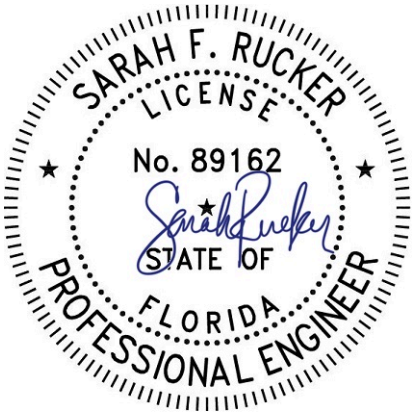
AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	195 ft Monopole
ATC Asset Name	:	FT WHITE WEST FL
ATC Asset Number	:	282213
Engineering Number	:	15384448_C3_01
Proposed Carrier	:	AT&T MOBILITY
Carrier Site Name	:	FORT WHITE WEST
Carrier Site Number	:	WSTFL0063832
Site Location	:	338 SW Lenox Glen Fort White, FL 32038-0001 29.9536° N, 82.7531° W
County	:	Columbia
Date	:	January 5, 2026
Max Usage	:	85%
Analysis Result	:	Pass



This item has been electronically signed and sealed by Sarah F. Rucker, PE on the date shown using a digital signature.

Printed copies are not considered signed and sealed and the signature must be verified on any electronic copies.

Sarah Rucker Digitally signed by Sarah Rucker
Date: 2026.01.07 10:16:21 -05'00'

COA: 9053

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 195 ft Monopole tower to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower:	Nello Drawing #227349, dated February 21, 2014
Foundation:	RWH Engineering Foundation Design, dated October 31, 2014
Geotechnical:	EGSci Geotechnical Investigation, dated January 28, 2014

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:	120 mph (3-second gust)
Basic Wind Speed w/ Ice:	No Ice Considered
Code(s):	ANSI/TIA-222-I / 2021 IBC / 8th ED (2023) Florida Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	S_{DS} = 0.10, S_{D1} = 0.08
Site Class:	Default

Conclusion

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

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

Structure Usages

Structural Component	Usage	Control	Result
Pole Shaft	71.9%	1.2D + 1.0W	Pass
Serviceability Usage	49.2%	1.0D + 1.0W	Pass
Base Plate @ 0.0 ft	56.8%	Rods	Pass
Foundation	78.1%	Shear	Pass
Foundation	85.2%	Axial	Pass
Foundation	74.3%	Moment	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	4,766.3	58.0	36.1

Reactions shown reflect the results from the Load Case with maximum Moment excluding Overstrength Load Cases

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

AT&T MOBILITY Final Loading

Elev (ft)	Qty	Equipment
195.0	1	Low Profile Platform
	3	Ericsson NNHH-65B-R4
	3	Ericsson Radio 4449 B5 B12A
	3	Ericsson KRE 101 2526/1K
	3	Ericsson AIR 6472 B77G B77M
	3	Ericsson Radio 4494 44B14 20B29 M01
	3	Ericsson Radio 8843 B2 B66A
	3	Raycap DC6-48-60-18-8C

Elev (ft)	Lines
195.0	(2) 0.39" (10mm) Fiber Trunk
	(6) 0.78" (19.7mm) 8 AWG 6
	(2) 0.96" (24.3mm) Cable
	(3) 2" conduit

Install proposed lines inside the pole shaft.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment
185.0	1	Low Profile Platform
182.0	1	Raycap RCMDC-3315-PF-48 (32 lbs)
	3	Ericsson Radio 4449 - B13&B5
	3	Ericsson 8843 Rev 2
	3	Ericsson AIR 6449 B77D/ C-Band
	1	Raycap RCMDC-6627-PF-48
	6	Commscope NHH-65C-R2B
170.0	3	Ericsson Radio 4480 B71+B85
	3	Ericsson AIR 6419 B41
	3	Commscope FFVV-65C-R2N23
	1	Platform with Handrails
	3	Ericsson Radio 4460 B25+B66

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

Elev (ft)	Lines
182.0	(1) 1 1/4" Hybriflex Cable
	(1) 1 5/8" Hybriflex
170.0	(2) 2.00" (50.8mm) Hybrid

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

Standard Conditions

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

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

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

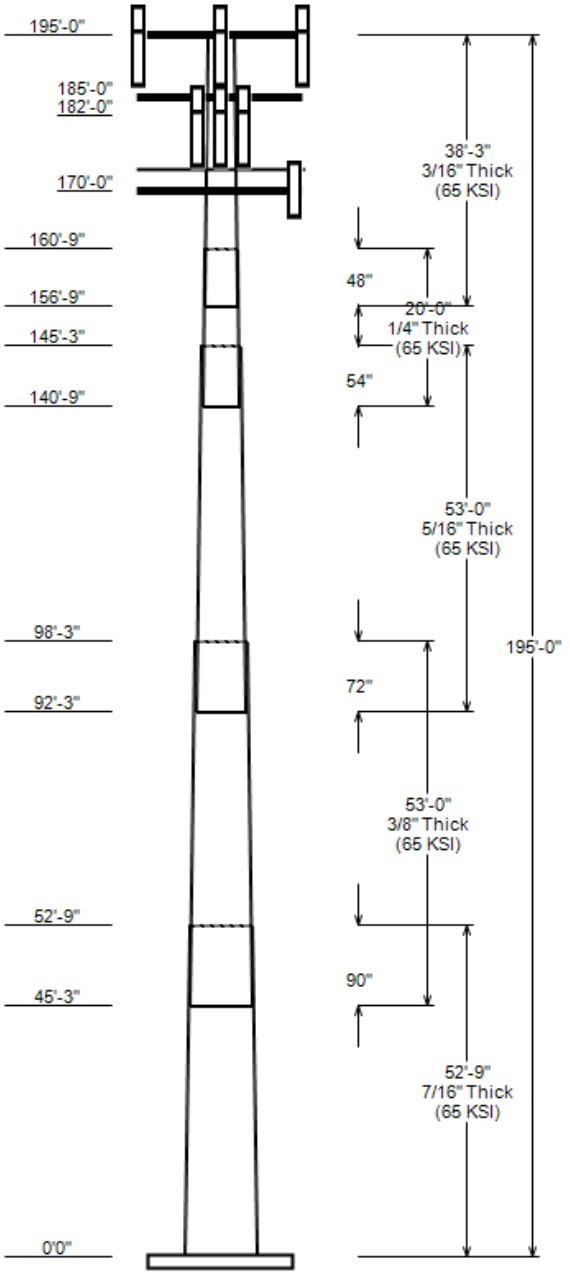
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

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

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

ANALYSIS PARAMETERS

Design Wind:	120 mph	**Ice Wind:**	30 mph w/ 0.0" ice	**Service Wind:**	60 mph
Risk Category:	II	**Exposure:**	C	**S_{D1}:** 0.080	**S_{DS}:** 0.100
Topo Factor:	Method 1	**Topo Feature:**	Flat		
Structure Height:	195.0 ft	**Base Elevation:**	0.00 ft	**Structure Type:**	Taper
Base Diameter:	64.24 in	**Base Rotation:**	0.00°	**Taper:**	0.2380 (in/ft)



POLE SECTION PROPERTIES

Section	Length (ft)	Flat Diameter (in) Top	Flat Diameter (in) Bottom	Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
1	52.750	51.67	64.24	0.438		0.00	18 Sides	65
2	53.000	41.57	54.21	0.375	Slip Joint	90.00	18 Sides	65
3	53.000	30.99	43.62	0.312	Slip Joint	72.00	18 Sides	65
4	20.000	27.79	32.56	0.250	Slip Joint	54.00	18 Sides	65
5	38.250	20.00	29.12	0.188	Slip Joint	48.00	18 Sides	65

DISCRETE APPURTENANCE

Elev (ft)	Description
195.0	(3) Ericsson Radio 4494 44B14 20B29 M
195.0	(1) Flat Low Profile Platform
195.0	(3) Ericsson AIR 6472 B77G B77M
195.0	(3) Ericsson KRE 101 2526/1K
195.0	(3) Ericsson Radio 8843 B2 B66A
195.0	(3) Raycap DC6-48-60-18-8C
195.0	(3) Ericsson Radio 4449 B5 B12A
195.0	(3) Ericsson NNHH-65B-R4
185.0	(1) Flat Low Profile Platform
182.0	(1) Raycap RCMDC-3315-PF-48 (32 lbs)
182.0	(3) Ericsson AIR 6449 B77D/ C-Band
182.0	(1) Raycap RCMDC-6627-PF-48
182.0	(3) Ericsson 8843 Rev 2
182.0	(3) Ericsson Radio 4449 - B13&B5
182.0	(6) Commscope NHH-65C-R2B
170.0	(1) Generic Platform with Handrails
170.0	(3) Commscope FFVV-65C-R2N23
170.0	(3) Ericsson AIR 6419 B41
170.0	(3) Ericsson Radio 4480 B71+B85
170.0	(3) Ericsson Radio 4460 B25+B66

LINEAR APPURTENANCE

Elev To (ft)	Description
195.0	(2) 0.39" (10mm) Fiber Trunk
195.0	(3) 2" conduit
195.0	(2) 0.96" (24.3mm) Cable
195.0	(6) 0.78" (19.7mm) 8 AWG 6
182.0	(1) 1 1/4" Hybriflex Cable
182.0	(1) 1 5/8" Hybriflex
170.0	(2) 2.00" (50.8mm) Hybrid

GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	4766.29	58.04	36.15
0.9D + 1.0W	4702.94	43.52	36.13
1.2D + 1.0Di + 1.0Wi	380.60	56.62	3.15
1.2D + 1.0Ev + 1.0Eh	235.98	57.09	1.46
0.9D - 1.0Ev + 1.0Eh	232.36	41.18	1.45
1.0D + 1.0W	1058.63	48.41	8.08

ANALYSIS PARAMETERS

Location:	Columbia County,FL	**Height:**	195 ft
Type and Shape:	Taper, 18 Sides	**Base Diameter:**	64.24 in
Manufacturer:	Undetermined	**Top Diameter:**	20.00 in
K_d (non-service):	0.95	**Taper:**	0.2380 in/ft
K_e:	1.00	**Rotation:**	0.000º

ICE & WIND PARAMETERS

Risk Category:	II	**Design Wind Speed:**	120 mph
Exposure Category:	C	**Design Wind Speed w/ Ice:**	30 mph
Design Ice Thickness:	0.00 in		
Topo Factor Procedure:	Method 1		
Crest Height(H):	0 ft	**Service Wind Speed:**	60 mph
Crest Length(L):	0 ft	**HMSL:**	61.00 ft
Feature:	Flat	**Distance from Apex (x):**	0 ft
		Upwind/Downwind:	

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	Default		**Period Based on Rayleigh Method (sec):**		2.91
T_L (sec):	8	**P:**	1	**C_s:**	0.030
S_{ds}:	0.100	**S_{d1}:**	0.080	**C_s Max:**	0.030
				C_s Min:	0.030

LOAD CASES

1.2D + 1.0W	120 mph Wind with No Ice
0.9D + 1.0W	120 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	30 mph Wind with 0" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice
1.2D + 1.0Ev + 1.5Eh	Seismic Overstrength
0.9D - 1.0Ev + 1.5Eh	Seismic Overstrength (Reduced DL)

