



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 151.8 ft Monopole
ATC Site Name : Coppola, FL
ATC Site Number : 302653
Engineering Number : 58989621
Proposed Carrier : Verizon
Carrier Site Name : ATC/Spectrasite Coppola
Carrier Site Number : 68126
Site Location : 6933 NW 39 Ave
Pompano Beach, FL 33073-2107
26.316758,-80.177647
County : Broward
Date : June 19, 2014
Max Usage : 61%
Result : Pass

Zach Graham



William Garret, PE
ATC Tower Services Inc.
3500 Regency Parkway,
Suite 100
Cary, NC 27518
FL ENG. NO. 62629
FL COA. NO. 9053

Jun 19 2014 3:00 PM



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	2
Proposed Equipment	2
Structure Usages	3
Foundations	3
Deflection, Twist, and Sway.....	3
Standard Conditions	4
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 151.8 ft monopole to reflect the change in loading by Verizon.

Supporting Documents

Tower Drawings	EI Drawing #GS51429, dated May 3, 1999
Foundation Drawing	EI Drawing #4968-150, dated May 19, 1999

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:	132 mph (3-Second Gust, V_{asd}) / 170 (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	No ice considered
Code:	ANSI/TIA-222-G / 2009 IBC / 2010 Florida Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1

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 contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
146.0	148.0	3	CSS X7-665-4	Low Profile Platform w/ Ladder	(12) 1 5/8" Coax	Verizon
140.0	140.0	3	Nokia FRIG w/o Solar Shield	Low Profile Platform w/ Ladder	(6) 1 5/8" Coax (1) 1.58" Hybrid	Metro PCS
		1	Nokia ASU9338TYP01			
		1	Nokia FRIE			
		2	Nokia FXFB			
		9	CellMax CMA-BDHH/6520/E0-8			
132.0	132.0	1	Vivotek IP8331	Stand-Offs	(1) 1" Conduit	Aoptix Technologies
		2	Transtector -48VDC-OD			
		1	Hoffman A1212CHFL			
		1	Belfort Instrument 6500			
		1	36" x 16" Panel			
125.0	125.0	9	RFS ACU-A20-N	Low Profile Platform	(3) 1 1/4" Hybriflex (1) 0.64" Fiber	Sprint Nextel
		3	Ericsson 800MHz SMR Filter			
		3	Ericsson RRUS 31			
		3	Nokia FZHJ			
		3	Ericsson RRUS-11 800MHz			
		3	Tongyu TYDA-252718DER4-65P			
		3	RFS APXVERR18-C			
118.0	118.0	2	DragonWave Horizon Compact	Stand-Offs	(6) 5/16" Coax (2) 1/2" Coax	Clearwire
		3	Motorola Vx DAP I/V			
		2	Andrew VHLP2-18-1WH			
		3	Powerwave P65-18-XXW2-R			
80.0	80.0	9	48" x 12" Panel	Platform w/ Handrails w/ Ladder	(12) 1 5/8" Coax	Sprint Nextel
		3	72" x 12" Panel			

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
146.0	146.0	6	Scala AP17-1900/090D/DT6	-	-	Verizon

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
146.0	148.0	6	CSS AXP19-60-2	Low Profile Platform w/ Ladder	(6) 1 5/8" Coax	Verizon

¹Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	58%	Pass
Shaft	60%	Pass
Base Plate	61%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	7,835.6	10,578.1	6,928.5	65%
Shear (Kips)	72.9	98.4	68.4	70%

* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Deflection (ft)	Sway (Rotation) (°)
146.0	0.722	0.517

*Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G



Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

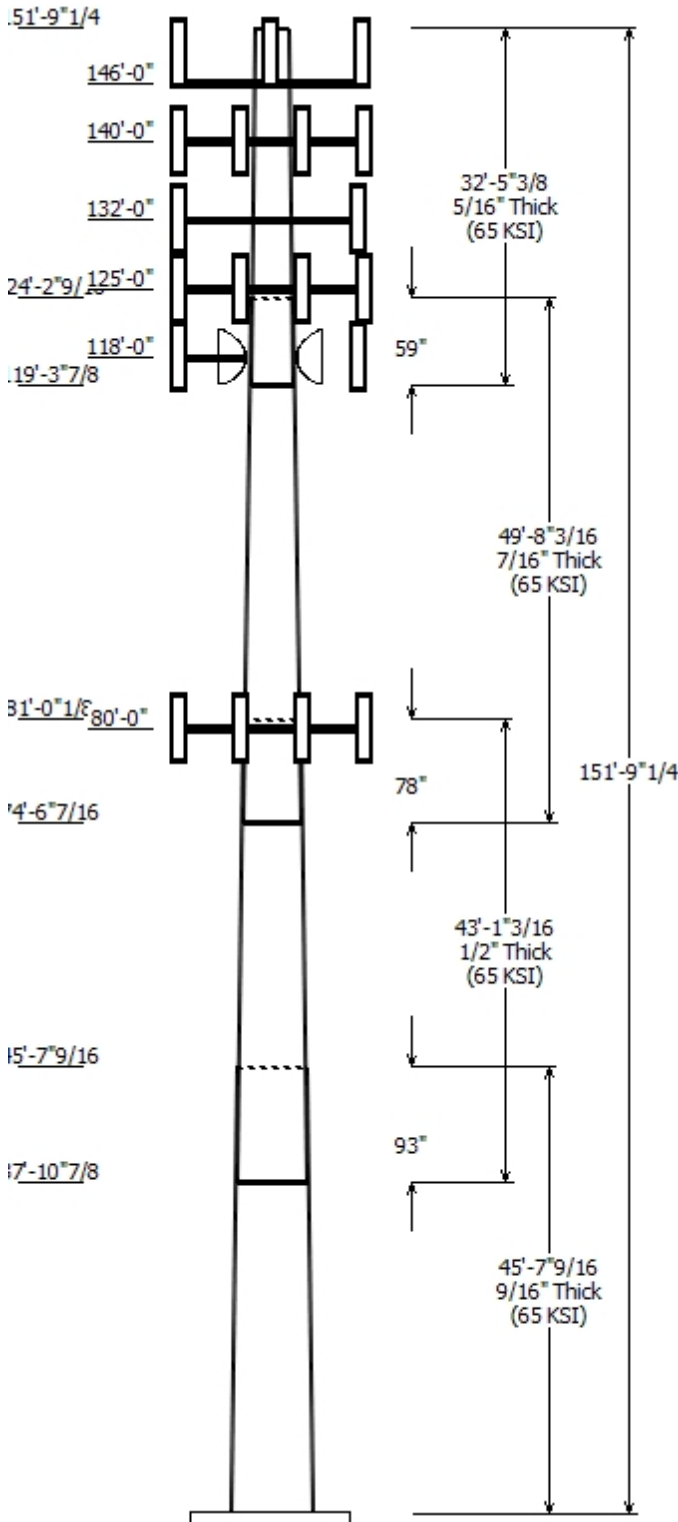
- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Tower Services, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

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

Job Information	
Pole :	302653
Code :	ANSI/TIA-222 Rev G
Description :	152 ft EEI Monopole
Client :	Verizon Wireless
Struct Class :	II
Location :	Coppola, FL
Shape :	18 Sides
Exposure :	C
Height :	151.77 (ft)
Topo :	1
Base Elev (ft):	0.00
Taper:	0.29729(in/ft)



Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap		Steel Grade (ksi)
		Across Flats Top	Across Flats Bottom			Length (in)	Taper (in/ft)	
1	45.630	54.43	68.00	0.563		0.000	0.297292	65
2	43.100	44.91	57.73	0.500	Slip Joint	92.660	0.297292	65
3	49.680	32.94	47.71	0.438	Slip Joint	77.690	0.297292	65
4	32.447	25.38	35.02	0.313	Slip Joint	58.690	0.297292	65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
146.000	148.000	6	CSS AXP19-60-2
146.000	148.000	3	CSS X7-665-4
146.000	146.000	1	Flat Low Profile Platform w/ L
140.000	140.000	1	Nokia ASU9338TYP01
140.000	140.000	3	Nokia FRIG w/o Solar Shield
140.000	140.000	1	Nokia FRIE
140.000	140.000	2	Nokia FXFB
140.000	140.000	9	CellMax CMA-BDHH/6520/E0-8
140.000	140.000	1	Flat Low Profile Platform w/ L
132.000	132.000	1	Vivotek IP8331
132.000	132.000	2	Transtector -48VDC-OD
132.000	132.000	1	Belfort Instrument 6500
132.000	132.000	1	Hoffman A1212CHFL
132.000	132.000	1	36" x 16" Panel
132.000	132.000	3	Stand-Offs
125.000	125.000	3	Ericsson RRUS 31
125.000	125.000	3	Nokia FZHJ
125.000	125.000	3	Tongyu TYDA-252718DER4-65P
125.000	125.000	1	Flat Low Profile Platform
125.000	125.000	9	RFS ACU-A20-N
125.000	125.000	3	Ericsson RRUS-11 800 MHz
125.000	125.000	3	RFS APXVERR18-C
125.000	125.000	3	Ericsson 800 MHz SMR Filter
118.000	118.000	1	Stand-Offs
118.000	118.000	3	Powerwave P65-18-XXW2-R
118.000	118.000	3	Motorola Vx DAP I/V
118.000	118.000	2	Andrew VHLP2-18-1WH
118.000	118.000	2	DragonWave Horizon Compact
80.000	80.000	3	72" x 12" Panel
80.000	80.000	9	48" x 12" Panel
80.000	80.000	1	Flat Platform w/ Handrails w/

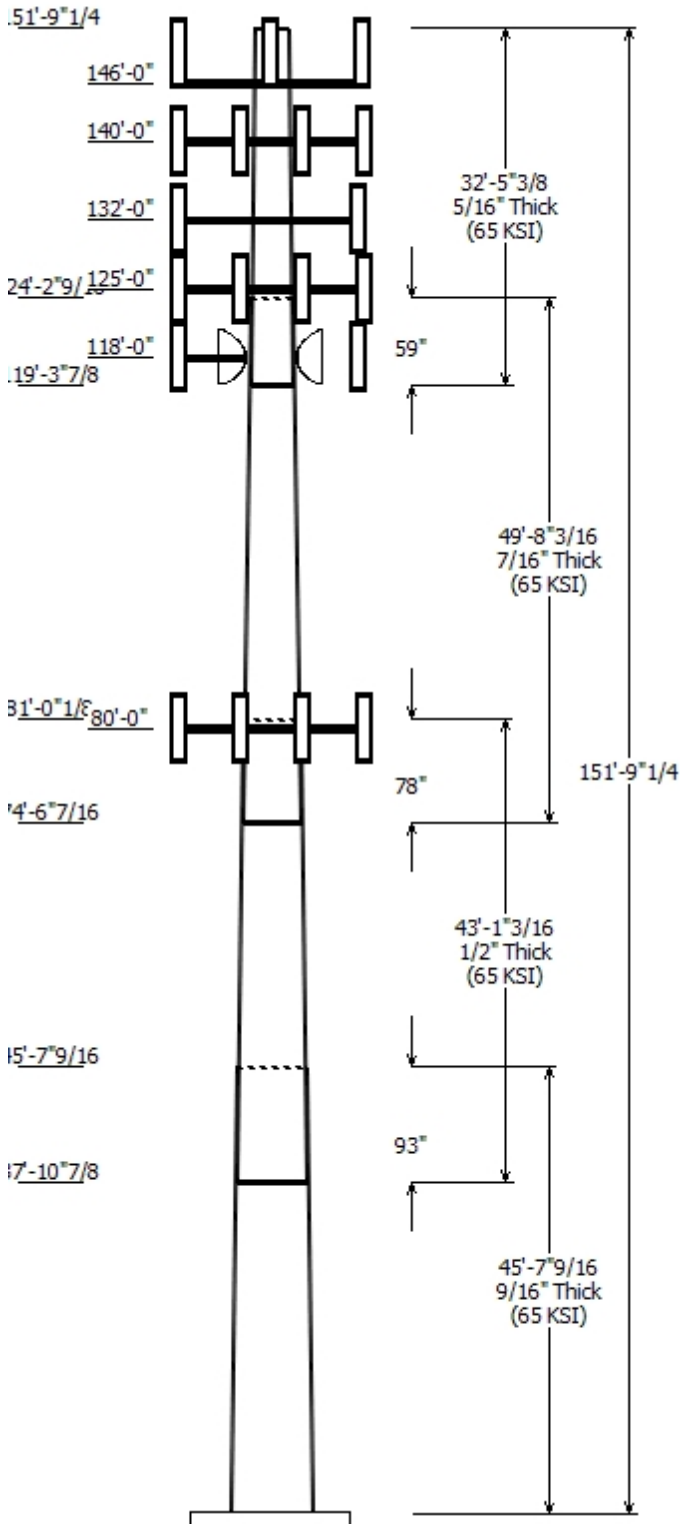
Linear Appurtenance			
Elev (ft) From	To	Description	Exposed To Wind
0.000	80.000	1 5/8" Coax	No
0.000	118.0	1/2" Coax	No
0.000	118.0	5/16" Coax	No
0.000	125.0	0.64" Fiber	No
0.000	125.0	1 1/4" Hybriflex	No
0.000	132.0	1" Conduit	No

