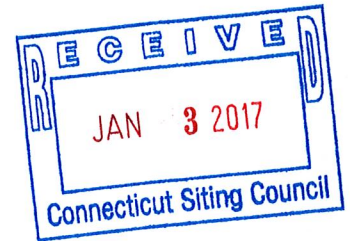


KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts

December 30, 2016



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

Re: **EM-VER-080-160921 – Cellco Partnership d/b/a Verizon Wireless
651 Paddock Avenue, Meriden, Connecticut**

ORIGINAL

Dear Ms. Bachman:

On October 11, 2016, the Siting Council acknowledged receipt of the Cellco Partnership d/b/a Verizon Wireless (“Cellco”) notice of intent to modify its existing telecommunications facility at 651 Paddock Avenue in Meriden, Connecticut. The modifications involved the replacement of certain antennas and the installation of new remote radio heads.

As a condition of the acknowledgement, Cellco was required to provide the Council with an updated Structural Analysis Report referencing Rev. G of the structural standards. The updated Structural Analysis Report is attached for your records.

If you have any questions please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kenneth C. Baldwin".

Kenneth C. Baldwin

Attachment
Copy to:
Tim Parks

15943224-v1



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
8445 Freeport Parkway, Suite 375, Irving, Texas 75063

Structural Analysis Report

Existing 119 ft SABRE Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT13069-A

Customer Site Name: Meriden

Carrier Name: Verizon

Carrier Site ID / Name: 179857

Site Location: 651 Paddock Avenue

Meriden, CT

New Haven County

Latitude: 41.512750

Longitude: -72.779449

Analysis Result:

Max Structural Usage: 62.0% [Pass]

Max Foundation Usage: 61.8% [Pass]

Report Prepared By : Fabiaye Arinyedokiari





Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
8445 Freeport Parkway, Suite 375, Irving, Texas 75063

Structural Analysis Report

Existing 119 ft SABRE Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT13069-A

Customer Site Name: Meriden

Carrier Name: Verizon

Carrier Site ID / Name: 179857

Site Location: 651 Paddock Avenue

Meriden, CT

New Haven County

Latitude: 41.512750

Longitude: -72.779449

Analysis Result:

Max Structural Usage: 62.0% [Pass]

Max Foundation Usage: 61.8% [Pass]

Report Prepared By : Fabiaye Arinyedokiari

Introduction

The purpose of this report is to summarize the analysis results on the 119 ft SABRE Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Sabre, Job #08-10201 dated November 9, 2007
Foundation Drawing	Sabre, Job #08-10201 dated November 9, 2007
Geotechnical Report	Gemini Geotechnical Associates, Project #07099CT dated August 21, 2007
Modification Drawings	N/A

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-G. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2012 IBC / 2016 Connecticut State Building Code
Exposure Category:	B
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_S = 0.183$, $S_1 = 0.063$

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	117.0	3	Ericsson AIR 21 B2A/B4P - Panel	Standoff Mount (SitePro RDS-272)	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
2		3	Ericsson AIR 21 B4A/B2P - Panel			
3		3	Ericsson KRY 112 144/1 - TMA			
4		3	Ericsson S11B12 - RRU			
-	107.0	3	Commscope DBXNH-6565B-VTM - Panel	(3) Side Arm	(12) 1 5/8" (1) 1 5/8" Fiber	Verizon
-		3	Amphenol BXA-80063-6BF - Panel			
-		3	Antel BXA-171063/12BF - Panel			
-		6	RFS FD9R6004/2C-3L - Diplexers			
-		3	ALU RRH-2X40-AWS - RRH			
-		1	RFS DB-T1-6Z-8AB-0Z – Distribution Box			
11	97.0	3	Argus LLPX310R	(3) Side Arm	(3) 1/2" (6) 5/16"	Clearwire
12		3	Samsung 2.5GHz RRH			
13		1	Andrew VHLP1-23 - Dish			
14		2	Andrew VHLP2-18 - Dish			

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
5	107.0	3	Amphenol BXA-80063-6BF-EDIN-X – Panel	(3) Side Arm	(11) 1 5/8" (2) 1 5/8" Hybriflex Fiber	Verizon
6		6	Andrew SBNHH-1D65B – Panel			
7		3	ALU RRH2X90-AWS - RRH			
8		3	ALU RRH2X60-PCS - RRH			
9		3	ALU RRH2X60-700 - RRH			
10		2	RFS DB-T1-6Z-8AB-0Z – Distribution Box			

(1) 1 5/8" Fiber was considered running outside of pole shaft all other proposed transmission lines are considered running inside of the pole shaft. If installed outside, the line shall be strapped tightly to the face of the pole shaft. Stacking lines is not allowed.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	62.0%	55.4%	46.9%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Original Design Reactions	1627.5	19.1	26.6
Analysis Reactions	1115.4	13.4	21.0
Factored Reactions*	2197.1	25.8	36.0
% of Design Reactions	50.8%	51.9%	58.3%

* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design reactions.

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

The maximum twist and sway of the microwave dishes under the operational wind speed as specified in the Analysis Criteria are listed in the table below:

Elevation (ft)	Antenna / Dish	Carrier	Twist (deg)	Sway (deg)
107.0	Proposed Antennas	Verizon	0.000	0.727
97.0	Andrew VHLP2-18 - Dish	Clearwire	0.000	0.709
	Andrew VHLP1-23 - Dish			

It is recommended that the carriers review the twist and sway values of the microwave dishes.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the ANSI/TIA/EIA 222-G Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The analysis is based on the presumption that the tower members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.
3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion.
4. An initial tension of 10% of the break strength on all the existing guy wires was assumed in all the structural analyses of guyed towers unless different values were provided by the client. **TES** cannot take responsibility for the deviations in the analysis results because of differences in the initial tension forces of the existing guy wires.
5. Secondary component or connection secondary components, welds and bolts are assumed to be able to carry their intended original design loads. **TES** cannot take responsibility for verification of the adequacy on the connections, bolts and welds present in the structure.
6. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
7. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
8. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
9. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Ratio 62.00% at 0.0ft

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-G
Exposure: B
Gh: 1.1

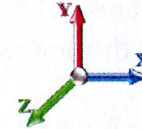
10/21/2016

Page: 1



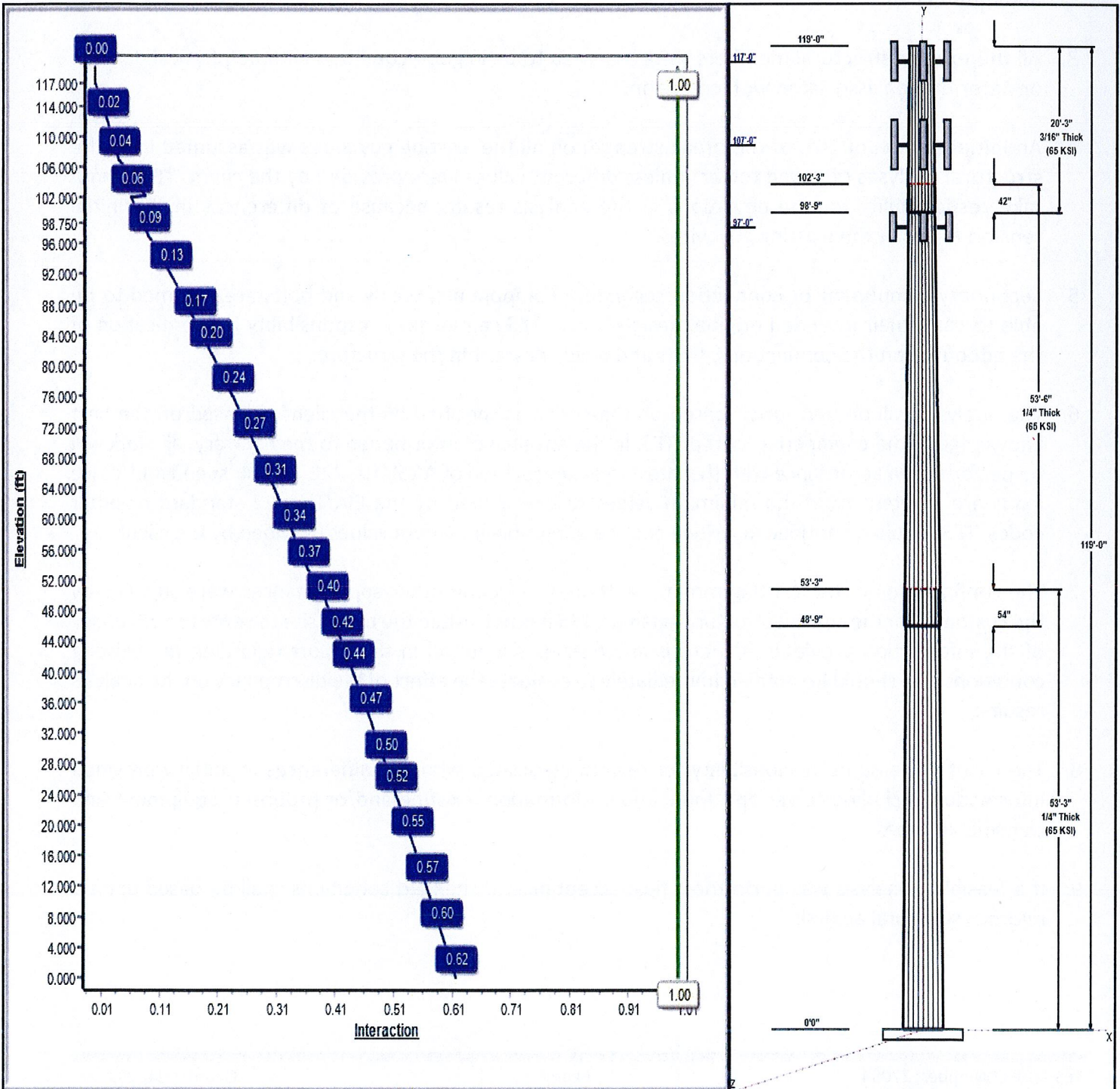
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 27

Copyright © 2016 by Tower Engineering Solutions, LLC. All rights reserved.



Structure: CT13069-A-SBA

Type: Tapered
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.16197

10/21/2016

Page: 2



Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	34.63	43.26	0.250		0.16197	65
2	53.50	27.20	35.86	0.250	Slip	0.16197	65
3	20.25	24.86	28.14	0.188	Slip	0.16197	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
117.00	117.00	3	AIR 21 B2A B4P	T-Mobile
117.00	117.00	3	AIR 21 B4A B2P	T-Mobile
117.00	117.00	3	KRY 112 144/1	T-Mobile
117.00	117.00	3	S11B12	T-Mobile
117.00	117.00	3	(3) Standoff Mount	T-Mobile
107.00	107.00	3	Side Arms	Verizon
107.00	107.00	3	BXA-80063-6BF-EDIN-X	Verizon
107.00	107.00	6	SBNHH-1D65B	Verizon
107.00	107.00	3	RRH2X90-AWS	Verizon
107.00	107.00	3	RRH2X60-PCS	Verizon
107.00	107.00	3	RRH2X60-700	Verizon
107.00	107.00	2	DB-T1-6Z-8AB-OZ	Verizon
97.00	97.00	3	LLPX310R	Clearwire
97.00	97.00	2	VHLP2-18	Clearwire
97.00	97.00	1	VHLP1-23	Clearwire
97.00	97.00	3	2.5GHz RRH	Clearwire
97.00	97.00	3	Side Arm	Clearwire

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	117.00	Inside	1 5/8" Coax	T-Mobile
0.00	117.00	Inside	1 5/8" Fiber	T-Mobile
0.00	107.00	Inside	1 5/8" Coax	Verizon
0.00	107.00	Outside	1 5/8" Hybrid	Verizon
0.00	107.00	Inside	1 5/8" Hybriflex Fiber	Verizon
0.00	97.00	Inside	1/2" Coax	Clearwire
0.00	97.00	Inside	5/16" Coax	Clearwire

Anchor Bolts

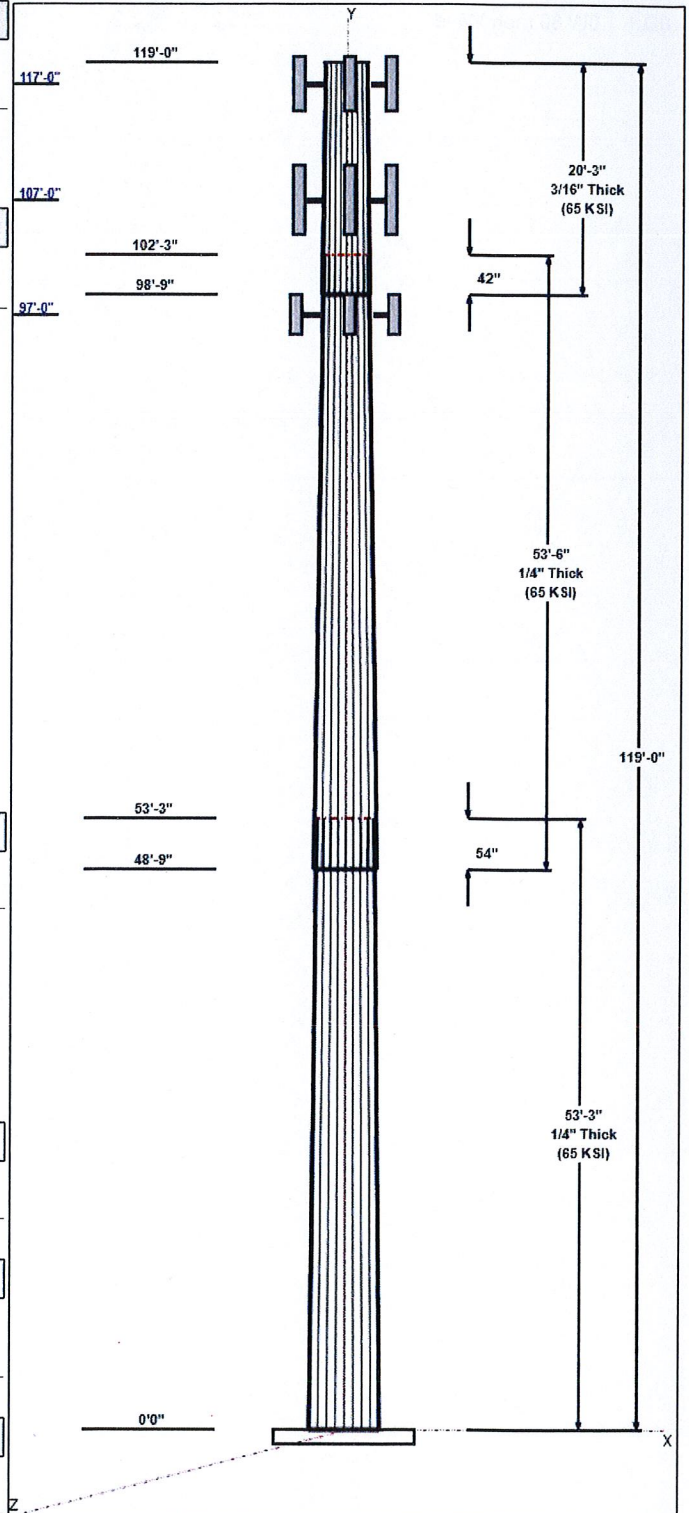
Qty	Specifications	Grade (ksi)	Arrangement
8	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.2500	47.0	60.0	Clipped

Reactions

Load Case	Moment	Shear	Axial
1.2D + 1.6W 97 mph Wind	1115.4	13.4	21.0
0.9D + 1.6W 97 mph Wind	1106.3	13.3	15.7
1.2D + 1.0Di + 1.0Wi 50 mph Wind	312.9	3.8	34.7
1.2D + 1.0E	78.8	0.8	21.0
0.9D + 1.0E	78.1	0.8	15.8



Structure: CT13069-A-SBA

Type: Tapered
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.16197

10/21/2016

Page: 3



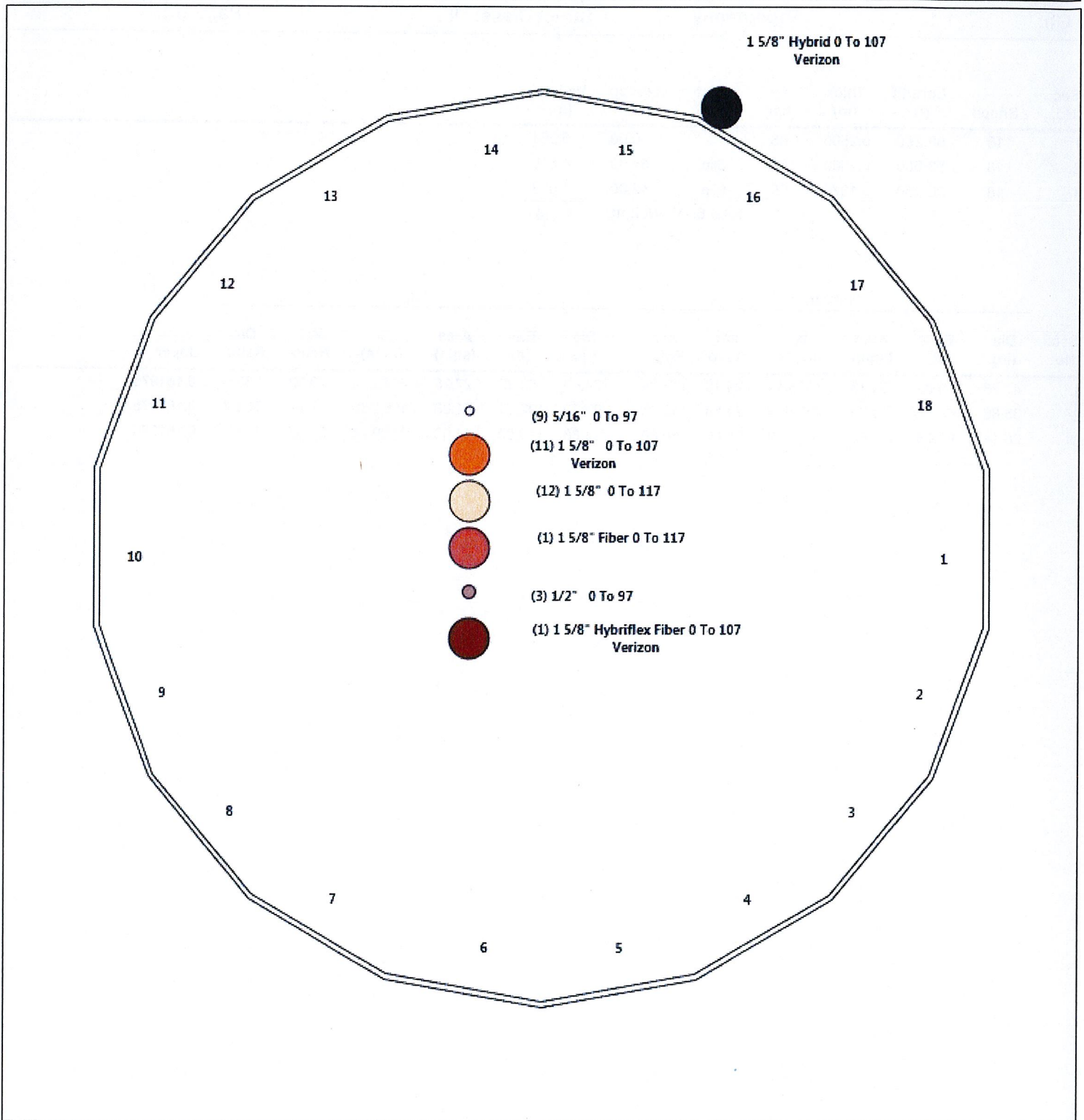
1.0D + 1.0W 60 mph Wind 265.2 3.2 17.5

Structure: CT13069-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Meriden
Height: 119.00 (ft)

10/21/2016

Page: 4



Shaft Properties

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 5

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	53.250	0.2500	65		0.00	5,564
2	18	53.500	0.2500	65	Slip	54.00	4,519
3	18	20.250	0.1875	65	Slip	42.00	1,079
Total Shaft Weight:							11,161

Bottom

Top

Sec. No.	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
1	43.26	0.00	34.13	7976.14	29.10	173.04	34.63	53.25	27.28	4075.54	23.02	138.5	0.161975
2	35.86	48.75	28.26	4528.32	23.88	143.45	27.20	102.25	21.38	1961.86	17.77	108.7	0.161975
3	28.14	98.75	16.63	1642.13	25.05	150.08	24.86	119.00	14.68	1129.24	21.97	132.5	0.161975

Load Summary

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 6

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	117.00	AIR 21 B2A B4P	3	91.50	6.09	0.83	255.46	7.159	0.83	0.00	0.00
2	117.00	AIR 21 B4A B2P	3	96.00	6.09	0.83	259.96	7.159	0.83	0.00	0.00
3	117.00	KRY 112 144/1	3	11.00	0.41	0.72	21.52	0.874	0.72	0.00	0.00
4	117.00	S11B12	3	51.00	2.83	0.67	118.89	3.485	0.71	0.00	0.00
5	117.00	(3) Standoff Mount (RDS-272)	3	198.00	5.00	0.67	359.79	8.405	0.67	0.00	0.00
6	107.00	Side Arms	3	120.00	4.50	0.67	221.23	9.572	0.67	0.00	0.00
7	107.00	BXA-80063-6BF-EDIN-X	3	19.20	7.26	0.78	182.12	8.451	0.78	0.00	0.00
8	107.00	SBNHH-1D65B	6	40.60	8.08	0.83	234.27	9.326	0.83	0.00	0.00
9	107.00	RRH2X90-AWS	3	64.00	3.87	0.67	144.16	3.279	0.75	0.00	0.00
10	107.00	RRH2X60-PCS	3	55.00	2.20	0.67	136.08	2.813	0.89	0.00	0.00
11	107.00	RRH2X60-700	3	55.00	3.50	0.67	132.36	4.263	0.76	0.00	0.00
12	107.00	DB-T1-6Z-8AB-0Z	2	18.90	4.80	0.67	157.03	5.643	0.71	0.00	0.00
13	97.00	LLPX310R	3	28.60	4.30	0.69	115.05	5.889	0.69	0.00	0.00
14	97.00	VHLP2-18	2	31.00	4.69	1.00	124.68	5.912	1.00	0.00	0.00
15	97.00	VHLP1-23	1	14.20	1.61	1.00	48.07	2.336	1.00	0.00	0.00
16	97.00	2.5GHz RRH	3	33.00	1.82	0.67	72.81	2.754	0.73	0.00	0.00
17	97.00	Side Arm	3	120.00	4.50	0.67	220.25	9.522	0.67	0.00	0.00
Totals:			50	3,184.50			8,736.17				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	117.00	(12) 1 5/8" Coax	0.00	Inside
0.00	117.00	(1) 1 5/8" Fiber	0.00	Inside
0.00	107.00	(11) 1 5/8" Coax	0.00	Inside
0.00	107.00	(1) 1 5/8" Hybrid	2.00	Outside
0.00	107.00	(1) 1 5/8" Hybriflex Fiber	0.00	Inside
0.00	97.00	(3) 1/2" Coax	0.00	Inside
0.00	97.00	(9) 5/16" Coax	0.00	Inside

