



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 291 ft Self Support Tower
ATC Asset Name : SMITH PRINCE NC
ATC Asset Number : 280860
Engineering Number : 14922096_C3_02
Proposed Carrier : T-MOBILE
Carrier Site Name : ATC 280860
Carrier Site Number : 5RA1141A
Site Location : 538 Smith Prince Rd
FUQUAY VARINA, NC 27526-6138
35.5086° N, 78.8799° W
County : Harnett
Date : November 6, 2024
Max Usage : 67%
Analysis Result : Pass



Digitally
signed by
Dalton
Wally Dalton Wally
Date:
2024.11.08
00:16:38 -05'00'

COA: P-1177



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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 291 ft Self Support tower to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower:	Nello Drawing #217592, dated November 27, 2013
Foundation:	ATC Project #56426473, dated February 11, 2014
Geotechnical:	TEP Project #47297.5597 dated October 21, 2013

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:	90 mph (3-second gust, Vasd) / 116 mph (3-second gust, Vult)
Basic Wind Speed w/ Ice:	30 mph (3-second gust) w/ 0.75" radial ice concurrent
Code(s):	ANSI/TIA-222-G / 2015 IBC / 2018 North Carolina Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.18, S ₁ = 0.08
Site Class:	D - Stiff Soil - 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	51.9%	Member X	Section 2	Pass
Diagonal	62.0%	Block Shear	Section 3	Pass
Horizontal	5.9%	Member Z	Section 15	Pass
Bolt	34.3%	-	Section 7	Pass
Serviceability Usage	8.4%	Deflection	Elevation 291 ft	Pass
Foundation	55.7%	Down	Base	Pass
Foundation	54.4%	Moment	Base	Pass
Foundation	66.6%	Shear	Base	Pass
Foundation	51.4%	Uplift	Base	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Uplift (k)	Shear (k)
Self Support Base (Global)	8,459.1	76.3	-	58.2
Self Support Base (Local)	-	374.3	303.8	36.1

**Reactions shown are maximum overall and not limited by Load Case*

Foundation usages were calculated by comparing the maximum reactions from this analysis to the reactions from the original design drawings.



T-MOBILE Final Loading

Elev (ft)	Qty	Equipment	Lines
265.0	3	Amphenol Antel APXVAALL24M-U-J20	(2) 2.00" (50.8mm) Hybrid
	3	Ericsson Radio 4460 B25+B66	
	3	Ericsson Radio 4480 B71+B85	
	3	Sector Frame	

Install proposed lines on the tower face with the least amount of existing lines.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
290.3	3	Raycap DC9-48-60-24-8C-EV (Enclosure)	-	AT&T MOBILITY
289.8	3	Ericsson RRUS 4415 B25	-	AT&T MOBILITY
	3	Ericsson RRUS 4426 B66		
	3	Ericsson RRUS 4478 B14 (16.5" Height)		
	3	Ericsson Radio 4415 B30		
285.0	3	Sector Frame	-	-
	3	Ericsson RRUS 4449 B5, B12	(3) 0.39" (10mm) Fiber Trunk (6) 0.92" (23.4mm) Cable	AT&T MOBILITY
	6	Commscope NNH4-65C-R6-V3 (102.5 lbs)		
119.2	1	1' Yagi	-	OTHER
119.0	-	-	(1) 1/2" Coax	OTHER
105.0	3	Light Sector Frame	-	-
	1	Raycap RDIDC-9181-PF-48	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	3	Fujitsu TA08025-B604		
	3	Fujitsu TA08025-B605		
	3	JMA Wireless MX08FRO665-21		

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



Standard Conditions

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

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

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services, PLLC and used in the performance of our engineering services is correct and complete.

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

Unless explicitly agreed by both the client and A.T. Engineering Services, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

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

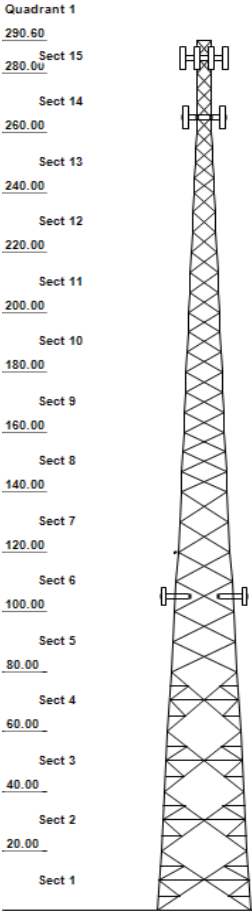
ANALYSIS PARAMETERS

Design Wind: 90 mph	Ice Wind: 30 mph w/ 0.75" ice	Service Wind: 60 mph
Structure Class: II	Exposure: C	S_s: 0.177 S_i: 0.084
		Topo Category: 1
Structure Height: 291 ft	Base Elevation: 0 ft	Shape: Triangle
Base Width: 28.00 ft	Top Width: 5.00 ft	

TOWER SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	PX 50 ksi 12" DIA PIPE	SAE 36 ksi 4X4X0.3125	
2	PST 50 ksi 12" DIA PIPE	SAE 36 ksi 4X4X0.3125	
3 - 5	PST 50 ksi 12" DIA PIPE	SAE 36 ksi 4X4X0.25	
6	PST 50 ksi 10" DIA PIPE	SAE 36 ksi 3.5X3.5X0.25	
7	PST 50 ksi 10" DIA PIPE	SAE 36 ksi 3X3X0.25	
8 - 9	PST 50 ksi 10" DIA PIPE	SAE 36 ksi 3X3X0.1875	
10	PST 50 ksi 8" DIA PIPE	SAE 36 ksi 3X3X0.1875	
11	PST 50 ksi 8" DIA PIPE	SAE 36 ksi 2.5X2.5X0.1875	
12	PST 50 ksi 6" DIA PIPE	SAE 36 ksi 2.5X2.5X0.1875	
13	PST 50 ksi 4" DIA PIPE	SAE 36 ksi 2X2X0.1875	
14	PST 50 ksi 3-1/2" DIA PIPE	SAE 36 ksi 2X2X0.1875	
15	PST 50 ksi 2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.125	SAE 36 ksi 1.75X1.75X0.125

Tower Elevation View



SECONDARY BRACING MEMBERS

Section	Sub Diagonal 1	Sub Diagonal 2	Sub Diagonal 3
1	S3X3X0.1875	S3X3X0.1875	-
2	S3X3X0.1875	S2.5X2.5X0.1875	-
3	S3X3X0.1875	S3X3X0.1875	-
4	S2.5X2.5X0.1875	S2.5X2.5X0.1875	-

Section	Sub Horizontal 1	Sub Horizontal 2	Sub Horizontal 3
1	S3X3X0.1875	S4X4X0.3125	S3X3X0.1875
2	S3X3X0.1875	S4X4X0.25	S3X3X0.1875
3	S2.5X2.5X0.1875	S3.5X3.5X0.25	S2.5X2.5X0.1875
4	S2.5X2.5X0.1875	S3.5X3.5X0.25	S2.5X2.5X0.1875

DISCRETE APPURTENANCE

LINEAR APPURTENANCE

Elev (ft)	Description	Elev (ft)	Description
290.3	(3) Raycap DC9-48-60-24-8C-EV (Enclos		
289.8	(3) Ericsson RRUS 4426 B66		
289.8	(3) Ericsson RRUS 4415 B25		
289.8	(3) Ericsson Radio 4415 B30		
289.8	(3) Ericsson RRUS 4478 B14 (16.5" Heig		
285.0	(6) Commscope NNH4-65C-R6-V3 (102.5		
285.0	(3) Generic Round Sector Frame		
285.0	(3) Ericsson RRUS 4449 B5, B12		
265.0	(3) Amphenol Antel APXVAALL24M-U-J2		
265.0	(3) Generic Sector Frame		
265.0	(3) Ericsson Radio 4460 B25+B66		
265.0	(3) Ericsson Radio 4480 B71+B85		
119.2	(1) Generic 1' Yagi		
105.0	(1) Raycap RDIDC-9181-PF-48		
105.0	(3) Fujitsu TA08025-B605		
105.0	(3) Generic Flat Light Sector Frame		
105.0	(3) JMA Wireless MX08FRO665-21		
105.0	(3) Fujitsu TA08025-B604		

GLOBAL BASE REACTIONS

	DL+WL	DL+WL+IL
Moment (k-ft):	8,459.13	1,159.98
Axial (k):	76.26	169.07
Shear (k):	58.18	7.64

INDIVIDUAL BASE REACTIONS

Comp (k):	374.27
Uplift (k):	303.80
Shear (k):	36.14

ASSET: 280860, SMITH PRINCE NC

CODE: ANSI/TIA-222-G

CUSTOMER: T-MOBILE

PROJECT: 14922096_C3_02

ANALYSIS PARAMETERS

Location:	Harnett County, NC	Height:	290.6 ft
Type and Shape:	Self Support, Triangle	Base Elevation:	0.00 ft
Manufacturer:	Nello	Bottom Face Width:	28.00 ft
		Top Face Width:	5.00 ft
		Anchor Bolt Detail Type:	c

ICE & WIND PARAMETERS

Structure Class:	II	Design Wind Speed Without Ice:	90 mph
Exposure Category:	C	Design Wind Speed with Ice:	30 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	0.75 in

SEISMIC PARAMETERS

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil	Period Based on Rayleigh Method (sec):	1.23
T_L (sec):	8	P:	1.3
S_{ds}:	0.189	S_{d1}:	0.134
S_s:	0.177	S₁:	0.084
F_a:	1.600	F_v:	2.400
		C_s:	0.036
		C_s Max:	0.036
		C_s Min:	0.030

LOAD CASES

1.2D + 1.6W Normal	1.2D + 1.6W Normal - 90 mph Wind with No Ice
1.2D + 1.6W 60°	1.2D + 1.6W 60° - 90 mph Wind with No Ice
1.2D + 1.6W 90°	1.2D + 1.6W 90° - 90 mph Wind with No Ice
1.2D + 1.6W 120°	1.2D + 1.6W 120° - 90 mph Wind with No Ice
1.2D + 1.6W 180°	1.2D + 1.6W 180° - 90 mph Wind with No Ice
1.2D + 1.6W 210°	1.2D + 1.6W 210° - 90 mph Wind with No Ice
1.2D + 1.6W 240°	1.2D + 1.6W 240° - 90 mph Wind with No Ice
1.2D + 1.6W 300°	1.2D + 1.6W 300° - 90 mph Wind with No Ice
1.2D + 1.6W 330°	1.2D + 1.6W 330° - 90 mph Wind with No Ice
0.9D + 1.6W Normal	0.9D + 1.6W Normal - 90 mph Wind with No Ice (Reduced DL)
0.9D + 1.6W 60°	0.9D + 1.6W 60° - 90 mph Wind with No Ice (Reduced DL)
0.9D + 1.6W 90°	0.9D + 1.6W 90° - 90 mph Wind with No Ice (Reduced DL)
0.9D + 1.6W 120°	0.9D + 1.6W 120° - 90 mph Wind with No Ice (Reduced DL)
0.9D + 1.6W 180°	0.9D + 1.6W 180° - 90 mph Wind with No Ice (Reduced DL)
0.9D + 1.6W 210°	0.9D + 1.6W 210° - 90 mph Wind with No Ice (Reduced DL)
0.9D + 1.6W 240°	0.9D + 1.6W 240° - 90 mph Wind with No Ice (Reduced DL)
0.9D + 1.6W 300°	0.9D + 1.6W 300° - 90 mph Wind with No Ice (Reduced DL)
0.9D + 1.6W 330°	0.9D + 1.6W 330° - 90 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	1.2D + 1.0Di + 1.0Wi Normal - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 60°	1.2D + 1.0Di + 1.0Wi 60° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 90°	1.2D + 1.0Di + 1.0Wi 90° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 120°	1.2D + 1.0Di + 1.0Wi 120° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 180°	1.2D + 1.0Di + 1.0Wi 180° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 210°	1.2D + 1.0Di + 1.0Wi 210° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 240°	1.2D + 1.0Di + 1.0Wi 240° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 300°	1.2D + 1.0Di + 1.0Wi 300° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 330°	1.2D + 1.0Di + 1.0Wi 330° - 30 mph Wind with 0.75" Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	(1.2 + 0.2Sds) * DL + E Normal - Seismic
(1.2 + 0.2Sds) * DL + E 60°	(1.2 + 0.2Sds) * DL + E 60° - Seismic
(1.2 + 0.2Sds) * DL + E 90°	(1.2 + 0.2Sds) * DL + E 90° - Seismic

LOAD CASES

(1.2 + 0.2Sds) * DL + E 120°	(1.2 + 0.2Sds) * DL + E 120° - Seismic
(1.2 + 0.2Sds) * DL + E 180°	(1.2 + 0.2Sds) * DL + E 180° - Seismic
(1.2 + 0.2Sds) * DL + E 210°	(1.2 + 0.2Sds) * DL + E 210° - Seismic
(1.2 + 0.2Sds) * DL + E 240°	(1.2 + 0.2Sds) * DL + E 240° - Seismic
(1.2 + 0.2Sds) * DL + E 300°	(1.2 + 0.2Sds) * DL + E 300° - Seismic
(1.2 + 0.2Sds) * DL + E 330°	(1.2 + 0.2Sds) * DL + E 330° - Seismic
(0.9 - 0.2Sds) * DL + E Normal	(0.9 - 0.2Sds) * DL + E Normal - Seismic (Reduced DL)
(0.9 - 0.2Sds) * DL + E 60°	(0.9 - 0.2Sds) * DL + E 60° - Seismic (Reduced DL)
(0.9 - 0.2Sds) * DL + E 90°	(0.9 - 0.2Sds) * DL + E 90° - Seismic (Reduced DL)
(0.9 - 0.2Sds) * DL + E 120°	(0.9 - 0.2Sds) * DL + E 120° - Seismic (Reduced DL)
(0.9 - 0.2Sds) * DL + E 180°	(0.9 - 0.2Sds) * DL + E 180° - Seismic (Reduced DL)
(0.9 - 0.2Sds) * DL + E 210°	(0.9 - 0.2Sds) * DL + E 210° - Seismic (Reduced DL)
(0.9 - 0.2Sds) * DL + E 240°	(0.9 - 0.2Sds) * DL + E 240° - Seismic (Reduced DL)
(0.9 - 0.2Sds) * DL + E 300°	(0.9 - 0.2Sds) * DL + E 300° - Seismic (Reduced DL)
(0.9 - 0.2Sds) * DL + E 330°	(0.9 - 0.2Sds) * DL + E 330° - Seismic (Reduced DL)
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

TOWER LOADING - DISCRETE APPURTENANCE

Discrete Appurtenance Properties for LC: 1.2D + 1.6W

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)
290.3	Raycap DC9-48-60-24-8C-EV (Enc	3	19	2.7	2.2	12.4	9.7	0.80	0.67	0.0	0.00	27.92	163	67
289.8	Ericsson RRUS 4426 B66	3	48	1.6	1.3	13.2	5.8	0.80	0.50	0.0	0.00	27.91	75	174
289.8	Ericsson Radio 4415 B30	3	43	1.6	1.3	13.2	5.0	0.80	0.50	0.0	0.00	27.91	75	155
289.8	Ericsson RRUS 4415 B25	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.00	27.91	84	166
289.8	Ericsson RRUS 4478 B14 (16.5"	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	27.91	84	216
285.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	27.81	89	256
285.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	27.81	821	1080
285.0	Commscope NNH4-65C-R6-V3 (102.	6	103	17.1	8.0	19.6	7.8	0.80	0.64	0.0	0.00	27.81	1984	738
265.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	27.39	154	392
265.0	Ericsson Radio 4480 B71+B85	3	93	2.8	1.8	15.4	7.5	0.80	0.67	0.0	0.00	27.39	168	335
265.0	Amphenol Antel APXVAALL24M-U-J	3	86	17.1	8.0	19.7	8.5	0.80	0.65	0.0	0.00	27.39	993	310
265.0	Generic Sector Frame	3	800	20.0	0.0	0.0	0.0	0.75	0.75	0.0	0.00	27.39	1257	2880
119.2	Generic 1' Yagi	1	5	0.4	1.0	12.0	2.0	1.00	1.00	0.0	0.00	23.15	12	6
105.0	Raycap RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	22.54	46	26
105.0	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	22.54	72	270
105.0	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	22.54	72	230
105.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.00	22.54	588	232
105.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	22.54	827	1440
Totals		53	7,476	413.1									7,564	8,972

Discrete Appurtenance Properties for LC: 0.9D + 1.6W

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)
290.3	Raycap DC9-48-60-24-8C-EV (Enc	3	19	2.7	2.2	12.4	9.7	0.80	0.67	0.0	0.00	27.92	163	50
289.8	Ericsson RRUS 4426 B66	3	48	1.6	1.3	13.2	5.8	0.80	0.50	0.0	0.00	27.91	75	131
289.8	Ericsson Radio 4415 B30	3	43	1.6	1.3	13.2	5.0	0.80	0.50	0.0	0.00	27.91	75	116
289.8	Ericsson RRUS 4415 B25	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.00	27.91	84	124
289.8	Ericsson RRUS 4478 B14 (16.5"	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	27.91	84	162
285.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	27.81	89	192
285.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	27.81	821	810
285.0	Commscope NNH4-65C-R6-V3 (102.	6	103	17.1	8.0	19.6	7.8	0.80	0.64	0.0	0.00	27.81	1984	554
265.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	27.39	154	294
265.0	Ericsson Radio 4480 B71+B85	3	93	2.8	1.8	15.4	7.5	0.80	0.67	0.0	0.00	27.39	168	251
265.0	Amphenol Antel APXVAALL24M-U-J	3	86	17.1	8.0	19.7	8.5	0.80	0.65	0.0	0.00	27.39	993	232
265.0	Generic Sector Frame	3	800	20.0	0.0	0.0	0.0	0.75	0.75	0.0	0.00	27.39	1257	2160
119.2	Generic 1' Yagi	1	5	0.4	1.0	12.0	2.0	1.00	1.00	0.0	0.00	23.15	12	4
105.0	Raycap RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	22.54	46	20
105.0	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	22.54	72	202
105.0	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	22.54	72	173
105.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.00	22.54	588	174
105.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	22.54	827	1080
Totals		53	7,476	413.1									7,564	6,729

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)
290.3	Raycap DC9-48-60-24-8C-EV (Enc	3	108	3.9	2.2	12.4	9.7	0.80	0.67	0.0	0.00	3.10	17	335
289.8	Ericsson RRUS 4426 B66	3	96	2.6	1.3	13.2	5.8	0.80	0.50	0.0	0.00	3.10	8	317
289.8	Ericsson Radio 4415 B30	3	88	2.6	1.3	13.2	5.0	0.80	0.50	0.0	0.00	3.10	8	290
289.8	Ericsson RRUS 4415 B25	3	98	2.8	1.4	13.4	5.9	0.80	0.50	0.0	0.00	3.10	9	323
289.8	Ericsson RRUS 4478 B14 (16.5"	3	119	2.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	3.10	9	393
285.0	Ericsson RRUS 4449 B5, B12	3	140	3.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	3.09	9	462
285.0	Generic Round Sector Frame	3	693	32.1	0.0	0.0	0.0	0.75	0.67	0.0	0.00	3.09	127	2259
285.0	Commscope NNH4-65C-R6-V3 (102.	6	453	21.0	8.0	19.6	7.8	0.80	0.64	0.0	0.00	3.09	170	2843
265.0	Ericsson Radio 4460 B25+B66	3	203	3.7	1.6	15.7	12.1	0.80	0.67	0.0	0.00	3.04	15	674
265.0	Ericsson Radio 4480 B71+B85	3	172	4.0	1.8	15.4	7.5	0.80	0.67	0.0	0.00	3.04	17	573
265.0	Amphenol Antel APXVAALL24M-U-J	3	445	21.0	8.0	19.7	8.5	0.80	0.65	0.0	0.00	3.04	85	1386
265.0	Generic Sector Frame	3	1985	37.8	0.0	0.0	0.0	0.75	0.75	0.0	0.00	3.04	165	6434
119.2	Generic 1' Yagi	1	19	1.4	1.0	12.0	2.0	1.00	1.00	0.0	0.00	2.57	3	20
105.0	Raycap RDIDC-9181-PF-48	1	76	2.7	1.3	14.0	8.0	0.80	1.00	0.0	0.00	2.50	5	80
105.0	Fujitsu TA08025-B605	3	135	2.8	1.3	15.0	9.1	0.80	0.50	0.0	0.00	2.50	7	449
105.0	Fujitsu TA08025-B604	3	119	2.8	1.3	15.0	7.9	0.80	0.50	0.0	0.00	2.50	7	397
105.0	JMA Wireless MX08FRO665-21	3	309	15.2	6.0	20.0	8.0	0.80	0.64	0.0	0.00	2.50	50	966
105.0	Generic Flat Light Sector Fram	3	687	32.3	0.0	0.0	0.0	0.75	0.67	0.0	0.00	2.50	104	2300
Totals		53	19,006	637.7									813	20,501

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)
290.3	Raycap DC9-48-60-24-8C-EV (Enc	3	19	2.7	2.2	12.4	9.7	0.80	0.67	0.0	0.00	12.41	45	56
289.8	Ericsson RRUS 4426 B66	3	48	1.6	1.3	13.2	5.8	0.80	0.50	0.0	0.00	12.40	21	145

ASSET: 280860, SMITH PRINCE NC

CODE: ANSI/TIA-222-G

CUSTOMER: T-MOBILE

PROJECT: 14922096_C3_02

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)
289.8	Ericsson Radio 4415 B30	3	43	1.6	1.3	13.2	5.0	0.80	0.50	0.0	0.00	12.40	21	129
289.8	Ericsson RRUS 4415 B25	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.00	12.40	23	138
289.8	Ericsson RRUS 4478 B14 (16.5"	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	12.40	23	180
285.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	12.36	25	213
285.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	12.36	228	900
285.0	Commscope NNH4-65C-R6-V3 (102.	6	103	17.1	8.0	19.6	7.8	0.80	0.64	0.0	0.00	12.36	551	615
265.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	12.17	43	327
265.0	Ericsson Radio 4480 B71+B85	3	93	2.8	1.8	15.4	7.5	0.80	0.67	0.0	0.00	12.17	47	279
265.0	Amphenol Antel APXVAALL24M-U-J	3	86	17.1	8.0	19.7	8.5	0.80	0.65	0.0	0.00	12.17	276	258
265.0	Generic Sector Frame	3	800	20.0	0.0	0.0	0.0	0.75	0.75	0.0	0.00	12.17	349	2400
119.2	Generic 1' Yagi	1	5	0.4	1.0	12.0	2.0	1.00	1.00	0.0	0.00	10.29	3	5
105.0	Raycap RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	10.02	13	22
105.0	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	10.02	20	225
105.0	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	10.02	20	192
105.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.00	10.02	163	194
105.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	10.02	230	1200
Totals		53	7,476	413.1									2,101	7,476