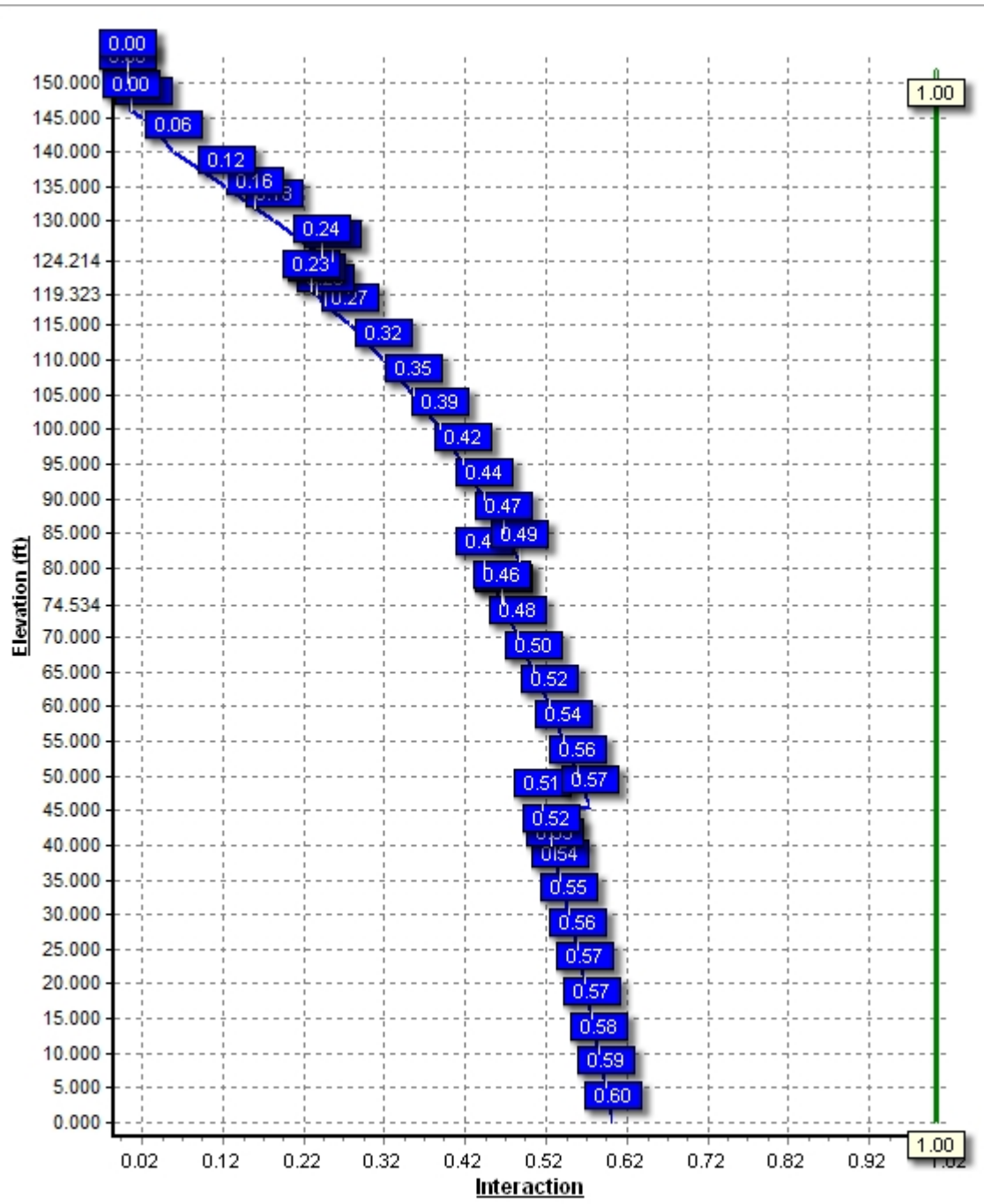
0.000	140.0	1 5/8" Coax	No
0.000	140.0	1.58" Hybrid	No
0.000	146.0	1 5/8" Coax	No
0.000	146.0	1 5/8" Coax	No

Load Cases	
1.2D + 1.6W	132.00 mph with No Ice
0.9D + 1.6W	132.00 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	30.00 mph with 0.00 in Radial Ice
1.0D + 1.0W	60.00 mph Serviceability

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	6928.54	68.43	68.24
0.9D + 1.6W	6895.31	68.40	51.16
1.2D + 1.0Di + 1.0Wi	287.62	3.09	67.07
1.0D + 1.0W	892.40	8.83	56.93

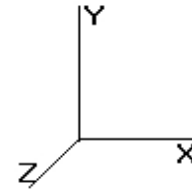
Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	118.00	5.739	0.466





Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



© 2007 - 2014 by ATC IP LLC. All rights reserved.

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top							
							Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	45.630	0.5625	65		0.00	16,814	68.00	0.00	120.40	69178.5	19.91	120.89	54.43	45.63	96.18	35266.1	15.65	96.77	0.297292	
2-18	43.100	0.5000	65	Slip	92.66	11,829	57.73	37.91	90.82	37582.7	18.95	115.46	44.91	81.01	70.49	17569.4	14.43	89.83	0.297292	
3-18	49.680	0.4375	65	Slip	77.69	9,365	47.71	74.53	65.65	18540.7	17.82	109.07	32.94	124.21	45.14	6027.7	11.87	75.31	0.297292	
4-18	32.447	0.3125	65	Slip	58.69	3,273	35.02	119.32	34.43	5242.0	18.35	112.08	25.38	151.77	24.86	1973.9	12.91	81.22	0.297292	
Shaft Weight						41,280														

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice			Ice			Distance From Face (ft)	Vert Ecc (ft)
			Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor		
146.00	CSS AXP19-60-2	6	15.00	4.860	0.85	15.00	4.858	0.85	0.000	2.000
146.00	CSS X7-665-4	3	27.40	8.410	0.81	27.40	8.406	0.81	0.000	2.000
146.00	Flat Low Profile Platform w/ L	1	1700.00	30.000	1.00	1,700.00	30.000	1.00	0.000	0.000
140.00	CellMax CMA-BDHH/6520/E0-8	9	62.00	9.050	0.70	62.00	9.050	0.70	0.000	0.000
140.00	Flat Low Profile Platform w/ L	1	1700.00	30.000	1.00	1,700.00	30.000	1.00	0.000	0.000
140.00	Nokia ASU9338TYP01	1	14.90	2.540	0.67	14.90	2.544	0.67	0.000	0.000
140.00	Nokia FRIE	1	55.10	4.130	0.67	55.10	0.830	0.67	0.000	0.000
140.00	Nokia FRIG w/o Solar Shield	3	54.00	2.290	0.67	54.00	2.295	0.67	0.000	0.000
140.00	Nokia FXFB	2	55.10	4.170	0.67	55.10	0.834	0.67	0.000	0.000
132.00	36" x 16" Panel	1	30.00	4.800	0.67	30.00	4.800	0.67	0.000	0.000
132.00	Belfort Instrument 6500	1	19.30	2.060	0.67	19.30	6.669	0.67	0.000	0.000
132.00	Hoffman A1212CHFL	1	30.00	1.200	0.50	30.00	1.200	0.50	0.000	0.000
132.00	Stand-Offs	3	250.00	9.700	0.67	250.00	9.700	0.67	0.000	0.000
132.00	Transtector -48VDC-OD	2	5.00	0.400	0.50	5.00	0.342	0.50	0.000	0.000
132.00	Vivotek IP8331	1	1.40	0.090	0.50	1.40	0.048	0.50	0.000	0.000
125.00	Ericsson 800 MHz SMR Filter	3	10.00	0.490	0.50	10.00	0.418	0.50	0.000	0.000
125.00	Ericsson RRUS 31	3	56.10	1.620	0.50	56.10	1.628	0.50	0.000	0.000
125.00	Ericsson RRUS-11 800 MHz	3	54.00	2.520	0.67	54.00	2.528	0.67	0.000	0.000
125.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,500.00	26.100	1.00	0.000	0.000
125.00	Nokia FZHJ	3	55.20	2.030	0.67	55.20	1.270	0.67	0.000	0.000
125.00	RFS ACU-A20-N	9	1.00	0.140	0.50	1.00	0.066	0.50	0.000	0.000
125.00	RFS APXVERR18-C	3	50.00	8.020	0.83	50.00	8.024	0.83	0.000	0.000
125.00	Tongyu TYDA-252718DER4-	3	54.00	7.530	0.77	54.00	7.534	0.77	0.000	0.000
118.00	Andrew VHLP2-18-1WH	2	31.00	4.690	1.00	31.00	4.690	1.00	0.000	0.000
118.00	DragonWave Horizon	2	10.60	0.430	0.50	10.60	0.365	0.50	0.000	0.000
118.00	Motorola Vx DAP IV	3	45.00	3.030	0.67	45.00	3.033	0.67	0.000	0.000
118.00	Powerwave P65-18-XXW2-R	3	20.00	5.430	0.66	20.00	5.430	0.66	0.000	0.000
118.00	Stand-Offs	1	560.00	8.500	1.00	560.00	8.500	1.00	0.000	0.000
80.00	48" x 12" Panel	9	30.00	5.070	0.67	30.00	5.067	0.67	0.000	0.000
80.00	72" x 12" Panel	3	45.00	8.130	0.67	45.00	8.133	0.67	0.000	0.000
80.00	Flat Platform w/ Handrails w/	1	2200.00	45.000	1.00	2,200.00	45.000	1.00	0.000	0.000
Totals		88	11103.20			11,103.20			Number of Loadings : 31	

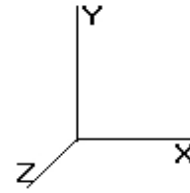
Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Exposed Width (in)	Exposed To Wind
0.00	146.00	(12) 1 5/8" Coax	0.00	N
0.00	146.00	(6) 1 5/8" Coax	0.00	N
0.00	140.00	(6) 1 5/8" Coax	0.00	N

Pole : 302653
Location : Coppola, FL
Height : 151.7 (ft)
Base Dia : 68.00 (in)
Top Dia : 25.38 (in)
Shape : 18 Sides
Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : C
Topographic Category : 1
Base Elev : 0.000 (ft)

© 2007 - 2014 by ATC IP LLC. All rights reserved.



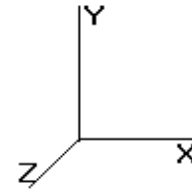
6/19/2014 11:52:49 AM

Page: 2

0.00	140.00	(1) 1.58" Hybrid	0.00	N
0.00	132.00	(1) 1" Conduit	0.00	N
0.00	125.00	(1) 0.64" Fiber	0.00	N
0.00	125.00	(3) 1 1/4" Hybriflex	0.00	N
0.00	118.00	(2) 1/2" Coax	0.00	N
0.00	118.00	(6) 5/16" Coax	0.00	N
0.00	80.00	(12) 1 5/8" Coax	0.00	N

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

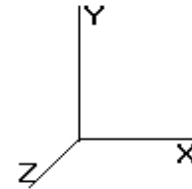


Segment Properties (Max Len : 5 ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	S (in3)	Weight (lb)
0.00		0.5625	68.000	120.397	69,178.5	19.91	120.89	78.0	2003.	0.0
5.00		0.5625	66.514	117.743	64,704.1	19.44	118.25	78.5	1916.	2,025.8
10.00		0.5625	65.027	115.089	60,426.9	18.97	115.60	79.1	1830.	1,980.7
15.00		0.5625	63.541	112.436	56,342.5	18.51	112.96	79.6	1746.	1,935.5
20.00		0.5625	62.054	109.782	52,446.4	18.04	110.32	80.2	1664.	1,890.4
25.00		0.5625	60.568	107.128	48,734.2	17.58	107.68	80.7	1584.	1,845.2
30.00		0.5625	59.081	104.474	45,201.4	17.11	105.03	81.3	1506.	1,800.1
35.00		0.5625	57.595	101.820	41,843.6	16.64	102.39	81.8	1431.	1,754.9
37.91	Bot - Section 2	0.5625	56.730	100.277	39,969.2	16.37	100.85	82.1	1387.	1,000.0
40.00		0.5625	56.108	99.167	38,656.4	16.18	99.75	82.4	1357.	1,352.7
45.00		0.5625	54.622	96.513	35,635.2	15.71	97.11	82.6	1285.	3,173.0
45.63	Top - Section 1	0.5000	55.435	87.178	33,239.3	18.14	110.87	80.1	1181.	393.7
50.00		0.5000	54.135	85.116	30,936.3	17.68	108.27	80.6	1125.	1,281.0
55.00		0.5000	52.649	82.757	28,434.8	17.16	105.30	81.2	1063.	1,428.1
60.00		0.5000	51.162	80.398	26,072.0	16.63	102.32	81.8	1003.	1,388.0
65.00		0.5000	49.676	78.040	23,843.7	16.11	99.35	82.5	945.4	1,347.8
70.00		0.5000	48.190	75.681	21,746.2	15.58	96.38	82.6	888.8	1,307.7
74.53	Bot - Section 3	0.5000	46.842	73.541	19,953.9	15.11	93.68	82.6	839.0	1,151.2
75.00		0.5000	46.703	73.322	19,775.5	15.06	93.41	82.6	834.0	220.3
80.00		0.5000	45.217	70.963	17,927.6	14.54	90.43	82.6	780.9	2,323.6
81.01	Top - Section 2	0.4375	45.792	62.978	16,367.4	17.05	104.67	81.4	704.0	459.5
85.00		0.4375	44.605	61.330	15,116.0	16.57	101.95	81.9	667.5	844.2
90.00		0.4375	43.119	59.266	13,640.6	15.97	98.56	82.6	623.1	1,025.9
95.00		0.4375	41.632	57.202	12,264.5	15.37	95.16	82.6	580.2	990.8
100.0		0.4375	40.146	55.138	10,984.1	14.77	91.76	82.6	538.9	955.7
105.0		0.4375	38.659	53.074	9,796.2	14.17	88.36	82.6	499.1	920.6
110.0		0.4375	37.173	51.010	8,697.1	13.57	84.97	82.6	460.8	885.4
115.0		0.4375	35.686	48.946	7,683.5	12.97	81.57	82.6	424.1	850.3
118.0		0.4375	34.795	47.707	7,114.9	12.61	79.53	82.6	402.8	493.3
119.3	Bot - Section 4	0.4375	34.401	47.161	6,873.3	12.45	78.63	82.6	393.5	213.6
120.0		0.4375	34.200	46.882	6,751.9	12.37	78.17	82.6	388.8	187.3
124.2	Top - Section 3	0.3125	33.572	32.988	4,610.5	17.53	107.43	80.8	270.5	1,141.8
125.0		0.3125	33.338	32.756	4,514.0	17.40	106.68	80.9	266.7	87.9
130.0		0.3125	31.852	31.282	3,931.5	16.56	101.93	81.9	243.1	544.8
132.0		0.3125	31.257	30.692	3,713.3	16.23	100.02	82.3	234.0	210.9
135.0		0.3125	30.366	29.808	3,401.4	15.72	97.17	82.6	220.6	308.8
140.0		0.3125	28.879	28.333	2,921.3	14.88	92.41	82.6	199.2	494.6
145.0		0.3125	27.393	26.859	2,488.6	14.05	87.66	82.6	178.9	469.5
146.0		0.3125	27.095	26.564	2,407.5	13.88	86.71	82.6	175.0	90.9
150.0		0.3125	25.906	25.385	2,100.8	13.21	82.90	82.6	159.7	353.5
151.7		0.3125	25.380	24.863	1,973.9	12.91	81.22	82.6	153.2	151.3
										41,280.4