Shaft Section Properties

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 7

Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in ³)	Weight (lb)
0.00		0.2500	43.260	34.127	7976.1	29.10	173.04	67.2	363.2	0.0
2.00		0.2500	42.936	33.870	7797.3	28.87	171.74	67.4	357.7	231.4
4.00		0.2500	42.612	33.613	7621.1	28.64	170.45	67.7	352.3	229.6
6.00		0.2500	42.288	33.356	7447.6	28.42	169.15	68.0	346.9	227.9
8.00		0.2500	41.964	33.099	7276.7	28.19	167.86	68.2	341.5	226.1
10.00		0.2500	41.640	32.842	7108.5	27.96	166.56	68.5	336.2	224.4
12.00		0.2500	41.316	32.585	6942.9	27.73	165.27	68.8	331.0	222.6
14.00		0.2500	40.992	32.328	6779.9	27.50	163.97	69.1	325.8	220.9
16.00		0.2500	40.668	32.071	6619.4	27.27	162.67	69.3	320.6	219.1
18.00		0.2500	40.344	31.814	6461.6	27.04	161.38	69.6	315.5	217.4
20.00		0.2500	40.021	31.557	6306.2	26.82	160.08	69.9	310.4	215.6
22.00		0.2500	39.697	31.300	6153.3	26.59	158.79	70.1	305.3	213.9
24.00		0.2500	39.373	31.043	6003.0	26.36	157.49	70.4	300.3	212.1
26.00		0.2500	39.049	30.786	5855.1	26.13	156.19	70.7	295.3	210.4
28.00		0.2500	38.725	30.529	5709.7	25.90	154.90	70.9	290.4	208.6
30.00		0.2500	38.401	30.272	5566.6	25.67	153.60	71.2	285.5	206.9
32.00		0.2500	38.077	30.014	5426.0	25.45	152.31	71.5	280.7	205.1
34.00		0.2500	37.753	29.757	5287.8	25.22	151.01	71.7	275.9	203.4
36.00		0.2500	37.429	29.500	5152.0	24.99	149.72	72.0	271.1	201.6
38.00		0.2500	37.105	29.243	5018.5	24.76	148.42	72.3	266.4	199.9
40.00		0.2500	36.781	28.986	4887.3	24.53	147.12	72.5	261.7	198.1
42.00		0.2500	36.457	28.729	4758.4	24.30	145.83	72.8	257.1	196.4
44.00		0.2500	36.133	28.472	4631.9	24.07	144.53	73.1	252.5	194.6
46.00		0.2500	35.809	28.215	4507.5	23.85	143.24	73.4	247.9	192.9
48.00		0.2500	35.485	27.958	4385.5	23.62	141.94	73.6	243.4	191.1
48.75	Bot - Section 2	0.2500	35.364	27.862	4340.3	23.53	141.45	73.7	241.7	71.2
50.00		0.2500	35.161	27.701	4265.6	23.39	140.65	73.9	238.9	238.0
52.00		0.2500	34.837	27.444	4148.0	23.16	139.35	74.2	234.5	378.0
53.25	Top - Section 1	0.2500	35.135	27.680	4255.9	23.37	140.54	0.0	0.0	234.5
54.00		0.2500	35.013	27.584	4211.6	23.28	140.05	74.0	236.9	70.5
56.00		0.2500	34.689	27.327	4095.0	23.06	138.76	74.3	232.5	186.8
58.00		0.2500	34.365	27.070	3980.5	22.83	137.46	74.6	228.1	185.1
60.00		0.2500	34.042	26.813	3868.2	22.60	136.17	74.8	223.8	183.3
62.00		0.2500	33.718	26.556	3758.0	22.37	134.87	75.1	219.5	181.6
64.00		0.2500	33.394	26.299	3649.9	22.14	133.57	75.4	215.3	179.9
66.00		0.2500	33.070	26.041	3543.9	21.91	132.28	75.6	211.1	178.1
68.00		0.2500	32.746	25.784	3440.0	21.69	130.98	75.9	206.9	176.4
70.00		0.2500	32.422	25.527	3338.2	21.46	129.69	76.2	202.8	174.6
72.00		0.2500	32.098	25.270	3238.3	21.23	128.39	76.4	198.7	172.9
74.00		0.2500	31.774	25.013	3140.5	21.00	127.10	76.7	194.7	171.1
76.00		0.2500	31.450	24.756	3044.7	20.77	125.80	77.0	190.7	169.4
78.00		0.2500	31.126	24.499	2950.8	20.54	124.50	77.2	186.7	167.6
80.00		0.2500	30.802	24.242	2858.9	20.31	123.21	77.5	182.8	165.9
82.00		0.2500	30.478	23.985	2769.0	20.09	121.91	77.8	178.9	164.1
84.00		0.2500	30.154	23.728	2680.9	19.86	120.62	78.0	175.1	162.4
86.00		0.2500	29.830	23.471	2594.7	19.63	119.32	78.3	171.3	160.6
88.00		0.2500	29.506	23.214	2510.4	19.40	118.02	78.6	167.6	158.9
90.00		0.2500	29.182	22.957	2427.9	19.17	116.73	78.9	163.9	157.1
92.00		0.2500	28.858	22.700	2347.3	18.94	115.43	79.1	160.2	155.4
94.00		0.2500	28.534	22.443	2268.4	18.71	114.14	79.4	156.6	153.6

Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in ³)	Weight (lb)
96.00		0.2500	28.210	22.186	2191.4	18.49	112.84	79.7	153.0	151.9
97.00		0.2500	28.048	22.057	2153.5	18.37	112.19	79.8	151.2	75.3
98.00		0.2500	27.886	21.929	2116.1	18.26	111.55	79.9	149.5	74.8
98.75	Bot - Section 3	0.2500	27.765	21.832	2088.3	18.17	111.06	80.0	148.1	55.8
100.00		0.2500	27.563	21.672	2042.5	18.03	110.25	80.2	146.0	163.0
102.00		0.2500	27.239	21.415	1970.7	17.80	108.95	80.5	142.5	258.3
102.25	Top - Section 2	0.1875	27.573	16.297	1544.2	24.52	147.06	0.0	0.0	32.1
104.00		0.1875	27.290	16.129	1496.8	24.25	145.54	72.9	108.0	96.5
106.00		0.1875	26.966	15.936	1443.7	23.95	143.82	73.2	105.5	109.1
107.00		0.1875	26.804	15.839	1417.7	23.80	142.95	73.4	104.2	54.1
108.00		0.1875	26.642	15.743	1392.0	23.64	142.09	73.6	102.9	53.7
110.00		0.1875	26.318	15.550	1341.5	23.34	140.36	74.0	100.4	106.5
112.00		0.1875	25.994	15.357	1292.2	23.03	138.63	74.3	97.9	105.2
114.00		0.1875	25.670	15.165	1244.1	22.73	136.91	74.7	95.5	103.9
116.00		0.1875	25.346	14.972	1197.3	22.42	135.18	75.0	93.0	102.5
117.00		0.1875	25.184	14.875	1174.3	22.27	134.31	75.2	91.8	50.8
118.00		0.1875	25.022	14.779	1151.6	22.12	133.45	75.4	90.7	50.5
119.00		0.1875	24.860	14.683	1129.2	21.97	132.59	75.6	89.5	50.1
										11161.3

Wind Loading - Shaft

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016

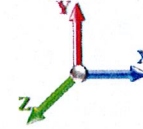
Page: 9



Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 27

Dead Load Factor 1.20
Wind Load Factor 1.60



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	16.018	17.62	297.08	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	16.018	17.62	294.86	0.650	0.000	2.00	7.294	4.74	133.7	0.0	277.7
4.00		1.00	0.70	16.018	17.62	292.63	0.650	0.000	2.00	7.239	4.71	132.7	0.0	275.6
6.00		1.00	0.70	16.018	17.62	290.41	0.650	0.000	2.00	7.184	4.67	131.6	0.0	273.5
8.00		1.00	0.70	16.018	17.62	288.18	0.650	0.000	2.00	7.129	4.63	130.6	0.0	271.4
10.00		1.00	0.70	16.018	17.62	285.96	0.650	0.000	2.00	7.075	4.60	129.6	0.0	269.3
12.00		1.00	0.70	16.018	17.62	283.73	0.650	0.000	2.00	7.020	4.56	128.6	0.0	267.2
14.00		1.00	0.70	16.018	17.62	281.51	0.650	0.000	2.00	6.965	4.53	127.6	0.0	265.1
16.00		1.00	0.70	16.018	17.62	279.28	0.650	0.000	2.00	6.910	4.49	126.6	0.0	263.0
18.00		1.00	0.70	16.018	17.62	277.06	0.650	0.000	2.00	6.855	4.46	125.6	0.0	260.9
20.00		1.00	0.70	16.018	17.62	274.83	0.650	0.000	2.00	6.800	4.42	124.6	0.0	258.8
22.00		1.00	0.70	16.018	17.62	272.61	0.650	0.000	2.00	6.746	4.38	123.6	0.0	256.7
24.00		1.00	0.70	16.018	17.62	270.38	0.650	0.000	2.00	6.691	4.35	122.6	0.0	254.6
26.00		1.00	0.70	16.018	17.62	268.16	0.650	0.000	2.00	6.636	4.31	121.6	0.0	252.5
28.00		1.00	0.70	16.018	17.62	265.94	0.650	0.000	2.00	6.581	4.28	120.6	0.0	250.4
30.00		1.00	0.70	16.031	17.63	263.82	0.650	0.000	2.00	6.526	4.24	119.7	0.0	248.3
32.00		1.00	0.71	16.330	17.96	264.02	0.650	0.000	2.00	6.471	4.21	120.9	0.0	246.2
34.00		1.00	0.73	16.615	18.28	264.05	0.650	0.000	2.00	6.417	4.17	122.0	0.0	244.1
36.00		1.00	0.74	16.889	18.58	263.93	0.650	0.000	2.00	6.362	4.14	122.9	0.0	242.0
38.00		1.00	0.75	17.152	18.87	263.68	0.650	0.000	2.00	6.307	4.10	123.8	0.0	239.9
40.00		1.00	0.76	17.405	19.15	263.30	0.650	0.000	2.00	6.252	4.06	124.5	0.0	237.8
42.00		1.00	0.77	17.649	19.41	262.80	0.650	0.000	2.00	6.197	4.03	125.1	0.0	235.7
44.00		1.00	0.78	17.885	19.67	262.20	0.650	0.000	2.00	6.142	3.99	125.7	0.0	233.6
46.00		1.00	0.79	18.114	19.93	261.51	0.650	0.000	2.00	6.088	3.96	126.2	0.0	231.5
48.00		1.00	0.80	18.335	20.17	260.72	0.650	0.000	2.00	6.033	3.92	126.5	0.0	229.4
48.75 Bot - Section 2		1.00	0.80	18.417	20.26	260.41	0.650	0.000	0.75	2.248	1.46	47.4	0.0	85.5
50.00		1.00	0.81	18.551	20.41	259.85	0.650	0.000	1.25	3.783	2.46	80.3	0.0	285.6
52.00		1.00	0.82	18.760	20.64	258.91	0.650	0.000	2.00	6.008	3.91	128.9	0.0	453.6
53.25 Top - Section 1		1.00	0.83	18.887	20.78	258.28	0.650	0.000	1.25	3.727	2.42	80.5	0.0	281.4
54.00		1.00	0.83	18.963	20.86	261.62	0.650	0.000	0.75	2.226	1.45	48.3	0.0	84.6
56.00		1.00	0.84	19.161	21.08	260.55	0.650	0.000	2.00	5.898	3.83	129.3	0.0	224.2
58.00		1.00	0.85	19.354	21.29	259.41	0.650	0.000	2.00	5.843	3.80	129.4	0.0	222.1
60.00		1.00	0.85	19.543	21.50	258.22	0.650	0.000	2.00	5.789	3.76	129.4	0.0	220.0
62.00		1.00	0.86	19.726	21.70	256.96	0.650	0.000	2.00	5.734	3.73	129.4	0.0	217.9
64.00		1.00	0.87	19.906	21.90	255.65	0.650	0.000	2.00	5.679	3.69	129.3	0.0	215.8
66.00		1.00	0.88	20.082	22.09	254.28	0.650	0.000	2.00	5.624	3.66	129.2	0.0	213.7
68.00		1.00	0.89	20.254	22.28	252.87	0.650	0.000	2.00	5.569	3.62	129.0	0.0	211.6
70.00		1.00	0.89	20.422	22.46	251.41	0.650	0.000	2.00	5.514	3.58	128.8	0.0	209.5
72.00		1.00	0.90	20.587	22.65	249.90	0.650	0.000	2.00	5.460	3.55	128.6	0.0	207.4
74.00		1.00	0.91	20.749	22.82	248.35	0.650	0.000	2.00	5.405	3.51	128.3	0.0	205.3
76.00		1.00	0.91	20.908	23.00	246.75	0.650	0.000	2.00	5.350	3.48	128.0	0.0	203.2
78.00		1.00	0.92	21.064	23.17	245.12	0.650	0.000	2.00	5.295	3.44	127.6	0.0	201.1
80.00		1.00	0.93	21.217	23.34	243.45	0.650	0.000	2.00	5.240	3.41	127.2	0.0	199.0
82.00		1.00	0.93	21.367	23.50	241.74	0.650	0.000	2.00	5.185	3.37	126.8	0.0	196.9
84.00		1.00	0.94	21.514	23.67	239.99	0.650	0.000	2.00	5.131	3.33	126.3	0.0	194.8
86.00		1.00	0.95	21.660	23.83	238.21	0.650	0.000	2.00	5.076	3.30	125.8	0.0	192.7
88.00		1.00	0.95	21.802	23.98	236.40	0.650	0.000	2.00	5.021	3.26	125.2	0.0	190.6

Wind Loading - Shaft

Structure: CT13069-A-SBA

Code: EIA/TIA-222-G

10/21/2016

Site Name: Meriden

Exposure: B

Height: 119.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 10



90.00	1.00	0.96	21.943	24.14	234.56	0.650	0.000	2.00	4.966	3.23	124.7	0.0	188.5	
92.00	1.00	0.96	22.081	24.29	232.68	0.650	0.000	2.00	4.911	3.19	124.1	0.0	186.4	
94.00	1.00	0.97	22.217	24.44	230.78	0.650	0.000	2.00	4.857	3.16	123.4	0.0	184.3	
96.00	1.00	0.98	22.351	24.59	228.85	0.650	0.000	2.00	4.802	3.12	122.8	0.0	182.2	
97.00 Appurtenance(s)	1.00	0.98	22.417	24.66	227.87	0.650	0.000	1.00	2.380	1.55	61.0	0.0	90.3	
98.00	1.00	0.98	22.483	24.73	226.89	0.650	0.000	1.00	2.367	1.54	60.9	0.0	89.8	
98.75 Bot - Section 3	1.00	0.98	22.532	24.79	226.14	0.650	0.000	0.75	1.766	1.15	45.5	0.0	67.0	
100.00	1.00	0.99	22.613	24.87	224.90	0.650	0.000	1.25	2.966	1.93	76.7	0.0	195.6	
102.00	1.00	0.99	22.742	25.02	222.89	0.650	0.000	2.00	4.701	3.06	122.3	0.0	310.0	
102.25 Top - Section 2	1.00	0.99	22.758	25.03	222.63	0.650	0.000	0.25	0.584	0.38	15.2	0.0	38.5	
104.00	1.00	1.00	22.868	25.16	223.92	0.650	0.000	1.75	4.062	2.64	106.3	0.0	115.9	
106.00	1.00	1.00	22.993	25.29	221.87	0.650	0.000	2.00	4.591	2.98	120.8	0.0	130.9	
107.00 Appurtenance(s)	1.00	1.01	23.055	25.36	220.83	0.650	0.000	1.00	2.275	1.48	60.0	0.0	64.9	
108.00	1.00	1.01	23.116	25.43	219.79	0.650	0.000	1.00	2.261	1.47	59.8	0.0	64.5	
110.00	1.00	1.02	23.238	25.56	217.69	0.650	0.000	2.00	4.481	2.91	119.1	0.0	127.8	
112.00	1.00	1.02	23.358	25.69	215.56	0.650	0.000	2.00	4.427	2.88	118.3	0.0	126.2	
114.00	1.00	1.03	23.476	25.82	213.41	0.650	0.000	2.00	4.372	2.84	117.4	0.0	124.6	
116.00	1.00	1.03	23.593	25.95	211.24	0.650	0.000	2.00	4.317	2.81	116.5	0.0	123.1	
117.00 Appurtenance(s)	1.00	1.03	23.651	26.02	210.15	0.650	0.000	1.00	2.138	1.39	57.8	0.0	60.9	
118.00	1.00	1.04	23.708	26.08	209.05	0.650	0.000	1.00	2.124	1.38	57.6	0.0	60.5	
119.00	1.00	1.04	23.766	26.14	207.95	0.650	0.000	1.00	2.110	1.37	57.4	0.0	60.2	
Totals:								119.00				7,447.5	13,393.5	

Discrete Appurtenance Forces

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

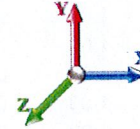
10/21/2016

Page: 11



Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	117.00 (3)	Standoff Mount	3	23.651	26.016	0.67	1.00	10.05	712.80	0.000	0.000	418.34	0.00	0.00
2	117.00	S11B12	3	23.651	26.016	0.54	0.80	4.55	183.60	0.000	0.000	189.42	0.00	0.00
3	117.00	KRY 112 144/1	3	23.651	26.016	0.58	0.80	0.71	39.60	0.000	0.000	29.49	0.00	0.00
4	117.00	AIR 21 B4A B2P	3	23.651	26.016	0.66	0.80	12.13	345.60	0.000	0.000	504.97	0.00	0.00
5	117.00	AIR 21 B2A B4P	3	23.651	26.016	0.66	0.80	12.13	329.40	0.000	0.000	504.97	0.00	0.00
6	107.00	DB-T1-6Z-8AB-OZ	2	23.055	25.360	0.54	0.80	5.15	45.36	0.000	0.000	208.79	0.00	0.00
7	107.00	RRH2X60-700	3	23.055	25.360	0.54	0.80	5.63	198.00	0.000	0.000	228.36	0.00	0.00
8	107.00	RRH2X60-PCS	3	23.055	25.360	0.54	0.80	3.54	198.00	0.000	0.000	143.54	0.00	0.00
9	107.00	RRH2X90-AWS	3	23.055	25.360	0.54	0.80	6.22	230.40	0.000	0.000	252.51	0.00	0.00
10	107.00	SBNHH-1D65B	6	23.055	25.360	0.66	0.80	32.19	292.32	0.000	0.000	1306.18	0.00	0.00
11	107.00	BXA-80063-6BF-EDIN-X	3	23.055	25.360	0.62	0.80	13.59	69.12	0.000	0.000	551.46	0.00	0.00
12	107.00	Side Arms	3	23.055	25.360	0.67	1.00	9.04	432.00	0.000	0.000	367.01	0.00	0.00
13	97.00	Side Arm	3	22.417	24.659	0.67	1.00	9.04	432.00	0.000	0.000	356.87	0.00	0.00
14	97.00	2.5GHz RRH	3	22.417	24.659	0.54	0.80	2.93	118.80	0.000	0.000	115.47	0.00	0.00
15	97.00	VHLP1-23	1	22.417	24.659	1.00	1.00	1.61	17.04	0.000	0.000	63.52	0.00	0.00
16	97.00	VHLP2-18	2	22.417	24.659	1.00	1.00	9.38	74.40	0.000	0.000	370.09	0.00	0.00
17	97.00	LLPX310R	3	22.417	24.659	0.55	0.80	7.12	102.96	0.000	0.000	280.95	0.00	0.00
Totals:									3,821.40			5,891.95		

Total Applied Force Summary

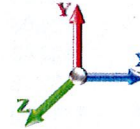
Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 12

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		133.66	345.86	0.00	0.00
4.00		132.65	343.76	0.00	0.00
6.00		131.65	341.67	0.00	0.00
8.00		130.64	339.57	0.00	0.00
10.00		129.64	337.47	0.00	0.00
12.00		128.63	335.37	0.00	0.00
14.00		127.63	333.27	0.00	0.00
16.00		126.62	331.17	0.00	0.00
18.00		125.62	329.07	0.00	0.00
20.00		124.61	326.97	0.00	0.00
22.00		123.61	324.87	0.00	0.00
24.00		122.60	322.77	0.00	0.00
26.00		121.60	320.67	0.00	0.00
28.00		120.59	318.57	0.00	0.00
30.00		119.69	316.48	0.00	0.00
32.00		120.89	314.38	0.00	0.00
34.00		121.96	312.28	0.00	0.00
36.00		122.91	310.18	0.00	0.00
38.00		123.75	308.08	0.00	0.00
40.00		124.49	305.98	0.00	0.00
42.00		125.13	303.88	0.00	0.00
44.00		125.68	301.78	0.00	0.00
46.00		126.15	299.68	0.00	0.00
48.00		126.54	297.58	0.00	0.00
48.75		47.37	111.05	0.00	0.00
50.00		80.28	328.26	0.00	0.00
52.00		128.93	521.80	0.00	0.00
53.25		80.53	323.99	0.00	0.00
54.00		48.29	110.20	0.00	0.00
56.00		129.29	292.43	0.00	0.00
58.00		129.38	290.33	0.00	0.00
60.00		129.41	288.23	0.00	0.00
62.00		129.39	286.13	0.00	0.00
64.00		129.32	284.03	0.00	0.00
66.00		129.21	281.93	0.00	0.00
68.00		129.04	279.83	0.00	0.00
70.00		128.83	277.73	0.00	0.00
72.00		128.58	275.63	0.00	0.00
74.00		128.29	273.53	0.00	0.00
76.00		127.96	271.43	0.00	0.00
78.00		127.60	269.33	0.00	0.00
80.00		127.19	267.24	0.00	0.00
82.00		126.75	265.14	0.00	0.00
84.00		126.28	263.04	0.00	0.00
86.00		125.77	260.94	0.00	0.00
88.00		125.23	258.84	0.00	0.00

Total Applied Force Summary

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



90.00		124.66	256.74	0.00	0.00
92.00		124.06	254.64	0.00	0.00
94.00		123.43	252.54	0.00	0.00
96.00		122.78	250.44	0.00	0.00
97.00	(12) attachments	1247.93	869.63	0.00	0.00
98.00		60.87	122.47	0.00	0.00
98.75		45.52	91.51	0.00	0.00
100.00		76.72	236.45	0.00	0.00
102.00		122.30	375.34	0.00	0.00
102.25		15.20	46.66	0.00	0.00
104.00		106.27	173.02	0.00	0.00
106.00		120.76	196.26	0.00	0.00
107.00	(23) attachments	3117.86	1562.74	0.00	0.00
108.00		59.80	80.78	0.00	0.00
110.00		119.13	160.37	0.00	0.00
112.00		118.28	158.80	0.00	0.00
114.00		117.41	157.22	0.00	0.00
116.00		116.51	155.65	0.00	0.00
117.00	(15) attachments	1705.04	1688.23	0.00	0.00
118.00		57.61	60.54	0.00	0.00
119.00		57.38	60.15	0.00	0.00
Totals:		13,339.43	21,012.59	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

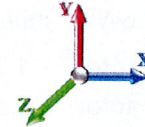
Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 14

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.046	0.000	16.018	0.00	2.64
4.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.046	0.000	16.018	0.00	2.64
6.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.046	0.000	16.018	0.00	2.64
8.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.047	0.000	16.018	0.00	2.64
10.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.047	0.000	16.018	0.00	2.64
12.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.047	0.000	16.018	0.00	2.64
14.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.048	0.000	16.018	0.00	2.64
16.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.048	0.000	16.018	0.00	2.64
18.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.049	0.000	16.018	0.00	2.64
20.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.049	0.000	16.018	0.00	2.64
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.049	0.000	16.018	0.00	2.64
24.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.050	0.000	16.018	0.00	2.64
26.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.050	0.000	16.018	0.00	2.64
28.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.051	0.000	16.018	0.00	2.64
30.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.051	0.000	16.031	0.00	2.64
32.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.052	0.000	16.330	0.00	2.64
34.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.052	0.000	16.615	0.00	2.64
36.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.052	0.000	16.889	0.00	2.64
38.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.053	0.000	17.152	0.00	2.64
40.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.053	0.000	17.405	0.00	2.64
42.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.054	0.000	17.649	0.00	2.64
44.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.054	0.000	17.885	0.00	2.64
46.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	18.114	0.00	2.64
48.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	18.335	0.00	2.64
48.75	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.056	0.000	18.417	0.00	0.99
50.00	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.056	0.000	18.551	0.00	1.65
52.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.056	0.000	18.760	0.00	2.64
53.25	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.057	0.000	18.887	0.00	1.65
54.00	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.056	0.000	18.963	0.00	0.99
56.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	19.161	0.00	2.64
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	19.354	0.00	2.64
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	19.543	0.00	2.64
62.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	19.726	0.00	2.64
64.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	19.906	0.00	2.64
66.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	20.082	0.00	2.64
68.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	20.254	0.00	2.64
70.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	20.422	0.00	2.64
72.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.061	0.000	20.587	0.00	2.64
74.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	20.749	0.00	2.64
76.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	20.908	0.00	2.64
78.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	21.064	0.00	2.64
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	21.217	0.00	2.64
82.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	21.367	0.00	2.64
84.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	21.514	0.00	2.64
86.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	21.660	0.00	2.64
88.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	21.802	0.00	2.64
90.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	21.943	0.00	2.64

