AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	300 ft Guyed Tower
ATC Asset Name	:	Thomas ARP3 Raw Land FL
ATC Asset Number	:	417361
Engineering Number	:	15248584_C3_01
Proposed Carrier	:	ALLTEL COMMUNICATIONS, LLC
Carrier Site Name	:	Thomas
Carrier Site Number	:	5000025813
Site Location	:	744 NW Spradley Road Lake City, FL 32055-5951 30.3662° N, 82.6294° W
County	:	Columbia
Date	:	September 5, 2025
Max Usage	:	68%
Analysis Result	:	Pass

Created By:

Siddharth Yadav
ETS

Reviewed By:

Raphael Mohamed, P.E.
ETS, PLLC Job#: 25139371.STR.9670

RAPHAEL MOHAMED
LICENSE
No. 82846
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Raphael Mohamed

Digitally signed by Raphael Mohamed
DN: CN=Raphael Mohamed, dnQualifier=A01410C00000188AEAA697700124F74, O=Engineered Tower Solutions, C=US
Date: 2025.09.05 11:27:09-04'00'

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Introduction

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

Supporting Documents

Tower:	Sabre Job #05-12108 Revision A, dated January 12, 2005
Foundation:	Sabre Job #05-12108 Revision A, dated January 12, 2005
Geotechnical:	SDII Project #3008708, dated August 9, 2004

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	118 mph (3-second gust)
Basic Wind Speed w/ Ice:	No Ice Considered
Code(s):	ANSI/TIA-222-I / 2021 IBC / 8th ED (2023) Florida Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	S_{DS} = 0.12, S_{D1} = 0.09
Site Class:	Default

Conclusion

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

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **Engineering@americantower.com** Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Location	Result
Leg	60.3%	Member X	Section 11	Pass
Diagonal	67.6%	Member X	Section 13	Pass
Horizontal	24.7%	Member X	Section 16	Pass
Torque Arm	23.2%	Tension	Elevation 235 ft	Pass
Cable	55.0%	Tension	Elevation 236 ft	Pass
Serviceability Usage	10.0%	Rotation	Elevation 287 ft	Pass
Foundation	49.5%	Shear	Anchor 1	Pass
Foundation	51.0%	Uplift	Anchor 1	Pass
Foundation	53.6%	Axial	Base	Pass
Foundation	44.0%	Shear	Base	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Uplift (k)	Shear (k)
Guyed – Pivot Base	-	127.8	-	1.5
Guyed Anchor - A1	-	-	50.8	55.7

Reactions shown are maximum overall and not limited by Load Case excluding Overstrength Load Cases

Foundation usages were calculated by comparing the maximum reactions from this analysis to the reactions from the original design drawings, factored by 1.35 per ANSI/TIA-222-I, Section 15.6.2

ALLTEL COMMUNICATIONS, LLC Final Loading

Elev (ft)	Qty	Equipment	Lines
295.0	1	Unused Reserve (17666.56 sqin)	(2) 1.43"(36.4mm) Hybrid
	2	Commscope RC2DC--3315--PF--48	
	3	Commscope NNSS-65C-HG-R2B	
	3	Ericsson AIR 3283 B25 B66	
	3	Ericsson AIR 6419 B77D	
	3	Ericsson RRUS 4490	
	3	Light Sector Frame	

Install proposed lines in the place of the existing ALLTEL COMMUNICATIONS, LLC lines.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines
292.9	3	Andrew ETD819HS12UB	-
275.0	3	CCI HBSA-M65R-KU-H6	(3) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6 (2) 0.95" (24.2mm) Cable
	3	Ericsson 4478 Band 14 (15" Height)	
	3	Ericsson RRUS 4415 B30	
	3	Ericsson RRUS 4449 B5, B12	
	3	Ericsson RRUS 8843 B2, B66A	
	3	Sector Frame	
	3	Raycap DC6-48-60-18-8C-EV (Enclosure)	
	6	Commscope NNHH-65B-R4	
265.0	4	Commscope FFVV-65C-R3-V1	(3) 1.99" (50.7mm) Hybrid
	4	Ericsson AIR 6419 B41	
	4	Ericsson Radio 4460 B25+B66	
	4	Ericsson Radio 4480 B71+B85A	
	4	Light Sector Frame	

(If table breaks across pages, please see previous page for data in merged cells)

Standard Conditions

All engineering services performed by ATC Tower Services, LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of ATC Tower Services, LLC

It is the responsibility of the client to ensure that the information provided to ATC Tower Services, LLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and ATC Tower Services, LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

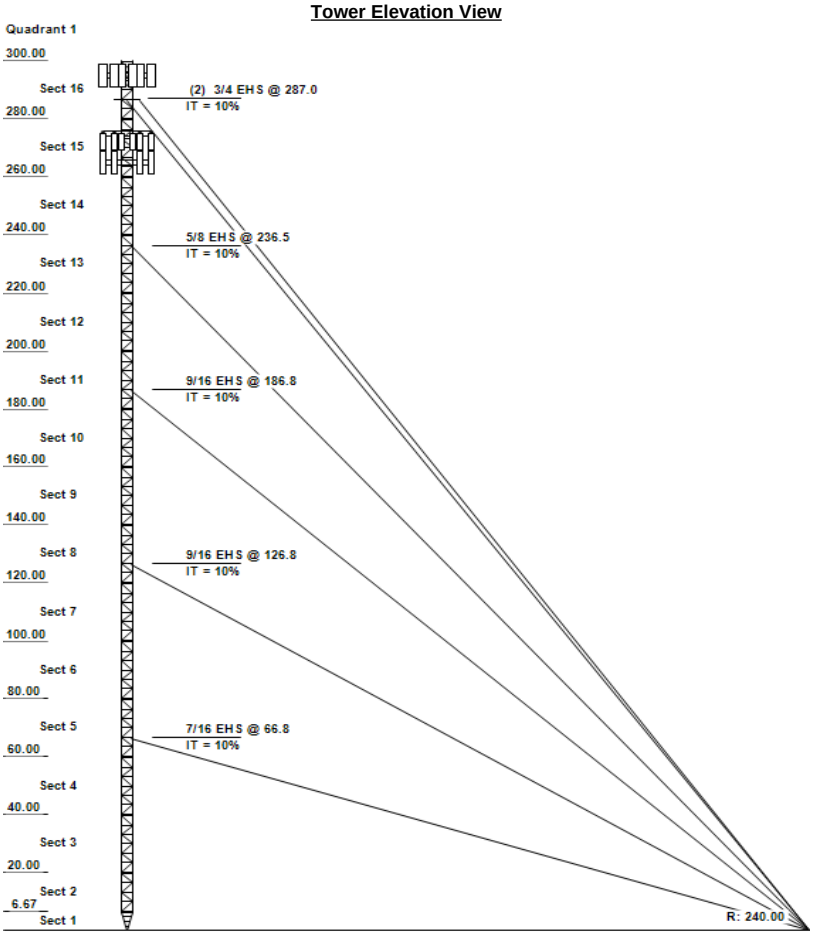
All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services, LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ASSET:	Thomas ARP3 Raw Land FL, 417361	CODE:	ANSI/TIA-222-I
CUSTOMER:	ALLTEL COMMUNICATIONS, LLC	PROJECT:	15248584

ANALYSIS PARAMETERS

Design Wind:	118 mph	**Ice Wind:**	30 mph w/ 0.00" ice	**Service Wind:**	60 mph
Risk Category	II	**Exposure:**	C	**S_{DS}:** 0.120	**S_{D1}:** 0.087
Topo Factor:	Method 1	**Topo Feature:**	**Flat**		
Structure Height:	300 ft	**Base Elevation:**	0 ft	**Shape:**	Triangle
Base Width:	3.00 ft	**Top Width:**	3.00 ft	**Base Type:**	Pivot

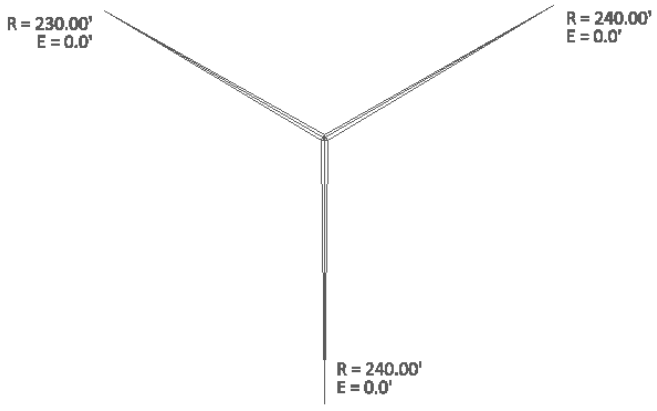
Tower Elevation View



BASE REACTIONS

Axial (k):	127.76
Shear (k):	1.46

Tower Plan View



TOWER SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	SOL 50 ksi 2 1/4" SOLID		PLA 36 ksi 12 X 1/2"
2	SOL 50 ksi 2 1/4" SOLID	SOL 36 ksi 1 1/4" SOLID	SOL 36 ksi 7/8" SOLID
3 - 4	SOL 50 ksi 2 1/4" SOLID	SOL 36 ksi 1" SOLID	SOL 36 ksi 7/8" SOLID
5 - 14	SOL 50 ksi 2" SOLID	SOL 36 ksi 1" SOLID	SOL 36 ksi 7/8" SOLID
15	SOL 50 ksi 2" SOLID	SOL 36 ksi 1 1/4" SOLID	SOL 36 ksi 7/8" SOLID
16	SOL 50 ksi 1 3/4" SOLID	SOL 36 ksi 1 1/4" SOLID	SOL 36 ksi 7/8" SOLID

DISCRETE APPURTENANCE

Elev (ft)	Description
295.0	(3) Ericsson AIR 3283 B25 B66
295.0	(3) Ericsson RRUS 4490
295.0	(3) Ericsson AIR 6419 B77D
295.0	(1) Unused Reserve (17666.56 sqin)
295.0	(2) Commscope RC2DC--3315--PF--48
295.0	(3) Commscope NNSS-65C-HG-R2B
295.0	(3) Generic Flat Light Sector Frame
292.9	(3) Andrew ETD819HS12UB
287.0	(1) Torque Arms
275.0	(3) Ericsson RRUS 4415 B30
275.0	(3) Ericsson RRUS 8843 B2, B66A
275.0	(3) Raycap DC6-48-60-18-8C-EV (Enclos
275.0	(3) CCI HBSA-M65R-KU-H6
275.0	(6) Commscope NNHH-65B-R4
275.0	(3) Ericsson 4478 Band 14 (15" Height)
275.0	(3) Ericsson RRUS 4449 B5, B12
275.0	(3) Generic Round Sector Frame
265.0	(4) Ericsson Radio 4460 B25+B66
265.0	(4) Commscope FFVV-65C-R3-V1
265.0	(4) Ericsson Radio 4480 B71+B85A
265.0	(4) Generic Flat Light Sector Frame
265.0	(4) Ericsson AIR 6419 B41

LINEAR APPURTENANCE

Elev (ft)	Description
295.0	(2) 1.43"(36.4mm) Hybrid
295.0	(1) Waveguide
284.0	(1) Waveguide
275.0	(4) 0.78" (19.7mm) 8 AWG 6
275.0	(3) 0.39" (10mm) Fiber Trunk
275.0	(2) 0.95" (24.2mm) Cable
265.0	(3) 1.99" (50.7mm) Hybrid
265.0	(1) Waveguide

GUY ANCHOR REACTIONS

Radius (ft)	Drop (ft)	Azimuth (°)	Uplift (k)	Shear (k)
230.0	0.00	240	50.80	55.74
240.0	0.00	0	48.48	55.51
240.0	0.00	120	48.48	55.51

ANALYSIS PARAMETERS

Location:	Columbia County, FL	**Height:**	300 ft
Type and Shape:	Guyed, Triangle	**Base Elevation:**	0.00 ft
Manufacturer:	Sabre	**Bottom Face Width:**	3.00 ft
Kd	0.85	**Top Face Width:**	3.00 ft
Ke:	1.00		

ICE & WIND PARAMETERS

Exposure Category:	C	**Design Wind Speed Without Ice:**	118 mph
		Design Wind Speed with Ice:	30 mph
Risk Category:	II	**Operational Windspeed:**	60 mph
Topographic Factor Procedure:	Method 1		
Crest Height(H):	0 ft	**Design Ice Thickness:**	0.00 in
Crest Length(L):	0 ft	**HMSL:**	115 ft
Feature:	Flat	**Distance from Apex (x):**	0
		Upwind/Downwind:	Upwind

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	Default			**Period Based on Rayleigh Method (sec):**	1.01
T_L (sec):	8	**P:**	1.3	**C_s:**	0.030
S_{ds}:	0.120	**S_{d1}:**	0.087	**C_s, Max:**	0.030
				C_s, Min:	0.030

LOAD CASES

1.2D + 1.0W Normal	1.2D + 1.0W Normal - 118 mph Wind with No Ice
1.2D + 1.0W 60°	1.2D + 1.0W 60° - 118 mph Wind with No Ice
1.2D + 1.0W 90°	1.2D + 1.0W 90° - 118 mph Wind with No Ice
1.2D + 1.0W 120°	1.2D + 1.0W 120° - 118 mph Wind with No Ice
1.2D + 1.0W 180°	1.2D + 1.0W 180° - 118 mph Wind with No Ice
1.2D + 1.0W 210°	1.2D + 1.0W 210° - 118 mph Wind with No Ice
1.2D + 1.0W 240°	1.2D + 1.0W 240° - 118 mph Wind with No Ice
1.2D + 1.0W 300°	1.2D + 1.0W 300° - 118 mph Wind with No Ice
1.2D + 1.0W 330°	1.2D + 1.0W 330° - 118 mph Wind with No Ice
1.2D + 1.0Di + 1.0Wi Normal	1.2D + 1.0Di + 1.0Wi Normal - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 60°	1.2D + 1.0Di + 1.0Wi 60° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 90°	1.2D + 1.0Di + 1.0Wi 90° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 120°	1.2D + 1.0Di + 1.0Wi 120° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 180°	1.2D + 1.0Di + 1.0Wi 180° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 210°	1.2D + 1.0Di + 1.0Wi 210° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 240°	1.2D + 1.0Di + 1.0Wi 240° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 300°	1.2D + 1.0Di + 1.0Wi 300° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 330°	1.2D + 1.0Di + 1.0Wi 330° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Ev + 1.0Eh Normal	1.2D + 1.0Ev + 1.0Eh Normal - Seismic
1.2D + 1.0Ev + 1.0Eh 60°	1.2D + 1.0Ev + 1.0Eh 60° - Seismic
1.2D + 1.0Ev + 1.0Eh 90°	1.2D + 1.0Ev + 1.0Eh 90° - Seismic
1.2D + 1.0Ev + 1.0Eh 120°	1.2D + 1.0Ev + 1.0Eh 120° - Seismic
1.2D + 1.0Ev + 1.0Eh 180°	1.2D + 1.0Ev + 1.0Eh 180° - Seismic
1.2D + 1.0Ev + 1.0Eh 210°	1.2D + 1.0Ev + 1.0Eh 210° - Seismic
1.2D + 1.0Ev + 1.0Eh 240°	1.2D + 1.0Ev + 1.0Eh 240° - Seismic
1.2D + 1.0Ev + 1.0Eh 300°	1.2D + 1.0Ev + 1.0Eh 300° - Seismic

LOAD CASES	
1.2D + 1.0Ev + 1.0Eh 330°	1.2D + 1.0Ev + 1.0Eh 330° - Seismic
1.0D + 1.0W Service Normal	1.0D + 1.0W Service Normal - 60 mph Wind with No Ice
1.0D + 1.0W Service 60°	1.0D + 1.0W Service 60° - 60 mph Wind with No Ice
1.0D + 1.0W Service 90°	1.0D + 1.0W Service 90° - 60 mph Wind with No Ice
1.0D + 1.0W Service 120°	1.0D + 1.0W Service 120° - 60 mph Wind with No Ice
1.0D + 1.0W Service 180°	1.0D + 1.0W Service 180° - 60 mph Wind with No Ice
1.0D + 1.0W Service 210°	1.0D + 1.0W Service 210° - 60 mph Wind with No Ice
1.0D + 1.0W Service 240°	1.0D + 1.0W Service 240° - 60 mph Wind with No Ice
1.0D + 1.0W Service 300°	1.0D + 1.0W Service 300° - 60 mph Wind with No Ice
1.0D + 1.0W Service 330°	1.0D + 1.0W Service 330° - 60 mph Wind with No Ice
1.2D + 1.0Ev + 1.5Eh Normal	1.2D + 1.0Ev + 1.5Eh Normal - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 60°	1.2D + 1.0Ev + 1.5Eh 60° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 90°	1.2D + 1.0Ev + 1.5Eh 90° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 120°	1.2D + 1.0Ev + 1.5Eh 120° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 180°	1.2D + 1.0Ev + 1.5Eh 180° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 210°	1.2D + 1.0Ev + 1.5Eh 210° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 240°	1.2D + 1.0Ev + 1.5Eh 240° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 300°	1.2D + 1.0Ev + 1.5Eh 300° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 330°	1.2D + 1.0Ev + 1.5Eh 330° - Seismic Overstrength

TOWER LOADING – DISCRETE APPURTENANCE

Discrete Appurtenance Properties for LC: **1.2D + 1.0W**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
295.0	Ericsson RRUS 4490	3	68	2.7	1.7	15.7	7.0	0.80	0.67	0.0	0.00	47.17	174	246
295.0	Commscope RC2DC--3315--PF--48	2	32	3.8	2.4	15.7	10.3	0.80	0.77	0.0	0.00	47.17	187	77
295.0	Ericsson AIR 6419 B77D	3	63	4.2	2.6	16.1	9.1	0.80	0.67	0.0	0.00	47.17	270	227
295.0	Ericsson AIR 3283 B25 B66	3	108	7.9	3.9	20.0	10.9	0.80	0.67	0.0	0.00	47.17	507	389
295.0	Commscope NNSS-65C-HG-R2B	3	84	17.1	8.0	19.6	7.8	0.80	0.64	0.0	0.00	47.17	1051	302
295.0	Generic Flat Light Sector Fram	3	800	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	47.17	1082	2880
295.0	Unused Reserve (17666.56 sqin)	1	1411	122.7	0.0	0.0	0.0	0.80	0.90	0.0	0.00	47.17	3542	1693
292.9	Andrew ETD819HS12UB	3	19	1.3	0.9	13.8	3.5	0.80	0.50	0.0	0.00	47.10	63	67
287.0	Torque Arms	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	46.90	598	600
275.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	46.50	78	259
275.0	Ericsson 4478 Band 14 (15" Hei	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	46.50	87	216
275.0	Ericsson RRUS 4415 B30	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.00	46.50	87	166
275.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	2.1	196.41	46.57	94	256
275.0	Raycap DC6-48-60-18-8C-EV (Enc	3	16	2.7	2.2	12.4	9.7	0.80	0.67	0.8	136.69	46.52	171	58
275.0	CCI HBSA-M65R-KU-H6	3	45	8.5	5.7	13.7	8.5	0.80	0.69	-0.3	166.58	46.49	555	160
275.0	Commscope NNHH-65B-R4	6	84	12.3	6.0	19.6	7.8	0.80	0.64	-0.4	595.77	46.48	1489	603
275.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	46.50	858	1080
265.0	Ericsson Radio 4460 B25+B66	4	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	46.15	161	523
265.0	Ericsson Radio 4480 B71+B85A	4	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	46.15	179	403
265.0	Ericsson AIR 6419 B41	4	69	5.6	2.8	20.0	6.3	0.80	0.63	0.0	0.00	46.15	443	329
265.0	Generic Flat Light Sector Fram	4	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	46.15	1580	1920
265.0	Commscope FFVV-65C-R3-V1	4	125	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.00	46.15	1670	598
	Totals	**69**	**10,875**	**670.7**									14,925	13,050