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



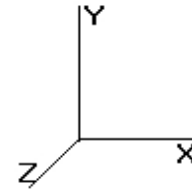
Load Case: 1.2D + 1.6W	132.00 mph with No Ice	20 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 1.20		
Wind Load Factor : 1.60		

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	36.019	39.62	700.26	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	36.019	39.62	684.95	0.650	0.000	5.00	28.456	18.50	1,172.5	0.0	2,431.0
10.00		1.00	0.85	36.019	39.62	669.64	0.650	0.000	5.00	27.827	18.09	1,146.6	0.0	2,376.8
15.00		1.00	0.85	36.019	39.62	654.33	0.650	0.000	5.00	27.198	17.68	1,120.7	0.0	2,322.6
20.00		1.00	0.90	38.218	42.03	658.24	0.650	0.000	5.00	26.569	17.27	1,161.6	0.0	2,268.5
25.00		1.00	0.94	40.056	44.06	657.74	0.650	0.000	5.00	25.940	16.86	1,188.7	0.0	2,214.3
30.00		1.00	0.98	41.623	45.78	654.03	0.650	0.000	5.00	25.311	16.45	1,205.2	0.0	2,160.1
35.00		1.00	1.01	42.996	47.29	648.01	0.650	0.000	5.00	24.682	16.04	1,214.1	0.0	2,105.9
37.91	Bot - Section 2	1.00	1.03	43.725	48.09	643.66	0.650	0.000	2.91	14.068	9.14	703.7	0.0	1,200.0
40.00		1.00	1.04	44.222	48.64	640.22	0.650	0.000	2.09	10.163	6.61	514.1	0.0	1,623.2
45.00		1.00	1.07	45.332	49.86	631.03	0.650	0.000	5.00	23.848	15.50	1,236.7	0.0	3,807.6
45.63	Top - Section 1	1.00	1.07	45.465	50.01	629.79	0.650	0.000	0.63	2.960	1.92	154.0	0.0	472.5
50.00		1.00	1.09	46.349	50.98	632.39	0.650	0.000	4.37	20.259	13.17	1,074.2	0.0	1,537.2
55.00		1.00	1.11	47.288	52.01	621.22	0.650	0.000	5.00	22.590	14.68	1,222.1	0.0	1,713.7
60.00		1.00	1.13	48.163	52.97	609.24	0.650	0.000	5.00	21.961	14.27	1,210.0	0.0	1,665.5
65.00		1.00	1.15	48.981	53.87	596.54	0.650	0.000	5.00	21.332	13.87	1,195.3	0.0	1,617.4
70.00		1.00	1.17	49.751	54.72	583.23	0.650	0.000	5.00	20.703	13.46	1,178.3	0.0	1,569.2
74.53	Bot - Section 3	1.00	1.19	50.413	55.45	570.67	0.650	0.000	4.53	18.231	11.85	1,051.4	0.0	1,381.4
75.00		1.00	1.19	50.479	55.52	569.36	0.650	0.000	0.47	1.878	1.22	108.5	0.0	264.4
80.00	Appertunance(s)	1.00	1.20	51.170	56.28	554.99	0.650	0.000	5.00	19.816	12.88	1,160.0	0.0	2,788.3
81.01	Top - Section 2	1.00	1.21	51.305	56.43	552.04	0.650	0.000	1.01	3.920	2.55	230.1	0.0	551.4
85.00		1.00	1.22	51.827	57.01	550.99	0.650	0.000	3.99	15.267	9.92	905.2	0.0	1,013.1
90.00		1.00	1.23	52.454	57.70	535.84	0.650	0.000	5.00	18.558	12.06	1,113.6	0.0	1,231.1
95.00		1.00	1.25	53.055	58.36	520.32	0.650	0.000	5.00	17.929	11.65	1,088.2	0.0	1,188.9
100.00		1.00	1.26	53.631	58.99	504.46	0.650	0.000	5.00	17.300	11.24	1,061.4	0.0	1,146.8
105.00		1.00	1.27	54.185	59.60	488.29	0.650	0.000	5.00	16.671	10.84	1,033.4	0.0	1,104.7
110.00		1.00	1.29	54.718	60.19	471.82	0.650	0.000	5.00	16.042	10.43	1,004.2	0.0	1,062.5
115.00		1.00	1.30	55.232	60.75	455.07	0.650	0.000	5.00	15.413	10.02	973.9	0.0	1,020.4
118.00	Appertunance(s)	1.00	1.31	55.533	61.08	444.90	0.650	0.000	3.00	8.946	5.81	568.3	0.0	592.0
119.30	Bot - Section 4	1.00	1.31	55.663	61.22	440.39	0.650	0.000	1.32	3.874	2.52	246.7	0.0	256.3
120.00		1.00	1.31	55.729	61.30	438.08	0.650	0.000	0.68	2.000	1.30	127.5	0.0	224.8
124.20	Top - Section 3	1.00	1.32	56.136	61.74	423.56	0.650	0.000	4.21	12.195	7.93	783.2	0.0	1,370.1
125.00	Appertunance(s)	1.00	1.32	56.210	61.83	428.88	0.650	0.000	0.79	2.225	1.45	143.1	0.0	105.5
130.00		1.00	1.33	56.676	62.34	411.45	0.650	0.000	5.00	13.791	8.96	894.2	0.0	653.7
132.00	Appertunance(s)	1.00	1.34	56.859	62.54	404.42	0.650	0.000	2.00	5.340	3.47	347.4	0.0	253.1
135.00		1.00	1.34	57.129	62.84	393.81	0.650	0.000	3.00	7.822	5.08	511.2	0.0	370.6
140.00	Appertunance(s)	1.00	1.35	57.568	63.32	375.97	0.650	0.000	5.00	12.533	8.15	825.4	0.0	593.5
145.00		1.00	1.36	57.994	63.79	357.94	0.650	0.000	5.00	11.904	7.74	789.8	0.0	563.4
146.00	Appertunance(s)	1.00	1.37	58.078	63.88	354.31	0.650	0.000	1.00	2.305	1.50	153.2	0.0	109.1
150.00		1.00	1.37	58.410	64.25	339.72	0.650	0.000	4.00	8.970	5.83	599.4	0.0	424.3
151.70		1.00	1.38	58.554	64.41	333.23	0.650	0.000	1.77	3.841	2.50	257.3	0.0	181.6
Totals:									151.77			32,674.2	0.0	49,536.4

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



6/19/2014 11:52:49 AM
 Page: 5

© 2007 - 2014 by ATC IP LLC. All rights reserved.

Load Case: 1.2D + 1.6W 132.00 mph with No Ice 20 Iterations

Gust Response Factor : 1.10 Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

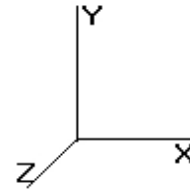
Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
80.00	Flat Platform w/ Han	1	51.170	56.287	1.00	1.00	45.00	0.000	0.000	4,052.63	0.00	0.00	2,640.00
80.00	48" x 12" Panel	9	51.170	56.287	0.67	0.75	22.93	0.000	0.000	2,064.96	0.00	0.00	324.00
80.00	72" x 12" Panel	3	51.170	56.287	0.67	0.75	12.26	0.000	0.000	1,103.76	0.00	0.00	162.00
118.0	DragonWave Horizon	2	55.533	61.086	0.50	1.00	0.43	0.000	0.000	42.03	0.00	0.00	25.44
118.0	Andrew VHLP2-18-	2	55.533	61.086	1.00	1.00	9.38	0.000	0.000	916.78	0.00	0.00	74.40
118.0	Motorola Vx DAP I/V	3	55.533	61.086	0.67	1.00	6.09	0.000	0.000	595.25	0.00	0.00	162.00
118.0	Powerwave P65-18-	3	55.533	61.086	0.66	1.00	10.75	0.000	0.000	1,050.81	0.00	0.00	72.00
118.0	Stand-Offs	1	55.533	61.086	1.00	1.00	8.50	0.000	0.000	830.77	0.00	0.00	672.00
125.0	Ericsson 800 MHz	3	56.210	61.831	0.50	0.80	0.59	0.000	0.000	58.17	0.00	0.00	36.00
125.0	RFS APXVERR18-C	3	56.210	61.831	0.83	0.80	15.98	0.000	0.000	1,580.49	0.00	0.00	180.00
125.0	Ericsson RRUS-11 800	3	56.210	61.831	0.67	0.80	4.05	0.000	0.000	400.88	0.00	0.00	194.40
125.0	RFS ACU-A20-N	9	56.210	61.831	0.50	0.80	0.50	0.000	0.000	49.86	0.00	0.00	10.80
125.0	Flat Low Profile Pla	1	56.210	61.831	1.00	1.00	26.10	0.000	0.000	2,582.08	0.00	0.00	1,800.00
125.0	Tongyu TYDA-	3	56.210	61.831	0.77	0.80	13.92	0.000	0.000	1,376.66	0.00	0.00	194.40
125.0	Nokia FZHJ	3	56.210	61.831	0.67	0.80	3.26	0.000	0.000	322.93	0.00	0.00	198.72
125.0	Ericsson RRUS 31	3	56.210	61.831	0.50	0.80	1.94	0.000	0.000	192.32	0.00	0.00	201.96
132.0	Stand-Offs	3	56.859	62.545	0.67	1.00	19.50	0.000	0.000	1,951.08	0.00	0.00	900.00
132.0	36" x 16" Panel	1	56.859	62.545	0.67	0.80	2.57	0.000	0.000	257.46	0.00	0.00	36.00
132.0	Hoffman A1212CHFL	1	56.859	62.545	0.50	0.80	0.48	0.000	0.000	48.03	0.00	0.00	36.00
132.0	Belfort Instrument 6	1	56.859	62.545	0.67	0.80	1.10	0.000	0.000	110.50	0.00	0.00	23.16
132.0	Transtector -48VDC-O	2	56.859	62.545	0.50	0.80	0.32	0.000	0.000	32.02	0.00	0.00	12.00
132.0	Vivotek IP8331	1	56.859	62.545	0.50	0.80	0.04	0.000	0.000	3.60	0.00	0.00	1.68
140.0	Flat Low Profile Pla	1	57.568	63.324	1.00	1.00	30.00	0.000	0.000	3,039.57	0.00	0.00	2,040.00
140.0	CellMax CMA-	9	57.568	63.324	0.70	0.80	45.61	0.000	0.000	4,621.36	0.00	0.00	669.60
140.0	Nokia FXFB	2	57.568	63.324	0.67	0.80	4.47	0.000	0.000	452.92	0.00	0.00	132.24
140.0	Nokia FRIE	1	57.568	63.324	0.67	0.80	2.21	0.000	0.000	224.29	0.00	0.00	66.12
140.0	Nokia FRIG w/o Solar	3	57.568	63.324	0.67	0.80	3.68	0.000	0.000	373.09	0.00	0.00	194.40
140.0	Nokia ASU9338TYP01	1	57.568	63.324	0.67	0.80	1.36	0.000	0.000	137.94	0.00	0.00	17.88
146.0	CSS X7-665-4	3	58.245	64.070	0.81	1.00	20.44	0.000	2.000	2,094.95	0.00	4,189.90	98.64
146.0	CSS AXP19-60-2	6	58.245	64.070	0.85	0.80	19.83	0.000	2.000	2,032.68	0.00	4,065.35	108.00
146.0	Flat Low Profile Pla	1	58.078	63.886	1.00	1.00	30.00	0.000	0.000	3,066.54	0.00	0.00	2,040.00
										35,666.41			13,323.84

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

6/19/2014 11:52:49 AM
 Page: 6



© 2007 - 2014 by ATC IP LLC. All rights reserved.

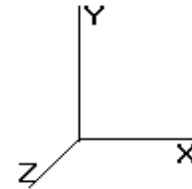
Load Case: 1.2D + 1.6W 132.00 mph with No Ice 20 Iterations
 Gust Response Factor : 1.10 Wind Importance Factor : 1.00
 Dead Load Factor : 1.20
 Wind Load Factor : 1.60

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	1,172.55	2,650.78	0.00	0.00
10.00	1,146.63	2,596.60	0.00	0.00
15.00	1,120.72	2,542.42	0.00	0.00
20.00	1,161.63	2,488.24	0.00	0.00
25.00	1,188.68	2,434.06	0.00	0.00
30.00	1,205.25	2,379.87	0.00	0.00
35.00	1,214.07	2,325.69	0.00	0.00
37.91	703.68	1,327.85	0.00	0.00
40.00	514.14	1,715.14	0.00	0.00
45.00	1,236.74	4,027.36	0.00	0.00
45.63	153.97	500.19	0.00	0.00
50.00	1,074.18	1,729.30	0.00	0.00
55.00	1,222.07	1,933.48	0.00	0.00
60.00	1,210.01	1,885.32	0.00	0.00
65.00	1,195.33	1,837.16	0.00	0.00
70.00	1,178.33	1,789.00	0.00	0.00
74.53	1,051.40	1,580.68	0.00	0.00
75.00	108.46	284.85	0.00	0.00
80.00	8,381.31	6,134.04	0.00	0.00
81.01	230.07	583.77	0.00	0.00
85.00	905.16	1,141.39	0.00	0.00
90.00	1,113.61	1,391.82	0.00	0.00
95.00	1,088.18	1,349.68	0.00	0.00
100.0	1,061.41	1,307.54	0.00	0.00
105.0	1,033.39	1,265.40	0.00	0.00
110.0	1,004.19	1,223.26	0.00	0.00
115.0	973.89	1,181.12	0.00	0.00
118.0	4,003.96	1,694.28	0.00	0.00
119.3	246.71	297.95	0.00	0.00
120.0	127.49	246.07	0.00	0.00
124.2	783.16	1,502.70	0.00	0.00
125.0	6,706.45	2,946.49	0.00	0.00
130.0	894.17	791.54	0.00	0.00
132.0	2,750.06	1,317.03	0.00	0.00
135.0	511.19	447.21	0.00	0.00
140.0	9,674.56	3,841.50	0.00	0.00
145.0	789.79	651.98	0.00	0.00
146.0	7,347.34	2,373.42	0.00	8,255.25
150.0	599.37	424.25	0.00	0.00
151.7	257.27	181.58	0.00	0.00
Totals:	68,340.58	68,322.03	0.00	8,255.25

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



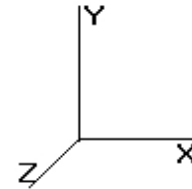
Load Case: 1.2D + 1.6W	132.00 mph with No Ice	20 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 1.20		
Wind Load Factor : 1.60		

