

Transcend Wireless  
48 Spruce Street  
Oakland, NJ 07436  
Phone: (203) 217-6200  
Chris Bisson  
Real Estate Consultant

May 1, 2014

**Hand Delivered**

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

RE: T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 6 Fairfield Drive, Newtown, CT 06470. Known to T-Mobile Northeast LLC as site CT11105F.

Dear Ms. Bachman:

In order to accommodate technological changes, implement Global System for Mobile Communications Access (“GSM”) and/or Long Term Evolution (“LTE”) capabilities, and enhance system performance in the state of Connecticut, T-Mobile Northeast LLC plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and its attachments is being sent to the chief elected official of the municipality in which affected cell site is located.

GSM employs Spread-Spectrum technology and special coding scheme to allow multiple users to be multiplexed over the same physical channel. LTE is a new high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

As part of the project the new multi-mode 800/1900 antenna will replace existing antennas. These antennas will provide more flexibility for optimization by allowing fast and easy electrical tilt adjustment from remote location and will enable the transmission of multiple technologies from a single antenna. As T-Mobile Northeast LLC network evolves to meet the demands of its customers, it is essential for T-Mobile Northeast LLC to install modern equipment and antennas in order to provide reliable wireless voice and data services. The proposed equipment will include multi-mode radios that will allow T-Mobile Northeast LLC to transmit at different frequencies using different technologies, including LTE technology. Likewise, the proposed antennas are quad-pole multi-band high gain antennas that will allow T-Mobile Northeast LLC to operate using its multiple

frequency bands and technologies, including LTE technology. The proposed equipment and antennas will improve the reliability, coverage and capacity of T-Mobile Northeast LLC voice and data networks across T-Mobile Northeast LLC various FCC licensed frequency bands and significantly increase the data speeds of T-Mobile Northeast LLC's network by utilizing the latest LTE technology. Without the proposed modifications T-Mobile Northeast LLC will be unable to provide reliable wireless voice and data service using the latest technologies.

T-Mobile Northeast LLC will have an interim (testing) period during the modification/installation prior to the final configuration. This antenna configuration is shown on the attached drawings of the planned modifications. Also included is the power density calculation reflecting the change in T-Mobile Northeast LLC operations at the site and documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modification as defined Connecticut General Statues ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for the R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will not be affected.
2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound.
3. The proposed changes will not increase the noise level at the existing facility by 6 decibels or more.
4. Radio Frequency power density may increase due to the use of one or more GSM transmissions. Moreover, LTE will utilize additional radio frequencies newly licensed by the FCC for cellular mobile communications. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons T-Mobile Northeast LLC respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (203) 217-6200 or email  
[cblisson@transcendwireless.com](mailto:cblisson@transcendwireless.com) with questions concerning this matter.  
Thank you for your consideration.

Sincerely,

Chris Bisson  
(203) 217-6200



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

T-Mobile Existing Facility

Site ID: CT11105F  
Newtown CT3

6 Fairfield Drive  
Newtown, CT 06470

**April 30, 2014**

**EBI Project Number: 62142701**



April 30, 2014

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

**Re: Emissions Values for Site: CT11105F - Newtown CT3**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 6 Fairfield Drive, Newtown CT, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 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 public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The general population exposure limit for the cellular band is 567  $\mu\text{W}/\text{cm}^2$ , and the general population exposure limit for the PCS and AWS 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 done for the proposed T-Mobile Wireless antenna facility located at 6 Fairfield Drive, Newtown CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, the actual antenna pattern gain value in the direction of the sample area was used. For this report the sample point is a 6 foot person standing at the base of the tower.

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

- 1) 2 GSM channels (1940.000 MHz—to 1950.000 MHz) were considered for each sector of the proposed installation.
- 2) 2 UMTS channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation.
- 3) 2 LTE channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation.
- 4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the manufacturers supplied specifications.
- 6) The antenna used in this modeling is the Ericsson AIR21 for LTE, UMTS and GSM. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 15.6 dBd gain value at its main lobe. Actual antenna gain values were used for all calculations as per the manufacturers specifications.



- 
- 7) The antenna mounting height centerline of the proposed antennas is **163 feet** above ground level (AGL).
  - 8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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

Site ID	CT11105F - Newtown CT3
Site Addresss	6 Fairfield Drive, Newtown CT 06470
Site Type	Monopole

Sector 1																	
Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	163	157	None	0	0	48.326044	0.704836	0.07048%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	-	-	0	-3.95	163	157	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	163	157	1-5/8"	0	0	24.163022	0.352418	0.03524%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	163	157	1-5/8"	0	0	24.163022	0.352418	0.03524%
Sector total Power Density Value: 0.141%																	
Sector 2																	
Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	163	157	None	0	0	48.326044	0.704836	0.07048%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	-	-	0	-3.95	163	157	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	163	157	1-5/8"	0	0	24.163022	0.352418	0.03524%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	163	157	1-5/8"	0	0	24.163022	0.352418	0.03524%
Sector total Power Density Value: 0.141%																	
Sector 3																	
Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	163	157	None	0	0	48.326044	0.704836	0.07048%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	-	-	0	-3.95	163	157	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	163	157	1-5/8"	0	0	24.163022	0.352418	0.03524%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	163	157	1-5/8"	0	0	24.163022	0.352418	0.03524%
Sector total Power Density Value: 0.141%																	

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.423%
AT&T	10.750%
Metro PCS	2.660%
Verizon	14.400%
Total Site MPE %	28.233%



## Summary

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

The anticipated Maximum Composite contributions from the T-Mobile facility are **0.423% (0.141% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously.

The anticipated composite MPE value for this site assuming all carriers present is **28.233%** of the allowable FCC established general public limit. 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 within the allowable 100% threshold standard per the federal government.

Scott Heffernan  
RF Engineering Director

**EBI Consulting**

21 B Street  
Burlington, MA 01803



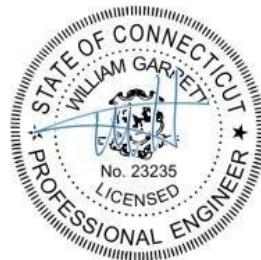
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## Structural Analysis Report

Structure : 152 ft Monopole  
ATC Site Name : Newtown CT 3, CT  
ATC Site Number : 302518  
Engineering Number : 58043821  
Proposed Carrier : T-Mobile  
Carrier Site Name : Newtown CT 3  
Carrier Site Number : CT11105F  
Site Location : 6 Fairfield Dr (Brkfld)  
Newtown, CT 06470-1216  
41.425528,-73.374047  
County : Fairfield  
Date : April 15, 2014  
Max Usage : 87%  
Result : Pass

Joseph R. King, E.I.

A handwritten signature in black ink that appears to read "Joseph R. King".



Apr 16 2014 3:16 PM



Eng. Number 58043821

April 15, 2014

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Eng. Number 58043821

April 15, 2014

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## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 152 ft monopole to reflect the change in loading by T-Mobile.

## Supporting Documents

<b>Tower Drawings</b>	EEI Job #8238 Rev 2, dated January 30, 2001
<b>Foundation Drawing</b>	EEI Job #8238, dated November 16, 2000
<b>Geotechnical Report</b>	Soiltesting, Inc. Project #G128-5268-98, dated September 8, 1999

## Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/EIA-222.

<b>Basic Wind Speed:</b>	85 mph (Fastest Mile)
<b>Basic Wind Speed w/ Ice:</b>	74 mph (Fastest Mile)w/ 1/2" radial ice concurrent
<b>Code:</b>	ANSI/TIA/EIA-222-F / 2003 IBC , Sec. 1609.1.1, Exception (5) & Sec. 3108.4 w/ 2005 CT Supplement & 2009 CT Amendment

## Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at [Engineering@americantower.com](mailto:Engineering@americantower.com). Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



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April 15, 2014

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### Existing and Reserved Equipment

Elevation <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD				
152.0	-	-	-	(4) 1 5/8" Coax	T-Mobile
150.0	149.0	6 Powerwave LGP21901	Low Profile Platform	(12) 1 5/8" Coax (2) 0.74" 8 AWG 7 (1) 0.28" RG-6	AT&T Mobility
		1 Raycap DC6-48-60-18-8F			
		6 Powerwave LGP21401			
		6 Ericsson RRUS 11 (Band 12)			
		6 Powerwave 7770.00			
	152.0	3 Powerwave P65-16-XLH-RR		(1) 7/8" Coax	US Mobile Comm.
	156.0	1 9' Omni			
140.0	142.0	6 RFS FD9R6004/1C-3L	Low Profile Platform	(12) 1 5/8" Coax	Verizon
		3 Rymsa MGD3-800T0			
		6 Andrew DB846H80E-SX			
		3 Powerwave P65-16-XL-2			
134.0	134.0	6 Kathrein 860-10025	Low Profile Platform	(12) 1 5/8" Coax	Metro PCS
		3 Kathrein 800 10504			
		3 Kathrein 742 351			
30.0	30.0	1 2" x 4" GPS	Flush	(1) 1/2" Coax	Verizon

### Equipment to be Removed

Elevation <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD				
163.0	163.0	6 Remec S20057A1	-	-	T-Mobile
		3 72" x 16" Panel			

### Proposed Equipment

Elevation <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD				
152.0	163.0	3 Ericsson KRY 112 144/1	Flush	(8) 1 5/8" Coax (1) 1 5/8" Hybriflex	T-Mobile
		3 Ericsson AIR 21, 1.3M, B2A B4P			

<sup>1</sup>Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax inside the pole shaft.



Eng. Number 58043821

April 15, 2014

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### Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	69%	Pass
Shaft	82%	Pass
Base Plate	87%	Pass

### Foundations

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Moment (Kips-Ft)	3,859.3	2,924.9	76%
Shear (Kips)	34.7	27.5	79%

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

### Deflection and Sway\*

Antenna Elevation (ft)	Deflection (ft)	Sway (Rotation) (°)
152.0	2.421	1.919

\*Deflection and Sway was evaluated considering a design wind speed of 50 mph (Fastest Mile) per ANSI/TIA/EIA-222-F.



## **Standard Conditions**

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited, to:

- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Tower Services, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

## Job Information

Pole : 302518 Code: TIA/EIA-222 Rev F

Description : 152 ft EEI Monopole

Client : AT&T Mobility

Location : Newtown CT 3, CT

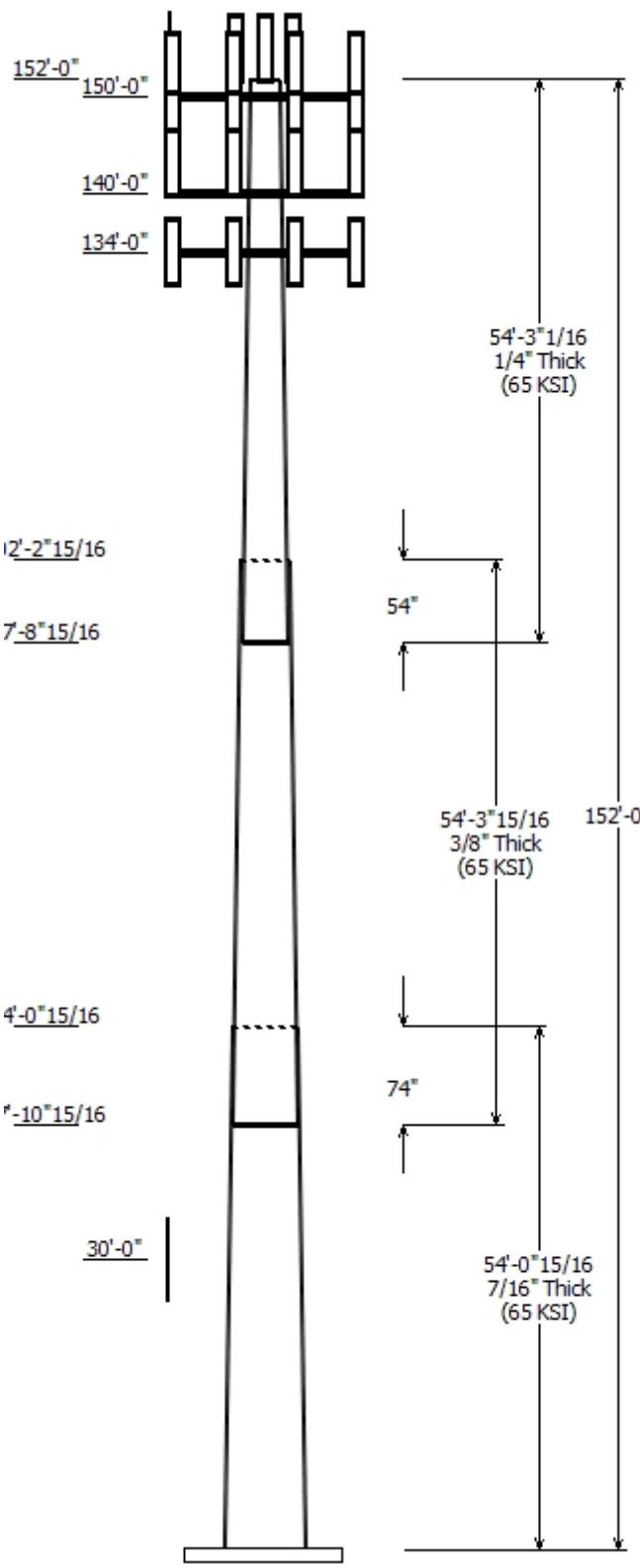
Shape : 18 Sides

Height : 152.00 (ft)

Base Elev (ft): 0.00

Taper: 0.268104(in/ft)

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## Sections Properties

Shaft Section	Length (ft)	Diameter (in) Across Flats	Overlap Length (in)	Steel Grade
		Top Thick (in)	Joint Type	
1	54.080	42.25	56.75	0.438
2	54.330	30.08	44.65	0.375 Slip Joint
3	54.257	17.24	31.79	0.250 Slip Joint

## Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
152.000	163.000	3	Ericsson AIR 21, 1.3M, B2A B4P
152.000	163.000	3	Ericsson KRY 112 144/1
150.000	149.000	6	Ericsson RRUS 11 (Band 12)
150.000	149.000	1	Raycap DC6-48-60-18-8F
150.000	149.000	6	Powerwave 7770.00
150.000	152.000	3	Powerwave P65-16-XLH-RR
150.000	149.000	6	Powerwave LGP21401
150.000	149.000	6	Powerwave LGP21901
150.000	156.000	1	9' Omni
150.000	150.000	1	Flat Low Profile Platform
140.000	140.000	1	Flat Low Profile Platform
140.000	142.000	6	RFS FD9R6004/1C-3L
140.000	142.000	3	Ryma MGD3-800T0
140.000	142.000	6	Andrew DB846H80E-SX
140.000	142.000	3	Powerwave P65-16-XL-2
134.000	134.000	6	Kathrein 860-10025
134.000	134.000	3	Kathrein 800 10504
134.000	134.000	3	Kathrein 742 351
134.000	134.000	1	Low Profile Platform
30.000	30.000	1	2" x 4" GPS

## Linear Appurtenance

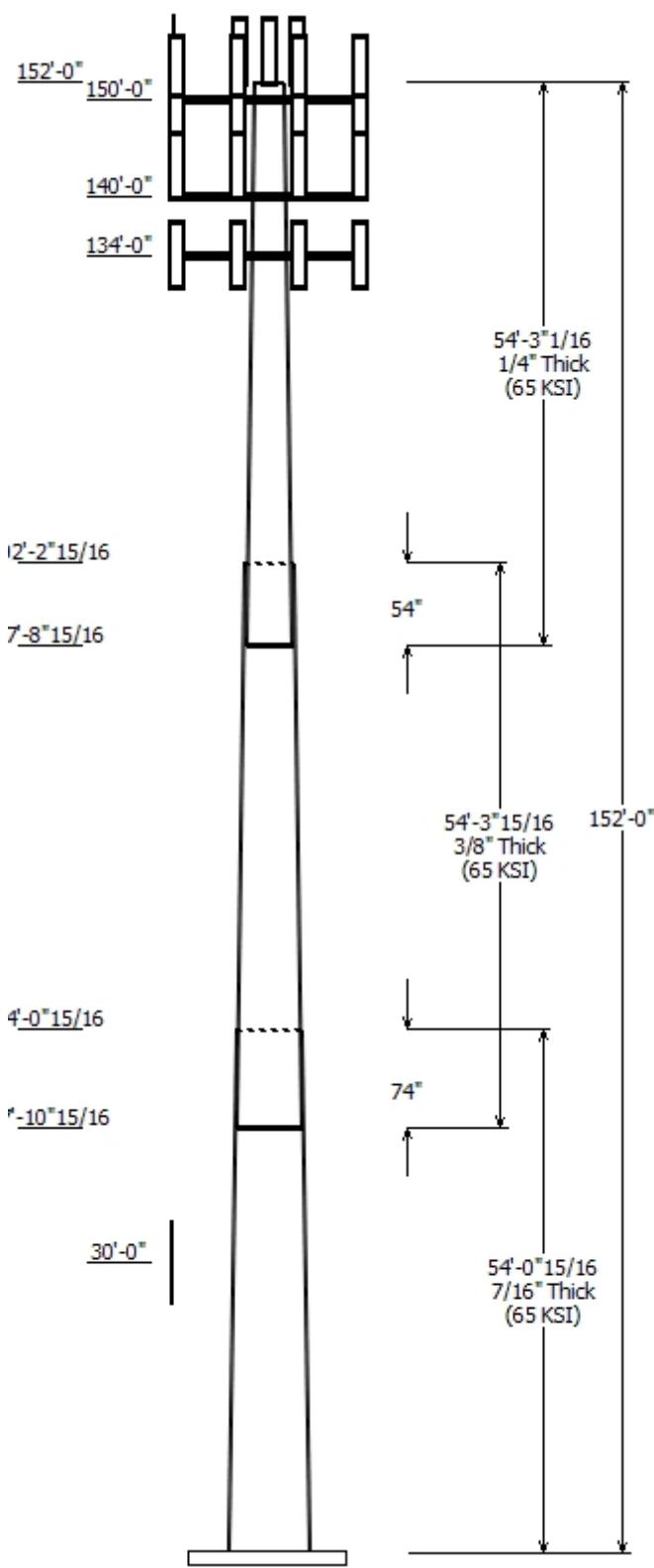
Elev (ft) From	To	Description	Exposed To Wind
0.000	30.000	1/2" Coax	Yes
0.000	134.0	1 5/8" Coax	Yes
0.000	140.0	1 5/8" Coax	No
0.000	150.0	0.28" RG-6	Yes
0.000	150.0	0.74" 8 AWG 7	Yes
0.000	150.0	1 5/8" Coax	Yes
0.000	150.0	7/8" Coax	No
0.000	152.0	1 5/8" Coax	No
0.000	152.0	1 5/8" Coax	No
0.000	152.0	1 5/8" Hybriflex	No

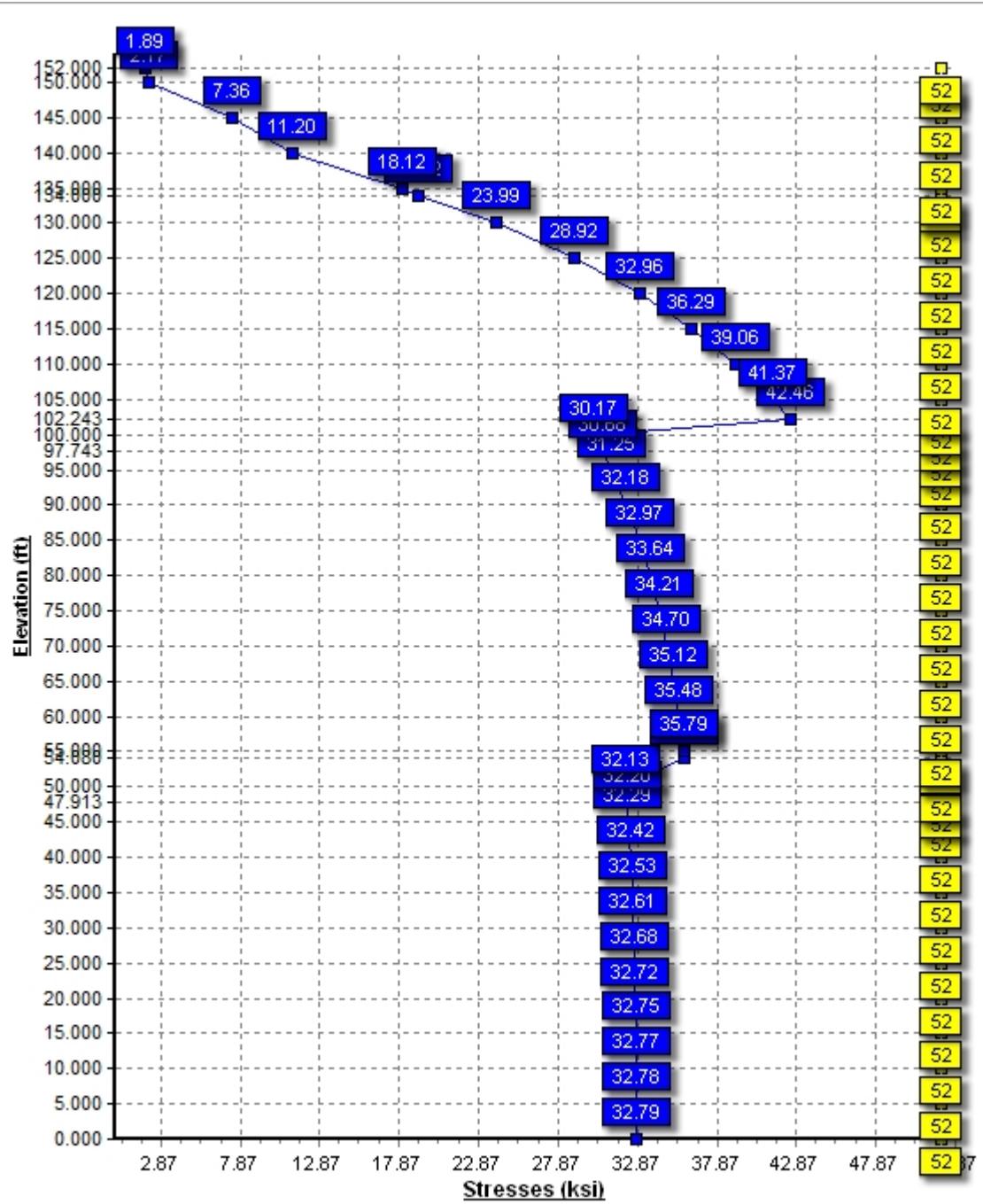
## Load Cases

No Ice	85.00 mph Wind with No Ice
Ice	73.61 mph Wind with Ice
Twist/Sway	50.00 mph Wind with No Ice

