Filed by:
Kri Pelletier, Property Specialist - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
508.251.0720 x 3804 - kpelletier@sbasite.com

November 4, 2016

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

Notice of Exempt Modification
206 Everett Road, Easton, CT 06612
N 41 17 25.2
W -73 16 57.6
T-Mobile#: CT11949A_L700

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 138-foot level of the existing 150-foot Monopole Tower at 206 Everett Rd., Easton, CT. The tower is owned by SBA 2012 TC Assets, LLC. The property is owned by Alfred Barney. T-Mobile now intends to remove nine (9) antennas and replace with (6) new L19/G19 and L700 Antennas. These antennas would be installed at the 138-foot level of the tower. T-Mobile's proposed full scope of work is as follows:

Remove:

- (3) APX16DWV-16DWV-S-E-A20 Panel Antennas

Remove and Replace:

- Remove (6) APX16DWV-16DWV-S-E-A20 Panel Antennas and replace with (3) Commscope LNX 6515DS-A1M panel antennas and (3) RFS APXV18-206516S-A20 panel antennas
- Remove (3) Style 1A twin PCS TMAs and replace with (3) Ericsson KRY 112 144/1-TMAs

Install:

- (1) Commscope rail kit MT-195-14
- (1) V-stabilizer talley MTSVSR-MS-B

Existing Equipment to Remain (including Entitlements):

- (3) RFS-APXV18-206516S-A2- panel antennas
- (3) RFS-APX16DWV-16DWVS-E-A20 panel antennas
- (3) Style 1A twin PCS TMAs
- (3) Kathrein 782 11056 Bias Ts
- (12) 1-1/4" lines

This facility was approved by the Town of Easton in 1999 before the Council had jurisdiction over the site. Council's Staff Report and Petition 627 dated June 19, 2003, shows the tower originally approved at 120-feet with an approved 40-foot extension of 38-feet making for a 158-foot tower. Per the Staff Report, the Town's Land Use Director confirmed the original site approval and extension approval. This modification complies with all tower conditions.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16.50j-72(b)(2). In accordance with R.C.S.A. § 16.50j-73, a copy of this letter is being sent to Adam Dunsby, First Selectman for the Town of Easton, as well as the property owner. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16.50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modification will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, T-Mobile respectfully submits that the proposed modifications to the above-referenced telecommunication facility constitute an exempt modifications under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kri Pelletier
Property Specialist
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581

508.251.0720 x3804 + T
508.366.2610 + F
203.446.7700 + C
kpelletier@sbasite.com

Attachments

cc: Adam Dunsby, First Selectman–as elected official
Town of Easton, 225 Center Road, Easton, CT 06612
Alfred Barney–as property owner
206 Everett Rd. Easton CT 06612

POWER DENSITY

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXV18-206516S-C-A20	Make / Model:	RFS APXV18-206516S-C-A20	Make / Model:	RFS APXV18-206516S-C-A20
Gain:	16.3 dBd	Gain:	16.3 dBd	Gain:	16.3 dBd
Height (AGL):	138	Height (AGL):	138	Height (AGL):	138
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	180	Total TX Power(W):	180	Total TX Power(W):	180
ERP (W):	4,934.83	ERP (W):	4,934.83	ERP (W):	4,934.83
Antenna A1 MPE%	1.02	Antenna B1 MPE%	1.02	Antenna C1 MPE%	1.02
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	138	Height (AGL):	138	Height (AGL):	138
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power(W):	30	Total TX Power(W):	30	Total TX Power(W):	30
ERP (W):	668.53	ERP (W):	668.53	ERP (W):	668.53
Antenna A2 MPE%	0.30	Antenna B2 MPE%	0.30	Antenna C2 MPE%	0.30

Site Composite MPE%	
Carrier	MPE%
T-Mobile (Per Sector Max)	1.31 %
Sprint	0.32 %
AT&T	1.91 %
Verizon Wireless	3.87 %
Nextel	0.28 %
Site Total MPE %:	7.69 %

T-Mobile Sector A Total:	1.31 %
T-Mobile Sector B Total:	1.31 %
T-Mobile Sector C Total:	1.31 %
Site Total:	7.69 %

T-Mobile _per sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
T-Mobile PCS - 1950 MHz LTE	2	1,644.94	138	6.79	PCS - 1950 MHz	1000	0.68%
T-Mobile PCS - 1950 MHz GSM	2	822.47	138	3.39	PCS - 1950 MHz	1000	0.34%
T-Mobile 700 MHz LTE	1	668.53	138	1.38	700 MHz	467	0.30%
						Total:	1.31%

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2011.

Easton, CT

Information on the Property Records for the Municipality of Easton was last updated on 11/3/2016.

Parcel Information

Location:	206 EVERETT ROAD	Property Use:	Residential	Primary Use:	Residential
Unique ID:	00010600	Map Block Lot:	9610 9611 1	Acres:	35.92
490 Acres:	31.25	Zone:	R3	District:	
Volume / Page:	0645/0931	Developers Map / Lot:		Census:	1052

Value Information

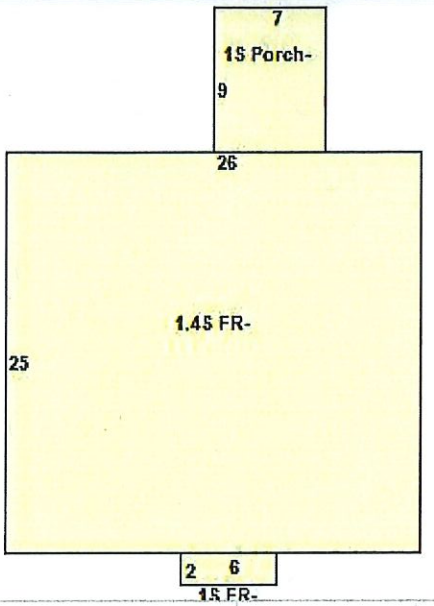
	Appraised Value	70% Assessed Value
Land	578,202	404,740
Buildings	177,797	124,460

	Appraised Value	70% Assessed Value
Detached Outbuildings	76,807	53,760
Total	832,806	582,960

Owner's Information

Owner's Data
BARNEY ALFRED JOAN BARNEY POA 108 HIRAM HILL ROAD MONROE CT 06468

Building 1



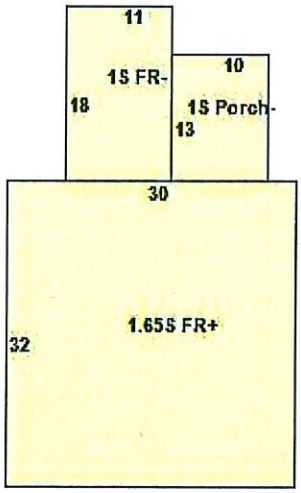
Building Use:	Single Family	Style:	Cape	Living Area:	922
Stories:	1.40	Construction:	Wood Frame	Year Built:	1948
Total Rooms:	5	Bedrooms:	3	Full Baths:	1
Half Baths:	0	Fireplaces:	0	Heating:	Hot Water
Fuel:	Oil	Cooling Percent:	0%	Basement Area:	0
Basement Finished Area:	0	Basement Garages:	0	Roof Material:	Asphalt
Siding:	Clapboards/Stucco	Units:			

Special Features

Attached Components

Type:	Year Built:	Area:
Enclosed Porch	1948	63

Building 2



Building Use:	Single Family	Style:	Salt Box	Living Area:	1,782
Stories:	1.65	Construction:	Wood Frame	Year Built:	1934
Total Rooms:	8	Bedrooms:	3	Full Baths:	1
Half Baths:	1	Fireplaces:	2	Heating:	Hot Water
Fuel:	Oil	Cooling Percent:	0%	Basement Area:	960
Basement Finished Area:	0	Basement Garages:	0	Roof Material:	
Siding:	Wood Shingles	Units:			

Special Features

Attached Components

Type:	Year Built:	Area:
Dormer Dormer	1934	12
Enclosed Porch	1934	130

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
1 Story Frame Barn	1900	21	27	567
1 Story Frame Barn	1900	16	21	336
1 Story Masonry Barn	1966	38	70	2,660

Type:	Year Built:	Length:	Width:	Area:
Det 1 Story Frame Garage	1944	13	23	299
Det 1 Story Frame with Loft Garage	1934	19	20	380
Average Shed	1934	12	22	264
Frame Shed	2009	20	10	200

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
BARNEY ALFRED	0645	0931	01/11/2012	Quit Claim	No	$0
BARNEY FAMILY TRUST THE	0121	0208	12/16/1991		No	$0
BARNEY ALFRED N & DOROTHY M SURV	0037	0312	02/14/1961	Warranty Deed	No	$18,000

Building Permits

Permit Number	Permit Type	Date Opened	Date Closed	Permit Status	Reason
13790	Mechanical	05/03/2013			MODIFY SPRINT EQUIPMENT ON TOWER
13039	Commercial Addition	07/01/2011			ADD 3 LTE ANTENNAS TO EXISTING PLATFORM, ADD 6 RR4 TO MOUNTED MONOPOLE
12325		05/11/2009		Closed	ANTENNAS ON EXIST TOWER 10X20 EQUIPMENT SHELTER W/GENERATOR

EBI Consulting
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RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11949A

Nextel Tower Extension
206 Everett Road
Easton, CT 06612

November 1, 2016

EBI Project Number: 6216004974

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	7.69 %

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

November 1, 2016

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Emissions Analysis for Site: **CT11949A – Nextel Tower Extension**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **206 Everett Road, Easton, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (µW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the 700 MHz Band is approximately 467 $\mu W/cm^2$, and the general population exposure limit for the 1900 MHz (PCS) band is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at **206 Everett Road, Easton, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

1) 2 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

3) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.

4) Since all radios are ground mounted there are additional cabling losses accounted for. For each ground mounted RF path the following losses were calculated. 1.12 dB of additional cable loss for all ground mounted 700 MHz Channels and 1.92 dB of additional cable loss for all ground mounted 2100 MHz channels. This is based on manufacturers Specifications for 160 feet of 1-5/8” coax cable on each path.

5) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

6) For the following calculations the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

7) The antennas used in this modeling are the **RFS APXV18-206516S-C-A20** for 1900 MHz (PCS) channels and the **Commscope LNX-6515DS-VTM** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **RFS APXV18-206516S-C-A20** has a maximum gain of **16.3 dBd** at its main lobe at 1900 MHz. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe at 700 MHz. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

8) The antenna mounting height centerline of the proposed antennas is **138 feet** above ground level (AGL).

9) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

10) All calculations were done with respect to uncontrolled / general public threshold limits.

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T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	RFS APXV18-206516S-C-A20	Make / Model:	RFS APXV18-206516S-C-A20	Make / Model:	RFS APXV18-206516S-C-A20
Gain:	16.3 dBd	Gain:	16.3 dBd	Gain:	16.3 dBd
Height (AGL):	138	Height (AGL):	138	Height (AGL):	138
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	180	Total TX Power(W):	180	Total TX Power(W):	180
ERP (W):	4,934.83	ERP (W):	4,934.83	ERP (W):	4,934.83
Antenna A1 MPE%	1.02	Antenna B1 MPE%	1.02	Antenna C1 MPE%	1.02
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	138	Height (AGL):	138	Height (AGL):	138
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power(W):	30	Total TX Power(W):	30	Total TX Power(W):	30
ERP (W):	668.53	ERP (W):	668.53	ERP (W):	668.53
Antenna A2 MPE%	0.30	Antenna B2 MPE%	0.30	Antenna C2 MPE%	0.30

Site Composite MPE%	
Carrier	**MPE%**
T-Mobile (Per Sector Max)	**1.31 %**
Sprint	0.32 %
AT&T	1.91 %
Verizon Wireless	3.87 %
Nextel	0.28 %
Site Total MPE %:	**7.69 %**

T-Mobile Sector A Total:	1.31 %
T-Mobile Sector B Total:	1.31 %
T-Mobile Sector C Total:	1.31 %
Site Total:	7.69 %

T-Mobile _per sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile PCS - 1950 MHz LTE	2	1,644.94	138	6.79	PCS - 1950 MHz	1000	0.68%
T-Mobile PCS - 1950 MHz GSM	2	822.47	138	3.39	PCS - 1950 MHz	1000	0.34%
T-Mobile 700 MHz LTE	1	668.53	138	1.38	700 MHz	467	0.30%
						Total:	**1.31%**

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general public exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector A:	1.31 %
Sector B:	1.31 %
Sector C:	1.31 %
T-Mobile Per Sector Maximum:	1.31 %
Site Total:	7.69 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **7.69%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

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

Structural Analysis Report

Existing 158 ft PennSummit Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT46131-A
Customer Site Name: Easton-Everetts Rd
Carrier Name: T-Mobile
Carrier Site ID / Name: CT11949A / Easton
Site Location: 206 Everett Road
Easton, Connecticut
Fairfield County
Latitude: 41.290333
Longitude: -73.282666

Analysis Result:

Max Structural Usage: 89.7% [Pass]

Max Foundation Usage: 83.0% [Pass]

Report Prepared by: Matthew Baker

10/19/16

Introduction

The purpose of this report is to summarize the analysis results on the 158 ft PennSummit 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	Paul J. Ford for PennSummit Tubular, Job #29202-0378, Design #5951, Dated 12/19/02
Foundation Drawing	Paul J. Ford for PennSummit Tubular, Job #29202-0378, Design #5951, Dated 12/19/02
Geotechnical Report	Tectonic Engineering Consultants W.O. #1170.C912, Dated 03/30/00
Modification Drawings	Vertical Solutions Project #131141.01 As-Builts, Dated 11/06/2013

Analysis Criteria

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

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 130 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 101.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2012 IBC / 2016 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.212, S_1 = 0.066

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	158.5	6	Decibel - DB980F90E-M - Panel	Low Profile Platform	(3) 1 1/4" (6) 1 5/8"	Sprint
2		3	RFS - APXVSPP18-C-A20 - Panel			
3	156.5	3	ALU - 1900MHz RRH - RRU	Collar Mount		
4		3	ALU - 800MHz Notch Filter – RRH Filter			
5		6	ALU - 1900MHz - RET			
6		3	ALU - 800MHz RET			
7	149.0	12	Decibel - DB844H90E-XY - Panel	Low Profile Platform	(12) 1 1/4"	
-	138.0	9	EMS - RR90-17-02DP - Panel	Low Profile Platform	(18) 1 1/4"	T-Mobile
-		6	TMA			
13	128.0	2	Swedcom - SLCP 2X6014 - Panel	Low Profile Platform	(12) 1 5/8"	Verizon
14		6	Decibel - DB846F65ZAXY - Panel			
15		3	Antel - BXA-70063-6BF - Panel			
16		1	Antel - BXA-171063-12BF - Panel			
17		6	RFS - FD9R6004-2C-3L - Diplexer			
18	118.0	3	Powerwave - P65-16-XLH-RR - Panel	Low Profile Platform	(12) 1 1/4" (1) 3/8" RET (2) 5/8" DC inside (1) 3" Innerduct	AT&T
19		6	Powerwave - 7770 - Panel			
20		6	Powerwave - LGP21401 - TMA			
21		3	Powerwave - TT19-08BP111-001 - TMA			
22		6	Ericsson - RRUS-11 - RRU			
23		1	Raycap - DC6-48-60-18 - SP			
24	75.0	1	GPS	Pipe Mount	(1) 1/2”	Sprint

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
8	138.0	6	RFS - APX16DWV-16DWVS-E-A20 - Panel	Low Profile Platform w/ Handrail and V-Brace tie-back	(12) 1 1/4"	T-Mobile
9		3	RFS - APXV18-206516S-A20 - Panel			
10		3	Commscope - LNX-6515DS-A1M - Panel			
11		3	Ericsson - KRY 112 144/1 - TMA			
12		3	Kathrein - 782 11056 - Bias T			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	**89.7%**	**72.9%**	**83.4%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4633.3	40.2	56.2

The foundation has been analyzed using the supplied documents and was found adequate. Therefore, no modification to the foundation will be required. Geotechnical soil parameters were obtained from the original foundation calculations included with the referenced tower and foundation design drawings.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.3768 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-G Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC.** Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.

2. The analysis is based on the presumption that the tower members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.

3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion.

4. An initial tension of 10% of the break strength on all the existing guy wires was assumed in all the structural analyses of guyed towers unless different values were provided by the client. **TES** cannot take responsibility for the deviations in the analysis results because of differences in the initial tension forces of the existing guy wires.

5. Secondary component or connection secondary components, welds and bolts are assumed to be able to carry their intended original design loads. **TES** cannot take responsibility for verification of the adequacy on the connections, bolts and welds present in the structure.

6. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.

7. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

8. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

9. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

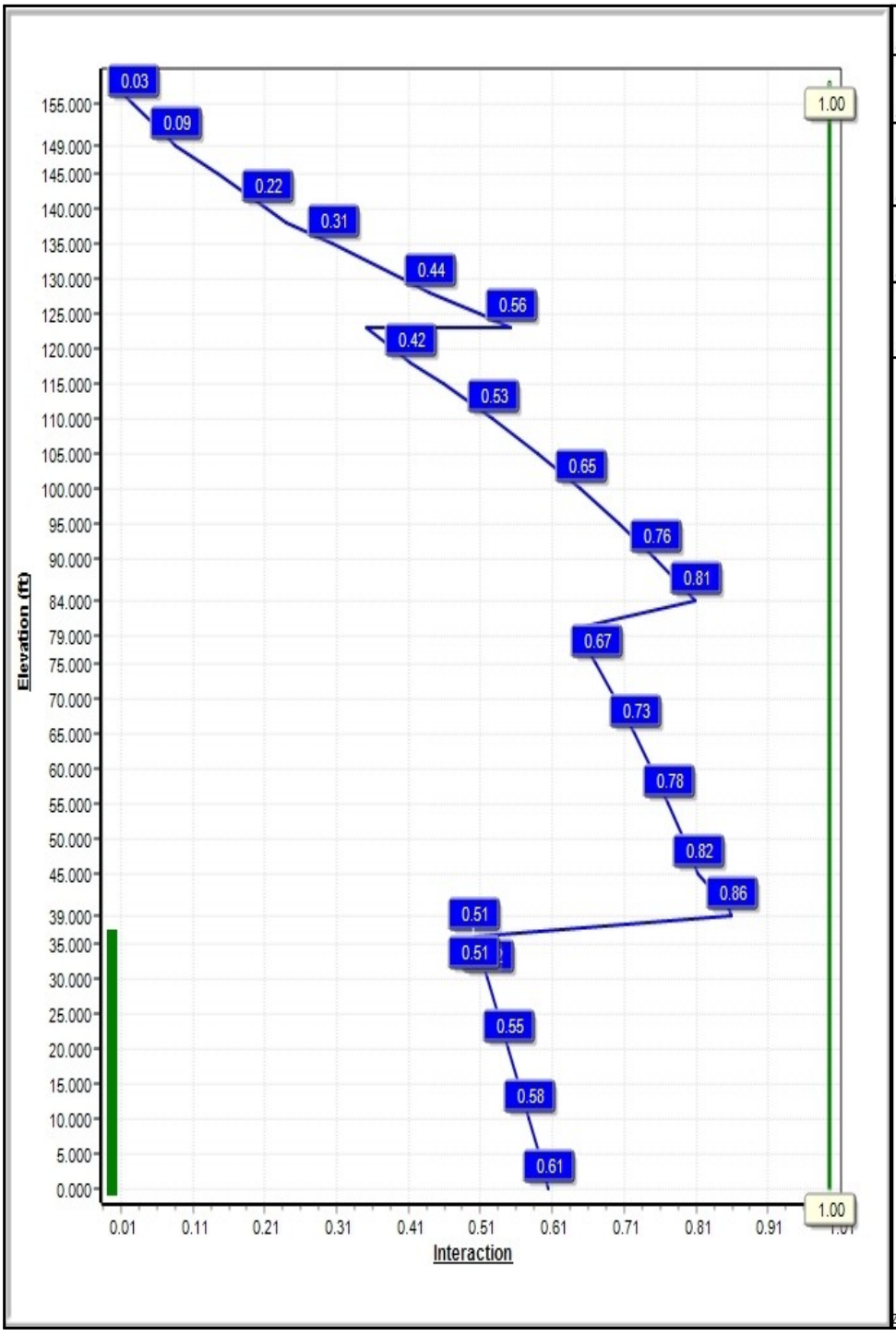
Usage Diagram - Max Ratio 86.38% at 39.0ft

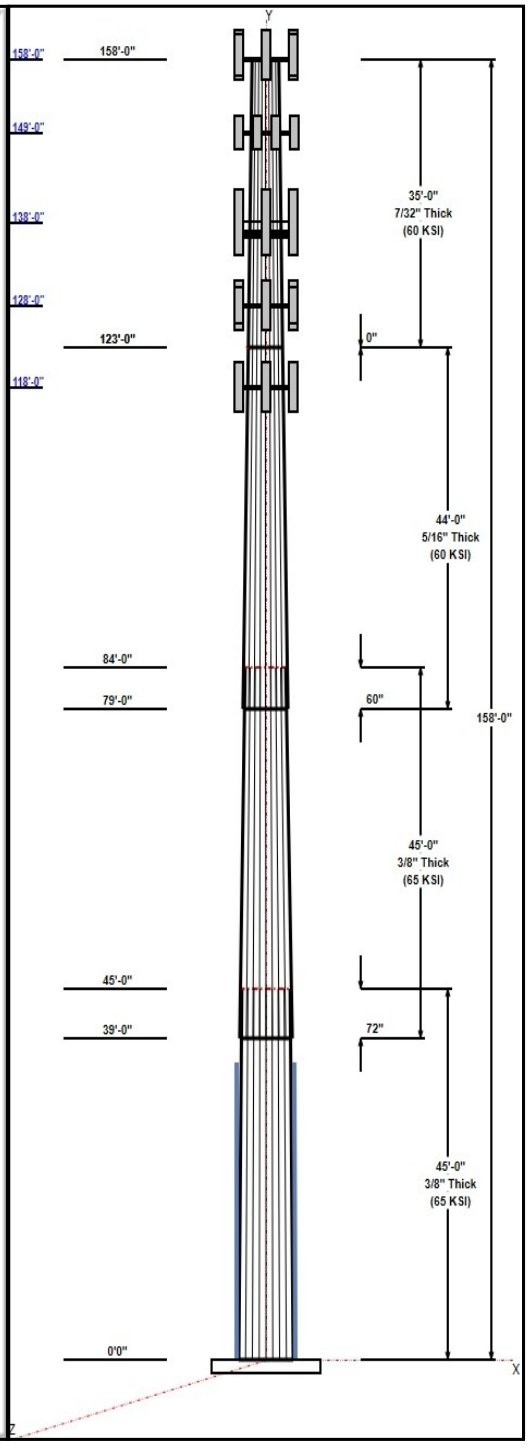
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016
Site Name:	Easton-Everetts Rd	**Exposure:**	C	
Height:	158.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

Tower Engineering Solutions

Dead Load Factor:	1.20	**Iterations:**	24
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 101 mph Wind





Structure: CT46131-A-SBA

Type: Tapered
Site Name: Easton-Everetts Rd
Height: 158.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.20320

