



Mike Gentile, Site Acquisition
c/o New Cingular Wireless, PCS LLC (AT&T)
Centerline Communications, LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767
Mobile: (508) 844-9813
mgentile@clinellc.com

March 6, 2018

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

RE: Notice of Exempt Modification // Site Number: CT5511
Address: 8 Ferris Road, Newtown, CT 06470 (Site Name: Newtown-Ferris Rd)
N 41.3896944444 // W 73.338119444

Dear Ms. Bachman:

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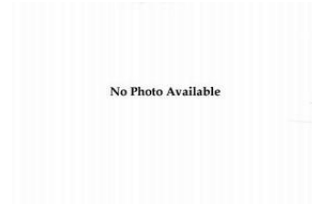
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Property Information

Property Location	8 FERRIS ROAD
Owner	GERTSCH ERICH & PATRICIA A
Co-Owner	
Mailing Address	8 FERRIS RD NEWTOWN CT 06384
Land Use	1060 Vacant W/ OB
Land Class	R
Zoning Code	R-1
Census Tract	12
Sub Lot	
Neighborhood	
Acreage	0
Utilities	Well,Septic
Lot Setting/Desc	
Survey Map	
TC Survey Numbers	

Photo



Sketch

Primary Construction Details

Year Built	
Stories	
Building Style	
Building Use	
Building Condition	
Floors	
Total Rooms	

Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

Exterior Walls	
Interior Walls	
Heating Type	
Heating Fuel	
AC Type	
Gross Bldg Area	
Total Living Area	



Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CT5511

FA#: 10071169

Newtown West Central

8 Ferris Road

Newtown, CT 6470

February 27, 2018

Centerline Communications Project Number: 950012-031

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	15.89 %



February 27, 2018

AT&T Mobility – New England
Attn: John Benedetto, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CT5511 – Newtown West Central**

Centerline Communications, LLC (“Centerline”) was directed to analyze the proposed AT&T facility located at **8 Ferris Road, Newtown, CT**, for the purpose of determining whether the emissions from the Proposed AT&T 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ 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 population 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 population 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.

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately $467 \mu\text{W}/\text{cm}^2$ and $567 \mu\text{W}/\text{cm}^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is $1000 \mu\text{W}/\text{cm}^2$. 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 performed for the proposed AT&T Wireless antenna facility located at **8 Ferris Road, Newtown, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T 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.

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. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
UMTS	850 MHz	2	30
LTE	700 MHz	2	40
LTE	1900 MHz (PCS)	4	60
LTE	2300 MHz (WCS)	4	30

Table 1: Channel Data Table



The following antennas listed in *Table 2* were used in the modeling for transmission in the 700 MHz, 850 MHz, 1900 MHz (PCS) and 2300 MHz (WCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. 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.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Powerwave 7770	88
A	2	Powerwave P65-16-XLH-RR	88
A	3	Quintel QS66512-2	88
B	1	Powerwave 7770	88
B	2	Powerwave P65-16-XLH-RR	88
B	3	Quintel QS66512-2	88
C	1	Powerwave 7770	88
C	2	Powerwave P65-16-XLH-RR	88
C	3	Quintel QS66512-2	88

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.



RESULTS

Per the calculations completed for the proposed AT&T configurations *Table 3* shows resulting emissions power levels and percentages of the FCC’s allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Powerwave 7770	850 MHz	11.4	1	30	414.12	0.39
Antenna A2	Powerwave P65-16-XLH-RR	700 MHz	12.7	2	80	1,489.67	1.71
Antenna A3	Quintel QS66512-2	1900 MHz (PCS) / 2300 MHz (WCS)	13.85 / 14.85	8	360	9,489.77	5.07
Sector A Composite MPE%							7.17
Antenna B1	Powerwave 7770	850 MHz	11.4	1	30	414.12	0.39
Antenna B2	Powerwave P65-16-XLH-RR	700 MHz	12.7	2	80	1,489.67	1.71
Antenna B3	Quintel QS66512-2	1900 MHz (PCS) / 2300 MHz (WCS)	13.85 / 14.85	8	360	9,489.77	5.07
Sector B Composite MPE%							7.17
Antenna C1	Powerwave 7770	850 MHz	11.4	1	30	414.12	0.39
Antenna C2	Powerwave P65-16-XLH-RR	700 MHz	12.7	2	80	1,489.67	1.71
Antenna C3	Quintel QS66512-2	1900 MHz (PCS) / 2300 MHz (WCS)	13.85 / 14.85	8	360	9,489.77	5.07
Sector C Composite MPE%							7.17

Table 3: AT&T Emissions Levels



The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum AT&T MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each AT&T Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	MPE%
AT&T – Max Sector Value	7.17 %
Nextel	0.45 %
Sprint	0.13 %
Verizon Wireless	4.98 %
T-Mobile	3.16 %
Site Total MPE %:	15.89 %

Table 4: All Carrier MPE Contributions

AT&T Sector A Total:	7.17 %
AT&T Sector B Total:	7.17 %
AT&T Sector C Total:	7.17 %
Site Total:	15.89 %

Table 5: Site MPE Summary



FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

AT&T _ Frequency Band / Technology Max Power Values (All Sectors)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
AT&T 850 MHz UMTS	1	414.12	88	2.21	850 MHz	567	0.39%
AT&T 700 MHz LTE	2	744.83	88	7.96	700 MHz	467	1.71%
AT&T 1900 MHz (PCS) LTE	4	1,455.97	88	31.14	1900 MHz (PCS)	1000	3.11%
AT&T 2300 MHz (WCS) LTE	4	916.48	88	19.60	2300 MHz (WCS)	1000	1.96%
						Total:	7.17%

Table 6: AT&T Maximum Sector MPE Power Values



Summary

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

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

AT&T Sector	Power Density Value (%)
Sector A:	7.17 %
Sector B:	7.17 %
Sector C:	7.17 %
AT&T Maximum Total (per sector):	7.17 %
Site Total:	15.89 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **15.89 %** of the allowable FCC established general population 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.

A handwritten signature in black ink, appearing to read 'Scott Heffernan', is positioned above the contact information.

Scott Heffernan
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Centerline Communications, LLC
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Tower Engineering Solutions

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

Structural Analysis Report

Existing 118 ft EEI Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT46132-A

Customer Site Name: Newtown-ferris Rd

Carrier Name: AT&T

Carrier Site ID / Name: CT5511 / Newton-Ferris Road

Site Location: 8 Ferris Road

Newtown, Connecticut

Fairfield County

Latitude: 41.389747

Longitude: -73.338444

Analysis Result:

Max Structural Usage: 77.2% [Pass]

Max Foundation Usage: 85% [Pass]

Report Prepared By : Jie Chen





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Newtown, Connecticut

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Latitude: 41.389747

Longitude: -73.338444

Analysis Result:

Max Structural Usage: 77.2% [Pass]

Max Foundation Usage: 85% [Pass]

Report Prepared By : Jie Chen

Introduction

The purpose of this report is to summarize the analysis results on the 118 ft EEI 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	EEI, Job No. 5189, dated 06/30/1999.
Foundation Drawing	EEI, Job No. 5189, dated 06/30/1999.
Geotechnical Report	New England Boring Contractors & Applied Earth Technologies Inc. dated 06/14/1999.
Modification Drawings	Vertical Solutions, Project No. 100188.08, dated 5/7/2010.

Analysis Criteria

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

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2012 IBC / 2016 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_S = 0.215$, $S_1 = 0.065$

This structural analysis is based upon the tower being classified as a Structure Class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

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	118.0	1	Telewave ANT150D - Dipole	Low Profile Platform	(2) 1/2"	Town of Newtown
2		1	Decibel DB222 - Dipole			
3	118.0	9	Decibel DB844H90E-XY - Panel		(12) 7/8"	Nextel
4	108.0	3	RFS APXV9TM14-ALU-120 - Panel	Low Profile Platform	(3) 1-1/4"	Sprint
5	107.0	3	RFS APXVSPP18-C-A20 - Panel			
6		3	ALU TD-RRH8x20-25			
7		3	ALU 1900 MHz RRUs			
8		3	ALU 800 MHz RRU Filter			
9		4	RFS ACU-A20-N			
10	98.0	3	Powerwave P65-16-XL-2 - Panel	Low Profile Platform	(12) 1-5/8"	Verizon
11		3	RFS APL199014-42T0 - Panel			
12		2	RFS APL868013 - Panel			
13		4	Andrew DB846H80E-SX - Panel			
-	91.0	3	Powerwave 7770 - Panel	Low Profile Platform	(12) 7/8" (1) 3/8"	AT&T
-		3	Powerwave P65-16-XLH-RR - Panel			
-		6	Powerwave LGP21401 TMA			
-		6	Ericsson RRUS-11			
-		1	Raycap DC6-48-60-18-8F			
22	83.0	3	RFS APXV18-209014 - Panel	Platform w/ Handrail kit and V-brace kit	(12) 1 1/4"	T-Mobile
23		3	Commscope LNX-6515DS-A1M - Panel			
24		3	RFS ATMAA1412D-1A2 TMA			
25		3	S20057A1			
26		3	Kathrein 782 11054 Bias T			
27	75.0	1	GPS	Direct	(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
14	91.0	3	Powerwave 7770 - Panel	Low Profile Platform	(12) 7/8" (2) 3/8" Fiber (4) 5/8" DC	AT&T
15		3	Powerwave P65-16-XLH-RR - Panel			
16		3	Quintel QS66512-2 - Panel			
17		6	Powerwave LGP21401 TMA			
18		3	Ericsson RRUS-11			
19		3	Ericsson RRUS 32 B2			
20		3	Ericsson RRUS 32 B30			
21		2	Raycap DC6-48-60-18-8F			

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:	77.2%	75.8%	73.8%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	2442.9	27.2	57.1

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.4080 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-222-G standards and the 2012 IBC under the design basic wind speed 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 77.24% at 0.0ft

Structure: CT46132-A-SBA
Site Name: Newtown-ferris Rd
Height: 118.00 (ft)
Base Elev: 0.000 (ft)

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

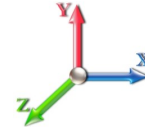
11/9/2017



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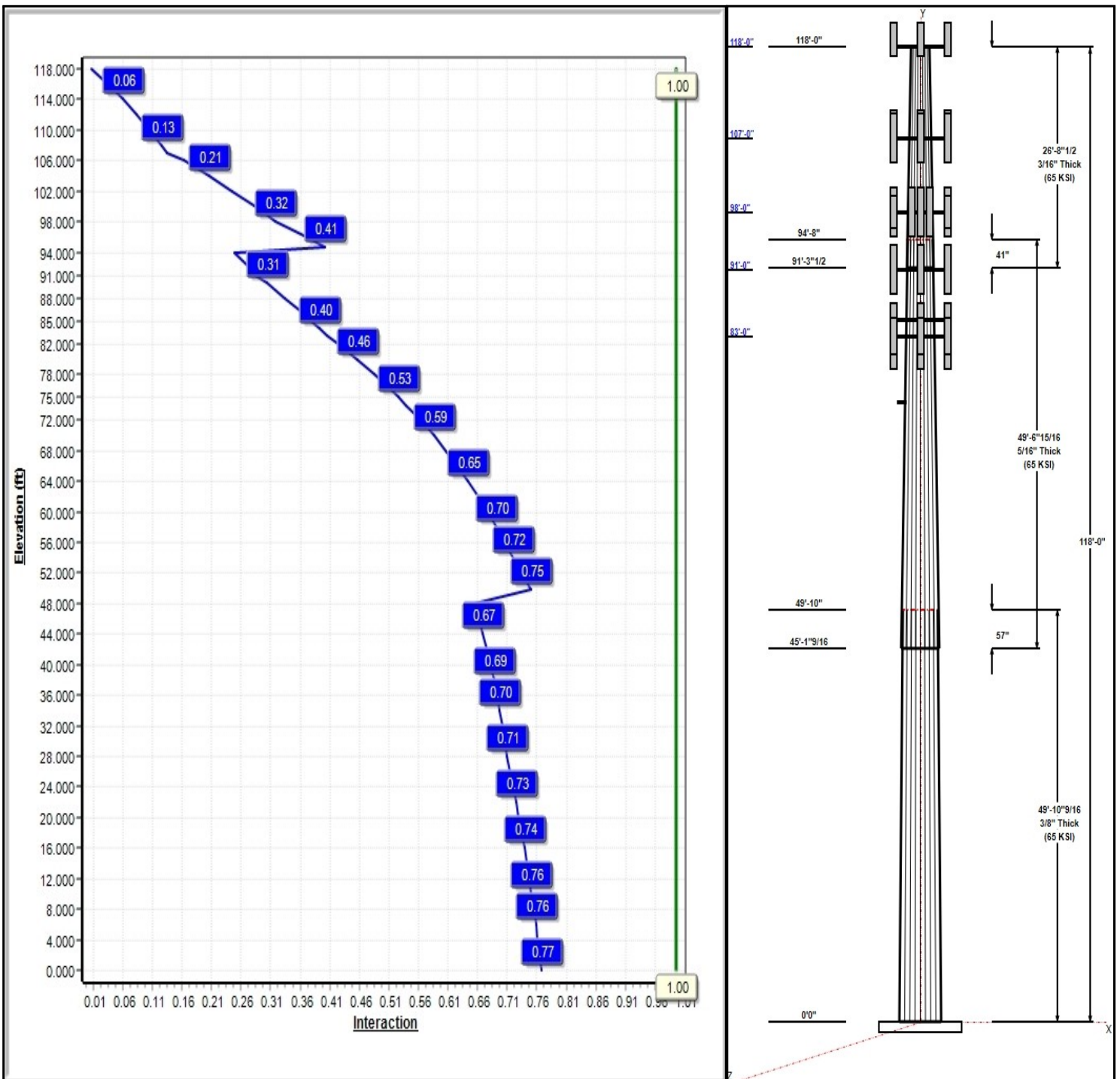
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 26

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Structure: CT46132-A-SBA

Type: Tapered
Site Name: Newtown-ferris Rd
Height: 118.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23093

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Shaft Properties

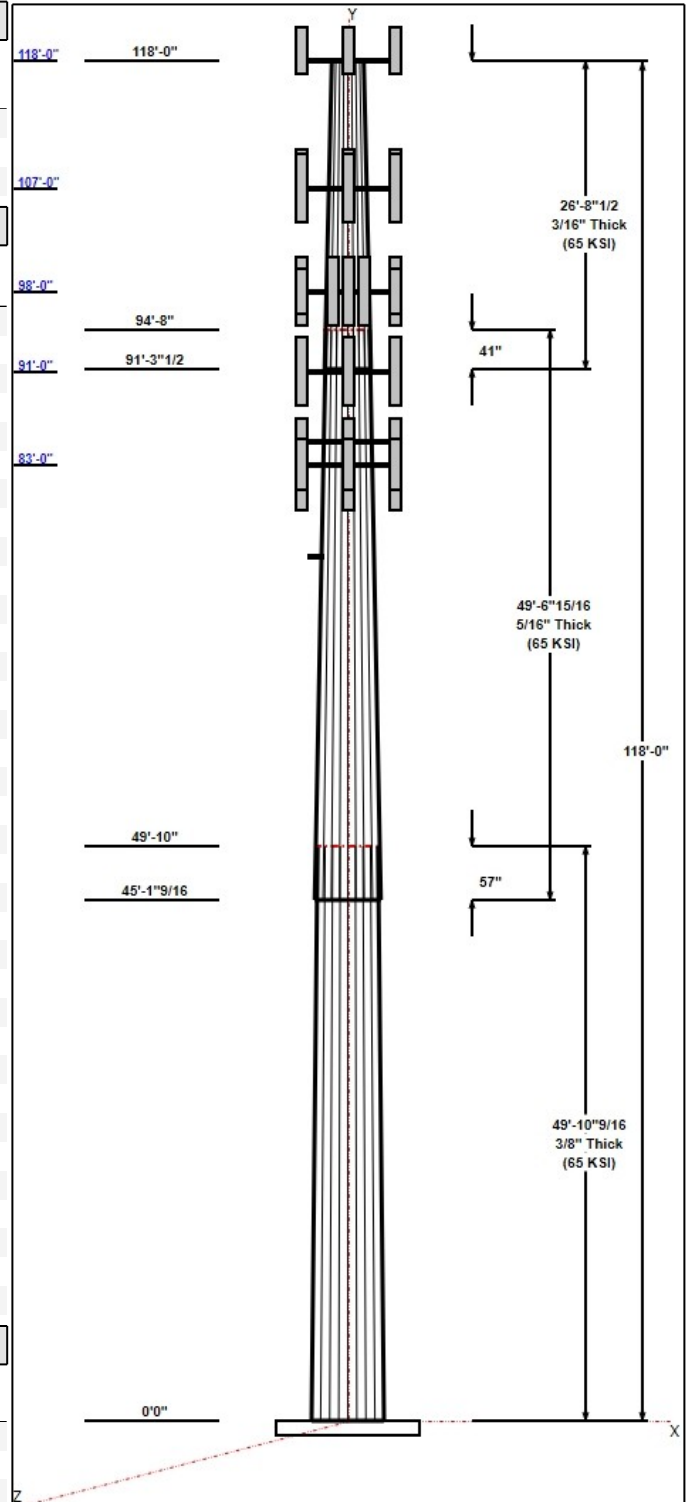
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	49.88	31.73	43.25	0.375		0.23093	65
2	49.58	22.00	33.45	0.313	Slip	0.23093	65
3	26.71	17.00	23.17	0.188	Slip	0.23093	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
118.00	130.00	1	DB222	Town of Newtown
118.00	119.42	1	ANT150D	Town of Newtown
118.00	118.80	9	DB844H90E-XY	Nextel
118.00	118.00	1	Low Profile Platform	Town of
107.00	107.00	1	Universal Ring Mount	Sprint
107.00	107.00	1	Low Profile Platform	Sprint
107.00	107.00	3	APXVSP18-C-A20	Sprint
107.00	108.00	3	APXV9TM14-ALU-120	Sprint
107.00	107.00	3	1900 MHz 4X45 RRH	Sprint
107.00	107.00	3	800 MHz RRU Filter	Sprint
107.00	107.00	3	TD-RRH8x20-25	Sprint
107.00	107.00	4	ACU-A20-N	Sprint
98.00	98.00	1	Low Profile Platform	Verizon
98.00	98.00	2	RFS APL868013	Verizon
98.00	98.00	4	Andrew DB846H80E-SX	Verizon
98.00	98.00	3	P65-16-XL-2	Verizon
98.00	98.00	3	APL199014-42T0	Verizon
91.00	91.00	3	QS66512-2	AT&T
91.00	91.00	3	RRUS 32 B2	AT&T
91.00	91.00	3	RRUS 32 B30	AT&T
91.00	91.00	3	7770.00	AT&T
91.00	91.00	3	P65-16-XLH-RR	AT&T
91.00	91.00	6	LGP21401	AT&T
91.00	91.00	3	RRUS-11	AT&T
91.00	91.00	2	DC6-48-60-18-8F	AT&T
91.00	91.00	1	Low Profile Platform	AT&T
85.00	85.00	1	V-brace kit	T-Mobile
83.00	83.00	1	Platform w/ Handrail kit	T-Mobile
83.00	83.00	3	RFS APXV18-209014	T-Mobile
83.00	83.00	3	Commscope	T-Mobile
83.00	83.00	3	RFS ATMAA1412D-1A2	T-Mobile
83.00	83.00	3	S20057A1	T-Mobile
83.00	83.00	3	Kathrein 782 11054	T-Mobile
75.00	75.00	1	GPS	Sprint
75.00	75.00	1	Standoff Mount	Sprint

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	118.00	Inside	1/2" Coax	Town of Newtown
0.00	118.00	Inside	7/8"	Nextel
0.00	107.00	Inside	1-1/4"	Sprint
0.00	98.00	Inside	1-5/8" Coax	Verizon
0.00	91.00	Inside	3/8" Fiber	AT&T
0.00	91.00	Inside	5/8" DC	AT&T
0.00	91.00	Inside	7/8"	AT&T
0.00	83.00	Inside	1 1/4" Coax	T-Mobile



Structure: CT46132-A-SBA

Type: Tapered
Site Name: Newtown-ferris Rd
Height: 118.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23093

11/9/2017

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0.00 75.00 Outside 1/2" Sprint

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
12	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.7500	58.0	60.0	Round

Reactions

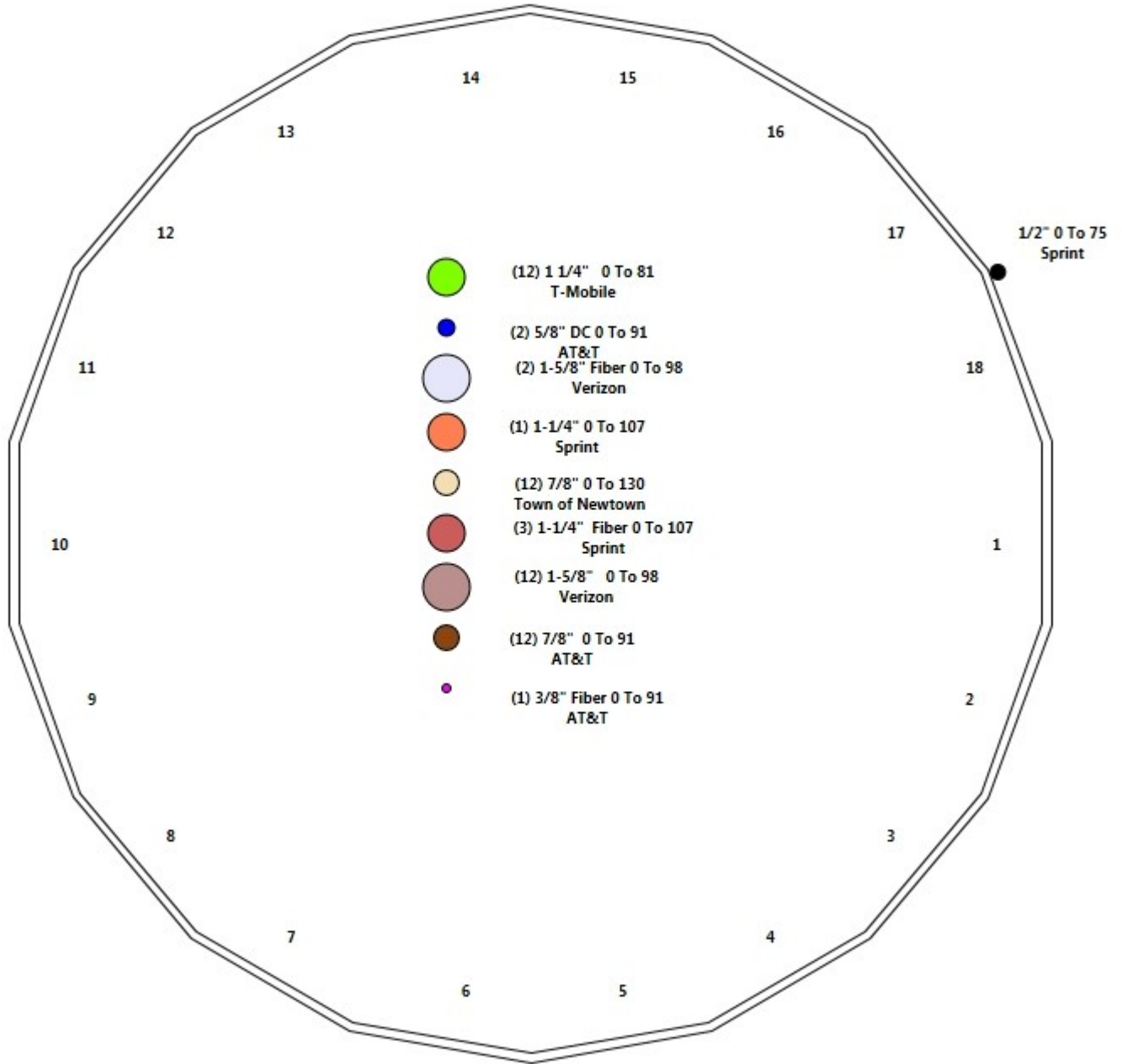
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	2442.9	27.2	35.3
0.9D + 1.6W 97 mph Wind	2411.4	27.2	26.4
1.2D + 1.0Di + 1.0Wi 50 mph Wind	651.8	7.3	57.1
1.2D + 1.0E	153.3	1.6	35.3
0.9D + 1.0E	151.1	1.6	26.5
1.0D + 1.0W 60 mph Wind	580.2	6.5	29.4

Structure: CT46132-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Newtown-ferris Rd
Height: 118.00 (ft)

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Shaft Properties

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	49.880	0.3750	65		0.00	7,498
2	18	49.580	0.3125	65	Slip	57.00	4,588
3	18	26.707	0.1875	65	Slip	41.00	1,076
Total Shaft Weight:							13,161

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	43.25	0.00	51.03	11851.90	18.93	115.33	31.73	49.88	37.32	4635.98	13.51	84.62	0.230932
2	33.45	45.13	32.87	4561.13	17.47	107.05	22.00	94.71	21.51	1278.87	11.00	70.41	0.230932
3	23.17	91.29	13.68	912.41	20.38	123.56	17.00	118.00	10.01	357.31	14.58	90.67	0.230932

Load Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	118.00	DB222	1	16.00	2.25	1.00	83.66	8.168	1.00	0.00	12.00
2	118.00	ANT150D	1	6.00	1.00	1.00	14.49	2.675	1.00	0.00	1.42
3	118.00	DB844H90E-XY	9	14.00	3.05	1.12	121.41	3.900	1.12	0.00	0.80
4	118.00	Low Profile Platform	1	1800.00	28.47	1.00	3716.82	35.191	1.00	0.00	0.00
5	107.00	Universal Ring Mount	1	350.00	5.00	1.00	633.46	8.374	1.00	0.00	0.00
6	107.00	Low Profile Platform	1	2000.00	27.33	1.00	4109.06	33.719	1.00	0.00	0.00
7	107.00	APXVSP18-C-A20	3	57.00	8.02	0.83	224.11	10.721	0.85	0.00	0.00
8	107.00	APXV9TM14-ALU-120	3	56.00	6.34	0.79	210.04	7.414	0.81	0.00	1.00
9	107.00	1900 MHz 4X45 RRH	3	60.00	2.71	0.67	138.07	3.932	0.69	0.00	0.00
10	107.00	800 MHz RRU Filter	3	64.00	2.40	0.67	138.64	3.482	0.69	0.00	0.00
11	107.00	TD-RRH8x20-25	3	70.00	4.05	0.67	176.05	4.834	0.69	0.00	0.00
12	107.00	ACU-A20-N	4	1.00	0.14	0.67	5.15	0.427	0.69	0.00	0.00
13	98.00	Low Profile Platform	1	2100.00	23.10	1.00	4295.14	28.453	1.00	0.00	0.00
14	98.00	RFS APL868013	2	6.30	2.86	1.15	108.04	3.687	1.15	0.00	0.00
15	98.00	Andrew DB846H80E-SX	4	16.00	5.01	1.12	167.39	6.169	1.14	0.00	0.00
16	98.00	P65-16-XL-2	3	33.00	8.16	0.71	181.95	10.846	0.71	0.00	0.00
17	98.00	APL199014-42T0	3	6.00	2.09	1.00	70.88	2.894	1.00	0.00	0.00
18	91.00	QS66512-2	3	77.00	8.13	0.90	285.73	9.362	0.90	0.00	0.00
19	91.00	RRUS 32 B2	3	53.00	2.74	0.81	135.74	3.431	0.81	0.00	0.00
20	91.00	RRUS 32 B30	3	60.00	2.74	0.81	142.74	3.431	0.81	0.00	0.00
21	91.00	7770.00	3	35.00	5.50	0.73	162.16	6.510	0.75	0.00	0.00
22	91.00	P65-16-XLH-RR	3	53.00	8.16	0.75	210.00	10.826	0.75	0.00	0.00
23	91.00	LGP21401	6	14.10	1.29	0.67	37.88	2.085	0.69	0.00	0.00
24	91.00	RRUS-11	3	55.00	4.42	0.67	140.57	5.846	0.69	0.00	0.00
25	91.00	DC6-48-60-18-8F	2	31.80	0.92	1.00	90.61	1.337	1.00	0.00	0.00
26	91.00	Low Profile Platform	1	1349.00	17.46	1.00	2468.76	30.794	1.00	0.00	0.00
27	85.00	V-brace kit	1	421.10	12.00	1.00	768.27	21.102	1.00	0.00	0.00
28	83.00	Platform w/ Handrail kit	1	1868.20	37.16	1.00	3404.73	65.278	1.00	0.00	0.00
29	83.00	RFS APXV18-209014	3	18.70	3.58	0.74	100.78	4.453	0.76	0.00	0.00
30	83.00	Commscope LNX-6515DS-A1M	3	49.80	11.47	0.80	266.16	14.549	0.82	0.00	0.00
31	83.00	RFS ATMAA1412D-1A2	3	13.00	1.17	0.67	38.05	1.907	0.69	0.00	0.00
32	83.00	S20057A1	3	11.00	0.82	0.67	28.79	1.478	0.69	0.00	0.00
33	83.00	Kathrein 782 11054	3	1.80	0.15	0.67	8.12	0.407	0.69	0.00	0.00
34	75.00	GPS	1	10.00	1.00	1.00	37.36	1.664	1.00	0.00	0.00
35	75.00	Standoff Mount	1	40.00	2.63	1.00	114.90	8.199	1.00	0.00	0.00
Totals:			92	12,635.00			30,029.87				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	118.00	(2) 1/2" Coax	0.00	Inside
0.00	118.00	(12) 7/8"	0.00	Inside
0.00	107.00	(3) 1-1/4"	0.00	Inside
0.00	98.00	(12) 1-5/8" Coax	0.00	Inside
0.00	91.00	(2) 3/8" Fiber	0.00	Inside
0.00	91.00	(4) 5/8" DC	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
0.00	91.00	(12) 7/8"		0.00		Inside					
0.00	83.00	(12) 1 1/4" Coax		0.00		Inside					
0.00	75.00	(1) 1/2"		1.00		Outside					