Linear Appurtenance Segment Forces (Factored)

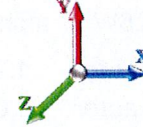
Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 15

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
92.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.068	0.000	22.081	0.00	2.64
94.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.069	0.000	22.217	0.00	2.64
96.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.069	0.000	22.351	0.00	2.64
97.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.070	0.000	22.417	0.00	1.32
98.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.070	0.000	22.483	0.00	1.32
98.75	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.071	0.000	22.532	0.00	0.99
100.00	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.071	0.000	22.613	0.00	1.65
102.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.072	0.000	22.742	0.00	2.64
102.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.072	0.000	22.758	0.00	0.33
104.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.072	0.000	22.868	0.00	2.31
106.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.073	0.000	22.993	0.00	2.64
107.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.073	0.000	23.055	0.00	1.32
Totals:											0.0	141.2

Calculated Forces

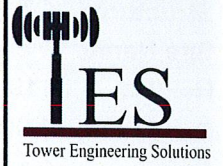
Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016

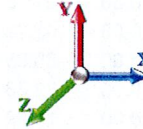
Page: 16



Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 27

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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-21.00	-13.35	0.00	-1115.4	0.00	1115.42	2063.18	1031.59	3653.66	1829.55	0.00	0.000	0.000	0.620
2.00	-20.64	-13.25	0.00	-1088.7	0.00	1088.72	2055.83	1027.92	3613.07	1809.22	0.02	-0.079	0.000	0.612
4.00	-20.28	-13.14	0.00	-1062.2	0.00	1062.22	2048.36	1024.18	3572.46	1788.88	0.07	-0.157	0.000	0.604
6.00	-19.92	-13.04	0.00	-1035.9	0.00	1035.94	2040.76	1020.38	3531.83	1768.54	0.15	-0.235	0.000	0.596
8.00	-19.56	-12.93	0.00	-1009.8	0.00	1009.87	2033.04	1016.52	3491.19	1748.19	0.27	-0.314	0.000	0.587
10.00	-19.21	-12.82	0.00	-984.01	0.00	984.01	2025.20	1012.60	3450.55	1727.84	0.41	-0.392	0.000	0.579
12.00	-18.86	-12.72	0.00	-958.36	0.00	958.36	2017.23	1008.61	3409.91	1707.49	0.60	-0.469	0.000	0.571
14.00	-18.51	-12.61	0.00	-932.92	0.00	932.92	2009.13	1004.57	3369.28	1687.14	0.81	-0.547	0.000	0.562
16.00	-18.16	-12.51	0.00	-907.69	0.00	907.69	2000.92	1000.46	3328.65	1666.80	1.05	-0.624	0.000	0.554
18.00	-17.82	-12.40	0.00	-882.68	0.00	882.68	1992.57	996.29	3288.04	1646.46	1.33	-0.701	0.000	0.545
20.00	-17.47	-12.30	0.00	-857.87	0.00	857.87	1984.11	992.05	3247.45	1626.14	1.64	-0.778	0.000	0.537
22.00	-17.14	-12.19	0.00	-833.28	0.00	833.28	1975.52	987.76	3206.89	1605.83	1.99	-0.854	0.000	0.528
24.00	-16.80	-12.09	0.00	-808.90	0.00	808.90	1966.80	983.40	3166.36	1585.53	2.36	-0.930	0.000	0.519
26.00	-16.46	-11.98	0.00	-784.72	0.00	784.72	1957.96	978.98	3125.86	1565.25	2.77	-1.005	0.000	0.510
28.00	-16.13	-11.88	0.00	-760.76	0.00	760.76	1948.99	974.50	3085.40	1544.99	3.20	-1.080	0.000	0.501
30.00	-15.80	-11.77	0.00	-737.01	0.00	737.01	1939.91	969.95	3044.99	1524.76	3.67	-1.155	0.000	0.492
32.00	-15.48	-11.66	0.00	-713.47	0.00	713.47	1930.69	965.35	3004.63	1504.55	4.17	-1.229	0.000	0.482
34.00	-15.15	-11.55	0.00	-690.15	0.00	690.15	1921.36	960.68	2964.32	1484.36	4.70	-1.303	0.000	0.473
36.00	-14.83	-11.44	0.00	-667.04	0.00	667.04	1911.89	955.95	2924.07	1464.21	5.27	-1.376	0.000	0.463
38.00	-14.51	-11.33	0.00	-644.16	0.00	644.16	1902.31	951.15	2883.89	1444.09	5.86	-1.448	0.000	0.454
40.00	-14.19	-11.21	0.00	-621.50	0.00	621.50	1892.60	946.30	2843.78	1424.00	6.48	-1.520	0.000	0.444
42.00	-13.88	-11.10	0.00	-599.07	0.00	599.07	1882.76	941.38	2803.75	1403.96	7.13	-1.591	0.000	0.434
44.00	-13.57	-10.98	0.00	-576.88	0.00	576.88	1872.80	936.40	2763.79	1383.95	7.81	-1.661	0.000	0.424
46.00	-13.26	-10.86	0.00	-554.91	0.00	554.91	1862.72	931.36	2723.92	1363.99	8.52	-1.731	0.000	0.414
48.00	-12.96	-10.74	0.00	-533.19	0.00	533.19	1852.51	926.26	2684.14	1344.07	9.26	-1.800	0.000	0.404
48.75	-12.84	-10.69	0.00	-525.14	0.00	525.14	1848.65	924.33	2669.25	1336.61	9.55	-1.825	0.000	0.400
50.00	-12.51	-10.61	0.00	-511.77	0.00	511.77	1842.18	921.09	2644.46	1324.20	10.03	-1.868	0.000	0.393
52.00	-11.98	-10.48	0.00	-490.54	0.00	490.54	1831.72	915.86	2604.88	1304.37	10.83	-1.935	0.000	0.383
53.25	-11.65	-10.39	0.00	-477.44	0.00	477.44	1841.33	920.67	2641.23	1322.58	11.34	-1.976	0.000	0.367
54.00	-11.54	-10.35	0.00	-469.65	0.00	469.65	1837.42	918.71	2626.38	1315.14	11.66	-2.001	0.000	0.364
56.00	-11.24	-10.22	0.00	-448.95	0.00	448.95	1826.91	913.45	2586.84	1295.34	12.51	-2.063	0.000	0.353
58.00	-10.94	-10.10	0.00	-428.50	0.00	428.50	1816.27	908.14	2547.41	1275.60	13.38	-2.124	0.000	0.342
60.00	-10.65	-9.97	0.00	-408.31	0.00	408.31	1805.51	902.75	2508.10	1255.91	14.29	-2.184	0.000	0.331
62.00	-10.36	-9.84	0.00	-388.37	0.00	388.37	1794.62	897.31	2468.90	1236.28	15.21	-2.242	0.000	0.320
64.00	-10.07	-9.71	0.00	-368.70	0.00	368.70	1783.61	891.81	2429.82	1216.72	16.17	-2.300	0.000	0.309
66.00	-9.78	-9.58	0.00	-349.29	0.00	349.29	1772.48	886.24	2390.88	1197.22	17.14	-2.356	0.000	0.297
68.00	-9.50	-9.44	0.00	-330.14	0.00	330.14	1761.22	880.61	2352.06	1177.78	18.14	-2.410	0.000	0.286
70.00	-9.22	-9.31	0.00	-311.25	0.00	311.25	1749.83	874.92	2313.39	1158.41	19.16	-2.463	0.000	0.274
72.00	-8.94	-9.18	0.00	-292.63	0.00	292.63	1738.33	869.16	2274.85	1139.12	20.20	-2.515	0.000	0.262
74.00	-8.67	-9.05	0.00	-274.27	0.00	274.27	1726.69	863.35	2236.47	1119.90	21.27	-2.564	0.000	0.250
76.00	-8.39	-8.91	0.00	-256.18	0.00	256.18	1714.94	857.47	2198.23	1100.75	22.35	-2.613	0.000	0.238
78.00	-8.12	-8.78	0.00	-238.36	0.00	238.36	1703.06	851.53	2160.16	1081.68	23.46	-2.659	0.000	0.225
80.00	-7.86	-8.65	0.00	-220.80	0.00	220.80	1691.05	845.53	2122.25	1062.70	24.58	-2.703	0.000	0.213
82.00	-7.59	-8.51	0.00	-203.51	0.00	203.51	1678.92	839.46	2084.50	1043.80	25.72	-2.745	0.000	0.200
84.00	-7.33	-8.38	0.00	-186.48	0.00	186.48	1666.67	833.33	2046.93	1024.99	26.88	-2.785	0.000	0.186
86.00	-7.07	-8.24	0.00	-169.73	0.00	169.73	1654.29	827.14	2009.53	1006.26	28.06	-2.823	0.000	0.173
88.00	-6.81	-8.11	0.00	-153.24	0.00	153.24	1641.79	820.89	1972.32	987.63	29.25	-2.859	0.000	0.159
90.00	-6.56	-7.98	0.00	-137.02	0.00	137.02	1629.16	814.58	1935.30	969.09	30.45	-2.891	0.000	0.146

Calculated Forces

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016



Page: 17

92.00	-6.31	-7.84	0.00	-121.06	0.00	121.06	1616.41	808.20	1898.47	950.64	31.67	-2.922	0.000	0.131
94.00	-6.06	-7.71	0.00	-105.38	0.00	105.38	1603.53	801.77	1861.83	932.30	32.90	-2.949	0.000	0.117
96.00	-5.81	-7.58	0.00	-89.96	0.00	89.96	1590.53	795.27	1825.40	914.06	34.14	-2.974	0.000	0.102
97.00	-5.01	-6.29	0.00	-82.38	0.00	82.38	1583.99	791.99	1807.27	904.98	34.76	-2.985	0.000	0.094
98.00	-4.88	-6.22	0.00	-76.09	0.00	76.09	1577.41	788.70	1789.18	895.92	35.39	-2.995	0.000	0.088
98.75	-4.79	-6.17	0.00	-71.43	0.00	71.43	1572.46	786.23	1775.65	889.15	35.86	-3.003	0.000	0.083
100.00	-4.56	-6.08	0.00	-63.72	0.00	63.72	1564.16	782.08	1753.17	877.89	36.65	-3.014	0.000	0.076
102.00	-4.19	-5.94	0.00	-51.55	0.00	51.55	1550.79	775.39	1717.38	859.97	37.91	-3.030	0.000	0.063
102.25	-4.15	-5.92	0.00	-50.07	0.00	50.07	1064.30	532.15	1198.84	600.31	38.07	-3.032	0.000	0.087
104.00	-3.98	-5.81	0.00	-39.70	0.00	39.70	1057.83	528.92	1179.14	590.45	39.18	-3.043	0.000	0.071
106.00	-3.79	-5.68	0.00	-28.08	0.00	28.08	1050.33	525.16	1156.68	579.20	40.46	-3.056	0.000	0.052
107.00	-2.39	-2.48	0.00	-22.41	0.00	22.41	1046.53	523.26	1145.48	573.59	41.10	-3.061	0.000	0.041
108.00	-2.31	-2.42	0.00	-19.92	0.00	19.92	1042.70	521.35	1134.29	567.99	41.74	-3.066	0.000	0.037
110.00	-2.16	-2.29	0.00	-15.09	0.00	15.09	1034.95	517.47	1111.97	556.81	43.03	-3.073	0.000	0.029
112.00	-2.01	-2.16	0.00	-10.50	0.00	10.50	1027.07	513.53	1089.73	545.68	44.32	-3.078	0.000	0.021
114.00	-1.86	-2.04	0.00	-6.17	0.00	6.17	1019.06	509.53	1067.57	534.58	45.61	-3.082	0.000	0.013
116.00	-1.71	-1.91	0.00	-2.10	0.00	2.10	1010.94	505.47	1045.49	523.52	46.90	-3.084	0.000	0.006
117.00	-0.11	-0.12	0.00	-0.18	0.00	0.18	1006.83	503.41	1034.49	518.01	47.54	-3.084	0.000	0.000
118.00	-0.06	-0.06	0.00	-0.06	0.00	0.06	1002.69	501.34	1023.51	512.52	48.19	-3.084	0.000	0.000
119.00	0.00	-0.06	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	48.84	-3.084	0.000	0.000

Wind Loading - Shaft

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

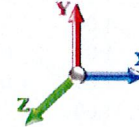
Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016
 Page: 18



Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	16.018	17.62	297.08	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	16.018	17.62	294.86	0.650	0.000	2.00	7.294	4.74	133.7	0.0	208.2
4.00		1.00	0.70	16.018	17.62	292.63	0.650	0.000	2.00	7.239	4.71	132.7	0.0	206.7
6.00		1.00	0.70	16.018	17.62	290.41	0.650	0.000	2.00	7.184	4.67	131.6	0.0	205.1
8.00		1.00	0.70	16.018	17.62	288.18	0.650	0.000	2.00	7.129	4.63	130.6	0.0	203.5
10.00		1.00	0.70	16.018	17.62	285.96	0.650	0.000	2.00	7.075	4.60	129.6	0.0	201.9
12.00		1.00	0.70	16.018	17.62	283.73	0.650	0.000	2.00	7.020	4.56	128.6	0.0	200.4
14.00		1.00	0.70	16.018	17.62	281.51	0.650	0.000	2.00	6.965	4.53	127.6	0.0	198.8
16.00		1.00	0.70	16.018	17.62	279.28	0.650	0.000	2.00	6.910	4.49	126.6	0.0	197.2
18.00		1.00	0.70	16.018	17.62	277.06	0.650	0.000	2.00	6.855	4.46	125.6	0.0	195.6
20.00		1.00	0.70	16.018	17.62	274.83	0.650	0.000	2.00	6.800	4.42	124.6	0.0	194.1
22.00		1.00	0.70	16.018	17.62	272.61	0.650	0.000	2.00	6.746	4.38	123.6	0.0	192.5
24.00		1.00	0.70	16.018	17.62	270.38	0.650	0.000	2.00	6.691	4.35	122.6	0.0	190.9
26.00		1.00	0.70	16.018	17.62	268.16	0.650	0.000	2.00	6.636	4.31	121.6	0.0	189.3
28.00		1.00	0.70	16.018	17.62	265.94	0.650	0.000	2.00	6.581	4.28	120.6	0.0	187.8
30.00		1.00	0.70	16.031	17.63	263.82	0.650	0.000	2.00	6.526	4.24	119.7	0.0	186.2
32.00		1.00	0.71	16.330	17.96	264.02	0.650	0.000	2.00	6.471	4.21	120.9	0.0	184.6
34.00		1.00	0.73	16.615	18.28	264.05	0.650	0.000	2.00	6.417	4.17	122.0	0.0	183.1
36.00		1.00	0.74	16.889	18.58	263.93	0.650	0.000	2.00	6.362	4.14	122.9	0.0	181.5
38.00		1.00	0.75	17.152	18.87	263.68	0.650	0.000	2.00	6.307	4.10	123.8	0.0	179.9
40.00		1.00	0.76	17.405	19.15	263.30	0.650	0.000	2.00	6.252	4.06	124.5	0.0	178.3
42.00		1.00	0.77	17.649	19.41	262.80	0.650	0.000	2.00	6.197	4.03	125.1	0.0	176.8
44.00		1.00	0.78	17.885	19.67	262.20	0.650	0.000	2.00	6.142	3.99	125.7	0.0	175.2
46.00		1.00	0.79	18.114	19.93	261.51	0.650	0.000	2.00	6.088	3.96	126.2	0.0	173.6
48.00		1.00	0.80	18.335	20.17	260.72	0.650	0.000	2.00	6.033	3.92	126.5	0.0	172.0
48.75 Bot - Section 2		1.00	0.80	18.417	20.26	260.41	0.650	0.000	0.75	2.248	1.46	47.4	0.0	64.1
50.00		1.00	0.81	18.551	20.41	259.85	0.650	0.000	1.25	3.783	2.46	80.3	0.0	214.2
52.00		1.00	0.82	18.760	20.64	258.91	0.650	0.000	2.00	6.008	3.91	128.9	0.0	340.2
53.25 Top - Section 1		1.00	0.83	18.887	20.78	258.28	0.650	0.000	1.25	3.727	2.42	80.5	0.0	211.0
54.00		1.00	0.83	18.963	20.86	261.62	0.650	0.000	0.75	2.226	1.45	48.3	0.0	63.5
56.00		1.00	0.84	19.161	21.08	260.55	0.650	0.000	2.00	5.898	3.83	129.3	0.0	168.2
58.00		1.00	0.85	19.354	21.29	259.41	0.650	0.000	2.00	5.843	3.80	129.4	0.0	166.6
60.00		1.00	0.85	19.543	21.50	258.22	0.650	0.000	2.00	5.789	3.76	129.4	0.0	165.0
62.00		1.00	0.86	19.726	21.70	256.96	0.650	0.000	2.00	5.734	3.73	129.4	0.0	163.4
64.00		1.00	0.87	19.906	21.90	255.65	0.650	0.000	2.00	5.679	3.69	129.3	0.0	161.9
66.00		1.00	0.88	20.082	22.09	254.28	0.650	0.000	2.00	5.624	3.66	129.2	0.0	160.3
68.00		1.00	0.89	20.254	22.28	252.87	0.650	0.000	2.00	5.569	3.62	129.0	0.0	158.7
70.00		1.00	0.89	20.422	22.46	251.41	0.650	0.000	2.00	5.514	3.58	128.8	0.0	157.1
72.00		1.00	0.90	20.587	22.65	249.90	0.650	0.000	2.00	5.460	3.55	128.6	0.0	155.6
74.00		1.00	0.91	20.749	22.82	248.35	0.650	0.000	2.00	5.405	3.51	128.3	0.0	154.0
76.00		1.00	0.91	20.908	23.00	246.75	0.650	0.000	2.00	5.350	3.48	128.0	0.0	152.4
78.00		1.00	0.92	21.064	23.17	245.12	0.650	0.000	2.00	5.295	3.44	127.6	0.0	150.8
80.00		1.00	0.93	21.217	23.34	243.45	0.650	0.000	2.00	5.240	3.41	127.2	0.0	149.3
82.00		1.00	0.93	21.367	23.50	241.74	0.650	0.000	2.00	5.185	3.37	126.8	0.0	147.7
84.00		1.00	0.94	21.514	23.67	239.99	0.650	0.000	2.00	5.131	3.33	126.3	0.0	146.1
86.00		1.00	0.95	21.660	23.83	238.21	0.650	0.000	2.00	5.076	3.30	125.8	0.0	144.5
88.00		1.00	0.95	21.802	23.98	236.40	0.650	0.000	2.00	5.021	3.26	125.2	0.0	143.0

Wind Loading - Shaft

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

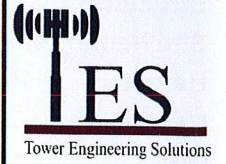


Page: 19

90.00	1.00	0.96	21.943	24.14	234.56	0.650	0.000	2.00	4.966	3.23	124.7	0.0	141.4			
92.00	1.00	0.96	22.081	24.29	232.68	0.650	0.000	2.00	4.911	3.19	124.1	0.0	139.8			
94.00	1.00	0.97	22.217	24.44	230.78	0.650	0.000	2.00	4.857	3.16	123.4	0.0	138.2			
96.00	1.00	0.98	22.351	24.59	228.85	0.650	0.000	2.00	4.802	3.12	122.8	0.0	136.7			
97.00 Appurtenance(s)	1.00	0.98	22.417	24.66	227.87	0.650	0.000	1.00	2.380	1.55	61.0	0.0	67.7			
98.00	1.00	0.98	22.483	24.73	226.89	0.650	0.000	1.00	2.367	1.54	60.9	0.0	67.4			
98.75 Bot - Section 3	1.00	0.98	22.532	24.79	226.14	0.650	0.000	0.75	1.766	1.15	45.5	0.0	50.3			
100.00	1.00	0.99	22.613	24.87	224.90	0.650	0.000	1.25	2.966	1.93	76.7	0.0	146.7			
102.00	1.00	0.99	22.742	25.02	222.89	0.650	0.000	2.00	4.701	3.06	122.3	0.0	232.5			
102.25 Top - Section 2	1.00	0.99	22.758	25.03	222.63	0.650	0.000	0.25	0.584	0.38	15.2	0.0	28.9			
104.00	1.00	1.00	22.868	25.16	223.92	0.650	0.000	1.75	4.062	2.64	106.3	0.0	86.9			
106.00	1.00	1.00	22.993	25.29	221.87	0.650	0.000	2.00	4.591	2.98	120.8	0.0	98.2			
107.00 Appurtenance(s)	1.00	1.01	23.055	25.36	220.83	0.650	0.000	1.00	2.275	1.48	60.0	0.0	48.7			
108.00	1.00	1.01	23.116	25.43	219.79	0.650	0.000	1.00	2.261	1.47	59.8	0.0	48.4			
110.00	1.00	1.02	23.238	25.56	217.69	0.650	0.000	2.00	4.481	2.91	119.1	0.0	95.8			
112.00	1.00	1.02	23.358	25.69	215.56	0.650	0.000	2.00	4.427	2.88	118.3	0.0	94.7			
114.00	1.00	1.03	23.476	25.82	213.41	0.650	0.000	2.00	4.372	2.84	117.4	0.0	93.5			
116.00	1.00	1.03	23.593	25.95	211.24	0.650	0.000	2.00	4.317	2.81	116.5	0.0	92.3			
117.00 Appurtenance(s)	1.00	1.03	23.651	26.02	210.15	0.650	0.000	1.00	2.138	1.39	57.8	0.0	45.7			
118.00	1.00	1.04	23.708	26.08	209.05	0.650	0.000	1.00	2.124	1.38	57.6	0.0	45.4			
119.00	1.00	1.04	23.766	26.14	207.95	0.650	0.000	1.00	2.110	1.37	57.4	0.0	45.1			
Totals:								119.00				7,447.5				10,045.1

Discrete Appurtenance Forces

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

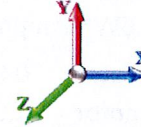


Page: 20

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 27

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	117.00 (3)	Standoff Mount	3	23.651	26.016	0.67	1.00	10.05	534.60	0.000	0.000	418.34	0.00	0.00
2	117.00	S11B12	3	23.651	26.016	0.54	0.80	4.55	137.70	0.000	0.000	189.42	0.00	0.00
3	117.00	KRY 112 144/1	3	23.651	26.016	0.58	0.80	0.71	29.70	0.000	0.000	29.49	0.00	0.00
4	117.00	AIR 21 B4A B2P	3	23.651	26.016	0.66	0.80	12.13	259.20	0.000	0.000	504.97	0.00	0.00
5	117.00	AIR 21 B2A B4P	3	23.651	26.016	0.66	0.80	12.13	247.05	0.000	0.000	504.97	0.00	0.00
6	107.00	DB-T1-6Z-8AB-OZ	2	23.055	25.360	0.54	0.80	5.15	34.02	0.000	0.000	208.79	0.00	0.00
7	107.00	RRH2X60-700	3	23.055	25.360	0.54	0.80	5.63	148.50	0.000	0.000	228.36	0.00	0.00
8	107.00	RRH2X60-PCS	3	23.055	25.360	0.54	0.80	3.54	148.50	0.000	0.000	143.54	0.00	0.00
9	107.00	RRH2X90-AWS	3	23.055	25.360	0.54	0.80	6.22	172.80	0.000	0.000	252.51	0.00	0.00
10	107.00	SBNHH-1D65B	6	23.055	25.360	0.66	0.80	32.19	219.24	0.000	0.000	1306.18	0.00	0.00
11	107.00	BXA-80063-6BF-EDIN-X	3	23.055	25.360	0.62	0.80	13.59	51.84	0.000	0.000	551.46	0.00	0.00
12	107.00	Side Arms	3	23.055	25.360	0.67	1.00	9.04	324.00	0.000	0.000	367.01	0.00	0.00
13	97.00	Side Arm	3	22.417	24.659	0.67	1.00	9.04	324.00	0.000	0.000	356.87	0.00	0.00
14	97.00	2.5GHz RRH	3	22.417	24.659	0.54	0.80	2.93	89.10	0.000	0.000	115.47	0.00	0.00
15	97.00	VHLP1-23	1	22.417	24.659	1.00	1.00	1.61	12.78	0.000	0.000	63.52	0.00	0.00
16	97.00	VHLP2-18	2	22.417	24.659	1.00	1.00	9.38	55.80	0.000	0.000	370.09	0.00	0.00
17	97.00	LLPX310R	3	22.417	24.659	0.55	0.80	7.12	77.22	0.000	0.000	280.95	0.00	0.00
Totals:								2,866.05				5,891.95		