10/19/2016

Tower Engineering Solutions

Shaft Properties

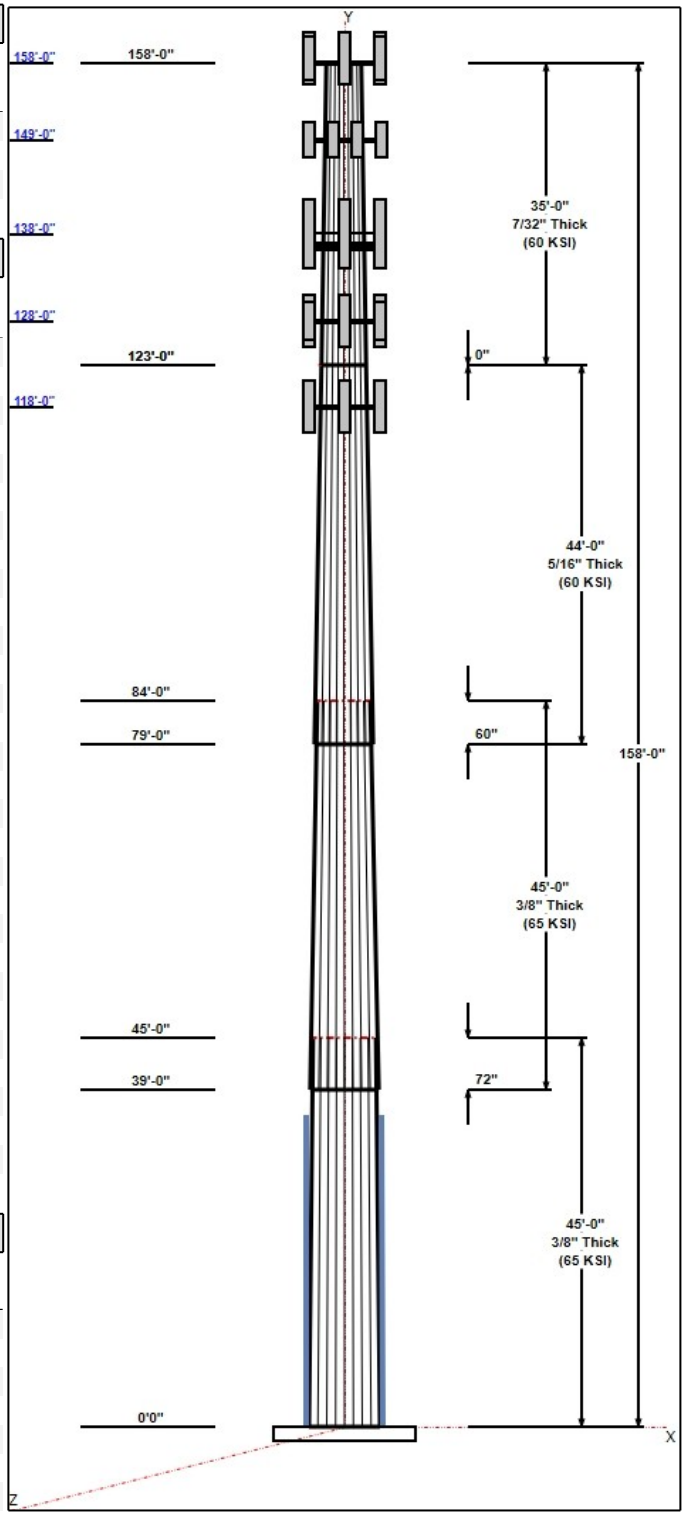
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	45.00	45.59	54.73	0.375		0.20320	65
2	45.00	38.41	47.56	0.375	Slip	0.20320	65
3	44.00	31.11	40.05	0.313	Slip	0.20320	60
4	35.00	24.00	31.11	0.219	Butt	0.20320	60

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
158.00	158.50	1	Low Profile Platform	Sprint
158.00	158.50	6	DB980F90E-M	Sprint
158.00	158.50	3	APXVSPP18-C-A20	Sprint
156.50	156.50	3	1900MHz RRH	Sprint
156.50	156.50	3	800MHz Notch Filter	Sprint
156.50	156.50	6	1900MHz	Sprint
156.50	156.50	3	800MHz	Sprint
156.50	156.50	1	Collar Mount	Sprint
149.00	149.00	1	Low Profile Platform	Sprint
149.00	149.00	12	DB844H90E-XY	Sprint
138.00	138.00	1	Platform w/ HR & V-Brace	T-Mobile
138.00	138.00	6	APX16DWV-16DWVS-E-A	T-Mobile
138.00	138.00	3	APXV18-206516S-A20	T-Mobile
138.00	138.00	3	LNX-6515DS-A1M	T-Mobile
138.00	138.00	3	KRY 112 144/1	T-Mobile
138.00	138.00	3	Bias T	T-Mobile
128.00	128.00	1	Low Profile Platform	Verizon
128.00	128.00	2	SLCP 2x6014	Verizon
128.00	128.00	6	DB846F65ZAXY	Verizon
128.00	128.00	3	BXA-70063-6BF	Verizon
128.00	128.00	1	BXA-171063-12BF	Verizon
128.00	128.00	6	FD9R6004-2C-3L	Verizon
118.00	118.00	1	Low Profile Platform	AT&T
118.00	118.00	3	P65-16-XLH-RR	AT&T
118.00	118.00	6	7770	AT&T
118.00	118.00	6	LGP21401	AT&T
118.00	118.00	3	TT19-08BP111-001	AT&T
118.00	118.00	6	RRUS-11	AT&T
118.00	118.00	1	DC6-48-60-18	AT&T
75.00	75.00	1	GPS	Sprint

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	158.00	Inside	1 1/4" Coax	Sprint
0.00	158.00	Inside	1 5/8" Coax	Sprint
0.00	149.00	Inside	1 1/4" Coax	Sprint
0.00	138.00	Inside	1 1/4" Coax	T-Mobile
0.00	128.00	Outside	1 5/8" Coax	Verizon
0.00	118.00	Inside	1 1/4" Coax	AT&T
0.00	118.00	Inside	3" Innerduct	AT&T
0.00	118.00	Inside	3/8" RET	AT&T
0.00	118.00	Inside	5/8" DC	AT&T
0.00	75.00	Inside	1/2" Coax	Sprint
0.00	39.00	Outside	1.25" Reinforcing plate	



Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
16	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.2500	60.0	50.0	Clipped

Reactions

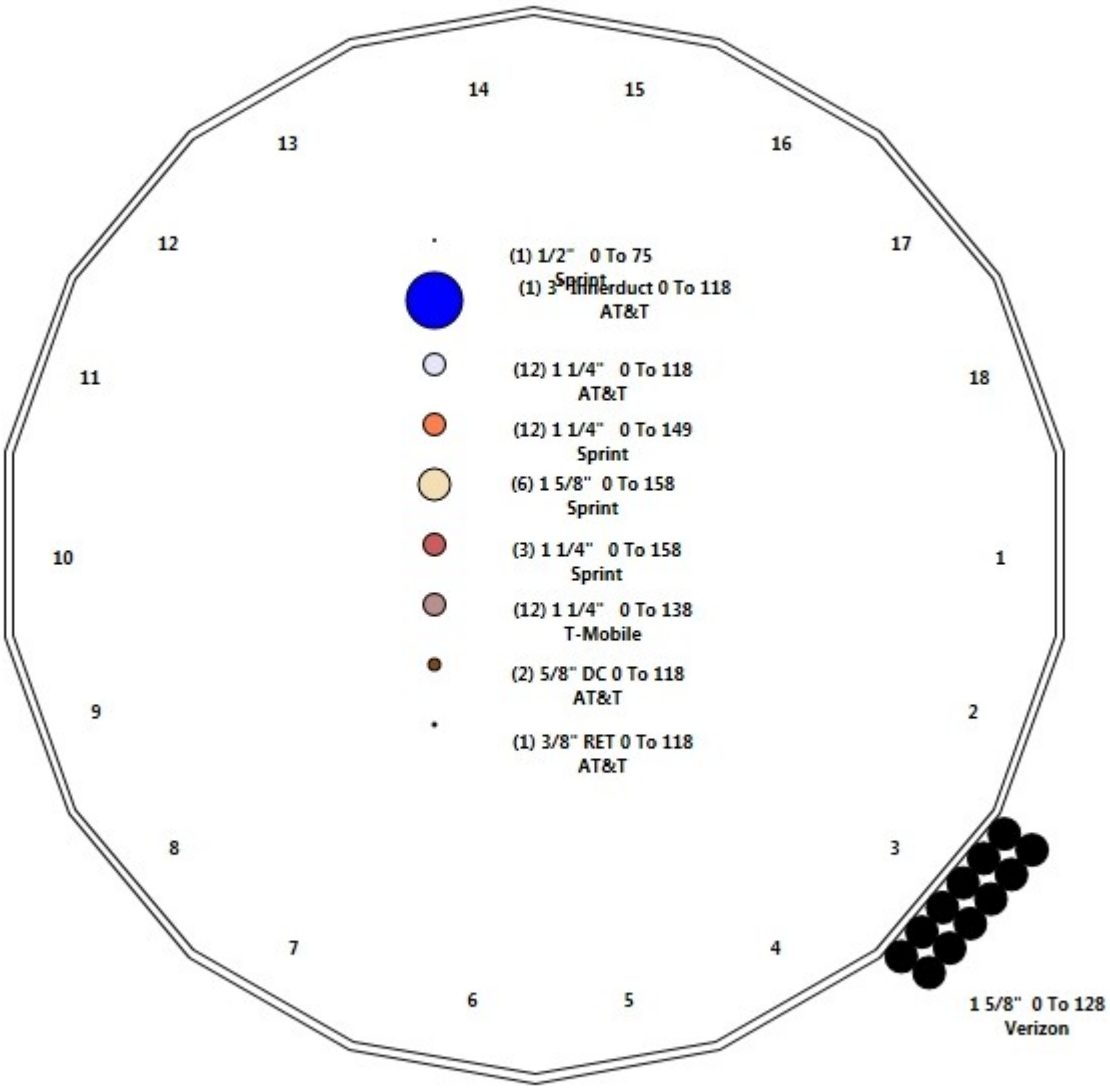
Load Case	Moment	Shear	Axial
1.2D + 1.6W 101 mph Wind	4633.3	40.2	56.2
0.9D + 1.6W 101 mph Wind	4589.8	40.2	42.1
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1228.4	10.6	88.0
1.2D + 1.0E	235.7	2.0	56.3
0.9D + 1.0E	233.4	2.0	42.2
1.0D + 1.0W 60 mph Wind	1017.2	8.9	46.9

Structure: CT46131-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Easton-Everetts Rd
Height: 158.00 (ft)

10/19/2016

Tower Engineering Solutions



Shaft Properties

Structure:	CT46131-A-SBA		**Code:**	EIA/TIA-222-G	10/19/2016
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	45.000	0.3750	65		0.00	9,073
2	18	45.000	0.3750	65	Slip	72.00	7,765
3	18	44.000	0.3125	60	Slip	60.00	5,238
4	18	35.000	0.2188	60	Flange	0.00	2,261
					Total Shaft Weight:		**24,337**

	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	54.73	0.00	64.69	24148.72	24.32	145.95	45.59	45.00	53.81	13896.7	20.02	121.5	0.203196
2	47.56	39.00	56.15	15792.80	20.95	126.81	38.41	84.00	45.27	8275.19	16.65	102.4	0.203196
3	40.05	79.00	39.42	7864.62	21.19	128.17	31.11	123.00	30.55	3661.17	16.14	99.56	0.203196
4	31.11	123.0	21.45	2586.87	23.66	142.19	24.00	158.00	16.51	1180.03	17.93	109.6	0.203196

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
0.00	36.00	4	PLT 7.625x1.5(31mm Hole	50	65	0.00	AJM20&sleeve	15.00	AJM20&sleeve	3.00	15	12

Load Summary

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

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	158.00	Low Profile Platform	1	1200.00	25.00	1.00	2252.58	46.052	1.00	0.00	0.50
2	158.00	DB980F90E-M	6	9.50	3.75	0.81	100.20	4.808	0.84	0.00	0.50
3	158.00	APXVSPP18-C-A20	3	57.00	8.02	0.83	230.75	10.828	0.85	0.00	0.50
4	156.50	1900MHz RRH	3	44.00	3.80	1.15	153.63	5.196	1.13	0.00	0.00
5	156.50	800MHz Notch Filter	3	8.80	0.78	0.69	26.52	1.430	0.76	0.00	0.00
6	156.50	1900MHz	6	5.00	0.35	0.90	18.08	0.793	0.93	0.00	0.00
7	156.50	800MHz	3	5.00	0.35	0.90	18.08	0.793	0.93	0.00	0.00
8	156.50	Collar Mount	1	350.00	5.00	1.00	644.44	8.505	1.00	0.00	0.00
9	149.00	Low Profile Platform	1	1200.00	25.00	1.00	2246.43	45.929	1.00	0.00	0.00
10	149.00	DB844H90E-XY	12	14.00	3.05	1.10	116.72	3.908	1.08	0.00	0.00
11	138.00	Platform w/ HR & V-Brace	1	2246.00	51.70	1.00	5355.76	89.639	1.00	0.00	0.00
12	138.00	APX16DWV-16DWVS-E-A20	6	40.70	6.46	0.67	189.75	7.565	0.70	0.00	0.00
13	138.00	APXV18-206516S-A20	3	18.70	3.61	0.78	88.19	5.452	0.82	0.00	0.00
14	138.00	LNX-6515DS-A1M	3	49.80	11.47	0.84	277.45	14.710	0.85	0.00	0.00
15	138.00	KRY 112 144/1	3	11.00	0.41	0.67	21.69	0.881	0.67	0.00	0.00
16	138.00	Bias T	3	3.30	0.09	0.67	6.57	0.323	0.67	0.00	0.00
17	128.00	Low Profile Platform	1	1500.00	22.00	1.00	2788.32	39.384	1.00	0.00	0.00
18	128.00	SLCP 2x6014	2	20.00	6.49	0.91	193.47	8.532	0.92	0.00	0.00
19	128.00	DB846F65ZAXY	6	21.00	7.05	0.94	207.89	8.280	0.95	0.00	0.00
20	128.00	BXA-70063-6BF	3	15.00	4.76	0.88	108.81	7.079	0.90	0.00	0.00
21	128.00	BXA-171063-12BF	1	22.00	0.00	0.67	147.69	7.181	0.67	0.00	0.00
22	128.00	FD9R6004-2C-3L	6	3.10	0.36	0.67	11.00	0.796	0.67	0.00	0.00
23	118.00	Low Profile Platform	1	1500.00	22.00	1.00	2777.88	39.243	1.00	0.00	0.00
24	118.00	P65-16-XLH-RR	3	53.00	8.16	0.79	214.14	10.896	0.81	0.00	0.00
25	118.00	7770	6	35.00	5.50	0.77	166.67	6.527	0.80	0.00	0.00
26	118.00	LGP21401	6	14.10	1.29	0.67	38.51	2.106	0.67	0.00	0.00
27	118.00	TT19-08BP111-001	3	16.00	0.64	0.67	35.76	1.219	0.67	0.00	0.00
28	118.00	RRUS-11	6	51.00	2.52	0.50	121.56	3.138	0.50	0.00	0.00
29	118.00	DC6-48-60-18	1	31.80	0.92	1.00	92.16	1.348	1.00	0.00	0.00
30	75.00	GPS	1	3.70	0.01	1.00	3.70	0.010	1.00	0.00	0.00
		Totals:	**104**	**10,182.70**			**26,763.15**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	158.00	(3) 1 1/4" Coax	0.00	Inside
0.00	158.00	(6) 1 5/8" Coax	0.00	Inside
0.00	149.00	(12) 1 1/4" Coax	0.00	Inside
0.00	138.00	(12) 1 1/4" Coax	0.00	Inside
0.00	128.00	(12) 1 5/8" Coax	4.00	Outside
0.00	118.00	(12) 1 1/4" Coax	0.00	Inside
0.00	118.00	(1) 3" Innerduct	0.00	Inside
0.00	118.00	(1) 3/8" RET	0.00	Inside
0.00	118.00	(2) 5/8" DC	0.00	Inside
0.00	75.00	(1) 1/2" Coax	0.00	Inside
0.00	39.00	(4) 1.25" Reinforcing plate	3.00	Outside

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)

Shaft Section Properties

Structure: CT46131-A-SBA
Site Name: Easton-Everetts Rd
Height: 158.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1 **Topography:** 1

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

10/19/2016

Tower Engineering Solutions

Increment Length: 5 (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)
0.00	RB1	0.3750	54.730	64.694	24148.7	24.32	145.95	65	73	0.0	45.75	21320.2	15073.2	
5.00		0.3750	53.714	63.484	22819.7	23.85	143.24	65	73	1090.4	45.75	20560.3	14538.2	778.4
10.00		0.3750	52.698	62.275	21540.4	23.37	140.53	65	74	1069.8	45.75	19814.2	14012.8	778.4
15.00		0.3750	51.682	61.066	20309.9	22.89	137.82	65	74	1049.3	45.75	19082.0	13497.3	778.4
20.00		0.3750	50.666	59.857	19127.1	22.41	135.11	65	75	1028.7	45.75	18363.6	12991.5	778.4
25.00		0.3750	49.650	58.648	17991.1	21.94	132.40	65	76	1008.1	45.75	17659.1	12495.4	778.4
30.00		0.3750	48.634	57.438	16901.0	21.46	129.69	65	76	987.5	45.75	16968.4	12009.2	778.4
35.00		0.3750	47.618	56.229	15855.9	20.98	126.98	65	77	967.0	45.75	16291.6	11532.6	778.4
36.00	RT1	0.3750	47.415	55.987	15652.2	20.88	126.44	65	77	190.9	45.75	16157.9	11438.5	155.7
39.00	Bot - Section 2	0.3750	46.805	55.262	15051.6	20.60	124.81	65	77	567.8				
40.00		0.3750	46.602	55.020	14854.8	20.50	124.27	65	77	378.3				
45.00	Top - Section 1	0.3750	46.336	54.703	14599.9	20.38	123.56	65	77	1866.8				
50.00		0.3750	45.320	53.494	13652.9	19.90	120.85	65	78	920.4				
55.00		0.3750	44.304	52.285	12747.8	19.42	118.14	65	79	899.9				
60.00		0.3750	43.288	51.076	11883.6	18.94	115.44	65	79	879.3				
65.00		0.3750	42.272	49.866	11059.4	18.47	112.73	65	80	858.7				
70.00		0.3750	41.256	48.657	10274.2	17.99	110.02	65	80	838.1				
75.00		0.3750	40.240	47.448	9527.1	17.51	107.31	65	81	817.6				
79.00	Bot - Section 3	0.3750	39.428	46.481	8956.2	17.13	105.14	65	81	639.2				
80.00		0.3750	39.224	46.239	8817.1	17.03	104.60	65	81	291.5				
84.00	Top - Section 2	0.3125	39.037	38.408	7276.7	20.62	124.92	60	72	1151.0				
85.00		0.3125	38.833	38.206	7162.8	20.50	124.27	60	72	130.4				
90.00		0.3125	37.817	37.199	6610.8	19.93	121.02	60	73	641.5				
95.00		0.3125	36.801	36.191	6088.0	19.35	117.76	60	73	624.3				
100.00		0.3125	35.785	35.183	5593.5	18.78	114.51	60	74	607.2				
105.00		0.3125	34.769	34.176	5126.5	18.21	111.26	60	75	590.0				
110.00		0.3125	33.753	33.168	4686.3	17.63	108.01	60	75	572.9				
115.00		0.3125	32.737	32.160	4272.0	17.06	104.76	60	76	555.7				
118.00		0.3125	32.128	31.556	4035.6	16.72	102.81	60	76	325.2				
120.00		0.3125	31.721	31.153	3882.9	16.49	101.51	60	76	213.4				
123.00	Top - Section 3	0.3125	31.112	30.548	3661.2	16.14	99.56	60	76	314.9				
123.00	Bot - Section 4	0.2188	31.112	21.454	2586.9	23.06	142.19	60	69					
125.00		0.2188	30.705	21.171	2486.1	23.33	140.34	60	69	145.0				
128.00		0.2188	30.096	20.748	2339.9	22.84	137.55	60	70	214.0				
130.00		0.2188	29.689	20.466	2245.8	22.52	135.69	60	70	140.2				
135.00		0.2188	28.674	19.760	2021.4	21.70	131.05	60	71	342.2				
138.00		0.2188	28.064	19.337	1894.3	21.21	128.26	60	71	199.6				
140.00		0.2188	27.658	19.055	1812.5	20.88	126.41	60	72	130.6				
145.00		0.2188	26.642	18.349	1618.5	20.06	121.76	60	73	318.2				
149.00		0.2188	25.829	17.785	1473.7	19.40	118.05	60	73	245.9				
150.00		0.2188	25.626	17.644	1438.9	19.24	117.12	60	74	60.3				
155.00		0.2188	24.610	16.938	1273.1	18.42	112.48	60	74	294.2				
156.50		0.2188	24.305	16.726	1226.0	18.18	111.08	60	75	85.9				
158.00		0.2188	24.000	16.515	1180.0	17.93	109.69	60	75	84.8				
									Total Weight	**24336.9**				**5604.5**

Wind Loading - Shaft

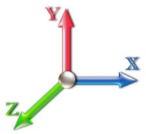
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

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	RB1	1.00	0.85	21.088	23.20	431.24	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	423.24	0.702 *	0.000	5.00	22.941	16.09	597.3	0.0	1308.5
10.00		1.00	0.85	21.088	23.20	415.23	0.706 *	0.000	5.00	22.511	15.90	590.0	0.0	1283.8
15.00		1.00	0.85	21.088	23.20	407.23	0.711 *	0.000	5.00	22.081	15.70	582.8	0.0	1259.1
20.00		1.00	0.90	22.375	24.61	411.23	0.716 *	0.000	5.00	21.651	15.51	610.6	0.0	1234.4
25.00		1.00	0.95	23.451	25.80	412.56	0.721 *	0.000	5.00	21.222	15.31	631.9	0.0	1209.7
30.00		1.00	0.98	24.369	26.81	411.95	0.727 *	0.000	5.00	20.792	15.12	648.3	0.0	1185.0
35.00		1.00	1.01	25.172	27.69	409.94	0.733 *	0.000	5.00	20.362	14.92	661.0	0.0	1160.4
36.00	RT1	1.00	1.02	25.322	27.85	409.40	0.736 *	0.000	1.00	4.021	2.96	131.9	0.0	229.1
39.00	Bot - Section 2	1.00	1.04	25.752	28.33	407.56	0.739 *	0.000	3.00	11.959	8.83	400.4	0.0	681.4
40.00		1.00	1.04	25.890	28.48	406.87	0.650	0.000	1.00	4.015	2.61	118.9	0.0	454.0
45.00	Top - Section 1	1.00	1.07	26.540	29.19	402.97	0.650	0.000	5.00	19.820	12.88	601.8	0.0	2240.2
50.00		1.00	1.09	27.135	29.85	405.08	0.650	0.000	5.00	19.390	12.60	601.9	0.0	1104.5
55.00		1.00	1.12	27.685	30.45	400.00	0.650	0.000	5.00	18.960	12.32	600.5	0.0	1079.8
60.00		1.00	1.14	28.197	31.02	394.42	0.650	0.000	5.00	18.530	12.04	597.7	0.0	1055.1
65.00		1.00	1.16	28.676	31.54	388.42	0.650	0.000	5.00	18.100	11.77	593.8	0.0	1030.4
70.00		1.00	1.17	29.127	32.04	382.05	0.650	0.000	5.00	17.670	11.49	588.8	0.0	1005.8
75.00	Appurtenance(s)	1.00	1.19	29.553	32.51	375.36	0.650	0.000	5.00	17.240	11.21	582.9	0.0	981.1
79.00	Bot - Section 3	1.00	1.20	29.878	32.87	369.80	0.650	0.000	4.00	13.483	8.76	460.9	0.0	767.1
80.00		1.00	1.21	29.958	32.95	368.38	0.650	0.000	1.00	3.381	2.20	115.9	0.0	349.8
84.00	Top - Section 2	1.00	1.22	30.267	33.29	362.60	0.651 *	0.000	4.00	13.350	8.69	462.9	0.0	1381.2
85.00		1.00	1.22	30.342	33.38	367.04	0.650 *	0.000	1.00	3.295	2.14	114.4	0.0	156.4
90.00		1.00	1.24	30.710	33.78	359.60	0.653 *	0.000	5.00	16.215	10.60	572.7	0.0	769.8
95.00		1.00	1.25	31.061	34.17	351.93	0.659 *	0.000	5.00	15.785	10.40	568.5	0.0	749.2
100.00		1.00	1.27	31.399	34.54	344.07	0.665 *	0.000	5.00	15.356	10.20	563.9	0.0	728.6
105.00		1.00	1.28	31.723	34.89	336.02	0.671 *	0.000	5.00	14.926	10.01	558.8	0.0	708.0
110.00		1.00	1.29	32.035	35.24	327.80	0.677 *	0.000	5.00	14.496	9.81	553.3	0.0	687.5
115.00		1.00	1.30	32.336	35.57	319.43	0.684 *	0.000	5.00	14.066	9.62	547.3	0.0	666.9
118.00	Appurtenance(s)	1.00	1.31	32.512	35.76	314.33	0.689 *	0.000	3.00	8.233	5.68	324.8	0.0	390.3
120.00		1.00	1.32	32.627	35.89	310.91	0.693 *	0.000	2.00	5.403	3.75	215.1	0.0	256.1
123.00	Top - Section 3	1.00	1.32	32.797	36.08	305.72	0.697 *	0.000	3.00	7.975	5.56	320.9	0.0	377.9
125.00		1.00	1.33	32.909	36.20	302.24	0.701 *	0.000	2.00	5.231	3.67	212.4	0.0	174.1
128.00	Appurtenance(s)	1.00	1.33	33.073	36.38	296.98	0.705 *	0.000	3.00	7.717	5.44	316.8	0.0	256.8
130.00		1.00	1.34	33.182	36.50	293.45	0.650	0.000	2.00	5.059	3.29	192.0	0.0	168.3
135.00		1.00	1.35	33.446	36.79	284.54	0.650	0.000	5.00	12.347	8.03	472.4	0.0	410.6
138.00	Appurtenance(s)	1.00	1.35	33.601	36.96	279.13	0.650	0.000	3.00	7.202	4.68	276.8	0.0	239.5
140.00		1.00	1.36	33.703	37.07	275.51	0.650	0.000	2.00	4.715	3.06	181.8	0.0	156.8
145.00		1.00	1.37	33.953	37.35	266.37	0.650	0.000	5.00	11.487	7.47	446.2	0.0	381.8
149.00	Appurtenance(s)	1.00	1.38	34.148	37.56	258.98	0.650	0.000	4.00	8.880	5.77	346.9	0.0	295.1
150.00		1.00	1.38	34.196	37.62	257.13	0.650	0.000	1.00	2.177	1.42	85.2	0.0	72.3
155.00		1.00	1.39	34.433	37.88	247.79	0.650	0.000	5.00	10.627	6.91	418.6	0.0	353.0
156.50	Appurtenance(s)	1.00	1.39	34.503	37.95	244.97	0.650	0.000	1.50	3.104	2.02	122.5	0.0	103.1
158.00	Appurtenance(s)	1.00	1.39	34.573	38.03	242.14	0.650	0.000	1.50	3.066	1.99	121.2	0.0	101.8
								Totals:	**158.00**			**17,712.8**		**29,204.3**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

