January 6, 2016

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

RE: **EM-T-MOBILE-046-150506**
275 North Street, Easton, CT 06612
T-Mobile #: CT11243A-L700

Dear Ms. Bachman:

On May 26, 2015, SBA Communications received the Council's approval for modification of T-Mobile's existing equipment at a tower facility located at 275 North Street, Easton, CT 06612 (EM-T-MOBILE-046-150506.)

When construction commenced, it was discovered that the proposed coax could not be run inside the monopole because available space is already effectively filled to the maximum acceptable capacity. Existing cable bundles, cable appurtenances (hoisting grips, grounding kits, termination fitting) and interior monopole hardware obstructions (j-hooks, handhole reinforcement) make new cable pulling unfeasible and potentially damaging to existing feedlines. As such, the Structural Analysis was re-run, and drawings were revised, to address the following engineering provisions:

- (6) lines ran outside in (1) row, 1x6
- Lines must be ran up back side of tower. Side facing T-Mobile equipment .
- All lines, banding, clamps etc. must be painted brown to match tower.
- Lines not permitted to block or hinder safety climb/climbing face.
- Coax not allowed to impede on other carriers equipment.
- NET MUST red line CDs accordingly once completed showing the changes with regards to the (6) cables.

Attached for the Council's files are copies of the re-run Structural Analysis and revised Construction Drawings. A copy of the Council's approval letter is also attached for reference. Please let me know if you have any questions or if SBA can provide anything further.

Thank you,

Kri Pelletier
SBA Communications Corporation
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Westboro, MA 01581
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Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
8445 Freeport Parkway, Suite 375, Irving, Texas 75063

Structural Analysis Report

Existing 185 ft Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT00707-S

Customer Site Name: North Easton

Carrier Name: T-Mobile

Carrier Site ID / Name: CT11243A

Site Location: 275 North Street

Easton, Connecticut

Fairfield County

Latitude: 41.316417

Longitude: -73.314022

Analysis Result:

Max Structural Usage: 99.9% [Pass]

Max Foundation Usage: 94% [Pass]

Report Prepared By : Jarryd Tibbetts

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Max Foundation Usage: 94% [Pass]

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Introduction

The purpose of this report is to summarize the analysis results on the 185 ft 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	Monopole original structural design report & shaft section data prepared by Paul J. Ford and Company. Dated 08-10-1999. Job No 20099-146. Monopole previous structural report prepared by FDH Engineering, Inc. Dated 03-04-2015. Project No 15BFFU1400.
Foundation Drawing	Monopole foundation drawing prepared by Paul J. Ford and Company. Dated 08-10-1999. Job No 20099-146.
Geotechnical Report	Monopole geotechnical report prepared by Jaworski Geotech, Inc. Dated 07-30-1999. Project No C98404G.
Modification Drawings	Modification Drawing prepared by TES, Job #14918 dated 4/23/15

Analysis Criteria

The analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-F**.** 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.

Basic Wind Speed Used in the Analysis:	85.0 mph (Fastest mile)
Basic Wind Speed with Ice:	74 mph (Fastest mile) with 1/2" radial ice concurrent
Operational Wind Speed:	50 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-F / IBC 2003 / 2005 Connecticut State Building Code

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	185.0	-	6' Pole Branch	Direct	-	-
2	179.5	-	6' Pole Branch	Direct	-	-
3	175.0	3	Alcatel Lucent 1900 MHz RRUs	(3) Cobra Arms	(4) 1 1/4" Coax	Sprint
4		3	Alcatel Lucent 800 MHz Filters			
5		3	Alcatel Lucent 800 MHz RRUs			
6		3	Alcatel Lucent TD-RRH8x20-25			
7		4	RFS ACU-A20-N RETs			
8		3	RFS APXVSPP18-C-A20			
9		3	RFS APXVTM14-C-120			
10	174.5	-	7' Pole Branch	Direct	-	-
11	169.5	-	8' Pole Branch	Direct	-	-
12	165.0	3	Antel BXA 171063/8BF	(3) Cobra Arms	(12) 1 5/8”	Verizon Wireless
13		1	Antel BXA 70063/6CF_4			
14		2	Antel LPA 80063/6CF			
15		6	RFS FD9R6004/2C-3L			
16		4	Swedcom SC-E 6014 Rev 2			
17		2	Swedcom SLCP 2x6014			
18	164.5	-	8' Pole Branch	Direct	-	-
19	159.5	-	9' Pole Branch	Direct	-	-
20	155.0	6	Ericsson RRUS-11 RRUs	(3) Cobra Arms	(12) 1 5/8”; (1) Fiber; (2) DC Power	AT&T Wireless
21		6	Powerwave 7770.00			
22		6	Powerwave LGP 21401 TMAs			
23		6	Powerwave LGP21903 Diplexers			
24		3	Powerwave P65-16-XLH-RR			
25		1	Raycap DC6-48-60-18-8F Surge			
26	154.5	-	9' Pole Branch	Direct	-	-
27	149.5	-	10' Pole Branch	Direct	-	-
28	144.5	-	11' Pole Branch	Direct	-	-

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
29	185.0	6	Allen Telecom FE15S01P77/75 TMAs	(3) Cobra Arms*	(12) 1 5/8"	T-Mobile
30		3	Commscope LNX-6515DS			
31		3	EMS RR90-17-02DP			
32		3	Kathrein 782 11056			

*. (3) Cobra Arms cut down from 12' to 5' long. Cantilever length reduced from 6' to 2.5'.

The proposed transmission lines can be installed inside or outside of the pole shafts. If installed outside, the lines shall be strapped tightly to the face of the pole shafts. 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	Plates
Max. Usage:	**99.9%**	**94.4%**	**78.5%**	**57.4%**
Pass/Fail	**Pass**	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)
Original Design Reactions	7275.0	52.5
Analysis Reactions	7255.6	52.2
% of Design Reactions	99.7%	99.4%

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):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-F for the installed antennas. Maximum twist/sway at the elevation of the proposed equipment is 2.5639 degrees under the operational wind speed as specified in the Analysis Criteria.

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-F 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 or/and 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 Stress 99.9% at 0.0ft

Structure:	CT00707-S-SBA	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)			Page: 1	

Tower Engineering Solutions

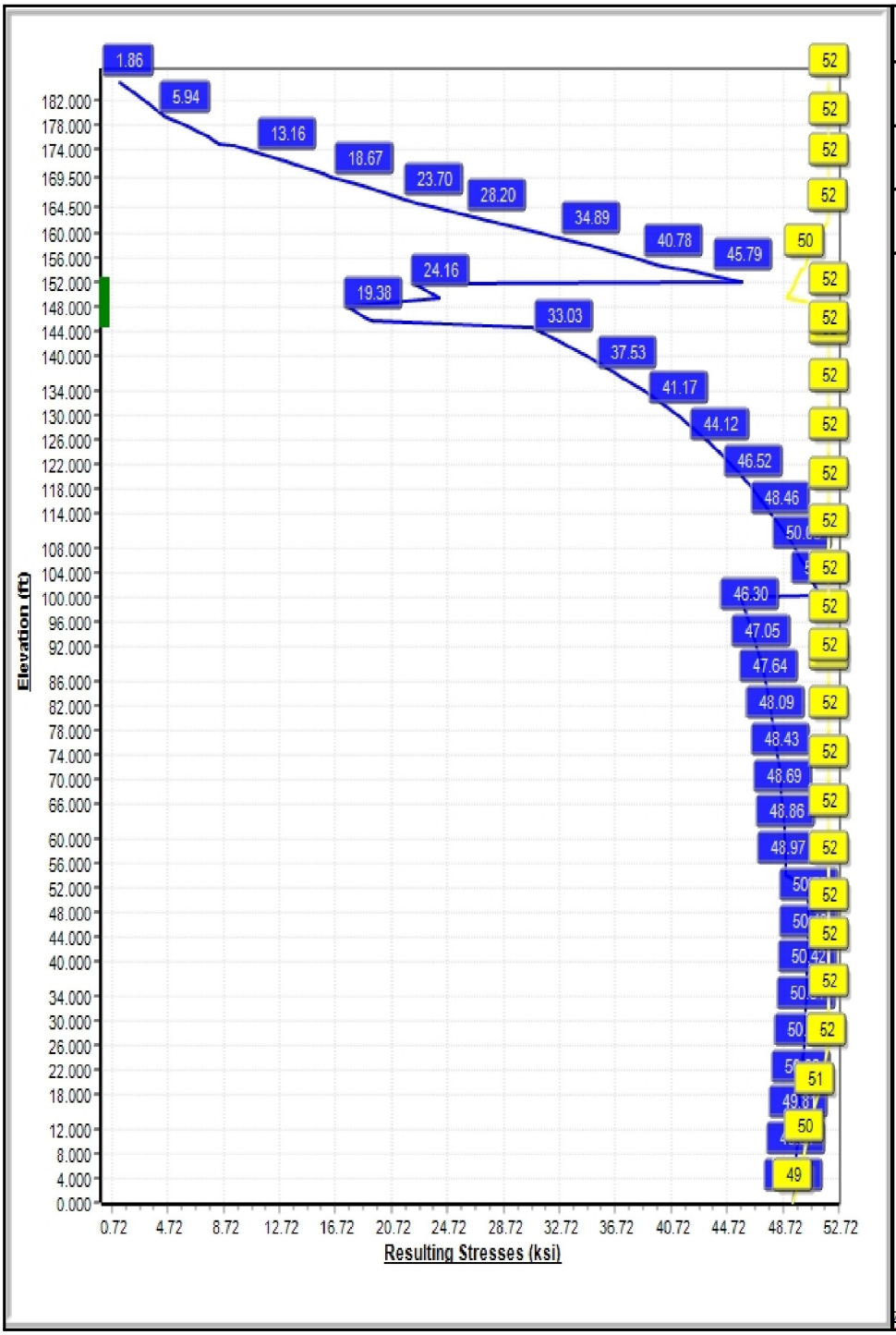
Dead Load Factor:	1.00
Wind Load Factor:	1.00

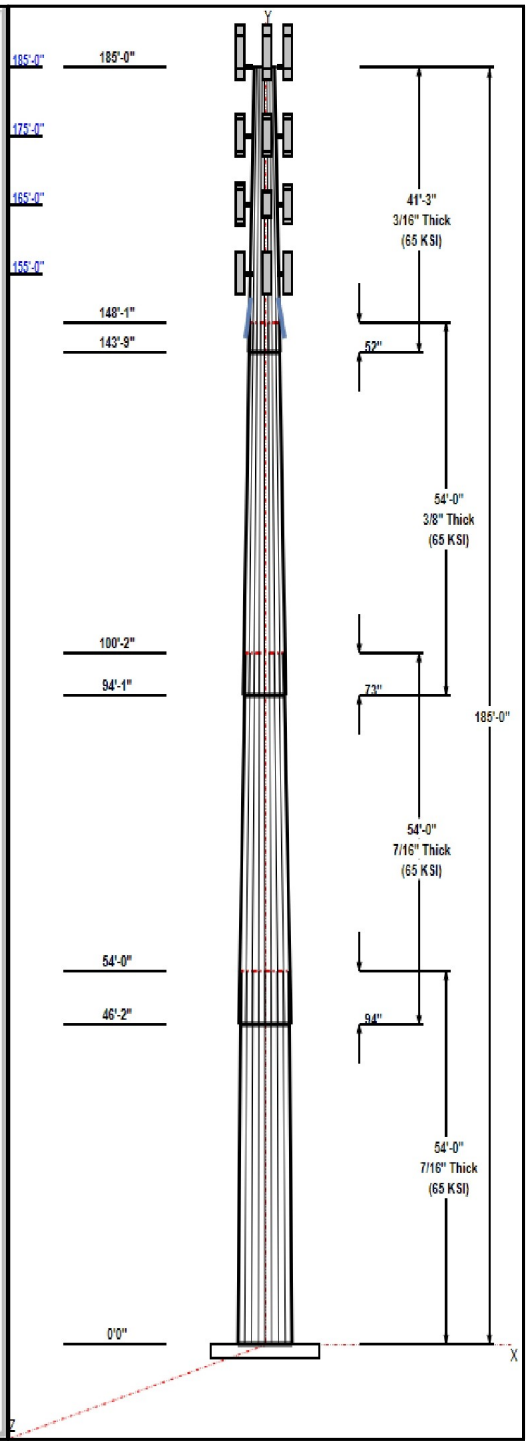
49 Alllowable Stress

49 Resulting Stress

Load Case : 85 mph Wind with 0 in Ice

Iterations: 28





Structure: CT00707-S-SBA

Type: Tapered
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.28716

11/24/2015

Tower Engineering Solutions

Shaft Properties

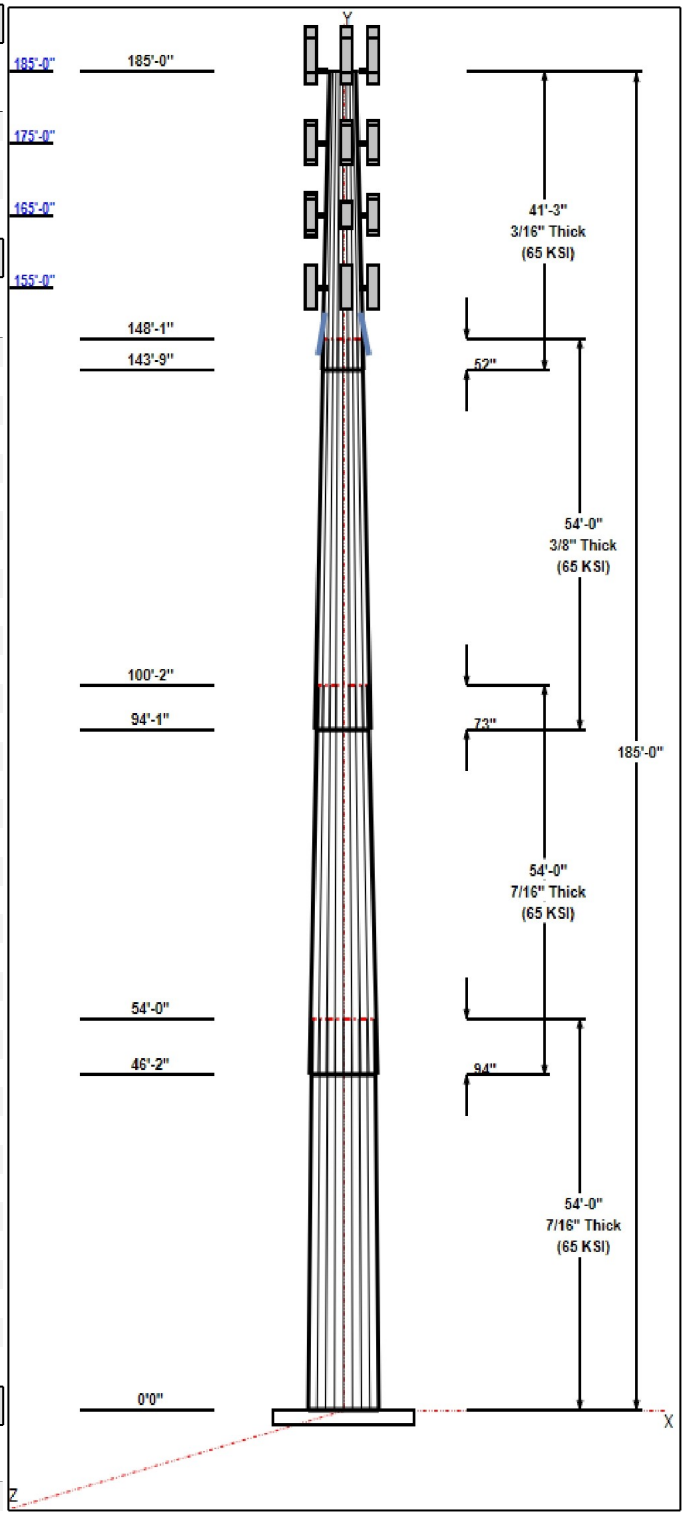
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	54.00	56.99	72.50	0.438		0.28716	65
2	54.00	44.61	60.12	0.438	Slip	0.28716	65
3	54.00	31.60	47.11	0.375	Slip	0.28716	65
4	41.25	21.38	33.22	0.188	Slip	0.28716	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
185.00	185.00	1	6' Pole Branch	---
185.00	187.00	6	Allen Telecom	T-Mobile
185.00	185.00	3	Cobra Arms	T-Mobile
185.00	187.00	3	Commscope LNX-6515DS	T-Mobile
185.00	187.00	3	EMS RR90-17-02DP	T-Mobile
185.00	187.00	3	Kathrein 782 11056	T-Mobile
179.50	179.50	1	6' Pole Branch	---
175.00	175.00	3	Alcatel Lucent 1900 MHz	Sprint
175.00	175.00	3	Alcatel Lucent 800 MHz	Sprint
175.00	175.00	3	Alcatel Lucent 800 MHz	Sprint
175.00	175.00	3	Alcatel Lucent	Sprint
175.00	175.00	3	Cobra Arms	Sprint
175.00	175.00	4	RFS ACU-A20-N RETs	Sprint
175.00	175.00	3	RFS APXVSPP18-C-A20	Sprint
175.00	175.00	3	RFS APXVTM14-C-120	Sprint
174.50	174.50	1	7' Pole Branch	---
169.50	169.50	1	8' Pole Branch	---
165.00	165.00	3	Antel BXA 171063/8BF	Verizon
165.00	165.00	1	Antel BXA 70063/6CF_4	Verizon
165.00	165.00	2	Antel LPA 80063/6CF	Verizon
165.00	165.00	3	Cobra Arms	Verizon
165.00	165.00	6	RFS FD9R6004/2C-3L	Verizon
165.00	165.00	4	Swedcom SC-E 6014 Rev	Verizon
165.00	165.00	2	Swedcom SLCP 2x6014	Verizon
164.50	164.50	1	8' Pole Branch	---
159.50	159.50	1	9' Pole Branch	---
155.00	155.00	3	Cobra Arms	AT&T
155.00	155.00	6	Ericsson RRUS-11 RRUs	AT&T
155.00	155.00	6	Powerwave 7770.00	AT&T
155.00	155.00	6	Powerwave LGP 21401	AT&T
155.00	155.00	6	Powerwave LGP21903	AT&T
155.00	155.00	3	Powerwave	AT&T
155.00	155.00	1	Raycap DC6-48-60-18-8F	AT&T
154.50	154.50	1	9' Pole Branch	---
149.50	149.50	1	10' Pole Branch	---
144.50	144.50	1	11' Pole Branch	---

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
3.00	185.00	Outside	1 5/8" Coax	T-Mobile
3.00	185.00	Inside	1 5/8" Coax	T-Mobile
3.00	175.00	Inside	1 1/4" Coax	Sprint
3.00	165.00	Inside	1 5/8" Coax	Verizon
3.00	155.00	Inside	1 5/8" Coax	AT&T
3.00	155.00	Inside	DC Power	AT&T



3.00	155.00	Inside	Fiber	AT&T
143.75	153.75	Outside	1" Reinforcing plate	

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.5000	79.6	50.0	Square

Reactions

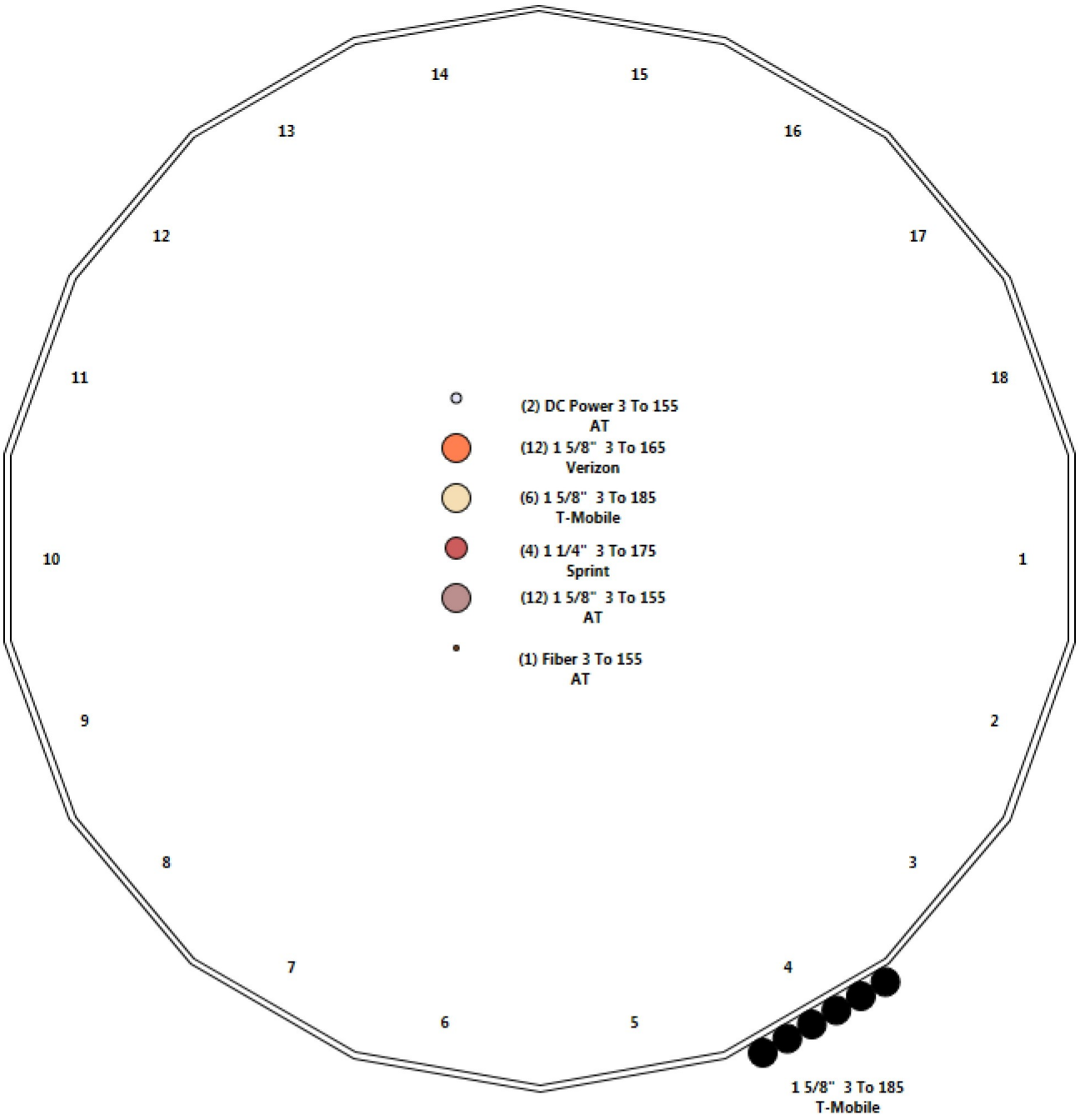
Load Case	Moment	Shear	Axial
85 mph Wind with 0" Ice	7255.6	52.2	54.2
73.61 mph Wind with 0.5" Ice	4364.8	32.6	57.7
50 mph Wind with 0" Ice	2514.9	18.1	54.2

Structure: CT00707-S-SBA - Coax Line Placement

Type: Monopole
Site Name: North Easton
Height: 185.00 (ft)

11/24/2015

Tower Engineering Solutions



Shaft Properties

Structure:	CT00707-S-SBA	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 5	

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	54.000	0.4375	65		0.00	16,409
2	18	54.000	0.4375	65	Slip	94.00	13,249
3	18	54.000	0.3750	65	Slip	73.00	8,525
4	18	41.250	0.1875	65	Slip	52.00	2,265
					Total Shaft Weight:		**40,447**

	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	72.50	0.00	100.0	65652.37	27.80	165.7	56.99	54.00	78.53	31736.0	21.55	130.2	0.287162
2	60.12	46.17	82.87	37291.75	22.81	137.4	44.61	100.1	61.34	15121.8	16.56	101.9	0.287162
3	47.11	94.08	55.62	15347.65	20.73	125.6	31.60	148.0	37.17	4578.55	13.44	84.26	0.287162
4	33.22	143.7	19.66	2710.11	29.83	177.1	21.38	185.0	12.61	715.13	18.69	114	0.287162

Additional Steel

							Intermediate Connectors		Termination Connectors			
Elev From (ft)	**Elev To (ft)**	**Qty**	**Description**	**Fy (ksi)**	**Fu (ksi)**	**Offset (in)**	**Description**	**Spacing (in)**	**Description**	**Spacing (in)**	**Lower Qty**	**Upper Qty**
145.7	151.7	3	LNP LP6X100-G-10CT	65	80	0.00	5/8" Hollo Bolt	24.00	M20 Hollo Bolt	3.00	8	8

Loading Summary

Structure:	CT00707-S-SBA	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 6	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	**Elev (ft)**	**Description**	**Qty**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Hor. Ecc. (ft)**	**Vert Ecc (ft)**
1	185.0	6' Pole Branch	1	300.00	16.06	1.00	20.00	5.000	1.00	0.00	0.00
2	185.0	Allen Telecom FE15S01P77/75	6	17.50	0.55	0.75	16.00	0.720	0.75	0.00	2.00
3	185.0	Cobra Arms	3	350.00	6.50	0.75	550.00	16.00	0.75	0.00	0.00
4	185.0	Commscope LNX-6515DS	3	50.30	11.41	0.80	115.60	12.34	0.80	0.00	2.00
5	185.0	EMS RR90-17-02DP	3	18.00	4.36	0.79	0.00	4.990	0.79	0.00	2.00
6	185.0	Kathrein 782 11056	3	2.90	0.13	0.67	4.00	0.210	0.67	0.00	2.00
7	179.5	6' Pole Branch	1	300.00	46.00	1.00	20.00	5.000	1.00	0.00	0.00
8	175.0	Alcatel Lucent 1900 MHz RRUs	3	44.00	2.94	0.75	75.20	4.200	0.75	0.00	0.00
9	175.0	Alcatel Lucent 800 MHz Filters	3	17.50	0.65	0.75	87.80	3.260	0.75	0.00	0.00
10	175.0	Alcatel Lucent 800 MHz RRUs	3	53.00	2.49	0.75	74.10	2.820	0.75	0.00	0.00
11	175.0	Alcatel Lucent TD-RRH8x20-25	3	70.00	4.72	0.75	92.00	4.970	0.75	0.00	0.00
12	175.0	Cobra Arms	3	400.00	13.50	0.75	550.00	16.00	0.75	0.00	0.00
13	175.0	RFS ACU-A20-N RETs	4	1.00	0.14	0.67	2.30	0.220	0.67	0.00	0.00
14	175.0	RFS APXVSPP18-C-A20	3	57.00	8.26	0.83	106.50	9.080	0.83	0.00	0.00
15	175.0	RFS APXVTM14-C-120	3	56.00	6.90	0.79	91.90	7.290	0.79	0.00	0.00
16	174.5	7' Pole Branch	1	460.00	15.00	1.00	20.00	5.000	1.00	0.00	0.00
17	169.5	8' Pole Branch	1	560.00	35.00	1.00	20.00	5.000	1.00	0.00	0.00
18	165.0	Antel BXA 171063/8BF	3	10.50	2.94	0.84	29.30	3.410	0.84	0.00	0.00
19	165.0	Antel BXA 70063/6CF_4	1	17.00	7.73	1.00	57.60	8.540	1.00	0.00	0.00
20	165.0	Antel LPA 80063/6CF	2	27.00	10.34	0.94	0.00	11.18	0.94	0.00	0.00
21	165.0	Cobra Arms	3	400.00	13.50	0.75	550.00	16.00	0.75	0.00	0.00
22	165.0	RFS FD9R6004/2C-3L	6	3.10	0.36	0.67	5.40	0.500	0.67	0.00	0.00
23	165.0	Swedcom SC-E 6014 Rev 2	4	15.00	3.55	0.97	42.10	4.060	0.97	0.00	0.00
24	165.0	Swedcom SLCP 2x6014	2	20.00	7.21	0.93	70.40	7.880	0.93	0.00	0.00
25	164.5	8' Pole Branch	1	560.00	24.24	1.00	20.00	5.000	1.00	0.00	0.00
26	159.5	9' Pole Branch	1	660.00	45.00	1.00	20.00	5.000	1.00	0.00	0.00
27	155.0	Cobra Arms	3	400.00	13.50	0.75	550.00	16.00	0.75	0.00	0.00
28	155.0	Ericsson RRUS-11 RRUs	6	55.00	4.42	0.75	80.70	4.850	0.75	0.00	0.00
29	155.0	Powerwave 7770.00	6	35.00	5.88	0.78	0.00	6.530	0.78	0.00	0.00
30	155.0	Powerwave LGP 21401 TMAs	6	17.50	0.95	0.50	0.00	0.000	0.50	0.00	0.00
31	155.0	Powerwave LGP21903 Diplexers	6	5.50	0.27	0.50	7.90	0.380	0.50	0.00	0.00
32	155.0	Powerwave P65-16-XLH-RR	3	53.00	8.40	0.78	100.20	9.220	0.78	0.00	0.00
33	155.0	Raycap DC6-48-60-18-8F Surge	1	31.80	1.47	1.00	49.50	1.670	1.00	0.00	0.00
34	154.5	9' Pole Branch	1	660.00	33.48	1.00	20.00	5.000	1.00	0.00	0.00
35	149.5	10' Pole Branch	1	700.00	50.00	1.00	20.00	5.000	1.00	0.00	0.00
36	144.5	11' Pole Branch	1	720.00	42.72	1.00	20.00	5.000	1.00	0.00	0.00
		Totals:	**104**	**11,875.00**			**10,195.30**				

Linear Appurtenances

			No Ice		Ice		
Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**	**Weight (lb/ft)**	**CaAa (sf/ft)**	**Weight (lb/ft)**	**CaAa (sf/ft)**	**Exposed**
3.00	185.0	(6) 1 5/8" Coax	1.04	0.20	0.00	0.25	Outside
3.00	185.0	(6) 1 5/8" Coax	1.04	0.00	0.00	0.00	Inside
3.00	175.0	(4) 1 1/4" Coax	1.98	0.00	0.00	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
3.00	165.0	(12) 1 5/8" Coax		1.04	0.00		0.00	0.00	Inside		
3.00	155.0	(12) 1 5/8" Coax		1.04	0.00		0.00	0.00	Inside		
3.00	155.0	(2) DC Power		2.40	0.00		0.00	0.00	Inside		
3.00	155.0	(1) Fiber		0.36	0.00		0.00	0.00	Inside		
143.75	153.7	(3) 1" Reinforcing plate		0.00	0.10		0.00	0.15	Outside		
		Totals:		**1,465.20**			**0.00**				