Total Applied Force Summary

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

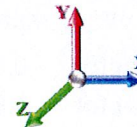


Page: 21

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		133.66	259.40	0.00	0.00
4.00		132.65	257.82	0.00	0.00
6.00		131.65	256.25	0.00	0.00
8.00		130.64	254.67	0.00	0.00
10.00		129.64	253.10	0.00	0.00
12.00		128.63	251.53	0.00	0.00
14.00		127.63	249.95	0.00	0.00
16.00		126.62	248.38	0.00	0.00
18.00		125.62	246.80	0.00	0.00
20.00		124.61	245.23	0.00	0.00
22.00		123.61	243.65	0.00	0.00
24.00		122.60	242.08	0.00	0.00
26.00		121.60	240.51	0.00	0.00
28.00		120.59	238.93	0.00	0.00
30.00		119.69	237.36	0.00	0.00
32.00		120.89	235.78	0.00	0.00
34.00		121.96	234.21	0.00	0.00
36.00		122.91	232.63	0.00	0.00
38.00		123.75	231.06	0.00	0.00
40.00		124.49	229.48	0.00	0.00
42.00		125.13	227.91	0.00	0.00
44.00		125.68	226.34	0.00	0.00
46.00		126.15	224.76	0.00	0.00
48.00		126.54	223.19	0.00	0.00
48.75		47.37	83.29	0.00	0.00
50.00		80.28	246.19	0.00	0.00
52.00		128.93	391.35	0.00	0.00
53.25		80.53	242.99	0.00	0.00
54.00		48.29	82.65	0.00	0.00
56.00		129.29	219.32	0.00	0.00
58.00		129.38	217.74	0.00	0.00
60.00		129.41	216.17	0.00	0.00
62.00		129.39	214.60	0.00	0.00
64.00		129.32	213.02	0.00	0.00
66.00		129.21	211.45	0.00	0.00
68.00		129.04	209.87	0.00	0.00
70.00		128.83	208.30	0.00	0.00
72.00		128.58	206.72	0.00	0.00
74.00		128.29	205.15	0.00	0.00
76.00		127.96	203.58	0.00	0.00
78.00		127.60	202.00	0.00	0.00
80.00		127.19	200.43	0.00	0.00
82.00		126.75	198.85	0.00	0.00
84.00		126.28	197.28	0.00	0.00
86.00		125.77	195.70	0.00	0.00
88.00		125.23	194.13	0.00	0.00

Total Applied Force Summary

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 22

90.00		124.66	192.55	0.00	0.00
92.00		124.06	190.98	0.00	0.00
94.00		123.43	189.41	0.00	0.00
96.00		122.78	187.83	0.00	0.00
97.00	(12) attachments	1247.93	652.23	0.00	0.00
98.00		60.87	91.85	0.00	0.00
98.75		45.52	68.63	0.00	0.00
100.00		76.72	177.34	0.00	0.00
102.00		122.30	281.51	0.00	0.00
102.25		15.20	34.99	0.00	0.00
104.00		106.27	129.76	0.00	0.00
106.00		120.76	147.19	0.00	0.00
107.00	(23) attachments	3117.86	1172.05	0.00	0.00
108.00		59.80	60.58	0.00	0.00
110.00		119.13	120.28	0.00	0.00
112.00		118.28	119.10	0.00	0.00
114.00		117.41	117.92	0.00	0.00
116.00		116.51	116.74	0.00	0.00
117.00	(15) attachments	1705.04	1266.18	0.00	0.00
118.00		57.61	45.41	0.00	0.00
119.00		57.38	45.11	0.00	0.00
	Totals:	13,339.43	15,759.44	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016

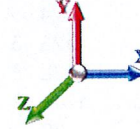
Page: 23



Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 27

Dead Load Factor 0.90
Wind Load Factor 1.60



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.046	0.000	16.018	0.00	1.98
4.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.046	0.000	16.018	0.00	1.98
6.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.046	0.000	16.018	0.00	1.98
8.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.047	0.000	16.018	0.00	1.98
10.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.047	0.000	16.018	0.00	1.98
12.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.047	0.000	16.018	0.00	1.98
14.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.048	0.000	16.018	0.00	1.98
16.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.048	0.000	16.018	0.00	1.98
18.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.049	0.000	16.018	0.00	1.98
20.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.049	0.000	16.018	0.00	1.98
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.049	0.000	16.018	0.00	1.98
24.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.050	0.000	16.018	0.00	1.98
26.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.050	0.000	16.018	0.00	1.98
28.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.051	0.000	16.018	0.00	1.98
30.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.051	0.000	16.031	0.00	1.98
32.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.052	0.000	16.330	0.00	1.98
34.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.052	0.000	16.615	0.00	1.98
36.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.052	0.000	16.889	0.00	1.98
38.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.053	0.000	17.152	0.00	1.98
40.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.053	0.000	17.405	0.00	1.98
42.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.054	0.000	17.649	0.00	1.98
44.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.054	0.000	17.885	0.00	1.98
46.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	18.114	0.00	1.98
48.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	18.335	0.00	1.98
48.75	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.056	0.000	18.417	0.00	0.74
50.00	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.056	0.000	18.551	0.00	1.24
52.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.056	0.000	18.760	0.00	1.98
53.25	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.057	0.000	18.887	0.00	1.24
54.00	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.056	0.000	18.963	0.00	0.74
56.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	19.161	0.00	1.98
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	19.354	0.00	1.98
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	19.543	0.00	1.98
62.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	19.726	0.00	1.98
64.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	19.906	0.00	1.98
66.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	20.082	0.00	1.98
68.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	20.254	0.00	1.98
70.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	20.422	0.00	1.98
72.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.061	0.000	20.587	0.00	1.98
74.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	20.749	0.00	1.98
76.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	20.908	0.00	1.98
78.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	21.064	0.00	1.98
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	21.217	0.00	1.98
82.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	21.367	0.00	1.98
84.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	21.514	0.00	1.98
86.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	21.660	0.00	1.98
88.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	21.802	0.00	1.98
90.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	21.943	0.00	1.98

Linear Appurtenance Segment Forces (Factored)

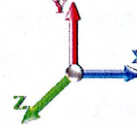
Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 24

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
92.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.068	0.000	22.081	0.00	1.98
94.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.069	0.000	22.217	0.00	1.98
96.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.069	0.000	22.351	0.00	1.98
97.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.070	0.000	22.417	0.00	0.99
98.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.070	0.000	22.483	0.00	0.99
98.75	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.071	0.000	22.532	0.00	0.74
100.00	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.071	0.000	22.613	0.00	1.24
102.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.072	0.000	22.742	0.00	1.98
102.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.072	0.000	22.758	0.00	0.25
104.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.072	0.000	22.868	0.00	1.73
106.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.073	0.000	22.993	0.00	1.98
107.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.073	0.000	23.055	0.00	0.99
Totals:											0.0	105.9

Calculated Forces

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016

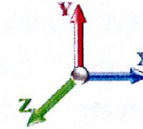
Page: 25



Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 27

Dead Load Factor 0.90
Wind Load Factor 1.60



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-15.75	-13.35	0.00	-1106.2	0.00	1106.29	2063.18	1031.59	3653.66	1829.55	0.00	0.000	0.000	0.612
2.00	-15.47	-13.24	0.00	-1079.5	0.00	1079.59	2055.83	1027.92	3613.07	1809.22	0.02	-0.078	0.000	0.604
4.00	-15.20	-13.12	0.00	-1053.1	0.00	1053.12	2048.36	1024.18	3572.46	1788.88	0.07	-0.156	0.000	0.596
6.00	-14.92	-13.01	0.00	-1026.8	0.00	1026.87	2040.76	1020.38	3531.83	1768.54	0.15	-0.233	0.000	0.588
8.00	-14.65	-12.90	0.00	-1000.8	0.00	1000.85	2033.04	1016.52	3491.19	1748.19	0.26	-0.311	0.000	0.580
10.00	-14.38	-12.79	0.00	-975.05	0.00	975.05	2025.20	1012.60	3450.55	1727.84	0.41	-0.388	0.000	0.572
12.00	-14.12	-12.68	0.00	-949.48	0.00	949.48	2017.23	1008.61	3409.91	1707.49	0.59	-0.465	0.000	0.563
14.00	-13.85	-12.56	0.00	-924.13	0.00	924.13	2009.13	1004.57	3369.28	1687.14	0.80	-0.542	0.000	0.555
16.00	-13.59	-12.45	0.00	-899.00	0.00	899.00	2000.92	1000.46	3328.65	1666.80	1.05	-0.618	0.000	0.546
18.00	-13.32	-12.34	0.00	-874.09	0.00	874.09	1992.57	996.29	3288.04	1646.46	1.32	-0.695	0.000	0.538
20.00	-13.06	-12.23	0.00	-849.40	0.00	849.40	1984.11	992.05	3247.45	1626.14	1.63	-0.771	0.000	0.529
22.00	-12.81	-12.12	0.00	-824.94	0.00	824.94	1975.52	987.76	3206.89	1605.83	1.97	-0.846	0.000	0.520
24.00	-12.55	-12.01	0.00	-800.70	0.00	800.70	1966.80	983.40	3166.36	1585.53	2.34	-0.921	0.000	0.512
26.00	-12.30	-11.90	0.00	-776.67	0.00	776.67	1957.96	978.98	3125.86	1565.25	2.74	-0.996	0.000	0.503
28.00	-12.05	-11.79	0.00	-752.87	0.00	752.87	1948.99	974.50	3085.40	1544.99	3.17	-1.070	0.000	0.494
30.00	-11.80	-11.68	0.00	-729.28	0.00	729.28	1939.91	969.95	3044.99	1524.76	3.64	-1.144	0.000	0.485
32.00	-11.55	-11.57	0.00	-705.91	0.00	705.91	1930.69	965.35	3004.63	1504.55	4.13	-1.218	0.000	0.475
34.00	-11.30	-11.46	0.00	-682.76	0.00	682.76	1921.36	960.68	2964.32	1484.36	4.66	-1.290	0.000	0.466
36.00	-11.06	-11.35	0.00	-659.84	0.00	659.84	1911.89	955.95	2924.07	1464.21	5.22	-1.363	0.000	0.457
38.00	-10.82	-11.23	0.00	-637.15	0.00	637.15	1902.31	951.15	2883.89	1444.09	5.80	-1.434	0.000	0.447
40.00	-10.58	-11.11	0.00	-614.69	0.00	614.69	1892.60	946.30	2843.78	1424.00	6.42	-1.505	0.000	0.437
42.00	-10.34	-10.99	0.00	-592.46	0.00	592.46	1882.76	941.38	2803.75	1403.96	7.07	-1.575	0.000	0.428
44.00	-10.10	-10.87	0.00	-570.47	0.00	570.47	1872.80	936.40	2763.79	1383.95	7.74	-1.645	0.000	0.418
46.00	-9.87	-10.75	0.00	-548.73	0.00	548.73	1862.72	931.36	2723.92	1363.99	8.44	-1.714	0.000	0.408
48.00	-9.64	-10.63	0.00	-527.22	0.00	527.22	1852.51	926.26	2684.14	1344.07	9.18	-1.782	0.000	0.398
48.75	-9.55	-10.58	0.00	-519.25	0.00	519.25	1848.65	924.33	2669.25	1336.61	9.46	-1.807	0.000	0.394
50.00	-9.30	-10.50	0.00	-506.02	0.00	506.02	1842.18	921.09	2644.46	1324.20	9.94	-1.849	0.000	0.387
52.00	-8.90	-10.37	0.00	-485.01	0.00	485.01	1831.72	915.86	2604.88	1304.37	10.73	-1.915	0.000	0.377
53.25	-8.66	-10.29	0.00	-472.04	0.00	472.04	1841.33	920.67	2641.23	1322.58	11.23	-1.956	0.000	0.362
54.00	-8.57	-10.24	0.00	-464.33	0.00	464.33	1837.42	918.71	2626.38	1315.14	11.54	-1.981	0.000	0.358
56.00	-8.34	-10.12	0.00	-443.84	0.00	443.84	1826.91	913.45	2586.84	1295.34	12.39	-2.042	0.000	0.347
58.00	-8.12	-9.99	0.00	-423.61	0.00	423.61	1816.27	908.14	2547.41	1275.60	13.26	-2.102	0.000	0.337
60.00	-7.90	-9.86	0.00	-403.64	0.00	403.64	1805.51	902.75	2508.10	1255.91	14.15	-2.161	0.000	0.326
62.00	-7.68	-9.73	0.00	-383.93	0.00	383.93	1794.62	897.31	2468.90	1236.28	15.07	-2.219	0.000	0.315
64.00	-7.46	-9.60	0.00	-364.47	0.00	364.47	1783.61	891.81	2429.82	1216.72	16.01	-2.276	0.000	0.304
66.00	-7.25	-9.47	0.00	-345.28	0.00	345.28	1772.48	886.24	2390.88	1197.22	16.97	-2.331	0.000	0.293
68.00	-7.03	-9.34	0.00	-326.35	0.00	326.35	1761.22	880.61	2352.06	1177.78	17.96	-2.385	0.000	0.281
70.00	-6.82	-9.20	0.00	-307.68	0.00	307.68	1749.83	874.92	2313.39	1158.41	18.97	-2.438	0.000	0.270
72.00	-6.61	-9.07	0.00	-289.27	0.00	289.27	1738.33	869.16	2274.85	1139.12	20.00	-2.489	0.000	0.258
74.00	-6.41	-8.94	0.00	-271.12	0.00	271.12	1726.69	863.35	2236.47	1119.90	21.06	-2.538	0.000	0.246
76.00	-6.20	-8.81	0.00	-253.24	0.00	253.24	1714.94	857.47	2198.23	1100.75	22.13	-2.585	0.000	0.234
78.00	-6.00	-8.68	0.00	-235.62	0.00	235.62	1703.06	851.53	2160.16	1081.68	23.22	-2.631	0.000	0.221
80.00	-5.80	-8.54	0.00	-218.27	0.00	218.27	1691.05	845.53	2122.25	1062.70	24.34	-2.675	0.000	0.209
82.00	-5.60	-8.41	0.00	-201.18	0.00	201.18	1678.92	839.46	2084.50	1043.80	25.47	-2.717	0.000	0.196
84.00	-5.40	-8.28	0.00	-184.36	0.00	184.36	1666.67	833.33	2046.93	1024.99	26.61	-2.756	0.000	0.183
86.00	-5.21	-8.15	0.00	-167.79	0.00	167.79	1654.29	827.14	2009.53	1006.26	27.77	-2.794	0.000	0.170
88.00	-5.02	-8.02	0.00	-151.50	0.00	151.50	1641.79	820.89	1972.32	987.63	28.95	-2.829	0.000	0.157
90.00	-4.83	-7.89	0.00	-135.46	0.00	135.46	1629.16	814.58	1935.30	969.09	30.14	-2.861	0.000	0.143

Calculated Forces

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 26

92.00	-4.64	-7.76	0.00	-119.69	0.00	119.69	1616.41	808.20	1898.47	950.64	31.35	-2.891	0.000	0.129
94.00	-4.45	-7.62	0.00	-104.18	0.00	104.18	1603.53	801.77	1861.83	932.30	32.57	-2.918	0.000	0.115
96.00	-4.27	-7.49	0.00	-88.93	0.00	88.93	1590.53	795.27	1825.40	914.06	33.79	-2.942	0.000	0.100
97.00	-3.68	-6.21	0.00	-81.44	0.00	81.44	1583.99	791.99	1807.27	904.98	34.41	-2.953	0.000	0.092
98.00	-3.59	-6.15	0.00	-75.22	0.00	75.22	1577.41	788.70	1789.18	895.92	35.03	-2.964	0.000	0.086
98.75	-3.52	-6.10	0.00	-70.61	0.00	70.61	1572.46	786.23	1775.65	889.15	35.50	-2.971	0.000	0.082
100.00	-3.35	-6.02	0.00	-62.99	0.00	62.99	1564.16	782.08	1753.17	877.89	36.28	-2.982	0.000	0.074
102.00	-3.07	-5.88	0.00	-50.95	0.00	50.95	1550.79	775.39	1717.38	859.97	37.53	-2.998	0.000	0.061
102.25	-3.04	-5.86	0.00	-49.48	0.00	49.48	1064.30	532.15	1198.84	600.31	37.68	-3.000	0.000	0.085
104.00	-2.91	-5.75	0.00	-39.22	0.00	39.22	1057.83	528.92	1179.14	590.45	38.79	-3.011	0.000	0.069
106.00	-2.77	-5.62	0.00	-27.72	0.00	27.72	1050.33	525.16	1156.68	579.20	40.05	-3.024	0.000	0.051
107.00	-1.76	-2.45	0.00	-22.10	0.00	22.10	1046.53	523.26	1145.48	573.59	40.68	-3.029	0.000	0.040
108.00	-1.71	-2.38	0.00	-19.65	0.00	19.65	1042.70	521.35	1134.29	567.99	41.32	-3.033	0.000	0.036
110.00	-1.59	-2.26	0.00	-14.88	0.00	14.88	1034.95	517.47	1111.97	556.81	42.59	-3.040	0.000	0.028
112.00	-1.48	-2.14	0.00	-10.36	0.00	10.36	1027.07	513.53	1089.73	545.68	43.87	-3.046	0.000	0.020
114.00	-1.37	-2.01	0.00	-6.09	0.00	6.09	1019.06	509.53	1067.57	534.58	45.14	-3.049	0.000	0.013
116.00	-1.26	-1.89	0.00	-2.07	0.00	2.07	1010.94	505.47	1045.49	523.52	46.42	-3.051	0.000	0.005
117.00	-0.08	-0.12	0.00	-0.18	0.00	0.18	1006.83	503.41	1034.49	518.01	47.06	-3.051	0.000	0.000
118.00	-0.04	-0.06	0.00	-0.06	0.00	0.06	1002.69	501.34	1023.51	512.52	47.70	-3.051	0.000	0.000
119.00	0.00	-0.06	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	48.34	-3.051	0.000	0.000

Wind Loading - Shaft

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016

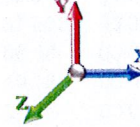
Page: 27



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

Dead Load Factor 1.20
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	4.256	4.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	4.256	4.68	0.00	1.200	1.133	2.00	7.672	9.21	43.1	125.1	402.8
4.00		1.00	0.70	4.256	4.68	0.00	1.200	1.215	2.00	7.644	9.17	42.9	133.4	408.9
6.00		1.00	0.70	4.256	4.68	0.00	1.200	1.265	2.00	7.606	9.13	42.7	138.0	411.5
8.00		1.00	0.70	4.256	4.68	0.00	1.200	1.302	2.00	7.563	9.08	42.5	141.1	412.5
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.331	2.00	7.518	9.02	42.2	143.3	412.6
12.00		1.00	0.70	4.256	4.68	0.00	1.200	1.356	2.00	7.472	8.97	42.0	144.9	412.1
14.00		1.00	0.70	4.256	4.68	0.00	1.200	1.377	2.00	7.424	8.91	41.7	146.1	411.2
16.00		1.00	0.70	4.256	4.68	0.00	1.200	1.395	2.00	7.375	8.85	41.4	147.0	410.0
18.00		1.00	0.70	4.256	4.68	0.00	1.200	1.412	2.00	7.326	8.79	41.2	147.7	408.6
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.427	2.00	7.276	8.73	40.9	148.2	406.9
22.00		1.00	0.70	4.256	4.68	0.00	1.200	1.440	2.00	7.226	8.67	40.6	148.4	405.1
24.00		1.00	0.70	4.256	4.68	0.00	1.200	1.453	2.00	7.175	8.61	40.3	148.6	403.2
26.00		1.00	0.70	4.256	4.68	0.00	1.200	1.465	2.00	7.124	8.55	40.0	148.7	401.1
28.00		1.00	0.70	4.256	4.68	0.00	1.200	1.476	2.00	7.073	8.49	39.7	148.6	399.0
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.486	2.00	7.022	8.43	39.5	148.5	396.7
32.00		1.00	0.71	4.339	4.77	0.00	1.200	1.495	2.00	6.970	8.36	39.9	148.2	394.4
34.00		1.00	0.73	4.415	4.86	0.00	1.200	1.504	2.00	6.918	8.30	40.3	148.0	392.0
36.00		1.00	0.74	4.487	4.94	0.00	1.200	1.513	2.00	6.866	8.24	40.7	147.6	389.6
38.00		1.00	0.75	4.557	5.01	0.00	1.200	1.521	2.00	6.814	8.18	41.0	147.2	387.1
40.00		1.00	0.76	4.625	5.09	0.00	1.200	1.529	2.00	6.762	8.11	41.3	146.8	384.5
42.00		1.00	0.77	4.689	5.16	0.00	1.200	1.537	2.00	6.710	8.05	41.5	146.3	381.9
44.00		1.00	0.78	4.752	5.23	0.00	1.200	1.544	2.00	6.657	7.99	41.8	145.7	379.3
46.00		1.00	0.79	4.813	5.29	0.00	1.200	1.551	2.00	6.605	7.93	42.0	145.1	376.6
48.00		1.00	0.80	4.872	5.36	0.00	1.200	1.557	2.00	6.552	7.86	42.1	144.5	373.9
48.75 Bot - Section 2		1.00	0.80	4.893	5.38	0.00	1.200	1.560	0.75	2.443	2.93	15.8	54.1	139.6
50.00		1.00	0.81	4.929	5.42	0.00	1.200	1.564	1.25	4.108	4.93	26.7	91.1	376.8
52.00		1.00	0.82	4.984	5.48	0.00	1.200	1.570	2.00	6.531	7.84	43.0	145.1	598.7
53.25 Top - Section 1		1.00	0.83	5.018	5.52	0.00	1.200	1.574	1.25	4.055	4.87	26.9	90.4	371.8
54.00		1.00	0.83	5.039	5.54	0.00	1.200	1.576	0.75	2.423	2.91	16.1	54.2	138.8
56.00		1.00	0.84	5.091	5.60	0.00	1.200	1.581	2.00	6.425	7.71	43.2	143.7	367.9
58.00		1.00	0.85	5.142	5.66	0.00	1.200	1.587	2.00	6.372	7.65	43.3	142.9	365.0
60.00		1.00	0.85	5.193	5.71	0.00	1.200	1.592	2.00	6.319	7.58	43.3	142.1	362.2
62.00		1.00	0.86	5.241	5.77	0.00	1.200	1.598	2.00	6.266	7.52	43.4	141.3	359.3
64.00		1.00	0.87	5.289	5.82	0.00	1.200	1.603	2.00	6.213	7.46	43.4	140.5	356.3
66.00		1.00	0.88	5.336	5.87	0.00	1.200	1.608	2.00	6.160	7.39	43.4	139.6	353.4
68.00		1.00	0.89	5.382	5.92	0.00	1.200	1.612	2.00	6.107	7.33	43.4	138.8	350.4
70.00		1.00	0.89	5.426	5.97	0.00	1.200	1.617	2.00	6.053	7.26	43.4	137.9	347.4
72.00		1.00	0.90	5.470	6.02	0.00	1.200	1.622	2.00	6.000	7.20	43.3	137.0	344.4
74.00		1.00	0.91	5.513	6.06	0.00	1.200	1.626	2.00	5.947	7.14	43.3	136.0	341.4
76.00		1.00	0.91	5.555	6.11	0.00	1.200	1.631	2.00	5.893	7.07	43.2	135.1	338.3
78.00		1.00	0.92	5.597	6.16	0.00	1.200	1.635	2.00	5.840	7.01	43.1	134.1	335.3
80.00		1.00	0.93	5.637	6.20	0.00	1.200	1.639	2.00	5.787	6.94	43.1	133.2	332.2
82.00		1.00	0.93	5.677	6.24	0.00	1.200	1.643	2.00	5.733	6.88	43.0	132.2	329.1
84.00		1.00	0.94	5.716	6.29	0.00	1.200	1.647	2.00	5.680	6.82	42.9	131.2	326.0
86.00		1.00	0.95	5.755	6.33	0.00	1.200	1.651	2.00	5.626	6.75	42.7	130.2	322.9
88.00		1.00	0.95	5.793	6.37	0.00	1.200	1.655	2.00	5.573	6.69	42.6	129.1	319.8