Discrete Appurtenance Properties for LC: **1.2D + 1.0Di + 1.0Wi**

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
295.0	Ericsson RRUS 4490	3	68	2.7	1.7	15.7	7.0	0.80	0.67	0.0	0.00	3.05	11	246
295.0	Commscope RC2DC--3315--PF--48	2	32	3.8	2.4	15.7	10.3	0.80	0.77	0.0	0.00	3.05	12	77
295.0	Ericsson AIR 6419 B77D	3	63	4.2	2.6	16.1	9.1	0.80	0.67	0.0	0.00	3.05	17	227
295.0	Ericsson AIR 3283 B25 B66	3	108	7.9	3.9	20.0	10.9	0.80	0.67	0.0	0.00	3.05	33	389
295.0	Commscope NNSS-65C-HG-R2B	3	84	17.1	8.0	19.6	7.8	0.80	0.64	0.0	0.00	3.05	68	302
295.0	Generic Flat Light Sector Fram	3	800	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	3.05	70	2880
295.0	Unused Reserve (17666.56 sqin)	1	1411	122.7	0.0	0.0	0.0	0.80	0.90	0.0	0.00	3.05	229	1693
292.9	Andrew ETD819HS12UB	3	18	1.3	0.9	13.8	3.5	0.80	0.50	0.0	0.00	3.04	4	67
287.0	Torque Arms	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	3.03	39	600
275.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	3.01	5	259
275.0	Ericsson 4478 Band 14 (15" Hei	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	3.01	6	216
275.0	Ericsson RRUS 4415 B30	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.00	3.01	6	166
275.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	2.1	12.70	3.01	6	256
275.0	Raycap DC6-48-60-18-8C-EV (Enc	3	16	2.7	2.2	12.4	9.7	0.80	0.67	0.8	8.84	3.01	11	58
275.0	CCI HBSA-M65R-KU-H6	3	44	8.5	5.7	13.7	8.5	0.80	0.69	-0.3	10.77	3.00	36	160
275.0	Commscope NNHH-65B-R4	6	84	12.3	6.0	19.6	7.8	0.80	0.64	-0.4	38.51	3.00	96	603
275.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	3.01	55	1080
265.0	Ericsson Radio 4460 B25+B66	4	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	2.98	10	523
265.0	Ericsson Radio 4480 B71+B85A	4	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	2.98	12	403
265.0	Ericsson AIR 6419 B41	4	68	5.6	2.8	20.0	6.3	0.80	0.63	0.0	0.00	2.98	29	329
265.0	Generic Flat Light Sector Fram	4	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	2.98	102	1920
265.0	Commscope FFVV-65C-R3-V1	4	125	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.00	2.98	108	598
	Totals	**69**	**10,875**	**670.7**									965	13,050

Discrete Appurtenance Properties for LC: **1.0D + 1.0W Service**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
295.0	Ericsson RRUS 4490	3	68	2.7	1.7	15.7	7.0	0.80	0.67	0.0	0.00	12.20	45	205
295.0	Commscope RC2DC--3315--PF--48	2	32	3.8	2.4	15.7	10.3	0.80	0.77	0.0	0.00	12.20	48	64
295.0	Ericsson AIR 6419 B77D	3	63	4.2	2.6	16.1	9.1	0.80	0.67	0.0	0.00	12.20	70	189
295.0	Ericsson AIR 3283 B25 B66	3	108	7.9	3.9	20.0	10.9	0.80	0.67	0.0	0.00	12.20	131	324
295.0	Commscope NNSS-65C-HG-R2B	3	84	17.1	8.0	19.6	7.8	0.80	0.64	0.0	0.00	12.20	272	251
295.0	Generic Flat Light Sector Fram	3	800	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	12.20	280	2400
295.0	Unused Reserve (17666.56 sqin)	1	1411	122.7	0.0	0.0	0.0	0.80	0.90	0.0	0.00	12.20	916	1411
292.9	Andrew ETD819HS12UB	3	19	1.3	0.9	13.8	3.5	0.80	0.50	0.0	0.00	12.18	16	56
287.0	Torque Arms	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	12.13	155	500
275.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	12.02	20	216
275.0	Ericsson 4478 Band 14 (15" Hei	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	12.02	23	180
275.0	Ericsson RRUS 4415 B30	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.00	12.02	23	138
275.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	2.1	50.78	12.04	24	213
275.0	Raycap DC6-48-60-18-8C-EV (Enc	3	16	2.7	2.2	12.4	9.7	0.80	0.67	0.8	35.34	12.03	44	48
275.0	CCI HBSA-M65R-KU-H6	3	45	8.5	5.7	13.7	8.5	0.80	0.69	-0.3	43.07	12.02	144	134
275.0	Commscope NNHH-65B-R4	6	84	12.3	6.0	19.6	7.8	0.80	0.64	-0.4	154.03	12.02	385	503
275.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	12.02	222	900
265.0	Ericsson Radio 4460 B25+B66	4	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	11.93	42	436
265.0	Ericsson Radio 4480 B71+B85A	4	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	11.93	46	336

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
265.0	Ericsson AIR 6419 B41	4	69	5.6	2.8	20.0	6.3	0.80	0.63	0.0	0.00	11.93	114	274
265.0	Generic Flat Light Sector Fram	4	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	11.93	408	1600
265.0	Commscope FFVV-65C-R3-V1	4	125	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.00	11.93	432	498
	Totals	**69**	**10,875**	**670.7**									3,859	10,875

TOWER LOADING – LINEAR APPURTENANCE

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	% In Wind	Spread On Faces	Bundling	Cluster Dia (in)	Out of Zone	Spacing (in)	Orient. Factor	K_a Override
0.0	295.0	1.43"(36.4mm) Hybrid	2	1.43	0.79	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	295.0	Waveguide	1	2.00	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	284.0	Waveguide	1	2.00	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	275.0	0.39" (10mm) Fiber Trunk	3	0.39	0.06	100	2	Individual	0.00	N	1.00	1.00	0.01
0.0	275.0	0.95" (24.2mm) Cable	2	0.95	0.73	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	275.0	0.78" (19.7mm) 8 AWG 6	4	0.78	0.59	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	265.0	1.99" (50.7mm) Hybrid	3	1.99	1.90	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	265.0	Waveguide	1	2.00	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.0W Normal — Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	47.00	0.000	9.964	0.00	0.158	2.74	1.00	1.00	0.0	5.76	15.78	0.00	1308	0	631	255	885
15	270	46.32	0.000	10.773	0.00	0.170	2.70	1.00	1.00	0.0	6.25	16.86	0.00	1791	0	664	739	1403
14	250	45.60	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	626	1110	1737
13	230	44.83	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	651	1092	1743
12	210	44.01	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	604	1071	1676
11	190	43.12	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	627	1050	1676
10	170	42.15	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	579	1026	1605
9	150	41.09	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	564	1000	1565
8	130	39.90	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	580	972	1551
7	110	38.57	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	530	939	1469
6	90	37.02	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	508	901	1410
5	70	35.17	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	511	856	1367
4	50	32.83	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	481	799	1280
3	30	29.58	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	433	720	1154
2	13	25.65	0.000	7.776	0.00	0.183	2.65	1.00	1.00	0.0	4.53	12.02	0.00	1492	0	262	416	678
1	3	25.65	3.282	2.584	0.00	0.521	1.87	1.00	1.00	0.0	5.08	9.52	0.00	1108	0	208	166	374
													Totals	**28,720**	**0**			**21,573**

1.2D + 1.0W 60° — Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	47.00	0.000	9.964	0.00	0.158	2.74	0.80	1.00	0.0	5.76	15.78	0.00	1308	0	631	255	885
15	270	46.32	0.000	10.773	0.00	0.170	2.70	0.80	1.00	0.0	6.25	16.86	0.00	1791	0	664	739	1403
14	250	45.60	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	626	1110	1737
13	230	44.83	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	641	1092	1733
12	210	44.01	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	604	1071	1676
11	190	43.12	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	617	1050	1666
10	170	42.15	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	579	1026	1605
9	150	41.09	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	564	1000	1565
8	130	39.90	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	571	972	1542
7	110	38.57	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	530	939	1469
6	90	37.02	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	508	901	1410
5	70	35.17	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	503	856	1359
4	50	32.83	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	481	799	1280
3	30	29.58	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	433	720	1154
2	13	25.65	0.000	7.776	0.00	0.183	2.65	0.80	1.00	0.0	4.53	12.02	0.00	1492	0	262	416	678
1	3	25.65	3.282	2.584	0.00	0.521	1.87	0.80	1.00	0.0	4.43	8.29	0.00	1108	0	181	166	347
													Totals	**28,720**	**0**			**21,508**

1.2D + 1.0W 90° — Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	47.00	0.000	9.964	0.00	0.158	2.74	0.85	1.00	0.0	5.76	15.78	0.00	1308	0	631	255	885
15	270	46.32	0.000	10.773	0.00	0.170	2.70	0.85	1.00	0.0	6.25	16.86	0.00	1791	0	664	739	1403
14	250	45.60	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	626	1110	1737
13	230	44.83	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	644	1092	1735
12	210	44.01	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	604	1071	1676
11	190	43.12	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	619	1050	1669
10	170	42.15	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	579	1026	1605
9	150	41.09	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	564	1000	1565
8	130	39.90	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	573	972	1545
7	110	38.57	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	530	939	1469
6	90	37.02	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	508	901	1410
5	70	35.17	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	505	856	1361
4	50	32.83	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	481	799	1280
3	30	29.58	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	433	720	1154
2	13	25.65	0.000	7.776	0.00	0.183	2.65	0.85	1.00	0.0	4.53	12.02	0.00	1492	0	262	416	678
1	3	25.65	3.282	2.584	0.00	0.521	1.87	0.85	1.00	0.0	4.59	8.60	0.00	1108	0	188	166	354
													Totals	**28,720**	**0**			**21,524**

1.2D + 1.0W 120° — Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	47.00	0.000	9.964	0.00	0.158	2.74	1.00	1.00	0.0	5.76	15.78	0.00	1308	0	631	255	885
15	270	46.32	0.000	10.773	0.00	0.170	2.70	1.00	1.00	0.0	6.25	16.86	0.00	1791	0	664	739	1403
14	250	45.60	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	626	1110	1737
13	230	44.83	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	651	1092	1743
12	210	44.01	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	604	1071	1676
11	190	43.12	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	627	1050	1676
10	170	42.15	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	579	1026	1605
9	150	41.09	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	564	1000	1565

SECTION FORCES

1.2D + 1.0W 120° Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	39.90	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	580	972	1551
7	110	38.57	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	530	939	1469
6	90	37.02	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	508	901	1410
5	70	35.17	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	511	856	1367
4	50	32.83	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	481	799	1280
3	30	29.58	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	433	720	1154
2	13	25.65	0.000	7.776	0.00	0.183	2.65	1.00	1.00	0.0	4.53	12.02	0.00	1492	0	262	416	678
1	3	25.65	3.282	2.584	0.00	0.521	1.87	1.00	1.00	0.0	5.08	9.52	0.00	1108	0	208	166	374
													Totals	**28,720**	**0**			**21,573**

1.2D + 1.0W 180° Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	47.00	0.000	9.964	0.00	0.158	2.74	0.80	1.00	0.0	5.76	15.78	0.00	1308	0	631	255	885
15	270	46.32	0.000	10.773	0.00	0.170	2.70	0.80	1.00	0.0	6.25	16.86	0.00	1791	0	664	739	1403
14	250	45.60	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	626	1110	1737
13	230	44.83	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	641	1092	1733
12	210	44.01	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	604	1071	1676
11	190	43.12	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	617	1050	1666
10	170	42.15	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	579	1026	1605
9	150	41.09	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	564	1000	1565
8	130	39.90	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	571	972	1542
7	110	38.57	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	530	939	1469
6	90	37.02	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	508	901	1410
5	70	35.17	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	503	856	1359
4	50	32.83	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	481	799	1280
3	30	29.58	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	433	720	1154
2	13	25.65	0.000	7.776	0.00	0.183	2.65	0.80	1.00	0.0	4.53	12.02	0.00	1492	0	262	416	678
1	3	25.65	3.282	2.584	0.00	0.521	1.87	0.80	1.00	0.0	4.43	8.29	0.00	1108	0	181	166	347
													Totals	**28,720**	**0**			**21,508**

1.2D + 1.0W 210° Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	47.00	0.000	9.964	0.00	0.158	2.74	0.85	1.00	0.0	5.76	15.78	0.00	1308	0	631	255	885
15	270	46.32	0.000	10.773	0.00	0.170	2.70	0.85	1.00	0.0	6.25	16.86	0.00	1791	0	664	739	1403
14	250	45.60	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	626	1110	1737
13	230	44.83	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	644	1092	1735
12	210	44.01	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	604	1071	1676
11	190	43.12	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	619	1050	1669
10	170	42.15	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	579	1026	1605
9	150	41.09	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	564	1000	1565
8	130	39.90	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	573	972	1545
7	110	38.57	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	530	939	1469
6	90	37.02	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	508	901	1410
5	70	35.17	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	505	856	1361
4	50	32.83	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	481	799	1280
3	30	29.58	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	433	720	1154
2	13	25.65	0.000	7.776	0.00	0.183	2.65	0.85	1.00	0.0	4.53	12.02	0.00	1492	0	262	416	678
1	3	25.65	3.282	2.584	0.00	0.521	1.87	0.85	1.00	0.0	4.59	8.60	0.00	1108	0	188	166	354
													Totals	**28,720**	**0**			**21,524**

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	47.00	0.000	9.964	0.00	0.158	2.74	1.00	1.00	0.0	5.76	15.78	0.00	1308	0	631	255	885
15	270	46.32	0.000	10.773	0.00	0.170	2.70	1.00	1.00	0.0	6.25	16.86	0.00	1791	0	664	739	1403
14	250	45.60	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	626	1110	1737
13	230	44.83	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	651	1092	1743
12	210	44.01	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	604	1071	1676
11	190	43.12	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	627	1050	1676
10	170	42.15	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	579	1026	1605
9	150	41.09	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	564	1000	1565
8	130	39.90	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	580	972	1551
7	110	38.57	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	530	939	1469
6	90	37.02	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	508	901	1410
5	70	35.17	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	511	856	1367
4	50	32.83	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	481	799	1280
3	30	29.58	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	433	720	1154
2	13	25.65	0.000	7.776	0.00	0.183	2.65	1.00	1.00	0.0	4.53	12.02	0.00	1492	0	262	416	678
1	3	25.65	3.282	2.584	0.00	0.521	1.87	1.00	1.00	0.0	5.08	9.52	0.00	1108	0	208	166	374

SECTION FORCES

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
													Totals	**28,720**	**0**			**21,573**

1.2D + 1.0W 300° Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	47.00	0.000	9.964	0.00	0.158	2.74	0.80	1.00	0.0	5.76	15.78	0.00	1308	0	631	255	885
15	270	46.32	0.000	10.773	0.00	0.170	2.70	0.80	1.00	0.0	6.25	16.86	0.00	1791	0	664	739	1403
14	250	45.60	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	626	1110	1737
13	230	44.83	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	641	1092	1733
12	210	44.01	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	604	1071	1676
11	190	43.12	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	617	1050	1666
10	170	42.15	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	579	1026	1605
9	150	41.09	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	564	1000	1565
8	130	39.90	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	571	972	1542
7	110	38.57	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	530	939	1469
6	90	37.02	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	508	901	1410
5	70	35.17	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	503	856	1359
4	50	32.83	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	481	799	1280
3	30	29.58	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	433	720	1154
2	13	25.65	0.000	7.776	0.00	0.183	2.65	0.80	1.00	0.0	4.53	12.02	0.00	1492	0	262	416	678
1	3	25.65	3.282	2.584	0.00	0.521	1.87	0.80	1.00	0.0	4.43	8.29	0.00	1108	0	181	166	347
													Totals	**28,720**	**0**			**21,508**

1.2D + 1.0W 330° Gust Response Factor (Gh): 0.85
118 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	47.00	0.000	9.964	0.00	0.158	2.74	0.85	1.00	0.0	5.76	15.78	0.00	1308	0	631	255	885
15	270	46.32	0.000	10.773	0.00	0.170	2.70	0.85	1.00	0.0	6.25	16.86	0.00	1791	0	664	739	1403
14	250	45.60	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	626	1110	1737
13	230	44.83	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	644	1092	1735
12	210	44.01	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	604	1071	1676
11	190	43.12	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	619	1050	1669
10	170	42.15	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	579	1026	1605
9	150	41.09	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	564	1000	1565
8	130	39.90	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	573	972	1545
7	110	38.57	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	530	939	1469
6	90	37.02	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	508	901	1410
5	70	35.17	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	505	856	1361
4	50	32.83	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	481	799	1280
3	30	29.58	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	433	720	1154
2	13	25.65	0.000	7.776	0.00	0.183	2.65	0.85	1.00	0.0	4.53	12.02	0.00	1492	0	262	416	678
1	3	25.65	3.282	2.584	0.00	0.521	1.87	0.85	1.00	0.0	4.59	8.60	0.00	1108	0	188	166	354
													Totals	**28,720**	**0**			**21,524**

1.2D + 1.0Di + 1.0Wi Normal Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	3.04	0.000	9.964	0.00	0.158	2.74	1.00	1.00	0.0	5.76	15.78	0.00	1308	0	41	19	60
15	270	2.99	0.000	10.773	0.00	0.170	2.70	1.00	1.00	0.0	6.25	16.86	0.00	1791	0	43	57	100
14	250	2.95	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	40	88	129
13	230	2.90	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	42	86	129
12	210	2.84	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	39	85	124
11	190	2.79	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	40	83	124
10	170	2.72	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	37	82	119
9	150	2.66	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	36	80	116
8	130	2.58	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	37	77	114
7	110	2.49	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	34	75	109
6	90	2.39	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	33	72	105
5	70	2.27	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	33	68	101
4	50	2.12	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	31	63	94
3	30	1.91	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	28	57	85
2	13	1.66	0.000	7.776	0.00	0.183	2.65	1.00	1.00	0.0	4.53	12.02	0.00	1492	0	17	33	49
1	3	1.66	3.282	2.584	0.00	0.521	1.87	1.00	1.00	0.0	5.08	9.52	0.00	1108	0	13	11	24
													Totals	**28,720**	**0**			**1,582**