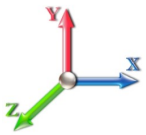
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	158.00	DB980F90E-M	6	34.596	38.055	0.81	1.00	18.23	68.40	0.000	0.500	1109.69	0.00	554.84
2	158.00	Low Profile Platform	1	34.596	38.055	1.00	1.00	25.00	1440.00	0.000	0.500	1522.21	0.00	761.10
3	158.00	APXVSPP18-C-A20	3	34.596	38.055	0.83	1.00	19.97	205.20	0.000	0.500	1215.93	0.00	607.96
4	156.50	1900MHz	6	34.503	37.954	0.90	1.00	1.89	36.00	0.000	0.000	114.77	0.00	0.00
5	156.50	800MHz Notch Filter	3	34.503	37.954	0.69	1.00	1.61	31.68	0.000	0.000	98.05	0.00	0.00
6	156.50	1900MHz RRH	3	34.503	37.954	1.15	1.00	13.11	158.40	0.000	0.000	796.11	0.00	0.00
7	156.50	800MHz	3	34.503	37.954	0.90	1.00	0.94	18.00	0.000	0.000	57.39	0.00	0.00
8	156.50	Collar Mount	1	34.503	37.954	1.00	1.00	5.00	420.00	0.000	0.000	303.63	0.00	0.00
9	149.00	DB844H90E-XY	12	34.148	37.563	0.88	0.80	32.21	201.60	0.000	0.000	1935.74	0.00	0.00
10	149.00	Low Profile Platform	1	34.148	37.563	1.00	1.00	25.00	1440.00	0.000	0.000	1502.53	0.00	0.00
11	138.00	Bias T	3	33.601	36.962	0.50	0.75	0.14	11.88	0.000	0.000	8.02	0.00	0.00
12	138.00	KRY 112 144/1	3	33.601	36.962	0.50	0.75	0.62	39.60	0.000	0.000	36.55	0.00	0.00
13	138.00	LNX-6515DS-A1M	3	33.601	36.962	0.63	0.75	21.68	179.28	0.000	0.000	1282.02	0.00	0.00
14	138.00	APXV18-206516S-A20	3	33.601	36.962	0.58	0.75	6.34	67.32	0.000	0.000	374.67	0.00	0.00
15	138.00	APX16DWV-16DWVS-E-	6	33.601	36.962	0.50	0.75	19.48	293.04	0.000	0.000	1151.83	0.00	0.00
16	138.00	Platform w/ HR & V-Brace	1	33.601	36.962	1.00	1.00	51.70	2695.20	0.000	0.000	3057.46	0.00	0.00
17	128.00	BXA-171063-12BF	1	33.073	36.381	0.54	0.80	0.00	26.40	0.000	0.000	0.00	0.00	0.00
18	128.00	BXA-70063-6BF	3	33.073	36.381	0.70	0.80	10.05	54.00	0.000	0.000	585.19	0.00	0.00
19	128.00	DB846F65ZAXY	6	33.073	36.381	0.75	0.80	31.81	151.20	0.000	0.000	1851.61	0.00	0.00
20	128.00	SLCP 2x6014	2	33.073	36.381	0.73	0.80	9.45	48.00	0.000	0.000	550.05	0.00	0.00
21	128.00	Low Profile Platform	1	33.073	36.381	0.80	0.80	17.60	1800.00	0.000	0.000	1024.48	0.00	0.00
22	128.00	FD9R6004-2C-3L	6	33.073	36.381	0.54	0.80	1.16	22.32	0.000	0.000	67.39	0.00	0.00
23	118.00	7770	6	32.512	35.763	0.62	0.80	20.33	252.00	0.000	0.000	1163.19	0.00	0.00
24	118.00	Low Profile Platform	1	32.512	35.763	0.80	0.80	17.60	1800.00	0.000	0.000	1007.09	0.00	0.00
25	118.00	P65-16-XLH-RR	3	32.512	35.763	0.63	0.80	15.47	190.80	0.000	0.000	885.29	0.00	0.00
26	118.00	DC6-48-60-18	1	32.512	35.763	0.80	0.80	0.74	38.16	0.000	0.000	42.11	0.00	0.00
27	118.00	LGP21401	6	32.512	35.763	0.54	0.80	4.15	101.52	0.000	0.000	237.39	0.00	0.00
28	118.00	TT19-08BP111-001	3	32.512	35.763	0.54	0.80	1.03	57.60	0.000	0.000	58.89	0.00	0.00
29	118.00	RRUS-11	6	32.512	35.763	0.40	0.80	6.05	367.20	0.000	0.000	346.07	0.00	0.00
30	75.00	GPS	1	29.553	32.509	1.00	1.00	0.01	4.44	0.000	0.000	0.52	0.00	0.00
							Totals:		**12,219.24**			**22,385.86**		

Total Applied Force Summary

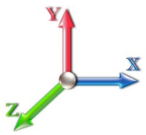
Structure:	CT46131-A-SBA		**Code:**	EIA/TIA-222-G	10/19/2016
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 11

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

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
5.00		597.28	2518.99	0.00	0.00
10.00		590.02	2494.30	0.00	0.00
15.00		582.76	2469.61	0.00	0.00
20.00		610.64	2444.92	0.00	0.00
25.00		631.93	2420.23	0.00	0.00
30.00		648.27	2395.54	0.00	0.00
35.00		660.99	2370.86	0.00	0.00
36.00		131.94	471.21	0.00	0.00
39.00		400.41	1407.70	0.00	0.00
40.00		118.93	509.25	0.00	0.00
45.00		601.76	2516.60	0.00	0.00
50.00		601.91	1380.94	0.00	0.00
55.00		600.49	1356.25	0.00	0.00
60.00		597.73	1331.56	0.00	0.00
65.00		593.78	1306.87	0.00	0.00
70.00		588.80	1282.18	0.00	0.00
75.00	(1) attachments	583.40	1261.93	0.00	0.00
79.00		460.85	987.45	0.00	0.00
80.00		115.86	404.93	0.00	0.00
84.00		462.91	1601.61	0.00	0.00
85.00		114.42	211.51	0.00	0.00
90.00		572.67	1045.22	0.00	0.00
95.00		568.54	1024.65	0.00	0.00
100.00		563.90	1004.07	0.00	0.00
105.00		558.80	983.50	0.00	0.00
110.00		553.28	962.93	0.00	0.00
115.00		547.35	942.35	0.00	0.00
118.00	(26) attachments	4064.85	3362.82	0.00	0.00
120.00		215.07	343.76	0.00	0.00
123.00		320.90	509.46	0.00	0.00
125.00		212.39	261.75	0.00	0.00
128.00	(19) attachments	4395.49	2490.22	0.00	0.00
130.00		192.04	226.03	0.00	0.00
135.00		472.41	555.00	0.00	0.00
138.00	(19) attachments	6187.39	3612.41	0.00	0.00
140.00		181.80	195.50	0.00	0.00
145.00		446.18	478.67	0.00	0.00
149.00	(13) attachments	3785.16	2014.17	0.00	0.00
150.00		85.17	82.20	0.00	0.00
155.00		418.62	402.34	0.00	0.00
156.50	(16) attachments	1492.48	781.97	0.00	0.00
158.00	(10) attachments	3969.07	1830.20	0.00	1923.91
	Totals:	**40,098.65**	**56,253.65**	**0.00**	**1,923.91**

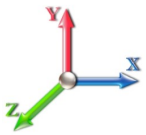
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.126	1.079	21.088	0.00	74.88
5.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.126	1.079	21.088	0.00	934.08
10.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.129	1.086	21.088	0.00	74.88
10.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.129	1.086	21.088	0.00	934.08
15.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.131	1.094	21.088	0.00	74.88
15.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.131	1.094	21.088	0.00	934.08
20.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.134	1.102	22.375	0.00	74.88
20.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.134	1.102	22.375	0.00	934.08
25.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.137	1.110	23.451	0.00	74.88
25.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.137	1.110	23.451	0.00	934.08
30.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.139	1.118	24.369	0.00	74.88
30.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.139	1.118	24.369	0.00	934.08
35.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.142	1.127	25.172	0.00	74.88
35.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.142	1.127	25.172	0.00	934.08
36.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.144	1.133	25.322	0.00	14.98
36.00	1.25" Reinforcing	Yes	1.00	0.000	3.00	0.25	0.00	0.144	1.133	25.322	0.00	186.82
39.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.145	1.136	25.752	0.00	44.93
39.00	1.25" Reinforcing	Yes	3.00	0.000	3.00	0.75	0.00	0.145	1.136	25.752	0.00	560.45
40.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.084	0.000	25.890	0.00	14.98
45.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.085	0.000	26.540	0.00	74.88
50.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.085	0.000	27.135	0.00	74.88
55.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.087	0.000	27.685	0.00	74.88
60.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.089	0.000	28.197	0.00	74.88
65.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.091	0.000	28.676	0.00	74.88
70.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.093	0.000	29.127	0.00	74.88
75.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.096	0.000	29.553	0.00	74.88
79.00	1 5/8" Coax	Yes	4.00	0.000	3.96	1.32	0.00	0.098	0.000	29.878	0.00	59.90
80.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.099	0.000	29.958	0.00	14.98
84.00	1 5/8" Coax	Yes	4.00	0.000	3.96	1.32	0.00	0.100	1.001	30.267	0.00	59.90
85.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.100	1.000	30.342	0.00	14.98
90.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.102	1.005	30.710	0.00	74.88
95.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.105	1.014	31.061	0.00	74.88
100.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.107	1.022	31.399	0.00	74.88
105.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.111	1.032	31.723	0.00	74.88
110.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.114	1.041	32.035	0.00	74.88
115.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.117	1.052	32.336	0.00	74.88
118.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.120	1.061	32.512	0.00	44.93
120.00	1 5/8" Coax	Yes	2.00	0.000	3.96	0.66	0.00	0.122	1.066	32.627	0.00	29.95
123.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.124	1.072	32.797	0.00	44.93
125.00	1 5/8" Coax	Yes	2.00	0.000	3.96	0.66	0.00	0.126	1.079	32.909	0.00	29.95
128.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.128	1.085	33.073	0.00	44.93
										Totals:	**0.0**	**9,202.8**

Calculated Forces

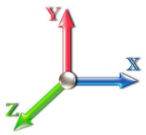
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-56.19	-40.18	0.00	-4633.2	0.00	4633.27	4238.25	2119.12	9474.98	4744.53	0.00	0.000	0.000	0.609
5.00	-53.56	-39.73	0.00	-4432.3	0.00	4432.37	4191.13	2095.57	9193.31	4603.49	0.09	-0.164	0.000	0.596
10.00	-50.96	-39.28	0.00	-4233.7	0.00	4233.71	4142.79	2071.40	8912.98	4463.11	0.35	-0.329	0.000	0.582
15.00	-48.38	-38.82	0.00	-4037.3	0.00	4037.31	4093.23	2046.62	8634.14	4323.49	0.78	-0.495	0.000	0.568
20.00	-45.83	-38.32	0.00	-3843.2	0.00	3843.22	4042.45	2021.22	8356.93	4184.68	1.39	-0.661	0.000	0.554
25.00	-43.31	-37.78	0.00	-3651.6	0.00	3651.64	3990.44	1995.22	8081.53	4046.77	2.17	-0.827	0.000	0.539
30.00	-40.82	-37.21	0.00	-3462.7	0.00	3462.75	3937.21	1968.60	7808.07	3909.84	3.13	-0.993	0.000	0.524
35.00	-38.40	-36.57	0.00	-3276.7	0.00	3276.70	3882.75	1941.38	7536.73	3773.96	4.25	-1.158	0.000	0.508
36.00	-37.88	-36.47	0.00	-3240.1	0.00	3240.12	3871.71	1935.86	7482.72	3746.92	4.50	-1.192	0.000	0.505
36.00	-37.88	-36.47	0.00	-3240.1	0.00	3240.12	3871.71	1935.86	7482.72	3746.92	4.50	-1.192	0.000	0.505
39.00	-36.44	-36.10	0.00	-3130.7	0.00	3130.70	3838.31	1919.15	7321.27	3666.08	5.28	-1.293	0.000	0.864
40.00	-35.82	-36.07	0.00	-3094.6	0.00	3094.61	3827.07	1913.54	7267.64	3639.22	5.56	-1.351	0.000	0.860
45.00	-33.14	-35.57	0.00	-2914.2	0.00	2914.24	3812.30	1906.15	7197.58	3604.14	7.13	-1.639	0.000	0.818
50.00	-31.61	-35.09	0.00	-2736.3	0.00	2736.38	3755.07	1877.54	6931.57	3470.94	9.00	-1.928	0.000	0.797
55.00	-30.11	-34.58	0.00	-2560.9	0.00	2560.95	3696.63	1848.32	6668.16	3339.04	11.17	-2.204	0.000	0.775
60.00	-28.64	-34.07	0.00	-2388.0	0.00	2388.04	3636.96	1818.48	6407.52	3208.52	13.63	-2.480	0.000	0.753
65.00	-27.20	-33.55	0.00	-2217.7	0.00	2217.71	3576.08	1788.04	6149.79	3079.47	16.37	-2.756	0.000	0.728
70.00	-25.79	-33.02	0.00	-2049.9	0.00	2049.98	3513.96	1756.98	5895.14	2951.95	19.40	-3.031	0.000	0.702
75.00	-24.42	-32.47	0.00	-1884.8	0.00	1884.89	3450.63	1725.31	5643.71	2826.05	22.72	-3.303	0.000	0.674
79.00	-23.39	-32.01	0.00	-1755.0	0.00	1755.02	3399.08	1699.54	5445.00	2726.55	25.58	-3.520	0.000	0.651
80.00	-22.92	-31.92	0.00	-1723.0	0.00	1723.01	3386.07	1693.03	5395.67	2701.84	26.33	-3.576	0.000	0.645
84.00	-21.28	-31.40	0.00	-1595.3	0.00	1595.34	2492.17	1246.08	3964.65	1985.27	29.41	-3.790	0.000	0.813
85.00	-20.98	-31.34	0.00	-1563.9	0.00	1563.93	2483.20	1241.60	3929.49	1967.67	30.21	-3.844	0.000	0.804
90.00	-19.82	-30.80	0.00	-1407.2	0.00	1407.23	2437.73	1218.86	3754.97	1880.28	34.40	-4.139	0.000	0.757
95.00	-18.69	-30.25	0.00	-1253.2	0.00	1253.24	2391.17	1195.58	3582.65	1793.99	38.88	-4.425	0.000	0.707
100.00	-17.59	-29.69	0.00	-1102.0	0.00	1102.01	2343.52	1171.76	3412.67	1708.87	43.66	-4.701	0.000	0.653
105.00	-16.53	-29.12	0.00	-953.58	0.00	953.58	2294.79	1147.40	3245.17	1624.99	48.72	-4.962	0.000	0.595
110.00	-15.51	-28.55	0.00	-807.98	0.00	807.98	2244.98	1122.49	3080.27	1542.43	54.05	-5.206	0.000	0.531
115.00	-14.54	-27.96	0.00	-665.24	0.00	665.24	2194.08	1097.04	2918.13	1461.23	59.61	-5.430	0.000	0.463
118.00	-11.54	-23.61	0.00	-581.37	0.00	581.37	2163.02	1081.51	2822.22	1413.21	63.06	-5.554	0.000	0.417
120.00	-11.18	-23.38	0.00	-534.15	0.00	534.15	2136.45	1068.22	2751.59	1377.84	65.40	-5.633	0.000	0.393
123.00	-10.67	-23.03	0.00	-464.00	0.00	464.00	2094.98	1047.49	2645.31	1324.62	68.97	-5.743	0.000	0.356
123.00	-10.67	-23.03	0.00	-464.00	0.00	464.00	1330.70	665.35	1690.49	846.50	68.97	-5.743	0.000	0.557
125.00	-10.39	-22.81	0.00	-417.94	0.00	417.94	1319.70	659.85	1654.32	828.39	71.39	-5.811	0.000	0.514
128.00	-8.33	-18.20	0.00	-349.51	0.00	349.51	1302.88	651.44	1600.34	801.36	75.08	-5.943	0.000	0.443
130.00	-8.08	-18.00	0.00	-313.12	0.00	313.12	1291.45	645.73	1564.57	783.45	77.58	-6.024	0.000	0.407
135.00	-7.54	-17.49	0.00	-223.11	0.00	223.11	1262.12	631.06	1475.93	739.06	83.98	-6.193	0.000	0.309
138.00	-4.61	-10.95	0.00	-170.65	0.00	170.65	1244.00	622.00	1423.34	712.73	87.89	-6.277	0.000	0.243
140.00	-4.42	-10.75	0.00	-148.75	0.00	148.75	1231.70	615.85	1388.54	695.30	90.53	-6.325	0.000	0.218
145.00	-3.98	-10.26	0.00	-94.98	0.00	94.98	1200.20	600.10	1302.53	652.23	97.19	-6.420	0.000	0.149
149.00	-2.40	-6.28	0.00	-53.93	0.00	53.93	1174.22	587.11	1234.81	618.32	102.58	-6.473	0.000	0.089
150.00	-2.33	-6.18	0.00	-47.65	0.00	47.65	1167.61	583.81	1218.04	609.93	103.94	-6.482	0.000	0.080
155.00	-1.98	-5.72	0.00	-16.73	0.00	16.73	1133.94	566.97	1135.21	568.45	110.73	-6.514	0.000	0.031
156.50	-1.37	-4.15	0.00	-8.15	0.00	8.15	1123.63	561.81	1110.70	556.18	112.78	-6.518	0.000	0.016
158.00	0.00	-3.97	0.00	-1.92	0.00	1.92	1113.22	556.61	1086.36	543.99	114.82	-6.520	0.000	0.004

Wind Loading - Shaft

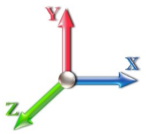
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

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	RB1	1.00	0.85	21.088	23.20	431.24	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	423.24	0.702 *	0.000	5.00	22.941	16.09	597.3	0.0	981.4
10.00		1.00	0.85	21.088	23.20	415.23	0.706 *	0.000	5.00	22.511	15.90	590.0	0.0	962.8
15.00		1.00	0.85	21.088	23.20	407.23	0.711 *	0.000	5.00	22.081	15.70	582.8	0.0	944.3
20.00		1.00	0.90	22.375	24.61	411.23	0.716 *	0.000	5.00	21.651	15.51	610.6	0.0	925.8
25.00		1.00	0.95	23.451	25.80	412.56	0.721 *	0.000	5.00	21.222	15.31	631.9	0.0	907.3
30.00		1.00	0.98	24.369	26.81	411.95	0.727 *	0.000	5.00	20.792	15.12	648.3	0.0	888.8
35.00		1.00	1.01	25.172	27.69	409.94	0.733 *	0.000	5.00	20.362	14.92	661.0	0.0	870.3
36.00	RT1	1.00	1.02	25.322	27.85	409.40	0.736 *	0.000	1.00	4.021	2.96	131.9	0.0	171.8
39.00	Bot - Section 2	1.00	1.04	25.752	28.33	407.56	0.739 *	0.000	3.00	11.959	8.83	400.4	0.0	511.1
40.00		1.00	1.04	25.890	28.48	406.87	0.650	0.000	1.00	4.015	2.61	118.9	0.0	340.5
45.00	Top - Section 1	1.00	1.07	26.540	29.19	402.97	0.650	0.000	5.00	19.820	12.88	601.8	0.0	1680.1
50.00		1.00	1.09	27.135	29.85	405.08	0.650	0.000	5.00	19.390	12.60	601.9	0.0	828.4
55.00		1.00	1.12	27.685	30.45	400.00	0.650	0.000	5.00	18.960	12.32	600.5	0.0	809.9
60.00		1.00	1.14	28.197	31.02	394.42	0.650	0.000	5.00	18.530	12.04	597.7	0.0	791.4
65.00		1.00	1.16	28.676	31.54	388.42	0.650	0.000	5.00	18.100	11.77	593.8	0.0	772.8
70.00		1.00	1.17	29.127	32.04	382.05	0.650	0.000	5.00	17.670	11.49	588.8	0.0	754.3
75.00	Appurtenance(s)	1.00	1.19	29.553	32.51	375.36	0.650	0.000	5.00	17.240	11.21	582.9	0.0	735.8
79.00	Bot - Section 3	1.00	1.20	29.878	32.87	369.80	0.650	0.000	4.00	13.483	8.76	460.9	0.0	575.3
80.00		1.00	1.21	29.958	32.95	368.38	0.650	0.000	1.00	3.381	2.20	115.9	0.0	262.4
84.00	Top - Section 2	1.00	1.22	30.267	33.29	362.60	0.651 *	0.000	4.00	13.350	8.69	462.9	0.0	1035.9
85.00		1.00	1.22	30.342	33.38	367.04	0.650 *	0.000	1.00	3.295	2.14	114.4	0.0	117.3
90.00		1.00	1.24	30.710	33.78	359.60	0.653 *	0.000	5.00	16.215	10.60	572.7	0.0	577.3
95.00		1.00	1.25	31.061	34.17	351.93	0.659 *	0.000	5.00	15.785	10.40	568.5	0.0	561.9
100.00		1.00	1.27	31.399	34.54	344.07	0.665 *	0.000	5.00	15.356	10.20	563.9	0.0	546.5
105.00		1.00	1.28	31.723	34.89	336.02	0.671 *	0.000	5.00	14.926	10.01	558.8	0.0	531.0
110.00		1.00	1.29	32.035	35.24	327.80	0.677 *	0.000	5.00	14.496	9.81	553.3	0.0	515.6
115.00		1.00	1.30	32.336	35.57	319.43	0.684 *	0.000	5.00	14.066	9.62	547.3	0.0	500.2
118.00	Appurtenance(s)	1.00	1.31	32.512	35.76	314.33	0.689 *	0.000	3.00	8.233	5.68	324.8	0.0	292.7
120.00		1.00	1.32	32.627	35.89	310.91	0.693 *	0.000	2.00	5.403	3.75	215.1	0.0	192.0
123.00	Top - Section 3	1.00	1.32	32.797	36.08	305.72	0.697 *	0.000	3.00	7.975	5.56	320.9	0.0	283.4
125.00		1.00	1.33	32.909	36.20	302.24	0.701 *	0.000	2.00	5.231	3.67	212.4	0.0	130.5
128.00	Appurtenance(s)	1.00	1.33	33.073	36.38	296.98	0.705 *	0.000	3.00	7.717	5.44	316.8	0.0	192.6
130.00		1.00	1.34	33.182	36.50	293.45	0.650	0.000	2.00	5.059	3.29	192.0	0.0	126.2
135.00		1.00	1.35	33.446	36.79	284.54	0.650	0.000	5.00	12.347	8.03	472.4	0.0	308.0
138.00	Appurtenance(s)	1.00	1.35	33.601	36.96	279.13	0.650	0.000	3.00	7.202	4.68	276.8	0.0	179.6
140.00		1.00	1.36	33.703	37.07	275.51	0.650	0.000	2.00	4.715	3.06	181.8	0.0	117.6
145.00		1.00	1.37	33.953	37.35	266.37	0.650	0.000	5.00	11.487	7.47	446.2	0.0	286.4
149.00	Appurtenance(s)	1.00	1.38	34.148	37.56	258.98	0.650	0.000	4.00	8.880	5.77	346.9	0.0	221.3
150.00		1.00	1.38	34.196	37.62	257.13	0.650	0.000	1.00	2.177	1.42	85.2	0.0	54.2
155.00		1.00	1.39	34.433	37.88	247.79	0.650	0.000	5.00	10.627	6.91	418.6	0.0	264.8
156.50	Appurtenance(s)	1.00	1.39	34.503	37.95	244.97	0.650	0.000	1.50	3.104	2.02	122.5	0.0	77.3
158.00	Appurtenance(s)	1.00	1.39	34.573	38.03	242.14	0.650	0.000	1.50	3.066	1.99	121.2	0.0	76.4
								Totals:	**158.00**			**17,712.8**		**21,903.2**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