Shaft Section Properties

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.3750	43.250	51.030	11851.9	18.93	115.33	79.1	539.7	0.0
2.00		0.3750	42.788	50.480	11473.0	18.71	114.10	79.4	528.1	345.4
4.00		0.3750	42.326	49.931	11102.3	18.49	112.87	79.7	516.6	341.7
6.00		0.3750	41.864	49.381	10739.6	18.27	111.64	79.9	505.3	337.9
8.00		0.3750	41.403	48.831	10384.9	18.06	110.41	80.2	494.0	334.2
10.00		0.3750	40.941	48.282	10038.1	17.84	109.18	80.4	482.9	330.5
12.00		0.3750	40.479	47.732	9699.1	17.62	107.94	80.7	471.9	326.7
14.00		0.3750	40.017	47.182	9367.9	17.41	106.71	80.9	461.1	323.0
16.00		0.3750	39.555	46.632	9044.2	17.19	105.48	81.2	450.4	319.2
18.00		0.3750	39.093	46.083	8728.1	16.97	104.25	81.4	439.7	315.5
20.00		0.3750	38.631	45.533	8419.5	16.75	103.02	81.7	429.3	311.7
22.00		0.3750	38.169	44.983	8118.2	16.54	101.79	82.0	418.9	308.0
24.00		0.3750	37.708	44.434	7824.2	16.32	100.55	82.2	408.7	304.3
26.00		0.3750	37.246	43.884	7537.4	16.10	99.32	82.5	398.6	300.5
28.00		0.3750	36.784	43.334	7257.7	15.89	98.09	82.5	388.6	296.8
30.00		0.3750	36.322	42.784	6985.0	15.67	96.86	82.5	378.8	293.0
32.00		0.3750	35.860	42.235	6719.2	15.45	95.63	82.5	369.1	289.3
34.00		0.3750	35.398	41.685	6460.2	15.23	94.40	82.5	359.5	285.6
36.00		0.3750	34.936	41.135	6208.0	15.02	93.16	82.5	350.0	281.8
38.00		0.3750	34.475	40.586	5962.4	14.80	91.93	82.5	340.6	278.1
40.00		0.3750	34.013	40.036	5723.4	14.58	90.70	82.5	331.4	274.3
42.00		0.3750	33.551	39.486	5490.9	14.37	89.47	82.5	322.3	270.6
44.00		0.3750	33.089	38.936	5264.7	14.15	88.24	82.5	313.4	266.9
45.13	Bot - Section 2	0.3750	32.828	38.626	5139.7	14.03	87.54	82.5	308.4	149.1
46.00		0.3750	32.627	38.387	5044.9	13.93	87.01	82.5	304.5	211.0
48.00		0.3750	32.165	37.837	4831.2	13.71	85.77	82.5	295.8	480.2
49.88	Top - Section 1	0.3125	32.356	31.782	4123.0	16.85	103.54	0.0	0.0	445.1
50.00		0.3125	32.328	31.755	4112.4	16.83	103.45	81.6	250.5	13.0
52.00		0.3125	31.867	31.297	3936.9	16.57	101.97	81.9	243.3	214.5
54.00		0.3125	31.405	30.838	3766.6	16.31	100.49	82.2	236.2	211.4
56.00		0.3125	30.943	30.380	3601.2	16.05	99.02	82.5	229.2	208.3
58.00		0.3125	30.481	29.922	3440.7	15.79	97.54	82.5	222.3	205.2
60.00		0.3125	30.019	29.464	3285.1	15.53	96.06	82.5	215.5	202.1
62.00		0.3125	29.557	29.006	3134.3	15.27	94.58	82.5	208.9	199.0
64.00		0.3125	29.095	28.548	2988.1	15.01	93.11	82.5	202.3	195.8
66.00		0.3125	28.633	28.090	2846.6	14.75	91.63	82.5	195.8	192.7
68.00		0.3125	28.172	27.632	2709.5	14.49	90.15	82.5	189.4	189.6
70.00		0.3125	27.710	27.174	2577.0	14.22	88.67	82.5	183.2	186.5
72.00		0.3125	27.248	26.716	2448.9	13.96	87.19	82.5	177.0	183.4
74.00		0.3125	26.786	26.257	2325.0	13.70	85.72	82.5	171.0	180.3
75.00		0.3125	26.555	26.028	2264.7	13.57	84.98	82.5	168.0	89.0
76.00		0.3125	26.324	25.799	2205.5	13.44	84.24	82.5	165.0	88.2
78.00		0.3125	25.862	25.341	2090.0	13.18	82.76	82.5	159.2	174.0
80.00		0.3125	25.400	24.883	1978.7	12.92	81.28	82.5	153.4	170.9
82.00		0.3125	24.939	24.425	1871.5	12.66	79.80	82.5	147.8	167.8
83.00		0.3125	24.708	24.196	1819.3	12.53	79.06	82.5	145.0	82.7
84.00		0.3125	24.477	23.967	1768.1	12.40	78.33	82.5	142.3	81.9
85.00		0.3125	24.246	23.738	1717.9	12.27	77.59	82.5	139.6	81.2
86.00		0.3125	24.015	23.509	1668.7	12.14	76.85	82.5	136.9	80.4
88.00		0.3125	23.553	23.051	1573.0	11.88	75.37	82.5	131.5	158.4

Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
90.00		0.3125	23.091	22.593	1481.1	11.62	73.89	82.5	126.3	155.3
91.00		0.3125	22.860	22.364	1436.5	11.49	73.15	82.5	123.8	76.5
91.29	Bot - Section 3	0.3125	22.792	22.296	1423.6	11.45	72.94	82.5	123.0	22.3
92.00		0.3125	22.629	22.135	1392.8	11.36	72.41	82.5	121.2	86.2
94.00		0.3125	22.167	21.677	1308.1	11.10	70.94	82.5	116.2	240.6
94.71	Top - Section 2	0.1875	22.378	13.206	821.6	19.63	119.35	0.0	0.0	84.2
96.00		0.1875	22.081	13.029	789.0	19.35	117.76	78.6	70.4	57.6
98.00		0.1875	21.619	12.754	740.1	18.92	115.30	79.1	67.4	87.7
100.00		0.1875	21.157	12.479	693.3	18.49	112.84	79.7	64.5	85.9
102.00		0.1875	20.695	12.204	648.5	18.05	110.37	80.2	61.7	84.0
104.00		0.1875	20.233	11.929	605.6	17.62	107.91	80.7	59.0	82.1
106.00		0.1875	19.771	11.654	564.7	17.18	105.45	81.2	56.3	80.2
107.00		0.1875	19.540	11.517	545.0	16.97	104.21	81.4	54.9	39.4
108.00		0.1875	19.309	11.379	525.7	16.75	102.98	81.7	53.6	39.0
110.00		0.1875	18.847	11.105	488.5	16.31	100.52	82.2	51.1	76.5
112.00		0.1875	18.386	10.830	453.1	15.88	98.06	82.5	48.5	74.6
114.00		0.1875	17.924	10.555	419.5	15.45	95.59	82.5	46.1	72.8
116.00		0.1875	17.462	10.280	387.6	15.01	93.13	82.5	43.7	70.9
118.00		0.1875	17.000	10.005	357.3	14.58	90.67	82.5	41.4	69.0
										13161.4

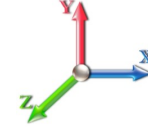
Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 26

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	327.29	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	19.450	21.40	323.80	0.650	0.000	2.00	7.280	4.73	162.0	0.0	414.5
4.00		1.00	0.85	19.450	21.40	320.30	0.650	0.000	2.00	7.202	4.68	160.3	0.0	410.0
6.00		1.00	0.85	19.450	21.40	316.81	0.650	0.000	2.00	7.124	4.63	158.5	0.0	405.5
8.00		1.00	0.85	19.450	21.40	313.31	0.650	0.000	2.00	7.046	4.58	156.8	0.0	401.0
10.00		1.00	0.85	19.450	21.40	309.82	0.650	0.000	2.00	6.968	4.53	155.0	0.0	396.5
12.00		1.00	0.85	19.450	21.40	306.32	0.650	0.000	2.00	6.890	4.48	153.3	0.0	392.1
14.00		1.00	0.85	19.450	21.40	302.83	0.650	0.000	2.00	6.811	4.43	151.6	0.0	387.6
16.00		1.00	0.86	19.690	21.66	301.17	0.650	0.000	2.00	6.733	4.38	151.7	0.0	383.1
18.00		1.00	0.88	20.185	22.20	301.37	0.650	0.000	2.00	6.655	4.33	153.7	0.0	378.6
20.00		1.00	0.90	20.638	22.70	301.13	0.650	0.000	2.00	6.577	4.28	155.3	0.0	374.1
22.00		1.00	0.92	21.056	23.16	300.53	0.650	0.000	2.00	6.499	4.22	156.5	0.0	369.6
24.00		1.00	0.94	21.445	23.59	299.63	0.650	0.000	2.00	6.421	4.17	157.5	0.0	365.1
26.00		1.00	0.95	21.810	23.99	298.46	0.650	0.000	2.00	6.342	4.12	158.2	0.0	360.6
28.00		1.00	0.97	22.152	24.37	297.07	0.650	0.000	2.00	6.264	4.07	158.8	0.0	356.1
30.00		1.00	0.98	22.477	24.72	295.48	0.650	0.000	2.00	6.186	4.02	159.1	0.0	351.7
32.00		1.00	1.00	22.784	25.06	293.71	0.650	0.000	2.00	6.108	3.97	159.2	0.0	347.2
34.00		1.00	1.01	23.077	25.38	291.78	0.650	0.000	2.00	6.030	3.92	159.2	0.0	342.7
36.00		1.00	1.02	23.356	25.69	289.71	0.650	0.000	2.00	5.952	3.87	159.0	0.0	338.2
38.00		1.00	1.03	23.623	25.99	287.51	0.650	0.000	2.00	5.873	3.82	158.7	0.0	333.7
40.00		1.00	1.04	23.880	26.27	285.20	0.650	0.000	2.00	5.795	3.77	158.3	0.0	329.2
42.00		1.00	1.05	24.126	26.54	282.77	0.650	0.000	2.00	5.717	3.72	157.8	0.0	324.7
44.00		1.00	1.06	24.364	26.80	280.25	0.650	0.000	2.00	5.639	3.67	157.2	0.0	320.2
45.13 Bot - Section 2		1.00	1.07	24.494	26.94	278.78	0.650	0.000	1.13	3.151	2.05	88.3	0.0	178.9
46.00		1.00	1.07	24.593	27.05	277.63	0.650	0.000	0.87	2.455	1.60	69.1	0.0	253.2
48.00		1.00	1.08	24.814	27.30	274.93	0.650	0.000	2.00	5.588	3.63	158.6	0.0	576.2
49.88 Top - Section 1		1.00	1.09	25.016	27.52	272.32	0.650	0.000	1.88	5.182	3.37	148.3	0.0	534.1
50.00		1.00	1.09	25.029	27.53	277.52	0.650	0.000	0.12	0.328	0.21	9.4	0.0	15.6
52.00		1.00	1.10	25.236	27.76	274.68	0.650	0.000	2.00	5.432	3.53	156.8	0.0	257.5
54.00		1.00	1.11	25.437	27.98	271.78	0.650	0.000	2.00	5.354	3.48	155.8	0.0	253.7
56.00		1.00	1.12	25.633	28.20	268.81	0.650	0.000	2.00	5.276	3.43	154.7	0.0	250.0
58.00		1.00	1.13	25.823	28.41	265.78	0.650	0.000	2.00	5.198	3.38	153.5	0.0	246.2
60.00		1.00	1.14	26.008	28.61	262.68	0.650	0.000	2.00	5.119	3.33	152.3	0.0	242.5
62.00		1.00	1.14	26.188	28.81	259.54	0.650	0.000	2.00	5.041	3.28	151.0	0.0	238.8
64.00		1.00	1.15	26.364	29.00	256.34	0.650	0.000	2.00	4.963	3.23	149.7	0.0	235.0
66.00		1.00	1.16	26.535	29.19	253.09	0.650	0.000	2.00	4.885	3.18	148.3	0.0	231.3
68.00		1.00	1.17	26.702	29.37	249.79	0.650	0.000	2.00	4.807	3.12	146.8	0.0	227.5
70.00		1.00	1.17	26.866	29.55	246.44	0.650	0.000	2.00	4.729	3.07	145.3	0.0	223.8
72.00		1.00	1.18	27.026	29.73	243.06	0.650	0.000	2.00	4.650	3.02	143.8	0.0	220.0
74.00		1.00	1.19	27.182	29.90	239.63	0.650	0.000	2.00	4.572	2.97	142.2	0.0	216.3
75.00 Appurtenance(s)		1.00	1.19	27.259	29.98	237.90	0.650	0.000	1.00	2.257	1.47	70.4	0.0	106.8
76.00		1.00	1.19	27.335	30.07	236.16	0.650	0.000	1.00	2.237	1.45	70.0	0.0	105.8
78.00		1.00	1.20	27.485	30.23	232.65	0.650	0.000	2.00	4.416	2.87	138.8	0.0	208.8
80.00		1.00	1.21	27.632	30.39	229.10	0.650	0.000	2.00	4.338	2.82	137.1	0.0	205.1
82.00		1.00	1.21	27.776	30.55	225.52	0.650	0.000	2.00	4.260	2.77	135.4	0.0	201.3
83.00 Appurtenance(s)		1.00	1.22	27.847	30.63	223.72	0.650	0.000	1.00	2.101	1.37	66.9	0.0	99.3
84.00		1.00	1.22	27.917	30.71	221.91	0.650	0.000	1.00	2.081	1.35	66.5	0.0	98.3

Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



85.00 Appurtenance(s)	1.00	1.22	27.987	30.79	220.09	0.650	0.000	1.00	2.061	1.34	66.0	0.0	97.4
86.00	1.00	1.23	28.056	30.86	218.26	0.650	0.000	1.00	2.042	1.33	65.5	0.0	96.5
88.00	1.00	1.23	28.192	31.01	214.58	0.650	0.000	2.00	4.025	2.62	129.8	0.0	190.1
90.00	1.00	1.24	28.325	31.16	210.87	0.650	0.000	2.00	3.947	2.57	127.9	0.0	186.4
91.00 Appurtenance(s)	1.00	1.24	28.391	31.23	209.01	0.650	0.000	1.00	1.944	1.26	63.1	0.0	91.8
91.29 Bot - Section 3	1.00	1.24	28.411	31.25	208.46	0.650	0.000	0.29	0.567	0.37	18.4	0.0	26.7
92.00	1.00	1.24	28.457	31.30	207.13	0.650	0.000	0.71	1.380	0.90	44.9	0.0	103.4
94.00	1.00	1.25	28.586	31.44	203.36	0.650	0.000	2.00	3.854	2.51	126.0	0.0	288.7
94.71 Top - Section 2	1.00	1.25	28.631	31.49	202.02	0.650	0.000	0.71	1.349	0.88	44.2	0.0	101.0
96.00	1.00	1.25	28.713	31.58	203.02	0.650	0.000	1.29	2.427	1.58	79.7	0.0	69.1
98.00 Appurtenance(s)	1.00	1.26	28.838	31.72	199.20	0.650	0.000	2.00	3.698	2.40	122.0	0.0	105.3
100.00	1.00	1.27	28.961	31.86	195.36	0.650	0.000	2.00	3.620	2.35	119.9	0.0	103.0
102.00	1.00	1.27	29.082	31.99	191.50	0.650	0.000	2.00	3.541	2.30	117.8	0.0	100.8
104.00	1.00	1.28	29.201	32.12	187.61	0.650	0.000	2.00	3.463	2.25	115.7	0.0	98.5
106.00	1.00	1.28	29.318	32.25	183.69	0.650	0.000	2.00	3.385	2.20	113.5	0.0	96.3
107.00 Appurtenance(s)	1.00	1.28	29.376	32.31	181.72	0.650	0.000	1.00	1.663	1.08	55.9	0.0	47.3
108.00	1.00	1.29	29.434	32.38	179.75	0.650	0.000	1.00	1.644	1.07	55.3	0.0	46.7
110.00	1.00	1.29	29.548	32.50	175.79	0.650	0.000	2.00	3.229	2.10	109.1	0.0	91.8
112.00	1.00	1.30	29.660	32.63	171.81	0.650	0.000	2.00	3.151	2.05	106.9	0.0	89.6
114.00	1.00	1.30	29.771	32.75	167.81	0.650	0.000	2.00	3.072	2.00	104.6	0.0	87.3
116.00	1.00	1.31	29.880	32.87	163.78	0.650	0.000	2.00	2.994	1.95	102.4	0.0	85.1
118.00 Appurtenance(s)	1.00	1.31	29.988	32.99	159.74	0.650	0.000	2.00	2.916	1.90	100.0	0.0	82.8
Totals:								118.00			8,405.7		15,793.7

Discrete Appurtenance Forces

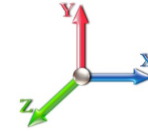
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 26

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	118.00	Low Profile Platform	1	29.988	32.986	1.00	1.00	28.47	2160.00	0.000	0.000	1502.60	0.00	0.00
2	118.00	DB844H90E-XY	9	30.030	33.033	1.12	1.00	30.74	151.20	0.000	0.800	1624.93	0.00	1299.94
3	118.00	ANT150D	1	30.063	33.070	1.00	1.00	1.00	7.20	0.000	1.420	52.91	0.00	75.13
4	118.00	DB222	1	30.605	33.666	1.00	1.00	2.25	19.20	0.000	12.000	121.20	0.00	1454.37
5	107.00	Universal Ring Mount	1	29.376	32.314	1.00	1.00	5.00	420.00	0.000	0.000	258.51	0.00	0.00
6	107.00	Low Profile Platform	1	29.376	32.314	1.00	1.00	27.33	2400.00	0.000	0.000	1413.02	0.00	0.00
7	107.00	APXVSP18-C-A20	3	29.376	32.314	0.66	0.80	15.98	205.20	0.000	0.000	825.99	0.00	0.00
8	107.00	APXV9TM14-ALU-120	3	29.434	32.377	0.63	0.80	12.02	201.60	0.000	1.000	622.71	0.00	622.71
9	107.00	1900 MHz 4X45 RRH	3	29.376	32.314	0.54	0.80	4.36	216.00	0.000	0.000	225.30	0.00	0.00
10	107.00	800 MHz RRU Filter	3	29.376	32.314	0.54	0.80	3.86	230.40	0.000	0.000	199.53	0.00	0.00
11	107.00	TD-RRH8x20-25	3	29.376	32.314	0.54	0.80	6.51	252.00	0.000	0.000	336.71	0.00	0.00
12	107.00	ACU-A20-N	4	29.376	32.314	0.54	0.80	0.30	4.80	0.000	0.000	15.52	0.00	0.00
13	98.00	APL199014-42T0	3	28.838	31.722	0.80	0.80	5.02	21.60	0.000	0.000	254.59	0.00	0.00
14	98.00	P65-16-XL-2	3	28.838	31.722	0.57	0.80	13.90	118.80	0.000	0.000	705.72	0.00	0.00
15	98.00	Andrew DB846H80E-SX	4	28.838	31.722	0.90	0.80	17.96	76.80	0.000	0.000	911.34	0.00	0.00
16	98.00	RFS APL868013	2	28.838	31.722	0.92	0.80	5.27	15.12	0.000	0.000	267.32	0.00	0.00
17	98.00	Low Profile Platform	1	28.838	31.722	1.00	1.00	23.10	2520.00	0.000	0.000	1172.43	0.00	0.00
18	91.00	DC6-48-60-18-8F	2	28.391	31.231	1.00	1.00	1.84	76.32	0.000	0.000	91.94	0.00	0.00
19	91.00	RRUS-11	3	28.391	31.231	0.54	0.80	7.11	198.00	0.000	0.000	355.15	0.00	0.00
20	91.00	LGP21401	6	28.391	31.231	0.54	0.80	4.15	101.52	0.000	0.000	207.30	0.00	0.00
21	91.00	P65-16-XLH-RR	3	28.391	31.231	0.60	0.80	14.69	190.80	0.000	0.000	733.94	0.00	0.00
22	91.00	7770.00	3	28.391	31.231	0.58	0.80	9.64	126.00	0.000	0.000	481.50	0.00	0.00
23	91.00	RRUS 32 B30	3	28.391	31.231	0.65	0.80	5.33	216.00	0.000	0.000	266.16	0.00	0.00
24	91.00	RRUS 32 B2	3	28.391	31.231	0.65	0.80	5.33	190.80	0.000	0.000	266.16	0.00	0.00
25	91.00	QS66512-2	3	28.391	31.231	0.72	0.80	17.56	277.20	0.000	0.000	877.49	0.00	0.00
26	91.00	Low Profile Platform	1	28.391	31.231	1.00	1.00	17.46	1618.80	0.000	0.000	872.46	0.00	0.00
27	85.00	V-brace kit	1	27.987	30.785	1.00	1.00	12.00	505.32	0.000	0.000	591.08	0.00	0.00
28	83.00	Platform w/ Handrail kit	1	27.847	30.631	1.00	1.00	37.16	2241.84	0.000	0.000	1821.22	0.00	0.00
29	83.00	Kathrein 782 11054	3	27.847	30.631	0.54	0.80	0.24	6.48	0.000	0.000	11.82	0.00	0.00
30	83.00	S20057A1	3	27.847	30.631	0.54	0.80	1.32	39.60	0.000	0.000	64.62	0.00	0.00
31	83.00	RFS ATMAA1412D-1A2	3	27.847	30.631	0.54	0.80	1.88	46.80	0.000	0.000	92.21	0.00	0.00
32	83.00	Commscope	3	27.847	30.631	0.64	0.80	22.02	179.28	0.000	0.000	1079.32	0.00	0.00
33	83.00	RFS APXV18-209014	3	27.847	30.631	0.59	0.80	6.36	67.32	0.000	0.000	311.61	0.00	0.00
34	75.00	Standoff Mount	1	27.259	29.985	1.00	1.00	2.63	48.00	0.000	0.000	126.18	0.00	0.00
35	75.00	GPS	1	27.259	29.985	1.00	1.00	1.00	12.00	0.000	0.000	47.98	0.00	0.00
Totals:								15,162.00				18,808.46		

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

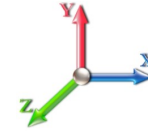


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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		162.00	503.45	0.00	0.00
4.00		160.26	498.96	0.00	0.00
6.00		158.52	494.47	0.00	0.00
8.00		156.78	489.98	0.00	0.00
10.00		155.04	485.49	0.00	0.00
12.00		153.30	481.00	0.00	0.00
14.00		151.56	476.51	0.00	0.00
16.00		151.67	472.02	0.00	0.00
18.00		153.68	467.53	0.00	0.00
20.00		155.28	463.04	0.00	0.00
22.00		156.54	458.55	0.00	0.00
24.00		157.52	454.06	0.00	0.00
26.00		158.25	449.57	0.00	0.00
28.00		158.75	445.08	0.00	0.00
30.00		159.07	440.59	0.00	0.00
32.00		159.20	436.11	0.00	0.00
34.00		159.19	431.62	0.00	0.00
36.00		159.02	427.13	0.00	0.00
38.00		158.73	422.64	0.00	0.00
40.00		158.32	418.15	0.00	0.00
42.00		157.80	413.66	0.00	0.00
44.00		157.17	409.17	0.00	0.00
45.13		88.31	229.20	0.00	0.00
46.00		69.08	291.90	0.00	0.00
48.00		158.64	665.13	0.00	0.00
49.88		148.30	617.72	0.00	0.00
50.00		9.40	20.90	0.00	0.00
52.00		156.82	346.40	0.00	0.00
54.00		155.80	342.66	0.00	0.00
56.00		154.71	338.92	0.00	0.00
58.00		153.54	335.18	0.00	0.00
60.00		152.32	331.44	0.00	0.00
62.00		151.03	327.70	0.00	0.00
64.00		149.69	323.96	0.00	0.00
66.00		148.29	320.22	0.00	0.00
68.00		146.83	316.47	0.00	0.00
70.00		145.33	312.73	0.00	0.00
72.00		143.78	308.99	0.00	0.00
74.00		142.18	305.25	0.00	0.00
75.00	(2) attachments	244.53	211.22	0.00	0.00
76.00		69.96	150.10	0.00	0.00
78.00		138.85	297.38	0.00	0.00
80.00		137.12	293.64	0.00	0.00
82.00		135.35	289.90	0.00	0.00
83.00	(16) attachments	3447.72	2724.87	0.00	0.00
84.00		66.46	133.11	0.00	0.00

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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85.00	(1) attachments	657.08	637.49	0.00	0.00
86.00		65.54	131.24	0.00	0.00
88.00		129.82	259.67	0.00	0.00
90.00		127.90	255.93	0.00	0.00
91.00	(27) attachments	4215.26	3122.00	0.00	0.00
91.29		18.41	34.15	0.00	0.00
92.00		44.94	121.25	0.00	0.00
94.00		126.04	339.11	0.00	0.00
94.71		44.20	118.94	0.00	0.00
96.00		79.71	101.63	0.00	0.00
98.00	(13) attachments	3433.40	2908.05	0.00	0.00
100.00		119.92	123.53	0.00	0.00
102.00		117.82	121.28	0.00	0.00
104.00		115.69	119.04	0.00	0.00
106.00		113.54	116.80	0.00	0.00
107.00	(21) attachments	3953.18	3987.56	0.00	622.71
108.00		55.35	54.62	0.00	0.00
110.00		109.14	107.55	0.00	0.00
112.00		106.90	105.31	0.00	0.00
114.00		104.64	103.06	0.00	0.00
116.00		102.35	100.82	0.00	0.00
118.00	(12) attachments	3401.68	2436.18	0.00	2829.44
Totals:		27,214.19	35,278.97	0.00	3,452.16

Linear Appurtenance Segment Forces (Factored)

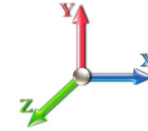
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.38
4.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.38
6.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.38
8.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.38
10.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.38
12.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.38
14.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.38
16.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.690	0.00	0.38
18.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	20.185	0.00	0.38
20.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	20.638	0.00	0.38
22.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.056	0.00	0.38
24.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.445	0.00	0.38
26.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.810	0.00	0.38
28.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	22.152	0.00	0.38
30.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	22.477	0.00	0.38
32.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	22.784	0.00	0.38
34.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.077	0.00	0.38
36.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.356	0.00	0.38
38.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.623	0.00	0.38
40.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	23.880	0.00	0.38
42.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	24.126	0.00	0.38
44.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	24.364	0.00	0.38
45.13	1/2"	Yes	1.13	0.000	0.65	0.06	0.00	0.019	0.000	24.494	0.00	0.22
46.00	1/2"	Yes	0.87	0.000	0.65	0.05	0.00	0.020	0.000	24.593	0.00	0.17
48.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	24.814	0.00	0.38
49.88	1/2"	Yes	1.88	0.000	0.65	0.10	0.00	0.020	0.000	25.016	0.00	0.36
50.00	1/2"	Yes	0.12	0.000	0.65	0.01	0.00	0.020	0.000	25.029	0.00	0.02
52.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	25.236	0.00	0.38
54.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	25.437	0.00	0.38
56.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	25.633	0.00	0.38
58.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	25.823	0.00	0.38
60.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	26.008	0.00	0.38
62.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	26.188	0.00	0.38
64.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	26.364	0.00	0.38
66.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	26.535	0.00	0.38
68.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	26.702	0.00	0.38
70.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	26.866	0.00	0.38
72.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	27.026	0.00	0.38
74.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.024	0.000	27.182	0.00	0.38
75.00	1/2"	Yes	1.00	0.000	0.65	0.05	0.00	0.024	0.000	27.259	0.00	0.19
Totals:											0.0	14.4

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

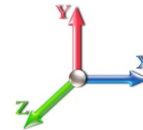


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Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 1.20
Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-35.25	-27.25	0.00	-2442.8	0.00	2442.86	3634.70	1817.35	6397.77	3203.64	0.00	0.000	0.000	0.772
2.00	-34.69	-27.16	0.00	-2388.3	0.00	2388.36	3607.15	1803.57	6280.28	3144.81	0.03	-0.116	0.000	0.769
4.00	-34.14	-27.07	0.00	-2334.0	0.00	2334.05	3579.34	1789.67	6163.42	3086.29	0.10	-0.233	0.000	0.766
6.00	-33.59	-26.97	0.00	-2279.9	0.00	2279.92	3551.29	1775.64	6047.19	3028.09	0.22	-0.351	0.000	0.763
8.00	-33.04	-26.88	0.00	-2225.9	0.00	2225.97	3522.98	1761.49	5931.61	2970.21	0.40	-0.471	0.000	0.759
10.00	-32.50	-26.79	0.00	-2172.2	0.00	2172.21	3494.42	1747.21	5816.69	2912.67	0.62	-0.591	0.000	0.755
12.00	-31.97	-26.70	0.00	-2118.6	0.00	2118.62	3465.61	1732.80	5702.44	2855.46	0.89	-0.713	0.000	0.751
14.00	-31.43	-26.61	0.00	-2065.2	0.00	2065.22	3436.54	1718.27	5588.89	2798.60	1.22	-0.836	0.000	0.747
16.00	-30.91	-26.52	0.00	-2012.0	0.00	2012.00	3407.22	1703.61	5476.05	2742.09	1.60	-0.959	0.000	0.743
18.00	-30.39	-26.42	0.00	-1958.9	0.00	1958.96	3377.65	1688.83	5363.92	2685.95	2.02	-1.084	0.000	0.739
20.00	-29.87	-26.33	0.00	-1906.1	0.00	1906.11	3347.83	1673.91	5252.53	2630.17	2.51	-1.210	0.000	0.734
22.00	-29.35	-26.22	0.00	-1853.4	0.00	1853.46	3317.75	1658.87	5141.89	2574.76	3.04	-1.337	0.000	0.729
24.00	-28.85	-26.12	0.00	-1801.0	0.00	1801.02	3287.42	1643.71	5032.01	2519.74	3.63	-1.465	0.000	0.724
26.00	-28.34	-26.01	0.00	-1748.7	0.00	1748.78	3256.84	1628.42	4922.91	2465.11	4.27	-1.594	0.000	0.718
28.00	-27.84	-25.91	0.00	-1696.7	0.00	1696.75	3219.51	1609.75	4804.91	2406.03	4.97	-1.724	0.000	0.714
30.00	-27.35	-25.80	0.00	-1644.9	0.00	1644.94	3178.67	1589.33	4683.16	2345.06	5.72	-1.855	0.000	0.710
32.00	-26.86	-25.69	0.00	-1593.3	0.00	1593.34	3137.83	1568.91	4562.98	2284.88	6.52	-1.987	0.000	0.706
34.00	-26.37	-25.57	0.00	-1541.9	0.00	1541.97	3096.99	1548.49	4444.36	2225.48	7.38	-2.120	0.000	0.702
36.00	-25.89	-25.46	0.00	-1490.8	0.00	1490.83	3056.15	1528.07	4327.30	2166.87	8.30	-2.254	0.000	0.697
38.00	-25.42	-25.34	0.00	-1439.9	0.00	1439.92	3015.30	1507.65	4211.81	2109.03	9.27	-2.388	0.000	0.691
40.00	-24.95	-25.22	0.00	-1389.2	0.00	1389.24	2974.46	1487.23	4097.87	2051.98	10.30	-2.523	0.000	0.686
42.00	-24.48	-25.11	0.00	-1338.7	0.00	1338.79	2933.62	1466.81	3985.50	1995.71	11.39	-2.659	0.000	0.679
44.00	-24.03	-24.97	0.00	-1288.5	0.00	1288.58	2892.78	1446.39	3874.69	1940.23	12.53	-2.795	0.000	0.673
45.13	-23.78	-24.90	0.00	-1260.3	0.00	1260.36	2869.71	1434.85	3812.78	1909.22	13.20	-2.873	0.000	0.669
46.00	-23.45	-24.86	0.00	-1238.6	0.00	1238.69	2851.94	1425.97	3765.45	1885.52	13.73	-2.933	0.000	0.665
48.00	-22.74	-24.72	0.00	-1188.9	0.00	1188.97	2811.10	1405.55	3657.76	1831.60	14.99	-3.070	0.000	0.658
49.88	-22.10	-24.56	0.00	-1142.5	0.00	1142.50	2333.69	1166.84	3066.96	1535.76	16.23	-3.199	0.000	0.754
50.00	-22.04	-24.59	0.00	-1139.5	0.00	1139.55	2332.20	1166.10	3062.32	1533.44	16.31	-3.207	0.000	0.753
52.00	-21.64	-24.47	0.00	-1090.3	0.00	1090.38	2307.18	1153.59	2985.35	1494.89	17.68	-3.361	0.000	0.739
54.00	-21.24	-24.35	0.00	-1041.4	0.00	1041.45	2281.92	1140.96	2909.02	1456.67	19.12	-3.515	0.000	0.725
56.00	-20.85	-24.23	0.00	-992.76	0.00	992.76	2256.40	1128.20	2833.34	1418.77	20.63	-3.669	0.000	0.709
58.00	-20.46	-24.11	0.00	-944.30	0.00	944.30	2223.07	1111.54	2748.96	1376.53	22.20	-3.822	0.000	0.696
60.00	-20.08	-23.99	0.00	-896.08	0.00	896.08	2189.04	1094.52	2665.01	1334.49	23.83	-3.974	0.000	0.681
62.00	-19.70	-23.86	0.00	-848.11	0.00	848.11	2155.00	1077.50	2582.36	1293.10	25.53	-4.125	0.000	0.666
64.00	-19.32	-23.74	0.00	-800.38	0.00	800.38	2120.97	1060.48	2501.02	1252.37	27.29	-4.275	0.000	0.649
66.00	-18.95	-23.62	0.00	-752.90	0.00	752.90	2086.94	1043.47	2420.97	1212.28	29.11	-4.423	0.000	0.631
68.00	-18.59	-23.49	0.00	-705.66	0.00	705.66	2052.90	1026.45	2342.23	1172.85	30.99	-4.569	0.000	0.611
70.00	-18.23	-23.37	0.00	-658.68	0.00	658.68	2018.87	1009.43	2264.79	1134.08	32.93	-4.712	0.000	0.590
72.00	-17.88	-23.24	0.00	-611.94	0.00	611.94	1984.83	992.42	2188.65	1095.95	34.94	-4.852	0.000	0.568
74.00	-17.55	-23.11	0.00	-565.45	0.00	565.45	1950.80	975.40	2113.81	1058.48	37.00	-4.989	0.000	0.544
75.00	-17.33	-22.87	0.00	-542.34	0.00	542.34	1933.78	966.89	2076.88	1039.98	38.05	-5.057	0.000	0.531
76.00	-17.15	-22.81	0.00	-519.48	0.00	519.48	1916.76	958.38	2040.27	1021.65	39.11	-5.123	0.000	0.518
78.00	-16.82	-22.68	0.00	-473.86	0.00	473.86	1882.73	941.37	1968.04	985.48	41.29	-5.252	0.000	0.490
80.00	-16.49	-22.55	0.00	-428.49	0.00	428.49	1848.70	924.35	1897.11	949.96	43.51	-5.374	0.000	0.461
82.00	-16.18	-22.42	0.00	-383.38	0.00	383.38	1814.66	907.33	1827.48	915.10	45.78	-5.491	0.000	0.428
83.00	-13.78	-18.74	0.00	-360.97	0.00	360.97	1797.65	898.82	1793.15	897.91	46.94	-5.548	0.000	0.410
84.00	-13.64	-18.67	0.00	-342.23	0.00	342.23	1780.63	890.31	1759.15	880.88	48.11	-5.603	0.000	0.397
85.00	-13.05	-17.97	0.00	-323.56	0.00	323.56	1763.61	881.81	1725.48	864.02	49.28	-5.656	0.000	0.382

