	512.38	0.529 ¹ ✓
T10	120 - 100	Pirod 112743	20.03	20.03	32.6 K=1.00	14.7262	-306.11	613.14	0.499 ¹ ✓
T11	100 - 80	Pirod 112743	20.03	20.03	32.6 K=1.00	14.7262	-361.01	613.14	0.589 ¹ ✓
T12	80 - 60	Pirod 112744	20.03	20.03	32.6	17.8187	-411.88	741.99	0.555 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T13	60 - 40	Pirod 112744	20.03	20.03	K=1.00 32.6	17.8187	-459.74	741.99	0.620 ¹ ✓
T14	40 - 20	Pirod 112745	20.03	20.03	K=1.00 32.5	21.2057	-511.07	883.14	0.579 ¹ ✓
T15	20 - 0	Pirod 112740	20.03	20.03	K=1.00 32.5	21.2057	-552.20	883.14	0.625 ¹ ✓

¹ P_u / φP_n controls

Truss-Leg Diagonal Data

Section No.	Elevation ft	Diagonal Size	L _d ft	Kl/r	φP _n K	A in ²	V _u K	φV _n K	Stress Ratio
T4	230 - 220	0.5	1.47	120.0	238.57	0.1963	0.56	3.45	0.163 ✓
T5	220 - 200	0.5	1.46	119.0	324.71	0.1963	0.33	3.38	0.098 ✓
T6	200 - 180	0.5	1.46	119.0	324.71	0.1963	0.97	3.38	0.287 ✓
T7	180 - 160	0.625	1.45	94.4	424.12	0.3068	0.87	6.96	0.125 ✓
T8	160 - 140	0.625	1.43	93.6	536.77	0.3068	1.51	7.01	0.216 ✓
T9	140 - 120	0.625	1.43	93.6	536.77	0.3068	1.57	7.01	0.225 ✓
T10	120 - 100	0.75	1.73	93.9	662.68	0.4418	0.80	14.36	0.056 ✓
T11	100 - 80	0.75	1.73	93.9	662.68	0.4418	0.84	14.36	0.059 ✓
T12	80 - 60	0.75	1.71	93.1	801.84	0.4418	0.76	14.53	0.053 ✓
T13	60 - 40	0.75	1.71	93.1	801.84	0.4418	0.83	14.53	0.058 ✓
T14	40 - 20	0.875	1.70	79.1	954.26	0.6013	1.25	23.59	0.054 ✓
T15	20 - 0	0.875	1.70	79.1	954.26	0.6013	1.55	23.59	0.066 ✓

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	280 - 270	7/8	5.48	2.66	131.4 K=0.90	0.6013	-1.40	7.87	0.178 ¹ ✓
T2	270 - 250	7/8	5.54	2.68	132.1	0.6013	-1.80	7.79	0.231 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T3	250 - 230	1	5.54	2.65	K=0.90 114.6	0.7854	-4.29	13.51	0.318 ¹ ✓
T4	230 - 220	L3x3x5/16	11.42	5.02	K=0.90 106.8	1.7800	-5.89	31.65	0.186 ¹ ✓
T5	220 - 200	L3x3x3/16	12.50	5.67	K=1.04 115.6	1.0900	-4.93	17.29	0.285 ¹ ✓
T6	200 - 180	L3x3x5/16	13.80	6.37	K=1.01 129.8	1.7800	-9.03	23.77	0.380 ¹ ✓
T7	180 - 160	L3x3x5/16	15.24	7.09	K=1.00 144.5	1.7800	-10.99	19.26	0.570 ¹ ✓
T8	160 - 140	L3 1/2x3 1/2x5/16	16.80	7.89	K=1.00 137.3	2.0900	-11.40	25.06	0.455 ¹ ✓
T9	140 - 120	L3 1/2x3 1/2x5/16	18.45	8.73	K=1.00 151.8	2.0900	-12.63	20.49	0.616 ¹ ✓
T10	120 - 100	2L3 1/2x3 1/2x5/16x3/8	26.26	12.45	K=1.00 134.0	4.1800	-19.02	52.58	0.362 ¹ ✓
T11	100 - 80	2L3 1/2x3 1/2x5/16x3/8	27.59	13.14	K=0.97 139.9	4.1800	-19.69	48.27	0.408 ¹ ✓
T12	80 - 60	2L3 1/2x3 1/2x5/16x3/8	29.01	13.87	K=0.96 146.0	4.1800	-19.56	44.30	0.441 ¹ ✓
T13	60 - 40	2L3 1/2x3 1/2x5/16x3/8	30.49	14.62	K=0.95 152.4	4.1800	-20.59	40.67	0.506 ¹ ✓
T14	40 - 20	2L3 1/2x3 1/2x5/16x3/8	32.02	15.40	K=0.94 159.0	4.1800	-19.46	37.36	0.521 ¹ ✓
T15	20 - 0	2L3 1/2x3 1/2x5/16x3/8	33.61	16.20	K=0.93 165.8	4.1800	-22.33	34.37	0.650 ¹ ✓

