

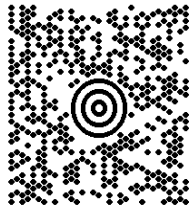
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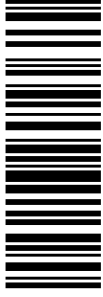
MARY CAULFIELD
978-994-0252
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
WEST BRIDGEWATER MA 02379

SHIP TO:

CONNECTICUT SITING COUNCIL
860-827-2935
TEN FRANKLIN SQUARE
NEW BRITAIN CT 06051-2655

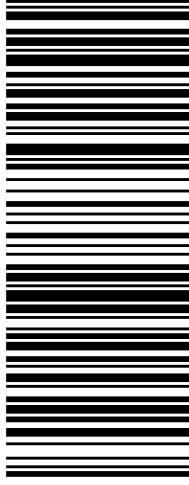


CT 067 9-06



UPS GROUND

TRACKING #: 1Z 9Y4 503 03 3596 1624



BILLING: P/P

Reference#1: CT5266; CSC filings resent to CSC

UIS 20.5.12. WNTNVS0 03.04.07/2018



TM

1 OF 1

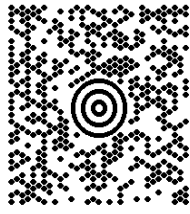
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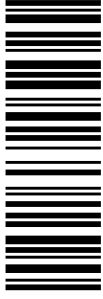
SHIP TO:

KENNETH KELLOG, 1ST SELECTMAN
TOWN OF MONROE
TOWN HALL
7 FAN HILL ROAD

MONROE CT 06468-1847

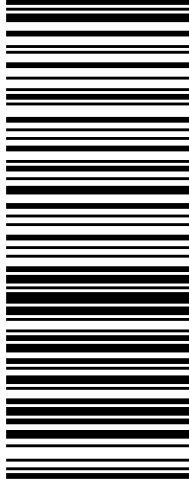


CT 068 0-02



UPS GROUND

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BILLING: P/P

Reference#1: CT5266; CSC refilled w/ 1st Selectm

UPS 20.5.12. WNTNVS0 03.0A.07/2018



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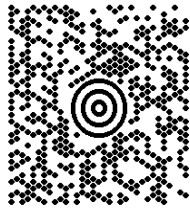
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MARY CAULFIELD
978-994-0252
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
WEST BRIDGEWATER MA 02379

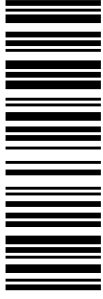
SHIP TO:

WILLIAM AGRESTA, PLANNING & ZONING
TOWN OF MONROE
TOWN HALL ANNEX
7 FAN HILL ROAD

MONROE CT 06468-1847

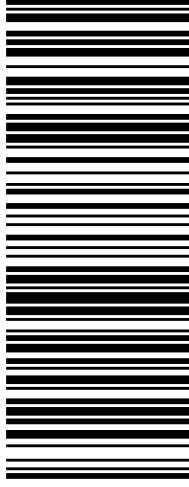


CT 068 0-02



UPS GROUND

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BILLING: P/P

Reference#1: CTS266; CSC refilled w/ Planning

UPS 20.5.12. WNTNVS0 03.0A.07/2018



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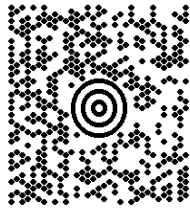
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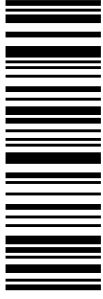
MARY CAULFIELD
978-994-0252
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
WEST BRIDGEWATER MA 02379

SHIP TO:

CARLA SHORTER
SBA COMMUNICATIONS CORPORATION
8051 CONGRESS AVENUE
BOCA RATON FL 33487-1307

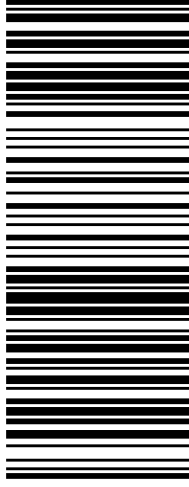


FL 332 6-07



UPS GROUND

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BILLING: P/P

Reference#1: CTS266; CSC refilled w/ SBA

UPS 20.5.12. WNTNVS0 03.0A.07/2018



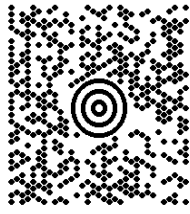
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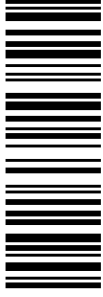
MARY CAULFIELD
978-994-0252
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
WEST BRIDGEWATER MA 02379

SHIP TO:

JIM M. KIMBALL
STONE CASTLE INVESTMENTS LLC
1428 MONROE TPKE
MONROE CT 06468-1478

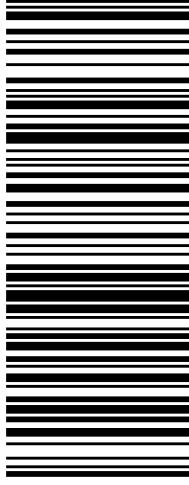


CT 068 0-02



UPS GROUND

TRACKING #: 1Z 9Y4 503 03 2982 2063



BILLING: P/P

Reference#1: CTS266; CSC refilled w/ Property



UPS 20.5.12. WNTNVS0 03.0A.07/2018

Mary Caulfield, Site Acquisition Consultant
c/o New Cingular Wireless, PCS LLC (AT&T)
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
Mobile: (978) 994-0252
MCaulfield@centerlinecommunications.com

August 2, 2018

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

**RE: Notice of Exempt Modification // Site Number: CT5266 (Name: Monroe Turnpike)
1428 Monroe Turnpike, Monroe, CT 06468
N 41.3763888888889 // W -73.1863888888889**

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (“AT&T”) currently maintains 9 total antennas at the 160-foot mount on the existing 160-foot monopole tower, located at 1428 Monroe Turnpike, Monroe, CT. The tower is owned by SBA Infrastructure, LLC. The property is owned by Jim M. Kimball/Stone Castle Investments LLC. AT&T now intends to replace three (3) of its existing antennas with three (3) new LTE (1900/2300 band) antennas for its LTE upgrade. AT&T also intends to install six (6) new remote radios and one (1) surge arrestor; and certain in-cabinet upgrades at the base.

The current proposal involves an antenna swap only (three for three); no antennas will be added.

Note that this facility was originally approved by the Connecticut Siting Council on February 14, 2002, Docket No. 210.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Kenneth Kellogg, First Selectman for the Town of Monroe, William Agresta, AICP, Director of Planning and Zoning for the Town of Monroe, as well as the tower owner, SBA Infrastructure, LLC, and the ground owner, Jim M. Kimball/Stone Castle Investments LLC.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

Attached to accommodate this filing are construction drawings dated June 15, 2018 by Infinigy, a structural analysis dated July 25, 2018 by Tower Engineering Solutions, a mount analysis dated June 7, 2018 by Infinigy, and an Emissions Analysis Report dated March 26, 2018 by Centerline Communications, LLC.

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause an ineligible change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading, pursuant to the structural analysis by Tower Engineering Solutions, dated July 25, 2018.

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

Sincerely,

Mary Caulfield, Site Acquisition Consultant
c/o New Cingular Wireless, PCS LLC (AT&T)
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
Mobile: (978) 994-0252
MCaulfield@centerlinecommunications.com

cc: Kenneth Kellogg, First Selectman, Town of Monroe
William Agresta, AICP, Director of Planning and Zoning, Town of Monroe
SBA Infrastructure LLC, Tower Owner
Jim M. Kimball/ Stone Castle Investments LLC, Property Owner



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 159 ft SABRE Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT13055-A

Customer Site Name: Monroe Turnpike

Carrier Name: AT&T

Carrier Site ID / Name: CT5266 / Monroe-Monroe Turnpike

Site Location: 1428 Monroe Turnpike

Monroe, CT

Fairfield County

Latitude: 41.376463

Longitude: -73.186541

Analysis Result:

Max Structural Usage: 99.7% [Pass]

Max Foundation Usage: 91% [Pass]

Additional Usage Caused by Mount Modification: +1.6%

Report Prepared By: Gustavo Zaragoza





Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

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Existing 159 ft SABRE Monopole

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Longitude: -73.186541

Analysis Result:

Max Structural Usage: 99.7% [Pass]

Max Foundation Usage: 91% [Pass]

Additional Usage Caused by Mount Modification: +1.6%

Report Prepared By: Gustavo Zaragoza

Introduction

The purpose of this report is to summarize the analysis results on the 159 ft SABRE Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Sabre Communications Corporation; Job #04-05018; 5/23/2003
Foundation Drawing	Sabre Communications Corporation; Job #04-05018; 5/23/2003
Geotechnical Report	Dr. Clarence Welti, P.E., P.C.; 4/25/2003

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 $V_{ult} = 120$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 93$ 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
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_5 = 0.205$, $S_1 = 0.065$

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 ¹	Owner
-	162.0	3	Powerwave 7770 - Panel	Platform w/ Handrails (Site Pro 1 - RMQP-496-HK)	(12) 1 5/8" (2) 1/2" Fiber (4) 3/4" DC Power	AT&T
-		3	Powerwave P65-16-XLHH-RR - Panel			
-		3	Quintel QS66512-2 - Panel			
-		6	Powerwave Technologies LGP21401 - TMA			
-		3	Kaelus DBC0061F1V51-2 - Diplexer			
-		3	Ericsson RRUS 11-700			
-		3	Ericsson RRUS 32 B30			
-		3	Ericsson RRUS 32 B2			
-		2	Raycap DC6-48-60-18-8F			
10			1			
11	151.0	3	RFS - APXVSP18-C-A20 - Panel	Low Profile Platform with SitePro HRK-12 Handrail Kit	(4) 1-1/4" Hybrid	Sprint Nextel
12		3	RFS - APXVTM14-C-I20 - Panel			
13		4	RFS - ACU-A20-N - RET			
14		3	Alcatel Lucent - 1900 MHz RRH			
15		3	Alcatel Lucent - 800 MHz RRH			
16		3	Alcatel Lucent - TD-RRH8x20-25 - RRH			
17		3	Alcatel Lucent - 800 MHz Filters			
18	142.5	6	EMS - FR90-16-XXDP - Panel	LP Platform w/ Handrails w/ (3) VSR-MS-B	(24) 1 1/4"	T-Mobile
19		3	RFS - APX16DWV-16DWVS-E-A20 - Panel			
20		3	RFS - APXVAA24_43-U-A20 - Panel			
21		3	RFS - ATMA4P4DBP-1A20 - TMA			
22		3	Andrew - ATSBT-TOP-FM - Bias T			
23	131.0	3	Kathrein 742 213_2110_P45_02.0	Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Hybriflex	Verizon
24		3	Antel BXA-70063/6CF - Panel			
25		3	Antel BXA-171063-12BF - Panel			
26		6	Antel LPA-80063/6CF - Panel			
27		3	Alcatel Lucent RRH2x60-AWS - RRU			
28		6	RFS FD9R6004/2C-3L - Diplexer			
29		1	RFS DB-T1-6Z-8AB-0Z - Distribution Box			
30	110.0	1	Sinclair SCL329-HL - Omni	(1) 4 ft. Standoff	(1) 7/8" ²	Town
31	80.0	1	Sinclair SCL329-HL - Omni	(1) 4 ft. Standoff	(1) 7/8" ²	
32	50.0	1	Decibel 26DB - GPS	(1) 4 ft. Standoff	(1) 1/2" ³	Sprint Nextel

1. Transmission lines installed inside the pole shafts unless otherwise noted.
2. Town has (2) 7/8" coax installed outside the pole shafts in a single row to 110 ft. and 80 ft.
3. Sprint Nextel has (1) 1/2" coax installed outside the pole shafts to 50 ft.

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
1	162.0	3	Powerwave 7770	Platform w/ Handrails (Site Pro 1 - RMQP-496-HK w/ HRK14)	(12) 1 5/8" (2) 1/2" Fiber (4) 3/4" DC Power	AT&T
2		3	Powerwave P65-16-XLHH-RR w/Mount Pipe			
3		3	Quintel QS66512-2			
4		6	Powerwave Technologies LGP21401			
5		3	Kaelus DBC0061F1V51-2			
6		3	Ericsson RRUS 11-700			
7		3	Ericsson RRUS 32 B30			
8		3	Ericsson RRUS 32 B2			
9		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:	91.0%	99.7%	73.4%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Original Design Reactions	3665.0	31.3	41.5
Analysis Reactions	4697.9	38.1	50.0
Factored Reactions*	4947.8	42.2	56.0
% of Design Reactions	95.0%	90.2%	89.3%

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

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

Operational Condition (Rigidity)

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 2.7892 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

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

Standard Conditions

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

Usage Diagram - Max Ratio 90.97% at 0.0ft

Structure: CT13055-A-SBA
Site Name: Monroe Turnpike
Height: 159.00 (ft)
Base Elev: 1.000 (ft)

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

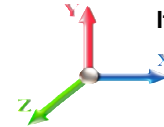
7/25/2018



Page: 1

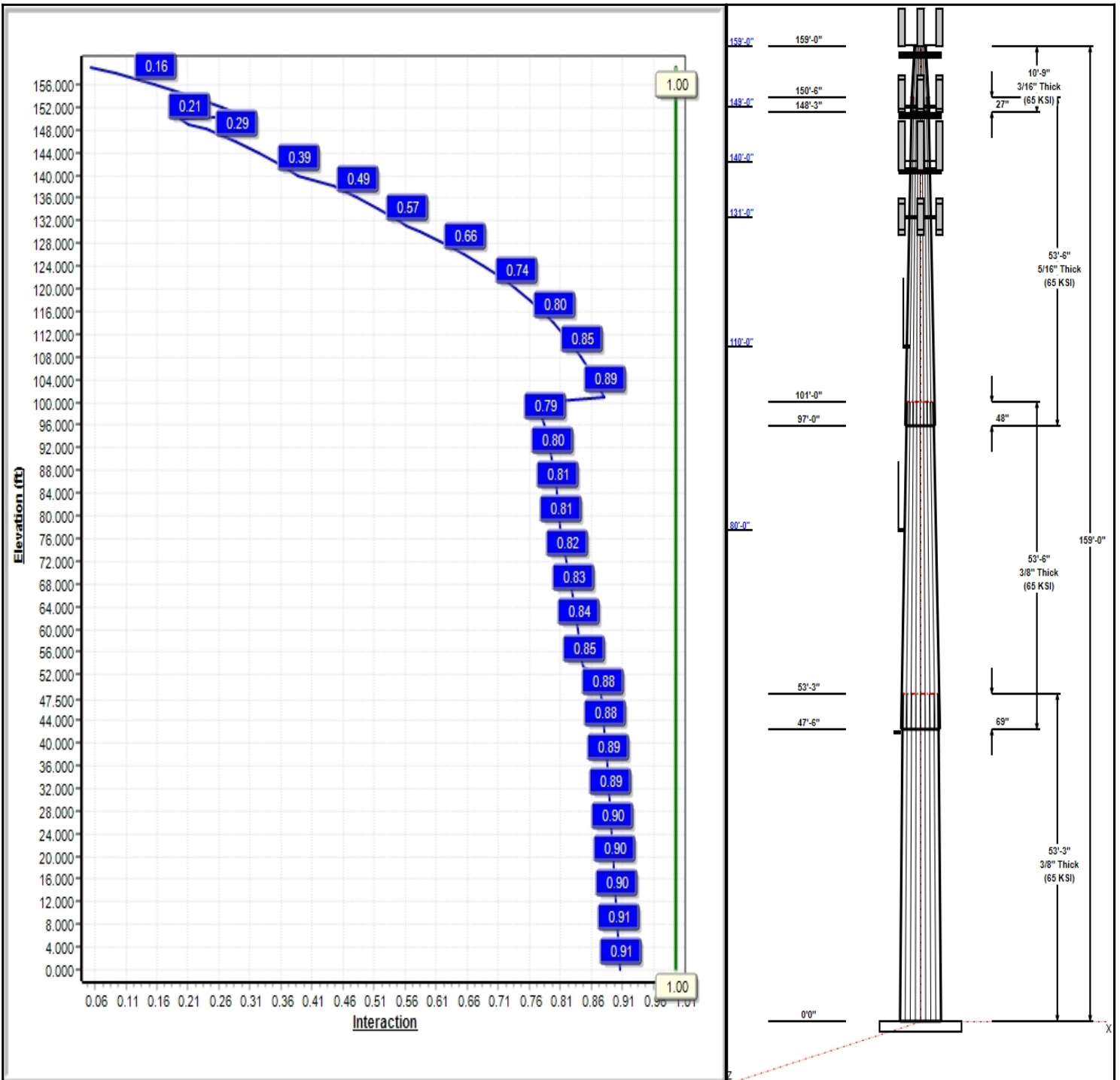
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 93 mph Wind



Iterations: 29

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Structure: CT13055-A-SBA

Type: Tapered
Site Name: Monroe Turnpike
Height: 159.00 (ft)
Base Elev: 1.00 (ft)

Base Shape: 18 Sided
Taper: 0.28277

7/25/2018

Page: 2

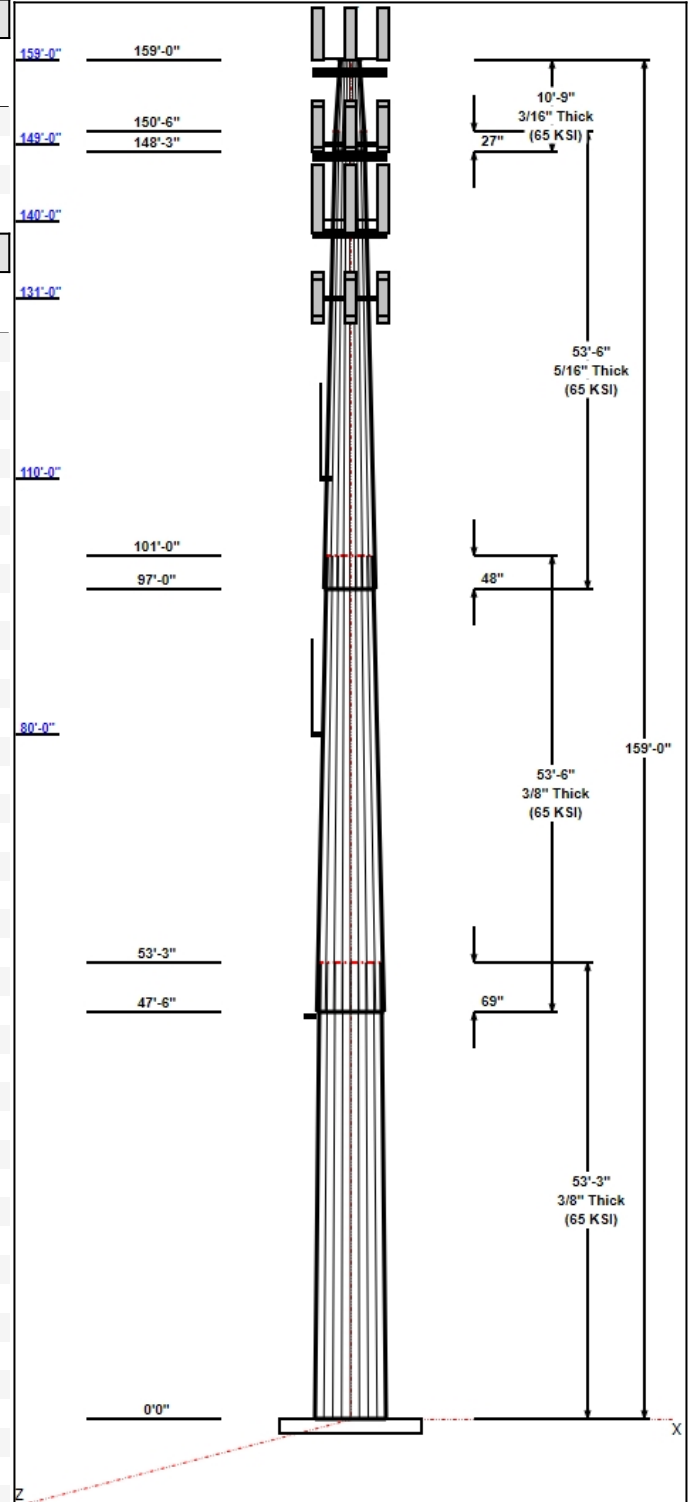


Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	43.15	58.21	0.375		0.28277	65
2	53.50	30.40	45.53	0.375	Slip	0.28277	65
3	53.50	17.03	32.16	0.313	Slip	0.28277	65
4	10.75	15.00	18.04	0.188	Slip	0.28277	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
159.00	162.00	3	Powerwave 7770	AT&T
159.00	162.00	3	Powerwave	AT&T
159.00	162.00	6	Powerwave Technologies	AT&T
159.00	162.00	3	Ericsson RRUS 11-700	AT&T
159.00	162.00	2	Raycap DC6-48-60-18-8F	AT&T
159.00	159.00	1	Site Pro 1 - RMQP-496-HK	AT&T
159.00	162.00	1	Decibel DB404-B - Omni	Town
159.00	162.00	3	Quintel QS66512-2	AT&T
159.00	162.00	3	Kaelus DBC0061F1V51-2	AT&T
159.00	162.00	3	Ericsson RRUS 32 B30	AT&T
159.00	162.00	3	Ericsson RRUS 32 B2	AT&T
159.00	159.00	1	Site Pro 1 - HRK14	AT&T
149.00	151.00	3	RFS - APXVTM14-C-I20 -	Sprint Nextel
149.00	151.00	3	Alcatel Lucent -	Sprint Nextel
149.00	151.00	3	RFS - APXVSP18-C-A20	Sprint Nextel
149.00	151.00	3	Alcatel Lucent - 1900 MHz	Sprint Nextel
149.00	151.00	3	Alcatel Lucent - 800 MHz	Sprint Nextel
149.00	151.00	3	Alcatel Lucent - 800 MHz	Sprint Nextel
149.00	151.00	4	RFS - ACU-A20-N - RET	Sprint Nextel
149.00	149.00	1	Low Profile Platform	Sprint Nextel
149.00	149.00	1	SitePro HRK-12 Handrail	Sprint Nextel
140.00	140.00	1	LP Platform w/ Handrails	T-Mobile
140.00	142.50	6	EMS - FR90-16-XXDP -	T-Mobile
140.00	142.50	3	RFS -	T-Mobile
140.00	142.50	3	RFS -	T-Mobile
140.00	142.50	3	RFS -	T-Mobile
140.00	142.50	3	Andrew - ATSBT-TOP-FM	T-Mobile
131.00	131.00	3	Kathrein 742	Verizon
131.00	131.00	3	Antel BXA-70063/6CF -	Verizon
131.00	131.00	3	Antel BXA-171063-12BF -	Verizon
131.00	131.00	6	Antel LPA-80063/6CF -	Verizon
131.00	131.00	3	Alcatel Lucent	Verizon
131.00	131.00	6	RFS FD9R6004/2C-3L -	Verizon
131.00	131.00	1	RFS DB-T1-6Z-8AB-OZ -	Verizon
131.00	131.00	1	Low Profile Platform	Verizon
110.00	115.55	1	Sinclair SCL329-HL - Omni	Town
110.00	110.00	1	4 ft. Standoff	Town
80.00	80.00	1	4 ft Standoff	Town
80.00	85.55	1	Sinclair SCL329-HL - Omni	Town
47.00	50.00	1	Decibel 26DB - GPS	Sprint Nextel
47.00	47.00	1	4 ft Standoff	Sprint Nextel



Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	159.00	Outside	1 5/8"	AT&T

Structure: CT13055-A-SBA

Type: Tapered
Site Name: Monroe Turnpike
Height: 159.00 (ft)
Base Elev: 1.00 (ft)

Base Shape: 18 Sided
Taper: 0.28277

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Page: 3



0.00	159.00	Outside	1/2" Fiber	AT&T
0.00	159.00	Inside	1/2" Fiber	Town
0.00	159.00	Outside	3/4" DC Power	AT&T
0.00	151.00	Inside	1-1/4" Hybrid	Sprint Nextel
0.00	142.50	Inside	1 1/4"	T-Mobile
0.00	131.00	Inside	1 5/8"	Verizon
0.00	131.00	Inside	1 5/8" Hybriflex	Verizon
0.00	110.00	Outside	7/8"	Town
0.00	80.00	Outside	7/8"	Town
0.00	50.00	Outside	1/2"	Sprint Nextel

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
14	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.2500	71.0	60.0	Round

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 93 mph Wind	4697.9	38.1	49.9
0.9D + 1.6W 93 mph Wind	4628.0	38.1	37.4
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1451.2	11.6	85.2
1.2D + 1.0E	363.1	2.7	50.0
0.9D + 1.0E	357.1	2.7	37.5
1.0D + 1.0W 60 mph Wind	1214.5	9.9	41.6

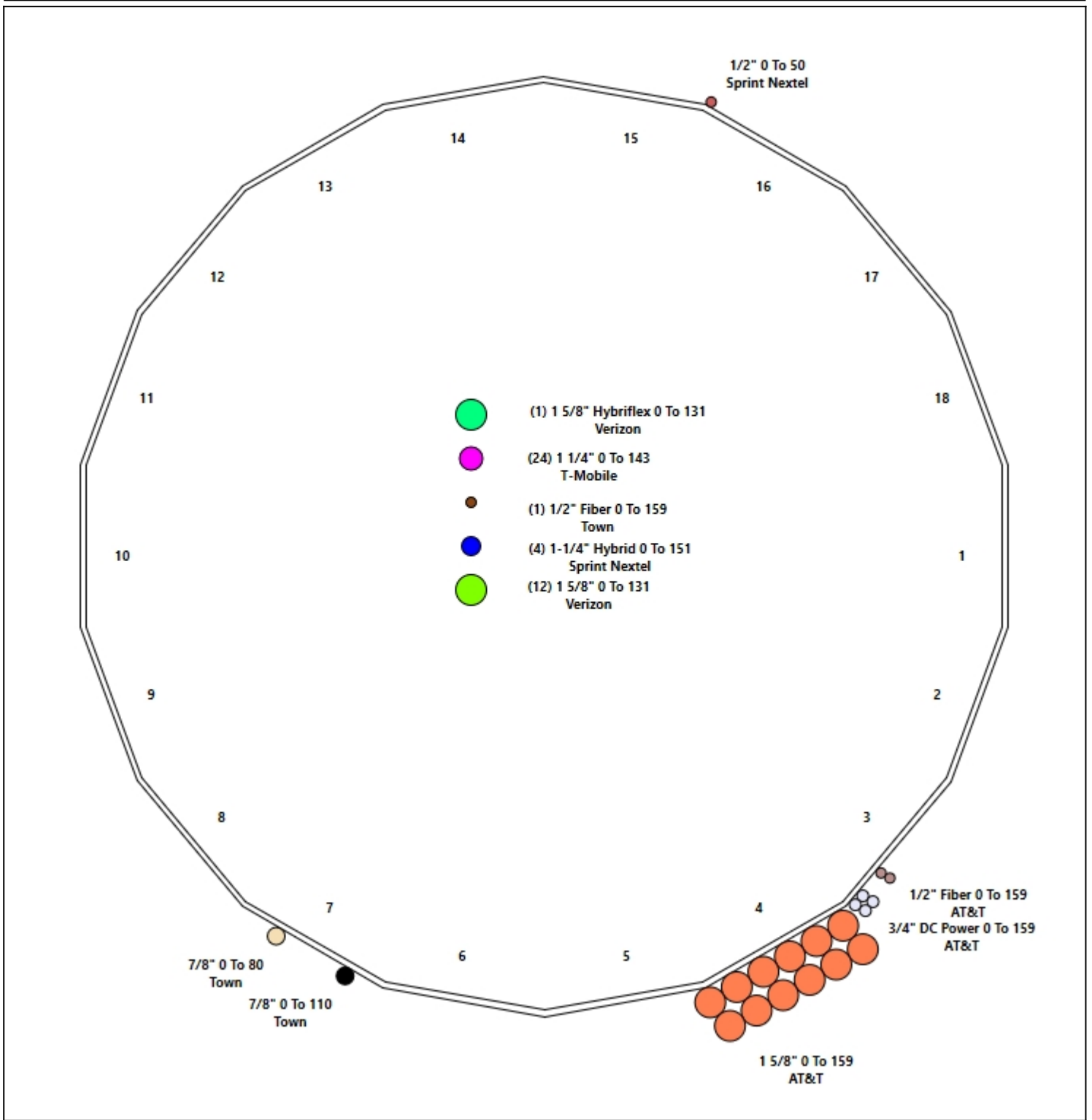
Structure: CT13055-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Monroe Turnpike
Height: 159.00 (ft)

7/25/2018



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Shaft Properties

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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	53.250	0.3750	65		0.00	10,849
2	18	53.500	0.3750	65	Slip	69.00	8,145
3	18	53.500	0.3125	65	Slip	48.00	4,384
4	18	10.750	0.1875	65	Slip	27.00	356
Total Shaft Weight:							23,734

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	58.21	0.00	68.84	29090.28	25.96	155.23	43.15	53.25	50.91	11771.3	18.88	115.0	0.282767
2	45.53	47.50	53.74	13843.68	20.00	121.41	30.40	101.00	35.74	4070.49	12.88	81.07	0.282767
3	32.16	97.00	31.58	4046.51	16.73	102.90	17.03	150.50	16.58	585.32	8.20	54.49	0.282767
4	18.04	148.2	10.62	427.78	15.55	96.21	15.00	159.00	8.81	244.36	12.70	80.00	0.282767

Load Summary

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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	159.00	Powerwave 7770	3	35.00	5.79	0.73	151.37	7.271	0.73	0.00	3.00
2	159.00	Powerwave P65-16-XLHH-RR	3	64.00	8.53	0.75	230.65	10.418	0.75	0.00	3.00
3	159.00	Powerwave Technologies LGP21401	6	14.10	1.29	0.50	39.26	2.131	0.50	0.00	3.00
4	159.00	Ericsson RRUS 11-700	3	55.00	2.52	0.50	133.45	3.157	0.50	0.00	3.00
5	159.00	Raycap DC6-48-60-18-8F	2	32.80	0.92	0.50	96.98	1.361	0.50	0.00	3.00
6	159.00	Site Pro 1 - RMQP-496-HK	1	2645.00	48.00	1.00	5432.59	83.749	1.00	0.00	0.00
7	159.00	Decibel DB404-B - Omni	1	14.00	0.00	1.00	14.01	0.000	1.00	0.00	3.00
8	159.00	Quintel QS66512-2	3	111.00	8.13	0.92	340.01	9.438	0.92	0.00	3.00
9	159.00	Kaelus DBC0061F1V51-2	3	18.30	0.43	0.50	28.84	0.717	0.50	0.00	3.00
10	159.00	Ericsson RRUS 32 B30	3	60.00	2.74	0.50	148.71	3.474	0.50	0.00	3.00
11	159.00	Ericsson RRUS 32 B2	3	53.00	2.74	0.50	141.71	3.474	0.50	0.00	3.00
12	159.00	Site Pro 1 - HRK14	1	302.36	8.13	1.00	663.51	16.127	1.00	0.00	0.00
13	149.00	RFS - APXVTM14-C-I20 - Panel	3	56.00	6.34	0.79	182.70	7.451	0.79	0.00	2.00
14	149.00	Alcatel Lucent - TD-RRH8x20-25 -	3	70.00	4.05	0.67	167.73	5.464	0.67	0.00	2.00
15	149.00	RFS - APXVSP18-C-A20 - Panel	3	106.00	8.42	0.83	373.43	10.289	0.83	0.00	2.00
16	149.00	Alcatel Lucent - 1900 MHz RRH	3	44.00	3.80	0.67	153.16	5.190	0.67	0.00	2.00
17	149.00	Alcatel Lucent - 800 MHz RRH	3	53.00	2.49	0.67	126.96	3.634	0.67	0.00	2.00
18	149.00	Alcatel Lucent - 800 MHz Filters	3	8.80	0.78	0.67	26.44	1.427	0.67	0.00	2.00
19	149.00	RFS - ACU-A20-N - RET	4	1.00	0.14	0.67	5.30	0.437	0.67	0.00	2.00
20	149.00	Low Profile Platform	1	1200.00	35.00	1.00	2247.13	64.320	1.00	0.00	0.00
21	149.00	SitePro HRK-12 Handrail Kit	1	261.72	6.75	1.00	572.32	13.347	1.00	0.00	0.00
22	140.00	LP Platform w/ Handrails w/ (3)	1	1600.00	34.00	1.00	3686.89	63.486	1.00	0.00	0.00
23	140.00	EMS - FR90-16-XXDP - Panel	6	18.00	4.36	0.68	115.91	5.339	0.68	0.00	2.50
24	140.00	RFS - APX16DWV-16DWVS-E-A20 -	3	40.70	6.61	0.62	157.04	8.774	0.62	0.00	2.50
25	140.00	RFS - APXVAA24_43-U-A20 - Panel	3	101.40	20.24	0.73	526.54	22.153	0.73	0.00	2.50
26	140.00	RFS - ATMA4P4DBP-1A20 - TMA	3	15.85	1.17	0.67	48.06	1.948	0.67	0.00	2.50
27	140.00	Andrew - ATSBT-TOP-FM - Bias T	3	1.80	0.20	0.67	7.60	0.545	0.67	0.00	2.50
28	131.00	Kathrein 742 213_2110_P45_02.0	3	16.50	3.15	0.72	93.21	4.044	0.72	0.00	0.00
29	131.00	Antel BXA-70063/6CF - Panel	3	17.00	7.57	0.70	156.91	10.299	0.70	0.00	0.00
30	131.00	Antel BXA-171063-12BF - Panel	3	15.00	4.74	0.84	108.73	7.059	0.84	0.00	0.00
31	131.00	Antel LPA-80063/6CF - Panel	6	27.00	9.60	0.94	310.87	10.934	0.94	0.00	0.00
32	131.00	Alcatel Lucent RRH2x60-AWS - RRU	3	55.00	3.50	0.67	134.00	4.279	0.67	0.00	0.00
33	131.00	RFS FD9R6004/2C-3L - Diplexer	6	3.10	0.36	0.67	11.02	0.798	0.67	0.00	0.00
34	131.00	RFS DB-T1-6Z-8AB-OZ - Distribution	1	18.90	4.80	1.00	160.48	5.662	1.00	0.00	0.00
35	131.00	Low Profile Platform	1	1200.00	22.00	1.00	2233.83	40.195	1.00	0.00	0.00
36	110.00	Sinclair SCL329-HL - Omni	1	10.40	2.22	1.00	68.59	6.064	1.00	0.00	5.55
37	110.00	4 ft. Standoff	1	53.32	3.50	1.00	157.23	11.256	1.00	0.00	0.00
38	80.00	4 ft Standoff	1	53.32	3.50	1.00	154.01	11.015	1.00	0.00	0.00
39	80.00	Sinclair SCL329-HL - Omni	1	10.40	2.22	1.00	66.78	5.944	1.00	0.00	5.55
40	47.00	Decibel 26DB - GPS	1	10.00	0.16	1.00	14.95	0.503	1.00	0.00	3.00
41	47.00	4 ft Standoff	1	53.32	3.50	1.00	148.87	10.632	1.00	0.00	0.00
Totals:			107	10,867.59			29,010.48				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
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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)		
0.00	159.00	(12) 1 5/8"		2.00		Outside				
0.00	159.00	(2) 1/2" Fiber		1.00		Outside				
0.00	159.00	(1) 1/2" Fiber		0.00		Inside				
0.00	159.00	(4) 3/4" DC Power		1.50		Outside				
0.00	151.00	(4) 1-1/4" Hybrid		0.00		Inside				
0.00	142.50	(24) 1 1/4"		0.00		Inside				
0.00	131.00	(12) 1 5/8"		0.00		Inside				
0.00	131.00	(1) 1 5/8" Hybriflex		0.00		Inside				
0.00	110.00	(1) 7/8"		1.11		Outside				
0.00	80.00	(1) 7/8"		0.00		Outside				
0.00	50.00	(1) 1/2"		0.65		Outside				

Shaft Section Properties

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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	58.210	68.836	29090.3	25.96	155.23	70.9	984.3	0.0
2.00		0.3750	57.644	68.163	28245.2	25.69	153.72	71.2	965.1	466.2
4.00		0.3750	57.079	67.489	27416.7	25.43	152.21	71.5	946.1	461.6
6.00		0.3750	56.513	66.816	26604.5	25.16	150.70	71.8	927.2	457.0
8.00		0.3750	55.948	66.143	25808.6	24.90	149.19	72.1	908.6	452.4
10.00		0.3750	55.382	65.470	25028.6	24.63	147.69	72.4	890.1	447.9
12.00		0.3750	54.817	64.797	24264.6	24.36	146.18	72.7	871.8	443.3
14.00		0.3750	54.251	64.124	23516.2	24.10	144.67	73.1	853.8	438.7
16.00		0.3750	53.686	63.451	22783.4	23.83	143.16	73.4	835.9	434.1
18.00		0.3750	53.120	62.778	22066.0	23.57	141.65	73.7	818.2	429.5
20.00		0.3750	52.555	62.105	21363.8	23.30	140.15	74.0	800.7	424.9
22.00		0.3750	51.989	61.431	20676.7	23.03	138.64	74.3	783.3	420.4
24.00		0.3750	51.424	60.758	20004.5	22.77	137.13	74.6	766.2	415.8
26.00		0.3750	50.858	60.085	19346.9	22.50	135.62	74.9	749.3	411.2
28.00		0.3750	50.293	59.412	18704.0	22.24	134.11	75.2	732.5	406.6
30.00		0.3750	49.727	58.739	18075.5	21.97	132.61	75.6	715.9	402.0
32.00		0.3750	49.161	58.066	17461.2	21.71	131.10	75.9	699.6	397.5
34.00		0.3750	48.596	57.393	16860.9	21.44	129.59	76.2	683.4	392.9
36.00		0.3750	48.030	56.720	16274.6	21.17	128.08	76.5	667.4	388.3
38.00		0.3750	47.465	56.047	15702.1	20.91	126.57	76.8	651.6	383.7
40.00		0.3750	46.899	55.374	15143.1	20.64	125.06	77.1	636.0	379.1
42.00		0.3750	46.334	54.700	14597.6	20.38	123.56	77.4	620.5	374.6
44.00		0.3750	45.768	54.027	14065.3	20.11	122.05	77.7	605.3	370.0
46.00		0.3750	45.203	53.354	13546.1	19.84	120.54	78.1	590.2	365.4
47.00		0.3750	44.920	53.018	13291.4	19.71	119.79	78.2	582.8	181.0
47.50	Bot - Section 2	0.3750	44.779	52.849	13165.2	19.64	119.41	78.3	579.1	90.1
48.00		0.3750	44.637	52.681	13039.9	19.58	119.03	78.4	575.4	181.1
50.00		0.3750	44.072	52.008	12546.4	19.31	117.52	78.7	560.7	718.5
52.00		0.3750	43.506	51.335	12065.6	19.05	116.02	79.0	546.2	709.4
53.25	Top - Section 1	0.3750	43.903	51.807	12401.4	19.23	117.07	0.0	0.0	438.7
54.00		0.3750	43.691	51.554	12221.0	19.13	116.51	78.9	550.9	131.9
56.00		0.3750	43.125	50.881	11748.6	18.87	115.00	79.2	536.6	348.6
58.00		0.3750	42.559	50.208	11288.4	18.60	113.49	79.5	522.4	344.0
60.00		0.3750	41.994	49.535	10840.5	18.34	111.98	79.8	508.4	339.4
62.00		0.3750	41.428	48.862	10404.6	18.07	110.48	80.1	494.7	334.8
64.00		0.3750	40.863	48.189	9980.5	17.80	108.97	80.5	481.1	330.2
66.00		0.3750	40.297	47.516	9568.1	17.54	107.46	80.8	467.7	325.7
68.00		0.3750	39.732	46.843	9167.2	17.27	105.95	81.1	454.4	321.1
70.00		0.3750	39.166	46.170	8777.7	17.01	104.44	81.4	441.4	316.5
72.00		0.3750	38.601	45.497	8399.3	16.74	102.94	81.7	428.6	311.9
74.00		0.3750	38.035	44.823	8032.0	16.47	101.43	82.0	415.9	307.3
76.00		0.3750	37.470	44.150	7675.6	16.21	99.92	82.3	403.5	302.8
78.00		0.3750	36.904	43.477	7329.8	15.94	98.41	82.5	391.2	298.2
80.00		0.3750	36.339	42.804	6994.6	15.68	96.90	82.5	379.1	293.6
82.00		0.3750	35.773	42.131	6669.8	15.41	95.39	82.5	367.2	289.0
84.00		0.3750	35.208	41.458	6355.2	15.14	93.89	82.5	355.5	284.4
86.00		0.3750	34.642	40.785	6050.7	14.88	92.38	82.5	344.0	279.9
88.00		0.3750	34.076	40.112	5756.0	14.61	90.87	82.5	332.7	275.3
90.00		0.3750	33.511	39.439	5471.1	14.35	89.36	82.5	321.6	270.7
92.00		0.3750	32.945	38.766	5195.7	14.08	87.85	82.5	310.6	266.1

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)
94.00		0.3750	32.380	38.092	4929.7	13.81	86.35	82.5	299.9	261.5
96.00		0.3750	31.814	37.419	4673.0	13.55	84.84	82.5	289.3	256.9
97.00	Bot - Section 3	0.3750	31.532	37.083	4548.0	13.42	84.08	82.5	284.1	126.8
98.00		0.3750	31.249	36.746	4425.3	13.28	83.33	82.5	278.9	232.6
100.00		0.3750	30.683	36.073	4186.6	13.02	81.82	82.5	268.7	458.9
101.00	Top - Section 2	0.3125	31.026	30.462	3630.5	16.10	99.28	0.0	0.0	226.3
102.00		0.3125	30.743	30.182	3531.1	15.94	98.38	82.5	226.2	103.2
104.00		0.3125	30.177	29.621	3337.9	15.62	96.57	82.5	217.9	203.5
106.00		0.3125	29.612	29.060	3151.8	15.30	94.76	82.5	209.6	199.7
108.00		0.3125	29.046	28.499	2972.8	14.98	92.95	82.5	201.6	195.9
110.00		0.3125	28.481	27.938	2800.7	14.66	91.14	82.5	193.7	192.0
112.00		0.3125	27.915	27.377	2635.4	14.34	89.33	82.5	185.9	188.2
114.00		0.3125	27.350	26.816	2476.7	14.02	87.52	82.5	178.4	184.4
116.00		0.3125	26.784	26.255	2324.5	13.70	85.71	82.5	170.9	180.6
118.00		0.3125	26.218	25.695	2178.7	13.38	83.90	82.5	163.7	176.8
120.00		0.3125	25.653	25.134	2039.1	13.06	82.09	82.5	156.6	173.0
122.00		0.3125	25.087	24.573	1905.6	12.74	80.28	82.5	149.6	169.1
124.00		0.3125	24.522	24.012	1778.1	12.43	78.47	82.5	142.8	165.3
126.00		0.3125	23.956	23.451	1656.3	12.11	76.66	82.5	136.2	161.5
128.00		0.3125	23.391	22.890	1540.3	11.79	74.85	82.5	129.7	157.7
130.00		0.3125	22.825	22.329	1429.8	11.47	73.04	82.5	123.4	153.9
131.00		0.3125	22.542	22.049	1376.6	11.31	72.14	82.5	120.3	75.5
132.00		0.3125	22.260	21.768	1324.7	11.15	71.23	82.5	117.2	74.5
134.00		0.3125	21.694	21.207	1225.0	10.83	69.42	82.5	111.2	146.2
136.00		0.3125	21.129	20.646	1130.3	10.51	67.61	82.5	105.4	142.4
138.00		0.3125	20.563	20.085	1040.7	10.19	65.80	82.5	99.7	138.6
140.00		0.3125	19.998	19.524	955.9	9.87	63.99	82.5	94.1	134.8
142.00		0.3125	19.432	18.964	875.8	9.55	62.18	82.5	88.8	131.0
144.00		0.3125	18.867	18.403	800.4	9.23	60.37	82.5	83.6	127.1
146.00		0.3125	18.301	17.842	729.4	8.92	58.56	82.5	78.5	123.3
148.00		0.3125	17.735	17.281	662.8	8.60	56.75	82.5	73.6	119.5
148.25	Bot - Section 4	0.3125	17.665	17.211	654.7	8.56	56.53	82.5	73.0	14.7
149.00		0.3125	17.453	17.000	631.0	8.44	55.85	82.5	71.2	70.6
150.00		0.3125	17.170	16.720	600.3	8.28	54.94	82.5	68.9	92.8
150.50	Top - Section 3	0.1875	17.404	10.245	383.7	14.96	92.82	0.0	0.0	45.8
152.00		0.1875	16.979	9.993	356.0	14.56	90.56	82.5	41.3	51.6
154.00		0.1875	16.414	9.656	321.2	14.03	87.54	82.5	38.5	66.9
156.00		0.1875	15.848	9.320	288.8	13.49	84.52	82.5	35.9	64.6
158.00		0.1875	15.283	8.983	258.6	12.96	81.51	82.5	33.3	62.3
159.00		0.1875	15.000	8.815	244.4	12.70	80.00	82.5	32.1	30.3

23733.6

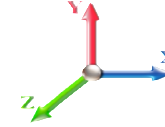
Wind Loading - Shaft

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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	17.879	19.67	422.34	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	17.879	19.67	418.23	0.663 *	0.000	2.00	9.803	6.50	204.4	0.0	559.4
4.00		1.00	0.85	17.879	19.67	414.13	0.665 *	0.000	2.00	9.708	6.45	203.0	0.0	553.9
6.00		1.00	0.85	17.879	19.67	410.03	0.667 *	0.000	2.00	9.612	6.41	201.6	0.0	548.4
8.00		1.00	0.85	17.879	19.67	405.92	0.669 *	0.000	2.00	9.516	6.36	200.3	0.0	542.9
10.00		1.00	0.85	17.879	19.67	401.82	0.671 *	0.000	2.00	9.421	6.32	198.9	0.0	537.4
12.00		1.00	0.85	17.879	19.67	397.72	0.673 *	0.000	2.00	9.325	6.28	197.5	0.0	531.9
14.00		1.00	0.85	17.879	19.67	393.61	0.675 *	0.000	2.00	9.229	6.23	196.2	0.0	526.4
16.00		1.00	0.87	18.332	20.17	394.42	0.678 *	0.000	2.00	9.134	6.19	199.7	0.0	520.9
18.00		1.00	0.89	18.767	20.64	394.86	0.680 *	0.000	2.00	9.038	6.15	203.0	0.0	515.4
20.00		1.00	0.91	19.166	21.08	394.79	0.683 *	0.000	2.00	8.942	6.10	205.9	0.0	509.9
22.00		1.00	0.93	19.537	21.49	394.30	0.685 *	0.000	2.00	8.846	6.06	208.4	0.0	504.4
24.00		1.00	0.95	19.883	21.87	393.45	0.687 *	0.000	2.00	8.751	6.02	210.5	0.0	498.9
26.00		1.00	0.96	20.208	22.23	392.29	0.690 *	0.000	2.00	8.655	5.97	212.4	0.0	493.4
28.00		1.00	0.98	20.514	22.57	390.85	0.693 *	0.000	2.00	8.559	5.93	214.1	0.0	487.9
30.00		1.00	0.99	20.804	22.88	389.18	0.695 *	0.000	2.00	8.464	5.89	215.5	0.0	482.5
32.00		1.00	1.00	21.080	23.19	387.30	0.698 *	0.000	2.00	8.368	5.84	216.7	0.0	477.0
34.00		1.00	1.01	21.343	23.48	385.22	0.701 *	0.000	2.00	8.272	5.80	217.8	0.0	471.5
36.00		1.00	1.03	21.594	23.75	382.97	0.704 *	0.000	2.00	8.176	5.75	218.7	0.0	466.0
38.00		1.00	1.04	21.834	24.02	380.56	0.707 *	0.000	2.00	8.081	5.71	219.5	0.0	460.5
40.00		1.00	1.05	22.065	24.27	378.01	0.710 *	0.000	2.00	7.985	5.67	220.1	0.0	455.0
42.00		1.00	1.06	22.288	24.52	375.33	0.713 *	0.000	2.00	7.889	5.62	220.6	0.0	449.5
44.00		1.00	1.07	22.502	24.75	372.53	0.716 *	0.000	2.00	7.794	5.58	221.0	0.0	444.0
46.00		1.00	1.08	22.709	24.98	369.62	0.719 *	0.000	2.00	7.698	5.54	221.3	0.0	438.5
47.00	Appurtenance(s)	1.00	1.08	22.810	25.09	368.12	0.722 *	0.000	1.00	3.813	2.75	110.5	0.0	217.2
47.50	Bot - Section 2	1.00	1.09	22.860	25.15	367.36	0.723 *	0.000	0.50	1.898	1.37	55.2	0.0	108.1
48.00		1.00	1.09	22.909	25.20	366.60	0.724 *	0.000	0.50	1.923	1.39	56.1	0.0	217.3
50.00		1.00	1.10	23.103	25.41	363.48	0.726 *	0.000	2.00	7.633	5.54	225.3	0.0	862.3
52.00		1.00	1.11	23.291	25.62	360.27	0.701 *	0.000	2.00	7.538	5.28	216.6	0.0	851.3
53.25	Top - Section 1	1.00	1.11	23.405	25.75	358.22	0.704 *	0.000	1.25	4.662	3.28	135.1	0.0	526.5
54.00		1.00	1.12	23.473	25.82	363.21	0.701 *	0.000	0.75	2.780	1.95	80.5	0.0	158.3
56.00		1.00	1.12	23.650	26.02	359.86	0.703 *	0.000	2.00	7.346	5.17	215.0	0.0	418.3
58.00		1.00	1.13	23.823	26.20	356.43	0.706 *	0.000	2.00	7.251	5.12	214.8	0.0	412.8
60.00		1.00	1.14	23.990	26.39	352.93	0.710 *	0.000	2.00	7.155	5.08	214.4	0.0	407.3
62.00		1.00	1.15	24.154	26.57	349.36	0.713 *	0.000	2.00	7.059	5.04	214.0	0.0	401.8
64.00		1.00	1.16	24.313	26.74	345.73	0.717 *	0.000	2.00	6.963	4.99	213.6	0.0	396.3
66.00		1.00	1.16	24.469	26.92	342.03	0.720 *	0.000	2.00	6.868	4.95	213.1	0.0	390.8
68.00		1.00	1.17	24.621	27.08	338.28	0.724 *	0.000	2.00	6.772	4.90	212.5	0.0	385.3
70.00		1.00	1.18	24.770	27.25	334.47	0.728 *	0.000	2.00	6.676	4.86	211.9	0.0	379.8
72.00		1.00	1.18	24.915	27.41	330.61	0.732 *	0.000	2.00	6.581	4.82	211.2	0.0	374.3
74.00		1.00	1.19	25.057	27.56	326.69	0.736 *	0.000	2.00	6.485	4.77	210.5	0.0	368.8
76.00		1.00	1.20	25.196	27.72	322.73	0.740 *	0.000	2.00	6.389	4.73	209.8	0.0	363.3
78.00		1.00	1.20	25.333	27.87	318.71	0.745 *	0.000	2.00	6.293	4.69	209.0	0.0	357.8
80.00	Appurtenance(s)	1.00	1.21	25.466	28.01	314.66	0.749 *	0.000	2.00	6.198	4.64	208.1	0.0	352.3
82.00		1.00	1.22	25.597	28.16	310.56	0.754 *	0.000	2.00	6.102	4.60	207.2	0.0	346.8
84.00		1.00	1.22	25.726	28.30	306.41	0.759 *	0.000	2.00	6.006	4.56	206.3	0.0	341.3
86.00		1.00	1.23	25.852	28.44	302.23	0.763 *	0.000	2.00	5.911	4.51	205.3	0.0	335.8

Wind Loading - Shaft

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00	1.00	1.23	25.976	28.57	298.01	0.769 *	0.000	2.00	5.815	4.47	204.3	0.0	330.3
90.00	1.00	1.24	26.098	28.71	293.75	0.774 *	0.000	2.00	5.719	4.43	203.3	0.0	324.8
92.00	1.00	1.25	26.218	28.84	289.45	0.779 *	0.000	2.00	5.623	4.38	202.2	0.0	319.3
94.00	1.00	1.25	26.336	28.97	285.12	0.785 *	0.000	2.00	5.528	4.34	201.1	0.0	313.8
96.00	1.00	1.26	26.451	29.10	280.76	0.791 *	0.000	2.00	5.432	4.29	199.9	0.0	308.3
97.00 Bot - Section 3	1.00	1.26	26.509	29.16	278.56	0.795 *	0.000	1.00	2.680	2.13	99.4	0.0	152.1
98.00	1.00	1.26	26.565	29.22	276.36	0.798 *	0.000	1.00	2.709	2.16	101.1	0.0	279.1
100.00	1.00	1.27	26.677	29.35	271.93	0.803 *	0.000	2.00	5.346	4.29	201.5	0.0	550.7
100.00 Top - Section 2	1.00	1.27	26.733	29.41	269.70	0.808 *	0.000	1.00	2.637	2.13	100.2	0.0	271.6
102.00	1.00	1.27	26.788	29.47	273.02	0.804 *	0.000	1.00	2.613	2.10	99.0	0.0	123.8
104.00	1.00	1.28	26.896	29.59	268.54	0.809 *	0.000	2.00	5.155	4.17	197.3	0.0	244.2
106.00	1.00	1.28	27.003	29.70	264.03	0.815 *	0.000	2.00	5.059	4.13	196.1	0.0	239.6
108.00	1.00	1.29	27.109	29.82	259.50	0.822 *	0.000	2.00	4.964	4.08	194.7	0.0	235.0
110.00 Appurtenance(s)	1.00	1.29	27.213	29.93	254.93	0.830 *	0.000	2.00	4.868	4.04	193.4	0.0	230.5
112.00	1.00	1.30	27.315	30.05	250.34	0.761 *	0.000	2.00	4.772	3.63	174.7	0.0	225.9
114.00	1.00	1.30	27.416	30.16	245.72	0.768 *	0.000	2.00	4.676	3.59	173.2	0.0	221.3
116.00	1.00	1.31	27.516	30.27	241.08	0.774 *	0.000	2.00	4.581	3.55	171.8	0.0	216.7
118.00	1.00	1.31	27.614	30.38	236.41	0.781 *	0.000	2.00	4.485	3.50	170.3	0.0	212.1
120.00	1.00	1.32	27.712	30.48	231.71	0.788 *	0.000	2.00	4.389	3.46	168.7	0.0	207.5
122.00	1.00	1.32	27.807	30.59	227.00	0.796 *	0.000	2.00	4.294	3.42	167.2	0.0	203.0
124.00	1.00	1.33	27.902	30.69	222.26	0.803 *	0.000	2.00	4.198	3.37	165.6	0.0	198.4
126.00	1.00	1.33	27.995	30.79	217.49	0.812 *	0.000	2.00	4.102	3.33	164.0	0.0	193.8
128.00	1.00	1.34	28.088	30.90	212.71	0.820 *	0.000	2.00	4.006	3.29	162.4	0.0	189.2
130.00	1.00	1.34	28.179	31.00	207.90	0.829 *	0.000	2.00	3.911	3.24	160.8	0.0	184.6
131.00 Appurtenance(s)	1.00	1.34	28.224	31.05	205.49	0.836 *	0.000	1.00	1.919	1.60	79.7	0.0	90.6
132.00	1.00	1.34	28.269	31.10	203.08	0.841 *	0.000	1.00	1.896	1.59	79.3	0.0	89.5
134.00	1.00	1.35	28.358	31.19	198.23	1.200 *	0.000	2.00	3.719	4.46	222.8	0.0	175.5
136.00	1.00	1.35	28.446	31.29	193.36	1.200 *	0.000	2.00	3.624	4.35	217.7	0.0	170.9
138.00	1.00	1.36	28.533	31.39	188.47	1.200 *	0.000	2.00	3.528	4.23	212.6	0.0	166.3
140.00 Appurtenance(s)	1.00	1.36	28.619	31.48	183.56	1.200 *	0.000	2.00	3.432	4.12	207.5	0.0	161.7
142.00	1.00	1.36	28.703	31.57	178.64	1.200 *	0.000	2.00	3.336	4.00	202.3	0.0	157.2
144.00	1.00	1.37	28.788	31.67	173.69	1.200 *	0.000	2.00	3.241	3.89	197.0	0.0	152.6
146.00	1.00	1.37	28.871	31.76	168.73	1.200 *	0.000	2.00	3.145	3.77	191.8	0.0	148.0
148.00	1.00	1.38	28.953	31.85	163.75	1.200 *	0.000	2.00	3.049	3.66	186.5	0.0	143.4
148.25 Bot - Section 4	1.00	1.38	28.963	31.86	163.12	1.200 *	0.000	0.25	0.374	0.45	22.9	0.0	17.6
149.00 Appurtenance(s)	1.00	1.38	28.994	31.89	161.25	1.200 *	0.000	0.75	1.138	1.37	69.7	0.0	84.7
150.00	1.00	1.38	29.034	31.94	158.75	1.200 *	0.000	1.00	1.497	1.80	91.8	0.0	111.4
150.50 Top - Section 3	1.00	1.38	29.055	31.96	157.50	1.200 *	0.000	0.50	0.739	0.89	45.4	0.0	55.0
152.00	1.00	1.38	29.115	32.03	157.20	1.200 *	0.000	1.50	2.182	2.62	134.2	0.0	62.0
154.00	1.00	1.39	29.195	32.11	152.18	1.200 *	0.000	2.00	2.826	3.39	174.2	0.0	80.2
156.00	1.00	1.39	29.273	32.20	147.13	1.200 *	0.000	2.00	2.730	3.28	168.8	0.0	77.5
158.00	1.00	1.40	29.352	32.29	142.07	1.200 *	0.000	2.00	2.634	3.16	163.3	0.0	74.7
159.00 Appurtenance(s)	1.00	1.40	29.390	32.33	139.53	1.200 *	0.000	1.00	1.281	1.54	79.5	0.0	36.3

* Cf Adjusted by Linear Load Ra Effect

Totals:	159.00	15,902.6		28,480.3
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Discrete Appurtenance Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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	159.00	Site Pro 1 -	1	29.390	32.329	1.00	1.00	48.00	3174.00	0.000	0.000	2482.90	0.00	0.00
2	159.00	Powerwave 7770	3	29.506	32.456	0.73	1.00	12.68	126.00	0.000	3.000	658.47	0.00	1975.42
3	159.00	Powerwave	3	29.506	32.456	0.75	1.00	19.19	230.40	0.000	3.000	996.66	0.00	2989.98
4	159.00	Powerwave Technologies	6	29.506	32.456	0.50	1.00	3.87	101.52	0.000	3.000	200.97	0.00	602.90
5	159.00	Ericsson RRUS 11-700	3	29.506	32.456	0.50	1.00	3.78	198.00	0.000	3.000	196.29	0.00	588.88
6	159.00	Raycap DC6-48-60-18-8F	2	29.506	32.456	0.50	1.00	0.92	78.72	0.000	3.000	47.78	0.00	143.33
7	159.00	Site Pro 1 - HRK14	1	29.390	32.329	1.00	1.00	8.13	362.83	0.000	0.000	420.54	0.00	0.00
8	159.00	Quintel QS66512-2	3	29.506	32.456	0.92	1.00	22.44	399.60	0.000	3.000	1165.24	0.00	3495.72
9	159.00	Kaelus DBC0061F1V51-2	3	29.506	32.456	0.50	1.00	0.65	65.88	0.000	3.000	33.49	0.00	100.48
10	159.00	Ericsson RRUS 32 B30	3	29.506	32.456	0.50	1.00	4.11	216.00	0.000	3.000	213.43	0.00	640.29
11	159.00	Ericsson RRUS 32 B2	3	29.506	32.456	0.50	1.00	4.11	190.80	0.000	3.000	213.43	0.00	640.29
12	159.00	Decibel DB404-B - Omni	1	29.506	32.456	1.00	1.00	0.00	16.80	0.000	3.000	0.00	0.00	0.00
13	149.00	Alcatel Lucent - 800 MHz	3	29.075	31.982	0.50	0.75	3.75	190.80	0.000	2.000	192.08	0.00	384.16
14	149.00	Alcatel Lucent -	3	29.075	31.982	0.50	0.75	6.11	252.00	0.000	2.000	312.42	0.00	624.84
15	149.00	RFS - APXVSP18-C-A20	3	29.075	31.982	0.62	0.75	15.72	381.60	0.000	2.000	804.64	0.00	1609.28
16	149.00	Alcatel Lucent - 1900 MHz	3	29.075	31.982	0.50	0.75	5.73	158.40	0.000	2.000	293.14	0.00	586.27
17	149.00	Low Profile Platform	1	28.994	31.893	1.00	1.00	35.00	1440.00	0.000	0.000	1786.01	0.00	0.00
18	149.00	Alcatel Lucent - 800 MHz	3	29.075	31.982	0.50	0.75	1.18	31.68	0.000	2.000	60.17	0.00	120.34
19	149.00	RFS - ACU-A20-N - RET	4	29.075	31.982	0.50	0.75	0.28	4.80	0.000	2.000	14.40	0.00	28.80
20	149.00	SitePro HRK-12 Handrail	1	28.994	31.893	1.00	1.00	6.75	314.06	0.000	0.000	344.45	0.00	0.00
21	149.00	RFS - APXVTM14-C-I20 -	3	29.075	31.982	0.59	0.75	11.27	201.60	0.000	2.000	576.67	0.00	1153.34
22	140.00	RFS -	3	28.725	31.597	0.50	0.75	1.76	57.06	0.000	2.500	89.17	0.00	222.92
23	140.00	RFS -	3	28.725	31.597	0.55	0.75	33.24	365.04	0.000	2.500	1680.67	0.00	4201.67
24	140.00	RFS -	3	28.725	31.597	0.46	0.75	9.22	146.52	0.000	2.500	466.17	0.00	1165.42
25	140.00	EMS - FR90-16-XXDP -	6	28.725	31.597	0.51	0.75	13.34	129.60	0.000	2.500	674.49	0.00	1686.22
26	140.00	LP Platform w/ Handrails	1	28.619	31.480	1.00	1.00	34.00	1920.00	0.000	0.000	1712.53	0.00	0.00
27	140.00	Andrew - ATSBT-TOP-FM	3	28.725	31.597	0.50	0.75	0.30	6.48	0.000	2.500	15.24	0.00	38.11
28	131.00	Antel LPA-80063/6CF -	6	28.224	31.046	0.75	0.80	43.32	194.40	0.000	0.000	2151.64	0.00	0.00
29	131.00	Kathrein 742	3	28.224	31.046	0.58	0.80	5.44	59.40	0.000	0.000	270.39	0.00	0.00
30	131.00	Antel BXA-70063/6CF -	3	28.224	31.046	0.56	0.80	12.72	61.20	0.000	0.000	631.73	0.00	0.00
31	131.00	Antel BXA-171063-12BF -	3	28.224	31.046	0.67	0.80	9.56	54.00	0.000	0.000	474.68	0.00	0.00
32	131.00	Alcatel Lucent	3	28.224	31.046	0.54	0.80	5.63	198.00	0.000	0.000	279.57	0.00	0.00
33	131.00	RFS FD9R6004/2C-3L -	6	28.224	31.046	0.54	0.80	1.16	22.32	0.000	0.000	57.51	0.00	0.00
34	131.00	RFS DB-T1-6Z-8AB-0Z -	1	28.224	31.046	1.00	1.00	4.80	22.68	0.000	0.000	238.44	0.00	0.00
35	131.00	Low Profile Platform	1	28.224	31.046	1.00	1.00	22.00	1440.00	0.000	0.000	1092.83	0.00	0.00
36	110.00	4 ft. Standoff	1	27.213	29.934	1.00	1.00	3.50	63.98	0.000	0.000	167.63	0.00	0.00
37	110.00	Sinclair SCL329-HL -	1	27.494	30.243	1.00	1.00	2.22	12.48	0.000	5.550	107.42	0.00	596.20
38	80.00	Sinclair SCL329-HL -	1	25.824	28.407	1.00	1.00	2.22	12.48	0.000	5.550	100.90	0.00	559.99
39	80.00	4 ft Standoff	1	25.466	28.013	1.00	1.00	3.50	63.98	0.000	0.000	156.87	0.00	0.00
40	47.00	4 ft Standoff	1	22.810	25.091	1.00	1.00	3.50	63.98	0.000	0.000	140.51	0.00	0.00
41	47.00	Decibel 26DB - GPS	1	23.103	25.413	1.00	1.00	0.16	12.00	0.000	3.000	6.51	0.00	19.52

Totals: 13,041.11 21,528.07

Total Applied Force Summary

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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		204.38	677.00	0.00	0.00
4.00		203.01	671.50	0.00	0.00
6.00		201.64	666.01	0.00	0.00
8.00		200.27	660.51	0.00	0.00
10.00		198.90	655.01	0.00	0.00
12.00		197.53	649.51	0.00	0.00
14.00		196.16	644.02	0.00	0.00
16.00		199.73	638.52	0.00	0.00
18.00		203.02	633.02	0.00	0.00
20.00		205.88	627.53	0.00	0.00
22.00		208.36	622.03	0.00	0.00
24.00		210.53	616.53	0.00	0.00
26.00		212.42	611.04	0.00	0.00
28.00		214.06	605.54	0.00	0.00
30.00		215.50	600.04	0.00	0.00
32.00		216.74	594.54	0.00	0.00
34.00		217.80	589.05	0.00	0.00
36.00		218.71	583.55	0.00	0.00
38.00		219.47	578.05	0.00	0.00
40.00		220.11	572.56	0.00	0.00
42.00		220.62	567.06	0.00	0.00
44.00		221.01	561.56	0.00	0.00
46.00		221.30	556.07	0.00	0.00
47.00	(2) attachments	257.50	351.96	0.00	19.52
47.50		55.20	137.47	0.00	0.00
48.00		56.14	246.68	0.00	0.00
50.00		225.35	979.84	0.00	0.00
52.00		216.61	968.46	0.00	0.00
53.25		135.14	599.71	0.00	0.00
54.00		80.49	202.22	0.00	0.00
56.00		215.02	535.49	0.00	0.00
58.00		214.76	529.99	0.00	0.00
60.00		214.44	524.49	0.00	0.00
62.00		214.05	519.00	0.00	0.00
64.00		213.60	513.50	0.00	0.00
66.00		213.09	508.00	0.00	0.00
68.00		212.53	502.50	0.00	0.00
70.00		211.91	497.01	0.00	0.00
72.00		211.24	491.51	0.00	0.00
74.00		210.53	486.01	0.00	0.00
76.00		209.77	480.52	0.00	0.00
78.00		208.96	475.02	0.00	0.00
80.00	(2) attachments	465.88	545.99	0.00	559.99
82.00		207.22	462.78	0.00	0.00
84.00		206.29	457.28	0.00	0.00
86.00		205.32	451.78	0.00	0.00