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 17
	Struct Class: II	



86.00	-12.90	-17.90	0.00	-305.60	0.00	305.60	1746.59	873.30	1692.13	847.32	50.47	-5.708	0.000	0.368
88.00	-12.63	-17.77	0.00	-269.79	0.00	269.79	1712.56	856.28	1626.40	814.41	52.88	-5.806	0.000	0.339
90.00	-12.37	-17.63	0.00	-234.25	0.00	234.25	1678.53	839.26	1561.98	782.15	55.33	-5.898	0.000	0.307
91.00	-9.69	-13.12	0.00	-216.62	0.00	216.62	1661.51	830.75	1530.26	766.27	56.57	-5.941	0.000	0.289
91.29	-9.65	-13.10	0.00	-212.77	0.00	212.77	1656.52	828.26	1521.01	761.64	56.93	-5.953	0.000	0.285
92.00	-9.53	-13.05	0.00	-203.51	0.00	203.51	1644.49	822.25	1498.86	750.54	57.82	-5.983	0.000	0.277
94.00	-9.19	-12.90	0.00	-177.40	0.00	177.40	1610.46	805.23	1437.04	719.59	60.33	-6.061	0.000	0.252
94.71	-9.07	-12.85	0.00	-168.24	0.00	168.24	930.70	465.35	848.15	424.70	61.24	-6.087	0.000	0.407
96.00	-8.96	-12.77	0.00	-151.66	0.00	151.66	922.07	461.04	828.91	415.07	62.89	-6.133	0.000	0.376
98.00	-6.42	-9.06	0.00	-126.12	0.00	126.12	908.49	454.24	799.32	400.25	65.47	-6.233	0.000	0.323
100.00	-6.30	-8.93	0.00	-108.00	0.00	108.00	894.64	447.32	770.03	385.59	68.10	-6.323	0.000	0.288
102.00	-6.18	-8.81	0.00	-90.14	0.00	90.14	880.55	440.27	741.05	371.08	70.76	-6.405	0.000	0.250
104.00	-6.07	-8.69	0.00	-72.52	0.00	72.52	866.20	433.10	712.41	356.74	73.45	-6.476	0.000	0.211
106.00	-5.96	-8.57	0.00	-55.14	0.00	55.14	851.60	425.80	684.12	342.57	76.18	-6.536	0.000	0.168
107.00	-2.44	-4.19	0.00	-45.95	0.00	45.95	844.21	422.10	670.11	335.55	77.54	-6.562	0.000	0.140
108.00	-2.39	-4.13	0.00	-41.76	0.00	41.76	836.75	418.38	656.18	328.58	78.92	-6.585	0.000	0.130
110.00	-2.30	-4.01	0.00	-33.50	0.00	33.50	821.65	410.82	628.62	314.78	81.68	-6.625	0.000	0.109
112.00	-2.20	-3.89	0.00	-25.49	0.00	25.49	804.60	402.30	600.19	300.54	84.46	-6.660	0.000	0.088
114.00	-2.11	-3.78	0.00	-17.71	0.00	17.71	784.18	392.09	569.96	285.40	87.25	-6.687	0.000	0.065
116.00	-2.02	-3.66	0.00	-10.16	0.00	10.16	763.76	381.88	540.51	270.66	90.05	-6.706	0.000	0.040
118.00	0.00	-3.40	0.00	-2.83	0.00	2.83	743.33	371.67	511.84	256.30	92.85	-6.715	0.000	0.011

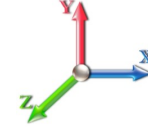
Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 26

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	327.29	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	19.450	21.40	323.80	0.650	0.000	2.00	7.280	4.73	162.0	0.0	310.9
4.00		1.00	0.85	19.450	21.40	320.30	0.650	0.000	2.00	7.202	4.68	160.3	0.0	307.5
6.00		1.00	0.85	19.450	21.40	316.81	0.650	0.000	2.00	7.124	4.63	158.5	0.0	304.1
8.00		1.00	0.85	19.450	21.40	313.31	0.650	0.000	2.00	7.046	4.58	156.8	0.0	300.8
10.00		1.00	0.85	19.450	21.40	309.82	0.650	0.000	2.00	6.968	4.53	155.0	0.0	297.4
12.00		1.00	0.85	19.450	21.40	306.32	0.650	0.000	2.00	6.890	4.48	153.3	0.0	294.0
14.00		1.00	0.85	19.450	21.40	302.83	0.650	0.000	2.00	6.811	4.43	151.6	0.0	290.7
16.00		1.00	0.86	19.690	21.66	301.17	0.650	0.000	2.00	6.733	4.38	151.7	0.0	287.3
18.00		1.00	0.88	20.185	22.20	301.37	0.650	0.000	2.00	6.655	4.33	153.7	0.0	283.9
20.00		1.00	0.90	20.638	22.70	301.13	0.650	0.000	2.00	6.577	4.28	155.3	0.0	280.6
22.00		1.00	0.92	21.056	23.16	300.53	0.650	0.000	2.00	6.499	4.22	156.5	0.0	277.2
24.00		1.00	0.94	21.445	23.59	299.63	0.650	0.000	2.00	6.421	4.17	157.5	0.0	273.8
26.00		1.00	0.95	21.810	23.99	298.46	0.650	0.000	2.00	6.342	4.12	158.2	0.0	270.5
28.00		1.00	0.97	22.152	24.37	297.07	0.650	0.000	2.00	6.264	4.07	158.8	0.0	267.1
30.00		1.00	0.98	22.477	24.72	295.48	0.650	0.000	2.00	6.186	4.02	159.1	0.0	263.7
32.00		1.00	1.00	22.784	25.06	293.71	0.650	0.000	2.00	6.108	3.97	159.2	0.0	260.4
34.00		1.00	1.01	23.077	25.38	291.78	0.650	0.000	2.00	6.030	3.92	159.2	0.0	257.0
36.00		1.00	1.02	23.356	25.69	289.71	0.650	0.000	2.00	5.952	3.87	159.0	0.0	253.6
38.00		1.00	1.03	23.623	25.99	287.51	0.650	0.000	2.00	5.873	3.82	158.7	0.0	250.3
40.00		1.00	1.04	23.880	26.27	285.20	0.650	0.000	2.00	5.795	3.77	158.3	0.0	246.9
42.00		1.00	1.05	24.126	26.54	282.77	0.650	0.000	2.00	5.717	3.72	157.8	0.0	243.5
44.00		1.00	1.06	24.364	26.80	280.25	0.650	0.000	2.00	5.639	3.67	157.2	0.0	240.2
45.13 Bot - Section 2		1.00	1.07	24.494	26.94	278.78	0.650	0.000	1.13	3.151	2.05	88.3	0.0	134.2
46.00		1.00	1.07	24.593	27.05	277.63	0.650	0.000	0.87	2.455	1.60	69.1	0.0	189.9
48.00		1.00	1.08	24.814	27.30	274.93	0.650	0.000	2.00	5.588	3.63	158.6	0.0	432.1
49.88 Top - Section 1		1.00	1.09	25.016	27.52	272.32	0.650	0.000	1.88	5.182	3.37	148.3	0.0	400.6
50.00		1.00	1.09	25.029	27.53	277.52	0.650	0.000	0.12	0.328	0.21	9.4	0.0	11.7
52.00		1.00	1.10	25.236	27.76	274.68	0.650	0.000	2.00	5.432	3.53	156.8	0.0	193.1
54.00		1.00	1.11	25.437	27.98	271.78	0.650	0.000	2.00	5.354	3.48	155.8	0.0	190.3
56.00		1.00	1.12	25.633	28.20	268.81	0.650	0.000	2.00	5.276	3.43	154.7	0.0	187.5
58.00		1.00	1.13	25.823	28.41	265.78	0.650	0.000	2.00	5.198	3.38	153.5	0.0	184.7
60.00		1.00	1.14	26.008	28.61	262.68	0.650	0.000	2.00	5.119	3.33	152.3	0.0	181.9
62.00		1.00	1.14	26.188	28.81	259.54	0.650	0.000	2.00	5.041	3.28	151.0	0.0	179.1
64.00		1.00	1.15	26.364	29.00	256.34	0.650	0.000	2.00	4.963	3.23	149.7	0.0	176.3
66.00		1.00	1.16	26.535	29.19	253.09	0.650	0.000	2.00	4.885	3.18	148.3	0.0	173.5
68.00		1.00	1.17	26.702	29.37	249.79	0.650	0.000	2.00	4.807	3.12	146.8	0.0	170.6
70.00		1.00	1.17	26.866	29.55	246.44	0.650	0.000	2.00	4.729	3.07	145.3	0.0	167.8
72.00		1.00	1.18	27.026	29.73	243.06	0.650	0.000	2.00	4.650	3.02	143.8	0.0	165.0
74.00		1.00	1.19	27.182	29.90	239.63	0.650	0.000	2.00	4.572	2.97	142.2	0.0	162.2
75.00 Appurtenance(s)		1.00	1.19	27.259	29.98	237.90	0.650	0.000	1.00	2.257	1.47	70.4	0.0	80.1
76.00		1.00	1.19	27.335	30.07	236.16	0.650	0.000	1.00	2.237	1.45	70.0	0.0	79.4
78.00		1.00	1.20	27.485	30.23	232.65	0.650	0.000	2.00	4.416	2.87	138.8	0.0	156.6
80.00		1.00	1.21	27.632	30.39	229.10	0.650	0.000	2.00	4.338	2.82	137.1	0.0	153.8
82.00		1.00	1.21	27.776	30.55	225.52	0.650	0.000	2.00	4.260	2.77	135.4	0.0	151.0
83.00 Appurtenance(s)		1.00	1.22	27.847	30.63	223.72	0.650	0.000	1.00	2.101	1.37	66.9	0.0	74.5
84.00		1.00	1.22	27.917	30.71	221.91	0.650	0.000	1.00	2.081	1.35	66.5	0.0	73.7

Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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85.00 Appurtenance(s)	1.00	1.22	27.987	30.79	220.09	0.650	0.000	1.00	2.061	1.34	66.0	0.0	73.0		
86.00	1.00	1.23	28.056	30.86	218.26	0.650	0.000	1.00	2.042	1.33	65.5	0.0	72.3		
88.00	1.00	1.23	28.192	31.01	214.58	0.650	0.000	2.00	4.025	2.62	129.8	0.0	142.6		
90.00	1.00	1.24	28.325	31.16	210.87	0.650	0.000	2.00	3.947	2.57	127.9	0.0	139.8		
91.00 Appurtenance(s)	1.00	1.24	28.391	31.23	209.01	0.650	0.000	1.00	1.944	1.26	63.1	0.0	68.8		
91.29 Bot - Section 3	1.00	1.24	28.411	31.25	208.46	0.650	0.000	0.29	0.567	0.37	18.4	0.0	20.1		
92.00	1.00	1.24	28.457	31.30	207.13	0.650	0.000	0.71	1.380	0.90	44.9	0.0	77.6		
94.00	1.00	1.25	28.586	31.44	203.36	0.650	0.000	2.00	3.854	2.51	126.0	0.0	216.5		
94.71 Top - Section 2	1.00	1.25	28.631	31.49	202.02	0.650	0.000	0.71	1.349	0.88	44.2	0.0	75.8		
96.00	1.00	1.25	28.713	31.58	203.02	0.650	0.000	1.29	2.427	1.58	79.7	0.0	51.8		
98.00 Appurtenance(s)	1.00	1.26	28.838	31.72	199.20	0.650	0.000	2.00	3.698	2.40	122.0	0.0	79.0		
100.00	1.00	1.27	28.961	31.86	195.36	0.650	0.000	2.00	3.620	2.35	119.9	0.0	77.3		
102.00	1.00	1.27	29.082	31.99	191.50	0.650	0.000	2.00	3.541	2.30	117.8	0.0	75.6		
104.00	1.00	1.28	29.201	32.12	187.61	0.650	0.000	2.00	3.463	2.25	115.7	0.0	73.9		
106.00	1.00	1.28	29.318	32.25	183.69	0.650	0.000	2.00	3.385	2.20	113.5	0.0	72.2		
107.00 Appurtenance(s)	1.00	1.28	29.376	32.31	181.72	0.650	0.000	1.00	1.663	1.08	55.9	0.0	35.5		
108.00	1.00	1.29	29.434	32.38	179.75	0.650	0.000	1.00	1.644	1.07	55.3	0.0	35.1		
110.00	1.00	1.29	29.548	32.50	175.79	0.650	0.000	2.00	3.229	2.10	109.1	0.0	68.9		
112.00	1.00	1.30	29.660	32.63	171.81	0.650	0.000	2.00	3.151	2.05	106.9	0.0	67.2		
114.00	1.00	1.30	29.771	32.75	167.81	0.650	0.000	2.00	3.072	2.00	104.6	0.0	65.5		
116.00	1.00	1.31	29.880	32.87	163.78	0.650	0.000	2.00	2.994	1.95	102.4	0.0	63.8		
118.00 Appurtenance(s)	1.00	1.31	29.988	32.99	159.74	0.650	0.000	2.00	2.916	1.90	100.0	0.0	62.1		
Totals:							118.00					8,405.7	11,845.3		

Discrete Appurtenance Forces

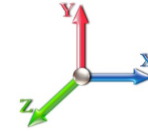
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 26

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	118.00	Low Profile Platform	1	29.988	32.986	1.00	1.00	28.47	1620.00	0.000	0.000	1502.60	0.00	0.00
2	118.00	DB844H90E-XY	9	30.030	33.033	1.12	1.00	30.74	113.40	0.000	0.800	1624.93	0.00	1299.94
3	118.00	ANT150D	1	30.063	33.070	1.00	1.00	1.00	5.40	0.000	1.420	52.91	0.00	75.13
4	118.00	DB222	1	30.605	33.666	1.00	1.00	2.25	14.40	0.000	12.000	121.20	0.00	1454.37
5	107.00	Universal Ring Mount	1	29.376	32.314	1.00	1.00	5.00	315.00	0.000	0.000	258.51	0.00	0.00
6	107.00	Low Profile Platform	1	29.376	32.314	1.00	1.00	27.33	1800.00	0.000	0.000	1413.02	0.00	0.00
7	107.00	APXVSP18-C-A20	3	29.376	32.314	0.66	0.80	15.98	153.90	0.000	0.000	825.99	0.00	0.00
8	107.00	APXV9TM14-ALU-120	3	29.434	32.377	0.63	0.80	12.02	151.20	0.000	1.000	622.71	0.00	622.71
9	107.00	1900 MHz 4X45 RRH	3	29.376	32.314	0.54	0.80	4.36	162.00	0.000	0.000	225.30	0.00	0.00
10	107.00	800 MHz RRU Filter	3	29.376	32.314	0.54	0.80	3.86	172.80	0.000	0.000	199.53	0.00	0.00
11	107.00	TD-RRH8x20-25	3	29.376	32.314	0.54	0.80	6.51	189.00	0.000	0.000	336.71	0.00	0.00
12	107.00	ACU-A20-N	4	29.376	32.314	0.54	0.80	0.30	3.60	0.000	0.000	15.52	0.00	0.00
13	98.00	APL199014-42T0	3	28.838	31.722	0.80	0.80	5.02	16.20	0.000	0.000	254.59	0.00	0.00
14	98.00	P65-16-XL-2	3	28.838	31.722	0.57	0.80	13.90	89.10	0.000	0.000	705.72	0.00	0.00
15	98.00	Andrew DB846H80E-SX	4	28.838	31.722	0.90	0.80	17.96	57.60	0.000	0.000	911.34	0.00	0.00
16	98.00	RFS APL868013	2	28.838	31.722	0.92	0.80	5.27	11.34	0.000	0.000	267.32	0.00	0.00
17	98.00	Low Profile Platform	1	28.838	31.722	1.00	1.00	23.10	1890.00	0.000	0.000	1172.43	0.00	0.00
18	91.00	DC6-48-60-18-8F	2	28.391	31.231	1.00	1.00	1.84	57.24	0.000	0.000	91.94	0.00	0.00
19	91.00	RRUS-11	3	28.391	31.231	0.54	0.80	7.11	148.50	0.000	0.000	355.15	0.00	0.00
20	91.00	LGP21401	6	28.391	31.231	0.54	0.80	4.15	76.14	0.000	0.000	207.30	0.00	0.00
21	91.00	P65-16-XLH-RR	3	28.391	31.231	0.60	0.80	14.69	143.10	0.000	0.000	733.94	0.00	0.00
22	91.00	7770.00	3	28.391	31.231	0.58	0.80	9.64	94.50	0.000	0.000	481.50	0.00	0.00
23	91.00	RRUS 32 B30	3	28.391	31.231	0.65	0.80	5.33	162.00	0.000	0.000	266.16	0.00	0.00
24	91.00	RRUS 32 B2	3	28.391	31.231	0.65	0.80	5.33	143.10	0.000	0.000	266.16	0.00	0.00
25	91.00	QS66512-2	3	28.391	31.231	0.72	0.80	17.56	207.90	0.000	0.000	877.49	0.00	0.00
26	91.00	Low Profile Platform	1	28.391	31.231	1.00	1.00	17.46	1214.10	0.000	0.000	872.46	0.00	0.00
27	85.00	V-brace kit	1	27.987	30.785	1.00	1.00	12.00	378.99	0.000	0.000	591.08	0.00	0.00
28	83.00	Platform w/ Handrail kit	1	27.847	30.631	1.00	1.00	37.16	1681.38	0.000	0.000	1821.22	0.00	0.00
29	83.00	Kathrein 782 11054	3	27.847	30.631	0.54	0.80	0.24	4.86	0.000	0.000	11.82	0.00	0.00
30	83.00	S20057A1	3	27.847	30.631	0.54	0.80	1.32	29.70	0.000	0.000	64.62	0.00	0.00
31	83.00	RFS ATMAA1412D-1A2	3	27.847	30.631	0.54	0.80	1.88	35.10	0.000	0.000	92.21	0.00	0.00
32	83.00	Commscope	3	27.847	30.631	0.64	0.80	22.02	134.46	0.000	0.000	1079.32	0.00	0.00
33	83.00	RFS APXV18-209014	3	27.847	30.631	0.59	0.80	6.36	50.49	0.000	0.000	311.61	0.00	0.00
34	75.00	Standoff Mount	1	27.259	29.985	1.00	1.00	2.63	36.00	0.000	0.000	126.18	0.00	0.00
35	75.00	GPS	1	27.259	29.985	1.00	1.00	1.00	9.00	0.000	0.000	47.98	0.00	0.00
Totals:								11,371.50				18,808.46		

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

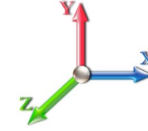


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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		162.00	377.58	0.00	0.00
4.00		160.26	374.22	0.00	0.00
6.00		158.52	370.85	0.00	0.00
8.00		156.78	367.48	0.00	0.00
10.00		155.04	364.12	0.00	0.00
12.00		153.30	360.75	0.00	0.00
14.00		151.56	357.38	0.00	0.00
16.00		151.67	354.02	0.00	0.00
18.00		153.68	350.65	0.00	0.00
20.00		155.28	347.28	0.00	0.00
22.00		156.54	343.91	0.00	0.00
24.00		157.52	340.55	0.00	0.00
26.00		158.25	337.18	0.00	0.00
28.00		158.75	333.81	0.00	0.00
30.00		159.07	330.45	0.00	0.00
32.00		159.20	327.08	0.00	0.00
34.00		159.19	323.71	0.00	0.00
36.00		159.02	320.35	0.00	0.00
38.00		158.73	316.98	0.00	0.00
40.00		158.32	313.61	0.00	0.00
42.00		157.80	310.24	0.00	0.00
44.00		157.17	306.88	0.00	0.00
45.13		88.31	171.90	0.00	0.00
46.00		69.08	218.93	0.00	0.00
48.00		158.64	498.85	0.00	0.00
49.88		148.30	463.29	0.00	0.00
50.00		9.40	15.68	0.00	0.00
52.00		156.82	259.80	0.00	0.00
54.00		155.80	257.00	0.00	0.00
56.00		154.71	254.19	0.00	0.00
58.00		153.54	251.38	0.00	0.00
60.00		152.32	248.58	0.00	0.00
62.00		151.03	245.77	0.00	0.00
64.00		149.69	242.97	0.00	0.00
66.00		148.29	240.16	0.00	0.00
68.00		146.83	237.36	0.00	0.00
70.00		145.33	234.55	0.00	0.00
72.00		143.78	231.74	0.00	0.00
74.00		142.18	228.94	0.00	0.00
75.00	(2) attachments	244.53	158.42	0.00	0.00
76.00		69.96	112.57	0.00	0.00
78.00		138.85	223.04	0.00	0.00
80.00		137.12	220.23	0.00	0.00
82.00		135.35	217.43	0.00	0.00
83.00	(16) attachments	3447.72	2043.65	0.00	0.00
84.00		66.46	99.83	0.00	0.00

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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85.00	(1) attachments	657.08	478.12	0.00	0.00
86.00		65.54	98.43	0.00	0.00
88.00		129.82	194.75	0.00	0.00
90.00		127.90	191.95	0.00	0.00
91.00	(27) attachments	4215.26	2341.50	0.00	0.00
91.29		18.41	25.61	0.00	0.00
92.00		44.94	90.94	0.00	0.00
94.00		126.04	254.33	0.00	0.00
94.71		44.20	89.21	0.00	0.00
96.00		79.71	76.23	0.00	0.00
98.00	(13) attachments	3433.40	2181.03	0.00	0.00
100.00		119.92	92.65	0.00	0.00
102.00		117.82	90.96	0.00	0.00
104.00		115.69	89.28	0.00	0.00
106.00		113.54	87.60	0.00	0.00
107.00	(21) attachments	3953.18	2990.67	0.00	622.71
108.00		55.35	40.96	0.00	0.00
110.00		109.14	80.67	0.00	0.00
112.00		106.90	78.98	0.00	0.00
114.00		104.64	77.30	0.00	0.00
116.00		102.35	75.61	0.00	0.00
118.00	(12) attachments	3401.68	1827.13	0.00	2829.44
Totals:		27,214.19	26,459.23	0.00	3,452.16

Linear Appurtenance Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

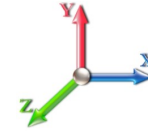


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Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.29
4.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.29
6.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.29
8.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.29
10.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.29
12.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.29
14.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.29
16.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.690	0.00	0.29
18.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	20.185	0.00	0.29
20.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	20.638	0.00	0.29
22.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.056	0.00	0.29
24.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.445	0.00	0.29
26.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.810	0.00	0.29
28.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	22.152	0.00	0.29
30.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	22.477	0.00	0.29
32.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	22.784	0.00	0.29
34.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.077	0.00	0.29
36.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.356	0.00	0.29
38.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.623	0.00	0.29
40.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	23.880	0.00	0.29
42.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	24.126	0.00	0.29
44.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	24.364	0.00	0.29
45.13	1/2"	Yes	1.13	0.000	0.65	0.06	0.00	0.019	0.000	24.494	0.00	0.16
46.00	1/2"	Yes	0.87	0.000	0.65	0.05	0.00	0.020	0.000	24.593	0.00	0.13
48.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	24.814	0.00	0.29
49.88	1/2"	Yes	1.88	0.000	0.65	0.10	0.00	0.020	0.000	25.016	0.00	0.27
50.00	1/2"	Yes	0.12	0.000	0.65	0.01	0.00	0.020	0.000	25.029	0.00	0.02
52.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	25.236	0.00	0.29
54.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	25.437	0.00	0.29
56.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	25.633	0.00	0.29
58.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	25.823	0.00	0.29
60.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	26.008	0.00	0.29
62.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	26.188	0.00	0.29
64.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	26.364	0.00	0.29
66.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	26.535	0.00	0.29
68.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	26.702	0.00	0.29
70.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	26.866	0.00	0.29
72.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	27.026	0.00	0.29
74.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.024	0.000	27.182	0.00	0.29
75.00	1/2"	Yes	1.00	0.000	0.65	0.05	0.00	0.024	0.000	27.259	0.00	0.14
Totals:											0.0	10.8

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

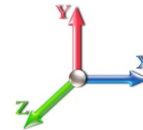


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Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 26