Calculated Forces

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	-68.24	-68.43	0.00	-6,928.54	0.00	6,928.54	8,450.60	4,225.30	23,405.6	11,720.2	0.00	0.00	0.599
5.00	-65.42	-67.41	0.00	-6,586.42	0.00	6,586.42	8,322.41	4,161.20	22,538.2	11,285.8	0.08	-0.14	0.592
10.00	-62.66	-66.41	0.00	-6,249.37	0.00	6,249.37	8,191.60	4,095.80	21,679.7	10,856.0	0.30	-0.28	0.584
15.00	-59.96	-65.42	0.00	-5,917.33	0.00	5,917.33	8,058.17	4,029.08	20,830.6	10,430.8	0.67	-0.42	0.575
20.00	-57.32	-64.39	0.00	-5,590.21	0.00	5,590.21	7,922.12	3,961.06	19,991.3	10,010.5	1.19	-0.57	0.566
25.00	-54.74	-63.31	0.00	-5,268.28	0.00	5,268.28	7,783.45	3,891.73	19,162.2	9,595.38	1.87	-0.72	0.556
30.00	-52.21	-62.21	0.00	-4,951.72	0.00	4,951.72	7,642.17	3,821.09	18,344.0	9,185.66	2.70	-0.86	0.546
35.00	-49.78	-61.06	0.00	-4,640.66	0.00	4,640.66	7,498.27	3,749.14	17,537.0	8,781.58	3.69	-1.02	0.535
37.91	-48.38	-60.40	0.00	-4,463.07	0.00	4,463.07	7,413.36	3,706.68	17,073.0	8,549.23	4.33	-1.11	0.529
40.00	-46.56	-59.94	0.00	-4,336.73	0.00	4,336.73	7,351.75	3,675.88	16,741.8	8,383.39	4.83	-1.17	0.524
45.00	-42.48	-58.68	0.00	-4,037.02	0.00	4,037.02	7,170.42	3,585.21	15,887.5	7,955.60	6.14	-1.33	0.514
45.63	-41.90	-58.58	0.00	-4,000.05	0.00	4,000.05	6,282.02	3,141.01	14,162.7	7,091.91	6.32	-1.35	0.571
50.00	-40.04	-57.57	0.00	-3,744.07	0.00	3,744.07	6,174.73	3,087.37	13,588.7	6,804.45	7.62	-1.48	0.557
55.00	-37.98	-56.40	0.00	-3,456.25	0.00	3,456.25	6,049.53	3,024.76	12,940.8	6,480.02	9.26	-1.65	0.540
60.00	-35.97	-55.24	0.00	-3,174.25	0.00	3,174.25	5,921.70	2,960.85	12,302.8	6,160.57	11.08	-1.81	0.522
65.00	-34.02	-54.08	0.00	-2,898.06	0.00	2,898.06	5,791.26	2,895.63	11,675.3	5,846.37	13.07	-1.98	0.502
70.00	-32.13	-52.93	0.00	-2,627.66	0.00	2,627.66	5,622.69	2,811.34	10,989.4	5,502.89	15.23	-2.14	0.484
74.53	-30.52	-51.86	0.00	-2,387.68	0.00	2,387.68	5,463.76	2,731.88	10,373.8	5,194.64	17.34	-2.29	0.466
75.00	-30.16	-51.79	0.00	-2,363.52	0.00	2,363.52	5,447.43	2,723.72	10,311.6	5,163.47	17.56	-2.31	0.464
80.00	-24.31	-43.20	0.00	-2,104.59	0.00	2,104.59	5,272.18	2,636.09	9,655.35	4,834.85	20.07	-2.47	0.440
81.01	-23.67	-42.98	0.00	-2,061.04	0.00	2,061.04	4,611.07	2,305.54	8,578.08	4,295.42	20.59	-2.50	0.485
85.00	-22.46	-42.08	0.00	-1,889.50	0.00	1,889.50	4,521.48	2,260.74	8,189.21	4,100.69	22.74	-2.63	0.466
90.00	-21.01	-40.96	0.00	-1,679.11	0.00	1,679.11	4,403.17	2,201.59	7,703.92	3,857.68	25.59	-2.80	0.440
95.00	-19.60	-39.86	0.00	-1,474.30	0.00	1,474.30	4,249.82	2,124.91	7,174.03	3,592.34	28.61	-2.96	0.415
100.00	-18.25	-38.78	0.00	-1,275.00	0.00	1,275.00	4,096.47	2,048.24	6,663.02	3,336.46	31.80	-3.12	0.387
105.00	-16.94	-37.72	0.00	-1,081.09	0.00	1,081.09	3,943.12	1,971.56	6,170.88	3,090.03	35.15	-3.27	0.355
110.00	-15.69	-36.69	0.00	-892.47	0.00	892.47	3,789.77	1,894.89	5,697.63	2,853.05	38.66	-3.42	0.317
115.00	-14.51	-35.67	0.00	-709.03	0.00	709.03	3,636.43	1,818.21	5,243.26	2,625.53	42.31	-3.55	0.274
118.00	-13.04	-31.58	0.00	-602.02	0.00	602.02	3,544.42	1,772.21	4,979.70	2,493.55	44.56	-3.62	0.245
119.32	-12.75	-31.32	0.00	-560.24	0.00	560.24	3,503.83	1,751.91	4,865.60	2,436.42	45.57	-3.65	0.234
120.00	-12.48	-31.19	0.00	-539.04	0.00	539.04	3,483.08	1,741.54	4,807.77	2,407.46	46.09	-3.67	0.228
124.21	-11.01	-30.32	0.00	-407.62	0.00	407.62	2,398.29	1,199.14	3,272.62	1,638.74	49.37	-3.75	0.254
125.00	-8.48	-23.44	0.00	-383.79	0.00	383.79	2,386.01	1,193.01	3,232.79	1,618.80	49.98	-3.77	0.241
130.00	-7.73	-22.51	0.00	-266.59	0.00	266.59	2,306.40	1,153.20	2,982.95	1,493.69	53.99	-3.87	0.182
132.00	-6.59	-19.68	0.00	-221.58	0.00	221.58	2,273.81	1,136.91	2,884.82	1,444.56	55.61	-3.90	0.157
135.00	-6.16	-19.14	0.00	-162.55	0.00	162.55	2,214.57	1,107.29	2,727.87	1,365.96	58.08	-3.95	0.122
140.00	-2.99	-9.23	0.00	-66.84	0.00	66.84	2,105.04	1,052.52	2,463.38	1,233.52	62.24	-4.00	0.056
145.00	-2.40	-8.39	0.00	-20.71	0.00	20.71	1,995.50	997.75	2,212.37	1,107.83	66.44	-4.02	0.020
146.00	-0.54	-0.90	0.00	-4.06	0.00	4.06	1,973.59	986.80	2,163.79	1,083.50	67.28	-4.02	0.004
150.00	-0.16	-0.27	0.00	-0.48	0.00	0.48	1,885.97	942.98	1,974.85	988.89	70.65	-4.02	0.001
151.77	0.00	-0.26	0.00	0.00	0.00	0.00	1,847.19	923.59	1,894.00	948.41	72.14	-4.02	0.000

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



© 2007 - 2014 by ATC IP LLC. All rights reserved.

Load Case: 0.9D + 1.6W 132.00 mph with No Ice (Reduced DL) 20 Iterations

Gust Response Factor : 1.10 Wind Importance Factor : 1.00

Dead Load Factor : 0.90

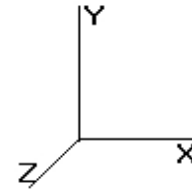
Wind Load Factor : 1.60

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	36.019	39.62	700.26	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	36.019	39.62	684.95	0.650	0.000	5.00	28.456	18.50	1,172.5	0.0	1,823.3
10.00		1.00	0.85	36.019	39.62	669.64	0.650	0.000	5.00	27.827	18.09	1,146.6	0.0	1,782.6
15.00		1.00	0.85	36.019	39.62	654.33	0.650	0.000	5.00	27.198	17.68	1,120.7	0.0	1,742.0
20.00		1.00	0.90	38.218	42.03	658.24	0.650	0.000	5.00	26.569	17.27	1,161.6	0.0	1,701.4
25.00		1.00	0.94	40.056	44.06	657.74	0.650	0.000	5.00	25.940	16.86	1,188.7	0.0	1,660.7
30.00		1.00	0.98	41.623	45.78	654.03	0.650	0.000	5.00	25.311	16.45	1,205.2	0.0	1,620.1
35.00		1.00	1.01	42.996	47.29	648.01	0.650	0.000	5.00	24.682	16.04	1,214.1	0.0	1,579.4
37.91	Bot - Section 2	1.00	1.03	43.725	48.09	643.66	0.650	0.000	2.91	14.068	9.14	703.7	0.0	900.0
40.00		1.00	1.04	44.222	48.64	640.22	0.650	0.000	2.09	10.163	6.61	514.1	0.0	1,217.4
45.00		1.00	1.07	45.332	49.86	631.03	0.650	0.000	5.00	23.848	15.50	1,236.7	0.0	2,855.7
45.63	Top - Section 1	1.00	1.07	45.465	50.01	629.79	0.650	0.000	0.63	2.960	1.92	154.0	0.0	354.4
50.00		1.00	1.09	46.349	50.98	632.39	0.650	0.000	4.37	20.259	13.17	1,074.2	0.0	1,152.9
55.00		1.00	1.11	47.288	52.01	621.22	0.650	0.000	5.00	22.590	14.68	1,222.1	0.0	1,285.3
60.00		1.00	1.13	48.163	52.97	609.24	0.650	0.000	5.00	21.961	14.27	1,210.0	0.0	1,249.2
65.00		1.00	1.15	48.981	53.87	596.54	0.650	0.000	5.00	21.332	13.87	1,195.3	0.0	1,213.0
70.00		1.00	1.17	49.751	54.72	583.23	0.650	0.000	5.00	20.703	13.46	1,178.3	0.0	1,176.9
74.53	Bot - Section 3	1.00	1.19	50.413	55.45	570.67	0.650	0.000	4.53	18.231	11.85	1,051.4	0.0	1,036.0
75.00		1.00	1.19	50.479	55.52	569.36	0.650	0.000	0.47	1.878	1.22	108.5	0.0	198.3
80.00	Appertunance(s)	1.00	1.20	51.170	56.28	554.99	0.650	0.000	5.00	19.816	12.88	1,160.0	0.0	2,091.2
81.01	Top - Section 2	1.00	1.21	51.305	56.43	552.04	0.650	0.000	1.01	3.920	2.55	230.1	0.0	413.5
85.00		1.00	1.22	51.827	57.01	550.99	0.650	0.000	3.99	15.267	9.92	905.2	0.0	759.8
90.00		1.00	1.23	52.454	57.70	535.84	0.650	0.000	5.00	18.558	12.06	1,113.6	0.0	923.3
95.00		1.00	1.25	53.055	58.36	520.32	0.650	0.000	5.00	17.929	11.65	1,088.2	0.0	891.7
100.00		1.00	1.26	53.631	58.99	504.46	0.650	0.000	5.00	17.300	11.24	1,061.4	0.0	860.1
105.00		1.00	1.27	54.185	59.60	488.29	0.650	0.000	5.00	16.671	10.84	1,033.4	0.0	828.5
110.00		1.00	1.29	54.718	60.19	471.82	0.650	0.000	5.00	16.042	10.43	1,004.2	0.0	796.9
115.00		1.00	1.30	55.232	60.75	455.07	0.650	0.000	5.00	15.413	10.02	973.9	0.0	765.3
118.00	Appertunance(s)	1.00	1.31	55.533	61.08	444.90	0.650	0.000	3.00	8.946	5.81	568.3	0.0	444.0
119.30	Bot - Section 4	1.00	1.31	55.663	61.22	440.39	0.650	0.000	1.32	3.874	2.52	246.7	0.0	192.2
120.00		1.00	1.31	55.729	61.30	438.08	0.650	0.000	0.68	2.000	1.30	127.5	0.0	168.6
124.20	Top - Section 3	1.00	1.32	56.136	61.74	423.56	0.650	0.000	4.21	12.195	7.93	783.2	0.0	1,027.6
125.00	Appertunance(s)	1.00	1.32	56.210	61.83	428.88	0.650	0.000	0.79	2.225	1.45	143.1	0.0	79.1
130.00		1.00	1.33	56.676	62.34	411.45	0.650	0.000	5.00	13.791	8.96	894.2	0.0	490.3
132.00	Appertunance(s)	1.00	1.34	56.859	62.54	404.42	0.650	0.000	2.00	5.340	3.47	347.4	0.0	189.8
135.00		1.00	1.34	57.129	62.84	393.81	0.650	0.000	3.00	7.822	5.08	511.2	0.0	277.9
140.00	Appertunance(s)	1.00	1.35	57.568	63.32	375.97	0.650	0.000	5.00	12.533	8.15	825.4	0.0	445.1
145.00		1.00	1.36	57.994	63.79	357.94	0.650	0.000	5.00	11.904	7.74	789.8	0.0	422.6
146.00	Appertunance(s)	1.00	1.37	58.078	63.88	354.31	0.650	0.000	1.00	2.305	1.50	153.2	0.0	81.8
150.00		1.00	1.37	58.410	64.25	339.72	0.650	0.000	4.00	8.970	5.83	599.4	0.0	318.2
151.70		1.00	1.38	58.554	64.41	333.23	0.650	0.000	1.77	3.841	2.50	257.3	0.0	136.2
Totals:									151.77			32,674.2	0.0	37,152.3

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



6/19/2014 11:52:49 AM

Page: 9

© 2007 - 2014 by ATC IP LLC. All rights reserved.