ASSET: 280860, SMITH PRINCE NC

CODE: ANSI/TIA-222-G

CUSTOMER: T-MOBILE

PROJECT: 14922096_C3_02

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	285.0	0.39" (10mm) Fiber Trunk	3	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	285.0	Waveguide	1	2.00	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.0	285.0	0.92" (23.4mm) Cable	6	0.92	0.89	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	265.0	2.00" (50.8mm) Hybrid	2	2.00	3.09	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	119.0	1/2" Coax	1	0.63	0.15	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	105.0	1.60" (40.6mm) Hybrid	1	1.60	2.34	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	105.0	Waveguide	1	2.00	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.6W Normal

Gust Response Factor (Gh): 0.85

90 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 _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	1.00	1.00	0.0	7.20	19.61	0.00	386	0	742	114	856
14	270	27.50	8.977	13.333	0.00	0.209	2.57	1.00	1.00	0.0	16.37	42.01	0.00	1466	0	1571	495	2066
13	250	27.05	9.638	15.014	0.00	0.201	2.59	1.00	1.00	0.0	17.68	45.81	0.00	1738	0	1686	619	2305
12	230	26.58	11.593	22.104	0.00	0.216	2.54	1.00	1.00	0.0	21.90	55.71	0.00	2445	0	2014	608	2623
11	210	26.08	12.857	28.777	0.00	0.220	2.53	1.00	1.00	0.0	26.02	65.85	0.00	3212	0	2336	597	2932
10	190	25.53	17.223	28.777	0.00	0.210	2.56	1.00	1.00	0.0	30.21	77.46	0.00	3462	0	2690	584	3274
9	170	24.94	18.924	35.867	0.00	0.217	2.54	1.00	1.00	0.0	35.26	89.61	0.00	4425	0	3040	571	3611
8	150	24.30	20.908	35.867	0.00	0.201	2.59	1.00	1.00	0.0	36.91	95.73	0.00	4531	0	3163	556	3719
7	130	23.57	17.136	35.893	0.00	0.167	2.71	1.00	1.00	0.0	32.48	88.04	0.00	4617	0	2823	540	3362
6	110	22.76	21.921	35.893	0.00	0.162	2.73	1.00	1.00	0.0	37.16	101.44	0.00	5045	0	3140	589	3729
5	90	21.82	27.216	42.571	0.00	0.174	2.69	1.00	1.00	0.0	45.57	122.39	0.00	6244	0	3631	697	4329
4	70	20.69	35.171	42.571	0.00	0.176	2.68	1.00	1.00	0.0	53.58	143.46	0.00	6572	0	4038	661	4699
3	50	19.28	38.421	42.571	0.00	0.168	2.71	1.00	1.00	0.0	56.65	153.26	0.00	6775	0	4018	616	4634
2	30	17.31	42.883	42.571	0.00	0.164	2.72	1.00	1.00	0.0	61.01	166.01	0.00	7430	0	3909	553	4462
1	10	14.98	45.841	42.571	0.00	0.158	2.74	1.00	1.00	0.0	63.83	175.15	0.00	8936	0	3569	479	4048
Totals															67,285	0	50,648	

1.2D + 1.6W 60°

Gust Response Factor (Gh): 0.85

90 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 _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.80	1.00	0.0	6.24	16.99	0.00	386	0	643	114	756
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.80	1.00	0.0	14.58	37.40	0.00	1466	0	1399	495	1893
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.80	1.00	0.0	15.75	40.82	0.00	1738	0	1502	619	2121
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.80	1.00	0.0	19.58	49.81	0.00	2445	0	1801	608	2409
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.80	1.00	0.0	23.45	59.34	0.00	3212	0	2105	597	2702
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.80	1.00	0.0	26.77	68.63	0.00	3462	0	2383	584	2968
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.80	1.00	0.0	31.47	79.99	0.00	4425	0	2713	571	3284
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.80	1.00	0.0	32.73	84.89	0.00	4531	0	2805	556	3361
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.80	1.00	0.0	29.05	78.75	0.00	4617	0	2525	540	3064
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.80	1.00	0.0	32.78	89.47	0.00	5045	0	2769	589	3358
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.80	1.00	0.0	40.13	107.77	0.00	6244	0	3198	697	3895
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.80	1.00	0.0	46.55	124.63	0.00	6572	0	3507	661	4169
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.80	1.00	0.0	48.97	132.47	0.00	6775	0	3473	616	4089
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.80	1.00	0.0	52.44	142.68	0.00	7430	0	3359	553	3913
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.80	1.00	0.0	54.66	149.99	0.00	8936	0	3056	479	3535
Totals															67,285	0	45,518	

1.2D + 1.6W 90°

Gust Response Factor (Gh): 0.85

90 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 _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.85	1.00	0.0	6.48	17.64	0.00	386	0	667	114	781
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.85	1.00	0.0	15.03	38.55	0.00	1466	0	1442	495	1936
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.85	1.00	0.0	16.23	42.07	0.00	1738	0	1548	619	2167
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.85	1.00	0.0	20.16	51.29	0.00	2445	0	1854	608	2463
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.85	1.00	0.0	24.09	60.97	0.00	3212	0	2162	597	2759
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.85	1.00	0.0	27.63	70.84	0.00	3462	0	2460	584	3044
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.85	1.00	0.0	32.42	82.39	0.00	4425	0	2795	571	3366
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.85	1.00	0.0	33.77	87.60	0.00	4531	0	2894	556	3450
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.85	1.00	0.0	29.91	81.07	0.00	4617	0	2599	540	3139
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.85	1.00	0.0	33.87	92.46	0.00	5045	0	2862	589	3451
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.85	1.00	0.0	41.49	111.42	0.00	6244	0	3306	697	4004
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.85	1.00	0.0	48.31	129.34	0.00	6572	0	3640	661	4301
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.85	1.00	0.0	50.89	137.67	0.00	6775	0	3609	616	4226
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.85	1.00	0.0	54.58	148.51	0.00	7430	0	3497	553	4050
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.85	1.00	0.0	56.95	156.28	0.00	8936	0	3184	479	3663
Totals															67,285	0	46,801	

1.2D + 1.6W 120°

Gust Response Factor (Gh): 0.85

90 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 _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	1.00	1.00	0.0	7.20	19.61	0.00	386	0	742	114	856
14	270	27.50	8.977	13.333	0.00	0.209	2.57	1.00	1.00	0.0	16.37	42.01	0.00	1466	0	1571	495	2066
13	250	27.05	9.638	15.014	0.00	0.201	2.59	1.00	1.00	0.0	17.68	45.81	0.00	1738	0	1686	619	2305
12	230	26.58	11.593	22.104	0.00	0.216	2.54	1.00	1.00	0.0	21.90	55.71	0.00	2445	0	2014	608	2623
11	210	26.08	12.857	28.777	0.00	0.220	2.53	1.00	1.00	0.0	26.02	65.85	0.00	3212	0	2336	597	2932
10	190	25.53	17.223	28.777	0.00	0.210	2.56	1.00	1.00	0.0	30.21	77.46	0.00	3462	0	2690	584	3274
9	170	24.94	18.924	35.867	0.00	0.217	2.54	1.00	1.00	0.0	35.26	89.61	0.00	4425	0	3040	571	3611
8	150	24.30	20.908	35.867	0.00	0.201	2.59	1.00	1.00	0.0	36.91	95.73	0.00	4531	0	3163	556	3719
7	130	23.57	17.136	35.893	0.00	0.167	2.71	1.00	1.00	0.0	32.48	88.04	0.00	4617	0	2823	540	3362
6	110	22.76	21.921	35.893	0.00	0.162	2.73	1.00	1.00	0.0	37.16	101.44	0.00	5045	0	3140	589	3729
5	90	21.82	27.216	42.571	0.00	0.174	2.69	1.00	1.00	0.0	45.57	122.39	0.00	6244	0	3631	697	4329

SECTION FORCES

1.2D + 1.6W 120°
90 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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)
4	70	20.69	35.171	42.571	0.00	0.176	2.68	1.00	1.00	0.0	53.58	143.46	0.00	6572	0	4038	661	4699
3	50	19.28	38.421	42.571	0.00	0.168	2.71	1.00	1.00	0.0	56.65	153.26	0.00	6775	0	4018	616	4634
2	30	17.31	42.883	42.571	0.00	0.164	2.72	1.00	1.00	0.0	61.01	166.01	0.00	7430	0	3909	553	4462
1	10	14.98	45.841	42.571	0.00	0.158	2.74	1.00	1.00	0.0	63.83	175.15	0.00	8936	0	3569	479	4048
Totals														67,285	0	50,648		

1.2D + 1.6W 180°
90 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.80	1.00	0.0	6.24	16.99	0.00	386	0	643	114	756
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.80	1.00	0.0	14.58	37.40	0.00	1466	0	1399	495	1893
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.80	1.00	0.0	15.75	40.82	0.00	1738	0	1502	619	2121
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.80	1.00	0.0	19.58	49.81	0.00	2445	0	1801	608	2409
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.80	1.00	0.0	23.45	59.34	0.00	3212	0	2105	597	2702
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.80	1.00	0.0	26.77	68.63	0.00	3462	0	2383	584	2968
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.80	1.00	0.0	31.47	79.99	0.00	4425	0	2713	571	3284
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.80	1.00	0.0	32.73	84.89	0.00	4531	0	2805	556	3361
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.80	1.00	0.0	29.05	78.75	0.00	4617	0	2525	540	3064
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.80	1.00	0.0	32.78	89.47	0.00	5045	0	2769	589	3358
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.80	1.00	0.0	40.13	107.77	0.00	6244	0	3198	697	3895
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.80	1.00	0.0	46.55	124.63	0.00	6572	0	3507	661	4169
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.80	1.00	0.0	48.97	132.47	0.00	6775	0	3473	616	4089
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.80	1.00	0.0	52.44	142.68	0.00	7430	0	3359	553	3913
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.80	1.00	0.0	54.66	149.99	0.00	8936	0	3056	479	3535
Totals														67,285	0	45,518		

1.2D + 1.6W 210°
90 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.85	1.00	0.0	6.48	17.64	0.00	386	0	667	114	781
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.85	1.00	0.0	15.03	38.55	0.00	1466	0	1442	495	1936
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.85	1.00	0.0	16.23	42.07	0.00	1738	0	1548	619	2167
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.85	1.00	0.0	20.16	51.29	0.00	2445	0	1854	608	2463
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.85	1.00	0.0	24.09	60.97	0.00	3212	0	2162	597	2759
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.85	1.00	0.0	27.63	70.84	0.00	3462	0	2460	584	3044
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.85	1.00	0.0	32.42	82.39	0.00	4425	0	2795	571	3366
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.85	1.00	0.0	33.77	87.60	0.00	4531	0	2894	556	3450
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.85	1.00	0.0	29.91	81.07	0.00	4617	0	2599	540	3139
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.85	1.00	0.0	33.87	92.46	0.00	5045	0	2862	589	3451
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.85	1.00	0.0	41.49	111.42	0.00	6244	0	3306	697	4004
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.85	1.00	0.0	48.31	129.34	0.00	6572	0	3640	661	4301
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.85	1.00	0.0	50.89	137.67	0.00	6775	0	3609	616	4226
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.85	1.00	0.0	54.58	148.51	0.00	7430	0	3497	553	4050
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.85	1.00	0.0	56.95	156.28	0.00	8936	0	3184	479	3663
Totals														67,285	0	46,801		

1.2D + 1.6W 240°
90 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	1.00	1.00	0.0	7.20	19.61	0.00	386	0	742	114	856
14	270	27.50	8.977	13.333	0.00	0.209	2.57	1.00	1.00	0.0	16.37	42.01	0.00	1466	0	1571	495	2066
13	250	27.05	9.638	15.014	0.00	0.201	2.59	1.00	1.00	0.0	17.68	45.81	0.00	1738	0	1686	619	2305
12	230	26.58	11.593	22.104	0.00	0.216	2.54	1.00	1.00	0.0	21.90	55.71	0.00	2445	0	2014	608	2623
11	210	26.08	12.857	28.777	0.00	0.220	2.53	1.00	1.00	0.0	26.02	65.85	0.00	3212	0	2336	597	2932
10	190	25.53	17.223	28.777	0.00	0.210	2.56	1.00	1.00	0.0	30.21	77.46	0.00	3462	0	2690	584	3274
9	170	24.94	18.924	35.867	0.00	0.217	2.54	1.00	1.00	0.0	35.26	89.61	0.00	4425	0	3040	571	3611
8	150	24.30	20.908	35.867	0.00	0.201	2.59	1.00	1.00	0.0	36.91	95.73	0.00	4531	0	3163	556	3719
7	130	23.57	17.136	35.893	0.00	0.167	2.71	1.00	1.00	0.0	32.48	88.04	0.00	4617	0	2823	540	3362
6	110	22.76	21.921	35.893	0.00	0.162	2.73	1.00	1.00	0.0	37.16	101.44	0.00	5045	0	3140	589	3729
5	90	21.82	27.216	42.571	0.00	0.174	2.69	1.00	1.00	0.0	45.57	122.39	0.00	6244	0	3631	697	4329
4	70	20.69	35.171	42.571	0.00	0.176	2.68	1.00	1.00	0.0	53.58	143.46	0.00	6572	0	4038	661	4699
3	50	19.28	38.421	42.571	0.00	0.168	2.71	1.00	1.00	0.0	56.65	153.26	0.00	6775	0	4018	616	4634
2	30	17.31	42.883	42.571	0.00	0.164	2.72	1.00	1.00	0.0	61.01	166.01	0.00	7430	0	3909	553	4462
1	10	14.98	45.841	42.571	0.00	0.158	2.74	1.00	1.00	0.0	63.83	175.15	0.00	8936	0	3569	479	4048
Totals														67,285	0	50,648		

1.2D + 1.6W 300°
90 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	1.00	1.00	0.0	7.20	19.61	0.00	386	0	742	114	856
14	270	27.50	8.977	13.333	0.00	0.209	2.57	1.00	1.00	0.0	16.37	42.01	0.00	1466	0	1571	495	2066
13	250	27.05																

SECTION FORCES

1.2D + 1.6W 300°

Gust Response Factor (Gh): 0.85

90 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 _r	D _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.80	1.00	0.0	6.24	16.99	0.00	386	0	643	114	756
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.80	1.00	0.0	14.58	37.40	0.00	1466	0	1399	495	1893
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.80	1.00	0.0	15.75	40.82	0.00	1738	0	1502	619	2121
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.80	1.00	0.0	19.58	49.81	0.00	2445	0	1801	608	2409
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.80	1.00	0.0	23.45	59.34	0.00	3212	0	2105	597	2702
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.80	1.00	0.0	26.77	68.63	0.00	3462	0	2383	584	2968
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.80	1.00	0.0	31.47	79.99	0.00	4425	0	2713	571	3284
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.80	1.00	0.0	32.73	84.89	0.00	4531	0	2805	556	3361
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.80	1.00	0.0	29.05	78.75	0.00	4617	0	2525	540	3064
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.80	1.00	0.0	32.78	89.47	0.00	5045	0	2769	589	3358
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.80	1.00	0.0	40.13	107.77	0.00	6244	0	3198	697	3895
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.80	1.00	0.0	46.55	124.63	0.00	6572	0	3507	661	4169
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.80	1.00	0.0	48.97	132.47	0.00	6775	0	3473	616	4089
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.80	1.00	0.0	52.44	142.68	0.00	7430	0	3359	553	3913
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.80	1.00	0.0	54.66	149.99	0.00	8936	0	3056	479	3535
Totals														67,285	0			45,518

1.2D + 1.6W 330°

Gust Response Factor (Gh): 0.85

90 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 _r	D _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.85	1.00	0.0	6.48	17.64	0.00	386	0	667	114	781
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.85	1.00	0.0	15.03	38.55	0.00	1466	0	1442	495	1936
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.85	1.00	0.0	16.23	42.07	0.00	1738	0	1548	619	2167
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.85	1.00	0.0	20.16	51.29	0.00	2445	0	1854	608	2463
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.85	1.00	0.0	24.09	60.97	0.00	3212	0	2162	597	2759
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.85	1.00	0.0	27.63	70.84	0.00	3462	0	2460	584	3044
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.85	1.00	0.0	32.42	82.39	0.00	4425	0	2795	571	3366
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.85	1.00	0.0	33.77	87.60	0.00	4531	0	2894	556	3450
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.85	1.00	0.0	29.91	81.07	0.00	4617	0	2599	540	3139
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.85	1.00	0.0	33.87	92.46	0.00	5045	0	2862	589	3451
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.85	1.00	0.0	41.49	111.42	0.00	6244	0	3306	697	4004
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.85	1.00	0.0	48.31	129.34	0.00	6572	0	3640	661	4301
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.85	1.00	0.0	50.89	137.67	0.00	6775	0	3609	616	4226
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.85	1.00	0.0	54.58	148.51	0.00	7430	0	3497	553	4050
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.85	1.00	0.0	56.95	156.28	0.00	8936	0	3184	479	3663
Totals														67,285	0			46,801

0.9D + 1.6W Normal

Gust Response Factor (Gh): 0.85

90 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	1.00	1.00	0.0	7.20	19.61	0.00	289	0	742	114	856
14	270	27.50	8.977	13.333	0.00	0.209	2.57	1.00	1.00	0.0	16.37	42.01	0.00	1100	0	1571	495	2066
13	250	27.05	9.638	15.014	0.00	0.201	2.59	1.00	1.00	0.0	17.68	45.81	0.00	1304	0	1686	619	2305
12	230	26.58	11.593	22.104	0.00	0.216	2.54	1.00	1.00	0.0	21.90	55.71	0.00	1834	0	2014	608	2623
11	210	26.08	12.857	28.777	0.00	0.220	2.53	1.00	1.00	0.0	26.02	65.85	0.00	2409	0	2336	597	2932
10	190	25.53	17.223	28.777	0.00	0.210	2.56	1.00	1.00	0.0	30.21	77.46	0.00	2597	0	2690	584	3274
9	170	24.94	18.924	35.867	0.00	0.217	2.54	1.00	1.00	0.0	35.26	89.61	0.00	3319	0	3040	571	3611
8	150	24.30	20.908	35.867	0.00	0.201	2.59	1.00	1.00	0.0	36.91	95.73	0.00	3398	0	3163	556	3719
7	130	23.57	17.136	35.893	0.00	0.167	2.71	1.00	1.00	0.0	32.48	88.04	0.00	3462	0	2823	540	3362
6	110	22.76	21.921	35.893	0.00	0.162	2.73	1.00	1.00	0.0	37.16	101.44	0.00	3784	0	3140	589	3729
5	90	21.82	27.216	42.571	0.00	0.174	2.69	1.00	1.00	0.0	45.57	122.39	0.00	4683	0	3631	697	4329
4	70	20.69	35.171	42.571	0.00	0.176	2.68	1.00	1.00	0.0	53.58	143.46	0.00	4929	0	4038	661	4699
3	50	19.28	38.421	42.571	0.00	0.168	2.71	1.00	1.00	0.0	56.65	153.26	0.00	5082	0	4018	616	4634
2	30	17.31	42.883	42.571	0.00	0.164	2.72	1.00	1.00	0.0	61.01	166.01	0.00	5572	0	3909	553	4462
1	10	14.98	45.841	42.571	0.00	0.158	2.74	1.00	1.00	0.0	63.83	175.15	0.00	6702	0	3569	479	4048
Totals														50,464	0			50,648

0.9D + 1.6W 60°

Gust Response Factor (Gh): 0.85

90 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.80	1.00	0.0	6.24	16.99	0.00	289	0	643	114	756
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.80	1.00	0.0	14.58	37.40	0.00	1100	0	1399	495	1893
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.80	1.00	0.0	15.75	40.82	0.00	1304	0	1502	619	2121
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.80	1.00	0.0	19.58	49.81	0.00	1834	0	1801	608	2409
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.80	1.00	0.0	23.45	59.34	0.00	2409	0	2105	597	2702
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.80	1.00	0.0	26.77	68.63	0.00	2597	0	2383	5	

SECTION FORCES

0.9D + 1.6W 60°
90 mph Wind with No Ice (Reduced DL)

																	Gust Response Factor (Gh): 0.85	
																	Wind Importance Factor (Iw): 1.00	
Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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)
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.80	1.00	0.0	46.55	124.63	0.00	4929	0	3507	661	4169
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.80	1.00	0.0	48.97	132.47	0.00	5082	0	3473	616	4089
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.80	1.00	0.0	52.44	142.68	0.00	5572	0	3359	553	3913
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.80	1.00	0.0	54.66	149.99	0.00	6702	0	3056	479	3535
Totals														50,464	0	45,518		

0.9D + 1.6W 90°
90 mph Wind with No Ice (Reduced DL)

																	Gust Response Factor (Gh): 0.85	
																	Wind Importance Factor (Iw): 1.00	
Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.85	1.00	0.0	6.48	17.64	0.00	289	0	667	114	781
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.85	1.00	0.0	15.03	38.55	0.00	1100	0	1442	495	1936
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.85	1.00	0.0	16.23	42.07	0.00	1304	0	1548	619	2167
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.85	1.00	0.0	20.16	51.29	0.00	1834	0	1854	608	2463
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.85	1.00	0.0	24.09	60.97	0.00	2409	0	2162	597	2759
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.85	1.00	0.0	27.63	70.84	0.00	2597	0	2460	584	3044
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.85	1.00	0.0	32.42	82.39	0.00	3319	0	2795	571	3366
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.85	1.00	0.0	33.77	87.60	0.00	3398	0	2894	556	3450
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.85	1.00	0.0	29.91	81.07	0.00	3462	0	2599	540	3139
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.85	1.00	0.0	33.87	92.46	0.00	3784	0	2862	589	3451
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.85	1.00	0.0	41.49	111.42	0.00	4683	0	3306	697	4004
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.85	1.00	0.0	48.31	129.34	0.00	4929	0	3640	661	4301
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.85	1.00	0.0	50.89	137.67	0.00	5082	0	3609	616	4226
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.85	1.00	0.0	54.58	148.51	0.00	5572	0	3497	553	4050
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.85	1.00	0.0	56.95	156.28	0.00	6702	0	3184	479	3663
Totals														50,464	0	46,801		

0.9D + 1.6W 120°
90 mph Wind with No Ice (Reduced DL)