1.2D + 1.0Di + 1.0Wi 60° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	3.04	0.000	9.964	0.00	0.158	2.74	0.80	1.00	0.0	5.76	15.78	0.00	1308	0	41	19	60

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 60° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
15	270	2.99	0.000	10.773	0.00	0.170	2.70	0.80	1.00	0.0	6.25	16.86	0.00	1791	0	43	57	100
14	250	2.95	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	40	88	129
13	230	2.90	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	41	86	128
12	210	2.84	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	39	85	124
11	190	2.79	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	40	83	123
10	170	2.72	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	37	82	119
9	150	2.66	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	36	80	116
8	130	2.58	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	37	77	114
7	110	2.49	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	34	75	109
6	90	2.39	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	33	72	105
5	70	2.27	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	33	68	100
4	50	2.12	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	31	63	94
3	30	1.91	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	28	57	85
2	13	1.66	0.000	7.776	0.00	0.183	2.65	0.80	1.00	0.0	4.53	12.02	0.00	1492	0	17	33	49
1	3	1.66	3.282	2.584	0.00	0.521	1.87	0.80	1.00	0.0	4.43	8.29	0.00	1108	0	12	11	22
													Totals	**28,720**	**0**			**1,578**

1.2D + 1.0Di + 1.0Wi 90° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	3.04	0.000	9.964	0.00	0.158	2.74	0.85	1.00	0.0	5.76	15.78	0.00	1308	0	41	19	60
15	270	2.99	0.000	10.773	0.00	0.170	2.70	0.85	1.00	0.0	6.25	16.86	0.00	1791	0	43	57	100
14	250	2.95	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	40	88	129
13	230	2.90	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	42	86	128
12	210	2.84	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	39	85	124
11	190	2.79	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	40	83	123
10	170	2.72	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	37	82	119
9	150	2.66	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	36	80	116
8	130	2.58	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	37	77	114
7	110	2.49	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	34	75	109
6	90	2.39	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	33	72	105
5	70	2.27	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	33	68	100
4	50	2.12	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	31	63	94
3	30	1.91	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	28	57	85
2	13	1.66	0.000	7.776	0.00	0.183	2.65	0.85	1.00	0.0	4.53	12.02	0.00	1492	0	17	33	49
1	3	1.66	3.282	2.584	0.00	0.521	1.87	0.85	1.00	0.0	4.59	8.60	0.00	1108	0	12	11	23
													Totals	**28,720**	**0**			**1,579**

1.2D + 1.0Di + 1.0Wi 120° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	3.04	0.000	9.964	0.00	0.158	2.74	1.00	1.00	0.0	5.76	15.78	0.00	1308	0	41	19	60
15	270	2.99	0.000	10.773	0.00	0.170	2.70	1.00	1.00	0.0	6.25	16.86	0.00	1791	0	43	57	100
14	250	2.95	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	40	88	129
13	230	2.90	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	42	86	129
12	210	2.84	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	39	85	124
11	190	2.79	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	40	83	124
10	170	2.72	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	37	82	119
9	150	2.66	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	36	80	116
8	130	2.58	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	37	77	114
7	110	2.49	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	34	75	109
6	90	2.39	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	33	72	105
5	70	2.27	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	33	68	101
4	50	2.12	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	31	63	94
3	30	1.91	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	28	57	85
2	13	1.66	0.000	7.776	0.00	0.183	2.65	1.00	1.00	0.0	4.53	12.02	0.00	1492	0	17	33	49
1	3	1.66	3.282	2.584	0.00	0.521	1.87	1.00	1.00	0.0	5.08	9.52	0.00	1108	0	13	11	24
													Totals	**28,720**	**0**			**1,582**

1.2D + 1.0Di + 1.0Wi 180° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	3.04	0.000	9.964	0.00	0.158	2.74	0.80	1.00	0.0	5.76	15.78	0.00	1308	0	41	19	60
15	270	2.99	0.000	10.773	0.00	0.170	2.70	0.80	1.00	0.0	6.25	16.86	0.00	1791	0	43	57	100
14	250	2.95	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	40	88	129
13	230	2.90	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	41	86	128
12	210	2.84	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	39	85	124
11	190	2.79	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	40	83	123
10	170	2.72	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	37	82	119
9	150	2.66	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	36	80	116
8	130	2.58	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	37	77	114

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 180° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
7	110	2.49	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	34	75	109
6	90	2.39	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	33	72	105
5	70	2.27	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	33	68	100
4	50	2.12	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	31	63	94
3	30	1.91	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	28	57	85
2	13	1.66	0.000	7.776	0.00	0.183	2.65	0.80	1.00	0.0	4.53	12.02	0.00	1492	0	17	33	49
1	3	1.66	3.282	2.584	0.00	0.521	1.87	0.80	1.00	0.0	4.43	8.29	0.00	1108	0	12	11	22
													Totals	**28,720**	**0**			**1,578**

1.2D + 1.0Di + 1.0Wi 210° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	3.04	0.000	9.964	0.00	0.158	2.74	0.85	1.00	0.0	5.76	15.78	0.00	1308	0	41	19	60
15	270	2.99	0.000	10.773	0.00	0.170	2.70	0.85	1.00	0.0	6.25	16.86	0.00	1791	0	43	57	100
14	250	2.95	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	40	88	129
13	230	2.90	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	42	86	128
12	210	2.84	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	39	85	124
11	190	2.79	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	40	83	123
10	170	2.72	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	37	82	119
9	150	2.66	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	36	80	116
8	130	2.58	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	37	77	114
7	110	2.49	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	34	75	109
6	90	2.39	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	33	72	105
5	70	2.27	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	33	68	100
4	50	2.12	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	31	63	94
3	30	1.91	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	28	57	85
2	13	1.66	0.000	7.776	0.00	0.183	2.65	0.85	1.00	0.0	4.53	12.02	0.00	1492	0	17	33	49
1	3	1.66	3.282	2.584	0.00	0.521	1.87	0.85	1.00	0.0	4.59	8.60	0.00	1108	0	12	11	23
													Totals	**28,720**	**0**			**1,579**

1.2D + 1.0Di + 1.0Wi 240° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	3.04	0.000	9.964	0.00	0.158	2.74	1.00	1.00	0.0	5.76	15.78	0.00	1308	0	41	19	60
15	270	2.99	0.000	10.773	0.00	0.170	2.70	1.00	1.00	0.0	6.25	16.86	0.00	1791	0	43	57	100
14	250	2.95	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	40	88	129
13	230	2.90	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	42	86	129
12	210	2.84	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	39	85	124
11	190	2.79	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	40	83	124
10	170	2.72	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	37	82	119
9	150	2.66	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	36	80	116
8	130	2.58	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	37	77	114
7	110	2.49	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	34	75	109
6	90	2.39	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1882	0	33	72	105
5	70	2.27	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1888	0	33	68	101
4	50	2.12	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	31	63	94
3	30	1.91	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	2087	0	28	57	85
2	13	1.66	0.000	7.776	0.00	0.183	2.65	1.00	1.00	0.0	4.53	12.02	0.00	1492	0	17	33	49
1	3	1.66	3.282	2.584	0.00	0.521	1.87	1.00	1.00	0.0	5.08	9.52	0.00	1108	0	13	11	24
													Totals	**28,720**	**0**			**1,582**

1.2D + 1.0Di + 1.0Wi 300° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	3.04	0.000	9.964	0.00	0.158	2.74	0.80	1.00	0.0	5.76	15.78	0.00	1308	0	41	19	60
15	270	2.99	0.000	10.773	0.00	0.170	2.70	0.80	1.00	0.0	6.25	16.86	0.00	1791	0	43	57	100
14	250	2.95	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	40	88	129
13	230	2.90	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	41	86	128
12	210	2.84	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	39	85	124
11	190	2.79	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	40	83	123
10	170	2.72	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	37	82	119
9	150	2.66	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	36	80	116
8	130	2.58	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	37	77	114
7	110	2.49	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	34	75	109
6	90	2.39	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1882	0	33	72	105
5	70	2.27	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1888	0	33	68	100
4	50	2.12	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	31	63	94
3	30	1.91	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	2087	0	28	57	85
2	13	1.66	0.000	7.776	0.00	0.183	2.65	0.80	1.00	0.0	4.53	12.02	0.00	1492	0	17	33	49
1	3	1.66	3.282	2.584	0.00	0.521	1.87	0.80	1.00	0.0	4.43	8.29	0.00	1108	0	12	11	22
													Totals	**28,720**	**0**			**1,578**

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 330° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	3.04	0.000	9.964	0.00	0.158	2.74	0.85	1.00	0.0	5.76	15.78	0.00	1308	0	41	19	60
15	270	2.99	0.000	10.773	0.00	0.170	2.70	0.85	1.00	0.0	6.25	16.86	0.00	1791	0	43	57	100
14	250	2.95	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	40	88	129
13	230	2.90	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	42	86	128
12	210	2.84	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	39	85	124
11	190	2.79	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	40	83	123
10	170	2.72	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	37	82	119
9	150	2.66	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	36	80	116
8	130	2.58	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	37	77	114
7	110	2.49	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	34	75	109
6	90	2.39	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1882	0	33	72	105
5	70	2.27	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1888	0	33	68	100
4	50	2.12	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	31	63	94
3	30	1.91	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	2087	0	28	57	85
2	13	1.66	0.000	7.776	0.00	0.183	2.65	0.85	1.00	0.0	4.53	12.02	0.00	1492	0	17	33	49
1	3	1.66	3.282	2.584	0.00	0.521	1.87	0.85	1.00	0.0	4.59	8.60	0.00	1108	0	12	11	23
													Totals	**28,720**	**0**			**1,579**

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.15	0.000	9.964	0.00	0.158	2.74	1.00	1.00	0.0	5.76	15.78	0.00	1090	0	163	66	229
15	270	11.98	0.000	10.773	0.00	0.170	2.70	1.00	1.00	0.0	6.25	16.86	0.00	1493	0	172	191	363
14	250	11.79	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	162	287	449
13	230	11.59	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	168	282	451
12	210	11.38	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	156	277	433
11	190	11.15	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	162	271	433
10	170	10.90	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	150	265	415
9	150	10.62	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	146	259	405
8	130	10.32	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	150	251	401
7	110	9.97	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	137	243	380
6	90	9.57	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	131	233	364
5	70	9.09	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	132	221	354
4	50	8.49	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	1739	0	124	207	331
3	30	7.65	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	1739	0	112	186	298
2	13	6.63	0.000	7.776	0.00	0.183	2.65	1.00	1.00	0.0	4.53	12.02	0.00	1244	0	68	108	175
1	3	6.63	3.282	2.584	0.00	0.521	1.87	1.00	1.00	0.0	5.08	9.52	0.00	923	0	54	43	97
													Totals	**23,933**	**0**			**5,578**

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.15	0.000	9.964	0.00	0.158	2.74	0.80	1.00	0.0	5.76	15.78	0.00	1090	0	163	66	229
15	270	11.98	0.000	10.773	0.00	0.170	2.70	0.80	1.00	0.0	6.25	16.86	0.00	1493	0	172	191	363
14	250	11.79	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	162	287	449
13	230	11.59	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	166	282	448
12	210	11.38	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	156	277	433
11	190	11.15	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	159	271	431
10	170	10.90	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	150	265	415
9	150	10.62	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	146	259	405
8	130	10.32	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	148	251	399
7	110	9.97	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	137	243	380
6	90	9.57	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	131	233	364
5	70	9.09	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	130	221	351
4	50	8.49	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	1739	0	124	207	331
3	30	7.65	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	1739	0	112	186	298
2	13	6.63	0.000	7.776	0.00	0.183	2.65	0.80	1.00	0.0	4.53	12.02	0.00	1244	0	68	108	175
1	3	6.63	3.282	2.584	0.00	0.521	1.87	0.80	1.00	0.0	4.43	8.29	0.00	923	0	47	43	90
													Totals	**23,933**	**0**			**5,561**

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.15	0.000	9.964	0.00	0.158	2.74	0.85	1.00	0.0	5.76	15.78	0.00	1090	0	163	66	229
15	270	11.98	0.000	10.773	0.00	0.170	2.70	0.85	1.00	0.0	6.25	16.86	0.00	1493	0	172	191	363
14	250	11.79	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	162	287	449
13	230	11.59	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	166	282	449
12	210	11.38	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	156	277	433
11	190	11.15	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	160	271	431
10	170	10.90	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	150	265	415

SECTION FORCES

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
9	150	10.62	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	146	259	405
8	130	10.32	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	148	251	399
7	110	9.97	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	137	243	380
6	90	9.57	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	131	233	364
5	70	9.09	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	131	221	352
4	50	8.49	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	1739	0	124	207	331
3	30	7.65	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	1739	0	112	186	298
2	13	6.63	0.000	7.776	0.00	0.183	2.65	0.85	1.00	0.0	4.53	12.02	0.00	1244	0	68	108	175
1	3	6.63	3.282	2.584	0.00	0.521	1.87	0.85	1.00	0.0	4.59	8.60	0.00	923	0	48	43	91
													Totals	**23,933**	**0**			**5,565**

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.15	0.000	9.964	0.00	0.158	2.74	1.00	1.00	0.0	5.76	15.78	0.00	1090	0	163	66	229
15	270	11.98	0.000	10.773	0.00	0.170	2.70	1.00	1.00	0.0	6.25	16.86	0.00	1493	0	172	191	363
14	250	11.79	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	162	287	449
13	230	11.59	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	168	282	451
12	210	11.38	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	156	277	433
11	190	11.15	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	162	271	433
10	170	10.90	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	150	265	415
9	150	10.62	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	146	259	405
8	130	10.32	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	150	251	401
7	110	9.97	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	137	243	380
6	90	9.57	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	131	233	364
5	70	9.09	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	132	221	354
4	50	8.49	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	1739	0	124	207	331
3	30	7.65	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	1739	0	112	186	298
2	13	6.63	0.000	7.776	0.00	0.183	2.65	1.00	1.00	0.0	4.53	12.02	0.00	1244	0	68	108	175
1	3	6.63	3.282	2.584	0.00	0.521	1.87	1.00	1.00	0.0	5.08	9.52	0.00	923	0	54	43	97
													Totals	**23,933**	**0**			**5,578**

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.15	0.000	9.964	0.00	0.158	2.74	0.80	1.00	0.0	5.76	15.78	0.00	1090	0	163	66	229
15	270	11.98	0.000	10.773	0.00	0.170	2.70	0.80	1.00	0.0	6.25	16.86	0.00	1493	0	172	191	363
14	250	11.79	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	162	287	449
13	230	11.59	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	166	282	448
12	210	11.38	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	156	277	433
11	190	11.15	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	159	271	431
10	170	10.90	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	150	265	415
9	150	10.62	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	146	259	405
8	130	10.32	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	148	251	399
7	110	9.97	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	137	243	380
6	90	9.57	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	131	233	364
5	70	9.09	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	130	221	351
4	50	8.49	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	1739	0	124	207	331
3	30	7.65	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	1739	0	112	186	298
2	13	6.63	0.000	7.776	0.00	0.183	2.65	0.80	1.00	0.0	4.53	12.02	0.00	1244	0	68	108	175
1	3	6.63	3.282	2.584	0.00	0.521	1.87	0.80	1.00	0.0	4.43	8.29	0.00	923	0	47	43	90
													Totals	**23,933**	**0**			**5,561**

1.0D + 1.0W Service 210° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.15	0.000	9.964	0.00	0.158	2.74	0.85	1.00	0.0	5.76	15.78	0.00	1090	0	163	66	229
15	270	11.98	0.000	10.773	0.00	0.170	2.70	0.85	1.00	0.0	6.25	16.86	0.00	1493	0	172	191	363
14	250	11.79	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	162	287	449
13	230	11.59	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	166	282	449
12	210	11.38	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	156	277	433
11	190	11.15	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	160	271	431
10	170	10.90	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	150	265	415
9	150	10.62	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	146	259	405
8	130	10.32	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	148	251	399
7	110	9.97	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	137	243	380
6	90	9.57	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	131	233	364
5	70	9.09	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	131	221	352
4	50	8.49	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	1739	0	124	207	331
3	30	7.65	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	1739	0	112	186	298
2	13	6.63	0.000	7.776	0.00	0.183	2.65	0.85	1.00	0.0	4.53	12.02	0.00	1244	0	68	108	175

SECTION FORCES

1.0D + 1.0W Service 210° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
1	3	6.63	3.282	2.584	0.00	0.521	1.87	0.85	1.00	0.0	4.59	8.60	0.00	923	0	48	43	91
													Totals	**23,933**	**0**			**5,565**

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.15	0.000	9.964	0.00	0.158	2.74	1.00	1.00	0.0	5.76	15.78	0.00	1090	0	163	66	229
15	270	11.98	0.000	10.773	0.00	0.170	2.70	1.00	1.00	0.0	6.25	16.86	0.00	1493	0	172	191	363
14	250	11.79	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	162	287	449
13	230	11.59	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	168	282	451
12	210	11.38	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	156	277	433
11	190	11.15	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	162	271	433
10	170	10.90	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	150	265	415
9	150	10.62	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	146	259	405
8	130	10.32	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	150	251	401
7	110	9.97	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	137	243	380
6	90	9.57	0.000	10.241	0.00	0.162	2.73	1.00	1.00	0.0	5.92	16.16	0.00	1569	0	131	233	364
5	70	9.09	0.500	10.035	0.00	0.166	2.71	1.00	1.00	0.0	6.30	17.10	0.00	1573	0	132	221	354
4	50	8.49	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	1739	0	124	207	331
3	30	7.65	0.000	11.054	0.00	0.173	2.69	1.00	1.00	0.0	6.41	17.23	0.00	1739	0	112	186	298
2	13	6.63	0.000	7.776	0.00	0.183	2.65	1.00	1.00	0.0	4.53	12.02	0.00	1244	0	68	108	175
1	3	6.63	3.282	2.584	0.00	0.521	1.87	1.00	1.00	0.0	5.08	9.52	0.00	923	0	54	43	97
													Totals	**23,933**	**0**			**5,578**

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.15	0.000	9.964	0.00	0.158	2.74	0.80	1.00	0.0	5.76	15.78	0.00	1090	0	163	66	229
15	270	11.98	0.000	10.773	0.00	0.170	2.70	0.80	1.00	0.0	6.25	16.86	0.00	1493	0	172	191	363
14	250	11.79	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	162	287	449
13	230	11.59	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	166	282	448
12	210	11.38	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	156	277	433
11	190	11.15	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	159	271	431
10	170	10.90	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	150	265	415
9	150	10.62	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	146	259	405
8	130	10.32	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	148	251	399
7	110	9.97	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	137	243	380
6	90	9.57	0.000	10.241	0.00	0.162	2.73	0.80	1.00	0.0	5.92	16.16	0.00	1569	0	131	233	364
5	70	9.09	0.500	10.035	0.00	0.166	2.71	0.80	1.00	0.0	6.20	16.82	0.00	1573	0	130	221	351
4	50	8.49	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	1739	0	124	207	331
3	30	7.65	0.000	11.054	0.00	0.173	2.69	0.80	1.00	0.0	6.41	17.23	0.00	1739	0	112	186	298
2	13	6.63	0.000	7.776	0.00	0.183	2.65	0.80	1.00	0.0	4.53	12.02	0.00	1244	0	68	108	175
1	3	6.63	3.282	2.584	0.00	0.521	1.87	0.80	1.00	0.0	4.43	8.29	0.00	923	0	47	43	90
													Totals	**23,933**	**0**			**5,561**