Shaft Section Properties

Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
0.00		0.4375	72.500	100.064	65652.4	27.81	165.71	65	49	0.0	0.00	0.0	0.0	0.0
2.00		0.4375	71.926	99.267	64095.1	27.58	164.40	65	50	678.3				
4.00		0.4375	71.351	98.469	62562.7	27.35	163.09	65	50	672.9				
6.00		0.4375	70.777	97.672	61054.9	27.11	161.78	65	50	667.4				
8.00		0.4375	70.203	96.874	59571.6	26.88	160.46	65	50	662.0				
10.00		0.4375	69.628	96.077	58112.4	26.65	159.15	65	50	656.6				
12.00		0.4375	69.054	95.279	56677.3	26.42	157.84	65	51	651.1				
14.00		0.4375	68.480	94.482	55266.0	26.19	156.53	65	51	645.7				
16.00		0.4375	67.905	93.684	53878.3	25.96	155.21	65	51	640.3				
18.00		0.4375	67.331	92.887	52514.1	25.73	153.90	65	51	634.9				
20.00		0.4375	66.757	92.089	51173.1	25.49	152.59	65	51	629.4				
22.00		0.4375	66.182	91.292	49855.1	25.26	151.27	65	52	624.0				
24.00		0.4375	65.608	90.494	48559.9	25.03	149.96	65	52	618.6				
26.00		0.4375	65.034	89.697	47287.4	24.80	148.65	65	52	613.2				
28.00		0.4375	64.459	88.899	46037.2	24.57	147.34	65	52	607.7				
30.00		0.4375	63.885	88.102	44809.4	24.34	146.02	65	52	602.3				
32.00		0.4375	63.311	87.304	43603.5	24.11	144.71	65	52	596.9				
34.00		0.4375	62.736	86.507	42419.5	23.87	143.40	65	52	591.4				
36.00		0.4375	62.162	85.709	41257.1	23.64	142.08	65	52	586.0				
38.00		0.4375	61.588	84.912	40116.1	23.41	140.77	65	52	580.6				
40.00		0.4375	61.014	84.114	38996.4	23.18	139.46	65	52	575.2				
42.00		0.4375	60.439	83.317	37897.7	22.95	138.15	65	52	569.7				
44.00		0.4375	59.865	82.519	36819.8	22.72	136.83	65	52	564.3				
46.00		0.4375	59.291	81.722	35762.6	22.49	135.52	65	52	558.9				
46.17	Bot - Section 2	0.4375	59.243	81.655	35675.4	22.47	135.41	65	52	46.3				
48.00		0.4375	58.716	80.924	34725.8	22.25	134.21	65	52	1021.8				
50.00		0.4375	58.142	80.127	33709.2	22.02	132.90	65	52	1104.3				
52.00		0.4375	57.568	79.329	32712.7	21.79	131.58	65	52	1093.5				
54.00	Top - Section 1	0.4375	57.868	79.747	33231.9	21.91	132.27	65	52	1082.6				
56.00		0.4375	57.294	78.949	32244.9	21.68	130.96	65	52	540.0				
58.00		0.4375	56.720	78.152	31277.6	21.45	129.64	65	52	534.6				
60.00		0.4375	56.145	77.354	30329.8	21.22	128.33	65	52	529.2				
62.00		0.4375	55.571	76.557	29401.4	20.99	127.02	65	52	523.7				
64.00		0.4375	54.997	75.759	28492.1	20.75	125.71	65	52	518.3				
66.00		0.4375	54.422	74.962	27601.8	20.52	124.39	65	52	512.9				
68.00		0.4375	53.848	74.164	26730.2	20.29	123.08	65	52	507.4				
70.00		0.4375	53.274	73.367	25877.1	20.06	121.77	65	52	502.0				
72.00		0.4375	52.699	72.569	25042.4	19.83	120.46	65	52	496.6				
74.00		0.4375	52.125	71.772	24225.8	19.60	119.14	65	52	491.2				
76.00		0.4375	51.551	70.974	23427.2	19.37	117.83	65	52	485.7				
78.00		0.4375	50.976	70.177	22646.4	19.13	116.52	65	52	480.3				
80.00		0.4375	50.402	69.379	21883.0	18.90	115.20	65	52	474.9				
82.00		0.4375	49.828	68.582	21137.1	18.67	113.89	65	52	469.5				
84.00		0.4375	49.253	67.785	20408.2	18.44	112.58	65	52	464.0				
86.00		0.4375	48.679	66.987	19696.4	18.21	111.27	65	52	458.6				
88.00		0.4375	48.105	66.190	19001.2	17.98	109.95	65	52	453.2				
90.00		0.4375	47.530	65.392	18322.7	17.75	108.64	65	52	447.7				
92.00		0.4375	46.956	64.595	17660.5	17.51	107.33	65	52	442.3				
94.00		0.4375	46.382	63.797	17014.4	17.28	106.02	65	52	436.9				
94.08	Bot - Section 3	0.4375	46.358	63.764	16987.8	17.27	105.96	65	52	18.1				
96.00		0.4375	45.807	63.000	16384.3	17.05	104.70	65	52	774.0				
98.00		0.4375	45.233	62.202	15769.9	16.82	103.39	65	52	797.8				

Increment Length: **2 (ft)**

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
100.00		0.4375	44.659	61.405	15171.1	16.59	102.08	65	52	787.7				
100.17	Top - Section 2	0.3750	45.361	53.543	13690.1	19.92	120.96	65	52	65.2				
102.00		0.3750	44.834	52.916	13215.0	19.67	119.56	65	52	332.1				
104.00		0.3750	44.260	52.232	12709.5	19.40	118.03	65	52	357.8				
106.00		0.3750	43.686	51.549	12217.0	19.13	116.50	65	52	353.1				
108.00		0.3750	43.111	50.865	11737.4	18.86	114.96	65	52	348.5				
110.00		0.3750	42.537	50.182	11270.5	18.59	113.43	65	52	343.8				
112.00		0.3750	41.963	49.498	10816.2	18.32	111.90	65	52	339.2				
114.00		0.3750	41.389	48.815	10374.2	18.05	110.37	65	52	334.5				
116.00		0.3750	40.814	48.131	9944.5	17.78	108.84	65	52	329.9				
118.00		0.3750	40.240	47.447	9526.8	17.51	107.31	65	52	325.2				
120.00		0.3750	39.666	46.764	9120.9	17.24	105.77	65	52	320.6				
122.00		0.3750	39.091	46.080	8726.8	16.97	104.24	65	52	315.9				
124.00		0.3750	38.517	45.397	8344.2	16.70	102.71	65	52	311.3				
126.00		0.3750	37.943	44.713	7972.9	16.43	101.18	65	52	306.6				
128.00		0.3750	37.368	44.030	7612.8	16.16	99.65	65	52	302.0				
130.00		0.3750	36.794	43.346	7263.7	15.89	98.12	65	52	297.3				
132.00		0.3750	36.220	42.662	6925.4	15.62	96.59	65	52	292.7				
134.00		0.3750	35.645	41.979	6597.8	15.35	95.05	65	52	288.0				
136.00		0.3750	35.071	41.295	6280.8	15.08	93.52	65	52	283.4				
138.00		0.3750	34.497	40.612	5974.0	14.81	91.99	65	52	278.7				
140.00		0.3750	33.922	39.928	5677.4	14.54	90.46	65	52	274.1				
142.00		0.3750	33.348	39.245	5390.8	14.27	88.93	65	52	269.4				
143.75	Bot - Section 4	0.3750	32.845	38.647	5148.0	14.03	87.59	65	52	231.9				
144.00		0.3750	32.774	38.561	5113.9	14.00	87.40	65	52	49.5				
144.50		0.3750	32.630	38.390	5046.3	13.93	87.01	65	52	98.8				
145.75	RB1	0.3750	32.271	37.963	4879.7	13.76	86.06	65	52	245.0	18.00	2574.9	2574.9	76.6
146.00		0.3750	32.199	37.878	4846.8	13.73	85.86	65	52	48.7	18.00	2564.0	2564.0	15.3
148.00		0.3750	31.625	37.194	4589.1	13.46	84.33	65	52	385.5	18.00	2478.0	2478.0	122.5
148.08	Top - Section 3	0.1875	31.976	18.917	2415.2	28.66	170.54	65	52	15.9	18.00	2474.4	2474.4	5.1
149.50		0.1875	31.569	18.675	2323.7	28.28	168.37	65	49	90.6	18.00	2414.5	2414.5	86.8
150.00		0.1875	31.426	18.590	2291.9	28.14	167.60	65	49	31.7	18.00	2393.5	2393.5	30.6
151.75	RT1	0.1875	30.923	18.291	2183.1	27.67	164.92	65	50	109.8	18.00	2320.7	2320.7	107.2
152.00		0.1875	30.851	18.248	2167.8	27.60	164.54	65	50	15.5				
154.00		0.1875	30.277	17.906	2048.3	27.06	161.48	65	50	123.0				
154.50		0.1875	30.133	17.821	2019.1	26.93	160.71	65	50	30.4				
155.00		0.1875	29.990	17.735	1990.2	26.79	159.95	65	50	30.2				
156.00		0.1875	29.703	17.565	1933.2	26.52	158.41	65	51	60.1				
158.00		0.1875	29.128	17.223	1822.6	25.98	155.35	65	51	118.4				
159.50		0.1875	28.698	16.966	1742.4	25.58	153.05	65	51	87.3				
160.00		0.1875	28.554	16.881	1716.2	25.44	152.29	65	51	28.8				
162.00		0.1875	27.980	16.539	1614.0	24.90	149.23	65	52	113.7				
164.00		0.1875	27.405	16.197	1516.0	24.36	146.16	65	52	111.4				
164.50		0.1875	27.262	16.112	1492.2	24.23	145.40	65	52	27.5				
165.00		0.1875	27.118	16.027	1468.6	24.09	144.63	65	52	27.3				
166.00		0.1875	26.831	15.856	1422.1	23.82	143.10	65	52	54.2				
168.00		0.1875	26.257	15.514	1332.1	23.28	140.04	65	52	106.7				
169.50		0.1875	25.826	15.258	1267.1	22.88	137.74	65	52	78.5				
170.00		0.1875	25.682	15.172	1246.0	22.74	136.97	65	52	25.9				
172.00		0.1875	25.108	14.830	1163.6	22.20	133.91	65	52	102.1				
174.00		0.1875	24.534	14.489	1085.0	21.66	130.85	65	52	99.8				
174.50		0.1875	24.390	14.403	1066.0	21.53	130.08	65	52	24.6				
175.00		0.1875	24.247	14.318	1047.1	21.39	129.32	65	52	24.4				
176.00		0.1875	23.959	14.147	1010.0	21.12	127.78	65	52	48.4				
178.00		0.1875	23.385	13.805	938.6	20.58	124.72	65	52	95.1				
179.50		0.1875	22.954	13.549	887.3	20.18	122.42	65	52	69.8				
180.00		0.1875	22.811	13.463	870.6	20.04	121.66	65	52	23.0				
182.00		0.1875	22.236	13.121	806.0	19.50	118.59	65	52	90.5				
184.00		0.1875	21.662	12.780	744.6	18.96	115.53	65	52	88.1				
185.00		0.1875	21.375	12.609	715.1	18.69	114.00	65	52	43.2				

Increment Length: **2 (ft)**

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing Area (in^2)	Additional Reinforcing Ixp (in^4)	Additional Reinforcing Iyp (in^4)	Additional Reinforcing Weight (lb)
									Total Weight	**40447.1**				**444.1**

Wind Loading - Shaft

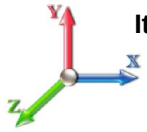
Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

Load Case: 85 mph Wind with 0" Ice
Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 28

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		0.00	1.00	18.496	31.26	513.54	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		0.00	1.00	18.496	31.26	509.47	0.650	0.000	2.00	12.035	7.82	244.5	0.0	678.3
4.00		0.00	1.00	18.496	31.26	505.41	0.650	0.000	2.00	11.940	7.76	242.6	0.0	672.9
6.00		0.00	1.00	18.496	31.26	501.34	0.650	0.000	2.00	11.844	7.70	240.6	0.0	667.4
8.00		0.00	1.00	18.496	31.26	497.27	0.650	0.000	2.00	11.748	7.64	238.7	0.0	662.0
10.00		0.00	1.00	18.496	31.26	493.20	0.650	0.000	2.00	11.653	7.57	236.8	0.0	656.6
12.00		0.00	1.00	18.496	31.26	489.13	0.650	0.000	2.00	11.557	7.51	234.8	0.0	651.1
14.00		0.00	1.00	18.496	31.26	485.06	0.650	0.000	2.00	11.461	7.45	232.9	0.0	645.7
16.00		0.00	1.00	18.496	31.26	481.00	0.650	0.000	2.00	11.365	7.39	230.9	0.0	640.3
18.00		0.00	1.00	18.496	31.26	476.93	0.650	0.000	2.00	11.270	7.33	229.0	0.0	634.9
20.00		0.00	1.00	18.496	31.26	472.86	0.650	0.000	2.00	11.174	7.26	227.0	0.0	629.4
22.00		0.00	1.00	18.496	31.26	468.79	0.650	0.000	2.00	11.078	7.20	225.1	0.0	624.0
24.00		0.00	1.00	18.496	31.26	464.72	0.650	0.000	2.00	10.983	7.14	223.1	0.0	618.6
26.00		0.00	1.00	18.496	31.26	460.66	0.650	0.000	2.00	10.887	7.08	221.2	0.0	613.2
28.00		0.00	1.00	18.496	31.26	456.59	0.650	0.000	2.00	10.791	7.01	219.3	0.0	607.7
30.00		0.00	1.00	18.496	31.26	452.52	0.650	0.000	2.00	10.695	6.95	217.3	0.0	602.3
32.00		0.00	1.00	18.496	31.26	448.45	0.650	0.000	2.00	10.600	6.89	215.4	0.0	596.9
34.00		0.00	1.01	18.654	31.53	446.28	0.650	0.000	2.00	10.504	6.83	215.2	0.0	591.4
36.00		0.00	1.03	18.962	32.05	445.82	0.650	0.000	2.00	10.408	6.77	216.8	0.0	586.0
38.00		0.00	1.04	19.257	32.54	445.13	0.650	0.000	2.00	10.313	6.70	218.1	0.0	580.6
40.00		0.00	1.06	19.541	33.02	444.22	0.650	0.000	2.00	10.217	6.64	219.3	0.0	575.2
42.00		0.00	1.07	19.815	33.49	443.12	0.650	0.000	2.00	10.121	6.58	220.3	0.0	569.7
44.00		0.00	1.09	20.081	33.94	441.83	0.650	0.000	2.00	10.025	6.52	221.1	0.0	564.3
46.00		0.00	1.10	20.337	34.37	440.38	0.650	0.000	2.00	9.930	6.45	221.8	0.0	558.9
46.17	Bot - Section 2	0.00	1.10	20.358	34.41	440.25	0.650	0.000	0.17	0.823	0.54	18.4	0.0	46.3
48.00		0.00	1.11	20.586	34.79	438.78	0.650	0.000	1.83	9.144	5.94	206.8	0.0	1021.8
50.00		0.00	1.13	20.827	35.20	437.02	0.650	0.000	2.00	9.884	6.42	226.1	0.0	1104.3
52.00		0.00	1.14	21.062	35.60	435.14	0.650	0.000	2.00	9.788	6.36	226.5	0.0	1093.5
54.00	Top - Section 1	0.00	1.15	21.291	35.98	433.13	0.650	0.000	2.00	9.693	6.30	226.7	0.0	1082.6
56.00		0.00	1.16	21.513	36.36	437.68	0.650	0.000	2.00	9.597	6.24	226.8	0.0	540.0
58.00		0.00	1.17	21.730	36.72	435.47	0.650	0.000	2.00	9.501	6.18	226.8	0.0	534.6
60.00		0.00	1.19	21.941	37.08	433.15	0.650	0.000	2.00	9.405	6.11	226.7	0.0	529.2
62.00		0.00	1.20	22.148	37.43	430.74	0.650	0.000	2.00	9.310	6.05	226.5	0.0	523.7
64.00		0.00	1.21	22.350	37.77	428.22	0.650	0.000	2.00	9.214	5.99	226.2	0.0	518.3
66.00		0.00	1.22	22.547	38.10	425.62	0.650	0.000	2.00	9.118	5.93	225.8	0.0	512.9
68.00		0.00	1.23	22.740	38.43	422.93	0.650	0.000	2.00	9.023	5.86	225.4	0.0	507.4
70.00		0.00	1.24	22.929	38.75	420.15	0.650	0.000	2.00	8.927	5.80	224.8	0.0	502.0
72.00		0.00	1.25	23.114	39.06	417.30	0.650	0.000	2.00	8.831	5.74	224.2	0.0	496.6
74.00		0.00	1.26	23.296	39.37	414.37	0.650	0.000	2.00	8.735	5.68	223.5	0.0	491.2
76.00		0.00	1.27	23.474	39.67	411.37	0.650	0.000	2.00	8.640	5.62	222.8	0.0	485.7
78.00		0.00	1.28	23.649	39.97	408.30	0.650	0.000	2.00	8.544	5.55	222.0	0.0	480.3
80.00		0.00	1.29	23.821	40.26	405.16	0.650	0.000	2.00	8.448	5.49	221.1	0.0	474.9
82.00		0.00	1.30	23.989	40.54	401.96	0.650	0.000	2.00	8.352	5.43	220.1	0.0	469.5
84.00		0.00	1.31	24.155	40.82	398.69	0.650	0.000	2.00	8.257	5.37	219.1	0.0	464.0
86.00		0.00	1.31	24.318	41.10	395.37	0.650	0.000	2.00	8.161	5.30	218.0	0.0	458.6
88.00		0.00	1.32	24.478	41.37	391.99	0.650	0.000	2.00	8.065	5.24	216.9	0.0	453.2
90.00		0.00	1.33	24.636	41.63	388.56	0.650	0.000	2.00	7.970	5.18	215.7	0.0	447.7
92.00		0.00	1.34	24.791	41.90	385.07	0.650	0.000	2.00	7.874	5.12	214.4	0.0	442.3

Wind Loading - Shaft

Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

94.00	0.00	1.35	24.944	42.16	381.53	0.650	0.000	2.00	7.778	5.06	213.1	0.0	436.9
94.08 Bot - Section 3	0.00	1.35	24.950	42.17	381.38	0.650	0.000	0.08	0.322	0.21	8.8	0.0	18.1
96.00	0.00	1.36	25.095	42.41	377.94	0.650	0.000	1.92	7.480	4.86	206.2	0.0	774.0
98.00	0.00	1.36	25.243	42.66	374.30	0.650	0.000	2.00	7.712	5.01	213.8	0.0	797.8
100.00	0.00	1.37	25.389	42.91	370.62	0.650	0.000	2.00	7.616	4.95	212.4	0.0	787.7
100.17 Top - Section 2	0.00	1.37	25.401	42.93	370.31	0.650	0.000	0.17	0.630	0.41	17.6	0.0	65.2
102.00	0.00	1.38	25.533	43.15	373.13	0.650	0.000	1.83	6.890	4.48	193.2	0.0	332.1
104.00	0.00	1.39	25.675	43.39	369.37	0.650	0.000	2.00	7.425	4.83	209.4	0.0	357.8
106.00	0.00	1.40	25.815	43.63	365.58	0.650	0.000	2.00	7.329	4.76	207.8	0.0	353.1
108.00	0.00	1.40	25.953	43.86	361.73	0.650	0.000	2.00	7.233	4.70	206.2	0.0	348.5
110.00	0.00	1.41	26.090	44.09	357.85	0.650	0.000	2.00	7.137	4.64	204.6	0.0	343.8
112.00	0.00	1.42	26.225	44.32	353.93	0.650	0.000	2.00	7.042	4.58	202.9	0.0	339.2
114.00	0.00	1.43	26.357	44.54	349.97	0.650	0.000	2.00	6.946	4.51	201.1	0.0	334.5
116.00	0.00	1.43	26.489	44.77	345.97	0.650	0.000	2.00	6.850	4.45	199.3	0.0	329.9
118.00	0.00	1.44	26.618	44.99	341.94	0.650	0.000	2.00	6.755	4.39	197.5	0.0	325.2
120.00	0.00	1.45	26.747	45.20	337.87	0.650	0.000	2.00	6.659	4.33	195.6	0.0	320.6
122.00	0.00	1.45	26.873	45.42	333.76	0.650	0.000	2.00	6.563	4.27	193.7	0.0	315.9
124.00	0.00	1.46	26.998	45.63	329.62	0.650	0.000	2.00	6.467	4.20	191.8	0.0	311.3
126.00	0.00	1.47	27.122	45.84	325.45	0.650	0.000	2.00	6.372	4.14	189.8	0.0	306.6
128.00	0.00	1.47	27.244	46.04	321.25	0.650	0.000	2.00	6.276	4.08	187.8	0.0	302.0
130.00	0.00	1.48	27.365	46.25	317.01	0.650	0.000	2.00	6.180	4.02	185.8	0.0	297.3
132.00	0.00	1.49	27.485	46.45	312.74	0.650	0.000	2.00	6.084	3.95	183.7	0.0	292.7
134.00	0.00	1.49	27.603	46.65	308.45	0.650	0.000	2.00	5.989	3.89	181.6	0.0	288.0
136.00	0.00	1.50	27.720	46.85	304.12	0.650	0.000	2.00	5.893	3.83	179.4	0.0	283.4
138.00	0.00	1.50	27.836	47.04	299.76	0.650	0.000	2.00	5.797	3.77	177.3	0.0	278.7
140.00	0.00	1.51	27.951	47.24	295.38	0.650	0.000	2.00	5.702	3.71	175.1	0.0	274.1
142.00	0.00	1.52	28.064	47.43	290.97	0.650	0.000	2.00	5.606	3.64	172.8	0.0	269.4
143.75 Bot - Section 4	0.00	1.52	28.163	47.60	287.09	0.650	0.000	1.75	4.827	3.14	149.3	0.0	231.9
144.00	0.00	1.52	28.177	47.62	286.53	0.650	0.000	0.25	0.691	0.45	21.4	0.0	49.5
144.50 Appurtenance(s)	0.00	1.52	28.205	47.67	285.42	0.650	0.000	0.50	1.378	0.90	42.7	0.0	98.8
145.75 RB1	0.00	1.53	28.274	47.78	282.62	0.650	0.000	1.25	3.419	2.22	106.2	0.0	398.1
146.00	0.00	1.53	28.288	47.81	282.06	0.650	0.000	0.25	0.679	0.44	21.1	0.0	79.3
148.00	0.00	1.54	28.398	47.99	277.57	0.650	0.000	2.00	5.381	3.50	167.9	0.0	630.5
148.08 Top - Section 3	0.00	1.54	28.403	48.00	277.38	0.650	0.000	0.08	0.222	0.14	6.9	0.0	26.1
149.50 Appurtenance(s)	0.00	1.54	28.480	48.13	277.48	0.650	0.000	1.42	3.751	2.44	117.3	0.0	264.2
150.00	0.00	1.54	28.507	48.18	276.35	0.650	0.000	0.50	1.312	0.85	41.1	0.0	93.0
151.75 RT1	0.00	1.55	28.602	48.34	272.38	0.650	0.000	1.75	4.546	2.96	142.8	0.0	324.2
152.00	0.00	1.55	28.615	48.36	271.81	0.650	0.000	0.25	0.643	0.42	20.2	0.0	15.5
154.00	0.00	1.55	28.723	48.54	267.25	0.650	0.000	2.00	5.094	3.31	160.7	0.0	123.0
154.50 Appurtenance(s)	0.00	1.55	28.749	48.59	266.11	0.650	0.000	0.50	1.259	0.82	39.7	0.0	30.4
155.00 Appurtenance(s)	0.00	1.56	28.776	48.63	264.96	0.650	0.000	0.50	1.253	0.81	39.6	0.0	30.2
156.00	0.00	1.56	28.829	48.72	262.67	0.650	0.000	1.00	2.487	1.62	78.8	0.0	60.1
158.00	0.00	1.56	28.934	48.90	258.06	0.650	0.000	2.00	4.903	3.19	155.8	0.0	118.4
159.50 Appurtenance(s)	0.00	1.57	29.012	49.03	254.59	0.650	0.000	1.50	3.614	2.35	115.2	0.0	87.3
160.00	0.00	1.57	29.038	49.07	253.42	0.650	0.000	0.50	1.193	0.78	38.0	0.0	28.8
162.00	0.00	1.58	29.141	49.25	248.77	0.650	0.000	2.00	4.711	3.06	150.8	0.0	113.7
164.00	0.00	1.58	29.243	49.42	244.09	0.650	0.000	2.00	4.615	3.00	148.3	0.0	111.4
164.50 Appurtenance(s)	0.00	1.58	29.269	49.46	242.92	0.650	0.000	0.50	1.139	0.74	36.6	0.0	27.5
165.00 Appurtenance(s)	0.00	1.58	29.294	49.51	241.74	0.650	0.000	0.50	1.133	0.74	36.5	0.0	27.3
166.00	0.00	1.59	29.345	49.59	239.39	0.650	0.000	1.00	2.248	1.46	72.5	0.0	54.2
168.00	0.00	1.59	29.446	49.76	234.67	0.650	0.000	2.00	4.424	2.88	143.1	0.0	106.7
169.50 Appurtenance(s)	0.00	1.60	29.520	49.89	231.11	0.650	0.000	1.50	3.255	2.12	105.6	0.0	78.5
170.00	0.00	1.60	29.545	49.93	229.92	0.650	0.000	0.50	1.073	0.70	34.8	0.0	25.9
172.00	0.00	1.60	29.644	50.10	225.16	0.650	0.000	2.00	4.233	2.75	137.8	0.0	102.1
174.00	0.00	1.61	29.742	50.26	220.37	0.650	0.000	2.00	4.137	2.69	135.2	0.0	99.8
174.50 Appurtenance(s)	0.00	1.61	29.767	50.31	219.17	0.650	0.000	0.50	1.019	0.66	33.3	0.0	24.6
175.00 Appurtenance(s)	0.00	1.61	29.791	50.35	217.97	0.650	0.000	0.50	1.013	0.66	33.2	0.0	24.4
176.00	0.00	1.61	29.840	50.43	215.56	0.650	0.000	1.00	2.009	1.31	65.8	0.0	48.4

Wind Loading - Shaft

Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

178.00	0.00	1.62	29.936	50.59	210.73	0.650	0.000	2.00	3.945	2.56	129.7	0.0	95.1
179.50 Appurtenance(s)	0.00	1.62	30.008	50.71	207.10	0.650	0.000	1.50	2.896	1.88	95.5	0.0	69.8
180.00	0.00	1.62	30.032	50.75	205.89	0.650	0.000	0.50	0.953	0.62	31.5	0.0	23.0
182.00	0.00	1.63	30.127	50.91	201.02	0.650	0.000	2.00	3.754	2.44	124.2	0.0	90.5
184.00	0.00	1.63	30.221	51.07	196.13	0.650	0.000	2.00	3.658	2.38	121.4	0.0	88.1
185.00 Appurtenance(s)	0.00	1.64	30.268	51.15	193.68	0.650	0.000	1.00	1.793	1.17	59.6	0.0	43.2
							Totals:	**185.00**			**18,412.2**		**41,335.2**

Discrete Appurtenance Forces

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 28

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	185.00	EMS RR90-17-02DP	3	30.361	51.310	0.79	10.33	54.00	0.000	2.000	530.20	0.00	1060.39
2	185.00	Commscope LNX-6515DS	3	30.361	51.310	0.80	27.38	150.90	0.000	2.000	1405.07	0.00	2810.14
3	185.00	Cobra Arms	3	30.268	51.152	0.75	14.63	1050.00	0.000	0.000	748.11	0.00	0.00
4	185.00	Allen Telecom	6	30.361	51.310	0.75	2.48	105.00	0.000	2.000	126.99	0.00	253.98
5	185.00	6' Pole Branch	1	30.268	51.152	1.00	16.06	300.00	0.000	0.000	821.51	0.00	0.00
6	185.00	Kathrein 782 11056	3	30.361	51.310	0.67	0.26	8.70	0.000	2.000	13.41	0.00	26.81
7	179.50	6' Pole Branch	1	30.008	50.713	1.00	46.00	300.00	0.000	0.000	2332.81	0.00	0.00
8	175.00	Alcatel Lucent 800 MHz	3	29.791	50.347	0.75	1.46	52.50	0.000	0.000	73.63	0.00	0.00
9	175.00	Alcatel Lucent 800 MHz	3	29.791	50.347	0.75	5.60	159.00	0.000	0.000	282.07	0.00	0.00
10	175.00	Alcatel Lucent	3	29.791	50.347	0.75	10.62	210.00	0.000	0.000	534.68	0.00	0.00
11	175.00	Alcatel Lucent 1900 MHz	3	29.791	50.347	0.75	6.62	132.00	0.000	0.000	333.04	0.00	0.00
12	175.00	RFS APXVSPP18-C-A20	3	29.791	50.347	0.83	20.57	171.00	0.000	0.000	1035.50	0.00	0.00
13	175.00	Cobra Arms	3	29.791	50.347	0.75	30.38	1200.00	0.000	0.000	1529.28	0.00	0.00
14	175.00	RFS ACU-A20-N RETs	4	29.791	50.347	0.67	0.38	4.00	0.000	0.000	18.89	0.00	0.00
15	175.00	RFS APXVTM14-C-120	3	29.791	50.347	0.79	16.35	168.00	0.000	0.000	823.32	0.00	0.00
16	174.50	7' Pole Branch	1	29.767	50.306	1.00	15.00	460.00	0.000	0.000	754.58	0.00	0.00
17	169.50	8' Pole Branch	1	29.520	49.889	1.00	35.00	560.00	0.000	0.000	1746.13	0.00	0.00
18	165.00	Swedcom SLCP 2x6014	2	29.294	49.507	0.93	13.41	40.00	0.000	0.000	663.92	0.00	0.00
19	165.00	Swedcom SC-E 6014 Rev 2	4	29.294	49.507	0.97	13.77	60.00	0.000	0.000	681.92	0.00	0.00
20	165.00	Cobra Arms	3	29.294	49.507	0.75	30.38	1200.00	0.000	0.000	1503.79	0.00	0.00
21	165.00	Antel LPA 80063/6CF	2	29.294	49.507	0.94	19.44	54.00	0.000	0.000	962.38	0.00	0.00
22	165.00	Antel BXA 70063/6CF_4	1	29.294	49.507	1.00	7.73	17.00	0.000	0.000	382.69	0.00	0.00
23	165.00	Antel BXA 171063/8BF	3	29.294	49.507	0.84	7.41	31.50	0.000	0.000	366.79	0.00	0.00
24	165.00	RFS FD9R6004/2C-3L	6	29.294	49.507	0.67	1.45	18.60	0.000	0.000	71.65	0.00	0.00
25	164.50	8' Pole Branch	1	29.269	49.465	1.00	24.24	560.00	0.000	0.000	1199.02	0.00	0.00
26	159.50	9' Pole Branch	1	29.012	49.030	1.00	45.00	660.00	0.000	0.000	2206.36	0.00	0.00
27	155.00	Powerwave 7770.00	6	28.776	48.631	0.78	27.52	210.00	0.000	0.000	1338.25	0.00	0.00
28	155.00	Cobra Arms	3	28.776	48.631	0.75	30.38	1200.00	0.000	0.000	1477.16	0.00	0.00
29	155.00	Ericsson RRUS-11 RRUs	6	28.776	48.631	0.75	19.89	330.00	0.000	0.000	967.27	0.00	0.00
30	155.00	Powerwave P65-16-XLH-RR	3	28.776	48.631	0.78	19.66	159.00	0.000	0.000	955.89	0.00	0.00
31	155.00	Powerwave LGP 21401	6	28.776	48.631	0.50	2.85	105.00	0.000	0.000	138.60	0.00	0.00
32	155.00	Powerwave LGP21903	6	28.776	48.631	0.50	0.81	33.00	0.000	0.000	39.39	0.00	0.00
33	155.00	Raycap DC6-48-60-18-8F	1	28.776	48.631	1.00	1.47	31.80	0.000	0.000	71.49	0.00	0.00
34	154.50	9' Pole Branch	1	28.749	48.586	1.00	33.48	660.00	0.000	0.000	1626.66	0.00	0.00
35	149.50	10' Pole Branch	1	28.480	48.132	1.00	50.00	700.00	0.000	0.000	2406.58	0.00	0.00
36	144.50	11' Pole Branch	1	28.205	47.666	1.00	42.72	720.00	0.000	0.000	2036.29	0.00	0.00
						Totals:		**11,875.00**			**32,205.32**		