SHAFT SECTION PROPERTIES

							Bottom						Top						
Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Dia (in)	Elev (ft)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	52.75	0.4375	65		0.00	14,336	64.24	0.000	88.60	45,574.0	24.13	146.84	51.67	52.75	71.14	23,587.	19.06	118.10	0.2384
2-18	53.00	0.3750	65	Slip	90.00	10,198	54.20	45.250	64.07	23,455.7	23.72	144.55	41.57	98.25	49.03	10,511.	17.78	110.85	0.2384
3-18	53.00	0.3125	65	Slip	72.00	6,617	43.62	92.250	42.96	10,181.1	22.85	139.60	30.99	145.25	30.42	3,616.8	15.72	99.16	0.2384
4-18	20.00	0.2500	65	Slip	54.00	1,616	32.56	140.750	25.64	3,381.3	21.20	130.24	27.79	160.75	21.85	2,094.3	17.84	111.16	0.2384
5-18	38.25	0.1875	65	Slip	48.00	1,888	29.12	156.750	17.22	1,821.0	25.62	155.31	20.00	195.00	11.79	584.7	17.04	106.67	0.2384
			Total Shaft Weight			**34,655**													

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
195.00	Ericsson Radio 8843 B2 B66A	3	0.80	0.000	71.90	1.980	0.50	71.90	1.980	0.50
195.00	Ericsson Radio 4449 B5 B12A	3	0.80	0.000	75.00	1.969	0.50	75.00	1.969	0.50
195.00	Flat Low Profile Platform	1	1.00	0.000	1500.00	26.100	1.00	1500.00	26.100	1.00
195.00	Raycap DC6-48-60-18-8C	3	0.80	-0.800	16.00	2.030	1.00	16.00	2.030	1.00
195.00	Ericsson Radio 4494 44B14 20B2	3	0.80	0.000	57.30	2.202	0.67	57.30	2.202	0.67
195.00	Ericsson NNHH-65B-R4	3	0.80	-1.600	83.80	12.271	0.64	83.80	12.271	0.64
195.00	Ericsson KRE 101 2526/1K	3	0.80	0.000	92.60	12.053	0.62	92.60	12.053	0.62
195.00	Ericsson AIR 6472 B77G B77M	3	0.80	0.000	75.60	4.779	0.68	75.60	4.779	0.68
185.00	Flat Low Profile Platform	1	1.00	0.000	1500.00	26.100	1.00	1500.00	26.100	1.00
182.00	Commscope NHH-65C-R2B	6	0.80	-0.100	51.60	11.389	0.70	51.60	11.389	0.70
182.00	Ericsson AIR 6449 B77D/ C-Band	3	0.75	0.000	81.60	4.028	0.70	81.60	4.028	0.70
182.00	Raycap RCMDC-3315-PF-48 (32 lb	1	0.80	1.900	32.00	2.512	0.67	32.00	2.512	0.67
182.00	Ericsson Radio 4449 - B13&B5	3	0.75	0.000	70.00	1.650	0.50	70.00	1.650	0.50
182.00	Ericsson 8843 Rev 2	3	0.75	0.000	75.00	1.650	0.50	75.00	1.650	0.50
182.00	Raycap RCMDC-6627-PF-48	1	0.75	0.000	32.00	4.056	1.00	32.00	4.056	1.00
170.00	Commscope FFVV-65C-R2N23	3	0.75	0.000	103.60	19.396	0.63	103.60	19.396	0.63
170.00	Ericsson AIR 6419 B41	3	0.75	0.000	68.50	5.600	0.60	68.50	5.600	0.60
170.00	Ericsson Radio 4480 B71+B85	3	0.75	0.000	93.00	2.798	0.67	93.00	2.798	0.67
170.00	Ericsson Radio 4460 B25+B66	3	0.75	0.000	109.00	2.564	0.67	109.00	2.564	0.67
170.00	Generic Platform with Handrail	1	1.00	0.000	2500.00	50.000	1.00	2500.00	50.000	1.00
Totals	**Row Count: 20**	**53**			**9,092.30**			**9,092.30**		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg): 0.00

Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/ Row	Distance Between Rows(in)	Distance Between Cols(in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
0.00	195.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	195.00	3	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	195.00	2	0.96" (24.3mm) Cable	0.96	0.88	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	195.00	2	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	182.00	1	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	182.00	1	1 1/4" Hybriflex Cabl	1.54	1	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	170.00	2	2.00" (50.8mm) Hybrid	2	3.09	N	2	1.5	1.5	90	1.5	Y	T-MOBILE

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description *(Max Length: 5 ft)*	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.4375	64.244	88.600	45,574.00	24.13	146.84	73	1397.2	0.0	0.0
5.00		0.4375	63.052	86.945	43,066.90	23.65	144.12	73.6	1345.3	0.0	1,493.4
10.00		0.4375	61.860	85.289	40,653.50	23.17	141.39	74.2	1294.4	0.0	1,465.2
15.00		0.4375	60.668	83.634	38,332.00	22.69	138.67	74.7	1244.5	0.0	1,437.0
20.00		0.4375	59.475	81.979	36,100.60	22.21	135.94	75.3	1195.5	0.0	1,408.9
25.00		0.4375	58.283	80.323	33,957.50	21.73	133.22	75.8	1147.6	0.0	1,380.7
30.00		0.4375	57.091	78.668	31,901.00	21.25	130.49	76.4	1100.6	0.0	1,352.5
35.00		0.4375	55.899	77.012	29,929.20	20.77	127.77	77	1054.6	0.0	1,324.4
40.00		0.4375	54.707	75.357	28,040.40	20.29	125.04	77.5	1009.5	0.0	1,296.2
45.00		0.4375	53.515	73.702	26,232.70	19.80	122.32	78.1	965.5	0.0	1,268.0
45.25	Bot - Section 2	0.4375	53.455	73.619	26,144.50	19.78	122.18	78.1	963.3	0.0	62.7
50.00		0.4375	52.322	72.046	24,504.50	19.32	119.59	78.7	922.4	0.0	2,201.9
52.75	Top - Section 1	0.3750	52.417	61.940	21,194.90	22.88	139.78	74.5	796.4	0.0	1,253.2
55.00		0.3750	51.880	61.302	20,546.20	22.63	138.35	74.8	780.0	0.0	471.8
60.00		0.3750	50.688	59.883	19,152.20	22.07	135.17	75.4	744.2	0.0	1,030.9
65.00		0.3750	49.496	58.464	17,822.80	21.51	131.99	76.1	709.2	0.0	1,006.8
70.00		0.3750	48.304	57.045	16,556.40	20.95	128.81	76.8	675.1	0.0	982.6
75.00		0.3750	47.112	55.626	15,351.40	20.39	125.63	77.4	641.8	0.0	958.5
80.00		0.3750	45.919	54.207	14,206.40	19.83	122.45	78.1	609.4	0.0	934.3
85.00		0.3750	44.727	52.788	13,119.70	19.27	119.27	78.7	577.7	0.0	910.2
90.00		0.3750	43.535	51.370	12,090.00	18.71	116.09	79.4	547.0	0.0	886.1
92.25	Bot - Section 3	0.3750	42.999	50.731	11,644.70	18.45	114.66	79.7	533.4	0.0	390.9
95.00		0.3750	42.343	49.951	11,115.60	18.15	112.91	80.1	517.0	0.0	870.0
98.25	Top - Section 2	0.3125	42.193	41.539	9,205.20	22.04	135.02	75.5	429.7	0.0	1,010.9
100.00		0.3125	41.776	41.125	8,932.80	21.81	133.68	75.7	421.2	0.0	246.1
105.00		0.3125	40.584	39.943	8,184.20	21.14	129.87	76.5	397.2	0.0	689.6
110.00		0.3125	39.392	38.760	7,478.70	20.46	126.05	77.3	373.9	0.0	669.5
115.00		0.3125	38.199	37.578	6,814.90	19.79	122.24	78.1	351.4	0.0	649.4
120.00		0.3125	37.007	36.395	6,191.60	19.12	118.42	78.9	329.5	0.0	629.3
125.00		0.3125	35.815	35.213	5,607.60	18.45	114.61	79.7	308.4	0.0	609.2
130.00		0.3125	34.623	34.030	5,061.40	17.77	110.79	80.5	287.9	0.0	589.0
135.00		0.3125	33.431	32.848	4,552.00	17.10	106.98	81.3	268.2	0.0	568.9
140.00		0.3125	32.239	31.666	4,077.90	16.43	103.16	82.1	249.1	0.0	548.8
140.75	Bot - Section 4	0.3125	32.060	31.488	4,009.70	16.33	102.59	82.2	246.3	0.0	80.6
145.00		0.3125	31.046	30.483	3,637.90	15.75	99.35	82.6	230.8	0.0	813.1
145.25	Top - Section 3	0.2500	31.487	24.786	3,055.50	20.44	125.95	77.4	191.1	0.0	47.0
150.00		0.2500	30.354	23.887	2,735.10	19.65	121.42	78.3	177.5	0.0	393.4
155.00		0.2500	29.162	22.941	2,422.80	18.81	116.65	79.3	163.6	0.0	398.4
156.75	Bot - Section 5	0.2500	28.745	22.610	2,319.50	18.51	114.98	79.6	158.9	0.0	135.6
160.00		0.2500	27.970	21.995	2,135.30	17.96	111.88	80.3	150.4	0.0	434.5
160.75	Top - Section 4	0.1875	28.166	16.650	1,646.70	24.72	150.22	72.3	115.2	0.0	98.6
165.00		0.1875	27.153	16.047	1,474.20	23.77	144.82	73.4	106.9	0.0	236.4
170.00		0.1875	25.961	15.338	1,287.20	22.65	138.46	74.8	97.7	0.0	267.0
175.00		0.1875	24.769	14.628	1,116.70	21.53	132.10	76.1	88.8	0.0	254.9
180.00		0.1875	23.576	13.919	962.00	20.41	125.74	77.4	80.4	0.0	242.8
182.00		0.1875	23.100	13.635	904.30	19.96	123.20	77.9	77.1	0.0	93.8
185.00		0.1875	22.384	13.209	822.30	19.29	119.38	78.7	72.4	0.0	137.0
190.00		0.1875	21.192	12.500	696.80	18.17	113.02	80	64.8	0.0	218.7
195.00		0.1875	20.000	11.790	584.70	17.04	106.67	81.4	57.6	0.0	206.6
										Total:	**34,655.3**

CALCULATED FORCES

Load Case: 1.2D + 1.0W — 120 mph Wind with No Ice — 27 Iterations

Gust Response Factor: 1.10
Dead load Factor: 1.20
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-58.04	-36.15	0.00	-4,766.3	0.00	4,766.29	5,822.66	1,554.93	8,961.06	7,651.95	0	0	0.633