																	Gust Response Factor (Gh): 0.85	
																	Wind Importance Factor (Iw): 1.00	
Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	1.00	1.00	0.0	7.20	19.61	0.00	289	0	742	114	856
14	270	27.50	8.977	13.333	0.00	0.209	2.57	1.00	1.00	0.0	16.37	42.01	0.00	1100	0	1571	495	2066
13	250	27.05	9.638	15.014	0.00	0.201	2.59	1.00	1.00	0.0	17.68	45.81	0.00	1304	0	1686	619	2305
12	230	26.58	11.593	22.104	0.00	0.216	2.54	1.00	1.00	0.0	21.90	55.71	0.00	1834	0	2014	608	2623
11	210	26.08	12.857	28.777	0.00	0.220	2.53	1.00	1.00	0.0	26.02	65.85	0.00	2409	0	2336	597	2932
10	190	25.53	17.223	28.777	0.00	0.210	2.56	1.00	1.00	0.0	30.21	77.46	0.00	2597	0	2690	584	3274
9	170	24.94	18.924	35.867	0.00	0.217	2.54	1.00	1.00	0.0	35.26	89.61	0.00	3319	0	3040	571	3611
8	150	24.30	20.908	35.867	0.00	0.201	2.59	1.00	1.00	0.0	36.91	95.73	0.00	3398	0	3163	556	3719
7	130	23.57	17.136	35.893	0.00	0.167	2.71	1.00	1.00	0.0	32.48	88.04	0.00	3462	0	2823	540	3362
6	110	22.76	21.921	35.893	0.00	0.162	2.73	1.00	1.00	0.0	37.16	101.44	0.00	3784	0	3140	589	3729
5	90	21.82	27.216	42.571	0.00	0.174	2.69	1.00	1.00	0.0	45.57	122.39	0.00	4683	0	3631	697	4329
4	70	20.69	35.171	42.571	0.00	0.176	2.68	1.00	1.00	0.0	53.58	143.46	0.00	4929	0	4038	661	4699
3	50	19.28	38.421	42.571	0.00	0.168	2.71	1.00	1.00	0.0	56.65	153.26	0.00	5082	0	4018	616	4634
2	30	17.31	42.883	42.571	0.00	0.164	2.72	1.00	1.00	0.0	61.01	166.01	0.00	5572	0	3909	553	4462
1	10	14.98	45.841	42.571	0.00	0.158	2.74	1.00	1.00	0.0	63.83	175.15	0.00	6702	0	3569	479	4048
Totals														50,464	0	50,648		

0.9D + 1.6W 180°
90 mph Wind with No Ice (Reduced DL)

																	Gust Response Factor (Gh): 0.85	
																	Wind Importance Factor (Iw): 1.00	
Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.80	1.00	0.0	6.24	16.99	0.00	289	0	643	114	756
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.80	1.00	0.0	14.58	37.40	0.00	1100	0	1399	495	1893
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.80	1.00	0.0	15.75	40.82	0.00	1304	0	1502	619	2121
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.80	1.00	0.0	19.58	49.81	0.00	1834	0	1801	608	2409
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.80	1.00	0.0	23.45	59.34	0.00	2409	0	2105	597	2702
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.80	1.00	0.0	26.77	68.63	0.00	2597	0	2383	584	2968
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.80	1.00	0.0	31.47	79.99	0.00	3319	0	2713	571	3284
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.80	1.00	0.0	32.73	84.89	0.00	3398	0	2805	556	3361
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.80	1.00	0.0	29.05	78.75	0.00	3462	0	2525	540	3064
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.80	1.00	0.0	32.78	89.47	0.00	3784	0	2769	589	3358
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.80	1.00	0.0	40.13	107.77	0.00	4683	0	3198	697	3895
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.80	1.00	0.0	46.55	124.63	0.00	4929	0	3507	661	4169
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.80	1.00	0.0	48.97	132.47	0.00	5082	0	3473	616	4089
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.80	1.00	0.0	52.44	142.68	0.00	5572	0	3359	553	3913
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.80	1.00	0.0	54.66	149.99	0.00	6702	0	3056	479	3535
Totals														50,464	0	45,518		

0.9D + 1.6W 210°
90 mph Wind with No Ice (Reduced DL)

																	Gust Response Factor (Gh): 0.85	
																	Wind Importance Factor (Iw): 1.00	
Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.80	1.00	0.0	6.24	16.99	0.00	289	0	643	114	756
14	270	27.50																

SECTION FORCES

0.9D + 1.6W 210°

Gust Response Factor (Gh): 0.85

90 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.85	1.00	0.0	6.48	17.64	0.00	289	0	667	114	781
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.85	1.00	0.0	15.03	38.55	0.00	1100	0	1442	495	1936
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.85	1.00	0.0	16.23	42.07	0.00	1304	0	1548	619	2167
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.85	1.00	0.0	20.16	51.29	0.00	1834	0	1854	608	2463
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.85	1.00	0.0	24.09	60.97	0.00	2409	0	2162	597	2759
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.85	1.00	0.0	27.63	70.84	0.00	2597	0	2460	584	3044
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.85	1.00	0.0	32.42	82.39	0.00	3319	0	2795	571	3366
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.85	1.00	0.0	33.77	87.60	0.00	3398	0	2894	556	3450
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.85	1.00	0.0	29.91	81.07	0.00	3462	0	2599	540	3139
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.85	1.00	0.0	33.87	92.46	0.00	3784	0	2862	589	3451
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.85	1.00	0.0	41.49	111.42	0.00	4683	0	3306	697	4004
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.85	1.00	0.0	48.31	129.34	0.00	4929	0	3640	661	4301
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.85	1.00	0.0	50.89	137.67	0.00	5082	0	3609	616	4226
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.85	1.00	0.0	54.58	148.51	0.00	5572	0	3497	553	4050
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.85	1.00	0.0	56.95	156.28	0.00	6702	0	3184	479	3663
Totals														50,464	0			46,801

0.9D + 1.6W 240°

Gust Response Factor (Gh): 0.85

90 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	1.00	1.00	0.0	7.20	19.61	0.00	289	0	742	114	856
14	270	27.50	8.977	13.333	0.00	0.209	2.57	1.00	1.00	0.0	16.37	42.01	0.00	1100	0	1571	495	2066
13	250	27.05	9.638	15.014	0.00	0.201	2.59	1.00	1.00	0.0	17.68	45.81	0.00	1304	0	1686	619	2305
12	230	26.58	11.593	22.104	0.00	0.216	2.54	1.00	1.00	0.0	21.90	55.71	0.00	1834	0	2014	608	2623
11	210	26.08	12.857	28.777	0.00	0.220	2.53	1.00	1.00	0.0	26.02	65.85	0.00	2409	0	2336	597	2932
10	190	25.53	17.223	28.777	0.00	0.210	2.56	1.00	1.00	0.0	30.21	77.46	0.00	2597	0	2690	584	3274
9	170	24.94	18.924	35.867	0.00	0.217	2.54	1.00	1.00	0.0	35.26	89.61	0.00	3319	0	3040	571	3611
8	150	24.30	20.908	35.867	0.00	0.201	2.59	1.00	1.00	0.0	36.91	95.73	0.00	3398	0	3163	556	3719
7	130	23.57	17.136	35.893	0.00	0.167	2.71	1.00	1.00	0.0	32.48	88.04	0.00	3462	0	2823	540	3362
6	110	22.76	21.921	35.893	0.00	0.162	2.73	1.00	1.00	0.0	37.16	101.44	0.00	3784	0	3140	589	3729
5	90	21.82	27.216	42.571	0.00	0.174	2.69	1.00	1.00	0.0	45.57	122.39	0.00	4683	0	3631	697	4329
4	70	20.69	35.171	42.571	0.00	0.176	2.68	1.00	1.00	0.0	53.58	143.46	0.00	4929	0	4038	661	4699
3	50	19.28	38.421	42.571	0.00	0.168	2.71	1.00	1.00	0.0	56.65	153.26	0.00	5082	0	4018	616	4634
2	30	17.31	42.883	42.571	0.00	0.164	2.72	1.00	1.00	0.0	61.01	166.01	0.00	5572	0	3909	553	4462
1	10	14.98	45.841	42.571	0.00	0.158	2.74	1.00	1.00	0.0	63.83	175.15	0.00	6702	0	3569	479	4048
Totals														50,464	0			50,648

0.9D + 1.6W 300°

Gust Response Factor (Gh): 0.85

90 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.80	1.00	0.0	6.24	16.99	0.00	289	0	643	114	756
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.80	1.00	0.0	14.58	37.40	0.00	1100	0	1399	495	1893
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.80	1.00	0.0	15.75	40.82	0.00	1304	0	1502	619	2121
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.80	1.00	0.0	19.58	49.81	0.00	1834	0	1801	608	2409
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.80	1.00	0.0	23.45	59.34	0.00	2409	0	2105	597	2702
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.80	1.00	0.0	26.77	68.63	0.00	2597	0	2383	584	2968
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.80	1.00	0.0	31.47	79.99	0.00	3319	0	2713	571	3284
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.80	1.00	0.0	32.73	84.89	0.00	3398	0	2805	556	3361
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.80	1.00	0.0	29.05	78.75	0.00	3462	0	2525	540	3064
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.80	1.00	0.0	32.78	89.47	0.00	3784	0	2769	589	3358
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.80	1.00	0.0	40.13	107.77	0.00	4683	0	3198	697	3895
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.80	1.00	0.0	46.55	124.63	0.00	4929	0	3507	661	4169
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.80	1.00	0.0	48.97	132.47	0.00	5082	0	3473	616	4089
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.80	1.00	0.0	52.44	142.68	0.00	5572	0	3359	553	3913
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.80	1.00	0.0	54.66	149.99	0.00	6702	0	3056	479	3535
Totals														50,464	0			45,518

0.9D + 1.6W 330°

Gust Response Factor (Gh): 0.85

90 mph Wind with No Ice (Reduced DL)

Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	285.3	27.82	4.815	4.196	0.00	0.164	2.72	0.85	1.00	0.0	6.48	17.64	0.00	289	0	667	114	781
14	270	27.50	8.977	13.333	0.00	0.209	2.57	0.85	1.00	0.0	15.03	38.55	0.00	1100	0	1442	495	1936
13	250	27.05	9.638	15.014	0.00	0.201	2.59	0.85	1.00	0.0	16.23	42.07	0.00	1304	0	1548	619	2167
12	230	26.58	11.593	22.104	0.00	0.216	2.54	0.85	1.00	0.0	20.16	51.29	0.00	1834	0	1854	608	2463
11	210	26.08	12.857	28.777	0.00	0.220	2.53	0.85	1.00	0.0	24.09	60.97	0.00	2409	0	2162	597	2759
10	190	25.53	17.223	28.777	0.00	0.210	2.56	0.85	1.00	0.0	27.63	70.84	0.00	2597	0	2460	584	3044
9	170	24.94	18.924	35.867	0.00	0.217	2.54	0.85	1.00	0.0	32.42	82.39	0.00	3319	0	2795	571	3366
8	150	24.30	20.908	35.867	0.00	0.201	2.59	0.85	1.00	0.0	33.77	87.60	0.00	3398	0	2894	556	3450
7	130	23.57	17.136	35.893	0.00	0.167	2.71	0.85	1.00	0.0	29.91	81.07	0.00	3462	0	2599	540	3139
6	110	22.76	21.921	35.893	0.00	0.162	2.73	0.85	1.00	0.0	33.87	92.46	0.00	3784	0	2862	589	3451
5	90	21.82	27.216	42.571	0.00	0.174	2.69	0.85	1.00	0.0	41.49	111.42	0.00	4683	0	3306	697	4004

SECTION FORCES

0.9D + 1.6W 330°
 90 mph Wind with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85
 Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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)
4	70	20.69	35.171	42.571	0.00	0.176	2.68	0.85	1.00	0.0	48.31	129.34	0.00	4929	0	3640	661	4301
3	50	19.28	38.421	42.571	0.00	0.168	2.71	0.85	1.00	0.0	50.89	137.67	0.00	5082	0	3609	616	4226
2	30	17.31	42.883	42.571	0.00	0.164	2.72	0.85	1.00	0.0	54.58	148.51	0.00	5572	0	3497	553	4050
1	10	14.98	45.841	42.571	0.00	0.158	2.74	0.85	1.00	0.0	56.95	156.28	0.00	6702	0	3184	479	3663
Totals														50,464	0	46,801		

1.2D + 1.0Di + 1.0Wi Normal
 30 mph Wind with 0.75" Radial Ice

Gust Response Factor (Gh): 0.85
 Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	3.09	4.815	21.363	17.17	0.448	1.98	1.00	1.00	1.9	18.88	37.32	17.17	1797	1412	98	36	134
14	270	3.06	8.977	43.123	29.79	0.462	1.95	1.00	1.00	1.9	37.66	73.61	29.79	5007	3540	191	146	338
13	250	3.01	9.638	45.944	30.93	0.432	2.00	1.00	1.00	1.8	39.54	79.22	30.93	5677	3939	202	176	378
12	230	2.95	11.593	52.207	30.10	0.394	2.08	1.00	1.00	1.8	44.66	92.76	30.10	6826	4380	233	183	416
11	210	2.90	12.857	60.683	31.91	0.376	2.11	1.00	1.00	1.8	50.86	107.46	31.91	8000	4788	265	182	447
10	190	2.84	17.223	62.556	33.78	0.354	2.16	1.00	1.00	1.8	55.86	120.77	33.78	8701	5238	291	183	474
9	170	2.77	18.924	71.537	35.67	0.350	2.17	1.00	1.00	1.8	62.98	136.84	35.67	10108	5683	322	178	500
8	150	2.70	20.908	73.402	37.54	0.327	2.23	1.00	1.00	1.7	65.51	145.93	37.54	10372	5841	335	177	512
7	130	2.62	17.136	68.064	32.17	0.263	2.40	1.00	1.00	1.7	57.18	137.14	32.17	9829	5212	305	183	489
6	110	2.53	21.921	69.442	33.55	0.251	2.43	1.00	1.00	1.7	62.57	152.26	33.55	10826	5781	327	199	527
5	90	2.42	27.216	77.385	34.81	0.257	2.42	1.00	1.00	1.7	72.62	175.48	34.81	12902	6658	362	215	577
4	70	2.30	35.171	69.005	26.43	0.233	2.49	1.00	1.00	1.6	75.27	187.32	26.43	13942	7370	366	206	572
3	50	2.14	38.421	68.902	26.33	0.221	2.53	1.00	1.00	1.6	78.27	197.92	26.33	14172	7396	360	189	550
2	30	1.92	42.883	68.351	25.78	0.211	2.56	1.00	1.00	1.5	82.29	210.54	25.78	14785	7356	344	165	510
1	10	1.66	45.841	66.372	23.80	0.198	2.60	1.00	1.00	1.3	83.95	218.40	23.80	15623	6686	309	134	443
Totals														148,566	81,281	6,866		

1.2D + 1.0Di + 1.0Wi 60°
 30 mph Wind with 0.75" Radial Ice

Gust Response Factor (Gh): 0.85
 Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	3.09	4.815	21.363	17.17	0.448	1.98	0.80	1.00	1.9	17.92	35.41	17.17	1797	1412	93	36	129
14	270	3.06	8.977	43.123	29.79	0.462	1.95	0.80	1.00	1.9	35.86	70.10	29.79	5007	3540	182	146	328
13	250	3.01	9.638	45.944	30.93	0.432	2.00	0.80	1.00	1.8	37.61	75.36	30.93	5677	3939	193	176	368
12	230	2.95	11.593	52.207	30.10	0.394	2.08	0.80	1.00	1.8	42.35	87.95	30.10	6826	4380	221	183	404
11	210	2.90	12.857	60.683	31.91	0.376	2.11	0.80	1.00	1.8	48.29	102.03	31.91	8000	4788	251	182	434
10	190	2.84	17.223	62.556	33.78	0.354	2.16	0.80	1.00	1.8	52.41	113.32	33.78	8701	5238	273	183	456
9	170	2.77	18.924	71.537	35.67	0.350	2.17	0.80	1.00	1.8	59.20	128.61	35.67	10108	5683	303	178	481
8	150	2.70	20.908	73.402	37.54	0.327	2.23	0.80	1.00	1.7	61.33	136.62	37.54	10372	5841	313	177	490
7	130	2.62	17.136	68.064	32.17	0.263	2.40	0.80	1.00	1.7	53.76	128.92	32.17	9829	5212	287	183	471
6	110	2.53	21.921	69.442	33.55	0.251	2.43	0.80	1.00	1.7	58.18	141.59	33.55	10826	5781	304	199	504
5	90	2.42	27.216	77.385	34.81	0.257	2.42	0.80	1.00	1.7	67.18	162.33	34.81	12902	6658	334	215	550
4	70	2.30	35.171	69.005	26.43	0.233	2.49	0.80	1.00	1.6	68.23	169.82	26.43	13942	7370	332	206	538
3	50	2.14	38.421	68.902	26.33	0.221	2.53	0.80	1.00	1.6	70.59	178.49	26.33	14172	7396	325	189	514
2	30	1.92	42.883	68.351	25.78	0.211	2.56	0.80	1.00	1.5	73.72	188.59	25.78	14785	7356	308	165	474
1	10	1.66	45.841	66.372	23.80	0.198	2.60	0.80	1.00	1.3	74.78	194.55	23.80	15623	6686	275	134	409
Totals														148,566	81,281	6,550		

1.2D + 1.0Di + 1.0Wi 90°
 30 mph Wind with 0.75" Radial Ice

Gust Response Factor (Gh): 0.85
 Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	3.09	4.815	21.363	17.17	0.448	1.98	0.85	1.00	1.9	18.16	35.89	17.17	1797	1412	94	36	130
14	270	3.06	8.977	43.123	29.79	0.462	1.95	0.85	1.00	1.9	36.31	70.98	29.79	5007	3540	184	146	331
13	250	3.01	9.638	45.944	30.93	0.432	2.00	0.85	1.00	1.8	38.09	76.33	30.93	5677	3939	195	176	371
12	230	2.95	11.593	52.207	30.10	0.394	2.08	0.85	1.00	1.8	42.93	89.15	30.10	6826	4380	224	183	407
11	210	2.90	12.857	60.683	31.91	0.376	2.11	0.85	1.00	1.8	48.94	103.39	31.91	8000	4788	255	182	437
10	190	2.84	17.223	62.556	33.78	0.354	2.16	0.85	1.00	1.8	53.27	115.18	33.78	8701	5238	278	183	460
9	170	2.77	18.924	71.537	35.67	0.350	2.17	0.85	1.00	1.8	60.14	130.67	35.67	10108	5683	308	178	486
8	150	2.70	20.908	73.402	37.54	0.327	2.23	0.85	1.00	1.7	62.38	138.94	37.54	10372	5841	319	177	496
7	130	2.62	17.136	68.064	32.17	0.263	2.40	0.85	1.00	1.7	54.61	130.98	32.17	9829	5212	292	183	475
6	110	2.53	21.921	69.442	33.55	0.251	2.43	0.85	1.00	1.7	59.28	144.26	33.55	10826	5781	310	199	510
5	90	2.42	27.216	77.385	34.81	0.257	2.42	0.85	1.00	1.7	68.54	165.61	34.81	12902	6658	341	215	557
4	70	2.30	35.171	69.005	26.43	0.233	2.49	0.85	1.00	1.6	69.99	174.19	26.43	13942	7370	340	206	546
3	50	2.14	38.421	68.902	26.33	0.221	2.53	0.85	1.00	1.6	72.51	183.35	26.33	14172	7396	334	189	523
2	30	1.92	42.883	68.351	25.78	0.211	2.56	0.85	1.00	1.5	75.86	194.08	25.78	14785	7356	317	165	483
1	10	1.66	45.841	66.372	23.80	0.198	2.60	0.85	1.00	1.3	77.08	200.51	23.80	15623	6686	284	134	418
Totals														148,566	81,281	6,629		

1.2D + 1.0Di + 1.0Wi 120°
 30 mph Wind with 0.75" Radial Ice

Gust Response Factor (Gh): 0.85
 Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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)
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SECTION FORCES

1.2D + 1.0Di + 1.0Wi 120°

Gust Response Factor (Gh): 0.85

30 mph Wind with 0.75" Radial 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 _r	D _r	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	285.3	3.09	4.815	21.363	17.17	0.448	1.98	1.00	1.00	1.9	18.88	37.32	17.17	1797	1412	98	36	134	
14	270	3.06	8.977	43.123	29.79	0.462	1.95	1.00	1.00	1.9	37.66	73.61	29.79	5007	3540	191	146	338	
13	250	3.01	9.638	45.944	30.93	0.432	2.00	1.00	1.00	1.8	39.54	79.22	30.93	5677	3939	202	176	378	
12	230	2.95	11.593	52.207	30.10	0.394	2.08	1.00	1.00	1.8	44.66	92.76	30.10	6826	4380	233	183	416	
11	210	2.90	12.857	60.683	31.91	0.376	2.11	1.00	1.00	1.8	50.86	107.46	31.91	8000	4788	265	182	447	
10	190	2.84	17.223	62.556	33.78	0.354	2.16	1.00	1.00	1.8	55.86	120.77	33.78	8701	5238	291	183	474	
9	170	2.77	18.924	71.537	35.67	0.350	2.17	1.00	1.00	1.8	62.98	136.84	35.67	10108	5683	322	178	500	
8	150	2.70	20.908	73.402	37.54	0.327	2.23	1.00	1.00	1.7	65.51	145.93	37.54	10372	5841	335	177	512	
7	130	2.62	17.136	68.064	32.17	0.263	2.40	1.00	1.00	1.7	57.18	137.14	32.17	9829	5212	305	183	489	
6	110	2.53	21.921	69.442	33.55	0.251	2.43	1.00	1.00	1.7	62.57	152.26	33.55	10826	5781	327	199	527	
5	90	2.42	27.216	77.385	34.81	0.257	2.42	1.00	1.00	1.7	72.62	175.48	34.81	12902	6658	362	215	577	
4	70	2.30	35.171	69.005	26.43	0.233	2.49	1.00	1.00	1.6	75.27	187.32	26.43	13942	7370	366	206	572	
3	50	2.14	38.421	68.902	26.33	0.221	2.53	1.00	1.00	1.6	78.27	197.92	26.33	14172	7396	360	189	550	
2	30	1.92	42.883	68.351	25.78	0.211	2.56	1.00	1.00	1.5	82.29	210.54	25.78	14785	7356	344	165	510	
1	10	1.66	45.841	66.372	23.80	0.198	2.60	1.00	1.00	1.3	83.95	218.40	23.80	15623	6686	309	134	443	
Totals															148,566	81,281			6,866

1.2D + 1.0Di + 1.0Wi 180°

Gust Response Factor (Gh): 0.85

30 mph Wind with 0.75" Radial 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 _r	D _r	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	285.3	3.09	4.815	21.363	17.17	0.448	1.98	0.80	1.00	1.9	17.92	35.41	17.17	1797	1412	93	36	129	
14	270	3.06	8.977	43.123	29.79	0.462	1.95	0.80	1.00	1.9	35.86	70.10	29.79	5007	3540	182	146	328	
13	250	3.01	9.638	45.944	30.93	0.432	2.00	0.80	1.00	1.8	37.61	75.36	30.93	5677	3939	193	176	368	
12	230	2.95	11.593	52.207	30.10	0.394	2.08	0.80	1.00	1.8	42.35	87.95	30.10	6826	4380	221	183	404	
11	210	2.90	12.857	60.683	31.91	0.376	2.11	0.80	1.00	1.8	48.29	102.03	31.91	8000	4788	251	182	434	
10	190	2.84	17.223	62.556	33.78	0.354	2.16	0.80	1.00	1.8	52.41	113.32	33.78	8701	5238	273	183	456	
9	170	2.77	18.924	71.537	35.67	0.350	2.17	0.80	1.00	1.8	59.20	128.61	35.67	10108	5683	303	178	481	
8	150	2.70	20.908	73.402	37.54	0.327	2.23	0.80	1.00	1.7	61.33	136.62	37.54	10372	5841	313	177	490	
7	130	2.62	17.136	68.064	32.17	0.263	2.40	0.80	1.00	1.7	53.76	128.92	32.17	9829	5212	287	183	471	
6	110	2.53	21.921	69.442	33.55	0.251	2.43	0.80	1.00	1.7	58.18	141.59	33.55	10826	5781	304	199	504	
5	90	2.42	27.216	77.385	34.81	0.257	2.42	0.80	1.00	1.7	67.18	162.33	34.81	12902	6658	334	215	550	
4	70	2.30	35.171	69.005	26.43	0.233	2.49	0.80	1.00	1.6	68.23	169.82	26.43	13942	7370	332	206	538	
3	50	2.14	38.421	68.902	26.33	0.221	2.53	0.80	1.00	1.6	70.59	178.49	26.33	14172	7396	325	189	514	
2	30	1.92	42.883	68.351	25.78	0.211	2.56	0.80	1.00	1.5	73.72	188.59	25.78	14785	7356	308	165	474	
1	10	1.66	45.841	66.372	23.80	0.198	2.60	0.80	1.00	1.3	74.78	194.55	23.80	15623	6686	275	134	409	
Totals															148,566	81,281			6,550