Total Applied Force Summary

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 15	

Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 28

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		244.54	678.28	0.00	0.00
4.00		248.84	681.75	0.00	0.00
6.00		253.15	685.22	0.00	0.00
8.00		251.20	679.80	0.00	0.00
10.00		249.26	674.37	0.00	0.00
12.00		247.31	668.94	0.00	0.00
14.00		245.37	663.51	0.00	0.00
16.00		243.42	658.09	0.00	0.00
18.00		241.48	652.66	0.00	0.00
20.00		239.53	647.23	0.00	0.00
22.00		237.59	641.80	0.00	0.00
24.00		235.65	636.38	0.00	0.00
26.00		233.70	630.95	0.00	0.00
28.00		231.76	625.52	0.00	0.00
30.00		229.81	620.10	0.00	0.00
32.00		227.87	614.67	0.00	0.00
34.00		227.86	609.24	0.00	0.00
36.00		229.61	603.81	0.00	0.00
38.00		231.16	598.39	0.00	0.00
40.00		232.52	592.96	0.00	0.00
42.00		233.70	587.53	0.00	0.00
44.00		234.72	582.10	0.00	0.00
46.00		235.58	576.68	0.00	0.00
46.17		19.56	47.81	0.00	0.00
48.00		219.55	1038.14	0.00	0.00
50.00		240.22	1122.11	0.00	0.00
52.00		240.71	1111.26	0.00	0.00
54.00		241.08	1100.40	0.00	0.00
56.00		241.33	557.81	0.00	0.00
58.00		241.48	552.38	0.00	0.00
60.00		241.52	546.95	0.00	0.00
62.00		241.47	541.53	0.00	0.00
64.00		241.32	536.10	0.00	0.00
66.00		241.08	530.67	0.00	0.00
68.00		240.75	525.24	0.00	0.00
70.00		240.35	519.82	0.00	0.00
72.00		239.86	514.39	0.00	0.00
74.00		239.29	508.96	0.00	0.00
76.00		238.65	503.53	0.00	0.00
78.00		237.95	498.11	0.00	0.00
80.00		237.17	492.68	0.00	0.00
82.00		236.32	487.25	0.00	0.00
84.00		235.42	481.82	0.00	0.00
86.00		234.45	476.40	0.00	0.00
88.00		233.42	470.97	0.00	0.00
90.00		232.33	465.54	0.00	0.00
92.00		231.19	460.12	0.00	0.00
94.00		229.99	454.69	0.00	0.00

Total Applied Force Summary

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 16	

94.08		9.53	18.83	0.00	0.00
96.00		222.46	791.06	0.00	0.00
98.00		230.90	815.59	0.00	0.00
100.00		229.57	805.51	0.00	0.00
100.17		19.02	66.67	0.00	0.00
102.00		209.07	348.38	0.00	0.00
104.00		226.76	375.60	0.00	0.00
106.00		225.28	370.94	0.00	0.00
108.00		223.76	366.29	0.00	0.00
110.00		222.19	361.64	0.00	0.00
112.00		220.58	356.99	0.00	0.00
114.00		218.93	352.34	0.00	0.00
116.00		217.23	347.68	0.00	0.00
118.00		215.50	343.03	0.00	0.00
120.00		213.72	338.38	0.00	0.00
122.00		211.91	333.73	0.00	0.00
124.00		210.06	329.08	0.00	0.00
126.00		208.17	324.42	0.00	0.00
128.00		206.24	319.77	0.00	0.00
130.00		204.28	315.12	0.00	0.00
132.00		202.28	310.47	0.00	0.00
134.00		200.25	305.82	0.00	0.00
136.00		198.19	301.16	0.00	0.00
138.00		196.09	296.51	0.00	0.00
140.00		193.96	291.86	0.00	0.00
142.00		191.79	287.21	0.00	0.00
143.75		165.98	247.49	0.00	0.00
144.00		24.97	51.77	0.00	0.00
144.50	(1) appurtenances	2086.14	823.21	0.00	0.00
145.75		124.12	332.69	0.00	0.00
146.00		24.70	66.21	0.00	0.00
148.00		196.66	525.76	0.00	0.00
148.08		8.13	21.76	0.00	0.00
149.50	(1) appurtenances	2544.38	889.99	0.00	0.00
150.00		48.32	66.78	0.00	0.00
151.75		168.22	232.57	0.00	0.00
152.00		23.85	17.77	0.00	0.00
154.00		188.64	140.83	0.00	0.00
154.50	(1) appurtenances	1671.27	694.84	0.00	0.00
155.00	(31) appurtenances	5032.50	2103.50	0.00	0.00
156.00		88.51	65.16	0.00	0.00
158.00		175.38	128.57	0.00	0.00
159.50	(1) appurtenances	2336.25	754.90	0.00	0.00
160.00		42.95	31.34	0.00	0.00
162.00		170.51	123.92	0.00	0.00
164.00		168.03	121.60	0.00	0.00
164.50	(1) appurtenances	1240.58	590.04	0.00	0.00
165.00	(21) appurtenances	4674.55	1450.99	0.00	0.00
166.00		82.38	58.30	0.00	0.00
168.00		163.00	114.86	0.00	0.00
169.50	(1) appurtenances	1866.66	644.62	0.00	0.00
170.00		39.82	27.92	0.00	0.00
172.00		157.87	110.21	0.00	0.00
174.00		155.26	107.89	0.00	0.00
174.50	(1) appurtenances	792.94	486.61	0.00	0.00
175.00	(25) appurtenances	4668.61	2122.96	0.00	0.00
176.00		75.92	50.51	0.00	0.00
178.00		149.98	99.27	0.00	0.00

Total Applied Force Summary

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 17	

179.50	(1) appurtenances	2443.50	372.93	0.00	0.00
180.00		36.53	24.02	0.00	0.00
182.00		144.60	94.62	0.00	0.00
184.00		141.87	92.30	0.00	0.00
185.00	(19) appurtenances	3715.13	1713.88	0.00	4151.33
	Totals:	**52,168.55**	**54,231.32**	**0.00**	**4,151.33**

Resulting Forces and Deflections

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 28

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-52.196	-54.201	0.000	0.000	0.000	-7255.6	0.000	0.000	0.000	0.000	0.000
2.00	-52.010	-53.466	0.000	0.000	0.000	-7151.2	-0.014	0.000	0.014	-0.062	0.000
4.00	-51.818	-52.727	0.000	0.000	0.000	-7047.2	-0.054	0.000	0.054	-0.125	0.000
6.00	-51.621	-51.985	0.000	0.000	0.000	-6943.5	-0.121	0.000	0.121	-0.189	0.000
8.00	-51.425	-51.248	0.000	0.000	0.000	-6840.3	-0.215	0.000	0.215	-0.253	0.000
10.00	-51.230	-50.517	0.000	0.000	0.000	-6737.5	-0.335	0.000	0.335	-0.318	0.000
12.00	-51.035	-49.791	0.000	0.000	0.000	-6635.0	-0.483	0.000	0.483	-0.384	0.000
14.00	-50.842	-49.070	0.000	0.000	0.000	-6532.9	-0.659	0.000	0.659	-0.450	0.000
16.00	-50.650	-48.355	0.000	0.000	0.000	-6431.2	-0.862	0.000	0.862	-0.516	0.000
18.00	-50.458	-47.645	0.000	0.000	0.000	-6330.0	-1.093	0.000	1.093	-0.584	0.000
20.00	-50.268	-46.941	0.000	0.000	0.000	-6229.0	-1.353	0.000	1.353	-0.652	0.000
22.00	-50.078	-46.241	0.000	0.000	0.000	-6128.5	-1.641	0.000	1.641	-0.721	0.000
24.00	-49.890	-45.548	0.000	0.000	0.000	-6028.3	-1.959	0.000	1.959	-0.790	0.000
26.00	-49.702	-44.859	0.000	0.000	0.000	-5928.6	-2.305	0.000	2.305	-0.860	0.000
28.00	-49.516	-44.176	0.000	0.000	0.000	-5829.2	-2.681	0.000	2.681	-0.931	0.000
30.00	-49.330	-43.498	0.000	0.000	0.000	-5730.1	-3.087	0.000	3.087	-1.002	0.000
32.00	-49.145	-42.825	0.000	0.000	0.000	-5631.5	-3.523	0.000	3.523	-1.074	0.000
34.00	-48.959	-42.158	0.000	0.000	0.000	-5533.2	-3.989	0.000	3.989	-1.147	0.000
36.00	-48.771	-41.496	0.000	0.000	0.000	-5435.3	-4.486	0.000	4.486	-1.221	0.000
38.00	-48.580	-40.840	0.000	0.000	0.000	-5337.7	-5.014	0.000	5.014	-1.295	0.000
40.00	-48.387	-40.189	0.000	0.000	0.000	-5240.6	-5.573	0.000	5.573	-1.370	0.000
42.00	-48.191	-39.543	0.000	0.000	0.000	-5143.8	-6.163	0.000	6.163	-1.446	0.000
44.00	-47.994	-38.903	0.000	0.000	0.000	-5047.4	-6.786	0.000	6.786	-1.522	0.000
46.00	-47.770	-38.298	0.000	0.000	0.000	-4951.4	-7.441	0.000	7.441	-1.600	0.000
46.17	-47.776	-38.218	0.000	0.000	0.000	-4943.5	-7.497	0.000	7.497	-1.606	0.000
48.00	-47.575	-37.124	0.000	0.000	0.000	-4855.9	-8.128	0.000	8.128	-1.678	0.000
50.00	-47.351	-35.945	0.000	0.000	0.000	-4760.7	-8.848	0.000	8.848	-1.757	0.000
52.00	-47.124	-34.776	0.000	0.000	0.000	-4666.0	-9.602	0.000	9.602	-1.836	0.000
54.00	-46.895	-33.618	0.000	0.000	0.000	-4571.8	-10.389	0.000	10.389	-1.916	0.000
56.00	-46.680	-33.004	0.000	0.000	0.000	-4478.0	-11.209	0.000	11.209	-1.998	0.000
58.00	-46.464	-32.397	0.000	0.000	0.000	-4384.6	-12.063	0.000	12.063	-2.076	0.000
60.00	-46.246	-31.795	0.000	0.000	0.000	-4291.7	-12.950	0.000	12.950	-2.155	0.000
62.00	-46.028	-31.199	0.000	0.000	0.000	-4199.2	-13.870	0.000	13.870	-2.234	0.000
64.00	-45.809	-30.608	0.000	0.000	0.000	-4107.2	-14.824	0.000	14.824	-2.315	0.000
66.00	-45.589	-30.023	0.000	0.000	0.000	-4015.6	-15.811	0.000	15.811	-2.396	0.000
68.00	-45.368	-29.443	0.000	0.000	0.000	-3924.4	-16.832	0.000	16.832	-2.478	0.000
70.00	-45.147	-28.869	0.000	0.000	0.000	-3833.6	-17.888	0.000	17.888	-2.560	0.000
72.00	-44.925	-28.301	0.000	0.000	0.000	-3743.4	-18.979	0.000	18.979	-2.644	0.000
74.00	-44.704	-27.738	0.000	0.000	0.000	-3653.5	-20.105	0.000	20.105	-2.728	0.000
76.00	-44.481	-27.180	0.000	0.000	0.000	-3564.1	-21.265	0.000	21.265	-2.812	0.000
78.00	-44.259	-26.628	0.000	0.000	0.000	-3475.1	-22.462	0.000	22.462	-2.898	0.000
80.00	-44.036	-26.082	0.000	0.000	0.000	-3386.6	-23.694	0.000	23.694	-2.984	0.000
82.00	-43.813	-25.541	0.000	0.000	0.000	-3298.6	-24.963	0.000	24.963	-3.071	0.000
84.00	-43.590	-25.006	0.000	0.000	0.000	-3210.9	-26.268	0.000	26.268	-3.159	0.000
86.00	-43.368	-24.476	0.000	0.000	0.000	-3123.7	-27.610	0.000	27.610	-3.247	0.000
88.00	-43.145	-23.952	0.000	0.000	0.000	-3037.0	-28.989	0.000	28.989	-3.336	0.000
90.00	-42.923	-23.434	0.000	0.000	0.000	-2950.7	-30.406	0.000	30.406	-3.426	0.000
92.00	-42.700	-22.921	0.000	0.000	0.000	-2864.9	-31.860	0.000	31.860	-3.516	0.000
94.00	-42.461	-22.447	0.000	0.000	0.000	-2779.5	-33.352	0.000	33.352	-3.607	0.000

Resulting Forces and Deflections

Structure: CT00707-S-SB | **Code:** EIA/TIA-222-F | 11/24/2015

Site Name: North Easton | **Exposure:** C

Height: 185.00 (ft) | **Gh:** 1.69

Base Elev: 0.000 (ft) | **Struct Class:** II

Tower Engineering Solutions

94.08	-42.468	-22.394	0.000	0.000	0.000	-2775.9	-33.415	0.000	33.415	-3.611	0.000
96.00	-42.230	-21.553	0.000	0.000	0.000	-2694.5	-34.882	0.000	34.882	-3.698	0.000
98.00	-41.979	-20.686	0.000	0.000	0.000	-2610.1	-36.451	0.000	36.451	-3.791	0.000
100.00	-41.714	-19.862	0.000	0.000	0.000	-2526.1	-38.058	0.000	38.058	-3.883	0.000
100.17	-41.707	-19.762	0.000	0.000	0.000	-2519.2	-38.194	0.000	38.194	-3.891	0.000
102.00	-41.506	-19.360	0.000	0.000	0.000	-2442.7	-39.704	0.000	39.704	-3.977	0.000
104.00	-41.288	-18.927	0.000	0.000	0.000	-2359.7	-41.391	0.000	41.391	-4.080	0.000
106.00	-41.070	-18.499	0.000	0.000	0.000	-2277.1	-43.122	0.000	43.122	-4.184	0.000
108.00	-40.853	-18.076	0.000	0.000	0.000	-2195.0	-44.896	0.000	44.896	-4.288	0.000
110.00	-40.636	-17.658	0.000	0.000	0.000	-2113.3	-46.714	0.000	46.714	-4.392	0.000
112.00	-40.420	-17.245	0.000	0.000	0.000	-2032.0	-48.575	0.000	48.575	-4.497	0.000
114.00	-40.205	-16.838	0.000	0.000	0.000	-1951.2	-50.481	0.000	50.481	-4.602	0.000
116.00	-39.991	-16.436	0.000	0.000	0.000	-1870.8	-52.430	0.000	52.430	-4.707	0.000
118.00	-39.777	-16.039	0.000	0.000	0.000	-1790.8	-54.422	0.000	54.422	-4.811	0.000
120.00	-39.564	-15.648	0.000	0.000	0.000	-1711.2	-56.459	0.000	56.459	-4.916	0.000
122.00	-39.352	-15.262	0.000	0.000	0.000	-1632.1	-58.539	0.000	58.539	-5.020	0.000
124.00	-39.140	-14.882	0.000	0.000	0.000	-1553.4	-60.662	0.000	60.662	-5.124	0.000
126.00	-38.930	-14.508	0.000	0.000	0.000	-1475.1	-62.829	0.000	62.829	-5.227	0.000
128.00	-38.720	-14.140	0.000	0.000	0.000	-1397.3	-65.038	0.000	65.038	-5.330	0.000
130.00	-38.512	-13.777	0.000	0.000	0.000	-1319.8	-67.291	0.000	67.291	-5.432	0.000
132.00	-38.304	-13.421	0.000	0.000	0.000	-1242.8	-69.585	0.000	69.585	-5.532	0.000
134.00	-38.098	-13.071	0.000	0.000	0.000	-1166.2	-71.921	0.000	71.921	-5.631	0.000
136.00	-37.892	-12.727	0.000	0.000	0.000	-1090.0	-74.298	0.000	74.298	-5.728	0.000
138.00	-37.688	-12.390	0.000	0.000	0.000	-1014.2	-76.715	0.000	76.715	-5.823	0.000
140.00	-37.484	-12.059	0.000	0.000	0.000	-938.89	-79.171	0.000	79.171	-5.916	0.000
142.00	-37.281	-11.739	0.000	0.000	0.000	-863.92	-81.665	0.000	81.665	-6.007	0.000
143.75	-37.098	-11.483	0.000	0.000	0.000	-798.68	-83.879	0.000	83.879	-6.084	0.000
144.00	-37.071	-11.423	0.000	0.000	0.000	-789.41	-84.197	0.000	84.197	-6.095	0.000
144.50	-34.917	-10.804	0.000	0.000	0.000	-770.87	-84.835	0.000	84.835	-6.116	0.000
145.75	-34.763	-10.469	0.000	0.000	0.000	-727.23	-86.442	0.000	86.442	-6.169	0.000
146.00	-34.737	-10.388	0.000	0.000	0.000	-718.54	-86.764	0.000	86.764	-6.176	0.000
148.00	-34.489	-9.870	0.000	0.000	0.000	-649.07	-89.358	0.000	89.358	-6.228	0.000
148.08	-34.482	-9.838	0.000	0.000	0.000	-646.19	-89.467	0.000	89.467	-6.231	0.000
149.50	-31.860	-9.215	0.000	0.000	0.000	-597.34	-91.318	0.000	91.318	-6.266	0.000
150.00	-31.811	-9.132	0.000	0.000	0.000	-581.41	-91.974	0.000	91.974	-6.284	0.000
151.75	-31.624	-8.901	0.000	0.000	0.000	-525.74	-94.285	0.000	94.285	-6.343	0.000
152.00	-31.609	-8.846	0.000	0.000	0.000	-517.84	-94.617	0.000	94.617	-6.351	0.000
154.00	-31.418	-8.685	0.000	0.000	0.000	-454.62	-97.301	0.000	97.301	-6.479	0.000
154.50	-29.683	-8.168	0.000	0.000	0.000	-438.91	-97.981	0.000	97.981	-6.510	0.000
155.00	-24.449	-6.632	0.000	0.000	0.000	-424.07	-98.663	0.000	98.663	-6.540	0.000
156.00	-24.364	-6.541	0.000	0.000	0.000	-399.62	-100.03	0.000	100.037	-6.599	0.000
158.00	-24.185	-6.394	0.000	0.000	0.000	-350.90	-102.82	0.000	102.821	-6.709	0.000
159.50	-21.782	-5.900	0.000	0.000	0.000	-314.62	-104.93	0.000	104.938	-6.787	0.000
160.00	-21.741	-5.851	0.000	0.000	0.000	-303.73	-105.64	0.000	105.649	-6.812	0.000
162.00	-21.566	-5.715	0.000	0.000	0.000	-260.25	-108.51	0.000	108.518	-6.906	0.000
164.00	-21.390	-5.595	0.000	0.000	0.000	-217.11	-111.42	0.000	111.424	-6.990	0.000
164.50	-20.088	-5.154	0.000	0.000	0.000	-206.42	-112.15	0.000	112.155	-7.010	0.000
165.00	-15.274	-4.278	0.000	0.000	0.000	-196.38	-112.88	0.000	112.889	-7.029	0.000
166.00	-15.189	-4.217	0.000	0.000	0.000	-181.10	-114.36	0.000	114.362	-7.066	0.000
168.00	-15.017	-4.108	0.000	0.000	0.000	-150.73	-117.33	0.000	117.330	-7.132	0.000
169.50	-13.086	-3.695	0.000	0.000	0.000	-128.20	-119.57	0.000	119.573	-7.177	0.000
170.00	-13.045	-3.665	0.000	0.000	0.000	-121.66	-120.32	0.000	120.324	-7.191	0.000
172.00	-12.878	-3.565	0.000	0.000	0.000	-95.572	-123.34	0.000	123.340	-7.240	0.000
174.00	-12.712	-3.473	0.000	0.000	0.000	-69.817	-126.37	0.000	126.375	-7.281	0.000
174.50	-11.864	-3.089	0.000	0.000	0.000	-63.462	-127.13	0.000	127.137	-7.290	0.000
175.00	-6.964	-1.575	0.000	0.000	0.000	-57.530	-127.89	0.000	127.899	-7.298	0.000
176.00	-6.883	-1.532	0.000	0.000	0.000	-50.566	-129.42	0.000	129.425	-7.312	0.000
178.00	-6.722	-1.450	0.000	0.000	0.000	-36.801	-132.48	0.000	132.486	-7.337	0.000

Resulting Forces and Deflections

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 20	

179.50	-4.251	-1.392	0.000	0.000	0.000	-26.718	-134.78	0.000	134.788	-7.351	0.000
180.00	-4.212	-1.372	0.000	0.000	0.000	-24.593	-135.55	0.000	135.556	-7.356	0.000
182.00	-4.057	-1.296	0.000	0.000	0.000	-16.169	-138.63	0.000	138.632	-7.369	0.000
184.00	-3.904	-1.222	0.000	0.000	0.000	-8.056	-141.71	0.000	141.712	-7.377	0.000
185.00	-3.715	0.000	0.000	0.000	0.000	-4.151	0.000	0.000	143.254	-7.380	0.000

Resulting Stresses

Structure:	CT00707-S-SBA	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 21	

Tower Engineering Solutions

Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 28

Applied Stresses

Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvt Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Allow Stress (ksi)	f/Fb Stress Ratio
0.00	0.54	1.05	0.00	0.00	0.00	48.82	49.39	49.4	**0.999**
2.00	0.54	1.06	0.00	0.00	0.00	48.89	49.46	49.6	0.997
4.00	0.54	1.06	0.00	0.00	0.00	48.97	49.54	49.8	0.994
6.00	0.53	1.07	0.00	0.00	0.00	49.04	49.61	50.0	0.992
8.00	0.53	1.07	0.00	0.00	0.00	49.11	49.68	50.2	0.989
10.00	0.53	1.07	0.00	0.00	0.00	49.18	49.74	50.4	0.987
12.00	0.52	1.08	0.00	0.00	0.00	49.25	49.81	50.6	0.984
14.00	0.52	1.08	0.00	0.00	0.00	49.32	49.87	50.8	0.982
16.00	0.52	1.09	0.00	0.00	0.00	49.38	49.94	51.0	0.979
18.00	0.51	1.09	0.00	0.00	0.00	49.45	50.00	51.2	0.976
20.00	0.51	1.10	0.00	0.00	0.00	49.51	50.05	51.4	0.974
22.00	0.51	1.11	0.00	0.00	0.00	49.57	50.11	51.6	0.971
24.00	0.50	1.11	0.00	0.00	0.00	49.62	50.16	51.8	0.969
26.00	0.50	1.12	0.00	0.00	0.00	49.68	50.21	52.0	0.966
28.00	0.50	1.12	0.00	0.00	0.00	49.73	50.26	52.0	0.967
30.00	0.49	1.13	0.00	0.00	0.00	49.77	50.31	52.0	0.968
32.00	0.49	1.13	0.00	0.00	0.00	49.82	50.35	52.0	0.969
34.00	0.49	1.14	0.00	0.00	0.00	49.86	50.38	52.0	0.969
36.00	0.48	1.15	0.00	0.00	0.00	49.89	50.42	52.0	0.970
38.00	0.48	1.15	0.00	0.00	0.00	49.93	50.45	52.0	0.971
40.00	0.48	1.16	0.00	0.00	0.00	49.96	50.47	52.0	0.971
42.00	0.47	1.17	0.00	0.00	0.00	49.98	50.49	52.0	0.971
44.00	0.47	1.17	0.00	0.00	0.00	50.00	50.51	52.0	0.972
46.00	0.47	1.18	0.00	0.00	0.00	50.01	50.52	52.0	0.972
46.17	0.47	1.18	0.00	0.00	0.00	50.02	50.52	52.0	0.972
48.00	0.46	1.18	0.00	0.00	0.00	50.02	50.52	52.0	0.972
50.00	0.45	1.19	0.00	0.00	0.00	50.03	50.52	52.0	0.972
52.00	0.44	1.20	0.00	0.00	0.00	50.03	50.51	52.0	0.972
54.00	0.42	1.19	0.00	0.00	0.00	48.50	48.97	52.0	0.942
56.00	0.42	1.19	0.00	0.00	0.00	48.48	48.94	52.0	0.941
58.00	0.41	1.20	0.00	0.00	0.00	48.44	48.90	52.0	0.941
60.00	0.41	1.20	0.00	0.00	0.00	48.40	48.86	52.0	0.940
62.00	0.41	1.21	0.00	0.00	0.00	48.36	48.81	52.0	0.939
64.00	0.40	1.22	0.00	0.00	0.00	48.30	48.75	52.0	0.938
66.00	0.40	1.23	0.00	0.00	0.00	48.24	48.69	52.0	0.937
68.00	0.40	1.23	0.00	0.00	0.00	48.17	48.61	52.0	0.935
70.00	0.39	1.24	0.00	0.00	0.00	48.09	48.53	52.0	0.934
72.00	0.39	1.25	0.00	0.00	0.00	47.99	48.43	52.0	0.932
74.00	0.39	1.26	0.00	0.00	0.00	47.89	48.33	52.0	0.930
76.00	0.38	1.26	0.00	0.00	0.00	47.78	48.22	52.0	0.928
78.00	0.38	1.27	0.00	0.00	0.00	47.66	48.09	52.0	0.925
80.00	0.38	1.28	0.00	0.00	0.00	47.52	47.95	52.0	0.922
82.00	0.37	1.29	0.00	0.00	0.00	47.38	47.80	52.0	0.920
84.00	0.37	1.30	0.00	0.00	0.00	47.21	47.64	52.0	0.916
86.00	0.37	1.30	0.00	0.00	0.00	47.04	47.46	52.0	0.913
88.00	0.36	1.31	0.00	0.00	0.00	46.84	47.26	52.0	0.909
90.00	0.36	1.32	0.00	0.00	0.00	46.64	47.05	52.0	0.905

Resulting Stresses

Structure:	CT00707-S-SBA	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 22	

Tower Engineering Solutions

92.00	0.35	1.33	0.00	0.00	0.00	46.41	46.82	52.0	0.901
94.00	0.35	1.34	0.00	0.00	0.00	46.16	46.57	52.0	0.896
94.08	0.35	1.34	0.00	0.00	0.00	46.15	46.56	52.0	0.896
96.00	0.34	1.35	0.00	0.00	0.00	45.90	46.30	52.0	0.891
98.00	0.33	1.36	0.00	0.00	0.00	45.61	46.01	52.0	0.885
100.00	0.32	1.37	0.00	0.00	0.00	45.31	45.69	52.0	0.879
100.17	0.37	1.57	0.00	0.00	0.00	50.86	51.30	52.0	0.987
102.00	0.37	1.58	0.00	0.00	0.00	50.49	50.93	52.0	0.980
104.00	0.36	1.59	0.00	0.00	0.00	50.07	50.50	52.0	0.972
106.00	0.36	1.61	0.00	0.00	0.00	49.61	50.05	52.0	0.963
108.00	0.36	1.62	0.00	0.00	0.00	49.12	49.56	52.0	0.953
110.00	0.35	1.63	0.00	0.00	0.00	48.60	49.03	52.0	0.943
112.00	0.35	1.65	0.00	0.00	0.00	48.03	48.46	52.0	0.932
114.00	0.34	1.66	0.00	0.00	0.00	47.43	47.86	52.0	0.921
116.00	0.34	1.67	0.00	0.00	0.00	46.78	47.21	52.0	0.908
118.00	0.34	1.69	0.00	0.00	0.00	46.09	46.52	52.0	0.895
120.00	0.33	1.71	0.00	0.00	0.00	45.34	45.77	52.0	0.881
122.00	0.33	1.72	0.00	0.00	0.00	44.54	44.97	52.0	0.865
124.00	0.33	1.74	0.00	0.00	0.00	43.69	44.12	52.0	0.849
126.00	0.32	1.75	0.00	0.00	0.00	42.77	43.20	52.0	0.831
128.00	0.32	1.77	0.00	0.00	0.00	41.79	42.22	52.0	0.812
130.00	0.32	1.79	0.00	0.00	0.00	40.73	41.17	52.0	0.792
132.00	0.31	1.81	0.00	0.00	0.00	39.60	40.04	52.0	0.770
134.00	0.31	1.83	0.00	0.00	0.00	38.39	38.83	52.0	0.747
136.00	0.31	1.85	0.00	0.00	0.00	37.08	37.53	52.0	0.722
138.00	0.31	1.87	0.00	0.00	0.00	35.68	36.13	52.0	0.695
140.00	0.30	1.89	0.00	0.00	0.00	34.18	34.64	52.0	0.666
142.00	0.30	1.91	0.00	0.00	0.00	32.56	33.03	52.0	0.635
143.75	0.30	1.93	0.00	0.00	0.00	31.05	31.52	52.0	0.606
144.00	0.30	1.94	0.00	0.00	0.00	30.82	31.30	52.0	0.602
144.50	0.28	1.83	0.00	0.00	0.00	30.37	30.81	52.0	0.593
145.75	0.28	1.85	0.00	0.00	0.00	19.11	19.38	52.0	0.373
146.00	0.27	1.85	0.00	0.00	0.00	18.95	18.95	52.0	0.365
148.00	0.27	1.87	0.00	0.00	0.00	17.63	17.63	52.0	0.339
148.08	0.52	3.67	0.00	0.00	0.00	17.57	17.57	52.0	0.338
149.50	0.49	3.44	0.00	0.00	0.00	24.16	24.16	49.0	0.493
150.00	0.49	3.45	0.00	0.00	0.00	23.67	23.67	49.2	0.482
151.75	0.49	3.48	0.00	0.00	0.00	21.91	22.40	49.6	0.452
152.00	0.48	3.49	0.00	0.00	0.00	44.90	45.79	49.6	0.923
154.00	0.49	3.54	0.00	0.00	0.00	40.94	41.88	50.1	0.836
154.50	0.46	3.36	0.00	0.00	0.00	39.91	40.78	50.2	0.813
155.00	0.37	2.78	0.00	0.00	0.00	38.93	39.60	50.3	0.787
156.00	0.37	2.80	0.00	0.00	0.00	37.41	38.09	50.5	0.754
158.00	0.37	2.83	0.00	0.00	0.00	34.17	34.89	51.0	0.684
159.50	0.35	2.59	0.00	0.00	0.00	31.57	32.23	51.3	0.628
160.00	0.35	2.60	0.00	0.00	0.00	30.79	31.46	51.4	0.612
162.00	0.35	2.63	0.00	0.00	0.00	27.49	28.20	51.9	0.543
164.00	0.35	2.66	0.00	0.00	0.00	23.91	24.69	52.0	0.475
164.50	0.32	2.51	0.00	0.00	0.00	22.98	23.70	52.0	0.456
165.00	0.27	1.92	0.00	0.00	0.00	22.09	22.61	52.0	0.435
166.00	0.27	1.93	0.00	0.00	0.00	20.82	21.35	52.0	0.411
168.00	0.26	1.95	0.00	0.00	0.00	18.10	18.67	52.0	0.359
169.50	0.24	1.73	0.00	0.00	0.00	15.92	16.44	52.0	0.316
170.00	0.24	1.73	0.00	0.00	0.00	15.28	15.81	52.0	0.304
172.00	0.24	1.75	0.00	0.00	0.00	12.56	13.16	52.0	0.253
174.00	0.24	1.77	0.00	0.00	0.00	9.62	10.32	52.0	0.199
174.50	0.21	1.66	0.00	0.00	0.00	8.85	9.51	52.0	0.183
175.00	0.11	0.98	0.00	0.00	0.00	8.12	8.40	52.0	0.162