Load Case: 0.9D + 1.6W 132.00 mph with No Ice (Reduced DL) 20 Iterations

Gust Response Factor : 1.10 Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

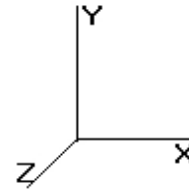
Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
80.00	Flat Platform w/ Han	1	51.170	56.287	1.00	1.00	45.00	0.000	0.000	4,052.63	0.00	0.00	1,980.00
80.00	48" x 12" Panel	9	51.170	56.287	0.67	0.75	22.93	0.000	0.000	2,064.96	0.00	0.00	243.00
80.00	72" x 12" Panel	3	51.170	56.287	0.67	0.75	12.26	0.000	0.000	1,103.76	0.00	0.00	121.50
118.0	DragonWave Horizon	2	55.533	61.086	0.50	1.00	0.43	0.000	0.000	42.03	0.00	0.00	19.08
118.0	Andrew VHLP2-18-	2	55.533	61.086	1.00	1.00	9.38	0.000	0.000	916.78	0.00	0.00	55.80
118.0	Motorola Vx DAP I/V	3	55.533	61.086	0.67	1.00	6.09	0.000	0.000	595.25	0.00	0.00	121.50
118.0	Powerwave P65-18-	3	55.533	61.086	0.66	1.00	10.75	0.000	0.000	1,050.81	0.00	0.00	54.00
118.0	Stand-Offs	1	55.533	61.086	1.00	1.00	8.50	0.000	0.000	830.77	0.00	0.00	504.00
125.0	Ericsson 800 MHz	3	56.210	61.831	0.50	0.80	0.59	0.000	0.000	58.17	0.00	0.00	27.00
125.0	RFS APXVERR18-C	3	56.210	61.831	0.83	0.80	15.98	0.000	0.000	1,580.49	0.00	0.00	135.00
125.0	Ericsson RRUS-11 800	3	56.210	61.831	0.67	0.80	4.05	0.000	0.000	400.88	0.00	0.00	145.80
125.0	RFS ACU-A20-N	9	56.210	61.831	0.50	0.80	0.50	0.000	0.000	49.86	0.00	0.00	8.10
125.0	Flat Low Profile Pla	1	56.210	61.831	1.00	1.00	26.10	0.000	0.000	2,582.08	0.00	0.00	1,350.00
125.0	Tongyu TYDA-	3	56.210	61.831	0.77	0.80	13.92	0.000	0.000	1,376.66	0.00	0.00	145.80
125.0	Nokia FZHJ	3	56.210	61.831	0.67	0.80	3.26	0.000	0.000	322.93	0.00	0.00	149.04
125.0	Ericsson RRUS 31	3	56.210	61.831	0.50	0.80	1.94	0.000	0.000	192.32	0.00	0.00	151.47
132.0	Stand-Offs	3	56.859	62.545	0.67	1.00	19.50	0.000	0.000	1,951.08	0.00	0.00	675.00
132.0	36" x 16" Panel	1	56.859	62.545	0.67	0.80	2.57	0.000	0.000	257.46	0.00	0.00	27.00
132.0	Hoffman A1212CHFL	1	56.859	62.545	0.50	0.80	0.48	0.000	0.000	48.03	0.00	0.00	27.00
132.0	Belfort Instrument 6	1	56.859	62.545	0.67	0.80	1.10	0.000	0.000	110.50	0.00	0.00	17.37
132.0	Transtector -48VDC-O	2	56.859	62.545	0.50	0.80	0.32	0.000	0.000	32.02	0.00	0.00	9.00
132.0	Vivotek IP8331	1	56.859	62.545	0.50	0.80	0.04	0.000	0.000	3.60	0.00	0.00	1.26
140.0	Flat Low Profile Pla	1	57.568	63.324	1.00	1.00	30.00	0.000	0.000	3,039.57	0.00	0.00	1,530.00
140.0	CellMax CMA-	9	57.568	63.324	0.70	0.80	45.61	0.000	0.000	4,621.36	0.00	0.00	502.20
140.0	Nokia FXFB	2	57.568	63.324	0.67	0.80	4.47	0.000	0.000	452.92	0.00	0.00	99.18
140.0	Nokia FRIE	1	57.568	63.324	0.67	0.80	2.21	0.000	0.000	224.29	0.00	0.00	49.59
140.0	Nokia FRIG w/o Solar	3	57.568	63.324	0.67	0.80	3.68	0.000	0.000	373.09	0.00	0.00	145.80
140.0	Nokia ASU9338TYP01	1	57.568	63.324	0.67	0.80	1.36	0.000	0.000	137.94	0.00	0.00	13.41
146.0	CSS X7-665-4	3	58.245	64.070	0.81	1.00	20.44	0.000	2.000	2,094.95	0.00	4,189.90	73.98
146.0	CSS AXP19-60-2	6	58.245	64.070	0.85	0.80	19.83	0.000	2.000	2,032.68	0.00	4,065.35	81.00
146.0	Flat Low Profile Pla	1	58.078	63.886	1.00	1.00	30.00	0.000	0.000	3,066.54	0.00	0.00	1,530.00
										35,666.41			9,992.88

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

6/19/2014 11:52:49 AM
 Page: 10



© 2007 - 2014 by ATC IP LLC. All rights reserved.

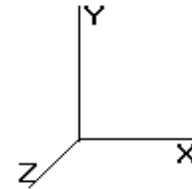
Load Case: 0.9D + 1.6W 132.00 mph with No Ice (Reduced DL) 20 Iterations
 Gust Response Factor : 1.10 Wind Importance Factor : 1.00
 Dead Load Factor : 0.90
 Wind Load Factor : 1.60

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	1,172.55	1,988.09	0.00	0.00
10.00	1,146.63	1,947.45	0.00	0.00
15.00	1,120.72	1,906.81	0.00	0.00
20.00	1,161.63	1,866.18	0.00	0.00
25.00	1,188.68	1,825.54	0.00	0.00
30.00	1,205.25	1,784.91	0.00	0.00
35.00	1,214.07	1,744.27	0.00	0.00
37.91	703.68	995.89	0.00	0.00
40.00	514.14	1,286.36	0.00	0.00
45.00	1,236.74	3,020.52	0.00	0.00
45.63	153.97	375.14	0.00	0.00
50.00	1,074.18	1,296.98	0.00	0.00
55.00	1,222.07	1,450.11	0.00	0.00
60.00	1,210.01	1,413.99	0.00	0.00
65.00	1,195.33	1,377.87	0.00	0.00
70.00	1,178.33	1,341.75	0.00	0.00
74.53	1,051.40	1,185.51	0.00	0.00
75.00	108.46	213.64	0.00	0.00
80.00	8,381.31	4,600.53	0.00	0.00
81.01	230.07	437.83	0.00	0.00
85.00	905.16	856.04	0.00	0.00
90.00	1,113.61	1,043.87	0.00	0.00
95.00	1,088.18	1,012.26	0.00	0.00
100.0	1,061.41	980.66	0.00	0.00
105.0	1,033.39	949.05	0.00	0.00
110.0	1,004.19	917.44	0.00	0.00
115.0	973.89	885.84	0.00	0.00
118.0	4,003.96	1,270.71	0.00	0.00
119.3	246.71	223.47	0.00	0.00
120.0	127.49	184.55	0.00	0.00
124.2	783.16	1,127.03	0.00	0.00
125.0	6,706.45	2,209.87	0.00	0.00
130.0	894.17	593.66	0.00	0.00
132.0	2,750.06	987.77	0.00	0.00
135.0	511.19	335.40	0.00	0.00
140.0	9,674.56	2,881.13	0.00	0.00
145.0	789.79	488.99	0.00	0.00
146.0	7,347.34	1,780.07	0.00	8,255.25
150.0	599.37	318.19	0.00	0.00
151.7	257.27	136.19	0.00	0.00
Totals:	68,340.58	51,241.52	0.00	8,255.25

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



Load Case: 0.9D + 1.6W

132.00 mph with No Ice (Reduced DL)

20 Iterations

Gust Response Factor : 1.10
 Dead Load Factor : 0.90
 Wind Load Factor : 1.60

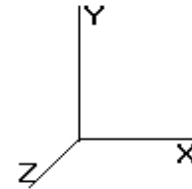
Wind Importance Factor : 1.00

Calculated Forces

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	-51.16	-68.40	0.00	-6,895.31	0.00	6,895.31	8,450.60	4,225.30	23,405.6	11,720.2	0.00	0.00	0.595
5.00	-49.01	-67.35	0.00	-6,553.30	0.00	6,553.30	8,322.41	4,161.20	22,538.2	11,285.8	0.08	-0.14	0.587
10.00	-46.90	-66.31	0.00	-6,216.56	0.00	6,216.56	8,191.60	4,095.80	21,679.7	10,856.0	0.30	-0.28	0.579
15.00	-44.84	-65.29	0.00	-5,885.01	0.00	5,885.01	8,058.17	4,029.08	20,830.6	10,430.8	0.67	-0.42	0.570
20.00	-42.82	-64.22	0.00	-5,558.56	0.00	5,558.56	7,922.12	3,961.06	19,991.3	10,010.5	1.19	-0.57	0.561
25.00	-40.84	-63.12	0.00	-5,237.46	0.00	5,237.46	7,783.45	3,891.73	19,162.2	9,595.38	1.86	-0.71	0.551
30.00	-38.91	-61.99	0.00	-4,921.87	0.00	4,921.87	7,642.17	3,821.09	18,344.0	9,185.66	2.68	-0.86	0.541
35.00	-37.06	-60.82	0.00	-4,611.93	0.00	4,611.93	7,498.27	3,749.14	17,537.0	8,781.58	3.67	-1.01	0.530
37.91	-36.00	-60.15	0.00	-4,435.03	0.00	4,435.03	7,413.36	3,706.68	17,073.0	8,549.23	4.31	-1.10	0.524
40.00	-34.61	-59.68	0.00	-4,309.22	0.00	4,309.22	7,351.75	3,675.88	16,741.8	8,383.39	4.81	-1.16	0.519
45.00	-31.53	-58.42	0.00	-4,010.83	0.00	4,010.83	7,170.42	3,585.21	15,887.5	7,955.60	6.11	-1.32	0.509
45.63	-31.08	-58.30	0.00	-3,974.02	0.00	3,974.02	6,282.02	3,141.01	14,162.7	7,091.91	6.29	-1.34	0.566
50.00	-29.66	-57.28	0.00	-3,719.24	0.00	3,719.24	6,174.73	3,087.37	13,588.7	6,804.45	7.58	-1.47	0.552
55.00	-28.08	-56.10	0.00	-3,432.86	0.00	3,432.86	6,049.53	3,024.76	12,940.8	6,480.02	9.21	-1.64	0.535
60.00	-26.54	-54.92	0.00	-3,152.39	0.00	3,152.39	5,921.70	2,960.85	12,302.8	6,160.57	11.01	-1.80	0.517
65.00	-25.05	-53.75	0.00	-2,877.79	0.00	2,877.79	5,791.26	2,895.63	11,675.3	5,846.37	12.99	-1.97	0.497
70.00	-23.61	-52.59	0.00	-2,609.03	0.00	2,609.03	5,622.69	2,811.34	10,989.4	5,502.89	15.14	-2.13	0.479
74.53	-22.39	-51.53	0.00	-2,370.58	0.00	2,370.58	5,463.76	2,731.88	10,373.8	5,194.64	17.24	-2.28	0.461
75.00	-22.10	-51.44	0.00	-2,346.58	0.00	2,346.58	5,447.43	2,723.72	10,311.6	5,163.47	17.46	-2.29	0.459
80.00	-17.79	-42.91	0.00	-2,089.36	0.00	2,089.36	5,272.18	2,636.09	9,655.35	4,834.85	19.95	-2.45	0.436
81.01	-17.30	-42.68	0.00	-2,046.10	0.00	2,046.10	4,611.07	2,305.54	8,578.08	4,295.42	20.47	-2.49	0.480
85.00	-16.38	-41.78	0.00	-1,875.72	0.00	1,875.72	4,521.48	2,260.74	8,189.21	4,100.69	22.61	-2.61	0.461
90.00	-15.27	-40.67	0.00	-1,666.80	0.00	1,666.80	4,403.17	2,201.59	7,703.92	3,857.68	25.44	-2.78	0.436
95.00	-14.20	-39.57	0.00	-1,463.47	0.00	1,463.47	4,249.82	2,124.91	7,174.03	3,592.34	28.44	-2.94	0.411
100.00	-13.17	-38.49	0.00	-1,265.63	0.00	1,265.63	4,096.47	2,048.24	6,663.02	3,336.46	31.60	-3.10	0.383
105.00	-12.19	-37.44	0.00	-1,073.17	0.00	1,073.17	3,943.12	1,971.56	6,170.88	3,090.03	34.94	-3.25	0.351
110.00	-11.24	-36.41	0.00	-885.97	0.00	885.97	3,789.77	1,894.89	5,697.63	2,853.05	38.42	-3.40	0.314
115.00	-10.36	-35.40	0.00	-703.92	0.00	703.92	3,636.43	1,818.21	5,243.26	2,625.53	42.05	-3.53	0.271
118.00	-9.31	-31.34	0.00	-597.71	0.00	597.71	3,544.42	1,772.21	4,979.70	2,493.55	44.29	-3.60	0.243
119.32	-9.09	-31.08	0.00	-556.24	0.00	556.24	3,503.83	1,751.91	4,865.60	2,436.42	45.29	-3.63	0.231
120.00	-8.89	-30.95	0.00	-535.21	0.00	535.21	3,483.08	1,741.54	4,807.77	2,407.46	45.80	-3.64	0.225
124.21	-7.79	-30.10	0.00	-404.79	0.00	404.79	2,398.29	1,199.14	3,272.62	1,638.74	49.06	-3.73	0.251
125.00	-5.99	-23.27	0.00	-381.13	0.00	381.13	2,386.01	1,193.01	3,232.79	1,618.80	49.67	-3.74	0.238
130.00	-5.43	-22.35	0.00	-264.77	0.00	264.77	2,306.40	1,153.20	2,982.95	1,493.69	53.65	-3.84	0.180
132.00	-4.62	-19.54	0.00	-220.08	0.00	220.08	2,273.81	1,136.91	2,884.82	1,444.56	55.26	-3.88	0.155
135.00	-4.30	-19.01	0.00	-161.46	0.00	161.46	2,214.57	1,107.29	2,727.87	1,365.96	57.72	-3.92	0.120
140.00	-2.09	-9.16	0.00	-66.42	0.00	66.42	2,105.04	1,052.52	2,463.38	1,233.52	61.85	-3.97	0.055
145.00	-1.66	-8.34	0.00	-20.61	0.00	20.61	1,995.50	997.75	2,212.37	1,107.83	66.02	-3.99	0.020
146.00	-0.39	-0.89	0.00	-4.02	0.00	4.02	1,973.59	986.80	2,163.79	1,083.50	66.85	-3.99	0.004
150.00	-0.12	-0.27	0.00	-0.47	0.00	0.47	1,885.97	942.98	1,974.85	988.89	70.20	-3.99	0.001
151.77	0.00	-0.26	0.00	0.00	0.00	0.00	1,847.19	923.59	1,894.00	948.41	71.68	-3.99	0.000