CALCULATED FORCES

5.00	-56.01	-35.65	0.00	-4,585.6	0.00	4,585.56	5,758.09	1,525.88	8,629.37	7,424.75	0.08	-0.15	0.628
10.00	-54.01	-35.16	0.00	-4,407.3	0.00	4,407.30	5,691.84	1,496.83	8,303.93	7,198.61	0.31	-0.29	0.622
15.00	-52.05	-34.67	0.00	-4,231.5	0.00	4,231.49	5,623.90	1,467.78	7,984.75	6,973.66	0.7	-0.45	0.617
20.00	-50.13	-34.15	0.00	-4,058.2	0.00	4,058.16	5,554.28	1,438.72	7,671.82	6,750.02	1.25	-0.6	0.611
25.00	-48.24	-33.61	0.00	-3,887.4	0.00	3,887.42	5,482.97	1,409.67	7,365.15	6,527.82	1.96	-0.76	0.605
30.00	-46.38	-33.05	0.00	-3,719.4	0.00	3,719.38	5,409.99	1,380.62	7,064.73	6,307.19	2.84	-0.92	0.599
35.00	-44.56	-32.47	0.00	-3,554.2	0.00	3,554.15	5,335.31	1,351.57	6,770.57	6,088.24	3.89	-1.08	0.593
40.00	-42.78	-31.89	0.00	-3,391.8	0.00	3,391.78	5,258.95	1,322.51	6,482.66	5,871.10	5.1	-1.24	0.586
45.00	-41.07	-31.56	0.00	-3,232.3	0.00	3,232.33	5,180.91	1,293.46	6,201.01	5,655.90	6.49	-1.41	0.580
45.25	-40.95	-31.28	0.00	-3,224.4	0.00	3,224.44	5,176.97	1,292.01	6,187.09	5,645.19	6.57	-1.42	0.580
50.00	-38.11	-30.77	0.00	-3,075.9	0.00	3,075.88	5,101.19	1,264.41	5,925.61	5,442.76	8.06	-1.58	0.573
52.75	-36.49	-30.44	0.00	-2,991.2	0.00	2,991.25	4,152.32	1,087.06	5,109.65	4,449.15	9	-1.68	0.682
55.00	-35.80	-30.02	0.00	-2,922.8	0.00	2,922.76	4,125.88	1,075.85	5,004.86	4,374.93	9.81	-1.76	0.678
60.00	-34.33	-29.41	0.00	-2,772.7	0.00	2,772.67	4,065.91	1,050.95	4,775.88	4,210.83	11.76	-1.96	0.668
65.00	-32.90	-28.81	0.00	-2,625.6	0.00	2,625.61	4,004.26	1,026.05	4,552.26	4,048.00	13.92	-2.16	0.658
70.00	-31.50	-28.20	0.00	-2,481.6	0.00	2,481.58	3,940.93	1,001.14	4,334.00	3,886.55	16.29	-2.36	0.647
75.00	-30.13	-27.59	0.00	-2,340.6	0.00	2,340.59	3,875.91	976.24	4,121.10	3,726.61	18.87	-2.57	0.637
80.00	-28.79	-26.99	0.00	-2,202.6	0.00	2,202.63	3,809.21	951.34	3,913.57	3,568.31	21.67	-2.78	0.626
85.00	-27.48	-26.39	0.00	-2,067.7	0.00	2,067.69	3,740.83	926.44	3,711.39	3,411.78	24.69	-2.99	0.614
90.00	-26.22	-25.93	0.00	-1,935.8	0.00	1,935.76	3,670.76	901.54	3,514.58	3,257.13	27.94	-3.21	0.602
92.25	-25.66	-25.64	0.00	-1,877.4	0.00	1,877.41	3,638.68	890.33	3,427.77	3,188.19	29.48	-3.31	0.597
95.00	-24.49	-25.25	0.00	-1,806.9	0.00	1,806.92	3,599.00	876.63	3,323.13	3,104.49	31.42	-3.43	0.590
98.25	-23.16	-24.90	0.00	-1,724.9	0.00	1,724.86	2,821.55	729.01	2,757.63	2,432.35	33.81	-3.58	0.719
100.00	-22.76	-24.53	0.00	-1,681.3	0.00	1,681.28	2,803.69	721.74	2,702.96	2,392.69	35.14	-3.66	0.712
105.00	-21.72	-23.96	0.00	-1,558.6	0.00	1,558.63	2,751.52	700.99	2,549.78	2,280.15	39.11	-3.92	0.693
110.00	-20.71	-23.39	0.00	-1,438.8	0.00	1,438.85	2,697.67	680.24	2,401.07	2,168.83	43.35	-4.18	0.672
115.00	-19.72	-22.83	0.00	-1,321.9	0.00	1,321.92	2,642.13	659.49	2,256.83	2,058.87	47.86	-4.44	0.651
120.00	-18.76	-22.27	0.00	-1,207.8	0.00	1,207.79	2,584.90	638.74	2,117.05	1,950.38	52.65	-4.71	0.628
125.00	-17.83	-21.72	0.00	-1,096.4	0.00	1,096.44	2,526.00	617.99	1,981.74	1,843.49	57.72	-4.97	0.603
130.00	-16.93	-21.18	0.00	-987.8	0.00	987.83	2,465.41	597.23	1,850.90	1,738.32	63.06	-5.24	0.576
135.00	-16.06	-20.65	0.00	-881.9	0.00	881.91	2,403.13	576.48	1,724.53	1,635.01	68.68	-5.5	0.547
140.00	-15.23	-20.31	0.00	-778.6	0.00	778.65	2,339.18	555.73	1,602.63	1,533.67	74.57	-5.76	0.516
140.75	-15.09	-20.08	0.00	-763.4	0.00	763.42	2,329.44	552.62	1,584.73	1,518.65	75.47	-5.8	0.510
145.00	-13.98	-19.77	0.00	-678.1	0.00	678.07	2,264.75	534.98	1,485.19	1,428.89	80.73	-6.02	0.482
145.25	-13.90	-19.54	0.00	-673.1	0.00	673.13	1,725.54	434.99	1,227.27	1,108.88	81.04	-6.03	0.617
150.00	-13.26	-19.06	0.00	-580.3	0.00	580.30	1,683.17	419.22	1,139.90	1,042.12	87.15	-6.26	0.567
155.00	-12.61	-18.71	0.00	-485.0	0.00	484.99	1,636.94	402.61	1,051.42	973.03	93.85	-6.54	0.508
156.75	-12.38	-18.48	0.00	-452.2	0.00	452.25	1,620.36	396.80	1,021.29	949.15	96.26	-6.64	0.486
160.00	-11.76	-18.24	0.00	-392.2	0.00	392.19	1,589.02	386.01	966.51	905.26	100.82	-6.8	0.443
160.75	-11.60	-18.02	0.00	-378.5	0.00	378.51	1,083.73	292.21	738.42	624.60	101.89	-6.84	0.621
165.00	-11.18	-17.61	0.00	-301.9	0.00	301.90	1,060.67	281.63	685.91	589.02	108.06	-7.04	0.527
170.00	-7.03	-11.65	0.00	-213.9	0.00	213.86	1,031.98	269.18	626.61	547.58	115.56	-7.29	0.399
175.00	-6.63	-11.20	0.00	-155.6	0.00	155.63	1,001.60	256.73	569.98	506.70	123.28	-7.49	0.316
180.00	-6.25	-10.88	0.00	-99.6	0.00	99.60	969.55	244.27	516.04	466.51	131.2	-7.65	0.222
182.00	-5.25	-7.66	0.00	-77.8	0.00	77.84	956.25	239.29	495.22	450.66	134.41	-7.71	0.179
185.00	-3.47	-5.69	0.00	-54.8	0.00	54.85	935.80	231.82	464.78	427.14	139.26	-7.77	0.133
190.00	-3.15	-5.28	0.00	-26.4	0.00	26.42	900.38	219.37	416.21	388.71	147.41	-7.84	0.072
195.00	0.00	-4.80	0.00	0.0	0.00	0.00	863.27	206.92	370.31	351.35	155.62	-7.87	0.001