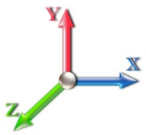
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	158.00	DB980F90E-M	6	34.596	38.055	0.81	1.00	18.23	51.30	0.000	0.500	1109.69	0.00	554.84
2	158.00	Low Profile Platform	1	34.596	38.055	1.00	1.00	25.00	1080.00	0.000	0.500	1522.21	0.00	761.10
3	158.00	APXVSPP18-C-A20	3	34.596	38.055	0.83	1.00	19.97	153.90	0.000	0.500	1215.93	0.00	607.96
4	156.50	1900MHz	6	34.503	37.954	0.90	1.00	1.89	27.00	0.000	0.000	114.77	0.00	0.00
5	156.50	800MHz Notch Filter	3	34.503	37.954	0.69	1.00	1.61	23.76	0.000	0.000	98.05	0.00	0.00
6	156.50	1900MHz RRH	3	34.503	37.954	1.15	1.00	13.11	118.80	0.000	0.000	796.11	0.00	0.00
7	156.50	800MHz	3	34.503	37.954	0.90	1.00	0.94	13.50	0.000	0.000	57.39	0.00	0.00
8	156.50	Collar Mount	1	34.503	37.954	1.00	1.00	5.00	315.00	0.000	0.000	303.63	0.00	0.00
9	149.00	DB844H90E-XY	12	34.148	37.563	0.88	0.80	32.21	151.20	0.000	0.000	1935.74	0.00	0.00
10	149.00	Low Profile Platform	1	34.148	37.563	1.00	1.00	25.00	1080.00	0.000	0.000	1502.53	0.00	0.00
11	138.00	Bias T	3	33.601	36.962	0.50	0.75	0.14	8.91	0.000	0.000	8.02	0.00	0.00
12	138.00	KRY 112 144/1	3	33.601	36.962	0.50	0.75	0.62	29.70	0.000	0.000	36.55	0.00	0.00
13	138.00	LNX-6515DS-A1M	3	33.601	36.962	0.63	0.75	21.68	134.46	0.000	0.000	1282.02	0.00	0.00
14	138.00	APXV18-206516S-A20	3	33.601	36.962	0.58	0.75	6.34	50.49	0.000	0.000	374.67	0.00	0.00
15	138.00	APX16DWV-16DWVS-E-	6	33.601	36.962	0.50	0.75	19.48	219.78	0.000	0.000	1151.83	0.00	0.00
16	138.00	Platform w/ HR & V-Brace	1	33.601	36.962	1.00	1.00	51.70	2021.40	0.000	0.000	3057.46	0.00	0.00
17	128.00	BXA-171063-12BF	1	33.073	36.381	0.54	0.80	0.00	19.80	0.000	0.000	0.00	0.00	0.00
18	128.00	BXA-70063-6BF	3	33.073	36.381	0.70	0.80	10.05	40.50	0.000	0.000	585.19	0.00	0.00
19	128.00	DB846F65ZAXY	6	33.073	36.381	0.75	0.80	31.81	113.40	0.000	0.000	1851.61	0.00	0.00
20	128.00	SLCP 2x6014	2	33.073	36.381	0.73	0.80	9.45	36.00	0.000	0.000	550.05	0.00	0.00
21	128.00	Low Profile Platform	1	33.073	36.381	0.80	0.80	17.60	1350.00	0.000	0.000	1024.48	0.00	0.00
22	128.00	FD9R6004-2C-3L	6	33.073	36.381	0.54	0.80	1.16	16.74	0.000	0.000	67.39	0.00	0.00
23	118.00	7770	6	32.512	35.763	0.62	0.80	20.33	189.00	0.000	0.000	1163.19	0.00	0.00
24	118.00	Low Profile Platform	1	32.512	35.763	0.80	0.80	17.60	1350.00	0.000	0.000	1007.09	0.00	0.00
25	118.00	P65-16-XLH-RR	3	32.512	35.763	0.63	0.80	15.47	143.10	0.000	0.000	885.29	0.00	0.00
26	118.00	DC6-48-60-18	1	32.512	35.763	0.80	0.80	0.74	28.62	0.000	0.000	42.11	0.00	0.00
27	118.00	LGP21401	6	32.512	35.763	0.54	0.80	4.15	76.14	0.000	0.000	237.39	0.00	0.00
28	118.00	TT19-08BP111-001	3	32.512	35.763	0.54	0.80	1.03	43.20	0.000	0.000	58.89	0.00	0.00
29	118.00	RRUS-11	6	32.512	35.763	0.40	0.80	6.05	275.40	0.000	0.000	346.07	0.00	0.00
30	75.00	GPS	1	29.553	32.509	1.00	1.00	0.01	3.33	0.000	0.000	0.52	0.00	0.00
							Totals:		**9,164.43**			**22,385.86**		

Total Applied Force Summary

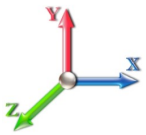
Structure:	CT46131-A-SBA		**Code:**	EIA/TIA-222-G	10/19/2016
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 16

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

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
5.00		597.28	1889.24	0.00	0.00
10.00		590.02	1870.72	0.00	0.00
15.00		582.76	1852.21	0.00	0.00
20.00		610.64	1833.69	0.00	0.00
25.00		631.93	1815.17	0.00	0.00
30.00		648.27	1796.66	0.00	0.00
35.00		660.99	1778.14	0.00	0.00
36.00		131.94	353.41	0.00	0.00
39.00		400.41	1055.78	0.00	0.00
40.00		118.93	381.93	0.00	0.00
45.00		601.76	1887.45	0.00	0.00
50.00		601.91	1035.70	0.00	0.00
55.00		600.49	1017.19	0.00	0.00
60.00		597.73	998.67	0.00	0.00
65.00		593.78	980.15	0.00	0.00
70.00		588.80	961.64	0.00	0.00
75.00	(1) attachments	583.40	946.45	0.00	0.00
79.00		460.85	740.59	0.00	0.00
80.00		115.86	303.70	0.00	0.00
84.00		462.91	1201.21	0.00	0.00
85.00		114.42	158.63	0.00	0.00
90.00		572.67	783.92	0.00	0.00
95.00		568.54	768.49	0.00	0.00
100.00		563.90	753.06	0.00	0.00
105.00		558.80	737.63	0.00	0.00
110.00		553.28	722.20	0.00	0.00
115.00		547.35	706.77	0.00	0.00
118.00	(26) attachments	4064.85	2522.11	0.00	0.00
120.00		215.07	257.82	0.00	0.00
123.00		320.90	382.10	0.00	0.00
125.00		212.39	196.31	0.00	0.00
128.00	(19) attachments	4395.49	1867.67	0.00	0.00
130.00		192.04	169.53	0.00	0.00
135.00		472.41	416.25	0.00	0.00
138.00	(19) attachments	6187.39	2709.30	0.00	0.00
140.00		181.80	146.63	0.00	0.00
145.00		446.18	359.00	0.00	0.00
149.00	(13) attachments	3785.16	1510.62	0.00	0.00
150.00		85.17	61.65	0.00	0.00
155.00		418.62	301.76	0.00	0.00
156.50	(16) attachments	1492.48	586.48	0.00	0.00
158.00	(10) attachments	3969.07	1372.65	0.00	1923.91
	Totals:	**40,098.65**	**42,190.24**	**0.00**	**1,923.91**

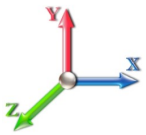
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.126	1.079	21.088	0.00	56.16
5.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.126	1.079	21.088	0.00	700.56
10.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.129	1.086	21.088	0.00	56.16
10.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.129	1.086	21.088	0.00	700.56
15.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.131	1.094	21.088	0.00	56.16
15.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.131	1.094	21.088	0.00	700.56
20.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.134	1.102	22.375	0.00	56.16
20.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.134	1.102	22.375	0.00	700.56
25.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.137	1.110	23.451	0.00	56.16
25.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.137	1.110	23.451	0.00	700.56
30.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.139	1.118	24.369	0.00	56.16
30.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.139	1.118	24.369	0.00	700.56
35.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.142	1.127	25.172	0.00	56.16
35.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.142	1.127	25.172	0.00	700.56
36.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.144	1.133	25.322	0.00	11.23
36.00	1.25" Reinforcing	Yes	1.00	0.000	3.00	0.25	0.00	0.144	1.133	25.322	0.00	140.11
39.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.145	1.136	25.752	0.00	33.70
39.00	1.25" Reinforcing	Yes	3.00	0.000	3.00	0.75	0.00	0.145	1.136	25.752	0.00	420.34
40.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.084	0.000	25.890	0.00	11.23
45.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.085	0.000	26.540	0.00	56.16
50.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.085	0.000	27.135	0.00	56.16
55.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.087	0.000	27.685	0.00	56.16
60.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.089	0.000	28.197	0.00	56.16
65.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.091	0.000	28.676	0.00	56.16
70.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.093	0.000	29.127	0.00	56.16
75.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.096	0.000	29.553	0.00	56.16
79.00	1 5/8" Coax	Yes	4.00	0.000	3.96	1.32	0.00	0.098	0.000	29.878	0.00	44.93
80.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.099	0.000	29.958	0.00	11.23
84.00	1 5/8" Coax	Yes	4.00	0.000	3.96	1.32	0.00	0.100	1.001	30.267	0.00	44.93
85.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.100	1.000	30.342	0.00	11.23
90.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.102	1.005	30.710	0.00	56.16
95.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.105	1.014	31.061	0.00	56.16
100.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.107	1.022	31.399	0.00	56.16
105.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.111	1.032	31.723	0.00	56.16
110.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.114	1.041	32.035	0.00	56.16
115.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.117	1.052	32.336	0.00	56.16
118.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.120	1.061	32.512	0.00	33.70
120.00	1 5/8" Coax	Yes	2.00	0.000	3.96	0.66	0.00	0.122	1.066	32.627	0.00	22.46
123.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.124	1.072	32.797	0.00	33.70
125.00	1 5/8" Coax	Yes	2.00	0.000	3.96	0.66	0.00	0.126	1.079	32.909	0.00	22.46
128.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.128	1.085	33.073	0.00	33.70
									Totals:		**0.0**	**6,902.1**

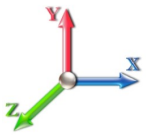
Calculated Forces

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-42.13	-40.16	0.00	-4589.7	0.00	4589.76	4238.25	2119.12	9474.98	4744.53	0.00	0.000	0.000	0.602
5.00	-40.13	-39.67	0.00	-4388.9	0.00	4388.97	4191.13	2095.57	9193.31	4603.49	0.09	-0.163	0.000	0.588
10.00	-38.15	-39.18	0.00	-4190.6	0.00	4190.60	4142.79	2071.40	8912.98	4463.11	0.35	-0.326	0.000	0.575
15.00	-36.19	-38.69	0.00	-3994.6	0.00	3994.68	4093.23	2046.62	8634.14	4323.49	0.78	-0.490	0.000	0.560
20.00	-34.26	-38.16	0.00	-3801.2	0.00	3801.22	4042.45	2021.22	8356.93	4184.68	1.38	-0.654	0.000	0.546
25.00	-32.34	-37.60	0.00	-3610.4	0.00	3610.42	3990.44	1995.22	8081.53	4046.77	2.15	-0.818	0.000	0.531
30.00	-30.45	-37.01	0.00	-3422.4	0.00	3422.43	3937.21	1968.60	7808.07	3909.84	3.09	-0.982	0.000	0.516
35.00	-28.62	-36.36	0.00	-3237.3	0.00	3237.38	3882.75	1941.38	7536.73	3773.96	4.21	-1.146	0.000	0.501
36.00	-28.23	-36.26	0.00	-3201.0	0.00	3201.02	3871.71	1935.86	7482.72	3746.92	4.45	-1.179	0.000	0.498
36.00	-28.23	-36.26	0.00	-3201.0	0.00	3201.02	3871.71	1935.86	7482.72	3746.92	4.45	-1.179	0.000	0.498
39.00	-27.13	-35.87	0.00	-3092.2	0.00	3092.24	3838.31	1919.15	7321.27	3666.08	5.23	-1.279	0.000	0.851
40.00	-26.65	-35.83	0.00	-3056.3	0.00	3056.37	3827.07	1913.54	7267.64	3639.22	5.50	-1.337	0.000	0.847
45.00	-24.60	-35.30	0.00	-2877.2	0.00	2877.24	3812.30	1906.15	7197.58	3604.14	7.05	-1.621	0.000	0.805
50.00	-23.41	-34.78	0.00	-2700.7	0.00	2700.75	3755.07	1877.54	6931.57	3470.94	8.91	-1.906	0.000	0.785
55.00	-22.26	-34.25	0.00	-2526.8	0.00	2526.86	3696.63	1848.32	6668.16	3339.04	11.05	-2.179	0.000	0.763
60.00	-21.12	-33.71	0.00	-2355.6	0.00	2355.62	3636.96	1818.48	6407.52	3208.52	13.48	-2.451	0.000	0.740
65.00	-20.01	-33.17	0.00	-2187.0	0.00	2187.06	3576.08	1788.04	6149.79	3079.47	16.19	-2.723	0.000	0.716
70.00	-18.93	-32.62	0.00	-2021.2	0.00	2021.22	3513.96	1756.98	5895.14	2951.95	19.18	-2.994	0.000	0.690
75.00	-17.88	-32.06	0.00	-1858.1	0.00	1858.10	3450.63	1725.31	5643.71	2826.05	22.46	-3.262	0.000	0.663
79.00	-17.09	-31.60	0.00	-1729.8	0.00	1729.85	3399.08	1699.54	5445.00	2726.55	25.29	-3.476	0.000	0.640
80.00	-16.73	-31.51	0.00	-1698.2	0.00	1698.25	3386.07	1693.03	5395.67	2701.84	26.02	-3.531	0.000	0.634
84.00	-15.48	-31.00	0.00	-1572.2	0.00	1572.23	2492.17	1246.08	3964.65	1985.27	29.07	-3.742	0.000	0.799
85.00	-15.24	-30.92	0.00	-1541.2	0.00	1541.22	2483.20	1241.60	3929.49	1967.67	29.86	-3.795	0.000	0.790
90.00	-14.35	-30.37	0.00	-1386.6	0.00	1386.60	2437.73	1218.86	3754.97	1880.28	33.99	-4.086	0.000	0.744
95.00	-13.48	-29.81	0.00	-1234.7	0.00	1234.74	2391.17	1195.58	3582.65	1793.99	38.42	-4.368	0.000	0.695
100.00	-12.64	-29.25	0.00	-1085.6	0.00	1085.68	2343.52	1171.76	3412.67	1708.87	43.13	-4.639	0.000	0.641
105.00	-11.82	-28.68	0.00	-939.43	0.00	939.43	2294.79	1147.40	3245.17	1624.99	48.13	-4.897	0.000	0.584
110.00	-11.04	-28.11	0.00	-796.01	0.00	796.01	2244.98	1122.49	3080.27	1542.43	53.38	-5.138	0.000	0.522
115.00	-10.30	-27.54	0.00	-655.43	0.00	655.43	2194.08	1097.04	2918.13	1461.23	58.88	-5.358	0.000	0.454
118.00	-8.14	-23.26	0.00	-572.83	0.00	572.83	2163.02	1081.51	2822.22	1413.21	62.28	-5.481	0.000	0.410
120.00	-7.86	-23.04	0.00	-526.30	0.00	526.30	2136.45	1068.22	2751.59	1377.84	64.59	-5.558	0.000	0.386
123.00	-7.48	-22.69	0.00	-457.19	0.00	457.19	2094.98	1047.49	2645.31	1324.62	68.11	-5.666	0.000	0.349
123.00	-7.48	-22.69	0.00	-457.19	0.00	457.19	1330.70	665.35	1690.49	846.50	68.11	-5.666	0.000	0.547
125.00	-7.27	-22.48	0.00	-411.80	0.00	411.80	1319.70	659.85	1654.32	828.39	70.50	-5.734	0.000	0.504
128.00	-5.82	-17.92	0.00	-344.37	0.00	344.37	1302.88	651.44	1600.34	801.36	74.14	-5.863	0.000	0.435
130.00	-5.63	-17.73	0.00	-308.53	0.00	308.53	1291.45	645.73	1564.57	783.45	76.61	-5.943	0.000	0.399
135.00	-5.23	-17.23	0.00	-219.89	0.00	219.89	1262.12	631.06	1475.93	739.06	82.92	-6.110	0.000	0.302
138.00	-3.19	-10.79	0.00	-168.21	0.00	168.21	1244.00	622.00	1423.34	712.73	86.78	-6.192	0.000	0.239
140.00	-3.05	-10.59	0.00	-146.64	0.00	146.64	1231.70	615.85	1388.54	695.30	89.38	-6.239	0.000	0.214
145.00	-2.73	-10.12	0.00	-93.67	0.00	93.67	1200.20	600.10	1302.53	652.23	95.95	-6.334	0.000	0.146
149.00	-1.64	-6.19	0.00	-53.21	0.00	53.21	1174.22	587.11	1234.81	618.32	101.27	-6.385	0.000	0.088
150.00	-1.59	-6.10	0.00	-47.02	0.00	47.02	1167.61	583.81	1218.04	609.93	102.61	-6.395	0.000	0.079
155.00	-1.34	-5.65	0.00	-16.54	0.00	16.54	1133.94	566.97	1135.21	568.45	109.31	-6.426	0.000	0.030
156.50	-0.92	-4.10	0.00	-8.07	0.00	8.07	1123.63	561.81	1110.70	556.18	111.33	-6.431	0.000	0.015
158.00	0.00	-3.97	0.00	-1.92	0.00	1.92	1113.22	556.61	1086.36	543.99	113.35	-6.432	0.000	0.004

Wind Loading - Shaft

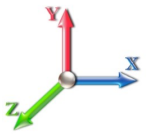
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

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	RB1	1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.295 *	1.242	5.00	23.976	31.05	176.5	427.6	1736.1
10.00		1.00	0.85	5.168	5.68	0.00	1.304 *	1.331	5.00	23.620	30.80	175.1	450.5	1734.3
15.00		1.00	0.85	5.168	5.68	0.00	1.313 *	1.386	5.00	23.237	30.50	173.4	460.8	1719.9
20.00		1.00	0.90	5.483	6.03	0.00	1.322 *	1.427	5.00	22.840	30.20	182.2	465.6	1700.0
25.00		1.00	0.95	5.747	6.32	0.00	1.332 *	1.459	5.00	22.437	29.89	188.9	467.1	1676.8
30.00		1.00	0.98	5.972	6.57	0.00	1.342 *	1.486	5.00	22.030	29.57	194.2	466.4	1651.5
35.00		1.00	1.01	6.169	6.79	0.00	1.353 *	1.509	5.00	21.619	29.24	198.5	464.3	1624.7
36.00	RT1	1.00	1.02	6.206	6.83	0.00	1.359 *	1.513	1.00	4.273	5.81	39.6	92.7	321.9
39.00	Bot - Section 2	1.00	1.04	6.311	6.94	0.00	1.364 *	1.525	3.00	12.722	17.35	120.4	277.0	958.4
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	1.00	4.270	5.12	35.8	93.6	547.6
45.00	Top - Section 1	1.00	1.07	6.504	7.15	0.00	1.200	1.547	5.00	21.109	25.33	181.2	464.1	2704.2
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	5.00	20.693	24.83	181.6	459.2	1563.7
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.579	5.00	20.275	24.33	181.6	453.7	1533.5
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	19.857	23.83	181.1	447.6	1502.8
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	19.438	23.33	180.3	441.1	1471.6
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	5.00	19.018	22.82	179.2	434.2	1440.0
75.00	Appurtenance(s)	1.00	1.19	7.243	7.97	0.00	1.200	1.628	5.00	18.597	22.32	177.8	427.0	1408.1
79.00	Bot - Section 3	1.00	1.20	7.322	8.05	0.00	1.200	1.637	4.00	14.574	17.49	140.9	336.8	1103.8
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	1.00	3.654	4.38	35.4	85.2	435.0
84.00	Top - Section 2	1.00	1.22	7.418	8.16	0.00	1.202 *	1.647	4.00	14.448	17.36	141.7	335.7	1716.9
85.00		1.00	1.22	7.436	8.18	0.00	1.201 *	1.649	1.00	3.569	4.29	35.1	83.6	240.0
90.00		1.00	1.24	7.526	8.28	0.00	1.206 *	1.658	5.00	17.597	21.23	175.7	410.0	1179.7
95.00		1.00	1.25	7.612	8.37	0.00	1.216 *	1.667	5.00	17.175	20.89	174.9	401.7	1150.9
100.00		1.00	1.27	7.695	8.46	0.00	1.227 *	1.676	5.00	16.752	20.55	174.0	393.2	1121.8
105.00		1.00	1.28	7.774	8.55	0.00	1.238 *	1.684	5.00	16.329	20.21	172.9	384.4	1092.5
110.00		1.00	1.29	7.851	8.64	0.00	1.250 *	1.692	5.00	15.906	19.88	171.7	375.5	1063.0
115.00		1.00	1.30	7.925	8.72	0.00	1.262 *	1.699	5.00	15.482	19.54	170.4	366.5	1033.4
118.00	Appurtenance(s)	1.00	1.31	7.968	8.76	0.00	1.273 *	1.704	3.00	9.085	11.56	101.4	216.6	606.8
120.00		1.00	1.32	7.996	8.80	0.00	1.280 *	1.707	2.00	5.972	7.64	67.2	142.9	399.0
123.00	Top - Section 3	1.00	1.32	8.038	8.84	0.00	1.287 *	1.711	3.00	8.831	11.36	100.5	211.0	588.9
125.00		1.00	1.33	8.065	8.87	0.00	1.294 *	1.714	2.00	5.802	7.51	66.6	139.1	313.2
128.00	Appurtenance(s)	1.00	1.33	8.105	8.92	0.00	1.302 *	1.718	3.00	8.576	11.16	99.5	205.3	462.1
130.00		1.00	1.34	8.132	8.95	0.00	1.200	1.720	2.00	5.632	6.76	60.5	135.3	303.6
135.00		1.00	1.35	8.197	9.02	0.00	1.200	1.727	5.00	13.786	16.54	149.2	328.7	739.4
138.00	Appurtenance(s)	1.00	1.35	8.235	9.06	0.00	1.200	1.731	3.00	8.067	9.68	87.7	193.7	433.2
140.00		1.00	1.36	8.260	9.09	0.00	1.200	1.733	2.00	5.293	6.35	57.7	127.6	284.3
145.00		1.00	1.37	8.321	9.15	0.00	1.200	1.739	5.00	12.936	15.52	142.1	309.1	690.9
149.00	Appurtenance(s)	1.00	1.38	8.369	9.21	0.00	1.200	1.744	4.00	10.043	12.05	110.9	240.9	535.9
150.00		1.00	1.38	8.381	9.22	0.00	1.200	1.745	1.00	2.468	2.96	27.3	59.8	132.1
155.00		1.00	1.39	8.439	9.28	0.00	1.200	1.751	5.00	12.086	14.50	134.6	289.0	642.0
156.50	Appurtenance(s)	1.00	1.39	8.456	9.30	0.00	1.200	1.753	1.50	3.542	4.25	39.5	85.8	188.9
158.00	Appurtenance(s)	1.00	1.39	8.473	9.32	0.00	1.200	1.754	1.50	3.504	4.21	39.2	84.9	186.7
								Totals:	**158.00**			**5,424.0**		**41,939.0**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