Total Applied Force Summary

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00		204.32	446.29	0.00	0.00
90.00		203.27	440.79	0.00	0.00
92.00		202.20	435.29	0.00	0.00
94.00		201.09	429.80	0.00	0.00
96.00		199.94	424.30	0.00	0.00
97.00		99.43	210.09	0.00	0.00
98.00		101.10	337.11	0.00	0.00
100.00		201.55	666.66	0.00	0.00
101.00		100.23	329.55	0.00	0.00
102.00		99.04	181.79	0.00	0.00
104.00		197.34	360.15	0.00	0.00
106.00		196.05	355.57	0.00	0.00
108.00		194.74	350.99	0.00	0.00
110.00	(2) attachments	468.46	422.87	0.00	596.20
112.00		174.70	340.58	0.00	0.00
114.00		173.24	336.00	0.00	0.00
116.00		171.76	331.42	0.00	0.00
118.00		170.26	326.84	0.00	0.00
120.00		168.73	322.26	0.00	0.00
122.00		167.19	317.68	0.00	0.00
124.00		165.62	313.10	0.00	0.00
126.00		164.03	308.52	0.00	0.00
128.00		162.41	303.94	0.00	0.00
130.00		160.78	299.35	0.00	0.00
131.00	(26) attachments	5276.48	2199.96	0.00	0.00
132.00		79.29	130.52	0.00	0.00
134.00		267.67	257.60	0.00	0.00
136.00		262.75	253.02	0.00	0.00
138.00		257.79	248.44	0.00	0.00
140.00	(19) attachments	4891.05	2868.56	0.00	7314.34
142.00		247.73	239.28	0.00	0.00
144.00		242.64	206.18	0.00	0.00
146.00		237.50	192.10	0.00	0.00
148.00		232.33	187.52	0.00	0.00
148.25		28.64	23.12	0.00	0.00
149.00	(24) attachments	4470.89	3076.21	0.00	4507.03
150.00		114.77	133.42	0.00	0.00
150.50		56.87	66.02	0.00	0.00
152.00		168.77	90.48	0.00	0.00
154.00		220.47	115.18	0.00	0.00
156.00		215.15	112.43	0.00	0.00
158.00		209.79	109.68	0.00	0.00
159.00	(32) attachments	6732.02	5214.36	0.00	11177.31
	Totals:	38,048.30	49,962.46	0.00	24,174.40

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.106	1.019	17.879	0.00	29.95
2.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.106	1.019	17.879	0.00	0.77
2.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.106	1.019	17.879	0.00	3.84
2.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.106	1.019	17.879	0.00	1.25
2.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.019	17.879	0.00	1.25
2.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.106	1.019	17.879	0.00	0.38
4.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.107	1.022	17.879	0.00	29.95
4.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.107	1.022	17.879	0.00	0.77
4.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.107	1.022	17.879	0.00	3.84
4.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.107	1.022	17.879	0.00	1.25
4.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.107	1.022	17.879	0.00	1.25
4.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.107	1.022	17.879	0.00	0.38
6.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.109	1.026	17.879	0.00	29.95
6.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.109	1.026	17.879	0.00	0.77
6.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.109	1.026	17.879	0.00	3.84
6.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.109	1.026	17.879	0.00	1.25
6.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.109	1.026	17.879	0.00	1.25
6.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.109	1.026	17.879	0.00	0.38
8.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.110	1.029	17.879	0.00	29.95
8.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.110	1.029	17.879	0.00	0.77
8.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.110	1.029	17.879	0.00	3.84
8.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.110	1.029	17.879	0.00	1.25
8.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.110	1.029	17.879	0.00	1.25
8.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.110	1.029	17.879	0.00	0.38
10.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.111	1.032	17.879	0.00	29.95
10.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.111	1.032	17.879	0.00	0.77
10.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.111	1.032	17.879	0.00	3.84
10.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.111	1.032	17.879	0.00	1.25
10.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.032	17.879	0.00	1.25
10.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.111	1.032	17.879	0.00	0.38
12.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.112	1.036	17.879	0.00	29.95
12.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.112	1.036	17.879	0.00	0.77
12.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.112	1.036	17.879	0.00	3.84
12.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.112	1.036	17.879	0.00	1.25
12.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.112	1.036	17.879	0.00	1.25
12.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.112	1.036	17.879	0.00	0.38
14.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.113	1.039	17.879	0.00	29.95
14.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.113	1.039	17.879	0.00	0.77
14.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.113	1.039	17.879	0.00	3.84
14.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.113	1.039	17.879	0.00	1.25
14.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.113	1.039	17.879	0.00	1.25
14.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.113	1.039	17.879	0.00	0.38
16.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.114	1.043	18.332	0.00	29.95
16.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.114	1.043	18.332	0.00	0.77
16.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.114	1.043	18.332	0.00	3.84
16.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.114	1.043	18.332	0.00	1.25
16.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.114	1.043	18.332	0.00	1.25

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
16.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.114	1.043	18.332	0.00	0.38
18.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.115	1.046	18.767	0.00	29.95
18.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.115	1.046	18.767	0.00	0.77
18.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.115	1.046	18.767	0.00	3.84
18.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.115	1.046	18.767	0.00	1.25
18.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.115	1.046	18.767	0.00	1.25
18.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.115	1.046	18.767	0.00	0.38
20.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.117	1.050	19.166	0.00	29.95
20.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.117	1.050	19.166	0.00	0.77
20.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.117	1.050	19.166	0.00	3.84
20.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.117	1.050	19.166	0.00	1.25
20.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.117	1.050	19.166	0.00	1.25
20.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.117	1.050	19.166	0.00	0.38
22.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.118	1.054	19.537	0.00	29.95
22.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.118	1.054	19.537	0.00	0.77
22.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.118	1.054	19.537	0.00	3.84
22.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.118	1.054	19.537	0.00	1.25
22.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.118	1.054	19.537	0.00	1.25
22.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.118	1.054	19.537	0.00	0.38
24.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.119	1.058	19.883	0.00	29.95
24.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.119	1.058	19.883	0.00	0.77
24.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.119	1.058	19.883	0.00	3.84
24.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.119	1.058	19.883	0.00	1.25
24.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.119	1.058	19.883	0.00	1.25
24.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.119	1.058	19.883	0.00	0.38
26.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.121	1.062	20.208	0.00	29.95
26.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.121	1.062	20.208	0.00	0.77
26.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.121	1.062	20.208	0.00	3.84
26.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.121	1.062	20.208	0.00	1.25
26.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.062	20.208	0.00	1.25
26.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.121	1.062	20.208	0.00	0.38
28.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.122	1.066	20.514	0.00	29.95
28.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.122	1.066	20.514	0.00	0.77
28.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.122	1.066	20.514	0.00	3.84
28.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.122	1.066	20.514	0.00	1.25
28.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.122	1.066	20.514	0.00	1.25
28.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.122	1.066	20.514	0.00	0.38
30.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.123	1.070	20.804	0.00	29.95
30.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.123	1.070	20.804	0.00	0.77
30.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.123	1.070	20.804	0.00	3.84
30.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.123	1.070	20.804	0.00	1.25
30.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.123	1.070	20.804	0.00	1.25
30.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.123	1.070	20.804	0.00	0.38
32.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.125	1.074	21.080	0.00	29.95
32.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.125	1.074	21.080	0.00	0.77
32.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.125	1.074	21.080	0.00	3.84
32.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.125	1.074	21.080	0.00	1.25

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
32.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.074	21.080	0.00	1.25
32.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.125	1.074	21.080	0.00	0.38
34.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.126	1.078	21.343	0.00	29.95
34.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.126	1.078	21.343	0.00	0.77
34.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.126	1.078	21.343	0.00	3.84
34.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.126	1.078	21.343	0.00	1.25
34.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.078	21.343	0.00	1.25
34.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.126	1.078	21.343	0.00	0.38
36.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.128	1.083	21.594	0.00	29.95
36.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.128	1.083	21.594	0.00	0.77
36.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.128	1.083	21.594	0.00	3.84
36.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.128	1.083	21.594	0.00	1.25
36.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	21.594	0.00	1.25
36.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.128	1.083	21.594	0.00	0.38
38.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.129	1.087	21.834	0.00	29.95
38.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.129	1.087	21.834	0.00	0.77
38.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.129	1.087	21.834	0.00	3.84
38.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.129	1.087	21.834	0.00	1.25
38.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.129	1.087	21.834	0.00	1.25
38.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.129	1.087	21.834	0.00	0.38
40.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.131	1.092	22.065	0.00	29.95
40.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.131	1.092	22.065	0.00	0.77
40.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.131	1.092	22.065	0.00	3.84
40.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.131	1.092	22.065	0.00	1.25
40.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.131	1.092	22.065	0.00	1.25
40.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.131	1.092	22.065	0.00	0.38
42.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.132	1.097	22.288	0.00	29.95
42.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.132	1.097	22.288	0.00	0.77
42.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.132	1.097	22.288	0.00	3.84
42.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.132	1.097	22.288	0.00	1.25
42.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.132	1.097	22.288	0.00	1.25
42.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.132	1.097	22.288	0.00	0.38
44.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.134	1.102	22.502	0.00	29.95
44.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.134	1.102	22.502	0.00	0.77
44.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.134	1.102	22.502	0.00	3.84
44.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.134	1.102	22.502	0.00	1.25
44.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.102	22.502	0.00	1.25
44.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.134	1.102	22.502	0.00	0.38
46.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.136	1.107	22.709	0.00	29.95
46.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.136	1.107	22.709	0.00	0.77
46.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.136	1.107	22.709	0.00	3.84
46.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.136	1.107	22.709	0.00	1.25
46.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.136	1.107	22.709	0.00	1.25
46.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.136	1.107	22.709	0.00	0.38
47.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.137	1.110	22.810	0.00	14.98
47.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.137	1.110	22.810	0.00	0.38
47.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.137	1.110	22.810	0.00	1.92

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
47.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.137	1.110	22.810	0.00	0.62
47.00	7/8"	Yes	1.00	0.000	0.00	0.00	0.00	0.137	1.110	22.810	0.00	0.62
47.00	1/2"	Yes	1.00	0.000	0.65	0.05	0.00	0.137	1.110	22.810	0.00	0.19
47.50	1 5/8"	Yes	0.50	0.000	2.00	0.08	0.00	0.137	1.112	22.860	0.00	7.49
47.50	1/2" Fiber	Yes	0.50	0.000	1.00	0.04	0.00	0.137	1.112	22.860	0.00	0.19
47.50	3/4" DC Power	Yes	0.50	0.000	1.50	0.06	0.00	0.137	1.112	22.860	0.00	0.96
47.50	7/8"	Yes	0.50	0.000	1.11	0.05	0.00	0.137	1.112	22.860	0.00	0.31
47.50	7/8"	Yes	0.50	0.000	0.00	0.00	0.00	0.137	1.112	22.860	0.00	0.31
47.50	1/2"	Yes	0.50	0.000	0.65	0.03	0.00	0.137	1.112	22.860	0.00	0.10
48.00	1 5/8"	Yes	0.50	0.000	2.00	0.08	0.00	0.138	1.114	22.909	0.00	7.49
48.00	1/2" Fiber	Yes	0.50	0.000	1.00	0.04	0.00	0.138	1.114	22.909	0.00	0.19
48.00	3/4" DC Power	Yes	0.50	0.000	1.50	0.06	0.00	0.138	1.114	22.909	0.00	0.96
48.00	7/8"	Yes	0.50	0.000	1.11	0.05	0.00	0.138	1.114	22.909	0.00	0.31
48.00	7/8"	Yes	0.50	0.000	0.00	0.00	0.00	0.138	1.114	22.909	0.00	0.31
48.00	1/2"	Yes	0.50	0.000	0.65	0.03	0.00	0.138	1.114	22.909	0.00	0.10
50.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.139	1.117	23.103	0.00	29.95
50.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.139	1.117	23.103	0.00	0.77
50.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.139	1.117	23.103	0.00	3.84
50.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.139	1.117	23.103	0.00	1.25
50.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.139	1.117	23.103	0.00	1.25
50.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.139	1.117	23.103	0.00	0.38
52.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.126	1.079	23.291	0.00	29.95
52.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.126	1.079	23.291	0.00	0.77
52.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.126	1.079	23.291	0.00	3.84
52.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.126	1.079	23.291	0.00	1.25
52.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	23.291	0.00	1.25
53.25	1 5/8"	Yes	1.25	0.000	2.00	0.21	0.00	0.128	1.083	23.405	0.00	18.72
53.25	1/2" Fiber	Yes	1.25	0.000	1.00	0.10	0.00	0.128	1.083	23.405	0.00	0.48
53.25	3/4" DC Power	Yes	1.25	0.000	1.50	0.16	0.00	0.128	1.083	23.405	0.00	2.40
53.25	7/8"	Yes	1.25	0.000	1.11	0.12	0.00	0.128	1.083	23.405	0.00	0.78
53.25	7/8"	Yes	1.25	0.000	0.00	0.00	0.00	0.128	1.083	23.405	0.00	0.78
54.00	1 5/8"	Yes	0.75	0.000	2.00	0.13	0.00	0.126	1.078	23.473	0.00	11.23
54.00	1/2" Fiber	Yes	0.75	0.000	1.00	0.06	0.00	0.126	1.078	23.473	0.00	0.29
54.00	3/4" DC Power	Yes	0.75	0.000	1.50	0.09	0.00	0.126	1.078	23.473	0.00	1.44
54.00	7/8"	Yes	0.75	0.000	1.11	0.07	0.00	0.126	1.078	23.473	0.00	0.47
54.00	7/8"	Yes	0.75	0.000	0.00	0.00	0.00	0.126	1.078	23.473	0.00	0.47
56.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.127	1.082	23.650	0.00	29.95
56.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.127	1.082	23.650	0.00	0.77
56.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.127	1.082	23.650	0.00	3.84
56.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.127	1.082	23.650	0.00	1.25
56.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.127	1.082	23.650	0.00	1.25
58.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.129	1.087	23.823	0.00	29.95
58.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.129	1.087	23.823	0.00	0.77
58.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.129	1.087	23.823	0.00	3.84
58.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.129	1.087	23.823	0.00	1.25
58.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.129	1.087	23.823	0.00	1.25
60.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.131	1.092	23.990	0.00	29.95

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
60.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.131	1.092	23.990	0.00	0.77
60.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.131	1.092	23.990	0.00	3.84
60.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.131	1.092	23.990	0.00	1.25
60.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.131	1.092	23.990	0.00	1.25
62.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.132	1.097	24.154	0.00	29.95
62.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.132	1.097	24.154	0.00	0.77
62.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.132	1.097	24.154	0.00	3.84
62.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.132	1.097	24.154	0.00	1.25
62.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.132	1.097	24.154	0.00	1.25
64.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.134	1.103	24.313	0.00	29.95
64.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.134	1.103	24.313	0.00	0.77
64.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.134	1.103	24.313	0.00	3.84
64.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.134	1.103	24.313	0.00	1.25
64.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	24.313	0.00	1.25
66.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.136	1.108	24.469	0.00	29.95
66.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.136	1.108	24.469	0.00	0.77
66.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.136	1.108	24.469	0.00	3.84
66.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.136	1.108	24.469	0.00	1.25
66.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.136	1.108	24.469	0.00	1.25
68.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.138	1.114	24.621	0.00	29.95
68.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.138	1.114	24.621	0.00	0.77
68.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.138	1.114	24.621	0.00	3.84
68.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.138	1.114	24.621	0.00	1.25
68.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.138	1.114	24.621	0.00	1.25
70.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.140	1.120	24.770	0.00	29.95
70.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.140	1.120	24.770	0.00	0.77
70.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.140	1.120	24.770	0.00	3.84
70.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.140	1.120	24.770	0.00	1.25
70.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.140	1.120	24.770	0.00	1.25
72.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.142	1.126	24.915	0.00	29.95
72.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.142	1.126	24.915	0.00	0.77
72.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.142	1.126	24.915	0.00	3.84
72.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.142	1.126	24.915	0.00	1.25
72.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.142	1.126	24.915	0.00	1.25
74.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.144	1.133	25.057	0.00	29.95
74.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.144	1.133	25.057	0.00	0.77
74.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.144	1.133	25.057	0.00	3.84
74.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.144	1.133	25.057	0.00	1.25
74.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.144	1.133	25.057	0.00	1.25
76.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.146	1.139	25.196	0.00	29.95
76.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.146	1.139	25.196	0.00	0.77
76.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.146	1.139	25.196	0.00	3.84
76.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.146	1.139	25.196	0.00	1.25
76.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.146	1.139	25.196	0.00	1.25
78.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.149	1.146	25.333	0.00	29.95
78.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.149	1.146	25.333	0.00	0.77
78.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.149	1.146	25.333	0.00	3.84

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
78.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.149	1.146	25.333	0.00	1.25
78.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.149	1.146	25.333	0.00	1.25
80.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.151	1.153	25.466	0.00	29.95
80.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.151	1.153	25.466	0.00	0.77
80.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.151	1.153	25.466	0.00	3.84
80.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.151	1.153	25.466	0.00	1.25
80.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.151	1.153	25.466	0.00	1.25
82.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.153	1.160	25.597	0.00	29.95
82.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.153	1.160	25.597	0.00	0.77
82.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.153	1.160	25.597	0.00	3.84
82.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.153	1.160	25.597	0.00	1.25
84.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.156	1.167	25.726	0.00	29.95
84.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.156	1.167	25.726	0.00	0.77
84.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.156	1.167	25.726	0.00	3.84
84.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.156	1.167	25.726	0.00	1.25
86.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.158	1.175	25.852	0.00	29.95
86.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.158	1.175	25.852	0.00	0.77
86.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.158	1.175	25.852	0.00	3.84
86.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.158	1.175	25.852	0.00	1.25
88.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.161	1.182	25.976	0.00	29.95
88.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.161	1.182	25.976	0.00	0.77
88.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.161	1.182	25.976	0.00	3.84
88.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.161	1.182	25.976	0.00	1.25
90.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.163	1.190	26.098	0.00	29.95
90.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.163	1.190	26.098	0.00	0.77
90.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.163	1.190	26.098	0.00	3.84
90.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.163	1.190	26.098	0.00	1.25
92.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.166	1.199	26.218	0.00	29.95
92.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.166	1.199	26.218	0.00	0.77
92.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.166	1.199	26.218	0.00	3.84
92.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.166	1.199	26.218	0.00	1.25
94.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.169	1.207	26.336	0.00	29.95
94.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.169	1.207	26.336	0.00	0.77
94.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.169	1.207	26.336	0.00	3.84
94.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.169	1.207	26.336	0.00	1.25
96.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.172	1.216	26.451	0.00	29.95
96.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.172	1.216	26.451	0.00	0.77
96.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.172	1.216	26.451	0.00	3.84
96.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.172	1.216	26.451	0.00	1.25
97.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.174	1.223	26.509	0.00	14.98
97.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.174	1.223	26.509	0.00	0.38
97.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.174	1.223	26.509	0.00	1.92
97.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.174	1.223	26.509	0.00	0.62
98.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.176	1.228	26.565	0.00	14.98
98.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.176	1.228	26.565	0.00	0.38
98.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.176	1.228	26.565	0.00	1.92
98.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.176	1.228	26.565	0.00	0.62

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
100.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.178	1.235	26.677	0.00	29.95
100.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.178	1.235	26.677	0.00	0.77
100.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.178	1.235	26.677	0.00	3.84
100.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.178	1.235	26.677	0.00	1.25
101.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.181	1.243	26.733	0.00	14.98
101.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.181	1.243	26.733	0.00	0.38
101.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.181	1.243	26.733	0.00	1.92
101.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.181	1.243	26.733	0.00	0.62
102.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.179	1.237	26.788	0.00	14.98
102.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.179	1.237	26.788	0.00	0.38
102.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.179	1.237	26.788	0.00	1.92
102.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.179	1.237	26.788	0.00	0.62
104.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.181	1.244	26.896	0.00	29.95
104.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.181	1.244	26.896	0.00	0.77
104.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.181	1.244	26.896	0.00	3.84
104.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.181	1.244	26.896	0.00	1.25
106.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.185	1.254	27.003	0.00	29.95
106.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.185	1.254	27.003	0.00	0.77
106.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.185	1.254	27.003	0.00	3.84
106.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.185	1.254	27.003	0.00	1.25
108.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.188	1.265	27.109	0.00	29.95
108.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.188	1.265	27.109	0.00	0.77
108.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.188	1.265	27.109	0.00	3.84
108.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.188	1.265	27.109	0.00	1.25
110.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.192	1.276	27.213	0.00	29.95
110.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.192	1.276	27.213	0.00	0.77
110.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.192	1.276	27.213	0.00	3.84
110.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.192	1.276	27.213	0.00	1.25
112.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.157	1.171	27.315	0.00	29.95
112.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.157	1.171	27.315	0.00	0.77
112.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.157	1.171	27.315	0.00	3.84
114.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.160	1.181	27.416	0.00	29.95
114.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.160	1.181	27.416	0.00	0.77
114.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.160	1.181	27.416	0.00	3.84
116.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.164	1.191	27.516	0.00	29.95
116.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.164	1.191	27.516	0.00	0.77
116.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.164	1.191	27.516	0.00	3.84
118.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.167	1.202	27.614	0.00	29.95
118.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.167	1.202	27.614	0.00	0.77
118.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.167	1.202	27.614	0.00	3.84
120.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.171	1.213	27.712	0.00	29.95
120.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.171	1.213	27.712	0.00	0.77
120.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.171	1.213	27.712	0.00	3.84
122.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.175	1.224	27.807	0.00	29.95
122.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.175	1.224	27.807	0.00	0.77
122.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.175	1.224	27.807	0.00	3.84
124.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.179	1.236	27.902	0.00	29.95

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
124.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.179	1.236	27.902	0.00	0.77
124.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.179	1.236	27.902	0.00	3.84
126.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.183	1.248	27.995	0.00	29.95
126.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.183	1.248	27.995	0.00	0.77
126.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.183	1.248	27.995	0.00	3.84
128.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.187	1.262	28.088	0.00	29.95
128.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.187	1.262	28.088	0.00	0.77
128.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.187	1.262	28.088	0.00	3.84
130.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.192	1.275	28.179	0.00	29.95
130.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.192	1.275	28.179	0.00	0.77
130.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.192	1.275	28.179	0.00	3.84
131.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.195	1.286	28.224	0.00	14.98
131.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.195	1.286	28.224	0.00	0.38
131.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.195	1.286	28.224	0.00	1.92
132.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.198	1.293	28.269	0.00	14.98
132.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.198	1.293	28.269	0.00	0.38
132.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.198	1.293	28.269	0.00	1.92
134.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.202	0.000	28.358	19.96	29.95
134.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.202	0.000	28.358	9.98	0.77
134.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.202	0.000	28.358	14.97	3.84
136.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.207	0.000	28.446	20.03	29.95
136.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.207	0.000	28.446	10.01	0.77
136.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.207	0.000	28.446	15.02	3.84
138.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.213	0.000	28.533	20.09	29.95
138.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.213	0.000	28.533	10.04	0.77
138.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.213	0.000	28.533	15.07	3.84
140.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.219	0.000	28.619	20.15	29.95
140.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.219	0.000	28.619	10.07	0.77
140.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.219	0.000	28.619	15.11	3.84
142.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.225	0.000	28.703	20.21	29.95
142.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.225	0.000	28.703	10.10	0.77
142.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.225	0.000	28.703	15.16	3.84
144.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.231	0.000	28.788	20.27	29.95
144.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.231	0.000	28.788	10.13	0.77
144.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.231	0.000	28.788	15.20	3.84
146.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.238	0.000	28.871	20.32	29.95
146.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.238	0.000	28.871	10.16	0.77
146.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.238	0.000	28.871	15.24	3.84
148.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.246	0.000	28.953	20.38	29.95
148.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.246	0.000	28.953	10.19	0.77
148.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.246	0.000	28.953	15.29	3.84
148.25	1 5/8"	Yes	0.25	1.200	2.00	0.04	0.05	0.250	0.000	28.963	2.55	3.74
148.25	1/2" Fiber	Yes	0.25	1.200	1.00	0.02	0.02	0.250	0.000	28.963	1.27	0.10
148.25	3/4" DC Power	Yes	0.25	1.200	1.50	0.03	0.04	0.250	0.000	28.963	1.91	0.48
149.00	1 5/8"	Yes	0.75	1.200	2.00	0.13	0.15	0.252	0.000	28.994	7.65	11.23
149.00	1/2" Fiber	Yes	0.75	1.200	1.00	0.06	0.07	0.252	0.000	28.994	3.83	0.29
149.00	3/4" DC Power	Yes	0.75	1.200	1.50	0.09	0.11	0.252	0.000	28.994	5.74	1.44

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
150.00	1 5/8"	Yes	1.00	1.200	2.00	0.17	0.20	0.256	0.000	29.034	10.22	14.98
150.00	1/2" Fiber	Yes	1.00	1.200	1.00	0.08	0.10	0.256	0.000	29.034	5.11	0.38
150.00	3/4" DC Power	Yes	1.00	1.200	1.50	0.13	0.15	0.256	0.000	29.034	7.67	1.92
150.50	1 5/8"	Yes	0.50	1.200	2.00	0.08	0.10	0.259	0.000	29.055	5.11	7.49
150.50	1/2" Fiber	Yes	0.50	1.200	1.00	0.04	0.05	0.259	0.000	29.055	2.56	0.19
150.50	3/4" DC Power	Yes	0.50	1.200	1.50	0.06	0.07	0.259	0.000	29.055	3.84	0.96
152.00	1 5/8"	Yes	1.50	1.200	2.00	0.25	0.30	0.258	0.000	29.115	15.37	22.46
152.00	1/2" Fiber	Yes	1.50	1.200	1.00	0.13	0.15	0.258	0.000	29.115	7.69	0.58
152.00	3/4" DC Power	Yes	1.50	1.200	1.50	0.19	0.22	0.258	0.000	29.115	11.53	2.88
154.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.265	0.000	29.195	20.55	29.95
154.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.265	0.000	29.195	10.28	0.77
154.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.265	0.000	29.195	15.41	3.84
156.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.275	0.000	29.273	20.61	29.95
156.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.275	0.000	29.273	10.30	0.77
156.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.275	0.000	29.273	15.46	3.84
158.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.285	0.000	29.352	20.66	29.95
158.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.285	0.000	29.352	10.33	0.77
158.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.285	0.000	29.352	15.50	3.84
159.00	1 5/8"	Yes	1.00	1.200	2.00	0.17	0.20	0.293	0.000	29.390	10.35	14.98
159.00	1/2" Fiber	Yes	1.00	1.200	1.00	0.08	0.10	0.293	0.000	29.390	5.17	0.38
159.00	3/4" DC Power	Yes	1.00	1.200	1.50	0.13	0.15	0.293	0.000	29.390	7.76	1.92
Totals:											617.6	2,875.7

Calculated Forces

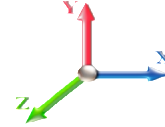
Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 93 mph Wind

Iterations 29

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	-49.93	-38.09	0.00	-4697.9	0.00	4697.95	4390.37	2195.18	10447.7	5231.64	0.00	0.000	0.000	0.910
2.00	-49.19	-37.96	0.00	-4621.7	0.00	4621.77	4366.62	2183.31	10288.9	5152.14	0.02	-0.091	0.000	0.909
4.00	-48.46	-37.84	0.00	-4545.8	0.00	4545.85	4342.50	2171.25	10130.4	5072.75	0.08	-0.183	0.000	0.908
6.00	-47.73	-37.71	0.00	-4470.1	0.00	4470.18	4318.00	2159.00	9972.16	4993.49	0.18	-0.277	0.000	0.907
8.00	-47.01	-37.58	0.00	-4394.7	0.00	4394.77	4293.12	2146.56	9814.16	4914.37	0.31	-0.372	0.000	0.906
10.00	-46.29	-37.46	0.00	-4319.6	0.00	4319.60	4267.86	2133.93	9656.46	4835.41	0.49	-0.468	0.000	0.904
12.00	-45.58	-37.33	0.00	-4244.6	0.00	4244.68	4242.22	2121.11	9499.10	4756.61	0.71	-0.565	0.000	0.903
14.00	-44.88	-37.21	0.00	-4170.0	0.00	4170.02	4216.20	2108.10	9342.10	4677.99	0.97	-0.664	0.000	0.902
16.00	-44.18	-37.08	0.00	-4095.6	0.00	4095.61	4189.80	2094.90	9185.49	4599.57	1.27	-0.764	0.000	0.901
18.00	-43.48	-36.94	0.00	-4021.4	0.00	4021.45	4163.03	2081.51	9029.29	4521.36	1.61	-0.865	0.000	0.900
20.00	-42.79	-36.80	0.00	-3947.5	0.00	3947.57	4135.87	2067.94	8873.53	4443.36	1.99	-0.968	0.000	0.899
22.00	-42.10	-36.66	0.00	-3873.9	0.00	3873.96	4108.34	2054.17	8718.25	4365.60	2.42	-1.072	0.000	0.898
24.00	-41.42	-36.52	0.00	-3800.6	0.00	3800.64	4080.43	2040.21	8563.45	4288.09	2.89	-1.178	0.000	0.897
26.00	-40.75	-36.37	0.00	-3727.6	0.00	3727.60	4052.14	2026.07	8409.18	4210.84	3.41	-1.285	0.000	0.896
28.00	-40.08	-36.22	0.00	-3654.8	0.00	3654.87	4023.46	2011.73	8255.45	4133.86	3.97	-1.393	0.000	0.894
30.00	-39.42	-36.06	0.00	-3582.4	0.00	3582.44	3994.42	1997.21	8102.30	4057.17	4.58	-1.504	0.000	0.893
32.00	-38.76	-35.91	0.00	-3510.3	0.00	3510.31	3964.99	1982.49	7949.75	3980.79	5.23	-1.615	0.000	0.892
34.00	-38.10	-35.75	0.00	-3438.5	0.00	3438.51	3935.18	1967.59	7797.83	3904.71	5.94	-1.728	0.000	0.891
36.00	-37.46	-35.59	0.00	-3367.0	0.00	3367.01	3904.99	1952.50	7646.57	3828.97	6.68	-1.843	0.000	0.889
38.00	-36.81	-35.42	0.00	-3295.8	0.00	3295.84	3874.43	1937.21	7495.98	3753.56	7.48	-1.960	0.000	0.888
40.00	-36.18	-35.26	0.00	-3225.0	0.00	3225.00	3843.48	1921.74	7346.10	3678.51	8.33	-2.078	0.000	0.886
42.00	-35.54	-35.09	0.00	-3154.4	0.00	3154.49	3812.16	1906.08	7196.95	3603.83	9.22	-2.198	0.000	0.885
44.00	-34.92	-34.92	0.00	-3084.3	0.00	3084.31	3780.46	1890.23	7048.57	3529.52	10.17	-2.319	0.000	0.883
46.00	-34.31	-34.73	0.00	-3014.4	0.00	3014.47	3748.38	1874.19	6900.97	3455.62	11.17	-2.443	0.000	0.882
47.00	-33.94	-34.49	0.00	-2979.7	0.00	2979.71	3732.20	1866.10	6827.48	3418.81	11.69	-2.506	0.000	0.881
47.50	-33.79	-34.45	0.00	-2962.4	0.00	2962.47	3724.07	1862.03	6790.81	3400.45	11.95	-2.537	0.000	0.881
48.00	-33.50	-34.43	0.00	-2945.2	0.00	2945.25	3715.92	1857.96	6754.19	3382.11	12.22	-2.569	0.000	0.880
50.00	-32.45	-34.23	0.00	-2876.3	0.00	2876.39	3683.08	1841.54	6608.25	3309.03	13.32	-2.696	0.000	0.878
52.00	-31.43	-34.02	0.00	-2807.9	0.00	2807.94	3649.86	1824.93	6463.17	3236.39	14.48	-2.825	0.000	0.877
53.25	-30.80	-33.89	0.00	-2765.4	0.00	2765.41	3673.19	1836.60	6564.80	3287.28	15.23	-2.907	0.000	0.850
54.00	-30.55	-33.85	0.00	-2739.9	0.00	2739.99	3660.74	1830.37	6510.40	3260.04	15.69	-2.957	0.000	0.849
56.00	-29.96	-33.67	0.00	-2672.2	0.00	2672.29	3627.27	1813.63	6365.92	3187.69	16.96	-3.083	0.000	0.847
58.00	-29.36	-33.50	0.00	-2604.9	0.00	2604.94	3593.41	1796.71	6222.36	3115.80	18.28	-3.211	0.000	0.845
60.00	-28.78	-33.32	0.00	-2537.9	0.00	2537.95	3559.18	1779.59	6079.73	3044.38	19.65	-3.341	0.000	0.842
62.00	-28.19	-33.14	0.00	-2471.3	0.00	2471.31	3524.57	1762.29	5938.07	2973.45	21.08	-3.472	0.000	0.839
64.00	-27.62	-32.96	0.00	-2405.0	0.00	2405.04	3489.59	1744.79	5797.40	2903.01	22.56	-3.605	0.000	0.837
66.00	-27.05	-32.78	0.00	-2339.1	0.00	2339.12	3454.22	1727.11	5657.75	2833.08	24.10	-3.741	0.000	0.834
68.00	-26.48	-32.60	0.00	-2273.5	0.00	2273.56	3418.47	1709.24	5519.14	2763.67	25.69	-3.878	0.000	0.831
70.00	-25.92	-32.41	0.00	-2208.3	0.00	2208.37	3382.35	1691.17	5381.61	2694.80	27.35	-4.017	0.000	0.828
72.00	-25.36	-32.23	0.00	-2143.5	0.00	2143.54	3345.84	1672.92	5245.17	2626.49	29.06	-4.158	0.000	0.824
74.00	-24.82	-32.05	0.00	-2079.0	0.00	2079.08	3308.96	1654.48	5109.86	2558.73	30.83	-4.301	0.000	0.820
76.00	-24.27	-31.86	0.00	-2014.9	0.00	2014.99	3271.70	1635.85	4975.70	2491.55	32.66	-4.446	0.000	0.817
78.00	-23.73	-31.68	0.00	-1951.2	0.00	1951.26	3230.14	1615.07	4836.86	2422.03	34.55	-4.593	0.000	0.813
80.00	-23.14	-31.23	0.00	-1887.3	0.00	1887.34	3180.13	1590.07	4687.51	2347.24	36.51	-4.742	0.000	0.812
82.00	-22.62	-31.05	0.00	-1824.8	0.00	1824.88	3130.13	1565.06	4540.49	2273.62	38.53	-4.893	0.000	0.810
84.00	-22.10	-30.86	0.00	-1762.7	0.00	1762.78	3080.12	1540.06	4395.82	2201.18	40.61	-5.046	0.000	0.808
86.00	-21.58	-30.68	0.00	-1701.0	0.00	1701.06	3030.11	1515.05	4253.50	2129.91	42.75	-5.201	0.000	0.806
88.00	-21.07	-30.49	0.00	-1639.7	0.00	1639.71	2980.10	1490.05	4113.51	2059.81	44.96	-5.358	0.000	0.804

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00	-20.57	-30.30	0.00	-1578.7	0.00	1578.73	2930.09	1465.05	3975.87	1990.89	47.24	-5.517	0.000	0.800
92.00	-20.07	-30.12	0.00	-1518.1	0.00	1518.13	2880.09	1440.04	3840.56	1923.14	49.58	-5.678	0.000	0.797
94.00	-19.58	-29.93	0.00	-1457.9	0.00	1457.90	2830.08	1415.04	3707.61	1856.56	51.99	-5.841	0.000	0.793
96.00	-19.11	-29.73	0.00	-1398.0	0.00	1398.04	2780.07	1390.03	3576.99	1791.15	54.47	-6.006	0.000	0.788
97.00	-18.87	-29.63	0.00	-1368.3	0.00	1368.31	2755.06	1377.53	3512.56	1758.89	55.73	-6.090	0.000	0.785
98.00	-18.48	-29.54	0.00	-1338.6	0.00	1338.68	2730.06	1365.03	3448.72	1726.92	57.02	-6.175	0.000	0.782
100.00	-17.77	-29.31	0.00	-1279.6	0.00	1279.60	2680.05	1340.03	3322.78	1663.86	59.63	-6.343	0.000	0.776
101.00	-17.41	-29.20	0.00	-1250.3	0.00	1250.30	2260.99	1130.50	2846.84	1425.54	60.97	-6.429	0.000	0.885
102.00	-17.17	-29.12	0.00	-1221.1	0.00	1221.10	2242.36	1121.18	2797.13	1400.64	62.32	-6.516	0.000	0.880
104.00	-16.74	-28.94	0.00	-1162.8	0.00	1162.87	2200.69	1100.35	2693.61	1348.81	65.09	-6.708	0.000	0.870
106.00	-16.31	-28.76	0.00	-1104.9	0.00	1104.99	2159.02	1079.51	2592.04	1297.95	67.93	-6.901	0.000	0.860
108.00	-15.89	-28.57	0.00	-1047.4	0.00	1047.48	2117.34	1058.67	2492.43	1248.07	70.86	-7.095	0.000	0.848
110.00	-15.44	-28.11	0.00	-989.74	0.00	989.74	2075.67	1037.84	2394.76	1199.16	73.87	-7.290	0.000	0.834
112.00	-15.02	-27.94	0.00	-933.52	0.00	933.52	2034.00	1017.00	2299.05	1151.23	76.95	-7.486	0.000	0.819
114.00	-14.62	-27.78	0.00	-877.63	0.00	877.63	1992.32	996.16	2205.29	1104.29	80.12	-7.681	0.000	0.803
116.00	-14.22	-27.61	0.00	-822.08	0.00	822.08	1950.65	975.32	2113.48	1058.31	83.37	-7.877	0.000	0.785
118.00	-13.83	-27.44	0.00	-766.86	0.00	766.86	1908.98	954.49	2023.63	1013.32	86.71	-8.071	0.000	0.765
120.00	-13.44	-27.28	0.00	-711.97	0.00	711.97	1867.30	933.65	1935.73	969.30	90.12	-8.264	0.000	0.743
122.00	-13.06	-27.11	0.00	-657.42	0.00	657.42	1825.63	912.81	1849.77	926.26	93.61	-8.455	0.000	0.718
124.00	-12.69	-26.94	0.00	-603.20	0.00	603.20	1783.96	891.98	1765.78	884.20	97.18	-8.643	0.000	0.690
126.00	-12.32	-26.77	0.00	-549.32	0.00	549.32	1742.28	871.14	1683.73	843.12	100.83	-8.828	0.000	0.660
128.00	-11.97	-26.60	0.00	-495.78	0.00	495.78	1700.61	850.30	1603.63	803.01	104.55	-9.007	0.000	0.625
130.00	-11.64	-26.42	0.00	-442.59	0.00	442.59	1658.94	829.47	1525.49	763.88	108.34	-9.181	0.000	0.587
131.00	-10.28	-20.87	0.00	-416.17	0.00	416.17	1638.10	819.05	1487.15	744.68	110.27	-9.266	0.000	0.566
132.00	-10.12	-20.80	0.00	-395.29	0.00	395.29	1617.26	808.63	1449.30	725.73	112.21	-9.350	0.000	0.552
134.00	-9.85	-20.52	0.00	-353.70	0.00	353.70	1575.59	787.79	1375.06	688.55	116.15	-9.511	0.000	0.521
136.00	-9.60	-20.24	0.00	-312.67	0.00	312.67	1533.91	766.96	1302.77	652.35	120.15	-9.666	0.000	0.486
138.00	-9.34	-19.97	0.00	-272.19	0.00	272.19	1492.24	746.12	1232.44	617.13	124.21	-9.813	0.000	0.448
140.00	-7.33	-14.67	0.00	-224.93	0.00	224.93	1450.57	725.28	1164.05	582.89	128.33	-9.951	0.000	0.391
142.00	-7.10	-14.40	0.00	-195.59	0.00	195.59	1408.89	704.45	1097.62	549.63	132.50	-10.076	0.000	0.361
144.00	-6.91	-14.14	0.00	-166.78	0.00	166.78	1367.22	683.61	1033.14	517.34	136.73	-10.194	0.000	0.328
146.00	-6.74	-13.89	0.00	-138.49	0.00	138.49	1325.55	662.77	970.62	486.03	141.00	-10.302	0.000	0.290
148.00	-6.59	-13.63	0.00	-110.72	0.00	110.72	1283.87	641.94	910.04	455.70	145.31	-10.399	0.000	0.249
148.25	-6.56	-13.60	0.00	-107.31	0.00	107.31	1278.66	639.33	902.61	451.97	145.86	-10.411	0.000	0.243
149.00	-4.34	-8.65	0.00	-92.60	0.00	92.60	1263.04	631.52	880.49	440.90	147.49	-10.444	0.000	0.214
150.00	-4.23	-8.52	0.00	-83.95	0.00	83.95	1242.20	621.10	851.42	426.34	149.67	-10.484	0.000	0.201
150.50	-4.17	-8.45	0.00	-79.70	0.00	79.70	761.18	380.59	536.85	268.82	150.76	-10.503	0.000	0.302
152.00	-4.10	-8.27	0.00	-67.02	0.00	67.02	742.42	371.21	510.58	255.67	154.05	-10.557	0.000	0.268
154.00	-4.01	-8.04	0.00	-50.48	0.00	50.48	717.42	358.71	476.59	238.65	158.47	-10.651	0.000	0.218
156.00	-3.93	-7.81	0.00	-34.39	0.00	34.39	692.41	346.21	443.76	222.21	162.92	-10.726	0.000	0.161
158.00	-3.86	-7.59	0.00	-18.77	0.00	18.77	667.41	333.71	412.11	206.36	167.40	-10.778	0.000	0.097
159.00	0.00	-6.73	0.00	-11.18	0.00	11.18	654.91	327.45	396.72	198.65	169.65	-10.795	0.000	0.057

Wind Loading - Shaft

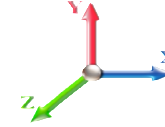
Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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	17.879	19.67	422.34	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	17.879	19.67	418.23	0.663 *	0.000	2.00	9.803	6.50	204.4	0.0	419.6
4.00		1.00	0.85	17.879	19.67	414.13	0.665 *	0.000	2.00	9.708	6.45	203.0	0.0	415.4
6.00		1.00	0.85	17.879	19.67	410.03	0.667 *	0.000	2.00	9.612	6.41	201.6	0.0	411.3
8.00		1.00	0.85	17.879	19.67	405.92	0.669 *	0.000	2.00	9.516	6.36	200.3	0.0	407.2
10.00		1.00	0.85	17.879	19.67	401.82	0.671 *	0.000	2.00	9.421	6.32	198.9	0.0	403.1
12.00		1.00	0.85	17.879	19.67	397.72	0.673 *	0.000	2.00	9.325	6.28	197.5	0.0	398.9
14.00		1.00	0.85	17.879	19.67	393.61	0.675 *	0.000	2.00	9.229	6.23	196.2	0.0	394.8
16.00		1.00	0.87	18.332	20.17	394.42	0.678 *	0.000	2.00	9.134	6.19	199.7	0.0	390.7
18.00		1.00	0.89	18.767	20.64	394.86	0.680 *	0.000	2.00	9.038	6.15	203.0	0.0	386.6
20.00		1.00	0.91	19.166	21.08	394.79	0.683 *	0.000	2.00	8.942	6.10	205.9	0.0	382.5
22.00		1.00	0.93	19.537	21.49	394.30	0.685 *	0.000	2.00	8.846	6.06	208.4	0.0	378.3
24.00		1.00	0.95	19.883	21.87	393.45	0.687 *	0.000	2.00	8.751	6.02	210.5	0.0	374.2
26.00		1.00	0.96	20.208	22.23	392.29	0.690 *	0.000	2.00	8.655	5.97	212.4	0.0	370.1
28.00		1.00	0.98	20.514	22.57	390.85	0.693 *	0.000	2.00	8.559	5.93	214.1	0.0	366.0
30.00		1.00	0.99	20.804	22.88	389.18	0.695 *	0.000	2.00	8.464	5.89	215.5	0.0	361.8
32.00		1.00	1.00	21.080	23.19	387.30	0.698 *	0.000	2.00	8.368	5.84	216.7	0.0	357.7
34.00		1.00	1.01	21.343	23.48	385.22	0.701 *	0.000	2.00	8.272	5.80	217.8	0.0	353.6
36.00		1.00	1.03	21.594	23.75	382.97	0.704 *	0.000	2.00	8.176	5.75	218.7	0.0	349.5
38.00		1.00	1.04	21.834	24.02	380.56	0.707 *	0.000	2.00	8.081	5.71	219.5	0.0	345.3
40.00		1.00	1.05	22.065	24.27	378.01	0.710 *	0.000	2.00	7.985	5.67	220.1	0.0	341.2
42.00		1.00	1.06	22.288	24.52	375.33	0.713 *	0.000	2.00	7.889	5.62	220.6	0.0	337.1
44.00		1.00	1.07	22.502	24.75	372.53	0.716 *	0.000	2.00	7.794	5.58	221.0	0.0	333.0
46.00		1.00	1.08	22.709	24.98	369.62	0.719 *	0.000	2.00	7.698	5.54	221.3	0.0	328.9
47.00	Appurtenance(s)	1.00	1.08	22.810	25.09	368.12	0.722 *	0.000	1.00	3.813	2.75	110.5	0.0	162.9
47.50	Bot - Section 2	1.00	1.09	22.860	25.15	367.36	0.723 *	0.000	0.50	1.898	1.37	55.2	0.0	81.1
48.00		1.00	1.09	22.909	25.20	366.60	0.724 *	0.000	0.50	1.923	1.39	56.1	0.0	163.0
50.00		1.00	1.10	23.103	25.41	363.48	0.726 *	0.000	2.00	7.633	5.54	225.3	0.0	646.7
52.00		1.00	1.11	23.291	25.62	360.27	0.701 *	0.000	2.00	7.538	5.28	216.6	0.0	638.4
53.25	Top - Section 1	1.00	1.11	23.405	25.75	358.22	0.704 *	0.000	1.25	4.662	3.28	135.1	0.0	394.8
54.00		1.00	1.12	23.473	25.82	363.21	0.701 *	0.000	0.75	2.780	1.95	80.5	0.0	118.7
56.00		1.00	1.12	23.650	26.02	359.86	0.703 *	0.000	2.00	7.346	5.17	215.0	0.0	313.7
58.00		1.00	1.13	23.823	26.20	356.43	0.706 *	0.000	2.00	7.251	5.12	214.8	0.0	309.6
60.00		1.00	1.14	23.990	26.39	352.93	0.710 *	0.000	2.00	7.155	5.08	214.4	0.0	305.5
62.00		1.00	1.15	24.154	26.57	349.36	0.713 *	0.000	2.00	7.059	5.04	214.0	0.0	301.3
64.00		1.00	1.16	24.313	26.74	345.73	0.717 *	0.000	2.00	6.963	4.99	213.6	0.0	297.2
66.00		1.00	1.16	24.469	26.92	342.03	0.720 *	0.000	2.00	6.868	4.95	213.1	0.0	293.1
68.00		1.00	1.17	24.621	27.08	338.28	0.724 *	0.000	2.00	6.772	4.90	212.5	0.0	289.0
70.00		1.00	1.18	24.770	27.25	334.47	0.728 *	0.000	2.00	6.676	4.86	211.9	0.0	284.9
72.00		1.00	1.18	24.915	27.41	330.61	0.732 *	0.000	2.00	6.581	4.82	211.2	0.0	280.7
74.00		1.00	1.19	25.057	27.56	326.69	0.736 *	0.000	2.00	6.485	4.77	210.5	0.0	276.6
76.00		1.00	1.20	25.196	27.72	322.73	0.740 *	0.000	2.00	6.389	4.73	209.8	0.0	272.5
78.00		1.00	1.20	25.333	27.87	318.71	0.745 *	0.000	2.00	6.293	4.69	209.0	0.0	268.4
80.00	Appurtenance(s)	1.00	1.21	25.466	28.01	314.66	0.749 *	0.000	2.00	6.198	4.64	208.1	0.0	264.2
82.00		1.00	1.22	25.597	28.16	310.56	0.754 *	0.000	2.00	6.102	4.60	207.2	0.0	260.1
84.00		1.00	1.22	25.726	28.30	306.41	0.759 *	0.000	2.00	6.006	4.56	206.3	0.0	256.0
86.00		1.00	1.23	25.852	28.44	302.23	0.763 *	0.000	2.00	5.911	4.51	205.3	0.0	251.9

Wind Loading - Shaft

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00	1.00	1.23	25.976	28.57	298.01	0.769 *	0.000	2.00	5.815	4.47	204.3	0.0	247.7
90.00	1.00	1.24	26.098	28.71	293.75	0.774 *	0.000	2.00	5.719	4.43	203.3	0.0	243.6
92.00	1.00	1.25	26.218	28.84	289.45	0.779 *	0.000	2.00	5.623	4.38	202.2	0.0	239.5
94.00	1.00	1.25	26.336	28.97	285.12	0.785 *	0.000	2.00	5.528	4.34	201.1	0.0	235.4
96.00	1.00	1.26	26.451	29.10	280.76	0.791 *	0.000	2.00	5.432	4.29	199.9	0.0	231.3
97.00 Bot - Section 3	1.00	1.26	26.509	29.16	278.56	0.795 *	0.000	1.00	2.680	2.13	99.4	0.0	114.1
98.00	1.00	1.26	26.565	29.22	276.36	0.798 *	0.000	1.00	2.709	2.16	101.1	0.0	209.3
100.00	1.00	1.27	26.677	29.35	271.93	0.803 *	0.000	2.00	5.346	4.29	201.5	0.0	413.0
100.00 Top - Section 2	1.00	1.27	26.733	29.41	269.70	0.808 *	0.000	1.00	2.637	2.13	100.2	0.0	203.7
102.00	1.00	1.27	26.788	29.47	273.02	0.804 *	0.000	1.00	2.613	2.10	99.0	0.0	92.9
104.00	1.00	1.28	26.896	29.59	268.54	0.809 *	0.000	2.00	5.155	4.17	197.3	0.0	183.1
106.00	1.00	1.28	27.003	29.70	264.03	0.815 *	0.000	2.00	5.059	4.13	196.1	0.0	179.7
108.00	1.00	1.29	27.109	29.82	259.50	0.822 *	0.000	2.00	4.964	4.08	194.7	0.0	176.3
110.00 Appurtenance(s)	1.00	1.29	27.213	29.93	254.93	0.830 *	0.000	2.00	4.868	4.04	193.4	0.0	172.8
112.00	1.00	1.30	27.315	30.05	250.34	0.761 *	0.000	2.00	4.772	3.63	174.7	0.0	169.4
114.00	1.00	1.30	27.416	30.16	245.72	0.768 *	0.000	2.00	4.676	3.59	173.2	0.0	166.0
116.00	1.00	1.31	27.516	30.27	241.08	0.774 *	0.000	2.00	4.581	3.55	171.8	0.0	162.5
118.00	1.00	1.31	27.614	30.38	236.41	0.781 *	0.000	2.00	4.485	3.50	170.3	0.0	159.1
120.00	1.00	1.32	27.712	30.48	231.71	0.788 *	0.000	2.00	4.389	3.46	168.7	0.0	155.7
122.00	1.00	1.32	27.807	30.59	227.00	0.796 *	0.000	2.00	4.294	3.42	167.2	0.0	152.2
124.00	1.00	1.33	27.902	30.69	222.26	0.803 *	0.000	2.00	4.198	3.37	165.6	0.0	148.8
126.00	1.00	1.33	27.995	30.79	217.49	0.812 *	0.000	2.00	4.102	3.33	164.0	0.0	145.4
128.00	1.00	1.34	28.088	30.90	212.71	0.820 *	0.000	2.00	4.006	3.29	162.4	0.0	141.9
130.00	1.00	1.34	28.179	31.00	207.90	0.829 *	0.000	2.00	3.911	3.24	160.8	0.0	138.5
131.00 Appurtenance(s)	1.00	1.34	28.224	31.05	205.49	0.836 *	0.000	1.00	1.919	1.60	79.7	0.0	68.0
132.00	1.00	1.34	28.269	31.10	203.08	0.841 *	0.000	1.00	1.896	1.59	79.3	0.0	67.1
134.00	1.00	1.35	28.358	31.19	198.23	1.200 *	0.000	2.00	3.719	4.46	222.8	0.0	131.6
136.00	1.00	1.35	28.446	31.29	193.36	1.200 *	0.000	2.00	3.624	4.35	217.7	0.0	128.2
138.00	1.00	1.36	28.533	31.39	188.47	1.200 *	0.000	2.00	3.528	4.23	212.6	0.0	124.7
140.00 Appurtenance(s)	1.00	1.36	28.619	31.48	183.56	1.200 *	0.000	2.00	3.432	4.12	207.5	0.0	121.3
142.00	1.00	1.36	28.703	31.57	178.64	1.200 *	0.000	2.00	3.336	4.00	202.3	0.0	117.9
144.00	1.00	1.37	28.788	31.67	173.69	1.200 *	0.000	2.00	3.241	3.89	197.0	0.0	114.4
146.00	1.00	1.37	28.871	31.76	168.73	1.200 *	0.000	2.00	3.145	3.77	191.8	0.0	111.0
148.00	1.00	1.38	28.953	31.85	163.75	1.200 *	0.000	2.00	3.049	3.66	186.5	0.0	107.6
148.25 Bot - Section 4	1.00	1.38	28.963	31.86	163.12	1.200 *	0.000	0.25	0.374	0.45	22.9	0.0	13.2
149.00 Appurtenance(s)	1.00	1.38	28.994	31.89	161.25	1.200 *	0.000	0.75	1.138	1.37	69.7	0.0	63.5
150.00	1.00	1.38	29.034	31.94	158.75	1.200 *	0.000	1.00	1.497	1.80	91.8	0.0	83.5
150.50 Top - Section 3	1.00	1.38	29.055	31.96	157.50	1.200 *	0.000	0.50	0.739	0.89	45.4	0.0	41.2
152.00	1.00	1.38	29.115	32.03	157.20	1.200 *	0.000	1.50	2.182	2.62	134.2	0.0	46.5
154.00	1.00	1.39	29.195	32.11	152.18	1.200 *	0.000	2.00	2.826	3.39	174.2	0.0	60.2
156.00	1.00	1.39	29.273	32.20	147.13	1.200 *	0.000	2.00	2.730	3.28	168.8	0.0	58.1
158.00	1.00	1.40	29.352	32.29	142.07	1.200 *	0.000	2.00	2.634	3.16	163.3	0.0	56.1
159.00 Appurtenance(s)	1.00	1.40	29.390	32.33	139.53	1.200 *	0.000	1.00	1.281	1.54	79.5	0.0	27.3

* Cf Adjusted by Linear Load Ra Effect

Totals:	159.00	15,902.6	21,360.2
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Discrete Appurtenance Forces

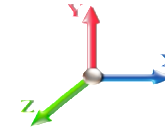
Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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	159.00	Site Pro 1 -	1	29.390	32.329	1.00	1.00	48.00	2380.50	0.000	0.000	2482.90	0.00	0.00
2	159.00	Powerwave 7770	3	29.506	32.456	0.73	1.00	12.68	94.50	0.000	3.000	658.47	0.00	1975.42
3	159.00	Powerwave	3	29.506	32.456	0.75	1.00	19.19	172.80	0.000	3.000	996.66	0.00	2989.98
4	159.00	Powerwave Technologies	6	29.506	32.456	0.50	1.00	3.87	76.14	0.000	3.000	200.97	0.00	602.90
5	159.00	Ericsson RRUS 11-700	3	29.506	32.456	0.50	1.00	3.78	148.50	0.000	3.000	196.29	0.00	588.88
6	159.00	Raycap DC6-48-60-18-8F	2	29.506	32.456	0.50	1.00	0.92	59.04	0.000	3.000	47.78	0.00	143.33
7	159.00	Site Pro 1 - HRK14	1	29.390	32.329	1.00	1.00	8.13	272.12	0.000	0.000	420.54	0.00	0.00
8	159.00	Quintel QS66512-2	3	29.506	32.456	0.92	1.00	22.44	299.70	0.000	3.000	1165.24	0.00	3495.72
9	159.00	Kaelus DBC0061F1V51-2	3	29.506	32.456	0.50	1.00	0.65	49.41	0.000	3.000	33.49	0.00	100.48
10	159.00	Ericsson RRUS 32 B30	3	29.506	32.456	0.50	1.00	4.11	162.00	0.000	3.000	213.43	0.00	640.29
11	159.00	Ericsson RRUS 32 B2	3	29.506	32.456	0.50	1.00	4.11	143.10	0.000	3.000	213.43	0.00	640.29
12	159.00	Decibel DB404-B - Omni	1	29.506	32.456	1.00	1.00	0.00	12.60	0.000	3.000	0.00	0.00	0.00
13	149.00	Alcatel Lucent - 800 MHz	3	29.075	31.982	0.50	0.75	3.75	143.10	0.000	2.000	192.08	0.00	384.16
14	149.00	Alcatel Lucent -	3	29.075	31.982	0.50	0.75	6.11	189.00	0.000	2.000	312.42	0.00	624.84
15	149.00	RFS - APXVSP18-C-A20	3	29.075	31.982	0.62	0.75	15.72	286.20	0.000	2.000	804.64	0.00	1609.28
16	149.00	Alcatel Lucent - 1900 MHz	3	29.075	31.982	0.50	0.75	5.73	118.80	0.000	2.000	293.14	0.00	586.27
17	149.00	Low Profile Platform	1	28.994	31.893	1.00	1.00	35.00	1080.00	0.000	0.000	1786.01	0.00	0.00
18	149.00	Alcatel Lucent - 800 MHz	3	29.075	31.982	0.50	0.75	1.18	23.76	0.000	2.000	60.17	0.00	120.34
19	149.00	RFS - ACU-A20-N - RET	4	29.075	31.982	0.50	0.75	0.28	3.60	0.000	2.000	14.40	0.00	28.80
20	149.00	SitePro HRK-12 Handrail	1	28.994	31.893	1.00	1.00	6.75	235.55	0.000	0.000	344.45	0.00	0.00
21	149.00	RFS - APXVTM14-C-I20 -	3	29.075	31.982	0.59	0.75	11.27	151.20	0.000	2.000	576.67	0.00	1153.34
22	140.00	RFS -	3	28.725	31.597	0.50	0.75	1.76	42.80	0.000	2.500	89.17	0.00	222.92
23	140.00	RFS -	3	28.725	31.597	0.55	0.75	33.24	273.78	0.000	2.500	1680.67	0.00	4201.67
24	140.00	RFS -	3	28.725	31.597	0.46	0.75	9.22	109.89	0.000	2.500	466.17	0.00	1165.42
25	140.00	EMS - FR90-16-XXDP -	6	28.725	31.597	0.51	0.75	13.34	97.20	0.000	2.500	674.49	0.00	1686.22
26	140.00	LP Platform w/ Handrails	1	28.619	31.480	1.00	1.00	34.00	1440.00	0.000	0.000	1712.53	0.00	0.00
27	140.00	Andrew - ATSBT-TOP-FM	3	28.725	31.597	0.50	0.75	0.30	4.86	0.000	2.500	15.24	0.00	38.11
28	131.00	Antel LPA-80063/6CF -	6	28.224	31.046	0.75	0.80	43.32	145.80	0.000	0.000	2151.64	0.00	0.00
29	131.00	Kathrein 742	3	28.224	31.046	0.58	0.80	5.44	44.55	0.000	0.000	270.39	0.00	0.00
30	131.00	Antel BXA-70063/6CF -	3	28.224	31.046	0.56	0.80	12.72	45.90	0.000	0.000	631.73	0.00	0.00
31	131.00	Antel BXA-171063-12BF -	3	28.224	31.046	0.67	0.80	9.56	40.50	0.000	0.000	474.68	0.00	0.00
32	131.00	Alcatel Lucent	3	28.224	31.046	0.54	0.80	5.63	148.50	0.000	0.000	279.57	0.00	0.00
33	131.00	RFS FD9R6004/2C-3L -	6	28.224	31.046	0.54	0.80	1.16	16.74	0.000	0.000	57.51	0.00	0.00
34	131.00	RFS DB-T1-6Z-8AB-0Z -	1	28.224	31.046	1.00	1.00	4.80	17.01	0.000	0.000	238.44	0.00	0.00
35	131.00	Low Profile Platform	1	28.224	31.046	1.00	1.00	22.00	1080.00	0.000	0.000	1092.83	0.00	0.00
36	110.00	4 ft. Standoff	1	27.213	29.934	1.00	1.00	3.50	47.99	0.000	0.000	167.63	0.00	0.00
37	110.00	Sinclair SCL329-HL -	1	27.494	30.243	1.00	1.00	2.22	9.36	0.000	5.550	107.42	0.00	596.20
38	80.00	Sinclair SCL329-HL -	1	25.824	28.407	1.00	1.00	2.22	9.36	0.000	5.550	100.90	0.00	559.99
39	80.00	4 ft Standoff	1	25.466	28.013	1.00	1.00	3.50	47.99	0.000	0.000	156.87	0.00	0.00
40	47.00	4 ft Standoff	1	22.810	25.091	1.00	1.00	3.50	47.99	0.000	0.000	140.51	0.00	0.00
41	47.00	Decibel 26DB - GPS	1	23.103	25.413	1.00	1.00	0.16	9.00	0.000	3.000	6.51	0.00	19.52

Totals: 9,780.83 21,528.07

Total Applied Force Summary

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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		204.38	507.75	0.00	0.00
4.00		203.01	503.63	0.00	0.00
6.00		201.64	499.50	0.00	0.00
8.00		200.27	495.38	0.00	0.00
10.00		198.90	491.26	0.00	0.00
12.00		197.53	487.14	0.00	0.00
14.00		196.16	483.01	0.00	0.00
16.00		199.73	478.89	0.00	0.00
18.00		203.02	474.77	0.00	0.00
20.00		205.88	470.64	0.00	0.00
22.00		208.36	466.52	0.00	0.00
24.00		210.53	462.40	0.00	0.00
26.00		212.42	458.28	0.00	0.00
28.00		214.06	454.15	0.00	0.00
30.00		215.50	450.03	0.00	0.00
32.00		216.74	445.91	0.00	0.00
34.00		217.80	441.79	0.00	0.00
36.00		218.71	437.66	0.00	0.00
38.00		219.47	433.54	0.00	0.00
40.00		220.11	429.42	0.00	0.00
42.00		220.62	425.29	0.00	0.00
44.00		221.01	421.17	0.00	0.00
46.00		221.30	417.05	0.00	0.00
47.00	(2) attachments	257.50	263.97	0.00	19.52
47.50		55.20	103.10	0.00	0.00
48.00		56.14	185.01	0.00	0.00
50.00		225.35	734.88	0.00	0.00
52.00		216.61	726.35	0.00	0.00
53.25		135.14	449.78	0.00	0.00
54.00		80.49	151.67	0.00	0.00
56.00		215.02	401.61	0.00	0.00
58.00		214.76	397.49	0.00	0.00
60.00		214.44	393.37	0.00	0.00
62.00		214.05	389.25	0.00	0.00
64.00		213.60	385.12	0.00	0.00
66.00		213.09	381.00	0.00	0.00
68.00		212.53	376.88	0.00	0.00
70.00		211.91	372.76	0.00	0.00
72.00		211.24	368.63	0.00	0.00
74.00		210.53	364.51	0.00	0.00
76.00		209.77	360.39	0.00	0.00
78.00		208.96	356.26	0.00	0.00
80.00	(2) attachments	465.88	409.49	0.00	559.99
82.00		207.22	347.08	0.00	0.00
84.00		206.29	342.96	0.00	0.00
86.00		205.32	338.84	0.00	0.00

Total Applied Force Summary

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00		204.32	334.71	0.00	0.00
90.00		203.27	330.59	0.00	0.00
92.00		202.20	326.47	0.00	0.00
94.00		201.09	322.35	0.00	0.00
96.00		199.94	318.22	0.00	0.00
97.00		99.43	157.57	0.00	0.00
98.00		101.10	252.83	0.00	0.00
100.00		201.55	500.00	0.00	0.00
101.00		100.23	247.16	0.00	0.00
102.00		99.04	136.35	0.00	0.00
104.00		197.34	270.12	0.00	0.00
106.00		196.05	266.68	0.00	0.00
108.00		194.74	263.24	0.00	0.00
110.00	(2) attachments	468.46	317.16	0.00	596.20
112.00		174.70	255.44	0.00	0.00
114.00		173.24	252.00	0.00	0.00
116.00		171.76	248.57	0.00	0.00
118.00		170.26	245.13	0.00	0.00
120.00		168.73	241.69	0.00	0.00
122.00		167.19	238.26	0.00	0.00
124.00		165.62	234.82	0.00	0.00
126.00		164.03	231.39	0.00	0.00
128.00		162.41	227.95	0.00	0.00
130.00		160.78	224.52	0.00	0.00
131.00	(26) attachments	5276.48	1649.97	0.00	0.00
132.00		79.29	97.89	0.00	0.00
134.00		267.67	193.20	0.00	0.00
136.00		262.75	189.77	0.00	0.00
138.00		257.79	186.33	0.00	0.00
140.00	(19) attachments	4891.05	2151.42	0.00	7314.34
142.00		247.73	179.46	0.00	0.00
144.00		242.64	154.64	0.00	0.00
146.00		237.50	144.07	0.00	0.00
148.00		232.33	140.64	0.00	0.00
148.25		28.64	17.34	0.00	0.00
149.00	(24) attachments	4470.89	2307.16	0.00	4507.03
150.00		114.77	100.06	0.00	0.00
150.50		56.87	49.52	0.00	0.00
152.00		168.77	67.86	0.00	0.00
154.00		220.47	86.38	0.00	0.00
156.00		215.15	84.32	0.00	0.00
158.00		209.79	82.26	0.00	0.00
159.00	(32) attachments	6732.02	3910.77	0.00	11177.31
	Totals:	38,048.30	37,471.85	0.00	24,174.40