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.15	0.000	9.964	0.00	0.158	2.74	0.85	1.00	0.0	5.76	15.78	0.00	1090	0	163	66	229
15	270	11.98	0.000	10.773	0.00	0.170	2.70	0.85	1.00	0.0	6.25	16.86	0.00	1493	0	172	191	363
14	250	11.79	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	162	287	449
13	230	11.59	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	166	282	449
12	210	11.38	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	156	277	433
11	190	11.15	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	160	271	431
10	170	10.90	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	150	265	415
9	150	10.62	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	146	259	405
8	130	10.32	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	148	251	399
7	110	9.97	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	137	243	380
6	90	9.57	0.000	10.241	0.00	0.162	2.73	0.85	1.00	0.0	5.92	16.16	0.00	1569	0	131	233	364
5	70	9.09	0.500	10.035	0.00	0.166	2.71	0.85	1.00	0.0	6.23	16.89	0.00	1573	0	131	221	352
4	50	8.49	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	1739	0	124	207	331
3	30	7.65	0.000	11.054	0.00	0.173	2.69	0.85	1.00	0.0	6.41	17.23	0.00	1739	0	112	186	298
2	13	6.63	0.000	7.776	0.00	0.183	2.65	0.85	1.00	0.0	4.53	12.02	0.00	1244	0	68	108	175
1	3	6.63	3.282	2.584	0.00	0.521	1.87	0.85	1.00	0.0	4.59	8.60	0.00	923	0	48	43	91
													Totals	**23,933**	**0**			**5,565**

EQUIVALENT LATERAL FORCE METHOD

Long-Period Transition Period (T_L – Seconds):	8
Importance Factor (I_e):	1.00
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.12
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_S:	0.03
Lower Limit C_S:	0.03
Period based on Rayleigh Method (sec):	1.01
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.25
Total Unfactored Dead Load:	34.81 k
Seismic Base Shear (E):	1.36 k

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_Z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
16	290.00	1,090	1,340,390	0.052	71	1,334
15	270.00	1,493	1,678,089	0.065	89	1,827
14	250.00	1,569	1,601,013	0.062	85	1,920
13	230.00	1,573	1,446,143	0.056	77	1,926
12	210.00	1,569	1,286,422	0.050	68	1,920
11	190.00	1,573	1,137,885	0.044	60	1,926
10	170.00	1,569	986,810	0.038	52	1,920
9	150.00	1,569	843,388	0.033	45	1,920
8	130.00	1,573	706,807	0.028	37	1,926
7	110.00	1,569	571,495	0.022	30	1,920
6	90.00	1,569	444,283	0.017	24	1,920
5	70.00	1,573	325,060	0.013	17	1,926
4	50.00	1,739	235,579	0.009	12	2,129
3	30.00	1,739	124,099	0.005	7	2,129
2	13.34	1,244	32,082	0.001	2	1,522
1	3.34	923	4,184	0.000	0	1,130
Ericsson RRUS 4490	295.00	205	257,762	0.010	14	251
Commscope RC2DC--3315--PF--48	295.00	64	80,393	0.003	4	78
Ericsson AIR 6419 B77D	295.00	189	237,789	0.009	13	232
Ericsson AIR 3283 B25 B66	295.00	324	406,992	0.016	22	397
Commscope NNSS-65C-HG-R2B	295.00	251	315,796	0.012	17	308
Generic Flat Light Sector Frame	295.00	2,400	3,014,755	0.118	160	2,938
Unused Reserve (17666.56 sqin)	295.00	1,411	1,771,922	0.069	94	1,727
Andrew ETD819HS12UB	292.90	56	69,094	0.003	4	68
Torque Arms	287.00	500	606,776	0.024	32	612
Ericsson RRUS 8843 B2, B66A	275.00	216	248,449	0.010	13	264
Ericsson 4478 Band 14 (15" Height)	275.00	180	206,696	0.008	11	220
Ericsson RRUS 4415 B30	275.00	138	158,731	0.006	8	169
Ericsson RRUS 4449 B5, B12	275.00	213	244,999	0.010	13	261
Raycap DC6-48-60-18-8C-EV (Enclosure)	275.00	48	55,211	0.002	3	59
CCI HBSA-M65R-KU-H6	275.00	134	153,555	0.006	8	163
Commscope NNHH-65B-R4	275.00	503	578,335	0.022	31	615
Generic Round Sector Frame	275.00	900	1,035,205	0.040	55	1,102
Ericsson Radio 4460 B25+B66	265.00	436	478,724	0.019	25	534
Ericsson Radio 4480 B71+B85A	265.00	336	368,925	0.014	20	411
Ericsson AIR 6419 B41	265.00	274	300,849	0.012	16	335
Generic Flat Light Sector Frame	265.00	1,600	1,756,785	0.068	93	1,958
Commscope FFVV-65C-R3-V1	265.00	498	547,239	0.021	29	610
Totals		**34,809**	**25,658,712**	**1.000**	**1,358**	**42,606**

1.2D + 1.0Ev + 1.5Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_Z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
16	290.00	1,090	1,340,390	0.052	106	1,334
15	270.00	1,493	1,678,089	0.065	133	1,827
14	250.00	1,569	1,601,013	0.062	127	1,920
13	230.00	1,573	1,446,143	0.056	115	1,926
12	210.00	1,569	1,286,422	0.050	102	1,920

11		190.00	1,573	1,137,885	0.044	90	1,926
10		170.00	1,569	986,810	0.038	78	1,920
9		150.00	1,569	843,388	0.033	67	1,920
8		130.00	1,573	706,807	0.028	56	1,926
7		110.00	1,569	571,495	0.022	45	1,920
6		90.00	1,569	444,283	0.017	35	1,920
5		70.00	1,573	325,060	0.013	26	1,926
4		50.00	1,739	235,579	0.009	19	2,129
3		30.00	1,739	124,099	0.005	10	2,129
2		13.34	1,244	32,082	0.001	3	1,522
1		3.34	923	4,184	0.000	0	1,130
Ericsson RRUS 4490		295.00	205	257,762	0.010	20	251
Commscope RC2DC--3315--PF--48		295.00	64	80,393	0.003	6	78
Ericsson AIR 6419 B77D		295.00	189	237,789	0.009	19	232
Ericsson AIR 3283 B25 B66		295.00	324	406,992	0.016	32	397
Commscope NNSS-65C-HG-R2B		295.00	251	315,796	0.012	25	308
Generic Flat Light Sector Frame		295.00	2,400	3,014,755	0.118	239	2,938
Unused Reserve (17666.56 sqin)		295.00	1,411	1,771,922	0.069	141	1,727
Andrew ETD819HS12UB		292.90	56	69,094	0.003	5	68
Torque Arms		287.00	500	606,776	0.024	48	612
Ericsson RRUS 8843 B2, B66A		275.00	216	248,449	0.010	20	264
Ericsson 4478 Band 14 (15" Height)		275.00	180	206,696	0.008	16	220
Ericsson RRUS 4415 B30		275.00	138	158,731	0.006	13	169
Ericsson RRUS 4449 B5, B12		275.00	213	244,999	0.010	19	261
Raycap DC6-48-60-18-8C-EV (Enclosure)		275.00	48	55,211	0.002	4	59
CCI HBSA-M65R-KU-H6		275.00	134	153,555	0.006	12	163
Commscope NNHH-65B-R4		275.00	503	578,335	0.022	46	615
Generic Round Sector Frame		275.00	900	1,035,205	0.040	82	1,102
Ericsson Radio 4460 B25+B66		265.00	436	478,724	0.019	38	534
Ericsson Radio 4480 B71+B85A		265.00	336	368,925	0.014	29	411
Ericsson AIR 6419 B41		265.00	274	300,849	0.012	24	335
Generic Flat Light Sector Frame		265.00	1,600	1,756,785	0.068	139	1,958
Commscope FFVV-65C-R3-V1		265.00	498	547,239	0.021	43	610
	Totals		**34,809**	**25,658,712**	**1.000**	**2,036**	**42,606**

FORCE/STRESS SUMMARY

Section 1 – 0.0' to 6.67'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-48.88	1.2D + 1.0W 90°	1.68	100	100	100	35.83	50.00	162.89	0.00	0.00	0	0	30	Member X
H PLA - 12 X 1/2"	-0.21	1.2D + 1.0W 120°	2.194	100	100	100	11.76	36.00	215.06	0.00	0.00	0	0	0	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H PLA - 12 X 1/2"	4.93	1.2D + 1.0W 120°	36.0	58	194.40	0.00	0.00	0.00	0	0	3	Member

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

Section 2 – 6.7' to 20.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-53.34	1.2D + 1.0W 60°	3.208	100	100	100	68.43	50.00	127.05	0.00	0.00	0	0	42	Member X
H SOL - 7/8" SOLID	-0.30	1.2D + 1.0W 120°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	3	Member X
D SOL - 1 1/4" SOLID	-2.00	1.2D + 1.0W 330°	4.392	100	100	100	118.06	36.00	19.09	0.00	0.00	0	0	10	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	2.48	1.2D + 1.0W 120°	36.0	58	19.48	0.00	0.00	0.00	0	0	13	Member
D SOL - 1 1/4" SOLID	1.64	1.2D + 1.0W 330°	36.0	58	39.76	0.00	0.00	0.00	0	0	4	Member

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

FORCE/STRESS SUMMARY

Section 3 – 20.0' to 40.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-57.73	1.2D + 1.0W 60°	3.25	100	100	100	69.33	50.00	125.90	0.00	0.00	0	0	46	Member X
H SOL - 7/8" SOLID	-0.12	1.2D + 1.0W 300°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	1	Member X
D SOL - 1" SOLID	-1.42	1.2D + 1.0W 120°	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	18	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	0.43	1.2D + 1.0W 60°	36.0	58	19.48	0.00	0.00	0.00	0	0	2	Member
D SOL - 1" SOLID	0.66	1.2D + 1.0W 330°	36.0	58	25.45	0.00	0.00	0.00	0	0	3	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 4 – 40.0' to 60.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-57.24	1.2D + 1.0W 60°	3.25	100	100	100	69.33	50.00	125.90	0.00	0.00	0	0	45	Member X
H SOL - 7/8" SOLID	-0.28	1.2D + 1.0W 60°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	3	Member X
D SOL - 1" SOLID	-1.69	1.2D + 1.0W 60°	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	21	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	0.51	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	3	Member
D SOL - 1" SOLID	1.21	1.2D + 1.0W 90°	36.0	58	25.45	0.00	0.00	0.00	0	0	5	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 5 – 60.0' to 80.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-48.72	1.2D + 1.0W 60°	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	54	Member X
H SOL - 7/8" SOLID	-0.48	1.2D + 1.0W 240°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	5	Member X
D SOL - 1" SOLID	-2.35	1.2D + 1.0W 90°	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	29	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	0.70	1.2D + 1.0W 60°	36.0	58	19.48	0.00	0.00	0.00	0	0	4	Member
D SOL - 1" SOLID	1.69	1.2D + 1.0W 90°	36.0	58	25.45	0.00	0.00	0.00	0	0	7	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

FORCE/STRESS SUMMARY

Section 6 – 80.0' to 100.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-47.54	1.2D + 1.0W 60°	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	52	Member X
H SOL - 7/8" SOLID	-0.18	1.2D + 1.0W 180°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	2	Member X
D SOL - 1" SOLID	-1.34	1.2D + 1.0W 120°	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	17	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	0.43	1.2D + 1.0W 240°	36.0	58	19.48	0.00	0.00	0.00	0	0	2	Member
D SOL - 1" SOLID	0.78	1.2D + 1.0W 240°	36.0	58	25.45	0.00	0.00	0.00	0	0	3	Member

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

Section 7 – 100.0' to 120.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-46.38	1.2D + 1.0W N	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	51	Member X
H SOL - 7/8" SOLID	-0.66	1.2D + 1.0W 180°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	6	Member X
D SOL - 1" SOLID	-2.71	1.2D + 1.0W 120°	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	34	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	0.92	1.2D + 1.0W 120°	36.0	58	19.48	0.00	0.00	0.00	0	0	5	Member
D SOL - 1" SOLID	2.34	1.2D + 1.0W 330°	36.0	58	25.45	0.00	0.00	0.00	0	0	9	Member

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

FORCE/STRESS SUMMARY

Section 8 – 120.0' to 140.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-54.58	1.2D + 1.0W N	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	60	Member X
H SOL - 7/8" SOLID	-0.94	1.2D + 1.0W 120°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	9	Member X
D SOL - 1" SOLID	-3.42	1.2D + 1.0W 330°	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	43	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	1.05	1.2D + 1.0W 180°	36.0	58	19.48	0.00	0.00	0.00	0	0	5	Member
D SOL - 1" SOLID	2.63	1.2D + 1.0W 330°	36.0	58	25.45	0.00	0.00	0.00	0	0	10	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 9 – 140.0' to 160.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-46.33	1.2D + 1.0W N	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	51	Member X
H SOL - 7/8" SOLID	-0.24	1.2D + 1.0W 60°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	2	Member X
D SOL - 1" SOLID	-1.30	1.2D + 1.0W 60°	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	16	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	0.37	1.2D + 1.0W 240°	36.0	58	19.48	0.00	0.00	0.00	0	0	2	Member
D SOL - 1" SOLID	0.93	1.2D + 1.0W 210°	36.0	58	25.45	0.00	0.00	0.00	0	0	4	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 10 – 160.0' to 180.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-49.79	1.2D + 1.0W 120°	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	55	Member X
H SOL - 7/8" SOLID	-0.35	1.2D + 1.0W 180°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	3	Member X
D SOL - 1" SOLID	-1.69	1.2D + 1.0W 120°	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	21	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	0.57	1.2D + 1.0W 120°	36.0	58	19.48	0.00	0.00	0.00	0	0	3	Member
D SOL - 1" SOLID	1.24	1.2D + 1.0W 330°	36.0	58	25.45	0.00	0.00	0.00	0	0	5	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

FORCE/STRESS SUMMARY

Section 11 – 180.0' to 200.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-54.68	1.2D + 1.0W 120°	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	60	Member X
H SOL - 7/8" SOLID	-0.62	1.2D + 1.0W N	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	6	Member X
D SOL - 1" SOLID	-2.71	1.2D + 1.0W 90°	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	34	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	0.74	1.2D + 1.0W 180°	36.0	58	19.48	0.00	0.00	0.00	0	0	4	Member
D SOL - 1" SOLID	2.27	1.2D + 1.0W 90°	36.0	58	25.45	0.00	0.00	0.00	0	0	9	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 12 – 200.0' to 220.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-42.33	1.2D + 1.0W 120°	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	47	Member X
H SOL - 7/8" SOLID	-0.31	1.2D + 1.0W 60°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	3	Member X
D SOL - 1" SOLID	-1.68	1.2D + 1.0W N	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	21	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	0.55	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	3	Member
D SOL - 1" SOLID	1.40	1.2D + 1.0W 90°	36.0	58	25.45	0.00	0.00	0.00	0	0	5	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

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Section 13 – 220.0' to 240.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-37.73	1.2D + 1.0W 120°	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	42	Member X
H SOL - 7/8" SOLID	-1.51	1.2D + 1.0W N	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	14	Member X
D SOL - 1" SOLID	-5.43	1.2D + 1.0W 90°	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	68	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	1.61	1.2D + 1.0W 60°	36.0	58	19.48	0.00	0.00	0.00	0	0	8	Member
D SOL - 1" SOLID	4.29	1.2D + 1.0W N	36.0	58	25.45	0.00	0.00	0.00	0	0	17	Member

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

Section 14 – 240.0' to 260.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-40.01	1.2D + 1.0W 60°	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	44	Member X
H SOL - 7/8" SOLID	-1.26	1.2D + 1.0W 60°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	12	Member X
D SOL - 1" SOLID	-4.17	1.2D + 1.0W N	4.423	100	100	100	148.62	36.00	8.03	0.00	0.00	0	0	52	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	1.41	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	7	Member
D SOL - 1" SOLID	4.50	1.2D + 1.0W 90°	36.0	58	25.45	0.00	0.00	0.00	0	0	18	Member

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

Section 15 – 260.0' to 280.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-43.32	1.2D + 1.0W 60°	3.25	100	100	100	78.00	50.00	90.61	0.00	0.00	0	0	48	Member X
H SOL - 7/8" SOLID	-2.30	1.2D + 1.0W 180°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	22	Member X
D SOL - 1 1/4" SOLID	-6.24	1.2D + 1.0W 180°	4.423	100	100	100	118.90	36.00	18.89	0.00	0.00	0	0	33	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	1.09	1.2D + 1.0W N	50.0	65	141.37	0.00	0.00		0	0	1	Member
H SOL - 7/8" SOLID	2.04	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	10	Member
D SOL - 1 1/4" SOLID	6.64	1.2D + 1.0W 210°	36.0	58	39.76	0.00	0.00	0.00	0	0	17	Member

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

FORCE/STRESS SUMMARY

Section 16 – 280.0' to 300.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 1 3/4" SOLID	-29.31	1.2D + 1.0W 240°	3.25	100	100	100	89.14	50.00	60.54	0.00	0.00	0	0	48	Member X
H SOL - 7/8" SOLID	-2.64	1.2D + 1.0W 240°	3	100	100	100	107.01	36.00	10.66	0.00	0.00	0	0	25	Member X
D SOL - 1 1/4" SOLID	-7.49	1.2D + 1.0W 330°	4.423	100	100	100	118.90	36.00	18.89	0.00	0.00	0	0	40	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 1 3/4" SOLID	20.66	1.2D + 1.0W 180°	50.0	65	108.24	0.00	0.00		0	0	19	Member
H SOL - 7/8" SOLID	4.70	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	24	Member
D SOL - 1 1/4" SOLID	7.07	1.2D + 1.0W 330°	36.0	58	39.76	0.00	0.00	0.00	0	0	18	Member