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
No Ice	2924.87	27.49	37.76
Ice	2578.52	23.88	48.30
Twist/Sway	1012.96	9.51	37.79

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000





Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

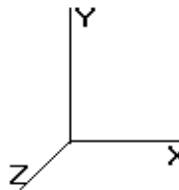
Code: TIA/EIA-222 Rev F

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Page: 1

Base Elev : 0.000 (ft)

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### Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type		Weight (lb)	Bottom						Top						
				Joint Len (in)	Joint 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 (in/ft)	
1-18	54.080	0.4375	65	0.00	12,537	56.75	0.00	78.19	31328.3	21.11	129.71	42.25	54.08	58.06	12825.4	15.27	96.57	0.268105	
2-18	54.330	0.3750	65	Slip	74.00	8,141	44.65	47.91	52.70	13054.9	19.23	119.08	30.08	102.24	35.36	3944.7	12.38	80.23	0.268105
3-18	54.257	0.2500	65	Slip	54.00	3,556	31.79	97.74	25.03	3146.7	20.66	127.18	17.24	152.00	13.49	492.4	10.40	68.99	0.268105
				Shaft Weight		24,233													

### Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice			Ice			Distance From Face (ft)	Vert Ecc (ft)	
			Weight (lb)	EPAa (sf)	Orientation Factor	Weight (lb)	EPAa (sf)	Orientation Factor			
152.00	Ericsson AIR 21, 1.3M, B2A	3	83.00	6.050	0.86	132.60	7.200	0.86	0.000	11.000	
152.00	Ericsson KRY 112 144/1	3	11.00	0.410	0.50	14.10	0.550	0.50	0.000	11.000	
150.00	9' Omni	1	25.00	2.700	0.67	44.70	3.630	0.67	0.000	6.000	
150.00	Ericsson RRUS 11 (Band 12)	6	55.00	2.940	0.67	74.30	3.290	0.67	0.000	-1.000	
150.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000	
150.00	Powerwave 7770.00	6	35.00	5.880	0.77	59.00	6.530	0.77	0.000	-1.000	
150.00	Powerwave LGP21401	6	14.10	1.290	0.50	21.20	1.530	0.50	0.000	-1.000	
150.00	Powerwave LGP21901	6	5.50	0.230	0.50	7.70	0.340	0.50	0.000	-1.000	
150.00	Powerwave P65-16-XLH-RR	3	53.00	8.400	0.79	100.20	9.220	0.79	0.000	2.000	
150.00	Raycap DC6-48-60-18-8F	1	20.00	1.260	1.00	49.50	1.670	1.00	0.000	-1.000	
140.00	Andrew DB846H80E-SX	6	16.00	5.870	0.93	35.00	6.560	0.93	0.000	2.000	
140.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000	
140.00	Powerwave P65-16-XL-2	3	33.00	8.400	0.75	77.50	9.220	0.75	0.000	2.000	
140.00	RFS FD9R6004/1C-3L	6	3.10	0.370	0.67	5.40	0.500	0.67	0.000	2.000	
140.00	Rymsa MGD3-800T0	3	19.80	3.450	0.82	45.00	3.980	0.82	0.000	2.000	
134.00	Kathrein 742 351	3	29.80	5.880	0.66	57.10	6.510	0.66	0.000	0.000	
134.00	Kathrein 800 10504	3	17.60	3.350	0.78	35.70	3.870	0.78	0.000	0.000	
134.00	Kathrein 860-10025	6	1.10	0.160	0.50	2.60	0.260	0.50	0.000	0.000	
134.00	Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000	
30.00	2" x 4" GPS	1	5.00	0.040	1.00	5.74	0.080	1.00	0.000	0.000	
Totals			69	6070.40		7,817.74			Number of Loadings :		20

### Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	No Ice		Ice		Exposed To Wind
			Weight (lb/ft)	CaAa (sf/ft)	Weight (lb/ft)	CaAa (sf/ft)	
0.00	152.00	(4) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
0.00	152.00	(8) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
0.00	152.00	(1) 1 5/8" Hybriflex	1.30	0.00	0.00	0.00	N
0.00	150.00	(1) 0.28" RG-6	0.03	0.00	0.57	0.00	Y
0.00	150.00	(2) 0.74" 8 AWG 7	0.49	0.00	0.98	0.00	Y
0.00	150.00	(12) 1 5/8" Coax	9.84	0.40	28.02	0.60	Y
0.00	150.00	(1) 7/8" Coax	0.33	0.00	0.00	0.00	N
0.00	140.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
0.00	134.00	(12) 1 5/8" Coax	9.84	0.40	28.02	0.60	Y
0.00	30.00	(1) 1/2" Coax	0.15	0.00	0.00	0.00	Y
Total Weight			7,492.97 (lb)		8,190.18 (lb)		

Pole : 302518  
Location : Newtown CT 3, CT  
Height : 152.0 (ft)  
Base Dia : 56.75 (in)  
Top Dia : 17.24 (in)  
Shape : 18 Sides  
Taper : 0.268105 (in/ft)

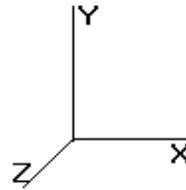
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**Base Elev : 0.000 (ft)**

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## Segment Properties (Max Len : 5 ft)

Seg Top Elev (ft)	Flat Description	Thick (in)	Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)
0.00		0.4375	56.750	78.194	31,328.3	21.11	129.71	65	52	0.0
5.00		0.4375	55.409	76.333	29,143.8	20.57	126.65	65	52	1,314.6
10.00		0.4375	54.069	74.471	27,063.3	20.03	123.59	65	52	1,282.9
15.00		0.4375	52.728	72.610	25,084.3	19.49	120.52	65	52	1,251.2
20.00		0.4375	51.388	70.748	23,204.1	18.95	117.46	65	52	1,219.5
25.00		0.4375	50.047	68.887	21,420.4	18.41	114.39	65	52	1,187.9
30.00		0.4375	48.707	67.026	19,730.5	17.87	111.33	65	52	1,156.2
35.00		0.4375	47.366	65.164	18,131.8	17.33	108.27	65	52	1,124.5
40.00		0.4375	46.026	63.303	16,622.0	16.79	105.20	65	52	1,092.9
45.00		0.4375	44.685	61.441	15,198.4	16.25	102.14	65	52	1,061.2
47.91	Bot - Section 2	0.4375	43.904	60.357	14,407.7	15.93	100.35	65	52	603.7
50.00		0.4375	43.345	59.580	13,858.5	15.71	99.07	65	52	797.7
54.08	Top - Section 1	0.3750	43.001	50.734	11,646.5	18.46	114.67	65	52	1,530.0
55.00		0.3750	42.754	50.440	11,445.5	18.34	114.01	65	52	158.4
60.00		0.3750	41.414	48.845	10,393.4	17.71	110.44	65	52	844.6
65.00		0.3750	40.073	47.249	9,407.8	17.08	106.86	65	52	817.5
70.00		0.3750	38.733	45.654	8,486.6	16.45	103.29	65	52	790.3
75.00		0.3750	37.392	44.058	7,627.5	15.82	99.71	65	52	763.2
80.00		0.3750	36.052	42.463	6,828.5	15.19	96.14	65	52	736.0
85.00		0.3750	34.711	40.867	6,087.4	14.56	92.56	65	52	708.9
90.00		0.3750	33.371	39.272	5,401.9	13.93	88.99	65	52	681.7
95.00		0.3750	32.030	37.676	4,769.9	13.30	85.41	65	52	654.6
97.74	Bot - Section 3	0.3750	31.295	36.801	4,445.1	12.95	83.45	65	52	347.6
100.0		0.3750	30.690	36.081	4,189.2	12.67	81.84	65	52	470.2
102.2	Top - Section 2	0.2500	30.588	24.072	2,799.3	19.81	122.35	65	52	458.2
105.0		0.2500	29.849	23.486	2,599.7	19.29	119.40	65	52	223.1
110.0		0.2500	28.508	22.422	2,262.2	18.34	114.03	65	52	390.5
115.0		0.2500	27.168	21.359	1,955.3	17.40	108.67	65	52	372.4
120.0		0.2500	25.827	20.295	1,677.5	16.45	103.31	65	52	354.3
125.0		0.2500	24.487	19.231	1,427.3	15.51	97.95	65	52	336.2
130.0		0.2500	23.146	18.168	1,203.3	14.56	92.59	65	52	318.2
134.0		0.2500	22.074	17.317	1,042.0	13.81	88.30	65	52	241.5
135.0		0.2500	21.806	17.104	1,004.1	13.62	87.22	65	52	58.6
140.0		0.2500	20.465	16.040	828.2	12.67	81.86	65	52	282.0
145.0		0.2500	19.125	14.977	674.1	11.73	76.50	65	52	263.9
150.0		0.2500	17.784	13.913	540.4	10.78	71.14	65	52	245.8
152.0		0.2500	17.248	13.487	492.4	10.40	68.99	65	52	93.2

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

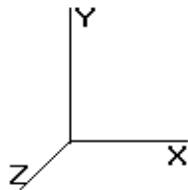
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Base Elev : 0.000 (ft)

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**Load Case:** No Ice

85.00 mph Wind with No Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Shaft Segment Forces

Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	18.496	31.25	401.97	0.650	0.000	0.00	0.000	0.00	0.0	0.0
5.00		0.00	1.00	18.496	31.25	392.48	0.650	0.000	5.00	23.367	15.19	474.8	0.0
10.00		0.00	1.00	18.496	31.25	382.98	0.650	0.000	5.00	22.808	14.83	463.4	0.0
15.00		0.00	1.00	18.496	31.25	373.49	0.650	0.000	5.00	22.249	14.46	452.1	0.0
20.00		0.00	1.00	18.496	31.25	363.99	0.650	0.000	5.00	21.691	14.10	440.7	0.0
25.00		0.00	1.00	18.496	31.25	354.50	0.650	0.000	5.00	21.132	13.74	429.4	0.0
30.00	Appertunance(s)	0.00	1.00	18.496	31.25	345.00	0.650	0.000	5.00	20.574	13.37	418.0	0.0
35.00		0.00	1.01	18.810	31.78	338.34	0.650	0.000	5.00	20.015	13.01	413.6	0.0
40.00		0.00	1.05	19.541	33.02	335.10	0.650	0.000	5.00	19.457	12.65	417.7	0.0
45.00		0.00	1.09	20.210	34.15	330.86	0.650	0.000	5.00	18.898	12.28	419.5	0.0
47.91	Bot - Section 2	0.00	1.11	20.575	34.77	328.00	0.650	0.000	2.91	10.753	6.99	243.0	0.0
50.00		0.00	1.12	20.827	35.19	325.80	0.650	0.000	2.09	7.717	5.02	176.5	0.0
54.08	Top - Section 1	0.00	1.15	21.300	35.99	321.15	0.650	0.000	4.08	14.806	9.62	346.4	0.0
55.00		0.00	1.15	21.402	36.17	325.76	0.650	0.000	0.92	3.288	2.14	77.3	0.0
60.00		0.00	1.18	21.941	37.08	319.50	0.650	0.000	5.00	17.535	11.40	422.6	0.0
65.00		0.00	1.21	22.449	37.93	312.71	0.650	0.000	5.00	16.976	11.03	418.6	0.0
70.00		0.00	1.24	22.929	38.75	305.47	0.650	0.000	5.00	16.418	10.67	413.5	0.0
75.00		0.00	1.26	23.386	39.52	297.82	0.650	0.000	5.00	15.859	10.31	407.4	0.0
80.00		0.00	1.28	23.821	40.25	289.80	0.650	0.000	5.00	15.301	9.95	400.4	0.0
85.00		0.00	1.31	24.237	40.96	281.45	0.650	0.000	5.00	14.742	9.58	392.5	0.0
90.00		0.00	1.33	24.636	41.63	272.80	0.650	0.000	5.00	14.184	9.22	383.8	0.0
95.00		0.00	1.35	25.020	42.28	263.87	0.650	0.000	5.00	13.625	8.86	374.5	0.0
97.74	Bot - Section 3	0.00	1.36	25.224	42.62	258.86	0.650	0.000	2.74	7.238	4.70	200.5	0.0
100.0		0.00	1.37	25.389	42.90	254.69	0.650	0.000	2.26	5.923	3.85	165.2	0.0
102.2	Top - Section 2	0.00	1.38	25.550	43.18	250.49	0.650	0.000	2.24	5.774	3.75	162.1	0.0
105.0		0.00	1.39	25.745	43.51	249.44	0.650	0.000	2.76	6.942	4.51	196.3	0.0
110.0		0.00	1.41	26.090	44.09	239.83	0.650	0.000	5.00	12.158	7.90	348.4	0.0
115.0		0.00	1.42	26.423	44.65	230.01	0.650	0.000	5.00	11.599	7.54	336.7	0.0
120.0		0.00	1.44	26.747	45.20	219.99	0.650	0.000	5.00	11.041	7.18	324.4	0.0
125.0		0.00	1.46	27.060	45.73	209.79	0.650	0.000	5.00	10.482	6.81	311.6	0.0
130.0		0.00	1.48	27.365	46.24	199.42	0.650	0.000	5.00	9.924	6.45	298.3	0.0
134.0	Appertunance(s)	0.00	1.49	27.603	46.65	191.01	0.650	0.000	4.00	7.537	4.90	228.5	0.0
135.0		0.00	1.49	27.662	46.74	188.89	0.650	0.000	1.00	1.828	1.19	55.6	0.0
140.0	Appertunance(s)	0.00	1.51	27.951	47.23	178.20	0.650	0.000	5.00	8.806	5.72	270.4	0.0
145.0		0.00	1.52	28.233	47.71	167.36	0.650	0.000	5.00	8.248	5.36	255.8	0.0
150.0	Appertunance(s)	0.00	1.54	28.507	48.17	156.39	0.650	0.000	5.00	7.689	5.00	240.8	0.0
152.0	Appertunance(s)	0.00	1.54	28.615	48.36	151.96	0.650	0.000	2.00	2.919	1.90	91.8	0.0

Totals: 152.00 11,472.2 0.0 24,233.1

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

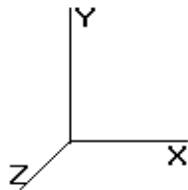
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Base Elev : 0.000 (ft)

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**Load Case:** No Ice

85.00 mph Wind with No Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
30.00	2" x 4" GPS	1	18.496	31.258	1.00	0.04	0.000	0.000	1.25	0.00	0.00	5.00
134.0	Low Profile Platform	1	27.603	46.650	1.00	26.10	0.000	0.000	1,217.55	0.00	0.00	1,500.00
134.0	Kathrein 742 351	3	27.603	46.650	0.66	11.64	0.000	0.000	543.11	0.00	0.00	89.40
134.0	Kathrein 800 10504	3	27.603	46.650	0.78	7.84	0.000	0.000	365.69	0.00	0.00	52.80
134.0	Kathrein 860-10025	6	27.603	46.650	0.50	0.48	0.000	0.000	22.39	0.00	0.00	6.60
140.0	Powerwave P65-16-	3	28.064	47.429	0.75	18.90	0.000	2.000	896.41	0.00	1,792.81	99.00
140.0	Andrew DB846H80E-	6	28.064	47.429	0.93	32.75	0.000	2.000	1,553.51	0.00	3,107.03	96.00
140.0	Rymsa MGD3-800T0	3	28.064	47.429	0.82	8.49	0.000	2.000	402.53	0.00	805.06	59.40
140.0	RFS FD9R6004/1C-3L	6	28.064	47.429	0.67	1.49	0.000	2.000	70.55	0.00	141.09	18.60
140.0	Flat Low Profile Pla	1	27.951	47.237	1.00	26.10	0.000	0.000	1,232.89	0.00	0.00	1,500.00
150.0	Flat Low Profile Pla	1	28.507	48.177	1.00	26.10	0.000	0.000	1,257.43	0.00	0.00	1,500.00
150.0	9' Omni	1	28.829	48.720	0.67	1.81	0.000	6.000	88.14	0.00	528.81	25.00
150.0	Powerwave LGP21901	6	28.453	48.085	0.50	0.69	0.000	-1.000	33.18	0.00	-33.18	33.00
150.0	Powerwave LGP21401	6	28.453	48.085	0.50	3.87	0.000	-1.000	186.09	0.00	-186.09	84.60
150.0	Powerwave P65-16-	3	28.615	48.360	0.79	19.91	0.000	2.000	962.75	0.00	1,925.51	159.00
150.0	Powerwave 7770.00	6	28.453	48.085	0.77	27.17	0.000	-1.000	1,306.27	0.00	-1,306.27	210.00
150.0	Raycap DC6-48-60-18-	1	28.453	48.085	1.00	1.26	0.000	-1.000	60.59	0.00	-60.59	20.00
150.0	Ericsson RRUS 11 (Ba	6	28.453	48.085	0.67	11.82	0.000	-1.000	568.31	0.00	-568.31	330.00
152.0	Ericsson KRY 112 144	3	29.192	49.335	0.50	0.62	0.000	11.000	30.34	0.00	333.75	33.00
152.0	Ericsson AIR 21, 1.3	3	29.192	49.335	0.86	15.61	0.000	11.000	770.07	0.00	8,470.81	249.00
											11,569.05	6,070.40

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

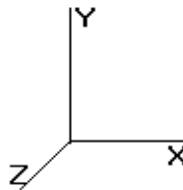
Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

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**Load Case:** No Ice

85.00 mph Wind with No Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Linear Appurtenance Segment Forces

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
5.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	18.496	0.00	0.14
5.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	18.496	0.00	2.45
5.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
5.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
5.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	18.496	0.00	0.75
10.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	18.496	0.00	0.14
10.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	18.496	0.00	2.45
10.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
10.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
10.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	18.496	0.00	0.75
15.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	18.496	0.00	0.14
15.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	18.496	0.00	2.45
15.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
15.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
15.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	18.496	0.00	0.75
20.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	18.496	0.00	0.14
20.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	18.496	0.00	2.45
20.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
20.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
20.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	18.496	0.00	0.75
25.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	18.496	0.00	0.14
25.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	18.496	0.00	2.45
25.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
25.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
25.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	18.496	0.00	0.75
30.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	18.496	0.00	0.14
30.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	18.496	0.00	2.45
30.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
30.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.496	62.52	49.20
30.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	18.496	0.00	0.75
35.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	18.810	0.00	0.14
35.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	18.810	0.00	2.45
35.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.810	63.58	49.20
35.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.810	63.58	49.20
40.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	19.541	0.00	0.14
40.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	19.541	0.00	2.45
40.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	19.541	66.05	49.20
40.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	19.541	66.05	49.20
45.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	20.210	0.00	0.14
45.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	20.210	0.00	2.45
45.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	20.210	68.31	49.20
45.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	20.210	68.31	49.20
47.91	(1) 0.28" RG-6	Yes	2.91	0.03	0.00	20.575	0.00	0.08
47.91	(2) 0.74" 8 AWG7	Yes	2.91	0.49	0.00	20.575	0.00	1.43
47.91	(12) 1 5/8" Coax	Yes	2.91	9.84	0.40	20.575	40.52	28.67
47.91	(12) 1 5/8" Coax	Yes	2.91	9.84	0.40	20.575	40.52	28.67
50.00	(1) 0.28" RG-6	Yes	2.09	0.03	0.00	20.827	0.00	0.06
50.00	(2) 0.74" 8 AWG7	Yes	2.09	0.49	0.00	20.827	0.00	1.02
50.00	(12) 1 5/8" Coax	Yes	2.09	9.84	0.40	20.827	29.38	20.53
50.00	(12) 1 5/8" Coax	Yes	2.09	9.84	0.40	20.827	29.38	20.53
54.08	(1) 0.28" RG-6	Yes	4.08	0.03	0.00	21.300	0.00	0.12

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

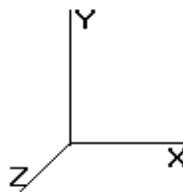
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Base Elev : 0.000 (ft)

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**Load Case:** No Ice

85.00 mph Wind with No Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

54.08	(2) 0.74" 8 AWG 7	Yes	4.08	0.49	0.00	21.300		0.00	2.00
54.08	(12) 1 5/8" Coax	Yes	4.08	9.84	0.40	21.300		58.74	40.15
54.08	(12) 1 5/8" Coax	Yes	4.08	9.84	0.40	21.300		58.74	40.15
55.00	(1) 0.28" RG-6	Yes	0.92	0.03	0.00	21.402		0.00	0.03
55.00	(2) 0.74" 8 AWG 7	Yes	0.92	0.49	0.00	21.402		0.00	0.45
55.00	(12) 1 5/8" Coax	Yes	0.92	9.84	0.40	21.402		13.31	9.05
55.00	(12) 1 5/8" Coax	Yes	0.92	9.84	0.40	21.402		13.31	9.05
60.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	21.941		0.00	0.14
60.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	21.941		0.00	2.45
60.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	21.941		74.16	49.20
60.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	21.941		74.16	49.20
65.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	22.449		0.00	0.14
65.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	22.449		0.00	2.45
65.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	22.449		75.88	49.20
65.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	22.449		75.88	49.20
70.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	22.929		0.00	0.14
70.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	22.929		0.00	2.45
70.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	22.929		77.50	49.20
70.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	22.929		77.50	49.20
75.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	23.386		0.00	0.14
75.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	23.386		0.00	2.45
75.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	23.386		79.04	49.20
75.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	23.386		79.04	49.20
80.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	23.821		0.00	0.14
80.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	23.821		0.00	2.45
80.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	23.821		80.51	49.20
80.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	23.821		80.51	49.20
85.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	24.237		0.00	0.14
85.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	24.237		0.00	2.45
85.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	24.237		81.92	49.20
85.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	24.237		81.92	49.20
90.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	24.636		0.00	0.14
90.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	24.636		0.00	2.45
90.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	24.636		83.27	49.20
90.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	24.636		83.27	49.20
95.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	25.020		0.00	0.14
95.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	25.020		0.00	2.45
95.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	25.020		84.57	49.20
95.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	25.020		84.57	49.20
97.74	(1) 0.28" RG-6	Yes	2.74	0.03	0.00	25.224		0.00	0.08
97.74	(2) 0.74" 8 AWG 7	Yes	2.74	0.49	0.00	25.224		0.00	1.34
97.74	(12) 1 5/8" Coax	Yes	2.74	9.84	0.40	25.224		46.77	26.99
97.74	(12) 1 5/8" Coax	Yes	2.74	9.84	0.40	25.224		46.77	26.99
100.0	(1) 0.28" RG-6	Yes	2.26	0.03	0.00	25.389		0.00	0.07
100.0	(2) 0.74" 8 AWG 7	Yes	2.26	0.49	0.00	25.389		0.00	1.11
100.0	(12) 1 5/8" Coax	Yes	2.26	9.84	0.40	25.389		38.73	22.21
100.0	(12) 1 5/8" Coax	Yes	2.26	9.84	0.40	25.389		38.73	22.21
102.2	(1) 0.28" RG-6	Yes	2.24	0.03	0.00	25.550		0.00	0.07
102.2	(2) 0.74" 8 AWG 7	Yes	2.24	0.49	0.00	25.550		0.00	1.10
102.2	(12) 1 5/8" Coax	Yes	2.24	9.84	0.40	25.550		38.74	22.07
102.2	(12) 1 5/8" Coax	Yes	2.24	9.84	0.40	25.550		38.74	22.07
105.0	(1) 0.28" RG-6	Yes	2.76	0.03	0.00	25.745		0.00	0.08
105.0	(2) 0.74" 8 AWG 7	Yes	2.76	0.49	0.00	25.745		0.00	1.35
105.0	(12) 1 5/8" Coax	Yes	2.76	9.84	0.40	25.745		47.98	27.13
105.0	(12) 1 5/8" Coax	Yes	2.76	9.84	0.40	25.745		47.98	27.13
110.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	26.090		0.00	0.14
110.0	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	26.090		0.00	2.45