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.106	1.019	17.879	0.00	22.46
2.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.106	1.019	17.879	0.00	0.58
2.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.106	1.019	17.879	0.00	2.88
2.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.106	1.019	17.879	0.00	0.94
2.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.019	17.879	0.00	0.94
2.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.106	1.019	17.879	0.00	0.29
4.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.107	1.022	17.879	0.00	22.46
4.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.107	1.022	17.879	0.00	0.58
4.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.107	1.022	17.879	0.00	2.88
4.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.107	1.022	17.879	0.00	0.94
4.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.107	1.022	17.879	0.00	0.94
4.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.107	1.022	17.879	0.00	0.29
6.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.109	1.026	17.879	0.00	22.46
6.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.109	1.026	17.879	0.00	0.58
6.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.109	1.026	17.879	0.00	2.88
6.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.109	1.026	17.879	0.00	0.94
6.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.109	1.026	17.879	0.00	0.94
6.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.109	1.026	17.879	0.00	0.29
8.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.110	1.029	17.879	0.00	22.46
8.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.110	1.029	17.879	0.00	0.58
8.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.110	1.029	17.879	0.00	2.88
8.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.110	1.029	17.879	0.00	0.94
8.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.110	1.029	17.879	0.00	0.94
8.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.110	1.029	17.879	0.00	0.29
10.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.111	1.032	17.879	0.00	22.46
10.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.111	1.032	17.879	0.00	0.58
10.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.111	1.032	17.879	0.00	2.88
10.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.111	1.032	17.879	0.00	0.94
10.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.032	17.879	0.00	0.94
10.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.111	1.032	17.879	0.00	0.29
12.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.112	1.036	17.879	0.00	22.46
12.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.112	1.036	17.879	0.00	0.58
12.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.112	1.036	17.879	0.00	2.88
12.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.112	1.036	17.879	0.00	0.94
12.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.112	1.036	17.879	0.00	0.94
12.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.112	1.036	17.879	0.00	0.29
14.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.113	1.039	17.879	0.00	22.46
14.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.113	1.039	17.879	0.00	0.58
14.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.113	1.039	17.879	0.00	2.88
14.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.113	1.039	17.879	0.00	0.94
14.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.113	1.039	17.879	0.00	0.94
14.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.113	1.039	17.879	0.00	0.29
16.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.114	1.043	18.332	0.00	22.46
16.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.114	1.043	18.332	0.00	0.58
16.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.114	1.043	18.332	0.00	2.88
16.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.114	1.043	18.332	0.00	0.94
16.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.114	1.043	18.332	0.00	0.94

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
16.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.114	1.043	18.332	0.00	0.29
18.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.115	1.046	18.767	0.00	22.46
18.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.115	1.046	18.767	0.00	0.58
18.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.115	1.046	18.767	0.00	2.88
18.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.115	1.046	18.767	0.00	0.94
18.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.115	1.046	18.767	0.00	0.94
18.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.115	1.046	18.767	0.00	0.29
20.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.117	1.050	19.166	0.00	22.46
20.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.117	1.050	19.166	0.00	0.58
20.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.117	1.050	19.166	0.00	2.88
20.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.117	1.050	19.166	0.00	0.94
20.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.117	1.050	19.166	0.00	0.94
20.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.117	1.050	19.166	0.00	0.29
22.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.118	1.054	19.537	0.00	22.46
22.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.118	1.054	19.537	0.00	0.58
22.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.118	1.054	19.537	0.00	2.88
22.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.118	1.054	19.537	0.00	0.94
22.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.118	1.054	19.537	0.00	0.94
22.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.118	1.054	19.537	0.00	0.29
24.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.119	1.058	19.883	0.00	22.46
24.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.119	1.058	19.883	0.00	0.58
24.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.119	1.058	19.883	0.00	2.88
24.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.119	1.058	19.883	0.00	0.94
24.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.119	1.058	19.883	0.00	0.94
24.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.119	1.058	19.883	0.00	0.29
26.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.121	1.062	20.208	0.00	22.46
26.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.121	1.062	20.208	0.00	0.58
26.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.121	1.062	20.208	0.00	2.88
26.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.121	1.062	20.208	0.00	0.94
26.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.062	20.208	0.00	0.94
26.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.121	1.062	20.208	0.00	0.29
28.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.122	1.066	20.514	0.00	22.46
28.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.122	1.066	20.514	0.00	0.58
28.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.122	1.066	20.514	0.00	2.88
28.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.122	1.066	20.514	0.00	0.94
28.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.122	1.066	20.514	0.00	0.94
28.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.122	1.066	20.514	0.00	0.29
30.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.123	1.070	20.804	0.00	22.46
30.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.123	1.070	20.804	0.00	0.58
30.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.123	1.070	20.804	0.00	2.88
30.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.123	1.070	20.804	0.00	0.94
30.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.123	1.070	20.804	0.00	0.94
30.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.123	1.070	20.804	0.00	0.29
32.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.125	1.074	21.080	0.00	22.46
32.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.125	1.074	21.080	0.00	0.58
32.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.125	1.074	21.080	0.00	2.88
32.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.125	1.074	21.080	0.00	0.94

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
32.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.074	21.080	0.00	0.94
32.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.125	1.074	21.080	0.00	0.29
34.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.126	1.078	21.343	0.00	22.46
34.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.126	1.078	21.343	0.00	0.58
34.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.126	1.078	21.343	0.00	2.88
34.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.126	1.078	21.343	0.00	0.94
34.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.078	21.343	0.00	0.94
34.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.126	1.078	21.343	0.00	0.29
36.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.128	1.083	21.594	0.00	22.46
36.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.128	1.083	21.594	0.00	0.58
36.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.128	1.083	21.594	0.00	2.88
36.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.128	1.083	21.594	0.00	0.94
36.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	21.594	0.00	0.94
36.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.128	1.083	21.594	0.00	0.29
38.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.129	1.087	21.834	0.00	22.46
38.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.129	1.087	21.834	0.00	0.58
38.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.129	1.087	21.834	0.00	2.88
38.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.129	1.087	21.834	0.00	0.94
38.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.129	1.087	21.834	0.00	0.94
38.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.129	1.087	21.834	0.00	0.29
40.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.131	1.092	22.065	0.00	22.46
40.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.131	1.092	22.065	0.00	0.58
40.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.131	1.092	22.065	0.00	2.88
40.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.131	1.092	22.065	0.00	0.94
40.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.131	1.092	22.065	0.00	0.94
40.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.131	1.092	22.065	0.00	0.29
42.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.132	1.097	22.288	0.00	22.46
42.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.132	1.097	22.288	0.00	0.58
42.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.132	1.097	22.288	0.00	2.88
42.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.132	1.097	22.288	0.00	0.94
42.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.132	1.097	22.288	0.00	0.94
42.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.132	1.097	22.288	0.00	0.29
44.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.134	1.102	22.502	0.00	22.46
44.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.134	1.102	22.502	0.00	0.58
44.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.134	1.102	22.502	0.00	2.88
44.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.134	1.102	22.502	0.00	0.94
44.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.102	22.502	0.00	0.94
44.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.134	1.102	22.502	0.00	0.29
46.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.136	1.107	22.709	0.00	22.46
46.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.136	1.107	22.709	0.00	0.58
46.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.136	1.107	22.709	0.00	2.88
46.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.136	1.107	22.709	0.00	0.94
46.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.136	1.107	22.709	0.00	0.94
46.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.136	1.107	22.709	0.00	0.29
47.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.137	1.110	22.810	0.00	11.23
47.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.137	1.110	22.810	0.00	0.29
47.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.137	1.110	22.810	0.00	1.44

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
47.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.137	1.110	22.810	0.00	0.47
47.00	7/8"	Yes	1.00	0.000	0.00	0.00	0.00	0.137	1.110	22.810	0.00	0.47
47.00	1/2"	Yes	1.00	0.000	0.65	0.05	0.00	0.137	1.110	22.810	0.00	0.14
47.50	1 5/8"	Yes	0.50	0.000	2.00	0.08	0.00	0.137	1.112	22.860	0.00	5.62
47.50	1/2" Fiber	Yes	0.50	0.000	1.00	0.04	0.00	0.137	1.112	22.860	0.00	0.14
47.50	3/4" DC Power	Yes	0.50	0.000	1.50	0.06	0.00	0.137	1.112	22.860	0.00	0.72
47.50	7/8"	Yes	0.50	0.000	1.11	0.05	0.00	0.137	1.112	22.860	0.00	0.23
47.50	7/8"	Yes	0.50	0.000	0.00	0.00	0.00	0.137	1.112	22.860	0.00	0.23
47.50	1/2"	Yes	0.50	0.000	0.65	0.03	0.00	0.137	1.112	22.860	0.00	0.07
48.00	1 5/8"	Yes	0.50	0.000	2.00	0.08	0.00	0.138	1.114	22.909	0.00	5.62
48.00	1/2" Fiber	Yes	0.50	0.000	1.00	0.04	0.00	0.138	1.114	22.909	0.00	0.14
48.00	3/4" DC Power	Yes	0.50	0.000	1.50	0.06	0.00	0.138	1.114	22.909	0.00	0.72
48.00	7/8"	Yes	0.50	0.000	1.11	0.05	0.00	0.138	1.114	22.909	0.00	0.23
48.00	7/8"	Yes	0.50	0.000	0.00	0.00	0.00	0.138	1.114	22.909	0.00	0.23
48.00	1/2"	Yes	0.50	0.000	0.65	0.03	0.00	0.138	1.114	22.909	0.00	0.07
50.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.139	1.117	23.103	0.00	22.46
50.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.139	1.117	23.103	0.00	0.58
50.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.139	1.117	23.103	0.00	2.88
50.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.139	1.117	23.103	0.00	0.94
50.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.139	1.117	23.103	0.00	0.94
50.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.139	1.117	23.103	0.00	0.29
52.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.126	1.079	23.291	0.00	22.46
52.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.126	1.079	23.291	0.00	0.58
52.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.126	1.079	23.291	0.00	2.88
52.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.126	1.079	23.291	0.00	0.94
52.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	23.291	0.00	0.94
53.25	1 5/8"	Yes	1.25	0.000	2.00	0.21	0.00	0.128	1.083	23.405	0.00	14.04
53.25	1/2" Fiber	Yes	1.25	0.000	1.00	0.10	0.00	0.128	1.083	23.405	0.00	0.36
53.25	3/4" DC Power	Yes	1.25	0.000	1.50	0.16	0.00	0.128	1.083	23.405	0.00	1.80
53.25	7/8"	Yes	1.25	0.000	1.11	0.12	0.00	0.128	1.083	23.405	0.00	0.59
53.25	7/8"	Yes	1.25	0.000	0.00	0.00	0.00	0.128	1.083	23.405	0.00	0.59
54.00	1 5/8"	Yes	0.75	0.000	2.00	0.13	0.00	0.126	1.078	23.473	0.00	8.42
54.00	1/2" Fiber	Yes	0.75	0.000	1.00	0.06	0.00	0.126	1.078	23.473	0.00	0.22
54.00	3/4" DC Power	Yes	0.75	0.000	1.50	0.09	0.00	0.126	1.078	23.473	0.00	1.08
54.00	7/8"	Yes	0.75	0.000	1.11	0.07	0.00	0.126	1.078	23.473	0.00	0.35
54.00	7/8"	Yes	0.75	0.000	0.00	0.00	0.00	0.126	1.078	23.473	0.00	0.35
56.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.127	1.082	23.650	0.00	22.46
56.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.127	1.082	23.650	0.00	0.58
56.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.127	1.082	23.650	0.00	2.88
56.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.127	1.082	23.650	0.00	0.94
56.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.127	1.082	23.650	0.00	0.94
58.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.129	1.087	23.823	0.00	22.46
58.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.129	1.087	23.823	0.00	0.58
58.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.129	1.087	23.823	0.00	2.88
58.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.129	1.087	23.823	0.00	0.94
58.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.129	1.087	23.823	0.00	0.94
60.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.131	1.092	23.990	0.00	22.46

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
60.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.131	1.092	23.990	0.00	0.58
60.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.131	1.092	23.990	0.00	2.88
60.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.131	1.092	23.990	0.00	0.94
60.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.131	1.092	23.990	0.00	0.94
62.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.132	1.097	24.154	0.00	22.46
62.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.132	1.097	24.154	0.00	0.58
62.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.132	1.097	24.154	0.00	2.88
62.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.132	1.097	24.154	0.00	0.94
62.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.132	1.097	24.154	0.00	0.94
64.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.134	1.103	24.313	0.00	22.46
64.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.134	1.103	24.313	0.00	0.58
64.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.134	1.103	24.313	0.00	2.88
64.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.134	1.103	24.313	0.00	0.94
64.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	24.313	0.00	0.94
66.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.136	1.108	24.469	0.00	22.46
66.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.136	1.108	24.469	0.00	0.58
66.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.136	1.108	24.469	0.00	2.88
66.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.136	1.108	24.469	0.00	0.94
66.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.136	1.108	24.469	0.00	0.94
68.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.138	1.114	24.621	0.00	22.46
68.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.138	1.114	24.621	0.00	0.58
68.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.138	1.114	24.621	0.00	2.88
68.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.138	1.114	24.621	0.00	0.94
68.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.138	1.114	24.621	0.00	0.94
70.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.140	1.120	24.770	0.00	22.46
70.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.140	1.120	24.770	0.00	0.58
70.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.140	1.120	24.770	0.00	2.88
70.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.140	1.120	24.770	0.00	0.94
70.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.140	1.120	24.770	0.00	0.94
72.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.142	1.126	24.915	0.00	22.46
72.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.142	1.126	24.915	0.00	0.58
72.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.142	1.126	24.915	0.00	2.88
72.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.142	1.126	24.915	0.00	0.94
72.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.142	1.126	24.915	0.00	0.94
74.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.144	1.133	25.057	0.00	22.46
74.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.144	1.133	25.057	0.00	0.58
74.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.144	1.133	25.057	0.00	2.88
74.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.144	1.133	25.057	0.00	0.94
74.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.144	1.133	25.057	0.00	0.94
76.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.146	1.139	25.196	0.00	22.46
76.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.146	1.139	25.196	0.00	0.58
76.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.146	1.139	25.196	0.00	2.88
76.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.146	1.139	25.196	0.00	0.94
76.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.146	1.139	25.196	0.00	0.94
78.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.149	1.146	25.333	0.00	22.46
78.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.149	1.146	25.333	0.00	0.58
78.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.149	1.146	25.333	0.00	2.88

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
78.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.149	1.146	25.333	0.00	0.94
78.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.149	1.146	25.333	0.00	0.94
80.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.151	1.153	25.466	0.00	22.46
80.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.151	1.153	25.466	0.00	0.58
80.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.151	1.153	25.466	0.00	2.88
80.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.151	1.153	25.466	0.00	0.94
80.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.151	1.153	25.466	0.00	0.94
82.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.153	1.160	25.597	0.00	22.46
82.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.153	1.160	25.597	0.00	0.58
82.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.153	1.160	25.597	0.00	2.88
82.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.153	1.160	25.597	0.00	0.94
84.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.156	1.167	25.726	0.00	22.46
84.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.156	1.167	25.726	0.00	0.58
84.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.156	1.167	25.726	0.00	2.88
84.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.156	1.167	25.726	0.00	0.94
86.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.158	1.175	25.852	0.00	22.46
86.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.158	1.175	25.852	0.00	0.58
86.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.158	1.175	25.852	0.00	2.88
86.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.158	1.175	25.852	0.00	0.94
88.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.161	1.182	25.976	0.00	22.46
88.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.161	1.182	25.976	0.00	0.58
88.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.161	1.182	25.976	0.00	2.88
88.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.161	1.182	25.976	0.00	0.94
90.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.163	1.190	26.098	0.00	22.46
90.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.163	1.190	26.098	0.00	0.58
90.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.163	1.190	26.098	0.00	2.88
90.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.163	1.190	26.098	0.00	0.94
92.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.166	1.199	26.218	0.00	22.46
92.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.166	1.199	26.218	0.00	0.58
92.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.166	1.199	26.218	0.00	2.88
92.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.166	1.199	26.218	0.00	0.94
94.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.169	1.207	26.336	0.00	22.46
94.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.169	1.207	26.336	0.00	0.58
94.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.169	1.207	26.336	0.00	2.88
94.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.169	1.207	26.336	0.00	0.94
96.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.172	1.216	26.451	0.00	22.46
96.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.172	1.216	26.451	0.00	0.58
96.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.172	1.216	26.451	0.00	2.88
96.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.172	1.216	26.451	0.00	0.94
97.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.174	1.223	26.509	0.00	11.23
97.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.174	1.223	26.509	0.00	0.29
97.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.174	1.223	26.509	0.00	1.44
97.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.174	1.223	26.509	0.00	0.47
98.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.176	1.228	26.565	0.00	11.23
98.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.176	1.228	26.565	0.00	0.29
98.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.176	1.228	26.565	0.00	1.44
98.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.176	1.228	26.565	0.00	0.47

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
100.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.178	1.235	26.677	0.00	22.46
100.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.178	1.235	26.677	0.00	0.58
100.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.178	1.235	26.677	0.00	2.88
100.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.178	1.235	26.677	0.00	0.94
101.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.181	1.243	26.733	0.00	11.23
101.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.181	1.243	26.733	0.00	0.29
101.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.181	1.243	26.733	0.00	1.44
101.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.181	1.243	26.733	0.00	0.47
102.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.179	1.237	26.788	0.00	11.23
102.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.179	1.237	26.788	0.00	0.29
102.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.179	1.237	26.788	0.00	1.44
102.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.179	1.237	26.788	0.00	0.47
104.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.181	1.244	26.896	0.00	22.46
104.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.181	1.244	26.896	0.00	0.58
104.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.181	1.244	26.896	0.00	2.88
104.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.181	1.244	26.896	0.00	0.94
106.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.185	1.254	27.003	0.00	22.46
106.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.185	1.254	27.003	0.00	0.58
106.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.185	1.254	27.003	0.00	2.88
106.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.185	1.254	27.003	0.00	0.94
108.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.188	1.265	27.109	0.00	22.46
108.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.188	1.265	27.109	0.00	0.58
108.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.188	1.265	27.109	0.00	2.88
108.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.188	1.265	27.109	0.00	0.94
110.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.192	1.276	27.213	0.00	22.46
110.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.192	1.276	27.213	0.00	0.58
110.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.192	1.276	27.213	0.00	2.88
110.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.192	1.276	27.213	0.00	0.94
112.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.157	1.171	27.315	0.00	22.46
112.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.157	1.171	27.315	0.00	0.58
112.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.157	1.171	27.315	0.00	2.88
114.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.160	1.181	27.416	0.00	22.46
114.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.160	1.181	27.416	0.00	0.58
114.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.160	1.181	27.416	0.00	2.88
116.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.164	1.191	27.516	0.00	22.46
116.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.164	1.191	27.516	0.00	0.58
116.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.164	1.191	27.516	0.00	2.88
118.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.167	1.202	27.614	0.00	22.46
118.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.167	1.202	27.614	0.00	0.58
118.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.167	1.202	27.614	0.00	2.88
120.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.171	1.213	27.712	0.00	22.46
120.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.171	1.213	27.712	0.00	0.58
120.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.171	1.213	27.712	0.00	2.88
122.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.175	1.224	27.807	0.00	22.46
122.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.175	1.224	27.807	0.00	0.58
122.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.175	1.224	27.807	0.00	2.88
124.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.179	1.236	27.902	0.00	22.46

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
124.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.179	1.236	27.902	0.00	0.58
124.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.179	1.236	27.902	0.00	2.88
126.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.183	1.248	27.995	0.00	22.46
126.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.183	1.248	27.995	0.00	0.58
126.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.183	1.248	27.995	0.00	2.88
128.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.187	1.262	28.088	0.00	22.46
128.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.187	1.262	28.088	0.00	0.58
128.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.187	1.262	28.088	0.00	2.88
130.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.192	1.275	28.179	0.00	22.46
130.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.192	1.275	28.179	0.00	0.58
130.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.192	1.275	28.179	0.00	2.88
131.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.195	1.286	28.224	0.00	11.23
131.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.195	1.286	28.224	0.00	0.29
131.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.195	1.286	28.224	0.00	1.44
132.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.198	1.293	28.269	0.00	11.23
132.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.198	1.293	28.269	0.00	0.29
132.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.198	1.293	28.269	0.00	1.44
134.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.202	0.000	28.358	19.96	22.46
134.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.202	0.000	28.358	9.98	0.58
134.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.202	0.000	28.358	14.97	2.88
136.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.207	0.000	28.446	20.03	22.46
136.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.207	0.000	28.446	10.01	0.58
136.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.207	0.000	28.446	15.02	2.88
138.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.213	0.000	28.533	20.09	22.46
138.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.213	0.000	28.533	10.04	0.58
138.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.213	0.000	28.533	15.07	2.88
140.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.219	0.000	28.619	20.15	22.46
140.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.219	0.000	28.619	10.07	0.58
140.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.219	0.000	28.619	15.11	2.88
142.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.225	0.000	28.703	20.21	22.46
142.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.225	0.000	28.703	10.10	0.58
142.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.225	0.000	28.703	15.16	2.88
144.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.231	0.000	28.788	20.27	22.46
144.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.231	0.000	28.788	10.13	0.58
144.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.231	0.000	28.788	15.20	2.88
146.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.238	0.000	28.871	20.32	22.46
146.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.238	0.000	28.871	10.16	0.58
146.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.238	0.000	28.871	15.24	2.88
148.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.246	0.000	28.953	20.38	22.46
148.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.246	0.000	28.953	10.19	0.58
148.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.246	0.000	28.953	15.29	2.88
148.25	1 5/8"	Yes	0.25	1.200	2.00	0.04	0.05	0.250	0.000	28.963	2.55	2.81
148.25	1/2" Fiber	Yes	0.25	1.200	1.00	0.02	0.02	0.250	0.000	28.963	1.27	0.07
148.25	3/4" DC Power	Yes	0.25	1.200	1.50	0.03	0.04	0.250	0.000	28.963	1.91	0.36
149.00	1 5/8"	Yes	0.75	1.200	2.00	0.13	0.15	0.252	0.000	28.994	7.65	8.42
149.00	1/2" Fiber	Yes	0.75	1.200	1.00	0.06	0.07	0.252	0.000	28.994	3.83	0.22
149.00	3/4" DC Power	Yes	0.75	1.200	1.50	0.09	0.11	0.252	0.000	28.994	5.74	1.08

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

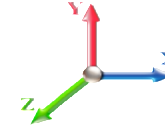


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Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 29

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)
150.00	1 5/8"	Yes	1.00	1.200	2.00	0.17	0.20	0.256	0.000	29.034	10.22	11.23
150.00	1/2" Fiber	Yes	1.00	1.200	1.00	0.08	0.10	0.256	0.000	29.034	5.11	0.29
150.00	3/4" DC Power	Yes	1.00	1.200	1.50	0.13	0.15	0.256	0.000	29.034	7.67	1.44
150.50	1 5/8"	Yes	0.50	1.200	2.00	0.08	0.10	0.259	0.000	29.055	5.11	5.62
150.50	1/2" Fiber	Yes	0.50	1.200	1.00	0.04	0.05	0.259	0.000	29.055	2.56	0.14
150.50	3/4" DC Power	Yes	0.50	1.200	1.50	0.06	0.07	0.259	0.000	29.055	3.84	0.72
152.00	1 5/8"	Yes	1.50	1.200	2.00	0.25	0.30	0.258	0.000	29.115	15.37	16.85
152.00	1/2" Fiber	Yes	1.50	1.200	1.00	0.13	0.15	0.258	0.000	29.115	7.69	0.43
152.00	3/4" DC Power	Yes	1.50	1.200	1.50	0.19	0.22	0.258	0.000	29.115	11.53	2.16
154.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.265	0.000	29.195	20.55	22.46
154.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.265	0.000	29.195	10.28	0.58
154.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.265	0.000	29.195	15.41	2.88
156.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.275	0.000	29.273	20.61	22.46
156.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.275	0.000	29.273	10.30	0.58
156.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.275	0.000	29.273	15.46	2.88
158.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.285	0.000	29.352	20.66	22.46
158.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.285	0.000	29.352	10.33	0.58
158.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.285	0.000	29.352	15.50	2.88
159.00	1 5/8"	Yes	1.00	1.200	2.00	0.17	0.20	0.293	0.000	29.390	10.35	11.23
159.00	1/2" Fiber	Yes	1.00	1.200	1.00	0.08	0.10	0.293	0.000	29.390	5.17	0.29
159.00	3/4" DC Power	Yes	1.00	1.200	1.50	0.13	0.15	0.293	0.000	29.390	7.76	1.44
Totals:											617.6	2,156.8

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

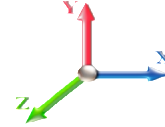


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Load Case: 0.9D + 1.6W 93 mph Wind

Iterations 29

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	-37.44	-38.08	0.00	-4627.9	0.00	4627.96	4390.37	2195.18	10447.7	5231.64	0.00	0.000	0.000	0.893
2.00	-36.87	-37.93	0.00	-4551.8	0.00	4551.80	4366.62	2183.31	10288.9	5152.14	0.02	-0.090	0.000	0.892
4.00	-36.31	-37.78	0.00	-4475.9	0.00	4475.94	4342.50	2171.25	10130.4	5072.75	0.08	-0.181	0.000	0.891
6.00	-35.75	-37.64	0.00	-4400.3	0.00	4400.38	4318.00	2159.00	9972.16	4993.49	0.17	-0.273	0.000	0.890
8.00	-35.19	-37.49	0.00	-4325.1	0.00	4325.10	4293.12	2146.56	9814.16	4914.37	0.31	-0.366	0.000	0.889
10.00	-34.64	-37.35	0.00	-4250.1	0.00	4250.12	4267.86	2133.93	9656.46	4835.41	0.48	-0.461	0.000	0.887
12.00	-34.09	-37.20	0.00	-4175.4	0.00	4175.42	4242.22	2121.11	9499.10	4756.61	0.70	-0.556	0.000	0.886
14.00	-33.55	-37.06	0.00	-4101.0	0.00	4101.01	4216.20	2108.10	9342.10	4677.99	0.95	-0.653	0.000	0.885
16.00	-33.01	-36.91	0.00	-4026.9	0.00	4026.90	4189.80	2094.90	9185.49	4599.57	1.25	-0.752	0.000	0.884
18.00	-32.47	-36.76	0.00	-3953.0	0.00	3953.07	4163.03	2081.51	9029.29	4521.36	1.58	-0.851	0.000	0.882
20.00	-31.94	-36.60	0.00	-3879.5	0.00	3879.56	4135.87	2067.94	8873.53	4443.36	1.96	-0.952	0.000	0.881
22.00	-31.41	-36.44	0.00	-3806.3	0.00	3806.35	4108.34	2054.17	8718.25	4365.60	2.38	-1.055	0.000	0.880
24.00	-30.89	-36.28	0.00	-3733.4	0.00	3733.47	4080.43	2040.21	8563.45	4288.09	2.85	-1.159	0.000	0.879
26.00	-30.37	-36.11	0.00	-3660.9	0.00	3660.91	4052.14	2026.07	8409.18	4210.84	3.36	-1.264	0.000	0.877
28.00	-29.85	-35.94	0.00	-3588.6	0.00	3588.69	4023.46	2011.73	8255.45	4133.86	3.91	-1.370	0.000	0.876
30.00	-29.34	-35.77	0.00	-3516.8	0.00	3516.80	3994.42	1997.21	8102.30	4057.17	4.51	-1.478	0.000	0.874
32.00	-28.83	-35.60	0.00	-3445.2	0.00	3445.25	3964.99	1982.49	7949.75	3980.79	5.15	-1.588	0.000	0.873
34.00	-28.33	-35.43	0.00	-3374.0	0.00	3374.05	3935.18	1967.59	7797.83	3904.71	5.84	-1.699	0.000	0.872
36.00	-27.83	-35.25	0.00	-3303.2	0.00	3303.20	3904.99	1952.50	7646.57	3828.97	6.58	-1.812	0.000	0.870
38.00	-27.33	-35.07	0.00	-3232.7	0.00	3232.71	3874.43	1937.21	7495.98	3753.56	7.36	-1.926	0.000	0.869
40.00	-26.84	-34.89	0.00	-3162.5	0.00	3162.57	3843.48	1921.74	7346.10	3678.51	8.19	-2.042	0.000	0.867
42.00	-26.35	-34.71	0.00	-3092.7	0.00	3092.79	3812.16	1906.08	7196.95	3603.83	9.07	-2.159	0.000	0.865
44.00	-25.86	-34.53	0.00	-3023.3	0.00	3023.37	3780.46	1890.23	7048.57	3529.52	10.00	-2.279	0.000	0.864
46.00	-25.40	-34.33	0.00	-2954.3	0.00	2954.32	3748.38	1874.19	6900.97	3455.62	10.98	-2.400	0.000	0.862
47.00	-25.12	-34.08	0.00	-2919.9	0.00	2919.97	3732.20	1866.10	6827.48	3418.81	11.49	-2.461	0.000	0.861
47.50	-25.00	-34.03	0.00	-2902.9	0.00	2902.93	3724.07	1862.03	6790.81	3400.45	11.75	-2.492	0.000	0.861
48.00	-24.77	-34.00	0.00	-2885.9	0.00	2885.91	3715.92	1857.96	6754.19	3382.11	12.01	-2.524	0.000	0.860
50.00	-23.98	-33.80	0.00	-2817.9	0.00	2817.91	3683.08	1841.54	6608.25	3309.03	13.10	-2.648	0.000	0.858
52.00	-23.20	-33.59	0.00	-2750.3	0.00	2750.31	3649.86	1824.93	6463.17	3236.39	14.24	-2.774	0.000	0.857
53.25	-22.72	-33.46	0.00	-2708.3	0.00	2708.33	3673.19	1836.60	6564.80	3287.28	14.97	-2.855	0.000	0.830
54.00	-22.52	-33.40	0.00	-2683.2	0.00	2683.23	3660.74	1830.37	6510.40	3260.04	15.42	-2.904	0.000	0.830
56.00	-22.06	-33.22	0.00	-2616.4	0.00	2616.43	3627.27	1813.63	6365.92	3187.69	16.67	-3.027	0.000	0.827
58.00	-21.60	-33.03	0.00	-2550.0	0.00	2550.00	3593.41	1796.71	6222.36	3115.80	17.96	-3.152	0.000	0.825
60.00	-21.15	-32.84	0.00	-2483.9	0.00	2483.94	3559.18	1779.59	6079.73	3044.38	19.31	-3.279	0.000	0.822
62.00	-20.70	-32.65	0.00	-2418.2	0.00	2418.26	3524.57	1762.29	5938.07	2973.45	20.71	-3.408	0.000	0.820
64.00	-20.25	-32.46	0.00	-2352.9	0.00	2352.97	3489.59	1744.79	5797.40	2903.01	22.17	-3.538	0.000	0.817
66.00	-19.81	-32.27	0.00	-2288.0	0.00	2288.05	3454.22	1727.11	5657.75	2833.08	23.68	-3.670	0.000	0.814
68.00	-19.37	-32.08	0.00	-2223.5	0.00	2223.51	3418.47	1709.24	5519.14	2763.67	25.24	-3.805	0.000	0.811
70.00	-18.94	-31.89	0.00	-2159.3	0.00	2159.36	3382.35	1691.17	5381.61	2694.80	26.86	-3.941	0.000	0.807
72.00	-18.51	-31.70	0.00	-2095.5	0.00	2095.58	3345.84	1672.92	5245.17	2626.49	28.54	-4.079	0.000	0.804
74.00	-18.08	-31.50	0.00	-2032.1	0.00	2032.19	3308.96	1654.48	5109.86	2558.73	30.28	-4.218	0.000	0.800
76.00	-17.66	-31.31	0.00	-1969.1	0.00	1969.19	3271.70	1635.85	4975.70	2491.55	32.08	-4.360	0.000	0.796
78.00	-17.24	-31.12	0.00	-1906.5	0.00	1906.57	3230.14	1615.07	4836.86	2422.03	33.93	-4.504	0.000	0.793
80.00	-16.80	-30.67	0.00	-1843.7	0.00	1843.77	3180.13	1590.07	4687.51	2347.24	35.85	-4.649	0.000	0.791
82.00	-16.39	-30.47	0.00	-1782.4	0.00	1782.44	3130.13	1565.06	4540.49	2273.62	37.83	-4.797	0.000	0.790
84.00	-15.98	-30.28	0.00	-1721.4	0.00	1721.49	3080.12	1540.06	4395.82	2201.18	39.87	-4.946	0.000	0.788
86.00	-15.58	-30.09	0.00	-1660.9	0.00	1660.94	3030.11	1515.05	4253.50	2129.91	41.97	-5.098	0.000	0.785
88.00	-15.19	-29.89	0.00	-1600.7	0.00	1600.76	2980.10	1490.05	4113.51	2059.81	44.13	-5.251	0.000	0.783

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00	-14.80	-29.70	0.00	-1540.9	0.00	1540.97	2930.09	1465.05	3975.87	1990.89	46.36	-5.406	0.000	0.779
92.00	-14.41	-29.51	0.00	-1481.5	0.00	1481.57	2880.09	1440.04	3840.56	1923.14	48.66	-5.564	0.000	0.776
94.00	-14.03	-29.32	0.00	-1422.5	0.00	1422.55	2830.08	1415.04	3707.61	1856.56	51.02	-5.723	0.000	0.772
96.00	-13.67	-29.12	0.00	-1363.9	0.00	1363.92	2780.07	1390.03	3576.99	1791.15	53.45	-5.883	0.000	0.767
97.00	-13.48	-29.02	0.00	-1334.8	0.00	1334.80	2755.06	1377.53	3512.56	1758.89	54.69	-5.966	0.000	0.764
98.00	-13.18	-28.92	0.00	-1305.7	0.00	1305.78	2730.06	1365.03	3448.72	1726.92	55.94	-6.048	0.000	0.761
100.00	-12.64	-28.69	0.00	-1247.9	0.00	1247.94	2680.05	1340.03	3322.78	1663.86	58.51	-6.212	0.000	0.755
101.00	-12.36	-28.59	0.00	-1219.2	0.00	1219.25	2260.99	1130.50	2846.84	1425.54	59.82	-6.296	0.000	0.861
102.00	-12.17	-28.50	0.00	-1190.6	0.00	1190.66	2242.36	1121.18	2797.13	1400.64	61.14	-6.380	0.000	0.856
104.00	-11.83	-28.31	0.00	-1133.6	0.00	1133.66	2200.69	1100.35	2693.61	1348.81	63.85	-6.568	0.000	0.847
106.00	-11.50	-28.13	0.00	-1077.0	0.00	1077.03	2159.02	1079.51	2592.04	1297.95	66.64	-6.756	0.000	0.836
108.00	-11.17	-27.94	0.00	-1020.7	0.00	1020.78	2117.34	1058.67	2492.43	1248.07	69.50	-6.945	0.000	0.824
110.00	-10.82	-27.47	0.00	-964.31	0.00	964.31	2075.67	1037.84	2394.76	1199.16	72.44	-7.135	0.000	0.810
112.00	-10.50	-27.30	0.00	-909.37	0.00	909.37	2034.00	1017.00	2299.05	1151.23	75.47	-7.326	0.000	0.796
114.00	-10.18	-27.13	0.00	-854.76	0.00	854.76	1992.32	996.16	2205.29	1104.29	78.57	-7.516	0.000	0.780
116.00	-9.87	-26.96	0.00	-800.50	0.00	800.50	1950.65	975.32	2113.48	1058.31	81.75	-7.706	0.000	0.762
118.00	-9.56	-26.79	0.00	-746.58	0.00	746.58	1908.98	954.49	2023.63	1013.32	85.01	-7.896	0.000	0.743
120.00	-9.26	-26.62	0.00	-693.01	0.00	693.01	1867.30	933.65	1935.73	969.30	88.35	-8.084	0.000	0.721
122.00	-8.96	-26.45	0.00	-639.77	0.00	639.77	1825.63	912.81	1849.77	926.26	91.76	-8.270	0.000	0.696
124.00	-8.67	-26.28	0.00	-586.87	0.00	586.87	1783.96	891.98	1765.78	884.20	95.26	-8.453	0.000	0.669
126.00	-8.38	-26.11	0.00	-534.31	0.00	534.31	1742.28	871.14	1683.73	843.12	98.82	-8.632	0.000	0.639
128.00	-8.10	-25.94	0.00	-482.10	0.00	482.10	1700.61	850.30	1603.63	803.01	102.46	-8.807	0.000	0.606
130.00	-7.85	-25.76	0.00	-430.22	0.00	430.22	1658.94	829.47	1525.49	763.88	106.18	-8.975	0.000	0.569
131.00	-7.02	-20.30	0.00	-404.46	0.00	404.46	1638.10	819.05	1487.15	744.68	108.06	-9.058	0.000	0.548
132.00	-6.89	-20.22	0.00	-384.16	0.00	384.16	1617.26	808.63	1449.30	725.73	109.96	-9.140	0.000	0.534
134.00	-6.69	-19.94	0.00	-343.72	0.00	343.72	1575.59	787.79	1375.06	688.55	113.80	-9.296	0.000	0.504
136.00	-6.50	-19.67	0.00	-303.83	0.00	303.83	1533.91	766.96	1302.77	652.35	117.71	-9.447	0.000	0.471
138.00	-6.31	-19.40	0.00	-264.48	0.00	264.48	1492.24	746.12	1232.44	617.13	121.68	-9.590	0.000	0.433
140.00	-4.98	-14.23	0.00	-218.37	0.00	218.37	1450.57	725.28	1164.05	582.89	125.71	-9.724	0.000	0.378
142.00	-4.81	-13.97	0.00	-189.91	0.00	189.91	1408.89	704.45	1097.62	549.63	129.79	-9.845	0.000	0.349
144.00	-4.68	-13.71	0.00	-161.98	0.00	161.98	1367.22	683.61	1033.14	517.34	133.92	-9.959	0.000	0.317
146.00	-4.55	-13.46	0.00	-134.56	0.00	134.56	1325.55	662.77	970.62	486.03	138.10	-10.065	0.000	0.281
148.00	-4.44	-13.21	0.00	-107.64	0.00	107.64	1283.87	641.94	910.04	455.70	142.31	-10.159	0.000	0.240
148.25	-4.43	-13.18	0.00	-104.34	0.00	104.34	1278.66	639.33	902.61	451.97	142.84	-10.171	0.000	0.235
149.00	-2.94	-8.37	0.00	-89.95	0.00	89.95	1263.04	631.52	880.49	440.90	144.43	-10.203	0.000	0.207
150.00	-2.86	-8.24	0.00	-81.58	0.00	81.58	1242.20	621.10	851.42	426.34	146.56	-10.242	0.000	0.194
150.50	-2.82	-8.18	0.00	-77.45	0.00	77.45	761.18	380.59	536.85	268.82	147.63	-10.261	0.000	0.292
152.00	-2.77	-8.01	0.00	-65.18	0.00	65.18	742.42	371.21	510.58	255.67	150.85	-10.313	0.000	0.259
154.00	-2.71	-7.78	0.00	-49.17	0.00	49.17	717.42	358.71	476.59	238.65	155.16	-10.404	0.000	0.210
156.00	-2.66	-7.55	0.00	-33.62	0.00	33.62	692.41	346.21	443.76	222.21	159.51	-10.477	0.000	0.156
158.00	-2.61	-7.33	0.00	-18.51	0.00	18.51	667.41	333.71	412.11	206.36	163.89	-10.529	0.000	0.094
159.00	0.00	-6.73	0.00	-11.18	0.00	11.18	654.91	327.45	396.72	198.65	166.09	-10.545	0.000	0.057

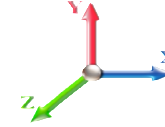
Wind Loading - Shaft

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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	1.057	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	5.168	5.68	0.00	1.223 *	1.180	2.00	10.197	12.47	70.9	174.0	733.4
4.00		1.00	0.85	5.168	5.68	0.00	1.227 *	1.242	2.00	10.122	12.42	70.6	181.5	735.4
6.00		1.00	0.85	5.168	5.68	0.00	1.231 *	1.285	2.00	10.040	12.36	70.2	186.0	734.5
8.00		1.00	0.85	5.168	5.68	0.00	1.235 *	1.317	2.00	9.955	12.29	69.9	189.0	731.9
10.00		1.00	0.85	5.168	5.68	0.00	1.239 *	1.344	2.00	9.869	12.22	69.5	191.0	728.5
12.00		1.00	0.85	5.168	5.68	0.00	1.243 *	1.367	2.00	9.780	12.16	69.1	192.4	724.3
14.00		1.00	0.85	5.168	5.68	0.00	1.247 *	1.386	2.00	9.691	12.08	68.7	193.3	719.7
16.00		1.00	0.87	5.299	5.83	0.00	1.251 *	1.404	2.00	9.601	12.01	70.0	193.8	714.7
18.00		1.00	0.89	5.425	5.97	0.00	1.256 *	1.419	2.00	9.511	11.94	71.3	194.0	709.4
20.00		1.00	0.91	5.540	6.09	0.00	1.260 *	1.434	2.00	9.420	11.87	72.3	193.9	703.9
22.00		1.00	0.93	5.647	6.21	0.00	1.265 *	1.447	2.00	9.329	11.80	73.3	193.7	698.2
24.00		1.00	0.95	5.747	6.32	0.00	1.269 *	1.459	2.00	9.237	11.72	74.1	193.3	692.3
26.00		1.00	0.96	5.841	6.43	0.00	1.274 *	1.470	2.00	9.145	11.65	74.9	192.8	686.2
28.00		1.00	0.98	5.930	6.52	0.00	1.279 *	1.481	2.00	9.053	11.58	75.5	192.1	680.0
30.00		1.00	0.99	6.013	6.61	0.00	1.284 *	1.491	2.00	8.960	11.50	76.1	191.3	673.7
32.00		1.00	1.00	6.093	6.70	0.00	1.289 *	1.500	2.00	8.868	11.43	76.6	190.4	667.4
34.00		1.00	1.01	6.169	6.79	0.00	1.294 *	1.509	2.00	8.775	11.36	77.1	189.4	660.9
36.00		1.00	1.03	6.242	6.87	0.00	1.299 *	1.517	2.00	8.682	11.28	77.5	188.4	654.3
38.00		1.00	1.04	6.311	6.94	0.00	1.305 *	1.525	2.00	8.589	11.21	77.8	187.2	647.7
40.00		1.00	1.05	6.378	7.02	0.00	1.310 *	1.533	2.00	8.496	11.13	78.1	186.0	641.0
42.00		1.00	1.06	6.442	7.09	0.00	1.316 *	1.540	2.00	8.403	11.06	78.4	184.7	634.2
44.00		1.00	1.07	6.504	7.15	0.00	1.322 *	1.547	2.00	8.309	10.98	78.6	183.4	627.4
46.00		1.00	1.08	6.564	7.22	0.00	1.328 *	1.554	2.00	8.216	10.91	78.8	182.0	620.5
47.00	Appurtenance(s)	1.00	1.08	6.593	7.25	0.00	1.333 *	1.557	1.00	4.073	5.43	39.4	90.7	307.8
47.50	Bot - Section 2	1.00	1.09	6.608	7.27	0.00	1.335 *	1.559	0.50	2.027	2.71	19.7	45.2	153.3
48.00		1.00	1.09	6.622	7.28	0.00	1.336 *	1.560	0.50	2.053	2.74	20.0	45.9	263.2
50.00		1.00	1.10	6.678	7.35	0.00	1.340 *	1.567	2.00	8.156	10.93	80.3	182.1	1044.3
52.00		1.00	1.11	6.732	7.41	0.00	1.294 *	1.573	2.00	8.062	10.43	77.3	180.6	1031.8
53.25	Top - Section 1	1.00	1.11	6.765	7.44	0.00	1.299 *	1.576	1.25	4.991	6.48	48.2	112.3	638.7
54.00		1.00	1.12	6.785	7.46	0.00	1.294 *	1.579	0.75	2.977	3.85	28.8	67.1	225.4
56.00		1.00	1.12	6.836	7.52	0.00	1.298 *	1.584	2.00	7.874	10.22	76.9	177.5	595.7
58.00		1.00	1.13	6.886	7.57	0.00	1.304 *	1.590	2.00	7.780	10.15	76.9	175.8	588.6
60.00		1.00	1.14	6.934	7.63	0.00	1.310 *	1.595	2.00	7.687	10.07	76.8	174.2	581.5
62.00		1.00	1.15	6.982	7.68	0.00	1.317 *	1.600	2.00	7.593	10.00	76.8	172.5	574.3
64.00		1.00	1.16	7.028	7.73	0.00	1.323 *	1.605	2.00	7.498	9.92	76.7	170.8	567.1
66.00		1.00	1.16	7.073	7.78	0.00	1.330 *	1.610	2.00	7.404	9.85	76.6	169.0	559.8
68.00		1.00	1.17	7.117	7.83	0.00	1.337 *	1.615	2.00	7.310	9.77	76.5	167.3	552.6
70.00		1.00	1.18	7.160	7.88	0.00	1.344 *	1.619	2.00	7.216	9.70	76.4	165.5	545.3
72.00		1.00	1.18	7.202	7.92	0.00	1.352 *	1.624	2.00	7.122	9.63	76.2	163.6	537.9
74.00		1.00	1.19	7.243	7.97	0.00	1.359 *	1.628	2.00	7.028	9.55	76.1	161.8	530.6
76.00		1.00	1.20	7.283	8.01	0.00	1.367 *	1.633	2.00	6.933	9.48	75.9	159.9	523.2
78.00		1.00	1.20	7.322	8.05	0.00	1.375 *	1.637	2.00	6.839	9.40	75.7	158.0	515.8
80.00	Appurtenance(s)	1.00	1.21	7.361	8.10	0.00	1.383 *	1.641	2.00	6.745	9.33	75.5	156.1	508.4
82.00		1.00	1.22	7.399	8.14	0.00	1.392 *	1.645	2.00	6.650	9.25	75.3	154.2	501.0
84.00		1.00	1.22	7.436	8.18	0.00	1.400 *	1.649	2.00	6.556	9.18	75.1	152.2	493.5
86.00		1.00	1.23	7.473	8.22	0.00	1.409 *	1.653	2.00	6.461	9.11	74.9	150.3	486.1

Wind Loading - Shaft

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00	1.00	1.23	7.508	8.26	0.00	1.419 *	1.656	2.00	6.367	9.03	74.6	148.3	478.6
90.00	1.00	1.24	7.544	8.30	0.00	1.429 *	1.660	2.00	6.273	8.96	74.4	146.3	471.1
92.00	1.00	1.25	7.578	8.34	0.00	1.439 *	1.664	2.00	6.178	8.89	74.1	144.2	463.6
94.00	1.00	1.25	7.612	8.37	0.00	1.449 *	1.667	2.00	6.084	8.81	73.8	142.2	456.0
96.00	1.00	1.26	7.646	8.41	0.00	1.460 *	1.671	2.00	5.989	8.74	73.5	140.1	448.5
97.00 Bot - Section 3	1.00	1.26	7.662	8.43	0.00	1.468 *	1.672	1.00	2.959	4.34	36.6	69.5	221.7
98.00	1.00	1.26	7.679	8.45	0.00	1.474 *	1.674	1.00	2.988	4.40	37.2	70.3	349.5
100.00	1.00	1.27	7.711	8.48	0.00	1.482 *	1.678	2.00	5.906	8.75	74.3	138.6	689.3
101.00 Top - Section 2	1.00	1.27	7.727	8.50	0.00	1.491 *	1.679	1.00	2.917	4.35	37.0	68.8	340.3
102.00	1.00	1.27	7.743	8.52	0.00	1.484 *	1.681	1.00	2.894	4.29	36.6	68.3	192.1
104.00	1.00	1.28	7.774	8.55	0.00	1.493 *	1.684	2.00	5.716	8.53	73.0	134.4	378.6
106.00	1.00	1.28	7.805	8.59	0.00	1.505 *	1.687	2.00	5.622	8.46	72.7	132.3	371.9
108.00	1.00	1.29	7.836	8.62	0.00	1.518 *	1.690	2.00	5.527	8.39	72.3	130.1	365.2
110.00 Appurtenance(s)	1.00	1.29	7.866	8.65	0.00	1.531 *	1.693	2.00	5.432	8.32	72.0	128.0	358.4
112.00	1.00	1.30	7.896	8.69	0.00	1.406 *	1.696	2.00	5.338	7.50	65.2	125.8	351.7
114.00	1.00	1.30	7.925	8.72	0.00	1.417 *	1.699	2.00	5.243	7.43	64.8	123.6	344.9
116.00	1.00	1.31	7.954	8.75	0.00	1.429 *	1.702	2.00	5.148	7.36	64.4	121.4	338.2
118.00	1.00	1.31	7.982	8.78	0.00	1.442 *	1.705	2.00	5.053	7.29	64.0	119.3	331.4
120.00	1.00	1.32	8.010	8.81	0.00	1.455 *	1.708	2.00	4.959	7.22	63.6	117.0	324.6
122.00	1.00	1.32	8.038	8.84	0.00	1.469 *	1.711	2.00	4.864	7.14	63.2	114.8	317.8
124.00	1.00	1.33	8.065	8.87	0.00	1.483 *	1.714	2.00	4.769	7.07	62.8	112.6	311.0
126.00	1.00	1.33	8.092	8.90	0.00	1.498 *	1.716	2.00	4.674	7.00	62.3	110.3	304.1
128.00	1.00	1.34	8.119	8.93	0.00	1.514 *	1.719	2.00	4.579	6.93	61.9	108.1	297.3
130.00	1.00	1.34	8.145	8.96	0.00	1.530 *	1.722	2.00	4.485	6.86	61.5	105.8	290.5
131.00 Appurtenance(s)	1.00	1.34	8.158	8.97	0.00	1.543 *	1.723	1.00	2.207	3.41	30.6	52.3	143.0
132.00	1.00	1.34	8.171	8.99	0.00	1.552 *	1.724	1.00	2.183	3.39	30.5	51.8	141.2
134.00	1.00	1.35	8.197	9.02	0.00	1.200 *	1.727	2.00	4.295	5.15	46.5	101.3	276.8
136.00	1.00	1.35	8.222	9.04	0.00	1.200 *	1.729	2.00	4.200	5.04	45.6	99.0	269.9
138.00	1.00	1.36	8.247	9.07	0.00	1.200 *	1.732	2.00	4.105	4.93	44.7	96.7	263.0
140.00 Appurtenance(s)	1.00	1.36	8.272	9.10	0.00	1.200 *	1.734	2.00	4.010	4.81	43.8	94.4	256.1
142.00	1.00	1.36	8.297	9.13	0.00	1.200 *	1.737	2.00	3.915	4.70	42.9	92.1	249.2
144.00	1.00	1.37	8.321	9.15	0.00	1.200 *	1.739	2.00	3.821	4.58	42.0	89.7	242.3
146.00	1.00	1.37	8.345	9.18	0.00	1.200 *	1.742	2.00	3.726	4.47	41.0	87.4	235.4
148.00	1.00	1.38	8.369	9.21	0.00	1.200 *	1.744	2.00	3.631	4.36	40.1	85.0	228.5
148.25 Bot - Section 4	1.00	1.38	8.372	9.21	0.00	1.200 *	1.744	0.25	0.447	0.54	4.9	10.6	28.2
149.00 Appurtenance(s)	1.00	1.38	8.381	9.22	0.00	1.200 *	1.745	0.75	1.356	1.63	15.0	32.1	116.8
150.00	1.00	1.38	8.392	9.23	0.00	1.200 *	1.746	1.00	1.788	2.15	19.8	42.2	153.5
150.50 Top - Section 3	1.00	1.38	8.398	9.24	0.00	1.200 *	1.747	0.50	0.885	1.06	9.8	20.9	75.9
152.00	1.00	1.38	8.416	9.26	0.00	1.200 *	1.749	1.50	2.619	3.14	29.1	61.5	123.5
154.00	1.00	1.39	8.439	9.28	0.00	1.200 *	1.751	2.00	3.409	4.09	38.0	79.6	159.8
156.00	1.00	1.39	8.462	9.31	0.00	1.200 *	1.753	2.00	3.314	3.98	37.0	77.2	154.7
158.00	1.00	1.40	8.484	9.33	0.00	1.200 *	1.755	2.00	3.219	3.86	36.1	74.9	149.6
159.00 Appurtenance(s)	1.00	1.40	8.495	9.34	0.00	1.200 *	1.757	1.00	1.574	1.89	17.7	36.8	73.2

* Cf Adjusted by Linear Load Ra Effect

Totals:	159.00	5,361.5	40,282.1
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Discrete Appurtenance Forces

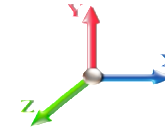
Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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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 29

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	159.00	Site Pro 1 -	1	8.495	9.345	1.00	1.00	83.75	5206.59	0.000	0.000	782.62	0.00	0.00
2	159.00	Powerwave 7770	3	8.529	9.381	0.73	1.00	15.92	-418.43	0.000	3.000	149.38	0.00	448.14
3	159.00	Powerwave	3	8.529	9.381	0.75	1.00	23.44	621.74	0.000	3.000	219.90	0.00	659.71
4	159.00	Powerwave Technologies	6	8.529	9.381	0.50	1.00	6.39	209.90	0.000	3.000	59.98	0.00	179.94
5	159.00	Ericsson RRUS 11-700	3	8.529	9.381	0.50	1.00	4.74	397.34	0.000	3.000	44.43	0.00	133.29
6	159.00	Raycap DC6-48-60-18-8F	2	8.529	9.381	0.50	1.00	1.36	173.68	0.000	3.000	12.77	0.00	38.30
7	159.00	Site Pro 1 - HRK14	1	8.495	9.345	1.00	1.00	16.13	1026.34	0.000	0.000	150.70	0.00	0.00
8	159.00	Quintel QS66512-2	3	8.529	9.381	0.92	1.00	26.05	1086.64	0.000	3.000	244.38	0.00	733.15
9	159.00	Kaelus DBC0061F1V51-2	3	8.529	9.381	0.50	1.00	1.08	65.71	0.000	3.000	10.09	0.00	30.27
10	159.00	Ericsson RRUS 32 B30	3	8.529	9.381	0.50	1.00	5.21	482.14	0.000	3.000	48.88	0.00	146.65
11	159.00	Ericsson RRUS 32 B2	3	8.529	9.381	0.50	1.00	5.21	456.94	0.000	3.000	48.88	0.00	146.65
12	159.00	Decibel DB404-B - Omni	1	8.529	9.381	1.00	1.00	0.00	30.81	0.000	3.000	0.00	0.00	0.00
13	149.00	Alcatel Lucent - 800 MHz	3	8.404	9.244	0.50	0.75	5.48	349.38	0.000	2.000	50.64	0.00	101.28
14	149.00	Alcatel Lucent -	3	8.404	9.244	0.50	0.75	8.24	479.20	0.000	2.000	76.14	0.00	152.28
15	149.00	RFS - APXVSP18-C-A20	3	8.404	9.244	0.62	0.75	19.22	1182.38	0.000	2.000	177.63	0.00	355.27
16	149.00	Alcatel Lucent - 1900 MHz	3	8.404	9.244	0.50	0.75	7.82	392.29	0.000	2.000	72.33	0.00	144.66
17	149.00	Low Profile Platform	1	8.381	9.219	1.00	1.00	64.32	2187.13	0.000	0.000	592.95	0.00	0.00
18	149.00	Alcatel Lucent - 800 MHz	3	8.404	9.244	0.50	0.75	2.15	69.61	0.000	2.000	19.88	0.00	39.77
19	149.00	RFS - ACU-A20-N - RET	4	8.404	9.244	0.50	0.75	0.88	16.78	0.000	2.000	8.11	0.00	16.23
20	149.00	SitePro HRK-12 Handrail	1	8.381	9.219	1.00	1.00	13.35	886.38	0.000	0.000	123.04	0.00	0.00
21	149.00	RFS - APXVTM14-C-I20 -	3	8.404	9.244	0.59	0.75	13.24	474.00	0.000	2.000	122.43	0.00	244.87
22	140.00	RFS -	3	8.303	9.133	0.50	0.75	2.94	139.44	0.000	2.500	26.82	0.00	67.04
23	140.00	RFS -	3	8.303	9.133	0.55	0.75	36.39	1640.46	0.000	2.500	332.33	0.00	830.82
24	140.00	RFS -	3	8.303	9.133	0.46	0.75	12.24	395.03	0.000	2.500	111.79	0.00	279.49
25	140.00	EMS - FR90-16-XXDP -	6	8.303	9.133	0.51	0.75	16.34	717.07	0.000	2.500	149.22	0.00	373.05
26	140.00	LP Platform w/ Handrails	1	8.272	9.099	1.00	1.00	63.49	3406.89	0.000	0.000	577.68	0.00	0.00
27	140.00	Andrew - ATSBT-TOP-FM	3	8.303	9.133	0.50	0.75	0.82	18.79	0.000	2.500	7.50	0.00	18.76
28	131.00	Antel LPA-80063/6CF -	6	8.158	8.974	0.75	0.80	49.34	1897.61	0.000	0.000	442.73	0.00	0.00
29	131.00	Kathrein 742	3	8.158	8.974	0.58	0.80	6.99	289.54	0.000	0.000	62.71	0.00	0.00
30	131.00	Antel BXA-70063/6CF -	3	8.158	8.974	0.56	0.80	17.30	359.13	0.000	0.000	155.27	0.00	0.00
31	131.00	Antel BXA-171063-12BF -	3	8.158	8.974	0.67	0.80	14.23	253.58	0.000	0.000	127.72	0.00	0.00
32	131.00	Alcatel Lucent	3	8.158	8.974	0.54	0.80	6.88	374.69	0.000	0.000	61.75	0.00	0.00
33	131.00	RFS FD9R6004/2C-3L -	6	8.158	8.974	0.54	0.80	2.57	56.07	0.000	0.000	23.02	0.00	0.00
34	131.00	RFS DB-T1-6Z-8AB-0Z -	1	8.158	8.974	1.00	1.00	5.66	164.26	0.000	0.000	50.81	0.00	0.00
35	131.00	Low Profile Platform	1	8.158	8.974	1.00	1.00	40.20	2173.83	0.000	0.000	360.71	0.00	0.00
36	110.00	4 ft. Standoff	1	7.866	8.652	1.00	1.00	11.26	137.21	0.000	0.000	97.39	0.00	0.00
37	110.00	Sinclair SCL329-HL -	1	7.947	8.742	1.00	1.00	6.06	53.57	0.000	5.550	53.01	0.00	294.19
38	80.00	Sinclair SCL329-HL -	1	7.464	8.211	1.00	1.00	5.94	51.76	0.000	5.550	48.81	0.00	270.89
39	80.00	4 ft Standoff	1	7.361	8.097	1.00	1.00	11.02	133.99	0.000	0.000	89.19	0.00	0.00
40	47.00	4 ft Standoff	1	6.593	7.253	1.00	1.00	10.63	128.86	0.000	0.000	77.11	0.00	0.00
41	47.00	Decibel 26DB - GPS	1	6.678	7.346	1.00	1.00	0.50	15.45	0.000	3.000	3.69	0.00	11.08

Totals: 27,783.76

5,874.45

Total Applied Force Summary

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 29

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		70.90	937.02	0.00	0.00
4.00		70.60	944.25	0.00	0.00
6.00		70.25	946.89	0.00	0.00
8.00		69.88	947.19	0.00	0.00
10.00		69.49	946.03	0.00	0.00
12.00		69.10	943.88	0.00	0.00
14.00		68.70	941.00	0.00	0.00
16.00		70.03	937.57	0.00	0.00
18.00		71.26	933.68	0.00	0.00
20.00		72.33	929.44	0.00	0.00
22.00		73.28	924.89	0.00	0.00
24.00		74.12	920.09	0.00	0.00
26.00		74.86	915.07	0.00	0.00
28.00		75.51	909.86	0.00	0.00
30.00		76.09	904.48	0.00	0.00
32.00		76.61	898.95	0.00	0.00
34.00		77.06	893.29	0.00	0.00
36.00		77.46	887.51	0.00	0.00
38.00		77.80	881.61	0.00	0.00
40.00		78.11	875.62	0.00	0.00
42.00		78.37	869.54	0.00	0.00
44.00		78.59	863.37	0.00	0.00
46.00		78.78	857.13	0.00	0.00
47.00	(2) attachments	120.16	570.61	0.00	11.08
47.50		19.67	212.58	0.00	0.00
48.00		19.99	322.47	0.00	0.00
50.00		80.30	1282.15	0.00	0.00
52.00		77.27	1262.13	0.00	0.00
53.25		48.25	782.84	0.00	0.00
54.00		28.75	311.96	0.00	0.00
56.00		76.87	827.01	0.00	0.00
58.00		76.86	820.36	0.00	0.00
60.00		76.83	813.67	0.00	0.00
62.00		76.78	806.93	0.00	0.00
64.00		76.71	800.15	0.00	0.00
66.00		76.62	793.33	0.00	0.00
68.00		76.52	786.47	0.00	0.00
70.00		76.39	779.57	0.00	0.00
72.00		76.25	772.64	0.00	0.00
74.00		76.09	765.68	0.00	0.00
76.00		75.92	758.69	0.00	0.00
78.00		75.73	751.66	0.00	0.00
80.00	(2) attachments	213.54	930.36	0.00	270.89
82.00		75.32	726.62	0.00	0.00
84.00		75.10	719.47	0.00	0.00
86.00		74.86	712.30	0.00	0.00

Total Applied Force Summary

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00		74.61	705.11	0.00	0.00
90.00		74.36	697.89	0.00	0.00
92.00		74.09	690.65	0.00	0.00
94.00		73.81	683.38	0.00	0.00
96.00		73.52	676.10	0.00	0.00
97.00		36.61	335.54	0.00	0.00
98.00		37.19	463.42	0.00	0.00
100.00		74.25	917.46	0.00	0.00
101.00		36.98	454.49	0.00	0.00
102.00		36.57	306.27	0.00	0.00
104.00		72.98	607.25	0.00	0.00
106.00		72.66	600.80	0.00	0.00
108.00		72.32	594.32	0.00	0.00
110.00	(2) attachments	222.38	778.62	0.00	294.19
112.00		65.17	569.91	0.00	0.00
114.00		64.78	563.36	0.00	0.00
116.00		64.38	556.79	0.00	0.00
118.00		63.98	550.21	0.00	0.00
120.00		63.58	543.61	0.00	0.00
122.00		63.17	537.00	0.00	0.00
124.00		62.75	530.38	0.00	0.00
126.00		62.34	523.74	0.00	0.00
128.00		61.92	517.09	0.00	0.00
130.00		61.49	510.43	0.00	0.00
131.00	(26) attachments	1315.28	5821.69	0.00	0.00
132.00		30.46	235.01	0.00	0.00
134.00		73.27	464.48	0.00	0.00
136.00		72.50	457.78	0.00	0.00
138.00		71.71	451.08	0.00	0.00
140.00	(19) attachments	1276.26	6762.03	0.00	1569.15
142.00		70.12	437.62	0.00	0.00
144.00		69.31	402.37	0.00	0.00
146.00		68.49	386.12	0.00	0.00
148.00		67.66	379.35	0.00	0.00
148.25		8.39	47.06	0.00	0.00
149.00	(24) attachments	1268.52	6210.56	0.00	1054.35
150.00		33.63	229.06	0.00	0.00
150.50		16.73	113.71	0.00	0.00
152.00		49.91	232.29	0.00	0.00
154.00		65.84	302.06	0.00	0.00
156.00		64.98	297.09	0.00	0.00
158.00		64.11	292.12	0.00	0.00
159.00	(32) attachments	1803.73	9483.85	0.00	2516.10
	Totals:	11,606.72	85,237.20	0.00	5,715.76

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8"	Yes	2.00	0.000	2.00	0.73	0.00	0.106	1.019	5.168	0.00	84.83
2.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.56	0.00	0.106	1.019	5.168	0.00	6.70
2.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.64	0.00	0.106	1.019	5.168	0.00	13.13
2.00	7/8"	Yes	2.00	0.000	1.11	0.58	0.00	0.106	1.019	5.168	0.00	6.89
2.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.019	5.168	0.00	6.89
2.00	1/2"	Yes	2.00	0.000	0.65	0.50	0.00	0.106	1.019	5.168	0.00	5.05
4.00	1 5/8"	Yes	2.00	0.000	2.00	0.75	0.00	0.107	1.022	5.168	0.00	87.48
4.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.58	0.00	0.107	1.022	5.168	0.00	7.19
4.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.66	0.00	0.107	1.022	5.168	0.00	13.78
4.00	7/8"	Yes	2.00	0.000	1.11	0.60	0.00	0.107	1.022	5.168	0.00	7.37
4.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.107	1.022	5.168	0.00	7.37
4.00	1/2"	Yes	2.00	0.000	0.65	0.52	0.00	0.107	1.022	5.168	0.00	5.48
6.00	1 5/8"	Yes	2.00	0.000	2.00	0.76	0.00	0.109	1.026	5.168	0.00	89.31
6.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.59	0.00	0.109	1.026	5.168	0.00	7.54
6.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.68	0.00	0.109	1.026	5.168	0.00	14.24
6.00	7/8"	Yes	2.00	0.000	1.11	0.61	0.00	0.109	1.026	5.168	0.00	7.70
6.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.109	1.026	5.168	0.00	7.70
6.00	1/2"	Yes	2.00	0.000	0.65	0.54	0.00	0.109	1.026	5.168	0.00	5.79
8.00	1 5/8"	Yes	2.00	0.000	2.00	0.77	0.00	0.110	1.029	5.168	0.00	90.73
8.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.61	0.00	0.110	1.029	5.168	0.00	7.81
8.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.69	0.00	0.110	1.029	5.168	0.00	14.60
8.00	7/8"	Yes	2.00	0.000	1.11	0.62	0.00	0.110	1.029	5.168	0.00	7.97
8.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.110	1.029	5.168	0.00	7.97
8.00	1/2"	Yes	2.00	0.000	0.65	0.55	0.00	0.110	1.029	5.168	0.00	6.03
10.00	1 5/8"	Yes	2.00	0.000	2.00	0.78	0.00	0.111	1.032	5.168	0.00	91.89
10.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.61	0.00	0.111	1.032	5.168	0.00	8.04
10.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.70	0.00	0.111	1.032	5.168	0.00	14.90
10.00	7/8"	Yes	2.00	0.000	1.11	0.63	0.00	0.111	1.032	5.168	0.00	8.19
10.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.032	5.168	0.00	8.19
10.00	1/2"	Yes	2.00	0.000	0.65	0.56	0.00	0.111	1.032	5.168	0.00	6.23
12.00	1 5/8"	Yes	2.00	0.000	2.00	0.79	0.00	0.112	1.036	5.168	0.00	92.88
12.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.62	0.00	0.112	1.036	5.168	0.00	8.24
12.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.71	0.00	0.112	1.036	5.168	0.00	15.16
12.00	7/8"	Yes	2.00	0.000	1.11	0.64	0.00	0.112	1.036	5.168	0.00	8.38
12.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.112	1.036	5.168	0.00	8.38
12.00	1/2"	Yes	2.00	0.000	0.65	0.56	0.00	0.112	1.036	5.168	0.00	6.40
14.00	1 5/8"	Yes	2.00	0.000	2.00	0.80	0.00	0.113	1.039	5.168	0.00	93.74
14.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.63	0.00	0.113	1.039	5.168	0.00	8.41
14.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.71	0.00	0.113	1.039	5.168	0.00	15.38
14.00	7/8"	Yes	2.00	0.000	1.11	0.65	0.00	0.113	1.039	5.168	0.00	8.54
14.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.113	1.039	5.168	0.00	8.54
14.00	1/2"	Yes	2.00	0.000	0.65	0.57	0.00	0.113	1.039	5.168	0.00	6.55
16.00	1 5/8"	Yes	2.00	0.000	2.00	0.80	0.00	0.114	1.043	5.299	0.00	94.50
16.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.63	0.00	0.114	1.043	5.299	0.00	8.56
16.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.72	0.00	0.114	1.043	5.299	0.00	15.58
16.00	7/8"	Yes	2.00	0.000	1.11	0.65	0.00	0.114	1.043	5.299	0.00	8.69
16.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.114	1.043	5.299	0.00	8.69