Resulting Stresses

Structure:	CT00707-S-SBA	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 23	

176.00	0.11	0.98	0.00	0.00	0.00	7.31	7.61	52.0	0.146
178.00	0.11	0.98	0.00	0.00	0.00	5.59	5.94	52.0	0.114
179.50	0.10	0.63	0.00	0.00	0.00	4.21	4.45	52.0	0.086
180.00	0.10	0.63	0.00	0.00	0.00	3.93	4.17	52.0	0.080
182.00	0.10	0.62	0.00	0.00	0.00	2.72	3.02	52.0	0.058
184.00	0.10	0.62	0.00	0.00	0.00	1.43	1.86	52.0	0.036
185.00	0.00	0.59	0.00	0.00	0.00	0.76	1.28	52.0	0.025

Wind Loading - Shaft

Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

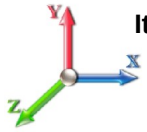
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 28

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		0.00	1.00	13.871	23.44	444.73	0.650	0.500	0.00	0.000	0.00	0.0	0.0	0.0
2.00		0.00	1.00	13.871	23.44	441.20	0.650	0.500	2.00	12.202	7.93	185.9	89.4	767.7
4.00		0.00	1.00	13.871	23.44	437.68	0.650	0.500	2.00	12.106	7.87	184.5	88.7	761.5
6.00		0.00	1.00	13.871	23.44	434.16	0.650	0.500	2.00	12.011	7.81	183.0	88.0	755.4
8.00		0.00	1.00	13.871	23.44	430.64	0.650	0.500	2.00	11.915	7.74	181.6	87.3	749.3
10.00		0.00	1.00	13.871	23.44	427.11	0.650	0.500	2.00	11.819	7.68	180.1	86.6	743.1
12.00		0.00	1.00	13.871	23.44	423.59	0.650	0.500	2.00	11.724	7.62	178.6	85.8	737.0
14.00		0.00	1.00	13.871	23.44	420.07	0.650	0.500	2.00	11.628	7.56	177.2	85.1	730.9
16.00		0.00	1.00	13.871	23.44	416.54	0.650	0.500	2.00	11.532	7.50	175.7	84.4	724.7
18.00		0.00	1.00	13.871	23.44	413.02	0.650	0.500	2.00	11.436	7.43	174.3	83.7	718.6
20.00		0.00	1.00	13.871	23.44	409.50	0.650	0.500	2.00	11.341	7.37	172.8	83.0	712.4
22.00		0.00	1.00	13.871	23.44	405.97	0.650	0.500	2.00	11.245	7.31	171.3	82.3	706.3
24.00		0.00	1.00	13.871	23.44	402.45	0.650	0.500	2.00	11.149	7.25	169.9	81.6	700.2
26.00		0.00	1.00	13.871	23.44	398.93	0.650	0.500	2.00	11.053	7.18	168.4	80.9	694.0
28.00		0.00	1.00	13.871	23.44	395.41	0.650	0.500	2.00	10.958	7.12	167.0	80.2	687.9
30.00		0.00	1.00	13.871	23.44	391.88	0.650	0.500	2.00	10.862	7.06	165.5	79.5	681.8
32.00		0.00	1.00	13.871	23.44	388.36	0.650	0.500	2.00	10.766	7.00	164.1	78.8	675.6
34.00		0.00	1.01	13.990	23.64	386.48	0.650	0.500	2.00	10.671	6.94	164.0	78.1	669.5
36.00		0.00	1.03	14.220	24.03	386.08	0.650	0.500	2.00	10.575	6.87	165.2	77.3	663.4
38.00		0.00	1.04	14.442	24.41	385.48	0.650	0.500	2.00	10.479	6.81	166.2	76.6	657.2
40.00		0.00	1.06	14.655	24.77	384.70	0.650	0.500	2.00	10.383	6.75	167.2	75.9	651.1
42.00		0.00	1.07	14.861	25.11	383.74	0.650	0.500	2.00	10.288	6.69	167.9	75.2	644.9
44.00		0.00	1.09	15.059	25.45	382.63	0.650	0.500	2.00	10.192	6.62	168.6	74.5	638.8
46.00		0.00	1.10	15.252	25.78	381.37	0.650	0.500	2.00	10.096	6.56	169.2	73.8	632.7
46.17	Bot - Section 2	0.00	1.10	15.268	25.80	381.26	0.650	0.500	0.17	0.837	0.54	14.0	6.1	52.5
48.00		0.00	1.11	15.439	26.09	379.98	0.650	0.500	1.83	9.297	6.04	157.7	68.0	1089.8
50.00		0.00	1.13	15.620	26.40	378.46	0.650	0.500	2.00	10.051	6.53	172.5	73.5	1177.8
52.00		0.00	1.14	15.796	26.69	376.83	0.650	0.500	2.00	9.955	6.47	172.7	72.8	1166.2
54.00	Top - Section 1	0.00	1.15	15.967	26.98	375.09	0.650	0.500	2.00	9.859	6.41	172.9	72.0	1154.6
56.00		0.00	1.16	16.134	27.27	379.03	0.650	0.500	2.00	9.764	6.35	173.0	71.3	611.3
58.00		0.00	1.17	16.296	27.54	377.12	0.650	0.500	2.00	9.668	6.28	173.1	70.6	605.2
60.00		0.00	1.19	16.455	27.81	375.11	0.650	0.500	2.00	9.572	6.22	173.0	69.9	599.1
62.00		0.00	1.20	16.610	28.07	373.02	0.650	0.500	2.00	9.476	6.16	172.9	69.2	592.9
64.00		0.00	1.21	16.761	28.33	370.84	0.650	0.500	2.00	9.381	6.10	172.7	68.5	586.8
66.00		0.00	1.22	16.909	28.58	368.58	0.650	0.500	2.00	9.285	6.04	172.5	67.8	580.7
68.00		0.00	1.23	17.054	28.82	366.25	0.650	0.500	2.00	9.189	5.97	172.1	67.1	574.5
70.00		0.00	1.24	17.196	29.06	363.85	0.650	0.500	2.00	9.093	5.91	171.8	66.4	568.4
72.00		0.00	1.25	17.335	29.30	361.38	0.650	0.500	2.00	8.998	5.85	171.3	65.7	562.3
74.00		0.00	1.26	17.471	29.53	358.84	0.650	0.500	2.00	8.902	5.79	170.8	65.0	556.1
76.00		0.00	1.27	17.605	29.75	356.24	0.650	0.500	2.00	8.806	5.72	170.3	64.2	550.0
78.00		0.00	1.28	17.736	29.97	353.58	0.650	0.500	2.00	8.711	5.66	169.7	63.5	543.8
80.00		0.00	1.29	17.865	30.19	350.87	0.650	0.500	2.00	8.615	5.60	169.1	62.8	537.7
82.00		0.00	1.30	17.991	30.40	348.10	0.650	0.500	2.00	8.519	5.54	168.4	62.1	531.6
84.00		0.00	1.31	18.115	30.61	345.27	0.650	0.500	2.00	8.423	5.48	167.6	61.4	525.4
86.00		0.00	1.31	18.238	30.82	342.39	0.650	0.500	2.00	8.328	5.41	166.8	60.7	519.3
88.00		0.00	1.32	18.358	31.02	339.47	0.650	0.500	2.00	8.232	5.35	166.0	60.0	513.2
90.00		0.00	1.33	18.476	31.22	336.49	0.650	0.500	2.00	8.136	5.29	165.1	59.3	507.0
92.00		0.00	1.34	18.592	31.42	333.47	0.650	0.500	2.00	8.041	5.23	164.2	58.6	500.9

Wind Loading - Shaft

Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

94.00	0.00	1.35	18.707	31.61	330.41	0.650	0.500	2.00	7.945	5.16	163.3	57.9	494.8
94.08 Bot - Section 3	0.00	1.35	18.712	31.62	330.28	0.650	0.500	0.08	0.329	0.21	6.8	2.4	20.5
96.00	0.00	1.36	18.820	31.81	327.30	0.650	0.500	1.92	7.640	4.97	157.9	55.7	829.7
98.00	0.00	1.36	18.931	31.99	324.15	0.650	0.500	2.00	7.878	5.12	163.8	57.4	855.2
100.00	0.00	1.37	19.041	32.18	320.96	0.650	0.500	2.00	7.783	5.06	162.8	56.7	844.4
100.17 Top - Section 2	0.00	1.37	19.050	32.19	320.69	0.650	0.500	0.17	0.644	0.42	13.5	4.7	69.9
102.00	0.00	1.38	19.149	32.36	323.13	0.650	0.500	1.83	7.043	4.58	148.1	51.3	383.4
104.00	0.00	1.39	19.255	32.54	319.88	0.650	0.500	2.00	7.591	4.93	160.6	55.2	413.0
106.00	0.00	1.40	19.360	32.72	316.59	0.650	0.500	2.00	7.495	4.87	159.4	54.5	407.7
108.00	0.00	1.40	19.464	32.89	313.26	0.650	0.500	2.00	7.400	4.81	158.2	53.8	402.3
110.00	0.00	1.41	19.566	33.07	309.90	0.650	0.500	2.00	7.304	4.75	157.0	53.1	397.0
112.00	0.00	1.42	19.667	33.24	306.50	0.650	0.500	2.00	7.208	4.69	155.7	52.4	391.6
114.00	0.00	1.43	19.767	33.41	303.07	0.650	0.500	2.00	7.113	4.62	154.4	51.7	386.2
116.00	0.00	1.43	19.865	33.57	299.61	0.650	0.500	2.00	7.017	4.56	153.1	51.0	380.9
118.00	0.00	1.44	19.963	33.74	296.12	0.650	0.500	2.00	6.921	4.50	151.8	50.3	375.5
120.00	0.00	1.45	20.059	33.90	292.59	0.650	0.500	2.00	6.825	4.44	150.4	49.6	370.2
122.00	0.00	1.45	20.154	34.06	289.04	0.650	0.500	2.00	6.730	4.37	149.0	48.9	364.8
124.00	0.00	1.46	20.248	34.22	285.45	0.650	0.500	2.00	6.634	4.31	147.6	48.2	359.4
126.00	0.00	1.47	20.340	34.38	281.84	0.650	0.500	2.00	6.538	4.25	146.1	47.4	354.1
128.00	0.00	1.47	20.432	34.53	278.20	0.650	0.500	2.00	6.443	4.19	144.6	46.7	348.7
130.00	0.00	1.48	20.523	34.68	274.53	0.650	0.500	2.00	6.347	4.13	143.1	46.0	343.4
132.00	0.00	1.49	20.613	34.84	270.84	0.650	0.500	2.00	6.251	4.06	141.5	45.3	338.0
134.00	0.00	1.49	20.701	34.99	267.12	0.650	0.500	2.00	6.155	4.00	140.0	44.6	332.6
136.00	0.00	1.50	20.789	35.13	263.37	0.650	0.500	2.00	6.060	3.94	138.4	43.9	327.3
138.00	0.00	1.50	20.876	35.28	259.60	0.650	0.500	2.00	5.964	3.88	136.8	43.2	321.9
140.00	0.00	1.51	20.962	35.43	255.80	0.650	0.500	2.00	5.868	3.81	135.1	42.5	316.5
142.00	0.00	1.52	21.047	35.57	251.98	0.650	0.500	2.00	5.773	3.75	133.5	41.8	311.2
143.75 Bot - Section 4	0.00	1.52	21.121	35.69	248.62	0.650	0.500	1.75	4.972	3.23	115.4	36.0	267.9
144.00	0.00	1.52	21.131	35.71	248.13	0.650	0.500	0.25	0.712	0.46	16.5	5.2	54.7
144.50 Appurtenance(s)	0.00	1.52	21.152	35.75	247.17	0.650	0.500	0.50	1.420	0.92	33.0	10.3	109.1
145.75 RB1	0.00	1.53	21.204	35.84	244.75	0.650	0.500	1.25	3.523	2.29	82.1	25.6	423.7
146.00	0.00	1.53	21.215	35.85	244.27	0.650	0.500	0.25	0.700	0.46	16.3	5.1	84.4
148.00	0.00	1.54	21.297	35.99	240.38	0.650	0.500	2.00	5.548	3.61	129.8	40.1	670.6
148.08 Top - Section 3	0.00	1.54	21.301	36.00	240.21	0.650	0.500	0.08	0.229	0.15	5.4	1.7	27.8
149.50 Appurtenance(s)	0.00	1.54	21.359	36.10	240.30	0.650	0.500	1.42	3.869	2.51	90.8	28.0	292.2
150.00	0.00	1.54	21.379	36.13	239.32	0.650	0.500	0.50	1.354	0.88	31.8	9.9	102.8
151.75 RT1	0.00	1.55	21.450	36.25	235.88	0.650	0.500	1.75	4.692	3.05	110.6	33.9	358.1
152.00	0.00	1.55	21.460	36.27	235.39	0.650	0.500	0.25	0.664	0.43	15.7	4.8	20.4
154.00	0.00	1.55	21.541	36.40	231.44	0.650	0.500	2.00	5.261	3.42	124.5	38.0	161.0
154.50 Appurtenance(s)	0.00	1.55	21.561	36.44	230.45	0.650	0.500	0.50	1.300	0.85	30.8	9.5	39.8
155.00 Appurtenance(s)	0.00	1.56	21.581	36.47	229.46	0.650	0.500	0.50	1.294	0.84	30.7	9.4	39.7
156.00	0.00	1.56	21.620	36.54	227.47	0.650	0.500	1.00	2.571	1.67	61.0	18.6	78.7
158.00	0.00	1.56	21.699	36.67	223.48	0.650	0.500	2.00	5.069	3.30	120.8	36.6	154.9
159.50 Appurtenance(s)	0.00	1.57	21.758	36.77	220.47	0.650	0.500	1.50	3.739	2.43	89.4	27.0	114.3
160.00	0.00	1.57	21.777	36.80	219.47	0.650	0.500	0.50	1.234	0.80	29.5	9.0	37.8
162.00	0.00	1.58	21.855	36.93	215.43	0.650	0.500	2.00	4.878	3.17	117.1	35.2	148.9
164.00	0.00	1.58	21.931	37.06	211.38	0.650	0.500	2.00	4.782	3.11	115.2	34.4	145.8
164.50 Appurtenance(s)	0.00	1.58	21.950	37.10	210.37	0.650	0.500	0.50	1.181	0.77	28.5	8.6	36.1
165.00 Appurtenance(s)	0.00	1.58	21.969	37.13	209.35	0.650	0.500	0.50	1.175	0.76	28.3	8.5	35.9
166.00	0.00	1.59	22.007	37.19	207.31	0.650	0.500	1.00	2.331	1.52	56.4	16.9	71.1
168.00	0.00	1.59	22.083	37.32	203.22	0.650	0.500	2.00	4.591	2.98	111.4	33.0	139.8
169.50 Appurtenance(s)	0.00	1.60	22.139	37.41	200.14	0.650	0.500	1.50	3.380	2.20	82.2	24.4	102.9
170.00	0.00	1.60	22.158	37.45	199.11	0.650	0.500	0.50	1.115	0.72	27.1	8.1	34.0
172.00	0.00	1.60	22.232	37.57	194.98	0.650	0.500	2.00	4.399	2.86	107.4	31.6	133.7
174.00	0.00	1.61	22.305	37.70	190.84	0.650	0.500	2.00	4.303	2.80	105.4	30.9	130.7
174.50 Appurtenance(s)	0.00	1.61	22.324	37.73	189.80	0.650	0.500	0.50	1.061	0.69	26.0	7.7	32.3
175.00 Appurtenance(s)	0.00	1.61	22.342	37.76	188.76	0.650	0.500	0.50	1.055	0.69	25.9	7.6	32.1
176.00	0.00	1.61	22.378	37.82	186.68	0.650	0.500	1.00	2.092	1.36	51.4	15.1	63.5

Wind Loading - Shaft

Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

178.00	0.00	1.62	22.451	37.94	182.50	0.650	0.500	2.00	4.112	2.67	101.4	29.5	124.6
179.50 Appurtenance(s)	0.00	1.62	22.505	38.03	179.35	0.650	0.500	1.50	3.021	1.96	74.7	21.7	91.5
180.00	0.00	1.62	22.522	38.06	178.30	0.650	0.500	0.50	0.995	0.65	24.6	7.2	30.2
182.00	0.00	1.63	22.594	38.18	174.08	0.650	0.500	2.00	3.921	2.55	97.3	28.1	118.5
184.00	0.00	1.63	22.664	38.30	169.85	0.650	0.500	2.00	3.825	2.49	95.2	27.4	115.5
185.00 Appurtenance(s)	0.00	1.64	22.699	38.36	167.73	0.650	0.500	1.00	1.877	1.22	46.8	13.5	56.7
							Totals:	**185.00**			**14,117.4**		**46,732.6**

Discrete Appurtenance Forces

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 27	

Tower Engineering Solutions

Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 28

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	185.00	EMS RR90-17-02DP	3	22.769	38.480	0.79	11.83	0.00	0.000	2.000	455.08	0.00	910.16
2	185.00	Commscope LNX-6515DS	3	22.769	38.480	0.80	29.62	346.80	0.000	2.000	1139.63	0.00	2279.26
3	185.00	Cobra Arms	3	22.699	38.362	0.75	36.00	1650.00	0.000	0.000	1381.04	0.00	0.00
4	185.00	Allen Telecom	6	22.769	38.480	0.75	3.24	96.00	0.000	2.000	124.68	0.00	249.35
5	185.00	6' Pole Branch	1	22.699	38.362	1.00	5.00	20.00	0.000	0.000	191.81	0.00	0.00
6	185.00	Kathrein 782 11056	3	22.769	38.480	0.67	0.42	12.00	0.000	2.000	16.24	0.00	32.48
7	179.50	6' Pole Branch	1	22.505	38.033	1.00	5.00	20.00	0.000	0.000	190.16	0.00	0.00
8	175.00	Alcatel Lucent 800 MHz	3	22.342	37.758	0.75	7.33	263.40	0.000	0.000	276.95	0.00	0.00
9	175.00	Alcatel Lucent 800 MHz	3	22.342	37.758	0.75	6.34	222.30	0.000	0.000	239.57	0.00	0.00
10	175.00	Alcatel Lucent	3	22.342	37.758	0.75	11.18	276.00	0.000	0.000	422.23	0.00	0.00
11	175.00	Alcatel Lucent 1900 MHz	3	22.342	37.758	0.75	9.45	225.60	0.000	0.000	356.81	0.00	0.00
12	175.00	RFS APXVSPP18-C-A20	3	22.342	37.758	0.83	22.61	319.50	0.000	0.000	853.67	0.00	0.00
13	175.00	Cobra Arms	3	22.342	37.758	0.75	36.00	1650.00	0.000	0.000	1359.28	0.00	0.00
14	175.00	RFS ACU-A20-N RETs	4	22.342	37.758	0.67	0.59	9.20	0.000	0.000	22.26	0.00	0.00
15	175.00	RFS APXVTM14-C-120	3	22.342	37.758	0.79	17.28	275.70	0.000	0.000	652.35	0.00	0.00
16	174.50	7' Pole Branch	1	22.324	37.727	1.00	5.00	20.00	0.000	0.000	188.63	0.00	0.00
17	169.50	8' Pole Branch	1	22.139	37.415	1.00	5.00	20.00	0.000	0.000	187.07	0.00	0.00
18	165.00	Swedcom SLCP 2x6014	2	21.969	37.128	0.93	14.66	140.80	0.000	0.000	544.18	0.00	0.00
19	165.00	Swedcom SC-E 6014 Rev 2	4	21.969	37.128	0.97	15.75	168.40	0.000	0.000	584.88	0.00	0.00
20	165.00	Cobra Arms	3	21.969	37.128	0.75	36.00	1650.00	0.000	0.000	1336.62	0.00	0.00
21	165.00	Antel LPA 80063/6CF	2	21.969	37.128	0.94	21.02	0.00	0.000	0.000	780.38	0.00	0.00
22	165.00	Antel BXA 70063/6CF_4	1	21.969	37.128	1.00	8.54	57.60	0.000	0.000	317.08	0.00	0.00
23	165.00	Antel BXA 171063/8BF	3	21.969	37.128	0.84	8.59	87.90	0.000	0.000	319.05	0.00	0.00
24	165.00	RFS FD9R6004/2C-3L	6	21.969	37.128	0.67	2.01	32.40	0.000	0.000	74.63	0.00	0.00
25	164.50	8' Pole Branch	1	21.950	37.096	1.00	5.00	20.00	0.000	0.000	185.48	0.00	0.00
26	159.50	9' Pole Branch	1	21.758	36.770	1.00	5.00	20.00	0.000	0.000	183.85	0.00	0.00
27	155.00	Powerwave 7770.00	6	21.581	36.471	0.78	30.56	0.00	0.000	0.000	1114.57	0.00	0.00
28	155.00	Cobra Arms	3	21.581	36.471	0.75	36.00	1650.00	0.000	0.000	1312.96	0.00	0.00
29	155.00	Ericsson RRUS-11 RRUs	6	21.581	36.471	0.75	21.82	484.20	0.000	0.000	795.98	0.00	0.00
30	155.00	Powerwave P65-16-XLH-RR	3	21.581	36.471	0.78	21.57	300.60	0.000	0.000	786.86	0.00	0.00
31	155.00	Powerwave LGP 21401	6	21.581	36.471	0.50	0.00	0.00	0.000	0.000	0.00	0.00	0.00
32	155.00	Powerwave LGP21903	6	21.581	36.471	0.50	1.14	47.40	0.000	0.000	41.58	0.00	0.00
33	155.00	Raycap DC6-48-60-18-8F	1	21.581	36.471	1.00	1.67	49.50	0.000	0.000	60.91	0.00	0.00
34	154.50	9' Pole Branch	1	21.561	36.437	1.00	5.00	20.00	0.000	0.000	182.19	0.00	0.00
35	149.50	10' Pole Branch	1	21.359	36.097	1.00	5.00	20.00	0.000	0.000	180.48	0.00	0.00
36	144.50	11' Pole Branch	1	21.152	35.747	1.00	5.00	20.00	0.000	0.000	178.74	0.00	0.00
						Totals:		**10,195.30**			**17,037.89**		

Total Applied Force Summary

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 28	

Load Case: 73.61 mph Wind with 0.5" Ice

Iterations: 28

Dead Load Factor 1.00

Wind Load Factor 1.00

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		185.93	767.67	0.00	0.00
4.00		190.33	769.40	0.00	0.00
6.00		194.73	771.12	0.00	0.00
8.00		193.28	764.98	0.00	0.00
10.00		191.82	758.85	0.00	0.00
12.00		190.36	752.71	0.00	0.00
14.00		188.90	746.58	0.00	0.00
16.00		187.44	740.44	0.00	0.00
18.00		185.98	734.30	0.00	0.00
20.00		184.52	728.17	0.00	0.00
22.00		183.07	722.03	0.00	0.00
24.00		181.61	715.89	0.00	0.00
26.00		180.15	709.76	0.00	0.00
28.00		178.69	703.62	0.00	0.00
30.00		177.23	697.49	0.00	0.00
32.00		175.77	691.35	0.00	0.00
34.00		175.81	685.21	0.00	0.00
36.00		177.21	679.08	0.00	0.00
38.00		178.45	672.94	0.00	0.00
40.00		179.54	666.80	0.00	0.00
42.00		180.50	660.67	0.00	0.00
44.00		181.33	654.53	0.00	0.00
46.00		182.04	648.40	0.00	0.00
46.17		15.11	53.78	0.00	0.00
48.00		169.63	1104.22	0.00	0.00
50.00		185.65	1193.49	0.00	0.00
52.00		186.08	1181.93	0.00	0.00
54.00		186.42	1170.37	0.00	0.00
56.00		186.67	627.06	0.00	0.00
58.00		186.84	620.93	0.00	0.00
60.00		186.93	614.79	0.00	0.00
62.00		186.94	608.65	0.00	0.00
64.00		186.88	602.52	0.00	0.00
66.00		186.75	596.38	0.00	0.00
68.00		186.56	590.25	0.00	0.00
70.00		186.30	584.11	0.00	0.00
72.00		185.99	577.97	0.00	0.00
74.00		185.61	571.84	0.00	0.00
76.00		185.18	565.70	0.00	0.00
78.00		184.69	559.56	0.00	0.00
80.00		184.16	553.43	0.00	0.00
82.00		183.57	547.29	0.00	0.00
84.00		182.93	541.15	0.00	0.00
86.00		182.25	535.02	0.00	0.00
88.00		181.52	528.88	0.00	0.00
90.00		180.74	522.75	0.00	0.00
92.00		179.93	516.61	0.00	0.00
94.00		179.07	510.47	0.00	0.00

Total Applied Force Summary

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 29	

94.08		7.42	21.15	0.00	0.00
96.00		173.18	844.73	0.00	0.00
98.00		179.83	870.88	0.00	0.00
100.00		178.87	860.09	0.00	0.00
100.17		14.82	71.21	0.00	0.00
102.00		162.97	397.77	0.00	0.00
104.00		176.84	428.76	0.00	0.00
106.00		175.77	423.40	0.00	0.00
108.00		174.66	418.04	0.00	0.00
110.00		173.52	412.68	0.00	0.00
112.00		172.35	407.32	0.00	0.00
114.00		171.15	401.96	0.00	0.00
116.00		169.91	396.60	0.00	0.00
118.00		168.64	391.24	0.00	0.00
120.00		167.35	385.88	0.00	0.00
122.00		166.02	380.52	0.00	0.00
124.00		164.66	375.15	0.00	0.00
126.00		163.28	369.79	0.00	0.00
128.00		161.87	364.43	0.00	0.00
130.00		160.43	359.07	0.00	0.00
132.00		158.96	353.71	0.00	0.00
134.00		157.47	348.35	0.00	0.00
136.00		155.95	342.99	0.00	0.00
138.00		154.41	337.63	0.00	0.00
140.00		152.84	332.27	0.00	0.00
142.00		151.25	326.91	0.00	0.00
143.75		130.98	281.68	0.00	0.00
144.00		20.10	56.70	0.00	0.00
144.50	(1) appurtenances	218.88	133.03	0.00	0.00
145.75		99.99	356.96	0.00	0.00
146.00		19.90	71.05	0.00	0.00
148.00		158.59	563.79	0.00	0.00
148.08		6.56	23.34	0.00	0.00
149.50	(1) appurtenances	291.71	236.55	0.00	0.00
150.00		39.03	76.11	0.00	0.00
151.75		135.94	264.69	0.00	0.00
152.00		19.29	22.34	0.00	0.00
154.00		152.24	176.73	0.00	0.00
154.50	(1) appurtenances	217.54	63.78	0.00	0.00
155.00	(31) appurtenances	4148.09	2575.29	0.00	0.00
156.00		70.18	82.76	0.00	0.00
158.00		139.17	163.06	0.00	0.00
159.50	(1) appurtenances	287.01	140.37	0.00	0.00
160.00		34.13	39.79	0.00	0.00
162.00		135.57	156.99	0.00	0.00
164.00		133.74	153.96	0.00	0.00
164.50	(1) appurtenances	218.58	58.08	0.00	0.00
165.00	(21) appurtenances	3989.80	2174.99	0.00	0.00
166.00		65.66	74.13	0.00	0.00
168.00		130.02	145.81	0.00	0.00
169.50	(1) appurtenances	283.31	127.43	0.00	0.00
170.00		31.81	35.48	0.00	0.00
172.00		126.22	139.74	0.00	0.00
174.00		124.29	136.70	0.00	0.00
174.50	(1) appurtenances	219.37	53.77	0.00	0.00
175.00	(25) appurtenances	4213.75	3275.28	0.00	0.00
176.00		60.88	64.56	0.00	0.00
178.00		120.38	126.67	0.00	0.00

Total Applied Force Summary

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 30	

179.50	(1) appurtenances	279.11	113.08	0.00	0.00
180.00		29.38	30.69	0.00	0.00
182.00		116.40	120.61	0.00	0.00
184.00		114.38	117.57	0.00	0.00
185.00	(19) appurtenances	3364.85	2182.54	0.00	3471.25
	Totals:	**32,618.35**	**57,759.78**	**0.00**	**3,471.25**