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

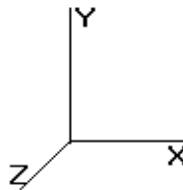
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Base Elev : 0.000 (ft)

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**Load Case:** No Ice

85.00 mph Wind with No Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

110.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	26.090	88.18	49.20
110.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	26.090	88.18	49.20
115.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	26.423	0.00	0.14
115.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	26.423	0.00	2.45
115.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	26.423	89.31	49.20
115.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	26.423	89.31	49.20
120.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	26.747	0.00	0.14
120.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	26.747	0.00	2.45
120.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	26.747	90.40	49.20
120.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	26.747	90.40	49.20
125.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	27.060	0.00	0.14
125.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	27.060	0.00	2.45
125.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	27.060	91.46	49.20
125.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	27.060	91.46	49.20
130.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	27.365	0.00	0.14
130.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	27.365	0.00	2.45
130.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	27.365	92.49	49.20
130.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	27.365	92.49	49.20
134.0	(1) 0.28" RG-6	Yes	4.00	0.03	0.00	27.603	0.00	0.12
134.0	(2) 0.74" 8 AWG7	Yes	4.00	0.49	0.00	27.603	0.00	1.96
134.0	(12) 1 5/8" Coax	Yes	4.00	9.84	0.40	27.603	74.64	39.36
134.0	(12) 1 5/8" Coax	Yes	4.00	9.84	0.40	27.603	74.64	39.36
135.0	(1) 0.28" RG-6	Yes	1.00	0.03	0.00	27.662	0.00	0.03
135.0	(2) 0.74" 8 AWG7	Yes	1.00	0.49	0.00	27.662	0.00	0.49
135.0	(12) 1 5/8" Coax	Yes	1.00	9.84	0.40	27.662	18.70	9.84
140.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	27.951	0.00	0.14
140.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	27.951	0.00	2.45
140.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	27.951	94.47	49.20
145.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	28.233	0.00	0.14
145.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	28.233	0.00	2.45
145.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	28.233	95.43	49.20
150.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	28.507	0.00	0.14
150.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	28.507	0.00	2.45
150.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	28.507	96.35	49.20

Totals: 4,406.10 2,876.91

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

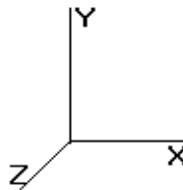
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Base Elev : 0.000 (ft)

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**Load Case:** No Ice

85.00 mph Wind with No Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	599.79	1,572.05	0.00	0.00
10.00	588.44	1,540.38	0.00	0.00
15.00	577.09	1,508.71	0.00	0.00
20.00	565.75	1,477.04	0.00	0.00
25.00	554.40	1,445.37	0.00	0.00
30.00	544.30	1,418.70	0.00	0.00
35.00	540.71	1,381.28	0.00	0.00
40.00	549.75	1,349.61	0.00	0.00
45.00	556.17	1,317.94	0.00	0.00
47.91	324.09	753.29	0.00	0.00
50.00	235.31	904.83	0.00	0.00
54.08	463.91	1,739.48	0.00	0.00
55.00	103.92	205.63	0.00	0.00
60.00	570.96	1,101.35	0.00	0.00
65.00	570.39	1,074.21	0.00	0.00
70.00	568.53	1,047.06	0.00	0.00
75.00	565.50	1,019.92	0.00	0.00
80.00	561.41	992.77	0.00	0.00
85.00	556.34	965.63	0.00	0.00
90.00	550.39	938.48	0.00	0.00
95.00	543.61	911.33	0.00	0.00
97.74	294.10	488.45	0.00	0.00
100.0	242.65	586.11	0.00	0.00
102.2	239.55	573.41	0.00	0.00
105.0	292.30	364.64	0.00	0.00
110.0	524.81	647.28	0.00	0.00
115.0	515.30	629.19	0.00	0.00
120.0	505.20	611.09	0.00	0.00
125.0	494.52	592.99	0.00	0.00
130.0	483.30	574.90	0.00	0.00
134.0	2,526.55	2,095.69	0.00	0.00
135.0	74.26	100.07	0.00	0.00
140.0	4,520.75	2,262.50	0.00	5,845.99
145.0	351.22	422.20	0.00	0.00
150.0	4,799.91	2,765.71	0.00	299.88
152.0	892.18	417.20	0.00	8,804.56
<b>Totals:</b>	<b>27,447.35</b>	<b>37,796.46</b>	<b>0.00</b>	<b>14,950.43</b>

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

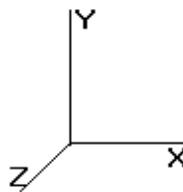
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Base Elev : 0.000 (ft)

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**Load Case:** No Ice

85.00 mph Wind with No Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-27.491	-37.764	0.000	0.000	0.000	-2,924.870	0.000	0.000	0.000	0.000
5.00	-26.972	-36.131	0.000	0.000	0.000	-2,787.418	-0.070	0.000	0.070	-0.130
10.00	-26.459	-34.531	0.000	0.000	0.000	-2,652.561	-0.277	0.000	0.277	-0.262
15.00	-25.953	-32.964	0.000	0.000	0.000	-2,520.266	-0.625	0.000	0.625	-0.398
20.00	-25.452	-31.429	0.000	0.000	0.000	-2,390.504	-1.118	0.000	1.118	-0.538
25.00	-24.958	-29.926	0.000	0.000	0.000	-2,263.244	-1.757	0.000	1.757	-0.680
30.00	-24.469	-28.452	0.000	0.000	0.000	-2,138.456	-2.549	0.000	2.549	-0.826
35.00	-23.978	-27.016	0.000	0.000	0.000	-2,016.114	-3.495	0.000	3.495	-0.976
40.00	-23.473	-25.613	0.000	0.000	0.000	-1,896.227	-4.600	0.000	4.600	-1.130
45.00	-22.942	-24.257	0.000	0.000	0.000	-1,778.863	-5.867	0.000	5.867	-1.287
47.91	-22.635	-23.479	0.000	0.000	0.000	-1,712.028	-6.682	0.000	6.682	-1.382
50.00	-22.417	-22.540	0.000	0.000	0.000	-1,664.796	-7.302	0.000	7.302	-1.452
54.08	-21.938	-20.782	0.000	0.000	0.000	-1,573.336	-8.602	0.000	8.602	-1.587
55.00	-21.868	-20.537	0.000	0.000	0.000	-1,553.151	-8.912	0.000	8.912	-1.619
60.00	-21.328	-19.383	0.000	0.000	0.000	-1,443.815	-10.707	0.000	10.707	-1.805
65.00	-20.784	-18.259	0.000	0.000	0.000	-1,337.177	-12.700	0.000	12.700	-1.996
70.00	-20.236	-17.164	0.000	0.000	0.000	-1,233.261	-14.895	0.000	14.895	-2.190
75.00	-19.687	-16.099	0.000	0.000	0.000	-1,132.082	-17.295	0.000	17.295	-2.388
80.00	-19.136	-15.063	0.000	0.000	0.000	-1,033.650	-19.904	0.000	19.904	-2.590
85.00	-18.586	-14.058	0.000	0.000	0.000	-937.970	-22.727	0.000	22.727	-2.796
90.00	-18.037	-13.083	0.000	0.000	0.000	-845.041	-25.766	0.000	25.766	-3.004
95.00	-17.479	-12.152	0.000	0.000	0.000	-754.858	-29.024	0.000	29.024	-3.215
97.74	-17.180	-11.649	0.000	0.000	0.000	-706.910	-30.906	0.000	30.906	-3.334
100.0	-16.922	-11.049	0.000	0.000	0.000	-668.137	-32.506	0.000	32.506	-3.434
102.2	-16.669	-10.459	0.000	0.000	0.000	-630.178	-34.142	0.000	34.142	-3.532
105.0	-16.391	-10.052	0.000	0.000	0.000	-584.226	-36.217	0.000	36.217	-3.653
110.0	-15.873	-9.360	0.000	0.000	0.000	-502.270	-40.202	0.000	40.202	-3.950
115.0	-15.358	-8.693	0.000	0.000	0.000	-422.905	-44.494	0.000	44.494	-4.241
120.0	-14.846	-8.052	0.000	0.000	0.000	-346.117	-49.086	0.000	49.086	-4.521
125.0	-14.337	-7.439	0.000	0.000	0.000	-271.890	-53.960	0.000	53.960	-4.783
130.0	-13.830	-6.859	0.000	0.000	0.000	-200.206	-59.095	0.000	59.095	-5.018
134.0	-11.135	-4.978	0.000	0.000	0.000	-144.886	-63.368	0.000	63.368	-5.182
135.0	-11.061	-4.866	0.000	0.000	0.000	-133.750	-64.457	0.000	64.457	-5.220
140.0	-6.357	-3.018	0.000	0.000	0.000	-72.600	-70.003	0.000	70.003	-5.370
145.0	-5.971	-2.623	0.000	0.000	0.000	-40.815	-75.675	0.000	75.675	-5.467
150.0	-0.928	-0.329	0.000	0.000	0.000	-10.661	-81.427	0.000	81.427	-5.522
152.0	-0.892	0.000	0.000	0.000	0.000	-8.805	-83.739	0.000	83.739	-5.532

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

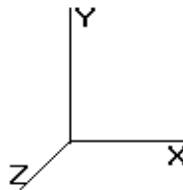
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Base Elev : 0.000 (ft)

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**Load Case:** No Ice

85.00 mph Wind with No Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Calculated Stresses

Seg Elev (ft)	Applied Stresses						Allowable Stress (Fb) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)		
0.00	0.48	0.71	0.00	0.00	0.00	32.28	32.79	52.0 0.0 0.631
5.00	0.47	0.71	0.00	0.00	0.00	32.29	32.78	52.0 0.0 0.631
10.00	0.46	0.72	0.00	0.00	0.00	32.29	32.77	52.0 0.0 0.631
15.00	0.45	0.72	0.00	0.00	0.00	32.28	32.75	52.0 0.0 0.630
20.00	0.44	0.73	0.00	0.00	0.00	32.25	32.72	52.0 0.0 0.630
25.00	0.43	0.73	0.00	0.00	0.00	32.22	32.68	52.0 0.0 0.629
30.00	0.42	0.74	0.00	0.00	0.00	32.16	32.61	52.0 0.0 0.627
35.00	0.41	0.74	0.00	0.00	0.00	32.09	32.53	52.0 0.0 0.626
40.00	0.40	0.75	0.00	0.00	0.00	31.99	32.42	52.0 0.0 0.624
45.00	0.39	0.75	0.00	0.00	0.00	31.86	32.29	52.0 0.0 0.621
47.91	0.39	0.76	0.00	0.00	0.00	31.79	32.20	52.0 0.0 0.619
50.00	0.38	0.76	0.00	0.00	0.00	31.72	32.13	52.0 0.0 0.618
54.08	0.41	0.87	0.00	0.00	0.00	35.39	35.83	52.0 0.0 0.689
55.00	0.41	0.87	0.00	0.00	0.00	35.35	35.79	52.0 0.0 0.688
60.00	0.40	0.88	0.00	0.00	0.00	35.05	35.48	52.0 0.0 0.683
65.00	0.39	0.89	0.00	0.00	0.00	34.70	35.12	52.0 0.0 0.676
70.00	0.38	0.89	0.00	0.00	0.00	34.29	34.70	52.0 0.0 0.668
75.00	0.37	0.90	0.00	0.00	0.00	33.81	34.21	52.0 0.0 0.658
80.00	0.35	0.91	0.00	0.00	0.00	33.25	33.64	52.0 0.0 0.647
85.00	0.34	0.92	0.00	0.00	0.00	32.59	32.97	52.0 0.0 0.634
90.00	0.33	0.93	0.00	0.00	0.00	31.81	32.18	52.0 0.0 0.619
95.00	0.32	0.94	0.00	0.00	0.00	30.88	31.25	52.0 0.0 0.601
97.74	0.32	0.94	0.00	0.00	0.00	30.32	30.68	52.0 0.0 0.590
100.00	0.31	0.95	0.00	0.00	0.00	29.82	30.17	52.0 0.0 0.580
102.24	0.43	1.40	0.00	0.00	0.00	41.95	42.46	52.0 0.0 0.817
105.00	0.43	1.41	0.00	0.00	0.00	40.87	41.37	52.0 0.0 0.796
110.00	0.42	1.43	0.00	0.00	0.00	38.56	39.06	52.0 0.0 0.751
115.00	0.41	1.45	0.00	0.00	0.00	35.80	36.29	52.0 0.0 0.698
120.00	0.40	1.47	0.00	0.00	0.00	32.47	32.96	52.0 0.0 0.634
125.00	0.39	1.50	0.00	0.00	0.00	28.42	28.92	52.0 0.0 0.556
130.00	0.38	1.53	0.00	0.00	0.00	23.46	23.99	52.0 0.0 0.461
134.00	0.29	1.30	0.00	0.00	0.00	18.70	19.12	52.0 0.0 0.368
135.00	0.28	1.30	0.00	0.00	0.00	17.70	18.12	52.0 0.0 0.349
140.00	0.19	0.80	0.00	0.00	0.00	10.93	11.20	52.0 0.0 0.216
145.00	0.18	0.80	0.00	0.00	0.00	7.05	7.36	52.0 0.0 0.142
150.00	0.02	0.13	0.00	0.00	0.00	2.14	2.17	52.0 0.0 0.042
152.00	0.00	0.13	0.00	0.00	0.00	1.88	1.89	52.0 0.0 0.036

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

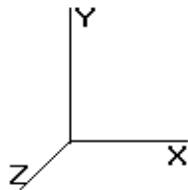
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Base Elev : 0.000 (ft)

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**Load Case:** Ice

73.61 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Shaft Segment Forces

Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	13.871	23.44	348.11	0.650	0.500	0.00	0.000	0.00	0.0	0.0
5.00		0.00	1.00	13.871	23.44	339.89	0.650	0.500	5.00	23.783	15.46	362.4	172.5
10.00		0.00	1.00	13.871	23.44	331.66	0.650	0.500	5.00	23.225	15.10	353.9	168.4
15.00		0.00	1.00	13.871	23.44	323.44	0.650	0.500	5.00	22.666	14.73	345.4	164.2
20.00		0.00	1.00	13.871	23.44	315.22	0.650	0.500	5.00	22.108	14.37	336.9	160.1
25.00		0.00	1.00	13.871	23.44	306.99	0.650	0.500	5.00	21.549	14.01	328.4	156.0
30.00	Appertunance(s)	0.00	1.00	13.871	23.44	298.77	0.650	0.500	5.00	20.990	13.64	319.8	151.8
35.00		0.00	1.01	14.106	23.84	293.00	0.650	0.500	5.00	20.432	13.28	316.6	147.7
40.00		0.00	1.05	14.655	24.76	290.19	0.650	0.500	5.00	19.873	12.92	319.9	143.6
45.00		0.00	1.09	15.156	25.61	286.52	0.650	0.500	5.00	19.315	12.55	321.6	139.4
47.91	Bot - Section 2	0.00	1.11	15.431	26.07	284.05	0.650	0.500	2.91	10.996	7.15	186.4	79.8
50.00		0.00	1.12	15.620	26.39	282.14	0.650	0.500	2.09	7.890	5.13	135.4	57.4
54.08	Top - Section 1	0.00	1.15	15.974	26.99	278.12	0.650	0.500	4.08	15.146	9.84	265.8	109.5
55.00		0.00	1.15	16.051	27.12	282.11	0.650	0.500	0.92	3.364	2.19	59.3	24.6
60.00		0.00	1.18	16.455	27.80	276.68	0.650	0.500	5.00	17.952	11.67	324.5	129.3
65.00		0.00	1.21	16.836	28.45	270.81	0.650	0.500	5.00	17.393	11.31	321.7	125.2
70.00		0.00	1.24	17.196	29.06	264.53	0.650	0.500	5.00	16.835	10.94	318.0	121.1
75.00		0.00	1.26	17.538	29.64	257.91	0.650	0.500	5.00	16.276	10.58	313.6	116.9
80.00		0.00	1.28	17.865	30.19	250.96	0.650	0.500	5.00	15.717	10.22	308.4	112.8
85.00		0.00	1.31	18.177	30.71	243.73	0.650	0.500	5.00	15.159	9.85	302.7	108.7
90.00		0.00	1.33	18.476	31.22	236.24	0.650	0.500	5.00	14.600	9.49	296.3	104.5
95.00		0.00	1.35	18.764	31.71	228.51	0.650	0.500	5.00	14.042	9.13	289.4	100.4
97.74	Bot - Section 3	0.00	1.36	18.917	31.96	224.17	0.650	0.500	2.74	7.466	4.85	155.2	53.8
100.0		0.00	1.37	19.041	32.17	220.56	0.650	0.500	2.26	6.111	3.97	127.8	44.1
102.2	Top - Section 2	0.00	1.38	19.162	32.38	216.92	0.650	0.500	2.24	5.961	3.87	125.5	43.0
105.0		0.00	1.39	19.308	32.63	216.02	0.650	0.500	2.76	7.172	4.66	152.1	51.6
110.0		0.00	1.41	19.566	33.06	207.69	0.650	0.500	5.00	12.574	8.17	270.3	89.5
115.0		0.00	1.42	19.816	33.49	199.19	0.650	0.500	5.00	12.016	7.81	261.6	85.4
120.0		0.00	1.44	20.059	33.89	190.51	0.650	0.500	5.00	11.457	7.45	252.5	81.2
125.0		0.00	1.46	20.294	34.29	181.68	0.650	0.500	5.00	10.899	7.08	243.0	77.1
130.0		0.00	1.48	20.523	34.68	172.70	0.650	0.500	5.00	10.340	6.72	233.1	73.0
134.0	Appertunance(s)	0.00	1.49	20.701	34.98	165.41	0.650	0.500	4.00	7.870	5.12	179.0	55.7
135.0		0.00	1.49	20.745	35.06	163.58	0.650	0.500	1.00	1.912	1.24	43.6	13.8
140.0	Appertunance(s)	0.00	1.51	20.962	35.42	154.32	0.650	0.500	5.00	9.223	6.00	212.4	64.7
145.0		0.00	1.52	21.173	35.78	144.94	0.650	0.500	5.00	8.665	5.63	201.5	60.6
150.0	Appertunance(s)	0.00	1.54	21.379	36.13	135.43	0.650	0.500	5.00	8.106	5.27	190.4	56.4
152.0	Appertunance(s)	0.00	1.54	21.460	36.26	131.60	0.650	0.500	2.00	3.086	2.01	72.8	21.9

Totals: 152.00 8,846.8 3,465.9 27,699.0

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

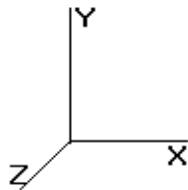
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Base Elev : 0.000 (ft)

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**Load Case:** Ice

73.61 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
30.00	2" x 4" GPS	1	13.871	23.442	1.00	0.08	0.000	0.000	1.88	0.00	0.00	5.74
134.0	Low Profile Platform	1	20.701	34.985	1.00	31.60	0.000	0.000	1,105.53	0.00	0.00	1,700.00
134.0	Kathrein 742 351	3	20.701	34.985	0.66	12.89	0.000	0.000	450.95	0.00	0.00	171.30
134.0	Kathrein 800 10504	3	20.701	34.985	0.78	9.06	0.000	0.000	316.82	0.00	0.00	107.10
134.0	Kathrein 860-10025	6	20.701	34.985	0.50	0.78	0.000	0.000	27.29	0.00	0.00	15.60
140.0	Powerwave P65-16-	3	21.047	35.570	0.75	20.74	0.000	2.000	737.89	0.00	1,475.78	232.50
140.0	Andrew DB846H80E-	6	21.047	35.570	0.93	36.60	0.000	2.000	1,302.02	0.00	2,604.03	210.00
140.0	Rymsa MGD3-800T0	3	21.047	35.570	0.82	9.79	0.000	2.000	348.25	0.00	696.51	135.00
140.0	RFS FD9R6004/1C-3L	6	21.047	35.570	0.67	2.01	0.000	2.000	71.49	0.00	142.99	32.40
140.0	Flat Low Profile Pla	1	20.962	35.426	1.00	31.60	0.000	0.000	1,119.45	0.00	0.00	1,700.00
150.0	Flat Low Profile Pla	1	21.379	36.131	1.00	31.60	0.000	0.000	1,141.74	0.00	0.00	1,700.00
150.0	9' Omni	1	21.620	36.538	0.67	2.43	0.000	6.000	88.86	0.00	533.19	44.70
150.0	Powerwave LGP21901	6	21.338	36.062	0.50	1.02	0.000	-1.000	36.78	0.00	-36.78	46.20
150.0	Powerwave LGP21401	6	21.338	36.062	0.50	4.59	0.000	-1.000	165.52	0.00	-165.52	127.20
150.0	Powerwave P65-16-	3	21.460	36.268	0.79	21.85	0.000	2.000	792.51	0.00	1,585.01	300.60
150.0	Powerwave 7770.00	6	21.338	36.062	0.77	30.17	0.000	-1.000	1,087.94	0.00	-1,087.94	354.00
150.0	Raycap DC6-48-60-18-	1	21.338	36.062	1.00	1.67	0.000	-1.000	60.22	0.00	-60.22	49.50
150.0	Ericsson RRUS 11 (Ba	6	21.338	36.062	0.67	13.23	0.000	-1.000	476.95	0.00	-476.95	445.80
152.0	Ericsson KRY 112 144	3	21.893	36.999	0.50	0.83	0.000	11.000	30.52	0.00	335.77	42.30
152.0	Ericsson AIR 21, 1.3	3	21.893	36.999	0.86	18.58	0.000	11.000	687.30	0.00	7,560.28	397.80
											10,049.92	7,817.74