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 29

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)
16.00	1/2"	Yes	2.00	0.000	0.65	0.58	0.00	0.114	1.043	5.299	0.00	6.69
18.00	1 5/8"	Yes	2.00	0.000	2.00	0.81	0.00	0.115	1.046	5.425	0.00	95.19
18.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.64	0.00	0.115	1.046	5.425	0.00	8.70
18.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.72	0.00	0.115	1.046	5.425	0.00	15.76
18.00	7/8"	Yes	2.00	0.000	1.11	0.66	0.00	0.115	1.046	5.425	0.00	8.83
18.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.115	1.046	5.425	0.00	8.83
18.00	1/2"	Yes	2.00	0.000	0.65	0.58	0.00	0.115	1.046	5.425	0.00	6.81
20.00	1 5/8"	Yes	2.00	0.000	2.00	0.81	0.00	0.117	1.050	5.540	0.00	95.82
20.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.64	0.00	0.117	1.050	5.540	0.00	8.83
20.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.73	0.00	0.117	1.050	5.540	0.00	15.93
20.00	7/8"	Yes	2.00	0.000	1.11	0.66	0.00	0.117	1.050	5.540	0.00	8.95
20.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.117	1.050	5.540	0.00	8.95
20.00	1/2"	Yes	2.00	0.000	0.65	0.59	0.00	0.117	1.050	5.540	0.00	6.93
22.00	1 5/8"	Yes	2.00	0.000	2.00	0.82	0.00	0.118	1.054	5.647	0.00	96.39
22.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.65	0.00	0.118	1.054	5.647	0.00	8.95
22.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.73	0.00	0.118	1.054	5.647	0.00	16.08
22.00	7/8"	Yes	2.00	0.000	1.11	0.67	0.00	0.118	1.054	5.647	0.00	9.07
22.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.118	1.054	5.647	0.00	9.07
22.00	1/2"	Yes	2.00	0.000	0.65	0.59	0.00	0.118	1.054	5.647	0.00	7.03
24.00	1 5/8"	Yes	2.00	0.000	2.00	0.82	0.00	0.119	1.058	5.747	0.00	96.93
24.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.65	0.00	0.119	1.058	5.747	0.00	9.06
24.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.74	0.00	0.119	1.058	5.747	0.00	16.22
24.00	7/8"	Yes	2.00	0.000	1.11	0.67	0.00	0.119	1.058	5.747	0.00	9.17
24.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.119	1.058	5.747	0.00	9.17
24.00	1/2"	Yes	2.00	0.000	0.65	0.59	0.00	0.119	1.058	5.747	0.00	7.13
26.00	1 5/8"	Yes	2.00	0.000	2.00	0.82	0.00	0.121	1.062	5.841	0.00	97.42
26.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.66	0.00	0.121	1.062	5.841	0.00	9.16
26.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.74	0.00	0.121	1.062	5.841	0.00	16.36
26.00	7/8"	Yes	2.00	0.000	1.11	0.68	0.00	0.121	1.062	5.841	0.00	9.27
26.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.062	5.841	0.00	9.27
26.00	1/2"	Yes	2.00	0.000	0.65	0.60	0.00	0.121	1.062	5.841	0.00	7.22
28.00	1 5/8"	Yes	2.00	0.000	2.00	0.83	0.00	0.122	1.066	5.930	0.00	97.89
28.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.66	0.00	0.122	1.066	5.930	0.00	9.26
28.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.74	0.00	0.122	1.066	5.930	0.00	16.48
28.00	7/8"	Yes	2.00	0.000	1.11	0.68	0.00	0.122	1.066	5.930	0.00	9.37
28.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.122	1.066	5.930	0.00	9.37
28.00	1/2"	Yes	2.00	0.000	0.65	0.60	0.00	0.122	1.066	5.930	0.00	7.31
30.00	1 5/8"	Yes	2.00	0.000	2.00	0.83	0.00	0.123	1.070	6.013	0.00	98.33
30.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.66	0.00	0.123	1.070	6.013	0.00	9.35
30.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.75	0.00	0.123	1.070	6.013	0.00	16.60
30.00	7/8"	Yes	2.00	0.000	1.11	0.68	0.00	0.123	1.070	6.013	0.00	9.46
30.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.123	1.070	6.013	0.00	9.46
30.00	1/2"	Yes	2.00	0.000	0.65	0.61	0.00	0.123	1.070	6.013	0.00	7.39
32.00	1 5/8"	Yes	2.00	0.000	2.00	0.83	0.00	0.125	1.074	6.093	0.00	98.74
32.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.67	0.00	0.125	1.074	6.093	0.00	9.44
32.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.75	0.00	0.125	1.074	6.093	0.00	16.71
32.00	7/8"	Yes	2.00	0.000	1.11	0.69	0.00	0.125	1.074	6.093	0.00	9.54

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 29

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)
32.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.074	6.093	0.00	9.54
32.00	1/2"	Yes	2.00	0.000	0.65	0.61	0.00	0.125	1.074	6.093	0.00	7.47
34.00	1 5/8"	Yes	2.00	0.000	2.00	0.84	0.00	0.126	1.078	6.169	0.00	99.13
34.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.67	0.00	0.126	1.078	6.169	0.00	9.52
34.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.75	0.00	0.126	1.078	6.169	0.00	16.82
34.00	7/8"	Yes	2.00	0.000	1.11	0.69	0.00	0.126	1.078	6.169	0.00	9.62
34.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.078	6.169	0.00	9.62
34.00	1/2"	Yes	2.00	0.000	0.65	0.61	0.00	0.126	1.078	6.169	0.00	7.54
36.00	1 5/8"	Yes	2.00	0.000	2.00	0.84	0.00	0.128	1.083	6.242	0.00	99.51
36.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.67	0.00	0.128	1.083	6.242	0.00	9.60
36.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.76	0.00	0.128	1.083	6.242	0.00	16.92
36.00	7/8"	Yes	2.00	0.000	1.11	0.69	0.00	0.128	1.083	6.242	0.00	9.70
36.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	6.242	0.00	9.70
36.00	1/2"	Yes	2.00	0.000	0.65	0.61	0.00	0.128	1.083	6.242	0.00	7.61
38.00	1 5/8"	Yes	2.00	0.000	2.00	0.84	0.00	0.129	1.087	6.311	0.00	99.86
38.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.68	0.00	0.129	1.087	6.311	0.00	9.68
38.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.76	0.00	0.129	1.087	6.311	0.00	17.02
38.00	7/8"	Yes	2.00	0.000	1.11	0.69	0.00	0.129	1.087	6.311	0.00	9.77
38.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.129	1.087	6.311	0.00	9.77
38.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.129	1.087	6.311	0.00	7.68
40.00	1 5/8"	Yes	2.00	0.000	2.00	0.84	0.00	0.131	1.092	6.378	0.00	100.20
40.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.68	0.00	0.131	1.092	6.378	0.00	9.75
40.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.76	0.00	0.131	1.092	6.378	0.00	17.11
40.00	7/8"	Yes	2.00	0.000	1.11	0.70	0.00	0.131	1.092	6.378	0.00	9.84
40.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.131	1.092	6.378	0.00	9.84
40.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.131	1.092	6.378	0.00	7.75
42.00	1 5/8"	Yes	2.00	0.000	2.00	0.85	0.00	0.132	1.097	6.442	0.00	100.53
42.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.68	0.00	0.132	1.097	6.442	0.00	9.82
42.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.76	0.00	0.132	1.097	6.442	0.00	17.20
42.00	7/8"	Yes	2.00	0.000	1.11	0.70	0.00	0.132	1.097	6.442	0.00	9.91
42.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.132	1.097	6.442	0.00	9.91
42.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.132	1.097	6.442	0.00	7.81
44.00	1 5/8"	Yes	2.00	0.000	2.00	0.85	0.00	0.134	1.102	6.504	0.00	100.84
44.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.68	0.00	0.134	1.102	6.504	0.00	9.89
44.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.77	0.00	0.134	1.102	6.504	0.00	17.29
44.00	7/8"	Yes	2.00	0.000	1.11	0.70	0.00	0.134	1.102	6.504	0.00	9.97
44.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.102	6.504	0.00	9.97
44.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.134	1.102	6.504	0.00	7.87
46.00	1 5/8"	Yes	2.00	0.000	2.00	0.85	0.00	0.136	1.107	6.564	0.00	101.14
46.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.68	0.00	0.136	1.107	6.564	0.00	9.95
46.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.77	0.00	0.136	1.107	6.564	0.00	17.37
46.00	7/8"	Yes	2.00	0.000	1.11	0.70	0.00	0.136	1.107	6.564	0.00	10.04
46.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.136	1.107	6.564	0.00	10.04
46.00	1/2"	Yes	2.00	0.000	0.65	0.63	0.00	0.136	1.107	6.564	0.00	7.93
47.00	1 5/8"	Yes	1.00	0.000	2.00	0.43	0.00	0.137	1.110	6.593	0.00	50.64
47.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.34	0.00	0.137	1.110	6.593	0.00	4.99
47.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.38	0.00	0.137	1.110	6.593	0.00	8.70

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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)
47.00	7/8"	Yes	1.00	0.000	1.11	0.35	0.00	0.137	1.110	6.593	0.00	5.03
47.00	7/8"	Yes	1.00	0.000	0.00	0.00	0.00	0.137	1.110	6.593	0.00	5.03
47.00	1/2"	Yes	1.00	0.000	0.65	0.31	0.00	0.137	1.110	6.593	0.00	3.98
47.50	1 5/8"	Yes	0.50	0.000	2.00	0.21	0.00	0.137	1.112	6.608	0.00	25.34
47.50	1/2" Fiber	Yes	0.50	0.000	1.00	0.17	0.00	0.137	1.112	6.608	0.00	2.50
47.50	3/4" DC Power	Yes	0.50	0.000	1.50	0.19	0.00	0.137	1.112	6.608	0.00	4.36
47.50	7/8"	Yes	0.50	0.000	1.11	0.18	0.00	0.137	1.112	6.608	0.00	2.52
47.50	7/8"	Yes	0.50	0.000	0.00	0.00	0.00	0.137	1.112	6.608	0.00	2.52
47.50	1/2"	Yes	0.50	0.000	0.65	0.16	0.00	0.137	1.112	6.608	0.00	1.99
48.00	1 5/8"	Yes	0.50	0.000	2.00	0.21	0.00	0.138	1.114	6.622	0.00	25.36
48.00	1/2" Fiber	Yes	0.50	0.000	1.00	0.17	0.00	0.138	1.114	6.622	0.00	2.50
48.00	3/4" DC Power	Yes	0.50	0.000	1.50	0.19	0.00	0.138	1.114	6.622	0.00	4.36
48.00	7/8"	Yes	0.50	0.000	1.11	0.18	0.00	0.138	1.114	6.622	0.00	2.52
48.00	7/8"	Yes	0.50	0.000	0.00	0.00	0.00	0.138	1.114	6.622	0.00	2.52
48.00	1/2"	Yes	0.50	0.000	0.65	0.16	0.00	0.138	1.114	6.622	0.00	2.00
50.00	1 5/8"	Yes	2.00	0.000	2.00	0.86	0.00	0.139	1.117	6.678	0.00	101.71
50.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.69	0.00	0.139	1.117	6.678	0.00	10.08
50.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.77	0.00	0.139	1.117	6.678	0.00	17.52
50.00	7/8"	Yes	2.00	0.000	1.11	0.71	0.00	0.139	1.117	6.678	0.00	10.16
50.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.139	1.117	6.678	0.00	10.16
50.00	1/2"	Yes	2.00	0.000	0.65	0.63	0.00	0.139	1.117	6.678	0.00	8.04
52.00	1 5/8"	Yes	2.00	0.000	2.00	0.86	0.00	0.126	1.079	6.732	0.00	101.98
52.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.69	0.00	0.126	1.079	6.732	0.00	10.13
52.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.77	0.00	0.126	1.079	6.732	0.00	17.60
52.00	7/8"	Yes	2.00	0.000	1.11	0.71	0.00	0.126	1.079	6.732	0.00	10.21
52.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	6.732	0.00	10.21
53.25	1 5/8"	Yes	1.25	0.000	2.00	0.54	0.00	0.128	1.083	6.765	0.00	63.84
53.25	1/2" Fiber	Yes	1.25	0.000	1.00	0.43	0.00	0.128	1.083	6.765	0.00	6.36
53.25	3/4" DC Power	Yes	1.25	0.000	1.50	0.48	0.00	0.128	1.083	6.765	0.00	11.03
53.25	7/8"	Yes	1.25	0.000	1.11	0.44	0.00	0.128	1.083	6.765	0.00	6.41
53.25	7/8"	Yes	1.25	0.000	0.00	0.00	0.00	0.128	1.083	6.765	0.00	6.41
54.00	1 5/8"	Yes	0.75	0.000	2.00	0.32	0.00	0.126	1.078	6.785	0.00	38.34
54.00	1/2" Fiber	Yes	0.75	0.000	1.00	0.26	0.00	0.126	1.078	6.785	0.00	3.82
54.00	3/4" DC Power	Yes	0.75	0.000	1.50	0.29	0.00	0.126	1.078	6.785	0.00	6.63
54.00	7/8"	Yes	0.75	0.000	1.11	0.27	0.00	0.126	1.078	6.785	0.00	3.85
54.00	7/8"	Yes	0.75	0.000	0.00	0.00	0.00	0.126	1.078	6.785	0.00	3.85
56.00	1 5/8"	Yes	2.00	0.000	2.00	0.86	0.00	0.127	1.082	6.836	0.00	102.49
56.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.69	0.00	0.127	1.082	6.836	0.00	10.25
56.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.78	0.00	0.127	1.082	6.836	0.00	17.74
56.00	7/8"	Yes	2.00	0.000	1.11	0.71	0.00	0.127	1.082	6.836	0.00	10.32
56.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.127	1.082	6.836	0.00	10.32
58.00	1 5/8"	Yes	2.00	0.000	2.00	0.86	0.00	0.129	1.087	6.886	0.00	102.74
58.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.70	0.00	0.129	1.087	6.886	0.00	10.30
58.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.78	0.00	0.129	1.087	6.886	0.00	17.81
58.00	7/8"	Yes	2.00	0.000	1.11	0.71	0.00	0.129	1.087	6.886	0.00	10.37
58.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.129	1.087	6.886	0.00	10.37
60.00	1 5/8"	Yes	2.00	0.000	2.00	0.87	0.00	0.131	1.092	6.934	0.00	102.97

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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)
60.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.70	0.00	0.131	1.092	6.934	0.00	10.35
60.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.78	0.00	0.131	1.092	6.934	0.00	17.88
60.00	7/8"	Yes	2.00	0.000	1.11	0.72	0.00	0.131	1.092	6.934	0.00	10.42
60.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.131	1.092	6.934	0.00	10.42
62.00	1 5/8"	Yes	2.00	0.000	2.00	0.87	0.00	0.132	1.097	6.982	0.00	103.20
62.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.70	0.00	0.132	1.097	6.982	0.00	10.40
62.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.78	0.00	0.132	1.097	6.982	0.00	17.94
62.00	7/8"	Yes	2.00	0.000	1.11	0.72	0.00	0.132	1.097	6.982	0.00	10.47
62.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.132	1.097	6.982	0.00	10.47
64.00	1 5/8"	Yes	2.00	0.000	2.00	0.87	0.00	0.134	1.103	7.028	0.00	103.43
64.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.70	0.00	0.134	1.103	7.028	0.00	10.45
64.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.79	0.00	0.134	1.103	7.028	0.00	18.00
64.00	7/8"	Yes	2.00	0.000	1.11	0.72	0.00	0.134	1.103	7.028	0.00	10.52
64.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	7.028	0.00	10.52
66.00	1 5/8"	Yes	2.00	0.000	2.00	0.87	0.00	0.136	1.108	7.073	0.00	103.65
66.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.70	0.00	0.136	1.108	7.073	0.00	10.50
66.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.79	0.00	0.136	1.108	7.073	0.00	18.06
66.00	7/8"	Yes	2.00	0.000	1.11	0.72	0.00	0.136	1.108	7.073	0.00	10.57
66.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.136	1.108	7.073	0.00	10.57
68.00	1 5/8"	Yes	2.00	0.000	2.00	0.87	0.00	0.138	1.114	7.117	0.00	103.86
68.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.70	0.00	0.138	1.114	7.117	0.00	10.55
68.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.79	0.00	0.138	1.114	7.117	0.00	18.12
68.00	7/8"	Yes	2.00	0.000	1.11	0.72	0.00	0.138	1.114	7.117	0.00	10.61
68.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.138	1.114	7.117	0.00	10.61
70.00	1 5/8"	Yes	2.00	0.000	2.00	0.87	0.00	0.140	1.120	7.160	0.00	104.07
70.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.71	0.00	0.140	1.120	7.160	0.00	10.59
70.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.79	0.00	0.140	1.120	7.160	0.00	18.18
70.00	7/8"	Yes	2.00	0.000	1.11	0.72	0.00	0.140	1.120	7.160	0.00	10.66
70.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.140	1.120	7.160	0.00	10.66
72.00	1 5/8"	Yes	2.00	0.000	2.00	0.87	0.00	0.142	1.126	7.202	0.00	104.27
72.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.71	0.00	0.142	1.126	7.202	0.00	10.64
72.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.79	0.00	0.142	1.126	7.202	0.00	18.24
72.00	7/8"	Yes	2.00	0.000	1.11	0.73	0.00	0.142	1.126	7.202	0.00	10.70
72.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.142	1.126	7.202	0.00	10.70
74.00	1 5/8"	Yes	2.00	0.000	2.00	0.88	0.00	0.144	1.133	7.243	0.00	104.47
74.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.71	0.00	0.144	1.133	7.243	0.00	10.68
74.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.79	0.00	0.144	1.133	7.243	0.00	18.29
74.00	7/8"	Yes	2.00	0.000	1.11	0.73	0.00	0.144	1.133	7.243	0.00	10.74
74.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.144	1.133	7.243	0.00	10.74
76.00	1 5/8"	Yes	2.00	0.000	2.00	0.88	0.00	0.146	1.139	7.283	0.00	104.66
76.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.71	0.00	0.146	1.139	7.283	0.00	10.72
76.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.79	0.00	0.146	1.139	7.283	0.00	18.35
76.00	7/8"	Yes	2.00	0.000	1.11	0.73	0.00	0.146	1.139	7.283	0.00	10.79
76.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.146	1.139	7.283	0.00	10.79
78.00	1 5/8"	Yes	2.00	0.000	2.00	0.88	0.00	0.149	1.146	7.322	0.00	104.85
78.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.71	0.00	0.149	1.146	7.322	0.00	10.77
78.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.80	0.00	0.149	1.146	7.322	0.00	18.40

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 29

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)
78.00	7/8"	Yes	2.00	0.000	1.11	0.73	0.00	0.149	1.146	7.322	0.00	10.83
78.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.149	1.146	7.322	0.00	10.83
80.00	1 5/8"	Yes	2.00	0.000	2.00	0.88	0.00	0.151	1.153	7.361	0.00	105.03
80.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.71	0.00	0.151	1.153	7.361	0.00	10.81
80.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.80	0.00	0.151	1.153	7.361	0.00	18.45
80.00	7/8"	Yes	2.00	0.000	1.11	0.73	0.00	0.151	1.153	7.361	0.00	10.87
80.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.151	1.153	7.361	0.00	10.87
82.00	1 5/8"	Yes	2.00	0.000	2.00	0.88	0.00	0.153	1.160	7.399	0.00	105.21
82.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.71	0.00	0.153	1.160	7.399	0.00	10.85
82.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.80	0.00	0.153	1.160	7.399	0.00	18.50
82.00	7/8"	Yes	2.00	0.000	1.11	0.73	0.00	0.153	1.160	7.399	0.00	10.91
84.00	1 5/8"	Yes	2.00	0.000	2.00	0.88	0.00	0.156	1.167	7.436	0.00	105.39
84.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.72	0.00	0.156	1.167	7.436	0.00	10.89
84.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.80	0.00	0.156	1.167	7.436	0.00	18.55
84.00	7/8"	Yes	2.00	0.000	1.11	0.73	0.00	0.156	1.167	7.436	0.00	10.94
86.00	1 5/8"	Yes	2.00	0.000	2.00	0.88	0.00	0.158	1.175	7.473	0.00	105.56
86.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.72	0.00	0.158	1.175	7.473	0.00	10.93
86.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.80	0.00	0.158	1.175	7.473	0.00	18.60
86.00	7/8"	Yes	2.00	0.000	1.11	0.74	0.00	0.158	1.175	7.473	0.00	10.98
88.00	1 5/8"	Yes	2.00	0.000	2.00	0.89	0.00	0.161	1.182	7.508	0.00	105.73
88.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.72	0.00	0.161	1.182	7.508	0.00	10.96
88.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.80	0.00	0.161	1.182	7.508	0.00	18.65
88.00	7/8"	Yes	2.00	0.000	1.11	0.74	0.00	0.161	1.182	7.508	0.00	11.02
90.00	1 5/8"	Yes	2.00	0.000	2.00	0.89	0.00	0.163	1.190	7.544	0.00	105.90
90.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.72	0.00	0.163	1.190	7.544	0.00	11.00
90.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.80	0.00	0.163	1.190	7.544	0.00	18.70
90.00	7/8"	Yes	2.00	0.000	1.11	0.74	0.00	0.163	1.190	7.544	0.00	11.05
92.00	1 5/8"	Yes	2.00	0.000	2.00	0.89	0.00	0.166	1.199	7.578	0.00	106.06
92.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.72	0.00	0.166	1.199	7.578	0.00	11.04
92.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.80	0.00	0.166	1.199	7.578	0.00	18.74
92.00	7/8"	Yes	2.00	0.000	1.11	0.74	0.00	0.166	1.199	7.578	0.00	11.09
94.00	1 5/8"	Yes	2.00	0.000	2.00	0.89	0.00	0.169	1.207	7.612	0.00	106.22
94.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.72	0.00	0.169	1.207	7.612	0.00	11.07
94.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.81	0.00	0.169	1.207	7.612	0.00	18.79
94.00	7/8"	Yes	2.00	0.000	1.11	0.74	0.00	0.169	1.207	7.612	0.00	11.13
96.00	1 5/8"	Yes	2.00	0.000	2.00	0.89	0.00	0.172	1.216	7.646	0.00	106.38
96.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.72	0.00	0.172	1.216	7.646	0.00	11.11
96.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.81	0.00	0.172	1.216	7.646	0.00	18.83
96.00	7/8"	Yes	2.00	0.000	1.11	0.74	0.00	0.172	1.216	7.646	0.00	11.16
97.00	1 5/8"	Yes	1.00	0.000	2.00	0.45	0.00	0.174	1.223	7.662	0.00	53.23
97.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.36	0.00	0.174	1.223	7.662	0.00	5.56
97.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.40	0.00	0.174	1.223	7.662	0.00	9.43
97.00	7/8"	Yes	1.00	0.000	1.11	0.37	0.00	0.174	1.223	7.662	0.00	5.59
98.00	1 5/8"	Yes	1.00	0.000	2.00	0.45	0.00	0.176	1.228	7.679	0.00	53.27
98.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.36	0.00	0.176	1.228	7.679	0.00	5.57
98.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.40	0.00	0.176	1.228	7.679	0.00	9.44
98.00	7/8"	Yes	1.00	0.000	1.11	0.37	0.00	0.176	1.228	7.679	0.00	5.60

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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)
100.00	1 5/8"	Yes	2.00	0.000	2.00	0.89	0.00	0.178	1.235	7.711	0.00	106.68
100.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.73	0.00	0.178	1.235	7.711	0.00	11.18
100.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.81	0.00	0.178	1.235	7.711	0.00	18.92
100.00	7/8"	Yes	2.00	0.000	1.11	0.74	0.00	0.178	1.235	7.711	0.00	11.23
101.00	1 5/8"	Yes	1.00	0.000	2.00	0.45	0.00	0.181	1.243	7.727	0.00	53.38
101.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.36	0.00	0.181	1.243	7.727	0.00	5.60
101.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.40	0.00	0.181	1.243	7.727	0.00	9.47
101.00	7/8"	Yes	1.00	0.000	1.11	0.37	0.00	0.181	1.243	7.727	0.00	5.62
102.00	1 5/8"	Yes	1.00	0.000	2.00	0.45	0.00	0.179	1.237	7.743	0.00	53.42
102.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.36	0.00	0.179	1.237	7.743	0.00	5.61
102.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.41	0.00	0.179	1.237	7.743	0.00	9.48
102.00	7/8"	Yes	1.00	0.000	1.11	0.37	0.00	0.179	1.237	7.743	0.00	5.63
104.00	1 5/8"	Yes	2.00	0.000	2.00	0.89	0.00	0.181	1.244	7.774	0.00	106.98
104.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.73	0.00	0.181	1.244	7.774	0.00	11.24
104.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.81	0.00	0.181	1.244	7.774	0.00	19.00
104.00	7/8"	Yes	2.00	0.000	1.11	0.75	0.00	0.181	1.244	7.774	0.00	11.29
106.00	1 5/8"	Yes	2.00	0.000	2.00	0.90	0.00	0.185	1.254	7.805	0.00	107.12
106.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.73	0.00	0.185	1.254	7.805	0.00	11.28
106.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.81	0.00	0.185	1.254	7.805	0.00	19.05
106.00	7/8"	Yes	2.00	0.000	1.11	0.75	0.00	0.185	1.254	7.805	0.00	11.32
108.00	1 5/8"	Yes	2.00	0.000	2.00	0.90	0.00	0.188	1.265	7.836	0.00	107.26
108.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.73	0.00	0.188	1.265	7.836	0.00	11.31
108.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.81	0.00	0.188	1.265	7.836	0.00	19.09
108.00	7/8"	Yes	2.00	0.000	1.11	0.75	0.00	0.188	1.265	7.836	0.00	11.35
110.00	1 5/8"	Yes	2.00	0.000	2.00	0.90	0.00	0.192	1.276	7.866	0.00	107.40
110.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.73	0.00	0.192	1.276	7.866	0.00	11.34
110.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.81	0.00	0.192	1.276	7.866	0.00	19.13
110.00	7/8"	Yes	2.00	0.000	1.11	0.75	0.00	0.192	1.276	7.866	0.00	11.38
112.00	1 5/8"	Yes	2.00	0.000	2.00	0.90	0.00	0.157	1.171	7.896	0.00	107.54
112.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.73	0.00	0.157	1.171	7.896	0.00	11.37
112.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.82	0.00	0.157	1.171	7.896	0.00	19.16
114.00	1 5/8"	Yes	2.00	0.000	2.00	0.90	0.00	0.160	1.181	7.925	0.00	107.67
114.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.73	0.00	0.160	1.181	7.925	0.00	11.40
114.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.82	0.00	0.160	1.181	7.925	0.00	19.20
116.00	1 5/8"	Yes	2.00	0.000	2.00	0.90	0.00	0.164	1.191	7.954	0.00	107.81
116.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.73	0.00	0.164	1.191	7.954	0.00	11.43
116.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.82	0.00	0.164	1.191	7.954	0.00	19.24
118.00	1 5/8"	Yes	2.00	0.000	2.00	0.90	0.00	0.167	1.202	7.982	0.00	107.94
118.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.74	0.00	0.167	1.202	7.982	0.00	11.46
118.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.82	0.00	0.167	1.202	7.982	0.00	19.28
120.00	1 5/8"	Yes	2.00	0.000	2.00	0.90	0.00	0.171	1.213	8.010	0.00	108.07
120.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.74	0.00	0.171	1.213	8.010	0.00	11.49
120.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.82	0.00	0.171	1.213	8.010	0.00	19.32
122.00	1 5/8"	Yes	2.00	0.000	2.00	0.90	0.00	0.175	1.224	8.038	0.00	108.19
122.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.74	0.00	0.175	1.224	8.038	0.00	11.52
122.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.82	0.00	0.175	1.224	8.038	0.00	19.35
124.00	1 5/8"	Yes	2.00	0.000	2.00	0.90	0.00	0.179	1.236	8.065	0.00	108.32

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 29

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)
124.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.74	0.00	0.179	1.236	8.065	0.00	11.55
124.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.82	0.00	0.179	1.236	8.065	0.00	19.39
126.00	1 5/8"	Yes	2.00	0.000	2.00	0.91	0.00	0.183	1.248	8.092	0.00	108.44
126.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.74	0.00	0.183	1.248	8.092	0.00	11.58
126.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.82	0.00	0.183	1.248	8.092	0.00	19.42
128.00	1 5/8"	Yes	2.00	0.000	2.00	0.91	0.00	0.187	1.262	8.119	0.00	108.56
128.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.74	0.00	0.187	1.262	8.119	0.00	11.61
128.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.82	0.00	0.187	1.262	8.119	0.00	19.46
130.00	1 5/8"	Yes	2.00	0.000	2.00	0.91	0.00	0.192	1.275	8.145	0.00	108.68
130.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.74	0.00	0.192	1.275	8.145	0.00	11.63
130.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.82	0.00	0.192	1.275	8.145	0.00	19.49
131.00	1 5/8"	Yes	1.00	0.000	2.00	0.45	0.00	0.195	1.286	8.158	0.00	54.37
131.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.37	0.00	0.195	1.286	8.158	0.00	5.82
131.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.41	0.00	0.195	1.286	8.158	0.00	9.76
132.00	1 5/8"	Yes	1.00	0.000	2.00	0.45	0.00	0.198	1.293	8.171	0.00	54.40
132.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.37	0.00	0.198	1.293	8.171	0.00	5.83
132.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.41	0.00	0.198	1.293	8.171	0.00	9.76
134.00	1 5/8"	Yes	2.00	1.200	2.00	0.91	1.09	0.202	0.000	8.197	9.83	108.92
134.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.74	0.89	0.202	0.000	8.197	8.03	11.69
134.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.83	0.99	0.202	0.000	8.197	8.93	19.56
136.00	1 5/8"	Yes	2.00	1.200	2.00	0.91	1.09	0.207	0.000	8.222	9.87	109.03
136.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.74	0.89	0.207	0.000	8.222	8.07	11.71
136.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.83	0.99	0.207	0.000	8.222	8.97	19.59
138.00	1 5/8"	Yes	2.00	1.200	2.00	0.91	1.09	0.213	0.000	8.247	9.91	109.15
138.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.74	0.89	0.213	0.000	8.247	8.10	11.74
138.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.83	0.99	0.213	0.000	8.247	9.01	19.63
140.00	1 5/8"	Yes	2.00	1.200	2.00	0.91	1.09	0.219	0.000	8.272	9.95	109.26
140.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.74	0.89	0.219	0.000	8.272	8.13	11.77
140.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.83	0.99	0.219	0.000	8.272	9.04	19.66
142.00	1 5/8"	Yes	2.00	1.200	2.00	0.91	1.09	0.225	0.000	8.297	9.99	109.37
142.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.75	0.89	0.225	0.000	8.297	8.17	11.79
142.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.83	0.99	0.225	0.000	8.297	9.08	19.69
144.00	1 5/8"	Yes	2.00	1.200	2.00	0.91	1.10	0.231	0.000	8.321	10.03	109.48
144.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.75	0.90	0.231	0.000	8.321	8.20	11.82
144.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.83	1.00	0.231	0.000	8.321	9.11	19.72
146.00	1 5/8"	Yes	2.00	1.200	2.00	0.91	1.10	0.238	0.000	8.345	10.07	109.59
146.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.75	0.90	0.238	0.000	8.345	8.23	11.84
146.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.83	1.00	0.238	0.000	8.345	9.15	19.76
148.00	1 5/8"	Yes	2.00	1.200	2.00	0.91	1.10	0.246	0.000	8.369	10.10	109.70
148.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.75	0.90	0.246	0.000	8.369	8.26	11.87
148.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.83	1.00	0.246	0.000	8.369	9.18	19.79
148.25	1 5/8"	Yes	0.25	1.200	2.00	0.11	0.14	0.250	0.000	8.372	1.26	13.71
148.25	1/2" Fiber	Yes	0.25	1.200	1.00	0.09	0.11	0.250	0.000	8.372	1.03	1.48
148.25	3/4" DC Power	Yes	0.25	1.200	1.50	0.10	0.12	0.250	0.000	8.372	1.15	2.47
149.00	1 5/8"	Yes	0.75	1.200	2.00	0.34	0.41	0.252	0.000	8.381	3.80	41.16
149.00	1/2" Fiber	Yes	0.75	1.200	1.00	0.28	0.34	0.252	0.000	8.381	3.10	4.46
149.00	3/4" DC Power	Yes	0.75	1.200	1.50	0.31	0.37	0.252	0.000	8.381	3.45	7.43

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 29

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)
150.00	1 5/8"	Yes	1.00	1.200	2.00	0.46	0.55	0.256	0.000	8.392	5.07	54.90
150.00	1/2" Fiber	Yes	1.00	1.200	1.00	0.37	0.45	0.256	0.000	8.392	4.15	5.95
150.00	3/4" DC Power	Yes	1.00	1.200	1.50	0.42	0.50	0.256	0.000	8.392	4.61	9.91
150.50	1 5/8"	Yes	0.50	1.200	2.00	0.23	0.27	0.259	0.000	8.398	2.54	27.46
150.50	1/2" Fiber	Yes	0.50	1.200	1.00	0.19	0.22	0.259	0.000	8.398	2.08	2.97
150.50	3/4" DC Power	Yes	0.50	1.200	1.50	0.21	0.25	0.259	0.000	8.398	2.31	4.96
152.00	1 5/8"	Yes	1.50	1.200	2.00	0.69	0.82	0.258	0.000	8.416	7.63	82.43
152.00	1/2" Fiber	Yes	1.50	1.200	1.00	0.56	0.67	0.258	0.000	8.416	6.24	8.94
152.00	3/4" DC Power	Yes	1.50	1.200	1.50	0.62	0.75	0.258	0.000	8.416	6.94	14.89
154.00	1 5/8"	Yes	2.00	1.200	2.00	0.92	1.10	0.265	0.000	8.439	10.21	110.01
154.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.75	0.90	0.265	0.000	8.439	8.36	11.94
154.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.83	1.00	0.265	0.000	8.439	9.29	19.88
156.00	1 5/8"	Yes	2.00	1.200	2.00	0.92	1.10	0.275	0.000	8.462	10.25	110.11
156.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.75	0.90	0.275	0.000	8.462	8.39	11.96
156.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.83	1.00	0.275	0.000	8.462	9.32	19.91
158.00	1 5/8"	Yes	2.00	1.200	2.00	0.92	1.10	0.285	0.000	8.484	10.29	110.21
158.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.75	0.90	0.285	0.000	8.484	8.42	11.99
158.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.84	1.00	0.285	0.000	8.484	9.35	19.94
159.00	1 5/8"	Yes	1.00	1.200	2.00	0.46	0.55	0.293	0.000	8.495	5.15	55.13
159.00	1/2" Fiber	Yes	1.00	1.200	1.00	0.38	0.45	0.293	0.000	8.495	4.22	6.00
159.00	3/4" DC Power	Yes	1.00	1.200	1.50	0.42	0.50	0.293	0.000	8.495	4.68	9.98
Totals:											370.7	11,605.9

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

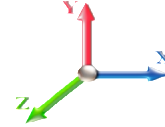


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 29

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	-85.23	-11.63	0.00	-1451.1	0.00	1451.18	4390.37	2195.18	10447.7	5231.64	0.00	0.000	0.000	0.297
2.00	-84.29	-11.60	0.00	-1427.9	0.00	1427.92	4366.62	2183.31	10288.9	5152.14	0.01	-0.028	0.000	0.296
4.00	-83.34	-11.57	0.00	-1404.7	0.00	1404.73	4342.50	2171.25	10130.4	5072.75	0.02	-0.057	0.000	0.296
6.00	-82.39	-11.54	0.00	-1381.5	0.00	1381.59	4318.00	2159.00	9972.16	4993.49	0.05	-0.086	0.000	0.296
8.00	-81.44	-11.51	0.00	-1358.5	0.00	1358.51	4293.12	2146.56	9814.16	4914.37	0.10	-0.115	0.000	0.295
10.00	-80.48	-11.48	0.00	-1335.4	0.00	1335.49	4267.86	2133.93	9656.46	4835.41	0.15	-0.145	0.000	0.295
12.00	-79.53	-11.45	0.00	-1312.5	0.00	1312.54	4242.22	2121.11	9499.10	4756.61	0.22	-0.175	0.000	0.295
14.00	-78.59	-11.42	0.00	-1289.6	0.00	1289.64	4216.20	2108.10	9342.10	4677.99	0.30	-0.205	0.000	0.294
16.00	-77.64	-11.39	0.00	-1266.8	0.00	1266.80	4189.80	2094.90	9185.49	4599.57	0.39	-0.236	0.000	0.294
18.00	-76.70	-11.36	0.00	-1244.0	0.00	1244.02	4163.03	2081.51	9029.29	4521.36	0.50	-0.267	0.000	0.294
20.00	-75.77	-11.32	0.00	-1221.3	0.00	1221.31	4135.87	2067.94	8873.53	4443.36	0.62	-0.299	0.000	0.293
22.00	-74.84	-11.29	0.00	-1198.6	0.00	1198.67	4108.34	2054.17	8718.25	4365.60	0.75	-0.332	0.000	0.293
24.00	-73.91	-11.25	0.00	-1176.1	0.00	1176.10	4080.43	2040.21	8563.45	4288.09	0.89	-0.364	0.000	0.292
26.00	-72.99	-11.21	0.00	-1153.6	0.00	1153.60	4052.14	2026.07	8409.18	4210.84	1.05	-0.397	0.000	0.292
28.00	-72.07	-11.17	0.00	-1131.1	0.00	1131.18	4023.46	2011.73	8255.45	4133.86	1.23	-0.431	0.000	0.292
30.00	-71.16	-11.13	0.00	-1108.8	0.00	1108.84	3994.42	1997.21	8102.30	4057.17	1.42	-0.465	0.000	0.291
32.00	-70.26	-11.09	0.00	-1086.5	0.00	1086.59	3964.99	1982.49	7949.75	3980.79	1.62	-0.500	0.000	0.291
34.00	-69.36	-11.05	0.00	-1064.4	0.00	1064.41	3935.18	1967.59	7797.83	3904.71	1.84	-0.535	0.000	0.290
36.00	-68.47	-11.00	0.00	-1042.3	0.00	1042.32	3904.99	1952.50	7646.57	3828.97	2.07	-0.570	0.000	0.290
38.00	-67.58	-10.96	0.00	-1020.3	0.00	1020.32	3874.43	1937.21	7495.98	3753.56	2.31	-0.606	0.000	0.289
40.00	-66.70	-10.91	0.00	-998.40	0.00	998.40	3843.48	1921.74	7346.10	3678.51	2.58	-0.643	0.000	0.289
42.00	-65.82	-10.87	0.00	-976.57	0.00	976.57	3812.16	1906.08	7196.95	3603.83	2.85	-0.680	0.000	0.288
44.00	-64.95	-10.82	0.00	-954.84	0.00	954.84	3780.46	1890.23	7048.57	3529.52	3.15	-0.718	0.000	0.288
46.00	-64.09	-10.76	0.00	-933.19	0.00	933.19	3748.38	1874.19	6900.97	3455.62	3.45	-0.756	0.000	0.287
47.00	-63.52	-10.65	0.00	-922.42	0.00	922.42	3732.20	1866.10	6827.48	3418.81	3.62	-0.775	0.000	0.287
47.50	-63.30	-10.64	0.00	-917.09	0.00	917.09	3724.07	1862.03	6790.81	3400.45	3.70	-0.785	0.000	0.287
48.00	-62.98	-10.64	0.00	-911.77	0.00	911.77	3715.92	1857.96	6754.19	3382.11	3.78	-0.795	0.000	0.287
50.00	-61.69	-10.59	0.00	-890.49	0.00	890.49	3683.08	1841.54	6608.25	3309.03	4.12	-0.834	0.000	0.286
52.00	-60.42	-10.53	0.00	-869.31	0.00	869.31	3649.86	1824.93	6463.17	3236.39	4.48	-0.874	0.000	0.285
53.25	-59.64	-10.49	0.00	-856.15	0.00	856.15	3673.19	1836.60	6564.80	3287.28	4.71	-0.900	0.000	0.277
54.00	-59.32	-10.48	0.00	-848.29	0.00	848.29	3660.74	1830.37	6510.40	3260.04	4.85	-0.915	0.000	0.276
56.00	-58.49	-10.43	0.00	-827.32	0.00	827.32	3627.27	1813.63	6365.92	3187.69	5.25	-0.954	0.000	0.276
58.00	-57.66	-10.38	0.00	-806.46	0.00	806.46	3593.41	1796.71	6222.36	3115.80	5.65	-0.994	0.000	0.275
60.00	-56.84	-10.33	0.00	-785.70	0.00	785.70	3559.18	1779.59	6079.73	3044.38	6.08	-1.034	0.000	0.274
62.00	-56.03	-10.28	0.00	-765.04	0.00	765.04	3524.57	1762.29	5938.07	2973.45	6.52	-1.074	0.000	0.273
64.00	-55.22	-10.23	0.00	-744.49	0.00	744.49	3489.59	1744.79	5797.40	2903.01	6.98	-1.116	0.000	0.272
66.00	-54.42	-10.17	0.00	-724.03	0.00	724.03	3454.22	1727.11	5657.75	2833.08	7.46	-1.158	0.000	0.271
68.00	-53.63	-10.12	0.00	-703.69	0.00	703.69	3418.47	1709.24	5519.14	2763.67	7.95	-1.200	0.000	0.270
70.00	-52.85	-10.07	0.00	-683.45	0.00	683.45	3382.35	1691.17	5381.61	2694.80	8.46	-1.243	0.000	0.269
72.00	-52.07	-10.02	0.00	-663.31	0.00	663.31	3345.84	1672.92	5245.17	2626.49	8.99	-1.287	0.000	0.268
74.00	-51.30	-9.96	0.00	-643.28	0.00	643.28	3308.96	1654.48	5109.86	2558.73	9.54	-1.331	0.000	0.267
76.00	-50.53	-9.91	0.00	-623.36	0.00	623.36	3271.70	1635.85	4975.70	2491.55	10.11	-1.376	0.000	0.266
78.00	-49.78	-9.85	0.00	-603.54	0.00	603.54	3230.14	1615.07	4836.86	2422.03	10.70	-1.421	0.000	0.265
80.00	-48.84	-9.66	0.00	-583.57	0.00	583.57	3180.13	1590.07	4687.51	2347.24	11.30	-1.467	0.000	0.264
82.00	-48.11	-9.60	0.00	-564.26	0.00	564.26	3130.13	1565.06	4540.49	2273.62	11.93	-1.514	0.000	0.264
84.00	-47.39	-9.55	0.00	-545.05	0.00	545.05	3080.12	1540.06	4395.82	2201.18	12.57	-1.561	0.000	0.263
86.00	-46.67	-9.49	0.00	-525.96	0.00	525.96	3030.11	1515.05	4253.50	2129.91	13.23	-1.609	0.000	0.262
88.00	-45.96	-9.44	0.00	-506.98	0.00	506.98	2980.10	1490.05	4113.51	2059.81	13.92	-1.658	0.000	0.262

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00	-45.25	-9.38	0.00	-488.11	0.00	488.11	2930.09	1465.05	3975.87	1990.89	14.62	-1.707	0.000	0.261
92.00	-44.56	-9.32	0.00	-469.35	0.00	469.35	2880.09	1440.04	3840.56	1923.14	15.35	-1.757	0.000	0.260
94.00	-43.87	-9.27	0.00	-450.71	0.00	450.71	2830.08	1415.04	3707.61	1856.56	16.10	-1.807	0.000	0.258
96.00	-43.19	-9.20	0.00	-432.17	0.00	432.17	2780.07	1390.03	3576.99	1791.15	16.86	-1.858	0.000	0.257
97.00	-42.85	-9.17	0.00	-422.97	0.00	422.97	2755.06	1377.53	3512.56	1758.89	17.26	-1.884	0.000	0.256
98.00	-42.38	-9.15	0.00	-413.80	0.00	413.80	2730.06	1365.03	3448.72	1726.92	17.65	-1.910	0.000	0.255
100.00	-41.46	-9.07	0.00	-395.50	0.00	395.50	2680.05	1340.03	3322.78	1663.86	18.47	-1.962	0.000	0.253
101.00	-41.00	-9.04	0.00	-386.43	0.00	386.43	2260.99	1130.50	2846.84	1425.54	18.88	-1.989	0.000	0.289
102.00	-40.69	-9.02	0.00	-377.39	0.00	377.39	2242.36	1121.18	2797.13	1400.64	19.30	-2.016	0.000	0.288
104.00	-40.08	-8.97	0.00	-359.34	0.00	359.34	2200.69	1100.35	2693.61	1348.81	20.16	-2.075	0.000	0.285
106.00	-39.47	-8.92	0.00	-341.40	0.00	341.40	2159.02	1079.51	2592.04	1297.95	21.04	-2.135	0.000	0.281
108.00	-38.87	-8.86	0.00	-323.57	0.00	323.57	2117.34	1058.67	2492.43	1248.07	21.95	-2.195	0.000	0.278
110.00	-38.09	-8.65	0.00	-305.55	0.00	305.55	2075.67	1037.84	2394.76	1199.16	22.88	-2.255	0.000	0.273
112.00	-37.52	-8.60	0.00	-288.25	0.00	288.25	2034.00	1017.00	2299.05	1151.23	23.84	-2.315	0.000	0.269
114.00	-36.95	-8.55	0.00	-271.05	0.00	271.05	1992.32	996.16	2205.29	1104.29	24.82	-2.376	0.000	0.264
116.00	-36.39	-8.50	0.00	-253.94	0.00	253.94	1950.65	975.32	2113.48	1058.31	25.83	-2.436	0.000	0.259
118.00	-35.83	-8.45	0.00	-236.93	0.00	236.93	1908.98	954.49	2023.63	1013.32	26.86	-2.496	0.000	0.253
120.00	-35.28	-8.40	0.00	-220.03	0.00	220.03	1867.30	933.65	1935.73	969.30	27.92	-2.556	0.000	0.246
122.00	-34.74	-8.35	0.00	-203.22	0.00	203.22	1825.63	912.81	1849.77	926.26	29.00	-2.615	0.000	0.239
124.00	-34.20	-8.30	0.00	-186.52	0.00	186.52	1783.96	891.98	1765.78	884.20	30.11	-2.673	0.000	0.230
126.00	-33.67	-8.24	0.00	-169.92	0.00	169.92	1742.28	871.14	1683.73	843.12	31.24	-2.730	0.000	0.221
128.00	-33.15	-8.19	0.00	-153.44	0.00	153.44	1700.61	850.30	1603.63	803.01	32.40	-2.786	0.000	0.211
130.00	-32.64	-8.13	0.00	-137.06	0.00	137.06	1658.94	829.47	1525.49	763.88	33.57	-2.839	0.000	0.199
131.00	-26.89	-6.53	0.00	-128.93	0.00	128.93	1638.10	819.05	1487.15	744.68	34.17	-2.866	0.000	0.190
132.00	-26.65	-6.51	0.00	-122.40	0.00	122.40	1617.26	808.63	1449.30	725.73	34.78	-2.892	0.000	0.185
134.00	-26.19	-6.44	0.00	-109.38	0.00	109.38	1575.59	787.79	1375.06	688.55	36.00	-2.942	0.000	0.176
136.00	-25.73	-6.36	0.00	-96.51	0.00	96.51	1533.91	766.96	1302.77	652.35	37.24	-2.989	0.000	0.165
138.00	-25.28	-6.28	0.00	-83.79	0.00	83.79	1492.24	746.12	1232.44	617.13	38.50	-3.035	0.000	0.153
140.00	-18.59	-4.66	0.00	-69.65	0.00	69.65	1450.57	725.28	1164.05	582.89	39.78	-3.077	0.000	0.132
142.00	-18.15	-4.58	0.00	-60.33	0.00	60.33	1408.89	704.45	1097.62	549.63	41.08	-3.116	0.000	0.123
144.00	-17.75	-4.50	0.00	-51.17	0.00	51.17	1367.22	683.61	1033.14	517.34	42.39	-3.152	0.000	0.112
146.00	-17.37	-4.42	0.00	-42.17	0.00	42.17	1325.55	662.77	970.62	486.03	43.72	-3.185	0.000	0.100
148.00	-16.99	-4.34	0.00	-33.33	0.00	33.33	1283.87	641.94	910.04	455.70	45.06	-3.215	0.000	0.086
148.25	-16.94	-4.33	0.00	-32.24	0.00	32.24	1278.66	639.33	902.61	451.97	45.23	-3.218	0.000	0.085
149.00	-10.81	-2.71	0.00	-27.94	0.00	27.94	1263.04	631.52	880.49	440.90	45.73	-3.228	0.000	0.072
150.00	-10.59	-2.67	0.00	-25.23	0.00	25.23	1242.20	621.10	851.42	426.34	46.41	-3.240	0.000	0.068
150.50	-10.47	-2.65	0.00	-23.90	0.00	23.90	761.18	380.59	536.85	268.82	46.75	-3.246	0.000	0.103
152.00	-10.24	-2.59	0.00	-19.92	0.00	19.92	742.42	371.21	510.58	255.67	47.77	-3.262	0.000	0.092
154.00	-9.95	-2.51	0.00	-14.75	0.00	14.75	717.42	358.71	476.59	238.65	49.14	-3.290	0.000	0.076
156.00	-9.65	-2.43	0.00	-9.73	0.00	9.73	692.41	346.21	443.76	222.21	50.53	-3.311	0.000	0.058
158.00	-9.36	-2.35	0.00	-4.87	0.00	4.87	667.41	333.71	412.11	206.36	51.92	-3.326	0.000	0.038
159.00	0.00	-1.80	0.00	-2.52	0.00	2.52	654.91	327.45	396.72	198.65	52.61	-3.330	0.000	0.013

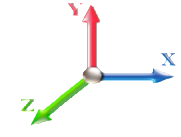
Seismic Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 27
Gust Response Factor	1.10			Sds 0.22	Ss 0.20
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1 0.10	S1 0.07
Wind Load Factor	0.00	Structure Frequency	0.33	SA 0.03	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	0.01	0.00	0.00	
2.00		466.17	0.00	0.02	0.01	7.28	
4.00		461.59	0.00	0.03	0.02	10.21	
6.00		457.01	0.00	0.04	0.02	12.29	
8.00		452.43	0.01	0.05	0.03	13.77	
10.00		447.85	0.01	0.05	0.03	14.83	
12.00		443.27	0.01	0.06	0.03	15.58	
14.00		438.69	0.02	0.06	0.04	16.11	
16.00		434.11	0.02	0.06	0.04	16.46	
18.00		429.53	0.03	0.07	0.04	16.69	
20.00		424.95	0.03	0.07	0.04	16.83	
22.00		420.37	0.04	0.07	0.04	16.90	
24.00		415.79	0.05	0.07	0.04	16.92	
26.00		411.20	0.05	0.07	0.04	16.92	
28.00		406.62	0.06	0.07	0.04	16.89	
30.00		402.04	0.07	0.07	0.04	16.86	
32.00		397.46	0.08	0.07	0.04	16.82	
34.00		392.88	0.09	0.07	0.04	16.77	
36.00		388.30	0.10	0.07	0.04	16.73	
38.00		383.72	0.11	0.07	0.04	16.68	
40.00		379.14	0.12	0.07	0.03	16.63	
42.00		374.56	0.14	0.07	0.03	16.57	
44.00		369.98	0.15	0.07	0.03	16.49	
46.00		365.40	0.16	0.07	0.03	16.39	
47.00	Appurtenance(s)	244.30	0.17	0.07	0.03	10.98	
47.50	Bot - Section 2	90.06	0.17	0.07	0.03	4.05	
48.00		181.07	0.18	0.07	0.03	8.16	
50.00		718.54	0.19	0.06	0.02	32.43	
52.00		709.38	0.21	0.06	0.02	31.96	
53.25	Top - Section 1	438.71	0.22	0.06	0.02	19.70	
54.00		131.89	0.22	0.06	0.02	5.91	
56.00		348.57	0.24	0.06	0.02	15.43	
58.00		343.99	0.26	0.05	0.02	14.95	
60.00		339.40	0.27	0.05	0.01	14.35	
62.00		334.82	0.29	0.05	0.01	13.62	
64.00		330.24	0.31	0.04	0.01	12.75	
66.00		325.66	0.33	0.04	0.01	11.73	
68.00		321.08	0.35	0.03	0.01	10.54	
70.00		316.50	0.37	0.03	0.01	9.18	
72.00		311.92	0.39	0.02	0.01	7.66	
74.00		307.34	0.42	0.01	0.01	5.99	
76.00		302.76	0.44	0.01	0.01	4.19	
78.00		298.18	0.46	0.00	0.01	2.29	
80.00	Appurtenance(s)	357.32	0.48	-0.01	0.01	0.43	
82.00		289.02	0.51	-0.02	0.01	-1.58	
84.00		284.43	0.53	-0.03	0.01	-3.45	

Seismic Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00		279.85	0.56	-0.04	0.01	-5.22	
88.00		275.27	0.58	-0.05	0.01	-6.82	
90.00		270.69	0.61	-0.06	0.02	-8.22	
92.00		266.11	0.64	-0.07	0.02	-9.40	
94.00		261.53	0.67	-0.08	0.02	-10.34	
96.00		256.95	0.69	-0.09	0.03	-11.03	
97.00	Bot - Section 3	126.76	0.71	-0.09	0.03	-5.61	
98.00		232.61	0.72	-0.09	0.03	-10.57	
100.00		458.92	0.75	-0.10	0.04	-21.62	
101.00	Top - Section 2	226.31	0.77	-0.11	0.05	-10.77	
102.00		103.18	0.78	-0.11	0.05	-4.94	
104.00		203.50	0.81	-0.11	0.06	-9.73	
106.00		199.68	0.85	-0.12	0.07	-9.36	
108.00		195.86	0.88	-0.12	0.08	-8.83	
110.00	Appurtenance(s)	255.76	0.91	-0.12	0.09	-10.87	
112.00		188.23	0.94	-0.12	0.10	-7.35	
114.00		184.41	0.98	-0.12	0.12	-6.42	
116.00		180.59	1.01	-0.11	0.14	-5.38	
118.00		176.77	1.05	-0.10	0.16	-4.24	
120.00		172.96	1.08	-0.08	0.18	-3.01	
122.00		169.14	1.12	-0.06	0.20	-1.69	
124.00		165.32	1.15	-0.03	0.22	-0.30	
126.00		161.50	1.19	0.00	0.25	1.15	
128.00		157.69	1.23	0.03	0.28	2.67	
130.00		153.87	1.27	0.08	0.31	4.23	
131.00	Appurtenance(s)	1785.5	1.29	0.10	0.32	58.98	
132.00		74.55	1.31	0.13	0.34	2.89	
134.00		146.24	1.35	0.19	0.38	7.45	
136.00		142.42	1.39	0.26	0.42	9.10	
138.00		138.60	1.43	0.34	0.46	10.77	
140.00	Appurtenance(s)	2322.0	1.47	0.42	0.51	214.38	
142.00		130.97	1.51	0.53	0.55	14.11	
144.00		127.15	1.55	0.64	0.61	15.77	
146.00		123.33	1.60	0.76	0.66	17.41	
148.00		119.51	1.64	0.90	0.72	19.02	
148.25	Bot - Section 4	14.67	1.64	0.92	0.73	2.37	
149.00	Appurtenance(s)	2549.7	1.66	0.98	0.76	429.59	
150.00		92.81	1.68	1.06	0.79	16.52	
150.50	Top - Section 3	45.83	1.69	1.10	0.81	8.38	
152.00		51.65	1.73	1.23	0.86	10.21	
154.00		66.86	1.77	1.42	0.93	14.60	
156.00		64.57	1.82	1.63	1.01	15.49	
158.00		62.28	1.87	1.86	1.10	16.33	
159.00	Appurtenance(s)	<u>4330.7</u>	1.89	1.98	1.14	<u>1185.58</u>	
Totals:		34,601.1				2,494.2	Total Wind: 38,048.3

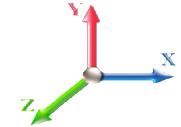
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0E										Iterations 27
Gust Response Factor	1.10						Sds	0.22		Ss 0.20
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.10					S1 0.07
Wind Load Factor	0.00	Structure Frequency	0.33	SA	0.03	Seismic Importance Factor	1.00			



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-49.96	-2.67	0.00	-363.07	0.00	363.07	4390.37	2195.18	10447.7	5231.64	0.00	0.00	0.00	0.081
2.00	-49.28	-2.67	0.00	-357.73	0.00	357.73	4366.62	2183.31	10288.9	5152.14	0.00	-0.01	-0.01	0.081
4.00	-48.61	-2.67	0.00	-352.39	0.00	352.39	4342.50	2171.25	10130.4	5072.75	0.01	-0.01	-0.01	0.081
6.00	-47.95	-2.66	0.00	-347.05	0.00	347.05	4318.00	2159.00	9972.16	4993.49	0.01	-0.02	-0.02	0.081
8.00	-47.29	-2.65	0.00	-341.73	0.00	341.73	4293.12	2146.56	9814.16	4914.37	0.02	-0.03	-0.03	0.081
10.00	-46.63	-2.64	0.00	-336.42	0.00	336.42	4267.86	2133.93	9656.46	4835.41	0.04	-0.04	-0.04	0.081
12.00	-45.98	-2.63	0.00	-331.14	0.00	331.14	4242.22	2121.11	9499.10	4756.61	0.05	-0.04	-0.04	0.080
14.00	-45.34	-2.62	0.00	-325.87	0.00	325.87	4216.20	2108.10	9342.10	4677.99	0.07	-0.05	-0.05	0.080
16.00	-44.70	-2.61	0.00	-320.62	0.00	320.62	4189.80	2094.90	9185.49	4599.57	0.10	-0.06	-0.06	0.080
18.00	-44.06	-2.60	0.00	-315.40	0.00	315.40	4163.03	2081.51	9029.29	4521.36	0.12	-0.07	-0.07	0.080
20.00	-43.44	-2.59	0.00	-310.19	0.00	310.19	4135.87	2067.94	8873.53	4443.36	0.15	-0.08	-0.08	0.080
22.00	-42.81	-2.58	0.00	-305.02	0.00	305.02	4108.34	2054.17	8718.25	4365.60	0.19	-0.08	-0.08	0.080
24.00	-42.20	-2.57	0.00	-299.86	0.00	299.86	4080.43	2040.21	8563.45	4288.09	0.22	-0.09	-0.09	0.080
26.00	-41.59	-2.55	0.00	-294.73	0.00	294.73	4052.14	2026.07	8409.18	4210.84	0.27	-0.10	-0.10	0.080
28.00	-40.98	-2.54	0.00	-289.62	0.00	289.62	4023.46	2011.73	8255.45	4133.86	0.31	-0.11	-0.11	0.080
30.00	-40.38	-2.53	0.00	-284.53	0.00	284.53	3994.42	1997.21	8102.30	4057.17	0.36	-0.12	-0.12	0.080
32.00	-39.78	-2.52	0.00	-279.47	0.00	279.47	3964.99	1982.49	7949.75	3980.79	0.41	-0.13	-0.13	0.080
34.00	-39.20	-2.51	0.00	-274.43	0.00	274.43	3935.18	1967.59	7797.83	3904.71	0.46	-0.14	-0.14	0.080
36.00	-38.61	-2.50	0.00	-269.42	0.00	269.42	3904.99	1952.50	7646.57	3828.97	0.52	-0.14	-0.14	0.080
38.00	-38.03	-2.48	0.00	-264.42	0.00	264.42	3874.43	1937.21	7495.98	3753.56	0.58	-0.15	-0.15	0.080
40.00	-37.46	-2.47	0.00	-259.46	0.00	259.46	3843.48	1921.74	7346.10	3678.51	0.65	-0.16	-0.16	0.080
42.00	-36.89	-2.46	0.00	-254.51	0.00	254.51	3812.16	1906.08	7196.95	3603.83	0.72	-0.17	-0.17	0.080
44.00	-36.33	-2.45	0.00	-249.60	0.00	249.60	3780.46	1890.23	7048.57	3529.52	0.80	-0.18	-0.18	0.080
46.00	-35.77	-2.43	0.00	-244.70	0.00	244.70	3748.38	1874.19	6900.97	3455.62	0.88	-0.19	-0.19	0.080
47.00	-35.42	-2.42	0.00	-242.27	0.00	242.27	3732.20	1866.10	6827.48	3418.81	0.92	-0.20	-0.20	0.080
47.50	-35.28	-2.42	0.00	-241.05	0.00	241.05	3724.07	1862.03	6790.81	3400.45	0.94	-0.20	-0.20	0.080
48.00	-35.04	-2.42	0.00	-239.84	0.00	239.84	3715.92	1857.96	6754.19	3382.11	0.96	-0.20	-0.20	0.080
50.00	-34.06	-2.39	0.00	-235.01	0.00	235.01	3683.08	1841.54	6608.25	3309.03	1.05	-0.21	-0.21	0.080
52.00	-33.09	-2.36	0.00	-230.24	0.00	230.24	3649.86	1824.93	6463.17	3236.39	1.14	-0.22	-0.22	0.080
53.25	-32.49	-2.34	0.00	-227.29	0.00	227.29	3673.19	1836.60	6564.80	3287.28	1.20	-0.23	-0.23	0.078
54.00	-32.29	-2.33	0.00	-225.54	0.00	225.54	3660.74	1830.37	6510.40	3260.04	1.23	-0.24	-0.24	0.078
56.00	-31.75	-2.32	0.00	-220.87	0.00	220.87	3627.27	1813.63	6365.92	3187.69	1.33	-0.25	-0.25	0.078
58.00	-31.22	-2.31	0.00	-216.23	0.00	216.23	3593.41	1796.71	6222.36	3115.80	1.44	-0.26	-0.26	0.078
60.00	-30.70	-2.30	0.00	-211.60	0.00	211.60	3559.18	1779.59	6079.73	3044.38	1.55	-0.27	-0.27	0.078
62.00	-30.18	-2.29	0.00	-207.00	0.00	207.00	3524.57	1762.29	5938.07	2973.45	1.66	-0.28	-0.28	0.078
64.00	-29.66	-2.28	0.00	-202.42	0.00	202.42	3489.59	1744.79	5797.40	2903.01	1.78	-0.29	-0.29	0.078
66.00	-29.15	-2.27	0.00	-197.86	0.00	197.86	3454.22	1727.11	5657.75	2833.08	1.91	-0.30	-0.30	0.078
68.00	-28.65	-2.26	0.00	-193.32	0.00	193.32	3418.47	1709.24	5519.14	2763.67	2.03	-0.31	-0.31	0.078
70.00	-28.15	-2.26	0.00	-188.79	0.00	188.79	3382.35	1691.17	5381.61	2694.80	2.17	-0.32	-0.32	0.078
72.00	-27.66	-2.25	0.00	-184.27	0.00	184.27	3345.84	1672.92	5245.17	2626.49	2.31	-0.34	-0.34	0.078
74.00	-27.17	-2.25	0.00	-179.77	0.00	179.77	3308.96	1654.48	5109.86	2558.73	2.45	-0.35	-0.35	0.078
76.00	-26.69	-2.25	0.00	-175.26	0.00	175.26	3271.70	1635.85	4975.70	2491.55	2.60	-0.36	-0.36	0.079
78.00	-26.22	-2.25	0.00	-170.77	0.00	170.77	3230.14	1615.07	4836.86	2422.03	2.75	-0.37	-0.37	0.079
80.00	-25.77	-2.25	0.00	-166.26	0.00	166.26	3180.13	1590.07	4687.51	2347.24	2.91	-0.39	-0.39	0.079
82.00	-25.21	-2.26	0.00	-161.76	0.00	161.76	3130.13	1565.06	4540.49	2273.62	3.08	-0.40	-0.40	0.079
84.00	-24.75	-2.26	0.00	-157.25	0.00	157.25	3080.12	1540.06	4395.82	2201.18	3.25	-0.41	-0.41	0.079
86.00	-24.30	-2.26	0.00	-152.74	0.00	152.74	3030.11	1515.05	4253.50	2129.91	3.42	-0.43	-0.43	0.080