Wind Loading - Shaft

Structure: CT13069-A-SBA

Code: EIA/TIA-222-G

10/21/2016

Site Name: Meriden

Exposure: B

Height: 119.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

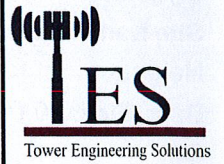
Page: 28



90.00	1.00	0.96	5.830	6.41	0.00	1.200	1.658	2.00	5.519	6.62	42.5	128.1	316.6
92.00	1.00	0.96	5.867	6.45	0.00	1.200	1.662	2.00	5.465	6.56	42.3	127.0	313.5
94.00	1.00	0.97	5.903	6.49	0.00	1.200	1.666	2.00	5.412	6.49	42.2	126.0	310.3
96.00	1.00	0.98	5.939	6.53	0.00	1.200	1.669	2.00	5.358	6.43	42.0	124.9	307.1
97.00 Appurtenance(s)	1.00	0.98	5.956	6.55	0.00	1.200	1.671	1.00	2.659	3.19	20.9	62.2	152.5
98.00	1.00	0.98	5.974	6.57	0.00	1.200	1.672	1.00	2.645	3.17	20.9	61.9	151.7
98.75 Bot - Section 3	1.00	0.98	5.987	6.59	0.00	1.200	1.674	0.75	1.975	2.37	15.6	46.3	113.3
100.00	1.00	0.99	6.008	6.61	0.00	1.200	1.676	1.25	3.315	3.98	26.3	77.7	273.3
102.00	1.00	0.99	6.043	6.65	0.00	1.200	1.679	2.00	5.260	6.31	42.0	123.2	433.2
102.25 Top - Section 2	1.00	0.99	6.047	6.65	0.00	1.200	1.680	0.25	0.654	0.78	5.2	15.4	53.9
104.00	1.00	1.00	6.076	6.68	0.00	1.200	1.682	1.75	4.553	5.46	36.5	106.8	222.7
106.00	1.00	1.00	6.109	6.72	0.00	1.200	1.686	2.00	5.153	6.18	41.6	121.0	251.9
107.00 Appurtenance(s)	1.00	1.01	6.126	6.74	0.00	1.200	1.687	1.00	2.556	3.07	20.7	60.2	125.1
108.00	1.00	1.01	6.142	6.76	0.00	1.200	1.689	1.00	2.543	3.05	20.6	59.9	124.4
110.00	1.00	1.02	6.174	6.79	0.00	1.200	1.692	2.00	5.045	6.05	41.1	118.7	246.5
112.00	1.00	1.02	6.206	6.83	0.00	1.200	1.695	2.00	4.992	5.99	40.9	117.5	243.7
114.00	1.00	1.03	6.238	6.86	0.00	1.200	1.698	2.00	4.938	5.93	40.7	116.4	241.0
116.00	1.00	1.03	6.269	6.90	0.00	1.200	1.701	2.00	4.884	5.86	40.4	115.2	238.3
117.00 Appurtenance(s)	1.00	1.03	6.284	6.91	0.00	1.200	1.702	1.00	2.422	2.91	20.1	57.3	118.2
118.00	1.00	1.04	6.299	6.93	0.00	1.200	1.704	1.00	2.408	2.89	20.0	57.0	117.6
119.00	1.00	1.04	6.315	6.95	0.00	1.200	1.705	1.00	2.395	2.87	20.0	56.7	116.9
Totals:								119.00			2,495.9	21,509.9	

Discrete Appurtenance Forces

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 29
	Struct Class: II	

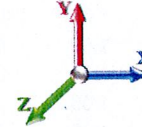


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

Dead Load Factor 1.20

Wind Load Factor 1.00



No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	117.00 (3)	Standoff Mount	3	6.284	6.913	0.67	1.00	16.89	1042.18	0.000	0.000	116.78	0.00	0.00
2	117.00	S11B12	3	6.284	6.913	0.57	0.80	5.94	338.98	0.000	0.000	41.05	0.00	0.00
3	117.00	KRY 112 144/1	3	6.284	6.913	0.58	0.80	1.51	61.85	0.000	0.000	10.43	0.00	0.00
4	117.00	AIR 21 B4A B2P	3	6.284	6.913	0.66	0.80	14.26	837.48	0.000	0.000	98.57	0.00	0.00
5	117.00	AIR 21 B2A B4P	3	6.284	6.913	0.66	0.80	14.26	821.28	0.000	0.000	98.57	0.00	0.00
6	107.00	DB-T1-6Z-8AB-0Z	2	6.126	6.738	0.57	0.80	6.41	321.62	0.000	0.000	43.19	0.00	0.00
7	107.00	RRH2X60-700	3	6.126	6.738	0.61	0.80	7.78	369.77	0.000	0.000	52.39	0.00	0.00
8	107.00	RRH2X60-PCS	3	6.126	6.738	0.71	0.80	6.01	441.25	0.000	0.000	40.49	0.00	0.00
9	107.00	RRH2X90-AWS	3	6.126	6.738	0.60	0.80	5.90	470.87	0.000	0.000	39.77	0.00	0.00
10	107.00	SBNHH-1D65B	6	6.126	6.738	0.66	0.80	37.16	1454.33	0.000	0.000	250.36	0.00	0.00
11	107.00	BXA-80063-6BF-EDIN-X	3	6.126	6.738	0.62	0.80	15.82	557.89	0.000	0.000	106.60	0.00	0.00
12	107.00	Side Arms	3	6.126	6.738	0.67	1.00	19.24	645.70	0.000	0.000	129.64	0.00	0.00
13	97.00	Side Arm	3	5.956	6.552	0.67	1.00	19.14	642.74	0.000	0.000	125.41	0.00	0.00
14	97.00	2.5GHz RRH	3	5.956	6.552	0.58	0.80	4.83	202.52	0.000	0.000	31.62	0.00	0.00
15	97.00	VHLP1-23	1	5.956	6.552	1.00	1.00	2.34	40.81	0.000	0.000	15.31	0.00	0.00
16	97.00	VHLP2-18	2	5.956	6.552	1.00	1.00	11.82	214.17	0.000	0.000	77.48	0.00	0.00
17	97.00	LLPX310R	3	5.956	6.552	0.55	0.80	9.75	284.61	0.000	0.000	63.90	0.00	0.00

Totals: 8,748.07

1,341.56

Total Applied Force Summary

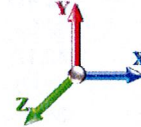
Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 30

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		43.10	478.34	0.00	0.00
4.00		42.94	485.20	0.00	0.00
6.00		42.73	488.21	0.00	0.00
8.00		42.49	489.55	0.00	0.00
10.00		42.24	489.93	0.00	0.00
12.00		41.97	489.68	0.00	0.00
14.00		41.71	489.00	0.00	0.00
16.00		41.43	487.97	0.00	0.00
18.00		41.16	486.69	0.00	0.00
20.00		40.88	485.20	0.00	0.00
22.00		40.59	483.54	0.00	0.00
24.00		40.31	481.73	0.00	0.00
26.00		40.02	479.80	0.00	0.00
28.00		39.74	477.76	0.00	0.00
30.00		39.48	475.63	0.00	0.00
32.00		39.92	473.41	0.00	0.00
34.00		40.31	471.12	0.00	0.00
36.00		40.67	468.76	0.00	0.00
38.00		40.99	466.34	0.00	0.00
40.00		41.28	463.87	0.00	0.00
42.00		41.53	461.35	0.00	0.00
44.00		41.76	458.78	0.00	0.00
46.00		41.96	456.17	0.00	0.00
48.00		42.13	453.53	0.00	0.00
48.75		15.78	169.45	0.00	0.00
50.00		26.73	426.58	0.00	0.00
52.00		42.97	678.51	0.00	0.00
53.25		26.86	421.68	0.00	0.00
54.00		16.11	168.72	0.00	0.00
56.00		43.18	447.81	0.00	0.00
58.00		43.26	445.01	0.00	0.00
60.00		43.31	442.19	0.00	0.00
62.00		43.35	439.33	0.00	0.00
64.00		43.38	436.46	0.00	0.00
66.00		43.39	433.56	0.00	0.00
68.00		43.38	430.64	0.00	0.00
70.00		43.36	427.70	0.00	0.00
72.00		43.32	424.74	0.00	0.00
74.00		43.28	421.77	0.00	0.00
76.00		43.22	418.77	0.00	0.00
78.00		43.14	415.76	0.00	0.00
80.00		43.06	412.73	0.00	0.00
82.00		42.96	409.69	0.00	0.00
84.00		42.86	406.63	0.00	0.00
86.00		42.74	403.56	0.00	0.00
88.00		42.61	400.48	0.00	0.00

Total Applied Force Summary

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 31

90.00		42.47	397.38	0.00	0.00
92.00		42.33	394.27	0.00	0.00
94.00		42.17	391.14	0.00	0.00
96.00		42.00	388.01	0.00	0.00
97.00	(12) attachments	334.61	1577.81	0.00	0.00
98.00		20.86	190.73	0.00	0.00
98.75		15.61	142.55	0.00	0.00
100.00		26.29	322.10	0.00	0.00
102.00		41.96	511.31	0.00	0.00
102.25		5.22	63.64	0.00	0.00
104.00		36.52	291.05	0.00	0.00
106.00		41.55	330.07	0.00	0.00
107.00	(23) attachments	683.12	4425.61	0.00	0.00
108.00		20.62	140.69	0.00	0.00
110.00		41.12	279.05	0.00	0.00
112.00		40.89	276.33	0.00	0.00
114.00		40.66	273.60	0.00	0.00
116.00		40.41	270.86	0.00	0.00
117.00	(15) attachments	385.49	3236.32	0.00	0.00
118.00		20.02	117.56	0.00	0.00
119.00		19.96	116.87	0.00	0.00
Totals:		3,837.47	34,660.31	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016

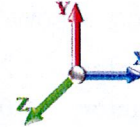
Page: 32



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

Dead Load Factor 1.20
Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.71	0.00	0.046	0.000	4.256	0.00	9.97
4.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.74	0.00	0.046	0.000	4.256	0.00	10.69
6.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.75	0.00	0.046	0.000	4.256	0.00	11.15
8.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.77	0.00	0.047	0.000	4.256	0.00	11.50
10.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.78	0.00	0.047	0.000	4.256	0.00	11.78
12.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.79	0.00	0.047	0.000	4.256	0.00	12.02
14.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.79	0.00	0.048	0.000	4.256	0.00	12.22
16.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.80	0.00	0.048	0.000	4.256	0.00	12.41
18.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.80	0.00	0.049	0.000	4.256	0.00	12.57
20.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.81	0.00	0.049	0.000	4.256	0.00	12.72
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.81	0.00	0.049	0.000	4.256	0.00	12.86
24.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.82	0.00	0.050	0.000	4.256	0.00	12.99
26.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.82	0.00	0.050	0.000	4.256	0.00	13.11
28.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.83	0.00	0.051	0.000	4.256	0.00	13.22
30.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.83	0.00	0.051	0.000	4.260	0.00	13.32
32.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.83	0.00	0.052	0.000	4.339	0.00	13.42
34.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.83	0.00	0.052	0.000	4.415	0.00	13.52
36.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.84	0.00	0.052	0.000	4.487	0.00	13.61
38.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.84	0.00	0.053	0.000	4.557	0.00	13.70
40.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.84	0.00	0.053	0.000	4.625	0.00	13.78
42.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.85	0.00	0.054	0.000	4.689	0.00	13.86
44.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.85	0.00	0.054	0.000	4.752	0.00	13.93
46.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.85	0.00	0.055	0.000	4.813	0.00	14.01
48.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.85	0.00	0.055	0.000	4.872	0.00	14.08
48.75	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.32	0.00	0.056	0.000	4.893	0.00	5.29
50.00	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.53	0.00	0.056	0.000	4.929	0.00	8.84
52.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.86	0.00	0.056	0.000	4.984	0.00	14.21
53.25	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.54	0.00	0.057	0.000	5.018	0.00	8.91
54.00	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.32	0.00	0.056	0.000	5.039	0.00	5.35
56.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.86	0.00	0.057	0.000	5.091	0.00	14.34
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.86	0.00	0.057	0.000	5.142	0.00	14.40
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.86	0.00	0.058	0.000	5.193	0.00	14.46
62.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.87	0.00	0.058	0.000	5.241	0.00	14.51
64.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.87	0.00	0.059	0.000	5.289	0.00	14.57
66.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.87	0.00	0.059	0.000	5.336	0.00	14.62
68.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.87	0.00	0.060	0.000	5.382	0.00	14.68
70.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.87	0.00	0.060	0.000	5.426	0.00	14.73
72.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.87	0.00	0.061	0.000	5.470	0.00	14.78
74.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.88	0.00	0.062	0.000	5.513	0.00	14.83
76.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.88	0.00	0.062	0.000	5.555	0.00	14.88
78.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.88	0.00	0.063	0.000	5.597	0.00	14.92
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.88	0.00	0.064	0.000	5.637	0.00	14.97
82.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.88	0.00	0.064	0.000	5.677	0.00	15.01
84.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.88	0.00	0.065	0.000	5.716	0.00	15.06
86.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.88	0.00	0.066	0.000	5.755	0.00	15.10
88.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.88	0.00	0.066	0.000	5.793	0.00	15.14
90.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.89	0.00	0.067	0.000	5.830	0.00	15.19

Linear Appurtenance Segment Forces (Factored)

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

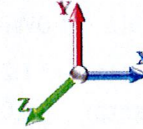
10/21/2016

Page: 33



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
92.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.89	0.00	0.068	0.000	5.867	0.00	15.23
94.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.89	0.00	0.069	0.000	5.903	0.00	15.27
96.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.89	0.00	0.069	0.000	5.939	0.00	15.31
97.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.45	0.00	0.070	0.000	5.956	0.00	7.66
98.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.45	0.00	0.070	0.000	5.974	0.00	7.67
98.75	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.33	0.00	0.071	0.000	5.987	0.00	5.76
100.00	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.56	0.00	0.071	0.000	6.008	0.00	9.62
102.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.89	0.00	0.072	0.000	6.043	0.00	15.42
102.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.11	0.00	0.072	0.000	6.047	0.00	1.93
104.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.78	0.00	0.072	0.000	6.076	0.00	13.53
106.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.90	0.00	0.073	0.000	6.109	0.00	15.49
107.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.45	0.00	0.073	0.000	6.126	0.00	7.76
Totals:											0.0	745.9

Calculated Forces

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

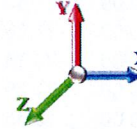
10/21/2016

Page: 34



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 26

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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-34.66	-3.84	0.00	-312.94	0.00	312.94	2063.18	1031.59	3653.66	1829.55	0.00	0.000	0.000	0.188
2.00	-34.18	-3.81	0.00	-305.25	0.00	305.25	2055.83	1027.92	3613.07	1809.22	0.00	-0.022	0.000	0.185
4.00	-33.69	-3.78	0.00	-297.62	0.00	297.62	2048.36	1024.18	3572.46	1788.88	0.02	-0.044	0.000	0.183
6.00	-33.20	-3.75	0.00	-290.06	0.00	290.06	2040.76	1020.38	3531.83	1768.54	0.04	-0.066	0.000	0.180
8.00	-32.71	-3.72	0.00	-282.56	0.00	282.56	2033.04	1016.52	3491.19	1748.19	0.07	-0.088	0.000	0.178
10.00	-32.22	-3.69	0.00	-275.11	0.00	275.11	2025.20	1012.60	3450.55	1727.84	0.12	-0.110	0.000	0.175
12.00	-31.73	-3.66	0.00	-267.73	0.00	267.73	2017.23	1008.61	3409.91	1707.49	0.17	-0.131	0.000	0.173
14.00	-31.24	-3.63	0.00	-260.41	0.00	260.41	2009.13	1004.57	3369.28	1687.14	0.23	-0.153	0.000	0.170
16.00	-30.75	-3.60	0.00	-253.16	0.00	253.16	2000.92	1000.46	3328.65	1666.80	0.30	-0.175	0.000	0.167
18.00	-30.26	-3.57	0.00	-245.96	0.00	245.96	1992.57	996.29	3288.04	1646.46	0.37	-0.196	0.000	0.165
20.00	-29.78	-3.53	0.00	-238.83	0.00	238.83	1984.11	992.05	3247.45	1626.14	0.46	-0.217	0.000	0.162
22.00	-29.29	-3.50	0.00	-231.76	0.00	231.76	1975.52	987.76	3206.89	1605.83	0.56	-0.239	0.000	0.159
24.00	-28.81	-3.47	0.00	-224.76	0.00	224.76	1966.80	983.40	3166.36	1585.53	0.66	-0.260	0.000	0.156
26.00	-28.33	-3.44	0.00	-217.82	0.00	217.82	1957.96	978.98	3125.86	1565.25	0.77	-0.281	0.000	0.154
28.00	-27.85	-3.41	0.00	-210.94	0.00	210.94	1948.99	974.50	3085.40	1544.99	0.90	-0.302	0.000	0.151
30.00	-27.37	-3.37	0.00	-204.13	0.00	204.13	1939.91	969.95	3044.99	1524.76	1.03	-0.322	0.000	0.148
32.00	-26.90	-3.34	0.00	-197.38	0.00	197.38	1930.69	965.35	3004.63	1504.55	1.17	-0.343	0.000	0.145
34.00	-26.43	-3.31	0.00	-190.70	0.00	190.70	1921.36	960.68	2964.32	1484.36	1.31	-0.363	0.000	0.142
36.00	-25.96	-3.27	0.00	-184.08	0.00	184.08	1911.89	955.95	2924.07	1464.21	1.47	-0.383	0.000	0.139
38.00	-25.49	-3.24	0.00	-177.54	0.00	177.54	1902.31	951.15	2883.89	1444.09	1.64	-0.403	0.000	0.136
40.00	-25.03	-3.20	0.00	-171.06	0.00	171.06	1892.60	946.30	2843.78	1424.00	1.81	-0.423	0.000	0.133
42.00	-24.56	-3.16	0.00	-164.66	0.00	164.66	1882.76	941.38	2803.75	1403.96	1.99	-0.443	0.000	0.130
44.00	-24.10	-3.13	0.00	-158.33	0.00	158.33	1872.80	936.40	2763.79	1383.95	2.18	-0.462	0.000	0.127
46.00	-23.65	-3.09	0.00	-152.07	0.00	152.07	1862.72	931.36	2723.92	1363.99	2.38	-0.481	0.000	0.124
48.00	-23.19	-3.05	0.00	-145.89	0.00	145.89	1852.51	926.26	2684.14	1344.07	2.58	-0.500	0.000	0.121
48.75	-23.02	-3.04	0.00	-143.61	0.00	143.61	1848.65	924.33	2669.25	1336.61	2.66	-0.507	0.000	0.120
50.00	-22.60	-3.01	0.00	-139.81	0.00	139.81	1842.18	921.09	2644.46	1324.20	2.80	-0.518	0.000	0.118
52.00	-21.92	-2.97	0.00	-133.79	0.00	133.79	1831.72	915.86	2604.88	1304.37	3.02	-0.537	0.000	0.115
53.25	-21.50	-2.94	0.00	-130.08	0.00	130.08	1841.33	920.67	2641.23	1322.58	3.16	-0.548	0.000	0.110
54.00	-21.33	-2.93	0.00	-127.88	0.00	127.88	1837.42	918.71	2626.38	1315.14	3.25	-0.555	0.000	0.109
56.00	-20.88	-2.88	0.00	-122.03	0.00	122.03	1826.91	913.45	2586.84	1295.34	3.48	-0.572	0.000	0.106
58.00	-20.43	-2.84	0.00	-116.26	0.00	116.26	1816.27	908.14	2547.41	1275.60	3.73	-0.588	0.000	0.102
60.00	-19.99	-2.80	0.00	-110.57	0.00	110.57	1805.51	902.75	2508.10	1255.91	3.98	-0.604	0.000	0.099
62.00	-19.55	-2.76	0.00	-104.97	0.00	104.97	1794.62	897.31	2468.90	1236.28	4.23	-0.620	0.000	0.096
64.00	-19.11	-2.71	0.00	-99.46	0.00	99.46	1783.61	891.81	2429.82	1216.72	4.50	-0.636	0.000	0.092
66.00	-18.68	-2.67	0.00	-94.03	0.00	94.03	1772.48	886.24	2390.88	1197.22	4.76	-0.651	0.000	0.089
68.00	-18.25	-2.63	0.00	-88.68	0.00	88.68	1761.22	880.61	2352.06	1177.78	5.04	-0.665	0.000	0.086
70.00	-17.82	-2.58	0.00	-83.43	0.00	83.43	1749.83	874.92	2313.39	1158.41	5.32	-0.680	0.000	0.082
72.00	-17.40	-2.54	0.00	-78.26	0.00	78.26	1738.33	869.16	2274.85	1139.12	5.61	-0.693	0.000	0.079
74.00	-16.97	-2.50	0.00	-73.18	0.00	73.18	1726.69	863.35	2236.47	1119.90	5.90	-0.707	0.000	0.075
76.00	-16.56	-2.45	0.00	-68.19	0.00	68.19	1714.94	857.47	2198.23	1100.75	6.20	-0.720	0.000	0.072
78.00	-16.14	-2.41	0.00	-63.29	0.00	63.29	1703.06	851.53	2160.16	1081.68	6.51	-0.732	0.000	0.068
80.00	-15.73	-2.36	0.00	-58.48	0.00	58.48	1691.05	845.53	2122.25	1062.70	6.82	-0.744	0.000	0.064
82.00	-15.32	-2.31	0.00	-53.76	0.00	53.76	1678.92	839.46	2084.50	1043.80	7.13	-0.755	0.000	0.061
84.00	-14.91	-2.27	0.00	-49.13	0.00	49.13	1666.67	833.33	2046.93	1024.99	7.45	-0.765	0.000	0.057
86.00	-14.51	-2.22	0.00	-44.59	0.00	44.59	1654.29	827.14	2009.53	1006.26	7.77	-0.775	0.000	0.053
88.00	-14.11	-2.18	0.00	-40.15	0.00	40.15	1641.79	820.89	1972.32	987.63	8.10	-0.785	0.000	0.049
90.00	-13.71	-2.13	0.00	-35.79	0.00	35.79	1629.16	814.58	1935.30	969.09	8.43	-0.793	0.000	0.045