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
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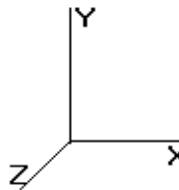
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Base Elev : 0.000 (ft)

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**Load Case:** Ice

73.61 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Linear Appurtenance Segment Forces

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
5.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	13.871	0.00	2.85
5.00	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	13.871	0.00	4.90
5.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	69.86	140.10
5.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	70.33	140.10
5.00	(1) 1/2" Coax	Yes	5.00	0.00	0.00	13.871	0.00	0.00
10.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	13.871	0.00	2.85
10.00	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	13.871	0.00	4.90
10.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	69.86	140.10
10.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	70.33	140.10
10.00	(1) 1/2" Coax	Yes	5.00	0.00	0.00	13.871	0.00	0.00
15.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	13.871	0.00	2.85
15.00	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	13.871	0.00	4.90
15.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	69.86	140.10
15.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	70.33	140.10
15.00	(1) 1/2" Coax	Yes	5.00	0.00	0.00	13.871	0.00	0.00
20.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	13.871	0.00	2.85
20.00	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	13.871	0.00	4.90
20.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	69.86	140.10
20.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	70.33	140.10
20.00	(1) 1/2" Coax	Yes	5.00	0.00	0.00	13.871	0.00	0.00
25.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	13.871	0.00	2.85
25.00	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	13.871	0.00	4.90
25.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	69.86	140.10
25.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	70.33	140.10
25.00	(1) 1/2" Coax	Yes	5.00	0.00	0.00	13.871	0.00	0.00
30.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	13.871	0.00	2.85
30.00	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	13.871	0.00	4.90
30.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	69.86	140.10
30.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	13.871	70.33	140.10
30.00	(1) 1/2" Coax	Yes	5.00	0.00	0.00	13.871	0.00	0.00
35.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	14.106	0.00	2.85
35.00	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	14.106	0.00	4.90
35.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	14.106	71.04	140.10
35.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	14.106	71.52	140.10
40.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	14.655	0.00	2.85
40.00	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	14.655	0.00	4.90
40.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	14.655	73.81	140.10
40.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	14.655	74.30	140.10
45.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	15.156	0.00	2.85
45.00	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	15.156	0.00	4.90
45.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	15.156	76.33	140.10
45.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	15.156	76.84	140.10
47.91	(1) 0.28" RG-6	Yes	2.91	0.57	0.00	15.431	0.00	1.66
47.91	(2) 0.74" 8 AWG7	Yes	2.91	0.98	0.00	15.431	0.00	2.85
47.91	(12) 1 5/8" Coax	Yes	2.91	28.02	0.60	15.431	45.28	81.63
47.91	(12) 1 5/8" Coax	Yes	2.91	28.02	0.60	15.431	45.58	81.63
50.00	(1) 0.28" RG-6	Yes	2.09	0.57	0.00	15.620	0.00	1.19
50.00	(2) 0.74" 8 AWG7	Yes	2.09	0.98	0.00	15.620	0.00	2.05
50.00	(12) 1 5/8" Coax	Yes	2.09	28.02	0.60	15.620	32.83	58.47
50.00	(12) 1 5/8" Coax	Yes	2.09	28.02	0.60	15.620	33.05	58.47
54.08	(1) 0.28" RG-6	Yes	4.08	0.57	0.00	15.974	0.00	2.33

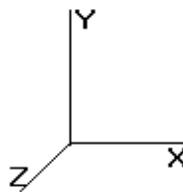
Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

Code: TIA/EIA-222 Rev F

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Base Elev : 0.000 (ft)

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**Load Case: Ice**

73.61 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

54.08	(2) 0.74" 8 AWG 7	Yes	4.08	0.98	0.00	15.974	0.00	4.00
54.08	(12) 1 5/8" Coax	Yes	4.08	28.02	0.60	15.974	65.64	114.32
54.08	(12) 1 5/8" Coax	Yes	4.08	28.02	0.60	15.974	66.08	114.32
55.00	(1) 0.28" RG-6	Yes	0.92	0.57	0.00	16.051	0.00	0.52
55.00	(2) 0.74" 8 AWG 7	Yes	0.92	0.98	0.00	16.051	0.00	0.90
55.00	(12) 1 5/8" Coax	Yes	0.92	28.02	0.60	16.051	14.88	25.78
55.00	(12) 1 5/8" Coax	Yes	0.92	28.02	0.60	16.051	14.98	25.78
60.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	16.455	0.00	2.85
60.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.98	0.00	16.455	0.00	4.90
60.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	16.455	82.87	140.10
60.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	16.455	83.43	140.10
65.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	16.836	0.00	2.85
65.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.98	0.00	16.836	0.00	4.90
65.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	16.836	84.79	140.10
65.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	16.836	85.36	140.10
70.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	17.196	0.00	2.85
70.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.98	0.00	17.196	0.00	4.90
70.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	17.196	86.60	140.10
70.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	17.196	87.18	140.10
75.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	17.538	0.00	2.85
75.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.98	0.00	17.538	0.00	4.90
75.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	17.538	88.33	140.10
75.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	17.538	88.92	140.10
80.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	17.865	0.00	2.85
80.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.98	0.00	17.865	0.00	4.90
80.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	17.865	89.97	140.10
80.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	17.865	90.57	140.10
85.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	18.177	0.00	2.85
85.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.98	0.00	18.177	0.00	4.90
85.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	18.177	91.54	140.10
85.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	18.177	92.16	140.10
90.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	18.476	0.00	2.85
90.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.98	0.00	18.476	0.00	4.90
90.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	18.476	93.05	140.10
90.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	18.476	93.67	140.10
95.00	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	18.764	0.00	2.85
95.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.98	0.00	18.764	0.00	4.90
95.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	18.764	94.50	140.10
95.00	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	18.764	95.13	140.10
97.74	(1) 0.28" RG-6	Yes	2.74	0.57	0.00	18.917	0.00	1.56
97.74	(2) 0.74" 8 AWG 7	Yes	2.74	0.98	0.00	18.917	0.00	2.69
97.74	(12) 1 5/8" Coax	Yes	2.74	28.02	0.60	18.917	52.27	76.86
97.74	(12) 1 5/8" Coax	Yes	2.74	28.02	0.60	18.917	52.62	76.86
100.0	(1) 0.28" RG-6	Yes	2.26	0.57	0.00	19.041	0.00	1.29
100.0	(2) 0.74" 8 AWG 7	Yes	2.26	0.98	0.00	19.041	0.00	2.21
100.0	(12) 1 5/8" Coax	Yes	2.26	28.02	0.60	19.041	43.28	63.24
100.0	(12) 1 5/8" Coax	Yes	2.26	28.02	0.60	19.041	43.57	63.24
102.2	(1) 0.28" RG-6	Yes	2.24	0.57	0.00	19.162	0.00	1.28
102.2	(2) 0.74" 8 AWG 7	Yes	2.24	0.98	0.00	19.162	0.00	2.20
102.2	(12) 1 5/8" Coax	Yes	2.24	28.02	0.60	19.162	43.29	62.85
102.2	(12) 1 5/8" Coax	Yes	2.24	28.02	0.60	19.162	43.58	62.85
105.0	(1) 0.28" RG-6	Yes	2.76	0.57	0.00	19.308	0.00	1.57
105.0	(2) 0.74" 8 AWG 7	Yes	2.76	0.98	0.00	19.308	0.00	2.70
105.0	(12) 1 5/8" Coax	Yes	2.76	28.02	0.60	19.308	53.61	77.25
105.0	(12) 1 5/8" Coax	Yes	2.76	28.02	0.60	19.308	53.97	77.25
110.0	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	19.566	0.00	2.85
110.0	(2) 0.74" 8 AWG 7	Yes	5.00	0.98	0.00	19.566	0.00	4.90

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

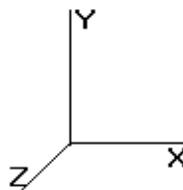
Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

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**Load Case: Ice**

73.61 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

110.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	19.566	98.54	140.10
110.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	19.566	99.20	140.10
115.0	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	19.816	0.00	2.85
115.0	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	19.816	0.00	4.90
115.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	19.816	99.80	140.10
115.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	19.816	100.47	140.10
120.0	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	20.059	0.00	2.85
120.0	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	20.059	0.00	4.90
120.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	20.059	101.02	140.10
120.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	20.059	101.70	140.10
125.0	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	20.294	0.00	2.85
125.0	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	20.294	0.00	4.90
125.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	20.294	102.21	140.10
125.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	20.294	102.89	140.10
130.0	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	20.523	0.00	2.85
130.0	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	20.523	0.00	4.90
130.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	20.523	103.36	140.10
130.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	20.523	104.05	140.10
134.0	(1) 0.28" RG-6	Yes	4.00	0.57	0.00	20.701	0.00	2.28
134.0	(2) 0.74" 8 AWG7	Yes	4.00	0.98	0.00	20.701	0.00	3.92
134.0	(12) 1 5/8" Coax	Yes	4.00	28.02	0.60	20.701	83.40	112.08
134.0	(12) 1 5/8" Coax	Yes	4.00	28.02	0.60	20.701	83.96	112.08
135.0	(1) 0.28" RG-6	Yes	1.00	0.57	0.00	20.745	0.00	0.57
135.0	(2) 0.74" 8 AWG7	Yes	1.00	0.98	0.00	20.745	0.00	0.98
135.0	(12) 1 5/8" Coax	Yes	1.00	28.02	0.60	20.745	20.90	28.02
140.0	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	20.962	0.00	2.85
140.0	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	20.962	0.00	4.90
140.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	20.962	105.57	140.10
145.0	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	21.173	0.00	2.85
145.0	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	21.173	0.00	4.90
145.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	21.173	106.63	140.10
150.0	(1) 0.28" RG-6	Yes	5.00	0.57	0.00	21.379	0.00	2.85
150.0	(2) 0.74" 8 AWG7	Yes	5.00	0.98	0.00	21.379	0.00	4.90
150.0	(12) 1 5/8" Coax	Yes	5.00	28.02	0.60	21.379	107.67	140.10

Totals: 4,938.91 8,190.18

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

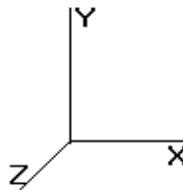
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Base Elev : 0.000 (ft)

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**Load Case:** Ice

73.61 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	502.58	1,930.77	0.00	0.00
10.00	494.07	1,894.97	0.00	0.00
15.00	485.56	1,859.16	0.00	0.00
20.00	477.05	1,823.35	0.00	0.00
25.00	468.54	1,787.55	0.00	0.00
30.00	461.90	1,757.48	0.00	0.00
35.00	459.17	1,715.93	0.00	0.00
40.00	468.04	1,680.13	0.00	0.00
45.00	474.75	1,644.32	0.00	0.00
47.91	277.25	942.05	0.00	0.00
50.00	201.27	1,040.29	0.00	0.00
54.08	397.49	2,001.56	0.00	0.00
55.00	89.17	264.59	0.00	0.00
60.00	490.79	1,417.64	0.00	0.00
65.00	491.81	1,386.36	0.00	0.00
70.00	491.78	1,355.08	0.00	0.00
75.00	490.81	1,323.80	0.00	0.00
80.00	488.99	1,292.51	0.00	0.00
85.00	486.38	1,261.23	0.00	0.00
90.00	483.05	1,229.95	0.00	0.00
95.00	479.06	1,198.67	0.00	0.00
97.74	260.04	644.84	0.00	0.00
100.0	214.67	714.64	0.00	0.00
102.2	212.35	700.32	0.00	0.00
105.0	259.71	519.35	0.00	0.00
110.0	468.01	923.75	0.00	0.00
115.0	461.83	901.52	0.00	0.00
120.0	455.18	879.28	0.00	0.00
125.0	448.06	857.05	0.00	0.00
130.0	440.52	834.82	0.00	0.00
134.0	2,246.92	2,646.18	0.00	0.00
135.0	64.46	133.05	0.00	0.00
140.0	3,897.06	2,960.15	0.00	4,919.32
145.0	308.16	578.82	0.00	0.00
150.0	4,148.57	3,624.58	0.00	290.78
152.0	790.57	597.20	0.00	7,896.04
<b>Totals:</b>	<b>23,835.62</b>	<b>48,322.95</b>	<b>0.00</b>	<b>13,106.14</b>

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
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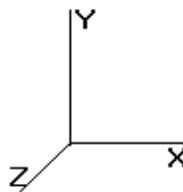
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Base Elev : 0.000 (ft)

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### Load Case: Ice

73.61 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-23.885	-48.298	0.000	0.000	0.000	-2,578.524	0.000	0.000	0.000	0.000
5.00	-23.474	-46.321	0.000	0.000	0.000	-2,459.103	-0.062	0.000	0.062	-0.114
10.00	-23.066	-44.380	0.000	0.000	0.000	-2,341.736	-0.245	0.000	0.245	-0.232
15.00	-22.661	-42.475	0.000	0.000	0.000	-2,226.409	-0.552	0.000	0.552	-0.352
20.00	-22.259	-40.607	0.000	0.000	0.000	-2,113.106	-0.986	0.000	0.986	-0.475
25.00	-21.860	-38.775	0.000	0.000	0.000	-2,001.813	-1.551	0.000	1.551	-0.601
30.00	-21.463	-36.974	0.000	0.000	0.000	-1,892.513	-2.250	0.000	2.250	-0.730
35.00	-21.062	-35.216	0.000	0.000	0.000	-1,785.203	-3.086	0.000	3.086	-0.863
40.00	-20.647	-33.494	0.000	0.000	0.000	-1,679.894	-4.062	0.000	4.062	-0.999
45.00	-20.204	-31.819	0.000	0.000	0.000	-1,576.659	-5.183	0.000	5.183	-1.138
47.91	-19.947	-30.858	0.000	0.000	0.000	-1,517.801	-5.904	0.000	5.904	-1.222
50.00	-19.770	-29.791	0.000	0.000	0.000	-1,476.178	-6.452	0.000	6.452	-1.284
54.08	-19.362	-27.774	0.000	0.000	0.000	-1,395.519	-7.602	0.000	7.602	-1.404
55.00	-19.313	-27.479	0.000	0.000	0.000	-1,377.705	-7.876	0.000	7.876	-1.433
60.00	-18.861	-26.020	0.000	0.000	0.000	-1,281.142	-9.465	0.000	9.465	-1.598
65.00	-18.402	-24.594	0.000	0.000	0.000	-1,186.841	-11.229	0.000	11.229	-1.767
70.00	-17.937	-23.201	0.000	0.000	0.000	-1,094.834	-13.172	0.000	13.172	-1.939
75.00	-17.467	-21.841	0.000	0.000	0.000	-1,005.151	-15.297	0.000	15.297	-2.115
80.00	-16.994	-20.515	0.000	0.000	0.000	-917.815	-17.608	0.000	17.608	-2.294
85.00	-16.517	-19.222	0.000	0.000	0.000	-832.846	-20.109	0.000	20.109	-2.477
90.00	-16.038	-17.963	0.000	0.000	0.000	-750.262	-22.802	0.000	22.802	-2.662
95.00	-15.544	-16.750	0.000	0.000	0.000	-670.074	-25.690	0.000	25.690	-2.849
97.74	-15.279	-16.093	0.000	0.000	0.000	-627.435	-27.358	0.000	27.358	-2.955
100.0	-15.051	-15.367	0.000	0.000	0.000	-592.952	-28.775	0.000	28.775	-3.043
102.2	-14.826	-14.654	0.000	0.000	0.000	-559.191	-30.226	0.000	30.226	-3.131
105.0	-14.585	-14.102	0.000	0.000	0.000	-518.318	-32.065	0.000	32.065	-3.238
110.0	-14.123	-13.143	0.000	0.000	0.000	-445.396	-35.598	0.000	35.598	-3.502
115.0	-13.659	-12.213	0.000	0.000	0.000	-374.782	-39.404	0.000	39.404	-3.760
120.0	-13.193	-11.311	0.000	0.000	0.000	-306.488	-43.474	0.000	43.474	-4.007
125.0	-12.725	-10.440	0.000	0.000	0.000	-240.524	-47.796	0.000	47.796	-4.239
130.0	-12.252	-9.603	0.000	0.000	0.000	-176.901	-52.348	0.000	52.348	-4.447
134.0	-9.813	-7.128	0.000	0.000	0.000	-127.896	-56.136	0.000	56.136	-4.591
135.0	-9.749	-6.986	0.000	0.000	0.000	-118.083	-57.100	0.000	57.100	-4.625
140.0	-5.631	-4.344	0.000	0.000	0.000	-64.418	-62.016	0.000	62.016	-4.758
145.0	-5.280	-3.787	0.000	0.000	0.000	-36.264	-67.043	0.000	67.043	-4.844
150.0	-0.839	-0.528	0.000	0.000	0.000	-9.573	-72.142	0.000	72.142	-4.893
152.0	-0.791	0.000	0.000	0.000	0.000	-7.896	-74.191	0.000	74.191	-4.902

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

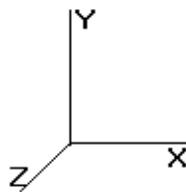
Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

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### Load Case: Ice

73.61 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Calculated Stresses

Seg Elev (ft)	Applied Stresses						Allowable Stress (Fb) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)		
0.00	0.62	0.62	0.00	0.00	0.00	28.46	29.09	52.0 0.0 0.560
5.00	0.61	0.62	0.00	0.00	0.00	28.48	29.11	52.0 0.0 0.560
10.00	0.60	0.62	0.00	0.00	0.00	28.50	29.12	52.0 0.0 0.560
15.00	0.58	0.63	0.00	0.00	0.00	28.51	29.12	52.0 0.0 0.560
20.00	0.57	0.63	0.00	0.00	0.00	28.51	29.11	52.0 0.0 0.560
25.00	0.56	0.64	0.00	0.00	0.00	28.50	29.08	52.0 0.0 0.559
30.00	0.55	0.65	0.00	0.00	0.00	28.46	29.04	52.0 0.0 0.559
35.00	0.54	0.65	0.00	0.00	0.00	28.41	28.98	52.0 0.0 0.557
40.00	0.53	0.66	0.00	0.00	0.00	28.34	28.89	52.0 0.0 0.556
45.00	0.52	0.66	0.00	0.00	0.00	28.24	28.78	52.0 0.0 0.554
47.91	0.51	0.67	0.00	0.00	0.00	28.18	28.71	52.0 0.0 0.552
50.00	0.50	0.67	0.00	0.00	0.00	28.13	28.65	52.0 0.0 0.551
54.08	0.55	0.77	0.00	0.00	0.00	31.39	31.97	52.0 0.0 0.615
55.00	0.54	0.77	0.00	0.00	0.00	31.35	31.93	52.0 0.0 0.614
60.00	0.53	0.78	0.00	0.00	0.00	31.10	31.66	52.0 0.0 0.609
65.00	0.52	0.78	0.00	0.00	0.00	30.80	31.35	52.0 0.0 0.603
70.00	0.51	0.79	0.00	0.00	0.00	30.44	30.98	52.0 0.0 0.596
75.00	0.50	0.80	0.00	0.00	0.00	30.02	30.55	52.0 0.0 0.588
80.00	0.48	0.81	0.00	0.00	0.00	29.52	30.04	52.0 0.0 0.578
85.00	0.47	0.81	0.00	0.00	0.00	28.93	29.44	52.0 0.0 0.566
90.00	0.46	0.82	0.00	0.00	0.00	28.24	28.73	52.0 0.0 0.553
95.00	0.44	0.83	0.00	0.00	0.00	27.41	27.90	52.0 0.0 0.537
97.74	0.44	0.84	0.00	0.00	0.00	26.91	27.39	52.0 0.0 0.527
100.00	0.43	0.84	0.00	0.00	0.00	26.47	26.93	52.0 0.0 0.518
102.24	0.61	1.24	0.00	0.00	0.00	37.23	37.90	52.0 0.0 0.729
105.00	0.60	1.25	0.00	0.00	0.00	36.26	36.92	52.0 0.0 0.710
110.00	0.59	1.27	0.00	0.00	0.00	34.20	34.85	52.0 0.0 0.670
115.00	0.57	1.29	0.00	0.00	0.00	31.73	32.38	52.0 0.0 0.623
120.00	0.56	1.31	0.00	0.00	0.00	28.75	29.40	52.0 0.0 0.566
125.00	0.54	1.33	0.00	0.00	0.00	25.14	25.79	52.0 0.0 0.496
130.00	0.53	1.36	0.00	0.00	0.00	20.73	21.39	52.0 0.0 0.412
134.00	0.41	1.14	0.00	0.00	0.00	16.51	17.03	52.0 0.0 0.328
135.00	0.41	1.15	0.00	0.00	0.00	15.62	16.15	52.0 0.0 0.311
140.00	0.27	0.71	0.00	0.00	0.00	9.70	10.04	52.0 0.0 0.193
145.00	0.25	0.71	0.00	0.00	0.00	6.27	6.64	52.0 0.0 0.128
150.00	0.04	0.12	0.00	0.00	0.00	1.92	1.97	52.0 0.0 0.038
152.00	0.00	0.12	0.00	0.00	0.00	1.69	1.70	52.0 0.0 0.033

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

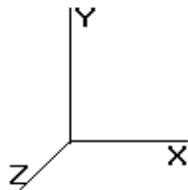
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Base Elev : 0.000 (ft)