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00	-23.85	-2.26	0.00	-148.21	0.00	148.21	2980.10	1490.05	4113.51	2059.81	3.61	-0.44	0.080
90.00	-23.41	-2.27	0.00	-143.69	0.00	143.69	2930.09	1465.05	3975.87	1990.89	3.79	-0.46	0.080
92.00	-22.97	-2.27	0.00	-139.16	0.00	139.16	2880.09	1440.04	3840.56	1923.14	3.99	-0.47	0.080
94.00	-22.54	-2.27	0.00	-134.62	0.00	134.62	2830.08	1415.04	3707.61	1856.56	4.19	-0.49	0.080
96.00	-22.12	-2.27	0.00	-130.08	0.00	130.08	2780.07	1390.03	3576.99	1791.15	4.40	-0.50	0.081
97.00	-21.91	-2.27	0.00	-127.81	0.00	127.81	2755.06	1377.53	3512.56	1758.89	4.50	-0.51	0.081
98.00	-21.57	-2.27	0.00	-125.54	0.00	125.54	2730.06	1365.03	3448.72	1726.92	4.61	-0.52	0.081
100.00	-20.90	-2.27	0.00	-120.99	0.00	120.99	2680.05	1340.03	3322.78	1663.86	4.83	-0.53	0.081
101.00	-20.57	-2.27	0.00	-118.72	0.00	118.72	2260.99	1130.50	2846.84	1425.54	4.94	-0.54	0.092
102.00	-20.39	-2.27	0.00	-116.45	0.00	116.45	2242.36	1121.18	2797.13	1400.64	5.06	-0.55	0.092
104.00	-20.03	-2.28	0.00	-111.90	0.00	111.90	2200.69	1100.35	2693.61	1348.81	5.29	-0.57	0.092
106.00	-19.67	-2.28	0.00	-107.34	0.00	107.34	2159.02	1079.51	2592.04	1297.95	5.53	-0.59	0.092
108.00	-19.32	-2.28	0.00	-102.78	0.00	102.78	2117.34	1058.67	2492.43	1248.07	5.78	-0.61	0.091
110.00	-18.90	-2.29	0.00	-98.21	0.00	98.21	2075.67	1037.84	2394.76	1199.16	6.04	-0.62	0.091
112.00	-18.56	-2.29	0.00	-93.64	0.00	93.64	2034.00	1017.00	2299.05	1151.23	6.31	-0.64	0.090
114.00	-18.22	-2.29	0.00	-89.07	0.00	89.07	1992.32	996.16	2205.29	1104.29	6.58	-0.66	0.090
116.00	-17.89	-2.29	0.00	-84.49	0.00	84.49	1950.65	975.32	2113.48	1058.31	6.86	-0.68	0.089
118.00	-17.56	-2.30	0.00	-79.90	0.00	79.90	1908.98	954.49	2023.63	1013.32	7.15	-0.70	0.088
120.00	-17.24	-2.30	0.00	-75.31	0.00	75.31	1867.30	933.65	1935.73	969.30	7.45	-0.72	0.087
122.00	-16.92	-2.30	0.00	-70.72	0.00	70.72	1825.63	912.81	1849.77	926.26	7.76	-0.74	0.086
124.00	-16.61	-2.30	0.00	-66.12	0.00	66.12	1783.96	891.98	1765.78	884.20	8.08	-0.76	0.084
126.00	-16.30	-2.30	0.00	-61.51	0.00	61.51	1742.28	871.14	1683.73	843.12	8.40	-0.79	0.082
128.00	-15.99	-2.30	0.00	-56.91	0.00	56.91	1700.61	850.30	1603.63	803.01	8.73	-0.81	0.080
130.00	-15.69	-2.30	0.00	-52.31	0.00	52.31	1658.94	829.47	1525.49	763.88	9.08	-0.83	0.078
131.00	-13.49	-2.21	0.00	-50.01	0.00	50.01	1638.10	819.05	1487.15	744.68	9.25	-0.84	0.075
132.00	-13.36	-2.21	0.00	-47.81	0.00	47.81	1617.26	808.63	1449.30	725.73	9.43	-0.85	0.074
134.00	-13.10	-2.20	0.00	-43.39	0.00	43.39	1575.59	787.79	1375.06	688.55	9.79	-0.87	0.071
136.00	-12.85	-2.19	0.00	-39.00	0.00	39.00	1533.91	766.96	1302.77	652.35	10.15	-0.88	0.068
138.00	-12.60	-2.18	0.00	-34.61	0.00	34.61	1492.24	746.12	1232.44	617.13	10.53	-0.90	0.065
140.00	-9.74	-1.92	0.00	-30.25	0.00	30.25	1450.57	725.28	1164.05	582.89	10.91	-0.92	0.059
142.00	-9.50	-1.91	0.00	-26.41	0.00	26.41	1408.89	704.45	1097.62	549.63	11.30	-0.94	0.055
144.00	-9.29	-1.89	0.00	-22.59	0.00	22.59	1367.22	683.61	1033.14	517.34	11.70	-0.95	0.050
146.00	-9.10	-1.87	0.00	-18.81	0.00	18.81	1325.55	662.77	970.62	486.03	12.10	-0.97	0.046
148.00	-8.91	-1.85	0.00	-15.06	0.00	15.06	1283.87	641.94	910.04	455.70	12.51	-0.98	0.040
148.25	-8.89	-1.85	0.00	-14.60	0.00	14.60	1278.66	639.33	902.61	451.97	12.56	-0.98	0.039
149.00	-5.82	-1.37	0.00	-13.21	0.00	13.21	1263.04	631.52	880.49	440.90	12.71	-0.99	0.035
150.00	-5.69	-1.35	0.00	-11.85	0.00	11.85	1242.20	621.10	851.42	426.34	12.92	-0.99	0.032
150.50	-5.62	-1.34	0.00	-11.17	0.00	11.17	761.18	380.59	536.85	268.82	13.03	-1.00	0.049
152.00	-5.53	-1.33	0.00	-9.16	0.00	9.16	742.42	371.21	510.58	255.67	13.34	-1.00	0.043
154.00	-5.41	-1.31	0.00	-6.50	0.00	6.50	717.42	358.71	476.59	238.65	13.76	-1.02	0.035
156.00	-5.30	-1.30	0.00	-3.87	0.00	3.87	692.41	346.21	443.76	222.21	14.19	-1.03	0.025
158.00	-5.19	-1.28	0.00	-1.28	0.00	1.28	667.41	333.71	412.11	206.36	14.62	-1.03	0.014
159.00	0.00	-1.19	0.00	0.00	0.00	0.00	654.91	327.45	396.72	198.65	14.84	-1.03	0.000

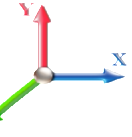
Seismic Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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	27
Sds	0.22
Ss	0.20
Sd1	0.10
S1	0.07
SA	0.03
Seismic Importance Factor	1.00

Gust Response Factor	1.10	Seismic Load Factor	1.00
Dead Load Factor	0.90	Structure Frequency	0.33
Wind Load Factor	0.00		

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.01	0.00	0.00	
2.00		466.17	0.00	0.02	0.01	7.28	
4.00		461.59	0.00	0.03	0.02	10.21	
6.00		457.01	0.00	0.04	0.02	12.29	
8.00		452.43	0.01	0.05	0.03	13.77	
10.00		447.85	0.01	0.05	0.03	14.83	
12.00		443.27	0.01	0.06	0.03	15.58	
14.00		438.69	0.02	0.06	0.04	16.11	
16.00		434.11	0.02	0.06	0.04	16.46	
18.00		429.53	0.03	0.07	0.04	16.69	
20.00		424.95	0.03	0.07	0.04	16.83	
22.00		420.37	0.04	0.07	0.04	16.90	
24.00		415.79	0.05	0.07	0.04	16.92	
26.00		411.20	0.05	0.07	0.04	16.92	
28.00		406.62	0.06	0.07	0.04	16.89	
30.00		402.04	0.07	0.07	0.04	16.86	
32.00		397.46	0.08	0.07	0.04	16.82	
34.00		392.88	0.09	0.07	0.04	16.77	
36.00		388.30	0.10	0.07	0.04	16.73	
38.00		383.72	0.11	0.07	0.04	16.68	
40.00		379.14	0.12	0.07	0.03	16.63	
42.00		374.56	0.14	0.07	0.03	16.57	
44.00		369.98	0.15	0.07	0.03	16.49	
46.00		365.40	0.16	0.07	0.03	16.39	
47.00	Appurtenance(s)	244.30	0.17	0.07	0.03	10.98	
47.50	Bot - Section 2	90.06	0.17	0.07	0.03	4.05	
48.00		181.07	0.18	0.07	0.03	8.16	
50.00		718.54	0.19	0.06	0.02	32.43	
52.00		709.38	0.21	0.06	0.02	31.96	
53.25	Top - Section 1	438.71	0.22	0.06	0.02	19.70	
54.00		131.89	0.22	0.06	0.02	5.91	
56.00		348.57	0.24	0.06	0.02	15.43	
58.00		343.99	0.26	0.05	0.02	14.95	
60.00		339.40	0.27	0.05	0.01	14.35	
62.00		334.82	0.29	0.05	0.01	13.62	
64.00		330.24	0.31	0.04	0.01	12.75	
66.00		325.66	0.33	0.04	0.01	11.73	
68.00		321.08	0.35	0.03	0.01	10.54	
70.00		316.50	0.37	0.03	0.01	9.18	
72.00		311.92	0.39	0.02	0.01	7.66	
74.00		307.34	0.42	0.01	0.01	5.99	
76.00		302.76	0.44	0.01	0.01	4.19	
78.00		298.18	0.46	0.00	0.01	2.29	
80.00	Appurtenance(s)	357.32	0.48	-0.01	0.01	0.43	
82.00		289.02	0.51	-0.02	0.01	-1.58	
84.00		284.43	0.53	-0.03	0.01	-3.45	

Seismic Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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86.00		279.85	0.56	-0.04	0.01	-5.22
88.00		275.27	0.58	-0.05	0.01	-6.82
90.00		270.69	0.61	-0.06	0.02	-8.22
92.00		266.11	0.64	-0.07	0.02	-9.40
94.00		261.53	0.67	-0.08	0.02	-10.34
96.00		256.95	0.69	-0.09	0.03	-11.03
97.00	Bot - Section 3	126.76	0.71	-0.09	0.03	-5.61
98.00		232.61	0.72	-0.09	0.03	-10.57
100.00		458.92	0.75	-0.10	0.04	-21.62
101.00	Top - Section 2	226.31	0.77	-0.11	0.05	-10.77
102.00		103.18	0.78	-0.11	0.05	-4.94
104.00		203.50	0.81	-0.11	0.06	-9.73
106.00		199.68	0.85	-0.12	0.07	-9.36
108.00		195.86	0.88	-0.12	0.08	-8.83
110.00	Appurtenance(s)	255.76	0.91	-0.12	0.09	-10.87
112.00		188.23	0.94	-0.12	0.10	-7.35
114.00		184.41	0.98	-0.12	0.12	-6.42
116.00		180.59	1.01	-0.11	0.14	-5.38
118.00		176.77	1.05	-0.10	0.16	-4.24
120.00		172.96	1.08	-0.08	0.18	-3.01
122.00		169.14	1.12	-0.06	0.20	-1.69
124.00		165.32	1.15	-0.03	0.22	-0.30
126.00		161.50	1.19	0.00	0.25	1.15
128.00		157.69	1.23	0.03	0.28	2.67
130.00		153.87	1.27	0.08	0.31	4.23
131.00	Appurtenance(s)	1785.5	1.29	0.10	0.32	58.98
132.00		74.55	1.31	0.13	0.34	2.89
134.00		146.24	1.35	0.19	0.38	7.45
136.00		142.42	1.39	0.26	0.42	9.10
138.00		138.60	1.43	0.34	0.46	10.77
140.00	Appurtenance(s)	2322.0	1.47	0.42	0.51	214.38
142.00		130.97	1.51	0.53	0.55	14.11
144.00		127.15	1.55	0.64	0.61	15.77
146.00		123.33	1.60	0.76	0.66	17.41
148.00		119.51	1.64	0.90	0.72	19.02
148.25	Bot - Section 4	14.67	1.64	0.92	0.73	2.37
149.00	Appurtenance(s)	2549.7	1.66	0.98	0.76	429.59
150.00		92.81	1.68	1.06	0.79	16.52
150.50	Top - Section 3	45.83	1.69	1.10	0.81	8.38
152.00		51.65	1.73	1.23	0.86	10.21
154.00		66.86	1.77	1.42	0.93	14.60
156.00		64.57	1.82	1.63	1.01	15.49
158.00		62.28	1.87	1.86	1.10	16.33
159.00	Appurtenance(s)	<u>4330.7</u>	1.89	1.98	1.14	<u>1185.58</u>
Totals:		34,601.1				2,494.2
						Total Wind: 38,048.3

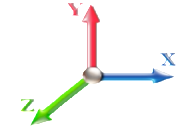
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0E						Iterations 27
Gust Response Factor	1.10		Sds	0.22		Ss 0.20
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.10	S1 0.07
Wind Load Factor	0.00	Structure Frequency	0.33	SA	0.03	Seismic Importance Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-37.47	-2.67	0.00	-357.09	0.00	357.09	4390.37	2195.18	10447.7	5231.64	0.00	0.00	0.00	0.077
2.00	-36.96	-2.67	0.00	-351.74	0.00	351.74	4366.62	2183.31	10288.9	5152.14	0.00	-0.01	0.077	0.077
4.00	-36.46	-2.66	0.00	-346.41	0.00	346.41	4342.50	2171.25	10130.4	5072.75	0.01	-0.01	0.077	0.077
6.00	-35.96	-2.66	0.00	-341.08	0.00	341.08	4318.00	2159.00	9972.16	4993.49	0.01	-0.02	0.077	0.077
8.00	-35.46	-2.65	0.00	-335.77	0.00	335.77	4293.12	2146.56	9814.16	4914.37	0.02	-0.03	0.077	0.077
10.00	-34.97	-2.64	0.00	-330.48	0.00	330.48	4267.86	2133.93	9656.46	4835.41	0.04	-0.04	0.077	0.077
12.00	-34.49	-2.62	0.00	-325.21	0.00	325.21	4242.22	2121.11	9499.10	4756.61	0.05	-0.04	0.076	0.076
14.00	-34.00	-2.61	0.00	-319.96	0.00	319.96	4216.20	2108.10	9342.10	4677.99	0.07	-0.05	0.076	0.076
16.00	-33.52	-2.60	0.00	-314.73	0.00	314.73	4189.80	2094.90	9185.49	4599.57	0.10	-0.06	0.076	0.076
18.00	-33.05	-2.59	0.00	-309.53	0.00	309.53	4163.03	2081.51	9029.29	4521.36	0.12	-0.07	0.076	0.076
20.00	-32.58	-2.57	0.00	-304.36	0.00	304.36	4135.87	2067.94	8873.53	4443.36	0.15	-0.07	0.076	0.076
22.00	-32.11	-2.56	0.00	-299.21	0.00	299.21	4108.34	2054.17	8718.25	4365.60	0.18	-0.08	0.076	0.076
24.00	-31.65	-2.55	0.00	-294.09	0.00	294.09	4080.43	2040.21	8563.45	4288.09	0.22	-0.09	0.076	0.076
26.00	-31.19	-2.53	0.00	-288.99	0.00	288.99	4052.14	2026.07	8409.18	4210.84	0.26	-0.10	0.076	0.076
28.00	-30.73	-2.52	0.00	-283.92	0.00	283.92	4023.46	2011.73	8255.45	4133.86	0.30	-0.11	0.076	0.076
30.00	-30.28	-2.51	0.00	-278.88	0.00	278.88	3994.42	1997.21	8102.30	4057.17	0.35	-0.12	0.076	0.076
32.00	-29.84	-2.50	0.00	-273.86	0.00	273.86	3964.99	1982.49	7949.75	3980.79	0.40	-0.12	0.076	0.076
34.00	-29.39	-2.48	0.00	-268.87	0.00	268.87	3935.18	1967.59	7797.83	3904.71	0.45	-0.13	0.076	0.076
36.00	-28.96	-2.47	0.00	-263.91	0.00	263.91	3904.99	1952.50	7646.57	3828.97	0.51	-0.14	0.076	0.076
38.00	-28.52	-2.46	0.00	-258.97	0.00	258.97	3874.43	1937.21	7495.98	3753.56	0.57	-0.15	0.076	0.076
40.00	-28.09	-2.44	0.00	-254.06	0.00	254.06	3843.48	1921.74	7346.10	3678.51	0.64	-0.16	0.076	0.076
42.00	-27.67	-2.43	0.00	-249.17	0.00	249.17	3812.16	1906.08	7196.95	3603.83	0.71	-0.17	0.076	0.076
44.00	-27.25	-2.42	0.00	-244.32	0.00	244.32	3780.46	1890.23	7048.57	3529.52	0.78	-0.18	0.076	0.076
46.00	-26.83	-2.40	0.00	-239.48	0.00	239.48	3748.38	1874.19	6900.97	3455.62	0.86	-0.19	0.076	0.076
47.00	-26.56	-2.39	0.00	-237.08	0.00	237.08	3732.20	1866.10	6827.48	3418.81	0.90	-0.19	0.076	0.076
47.50	-26.46	-2.39	0.00	-235.88	0.00	235.88	3724.07	1862.03	6790.81	3400.45	0.92	-0.20	0.076	0.076
48.00	-26.28	-2.38	0.00	-234.69	0.00	234.69	3715.92	1857.96	6754.19	3382.11	0.94	-0.20	0.076	0.076
50.00	-25.54	-2.35	0.00	-229.93	0.00	229.93	3683.08	1841.54	6608.25	3309.03	1.03	-0.21	0.076	0.076
52.00	-24.81	-2.32	0.00	-225.22	0.00	225.22	3649.86	1824.93	6463.17	3236.39	1.12	-0.22	0.076	0.076
53.25	-24.36	-2.30	0.00	-222.32	0.00	222.32	3673.19	1836.60	6564.80	3287.28	1.18	-0.23	0.074	0.074
54.00	-24.21	-2.30	0.00	-220.59	0.00	220.59	3660.74	1830.37	6510.40	3260.04	1.21	-0.23	0.074	0.074
56.00	-23.81	-2.29	0.00	-216.00	0.00	216.00	3627.27	1813.63	6365.92	3187.69	1.31	-0.24	0.074	0.074
58.00	-23.41	-2.27	0.00	-211.42	0.00	211.42	3593.41	1796.71	6222.36	3115.80	1.41	-0.25	0.074	0.074
60.00	-23.02	-2.26	0.00	-206.88	0.00	206.88	3559.18	1779.59	6079.73	3044.38	1.52	-0.26	0.074	0.074
62.00	-22.63	-2.25	0.00	-202.35	0.00	202.35	3524.57	1762.29	5938.07	2973.45	1.63	-0.27	0.074	0.074
64.00	-22.24	-2.24	0.00	-197.85	0.00	197.85	3489.59	1744.79	5797.40	2903.01	1.75	-0.28	0.075	0.075
66.00	-21.86	-2.23	0.00	-193.37	0.00	193.37	3454.22	1727.11	5657.75	2833.08	1.87	-0.29	0.075	0.075
68.00	-21.49	-2.22	0.00	-188.91	0.00	188.91	3418.47	1709.24	5519.14	2763.67	2.00	-0.31	0.075	0.075
70.00	-21.11	-2.22	0.00	-184.47	0.00	184.47	3382.35	1691.17	5381.61	2694.80	2.13	-0.32	0.075	0.075
72.00	-20.74	-2.21	0.00	-180.04	0.00	180.04	3345.84	1672.92	5245.17	2626.49	2.26	-0.33	0.075	0.075
74.00	-20.38	-2.21	0.00	-175.62	0.00	175.62	3308.96	1654.48	5109.86	2558.73	2.40	-0.34	0.075	0.075
76.00	-20.02	-2.20	0.00	-171.20	0.00	171.20	3271.70	1635.85	4975.70	2491.55	2.55	-0.35	0.075	0.075
78.00	-19.66	-2.20	0.00	-166.79	0.00	166.79	3230.14	1615.07	4836.86	2422.03	2.70	-0.37	0.075	0.075
80.00	-19.25	-2.21	0.00	-162.39	0.00	162.39	3180.13	1590.07	4687.51	2347.24	2.85	-0.38	0.075	0.075
82.00	-18.90	-2.21	0.00	-157.98	0.00	157.98	3130.13	1565.06	4540.49	2273.62	3.02	-0.39	0.076	0.076
84.00	-18.56	-2.21	0.00	-153.56	0.00	153.56	3080.12	1540.06	4395.82	2201.18	3.18	-0.41	0.076	0.076
86.00	-18.22	-2.21	0.00	-149.14	0.00	149.14	3030.11	1515.05	4253.50	2129.91	3.36	-0.42	0.076	0.076

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00	-17.89	-2.21	0.00	-144.72	0.00	144.72	2980.10	1490.05	4113.51	2059.81	3.53	-0.43	0.076
90.00	-17.55	-2.22	0.00	-140.29	0.00	140.29	2930.09	1465.05	3975.87	1990.89	3.72	-0.45	0.076
92.00	-17.23	-2.22	0.00	-135.86	0.00	135.86	2880.09	1440.04	3840.56	1923.14	3.91	-0.46	0.077
94.00	-16.90	-2.22	0.00	-131.43	0.00	131.43	2830.08	1415.04	3707.61	1856.56	4.11	-0.48	0.077
96.00	-16.59	-2.22	0.00	-126.99	0.00	126.99	2780.07	1390.03	3576.99	1791.15	4.31	-0.49	0.077
97.00	-16.43	-2.22	0.00	-124.77	0.00	124.77	2755.06	1377.53	3512.56	1758.89	4.41	-0.50	0.077
98.00	-16.17	-2.22	0.00	-122.55	0.00	122.55	2730.06	1365.03	3448.72	1726.92	4.52	-0.51	0.077
100.00	-15.67	-2.22	0.00	-118.11	0.00	118.11	2680.05	1340.03	3322.78	1663.86	4.73	-0.52	0.077
101.00	-15.43	-2.22	0.00	-115.89	0.00	115.89	2260.99	1130.50	2846.84	1425.54	4.84	-0.53	0.088
102.00	-15.29	-2.22	0.00	-113.67	0.00	113.67	2242.36	1121.18	2797.13	1400.64	4.95	-0.54	0.088
104.00	-15.02	-2.22	0.00	-109.23	0.00	109.23	2200.69	1100.35	2693.61	1348.81	5.18	-0.56	0.088
106.00	-14.75	-2.23	0.00	-104.78	0.00	104.78	2159.02	1079.51	2592.04	1297.95	5.42	-0.57	0.088
108.00	-14.49	-2.23	0.00	-100.33	0.00	100.33	2117.34	1058.67	2492.43	1248.07	5.66	-0.59	0.087
110.00	-14.17	-2.23	0.00	-95.87	0.00	95.87	2075.67	1037.84	2394.76	1199.16	5.92	-0.61	0.087
112.00	-13.91	-2.23	0.00	-91.41	0.00	91.41	2034.00	1017.00	2299.05	1151.23	6.18	-0.63	0.086
114.00	-13.66	-2.23	0.00	-86.95	0.00	86.95	1992.32	996.16	2205.29	1104.29	6.44	-0.65	0.086
116.00	-13.41	-2.24	0.00	-82.48	0.00	82.48	1950.65	975.32	2113.48	1058.31	6.72	-0.67	0.085
118.00	-13.17	-2.24	0.00	-78.01	0.00	78.01	1908.98	954.49	2023.63	1013.32	7.00	-0.69	0.084
120.00	-12.92	-2.24	0.00	-73.54	0.00	73.54	1867.30	933.65	1935.73	969.30	7.30	-0.71	0.083
122.00	-12.68	-2.24	0.00	-69.06	0.00	69.06	1825.63	912.81	1849.77	926.26	7.60	-0.73	0.082
124.00	-12.45	-2.24	0.00	-64.58	0.00	64.58	1783.96	891.98	1765.78	884.20	7.91	-0.75	0.080
126.00	-12.22	-2.24	0.00	-60.10	0.00	60.10	1742.28	871.14	1683.73	843.12	8.22	-0.77	0.078
128.00	-11.99	-2.24	0.00	-55.61	0.00	55.61	1700.61	850.30	1603.63	803.01	8.55	-0.79	0.076
130.00	-11.76	-2.24	0.00	-51.14	0.00	51.14	1658.94	829.47	1525.49	763.88	8.88	-0.81	0.074
131.00	-10.11	-2.15	0.00	-48.90	0.00	48.90	1638.10	819.05	1487.15	744.68	9.05	-0.82	0.072
132.00	-10.01	-2.15	0.00	-46.74	0.00	46.74	1617.26	808.63	1449.30	725.73	9.23	-0.83	0.071
134.00	-9.82	-2.15	0.00	-42.44	0.00	42.44	1575.59	787.79	1375.06	688.55	9.58	-0.85	0.068
136.00	-9.63	-2.14	0.00	-38.15	0.00	38.15	1533.91	766.96	1302.77	652.35	9.94	-0.87	0.065
138.00	-9.44	-2.13	0.00	-33.87	0.00	33.87	1492.24	746.12	1232.44	617.13	10.30	-0.88	0.061
140.00	-7.30	-1.88	0.00	-29.62	0.00	29.62	1450.57	725.28	1164.05	582.89	10.68	-0.90	0.056
142.00	-7.12	-1.87	0.00	-25.86	0.00	25.86	1408.89	704.45	1097.62	549.63	11.06	-0.92	0.052
144.00	-6.96	-1.85	0.00	-22.13	0.00	22.13	1367.22	683.61	1033.14	517.34	11.45	-0.93	0.048
146.00	-6.82	-1.83	0.00	-18.43	0.00	18.43	1325.55	662.77	970.62	486.03	11.84	-0.95	0.043
148.00	-6.68	-1.81	0.00	-14.76	0.00	14.76	1283.87	641.94	910.04	455.70	12.24	-0.96	0.038
148.25	-6.66	-1.81	0.00	-14.31	0.00	14.31	1278.66	639.33	902.61	451.97	12.29	-0.96	0.037
149.00	-4.36	-1.34	0.00	-12.95	0.00	12.95	1263.04	631.52	880.49	440.90	12.44	-0.97	0.033
150.00	-4.26	-1.32	0.00	-11.61	0.00	11.61	1242.20	621.10	851.42	426.34	12.64	-0.97	0.031
150.50	-4.21	-1.31	0.00	-10.95	0.00	10.95	761.18	380.59	536.85	268.82	12.75	-0.97	0.046
152.00	-4.14	-1.30	0.00	-8.98	0.00	8.98	742.42	371.21	510.58	255.67	13.05	-0.98	0.041
154.00	-4.06	-1.29	0.00	-6.37	0.00	6.37	717.42	358.71	476.59	238.65	13.47	-0.99	0.032
156.00	-3.97	-1.27	0.00	-3.80	0.00	3.80	692.41	346.21	443.76	222.21	13.89	-1.00	0.023
158.00	-3.89	-1.25	0.00	-1.25	0.00	1.25	667.41	333.71	412.11	206.36	14.31	-1.01	0.012
159.00	0.00	-1.19	0.00	0.00	0.00	0.00	654.91	327.45	396.72	198.65	14.52	-1.01	0.000

Wind Loading - Shaft

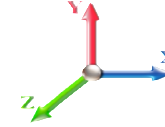
Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	272.47	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	269.83	0.663 *	0.000	2.00	9.803	6.50	53.2	0.0	466.2
4.00		1.00	0.85	7.442	8.19	267.18	0.665 *	0.000	2.00	9.708	6.45	52.8	0.0	461.6
6.00		1.00	0.85	7.442	8.19	264.53	0.667 *	0.000	2.00	9.612	6.41	52.5	0.0	457.0
8.00		1.00	0.85	7.442	8.19	261.89	0.669 *	0.000	2.00	9.516	6.36	52.1	0.0	452.4
10.00		1.00	0.85	7.442	8.19	259.24	0.671 *	0.000	2.00	9.421	6.32	51.7	0.0	447.9
12.00		1.00	0.85	7.442	8.19	256.59	0.673 *	0.000	2.00	9.325	6.28	51.4	0.0	443.3
14.00		1.00	0.85	7.442	8.19	253.94	0.675 *	0.000	2.00	9.229	6.23	51.0	0.0	438.7
16.00		1.00	0.87	7.631	8.39	254.46	0.678 *	0.000	2.00	9.134	6.19	52.0	0.0	434.1
18.00		1.00	0.89	7.811	8.59	254.75	0.680 *	0.000	2.00	9.038	6.15	52.8	0.0	429.5
20.00		1.00	0.91	7.978	8.78	254.70	0.683 *	0.000	2.00	8.942	6.10	53.6	0.0	424.9
22.00		1.00	0.93	8.132	8.95	254.39	0.685 *	0.000	2.00	8.846	6.06	54.2	0.0	420.4
24.00		1.00	0.95	8.276	9.10	253.84	0.687 *	0.000	2.00	8.751	6.02	54.8	0.0	415.8
26.00		1.00	0.96	8.411	9.25	253.09	0.690 *	0.000	2.00	8.655	5.97	55.3	0.0	411.2
28.00		1.00	0.98	8.539	9.39	252.16	0.693 *	0.000	2.00	8.559	5.93	55.7	0.0	406.6
30.00		1.00	0.99	8.659	9.53	251.09	0.695 *	0.000	2.00	8.464	5.89	56.1	0.0	402.0
32.00		1.00	1.00	8.774	9.65	249.87	0.698 *	0.000	2.00	8.368	5.84	56.4	0.0	397.5
34.00		1.00	1.01	8.883	9.77	248.53	0.701 *	0.000	2.00	8.272	5.80	56.7	0.0	392.9
36.00		1.00	1.03	8.988	9.89	247.08	0.704 *	0.000	2.00	8.176	5.75	56.9	0.0	388.3
38.00		1.00	1.04	9.088	10.00	245.53	0.707 *	0.000	2.00	8.081	5.71	57.1	0.0	383.7
40.00		1.00	1.05	9.184	10.10	243.88	0.710 *	0.000	2.00	7.985	5.67	57.3	0.0	379.1
42.00		1.00	1.06	9.277	10.20	242.15	0.713 *	0.000	2.00	7.889	5.62	57.4	0.0	374.6
44.00		1.00	1.07	9.366	10.30	240.34	0.716 *	0.000	2.00	7.794	5.58	57.5	0.0	370.0
46.00		1.00	1.08	9.452	10.40	238.46	0.719 *	0.000	2.00	7.698	5.54	57.6	0.0	365.4
47.00	Appurtenance(s)	1.00	1.08	9.494	10.44	237.50	0.722 *	0.000	1.00	3.813	2.75	28.7	0.0	181.0
47.50	Bot - Section 2	1.00	1.09	9.515	10.47	237.01	0.723 *	0.000	0.50	1.898	1.37	14.4	0.0	90.1
48.00		1.00	1.09	9.536	10.49	236.51	0.724 *	0.000	0.50	1.923	1.39	14.6	0.0	181.1
50.00		1.00	1.10	9.616	10.58	234.50	0.726 *	0.000	2.00	7.633	5.54	58.6	0.0	718.5
52.00		1.00	1.11	9.694	10.66	232.43	0.701 *	0.000	2.00	7.538	5.28	56.3	0.0	709.4
53.25	Top - Section 1	1.00	1.11	9.742	10.72	231.11	0.704 *	0.000	1.25	4.662	3.28	35.2	0.0	438.7
54.00		1.00	1.12	9.770	10.75	234.33	0.701 *	0.000	0.75	2.780	1.95	20.9	0.0	131.9
56.00		1.00	1.12	9.844	10.83	232.17	0.703 *	0.000	2.00	7.346	5.17	55.9	0.0	348.6
58.00		1.00	1.13	9.916	10.91	229.96	0.706 *	0.000	2.00	7.251	5.12	55.9	0.0	344.0
60.00		1.00	1.14	9.986	10.98	227.70	0.710 *	0.000	2.00	7.155	5.08	55.8	0.0	339.4
62.00		1.00	1.15	10.054	11.06	225.40	0.713 *	0.000	2.00	7.059	5.04	55.7	0.0	334.8
64.00		1.00	1.16	10.120	11.13	223.05	0.717 *	0.000	2.00	6.963	4.99	55.6	0.0	330.2
66.00		1.00	1.16	10.185	11.20	220.67	0.720 *	0.000	2.00	6.868	4.95	55.4	0.0	325.7
68.00		1.00	1.17	10.248	11.27	218.25	0.724 *	0.000	2.00	6.772	4.90	55.3	0.0	321.1
70.00		1.00	1.18	10.310	11.34	215.79	0.728 *	0.000	2.00	6.676	4.86	55.1	0.0	316.5
72.00		1.00	1.18	10.370	11.41	213.29	0.732 *	0.000	2.00	6.581	4.82	55.0	0.0	311.9
74.00		1.00	1.19	10.430	11.47	210.77	0.736 *	0.000	2.00	6.485	4.77	54.8	0.0	307.3
76.00		1.00	1.20	10.488	11.54	208.21	0.740 *	0.000	2.00	6.389	4.73	54.6	0.0	302.8
78.00		1.00	1.20	10.544	11.60	205.62	0.745 *	0.000	2.00	6.293	4.69	54.4	0.0	298.2
80.00	Appurtenance(s)	1.00	1.21	10.600	11.66	203.00	0.749 *	0.000	2.00	6.198	4.64	54.1	0.0	293.6
82.00		1.00	1.22	10.654	11.72	200.36	0.754 *	0.000	2.00	6.102	4.60	53.9	0.0	289.0
84.00		1.00	1.22	10.708	11.78	197.69	0.759 *	0.000	2.00	6.006	4.56	53.7	0.0	284.4
86.00		1.00	1.23	10.761	11.84	194.99	0.763 *	0.000	2.00	5.911	4.51	53.4	0.0	279.9

Wind Loading - Shaft

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00	1.00	1.23	10.812	11.89	192.26	0.769 *	0.000	2.00	5.815	4.47	53.2	0.0	275.3
90.00	1.00	1.24	10.863	11.95	189.52	0.774 *	0.000	2.00	5.719	4.43	52.9	0.0	270.7
92.00	1.00	1.25	10.913	12.00	186.74	0.779 *	0.000	2.00	5.623	4.38	52.6	0.0	266.1
94.00	1.00	1.25	10.962	12.06	183.95	0.785 *	0.000	2.00	5.528	4.34	52.3	0.0	261.5
96.00	1.00	1.26	11.010	12.11	181.13	0.791 *	0.000	2.00	5.432	4.29	52.0	0.0	256.9
97.00 Bot - Section 3	1.00	1.26	11.034	12.14	179.72	0.795 *	0.000	1.00	2.680	2.13	25.9	0.0	126.8
98.00	1.00	1.26	11.057	12.16	178.30	0.798 *	0.000	1.00	2.709	2.16	26.3	0.0	232.6
100.00	1.00	1.27	11.104	12.21	175.44	0.803 *	0.000	2.00	5.346	4.29	52.4	0.0	458.9
101.00 Top - Section 2	1.00	1.27	11.127	12.24	174.00	0.808 *	0.000	1.00	2.637	2.13	26.1	0.0	226.3
102.00	1.00	1.27	11.150	12.26	176.14	0.804 *	0.000	1.00	2.613	2.10	25.8	0.0	103.2
104.00	1.00	1.28	11.195	12.31	173.25	0.809 *	0.000	2.00	5.155	4.17	51.3	0.0	203.5
106.00	1.00	1.28	11.240	12.36	170.34	0.815 *	0.000	2.00	5.059	4.13	51.0	0.0	199.7
108.00	1.00	1.29	11.284	12.41	167.42	0.822 *	0.000	2.00	4.964	4.08	50.7	0.0	195.9
110.00 Appurtenance(s)	1.00	1.29	11.327	12.46	164.47	0.830 *	0.000	2.00	4.868	4.04	50.3	0.0	192.0
112.00	1.00	1.30	11.370	12.51	161.51	0.761 *	0.000	2.00	4.772	3.63	45.4	0.0	188.2
114.00	1.00	1.30	11.412	12.55	158.53	0.768 *	0.000	2.00	4.676	3.59	45.1	0.0	184.4
116.00	1.00	1.31	11.453	12.60	155.53	0.774 *	0.000	2.00	4.581	3.55	44.7	0.0	180.6
118.00	1.00	1.31	11.494	12.64	152.52	0.781 *	0.000	2.00	4.485	3.50	44.3	0.0	176.8
120.00	1.00	1.32	11.534	12.69	149.49	0.788 *	0.000	2.00	4.389	3.46	43.9	0.0	173.0
122.00	1.00	1.32	11.574	12.73	146.45	0.796 *	0.000	2.00	4.294	3.42	43.5	0.0	169.1
124.00	1.00	1.33	11.614	12.78	143.39	0.803 *	0.000	2.00	4.198	3.37	43.1	0.0	165.3
126.00	1.00	1.33	11.653	12.82	140.32	0.812 *	0.000	2.00	4.102	3.33	42.7	0.0	161.5
128.00	1.00	1.34	11.691	12.86	137.23	0.820 *	0.000	2.00	4.006	3.29	42.3	0.0	157.7
130.00	1.00	1.34	11.729	12.90	134.13	0.829 *	0.000	2.00	3.911	3.24	41.8	0.0	153.9
131.00 Appurtenance(s)	1.00	1.34	11.748	12.92	132.58	0.836 *	0.000	1.00	1.919	1.60	20.7	0.0	75.5
132.00	1.00	1.34	11.766	12.94	131.02	0.841 *	0.000	1.00	1.896	1.59	20.6	0.0	74.5
134.00	1.00	1.35	11.803	12.98	127.89	1.200 *	0.000	2.00	3.719	4.46	57.9	0.0	146.2
136.00	1.00	1.35	11.840	13.02	124.75	1.200 *	0.000	2.00	3.624	4.35	56.6	0.0	142.4
138.00	1.00	1.36	11.876	13.06	121.59	1.200 *	0.000	2.00	3.528	4.23	55.3	0.0	138.6
140.00 Appurtenance(s)	1.00	1.36	11.912	13.10	118.43	1.200 *	0.000	2.00	3.432	4.12	54.0	0.0	134.8
142.00	1.00	1.36	11.947	13.14	115.25	1.200 *	0.000	2.00	3.336	4.00	52.6	0.0	131.0
144.00	1.00	1.37	11.982	13.18	112.06	1.200 *	0.000	2.00	3.241	3.89	51.3	0.0	127.1
146.00	1.00	1.37	12.017	13.22	108.86	1.200 *	0.000	2.00	3.145	3.77	49.9	0.0	123.3
148.00	1.00	1.38	12.051	13.26	105.64	1.200 *	0.000	2.00	3.049	3.66	48.5	0.0	119.5
148.25 Bot - Section 4	1.00	1.38	12.055	13.26	105.24	1.200 *	0.000	0.25	0.374	0.45	6.0	0.0	14.7
149.00 Appurtenance(s)	1.00	1.38	12.068	13.27	104.03	1.200 *	0.000	0.75	1.138	1.37	18.1	0.0	70.6
150.00	1.00	1.38	12.085	13.29	102.42	1.200 *	0.000	1.00	1.497	1.80	23.9	0.0	92.8
150.50 Top - Section 3	1.00	1.38	12.093	13.30	101.61	1.200 *	0.000	0.50	0.739	0.89	11.8	0.0	45.8
152.00	1.00	1.38	12.119	13.33	101.42	1.200 *	0.000	1.50	2.182	2.62	34.9	0.0	51.6
154.00	1.00	1.39	12.152	13.37	98.18	1.200 *	0.000	2.00	2.826	3.39	45.3	0.0	66.9
156.00	1.00	1.39	12.185	13.40	94.92	1.200 *	0.000	2.00	2.730	3.28	43.9	0.0	64.6
158.00	1.00	1.40	12.217	13.44	91.66	1.200 *	0.000	2.00	2.634	3.16	42.5	0.0	62.3
159.00 Appurtenance(s)	1.00	1.40	12.233	13.46	90.02	1.200 *	0.000	1.00	1.281	1.54	20.7	0.0	30.3

* Cf Adjusted by Linear Load Ra Effect

Totals:	159.00	4,137.0	23,733.6
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Discrete Appurtenance Forces

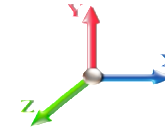
Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

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	159.00	Site Pro 1 -	1	12.233	13.457	1.00	1.00	48.00	2645.00	0.000	0.000	645.92	0.00	0.00
2	159.00	Powerwave 7770	3	12.281	13.509	0.73	1.00	12.68	105.00	0.000	3.000	171.30	0.00	513.90
3	159.00	Powerwave	3	12.281	13.509	0.75	1.00	19.19	192.00	0.000	3.000	259.28	0.00	777.83
4	159.00	Powerwave Technologies	6	12.281	13.509	0.50	1.00	3.87	84.60	0.000	3.000	52.28	0.00	156.84
5	159.00	Ericsson RRUS 11-700	3	12.281	13.509	0.50	1.00	3.78	165.00	0.000	3.000	51.07	0.00	153.20
6	159.00	Raycap DC6-48-60-18-8F	2	12.281	13.509	0.50	1.00	0.92	65.60	0.000	3.000	12.43	0.00	37.29
7	159.00	Site Pro 1 - HRK14	1	12.233	13.457	1.00	1.00	8.13	302.36	0.000	0.000	109.40	0.00	0.00
8	159.00	Quintel QS66512-2	3	12.281	13.509	0.92	1.00	22.44	333.00	0.000	3.000	303.13	0.00	909.40
9	159.00	Kaelus DBC0061F1V51-2	3	12.281	13.509	0.50	1.00	0.65	54.90	0.000	3.000	8.71	0.00	26.14
10	159.00	Ericsson RRUS 32 B30	3	12.281	13.509	0.50	1.00	4.11	180.00	0.000	3.000	55.52	0.00	166.57
11	159.00	Ericsson RRUS 32 B2	3	12.281	13.509	0.50	1.00	4.11	159.00	0.000	3.000	55.52	0.00	166.57
12	159.00	Decibel DB404-B - Omni	1	12.281	13.509	1.00	1.00	0.00	14.00	0.000	3.000	0.00	0.00	0.00
13	149.00	Alcatel Lucent - 800 MHz	3	12.102	13.312	0.50	0.75	3.75	159.00	0.000	2.000	49.97	0.00	99.94
14	149.00	Alcatel Lucent -	3	12.102	13.312	0.50	0.75	6.11	210.00	0.000	2.000	81.27	0.00	162.55
15	149.00	RFS - APXVSP18-C-A20	3	12.102	13.312	0.62	0.75	15.72	318.00	0.000	2.000	209.32	0.00	418.65
16	149.00	Alcatel Lucent - 1900 MHz	3	12.102	13.312	0.50	0.75	5.73	132.00	0.000	2.000	76.26	0.00	152.52
17	149.00	Low Profile Platform	1	12.068	13.275	1.00	1.00	35.00	1200.00	0.000	0.000	464.62	0.00	0.00
18	149.00	Alcatel Lucent - 800 MHz	3	12.102	13.312	0.50	0.75	1.18	26.40	0.000	2.000	15.65	0.00	31.31
19	149.00	RFS - ACU-A20-N - RET	4	12.102	13.312	0.50	0.75	0.28	4.00	0.000	2.000	3.75	0.00	7.49
20	149.00	SitePro HRK-12 Handrail	1	12.068	13.275	1.00	1.00	6.75	261.72	0.000	0.000	89.61	0.00	0.00
21	149.00	RFS - APXVTM14-C-I20 -	3	12.102	13.312	0.59	0.75	11.27	168.00	0.000	2.000	150.02	0.00	300.04
22	140.00	RFS -	3	11.956	13.152	0.50	0.75	1.76	47.55	0.000	2.500	23.20	0.00	57.99
23	140.00	RFS -	3	11.956	13.152	0.55	0.75	33.24	304.20	0.000	2.500	437.22	0.00	1093.05
24	140.00	RFS -	3	11.956	13.152	0.46	0.75	9.22	122.10	0.000	2.500	121.27	0.00	303.18
25	140.00	EMS - FR90-16-XXDP -	6	11.956	13.152	0.51	0.75	13.34	108.00	0.000	2.500	175.47	0.00	438.66
26	140.00	LP Platform w/ Handrails	1	11.912	13.103	1.00	1.00	34.00	1600.00	0.000	0.000	445.51	0.00	0.00
27	140.00	Andrew - ATSBT-TOP-FM	3	11.956	13.152	0.50	0.75	0.30	5.40	0.000	2.500	3.97	0.00	9.91
28	131.00	Antel LPA-80063/6CF -	6	11.748	12.922	0.75	0.80	43.32	162.00	0.000	0.000	559.74	0.00	0.00
29	131.00	Kathrein 742	3	11.748	12.922	0.58	0.80	5.44	49.50	0.000	0.000	70.34	0.00	0.00
30	131.00	Antel BXA-70063/6CF -	3	11.748	12.922	0.56	0.80	12.72	51.00	0.000	0.000	164.34	0.00	0.00
31	131.00	Antel BXA-171063-12BF -	3	11.748	12.922	0.67	0.80	9.56	45.00	0.000	0.000	123.49	0.00	0.00
32	131.00	Alcatel Lucent	3	11.748	12.922	0.54	0.80	5.63	165.00	0.000	0.000	72.73	0.00	0.00
33	131.00	RFS FD9R6004/2C-3L -	6	11.748	12.922	0.54	0.80	1.16	18.60	0.000	0.000	14.96	0.00	0.00
34	131.00	RFS DB-T1-6Z-8AB-0Z -	1	11.748	12.922	1.00	1.00	4.80	18.90	0.000	0.000	62.03	0.00	0.00
35	131.00	Low Profile Platform	1	11.748	12.922	1.00	1.00	22.00	1200.00	0.000	0.000	284.29	0.00	0.00
36	110.00	4 ft. Standoff	1	11.327	12.460	1.00	1.00	3.50	53.32	0.000	0.000	43.61	0.00	0.00
37	110.00	Sinclair SCL329-HL -	1	11.444	12.588	1.00	1.00	2.22	10.40	0.000	5.550	27.95	0.00	155.10
38	80.00	Sinclair SCL329-HL -	1	10.749	11.824	1.00	1.00	2.22	10.40	0.000	5.550	26.25	0.00	145.68
39	80.00	4 ft Standoff	1	10.600	11.660	1.00	1.00	3.50	53.32	0.000	0.000	40.81	0.00	0.00
40	47.00	4 ft Standoff	1	9.494	10.444	1.00	1.00	3.50	53.32	0.000	0.000	36.55	0.00	0.00
41	47.00	Decibel 26DB - GPS	1	9.616	10.578	1.00	1.00	0.16	10.00	0.000	3.000	1.69	0.00	5.08

Totals: 10,867.59

5,600.43

Total Applied Force Summary

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 28

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		53.17	564.17	0.00	0.00
4.00		52.81	559.59	0.00	0.00
6.00		52.46	555.00	0.00	0.00
8.00		52.10	550.42	0.00	0.00
10.00		51.74	545.84	0.00	0.00
12.00		51.39	541.26	0.00	0.00
14.00		51.03	536.68	0.00	0.00
16.00		51.96	532.10	0.00	0.00
18.00		52.82	527.52	0.00	0.00
20.00		53.56	522.94	0.00	0.00
22.00		54.20	518.36	0.00	0.00
24.00		54.77	513.78	0.00	0.00
26.00		55.26	509.20	0.00	0.00
28.00		55.69	504.62	0.00	0.00
30.00		56.06	500.03	0.00	0.00
32.00		56.38	495.45	0.00	0.00
34.00		56.66	490.87	0.00	0.00
36.00		56.90	486.29	0.00	0.00
38.00		57.10	481.71	0.00	0.00
40.00		57.26	477.13	0.00	0.00
42.00		57.39	472.55	0.00	0.00
44.00		57.50	467.97	0.00	0.00
46.00		57.57	463.39	0.00	0.00
47.00	(2) attachments	66.99	293.30	0.00	5.08
47.50		14.36	114.56	0.00	0.00
48.00		14.60	205.57	0.00	0.00
50.00		58.62	816.54	0.00	0.00
52.00		56.35	807.05	0.00	0.00
53.25		35.16	499.76	0.00	0.00
54.00		20.94	168.52	0.00	0.00
56.00		55.94	446.24	0.00	0.00
58.00		55.87	441.66	0.00	0.00
60.00		55.79	437.08	0.00	0.00
62.00		55.68	432.50	0.00	0.00
64.00		55.57	427.92	0.00	0.00
66.00		55.43	423.33	0.00	0.00
68.00		55.29	418.75	0.00	0.00
70.00		55.13	414.17	0.00	0.00
72.00		54.95	409.59	0.00	0.00
74.00		54.77	405.01	0.00	0.00
76.00		54.57	400.43	0.00	0.00
78.00		54.36	395.85	0.00	0.00
80.00	(2) attachments	121.20	454.99	0.00	145.68
82.00		53.91	385.65	0.00	0.00
84.00		53.67	381.07	0.00	0.00
86.00		53.41	376.49	0.00	0.00

Total Applied Force Summary

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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88.00		53.15	371.91	0.00	0.00
90.00		52.88	367.32	0.00	0.00
92.00		52.60	362.74	0.00	0.00
94.00		52.31	358.16	0.00	0.00
96.00		52.01	353.58	0.00	0.00
97.00		25.87	175.07	0.00	0.00
98.00		26.30	280.92	0.00	0.00
100.00		52.43	555.55	0.00	0.00
101.00		26.07	274.63	0.00	0.00
102.00		25.77	151.50	0.00	0.00
104.00		51.34	300.13	0.00	0.00
106.00		51.00	296.31	0.00	0.00
108.00		50.66	292.49	0.00	0.00
110.00	(2) attachments	121.87	352.40	0.00	155.10
112.00		45.45	283.82	0.00	0.00
114.00		45.07	280.00	0.00	0.00
116.00		44.68	276.18	0.00	0.00
118.00		44.29	272.37	0.00	0.00
120.00		43.90	268.55	0.00	0.00
122.00		43.49	264.73	0.00	0.00
124.00		43.08	260.91	0.00	0.00
126.00		42.67	257.10	0.00	0.00
128.00		42.25	253.28	0.00	0.00
130.00		41.83	249.46	0.00	0.00
131.00	(26) attachments	1372.65	1833.30	0.00	0.00
132.00		20.63	108.77	0.00	0.00
134.00		69.63	214.67	0.00	0.00
136.00		68.35	210.85	0.00	0.00
138.00		67.06	207.03	0.00	0.00
140.00	(19) attachments	1272.39	2390.47	0.00	1902.79
142.00		64.45	199.40	0.00	0.00
144.00		63.12	171.82	0.00	0.00
146.00		61.78	160.08	0.00	0.00
148.00		60.44	156.27	0.00	0.00
148.25		7.45	19.26	0.00	0.00
149.00	(24) attachments	1163.08	2563.51	0.00	1172.48
150.00		29.86	111.18	0.00	0.00
150.50		14.80	55.02	0.00	0.00
152.00		43.90	75.40	0.00	0.00
154.00		57.36	95.98	0.00	0.00
156.00		55.97	93.69	0.00	0.00
158.00		54.58	91.40	0.00	0.00
159.00	(32) attachments	1751.31	4345.30	0.00	2907.73
	Totals:	9,898.10	41,635.39	0.00	6,288.87

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 28

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.106	1.019	7.442	0.00	24.96
2.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.106	1.019	7.442	0.00	0.64
2.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.106	1.019	7.442	0.00	3.20
2.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.106	1.019	7.442	0.00	1.04
2.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.019	7.442	0.00	1.04
2.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.106	1.019	7.442	0.00	0.32
4.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.107	1.022	7.442	0.00	24.96
4.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.107	1.022	7.442	0.00	0.64
4.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.107	1.022	7.442	0.00	3.20
4.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.107	1.022	7.442	0.00	1.04
4.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.107	1.022	7.442	0.00	1.04
4.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.107	1.022	7.442	0.00	0.32
6.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.109	1.026	7.442	0.00	24.96
6.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.109	1.026	7.442	0.00	0.64
6.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.109	1.026	7.442	0.00	3.20
6.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.109	1.026	7.442	0.00	1.04
6.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.109	1.026	7.442	0.00	1.04
6.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.109	1.026	7.442	0.00	0.32
8.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.110	1.029	7.442	0.00	24.96
8.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.110	1.029	7.442	0.00	0.64
8.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.110	1.029	7.442	0.00	3.20
8.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.110	1.029	7.442	0.00	1.04
8.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.110	1.029	7.442	0.00	1.04
8.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.110	1.029	7.442	0.00	0.32
10.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.111	1.032	7.442	0.00	24.96
10.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.111	1.032	7.442	0.00	0.64
10.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.111	1.032	7.442	0.00	3.20
10.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.111	1.032	7.442	0.00	1.04
10.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.111	1.032	7.442	0.00	1.04
10.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.111	1.032	7.442	0.00	0.32
12.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.112	1.036	7.442	0.00	24.96
12.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.112	1.036	7.442	0.00	0.64
12.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.112	1.036	7.442	0.00	3.20
12.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.112	1.036	7.442	0.00	1.04
12.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.112	1.036	7.442	0.00	1.04
12.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.112	1.036	7.442	0.00	0.32
14.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.113	1.039	7.442	0.00	24.96
14.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.113	1.039	7.442	0.00	0.64
14.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.113	1.039	7.442	0.00	3.20
14.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.113	1.039	7.442	0.00	1.04
14.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.113	1.039	7.442	0.00	1.04
14.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.113	1.039	7.442	0.00	0.32
16.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.114	1.043	7.631	0.00	24.96
16.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.114	1.043	7.631	0.00	0.64
16.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.114	1.043	7.631	0.00	3.20
16.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.114	1.043	7.631	0.00	1.04
16.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.114	1.043	7.631	0.00	1.04

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 28

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)
16.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.114	1.043	7.631	0.00	0.32
18.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.115	1.046	7.811	0.00	24.96
18.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.115	1.046	7.811	0.00	0.64
18.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.115	1.046	7.811	0.00	3.20
18.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.115	1.046	7.811	0.00	1.04
18.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.115	1.046	7.811	0.00	1.04
18.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.115	1.046	7.811	0.00	0.32
20.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.117	1.050	7.978	0.00	24.96
20.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.117	1.050	7.978	0.00	0.64
20.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.117	1.050	7.978	0.00	3.20
20.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.117	1.050	7.978	0.00	1.04
20.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.117	1.050	7.978	0.00	1.04
20.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.117	1.050	7.978	0.00	0.32
22.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.118	1.054	8.132	0.00	24.96
22.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.118	1.054	8.132	0.00	0.64
22.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.118	1.054	8.132	0.00	3.20
22.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.118	1.054	8.132	0.00	1.04
22.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.118	1.054	8.132	0.00	1.04
22.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.118	1.054	8.132	0.00	0.32
24.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.119	1.058	8.276	0.00	24.96
24.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.119	1.058	8.276	0.00	0.64
24.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.119	1.058	8.276	0.00	3.20
24.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.119	1.058	8.276	0.00	1.04
24.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.119	1.058	8.276	0.00	1.04
24.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.119	1.058	8.276	0.00	0.32
26.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.121	1.062	8.411	0.00	24.96
26.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.121	1.062	8.411	0.00	0.64
26.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.121	1.062	8.411	0.00	3.20
26.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.121	1.062	8.411	0.00	1.04
26.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.062	8.411	0.00	1.04
26.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.121	1.062	8.411	0.00	0.32
28.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.122	1.066	8.539	0.00	24.96
28.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.122	1.066	8.539	0.00	0.64
28.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.122	1.066	8.539	0.00	3.20
28.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.122	1.066	8.539	0.00	1.04
28.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.122	1.066	8.539	0.00	1.04
28.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.122	1.066	8.539	0.00	0.32
30.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.123	1.070	8.659	0.00	24.96
30.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.123	1.070	8.659	0.00	0.64
30.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.123	1.070	8.659	0.00	3.20
30.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.123	1.070	8.659	0.00	1.04
30.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.123	1.070	8.659	0.00	1.04
30.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.123	1.070	8.659	0.00	0.32
32.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.125	1.074	8.774	0.00	24.96
32.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.125	1.074	8.774	0.00	0.64
32.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.125	1.074	8.774	0.00	3.20
32.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.125	1.074	8.774	0.00	1.04

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 28

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)
32.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.074	8.774	0.00	1.04
32.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.125	1.074	8.774	0.00	0.32
34.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.126	1.078	8.883	0.00	24.96
34.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.126	1.078	8.883	0.00	0.64
34.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.126	1.078	8.883	0.00	3.20
34.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.126	1.078	8.883	0.00	1.04
34.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.078	8.883	0.00	1.04
34.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.126	1.078	8.883	0.00	0.32
36.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.128	1.083	8.988	0.00	24.96
36.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.128	1.083	8.988	0.00	0.64
36.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.128	1.083	8.988	0.00	3.20
36.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.128	1.083	8.988	0.00	1.04
36.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	8.988	0.00	1.04
36.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.128	1.083	8.988	0.00	0.32
38.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.129	1.087	9.088	0.00	24.96
38.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.129	1.087	9.088	0.00	0.64
38.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.129	1.087	9.088	0.00	3.20
38.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.129	1.087	9.088	0.00	1.04
38.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.129	1.087	9.088	0.00	1.04
38.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.129	1.087	9.088	0.00	0.32
40.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.131	1.092	9.184	0.00	24.96
40.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.131	1.092	9.184	0.00	0.64
40.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.131	1.092	9.184	0.00	3.20
40.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.131	1.092	9.184	0.00	1.04
40.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.131	1.092	9.184	0.00	1.04
40.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.131	1.092	9.184	0.00	0.32
42.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.132	1.097	9.277	0.00	24.96
42.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.132	1.097	9.277	0.00	0.64
42.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.132	1.097	9.277	0.00	3.20
42.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.132	1.097	9.277	0.00	1.04
42.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.132	1.097	9.277	0.00	1.04
42.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.132	1.097	9.277	0.00	0.32
44.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.134	1.102	9.366	0.00	24.96
44.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.134	1.102	9.366	0.00	0.64
44.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.134	1.102	9.366	0.00	3.20
44.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.134	1.102	9.366	0.00	1.04
44.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.102	9.366	0.00	1.04
44.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.134	1.102	9.366	0.00	0.32
46.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.136	1.107	9.452	0.00	24.96
46.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.136	1.107	9.452	0.00	0.64
46.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.136	1.107	9.452	0.00	3.20
46.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.136	1.107	9.452	0.00	1.04
46.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.136	1.107	9.452	0.00	1.04
46.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.136	1.107	9.452	0.00	0.32
47.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.137	1.110	9.494	0.00	12.48
47.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.137	1.110	9.494	0.00	0.32
47.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.137	1.110	9.494	0.00	1.60

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 28

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)
47.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.137	1.110	9.494	0.00	0.52
47.00	7/8"	Yes	1.00	0.000	0.00	0.00	0.00	0.137	1.110	9.494	0.00	0.52
47.00	1/2"	Yes	1.00	0.000	0.65	0.05	0.00	0.137	1.110	9.494	0.00	0.16
47.50	1 5/8"	Yes	0.50	0.000	2.00	0.08	0.00	0.137	1.112	9.515	0.00	6.24
47.50	1/2" Fiber	Yes	0.50	0.000	1.00	0.04	0.00	0.137	1.112	9.515	0.00	0.16
47.50	3/4" DC Power	Yes	0.50	0.000	1.50	0.06	0.00	0.137	1.112	9.515	0.00	0.80
47.50	7/8"	Yes	0.50	0.000	1.11	0.05	0.00	0.137	1.112	9.515	0.00	0.26
47.50	7/8"	Yes	0.50	0.000	0.00	0.00	0.00	0.137	1.112	9.515	0.00	0.26
47.50	1/2"	Yes	0.50	0.000	0.65	0.03	0.00	0.137	1.112	9.515	0.00	0.08
48.00	1 5/8"	Yes	0.50	0.000	2.00	0.08	0.00	0.138	1.114	9.536	0.00	6.24
48.00	1/2" Fiber	Yes	0.50	0.000	1.00	0.04	0.00	0.138	1.114	9.536	0.00	0.16
48.00	3/4" DC Power	Yes	0.50	0.000	1.50	0.06	0.00	0.138	1.114	9.536	0.00	0.80
48.00	7/8"	Yes	0.50	0.000	1.11	0.05	0.00	0.138	1.114	9.536	0.00	0.26
48.00	7/8"	Yes	0.50	0.000	0.00	0.00	0.00	0.138	1.114	9.536	0.00	0.26
48.00	1/2"	Yes	0.50	0.000	0.65	0.03	0.00	0.138	1.114	9.536	0.00	0.08
50.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.139	1.117	9.616	0.00	24.96
50.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.139	1.117	9.616	0.00	0.64
50.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.139	1.117	9.616	0.00	3.20
50.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.139	1.117	9.616	0.00	1.04
50.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.139	1.117	9.616	0.00	1.04
50.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.139	1.117	9.616	0.00	0.32
52.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.126	1.079	9.694	0.00	24.96
52.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.126	1.079	9.694	0.00	0.64
52.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.126	1.079	9.694	0.00	3.20
52.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.126	1.079	9.694	0.00	1.04
52.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	9.694	0.00	1.04
53.25	1 5/8"	Yes	1.25	0.000	2.00	0.21	0.00	0.128	1.083	9.742	0.00	15.60
53.25	1/2" Fiber	Yes	1.25	0.000	1.00	0.10	0.00	0.128	1.083	9.742	0.00	0.40
53.25	3/4" DC Power	Yes	1.25	0.000	1.50	0.16	0.00	0.128	1.083	9.742	0.00	2.00
53.25	7/8"	Yes	1.25	0.000	1.11	0.12	0.00	0.128	1.083	9.742	0.00	0.65
53.25	7/8"	Yes	1.25	0.000	0.00	0.00	0.00	0.128	1.083	9.742	0.00	0.65
54.00	1 5/8"	Yes	0.75	0.000	2.00	0.13	0.00	0.126	1.078	9.770	0.00	9.36
54.00	1/2" Fiber	Yes	0.75	0.000	1.00	0.06	0.00	0.126	1.078	9.770	0.00	0.24
54.00	3/4" DC Power	Yes	0.75	0.000	1.50	0.09	0.00	0.126	1.078	9.770	0.00	1.20
54.00	7/8"	Yes	0.75	0.000	1.11	0.07	0.00	0.126	1.078	9.770	0.00	0.39
54.00	7/8"	Yes	0.75	0.000	0.00	0.00	0.00	0.126	1.078	9.770	0.00	0.39
56.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.127	1.082	9.844	0.00	24.96
56.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.127	1.082	9.844	0.00	0.64
56.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.127	1.082	9.844	0.00	3.20
56.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.127	1.082	9.844	0.00	1.04
56.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.127	1.082	9.844	0.00	1.04
58.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.129	1.087	9.916	0.00	24.96
58.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.129	1.087	9.916	0.00	0.64
58.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.129	1.087	9.916	0.00	3.20
58.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.129	1.087	9.916	0.00	1.04
58.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.129	1.087	9.916	0.00	1.04
60.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.131	1.092	9.986	0.00	24.96

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 28

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)
60.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.131	1.092	9.986	0.00	0.64
60.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.131	1.092	9.986	0.00	3.20
60.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.131	1.092	9.986	0.00	1.04
60.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.131	1.092	9.986	0.00	1.04
62.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.132	1.097	10.054	0.00	24.96
62.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.132	1.097	10.054	0.00	0.64
62.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.132	1.097	10.054	0.00	3.20
62.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.132	1.097	10.054	0.00	1.04
62.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.132	1.097	10.054	0.00	1.04
64.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.134	1.103	10.120	0.00	24.96
64.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.134	1.103	10.120	0.00	0.64
64.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.134	1.103	10.120	0.00	3.20
64.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.134	1.103	10.120	0.00	1.04
64.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	10.120	0.00	1.04
66.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.136	1.108	10.185	0.00	24.96
66.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.136	1.108	10.185	0.00	0.64
66.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.136	1.108	10.185	0.00	3.20
66.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.136	1.108	10.185	0.00	1.04
66.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.136	1.108	10.185	0.00	1.04
68.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.138	1.114	10.248	0.00	24.96
68.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.138	1.114	10.248	0.00	0.64
68.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.138	1.114	10.248	0.00	3.20
68.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.138	1.114	10.248	0.00	1.04
68.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.138	1.114	10.248	0.00	1.04
70.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.140	1.120	10.310	0.00	24.96
70.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.140	1.120	10.310	0.00	0.64
70.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.140	1.120	10.310	0.00	3.20
70.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.140	1.120	10.310	0.00	1.04
70.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.140	1.120	10.310	0.00	1.04
72.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.142	1.126	10.370	0.00	24.96
72.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.142	1.126	10.370	0.00	0.64
72.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.142	1.126	10.370	0.00	3.20
72.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.142	1.126	10.370	0.00	1.04
72.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.142	1.126	10.370	0.00	1.04
74.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.144	1.133	10.430	0.00	24.96
74.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.144	1.133	10.430	0.00	0.64
74.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.144	1.133	10.430	0.00	3.20
74.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.144	1.133	10.430	0.00	1.04
74.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.144	1.133	10.430	0.00	1.04
76.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.146	1.139	10.488	0.00	24.96
76.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.146	1.139	10.488	0.00	0.64
76.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.146	1.139	10.488	0.00	3.20
76.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.146	1.139	10.488	0.00	1.04
76.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.146	1.139	10.488	0.00	1.04
78.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.149	1.146	10.544	0.00	24.96
78.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.149	1.146	10.544	0.00	0.64
78.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.149	1.146	10.544	0.00	3.20

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 28

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)
78.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.149	1.146	10.544	0.00	1.04
78.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.149	1.146	10.544	0.00	1.04
80.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.151	1.153	10.600	0.00	24.96
80.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.151	1.153	10.600	0.00	0.64
80.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.151	1.153	10.600	0.00	3.20
80.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.151	1.153	10.600	0.00	1.04
80.00	7/8"	Yes	2.00	0.000	0.00	0.00	0.00	0.151	1.153	10.600	0.00	1.04
82.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.153	1.160	10.654	0.00	24.96
82.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.153	1.160	10.654	0.00	0.64
82.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.153	1.160	10.654	0.00	3.20
82.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.153	1.160	10.654	0.00	1.04
84.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.156	1.167	10.708	0.00	24.96
84.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.156	1.167	10.708	0.00	0.64
84.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.156	1.167	10.708	0.00	3.20
84.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.156	1.167	10.708	0.00	1.04
86.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.158	1.175	10.761	0.00	24.96
86.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.158	1.175	10.761	0.00	0.64
86.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.158	1.175	10.761	0.00	3.20
86.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.158	1.175	10.761	0.00	1.04
88.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.161	1.182	10.812	0.00	24.96
88.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.161	1.182	10.812	0.00	0.64
88.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.161	1.182	10.812	0.00	3.20
88.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.161	1.182	10.812	0.00	1.04
90.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.163	1.190	10.863	0.00	24.96
90.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.163	1.190	10.863	0.00	0.64
90.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.163	1.190	10.863	0.00	3.20
90.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.163	1.190	10.863	0.00	1.04
92.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.166	1.199	10.913	0.00	24.96
92.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.166	1.199	10.913	0.00	0.64
92.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.166	1.199	10.913	0.00	3.20
92.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.166	1.199	10.913	0.00	1.04
94.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.169	1.207	10.962	0.00	24.96
94.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.169	1.207	10.962	0.00	0.64
94.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.169	1.207	10.962	0.00	3.20
94.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.169	1.207	10.962	0.00	1.04
96.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.172	1.216	11.010	0.00	24.96
96.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.172	1.216	11.010	0.00	0.64
96.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.172	1.216	11.010	0.00	3.20
96.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.172	1.216	11.010	0.00	1.04
97.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.174	1.223	11.034	0.00	12.48
97.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.174	1.223	11.034	0.00	0.32
97.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.174	1.223	11.034	0.00	1.60
97.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.174	1.223	11.034	0.00	0.52
98.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.176	1.228	11.057	0.00	12.48
98.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.176	1.228	11.057	0.00	0.32
98.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.176	1.228	11.057	0.00	1.60
98.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.176	1.228	11.057	0.00	0.52