CALCULATED FORCES

Load Case: 0.9D + 1.0W — 120 mph Wind with No Ice (Reduced DL) — 27 Iterations

Gust Response Factor: 1.10
Dead load Factor: 0.90
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-43.52	-36.13	0.00	-4,702.9	0.00	4,702.94	5,822.66	1,554.93	8,961.06	7,651.95	0	0	0.623
5.00	-41.98	-35.60	0.00	-4,522.3	0.00	4,522.30	5,758.09	1,525.88	8,629.37	7,424.75	0.08	-0.14	0.617
10.00	-40.46	-35.07	0.00	-4,344.3	0.00	4,344.33	5,691.84	1,496.83	8,303.93	7,198.61	0.31	-0.29	0.611
15.00	-38.97	-34.54	0.00	-4,169.0	0.00	4,168.98	5,623.90	1,467.78	7,984.75	6,973.66	0.69	-0.44	0.605
20.00	-37.50	-33.99	0.00	-3,996.3	0.00	3,996.27	5,554.28	1,438.72	7,671.82	6,750.02	1.23	-0.59	0.599
25.00	-36.06	-33.42	0.00	-3,826.3	0.00	3,826.31	5,482.97	1,409.67	7,365.15	6,527.82	1.93	-0.74	0.593
30.00	-34.65	-32.83	0.00	-3,659.2	0.00	3,659.20	5,409.99	1,380.62	7,064.73	6,307.19	2.8	-0.9	0.587
35.00	-33.27	-32.24	0.00	-3,495.0	0.00	3,495.03	5,335.31	1,351.57	6,770.57	6,088.24	3.83	-1.06	0.581
40.00	-31.92	-31.63	0.00	-3,333.8	0.00	3,333.85	5,258.95	1,322.51	6,482.66	5,871.10	5.03	-1.22	0.574
45.00	-30.63	-31.29	0.00	-3,175.7	0.00	3,175.73	5,180.91	1,293.46	6,201.01	5,655.90	6.4	-1.39	0.568
45.25	-30.53	-30.99	0.00	-3,167.9	0.00	3,167.90	5,176.97	1,292.01	6,187.09	5,645.19	6.47	-1.4	0.568
50.00	-28.38	-30.48	0.00	-3,020.7	0.00	3,020.70	5,101.19	1,264.41	5,925.61	5,442.76	7.94	-1.56	0.561
52.75	-27.16	-30.15	0.00	-2,936.9	0.00	2,936.87	4,152.32	1,087.06	5,109.65	4,449.15	8.87	-1.65	0.667
55.00	-26.63	-29.71	0.00	-2,869.0	0.00	2,869.04	4,125.88	1,075.85	5,004.86	4,374.93	9.67	-1.73	0.663
60.00	-25.51	-29.08	0.00	-2,720.5	0.00	2,720.51	4,065.91	1,050.95	4,775.88	4,210.83	11.58	-1.92	0.653
65.00	-24.42	-28.45	0.00	-2,575.1	0.00	2,575.11	4,004.26	1,026.05	4,552.26	4,048.00	13.7	-2.12	0.643
70.00	-23.35	-27.83	0.00	-2,432.8	0.00	2,432.84	3,940.93	1,001.14	4,334.00	3,886.55	16.03	-2.32	0.633
75.00	-22.31	-27.21	0.00	-2,293.7	0.00	2,293.69	3,875.91	976.24	4,121.10	3,726.61	18.57	-2.52	0.622
80.00	-21.29	-26.59	0.00	-2,157.6	0.00	2,157.65	3,809.21	951.34	3,913.57	3,568.31	21.32	-2.73	0.611
85.00	-20.30	-25.98	0.00	-2,024.7	0.00	2,024.70	3,740.83	926.44	3,711.39	3,411.78	24.3	-2.94	0.600
90.00	-19.35	-25.52	0.00	-1,894.8	0.00	1,894.82	3,670.76	901.54	3,514.58	3,257.13	27.49	-3.15	0.588
92.25	-18.91	-25.22	0.00	-1,837.4	0.00	1,837.40	3,638.68	890.33	3,427.77	3,188.19	29	-3.25	0.582
95.00	-18.04	-24.83	0.00	-1,768.1	0.00	1,768.06	3,599.00	876.63	3,323.13	3,104.49	30.9	-3.37	0.575
98.25	-17.03	-24.49	0.00	-1,687.4	0.00	1,687.36	2,821.55	729.01	2,757.63	2,432.35	33.25	-3.52	0.701
100.00	-16.72	-24.11	0.00	-1,644.5	0.00	1,644.50	2,803.69	721.74	2,702.96	2,392.69	34.55	-3.59	0.694
105.00	-15.93	-23.52	0.00	-1,524.0	0.00	1,523.96	2,751.52	700.99	2,549.78	2,280.15	38.45	-3.85	0.675
110.00	-15.15	-22.94	0.00	-1,406.4	0.00	1,406.35	2,697.67	680.24	2,401.07	2,168.83	42.61	-4.1	0.655
115.00	-14.40	-22.37	0.00	-1,291.6	0.00	1,291.62	2,642.13	659.49	2,256.83	2,058.87	47.04	-4.36	0.634
120.00	-13.67	-21.81	0.00	-1,179.8	0.00	1,179.75	2,584.90	638.74	2,117.05	1,950.38	51.74	-4.62	0.611
125.00	-12.96	-21.26	0.00	-1,070.7	0.00	1,070.68	2,526.00	617.99	1,981.74	1,843.49	56.71	-4.87	0.587
130.00	-12.28	-20.72	0.00	-964.4	0.00	964.37	2,465.41	597.23	1,850.90	1,738.32	61.95	-5.13	0.561
135.00	-11.62	-20.19	0.00	-860.8	0.00	860.77	2,403.13	576.48	1,724.53	1,635.01	67.45	-5.39	0.533
140.00	-10.99	-19.86	0.00	-759.8	0.00	759.84	2,339.18	555.73	1,602.63	1,533.67	73.23	-5.64	0.501
140.75	-10.89	-19.62	0.00	-744.9	0.00	744.94	2,329.44	552.62	1,584.73	1,518.65	74.12	-5.68	0.496
145.00	-10.05	-19.33	0.00	-661.6	0.00	661.56	2,264.75	534.98	1,485.19	1,428.89	79.26	-5.89	0.469
145.25	-9.99	-19.09	0.00	-656.7	0.00	656.73	1,725.54	434.99	1,227.27	1,108.88	79.57	-5.91	0.600
150.00	-9.50	-18.61	0.00	-566.0	0.00	566.03	1,683.17	419.22	1,139.90	1,042.12	85.56	-6.14	0.551
155.00	-9.01	-18.27	0.00	-473.0	0.00	472.96	1,636.94	402.61	1,051.42	973.03	92.12	-6.41	0.494
156.75	-8.83	-18.04	0.00	-441.0	0.00	441.00	1,620.36	396.80	1,021.29	949.15	94.48	-6.5	0.472
160.00	-8.36	-17.81	0.00	-382.4	0.00	382.38	1,589.02	386.01	966.51	905.26	98.95	-6.66	0.430
160.75	-8.25	-17.59	0.00	-369.0	0.00	369.02	1,083.73	292.21	738.42	624.60	100	-6.7	0.602
165.00	-7.93	-17.17	0.00	-294.3	0.00	294.27	1,060.67	281.63	685.91	589.02	106.04	-6.89	0.511
170.00	-4.96	-11.36	0.00	-208.4	0.00	208.40	1,031.98	269.18	626.61	547.58	113.38	-7.14	0.387
175.00	-4.67	-10.93	0.00	-151.6	0.00	151.60	1,001.60	256.73	569.98	506.70	120.94	-7.33	0.306
180.00	-4.39	-10.62	0.00	-97.0	0.00	96.97	969.55	244.27	516.04	466.51	128.69	-7.49	0.214
182.00	-3.72	-7.44	0.00	-75.7	0.00	75.74	956.25	239.29	495.22	450.66	131.84	-7.54	0.173
185.00	-2.44	-5.54	0.00	-53.4	0.00	53.41	935.80	231.82	464.78	427.14	136.58	-7.6	0.128
190.00	-2.22	-5.15	0.00	-25.7	0.00	25.73	900.38	219.37	416.21	388.71	144.56	-7.67	0.069
195.00	0.00	-4.80	0.00	0.0	0.00	0.00	863.27	206.92	370.31	351.35	152.6	-7.7	0.001

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi — 30 mph Wind with 0" Radial Ice — 24 Iterations

Gust Response Factor: 1.10 — Ice Dead Load Factor 1.00
Dead load Factor: 1.20 — Ice Importance Factor 1.00
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-56.62	-3.15	0.00	-380.6	0.00	380.60	5,822.66	1,554.93	8,961.06	7,651.95	0	0	0.059
5.00	-54.68	-3.10	0.00	-364.8	0.00	364.84	5,758.09	1,525.88	8,629.37	7,424.75	0.01	-0.01	0.059
10.00	-52.77	-3.04	0.00	-349.4	0.00	349.36	5,691.84	1,496.83	8,303.93	7,198.61	0.02	-0.02	0.058
15.00	-50.90	-2.99	0.00	-334.2	0.00	334.15	5,623.90	1,467.78	7,984.75	6,973.66	0.06	-0.04	0.057
20.00	-49.06	-2.93	0.00	-319.2	0.00	319.21	5,554.28	1,438.72	7,671.82	6,750.02	0.1	-0.05	0.056
25.00	-47.25	-2.87	0.00	-304.6	0.00	304.56	5,482.97	1,409.67	7,365.15	6,527.82	0.16	-0.06	0.055
30.00	-45.48	-2.81	0.00	-290.2	0.00	290.19	5,409.99	1,380.62	7,064.73	6,307.19	0.23	-0.07	0.054
35.00	-43.74	-2.75	0.00	-276.1	0.00	276.13	5,335.31	1,351.57	6,770.57	6,088.24	0.31	-0.08	0.054
40.00	-42.03	-2.69	0.00	-262.4	0.00	262.37	5,258.95	1,322.51	6,482.66	5,871.10	0.4	-0.1	0.053
45.00	-40.36	-2.65	0.00	-248.9	0.00	248.93	5,180.91	1,293.46	6,201.01	5,655.90	0.51	-0.11	0.052
45.25	-40.28	-2.62	0.00	-248.3	0.00	248.27	5,176.97	1,292.01	6,187.09	5,645.19	0.52	-0.11	0.052
50.00	-37.50	-2.57	0.00	-235.8	0.00	235.81	5,101.19	1,264.41	5,925.61	5,442.76	0.64	-0.12	0.051
52.75	-35.91	-2.54	0.00	-228.7	0.00	228.74	4,152.32	1,087.06	5,109.65	4,449.15	0.71	-0.13	0.060
55.00	-35.28	-2.49	0.00	-223.0	0.00	223.03	4,125.88	1,075.85	5,004.86	4,374.93	0.77	-0.14	0.060
60.00	-33.89	-2.43	0.00	-210.6	0.00	210.58	4,065.91	1,050.95	4,775.88	4,210.83	0.92	-0.15	0.058
65.00	-32.53	-2.36	0.00	-198.4	0.00	198.44	4,004.26	1,026.05	4,552.26	4,048.00	1.09	-0.17	0.057
70.00	-31.20	-2.30	0.00	-186.6	0.00	186.63	3,940.93	1,001.14	4,334.00	3,886.55	1.28	-0.18	0.056
75.00	-29.90	-2.23	0.00	-175.2	0.00	175.15	3,875.91	976.24	4,121.10	3,726.61	1.48	-0.2	0.055
80.00	-28.63	-2.17	0.00	-164.0	0.00	163.98	3,809.21	951.34	3,913.57	3,568.31	1.69	-0.21	0.053
85.00	-27.39	-2.11	0.00	-153.1	0.00	153.13	3,740.83	926.44	3,711.39	3,411.78	1.93	-0.23	0.052
90.00	-26.18	-2.06	0.00	-142.6	0.00	142.60	3,670.76	901.54	3,514.58	3,257.13	2.17	-0.25	0.051
92.25	-25.64	-2.03	0.00	-138.0	0.00	137.96	3,638.68	890.33	3,427.77	3,188.19	2.29	-0.25	0.050
95.00	-24.52	-1.99	0.00	-132.4	0.00	132.39	3,599.00	876.63	3,323.13	3,104.49	2.44	-0.26	0.049
98.25	-23.21	-1.95	0.00	-125.9	0.00	125.92	2,821.55	729.01	2,757.63	2,432.35	2.62	-0.27	0.060
100.00	-22.86	-1.91	0.00	-122.5	0.00	122.50	2,803.69	721.74	2,702.96	2,392.69	2.73	-0.28	0.059
105.00	-21.88	-1.85	0.00	-112.9	0.00	112.94	2,751.52	700.99	2,549.78	2,280.15	3.03	-0.3	0.057
110.00	-20.93	-1.79	0.00	-103.7	0.00	103.67	2,697.67	680.24	2,401.07	2,168.83	3.35	-0.32	0.056
115.00	-20.00	-1.74	0.00	-94.7	0.00	94.70	2,642.13	659.49	2,256.83	2,058.87	3.69	-0.34	0.054
120.00	-19.10	-1.68	0.00	-86.0	0.00	86.02	2,584.90	638.74	2,117.05	1,950.38	4.05	-0.35	0.052
125.00	-18.22	-1.62	0.00	-77.6	0.00	77.64	2,526.00	617.99	1,981.74	1,843.49	4.44	-0.37	0.049
130.00	-17.36	-1.56	0.00	-69.5	0.00	69.54	2,465.41	597.23	1,850.90	1,738.32	4.84	-0.39	0.047
135.00	-16.53	-1.51	0.00	-61.7	0.00	61.71	2,403.13	576.48	1,724.53	1,635.01	5.26	-0.41	0.045
140.00	-15.72	-1.48	0.00	-54.2	0.00	54.17	2,339.18	555.73	1,602.63	1,533.67	5.7	-0.43	0.042
140.75	-15.60	-1.45	0.00	-53.1	0.00	53.06	2,329.44	552.62	1,584.73	1,518.65	5.76	-0.43	0.042
145.00	-14.50	-1.42	0.00	-46.9	0.00	46.89	2,264.75	534.98	1,485.19	1,428.89	6.16	-0.45	0.039
145.25	-14.43	-1.40	0.00	-46.5	0.00	46.54	1,725.54	434.99	1,227.27	1,108.88	6.18	-0.45	0.050
150.00	-13.82	-1.35	0.00	-39.9	0.00	39.90	1,683.17	419.22	1,139.90	1,042.12	6.63	-0.46	0.047
155.00	-13.19	-1.31	0.00	-33.2	0.00	33.16	1,636.94	402.61	1,051.42	973.03	7.13	-0.48	0.042
156.75	-12.98	-1.29	0.00	-30.9	0.00	30.87	1,620.36	396.80	1,021.29	949.15	7.31	-0.49	0.041
160.00	-12.36	-1.26	0.00	-26.7	0.00	26.68	1,589.02	386.01	966.51	905.26	7.64	-0.5	0.037
160.75	-12.22	-1.24	0.00	-25.7	0.00	25.73	1,083.73	292.21	738.42	624.60	7.72	-0.5	0.052
165.00	-11.81	-1.20	0.00	-20.5	0.00	20.46	1,060.67	281.63	685.91	589.02	8.18	-0.52	0.046
170.00	-7.58	-0.81	0.00	-14.5	0.00	14.46	1,031.98	269.18	626.61	547.58	8.73	-0.53	0.034
175.00	-7.16	-0.76	0.00	-10.4	0.00	10.43	1,001.60	256.73	569.98	506.70	9.29	-0.55	0.028
180.00	-6.76	-0.73	0.00	-6.6	0.00	6.63	969.55	244.27	516.04	466.51	9.87	-0.56	0.021
182.00	-5.67	-0.52	0.00	-5.2	0.00	5.17	956.25	239.29	495.22	450.66	10.11	-0.56	0.017
185.00	-3.74	-0.38	0.00	-3.6	0.00	3.61	935.80	231.82	464.78	427.14	10.46	-0.57	0.012
190.00	-3.38	-0.34	0.00	-1.7	0.00	1.70	900.38	219.37	416.21	388.71	11.06	-0.57	0.008
195.00	0.00	-0.31	0.00	0.0	0.00	0.00	863.27	206.92	370.31	351.35	11.65	-0.57	0.000