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



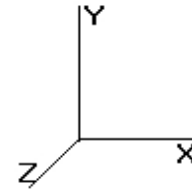
Load Case: 1.2D + 1.0Di + 1.0Wi	30.00 mph with 0.00 in Radial Ice	18 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	1.860	2.047	0.000	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	1.860	2.047	0.000	1.200	0.000	5.00	28.456	34.15	69.9	0.0	2,431.0
10.00		1.00	0.85	1.860	2.047	0.000	1.200	0.000	5.00	27.827	33.39	68.3	0.0	2,376.8
15.00		1.00	0.85	1.860	2.047	0.000	1.200	0.000	5.00	27.198	32.64	66.8	0.0	2,322.6
20.00		1.00	0.90	1.974	2.171	0.000	1.200	0.000	5.00	26.569	31.88	69.2	0.0	2,268.5
25.00		1.00	0.94	2.069	2.276	0.000	1.200	0.000	5.00	25.940	31.13	70.8	0.0	2,214.3
30.00		1.00	0.98	2.150	2.365	0.000	1.200	0.000	5.00	25.311	30.37	71.8	0.0	2,160.1
35.00		1.00	1.01	2.221	2.443	0.000	1.200	0.000	5.00	24.682	29.62	72.4	0.0	2,105.9
37.91	Bot - Section 2	1.00	1.03	2.259	2.484	0.000	1.200	0.000	2.91	14.068	16.88	41.9	0.0	1,200.0
40.00		1.00	1.04	2.284	2.513	0.000	1.200	0.000	2.09	10.163	12.20	30.6	0.0	1,623.2
45.00		1.00	1.07	2.342	2.576	0.000	1.200	0.000	5.00	23.848	28.62	73.7	0.0	3,807.6
45.63	Top - Section 1	1.00	1.07	2.348	2.583	0.000	1.200	0.000	0.63	2.960	3.55	9.2	0.0	472.5
50.00		1.00	1.09	2.394	2.633	0.000	1.200	0.000	4.37	20.259	24.31	64.0	0.0	1,537.2
55.00		1.00	1.11	2.443	2.687	0.000	1.200	0.000	5.00	22.590	27.11	72.8	0.0	1,713.7
60.00		1.00	1.13	2.488	2.737	0.000	1.200	0.000	5.00	21.961	26.35	72.1	0.0	1,665.5
65.00		1.00	1.15	2.530	2.783	0.000	1.200	0.000	5.00	21.332	25.60	71.2	0.0	1,617.4
70.00		1.00	1.17	2.570	2.827	0.000	1.200	0.000	5.00	20.703	24.84	70.2	0.0	1,569.2
74.53	Bot - Section 3	1.00	1.19	2.604	2.864	0.000	1.200	0.000	4.53	18.231	21.88	62.7	0.0	1,381.4
75.00		1.00	1.19	2.607	2.868	0.000	1.200	0.000	0.47	1.878	2.25	6.5	0.0	264.4
80.00	Appertunance(s)	1.00	1.20	2.643	2.907	0.000	1.200	0.000	5.00	19.816	23.78	69.1	0.0	2,788.3
81.01	Top - Section 2	1.00	1.21	2.650	2.915	0.000	1.200	0.000	1.01	3.920	4.70	13.7	0.0	551.4
85.00		1.00	1.22	2.677	2.945	0.000	1.200	0.000	3.99	15.267	18.32	53.9	0.0	1,013.1
90.00		1.00	1.23	2.709	2.980	0.000	1.200	0.000	5.00	18.558	22.27	66.4	0.0	1,231.1
95.00		1.00	1.25	2.740	3.014	0.000	1.200	0.000	5.00	17.929	21.51	64.9	0.0	1,188.9
100.00		1.00	1.26	2.770	3.047	0.000	1.200	0.000	5.00	17.300	20.76	63.3	0.0	1,146.8
105.00		1.00	1.27	2.799	3.079	0.000	1.200	0.000	5.00	16.671	20.01	61.6	0.0	1,104.7
110.00		1.00	1.29	2.826	3.109	0.000	1.200	0.000	5.00	16.042	19.25	59.8	0.0	1,062.5
115.00		1.00	1.30	2.853	3.138	0.000	1.200	0.000	5.00	15.413	18.50	58.0	0.0	1,020.4
118.00	Appertunance(s)	1.00	1.31	2.868	3.155	0.000	1.200	0.000	3.00	8.946	10.74	33.9	0.0	592.0
119.30	Bot - Section 4	1.00	1.31	2.875	3.163	0.000	1.200	0.000	1.32	3.874	4.65	14.7	0.0	256.3
120.00		1.00	1.31	2.879	3.166	0.000	1.200	0.000	0.68	2.000	2.40	7.6	0.0	224.8
124.20	Top - Section 3	1.00	1.32	2.900	3.190	0.000	1.200	0.000	4.21	12.195	14.63	46.7	0.0	1,370.1
125.00	Appertunance(s)	1.00	1.32	2.903	3.194	0.000	1.200	0.000	0.79	2.225	2.67	8.5	0.0	105.5
130.00		1.00	1.33	2.928	3.220	0.000	1.200	0.000	5.00	13.791	16.55	53.3	0.0	653.7
132.00	Appertunance(s)	1.00	1.34	2.937	3.231	0.000	1.200	0.000	2.00	5.340	6.41	20.7	0.0	253.1
135.00		1.00	1.34	2.951	3.246	0.000	1.200	0.000	3.00	7.822	9.39	30.5	0.0	370.6
140.00	Appertunance(s)	1.00	1.35	2.974	3.271	0.000	1.200	0.000	5.00	12.533	15.04	49.2	0.0	593.5
145.00		1.00	1.36	2.996	3.295	0.000	1.200	0.000	5.00	11.904	14.28	47.1	0.0	563.4
146.00	Appertunance(s)	1.00	1.37	3.000	3.300	0.000	1.200	0.000	1.00	2.305	2.77	9.1	0.0	109.1
150.00		1.00	1.37	3.017	3.319	0.000	1.200	0.000	4.00	8.970	10.76	35.7	0.0	424.3
151.70		1.00	1.38	3.024	3.327	0.000	1.200	0.000	1.77	3.841	4.61	15.3	0.0	181.6
Totals:									151.77			1,947.4	0.0	49,536.4

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



6/19/2014 11:52:49 AM

Page: 13

© 2007 - 2014 by ATC IP LLC. All rights reserved.

Load Case: 1.2D + 1.0Di + 1.0Wi 30.00 mph with 0.00 in Radial Ice 18 Iterations

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

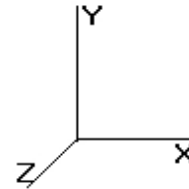
Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
80.00	Flat Platform w/ Han	1	2.643	2.907	1.00	1.00	45.00	0.000	0.000	130.83	0.00	0.00	2,390.00
80.00	48" x 12" Panel	9	2.643	2.907	0.67	0.75	22.91	0.000	0.000	66.62	0.00	0.00	324.00
80.00	72" x 12" Panel	3	2.643	2.907	0.67	0.75	12.26	0.000	0.000	35.65	0.00	0.00	162.00
118.0	DragonWave Horizon	2	2.868	3.155	0.50	1.00	0.36	0.000	0.000	1.15	0.00	0.00	25.44
118.0	Andrew VHLP2-18-	2	2.868	3.155	1.00	1.00	9.38	0.000	0.000	29.60	0.00	0.00	26.80
118.0	Motorola Vx DAP I/V	3	2.868	3.155	0.67	1.00	6.10	0.000	0.000	19.24	0.00	0.00	162.00
118.0	Powerwave P65-18-	3	2.868	3.155	0.66	1.00	10.75	0.000	0.000	33.92	0.00	0.00	72.00
118.0	Stand-Offs	1	2.868	3.155	1.00	1.00	8.50	0.000	0.000	26.82	0.00	0.00	552.00
125.0	Ericsson 800 MHz	3	2.903	3.194	0.50	0.80	0.50	0.000	0.000	1.60	0.00	0.00	36.00
125.0	RFS APXVERR18-C	3	2.903	3.194	0.83	0.80	15.98	0.000	0.000	51.05	0.00	0.00	180.00
125.0	Ericsson RRUS-11 800	3	2.903	3.194	0.67	0.80	4.06	0.000	0.000	12.98	0.00	0.00	194.40
125.0	RFS ACU-A20-N	9	2.903	3.194	0.50	0.80	0.24	0.000	0.000	0.76	0.00	0.00	10.80
125.0	Flat Low Profile Pla	1	2.903	3.194	1.00	1.00	26.10	0.000	0.000	83.36	0.00	0.00	1,600.00
125.0	Tongyu TYDA-	3	2.903	3.194	0.77	0.80	13.92	0.000	0.000	44.46	0.00	0.00	194.40
125.0	Nokia FZHJ	3	2.903	3.194	0.67	0.80	2.04	0.000	0.000	6.52	0.00	0.00	198.72
125.0	Ericsson RRUS 31	3	2.903	3.194	0.50	0.80	1.95	0.000	0.000	6.24	0.00	0.00	201.96
132.0	Stand-Offs	3	2.937	3.231	0.67	1.00	19.50	0.000	0.000	62.99	0.00	0.00	708.00
132.0	36" x 16" Panel	1	2.937	3.231	0.67	0.80	2.57	0.000	0.000	8.31	0.00	0.00	36.00
132.0	Hoffman A1212CHFL	1	2.937	3.231	0.50	0.80	0.48	0.000	0.000	1.55	0.00	0.00	36.00
132.0	Belfort Instrument 6	1	2.937	3.231	0.67	0.80	3.57	0.000	0.000	11.55	0.00	0.00	23.16
132.0	Transtector -48VDC-O	2	2.937	3.231	0.50	0.80	0.27	0.000	0.000	0.88	0.00	0.00	12.00
132.0	Vivotek IP8331	1	2.937	3.231	0.50	0.80	0.02	0.000	0.000	0.06	0.00	0.00	1.68
140.0	Flat Low Profile Pla	1	2.974	3.271	1.00	1.00	30.00	0.000	0.000	98.13	0.00	0.00	2,040.00
140.0	CellMax CMA-	9	2.974	3.271	0.70	0.80	45.61	0.000	0.000	149.19	0.00	0.00	227.70
140.0	Nokia FXFB	2	2.974	3.271	0.67	0.80	0.89	0.000	0.000	2.93	0.00	0.00	132.24
140.0	Nokia FRIE	1	2.974	3.271	0.67	0.80	0.44	0.000	0.000	1.45	0.00	0.00	66.12
140.0	Nokia FRIG w/o Solar	3	2.974	3.271	0.67	0.80	3.69	0.000	0.000	12.07	0.00	0.00	194.40
140.0	Nokia ASU9338TYP01	1	2.974	3.271	0.67	0.80	1.36	0.000	0.000	4.46	0.00	0.00	17.88
146.0	CSS X7-665-4	3	3.009	3.309	0.81	1.00	20.43	0.000	2.000	67.60	0.00	135.19	98.64
146.0	CSS AXP19-60-2	6	3.009	3.309	0.85	0.80	19.82	0.000	2.000	65.59	0.00	131.19	108.00
146.0	Flat Low Profile Pla	1	3.000	3.300	1.00	1.00	30.00	0.000	0.000	99.00	0.00	0.00	2,040.00
										1,136.56			12,072.34

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

6/19/2014 11:52:50 AM
 Page: 14



© 2007 - 2014 by ATC IP LLC. All rights reserved.

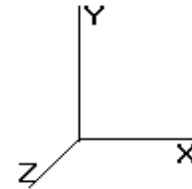
Load Case: 1.2D + 1.0Di + 1.0Wi	30.00 mph with 0.00 in Radial Ice	18 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	69.88	2,650.78	0.00	0.00
10.00	68.34	2,596.60	0.00	0.00
15.00	66.79	2,542.42	0.00	0.00
20.00	69.23	2,488.24	0.00	0.00
25.00	70.84	2,434.06	0.00	0.00
30.00	71.83	2,379.87	0.00	0.00
35.00	72.36	2,325.69	0.00	0.00
37.91	41.94	1,327.85	0.00	0.00
40.00	30.64	1,715.14	0.00	0.00
45.00	73.71	4,027.36	0.00	0.00
45.63	9.18	500.19	0.00	0.00
50.00	64.02	1,729.30	0.00	0.00
55.00	72.83	1,933.48	0.00	0.00
60.00	72.12	1,885.32	0.00	0.00
65.00	71.24	1,837.16	0.00	0.00
70.00	70.23	1,789.00	0.00	0.00
74.53	62.66	1,580.68	0.00	0.00
75.00	6.46	284.85	0.00	0.00
80.00	302.23	5,884.04	0.00	0.00
81.01	13.71	583.77	0.00	0.00
85.00	53.95	1,141.39	0.00	0.00
90.00	66.37	1,391.82	0.00	0.00
95.00	64.86	1,349.68	0.00	0.00
100.0	63.26	1,307.54	0.00	0.00
105.0	61.59	1,265.40	0.00	0.00
110.0	59.85	1,223.26	0.00	0.00
115.0	58.04	1,181.12	0.00	0.00
118.0	144.60	1,526.68	0.00	0.00
119.3	14.70	297.95	0.00	0.00
120.0	7.60	246.07	0.00	0.00
124.2	46.68	1,502.70	0.00	0.00
125.0	215.50	2,746.49	0.00	0.00
130.0	53.29	791.54	0.00	0.00
132.0	106.05	1,125.03	0.00	0.00
135.0	30.47	447.21	0.00	0.00
140.0	317.42	3,399.60	0.00	0.00
145.0	47.07	651.98	0.00	0.00
146.0	241.31	2,373.42	0.00	266.38
150.0	35.72	424.25	0.00	0.00
151.7	15.33	181.58	0.00	0.00
Totals:	3,083.92	67,070.53	0.00	266.38

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



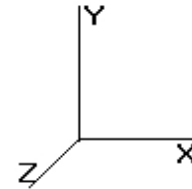
Load Case: 1.2D + 1.0Di + 1.0Wi	30.00 mph with 0.00 in Radial Ice	18 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