1.2D + 1.0Di + 1.0Wi 210°

Gust Response Factor (Gh): 0.85

30 mph Wind with 0.75" Radial 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 _r	D _r	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	285.3	3.09	4.815	21.363	17.17	0.448	1.98	0.85	1.00	1.9	18.16	35.89	17.17	1797	1412	94	36	130	
14	270	3.06	8.977	43.123	29.79	0.462	1.95	0.85	1.00	1.9	36.31	70.98	29.79	5007	3540	184	146	331	
13	250	3.01	9.638	45.944	30.93	0.432	2.00	0.85	1.00	1.8	38.09	76.33	30.93	5677	3939	195	176	371	
12	230	2.95	11.593	52.207	30.10	0.394	2.08	0.85	1.00	1.8	42.93	89.15	30.10	6826	4380	224	183	407	
11	210	2.90	12.857	60.683	31.91	0.376	2.11	0.85	1.00	1.8	48.94	103.39	31.91	8000	4788	255	182	437	
10	190	2.84	17.223	62.556	33.78	0.354	2.16	0.85	1.00	1.8	53.27	115.18	33.78	8701	5238	278	183	460	
9	170	2.77	18.924	71.537	35.67	0.350	2.17	0.85	1.00	1.8	60.14	130.67	35.67	10108	5683	308	178	486	
8	150	2.70	20.908	73.402	37.54	0.327	2.23	0.85	1.00	1.7	62.38	138.94	37.54	10372	5841	319	177	496	
7	130	2.62	17.136	68.064	32.17	0.263	2.40	0.85	1.00	1.7	54.61	130.98	32.17	9829	5212	292	183	475	
6	110	2.53	21.921	69.442	33.55	0.251	2.43	0.85	1.00	1.7	59.28	144.26	33.55	10826	5781	310	199	510	
5	90	2.42	27.216	77.385	34.81	0.257	2.42	0.85	1.00	1.7	68.54	165.61	34.81	12902	6658	341	215	557	
4	70	2.30	35.171	69.005	26.43	0.233	2.49	0.85	1.00	1.6	69.99	174.19	26.43	13942	7370	340	206	546	
3	50	2.14	38.421	68.902	26.33	0.221	2.53	0.85	1.00	1.6	72.51	183.35	26.33	14172	7396	334	189	523	
2	30	1.92	42.883	68.351	25.78	0.211	2.56	0.85	1.00	1.5	75.86	194.08	25.78	14785	7356	317	165	483	
1	10	1.66	45.841	66.372	23.80	0.198	2.60	0.85	1.00	1.3	77.08	200.51	23.80	15623	6686	284	134	418	
Totals															148,566	81,281			6,629

1.2D + 1.0Di + 1.0Wi 240°

Gust Response Factor (Gh): 0.85

30 mph Wind with 0.75" Radial 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 _r	D _r	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	285.3	3.09	4.815	21.363	17.17	0.448	1.98	1.00	1.00	1.9	18.88	37.32	17.17	1797	1412	98	36	134
14	270	3.06	8.977	43.123	29.79	0.462	1.95	1.00	1.00	1.9	37.66	73.61	29.79	5007	3540	191	146	338
13	250	3.01	9.638	45.944	30.93	0.432	2.00	1.00	1.00	1.8	39.54	79.22	30.93	5677	3939	202	176	378
12	230	2.95	11.593	52.207	30.10	0.394	2.08	1.00	1.00	1.8	44.66	92.76	30.10	6826	4380	233	183	416
11	210	2.90	12.857	60.683	31.91	0.376	2.11	1.00	1.00	1.8	50.86	107.46	31.91	8000	4788	265	182	447
10	190	2.84	17.223	62.556	33.78	0.354	2.16	1.00	1.00	1.8	55.86	120.77	33.78	8701	5238	291	183	474
9	170	2.77	18.924	71.537	35.67	0.350	2.17	1.00	1.00	1.8	62.98	136.84	35.67	10108	5683	322	178	500
8	150	2.70	20.908	73.402	37.54	0.327	2.23	1.00	1.00	1.7	65.51	145.93	37.54	10372	5841	335	177	512
7	130	2.62	17.136	68.064	32.17	0.263	2.40	1.00	1.00	1.7	57.18	137.14	32.17	9829	5212	305	183	489
6	110	2.53	21.921	69.442	33.55	0.251	2.43	1.00	1.00	1.7	62.57	152.26	33.55	10826	5781	327	199	527
5	90	2.42	27.216	77.385	34.81	0.257	2.42	1.00	1.00									

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 240°

Gust Response Factor (Gh): 0.85

30 mph Wind with 0.75" Radial 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 _r	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)
4	70	2.30	35.171	69.005	26.43	0.233	2.49	1.00	1.00	1.6	75.27	187.32	26.43	13942	7370	366	206	572
3	50	2.14	38.421	68.902	26.33	0.221	2.53	1.00	1.00	1.6	78.27	197.92	26.33	14172	7396	360	189	550
2	30	1.92	42.883	68.351	25.78	0.211	2.56	1.00	1.00	1.5	82.29	210.54	25.78	14785	7356	344	165	510
1	10	1.66	45.841	66.372	23.80	0.198	2.60	1.00	1.00	1.3	83.95	218.40	23.80	15623	6686	309	134	443
Totals															148,566	81,281	6,866	

1.2D + 1.0Di + 1.0Wi 300°

Gust Response Factor (Gh): 0.85

30 mph Wind with 0.75" Radial 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 _r	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	285.3	3.09	4.815	21.363	17.17	0.448	1.98	0.80	1.00	1.9	17.92	35.41	17.17	1797	1412	93	36	129
14	270	3.06	8.977	43.123	29.79	0.462	1.95	0.80	1.00	1.9	35.86	70.10	29.79	5007	3540	182	146	328
13	250	3.01	9.638	45.944	30.93	0.432	2.00	0.80	1.00	1.8	37.61	75.36	30.93	5677	3939	193	176	368
12	230	2.95	11.593	52.207	30.10	0.394	2.08	0.80	1.00	1.8	42.35	87.95	30.10	6826	4380	221	183	404
11	210	2.90	12.857	60.683	31.91	0.376	2.11	0.80	1.00	1.8	48.29	102.03	31.91	8000	4788	251	182	434
10	190	2.84	17.223	62.556	33.78	0.354	2.16	0.80	1.00	1.8	52.41	113.32	33.78	8701	5238	273	183	456
9	170	2.77	18.924	71.537	35.67	0.350	2.17	0.80	1.00	1.8	59.20	128.61	35.67	10108	5683	303	178	481
8	150	2.70	20.908	73.402	37.54	0.327	2.23	0.80	1.00	1.7	61.33	136.62	37.54	10372	5841	313	177	490
7	130	2.62	17.136	68.064	32.17	0.263	2.40	0.80	1.00	1.7	53.76	128.92	32.17	9829	5212	287	183	471
6	110	2.53	21.921	69.442	33.55	0.251	2.43	0.80	1.00	1.7	58.18	141.59	33.55	10826	5781	304	199	504
5	90	2.42	27.216	77.385	34.81	0.257	2.42	0.80	1.00	1.7	67.18	162.33	34.81	12902	6658	334	215	550
4	70	2.30	35.171	69.005	26.43	0.233	2.49	0.80	1.00	1.6	68.23	169.82	26.43	13942	7370	332	206	538
3	50	2.14	38.421	68.902	26.33	0.221	2.53	0.80	1.00	1.6	70.59	178.49	26.33	14172	7396	325	189	514
2	30	1.92	42.883	68.351	25.78	0.211	2.56	0.80	1.00	1.5	73.72	188.59	25.78	14785	7356	308	165	474
1	10	1.66	45.841	66.372	23.80	0.198	2.60	0.80	1.00	1.3	74.78	194.55	23.80	15623	6686	275	134	409
Totals															148,566	81,281	6,550	

1.2D + 1.0Di + 1.0Wi 330°

Gust Response Factor (Gh): 0.85

30 mph Wind with 0.75" Radial 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 _r	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	285.3	3.09	4.815	21.363	17.17	0.448	1.98	0.85	1.00	1.9	18.16	35.89	17.17	1797	1412	94	36	130
14	270	3.06	8.977	43.123	29.79	0.462	1.95	0.85	1.00	1.9	36.31	70.98	29.79	5007	3540	184	146	331
13	250	3.01	9.638	45.944	30.93	0.432	2.00	0.85	1.00	1.8	38.09	76.33	30.93	5677	3939	195	176	371
12	230	2.95	11.593	52.207	30.10	0.394	2.08	0.85	1.00	1.8	42.93	89.15	30.10	6826	4380	224	183	407
11	210	2.90	12.857	60.683	31.91	0.376	2.11	0.85	1.00	1.8	48.94	103.39	31.91	8000	4788	255	182	437
10	190	2.84	17.223	62.556	33.78	0.354	2.16	0.85	1.00	1.8	53.27	115.18	33.78	8701	5238	278	183	460
9	170	2.77	18.924	71.537	35.67	0.350	2.17	0.85	1.00	1.8	60.14	130.67	35.67	10108	5683	308	178	486
8	150	2.70	20.908	73.402	37.54	0.327	2.23	0.85	1.00	1.7	62.38	138.94	37.54	10372	5841	319	177	496
7	130	2.62	17.136	68.064	32.17	0.263	2.40	0.85	1.00	1.7	54.61	130.98	32.17	9829	5212	292	183	475
6	110	2.53	21.921	69.442	33.55	0.251	2.43	0.85	1.00	1.7	59.28	144.26	33.55	10826	5781	310	199	510
5	90	2.42	27.216	77.385	34.81	0.257	2.42	0.85	1.00	1.7	68.54	165.61	34.81	12902	6658	341	215	557
4	70	2.30	35.171	69.005	26.43	0.233	2.49	0.85	1.00	1.6	69.99	174.19	26.43	13942	7370	340	206	546
3	50	2.14	38.421	68.902	26.33	0.221	2.53	0.85	1.00	1.6	72.51	183.35	26.33	14172	7396	334	189	523
2	30	1.92	42.883	68.351	25.78	0.211	2.56	0.85	1.00	1.5	75.86	194.08	25.78	14785	7356	317	165	483
1	10	1.66	45.841	66.372	23.80	0.198	2.60	0.85	1.00	1.3	77.08	200.51	23.80	15623	6686	284	134	418
Totals															148,566	81,281	6,629	

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 _r	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	285.3	12.36	4.815	4.196	0.00	0.164	2.72	1.00	1.00	0.0	7.20	19.61	0.00	321	0	206	32	238
14	270	12.22	8.977	13.333	0.00	0.209	2.57	1.00	1.00	0.0	16.66	42.74	0.00	1222	0	444	137	581
13	250	12.02	9.638	15.014	0.00	0.201	2.59	1.00	1.00	0.0	18.27	47.34	0.00	1449	0	484	172	656
12	230	11.81	11.593	22.104	0.00	0.216	2.54	1.00	1.00	0.0	23.62	60.09	0.00	2038	0	603	169	772
11	210	11.59	12.857	28.777	0.00	0.220	2.53	1.00	1.00	0.0	27.27	69.03	0.00	2677	0	680	166	846
10	190	11.35	17.223	28.777	0.00	0.210	2.56	1.00	1.00	0.0	31.57	80.94	0.00	2885	0	781	162	943
9	170	11.09	18.924	35.867	0.00	0.217	2.54	1.00	1.00	0.0	35.27	89.63	0.00	3687	0	845	159	1003
8	150	10.80	20.908	35.867	0.00	0.201	2.59	1.00	1.00	0.0	37.04	96.07	0.00	3776	0	882	154	1036
7	130	10.48	17.136	35.893	0.00	0.167	2.71	1.00	1.00	0.0	32.77	88.83	0.00	3847	0	791	150	941
6	110	10.12	21.921	35.893	0.00	0.162	2.73	1.00	1.00	0.0	37.64	102.73	0.00	4204	0	883	164	1047
5	90	9.70	27.216	42.571	0.00	0.174	2.69	1.00	1.00	0.0	45.57	122.39	0.00	5203	0	1009	194	1202
4	70	9.20	35.171	42.571	0.00	0.176	2.68	1.00	1.00	0.0	53.58	143.46	0.00	5477	0	1122	184	1305
3	50	8.57	38.421	42.571	0.00	0.168	2.71	1.00	1.00	0.0	56.65	153.26	0.00	5646	0	1116	171	1287
2	30	7.69	42.883	42.571	0.00	0.164	2.72	1.00	1.00	0.0	61.17	166.44	0.00	6191	0	1089	154	1242
1	10	6.66	45.841	42.571	0.00	0.158	2.74	1.00	1.00	0.0	64.84	177.93	0.00	7447	0	1007	133	1140
Totals															56,071	0	14,241	

1.0D + 1.0W Service 60°

Gust Response Factor (Gh): 0.85

60 mph Wind with No Ice

SECTION FORCES

1.0D + 1.0W Service 60°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	285.3	12.36	4.815	4.196	0.00	0.164	2.72	0.80	1.00	0.0	6.24	16.99	0.00	321	0	179	32	210
14	270	12.22	8.977	13.333	0.00	0.209	2.57	0.80	1.00	0.0	14.86	38.13	0.00	1222	0	396	137	534
13	250	12.02	9.638	15.014	0.00	0.201	2.59	0.80	1.00	0.0	16.34	42.35	0.00	1449	0	433	172	605
12	230	11.81	11.593	22.104	0.00	0.216	2.54	0.80	1.00	0.0	21.30	54.19	0.00	2038	0	544	169	713
11	210	11.59	12.857	28.777	0.00	0.220	2.53	0.80	1.00	0.0	24.70	62.52	0.00	2677	0	616	166	782
10	190	11.35	17.223	28.777	0.00	0.210	2.56	0.80	1.00	0.0	28.13	72.11	0.00	2885	0	696	162	858
9	170	11.09	18.924	35.867	0.00	0.217	2.54	0.80	1.00	0.0	31.48	80.01	0.00	3687	0	754	159	913
8	150	10.80	20.908	35.867	0.00	0.201	2.59	0.80	1.00	0.0	32.86	85.22	0.00	3776	0	782	154	937
7	130	10.48	17.136	35.893	0.00	0.167	2.71	0.80	1.00	0.0	29.34	79.54	0.00	3847	0	708	150	858
6	110	10.12	21.921	35.893	0.00	0.162	2.73	0.80	1.00	0.0	33.25	90.76	0.00	4204	0	780	164	944
5	90	9.70	27.216	42.571	0.00	0.174	2.69	0.80	1.00	0.0	40.13	107.77	0.00	5203	0	888	194	1082
4	70	9.20	35.171	42.571	0.00	0.176	2.68	0.80	1.00	0.0	46.55	124.63	0.00	5477	0	974	184	1158
3	50	8.57	38.421	42.571	0.00	0.168	2.71	0.80	1.00	0.0	48.97	132.47	0.00	5646	0	965	171	1136
2	30	7.69	42.883	42.571	0.00	0.164	2.72	0.80	1.00	0.0	52.59	143.10	0.00	6191	0	936	154	1090
1	10	6.66	45.841	42.571	0.00	0.158	2.74	0.80	1.00	0.0	55.67	152.77	0.00	7447	0	865	133	998
Totals														56,071	0	12,816		

1.0D + 1.0W Service 90°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	285.3	12.36	4.815	4.196	0.00	0.164	2.72	0.85	1.00	0.0	6.48	17.64	0.00	321	0	185	32	217
14	270	12.22	8.977	13.333	0.00	0.209	2.57	0.85	1.00	0.0	15.31	39.29	0.00	1222	0	408	137	545
13	250	12.02	9.638	15.014	0.00	0.201	2.59	0.85	1.00	0.0	16.82	43.60	0.00	1449	0	446	172	618
12	230	11.81	11.593	22.104	0.00	0.216	2.54	0.85	1.00	0.0	21.88	55.66	0.00	2038	0	559	169	728
11	210	11.59	12.857	28.777	0.00	0.220	2.53	0.85	1.00	0.0	25.34	64.15	0.00	2677	0	632	166	798
10	190	11.35	17.223	28.777	0.00	0.210	2.56	0.85	1.00	0.0	28.99	74.32	0.00	2885	0	717	162	879
9	170	11.09	18.924	35.867	0.00	0.217	2.54	0.85	1.00	0.0	32.43	82.41	0.00	3687	0	777	159	935
8	150	10.80	20.908	35.867	0.00	0.201	2.59	0.85	1.00	0.0	33.90	87.93	0.00	3776	0	807	154	962
7	130	10.48	17.136	35.893	0.00	0.167	2.71	0.85	1.00	0.0	30.20	81.86	0.00	3847	0	729	150	879
6	110	10.12	21.921	35.893	0.00	0.162	2.73	0.85	1.00	0.0	34.35	93.75	0.00	4204	0	806	164	970
5	90	9.70	27.216	42.571	0.00	0.174	2.69	0.85	1.00	0.0	41.49	111.42	0.00	5203	0	918	194	1112
4	70	9.20	35.171	42.571	0.00	0.176	2.68	0.85	1.00	0.0	48.31	129.34	0.00	5477	0	1011	184	1195
3	50	8.57	38.421	42.571	0.00	0.168	2.71	0.85	1.00	0.0	50.89	137.67	0.00	5646	0	1003	171	1174
2	30	7.69	42.883	42.571	0.00	0.164	2.72	0.85	1.00	0.0	54.74	148.94	0.00	6191	0	974	154	1128
1	10	6.66	45.841	42.571	0.00	0.158	2.74	0.85	1.00	0.0	57.97	159.06	0.00	7447	0	900	133	1033
Totals														56,071	0	13,172		

1.0D + 1.0W Service 120°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	285.3	12.36	4.815	4.196	0.00	0.164	2.72	1.00	1.00	0.0	7.20	19.61	0.00	321	0	206	32	238
14	270	12.22	8.977	13.333	0.00	0.209	2.57	1.00	1.00	0.0	16.66	42.74	0.00	1222	0	444	137	581
13	250	12.02	9.638	15.014	0.00	0.201	2.59	1.00	1.00	0.0	18.27	47.34	0.00	1449	0	484	172	656
12	230	11.81	11.593	22.104	0.00	0.216	2.54	1.00	1.00	0.0	23.62	60.09	0.00	2038	0	603	169	772
11	210	11.59	12.857	28.777	0.00	0.220	2.53	1.00	1.00	0.0	27.27	69.03	0.00	2677	0	680	166	846
10	190	11.35	17.223	28.777	0.00	0.210	2.56	1.00	1.00	0.0	31.57	80.94	0.00	2885	0	781	162	943
9	170	11.09	18.924	35.867	0.00	0.217	2.54	1.00	1.00	0.0	35.27	89.63	0.00	3687	0	845	159	1003
8	150	10.80	20.908	35.867	0.00	0.201	2.59	1.00	1.00	0.0	37.04	96.07	0.00	3776	0	882	154	1036
7	130	10.48	17.136	35.893	0.00	0.167	2.71	1.00	1.00	0.0	32.77	88.83	0.00	3847	0	791	150	941
6	110	10.12	21.921	35.893	0.00	0.162	2.73	1.00	1.00	0.0	37.64	102.73	0.00	4204	0	883	164	1047
5	90	9.70	27.216	42.571	0.00	0.174	2.69	1.00	1.00	0.0	45.57	122.39	0.00	5203	0	1009	194	1202
4	70	9.20	35.171	42.571	0.00	0.176	2.68	1.00	1.00	0.0	53.58	143.46	0.00	5477	0	1122	184	1305
3	50	8.57	38.421	42.571	0.00	0.168	2.71	1.00	1.00	0.0	56.65	153.26	0.00	5646	0	1116	171	1287
2	30	7.69	42.883	42.571	0.00	0.164	2.72	1.00	1.00	0.0	61.17	166.44	0.00	6191	0	1089	154	1242
1	10	6.66	45.841	42.571	0.00	0.158	2.74	1.00	1.00	0.0	64.84	177.93	0.00	7447	0	1007	133	1140
Totals														56,071	0	14,241		

1.0D + 1.0W Service 180°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	285.3	12.36	4.815	4.196	0.00	0.164	2.72	0.80	1.00	0.0	6.24	16.99	0.00	321	0	179	32	210
14	270	12.22	8.977	13.333	0.00	0.209	2.57	0.80	1.00	0.0	14.86	38.13	0.00	1222	0	396	137	534
13	250	12.02	9.638	15.014	0.00	0.201	2.59	0.80	1.00	0.0	16.34	42.35	0.00	1449	0	433	172	605
12	230	11.81	11.593	22.104	0.00	0.216	2.54	0.80	1.00	0.0	21.30	54.19	0.00	2038	0	544	169	713
11	210	11.59	12.857	28.777	0.00	0.220	2.53	0.80	1.00	0.0	24.70	62.52	0.00	2677	0	616	166	782
10	190	11.35	17.223	28.777	0.00	0.210	2.56	0.80	1.00	0.0	28.13	72.11	0.00	2885	0	696	162	858
9	170	11.09	18.924	35.867	0.00	0.217	2.54	0.80	1.00	0.0	31.48	80.01	0.00	3687	0	754	159	913
8	150	10.80	20.908	35.867	0.00	0.201	2.59	0.80	1.00	0.0	32.86	85.22	0.00	3776	0	782	154	937
7	130	10.48	17.136	35.893	0.00	0.167	2.71	0.80	1.00	0.0	29.34	79.54	0.00	3847	0	708	150	858
6	110	10.12	21.921	35.893	0.00	0.162	2.73	0.80	1.00	0.0	33.25	90.76	0.00	4204	0	780	164	944
5	90	9.70	27.216	42.571	0.00	0.174	2.69	0.80	1.00	0.0	40.13	107.77	0.00	5203	0	888	194	1082

SECTION FORCES

1.0D + 1.0W Service 180°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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)
4	70	9.20	35.171	42.571	0.00	0.176	2.68	0.80	1.00	0.0	46.55	124.63	0.00	5477	0	974	184	1158
3	50	8.57	38.421	42.571	0.00	0.168	2.71	0.80	1.00	0.0	48.97	132.47	0.00	5646	0	965	171	1136
2	30	7.69	42.883	42.571	0.00	0.164	2.72	0.80	1.00	0.0	52.59	143.10	0.00	6191	0	936	154	1090
1	10	6.66	45.841	42.571	0.00	0.158	2.74	0.80	1.00	0.0	55.67	152.77	0.00	7447	0	865	133	998
Totals														56,071	0	12,816		