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**Load Case:** Twist/Sway

50.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Shaft Segment Forces

Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	6.400	10.81	236.45	0.650	0.000	0.00	0.000	0.00	0.0	0.0
5.00		0.00	1.00	6.400	10.81	230.87	0.650	0.000	5.00	23.367	15.19	164.3	0.0
10.00		0.00	1.00	6.400	10.81	225.28	0.650	0.000	5.00	22.808	14.83	160.3	0.0
15.00		0.00	1.00	6.400	10.81	219.70	0.650	0.000	5.00	22.249	14.46	156.4	0.0
20.00		0.00	1.00	6.400	10.81	214.11	0.650	0.000	5.00	21.691	14.10	152.5	0.0
25.00		0.00	1.00	6.400	10.81	208.53	0.650	0.000	5.00	21.132	13.74	148.6	0.0
30.00	Appertunance(s)	0.00	1.00	6.400	10.81	202.94	0.650	0.000	5.00	20.574	13.37	144.6	0.0
35.00		0.00	1.01	6.509	10.99	199.02	0.650	0.000	5.00	20.015	13.01	143.1	0.0
40.00		0.00	1.05	6.762	11.42	197.11	0.650	0.000	5.00	19.457	12.65	144.5	0.0
45.00		0.00	1.09	6.993	11.81	194.62	0.650	0.000	5.00	18.898	12.28	145.2	0.0
47.91	Bot - Section 2	0.00	1.11	7.119	12.03	192.94	0.650	0.000	2.91	10.753	6.99	84.1	0.0
50.00		0.00	1.12	7.207	12.17	191.64	0.650	0.000	2.09	7.717	5.02	61.1	0.0
54.08	Top - Section 1	0.00	1.15	7.370	12.45	188.91	0.650	0.000	4.08	14.806	9.62	119.9	0.0
55.00		0.00	1.15	7.406	12.51	191.62	0.650	0.000	0.92	3.288	2.14	26.7	0.0
60.00		0.00	1.18	7.592	12.83	187.94	0.650	0.000	5.00	17.535	11.40	146.2	0.0
65.00		0.00	1.21	7.768	13.12	183.95	0.650	0.000	5.00	16.976	11.03	144.9	0.0
70.00		0.00	1.24	7.934	13.40	179.68	0.650	0.000	5.00	16.418	10.67	143.1	0.0
75.00		0.00	1.26	8.092	13.67	175.18	0.650	0.000	5.00	15.859	10.31	141.0	0.0
80.00		0.00	1.28	8.242	13.93	170.47	0.650	0.000	5.00	15.301	9.95	138.5	0.0
85.00		0.00	1.31	8.387	14.17	165.56	0.650	0.000	5.00	14.742	9.58	135.8	0.0
90.00		0.00	1.33	8.525	14.40	160.47	0.650	0.000	5.00	14.184	9.22	132.8	0.0
95.00		0.00	1.35	8.657	14.63	155.22	0.650	0.000	5.00	13.625	8.86	129.6	0.0
97.74	Bot - Section 3	0.00	1.36	8.728	14.75	152.27	0.650	0.000	2.74	7.238	4.70	69.4	0.0
100.0		0.00	1.37	8.785	14.84	149.81	0.650	0.000	2.26	5.923	3.85	57.2	0.0
102.2	Top - Section 2	0.00	1.38	8.841	14.94	147.34	0.650	0.000	2.24	5.774	3.75	56.1	0.0
105.0		0.00	1.39	8.908	15.05	146.73	0.650	0.000	2.76	6.942	4.51	67.9	0.0
110.0		0.00	1.41	9.028	15.25	141.07	0.650	0.000	5.00	12.158	7.90	120.6	0.0
115.0		0.00	1.42	9.143	15.45	135.30	0.650	0.000	5.00	11.599	7.54	116.5	0.0
120.0		0.00	1.44	9.255	15.64	129.40	0.650	0.000	5.00	11.041	7.18	112.2	0.0
125.0		0.00	1.46	9.363	15.82	123.41	0.650	0.000	5.00	10.482	6.81	107.8	0.0
130.0		0.00	1.48	9.469	16.00	117.31	0.650	0.000	5.00	9.924	6.45	103.2	0.0
134.0	Appertunance(s)	0.00	1.49	9.551	16.14	112.36	0.650	0.000	4.00	7.537	4.90	79.1	0.0
135.0		0.00	1.49	9.572	16.17	111.11	0.650	0.000	1.00	1.828	1.19	19.2	0.0
140.0	Appertunance(s)	0.00	1.51	9.672	16.34	104.82	0.650	0.000	5.00	8.806	5.72	93.6	0.0
145.0		0.00	1.52	9.769	16.51	98.451	0.650	0.000	5.00	8.248	5.36	88.5	0.0
150.0	Appertunance(s)	0.00	1.54	9.864	16.67	91.995	0.650	0.000	5.00	7.689	5.00	83.3	0.0
152.0	Appertunance(s)	0.00	1.54	9.902	16.73	89.390	0.650	0.000	2.00	2.919	1.90	31.8	0.0

Totals: 152.00 3,969.6 0.0 24,233.1

Pole : 302518  
 Location : Newtown CT 3, CT  
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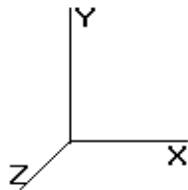
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Base Elev : 0.000 (ft)

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### Load Case: Twist/Sway

50.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
30.00	2" x 4" GPS	1	6.400	10.816	1.00	0.04	0.000	0.000	0.43	0.00	0.00	5.00
134.0	Low Profile Platform	1	9.551	16.142	1.00	26.10	0.000	0.000	421.30	0.00	0.00	1,500.00
134.0	Kathrein 742 351	3	9.551	16.142	0.66	11.64	0.000	0.000	187.93	0.00	0.00	89.40
134.0	Kathrein 800 10504	3	9.551	16.142	0.78	7.84	0.000	0.000	126.53	0.00	0.00	52.80
134.0	Kathrein 860-10025	6	9.551	16.142	0.50	0.48	0.000	0.000	7.75	0.00	0.00	6.60
140.0	Powerwave P65-16-	3	9.711	16.411	0.75	18.90	0.000	2.000	310.18	0.00	620.35	99.00
140.0	Andrew DB846H80E-	6	9.711	16.411	0.93	32.75	0.000	2.000	537.55	0.00	1,075.10	96.00
140.0	Rymsa MGD3-800T0	3	9.711	16.411	0.82	8.49	0.000	2.000	139.28	0.00	278.57	59.40
140.0	RFS FD9R6004/1C-3L	6	9.711	16.411	0.67	1.49	0.000	2.000	24.41	0.00	48.82	18.60
140.0	Flat Low Profile Pla	1	9.672	16.345	1.00	26.10	0.000	0.000	426.60	0.00	0.00	1,500.00
150.0	Flat Low Profile Pla	1	9.864	16.670	1.00	26.10	0.000	0.000	435.10	0.00	0.00	1,500.00
150.0	9' Omni	1	9.975	16.858	0.67	1.81	0.000	6.000	30.50	0.00	182.98	25.00
150.0	Powerwave LGP21901	6	9.845	16.639	0.50	0.69	0.000	-1.000	11.48	0.00	-11.48	33.00
150.0	Powerwave LGP21401	6	9.845	16.639	0.50	3.87	0.000	-1.000	64.39	0.00	-64.39	84.60
150.0	Powerwave P65-16-	3	9.902	16.734	0.79	19.91	0.000	2.000	333.13	0.00	666.27	159.00
150.0	Powerwave 7770.00	6	9.845	16.639	0.77	27.17	0.000	-1.000	452.00	0.00	-452.00	210.00
150.0	Raycap DC6-48-60-18-	1	9.845	16.639	1.00	1.26	0.000	-1.000	20.96	0.00	-20.96	20.00
150.0	Ericsson RRUS 11 (Ba	6	9.845	16.639	0.67	11.82	0.000	-1.000	196.65	0.00	-196.65	330.00
152.0	Ericsson KRY 112 144	3	10.101	17.071	0.50	0.62	0.000	11.000	10.50	0.00	115.49	33.00
152.0	Ericsson AIR 21, 1.3	3	10.101	17.071	0.86	15.61	0.000	11.000	266.46	0.00	2,931.08	249.00
											4,003.13	6,070.40

Pole : 302518  
 Location : Newtown CT 3, CT  
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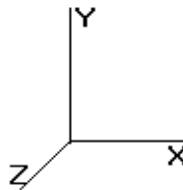
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### Load Case: Twist/Sway

50.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Linear Appurtenance Segment Forces

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
5.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	6.400	0.00	0.14
5.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	6.400	0.00	2.45
5.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
5.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
5.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
10.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	6.400	0.00	0.14
10.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	6.400	0.00	2.45
10.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
10.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
10.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
15.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	6.400	0.00	0.14
15.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	6.400	0.00	2.45
15.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
15.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
15.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
20.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	6.400	0.00	0.14
20.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	6.400	0.00	2.45
20.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
20.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
20.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
25.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	6.400	0.00	0.14
25.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	6.400	0.00	2.45
25.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
25.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
25.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
30.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	6.400	0.00	0.14
30.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	6.400	0.00	2.45
30.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
30.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
30.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
35.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	6.509	0.00	0.14
35.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	6.509	0.00	2.45
35.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.509	22.00	49.20
35.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.509	22.00	49.20
40.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	6.762	0.00	0.14
40.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	6.762	0.00	2.45
40.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.762	22.85	49.20
40.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.762	22.85	49.20
45.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	6.993	0.00	0.14
45.00	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	6.993	0.00	2.45
45.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.993	23.64	49.20
45.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.993	23.64	49.20
47.91	(1) 0.28" RG-6	Yes	2.91	0.03	0.00	7.119	0.00	0.08
47.91	(2) 0.74" 8 AWG7	Yes	2.91	0.49	0.00	7.119	0.00	1.43
47.91	(12) 1 5/8" Coax	Yes	2.91	9.84	0.40	7.119	14.02	28.67
47.91	(12) 1 5/8" Coax	Yes	2.91	9.84	0.40	7.119	14.02	28.67
50.00	(1) 0.28" RG-6	Yes	2.09	0.03	0.00	7.207	0.00	0.06
50.00	(2) 0.74" 8 AWG7	Yes	2.09	0.49	0.00	7.207	0.00	1.02
50.00	(12) 1 5/8" Coax	Yes	2.09	9.84	0.40	7.207	10.17	20.53
50.00	(12) 1 5/8" Coax	Yes	2.09	9.84	0.40	7.207	10.17	20.53
54.08	(1) 0.28" RG-6	Yes	4.08	0.03	0.00	7.370	0.00	0.12

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

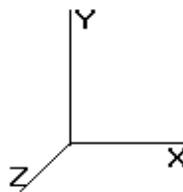
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Base Elev : 0.000 (ft)

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**Load Case: Twist/Sway**

50.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

54.08	(2) 0.74" 8 AWG 7	Yes	4.08	0.49	0.00	7.370	0.00	2.00
54.08	(12) 1 5/8" Coax	Yes	4.08	9.84	0.40	7.370	20.33	40.15
54.08	(12) 1 5/8" Coax	Yes	4.08	9.84	0.40	7.370	20.33	40.15
55.00	(1) 0.28" RG-6	Yes	0.92	0.03	0.00	7.406	0.00	0.03
55.00	(2) 0.74" 8 AWG 7	Yes	0.92	0.49	0.00	7.406	0.00	0.45
55.00	(12) 1 5/8" Coax	Yes	0.92	9.84	0.40	7.406	4.61	9.05
55.00	(12) 1 5/8" Coax	Yes	0.92	9.84	0.40	7.406	4.61	9.05
60.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	7.592	0.00	0.14
60.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	7.592	0.00	2.45
60.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.592	25.66	49.20
60.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.592	25.66	49.20
65.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	7.768	0.00	0.14
65.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	7.768	0.00	2.45
65.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.768	26.25	49.20
65.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.768	26.25	49.20
70.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	7.934	0.00	0.14
70.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	7.934	0.00	2.45
70.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.934	26.82	49.20
70.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.934	26.82	49.20
75.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	8.092	0.00	0.14
75.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	8.092	0.00	2.45
75.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.092	27.35	49.20
75.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.092	27.35	49.20
80.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	8.242	0.00	0.14
80.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	8.242	0.00	2.45
80.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.242	27.86	49.20
80.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.242	27.86	49.20
85.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	8.387	0.00	0.14
85.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	8.387	0.00	2.45
85.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.387	28.35	49.20
85.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.387	28.35	49.20
90.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	8.525	0.00	0.14
90.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	8.525	0.00	2.45
90.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.525	28.81	49.20
90.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.525	28.81	49.20
95.00	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	8.657	0.00	0.14
95.00	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	8.657	0.00	2.45
95.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.657	29.26	49.20
95.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.657	29.26	49.20
97.74	(1) 0.28" RG-6	Yes	2.74	0.03	0.00	8.728	0.00	0.08
97.74	(2) 0.74" 8 AWG 7	Yes	2.74	0.49	0.00	8.728	0.00	1.34
97.74	(12) 1 5/8" Coax	Yes	2.74	9.84	0.40	8.728	16.18	26.99
97.74	(12) 1 5/8" Coax	Yes	2.74	9.84	0.40	8.728	16.18	26.99
100.0	(1) 0.28" RG-6	Yes	2.26	0.03	0.00	8.785	0.00	0.07
100.0	(2) 0.74" 8 AWG 7	Yes	2.26	0.49	0.00	8.785	0.00	1.11
100.0	(12) 1 5/8" Coax	Yes	2.26	9.84	0.40	8.785	13.40	22.21
100.0	(12) 1 5/8" Coax	Yes	2.26	9.84	0.40	8.785	13.40	22.21
102.2	(1) 0.28" RG-6	Yes	2.24	0.03	0.00	8.841	0.00	0.07
102.2	(2) 0.74" 8 AWG 7	Yes	2.24	0.49	0.00	8.841	0.00	1.10
102.2	(12) 1 5/8" Coax	Yes	2.24	9.84	0.40	8.841	13.41	22.07
102.2	(12) 1 5/8" Coax	Yes	2.24	9.84	0.40	8.841	13.41	22.07
105.0	(1) 0.28" RG-6	Yes	2.76	0.03	0.00	8.908	0.00	0.08
105.0	(2) 0.74" 8 AWG 7	Yes	2.76	0.49	0.00	8.908	0.00	1.35
105.0	(12) 1 5/8" Coax	Yes	2.76	9.84	0.40	8.908	16.60	27.13
105.0	(12) 1 5/8" Coax	Yes	2.76	9.84	0.40	8.908	16.60	27.13
110.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	9.028	0.00	0.14
110.0	(2) 0.74" 8 AWG 7	Yes	5.00	0.49	0.00	9.028	0.00	2.45

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

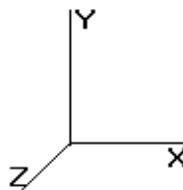
Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

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**Load Case:** Twist/Sway

50.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

110.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.028	30.51	49.20
110.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.028	30.51	49.20
115.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	9.143	0.00	0.14
115.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	9.143	0.00	2.45
115.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.143	30.90	49.20
115.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.143	30.90	49.20
120.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	9.255	0.00	0.14
120.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	9.255	0.00	2.45
120.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.255	31.28	49.20
120.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.255	31.28	49.20
125.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	9.363	0.00	0.14
125.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	9.363	0.00	2.45
125.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.363	31.65	49.20
125.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.363	31.65	49.20
130.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	9.469	0.00	0.14
130.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	9.469	0.00	2.45
130.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.469	32.01	49.20
130.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.469	32.01	49.20
134.0	(1) 0.28" RG-6	Yes	4.00	0.03	0.00	9.551	0.00	0.12
134.0	(2) 0.74" 8 AWG7	Yes	4.00	0.49	0.00	9.551	0.00	1.96
134.0	(12) 1 5/8" Coax	Yes	4.00	9.84	0.40	9.551	25.83	39.36
134.0	(12) 1 5/8" Coax	Yes	4.00	9.84	0.40	9.551	25.83	39.36
135.0	(1) 0.28" RG-6	Yes	1.00	0.03	0.00	9.572	0.00	0.03
135.0	(2) 0.74" 8 AWG7	Yes	1.00	0.49	0.00	9.572	0.00	0.49
135.0	(12) 1 5/8" Coax	Yes	1.00	9.84	0.40	9.572	6.47	9.84
140.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	9.672	0.00	0.14
140.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	9.672	0.00	2.45
140.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.672	32.69	49.20
145.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	9.769	0.00	0.14
145.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	9.769	0.00	2.45
145.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.769	33.02	49.20
150.0	(1) 0.28" RG-6	Yes	5.00	0.03	0.00	9.864	0.00	0.14
150.0	(2) 0.74" 8 AWG7	Yes	5.00	0.49	0.00	9.864	0.00	2.45
150.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.864	33.34	49.20

Totals: 1,524.60 2,876.91

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

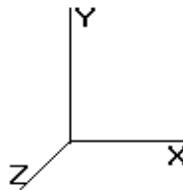
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Base Elev : 0.000 (ft)

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### Load Case: Twist/Sway

50.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	207.54	1,572.05	0.00	0.00
10.00	203.61	1,540.38	0.00	0.00
15.00	199.69	1,508.71	0.00	0.00
20.00	195.76	1,477.04	0.00	0.00
25.00	191.83	1,445.37	0.00	0.00
30.00	188.34	1,418.70	0.00	0.00
35.00	187.10	1,381.28	0.00	0.00
40.00	190.23	1,349.61	0.00	0.00
45.00	192.45	1,317.94	0.00	0.00
47.91	112.14	753.29	0.00	0.00
50.00	81.42	904.83	0.00	0.00
54.08	160.52	1,739.48	0.00	0.00
55.00	35.96	205.63	0.00	0.00
60.00	197.56	1,101.35	0.00	0.00
65.00	197.37	1,074.21	0.00	0.00
70.00	196.72	1,047.06	0.00	0.00
75.00	195.67	1,019.92	0.00	0.00
80.00	194.26	992.77	0.00	0.00
85.00	192.51	965.63	0.00	0.00
90.00	190.45	938.48	0.00	0.00
95.00	188.10	911.33	0.00	0.00
97.74	101.76	488.45	0.00	0.00
100.0	83.96	586.11	0.00	0.00
102.2	82.89	573.41	0.00	0.00
105.0	101.14	364.64	0.00	0.00
110.0	181.59	647.28	0.00	0.00
115.0	178.31	629.19	0.00	0.00
120.0	174.81	611.09	0.00	0.00
125.0	171.11	592.99	0.00	0.00
130.0	167.23	574.90	0.00	0.00
134.0	874.24	2,095.69	0.00	0.00
135.0	25.69	100.07	0.00	0.00
140.0	1,564.27	2,262.50	0.00	2,022.83
145.0	121.53	422.20	0.00	0.00
150.0	1,660.87	2,765.71	0.00	103.76
152.0	308.71	417.20	0.00	3,046.56
<b>Totals:</b>	<b>9,497.35</b>	<b>37,796.46</b>	<b>0.00</b>	<b>5,173.16</b>

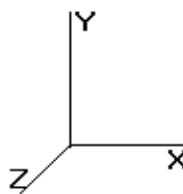
Pole : 302518  
 Location : Newtown CT 3, CT  
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Base Elev : 0.000 (ft)

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### Load Case: Twist/Sway

50.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-9.512	-37.793	0.000	0.000	0.000	-1,012.958	0.000	0.000	0.000	0.000
5.00	-9.332	-36.213	0.000	0.000	0.000	-965.400	-0.024	0.000	0.024	-0.045
10.00	-9.155	-34.666	0.000	0.000	0.000	-918.739	-0.096	0.000	0.096	-0.091
15.00	-8.980	-33.150	0.000	0.000	0.000	-872.964	-0.217	0.000	0.217	-0.138
20.00	-8.807	-31.666	0.000	0.000	0.000	-828.064	-0.387	0.000	0.387	-0.186
25.00	-8.636	-30.214	0.000	0.000	0.000	-784.030	-0.609	0.000	0.609	-0.236
30.00	-8.467	-28.788	0.000	0.000	0.000	-740.849	-0.883	0.000	0.883	-0.286
35.00	-8.298	-27.401	0.000	0.000	0.000	-698.514	-1.210	0.000	1.210	-0.338
40.00	-8.123	-26.045	0.000	0.000	0.000	-657.026	-1.593	0.000	1.593	-0.391
45.00	-7.940	-24.722	0.000	0.000	0.000	-616.410	-2.032	0.000	2.032	-0.446
47.91	-7.834	-23.966	0.000	0.000	0.000	-593.279	-2.315	0.000	2.315	-0.479
50.00	-7.759	-23.057	0.000	0.000	0.000	-576.932	-2.530	0.000	2.530	-0.503
54.08	-7.593	-21.315	0.000	0.000	0.000	-545.277	-2.980	0.000	2.980	-0.550
55.00	-7.569	-21.105	0.000	0.000	0.000	-538.290	-3.087	0.000	3.087	-0.561
60.00	-7.383	-19.997	0.000	0.000	0.000	-500.444	-3.709	0.000	3.709	-0.626
65.00	-7.195	-18.917	0.000	0.000	0.000	-463.529	-4.400	0.000	4.400	-0.691
70.00	-7.007	-17.864	0.000	0.000	0.000	-427.552	-5.160	0.000	5.160	-0.759
75.00	-6.817	-16.839	0.000	0.000	0.000	-392.519	-5.992	0.000	5.992	-0.828
80.00	-6.628	-15.841	0.000	0.000	0.000	-358.432	-6.897	0.000	6.897	-0.898
85.00	-6.438	-14.870	0.000	0.000	0.000	-325.294	-7.875	0.000	7.875	-0.969
90.00	-6.249	-13.928	0.000	0.000	0.000	-293.104	-8.929	0.000	8.929	-1.041
95.00	-6.057	-13.014	0.000	0.000	0.000	-261.859	-10.059	0.000	10.059	-1.114
97.74	-5.954	-12.524	0.000	0.000	0.000	-245.245	-10.711	0.000	10.711	-1.156
100.0	-5.865	-11.936	0.000	0.000	0.000	-231.809	-11.266	0.000	11.266	-1.190
102.2	-5.777	-11.360	0.000	0.000	0.000	-218.654	-11.833	0.000	11.833	-1.224
105.0	-5.683	-10.991	0.000	0.000	0.000	-202.726	-12.553	0.000	12.553	-1.266
110.0	-5.505	-10.338	0.000	0.000	0.000	-174.314	-13.935	0.000	13.935	-1.369
115.0	-5.328	-9.704	0.000	0.000	0.000	-146.791	-15.424	0.000	15.424	-1.470
120.0	-5.152	-9.090	0.000	0.000	0.000	-120.154	-17.018	0.000	17.018	-1.568
125.0	-4.977	-8.494	0.000	0.000	0.000	-94.396	-18.709	0.000	18.709	-1.658
130.0	-4.802	-7.919	0.000	0.000	0.000	-69.513	-20.492	0.000	20.492	-1.740
134.0	-3.867	-5.849	0.000	0.000	0.000	-50.305	-21.975	0.000	21.975	-1.797
135.0	-3.842	-5.747	0.000	0.000	0.000	-46.438	-22.353	0.000	22.353	-1.810
140.0	-2.208	-3.535	0.000	0.000	0.000	-25.207	-24.279	0.000	24.279	-1.862
145.0	-2.074	-3.116	0.000	0.000	0.000	-14.167	-26.249	0.000	26.249	-1.896
150.0	-0.322	-0.407	0.000	0.000	0.000	-3.691	-28.246	0.000	28.246	-1.915
152.0	-0.309	0.000	0.000	0.000	0.000	-3.047	-29.049	0.000	29.049	-1.919

Pole : 302518  
 Location : Newtown CT 3, CT  
 Height : 152.0 (ft)  
 Base Dia : 56.75 (in)  
 Top Dia : 17.24 (in)  
 Shape : 18 Sides  
 Taper : 0.268105 (in/ft)

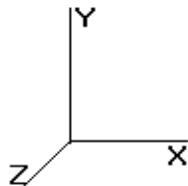
Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