Calculated Forces

Structure: CT13069-A-SBA

Code: EIA/TIA-222-G

10/21/2016

Site Name: Meriden

Exposure: B

Height: 119.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 35



92.00	-13.32	-2.09	0.00	-31.53	0.00	31.53	1616.41	808.20	1898.47	950.64	8.76	-0.801	0.000	0.041
94.00	-12.93	-2.04	0.00	-27.36	0.00	27.36	1603.53	801.77	1861.83	932.30	9.10	-0.808	0.000	0.037
96.00	-12.54	-1.99	0.00	-23.28	0.00	23.28	1590.53	795.27	1825.40	914.06	9.44	-0.815	0.000	0.033
97.00	-10.97	-1.64	0.00	-21.29	0.00	21.29	1583.99	791.99	1807.27	904.98	9.61	-0.817	0.000	0.030
98.00	-10.78	-1.61	0.00	-19.65	0.00	19.65	1577.41	788.70	1789.18	895.92	9.78	-0.820	0.000	0.029
98.75	-10.63	-1.60	0.00	-18.44	0.00	18.44	1572.46	786.23	1775.65	889.15	9.91	-0.822	0.000	0.028
100.00	-10.31	-1.57	0.00	-16.44	0.00	16.44	1564.16	782.08	1753.17	877.89	10.13	-0.825	0.000	0.025
102.00	-9.80	-1.52	0.00	-13.31	0.00	13.31	1550.79	775.39	1717.38	859.97	10.47	-0.829	0.000	0.022
102.25	-9.74	-1.51	0.00	-12.93	0.00	12.93	1064.30	532.15	1198.84	600.31	10.52	-0.830	0.000	0.031
104.00	-9.45	-1.47	0.00	-10.29	0.00	10.29	1057.83	528.92	1179.14	590.45	10.82	-0.833	0.000	0.026
106.00	-9.12	-1.43	0.00	-7.35	0.00	7.35	1050.33	525.16	1156.68	579.20	11.17	-0.836	0.000	0.021
107.00	-4.70	-0.68	0.00	-5.92	0.00	5.92	1046.53	523.26	1145.48	573.59	11.35	-0.837	0.000	0.015
108.00	-4.56	-0.66	0.00	-5.24	0.00	5.24	1042.70	521.35	1134.29	567.99	11.52	-0.838	0.000	0.014
110.00	-4.28	-0.61	0.00	-3.93	0.00	3.93	1034.95	517.47	1111.97	556.81	11.87	-0.840	0.000	0.011
112.00	-4.01	-0.57	0.00	-2.71	0.00	2.71	1027.07	513.53	1089.73	545.68	12.23	-0.842	0.000	0.009
114.00	-3.73	-0.52	0.00	-1.58	0.00	1.58	1019.06	509.53	1067.57	534.58	12.58	-0.843	0.000	0.007
116.00	-3.46	-0.48	0.00	-0.54	0.00	0.54	1010.94	505.47	1045.49	523.52	12.93	-0.843	0.000	0.004
117.00	-0.23	-0.04	0.00	-0.06	0.00	0.06	1006.83	503.41	1034.49	518.01	13.11	-0.843	0.000	0.000
118.00	-0.12	-0.02	0.00	-0.02	0.00	0.02	1002.69	501.34	1023.51	512.52	13.29	-0.843	0.000	0.000
119.00	0.00	-0.02	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	13.46	-0.843	0.000	0.000

Seismic Segment Forces (Factored)

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 36

Load Case: 1.2D + 1.0E

Iterations 24

Gust Response Factor 1.10	Sds 0.20	Ss 0.18	
Dead Load Factor 1.20	Seismic Load Factor 1.00	Sd1 0.10	
Wind Load Factor 0.00	Structure Frequency 0.48	SA 0.05	

Seismic Importance Factor 1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	
0.00		0.00	0.00	0.00	0.00	0.00	R: 1.50
2.00		231.38	0.00	0.02	0.01	2.08	
4.00		229.63	0.00	0.03	0.02	3.50	
6.00		227.88	0.00	0.04	0.02	4.49	
8.00		226.13	0.01	0.05	0.03	5.18	
10.00		224.38	0.01	0.06	0.03	5.66	
12.00		222.63	0.02	0.06	0.04	5.99	
14.00		220.88	0.03	0.07	0.04	6.21	
16.00		219.13	0.03	0.07	0.04	6.37	
18.00		217.39	0.04	0.07	0.04	6.47	
20.00		215.64	0.05	0.07	0.04	6.54	
22.00		213.89	0.06	0.07	0.04	6.60	
24.00		212.14	0.08	0.07	0.04	6.64	
26.00		210.39	0.09	0.07	0.04	6.68	
28.00		208.64	0.10	0.07	0.04	6.72	
30.00		206.89	0.12	0.07	0.03	6.75	
32.00		205.14	0.14	0.07	0.03	6.77	
34.00		203.39	0.15	0.07	0.03	6.78	
36.00		201.64	0.17	0.07	0.03	6.77	
38.00		199.89	0.19	0.06	0.02	6.73	
40.00		198.14	0.21	0.06	0.02	6.66	
42.00		196.39	0.24	0.06	0.02	6.53	
44.00		194.64	0.26	0.05	0.02	6.35	
46.00		192.89	0.28	0.05	0.01	6.09	
48.00		191.15	0.31	0.04	0.01	5.76	
48.75	Bot - Section 2	71.23	0.32	0.04	0.01	2.10	
50.00		238.02	0.33	0.04	0.01	6.70	
52.00		377.99	0.36	0.03	0.01	9.69	
53.25	Top - Section 1	234.47	0.38	0.02	0.01	5.58	
54.00		70.52	0.39	0.02	0.01	1.59	
56.00		186.85	0.42	0.01	0.01	3.53	
58.00		185.10	0.45	0.00	0.01	2.72	
60.00		183.35	0.48	-0.01	0.01	1.85	
62.00		181.60	0.51	-0.02	0.01	0.92	
64.00		179.85	0.55	-0.03	0.01	-0.01	
66.00		178.10	0.58	-0.05	0.01	-0.93	
68.00		176.35	0.62	-0.06	0.02	-1.79	
70.00		174.60	0.65	-0.07	0.02	-2.56	
72.00		172.85	0.69	-0.08	0.03	-3.20	
74.00		171.10	0.73	-0.10	0.04	-3.69	
76.00		169.35	0.77	-0.11	0.05	-4.00	
78.00		167.61	0.81	-0.11	0.06	-4.11	
80.00		165.86	0.85	-0.12	0.07	-4.03	
82.00		164.11	0.90	-0.12	0.09	-3.75	
84.00		162.36	0.94	-0.12	0.10	-3.26	
86.00		160.61	0.99	-0.11	0.13	-2.57	

Seismic Segment Forces (Factored)

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 37

88.00		158.86	1.03	-0.10	0.15	-1.68
90.00		157.11	1.08	-0.08	0.18	-0.61
92.00		155.36	1.13	-0.05	0.21	0.66
94.00		153.61	1.18	-0.01	0.24	2.10
96.00		151.86	1.23	0.03	0.28	3.72
97.00	Appurtenance(s)	696.27	1.26	0.06	0.30	21.16
98.00		74.84	1.28	0.10	0.32	2.74
98.75	Bot - Section 3	55.84	1.30	0.12	0.34	2.32
100.00		163.02	1.33	0.17	0.37	8.18
102.00		258.35	1.39	0.26	0.42	16.81
102.25	Top - Section 2	32.08	1.40	0.28	0.43	2.15
104.00		96.55	1.44	0.37	0.48	7.86
106.00		109.11	1.50	0.50	0.54	10.81
107.00	Appurtenance(s)	1275.0	1.53	0.57	0.58	138.25
108.00		53.73	1.56	0.65	0.61	6.35
110.00		106.48	1.61	0.83	0.69	14.76
112.00		105.17	1.67	1.03	0.78	16.89
114.00		103.86	1.73	1.26	0.87	19.10
116.00		102.55	1.80	1.52	0.97	21.41
117.00	Appurtenance(s)	1393.2	1.83	1.66	1.02	308.93
118.00		50.45	1.86	1.82	1.08	11.86
119.00		50.13	1.89	1.98	1.14	12.47
Totals:		14,345.8				771.3

Total Wind: 13,339.4

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016
 Page: 38



Load Case: 1.2D + 1.0E

Iterations 24

Gust Response Factor 1.10	Sds 0.20	Ss 0.18	
Dead Load Factor 1.20	Seismic Load Factor 1.00	Sd1 0.10	
Wind Load Factor 0.00	Structure Frequency 0.48	SA 0.05	

Seismic Importance 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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-21.01	-0.81	0.00	-78.76	0.00	78.76	2063.18	1031.59	3653.66	1829.55	0.00	0.00	0.00	0.053
2.00	-20.67	-0.81	0.00	-77.15	0.00	77.15	2055.83	1027.92	3613.07	1809.22	0.00	-0.01	-0.01	0.053
4.00	-20.32	-0.80	0.00	-75.54	0.00	75.54	2048.36	1024.18	3572.46	1788.88	0.00	-0.01	-0.01	0.052
6.00	-19.98	-0.80	0.00	-73.93	0.00	73.93	2040.76	1020.38	3531.83	1768.54	0.01	-0.02	-0.02	0.052
8.00	-19.64	-0.80	0.00	-72.32	0.00	72.32	2033.04	1016.52	3491.19	1748.19	0.02	-0.02	-0.02	0.051
10.00	-19.30	-0.79	0.00	-70.72	0.00	70.72	2025.20	1012.60	3450.55	1727.84	0.03	-0.03	-0.03	0.050
12.00	-18.97	-0.79	0.00	-69.13	0.00	69.13	2017.23	1008.61	3409.91	1707.49	0.04	-0.03	-0.03	0.050
14.00	-18.64	-0.79	0.00	-67.55	0.00	67.55	2009.13	1004.57	3369.28	1687.14	0.06	-0.04	-0.04	0.049
16.00	-18.30	-0.78	0.00	-65.98	0.00	65.98	2000.92	1000.46	3328.65	1666.80	0.08	-0.04	-0.04	0.049
18.00	-17.97	-0.78	0.00	-64.42	0.00	64.42	1992.57	996.29	3288.04	1646.46	0.10	-0.05	-0.05	0.048
20.00	-17.65	-0.77	0.00	-62.87	0.00	62.87	1984.11	992.05	3247.45	1626.14	0.12	-0.06	-0.06	0.048
22.00	-17.32	-0.77	0.00	-61.32	0.00	61.32	1975.52	987.76	3206.89	1605.83	0.14	-0.06	-0.06	0.047
24.00	-17.00	-0.76	0.00	-59.79	0.00	59.79	1966.80	983.40	3166.36	1585.53	0.17	-0.07	-0.07	0.046
26.00	-16.68	-0.76	0.00	-58.27	0.00	58.27	1957.96	978.98	3125.86	1565.25	0.20	-0.07	-0.07	0.046
28.00	-16.36	-0.75	0.00	-56.76	0.00	56.76	1948.99	974.50	3085.40	1544.99	0.23	-0.08	-0.08	0.045
30.00	-16.04	-0.74	0.00	-55.26	0.00	55.26	1939.91	969.95	3044.99	1524.76	0.26	-0.08	-0.08	0.045
32.00	-15.73	-0.74	0.00	-53.77	0.00	53.77	1930.69	965.35	3004.63	1504.55	0.30	-0.09	-0.09	0.044
34.00	-15.42	-0.73	0.00	-52.30	0.00	52.30	1921.36	960.68	2964.32	1484.36	0.34	-0.10	-0.10	0.043
36.00	-15.11	-0.73	0.00	-50.83	0.00	50.83	1911.89	955.95	2924.07	1464.21	0.38	-0.10	-0.10	0.043
38.00	-14.80	-0.72	0.00	-49.38	0.00	49.38	1902.31	951.15	2883.89	1444.09	0.42	-0.11	-0.11	0.042
40.00	-14.49	-0.71	0.00	-47.94	0.00	47.94	1892.60	946.30	2843.78	1424.00	0.47	-0.11	-0.11	0.041
42.00	-14.19	-0.71	0.00	-46.51	0.00	46.51	1882.76	941.38	2803.75	1403.96	0.52	-0.12	-0.12	0.041
44.00	-13.89	-0.70	0.00	-45.09	0.00	45.09	1872.80	936.40	2763.79	1383.95	0.57	-0.12	-0.12	0.040
46.00	-13.59	-0.70	0.00	-43.68	0.00	43.68	1862.72	931.36	2723.92	1363.99	0.62	-0.13	-0.13	0.039
48.00	-13.29	-0.69	0.00	-42.29	0.00	42.29	1852.51	926.26	2684.14	1344.07	0.67	-0.13	-0.13	0.039
48.75	-13.18	-0.69	0.00	-41.77	0.00	41.77	1848.65	924.33	2669.25	1336.61	0.70	-0.14	-0.14	0.038
50.00	-12.85	-0.68	0.00	-40.91	0.00	40.91	1842.18	921.09	2644.46	1324.20	0.73	-0.14	-0.14	0.038
52.00	-12.33	-0.67	0.00	-39.54	0.00	39.54	1831.72	915.86	2604.88	1304.37	0.79	-0.14	-0.14	0.037
53.25	-12.00	-0.67	0.00	-38.70	0.00	38.70	1841.33	920.67	2641.23	1322.58	0.83	-0.15	-0.15	0.036
54.00	-11.89	-0.67	0.00	-38.19	0.00	38.19	1837.42	918.71	2626.38	1315.14	0.85	-0.15	-0.15	0.036
56.00	-11.60	-0.66	0.00	-36.86	0.00	36.86	1826.91	913.45	2586.84	1295.34	0.92	-0.15	-0.15	0.035
58.00	-11.31	-0.66	0.00	-35.53	0.00	35.53	1816.27	908.14	2547.41	1275.60	0.98	-0.16	-0.16	0.034
60.00	-11.02	-0.66	0.00	-34.21	0.00	34.21	1805.51	902.75	2508.10	1255.91	1.05	-0.16	-0.16	0.033
62.00	-10.74	-0.66	0.00	-32.89	0.00	32.89	1794.62	897.31	2468.90	1236.28	1.12	-0.17	-0.17	0.033
64.00	-10.45	-0.66	0.00	-31.57	0.00	31.57	1783.61	891.81	2429.82	1216.72	1.19	-0.17	-0.17	0.032
66.00	-10.17	-0.66	0.00	-30.25	0.00	30.25	1772.48	886.24	2390.88	1197.22	1.27	-0.18	-0.18	0.031
68.00	-9.89	-0.66	0.00	-28.93	0.00	28.93	1761.22	880.61	2352.06	1177.78	1.34	-0.18	-0.18	0.030
70.00	-9.61	-0.66	0.00	-27.62	0.00	27.62	1749.83	874.92	2313.39	1158.41	1.42	-0.19	-0.19	0.029
72.00	-9.34	-0.66	0.00	-26.30	0.00	26.30	1738.33	869.16	2274.85	1139.12	1.50	-0.19	-0.19	0.028
74.00	-9.06	-0.66	0.00	-24.98	0.00	24.98	1726.69	863.35	2236.47	1119.90	1.58	-0.20	-0.20	0.028
76.00	-8.79	-0.66	0.00	-23.66	0.00	23.66	1714.94	857.47	2198.23	1100.75	1.67	-0.20	-0.20	0.027
78.00	-8.52	-0.66	0.00	-22.35	0.00	22.35	1703.06	851.53	2160.16	1081.68	1.75	-0.21	-0.21	0.026
80.00	-8.26	-0.66	0.00	-21.03	0.00	21.03	1691.05	845.53	2122.25	1062.70	1.84	-0.21	-0.21	0.025
82.00	-7.99	-0.66	0.00	-19.72	0.00	19.72	1678.92	839.46	2084.50	1043.80	1.93	-0.21	-0.21	0.024
84.00	-7.73	-0.66	0.00	-18.40	0.00	18.40	1666.67	833.33	2046.93	1024.99	2.02	-0.22	-0.22	0.023
86.00	-7.47	-0.66	0.00	-17.09	0.00	17.09	1654.29	827.14	2009.53	1006.26	2.11	-0.22	-0.22	0.021
88.00	-7.21	-0.66	0.00	-15.78	0.00	15.78	1641.79	820.89	1972.32	987.63	2.21	-0.23	-0.23	0.020

Calculated Forces

Structure: CT13069-A-SBA

Code: EIA/TIA-222-G

10/21/2016

Site Name: Meriden

Exposure: B

Height: 119.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

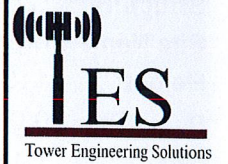
Page: 39



90.00	-6.95	-0.66	0.00	-14.46	0.00	14.46	1629.16	814.58	1935.30	969.09	2.30	-0.23	0.019
92.00	-6.70	-0.65	0.00	-13.15	0.00	13.15	1616.41	808.20	1898.47	950.64	2.40	-0.23	0.018
94.00	-6.44	-0.65	0.00	-11.84	0.00	11.84	1603.53	801.77	1861.83	932.30	2.50	-0.24	0.017
96.00	-6.19	-0.65	0.00	-10.54	0.00	10.54	1590.53	795.27	1825.40	914.06	2.60	-0.24	0.015
97.00	-5.32	-0.62	0.00	-9.90	0.00	9.90	1583.99	791.99	1807.27	904.98	2.65	-0.24	0.014
98.00	-5.20	-0.62	0.00	-9.27	0.00	9.27	1577.41	788.70	1789.18	895.92	2.70	-0.24	0.014
98.75	-5.11	-0.62	0.00	-8.81	0.00	8.81	1572.46	786.23	1775.65	889.15	2.73	-0.24	0.013
100.00	-4.87	-0.61	0.00	-8.04	0.00	8.04	1564.16	782.08	1753.17	877.89	2.80	-0.24	0.012
102.00	-4.50	-0.59	0.00	-6.82	0.00	6.82	1550.79	775.39	1717.38	859.97	2.90	-0.25	0.011
102.25	-4.45	-0.59	0.00	-6.68	0.00	6.68	1064.30	532.15	1198.84	600.31	2.91	-0.25	0.015
104.00	-4.28	-0.58	0.00	-5.65	0.00	5.65	1057.83	528.92	1179.14	590.45	3.00	-0.25	0.014
106.00	-4.08	-0.57	0.00	-4.49	0.00	4.49	1050.33	525.16	1156.68	579.20	3.11	-0.25	0.012
107.00	-2.52	-0.42	0.00	-3.92	0.00	3.92	1046.53	523.26	1145.48	573.59	3.16	-0.25	0.009
108.00	-2.44	-0.42	0.00	-3.50	0.00	3.50	1042.70	521.35	1134.29	567.99	3.21	-0.25	0.009
110.00	-2.28	-0.40	0.00	-2.67	0.00	2.67	1034.95	517.47	1111.97	556.81	3.32	-0.25	0.007
112.00	-2.12	-0.38	0.00	-1.87	0.00	1.87	1027.07	513.53	1089.73	545.68	3.42	-0.25	0.005
114.00	-1.96	-0.36	0.00	-1.10	0.00	1.10	1019.06	509.53	1067.57	534.58	3.53	-0.25	0.004
116.00	-1.81	-0.34	0.00	-0.38	0.00	0.38	1010.94	505.47	1045.49	523.52	3.64	-0.25	0.003
117.00	-0.12	-0.02	0.00	-0.04	0.00	0.04	1006.83	503.41	1034.49	518.01	3.69	-0.25	0.000
118.00	-0.06	-0.01	0.00	-0.01	0.00	0.01	1002.69	501.34	1023.51	512.52	3.74	-0.25	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	3.80	-0.25	0.000

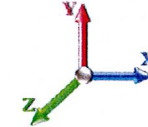
Seismic Segment Forces (Factored)

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 40

Load Case: 0.9D + 1.0E					Iterations 24
Gust Response Factor	1.10			Sds	0.20
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.10
Wind Load Factor	0.00	Structure Frequency	0.48	SA	0.05
				Seismic Importance Factor	1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
2.00		231.38	0.00	0.02	0.01	2.08	
4.00		229.63	0.00	0.03	0.02	3.50	
6.00		227.88	0.00	0.04	0.02	4.49	
8.00		226.13	0.01	0.05	0.03	5.18	
10.00		224.38	0.01	0.06	0.03	5.66	
12.00		222.63	0.02	0.06	0.04	5.99	
14.00		220.88	0.03	0.07	0.04	6.21	
16.00		219.13	0.03	0.07	0.04	6.37	
18.00		217.39	0.04	0.07	0.04	6.47	
20.00		215.64	0.05	0.07	0.04	6.54	
22.00		213.89	0.06	0.07	0.04	6.60	
24.00		212.14	0.08	0.07	0.04	6.64	
26.00		210.39	0.09	0.07	0.04	6.68	
28.00		208.64	0.10	0.07	0.04	6.72	
30.00		206.89	0.12	0.07	0.03	6.75	
32.00		205.14	0.14	0.07	0.03	6.77	
34.00		203.39	0.15	0.07	0.03	6.78	
36.00		201.64	0.17	0.07	0.03	6.77	
38.00		199.89	0.19	0.06	0.02	6.73	
40.00		198.14	0.21	0.06	0.02	6.66	
42.00		196.39	0.24	0.06	0.02	6.53	
44.00		194.64	0.26	0.05	0.02	6.35	
46.00		192.89	0.28	0.05	0.01	6.09	
48.00		191.15	0.31	0.04	0.01	5.76	
48.75	Bot - Section 2	71.23	0.32	0.04	0.01	2.10	
50.00		238.02	0.33	0.04	0.01	6.70	
52.00		377.99	0.36	0.03	0.01	9.69	
53.25	Top - Section 1	234.47	0.38	0.02	0.01	5.58	
54.00		70.52	0.39	0.02	0.01	1.59	
56.00		186.85	0.42	0.01	0.01	3.53	
58.00		185.10	0.45	0.00	0.01	2.72	
60.00		183.35	0.48	-0.01	0.01	1.85	
62.00		181.60	0.51	-0.02	0.01	0.92	
64.00		179.85	0.55	-0.03	0.01	-0.01	
66.00		178.10	0.58	-0.05	0.01	-0.93	
68.00		176.35	0.62	-0.06	0.02	-1.79	
70.00		174.60	0.65	-0.07	0.02	-2.56	
72.00		172.85	0.69	-0.08	0.03	-3.20	
74.00		171.10	0.73	-0.10	0.04	-3.69	
76.00		169.35	0.77	-0.11	0.05	-4.00	
78.00		167.61	0.81	-0.11	0.06	-4.11	
80.00		165.86	0.85	-0.12	0.07	-4.03	
82.00		164.11	0.90	-0.12	0.09	-3.75	
84.00		162.36	0.94	-0.12	0.10	-3.26	
86.00		160.61	0.99	-0.11	0.13	-2.57	

Seismic Segment Forces (Factored)

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 41

88.00		158.86	1.03	-0.10	0.15	-1.68
90.00		157.11	1.08	-0.08	0.18	-0.61
92.00		155.36	1.13	-0.05	0.21	0.66
94.00		153.61	1.18	-0.01	0.24	2.10
96.00		151.86	1.23	0.03	0.28	3.72
97.00	Appurtenance(s)	696.27	1.26	0.06	0.30	21.16
98.00		74.84	1.28	0.10	0.32	2.74
98.75	Bot - Section 3	55.84	1.30	0.12	0.34	2.32
100.00		163.02	1.33	0.17	0.37	8.18
102.00		258.35	1.39	0.26	0.42	16.81
102.25	Top - Section 2	32.08	1.40	0.28	0.43	2.15
104.00		96.55	1.44	0.37	0.48	7.86
106.00		109.11	1.50	0.50	0.54	10.81
107.00	Appurtenance(s)	1275.0	1.53	0.57	0.58	138.25
108.00		53.73	1.56	0.65	0.61	6.35
110.00		106.48	1.61	0.83	0.69	14.76
112.00		105.17	1.67	1.03	0.78	16.89
114.00		103.86	1.73	1.26	0.87	19.10
116.00		102.55	1.80	1.52	0.97	21.41
117.00	Appurtenance(s)	1393.2	1.83	1.66	1.02	308.93
118.00		50.45	1.86	1.82	1.08	11.86
119.00		50.13	1.89	1.98	1.14	12.47
	Totals:	14,345.8				771.3

Total Wind: 13,339.4

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016



Page: 42

Load Case: 0.9D + 1.0E

Gust Response Factor 1.10

Sds 0.20

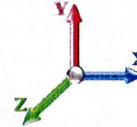
Iterations 24

Dead Load Factor 0.90 **Seismic Load Factor** 1.00 **Sd1** 0.10

Ss 0.18

Wind Load Factor 0.00 **Structure Frequency** 0.48 **SA** 0.05 **Seismic Importance Factor** 1.00