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

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.0W Normal	66.75	7/16 EHS	A1	31	12.48	0.52	4
		7/16 EHS	A1b	31a	12.48	4.12	33
		7/16 EHS	A1a	31b	12.48	4.14	33
	126.75	9/16 EHS	A1	55	21	0.37	2
		9/16 EHS	A1b	55a	21	6.74	32
		9/16 EHS	A1a	55b	21	6.8	32
	186.75	9/16 EHS	A1	79	21	0.48	2
		9/16 EHS	A1b	79a	21	7.51	36
		9/16 EHS	A1a	79b	21	7.65	36
	236.50	5/8 EHS	A1	98	25.44	0.94	4
		5/8 EHS	A1b	98a	25.44	10.55	41
		5/8 EHS	A1a	98b	25.44	10.82	43
	286.75	3/4 EHS	A1	T5	34.98	1.6	5
		3/4 EHS	A1b	T5	34.98	15.29	44
		3/4 EHS	A1a	T5a	34.98	15.42	44
		3/4 EHS	A1b	T5a	34.98	15.01	43
		3/4 EHS	A1	T5b	34.98	1.6	5
		3/4 EHS	A1a	T5b	34.98	15.64	45
1.2D + 1.0W 60°	66.75	7/16 EHS	A1	31	12.48	1.85	15
		7/16 EHS	A1b	31a	12.48	1.85	15
		7/16 EHS	A1a	31b	12.48	5.71	46
	126.75	9/16 EHS	A1	55	21	2.93	14
		9/16 EHS	A1b	55a	21	2.93	14
		9/16 EHS	A1a	55b	21	9.51	45
	186.75	9/16 EHS	A1	79	21	3.21	15
		9/16 EHS	A1b	79a	21	3.21	15
		9/16 EHS	A1a	79b	21	10.16	48
	236.50	5/8 EHS	A1	98	25.44	3.87	15
		5/8 EHS	A1b	98a	25.44	3.87	15
		5/8 EHS	A1a	98b	25.44	13.96	55
	286.75	3/4 EHS	A1	T5	34.98	5.32	15
		3/4 EHS	A1b	T5	34.98	5.31	15
		3/4 EHS	A1b	T5a	34.98	5.13	15
		3/4 EHS	A1a	T5a	34.98	19.21	55
		3/4 EHS	A1a	T5b	34.98	19.21	55
		3/4 EHS	A1	T5b	34.98	5.13	15
1.2D + 1.0W 90°	66.75	7/16 EHS	A1	31	12.48	2.92	23
		7/16 EHS	A1b	31a	12.48	0.8	6
		7/16 EHS	A1a	31b	12.48	5.17	41
	126.75	9/16 EHS	A1	55	21	4.76	23
		9/16 EHS	A1b	55a	21	1.2	6
		9/16 EHS	A1a	55b	21	8.64	41
	186.75	9/16 EHS	A1	79	21	5.46	26
		9/16 EHS	A1b	79a	21	1.39	7
		9/16 EHS	A1a	79b	21	9.48	45
	236.50	5/8 EHS	A1	98	25.44	7.29	29
		5/8 EHS	A1b	98a	25.44	1.75	7
		5/8 EHS	A1a	98b	25.44	13.27	52
	286.75	3/4 EHS	A1	T5	34.98	10.52	30
		3/4 EHS	A1b	T5	34.98	2.54	7
		3/4 EHS	A1a	T5a	34.98	18.6	53
		3/4 EHS	A1b	T5a	34.98	2.45	7
		3/4 EHS	A1	T5b	34.98	10.17	29
		3/4 EHS	A1a	T5b	34.98	18.6	53
1.2D + 1.0W 120°	66.75	7/16 EHS	A1	31	12.48	4.12	33
		7/16 EHS	A1b	31a	12.48	0.52	4
		7/16 EHS	A1a	31b	12.48	4.14	33
	126.75	9/16 EHS	A1	55	21	6.74	32
		9/16 EHS	A1b	55a	21	0.37	2

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		9/16 EHS	A1a	55b	21	6.8	32
	186.75	9/16 EHS	A1	79	21	7.51	36
		9/16 EHS	A1b	79a	21	0.48	2
		9/16 EHS	A1a	79b	21	7.65	36
	236.50	5/8 EHS	A1	98	25.44	10.55	41
		5/8 EHS	A1b	98a	25.44	0.94	4
		5/8 EHS	A1a	98b	25.44	10.81	43
	286.75	3/4 EHS	A1b	T5	34.98	1.6	5
		3/4 EHS	A1	T5	34.98	15.29	44
		3/4 EHS	A1a	T5a	34.98	15.64	45
		3/4 EHS	A1b	T5a	34.98	1.6	5
		3/4 EHS	A1	T5b	34.98	15.02	43
		3/4 EHS	A1a	T5b	34.98	15.43	44
1.2D + 1.0W 180°	66.75	7/16 EHS	A1	31	12.48	5.62	45
		7/16 EHS	A1b	31a	12.48	1.82	15
		7/16 EHS	A1a	31b	12.48	1.81	14
	126.75	9/16 EHS	A1	55	21	9.38	45
		9/16 EHS	A1b	55a	21	2.87	14
		9/16 EHS	A1a	55b	21	2.91	14
	186.75	9/16 EHS	A1	79	21	9.93	47
		9/16 EHS	A1b	79a	21	3.18	15
		9/16 EHS	A1a	79b	21	3.23	15
	236.50	5/8 EHS	A1	98	25.44	13.59	53
		5/8 EHS	A1b	98a	25.44	3.86	15
		5/8 EHS	A1a	98b	25.44	3.94	15
	286.75	3/4 EHS	A1	T5	34.98	18.75	54
		3/4 EHS	A1b	T5	34.98	5.13	15
		3/4 EHS	A1a	T5a	34.98	5.43	16
		3/4 EHS	A1b	T5a	34.98	5.32	15
		3/4 EHS	A1	T5b	34.98	18.7	53
		3/4 EHS	A1a	T5b	34.98	5.25	15
1.2D + 1.0W 210°	66.75	7/16 EHS	A1	31	12.48	5.1	41
		7/16 EHS	A1b	31a	12.48	2.89	23
		7/16 EHS	A1a	31b	12.48	0.75	6
	126.75	9/16 EHS	A1	55	21	8.54	41
		9/16 EHS	A1b	55a	21	4.72	22
		9/16 EHS	A1a	55b	21	1.17	6
	186.75	9/16 EHS	A1	79	21	9.3	44
		9/16 EHS	A1b	79a	21	5.45	26
		9/16 EHS	A1a	79b	21	1.4	7
	236.50	5/8 EHS	A1	98	25.44	12.96	51
		5/8 EHS	A1b	98a	25.44	7.3	29
		5/8 EHS	A1a	98b	25.44	1.79	7
	286.75	3/4 EHS	A1b	T5	34.98	10.21	29
		3/4 EHS	A1	T5	34.98	18.17	52
		3/4 EHS	A1a	T5a	34.98	2.62	7
		3/4 EHS	A1b	T5a	34.98	10.56	30
		3/4 EHS	A1a	T5b	34.98	2.54	7
		3/4 EHS	A1	T5b	34.98	18.17	52
1.2D + 1.0W 240°	66.75	7/16 EHS	A1	31	12.48	4.08	33
		7/16 EHS	A1b	31a	12.48	4.08	33
		7/16 EHS	A1a	31b	12.48	0.48	4
	126.75	9/16 EHS	A1	55	21	6.71	32
		9/16 EHS	A1b	55a	21	6.71	32
		9/16 EHS	A1a	55b	21	0.3	1
	186.75	9/16 EHS	A1	79	21	7.54	36
		9/16 EHS	A1b	79a	21	7.54	36
		9/16 EHS	A1a	79b	21	0.55	3
	236.50	5/8 EHS	A1	98	25.44	10.62	42

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		5/8 EHS	A1b	98a	25.44	10.61	42
		5/8 EHS	A1a	98b	25.44	1.02	4
	286.75	3/4 EHS	A1	T5	34.98	15.14	43
		3/4 EHS	A1b	T5	34.98	15.14	43
		3/4 EHS	A1b	T5a	34.98	15.38	44
		3/4 EHS	A1a	T5a	34.98	1.71	5
		3/4 EHS	A1a	T5b	34.98	1.71	5
		3/4 EHS	A1	T5b	34.98	15.37	44
1.2D + 1.0W 300°	66.75	7/16 EHS	A1	31	12.48	1.82	15
		7/16 EHS	A1b	31a	12.48	5.62	45
		7/16 EHS	A1a	31b	12.48	1.81	14
	126.75	9/16 EHS	A1	55	21	2.87	14
		9/16 EHS	A1b	55a	21	9.38	45
		9/16 EHS	A1a	55b	21	2.91	14
	186.75	9/16 EHS	A1	79	21	3.18	15
		9/16 EHS	A1b	79a	21	9.93	47
		9/16 EHS	A1a	79b	21	3.24	15
	236.50	5/8 EHS	A1	98	25.44	3.86	15
		5/8 EHS	A1b	98a	25.44	13.59	53
		5/8 EHS	A1a	98b	25.44	3.94	15
	286.75	3/4 EHS	A1	T5	34.98	5.13	15
		3/4 EHS	A1b	T5	34.98	18.76	54
		3/4 EHS	A1a	T5a	34.98	5.25	15
		3/4 EHS	A1b	T5a	34.98	18.71	53
		3/4 EHS	A1a	T5b	34.98	5.43	16
		3/4 EHS	A1	T5b	34.98	5.32	15
1.2D + 1.0W 330°	66.75	7/16 EHS	A1	31	12.48	0.77	6
		7/16 EHS	A1b	31a	12.48	5.11	41
		7/16 EHS	A1a	31b	12.48	2.9	23
	126.75	9/16 EHS	A1	55	21	1.17	6
		9/16 EHS	A1b	55a	21	8.55	41
		9/16 EHS	A1a	55b	21	4.79	23
	186.75	9/16 EHS	A1	79	21	1.37	7
		9/16 EHS	A1b	79a	21	9.28	44
		9/16 EHS	A1a	79b	21	5.55	26
	236.50	5/8 EHS	A1	98	25.44	1.75	7
		5/8 EHS	A1b	98a	25.44	12.93	51
		5/8 EHS	A1a	98b	25.44	7.46	29
	286.75	3/4 EHS	A1	T5	34.98	2.46	7
		3/4 EHS	A1b	T5	34.98	18.17	52
		3/4 EHS	A1b	T5a	34.98	18.09	52
		3/4 EHS	A1a	T5a	34.98	10.42	30
		3/4 EHS	A1	T5b	34.98	2.54	7
		3/4 EHS	A1a	T5b	34.98	10.75	31
1.2D + 1.0Di + 1.0Wi Normal	66.75	7/16 EHS	A1	31	12.48	2.29	18
		7/16 EHS	A1b	31a	12.48	2.58	21
		7/16 EHS	A1a	31b	12.48	2.59	21
	126.75	9/16 EHS	A1	55	21	3.59	17
		9/16 EHS	A1b	55a	21	4.06	19
		9/16 EHS	A1a	55b	21	4.1	20
	186.75	9/16 EHS	A1	79	21	3.31	16
		9/16 EHS	A1b	79a	21	3.8	18
		9/16 EHS	A1a	79b	21	3.87	18
	236.50	5/8 EHS	A1	98	25.44	3.76	15
		5/8 EHS	A1b	98a	25.44	4.43	17
		5/8 EHS	A1a	98b	25.44	4.54	18
	286.75	3/4 EHS	A1	T5	34.98	4.76	14
		3/4 EHS	A1b	T5	34.98	5.66	16
		3/4 EHS	A1b	T5a	34.98	5.62	16

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		3/4 EHS	A1a	T5a	34.98	5.76	16
		3/4 EHS	A1a	T5b	34.98	5.79	17
		3/4 EHS	A1	T5b	34.98	4.76	14
1.2D + 1.0Di + 1.0Wi 60°	66.75	7/16 EHS	A1	31	12.48	2.38	19
		7/16 EHS	A1b	31a	12.48	2.38	19
		7/16 EHS	A1a	31b	12.48	2.68	21
	126.75	9/16 EHS	A1	55	21	3.74	18
		9/16 EHS	A1b	55a	21	3.74	18
		9/16 EHS	A1a	55b	21	4.25	20
	186.75	9/16 EHS	A1	79	21	3.46	16
		9/16 EHS	A1b	79a	21	3.46	16
		9/16 EHS	A1a	79b	21	4.02	19
	236.50	5/8 EHS	A1	98	25.44	3.97	16
		5/8 EHS	A1b	98a	25.44	3.97	16
		5/8 EHS	A1a	98b	25.44	4.75	19
	286.75	3/4 EHS	A1	T5	34.98	5.05	14
		3/4 EHS	A1b	T5	34.98	5.05	14
		3/4 EHS	A1a	T5a	34.98	6.05	17
		3/4 EHS	A1b	T5a	34.98	5	14
		3/4 EHS	A1a	T5b	34.98	6.05	17
		3/4 EHS	A1	T5b	34.98	5	14
1.2D + 1.0Di + 1.0Wi 90°	66.75	7/16 EHS	A1	31	12.48	2.48	20
		7/16 EHS	A1b	31a	12.48	2.31	19
		7/16 EHS	A1a	31b	12.48	2.66	21
	126.75	9/16 EHS	A1	55	21	3.9	19
		9/16 EHS	A1b	55a	21	3.63	17
		9/16 EHS	A1a	55b	21	4.21	20
	186.75	9/16 EHS	A1	79	21	3.63	17
		9/16 EHS	A1b	79a	21	3.34	16
		9/16 EHS	A1a	79b	21	3.98	19
	236.50	5/8 EHS	A1	98	25.44	4.2	17
		5/8 EHS	A1b	98a	25.44	3.81	15
		5/8 EHS	A1a	98b	25.44	4.69	18
	286.75	3/4 EHS	A1	T5	34.98	5.36	15
		3/4 EHS	A1b	T5	34.98	4.83	14
		3/4 EHS	A1a	T5a	34.98	5.99	17
		3/4 EHS	A1b	T5a	34.98	4.81	14
		3/4 EHS	A1	T5b	34.98	5.3	15
		3/4 EHS	A1a	T5b	34.98	5.97	17
1.2D + 1.0Di + 1.0Wi 120°	66.75	7/16 EHS	A1	31	12.48	2.58	21
		7/16 EHS	A1b	31a	12.48	2.29	18
		7/16 EHS	A1a	31b	12.48	2.59	21
	126.75	9/16 EHS	A1	55	21	4.06	19
		9/16 EHS	A1b	55a	21	3.59	17
		9/16 EHS	A1a	55b	21	4.1	20
	186.75	9/16 EHS	A1	79	21	3.8	18
		9/16 EHS	A1b	79a	21	3.31	16
		9/16 EHS	A1a	79b	21	3.87	18
	236.50	5/8 EHS	A1	98	25.44	4.43	17
		5/8 EHS	A1b	98a	25.44	3.76	15
		5/8 EHS	A1a	98b	25.44	4.54	18
	286.75	3/4 EHS	A1b	T5	34.98	4.76	14
		3/4 EHS	A1	T5	34.98	5.66	16
		3/4 EHS	A1b	T5a	34.98	4.75	14
		3/4 EHS	A1a	T5a	34.98	5.79	17
		3/4 EHS	A1	T5b	34.98	5.62	16
		3/4 EHS	A1a	T5b	34.98	5.75	16
1.2D + 1.0Di + 1.0Wi 180°	66.75	7/16 EHS	A1	31	12.48	2.66	21
		7/16 EHS	A1b	31a	12.48	2.38	19

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		7/16 EHS	A1a	31b	12.48	2.39	19
	126.75	9/16 EHS	A1	55	21	4.21	20
		9/16 EHS	A1b	55a	21	3.74	18
		9/16 EHS	A1a	55b	21	3.77	18
	186.75	9/16 EHS	A1	79	21	3.95	19
		9/16 EHS	A1b	79a	21	3.46	16
		9/16 EHS	A1a	79b	21	3.52	17
	236.50	5/8 EHS	A1	98	25.44	4.64	18
		5/8 EHS	A1b	98a	25.44	3.97	16
		5/8 EHS	A1a	98b	25.44	4.06	16
	286.75	3/4 EHS	A1b	T5	34.98	5.02	14
		3/4 EHS	A1	T5	34.98	5.92	17
		3/4 EHS	A1a	T5a	34.98	5.17	15
		3/4 EHS	A1b	T5a	34.98	5.05	14
		3/4 EHS	A1	T5b	34.98	5.91	17
		3/4 EHS	A1a	T5b	34.98	5.13	15
1.2D + 1.0Di + 1.0Wi 210°	66.75	7/16 EHS	A1	31	12.48	2.64	21
		7/16 EHS	A1b	31a	12.48	2.48	20
		7/16 EHS	A1a	31b	12.48	2.32	19
	126.75	9/16 EHS	A1	55	21	4.17	20
		9/16 EHS	A1b	55a	21	3.9	19
		9/16 EHS	A1a	55b	21	3.66	17
	186.75	9/16 EHS	A1	79	21	3.91	19
		9/16 EHS	A1b	79a	21	3.63	17
		9/16 EHS	A1a	79b	21	3.4	16
	236.50	5/8 EHS	A1	98	25.44	4.59	18
		5/8 EHS	A1b	98a	25.44	4.2	17
		5/8 EHS	A1a	98b	25.44	3.91	15
	286.75	3/4 EHS	A1b	T5	34.98	5.32	15
		3/4 EHS	A1	T5	34.98	5.84	17
		3/4 EHS	A1a	T5a	34.98	4.95	14
		3/4 EHS	A1b	T5a	34.98	5.36	15
		3/4 EHS	A1	T5b	34.98	5.86	17
		3/4 EHS	A1a	T5b	34.98	4.93	14
1.2D + 1.0Di + 1.0Wi 240°	66.75	7/16 EHS	A1	31	12.48	2.57	21
		7/16 EHS	A1b	31a	12.48	2.57	21
		7/16 EHS	A1a	31b	12.48	2.3	18
	126.75	9/16 EHS	A1	55	21	4.06	19
		9/16 EHS	A1b	55a	21	4.06	19
		9/16 EHS	A1a	55b	21	3.63	17
	186.75	9/16 EHS	A1	79	21	3.8	18
		9/16 EHS	A1b	79a	21	3.8	18
		9/16 EHS	A1a	79b	21	3.37	16
	236.50	5/8 EHS	A1	98	25.44	4.43	17
		5/8 EHS	A1b	98a	25.44	4.43	17
		5/8 EHS	A1a	98b	25.44	3.86	15
	286.75	3/4 EHS	A1	T5	34.98	5.63	16
		3/4 EHS	A1b	T5	34.98	5.63	16
		3/4 EHS	A1a	T5a	34.98	4.88	14
		3/4 EHS	A1b	T5a	34.98	5.66	16
		3/4 EHS	A1	T5b	34.98	5.66	16
		3/4 EHS	A1a	T5b	34.98	4.87	14
1.2D + 1.0Di + 1.0Wi 300°	66.75	7/16 EHS	A1	31	12.48	2.38	19
		7/16 EHS	A1b	31a	12.48	2.66	21
		7/16 EHS	A1a	31b	12.48	2.39	19
	126.75	9/16 EHS	A1	55	21	3.74	18
		9/16 EHS	A1b	55a	21	4.21	20
		9/16 EHS	A1a	55b	21	3.77	18
	186.75	9/16 EHS	A1	79	21	3.46	16