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### Load Case: Twist/Sway

50.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

### Calculated Stresses

Seg Elev (ft)	Applied Stresses						Allowable Stress (F <sub>b</sub> ) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)		
0.00	0.48	0.25	0.00	0.00	0.00	11.18	11.67	52.0 0.0 0.225
5.00	0.47	0.25	0.00	0.00	0.00	11.18	11.66	52.0 0.0 0.224
10.00	0.47	0.25	0.00	0.00	0.00	11.18	11.66	52.0 0.0 0.224
15.00	0.46	0.25	0.00	0.00	0.00	11.18	11.64	52.0 0.0 0.224
20.00	0.45	0.25	0.00	0.00	0.00	11.17	11.63	52.0 0.0 0.224
25.00	0.44	0.25	0.00	0.00	0.00	11.16	11.61	52.0 0.0 0.223
30.00	0.43	0.25	0.00	0.00	0.00	11.14	11.58	52.0 0.0 0.223
35.00	0.42	0.26	0.00	0.00	0.00	11.12	11.55	52.0 0.0 0.222
40.00	0.41	0.26	0.00	0.00	0.00	11.08	11.50	52.0 0.0 0.221
45.00	0.40	0.26	0.00	0.00	0.00	11.04	11.45	52.0 0.0 0.220
47.91	0.40	0.26	0.00	0.00	0.00	11.01	11.42	52.0 0.0 0.220
50.00	0.39	0.26	0.00	0.00	0.00	10.99	11.39	52.0 0.0 0.219
54.08	0.42	0.30	0.00	0.00	0.00	12.27	12.70	52.0 0.0 0.244
55.00	0.42	0.30	0.00	0.00	0.00	12.25	12.68	52.0 0.0 0.244
60.00	0.41	0.30	0.00	0.00	0.00	12.15	12.57	52.0 0.0 0.242
65.00	0.40	0.31	0.00	0.00	0.00	12.03	12.44	52.0 0.0 0.239
70.00	0.39	0.31	0.00	0.00	0.00	11.89	12.29	52.0 0.0 0.236
75.00	0.38	0.31	0.00	0.00	0.00	11.72	12.12	52.0 0.0 0.233
80.00	0.37	0.31	0.00	0.00	0.00	11.53	11.91	52.0 0.0 0.229
85.00	0.36	0.32	0.00	0.00	0.00	11.30	11.68	52.0 0.0 0.225
90.00	0.35	0.32	0.00	0.00	0.00	11.03	11.40	52.0 0.0 0.219
95.00	0.35	0.32	0.00	0.00	0.00	10.71	11.07	52.0 0.0 0.213
97.74	0.34	0.33	0.00	0.00	0.00	10.52	10.87	52.0 0.0 0.209
100.00	0.33	0.33	0.00	0.00	0.00	10.35	10.69	52.0 0.0 0.206
102.24	0.47	0.48	0.00	0.00	0.00	14.56	15.05	52.0 0.0 0.290
105.00	0.47	0.49	0.00	0.00	0.00	14.18	14.67	52.0 0.0 0.282
110.00	0.46	0.49	0.00	0.00	0.00	13.38	13.87	52.0 0.0 0.267
115.00	0.45	0.50	0.00	0.00	0.00	12.43	12.91	52.0 0.0 0.248
120.00	0.45	0.51	0.00	0.00	0.00	11.27	11.75	52.0 0.0 0.226
125.00	0.44	0.52	0.00	0.00	0.00	9.87	10.35	52.0 0.0 0.199
130.00	0.44	0.53	0.00	0.00	0.00	8.15	8.63	52.0 0.0 0.166
134.00	0.34	0.45	0.00	0.00	0.00	6.49	6.87	52.0 0.0 0.132
135.00	0.34	0.45	0.00	0.00	0.00	6.14	6.53	52.0 0.0 0.126
140.00	0.22	0.28	0.00	0.00	0.00	3.80	4.04	52.0 0.0 0.078
145.00	0.21	0.28	0.00	0.00	0.00	2.45	2.70	52.0 0.0 0.052
150.00	0.03	0.05	0.00	0.00	0.00	0.74	0.77	52.0 0.0 0.015
152.00	0.00	0.05	0.00	0.00	0.00	0.65	0.66	52.0 0.0 0.013

Pole : 302518  
Location : Newtown CT 3, CT  
Height : 152.0 (ft)  
Base Dia : 56.75 (in)  
Top Dia : 17.24 (in)  
Shape : 18 Sides  
Taper : 0.268105 (in/ft)

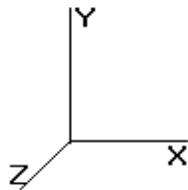
Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

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## Analysis Summary

Load Case	Reactions						Max Stresses			
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Combined Stress (ksi)	Allowable Stress (ksi)	Elev (ft)	Stress Ratio
No Ice	27.5	0.00	37.76	0.00	0.00	2924.87	42.46	52.0	102.24	0.817
Ice	23.9	0.00	48.30	0.00	0.00	2578.52	37.90	52.0	102.24	0.729
Twist/Sway	9.5	0.00	37.79	0.00	0.00	1012.96	15.05	52.0	102.24	0.290

<b>Base/Flange Plate</b>	Plate Type Pole Diameter Pole Thickness Plate Diameter Plate Thickness Plate Fy Weld Length Allowable Applied	<b>Baseplate</b> 56.75 in 0.4375 in 72 in 2 in 60 ksi 0.4375 in 445.71 k-in 445.71 k-in 386.53 k-in
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Code Rev.	<b>F</b>	Date 4/15/2014
A.S.I.	1.33	Engineer J. King
Moment	2921.4 k-ft	Site # 302518
Axial	27.5 k	Carrier T-Mobile

<b>Stiffeners</b>	#	0
-------------------	---	---

<b>Bolts</b>	# Bolt Circle (R)radial / (S)square	<b>16</b> 66 in R
	Diameter	2.25 in
	Hole Diameter	2.625 in
	Type	18J
	Fy	75 ksi
	Fu	100 ksi
	Allowable	194.86 k
	Applied	134.44 k

<b>Reinforcement ●</b>	#	0
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<b>Extra Bolts O</b>	#	0
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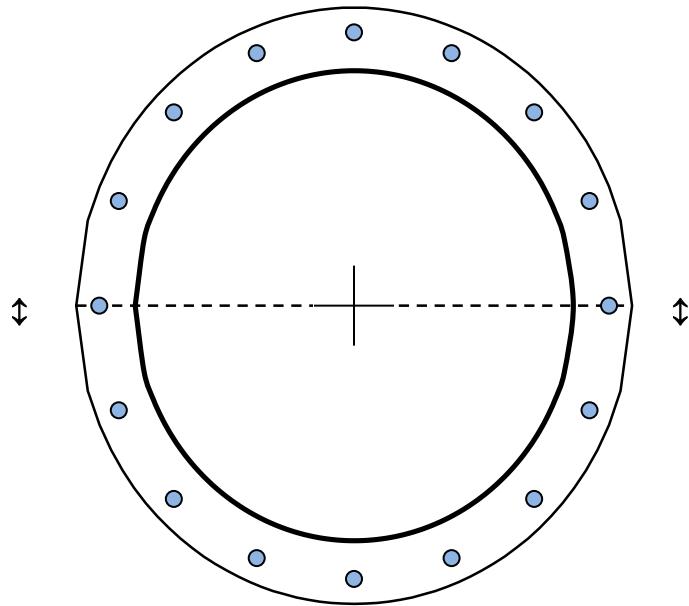


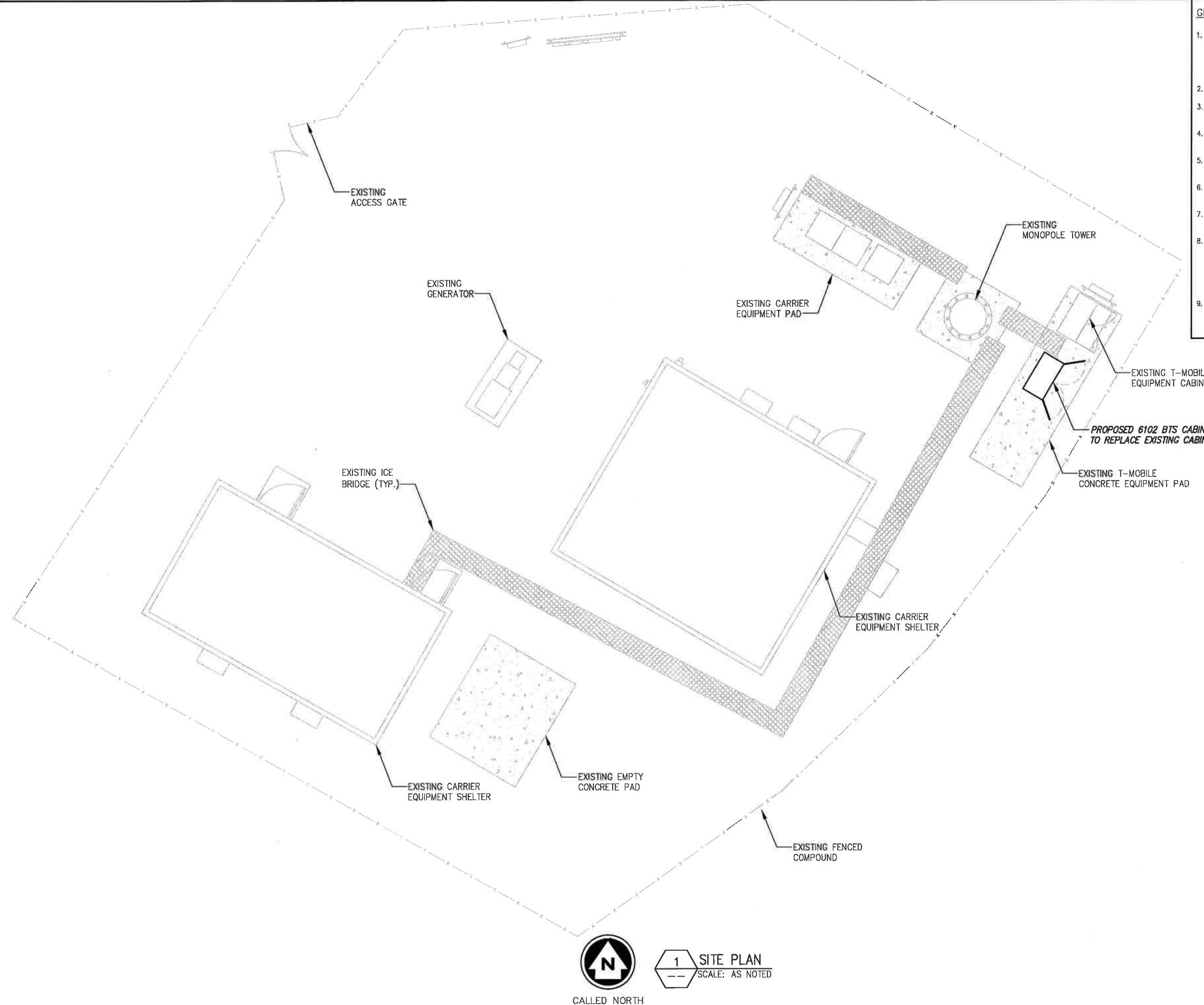
Plate Stress Ratio:

0.87 (Pass)

Bolt Stress Ratio:

0.69 (Pass)





**GENERAL SITE NOTES:**

1. A COMPLETE BOUNDARY SURVEY OF THE HOST PARCEL HAS NOT BEEN PERFORMED BY INFINIG ENGINEERING. BOUNDARY INFORMATION WAS OBTAINED FROM INFORMATION PROVIDED BY OTHERS. PROPERTY IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
  2. BASEMAPPING INFORMATION BASED ON PROVIDED INFORMATION.
  3. CONTRACTOR TO FIELD VERIFY DIMENSIONS AS NECESSARY BEFORE CONSTRUCTION.
  4. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE SIGNS OF ADVERTISING.
  5. THE PROPOSED DEVELOPMENT IS UNMANNED AND THEREFORE DOES NOT REQUIRE A MEANS OF WATER SUPPLY OR SEWAGE DISPOSAL.
  6. NO LANDSCAPING WORK IS PROPOSED IN CONJUNCTION WITH THIS DEVELOPMENT OTHER THAN THAT WHICH IS SHOWN.
  7. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES.
  8. UTILITIES SHOWN ON PLAN ARE TAKEN FROM OWNERS RECORDS AND FIELD LOCATION OF VISIBLE SURFACE FEATURES. THE EXISTENCE, EXTENT AND EXACT HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES HAS NOT BEEN VERIFIED. ANY CONTRACTOR PERFORMING WORK ON THIS SITE MUST CONTACT MISS UTILITY AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.
  9. ALL OBSOLETE OR UNUSED FACILITIES SHALL BE REMOVED WITHIN 12 MONTHS OF CESSION OF OPERATIONS.

---

**SUBMITTALS**

JECT NO: 317-1181  
WN BY: JLM  
CKED BY: AJD



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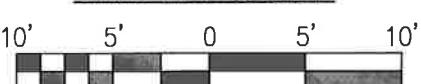
IF DRAWINGS ARE 22"X34", USE  
HICAL SCALE AND/OR 1/2 TIMES  
OF THE NOTED SCALE.

SITE NAME  
**CT11105F**  
BETHEL - SNET MOBILITY  
6 FAIRFIELD DRIVE  
NEWTOWN, CT 06470

SHEET THREE

SITE PLAN

### GRAPHIC SCALE



SCALE (11x17): 1" = 10'-0"

SCALE (11x17): 1" = 10'-0"

SHEET NUMBER

C-1

PAGE 2 OF 8 SHEETS

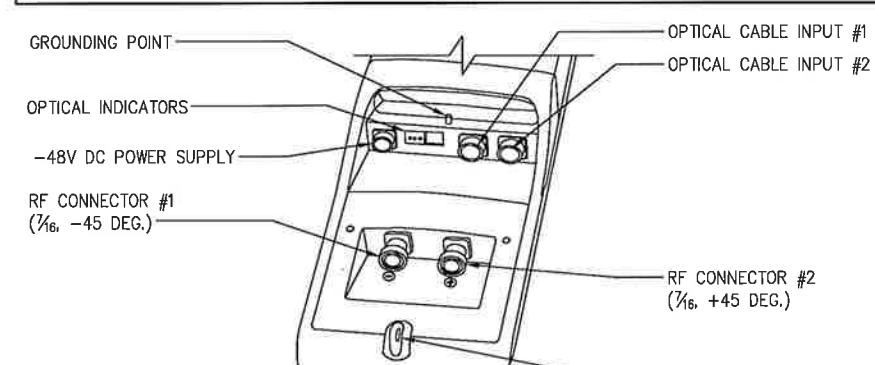
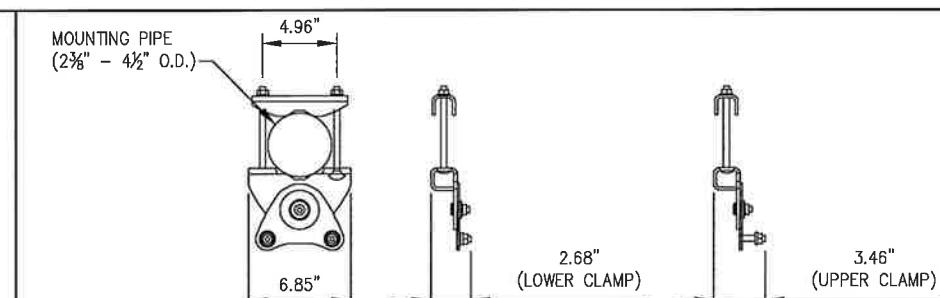
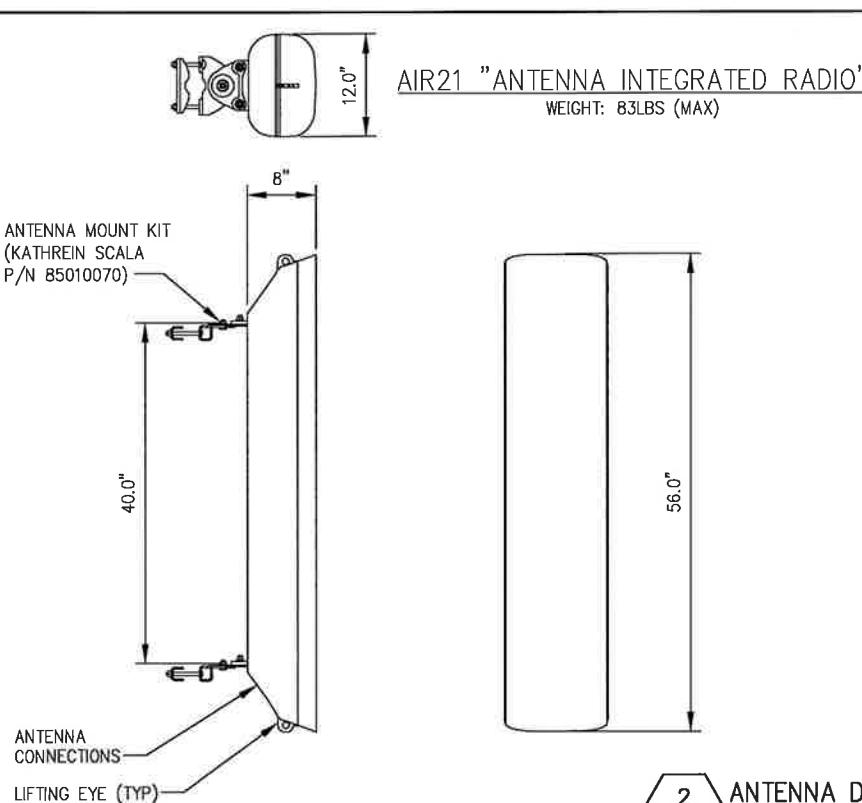


RF SYSTEM SCHEDULE (1B CONFIGURATION)																											
Sector	Technology	Antenna Port	Band	Antenna Model #	Vendor	Azimuth	M-Tilt	E-Tilt	Antenna Centerline	TMA Model #	Vendor	Cable Length	Cable Diameter	Cable Type	Cable Model #	Vendor	Cable Tagging	Color Coding	Jumper Type	Jumper Tagging	Color Coding						
A	UMTS AWS	RF #1	B4P	AIR21	ERICSSON	0°	0°	2°	163'-0"	KRY 112 144/1	N/A	EXISTING	1-5/8"	COAX	EXISTING	N/A	UMTS AWS A1	B	COAX	UMTS AWS A1	B						
		RF #2										EXISTING	1-5/8"	COAX	EXISTING	N/A	UMTS AWS A2	B	COAX	UMTS AWS A2	B						
	LMU	LMU #1	-							-	-	(P)191'±	1-5/8"	COAX	TBD	N/A	LMU A1	-	COAX	LMU A1	-						
		LMU #2										(P)191'±	1-5/8"	COAX	TBD	N/A	LMU A2	-	COAX	LMU A2	-						
	GSM	OPTICAL #1	B2A							-	-	191'±	-	HYBRID	MASTERLINE EXTREME HYBRID (9x18)	ERICSSON	FIBER 1	0	FIBER	GSM 1900 A1	R						
	UMTS	OPTICAL #2																	FIBER	UMTS 1900 A2	G						
B	UMTS AWS	RF #1	B4P	AIR21	ERICSSON	120°	0°	2°	163'-0"	KRY 112 144/1	N/A	EXISTING	1-5/8"	COAX	EXISTING	N/A	UMTS AWS B1	BB	COAX	UMTS AWS B1	BB						
		RF #2										EXISTING	1-5/8"	COAX	EXISTING	N/A	UMTS AWS B2	BB	COAX	UMTS AWS B2	BB						
	LMU	LMU #1	-							-	-	(P)191'±	1-5/8"	COAX	TBD	N/A	LMU B1	-	COAX	LMU B1	-						
		LMU #2										(P)191'±	1-5/8"	COAX	TBD	N/A	LMU B2	-	COAX	LMU B2	-						
	GSM	OPTICAL #1	B2A							-	-	(ANTENNA CONNECTED VIA SINGLE SHARED MLE HYBRID GEN2 CABLE. SEE SECTOR "A")						HYBRID	GSM 1900 B1	RR							
	UMTS	OPTICAL #2																HYBRID	UMTS 1900 B2	GG							
C	UMTS AWS	RF #1	B4P	AIR21	ERICSSON	240°	0°	2°	163'-0"	KRY 112 144/1	N/A	EXISTING	1-5/8"	COAX	EXISTING	N/A	UMTS AWS C1	BBB	COAX	UMTS AWS C1	BBB						
		RF #2										EXISTING	1-5/8"	COAX	EXISTING	N/A	UMTS AWS C2	BBB	COAX	UMTS AWS C2	BBB						
	LMU	LMU #1	-							-	-	(P)191'±	1-5/8"	COAX	TBD	N/A	LMU C1	-	COAX	LMU C1	-						
		LMU #2										(P)191'±	1-5/8"	COAX	TBD	N/A	LMU C2	-	COAX	LMU C2	-						
	GSM	OPTICAL #1	B2A							-	-	(ANTENNA CONNECTED VIA SINGLE SHARED MLE HYBRID GEN2 CABLE. SEE SECTOR "A")						HYBRID	GSM 1900 C1	RRR							
	UMTS	OPTICAL #2																HYBRID	UMTS 1900 C2	GGG							

1 RF SCHEDULE  
NOT TO SCALE

KEY

EXISTING	R - RED - GSM
PROPOSED	G - GREEN - UMTS 1900
FIBER CONNECTION	B - BLUE - UMTS AWS
	Y - YELLOW - LM
	O - ORANGE - FIBER CABLE



## METALLIC TAG NOTES:

1. TWO METALLIC TAGS SHALL BE ATTACHED AT EACH END OF EVERY CABLE LONGER THAN (3) THREE FEET.
2. CABLES LESS THAN (3) THREE FEET WILL HAVE TWO METALLIC TAGS ATTACHED AT THE CENTER OF THE CABLE.
3. TAGS WILL BE FASTENED WITH STAINLESS STEEL ZIP TIES APPROPRIATE FOR CABLE DIAMETER.
4. STANDARDIZED METALLIC TAG KITS WILL BE ASSEMBLED WITH TAGS ALREADY ENGRAVED TO ACCOMMODATE ALL CONFIGURATIONS.