S1 0.06



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-15.76	-0.81	0.00	-78.07	0.00	78.07	2063.18	1031.59	3653.66	1829.55	0.00	0.00	0.00	0.050
2.00	-15.50	-0.81	0.00	-76.46	0.00	76.46	2055.83	1027.92	3613.07	1809.22	0.00	-0.01	-0.01	0.050
4.00	-15.24	-0.80	0.00	-74.85	0.00	74.85	2048.36	1024.18	3572.46	1788.88	0.00	-0.01	-0.01	0.049
6.00	-14.99	-0.80	0.00	-73.24	0.00	73.24	2040.76	1020.38	3531.83	1768.54	0.01	-0.02	-0.02	0.049
8.00	-14.73	-0.80	0.00	-71.64	0.00	71.64	2033.04	1016.52	3491.19	1748.19	0.02	-0.02	-0.02	0.048
10.00	-14.48	-0.79	0.00	-70.05	0.00	70.05	2025.20	1012.60	3450.55	1727.84	0.03	-0.03	-0.03	0.048
12.00	-14.23	-0.79	0.00	-68.46	0.00	68.46	2017.23	1008.61	3409.91	1707.49	0.04	-0.03	-0.03	0.047
14.00	-13.98	-0.78	0.00	-66.89	0.00	66.89	2009.13	1004.57	3369.28	1687.14	0.06	-0.04	-0.04	0.047
16.00	-13.73	-0.78	0.00	-65.32	0.00	65.32	2000.92	1000.46	3328.65	1666.80	0.07	-0.04	-0.04	0.046
18.00	-13.48	-0.77	0.00	-63.77	0.00	63.77	1992.57	996.29	3288.04	1646.46	0.09	-0.05	-0.05	0.045
20.00	-13.24	-0.77	0.00	-62.23	0.00	62.23	1984.11	992.05	3247.45	1626.14	0.12	-0.06	-0.06	0.045
22.00	-12.99	-0.76	0.00	-60.69	0.00	60.69	1975.52	987.76	3206.89	1605.83	0.14	-0.06	-0.06	0.044
24.00	-12.75	-0.76	0.00	-59.17	0.00	59.17	1966.80	983.40	3166.36	1585.53	0.17	-0.07	-0.07	0.044
26.00	-12.51	-0.75	0.00	-57.66	0.00	57.66	1957.96	978.98	3125.86	1565.25	0.20	-0.07	-0.07	0.043
28.00	-12.27	-0.74	0.00	-56.16	0.00	56.16	1948.99	974.50	3085.40	1544.99	0.23	-0.08	-0.08	0.043
30.00	-12.03	-0.74	0.00	-54.67	0.00	54.67	1939.91	969.95	3044.99	1524.76	0.26	-0.08	-0.08	0.042
32.00	-11.80	-0.73	0.00	-53.20	0.00	53.20	1930.69	965.35	3004.63	1504.55	0.30	-0.09	-0.09	0.041
34.00	-11.56	-0.73	0.00	-51.74	0.00	51.74	1921.36	960.68	2964.32	1484.36	0.34	-0.09	-0.09	0.041
36.00	-11.33	-0.72	0.00	-50.28	0.00	50.28	1911.89	955.95	2924.07	1464.21	0.38	-0.10	-0.10	0.040
38.00	-11.10	-0.71	0.00	-48.84	0.00	48.84	1902.31	951.15	2883.89	1444.09	0.42	-0.11	-0.11	0.040
40.00	-10.87	-0.71	0.00	-47.42	0.00	47.42	1892.60	946.30	2843.78	1424.00	0.46	-0.11	-0.11	0.039
42.00	-10.64	-0.70	0.00	-46.00	0.00	46.00	1882.76	941.38	2803.75	1403.96	0.51	-0.12	-0.12	0.038
44.00	-10.41	-0.70	0.00	-44.60	0.00	44.60	1872.80	936.40	2763.79	1383.95	0.56	-0.12	-0.12	0.038
46.00	-10.19	-0.69	0.00	-43.21	0.00	43.21	1862.72	931.36	2723.92	1363.99	0.61	-0.13	-0.13	0.037
48.00	-9.97	-0.68	0.00	-41.83	0.00	41.83	1852.51	926.26	2684.14	1344.07	0.67	-0.13	-0.13	0.037
48.75	-9.88	-0.68	0.00	-41.31	0.00	41.31	1848.65	924.33	2669.25	1336.61	0.69	-0.13	-0.13	0.036
50.00	-9.64	-0.68	0.00	-40.46	0.00	40.46	1842.18	921.09	2644.46	1324.20	0.72	-0.14	-0.14	0.036
52.00	-9.25	-0.67	0.00	-39.11	0.00	39.11	1831.72	915.86	2604.88	1304.37	0.78	-0.14	-0.14	0.035
53.25	-9.00	-0.66	0.00	-38.28	0.00	38.28	1841.33	920.67	2641.23	1322.58	0.82	-0.15	-0.15	0.034
54.00	-8.92	-0.66	0.00	-37.78	0.00	37.78	1837.42	918.71	2626.38	1315.14	0.84	-0.15	-0.15	0.034
56.00	-8.70	-0.66	0.00	-36.46	0.00	36.46	1826.91	913.45	2586.84	1295.34	0.91	-0.15	-0.15	0.033
58.00	-8.48	-0.65	0.00	-35.15	0.00	35.15	1816.27	908.14	2547.41	1275.60	0.97	-0.16	-0.16	0.032
60.00	-8.27	-0.65	0.00	-33.84	0.00	33.84	1805.51	902.75	2508.10	1255.91	1.04	-0.16	-0.16	0.032
62.00	-8.05	-0.65	0.00	-32.54	0.00	32.54	1794.62	897.31	2468.90	1236.28	1.11	-0.17	-0.17	0.031
64.00	-7.84	-0.65	0.00	-31.24	0.00	31.24	1783.61	891.81	2429.82	1216.72	1.18	-0.17	-0.17	0.030
66.00	-7.63	-0.65	0.00	-29.94	0.00	29.94	1772.48	886.24	2390.88	1197.22	1.25	-0.18	-0.18	0.029
68.00	-7.42	-0.65	0.00	-28.64	0.00	28.64	1761.22	880.61	2352.06	1177.78	1.33	-0.18	-0.18	0.029
70.00	-7.21	-0.65	0.00	-27.34	0.00	27.34	1749.83	874.92	2313.39	1158.41	1.41	-0.19	-0.19	0.028
72.00	-7.00	-0.65	0.00	-26.03	0.00	26.03	1738.33	869.16	2274.85	1139.12	1.49	-0.19	-0.19	0.027
74.00	-6.80	-0.65	0.00	-24.73	0.00	24.73	1726.69	863.35	2236.47	1119.90	1.57	-0.20	-0.20	0.026
76.00	-6.59	-0.65	0.00	-23.43	0.00	23.43	1714.94	857.47	2198.23	1100.75	1.65	-0.20	-0.20	0.025
78.00	-6.39	-0.65	0.00	-22.13	0.00	22.13	1703.06	851.53	2160.16	1081.68	1.73	-0.20	-0.20	0.024
80.00	-6.19	-0.65	0.00	-20.83	0.00	20.83	1691.05	845.53	2122.25	1062.70	1.82	-0.21	-0.21	0.023
82.00	-5.99	-0.65	0.00	-19.53	0.00	19.53	1678.92	839.46	2084.50	1043.80	1.91	-0.21	-0.21	0.022
84.00	-5.79	-0.65	0.00	-18.23	0.00	18.23	1666.67	833.33	2046.93	1024.99	2.00	-0.22	-0.22	0.021
86.00	-5.60	-0.65	0.00	-16.93	0.00	16.93	1654.29	827.14	2009.53	1006.26	2.09	-0.22	-0.22	0.020
88.00	-5.41	-0.65	0.00	-15.64	0.00	15.64	1641.79	820.89	1972.32	987.63	2.18	-0.22	-0.22	0.019

Calculated Forces

Structure: CT13069-A-SBA

Code: EIA/TIA-222-G

10/21/2016

Site Name: Meriden

Exposure: B

Height: 119.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 43



90.00	-5.21	-0.65	0.00	-14.34	0.00	14.34	1629.16	814.58	1935.30	969.09	2.28	-0.23	0.018
92.00	-5.02	-0.65	0.00	-13.04	0.00	13.04	1616.41	808.20	1898.47	950.64	2.37	-0.23	0.017
94.00	-4.83	-0.64	0.00	-11.75	0.00	11.75	1603.53	801.77	1861.83	932.30	2.47	-0.23	0.016
96.00	-4.64	-0.64	0.00	-10.46	0.00	10.46	1590.53	795.27	1825.40	914.06	2.57	-0.24	0.014
97.00	-3.99	-0.62	0.00	-9.82	0.00	9.82	1583.99	791.99	1807.27	904.98	2.62	-0.24	0.013
98.00	-3.90	-0.61	0.00	-9.20	0.00	9.20	1577.41	788.70	1789.18	895.92	2.67	-0.24	0.013
98.75	-3.83	-0.61	0.00	-8.74	0.00	8.74	1572.46	786.23	1775.65	889.15	2.71	-0.24	0.012
100.00	-3.65	-0.60	0.00	-7.98	0.00	7.98	1564.16	782.08	1753.17	877.89	2.77	-0.24	0.011
102.00	-3.37	-0.58	0.00	-6.77	0.00	6.77	1550.79	775.39	1717.38	859.97	2.87	-0.24	0.010
102.25	-3.34	-0.58	0.00	-6.63	0.00	6.63	1064.30	532.15	1198.84	600.31	2.88	-0.24	0.014
104.00	-3.21	-0.57	0.00	-5.61	0.00	5.61	1057.83	528.92	1179.14	590.45	2.97	-0.24	0.013
106.00	-3.06	-0.56	0.00	-4.46	0.00	4.46	1050.33	525.16	1156.68	579.20	3.08	-0.25	0.011
107.00	-1.89	-0.42	0.00	-3.90	0.00	3.90	1046.53	523.26	1145.48	573.59	3.13	-0.25	0.009
108.00	-1.83	-0.41	0.00	-3.48	0.00	3.48	1042.70	521.35	1134.29	567.99	3.18	-0.25	0.008
110.00	-1.71	-0.40	0.00	-2.65	0.00	2.65	1034.95	517.47	1111.97	556.81	3.29	-0.25	0.006
112.00	-1.59	-0.38	0.00	-1.86	0.00	1.86	1027.07	513.53	1089.73	545.68	3.39	-0.25	0.005
114.00	-1.47	-0.36	0.00	-1.10	0.00	1.10	1019.06	509.53	1067.57	534.58	3.50	-0.25	0.003
116.00	-1.36	-0.34	0.00	-0.38	0.00	0.38	1010.94	505.47	1045.49	523.52	3.60	-0.25	0.002
117.00	-0.09	-0.02	0.00	-0.04	0.00	0.04	1006.83	503.41	1034.49	518.01	3.65	-0.25	0.000
118.00	-0.05	-0.01	0.00	-0.01	0.00	0.01	1002.69	501.34	1023.51	512.52	3.71	-0.25	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	3.76	-0.25	0.000

Wind Loading - Shaft

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016

Page: 44

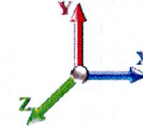


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

Dead Load Factor 1.00

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.74	183.76	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	6.129	6.74	182.39	0.650	0.000	2.00	7.294	4.74	32.0	0.0	231.4
4.00		1.00	0.70	6.129	6.74	181.01	0.650	0.000	2.00	7.239	4.71	31.7	0.0	229.6
6.00		1.00	0.70	6.129	6.74	179.63	0.650	0.000	2.00	7.184	4.67	31.5	0.0	227.9
8.00		1.00	0.70	6.129	6.74	178.26	0.650	0.000	2.00	7.129	4.63	31.2	0.0	226.1
10.00		1.00	0.70	6.129	6.74	176.88	0.650	0.000	2.00	7.075	4.60	31.0	0.0	224.4
12.00		1.00	0.70	6.129	6.74	175.50	0.650	0.000	2.00	7.020	4.56	30.8	0.0	222.6
14.00		1.00	0.70	6.129	6.74	174.13	0.650	0.000	2.00	6.965	4.53	30.5	0.0	220.9
16.00		1.00	0.70	6.129	6.74	172.75	0.650	0.000	2.00	6.910	4.49	30.3	0.0	219.1
18.00		1.00	0.70	6.129	6.74	171.38	0.650	0.000	2.00	6.855	4.46	30.0	0.0	217.4
20.00		1.00	0.70	6.129	6.74	170.00	0.650	0.000	2.00	6.800	4.42	29.8	0.0	215.6
22.00		1.00	0.70	6.129	6.74	168.62	0.650	0.000	2.00	6.746	4.38	29.6	0.0	213.9
24.00		1.00	0.70	6.129	6.74	167.25	0.650	0.000	2.00	6.691	4.35	29.3	0.0	212.1
26.00		1.00	0.70	6.129	6.74	165.87	0.650	0.000	2.00	6.636	4.31	29.1	0.0	210.4
28.00		1.00	0.70	6.129	6.74	164.50	0.650	0.000	2.00	6.581	4.28	28.8	0.0	208.6
30.00		1.00	0.70	6.134	6.75	163.19	0.650	0.000	2.00	6.526	4.24	28.6	0.0	206.9
32.00		1.00	0.71	6.248	6.87	163.31	0.650	0.000	2.00	6.471	4.21	28.9	0.0	205.1
34.00		1.00	0.73	6.357	6.99	163.33	0.650	0.000	2.00	6.417	4.17	29.2	0.0	203.4
36.00		1.00	0.74	6.462	7.11	163.26	0.650	0.000	2.00	6.362	4.14	29.4	0.0	201.6
38.00		1.00	0.75	6.562	7.22	163.10	0.650	0.000	2.00	6.307	4.10	29.6	0.0	199.9
40.00		1.00	0.76	6.659	7.33	162.86	0.650	0.000	2.00	6.252	4.06	29.8	0.0	198.1
42.00		1.00	0.77	6.753	7.43	162.56	0.650	0.000	2.00	6.197	4.03	29.9	0.0	196.4
44.00		1.00	0.78	6.843	7.53	162.19	0.650	0.000	2.00	6.142	3.99	30.1	0.0	194.6
46.00		1.00	0.79	6.931	7.62	161.76	0.650	0.000	2.00	6.088	3.96	30.2	0.0	192.9
48.00		1.00	0.80	7.015	7.72	161.27	0.650	0.000	2.00	6.033	3.92	30.3	0.0	191.1
48.75	Bot - Section 2	1.00	0.80	7.047	7.75	161.08	0.650	0.000	0.75	2.248	1.46	11.3	0.0	71.2
50.00		1.00	0.81	7.098	7.81	160.73	0.650	0.000	1.25	3.783	2.46	19.2	0.0	238.0
52.00		1.00	0.82	7.178	7.90	160.15	0.650	0.000	2.00	6.008	3.91	30.8	0.0	378.0
53.25	Top - Section 1	1.00	0.83	7.227	7.95	159.76	0.650	0.000	1.25	3.727	2.42	19.3	0.0	234.5
54.00		1.00	0.83	7.255	7.98	161.83	0.650	0.000	0.75	2.226	1.45	11.5	0.0	70.5
56.00		1.00	0.84	7.331	8.06	161.17	0.650	0.000	2.00	5.898	3.83	30.9	0.0	186.8
58.00		1.00	0.85	7.405	8.15	160.46	0.650	0.000	2.00	5.843	3.80	30.9	0.0	185.1
60.00		1.00	0.85	7.477	8.22	159.72	0.650	0.000	2.00	5.789	3.76	30.9	0.0	183.3
62.00		1.00	0.86	7.548	8.30	158.94	0.650	0.000	2.00	5.734	3.73	30.9	0.0	181.6
64.00		1.00	0.87	7.616	8.38	158.13	0.650	0.000	2.00	5.679	3.69	30.9	0.0	179.9
66.00		1.00	0.88	7.684	8.45	157.29	0.650	0.000	2.00	5.624	3.66	30.9	0.0	178.1
68.00		1.00	0.89	7.749	8.52	156.41	0.650	0.000	2.00	5.569	3.62	30.9	0.0	176.4
70.00		1.00	0.89	7.814	8.60	155.51	0.650	0.000	2.00	5.514	3.58	30.8	0.0	174.6
72.00		1.00	0.90	7.877	8.66	154.58	0.650	0.000	2.00	5.460	3.55	30.7	0.0	172.9
74.00		1.00	0.91	7.939	8.73	153.62	0.650	0.000	2.00	5.405	3.51	30.7	0.0	171.1
76.00		1.00	0.91	8.000	8.80	152.63	0.650	0.000	2.00	5.350	3.48	30.6	0.0	169.4
78.00		1.00	0.92	8.059	8.87	151.62	0.650	0.000	2.00	5.295	3.44	30.5	0.0	167.6
80.00		1.00	0.93	8.118	8.93	150.59	0.650	0.000	2.00	5.240	3.41	30.4	0.0	165.9
82.00		1.00	0.93	8.175	8.99	149.53	0.650	0.000	2.00	5.185	3.37	30.3	0.0	164.1
84.00		1.00	0.94	8.232	9.05	148.45	0.650	0.000	2.00	5.131	3.33	30.2	0.0	162.4
86.00		1.00	0.95	8.287	9.12	147.35	0.650	0.000	2.00	5.076	3.30	30.1	0.0	160.6
88.00		1.00	0.95	8.342	9.18	146.23	0.650	0.000	2.00	5.021	3.26	29.9	0.0	158.9

Wind Loading - Shaft

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016



Page: 45

90.00	1.00	0.96	8.396	9.24	145.09	0.650	0.000	2.00	4.966	3.23	29.8	0.0	157.1		
92.00	1.00	0.96	8.448	9.29	143.93	0.650	0.000	2.00	4.911	3.19	29.7	0.0	155.4		
94.00	1.00	0.97	8.501	9.35	142.75	0.650	0.000	2.00	4.857	3.16	29.5	0.0	153.6		
96.00	1.00	0.98	8.552	9.41	141.55	0.650	0.000	2.00	4.802	3.12	29.4	0.0	151.9		
97.00 Appurtenance(s)	1.00	0.98	8.577	9.43	140.95	0.650	0.000	1.00	2.380	1.55	14.6	0.0	75.3		
98.00	1.00	0.98	8.602	9.46	140.34	0.650	0.000	1.00	2.367	1.54	14.6	0.0	74.8		
98.75 Bot - Section 3	1.00	0.98	8.621	9.48	139.88	0.650	0.000	0.75	1.766	1.15	10.9	0.0	55.8		
100.00	1.00	0.99	8.652	9.52	139.11	0.650	0.000	1.25	2.966	1.93	18.3	0.0	163.0		
102.00	1.00	0.99	8.701	9.57	137.87	0.650	0.000	2.00	4.701	3.06	29.2	0.0	258.3		
102.25 Top - Section 2	1.00	0.99	8.707	9.58	137.71	0.650	0.000	0.25	0.584	0.38	3.6	0.0	32.1		
104.00	1.00	1.00	8.750	9.62	138.51	0.650	0.000	1.75	4.062	2.64	25.4	0.0	96.5		
106.00	1.00	1.00	8.797	9.68	137.24	0.650	0.000	2.00	4.591	2.98	28.9	0.0	109.1		
107.00 Appurtenance(s)	1.00	1.01	8.821	9.70	136.60	0.650	0.000	1.00	2.275	1.48	14.3	0.0	54.1		
108.00	1.00	1.01	8.845	9.73	135.95	0.650	0.000	1.00	2.261	1.47	14.3	0.0	53.7		
110.00	1.00	1.02	8.891	9.78	134.65	0.650	0.000	2.00	4.481	2.91	28.5	0.0	106.5		
112.00	1.00	1.02	8.937	9.83	133.34	0.650	0.000	2.00	4.427	2.88	28.3	0.0	105.2		
114.00	1.00	1.03	8.982	9.88	132.01	0.650	0.000	2.00	4.372	2.84	28.1	0.0	103.9		
116.00	1.00	1.03	9.027	9.93	130.67	0.650	0.000	2.00	4.317	2.81	27.9	0.0	102.5		
117.00 Appurtenance(s)	1.00	1.03	9.049	9.95	129.99	0.650	0.000	1.00	2.138	1.39	13.8	0.0	50.8		
118.00	1.00	1.04	9.071	9.98	129.31	0.650	0.000	1.00	2.124	1.38	13.8	0.0	50.5		
119.00	1.00	1.04	9.093	10.00	128.63	0.650	0.000	1.00	2.110	1.37	13.7	0.0	50.1		
Totals:								119.00				1,780.9			

Discrete Appurtenance Forces

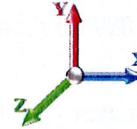
Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 46

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	117.00 (3)	Standoff Mount	3	9.049	9.954	0.67	1.00	10.05	594.00	0.000	0.000	100.04	0.00	0.00
2	117.00	S11B12	3	9.049	9.954	0.54	0.80	4.55	153.00	0.000	0.000	45.30	0.00	0.00
3	117.00	KRY 112 144/1	3	9.049	9.954	0.58	0.80	0.71	33.00	0.000	0.000	7.05	0.00	0.00
4	117.00	AIR 21 B4A B2P	3	9.049	9.954	0.66	0.80	12.13	288.00	0.000	0.000	120.76	0.00	0.00
5	117.00	AIR 21 B2A B4P	3	9.049	9.954	0.66	0.80	12.13	274.50	0.000	0.000	120.76	0.00	0.00
6	107.00	DB-T1-6Z-8AB-OZ	2	8.821	9.703	0.54	0.80	5.15	37.80	0.000	0.000	49.93	0.00	0.00
7	107.00	RRH2X60-700	3	8.821	9.703	0.54	0.80	5.63	165.00	0.000	0.000	54.61	0.00	0.00
8	107.00	RRH2X60-PCS	3	8.821	9.703	0.54	0.80	3.54	165.00	0.000	0.000	34.33	0.00	0.00
9	107.00	RRH2X90-AWS	3	8.821	9.703	0.54	0.80	6.22	192.00	0.000	0.000	60.38	0.00	0.00
10	107.00	SBNHH-1D65B	6	8.821	9.703	0.66	0.80	32.19	243.60	0.000	0.000	312.35	0.00	0.00
11	107.00	BXA-80063-6BF-EDIN-X	3	8.821	9.703	0.62	0.80	13.59	57.60	0.000	0.000	131.87	0.00	0.00
12	107.00	Side Arms	3	8.821	9.703	0.67	1.00	9.04	360.00	0.000	0.000	87.76	0.00	0.00
13	97.00	Side Arm	3	8.577	9.435	0.67	1.00	9.04	360.00	0.000	0.000	85.34	0.00	0.00
14	97.00	2.5GHz RRH	3	8.577	9.435	0.54	0.80	2.93	99.00	0.000	0.000	27.61	0.00	0.00
15	97.00	VHLP1-23	1	8.577	9.435	1.00	1.00	1.61	14.20	0.000	0.000	15.19	0.00	0.00
16	97.00	VHLP2-18	2	8.577	9.435	1.00	1.00	9.38	62.00	0.000	0.000	88.50	0.00	0.00
17	97.00	LLPX310R	3	8.577	9.435	0.55	0.80	7.12	85.80	0.000	0.000	67.18	0.00	0.00
Totals:									3,184.50			1,408.96		

Total Applied Force Summary

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

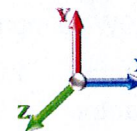


Page: 47

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		31.96	288.22	0.00	0.00
4.00		31.72	286.47	0.00	0.00
6.00		31.48	284.72	0.00	0.00
8.00		31.24	282.97	0.00	0.00
10.00		31.00	281.22	0.00	0.00
12.00		30.76	279.47	0.00	0.00
14.00		30.52	277.72	0.00	0.00
16.00		30.28	275.97	0.00	0.00
18.00		30.04	274.23	0.00	0.00
20.00		29.80	272.48	0.00	0.00
22.00		29.56	270.73	0.00	0.00
24.00		29.32	268.98	0.00	0.00
26.00		29.08	267.23	0.00	0.00
28.00		28.84	265.48	0.00	0.00
30.00		28.62	263.73	0.00	0.00
32.00		28.91	261.98	0.00	0.00
34.00		29.17	260.23	0.00	0.00
36.00		29.39	258.48	0.00	0.00
38.00		29.59	256.73	0.00	0.00
40.00		29.77	254.98	0.00	0.00
42.00		29.92	253.23	0.00	0.00
44.00		30.05	251.48	0.00	0.00
46.00		30.17	249.73	0.00	0.00
48.00		30.26	247.99	0.00	0.00
48.75		11.33	92.54	0.00	0.00
50.00		19.20	273.55	0.00	0.00
52.00		30.83	434.83	0.00	0.00
53.25		19.26	269.99	0.00	0.00
54.00		11.55	91.83	0.00	0.00
56.00		30.92	243.69	0.00	0.00
58.00		30.94	241.94	0.00	0.00
60.00		30.95	240.19	0.00	0.00
62.00		30.94	238.44	0.00	0.00
64.00		30.93	236.69	0.00	0.00
66.00		30.90	234.94	0.00	0.00
68.00		30.86	233.19	0.00	0.00
70.00		30.81	231.44	0.00	0.00
72.00		30.75	229.69	0.00	0.00
74.00		30.68	227.94	0.00	0.00
76.00		30.60	226.19	0.00	0.00
78.00		30.51	224.45	0.00	0.00
80.00		30.42	222.70	0.00	0.00
82.00		30.31	220.95	0.00	0.00
84.00		30.20	219.20	0.00	0.00
86.00		30.08	217.45	0.00	0.00
88.00		29.95	215.70	0.00	0.00