1.0D + 1.0W Service 210°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	12.36	4.815	4.196	0.00	0.164	2.72	0.85	1.00	0.0	6.48	17.64	0.00	321	0	185	32	217
14	270	12.22	8.977	13.333	0.00	0.209	2.57	0.85	1.00	0.0	15.31	39.29	0.00	1222	0	408	137	545
13	250	12.02	9.638	15.014	0.00	0.201	2.59	0.85	1.00	0.0	16.82	43.60	0.00	1449	0	446	172	618
12	230	11.81	11.593	22.104	0.00	0.216	2.54	0.85	1.00	0.0	21.88	55.66	0.00	2038	0	559	169	728
11	210	11.59	12.857	28.777	0.00	0.220	2.53	0.85	1.00	0.0	25.34	64.15	0.00	2677	0	632	166	798
10	190	11.35	17.223	28.777	0.00	0.210	2.56	0.85	1.00	0.0	28.99	74.32	0.00	2885	0	717	162	879
9	170	11.09	18.924	35.867	0.00	0.217	2.54	0.85	1.00	0.0	32.43	82.41	0.00	3687	0	777	159	935
8	150	10.80	20.908	35.867	0.00	0.201	2.59	0.85	1.00	0.0	33.90	87.93	0.00	3776	0	807	154	962
7	130	10.48	17.136	35.893	0.00	0.167	2.71	0.85	1.00	0.0	30.20	81.86	0.00	3847	0	729	150	879
6	110	10.12	21.921	35.893	0.00	0.162	2.73	0.85	1.00	0.0	34.35	93.75	0.00	4204	0	806	164	970
5	90	9.70	27.216	42.571	0.00	0.174	2.69	0.85	1.00	0.0	41.49	111.42	0.00	5203	0	918	194	1112
4	70	9.20	35.171	42.571	0.00	0.176	2.68	0.85	1.00	0.0	48.31	129.34	0.00	5477	0	1011	184	1195
3	50	8.57	38.421	42.571	0.00	0.168	2.71	0.85	1.00	0.0	50.89	137.67	0.00	5646	0	1003	171	1174
2	30	7.69	42.883	42.571	0.00	0.164	2.72	0.85	1.00	0.0	54.74	148.94	0.00	6191	0	974	154	1128
1	10	6.66	45.841	42.571	0.00	0.158	2.74	0.85	1.00	0.0	57.97	159.06	0.00	7447	0	900	133	1033
Totals														56,071	0	13,172		

1.0D + 1.0W Service 240°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	12.36	4.815	4.196	0.00	0.164	2.72	1.00	1.00	0.0	7.20	19.61	0.00	321	0	206	32	238
14	270	12.22	8.977	13.333	0.00	0.209	2.57	1.00	1.00	0.0	16.66	42.74	0.00	1222	0	444	137	581
13	250	12.02	9.638	15.014	0.00	0.201	2.59	1.00	1.00	0.0	18.27	47.34	0.00	1449	0	484	172	656
12	230	11.81	11.593	22.104	0.00	0.216	2.54	1.00	1.00	0.0	23.62	60.09	0.00	2038	0	603	169	772
11	210	11.59	12.857	28.777	0.00	0.220	2.53	1.00	1.00	0.0	27.27	69.03	0.00	2677	0	680	166	846
10	190	11.35	17.223	28.777	0.00	0.210	2.56	1.00	1.00	0.0	31.57	80.94	0.00	2885	0	781	162	943
9	170	11.09	18.924	35.867	0.00	0.217	2.54	1.00	1.00	0.0	35.27	89.63	0.00	3687	0	845	159	1003
8	150	10.80	20.908	35.867	0.00	0.201	2.59	1.00	1.00	0.0	37.04	96.07	0.00	3776	0	882	154	1036
7	130	10.48	17.136	35.893	0.00	0.167	2.71	1.00	1.00	0.0	32.77	88.83	0.00	3847	0	791	150	941
6	110	10.12	21.921	35.893	0.00	0.162	2.73	1.00	1.00	0.0	37.64	102.73	0.00	4204	0	883	164	1047
5	90	9.70	27.216	42.571	0.00	0.174	2.69	1.00	1.00	0.0	45.57	122.39	0.00	5203	0	1009	194	1202
4	70	9.20	35.171	42.571	0.00	0.176	2.68	1.00	1.00	0.0	53.58	143.46	0.00	5477	0	1122	184	1305
3	50	8.57	38.421	42.571	0.00	0.168	2.71	1.00	1.00	0.0	56.65	153.26	0.00	5646	0	1116	171	1287
2	30	7.69	42.883	42.571	0.00	0.164	2.72	1.00	1.00	0.0	61.17	166.44	0.00	6191	0	1089	154	1242
1	10	6.66	45.841	42.571	0.00	0.158	2.74	1.00	1.00	0.0	64.84	177.93	0.00	7447	0	1007	133	1140
Totals														56,071	0	14,241		

1.0D + 1.0W Service 300°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	12.36	4.815	4.196	0.00	0.164	2.72	0.80	1.00	0.0	6.24	16.99	0.00	321	0	179	32	210
14	270	12.22	8.977	13.333	0.00	0.209	2.57	0.80	1.00	0.0	14.86	38.13	0.00	1222	0	396	137	534
13	250	12.02	9.638	15.014	0.00	0.201	2.59	0.80	1.00	0.0	16.34	42.35	0.00	1449	0	433	172	605
12	230	11.81	11.593	22.104	0.00	0.216	2.54	0.80	1.00	0.0	21.30	54.19	0.00	2038	0	544	169	713
11	210	11.59	12.857	28.777	0.00	0.220	2.53	0.80	1.00	0.0	24.70	62.52	0.00	2677	0	616	166	782
10	190	11.35	17.223	28.777	0.00	0.210	2.56	0.80	1.00	0.0	28.13	72.11	0.00	2885	0	696	162	858
9	170	11.09	18.924	35.867	0.00	0.217	2.54	0.80	1.00	0.0	31.48	80.01	0.00	3687	0	754	159	913
8	150	10.80	20.908	35.867	0.00	0.201	2.59	0.80	1.00	0.0	32.86	85.22	0.00	3776	0	782	154	937
7	130	10.48	17.136	35.893	0.00	0.167	2.71	0.80	1.00	0.0	29.34	79.54	0.00	3847	0	708	150	858
6	110	10.12	21.921	35.893	0.00	0.162	2.73	0.80	1.00	0.0	33.25	90.76	0.00	4204	0	780	164	944
5	90	9.70	27.216	42.571	0.00	0.174	2.69	0.80	1.00	0.0	40.13	107.77	0.00	5203	0	888	194	1082
4	70	9.20	35.171	42.571	0.00	0.176	2.68	0.80	1.00	0.0	46.55	124.63	0.00	5477	0	974	184	1158
3	50	8.57	38.421	42.571	0.00	0.168	2.71	0.80	1.00	0.0	48.97	132.47	0.00	5646	0	965	171	1136
2	30	7.69	42.883	42.571	0.00	0.164	2.72	0.80	1.00	0.0	52.59	143.10	0.00	6191	0	936	154	1090
1	10	6.66	45.841	42.571	0.00	0.158	2.74	0.80	1.00	0.0	55.67	152.77	0.00	7447	0	865	133	998
Totals														56,071	0	12,816		

1.0D + 1.0W Service 330°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _Z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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)
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ASSET: 280860, SMITH PRINCE NC

CODE: ANSI/TIA-222-G

CUSTOMER: T-MOBILE

PROJECT: 14922096_C3_02

SECTION FORCES

1.0D + 1.0W Service 330°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	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	285.3	12.36	4.815	4.196	0.00	0.164	2.72	0.85	1.00	0.0	6.48	17.64	0.00	321	0	185	32	217
14	270	12.22	8.977	13.333	0.00	0.209	2.57	0.85	1.00	0.0	15.31	39.29	0.00	1222	0	408	137	545
13	250	12.02	9.638	15.014	0.00	0.201	2.59	0.85	1.00	0.0	16.82	43.60	0.00	1449	0	446	172	618
12	230	11.81	11.593	22.104	0.00	0.216	2.54	0.85	1.00	0.0	21.88	55.66	0.00	2038	0	559	169	728
11	210	11.59	12.857	28.777	0.00	0.220	2.53	0.85	1.00	0.0	25.34	64.15	0.00	2677	0	632	166	798
10	190	11.35	17.223	28.777	0.00	0.210	2.56	0.85	1.00	0.0	28.99	74.32	0.00	2885	0	717	162	879
9	170	11.09	18.924	35.867	0.00	0.217	2.54	0.85	1.00	0.0	32.43	82.41	0.00	3687	0	777	159	935
8	150	10.80	20.908	35.867	0.00	0.201	2.59	0.85	1.00	0.0	33.90	87.93	0.00	3776	0	807	154	962
7	130	10.48	17.136	35.893	0.00	0.167	2.71	0.85	1.00	0.0	30.20	81.86	0.00	3847	0	729	150	879
6	110	10.12	21.921	35.893	0.00	0.162	2.73	0.85	1.00	0.0	34.35	93.75	0.00	4204	0	806	164	970
5	90	9.70	27.216	42.571	0.00	0.174	2.69	0.85	1.00	0.0	41.49	111.42	0.00	5203	0	918	194	1112
4	70	9.20	35.171	42.571	0.00	0.176	2.68	0.85	1.00	0.0	48.31	129.34	0.00	5477	0	1011	184	1195
3	50	8.57	38.421	42.571	0.00	0.168	2.71	0.85	1.00	0.0	50.89	137.67	0.00	5646	0	1003	171	1174
2	30	7.69	42.883	42.571	0.00	0.164	2.72	0.85	1.00	0.0	54.74	148.94	0.00	6191	0	974	154	1128
1	10	6.66	45.841	42.571	0.00	0.158	2.74	0.85	1.00	0.0	57.97	159.06	0.00	7447	0	900	133	1033
Totals														56,071	0			13,172

EQUIVALENT LATERAL FORCE METHOD

(Based on ASCE7-10 Chapters 11, 12 & 15)

Spectral Response Acceleration for Short Period (S_s):	0.18
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.08
Long-Period Transition Period (T_L - Seconds):	8
Importance Factor (I_e):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.13
Seismic Response Coefficient (C_s):	0.04
Upper Limit C_s :	0.04
Lower Limit C_s :	0.03
Period based on Rayleigh Method (sec):	1.23
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.37
Total Unfactored Dead Load:	63.55 k
Seismic Base Shear (E):	3.01 k

SEISMIC FORCES

(0.9 - 0.2Sds) * DL + E

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
15	285.30	321	722,418	0.015	44	277
14	270.00	1,222	2,546,843	0.052	155	1,054
13	250.00	1,449	2,717,999	0.055	165	1,249
12	230.00	2,038	3,412,259	0.069	207	1,757
11	210.00	2,677	3,958,649	0.080	241	2,308
10	190.00	2,885	3,722,312	0.075	226	2,488
9	170.00	3,687	4,086,930	0.083	248	3,179
8	150.00	3,776	3,527,579	0.071	214	3,256
7	130.00	3,847	2,956,511	0.060	180	3,317
6	110.00	4,204	2,572,222	0.052	156	3,625
5	90.00	5,203	2,420,495	0.049	147	4,486
4	70.00	5,477	1,807,887	0.036	110	4,722
3	50.00	5,646	1,177,433	0.024	72	4,868
2	30.00	6,191	642,885	0.013	39	5,338
1	10.00	7,447	172,598	0.004	10	6,421
Raycap DC9-48-60-24-8C-EV (Enclosure)	290.30	56	127,704	0.003	8	48
Ericsson RRUS 4426 B66	289.80	145	333,317	0.007	20	125
Ericsson Radio 4415 B30	289.80	129	296,129	0.006	18	111
Ericsson RRUS 4415 B25	289.80	138	316,789	0.006	19	119
Ericsson RRUS 4478 B14 (16.5" Height)	289.80	180	412,515	0.008	25	155
Ericsson RRUS 4449 B5, B12	285.00	213	477,936	0.010	29	184
Generic Round Sector Frame	285.00	900	2,019,446	0.041	123	776
Commscope NNH4-65C-R6-V3 (102.5 lbs)	285.00	615	1,379,955	0.028	84	530
Ericsson Radio 4460 B25+B66	265.00	327	664,360	0.013	40	282
Ericsson Radio 4480 B71+B85	265.00	279	566,839	0.012	34	241
Amphenol Antel APXVAALL24M-U-J20	265.00	258	524,174	0.011	32	222
Generic Sector Frame	265.00	2,400	4,876,034	0.098	296	2,069
Generic 1' Yagi	119.20	5	3,413	0.000	0	4
Raycap RDIDC-9181-PF-48	105.00	22	12,574	0.000	1	19
Fujitsu TA08025-B605	105.00	225	129,184	0.003	8	194
Fujitsu TA08025-B604	105.00	192	110,065	0.002	7	165
JMA Wireless MX08FRO665-21	105.00	194	111,099	0.002	7	167
Generic Flat Light Sector Frame	105.00	1,200	688,983	0.014	42	1,035
Totals		63,547	49,495,536	1.000	3,009	54,793

(1.2 + 0.2Sds) * DL + E

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
15	285.30	321	722,418	0.015	44	398
14	270.00	1,222	2,546,843	0.052	155	1,513

ASSET: 280860, SMITH PRINCE NC

CODE: ANSI/TIA-222-G

CUSTOMER: T-MOBILE

PROJECT: 14922096_C3_02

13	250.00	1,449	2,717,999	0.055	165	1,793
12	230.00	2,038	3,412,259	0.069	207	2,522
11	210.00	2,677	3,958,649	0.080	241	3,313
10	190.00	2,885	3,722,312	0.075	226	3,571
9	170.00	3,687	4,086,930	0.083	248	4,564
8	150.00	3,776	3,527,579	0.071	214	4,673
7	130.00	3,847	2,956,511	0.060	180	4,762
6	110.00	4,204	2,572,222	0.052	156	5,204
5	90.00	5,203	2,420,495	0.049	147	6,440
4	70.00	5,477	1,807,887	0.036	110	6,779
3	50.00	5,646	1,177,433	0.024	72	6,989
2	30.00	6,191	642,885	0.013	39	7,663
1	10.00	7,447	172,598	0.004	10	9,218
Raycap DC9-48-60-24-8C-EV (Enclosure)	290.30	56	127,704	0.003	8	69
Ericsson RRUS 4426 B66	289.80	145	333,317	0.007	20	180
Ericsson Radio 4415 B30	289.80	129	296,129	0.006	18	160
Ericsson RRUS 4415 B25	289.80	138	316,789	0.006	19	171
Ericsson RRUS 4478 B14 (16.5" Height)	289.80	180	412,515	0.008	25	222
Ericsson RRUS 4449 B5, B12	285.00	213	477,936	0.010	29	264
Generic Round Sector Frame	285.00	900	2,019,446	0.041	123	1,114
Commscope NNH4-65C-R6-V3 (102.5 lbs)	285.00	615	1,379,955	0.028	84	761
Ericsson Radio 4460 B25+B66	265.00	327	664,360	0.013	40	405
Ericsson Radio 4480 B71+B85	265.00	279	566,839	0.012	34	345
Amphenol Antel APXVAALL24M-U-J20	265.00	258	524,174	0.011	32	319
Generic Sector Frame	265.00	2,400	4,876,034	0.098	296	2,971
Generic 1' Yagi	119.20	5	3,413	0.000	0	6
Raycap RDIDC-9181-PF-48	105.00	22	12,574	0.000	1	27
Fujitsu TA08025-B605	105.00	225	129,184	0.003	8	278
Fujitsu TA08025-B604	105.00	192	110,065	0.002	7	237
JMA Wireless MX08FRO665-21	105.00	194	111,099	0.002	7	240
Generic Flat Light Sector Frame	105.00	1,200	688,983	0.014	42	1,485
Totals		63,547	49,495,536	1.000	3,009	78,656

FORCE/STRESS SUMMARY

Section 1 - 0.0' to 20.00'

Member Compression		Pu (kip)	Load Case	Len (ft)	Bracing %			KL/R	F _y (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	# Bolt	# Hole	Use %	Controls
L PX - 12" DIA PIPE	D SAE - 4X4X0.3125	-361.13	1.2D + 1.6W N	20.033	25	25	25	13.88	50.00	851.91	0.00	0.00	0	0	42	Member X
L PX - 12" DIA PIPE	D SAE - 4X4X0.3125	-10.48	1.2D + 1.6W 330°	33.606	25	50	25	162.61	36.00	20.51	31.81	34.80	1	1	51	Member Y

Member Tension		Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 12" DIA PIPE	D SAE - 4X4X0.3125	294.80	0.9D + 1.6W 60°	50.0	62	864.00	0.00	0.00		0	0	34	Member
L PX - 12" DIA PIPE	D SAE - 4X4X0.3125	10.08	0.9D + 1.6W 210°	36.0	58	66.83	31.81	21.21	20.34	1	1	50	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension		306.15	0.9D + 1.6W 60°	1163.03	31	16	1" F1554-105

Section 2 - 20.0' to 40.00'

Member Compression		Pu (kip)	Load Case	Len (ft)	Bracing %			KL/R	F _y (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	# Bolt	# Hole	Use %	Controls
L PST - 12" DIA PIPE	D SAE - 4X4X0.3125	-336.01	1.2D + 1.6W N	20.033	25	25	25	13.72	50.00	648.02	0.00	0.00	0	0	52	Member X
L PST - 12" DIA PIPE	D SAE - 4X4X0.3125	-10.86	1.2D + 1.6W 210°	32.021	25	50	25	154.94	36.00	22.59	31.81	34.80	1	1	48	Member Y

Member Tension		Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
L PST - 12" DIA PIPE	D SAE - 4X4X0.3125	274.81	0.9D + 1.6W 60°	50.0	62	657.00	0.00	0.00		0	0	42	Member
L PST - 12" DIA PIPE	D SAE - 4X4X0.3125	10.45	0.9D + 1.6W 330°	36.0	58	66.83	31.81	21.21	20.34	1	1	51	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension		284.26	0.9D + 1.6W 180°	872.27	33	16	1 A325

FORCE/STRESS SUMMARY

Section 3 - 40.0' to 60.00'

Member Compression	Pu	Load Case	Len (ft)	Bracing %			KL/R	F _y	Φ _c P _n	Shear	Bear	# Bolt	# Hole	Use %	Controls
	(kip)			(ksi)	(kip)	(kip)		Φ _{R_{nv}}	Φ _{R_n}	Φ _t P _n					
L PST - 12" DIA PIPE	-308.59	1.2D + 1.6W N	20.033	25	25	25	13.72	50.00	648.02	0.00	0.00	0	0	48	Member X
D SAE - 4X4X0.25	-10.40	0.9D + 1.6W 210°	30.485	25	50	25	146.33	35.71	20.47	31.81	27.84	1	1	51	Member Y

Member Tension	Pu	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
	(kip)											
L PST - 12" DIA PIPE	254.11	0.9D + 1.6W 60°	50.0	62	657.00	0.00	0.00		0	0	39	Member
D SAE - 4X4X0.25	10.09	0.9D + 1.6W 330°	36.0	58	54.12	31.81	16.96	16.27	1	1	62	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	262.86	0.9D + 1.6W 180°	872.27	30	16	1 A325

Section 4 - 60.0' to 80.00'

Member Compression	Pu	Load Case	Len (ft)	Bracing %			KL/R	F _y	Φ _c P _n	Shear	Bear	# Bolt	# Hole	Use %	Controls
	(kip)			(ksi)	(kip)	(kip)		Φ _{R_{nv}}	Φ _{R_n}	Φ _t P _n					
L PST - 12" DIA PIPE	-280.38	1.2D + 1.6W N	20.033	25	25	25	13.72	50.00	648.02	0.00	0.00	0	0	43	Member X
D SAE - 4X4X0.25	-9.87	1.2D + 1.6W 120°	29.006	25	50	25	139.23	35.71	22.61	31.81	27.84	1	1	44	Member Y

Member Tension	Pu	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
	(kip)											
L PST - 12" DIA PIPE	232.52	0.9D + 1.6W 60°	50.0	62	657.00	0.00	0.00		0	0	35	Member
D SAE - 4X4X0.25	9.30	0.9D + 1.6W 210°	36.0	58	54.12	31.81	16.96	16.27	1	1	57	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	242.11	0.9D + 1.6W 180°	872.27	28	16	1 A325

Section 5 - 80.0' to 100.00'

Member Compression	Pu	Load Case	Len (ft)	Bracing %			KL/R	F _y	Φ _c P _n	Shear	Bear	# Bolt	# Hole	Use %	Controls
	(kip)			(ksi)	(kip)	(kip)		Φ _{R_{nv}}	Φ _{R_n}	Φ _t P _n					
L PST - 12" DIA PIPE	-261.91	1.2D + 1.6W N	10.017	100	100	100	27.44	50.00	621.80	0.00	0.00	0	0	42	Member X
D SAE - 4X4X0.25	-6.74	0.9D + 1.6W 210°	21.917	50	50	50	165.41	35.71	16.02	31.81	27.84	1	1	42	Member Z

Member Tension	Pu	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
	(kip)											
L PST - 12" DIA PIPE	218.75	0.9D + 1.6W 60°	50.0	62	657.00	0.00	0.00		0	0	33	Member
D SAE - 4X4X0.25	6.73	1.2D + 1.6W 330°	36.0	58	54.12	31.81	16.96	16.27	1	1	41	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	221.61	0.9D + 1.6W 180°	872.27	25	16	1 A325

FORCE/STRESS SUMMARY

Section 6 - 100.0' to 120.00'

Member Compression		Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	# Bolt	# Hole	Use %	Controls
L PST - 10" DIA PIPE	-236.70	1.2D + 1.6W N	10.017	100	100	100	32.75	50.00	495.10	0.00	0.00	0	0	48	Member X
D SAE - 3.5x3.5x0.25	-5.47	1.2D + 1.6W 330°	20.158	50	50	50	175.79	36.00	12.35	17.89	20.88	1	1	44	Member Z

Member Tension		Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
L PST - 10" DIA PIPE	200.50	0.9D + 1.6W 60°	50.0	62	535.50	0.00	0.00			0	0	37	Member
D SAE - 3.5x3.5x0.25	5.34	0.9D + 1.6W 210°	36.0	58	48.00	17.89	12.62	16.04		1	1	42	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	203.35	0.9D + 1.6W 60°	872.27	23	16	1 A325	

Section 7 - 120.0' to 140.00'

Member Compression		Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	# Bolt	# Hole	Use %	Controls
L PST - 10" DIA PIPE	-215.32	1.2D + 1.6W N	10.017	100	100	100	32.75	50.00	495.10	0.00	0.00	0	0	43	Member X
D SAE - 3X3X0.25	-4.94	0.9D + 1.6W 210°	18.448	48	48	48	179.50	36.00	10.10	17.89	20.88	1	1	49	Member Z