Resulting Forces and Deflections

Structure: CT00707-S-SB
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00

Iterations: 28

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-32.636	-57.748	0.000	0.000	0.000	-4364.7	0.000	0.000	0.000	0.000	0.000
2.00	-32.487	-56.959	0.000	0.000	0.000	-4299.5	-0.008	0.000	0.008	-0.038	0.000
4.00	-32.334	-56.169	0.000	0.000	0.000	-4234.5	-0.033	0.000	0.033	-0.075	0.000
6.00	-32.175	-55.376	0.000	0.000	0.000	-4169.8	-0.073	0.000	0.073	-0.114	0.000
8.00	-32.017	-54.590	0.000	0.000	0.000	-4105.5	-0.129	0.000	0.129	-0.152	0.000
10.00	-31.859	-53.810	0.000	0.000	0.000	-4041.4	-0.202	0.000	0.202	-0.191	0.000
12.00	-31.703	-53.036	0.000	0.000	0.000	-3977.7	-0.290	0.000	0.290	-0.230	0.000
14.00	-31.547	-52.269	0.000	0.000	0.000	-3914.3	-0.396	0.000	0.396	-0.270	0.000
16.00	-31.392	-51.507	0.000	0.000	0.000	-3851.2	-0.518	0.000	0.518	-0.310	0.000
18.00	-31.237	-50.752	0.000	0.000	0.000	-3788.4	-0.657	0.000	0.657	-0.350	0.000
20.00	-31.084	-50.003	0.000	0.000	0.000	-3726.0	-0.812	0.000	0.812	-0.391	0.000
22.00	-30.931	-49.260	0.000	0.000	0.000	-3663.8	-0.985	0.000	0.985	-0.432	0.000
24.00	-30.779	-48.523	0.000	0.000	0.000	-3601.9	-1.176	0.000	1.176	-0.474	0.000
26.00	-30.628	-47.792	0.000	0.000	0.000	-3540.4	-1.383	0.000	1.383	-0.515	0.000
28.00	-30.477	-47.068	0.000	0.000	0.000	-3479.1	-1.609	0.000	1.609	-0.558	0.000
30.00	-30.328	-46.350	0.000	0.000	0.000	-3418.2	-1.852	0.000	1.852	-0.600	0.000
32.00	-30.179	-45.637	0.000	0.000	0.000	-3357.5	-2.113	0.000	2.113	-0.643	0.000
34.00	-30.029	-44.931	0.000	0.000	0.000	-3297.2	-2.392	0.000	2.392	-0.687	0.000
36.00	-29.878	-44.232	0.000	0.000	0.000	-3237.1	-2.689	0.000	2.689	-0.731	0.000
38.00	-29.724	-43.538	0.000	0.000	0.000	-3177.4	-3.005	0.000	3.005	-0.775	0.000
40.00	-29.569	-42.851	0.000	0.000	0.000	-3117.9	-3.340	0.000	3.340	-0.819	0.000
42.00	-29.412	-42.170	0.000	0.000	0.000	-3058.8	-3.693	0.000	3.693	-0.864	0.000
44.00	-29.254	-41.495	0.000	0.000	0.000	-3000.0	-4.065	0.000	4.065	-0.910	0.000
46.00	-29.079	-40.837	0.000	0.000	0.000	-2941.4	-4.457	0.000	4.457	-0.956	0.000
46.17	-29.080	-40.771	0.000	0.000	0.000	-2936.6	-4.490	0.000	4.490	-0.960	0.000
48.00	-28.922	-39.648	0.000	0.000	0.000	-2883.3	-4.867	0.000	4.867	-1.002	0.000
50.00	-28.746	-38.434	0.000	0.000	0.000	-2825.4	-5.298	0.000	5.298	-1.049	0.000
52.00	-28.569	-37.232	0.000	0.000	0.000	-2768.0	-5.748	0.000	5.748	-1.096	0.000
54.00	-28.390	-36.042	0.000	0.000	0.000	-2710.8	-6.217	0.000	6.217	-1.144	0.000
56.00	-28.220	-35.396	0.000	0.000	0.000	-2654.0	-6.707	0.000	6.707	-1.192	0.000
58.00	-28.048	-34.756	0.000	0.000	0.000	-2597.6	-7.217	0.000	7.217	-1.238	0.000
60.00	-27.876	-34.123	0.000	0.000	0.000	-2541.5	-7.746	0.000	7.746	-1.285	0.000
62.00	-27.702	-33.496	0.000	0.000	0.000	-2485.8	-8.295	0.000	8.295	-1.332	0.000
64.00	-27.529	-32.875	0.000	0.000	0.000	-2430.3	-8.863	0.000	8.863	-1.380	0.000
66.00	-27.355	-32.260	0.000	0.000	0.000	-2375.3	-9.452	0.000	9.452	-1.428	0.000
68.00	-27.180	-31.652	0.000	0.000	0.000	-2320.6	-10.061	0.000	10.061	-1.476	0.000
70.00	-27.005	-31.050	0.000	0.000	0.000	-2266.2	-10.690	0.000	10.690	-1.525	0.000
72.00	-26.830	-30.454	0.000	0.000	0.000	-2212.2	-11.340	0.000	11.340	-1.574	0.000
74.00	-26.654	-29.864	0.000	0.000	0.000	-2158.6	-12.010	0.000	12.010	-1.624	0.000
76.00	-26.479	-29.281	0.000	0.000	0.000	-2105.2	-12.701	0.000	12.701	-1.674	0.000
78.00	-26.303	-28.704	0.000	0.000	0.000	-2052.3	-13.414	0.000	13.414	-1.725	0.000
80.00	-26.127	-28.133	0.000	0.000	0.000	-1999.7	-14.147	0.000	14.147	-1.775	0.000
82.00	-25.951	-27.568	0.000	0.000	0.000	-1947.4	-14.902	0.000	14.902	-1.827	0.000
84.00	-25.775	-27.010	0.000	0.000	0.000	-1895.5	-15.679	0.000	15.679	-1.878	0.000
86.00	-25.599	-26.458	0.000	0.000	0.000	-1844.0	-16.477	0.000	16.477	-1.931	0.000
88.00	-25.424	-25.912	0.000	0.000	0.000	-1792.8	-17.297	0.000	17.297	-1.983	0.000
90.00	-25.248	-25.373	0.000	0.000	0.000	-1741.9	-18.140	0.000	18.140	-2.036	0.000
92.00	-25.073	-24.839	0.000	0.000	0.000	-1691.4	-19.004	0.000	19.004	-2.089	0.000
94.00	-24.887	-24.324	0.000	0.000	0.000	-1641.3	-19.891	0.000	19.891	-2.143	0.000

Resulting Forces and Deflections

Structure: CT00707-S-SB
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

94.08	-24.891	-24.291	0.000	0.000	0.000	-1639.2	-19.928	0.000	19.928	-2.145	0.000
96.00	-24.707	-23.431	0.000	0.000	0.000	-1591.5	-20.800	0.000	20.800	-2.197	0.000
98.00	-24.515	-22.544	0.000	0.000	0.000	-1542.1	-21.733	0.000	21.733	-2.252	0.000
100.00	-24.314	-21.679	0.000	0.000	0.000	-1493.1	-22.688	0.000	22.688	-2.306	0.000
100.17	-24.306	-21.597	0.000	0.000	0.000	-1489.0	-22.768	0.000	22.768	-2.311	0.000
102.00	-24.148	-21.183	0.000	0.000	0.000	-1444.5	-23.666	0.000	23.666	-2.362	0.000
104.00	-23.976	-20.736	0.000	0.000	0.000	-1396.2	-24.668	0.000	24.668	-2.423	0.000
106.00	-23.804	-20.295	0.000	0.000	0.000	-1348.2	-25.697	0.000	25.697	-2.484	0.000
108.00	-23.632	-19.859	0.000	0.000	0.000	-1300.6	-26.751	0.000	26.751	-2.546	0.000
110.00	-23.462	-19.430	0.000	0.000	0.000	-1253.3	-27.831	0.000	27.831	-2.608	0.000
112.00	-23.291	-19.005	0.000	0.000	0.000	-1206.4	-28.936	0.000	28.936	-2.670	0.000
114.00	-23.122	-18.587	0.000	0.000	0.000	-1159.8	-30.068	0.000	30.068	-2.732	0.000
116.00	-22.953	-18.174	0.000	0.000	0.000	-1113.6	-31.226	0.000	31.226	-2.795	0.000
118.00	-22.784	-17.767	0.000	0.000	0.000	-1067.7	-32.410	0.000	32.410	-2.857	0.000
120.00	-22.617	-17.365	0.000	0.000	0.000	-1022.1	-33.620	0.000	33.620	-2.919	0.000
122.00	-22.450	-16.969	0.000	0.000	0.000	-976.94	-34.857	0.000	34.857	-2.982	0.000
124.00	-22.284	-16.579	0.000	0.000	0.000	-932.04	-36.119	0.000	36.119	-3.044	0.000
126.00	-22.118	-16.195	0.000	0.000	0.000	-887.47	-37.407	0.000	37.407	-3.106	0.000
128.00	-21.954	-15.816	0.000	0.000	0.000	-843.24	-38.721	0.000	38.721	-3.168	0.000
130.00	-21.790	-15.443	0.000	0.000	0.000	-799.33	-40.061	0.000	40.061	-3.229	0.000
132.00	-21.627	-15.076	0.000	0.000	0.000	-755.75	-41.427	0.000	41.427	-3.290	0.000
134.00	-21.465	-14.715	0.000	0.000	0.000	-712.50	-42.818	0.000	42.818	-3.350	0.000
136.00	-21.304	-14.360	0.000	0.000	0.000	-669.57	-44.234	0.000	44.234	-3.410	0.000
138.00	-21.144	-14.011	0.000	0.000	0.000	-626.96	-45.675	0.000	45.675	-3.469	0.000
140.00	-20.985	-13.667	0.000	0.000	0.000	-584.67	-47.140	0.000	47.140	-3.526	0.000
142.00	-20.826	-13.332	0.000	0.000	0.000	-542.70	-48.629	0.000	48.629	-3.583	0.000
143.75	-20.684	-13.049	0.000	0.000	0.000	-506.26	-49.951	0.000	49.951	-3.631	0.000
144.00	-20.662	-12.990	0.000	0.000	0.000	-501.09	-50.141	0.000	50.141	-3.638	0.000
144.50	-20.441	-12.862	0.000	0.000	0.000	-490.76	-50.523	0.000	50.523	-3.652	0.000
145.75	-20.322	-12.506	0.000	0.000	0.000	-465.21	-51.483	0.000	51.483	-3.686	0.000
146.00	-20.302	-12.430	0.000	0.000	0.000	-460.13	-51.676	0.000	51.676	-3.690	0.000
148.00	-20.111	-11.871	0.000	0.000	0.000	-419.52	-53.229	0.000	53.229	-3.724	0.000
148.08	-20.106	-11.844	0.000	0.000	0.000	-417.85	-53.294	0.000	53.294	-3.725	0.000
149.50	-19.803	-11.621	0.000	0.000	0.000	-389.36	-54.402	0.000	54.402	-3.748	0.000
150.00	-19.764	-11.539	0.000	0.000	0.000	-379.46	-54.795	0.000	54.795	-3.760	0.000
151.75	-19.615	-11.276	0.000	0.000	0.000	-344.88	-56.180	0.000	56.180	-3.798	0.000
152.00	-19.604	-11.239	0.000	0.000	0.000	-339.97	-56.379	0.000	56.379	-3.804	0.000
154.00	-19.450	-11.055	0.000	0.000	0.000	-300.77	-57.991	0.000	57.991	-3.888	0.000
154.50	-19.233	-10.999	0.000	0.000	0.000	-291.04	-58.399	0.000	58.399	-3.908	0.000
155.00	-14.922	-8.706	0.000	0.000	0.000	-281.43	-58.810	0.000	58.810	-3.929	0.000
156.00	-14.855	-8.614	0.000	0.000	0.000	-266.50	-59.637	0.000	59.637	-3.968	0.000
158.00	-14.714	-8.445	0.000	0.000	0.000	-236.79	-61.315	0.000	61.315	-4.042	0.000
159.50	-14.423	-8.316	0.000	0.000	0.000	-214.72	-62.593	0.000	62.593	-4.095	0.000
160.00	-14.392	-8.269	0.000	0.000	0.000	-207.51	-63.023	0.000	63.023	-4.112	0.000
162.00	-14.255	-8.107	0.000	0.000	0.000	-178.73	-64.759	0.000	64.759	-4.176	0.000
164.00	-14.115	-7.954	0.000	0.000	0.000	-150.22	-66.520	0.000	66.520	-4.234	0.000
164.50	-13.894	-7.909	0.000	0.000	0.000	-143.16	-66.964	0.000	66.964	-4.248	0.000
165.00	-9.756	-6.033	0.000	0.000	0.000	-136.21	-67.410	0.000	67.410	-4.261	0.000
166.00	-9.689	-5.958	0.000	0.000	0.000	-126.46	-68.304	0.000	68.304	-4.287	0.000
168.00	-9.552	-5.816	0.000	0.000	0.000	-107.08	-70.109	0.000	70.109	-4.333	0.000
169.50	-9.262	-5.707	0.000	0.000	0.000	-92.756	-71.475	0.000	71.475	-4.365	0.000
170.00	-9.230	-5.670	0.000	0.000	0.000	-88.125	-71.933	0.000	71.933	-4.375	0.000
172.00	-9.097	-5.535	0.000	0.000	0.000	-69.665	-73.772	0.000	73.772	-4.411	0.000
174.00	-8.964	-5.406	0.000	0.000	0.000	-51.471	-75.626	0.000	75.626	-4.441	0.000
174.50	-8.742	-5.369	0.000	0.000	0.000	-46.989	-76.091	0.000	76.091	-4.448	0.000
175.00	-4.287	-2.430	0.000	0.000	0.000	-42.618	-76.557	0.000	76.557	-4.453	0.000
176.00	-4.222	-2.369	0.000	0.000	0.000	-38.331	-77.490	0.000	77.490	-4.464	0.000
178.00	-4.093	-2.251	0.000	0.000	0.000	-29.887	-79.363	0.000	79.363	-4.484	0.000

Resulting Forces and Deflections

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 33	

179.50	-3.806	-2.160	0.000	0.000	0.000	-23.748	-80.773	0.000	80.773	-4.496	0.000
180.00	-3.775	-2.131	0.000	0.000	0.000	-21.846	-81.243	0.000	81.243	-4.500	0.000
182.00	-3.649	-2.019	0.000	0.000	0.000	-14.296	-83.129	0.000	83.129	-4.511	0.000
184.00	-3.526	-1.911	0.000	0.000	0.000	-6.998	-85.019	0.000	85.019	-4.519	0.000
185.00	-3.365	0.000	0.000	0.000	0.000	-3.471	0.000	0.000	85.965	-4.521	0.000

Resulting Stresses

Structure:	CT00707-S-SBA	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 34	

Tower Engineering Solutions

Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 28

Applied Stresses

Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvt Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Allow Stress (ksi)	f/Fb Stress Ratio
0.00	0.58	0.66	0.00	0.00	0.00	29.37	29.97	49.4	0.606
2.00	0.57	0.66	0.00	0.00	0.00	29.40	29.99	49.6	0.604
4.00	0.57	0.66	0.00	0.00	0.00	29.42	30.02	49.8	0.602
6.00	0.57	0.66	0.00	0.00	0.00	29.45	30.04	50.0	0.601
8.00	0.56	0.67	0.00	0.00	0.00	29.48	30.06	50.2	0.599
10.00	0.56	0.67	0.00	0.00	0.00	29.50	30.08	50.4	0.597
12.00	0.56	0.67	0.00	0.00	0.00	29.53	30.11	50.6	0.595
14.00	0.55	0.67	0.00	0.00	0.00	29.55	30.13	50.8	0.593
16.00	0.55	0.68	0.00	0.00	0.00	29.57	30.15	51.0	0.591
18.00	0.55	0.68	0.00	0.00	0.00	29.59	30.16	51.2	0.589
20.00	0.54	0.68	0.00	0.00	0.00	29.61	30.18	51.4	0.587
22.00	0.54	0.68	0.00	0.00	0.00	29.63	30.20	51.6	0.585
24.00	0.54	0.69	0.00	0.00	0.00	29.65	30.21	51.8	0.583
26.00	0.53	0.69	0.00	0.00	0.00	29.67	30.22	52.0	0.581
28.00	0.53	0.69	0.00	0.00	0.00	29.68	30.23	52.0	0.582
30.00	0.53	0.69	0.00	0.00	0.00	29.69	30.24	52.0	0.582
32.00	0.52	0.70	0.00	0.00	0.00	29.70	30.25	52.0	0.582
34.00	0.52	0.70	0.00	0.00	0.00	29.71	30.25	52.0	0.582
36.00	0.52	0.70	0.00	0.00	0.00	29.72	30.26	52.0	0.582
38.00	0.51	0.71	0.00	0.00	0.00	29.72	30.26	52.0	0.582
40.00	0.51	0.71	0.00	0.00	0.00	29.72	30.26	52.0	0.582
42.00	0.51	0.71	0.00	0.00	0.00	29.72	30.25	52.0	0.582
44.00	0.50	0.71	0.00	0.00	0.00	29.72	30.25	52.0	0.582
46.00	0.50	0.72	0.00	0.00	0.00	29.71	30.24	52.0	0.582
46.17	0.50	0.72	0.00	0.00	0.00	29.71	30.24	52.0	0.582
48.00	0.49	0.72	0.00	0.00	0.00	29.70	30.22	52.0	0.581
50.00	0.48	0.72	0.00	0.00	0.00	29.69	30.20	52.0	0.581
52.00	0.47	0.73	0.00	0.00	0.00	29.68	30.17	52.0	0.580
54.00	0.45	0.72	0.00	0.00	0.00	28.76	29.24	52.0	0.562
56.00	0.45	0.72	0.00	0.00	0.00	28.73	29.21	52.0	0.562
58.00	0.44	0.72	0.00	0.00	0.00	28.70	29.17	52.0	0.561
60.00	0.44	0.73	0.00	0.00	0.00	28.66	29.13	52.0	0.560
62.00	0.44	0.73	0.00	0.00	0.00	28.63	29.09	52.0	0.560
64.00	0.43	0.73	0.00	0.00	0.00	28.58	29.04	52.0	0.559
66.00	0.43	0.74	0.00	0.00	0.00	28.53	28.99	52.0	0.558
68.00	0.43	0.74	0.00	0.00	0.00	28.48	28.94	52.0	0.557
70.00	0.42	0.74	0.00	0.00	0.00	28.43	28.88	52.0	0.556
72.00	0.42	0.75	0.00	0.00	0.00	28.36	28.81	52.0	0.554
74.00	0.42	0.75	0.00	0.00	0.00	28.30	28.74	52.0	0.553
76.00	0.41	0.75	0.00	0.00	0.00	28.22	28.67	52.0	0.551
78.00	0.41	0.76	0.00	0.00	0.00	28.15	28.59	52.0	0.550
80.00	0.41	0.76	0.00	0.00	0.00	28.06	28.50	52.0	0.548
82.00	0.40	0.76	0.00	0.00	0.00	27.97	28.40	52.0	0.546
84.00	0.40	0.77	0.00	0.00	0.00	27.87	28.30	52.0	0.544
86.00	0.39	0.77	0.00	0.00	0.00	27.77	28.19	52.0	0.542
88.00	0.39	0.77	0.00	0.00	0.00	27.65	28.08	52.0	0.540
90.00	0.39	0.78	0.00	0.00	0.00	27.53	27.95	52.0	0.538

Resulting Stresses

Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

92.00	0.38	0.78	0.00	0.00	0.00	27.40	27.82	52.0	0.535
94.00	0.38	0.79	0.00	0.00	0.00	27.26	27.68	52.0	0.532
94.08	0.38	0.79	0.00	0.00	0.00	27.25	27.67	52.0	0.532
96.00	0.37	0.79	0.00	0.00	0.00	27.11	27.52	52.0	0.529
98.00	0.36	0.79	0.00	0.00	0.00	26.95	27.35	52.0	0.526
100.00	0.35	0.80	0.00	0.00	0.00	26.78	27.17	52.0	0.523
100.17	0.40	0.91	0.00	0.00	0.00	30.06	30.50	52.0	0.587
102.00	0.40	0.92	0.00	0.00	0.00	29.86	30.30	52.0	0.583
104.00	0.40	0.93	0.00	0.00	0.00	29.62	30.06	52.0	0.578
106.00	0.39	0.93	0.00	0.00	0.00	29.37	29.81	52.0	0.573
108.00	0.39	0.94	0.00	0.00	0.00	29.11	29.54	52.0	0.568
110.00	0.39	0.94	0.00	0.00	0.00	28.82	29.25	52.0	0.563
112.00	0.38	0.95	0.00	0.00	0.00	28.52	28.95	52.0	0.557
114.00	0.38	0.95	0.00	0.00	0.00	28.19	28.62	52.0	0.551
116.00	0.38	0.96	0.00	0.00	0.00	27.85	28.27	52.0	0.544
118.00	0.37	0.97	0.00	0.00	0.00	27.48	27.90	52.0	0.537
120.00	0.37	0.97	0.00	0.00	0.00	27.08	27.51	52.0	0.529
122.00	0.37	0.98	0.00	0.00	0.00	26.66	27.08	52.0	0.521
124.00	0.37	0.99	0.00	0.00	0.00	26.21	26.63	52.0	0.512
126.00	0.36	1.00	0.00	0.00	0.00	25.73	26.15	52.0	0.503
128.00	0.36	1.00	0.00	0.00	0.00	25.22	25.64	52.0	0.493
130.00	0.36	1.01	0.00	0.00	0.00	24.67	25.09	52.0	0.483
132.00	0.35	1.02	0.00	0.00	0.00	24.08	24.50	52.0	0.471
134.00	0.35	1.03	0.00	0.00	0.00	23.45	23.87	52.0	0.459
136.00	0.35	1.04	0.00	0.00	0.00	22.78	23.20	52.0	0.446
138.00	0.34	1.05	0.00	0.00	0.00	22.06	22.48	52.0	0.432
140.00	0.34	1.06	0.00	0.00	0.00	21.28	21.70	52.0	0.418
142.00	0.34	1.07	0.00	0.00	0.00	20.45	20.88	52.0	0.402
143.75	0.34	1.08	0.00	0.00	0.00	19.68	20.10	52.0	0.387
144.00	0.34	1.08	0.00	0.00	0.00	19.57	19.99	52.0	0.385
144.50	0.34	1.07	0.00	0.00	0.00	19.33	19.76	52.0	0.380
145.75	0.33	1.08	0.00	0.00	0.00	12.22	12.55	52.0	0.241
146.00	0.33	1.08	0.00	0.00	0.00	12.13	12.13	52.0	0.233
148.00	0.32	1.09	0.00	0.00	0.00	11.39	11.39	52.0	0.219
148.08	0.63	2.14	0.00	0.00	0.00	11.36	11.36	52.0	0.219
149.50	0.62	2.14	0.00	0.00	0.00	15.75	15.75	49.0	0.321
150.00	0.62	2.14	0.00	0.00	0.00	15.45	15.45	49.2	0.314
151.75	0.62	2.16	0.00	0.00	0.00	14.37	14.99	49.6	0.302
152.00	0.62	2.17	0.00	0.00	0.00	29.48	30.33	49.6	0.611
154.00	0.62	2.19	0.00	0.00	0.00	27.09	27.96	50.1	0.558
154.50	0.62	2.18	0.00	0.00	0.00	26.46	27.34	50.2	0.545
155.00	0.49	1.70	0.00	0.00	0.00	25.84	26.49	50.3	0.527
156.00	0.49	1.70	0.00	0.00	0.00	24.95	25.61	50.5	0.507
158.00	0.49	1.72	0.00	0.00	0.00	23.06	23.74	51.0	0.466
159.50	0.49	1.71	0.00	0.00	0.00	21.55	22.24	51.3	0.433
160.00	0.49	1.72	0.00	0.00	0.00	21.04	21.73	51.4	0.422
162.00	0.49	1.74	0.00	0.00	0.00	18.88	19.60	51.9	0.378
164.00	0.49	1.76	0.00	0.00	0.00	16.54	17.31	52.0	0.333
164.50	0.49	1.74	0.00	0.00	0.00	15.94	16.70	52.0	0.321
165.00	0.38	1.23	0.00	0.00	0.00	15.33	15.84	52.0	0.305
166.00	0.38	1.23	0.00	0.00	0.00	14.54	15.06	52.0	0.290
168.00	0.37	1.24	0.00	0.00	0.00	12.86	13.41	52.0	0.258
169.50	0.37	1.22	0.00	0.00	0.00	11.52	12.08	52.0	0.232
170.00	0.37	1.23	0.00	0.00	0.00	11.07	11.64	52.0	0.224
172.00	0.37	1.24	0.00	0.00	0.00	9.16	9.77	52.0	0.188
174.00	0.37	1.25	0.00	0.00	0.00	7.09	7.77	52.0	0.149
174.50	0.37	1.22	0.00	0.00	0.00	6.55	7.24	52.0	0.139
175.00	0.17	0.60	0.00	0.00	0.00	6.01	6.27	52.0	0.121

Resulting Stresses

Structure:	CT00707-S-SBA	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 36	

176.00	0.17	0.60	0.00	0.00	0.00	5.54	5.80	52.0	0.112
178.00	0.16	0.60	0.00	0.00	0.00	4.54	4.81	52.0	0.093
179.50	0.16	0.57	0.00	0.00	0.00	3.74	4.02	52.0	0.077
180.00	0.16	0.57	0.00	0.00	0.00	3.49	3.77	52.0	0.073
182.00	0.15	0.56	0.00	0.00	0.00	2.40	2.74	52.0	0.053
184.00	0.15	0.56	0.00	0.00	0.00	1.24	1.69	52.0	0.033
185.00	0.00	0.54	0.00	0.00	0.00	0.63	1.13	52.0	0.022

Wind Loading - Shaft

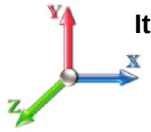
Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

Load Case: 50 mph Wind with 0" Ice
Dead Load Factor 1.00
Wind Load Factor 1.00



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		0.00	1.00	6.400	10.82	302.08	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		0.00	1.00	6.400	10.82	299.69	0.650	0.000	2.00	12.035	7.82	84.6	0.0	678.3
4.00		0.00	1.00	6.400	10.82	297.30	0.650	0.000	2.00	11.940	7.76	83.9	0.0	672.9
6.00		0.00	1.00	6.400	10.82	294.90	0.650	0.000	2.00	11.844	7.70	83.3	0.0	667.4
8.00		0.00	1.00	6.400	10.82	292.51	0.650	0.000	2.00	11.748	7.64	82.6	0.0	662.0
10.00		0.00	1.00	6.400	10.82	290.12	0.650	0.000	2.00	11.653	7.57	81.9	0.0	656.6
12.00		0.00	1.00	6.400	10.82	287.73	0.650	0.000	2.00	11.557	7.51	81.2	0.0	651.1
14.00		0.00	1.00	6.400	10.82	285.33	0.650	0.000	2.00	11.461	7.45	80.6	0.0	645.7
16.00		0.00	1.00	6.400	10.82	282.94	0.650	0.000	2.00	11.365	7.39	79.9	0.0	640.3
18.00		0.00	1.00	6.400	10.82	280.55	0.650	0.000	2.00	11.270	7.33	79.2	0.0	634.9
20.00		0.00	1.00	6.400	10.82	278.15	0.650	0.000	2.00	11.174	7.26	78.6	0.0	629.4
22.00		0.00	1.00	6.400	10.82	275.76	0.650	0.000	2.00	11.078	7.20	77.9	0.0	624.0
24.00		0.00	1.00	6.400	10.82	273.37	0.650	0.000	2.00	10.983	7.14	77.2	0.0	618.6
26.00		0.00	1.00	6.400	10.82	270.97	0.650	0.000	2.00	10.887	7.08	76.5	0.0	613.2
28.00		0.00	1.00	6.400	10.82	268.58	0.650	0.000	2.00	10.791	7.01	75.9	0.0	607.7
30.00		0.00	1.00	6.400	10.82	266.19	0.650	0.000	2.00	10.695	6.95	75.2	0.0	602.3
32.00		0.00	1.00	6.400	10.82	263.80	0.650	0.000	2.00	10.600	6.89	74.5	0.0	596.9
34.00		0.00	1.01	6.455	10.91	262.52	0.650	0.000	2.00	10.504	6.83	74.5	0.0	591.4
36.00		0.00	1.03	6.561	11.09	262.25	0.650	0.000	2.00	10.408	6.77	75.0	0.0	586.0
38.00		0.00	1.04	6.663	11.26	261.84	0.650	0.000	2.00	10.313	6.70	75.5	0.0	580.6
40.00		0.00	1.06	6.762	11.43	261.31	0.650	0.000	2.00	10.217	6.64	75.9	0.0	575.2
42.00		0.00	1.07	6.857	11.59	260.66	0.650	0.000	2.00	10.121	6.58	76.2	0.0	569.7
44.00		0.00	1.09	6.948	11.74	259.90	0.650	0.000	2.00	10.025	6.52	76.5	0.0	564.3
46.00		0.00	1.10	7.037	11.89	259.05	0.650	0.000	2.00	9.930	6.45	76.8	0.0	558.9
46.17	Bot - Section 2	0.00	1.10	7.044	11.90	258.97	0.650	0.000	0.17	0.823	0.54	6.4	0.0	46.3
48.00		0.00	1.11	7.123	12.04	258.10	0.650	0.000	1.83	9.144	5.94	71.6	0.0	1021.8
50.00		0.00	1.13	7.207	12.18	257.07	0.650	0.000	2.00	9.884	6.42	78.2	0.0	1104.3
52.00		0.00	1.14	7.288	12.32	255.96	0.650	0.000	2.00	9.788	6.36	78.4	0.0	1093.5
54.00	Top - Section 1	0.00	1.15	7.367	12.45	254.78	0.650	0.000	2.00	9.693	6.30	78.4	0.0	1082.6
56.00		0.00	1.16	7.444	12.58	257.46	0.650	0.000	2.00	9.597	6.24	78.5	0.0	540.0
58.00		0.00	1.17	7.519	12.71	256.16	0.650	0.000	2.00	9.501	6.18	78.5	0.0	534.6
60.00		0.00	1.19	7.592	12.83	254.80	0.650	0.000	2.00	9.405	6.11	78.4	0.0	529.2
62.00		0.00	1.20	7.664	12.95	253.37	0.650	0.000	2.00	9.310	6.05	78.4	0.0	523.7
64.00		0.00	1.21	7.733	13.07	251.90	0.650	0.000	2.00	9.214	5.99	78.3	0.0	518.3
66.00		0.00	1.22	7.802	13.18	250.36	0.650	0.000	2.00	9.118	5.93	78.1	0.0	512.9
68.00		0.00	1.23	7.869	13.30	248.78	0.650	0.000	2.00	9.023	5.86	78.0	0.0	507.4
70.00		0.00	1.24	7.934	13.41	247.15	0.650	0.000	2.00	8.927	5.80	77.8	0.0	502.0
72.00		0.00	1.25	7.998	13.52	245.47	0.650	0.000	2.00	8.831	5.74	77.6	0.0	496.6
74.00		0.00	1.26	8.061	13.62	243.75	0.650	0.000	2.00	8.735	5.68	77.4	0.0	491.2
76.00		0.00	1.27	8.123	13.73	241.98	0.650	0.000	2.00	8.640	5.62	77.1	0.0	485.7
78.00		0.00	1.28	8.183	13.83	240.17	0.650	0.000	2.00	8.544	5.55	76.8	0.0	480.3
80.00		0.00	1.29	8.242	13.93	238.33	0.650	0.000	2.00	8.448	5.49	76.5	0.0	474.9
82.00		0.00	1.30	8.301	14.03	236.45	0.650	0.000	2.00	8.352	5.43	76.2	0.0	469.5
84.00		0.00	1.31	8.358	14.13	234.53	0.650	0.000	2.00	8.257	5.37	75.8	0.0	464.0
86.00		0.00	1.31	8.415	14.22	232.57	0.650	0.000	2.00	8.161	5.30	75.4	0.0	458.6
88.00		0.00	1.32	8.470	14.31	230.58	0.650	0.000	2.00	8.065	5.24	75.0	0.0	453.2
90.00		0.00	1.33	8.525	14.41	228.56	0.650	0.000	2.00	7.970	5.18	74.6	0.0	447.7
92.00		0.00	1.34	8.578	14.50	226.51	0.650	0.000	2.00	7.874	5.12	74.2	0.0	442.3