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		9/16 EHS	A1b	79a	21	3.95	19
		9/16 EHS	A1a	79b	21	3.52	17
	236.50	5/8 EHS	A1	98	25.44	3.97	16
		5/8 EHS	A1b	98a	25.44	4.64	18
		5/8 EHS	A1a	98b	25.44	4.06	16
	286.75	3/4 EHS	A1	T5	34.98	5.01	14
		3/4 EHS	A1b	T5	34.98	5.92	17
		3/4 EHS	A1a	T5a	34.98	5.13	15
		3/4 EHS	A1b	T5a	34.98	5.91	17
		3/4 EHS	A1a	T5b	34.98	5.17	15
		3/4 EHS	A1	T5b	34.98	5.05	14
1.2D + 1.0Di + 1.0Wi 330°	66.75	7/16 EHS	A1	31	12.48	2.31	19
		7/16 EHS	A1b	31a	12.48	2.64	21
		7/16 EHS	A1a	31b	12.48	2.49	20
	126.75	9/16 EHS	A1	55	21	3.63	17
		9/16 EHS	A1b	55a	21	4.17	20
		9/16 EHS	A1a	55b	21	3.94	19
	186.75	9/16 EHS	A1	79	21	3.35	16
		9/16 EHS	A1b	79a	21	3.91	19
		9/16 EHS	A1a	79b	21	3.69	18
	236.50	5/8 EHS	A1	98	25.44	3.82	15
		5/8 EHS	A1b	98a	25.44	4.59	18
		5/8 EHS	A1a	98b	25.44	4.3	17
	286.75	3/4 EHS	A1b	T5	34.98	5.86	17
		3/4 EHS	A1	T5	34.98	4.82	14
		3/4 EHS	A1a	T5a	34.98	5.44	16
		3/4 EHS	A1b	T5a	34.98	5.83	17
		3/4 EHS	A1a	T5b	34.98	5.49	16
		3/4 EHS	A1	T5b	34.98	4.83	14
1.2D + 1.0Ev + 1.0Eh Normal	66.75	7/16 EHS	A1	31	12.48	2.02	16
		7/16 EHS	A1b	31a	12.48	2.06	17
		7/16 EHS	A1a	31b	12.48	2.07	17
	126.75	9/16 EHS	A1	55	21	3.22	15
		9/16 EHS	A1b	55a	21	3.35	16
		9/16 EHS	A1a	55b	21	3.38	16
	186.75	9/16 EHS	A1	79	21	3.02	14
		9/16 EHS	A1b	79a	21	3.25	15
		9/16 EHS	A1a	79b	21	3.31	16
	236.50	5/8 EHS	A1	98	25.44	3.5	14
		5/8 EHS	A1b	98a	25.44	3.91	15
		5/8 EHS	A1a	98b	25.44	4	16
	286.75	3/4 EHS	A1	T5	34.98	4.52	13
		3/4 EHS	A1b	T5	34.98	5.1	15
		3/4 EHS	A1a	T5a	34.98	5.2	15
		3/4 EHS	A1b	T5a	34.98	5.08	15
		3/4 EHS	A1	T5b	34.98	4.52	13
		3/4 EHS	A1a	T5b	34.98	5.22	15
1.2D + 1.0Ev + 1.0Eh 60°	66.75	7/16 EHS	A1	31	12.48	2.04	16
		7/16 EHS	A1b	31a	12.48	2.04	16
		7/16 EHS	A1a	31b	12.48	2.08	17
	126.75	9/16 EHS	A1	55	21	3.26	16
		9/16 EHS	A1b	55a	21	3.26	16
		9/16 EHS	A1a	55b	21	3.42	16
	186.75	9/16 EHS	A1	79	21	3.1	15
		9/16 EHS	A1b	79a	21	3.1	15
		9/16 EHS	A1a	79b	21	3.39	16
	236.50	5/8 EHS	A1	98	25.44	3.64	14
		5/8 EHS	A1b	98a	25.44	3.64	14
		5/8 EHS	A1a	98b	25.44	4.14	16

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
	286.75	3/4 EHS	A1	T5	34.98	4.72	13
		3/4 EHS	A1b	T5	34.98	4.72	14
		3/4 EHS	A1a	T5a	34.98	5.41	15
		3/4 EHS	A1b	T5a	34.98	4.7	13
		3/4 EHS	A1	T5b	34.98	4.7	13
		3/4 EHS	A1a	T5b	34.98	5.41	15
1.2D + 1.0Ev + 1.0Eh 90°	66.75	7/16 EHS	A1	31	12.48	2.05	16
		7/16 EHS	A1b	31a	12.48	2.03	16
		7/16 EHS	A1a	31b	12.48	2.08	17
	126.75	9/16 EHS	A1	55	21	3.31	16
		9/16 EHS	A1b	55a	21	3.23	15
		9/16 EHS	A1a	55b	21	3.41	16
	186.75	9/16 EHS	A1	79	21	3.17	15
		9/16 EHS	A1b	79a	21	3.04	14
		9/16 EHS	A1a	79b	21	3.37	16
	236.50	5/8 EHS	A1	98	25.44	3.77	15
		5/8 EHS	A1b	98a	25.44	3.54	14
		5/8 EHS	A1a	98b	25.44	4.1	16
	286.75	3/4 EHS	A1	T5	34.98	4.91	14
		3/4 EHS	A1b	T5	34.98	4.58	13
		3/4 EHS	A1a	T5a	34.98	5.36	15
		3/4 EHS	A1b	T5a	34.98	4.57	13
		3/4 EHS	A1	T5b	34.98	4.89	14
		3/4 EHS	A1a	T5b	34.98	5.35	15
1.2D + 1.0Ev + 1.0Eh 120°	66.75	7/16 EHS	A1	31	12.48	2.06	17
		7/16 EHS	A1b	31a	12.48	2.02	16
		7/16 EHS	A1a	31b	12.48	2.07	17
	126.75	9/16 EHS	A1	55	21	3.35	16
		9/16 EHS	A1b	55a	21	3.22	15
		9/16 EHS	A1a	55b	21	3.38	16
	186.75	9/16 EHS	A1	79	21	3.25	15
		9/16 EHS	A1b	79a	21	3.02	14
		9/16 EHS	A1a	79b	21	3.31	16
	236.50	5/8 EHS	A1	98	25.44	3.91	15
		5/8 EHS	A1b	98a	25.44	3.5	14
		5/8 EHS	A1a	98b	25.44	4	16
	286.75	3/4 EHS	A1	T5	34.98	5.1	15
		3/4 EHS	A1b	T5	34.98	4.52	13
		3/4 EHS	A1b	T5a	34.98	4.52	13
		3/4 EHS	A1a	T5a	34.98	5.22	15
		3/4 EHS	A1	T5b	34.98	5.08	15
		3/4 EHS	A1a	T5b	34.98	5.2	15
1.2D + 1.0Ev + 1.0Eh 180°	66.75	7/16 EHS	A1	31	12.48	2.08	17
		7/16 EHS	A1b	31a	12.48	2.04	16
		7/16 EHS	A1a	31b	12.48	2.04	16
	126.75	9/16 EHS	A1	55	21	3.39	16
		9/16 EHS	A1b	55a	21	3.26	16
		9/16 EHS	A1a	55b	21	3.29	16
	186.75	9/16 EHS	A1	79	21	3.32	16
		9/16 EHS	A1b	79a	21	3.1	15
		9/16 EHS	A1a	79b	21	3.15	15
	236.50	5/8 EHS	A1	98	25.44	4.04	16
		5/8 EHS	A1b	98a	25.44	3.64	14
		5/8 EHS	A1a	98b	25.44	3.72	15
	286.75	3/4 EHS	A1b	T5	34.98	4.71	13
		3/4 EHS	A1	T5	34.98	5.28	15
		3/4 EHS	A1b	T5a	34.98	4.72	13
		3/4 EHS	A1a	T5a	34.98	4.83	14
		3/4 EHS	A1a	T5b	34.98	4.81	14

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		3/4 EHS	A1	T5b	34.98	5.28	15
1.2D + 1.0Ev + 1.0Eh 210°	66.75	7/16 EHS	A1	31	12.48	2.07	17
		7/16 EHS	A1b	31a	12.48	2.05	16
		7/16 EHS	A1a	31b	12.48	2.03	16
	126.75	9/16 EHS	A1	55	21	3.38	16
		9/16 EHS	A1b	55a	21	3.3	16
		9/16 EHS	A1a	55b	21	3.26	16
	186.75	9/16 EHS	A1	79	21	3.3	16
		9/16 EHS	A1b	79a	21	3.17	15
		9/16 EHS	A1a	79b	21	3.09	15
	236.50	5/8 EHS	A1	98	25.44	4	16
		5/8 EHS	A1b	98a	25.44	3.77	15
		5/8 EHS	A1a	98b	25.44	3.62	14
	286.75	3/4 EHS	A1	T5	34.98	5.23	15
		3/4 EHS	A1b	T5	34.98	4.89	14
		3/4 EHS	A1b	T5a	34.98	4.91	14
		3/4 EHS	A1a	T5a	34.98	4.68	13
		3/4 EHS	A1	T5b	34.98	5.23	15
		3/4 EHS	A1a	T5b	34.98	4.67	13
1.2D + 1.0Ev + 1.0Eh 240°	66.75	7/16 EHS	A1	31	12.48	2.06	17
		7/16 EHS	A1b	31a	12.48	2.06	17
		7/16 EHS	A1a	31b	12.48	2.03	16
	126.75	9/16 EHS	A1	55	21	3.35	16
		9/16 EHS	A1b	55a	21	3.35	16
		9/16 EHS	A1a	55b	21	3.25	15
	186.75	9/16 EHS	A1	79	21	3.25	15
		9/16 EHS	A1b	79a	21	3.25	15
		9/16 EHS	A1a	79b	21	3.07	15
	236.50	5/8 EHS	A1	98	25.44	3.9	15
		5/8 EHS	A1b	98a	25.44	3.9	15
		5/8 EHS	A1a	98b	25.44	3.58	14
	286.75	3/4 EHS	A1	T5	34.98	5.08	15
		3/4 EHS	A1b	T5	34.98	5.09	15
		3/4 EHS	A1a	T5a	34.98	4.63	13
		3/4 EHS	A1b	T5a	34.98	5.1	15
		3/4 EHS	A1a	T5b	34.98	4.63	13
		3/4 EHS	A1	T5b	34.98	5.1	15
1.2D + 1.0Ev + 1.0Eh 300°	66.75	7/16 EHS	A1	31	12.48	2.04	16
		7/16 EHS	A1b	31a	12.48	2.08	17
		7/16 EHS	A1a	31b	12.48	2.04	16
	126.75	9/16 EHS	A1	55	21	3.26	16
		9/16 EHS	A1b	55a	21	3.39	16
		9/16 EHS	A1a	55b	21	3.29	16
	186.75	9/16 EHS	A1	79	21	3.1	15
		9/16 EHS	A1b	79a	21	3.32	16
		9/16 EHS	A1a	79b	21	3.15	15
	236.50	5/8 EHS	A1	98	25.44	3.64	14
		5/8 EHS	A1b	98a	25.44	4.04	16
		5/8 EHS	A1a	98b	25.44	3.72	15
	286.75	3/4 EHS	A1	T5	34.98	4.7	13
		3/4 EHS	A1b	T5	34.98	5.28	15
		3/4 EHS	A1a	T5a	34.98	4.81	14
		3/4 EHS	A1b	T5a	34.98	5.28	15
		3/4 EHS	A1a	T5b	34.98	4.83	14
		3/4 EHS	A1	T5b	34.98	4.72	13
1.2D + 1.0Ev + 1.0Eh 330°	66.75	7/16 EHS	A1	31	12.48	2.03	16
		7/16 EHS	A1b	31a	12.48	2.07	17
		7/16 EHS	A1a	31b	12.48	2.06	16
	126.75	9/16 EHS	A1	55	21	3.23	15

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		9/16 EHS	A1b	55a	21	3.38	16
		9/16 EHS	A1a	55b	21	3.34	16
	186.75	9/16 EHS	A1	79	21	3.04	14
		9/16 EHS	A1b	79a	21	3.31	16
		9/16 EHS	A1a	79b	21	3.23	15
	236.50	5/8 EHS	A1	98	25.44	3.54	14
		5/8 EHS	A1b	98a	25.44	4	16
		5/8 EHS	A1a	98b	25.44	3.86	15
	286.75	3/4 EHS	A1	T5	34.98	4.57	13
		3/4 EHS	A1b	T5	34.98	5.24	15
		3/4 EHS	A1a	T5a	34.98	5.01	14
		3/4 EHS	A1b	T5a	34.98	5.22	15
		3/4 EHS	A1	T5b	34.98	4.58	13
		3/4 EHS	A1a	T5b	34.98	5.03	14
1.0D + 1.0W Service Normal	66.75	7/16 EHS	A1	31	12.48	1.47	12
		7/16 EHS	A1b	31a	12.48	2.47	20
		7/16 EHS	A1a	31b	12.48	2.48	20
	126.75	9/16 EHS	A1	55	21	2.34	11
		9/16 EHS	A1b	55a	21	3.98	19
		9/16 EHS	A1a	55b	21	4.02	19
	186.75	9/16 EHS	A1	79	21	2.14	10
		9/16 EHS	A1b	79a	21	3.91	19
		9/16 EHS	A1a	79b	21	3.98	19
	236.50	5/8 EHS	A1	98	25.44	2.28	9
		5/8 EHS	A1b	98a	25.44	4.78	19
		5/8 EHS	A1a	98b	25.44	4.89	19
	286.75	3/4 EHS	A1	T5	34.98	2.8	8
		3/4 EHS	A1b	T5	34.98	6.35	18
		3/4 EHS	A1a	T5a	34.98	6.37	18
		3/4 EHS	A1b	T5a	34.98	6.21	18
		3/4 EHS	A1	T5b	34.98	2.8	8
		3/4 EHS	A1a	T5b	34.98	6.5	19
1.0D + 1.0W Service 60°	66.75	7/16 EHS	A1	31	12.48	1.8	14
		7/16 EHS	A1b	31a	12.48	1.8	14
		7/16 EHS	A1a	31b	12.48	2.8	22
	126.75	9/16 EHS	A1	55	21	2.87	14
		9/16 EHS	A1b	55a	21	2.87	14
		9/16 EHS	A1a	55b	21	4.57	22
	186.75	9/16 EHS	A1	79	21	2.76	13
		9/16 EHS	A1b	79a	21	2.76	13
		9/16 EHS	A1a	79b	21	4.6	22
	236.50	5/8 EHS	A1	98	25.44	3.19	13
		5/8 EHS	A1b	98a	25.44	3.19	13
		5/8 EHS	A1a	98b	25.44	5.85	23
	286.75	3/4 EHS	A1	T5	34.98	4.19	12
		3/4 EHS	A1b	T5	34.98	4.19	12
		3/4 EHS	A1a	T5a	34.98	7.8	22
		3/4 EHS	A1b	T5a	34.98	4.06	12
		3/4 EHS	A1	T5b	34.98	4.07	12
		3/4 EHS	A1a	T5b	34.98	7.8	22
1.0D + 1.0W Service 90°	66.75	7/16 EHS	A1	31	12.48	2.14	17
		7/16 EHS	A1b	31a	12.48	1.55	12
		7/16 EHS	A1a	31b	12.48	2.71	22
	126.75	9/16 EHS	A1	55	21	3.41	16
		9/16 EHS	A1b	55a	21	2.48	12
		9/16 EHS	A1a	55b	21	4.42	21
	186.75	9/16 EHS	A1	79	21	3.33	16
		9/16 EHS	A1b	79a	21	2.3	11
		9/16 EHS	A1a	79b	21	4.42	21

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
	236.50	5/8 EHS	A1	98	25.44	3.98	16
		5/8 EHS	A1b	98a	25.44	2.54	10
		5/8 EHS	A1a	98b	25.44	5.57	22
	286.75	3/4 EHS	A1	T5	34.98	5.29	15
		3/4 EHS	A1b	T5	34.98	3.22	9
		3/4 EHS	A1a	T5a	34.98	7.41	21
		3/4 EHS	A1b	T5a	34.98	3.17	9
		3/4 EHS	A1	T5b	34.98	5.12	15
		3/4 EHS	A1a	T5b	34.98	7.38	21
1.0D + 1.0W Service 120°	66.75	7/16 EHS	A1	31	12.48	2.47	20
		7/16 EHS	A1b	31a	12.48	1.47	12
		7/16 EHS	A1a	31b	12.48	2.48	20
	126.75	9/16 EHS	A1	55	21	3.98	19
		9/16 EHS	A1b	55a	21	2.34	11
		9/16 EHS	A1a	55b	21	4.02	19
	186.75	9/16 EHS	A1	79	21	3.91	19
		9/16 EHS	A1b	79a	21	2.14	10
		9/16 EHS	A1a	79b	21	3.98	19
	236.50	5/8 EHS	A1	98	25.44	4.78	19
		5/8 EHS	A1b	98a	25.44	2.29	9
		5/8 EHS	A1a	98b	25.44	4.89	19
	286.75	3/4 EHS	A1b	T5	34.98	2.8	8
		3/4 EHS	A1	T5	34.98	6.35	18
		3/4 EHS	A1b	T5a	34.98	2.8	8
		3/4 EHS	A1a	T5a	34.98	6.5	19
		3/4 EHS	A1	T5b	34.98	6.22	18
		3/4 EHS	A1a	T5b	34.98	6.37	18
1.0D + 1.0W Service 180°	66.75	7/16 EHS	A1	31	12.48	2.77	22
		7/16 EHS	A1b	31a	12.48	1.78	14
		7/16 EHS	A1a	31b	12.48	1.79	14
	126.75	9/16 EHS	A1	55	21	4.51	21
		9/16 EHS	A1b	55a	21	2.85	14
		9/16 EHS	A1a	55b	21	2.88	14
	186.75	9/16 EHS	A1	79	21	4.51	21
		9/16 EHS	A1b	79a	21	2.75	13
		9/16 EHS	A1a	79b	21	2.8	13
	236.50	5/8 EHS	A1	98	25.44	5.71	22
		5/8 EHS	A1b	98a	25.44	3.2	13
		5/8 EHS	A1a	98b	25.44	3.27	13
	286.75	3/4 EHS	A1b	T5	34.98	4.08	12
		3/4 EHS	A1	T5	34.98	7.63	22
		3/4 EHS	A1a	T5a	34.98	4.3	12
		3/4 EHS	A1b	T5a	34.98	4.2	12
		3/4 EHS	A1	T5b	34.98	7.62	22
		3/4 EHS	A1a	T5b	34.98	4.17	12
1.0D + 1.0W Service 210°	66.75	7/16 EHS	A1	31	12.48	2.68	21
		7/16 EHS	A1b	31a	12.48	2.12	17
		7/16 EHS	A1a	31b	12.48	1.53	12
	126.75	9/16 EHS	A1	55	21	4.37	21
		9/16 EHS	A1b	55a	21	3.4	16
		9/16 EHS	A1a	55b	21	2.49	12
	186.75	9/16 EHS	A1	79	21	4.35	21
		9/16 EHS	A1b	79a	21	3.33	16
		9/16 EHS	A1a	79b	21	2.34	11
	236.50	5/8 EHS	A1	98	25.44	5.45	21
		5/8 EHS	A1b	98a	25.44	3.99	16
		5/8 EHS	A1a	98b	25.44	2.61	10
	286.75	3/4 EHS	A1b	T5	34.98	5.15	15
		3/4 EHS	A1	T5	34.98	7.23	21