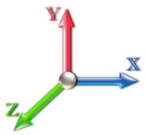
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	158.00	DB980F90E-M	6	8.478	9.326	0.84	1.00	24.23	669.58	0.000	0.500	225.99	0.00	113.00
2	158.00	Low Profile Platform	1	8.478	9.326	1.00	1.00	46.05	2192.58	0.000	0.500	429.49	0.00	214.75
3	158.00	APXVSPP18-C-A20	3	8.478	9.326	0.85	1.00	27.61	577.96	0.000	0.500	257.52	0.00	128.76
4	156.50	1900MHz	6	8.456	9.301	0.93	1.00	4.43	92.27	0.000	0.000	41.17	0.00	0.00
5	156.50	800MHz Notch Filter	3	8.456	9.301	0.76	1.00	3.26	69.83	0.000	0.000	30.32	0.00	0.00
6	156.50	1900MHz RRH	3	8.456	9.301	1.13	1.00	17.61	393.68	0.000	0.000	163.84	0.00	0.00
7	156.50	800MHz	3	8.456	9.301	0.93	1.00	2.21	46.13	0.000	0.000	20.58	0.00	0.00
8	156.50	Collar Mount	1	8.456	9.301	1.00	1.00	8.51	614.44	0.000	0.000	79.11	0.00	0.00
9	149.00	DB844H90E-XY	12	8.369	9.206	0.86	0.80	40.51	1602.19	0.000	0.000	372.95	0.00	0.00
10	149.00	Low Profile Platform	1	8.369	9.206	1.00	1.00	45.93	2186.43	0.000	0.000	422.81	0.00	0.00
11	138.00	Bias T	3	8.235	9.058	0.50	0.75	0.49	18.69	0.000	0.000	4.40	0.00	0.00
12	138.00	KRY 112 144/1	3	8.235	9.058	0.50	0.75	1.33	62.38	0.000	0.000	12.03	0.00	0.00
13	138.00	LNX-6515DS-A1M	3	8.235	9.058	0.64	0.75	28.13	664.82	0.000	0.000	254.83	0.00	0.00
14	138.00	APXV18-206516S-A20	3	8.235	9.058	0.61	0.75	10.06	215.80	0.000	0.000	91.12	0.00	0.00
15	138.00	APX16DWV-16DWVS-E-	6	8.235	9.058	0.52	0.75	23.83	1431.55	0.000	0.000	215.85	0.00	0.00
16	138.00	Platform w/ HR & V-Brace	1	8.235	9.058	1.00	1.00	89.64	4800.96	0.000	0.000	811.98	0.00	0.00
17	128.00	BXA-171063-12BF	1	8.105	8.916	0.54	0.80	3.85	152.09	0.000	0.000	34.32	0.00	0.00
18	128.00	BXA-70063-6BF	3	8.105	8.916	0.72	0.80	15.29	253.53	0.000	0.000	136.33	0.00	0.00
19	128.00	DB846F65ZAXY	6	8.105	8.916	0.76	0.80	37.76	1398.52	0.000	0.000	336.66	0.00	0.00
20	128.00	SLCP 2x6014	2	8.105	8.916	0.74	0.80	12.56	294.13	0.000	0.000	111.98	0.00	0.00
21	128.00	Low Profile Platform	1	8.105	8.916	0.80	0.80	31.51	2788.32	0.000	0.000	280.92	0.00	0.00
22	128.00	FD9R6004-2C-3L	6	8.105	8.916	0.54	0.80	2.56	55.92	0.000	0.000	22.83	0.00	0.00
23	118.00	7770	6	7.968	8.765	0.64	0.80	25.06	1252.04	0.000	0.000	219.68	0.00	0.00
24	118.00	Low Profile Platform	1	7.968	8.765	0.80	0.80	31.39	2777.88	0.000	0.000	275.16	0.00	0.00
25	118.00	P65-16-XLH-RR	3	7.968	8.765	0.65	0.80	21.18	532.61	0.000	0.000	185.65	0.00	0.00
26	118.00	DC6-48-60-18	1	7.968	8.765	0.80	0.80	1.08	80.82	0.000	0.000	9.45	0.00	0.00
27	118.00	LGP21401	6	7.968	8.765	0.54	0.80	6.77	205.37	0.000	0.000	59.36	0.00	0.00
28	118.00	TT19-08BP111-001	3	7.968	8.765	0.54	0.80	1.96	99.48	0.000	0.000	17.18	0.00	0.00
29	118.00	RRUS-11	6	7.968	8.765	0.40	0.80	7.53	694.56	0.000	0.000	66.01	0.00	0.00
30	75.00	GPS	1	7.243	7.967	1.00	1.00	0.01	8.14	0.000	0.000	0.08	0.00	0.00
							Totals:		**26,232.69**			**5,189.58**		

Total Applied Force Summary

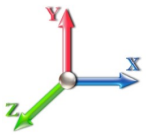
Structure:	CT46131-A-SBA		**Code:**	EIA/TIA-222-G	10/19/2016
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 21

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

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
5.00		176.52	3132.57	0.00	0.00
10.00		175.07	3143.94	0.00	0.00
15.00		173.41	3137.75	0.00	0.00
20.00		182.16	3123.86	0.00	0.00
25.00		188.93	3105.54	0.00	0.00
30.00		194.23	3084.30	0.00	0.00
35.00		198.46	3060.98	0.00	0.00
36.00		39.65	609.25	0.00	0.00
39.00		120.45	1821.74	0.00	0.00
40.00		35.77	637.92	0.00	0.00
45.00		181.23	3157.88	0.00	0.00
50.00		181.64	2019.15	0.00	0.00
55.00		181.59	1990.63	0.00	0.00
60.00		181.13	1961.44	0.00	0.00
65.00		180.32	1931.69	0.00	0.00
70.00		179.20	1901.45	0.00	0.00
75.00	(1) attachments	177.88	1878.91	0.00	0.00
79.00		140.87	1474.01	0.00	0.00
80.00		35.41	527.59	0.00	0.00
84.00		141.67	2088.01	0.00	0.00
85.00		35.05	332.84	0.00	0.00
90.00		175.74	1644.85	0.00	0.00
95.00		174.92	1616.99	0.00	0.00
100.00		173.96	1588.87	0.00	0.00
105.00		172.87	1560.50	0.00	0.00
110.00		171.67	1531.92	0.00	0.00
115.00		170.36	1503.13	0.00	0.00
118.00	(26) attachments	933.84	6531.74	0.00	0.00
120.00		67.22	564.70	0.00	0.00
123.00		100.48	837.81	0.00	0.00
125.00		66.62	479.26	0.00	0.00
128.00	(19) attachments	1022.58	5653.93	0.00	0.00
130.00		60.46	361.38	0.00	0.00
135.00		149.16	883.71	0.00	0.00
138.00	(19) attachments	1477.90	7714.00	0.00	0.00
140.00		57.71	323.08	0.00	0.00
145.00		142.09	787.72	0.00	0.00
149.00	(13) attachments	906.70	4402.04	0.00	0.00
150.00		27.30	142.01	0.00	0.00
155.00		134.63	691.29	0.00	0.00
156.50	(16) attachments	374.55	1420.03	0.00	0.00
158.00	(10) attachments	952.20	3641.57	0.00	456.50
	Totals:	**10,613.58**	**88,001.96**	**0.00**	**456.50**

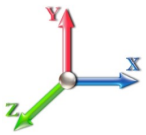
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.69	0.00	0.126	1.079	5.168	0.00	218.70
5.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.29	0.00	0.126	1.079	5.168	0.00	976.24
10.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.76	0.00	0.129	1.086	5.168	0.00	228.34
10.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.36	0.00	0.129	1.086	5.168	0.00	979.72
15.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.81	0.00	0.131	1.094	5.168	0.00	234.34
15.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.41	0.00	0.131	1.094	5.168	0.00	981.92
20.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.84	0.00	0.134	1.102	5.483	0.00	238.78
20.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.44	0.00	0.134	1.102	5.483	0.00	983.56
25.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.87	0.00	0.137	1.110	5.747	0.00	242.32
25.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.47	0.00	0.137	1.110	5.747	0.00	984.88
30.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.89	0.00	0.139	1.118	5.972	0.00	245.28
30.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.49	0.00	0.139	1.118	5.972	0.00	985.99
35.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.91	0.00	0.142	1.127	6.169	0.00	247.84
35.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.51	0.00	0.142	1.127	6.169	0.00	986.95
36.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.58	0.00	0.144	1.133	6.206	0.00	49.66
36.00	1.25" Reinforcing	Yes	1.00	0.000	3.00	0.50	0.00	0.144	1.133	6.206	0.00	197.43
39.00	1 5/8" Coax	Yes	3.00	0.000	3.96	1.75	0.00	0.145	1.136	6.311	0.00	149.79
39.00	1.25" Reinforcing	Yes	3.00	0.000	3.00	1.51	0.00	0.145	1.136	6.311	0.00	592.58
40.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.58	0.00	0.084	0.000	6.345	0.00	50.02
45.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.94	0.00	0.085	0.000	6.504	0.00	252.10
50.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.95	0.00	0.085	0.000	6.650	0.00	253.93
55.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.97	0.00	0.087	0.000	6.785	0.00	255.60
60.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.98	0.00	0.089	0.000	6.910	0.00	257.14
65.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.99	0.00	0.091	0.000	7.028	0.00	258.57
70.00	1 5/8" Coax	Yes	5.00	0.000	3.96	3.00	0.00	0.093	0.000	7.138	0.00	259.91
75.00	1 5/8" Coax	Yes	5.00	0.000	3.96	3.01	0.00	0.096	0.000	7.243	0.00	261.17
79.00	1 5/8" Coax	Yes	4.00	0.000	3.96	2.41	0.00	0.098	0.000	7.322	0.00	209.70
80.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.60	0.00	0.099	0.000	7.342	0.00	52.47
84.00	1 5/8" Coax	Yes	4.00	0.000	3.96	2.42	0.00	0.100	1.001	7.418	0.00	210.60
85.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.60	0.00	0.100	1.000	7.436	0.00	52.69
90.00	1 5/8" Coax	Yes	5.00	0.000	3.96	3.03	0.00	0.102	1.005	7.526	0.00	264.54
95.00	1 5/8" Coax	Yes	5.00	0.000	3.96	3.04	0.00	0.105	1.014	7.612	0.00	265.55
100.00	1 5/8" Coax	Yes	5.00	0.000	3.96	3.05	0.00	0.107	1.022	7.695	0.00	266.52
105.00	1 5/8" Coax	Yes	5.00	0.000	3.96	3.05	0.00	0.111	1.032	7.774	0.00	267.44
110.00	1 5/8" Coax	Yes	5.00	0.000	3.96	3.06	0.00	0.114	1.041	7.851	0.00	268.33
115.00	1 5/8" Coax	Yes	5.00	0.000	3.96	3.07	0.00	0.117	1.052	7.925	0.00	269.18
118.00	1 5/8" Coax	Yes	3.00	0.000	3.96	1.84	0.00	0.120	1.061	7.968	0.00	161.81
120.00	1 5/8" Coax	Yes	2.00	0.000	3.96	1.23	0.00	0.122	1.066	7.996	0.00	108.00
123.00	1 5/8" Coax	Yes	3.00	0.000	3.96	1.85	0.00	0.124	1.072	8.038	0.00	162.29
125.00	1 5/8" Coax	Yes	2.00	0.000	3.96	1.23	0.00	0.126	1.079	8.065	0.00	108.32
128.00	1 5/8" Coax	Yes	3.00	0.000	3.96	1.85	0.00	0.128	1.085	8.105	0.00	162.75
										Totals:	**0.0**	**14,202.9**

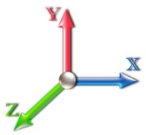
Calculated Forces

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

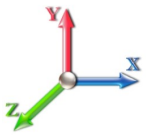
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-88.00	-10.65	0.00	-1228.4	0.00	1228.44	4238.25	2119.12	9474.98	4744.53	0.00	0.000	0.000	0.172
5.00	-84.86	-10.53	0.00	-1175.2	0.00	1175.21	4191.13	2095.57	9193.31	4603.49	0.02	-0.044	0.000	0.168
10.00	-81.71	-10.42	0.00	-1122.5	0.00	1122.53	4142.79	2071.40	8912.98	4463.11	0.09	-0.087	0.000	0.164
15.00	-78.56	-10.30	0.00	-1070.4	0.00	1070.44	4093.23	2046.62	8634.14	4323.49	0.21	-0.131	0.000	0.160
20.00	-75.43	-10.17	0.00	-1018.9	0.00	1018.95	4042.45	2021.22	8356.93	4184.68	0.37	-0.175	0.000	0.156
25.00	-72.32	-10.02	0.00	-968.12	0.00	968.12	3990.44	1995.22	8081.53	4046.77	0.58	-0.219	0.000	0.151
30.00	-69.23	-9.87	0.00	-918.01	0.00	918.01	3937.21	1968.60	7808.07	3909.84	0.83	-0.263	0.000	0.147
35.00	-66.16	-9.68	0.00	-868.67	0.00	868.67	3882.75	1941.38	7536.73	3773.96	1.13	-0.307	0.000	0.143
36.00	-65.55	-9.66	0.00	-858.98	0.00	858.98	3871.71	1935.86	7482.72	3746.92	1.19	-0.316	0.000	0.142
36.00	-65.55	-9.66	0.00	-858.98	0.00	858.98	3871.71	1935.86	7482.72	3746.92	1.19	-0.316	0.000	0.142
39.00	-63.72	-9.56	0.00	-830.00	0.00	830.00	3838.31	1919.15	7321.27	3666.08	1.40	-0.343	0.000	0.243
40.00	-63.08	-9.57	0.00	-820.44	0.00	820.44	3827.07	1913.54	7267.64	3639.22	1.47	-0.358	0.000	0.242
45.00	-59.91	-9.44	0.00	-772.61	0.00	772.61	3812.30	1906.15	7197.58	3604.14	1.89	-0.435	0.000	0.230
50.00	-57.88	-9.32	0.00	-725.40	0.00	725.40	3755.07	1877.54	6931.57	3470.94	2.39	-0.511	0.000	0.224
55.00	-55.88	-9.19	0.00	-678.80	0.00	678.80	3696.63	1848.32	6668.16	3339.04	2.96	-0.584	0.000	0.218
60.00	-53.91	-9.06	0.00	-632.84	0.00	632.84	3636.96	1818.48	6407.52	3208.52	3.61	-0.658	0.000	0.212
65.00	-51.97	-8.92	0.00	-587.55	0.00	587.55	3576.08	1788.04	6149.79	3079.47	4.34	-0.731	0.000	0.205
70.00	-50.06	-8.78	0.00	-542.95	0.00	542.95	3513.96	1756.98	5895.14	2951.95	5.15	-0.803	0.000	0.198
75.00	-48.17	-8.63	0.00	-499.06	0.00	499.06	3450.63	1725.31	5643.71	2826.05	6.03	-0.875	0.000	0.191
79.00	-46.70	-8.49	0.00	-464.55	0.00	464.55	3399.08	1699.54	5445.00	2726.55	6.78	-0.933	0.000	0.184
80.00	-46.16	-8.48	0.00	-456.06	0.00	456.06	3386.07	1693.03	5395.67	2701.84	6.98	-0.948	0.000	0.182
84.00	-44.07	-8.33	0.00	-422.15	0.00	422.15	2492.17	1246.08	3964.65	1985.27	7.80	-1.004	0.000	0.230
85.00	-43.73	-8.32	0.00	-413.82	0.00	413.82	2483.20	1241.60	3929.49	1967.67	8.01	-1.019	0.000	0.228
90.00	-42.08	-8.17	0.00	-372.21	0.00	372.21	2437.73	1218.86	3754.97	1880.28	9.12	-1.097	0.000	0.215
95.00	-40.46	-8.02	0.00	-331.35	0.00	331.35	2391.17	1195.58	3582.65	1793.99	10.31	-1.172	0.000	0.202
100.00	-38.86	-7.86	0.00	-291.26	0.00	291.26	2343.52	1171.76	3412.67	1708.87	11.58	-1.245	0.000	0.187
105.00	-37.30	-7.69	0.00	-251.96	0.00	251.96	2294.79	1147.40	3245.17	1624.99	12.92	-1.314	0.000	0.171
110.00	-35.76	-7.53	0.00	-213.49	0.00	213.49	2244.98	1122.49	3080.27	1542.43	14.33	-1.379	0.000	0.154
115.00	-34.26	-7.35	0.00	-175.86	0.00	175.86	2194.08	1097.04	2918.13	1461.23	15.81	-1.438	0.000	0.136
118.00	-27.75	-6.26	0.00	-153.82	0.00	153.82	2163.02	1081.51	2822.22	1413.21	16.72	-1.471	0.000	0.122
120.00	-27.18	-6.19	0.00	-141.31	0.00	141.31	2136.45	1068.22	2751.59	1377.84	17.34	-1.492	0.000	0.115
123.00	-26.35	-6.08	0.00	-122.74	0.00	122.74	2094.98	1047.49	2645.31	1324.62	18.29	-1.521	0.000	0.105
123.00	-26.35	-6.08	0.00	-122.74	0.00	122.74	1330.70	665.35	1690.49	846.50	18.29	-1.521	0.000	0.165
125.00	-25.87	-6.01	0.00	-110.58	0.00	110.58	1319.70	659.85	1654.32	828.39	18.93	-1.539	0.000	0.153
128.00	-20.24	-4.84	0.00	-92.55	0.00	92.55	1302.88	651.44	1600.34	801.36	19.91	-1.574	0.000	0.131
130.00	-19.88	-4.79	0.00	-82.86	0.00	82.86	1291.45	645.73	1564.57	783.45	20.57	-1.595	0.000	0.121
135.00	-19.00	-4.62	0.00	-58.94	0.00	58.94	1262.12	631.06	1475.93	739.06	22.27	-1.640	0.000	0.095
138.00	-11.33	-2.93	0.00	-45.07	0.00	45.07	1244.00	622.00	1423.34	712.73	23.31	-1.662	0.000	0.072
140.00	-11.01	-2.86	0.00	-39.22	0.00	39.22	1231.70	615.85	1388.54	695.30	24.01	-1.675	0.000	0.065
145.00	-10.22	-2.70	0.00	-24.90	0.00	24.90	1200.20	600.10	1302.53	652.23	25.77	-1.700	0.000	0.047
149.00	-5.85	-1.66	0.00	-14.10	0.00	14.10	1174.22	587.11	1234.81	618.32	27.21	-1.713	0.000	0.028
150.00	-5.71	-1.63	0.00	-12.43	0.00	12.43	1167.61	583.81	1218.04	609.93	27.56	-1.716	0.000	0.025
155.00	-5.02	-1.48	0.00	-4.27	0.00	4.27	1133.94	566.97	1135.21	568.45	29.37	-1.724	0.000	0.012
156.50	-3.61	-1.06	0.00	-2.05	0.00	2.05	1123.63	561.81	1110.70	556.18	29.91	-1.725	0.000	0.007
158.00	0.00	-0.95	0.00	-0.46	0.00	0.46	1113.22	556.61	1086.36	543.99	30.45	-1.726	0.000	0.001

Seismic Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Tower Engineering Solutions

Load Case: 1.2D + 1.0E



Gust Response Factor	1.10			**Sds**	0.23	**Iterations**	22
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.11	**Ss**	0.21
Wind Load Factor	0.00	**Structure Frequency**	0.31	**SA**	0.03	**S1**	0.07
						Seismic Importance Factor	1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	0.00	
5.00		1090.4	0.00	0.03	0.02	26.15	
10.00		1069.8	0.01	0.05	0.03	36.51	
15.00		1049.2	0.02	0.06	0.04	41.02	
20.00		1028.6	0.03	0.07	0.04	42.85	
25.00		1008.1	0.05	0.07	0.04	43.47	
30.00		987.54	0.07	0.07	0.04	43.64	
35.00		966.96	0.09	0.07	0.04	43.72	
36.00	RT1	190.92	0.10	0.07	0.04	8.67	
39.00	Bot - Section 2	567.83	0.12	0.07	0.04	26.16	
40.00		378.30	0.12	0.07	0.03	17.51	
45.00	Top - Section 1	1866.8	0.15	0.07	0.03	88.23	
50.00		920.43	0.19	0.06	0.02	44.01	
55.00		899.86	0.23	0.06	0.02	42.62	
60.00		879.28	0.27	0.05	0.01	39.64	
65.00		858.71	0.32	0.04	0.01	34.28	
70.00		838.13	0.37	0.03	0.01	25.82	
75.00	Appurtenance(s)	821.26	0.43	0.01	0.01	14.12	
79.00	Bot - Section 3	639.24	0.47	-0.01	0.01	2.27	
80.00		291.53	0.48	-0.01	0.01	-0.03	
84.00	Top - Section 2	1151.0	0.53	-0.03	0.01	-17.13	
85.00		130.35	0.55	-0.03	0.01	-2.41	
90.00		641.47	0.61	-0.06	0.02	-22.20	
95.00		624.32	0.68	-0.08	0.03	-28.69	
100.00		607.18	0.76	-0.10	0.04	-31.26	
105.00		590.03	0.83	-0.12	0.06	-30.18	
110.00		572.89	0.92	-0.12	0.09	-25.89	
115.00		555.74	1.00	-0.11	0.13	-18.82	
118.00	Appurtenance(s)	2664.6	1.05	-0.09	0.16	-65.50	
120.00		213.38	1.09	-0.08	0.18	-3.70	
123.00	Top - Section 3	314.93	1.15	-0.04	0.22	-1.56	
125.00		145.04	1.18	-0.01	0.24	0.63	
128.00	Appurtenance(s)	1965.5	1.24	0.05	0.29	38.96	
130.00		140.24	1.28	0.09	0.32	4.38	
135.00		342.20	1.38	0.25	0.41	21.68	
138.00	Appurtenance(s)	2938.1	1.44	0.37	0.48	250.36	
140.00		130.64	1.48	0.46	0.52	13.18	
145.00		318.19	1.59	0.75	0.66	45.80	
149.00	Appurtenance(s)	1613.9	1.68	1.05	0.79	294.43	
150.00		60.28	1.70	1.14	0.82	11.61	
155.00		294.18	1.82	1.63	1.01	72.70	
156.50	Appurtenance(s)	639.31	1.85	1.80	1.07	169.18	
158.00	Appurtenance(s)	1512.8	1.89	1.98	1.14	427.61	
	Totals:	**34,519.6**				**1,723.8**	**Total Wind:** **40,098.6**

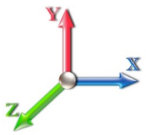
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