CALCULATED FORCES

Load Case: 1.0D + 1.0W — 60 mph Wind with No Ice — 25 Iterations

Gust Response Factor: 1.10
Dead load Factor: 1.00
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-48.41	-8.08	0.00	-1,058.6	0.00	1,058.63	5,822.66	1,554.93	8,961.06	7,651.95	0	0	0.147
5.00	-46.78	-7.97	0.00	-1,018.2	0.00	1,018.22	5,758.09	1,525.88	8,629.37	7,424.75	0.02	-0.03	0.145
10.00	-45.19	-7.85	0.00	-978.4	0.00	978.39	5,691.84	1,496.83	8,303.93	7,198.61	0.07	-0.07	0.144
15.00	-43.62	-7.73	0.00	-939.1	0.00	939.14	5,623.90	1,467.78	7,984.75	6,973.66	0.16	-0.1	0.142
20.00	-42.09	-7.61	0.00	-900.5	0.00	900.47	5,554.28	1,438.72	7,671.82	6,750.02	0.28	-0.13	0.141
25.00	-40.58	-7.49	0.00	-862.4	0.00	862.39	5,482.97	1,409.67	7,365.15	6,527.82	0.44	-0.17	0.140
30.00	-39.10	-7.36	0.00	-825.0	0.00	824.95	5,409.99	1,380.62	7,064.73	6,307.19	0.63	-0.2	0.138
35.00	-37.64	-7.23	0.00	-788.1	0.00	788.14	5,335.31	1,351.57	6,770.57	6,088.24	0.86	-0.24	0.137
40.00	-36.22	-7.09	0.00	-752.0	0.00	752.00	5,258.95	1,322.51	6,482.66	5,871.10	1.13	-0.28	0.135
45.00	-34.83	-7.02	0.00	-716.5	0.00	716.53	5,180.91	1,293.46	6,201.01	5,655.90	1.44	-0.31	0.133
45.25	-34.76	-6.95	0.00	-714.8	0.00	714.77	5,176.97	1,292.01	6,187.09	5,645.19	1.46	-0.31	0.133
50.00	-32.43	-6.84	0.00	-681.7	0.00	681.74	5,101.19	1,264.41	5,925.61	5,442.76	1.79	-0.35	0.132
52.75	-31.11	-6.77	0.00	-662.9	0.00	662.92	4,152.32	1,087.06	5,109.65	4,449.15	2	-0.37	0.157
55.00	-30.58	-6.67	0.00	-647.7	0.00	647.69	4,125.88	1,075.85	5,004.86	4,374.93	2.18	-0.39	0.155
60.00	-29.42	-6.53	0.00	-614.3	0.00	614.34	4,065.91	1,050.95	4,775.88	4,210.83	2.61	-0.43	0.153
65.00	-28.29	-6.39	0.00	-581.7	0.00	581.68	4,004.26	1,026.05	4,552.26	4,048.00	3.09	-0.48	0.151
70.00	-27.17	-6.26	0.00	-549.7	0.00	549.71	3,940.93	1,001.14	4,334.00	3,886.55	3.61	-0.52	0.148
75.00	-26.09	-6.12	0.00	-518.4	0.00	518.42	3,875.91	976.24	4,121.10	3,726.61	4.19	-0.57	0.146
80.00	-25.03	-5.98	0.00	-487.8	0.00	487.82	3,809.21	951.34	3,913.57	3,568.31	4.81	-0.62	0.143
85.00	-23.99	-5.85	0.00	-457.9	0.00	457.90	3,740.83	926.44	3,711.39	3,411.78	5.48	-0.66	0.141
90.00	-22.98	-5.75	0.00	-428.7	0.00	428.66	3,670.76	901.54	3,514.58	3,257.13	6.2	-0.71	0.138
92.25	-22.53	-5.68	0.00	-415.7	0.00	415.73	3,638.68	890.33	3,427.77	3,188.19	6.54	-0.73	0.137
95.00	-21.59	-5.59	0.00	-400.1	0.00	400.11	3,599.00	876.63	3,323.13	3,104.49	6.97	-0.76	0.135
98.25	-20.50	-5.52	0.00	-381.9	0.00	381.93	2,821.55	729.01	2,757.63	2,432.35	7.5	-0.79	0.164
100.00	-20.20	-5.43	0.00	-372.3	0.00	372.28	2,803.69	721.74	2,702.96	2,392.69	7.79	-0.81	0.163
105.00	-19.39	-5.31	0.00	-345.1	0.00	345.10	2,751.52	700.99	2,549.78	2,280.15	8.68	-0.87	0.158
110.00	-18.59	-5.18	0.00	-318.6	0.00	318.58	2,697.67	680.24	2,401.07	2,168.83	9.62	-0.93	0.154
115.00	-17.81	-5.05	0.00	-292.7	0.00	292.69	2,642.13	659.49	2,256.83	2,058.87	10.62	-0.98	0.149
120.00	-17.06	-4.93	0.00	-267.4	0.00	267.42	2,584.90	638.74	2,117.05	1,950.38	11.68	-1.04	0.144
125.00	-16.32	-4.81	0.00	-242.8	0.00	242.78	2,526.00	617.99	1,981.74	1,843.49	12.8	-1.1	0.138
130.00	-15.61	-4.69	0.00	-218.8	0.00	218.75	2,465.41	597.23	1,850.90	1,738.32	13.99	-1.16	0.132
135.00	-14.91	-4.57	0.00	-195.3	0.00	195.31	2,403.13	576.48	1,724.53	1,635.01	15.24	-1.22	0.126
140.00	-14.24	-4.50	0.00	-172.5	0.00	172.46	2,339.18	555.73	1,602.63	1,533.67	16.54	-1.28	0.119
140.75	-14.14	-4.44	0.00	-169.1	0.00	169.09	2,329.44	552.62	1,584.73	1,518.65	16.74	-1.28	0.117
145.00	-13.22	-4.38	0.00	-150.2	0.00	150.20	2,264.75	534.98	1,485.19	1,428.89	17.91	-1.33	0.111
145.25	-13.16	-4.33	0.00	-149.1	0.00	149.11	1,725.54	434.99	1,227.27	1,108.88	17.98	-1.34	0.142
150.00	-12.65	-4.22	0.00	-128.6	0.00	128.56	1,683.17	419.22	1,139.90	1,042.12	19.33	-1.39	0.131
155.00	-12.13	-4.14	0.00	-107.5	0.00	107.46	1,636.94	402.61	1,051.42	973.03	20.82	-1.45	0.118
156.75	-11.95	-4.09	0.00	-100.2	0.00	100.20	1,620.36	396.80	1,021.29	949.15	21.36	-1.47	0.113
160.00	-11.43	-4.04	0.00	-86.9	0.00	86.90	1,589.02	386.01	966.51	905.26	22.37	-1.51	0.103
160.75	-11.31	-3.99	0.00	-83.9	0.00	83.87	1,083.73	292.21	738.42	624.60	22.61	-1.52	0.145
165.00	-10.97	-3.90	0.00	-66.9	0.00	66.90	1,060.67	281.63	685.91	589.02	23.98	-1.56	0.124
170.00	-6.99	-2.58	0.00	-47.4	0.00	47.40	1,031.98	269.18	626.61	547.58	25.64	-1.61	0.093
175.00	-6.64	-2.48	0.00	-34.5	0.00	34.49	1,001.60	256.73	569.98	506.70	27.36	-1.66	0.075
180.00	-6.31	-2.41	0.00	-22.1	0.00	22.07	969.55	244.27	516.04	466.51	29.12	-1.7	0.054
182.00	-5.14	-1.70	0.00	-17.2	0.00	17.24	956.25	239.29	495.22	450.66	29.83	-1.71	0.044
185.00	-3.47	-1.26	0.00	-12.2	0.00	12.15	935.80	231.82	464.78	427.14	30.91	-1.72	0.032
190.00	-3.17	-1.17	0.00	-5.9	0.00	5.86	900.38	219.37	416.21	388.71	32.72	-1.74	0.019
195.00	0.00	-1.07	0.00	0.0	0.00	0.00	863.27	206.92	370.31	351.35	34.55	-1.74	0.000

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

Design Spectral Response Acceleration at Short Period (S_{ds}):	0.100
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.080
Long-Period Transition Period (T_L – Seconds):	8
Importance Factor (I_e):	1.000
Response Modification Coefficient (R):	1.500
Seismic Response Coefficient (C_s):	0.030
Upper Limit C_S:	0.030
Lower Limit C_S:	0.030
Period based on Rayleigh Method (sec):	2.910
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	2.000
Total Unfactored Dead Load:	48.410 k
Seismic Base Shear (E):	1.450 k

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
48	192.5	288	10,690	0.018	25	352
47	187.5	301	10,566	0.017	25	367
46	183.5	186	6,267	0.010	15	227
45	181	131	4,295	0.007	10	160
44	177.5	336	10,592	0.017	25	410
43	172.5	348	10,363	0.017	25	425
42	167.5	391	10,977	0.018	26	477
41	162.875	342	9,074	0.015	22	417
40	160.375	117	3,015	0.005	7	143
39	158.375	515	12,924	0.021	31	629
38	155.875	179	4,352	0.007	10	219
37	152.5	523	12,154	0.020	29	638
36	147.625	511	11,145	0.018	27	624
35	145.125	53	1,121	0.002	3	65
34	142.875	919	18,753	0.031	45	1,121
33	140.375	99	1,955	0.003	5	121
32	137.5	673	12,725	0.021	30	821
31	132.5	693	12,170	0.020	29	846
30	127.5	713	11,596	0.019	28	870
29	122.5	733	11,006	0.018	26	895
28	117.5	754	10,403	0.017	25	919
27	112.5	774	9,792	0.016	23	944
26	107.5	794	9,173	0.015	22	968
25	102.5	814	8,551	0.014	20	993
24	99.125	290	2,846	0.005	7	353
23	96.625	1,092	10,193	0.017	24	1,332
22	93.625	938	8,225	0.014	20	1,145
21	91.125	447	3,710	0.006	9	545
20	87.5	1,010	7,735	0.013	18	1,233
19	82.5	1,034	7,041	0.012	17	1,262
18	77.5	1,059	6,358	0.010	15	1,291
17	72.5	1,083	5,691	0.009	14	1,321
16	67.5	1,107	5,043	0.008	12	1,350
15	62.5	1,131	4,418	0.007	11	1,380
14	57.5	1,155	3,819	0.006	9	1,409
13	53.875	528	1,532	0.002	4	644
12	51.375	1,322	3,488	0.006	8	1,612
11	47.625	2,320	5,262	0.009	13	2,830
10	45.125	69	140	0.000	0	84
9	42.5	1,392	2,515	0.004	6	1,699
8	37.5	1,420	1,998	0.003	5	1,733
7	32.5	1,449	1,530	0.002	4	1,767