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		3/4 EHS	A1a	T5a	34.98	3.32	9
		3/4 EHS	A1b	T5a	34.98	5.31	15
		3/4 EHS	A1	T5b	34.98	7.26	21
		3/4 EHS	A1a	T5b	34.98	3.26	9
1.0D + 1.0W Service 240°	66.75	7/16 EHS	A1	31	12.48	2.46	20
		7/16 EHS	A1b	31a	12.48	2.46	20
		7/16 EHS	A1a	31b	12.48	1.45	12
	126.75	9/16 EHS	A1	55	21	3.97	19
		9/16 EHS	A1b	55a	21	3.97	19
		9/16 EHS	A1a	55b	21	2.35	11
	186.75	9/16 EHS	A1	79	21	3.92	19
		9/16 EHS	A1b	79a	21	3.91	19
		9/16 EHS	A1a	79b	21	2.18	10
	236.50	5/8 EHS	A1	98	25.44	4.79	19
		5/8 EHS	A1b	98a	25.44	4.79	19
		5/8 EHS	A1a	98b	25.44	2.35	9
	286.75	3/4 EHS	A1	T5	34.98	6.25	18
		3/4 EHS	A1b	T5	34.98	6.25	18
		3/4 EHS	A1a	T5a	34.98	2.89	8
		3/4 EHS	A1b	T5a	34.98	6.37	18
		3/4 EHS	A1a	T5b	34.98	2.88	8
		3/4 EHS	A1	T5b	34.98	6.37	18
1.0D + 1.0W Service 300°	66.75	7/16 EHS	A1	31	12.48	1.78	14
		7/16 EHS	A1b	31a	12.48	2.77	22
		7/16 EHS	A1a	31b	12.48	1.79	14
	126.75	9/16 EHS	A1	55	21	2.85	14
		9/16 EHS	A1b	55a	21	4.51	21
		9/16 EHS	A1a	55b	21	2.88	14
	186.75	9/16 EHS	A1	79	21	2.75	13
		9/16 EHS	A1b	79a	21	4.51	21
		9/16 EHS	A1a	79b	21	2.8	13
	236.50	5/8 EHS	A1	98	25.44	3.2	13
		5/8 EHS	A1b	98a	25.44	5.71	22
		5/8 EHS	A1a	98b	25.44	3.27	13
	286.75	3/4 EHS	A1	T5	34.98	4.08	12
		3/4 EHS	A1b	T5	34.98	7.63	22
		3/4 EHS	A1a	T5a	34.98	4.17	12
		3/4 EHS	A1b	T5a	34.98	7.62	22
		3/4 EHS	A1a	T5b	34.98	4.3	12
		3/4 EHS	A1	T5b	34.98	4.2	12
1.0D + 1.0W Service 330°	66.75	7/16 EHS	A1	31	12.48	1.54	12
		7/16 EHS	A1b	31a	12.48	2.69	22
		7/16 EHS	A1a	31b	12.48	2.13	17
	126.75	9/16 EHS	A1	55	21	2.46	12
		9/16 EHS	A1b	55a	21	4.37	21
		9/16 EHS	A1a	55b	21	3.43	16
	186.75	9/16 EHS	A1	79	21	2.3	11
		9/16 EHS	A1b	79a	21	4.34	21
		9/16 EHS	A1a	79b	21	3.39	16
	236.50	5/8 EHS	A1	98	25.44	2.54	10
		5/8 EHS	A1b	98a	25.44	5.43	21
		5/8 EHS	A1a	98b	25.44	4.07	16
	286.75	3/4 EHS	A1b	T5	34.98	7.24	21
		3/4 EHS	A1	T5	34.98	3.17	9
		3/4 EHS	A1a	T5a	34.98	5.25	15
		3/4 EHS	A1b	T5a	34.98	7.19	21
		3/4 EHS	A1a	T5b	34.98	5.41	15
		3/4 EHS	A1	T5b	34.98	3.23	9

MAXIMUM CABLE FORCES SUMMARY

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.0W 60°	66.75	7/16 EHS	A1a	31b	12.48	5.71	46
1.2D + 1.0W 60°	126.75	9/16 EHS	A1a	55b	21.00	9.51	45
1.2D + 1.0W 60°	186.75	9/16 EHS	A1a	79b	21.00	10.16	48
1.2D + 1.0W 60°	236.50	5/8 EHS	A1a	98b	25.44	13.96	55
1.2D + 1.0W 60°	286.75	3/4 EHS	A1a	T5a	34.98	19.21	55

MAXIMUM TORQUE ARM STRESS SUMMARY

Load Case	Elevation (ft)	Member	Type	Compression (%)	Tension (%)
1.2D + 1.0W 60°	67.00	PL 2 x 0.375"	Horiz	0	13.6
1.2D + 1.0W 60°	127.00	PL 2 x 0.375"	Horiz	0	20
1.2D + 1.0W 60°	187.00	PL 2 x 0.375"	Horiz	0	18.7
1.2D + 1.0W 60°	235.00	PL 2 x 0.375"	Horiz	0	23.2
1.2D + 1.0W 240°	287.00	C15 x 33.9	Torque Arm	0	2.4

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	263.50	0.1564	0.0243	0.0260	0.0352
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	276.50	0.1597	0.0250	0.0235	0.0343
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	286.75	0.1596	0.0259	0.3944	0.3952
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	293.25	0.1625	0.0258	0.0467	0.0527
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	296.50	0.1641	0.0258	0.0385	0.0457
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	263.50	0.1834	-0.0171	0.0368	0.0406
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	276.50	0.1894	-0.0132	0.0367	0.0386
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	286.75	0.1901	-0.0099	0.3957	0.3958
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	293.25	0.1941	-0.0100	0.0561	0.057
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	296.50	0.1967	-0.0100	0.0495	0.0503
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	263.50	0.1146	-0.0096	0.0062	0.0106
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	276.50	0.1136	-0.0056	0.0092	0.0107
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	286.75	0.1087	-0.0016	0.3891	0.3891
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	293.25	0.1092	-0.0016	0.0316	0.0316
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	296.50	0.1099	-0.0017	0.0174	0.0175
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	263.50	0.1526	0.0396	0.0262	0.047
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	276.50	0.1559	0.0402	0.0191	0.0445
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	286.75	0.1558	0.0411	0.3945	0.3965
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	293.25	0.1587	0.0410	0.0446	0.0597
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	296.50	0.1604	0.0409	0.0377	0.0549
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	263.50	0.1831	-0.0019	0.0364	0.0365
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	276.50	0.189	0.0040	0.0264	0.0267
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	286.75	0.19	0.0078	0.3962	0.3963
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	293.25	0.1941	0.0077	0.0557	0.0562
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	296.50	0.1965	0.0077	0.0486	0.0492
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	263.50	0.1302	-0.0017	0.0115	0.0116
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	276.50	0.1302	0.0042	0.0158	0.0161
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	286.75	0.1263	0.0085	0.3919	0.3919
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	293.25	0.1274	0.0084	0.0345	0.0353
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	296.50	0.1281	0.0084	0.0216	0.0227
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	263.50	0.1715	0.0406	0.0331	0.0518
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	276.50	0.1764	0.0411	0.0365	0.055
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	286.75	0.1773	0.0419	0.3985	0.4006
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	293.25	0.1807	0.0418	0.0493	0.0637
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	296.50	0.1827	0.0418	0.0431	0.0593
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	263.50	0.2016	-0.0101	0.0438	0.0449
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	276.50	0.2091	-0.0060	0.0445	0.0447
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	286.75	0.2108	-0.0019	0.4009	0.4009
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	293.25	0.2155	-0.0021	0.0593	0.0594
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	296.50	0.2181	-0.0022	0.0543	0.0543
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	263.50	0.1307	-0.0174	0.0107	0.0194
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	276.50	0.1306	-0.0137	0.0108	0.0162
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	286.75	0.1262	-0.0102	0.3920	0.3921
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	293.25	0.127	-0.0102	0.0344	0.0358
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	296.50	0.1281	-0.0102	0.0200	0.0224
1.2D + 1.0Ev + 1.0Eh 330° Seismic	263.50	0.0401	-0.0096	0.0133	0.0162
1.2D + 1.0Ev + 1.0Eh 330° Seismic	276.50	0.0424	-0.0052	0.0127	0.0137
1.2D + 1.0Ev + 1.0Eh 330° Seismic	286.75	0.0428	-0.0011	0.3327	0.3327
1.2D + 1.0Ev + 1.0Eh 330° Seismic	293.25	0.0438	-0.0011	0.0319	0.0319
1.2D + 1.0Ev + 1.0Eh 330° Seismic	296.50	0.0442	-0.0011	0.0146	0.0146
1.2D + 1.0Ev + 1.0Eh 300° Seismic	263.50	0.0337	-0.0091	0.0108	0.014
1.2D + 1.0Ev + 1.0Eh 300° Seismic	276.50	0.0355	-0.0048	0.0099	0.0109
1.2D + 1.0Ev + 1.0Eh 300° Seismic	286.75	0.0356	-0.0011	0.3333	0.3333
1.2D + 1.0Ev + 1.0Eh 300° Seismic	293.25	0.0364	-0.0010	0.0291	0.0291
1.2D + 1.0Ev + 1.0Eh 300° Seismic	296.50	0.0368	-0.0010	0.0137	0.0137
1.2D + 1.0Ev + 1.0Eh 240° Seismic	263.50	0.0281	-0.0090	0.0093	0.0128
1.2D + 1.0Ev + 1.0Eh 240° Seismic	276.50	0.0295	-0.0047	0.0092	0.0102
1.2D + 1.0Ev + 1.0Eh 240° Seismic	286.75	0.0293	-0.0009	0.3305	0.3305
1.2D + 1.0Ev + 1.0Eh 240° Seismic	293.25	0.0299	-0.0009	0.0296	0.0296

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 240° Seismic	296.50	0.0303	-0.0009	0.0116	0.0116
1.2D + 1.0Ev + 1.0Eh 210° Seismic	263.50	0.0293	-0.0090	0.0095	0.013
1.2D + 1.0Ev + 1.0Eh 210° Seismic	276.50	0.0308	-0.0047	0.0087	0.0097
1.2D + 1.0Ev + 1.0Eh 210° Seismic	286.75	0.0307	-0.0009	0.3325	0.3325
1.2D + 1.0Ev + 1.0Eh 210° Seismic	293.25	0.0314	-0.0009	0.0287	0.0287
1.2D + 1.0Ev + 1.0Eh 210° Seismic	296.50	0.0317	-0.0009	0.0127	0.0128
1.2D + 1.0Ev + 1.0Eh 180° Seismic	263.50	0.0339	-0.0089	0.0105	0.0137
1.2D + 1.0Ev + 1.0Eh 180° Seismic	276.50	0.0357	-0.0046	0.0098	0.0109
1.2D + 1.0Ev + 1.0Eh 180° Seismic	286.75	0.0356	-0.0009	0.3333	0.3333
1.2D + 1.0Ev + 1.0Eh 180° Seismic	293.25	0.0364	-0.0008	0.0287	0.0287
1.2D + 1.0Ev + 1.0Eh 180° Seismic	296.50	0.0368	-0.0008	0.0133	0.0133
1.2D + 1.0Ev + 1.0Eh 120° Seismic	263.50	0.0452	-0.0095	0.0152	0.0177
1.2D + 1.0Ev + 1.0Eh 120° Seismic	276.50	0.0479	-0.0051	0.0139	0.0147
1.2D + 1.0Ev + 1.0Eh 120° Seismic	286.75	0.0486	-0.0009	0.3331	0.3331
1.2D + 1.0Ev + 1.0Eh 120° Seismic	293.25	0.0497	-0.0009	0.0330	0.033
1.2D + 1.0Ev + 1.0Eh 120° Seismic	296.50	0.0502	-0.0009	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh 90° Seismic	263.50	0.0476	-0.0096	0.0157	0.0182
1.2D + 1.0Ev + 1.0Eh 90° Seismic	276.50	0.0504	-0.0051	0.0139	0.0147
1.2D + 1.0Ev + 1.0Eh 90° Seismic	286.75	0.0512	-0.0010	0.3354	0.3354
1.2D + 1.0Ev + 1.0Eh 90° Seismic	293.25	0.0523	-0.0010	0.0321	0.0321
1.2D + 1.0Ev + 1.0Eh 90° Seismic	296.50	0.0528	-0.0010	0.0167	0.0168
1.2D + 1.0Ev + 1.0Eh 60° Seismic	263.50	0.0483	-0.0095	0.0153	0.018
1.2D + 1.0Ev + 1.0Eh 60° Seismic	276.50	0.0511	-0.0051	0.0135	0.0144
1.2D + 1.0Ev + 1.0Eh 60° Seismic	286.75	0.0517	-0.0010	0.3363	0.3363
1.2D + 1.0Ev + 1.0Eh 60° Seismic	293.25	0.0528	-0.0010	0.0295	0.0295
1.2D + 1.0Ev + 1.0Eh 60° Seismic	296.50	0.0533	-0.0010	0.0167	0.0167
1.2D + 1.0Ev + 1.0Eh Normal Seismic	263.50	0.0454	-0.0096	0.0150	0.0176
1.2D + 1.0Ev + 1.0Eh Normal Seismic	276.50	0.0481	-0.0051	0.0142	0.0151
1.2D + 1.0Ev + 1.0Eh Normal Seismic	286.75	0.0486	-0.0011	0.3331	0.3331
1.2D + 1.0Ev + 1.0Eh Normal Seismic	293.25	0.0497	-0.0011	0.0330	0.033
1.2D + 1.0Ev + 1.0Eh Normal Seismic	296.50	0.0502	-0.0010	0.0148	0.0148
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0" Radial Ice	263.50	0.0399	-0.0063	0.0036	0.0071
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0" Radial Ice	276.50	0.04	-0.0027	0.0044	0.005
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0" Radial Ice	286.75	0.0386	0.0011	0.3725	0.3725
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0" Radial Ice	293.25	0.0389	0.0009	0.0284	0.0284
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0" Radial Ice	296.50	0.0391	0.0009	0.0111	0.0111
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0" Radial Ice	263.50	0.0362	-0.0104	0.0034	0.0109
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0" Radial Ice	276.50	0.0361	-0.0065	0.0055	0.0082
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0" Radial Ice	286.75	0.0349	-0.0034	0.3733	0.3733
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0" Radial Ice	293.25	0.0351	-0.0033	0.0285	0.0287
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0" Radial Ice	296.50	0.0354	-0.0033	0.0114	0.0118
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0" Radial Ice	263.50	0.0263	-0.0085	0.0022	0.0088
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0" Radial Ice	276.50	0.0253	-0.0047	0.0067	0.0079
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0" Radial Ice	286.75	0.023	-0.0016	0.3677	0.3677
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0" Radial Ice	293.25	0.0229	-0.0015	0.0265	0.0266
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0" Radial Ice	296.50	0.0229	-0.0015	0.0081	0.0082
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0" Radial Ice	263.50	0.03	-0.0038	0.0031	0.0049
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0" Radial Ice	276.50	0.0294	0.0003	0.0064	0.0064
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0" Radial Ice	286.75	0.0279	0.0040	0.3723	0.3723
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0" Radial Ice	293.25	0.028	0.0037	0.0275	0.0277
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0" Radial Ice	296.50	0.0281	0.0037	0.0093	0.0099
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0" Radial Ice	263.50	0.0363	-0.0075	0.0036	0.0083
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0" Radial Ice	276.50	0.0362	-0.0035	0.0062	0.007
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0" Radial Ice	286.75	0.0348	0.0007	0.3734	0.3734
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0" Radial Ice	293.25	0.0352	0.0006	0.0281	0.0281
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0" Radial Ice	296.50	0.0353	0.0005	0.0103	0.0103
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0" Radial Ice	263.50	0.0446	-0.0075	0.0052	0.0091
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0" Radial Ice	276.50	0.045	-0.0035	0.0072	0.0079
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0" Radial Ice	286.75	0.0437	0.0008	0.3700	0.37

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0" Radial Ice	293.25	0.0441	0.0008	0.0283	0.0283
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0" Radial Ice	296.50	0.0443	0.0008	0.0125	0.0125
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0" Radial Ice	263.50	0.0498	-0.0039	0.0070	0.008
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0" Radial Ice	276.50	0.0506	0.0004	0.0081	0.0081
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0" Radial Ice	286.75	0.0499	0.0043	0.3749	0.3749
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0" Radial Ice	293.25	0.0504	0.0040	0.0288	0.029
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0" Radial Ice	296.50	0.0509	0.0040	0.0141	0.0145
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0" Radial Ice	263.50	0.0526	-0.0090	0.0076	0.0118
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0" Radial Ice	276.50	0.0536	-0.0051	0.0086	0.0098
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0" Radial Ice	286.75	0.053	-0.0017	0.3760	0.376
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0" Radial Ice	293.25	0.0537	-0.0017	0.0291	0.0292
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0" Radial Ice	296.50	0.0542	-0.0017	0.0147	0.0147
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0" Radial Ice	263.50	0.0448	-0.0104	0.0049	0.0113
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0" Radial Ice	276.50	0.0451	-0.0065	0.0061	0.0086
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0" Radial Ice	286.75	0.0436	-0.0035	0.3701	0.3701
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0" Radial Ice	293.25	0.044	-0.0034	0.0283	0.0285
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0" Radial Ice	296.50	0.0443	-0.0034	0.0114	0.0118
1.2D + 1.0W 330° 118 mph Wind with No Ice	263.50	1.2476	0.0382	0.4189	0.4205
1.2D + 1.0W 330° 118 mph Wind with No Ice	276.50	1.3327	0.0307	0.3985	0.3996
1.2D + 1.0W 330° 118 mph Wind with No Ice	286.75	1.3866	0.0166	0.8113	0.8113
1.2D + 1.0W 330° 118 mph Wind with No Ice	293.25	1.4337	0.0196	0.4709	0.4711
1.2D + 1.0W 330° 118 mph Wind with No Ice	296.50	1.4585	0.0201	0.4503	0.4505
1.2D + 1.0W 300° 118 mph Wind with No Ice	263.50	1.0079	-0.0435	0.2480	0.2518
1.2D + 1.0W 300° 118 mph Wind with No Ice	276.50	1.055	-0.0376	0.2471	0.2488
1.2D + 1.0W 300° 118 mph Wind with No Ice	286.75	1.0776	-0.0358	0.6886	0.6894
1.2D + 1.0W 300° 118 mph Wind with No Ice	293.25	1.1045	-0.0375	0.2750	0.2776
1.2D + 1.0W 300° 118 mph Wind with No Ice	296.50	1.1201	-0.0378	0.2778	0.2796
1.2D + 1.0W 240° 118 mph Wind with No Ice	263.50	1.3515	-0.0198	0.5019	0.502
1.2D + 1.0W 240° 118 mph Wind with No Ice	276.50	1.4565	-0.0155	0.5070	0.5071
1.2D + 1.0W 240° 118 mph Wind with No Ice	286.75	1.5249	-0.0034	0.8707	0.8707
1.2D + 1.0W 240° 118 mph Wind with No Ice	293.25	1.5816	-0.0057	0.5566	0.5566
1.2D + 1.0W 240° 118 mph Wind with No Ice	296.50	1.6113	-0.0063	0.5346	0.5347
1.2D + 1.0W 210° 118 mph Wind with No Ice	263.50	1.2241	0.0783	0.4123	0.4195
1.2D + 1.0W 210° 118 mph Wind with No Ice	276.50	1.3072	0.0689	0.4093	0.4151
1.2D + 1.0W 210° 118 mph Wind with No Ice	286.75	1.3601	0.0630	0.8066	0.8088
1.2D + 1.0W 210° 118 mph Wind with No Ice	293.25	1.4065	0.0658	0.4651	0.4686
1.2D + 1.0W 210° 118 mph Wind with No Ice	296.50	1.431	0.0663	0.4443	0.4482
1.2D + 1.0W 180° 118 mph Wind with No Ice	263.50	1.0068	0.0267	0.2465	0.2471
1.2D + 1.0W 180° 118 mph Wind with No Ice	276.50	1.0535	0.0307	0.2069	0.2091
1.2D + 1.0W 180° 118 mph Wind with No Ice	286.75	1.0773	0.0324	0.6906	0.6913
1.2D + 1.0W 180° 118 mph Wind with No Ice	293.25	1.1046	0.0342	0.2753	0.2774
1.2D + 1.0W 180° 118 mph Wind with No Ice	296.50	1.12	0.0344	0.2754	0.2773
1.2D + 1.0W 120° 118 mph Wind with No Ice	263.50	1.3755	0.0228	0.5171	0.5176
1.2D + 1.0W 120° 118 mph Wind with No Ice	276.50	1.484	0.0285	0.5227	0.5233
1.2D + 1.0W 120° 118 mph Wind with No Ice	286.75	1.5557	0.0241	0.8839	0.8842
1.2D + 1.0W 120° 118 mph Wind with No Ice	293.25	1.6147	0.0291	0.5704	0.5709
1.2D + 1.0W 120° 118 mph Wind with No Ice	296.50	1.6452	0.0295	0.5485	0.5489
1.2D + 1.0W 90° 118 mph Wind with No Ice	263.50	1.268	0.0804	0.4348	0.4419
1.2D + 1.0W 90° 118 mph Wind with No Ice	276.50	1.3563	0.0729	0.4579	0.4637
1.2D + 1.0W 90° 118 mph Wind with No Ice	286.75	1.413	0.0603	0.8280	0.8299
1.2D + 1.0W 90° 118 mph Wind with No Ice	293.25	1.4616	0.0634	0.4848	0.4878
1.2D + 1.0W 90° 118 mph Wind with No Ice	296.50	1.4873	0.0638	0.4646	0.468
1.2D + 1.0W 60° 118 mph Wind with No Ice	263.50	1.0505	-0.0184	0.2689	0.2695
1.2D + 1.0W 60° 118 mph Wind with No Ice	276.50	1.1022	-0.0135	0.2689	0.2689
1.2D + 1.0W 60° 118 mph Wind with No Ice	286.75	1.1278	-0.0064	0.7015	0.7015
1.2D + 1.0W 60° 118 mph Wind with No Ice	293.25	1.157	-0.0083	0.2901	0.2901
1.2D + 1.0W 60° 118 mph Wind with No Ice	296.50	1.1734	-0.0087	0.2934	0.2934
1.2D + 1.0W Normal 118 mph Wind with No Ice	263.50	1.3769	-0.0396	0.5145	0.5154
1.2D + 1.0W Normal 118 mph Wind with No Ice	276.50	1.4847	-0.0339	0.4797	0.4806