Dead Load Factor 0.90
Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-26.43	-27.24	0.00	-2411.4	0.00	2411.42	3634.70	1817.35	6397.77	3203.64	0.00	0.000	0.000	0.760
2.00	-26.00	-27.13	0.00	-2356.9	0.00	2356.94	3607.15	1803.57	6280.28	3144.81	0.02	-0.114	0.000	0.757
4.00	-25.57	-27.02	0.00	-2302.6	0.00	2302.69	3579.34	1789.67	6163.42	3086.29	0.10	-0.230	0.000	0.753
6.00	-25.15	-26.91	0.00	-2248.6	0.00	2248.65	3551.29	1775.64	6047.19	3028.09	0.22	-0.347	0.000	0.750
8.00	-24.72	-26.80	0.00	-2194.8	0.00	2194.83	3522.98	1761.49	5931.61	2970.21	0.39	-0.464	0.000	0.746
10.00	-24.31	-26.70	0.00	-2141.2	0.00	2141.22	3494.42	1747.21	5816.69	2912.67	0.61	-0.583	0.000	0.742
12.00	-23.89	-26.59	0.00	-2087.8	0.00	2087.83	3465.61	1732.80	5702.44	2855.46	0.88	-0.703	0.000	0.738
14.00	-23.48	-26.48	0.00	-2034.6	0.00	2034.66	3436.54	1718.27	5588.89	2798.60	1.20	-0.824	0.000	0.734
16.00	-23.07	-26.37	0.00	-1981.6	0.00	1981.69	3407.22	1703.61	5476.05	2742.09	1.57	-0.946	0.000	0.730
18.00	-22.67	-26.26	0.00	-1928.9	0.00	1928.95	3377.65	1688.83	5363.92	2685.95	2.00	-1.069	0.000	0.725
20.00	-22.27	-26.15	0.00	-1876.4	0.00	1876.42	3347.83	1673.91	5252.53	2630.17	2.47	-1.193	0.000	0.720
22.00	-21.87	-26.03	0.00	-1824.1	0.00	1824.12	3317.75	1658.87	5141.89	2574.76	3.00	-1.318	0.000	0.715
24.00	-21.47	-25.92	0.00	-1772.0	0.00	1772.06	3287.42	1643.71	5032.01	2519.74	3.58	-1.444	0.000	0.710
26.00	-21.08	-25.80	0.00	-1720.2	0.00	1720.23	3256.84	1628.42	4922.91	2465.11	4.21	-1.571	0.000	0.705
28.00	-20.70	-25.67	0.00	-1668.6	0.00	1668.64	3219.51	1609.75	4804.91	2406.03	4.90	-1.699	0.000	0.700
30.00	-20.32	-25.55	0.00	-1617.2	0.00	1617.29	3178.67	1589.33	4683.16	2345.06	5.64	-1.828	0.000	0.696
32.00	-19.94	-25.43	0.00	-1566.1	0.00	1566.19	3137.83	1568.91	4562.98	2284.88	6.43	-1.957	0.000	0.692
34.00	-19.56	-25.30	0.00	-1515.3	0.00	1515.34	3096.99	1548.49	4444.36	2225.48	7.28	-2.088	0.000	0.687
36.00	-19.19	-25.17	0.00	-1464.7	0.00	1464.75	3056.15	1528.07	4327.30	2166.87	8.18	-2.219	0.000	0.683
38.00	-18.82	-25.05	0.00	-1414.4	0.00	1414.40	3015.30	1507.65	4211.81	2109.03	9.14	-2.351	0.000	0.677
40.00	-18.46	-24.92	0.00	-1364.3	0.00	1364.31	2974.46	1487.23	4097.87	2051.98	10.15	-2.484	0.000	0.671
42.00	-18.10	-24.79	0.00	-1314.4	0.00	1314.48	2933.62	1466.81	3985.50	1995.71	11.22	-2.617	0.000	0.665
44.00	-17.75	-24.65	0.00	-1264.9	0.00	1264.91	2892.78	1446.39	3874.69	1940.23	12.35	-2.750	0.000	0.658
45.13	-17.55	-24.57	0.00	-1237.0	0.00	1237.05	2869.71	1434.85	3812.78	1909.22	13.01	-2.827	0.000	0.654
46.00	-17.30	-24.52	0.00	-1215.6	0.00	1215.68	2851.94	1425.97	3765.45	1885.52	13.53	-2.886	0.000	0.651
48.00	-16.75	-24.38	0.00	-1166.6	0.00	1166.63	2811.10	1405.55	3657.76	1831.60	14.77	-3.020	0.000	0.643
49.88	-16.27	-24.22	0.00	-1120.8	0.00	1120.81	2333.69	1166.84	3066.96	1535.76	15.98	-3.147	0.000	0.737
50.00	-16.22	-24.23	0.00	-1117.9	0.00	1117.90	2332.20	1166.10	3062.32	1533.44	16.06	-3.155	0.000	0.736
52.00	-15.91	-24.11	0.00	-1069.4	0.00	1069.43	2307.18	1153.59	2985.35	1494.89	17.41	-3.306	0.000	0.723
54.00	-15.60	-23.98	0.00	-1021.2	0.00	1021.22	2281.92	1140.96	2909.02	1456.67	18.83	-3.458	0.000	0.708
56.00	-15.29	-23.85	0.00	-973.27	0.00	973.27	2256.40	1128.20	2833.34	1418.77	20.31	-3.608	0.000	0.693
58.00	-14.99	-23.72	0.00	-925.58	0.00	925.58	2223.07	1111.54	2748.96	1376.53	21.85	-3.758	0.000	0.680
60.00	-14.69	-23.59	0.00	-878.15	0.00	878.15	2189.04	1094.52	2665.01	1334.49	23.46	-3.907	0.000	0.665
62.00	-14.39	-23.46	0.00	-830.98	0.00	830.98	2155.00	1077.50	2582.36	1293.10	25.13	-4.055	0.000	0.650
64.00	-14.10	-23.32	0.00	-784.07	0.00	784.07	2120.97	1060.48	2501.02	1252.37	26.86	-4.202	0.000	0.633
66.00	-13.81	-23.19	0.00	-737.42	0.00	737.42	2086.94	1043.47	2420.97	1212.28	28.65	-4.347	0.000	0.615
68.00	-13.53	-23.06	0.00	-691.03	0.00	691.03	2052.90	1026.45	2342.23	1172.85	30.50	-4.490	0.000	0.596
70.00	-13.25	-22.93	0.00	-644.91	0.00	644.91	2018.87	1009.43	2264.79	1134.08	32.41	-4.630	0.000	0.576
72.00	-12.98	-22.80	0.00	-599.05	0.00	599.05	1984.83	992.42	2188.65	1095.95	34.38	-4.767	0.000	0.554
74.00	-12.73	-22.66	0.00	-553.45	0.00	553.45	1950.80	975.40	2113.81	1058.48	36.40	-4.901	0.000	0.530
75.00	-12.56	-22.42	0.00	-530.79	0.00	530.79	1933.78	966.89	2076.88	1039.98	37.43	-4.967	0.000	0.517
76.00	-12.42	-22.36	0.00	-508.37	0.00	508.37	1916.76	958.38	2040.27	1021.65	38.48	-5.033	0.000	0.505
78.00	-12.16	-22.23	0.00	-463.66	0.00	463.66	1882.73	941.37	1968.04	985.48	40.61	-5.158	0.000	0.478
80.00	-11.91	-22.10	0.00	-419.20	0.00	419.20	1848.70	924.35	1897.11	949.96	42.80	-5.278	0.000	0.448
82.00	-11.67	-21.96	0.00	-375.01	0.00	375.01	1814.66	907.33	1827.48	915.10	45.03	-5.392	0.000	0.417
83.00	-9.95	-18.34	0.00	-353.06	0.00	353.06	1797.65	898.82	1793.15	897.91	46.17	-5.448	0.000	0.399
84.00	-9.84	-18.27	0.00	-334.72	0.00	334.72	1780.63	890.31	1759.15	880.88	47.31	-5.502	0.000	0.386
85.00	-9.41	-17.58	0.00	-316.44	0.00	316.44	1763.61	881.81	1725.48	864.02	48.47	-5.554	0.000	0.372

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 25
	Struct Class: II	



86.00	-9.30	-17.52	0.00	-298.86	0.00	298.86	1746.59	873.30	1692.13	847.32	49.63	-5.605	0.000	0.358
88.00	-9.09	-17.39	0.00	-263.82	0.00	263.82	1712.56	856.28	1626.40	814.41	52.00	-5.701	0.000	0.330
90.00	-8.89	-17.25	0.00	-229.05	0.00	229.05	1678.53	839.26	1561.98	782.15	54.40	-5.790	0.000	0.299
91.00	-6.98	-12.82	0.00	-211.80	0.00	211.80	1661.51	830.75	1530.26	766.27	55.62	-5.832	0.000	0.281
91.29	-6.95	-12.80	0.00	-208.04	0.00	208.04	1656.52	828.26	1521.01	761.64	55.98	-5.845	0.000	0.278
92.00	-6.85	-12.76	0.00	-198.99	0.00	198.99	1644.49	822.25	1498.86	750.54	56.84	-5.873	0.000	0.270
94.00	-6.60	-12.61	0.00	-173.47	0.00	173.47	1610.46	805.23	1437.04	719.59	59.32	-5.949	0.000	0.245
94.71	-6.51	-12.56	0.00	-164.52	0.00	164.52	930.70	465.35	848.15	424.70	60.20	-5.975	0.000	0.395
96.00	-6.43	-12.48	0.00	-148.31	0.00	148.31	922.07	461.04	828.91	415.07	61.82	-6.020	0.000	0.365
98.00	-4.61	-8.85	0.00	-123.35	0.00	123.35	908.49	454.24	799.32	400.25	64.36	-6.118	0.000	0.314
100.00	-4.52	-8.72	0.00	-105.66	0.00	105.66	894.64	447.32	770.03	385.59	66.94	-6.206	0.000	0.279
102.00	-4.43	-8.60	0.00	-88.21	0.00	88.21	880.55	440.27	741.05	371.08	69.55	-6.286	0.000	0.243
104.00	-4.34	-8.48	0.00	-71.01	0.00	71.01	866.20	433.10	712.41	356.74	72.20	-6.356	0.000	0.204
106.00	-4.26	-8.36	0.00	-54.04	0.00	54.04	851.60	425.80	684.12	342.57	74.87	-6.415	0.000	0.163
107.00	-1.73	-4.10	0.00	-45.06	0.00	45.06	844.21	422.10	670.11	335.55	76.21	-6.440	0.000	0.136
108.00	-1.69	-4.04	0.00	-40.96	0.00	40.96	836.75	418.38	656.18	328.58	77.56	-6.462	0.000	0.127
110.00	-1.62	-3.93	0.00	-32.88	0.00	32.88	821.65	410.82	628.62	314.78	80.27	-6.502	0.000	0.107
112.00	-1.56	-3.81	0.00	-25.03	0.00	25.03	804.60	402.30	600.19	300.54	82.99	-6.536	0.000	0.085
114.00	-1.49	-3.70	0.00	-17.40	0.00	17.40	784.18	392.09	569.96	285.40	85.73	-6.562	0.000	0.063
116.00	-1.42	-3.59	0.00	-10.01	0.00	10.01	763.76	381.88	540.51	270.66	88.48	-6.581	0.000	0.039
118.00	0.00	-3.40	0.00	-2.83	0.00	2.83	743.33	371.67	511.84	256.30	91.23	-6.590	0.000	0.011

Wind Loading - Shaft

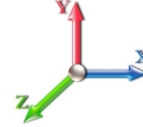
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Iterations 26

Dead Load Factor 1.20
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	5.168	5.68	0.00	1.200	1.133	2.00	7.658	9.19	52.2	124.7	539.2
4.00		1.00	0.85	5.168	5.68	0.00	1.200	1.215	2.00	7.607	9.13	51.9	132.5	542.5
6.00		1.00	0.85	5.168	5.68	0.00	1.200	1.265	2.00	7.546	9.05	51.5	136.7	542.2
8.00		1.00	0.85	5.168	5.68	0.00	1.200	1.302	2.00	7.480	8.98	51.0	139.3	540.3
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	2.00	7.412	8.89	50.6	141.0	537.5
12.00		1.00	0.85	5.168	5.68	0.00	1.200	1.356	2.00	7.342	8.81	50.1	142.1	534.1
14.00		1.00	0.85	5.168	5.68	0.00	1.200	1.377	2.00	7.270	8.72	49.6	142.8	530.3
16.00		1.00	0.86	5.232	5.76	0.00	1.200	1.395	2.00	7.198	8.64	49.7	143.1	526.2
18.00		1.00	0.88	5.363	5.90	0.00	1.200	1.412	2.00	7.126	8.55	50.4	143.3	521.9
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	2.00	7.053	8.46	51.0	143.2	517.3
22.00		1.00	0.92	5.595	6.15	0.00	1.200	1.440	2.00	6.979	8.37	51.5	142.9	512.5
24.00		1.00	0.94	5.698	6.27	0.00	1.200	1.453	2.00	6.905	8.29	51.9	142.5	507.7
26.00		1.00	0.95	5.795	6.37	0.00	1.200	1.465	2.00	6.831	8.20	52.2	142.0	502.7
28.00		1.00	0.97	5.886	6.47	0.00	1.200	1.476	2.00	6.756	8.11	52.5	141.4	497.6
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	2.00	6.681	8.02	52.7	140.7	492.4
32.00		1.00	1.00	6.054	6.66	0.00	1.200	1.495	2.00	6.606	7.93	52.8	139.9	487.1
34.00		1.00	1.01	6.132	6.74	0.00	1.200	1.504	2.00	6.531	7.84	52.9	139.1	481.8
36.00		1.00	1.02	6.206	6.83	0.00	1.200	1.513	2.00	6.456	7.75	52.9	138.2	476.3
38.00		1.00	1.03	6.277	6.90	0.00	1.200	1.521	2.00	6.381	7.66	52.9	137.2	470.9
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	2.00	6.305	7.57	52.8	136.1	465.3
42.00		1.00	1.05	6.410	7.05	0.00	1.200	1.537	2.00	6.229	7.48	52.7	135.1	459.8
44.00		1.00	1.06	6.474	7.12	0.00	1.200	1.544	2.00	6.154	7.38	52.6	133.9	454.2
45.13 Bot - Section 2		1.00	1.07	6.508	7.16	0.00	1.200	1.548	1.13	3.443	4.13	29.6	75.3	254.2
46.00		1.00	1.07	6.534	7.19	0.00	1.200	1.551	0.87	2.680	3.22	23.1	58.8	312.0
48.00		1.00	1.08	6.593	7.25	0.00	1.200	1.557	2.00	6.108	7.33	53.2	134.0	710.2
49.88 Top - Section 1		1.00	1.09	6.647	7.31	0.00	1.200	1.563	1.88	5.672	6.81	49.8	124.9	659.0
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	0.12	0.360	0.43	3.2	8.0	23.5
52.00		1.00	1.10	6.705	7.38	0.00	1.200	1.570	2.00	5.955	7.15	52.7	131.5	388.9
54.00		1.00	1.11	6.759	7.43	0.00	1.200	1.576	2.00	5.879	7.06	52.5	130.2	383.9
56.00		1.00	1.12	6.811	7.49	0.00	1.200	1.581	2.00	5.803	6.96	52.2	128.8	378.8
58.00		1.00	1.13	6.861	7.55	0.00	1.200	1.587	2.00	5.727	6.87	51.9	127.5	373.7
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	2.00	5.650	6.78	51.5	126.1	368.6
62.00		1.00	1.14	6.958	7.65	0.00	1.200	1.598	2.00	5.574	6.69	51.2	124.7	363.4
64.00		1.00	1.15	7.005	7.71	0.00	1.200	1.603	2.00	5.497	6.60	50.8	123.2	358.2
66.00		1.00	1.16	7.050	7.76	0.00	1.200	1.608	2.00	5.421	6.51	50.4	121.8	353.0
68.00		1.00	1.17	7.095	7.80	0.00	1.200	1.612	2.00	5.344	6.41	50.1	120.3	347.8
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	2.00	5.268	6.32	49.6	118.8	342.6
72.00		1.00	1.18	7.181	7.90	0.00	1.200	1.622	2.00	5.191	6.23	49.2	117.3	337.3
74.00		1.00	1.19	7.222	7.94	0.00	1.200	1.626	2.00	5.114	6.14	48.8	115.7	332.0
75.00 Appurtenance(s)		1.00	1.19	7.243	7.97	0.00	1.200	1.628	1.00	2.528	3.03	24.2	57.5	164.2
76.00		1.00	1.19	7.263	7.99	0.00	1.200	1.631	1.00	2.509	3.01	24.1	57.1	162.9
78.00		1.00	1.20	7.303	8.03	0.00	1.200	1.635	2.00	4.961	5.95	47.8	112.6	321.4
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	2.00	4.884	5.86	47.3	111.0	316.1
82.00		1.00	1.21	7.380	8.12	0.00	1.200	1.643	2.00	4.807	5.77	46.8	109.4	310.7
83.00 Appurtenance(s)		1.00	1.22	7.399	8.14	0.00	1.200	1.645	1.00	2.375	2.85	23.2	54.3	153.5
84.00		1.00	1.22	7.418	8.16	0.00	1.200	1.647	1.00	2.355	2.83	23.1	53.9	152.2

Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 27
	Struct Class: II	



85.00 Appurtenance(s)	1.00	1.22	7.436	8.18	0.00	1.200	1.649	1.00	2.336	2.80	22.9	53.5	150.9	
86.00	1.00	1.23	7.454	8.20	0.00	1.200	1.651	1.00	2.317	2.78	22.8	53.0	149.5	
88.00	1.00	1.23	7.491	8.24	0.00	1.200	1.655	2.00	4.577	5.49	45.3	104.4	294.6	
90.00	1.00	1.24	7.526	8.28	0.00	1.200	1.658	2.00	4.500	5.40	44.7	102.8	289.2	
91.00 Appurtenance(s)	1.00	1.24	7.544	8.30	0.00	1.200	1.660	1.00	2.221	2.67	22.1	51.0	142.8	
91.29 Bot - Section 3	1.00	1.24	7.549	8.30	0.00	1.200	1.661	0.29	0.648	0.78	6.5	14.9	41.7	
92.00	1.00	1.24	7.561	8.32	0.00	1.200	1.662	0.71	1.576	1.89	15.7	36.3	139.7	
94.00	1.00	1.25	7.595	8.35	0.00	1.200	1.666	2.00	4.409	5.29	44.2	101.0	389.6	
94.71 Top - Section 2	1.00	1.25	7.607	8.37	0.00	1.200	1.667	0.71	1.547	1.86	15.5	35.6	136.7	
96.00	1.00	1.25	7.629	8.39	0.00	1.200	1.669	1.29	2.785	3.34	28.0	64.0	133.1	
98.00 Appurtenance(s)	1.00	1.26	7.662	8.43	0.00	1.200	1.672	2.00	4.255	5.11	43.0	97.5	202.8	
100.00	1.00	1.27	7.695	8.46	0.00	1.200	1.676	2.00	4.178	5.01	42.4	95.8	198.8	
102.00	1.00	1.27	7.727	8.50	0.00	1.200	1.679	2.00	4.101	4.92	41.8	94.1	194.9	
104.00	1.00	1.28	7.759	8.53	0.00	1.200	1.682	2.00	4.024	4.83	41.2	92.3	190.9	
106.00	1.00	1.28	7.790	8.57	0.00	1.200	1.686	2.00	3.947	4.74	40.6	90.6	186.9	
107.00 Appurtenance(s)	1.00	1.28	7.805	8.59	0.00	1.200	1.687	1.00	1.944	2.33	20.0	44.8	92.1	
108.00	1.00	1.29	7.821	8.60	0.00	1.200	1.689	1.00	1.925	2.31	19.9	44.4	91.1	
110.00	1.00	1.29	7.851	8.64	0.00	1.200	1.692	2.00	3.793	4.55	39.3	87.0	178.8	
112.00	1.00	1.30	7.881	8.67	0.00	1.200	1.695	2.00	3.716	4.46	38.7	85.2	174.8	
114.00	1.00	1.30	7.910	8.70	0.00	1.200	1.698	2.00	3.638	4.37	38.0	83.4	170.7	
116.00	1.00	1.31	7.939	8.73	0.00	1.200	1.701	2.00	3.561	4.27	37.3	81.6	166.7	
118.00 Appurtenance(s)	1.00	1.31	7.968	8.76	0.00	1.200	1.704	2.00	3.484	4.18	36.6	79.8	162.6	
Totals:							118.00					2,851.3		22,886.8

Discrete Appurtenance Forces

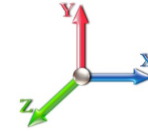
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 26

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	118.00	Low Profile Platform	1	7.968	8.765	1.00	1.00	35.19	3776.82	0.000	0.000	308.43	0.00	0.00
2	118.00	DB844H90E-XY	9	7.979	8.777	1.12	1.00	39.31	1117.86	0.000	0.800	345.05	0.00	276.04
3	118.00	ANT150D	1	7.988	8.787	1.00	1.00	2.68	-5.21	0.000	1.420	23.51	0.00	33.38
4	118.00	DB222	1	8.132	8.945	1.00	1.00	8.17	66.96	0.000	12.000	73.06	0.00	876.72
5	107.00	Universal Ring Mount	1	7.805	8.586	1.00	1.00	8.37	603.46	0.000	0.000	71.90	0.00	0.00
6	107.00	Low Profile Platform	1	7.805	8.586	1.00	1.00	33.72	4409.06	0.000	0.000	289.51	0.00	0.00
7	107.00	APXVSP18-C-A20	3	7.805	8.586	0.68	0.80	21.87	558.03	0.000	0.000	187.78	0.00	0.00
8	107.00	APXV9TM14-ALU-120	3	7.821	8.603	0.65	0.80	14.41	663.73	0.000	1.000	123.99	0.00	123.99
9	107.00	1900 MHz 4X45 RRH	3	7.805	8.586	0.55	0.80	6.51	380.92	0.000	0.000	55.90	0.00	0.00
10	107.00	800 MHz RRU Filter	3	7.805	8.586	0.55	0.80	5.77	388.02	0.000	0.000	49.51	0.00	0.00
11	107.00	TD-RRH8x20-25	3	7.805	8.586	0.55	0.80	8.01	570.16	0.000	0.000	68.73	0.00	0.00
12	107.00	ACU-A20-N	4	7.805	8.586	0.55	0.80	0.94	16.21	0.000	0.000	8.09	0.00	0.00
13	98.00	APL199014-42T0	3	7.662	8.429	0.80	0.80	6.95	216.24	0.000	0.000	58.55	0.00	0.00
14	98.00	P65-16-XL-2	3	7.662	8.429	0.57	0.80	18.48	432.16	0.000	0.000	155.77	0.00	0.00
15	98.00	Andrew DB846H80E-SX	4	7.662	8.429	0.91	0.80	22.51	682.35	0.000	0.000	189.69	0.00	0.00
16	98.00	RFS APL868013	2	7.662	8.429	0.92	0.80	6.80	218.61	0.000	0.000	57.28	0.00	0.00
17	98.00	Low Profile Platform	1	7.662	8.429	1.00	1.00	28.45	4715.14	0.000	0.000	239.82	0.00	0.00
18	91.00	DC6-48-60-18-8F	2	7.544	8.298	1.00	1.00	2.67	158.54	0.000	0.000	22.18	0.00	0.00
19	91.00	RRUS-11	3	7.544	8.298	0.55	0.80	9.68	377.62	0.000	0.000	80.34	0.00	0.00
20	91.00	LGP21401	6	7.544	8.298	0.55	0.80	6.91	201.61	0.000	0.000	57.30	0.00	0.00
21	91.00	P65-16-XLH-RR	3	7.544	8.298	0.60	0.80	19.49	520.21	0.000	0.000	161.70	0.00	0.00
22	91.00	7770.00	3	7.544	8.298	0.60	0.80	11.72	507.48	0.000	0.000	97.24	0.00	0.00
23	91.00	RRUS 32 B30	3	7.544	8.298	0.65	0.80	6.67	464.23	0.000	0.000	55.34	0.00	0.00
24	91.00	RRUS 32 B2	3	7.544	8.298	0.65	0.80	6.67	439.03	0.000	0.000	55.34	0.00	0.00
25	91.00	QS66512-2	3	7.544	8.298	0.72	0.80	20.22	903.38	0.000	0.000	167.80	0.00	0.00
26	91.00	Low Profile Platform	1	7.544	8.298	1.00	1.00	30.79	2287.56	0.000	0.000	255.53	0.00	0.00
27	85.00	V-brace kit	1	7.436	8.180	1.00	1.00	21.10	-526.41	0.000	0.000	172.61	0.00	0.00
28	83.00	Platform w/ Handrail kit	1	7.399	8.139	1.00	1.00	65.28	3846.57	0.000	0.000	531.29	0.00	0.00
29	83.00	Kathrein 782 11054	3	7.399	8.139	0.55	0.80	0.67	20.65	0.000	0.000	5.49	0.00	0.00
30	83.00	S20057A1	3	7.399	8.139	0.55	0.80	2.45	76.77	0.000	0.000	19.92	0.00	0.00
31	83.00	RFS ATMAA1412D-1A2	3	7.399	8.139	0.55	0.80	3.16	99.16	0.000	0.000	25.71	0.00	0.00
32	83.00	Commscope	3	7.399	8.139	0.66	0.80	28.63	630.96	0.000	0.000	233.04	0.00	0.00
33	83.00	RFS APXV18-209014	3	7.399	8.139	0.61	0.80	8.12	313.55	0.000	0.000	66.11	0.00	0.00
34	75.00	Standoff Mount	1	7.243	7.967	1.00	1.00	8.20	99.90	0.000	0.000	65.32	0.00	0.00
35	75.00	GPS	1	7.243	7.967	1.00	1.00	1.66	31.36	0.000	0.000	13.26	0.00	0.00
Totals:								29,262.68				4,392.07		

Total Applied Force Summary

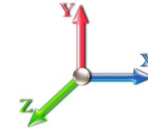
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		52.24	632.52	0.00	0.00
4.00		51.89	636.37	0.00	0.00
6.00		51.48	636.41	0.00	0.00
8.00		51.03	634.79	0.00	0.00
10.00		50.56	632.22	0.00	0.00
12.00		50.08	629.02	0.00	0.00
14.00		49.60	625.38	0.00	0.00
16.00		49.71	621.40	0.00	0.00
18.00		50.45	617.16	0.00	0.00
20.00		51.05	612.71	0.00	0.00
22.00		51.54	608.08	0.00	0.00
24.00		51.93	603.31	0.00	0.00
26.00		52.25	598.41	0.00	0.00
28.00		52.49	593.39	0.00	0.00
30.00		52.67	588.29	0.00	0.00
32.00		52.79	583.09	0.00	0.00
34.00		52.86	577.82	0.00	0.00
36.00		52.89	572.48	0.00	0.00
38.00		52.87	567.08	0.00	0.00
40.00		52.81	561.62	0.00	0.00
42.00		52.71	556.11	0.00	0.00
44.00		52.58	550.55	0.00	0.00
45.13		29.58	308.73	0.00	0.00
46.00		23.12	353.98	0.00	0.00
48.00		53.15	806.69	0.00	0.00
49.88		49.76	749.74	0.00	0.00
50.00		3.16	29.33	0.00	0.00
52.00		52.71	485.56	0.00	0.00
54.00		52.45	480.56	0.00	0.00
56.00		52.17	475.54	0.00	0.00
58.00		51.86	470.48	0.00	0.00
60.00		51.54	465.40	0.00	0.00
62.00		51.19	460.29	0.00	0.00
64.00		50.83	455.15	0.00	0.00
66.00		50.45	450.00	0.00	0.00
68.00		50.05	444.81	0.00	0.00
70.00		49.63	439.61	0.00	0.00
72.00		49.20	434.38	0.00	0.00
74.00		48.76	429.14	0.00	0.00
75.00	(2) attachments	102.75	344.05	0.00	0.00
76.00		24.05	207.17	0.00	0.00
78.00		47.82	409.96	0.00	0.00
80.00		47.33	404.62	0.00	0.00
82.00		46.83	399.27	0.00	0.00
83.00	(16) attachments	904.74	5185.49	0.00	0.00
84.00		23.06	186.98	0.00	0.00

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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85.00	(1) attachments	195.54	-340.78	0.00	0.00
86.00		22.80	184.29	0.00	0.00
88.00		45.25	364.11	0.00	0.00
90.00		44.70	358.70	0.00	0.00
91.00	(27) attachments	974.88	6037.20	0.00	0.00
91.29		6.45	49.06	0.00	0.00
92.00		15.73	157.52	0.00	0.00
94.00		44.21	440.07	0.00	0.00
94.71		15.53	154.57	0.00	0.00
96.00		28.05	165.65	0.00	0.00
98.00	(13) attachments	744.14	6517.75	0.00	0.00
100.00		42.44	219.34	0.00	0.00
102.00		41.83	215.35	0.00	0.00
104.00		41.21	211.36	0.00	0.00
106.00		40.59	207.35	0.00	0.00
107.00	(21) attachments	875.45	7691.97	0.00	123.99
108.00		19.87	99.01	0.00	0.00
110.00		39.31	194.55	0.00	0.00
112.00		38.65	190.52	0.00	0.00
114.00		37.99	186.47	0.00	0.00
116.00		37.32	182.41	0.00	0.00
118.00	(12) attachments	786.69	5134.78	0.00	1186.14
Totals:		7,243.34	56,736.43	0.00	1,310.13

Linear Appurtenance Segment Forces (Factored)

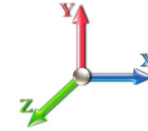
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1/2"	Yes	2.00	0.000	0.65	0.49	0.00	0.015	0.000	5.168	0.00	4.74
4.00	1/2"	Yes	2.00	0.000	0.65	0.51	0.00	0.015	0.000	5.168	0.00	5.29
6.00	1/2"	Yes	2.00	0.000	0.65	0.53	0.00	0.015	0.000	5.168	0.00	5.64
8.00	1/2"	Yes	2.00	0.000	0.65	0.54	0.00	0.015	0.000	5.168	0.00	5.91
10.00	1/2"	Yes	2.00	0.000	0.65	0.55	0.00	0.016	0.000	5.168	0.00	6.13
12.00	1/2"	Yes	2.00	0.000	0.65	0.56	0.00	0.016	0.000	5.168	0.00	6.32
14.00	1/2"	Yes	2.00	0.000	0.65	0.57	0.00	0.016	0.000	5.168	0.00	6.48
16.00	1/2"	Yes	2.00	0.000	0.65	0.57	0.00	0.016	0.000	5.232	0.00	6.62
18.00	1/2"	Yes	2.00	0.000	0.65	0.58	0.00	0.016	0.000	5.363	0.00	6.75
20.00	1/2"	Yes	2.00	0.000	0.65	0.58	0.00	0.016	0.000	5.483	0.00	6.87
22.00	1/2"	Yes	2.00	0.000	0.65	0.59	0.00	0.017	0.000	5.595	0.00	6.98
24.00	1/2"	Yes	2.00	0.000	0.65	0.59	0.00	0.017	0.000	5.698	0.00	7.08
26.00	1/2"	Yes	2.00	0.000	0.65	0.60	0.00	0.017	0.000	5.795	0.00	7.18
28.00	1/2"	Yes	2.00	0.000	0.65	0.60	0.00	0.017	0.000	5.886	0.00	7.27
30.00	1/2"	Yes	2.00	0.000	0.65	0.60	0.00	0.018	0.000	5.972	0.00	7.35
32.00	1/2"	Yes	2.00	0.000	0.65	0.61	0.00	0.018	0.000	6.054	0.00	7.43
34.00	1/2"	Yes	2.00	0.000	0.65	0.61	0.00	0.018	0.000	6.132	0.00	7.51
36.00	1/2"	Yes	2.00	0.000	0.65	0.61	0.00	0.018	0.000	6.206	0.00	7.58
38.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.018	0.000	6.277	0.00	7.65
40.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.019	0.000	6.345	0.00	7.71
42.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.019	0.000	6.410	0.00	7.78
44.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.019	0.000	6.474	0.00	7.84
45.13	1/2"	Yes	1.13	0.000	0.65	0.35	0.00	0.019	0.000	6.508	0.00	4.45
46.00	1/2"	Yes	0.87	0.000	0.65	0.27	0.00	0.020	0.000	6.534	0.00	3.44
48.00	1/2"	Yes	2.00	0.000	0.65	0.63	0.00	0.020	0.000	6.593	0.00	7.95
49.88	1/2"	Yes	1.88	0.000	0.65	0.59	0.00	0.020	0.000	6.647	0.00	7.53
50.00	1/2"	Yes	0.12	0.000	0.65	0.04	0.00	0.020	0.000	6.650	0.00	0.48
52.00	1/2"	Yes	2.00	0.000	0.65	0.63	0.00	0.020	0.000	6.705	0.00	8.06
54.00	1/2"	Yes	2.00	0.000	0.65	0.63	0.00	0.020	0.000	6.759	0.00	8.11
56.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.021	0.000	6.811	0.00	8.16
58.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.021	0.000	6.861	0.00	8.21
60.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.021	0.000	6.910	0.00	8.26
62.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.021	0.000	6.958	0.00	8.31
64.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.022	0.000	7.005	0.00	8.35
66.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.022	0.000	7.050	0.00	8.40
68.00	1/2"	Yes	2.00	0.000	0.65	0.65	0.00	0.023	0.000	7.095	0.00	8.44
70.00	1/2"	Yes	2.00	0.000	0.65	0.65	0.00	0.023	0.000	7.138	0.00	8.48
72.00	1/2"	Yes	2.00	0.000	0.65	0.65	0.00	0.023	0.000	7.181	0.00	8.52
74.00	1/2"	Yes	2.00	0.000	0.65	0.65	0.00	0.024	0.000	7.222	0.00	8.56
75.00	1/2"	Yes	1.00	0.000	0.65	0.33	0.00	0.024	0.000	7.243	0.00	4.29
Totals:											0.0	278.1