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
6	27.5	1,477	1,117	0.002	3	1,802
5	22.5	1,505	762	0.001	2	1,836
4	17.5	1,533	470	0.001	1	1,870
3	12.5	1,561	244	0.000	1	1,905
2	7.5	1,589	89	0.000	0	1,939
1	2.5	1,618	10	0.000	0	1,973
Ericsson Radio 4449 B5 B12A	195	225	8,556	0.014	20	274
Ericsson Radio 8843 B2 B66A	195	216	8,202	0.014	20	263
Raycap DC6-48-60-18-8C	195	48	1,825	0.003	4	59
Ericsson Radio 4494 44B14 20B29 M01	195	172	6,536	0.011	16	210
Ericsson AIR 6472 B77G B77M	195	227	8,624	0.014	21	277
Ericsson KRE 101 2526/1K	195	278	10,563	0.017	25	339
Ericsson NNHH-65B-R4	195	251	9,559	0.016	23	307
Flat Low Profile Platform	195	1,500	57,038	0.094	136	1,830
Flat Low Profile Platform	185	1,500	51,338	0.084	122	1,830
Ericsson 8843 Rev 2	182	225	7,453	0.012	18	274
Ericsson Radio 4449 - B13&B5	182	210	6,956	0.011	17	256
Raycap RCMDC-3315-PF-48 (32 lbs)	182	32	1,060	0.002	3	39
Ericsson AIR 6449 B77D/ C-Band	182	245	8,109	0.013	19	299
Raycap RCMDC-6627-PF-48	182	32	1,060	0.002	3	39
Commscope NHH-65C-R2B	182	310	10,255	0.017	24	378
Ericsson Radio 4460 B25+B66	170	327	9,450	0.016	23	399
Ericsson Radio 4480 B71+B85	170	279	8,063	0.013	19	340
Ericsson AIR 6419 B41	170	206	5,939	0.010	14	251
Commscope FFVV-65C-R2N23	170	311	8,982	0.015	21	379
Generic Platform with Handrails	170	2,500	72,250	0.118	172	3,050
	Totals:	**48,409**	**609,713**	**0.999**	**1,452**	**59,059**

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh **Seismic (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
48	192.5	288	10,690	0.018	25	254
47	187.5	301	10,566	0.017	25	264
46	183.5	186	6,267	0.010	15	164
45	181	131	4,295	0.007	10	115
44	177.5	336	10,592	0.017	25	296
43	172.5	348	10,363	0.017	25	306
42	167.5	391	10,977	0.018	26	344
41	162.875	342	9,074	0.015	22	301
40	160.375	117	3,015	0.005	7	103
39	158.375	515	12,924	0.021	31	453
38	155.875	179	4,352	0.007	10	158
37	152.5	523	12,154	0.020	29	460
36	147.625	511	11,145	0.018	27	450
35	145.125	53	1,121	0.002	3	47
34	142.875	919	18,753	0.031	45	808
33	140.375	99	1,955	0.003	5	87
32	137.5	673	12,725	0.021	30	592
31	132.5	693	12,170	0.020	29	610
30	127.5	713	11,596	0.019	28	628
29	122.5	733	11,006	0.018	26	645
28	117.5	754	10,403	0.017	25	663
27	112.5	774	9,792	0.016	23	681
26	107.5	794	9,173	0.015	22	699
25	102.5	814	8,551	0.014	20	716
24	99.125	290	2,846	0.005	7	255
23	96.625	1,092	10,193	0.017	24	961
22	93.625	938	8,225	0.014	20	826
21	91.125	447	3,710	0.006	9	393
20	87.5	1,010	7,735	0.013	18	889

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh **Seismic (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
19	82.5	1,034	7,041	0.012	17	910
18	77.5	1,059	6,358	0.010	15	932
17	72.5	1,083	5,691	0.009	14	953
16	67.5	1,107	5,043	0.008	12	974
15	62.5	1,131	4,418	0.007	11	995
14	57.5	1,155	3,819	0.006	9	1,017
13	53.875	528	1,532	0.002	4	464
12	51.375	1,322	3,488	0.006	8	1,163
11	47.625	2,320	5,262	0.009	13	2,042
10	45.125	69	140	0.000	0	61
9	42.5	1,392	2,515	0.004	6	1,225
8	37.5	1,420	1,998	0.003	5	1,250
7	32.5	1,449	1,530	0.002	4	1,275
6	27.5	1,477	1,117	0.002	3	1,300
5	22.5	1,505	762	0.001	2	1,324
4	17.5	1,533	470	0.001	1	1,349
3	12.5	1,561	244	0.000	1	1,374
2	7.5	1,589	89	0.000	0	1,399
1	2.5	1,618	10	0.000	0	1,423
Ericsson Radio 4449 B5 B12A	195	225	8,556	0.014	20	198
Ericsson Radio 8843 B2 B66A	195	216	8,202	0.014	20	190
Raycap DC6-48-60-18-8C	195	48	1,825	0.003	4	42
Ericsson Radio 4494 44B14 20B29 M01	195	172	6,536	0.011	16	151
Ericsson AIR 6472 B77G B77M	195	227	8,624	0.014	21	200
Ericsson KRE 101 2526/1K	195	278	10,563	0.017	25	244
Ericsson NNHH-65B-R4	195	251	9,559	0.016	23	221
Flat Low Profile Platform	195	1,500	57,038	0.094	136	1,320
Flat Low Profile Platform	185	1,500	51,338	0.084	122	1,320
Ericsson 8843 Rev 2	182	225	7,453	0.012	18	198
Ericsson Radio 4449 - B13&B5	182	210	6,956	0.011	17	185
Raycap RCMDC-3315-PF-48 (32 lbs)	182	32	1,060	0.002	3	28
Ericsson AIR 6449 B77D/ C-Band	182	245	8,109	0.013	19	215
Raycap RCMDC-6627-PF-48	182	32	1,060	0.002	3	28
Commscope NHH-65C-R2B	182	310	10,255	0.017	24	272
Ericsson Radio 4460 B25+B66	170	327	9,450	0.016	23	288
Ericsson Radio 4480 B71+B85	170	279	8,063	0.013	19	246
Ericsson AIR 6419 B41	170	206	5,939	0.010	14	181
Commscope FFVV-65C-R2N23	170	311	8,982	0.015	21	274
Generic Platform with Handrails	170	2,500	72,250	0.118	172	2,200
	Totals:	**48,409**	**609,713**	**0.999**	**1,452**	**42,600**

SEISMIC FORCES

1.2D + 1.0Ev + 1.5Eh **Seismic Overstrength**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
48	192.5	288	10,690	0.018	38	352
47	187.5	301	10,566	0.017	38	367
46	183.5	186	6,267	0.010	22	227
45	181	131	4,295	0.007	15	160
44	177.5	336	10,592	0.017	38	410
43	172.5	348	10,363	0.017	37	425
42	167.5	391	10,977	0.018	39	477
41	162.875	342	9,074	0.015	32	417
40	160.375	117	3,015	0.005	11	143
39	158.375	515	12,924	0.021	46	629
38	155.875	179	4,352	0.007	16	219
37	152.5	523	12,154	0.020	43	638
36	147.625	511	11,145	0.018	40	624
35	145.125	53	1,121	0.002	4	65
34	142.875	919	18,753	0.031	67	1,121
33	140.375	99	1,955	0.003	7	121

SEISMIC FORCES

1.2D + 1.0Ev + 1.5Eh **Seismic Overstrength**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
32	137.5	673	12,725	0.021	45	821
31	132.5	693	12,170	0.020	43	846
30	127.5	713	11,596	0.019	41	870
29	122.5	733	11,006	0.018	39	895
28	117.5	754	10,403	0.017	37	919
27	112.5	774	9,792	0.016	35	944
26	107.5	794	9,173	0.015	33	968
25	102.5	814	8,551	0.014	31	993
24	99.125	290	2,846	0.005	10	353
23	96.625	1,092	10,193	0.017	36	1,332
22	93.625	938	8,225	0.014	29	1,145
21	91.125	447	3,710	0.006	13	545
20	87.5	1,010	7,735	0.013	28	1,233
19	82.5	1,034	7,041	0.012	25	1,262
18	77.5	1,059	6,358	0.010	23	1,291
17	72.5	1,083	5,691	0.009	20	1,321
16	67.5	1,107	5,043	0.008	18	1,350
15	62.5	1,131	4,418	0.007	16	1,380
14	57.5	1,155	3,819	0.006	14	1,409
13	53.875	528	1,532	0.002	5	644
12	51.375	1,322	3,488	0.006	12	1,612
11	47.625	2,320	5,262	0.009	19	2,830
10	45.125	69	140	0.000	1	84
9	42.5	1,392	2,515	0.004	9	1,699
8	37.5	1,420	1,998	0.003	7	1,733
7	32.5	1,449	1,530	0.002	5	1,767
6	27.5	1,477	1,117	0.002	4	1,802
5	22.5	1,505	762	0.001	3	1,836
4	17.5	1,533	470	0.001	2	1,870
3	12.5	1,561	244	0.000	1	1,905
2	7.5	1,589	89	0.000	0	1,939
1	2.5	1,618	10	0.000	0	1,973
Ericsson Radio 4449 B5 B12A	195	225	8,556	0.014	31	274
Ericsson Radio 8843 B2 B66A	195	216	8,202	0.014	29	263
Raycap DC6-48-60-18-8C	195	48	1,825	0.003	7	59
Ericsson Radio 4494 44B14 20B29 M01	195	172	6,536	0.011	23	210
Ericsson AIR 6472 B77G B77M	195	227	8,624	0.014	31	277
Ericsson KRE 101 2526/1K	195	278	10,563	0.017	38	339
Ericsson NNHH-65B-R4	195	251	9,559	0.016	34	307
Flat Low Profile Platform	195	1,500	57,038	0.094	204	1,830
Flat Low Profile Platform	185	1,500	51,338	0.084	183	1,830
Ericsson 8843 Rev 2	182	225	7,453	0.012	27	274
Ericsson Radio 4449 - B13&B5	182	210	6,956	0.011	25	256
Raycap RCMDC-3315-PF-48 (32 lbs)	182	32	1,060	0.002	4	39
Ericsson AIR 6449 B77D/ C-Band	182	245	8,109	0.013	29	299
Raycap RCMDC-6627-PF-48	182	32	1,060	0.002	4	39
Commscope NHH-65C-R2B	182	310	10,255	0.017	37	378
Ericsson Radio 4460 B25+B66	170	327	9,450	0.016	34	399
Ericsson Radio 4480 B71+B85	170	279	8,063	0.013	29	340
Ericsson AIR 6419 B41	170	206	5,939	0.010	21	251
Commscope FFVV-65C-R2N23	170	311	8,982	0.015	32	379
Generic Platform with Handrails	170	2,500	72,250	0.118	258	3,050
	Totals:	**48,409**	**609,713**	**0.999**	**2,178**	**59,059**

SEISMIC FORCES

0.9D - 1.0Ev + 1.5Eh **Seismic Overstrength (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
48	192.5	288	10,690	0.018	38	254
47	187.5	301	10,566	0.017	38	264
46	183.5	186	6,267	0.010	22	164