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W Normal 118 mph Wind with No Ice	286.75	1.5549	-0.0267	0.8807	0.8811
1.2D + 1.0W Normal 118 mph Wind with No Ice	293.25	1.6123	-0.0294	0.5674	0.568
1.2D + 1.0W Normal 118 mph Wind with No Ice	296.50	1.6434	-0.0300	0.5457	0.5466

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
1.2D + 1.0W Normal	0.00	0.00		1	0.00	127.75	-1.45
	240.00	0.00	0	A1	0.00	-3.20	2.81
	230.00	0.00	240	A1a	-36.18	-39.69	-23.00
	240.00	0.00	120	A1b	36.12	-37.93	-23.00
1.2D + 1.0W 60°	0.00	0.00		1	-1.20	124.48	-0.69
	240.00	0.00	0	A1	-1.74	-13.86	15.42
	230.00	0.00	240	A1a	-48.27	-50.80	-27.87
	240.00	0.00	120	A1b	12.49	-13.86	-9.22
1.2D + 1.0W 90°	0.00	0.00		1	-1.38	127.17	0.00
	240.00	0.00	0	A1	-2.23	-26.20	29.29
	230.00	0.00	240	A1a	-46.06	-48.36	-25.52
	240.00	0.00	120	A1b	5.00	-6.16	-3.82
1.2D + 1.0W 120°	0.00	0.00		1	-1.25	127.76	0.73
	240.00	0.00	0	A1	-1.86	-37.93	42.78
	230.00	0.00	240	A1a	-38.01	-39.69	-19.83
	240.00	0.00	120	A1b	2.43	-3.20	-1.40
1.2D + 1.0W 180°	0.00	0.00		1	0.01	122.67	1.40
	240.00	0.00	0	A1	-0.01	-48.48	55.51
	230.00	0.00	240	A1a	-14.08	-14.40	-6.16
	240.00	0.00	120	A1b	14.13	-13.80	-6.15
1.2D + 1.0W 210°	0.00	0.00		1	0.70	125.43	1.21
	240.00	0.00	0	A1	0.93	-46.26	52.57
	230.00	0.00	240	A1a	-5.75	-6.45	-2.39
	240.00	0.00	120	A1b	26.47	-26.24	-12.72
1.2D + 1.0W 240°	0.00	0.00		1	1.26	126.73	0.73
	240.00	0.00	0	A1	1.86	-38.13	42.93
	230.00	0.00	240	A1a	-2.48	-3.51	-1.43
	240.00	0.00	120	A1b	38.11	-38.13	-19.86
1.2D + 1.0W 300°	0.00	0.00		1	1.22	122.67	-0.69
	240.00	0.00	0	A1	1.74	-13.80	15.31
	230.00	0.00	240	A1a	-12.37	-14.40	-9.11
	240.00	0.00	120	A1b	48.07	-48.48	-27.76
1.2D + 1.0W 330°	0.00	0.00		1	0.70	126.14	-1.19
	240.00	0.00	0	A1	0.81	-6.14	6.20
	230.00	0.00	240	A1a	-24.23	-27.36	-16.51
	240.00	0.00	120	A1b	45.00	-46.17	-27.07
1.2D + 1.0Di + 1.0Wi Normal	0.00	0.00		1	0.00	91.45	-0.11
	240.00	0.00	0	A1	0.00	-13.18	16.31
	230.00	0.00	240	A1a	-16.46	-16.26	-9.63
	240.00	0.00	120	A1b	16.45	-15.53	-9.63
1.2D + 1.0Di + 1.0Wi 60°	0.00	0.00		1	-0.09	91.25	-0.05
	240.00	0.00	0	A1	-0.11	-13.90	17.15
	230.00	0.00	240	A1a	-17.24	-17.02	-9.95
	240.00	0.00	120	A1b	14.79	-13.90	-8.67
1.2D + 1.0Di + 1.0Wi 90°	0.00	0.00		1	-0.11	91.36	0.00
	240.00	0.00	0	A1	-0.14	-14.72	18.10
	230.00	0.00	240	A1a	-17.09	-16.83	-9.81
	240.00	0.00	120	A1b	14.27	-13.36	-8.30
1.2D + 1.0Di + 1.0Wi 120°	0.00	0.00		1	-0.10	91.45	0.06
	240.00	0.00	0	A1	-0.11	-15.53	19.06
	230.00	0.00	240	A1a	-16.57	-16.26	-9.44
	240.00	0.00	120	A1b	14.12	-13.18	-8.15
1.2D + 1.0Di + 1.0Wi 180°	0.00	0.00		1	0.00	91.18	0.12
	240.00	0.00	0	A1	0.00	-16.27	19.91
	230.00	0.00	240	A1a	-14.91	-14.57	-8.48
	240.00	0.00	120	A1b	14.91	-13.92	-8.48
1.2D + 1.0Di + 1.0Wi 210°	0.00	0.00		1	0.06	91.27	0.10
	240.00	0.00	0	A1	0.05	-16.08	19.70
	230.00	0.00	240	A1a	-14.33	-14.00	-8.21

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					(-) Uplift and (+) Down		
1.2D + 1.0Di + 1.0Wi 240°	240.00	0.00	120	A1b	15.75	-14.73	-8.94
	0.00	0.00		1	0.10	91.38	0.06
	240.00	0.00	0	A1	0.11	-15.54	19.07
	230.00	0.00	240	A1a	-14.13	-13.81	-8.16
	240.00	0.00	120	A1b	16.57	-15.54	-9.44
1.2D + 1.0Di + 1.0Wi 300°	0.00	0.00		1	0.10	91.18	-0.06
	240.00	0.00	0	A1	0.11	-13.92	17.15
	230.00	0.00	240	A1a	-14.80	-14.57	-8.67
	240.00	0.00	120	A1b	17.24	-16.27	-9.95
1.2D + 1.0Di + 1.0Wi 330°	0.00	0.00		1	0.06	91.31	-0.10
	240.00	0.00	0	A1	0.05	-13.36	16.51
	230.00	0.00	240	A1a	-15.61	-15.41	-9.17
	240.00	0.00	120	A1b	17.03	-16.08	-9.90
1.2D + 1.0Ev + 1.0Eh Normal	0.00	0.00		1	0.00	87.17	0.00
	240.00	0.00	0	A1	0.00	-12.16	15.05
	230.00	0.00	240	A1a	-14.20	-14.18	-8.20
	240.00	0.00	120	A1b	14.20	-13.54	-8.20
1.2D + 1.0Ev + 1.0Eh 60°	0.00	0.00		1	0.00	87.18	0.00
	240.00	0.00	0	A1	0.00	-12.62	15.50
	230.00	0.00	240	A1a	-14.59	-14.65	-8.43
	240.00	0.00	120	A1b	13.42	-12.62	-7.75
1.2D + 1.0Ev + 1.0Eh 90°	0.00	0.00		1	0.00	87.18	0.00
	240.00	0.00	0	A1	0.00	-13.08	15.95
	230.00	0.00	240	A1a	-14.49	-14.53	-8.36
	240.00	0.00	120	A1b	13.14	-12.29	-7.59
1.2D + 1.0Ev + 1.0Eh 120°	0.00	0.00		1	0.00	87.17	0.00
	240.00	0.00	0	A1	0.00	-13.54	16.40
	230.00	0.00	240	A1a	-14.20	-14.18	-8.20
	240.00	0.00	120	A1b	13.04	-12.16	-7.53
1.2D + 1.0Ev + 1.0Eh 180°	0.00	0.00		1	0.00	87.11	0.00
	240.00	0.00	0	A1	0.00	-13.99	16.84
	230.00	0.00	240	A1a	-13.42	-13.22	-7.75
	240.00	0.00	120	A1b	13.42	-12.62	-7.75
1.2D + 1.0Ev + 1.0Eh 210°	0.00	0.00		1	0.00	87.09	0.00
	240.00	0.00	0	A1	0.00	-13.86	16.72
	230.00	0.00	240	A1a	-13.14	-12.87	-7.58
	240.00	0.00	120	A1b	13.81	-13.07	-7.97
1.2D + 1.0Ev + 1.0Eh 240°	0.00	0.00		1	0.00	87.09	0.00
	240.00	0.00	0	A1	0.00	-13.53	16.39
	230.00	0.00	240	A1a	-13.03	-12.74	-7.52
	240.00	0.00	120	A1b	14.20	-13.53	-8.19
1.2D + 1.0Ev + 1.0Eh 300°	0.00	0.00		1	0.00	87.11	0.00
	240.00	0.00	0	A1	0.00	-12.62	15.50
	230.00	0.00	240	A1a	-13.42	-13.22	-7.75
	240.00	0.00	120	A1b	14.59	-13.99	-8.42
1.2D + 1.0Ev + 1.0Eh 330°	0.00	0.00		1	0.00	87.14	0.00
	240.00	0.00	0	A1	0.00	-12.28	15.17
	230.00	0.00	240	A1a	-13.81	-13.70	-7.98
	240.00	0.00	120	A1b	14.48	-13.87	-8.36
1.0D + 1.0W Service Normal	0.00	0.00		1	0.00	81.49	-0.44
	240.00	0.00	0	A1	0.00	-7.72	9.79
	230.00	0.00	240	A1a	-17.22	-17.46	-10.45
	240.00	0.00	120	A1b	17.21	-16.67	-10.45
1.0D + 1.0W Service 60°	0.00	0.00		1	-0.36	82.48	-0.21
	240.00	0.00	0	A1	-0.44	-11.07	13.47
	230.00	0.00	240	A1a	-20.65	-20.97	-11.92
	240.00	0.00	120	A1b	11.44	-11.07	-7.12
1.0D + 1.0W Service 90°	0.00	0.00		1	-0.42	81.99	0.01
	240.00	0.00	0	A1	-0.55	-13.86	16.78

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
	230.00	0.00	240	A1a	-19.84	-19.93	-11.21
	240.00	0.00	120	A1b	9.26	-8.70	-5.59
	0.00	0.00		1	-0.38	81.49	0.22
1.0D + 1.0W Service 120°	240.00	0.00	0	A1	-0.45	-16.67	20.13
	230.00	0.00	240	A1a	-17.66	-17.46	-9.69
	240.00	0.00	120	A1b	8.48	-7.72	-4.90
	0.00	0.00		1	0.00	82.08	0.42
1.0D + 1.0W Service 180°	240.00	0.00	0	A1	0.00	-20.03	23.80
	230.00	0.00	240	A1a	-11.86	-11.60	-6.35
	240.00	0.00	120	A1b	11.88	-11.08	-6.34
	0.00	0.00		1	0.22	81.62	0.37
1.0D + 1.0W Service 210°	240.00	0.00	0	A1	0.21	-19.07	22.78
	230.00	0.00	240	A1a	-9.47	-9.15	-5.23
	240.00	0.00	120	A1b	14.82	-13.90	-7.92
	0.00	0.00		1	0.38	81.21	0.22
1.0D + 1.0W Service 240°	240.00	0.00	0	A1	0.44	-16.72	20.16
	230.00	0.00	240	A1a	-8.48	-8.14	-4.90
	240.00	0.00	120	A1b	17.68	-16.72	-9.69
	0.00	0.00		1	0.37	82.08	-0.21
1.0D + 1.0W Service 300°	240.00	0.00	0	A1	0.44	-11.08	13.46
	230.00	0.00	240	A1a	-11.43	-11.60	-7.10
	240.00	0.00	120	A1b	20.61	-20.03	-11.90
	0.00	0.00		1	0.21	81.71	-0.37
1.0D + 1.0W Service 330°	240.00	0.00	0	A1	0.21	-8.69	10.80
	230.00	0.00	240	A1a	-14.24	-14.50	-8.85
	240.00	0.00	120	A1b	19.58	-19.02	-11.55
	0.00	0.00		1	0.00	87.24	0.00
1.2D + 1.0Ev + 1.5Eh Normal	240.00	0.00	0	A1	0.00	-11.72	14.62
	230.00	0.00	240	A1a	-14.41	-14.44	-8.32
	240.00	0.00	120	A1b	14.41	-13.79	-8.32
	0.00	0.00		1	0.00	87.25	0.00
1.2D + 1.0Ev + 1.5Eh 60°	240.00	0.00	0	A1	0.00	-12.41	15.29
	230.00	0.00	240	A1a	-15.00	-15.15	-8.66
	240.00	0.00	120	A1b	13.24	-12.41	-7.65
	0.00	0.00		1	0.00	87.25	0.00
1.2D + 1.0Ev + 1.5Eh 90°	240.00	0.00	0	A1	0.00	-13.10	15.97
	230.00	0.00	240	A1a	-14.84	-14.96	-8.57
	240.00	0.00	120	A1b	12.81	-11.91	-7.40
	0.00	0.00		1	0.00	87.24	0.00
1.2D + 1.0Ev + 1.5Eh 120°	240.00	0.00	0	A1	0.00	-13.79	16.64
	230.00	0.00	240	A1a	-14.42	-14.44	-8.32
	240.00	0.00	120	A1b	12.66	-11.72	-7.31
	0.00	0.00		1	0.00	87.14	0.00
1.2D + 1.0Ev + 1.5Eh 180°	240.00	0.00	0	A1	0.00	-14.46	17.31
	230.00	0.00	240	A1a	-13.24	-12.99	-7.64
	240.00	0.00	120	A1b	13.24	-12.40	-7.64
	0.00	0.00		1	0.00	87.12	0.00
1.2D + 1.0Ev + 1.5Eh 210°	240.00	0.00	0	A1	0.00	-14.28	17.12
	230.00	0.00	240	A1a	-12.81	-12.47	-7.39
	240.00	0.00	120	A1b	13.82	-13.09	-7.98
	0.00	0.00		1	0.00	87.11	0.00
1.2D + 1.0Ev + 1.5Eh 240°	240.00	0.00	0	A1	0.00	-13.77	16.63
	230.00	0.00	240	A1a	-12.65	-12.28	-7.30
	240.00	0.00	120	A1b	14.40	-13.77	-8.31
	0.00	0.00		1	0.00	87.14	0.00
1.2D + 1.0Ev + 1.5Eh 300°	240.00	0.00	0	A1	0.00	-12.40	15.28
	230.00	0.00	240	A1a	-13.23	-12.99	-7.64
	240.00	0.00	120	A1b	14.99	-14.46	-8.65
1.2D + 1.0Ev + 1.5Eh 330°	0.00	0.00		1	0.00	87.19	0.00

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down* FX* (kip)	FY* (kip)	FZ* (kip)
	240.00	0.00	0	A1	0.00	-11.90	14.79
	230.00	0.00	240	A1a	-13.82	-13.71	-7.98
	240.00	0.00	120	A1b	14.84	-14.28	-8.57

MAXIMUM GUY ANCHOR REACTIONS

Radius (ft)	Drop (ft)	Azimuth (deg)	Uplift (kip)	Shear (kip)
230.00	0.00	240	50.80	55.74
240.00	0.00	0	48.48	55.51
240.00	0.00	120	48.48	55.51

MAXIMUM REACTIONS SUMMARY

Base / Anchor Group	Vertical Load *(Compression for Base; Uplift for Anchor)*	Horizontal Shear
Guyed – Pivot Base	127.76 (kip)	1.46 (kip)
Guyed Anchor - A1	50.80 (kip)	55.74 (kip)

MAXIMUM GUY ANCHOR REACTIONS WITH OVERSTRENGTH

Radius (ft)	Drop (ft)	Azimuth (deg)	Uplift (kip)	Shear (kip)
230.00	0.00	240	50.80	55.74
240.00	0.00	0	48.48	55.51
240.00	0.00	120	48.48	55.51

MAXIMUM REACTIONS SUMMARY WITH OVERSTRENGTH

Base / Anchor Group	Vertical Load *(Compression for Base; Uplift for Anchor)*	Horizontal Shear
Guyed – Pivot Base w/Overstrength	127.76 (kip)	1.46 (kip)
Guyed Anchor - A1 w/Overstrength	50.80 (kip)	55.74 (kip)