Calculated Forces

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	-67.07	-3.09	0.00	-287.62	0.00	287.62	8,450.60	4,225.30	23,405.6	11,720.2	0.00	0.00	0.032
5.00	-64.42	-3.02	0.00	-272.19	0.00	272.19	8,322.41	4,161.20	22,538.2	11,285.8	0.00	-0.01	0.032
10.00	-61.82	-2.96	0.00	-257.07	0.00	257.07	8,191.60	4,095.80	21,679.7	10,856.0	0.01	-0.01	0.031
15.00	-59.28	-2.90	0.00	-242.27	0.00	242.27	8,058.17	4,029.08	20,830.6	10,430.8	0.03	-0.02	0.031
20.00	-56.79	-2.84	0.00	-227.77	0.00	227.77	7,922.12	3,961.06	19,991.3	10,010.5	0.05	-0.02	0.030
25.00	-54.36	-2.77	0.00	-213.60	0.00	213.60	7,783.45	3,891.73	19,162.2	9,595.38	0.08	-0.03	0.029
30.00	-51.98	-2.70	0.00	-199.75	0.00	199.75	7,642.17	3,821.09	18,344.0	9,185.66	0.11	-0.04	0.029
35.00	-49.65	-2.63	0.00	-186.24	0.00	186.24	7,498.27	3,749.14	17,537.0	8,781.58	0.15	-0.04	0.028
37.91	-48.32	-2.59	0.00	-178.59	0.00	178.59	7,413.36	3,706.68	17,073.0	8,549.23	0.18	-0.05	0.027
40.00	-46.61	-2.56	0.00	-173.17	0.00	173.17	7,351.75	3,675.88	16,741.8	8,383.39	0.20	-0.05	0.027
45.00	-42.58	-2.49	0.00	-160.36	0.00	160.36	7,170.42	3,585.21	15,887.5	7,955.60	0.25	-0.05	0.026
45.63	-42.08	-2.48	0.00	-158.79	0.00	158.79	6,282.02	3,141.01	14,162.7	7,091.91	0.26	-0.05	0.029
50.00	-40.35	-2.42	0.00	-147.95	0.00	147.95	6,174.73	3,087.37	13,588.7	6,804.45	0.31	-0.06	0.028
55.00	-38.42	-2.35	0.00	-135.85	0.00	135.85	6,049.53	3,024.76	12,940.8	6,480.02	0.38	-0.07	0.027
60.00	-36.53	-2.28	0.00	-124.11	0.00	124.11	5,921.70	2,960.85	12,302.8	6,160.57	0.45	-0.07	0.026
65.00	-34.69	-2.21	0.00	-112.72	0.00	112.72	5,791.26	2,895.63	11,675.3	5,846.37	0.53	-0.08	0.025
70.00	-32.90	-2.14	0.00	-101.68	0.00	101.68	5,622.69	2,811.34	10,989.4	5,502.89	0.62	-0.09	0.024
74.53	-31.32	-2.08	0.00	-91.98	0.00	91.98	5,463.76	2,731.88	10,373.8	5,194.64	0.70	-0.09	0.023
75.00	-31.04	-2.07	0.00	-91.01	0.00	91.01	5,447.43	2,723.72	10,311.6	5,163.47	0.71	-0.09	0.023
80.00	-25.16	-1.76	0.00	-80.66	0.00	80.66	5,272.18	2,636.09	9,655.35	4,834.85	0.81	-0.10	0.021
81.01	-24.57	-1.75	0.00	-78.88	0.00	78.88	4,611.07	2,305.54	8,578.08	4,295.42	0.83	-0.10	0.024
85.00	-23.43	-1.69	0.00	-71.91	0.00	71.91	4,521.48	2,260.74	8,189.21	4,100.69	0.92	-0.10	0.023
90.00	-22.04	-1.63	0.00	-63.44	0.00	63.44	4,403.17	2,201.59	7,703.92	3,857.68	1.03	-0.11	0.021
95.00	-20.69	-1.56	0.00	-55.31	0.00	55.31	4,249.82	2,124.91	7,174.03	3,592.34	1.15	-0.12	0.020
100.00	-19.38	-1.50	0.00	-47.50	0.00	47.50	4,096.47	2,048.24	6,663.02	3,336.46	1.28	-0.12	0.019
105.00	-18.12	-1.43	0.00	-40.02	0.00	40.02	3,943.12	1,971.56	6,170.88	3,090.03	1.41	-0.13	0.018
110.00	-16.89	-1.37	0.00	-32.84	0.00	32.84	3,789.77	1,894.89	5,697.63	2,853.05	1.55	-0.13	0.016
115.00	-15.71	-1.31	0.00	-25.97	0.00	25.97	3,636.43	1,818.21	5,243.26	2,625.53	1.69	-0.14	0.014
118.00	-14.18	-1.17	0.00	-22.03	0.00	22.03	3,544.42	1,772.21	4,979.70	2,493.55	1.78	-0.14	0.013
119.32	-13.89	-1.15	0.00	-20.49	0.00	20.49	3,503.83	1,751.91	4,865.60	2,436.42	1.82	-0.14	0.012
120.00	-13.64	-1.14	0.00	-19.71	0.00	19.71	3,483.08	1,741.54	4,807.77	2,407.46	1.84	-0.14	0.012
124.21	-12.14	-1.09	0.00	-14.89	0.00	14.89	2,398.29	1,199.14	3,272.62	1,638.74	1.97	-0.15	0.014
125.00	-9.39	-0.87	0.00	-14.04	0.00	14.04	2,386.01	1,193.01	3,232.79	1,618.80	1.99	-0.15	0.013
130.00	-8.60	-0.82	0.00	-9.68	0.00	9.68	2,306.40	1,153.20	2,982.95	1,493.69	2.15	-0.15	0.010
132.00	-7.48	-0.71	0.00	-8.05	0.00	8.05	2,273.81	1,136.91	2,884.82	1,444.56	2.21	-0.15	0.009
135.00	-7.03	-0.68	0.00	-5.93	0.00	5.93	2,214.57	1,107.29	2,727.87	1,365.96	2.31	-0.15	0.008
140.00	-3.63	-0.35	0.00	-2.55	0.00	2.55	2,105.04	1,052.52	2,463.38	1,233.52	2.47	-0.16	0.004
145.00	-2.98	-0.30	0.00	-0.81	0.00	0.81	1,995.50	997.75	2,212.37	1,107.83	2.63	-0.16	0.002
146.00	-0.61	-0.05	0.00	-0.24	0.00	0.24	1,973.59	986.80	2,163.79	1,083.50	2.66	-0.16	0.001
150.00	-0.18	-0.02	0.00	-0.03	0.00	0.03	1,885.97	942.98	1,974.85	988.89	2.79	-0.16	0.000
151.77	0.00	-0.02	0.00	0.00	0.00	0.00	1,847.19	923.59	1,894.00	948.41	2.85	-0.16	0.000

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



© 2007 - 2014 by ATC IP LLC. All rights reserved.

Load Case: 1.0D + 1.0W 60.00 mph Serviceability 19 Iterations

Gust Response Factor : 1.10 Wind Importance Factor : 1.00

Dead Load Factor : 1.00

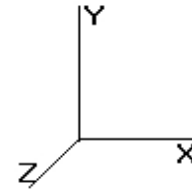
Wind Load Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.186	318.30	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.186	311.34	0.650	0.000	5.00	28.456	18.50	151.4	0.0	2,025.8
10.00		1.00	0.85	7.442	8.186	304.38	0.650	0.000	5.00	27.827	18.09	148.1	0.0	1,980.7
15.00		1.00	0.85	7.442	8.186	297.42	0.650	0.000	5.00	27.198	17.68	144.7	0.0	1,935.5
20.00		1.00	0.90	7.896	8.686	299.20	0.650	0.000	5.00	26.569	17.27	150.0	0.0	1,890.4
25.00		1.00	0.94	8.276	9.104	298.97	0.650	0.000	5.00	25.940	16.86	153.5	0.0	1,845.2
30.00		1.00	0.98	8.600	9.460	297.29	0.650	0.000	5.00	25.311	16.45	155.6	0.0	1,800.1
35.00		1.00	1.01	8.883	9.772	294.55	0.650	0.000	5.00	24.682	16.04	156.8	0.0	1,754.9
37.91	Bot - Section 2	1.00	1.03	9.034	9.937	292.57	0.650	0.000	2.91	14.068	9.14	90.9	0.0	1,000.0
40.00		1.00	1.04	9.137	10.05	291.01	0.650	0.000	2.09	10.163	6.61	66.4	0.0	1,352.7
45.00		1.00	1.07	9.366	10.30	286.83	0.650	0.000	5.00	23.848	15.50	159.7	0.0	3,173.0
45.63	Top - Section 1	1.00	1.07	9.394	10.33	286.27	0.650	0.000	0.63	2.960	1.92	19.9	0.0	393.7
50.00		1.00	1.09	9.576	10.53	287.45	0.650	0.000	4.37	20.259	13.17	138.7	0.0	1,281.0
55.00		1.00	1.11	9.770	10.74	282.37	0.650	0.000	5.00	22.590	14.68	157.8	0.0	1,428.1
60.00		1.00	1.13	9.951	10.94	276.92	0.650	0.000	5.00	21.961	14.27	156.3	0.0	1,388.0
65.00		1.00	1.15	10.120	11.13	271.15	0.650	0.000	5.00	21.332	13.87	154.4	0.0	1,347.8
70.00		1.00	1.17	10.279	11.30	265.10	0.650	0.000	5.00	20.703	13.46	152.2	0.0	1,307.7
74.53	Bot - Section 3	1.00	1.19	10.416	11.45	259.39	0.650	0.000	4.53	18.231	11.85	135.8	0.0	1,151.2
75.00		1.00	1.19	10.430	11.47	258.80	0.650	0.000	0.47	1.878	1.22	14.0	0.0	220.3
80.00	Appertunance(s)	1.00	1.20	10.572	11.62	252.27	0.650	0.000	5.00	19.816	12.88	149.8	0.0	2,323.6
81.01	Top - Section 2	1.00	1.21	10.600	11.66	250.92	0.650	0.000	1.01	3.920	2.55	29.7	0.0	459.5
85.00		1.00	1.22	10.708	11.77	250.45	0.650	0.000	3.99	15.267	9.92	116.9	0.0	844.2
90.00		1.00	1.23	10.838	11.92	243.56	0.650	0.000	5.00	18.558	12.06	143.8	0.0	1,025.9
95.00		1.00	1.25	10.962	12.05	236.51	0.650	0.000	5.00	17.929	11.65	140.5	0.0	990.8
100.0		1.00	1.26	11.081	12.18	229.30	0.650	0.000	5.00	17.300	11.24	137.1	0.0	955.7
105.0		1.00	1.27	11.195	12.31	221.95	0.650	0.000	5.00	16.671	10.84	133.4	0.0	920.6
110.0		1.00	1.29	11.305	12.43	214.46	0.650	0.000	5.00	16.042	10.43	129.7	0.0	885.4
115.0		1.00	1.30	11.412	12.55	206.85	0.650	0.000	5.00	15.413	10.02	125.8	0.0	850.3
118.0	Appertunance(s)	1.00	1.31	11.474	12.62	202.23	0.650	0.000	3.00	8.946	5.81	73.4	0.0	493.3
119.3	Bot - Section 4	1.00	1.31	11.501	12.65	200.17	0.650	0.000	1.32	3.874	2.52	31.9	0.0	213.6
120.0		1.00	1.31	11.514	12.66	199.12	0.650	0.000	0.68	2.000	1.30	16.5	0.0	187.3
124.2	Top - Section 3	1.00	1.32	11.598	12.75	192.53	0.650	0.000	4.21	12.195	7.93	101.1	0.0	1,141.8
125.0	Appertunance(s)	1.00	1.32	11.614	12.77	194.94	0.650	0.000	0.79	2.225	1.45	18.5	0.0	87.9
130.0		1.00	1.33	11.710	12.88	187.02	0.650	0.000	5.00	13.791	8.96	115.5	0.0	544.8
132.0	Appertunance(s)	1.00	1.34	11.748	12.92	183.83	0.650	0.000	2.00	5.340	3.47	44.9	0.0	210.9
135.0		1.00	1.34	11.803	12.98	179.00	0.650	0.000	3.00	7.822	5.08	66.0	0.0	308.8
140.0	Appertunance(s)	1.00	1.35	11.894	13.08	170.89	0.650	0.000	5.00	12.533	8.15	106.6	0.0	494.6
145.0		1.00	1.36	11.982	13.18	162.70	0.650	0.000	5.00	11.904	7.74	102.0	0.0	469.5
146.0	Appertunance(s)	1.00	1.37	12.000	13.20	161.05	0.650	0.000	1.00	2.305	1.50	19.8	0.0	90.9
150.0		1.00	1.37	12.068	13.27	154.42	0.650	0.000	4.00	8.970	5.83	77.4	0.0	353.5
151.7		1.00	1.38	12.098	13.30	151.47	0.650	0.000	1.77	3.841	2.50	33.2	0.0	151.3
Totals:									151.77			4,219.3	0.0	41,280.4

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



6/19/2014 11:52:50 AM

Page: 17

© 2007 - 2014 by ATC IP LLC. All rights reserved.