SEISMIC FORCES

0.9D - 1.0Ev + 1.5Eh **Seismic Overstrength (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
45	181	131	4,295	0.007	15	115
44	177.5	336	10,592	0.017	38	296
43	172.5	348	10,363	0.017	37	306
42	167.5	391	10,977	0.018	39	344
41	162.875	342	9,074	0.015	32	301
40	160.375	117	3,015	0.005	11	103
39	158.375	515	12,924	0.021	46	453
38	155.875	179	4,352	0.007	16	158
37	152.5	523	12,154	0.020	43	460
36	147.625	511	11,145	0.018	40	450
35	145.125	53	1,121	0.002	4	47
34	142.875	919	18,753	0.031	67	808
33	140.375	99	1,955	0.003	7	87
32	137.5	673	12,725	0.021	45	592
31	132.5	693	12,170	0.020	43	610
30	127.5	713	11,596	0.019	41	628
29	122.5	733	11,006	0.018	39	645
28	117.5	754	10,403	0.017	37	663
27	112.5	774	9,792	0.016	35	681
26	107.5	794	9,173	0.015	33	699
25	102.5	814	8,551	0.014	31	716
24	99.125	290	2,846	0.005	10	255
23	96.625	1,092	10,193	0.017	36	961
22	93.625	938	8,225	0.014	29	826
21	91.125	447	3,710	0.006	13	393
20	87.5	1,010	7,735	0.013	28	889
19	82.5	1,034	7,041	0.012	25	910
18	77.5	1,059	6,358	0.010	23	932
17	72.5	1,083	5,691	0.009	20	953
16	67.5	1,107	5,043	0.008	18	974
15	62.5	1,131	4,418	0.007	16	995
14	57.5	1,155	3,819	0.006	14	1,017
13	53.875	528	1,532	0.002	5	464
12	51.375	1,322	3,488	0.006	12	1,163
11	47.625	2,320	5,262	0.009	19	2,042
10	45.125	69	140	0.000	1	61
9	42.5	1,392	2,515	0.004	9	1,225
8	37.5	1,420	1,998	0.003	7	1,250
7	32.5	1,449	1,530	0.002	5	1,275
6	27.5	1,477	1,117	0.002	4	1,300
5	22.5	1,505	762	0.001	3	1,324
4	17.5	1,533	470	0.001	2	1,349
3	12.5	1,561	244	0.000	1	1,374
2	7.5	1,589	89	0.000	0	1,399
1	2.5	1,618	10	0.000	0	1,423
Ericsson Radio 4449 B5 B12A	195	225	8,556	0.014	31	198
Ericsson Radio 8843 B2 B66A	195	216	8,202	0.014	29	190
Raycap DC6-48-60-18-8C	195	48	1,825	0.003	7	42
Ericsson Radio 4494 44B14 20B29 M01	195	172	6,536	0.011	23	151
Ericsson AIR 6472 B77G B77M	195	227	8,624	0.014	31	200
Ericsson KRE 101 2526/1K	195	278	10,563	0.017	38	244
Ericsson NNHH-65B-R4	195	251	9,559	0.016	34	221
Flat Low Profile Platform	195	1,500	57,038	0.094	204	1,320
Flat Low Profile Platform	185	1,500	51,338	0.084	183	1,320
Ericsson 8843 Rev 2	182	225	7,453	0.012	27	198
Ericsson Radio 4449 - B13&B5	182	210	6,956	0.011	25	185
Raycap RCMDC-3315-PF-48 (32 lbs)	182	32	1,060	0.002	4	28
Ericsson AIR 6449 B77D/ C-Band	182	245	8,109	0.013	29	215
Raycap RCMDC-6627-PF-48	182	32	1,060	0.002	4	28
Commscope NHH-65C-R2B	182	310	10,255	0.017	37	272
Ericsson Radio 4460 B25+B66	170	327	9,450	0.016	34	288

SEISMIC FORCES

0.9D - 1.0Ev + 1.5Eh **Seismic Overstrength (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
Ericsson Radio 4480 B71+B85	170	279	8,063	0.013	29	246
Ericsson AIR 6419 B41	170	206	5,939	0.010	21	181
Commscope FFVV-65C-R2N23	170	311	8,982	0.015	32	274
Generic Platform with Handrails	170	2,500	72,250	0.118	258	2,200
	Totals:	**48,409**	**609,713**	**0.999**	**2,178**	**42,600**

1.2D + 1.0Ev + 1.0Eh **Seismic**

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-57.09	-1.46	0.00	-235.98	0.00	235.98	5,822.66	1,554.93	8,961	7,651.95	0.00	0.00	0.04
5.00	-55.15	-1.46	0.00	-228.71	0.00	228.71	5,758.09	1,525.88	8,629	7,424.75	0.00	-0.01	0.04
10.00	-53.24	-1.47	0.00	-221.40	0.00	221.40	5,691.84	1,496.83	8,304	7,198.61	0.02	-0.01	0.04
15.00	-51.37	-1.47	0.00	-214.06	0.00	214.06	5,623.90	1,467.78	7,985	6,973.66	0.03	-0.02	0.04
20.00	-49.53	-1.48	0.00	-206.70	0.00	206.70	5,554.28	1,438.72	7,672	6,750.02	0.06	-0.03	0.04
25.00	-47.73	-1.48	0.00	-199.31	0.00	199.31	5,482.97	1,409.67	7,365	6,527.82	0.10	-0.04	0.04
30.00	-45.96	-1.48	0.00	-191.91	0.00	191.91	5,409.99	1,380.62	7,065	6,307.19	0.14	-0.05	0.04
35.00	-44.23	-1.48	0.00	-184.50	0.00	184.50	5,335.31	1,351.57	6,771	6,088.24	0.20	-0.05	0.04
40.00	-42.53	-1.48	0.00	-177.09	0.00	177.09	5,258.95	1,322.51	6,483	5,871.10	0.26	-0.06	0.04
45.00	-42.45	-1.48	0.00	-169.69	0.00	169.69	5,180.91	1,293.46	6,201	5,655.90	0.33	-0.07	0.04
45.25	-39.62	-1.47	0.00	-169.32	0.00	169.32	5,176.97	1,292.01	6,187	5,645.19	0.33	-0.07	0.04
50.00	-38.01	-1.46	0.00	-162.33	0.00	162.33	5,101.19	1,264.41	5,926	5,442.76	0.41	-0.08	0.04
52.75	-37.36	-1.46	0.00	-158.30	0.00	158.30	4,152.32	1,087.06	5,110	4,449.15	0.46	-0.09	0.05
55.00	-35.95	-1.46	0.00	-155.01	0.00	155.01	4,125.88	1,075.85	5,005	4,374.93	0.50	-0.09	0.04
60.00	-34.57	-1.45	0.00	-147.72	0.00	147.72	4,065.91	1,050.95	4,776	4,210.83	0.60	-0.10	0.04
65.00	-33.22	-1.44	0.00	-140.47	0.00	140.47	4,004.26	1,026.05	4,552	4,048.00	0.71	-0.11	0.04
70.00	-31.90	-1.43	0.00	-133.26	0.00	133.26	3,940.93	1,001.14	4,334	3,886.55	0.83	-0.12	0.04
75.00	-30.61	-1.42	0.00	-126.10	0.00	126.10	3,875.91	976.24	4,121	3,726.61	0.97	-0.13	0.04
80.00	-29.35	-1.41	0.00	-119.00	0.00	119.00	3,809.21	951.34	3,914	3,568.31	1.11	-0.15	0.04
85.00	-28.11	-1.39	0.00	-111.97	0.00	111.97	3,740.83	926.44	3,711	3,411.78	1.27	-0.16	0.04
90.00	-27.57	-1.38	0.00	-105.02	0.00	105.02	3,670.76	901.54	3,515	3,257.13	1.44	-0.17	0.04
92.25	-26.42	-1.36	0.00	-101.91	0.00	101.91	3,638.68	890.33	3,428	3,188.19	1.52	-0.17	0.04
95.00	-25.09	-1.34	0.00	-98.16	0.00	98.16	3,599.00	876.63	3,323	3,104.49	1.63	-0.18	0.04
98.25	-24.74	-1.33	0.00	-93.81	0.00	93.81	2,821.55	729.01	2,758	2,432.35	1.75	-0.19	0.05
100.00	-23.75	-1.31	0.00	-91.47	0.00	91.47	2,803.69	721.74	2,703	2,392.69	1.82	-0.19	0.05
105.00	-22.78	-1.29	0.00	-84.91	0.00	84.91	2,751.52	700.99	2,550	2,280.15	2.03	-0.21	0.05
110.00	-21.83	-1.27	0.00	-78.44	0.00	78.44	2,697.67	680.24	2,401	2,168.83	2.26	-0.22	0.04
115.00	-20.91	-1.25	0.00	-72.08	0.00	72.08	2,642.13	659.49	2,257	2,058.87	2.49	-0.24	0.04
120.00	-20.02	-1.22	0.00	-65.83	0.00	65.83	2,584.90	638.74	2,117	1,950.38	2.75	-0.25	0.04
125.00	-19.15	-1.20	0.00	-59.71	0.00	59.71	2,526.00	617.99	1,982	1,843.49	3.02	-0.26	0.04
130.00	-18.30	-1.17	0.00	-53.72	0.00	53.72	2,465.41	597.23	1,851	1,738.32	3.30	-0.28	0.04
135.00	-17.48	-1.14	0.00	-47.87	0.00	47.87	2,403.13	576.48	1,725	1,635.01	3.60	-0.29	0.04
140.00	-17.36	-1.14	0.00	-42.18	0.00	42.18	2,339.18	555.73	1,603	1,533.67	3.92	-0.31	0.04
140.75	-16.24	-1.09	0.00	-41.33	0.00	41.33	2,329.44	552.62	1,585	1,518.65	3.97	-0.31	0.03
145.00	-16.17	-1.09	0.00	-36.70	0.00	36.70	2,264.75	534.98	1,485	1,428.89	4.25	-0.32	0.03
145.25	-15.55	-1.06	0.00	-36.43	0.00	36.43	1,725.54	434.99	1,227	1,108.88	4.26	-0.32	0.04
150.00	-14.91	-1.03	0.00	-31.41	0.00	31.41	1,683.17	419.22	1,140	1,042.12	4.59	-0.33	0.04
155.00	-14.69	-1.02	0.00	-26.26	0.00	26.26	1,636.94	402.61	1,051	973.03	4.95	-0.35	0.04
156.75	-14.06	-0.99	0.00	-24.47	0.00	24.47	1,620.36	396.80	1,021	949.15	5.08	-0.35	0.03
160.00	-13.92	-0.98	0.00	-21.27	0.00	21.27	1,589.02	386.01	967	905.26	5.32	-0.36	0.03
160.75	-13.50	-0.96	0.00	-20.53	0.00	20.53	1,083.73	292.21	738	624.60	5.38	-0.37	0.05
165.00	-13.03	-0.93	0.00	-16.46	0.00	16.46	1,060.67	281.63	686	589.02	5.71	-0.38	0.04
170.00	-8.19	-0.63	0.00	-11.80	0.00	11.80	1,031.98	269.18	627	547.58	6.11	-0.39	0.03
175.00	-7.77	-0.60	0.00	-8.67	0.00	8.67	1,001.60	256.73	570	506.70	6.53	-0.40	0.03
180.00	-7.62	-0.59	0.00	-5.67	0.00	5.67	969.55	244.27	516	466.51	6.95	-0.41	0.02
182.00	-6.10	-0.48	0.00	-4.49	0.00	4.49	956.25	239.29	495	450.66	7.13	-0.41	0.02
185.00	-3.91	-0.32	0.00	-3.04	0.00	3.04	935.80	231.82	465	427.14	7.39	-0.42	0.01
190.00	-3.56	-0.29	0.00	-1.45	0.00	1.45	900.38	219.37	416	388.71	7.83	-0.42	0.01
195.00	0.00	-0.26	0.00	0.00	0.00	0.00	863.27	206.92	370	351.35	8.27	-0.42	0.00