IES Tower Engineering Solutions

Load Case: 1.2D + 1.0E



Gust Response Factor	1.10			**Sds**	0.23			**Iterations**	22
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.11			**Ss**	0.21
Wind Load Factor	0.00	**Structure Frequency**	0.31	**SA**	0.03			**S1**	0.07
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-56.25	-1.97	0.00	-235.74	0.00	235.74	4238.25	2119.12	9474.98	4744.53		0.00	0.00	0.038
5.00	-53.73	-1.96	0.00	-225.87	0.00	225.87	4191.13	2095.57	9193.31	4603.49		0.00	-0.01	0.037
10.00	-51.24	-1.93	0.00	-216.09	0.00	216.09	4142.79	2071.40	8912.98	4463.11		0.02	-0.02	0.036
15.00	-48.77	-1.89	0.00	-206.45	0.00	206.45	4093.23	2046.62	8634.14	4323.49		0.04	-0.03	0.035
20.00	-46.32	-1.85	0.00	-196.99	0.00	196.99	4042.45	2021.22	8356.93	4184.68		0.07	-0.03	0.035
25.00	-43.90	-1.82	0.00	-187.72	0.00	187.72	3990.44	1995.22	8081.53	4046.77		0.11	-0.04	0.034
30.00	-41.51	-1.78	0.00	-178.64	0.00	178.64	3937.21	1968.60	7808.07	3909.84		0.16	-0.05	0.033
35.00	-39.14	-1.73	0.00	-169.75	0.00	169.75	3882.75	1941.38	7536.73	3773.96		0.22	-0.06	0.032
36.00	-38.67	-1.73	0.00	-168.02	0.00	168.02	3871.71	1935.86	7482.72	3746.92		0.23	-0.06	0.031
36.00	-38.67	-1.73	0.00	-168.02	0.00	168.02	3871.71	1935.86	7482.72	3746.92		0.23	-0.06	0.031
39.00	-37.26	-1.70	0.00	-162.84	0.00	162.84	3838.31	1919.15	7321.27	3666.08		0.27	-0.07	0.054
40.00	-36.75	-1.69	0.00	-161.13	0.00	161.13	3827.07	1913.54	7267.64	3639.22		0.28	-0.07	0.054
45.00	-34.23	-1.61	0.00	-152.68	0.00	152.68	3812.30	1906.15	7197.58	3604.14		0.37	-0.08	0.051
50.00	-32.85	-1.57	0.00	-144.65	0.00	144.65	3755.07	1877.54	6931.57	3470.94		0.46	-0.10	0.050
55.00	-31.49	-1.53	0.00	-136.80	0.00	136.80	3696.63	1848.32	6668.16	3339.04		0.57	-0.11	0.049
60.00	-30.16	-1.50	0.00	-129.13	0.00	129.13	3636.96	1818.48	6407.52	3208.52		0.70	-0.13	0.049
65.00	-28.86	-1.47	0.00	-121.64	0.00	121.64	3576.08	1788.04	6149.79	3079.47		0.84	-0.14	0.048
70.00	-27.57	-1.45	0.00	-114.30	0.00	114.30	3513.96	1756.98	5895.14	2951.95		1.00	-0.16	0.047
75.00	-26.31	-1.44	0.00	-107.06	0.00	107.06	3450.63	1725.31	5643.71	2826.05		1.18	-0.17	0.046
79.00	-25.32	-1.43	0.00	-101.32	0.00	101.32	3399.08	1699.54	5445.00	2726.55		1.33	-0.19	0.045
80.00	-24.92	-1.44	0.00	-99.89	0.00	99.89	3386.07	1693.03	5395.67	2701.84		1.37	-0.19	0.044
84.00	-23.32	-1.43	0.00	-94.15	0.00	94.15	2492.17	1246.08	3964.65	1985.27		1.53	-0.20	0.057
85.00	-23.10	-1.44	0.00	-92.71	0.00	92.71	2483.20	1241.60	3929.49	1967.67		1.58	-0.21	0.056
90.00	-22.06	-1.44	0.00	-85.53	0.00	85.53	2437.73	1218.86	3754.97	1880.28		1.80	-0.22	0.055
95.00	-21.03	-1.44	0.00	-78.33	0.00	78.33	2391.17	1195.58	3582.65	1793.99		2.05	-0.24	0.052
100.00	-20.03	-1.44	0.00	-71.12	0.00	71.12	2343.52	1171.76	3412.67	1708.87		2.31	-0.26	0.050
105.00	-19.04	-1.44	0.00	-63.90	0.00	63.90	2294.79	1147.40	3245.17	1624.99		2.59	-0.28	0.048
110.00	-18.08	-1.45	0.00	-56.68	0.00	56.68	2244.98	1122.49	3080.27	1542.43		2.89	-0.29	0.045
115.00	-17.14	-1.44	0.00	-49.46	0.00	49.46	2194.08	1097.04	2918.13	1461.23		3.20	-0.31	0.042
118.00	-13.78	-1.43	0.00	-45.13	0.00	45.13	2163.02	1081.51	2822.22	1413.21		3.40	-0.32	0.038
120.00	-13.43	-1.43	0.00	-42.27	0.00	42.27	2136.45	1068.22	2751.59	1377.84		3.53	-0.32	0.037
123.00	-12.92	-1.43	0.00	-37.99	0.00	37.99	2094.98	1047.49	2645.31	1324.62		3.74	-0.33	0.035
123.00	-12.92	-1.43	0.00	-37.99	0.00	37.99	1330.70	665.35	1690.49	846.50		3.74	-0.33	0.055
125.00	-12.66	-1.43	0.00	-35.14	0.00	35.14	1319.70	659.85	1654.32	828.39		3.88	-0.34	0.052
128.00	-10.17	-1.37	0.00	-30.86	0.00	30.86	1302.88	651.44	1600.34	801.36		4.10	-0.35	0.046
130.00	-9.94	-1.37	0.00	-28.11	0.00	28.11	1291.45	645.73	1564.57	783.45		4.25	-0.36	0.044
135.00	-9.39	-1.35	0.00	-21.26	0.00	21.26	1262.12	631.06	1475.93	739.06		4.63	-0.37	0.036
138.00	-5.78	-1.07	0.00	-17.22	0.00	17.22	1244.00	622.00	1423.34	712.73		4.87	-0.38	0.029
140.00	-5.58	-1.06	0.00	-15.08	0.00	15.08	1231.70	615.85	1388.54	695.30		5.03	-0.39	0.026
145.00	-5.10	-1.01	0.00	-9.78	0.00	9.78	1200.20	600.10	1302.53	652.23		5.44	-0.40	0.019
149.00	-3.09	-0.70	0.00	-5.74	0.00	5.74	1174.22	587.11	1234.81	618.32		5.77	-0.40	0.012
150.00	-3.01	-0.69	0.00	-5.04	0.00	5.04	1167.61	583.81	1218.04	609.93		5.86	-0.40	0.011
155.00	-2.61	-0.62	0.00	-1.58	0.00	1.58	1133.94	566.97	1135.21	568.45		6.28	-0.41	0.005
156.50	-1.83	-0.44	0.00	-0.66	0.00	0.66	1123.63	561.81	1110.70	556.18		6.41	-0.41	0.003
158.00	0.00	-0.43	0.00	0.00	0.00	0.00	1113.22	556.61	1086.36	543.99		6.54	-0.41	0.000

Seismic Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

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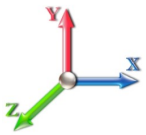
Load Case: 0.9D + 1.0E



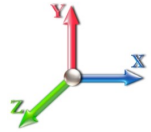
Gust Response Factor	1.10			**Sds**	0.23	**Iterations**	22		
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.11	**Ss**	0.21		
Wind Load Factor	0.00	**Structure Frequency**	0.31	**SA**	0.03	**S1**	0.07		
						Seismic Importance Factor	1.00		

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	0.00	
5.00		1090.4	0.00	0.03	0.02	26.15	
10.00		1069.8	0.01	0.05	0.03	36.51	
15.00		1049.2	0.02	0.06	0.04	41.02	
20.00		1028.6	0.03	0.07	0.04	42.85	
25.00		1008.1	0.05	0.07	0.04	43.47	
30.00		987.54	0.07	0.07	0.04	43.64	
35.00		966.96	0.09	0.07	0.04	43.72	
36.00	RT1	190.92	0.10	0.07	0.04	8.67	
39.00	Bot - Section 2	567.83	0.12	0.07	0.04	26.16	
40.00		378.30	0.12	0.07	0.03	17.51	
45.00	Top - Section 1	1866.8	0.15	0.07	0.03	88.23	
50.00		920.43	0.19	0.06	0.02	44.01	
55.00		899.86	0.23	0.06	0.02	42.62	
60.00		879.28	0.27	0.05	0.01	39.64	
65.00		858.71	0.32	0.04	0.01	34.28	
70.00		838.13	0.37	0.03	0.01	25.82	
75.00	Appurtenance(s)	821.26	0.43	0.01	0.01	14.12	
79.00	Bot - Section 3	639.24	0.47	-0.01	0.01	2.27	
80.00		291.53	0.48	-0.01	0.01	-0.03	
84.00	Top - Section 2	1151.0	0.53	-0.03	0.01	-17.13	
85.00		130.35	0.55	-0.03	0.01	-2.41	
90.00		641.47	0.61	-0.06	0.02	-22.20	
95.00		624.32	0.68	-0.08	0.03	-28.69	
100.00		607.18	0.76	-0.10	0.04	-31.26	
105.00		590.03	0.83	-0.12	0.06	-30.18	
110.00		572.89	0.92	-0.12	0.09	-25.89	
115.00		555.74	1.00	-0.11	0.13	-18.82	
118.00	Appurtenance(s)	2664.6	1.05	-0.09	0.16	-65.50	
120.00		213.38	1.09	-0.08	0.18	-3.70	
123.00	Top - Section 3	314.93	1.15	-0.04	0.22	-1.56	
125.00		145.04	1.18	-0.01	0.24	0.63	
128.00	Appurtenance(s)	1965.5	1.24	0.05	0.29	38.96	
130.00		140.24	1.28	0.09	0.32	4.38	
135.00		342.20	1.38	0.25	0.41	21.68	
138.00	Appurtenance(s)	2938.1	1.44	0.37	0.48	250.36	
140.00		130.64	1.48	0.46	0.52	13.18	
145.00		318.19	1.59	0.75	0.66	45.80	
149.00	Appurtenance(s)	1613.9	1.68	1.05	0.79	294.43	
150.00		60.28	1.70	1.14	0.82	11.61	
155.00		294.18	1.82	1.63	1.01	72.70	
156.50	Appurtenance(s)	639.31	1.85	1.80	1.07	169.18	
158.00	Appurtenance(s)	1512.8	1.89	1.98	1.14	427.61	
	Totals:	**34,519.6**				**1,723.8**	**Total Wind:** **40,098.6**

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

Calculated Forces

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	



Load Case: 0.9D + 1.0E								**Iterations**	22
Gust Response Factor	1.10			**Sds**	0.23			**Ss**	0.21
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.11			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency**	0.31	**SA**	0.03	**Seismic Importance Factor**			1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-42.19	-1.97	0.00	-233.35	0.00	233.35	4238.25	2119.12	9474.98	4744.53		0.00	0.00	0.036
5.00	-40.30	-1.95	0.00	-223.49	0.00	223.49	4191.13	2095.57	9193.31	4603.49		0.00	-0.01	0.035
10.00	-38.43	-1.92	0.00	-213.72	0.00	213.72	4142.79	2071.40	8912.98	4463.11		0.02	-0.02	0.034
15.00	-36.58	-1.89	0.00	-204.11	0.00	204.11	4093.23	2046.62	8634.14	4323.49		0.04	-0.02	0.033
20.00	-34.74	-1.85	0.00	-194.68	0.00	194.68	4042.45	2021.22	8356.93	4184.68		0.07	-0.03	0.033
25.00	-32.93	-1.81	0.00	-185.45	0.00	185.45	3990.44	1995.22	8081.53	4046.77		0.11	-0.04	0.032
30.00	-31.13	-1.77	0.00	-176.41	0.00	176.41	3937.21	1968.60	7808.07	3909.84		0.16	-0.05	0.031
35.00	-29.35	-1.72	0.00	-167.58	0.00	167.58	3882.75	1941.38	7536.73	3773.96		0.21	-0.06	0.030
36.00	-29.00	-1.72	0.00	-165.86	0.00	165.86	3871.71	1935.86	7482.72	3746.92		0.23	-0.06	0.030
36.00	-29.00	-1.72	0.00	-165.86	0.00	165.86	3871.71	1935.86	7482.72	3746.92		0.23	-0.06	0.030
39.00	-27.94	-1.69	0.00	-160.71	0.00	160.71	3838.31	1919.15	7321.27	3666.08		0.27	-0.07	0.051
40.00	-27.56	-1.68	0.00	-159.02	0.00	159.02	3827.07	1913.54	7267.64	3639.22		0.28	-0.07	0.051
45.00	-25.67	-1.59	0.00	-150.63	0.00	150.63	3812.30	1906.15	7197.58	3604.14		0.36	-0.08	0.049
50.00	-24.64	-1.55	0.00	-142.66	0.00	142.66	3755.07	1877.54	6931.57	3470.94		0.46	-0.10	0.048
55.00	-23.62	-1.52	0.00	-134.89	0.00	134.89	3696.63	1848.32	6668.16	3339.04		0.57	-0.11	0.047
60.00	-22.62	-1.48	0.00	-127.31	0.00	127.31	3636.96	1818.48	6407.52	3208.52		0.69	-0.13	0.046
65.00	-21.64	-1.45	0.00	-119.91	0.00	119.91	3576.08	1788.04	6149.79	3079.47		0.83	-0.14	0.045
70.00	-20.68	-1.43	0.00	-112.67	0.00	112.67	3513.96	1756.98	5895.14	2951.95		0.99	-0.16	0.044
75.00	-19.73	-1.41	0.00	-105.54	0.00	105.54	3450.63	1725.31	5643.71	2826.05		1.16	-0.17	0.043
79.00	-18.99	-1.41	0.00	-99.89	0.00	99.89	3399.08	1699.54	5445.00	2726.55		1.31	-0.18	0.042
80.00	-18.69	-1.41	0.00	-98.47	0.00	98.47	3386.07	1693.03	5395.67	2701.84		1.35	-0.19	0.042
84.00	-17.49	-1.41	0.00	-92.82	0.00	92.82	2492.17	1246.08	3964.65	1985.27		1.52	-0.20	0.054
85.00	-17.33	-1.41	0.00	-91.41	0.00	91.41	2483.20	1241.60	3929.49	1967.67		1.56	-0.20	0.053
90.00	-16.54	-1.42	0.00	-84.34	0.00	84.34	2437.73	1218.86	3754.97	1880.28		1.78	-0.22	0.052
95.00	-15.77	-1.42	0.00	-77.26	0.00	77.26	2391.17	1195.58	3582.65	1793.99		2.02	-0.24	0.050
100.00	-15.02	-1.42	0.00	-70.17	0.00	70.17	2343.52	1171.76	3412.67	1708.87		2.28	-0.26	0.047
105.00	-14.28	-1.42	0.00	-63.07	0.00	63.07	2294.79	1147.40	3245.17	1624.99		2.56	-0.27	0.045
110.00	-13.56	-1.42	0.00	-55.97	0.00	55.97	2244.98	1122.49	3080.27	1542.43		2.85	-0.29	0.042
115.00	-12.85	-1.42	0.00	-48.87	0.00	48.87	2194.08	1097.04	2918.13	1461.23		3.16	-0.30	0.039
118.00	-10.33	-1.41	0.00	-44.61	0.00	44.61	2163.02	1081.51	2822.22	1413.21		3.36	-0.31	0.036
120.00	-10.07	-1.41	0.00	-41.80	0.00	41.80	2136.45	1068.22	2751.59	1377.84		3.49	-0.32	0.035
123.00	-9.69	-1.41	0.00	-37.58	0.00	37.58	2094.98	1047.49	2645.31	1324.62		3.69	-0.33	0.033
123.00	-9.69	-1.41	0.00	-37.58	0.00	37.58	1330.70	665.35	1690.49	846.50		3.69	-0.33	0.052
125.00	-9.49	-1.41	0.00	-34.76	0.00	34.76	1319.70	659.85	1654.32	828.39		3.83	-0.33	0.049
128.00	-7.63	-1.36	0.00	-30.54	0.00	30.54	1302.88	651.44	1600.34	801.36		4.05	-0.35	0.044
130.00	-7.46	-1.35	0.00	-27.83	0.00	27.83	1291.45	645.73	1564.57	783.45		4.19	-0.35	0.041
135.00	-7.04	-1.33	0.00	-21.06	0.00	21.06	1262.12	631.06	1475.93	739.06		4.57	-0.37	0.034
138.00	-4.33	-1.06	0.00	-17.07	0.00	17.07	1244.00	622.00	1423.34	712.73		4.80	-0.38	0.027
140.00	-4.19	-1.05	0.00	-14.95	0.00	14.95	1231.70	615.85	1388.54	695.30		4.96	-0.38	0.025
145.00	-3.83	-1.00	0.00	-9.70	0.00	9.70	1200.20	600.10	1302.53	652.23		5.37	-0.39	0.018
149.00	-2.32	-0.70	0.00	-5.69	0.00	5.69	1174.22	587.11	1234.81	618.32		5.70	-0.40	0.011
150.00	-2.26	-0.69	0.00	-5.00	0.00	5.00	1167.61	583.81	1218.04	609.93		5.78	-0.40	0.010
155.00	-1.95	-0.61	0.00	-1.57	0.00	1.57	1133.94	566.97	1135.21	568.45		6.20	-0.40	0.004
156.50	-1.37	-0.44	0.00	-0.66	0.00	0.66	1123.63	561.81	1110.70	556.18		6.33	-0.40	0.002
158.00	0.00	-0.43	0.00	0.00	0.00	0.00	1113.22	556.61	1086.36	543.99		6.45	-0.40	0.000

Wind Loading - Shaft

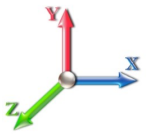
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

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	RB1	1.00	0.85	7.442	8.19	256.18	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	251.43	0.702 *	0.000	5.00	22.941	16.09	131.7	0.0	1090.4
10.00		1.00	0.85	7.442	8.19	246.67	0.706 *	0.000	5.00	22.511	15.90	130.1	0.0	1069.8
15.00		1.00	0.85	7.442	8.19	241.92	0.711 *	0.000	5.00	22.081	15.70	128.5	0.0	1049.3
20.00		1.00	0.90	7.896	8.69	244.29	0.716 *	0.000	5.00	21.651	15.51	134.7	0.0	1028.7
25.00		1.00	0.95	8.276	9.10	245.08	0.721 *	0.000	5.00	21.222	15.31	139.4	0.0	1008.1
30.00		1.00	0.98	8.600	9.46	244.72	0.727 *	0.000	5.00	20.792	15.12	143.0	0.0	987.5
35.00		1.00	1.01	8.883	9.77	243.53	0.733 *	0.000	5.00	20.362	14.92	145.8	0.0	967.0
36.00	RT1	1.00	1.02	8.936	9.83	243.21	0.736 *	0.000	1.00	4.021	2.96	29.1	0.0	190.9
39.00	Bot - Section 2	1.00	1.04	9.088	10.00	242.11	0.739 *	0.000	3.00	11.959	8.83	88.3	0.0	567.8
40.00		1.00	1.04	9.137	10.05	241.71	0.650	0.000	1.00	4.015	2.61	26.2	0.0	378.3
45.00	Top - Section 1	1.00	1.07	9.366	10.30	239.39	0.650	0.000	5.00	19.820	12.88	132.7	0.0	1866.8
50.00		1.00	1.09	9.576	10.53	240.64	0.650	0.000	5.00	19.390	12.60	132.8	0.0	920.4
55.00		1.00	1.12	9.770	10.75	237.62	0.650	0.000	5.00	18.960	12.32	132.4	0.0	899.9
60.00		1.00	1.14	9.951	10.95	234.31	0.650	0.000	5.00	18.530	12.04	131.8	0.0	879.3
65.00		1.00	1.16	10.120	11.13	230.74	0.650	0.000	5.00	18.100	11.77	131.0	0.0	858.7
70.00		1.00	1.17	10.279	11.31	226.96	0.650	0.000	5.00	17.670	11.49	129.9	0.0	838.1
75.00	Appurtenance(s)	1.00	1.19	10.430	11.47	222.99	0.650	0.000	5.00	17.240	11.21	128.6	0.0	817.6
79.00	Bot - Section 3	1.00	1.20	10.544	11.60	219.68	0.650	0.000	4.00	13.483	8.76	101.6	0.0	639.2
80.00		1.00	1.21	10.572	11.63	218.84	0.650	0.000	1.00	3.381	2.20	25.6	0.0	291.5
84.00	Top - Section 2	1.00	1.22	10.681	11.75	215.41	0.651 *	0.000	4.00	13.350	8.69	102.1	0.0	1151.0
85.00		1.00	1.22	10.708	11.78	218.04	0.650 *	0.000	1.00	3.295	2.14	25.2	0.0	130.4
90.00		1.00	1.24	10.838	11.92	213.62	0.653 *	0.000	5.00	16.215	10.60	126.3	0.0	641.5
95.00		1.00	1.25	10.962	12.06	209.07	0.659 *	0.000	5.00	15.785	10.40	125.4	0.0	624.3
100.00		1.00	1.27	11.081	12.19	204.40	0.665 *	0.000	5.00	15.356	10.20	124.4	0.0	607.2
105.00		1.00	1.28	11.195	12.31	199.62	0.671 *	0.000	5.00	14.926	10.01	123.3	0.0	590.0
110.00		1.00	1.29	11.305	12.44	194.74	0.677 *	0.000	5.00	14.496	9.81	122.0	0.0	572.9
115.00		1.00	1.30	11.412	12.55	189.76	0.684 *	0.000	5.00	14.066	9.62	120.7	0.0	555.7
118.00	Appurtenance(s)	1.00	1.31	11.474	12.62	186.73	0.689 *	0.000	3.00	8.233	5.68	71.6	0.0	325.2
120.00		1.00	1.32	11.514	12.67	184.70	0.693 *	0.000	2.00	5.403	3.75	47.4	0.0	213.4
123.00	Top - Section 3	1.00	1.32	11.574	12.73	181.62	0.697 *	0.000	3.00	7.975	5.56	70.8	0.0	314.9
125.00		1.00	1.33	11.614	12.78	179.55	0.701 *	0.000	2.00	5.231	3.67	46.8	0.0	145.0
128.00	Appurtenance(s)	1.00	1.33	11.672	12.84	176.43	0.705 *	0.000	3.00	7.717	5.44	69.9	0.0	214.0
130.00		1.00	1.34	11.710	12.88	174.33	0.650	0.000	2.00	5.059	3.29	42.4	0.0	140.2
135.00		1.00	1.35	11.803	12.98	169.03	0.650	0.000	5.00	12.347	8.03	104.2	0.0	342.2
138.00	Appurtenance(s)	1.00	1.35	11.858	13.04	165.82	0.650	0.000	3.00	7.202	4.68	61.1	0.0	199.6
140.00		1.00	1.36	11.894	13.08	163.67	0.650	0.000	2.00	4.715	3.06	40.1	0.0	130.6
145.00		1.00	1.37	11.982	13.18	158.24	0.650	0.000	5.00	11.487	7.47	98.4	0.0	318.2
149.00	Appurtenance(s)	1.00	1.38	12.051	13.26	153.85	0.650	0.000	4.00	8.880	5.77	76.5	0.0	245.9
150.00		1.00	1.38	12.068	13.27	152.75	0.650	0.000	1.00	2.177	1.42	18.8	0.0	60.3
155.00		1.00	1.39	12.152	13.37	147.20	0.650	0.000	5.00	10.627	6.91	92.3	0.0	294.2
156.50	Appurtenance(s)	1.00	1.39	12.176	13.39	145.52	0.650	0.000	1.50	3.104	2.02	27.0	0.0	85.9
158.00	Appurtenance(s)	1.00	1.39	12.201	13.42	143.84	0.650	0.000	1.50	3.066	1.99	26.7	0.0	84.8
								Totals:	**158.00**			**3,906.8**		**24,336.9**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

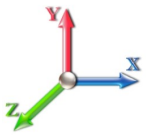
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 29	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	158.00	DB980F90E-M	6	12.209	13.430	0.81	1.00	18.23	57.00	0.000	0.500	244.76	0.00	122.38
2	158.00	Low Profile Platform	1	12.209	13.430	1.00	1.00	25.00	1200.00	0.000	0.500	335.75	0.00	167.87
3	158.00	APXVSPP18-C-A20	3	12.209	13.430	0.83	1.00	19.97	171.00	0.000	0.500	268.19	0.00	134.10
4	156.50	1900MHz	6	12.176	13.394	0.90	1.00	1.89	30.00	0.000	0.000	25.31	0.00	0.00
5	156.50	800MHz Notch Filter	3	12.176	13.394	0.69	1.00	1.61	26.40	0.000	0.000	21.63	0.00	0.00
6	156.50	1900MHz RRH	3	12.176	13.394	1.15	1.00	13.11	132.00	0.000	0.000	175.60	0.00	0.00
7	156.50	800MHz	3	12.176	13.394	0.90	1.00	0.94	15.00	0.000	0.000	12.66	0.00	0.00
8	156.50	Collar Mount	1	12.176	13.394	1.00	1.00	5.00	350.00	0.000	0.000	66.97	0.00	0.00
9	149.00	DB844H90E-XY	12	12.051	13.256	0.88	0.80	32.21	168.00	0.000	0.000	426.96	0.00	0.00
10	149.00	Low Profile Platform	1	12.051	13.256	1.00	1.00	25.00	1200.00	0.000	0.000	331.41	0.00	0.00
11	138.00	Bias T	3	11.858	13.044	0.50	0.75	0.14	9.90	0.000	0.000	1.77	0.00	0.00
12	138.00	KRY 112 144/1	3	11.858	13.044	0.50	0.75	0.62	33.00	0.000	0.000	8.06	0.00	0.00
13	138.00	LNX-6515DS-A1M	3	11.858	13.044	0.63	0.75	21.68	149.40	0.000	0.000	282.77	0.00	0.00
14	138.00	APXV18-206516S-A20	3	11.858	13.044	0.58	0.75	6.34	56.10	0.000	0.000	82.64	0.00	0.00
15	138.00	APX16DWV-16DWVS-E-	6	11.858	13.044	0.50	0.75	19.48	244.20	0.000	0.000	254.06	0.00	0.00
16	138.00	Platform w/ HR & V-Brace	1	11.858	13.044	1.00	1.00	51.70	2246.00	0.000	0.000	674.37	0.00	0.00
17	128.00	BXA-171063-12BF	1	11.672	12.839	0.54	0.80	0.00	22.00	0.000	0.000	0.00	0.00	0.00
18	128.00	BXA-70063-6BF	3	11.672	12.839	0.70	0.80	10.05	45.00	0.000	0.000	129.07	0.00	0.00
19	128.00	DB846F65ZAXY	6	11.672	12.839	0.75	0.80	31.81	126.00	0.000	0.000	408.40	0.00	0.00
20	128.00	SLCP 2x6014	2	11.672	12.839	0.73	0.80	9.45	40.00	0.000	0.000	121.32	0.00	0.00
21	128.00	Low Profile Platform	1	11.672	12.839	0.80	0.80	17.60	1500.00	0.000	0.000	225.97	0.00	0.00
22	128.00	FD9R6004-2C-3L	6	11.672	12.839	0.54	0.80	1.16	18.60	0.000	0.000	14.86	0.00	0.00
23	118.00	7770	6	11.474	12.621	0.62	0.80	20.33	210.00	0.000	0.000	256.56	0.00	0.00
24	118.00	Low Profile Platform	1	11.474	12.621	0.80	0.80	17.60	1500.00	0.000	0.000	222.13	0.00	0.00
25	118.00	P65-16-XLH-RR	3	11.474	12.621	0.63	0.80	15.47	159.00	0.000	0.000	195.26	0.00	0.00
26	118.00	DC6-48-60-18	1	11.474	12.621	0.80	0.80	0.74	31.80	0.000	0.000	9.29	0.00	0.00
27	118.00	LGP21401	6	11.474	12.621	0.54	0.80	4.15	84.60	0.000	0.000	52.36	0.00	0.00
28	118.00	TT19-08BP111-001	3	11.474	12.621	0.54	0.80	1.03	48.00	0.000	0.000	12.99	0.00	0.00
29	118.00	RRUS-11	6	11.474	12.621	0.40	0.80	6.05	306.00	0.000	0.000	76.33	0.00	0.00
30	75.00	GPS	1	10.430	11.473	1.00	1.00	0.01	3.70	0.000	0.000	0.11	0.00	0.00
							Totals:		**10,182.70**			**4,937.57**		