Member Tension		Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
L PST - 10" DIA PIPE	183.84	0.9D + 1.6W 180°	50.0	62	535.50	0.00	0.00			0	0	34	Member
D SAE - 3X3X0.25	4.85	1.2D + 1.6W 330°	36.0	58	39.84	17.89	12.62	13.32		1	1	38	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	187.25	0.9D + 1.6W 60°	545.17	34	10	1 A325	

FORCE/STRESS SUMMARY

Section 8 - 140.0' to 160.00'

Member Compression		Pu (kip)	Load Case	Len (ft)	Bracing %			KL/R	F _y (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	# Bolt	# Hole	Use %	Controls
L PST - 10" DIA PIPE		-194.26	1.2D + 1.6W 120°	6.673	100	100	100	21.82	50.00	517.18	0.00	0.00	0	0	38	Member X
D SAE - 3X3X0.1875		-5.27	1.2D + 1.6W 90°	15.282	48	48	48	147.69	36.00	11.29	17.89	15.66	1	1	47	Member Z

Member Tension		Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
L PST - 10" DIA PIPE		167.20	0.9D + 1.6W 60°	50.0	62	535.50	0.00	0.00		0	0	31	Member
D SAE - 3X3X0.1875		5.20	1.2D + 1.6W 330°	36.0	58	30.21	17.89	9.46	9.99	1	1	55	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension		170.31	0.9D + 1.6W 180°	545.17	31	10	1 A325

Section 9 - 160.0' to 180.00'

Member Compression		Pu (kip)	Load Case	Len (ft)	Bracing %			KL/R	F _y (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	# Bolt	# Hole	Use %	Controls
L PST - 10" DIA PIPE		-167.14	1.2D + 1.6W N	6.673	100	100	100	21.82	50.00	517.18	0.00	0.00	0	0	32	Member X
D SAE - 3X3X0.1875		-4.86	1.2D + 1.6W 210°	13.947	50	50	50	140.41	36.00	12.49	17.89	15.66	1	1	39	Member Z

Member Tension		Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
L PST - 10" DIA PIPE		144.72	0.9D + 1.6W 180°	50.0	62	535.50	0.00	0.00		0	0	27	Member
D SAE - 3X3X0.1875		4.78	1.2D + 1.6W 330°	36.0	58	30.21	17.89	9.46	9.99	1	1	51	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension		148.01	0.9D + 1.6W 180°	545.17	27	10	1 A325

Section 10 - 180.0' to 200.00'

Member Compression		Pu (kip)	Load Case	Len (ft)	Bracing %			KL/R	F _y (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	# Bolt	# Hole	Use %	Controls
L PST - 8" DIA PIPE		-140.74	1.2D + 1.6W N	6.673	100	100	100	27.24	50.00	358.04	0.00	0.00	0	0	39	Member X
D SAE - 3X3X0.1875		-4.28	1.2D + 1.6W 210°	12.65	50	50	50	127.35	36.00	15.04	17.89	15.66	1	1	28	Member Z

Member Tension		Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
L PST - 8" DIA PIPE		122.79	0.9D + 1.6W 180°	50.0	62	378.00	0.00	0.00		0	0	32	Member
D SAE - 3X3X0.1875		4.18	1.2D + 1.6W 330°	36.0	58	30.21	17.89	9.46	9.99	1	1	44	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension		126.05	0.9D + 1.6W 180°	545.17	23	10	1 A325

FORCE/STRESS SUMMARY

Section 11 - 200.0' to 220.00'

Member Compression		Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	# Bolt	# Hole	Use %	Controls
L PST - 8" DIA PIPE	-115.19	1.2D + 1.6W 120°	6.673	100	100	100	27.24	50.00	358.04	0.00	0.00	0	0	32	Member X
D SAE - 2.5X2.5X0.1875	-3.82	1.2D + 1.6W 210°	11.403	50	50	50	138.22	36.00	10.67	17.89	15.66	1	1	36	Member Z

Member Tension		Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
L PST - 8" DIA PIPE	100.89	0.9D + 1.6W 60°	50.0	62	378.00	0.00	0.00			0	0	27	Member
D SAE - 2.5X2.5X0.1875	3.76	1.2D + 1.6W 330°	36.0	58	24.08	17.89	9.46	8.97		1	1	42	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	104.20	0.9D + 1.6W 180°	436.14	24	8	1 A325	

Section 12 - 220.0' to 240.00'

Member Compression		Pu (kip)	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	# Bolt	# Hole	Use %	Controls
L PST - 6" DIA PIPE	-89.56	1.2D + 1.6W 120°	6.673	100	100	100	35.59	50.00	228.89	0.00	0.00	0	0	39	Member X
D SAE - 2.5X2.5X0.1875	-3.57	1.2D + 1.6W 330°	10.224	50	50	50	123.93	36.00	13.02	12.43	13.05	1	1	29	Bolt Shear

Member Tension		Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear Φ _{R_{nv}} (kip)	Bear Φ _{R_n} (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
L PST - 6" DIA PIPE	78.65	0.9D + 1.6W 60°	50.0	62	251.10	0.00	0.00			0	0	31	Member
D SAE - 2.5X2.5X0.1875	3.48	1.2D + 1.6W 90°	36.0	58	24.84	12.43	7.83	8.87		1	1	45	Bolt Bear

Max Splice Forces		Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	82.23	0.9D + 1.6W 180°	436.14	19	8	1 A325	

FORCE/STRESS SUMMARY

Section 13 – 240.0' to 260.00'

Member Compression	Pu	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls	
	(kip)			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)										
L PST - 4" DIA PIPE	-64.15	1.2D + 1.6W 120°	5.005	100	100	100	39.77	50.00	127.07	0.00	0.00	0	0	50	Member X
D SAE - 2X2X0.1875	-3.02	1.2D + 1.6W 90°	8.054	50	50	50	122.64	36.00	10.49	12.43	13.05	1	1	29	Member Z

Member Tension	Pu	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
	(kip)					Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
L PST - 4" DIA PIPE	55.90	0.9D + 1.6W 60°	50.0	62	142.65	0.00	0.00		0	0	39	Member
D SAE - 2X2X0.1875	3.14	1.2D + 1.6W 330°	36.0	58	18.74	12.43	7.83	6.83	1	1	46	Blk Shear

Max Splice Forces	Pu	Load Case	Φ _{R_{nt}}	Use	Num	Bolt Type
Bot Tension	(kip)		(kip)	%	Bolts	
	58.74	0.9D + 1.6W 180°	240.81	24	8	0.75" A325

Section 14 – 260.0' to 280.00'

Member Compression	Pu	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls	
	(kip)			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)										
L PST - 3-1/2" DIA PIPE	-32.22	1.2D + 1.6W 120°	5	100	100	100	44.78	50.00	104.16	0.00	0.00	0	0	31	Member X
D SAE - 2X2X0.1875	-4.17	1.2D + 1.6W 330°	7.071	50	50	50	110.76	36.00	12.14	12.43	13.05	1	1	34	Member Z

Member Tension	Pu	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
	(kip)					Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
L PST - 3-1/2" DIA PIPE	26.37	0.9D + 1.6W 60°	50.0	62	120.60	0.00	0.00		0	0	22	Member
D SAE - 2X2X0.1875	4.03	1.2D + 1.6W 210°	36.0	58	18.74	12.43	7.83	6.83	1	1	59	Blk Shear

Max Splice Forces	Pu	Load Case	Φ _{R_{nt}}	Use	Num	Bolt Type
Bot Tension	(kip)		(kip)	%	Bolts	
	31.51	0.9D + 1.6W 180°	240.81	13	8	0.75" A325

Section 15 – 280.0' to 290.60'

Member Compression	Pu	Load Case	Len (ft)	Bracing %			F _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls	
	(kip)			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)										
L PST - 2" DIA PIPE	-4.46	1.2D + 1.6W 120°	5.3	100	100	100	80.81	50.00	29.87	0.00	0.00	0	0	15	Member X
H SAE - 1.75X1.75X0.125	-0.19	1.2D + 1.6W N	5	100	100	100	172.91	36.00	3.17	7.95	6.96	1	1	6	Member Z
D SAE - 1.75X1.75X0.125	-2.07	1.2D + 1.6W 330°	7.286	50	50	50	125.99	36.00	5.90	7.95	6.96	1	1	35	Member Z

Member Tension	Pu	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
	(kip)					Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
L PST - 2" DIA PIPE	2.59	0.9D + 1.6W 60°	50.0	62	48.15	0.00	0.00		0	0	5	Member
H SAE - 1.75X1.75X0.125	0.15	0.9D + 1.6W 60°	36.0	58	11.15	7.95	4.13	3.81	1	1	4	Blk Shear
D SAE - 1.75X1.75X0.125	2.00	0.9D + 1.6W 210°	36.0	58	11.15	7.95	4.13	3.81	1	1	52	Blk Shear

Max Splice Forces	Pu	Load Case	Φ _{R_{nt}}	Use	Num	Bolt Type
Bot Tension	(kip)		(kip)	%	Bolts	
	5.28	0.9D + 1.6W 60°	240.81	2	8	0.75" A325

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	100.00	0.0695	-0.0029	0.0764	0.0764
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	120.00	0.0996	0.0018	0.0960	0.096
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	265.00	0.5584	-0.0074	0.3020	0.3021
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	285.30	0.6691	-0.0073	0.3228	0.3228
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	290.60	0.6982	-0.0072	0.3168	0.3168
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	100.00	0.0681	0.0024	0.0750	0.075
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	120.00	0.0976	0.0030	0.0941	0.0941
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	265.00	0.5498	0.0063	0.2985	0.2985
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	285.30	0.6592	0.0062	0.3176	0.3177
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	290.60	0.688	0.0061	0.3150	0.315
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	100.00	0.0735	0.0026	0.0808	0.0808
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	120.00	0.1047	0.0032	0.1005	0.1006
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	265.00	0.584	0.0068	0.3136	0.3136
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	285.30	0.6987	0.0067	0.3333	0.3334
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	290.60	0.729	0.0066	0.3273	0.3273
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	100.00	0.0695	-0.0029	0.0764	0.0764
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	120.00	0.0995	0.0018	0.0958	0.0958
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	265.00	0.5584	-0.0074	0.3020	0.3021
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	285.30	0.6691	-0.0073	0.3227	0.3228
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	290.60	0.6982	-0.0072	0.3168	0.3168
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	100.00	0.0681	0.0024	0.0750	0.075
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	120.00	0.0978	0.0000	0.0943	0.0943
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	265.00	0.5498	0.0063	0.2985	0.2985
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	285.30	0.6592	0.0062	0.3176	0.3177
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	290.60	0.688	0.0062	0.3150	0.315
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	100.00	0.0735	0.0026	0.0808	0.0808
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	120.00	0.1047	-0.0032	0.1005	0.1006
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	265.00	0.584	0.0068	0.3136	0.3136
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	285.30	0.6987	0.0067	0.3333	0.3334
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	290.60	0.729	0.0066	0.3273	0.3273
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	100.00	0.0695	-0.0029	0.0764	0.0764
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	120.00	0.0992	-0.0035	0.0956	0.0956
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	265.00	0.5584	-0.0074	0.3020	0.3021
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	285.30	0.6691	-0.0073	0.3228	0.3228
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	290.60	0.6982	-0.0072	0.3168	0.3168
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	100.00	0.0681	0.0024	0.0750	0.075
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	120.00	0.0976	-0.0030	0.0941	0.0941
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	265.00	0.5498	0.0063	0.2985	0.2985
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	285.30	0.6592	0.0062	0.3176	0.3177
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	290.60	0.688	0.0061	0.3150	0.315
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	100.00	0.0735	0.0026	0.0808	0.0808
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	120.00	0.1052	0.0000	0.1010	0.101
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	265.00	0.5841	0.0068	0.3136	0.3136
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	285.30	0.6987	0.0067	0.3333	0.3334
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	290.60	0.729	0.0066	0.3273	0.3273
(0.9 - 0.2Sds) * DL + E 330° Seismic (Reduced DL) M2	100.00	0.0124	-0.0005	0.0151	0.0151
(0.9 - 0.2Sds) * DL + E 330° Seismic (Reduced DL) M2	120.00	0.0184	0.0003	0.0195	0.0195
(0.9 - 0.2Sds) * DL + E 330° Seismic (Reduced DL) M2	265.00	0.1328	-0.0025	0.0912	0.0912
(0.9 - 0.2Sds) * DL + E 330° Seismic (Reduced DL) M2	285.30	0.1667	-0.0024	0.0996	0.0996
(0.9 - 0.2Sds) * DL + E 330° Seismic (Reduced DL) M2	290.60	0.1758	-0.0024	0.0999	0.1
(0.9 - 0.2Sds) * DL + E 330° Seismic (Reduced DL) M1	100.00	0.0188	-0.0008	0.0223	0.0223
(0.9 - 0.2Sds) * DL + E 330° Seismic (Reduced DL) M1	120.00	0.0276	0.0005	0.0286	0.0286
(0.9 - 0.2Sds) * DL + E 330° Seismic (Reduced DL) M1	265.00	0.1759	-0.0031	0.1057	0.1057
(0.9 - 0.2Sds) * DL + E 330° Seismic (Reduced DL) M1	285.30	0.2147	-0.0030	0.1126	0.1126
(0.9 - 0.2Sds) * DL + E 330° Seismic (Reduced DL) M1	290.60	0.225	-0.0030	0.1133	0.1133
(0.9 - 0.2Sds) * DL + E 300° Seismic (Reduced DL) M1	100.00	0.0186	0.0007	0.0220	0.022
(0.9 - 0.2Sds) * DL + E 300° Seismic (Reduced DL) M1	120.00	0.0275	0.0009	0.0285	0.0285
(0.9 - 0.2Sds) * DL + E 300° Seismic (Reduced DL) M1	265.00	0.1758	0.0027	0.1055	0.1055
(0.9 - 0.2Sds) * DL + E 300° Seismic (Reduced DL) M1	285.30	0.2147	0.0026	0.1125	0.1126

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
(0.9 - 0.2Sds) * DL + E 300° Seismic (Reduced DL) M1	290.60	0.225	0.0026	0.1135	0.1135
(0.9 - 0.2Sds) * DL + E 300° Seismic (Reduced DL) M2	100.00	0.0123	0.0004	0.0148	0.0148
(0.9 - 0.2Sds) * DL + E 300° Seismic (Reduced DL) M2	120.00	0.0183	0.0006	0.0194	0.0194
(0.9 - 0.2Sds) * DL + E 300° Seismic (Reduced DL) M2	265.00	0.1327	0.0022	0.0910	0.091
(0.9 - 0.2Sds) * DL + E 300° Seismic (Reduced DL) M2	285.30	0.1667	0.0021	0.0995	0.0995
(0.9 - 0.2Sds) * DL + E 300° Seismic (Reduced DL) M2	290.60	0.1758	0.0021	0.1003	0.1003
(0.9 - 0.2Sds) * DL + E 240° Seismic (Reduced DL) M2	100.00	0.0125	0.0004	0.0152	0.0152
(0.9 - 0.2Sds) * DL + E 240° Seismic (Reduced DL) M2	120.00	0.0183	0.0006	0.0193	0.0194
(0.9 - 0.2Sds) * DL + E 240° Seismic (Reduced DL) M2	265.00	0.1329	0.0022	0.0913	0.0913
(0.9 - 0.2Sds) * DL + E 240° Seismic (Reduced DL) M2	285.30	0.1667	0.0021	0.0993	0.0994
(0.9 - 0.2Sds) * DL + E 240° Seismic (Reduced DL) M2	290.60	0.1758	0.0021	0.0991	0.0992
(0.9 - 0.2Sds) * DL + E 240° Seismic (Reduced DL) M1	100.00	0.0188	0.0007	0.0225	0.0225
(0.9 - 0.2Sds) * DL + E 240° Seismic (Reduced DL) M1	120.00	0.0274	0.0009	0.0284	0.0284
(0.9 - 0.2Sds) * DL + E 240° Seismic (Reduced DL) M1	265.00	0.176	0.0027	0.1057	0.1057
(0.9 - 0.2Sds) * DL + E 240° Seismic (Reduced DL) M1	285.30	0.2147	0.0026	0.1124	0.1124
(0.9 - 0.2Sds) * DL + E 240° Seismic (Reduced DL) M1	290.60	0.225	0.0026	0.1126	0.1126
(0.9 - 0.2Sds) * DL + E 210° Seismic (Reduced DL) M1	100.00	0.0188	-0.0008	0.0223	0.0223
(0.9 - 0.2Sds) * DL + E 210° Seismic (Reduced DL) M1	120.00	0.0275	0.0005	0.0284	0.0284
(0.9 - 0.2Sds) * DL + E 210° Seismic (Reduced DL) M1	265.00	0.1759	-0.0031	0.1057	0.1057
(0.9 - 0.2Sds) * DL + E 210° Seismic (Reduced DL) M1	285.30	0.2147	-0.0030	0.1126	0.1126
(0.9 - 0.2Sds) * DL + E 210° Seismic (Reduced DL) M1	290.60	0.225	-0.0030	0.1133	0.1133
(0.9 - 0.2Sds) * DL + E 210° Seismic (Reduced DL) M2	100.00	0.0124	-0.0005	0.0151	0.0151
(0.9 - 0.2Sds) * DL + E 210° Seismic (Reduced DL) M2	120.00	0.0183	0.0003	0.0194	0.0194
(0.9 - 0.2Sds) * DL + E 210° Seismic (Reduced DL) M2	265.00	0.1328	-0.0025	0.0912	0.0912
(0.9 - 0.2Sds) * DL + E 210° Seismic (Reduced DL) M2	285.30	0.1667	-0.0024	0.0996	0.0996
(0.9 - 0.2Sds) * DL + E 210° Seismic (Reduced DL) M2	290.60	0.1758	-0.0024	0.0999	0.1
(0.9 - 0.2Sds) * DL + E 180° Seismic (Reduced DL) M1	100.00	0.0186	0.0007	0.0220	0.022
(0.9 - 0.2Sds) * DL + E 180° Seismic (Reduced DL) M1	120.00	0.0275	0.0000	0.0285	0.0285
(0.9 - 0.2Sds) * DL + E 180° Seismic (Reduced DL) M1	265.00	0.1758	0.0027	0.1055	0.1055
(0.9 - 0.2Sds) * DL + E 180° Seismic (Reduced DL) M1	285.30	0.2147	0.0026	0.1125	0.1126
(0.9 - 0.2Sds) * DL + E 180° Seismic (Reduced DL) M1	290.60	0.225	0.0026	0.1135	0.1135
(0.9 - 0.2Sds) * DL + E 180° Seismic (Reduced DL) M2	100.00	0.0123	0.0004	0.0148	0.0148
(0.9 - 0.2Sds) * DL + E 180° Seismic (Reduced DL) M2	120.00	0.0183	0.0000	0.0194	0.0194
(0.9 - 0.2Sds) * DL + E 180° Seismic (Reduced DL) M2	265.00	0.1327	0.0022	0.0910	0.091
(0.9 - 0.2Sds) * DL + E 180° Seismic (Reduced DL) M2	285.30	0.1667	0.0021	0.0995	0.0995
(0.9 - 0.2Sds) * DL + E 180° Seismic (Reduced DL) M2	290.60	0.1758	0.0021	0.1003	0.1003
(0.9 - 0.2Sds) * DL + E 120° Seismic (Reduced DL) M2	100.00	0.0125	0.0004	0.0152	0.0152
(0.9 - 0.2Sds) * DL + E 120° Seismic (Reduced DL) M2	120.00	0.0183	-0.0006	0.0193	0.0194
(0.9 - 0.2Sds) * DL + E 120° Seismic (Reduced DL) M2	265.00	0.1329	0.0022	0.0913	0.0913
(0.9 - 0.2Sds) * DL + E 120° Seismic (Reduced DL) M2	285.30	0.1667	0.0021	0.0993	0.0994
(0.9 - 0.2Sds) * DL + E 120° Seismic (Reduced DL) M2	290.60	0.1758	0.0021	0.0991	0.0992
(0.9 - 0.2Sds) * DL + E 120° Seismic (Reduced DL) M1	100.00	0.0188	0.0007	0.0225	0.0225
(0.9 - 0.2Sds) * DL + E 120° Seismic (Reduced DL) M1	120.00	0.0274	-0.0009	0.0284	0.0284
(0.9 - 0.2Sds) * DL + E 120° Seismic (Reduced DL) M1	265.00	0.176	0.0027	0.1057	0.1057
(0.9 - 0.2Sds) * DL + E 120° Seismic (Reduced DL) M1	285.30	0.2147	0.0026	0.1124	0.1124
(0.9 - 0.2Sds) * DL + E 120° Seismic (Reduced DL) M1	290.60	0.225	0.0026	0.1126	0.1126
(0.9 - 0.2Sds) * DL + E 90° Seismic (Reduced DL) M1	100.00	0.0188	-0.0008	0.0223	0.0223
(0.9 - 0.2Sds) * DL + E 90° Seismic (Reduced DL) M1	120.00	0.0274	-0.0010	0.0284	0.0284
(0.9 - 0.2Sds) * DL + E 90° Seismic (Reduced DL) M1	265.00	0.1759	-0.0031	0.1057	0.1057
(0.9 - 0.2Sds) * DL + E 90° Seismic (Reduced DL) M1	285.30	0.2147	-0.0030	0.1126	0.1126
(0.9 - 0.2Sds) * DL + E 90° Seismic (Reduced DL) M1	290.60	0.225	-0.0030	0.1133	0.1133
(0.9 - 0.2Sds) * DL + E 90° Seismic (Reduced DL) M2	100.00	0.0124	-0.0005	0.0151	0.0151
(0.9 - 0.2Sds) * DL + E 90° Seismic (Reduced DL) M2	120.00	0.0183	-0.0007	0.0193	0.0194
(0.9 - 0.2Sds) * DL + E 90° Seismic (Reduced DL) M2	265.00	0.1328	-0.0025	0.0912	0.0912
(0.9 - 0.2Sds) * DL + E 90° Seismic (Reduced DL) M2	285.30	0.1667	-0.0024	0.0996	0.0996
(0.9 - 0.2Sds) * DL + E 90° Seismic (Reduced DL) M2	290.60	0.1758	-0.0024	0.0999	0.1
(0.9 - 0.2Sds) * DL + E 60° Seismic (Reduced DL) M1	100.00	0.0186	0.0007	0.0220	0.022
(0.9 - 0.2Sds) * DL + E 60° Seismic (Reduced DL) M1	120.00	0.0275	-0.0009	0.0285	0.0285
(0.9 - 0.2Sds) * DL + E 60° Seismic (Reduced DL) M1	265.00	0.1758	0.0027	0.1055	0.1055