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

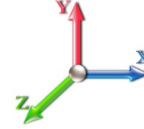


Page: 32

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

Iterations 26

Dead Load Factor 1.20
Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-57.08	-7.26	0.00	-651.83	0.00	651.83	3634.70	1817.35	6397.77	3203.64	0.00	0.000	0.000	0.219
2.00	-56.44	-7.24	0.00	-637.31	0.00	637.31	3607.15	1803.57	6280.28	3144.81	0.01	-0.031	0.000	0.218
4.00	-55.80	-7.21	0.00	-622.84	0.00	622.84	3579.34	1789.67	6163.42	3086.29	0.03	-0.062	0.000	0.217
6.00	-55.16	-7.19	0.00	-608.41	0.00	608.41	3551.29	1775.64	6047.19	3028.09	0.06	-0.094	0.000	0.216
8.00	-54.52	-7.17	0.00	-594.03	0.00	594.03	3522.98	1761.49	5931.61	2970.21	0.11	-0.126	0.000	0.215
10.00	-53.88	-7.15	0.00	-579.68	0.00	579.68	3494.42	1747.21	5816.69	2912.67	0.17	-0.158	0.000	0.214
12.00	-53.25	-7.13	0.00	-565.39	0.00	565.39	3465.61	1732.80	5702.44	2855.46	0.24	-0.190	0.000	0.213
14.00	-52.62	-7.11	0.00	-551.13	0.00	551.13	3436.54	1718.27	5588.89	2798.60	0.33	-0.223	0.000	0.212
16.00	-52.00	-7.08	0.00	-536.92	0.00	536.92	3407.22	1703.61	5476.05	2742.09	0.43	-0.256	0.000	0.211
18.00	-51.37	-7.06	0.00	-522.75	0.00	522.75	3377.65	1688.83	5363.92	2685.95	0.54	-0.289	0.000	0.210
20.00	-50.76	-7.04	0.00	-508.63	0.00	508.63	3347.83	1673.91	5252.53	2630.17	0.67	-0.323	0.000	0.209
22.00	-50.15	-7.01	0.00	-494.56	0.00	494.56	3317.75	1658.87	5141.89	2574.76	0.81	-0.357	0.000	0.207
24.00	-49.54	-6.98	0.00	-480.54	0.00	480.54	3287.42	1643.71	5032.01	2519.74	0.97	-0.391	0.000	0.206
26.00	-48.94	-6.96	0.00	-466.57	0.00	466.57	3256.84	1628.42	4922.91	2465.11	1.14	-0.425	0.000	0.204
28.00	-48.34	-6.93	0.00	-452.65	0.00	452.65	3219.51	1609.75	4804.91	2406.03	1.33	-0.460	0.000	0.203
30.00	-47.75	-6.90	0.00	-438.79	0.00	438.79	3178.67	1589.33	4683.16	2345.06	1.53	-0.495	0.000	0.202
32.00	-47.16	-6.87	0.00	-424.99	0.00	424.99	3137.83	1568.91	4562.98	2284.88	1.74	-0.530	0.000	0.201
34.00	-46.58	-6.84	0.00	-411.25	0.00	411.25	3096.99	1548.49	4444.36	2225.48	1.97	-0.566	0.000	0.200
36.00	-46.00	-6.81	0.00	-397.56	0.00	397.56	3056.15	1528.07	4327.30	2166.87	2.22	-0.601	0.000	0.199
38.00	-45.43	-6.78	0.00	-383.93	0.00	383.93	3015.30	1507.65	4211.81	2109.03	2.48	-0.637	0.000	0.197
40.00	-44.87	-6.75	0.00	-370.37	0.00	370.37	2974.46	1487.23	4097.87	2051.98	2.75	-0.673	0.000	0.196
42.00	-44.31	-6.72	0.00	-356.87	0.00	356.87	2933.62	1466.81	3985.50	1995.71	3.04	-0.709	0.000	0.194
44.00	-43.75	-6.68	0.00	-343.43	0.00	343.43	2892.78	1446.39	3874.69	1940.23	3.34	-0.746	0.000	0.192
45.13	-43.44	-6.66	0.00	-335.88	0.00	335.88	2869.71	1434.85	3812.78	1909.22	3.52	-0.766	0.000	0.191
46.00	-43.09	-6.65	0.00	-330.08	0.00	330.08	2851.94	1425.97	3765.45	1885.52	3.66	-0.782	0.000	0.190
48.00	-42.28	-6.62	0.00	-316.77	0.00	316.77	2811.10	1405.55	3657.76	1831.60	4.00	-0.819	0.000	0.188
49.88	-41.53	-6.57	0.00	-304.33	0.00	304.33	2333.69	1166.84	3066.96	1535.76	4.33	-0.853	0.000	0.216
50.00	-41.49	-6.58	0.00	-303.54	0.00	303.54	2332.20	1166.10	3062.32	1533.44	4.35	-0.855	0.000	0.216
52.00	-41.01	-6.55	0.00	-290.38	0.00	290.38	2307.18	1153.59	2985.35	1494.89	4.72	-0.897	0.000	0.212
54.00	-40.52	-6.52	0.00	-277.28	0.00	277.28	2281.92	1140.96	2909.02	1456.67	5.10	-0.938	0.000	0.208
56.00	-40.04	-6.49	0.00	-264.24	0.00	264.24	2256.40	1128.20	2833.34	1418.77	5.51	-0.978	0.000	0.204
58.00	-39.57	-6.46	0.00	-251.27	0.00	251.27	2223.07	1111.54	2748.96	1376.53	5.92	-1.019	0.000	0.200
60.00	-39.10	-6.42	0.00	-238.36	0.00	238.36	2189.04	1094.52	2665.01	1334.49	6.36	-1.060	0.000	0.197
62.00	-38.64	-6.39	0.00	-225.51	0.00	225.51	2155.00	1077.50	2582.36	1293.10	6.81	-1.100	0.000	0.192
64.00	-38.18	-6.36	0.00	-212.73	0.00	212.73	2120.97	1060.48	2501.02	1252.37	7.28	-1.140	0.000	0.188
66.00	-37.72	-6.32	0.00	-200.02	0.00	200.02	2086.94	1043.47	2420.97	1212.28	7.77	-1.179	0.000	0.183
68.00	-37.28	-6.29	0.00	-187.37	0.00	187.37	2052.90	1026.45	2342.23	1172.85	8.27	-1.218	0.000	0.178
70.00	-36.83	-6.25	0.00	-174.80	0.00	174.80	2018.87	1009.43	2264.79	1134.08	8.79	-1.256	0.000	0.172
72.00	-36.40	-6.22	0.00	-162.29	0.00	162.29	1984.83	992.42	2188.65	1095.95	9.32	-1.293	0.000	0.166
74.00	-35.97	-6.18	0.00	-149.85	0.00	149.85	1950.80	975.40	2113.81	1058.48	9.87	-1.329	0.000	0.160
75.00	-35.62	-6.08	0.00	-143.68	0.00	143.68	1933.78	966.89	2076.88	1039.98	10.15	-1.347	0.000	0.157
76.00	-35.41	-6.06	0.00	-137.60	0.00	137.60	1916.76	958.38	2040.27	1021.65	10.44	-1.365	0.000	0.153
78.00	-35.00	-6.03	0.00	-125.47	0.00	125.47	1882.73	941.37	1968.04	985.48	11.02	-1.399	0.000	0.146
80.00	-34.59	-5.99	0.00	-113.42	0.00	113.42	1848.70	924.35	1897.11	949.96	11.61	-1.431	0.000	0.138
82.00	-34.19	-5.95	0.00	-101.44	0.00	101.44	1814.66	907.33	1827.48	915.10	12.22	-1.462	0.000	0.130
83.00	-29.03	-4.92	0.00	-95.50	0.00	95.50	1797.65	898.82	1793.15	897.91	12.52	-1.477	0.000	0.123
84.00	-28.84	-4.89	0.00	-90.58	0.00	90.58	1780.63	890.31	1759.15	880.88	12.83	-1.492	0.000	0.119
85.00	-28.85	-4.71	0.00	-85.69	0.00	85.69	1763.61	881.81	1725.48	864.02	13.15	-1.506	0.000	0.116

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 33
	Struct Class: II	



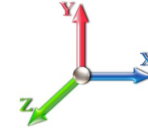
86.00	-28.66	-4.69	0.00	-80.98	0.00	80.98	1746.59	873.30	1692.13	847.32	13.47	-1.520	0.000	0.112
88.00	-28.30	-4.65	0.00	-71.60	0.00	71.60	1712.56	856.28	1626.40	814.41	14.11	-1.546	0.000	0.104
90.00	-27.94	-4.60	0.00	-62.31	0.00	62.31	1678.53	839.26	1561.98	782.15	14.76	-1.570	0.000	0.096
91.00	-21.93	-3.46	0.00	-57.71	0.00	57.71	1661.51	830.75	1530.26	766.27	15.09	-1.581	0.000	0.089
91.29	-21.88	-3.46	0.00	-56.70	0.00	56.70	1656.52	828.26	1521.01	761.64	15.19	-1.585	0.000	0.088
92.00	-21.72	-3.44	0.00	-54.25	0.00	54.25	1644.49	822.25	1498.86	750.54	15.42	-1.593	0.000	0.086
94.00	-21.28	-3.39	0.00	-47.37	0.00	47.37	1610.46	805.23	1437.04	719.59	16.09	-1.613	0.000	0.079
94.71	-21.13	-3.37	0.00	-44.96	0.00	44.96	930.70	465.35	848.15	424.70	16.34	-1.620	0.000	0.129
96.00	-20.96	-3.35	0.00	-40.61	0.00	40.61	922.07	461.04	828.91	415.07	16.77	-1.633	0.000	0.121
98.00	-14.47	-2.42	0.00	-33.91	0.00	33.91	908.49	454.24	799.32	400.25	17.46	-1.660	0.000	0.101
100.00	-14.25	-2.38	0.00	-29.06	0.00	29.06	894.64	447.32	770.03	385.59	18.17	-1.684	0.000	0.091
102.00	-14.03	-2.34	0.00	-24.30	0.00	24.30	880.55	440.27	741.05	371.08	18.88	-1.706	0.000	0.081
104.00	-13.82	-2.30	0.00	-19.62	0.00	19.62	866.20	433.10	712.41	356.74	19.59	-1.725	0.000	0.071
106.00	-13.62	-2.25	0.00	-15.03	0.00	15.03	851.60	425.80	684.12	342.57	20.32	-1.741	0.000	0.060
107.00	-5.96	-1.14	0.00	-12.66	0.00	12.66	844.21	422.10	670.11	335.55	20.69	-1.748	0.000	0.045
108.00	-5.86	-1.12	0.00	-11.52	0.00	11.52	836.75	418.38	656.18	328.58	21.05	-1.755	0.000	0.042
110.00	-5.66	-1.08	0.00	-9.28	0.00	9.28	821.65	410.82	628.62	314.78	21.79	-1.766	0.000	0.036
112.00	-5.47	-1.03	0.00	-7.12	0.00	7.12	804.60	402.30	600.19	300.54	22.53	-1.775	0.000	0.031
114.00	-5.29	-0.99	0.00	-5.06	0.00	5.06	784.18	392.09	569.96	285.40	23.28	-1.783	0.000	0.024
116.00	-5.11	-0.95	0.00	-3.08	0.00	3.08	763.76	381.88	540.51	270.66	24.03	-1.789	0.000	0.018
118.00	0.00	-0.79	0.00	-1.19	0.00	1.19	743.33	371.67	511.84	256.30	24.78	-1.792	0.000	0.005

Seismic Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E							Iterations 24	
Gust Response Factor	1.10				Sds	0.23	Ss	0.21
Dead Load Factor	1.20	Seismic Load Factor	1.00		Sd1	0.10	S1	0.07
Wind Load Factor	0.00	Structure Frequency	0.34		SA	0.04	Seismic Importance Factor	1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
2.00		345.42	0.00	0.02	0.01	5.31	
4.00		341.68	0.00	0.03	0.02	8.42	
6.00		337.94	0.00	0.04	0.02	10.37	
8.00		334.19	0.01	0.05	0.03	11.63	
10.00		330.45	0.01	0.06	0.03	12.44	
12.00		326.71	0.02	0.06	0.04	12.94	
14.00		322.97	0.03	0.07	0.04	13.25	
16.00		319.23	0.03	0.07	0.04	13.42	
18.00		315.49	0.04	0.07	0.04	13.50	
20.00		311.75	0.05	0.07	0.04	13.54	
22.00		308.01	0.07	0.07	0.04	13.55	
24.00		304.27	0.08	0.07	0.04	13.55	
26.00		300.52	0.09	0.07	0.04	13.55	
28.00		296.78	0.11	0.07	0.04	13.55	
30.00		293.04	0.12	0.07	0.03	13.54	
32.00		289.30	0.14	0.07	0.03	13.52	
34.00		285.56	0.16	0.07	0.03	13.48	
36.00		281.82	0.18	0.07	0.03	13.40	
38.00		278.08	0.20	0.06	0.02	13.25	
40.00		274.34	0.22	0.06	0.02	13.01	
42.00		270.60	0.24	0.06	0.02	12.65	
44.00		266.85	0.26	0.05	0.02	12.15	
45.13	Bot - Section 2	149.12	0.28	0.05	0.01	6.64	
46.00		211.01	0.29	0.05	0.01	9.19	
48.00		480.16	0.31	0.04	0.01	19.53	
49.88	Top - Section 1	445.09	0.34	0.04	0.01	16.47	
50.00		12.97	0.34	0.04	0.01	0.48	
52.00		214.55	0.37	0.03	0.01	6.78	
54.00		211.43	0.40	0.02	0.01	5.34	
56.00		208.31	0.43	0.01	0.01	3.68	
58.00		205.20	0.46	0.00	0.01	1.85	
60.00		202.08	0.49	-0.01	0.01	-0.07	
62.00		198.96	0.52	-0.02	0.01	-1.99	
64.00		195.84	0.56	-0.04	0.01	-3.81	
66.00		192.73	0.59	-0.05	0.01	-5.43	
68.00		189.61	0.63	-0.06	0.02	-6.79	
70.00		186.49	0.67	-0.08	0.02	-7.84	
72.00		183.37	0.70	-0.09	0.03	-8.56	
74.00		180.26	0.74	-0.10	0.04	-8.95	
75.00	Appurtenance(s)	138.96	0.76	-0.10	0.04	-7.02	
76.00		88.18	0.78	-0.11	0.05	-4.49	
78.00		174.02	0.83	-0.12	0.06	-8.79	
80.00		170.90	0.87	-0.12	0.08	-8.28	
82.00		167.79	0.91	-0.12	0.09	-7.51	
83.00	Appurtenance(s)	2233.8	0.94	-0.12	0.10	-94.63	

Seismic Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		81.94	0.96	-0.12	0.11	-3.24
85.00	Appurtenance(s)	502.26	0.98	-0.11	0.12	-18.26
86.00		80.39	1.00	-0.11	0.13	-2.64
88.00		158.43	1.05	-0.09	0.16	-3.88
90.00		155.31	1.10	-0.07	0.19	-2.28
91.00	Appurtenance(s)	2572.6	1.12	-0.06	0.20	-23.68
91.29	Bot - Section 3	22.29	1.13	-0.05	0.21	-0.17
92.00		86.19	1.15	-0.04	0.22	-0.29
94.00		240.55	1.20	0.00	0.25	2.28
94.71	Top - Section 2	84.20	1.22	0.02	0.27	1.21
96.00		57.58	1.25	0.06	0.29	1.37
98.00	Appurtenance(s)	2381.3	1.30	0.13	0.34	94.62
100.00		85.86	1.36	0.21	0.39	4.91
102.00		83.99	1.41	0.31	0.44	6.40
104.00		82.12	1.47	0.43	0.51	7.95
106.00		80.25	1.53	0.56	0.57	9.55
107.00	Appurtenance(s)	3314.4	1.55	0.64	0.61	433.12
108.00		38.96	1.58	0.73	0.65	5.56
110.00		76.51	1.64	0.92	0.73	12.87
112.00		74.64	1.70	1.13	0.82	14.58
114.00		72.77	1.76	1.38	0.92	16.31
116.00		70.90	1.83	1.66	1.02	18.06
118.00	Appurtenance(s)	2017.0	1.89	1.98	1.14	578.86
Totals:		25,796.4			1,323.1	

Total Wind: 27,214.2

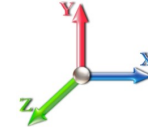
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0E										Iterations 24
Gust Response Factor	1.10						Sds	0.23		Ss 0.21
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.10					S1 0.07
Wind Load Factor	0.00	Structure Frequency	0.34	SA	0.04	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	-35.28	-1.55	0.00	-153.27	0.00	153.27	3634.70	1817.35	6397.77	3203.64	0.00	0.00	0.00	0.058
2.00	-34.78	-1.55	0.00	-150.16	0.00	150.16	3607.15	1803.57	6280.28	3144.81	0.00	-0.01	-0.01	0.057
4.00	-34.28	-1.55	0.00	-147.06	0.00	147.06	3579.34	1789.67	6163.42	3086.29	0.01	-0.01	-0.01	0.057
6.00	-33.78	-1.54	0.00	-143.96	0.00	143.96	3551.29	1775.64	6047.19	3028.09	0.01	-0.02	-0.02	0.057
8.00	-33.29	-1.53	0.00	-140.88	0.00	140.88	3522.98	1761.49	5931.61	2970.21	0.02	-0.03	-0.03	0.057
10.00	-32.81	-1.53	0.00	-137.81	0.00	137.81	3494.42	1747.21	5816.69	2912.67	0.04	-0.04	-0.04	0.057
12.00	-32.32	-1.52	0.00	-134.76	0.00	134.76	3465.61	1732.80	5702.44	2855.46	0.06	-0.05	-0.05	0.057
14.00	-31.85	-1.51	0.00	-131.73	0.00	131.73	3436.54	1718.27	5588.89	2798.60	0.08	-0.05	-0.05	0.056
16.00	-31.38	-1.50	0.00	-128.71	0.00	128.71	3407.22	1703.61	5476.05	2742.09	0.10	-0.06	-0.06	0.056
18.00	-30.91	-1.49	0.00	-125.72	0.00	125.72	3377.65	1688.83	5363.92	2685.95	0.13	-0.07	-0.07	0.056
20.00	-30.44	-1.48	0.00	-122.74	0.00	122.74	3347.83	1673.91	5252.53	2630.17	0.16	-0.08	-0.08	0.056
22.00	-29.99	-1.47	0.00	-119.78	0.00	119.78	3317.75	1658.87	5141.89	2574.76	0.19	-0.09	-0.09	0.056
24.00	-29.53	-1.46	0.00	-116.84	0.00	116.84	3287.42	1643.71	5032.01	2519.74	0.23	-0.09	-0.09	0.055
26.00	-29.08	-1.45	0.00	-113.93	0.00	113.93	3256.84	1628.42	4922.91	2465.11	0.27	-0.10	-0.10	0.055
28.00	-28.64	-1.44	0.00	-111.03	0.00	111.03	3225.91	1613.00	4814.61	2410.86	0.32	-0.11	-0.11	0.055
30.00	-28.20	-1.43	0.00	-108.15	0.00	108.15	3194.52	1597.45	4706.91	2356.99	0.36	-0.12	-0.12	0.055
32.00	-27.76	-1.42	0.00	-105.29	0.00	105.29	3163.67	1581.77	4600.01	2303.50	0.41	-0.13	-0.13	0.055
34.00	-27.33	-1.41	0.00	-102.46	0.00	102.46	3132.36	1565.96	4493.81	2250.39	0.47	-0.14	-0.14	0.055
36.00	-26.90	-1.40	0.00	-99.64	0.00	99.64	3100.59	1550.02	4388.41	2197.66	0.53	-0.15	-0.15	0.055
38.00	-26.48	-1.39	0.00	-96.85	0.00	96.85	3068.36	1533.95	4283.81	2145.31	0.59	-0.15	-0.15	0.055
40.00	-26.06	-1.38	0.00	-94.07	0.00	94.07	3035.67	1517.75	4180.01	2093.34	0.66	-0.16	-0.16	0.055
42.00	-25.65	-1.37	0.00	-91.32	0.00	91.32	2992.52	1501.42	4077.01	2041.74	0.73	-0.17	-0.17	0.054
44.00	-25.24	-1.36	0.00	-88.58	0.00	88.58	2948.91	1484.96	3974.81	1990.56	0.80	-0.18	-0.18	0.054
45.13	-25.01	-1.35	0.00	-87.05	0.00	87.05	2892.78	1466.81	3874.69	1940.23	0.85	-0.19	-0.19	0.054
46.00	-24.71	-1.35	0.00	-85.87	0.00	85.87	2869.71	1434.85	3812.78	1909.22	0.88	-0.19	-0.19	0.054
48.00	-24.05	-1.33	0.00	-83.18	0.00	83.18	2851.94	1425.97	3765.45	1885.52	0.96	-0.20	-0.20	0.054
49.88	-23.43	-1.31	0.00	-80.68	0.00	80.68	2811.10	1405.55	3657.76	1831.60	1.04	-0.21	-0.21	0.063
50.00	-23.41	-1.31	0.00	-80.53	0.00	80.53	2332.20	1166.10	3062.32	1533.44	1.05	-0.21	-0.21	0.063
52.00	-23.06	-1.31	0.00	-77.90	0.00	77.90	2307.18	1153.59	2985.35	1494.89	1.14	-0.22	-0.22	0.062
54.00	-22.72	-1.31	0.00	-75.28	0.00	75.28	2281.92	1140.96	2909.02	1456.67	1.24	-0.23	-0.23	0.062
56.00	-22.38	-1.31	0.00	-72.67	0.00	72.67	2256.40	1128.20	2833.34	1418.77	1.34	-0.24	-0.24	0.061
58.00	-22.05	-1.31	0.00	-70.06	0.00	70.06	2223.07	1111.54	2748.96	1376.53	1.44	-0.26	-0.26	0.061
60.00	-21.71	-1.31	0.00	-67.44	0.00	67.44	2189.04	1094.52	2665.01	1334.49	1.55	-0.27	-0.27	0.060
62.00	-21.39	-1.31	0.00	-64.82	0.00	64.82	2155.00	1077.50	2582.36	1293.10	1.66	-0.28	-0.28	0.060
64.00	-21.06	-1.32	0.00	-62.20	0.00	62.20	2120.97	1060.48	2501.02	1252.37	1.78	-0.29	-0.29	0.060
66.00	-20.74	-1.32	0.00	-59.57	0.00	59.57	2086.94	1043.47	2420.97	1212.28	1.91	-0.30	-0.30	0.059
68.00	-20.43	-1.32	0.00	-56.93	0.00	56.93	2052.90	1026.45	2342.23	1172.85	2.03	-0.31	-0.31	0.058
70.00	-20.11	-1.32	0.00	-54.29	0.00	54.29	2018.87	1009.43	2264.79	1134.08	2.17	-0.32	-0.32	0.058
72.00	-19.80	-1.32	0.00	-51.65	0.00	51.65	1984.83	992.42	2188.65	1095.95	2.31	-0.34	-0.34	0.057
74.00	-19.50	-1.33	0.00	-49.00	0.00	49.00	1950.80	975.40	2113.81	1058.48	2.45	-0.35	-0.35	0.056
75.00	-19.29	-1.33	0.00	-47.67	0.00	47.67	1933.78	966.89	2076.88	1039.98	2.52	-0.35	-0.35	0.056
76.00	-19.14	-1.33	0.00	-46.35	0.00	46.35	1916.76	958.38	2040.27	1021.65	2.60	-0.36	-0.36	0.055
78.00	-18.84	-1.33	0.00	-43.69	0.00	43.69	1882.73	941.37	1968.04	985.48	2.75	-0.37	-0.37	0.054
80.00	-18.54	-1.33	0.00	-41.03	0.00	41.03	1848.70	924.35	1897.11	949.96	2.91	-0.38	-0.38	0.053
82.00	-18.25	-1.33	0.00	-38.36	0.00	38.36	1814.66	907.33	1827.48	915.10	3.07	-0.39	-0.39	0.052
83.00	-15.53	-1.32	0.00	-37.03	0.00	37.03	1797.65	898.82	1793.15	897.91	3.16	-0.40	-0.40	0.050
84.00	-15.40	-1.32	0.00	-35.71	0.00	35.71	1780.63	890.31	1759.15	880.88	3.24	-0.41	-0.41	0.049

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 37
	Struct Class: II	



85.00	-14.76	-1.31	0.00	-34.40	0.00	34.40	1763.61	881.81	1725.48	864.02	3.33	-0.41	0.048
86.00	-14.63	-1.31	0.00	-33.08	0.00	33.08	1746.59	873.30	1692.13	847.32	3.41	-0.42	0.047
88.00	-14.37	-1.32	0.00	-30.45	0.00	30.45	1712.56	856.28	1626.40	814.41	3.59	-0.43	0.046
90.00	-14.11	-1.32	0.00	-27.82	0.00	27.82	1678.53	839.26	1561.98	782.15	3.77	-0.44	0.044
91.00	-10.99	-1.29	0.00	-26.51	0.00	26.51	1661.51	830.75	1530.26	766.27	3.86	-0.44	0.041
91.29	-10.95	-1.29	0.00	-26.13	0.00	26.13	1656.52	828.26	1521.01	761.64	3.89	-0.44	0.041
92.00	-10.83	-1.29	0.00	-25.21	0.00	25.21	1644.49	822.25	1498.86	750.54	3.96	-0.45	0.040
94.00	-10.49	-1.29	0.00	-22.63	0.00	22.63	1610.46	805.23	1437.04	719.59	4.15	-0.46	0.038
94.71	-10.38	-1.29	0.00	-21.71	0.00	21.71	930.70	465.35	848.15	424.70	4.21	-0.46	0.062
96.00	-10.27	-1.29	0.00	-20.05	0.00	20.05	922.07	461.04	828.91	415.07	4.34	-0.47	0.059
98.00	-7.37	-1.17	0.00	-17.48	0.00	17.48	908.49	454.24	799.32	400.25	4.54	-0.48	0.052
100.00	-7.24	-1.17	0.00	-15.14	0.00	15.14	894.64	447.32	770.03	385.59	4.74	-0.49	0.047
102.00	-7.12	-1.16	0.00	-12.80	0.00	12.80	880.55	440.27	741.05	371.08	4.95	-0.51	0.043
104.00	-7.00	-1.15	0.00	-10.48	0.00	10.48	866.20	433.10	712.41	356.74	5.17	-0.52	0.037
106.00	-6.88	-1.14	0.00	-8.18	0.00	8.18	851.60	425.80	684.12	342.57	5.38	-0.52	0.032
107.00	-2.90	-0.67	0.00	-7.04	0.00	7.04	844.21	422.10	670.11	335.55	5.50	-0.53	0.024
108.00	-2.85	-0.67	0.00	-6.36	0.00	6.36	836.75	418.38	656.18	328.58	5.61	-0.53	0.023
110.00	-2.74	-0.65	0.00	-5.03	0.00	5.03	821.65	410.82	628.62	314.78	5.83	-0.54	0.019
112.00	-2.63	-0.64	0.00	-3.72	0.00	3.72	804.60	402.30	600.19	300.54	6.06	-0.54	0.016
114.00	-2.53	-0.62	0.00	-2.45	0.00	2.45	784.18	392.09	569.96	285.40	6.29	-0.55	0.012
116.00	-2.43	-0.60	0.00	-1.20	0.00	1.20	763.76	381.88	540.51	270.66	6.51	-0.55	0.008
118.00	0.00	-0.58	0.00	0.00	0.00	0.00	743.33	371.67	511.84	256.30	6.75	-0.55	0.000

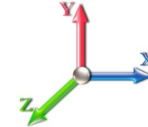
Seismic Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E					Iterations 24
Gust Response Factor	1.10	Sds	0.23	Ss	0.21
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.10
Wind Load Factor	0.00	Structure Frequency	0.34	SA	0.04
					Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
2.00		345.42	0.00	0.02	0.01	5.31	
4.00		341.68	0.00	0.03	0.02	8.42	
6.00		337.94	0.00	0.04	0.02	10.37	
8.00		334.19	0.01	0.05	0.03	11.63	
10.00		330.45	0.01	0.06	0.03	12.44	
12.00		326.71	0.02	0.06	0.04	12.94	
14.00		322.97	0.03	0.07	0.04	13.25	
16.00		319.23	0.03	0.07	0.04	13.42	
18.00		315.49	0.04	0.07	0.04	13.50	
20.00		311.75	0.05	0.07	0.04	13.54	
22.00		308.01	0.07	0.07	0.04	13.55	
24.00		304.27	0.08	0.07	0.04	13.55	
26.00		300.52	0.09	0.07	0.04	13.55	
28.00		296.78	0.11	0.07	0.04	13.55	
30.00		293.04	0.12	0.07	0.03	13.54	
32.00		289.30	0.14	0.07	0.03	13.52	
34.00		285.56	0.16	0.07	0.03	13.48	
36.00		281.82	0.18	0.07	0.03	13.40	
38.00		278.08	0.20	0.06	0.02	13.25	
40.00		274.34	0.22	0.06	0.02	13.01	
42.00		270.60	0.24	0.06	0.02	12.65	
44.00		266.85	0.26	0.05	0.02	12.15	
45.13	Bot - Section 2	149.12	0.28	0.05	0.01	6.64	
46.00		211.01	0.29	0.05	0.01	9.19	
48.00		480.16	0.31	0.04	0.01	19.53	
49.88	Top - Section 1	445.09	0.34	0.04	0.01	16.47	
50.00		12.97	0.34	0.04	0.01	0.48	
52.00		214.55	0.37	0.03	0.01	6.78	
54.00		211.43	0.40	0.02	0.01	5.34	
56.00		208.31	0.43	0.01	0.01	3.68	
58.00		205.20	0.46	0.00	0.01	1.85	
60.00		202.08	0.49	-0.01	0.01	-0.07	
62.00		198.96	0.52	-0.02	0.01	-1.99	
64.00		195.84	0.56	-0.04	0.01	-3.81	
66.00		192.73	0.59	-0.05	0.01	-5.43	
68.00		189.61	0.63	-0.06	0.02	-6.79	
70.00		186.49	0.67	-0.08	0.02	-7.84	
72.00		183.37	0.70	-0.09	0.03	-8.56	
74.00		180.26	0.74	-0.10	0.04	-8.95	
75.00	Appurtenance(s)	138.96	0.76	-0.10	0.04	-7.02	
76.00		88.18	0.78	-0.11	0.05	-4.49	
78.00		174.02	0.83	-0.12	0.06	-8.79	
80.00		170.90	0.87	-0.12	0.08	-8.28	
82.00		167.79	0.91	-0.12	0.09	-7.51	
83.00	Appurtenance(s)	2233.8	0.94	-0.12	0.10	-94.63	

Seismic Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		81.94	0.96	-0.12	0.11	-3.24
85.00	Appurtenance(s)	502.26	0.98	-0.11	0.12	-18.26
86.00		80.39	1.00	-0.11	0.13	-2.64
88.00		158.43	1.05	-0.09	0.16	-3.88
90.00		155.31	1.10	-0.07	0.19	-2.28
91.00	Appurtenance(s)	2572.6	1.12	-0.06	0.20	-23.68
91.29	Bot - Section 3	22.29	1.13	-0.05	0.21	-0.17
92.00		86.19	1.15	-0.04	0.22	-0.29
94.00		240.55	1.20	0.00	0.25	2.28
94.71	Top - Section 2	84.20	1.22	0.02	0.27	1.21
96.00		57.58	1.25	0.06	0.29	1.37
98.00	Appurtenance(s)	2381.3	1.30	0.13	0.34	94.62
100.00		85.86	1.36	0.21	0.39	4.91
102.00		83.99	1.41	0.31	0.44	6.40
104.00		82.12	1.47	0.43	0.51	7.95
106.00		80.25	1.53	0.56	0.57	9.55
107.00	Appurtenance(s)	3314.4	1.55	0.64	0.61	433.12
108.00		38.96	1.58	0.73	0.65	5.56
110.00		76.51	1.64	0.92	0.73	12.87
112.00		74.64	1.70	1.13	0.82	14.58
114.00		72.77	1.76	1.38	0.92	16.31
116.00		70.90	1.83	1.66	1.02	18.06
118.00	Appurtenance(s)	2017.0	1.89	1.98	1.14	578.86
Totals:		25,796.4			1,323.1	