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 28

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)
100.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.178	1.235	11.104	0.00	24.96
100.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.178	1.235	11.104	0.00	0.64
100.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.178	1.235	11.104	0.00	3.20
100.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.178	1.235	11.104	0.00	1.04
101.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.181	1.243	11.127	0.00	12.48
101.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.181	1.243	11.127	0.00	0.32
101.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.181	1.243	11.127	0.00	1.60
101.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.181	1.243	11.127	0.00	0.52
102.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.179	1.237	11.150	0.00	12.48
102.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.179	1.237	11.150	0.00	0.32
102.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.179	1.237	11.150	0.00	1.60
102.00	7/8"	Yes	1.00	0.000	1.11	0.09	0.00	0.179	1.237	11.150	0.00	0.52
104.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.181	1.244	11.195	0.00	24.96
104.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.181	1.244	11.195	0.00	0.64
104.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.181	1.244	11.195	0.00	3.20
104.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.181	1.244	11.195	0.00	1.04
106.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.185	1.254	11.240	0.00	24.96
106.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.185	1.254	11.240	0.00	0.64
106.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.185	1.254	11.240	0.00	3.20
106.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.185	1.254	11.240	0.00	1.04
108.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.188	1.265	11.284	0.00	24.96
108.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.188	1.265	11.284	0.00	0.64
108.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.188	1.265	11.284	0.00	3.20
108.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.188	1.265	11.284	0.00	1.04
110.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.192	1.276	11.327	0.00	24.96
110.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.192	1.276	11.327	0.00	0.64
110.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.192	1.276	11.327	0.00	3.20
110.00	7/8"	Yes	2.00	0.000	1.11	0.19	0.00	0.192	1.276	11.327	0.00	1.04
112.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.157	1.171	11.370	0.00	24.96
112.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.157	1.171	11.370	0.00	0.64
112.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.157	1.171	11.370	0.00	3.20
114.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.160	1.181	11.412	0.00	24.96
114.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.160	1.181	11.412	0.00	0.64
114.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.160	1.181	11.412	0.00	3.20
116.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.164	1.191	11.453	0.00	24.96
116.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.164	1.191	11.453	0.00	0.64
116.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.164	1.191	11.453	0.00	3.20
118.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.167	1.202	11.494	0.00	24.96
118.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.167	1.202	11.494	0.00	0.64
118.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.167	1.202	11.494	0.00	3.20
120.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.171	1.213	11.534	0.00	24.96
120.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.171	1.213	11.534	0.00	0.64
120.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.171	1.213	11.534	0.00	3.20
122.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.175	1.224	11.574	0.00	24.96
122.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.175	1.224	11.574	0.00	0.64
122.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.175	1.224	11.574	0.00	3.20
124.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.179	1.236	11.614	0.00	24.96

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 28

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)
124.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.179	1.236	11.614	0.00	0.64
124.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.179	1.236	11.614	0.00	3.20
126.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.183	1.248	11.653	0.00	24.96
126.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.183	1.248	11.653	0.00	0.64
126.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.183	1.248	11.653	0.00	3.20
128.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.187	1.262	11.691	0.00	24.96
128.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.187	1.262	11.691	0.00	0.64
128.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.187	1.262	11.691	0.00	3.20
130.00	1 5/8"	Yes	2.00	0.000	2.00	0.33	0.00	0.192	1.275	11.729	0.00	24.96
130.00	1/2" Fiber	Yes	2.00	0.000	1.00	0.17	0.00	0.192	1.275	11.729	0.00	0.64
130.00	3/4" DC Power	Yes	2.00	0.000	1.50	0.25	0.00	0.192	1.275	11.729	0.00	3.20
131.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.195	1.286	11.748	0.00	12.48
131.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.195	1.286	11.748	0.00	0.32
131.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.195	1.286	11.748	0.00	1.60
132.00	1 5/8"	Yes	1.00	0.000	2.00	0.17	0.00	0.198	1.293	11.766	0.00	12.48
132.00	1/2" Fiber	Yes	1.00	0.000	1.00	0.08	0.00	0.198	1.293	11.766	0.00	0.32
132.00	3/4" DC Power	Yes	1.00	0.000	1.50	0.13	0.00	0.198	1.293	11.766	0.00	1.60
134.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.202	0.000	11.803	5.19	24.96
134.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.202	0.000	11.803	2.60	0.64
134.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.202	0.000	11.803	3.90	3.20
136.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.207	0.000	11.840	5.21	24.96
136.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.207	0.000	11.840	2.60	0.64
136.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.207	0.000	11.840	3.91	3.20
138.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.213	0.000	11.876	5.23	24.96
138.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.213	0.000	11.876	2.61	0.64
138.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.213	0.000	11.876	3.92	3.20
140.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.219	0.000	11.912	5.24	24.96
140.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.219	0.000	11.912	2.62	0.64
140.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.219	0.000	11.912	3.93	3.20
142.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.225	0.000	11.947	5.26	24.96
142.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.225	0.000	11.947	2.63	0.64
142.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.225	0.000	11.947	3.94	3.20
144.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.231	0.000	11.982	5.27	24.96
144.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.231	0.000	11.982	2.64	0.64
144.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.231	0.000	11.982	3.95	3.20
146.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.238	0.000	12.017	5.29	24.96
146.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.238	0.000	12.017	2.64	0.64
146.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.238	0.000	12.017	3.97	3.20
148.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.246	0.000	12.051	5.30	24.96
148.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.246	0.000	12.051	2.65	0.64
148.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.246	0.000	12.051	3.98	3.20
148.25	1 5/8"	Yes	0.25	1.200	2.00	0.04	0.05	0.250	0.000	12.055	0.66	3.12
148.25	1/2" Fiber	Yes	0.25	1.200	1.00	0.02	0.02	0.250	0.000	12.055	0.33	0.08
148.25	3/4" DC Power	Yes	0.25	1.200	1.50	0.03	0.04	0.250	0.000	12.055	0.50	0.40
149.00	1 5/8"	Yes	0.75	1.200	2.00	0.13	0.15	0.252	0.000	12.068	1.99	9.36
149.00	1/2" Fiber	Yes	0.75	1.200	1.00	0.06	0.07	0.252	0.000	12.068	1.00	0.24
149.00	3/4" DC Power	Yes	0.75	1.200	1.50	0.09	0.11	0.252	0.000	12.068	1.49	1.20

Linear Appurtenance Segment Forces (Factored)

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (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 28

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)
150.00	1 5/8"	Yes	1.00	1.200	2.00	0.17	0.20	0.256	0.000	12.085	2.66	12.48
150.00	1/2" Fiber	Yes	1.00	1.200	1.00	0.08	0.10	0.256	0.000	12.085	1.33	0.32
150.00	3/4" DC Power	Yes	1.00	1.200	1.50	0.13	0.15	0.256	0.000	12.085	1.99	1.60
150.50	1 5/8"	Yes	0.50	1.200	2.00	0.08	0.10	0.259	0.000	12.093	1.33	6.24
150.50	1/2" Fiber	Yes	0.50	1.200	1.00	0.04	0.05	0.259	0.000	12.093	0.67	0.16
150.50	3/4" DC Power	Yes	0.50	1.200	1.50	0.06	0.07	0.259	0.000	12.093	1.00	0.80
152.00	1 5/8"	Yes	1.50	1.200	2.00	0.25	0.30	0.258	0.000	12.119	4.00	18.72
152.00	1/2" Fiber	Yes	1.50	1.200	1.00	0.13	0.15	0.258	0.000	12.119	2.00	0.48
152.00	3/4" DC Power	Yes	1.50	1.200	1.50	0.19	0.22	0.258	0.000	12.119	3.00	2.40
154.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.265	0.000	12.152	5.35	24.96
154.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.265	0.000	12.152	2.67	0.64
154.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.265	0.000	12.152	4.01	3.20
156.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.275	0.000	12.185	5.36	24.96
156.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.275	0.000	12.185	2.68	0.64
156.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.275	0.000	12.185	4.02	3.20
158.00	1 5/8"	Yes	2.00	1.200	2.00	0.33	0.40	0.285	0.000	12.217	5.38	24.96
158.00	1/2" Fiber	Yes	2.00	1.200	1.00	0.17	0.20	0.285	0.000	12.217	2.69	0.64
158.00	3/4" DC Power	Yes	2.00	1.200	1.50	0.25	0.30	0.285	0.000	12.217	4.03	3.20
159.00	1 5/8"	Yes	1.00	1.200	2.00	0.17	0.20	0.293	0.000	12.233	2.69	12.48
159.00	1/2" Fiber	Yes	1.00	1.200	1.00	0.08	0.10	0.293	0.000	12.233	1.35	0.32
159.00	3/4" DC Power	Yes	1.00	1.200	1.50	0.13	0.15	0.293	0.000	12.233	2.02	1.60
Totals:											160.7	2,396.4

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

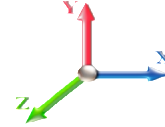


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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 28

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	-41.63	-9.91	0.00	-1214.5	0.00	1214.54	4390.37	2195.18	10447.7	5231.64	0.00	0.000	0.000	0.242
2.00	-41.06	-9.87	0.00	-1194.7	0.00	1194.73	4366.62	2183.31	10288.9	5152.14	0.01	-0.024	0.000	0.241
4.00	-40.50	-9.83	0.00	-1174.9	0.00	1174.99	4342.50	2171.25	10130.4	5072.75	0.02	-0.047	0.000	0.241
6.00	-39.94	-9.80	0.00	-1155.3	0.00	1155.32	4318.00	2159.00	9972.16	4993.49	0.05	-0.072	0.000	0.241
8.00	-39.39	-9.76	0.00	-1135.7	0.00	1135.73	4293.12	2146.56	9814.16	4914.37	0.08	-0.096	0.000	0.240
10.00	-38.84	-9.73	0.00	-1116.2	0.00	1116.21	4267.86	2133.93	9656.46	4835.41	0.13	-0.121	0.000	0.240
12.00	-38.29	-9.69	0.00	-1096.7	0.00	1096.76	4242.22	2121.11	9499.10	4756.61	0.18	-0.146	0.000	0.240
14.00	-37.75	-9.65	0.00	-1077.3	0.00	1077.38	4216.20	2108.10	9342.10	4677.99	0.25	-0.172	0.000	0.239
16.00	-37.22	-9.62	0.00	-1058.0	0.00	1058.07	4189.80	2094.90	9185.49	4599.57	0.33	-0.197	0.000	0.239
18.00	-36.68	-9.58	0.00	-1038.8	0.00	1038.84	4163.03	2081.51	9029.29	4521.36	0.42	-0.224	0.000	0.239
20.00	-36.16	-9.54	0.00	-1019.6	0.00	1019.68	4135.87	2067.94	8873.53	4443.36	0.52	-0.250	0.000	0.238
22.00	-35.63	-9.50	0.00	-1000.6	0.00	1000.60	4108.34	2054.17	8718.25	4365.60	0.63	-0.277	0.000	0.238
24.00	-35.12	-9.46	0.00	-981.60	0.00	981.60	4080.43	2040.21	8563.45	4288.09	0.75	-0.304	0.000	0.238
26.00	-34.60	-9.42	0.00	-962.68	0.00	962.68	4052.14	2026.07	8409.18	4210.84	0.88	-0.332	0.000	0.237
28.00	-34.09	-9.38	0.00	-943.84	0.00	943.84	4023.46	2011.73	8255.45	4133.86	1.03	-0.360	0.000	0.237
30.00	-33.59	-9.33	0.00	-925.09	0.00	925.09	3994.42	1997.21	8102.30	4057.17	1.18	-0.388	0.000	0.236
32.00	-33.09	-9.29	0.00	-906.42	0.00	906.42	3964.99	1982.49	7949.75	3980.79	1.35	-0.417	0.000	0.236
34.00	-32.59	-9.25	0.00	-887.84	0.00	887.84	3935.18	1967.59	7797.83	3904.71	1.53	-0.447	0.000	0.236
36.00	-32.10	-9.20	0.00	-869.34	0.00	869.34	3904.99	1952.50	7646.57	3828.97	1.73	-0.476	0.000	0.235
38.00	-31.62	-9.16	0.00	-850.94	0.00	850.94	3874.43	1937.21	7495.98	3753.56	1.93	-0.506	0.000	0.235
40.00	-31.14	-9.11	0.00	-832.62	0.00	832.62	3843.48	1921.74	7346.10	3678.51	2.15	-0.537	0.000	0.234
42.00	-30.66	-9.07	0.00	-814.39	0.00	814.39	3812.16	1906.08	7196.95	3603.83	2.38	-0.568	0.000	0.234
44.00	-30.19	-9.02	0.00	-796.25	0.00	796.25	3780.46	1890.23	7048.57	3529.52	2.63	-0.599	0.000	0.234
46.00	-29.72	-8.97	0.00	-778.21	0.00	778.21	3748.38	1874.19	6900.97	3455.62	2.89	-0.631	0.000	0.233
47.00	-29.43	-8.91	0.00	-769.23	0.00	769.23	3732.20	1866.10	6827.48	3418.81	3.02	-0.647	0.000	0.233
47.50	-29.31	-8.90	0.00	-764.77	0.00	764.77	3724.07	1862.03	6790.81	3400.45	3.09	-0.655	0.000	0.233
48.00	-29.10	-8.89	0.00	-760.33	0.00	760.33	3715.92	1857.96	6754.19	3382.11	3.16	-0.664	0.000	0.233
50.00	-28.28	-8.84	0.00	-742.54	0.00	742.54	3683.08	1841.54	6608.25	3309.03	3.44	-0.696	0.000	0.232
52.00	-27.47	-8.79	0.00	-724.86	0.00	724.86	3649.86	1824.93	6463.17	3236.39	3.74	-0.730	0.000	0.232
53.25	-26.97	-8.75	0.00	-713.88	0.00	713.88	3673.19	1836.60	6564.80	3287.28	3.94	-0.751	0.000	0.225
54.00	-26.80	-8.74	0.00	-707.32	0.00	707.32	3660.74	1830.37	6510.40	3260.04	4.05	-0.764	0.000	0.224
56.00	-26.35	-8.69	0.00	-689.84	0.00	689.84	3627.27	1813.63	6365.92	3187.69	4.38	-0.796	0.000	0.224
58.00	-25.90	-8.65	0.00	-672.45	0.00	672.45	3593.41	1796.71	6222.36	3115.80	4.72	-0.829	0.000	0.223
60.00	-25.46	-8.60	0.00	-655.16	0.00	655.16	3559.18	1779.59	6079.73	3044.38	5.08	-0.863	0.000	0.222
62.00	-25.02	-8.55	0.00	-637.97	0.00	637.97	3524.57	1762.29	5938.07	2973.45	5.45	-0.897	0.000	0.222
64.00	-24.59	-8.50	0.00	-620.86	0.00	620.86	3489.59	1744.79	5797.40	2903.01	5.83	-0.931	0.000	0.221
66.00	-24.16	-8.46	0.00	-603.86	0.00	603.86	3454.22	1727.11	5657.75	2833.08	6.23	-0.966	0.000	0.220
68.00	-23.74	-8.41	0.00	-586.95	0.00	586.95	3418.47	1709.24	5519.14	2763.67	6.64	-1.001	0.000	0.219
70.00	-23.32	-8.36	0.00	-570.13	0.00	570.13	3382.35	1691.17	5381.61	2694.80	7.07	-1.037	0.000	0.218
72.00	-22.91	-8.31	0.00	-553.41	0.00	553.41	3345.84	1672.92	5245.17	2626.49	7.51	-1.074	0.000	0.218
74.00	-22.50	-8.26	0.00	-536.78	0.00	536.78	3308.96	1654.48	5109.86	2558.73	7.97	-1.111	0.000	0.217
76.00	-22.09	-8.22	0.00	-520.25	0.00	520.25	3271.70	1635.85	4975.70	2491.55	8.44	-1.148	0.000	0.216
78.00	-21.69	-8.17	0.00	-503.82	0.00	503.82	3230.14	1615.07	4836.86	2422.03	8.93	-1.186	0.000	0.215
80.00	-21.24	-8.05	0.00	-487.34	0.00	487.34	3180.13	1590.07	4687.51	2347.24	9.43	-1.225	0.000	0.214
82.00	-20.85	-8.00	0.00	-471.23	0.00	471.23	3130.13	1565.06	4540.49	2273.62	9.96	-1.264	0.000	0.214
84.00	-20.46	-7.96	0.00	-455.22	0.00	455.22	3080.12	1540.06	4395.82	2201.18	10.49	-1.303	0.000	0.213
86.00	-20.08	-7.91	0.00	-439.31	0.00	439.31	3030.11	1515.05	4253.50	2129.91	11.05	-1.343	0.000	0.213
88.00	-19.70	-7.86	0.00	-423.49	0.00	423.49	2980.10	1490.05	4113.51	2059.81	11.62	-1.384	0.000	0.212

Calculated Forces

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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90.00	-19.33	-7.81	0.00	-407.77	0.00	407.77	2930.09	1465.05	3975.87	1990.89	12.21	-1.425	0.000	0.211
92.00	-18.97	-7.77	0.00	-392.15	0.00	392.15	2880.09	1440.04	3840.56	1923.14	12.81	-1.466	0.000	0.211
94.00	-18.60	-7.72	0.00	-376.62	0.00	376.62	2830.08	1415.04	3707.61	1856.56	13.44	-1.508	0.000	0.209
96.00	-18.25	-7.67	0.00	-361.18	0.00	361.18	2780.07	1390.03	3576.99	1791.15	14.08	-1.551	0.000	0.208
97.00	-18.07	-7.64	0.00	-353.52	0.00	353.52	2755.06	1377.53	3512.56	1758.89	14.41	-1.573	0.000	0.208
98.00	-17.78	-7.62	0.00	-345.87	0.00	345.87	2730.06	1365.03	3448.72	1726.92	14.74	-1.595	0.000	0.207
100.00	-17.23	-7.56	0.00	-330.64	0.00	330.64	2680.05	1340.03	3322.78	1663.86	15.41	-1.638	0.000	0.205
101.00	-16.95	-7.53	0.00	-323.08	0.00	323.08	2260.99	1130.50	2846.84	1425.54	15.76	-1.660	0.000	0.234
102.00	-16.79	-7.51	0.00	-315.54	0.00	315.54	2242.36	1121.18	2797.13	1400.64	16.11	-1.683	0.000	0.233
104.00	-16.49	-7.47	0.00	-300.52	0.00	300.52	2200.69	1100.35	2693.61	1348.81	16.83	-1.732	0.000	0.230
106.00	-16.19	-7.42	0.00	-285.58	0.00	285.58	2159.02	1079.51	2592.04	1297.95	17.56	-1.782	0.000	0.228
108.00	-15.89	-7.38	0.00	-270.74	0.00	270.74	2117.34	1058.67	2492.43	1248.07	18.32	-1.832	0.000	0.224
110.00	-15.54	-7.26	0.00	-255.83	0.00	255.83	2075.67	1037.84	2394.76	1199.16	19.10	-1.883	0.000	0.221
112.00	-15.25	-7.21	0.00	-241.32	0.00	241.32	2034.00	1017.00	2299.05	1151.23	19.90	-1.933	0.000	0.217
114.00	-14.96	-7.17	0.00	-226.89	0.00	226.89	1992.32	996.16	2205.29	1104.29	20.72	-1.984	0.000	0.213
116.00	-14.68	-7.13	0.00	-212.55	0.00	212.55	1950.65	975.32	2113.48	1058.31	21.56	-2.034	0.000	0.208
118.00	-14.41	-7.09	0.00	-198.28	0.00	198.28	1908.98	954.49	2023.63	1013.32	22.42	-2.085	0.000	0.203
120.00	-14.13	-7.05	0.00	-184.10	0.00	184.10	1867.30	933.65	1935.73	969.30	23.31	-2.135	0.000	0.198
122.00	-13.86	-7.01	0.00	-170.00	0.00	170.00	1825.63	912.81	1849.77	926.26	24.21	-2.184	0.000	0.191
124.00	-13.60	-6.97	0.00	-155.99	0.00	155.99	1783.96	891.98	1765.78	884.20	25.14	-2.233	0.000	0.184
126.00	-13.34	-6.92	0.00	-142.06	0.00	142.06	1742.28	871.14	1683.73	843.12	26.08	-2.280	0.000	0.176
128.00	-13.08	-6.88	0.00	-128.21	0.00	128.21	1700.61	850.30	1603.63	803.01	27.05	-2.327	0.000	0.167
130.00	-12.83	-6.84	0.00	-114.45	0.00	114.45	1658.94	829.47	1525.49	763.88	28.03	-2.372	0.000	0.158
131.00	-11.05	-5.39	0.00	-107.61	0.00	107.61	1638.10	819.05	1487.15	744.68	28.53	-2.394	0.000	0.151
132.00	-10.94	-5.38	0.00	-102.21	0.00	102.21	1617.26	808.63	1449.30	725.73	29.04	-2.415	0.000	0.148
134.00	-10.73	-5.30	0.00	-91.46	0.00	91.46	1575.59	787.79	1375.06	688.55	30.06	-2.457	0.000	0.140
136.00	-10.52	-5.23	0.00	-80.86	0.00	80.86	1533.91	766.96	1302.77	652.35	31.10	-2.497	0.000	0.131
138.00	-10.31	-5.16	0.00	-70.39	0.00	70.39	1492.24	746.12	1232.44	617.13	32.15	-2.535	0.000	0.121
140.00	-7.98	-3.79	0.00	-58.16	0.00	58.16	1450.57	725.28	1164.05	582.89	33.22	-2.571	0.000	0.105
142.00	-7.78	-3.72	0.00	-50.57	0.00	50.57	1408.89	704.45	1097.62	549.63	34.30	-2.603	0.000	0.098
144.00	-7.61	-3.66	0.00	-43.13	0.00	43.13	1367.22	683.61	1033.14	517.34	35.40	-2.634	0.000	0.089
146.00	-7.45	-3.59	0.00	-35.82	0.00	35.82	1325.55	662.77	970.62	486.03	36.51	-2.662	0.000	0.079
148.00	-7.29	-3.52	0.00	-28.64	0.00	28.64	1283.87	641.94	910.04	455.70	37.63	-2.687	0.000	0.069
148.25	-7.27	-3.52	0.00	-27.76	0.00	27.76	1278.66	639.33	902.61	451.97	37.77	-2.690	0.000	0.067
149.00	-4.77	-2.23	0.00	-23.95	0.00	23.95	1263.04	631.52	880.49	440.90	38.19	-2.698	0.000	0.058
150.00	-4.66	-2.20	0.00	-21.71	0.00	21.71	1242.20	621.10	851.42	426.34	38.76	-2.709	0.000	0.055
150.50	-4.60	-2.18	0.00	-20.61	0.00	20.61	761.18	380.59	536.85	268.82	39.04	-2.714	0.000	0.083
152.00	-4.53	-2.14	0.00	-17.34	0.00	17.34	742.42	371.21	510.58	255.67	39.90	-2.728	0.000	0.074
154.00	-4.44	-2.08	0.00	-13.06	0.00	13.06	717.42	358.71	476.59	238.65	41.05	-2.752	0.000	0.061
156.00	-4.34	-2.02	0.00	-8.91	0.00	8.91	692.41	346.21	443.76	222.21	42.20	-2.771	0.000	0.046
158.00	-4.25	-1.96	0.00	-4.87	0.00	4.87	667.41	333.71	412.11	206.36	43.37	-2.785	0.000	0.030
159.00	0.00	-1.75	0.00	-2.91	0.00	2.91	654.91	327.45	396.72	198.65	43.95	-2.789	0.000	0.015

Final Analysis Summary

Structure: CT13055-A-SBA	Code: EIA/TIA-222-G	7/25/2018
Site Name: Monroe Turnpike	Exposure: C	
Height: 159.00 (ft)	Crest Height: 0.00	
Base Elev: 1.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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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 93 mph Wind	38.1	0.00	49.93	0.00	0.00	4697.95
0.9D + 1.6W 93 mph Wind	38.1	0.00	37.44	0.00	0.00	4627.96
1.2D + 1.0Di + 1.0Wi 50 mph Wind	11.6	0.00	85.23	0.00	0.00	1451.18
1.2D + 1.0E	2.7	0.00	49.96	0.00	0.00	363.07
0.9D + 1.0E	2.7	0.00	37.47	0.00	0.00	357.09
1.0D + 1.0W 60 mph Wind	9.9	0.00	41.63	0.00	0.00	1214.54

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 93 mph Wind	-49.93	-38.09	0.00	-4697.9	0.00	-4697.9	4390.37	2195.1	10447.7	5231.64	0.00	0.910
0.9D + 1.6W 93 mph Wind	-37.44	-38.08	0.00	-4627.9	0.00	-4627.9	4390.37	2195.1	10447.7	5231.64	0.00	0.893
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-85.23	-11.63	0.00	-1451.1	0.00	-1451.1	4390.37	2195.1	10447.7	5231.64	0.00	0.297
1.2D + 1.0E	-20.57	-2.27	0.00	-118.72	0.00	-118.72	2260.99	1130.5	2846.84	1425.54	101.00	0.092
0.9D + 1.0E	-15.43	-2.22	0.00	-115.89	0.00	-115.89	2260.99	1130.5	2846.84	1425.54	101.00	0.088
1.0D + 1.0W 60 mph Wind	-41.63	-9.91	0.00	-1214.5	0.00	-1214.5	4390.37	2195.1	10447.7	5231.64	0.00	0.242



Monopole Mat Foundation Design

Date

7/25/2018

Customer Name:	AT&T	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	159
Site Number:	CT13055-A-SBA	Engineer Name:	H. You
Engr. Number:	56479	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Monopole

Analysis or Design?

Analysis

Base Reactions (Factored):

Axial Load (Kips):	50.0	Shear Force (Kips):	38.1
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4697.9

Allowable overstress %: 5.0%

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	5.5
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft):	2.00
Length of Pad (ft.):	25.5	Width of Pad (ft.):	25.5
Final Length of pad (ft)	25.5	Final width of pad (ft):	25.5
Control Value for Cell D18:	0	Control Value for Cell F18:	0

Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	32	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	50	Qty. of Rebar in Pad (W):	50	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	50	Qty. of Rebar in Pad (W):	50	

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

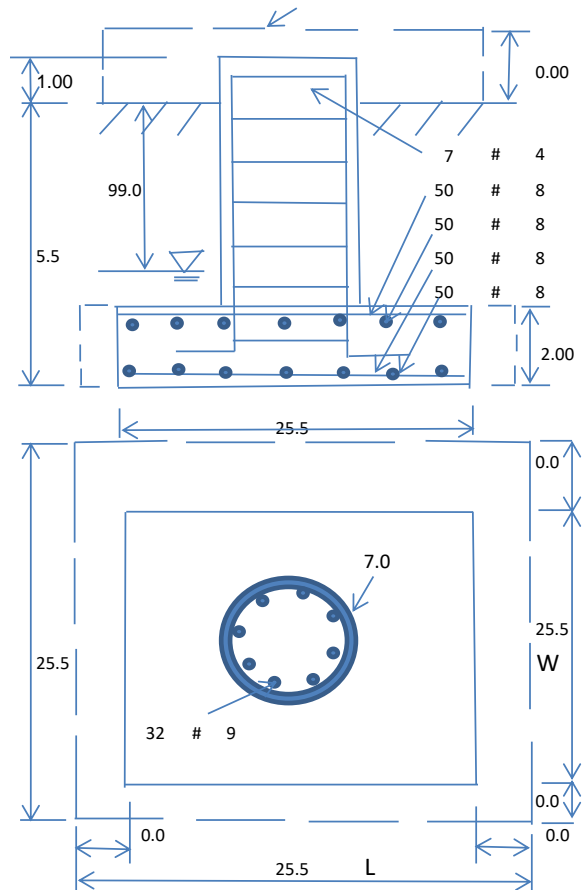
Soil Unit Weight (pcf):	115.0	Soil Buoyant Weight:	50.0	Pcf
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:	0	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hor. resist. for OTM.:	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.):	2141.18	Total Dry Soil Weight (Kips):	246.24
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	246.24	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1473.68	Total Dry Concrete Weight (Kips):	221.05
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	221.05	Total Vertical Load on Base (Kips):	517.29

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	3658	<	Allowable Factored Soil Bearing (psf):	9000	0.41	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5999.6	>	Design Factored Momont (kips-ft):	4946	0.82	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.21					OK!



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):	1.00	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	5377.0	> Design Factored Moment (Mu, Kips-Ft)	4869.4	0.91	OK!
Calculated Shear Capacity (Kips):	660.1	> Design Factored Shear (Kips):	38.1	0.06	OK!
Calculated Tension Capacity (Tn, Kips):	1728.0	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9741.3	> Design Factored Axial Load (Pu Kips):	50.0	0.01	OK!
Moment & Axial Strength Combination:	0.91	OK! Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.006	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	595.1	> One-Way Factored Shear (L-D. Kips):	309.2	0.52	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	595.1	> One-Way Factored Shear (W-D., Kips)	309.2	0.52	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	598.5	> One-Way Factored Shear (C-C, Kips):	330.0	0.55	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0063	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0063		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	3441.4	> Moment at Bottom (L-Dir. K-Ft):	1521.9	0.44	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	3441.4	> Moment at Bottom (W-Dir. K-Ft):	1521.9	0.44	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	4797.9	> Moment at Bottom (C-C Dir. K-Ft):	2152.2	0.45	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0063	OK! Upper Steel Reinf. Ratio (W-Dir.):	0.0063		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	3441.4	> Moment at the top (L-Dir K-Ft):	758.1	0.22	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	3441.4	> Moment at the top (W-Dir K-Ft):	758.1	0.22	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	4797.9	> Moment at the top (C-C Dir. K-Ft):	710.7	0.15	OK!

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:	1879.2	k-ft.	Max. factored shear stress $v_{u,CD}$:	6.6	Psi
Max. factored shear stress $v_{u,AB}$:	19.1	Psi	Factored shear Strength ϕv_n :	189.7	Psi
Max. factored shear stress v_u :	19.1	Psi	Check Usage of Punching Shear Capacity:	0.10	OK!

INFINIGY

FROM ZERO TO INFINIGY
the solutions are endless

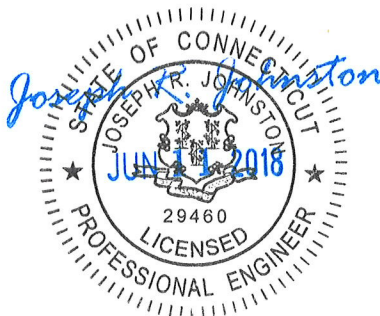
1033 WATERLIET SHAKER RD, ALBANY, NY 12205

Post Mod Mount Analysis Report

June 7, 2018

Site Name	CT5266
FA Number	10071137
PACE Number	MRCTB024332; MRCTB024512
PTN Number	2015A0BGEW; 2051A0BFN9
Infinigy Job Number	499-006
Client	Centerline
Carrier	AT&T
Site Location	1428 Monroe Turnpike, Monroe, CT06468 41.3763919 N NAD83 73.1863938 W NAD83
Mount Centerline EL.	160.0 ft
Mount Classification	Platform
Mount Usage	76.0%
Overall Result	Pass
Notes	See appended documents for mount modifications.

Upon reviewing the results of this analysis, it is our opinion that the post modification mount meets the specified TIA code requirements. The mounts for the proposed carrier are therefore deemed adequate to support the final loading configuration as listed in this report.



Brenden Archer
Structural Engineer I

AZ CA CO FL GA MD NC NH NJ NY TX WA

INFINIGY

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Introduction.....	3
Supporting Documentation.....	3
Analysis Code Requirements.....	3
Conclusion.....	3
Final Configuration Loading.....	4
Structure Usages.....	4
Assumptions and Limitations.....	5
Calculations.....	Appended

Introduction

Infinigy Engineering has been requested to perform a post modification mount analysis on the existing AT&T mounts. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The mount was analyzed using RISA-3D Version 16.0.3 analysis software.

Supporting Documentation

RFDS	AT&T RFDS ID #1793333, dated June 1, 2017
Mount Mapping	Infinigy Engineering Job #499-006, dated September 13, 2017
Construction Drawings	Infinigy Engineering Job #499-006, dated March 20, 2018

Analysis Code Requirements

Wind Speed	93 mph (3-Second Gust, V_{ASD}) / 120 mph (3-Second Gust, V_{ULT})
Wind Speed w/ ice	50 mph (3-Second Gust, V_{ASD}) w/ 3/4" ice
TIA Revision	ANSI/TIA-222-G
Adopted IBC	2012 IBC / 2016 Connecticut Building Code
Structure Class	II
Exposure Category	B
Topographic Category	1
Calculated Crest Height	0

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the post modification mount meets the specified TIA code requirements. The mounts for the proposed carrier are therefore deemed adequate to support the final loading configuration as listed in this report.

If you have any questions, require additional information, or actual conditions differ from those as detailed in this report please contact me via the information below:

Brenden Archer
 Structural Engineer I | Infinigy
 1033 Watervliet Shaker Road, Albany, NY 12205
 (O) (518) 690-0790 |
barcher@infinigy.com | www.infinigy.com

Final Configuration Loading

Mount CL (ft)	Rad. HT (ft)	Vert. O/S (ft)	Horiz. O/S (ft) ⁽¹⁾	Qty	Appurtenance ^{(2),(3)}	Carrier
160.0	160.0	0.0	3.5	3	Powerwave P65-16-XLH-RR	AT&T
			8.0	3	Quintel QS66512-2	
			13.0	3	Powerwave 7770	
			3.5	3	Ericsson RRUS-11	
			8.0	3	Ericsson RRUS-32 B2	
			8.0	3	Ericsson RRUS-32	
			13.0	6	Powerwave LGP21401	
			--	2	Raycap DC6-48-60-18-8F	

(1)Horizontal Offset is defined as the distance from the left most edge of the mount face horizontal when viewed facing the tower.

(2)Radios are mounted behind antennas at respective locations see appended documents for vertical locations.

(3)Raycaps are mounted to standoff

Structure Usages

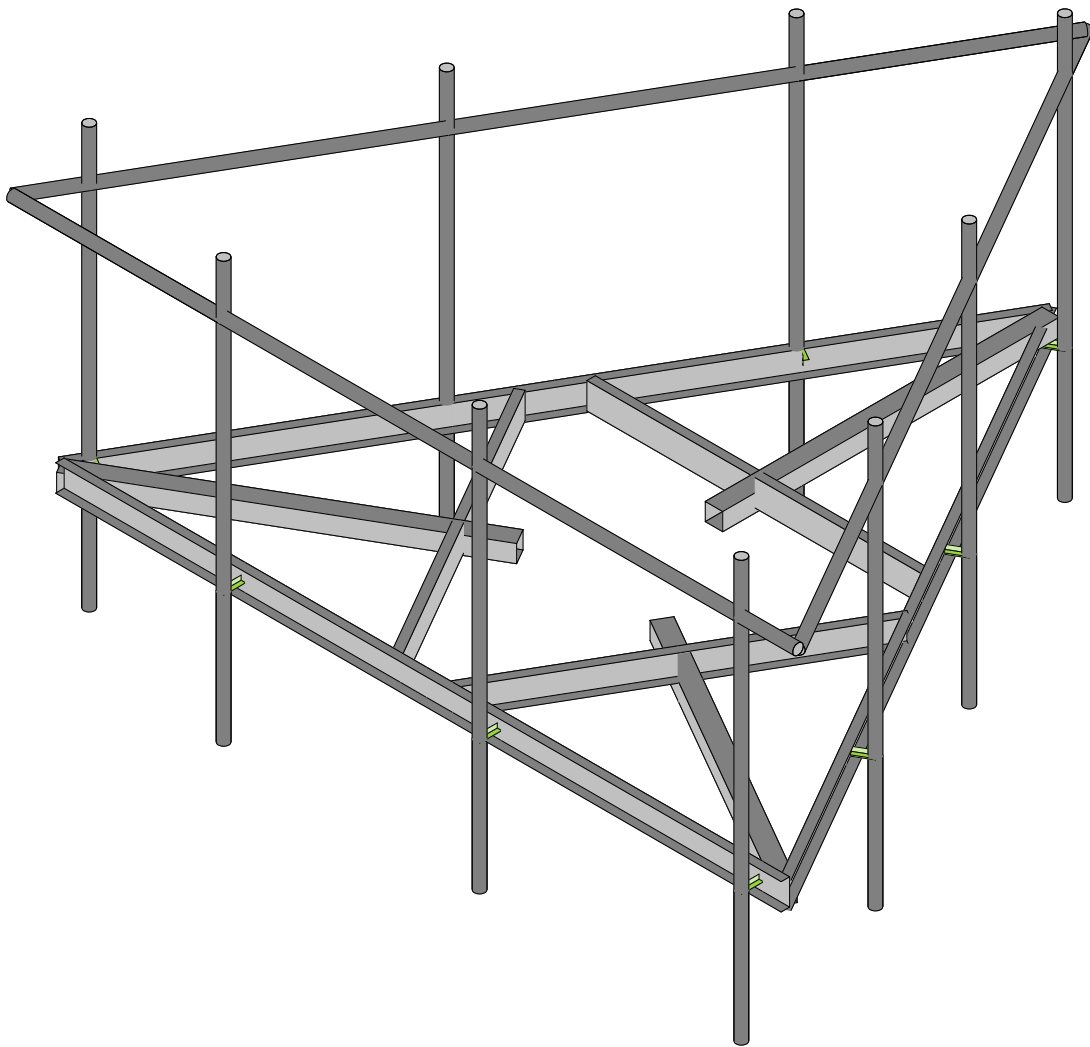
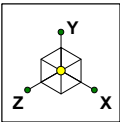
Horizontal	76.0%	Pass
Standoff	53.5%	Pass
Mount Pipe	68.3%	Pass
Results	76.0%	Pass

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of “like new” and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure’s condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report Infinigy Engineering should be notified immediately to complete a revised evaluation.

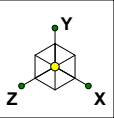
Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

This report is an evaluation of the proposed carriers mount structure only and does not reflect adequacy of the existing tower, other mounts, or coax mounting attachments. These elements are assumed to be adequate for the purposes of this analysis and are assumed to have been installed per their manufacturer requirements.

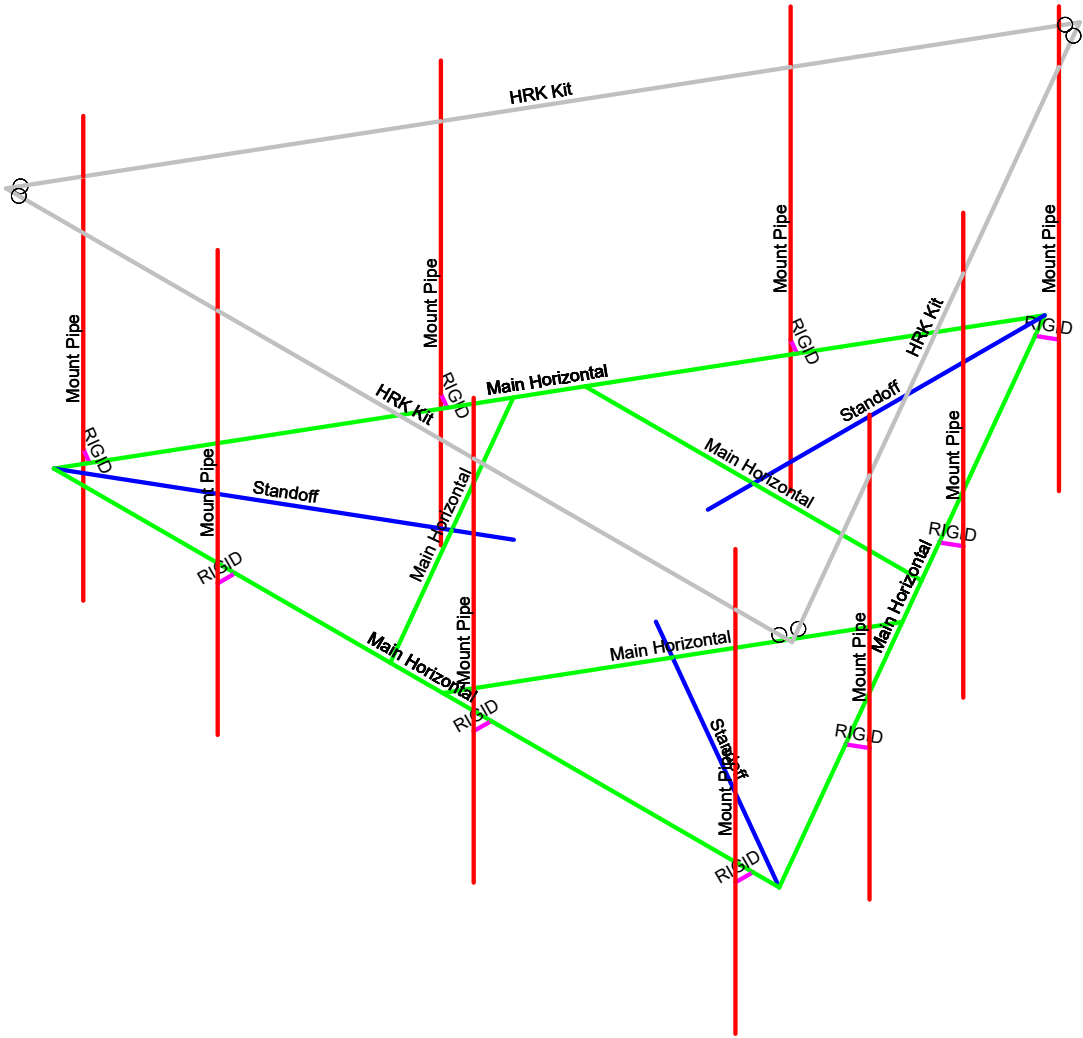


Envelope Only Solution

Infinigy Engineering PLLC	CT5266	Final Configuration
BDA		June 6, 2018 at 12:55 PM
499-006		Mod_CT5266.r3d

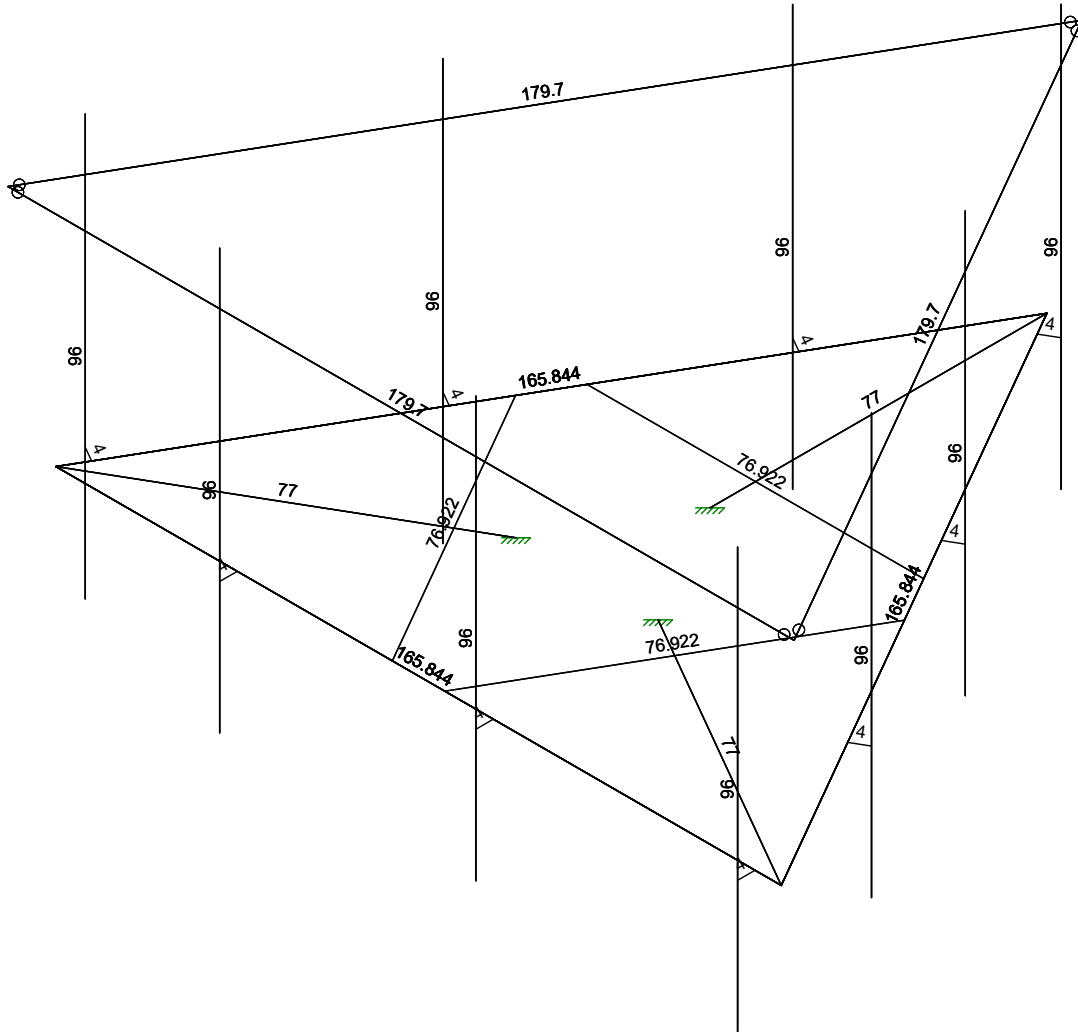
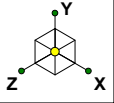


Section Sets	
█	Standoff
█	Main Horizontal
█	Mount Pipe
█	HRK Kit
█	RIGID



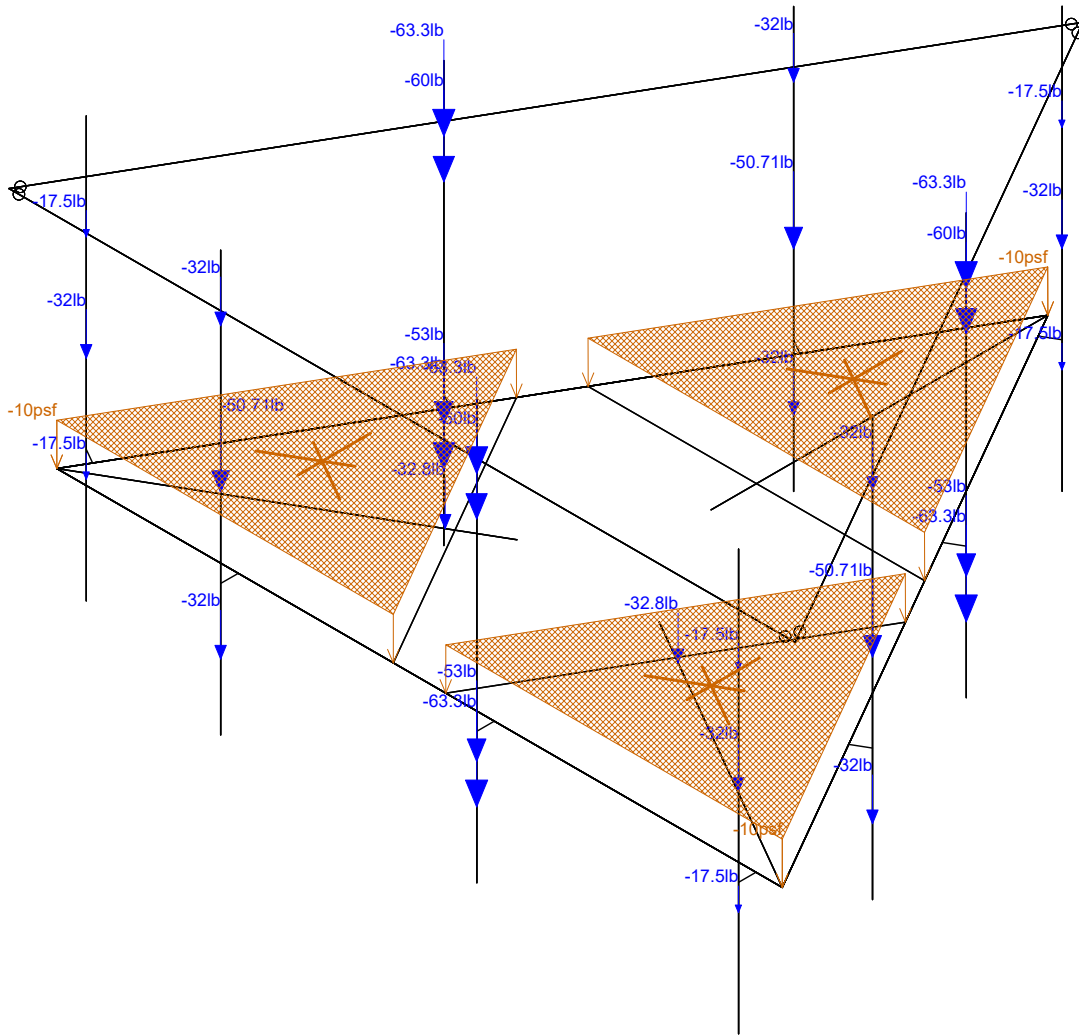
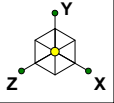
Envelope Only Solution

Infinigy Engineering PLLC	CT5266	Final Configuration
BDA		June 6, 2018 at 12:55 PM
499-006		Mod_CT5266.r3d



Member Length (in) Displayed
Envelope Only Solution

Infinigy Engineering PLLC	CT5266	Final Configuration
BDA		June 6, 2018 at 12:55 PM
499-006		Mod_CT5266.r3d



Loads: BLC 1, Self Weight
Envelope Only Solution

Infinigy Engineering PLLC

BDA

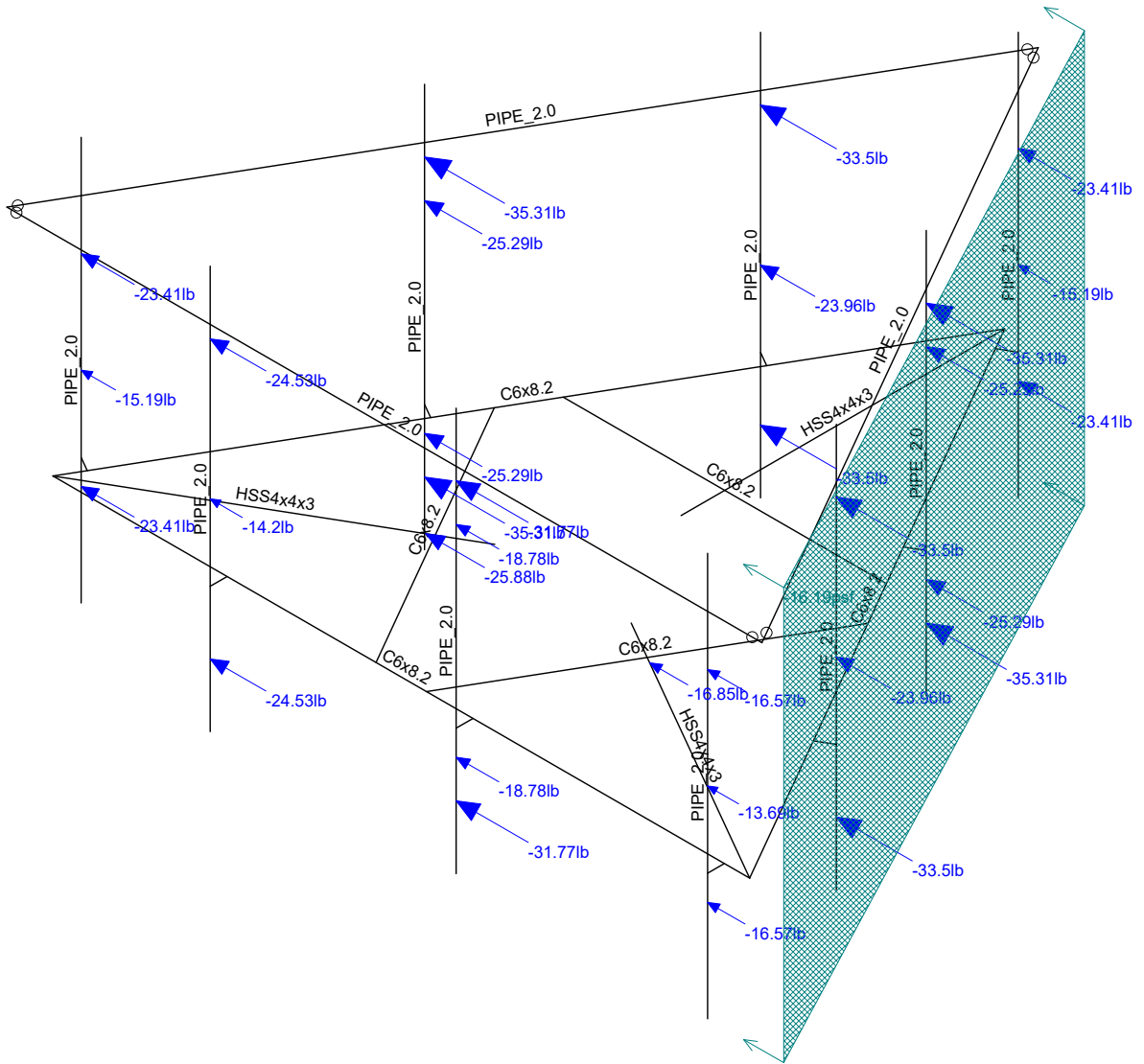
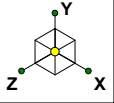
499-006

CT5266

Final Configuration

June 6, 2018 at 12:56 PM

Mod_CT5266.r3d



Loads: BLC 6, Wind + Ice Load AZI 090

Infinigy Engineering PLLC

BDA

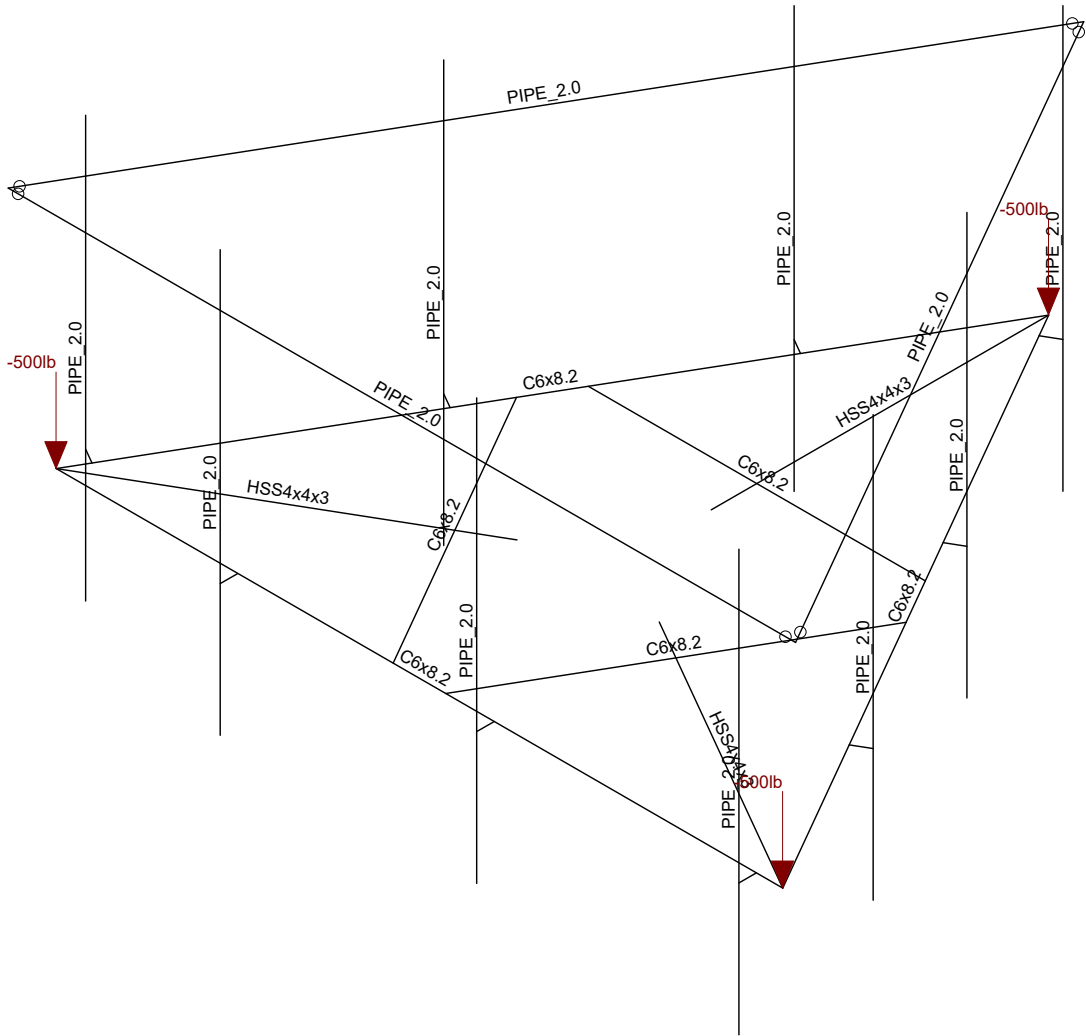
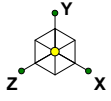
499-006

CT5266

Final Configuration

June 6, 2018 at 12:59 PM

Mod_CT5266.r3d



Loads: BLC 7, Service Live 1

Infinigy Engineering PLLC

BDA

499-006

CT5266

Final Configuration

June 6, 2018 at 12:58 PM

Mod_CT5266.r3d

Site Name: CT5266
 Client: Centerline
 Carrier: AT&T
 Engineer: BDA
 Date: 6/6/2018



Site Information Inputs:

Adopted Building Code: 2012 IBC
 Structure Load Standard: TIA-222-G
 Antenna Load Standard: TIA-222-G
 Structure Risk Category: II
 Structure Type: Mount - Platform
 Number of Sectors: 3
 Structure Shape 1: Flat

Rooftop Inputs:

Rooftop Wind Speed-Up?: No

Wind Loading Inputs:

Design Wind Velocity: 93 mph (nominal 3-second gust)
 Wind Centerline 1 (z_1): 160.0 ft
 Side Face Angle (θ): 60 degrees
 Exposure Category: B
 Topographic Category: 1

Wind with No Ice		
q_z (psf)	Gh	F_{ST} (psf)
23.75	1.00	47.50

Wind with Ice		
q_z (psf)	Gh	F_{ST} (psf)
6.87	1.00	16.19

Ice Loading Inputs:

Is Ice Loading Needed?: Yes
 Ice Wind Velocity: 50 mph (nominal 3-second gust)
 Base Ice Thickness: 0.75 in

Input Appurtenance Information and Load Placements:

Appurtenance Name	Elevation (ft)	Total Quantity	K_a	Front Shape	Side Shape	q_z (psf)	EPA (ft^2)	Fz (lbs)	Fx (lbs)	Fz(60) (lbs)	Fx(30) (lbs)
Powerwave P65-16-XLH-RR	160.0	3	1.00	Flat	Flat	23.75	8.13	193.16	111.62	132.01	172.78
Quintel QS66512-2	160.0	3	1.00	Flat	Flat	23.75	8.13	193.16	161.50	169.41	185.25
Powerwave 7770	160.0	3	1.00	Flat	Flat	23.75	5.51	130.82	69.54	84.86	115.50
Ericsson RRUS-11	160.0	3	1.00	Flat	Flat	23.75	2.78	66.13	28.20	37.68	56.65
Ericsson RRUS-32 B2	160.0	3	1.00	Flat	Flat	23.75	2.74	65.14	39.62	46.00	58.76
Ericsson RRUS-32	160.0	3	1.00	Flat	Flat	23.75	2.74	65.14	39.62	46.00	58.76
Powerwave LGP21401	160.0	6	1.00	Flat	Flat	23.75	0.55	13.13	10.58	11.22	12.49
Raycap DC6-48-60-18-8F	160.0	2	1.00	Round	Round	23.75	1.21	28.78	28.78	28.78	28.78

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N2	N8			Standoff	Beam	Tube	A53 Gr B	Typical
2	M2	N4	N15			Standoff	Beam	Tube	A53 Gr B	Typical
3	M3	N6	N22			Standoff	Beam	Tube	A53 Gr B	Typical
4	M4	N51A	N55			Main Horizontal	Beam	Channel	A36 Gr.36	Typical
5	M5	N52A	N50			Main Horizontal	Beam	Channel	A36 Gr.36	Typical
6	M6	N53B	N54			Main Horizontal	Beam	Channel	A36 Gr.36	Typical
7	M7	N22	N15			Main Horizontal	Beam	Channel	A36 Gr.36	Typical
8	M8	N22	N8			Main Horizontal	Beam	Channel	A36 Gr.36	Typical
9	M9	N8	N15			Main Horizontal	Beam	Channel	A36 Gr.36	Typical
10	M10	N22A	N26			RIGID	None	None	RIGID	Typical
11	M11	N21	N25			RIGID	None	None	RIGID	Typical
12	MP1	N34	N30			Mount Pipe	None	None	A53 Gr B	Typical
13	MP3	N33	N29			Mount Pipe	None	None	A53 Gr B	Typical
14	M14	N37	N41			RIGID	None	None	RIGID	Typical
15	MP6	N49	N45			Mount Pipe	None	None	A53 Gr B	Typical
16	M16	N53	N57			RIGID	None	None	RIGID	Typical
17	MP9	N65	N61			Mount Pipe	None	None	A53 Gr B	Typical
18	M18	N45A	N46A			RIGID	None	None	RIGID	Typical
19	MP4	N48	N47			Mount Pipe	None	None	A53 Gr B	Typical
20	M20	N50A	N51			RIGID	None	None	RIGID	Typical
21	MP7	N53A	N52			Mount Pipe	None	None	A53 Gr B	Typical
22	M23	N50B	N52B			RIGID	None	None	RIGID	Typical
23	MP2	N54A	N53C			Mount Pipe	None	None	A53 Gr B	Typical
24	M25	N55A	N56			RIGID	None	None	RIGID	Typical
25	MP5	N58	N57A			Mount Pipe	None	None	A53 Gr B	Typical
26	M27	N60	N61A			RIGID	None	None	RIGID	Typical
27	MP8	N63	N62			Mount Pipe	None	None	A53 Gr B	Typical
28	M28	N86	N81			HRK Kit	None	None	A53 Gr B	Typical
29	M29	N81	N83A			HRK Kit	None	None	A53 Gr B	Typical
30	M30	N83A	N86			HRK Kit	None	None	A53 Gr B	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		9	36	0
3	Total General		9	36	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	C6x8.2	6	728.3	.5
7	A53 Gr B	HSS4x4x3	3	231	.2
8	A53 Gr B	PIPE_2.0	12	1403.1	.4
9	Total HR Steel		21	2362.4	1.1

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(...
1	Self Weight	DL		-1			32	3	
2	Wind Load AZI 000	WLZ					32	1	
3	Wind Load AZI 090	WLX					32	1	
4	Ice Weight	OL1					32	30	
5	Wind + Ice Load AZI 000	OL2					32	1	
6	Wind + Ice Load AZI 090	OL3					32	1	
7	Service Live 1	LL				3			
8	BLC 1 Transient Area Loads	None						34	

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me... Surface(...
9	BLC 2 Transient Area Loads	None						26
10	BLC 3 Transient Area Loads	None						27
11	BLC 5 Transient Area Loads	None						26
12	BLC 6 Transient Area Loads	None						27

Load Combinations

	Description	S...P...	S...B...Fa...	BLC Fac...	BLC Fa...	B...F...	B...F...	B...F...	B...F...	B...F...	B...F...	B...F...
1	1.4D	Y... Y	DL 1.4									
2	1.2D + 1.6W AZI 000	Y... Y	DL 1.2 WLZ 1.6									
3	1.2D + 1.6W AZI 030	Y... Y	DL 1.2 WLZ 1.3... W... .8									
4	1.2D + 1.6W AZI 060	Y... Y	DL 1.2 WLZ .8 W... 1.3...									
5	1.2D + 1.6W AZI 090	Y... Y	DL 1.2 W... 1.6									
6	1.2D + 1.6W AZI 120	Y... Y	DL 1.2 WLZ -.8 W... 1.3...									
7	1.2D + 1.6W AZI 150	Y... Y	DL 1.2 WLZ -1.3... W... .8									
8	1.2D + 1.6W AZI 180	Y... Y	DL 1.2 WLZ -1.6									
9	1.2D + 1.6W AZI 210	Y... Y	DL 1.2 WLZ -1.3... W... -.8									
10	1.2D + 1.6W AZI 240	Y... Y	DL 1.2 WLZ -.8 W... -1...									
11	1.2D + 1.6W AZI 270	Y... Y	DL 1.2 W... -1.6									
12	1.2D + 1.6W AZI 300	Y... Y	DL 1.2 WLZ .8 W... -1...									
13	1.2D + 1.6W AZI 330	Y... Y	DL 1.2 WLZ 1.3... W... -.8									
14	0.9D + 1.6W AZI 000	Y... Y	DL .9 WLZ 1.6									
15	0.9D + 1.6W AZI 030	Y... Y	DL .9 WLZ 1.3... W... .8									
16	0.9D + 1.6W AZI 060	Y... Y	DL .9 WLZ .8 W... 1.3...									
17	0.9D + 1.6W AZI 090	Y... Y	DL .9 W... 1.6									
18	0.9D + 1.6W AZI 120	Y... Y	DL .9 WLZ -.8 W... 1.3...									
19	0.9D + 1.6W AZI 150	Y... Y	DL .9 WLZ -1.3... W... .8									
20	0.9D + 1.6W AZI 180	Y... Y	DL .9 WLZ -1.6									
21	0.9D + 1.6W AZI 210	Y... Y	DL .9 WLZ -1.3... W... -.8									
22	0.9D + 1.6W AZI 240	Y... Y	DL .9 WLZ -.8 W... -1...									
23	0.9D + 1.6W AZI 270	Y... Y	DL .9 W... -1.6									
24	0.9D + 1.6W AZI 300	Y... Y	DL .9 WLZ .8 W... -1...									
25	0.9D + 1.6W AZI 330	Y... Y	DL .9 WLZ 1.3... W... -.8									
26	1.2D + 1.0Di	Y... Y	DL 1.2 OL1 1									
27	1.2D + 1.0Di + 1.0Wi AZI 000	Y... Y	DL 1.2 OL1 1 OL2 1									
28	1.2D + 1.0Di + 1.0Wi AZI 030	Y... Y	DL 1.2 OL1 1 OL2 .8665									
29	1.2D + 1.0Di + 1.0Wi AZI 060	Y... Y	DL 1.2 OL1 1 OL2 .58...									
30	1.2D + 1.0Di + 1.0Wi AZI 090	Y... Y	DL 1.2 OL1 1 ... 1									
31	1.2D + 1.0Di + 1.0Wi AZI 120	Y... Y	DL 1.2 OL1 1 OL2 -.58...									
32	1.2D + 1.0Di + 1.0Wi AZI 150	Y... Y	DL 1.2 OL1 1 OL2 -.8665									
33	1.2D + 1.0Di + 1.0Wi AZI 180	Y... Y	DL 1.2 OL1 1 OL2 -1									
34	1.2D + 1.0Di + 1.0Wi AZI 210	Y... Y	DL 1.2 OL1 1 OL2 -.866 ... -.5									
35	1.2D + 1.0Di + 1.0Wi AZI 240	Y... Y	DL 1.2 OL1 1 OL2 -.5 ... -...									
36	1.2D + 1.0Di + 1.0Wi AZI 270	Y... Y	DL 1.2 OL1 1 ... -1									
37	1.2D + 1.0Di + 1.0Wi AZI 300	Y... Y	DL 1.2 OL1 1 OL2 .5 ... -...									
38	1.2D + 1.0Di + 1.0Wi AZI 330	Y... Y	DL 1.2 OL1 1 OL2 .866 ... -.5									
39	1.2D + 1.5L + 1.0WL (30 mph) AZI 000	Y... Y	DL 1.2 LL 1.5 WLZ .111									
40	1.2D + 1.5L + 1.0WL (30 mph) AZI 030	Y... Y	DL 1.2 LL 1.5 WLZ .0960...									
41	1.2D + 1.5L + 1.0WL (30 mph) AZI 060	Y... Y	DL 1.2 LL 1.5 WLZ .0560...									
42	1.2D + 1.5L + 1.0WL (30 mph) AZI 090	Y... Y	DL 1.2 LL 1.51...									
43	1.2D + 1.5L + 1.0WL (30 mph) AZI 120	Y... Y	DL 1.2 LL 1.5 WLZ -.0560...									
44	1.2D + 1.5L + 1.0WL (30 mph) AZI 150	Y... Y	DL 1.2 LL 1.5 WLZ -.0960...									
45	1.2D + 1.5L + 1.0WL (30 mph) AZI 180	Y... Y	DL 1.2 LL 1.5 WLZ -.111									
46	1.2D + 1.5L + 1.0WL (30 mph) AZI 210	Y... Y	DL 1.2 LL 1.5 WLZ -.096 ... -...									
47	1.2D + 1.5L + 1.0WL (30 mph) AZI 240	Y... Y	DL 1.2 LL 1.5 WLZ -.056 ... -...									
48	1.2D + 1.5L + 1.0WL (30 mph) AZI 270	Y... Y	DL 1.2 LL 1.5 ... -...									