Total Applied Force Summary

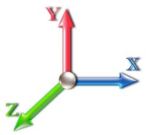
Structure:	CT46131-A-SBA		**Code:**	EIA/TIA-222-G	10/19/2016
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 30

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

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
5.00		131.74	2099.15	0.00	0.00
10.00		130.14	2078.58	0.00	0.00
15.00		128.54	2058.01	0.00	0.00
20.00		134.69	2037.43	0.00	0.00
25.00		139.38	2016.86	0.00	0.00
30.00		142.99	1996.29	0.00	0.00
35.00		145.79	1975.71	0.00	0.00
36.00		29.10	392.67	0.00	0.00
39.00		88.32	1173.08	0.00	0.00
40.00		26.23	424.37	0.00	0.00
45.00		132.73	2097.17	0.00	0.00
50.00		132.76	1150.78	0.00	0.00
55.00		132.45	1130.21	0.00	0.00
60.00		131.84	1109.63	0.00	0.00
65.00		130.97	1089.06	0.00	0.00
70.00		129.87	1068.48	0.00	0.00
75.00	(1) attachments	128.68	1051.61	0.00	0.00
79.00		101.65	822.88	0.00	0.00
80.00		25.55	337.44	0.00	0.00
84.00		102.10	1334.68	0.00	0.00
85.00		25.24	176.26	0.00	0.00
90.00		126.31	871.02	0.00	0.00
95.00		125.40	853.87	0.00	0.00
100.00		124.38	836.73	0.00	0.00
105.00		123.25	819.58	0.00	0.00
110.00		122.03	802.44	0.00	0.00
115.00		120.73	785.29	0.00	0.00
118.00	(26) attachments	896.57	2802.35	0.00	0.00
120.00		47.44	286.46	0.00	0.00
123.00		70.78	424.55	0.00	0.00
125.00		46.85	218.12	0.00	0.00
128.00	(19) attachments	969.50	2075.18	0.00	0.00
130.00		42.36	188.36	0.00	0.00
135.00		104.20	462.50	0.00	0.00
138.00	(19) attachments	1364.73	3010.34	0.00	0.00
140.00		40.10	162.92	0.00	0.00
145.00		98.41	398.89	0.00	0.00
149.00	(13) attachments	834.88	1678.47	0.00	0.00
150.00		18.78	68.50	0.00	0.00
155.00		92.33	335.28	0.00	0.00
156.50	(16) attachments	329.19	651.64	0.00	0.00
158.00	(10) attachments	875.44	1525.16	0.00	424.35
	Totals:	**8,844.42**	**46,878.04**	**0.00**	**424.35**

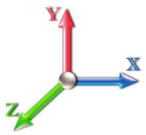
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.126	1.079	7.442	0.00	62.40
5.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.126	1.079	7.442	0.00	778.40
10.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.129	1.086	7.442	0.00	62.40
10.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.129	1.086	7.442	0.00	778.40
15.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.131	1.094	7.442	0.00	62.40
15.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.131	1.094	7.442	0.00	778.40
20.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.134	1.102	7.896	0.00	62.40
20.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.134	1.102	7.896	0.00	778.40
25.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.137	1.110	8.276	0.00	62.40
25.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.137	1.110	8.276	0.00	778.40
30.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.139	1.118	8.600	0.00	62.40
30.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.139	1.118	8.600	0.00	778.40
35.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.142	1.127	8.883	0.00	62.40
35.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.142	1.127	8.883	0.00	778.40
36.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.144	1.133	8.936	0.00	12.48
36.00	1.25" Reinforcing	Yes	1.00	0.000	3.00	0.25	0.00	0.144	1.133	8.936	0.00	155.68
39.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.145	1.136	9.088	0.00	37.44
39.00	1.25" Reinforcing	Yes	3.00	0.000	3.00	0.75	0.00	0.145	1.136	9.088	0.00	467.04
40.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.084	0.000	9.137	0.00	12.48
45.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.085	0.000	9.366	0.00	62.40
50.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.085	0.000	9.576	0.00	62.40
55.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.087	0.000	9.770	0.00	62.40
60.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.089	0.000	9.951	0.00	62.40
65.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.091	0.000	10.120	0.00	62.40
70.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.093	0.000	10.279	0.00	62.40
75.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.096	0.000	10.430	0.00	62.40
79.00	1 5/8" Coax	Yes	4.00	0.000	3.96	1.32	0.00	0.098	0.000	10.544	0.00	49.92
80.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.099	0.000	10.572	0.00	12.48
84.00	1 5/8" Coax	Yes	4.00	0.000	3.96	1.32	0.00	0.100	1.001	10.681	0.00	49.92
85.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.100	1.000	10.708	0.00	12.48
90.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.102	1.005	10.838	0.00	62.40
95.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.105	1.014	10.962	0.00	62.40
100.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.107	1.022	11.081	0.00	62.40
105.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.111	1.032	11.195	0.00	62.40
110.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.114	1.041	11.305	0.00	62.40
115.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.117	1.052	11.412	0.00	62.40
118.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.120	1.061	11.474	0.00	37.44
120.00	1 5/8" Coax	Yes	2.00	0.000	3.96	0.66	0.00	0.122	1.066	11.514	0.00	24.96
123.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.124	1.072	11.574	0.00	37.44
125.00	1 5/8" Coax	Yes	2.00	0.000	3.96	0.66	0.00	0.126	1.079	11.614	0.00	24.96
128.00	1 5/8" Coax	Yes	3.00	0.000	3.96	0.99	0.00	0.128	1.085	11.672	0.00	37.44
										Totals:	**0.0**	**7,669.0**

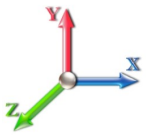
Calculated Forces

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-46.88	-8.86	0.00	-1017.2	0.00	1017.22	4238.25	2119.12	9474.98	4744.53	0.00	0.000	0.000	0.138
5.00	-44.77	-8.75	0.00	-972.92	0.00	972.92	4191.13	2095.57	9193.31	4603.49	0.02	-0.036	0.000	0.135
10.00	-42.69	-8.65	0.00	-929.15	0.00	929.15	4142.79	2071.40	8912.98	4463.11	0.08	-0.072	0.000	0.132
15.00	-40.62	-8.54	0.00	-885.90	0.00	885.90	4093.23	2046.62	8634.14	4323.49	0.17	-0.109	0.000	0.129
20.00	-38.58	-8.43	0.00	-843.19	0.00	843.19	4042.45	2021.22	8356.93	4184.68	0.31	-0.145	0.000	0.125
25.00	-36.56	-8.31	0.00	-801.04	0.00	801.04	3990.44	1995.22	8081.53	4046.77	0.48	-0.181	0.000	0.122
30.00	-34.56	-8.18	0.00	-759.51	0.00	759.51	3937.21	1968.60	7808.07	3909.84	0.69	-0.218	0.000	0.118
35.00	-32.58	-8.04	0.00	-718.62	0.00	718.62	3882.75	1941.38	7536.73	3773.96	0.93	-0.254	0.000	0.115
36.00	-32.19	-8.01	0.00	-710.58	0.00	710.58	3871.71	1935.86	7482.72	3746.92	0.99	-0.262	0.000	0.114
36.00	-32.19	-8.01	0.00	-710.58	0.00	710.58	3871.71	1935.86	7482.72	3746.92	0.99	-0.262	0.000	0.114
39.00	-31.01	-7.93	0.00	-686.54	0.00	686.54	3838.31	1919.15	7321.27	3666.08	1.16	-0.284	0.000	0.195
40.00	-30.58	-7.92	0.00	-678.60	0.00	678.60	3827.07	1913.54	7267.64	3639.22	1.22	-0.297	0.000	0.194
45.00	-28.48	-7.81	0.00	-638.99	0.00	638.99	3812.30	1906.15	7197.58	3604.14	1.56	-0.360	0.000	0.185
50.00	-27.32	-7.70	0.00	-599.95	0.00	599.95	3755.07	1877.54	6931.57	3470.94	1.98	-0.423	0.000	0.180
55.00	-26.18	-7.58	0.00	-561.46	0.00	561.46	3696.63	1848.32	6668.16	3339.04	2.45	-0.484	0.000	0.175
60.00	-25.06	-7.47	0.00	-523.54	0.00	523.54	3636.96	1818.48	6407.52	3208.52	2.99	-0.544	0.000	0.170
65.00	-23.97	-7.35	0.00	-486.19	0.00	486.19	3576.08	1788.04	6149.79	3079.47	3.59	-0.604	0.000	0.165
70.00	-22.89	-7.23	0.00	-449.43	0.00	449.43	3513.96	1756.98	5895.14	2951.95	4.26	-0.665	0.000	0.159
75.00	-21.84	-7.11	0.00	-413.26	0.00	413.26	3450.63	1725.31	5643.71	2826.05	4.99	-0.724	0.000	0.153
79.00	-21.01	-7.01	0.00	-384.81	0.00	384.81	3399.08	1699.54	5445.00	2726.55	5.61	-0.772	0.000	0.147
80.00	-20.67	-6.99	0.00	-377.79	0.00	377.79	3386.07	1693.03	5395.67	2701.84	5.78	-0.784	0.000	0.146
84.00	-19.34	-6.88	0.00	-349.82	0.00	349.82	2492.17	1246.08	3964.65	1985.27	6.45	-0.831	0.000	0.184
85.00	-19.15	-6.87	0.00	-342.94	0.00	342.94	2483.20	1241.60	3929.49	1967.67	6.63	-0.843	0.000	0.182
90.00	-18.28	-6.75	0.00	-308.61	0.00	308.61	2437.73	1218.86	3754.97	1880.28	7.55	-0.908	0.000	0.172
95.00	-17.42	-6.63	0.00	-274.87	0.00	274.87	2391.17	1195.58	3582.65	1793.99	8.53	-0.970	0.000	0.161
100.00	-16.58	-6.51	0.00	-241.74	0.00	241.74	2343.52	1171.76	3412.67	1708.87	9.58	-1.031	0.000	0.149
105.00	-15.76	-6.38	0.00	-209.21	0.00	209.21	2294.79	1147.40	3245.17	1624.99	10.69	-1.088	0.000	0.136
110.00	-14.95	-6.26	0.00	-177.30	0.00	177.30	2244.98	1122.49	3080.27	1542.43	11.86	-1.142	0.000	0.122
115.00	-14.16	-6.13	0.00	-146.02	0.00	146.02	2194.08	1097.04	2918.13	1461.23	13.08	-1.191	0.000	0.106
118.00	-11.38	-5.18	0.00	-127.63	0.00	127.63	2163.02	1081.51	2822.22	1413.21	13.84	-1.218	0.000	0.096
120.00	-11.09	-5.13	0.00	-117.27	0.00	117.27	2136.45	1068.22	2751.59	1377.84	14.36	-1.235	0.000	0.090
123.00	-10.67	-5.05	0.00	-101.88	0.00	101.88	2094.98	1047.49	2645.31	1324.62	15.14	-1.260	0.000	0.082
123.00	-10.67	-5.05	0.00	-101.88	0.00	101.88	1330.70	665.35	1690.49	846.50	15.14	-1.260	0.000	0.128
125.00	-10.45	-5.01	0.00	-91.77	0.00	91.77	1319.70	659.85	1654.32	828.39	15.67	-1.275	0.000	0.119
128.00	-8.39	-3.99	0.00	-76.75	0.00	76.75	1302.88	651.44	1600.34	801.36	16.48	-1.304	0.000	0.102
130.00	-8.20	-3.95	0.00	-68.77	0.00	68.77	1291.45	645.73	1564.57	783.45	17.03	-1.321	0.000	0.094
135.00	-7.74	-3.84	0.00	-49.01	0.00	49.01	1262.12	631.06	1475.93	739.06	18.44	-1.359	0.000	0.072
138.00	-4.76	-2.40	0.00	-37.49	0.00	37.49	1244.00	622.00	1423.34	712.73	19.30	-1.377	0.000	0.056
140.00	-4.60	-2.36	0.00	-32.68	0.00	32.68	1231.70	615.85	1388.54	695.30	19.88	-1.387	0.000	0.051
145.00	-4.20	-2.25	0.00	-20.88	0.00	20.88	1200.20	600.10	1302.53	652.23	21.34	-1.408	0.000	0.036
149.00	-2.55	-1.38	0.00	-11.86	0.00	11.86	1174.22	587.11	1234.81	618.32	22.53	-1.420	0.000	0.021
150.00	-2.48	-1.36	0.00	-10.48	0.00	10.48	1167.61	583.81	1218.04	609.93	22.82	-1.422	0.000	0.019
155.00	-2.15	-1.26	0.00	-3.68	0.00	3.68	1133.94	566.97	1135.21	568.45	24.32	-1.429	0.000	0.008
156.50	-1.50	-0.91	0.00	-1.79	0.00	1.79	1123.63	561.81	1110.70	556.18	24.77	-1.430	0.000	0.005
158.00	0.00	-0.88	0.00	-0.42	0.00	0.42	1113.22	556.61	1086.36	543.99	25.22	-1.430	0.000	0.001

Final Analysis Summary

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	10/19/2016	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 33	

Tower Engineering Solutions

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 101 mph Wind	40.2	0.00	56.19	0.00	0.00	4633.27
0.9D + 1.6W 101 mph Wind	40.2	0.00	42.13	0.00	0.00	4589.76
1.2D + 1.0Di + 1.0Wi 50 mph Wind	10.6	0.00	88.00	0.00	0.00	1228.44
1.2D + 1.0E	2.0	0.00	56.25	0.00	0.00	235.74
0.9D + 1.0E	2.0	0.00	42.19	0.00	0.00	233.35
1.0D + 1.0W 60 mph Wind	8.9	0.00	46.88	0.00	0.00	1017.22

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 101 mph Wind	-36.44	-36.10	0.00	-3130.7	0.00	-3130.7	3838.31	1919.1	7321.27	3666.08	39.00	0.864
0.9D + 1.6W 101 mph Wind	-27.13	-35.87	0.00	-3092.2	0.00	-3092.2	3838.31	1919.1	7321.27	3666.08	39.00	0.851
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-63.72	-9.56	0.00	-830.00	0.00	-830.00	3838.31	1919.1	7321.27	3666.08	39.00	0.243
1.2D + 1.0E	-23.32	-1.43	0.00	-94.15	0.00	-94.15	2492.17	1246.0	3964.65	1985.27	84.00	0.057
0.9D + 1.0E	-17.49	-1.41	0.00	-92.82	0.00	-92.82	2492.17	1246.0	3964.65	1985.27	84.00	0.054
1.0D + 1.0W 60 mph Wind	-31.01	-7.93	0.00	-686.54	0.00	-686.54	3838.31	1919.1	7321.27	3666.08	39.00	0.195

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors VQ/I (lb/in)	Intermediate Connectors Vu (kips)	Intermediate Connectors phi Vn (kips)	Lower Termination MQ/I (kips)	Lower Termination phi Vn (kips)	Lower Termination Num Reqd	Lower Termination Num Actual	Upper Termination MQ/I (kips)	Upper Termination phi Vn (kips)	Upper Termination Num Reqd	Upper Termination Num Actual	Max Member Pu (kips)	Max Member phi Pn (kips)	Max Member phi Tn (kips)	Ratio
0.0	36.0	(4) PLT-7.625x1.5(31mm Hol	345.0	5.18	37.1	420.3	0.0		15	367.8	37.1	10	12	420.27	503.5	468.37	0.897

Base Plate Summary

Structure:	CT46131-A-SB		**Code:**	EIA/TIA-222-G	10/19/2016
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 34

Tower Engineering Solutions

Reactions

Original Design

Moment (kip-ft):	2888.00
Axial (kip):	26.60
Shear (kip):	30.40

Analysis

Moment (kip-ft):	4633.27
Axial (kip):	88.00
Shear (kip):	40.18
Moment Design %:	160.43

Base Plate

Yield (ksi):	50.00
Width (in):	60.00
Style:	Clipped
Polygon Sides:	4.00
Clip Length (in):	10.00
Effective Len (in):	8.42
Moment (kip-in):	834.92
Allow Stress (ksi):	67.50
Applied Stress (ksi):	0.00
Stress Ratio:	0.83

Anchor Bolts

Bolt Circle:	62.00
Number Bolts:	16.00
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):	184.50
Allowable (kip):	260.00
Ratio:	0.73

Tension

Force (kip):	173.50
Allowable (kip):	260.00
Ratio:	0.69

Pier Foundation Design For Monopole

				Date
				10/17/2016
	Customer Name:	**T-Mobile**	**EIA/TIA Standard:**	EIA-222-G
	Site Name:		**Structure Height (Ft.):**	158
	Site Number:	CT46131-A-SBA	**Engineer Name:**	M. Baker
	Engr. Number:	26883	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

Analysis or Design? Analysis

Acceptable overstress (5.0%

Base Reactions (Factored):

Axial Load (Kips):	56.2	Shear Force (Kips):	40.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4633.3

Foundation Geometries:

Mods required -Yes/No ?:	No			ft.
Diameter of Pier (ft.):	7.0	Depth of Base B. G. S. :	22.0	ft.
Pier Height A. G. (ft.):	0.50			

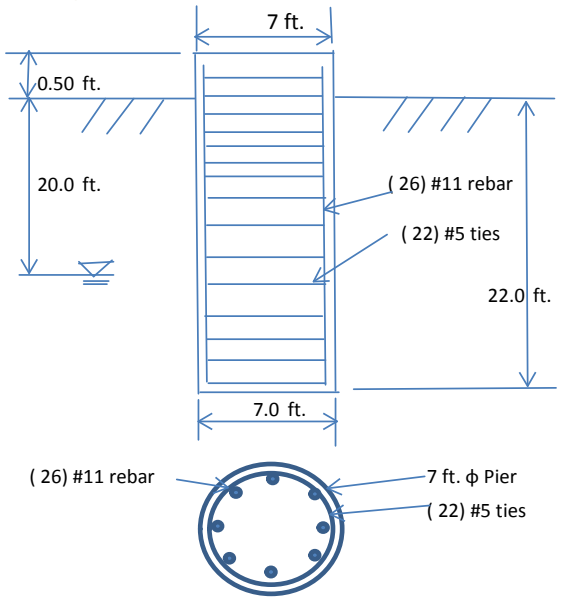
Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield strength:	60	ksi
Vertical Rebar Size #:	11	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	26	Tie Spacing:	18.0	in.
Concrete Cover (in.):	3	Concrete unit weight:	150.0	pcf

Soil Design Parameters:

Water Table B.G.S. (ft):	20.0	Unit weight of water:	62.4	psf
Ratio of Uplift/Axial Skin Friction:	1.0	Pullout failure Angle:	30	(°)

Skin Frictions are to be obtained from: Soil Report



Monopole Pier Foundation

8000

Depth of Layers (ft) Top	Bottom	γ_{soil} (pcf)	ϕ (°)	Cohesion (psf)	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types					
0.0	4.0	115	0			0	Sand					
4.0	20.0	125	38		150	0	Sand					
20.0	25.0	125	38		550	4000	Sand					
25.0	30.0											

Soil weight Increase Factor for bouyant soils (1.0 to 1.15): 1.1

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75	
Total Dry Soil Volume from Conical Failure (cu. Ft.):	6742	Dry Soil Weight from Conical Failure:	829	Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	28	Buoyant Soil Weight from Conical Failure (Ki	0	Kips
Total Dry Concrete Volume (cu. Ft.):	789	Total Dry Concrete Weight:	118.3	Kips
Total Buoyant Concrete Volume (cu. Ft.):	77.0	Total Buoyant Concrete Weight:	6.74	Kips
Total Effective Concrete Weight (Kips):	125.1	Total Effective Soil Weight:	829.5	Kips
Total Effective Vertical Load on Base (Kips):	85.9			

Check Soil Capacities:

					Usage	
Allowable Foundation Overturning Resistance (kips-ft.):	6331.5	>	Design Factored Momont (kips-ft):	5254	0.83	OK!
Factor of Safety of Passive Soil Resistance against Moment:	1.21	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:	1.00	

Reinforcing Concrete Pier:

					Usage	
Vertical Steel Rebar Area (sq. in./each):	1.56		Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	6590.1	>	Design Factored Moment (Mu, K-Ft):	4839.7	0.73	OK!
Calculated Shear Capacity (Kips):	970.0	>	Design Factored Shear (Kips):	527.0	0.54	OK!
Calculated Tension Capacity (Tn, Kips):	2190.2	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7295	>	Design Factored Axial Load (Pu Kips):	56.2	0.01	OK!
Moment & Axial Strength Combination:	0.73	OK!	Max. Allowable Tie/Stirrup Spacing:	8.86	in.	
Pier Reinforcement Ratio:	0.007	Reinforcement Ratio is satisfied per ACI				

PROJECT INFORMATION

SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY T–MOBILE EQUIPMENT MODERNIZATION
ZONING JURISDICTION:	BASED ON INFORMATION PROVIDED BY T–MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE FACILITY REQUEST, EXPEDITED REVIEW AND LIMITED/PARTIAL ZONING PRE–EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW OR ADMINISTRATIVE REVIEW).
SITE ADDRESS:	206 EVERETT ROAD EASTON, CT
LATITUDE:	41.29027800° N
LONGITUDE:	73.28250000° W
JURISDICTION:	NATIONAL, STATE & LOCAL CODES OR ORDINANCES
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY
TOWER OWNER	SBA 2012 TC ASSETS, LLC
SBA SITE ID:	CT46131–A
SBA SITE NAME:	EASTON–EVERETTS RD
SBA REGIONAL SITE MANAGER:	STEPHEN ROTH (860)539–4920 sroth@sbasite.com

GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T–MOBILE NORTHEAST, LLC. 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.
2. 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.
3. 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.

SITE NAME: NEXTEL TOWER EXTENSION
SITE NUMBER: CT11949A SITE ADDRESS:
206 EVERETT ROAD
EASTON, CT

DESIGN GUIDELINE: 704G

VICINITY MAP

APPROVALS

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

SHEET INDEX

SHT #.	DESCRIPTION	REV. #.
T–1	TITLE SHEET	0
GN–1	GENERAL NOTES	0
A–1	COMPOUND, EQUIPMENT PLAN & TOWER ELEVATION PLAN TOWER EQUIPMENT DETAILS	0
A–2	TOWER EQUIPMENT DETAILS	0
A–3	TOWER EQUIPMENT DETAILS	0
E–1	ELECTRICAL DETAILS AND NOTES	0

BUILDING CODES

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL AUTHORITIES HAVING JURISDICTION.

1. 2003 IBC WITH 2005 CT SUPPLEMENT & 2009 CT AMENDMENTS
2. 2005 NATIONAL ELECTRICAL CODE
3. TIA/EIA–222–G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS

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

SPECIAL STRUCTURAL NOTES

1. 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.
2. STRUCTURAL DESIGNS AND DETAILS FOR ANTENNA MOUNTS COMPLETED BY TRYLON TSF INC. 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.
3. TRYLON TSF INC. 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

DIG SAFE SYSTEM
(MA, ME, NH, RI, VT):
1–888–344–7233
CALL BEFORE YOU DIG
(CT): 1–800–922–4455

Michael Plahovinsak

Digitally signed by Michael Plahovinsak
Date: 2016.10.20 15:20:12 -04'00'

T–Mobile
T–MOBILE NORTHEAST, LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

SBA
SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581

Trylon

DESIGNER:
NAME: TRYLON TSF INC.
ADDRESS: 1825 W. WALNUT HILL LANE SUITE 302
CITY, PROVINCE, POSTAL CODE: IRVING, TEXAS TX 75038
CONTACT: KATYA SERAVALLE
PHONE: 519–465–4125

STATE OF CONNECTICUT
MICHAEL F. PLAHOVINSAK, P.E.
10–20–2016

DRAWING SCALES ARE INTENDED FOR 24"x36" SIZE PRINTED MEDIA ONLY. ALL OTHER PRINTED SIZES ARE DEEMED "NOT TO SCALE".