Total Wind: 27,214.2

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

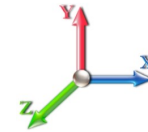
Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E										Iterations 24
Gust Response Factor 1.10					Sds 0.23					Ss 0.21
Dead Load Factor 0.90			Seismic Load Factor 1.00			Sd1 0.10			S1 0.07	
Wind Load Factor 0.00			Structure Frequency 0.34			SA 0.04			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	-26.46	-1.55	0.00	-151.09	0.00	151.09	3634.70	1817.35	6397.77	3203.64	0.00	0.00	0.00	0.054
2.00	-26.08	-1.55	0.00	-147.98	0.00	147.98	3607.15	1803.57	6280.28	3144.81	0.00	-0.01	0.00	0.054
4.00	-25.71	-1.54	0.00	-144.88	0.00	144.88	3579.34	1789.67	6163.42	3086.29	0.01	-0.01	0.00	0.054
6.00	-25.34	-1.54	0.00	-141.79	0.00	141.79	3551.29	1775.64	6047.19	3028.09	0.01	-0.02	0.00	0.054
8.00	-24.97	-1.53	0.00	-138.72	0.00	138.72	3522.98	1761.49	5931.61	2970.21	0.02	-0.03	0.00	0.054
10.00	-24.60	-1.52	0.00	-135.66	0.00	135.66	3494.42	1747.21	5816.69	2912.67	0.04	-0.04	0.00	0.054
12.00	-24.24	-1.51	0.00	-132.62	0.00	132.62	3465.61	1732.80	5702.44	2855.46	0.06	-0.04	0.00	0.053
14.00	-23.89	-1.50	0.00	-129.60	0.00	129.60	3436.54	1718.27	5588.89	2798.60	0.08	-0.05	0.00	0.053
16.00	-23.53	-1.49	0.00	-126.60	0.00	126.60	3407.22	1703.61	5476.05	2742.09	0.10	-0.06	0.00	0.053
18.00	-23.18	-1.48	0.00	-123.62	0.00	123.62	3377.65	1688.83	5363.92	2685.95	0.13	-0.07	0.00	0.053
20.00	-22.83	-1.47	0.00	-120.67	0.00	120.67	3347.83	1673.91	5252.53	2630.17	0.16	-0.08	0.00	0.053
22.00	-22.49	-1.46	0.00	-117.73	0.00	117.73	3317.75	1658.87	5141.89	2574.76	0.19	-0.08	0.00	0.053
24.00	-22.15	-1.45	0.00	-114.82	0.00	114.82	3287.42	1643.71	5032.01	2519.74	0.23	-0.09	0.00	0.052
26.00	-21.81	-1.43	0.00	-111.93	0.00	111.93	3256.84	1628.42	4922.91	2465.11	0.27	-0.10	0.00	0.052
28.00	-21.48	-1.42	0.00	-109.06	0.00	109.06	3226.01	1613.00	4814.61	2410.86	0.31	-0.11	0.00	0.052
30.00	-21.15	-1.41	0.00	-106.21	0.00	106.21	3194.84	1597.45	4707.10	2357.00	0.36	-0.12	0.00	0.052
32.00	-20.82	-1.40	0.00	-103.38	0.00	103.38	3173.33	1581.76	4600.39	2303.52	0.41	-0.13	0.00	0.052
34.00	-20.49	-1.39	0.00	-100.58	0.00	100.58	3151.46	1565.93	4494.48	2250.41	0.46	-0.13	0.00	0.052
36.00	-20.17	-1.38	0.00	-97.80	0.00	97.80	3129.23	1550.00	4389.37	2197.59	0.52	-0.14	0.00	0.052
38.00	-19.86	-1.37	0.00	-95.04	0.00	95.04	3106.64	1533.97	4285.06	2145.06	0.58	-0.15	0.00	0.052
40.00	-19.54	-1.36	0.00	-92.30	0.00	92.30	3083.70	1517.84	4181.55	2092.82	0.65	-0.16	0.00	0.052
42.00	-19.23	-1.35	0.00	-89.59	0.00	89.59	3060.40	1501.61	4078.84	2040.87	0.72	-0.17	0.00	0.051
44.00	-18.93	-1.34	0.00	-86.89	0.00	86.89	3036.74	1485.28	3976.93	1989.11	0.79	-0.18	0.00	0.051
45.13	-18.75	-1.33	0.00	-85.38	0.00	85.38	2869.71	1434.85	3812.78	1909.22	0.83	-0.18	0.00	0.051
46.00	-18.53	-1.32	0.00	-84.23	0.00	84.23	2851.94	1425.97	3765.45	1885.52	0.87	-0.19	0.00	0.051
48.00	-18.04	-1.30	0.00	-81.58	0.00	81.58	2811.10	1405.55	3657.76	1831.60	0.95	-0.20	0.00	0.051
49.88	-17.57	-1.29	0.00	-79.13	0.00	79.13	2333.69	1166.84	3066.96	1535.76	1.03	-0.21	0.00	0.059
50.00	-17.56	-1.29	0.00	-78.97	0.00	78.97	2332.20	1166.10	3062.32	1533.44	1.03	-0.21	0.00	0.059
52.00	-17.30	-1.28	0.00	-76.39	0.00	76.39	2307.18	1153.59	2985.35	1494.89	1.12	-0.22	0.00	0.059
54.00	-17.04	-1.28	0.00	-73.82	0.00	73.82	2281.92	1140.96	2909.02	1456.67	1.22	-0.23	0.00	0.058
56.00	-16.79	-1.28	0.00	-71.26	0.00	71.26	2256.40	1128.20	2833.34	1418.77	1.31	-0.24	0.00	0.058
58.00	-16.53	-1.28	0.00	-68.70	0.00	68.70	2223.07	1111.54	2748.96	1376.53	1.42	-0.25	0.00	0.057
60.00	-16.28	-1.28	0.00	-66.14	0.00	66.14	2189.04	1094.52	2665.01	1334.49	1.52	-0.26	0.00	0.057
62.00	-16.04	-1.28	0.00	-63.57	0.00	63.57	2155.00	1077.50	2582.36	1293.10	1.64	-0.27	0.00	0.057
64.00	-15.80	-1.29	0.00	-61.00	0.00	61.00	2120.97	1060.48	2501.02	1252.37	1.75	-0.28	0.00	0.056
66.00	-15.56	-1.29	0.00	-58.43	0.00	58.43	2086.94	1043.47	2420.97	1212.28	1.87	-0.30	0.00	0.056
68.00	-15.32	-1.29	0.00	-55.85	0.00	55.85	2052.90	1026.45	2342.23	1172.85	2.00	-0.31	0.00	0.055
70.00	-15.08	-1.29	0.00	-53.27	0.00	53.27	2018.87	1009.43	2264.79	1134.08	2.13	-0.32	0.00	0.054
72.00	-14.85	-1.29	0.00	-50.69	0.00	50.69	1984.83	992.42	2188.65	1095.95	2.27	-0.33	0.00	0.054
74.00	-14.62	-1.29	0.00	-48.10	0.00	48.10	1950.80	975.40	2113.81	1058.48	2.41	-0.34	0.00	0.053
75.00	-14.46	-1.30	0.00	-46.81	0.00	46.81	1933.78	966.89	2076.88	1039.98	2.48	-0.35	0.00	0.052
76.00	-14.35	-1.30	0.00	-45.51	0.00	45.51	1916.76	958.38	2040.27	1021.65	2.55	-0.35	0.00	0.052
78.00	-14.13	-1.30	0.00	-42.92	0.00	42.92	1882.73	941.37	1968.04	985.48	2.70	-0.36	0.00	0.051
80.00	-13.91	-1.30	0.00	-40.32	0.00	40.32	1848.70	924.35	1897.11	949.96	2.86	-0.38	0.00	0.050
82.00	-13.69	-1.30	0.00	-37.72	0.00	37.72	1814.66	907.33	1827.48	915.10	3.02	-0.39	0.00	0.049
83.00	-11.65	-1.29	0.00	-36.42	0.00	36.42	1797.65	898.82	1793.15	897.91	3.10	-0.39	0.00	0.047
84.00	-11.55	-1.29	0.00	-35.13	0.00	35.13	1780.63	890.31	1759.15	880.88	3.18	-0.40	0.00	0.046

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 41
	Struct Class: II	



85.00	-11.07	-1.29	0.00	-33.85	0.00	33.85	1763.61	881.81	1725.48	864.02	3.27	-0.40	0.045
86.00	-10.97	-1.29	0.00	-32.56	0.00	32.56	1746.59	873.30	1692.13	847.32	3.35	-0.41	0.045
88.00	-10.77	-1.29	0.00	-29.99	0.00	29.99	1712.56	856.28	1626.40	814.41	3.53	-0.42	0.043
90.00	-10.58	-1.29	0.00	-27.41	0.00	27.41	1678.53	839.26	1561.98	782.15	3.70	-0.43	0.041
91.00	-8.24	-1.27	0.00	-26.13	0.00	26.13	1661.51	830.75	1530.26	766.27	3.80	-0.44	0.039
91.29	-8.21	-1.27	0.00	-25.75	0.00	25.75	1656.52	828.26	1521.01	761.64	3.82	-0.44	0.039
92.00	-8.12	-1.27	0.00	-24.86	0.00	24.86	1644.49	822.25	1498.86	750.54	3.89	-0.44	0.038
94.00	-7.87	-1.27	0.00	-22.32	0.00	22.32	1610.46	805.23	1437.04	719.59	4.07	-0.45	0.036
94.71	-7.78	-1.27	0.00	-21.42	0.00	21.42	1610.46	805.23	1437.04	719.59	4.07	-0.45	0.036
96.00	-7.70	-1.27	0.00	-19.78	0.00	19.78	1610.46	805.23	1437.04	719.59	4.07	-0.45	0.036
96.00	-7.70	-1.27	0.00	-19.78	0.00	19.78	922.07	461.04	828.91	415.07	4.26	-0.46	0.056
98.00	-5.52	-1.15	0.00	-17.25	0.00	17.25	908.49	454.24	799.32	400.25	4.46	-0.47	0.049
100.00	-5.43	-1.15	0.00	-14.95	0.00	14.95	894.64	447.32	770.03	385.59	4.66	-0.49	0.045
102.00	-5.34	-1.14	0.00	-12.65	0.00	12.65	880.55	440.27	741.05	371.08	4.87	-0.50	0.040
104.00	-5.25	-1.14	0.00	-10.36	0.00	10.36	866.20	433.10	712.41	356.74	5.08	-0.51	0.035
106.00	-5.16	-1.13	0.00	-8.09	0.00	8.09	851.60	425.80	684.12	342.57	5.29	-0.52	0.030
107.00	-2.17	-0.67	0.00	-6.96	0.00	6.96	844.21	422.10	670.11	335.55	5.40	-0.52	0.023
108.00	-2.13	-0.66	0.00	-6.30	0.00	6.30	836.75	418.38	656.18	328.58	5.51	-0.52	0.022
110.00	-2.05	-0.65	0.00	-4.98	0.00	4.98	821.65	410.82	628.62	314.78	5.73	-0.53	0.018
112.00	-1.97	-0.63	0.00	-3.68	0.00	3.68	804.60	402.30	600.19	300.54	5.95	-0.53	0.015
114.00	-1.90	-0.61	0.00	-2.42	0.00	2.42	784.18	392.09	569.96	285.40	6.18	-0.54	0.011
116.00	-1.82	-0.60	0.00	-1.19	0.00	1.19	763.76	381.88	540.51	270.66	6.40	-0.54	0.007
118.00	0.00	-0.58	0.00	0.00	0.00	0.00	743.33	371.67	511.84	256.30	6.63	-0.54	0.000

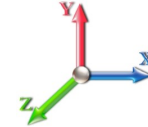
Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	202.45	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	7.442	8.19	200.29	0.650	0.000	2.00	7.280	4.73	38.7	0.0	345.4
4.00		1.00	0.85	7.442	8.19	198.12	0.650	0.000	2.00	7.202	4.68	38.3	0.0	341.7
6.00		1.00	0.85	7.442	8.19	195.96	0.650	0.000	2.00	7.124	4.63	37.9	0.0	337.9
8.00		1.00	0.85	7.442	8.19	193.80	0.650	0.000	2.00	7.046	4.58	37.5	0.0	334.2
10.00		1.00	0.85	7.442	8.19	191.64	0.650	0.000	2.00	6.968	4.53	37.1	0.0	330.5
12.00		1.00	0.85	7.442	8.19	189.48	0.650	0.000	2.00	6.890	4.48	36.7	0.0	326.7
14.00		1.00	0.85	7.442	8.19	187.31	0.650	0.000	2.00	6.811	4.43	36.2	0.0	323.0
16.00		1.00	0.86	7.534	8.29	186.29	0.650	0.000	2.00	6.733	4.38	36.3	0.0	319.2
18.00		1.00	0.88	7.723	8.50	186.41	0.650	0.000	2.00	6.655	4.33	36.7	0.0	315.5
20.00		1.00	0.90	7.896	8.69	186.27	0.650	0.000	2.00	6.577	4.28	37.1	0.0	311.7
22.00		1.00	0.92	8.056	8.86	185.89	0.650	0.000	2.00	6.499	4.22	37.4	0.0	308.0
24.00		1.00	0.94	8.205	9.03	185.34	0.650	0.000	2.00	6.421	4.17	37.7	0.0	304.3
26.00		1.00	0.95	8.345	9.18	184.61	0.650	0.000	2.00	6.342	4.12	37.8	0.0	300.5
28.00		1.00	0.97	8.476	9.32	183.75	0.650	0.000	2.00	6.264	4.07	38.0	0.0	296.8
30.00		1.00	0.98	8.600	9.46	182.77	0.650	0.000	2.00	6.186	4.02	38.0	0.0	293.0
32.00		1.00	1.00	8.717	9.59	181.67	0.650	0.000	2.00	6.108	3.97	38.1	0.0	289.3
34.00		1.00	1.01	8.829	9.71	180.48	0.650	0.000	2.00	6.030	3.92	38.1	0.0	285.6
36.00		1.00	1.02	8.936	9.83	179.20	0.650	0.000	2.00	5.952	3.87	38.0	0.0	281.8
38.00		1.00	1.03	9.039	9.94	177.84	0.650	0.000	2.00	5.873	3.82	38.0	0.0	278.1
40.00		1.00	1.04	9.137	10.05	176.41	0.650	0.000	2.00	5.795	3.77	37.9	0.0	274.3
42.00		1.00	1.05	9.231	10.15	174.91	0.650	0.000	2.00	5.717	3.72	37.7	0.0	270.6
44.00		1.00	1.06	9.322	10.25	173.35	0.650	0.000	2.00	5.639	3.67	37.6	0.0	266.9
45.13 Bot - Section 2		1.00	1.07	9.372	10.31	172.44	0.650	0.000	1.13	3.151	2.05	21.1	0.0	149.1
46.00		1.00	1.07	9.410	10.35	171.73	0.650	0.000	0.87	2.455	1.60	16.5	0.0	211.0
48.00		1.00	1.08	9.494	10.44	170.06	0.650	0.000	2.00	5.588	3.63	37.9	0.0	480.2
49.88 Top - Section 1		1.00	1.09	9.571	10.53	168.44	0.650	0.000	1.88	5.182	3.37	35.5	0.0	445.1
50.00		1.00	1.09	9.576	10.53	171.66	0.650	0.000	0.12	0.328	0.21	2.2	0.0	13.0
52.00		1.00	1.10	9.656	10.62	169.91	0.650	0.000	2.00	5.432	3.53	37.5	0.0	214.5
54.00		1.00	1.11	9.733	10.71	168.11	0.650	0.000	2.00	5.354	3.48	37.3	0.0	211.4
56.00		1.00	1.12	9.807	10.79	166.27	0.650	0.000	2.00	5.276	3.43	37.0	0.0	208.3
58.00		1.00	1.13	9.880	10.87	164.40	0.650	0.000	2.00	5.198	3.38	36.7	0.0	205.2
60.00		1.00	1.14	9.951	10.95	162.49	0.650	0.000	2.00	5.119	3.33	36.4	0.0	202.1
62.00		1.00	1.14	10.020	11.02	160.54	0.650	0.000	2.00	5.041	3.28	36.1	0.0	199.0
64.00		1.00	1.15	10.087	11.10	158.56	0.650	0.000	2.00	4.963	3.23	35.8	0.0	195.8
66.00		1.00	1.16	10.153	11.17	156.55	0.650	0.000	2.00	4.885	3.18	35.5	0.0	192.7
68.00		1.00	1.17	10.217	11.24	154.51	0.650	0.000	2.00	4.807	3.12	35.1	0.0	189.6
70.00		1.00	1.17	10.279	11.31	152.44	0.650	0.000	2.00	4.729	3.07	34.8	0.0	186.5
72.00		1.00	1.18	10.340	11.37	150.34	0.650	0.000	2.00	4.650	3.02	34.4	0.0	183.4
74.00		1.00	1.19	10.400	11.44	148.22	0.650	0.000	2.00	4.572	2.97	34.0	0.0	180.3
75.00 Appurtenance(s)		1.00	1.19	10.430	11.47	147.15	0.650	0.000	1.00	2.257	1.47	16.8	0.0	89.0
76.00		1.00	1.19	10.459	11.50	146.08	0.650	0.000	1.00	2.237	1.45	16.7	0.0	88.2
78.00		1.00	1.20	10.516	11.57	143.91	0.650	0.000	2.00	4.416	2.87	33.2	0.0	174.0
80.00		1.00	1.21	10.572	11.63	141.71	0.650	0.000	2.00	4.338	2.82	32.8	0.0	170.9
82.00		1.00	1.21	10.627	11.69	139.50	0.650	0.000	2.00	4.260	2.77	32.4	0.0	167.8
83.00 Appurtenance(s)		1.00	1.22	10.654	11.72	138.38	0.650	0.000	1.00	2.101	1.37	16.0	0.0	82.7
84.00		1.00	1.22	10.681	11.75	137.26	0.650	0.000	1.00	2.081	1.35	15.9	0.0	81.9

Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



85.00 Appurtenance(s)	1.00	1.22	10.708	11.78	136.14	0.650	0.000	1.00	2.061	1.34	15.8	0.0	81.2
86.00	1.00	1.23	10.734	11.81	135.01	0.650	0.000	1.00	2.042	1.33	15.7	0.0	80.4
88.00	1.00	1.23	10.787	11.87	132.73	0.650	0.000	2.00	4.025	2.62	31.0	0.0	158.4
90.00	1.00	1.24	10.838	11.92	130.44	0.650	0.000	2.00	3.947	2.57	30.6	0.0	155.3
91.00 Appurtenance(s)	1.00	1.24	10.863	11.95	129.28	0.650	0.000	1.00	1.944	1.26	15.1	0.0	76.5
91.29 Bot - Section 3	1.00	1.24	10.870	11.96	128.94	0.650	0.000	0.29	0.567	0.37	4.4	0.0	22.3
92.00	1.00	1.24	10.888	11.98	128.12	0.650	0.000	0.71	1.380	0.90	10.7	0.0	86.2
94.00	1.00	1.25	10.937	12.03	125.79	0.650	0.000	2.00	3.854	2.51	30.1	0.0	240.6
94.71 Top - Section 2	1.00	1.25	10.955	12.05	124.96	0.650	0.000	0.71	1.349	0.88	10.6	0.0	84.2
96.00	1.00	1.25	10.986	12.08	125.58	0.650	0.000	1.29	2.427	1.58	19.1	0.0	57.6
98.00 Appurtenance(s)	1.00	1.26	11.034	12.14	123.22	0.650	0.000	2.00	3.698	2.40	29.2	0.0	87.7
100.00	1.00	1.27	11.081	12.19	120.84	0.650	0.000	2.00	3.620	2.35	28.7	0.0	85.9
102.00	1.00	1.27	11.127	12.24	118.45	0.650	0.000	2.00	3.541	2.30	28.2	0.0	84.0
104.00	1.00	1.28	11.173	12.29	116.04	0.650	0.000	2.00	3.463	2.25	27.7	0.0	82.1
106.00	1.00	1.28	11.218	12.34	113.62	0.650	0.000	2.00	3.385	2.20	27.2	0.0	80.2
107.00 Appurtenance(s)	1.00	1.28	11.240	12.36	112.41	0.650	0.000	1.00	1.663	1.08	13.4	0.0	39.4
108.00	1.00	1.29	11.262	12.39	111.19	0.650	0.000	1.00	1.644	1.07	13.2	0.0	39.0
110.00	1.00	1.29	11.305	12.44	108.74	0.650	0.000	2.00	3.229	2.10	26.1	0.0	76.5
112.00	1.00	1.30	11.348	12.48	106.27	0.650	0.000	2.00	3.151	2.05	25.6	0.0	74.6
114.00	1.00	1.30	11.391	12.53	103.80	0.650	0.000	2.00	3.072	2.00	25.0	0.0	72.8
116.00	1.00	1.31	11.432	12.58	101.31	0.650	0.000	2.00	2.994	1.95	24.5	0.0	70.9
118.00 Appurtenance(s)	1.00	1.31	11.474	12.62	98.81	0.650	0.000	2.00	2.916	1.90	23.9	0.0	69.0
Totals:							118.00		2,010.1		13,161.4		

Discrete Appurtenance Forces

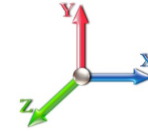
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	Low Profile Platform	1	11.474	12.621	1.00	1.00	28.47	1800.00	0.000	0.000	359.32	0.00	0.00
2	118.00	DB844H90E-XY	9	11.490	12.639	1.12	1.00	30.74	126.00	0.000	0.800	388.57	0.00	310.86
3	118.00	ANT150D	1	11.503	12.653	1.00	1.00	1.00	6.00	0.000	1.420	12.65	0.00	17.97
4	118.00	DB222	1	11.710	12.881	1.00	1.00	2.25	16.00	0.000	12.000	28.98	0.00	347.79
5	107.00	Universal Ring Mount	1	11.240	12.364	1.00	1.00	5.00	350.00	0.000	0.000	61.82	0.00	0.00
6	107.00	Low Profile Platform	1	11.240	12.364	1.00	1.00	27.33	2000.00	0.000	0.000	337.90	0.00	0.00
7	107.00	APXVSP18-C-A20	3	11.240	12.364	0.66	0.80	15.98	171.00	0.000	0.000	197.52	0.00	0.00
8	107.00	APXV9TM14-ALU-120	3	11.262	12.388	0.63	0.80	12.02	168.00	0.000	1.000	148.91	0.00	148.91
9	107.00	1900 MHz 4X45 RRH	3	11.240	12.364	0.54	0.80	4.36	180.00	0.000	0.000	53.88	0.00	0.00
10	107.00	800 MHz RRU Filter	3	11.240	12.364	0.54	0.80	3.86	192.00	0.000	0.000	47.71	0.00	0.00
11	107.00	TD-RRH8x20-25	3	11.240	12.364	0.54	0.80	6.51	210.00	0.000	0.000	80.52	0.00	0.00
12	107.00	ACU-A20-N	4	11.240	12.364	0.54	0.80	0.30	4.00	0.000	0.000	3.71	0.00	0.00
13	98.00	APL199014-42T0	3	11.034	12.137	0.80	0.80	5.02	18.00	0.000	0.000	60.88	0.00	0.00
14	98.00	P65-16-XL-2	3	11.034	12.137	0.57	0.80	13.90	99.00	0.000	0.000	168.76	0.00	0.00
15	98.00	Andrew DB846H80E-SX	4	11.034	12.137	0.90	0.80	17.96	64.00	0.000	0.000	217.93	0.00	0.00
16	98.00	RFS APL868013	2	11.034	12.137	0.92	0.80	5.27	12.60	0.000	0.000	63.93	0.00	0.00
17	98.00	Low Profile Platform	1	11.034	12.137	1.00	1.00	23.10	2100.00	0.000	0.000	280.37	0.00	0.00
18	91.00	DC6-48-60-18-8F	2	10.863	11.949	1.00	1.00	1.84	63.60	0.000	0.000	21.99	0.00	0.00
19	91.00	RRUS-11	3	10.863	11.949	0.54	0.80	7.11	165.00	0.000	0.000	84.93	0.00	0.00
20	91.00	LGP21401	6	10.863	11.949	0.54	0.80	4.15	84.60	0.000	0.000	49.57	0.00	0.00
21	91.00	P65-16-XLH-RR	3	10.863	11.949	0.60	0.80	14.69	159.00	0.000	0.000	175.51	0.00	0.00
22	91.00	7770.00	3	10.863	11.949	0.58	0.80	9.64	105.00	0.000	0.000	115.14	0.00	0.00
23	91.00	RRUS 32 B30	3	10.863	11.949	0.65	0.80	5.33	180.00	0.000	0.000	63.65	0.00	0.00
24	91.00	RRUS 32 B2	3	10.863	11.949	0.65	0.80	5.33	159.00	0.000	0.000	63.65	0.00	0.00
25	91.00	QS66512-2	3	10.863	11.949	0.72	0.80	17.56	231.00	0.000	0.000	209.84	0.00	0.00
26	91.00	Low Profile Platform	1	10.863	11.949	1.00	1.00	17.46	1349.00	0.000	0.000	208.63	0.00	0.00
27	85.00	V-brace kit	1	10.708	11.779	1.00	1.00	12.00	421.10	0.000	0.000	141.35	0.00	0.00
28	83.00	Platform w/ Handrail kit	1	10.654	11.720	1.00	1.00	37.16	1868.20	0.000	0.000	435.51	0.00	0.00
29	83.00	Kathrein 782 11054	3	10.654	11.720	0.54	0.80	0.24	5.40	0.000	0.000	2.83	0.00	0.00
30	83.00	S20057A1	3	10.654	11.720	0.54	0.80	1.32	33.00	0.000	0.000	15.45	0.00	0.00
31	83.00	RFS ATMAA1412D-1A2	3	10.654	11.720	0.54	0.80	1.88	39.00	0.000	0.000	22.05	0.00	0.00
32	83.00	Commscope	3	10.654	11.720	0.64	0.80	22.02	149.40	0.000	0.000	258.10	0.00	0.00
33	83.00	RFS APXV18-209014	3	10.654	11.720	0.59	0.80	6.36	56.10	0.000	0.000	74.52	0.00	0.00
34	75.00	Standoff Mount	1	10.430	11.473	1.00	1.00	2.63	40.00	0.000	0.000	30.17	0.00	0.00
35	75.00	GPS	1	10.430	11.473	1.00	1.00	1.00	10.00	0.000	0.000	11.47	0.00	0.00
Totals:									12,635.00			4,497.72		

Total Applied Force Summary

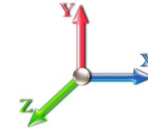
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		38.74	419.54	0.00	0.00
4.00		38.32	415.80	0.00	0.00
6.00		37.91	412.06	0.00	0.00
8.00		37.49	408.31	0.00	0.00
10.00		37.08	404.57	0.00	0.00
12.00		36.66	400.83	0.00	0.00
14.00		36.24	397.09	0.00	0.00
16.00		36.27	393.35	0.00	0.00
18.00		36.75	389.61	0.00	0.00
20.00		37.13	385.87	0.00	0.00
22.00		37.43	382.13	0.00	0.00
24.00		37.67	378.39	0.00	0.00
26.00		37.84	374.64	0.00	0.00
28.00		37.96	370.90	0.00	0.00
30.00		38.04	367.16	0.00	0.00
32.00		38.07	363.42	0.00	0.00
34.00		38.07	359.68	0.00	0.00
36.00		38.03	355.94	0.00	0.00
38.00		37.96	352.20	0.00	0.00
40.00		37.86	348.46	0.00	0.00
42.00		37.73	344.72	0.00	0.00
44.00		37.58	340.97	0.00	0.00
45.13		21.12	191.00	0.00	0.00
46.00		16.52	243.25	0.00	0.00
48.00		37.94	554.28	0.00	0.00
49.88		35.46	514.77	0.00	0.00
50.00		2.25	17.42	0.00	0.00
52.00		37.50	288.67	0.00	0.00
54.00		37.26	285.55	0.00	0.00
56.00		37.00	282.43	0.00	0.00
58.00		36.72	279.32	0.00	0.00
60.00		36.42	276.20	0.00	0.00
62.00		36.12	273.08	0.00	0.00
64.00		35.80	269.96	0.00	0.00
66.00		35.46	266.85	0.00	0.00
68.00		35.11	263.73	0.00	0.00
70.00		34.75	260.61	0.00	0.00
72.00		34.38	257.49	0.00	0.00
74.00		34.00	254.38	0.00	0.00
75.00	(2) attachments	58.47	176.02	0.00	0.00
76.00		16.73	125.08	0.00	0.00
78.00		33.20	247.82	0.00	0.00
80.00		32.79	244.70	0.00	0.00
82.00		32.37	241.59	0.00	0.00
83.00	(16) attachments	824.46	2270.72	0.00	0.00
84.00		15.89	110.92	0.00	0.00

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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85.00	(1) attachments	157.13	531.24	0.00	0.00
86.00		15.67	109.37	0.00	0.00
88.00		31.04	216.39	0.00	0.00
90.00		30.58	213.27	0.00	0.00
91.00	(27) attachments	1008.01	2601.67	0.00	0.00
91.29		4.40	28.45	0.00	0.00
92.00		10.75	101.04	0.00	0.00
94.00		30.14	282.59	0.00	0.00
94.71		10.57	99.12	0.00	0.00
96.00		19.06	84.70	0.00	0.00
98.00	(13) attachments	821.04	2423.37	0.00	0.00
100.00		28.68	102.94	0.00	0.00
102.00		28.18	101.07	0.00	0.00
104.00		27.67	99.20	0.00	0.00
106.00		27.15	97.33	0.00	0.00
107.00	(21) attachments	945.33	3322.96	0.00	148.91
108.00		13.24	45.52	0.00	0.00
110.00		26.10	89.63	0.00	0.00
112.00		25.56	87.76	0.00	0.00
114.00		25.02	85.89	0.00	0.00
116.00		24.48	84.02	0.00	0.00
118.00	(12) attachments	813.45	2030.15	0.00	676.61
Totals:		6,507.81	29,399.14	0.00	825.52

Linear Appurtenance Segment Forces (Factored)