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
(0.9 - 0.2Sds) * DL + E 60° Seismic (Reduced DL) M1	285.30	0.2147	0.0026	0.1125	0.1126
(0.9 - 0.2Sds) * DL + E 60° Seismic (Reduced DL) M1	290.60	0.225	0.0026	0.1135	0.1135
(0.9 - 0.2Sds) * DL + E 60° Seismic (Reduced DL) M2	100.00	0.0123	0.0004	0.0148	0.0148
(0.9 - 0.2Sds) * DL + E 60° Seismic (Reduced DL) M2	120.00	0.0183	-0.0006	0.0194	0.0194
(0.9 - 0.2Sds) * DL + E 60° Seismic (Reduced DL) M2	265.00	0.1327	0.0022	0.0910	0.091
(0.9 - 0.2Sds) * DL + E 60° Seismic (Reduced DL) M2	285.30	0.1667	0.0021	0.0995	0.0995
(0.9 - 0.2Sds) * DL + E 60° Seismic (Reduced DL) M2	290.60	0.1758	0.0021	0.1003	0.1003
(0.9 - 0.2Sds) * DL + E Normal Seismic (Reduced DL) M1	100.00	0.0188	0.0007	0.0225	0.0225
(0.9 - 0.2Sds) * DL + E Normal Seismic (Reduced DL) M1	120.00	0.0277	0.0000	0.0286	0.0286
(0.9 - 0.2Sds) * DL + E Normal Seismic (Reduced DL) M1	265.00	0.176	0.0027	0.1057	0.1057
(0.9 - 0.2Sds) * DL + E Normal Seismic (Reduced DL) M1	285.30	0.2147	0.0026	0.1124	0.1124
(0.9 - 0.2Sds) * DL + E Normal Seismic (Reduced DL) M1	290.60	0.225	0.0026	0.1126	0.1126
(0.9 - 0.2Sds) * DL + E Normal Seismic (Reduced DL) M2	100.00	0.0125	0.0004	0.0152	0.0152
(0.9 - 0.2Sds) * DL + E Normal Seismic (Reduced DL) M2	120.00	0.0185	0.0000	0.0196	0.0196
(0.9 - 0.2Sds) * DL + E Normal Seismic (Reduced DL) M2	265.00	0.1329	0.0022	0.0913	0.0913
(0.9 - 0.2Sds) * DL + E Normal Seismic (Reduced DL) M2	285.30	0.1667	0.0021	0.0993	0.0994
(0.9 - 0.2Sds) * DL + E Normal Seismic (Reduced DL) M2	290.60	0.1758	0.0021	0.0991	0.0992
(1.2 + 0.2Sds) * DL + E 330° Seismic M1	100.00	0.0188	-0.0008	0.0225	0.0225
(1.2 + 0.2Sds) * DL + E 330° Seismic M1	120.00	0.0277	0.0005	0.0287	0.0287
(1.2 + 0.2Sds) * DL + E 330° Seismic M1	265.00	0.1765	-0.0031	0.1062	0.1062
(1.2 + 0.2Sds) * DL + E 330° Seismic M1	285.30	0.2154	-0.0030	0.1130	0.1131
(1.2 + 0.2Sds) * DL + E 330° Seismic M1	290.60	0.2257	-0.0030	0.1144	0.1144
(1.2 + 0.2Sds) * DL + E 330° Seismic M2	100.00	0.0125	-0.0005	0.0152	0.0152
(1.2 + 0.2Sds) * DL + E 330° Seismic M2	120.00	0.0185	0.0003	0.0196	0.0196
(1.2 + 0.2Sds) * DL + E 330° Seismic M2	265.00	0.1333	-0.0025	0.0917	0.0917
(1.2 + 0.2Sds) * DL + E 330° Seismic M2	285.30	0.1673	-0.0024	0.0999	0.1
(1.2 + 0.2Sds) * DL + E 330° Seismic M2	290.60	0.1764	-0.0024	0.1010	0.101
(1.2 + 0.2Sds) * DL + E 300° Seismic M2	100.00	0.0124	0.0004	0.0149	0.0149
(1.2 + 0.2Sds) * DL + E 300° Seismic M2	120.00	0.0184	0.0006	0.0195	0.0195
(1.2 + 0.2Sds) * DL + E 300° Seismic M2	265.00	0.1332	0.0022	0.0914	0.0914
(1.2 + 0.2Sds) * DL + E 300° Seismic M2	285.30	0.1673	0.0021	0.0999	0.0999
(1.2 + 0.2Sds) * DL + E 300° Seismic M2	290.60	0.1764	0.0021	0.1014	0.1014
(1.2 + 0.2Sds) * DL + E 300° Seismic M1	100.00	0.0187	0.0007	0.0221	0.0221
(1.2 + 0.2Sds) * DL + E 300° Seismic M1	120.00	0.0276	0.0009	0.0285	0.0286
(1.2 + 0.2Sds) * DL + E 300° Seismic M1	265.00	0.1764	0.0027	0.1060	0.106
(1.2 + 0.2Sds) * DL + E 300° Seismic M1	285.30	0.2154	0.0026	0.1130	0.1131
(1.2 + 0.2Sds) * DL + E 300° Seismic M1	290.60	0.2257	0.0026	0.1147	0.1147
(1.2 + 0.2Sds) * DL + E 240° Seismic M2	100.00	0.0125	0.0004	0.0153	0.0153
(1.2 + 0.2Sds) * DL + E 240° Seismic M2	120.00	0.0183	0.0006	0.0194	0.0194
(1.2 + 0.2Sds) * DL + E 240° Seismic M2	265.00	0.1334	0.0022	0.0917	0.0917
(1.2 + 0.2Sds) * DL + E 240° Seismic M2	285.30	0.1673	0.0021	0.0997	0.0997
(1.2 + 0.2Sds) * DL + E 240° Seismic M2	290.60	0.1764	0.0021	0.0999	0.0999
(1.2 + 0.2Sds) * DL + E 240° Seismic M1	100.00	0.0189	0.0007	0.0226	0.0226
(1.2 + 0.2Sds) * DL + E 240° Seismic M1	120.00	0.0275	0.0009	0.0284	0.0284
(1.2 + 0.2Sds) * DL + E 240° Seismic M1	265.00	0.1766	0.0027	0.1062	0.1062
(1.2 + 0.2Sds) * DL + E 240° Seismic M1	285.30	0.2155	0.0026	0.1128	0.1129
(1.2 + 0.2Sds) * DL + E 240° Seismic M1	290.60	0.2257	0.0026	0.1134	0.1134
(1.2 + 0.2Sds) * DL + E 210° Seismic M1	100.00	0.0188	-0.0008	0.0225	0.0225
(1.2 + 0.2Sds) * DL + E 210° Seismic M1	120.00	0.0275	0.0005	0.0285	0.0285
(1.2 + 0.2Sds) * DL + E 210° Seismic M1	265.00	0.1765	-0.0031	0.1062	0.1062
(1.2 + 0.2Sds) * DL + E 210° Seismic M1	285.30	0.2154	-0.0030	0.1130	0.1131
(1.2 + 0.2Sds) * DL + E 210° Seismic M1	290.60	0.2257	-0.0030	0.1144	0.1144
(1.2 + 0.2Sds) * DL + E 210° Seismic M2	100.00	0.0125	-0.0005	0.0152	0.0152
(1.2 + 0.2Sds) * DL + E 210° Seismic M2	120.00	0.0183	0.0003	0.0194	0.0194
(1.2 + 0.2Sds) * DL + E 210° Seismic M2	265.00	0.1333	-0.0025	0.0917	0.0917
(1.2 + 0.2Sds) * DL + E 210° Seismic M2	285.30	0.1673	-0.0024	0.0999	0.1
(1.2 + 0.2Sds) * DL + E 210° Seismic M2	290.60	0.1764	-0.0024	0.1010	0.101
(1.2 + 0.2Sds) * DL + E 180° Seismic M1	100.00	0.0188	0.0007	0.0222	0.0222
(1.2 + 0.2Sds) * DL + E 180° Seismic M1	120.00	0.0278	0.0000	0.0287	0.0287

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
(1.2 + 0.2Sds) * DL + E 180° Seismic M1	265.00	0.1779	0.0028	0.1069	0.1069
(1.2 + 0.2Sds) * DL + E 180° Seismic M1	285.30	0.2172	0.0027	0.1140	0.114
(1.2 + 0.2Sds) * DL + E 180° Seismic M1	290.60	0.2276	0.0027	0.1157	0.1157
(1.2 + 0.2Sds) * DL + E 180° Seismic M2	100.00	0.0124	0.0004	0.0149	0.0149
(1.2 + 0.2Sds) * DL + E 180° Seismic M2	120.00	0.0183	0.0000	0.0194	0.0194
(1.2 + 0.2Sds) * DL + E 180° Seismic M2	265.00	0.1332	0.0022	0.0914	0.0914
(1.2 + 0.2Sds) * DL + E 180° Seismic M2	285.30	0.1673	0.0021	0.0999	0.0999
(1.2 + 0.2Sds) * DL + E 180° Seismic M2	290.60	0.1764	0.0021	0.1014	0.1014
(1.2 + 0.2Sds) * DL + E 120° Seismic M2	100.00	0.0125	0.0004	0.0153	0.0153
(1.2 + 0.2Sds) * DL + E 120° Seismic M2	120.00	0.0183	-0.0006	0.0194	0.0194
(1.2 + 0.2Sds) * DL + E 120° Seismic M2	265.00	0.1334	0.0022	0.0917	0.0917
(1.2 + 0.2Sds) * DL + E 120° Seismic M2	285.30	0.1673	0.0021	0.0997	0.0997
(1.2 + 0.2Sds) * DL + E 120° Seismic M2	290.60	0.1764	0.0021	0.0999	0.0999
(1.2 + 0.2Sds) * DL + E 120° Seismic M1	100.00	0.0189	0.0007	0.0226	0.0226
(1.2 + 0.2Sds) * DL + E 120° Seismic M1	120.00	0.0275	-0.0009	0.0284	0.0284
(1.2 + 0.2Sds) * DL + E 120° Seismic M1	265.00	0.1766	0.0027	0.1062	0.1062
(1.2 + 0.2Sds) * DL + E 120° Seismic M1	285.30	0.2155	0.0026	0.1128	0.1129
(1.2 + 0.2Sds) * DL + E 120° Seismic M1	290.60	0.2257	0.0026	0.1134	0.1134
(1.2 + 0.2Sds) * DL + E 90° Seismic M2	100.00	0.0125	-0.0005	0.0152	0.0152
(1.2 + 0.2Sds) * DL + E 90° Seismic M2	120.00	0.0183	-0.0007	0.0194	0.0194
(1.2 + 0.2Sds) * DL + E 90° Seismic M2	265.00	0.1333	-0.0025	0.0917	0.0917
(1.2 + 0.2Sds) * DL + E 90° Seismic M2	285.30	0.1673	-0.0024	0.0999	0.1
(1.2 + 0.2Sds) * DL + E 90° Seismic M2	290.60	0.1764	-0.0024	0.1010	0.101
(1.2 + 0.2Sds) * DL + E 90° Seismic M1	100.00	0.0188	-0.0008	0.0225	0.0225
(1.2 + 0.2Sds) * DL + E 90° Seismic M1	120.00	0.0275	-0.0010	0.0284	0.0284
(1.2 + 0.2Sds) * DL + E 90° Seismic M1	265.00	0.1765	-0.0031	0.1062	0.1062
(1.2 + 0.2Sds) * DL + E 90° Seismic M1	285.30	0.2154	-0.0030	0.1130	0.1131
(1.2 + 0.2Sds) * DL + E 90° Seismic M1	290.60	0.2257	-0.0030	0.1144	0.1144
(1.2 + 0.2Sds) * DL + E 60° Seismic M1	100.00	0.0187	0.0007	0.0221	0.0221
(1.2 + 0.2Sds) * DL + E 60° Seismic M1	120.00	0.0276	-0.0009	0.0285	0.0286
(1.2 + 0.2Sds) * DL + E 60° Seismic M1	265.00	0.1764	0.0027	0.1060	0.106
(1.2 + 0.2Sds) * DL + E 60° Seismic M1	285.30	0.2154	0.0026	0.1130	0.1131
(1.2 + 0.2Sds) * DL + E 60° Seismic M1	290.60	0.2257	0.0026	0.1147	0.1147
(1.2 + 0.2Sds) * DL + E 60° Seismic M2	100.00	0.0124	0.0004	0.0149	0.0149
(1.2 + 0.2Sds) * DL + E 60° Seismic M2	120.00	0.0184	-0.0006	0.0195	0.0195
(1.2 + 0.2Sds) * DL + E 60° Seismic M2	265.00	0.1332	0.0022	0.0914	0.0914
(1.2 + 0.2Sds) * DL + E 60° Seismic M2	285.30	0.1673	0.0021	0.0999	0.0999
(1.2 + 0.2Sds) * DL + E 60° Seismic M2	290.60	0.1764	0.0021	0.1014	0.1014
(1.2 + 0.2Sds) * DL + E Normal Seismic M2	100.00	0.0125	0.0004	0.0153	0.0153
(1.2 + 0.2Sds) * DL + E Normal Seismic M2	120.00	0.0185	0.0000	0.0197	0.0197
(1.2 + 0.2Sds) * DL + E Normal Seismic M2	265.00	0.1334	0.0022	0.0917	0.0917
(1.2 + 0.2Sds) * DL + E Normal Seismic M2	285.30	0.1673	0.0021	0.0997	0.0997
(1.2 + 0.2Sds) * DL + E Normal Seismic M2	290.60	0.1764	0.0021	0.0999	0.0999
(1.2 + 0.2Sds) * DL + E Normal Seismic M1	100.00	0.0189	0.0007	0.0226	0.0226
(1.2 + 0.2Sds) * DL + E Normal Seismic M1	120.00	0.0278	0.0000	0.0288	0.0288
(1.2 + 0.2Sds) * DL + E Normal Seismic M1	265.00	0.1766	0.0027	0.1062	0.1062
(1.2 + 0.2Sds) * DL + E Normal Seismic M1	285.30	0.2155	0.0026	0.1128	0.1129
(1.2 + 0.2Sds) * DL + E Normal Seismic M1	290.60	0.2257	0.0026	0.1134	0.1134
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0.75" Radial Ice	100.00	0.0366	-0.0015	0.0402	0.0403
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0.75" Radial Ice	120.00	0.0494	0.0009	0.0494	0.0494
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0.75" Radial Ice	265.00	0.2827	-0.0040	0.1496	0.1496
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0.75" Radial Ice	285.30	0.3373	-0.0039	0.1587	0.1587
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0.75" Radial Ice	290.60	0.352	-0.0038	0.1603	0.1603
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0.75" Radial Ice	100.00	0.0365	0.0013	0.0391	0.0391
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0.75" Radial Ice	120.00	0.0494	0.0016	0.0488	0.0488
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0.75" Radial Ice	265.00	0.281	0.0034	0.1489	0.1489
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0.75" Radial Ice	285.30	0.3353	0.0033	0.1572	0.1573
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0.75" Radial Ice	290.60	0.35	0.0033	0.1609	0.1609
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0.75" Radial Ice	100.00	0.0367	0.0013	0.0414	0.0414

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0.75" Radial Ice	120.00	0.0523	0.0016	0.0497	0.0498
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0.75" Radial Ice	265.00	0.2878	0.0035	0.1520	0.152
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0.75" Radial Ice	285.30	0.3433	0.0034	0.1607	0.1607
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0.75" Radial Ice	290.60	0.3581	0.0034	0.1593	0.1593
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0.75" Radial Ice	100.00	0.0365	-0.0015	0.0402	0.0402
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0.75" Radial Ice	120.00	0.0518	0.0009	0.0487	0.0487
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0.75" Radial Ice	265.00	0.2826	-0.0040	0.1496	0.1496
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0.75" Radial Ice	285.30	0.3372	-0.0039	0.1586	0.1587
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0.75" Radial Ice	290.60	0.352	-0.0038	0.1603	0.1603
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0.75" Radial Ice	100.00	0.0365	0.0013	0.0391	0.0391
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0.75" Radial Ice	120.00	0.0517	0.0000	0.0484	0.0484
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0.75" Radial Ice	265.00	0.2809	0.0034	0.1489	0.1489
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0.75" Radial Ice	285.30	0.3352	0.0033	0.1572	0.1573
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0.75" Radial Ice	290.60	0.3499	0.0033	0.1609	0.1609
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0.75" Radial Ice	100.00	0.0367	0.0013	0.0414	0.0414
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0.75" Radial Ice	120.00	0.0523	-0.0016	0.0497	0.0498
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0.75" Radial Ice	265.00	0.2878	0.0035	0.1520	0.152
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0.75" Radial Ice	285.30	0.3433	0.0034	0.1607	0.1607
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0.75" Radial Ice	290.60	0.3581	0.0034	0.1593	0.1593
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0.75" Radial Ice	100.00	0.0365	-0.0015	0.0402	0.0402
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0.75" Radial Ice	120.00	0.0504	-0.0018	0.0489	0.0489
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0.75" Radial Ice	265.00	0.2827	-0.0040	0.1496	0.1496
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0.75" Radial Ice	285.30	0.3373	-0.0039	0.1586	0.1587
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0.75" Radial Ice	290.60	0.352	-0.0038	0.1603	0.1603
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0.75" Radial Ice	100.00	0.0365	0.0013	0.0391	0.0391
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0.75" Radial Ice	120.00	0.0494	-0.0016	0.0488	0.0488
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0.75" Radial Ice	265.00	0.281	0.0034	0.1489	0.1489
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0.75" Radial Ice	285.30	0.3353	0.0033	0.1572	0.1573
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0.75" Radial Ice	290.60	0.35	0.0033	0.1609	0.1609
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0.75" Radial Ice	100.00	0.0367	0.0013	0.0415	0.0415
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0.75" Radial Ice	120.00	0.0504	0.0000	0.0505	0.0505
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0.75" Radial Ice	265.00	0.2879	0.0035	0.1520	0.152
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0.75" Radial Ice	285.30	0.3434	0.0034	0.1607	0.1607
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0.75" Radial Ice	290.60	0.3582	0.0034	0.1593	0.1593
0.9D + 1.6W 330° 90 mph Wind with No Ice (Reduced DL)	100.00	0.2469	-0.0102	0.2708	0.2709
0.9D + 1.6W 330° 90 mph Wind with No Ice (Reduced DL)	120.00	0.3539	0.0062	0.3406	0.3407
0.9D + 1.6W 330° 90 mph Wind with No Ice (Reduced DL)	265.00	1.9859	-0.0266	1.0781	1.0781
0.9D + 1.6W 330° 90 mph Wind with No Ice (Reduced DL)	285.30	2.3811	-0.0265	1.1530	1.1533
0.9D + 1.6W 330° 90 mph Wind with No Ice (Reduced DL)	290.60	2.4854	-0.0264	1.1278	1.1279
0.9D + 1.6W 300° 90 mph Wind with No Ice (Reduced DL)	100.00	0.2427	0.0087	0.2670	0.267
0.9D + 1.6W 300° 90 mph Wind with No Ice (Reduced DL)	120.00	0.3467	0.0106	0.3341	0.3342
0.9D + 1.6W 300° 90 mph Wind with No Ice (Reduced DL)	265.00	1.956	0.0223	1.0657	1.0657
0.9D + 1.6W 300° 90 mph Wind with No Ice (Reduced DL)	285.30	2.3458	0.0220	1.1350	1.1352
0.9D + 1.6W 300° 90 mph Wind with No Ice (Reduced DL)	290.60	2.4493	-0.0224	1.1210	1.121
0.9D + 1.6W 240° 90 mph Wind with No Ice (Reduced DL)	100.00	0.2611	0.0094	0.2864	0.2864
0.9D + 1.6W 240° 90 mph Wind with No Ice (Reduced DL)	120.00	0.3726	0.0115	0.3572	0.3574
0.9D + 1.6W 240° 90 mph Wind with No Ice (Reduced DL)	265.00	2.0773	0.0246	1.1197	1.1197
0.9D + 1.6W 240° 90 mph Wind with No Ice (Reduced DL)	285.30	2.4876	0.0247	1.1909	1.1911
0.9D + 1.6W 240° 90 mph Wind with No Ice (Reduced DL)	290.60	2.5956	0.0242	1.1738	1.1738
0.9D + 1.6W 210° 90 mph Wind with No Ice (Reduced DL)	100.00	0.2469	-0.0102	0.2708	0.2709
0.9D + 1.6W 210° 90 mph Wind with No Ice (Reduced DL)	120.00	0.3541	0.0063	0.3405	0.3405
0.9D + 1.6W 210° 90 mph Wind with No Ice (Reduced DL)	265.00	1.9859	-0.0266	1.0781	1.0782
0.9D + 1.6W 210° 90 mph Wind with No Ice (Reduced DL)	285.30	2.3811	-0.0265	1.1530	1.1533
0.9D + 1.6W 210° 90 mph Wind with No Ice (Reduced DL)	290.60	2.4854	-0.0264	1.1278	1.1279
0.9D + 1.6W 180° 90 mph Wind with No Ice (Reduced DL)	100.00	0.2427	0.0087	0.2670	0.267
0.9D + 1.6W 180° 90 mph Wind with No Ice (Reduced DL)	120.00	0.3482	0.0000	0.3351	0.3351
0.9D + 1.6W 180° 90 mph Wind with No Ice (Reduced DL)	265.00	1.956	0.0223	1.0657	1.0657
0.9D + 1.6W 180° 90 mph Wind with No Ice (Reduced DL)	285.30	2.3457	0.0221	1.1350	1.1352
0.9D + 1.6W 180° 90 mph Wind with No Ice (Reduced DL)	290.60	2.4493	0.0224	1.1210	1.121