Wind Loading - Shaft

Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

94.00	0.00	1.35	8.631	14.59	224.43	0.650	0.000	2.00	7.778	5.06	73.7	0.0	436.9
94.08 Bot - Section 3	0.00	1.35	8.633	14.59	224.34	0.650	0.000	0.08	0.322	0.21	3.1	0.0	18.1
96.00	0.00	1.36	8.683	14.67	222.32	0.650	0.000	1.92	7.480	4.86	71.4	0.0	774.0
98.00	0.00	1.36	8.735	14.76	220.18	0.650	0.000	2.00	7.712	5.01	74.0	0.0	797.8
100.00	0.00	1.37	8.785	14.85	218.01	0.650	0.000	2.00	7.616	4.95	73.5	0.0	787.7
100.17 Top - Section 2	0.00	1.37	8.789	14.85	217.83	0.650	0.000	0.17	0.630	0.41	6.1	0.0	65.2
102.00	0.00	1.38	8.835	14.93	219.49	0.650	0.000	1.83	6.890	4.48	66.9	0.0	332.1
104.00	0.00	1.39	8.884	15.01	217.28	0.650	0.000	2.00	7.425	4.83	72.5	0.0	357.8
106.00	0.00	1.40	8.933	15.10	215.04	0.650	0.000	2.00	7.329	4.76	71.9	0.0	353.1
108.00	0.00	1.40	8.980	15.18	212.78	0.650	0.000	2.00	7.233	4.70	71.4	0.0	348.5
110.00	0.00	1.41	9.028	15.26	210.50	0.650	0.000	2.00	7.137	4.64	70.8	0.0	343.8
112.00	0.00	1.42	9.074	15.34	208.19	0.650	0.000	2.00	7.042	4.58	70.2	0.0	339.2
114.00	0.00	1.43	9.120	15.41	205.86	0.650	0.000	2.00	6.946	4.51	69.6	0.0	334.5
116.00	0.00	1.43	9.166	15.49	203.51	0.650	0.000	2.00	6.850	4.45	69.0	0.0	329.9
118.00	0.00	1.44	9.211	15.57	201.14	0.650	0.000	2.00	6.755	4.39	68.3	0.0	325.2
120.00	0.00	1.45	9.255	15.64	198.75	0.650	0.000	2.00	6.659	4.33	67.7	0.0	320.6
122.00	0.00	1.45	9.299	15.71	196.33	0.650	0.000	2.00	6.563	4.27	67.0	0.0	315.9
124.00	0.00	1.46	9.342	15.79	193.90	0.650	0.000	2.00	6.467	4.20	66.4	0.0	311.3
126.00	0.00	1.47	9.385	15.86	191.44	0.650	0.000	2.00	6.372	4.14	65.7	0.0	306.6
128.00	0.00	1.47	9.427	15.93	188.97	0.650	0.000	2.00	6.276	4.08	65.0	0.0	302.0
130.00	0.00	1.48	9.469	16.00	186.48	0.650	0.000	2.00	6.180	4.02	64.3	0.0	297.3
132.00	0.00	1.49	9.510	16.07	183.97	0.650	0.000	2.00	6.084	3.95	63.6	0.0	292.7
134.00	0.00	1.49	9.551	16.14	181.44	0.650	0.000	2.00	5.989	3.89	62.8	0.0	288.0
136.00	0.00	1.50	9.592	16.21	178.89	0.650	0.000	2.00	5.893	3.83	62.1	0.0	283.4
138.00	0.00	1.50	9.632	16.28	176.33	0.650	0.000	2.00	5.797	3.77	61.3	0.0	278.7
140.00	0.00	1.51	9.672	16.35	173.75	0.650	0.000	2.00	5.702	3.71	60.6	0.0	274.1
142.00	0.00	1.52	9.711	16.41	171.16	0.650	0.000	2.00	5.606	3.64	59.8	0.0	269.4
143.75 Bot - Section 4	0.00	1.52	9.745	16.47	168.87	0.650	0.000	1.75	4.827	3.14	51.7	0.0	231.9
144.00	0.00	1.52	9.750	16.48	168.55	0.650	0.000	0.25	0.691	0.45	7.4	0.0	49.5
144.50 Appurtenance(s)	0.00	1.52	9.759	16.49	167.89	0.650	0.000	0.50	1.378	0.90	14.8	0.0	98.8
145.75 RB1	0.00	1.53	9.783	16.53	166.25	0.650	0.000	1.25	3.419	2.22	36.7	0.0	398.1
146.00	0.00	1.53	9.788	16.54	165.92	0.650	0.000	0.25	0.679	0.44	7.3	0.0	79.3
148.00	0.00	1.54	9.826	16.61	163.28	0.650	0.000	2.00	5.381	3.50	58.1	0.0	630.5
148.08 Top - Section 3	0.00	1.54	9.828	16.61	163.17	0.650	0.000	0.08	0.222	0.14	2.4	0.0	26.1
149.50 Appurtenance(s)	0.00	1.54	9.855	16.65	163.22	0.650	0.000	1.42	3.751	2.44	40.6	0.0	264.2
150.00	0.00	1.54	9.864	16.67	162.56	0.650	0.000	0.50	1.312	0.85	14.2	0.0	93.0
151.75 RT1	0.00	1.55	9.897	16.73	160.23	0.650	0.000	1.75	4.546	2.96	49.4	0.0	324.2
152.00	0.00	1.55	9.902	16.73	159.89	0.650	0.000	0.25	0.643	0.42	7.0	0.0	15.5
154.00	0.00	1.55	9.939	16.80	157.21	0.650	0.000	2.00	5.094	3.31	55.6	0.0	123.0
154.50 Appurtenance(s)	0.00	1.55	9.948	16.81	156.53	0.650	0.000	0.50	1.259	0.82	13.8	0.0	30.4
155.00 Appurtenance(s)	0.00	1.56	9.957	16.83	155.86	0.650	0.000	0.50	1.253	0.81	13.7	0.0	30.2
156.00	0.00	1.56	9.975	16.86	154.51	0.650	0.000	1.00	2.487	1.62	27.3	0.0	60.1
158.00	0.00	1.56	10.012	16.92	151.80	0.650	0.000	2.00	4.903	3.19	53.9	0.0	118.4
159.50 Appurtenance(s)	0.00	1.57	10.039	16.97	149.76	0.650	0.000	1.50	3.614	2.35	39.9	0.0	87.3
160.00	0.00	1.57	10.048	16.98	149.07	0.650	0.000	0.50	1.193	0.78	13.2	0.0	28.8
162.00	0.00	1.58	10.083	17.04	146.33	0.650	0.000	2.00	4.711	3.06	52.2	0.0	113.7
164.00	0.00	1.58	10.119	17.10	143.58	0.650	0.000	2.00	4.615	3.00	51.3	0.0	111.4
164.50 Appurtenance(s)	0.00	1.58	10.128	17.12	142.89	0.650	0.000	0.50	1.139	0.74	12.7	0.0	27.5
165.00 Appurtenance(s)	0.00	1.58	10.136	17.13	142.20	0.650	0.000	0.50	1.133	0.74	12.6	0.0	27.3
166.00	0.00	1.59	10.154	17.16	140.82	0.650	0.000	1.00	2.248	1.46	25.1	0.0	54.2
168.00	0.00	1.59	10.189	17.22	138.04	0.650	0.000	2.00	4.424	2.88	49.5	0.0	106.7
169.50 Appurtenance(s)	0.00	1.60	10.215	17.26	135.95	0.650	0.000	1.50	3.255	2.12	36.5	0.0	78.5
170.00	0.00	1.60	10.223	17.28	135.25	0.650	0.000	0.50	1.073	0.70	12.1	0.0	25.9
172.00	0.00	1.60	10.257	17.34	132.44	0.650	0.000	2.00	4.233	2.75	47.7	0.0	102.1
174.00	0.00	1.61	10.291	17.39	129.63	0.650	0.000	2.00	4.137	2.69	46.8	0.0	99.8
174.50 Appurtenance(s)	0.00	1.61	10.300	17.41	128.92	0.650	0.000	0.50	1.019	0.66	11.5	0.0	24.6
175.00 Appurtenance(s)	0.00	1.61	10.308	17.42	128.22	0.650	0.000	0.50	1.013	0.66	11.5	0.0	24.4
176.00	0.00	1.61	10.325	17.45	126.80	0.650	0.000	1.00	2.009	1.31	22.8	0.0	48.4

Wind Loading - Shaft

Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

178.00	0.00	1.62	10.358	17.51	123.96	0.650	0.000	2.00	3.945	2.56	44.9	0.0	95.1
179.50 Appurtenance(s)	0.00	1.62	10.383	17.55	121.82	0.650	0.000	1.50	2.896	1.88	33.0	0.0	69.8
180.00	0.00	1.62	10.392	17.56	121.11	0.650	0.000	0.50	0.953	0.62	10.9	0.0	23.0
182.00	0.00	1.63	10.424	17.62	118.25	0.650	0.000	2.00	3.754	2.44	43.0	0.0	90.5
184.00	0.00	1.63	10.457	17.67	115.37	0.650	0.000	2.00	3.658	2.38	42.0	0.0	88.1
185.00 Appurtenance(s)	0.00	1.64	10.473	17.70	113.93	0.650	0.000	1.00	1.793	1.17	20.6	0.0	43.2
							Totals:	**185.00**			**6,371.0**		**41,335.2**

Discrete Appurtenance Forces

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 40	

Tower Engineering Solutions

Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 27

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	185.00	EMS RR90-17-02DP	3	10.505	17.754	0.79	10.33	54.00	0.000	2.000	183.46	0.00	366.92
2	185.00	Commscope LNX-6515DS	3	10.505	17.754	0.80	27.38	150.90	0.000	2.000	486.18	0.00	972.37
3	185.00	Cobra Arms	3	10.473	17.700	0.75	14.63	1050.00	0.000	0.000	258.86	0.00	0.00
4	185.00	Allen Telecom	6	10.505	17.754	0.75	2.48	105.00	0.000	2.000	43.94	0.00	87.88
5	185.00	6' Pole Branch	1	10.473	17.700	1.00	16.06	300.00	0.000	0.000	284.26	0.00	0.00
6	185.00	Kathrein 782 11056	3	10.505	17.754	0.67	0.26	8.70	0.000	2.000	4.64	0.00	9.28
7	179.50	6' Pole Branch	1	10.383	17.548	1.00	46.00	300.00	0.000	0.000	807.20	0.00	0.00
8	175.00	Alcatel Lucent 800 MHz	3	10.308	17.421	0.75	1.46	52.50	0.000	0.000	25.48	0.00	0.00
9	175.00	Alcatel Lucent 800 MHz	3	10.308	17.421	0.75	5.60	159.00	0.000	0.000	97.60	0.00	0.00
10	175.00	Alcatel Lucent	3	10.308	17.421	0.75	10.62	210.00	0.000	0.000	185.01	0.00	0.00
11	175.00	Alcatel Lucent 1900 MHz	3	10.308	17.421	0.75	6.62	132.00	0.000	0.000	115.24	0.00	0.00
12	175.00	RFS APXVSPP18-C-A20	3	10.308	17.421	0.83	20.57	171.00	0.000	0.000	358.31	0.00	0.00
13	175.00	Cobra Arms	3	10.308	17.421	0.75	30.38	1200.00	0.000	0.000	529.16	0.00	0.00
14	175.00	RFS ACU-A20-N RETs	4	10.308	17.421	0.67	0.38	4.00	0.000	0.000	6.54	0.00	0.00
15	175.00	RFS APXVTM14-C-120	3	10.308	17.421	0.79	16.35	168.00	0.000	0.000	284.89	0.00	0.00
16	174.50	7' Pole Branch	1	10.300	17.407	1.00	15.00	460.00	0.000	0.000	261.10	0.00	0.00
17	169.50	8' Pole Branch	1	10.215	17.263	1.00	35.00	560.00	0.000	0.000	604.20	0.00	0.00
18	165.00	Swedcom SLCP 2x6014	2	10.136	17.131	0.93	13.41	40.00	0.000	0.000	229.73	0.00	0.00
19	165.00	Swedcom SC-E 6014 Rev 2	4	10.136	17.131	0.97	13.77	60.00	0.000	0.000	235.96	0.00	0.00
20	165.00	Cobra Arms	3	10.136	17.131	0.75	30.38	1200.00	0.000	0.000	520.34	0.00	0.00
21	165.00	Antel LPA 80063/6CF	2	10.136	17.131	0.94	19.44	54.00	0.000	0.000	333.01	0.00	0.00
22	165.00	Antel BXA 70063/6CF_4	1	10.136	17.131	1.00	7.73	17.00	0.000	0.000	132.42	0.00	0.00
23	165.00	Antel BXA 171063/8BF	3	10.136	17.131	0.84	7.41	31.50	0.000	0.000	126.92	0.00	0.00
24	165.00	RFS FD9R6004/2C-3L	6	10.136	17.131	0.67	1.45	18.60	0.000	0.000	24.79	0.00	0.00
25	164.50	8' Pole Branch	1	10.128	17.116	1.00	24.24	560.00	0.000	0.000	414.89	0.00	0.00
26	159.50	9' Pole Branch	1	10.039	16.965	1.00	45.00	660.00	0.000	0.000	763.45	0.00	0.00
27	155.00	Powerwave 7770.00	6	9.957	16.827	0.78	27.52	210.00	0.000	0.000	463.06	0.00	0.00
28	155.00	Cobra Arms	3	9.957	16.827	0.75	30.38	1200.00	0.000	0.000	511.13	0.00	0.00
29	155.00	Ericsson RRUS-11 RRUs	6	9.957	16.827	0.75	19.89	330.00	0.000	0.000	334.70	0.00	0.00
30	155.00	Powerwave P65-16-XLH-RR	3	9.957	16.827	0.78	19.66	159.00	0.000	0.000	330.76	0.00	0.00
31	155.00	Powerwave LGP 21401	6	9.957	16.827	0.50	2.85	105.00	0.000	0.000	47.96	0.00	0.00
32	155.00	Powerwave LGP21903	6	9.957	16.827	0.50	0.81	33.00	0.000	0.000	13.63	0.00	0.00
33	155.00	Raycap DC6-48-60-18-8F	1	9.957	16.827	1.00	1.47	31.80	0.000	0.000	24.74	0.00	0.00
34	154.50	9' Pole Branch	1	9.948	16.812	1.00	33.48	660.00	0.000	0.000	562.86	0.00	0.00
35	149.50	10' Pole Branch	1	9.855	16.655	1.00	50.00	700.00	0.000	0.000	832.73	0.00	0.00
36	144.50	11' Pole Branch	1	9.759	16.493	1.00	42.72	720.00	0.000	0.000	704.60	0.00	0.00
						Totals:		**11,875.00**			**11,143.71**		

Total Applied Force Summary

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 41	

Load Case: 50 mph Wind with 0" Ice

Iterations: 27

Dead Load Factor 1.00

Wind Load Factor 1.00

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		84.61	678.28	0.00	0.00
4.00		86.10	681.75	0.00	0.00
6.00		87.59	685.22	0.00	0.00
8.00		86.92	679.80	0.00	0.00
10.00		86.25	674.37	0.00	0.00
12.00		85.58	668.94	0.00	0.00
14.00		84.90	663.51	0.00	0.00
16.00		84.23	658.09	0.00	0.00
18.00		83.56	652.66	0.00	0.00
20.00		82.88	647.23	0.00	0.00
22.00		82.21	641.80	0.00	0.00
24.00		81.54	636.38	0.00	0.00
26.00		80.87	630.95	0.00	0.00
28.00		80.19	625.52	0.00	0.00
30.00		79.52	620.10	0.00	0.00
32.00		78.85	614.67	0.00	0.00
34.00		78.84	609.24	0.00	0.00
36.00		79.45	603.81	0.00	0.00
38.00		79.99	598.39	0.00	0.00
40.00		80.46	592.96	0.00	0.00
42.00		80.87	587.53	0.00	0.00
44.00		81.22	582.10	0.00	0.00
46.00		81.52	576.68	0.00	0.00
46.17		6.77	47.81	0.00	0.00
48.00		75.97	1038.14	0.00	0.00
50.00		83.12	1122.11	0.00	0.00
52.00		83.29	1111.26	0.00	0.00
54.00		83.42	1100.40	0.00	0.00
56.00		83.51	557.81	0.00	0.00
58.00		83.56	552.38	0.00	0.00
60.00		83.57	546.95	0.00	0.00
62.00		83.55	541.53	0.00	0.00
64.00		83.50	536.10	0.00	0.00
66.00		83.42	530.67	0.00	0.00
68.00		83.31	525.24	0.00	0.00
70.00		83.16	519.82	0.00	0.00
72.00		83.00	514.39	0.00	0.00
74.00		82.80	508.96	0.00	0.00
76.00		82.58	503.53	0.00	0.00
78.00		82.33	498.11	0.00	0.00
80.00		82.07	492.68	0.00	0.00
82.00		81.77	487.25	0.00	0.00
84.00		81.46	481.82	0.00	0.00
86.00		81.12	476.40	0.00	0.00
88.00		80.77	470.97	0.00	0.00
90.00		80.39	465.54	0.00	0.00
92.00		80.00	460.12	0.00	0.00
94.00		79.58	454.69	0.00	0.00

Total Applied Force Summary

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 42	

94.08		3.30	18.83	0.00	0.00
96.00		76.98	791.06	0.00	0.00
98.00		79.90	815.59	0.00	0.00
100.00		79.44	805.51	0.00	0.00
100.17		6.58	66.67	0.00	0.00
102.00		72.34	348.38	0.00	0.00
104.00		78.46	375.60	0.00	0.00
106.00		77.95	370.94	0.00	0.00
108.00		77.43	366.29	0.00	0.00
110.00		76.88	361.64	0.00	0.00
112.00		76.33	356.99	0.00	0.00
114.00		75.75	352.34	0.00	0.00
116.00		75.17	347.68	0.00	0.00
118.00		74.57	343.03	0.00	0.00
120.00		73.95	338.38	0.00	0.00
122.00		73.33	333.73	0.00	0.00
124.00		72.68	329.08	0.00	0.00
126.00		72.03	324.42	0.00	0.00
128.00		71.36	319.77	0.00	0.00
130.00		70.69	315.12	0.00	0.00
132.00		69.99	310.47	0.00	0.00
134.00		69.29	305.82	0.00	0.00
136.00		68.58	301.16	0.00	0.00
138.00		67.85	296.51	0.00	0.00
140.00		67.11	291.86	0.00	0.00
142.00		66.36	287.21	0.00	0.00
143.75		57.43	247.49	0.00	0.00
144.00		8.64	51.77	0.00	0.00
144.50	(1) appurtenances	721.85	823.21	0.00	0.00
145.75		42.95	332.69	0.00	0.00
146.00		8.55	66.21	0.00	0.00
148.00		68.05	525.76	0.00	0.00
148.08		2.81	21.76	0.00	0.00
149.50	(1) appurtenances	880.41	889.99	0.00	0.00
150.00		16.72	66.78	0.00	0.00
151.75		58.21	232.57	0.00	0.00
152.00		8.25	17.77	0.00	0.00
154.00		65.27	140.83	0.00	0.00
154.50	(1) appurtenances	578.29	694.84	0.00	0.00
155.00	(31) appurtenances	1741.35	2103.50	0.00	0.00
156.00		30.63	65.16	0.00	0.00
158.00		60.69	128.57	0.00	0.00
159.50	(1) appurtenances	808.39	754.90	0.00	0.00
160.00		14.86	31.34	0.00	0.00
162.00		59.00	123.92	0.00	0.00
164.00		58.14	121.60	0.00	0.00
164.50	(1) appurtenances	429.27	590.04	0.00	0.00
165.00	(21) appurtenances	1617.49	1450.99	0.00	0.00
166.00		28.51	58.30	0.00	0.00
168.00		56.40	114.86	0.00	0.00
169.50	(1) appurtenances	645.90	644.62	0.00	0.00
170.00		13.78	27.92	0.00	0.00
172.00		54.63	110.21	0.00	0.00
174.00		53.72	107.89	0.00	0.00
174.50	(1) appurtenances	274.37	486.61	0.00	0.00
175.00	(25) appurtenances	1615.44	2122.96	0.00	0.00
176.00		26.27	50.51	0.00	0.00
178.00		51.90	99.27	0.00	0.00

Total Applied Force Summary

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 43	

179.50	(1) appurtenances	845.50	372.93	0.00	0.00
180.00		12.64	24.02	0.00	0.00
182.00		50.03	94.62	0.00	0.00
184.00		49.09	92.30	0.00	0.00
185.00	(19) appurtenances	1285.51	1713.88	0.00	1436.45
	Totals:	**18,051.40**	**54,231.32**	**0.00**	**1,436.45**

Resulting Forces and Deflections

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 44	

Tower Engineering Solutions

Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 27

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-18.058	-54.228	0.000	0.000	0.000	-2514.9	0.000	0.000	0.000	0.000	0.000
2.00	-17.994	-53.542	0.000	0.000	0.000	-2478.8	-0.005	0.000	0.005	-0.022	0.000
4.00	-17.928	-52.854	0.000	0.000	0.000	-2442.8	-0.019	0.000	0.019	-0.043	0.000
6.00	-17.860	-52.162	0.000	0.000	0.000	-2406.9	-0.042	0.000	0.042	-0.066	0.000
8.00	-17.792	-51.475	0.000	0.000	0.000	-2371.2	-0.074	0.000	0.074	-0.088	0.000
10.00	-17.724	-50.794	0.000	0.000	0.000	-2335.6	-0.116	0.000	0.116	-0.110	0.000
12.00	-17.657	-50.118	0.000	0.000	0.000	-2300.2	-0.167	0.000	0.167	-0.133	0.000
14.00	-17.591	-49.448	0.000	0.000	0.000	-2264.9	-0.228	0.000	0.228	-0.156	0.000
16.00	-17.524	-48.783	0.000	0.000	0.000	-2229.7	-0.299	0.000	0.299	-0.179	0.000
18.00	-17.458	-48.123	0.000	0.000	0.000	-2194.6	-0.379	0.000	0.379	-0.202	0.000
20.00	-17.393	-47.469	0.000	0.000	0.000	-2159.7	-0.469	0.000	0.469	-0.226	0.000
22.00	-17.327	-46.821	0.000	0.000	0.000	-2124.9	-0.569	0.000	0.569	-0.250	0.000
24.00	-17.262	-46.177	0.000	0.000	0.000	-2090.3	-0.679	0.000	0.679	-0.274	0.000
26.00	-17.198	-45.540	0.000	0.000	0.000	-2055.7	-0.799	0.000	0.799	-0.298	0.000
28.00	-17.134	-44.907	0.000	0.000	0.000	-2021.4	-0.929	0.000	0.929	-0.323	0.000
30.00	-17.070	-44.280	0.000	0.000	0.000	-1987.1	-1.070	0.000	1.070	-0.347	0.000
32.00	-17.006	-43.658	0.000	0.000	0.000	-1952.9	-1.221	0.000	1.221	-0.372	0.000
34.00	-16.942	-43.042	0.000	0.000	0.000	-1918.9	-1.383	0.000	1.383	-0.398	0.000
36.00	-16.877	-42.431	0.000	0.000	0.000	-1885.0	-1.555	0.000	1.555	-0.423	0.000
38.00	-16.812	-41.826	0.000	0.000	0.000	-1851.3	-1.738	0.000	1.738	-0.449	0.000
40.00	-16.745	-41.226	0.000	0.000	0.000	-1817.7	-1.932	0.000	1.932	-0.475	0.000
42.00	-16.678	-40.632	0.000	0.000	0.000	-1784.2	-2.137	0.000	2.137	-0.501	0.000
44.00	-16.610	-40.043	0.000	0.000	0.000	-1750.8	-2.353	0.000	2.353	-0.528	0.000
46.00	-16.533	-39.463	0.000	0.000	0.000	-1717.6	-2.580	0.000	2.580	-0.555	0.000
46.17	-16.536	-39.411	0.000	0.000	0.000	-1714.9	-2.599	0.000	2.599	-0.557	0.000
48.00	-16.467	-38.366	0.000	0.000	0.000	-1684.5	-2.818	0.000	2.818	-0.582	0.000
50.00	-16.390	-37.237	0.000	0.000	0.000	-1651.6	-3.068	0.000	3.068	-0.609	0.000
52.00	-16.312	-36.119	0.000	0.000	0.000	-1618.8	-3.329	0.000	3.329	-0.637	0.000
54.00	-16.233	-35.012	0.000	0.000	0.000	-1586.2	-3.602	0.000	3.602	-0.665	0.000
56.00	-16.160	-34.447	0.000	0.000	0.000	-1553.7	-3.887	0.000	3.887	-0.693	0.000
58.00	-16.085	-33.888	0.000	0.000	0.000	-1521.4	-4.183	0.000	4.183	-0.720	0.000
60.00	-16.011	-33.334	0.000	0.000	0.000	-1489.2	-4.491	0.000	4.491	-0.747	0.000
62.00	-15.936	-32.786	0.000	0.000	0.000	-1457.2	-4.810	0.000	4.810	-0.775	0.000
64.00	-15.861	-32.244	0.000	0.000	0.000	-1425.4	-5.141	0.000	5.141	-0.803	0.000
66.00	-15.786	-31.707	0.000	0.000	0.000	-1393.6	-5.483	0.000	5.483	-0.831	0.000
68.00	-15.710	-31.175	0.000	0.000	0.000	-1362.1	-5.837	0.000	5.837	-0.859	0.000
70.00	-15.634	-30.648	0.000	0.000	0.000	-1330.6	-6.204	0.000	6.204	-0.888	0.000
72.00	-15.559	-30.127	0.000	0.000	0.000	-1299.4	-6.582	0.000	6.582	-0.917	0.000
74.00	-15.483	-29.612	0.000	0.000	0.000	-1268.3	-6.973	0.000	6.973	-0.946	0.000
76.00	-15.407	-29.102	0.000	0.000	0.000	-1237.3	-7.376	0.000	7.376	-0.976	0.000
78.00	-15.331	-28.597	0.000	0.000	0.000	-1206.5	-7.791	0.000	7.791	-1.005	0.000
80.00	-15.255	-28.098	0.000	0.000	0.000	-1175.8	-8.218	0.000	8.218	-1.035	0.000
82.00	-15.179	-27.605	0.000	0.000	0.000	-1145.3	-8.659	0.000	8.659	-1.065	0.000
84.00	-15.103	-27.116	0.000	0.000	0.000	-1115.0	-9.112	0.000	9.112	-1.096	0.000
86.00	-15.027	-26.634	0.000	0.000	0.000	-1084.7	-9.577	0.000	9.577	-1.126	0.000
88.00	-14.951	-26.156	0.000	0.000	0.000	-1054.7	-10.056	0.000	10.056	-1.157	0.000
90.00	-14.875	-25.684	0.000	0.000	0.000	-1024.8	-10.548	0.000	10.548	-1.188	0.000
92.00	-14.799	-25.218	0.000	0.000	0.000	-995.09	-11.053	0.000	11.053	-1.220	0.000
94.00	-14.717	-24.761	0.000	0.000	0.000	-965.50	-11.570	0.000	11.570	-1.251	0.000

Resulting Forces and Deflections

Structure: CT00707-S-SB | **Code:** EIA/TIA-222-F | 11/24/2015

Site Name: North Easton | **Exposure:** C

Height: 185.00 (ft) | **Gh:** 1.69

Base Elev: 0.000 (ft) | **Struct Class:** II | Page: 45

Tower Engineering Solutions

94.08	-14.720	-24.738	0.000	0.000	0.000	-964.27	-11.592	0.000	11.592	-1.253	0.000
96.00	-14.638	-23.941	0.000	0.000	0.000	-936.06	-12.102	0.000	12.102	-1.283	0.000
98.00	-14.553	-23.119	0.000	0.000	0.000	-906.78	-12.646	0.000	12.646	-1.315	0.000
100.00	-14.462	-22.311	0.000	0.000	0.000	-877.67	-13.204	0.000	13.204	-1.347	0.000
100.17	-14.460	-22.241	0.000	0.000	0.000	-875.26	-13.251	0.000	13.251	-1.350	0.000
102.00	-14.392	-21.886	0.000	0.000	0.000	-848.76	-13.776	0.000	13.776	-1.380	0.000
104.00	-14.318	-21.503	0.000	0.000	0.000	-819.97	-14.362	0.000	14.362	-1.416	0.000
106.00	-14.244	-21.125	0.000	0.000	0.000	-791.34	-14.963	0.000	14.963	-1.452	0.000
108.00	-14.170	-20.752	0.000	0.000	0.000	-762.85	-15.579	0.000	15.579	-1.488	0.000
110.00	-14.097	-20.384	0.000	0.000	0.000	-734.51	-16.210	0.000	16.210	-1.524	0.000
112.00	-14.024	-20.020	0.000	0.000	0.000	-706.32	-16.857	0.000	16.857	-1.561	0.000
114.00	-13.951	-19.661	0.000	0.000	0.000	-678.27	-17.519	0.000	17.519	-1.597	0.000
116.00	-13.878	-19.307	0.000	0.000	0.000	-650.37	-18.196	0.000	18.196	-1.634	0.000
118.00	-13.806	-18.957	0.000	0.000	0.000	-622.61	-18.888	0.000	18.888	-1.670	0.000
120.00	-13.734	-18.613	0.000	0.000	0.000	-595.00	-19.596	0.000	19.596	-1.706	0.000
122.00	-13.662	-18.273	0.000	0.000	0.000	-567.53	-20.319	0.000	20.319	-1.743	0.000
124.00	-13.591	-17.937	0.000	0.000	0.000	-540.21	-21.057	0.000	21.057	-1.779	0.000
126.00	-13.520	-17.607	0.000	0.000	0.000	-513.03	-21.810	0.000	21.810	-1.815	0.000
128.00	-13.449	-17.281	0.000	0.000	0.000	-485.99	-22.578	0.000	22.578	-1.850	0.000
130.00	-13.378	-16.960	0.000	0.000	0.000	-459.09	-23.361	0.000	23.361	-1.886	0.000
132.00	-13.308	-16.644	0.000	0.000	0.000	-432.34	-24.158	0.000	24.158	-1.921	0.000
134.00	-13.238	-16.333	0.000	0.000	0.000	-405.72	-24.970	0.000	24.970	-1.955	0.000
136.00	-13.169	-16.027	0.000	0.000	0.000	-379.25	-25.797	0.000	25.797	-1.989	0.000
138.00	-13.100	-15.725	0.000	0.000	0.000	-352.91	-26.637	0.000	26.637	-2.022	0.000
140.00	-13.031	-15.429	0.000	0.000	0.000	-326.71	-27.491	0.000	27.491	-2.054	0.000
142.00	-12.962	-15.138	0.000	0.000	0.000	-300.65	-28.359	0.000	28.359	-2.086	0.000
143.75	-12.899	-14.889	0.000	0.000	0.000	-277.97	-29.129	0.000	29.129	-2.113	0.000
144.00	-12.890	-14.836	0.000	0.000	0.000	-274.74	-29.239	0.000	29.239	-2.116	0.000
144.50	-12.142	-14.038	0.000	0.000	0.000	-268.30	-29.462	0.000	29.462	-2.124	0.000
145.75	-12.089	-13.705	0.000	0.000	0.000	-253.12	-30.020	0.000	30.020	-2.142	0.000
146.00	-12.080	-13.637	0.000	0.000	0.000	-250.10	-30.132	0.000	30.132	-2.145	0.000
148.00	-11.995	-13.112	0.000	0.000	0.000	-225.94	-31.035	0.000	31.035	-2.163	0.000
148.08	-11.993	-13.089	0.000	0.000	0.000	-224.94	-31.073	0.000	31.073	-2.164	0.000
149.50	-11.081	-12.231	0.000	0.000	0.000	-207.95	-31.717	0.000	31.717	-2.176	0.000
150.00	-11.065	-12.162	0.000	0.000	0.000	-202.41	-31.945	0.000	31.945	-2.182	0.000
151.75	-11.001	-11.930	0.000	0.000	0.000	-183.04	-32.749	0.000	32.749	-2.203	0.000
152.00	-10.997	-11.908	0.000	0.000	0.000	-180.29	-32.864	0.000	32.864	-2.206	0.000
154.00	-10.932	-11.764	0.000	0.000	0.000	-158.30	-33.798	0.000	33.798	-2.250	0.000
154.50	-10.329	-11.091	0.000	0.000	0.000	-152.83	-34.035	0.000	34.035	-2.261	0.000
155.00	-8.508	-9.056	0.000	0.000	0.000	-147.67	-34.272	0.000	34.272	-2.271	0.000
156.00	-8.479	-8.987	0.000	0.000	0.000	-139.16	-34.750	0.000	34.750	-2.292	0.000
158.00	-8.419	-8.856	0.000	0.000	0.000	-122.20	-35.719	0.000	35.719	-2.330	0.000
159.50	-7.583	-8.133	0.000	0.000	0.000	-109.58	-36.456	0.000	36.456	-2.358	0.000
160.00	-7.570	-8.100	0.000	0.000	0.000	-105.78	-36.703	0.000	36.703	-2.366	0.000
162.00	-7.510	-7.974	0.000	0.000	0.000	-90.650	-37.702	0.000	37.702	-2.399	0.000
164.00	-7.449	-7.853	0.000	0.000	0.000	-75.631	-38.714	0.000	38.714	-2.428	0.000
164.50	-6.996	-7.281	0.000	0.000	0.000	-71.906	-38.968	0.000	38.968	-2.435	0.000
165.00	-5.319	-5.899	0.000	0.000	0.000	-68.408	-39.224	0.000	39.224	-2.442	0.000
166.00	-5.290	-5.840	0.000	0.000	0.000	-63.089	-39.737	0.000	39.737	-2.455	0.000
168.00	-5.231	-5.726	0.000	0.000	0.000	-52.508	-40.770	0.000	40.770	-2.478	0.000
169.50	-4.559	-5.109	0.000	0.000	0.000	-44.662	-41.551	0.000	41.551	-2.493	0.000
170.00	-4.545	-5.081	0.000	0.000	0.000	-42.383	-41.812	0.000	41.812	-2.498	0.000
172.00	-4.487	-4.972	0.000	0.000	0.000	-33.293	-42.863	0.000	42.863	-2.515	0.000
174.00	-4.429	-4.866	0.000	0.000	0.000	-24.319	-43.920	0.000	43.920	-2.529	0.000
174.50	-4.134	-4.392	0.000	0.000	0.000	-22.105	-44.185	0.000	44.185	-2.533	0.000
175.00	-2.426	-2.342	0.000	0.000	0.000	-20.038	-44.450	0.000	44.450	-2.535	0.000
176.00	-2.398	-2.293	0.000	0.000	0.000	-17.611	-44.982	0.000	44.982	-2.540	0.000
178.00	-2.342	-2.196	0.000	0.000	0.000	-12.815	-46.048	0.000	46.048	-2.549	0.000