SUBMITTALS

REV	DATE	DESCRIPTION	BY
0	10/11/16	ISSUE FOR CONSTRUCTION	SE

SITE INFO:
SITE NAME:
NEXTEL TOWER EXTENSION
SITE NUMBER:
CT11949A
SITE ADDRESS:
206 EVERETT ROAD
EASTON, CT

SHEET TITLE:
TITLE SHEET

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) LIGHTNING 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 SURCUITS 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 ELECTRIC 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 THE 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 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 LTE 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.

    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, NINTH 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.

    ELECTRICAL DRAWING HAVE BEEN REVIEWED AND SEALED FOR STRUCTURAL PURPOSES ONLY

ABBREVIATIONS					
AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE		
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED	TYP	TYPICAL

T-Mobile

T-MOBILE NORTHEAST, LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

SBA

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581

Trylon

DESIGNER:
NAME: TRYLON TSF INC.
ADDRESS: 1825 W. WALNUT HILL LANE SUITE 302
CITY, PROVINCE, POSTAL CODE: IRVING, TEXAS TX 75038
CONTACT: KATYA SERAVALLE
PHONE: 519-465-4125

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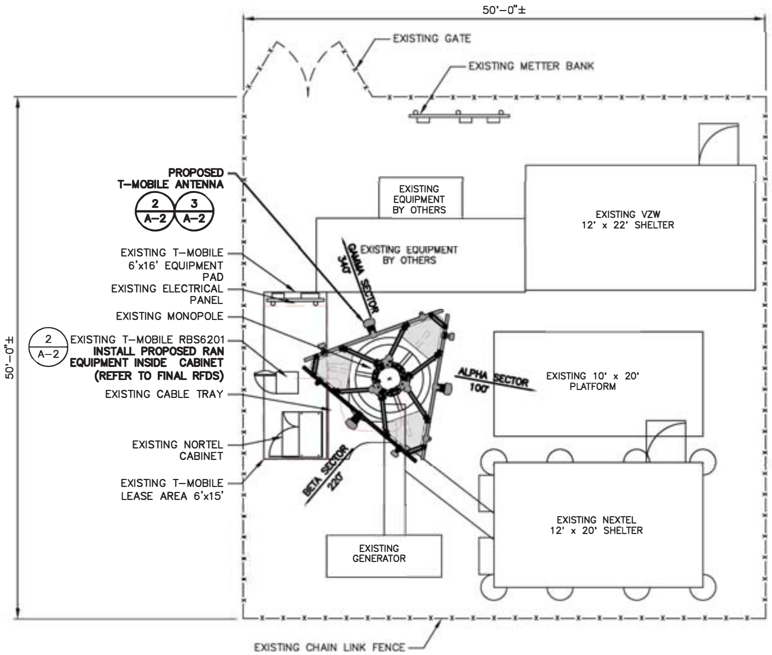
SUBMITTALS			
REV	DATE	DESCRIPTION	BY
0	10/11/16	ISSUE FOR CONSTRUCTION	SE

SITE INFO:
SITE NAME:
NEXTEL TOWER EXTENSION
SITE NUMBER:
CT11949A
SITE ADDRESS:
206 EVERETT ROAD
EASTON, CT

SHEET TITLE:
GENERAL NOTES

GN-1



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

SPECIAL PRE-CONSTRUCTION WORK NOTE :
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

ANTENNA MOUNT STRUCTURAL DESIGN NOTE:

ENGINEER-OF-RECORD HAS MADE A VISUAL ASSESSMENT ONLY OF EXISTING ANTENNA MOUNT ASSEMBLIES, WITHOUT THE BENEFIT OF A RIGOROUS ANTENNA MOUNT STRUCTURAL ANALYSIS, AND RECOMMENDS THAT EXISTING AND PROPOSED TOWER TOP EQUIPMENT BE INSTALLED AS DEPICTED HEREIN. STRUCTURAL DETAILS AS DEPICTED HEREIN FOR MODIFICATION OF EXISTING ANTENNA MOUNT ASSEMBLIES ARE PRELIMINARY ONLY AND THAT FINAL CONSTRUCTION DETAILS MAY BE SUBJECT TO CHANGE PENDING THE COMPLETION OF A SEPARATE SUPPLEMENTAL ANTENNA MOUNT STRUCTURAL ASSESSMENT, SUPPLEMENTAL STRUCTURAL MAPPING/CONDITIONS ASSESSMENT REPORT AND/OR SUPPLEMENTAL RIGOROUS ANTENNA MOUNT STRUCTURAL ANALYSIS.

FEEDLINES

FEEDLINE SCHEDULE	FEEDLINE DESCRIPTION	LOCATION
A	(12) EXISTING 1-1/4" COAX. TO T-MOBILE RAD TO BE REUSED (4) EXISTING 1-1/4" COAX. TO NORTEL CABINET INACTIVE	INSIDE POLE

EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS, RFDS AND FEELINE LEASING ENTIRLEMENTS MAY DIFFER.

EXISTING T-MOBILE RBS6201
INSTALL PROPOSED RAN
EQUIPMENT INSIDE EXISTING
RBS6201
(REFER TO FINAL RFDS)

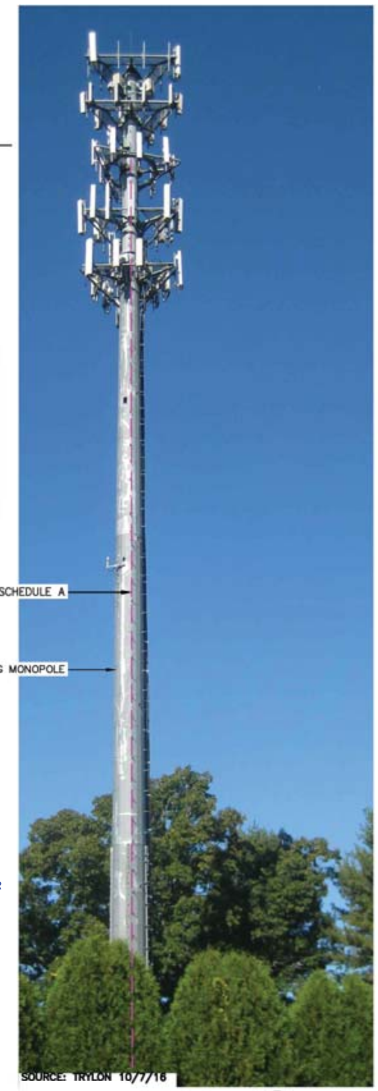
EQUIPMENT LOCATION PHOTO DETAIL (2A / A-1)
SCALE: NTS

EXISTING T-MOBILE RBS6201
INSTALL PROPOSED RAN
EQUIPMENT INSIDE EXISTING
RBS6201
(REFER TO FINAL RFDS)

FEEDLINE SCHEDULE A (REFER TO SBA PROVIDED STRUCTURAL ANALYSIS FOR SPECIAL CABLE INSTALLATION REQUIREMENTS, BUNDLING, SHIELDING, MOUNTING AND RELOCATION OF THE EXISTING CABLES).

FEEDLINE PHOTO DETAILs (2B / A-1)
SCALE: NTS

(2 / A-2) (3 / A-2) (ALL / A-3) T-MOBILE MOUNT
± 138' AGL



(2B / A-1) FEEDLINE SCHEDULE A

EXISTING MONOPOLE

ELEVATION PHOTO DETAIL (3 / A-1)
SCALE: NTS

T-MOBILE NORTHEAST, LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581

Trylon

DESIGNER: NAME: ADDRESS: CITY, PROVINCE, POSTAL CODE:	TRYLON TSF INC. 1825 W. WALNUT HILL LANE SUITE 302 IRVING, TEXAS TX 75038
CONTACT: PHONE:	KATYA SERAVALLE 519-465-4125

10-20-2016

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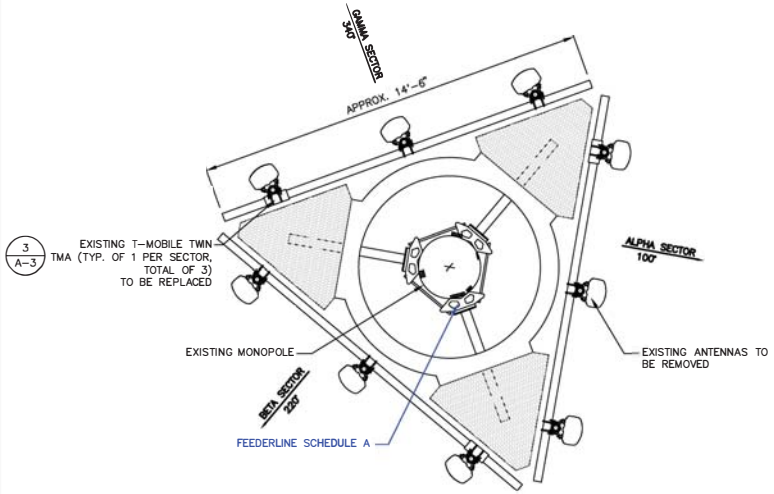
CT11949A

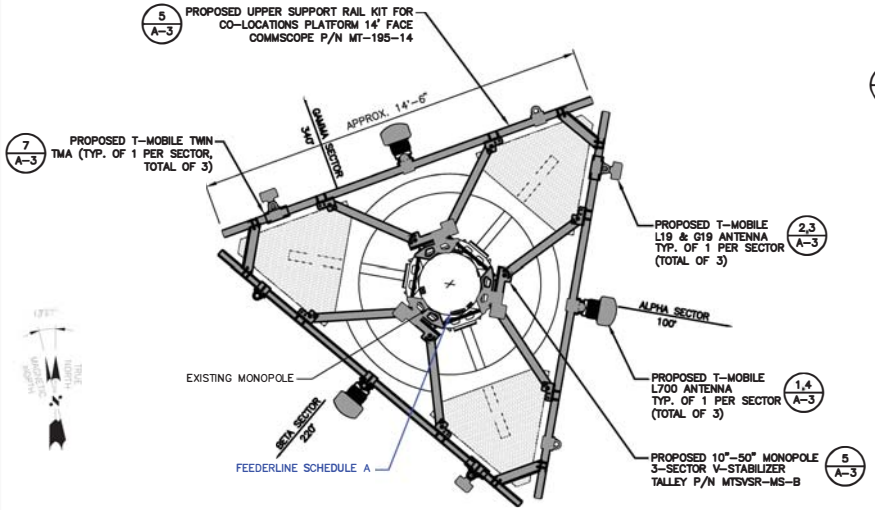
SITE ADDRESS:
206 EVERETT ROAD
EASTON, CT

SHEET TITLE:
COMPOUND, EQUIPMENT PLAN & TOWER ELEVATION PLAN

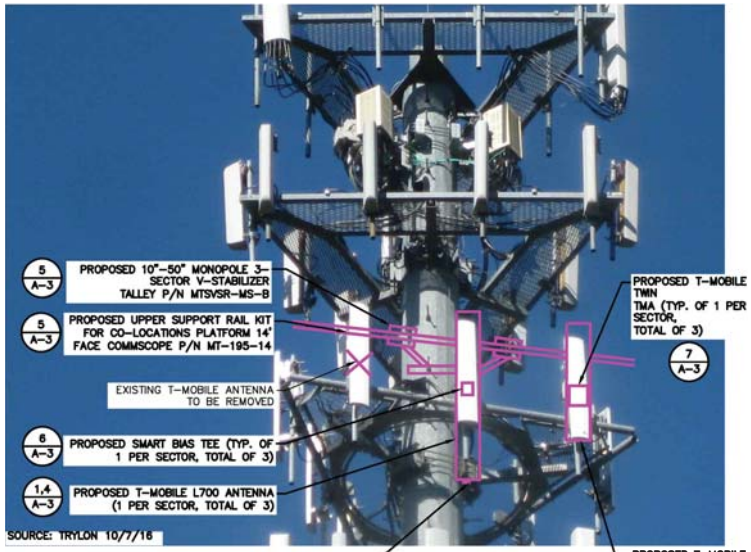
A-1



EXISTING ANTENNA PLAN (1 A-2)
SCALE: NTS



PROPOSED ANTENNA PLAN (2 A-2)
SCALE: NTS



ANTENNA MOUNT PHOTO DETAIL (3 A-2)
SCALE: NTS

NOTE:
AT TIME OF CONSTRUCTION, CONTRACTOR TO VERIFY AZIMUTHS OF EXISTING ANTENNAS. IF DIFFERENT FROM RFDS, PLEASE NOTIFY THE RF ENGINEER AND CONSTRUCTION MANAGER WITH ACTUAL AZIMUTH TO ENSURE T-MOBILE'S DATABASE IS ACCURATE AND UP-TO-DATE.

SPECIAL PRE-CONSTRUCTION WORK NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

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T-Mobile

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CITY, PROVINCE, POSTAL CODE: IRVING, TEXAS TX 75038
CONTACT: KATYA SERAVALLE
PHONE: 519-465-4125

STATE OF CONNECTICUT
MICHAEL P. PLAKHOVNIAK
10-20-2016

DRAWING SCALES ARE INTENDED FOR 24"x36" SIZE PRINTED MEDIA ONLY. ALL OTHER PRINTED SIZES ARE DEEMED "NOT TO SCALE".

SUBMITTALS

REV	DATE	DESCRIPTION	BY
0	10/11/16	ISSUE FOR CONSTRUCTION	SE

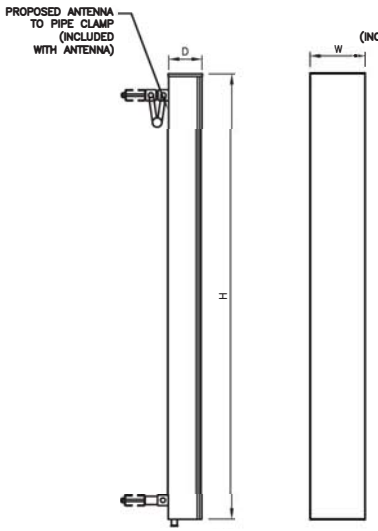
SITE INFO:
SITE NAME:
NEXTEL TOWER EXTENSION
SITE NUMBER:
CT11949A
SITE ADDRESS:
206 EVERETT ROAD
EASTON, CT

SHEET TITLE:
TOWER EQUIPMENT DETAILS

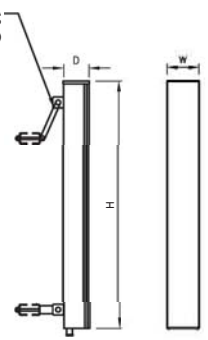
A-2

L700 ANTENNA DIMENSIONS	
MODEL	LNX_6515DS_VTM
MANUF.	COMMSCOPE
WIDTH	11.9"
DEPTH	7.1"
HEIGHT	96.4"
WEIGHT	50.3 LBS

L19/G19 ANTENNA DIMENSIONS	
MODEL	APXV18-206516S-A20
MANUF.	RFS
WIDTH	6.9"
DEPTH	3.15"
HEIGHT	53.1"
WEIGHT	18.7 LBS



L700 ANTENNA DETAIL (1/A-3)
SCALE: NTS



L19/G19 ANTENNA DETAIL (2/A-3)
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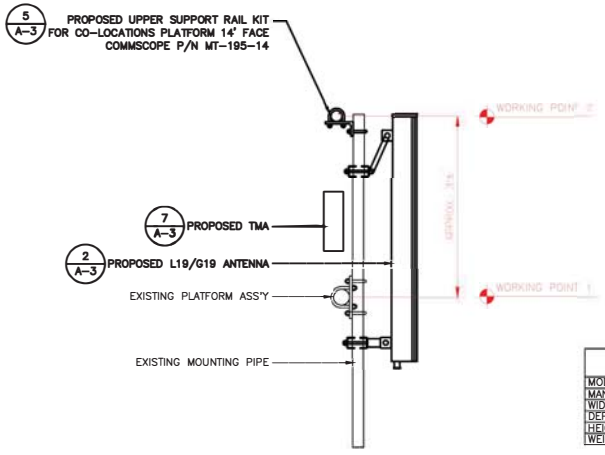
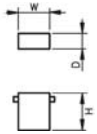
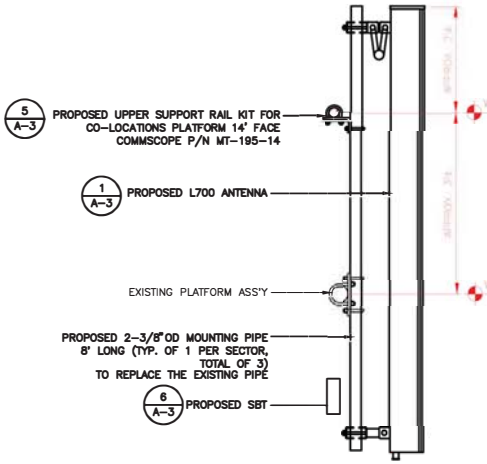


PROPOSED L19/G19 ANTENNA MOUNTING DETAIL (3/A-3)
SCALE: NTS

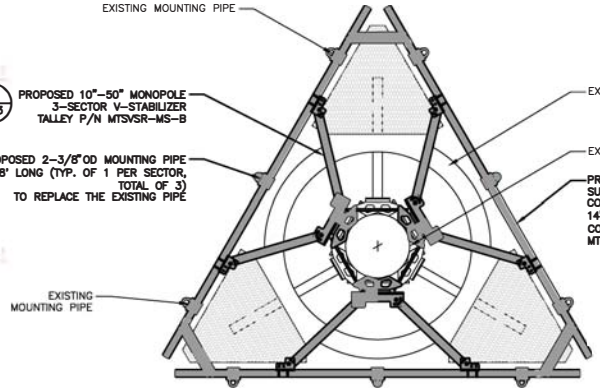


SBT SPECIFICATIONS	
MODEL	78211054
MANUF.	KATHREIN
WIDTH	3.2"
DEPTH	1.8"
HEIGHT	5.5"
WEIGHT	1.8 LBS

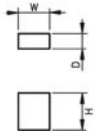
SMALL BIAS TEE (SBT) (6/A-3)
SCALE: NTS



PROPOSED L700 ANTENNA MOUNTING DETAIL (4/A-3)
SCALE: NTS



SUPPORT RAIL KIT DETAIL (5/A-3)
SCALE: NTS



TMA SPECIFICATIONS	
MODEL	GENERIC STYLE 1A-TWIN PCS
MANUF.	COMMSCOPE
WIDTH	6.7"
DEPTH	3.7"
HEIGHT	10.2"
WEIGHT	14.6 LBS

SGENERIC STYLE 1A-TWIN PCS (7/A-3)
SCALE: NTS

SPECIAL PRE-CONSTRUCTION WORK NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

ANTENNA MOUNT STRUCTURAL DESIGN NOTE:

ENGINEER-OF-RECORD HAS MADE A VISUAL ASSESSMENT ONLY OF EXISTING ANTENNA MOUNT ASSEMBLIES, WITHOUT THE BENEFIT OF A RIGOROUS ANTENNA MOUNT STRUCTURAL ANALYSIS, AND RECOMMENDS THAT EXISTING AND PROPOSED TOWER TOP EQUIPMENT BE INSTALLED AS DEPICTED HEREIN. STRUCTURAL DETAILS AS DEPICTED HEREIN FOR MODIFICATION OF EXISTING ANTENNA MOUNT ASSEMBLIES ARE PRELIMINARY ONLY AND THAT FINAL CONSTRUCTION DETAILS MAY BE SUBJECT TO CHANGE PENDING THE COMPLETION OF A SEPARATE SUPPLEMENTAL ANTENNA MOUNT STRUCTURAL ASSESSMENT, SUPPLEMENTAL STRUCTURAL MAPPING/CONDITIONS ASSESSMENT REPORT AND/OR SUPPLEMENTAL RIGOROUS ANTENNA MOUNT STRUCTURAL ANALYSIS.

T-Mobile

T-MOBILE NORTHEAST, LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581

Trylon

DESIGNER:
NAME: TRYLON TSF INC.
ADDRESS: 1825 W. WALNUT HILL LANE SUITE 302
CITY, PROVINCE, POSTAL CODE: IRVING, TEXAS TX 75038
CONTACT: KATYA SERAVALLE
PHONE: 519-465-4125

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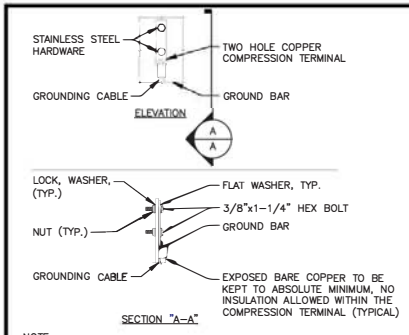
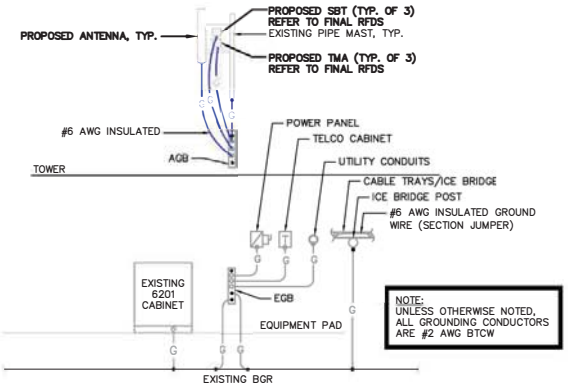
TOWER EQUIPMENT DETAILS

A-3



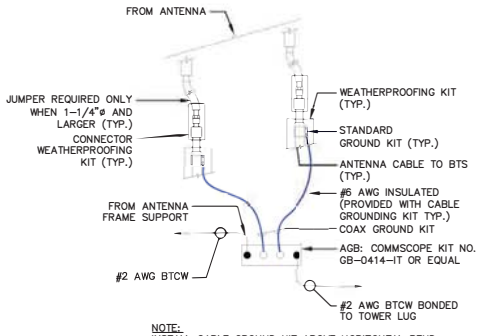
NOTE:
1. "DOUBLING UP" OR "STACKING " OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.

TYPICAL GROUND BAR CONNECTION DETAIL 1/E-1
SCALE: NTS



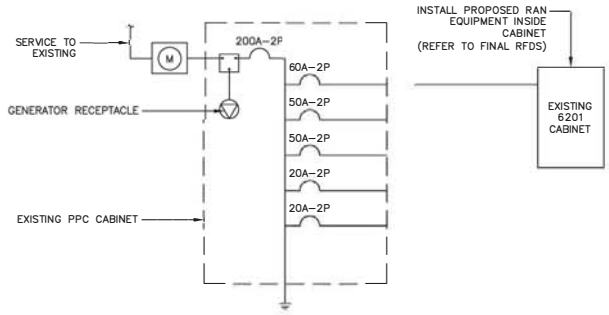
NOTE:
UNLESS OTHERWISE NOTED, ALL GROUNDING CONDUCTORS ARE #2 AWG BTCW

TYPICAL GROUNDING RISER DIAGRAM 2/E-1
SCALE: NTS



NOTE:
INSTALL CABLE GROUND KIT ABOVE HORIZONTAL BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO AGB/EGB.

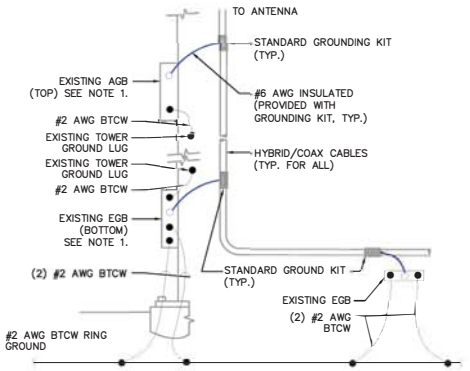
TOWER TOP CABLE GROUNDING DETAIL 3/E-1
SCALE: NTS



ONE LINE POWER DIAGRAM 4/E-1
SCALE: NTS

SOURCE: TRYLON 10/7/16

PHOTO DETAIL: PPC PANEL 5/E-1
SCALE: NTS



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

TOWER BOTTOM CABLE GROUNDING DETAIL 6/E-1
SCALE: NTS

ELECTRICAL LEGEND

A	AMPERE
V	VOLT
KWH	KILOWATT – HOUR
C	CONDUIT
GRC	GALVANIZED RIGID CONDUIT
BTCW	BARE TINNED (SOLID) COPPER WIRE (#2 AWG, UNLESS NOTES OTHERWISE)
G	GROUND
	GROUND
MGB	MASTER GROUND BAR ○ MECHANICAL CONNECTION ● CADWELD CONNECTION
AGB/EGB	EQUIPMENT GROUND BAR/ANTENNA GROUND BAR
G	GROUND COPPER WIRE, SIZE AS NOTED
	EXPOSED WIRING
	INSULATED GROUNDING CONDUCTOR (#6 AWG STRANDED, UNLESS NOTED OTHERWISE)
	5/8"x10' 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) 2014 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 SPECIFICATIONS 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 THHN INSULATION AS REQUIRED BY NEC.
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 LYGS. 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/GROUND RING.
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.

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ELECTRICAL DETAILS AND NOTES

E-1