Total Applied Force Summary

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 48

90.00		29.81	213.95	0.00	0.00
92.00		29.67	212.20	0.00	0.00
94.00		29.52	210.45	0.00	0.00
96.00		29.36	208.70	0.00	0.00
97.00	(12) attachments	298.42	724.69	0.00	0.00
98.00		14.56	102.06	0.00	0.00
98.75		10.89	76.26	0.00	0.00
100.00		18.35	197.05	0.00	0.00
102.00		29.24	312.79	0.00	0.00
102.25		3.63	38.88	0.00	0.00
104.00		25.41	144.18	0.00	0.00
106.00		28.88	163.55	0.00	0.00
107.00	(23) attachments	745.58	1302.28	0.00	0.00
108.00		14.30	67.31	0.00	0.00
110.00		28.49	133.64	0.00	0.00
112.00		28.29	132.33	0.00	0.00
114.00		28.08	131.02	0.00	0.00
116.00		27.86	129.71	0.00	0.00
117.00	(15) attachments	407.73	1406.86	0.00	0.00
118.00		13.78	50.45	0.00	0.00
119.00		13.72	50.13	0.00	0.00
	Totals:	3,189.90	17,510.49	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

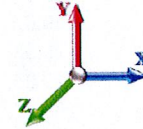
10/21/2016

Page: 49



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.046	0.000	6.129	0.00	2.20
4.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.046	0.000	6.129	0.00	2.20
6.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.046	0.000	6.129	0.00	2.20
8.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.047	0.000	6.129	0.00	2.20
10.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.047	0.000	6.129	0.00	2.20
12.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.047	0.000	6.129	0.00	2.20
14.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.048	0.000	6.129	0.00	2.20
16.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.048	0.000	6.129	0.00	2.20
18.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.049	0.000	6.129	0.00	2.20
20.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.049	0.000	6.129	0.00	2.20
22.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.049	0.000	6.129	0.00	2.20
24.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.050	0.000	6.129	0.00	2.20
26.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.050	0.000	6.129	0.00	2.20
28.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.051	0.000	6.129	0.00	2.20
30.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.051	0.000	6.134	0.00	2.20
32.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.052	0.000	6.248	0.00	2.20
34.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.052	0.000	6.357	0.00	2.20
36.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.052	0.000	6.462	0.00	2.20
38.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.053	0.000	6.562	0.00	2.20
40.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.053	0.000	6.659	0.00	2.20
42.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.054	0.000	6.753	0.00	2.20
44.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.054	0.000	6.843	0.00	2.20
46.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	6.931	0.00	2.20
48.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.055	0.000	7.015	0.00	2.20
48.75	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.056	0.000	7.047	0.00	0.83
50.00	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.056	0.000	7.098	0.00	1.38
52.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.056	0.000	7.178	0.00	2.20
53.25	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.057	0.000	7.227	0.00	1.38
54.00	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.056	0.000	7.255	0.00	0.83
56.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	7.331	0.00	2.20
58.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.057	0.000	7.405	0.00	2.20
60.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	7.477	0.00	2.20
62.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.058	0.000	7.548	0.00	2.20
64.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	7.616	0.00	2.20
66.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.059	0.000	7.684	0.00	2.20
68.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	7.749	0.00	2.20
70.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.060	0.000	7.814	0.00	2.20
72.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.061	0.000	7.877	0.00	2.20
74.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	7.939	0.00	2.20
76.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.062	0.000	8.000	0.00	2.20
78.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.063	0.000	8.059	0.00	2.20
80.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	8.118	0.00	2.20
82.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.064	0.000	8.175	0.00	2.20
84.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.065	0.000	8.232	0.00	2.20
86.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	8.287	0.00	2.20
88.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.066	0.000	8.342	0.00	2.20
90.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.067	0.000	8.396	0.00	2.20

Linear Appurtenance Segment Forces (Factored)

Structure: CT13069-A-SBA	Code: EIA/TIA-222-G	10/21/2016
Site Name: Meriden	Exposure: B	
Height: 119.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

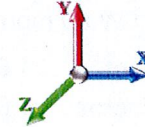


Page: 50

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
92.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.068	0.000	8.448	0.00	2.20
94.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.069	0.000	8.501	0.00	2.20
96.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.069	0.000	8.552	0.00	2.20
97.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.070	0.000	8.577	0.00	1.10
98.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.070	0.000	8.602	0.00	1.10
98.75	1 5/8" Hybrid	Yes	0.75	0.000	2.00	0.13	0.00	0.071	0.000	8.621	0.00	0.83
100.00	1 5/8" Hybrid	Yes	1.25	0.000	2.00	0.21	0.00	0.071	0.000	8.652	0.00	1.38
102.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.072	0.000	8.701	0.00	2.20
102.25	1 5/8" Hybrid	Yes	0.25	0.000	2.00	0.04	0.00	0.072	0.000	8.707	0.00	0.28
104.00	1 5/8" Hybrid	Yes	1.75	0.000	2.00	0.29	0.00	0.072	0.000	8.750	0.00	1.93
106.00	1 5/8" Hybrid	Yes	2.00	0.000	2.00	0.33	0.00	0.073	0.000	8.797	0.00	2.20
107.00	1 5/8" Hybrid	Yes	1.00	0.000	2.00	0.17	0.00	0.073	0.000	8.821	0.00	1.10
Totals:											0.0	117.7

Calculated Forces

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016

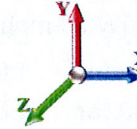
Page: 51



Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-17.51	-3.19	0.00	-265.21	0.00	265.21	2063.18	1031.59	3653.66	1829.55	0.00	0.000	0.000	0.153
2.00	-17.22	-3.16	0.00	-258.83	0.00	258.83	2055.83	1027.92	3613.07	1809.22	0.00	-0.019	0.000	0.151
4.00	-16.93	-3.14	0.00	-252.50	0.00	252.50	2048.36	1024.18	3572.46	1788.88	0.02	-0.037	0.000	0.149
6.00	-16.65	-3.11	0.00	-246.22	0.00	246.22	2040.76	1020.38	3531.83	1768.54	0.04	-0.056	0.000	0.147
8.00	-16.36	-3.09	0.00	-240.00	0.00	240.00	2033.04	1016.52	3491.19	1748.19	0.06	-0.075	0.000	0.145
10.00	-16.08	-3.06	0.00	-233.83	0.00	233.83	2025.20	1012.60	3450.55	1727.84	0.10	-0.093	0.000	0.143
12.00	-15.80	-3.03	0.00	-227.71	0.00	227.71	2017.23	1008.61	3409.91	1707.49	0.14	-0.112	0.000	0.141
14.00	-15.52	-3.01	0.00	-221.65	0.00	221.65	2009.13	1004.57	3369.28	1687.14	0.19	-0.130	0.000	0.139
16.00	-15.25	-2.98	0.00	-215.64	0.00	215.64	2000.92	1000.46	3328.65	1666.80	0.25	-0.148	0.000	0.137
18.00	-14.97	-2.95	0.00	-209.68	0.00	209.68	1992.57	996.29	3288.04	1646.46	0.32	-0.167	0.000	0.135
20.00	-14.70	-2.93	0.00	-203.77	0.00	203.77	1984.11	992.05	3247.45	1626.14	0.39	-0.185	0.000	0.133
22.00	-14.43	-2.90	0.00	-197.91	0.00	197.91	1975.52	987.76	3206.89	1605.83	0.47	-0.203	0.000	0.131
24.00	-14.16	-2.88	0.00	-192.11	0.00	192.11	1966.80	983.40	3166.36	1585.53	0.56	-0.221	0.000	0.128
26.00	-13.89	-2.85	0.00	-186.35	0.00	186.35	1957.96	978.98	3125.86	1565.25	0.66	-0.239	0.000	0.126
28.00	-13.62	-2.83	0.00	-180.65	0.00	180.65	1948.99	974.50	3085.40	1544.99	0.76	-0.257	0.000	0.124
30.00	-13.36	-2.80	0.00	-175.00	0.00	175.00	1939.91	969.95	3044.99	1524.76	0.87	-0.274	0.000	0.122
32.00	-13.09	-2.77	0.00	-169.40	0.00	169.40	1930.69	965.35	3004.63	1504.55	0.99	-0.292	0.000	0.119
34.00	-12.83	-2.75	0.00	-163.86	0.00	163.86	1921.36	960.68	2964.32	1484.36	1.12	-0.310	0.000	0.117
36.00	-12.57	-2.72	0.00	-158.36	0.00	158.36	1911.89	955.95	2924.07	1464.21	1.25	-0.327	0.000	0.115
38.00	-12.32	-2.69	0.00	-152.92	0.00	152.92	1902.31	951.15	2883.89	1444.09	1.39	-0.344	0.000	0.112
40.00	-12.06	-2.66	0.00	-147.54	0.00	147.54	1892.60	946.30	2843.78	1424.00	1.54	-0.361	0.000	0.110
42.00	-11.81	-2.64	0.00	-142.21	0.00	142.21	1882.76	941.38	2803.75	1403.96	1.69	-0.378	0.000	0.108
44.00	-11.56	-2.61	0.00	-136.94	0.00	136.94	1872.80	936.40	2763.79	1383.95	1.86	-0.395	0.000	0.105
46.00	-11.31	-2.58	0.00	-131.72	0.00	131.72	1862.72	931.36	2723.92	1363.99	2.03	-0.411	0.000	0.103
48.00	-11.06	-2.55	0.00	-126.57	0.00	126.57	1852.51	926.26	2684.14	1344.07	2.20	-0.427	0.000	0.100
48.75	-10.96	-2.54	0.00	-124.65	0.00	124.65	1848.65	924.33	2669.25	1336.61	2.27	-0.434	0.000	0.099
50.00	-10.69	-2.52	0.00	-121.48	0.00	121.48	1842.18	921.09	2644.46	1324.20	2.38	-0.444	0.000	0.098
52.00	-10.26	-2.49	0.00	-116.44	0.00	116.44	1831.72	915.86	2604.88	1304.37	2.57	-0.459	0.000	0.095
53.25	-9.99	-2.47	0.00	-113.33	0.00	113.33	1841.33	920.67	2641.23	1322.58	2.69	-0.469	0.000	0.091
54.00	-9.89	-2.46	0.00	-111.48	0.00	111.48	1837.42	918.71	2626.38	1315.14	2.77	-0.475	0.000	0.090
56.00	-9.65	-2.43	0.00	-106.56	0.00	106.56	1826.91	913.45	2586.84	1295.34	2.97	-0.490	0.000	0.088
58.00	-9.41	-2.40	0.00	-101.71	0.00	101.71	1816.27	908.14	2547.41	1275.60	3.18	-0.504	0.000	0.085
60.00	-9.17	-2.37	0.00	-96.92	0.00	96.92	1805.51	902.75	2508.10	1255.91	3.39	-0.519	0.000	0.082
62.00	-8.93	-2.33	0.00	-92.19	0.00	92.19	1794.62	897.31	2468.90	1236.28	3.61	-0.533	0.000	0.080
64.00	-8.69	-2.30	0.00	-87.52	0.00	87.52	1783.61	891.81	2429.82	1216.72	3.84	-0.546	0.000	0.077
66.00	-8.46	-2.27	0.00	-82.91	0.00	82.91	1772.48	886.24	2390.88	1197.22	4.07	-0.559	0.000	0.074
68.00	-8.22	-2.24	0.00	-78.37	0.00	78.37	1761.22	880.61	2352.06	1177.78	4.31	-0.572	0.000	0.071
70.00	-7.99	-2.21	0.00	-73.89	0.00	73.89	1749.83	874.92	2313.39	1158.41	4.55	-0.585	0.000	0.068
72.00	-7.76	-2.18	0.00	-69.47	0.00	69.47	1738.33	869.16	2274.85	1139.12	4.80	-0.597	0.000	0.065
74.00	-7.53	-2.15	0.00	-65.11	0.00	65.11	1726.69	863.35	2236.47	1119.90	5.05	-0.609	0.000	0.063
76.00	-7.31	-2.12	0.00	-60.82	0.00	60.82	1714.94	857.47	2198.23	1100.75	5.31	-0.620	0.000	0.060
78.00	-7.08	-2.08	0.00	-56.59	0.00	56.59	1703.06	851.53	2160.16	1081.68	5.57	-0.631	0.000	0.056
80.00	-6.86	-2.05	0.00	-52.42	0.00	52.42	1691.05	845.53	2122.25	1062.70	5.84	-0.642	0.000	0.053
82.00	-6.64	-2.02	0.00	-48.32	0.00	48.32	1678.92	839.46	2084.50	1043.80	6.11	-0.652	0.000	0.050
84.00	-6.42	-1.99	0.00	-44.28	0.00	44.28	1666.67	833.33	2046.93	1024.99	6.39	-0.661	0.000	0.047
86.00	-6.20	-1.96	0.00	-40.30	0.00	40.30	1654.29	827.14	2009.53	1006.26	6.67	-0.670	0.000	0.044
88.00	-5.99	-1.93	0.00	-36.38	0.00	36.38	1641.79	820.89	1972.32	987.63	6.95	-0.679	0.000	0.040
90.00	-5.77	-1.89	0.00	-32.53	0.00	32.53	1629.16	814.58	1935.30	969.09	7.23	-0.687	0.000	0.037

Calculated Forces

Structure: CT13069-A-SBA

Code: EIA/TIA-222-G

10/21/2016

Site Name: Meriden

Exposure: B

Height: 119.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 52



92.00	-5.56	-1.86	0.00	-28.75	0.00	28.75	1616.41	808.20	1898.47	950.64	7.52	-0.694	0.000	0.034
94.00	-5.35	-1.83	0.00	-25.02	0.00	25.02	1603.53	801.77	1861.83	932.30	7.82	-0.700	0.000	0.030
96.00	-5.14	-1.80	0.00	-21.36	0.00	21.36	1590.53	795.27	1825.40	914.06	8.11	-0.706	0.000	0.027
97.00	-4.42	-1.49	0.00	-19.56	0.00	19.56	1583.99	791.99	1807.27	904.98	8.26	-0.709	0.000	0.024
98.00	-4.32	-1.48	0.00	-18.07	0.00	18.07	1577.41	788.70	1789.18	895.92	8.41	-0.711	0.000	0.023
98.75	-4.24	-1.47	0.00	-16.96	0.00	16.96	1572.46	786.23	1775.65	889.15	8.52	-0.713	0.000	0.022
100.00	-4.05	-1.44	0.00	-15.13	0.00	15.13	1564.16	782.08	1753.17	877.89	8.71	-0.716	0.000	0.020
102.00	-3.73	-1.41	0.00	-12.24	0.00	12.24	1550.79	775.39	1717.38	859.97	9.01	-0.720	0.000	0.017
102.25	-3.69	-1.41	0.00	-11.89	0.00	11.89	1064.30	532.15	1198.84	600.31	9.04	-0.720	0.000	0.023
104.00	-3.55	-1.38	0.00	-9.42	0.00	9.42	1057.83	528.92	1179.14	590.45	9.31	-0.723	0.000	0.019
106.00	-3.39	-1.35	0.00	-6.66	0.00	6.66	1050.33	525.16	1156.68	579.20	9.61	-0.726	0.000	0.015
107.00	-2.09	-0.59	0.00	-5.31	0.00	5.31	1046.53	523.26	1145.48	573.59	9.76	-0.727	0.000	0.011
108.00	-2.03	-0.57	0.00	-4.72	0.00	4.72	1042.70	521.35	1134.29	567.99	9.92	-0.728	0.000	0.010
110.00	-1.89	-0.54	0.00	-3.58	0.00	3.58	1034.95	517.47	1111.97	556.81	10.22	-0.730	0.000	0.008
112.00	-1.76	-0.51	0.00	-2.49	0.00	2.49	1027.07	513.53	1089.73	545.68	10.53	-0.731	0.000	0.006
114.00	-1.63	-0.48	0.00	-1.46	0.00	1.46	1019.06	509.53	1067.57	534.58	10.83	-0.732	0.000	0.004
116.00	-1.50	-0.45	0.00	-0.50	0.00	0.50	1010.94	505.47	1045.49	523.52	11.14	-0.732	0.000	0.002
117.00	-0.10	-0.03	0.00	-0.04	0.00	0.04	1006.83	503.41	1034.49	518.01	11.30	-0.732	0.000	0.000
118.00	-0.05	-0.01	0.00	-0.01	0.00	0.01	1002.69	501.34	1023.51	512.52	11.45	-0.732	0.000	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	998.51	499.26	1012.55	507.03	11.60	-0.732	0.000	0.000

Final Analysis Summary

Structure: CT13069-A-SBA
Site Name: Meriden
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

10/21/2016

Page: 53

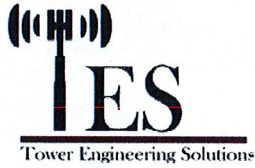


Reactions

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 + 1.6W 97 mph Wind	13.4	0.00	21.00	0.00	0.00	1115.42
0.9D + 1.6W 97 mph Wind	13.3	0.00	15.75	0.00	0.00	1106.29
1.2D + 1.0Di + 1.0Wi 50 mph Wind	3.8	0.00	34.66	0.00	0.00	312.94
1.2D + 1.0E	0.8	0.00	21.01	0.00	0.00	78.76
0.9D + 1.0E	0.8	0.00	15.76	0.00	0.00	78.07
1.0D + 1.0W 60 mph Wind	3.2	0.00	17.51	0.00	0.00	265.21

Max Stresses

Load Case	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)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-21.00	-13.35	0.00	-1115.4	0.00	-1115.4	2063.18	1031.5	3653.66	1829.55	0.00	0.620
0.9D + 1.6W 97 mph Wind	-15.75	-13.35	0.00	-1106.2	0.00	-1106.2	2063.18	1031.5	3653.66	1829.55	0.00	0.612
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-34.66	-3.84	0.00	-312.94	0.00	-312.94	2063.18	1031.5	3653.66	1829.55	0.00	0.188
1.2D + 1.0E	-21.01	-0.81	0.00	-78.76	0.00	-78.76	2063.18	1031.5	3653.66	1829.55	0.00	0.053
0.9D + 1.0E	-15.76	-0.81	0.00	-78.07	0.00	-78.07	2063.18	1031.5	3653.66	1829.55	0.00	0.050
1.0D + 1.0W 60 mph Wind	-17.51	-3.19	0.00	-265.21	0.00	-265.21	2063.18	1031.5	3653.66	1829.55	0.00	0.153



Monopole Mat Foundation Design

Date	10/21/2016
Customer Name:	Verizon
Site Name:	Meriden
Site Number:	CT13069-A-SBA
Engr. Number:	27084
EIA/TIA Standard:	EIA-222-G
Structure Height (Ft.):	119
Engineer Name:	Arinyedokia
Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations
Monopole
Analysis

Structure Type:

Analysis or Design?

Base Reactions (Factored):

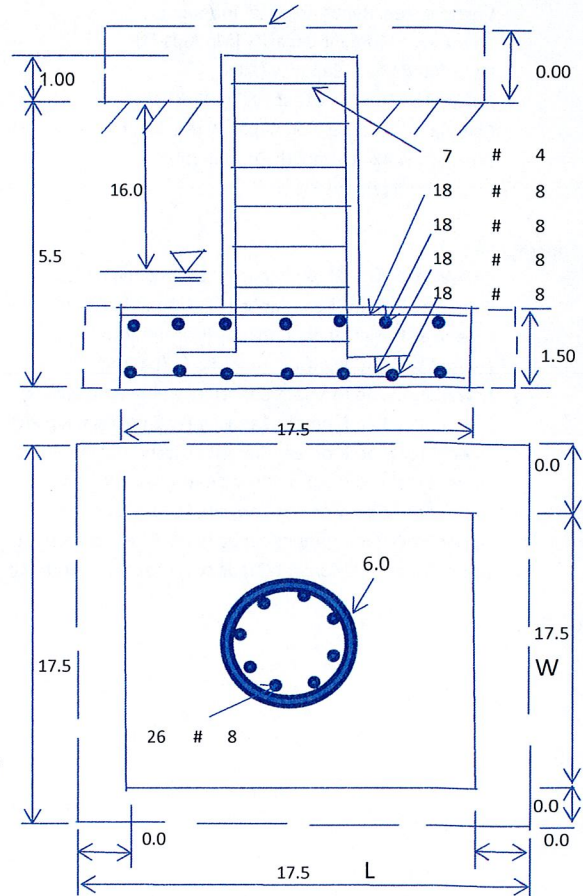
Axial Load (Kips):	21.0	Shear Force (Kips):	13.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	1115.4

Foundation Geometries:

Diameter of Pier (ft.):	6.0	Depth of Base BG (ft.):	5.5	Mods required -Yes/No ?:	No
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft.):	1.50		
Length of Pad (ft.):	17.5	Width of Pad (ft.):	17.5		
Final Length of pad (ft)	17.5	Final width of pad (ft):	17.5		
Control Value for Cell D18:	0	Control Value for Cell F18:	0		

Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	26	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	18	Qty. of Rebar in Pad (W):	18	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	18	Qty. of Rebar in Pad (W):	18	



Soil Design Parameters:

Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	57.6	Pcf
Water Table B.G.S. (ft):	16.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:	0	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hori. force for O.T.M.:	No	Reduction factor on the maximum soil bearing pressure:	1.00	
		Angle from Top of Pad:	30	
		Angle from Bottm of Pad:	25	
		Angle from Bottm of Pad:	25	

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	1111.90	Total Dry Soil Weight (Kips):	133.43
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	133.43	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	600.75	Total Dry Concrete Weight (Kips):	90.11
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	90.11	Total Vertical Load on Base (Kips):	244.54

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	2450	<	Allowable Factored Soil Bearing (psf):	9000	0.27	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	1944.1	>	Design Factored Momont (kips-ft):	1203	0.62	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.62					OK!

Load/
Capacity
Ratio

Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00		

Load/
Capacity
Ratio**(1) Concrete Pier:**

Vertical Steel Rebar Area (sq. in./each):	0.79	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	2994.3	> Design Factored Moment (Mu, Kips-Ft)	1182.4	0.39	OK!
Calculated Shear Capacity (Kips):	501.5	> Design Factored Shear (Kips):	13.4	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	1109.2	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7162.1	> Design Factored Axial Load (Pu Kips):	21.0	0.00	OK!
Moment & Axial Strength Combination:	0.39	OK! Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.005	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	288.9	> One-Way Factored Shear (L-D. Kips):	103.0	0.36	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	288.9	> One-Way Factored Shear (W-D., Kips)	103.0	0.36	OK!
One-Way Design Shear Capacity (Corner-Corner, Kips):	309.5	> One-Way Factored Shear (C-C, Kips):	152.3	0.49	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0047	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0047		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	889.6	> Moment at Bottom (L-Direct. K-Ft):	233.8	0.26	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	889.6	> Moment at Bottom (W-Direct. K-Ft):	233.8	0.26	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	1240.8	> Moment at Bottom (C-C Dir. K-Ft):	330.7	0.27	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0047	OK! Upper Steel Reinf. Ratio (W-Direct.):	0.0047		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	889.6	> Moment at the top (L-Dir Kips-Ft):	55.5	0.06	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	889.6	> Moment at the top (W-Dir Kips-Ft):	55.5	0.06	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	1240.8	> Moment at the top (C-C Direc. K-Ft):	119.7	0.10	OK!