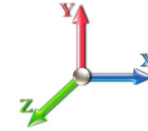
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	7.442	0.00	0.32
4.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	7.442	0.00	0.32
6.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	7.442	0.00	0.32
8.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	7.442	0.00	0.32
10.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.442	0.00	0.32
12.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.442	0.00	0.32
14.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.442	0.00	0.32
16.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.534	0.00	0.32
18.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.723	0.00	0.32
20.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.896	0.00	0.32
22.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	8.056	0.00	0.32
24.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	8.205	0.00	0.32
26.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	8.345	0.00	0.32
28.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	8.476	0.00	0.32
30.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	8.600	0.00	0.32
32.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	8.717	0.00	0.32
34.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	8.829	0.00	0.32
36.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	8.936	0.00	0.32
38.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	9.039	0.00	0.32
40.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	9.137	0.00	0.32
42.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	9.231	0.00	0.32
44.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	9.322	0.00	0.32
45.13	1/2"	Yes	1.13	0.000	0.65	0.06	0.00	0.019	0.000	9.372	0.00	0.18
46.00	1/2"	Yes	0.87	0.000	0.65	0.05	0.00	0.020	0.000	9.410	0.00	0.14
48.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	9.494	0.00	0.32
49.88	1/2"	Yes	1.88	0.000	0.65	0.10	0.00	0.020	0.000	9.571	0.00	0.30
50.00	1/2"	Yes	0.12	0.000	0.65	0.01	0.00	0.020	0.000	9.576	0.00	0.02
52.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	9.656	0.00	0.32
54.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	9.733	0.00	0.32
56.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	9.807	0.00	0.32
58.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	9.880	0.00	0.32
60.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	9.951	0.00	0.32
62.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	10.020	0.00	0.32
64.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	10.087	0.00	0.32
66.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	10.153	0.00	0.32
68.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	10.217	0.00	0.32
70.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	10.279	0.00	0.32
72.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	10.340	0.00	0.32
74.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.024	0.000	10.400	0.00	0.32
75.00	1/2"	Yes	1.00	0.000	0.65	0.05	0.00	0.024	0.000	10.430	0.00	0.16
Totals:											0.0	12.0

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

Dead Load Factor 1.00
Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-29.40	-6.51	0.00	-580.16	0.00	580.16	3634.70	1817.35	6397.77	3203.64	0.00	0.000	0.000	0.189
2.00	-28.97	-6.49	0.00	-567.14	0.00	567.14	3607.15	1803.57	6280.28	3144.81	0.01	-0.028	0.000	0.188
4.00	-28.56	-6.46	0.00	-554.16	0.00	554.16	3579.34	1789.67	6163.42	3086.29	0.02	-0.055	0.000	0.188
6.00	-28.14	-6.44	0.00	-541.23	0.00	541.23	3551.29	1775.64	6047.19	3028.09	0.05	-0.083	0.000	0.187
8.00	-27.73	-6.42	0.00	-528.35	0.00	528.35	3522.98	1761.49	5931.61	2970.21	0.09	-0.112	0.000	0.186
10.00	-27.32	-6.39	0.00	-515.52	0.00	515.52	3494.42	1747.21	5816.69	2912.67	0.15	-0.140	0.000	0.185
12.00	-26.92	-6.37	0.00	-502.74	0.00	502.74	3465.61	1732.80	5702.44	2855.46	0.21	-0.169	0.000	0.184
14.00	-26.52	-6.34	0.00	-490.01	0.00	490.01	3436.54	1718.27	5588.89	2798.60	0.29	-0.198	0.000	0.183
16.00	-26.12	-6.32	0.00	-477.32	0.00	477.32	3407.22	1703.61	5476.05	2742.09	0.38	-0.228	0.000	0.182
18.00	-25.73	-6.29	0.00	-464.68	0.00	464.68	3377.65	1688.83	5363.92	2685.95	0.48	-0.257	0.000	0.181
20.00	-25.34	-6.27	0.00	-452.10	0.00	452.10	3347.83	1673.91	5252.53	2630.17	0.59	-0.287	0.000	0.179
22.00	-24.95	-6.24	0.00	-439.56	0.00	439.56	3317.75	1658.87	5141.89	2574.76	0.72	-0.317	0.000	0.178
24.00	-24.57	-6.21	0.00	-427.08	0.00	427.08	3287.42	1643.71	5032.01	2519.74	0.86	-0.348	0.000	0.177
26.00	-24.19	-6.19	0.00	-414.65	0.00	414.65	3256.84	1628.42	4922.91	2465.11	1.01	-0.378	0.000	0.176
28.00	-23.82	-6.16	0.00	-402.28	0.00	402.28	3219.51	1609.75	4804.91	2406.03	1.18	-0.409	0.000	0.175
30.00	-23.45	-6.13	0.00	-389.96	0.00	389.96	3178.67	1589.33	4683.16	2345.06	1.36	-0.440	0.000	0.174
32.00	-23.08	-6.10	0.00	-377.69	0.00	377.69	3137.83	1568.91	4562.98	2284.88	1.55	-0.471	0.000	0.173
34.00	-22.72	-6.08	0.00	-365.49	0.00	365.49	3096.99	1548.49	4444.36	2225.48	1.75	-0.503	0.000	0.172
36.00	-22.36	-6.05	0.00	-353.34	0.00	353.34	3056.15	1528.07	4327.30	2166.87	1.97	-0.535	0.000	0.170
38.00	-22.01	-6.02	0.00	-341.24	0.00	341.24	3015.30	1507.65	4211.81	2109.03	2.20	-0.566	0.000	0.169
40.00	-21.66	-5.99	0.00	-329.21	0.00	329.21	2974.46	1487.23	4097.87	2051.98	2.45	-0.598	0.000	0.168
42.00	-21.31	-5.96	0.00	-317.23	0.00	317.23	2933.62	1466.81	3985.50	1995.71	2.70	-0.631	0.000	0.166
44.00	-20.97	-5.93	0.00	-305.32	0.00	305.32	2892.78	1446.39	3874.69	1940.23	2.97	-0.663	0.000	0.165
45.13	-20.77	-5.91	0.00	-298.62	0.00	298.62	2869.71	1434.85	3812.78	1909.22	3.13	-0.681	0.000	0.164
46.00	-20.53	-5.90	0.00	-293.48	0.00	293.48	2851.94	1425.97	3765.45	1885.52	3.26	-0.696	0.000	0.163
48.00	-19.97	-5.86	0.00	-281.69	0.00	281.69	2811.10	1405.55	3657.76	1831.60	3.56	-0.728	0.000	0.161
49.88	-19.45	-5.83	0.00	-270.66	0.00	270.66	2333.69	1166.84	3066.96	1535.76	3.85	-0.759	0.000	0.185
50.00	-19.44	-5.83	0.00	-269.96	0.00	269.96	2332.20	1166.10	3062.32	1533.44	3.87	-0.761	0.000	0.184
52.00	-19.14	-5.80	0.00	-258.30	0.00	258.30	2307.18	1153.59	2985.35	1494.89	4.20	-0.797	0.000	0.181
54.00	-18.85	-5.77	0.00	-246.70	0.00	246.70	2281.92	1140.96	2909.02	1456.67	4.54	-0.834	0.000	0.178
56.00	-18.57	-5.74	0.00	-235.15	0.00	235.15	2256.40	1128.20	2833.34	1418.77	4.89	-0.870	0.000	0.174
58.00	-18.29	-5.71	0.00	-223.66	0.00	223.66	2223.07	1111.54	2748.96	1376.53	5.27	-0.906	0.000	0.171
60.00	-18.01	-5.68	0.00	-212.24	0.00	212.24	2189.04	1094.52	2665.01	1334.49	5.65	-0.942	0.000	0.167
62.00	-17.73	-5.65	0.00	-200.87	0.00	200.87	2155.00	1077.50	2582.36	1293.10	6.06	-0.978	0.000	0.164
64.00	-17.46	-5.63	0.00	-189.56	0.00	189.56	2120.97	1060.48	2501.02	1252.37	6.47	-1.013	0.000	0.160
66.00	-17.19	-5.60	0.00	-178.31	0.00	178.31	2086.94	1043.47	2420.97	1212.28	6.91	-1.048	0.000	0.155
68.00	-16.92	-5.57	0.00	-167.12	0.00	167.12	2052.90	1026.45	2342.23	1172.85	7.35	-1.083	0.000	0.151
70.00	-16.66	-5.54	0.00	-155.99	0.00	155.99	2018.87	1009.43	2264.79	1134.08	7.81	-1.117	0.000	0.146
72.00	-16.40	-5.51	0.00	-144.92	0.00	144.92	1984.83	992.42	2188.65	1095.95	8.29	-1.150	0.000	0.141
74.00	-16.14	-5.47	0.00	-133.91	0.00	133.91	1950.80	975.40	2113.81	1058.48	8.78	-1.183	0.000	0.135
75.00	-15.97	-5.42	0.00	-128.43	0.00	128.43	1933.78	966.89	2076.88	1039.98	9.03	-1.199	0.000	0.132
76.00	-15.84	-5.40	0.00	-123.02	0.00	123.02	1916.76	958.38	2040.27	1021.65	9.28	-1.214	0.000	0.129
78.00	-15.59	-5.37	0.00	-112.21	0.00	112.21	1882.73	941.37	1968.04	985.48	9.80	-1.245	0.000	0.122
80.00	-15.34	-5.34	0.00	-101.47	0.00	101.47	1848.70	924.35	1897.11	949.96	10.32	-1.274	0.000	0.115
82.00	-15.10	-5.31	0.00	-90.79	0.00	90.79	1814.66	907.33	1827.48	915.10	10.86	-1.301	0.000	0.108
83.00	-12.85	-4.44	0.00	-85.48	0.00	85.48	1797.65	898.82	1793.15	897.91	11.14	-1.315	0.000	0.102
84.00	-12.74	-4.42	0.00	-81.04	0.00	81.04	1780.63	890.31	1759.15	880.88	11.42	-1.328	0.000	0.099
85.00	-12.21	-4.25	0.00	-76.62	0.00	76.62	1763.61	881.81	1725.48	864.02	11.70	-1.341	0.000	0.096

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00	-12.10	-4.24	0.00	-72.37	0.00	72.37	1746.59	873.30	1692.13	847.32	11.98	-1.353	0.000	0.092
88.00	-11.88	-4.21	0.00	-63.89	0.00	63.89	1712.56	856.28	1626.40	814.41	12.55	-1.376	0.000	0.085
90.00	-11.67	-4.18	0.00	-55.48	0.00	55.48	1678.53	839.26	1561.98	782.15	13.13	-1.398	0.000	0.078
91.00	-9.09	-3.10	0.00	-51.30	0.00	51.30	1661.51	830.75	1530.26	766.27	13.42	-1.408	0.000	0.072
91.29	-9.06	-3.10	0.00	-50.39	0.00	50.39	1656.52	828.26	1521.01	761.64	13.51	-1.411	0.000	0.072
92.00	-8.96	-3.09	0.00	-48.20	0.00	48.20	1644.49	822.25	1498.86	750.54	13.72	-1.418	0.000	0.070
94.00	-8.68	-3.05	0.00	-42.02	0.00	42.02	1610.46	805.23	1437.04	719.59	14.32	-1.436	0.000	0.064
94.71	-8.58	-3.04	0.00	-39.85	0.00	39.85	930.70	465.35	848.15	424.70	14.53	-1.443	0.000	0.103
96.00	-8.50	-3.02	0.00	-35.93	0.00	35.93	922.07	461.04	828.91	415.07	14.92	-1.454	0.000	0.096
98.00	-6.09	-2.14	0.00	-29.88	0.00	29.88	908.49	454.24	799.32	400.25	15.54	-1.477	0.000	0.081
100.00	-5.99	-2.11	0.00	-25.60	0.00	25.60	894.64	447.32	770.03	385.59	16.16	-1.499	0.000	0.073
102.00	-5.89	-2.09	0.00	-21.37	0.00	21.37	880.55	440.27	741.05	371.08	16.79	-1.518	0.000	0.064
104.00	-5.79	-2.06	0.00	-17.20	0.00	17.20	866.20	433.10	712.41	356.74	17.43	-1.535	0.000	0.055
106.00	-5.69	-2.03	0.00	-13.08	0.00	13.08	851.60	425.80	684.12	342.57	18.08	-1.549	0.000	0.045
107.00	-2.40	-0.99	0.00	-10.91	0.00	10.91	844.21	422.10	670.11	335.55	18.41	-1.555	0.000	0.035
108.00	-2.35	-0.98	0.00	-9.91	0.00	9.91	836.75	418.38	656.18	328.58	18.73	-1.561	0.000	0.033
110.00	-2.26	-0.95	0.00	-7.96	0.00	7.96	821.65	410.82	628.62	314.78	19.39	-1.570	0.000	0.028
112.00	-2.18	-0.92	0.00	-6.05	0.00	6.05	804.60	402.30	600.19	300.54	20.05	-1.578	0.000	0.023
114.00	-2.09	-0.90	0.00	-4.21	0.00	4.21	784.18	392.09	569.96	285.40	20.71	-1.585	0.000	0.017
116.00	-2.01	-0.87	0.00	-2.42	0.00	2.42	763.76	381.88	540.51	270.66	21.37	-1.589	0.000	0.012
118.00	0.00	-0.81	0.00	-0.68	0.00	0.68	743.33	371.67	511.84	256.30	22.04	-1.592	0.000	0.003

Final Analysis Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	11/9/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 50
	Struct Class: II	



Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	27.2	0.00	35.25	0.00	0.00	2442.86
0.9D + 1.6W 97 mph Wind	27.2	0.00	26.43	0.00	0.00	2411.42
1.2D + 1.0Di + 1.0Wi 50 mph Wind	7.3	0.00	57.08	0.00	0.00	651.83
1.2D + 1.0E	1.6	0.00	35.28	0.00	0.00	153.27
0.9D + 1.0E	1.6	0.00	26.46	0.00	0.00	151.09
1.0D + 1.0W 60 mph Wind	6.5	0.00	29.40	0.00	0.00	580.16

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-35.25	-27.25	0.00	-2442.8	0.00	-2442.8	3634.70	1817.3	6397.77	3203.64	0.00	0.772
0.9D + 1.6W 97 mph Wind	-26.43	-27.24	0.00	-2411.4	0.00	-2411.4	3634.70	1817.3	6397.77	3203.64	0.00	0.760
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-57.08	-7.26	0.00	-651.83	0.00	-651.83	3634.70	1817.3	6397.77	3203.64	0.00	0.219
1.2D + 1.0E	-23.43	-1.31	0.00	-80.68	0.00	-80.68	2333.69	1166.8	3066.96	1535.76	49.88	0.063
0.9D + 1.0E	-17.57	-1.29	0.00	-79.13	0.00	-79.13	2333.69	1166.8	3066.96	1535.76	49.88	0.059
1.0D + 1.0W 60 mph Wind	-29.40	-6.51	0.00	-580.16	0.00	-580.16	3634.70	1817.3	6397.77	3203.64	0.00	0.189



Monopole Mat Foundation Design

Date

11/9/2017

Customer Name:	AT&T	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	118
Site Number:	CT46132-A-SBA	Engineer Name:	J. Chen
Engr. Number:	42452	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Monopole

Analysis or Design?

Analysis

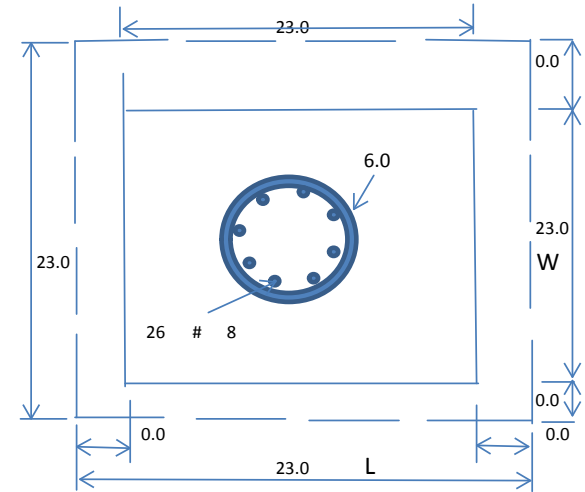
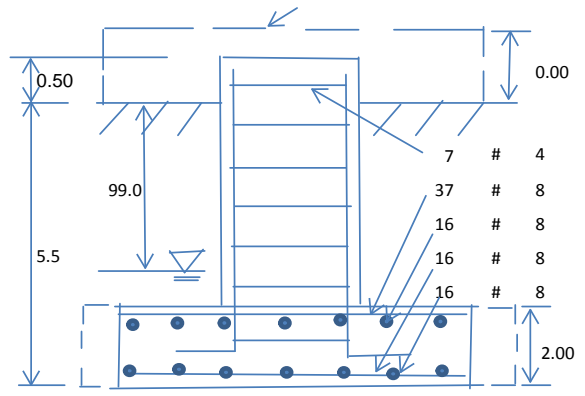
Base Reactions (Factored):

Axial Load (Kips):	57.1	Shear Force (Kips):	27.2
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2442.9

Allowable overstress %: 5.0%

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	6.0	Depth of Base BG (ft.):	5.5
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	2.00
Length of Pad (ft.):	23	Width of Pad (ft.):	23
Final Length of pad (ft)	23.0	Final width of pad (ft):	23.0
Control Value for Cell D18:	0	Control Value for Cell F18:	0



Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	26	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	4	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	37	Qty. of Rebar in Pad (W):	37	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	16	Qty. of Rebar in Pad (W):	16	

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

Soil Unit Weight (pcf):	155.0	Soil Buoyant Weight:	50.0	Pcf
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	20000	Ultimate Skin Friction:	0	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hori. force for O.T.M.:	No	Reduction factor on the maximum soil bearing pressure:	1.00	
		Angle from Top of Pad:	30	
		Angle from Bottm of Pad:	25	
		Angle from Bottm of Pad:	25	

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	1752.54	Total Dry Soil Weight (Kips):	271.64
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	271.64	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1171.10	Total Dry Concrete Weight (Kips):	175.66
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	175.66	Total Vertical Load on Base (Kips):	504.41

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	2250	<	Allowable Factored Soil Bearing (psf):	15000	0.15	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5286.3	>	Design Factored Momont (kips-ft):	2606	0.49	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	2.03					OK!

Load/
Capacity
Ratio

Check the capacities of Reinforcing Concrete:

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

Load/
Capacity
Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	0.79	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	2994.3	> Design Factored Moment (Mu, Kips-Ft)	2551.7	0.85	OK!
Calculated Shear Capacity (Kips):	501.5	> Design Factored Shear (Kips):	27.2	0.05	OK!
Calculated Tension Capacity (Tn, Kips):	1109.2	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7162.1	> Design Factored Axial Load (Pu Kips):	57.1	0.01	OK!
Moment & Axial Strength Combination:	0.85	OK! Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.005	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	510.6	> One-Way Factored Shear (L-D. Kips):	188.9	0.37	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	510.6	> One-Way Factored Shear (W-D., Kips)	188.9	0.37	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	588.9	> One-Way Factored Shear (C-C, Kips):	268.0	0.46	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0054	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0054		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	2442.0	> Moment at Bottom (L-Direct. K-Ft):	649.5	0.27	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	2442.0	> Moment at Bottom (W-Direct. K-Ft):	649.5	0.27	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	3414.2	> Moment at Bottom (C-C Dir. K-Ft):	918.5	0.27	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0023	OK! Upper Steel Reinf. Ratio (W-Direct.):	0.0023		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	1086.2	> Moment at the top (L-Dir Kips-Ft):	105.0	0.10	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	1086.2	> Moment at the top (W-Dir Kips-Ft):	105.0	0.10	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	1528.7	> Moment at the top (C-C Direc. K-Ft):	323.0	0.21	OK!

PROJECT INFORMATION

SCOPE OF WORK: ITEMS TO BE MOUNTED ON THE EXISTING TOWER:

- INSTALL (1) NEW AT&T (QS66512-2) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- NEW AT&T RRUS: RRUS-32 B2 (PCS) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- NEW AT&T RRUS: RRUS-32 (WCS) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- NEW JUMPER CABLES: COAX JUMPER (4) PER SECTOR FROM EACH RRU (TOTAL OF 12)
- NEW FIBER JUMPERS: FIBER JUMPERS (2) FROM THE SQUID TO EACH RRU (TOTAL OF 6)
- INSTALL (1) DC6-48-60-18-8C SURGE ARRESTOR WITH (2) DC POWER, (1) FIBER, & (1) ALARM CABLE.

ITEMS TO BE INSTALLED AT EQUIPMENT LEVEL:

- INSTALL (1) FIBER MANAGEMENT BOX & (1) OUTDOOR RATED DC6 ON EXISTING ICE BRIDGE POST.
- SWAP DUS FOR 5216 AND ADD (1) XMU IN EXISTING PURCELL CABINET.
- INSTALL (6) 30AMP BREAKERS TO EXISTING POWER PLANT.

ITEMS TO REMAIN:

- (6) ANTENNAS, (3) RRU'S, (6) TMA, (1) SURGE ARRESTOR, (12) COAX (2) DC POWER CABLES, & (1) FIBER RUN.

SQUID ALARMING (NOT TO BE DAISY CHAINED):

- THE 1ST SQUID INSTALLED WILL BE ALARMED TO THE LOWEST BAND (OR FIRST INSTALLED RRH/RRU ON THE ALPHA SECTOR, IN THE EVENT THE ALARM CABLE CANNOT BE CONNECTED TO ALPHA IT WILL BE ACCEPTABLE TO ALARM TO THE CLOSEST PHYSICAL SECTOR ON AN EXCEPTION BASIS.
- 2ND SQUID INSTALLED WILL BE ALARMED TO THE LOWEST BAND (OR FIRST INSTALLED) RRH/RRU ON THE BETA SECTOR.

SITE ADDRESS: 8 FERRIS ROAD
NEWTOWN, CT 06471

LATITUDE: 41.389791° N 41° 23' 23.25" N
LONGITUDE: 73.337900° W 73° 20' 16.44" W
TYPE OF SITE: MONOPOLE, OUTDOOR EQUIPMENT
TOWER HEIGHT: 118'± A.G.L.
RAD CENTER: 88'± A.G.L.
CURRENT USE: TELECOMMUNICATIONS FACILITY
PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CT5511

SITE NAME: NEWTOWN WEST CENTRAL

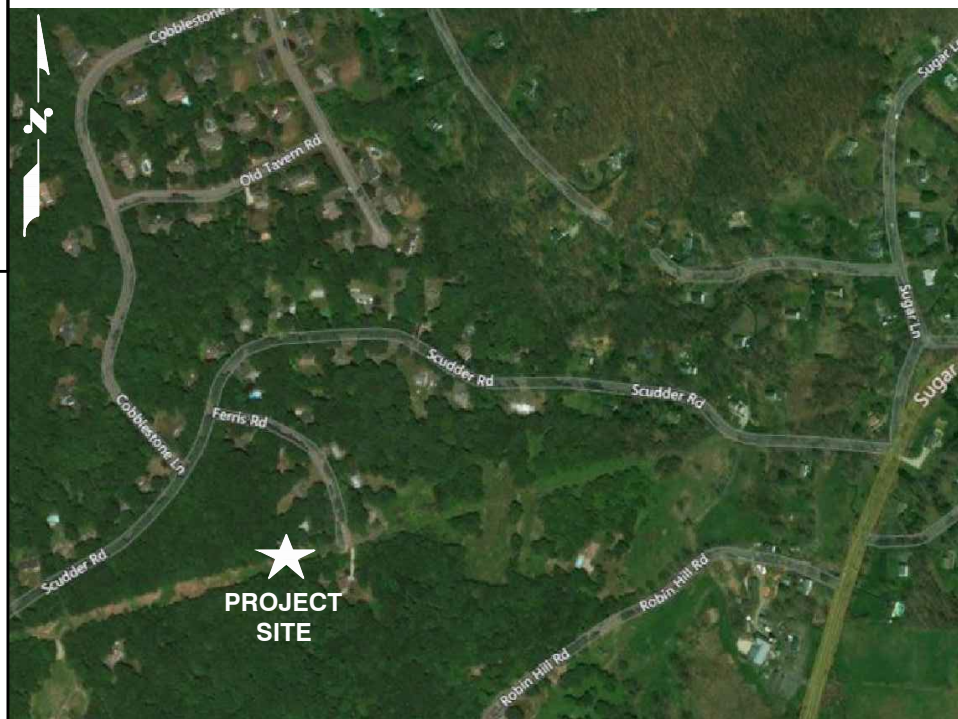
PROJECT: LTE 2C/3C 2018 UPGRADE

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND & EQUIPMENT PLANS	1
A-2	ANTENNA LAYOUTS & ELEVATION	1
A-3	DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1
G-1	GROUNDING DETAILS	1

VICINITY MAP

DIRECTIONS TO SITE:
DEPART ENTERPRISE DR TOWARD CAPITOL BLVD. 0.4 MI. TURN LEFT ONTO CAPITOL BLVD. 0.3 MI. TURN LEFT ONTO WEST ST. 0.3 MI. TAKE RAMP LEFT FOR I-91 S. 9.1 MI. AT EXIT 18, TAKE RAMP RIGHT FOR I-691 WEST TOWARD MERIDEN/WATERBURY. 8.0 MI. AT EXIT 1, TAKE RAMP LEFT FOR I-84 WEST TOWARD DANBURY/WATERBURY. 25.6 MI. AT EXIT 10, TAKE RAMP RIGHT FOR US-6 WEST TOWARD NEWTOWN/SANDY HOOK. 0.5 MI. TURN RIGHT ONTO US-6/CHURCH HILL RD. 1.1 MI. TURN LEFT ONTO CT-25 / MAIN ST. 0.4 MI. TURN RIGHT ONTO CT-302/SUGAR ST. 1.8 MI. TURN RIGHT ONTO SCUDDER RD. 0.6 MI. TURN LEFT ONTO FERRIS RD. 0.2 MI. ARRIVE AT ENTRANCE TO SITE ON THE RIGHT.



SBA SITE ID#: CT46132

GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. 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 AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OR RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

UNDERGROUND SERVICE ALERT



**WWW.DIGSAFE.COM
72 HOURS PRIOR**

HGD HUDSON Design Group LLC
45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845
TEL: (978) 557-5553 FAX: (978) 336-5586

CENTERLINE COMMUNICATIONS
95 RYAN DRIVE RAYNHAM, MA 02767

**SITE NUMBER: CT5511
SITE NAME: NEWTOWN WEST CENTRAL
SBA SITE ID#: CT46132**
8 FERRIS ROAD
NEWTOWN, CT 06471
FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/28/18	ISSUED FOR CONSTRUCTION	MR	SG	DKC
0	12/12/17	ISSUED FOR REVIEW	SG	SG	DKC
A	11/08/17	ISSUED FOR REVIEW	EB	SG	DKC

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: EB

Professional Engineer Seal: DEREK J. CREASER, No. 28233, State of Connecticut, License No. 28233

AT&T		
TITLE SHEET (LTE 2C/3C)		
SITE NUMBER	DRAWING NUMBER	REV
CT5511	T-1	1

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR – CENTERLINE
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER – AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH LTE SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:
 SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
 BUILDING CODE: IBC 2012 WITH 2016 CT BUILDING CODE AMENDMENTS
 ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
 LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS

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

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

 AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
 MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

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

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

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

ABBREVIATIONS

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

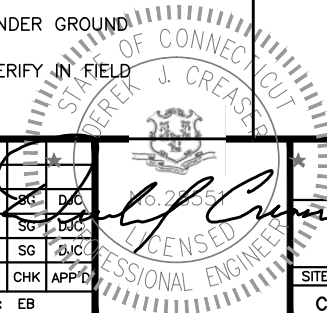
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

95 RYAN DRIVE
RAYNHAM, MA 02767

SITE NUMBER: CT5511
SITE NAME: NEWTOWN WEST CENTRAL
SBA SITE ID#: CT46132
 8 FERRIS ROAD
 NEWTOWN, CT 06471
 FAIRFIELD COUNTY

500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

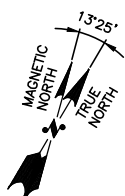
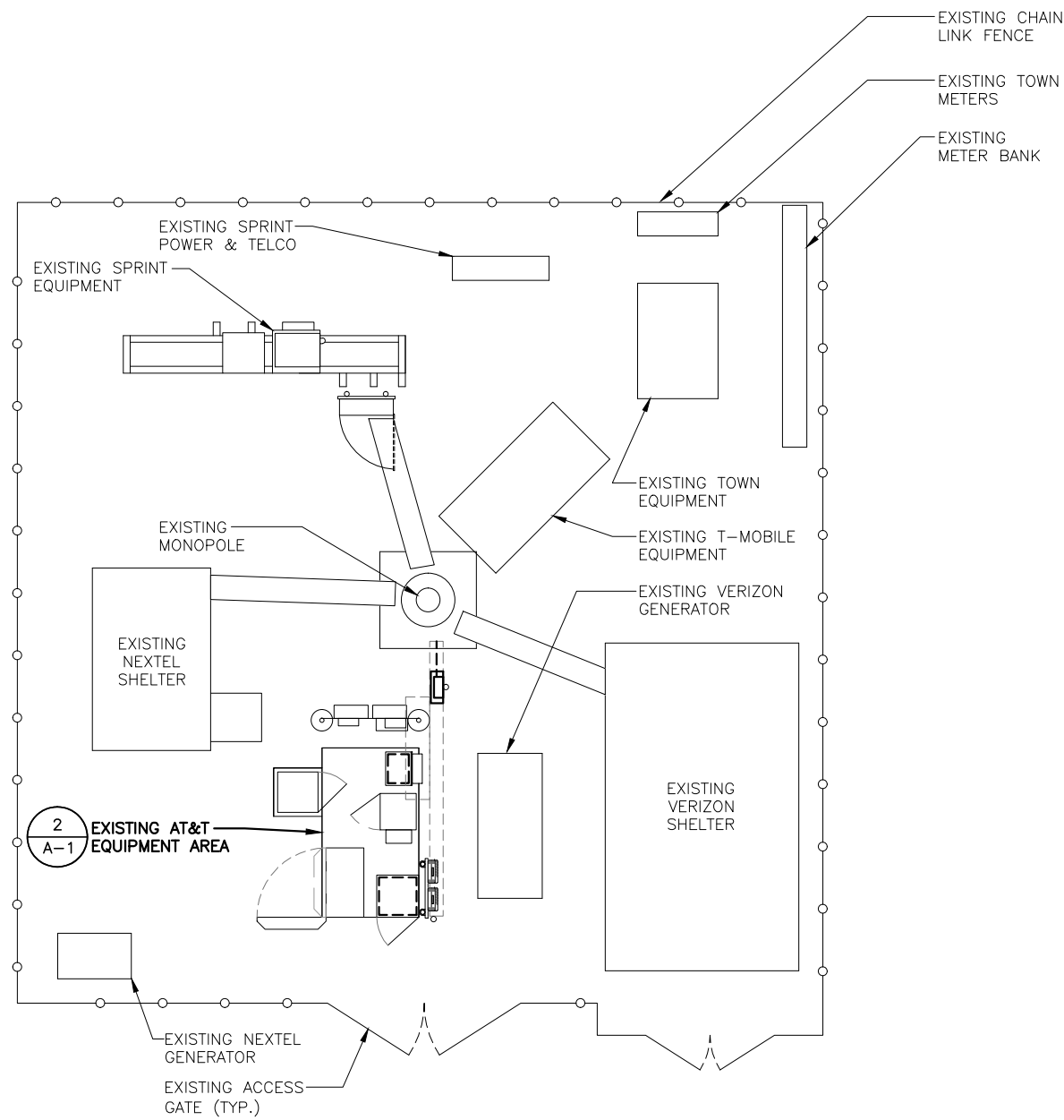
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0	12/12/17	ISSUED FOR REVIEW	SG	SG	CHK
A	11/08/17	ISSUED FOR REVIEW	EB	SG	CHK
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: EB		