Load Case: 1.0D + 1.0W

60.00 mph Serviceability

19 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

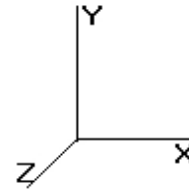
Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
80.00	Flat Platform w/ Han	1	10.572	11.629	1.00	1.00	45.00	0.000	0.000	523.33	0.00	0.00	2,200.00
80.00	48" x 12" Panel	9	10.572	11.629	0.67	0.75	22.93	0.000	0.000	266.65	0.00	0.00	270.00
80.00	72" x 12" Panel	3	10.572	11.629	0.67	0.75	12.26	0.000	0.000	142.53	0.00	0.00	135.00
118.0	DragonWave Horizon	2	11.474	12.621	0.50	1.00	0.43	0.000	0.000	5.43	0.00	0.00	21.20
118.0	Andrew VHLP2-18-	2	11.474	12.621	1.00	1.00	9.38	0.000	0.000	118.39	0.00	0.00	62.00
118.0	Motorola Vx DAP I/V	3	11.474	12.621	0.67	1.00	6.09	0.000	0.000	76.87	0.00	0.00	135.00
118.0	Powerwave P65-18-	3	11.474	12.621	0.66	1.00	10.75	0.000	0.000	135.69	0.00	0.00	60.00
118.0	Stand-Offs	1	11.474	12.621	1.00	1.00	8.50	0.000	0.000	107.28	0.00	0.00	560.00
125.0	Ericsson 800 MHz	3	11.614	12.775	0.50	0.80	0.59	0.000	0.000	7.51	0.00	0.00	30.00
125.0	RFS APXVERR18-C	3	11.614	12.775	0.83	0.80	15.98	0.000	0.000	204.09	0.00	0.00	150.00
125.0	Ericsson RRUS-11 800	3	11.614	12.775	0.67	0.80	4.05	0.000	0.000	51.77	0.00	0.00	162.00
125.0	RFS ACU-A20-N	9	11.614	12.775	0.50	0.80	0.50	0.000	0.000	6.44	0.00	0.00	9.00
125.0	Flat Low Profile Pla	1	11.614	12.775	1.00	1.00	26.10	0.000	0.000	333.43	0.00	0.00	1,500.00
125.0	Tongyu TYDA-	3	11.614	12.775	0.77	0.80	13.92	0.000	0.000	177.77	0.00	0.00	162.00
125.0	Nokia FZHJ	3	11.614	12.775	0.67	0.80	3.26	0.000	0.000	41.70	0.00	0.00	165.60
125.0	Ericsson RRUS 31	3	11.614	12.775	0.50	0.80	1.94	0.000	0.000	24.83	0.00	0.00	168.30
132.0	Stand-Offs	3	11.748	12.922	0.67	1.00	19.50	0.000	0.000	251.95	0.00	0.00	750.00
132.0	36" x 16" Panel	1	11.748	12.922	0.67	0.80	2.57	0.000	0.000	33.25	0.00	0.00	30.00
132.0	Hoffman A1212CHFL	1	11.748	12.922	0.50	0.80	0.48	0.000	0.000	6.20	0.00	0.00	30.00
132.0	Belfort Instrument 6	1	11.748	12.922	0.67	0.80	1.10	0.000	0.000	14.27	0.00	0.00	19.30
132.0	Transtector -48VDC-O	2	11.748	12.922	0.50	0.80	0.32	0.000	0.000	4.14	0.00	0.00	10.00
132.0	Vivotek IP8331	1	11.748	12.922	0.50	0.80	0.04	0.000	0.000	0.47	0.00	0.00	1.40
140.0	Flat Low Profile Pla	1	11.894	13.084	1.00	1.00	30.00	0.000	0.000	392.51	0.00	0.00	1,700.00
140.0	CellMax CMA-	9	11.894	13.084	0.70	0.80	45.61	0.000	0.000	596.77	0.00	0.00	558.00
140.0	Nokia FXFB	2	11.894	13.084	0.67	0.80	4.47	0.000	0.000	58.49	0.00	0.00	110.20
140.0	Nokia FRIE	1	11.894	13.084	0.67	0.80	2.21	0.000	0.000	28.96	0.00	0.00	55.10
140.0	Nokia FRIG w/o Solar	3	11.894	13.084	0.67	0.80	3.68	0.000	0.000	48.18	0.00	0.00	162.00
140.0	Nokia ASU9338TYP01	1	11.894	13.084	0.67	0.80	1.36	0.000	0.000	17.81	0.00	0.00	14.90
146.0	CSS X7-665-4	3	12.034	13.238	0.81	1.00	20.44	0.000	2.000	270.53	0.00	541.05	82.20
146.0	CSS AXP19-60-2	6	12.034	13.238	0.85	0.80	19.83	0.000	2.000	262.48	0.00	524.97	90.00
146.0	Flat Low Profile Pla	1	12.000	13.200	1.00	1.00	30.00	0.000	0.000	395.99	0.00	0.00	1,700.00
										4,605.68			11,103.20

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

6/19/2014 11:52:50 AM
 Page: 18



© 2007 - 2014 by ATC IP LLC. All rights reserved.

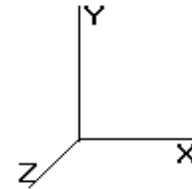
Load Case: 1.0D + 1.0W 60.00 mph Serviceability 19 Iterations
 Gust Response Factor : 1.10 Wind Importance Factor : 1.00
 Dead Load Factor : 1.00
 Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	151.41	2,208.98	0.00	0.00
10.00	148.07	2,163.83	0.00	0.00
15.00	144.72	2,118.68	0.00	0.00
20.00	150.00	2,073.53	0.00	0.00
25.00	153.50	2,028.38	0.00	0.00
30.00	155.64	1,983.23	0.00	0.00
35.00	156.78	1,938.08	0.00	0.00
37.91	90.87	1,106.54	0.00	0.00
40.00	66.39	1,429.29	0.00	0.00
45.00	159.70	3,356.14	0.00	0.00
45.63	19.88	416.82	0.00	0.00
50.00	138.71	1,441.08	0.00	0.00
55.00	157.81	1,611.23	0.00	0.00
60.00	156.25	1,571.10	0.00	0.00
65.00	154.36	1,530.96	0.00	0.00
70.00	152.16	1,490.83	0.00	0.00
74.53	135.77	1,317.23	0.00	0.00
75.00	14.01	237.37	0.00	0.00
80.00	1,082.30	5,111.70	0.00	0.00
81.01	29.71	486.48	0.00	0.00
85.00	116.89	951.16	0.00	0.00
90.00	143.80	1,159.85	0.00	0.00
95.00	140.52	1,124.73	0.00	0.00
100.0	137.06	1,089.62	0.00	0.00
105.0	133.44	1,054.50	0.00	0.00
110.0	129.67	1,019.38	0.00	0.00
115.0	125.76	984.26	0.00	0.00
118.0	517.04	1,411.90	0.00	0.00
119.3	31.86	248.30	0.00	0.00
120.0	16.46	205.06	0.00	0.00
124.2	101.13	1,252.25	0.00	0.00
125.0	866.02	2,455.41	0.00	0.00
130.0	115.47	659.62	0.00	0.00
132.0	355.12	1,097.52	0.00	0.00
135.0	66.01	372.67	0.00	0.00
140.0	1,249.30	3,201.25	0.00	0.00
145.0	101.99	543.32	0.00	0.00
146.0	948.78	1,977.85	0.00	1,066.02
150.0	77.40	353.54	0.00	0.00
151.7	33.22	151.32	0.00	0.00
Totals:	8,824.97	56,935.02	0.00	1,066.02

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)



Load Case: 1.0D + 1.0W

60.00 mph Serviceability

19 Iterations

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

Wind Importance Factor : 1.00

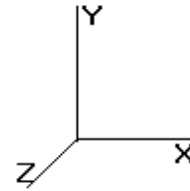
Calculated Forces

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	-56.93	-8.83	0.00	-892.40	0.00	892.40	8,450.60	4,225.30	23,405.6	11,720.2	0.00	0.00	0.083
5.00	-54.72	-8.70	0.00	-848.23	0.00	848.23	8,322.41	4,161.20	22,538.2	11,285.8	0.01	-0.02	0.082
10.00	-52.56	-8.57	0.00	-804.73	0.00	804.73	8,191.60	4,095.80	21,679.7	10,856.0	0.04	-0.04	0.081
15.00	-50.43	-8.44	0.00	-761.90	0.00	761.90	8,058.17	4,029.08	20,830.6	10,430.8	0.09	-0.05	0.079
20.00	-48.36	-8.30	0.00	-719.72	0.00	719.72	7,922.12	3,961.06	19,991.3	10,010.5	0.15	-0.07	0.078
25.00	-46.33	-8.16	0.00	-678.21	0.00	678.21	7,783.45	3,891.73	19,162.2	9,595.38	0.24	-0.09	0.077
30.00	-44.34	-8.02	0.00	-637.42	0.00	637.42	7,642.17	3,821.09	18,344.0	9,185.66	0.35	-0.11	0.075
35.00	-42.40	-7.87	0.00	-597.34	0.00	597.34	7,498.27	3,749.14	17,537.0	8,781.58	0.47	-0.13	0.074
37.91	-41.29	-7.78	0.00	-574.47	0.00	574.47	7,413.36	3,706.68	17,073.0	8,549.23	0.56	-0.14	0.073
40.00	-39.86	-7.72	0.00	-558.19	0.00	558.19	7,351.75	3,675.88	16,741.8	8,383.39	0.62	-0.15	0.072
45.00	-36.51	-7.56	0.00	-519.60	0.00	519.60	7,170.42	3,585.21	15,887.5	7,955.60	0.79	-0.17	0.070
45.63	-36.09	-7.54	0.00	-514.84	0.00	514.84	6,282.02	3,141.01	14,162.7	7,091.91	0.81	-0.17	0.078
50.00	-34.64	-7.41	0.00	-481.88	0.00	481.88	6,174.73	3,087.37	13,588.7	6,804.45	0.98	-0.19	0.076
55.00	-33.03	-7.26	0.00	-444.82	0.00	444.82	6,049.53	3,024.76	12,940.8	6,480.02	1.19	-0.21	0.074
60.00	-31.46	-7.11	0.00	-408.52	0.00	408.52	5,921.70	2,960.85	12,302.8	6,160.57	1.43	-0.23	0.072
65.00	-29.93	-6.96	0.00	-372.98	0.00	372.98	5,791.26	2,895.63	11,675.3	5,846.37	1.68	-0.25	0.069
70.00	-28.43	-6.81	0.00	-338.18	0.00	338.18	5,622.69	2,811.34	10,989.4	5,502.89	1.96	-0.28	0.067
74.53	-27.11	-6.67	0.00	-307.30	0.00	307.30	5,463.76	2,731.88	10,373.8	5,194.64	2.23	-0.30	0.064
75.00	-26.88	-6.66	0.00	-304.20	0.00	304.20	5,447.43	2,723.72	10,311.6	5,163.47	2.26	-0.30	0.064
80.00	-21.77	-5.56	0.00	-270.88	0.00	270.88	5,272.18	2,636.09	9,655.35	4,834.85	2.58	-0.32	0.060
81.01	-21.28	-5.53	0.00	-265.28	0.00	265.28	4,611.07	2,305.54	8,578.08	4,295.42	2.65	-0.32	0.066
85.00	-20.33	-5.41	0.00	-243.20	0.00	243.20	4,521.48	2,260.74	8,189.21	4,100.69	2.93	-0.34	0.064
90.00	-19.17	-5.27	0.00	-216.14	0.00	216.14	4,403.17	2,201.59	7,703.92	3,857.68	3.29	-0.36	0.060
95.00	-18.04	-5.13	0.00	-189.78	0.00	189.78	4,249.82	2,124.91	7,174.03	3,592.34	3.68	-0.38	0.057
100.00	-16.95	-4.99	0.00	-164.14	0.00	164.14	4,096.47	2,048.24	6,663.02	3,336.46	4.09	-0.40	0.053
105.00	-15.90	-4.85	0.00	-139.19	0.00	139.19	3,943.12	1,971.56	6,170.88	3,090.03	4.53	-0.42	0.049
110.00	-14.88	-4.72	0.00	-114.92	0.00	114.92	3,789.77	1,894.89	5,697.63	2,853.05	4.98	-0.44	0.044
115.00	-13.89	-4.59	0.00	-91.31	0.00	91.31	3,636.43	1,818.21	5,243.26	2,625.53	5.45	-0.46	0.039
118.00	-12.49	-4.06	0.00	-77.53	0.00	77.53	3,544.42	1,772.21	4,979.70	2,493.55	5.74	-0.47	0.035
119.32	-12.24	-4.03	0.00	-72.15	0.00	72.15	3,503.83	1,751.91	4,865.60	2,436.42	5.87	-0.47	0.033
120.00	-12.03	-4.01	0.00	-69.42	0.00	69.42	3,483.08	1,741.54	4,807.77	2,407.46	5.94	-0.47	0.032
124.21	-10.78	-3.90	0.00	-52.51	0.00	52.51	2,398.29	1,199.14	3,272.62	1,638.74	6.36	-0.48	0.037
125.00	-8.33	-3.02	0.00	-49.44	0.00	49.44	2,386.01	1,193.01	3,232.79	1,618.80	6.44	-0.48	0.034
130.00	-7.67	-2.90	0.00	-34.34	0.00	34.34	2,306.40	1,153.20	2,982.95	1,493.69	6.95	-0.50	0.026
132.00	-6.58	-2.53	0.00	-28.55	0.00	28.55	2,273.81	1,136.91	2,884.82	1,444.56	7.16	-0.50	0.023
135.00	-6.21	-2.47	0.00	-20.94	0.00	20.94	2,214.57	1,107.29	2,727.87	1,365.96	7.48	-0.51	0.018
140.00	-3.02	-1.19	0.00	-8.61	0.00	8.61	2,105.04	1,052.52	2,463.38	1,233.52	8.02	-0.51	0.008
145.00	-2.47	-1.08	0.00	-2.67	0.00	2.67	1,995.50	997.75	2,212.37	1,107.83	8.56	-0.52	0.004
146.00	-0.50	-0.12	0.00	-0.52	0.00	0.52	1,973.59	986.80	2,163.79	1,083.50	8.67	-0.52	0.001
150.00	-0.15	-0.03	0.00	-0.06	0.00	0.06	1,885.97	942.98	1,974.85	988.89	9.10	-0.52	0.000
151.77	0.00	-0.03	0.00	0.00	0.00	0.00	1,847.19	923.59	1,894.00	948.41	9.29	-0.52	0.000

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

6/19/2014 11:52:50 AM
 Page: 20



© 2007 - 2014 by ATC IP LLC. All rights reserved.

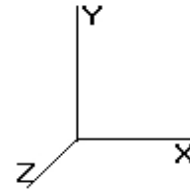
Analysis Summary

Load Case	Reactions						Max Usage	
	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 + 1.6W	68.43	0.00	68.24	0.00	0.00	6928.54	0.00	0.60
0.9D + 1.6W	68.40	0.00	51.16	0.00	0.00	6895.31	0.00	0.59
1.2D + 1.0Di + 1.0Wi	3.09	0.00	67.07	0.00	0.00	287.62	0.00	0.03
1.0D + 1.0W	8.83	0.00	56.93	0.00	0.00	892.40	0.00	0.08

Pole : 302653
 Location : Coppola, FL
 Height : 151.7 (ft)
 Base Dia : 68.00 (in)
 Top Dia : 25.38 (in)
 Shape : 18 Sides
 Taper : 0.297292 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : C
 Topographic Category : 1
 Base Elev : 0.000 (ft)

6/19/2014 11:52:50 AM
 Page: 21



© 2007 - 2014 by ATC IP LLC. All rights reserved.

Base Summary

Reactions

Original Design			Analysis			Moment Design %
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	
7,835.60	53.50	72.90	6,928.54	68.24	68.43	65.50

Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Mu (kip-in)	Phi Mn (kip-in)	Ratio
60.0	2.750	83.000	Round	0	0.00	7.194	447.90	734.48	0.61

Anchor Bolts

Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Start Angle (deg)	Compression			Tension		
									Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
77.00	30	2.25" 18J	2.25	75.00	100.00	Radial	0.00	0.0	146.24	260.00	0.58	141.70	260.00	0.56