Load Combinations (Continued)

	Description	S...P...	S...B...Fa...	BLC	Fac...	BLC	Fa...	B...	F...	B...	F...	B...	F...	B...	F...	B...	F...
49	1.2D + 1.5L + 1.0WL (30 mph) AZI 300	Y...	Y	DL	1.2	LL	1.5	WLZ	.056	...	-....						
50	1.2D + 1.5L + 1.0WL (30 mph) AZI 330	Y...	Y	DL	1.2	LL	1.5	WLZ	.096	...	-....						

Envelope Joint Reactions

Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC		
1	N6	max	2450.433	18	3224.575	31	1953.666	13	1.067	25	.824	2	1.471	24
2		min	-2495.494	12	-352.409	24	-1935.284	19	-2.354	7	-.815	20	-3.824	31
3	N4	max	1859.754	5	3092.566	27	2822.001	14	4.293	27	1.604	11	.593	11
4		min	-1848.948	23	-356.414	20	-2871.248	8	-1.725	20	-1.594	17	-.57	17
5	N2	max	2326.824	4	3226.442	35	2275.12	3	.78	15	1.018	8	3.843	10
6		min	-2284.757	22	-351.701	16	-2247.315	21	-2.219	34	-1.005	14	-1.597	16
7	Totals:	max	6522.642	5	8643.968	38	6332.68	2						
8		min	-6522.642	23	2638.535	19	-6332.679	20						

Envelope AISC 13th(360-05): LRFD Steel Code Checks

Member	Shape	Code Check	Loc[in]	LC	Shear Ch...	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pn...	phi*M...	phi*M...	Eqn	
1	M8	C6x8.2	.760	165.844	9	.761	89.832	y	8	5642.84	77436	2.108	8.189	H1-1a
2	M7	C6x8.2	.740	0	5	.705	76.012	y	4	5642.84	77436	2.108	8.136	H1-1a
3	M9	C6x8.2	.715	165.844	13	.723	89.832	y	12	5642.84	77436	2.108	8.174	H1-1a
4	MP4	PIPE_2.0	.683	30	3	.213	30		12	14916.096	32130	1.872	1.872	H1-1b
5	MP5	PIPE_2.0	.682	30	9	.159	30		11	14916.096	32130	1.872	1.872	H1-1b
6	MP7	PIPE_2.0	.676	30	6	.223	30		5	14916.096	32130	1.872	1.872	H1-1b
7	MP8	PIPE_2.0	.675	30	13	.162	30		4	14916.096	32130	1.872	1.872	H1-1b
8	MP2	PIPE_2.0	.623	30	5	.170	30		8	14916.096	32130	1.872	1.872	H1-1b
9	MP1	PIPE_2.0	.615	30	11	.232	30		8	14916.096	32130	1.872	1.872	H1-1b
10	MP6	PIPE_2.0	.586	30	10	.286	84		12	14916.096	32130	1.872	1.872	H1-1b
11	MP9	PIPE_2.0	.560	30	13	.293	84		4	14916.096	32130	1.872	1.872	H1-1b
12	M28	PIPE_2.0	.550	46.797	8	.211	166.597		8	4386.417	32130	1.872	1.872	H1-1b
13	M1	HSS4x4x3	.535	0	10	.151	0	y	33	71643.495	81270	9.634	9.634	H1-1b
14	MP3	PIPE_2.0	.523	30	6	.317	84		8	14916.096	32130	1.872	1.872	H1-1b
15	M29	PIPE_2.0	.509	46.797	12	.189	166.597		12	4386.417	32130	1.872	1.872	H1-1b
16	M2	HSS4x4x3	.507	0	13	.155	0	z	11	71643.495	81270	9.634	9.634	H1-1b
17	M3	HSS4x4x3	.502	0	6	.149	0	y	29	71643.495	81270	9.634	9.634	H1-1b
18	M30	PIPE_2.0	.501	46.797	4	.197	166.597		4	4386.417	32130	1.872	1.872	H1-1b
19	M6	C6x8.2	.298	38.461	30	.059	38.461	y	32	26229.897	77436	2.108	13.932	H1-1b
20	M4	C6x8.2	.296	38.461	36	.059	38.461	y	36	26229.874	77436	2.108	13.932	H1-1b
21	M5	C6x8.2	.291	38.461	38	.059	38.461	y	28	26229.852	77436	2.108	13.932	H1-1b

Hot Rolled Steel Section Sets

Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]	
1	Standoff	HSS4x4x3	Beam	Tube	A53 Gr B	Typical	2.58	6.21	6.21	10
2	Main Horizontal	C6x8.2	Beam	Channel	A36 Gr.36	Typical	2.39	.687	13.1	.074
3	Cross Support	L3x3x4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
4	Mount Pipe	PIPE_2.0	None	None	A53 Gr B	Typical	1.02	.627	.627	1.25
5	HRK Kit	PIPE_2.0	None	None	A53 Gr B	Typical	1.02	.627	.627	1.25

Joint Boundary Conditions

Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N6	Reaction	Reaction	Reaction	Reaction	Reaction
2	N4	Reaction	Reaction	Reaction	Reaction	Reaction
3	N2	Reaction	Reaction	Reaction	Reaction	Reaction

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Analysis ...	Inactive	Seismic Design ...
1	M1						Yes			None
2	M2						Yes			None
3	M3						Yes			None
4	M4						Yes			None
5	M5						Yes			None
6	M6						Yes			None
7	M7						Yes			None
8	M8						Yes			None
9	M9						Yes			None
10	M10						Yes			None
11	M11						Yes			None
12	MP1						Yes			None
13	MP3						Yes			None
14	M14						Yes			None
15	MP6						Yes			None
16	M16						Yes			None
17	MP9						Yes			None
18	M18						Yes			None
19	MP4						Yes			None
20	M20						Yes			None
21	MP7						Yes			None
22	M23						Yes			None
23	MP2						Yes			None
24	M25						Yes			None
25	MP5						Yes			None
26	M27						Yes			None
27	MP8						Yes			None
28	M28	BenPIN	BenPIN				Yes			None
29	M29	BenPIN	BenPIN				Yes			None
30	M30	BenPIN	BenPIN				Yes			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torq...	Kyy	Kzz	Cb	Function
1	M1	Standoff	77			Lbyy						Lateral
2	M2	Standoff	77			Lbyy						Lateral
3	M3	Standoff	77			Lbyy						Lateral
4	M4	Main Horizo...	76.922			Lbyy						Lateral
5	M5	Main Horizo...	76.922			Lbyy						Lateral
6	M6	Main Horizo...	76.922			Lbyy						Lateral
7	M7	Main Horizo...	165.844			Lbyy						Lateral
8	M8	Main Horizo...	165.844			Lbyy						Lateral
9	M9	Main Horizo...	165.844			Lbyy						Lateral
10	MP1	Mount Pipe	96			Lbyy						Lateral
11	MP3	Mount Pipe	96			Lbyy						Lateral
12	MP6	Mount Pipe	96			Lbyy						Lateral
13	MP9	Mount Pipe	96			Lbyy						Lateral
14	MP4	Mount Pipe	96			Lbyy						Lateral
15	MP7	Mount Pipe	96			Lbyy						Lateral
16	MP2	Mount Pipe	96			Lbyy						Lateral
17	MP5	Mount Pipe	96			Lbyy						Lateral
18	MP8	Mount Pipe	96			Lbyy						Lateral
19	M28	HRK Kit	179.7									Lateral
20	M29	HRK Kit	179.7									Lateral
21	M30	HRK Kit	179.7									Lateral

Joint Loads and Enforced Displacements (BLC 7 : Service Live 1)

	Joint Label	L,D,M	Direction	Magnitude[(lb.k-ft), (in.rad), (lb*s^2/in, lb*s^2*in)]
1	N8	L	Y	-500
2	N15	L	Y	-500
3	N22	L	Y	-500

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in,%]
1	MP1	Y	-32	15
2	MP2	Y	-63.3	15
3	MP3	Y	-17.5	24
4	MP1	Y	-50.71	48
5	MP2	Y	-53	24
6	MP2	Y	-60	72
7	MP3	Y	-32	48
8	M1	Y	-32.8	12
9	MP1	Y	-32	81
10	MP2	Y	-63.3	81
11	MP3	Y	-17.5	72
12	MP4	Y	-32	15
13	MP5	Y	-63.3	15
14	MP6	Y	-17.5	24
15	MP4	Y	-50.71	48
16	MP5	Y	-53	24
17	MP5	Y	-60	72
18	MP6	Y	-32	48
19	M3	Y	-32.8	12
20	MP4	Y	-32	81
21	MP5	Y	-63.3	81
22	MP6	Y	-17.5	72
23	MP7	Y	-32	15
24	MP8	Y	-63.3	15
25	MP9	Y	-17.5	24
26	MP7	Y	-50.71	48
27	MP8	Y	-53	24
28	MP8	Y	-60	72
29	MP9	Y	-32	48
30	MP7	Y	-32	81
31	MP8	Y	-63.3	81
32	MP9	Y	-17.5	72

Member Point Loads (BLC 2 : Wind Load AZI 000)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in,%]
1	MP1	Z	-96.58	15
2	MP2	Z	-96.58	15
3	MP3	Z	-65.41	24
4	MP1	Z	-66.13	48
5	MP2	Z	-65.14	24
6	MP2	Z	-65.14	72
7	MP3	Z	-26.26	48
8	M1	Z	-28.78	12
9	MP1	Z	-96.58	81
10	MP2	Z	-96.58	81
11	MP3	Z	-65.41	72
12	MP4	Z	-66	15
13	MP5	Z	-84.71	15

Member Point Loads (BLC 2 : Wind Load AZI 000) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
14	MP6	Z	-42.43	24
15	MP4	Z	-37.68	48
16	MP5	Z	-46	24
17	MP5	Z	-46	72
18	MP6	Z	-22.43	48
19	M3	Z	-28.78	12
20	MP4	Z	-66	81
21	MP5	Z	-84.71	81
22	MP6	Z	-42.43	72
23	MP7	Z	-66	15
24	MP8	Z	-84.71	15
25	MP9	Z	-42.43	24
26	MP7	Z	-37.68	48
27	MP8	Z	-46	24
28	MP8	Z	-46	72
29	MP9	Z	-22.43	48
30	MP7	Z	-66	81
31	MP8	Z	-84.71	81
32	MP9	Z	-42.43	72

Member Point Loads (BLC 3 : Wind Load AZI 090)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP1	X	-55.81	15
2	MP2	X	-80.75	15
3	MP3	X	-34.77	24
4	MP1	X	-28.2	48
5	MP2	X	-39.62	24
6	MP2	X	-39.62	72
7	MP3	X	-21.16	48
8	M1	X	-28.78	12
9	MP1	X	-55.81	81
10	MP2	X	-80.75	81
11	MP3	X	-34.77	72
12	MP4	X	-86.39	15
13	MP5	X	-92.62	15
14	MP6	X	-57.75	24
15	MP4	X	-56.65	48
16	MP5	X	-58.76	24
17	MP5	X	-58.76	72
18	MP6	X	-24.98	48
19	M3	X	-28.78	12
20	MP4	X	-86.39	81
21	MP5	X	-92.62	81
22	MP6	X	-57.75	72
23	MP7	X	-86.39	15
24	MP8	X	-92.62	15
25	MP9	X	-57.75	24
26	MP7	X	-56.65	48
27	MP8	X	-58.76	24
28	MP8	X	-58.76	72
29	MP9	X	-24.98	48
30	MP7	X	-86.39	81
31	MP8	X	-92.62	81
32	MP9	X	-57.75	72

Member Point Loads (BLC 4 : Ice Weight)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP1	Y	-96.57	15
2	MP2	Y	-114.51	15
3	MP3	Y	-68.12	24
4	MP1	Y	-86.9	48
5	MP2	Y	-88.71	24
6	MP2	Y	-88.71	72
7	MP3	Y	-55.92	48
8	M1	Y	-90.12	12
9	MP1	Y	-96.57	81
10	MP2	Y	-114.51	81
11	MP3	Y	-68.12	72
12	MP4	Y	-96.57	15
13	MP5	Y	-114.51	15
14	MP6	Y	-68.12	24
15	MP4	Y	-86.9	48
16	MP5	Y	-88.71	24
17	MP5	Y	-88.71	72
18	MP6	Y	-55.92	48
19	M3	Y	-90.12	12
20	MP4	Y	-96.57	81
21	MP5	Y	-114.51	81
22	MP6	Y	-68.12	72
23	MP7	Y	-96.57	15
24	MP8	Y	-114.51	15
25	MP9	Y	-68.12	24
26	MP7	Y	-86.9	48
27	MP8	Y	-88.71	24
28	MP8	Y	-88.71	72
29	MP9	Y	-55.92	48
30	MP7	Y	-96.57	81
31	MP8	Y	-114.51	81
32	MP9	Y	-68.12	72

Member Point Loads (BLC 5 : Wind + Ice Load AZI 000)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP1	Z	-36.48	15
2	MP2	Z	-36.48	15
3	MP3	Z	-25.69	24
4	MP1	Z	-27.22	48
5	MP2	Z	-27.46	24
6	MP2	Z	-27.46	72
7	MP3	Z	-15.69	48
8	M1	Z	-28.89	12
9	MP1	Z	-36.48	81
10	MP2	Z	-36.48	81
11	MP3	Z	-25.69	72
12	MP4	Z	-27.52	15
13	MP5	Z	-32.95	15
14	MP6	Z	-18.85	24
15	MP4	Z	-17.45	48
16	MP5	Z	-20.95	24
17	MP5	Z	-20.95	72
18	MP6	Z	-14.19	48
19	M3	Z	-19.86	12
20	MP4	Z	-27.52	81
21	MP5	Z	-32.95	81

Member Point Loads (BLC 5 : Wind + Ice Load AZI 000) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
22	MP6	Z	-18.85	72
23	MP7	Z	-27.52	15
24	MP8	Z	-32.95	15
25	MP9	Z	-18.85	24
26	MP7	Z	-17.45	48
27	MP8	Z	-20.95	24
28	MP8	Z	-20.95	72
29	MP9	Z	-14.19	48
30	MP7	Z	-27.52	81
31	MP8	Z	-32.95	81
32	MP9	Z	-18.85	72

Member Point Loads (BLC 6 : Wind + Ice Load AZI 090)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP1	X	-24.53	15
2	MP2	X	-31.77	15
3	MP3	X	-16.57	24
4	MP1	X	-14.2	48
5	MP2	X	-18.78	24
6	MP2	X	-18.78	72
7	MP3	X	-13.69	48
8	M1	X	-16.85	12
9	MP1	X	-24.53	81
10	MP2	X	-31.77	81
11	MP3	X	-16.57	72
12	MP4	X	-33.5	15
13	MP5	X	-35.31	15
14	MP6	X	-23.41	24
15	MP4	X	-23.96	48
16	MP5	X	-25.29	24
17	MP5	X	-25.29	72
18	MP6	X	-15.19	48
19	M3	X	-25.88	12
20	MP4	X	-33.5	81
21	MP5	X	-35.31	81
22	MP6	X	-23.41	72
23	MP7	X	-33.5	15
24	MP8	X	-35.31	15
25	MP9	X	-23.41	24
26	MP7	X	-23.96	48
27	MP8	X	-25.29	24
28	MP8	X	-25.29	72
29	MP9	X	-15.19	48
30	MP7	X	-33.5	81
31	MP8	X	-35.31	81
32	MP9	X	-23.41	72

Member Distributed Loads (BLC 4 : Ice Weight)

	Member Label	Direction	Start Magnitude[lb/ft.F,psf]	End Magnitude[lb/ft.F,psf]	Start Location[in...]	End Location[in...]
1	M1	Y	-15.729	-15.729	0	%100
2	M2	Y	-15.729	-15.729	0	%100
3	M3	Y	-15.729	-15.729	0	%100
4	M4	Y	-15.729	-15.729	0	%100
5	M5	Y	-15.729	-15.729	0	%100
6	M6	Y	-15.729	-15.729	0	%100

Member Distributed Loads (BLC 4 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/ft.F.psf]	Start Location[in...]	End Location[in...]
7	M7	Y	-15.729	-15.729	0	%100
8	M8	Y	-15.729	-15.729	0	%100
9	M9	Y	-15.729	-15.729	0	%100
10	M10	Y	-4.799	-4.799	0	%100
11	M11	Y	-4.799	-4.799	0	%100
12	MP1	Y	-8.877	-8.877	0	%100
13	MP3	Y	-8.877	-8.877	0	%100
14	M14	Y	-4.799	-4.799	0	%100
15	MP6	Y	-8.877	-8.877	0	%100
16	M16	Y	-4.799	-4.799	0	%100
17	MP9	Y	-8.877	-8.877	0	%100
18	M18	Y	-4.799	-4.799	0	%100
19	MP4	Y	-8.877	-8.877	0	%100
20	M20	Y	-4.799	-4.799	0	%100
21	MP7	Y	-8.877	-8.877	0	%100
22	M23	Y	-4.799	-4.799	0	%100
23	MP2	Y	-8.877	-8.877	0	%100
24	M25	Y	-4.799	-4.799	0	%100
25	MP5	Y	-8.877	-8.877	0	%100
26	M27	Y	-4.799	-4.799	0	%100
27	MP8	Y	-8.877	-8.877	0	%100
28	M28	Y	-8.877	-8.877	0	%100
29	M29	Y	-8.877	-8.877	0	%100
30	M30	Y	-8.877	-8.877	0	%100

Member Distributed Loads (BLC 8 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/ft.F.psf]	Start Location[in...]	End Location[in...]
1	M3	Y	-16.69	-12.195	7.7	28.233
2	M3	Y	-12.195	-10.306	28.233	48.767
3	M3	Y	-10.306	-11.024	48.767	69.3
4	M6	Y	-7.495	-4.762	7.692	28.205
5	M6	Y	-4.762	-5.488	28.205	48.717
6	M6	Y	-5.488	-9.672	48.717	69.23
7	M7	Y	-1.037	-8.233	0	27.641
8	M7	Y	-8.233	-9.206	27.641	55.281
9	M7	Y	-9.206	-2.593	55.281	82.922
10	M8	Y	-1.2	-5.315	0	27.641
11	M8	Y	-5.315	-7.385	27.641	55.281
12	M8	Y	-7.385	-7.411	55.281	82.922
13	M2	Y	-24.143	-12.915	7.7	38.5
14	M2	Y	-12.915	-1.687	38.5	69.3
15	M5	Y	-4.47	-4.47	7.692	38.461
16	M5	Y	-4.47	-4.469	38.461	69.23
17	M7	Y	-2.593	-9.208	82.922	110.563
18	M7	Y	-9.208	-8.234	110.563	138.203
19	M7	Y	-8.234	-1.037	138.203	165.844
20	M9	Y	-2.593	-9.206	82.922	110.563
21	M9	Y	-9.206	-8.233	110.563	138.203
22	M9	Y	-8.233	-1.037	138.203	165.844
23	M1	Y	-16.69	-12.195	7.7	28.233
24	M1	Y	-12.195	-10.306	28.233	48.767
25	M1	Y	-10.306	-11.024	48.767	69.3
26	M4	Y	-7.495	-4.762	7.692	28.205
27	M4	Y	-4.762	-5.488	28.205	48.717
28	M4	Y	-5.488	-9.672	48.717	69.23
29	M8	Y	-2.593	-9.206	82.922	110.563

Member Distributed Loads (BLC 8 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/ft.F.psf]	Start Location[in...]	End Location[in...]
30	M8	Y	-9.206	-8.233	110.563	138.203
31	M8	Y	-8.233	-1.037	138.203	165.844
32	M9	Y	-1.2	-5.315	0	27.641
33	M9	Y	-5.315	-7.385	27.641	55.281
34	M9	Y	-7.385	-7.411	55.281	82.922

Member Distributed Loads (BLC 9 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/ft.F.psf]	Start Location[in...]	End Location[in...]
1	M1	Z	-13.712	-13.712	0	77
2	M3	Z	-13.712	-13.712	0	77
3	M4	Z	-11.875	-11.875	0	76.922
4	M5	Z	-23.75	-23.75	0	76.922
5	M6	Z	-11.875	-11.875	0	76.922
6	M7	Z	-11.875	-11.875	0	165.844
7	M8	Z	-23.75	-23.75	0	165.844
8	M9	Z	-11.875	-11.875	0	165.844
9	MP1	Z	-9.421	-9.421	0	96
10	MP3	Z	-9.421	-9.421	0	96
11	M14	Z	0	0	0	4
12	MP6	Z	-9.421	-9.421	0	96
13	M16	Z	0	0	0	4
14	MP9	Z	-9.421	-9.421	0	96
15	M18	Z	0	0	0	4
16	MP4	Z	-9.421	-9.421	0	96
17	M20	Z	0	0	0	4
18	MP7	Z	-9.421	-9.421	0	96
19	MP2	Z	-9.421	-9.421	0	96
20	M25	Z	0	0	0	4
21	MP5	Z	-9.421	-9.421	0	96
22	M27	Z	0	0	0	4
23	MP8	Z	-9.421	-9.421	0	96
24	M28	Z	-9.421	-9.421	4.33	175.37
25	M29	Z	-4.71	-4.71	8.66	179.7
26	M30	Z	-4.71	-4.71	0	171.04

Member Distributed Loads (BLC 10 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/ft.F.psf]	Start Location[in...]	End Location[in...]
1	M1	X	-8.941	-8.941	0	77
2	M2	X	-17.882	-17.882	0	77
3	M3	X	-8.941	-8.941	0	77
4	M4	X	-23.229	-23.229	0	76.922
5	M6	X	-23.229	-23.229	0	76.922
6	M7	X	-23.229	-23.229	0	165.844
7	M9	X	-23.229	-23.229	0	165.844
8	M10	X	0	0	0	4
9	M11	X	0	0	0	4
10	MP1	X	-10.64	-10.64	0	96
11	MP3	X	-10.64	-10.64	0	96
12	M14	X	0	0	0	4
13	MP6	X	-10.64	-10.64	0	96
14	M16	X	0	0	0	4
15	MP9	X	-10.64	-10.64	0	96
16	M18	X	0	0	0	4
17	MP4	X	-10.64	-10.64	0	96
18	M20	X	0	0	0	4
19	MP7	X	-10.64	-10.64	0	96

Member Distributed Loads (BLC 10 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F,psf]	End Magnitude[lb/ft.F,psf]	Start Location[in...]	End Location[in...]
20	M23	X	0	0	0	4
21	MP2	X	-10.64	-10.64	0	96
22	M25	X	0	0	0	4
23	MP5	X	-10.64	-10.64	0	96
24	M27	X	0	0	0	4
25	MP8	X	-10.64	-10.64	0	96
26	M29	X	-9.214	-9.214	0	173.927
27	M30	X	-9.214	-9.214	5.774	179.7

Member Distributed Loads (BLC 11 : BLC 5 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft.F,psf]	End Magnitude[lb/ft.F,psf]	Start Location[in...]	End Location[in...]
1	M1	Z	-4.674	-4.674	0	77
2	M3	Z	-4.674	-4.674	0	77
3	M4	Z	-4.048	-4.048	0	76.922
4	M5	Z	-8.095	-8.095	0	76.922
5	M6	Z	-4.047	-4.047	0	76.922
6	M7	Z	-4.048	-4.048	0	165.844
7	M8	Z	-8.095	-8.095	0	165.844
8	M9	Z	-4.048	-4.048	0	165.844
9	MP1	Z	-3.211	-3.211	0	96
10	MP3	Z	-3.211	-3.211	0	96
11	M14	Z	0	0	0	4
12	MP6	Z	-3.211	-3.211	0	96
13	M16	Z	0	0	0	4
14	MP9	Z	-3.211	-3.211	0	96
15	M18	Z	0	0	0	4
16	MP4	Z	-3.211	-3.211	0	96
17	M20	Z	0	0	0	4
18	MP7	Z	-3.211	-3.211	0	96
19	MP2	Z	-3.211	-3.211	0	96
20	M25	Z	0	0	0	4
21	MP5	Z	-3.211	-3.211	0	96
22	M27	Z	0	0	0	4
23	MP8	Z	-3.211	-3.211	0	96
24	M28	Z	-3.211	-3.211	4.33	175.37
25	M29	Z	-1.606	-1.606	8.66	179.7
26	M30	Z	-1.606	-1.606	0	171.04

Member Distributed Loads (BLC 12 : BLC 6 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft.F,psf]	End Magnitude[lb/ft.F,psf]	Start Location[in...]	End Location[in...]
1	M1	X	-3.047	-3.047	0	77
2	M2	X	-6.095	-6.095	0	77
3	M3	X	-3.047	-3.047	0	77
4	M4	X	-7.917	-7.917	0	76.922
5	M6	X	-7.917	-7.917	0	76.922
6	M7	X	-7.917	-7.917	0	165.844
7	M9	X	-7.917	-7.917	0	165.844
8	M10	X	0	0	0	4
9	M11	X	0	0	0	4
10	MP1	X	-3.626	-3.626	0	96
11	MP3	X	-3.626	-3.626	0	96
12	M14	X	0	0	0	4
13	MP6	X	-3.626	-3.626	0	96
14	M16	X	0	0	0	4
15	MP9	X	-3.626	-3.626	0	96
16	M18	X	0	0	0	4

Member Distributed Loads (BLC 12 : BLC 6 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft.F.psf]	End Magnitude[lb/ft.F.psf]	Start Location[in...	End Location[in...
17	MP4	X	-3.626	-3.626	0	96
18	M20	X	0	0	0	4
19	MP7	X	-3.626	-3.626	0	96
20	M23	X	0	0	0	4
21	MP2	X	-3.626	-3.626	0	96
22	M25	X	0	0	0	4
23	MP5	X	-3.626	-3.626	0	96
24	M27	X	0	0	0	4
25	MP8	X	-3.626	-3.626	0	96
26	M29	X	-3.141	-3.141	0	173.927
27	M30	X	-3.141	-3.141	5.774	179.7

Member Area Loads (BLC 1 : Self Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N22	N54	N53B		Y	Two Way	-10
2	N15	N50	N52A		Y	Two Way	-10
3	N8	N55	N51A		Y	Two Way	-10

Member Area Loads (BLC 2 : Wind Load AZI 000)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N47A	N45B	N44	N46	Z	Open Structure	-47.5

Member Area Loads (BLC 3 : Wind Load AZI 090)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N45B	N49A	N48A	N44	X	Open Structure	-47.5

Member Area Loads (BLC 5 : Wind + Ice Load AZI 000)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N47A	N45B	N44	N46	Z	Open Structure	-16.19

Member Area Loads (BLC 6 : Wind + Ice Load AZI 090)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N45B	N49A	N48A	N44	X	Open Structure	-16.19

GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA-222 STANDARD, AWWA-D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA-1019-A-2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT INFINIGY ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVALITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
5. ALL STEEL MEMBERS AND CONNECTIONS SHALL MEET THE FOLLOWING GRADES:
 - ANGLES, CHANNELS, PLATES AND BARS TO BE A36. Fy=36 KSI, U.N.O.
 - W SHAPES TO BE A992. Fy=50 KSI, U.N.O.
 - RECTANGULAR HSS TO BE A500, GRADE B. Fy=46 KSI, U.N.O.
 - ROUND HSS TO BE A500, GRADE B. Fy=42 KSI, U.N.O.
 - STEEL PIPE TO BE A53, GRADE B. Fy=35 KSI, U.N.O.
 - BOLTS TO BE A325-X. Fu=120 KSI, U.N.O.
 - U-BOLTS AND LAG SCREWS TO BE A307 GR A. Fu=60 KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
 - MECHANICAL ANCHORS: KWIK BOLT-TZ, U.N.O.
 - CMU BLOCK ANCHORS: ADHESIVE - HY120, U.N.O.
 - CONCRETE ANCHORS: ADHESIVE - HY150, U.N.O.
 - CONCRETE REBAR: ADHESIVE - RE500, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"-20 LOW CARBON STEEL COPPER-FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

FIBER REINFORCED POLYMER (FRP) NOTES:

1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE Fy = 5.35 KSI LW (SAFETY FACTOR OF 8), .945 KSI CW (SAFETY FACTOR OF 8) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	ULTIMATE TORQUE STRENGTH	RECOMMENDED MAXIMUM INSTALLATION TORQUE
3/8-16 UNC	8 FT-LBS	4 FT-LBS
1/2-13 UNC	18 FT-LBS	8 FT-LBS
5/8-11 UNC	35 FT-LBS	16 FT-LBS
3/4-10 UNC	50 FT-LBS	24 FT-LBS
1-8 UNC	110 FT-LBS	50 FT-LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
9. STUD/NUT ASSEMBLIES SHOULD BE BONDED BY APPLYING BONDING AGENT TO ENTIRE NUT AND EXPOSED STUD.
10. ALL FRP MATERIALS TO BE PROVIDED BY FIBERGRATE COMPOSITE STRUCTURES, DALLAS TX, OR APPROVED EQUAL.
11. ALL FRP SHAPES TO BE DYNAFORM PULTRUDED STRUCTURAL SHAPES.
12. ALL FRP PLATES TO BE FIBERPLATE MOLDED FRP PLATE.
13. ALL FRP PANELS TO BE FIBERPLATE CLADDING PANEL.
14. EACH FRP PANEL TO BE IDENTIFIED WITH LARR#25536 AND FIBERGRATE COMPOSITE STRUCTURAL LABEL.
15. FRP MATERIAL TO BE CLASSIFIED AS CC1 OR BETTER, AND HAVE MAXIMUM FLAME SPREAD OF 50.
16. ALL DESIGN AND CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH LOS ANGELES RESEARCH REPORT RR25536, DATED FEBRUARY 1, 2016.
17. SPECIAL INSPECTIONS MUST BE PROVIDED FOR ALL FRP INSTALLMENTS. SEE SPECIAL INSPECTION SECTION, THIS SHEET.

RATIO OF EDGE DISTANCE TO FRP FASTENER DIAMETER		
	RANGE	RECOMMENDED
EDGE DISTANCE - CL* BOLT TO END	2.0-4.0	3.0
EDGE DISTANCE - CL* BOLT TO SIDE	1.5-3.5	2.5
BOLT PITCH - CL* TO CL*	4.0-5.0	5.0

WOOD CONSTRUCTION NOTES:

1. ALL EXISTING WOOD SHAPES ARE ASSUMED TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN.
2. ALL PROPOSED WOOD SHAPES ARE TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN. U.N.O.
3. ALL EXISTING AND PROPOSED GLUED LAMINATED TIMBERS ARE TO BE 24F-1.8C DOUGLAS FIR BALANCED WITH A REFERENCE DESIGN BENDING VALUE OF 2400 PSI MIN. U.N.O.

MASONRY CONSTRUCTION NOTES:

1. ALL BRICK TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
 - FOR INTERIOR/ABOVE GRADE APPLICATIONS TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 100 PSI SHALL BE USED. FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 133 PSI.
 - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. ALL CMU TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
 - FOR INTERIOR/ABOVE GRADE APPLICATIONS, TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 64 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 158 PSI FOR FULLY GROUTED BLOCKS.
 - FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 84 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 163 PSI FOR FULLY GROUTED BLOCKS.
 - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

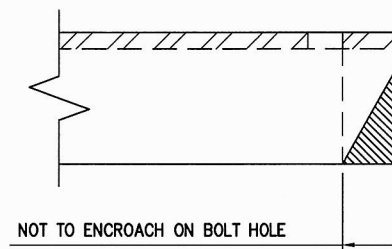
TOWER PLUMB & TENSION NOTES:

1. PLUMB AND TENSION TOWER UPON COMPLETION OF STRUCTURAL MODIFICATIONS DETAILED IN THESE DRAWINGS.
2. RETENSIONING OF EXISTING GUY WIRES SHALL BE PERFORMED AT A TIME WHEN THE WIND VELOCITY IS LESS THAN 10 MPH AT GROUND LEVEL AND WITH NO ICE ON THE STRUCTURE AND GUY WIRES.
3. PLUMB THE TOWER WHILE RETENSIONING THE EXISTING GUY WIRES. THE HORIZONTAL DISTANCE BETWEEN THE VERTICAL CENTERLINES AT ANY TWO ELEVATIONS SHALL NOT EXCEED 0.25% OF THE VERTICAL DISTANCE BETWEEN TWO ELEVATIONS FOR LATTICED STRUCTURES.
4. THE TWIST BETWEEN ANY TWO ELEVATIONS THROUGHOUT THE HEIGHT OF A LATTICE STRUCTURE SHALL NOT EXCEED 0.5 DEGREES IN 10 FEET. THE MAXIMUM TWIST OVER THE LATTICE STRUCTURE HEIGHT SHALL NOT EXCEED 5 DEGREES.

SPECIAL INSPECTIONS NOTES:

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER AND APPROVED BY THE JURISDICTION, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH THE THE GOVERNING BUILDING CODE, APPLICABLE SECTION(S) AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
 - a. STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELDS ONLY).
 - b. HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 AND/OR A490 BOLTS) TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD.
 - c. MECHANICAL AND EPOXYED ANCHORAGES.
 - d. FIBER REINFORCED POLYMER.
 - THE SPECIAL INSPECTOR MUST VERIFY THAT THE FRP MATERIAL SPECIFIED ON THE APPROVED DESIGN DOCUMENTS IS BEING INSTALLED.
 - THE SPECIAL INSPECTOR MUST VERIFY THAT ALL CUT EDGES AND DRILLED HOLES ARE PROPERLY SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
 - THE SPECIAL INSPECTOR MUST VERIFY THAT THE STRUCTURE IS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN DOCUMENTS.
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT THE SPECIAL INSPECTIONS.

MAXIMUM ALLOWABLE ANGLE CLIP



INFINIGY

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793



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Designed:	BDA	Date:	06/06/18
Checked:	NRO	Date:	06/06/18

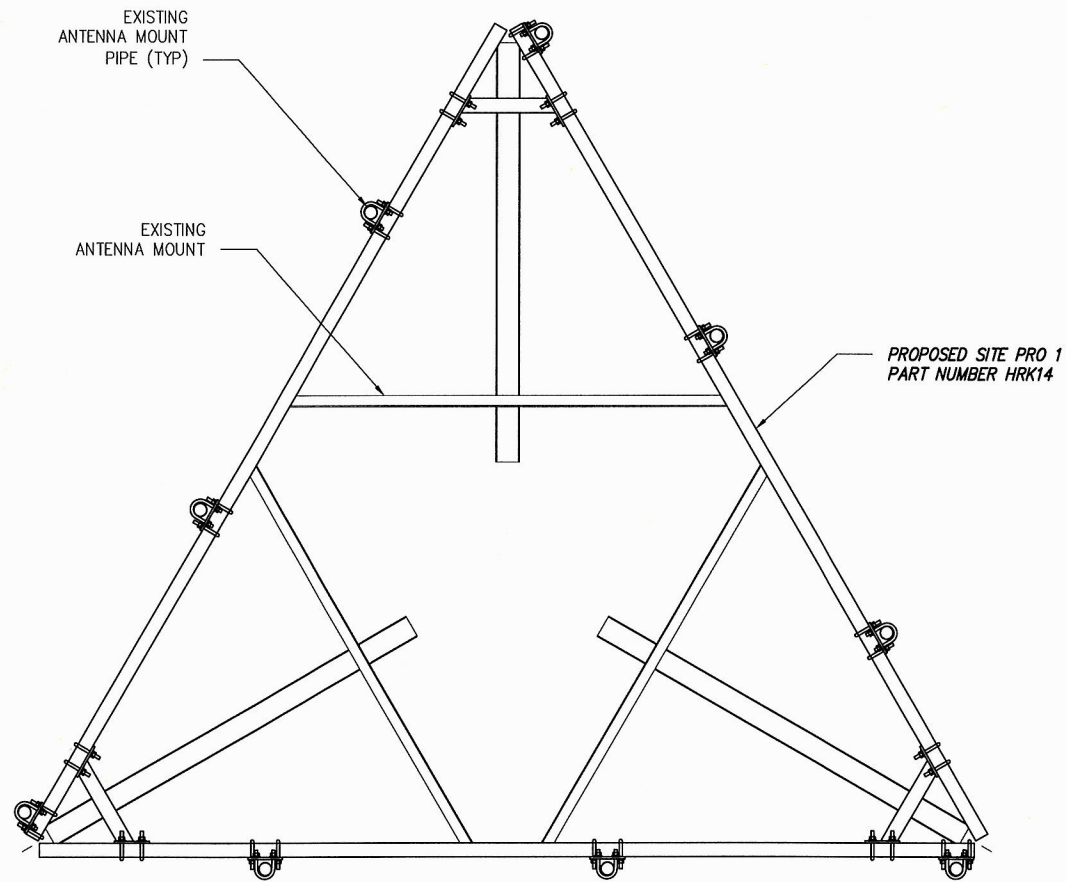
Project Number: 555-022
Project Title: FA# 10071137 CT5266 MONROE NORTHEAST 1428 MONROE TURNPIKE MONROE, CT 06468

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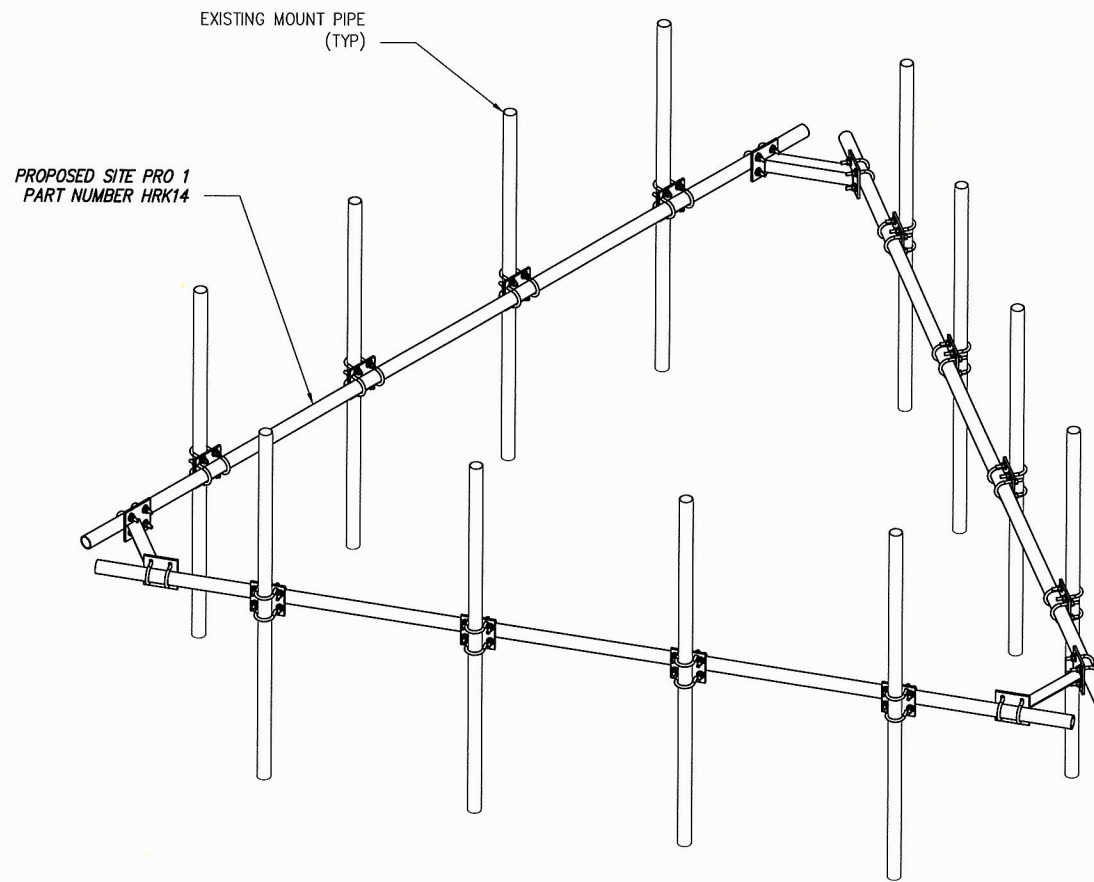
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GENERAL NOTES

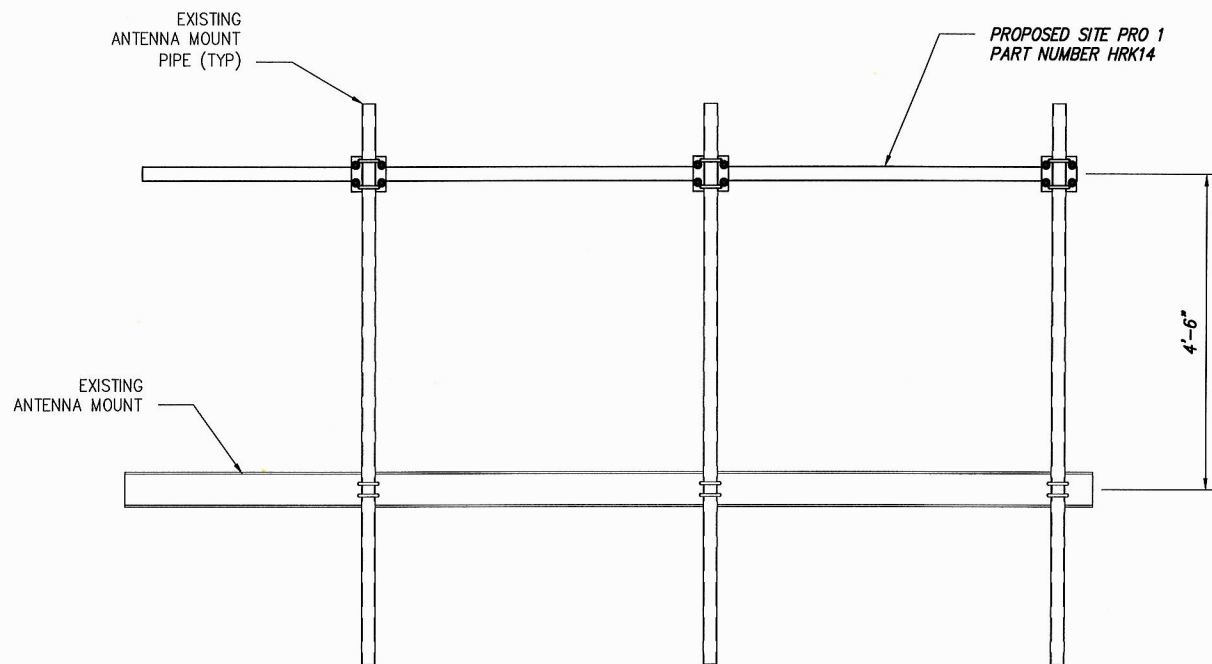
Drawing Number: S1



1 PLAN VIEW
SCALE: NOT TO SCALE



3 TYPICAL SITE PRO 1 PART # HRK14
SCALE: NOT TO SCALE



2 ELEVATION VIEW
SCALE: NOT TO SCALE

INFINIGY
1033 Waterlily Shaker Rd
Albany, NY 12205
Office # (518) 890-0780
Fax # (518) 890-0783



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Drawing Title:
MOUNT MOD

Drawing Number:
S2



Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CT5266

FA#: 10071137

Monroe Northeast
1428 Monroe Turnpike
Monroe, CT 06468

March 26, 2018

Centerline Communications Project Number: 950012-075

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	6.86 %



March 26, 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: **CT5266 – Monroe Northeast**

Centerline Communications, LLC (“Centerline”) was directed to analyze the proposed AT&T facility located at **1428 Monroe Turnpike, Monroe, 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 **1428 Monroe Turnpike, Monroe, 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)
LTE	700 MHz	2	40
LTE	1900 MHz (PCS)	4	40
LTE	2300 MHz (WCS)	4	30
UMTS	850 MHz	2	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 P65-16-XLH-RR	160
A	2	Quintel QS66512-2	160
A	3	Powerwave 7770	160
B	1	Powerwave P65-16-XLH-RR	160
B	2	Quintel QS66512-2	160
B	3	Powerwave 7770	160
C	1	Powerwave P65-16-XLH-RR	160
C	2	Quintel QS66512-2	160
C	3	Powerwave 7770	160

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 P65-16-XLH-RR	700 MHz	12.7	2	80	1,489.67	0.48
Antenna A2	Quintel QS66512-2	1900 MHz (PCS) / 2300 MHz (WCS)	13.85 / 14.85	8	280	7,548.48	1.14
Antenna A3	Powerwave 7770	850 MHz	11.4	2	60	828.23	0.22
Sector A Composite MPE%							1.85
Antenna B1	Powerwave P65-16-XLH-RR	700 MHz	12.7	2	80	1,489.67	0.48
Antenna B2	Quintel QS66512-2	1900 MHz (PCS) / 2300 MHz (WCS)	13.85 / 14.85	8	280	7,548.48	1.14
Antenna B3	Powerwave 7770	850 MHz	11.4	2	60	828.23	0.22
Sector B Composite MPE%							1.85
Antenna C1	Powerwave P65-16-XLH-RR	700 MHz	12.7	2	80	1,489.67	0.48
Antenna C2	Quintel QS66512-2	1900 MHz (PCS) / 2300 MHz (WCS)	13.85 / 14.85	8	280	7,548.48	1.14
Antenna C3	Powerwave 7770	850 MHz	11.4	2	60	828.23	0.22
Sector C Composite MPE%							1.85

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	1.85 %
T-Mobile	0.50 %
Sprint	0.36 %
Verizon Wireless	3.77 %
Town of Monroe	0.38 %
Site Total MPE %:	6.86 %

Table 4: All Carrier MPE Contributions

AT&T Sector A Total:	1.85 %
AT&T Sector B Total:	1.85 %
AT&T Sector C Total:	1.85 %
Site Total:	6.86 %

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 (Per Sector)	# 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 700 MHz LTE	2	744.83	160	2.26	700 MHz	467	0.48%
AT&T 1900 MHz (PCS) LTE	4	970.64	160	5.89	1900 MHz (PCS)	1000	0.59%
AT&T 2300 MHz (WCS) LTE	4	916.48	160	5.56	2300 MHz (WCS)	1000	0.56%
AT&T 850 MHz UMTS	2	414.12	160	1.26	850 MHz	567	0.22%
						Total:	1.85%

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:	1.85 %
Sector B:	1.85 %
Sector C:	1.85 %
AT&T Maximum Total (per sector):	1.85 %
Site Total:	6.86 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **6.86 %** 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 printed name.

Scott Heffernan

RF Engineering Director

Centerline Communications, LLC

95 Ryan Drive, Suite 1

Raynham, MA 02767

1428 MONROE TPKE

Location 1428 MONROE TPKE

Map/Lot 145/ 024/ 01/ /

Acct# 14502401

Owner KIMBALL JILL M

Assessment \$496,800

Appraisal \$709,600

PID 16577

Building Count 1

Survey 3171

Affordable

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2014	\$536,800	\$172,800	\$709,600

Assessment			
Valuation Year	Improvements	Land	Total
2014	\$375,800	\$121,000	\$496,800

Owner of Record

Owner KIMBALL JILL M
Co-Owner
Address 1428 MONROE TPKE
MONROE, CT 06468

Sale Price \$0
Certificate
Book & Page 1904/0251
Sale Date 12/29/2015

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
KIMBALL JILL M	\$0		1904/0251	12/29/2015
STONE CASTLE INVESTMENTS LLC	\$0	1	1789/ 323	07/13/2012
SISTERS OF THE HOLY FAMILY OF NAZARETH U	\$0	2	1603/ 14	07/10/2009

Building Information

Building 1 : Section 1

Year Built: 1936
Living Area: 5,638

Building Attributes	
Field	Description

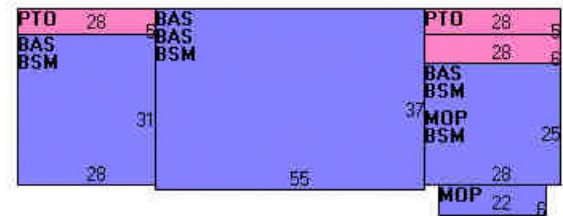
Style	Colonial
Model	Residential
Stories:	2
Occupancy	1
Exterior Wall 1	Stone
Heat Fuel	Oil
Heat Type:	Central A/C
AC Type:	Central AC
Total Bedrooms:	6
Total Bthrms:	4
Total Half Baths:	1
Total Rooms:	14
Fireplaces	5
Basement Gar.	0
Basement	Full
In Law Apt	0

Building Photo



(<http://images.vgsi.com/photos/MonroeCTPhotos//\00\00\66\11>).

Building Layout



FBM[2035]

(<http://images.vgsi.com/photos/MonroeCTPhotos//Sketches/165>).

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	5,638	5,638
BSM	Basement	3,771	0
FBM	Finished Basement	2,035	0
MOP	Masonry Open Porch	300	0
PTO	Patio	280	0
		12,024	5,638

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 101
Description Single Family
Zone RF2
Neighborhood
Alt Land Approved No
Category

Land Line Valuation

Size (Acres) 7.21
Appraised Value \$172,800

Outbuildings

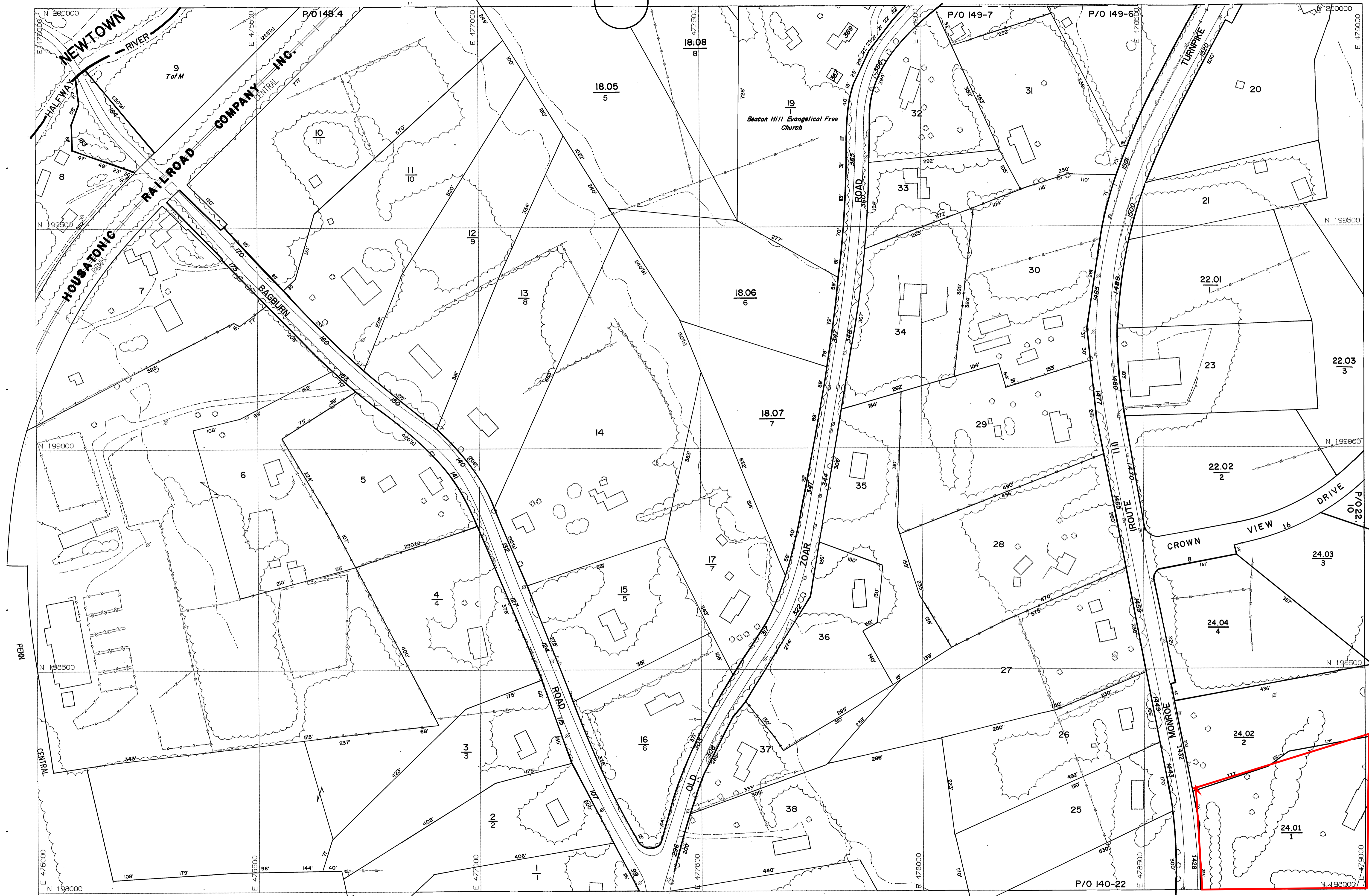
Outbuildings	<u>Legend</u>
No Data for Outbuildings	

Valuation History

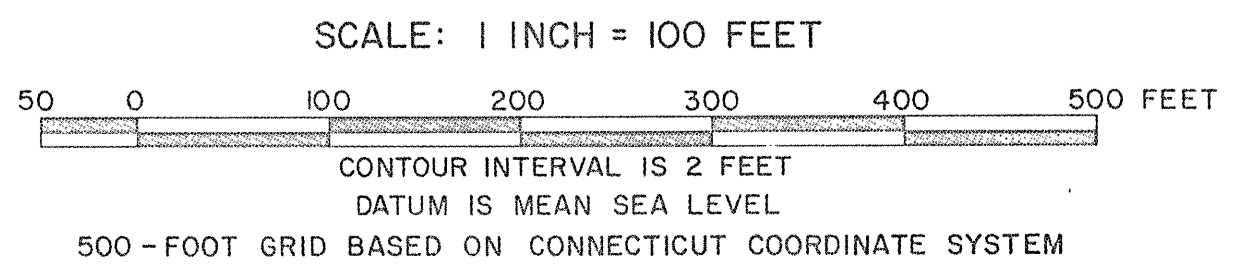
Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$435,300	\$172,800	\$608,100
2015	\$435,300	\$173,300	\$608,600

Assessment			
Valuation Year	Improvements	Land	Total
2017	\$304,700	\$121,000	\$425,700
2015	\$304,700	\$121,300	\$426,000

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COMPILED AND CONTROLLED BY JAMES W. SEWALL COMPANY, OLD TOWN, MAINE
 FROM PHOTOGRAMMETRIC METHODS
 FROM 1" = 750' AERIAL PHOTOGRAPHS DATED 4-22-84
 REVISED RLASKY 1/17/2013, 10/28/2015



TOWN OF MONROE
 MONROE, CONNECTICUT

149	150
144	145
139	140

GENERAL CONSTRUCTION NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
GENERAL CONTRACTOR
SUBCONTRACTOR - CONTRACTOR (CONSTRUCTION)
OWNER - AT&T
- ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
- GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH WORK.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE SPACE FOR APPROVAL BY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
- GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINE.
- ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
- SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. SUBCONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
- WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. SUBCONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND SUBCONTRACTORS TO THE SITE AND/OR BUILDING.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
- THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
- THE GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OT 2-A:10-B:C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT/ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, D) TRENCHING & EXCAVATION.

- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ARCHITECT/ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
- ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
- ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
- SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION. THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
- OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
- NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION OF AT&T MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING." IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
- SUBCONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF SUBCONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
- SUBCONTRACTOR SHALL REMOVED ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- NO WHITE STROBE LIGHTS ARE PERMITTED. ANY REQUIRED LIGHTING MUST MEET FAA STANDARDS AND REQUIREMENTS.
- ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
- NO SIGNIFICANT NOISE, SMOKE, DUST OR VIBRATIONS WILL RESULT FROM THIS FACILITY. (DISREGARD THIS NOTE IF THIS SITE HAS A GENERATOR)
- NO ADDITIONAL PARKING TO BE PROPOSED. EXISTING ACCESS AND PARKING TO REMAIN, UNLESS NOTED OTHERWISE.
- NO LANDSCAPING IS PROPOSED AT THIS SITE, UNLESS NOTED OTHERWISE.

ELECTRICAL NOTES:

- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY 'CONSTRUCTION MANAGER' AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE 'CONSTRUCTION MANAGER' HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
- ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIP., LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:
C - NATIONAL FIRE CODES
A. UL - UNDERWRITERS LABORATORIES
B. NEC - NATIONAL ELECTRICAL CODE
C. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
D. OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
E. SBC - STANDARD BUILDING CODE

- DO NOT SCALE ELECTRICAL DRAWINGS; REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH CONSTRUCTION MANAGER ANY SIZES AND LOCATIONS WHEN NEEDED.
- EXISTING SERVICES: CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
- CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS, AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.
- THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.
- CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS, SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.
- MINIMUM WIRE SIZE SHALL BE #12 AWC, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTY BY AT&T.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION & APPROVAL BY CONSTRUCTION MANAGER.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
- THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
- ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
- PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
- DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION, BACKFILLING AND COMPACTION. REFER TO 'FOUNDATION, EXCAVATION, AND BACKFILLING NOTES.'
- MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA, AND IECE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURERS CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES, AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
- ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE 'CONSTRUCTION MANAGER' UPON FINAL ACCEPTANCE.
- THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MADE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
- ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.
- RACEWAYS: CONDUIT SHALL BE SCHEDULE 40 PVC MEETING OR EXCEEDING NEMA TC2 - 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADING RIGID CONDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'GOLD CALV.'
- SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
- CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, 800 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWC. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWC.
- CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWC AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWC AND LARGER.
- SERVICES: 240/120V, SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY. OWNER OR OWNERS AGENT WILL APPLY FOR POWER.

- TELEPHONE SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
- ELECTRICAL AND TELCO RACEWAYS TO BE BURIED A MINIMUM OF 2' DEPTH.
- CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTION TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOMM."
- ALL BOLTS SHALL BE STAINLESS STEEL

GROUNDING NOTES:

- COMPRESSION CONNECTIONS (2), 2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUNDING BAR. ROUTE CONDUCTORS TO BURIED GROUNDING RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
- EC SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P," "A," "N," "I") WITH 1" LETTERS.
- ALL HARDWARE 18-8 STAINLESS STEEL, INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER.
- FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
- NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUNDING BAR AND BOLTED ON THE BACK SIDE.
- NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
- WHEN THE SCOPE OF WORK REQUIRES THE ADDITION OF A GROUNDING BAR TO AN EXISTING TOWER, THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BAR TO THE TOWER.
- ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.

FOUNDATION, EXCAVATION, & BACKFILL NOTES:

- ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL.
- ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL, AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.
- CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF INADEQUATE BEARING CAPACITY IS REACHED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.
- ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SLURRY, FREE FROM CLODS OR LARGE STONES OVER 2 1/2 MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.
- ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6" THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557
- NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HOURS PRIOR TO BACK FILLING.
- FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.
- NEWLY GRADED SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR-3401 AS MANUFACTURED BY "CONSTRUCTION MATERIAL 1-800-239-3841" OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICHEVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. FDOT TYPE NO.57 FOR FENCED COMPOUND; FDOT TYPE NO. 67 FOR ACCESS DRIVE AREA.
- IN ALL AREAS TO RECEIVE FILL, REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH EXISTING/PREPARED SOIL SURFACE.

INFINIGY
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTICUT
JUN 25 2018
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Prepared For: **CENTERLINE COMMUNICATIONS**

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Drawing Scale: **AS NOTED**

Date: **06/15/18**

Drawing Title: **GENERAL NOTES**

Drawing Number: **C1**

10. WHEN SUBGRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RE-COMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OR FILLS.
11. IN AREAS WHICH EXISTING GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.
12. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED WITH THE CONDITION THAT ANY UNFAVORABLE AMOUNTS OF ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ANY ADDITIONAL GRAVEL RESURFACING MATERIAL AS NEEDED TO PROVIDE A FULL DEPTH COMPACTED SURFACE THROUGHOUT SITE.
13. GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUBGRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE.
14. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING 'MATTS' OR OTHER SUITABLE PROTECTION DESIGNED TO SPREAD EQUIPMENT LOADS AS MAY BE NECESSARY. REPAIR ANY DAMAGE TO EXISTING GRAVEL SURFACING OR SUB GRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTORS OPERATIONS.
15. DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.
16. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.

ENVIRONMENTAL NOTES:

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.
2. CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS AND SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
6. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
7. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
8. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
9. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.

CONCRETE MASONRY NOTES:

1. CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90, GRADE N-1, (F'M=1,500 PSI), MEDIUM WEIGHT (115).
2. MORTAR SHALL BE TYPE "S" (MINIMUM 1,800 PSI AT 28 DAYS).
3. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS.
4. ALL CELLS CONTAINING REINFORCING STEEL OR EMBEDDED ITEMS AND ALL CELLS IN RETAINING WALLS AND WALLS BELOW GRADE SHALL BE SOLID GROUTED.
5. ALL HORIZONTAL REINFORCING STEEL SHALL BE PLACED IN BOND BEAM OR LINTEL BEAM UNITS.
6. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1-1/2" BELOW TOP OF THE UPPERMOST UNIT.
7. ALL BOND BEAM BLOCK SHALL BE "DEEP CUT" UNITS.
8. PROVIDE INSPECTION AND CLEAN-OUT HOLES AT BASE OF VERTICAL CELLS HAVING GROUT LIFTS IN EXCESS OF 4'-0" OF HEIGHT.
9. ALL GROUT SHALL BE CONSOLIDATED WITH A MECHANICAL VIBRATOR.
10. CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
11. REINFORCING BARS - SEE NOTES UNDER "REINFORCING STEEL" FOR REQUIREMENTS.

31. PROVIDE ONE BAR DIAMETER (A MINIMUM OF 1/2") GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.
32. LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 4 FEET.
33. LIFT GROUTED CONSTRUCTION MAY BE USED IN CONFORMANCE WITH PROJECT SPECIFICATIONS AND SECTION 2104.6.1 OF CURRENT BUILDING CODE.
34. ALL CELLS IN CONCRETE BLOCKS SHALL BE FILLED SOLID WITH GROUT, EXCEPT AS NOTED IN THE DRAWINGS OR SPECIFICATIONS.
35. CELLS SHALL BE IN VERTICAL ALIGNMENT, DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.
36. REFER TO ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN AND JOINT TYPE.
37. SAND SHALL BE CLEAN, SHARP AND WELL GRADED, FREE FROM INJURIOUS AMOUNTS OF DUST, LUMPS, SHALE, ALKAU OR ORGANIC MATERIAL.
38. BRICK SHALL CONFORM TO ASTM C-62 AND SHALL BE GRADE MW OR BETTER.

STRUCTURAL CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI-301-10
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH $f'_c=2,500$ PSI AT 28 DAYS UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST EARTH	3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 AND LARGER	2 IN.
#5 AND SMALLER & WWF	1-1/2 IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER, NOR CAST AGAINST THE GROUND:	
SLAB AND WALL	3/4 IN.
BEAMS AND COLUMNS	1-1/2 IN.

5. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE U.N.O. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLD, DOWEL OR ROD AND SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS.
7. USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER ICBO & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. STEEL SECTIONS SHALL BE IN ACCORDANCE WITH ASTM AS INDICATED BELOW:
W-SHAPES: ASTM A992, 50 KSI
ANGLES, BARS CHANNELS: ASTM A36, 36 KSI
HSS SECTIONS: ASTM 500, 46 KSI
PIPE SECTIONS: ASTM A53-E, 35 KSI
2. ALL EXTERIOR EXPOSED STEEL AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.
3. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION." PAINTED SURFACES SHALL BE TOUCHED UP.
4. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE 3/4" Ø CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" Ø ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
6. FIELD MODIFICATIONS ARE TO BE COATED WITH ZINC ENRICHED PAINT.

SITE WORK & DRAINAGE:

PART 1 - GENERAL
CLEARING, GRUBBING, STRIPPING, EROSION CONTROL, SURVEY, LAYOUT, SUBGRADE PREPARATION AND FINISH GRADING AS REQUIRED TO COMPLETE THE PROPOSED WORK SHOWN IN THESE PLANS.

1.1 REFERENCES:

- A. DOT (STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR WAY CONSTRUCTION - CURRENT EDITION)
- B. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)
- C. OSHA (OCCUPATION SAFETY AND HEALTH ADMINISTRATION)

1.2 INSPECTION AND TESTING:

- A. FIELD TESTING OF EARTHWORK COMPACTION AND CONCRETE CYLINDERS
- B. ALL WORK SHALL BE INSPECTED AND RELEASED BY THE GENERAL CONTRACTOR WHO SHALL CARRY OUT THE GENERAL INSPECTION OF THE WORK WITH SPECIFIC CONCERN TO PROPER PERFORMANCE OF THE WORK AS SPECIFIED AND/OR CALLED FOR ON THE DRAWINGS. IT IS THE SUBCONTRACTOR'S RESPONSIBILITY TO REQUEST TIMELY INSPECTIONS PRIOR TO PROCEEDING WITH FURTHER WORK THAT WOULD MAKE PARTS OF WORK INACCESSIBLE OR DIFFICULT TO INSPECT.