¹ P_u / φP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	280 - 270	1	5.00	4.85	K=0.70 163.1	0.7854	-0.60	6.67	0.090 ¹ ✓
T2	270 - 250	1	5.00	4.83	K=0.70 162.4	0.7854	-0.66	6.73	0.097 ¹ ✓
T3	250 - 230	1 1/4	5.00	4.79	K=0.70 128.8	1.2272	-1.21	16.71	0.072 ¹ ✓
T6	200 - 180	L3x3x3/16	8.00	6.67	K=0.70 134.2	1.0900	-2.89	13.65	0.212 ¹ ✓
T7	180 - 160	L4x4x1/4	10.00	8.60	K=1.00 129.9	1.9400	-4.43	25.75	0.172 ¹ ✓
T8	160 - 140	L3 1/2x3 1/2x5/16	12.00	10.60	K=1.00 184.4	2.0900	-3.11	13.88	0.224 ¹ ✓

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¹ $P_u / \phi P_n$ controls

Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	280 - 270	1	5.00	4.85	163.1 K=0.70	0.7854	-0.57	6.67	0.086 ¹ ✓
T2	270 - 250	1	5.00	4.83	162.4 K=0.70	0.7854	-0.73	6.73	0.109 ¹ ✓
T3	250 - 230	1 1/4	5.00	4.79	128.8 K=0.70	1.2272	-1.17	16.60	0.070 ¹ ✓

¹ $P_u / \phi P_n$ controls

Mid Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	280 - 270	1	5.00	4.85	163.1 K=0.70	0.7854	-0.00	6.67	0.000 ¹ ✓
T2	270 - 250	1	5.00	4.83	162.4 K=0.70	0.7854	-0.07	6.73	0.010 ¹ ✓
T6	200 - 180	L3x3x3/16	9.00	8.00	145.3 K=0.90	1.0900	-4.14	11.67	0.355 ¹ ✓
T7	180 - 160	L4x4x1/4	11.00	10.00	139.0 K=0.92	1.9400	-3.85	22.67	0.170 ¹ ✓

¹ $P_u / \phi P_n$ controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	280 - 270	1 3/4	10.00	0.54	14.9	1.7942	5.57	87.47	0.064 ^{1 #} ✓
T2	270 - 250	2	20.00	0.54	13.0	3.1416	21.00	141.37	0.149 ^{1 #} ✓
T3	250 - 230	2 1/2	20.00	0.54	10.4	4.9087	55.76	220.89	0.252 ¹ ✓
T4	230 - 220	Piroad 105245	10.02	10.02	37.8	5.3014	58.64	238.57	0.246 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T5	220 - 200	Pirod 105218	20.03	10.02	32.4	7.2158	82.61	324.71	0.254 ¹
T6	200 - 180	Pirod 105218	20.03	10.02	32.4	7.2158	106.31	324.71	0.327 ¹
T7	180 - 160	Pirod 105219	20.03	10.02	28.4	9.4248	140.36	424.12	0.331 ¹
T8	160 - 140	Pirod 105220	20.03	10.02	25.2	11.9282	183.94	536.77	0.343 ¹
T9	140 - 120	Pirod 105220	20.03	10.02	25.2	11.9282	230.84	536.77	0.430 ¹
T10	120 - 100	Pirod 112743	20.03	20.03	32.6	14.7262	262.27	662.68	0.396 ¹
T11	100 - 80	Pirod 112743	20.03	20.03	32.6	14.7262	308.97	662.68	0.466 ¹
T12	80 - 60	Pirod 112744	20.03	20.03	32.6	17.8187	351.99	801.84	0.439 ¹
T13	60 - 40	Pirod 112744	20.03	20.03	32.6	17.8187	392.46	801.84	0.489 ¹
T14	40 - 20	Pirod 112745	20.03	20.03	32.5	21.2057	434.15	954.26	0.455 ¹
T15	20 - 0	Pirod 112740	20.03	20.03	32.5	21.2057	468.31	954.26	0.491 ¹

¹ P_u / φP_n controls

Based on net area of leg in section below

Truss-Leg Diagonal Data

Section No.	Elevation ft	Diagonal Size	L _d ft	Kl/r	φP _n K	A in ²	V _u K	φV _n K	Stress Ratio
T4	230 - 220	0.5	1.47	120.0	238.57	0.1963	0.56	3.45	0.163
T5	220 - 200	0.5	1.46	119.0	324.71	0.1963	0.33	3.38	0.098
T6	200 - 180	0.5	1.46	119.0	324.71	0.1963	0.97	3.38	0.287
T7	180 - 160	0.625	1.45	94.4	424.12	0.3068	0.87	6.96	0.125
T8	160 - 140	0.625	1.43	93.6	536.77	0.3068	1.51	7.01	0.216
T9	140 - 120	0.625	1.43	93.6	536.77	0.3068	1.57	7.01	0.225
T10	120 - 100	0.75	1.73	93.9	662.68	0.4418	0.80	14.36	0.056
T11	100 - 80	0.75	1.73	93.9	662.68	0.4418	0.84	14.36	0.059
T12	80 - 60	0.75	1.71	93.1	801.84	0.4418	0.76	14.53	0.053