AT&T		
GENERAL NOTES (LTE 2C/3C)		
SITE NUMBER	DRAWING NUMBER	REV
CT5511	GN-1	1

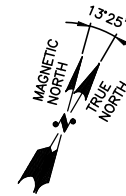
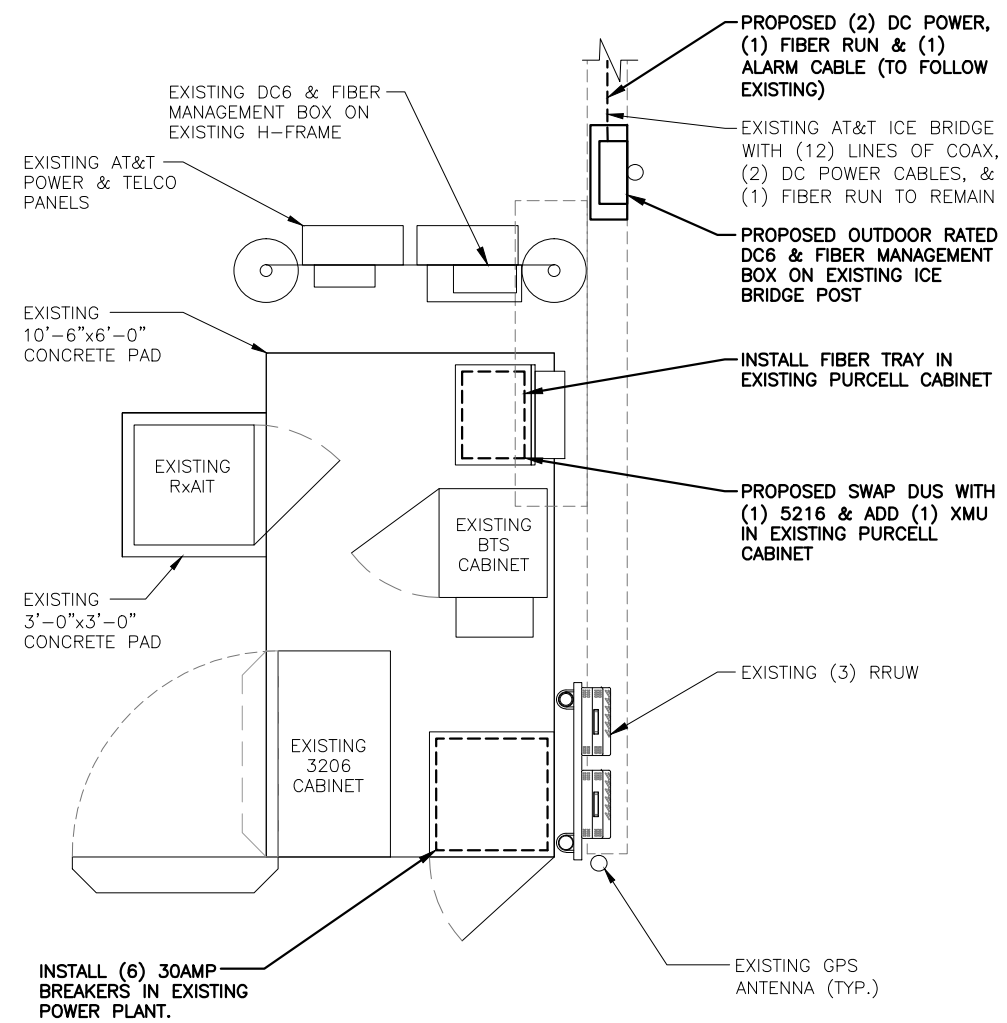
NOTE:
 AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: JANUARY 12, 2018

NOTE:
 REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



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

1
A-1



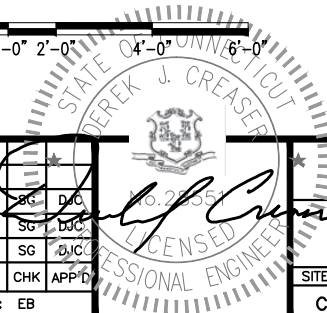
EQUIPMENT PLAN
 22x34 SCALE: 1/2"=1'-0"
 11x17 SCALE: 1/4"=1'-0"

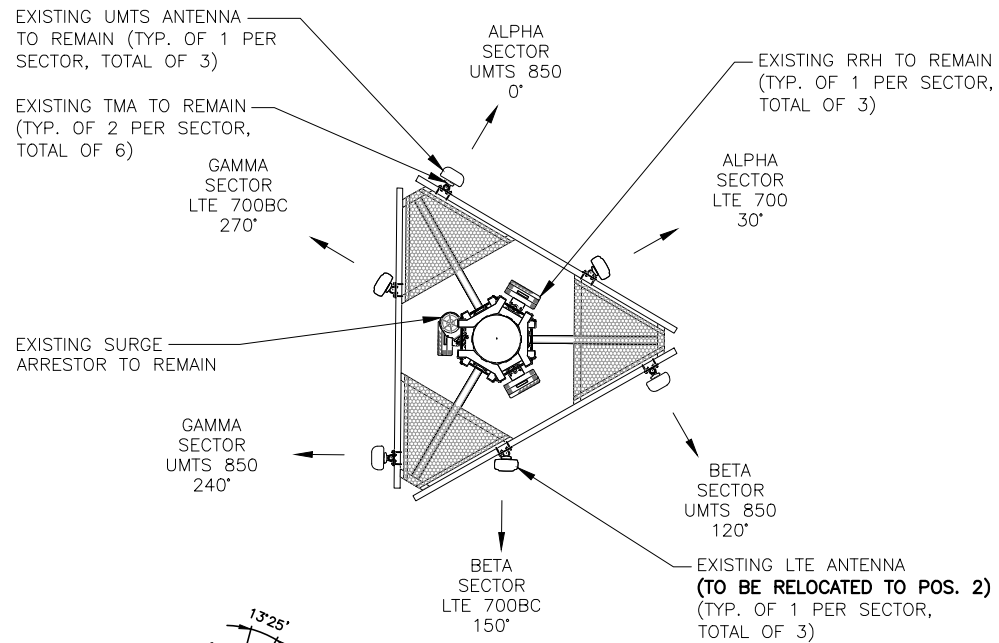
2
A-1



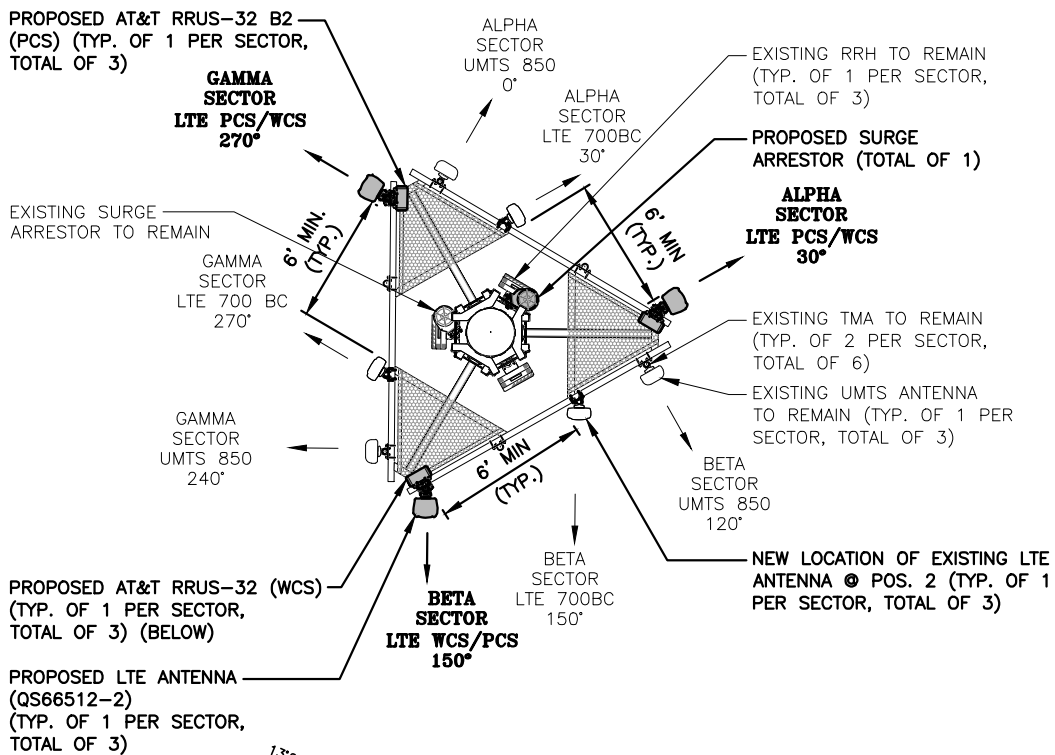
POWER PANEL NOTE:
 INSTALL (6) 30AMP BREAKERS TO EXISTING POWER PLANT.

1	02/28/18	ISSUED FOR CONSTRUCTION	MR	SG	DAC
0	12/12/17	ISSUED FOR REVIEW	SG	SG	BJC
A	11/08/17	ISSUED FOR REVIEW	EB	SG	BJC
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: EB		





EXISTING ANTENNA LAYOUT 1
SCALE: N.T.S. A-2



PROPOSED ANTENNA LAYOUT 2
SCALE: N.T.S. A-2

TOP OF EXISTING MONOPOLE
118'-0"± AGL

CENTER OF EXISTING & PROPOSED AT&T ANTENNAS
88'-0"± (AGL)

PROPOSED LTE ANTENNA (QS66512-2)
(TYP. OF 1 PER SECTOR, TOTAL OF 3)

CENTER OF EXISTING & PROPOSED AT&T ANTENNAS
88'-0"± (AGL)

PROPOSED AT&T RRUS-32 B2 (PCS)
(TYP. OF 1 PER SECTOR, TOTAL OF 3)

PROPOSED AT&T RRUS-32 (WCS)
(TYP. OF 1 PER SECTOR, TOTAL OF 3)

PROPOSED SURGE ARRESTOR (TOTAL OF 1)

EXISTING RRH TO REMAIN (TYP. OF 1 PER SECTOR, TOTAL OF 3)

NEW LOCATION OF EXISTING LTE ANTENNA @ POS. 2 (TYP. OF 1 PER SECTOR, TOTAL OF 3)

EXISTING UMTS ANTENNA TO REMAIN (TYP. OF 1 PER SECTOR, TOTAL OF 3)

EXISTING ANTENNA (BY OTHERS) (TYP.)

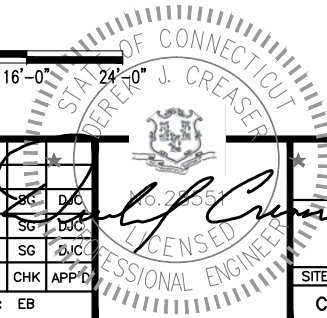
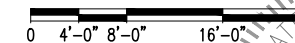
PROPOSED (2) DC POWER, (1) FIBER RUN & (1) ALARM CABLE (TO FOLLOW EXISTING)

EXISTING AT&T ICE BRIDGE WITH (12) 7/8" COAX, (2) DC POWER CABLES, & (1) FIBER RUN TO REMAIN

NOTE:
EXISTING GROUND EQUIPMENT NOT SHOWN FOR CLARITY.

GROUND LEVEL
ELEV. 0'-0"± (AGL)

ELEVATION 3
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0" A-2



NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: JANUARY 12, 2018

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

HGD HUDSON Design Group LLC
45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845
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CENTERLINE COMMUNICATIONS
95 RYAN DRIVE RAYNHAM, MA 02767

SITE NUMBER: CT5511
SITE NAME: NEWTOWN WEST CENTRAL
SBA SITE ID#: CT46132
8 FERRIS ROAD NEWTOWN, CT 06471
FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/28/18	ISSUED FOR CONSTRUCTION	MR	SG	DAC
0	12/12/17	ISSUED FOR REVIEW	SG	SG	DAC
A	11/08/17	ISSUED FOR REVIEW	EB	SG	DAC

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: EB

AT&T
ANTENNA LAYOUTS & ELEVATION (LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT5511	A-2	1

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: JANUARY 12, 2018

NOTE:

REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

***COAX JUMPER NOTE:**

COAX JUMPERS (4) PER SECTOR, SECTOR FROM EACH RRU (TOTAL OF 12).

****FIBER JUMPER NOTE:**

FIBER JUMPERS (2) PER SECTOR FROM THE SQUID TO EACH RRU (TOTAL OF 6).

FINAL ANTENNA SCHEDULE														
SECTOR	BAND	ANTENNA	SIZE (INCHES) (L X W X D)	RAD CENTER	AZIMUTH	COMBINERS		TMA'S	RRU'S	SIZE (INCHES) (L X W X D)	COAX JUMPERS	FIBER JUMPERS	COAX	
ALPHA	UMTS 850	EXISTING	7770	55.0x11.0x5.0	88'-0"±	0'	-	-	EXISTING	(2)LGP21401	-	-	(2) 1-5/8"	
	LTE 700 BC	EXISTING	P65-16-XLH-RR	72.0x12.0x6.0	88'-0"±	30'	-	-	-	-	EXISTING	RRUS-11 (700)	-	
	-	-	-	-	-	-	-	-	-	-	-	-	-	
BETA	UMTS 850	EXISTING	7770	55.0x11.0x5.0	88'-0"±	120'	-	-	EXISTING	(2)LGP21401	-	-	(2) 1-5/8"	
	LTE 700 BC	EXISTING	P65-16-XLH-RR	72.0x12.0x6.0	88'-0"±	150'	-	-	-	-	EXISTING	RRUS-11 (700)	-	
	-	-	-	-	-	-	-	-	-	-	-	-	-	
GAMMA	UMTS 850	EXISTING	7770	55.0x11.0x5.0	88'-0"±	240'	-	-	EXISTING	(2)LGP21401	-	-	(2) 1-5/8"	
	LTE 700 BC	EXISTING	P65-16-XLH-RR	72.0x12.0x6.0	88'-0"±	270'	-	-	-	-	EXISTING	RRUS-11 (700)	-	
	-	-	-	-	-	-	-	-	-	-	-	-	-	
GAMMA	LTE PC/WCS	PROPOSED	Q66512-2	72.0x12.0x9.6	88'-0"±	270'	-	-	PROPOSED	PROPOSED	RRUS-32 (WCS) RRUS-32-B2 (PCS)	27.2X12.1X7.0 27.2X12.1X7.0	2* 2*	1** 1**

FINAL ANTENNA CONFIGURATION TABLE

4
A-3

PROPOSED 2.5" STD (2.88" O.D.)
PIPE MAST (7' LONG) (TYP.)

PROPOSED AT&T RRUS-32 B2
(PCS) (TYP. OF 1 PER SECTOR,
TOTAL OF 3)

PROPOSED
CROSSOVER PIPE
MOUNT SITEPRO1
MODEL# SP219H OR
APPROVED EQUAL
(TYP. OF 1 PER
SECTOR, TOTAL OF 3)

EXISTING PLATFORM

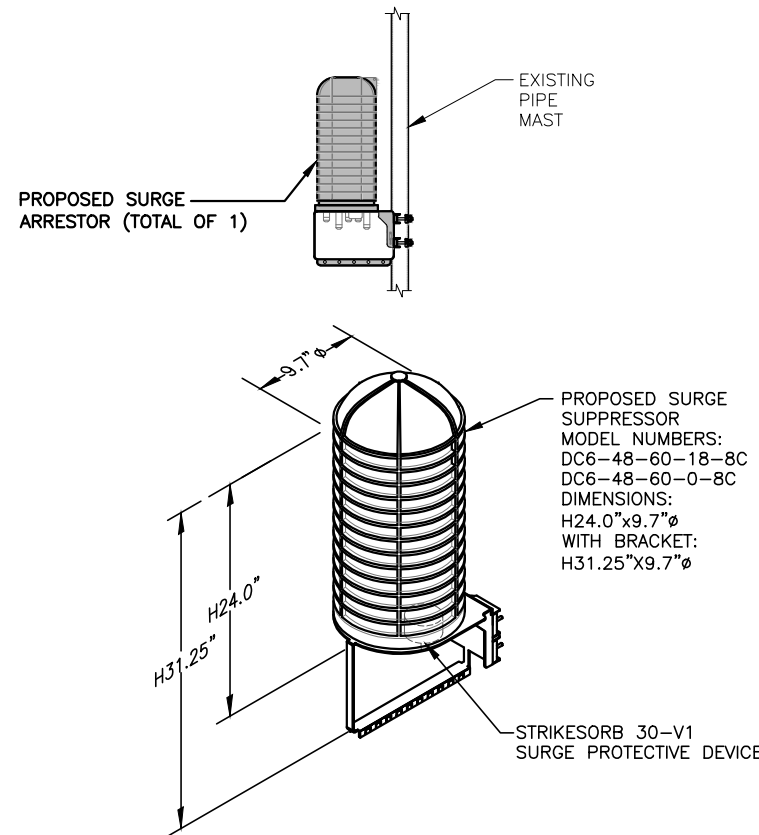
PROPOSED AT&T RRUS-32 (WCS)
(TYP. OF 1 PER SECTOR,
TOTAL OF 3) (BELOW)

PROPOSED LTE ANTENNA
(QS66512-2)
(TYP. OF 1 PER SECTOR,
TOTAL OF 3)

**PROPOSED ANTENNA AND
RRH MOUNTING DETAIL**

SCALE: N.T.S

1
A-3



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL

SCALE: N.T.S

2
A-3

RRH CHART				
QUANTITY	MODEL	L	W	D
3(E)	RRUS-11	19.7"	17.0"	7.2"
6(P)	RRUS-32	27.2"	12.1"	7.0"

NOTE:
MOUNT PER MANUFACTURER'S
SPECIFICATIONS

NOTE:
SEE RFDS FOR RRH
FREQUENCY AND
MODEL NUMBER

PROPOSED RRH REFER TO THE
FINAL RFDS AND CHART FOR
QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRH DETAIL

SCALE: N.T.S

3
A-3



45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586



95 RYAN DRIVE
RAYNHAM, MA 02767

SITE NUMBER: CT5511
SITE NAME: NEWTOWN WEST CENTRAL
SBA SITE ID#: CT46132

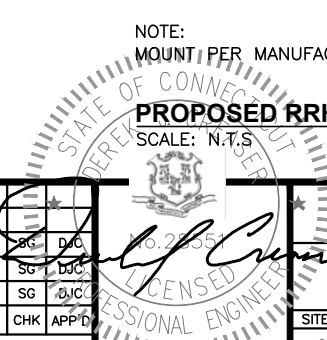
8 FERRIS ROAD
NEWTOWN, CT 06471
FAIRFIELD COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/28/18	ISSUED FOR CONSTRUCTION	MR	SG	DC
0	12/12/17	ISSUED FOR REVIEW	SG	SG	DC
A	11/08/17	ISSUED FOR REVIEW	EB	SG	DC

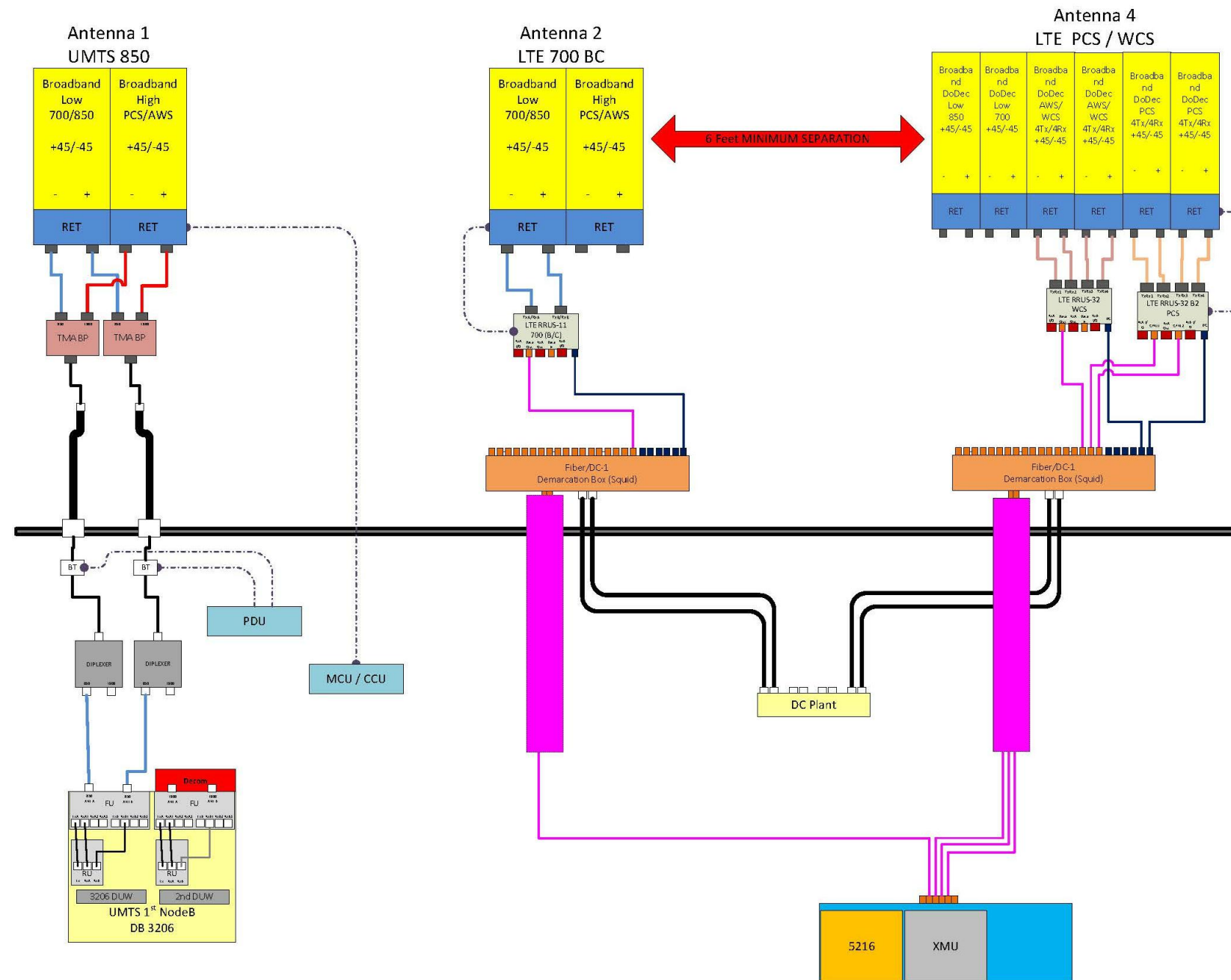
SCALE: AS SHOWN
DESIGNED BY: AT
DRAWN BY: EB



AT&T

DETAILS
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT5511	A-3	1



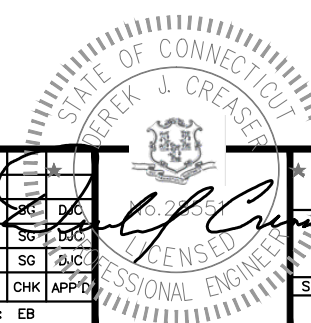
RF PLUMBING DIAGRAM 1
SCALE: N.T.S

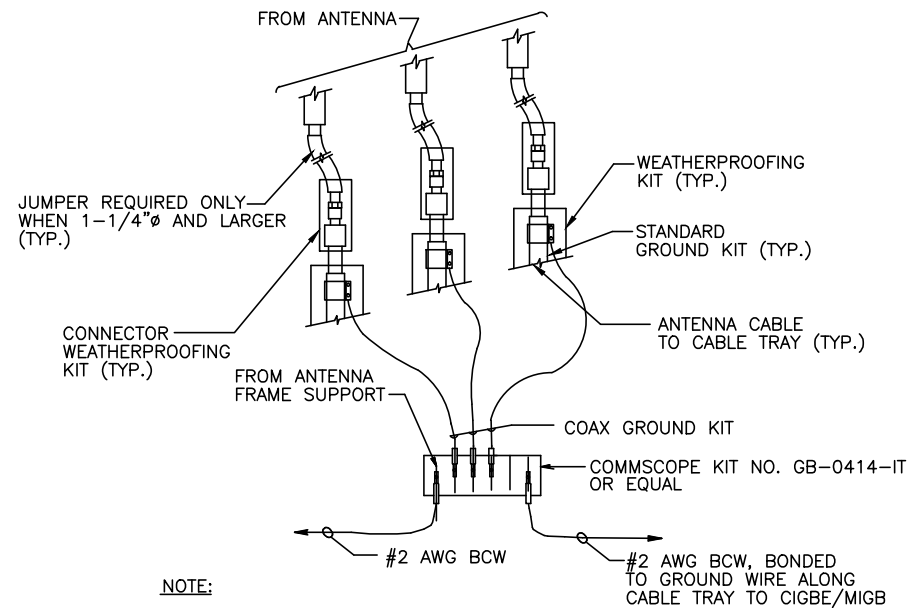
NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/28/18	ISSUED FOR CONSTRUCTION	MR	SG	DAC
0	12/12/17	ISSUED FOR REVIEW	SG	SG	DAC
A	11/08/17	ISSUED FOR REVIEW	EB	SG	DAC

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: EB

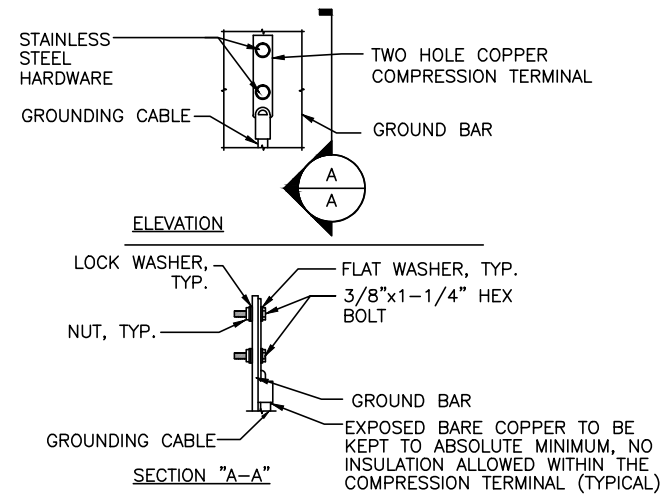




NOTE:
 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

GROUND WIRE TO GROUND BAR CONNECTION DETAIL

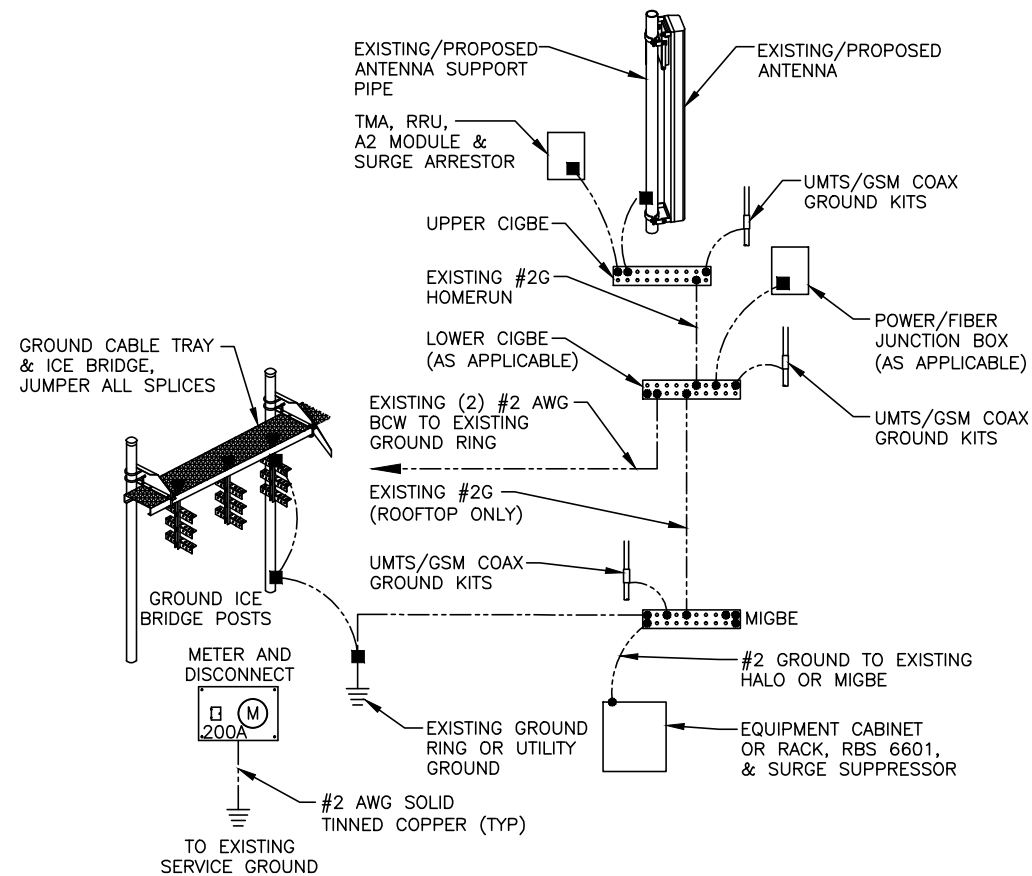
SCALE: N.T.S



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

TYPICAL GROUND BAR CONNECTION DETAIL

SCALE: N.T.S



GROUNDING RISER DIAGRAM

SCALE: N.T.S



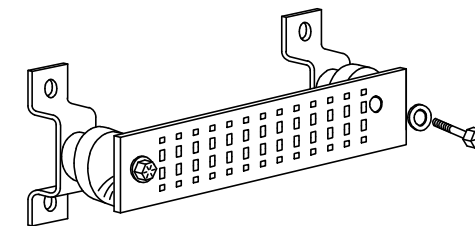
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

- CABLE ENTRY PORTS (HATCH PLATES) (#2)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
- +24V POWER SUPPLY RETURN BAR (#2)
- 48V POWER SUPPLY RETURN BAR (#2)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING (#2)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
- BUILDING STEEL (IF AVAILABLE) (#2)

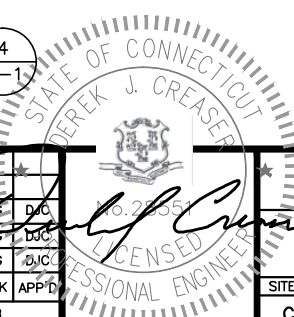


GROUND BAR - DETAIL

SCALE: N.T.S



NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/28/18	ISSUED FOR CONSTRUCTION	MR	SG	DAC
0	12/12/17	ISSUED FOR REVIEW	SG	SG	DJC
A	11/08/17	ISSUED FOR REVIEW	EB	SG	DJC
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: EB		



AT&T		
GROUNDING DETAILS (LTE 2C/3C)		
SITE NUMBER	DRAWING NUMBER	REV
CT5511	G-1	1