3 METALLIC TAG DETAIL  
NOT TO SCALE



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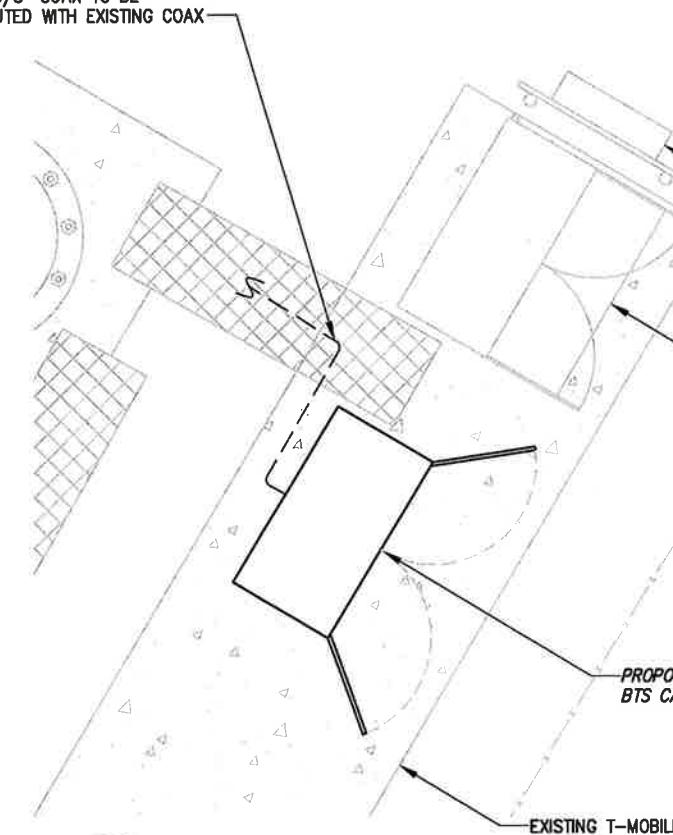
NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME  
CT11105F  
BETHEL-SNET MOBILITY  
6 FAIRFIELD DRIVE  
NEWTOWN, CT 06470

SHEET TITLE  
ANTENNA DETAIL & RF SCHEDULE

SHEET NUMBER  
C-3  
SHEET 4 OF 8 SHEETS



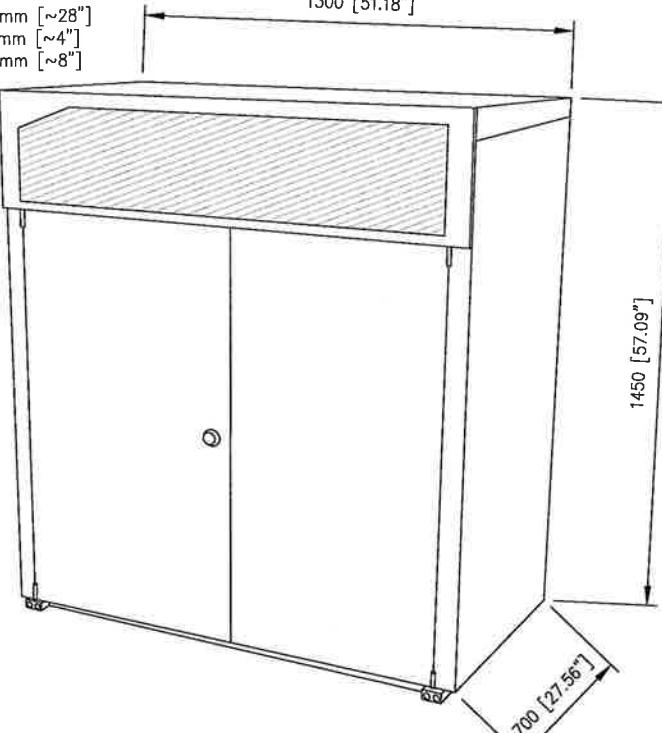


CABINET WEIGHT (WITHOUT BATTERIES): 330 KG [728 LBS]

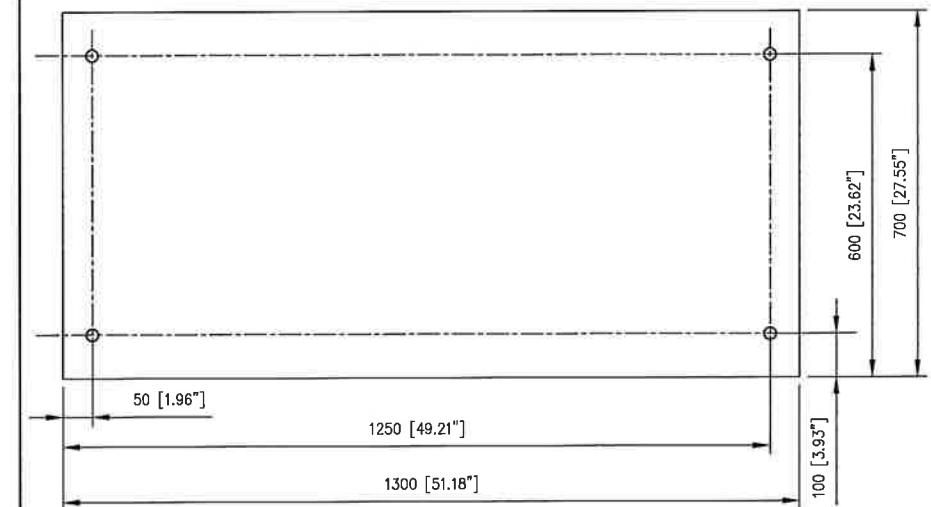
CABINET COLOR AS MANUFACTURED: GREY, RAL7035 GLOSSY

#### CABINET CLEARANCES:

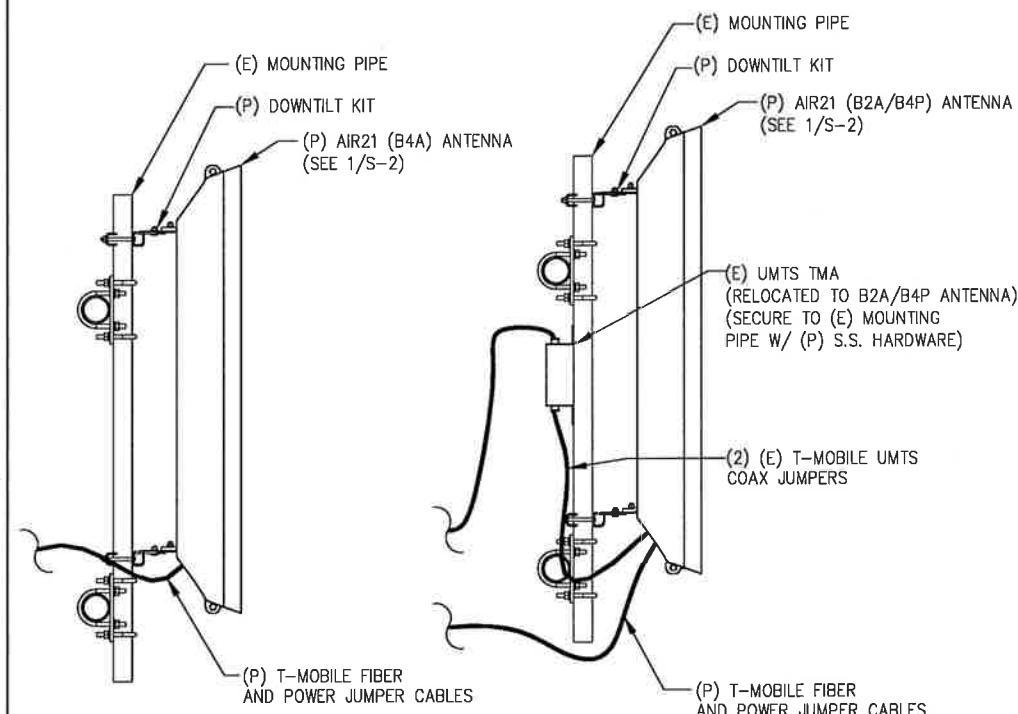
FRONT: 700mm [~28"]  
 SIDES: 100mm [~4"]  
 REAR: 200mm [~8"]



3 ERICSSON RBS 6102  
--- NOT TO SCALE



**4 BOLT HOLE DIAGRAM**  
--- NOT TO SCALE



**5** ANTENNA MOUNTING DETAIL  
--- NOT TO SCALE

1. SPECIFICATIONS / CODES:
    - CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE ACI CODE.
    - STEEL WORK SHALL BE PERFORMED IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL, 9TH EDITION.
    - WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.1-92 "STRUCTURAL WELDING" CODE-STEEL.
    - REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI), "MANUAL OF STANDARD PRACTICE."
  2. MATERIALS:
    - CONCRETE:  $f'_c$  - 3000psi. (MIN. U.N.O.)
    - REINFORCING STEEL: ASTM A615, GRADE 60.
    - WIRE MESH: ASTM A185.
    - STRUCTURAL STEEL: ASTM A36.
    - ELECTRODES FOR WELDING: E 70xx.
    - GALVANIZING: ASTM A153 (BOLTS) OR ASTM A123 (SHAPES, PLATES).
    - EXPANSION BOLTS: HILTI KWIK BOLT II, STAINLESS STEEL,  $3/4"$   $\phi$  x  $43/4"$  EMBEDMENT OR AN APPROVED EQUAL.

## 2. MATERIALS:

- CONCRETE: fc' = 3000psi. (MIN. U.N.O.)
  - REINFORCING STEEL: ASTM A615, GRADE 60.
  - WIRE MESH: ASTM A185.
  - STRUCTURAL STEEL: ASTM A36.
  - ELECTRODES FOR WELDING: E 70xx.
  - GALVANIZING: ASTM A153 (BOLTS) OR ASTM A123 (SHAPES, PLATES).
  - EXPANSION BOLTS: HILTI KWIK BOLT II, STAINLESS STEEL, 3/4"Øx43/4" EMBEDMENT OR AN APPROVED EQUAL.

SUBMITTALS

ECT NO: 317-1181  
VN BY: JLM  
KED BY: AJD

A circular seal containing the text "No. 24705", "LICENSED", "PROFESSIONAL ENGINEER", and "PROFESSIONAL SEAL".

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**NOTE: IF DRAWINGS ARE 22"X34", USE  
GRAPHICAL SCALE AND/OR 1/2 TIMES  
OF THE NOTED SCALE.**

SITE NAME  
CT11105F  
ETHEL - SNET MOBILITY  
6 FAIRFIELD DRIVE

SHEET THREE

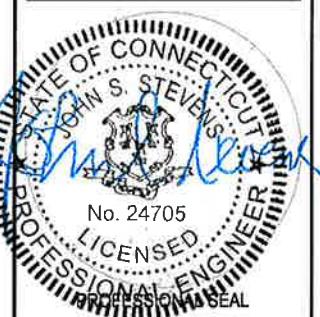
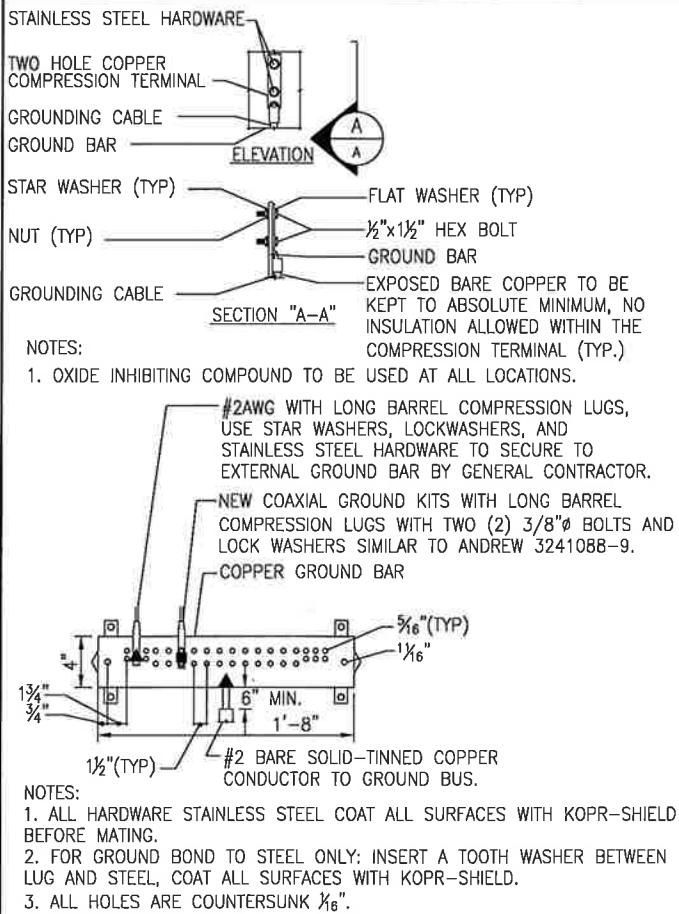
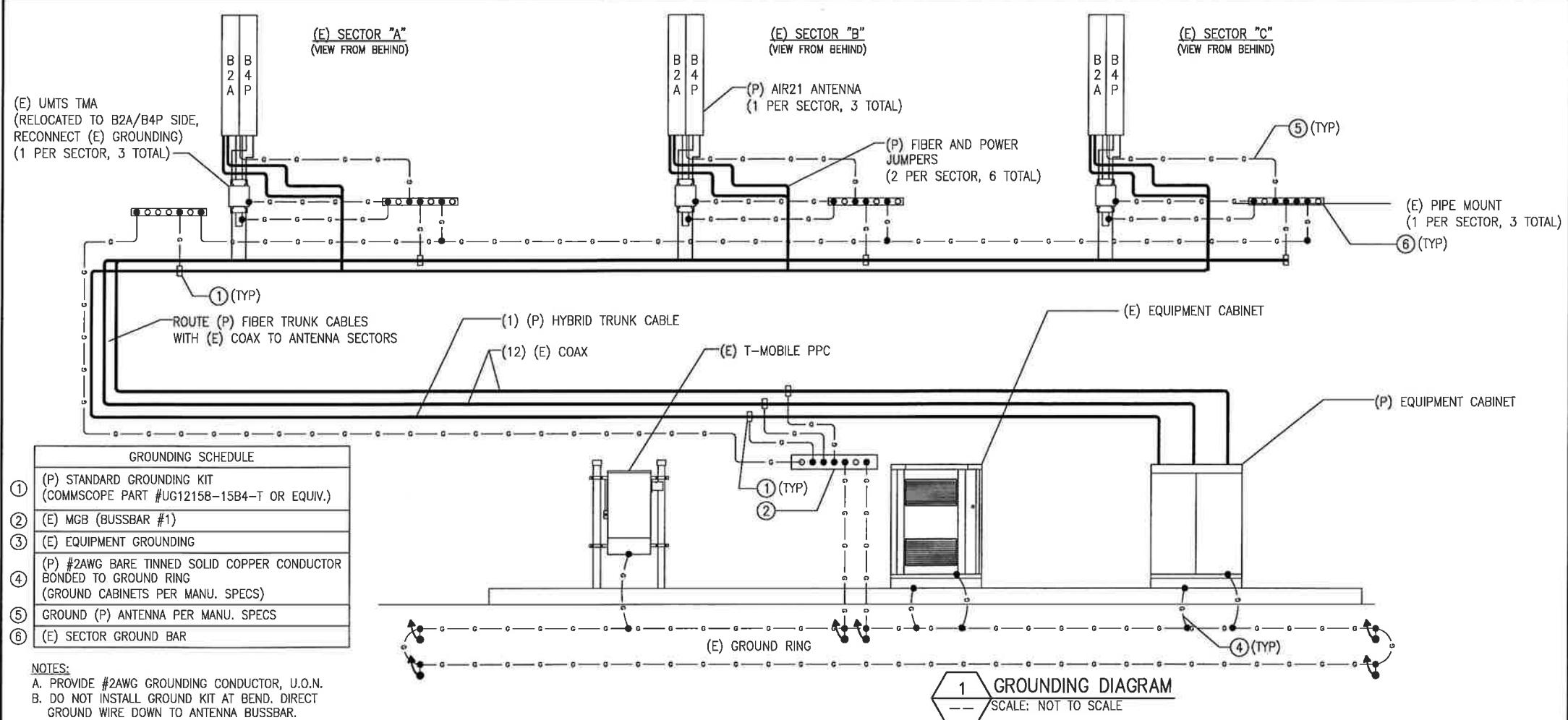
## **EQUIPMENT SPECIFICATIONS**

SHEET NUMBER

S-1

INFINIGY<sup>®</sup>  
design.  
build.  
deliver.

1033 WATERLOO ST, SHAKER ROAD  
ALBANY, NY 12205  
OFFICE: (518) 690-0793  
FAX: (518) 690-0793



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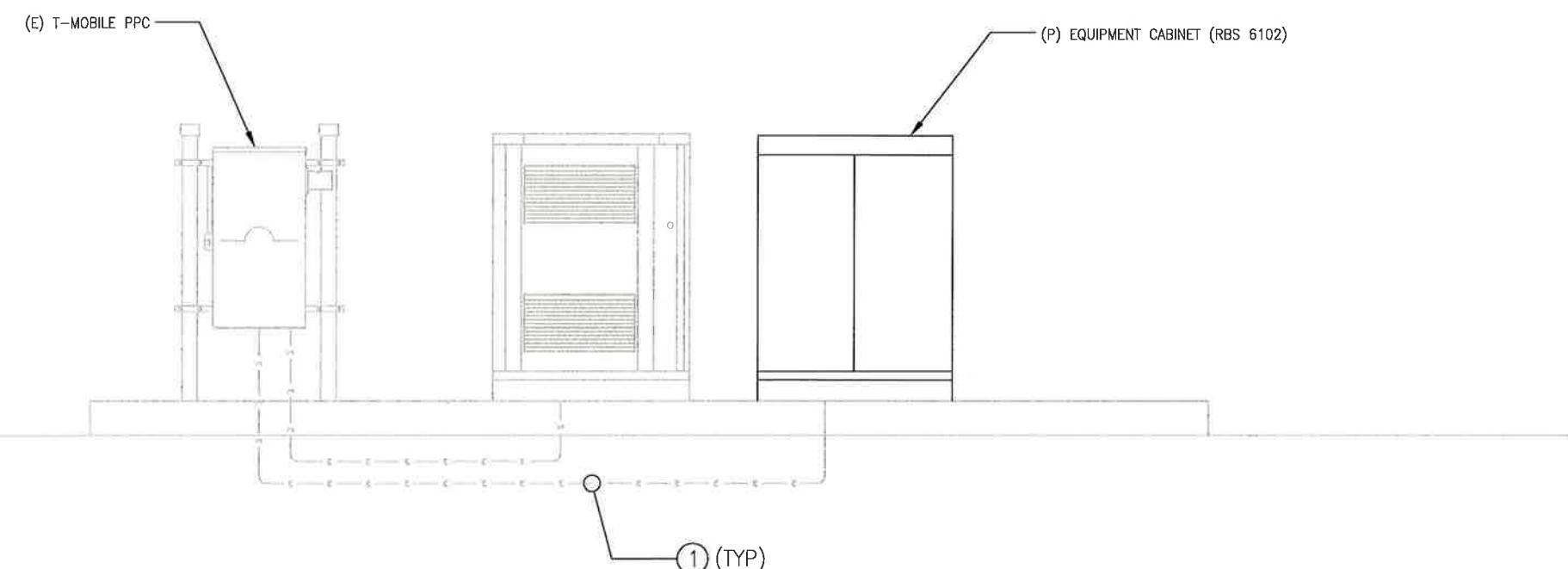
NOTE: IF DRAWINGS ARE 22"X34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME  
CT11105F  
BETHEL - SNET MOBILITY  
6 FAIRFIELD DRIVE  
NEWTOWN, CT 06470

SHEET TITLE  
**GROUNDING & POWER DIAGRAMS**

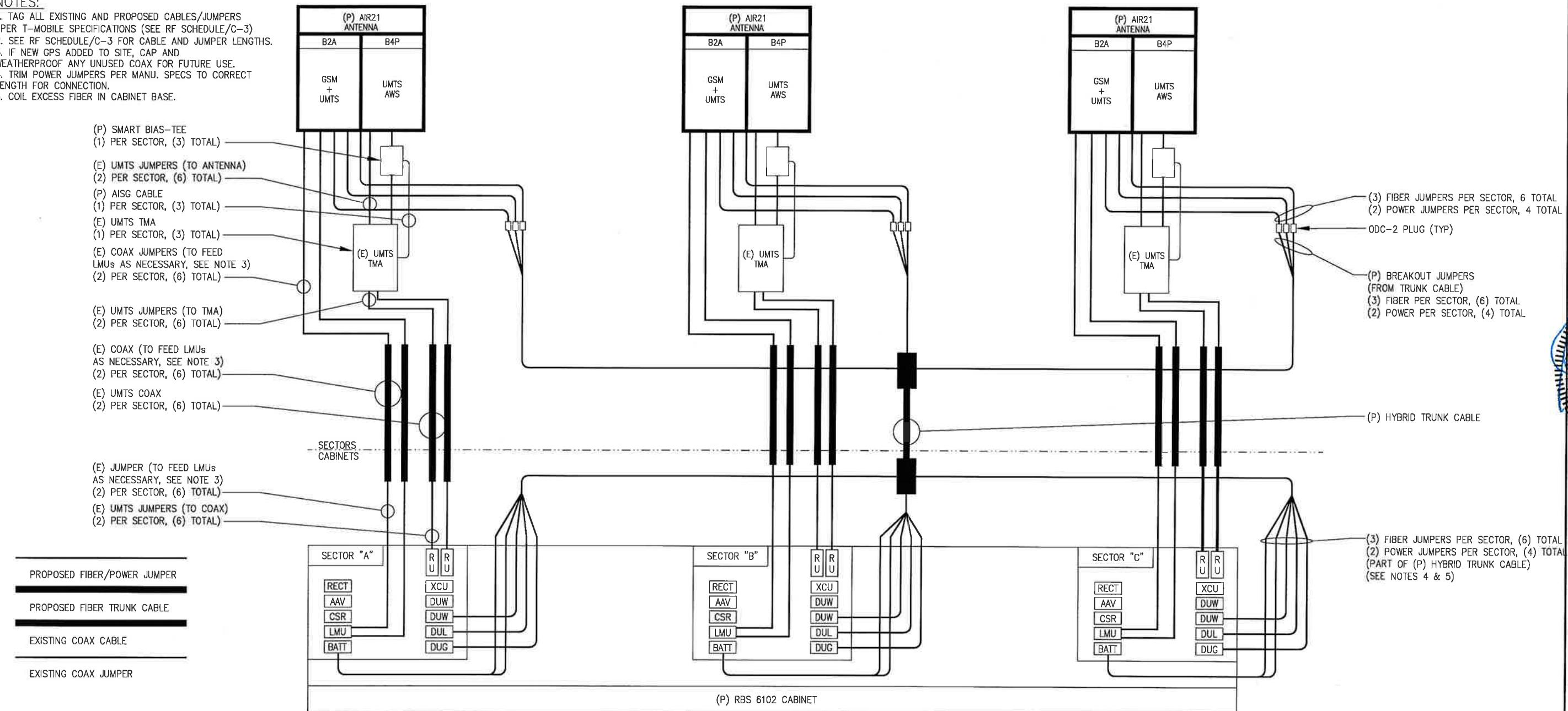
SHEET NUMBER  
**E-1**

SHEET 6 OF 8 SHEETS



NOTES:

1. TAG ALL EXISTING AND PROPOSED CABLES/JUMPERS PER T-MOBILE SPECIFICATIONS (SEE RF SCHEDULE/C-3)
2. SEE RF SCHEDULE/C-3 FOR CABLE AND JUMPER LENGTHS.
3. IF NEW GPS ADDED TO SITE, CAP AND WEATHERPROOF ANY UNUSED COAX FOR FUTURE USE.
4. TRIM POWER JUMPERS PER MANU. SPECS TO CORRECT LENGTH FOR CONNECTION.
5. COIL EXCESS FIBER IN CABINET BASE.