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Section No.	Elevation ft	Diagonal Size	L_d ft	Kl/r	ϕP_n K	A in ²	V_u K	ϕV_n K	Stress Ratio
T13	60 - 40	0.75	1.71	93.1	801.84	0.4418	0.83	14.53	0.058
T14	40 - 20	0.875	1.70	79.1	954.26	0.6013	1.25	23.59	0.054
T15	20 - 0	0.875	1.70	79.1	954.26	0.6013	1.55	23.59	0.066

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in ²	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	280 - 270	7/8	5.48	2.66	146.0	0.6013	1.40	27.06	0.052 ¹
T2	270 - 250	7/8	5.54	2.68	146.8	0.6013	1.80	27.06	0.067 ¹
T3	250 - 230	1	5.54	2.65	127.3	0.7854	4.23	35.34	0.120 ¹
T4	230 - 220	L3x3x5/16	11.42	5.02	67.6	1.0713	5.11	46.60	0.110 ¹
T5	220 - 200	L3x3x3/16	11.93	5.42	71.5	0.6593	4.75	28.68	0.165 ¹
T6	200 - 180	L3x3x5/16	13.80	6.37	85.1	1.0713	7.63	46.60	0.164 ¹
T7	180 - 160	L3x3x5/16	15.24	7.09	94.9	1.0127	9.53	44.05	0.216 ¹
T8	160 - 140	L3 1/2x3 1/2x5/16	16.80	7.89	89.9	1.2452	11.44	54.17	0.211 ¹
T9	140 - 120	L3 1/2x3 1/2x5/16	17.62	8.32	94.6	1.2452	12.95	54.17	0.239 ¹
T10	120 - 100	2L3 1/2x3 1/2x5/16x3/8	26.26	12.45	141.6	2.6077	17.82	113.43	0.157 ¹
T11	100 - 80	2L3 1/2x3 1/2x5/16x3/8	27.59	13.14	149.3	2.6077	19.03	113.43	0.168 ¹
T12	80 - 60	2L3 1/2x3 1/2x5/16x3/8	29.01	13.87	157.3	2.6077	18.94	113.43	0.167 ¹
T13	60 - 40	2L3 1/2x3 1/2x5/16x3/8	30.49	14.62	165.7	2.6077	19.44	113.43	0.171 ¹
T14	40 - 20	2L3 1/2x3 1/2x5/16x3/8	32.02	15.40	174.3	2.6077	19.34	113.43	0.170 ¹
T15	20 - 0	2L3 1/2x3 1/2x5/16x3/8	33.61	16.20	183.2	2.6077	20.33	113.43	0.179 ¹

¹ $P_u / \phi P_n$ controls

Top Girt Design Data (Tension)

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	280 - 270	1	5.00	4.85	233.0	0.7854	0.58	35.34	0.016 ¹
T2	270 - 250	1	5.00	4.83	232.0	0.7854	0.66	35.34	0.019 ¹
T3	250 - 230	1 1/4	5.00	4.79	184.0	1.2272	1.23	55.22	0.022 ¹
T6	200 - 180	L3x3x3/16	8.00	6.67	89.5	0.6593	3.69	28.68	0.129 ¹
T7	180 - 160	L4x4x1/4	10.00	8.60	86.4	1.1972	5.78	52.08	0.111 ¹
T8	160 - 140	L3 1/2x3 1/2x5/16	12.00	10.60	122.2	1.2452	4.11	54.17	0.076 ¹

¹ P_u / φP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	280 - 270	1	5.00	4.85	233.0	0.7854	0.59	35.34	0.017 ¹
T2	270 - 250	1	5.00	4.83	232.0	0.7854	0.73	35.34	0.021 ¹
T3	250 - 230	1 1/4	5.00	4.79	184.0	1.2272	1.29	39.76	0.032 ¹

¹ P_u / φP_n controls

Mid Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	280 - 270	1	5.00	4.85	233.0	0.7854	0.01	35.34	0.000 ¹
T2	270 - 250	1	5.00	4.83	232.0	0.7854	0.09	35.34	0.002 ¹
T6	200 - 180	L3x3x3/16	9.00	8.00	102.2	1.0900	5.42	35.32	0.153 ¹
T7	180 - 160	L4x4x1/4	11.00	10.00	96.0	1.9400	5.16	62.86	0.082 ¹