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D + 1.6W 120° 90 mph Wind with No Ice (Reduced DL)	100.00	0.2611	0.0094	0.2864	0.2864
0.9D + 1.6W 120° 90 mph Wind with No Ice (Reduced DL)	120.00	0.3726	-0.0115	0.3572	0.3574
0.9D + 1.6W 120° 90 mph Wind with No Ice (Reduced DL)	265.00	2.0773	0.0246	1.1197	1.1197
0.9D + 1.6W 120° 90 mph Wind with No Ice (Reduced DL)	285.30	2.4876	0.0247	1.1909	1.1911
0.9D + 1.6W 120° 90 mph Wind with No Ice (Reduced DL)	290.60	2.5956	0.0242	1.1738	1.1738
0.9D + 1.6W 90° 90 mph Wind with No Ice (Reduced DL)	100.00	0.2469	-0.0102	0.2708	0.2709
0.9D + 1.6W 90° 90 mph Wind with No Ice (Reduced DL)	120.00	0.3526	-0.0125	0.3394	0.3396
0.9D + 1.6W 90° 90 mph Wind with No Ice (Reduced DL)	265.00	1.9859	-0.0265	1.0781	1.0782
0.9D + 1.6W 90° 90 mph Wind with No Ice (Reduced DL)	285.30	2.3811	-0.0264	1.1531	1.1534
0.9D + 1.6W 90° 90 mph Wind with No Ice (Reduced DL)	290.60	2.4854	-0.0264	1.1279	1.1279
0.9D + 1.6W 60° 90 mph Wind with No Ice (Reduced DL)	100.00	0.2427	0.0087	0.2670	0.267
0.9D + 1.6W 60° 90 mph Wind with No Ice (Reduced DL)	120.00	0.3467	-0.0106	0.3341	0.3342
0.9D + 1.6W 60° 90 mph Wind with No Ice (Reduced DL)	265.00	1.956	0.0223	1.0657	1.0657
0.9D + 1.6W 60° 90 mph Wind with No Ice (Reduced DL)	285.30	2.3458	0.0220	1.1350	1.1352
0.9D + 1.6W 60° 90 mph Wind with No Ice (Reduced DL)	290.60	2.4493	0.0224	1.1210	1.121
0.9D + 1.6W Normal 90 mph Wind with No Ice (Reduced DL)	100.00	0.2611	0.0094	0.2864	0.2864
0.9D + 1.6W Normal 90 mph Wind with No Ice (Reduced DL)	120.00	0.3738	0.0000	0.3586	0.3586
0.9D + 1.6W Normal 90 mph Wind with No Ice (Reduced DL)	265.00	2.0773	0.0246	1.1198	1.1198
0.9D + 1.6W Normal 90 mph Wind with No Ice (Reduced DL)	285.30	2.4876	0.0247	1.1909	1.1911
0.9D + 1.6W Normal 90 mph Wind with No Ice (Reduced DL)	290.60	2.5956	0.0243	1.1738	1.1738
1.2D + 1.6W 330° 90 mph Wind with No Ice	100.00	0.2472	-0.0102	0.2714	0.2715
1.2D + 1.6W 330° 90 mph Wind with No Ice	120.00	0.3545	0.0062	0.3413	0.3414
1.2D + 1.6W 330° 90 mph Wind with No Ice	265.00	1.9908	-0.0266	1.0815	1.0816
1.2D + 1.6W 330° 90 mph Wind with No Ice	285.30	2.3873	-0.0265	1.1567	1.157
1.2D + 1.6W 330° 90 mph Wind with No Ice	290.60	2.4919	-0.0264	1.1319	1.1319
1.2D + 1.6W 300° 90 mph Wind with No Ice	100.00	0.2431	0.0087	0.2675	0.2675
1.2D + 1.6W 300° 90 mph Wind with No Ice	120.00	0.3473	0.0106	0.3348	0.3349
1.2D + 1.6W 300° 90 mph Wind with No Ice	265.00	1.9609	0.0223	1.0690	1.069
1.2D + 1.6W 300° 90 mph Wind with No Ice	285.30	2.3519	-0.0221	1.1386	1.1388
1.2D + 1.6W 300° 90 mph Wind with No Ice	290.60	2.4558	0.0224	1.1250	1.125
1.2D + 1.6W 240° 90 mph Wind with No Ice	100.00	0.2615	0.0094	0.2871	0.2871
1.2D + 1.6W 240° 90 mph Wind with No Ice	120.00	0.3732	0.0115	0.3580	0.3581
1.2D + 1.6W 240° 90 mph Wind with No Ice	265.00	2.0824	-0.0247	1.1232	1.1232
1.2D + 1.6W 240° 90 mph Wind with No Ice	285.30	2.494	0.0247	1.1947	1.1949
1.2D + 1.6W 240° 90 mph Wind with No Ice	290.60	2.6024	-0.0243	1.1770	1.177
1.2D + 1.6W 210° 90 mph Wind with No Ice	100.00	0.2472	-0.0102	0.2714	0.2715
1.2D + 1.6W 210° 90 mph Wind with No Ice	120.00	0.3546	0.0063	0.3412	0.3412
1.2D + 1.6W 210° 90 mph Wind with No Ice	265.00	1.9908	-0.0266	1.0815	1.0816
1.2D + 1.6W 210° 90 mph Wind with No Ice	285.30	2.3872	-0.0265	1.1567	1.157
1.2D + 1.6W 210° 90 mph Wind with No Ice	290.60	2.4919	-0.0264	1.1318	1.1319
1.2D + 1.6W 180° 90 mph Wind with No Ice	100.00	0.2431	0.0087	0.2675	0.2675
1.2D + 1.6W 180° 90 mph Wind with No Ice	120.00	0.3487	0.0000	0.3358	0.3358
1.2D + 1.6W 180° 90 mph Wind with No Ice	265.00	1.9608	0.0224	1.0691	1.0691
1.2D + 1.6W 180° 90 mph Wind with No Ice	285.30	2.3518	0.0221	1.1386	1.1388
1.2D + 1.6W 180° 90 mph Wind with No Ice	290.60	2.4557	0.0224	1.1250	1.125
1.2D + 1.6W 120° 90 mph Wind with No Ice	100.00	0.2615	0.0094	0.2871	0.2871
1.2D + 1.6W 120° 90 mph Wind with No Ice	120.00	0.3732	-0.0115	0.3580	0.3581
1.2D + 1.6W 120° 90 mph Wind with No Ice	265.00	2.0824	0.0247	1.1232	1.1232
1.2D + 1.6W 120° 90 mph Wind with No Ice	285.30	2.494	0.0247	1.1947	1.1949
1.2D + 1.6W 120° 90 mph Wind with No Ice	290.60	2.6024	0.0243	1.1770	1.177
1.2D + 1.6W 90° 90 mph Wind with No Ice	100.00	0.2472	-0.0102	0.2714	0.2714
1.2D + 1.6W 90° 90 mph Wind with No Ice	120.00	0.3532	-0.0125	0.3401	0.3403
1.2D + 1.6W 90° 90 mph Wind with No Ice	265.00	1.9908	-0.0266	1.0815	1.0816
1.2D + 1.6W 90° 90 mph Wind with No Ice	285.30	2.3873	-0.0265	1.1567	1.1571
1.2D + 1.6W 90° 90 mph Wind with No Ice	290.60	2.4919	-0.0264	1.1319	1.132
1.2D + 1.6W 60° 90 mph Wind with No Ice	100.00	0.2431	0.0087	0.2675	0.2675
1.2D + 1.6W 60° 90 mph Wind with No Ice	120.00	0.3473	-0.0106	0.3348	0.3349
1.2D + 1.6W 60° 90 mph Wind with No Ice	265.00	1.9609	0.0223	1.0690	1.069
1.2D + 1.6W 60° 90 mph Wind with No Ice	285.30	2.3519	0.0221	1.1386	1.1388

ASSET: 280860, SMITH PRINCE NC

CODE: ANSI/TIA-222-G

CUSTOMER: T-MOBILE

PROJECT: 14922096_C3_02

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.6W 60° 90 mph Wind with No Ice	290.60	2.4558	0.0224	1.1250	1.125
1.2D + 1.6W Normal 90 mph Wind with No Ice	100.00	0.2615	0.0094	0.2870	0.287
1.2D + 1.6W Normal 90 mph Wind with No Ice	120.00	0.3745	0.0000	0.3593	0.3593
1.2D + 1.6W Normal 90 mph Wind with No Ice	265.00	2.0824	0.0247	1.1233	1.1233
1.2D + 1.6W Normal 90 mph Wind with No Ice	285.30	2.4941	0.0247	1.1947	1.195
1.2D + 1.6W Normal 90 mph Wind with No Ice	290.60	2.6024	0.0243	1.1771	1.1771

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					FX* (kip)	FY* (kip)	FZ* (kip)
1.2D + 1.6W Normal	16.17	0.00	0	1	0.00	374.27	-36.14
	16.17	0.00	120	1a	12.03	-149.01	-11.02
	16.17	0.00	240	1b	-12.03	-149.01	-11.02
1.2D + 1.6W 60°	16.17	0.00	0	1	-3.12	187.09	-17.32
	16.17	0.00	120	1a	-16.56	187.08	5.96
	16.17	0.00	240	1b	-26.26	-297.91	-15.16
1.2D + 1.6W 90°	16.17	0.00	0	1	-3.72	25.43	-1.44
	16.17	0.00	120	1a	-26.55	310.95	13.18
	16.17	0.00	240	1b	-24.06	-260.12	-11.74
1.2D + 1.6W 120°	16.17	0.00	0	1	-3.53	-149.00	15.93
	16.17	0.00	120	1a	-31.29	374.26	18.07
	16.17	0.00	240	1b	-15.56	-149.01	-4.91
1.2D + 1.6W 180°	16.17	0.00	0	1	0.00	-297.91	30.32
	16.17	0.00	120	1a	-13.44	187.08	11.36
	16.17	0.00	240	1b	13.44	187.08	11.36
1.2D + 1.6W 210°	16.17	0.00	0	1	1.86	-260.12	26.71
	16.17	0.00	120	1a	0.61	25.42	3.94
	16.17	0.00	240	1b	24.69	310.95	16.40
1.2D + 1.6W 240°	16.17	0.00	0	1	3.53	-149.00	15.93
	16.17	0.00	120	1a	15.56	-149.01	-4.91
	16.17	0.00	240	1b	31.29	374.26	18.07
1.2D + 1.6W 300°	16.17	0.00	0	1	3.12	187.09	-17.32
	16.17	0.00	120	1a	26.26	-297.91	-15.16
	16.17	0.00	240	1b	16.56	187.08	5.96
1.2D + 1.6W 330°	16.17	0.00	0	1	1.86	310.95	-29.58
	16.17	0.00	120	1a	22.20	-260.12	-14.97
	16.17	0.00	240	1b	3.11	25.42	-2.50
0.9D + 1.6W Normal	16.17	0.00	0	1	0.00	367.41	-35.75
	16.17	0.00	120	1a	12.36	-155.11	-11.21
	16.17	0.00	240	1b	-12.36	-155.11	-11.21
0.9D + 1.6W 60°	16.17	0.00	0	1	-3.13	180.50	-16.94
	16.17	0.00	120	1a	-16.23	180.50	5.76
	16.17	0.00	240	1b	-26.58	-303.80	-15.35
0.9D + 1.6W 90°	16.17	0.00	0	1	-3.73	19.07	-1.06
	16.17	0.00	120	1a	-26.21	304.18	12.99
	16.17	0.00	240	1b	-24.39	-266.06	-11.93
0.9D + 1.6W 120°	16.17	0.00	0	1	-3.54	-155.11	16.31
	16.17	0.00	120	1a	-30.96	367.41	17.87
	16.17	0.00	240	1b	-15.89	-155.11	-5.09
0.9D + 1.6W 180°	16.17	0.00	0	1	0.00	-303.80	30.70
	16.17	0.00	120	1a	-13.11	180.49	11.17
	16.17	0.00	240	1b	13.11	180.49	11.17
0.9D + 1.6W 210°	16.17	0.00	0	1	1.87	-266.06	27.09
	16.17	0.00	120	1a	0.94	19.07	3.76
	16.17	0.00	240	1b	24.35	304.18	16.21
0.9D + 1.6W 240°	16.17	0.00	0	1	3.54	-155.11	16.31
	16.17	0.00	120	1a	15.89	-155.11	-5.09
	16.17	0.00	240	1b	30.96	367.41	17.87
0.9D + 1.6W 300°	16.17	0.00	0	1	3.13	180.50	-16.94
	16.17	0.00	120	1a	26.58	-303.80	-15.35
	16.17	0.00	240	1b	16.23	180.50	5.76
0.9D + 1.6W 330°	16.17	0.00	0	1	1.86	304.19	-29.20
	16.17	0.00	120	1a	22.52	-266.06	-15.16
	16.17	0.00	240	1b	2.78	19.07	-2.70
1.2D + 1.0Di + 1.0Wi Normal	16.17	0.00	0	1	0.00	104.19	-6.05
	16.17	0.00	120	1a	0.53	32.44	-0.79
	16.17	0.00	240	1b	-0.53	32.44	-0.79
1.2D + 1.0Di + 1.0Wi 60°	16.17	0.00	0	1	-0.40	79.52	-3.66
	16.17	0.00	120	1a	-3.37	79.51	1.49

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					FX* (kip)	FY* (kip)	FZ* (kip)
1.2D + 1.0Di + 1.0Wi 90°	16.17	0.00	240	1b	-2.57	10.03	-1.49
	16.17	0.00	0	1	-0.47	56.36	-1.45
	16.17	0.00	120	1a	-4.72	96.79	2.46
1.2D + 1.0Di + 1.0Wi 120°	16.17	0.00	240	1b	-2.21	15.91	-1.01
	16.17	0.00	0	1	-0.42	32.45	0.85
	16.17	0.00	120	1a	-5.24	104.18	3.03
1.2D + 1.0Di + 1.0Wi 180°	16.17	0.00	240	1b	-0.95	32.44	-0.06
	16.17	0.00	0	1	0.00	10.05	2.97
	16.17	0.00	120	1a	-2.97	79.51	2.17
1.2D + 1.0Di + 1.0Wi 210°	16.17	0.00	240	1b	2.97	79.51	2.17
	16.17	0.00	0	1	0.23	15.92	2.42
	16.17	0.00	120	1a	-1.02	56.35	1.13
1.2D + 1.0Di + 1.0Wi 240°	16.17	0.00	240	1b	4.49	96.79	2.86
	16.17	0.00	0	1	0.42	32.45	0.85
	16.17	0.00	120	1a	0.95	32.44	-0.06
1.2D + 1.0Di + 1.0Wi 300°	16.17	0.00	240	1b	5.24	104.18	3.03
	16.17	0.00	0	1	0.40	79.52	-3.66
	16.17	0.00	120	1a	2.57	10.03	-1.49
1.2D + 1.0Di + 1.0Wi 330°	16.17	0.00	240	1b	3.37	79.51	1.49
	16.17	0.00	0	1	0.23	96.80	-5.32
	16.17	0.00	120	1a	1.98	15.91	-1.41
(1.2 + 0.2Sds) * DL + E Normal M1	16.17	0.00	240	1b	1.49	56.35	0.32
	16.17	0.00	0	1	0.00	49.08	-3.48
	16.17	0.00	120	1a	-0.58	12.48	0.26
(1.2 + 0.2Sds) * DL + E 60° M1	16.17	0.00	240	1b	0.58	12.48	0.26
	16.17	0.00	0	1	0.00	40.84	-2.79
	16.17	0.00	120	1a	-0.86	16.60	0.47
(1.2 + 0.2Sds) * DL + E 90° M1	16.17	0.00	240	1b	0.86	16.60	0.47
	16.17	0.00	0	1	-0.06	36.88	-2.53
	16.17	0.00	120	1a	-2.23	36.88	1.21
(1.2 + 0.2Sds) * DL + E 120° M1	16.17	0.00	240	1b	-0.27	0.28	-0.16
	16.17	0.00	0	1	-0.03	32.76	-2.19
	16.17	0.00	120	1a	-1.91	32.76	1.07
(1.2 + 0.2Sds) * DL + E 180° M1	16.17	0.00	240	1b	0.33	8.52	0.19
	16.17	0.00	0	1	-0.07	24.68	-1.58
	16.17	0.00	120	1a	-2.81	45.81	1.58
(1.2 + 0.2Sds) * DL + E 210° M1	16.17	0.00	240	1b	-0.07	3.55	0.00
	16.17	0.00	0	1	-0.03	24.68	-1.58
	16.17	0.00	120	1a	-2.28	38.68	1.30
(1.2 + 0.2Sds) * DL + E 240° M1	16.17	0.00	240	1b	0.46	10.69	0.28
	16.17	0.00	0	1	-0.06	12.48	-0.63
	16.17	0.00	120	1a	-3.02	49.08	1.74

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					FX* (kip)	FY* (kip)	FZ* (kip)
(1.2 + 0.2Sds) * DL + E 300° M1	16.17	0.00	120	1a	-0.52	12.48	0.37
	16.17	0.00	240	1b	3.02	49.08	1.74
	16.17	0.00	0	1	0.03	16.60	-0.98
	16.17	0.00	120	1a	-0.84	16.60	0.51
	16.17	0.00	240	1b	2.42	40.84	1.39
	16.17	0.00	0	1	0.06	36.88	-2.53
	16.17	0.00	120	1a	0.27	0.28	-0.16
	16.17	0.00	240	1b	2.23	36.88	1.21
	16.17	0.00	0	1	0.03	32.76	-2.19
	16.17	0.00	120	1a	-0.33	8.52	0.19
(1.2 + 0.2Sds) * DL + E 330° M1	16.17	0.00	240	1b	1.91	32.76	1.07
	16.17	0.00	0	1	0.04	45.81	-3.23
	16.17	0.00	120	1a	0.04	3.55	-0.06
	16.17	0.00	240	1b	1.41	24.68	0.73
	16.17	0.00	0	1	0.02	38.68	-2.63
	16.17	0.00	120	1a	-0.47	10.69	0.26
	16.17	0.00	240	1b	1.39	24.68	0.77
	16.17	0.00	0	1	0.00	41.55	-3.00
	16.17	0.00	120	1a	-0.16	5.02	0.02
	16.17	0.00	240	1b	0.16	5.02	0.02
(0.9 - 0.2Sds) * DL + E Normal M1	16.17	0.00	0	1	0.00	33.32	-2.31
	16.17	0.00	120	1a	-0.45	9.13	0.23
	16.17	0.00	240	1b	0.45	9.13	0.23
	16.17	0.00	0	1	-0.06	29.37	-2.05
	16.17	0.00	120	1a	-1.81	29.37	0.97
	16.17	0.00	240	1b	-0.69	-7.16	-0.40
	16.17	0.00	0	1	-0.03	25.26	-1.71
	16.17	0.00	120	1a	-1.49	25.26	0.83
	16.17	0.00	240	1b	-0.09	1.07	-0.05
	16.17	0.00	0	1	-0.07	17.19	-1.10
(0.9 - 0.2Sds) * DL + E 60° M1	16.17	0.00	120	1a	-2.40	38.28	1.34
	16.17	0.00	240	1b	-0.49	-3.90	-0.24
	16.17	0.00	0	1	-0.03	17.19	-1.10
	16.17	0.00	120	1a	-1.87	31.16	1.06
	16.17	0.00	240	1b	0.04	3.23	0.04
	16.17	0.00	0	1	-0.06	5.02	-0.15
	16.17	0.00	120	1a	-2.60	41.55	1.50
	16.17	0.00	240	1b	0.10	5.02	0.13
	16.17	0.00	0	1	-0.03	9.13	-0.50
	16.17	0.00	120	1a	-2.00	33.32	1.15
(0.9 - 0.2Sds) * DL + E 90° M1	16.17	0.00	240	1b	0.42	9.13	0.27
	16.17	0.00	0	1	0.00	-7.16	0.80
	16.17	0.00	120	1a	-1.75	29.37	1.08
	16.17	0.00	240	1b	1.75	29.37	1.08
	16.17	0.00	0	1	0.00	1.07	0.10
	16.17	0.00	120	1a	-1.46	25.26	0.88
	16.17	0.00	240	1b	1.46	25.26	0.88
	16.17	0.00	0	1	0.04	-3.90	0.54
	16.17	0.00	120	1a	-0.92	17.19	0.62
	16.17	0.00	240	1b	2.36	38.28	1.41
(0.9 - 0.2Sds) * DL + E 120° M1	16.17	0.00	0	1	0.02	3.23	-0.06
	16.17	0.00	120	1a	-0.94	17.19	0.58
	16.17	0.00	240	1b	1.85	31.16	1.09
	16.17	0.00	0	1	0.06	5.02	-0.15
	16.17	0.00	120	1a	-0.10	5.02	0.13
	16.17	0.00	240	1b	2.60	41.55	1.50
	16.17	0.00	0	1	0.03	9.13	-0.50
	16.17	0.00	120	1a	-0.42	9.13	0.27
	16.17	0.00	240	1b	2.00	33.32	1.15
	16.17	0.00	0	1	0.00	0.00	0.00

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					FX* (kip)	FY* (kip)	FZ* (kip)
(0.9 - 0.2Sds) * DL + E 300° M1	16.17	0.00	0	1	0.06	29.37	-2.05
	16.17	0.00	120	1a	0.69	-7.16	-0.40
	16.17	0.00	240	1b	1.81	29.37	0.97
	16.17	0.00	0	1	0.03	25.26	-1.71
	16.17	0.00	120	1a	0.09	1.07	-0.05
	16.17	0.00	240	1b	1.49	25.26	0.83
(0.9 - 0.2Sds) * DL + E 330° M1	16.17	0.00	0	1	0.04	38.28	-2.75
	16.17	0.00	120	1a	0.45	-3.90	-0.30
	16.17	0.00	240	1b	0.99	17.19	0.49
	16.17	0.00	0	1	0.02	31.16	-2.15
	16.17	0.00	120	1a	-0.06	3.23	0.02
	16.17	0.00	240	1b	0.97	17.19	0.52
1.0D + 1.0W Service Normal	16.17	0.00	0	1	0.00	119.03	-11.00
	16.17	0.00	120	1a	2.62	-27.74	-2.65
	16.17	0.00	240	1b	-2.62	-27.74	-2.65
1.0D + 1.0W Service 60°	16.17	0.00	0	1	-0.87	66.57	-5.73
	16.17	0.00	120	1a	-5.40	66.57	2.11
	16.17	0.00	240	1b	-6.61	-69.60	-3.82
1.0D + 1.0W Service 90°	16.17	0.00	0	1	-1.04	21.18	-1.27
	16.17	0.00	120	1a	-8.20	101.33	4.13
	16.17	0.00	240	1b	-5.99	-58.97	-2.86
1.0D + 1.0W Service 120°	16.17	0.00	0	1	-0.99	-27.74	3.59
	16.17	0.00	120	1a	-9.53	119.03	5.50
	16.17	0.00	240	1b	-3.60	-27.74	-0.94
1.0D + 1.0W Service 180°	16.17	0.00	0	1	0.00	-69.60	7.64
	16.17	0.00	120	1a	-4.52	66.57	3.62
	16.17	0.00	240	1b	4.52	66.57	3.62
1.0D + 1.0W Service 210°	16.17	0.00	0	1	0.52	-58.96	6.62
	16.17	0.00	120	1a	-0.58	21.18	1.54
	16.17	0.00	240	1b	7.68	101.33	5.03
1.0D + 1.0W Service 240°	16.17	0.00	0	1	0.99	-27.74	3.59
	16.17	0.00	120	1a	3.60	-27.74	-0.94
	16.17	0.00	240	1b	9.53	119.03	5.50
1.0D + 1.0W Service 300°	16.17	0.00	0	1	0.87	66.57	-5.73
	16.17	0.00	120	1a	6.61	-69.60	-3.82
	16.17	0.00	240	1b	5.40	66.57	2.11
1.0D + 1.0W Service 330°	16.17	0.00	0	1	0.52	101.33	-9.17
	16.17	0.00	120	1a	5.47	-58.97	-3.76
	16.17	0.00	240	1b	1.62	21.18	-0.26

ASSET: 280860, SMITH PRINCE NC

CODE: ANSI/TIA-222-G

CUSTOMER: T-MOBILE

PROJECT: 14922096_C3_02

MAXIMUM REACTIONS SUMMARY

	<u>Individual</u>		<u>Global (DL+WL+IL)</u>		<u>Global (DL+WL)</u>
Max Uplift:	303.8 (kip)	Moment Ice:	1159.98 (kip-ft)	Moment:	8459.13 (kip-ft)
Max Down:	374.27 (kip)	Total Down Ice:	169.07 (kip)	Total Down:	76.26 (kip)
Max Shear:	36.14 (kip)	Total Shear Ice:	7.64 (kip)	Total Shear:	58.18 (kip)
1.2D + 1.6W Normal					