1.3 SITE MAINTENANCE AND PROTECTION:

- A. PROVIDE ALL NECESSARY JOB SITE MAINTENANCE FROM COMMENCEMENT OF WORK UNTIL COMPLETION OF THE SUBCONTRACT.
- B. AVOID DAMAGE TO THE SITE AND TO EXISTING FACILITIES, STRUCTURES, TREES, AND SHRUBS DESIGNATED TO REMAIN. TAKE PROTECTIVE MEASURES TO PREVENT EXISTING FACILITIES THAT ARE NOT DESIGNATED FOR REMOVAL FROM BEING DAMAGED BY THE WORK.
- C. KEEP SITE FREE OF ALL PONDING WATER.
- D. PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH STATE DOT AND EPA REQUIREMENTS.
- E. PROVIDE AND MAINTAIN ALL TEMPORARY FENCING, BARRICADES, WARNING SIGNALS AND SIMILAR DEVICES NECESSARY TO PROTECT AGAINST THEFT FROM PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION. REMOVE ALL SUCH DEVICES UPON COMPLETION OF THE WORK.
- F. EXISTING UTILITIES: DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE ENGINEER, AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.

PROVIDE A MINIMUM 48-HOUR NOTICE TO THE ENGINEER AND RECEIVE WRITTEN NOTICE TO PROCEED BEFORE INTERRUPTING ANY UTILITY SERVICE.

PART 2 - PRODUCTS

- 2.1 SUITABLE BACKFILL: ASTM D2321 (CLASS I, II, III, OR IVA) FREE FROM FROZEN LUMPS, REFUSE, STONES OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
- 2.2 NON-POROUS GRANULAR EMBANKMENT AND BACKFILL: ASTM D2321 (CLASS III, IVA OR IVB) COARSE AGGREGATE. FREE FROM FROZEN LUMPS, REFUSE, STONES, OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
- 2.3 POROUS GRANULAR EMBANKMENT AND BACKFILL: ASTM D2321 (CLASS IA, IB, OR II) COARSE AGGREGATE FREE FROM FROZEN LUMPS, REFUSE, STONES, OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
- 2.4 SELECT STRUCTURAL FILL: GRANULAR FILL MATERIAL MEETING THE REQUIREMENTS OF ASTM E850-95. FOR USE AROUND AND UNDER STRUCTURES WHERE STRUCTURAL FILL MATERIAL ARE REQUIRED.
- 2.5 GRANULAR BEDDING AND TRENCH BACKFILL: WELL-GRADED SAND MEETING THE GRADATION REQUIREMENTS OF ASTM D2487 (SE OR SW-SM).
- 2.6 COARSE AGGREGATE FOR ACCESS ROAD SUB BASE COURSE SHALL CONFORM TO ASTM D2940.
- 2.7 UNSUITABLE MATERIAL: AND MODERATELY PLASTIC SILTS AND CLAYS (LL>45). MATERIAL CONTAINING REFUSE, FROZEN LUMPS, DEMOLISHED BITUMINOUS MATERIAL, VEGETATIVE MATTER, WOOD, STONES IN EXCESS OF 3 INCHES IN ANY DIMENSION, AND DEBRIS AS DETERMINED BY THE CONSTRUCTION MANAGER. TYPICAL THESE WILL BE SOILS CLASSIFIED BY ASTM AS PT, MH, CH, OH, ML, AND OL.
- 2.8 GEOTEXTILE FABRIC: MIRAFI 500X OR APPROVED EQUAL.
- 2.9 PLASTIC MARKING TAPE: SHALL BE ACID AND ALKALI RESISTANT POLYETHYLENE FILM SPECIFICALLY MANUFACTURED FOR MARKING AND LOCATING UNDERGROUND UTILITIES, 6 INCHES WIDE WITH A MINIMUM THICKNESS OF 0.004 INCH. TAPE SHALL HAVE MINIMUM STRENGTH OF 1500 PSI IN BOTH DIRECTIONS AND MANUFACTURED WITH INTEGRAL CONDUCTORS, FOIL BACKING OR OTHER MEANS TO ENABLE DETECTION BY A METAL DETECTOR WHEN BURIED UP TO 3 FEET DEEP. THE METALLIC CORE OF THE TAPE SHALL BE ENCASED IN A PROTECTIVE JACKET OR PROVIDED WITH OTHER MEANS TO PROTECT IT FROM CORROSION. TAPE COLOR SHALL BE RED FOR ELECTRIC UTILITIES AND ORANGE FOR TELECOMMUNICATION UTILITIES.

PART 2 - EXECUTION

3.1 GENERAL:

- A. BEFORE STARTING GENERAL SITE PREPARATION ACTIVITIES, INSTALL EROSION AND SEDIMENT CONTROL MEASURES. THE WORK AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUCH A CONDITION THAT IN THE EVENT OF RAIN THE SITE WILL BE DRAINED AT ANY TIME.
- B. BEFORE ALL SURVEY, LAYOUT, STAKING, AND MARKING, ESTABLISH AND MAINTAIN ALL LINES, GRADES, ELEVATIONS AND BENCHMARKS NEEDED FOR EXECUTION OF THE WORK.
- C. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE. REMOVE TREES, BRUSH, STUMPS, RUBBISH AND OTHER DEBRIS AND VEGETATION RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE SITE AREA TO BE CLEARED.
 1. REMOVE THE FOLLOWING MATERIALS TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE ORIGINAL GROUND SURFACE: ROOTS, STUMPS, AND OTHER DEBRIS, BRUSH, AND REFUSE EMBEDDED IN OR PROTRUDING THROUGH THE GROUND SURFACE, RAKE, DISK OR PLOW THE AREA TO A DEPTH OF NO LESS THAN 6 INCHES, AND REMOVE TO A DEPTH OF 12 INCHES ALL ROOTS AND OTHER DEBRIS THEREBY EXPOSED.
 2. REMOVE TOPSOIL MATERIAL COMPLETELY FROM THE SURFACE UNTIL THE SOIL NO LONGER MEETS THE DEFINITION OF TOPSOIL. AVOID MIXING TOPSOIL WITH SUBSOIL OR OTHER UNDESIRABLE MATERIALS.
 3. EXCEPT WHERE EXCAVATION TO GREATER DEPTH IS INDICATED, FILL DEPRESSIONS RESULTING FROM CLEARING, GRUBBING, AND DEMOLITION WORK COMPLETELY WITH SUITABLE FILL.
 - D. REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING WILL NOT BE PERMITTED.

- E. PRIOR TO EXCAVATING, THOROUGHLY EXAMINE THE AREA TO BE EXCAVATED AND/OR TRENCHED TO VERIFY THE LOCATIONS OF FEATURES INDICATED ON THE DRAWINGS AND TO ASCERTAIN THE EXISTENCE AND LOCATION OF ANY STRUCTURE, UNDERGROUND STRUCTURE, OR OTHER ITEM NOT SHOWN THAT MIGHT INTERFERE WITH THE PROPOSED CONSTRUCTION. NOTIFY THE CONSTRUCTION MANAGER OF ANY OBSTRUCTIONS THAT WILL PREVENT ACCOMPLISHMENT OF THE WORK AS INDICATED ON THE DRAWINGS.
- F. SEPARATE AND STOCK PILE ALL EXCAVATED MATERIALS SUITABLE FOR BACKFILL. ALL EXCESS EXCAVATED AND UNSUITABLE MATERIALS SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.

3.2 BACKFILL:

- A. AS SOON AS PRACTICAL, AFTER COMPLETING CONSTRUCTION OF THE RELATED STRUCTURE, INCLUDING EXPIRATION OF THE SPECIFIED MINIMUM CURING PERIOD FOR CAST-IN-PLACE CONCRETE, BACKFILL THE EXCAVATION WITH APPROVED MATERIAL TO RESTORE THE REQUIRED FINISHED GRADE.
- B. PRIOR TO PLACING BACKFILL AROUND STRUCTURES, ALL FORMS SHALL BE REMOVED AND THE EXCAVATION CLEANED OF ALL TRASH, DEBRIS, AND UNSUITABLE MATERIALS.
- C. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL WHEN REQUIRED IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 8-INCHES LOOSE THICKNESS AND COMPACTED. WHERE HAND OPERATED COMPACTORS ARE USED, THE FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 4 INCHES IN LOOSE DEPTH AND COMPACTED.
- D. WHENEVER THE DENSITY TESTING INDICATES THAT THE CONTRACTOR HAS NOT OBTAINED THE SPECIFIED DENSITY, THE SUCCEEDING LAYER SHALL NOT BE PLACED UNTIL THE SPECIFICATION REQUIREMENTS ARE MET UNLESS OTHERWISE AUTHORIZED BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL TAKE WHATEVER APPROPRIATE ACTION IS NECESSARY, SUCH AS DISKING AND DRYING, ADDING WATER, OR INCREASING THE COMPACTION EFFORT TO MEET THE MINIMUM COMPACTION REQUIREMENTS.
- E. THOROUGHLY COMPACT EACH LAYER OF BACKFILL TO A MINIMUM 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.3 TRENCH EXCAVATION:

- A. UTILITY TRENCHES SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE GENERAL CONTRACTOR. PROVIDE SHORING, SHEETING AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF THE TRENCH WALLS.
- B. EXTEND THE TRENCH WIDTH A MINIMUM OF 6 INCHES BEYOND THE OUTSIDE EDGE OF THE OUTERMOST CONDUIT.
- C. WHEN SOFT YIELDING, OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, BACKFILL AT THE REQUIRED TRENCH TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE REQUIRED ELEVATION AND BACKFILL WITH GRANULAR BEDDING MATERIAL.

3.4 TRENCH BACKFILL:

- A. PROVIDE GRANULAR BEDDING MATERIAL IN ACCORDANCE WITH THE DRAWINGS AND THE UTILITY REQUIREMENTS.
- B. NOTIFY THE GENERAL CONTRACTOR 24 HOURS IN ADVANCE OF BACKFILLING.
- C. CONDUCT UTILITY CHECK TESTS BEFORE BACKFILLING. BACKFILL AND COMPACT TRENCH BEFORE ACCEPTANCE TESTING.
- D. PLACE GRANULAR TRENCH BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 6-INCH UNCOMPACTED LIFTS UNTIL 12 INCHES OVER THE CONDUITS. SOLIDLY RAM AND TAMP BACKFILL INTO SPACE AROUND CONDUITS.
- E. PROTECT CONDUIT FROM LATERAL MOVEMENT, IMPACT DAMAGE, OR UNBALANCED LOADING.
- F. ABOVE THE CONDUIT EMBEDMENT ZONE, PLACE AND COMPACT SATISFACTORY BACKFILL MATERIAL IN 8-INCH MAXIMUM LOOSE THICKNESS LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE GRADE.
- G. COMPACT FINAL TRENCH BACKFILL TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL IMMEDIATELY ADJACENT TO THE TRENCH BUT NO LESS THAN A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.5 FINISH GRADING:

- A. PERFORM ALL GRADING TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND SMOOTH, EVEN SURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION. GRADING SHALL BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY AND STRUCTURES.
- B. UTILIZE SATISFACTORY FILL MATERIAL RESULTING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILLS, EMBANKMENTS AND FOR REPLACEMENT OF REMOVED UNSUITABLE MATERIALS.
- C. ACHIEVE FINISHED GRADE BY PLACING A MINIMUM OF 4 INCHES OF 1/2" - 3/4" CRUSHED STONE ON TOP SOIL STABILIZER FABRIC.
- D. REPAIR ALL ACCESS ROADS AND SURROUNDING AREAS USED DURING THE COURSE OF THIS WORK TO THEIR ORIGINAL CONDITION.

3.7 ASPHALT PAVING ROAD:

- A. DIVISION 600 - KDOT FLEXIBLE PAVEMENT. (UPDATE PER LOCAL DOT)
- B. SECTION 403 - MODOT ASPHALT CONCRETE PAVEMENT.

INFINIGY

1033 Waterlily Shaker Rd
Albany, NY 12205
Office # (518) 680-0790
Fax # (518) 680-0793



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	Submital / Revision	App'd	Date

Drawn: BMM Date: 03/20/18
Designed: ASW Date: 03/20/18
Checked: ASW Date: 03/20/18

Project Number: 555-022

Project Title: FA# 10071137
CT5266

MONROE NORTHEAST

1428 MONROE TURNPIKE
MONROE, CT 06468

Prepared For:



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Date: 08/15/18

Drawing Title: **GENERAL NOTES**

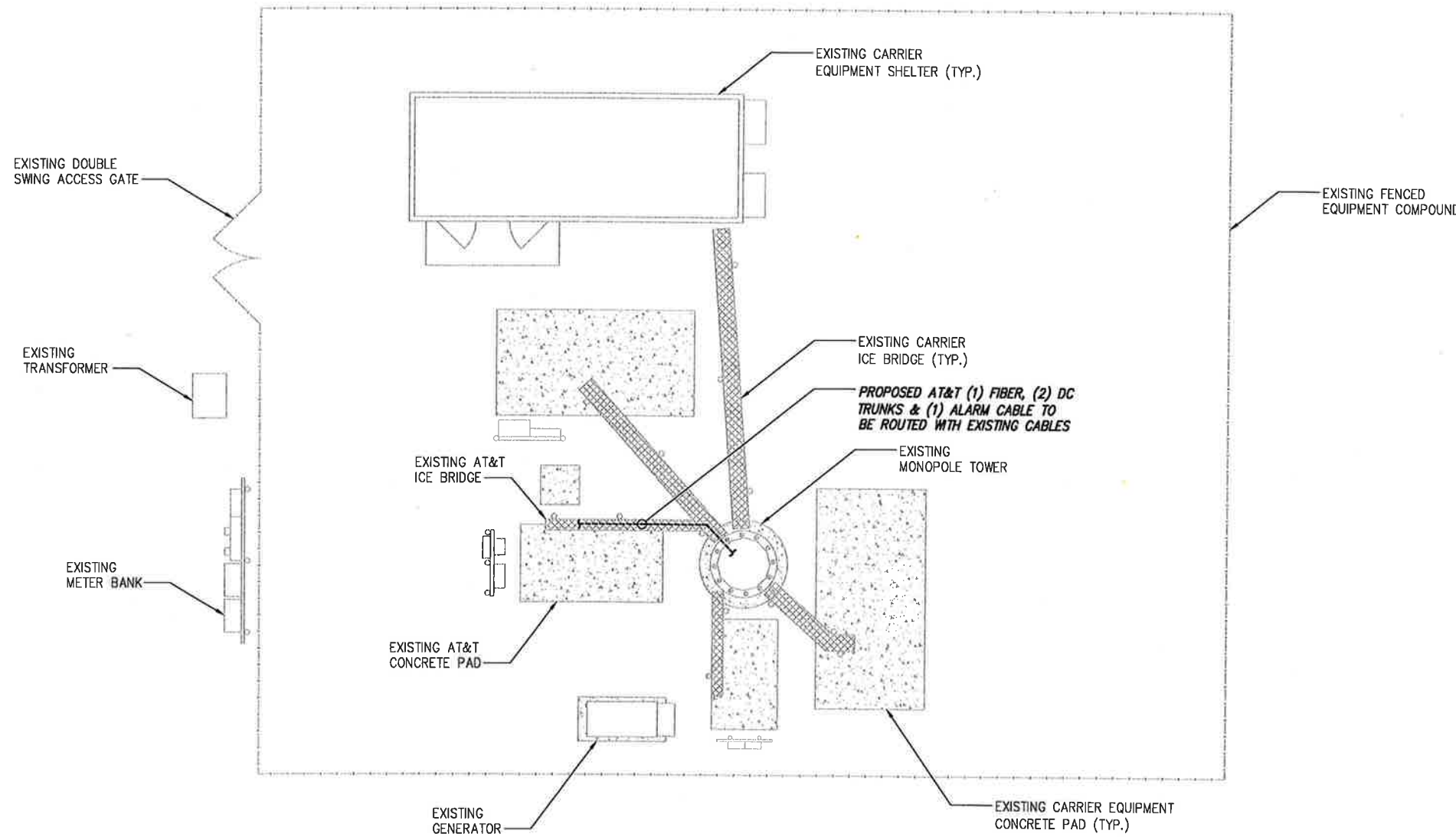
Drawing Number: **G2**

NOTE:

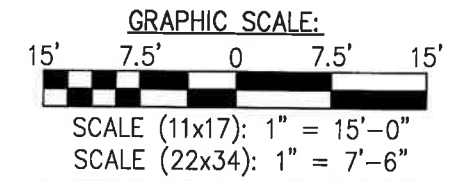
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- SEE 'POST MOD MOUNT ANALYSIS REPORT' COMPLETED BY INFINGY, DATED 6/7/18. FOR ADDITIONAL MOUNT MODIFICATION DETAILS SEE SHEETS S1-S2.

NOTES:

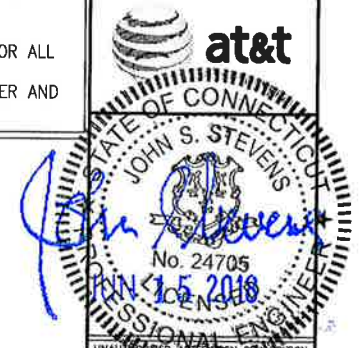
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3. ROUTE ALL PROPOSED CABLING ON EXISTING CABLE LADDER. ACTUAL ROUTE ON DRAWINGS MAY VARY FROM FIELD LOCATION OF EXISTING CABLE LADDER.
4. INSTALLER SHALL PROVIDE ALL NECESSARY CONDUITS AND CIRCUITS AS REQUIRED FOR A COMPLETED INSTALLATION AND SHALL COMPLY WITH EQUIPMENT MANUFACTURER'S INSTALLATION REQUIREMENTS.
5. INSTALLER SHALL PROVIDE ALL STRAIN RELIEF FOR ALL CABLE ASSEMBLIES ROUTING TO THE ANTENNAS. UTILIZATION OF HOISTING GRIPS ON ALL DC POWER AND FIBER OPTIC CABLES SHALL BE UTILIZED.



1 OVERALL SITE PLAN
SCALE: AS NOTED
CALLED NORTH



INFINGY
1033 WaterVliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793



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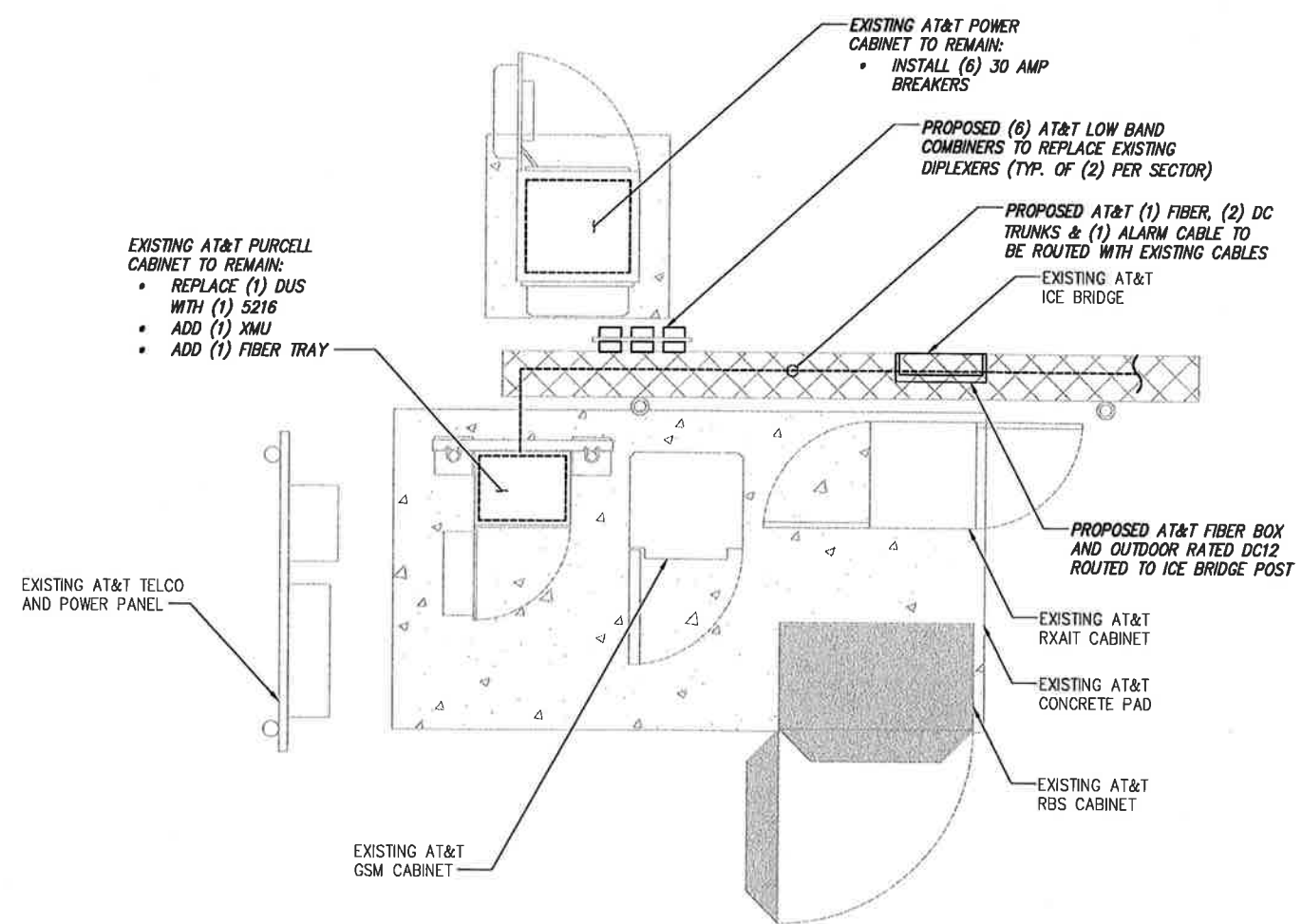
Project Title:
FA# 10071137
CT5266
MONROE NORTHEAST
1428 MONROE TURNPIKE
MONROE, CT 06468

Prepared For:
CENTERLINE
CONSULTANTS
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Drawing Title:
COMPOUND PLAN

Drawing Number:
C3

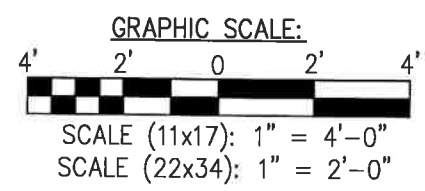
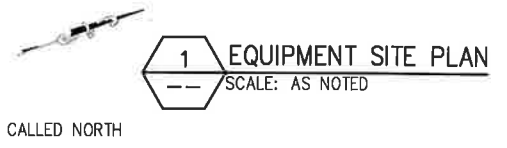


NOTES:
 CONTRACTOR TO GROUND ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

SYMBOL	
⊗	COPPER GROUND ROD
▶	CONNECT PER MANUFACTURER SPECS
■	CADWELD CONNECTION
•	MECHANICAL CONNECTION
▬	GROUND BAR
—	ELECTRICAL CONDUIT
—	GROUND WIRE
—	DC/FIBER LINE

ABBREVIATIONS:

CIGBE	COAX ISOLATED GROUND BAR EXTERNAL
MIGB	MASTER ISOLATED GROUND BAR
SST	SELF SUPPORTING TOWER
GPS	GLOBAL POSITIONING SYSTEM
TYP.	TYPICAL
DWG	DRAWING
BCW	BARE COPPER WIRE
BFG	BELOW FINISH GRADE
PVC	POLYVINYL CHLORIDE
CAB	CABINET
C	CONDUIT
SS	STAINLESS STEEL
G	GROUND
AWG	AMERICAN WIRE GAUGE
RGS	RIGID GALVANIZED STEEL
AHJ	AUTHORITY HAVING JURISDICTION
TLNA	TOWER TOP LOW NOISE AMPLIFIER
UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRICAL METALLIC TUBING
AGL	ABOVE GROUND LEVEL



NOTE:
 INFINIGY ENGINEERING HAS NOT CONDUCTED AN ELECTRICAL LOAD STUDY FOR THIS SITE. CONTRACTOR IS TO VERIFY EXISTING ELECTRICAL LOADS PRIOR TO CONSTRUCTION TO ENSURE THERE IS AMPLE SERVICE AVAILABLE TO ACCOMMODATE THE EXISTING AND PROPOSED EQUIPMENT.

NOTES:

- EXISTING CONDITIONS INFORMATION BASED ON INFORMATION PROVIDED TO INFINIGY.
- THESE DRAWINGS DO NOT REFLECT ADEQUACY OF EXISTING OR PROPOSED ANTENNA MOUNTS, MOUNT CONNECTIONS, OR CABLE ATTACHMENTS. INFINIGY DOES NOT ACCEPT LIABILITY FOR ANY OF THESE STRUCTURAL ELEMENTS.
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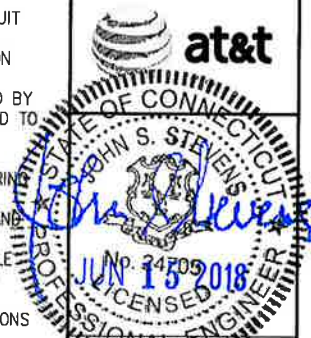
ELECTRICAL NOTES:

- ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (N.E.C.), AND APPLICABLE LOCAL CODES.
- GROUNDING SHALL COMPLY WITH THE ARTICLE 250 OF NATIONAL ELECTRICAL CODE.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED.
- ALL WIRES SHALL BE AWG MIN #12 THIN COPPER UNLESS NOTED OTHERWISE.
- CONDUCTORS SHALL BE INSTALLED IN SCHEDULE 40 PVC CONDUIT UNLESS NOTED OTHERWISE.
- LABEL AT&T SERVICE DISCONNECTS WITH SWITCH AND PANEL WITH ENGRAVED LAMACOID LABELS, LETTERS 1" IN HEIGHT.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 8" RADIUS.
- ENGAGE AN INDEPENDENT TESTING FIRM TO TEST AND VERIFY THAT RESISTANCE DOES NOT EXCEED 5 OHMS TO GROUND. TEST GROUND RING RESISTANCE PRIOR TO MAKING FINAL GROUND CONNECTIONS TO INFRASTRUCTURE AND EQUIPMENT. GROUNDING AND OTHER OPERATIONAL TESTING SHALL BE WITNESSED BY AT&T REPRESENTATIVE.
- PROVIDE PULL BOXES AND JUNCTION BOXES WHERE REQUIRED SO THAT CONDUIT BENDS DO NOT EXCEED 360 DEGREES.
- OBTAIN PERMITS AND PAY FEES RELATED TO ELECTRICAL WORK PERFORMED ON THIS PROJECT. DELIVER COPIES OF ALL PERMITS TO AT&T REPRESENTATIVE.
- SCHEDULE AND ATTEND INSPECTIONS RELATED TO ELECTRICAL WORK REQUIRED BY JURISDICTION HAVING AUTHORITY. CORRECT AND PAY FOR ANY WORK REQUIRED TO PASS ANY FAILED INSPECTION.
- REDLINED AS-BUILTS ARE TO BE DELIVERED TO AN AT&T REPRESENTATIVE.
- PROVIDE TWO COPIES OF OPERATION AND MAINTENANCE MANUALS IN THREE-RING BINDER.
- FURNISH AND INSTALL THE COMPLETE ELECTRICAL SERVICE, TELCO CONDUIT, AND THE COMPLETE GROUNDING SYSTEM.
- ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE BUILDING CODES AND LOCAL ORDINANCES, INSTALLED IN A NEAT MANNER AND SHALL BE SUBJECT TO APPROVAL BY AN AT&T REPRESENTATIVE.
- CONDUCT A PRE-CONSTRUCTION SITE VISIT AND VERIFY EXISTING SITE CONDITIONS AFFECTING THIS WORK. REPORT ANY OMISSIONS OR DISCREPANCIES FOR CLARIFICATION PRIOR TO THE START OF CONSTRUCTION.
- PROJECT ADJACENT STRUCTURES AND FINISHES FROM DAMAGE, REPAIR TO ORIGINAL CONDITION ANY DAMAGED AREA.
- REMOVE DEBRIS ON A DAILY BASIS. DEBRIS NOT REMOVED IN A TIMELY FASHION WILL BE REMOVED BY OTHERS AND THE RESPONSIBLE SUBCONTRACTOR SHALL BE CHARGED ACCORDINGLY. REMOVAL OF DEBRIS SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE. DEBRIS SHALL BE REMOVED FROM THE PROPERTY AND DISPOSED OF LEGALLY.
- UPON COMPLETION OF WORK, THE SITE SHALL BE CLEAN AND FREE OF DUST AND FINGERPRINTS.
- PRIOR TO ANY TRENCHING, CONTACT LOCAL UTILITY TO VERIFY LOCATION OF ANY EXISTING BURIED SERVICE CONDUITS.
- DOCUMENT GROUND RING INSTALLATION AND CONNECTIONS TO IT WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE. PRESENT PHOTO ARCHIVE A SITE "PUNCH LIST" WALK TO AT&T'S REPRESENTATIVE.
- ALL ABOVE GRADE CONDUIT TO BE RIGID METALLIC.

GROUNDING NOTES:

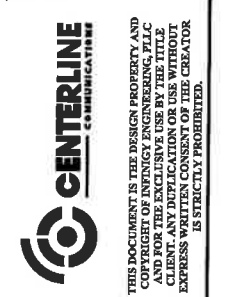
- ALL DOWN CONDUCTORS AND GROUND RING AND CONDUCTOR SHALL BE #2 AWG, SOLID, BARE, TINNED COPPER, UNO. ALL CONNECTIONS TO GROUND RING SHALL BE EXOTHERMICALLY WELDED. CONDUCTOR SHALL BE A MINIMUM DEPTH BELOW GRADE OF 30 INCHES OR TO THE LEDGE. MINIMUM BEND RADIUS SHALL BE 8 INCHES. CONDUCTOR SHALL BE AT LEAST 24 INCHES FROM ANY FOUNDATION, UNO.
- WHERE MECHANICAL CONDUCTOR CONNECTIONS ARE SPECIFIED, BOLTED, COMPRESSION-TYPE CLAMPS OR SPLIT-BOLT TYPE CONNECTORS SHALL BE USED. GRIND OFF GALVANIZING IN AFFECTED AREA. EXOTHERMICALLY WELD #2 CONDUCTOR AT 6 INCHES ABOVE GRADE R FOUNDATION, WHICHEVER IS HIGHER. COLD-GALY AFTER. EXOTHERMICALLY WELD OTHER END TO THE GROUND.
- GROUND CONDUCTORS ON EXTERIOR WALL OF SHELTER SHALL BE ENCASED IN 3/4" PVC CONDUIT TO GRADE. MOUNT PVC WITH GALVANIZED "C" CLAMPS. SEAL TOP ENDS.
- FOLLOWING COMPLETION OF WORK, CONDUCT GROUND TEST. SUBMIT WRITTEN TEST TO CONSTRUCTION MANAGER AND PROJECT MANAGER.
- ALL GROUNDING WORK SHALL COMPLY WITH CARRIER(S) STANDARDS.
- GROUNDING REQUIREMENTS SHOWN ON THIS PLAN ARE FOR ITEMS THAT ARE LOCATED NEAR GRADE LEVEL AND THAT NEED TO BE TIED TO THE BELOW GRADE GROUND RING.
- UNLESS NOTED OTHERWISE, ALL GROUNDING SHALL BE IN ACCORDANCE WITH AT&T'S SSEQ DOCUMENTS 3.018.02.004 "BONDING, GROUNDING AND TRANSIENT PROTECTION FOR CELL SITES", AND 3.018.10.002 "SITE RESISTANCE TO EARTH TESTING". ALL GROUNDING SHALL ALSO COMPLY WITH ALL STATE AND LOCAL CODES, AND THE NATIONAL ELECTRICAL CODE (NEC).
- UNLESS NOTED OTHERWISE, ALL GROUNDING CONNECTIONS SHALL BE MADE BY AN EXOTHERMIC WELD.
- RESISTANCE TO EARTH TESTING IS REQUIRED PER AT&T STANDARDS ON ALL NEW SITES.

INFINIGY
 1033 Watervliet Shaker Rd
 Albany, NY 12205
 Office # (518) 880-0790
 Fax # (518) 880-0793



No.	Submitted / Revision	App'd	Date
0	ISSUED FOR PERMIT	BMW	06/15/18
1	ASW	ASW	03/20/18
2	ASW	ASW	03/20/18

Project Number: 555-022
 Project Title:
FA# 10071137
CT5266
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Drawing Scale: AS NOTED
 Date: 06/15/18
 Drawing Title: **EQUIPMENT SITE PLAN**
 Drawing Number: **C4**

NOTE:

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- SEE "POST MOD MOUNT ANALYSIS REPORT" COMPLETED BY INFINIGY, DATED 6/7/18. FOR ADDITIONAL MOUNT MODIFICATION DETAILS SEE SHEETS S1-S2.

EXISTING AT&T TMA's TO REMAIN (TYP. OF (2) PER SECTOR, (3) SECTORS TOTAL)

PROPOSED AT&T RRUS-32 B2 (TYP. OF (1) PER SECTOR, (3) SECTORS TOTAL)
 PROPOSED AT&T MOUNT MODIFICATIONS, SEE SHEETS S1-S2 FOR ADDITIONAL DETAILS (TYP. OF EACH SECTOR)

EXISTING AT&T RRUS-11 TO BE REMAIN (TYP. OF (1) PER SECTOR, (3) SECTORS TOTAL)

PROPOSED AT&T DC6 SQUID (TYP. OF 1)

EXISTING AT&T DC6 SQUID TO REMAIN (TYP. OF 1)

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

PROPOSED AT&T PANEL ANTENNA ON PROPOSED PIPE MOUNT (TYP. OF (1) PER SECTOR, (3) SECTORS TOTAL)

EXISTING AT&T PANEL ANTENNA TO REMAIN (TYP. OF (2) PER SECTOR, (3) SECTORS TOTAL)

EXISTING CARRIER PANEL ANTENNA (TYP.)

PROPOSED AT&T (1) FIBER, (2) DC TRUNKS & (1) ALARM CABLE TO BE ROUTED WITH EXISTING CABLES

EXISTING MONOPOLE TOWER

TOP OF EXISTING MONOPOLE = ±160'-0" AGL

CENTERLINE OF EXISTING AND PROPOSED AT&T PANEL ANTENNAS ±160'-0" AGL

GROUND LEVEL

1 ELEVATION VIEW
 -- NOT TO SCALE

NOTES:

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5. INSTALLER SHALL PROVIDE ALL STRAIN RELIEF FOR ALL CABLE ASSEMBLIES ROUTING TO THE ANTENNAS. UTILIZATION OF HOISTING GRIPS ON ALL DC POWER AND FIBER OPTIC CABLES SHALL BE UTILIZED.

INFINIGY

1033 Watervliet Shaker Rd
 Albany, NY 12205
 Office # (518) 690-0790
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Drawn: BMM Date: 03/29/18
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 Checked: ASW Date: 03/29/18

Project Number: 555-022

Project Title:
 FA# 10071137
 CT5266
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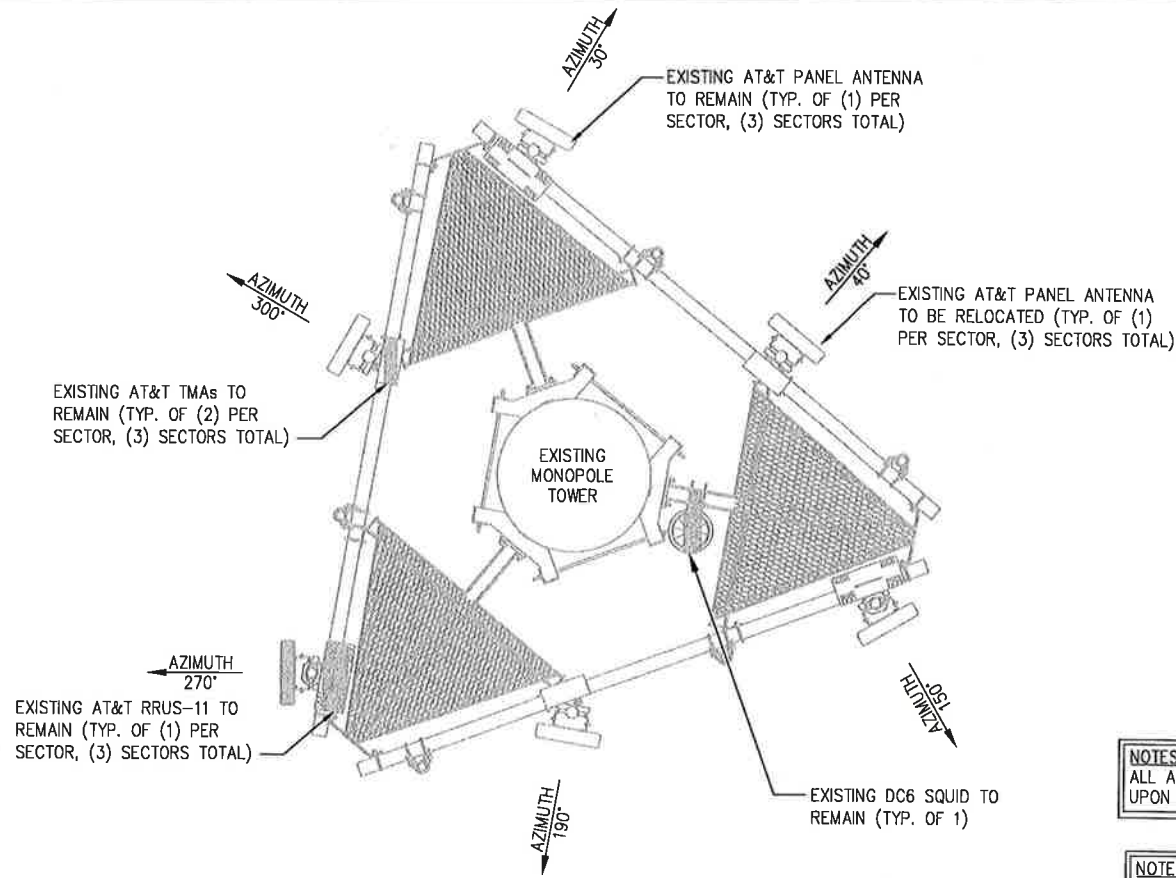
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Drawing Title:
ELEVATION VIEW

Drawing Number:
C5

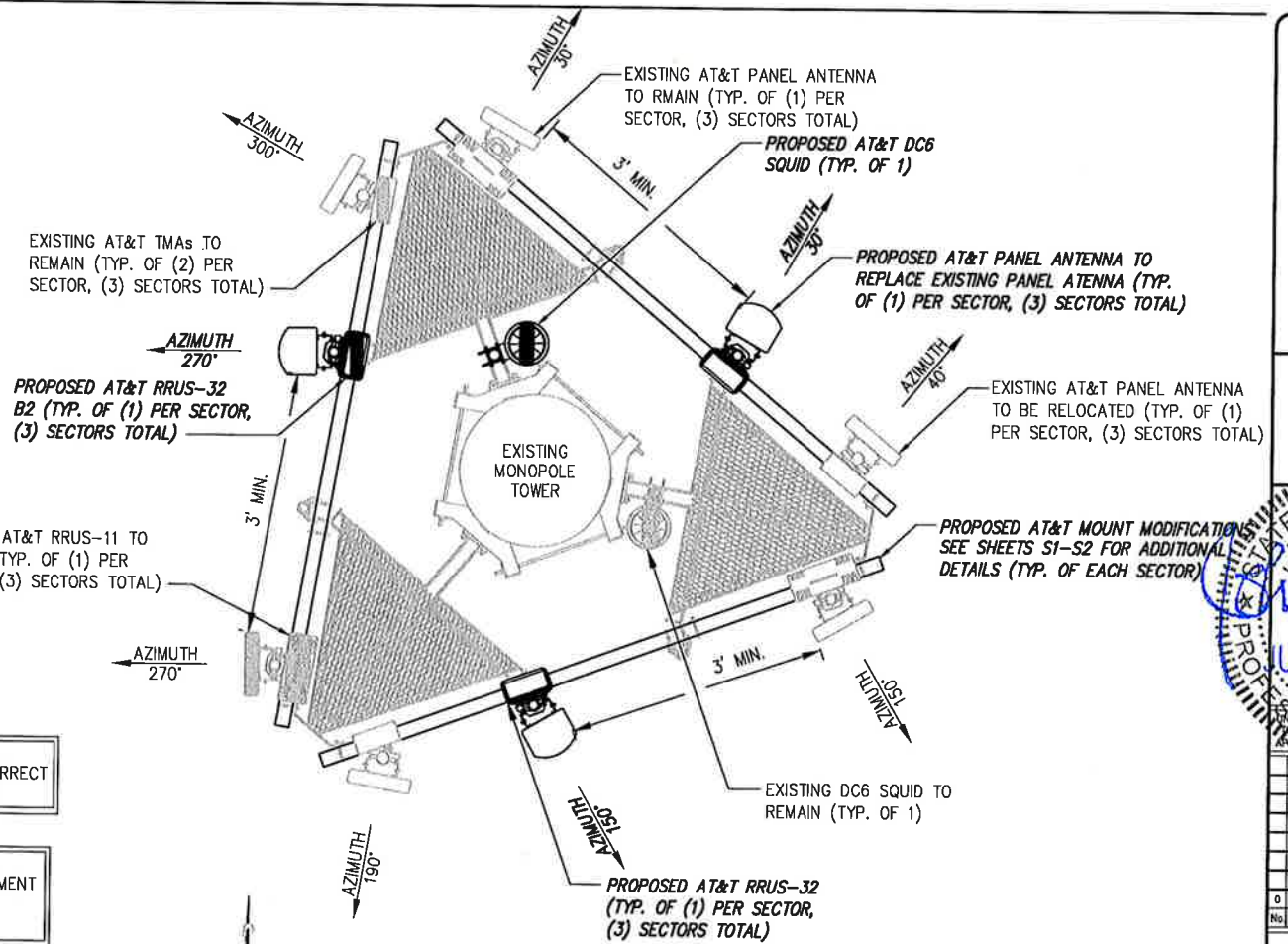


1 ANTENNA ORIENTATION PLAN (EXISTING)
NOT TO SCALE

CALLED NORTH

NOTES:
ALL ANTENNA AZIMUTHS MUST BE CORRECT UPON COMPLETION OF CONSTRUCTION

NOTES:
CONTRACTOR TO GROUND ALL EQUIPMENT AND MOUNTS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



2 ANTENNA ORIENTATION PLAN (PROPOSED)
NOT TO SCALE

CALLED NORTH

EXISTING AND PROPOSED ANTENNA, TMA AND DIPLEXER MODEL NUMBERS									
SECTOR	EXISTING/PROPOSED	BAND	ANTENNA	ANTENNA HEIGHT	AZIMUTH	TMA	RRU	FEEDER	RAYCAP
ALPHA	EXISTING	LTE 700	P65-16-XLH-RR	±160'	30°	---	(1) (E) RRUS-11	---	---
	---	---	---	---	---	---	---	---	DC6 SQUID
	PROPOSED	LTE 1900/WCS	QS66512-2	±160'	30°	---	(1) (P) RRUS-32 B2 (1) (P) RRUS-32	(2) 1-5/8 COAX	(1) (P) DC6 SQUID
BETA	EXISTING	UMTS 850	7770	±160'	40°	(2) LGP21401	---	(2) 1-5/8 COAX	(1) (E) DC6 SQUID (1) (P) DC6 SQUID
	---	---	---	---	---	---	---	---	SHARED WITH ALPHA SECTOR
	PROPOSED	LTE 1900/WCS	QS66512-2	±160'	150°	---	(1) (P) RRUS-32 B2 (1) (P) RRUS-32	(2) 1-5/8 COAX	(1) (P) DC6 SQUID
GAMMA	EXISTING	LTE 700	P65-16-XLH-RR	±160'	150°	---	(1) (E) RRUS-11	---	---
	---	---	---	---	---	---	---	---	SHARED WITH ALPHA SECTOR
	PROPOSED	LTE 1900/WCS	QS66512-2	±160'	150°	---	(1) (P) RRUS-32 B2 (1) (P) RRUS-32	(2) 1-5/8 COAX	(1) (P) DC6 SQUID
GAMMA	---	---	---	---	---	---	---	---	SHARED WITH ALPHA SECTOR
	EXISTING	UMTS 850	7770	±160'	190°	(2) LGP21401	---	(2) 1-5/8 COAX	(1) (E) DC6 SQUID (1) (P) DC6 SQUID

PROPOSED RRU AND CABLE SCHEDULE					
SECTOR	FIBER TRUNK	SINGLE FIBER	DC 3-PAIR	DC 1-PAIR	RRU'S
ALPHA		(2) 5 METER		(2) #8 AWG, 15'	(1) (E) RRUS-11 (1) (P) RRUS-32 B2 (1) (P) RRUS-32
BETA	(1) 18P	(2) 5 METER	(2) #8 AWG	(2) #8 AWG, 15'	(1) (E) RRUS-11 (1) (P) RRUS-32 B2 (1) (P) RRUS-32
GAMMA		(2) 5 METER		(2) #8 AWG, 15'	(1) (E) RRUS-11 (1) (P) RRUS-32 B2 (1) (P) RRUS-32

3 RF EQUIPMENT SCHEDULE
NOT TO SCALE

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Albany, NY 12205
Office # (518) 680-0790
Fax # (518) 680-0793



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Project Number: 555-022

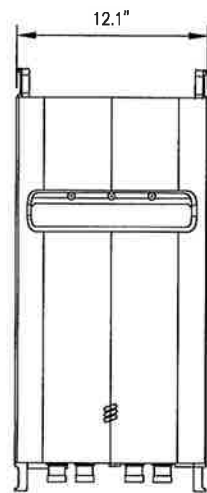
Project Title:
FA# 10071137
CT5266
MONROE NORTHEAST
1428 MONROE TURNPIKE
MONROE, CT 06468

Prepared For:
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Date: 06/15/18

Drawing Title:
EQUIPMENT DETAILS

Drawing Number:
C6

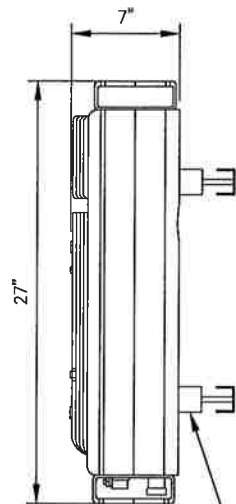


FRONT

RRUS-32 SPECIFICATIONS

- HXWD, (INCHES) : 27.2"x12.1"x7"
- WEIGHT (LBS) : 53
- COLOR : GRAY

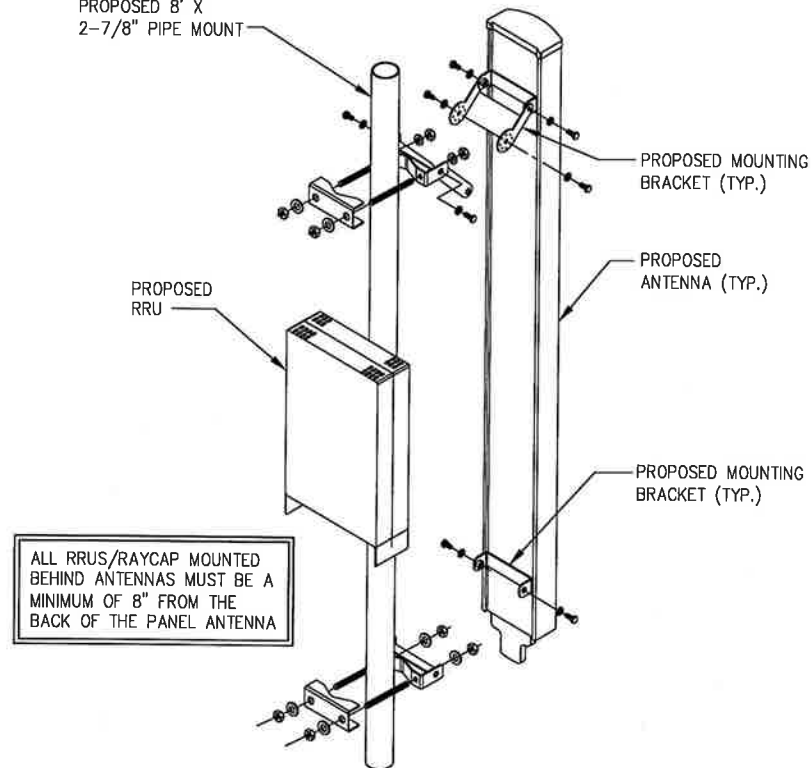
1 RRUS-32 DETAIL
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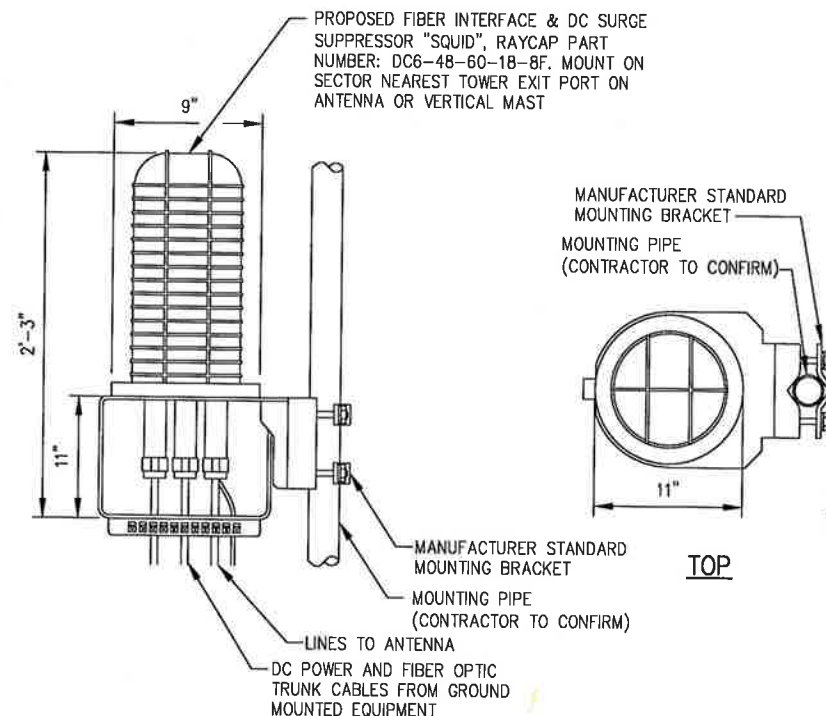
SIDE

MANUFACTURER STANDARD MOUNTING BRACKET

PROPOSED 8' X 2-7/8" PIPE MOUNT

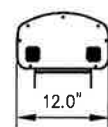


2 MOUNTING DETAIL
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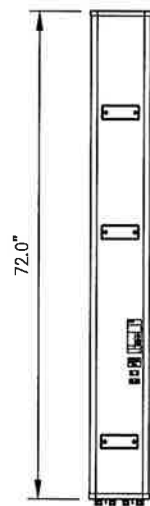


SIDE

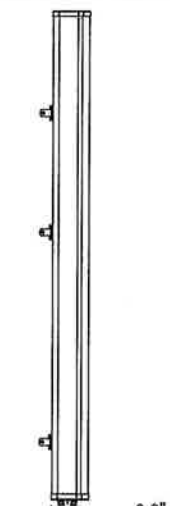
3 SQUID DETAIL
NOT TO SCALE



TOP



REAR



SIDE

QUINTEL MODEL NO.: QS66512-2

RADOME MATERIAL: FIBERGLASS, UV RESISTANT
 RADOME COLOR: LIGHT GRAY
 DIMENSIONS, HxWxD: 72.0"x12.0"x9.6"
 WEIGHT, w/ PRE-MOUNTED BRACKETS: 111.0 LBS
 CONNECTOR: 7-16 DIN FEMALE

4 ANTENNA DETAIL
NOT TO SCALE

5 DEATIL NOT USED
NOT TO SCALE

6 DETAIL NOT USED
NOT TO SCALE

INFINIGY
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 Office # (518) 690-0790
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1	Submittal / Revision	App'd	Date

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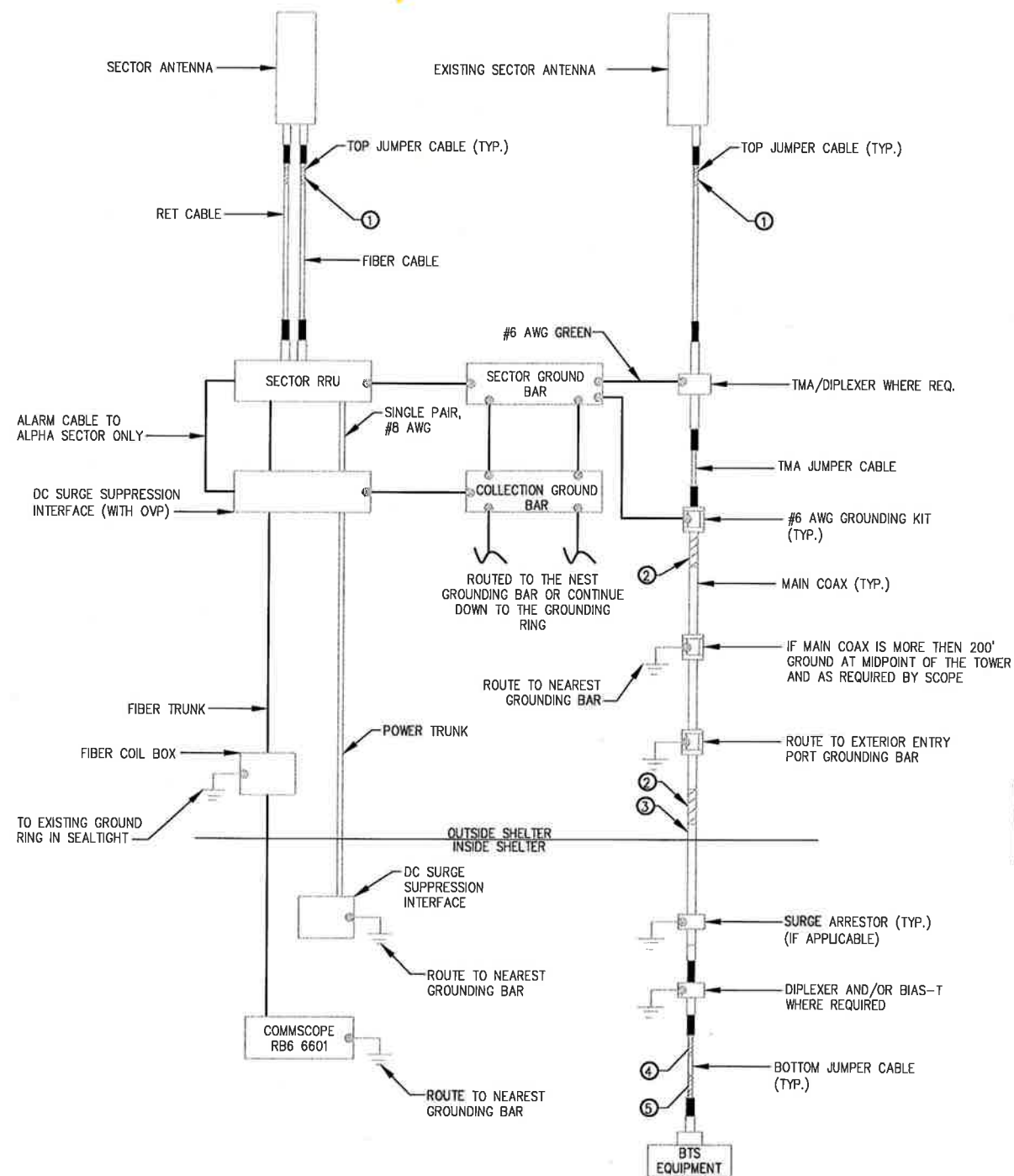
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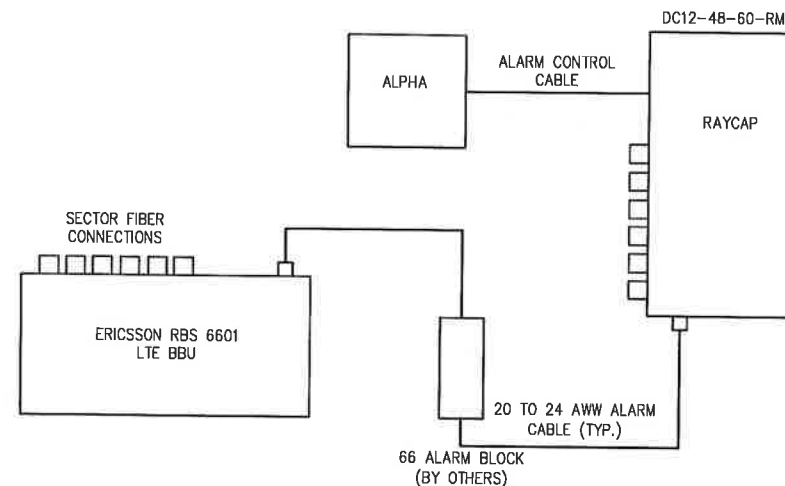
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C7

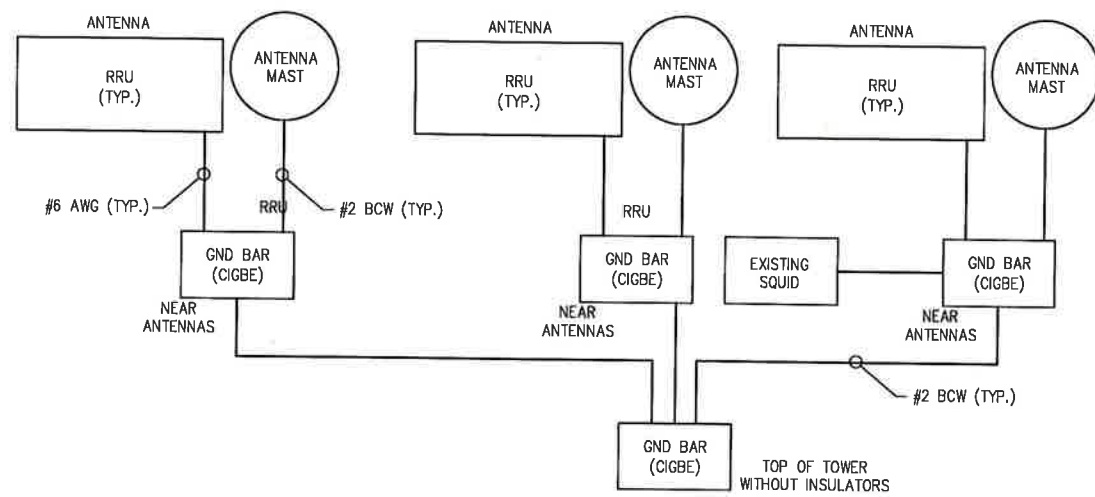
CABLE MARKING LOCATIONS TABLE	
NO.	LOCATIONS
①	EACH TOP JUMPER SHALL BE COLOR CODED WITH ONE (1) SET OF 3" WIDE BANDS
②	EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS NEAR THE TOP OF THE JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING
③	CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER
④	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER
⑤	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER



1 CABLE MARKING LOCATIONS DIAGRAM
SCALE: NOT TO SCALE



2 ALARM BLOCK CONNECTIONS
SCALE: NOT TO SCALE



3 SCHEMATIC DIAGRAM GROUNDING SYSTEM
SCALE: NOT TO SCALE

COAX COLOR CODING & IDENTIFICATION NOTES:

- SECTOR ORIENTATION/ AZIMUTH WILL VARY FROM REGION AND IS SITE SPECIFIC. REFER TO RF REPORT FOR EACH SITE TO DETERMINE THE ANTENNA LOCATION AND FUNCTION OF EACH TOWER SECTOR FACE.
- THE ANTENNA SYSTEM COAX SHALL BE LABELED WITH VINYL TAPE EXCEPT IN LOCATIONS WHERE ENVIRONMENTAL CONDITIONS CAUSE PHYSICAL DAMAGE, THEN PHYSICAL TAGS ARE PREFERRED.
- THE STANDARD IS BASED ON EIGHT COLORED TAPES- RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE AND VIOLET. THESE TAPES MUST BE 3/4" WIDE AND UV RESISTANT SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE AND SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR SUBCONTRACTOR ON SITE.
- USING COLOR BANDS ON THE CABLES MARK ALL RF CABLE BY SECTOR AND NUMBER AS SHOWN ON "CABLE MARKING COLOR CONVENTION TABLE".
- WHEN AN EXISTING COAXIAL LINE THAT IS INTENDED TO BE A SHARED LINE BETWEEN GSM/3G TDMA IS ENCOUNTERED, THE SUBCONTRACTOR SHALL REMOVE THE COLOR CODING SCHEME AND REPLACE IT WITH THE COLOR CODING AND TAGGING STANDARD THAT IS OUTLINED IN THE CURRENT VERSION OF THE STANDARD. IN THE ABSENCE OF AN EXISTING COLOR CODING AND TAGGING SCHEME, WHEN INSTALLING PROPOSED COAXIAL CABLES, THIS GUIDELINE SHALL BE IMPLEMENTED AT THAT SITE REGARDLESS OF TECHNOLOGY.
- ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE A MINIMUM OF (3) THREE WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID ANY UNRAVELING.
- ALL COLOR BANDS INSTALLED AT THE TOP OF THE TOWER SHALL BE A MINIMUM IF 3" WIDE, AND SHALL HAVE A MINIMUM OF 3/4" OF SPACE IN BETWEEN EACH COLOR.
- ALL COLOR CODES SHALL BE INSTALLED AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE TO SIDE.
- IF EXISTING CABLES AT THE SITE ALREADY HAVE A COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED WITH THE GSM TECHNOLOGY, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.

CABLE MARKING TAGS:

WHEN USING THE ALTERNATIVE LABELING METHOD, EACH RF CABLE SHALL BE IDENTIFIED WITH A METAL ID TAG MADE OF STAINLESS STEEL OR BRASS. THE TAG SHALL BE 1" 1-1/2" IN DIAMETER WITH 1/4" STAMPED LETTERS AND NUMBERS INDICATING THE SECTOR, ANTENNA POSITION, AND CABLE NUMBER. THE ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE". THE TAG SHOULD BE ATTACHED WITH CORROSION PROOF WIRE AROUND THE CABLE AT THE SAME LOCATIONS AS DEFINED ABOVE. THE TAG SHOULD BE LABELED AS SHOWN ON THE "GSM AND UMTS LINE TAG" DETAIL.

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Albany, NY 12205
Office # (518) 680-0790
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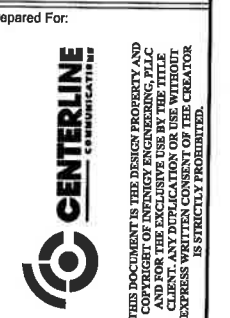


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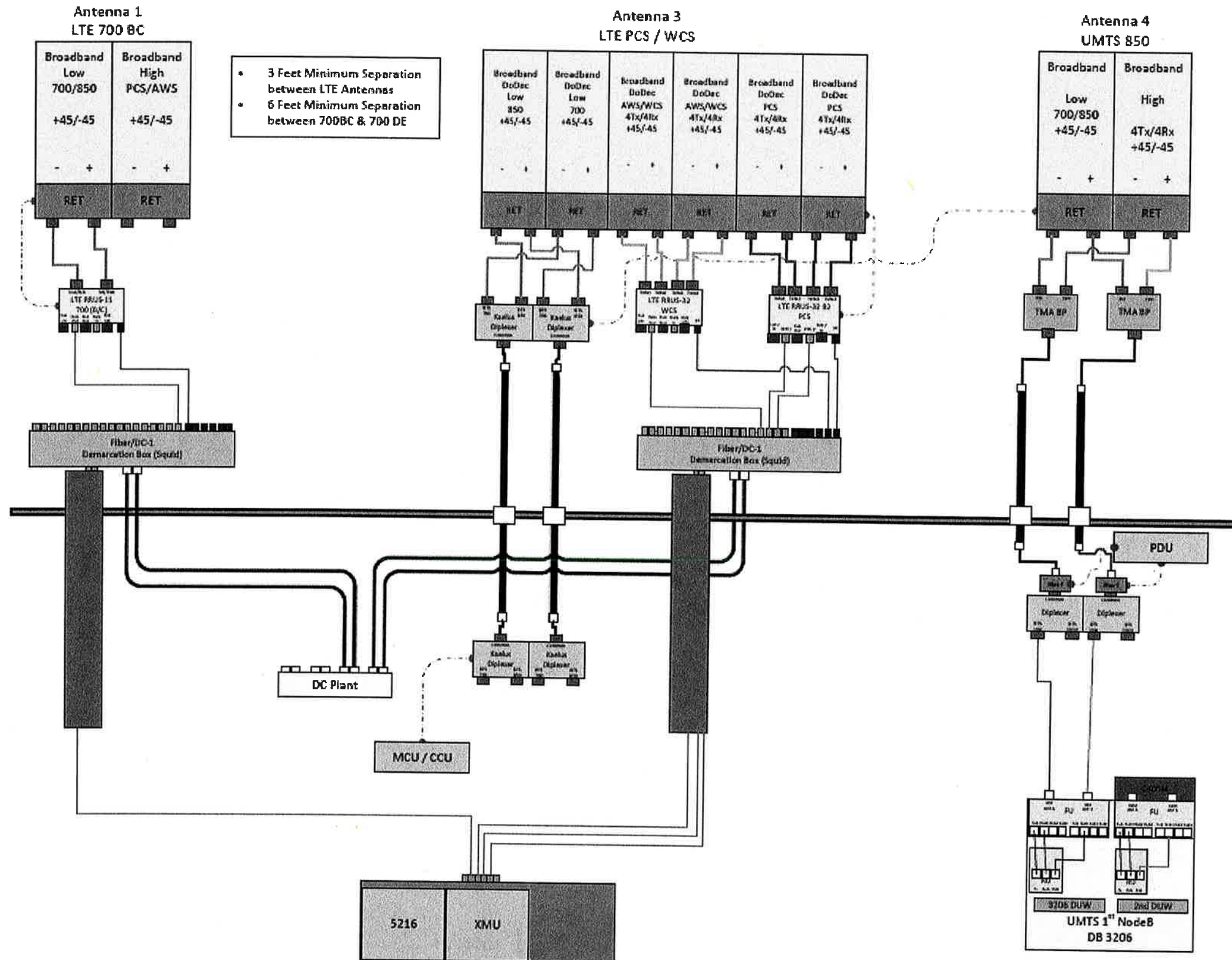
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Date: 06/15/18

Drawing Title:
SCHEMATICS, DIAGRAMS & NOTES

Drawing Number:
C8



1 PLUMBING DIAGRAM
SCALE: NOT TO SCALE

CONTRACTOR TO REFER TO LATEST RFDS PROVIDED BY AT&T FOR FINAL CONFIGURATION.



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Date:
08/15/18

Drawing Title:
PLUMBING DIAGRAM

Drawing Number:
C9