Resulting Forces and Deflections

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 46	

Tower Engineering Solutions

179.50	-1.481	-1.861	0.000	0.000	0.000	-9.301	-46.849	0.000	46.849	-2.554	0.000
180.00	-1.468	-1.837	0.000	0.000	0.000	-8.560	-47.117	0.000	47.117	-2.555	0.000
182.00	-1.414	-1.745	0.000	0.000	0.000	-5.625	-48.188	0.000	48.188	-2.560	0.000
184.00	-1.361	-1.655	0.000	0.000	0.000	-2.797	-49.261	0.000	49.261	-2.563	0.000
185.00	-1.285	0.000	0.000	0.000	0.000	-1.436	0.000	0.000	49.798	-2.564	0.000

Resulting Stresses

Structure:	CT00707-S-SBA	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 47	

Tower Engineering Solutions

Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 27

Applied Stresses

Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvt Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Allow Stress (ksi)	f/Fb Stress Ratio
0.00	0.54	0.36	0.00	0.00	0.00	16.92	17.47	49.4	0.353
2.00	0.54	0.37	0.00	0.00	0.00	16.95	17.50	49.6	0.353
4.00	0.54	0.37	0.00	0.00	0.00	16.97	17.52	49.8	0.352
6.00	0.53	0.37	0.00	0.00	0.00	17.00	17.55	50.0	0.351
8.00	0.53	0.37	0.00	0.00	0.00	17.03	17.57	50.2	0.350
10.00	0.53	0.37	0.00	0.00	0.00	17.05	17.59	50.4	0.349
12.00	0.53	0.37	0.00	0.00	0.00	17.07	17.61	50.6	0.348
14.00	0.52	0.38	0.00	0.00	0.00	17.10	17.63	50.8	0.347
16.00	0.52	0.38	0.00	0.00	0.00	17.12	17.65	51.0	0.346
18.00	0.52	0.38	0.00	0.00	0.00	17.14	17.67	51.2	0.345
20.00	0.52	0.38	0.00	0.00	0.00	17.17	17.69	51.4	0.344
22.00	0.51	0.38	0.00	0.00	0.00	17.19	17.71	51.6	0.343
24.00	0.51	0.38	0.00	0.00	0.00	17.21	17.73	51.8	0.342
26.00	0.51	0.39	0.00	0.00	0.00	17.23	17.75	52.0	0.341
28.00	0.51	0.39	0.00	0.00	0.00	17.24	17.76	52.0	0.342
30.00	0.50	0.39	0.00	0.00	0.00	17.26	17.78	52.0	0.342
32.00	0.50	0.39	0.00	0.00	0.00	17.28	17.79	52.0	0.342
34.00	0.50	0.39	0.00	0.00	0.00	17.29	17.80	52.0	0.342
36.00	0.50	0.40	0.00	0.00	0.00	17.30	17.81	52.0	0.343
38.00	0.49	0.40	0.00	0.00	0.00	17.32	17.82	52.0	0.343
40.00	0.49	0.40	0.00	0.00	0.00	17.33	17.83	52.0	0.343
42.00	0.49	0.40	0.00	0.00	0.00	17.34	17.84	52.0	0.343
44.00	0.49	0.41	0.00	0.00	0.00	17.34	17.84	52.0	0.343
46.00	0.48	0.41	0.00	0.00	0.00	17.35	17.85	52.0	0.343
46.17	0.48	0.41	0.00	0.00	0.00	17.35	17.85	52.0	0.343
48.00	0.47	0.41	0.00	0.00	0.00	17.35	17.84	52.0	0.343
50.00	0.46	0.41	0.00	0.00	0.00	17.36	17.84	52.0	0.343
52.00	0.46	0.41	0.00	0.00	0.00	17.36	17.83	52.0	0.343
54.00	0.44	0.41	0.00	0.00	0.00	16.83	17.28	52.0	0.332
56.00	0.44	0.41	0.00	0.00	0.00	16.82	17.27	52.0	0.332
58.00	0.43	0.41	0.00	0.00	0.00	16.81	17.26	52.0	0.332
60.00	0.43	0.42	0.00	0.00	0.00	16.80	17.24	52.0	0.332
62.00	0.43	0.42	0.00	0.00	0.00	16.78	17.22	52.0	0.331
64.00	0.43	0.42	0.00	0.00	0.00	16.76	17.20	52.0	0.331
66.00	0.42	0.42	0.00	0.00	0.00	16.74	17.18	52.0	0.331
68.00	0.42	0.43	0.00	0.00	0.00	16.72	17.15	52.0	0.330
70.00	0.42	0.43	0.00	0.00	0.00	16.69	17.12	52.0	0.329
72.00	0.42	0.43	0.00	0.00	0.00	16.66	17.09	52.0	0.329
74.00	0.41	0.43	0.00	0.00	0.00	16.63	17.06	52.0	0.328
76.00	0.41	0.44	0.00	0.00	0.00	16.59	17.02	52.0	0.327
78.00	0.41	0.44	0.00	0.00	0.00	16.55	16.97	52.0	0.326
80.00	0.40	0.44	0.00	0.00	0.00	16.50	16.92	52.0	0.326
82.00	0.40	0.45	0.00	0.00	0.00	16.45	16.87	52.0	0.325
84.00	0.40	0.45	0.00	0.00	0.00	16.39	16.81	52.0	0.323
86.00	0.40	0.45	0.00	0.00	0.00	16.33	16.75	52.0	0.322
88.00	0.40	0.46	0.00	0.00	0.00	16.27	16.68	52.0	0.321
90.00	0.39	0.46	0.00	0.00	0.00	16.20	16.61	52.0	0.320

Resulting Stresses

Structure: CT00707-S-SBA
Site Name: North Easton
Height: 185.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

11/24/2015

Tower Engineering Solutions

92.00	0.39	0.46	0.00	0.00	0.00	16.12	16.53	52.0	0.318
94.00	0.39	0.46	0.00	0.00	0.00	16.04	16.44	52.0	0.316
94.08	0.39	0.47	0.00	0.00	0.00	16.03	16.44	52.0	0.316
96.00	0.38	0.47	0.00	0.00	0.00	15.94	16.34	52.0	0.314
98.00	0.37	0.47	0.00	0.00	0.00	15.85	16.24	52.0	0.312
100.00	0.36	0.47	0.00	0.00	0.00	15.74	16.13	52.0	0.310
100.17	0.42	0.54	0.00	0.00	0.00	17.67	18.11	52.0	0.348
102.00	0.41	0.55	0.00	0.00	0.00	17.54	17.98	52.0	0.346
104.00	0.41	0.55	0.00	0.00	0.00	17.40	17.83	52.0	0.343
106.00	0.41	0.56	0.00	0.00	0.00	17.24	17.68	52.0	0.340
108.00	0.41	0.56	0.00	0.00	0.00	17.07	17.51	52.0	0.337
110.00	0.41	0.57	0.00	0.00	0.00	16.89	17.32	52.0	0.333
112.00	0.40	0.57	0.00	0.00	0.00	16.70	17.13	52.0	0.330
114.00	0.40	0.58	0.00	0.00	0.00	16.49	16.92	52.0	0.325
116.00	0.40	0.58	0.00	0.00	0.00	16.26	16.69	52.0	0.321
118.00	0.40	0.59	0.00	0.00	0.00	16.02	16.45	52.0	0.317
120.00	0.40	0.59	0.00	0.00	0.00	15.77	16.20	52.0	0.312
122.00	0.40	0.60	0.00	0.00	0.00	15.49	15.92	52.0	0.306
124.00	0.40	0.60	0.00	0.00	0.00	15.19	15.62	52.0	0.301
126.00	0.39	0.61	0.00	0.00	0.00	14.88	15.31	52.0	0.294
128.00	0.39	0.62	0.00	0.00	0.00	14.53	14.96	52.0	0.288
130.00	0.39	0.62	0.00	0.00	0.00	14.17	14.60	52.0	0.281
132.00	0.39	0.63	0.00	0.00	0.00	13.78	14.21	52.0	0.273
134.00	0.39	0.64	0.00	0.00	0.00	13.35	13.79	52.0	0.265
136.00	0.39	0.64	0.00	0.00	0.00	12.90	13.34	52.0	0.257
138.00	0.39	0.65	0.00	0.00	0.00	12.42	12.85	52.0	0.247
140.00	0.39	0.66	0.00	0.00	0.00	11.89	12.33	52.0	0.237
142.00	0.39	0.67	0.00	0.00	0.00	11.33	11.77	52.0	0.227
143.75	0.39	0.67	0.00	0.00	0.00	10.81	11.25	52.0	0.216
144.00	0.38	0.67	0.00	0.00	0.00	10.73	11.17	52.0	0.215
144.50	0.37	0.64	0.00	0.00	0.00	10.57	10.99	52.0	0.211
145.75	0.36	0.64	0.00	0.00	0.00	6.65	7.01	52.0	0.135
146.00	0.36	0.64	0.00	0.00	0.00	6.60	6.60	52.0	0.127
148.00	0.35	0.65	0.00	0.00	0.00	6.14	6.14	52.0	0.118
148.08	0.69	1.28	0.00	0.00	0.00	6.12	6.12	52.0	0.118
149.50	0.65	1.20	0.00	0.00	0.00	8.41	8.41	49.0	0.171
150.00	0.65	1.20	0.00	0.00	0.00	8.24	8.24	49.2	0.168
151.75	0.65	1.21	0.00	0.00	0.00	7.63	8.28	49.6	0.167
152.00	0.65	1.21	0.00	0.00	0.00	15.63	16.42	49.6	0.331
154.00	0.66	1.23	0.00	0.00	0.00	14.26	15.07	50.1	0.301
154.50	0.62	1.17	0.00	0.00	0.00	13.90	14.66	50.2	0.292
155.00	0.51	0.97	0.00	0.00	0.00	13.56	14.17	50.3	0.282
156.00	0.51	0.97	0.00	0.00	0.00	13.03	13.64	50.5	0.270
158.00	0.51	0.99	0.00	0.00	0.00	11.90	12.53	51.0	0.246
159.50	0.48	0.90	0.00	0.00	0.00	11.00	11.58	51.3	0.226
160.00	0.48	0.90	0.00	0.00	0.00	10.72	11.31	51.4	0.220
162.00	0.48	0.92	0.00	0.00	0.00	9.57	10.18	51.9	0.196
164.00	0.48	0.93	0.00	0.00	0.00	8.33	8.96	52.0	0.172
164.50	0.45	0.88	0.00	0.00	0.00	8.00	8.59	52.0	0.165
165.00	0.37	0.67	0.00	0.00	0.00	7.70	8.15	52.0	0.157
166.00	0.37	0.67	0.00	0.00	0.00	7.25	7.71	52.0	0.148
168.00	0.37	0.68	0.00	0.00	0.00	6.31	6.78	52.0	0.130
169.50	0.33	0.60	0.00	0.00	0.00	5.55	5.97	52.0	0.115
170.00	0.33	0.60	0.00	0.00	0.00	5.32	5.75	52.0	0.111
172.00	0.34	0.61	0.00	0.00	0.00	4.38	4.83	52.0	0.093
174.00	0.34	0.62	0.00	0.00	0.00	3.35	3.84	52.0	0.074
174.50	0.30	0.58	0.00	0.00	0.00	3.08	3.53	52.0	0.068
175.00	0.16	0.34	0.00	0.00	0.00	2.83	3.05	52.0	0.059

Resulting Stresses

Structure:	CT00707-S-SBA	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 49	

176.00	0.16	0.34	0.00	0.00	0.00	2.55	2.77	52.0	0.053
178.00	0.16	0.34	0.00	0.00	0.00	1.95	2.19	52.0	0.042
179.50	0.14	0.22	0.00	0.00	0.00	1.47	1.65	52.0	0.032
180.00	0.14	0.22	0.00	0.00	0.00	1.37	1.55	52.0	0.030
182.00	0.13	0.22	0.00	0.00	0.00	0.95	1.14	52.0	0.022
184.00	0.13	0.21	0.00	0.00	0.00	0.50	0.73	52.0	0.014
185.00	0.00	0.21	0.00	0.00	0.00	0.26	0.44	52.0	0.008

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	t MZ (ft-kips)
85 mph Wind with 0" Ice	52.2	0.00	54.20	0.00	0.00	7255.64
73.61 mph Wind with 0.5" Ice	32.6	0.00	57.75	0.00	0.00	4364.78
50 mph Wind with 0" Ice	18.1	0.00	54.23	0.00	0.00	2514.92

Max Stresses

Load Case	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvt Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	Combined Stress (ksi)	Allowable Stress (ksi)	Elev (ft)	Stress Ratio
85 mph Wind with 0" Ice	0.54	1.05	0.00	0.00	0.00	48.82	49.39	49.4	0.00	0.999
73.61 mph Wind with 0.5" Ice	0.62	2.17	0.00	0.00	0.00	29.48	30.33	49.6	152.00	0.611
50 mph Wind with 0" Ice	0.54	0.36	0.00	0.00	0.00	16.92	17.47	49.4	0.00	0.353

Additional Steel Summary

			Intermediate Connectors			Upper Termination			Lower Termination			Max Member			
Elev From (ft)	Elev To (ft)	Member	VQ/I (lb/in)	V (kips)	Shear Allow (kips)	MQ/I (kips)	Num Reqd	Num Actual	MQ/I (kips)	Num Reqd	Num Actual	MQ/I (kips)	Ta (kips)	Pa (kips)	Ratio
145.8	151.8	(3) LNP-LP6X100-G-10CT	672.4	16.14	22.5	134.1	5	8	118.2	1	8	147.8	260.0	257.3	0.574

Base Plate Summary

Structure:	CT00707-S-SB	**Code:**	EIA/TIA-222-F	11/24/2015	
Site Name:	North Easton	**Exposure:**	C		
Height:	185.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 51	

Tower Engineering Solutions

Reactions

Original Design

Moment (kip-ft):	7275.00
Axial (kip):	52.00
Shear (kip):	52.50

Analysis

Moment (kip-ft):	7255.64
Axial (kip):	57.75
Shear (kip):	52.20
Moment Design %:	99.73

Base Plate

Yield (ksi):	50.00
Width (in):	79.62
Style:	Square
Polygon Sides:	0.00
Clip Length (in):	0.00
Effective Len (in):	8.46
Moment (kip-in):	678.38
Allow Stress (ksi):	50.00
Applied Stress (ksi):	39.26
Stress Ratio:	0.79

Anchor Bolts

Bolt Circle:	79.87
Number Bolts:	24.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Clustered
Cluster Dist (in):	6.00
Start Angle (deg):	45.00

Compression

Force (kip):	184.09
Allowable (kip):	195.00
Ratio:	0.94

Tension

Force (kip):	179.28
Allowable (kip):	195.00
Ratio:	0.92

Monopole Mat Foundation Design

			Date: 11/24/2015
Customer Name:	T-Mobile	**EIA/TIA Standard:**	EIA-222-F
Site Name:	North Easton	**Structure Height (Ft.):**	185
Site Nmber:	CT00707-S-SBA	**Engineer Name:**	J. Tibbetts
Engr. Number:	19185	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

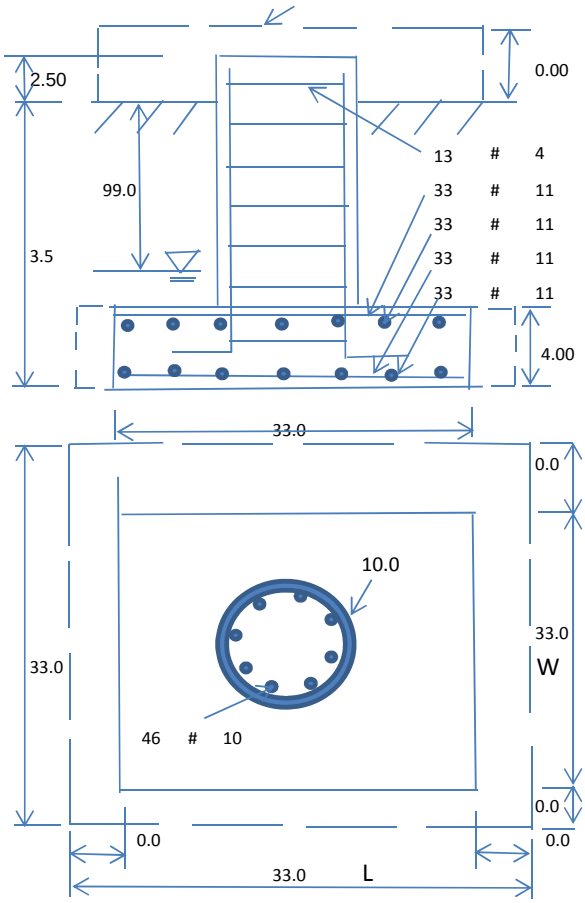
Analysis or Design? Analysis

Base Reactions (Unfactored)

Axial Load (Kips):	54.2	Shear Force (Kips):	52.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	7255.6
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	10.0	Depth of Base BG (ft.):	3.5
Pier Height A. G. (ft.):	2.50	Thickness of Pad (ft):	4.00
Length of Pad (ft.):	33	Width of Pad (ft.):	33
Final Length of pad (ft)	33.0	Final width of pad (ft):	33.0
Control Value for Cell D18:	0	Control Value for Cell F18:	0



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	10	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	46	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	11	
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):	33	Qty. of Rebar in Pad (W):	33	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	33	Qty. of Rebar in Pad (W):	33	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	110.0	Soil Buoyant Weight:	58.6	Pcf		
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Allowable Net Soil Bearing (psf):	40000	Allowable Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hori. force for O.T.M.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

Foundation Analysis and Design:

Total Dry Soil Volume (cu. Ft.):	2.02	Total Dry Soil Weight (Kips):	0.22
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.22	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4552.51	Total Dry Concrete Weight (Kips):	682.88
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	682.88	Total Vertical Load on Base (Kips):	737.30

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	2789	<	Allowable Soil Bearing (psf):	40000	0.07	OK!
Allowable Foundation Overturning Resistance (SF=1.5, kips-ft.):	8110.3	>	Applied Momont (kips-ft):	7595	0.94	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.60	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	0.65	Wind Load Factor on Concrete Design:	1.30		
				Load/ Capacity Ratio	
(1) Concrete Pier:					
Vertical Steel Rebar Area (sq. in./each):	1.27	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	14498.0 >	Design Factored Moment (Mu, Kips-Ft	9602.1	0.66	OK!
Calculated Shear Capacity (Kips):	1313.2 >	Design Factored Shear (Kips):	67.9	0.05	OK!
Calculated Tension Capacity (Tn, Kips):	3154.7 >	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	14919.2 >	Design Factored Axial Load (Pu Kips):	70.5	0.00	OK!
Moment & Axial Strength Combination(Pu/Pn+Mu/Mn):	0.67 OK!	Check Tie Spacing (Design/Required):		0.5	OK!
Pier Reinforcement Ratio:	0.005	Reinforcement Ratio is too small			
(2).Concrete Pad:					
One-Way Design Shear Capacity (L-Direction, Kips):	1441.7 >	One-Way Factored Shear (L-D. Kips):	485.0	0.34	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1441.7 >	One-Way Factored Shear (W-D., Kips)	485.0	0.34	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1602.0 >	One-Way Factored Shear (C-C, Kips):	822.1	0.51	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0029 OK!	Lower Steel Pad Reinf. Ratio (W-Direct	0.0029		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	9911.1 >	Moment at Bottom (L-Direct. K-Ft):	1456.5	0.15	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	9911.1 >	Moment at Bottom (W-Direct. K-Ft):	1456.5	0.15	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	13879.8 >	Moment at Bottom (C-C Dir. K-Ft):	2059.7	0.15	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0029 OK!	Upper Steel Reinf. Ratio (W-Direct.):	0.0029		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	9911.1 >	Moment at the top (L-Dir Kips-Ft):	118.7	0.01	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	9911.1 >	Moment at the top (W-Dir Kips-Ft):	118.7	0.01	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	13879.8 >	Moment at the top (C-C Direc. K-Ft):	1501.2	0.11	OK!

SITE NAME: EASTON-2 / RT 59

275 NORTH STREET
EASTON, CT 06612
FAIRFIELD COUNTY

SITE NUMBER: CT11243A

SPECIAL CONSTRUCTION NOTE:
NO MONOPINE BRANCHES ARE TO BE CUT, ALTERED, MOVED, REMOVED (TEMPORARILY OR PERMANENTLY) FOR ANY REASON. FAILURE TO COMPLY WILL RESULT IN LIQUIDATED DAMAGES AND PENALTIES FROM SBA TO T-MOBILE

SPECIAL CONSTRUCTION NOTE:
THE T-MOBILE TOP WORK IS CONTINGENT UPON COMPLETION OF ALL REQUIRED TOWER STRUCTURAL MODIFICATIONS, ENGINEERING CONSTRUCTION CONTROL INSPECTIONS, FINAL ENGINEERING AFFIDAVIT, AND ACCEPTANCE/APPROVAL BY SBA COMMUNICATIONS CORP.

T-MOBILE TECHNICIAN SITE SAFETY NOTES

LOCATION	SPECIAL RESTRICTIONS
SECTOR A:	ACCESS NOT PERMITTED
SECTOR B:	ACCESS NOT PERMITTED
SECTOR C:	ACCESS NOT PERMITTED
GPS/LMU:	UNRESTRICTED
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE

GENERAL NOTES

THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.

THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE NORTHEAST, LLC REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SPECIAL STRUCTURAL NOTES

TOWER OWNER SHALL PROVIDE GLOBAL STRUCTURAL STABILITY ANALYSIS OF EXISTING ANTENNA SUPPORT STRUCTURE. GENERAL CONTRACTOR SCOPE OF WORK SHALL INCLUDE ALL REQUIRED STRUCTURAL MODIFICATIONS, RE-BUNDLING OF COAXIAL CABLES OR OTHER SPECIAL MODIFICATIONS AS OUTLINED THEREIN.

STRUCTURAL DESIGNS AND DETAILS FOR ANTENNA MOUNTS COMPLETED BY HUDSON DESIGN ON BEHALF OF T-MOBILE ARE INCLUSIVE OF THE ENTIRE ANTENNA SUPPORT STRUCTURE (GLOBAL STRUCTURAL STABILITY ANALYSIS BY OTHERS), EXISTING TOWER PLATFORM, EXISTING ANTENNA MOUNTS AND ALL OTHER ASPECTS OF THE STRUCTURE THAT WILL SUPPORT THE T-MOBILE MODERNIZATION EQUIPMENT DEPLOYMENT AS DEPICTED HEREIN.

HUDSON DESIGN ASSUMES THAT THE TOWER IS PROPERLY CONSTRUCTED AND MAINTAINED. ALL STRUCTURAL MEMBERS AND THEIR CONNECTION ARE ASSUMED TO BE IN GOOD CONDITION AND ARE FREE FROM DEFECTS WITH NO DETERIORATION TO ITS MEMBER CAPACITIES

PROJECT SUMMARY

SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY T-MOBILE EQUIPMENT MODERNIZATION
ZONING JURISDICTION:	BASED ON INFORMATION PROVIDED BY T-MOBILE, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS AN ELIGIBLE FACILITY UNDER THE TAX RELIEF ACT OF 2012, 47 USC 1455(A), AND IS SUBJECT TO AN EXPEDITED ELIGIBLE FACILITIES REQUEST/REVIEW AND ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW).
SITE ADDRESS:	275 NORTH STREET EASTON, CT 06612
LATITUDE:	41° 18 59.10" N
LONGITUDE:	73° 18' 50.48" W
JURISDICTION:	NATIONAL, STATE & LOCAL CODES OR ORDINANCES
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY
TOWER OWNER	SBA TOWERS, LLC
SBA SITE ID:	CT00707-S **DESIGN GUIDELINE: 704G**
SBA SITE NAME:	NORTH EASTON
SBA REGIONAL SITE MANAGER:	STEPHEN ROTH PHONE: 860-539-4920 sroth@sbasite.com

APPROVALS

PROJECT MANAGER	DATE
CONSTRUCTION	DATE
RF ENGINEERING	DATE
ZONING / SITE ACQ.	DATE
OPERATIONS	DATE
TOWER OWNER	DATE

CALL
BEFORE YOU DIG
CALL TOLL FREE 800-922-4455
OR CALL 811

UNDERGROUND SERVICE ALERT

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	2
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A-2	EXISTING & PROPOSED ANTENNA PLANS	2
A-3	DETAILS	2
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N. ANDOVER, MA 01845 FAX: (978) 336-5586

STATE OF CONNECTICUT
DEREK J. CREASER
No. 29057
LICENSED
PROFESSIONAL ENGINEER

CHECKED BY: BB

APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
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FAIRFIELD COUNTY

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.

2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.

6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.

9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.

10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.

12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

   CONTRACTOR – SBA COMMUNICATIONS CORP.
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – T-MOBILE

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.

16. CONSTRUCTION SHALL COMPLY WITH UMTS SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T-MOBILE SITES."

17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

20. APPLICABLE BUILDING CODES:
    SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
    BUILDING CODE: IBC 2003 W/ 2005 CT SUPPLEMENT + 2009 AMENDMENT
    ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
    LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		

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STATE OF CONNECTICUT
DEREK J. CREASER
No. 28954
LICENSED
PROFESSIONAL ENGINEER

CHECKED BY: BB

APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	11/24/15	CONSTRUCTION FINAL	JA
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SITE NUMBER:
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SITE NAME:
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SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

SPECIAL CONSTRUCTION NOTE:
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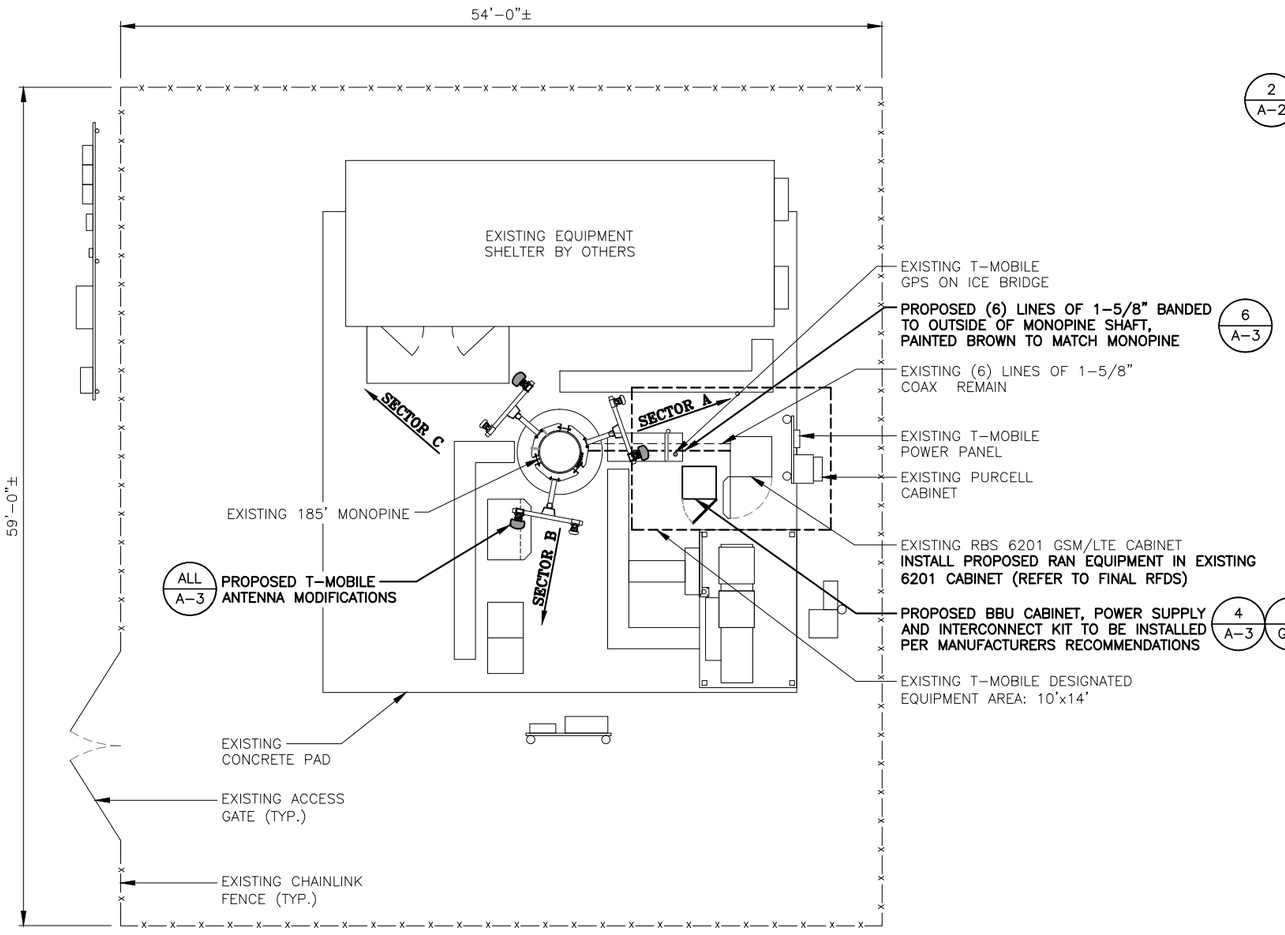
SPECIAL WORK NOTE:
PAINT-TO-MATCH BROWN ALL PROPOSED ANTENNA RADOMES, MOUNTS AND COAX BANDED OUTSIDE MONOPINE SHAFT

STRUCTURAL NOTES:
1. ADDITIONAL TOWER MAPPING AND STRUCTURAL ANALYSIS ARE REQUIRED PRIOR TO CONSTRUCTION. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF STRUCTURAL ANALYSIS.
2. MOUNT ALL ANTENNAS, COAX, ETC. IN ACCORDANCE WITH STRUCTURAL ANALYSIS.

ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:
ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND DETERMINED THAT THE EXISTING ANTENNA MOUNT IS ADEQUATE TO ACCOMMODATE ADDITIONAL EQUIPMENT LOADS. STRUCTURAL DESIGNS AND DETAILS AS SHOWN HEREIN FOR STRUCTURAL MODIFICATIONS OF THE EXISTING ANTENNA MOUNT ARE PRELIMINARY ONLY AND FINAL CONSTRUCTION DETAILS ARE SUBJECT TO CHANGE PENDING THE COMPLETION OF AN ANTENNA MOUNT STRUCTURAL ASSESSMENT.



COMPOUND PLAN 1 A-1
22x34 SCALE: 3/16"=1'-0"
11x17 SCALE: 3/32"=1'-0"

0 2'-8" 5'-4" 10'-8" 16'-0"

1 A-3 PROPOSED T-MOBILE ANTENNA ON PROPOSED PIPE (TYP. OF 1 PER SECTOR, TOTAL OF 3)

EXISTING T-MOBILE ANTENNA TO REMAIN (TYP.)

2 A-2 1,2 A-3 T-MOBILE T-ARMS
ELEV. = 185.0'± A.G.L (SBA*)

EXISTING ANTENNAS BY OTHERS (TYP.)

6 A-3 PROPOSED (6) LINES OF 1-5/8" BANDED TO OUTSIDE OF MONOPINE SHAFT, PAINTED BROWN TO MATCH MONOPINE

EXISTING (6) LINES OF 1-5/8" COAX AND TO REMAIN

PARTIAL ELEVATION DETAIL 2 A-1
SCALE: N.T.S

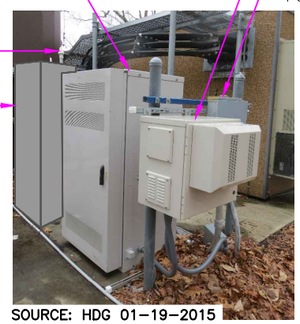
EXISTING RBS 6201 GSM/LTE CABINET
INSTALL PROPOSED RAN EQUIPMENT IN EXISTING 6201 CABINET (REFER TO FINAL RFDS)

EXISTING T-MOBILE GPS ON ICE BRIDGE

PROPOSED BBU CABINET, POWER SUPPLY AND INTERCONNECT KIT TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS

EXISTING T-MOBILE PURCELL CABINET

EXISTING T-MOBILE POWER PANEL



SOURCE: HDG 01-19-2015

EQUIPMENT PHOTO DETAIL 3 A-1
SCALE: N.T.S

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COMPOUND & ELEVATION PLAN

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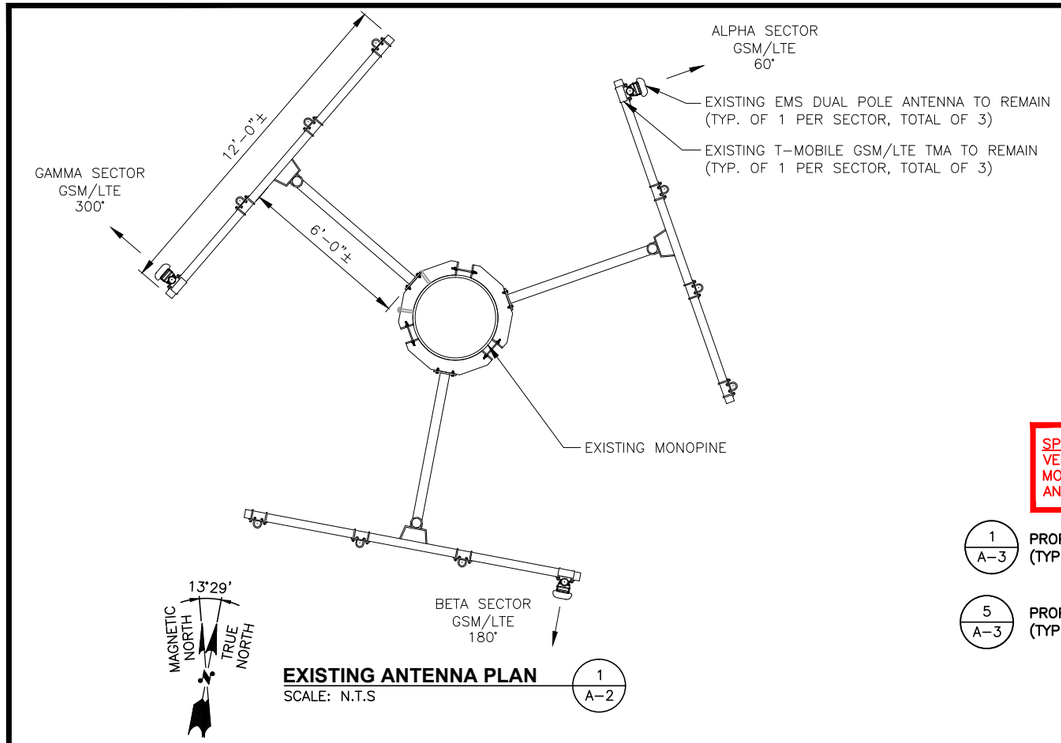

EXISTING ANTENNA PLAN (1 / A-2)
SCALE: N.T.S

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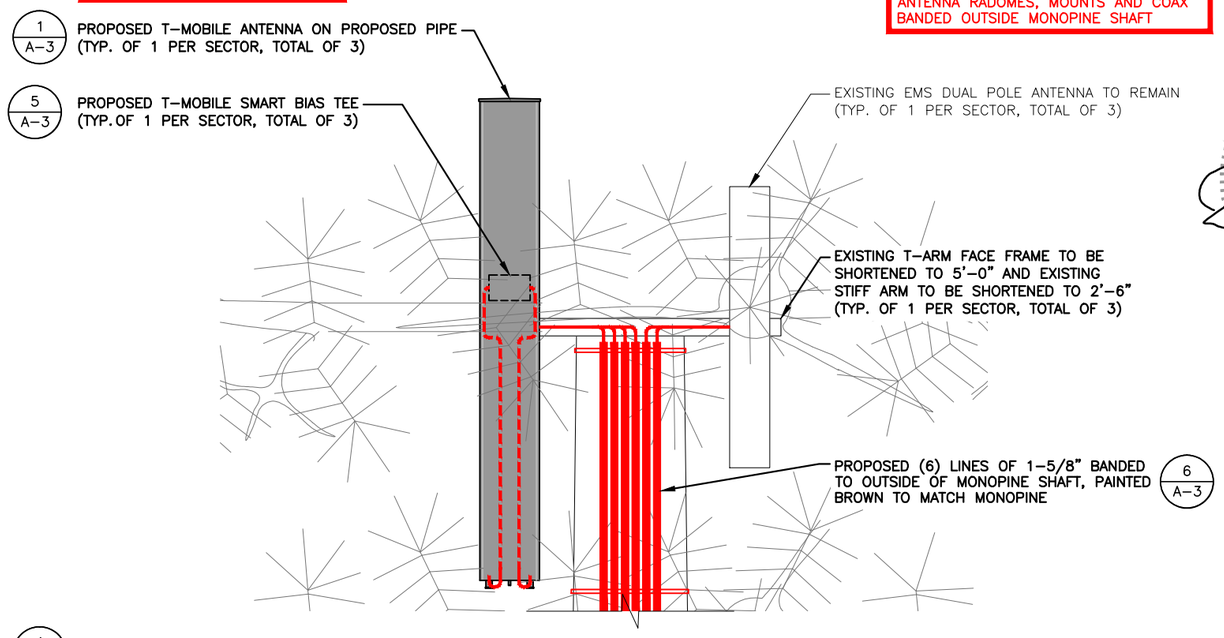
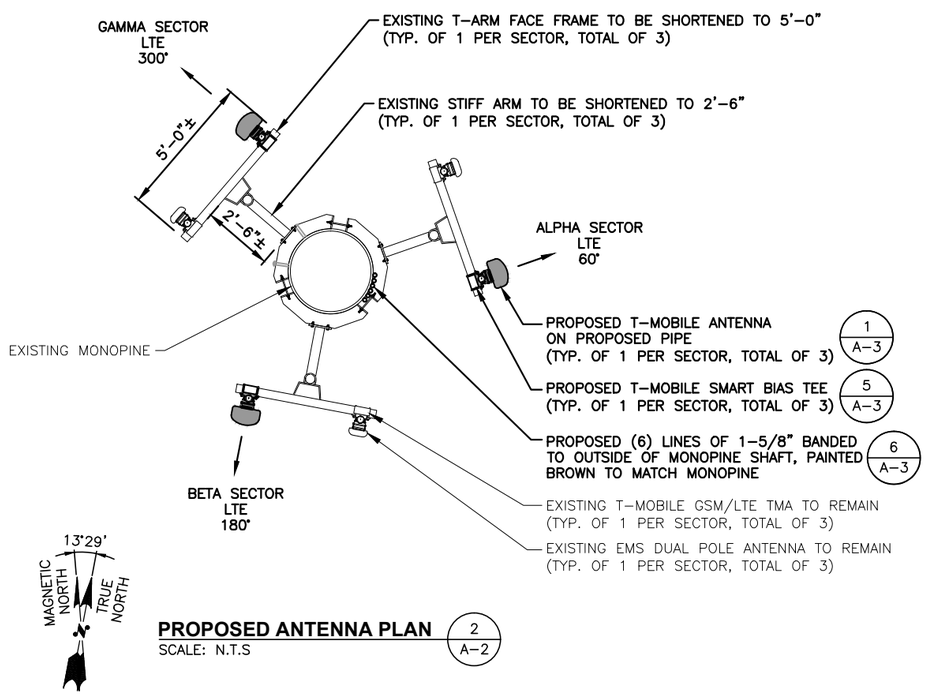
SPECIAL WORK NOTE:
PAINT-TO-MATCH BROWN ALL PROPOSED ANTENNA RADOMES, MOUNTS AND COAX BANDED OUTSIDE MONOPINE SHAFT

SPECIAL WORK NOTE:
VERTICALLY CENTER ON EXISTING MOUNTING RAIL, THE PIPE MAST AND ANTENNA



PROPOSED ANTENNA DETAIL (3 / A-2)
SCALE: N.T.S



PROPOSED ANTENNA PLAN (2 / A-2)
SCALE: N.T.S

T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 648-1116

SBA COMMUNICATIONS CORP.
33 BOSTON POST ROAD WEST, SUITE 320 TEL: (508) 251-0720
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1600 OSGOOD STREET
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N. ANDOVER, MA 01845 FAX: (978) 336-5586

STATE OF CONNECTICUT
DEREK J. CREASER
No. 29057
LICENSED PROFESSIONAL ENGINEER

CHECKED BY: BB

APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	11/24/15	CONSTRUCTION FINAL	JA
1	03/11/15	ISSUED FOR CONSTRUCTION	KMS
0	02/23/15	ISSUED FOR CONSTRUCTION	JA

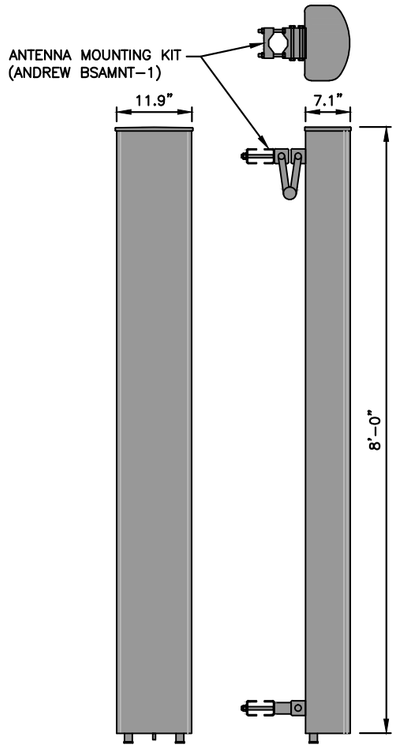
SITE NUMBER:
CT11243A

SITE NAME:
EASTON-2/RT 59

SITE ADDRESS:
275 NORTH STREET
EASTON, CT 06612
FAIRFIELD COUNTY

SHEET TITLE
EXISTING & PROPOSED ANTENNA PLANS

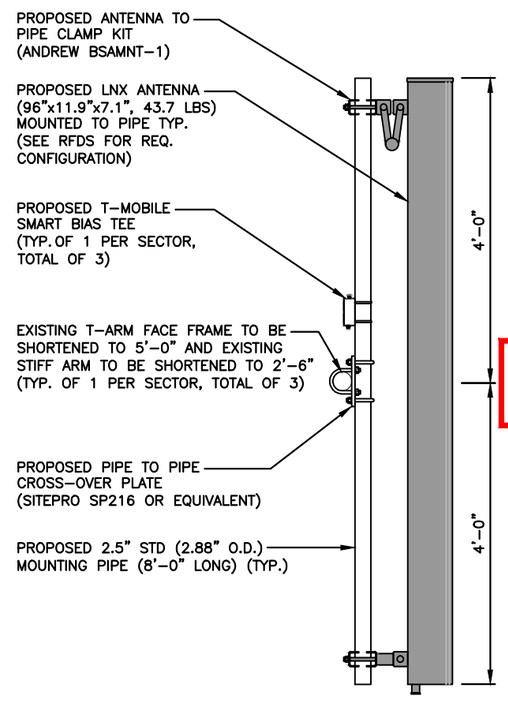
SHEET NUMBER
A-2



LNX ANTENNA DETAIL
SCALE: N.T.S

1 / A-3

SPECIAL CONSTRUCTION NOTE:
THE T-MOBILE TOP WORK IS CONTINGENT UPON COMPLETION OF ALL REQUIRED TOWER STRUCTURAL MODIFICATIONS, ENGINEERING CONSTRUCTION CONTROL INSPECTIONS, FINAL ENGINEERING AFFIDAVIT, AND ACCEPTANCE/APPROVAL BY SBA COMMUNICATIONS CORP.



PROPOSED ANTENNA MOUNTING DETAIL
SCALE: N.T.S

2 / A-3

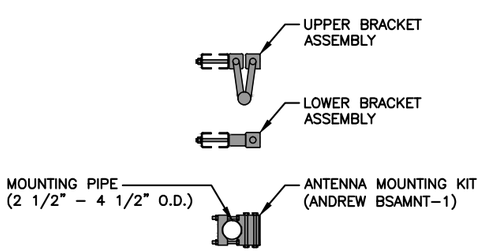
SPECIAL WORK NOTE:
VERTICALLY CENTER ON EXISTING MOUNTING RAIL, THE PIPE MAST AND ANTENNA

ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:
ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND DETERMINED THAT THE EXISTING ANTENNA MOUNT IS ADEQUATE TO ACCOMMODATE ADDITIONAL EQUIPMENT LOADS. STRUCTURAL DESIGNS AND DETAILS AS SHOWN HEREIN FOR STRUCTURAL MODIFICATIONS OF THE EXISTING ANTENNA MOUNT ARE PRELIMINARY ONLY AND FINAL CONSTRUCTION DETAILS ARE SUBJECT TO CHANGE PENDING THE COMPLETION OF AN ANTENNA MOUNT STRUCTURAL ASSESSMENT.

STRUCTURAL NOTES:
1. ADDITIONAL TOWER MAPPING AND STRUCTURAL ANALYSIS ARE REQUIRED PRIOR TO CONSTRUCTION. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF STRUCTURAL ANALYSIS.
2. MOUNT ALL ANTENNAS, COAX, ETC. IN ACCORDANCE WITH STRUCTURAL ANALYSIS.

SPECIAL CONSTRUCTION NOTE:
NO MONOPINE BRANCHES ARE TO BE CUT, ALTERED, MOVED, REMOVED (TEMPORARILY OR PERMANENTLY) FOR ANY REASON. FAILURE TO COMPLY WILL RESULT IN LIQUIDATED DAMAGES AND PENALTIES FROM SBA TO T-MOBILE

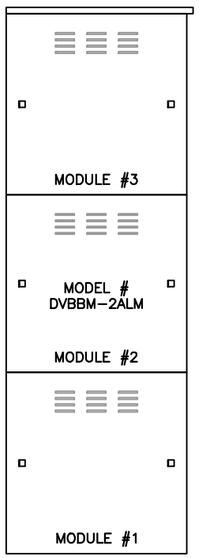
SPECIAL WORK NOTE:
PAINT-TO-MATCH BROWN ALL PROPOSED ANTENNA RADOMES, MOUNTS AND COAX BANDED OUTSIDE MONOPINE SHAFT



ANTENNA MOUNTING BRACKET
SCALE: N.T.S

3 / A-3

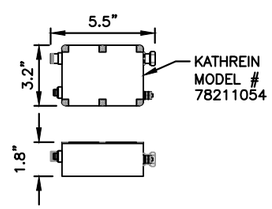
BBU DIMENSIONS	
MODEL #	DVBBM-2ALM
MANUF.	MSF DATA SERVICES
WIDTH	28.45"
DEPTH	28.45"
HEIGHT	29.67"
WEIGHT	1,264 LBS
MOUNT BASE WITH (4) 1/2" DROP IN ANCHOR'S WITH 2" MINIMUM EMBEDMENT (INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES)	



BATTERY CABINET (BBU)
SCALE: N.T.S

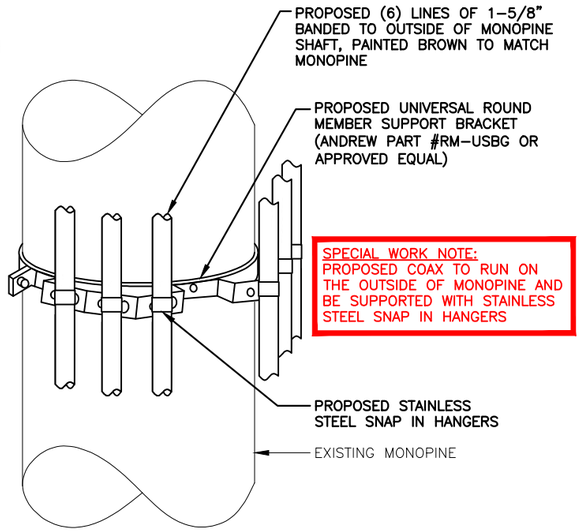
4 / A-3

NOTES:
1. COAX MUST BE INSTALLED IN A SINGLE COMPACT VERTICAL-RISER ROW 1x6 WIDE.
2. LINES MUST BE RUN ON THE POLE FACE NEAREST THE T-MOBILE ICE BRIDGE.
3. ALL COAX, BRACKETS, SNAP-IN HANGERS AND BANDING SHALL BE PAINTED BROWN TO MATCH THE MONOPINE SHAFT.
4. COAX LINES SHALL NOT INTERFERE, BLOCK OR HINDER THE EXISTING SAFETY CLIMB/CLIMBING FACE.
5. COAX SHALL NOT INTERFERE WITH OTHER ANTENNA-MOUNTS AND HANDHOLES.
6. UPON COMPLETION OF CONSTRUCTION, GENERAL CONTRACTOR SHALL PROVIDE SBA WITH AS-BUILT REDLINES AND AS-BUILT PHOTO DETAILS OF THE COAX INSTALLATION.



SMART BIAS TEE (SBT)
SCALE: N.T.S

5 / A-3



SPECIAL WORK NOTE:
PROPOSED COAX TO RUN ON THE OUTSIDE OF MONOPINE AND BE SUPPORTED WITH STAINLESS STEEL SNAP IN HANGERS

NOTES:
1. UTILIZE ANDREW BANDING KIT #MT-647 OR APPROVED EQUAL TO ATTACH BRACKET TO POLE.
2. MOUNT BRACKETS TO POLE EVERY 4 FT.

PROPOSED COAX BANDING DETAIL
SCALE: N.T.S

6 / A-3

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STATE OF CONNECTICUT
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LICENSED PROFESSIONAL ENGINEER

CHECKED BY: BB

APPROVED BY: DJC

SUBMITTALS

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1	03/11/15	ISSUED FOR CONSTRUCTION	KMS
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SITE NUMBER:
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SITE ADDRESS:
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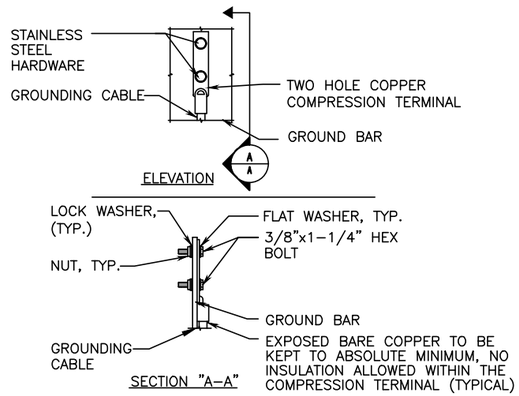
FAIRFIELD COUNTY

SHEET TITLE
DETAILS

SHEET NUMBER
A-3



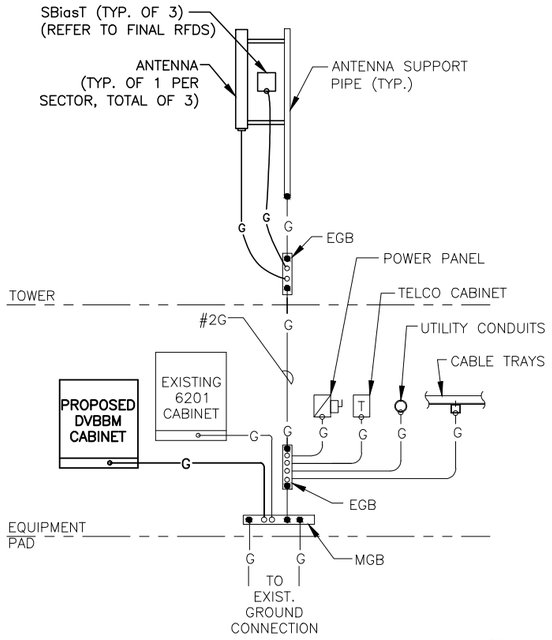
NOTE:
1. "DOUBLING UP" OR "STACKING " OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.

TYPICAL GROUND BAR CONNECTION DETAIL (1 / G-1)

SCALE: N.T.S

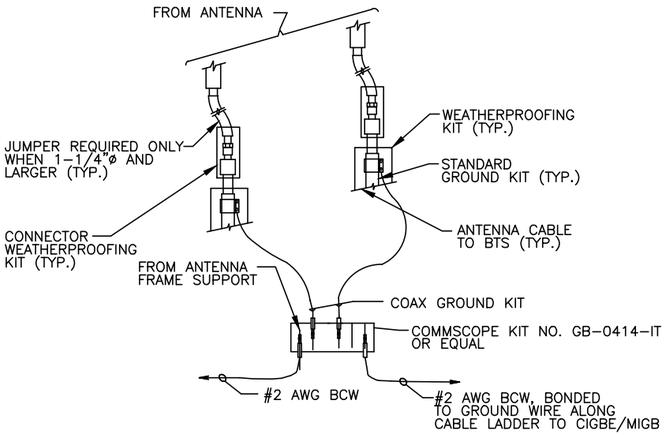
NOTE:

G.C. TO VERIFY THAT THE EXISTING CONDUITS AND WIRE SIZES ARE ADEQUATE FOR THE PROPOSED LOADING AND INCLUDE ELECTRICAL UPGRADES IN THE SCOPE OF WORK AS REQUIRED.



TYPICAL GROUNDING RISER DIAGRAM (2 / G-1)

SCALE: N.T.S

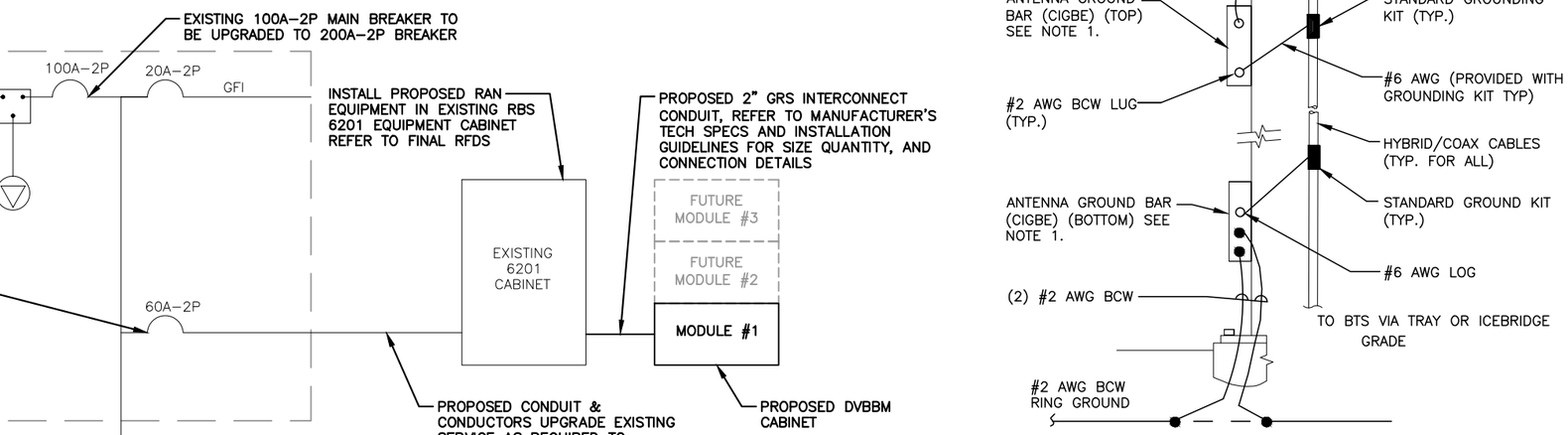


NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

GROUND WIRE TO GROUND BAR CONNECTION DETAIL (3 / G-1)

SCALE: N.T.S



ONE LINE POWER DIAGRAM (4 / G-1)

SCALE: N.T.S

ELECTRICAL LEGEND

A	AMPERE
V	VOLT
KWH	KILOWATT - HOUR
C	CONDUIT
GRC	GALVANIZED RIGID CONDUIT
G	GROUND
	GROUND
MGB	MASTER GROUND BAR ○ MECHANICAL CONNECTION ● CADWELD CONNECTION
EGB	EQUIPMENT GROUND BAR
—G—	GROUND COPPER WIRE, SIZE AS NOTED
	EXPOSED WIRING
	COAXIAL CABLE
⊙	5/8"x8' COPPER CLAD STAINLESS STEEL GROUND ROD
	● EXOTHERMIC (CAD WELD) OR ○ MECHANICAL (COMPRESSION TYPE) CONNECTION
PPC	POWER PROTECTION CABINET
⊠	OMNI-DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALL

ELECTRICAL & GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THIN INSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL ROOM AND PROPOSED CELL SITE POWER PEDESTAL AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROPOSED CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON DRAWING A-1. PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
11. GROUNDING SHALL COMPLY WITH NEC ART. 250.
12. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
13. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
14. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
15. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
16. CONNECTIONS TO MGB SHALL BE ARRANGED IN THREE MAIN GROUPS: SURGE PRODUCERS (COAXIAL CABLE GROUND KITS, TELCO AND POWER PANEL GROUND); (GROUNDING ELECTRODE RING OR BUILDING STEEL); NON-SURGING OBJECTS (EGB GROUND IN BTS UNIT).
17. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
18. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
20. BOND ANTENNA EGB'S AND MGB TO WATER MAIN.
21. TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.
22. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
23. VERIFY PROPOSED SERVICE UPGRADE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.

NOTE:

1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER. ANTENNA LOCATION AND CONNECTION ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

ANTENNA CABLE GROUNDING (5 / G-1)

SCALE: N.T.S

T-MOBILE NORTHEAST LLC

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BLOOMFIELD, CT 06002
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SBA

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STATE OF CONNECTICUT
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SUBMITTALS

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SITE NAME:
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SITE ADDRESS:
275 NORTH STREET
EASTON, CT 06612
FAIRFIELD COUNTY

SHEET TITLE
GROUNDING DETAILS & NOTES

SHEET NUMBER
G-1

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

May 26, 2015

Kri Pelletier
SBA Communications Corporation
33 Boston Post Road West, Suite 320
Marlborough, MA 01752

RE: **EM-T-MOBILE-046-150506 -** T-Mobile notice of intent to modify an existing telecommunications facility located at 275 North Street, Easton, Connecticut.

Dear Ms. Pelletier:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Prior to antenna installation, T-Mobile shall perform modifications in accordance with the structural analysis report prepared by Tower Engineering Solutions, and date/stamp April 13, 2015 by Jaime Reyes and Modification and Design Drawing date/stamp April 23, 2015 by Hanming You;
- Within 45 days following completion of the equipment installation, T-Mobile shall provide documentation certified by a professional engineer that its installation complied with the recommendations of the Structural Engineer;
- Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by T-Mobile shall be removed within 60 days of the date the antenna ceased to function;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated May 5, 2015. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site by any dimension, increase noise levels at the tower site boundary by six decibels or more, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standards adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996 and by the state Department of Energy and Environmental Protection pursuant to Connecticut General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below state and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Melanie A. Bachman
Acting Executive Director

MAB/FOC/lm

c: The Honorable Adam W. Dunsby, First Selectman, Town of Easton
Phillip Doremus, Zoning Enforcement Officer, Town of Easton