0.9D - 1.0Ev + 1.0Eh **Seismic (Reduced DL)**

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-41.18	-1.45	0.00	-232.36	0.00	232.36	5,822.66	1,554.93	8,961	7,651.95	0.00	0.00	0.04
5.00	-39.78	-1.46	0.00	-225.09	0.00	225.09	5,758.09	1,525.88	8,629	7,424.75	0.00	-0.01	0.04
10.00	-38.40	-1.46	0.00	-217.80	0.00	217.80	5,691.84	1,496.83	8,304	7,198.61	0.02	-0.01	0.04
15.00	-37.05	-1.47	0.00	-210.48	0.00	210.48	5,623.90	1,467.78	7,985	6,973.66	0.03	-0.02	0.04
20.00	-35.73	-1.47	0.00	-203.15	0.00	203.15	5,554.28	1,438.72	7,672	6,750.02	0.06	-0.03	0.04
25.00	-34.43	-1.47	0.00	-195.81	0.00	195.81	5,482.97	1,409.67	7,365	6,527.82	0.10	-0.04	0.04
30.00	-33.15	-1.47	0.00	-188.46	0.00	188.46	5,409.99	1,380.62	7,065	6,307.19	0.14	-0.05	0.04
35.00	-31.90	-1.47	0.00	-181.11	0.00	181.11	5,335.31	1,351.57	6,771	6,088.24	0.19	-0.05	0.04
40.00	-30.68	-1.47	0.00	-173.76	0.00	173.76	5,258.95	1,322.51	6,483	5,871.10	0.25	-0.06	0.04
45.00	-30.62	-1.47	0.00	-166.43	0.00	166.43	5,180.91	1,293.46	6,201	5,655.90	0.32	-0.07	0.04
45.25	-28.58	-1.46	0.00	-166.07	0.00	166.07	5,176.97	1,292.01	6,187	5,645.19	0.33	-0.07	0.04
50.00	-27.41	-1.45	0.00	-159.15	0.00	159.15	5,101.19	1,264.41	5,926	5,442.76	0.40	-0.08	0.04
52.75	-26.95	-1.45	0.00	-155.17	0.00	155.17	4,152.32	1,087.06	5,110	4,449.15	0.45	-0.08	0.04
55.00	-25.93	-1.44	0.00	-151.91	0.00	151.91	4,125.88	1,075.85	5,005	4,374.93	0.49	-0.09	0.04
60.00	-24.94	-1.43	0.00	-144.72	0.00	144.72	4,065.91	1,050.95	4,776	4,210.83	0.59	-0.10	0.04
65.00	-23.96	-1.42	0.00	-137.56	0.00	137.56	4,004.26	1,026.05	4,552	4,048.00	0.70	-0.11	0.04
70.00	-23.01	-1.41	0.00	-130.45	0.00	130.45	3,940.93	1,001.14	4,334	3,886.55	0.82	-0.12	0.04
75.00	-22.08	-1.40	0.00	-123.39	0.00	123.39	3,875.91	976.24	4,121	3,726.61	0.95	-0.13	0.04
80.00	-21.17	-1.38	0.00	-116.40	0.00	116.40	3,809.21	951.34	3,914	3,568.31	1.09	-0.14	0.04
85.00	-20.28	-1.37	0.00	-109.48	0.00	109.48	3,740.83	926.44	3,711	3,411.78	1.25	-0.15	0.04
90.00	-19.88	-1.36	0.00	-102.65	0.00	102.65	3,670.76	901.54	3,515	3,257.13	1.42	-0.17	0.04
92.25	-19.06	-1.34	0.00	-99.59	0.00	99.59	3,638.68	890.33	3,428	3,188.19	1.50	-0.17	0.04
95.00	-18.10	-1.31	0.00	-95.90	0.00	95.90	3,599.00	876.63	3,323	3,104.49	1.60	-0.18	0.04
98.25	-17.84	-1.31	0.00	-91.63	0.00	91.63	2,821.55	729.01	2,758	2,432.35	1.72	-0.18	0.04
100.00	-17.13	-1.29	0.00	-89.34	0.00	89.34	2,803.69	721.74	2,703	2,392.69	1.79	-0.19	0.04
105.00	-16.43	-1.27	0.00	-82.89	0.00	82.89	2,751.52	700.99	2,550	2,280.15	1.99	-0.20	0.04
110.00	-15.75	-1.25	0.00	-76.55	0.00	76.55	2,697.67	680.24	2,401	2,168.83	2.21	-0.22	0.04
115.00	-15.08	-1.22	0.00	-70.31	0.00	70.31	2,642.13	659.49	2,257	2,058.87	2.45	-0.23	0.04
120.00	-14.44	-1.20	0.00	-64.20	0.00	64.20	2,584.90	638.74	2,117	1,950.38	2.70	-0.24	0.04
125.00	-13.81	-1.17	0.00	-58.21	0.00	58.21	2,526.00	617.99	1,982	1,843.49	2.96	-0.26	0.04
130.00	-13.20	-1.14	0.00	-52.35	0.00	52.35	2,465.41	597.23	1,851	1,738.32	3.24	-0.27	0.04
135.00	-12.61	-1.11	0.00	-46.64	0.00	46.64	2,403.13	576.48	1,725	1,635.01	3.53	-0.29	0.03
140.00	-12.52	-1.11	0.00	-41.08	0.00	41.08	2,339.18	555.73	1,603	1,533.67	3.84	-0.30	0.03
140.75	-11.71	-1.06	0.00	-40.25	0.00	40.25	2,329.44	552.62	1,585	1,518.65	3.89	-0.30	0.03
145.00	-11.66	-1.06	0.00	-35.74	0.00	35.74	2,264.75	534.98	1,485	1,428.89	4.16	-0.31	0.03
145.25	-11.21	-1.03	0.00	-35.47	0.00	35.47	1,725.54	434.99	1,227	1,108.88	4.18	-0.31	0.04
150.00	-10.75	-1.00	0.00	-30.57	0.00	30.57	1,683.17	419.22	1,140	1,042.12	4.50	-0.33	0.04
155.00	-10.60	-0.99	0.00	-25.55	0.00	25.55	1,636.94	402.61	1,051	973.03	4.85	-0.34	0.03
156.75	-10.14	-0.96	0.00	-23.81	0.00	23.81	1,620.36	396.80	1,021	949.15	4.97	-0.35	0.03
160.00	-10.04	-0.95	0.00	-20.69	0.00	20.69	1,589.02	386.01	967	905.26	5.21	-0.36	0.03
160.75	-9.74	-0.93	0.00	-19.97	0.00	19.97	1,083.73	292.21	738	624.60	5.27	-0.36	0.04
165.00	-9.40	-0.91	0.00	-16.01	0.00	16.01	1,060.67	281.63	686	589.02	5.59	-0.37	0.04
170.00	-5.90	-0.61	0.00	-11.48	0.00	11.48	1,031.98	269.18	627	547.58	5.99	-0.38	0.03
175.00	-5.61	-0.58	0.00	-8.43	0.00	8.43	1,001.60	256.73	570	506.70	6.39	-0.39	0.02
180.00	-5.49	-0.57	0.00	-5.51	0.00	5.51	969.55	244.27	516	466.51	6.81	-0.40	0.02
182.00	-4.40	-0.47	0.00	-4.37	0.00	4.37	956.25	239.29	495	450.66	6.98	-0.40	0.01
185.00	-2.82	-0.31	0.00	-2.96	0.00	2.96	935.80	231.82	465	427.14	7.23	-0.41	0.01
190.00	-2.56	-0.28	0.00	-1.41	0.00	1.41	900.38	219.37	416	388.71	7.66	-0.41	0.01
195.00	0.00	-0.26	0.00	0.00	0.00	0.00	863.27	206.92	370	351.35	8.09	-0.41	0.00

ANALYSIS SUMMARY

	Base Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	36.15	0.00	58.04	0.00	0.00	4766.29	98.25	0.72
0.9D + 1.0W	36.13	0.00	43.52	0.00	0.00	4702.94	98.25	0.7
1.2D + 1.0Di + 1.0Wi	3.15	0.00	56.62	0.00	0.00	380.60	52.75	0.06
1.2D + 1.0Ev + 1.0Eh	1.46	0.00	57.09	0.00	0.00	235.98	98.25	0.05
0.9D - 1.0Ev + 1.0Eh	1.45	0.00	41.18	0.00	0.00	232.36	98.25	0.04
1.0D + 1.0W	8.08	0.00	48.41	0.00	0.00	1058.63	98.25	0.16

ANALYSIS SUMMARY – OVERSTRENGTH LOAD CASES

	Base Reactions					
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0Ev + 1.5Eh	2.18	0.00	57.09	0.00	0.00	353.97
0.9D - 1.0Ev + 1.5Eh	2.18	0.00	41.18	0.00	0.00	348.54

ASSET:	282213, FT WHITE WEST FL	CODE:	ANSI/TIA-222-I
CUSTOMER:	AT&T MOBILITY	PROJECT:	15384448

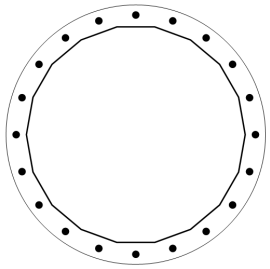
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
4766.29	58.04	36.15

PLATE PARAMETERS (ID# 33729)

Width:	77	in
Shape:	Round	
Thickness:	3	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Rod Detail Type:	d	
Clear Distance	3.875	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	0	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#34611]	Radial	20	2.25	71	A615-75	75	100	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	64.2441"ø x 0.4375" (18 Sides)	87.2542	-	-	44410.15	-
Bolt Group	Original (20) 2.25"ø	3.9761	3.2477	0.8393	37975.30	4.5

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	64.2441"ø x 0.4375" (18 Sides)	4766.3	58.04	36.15	1.000
Bolt Group	Original (20) 2.25"ø	4766.3	-	36.15	1.000

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	64.37	in	Flat Width:	11.350	in	Neutral Axis:	0	°
Point-to-Point Diameter:	65.36	in	Flat Radians:	0.349	rad	Bend Line Limits:	1.048 to 2.094	rad
Orientation Offset:	-	°						

PLATE PROPERTIES

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in^3)	Applied Moment M_u (k-in)	Moment Capacity ΦM_n (k-in)	Flexure Result $M_u/\Phi M_n$	
Flats	37.289	0.00	83.901	447.5	3775.5	11.9%	✓
Corners	35.520	0.00	79.920	256.3	3596.4	7.1%	✓
Circumferential	48.345	0.00	108.776	744.2	4894.9	15.2%	✓

PLASTIC ANCHOR ROD ANALYSIS

Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P_u (k)	Applied Shear Load V_u (k)	Compressive Capacity ΦP_n (k)	Interaction Result	
Original	20	2.25	125.7	2.9	243.6	51.6%	✓