¹ P_u / φP_n controls

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Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T1	280 - 270	Leg	1 3/4	3	-7.33	81.93	9.0	Pass
		Diagonal	7/8	16	-1.40	7.87	17.8	Pass
		Top Girt	1	5	-0.60	6.67	9.0	Pass
		Bottom Girt	1	7	-0.57	6.67	8.6	Pass
		Mid Girt	1	10	0.01	35.34	0.1	Pass
T2	270 - 250	Leg	2	38	-23.33	111.48	20.9	Pass
		Diagonal	7/8	53	-1.80	7.79	23.1	Pass
		Top Girt	1	42	-0.66	6.73	9.7	Pass
		Bottom Girt	1	45	-0.73	6.73	10.9	Pass
		Mid Girt	1	46	-0.07	6.73	1.0	Pass
T3	250 - 230	Leg	2 1/2	99	-61.47	189.74	32.4	Pass
		Diagonal	1	109	-4.29	13.51	31.8	Pass
		Top Girt	1 1/4	102	-1.21	16.71	7.2	Pass
		Bottom Girt	1 1/4	103	-1.17	16.60	7.0	Pass
T4	230 - 220	Leg	Pirod 105245	156	-66.89	214.86	31.1	Pass
		Diagonal	L3x3x5/16	159	-5.89	31.65	18.6	Pass
T5	220 - 200	Leg	Pirod 105218	165	-94.15	300.68	31.3	Pass
		Diagonal	L3x3x3/16	171	-4.93	17.29	28.5	Pass
T6	200 - 180	Leg	Pirod 105218	180	-122.46	300.68	40.7	Pass
		Diagonal	L3x3x5/16	189	-9.03	23.77	38.0	Pass
		Top Girt	L3x3x3/16	181	-2.89	13.65	21.2	Pass
		Mid Girt	L3x3x3/16	184	-4.14	11.67	35.5	Pass
T7	180 - 160	Leg	Pirod 105219	201	-163.93	399.87	41.0	Pass
		Diagonal	L3x3x5/16	210	-10.99	19.26	57.0	Pass
		Top Girt	L4x4x1/4	202	-4.43	25.75	17.2	Pass
		Mid Girt	L4x4x1/4	205	-3.85	22.67	17.0	Pass
T8	160 - 140	Leg	Pirod 105220	222	-216.88	512.38	42.3	Pass
		Diagonal	L3 1/2x3 1/2x5/16	228	-11.40	25.06	45.5	Pass
		Top Girt	L3 1/2x3 1/2x5/16	223	-3.11	13.88	22.4	Pass
T9	140 - 120	Leg	Pirod 105220	240	-271.03	512.38	52.9	Pass
		Diagonal	L3 1/2x3 1/2x5/16	246	-12.63	20.49	61.6	Pass
T10	120 - 100	Leg	Pirod 112743	253	-306.11	613.14	49.9	Pass
		Diagonal	2L3 1/2x3 1/2x5/16x3/8	261	-19.02	52.58	36.2	Pass
T11	100 - 80	Leg	Pirod 112743	262	-361.01	613.14	58.9	Pass
		Diagonal	2L3 1/2x3 1/2x5/16x3/8	270	-19.69	48.27	40.8	Pass
T12	80 - 60	Leg	Pirod 112744	271	-411.88	741.99	55.5	Pass
		Diagonal	2L3 1/2x3 1/2x5/16x3/8	279	-19.56	44.30	44.1	Pass
T13	60 - 40	Leg	Pirod 112744	280	-459.74	741.99	62.0	Pass
		Diagonal	2L3 1/2x3 1/2x5/16x3/8	288	-20.59	40.67	50.6	Pass
T14	40 - 20	Leg	Pirod 112745	289	-511.07	883.14	57.9	Pass
		Diagonal	2L3 1/2x3 1/2x5/16x3/8	297	-19.46	37.36	52.1	Pass
T15	20 - 0	Leg	Pirod 112740	298	-552.20	883.14	62.5	Pass
		Diagonal	2L3 1/2x3 1/2x5/16x3/8	306	-22.33	34.37	65.0	Pass
Summary								
Leg (T15)							62.5	Pass
Diagonal (T15)							65.0	Pass
Top Girt (T8)							22.4	Pass
Bottom Girt (T2)							10.9	Pass
Mid Girt (T6)							35.5	Pass
Bolt Checks							63.0	Pass
RATING =							65.0	Pass

<i>tnxTower</i> <i>Maser Consulting Connecticut</i> <i>331 Newman Springs Road, Suite 203</i> <i>Red Bank, NJ 07701</i> <i>Phone: 732 383-1950</i> <i>FAX:</i>	Job CT5633	Page 53 of 53
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	Client AT&T	Designed by