1 1B CONFIGURATION COAX/FIBER PLUMBING DIAGRAM  
--- NOT TO SCALE

SUBMITTALS		
DATE	DESCRIPTION	REVISION
4/04/14	REVIEW	A
4/10/14	FOR PERMIT	0

DEPT.	DATE	APP'D	REVISIONS
RFE			
RF MAN.			
ZONING			
OPS			
CONSTR.			
SITE AC.			

PROJECT NO: 317-1181  
DRAWN BY: JLM  
CHECKED BY: AJD



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NOTE: IF DRAWINGS ARE 22"X34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME  
CT11105F  
BETHEL - SNET MOBILITY  
6 FAIRFIELD DRIVE  
NEWTOWN, CT 06470

SHEET TITLE  
**COAX/FIBER PLUMBING DIAGRAM**

SHEET NUMBER  
**E-2**

## ELECTRICAL NOTES:

### WORK INCLUDED

- INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, PLANT SERVICES AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE THE ELECTRICAL WORK SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
  - PREPARE AND SUBMIT SHOP DRAWINGS, DIAGRAMS AND ILLUSTRATIONS.
  - PROCURE ALL NECESSARY PERMITS AND APPROVALS AND PAY ALL REQUIRED FEES AND CHARGES IN CONNECTION WITH THE WORK OF THIS CONTRACT.
  - SUBMIT AS-BUILT DRAWINGS, OPERATING AND MAINTENANCE INSTRUCTIONS AND MANUALS.
  - EXECUTE ALL CUTTING, DRILLING, ROUGH AND FINISH PATCHING OF EXISTING OR NEWLY INSTALLED CONSTRUCTION REQUIRED FOR THE WORK OF THIS CONTRACT. FOR SLAB PENETRATIONS THROUGH POST TENSION SLABS, X-RAY EXACT AREA OF PENETRATION PRIOR TO PERFORMING WORK.
  - PROVIDE HANGERS, SUPPORTS, FOUNDATIONS, STRUCTURAL FRAMING SUPPORTS, AND BASES FOR CONDUIT AND EQUIPMENT PROVIDED OR INSTALLED UNDER THE WORK OF HIS CONTRACT. PROVIDE COUNTER FLASHING, SLEEVES AND SEALS FOR FLOOR AND WALL PENETRATIONS.
  - MANTAIN ALL EXISTING ELECTRICAL SERVICES IN THE BUILDING AREAS NOT AFFECTED BY THE ALTERATION DURING THE PROGRESS OF THE WORK INCLUDING PROVIDING ALL TEMPORARY JUMPERS, CONDUITS, CAPS, PROTECTIVE DEVICES, CONNECTIONS AND EQUIPMENT REQUIRED. PROVIDE TEMPORARY LIGHT AND POWER FOR CONSTRUCTION PURPOSES.
- IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO CALL FOR AN INSTALLATION THAT IS COMPLETE IN EVERY RESPECT. IT IS NOT THE INTENT TO GIVE EVERY DETAIL ON THE DRAWINGS AND IN THE SPECIFICATIONS. IF AN ITEM OF WORK IS INDICATED IN THE DRAWINGS, IT IS CONSIDERED SUFFICIENT FOR INCLUSION IN THE CONTRACT, FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT USUALLY FURNISHED OR NEEDED TO MAKE A COMPLETE INSTALLATION WHETHER OR NOT SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS.

### GENERAL REQUIREMENTS

- PROVIDE ALL WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND LOCAL AND STATE ELECTRICAL CODES.
- THE ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT DIMENSIONS OF THE BUILDING.
- LOAD CALCULATIONS ARE BASED ON EXISTING BUILDING INFORMATION/DRAWINGS PROVIDED TO ENGINEERING. CONTRACTOR IS TO VERIFY ALL EXISTING RATINGS AND LOADS PRIOR TO PURCHASING OF SPECIFIED EQUIPMENT FOR COMPLIANCE TO NEC. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES AND REQUEST FURTHER DIRECTION BY ENGINEER.
- EXISTING BUILDING EQUIPMENT IS NOTED ON THE DRAWINGS. NEW OR RELOCATED EQUIPMENT IS SHOWN WITH SOLID LINES. FUTURE EQUIPMENT (NOT IN THIS CONTRACT) IS DEPICTED WITH SHADED LINES. REQUEST CLARIFICATION OF DRAWINGS OR OF SPECIFICATIONS PRIOR TO PRICING OR INSTALLATION.
- GENERAL
  - AFTER CAREFULLY STUDYING THE DRAWINGS AND SPECIFICATIONS, AND BEFORE SUBMITTING THE PROPOSAL, MAKE A MANDATORY SITE VISIT TO ASCERTAIN CONDITIONS OF THE SITE, AND THE NATURE AND EXACT QUANTITY OF WORK TO BE PERFORMED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR FAILURE TO NOTIFY THE OWNER, IN WRITING, OF ANY DISCREPANCIES THAT MAY HAVE BEEN NOTED BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS AND SPECIFICATIONS.
  - VERIFY ALL MEASUREMENTS AT THE SITE AND BE RESPONSIBLE FOR CORRECTNESS OF SAME.
- QUALITY, WORKMANSHIP, MATERIALS AND SAFETY
  - PROVIDE NEW MATERIALS AND EQUIPMENT OF A DOMESTIC MANUFACTURER BY THOSE REGULARLY ENGAGED IN THE PRODUCTION AND MANUFACTURE OF SPECIFIED MATERIALS AND EQUIPMENT. WHERE UL, OR OTHER AGENCY, HAS ESTABLISHED STANDARDS FOR MATERIALS, PROVIDE MATERIALS WHICH ARE LISTED AND LABELED ACCORDINGLY. THE COMMERCIALLY STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES MENTIONED HEREIN ARE INTENDED FOR THE PROPER FUNCTIONING OF THE WORK.
  - WORK SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE REQUIRED FOR THE WORK. INSTALL MATERIALS AND EQUIPMENT TO PRESENT A NEAT APPEARANCE WHEN COMPLETED AND IN ACCORDANCE WITH THE APPROVED RECOMMENDATIONS OF THE MANUFACTURER AND IN ACCORDANCE WITH CONTRACT DOCUMENTS.
  - PROVIDE LABOR, MATERIALS, APPARATUS AND APPLIANCES ESSENTIAL TO THE FUNCTIONING OF THE SYSTEMS DESCRIBED OR INDICATED HEREIN, OR WHICH MAY BE REASONABLY IMPLIED AS ESSENTIAL WHENEVER MENTIONED IN THE CONTRACT DOCUMENT OR NOT.
  - MAKE WRITTEN REQUESTS FOR SUPPLEMENTARY INSTRUCTIONS TO ARCHITECT/ENGINEER IN CASE OF DOUBT AS TO WORK INTENDED OR IN EVENT OF NEED FOR EXPLANATION THEREOF.
  - PERFORMANCE AND MATERIAL REQUIREMENTS SCHEDULED OR SPECIFIED ARE MINIMUM STANDARD ACCEPTABLE. THE RIGHT TO JUDGE THE QUALITY OF EQUIPMENT THAT DEVIATES FROM THE CONTRACT DOCUMENT REMAINS SOLELY WITH ARCHITECT/ENGINEER. CONTRACT DOCUMENT OR NOT.
- GUARANTEE
  - GUARANTEE MATERIALS, PARTS AND LABOR FOR WORK FOR ONE YEAR FROM THE DATE OF ISSUANCE OF OCCUPANCY PERMIT. DURING THAT PERIOD, MAKE GOOD FAULTS OR IMPERFECTIONS THAT MAY ARISE DUE TO DEFECTS OR OMISSIONS IN MATERIALS OR WORKMANSHIP WITH NO ADDITIONAL COMPENSATION AND AS DIRECTED BY ARCHITECT.

### CLEANING

- REMOVE ALL CONSTRUCTION DEBRIS RESULTING FROM THE WORK.
- CLEAN EQUIPMENT AND SYSTEMS FOLLOWING THE COMPLETION OF THE PROJECT TO THE SATISFACTION OF THE ENGINEER.
- CORORDINATION AND SUPERVISION
  - CAREFULLY LAY OUT ALL WORK IN ADVANCE TO AVOID UNNECESSARY CUTTING, CHANNELING, CHASING OR DRILLING OF FLOORS, WALLS, PARTITIONS, CEILINGS OR OTHER SURFACES. WHERE SUCH WORK IS NECESSARY, HOWEVER, PATCH AND REPAIR THE WORK IN AN APPROVED MANNER BY SKILLED MECHANICS AT NO ADDITIONAL COST TO THE OWNER. RENDER FULL COOPERATION TO OTHER TRADES WHERE WORK WILL BE INSTALLED IN CLOSE PROXIMITY TO WORK OF OTHER TRADES. ASSIST IN WORKING OUT SPACE CONDITIONS. IF WORK IS INSTALLED BEFORE COORDINATION WITH OTHER TRADES, OR CAUSES INTERFERENCE, MAKE CHANGES NECESSARY TO CORRECT CONDITIONS WITHOUT EXTRA CHARGE.
- SUBMITTALS
  - AS-BUILT DRAWINGS:
    - UPON COMPLETION OF THE WORK, FURNISH TO THE OWNER "AS-BUILT" DRAWINGS.
  - SERVICE MANUALS:
    - UPON COMPLETION OF THE WORK, FULLY INSTRUCT T-MOBILE AS TO THE OPERATION AND MAINTENANCE OF ALL MATERIAL, EQUIPMENT AND SYSTEMS.
    - PROVIDE 3 COMPLETE BOUND SETS OF INSTRUCTIONS FOR OPERATING AND MAINTAINING ALL SYSTEMS AND EQUIPMENT.

### CUTTING AND PATCHING

- PROVIDE ALL CUTTING, DRILLING, ROUGH AND FINISH PATCHING REQUIRED TO COMPLETE THE WORK.
- OBTAIN OWNER APPROVAL PRIOR TO CUTTING THROUGH FLOORS OR WALLS FOR PIPING OR CONDUIT.

### TESTS, INSPECTION AND APPROVAL

- BEFORE ENERGIZING ANY ELECTRICAL INSTALLATION, INSPECT EACH UNIT IN DETAIL. TIGHTEN ALL BOLTS AND CONNECTIONS (TORQUE-TIGHTEN WHERE REQUIRED) AND DETERMINE THAT ALL COMPONENTS ARE ALIGNED, AND THE EQUIPMENT IS IN SAFE, OPERATIONAL CONDITION.
- PROVIDE THE COMPLETE ELECTRICAL SYSTEM FREE OF GROUND FAULTS AND SHORT CIRCUITS SUCH THAT THE SYSTEM WILL OPERATE SATISFACTORILY UNDER FULL LOAD CONDITIONS, WITHOUT EXCESSIVE HEATING AT ANY POINT IN THE SYSTEM.

### SPECIAL REQUIREMENTS

- DO NOT LEAVE ANY WORK INCOMPLETE NOR ANY HAZARDOUS SITUATIONS CREATED WHICH WILL AFFECT THE LIFE OR SAFETY OF THE PUBLIC AND/OR BUILDING OCCUPANTS. DO NOT INTERFERE WITH OR CUT OFF ANY OF THE EXISTING SERVICES WITHOUT THE OWNER'S WRITTEN PERMISSION.
- WHEN NECESSARY TO TEMPORARILY DISCONNECT ANY EXISTING BUILDING UTILITIES AND SERVICE SYSTEMS, INCLUDING FEEDER OR BRANCH CIRCUITING SUPPLYING EXISTING FACILITIES, CONFER WITH THE OWNER AND ARRANGE THE PERIOD OF INTERRUPTION FOR A TIME MUTUALLY AGREED UPON. SHUTDOWN NOTE: SCHEDULE AND NOTIFY OWNER 48 HOURS PRIOR TO SHUTDOWN. ALL SHUTDOWN WORK TO BE SCHEDULED AT A TIME CONVENIENT TO OWNER.

### GROUNDS

- ROUTE ALL GROUNDS CONDUCTORS AS SHOWN ON CONDUIT/GROUNDS RISER.
- ROUTE 500 KCMIL CU, THHN CONDUCTOR FROM THE MGB LOCATION TO BUILDING STEEL. VERIFY BUILDING STEEL IS EFFECTIVELY GROUNDED PER NEC TO THE MAIN SERVICE GROUNDS ELECTRODE CONDUCTOR (GEC).
- MAKE ALL GROUNDS CONNECTIONS FROM MGB TO ELECTRICAL EQUIPMENT WITH 2 HOLE, CRIMP TYPE, BURNDY COMPRESSION TERMINATIONS, SIZED AS REQUIRED, AT EQUIPMENT GROUND CONNECTIONS.
- HIRE AN INDEPENDENT LAB TO PERFORM THE SPECIFIED OHMS TESTING. PROVIDE 4 SETS OF THE CERTIFIED DOCUMENTS TO THE OWNER FOR VERIFICATION PRIOR TO THE PROJECT COMPLETION.

### RACEWAYS

- ALL WIRING TO BE INSTALLED IN CONDUIT SYSTEMS IN ACCORDANCE WITH THE FOLLOWING:
  - EXTERIOR FEEDERS AND CONTROL, WHERE UNDERGROUND, TO BE IN SCH 40 PVC.
  - EXTERIOR, ABOVE GROUND POWER CONDUITS TO BE GALVANIZED RIGID STEEL (RGS).
  - ALL TELECOMMUNICATION CONDUITS, INTERIOR/EXTERIOR, TO BE EMT.
  - INSTALL PULL ROPES IN ALL NEW EMPTY CONDUITS INSTALLED ON THIS PROJECT.

- ALL TELECOM CONDUITS AND PULL BOXES INSTALLED ON THIS PROJECT TO BE LABELED "T-MOBILE". OWNER WILL PROVIDE LABELS FOR CONTRACTOR TO INSTALL.
- INTERIOR FEEDERS TO BE INSTALLED IN E.M.T. WITH STEEL COMPRESSION FITTINGS.
- MINIMUM SIZE CONDUIT TO BE  $\frac{3}{4}$ " TRADE SIZE UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

- FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT TO BE INSTALLED IN LIQUID-TIGHT FLEXIBLE METAL CONDUIT.
- CONDUIT TO BE RUN CONCEALED IN CEILINGS, FINISHED AREAS OR DRYWALL PARTITIONS, UNLESS OTHERWISE NOTED.
- ROUTING OF CONDUITS INDICATED ON THE DRAWINGS IS DIAGRAMMATIC. BEFORE INSTALLING ANY WORK, EXAMINE THE WORKING LAYOUTS AND SHOP DRAWINGS OF THE OTHER TRADES TO DETERMINE THE EXACT LOCATIONS AND CLEARANCES.

- ALL EXTERIOR MOUNTING HARDWARE TO BE GALVANIZED STEEL. COORDINATE WITH BUILDING ENGINEER PRIOR TO ATTACHING TO BUILDING STRUCTURE.

### RACEWAYS CONT'D

- PENETRATIONS OF WALLS, FLOORS AND ROOFS, FOR THE PASSAGE OF ELECTRICAL RACEWAYS, TO BE PROPERLY SEALED AFTER INSTALLATION OF RACEWAYS SO AS TO MAINTAIN THE STRUCTURAL OR WATERPROOF INTEGRITY OF THE WALL, FLOOR OR ROOF SYSTEM TO BE PENETRATED. SEAL ALL CONDUIT PENETRATIONS THROUGH FIRE OR SMOKE RATED WALLS, CEILINGS OR SMOKE TIGHT CORRIDOR PARTITIONS TO MAINTAIN PROPER RATING OF WALL OR CEILING.
- PROVIDE ALL CONDUIT ENDS WITH INSULATED METALLIC GROUNDING BUSHINGS.
- CONDUIT TO BE SUPPORTED AT MAXIMUM DISTANCE OF 8'-0", OR AS REQUIRED BY NEC, IN HORIZONTAL AND VERTICAL DIRECTIONS.
- PROVIDE STAINLESS STEEL BLANK COVER PLATES FOR ALL JUNCTION BOXES AND/OR OUTLET BOXES NOT USED IN EXPOSED AREAS. PROVIDE ALL OTHER UNUSED BOXES WITH STANDARD STEEL COVER PLATES.
- WHERE APPLICABLE, PROVIDE ROOFTOP CONDUIT SUPPORT SYSTEM, CONFORMING TO ROOFTOP WARRANTY REQUIREMENTS, PER BUILDING.

### WIRES AND CABLES

- CONTRACTOR TO COORDINATE WITH EQUIPMENT SUPPLIER AND VENDOR FOR EXACT EQUIPMENT OVER-CURRENT PROTECTION VOLTAGE, WIRE SIZE AND PLUG CONFIGURATION, IF APPLICABLE, PRIOR TO BID.
- ALL EQUIPMENT/DEVICES TO BE PROVIDED WITH INSULATED GROUND CONDUCTOR.

- ALL WIRE AND CABLE TO BE 600VOLTS, COPPER, WITH THHN/THWN INSULATION, EXCEPT AS NOTED.
- WIRE FOR POWER AND LIGHTING WILL NOT BE LESS THAN NO. 12AWG. ALL WIRE NO. 8 AND LARGER TO BE STRANDED.
- CONTROL WIRING IS NOT TO BE LESS THAN NO. 14AWG, FLEXIBLE IN SINGLE CONDUCTORS OR MULTI-CONDUCTOR CABLES. CONTROL WIRING WILL CONSIST OF MULTI-CONDUCTOR CABLES WHEREVER POSSIBLE. CABLES TO BE PROVIDED WITH AN OVERALL FLAME-RETARDANT, EXTRUDED JACKET AND RATED FOR PLENUM USE. ALL CONTROL WIRE TO BE 600VOLTS RATED.

- WIRE PREVIOUSLY PULLED INTO CONDUIT IS CONSIDERED USED AND IS NOT TO BE RE-PULLED.

- HOME RUNS AND BRANCH CIRCUIT WIRING FOR 20A, 120V CIRCUITS:

LENGTH (FT.)	HOME RUN WIRE SIZE
0 TO 50	NO. 12
51 TO 100	NO. 10
101 TO 150	NO. 8

- VOLTAGE DROP IS NOT TO EXCEED 3%.
- MAKE ALL CONNECTIONS WITH UL APPROVED, SOLDERLESS, PRESSURE TYPE INSULATED CONNECTORS: SCOTCHLOK OR AND APPROVED EQUAL.

### WIRING DEVICES

- ALL RECEPTACLES INSTALLED IN THIS PROJECT TO BE GROUNDING TYPE, WITH GROUNDING PIN SLOT CONNECTED TO DEVICE GROUND SCREW FOR GROUND WIRE CONNECTION.

### DISCONNECT SWITCHES AND FUSES

- DISCONNECT SWITCHES TO BE VOLTAGE-RATED TO SUIT THE CHARACTERISTICS OF THE SYSTEM FROM WHICH THEY ARE SUPPLIED.
- PROVIDE HEAVY-DUTY, METAL-ENCLOSED, EXTERNALLY-OPERATED DISCONNECT SWITCHES, FUSED OR UNFUSED, OF SUCH TYPE AND SIZE AS REQUIRED TO PROPERLY PROTECT OR DISCONNECT THE LOAD FOR WHICH THEY ARE INTENDED.
- PROVIDE NEMA 1 DISCONNECT SWITCHES FOR INTERIOR INSTALLATION, NEMA 3R FOR EXTERIOR INSTALLATION.
- DISCONNECT SWITCHES TO BE MANUFACTURED BY:
  - GENERAL ELECTRIC COMPANY
  - SQUARE-D
- PROVIDE RK-1 TYPE FUSES, UNLESS NOTED OTHERWISE.

### CHANGE ORDER PROCEDURE:

- REFER TO SECTION 17 OF SIGNED MCSA: SEE PROFESSIONAL SERVICE AGREEMENT FOR MCSA.

### RELATED DOCUMENTS AND COORDINATION

- GENERAL CARPENTRY, ELECTRICAL AND ANTENNA DRAWINGS ARE INTERRELATED. IN PERFORMANCE OF THE WORK, THE CONTRACTOR MUST REFER TO ALL DRAWINGS. ALL COORDINATION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

### SHOP DRAWINGS

- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AS REQUIRED AND LISTED IN THESE SPECIFICATIONS TO THE OWNER FOR APPROVAL.
- ALL SHOP DRAWINGS SHALL BE REVIEWED, CHECKED AND CORRECTED BY CONTRACTOR PRIOR TO SUBMITTAL TO THE OWNER.

### PRODUCTS AND SUBSTITUTIONS

- SUBMIT 3 COPIES OF EACH REQUEST FOR SUBSTITUTION. IN EACH REQUEST, IDENTIFY THE PRODUCT OR FABRICATION OR INSTALLATION METHOD TO BE REPLACED BY THE SUBSTITUTION. INCLUDE RELATED SPECIFICATION SECTION AND DRAWING NUMBERS AND COMPLETE DOCUMENTATION SHOWING COMPLIANCE WITH THE REQUIREMENTS FOR SUBSTITUTIONS.
- SUBMIT ALL NECESSARY PRODUCT DATA AND CUT SHEETS WHICH PROPERLY INDICATE AND DESCRIBE THE ITEMS, PRODUCTS AND MATERIALS BEING INSTALLED. THE CONTRACTOR SHALL, IF DEEMED NECESSARY BY THE OWNER, SUBMIT ACTUAL SAMPLES TO THE OWNER FOR APPROVAL IN LIEU OF CUT SHEETS.

### INTENT

- THESE SPECIFICATIONS AND CONSTRUCTION DRAWINGS ACCOMPANYING THEM DESCRIBE THE WORK TO BE DONE AND THE MATERIALS TO BE FURNISHED FOR CONSTRUCTION.
- THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY EXPLANATORY AND SUPPLEMENTARY. HOWEVER, SHOULD ANYTHING BE SHOWN, INDICATED, OR SPECIFIED ON ONE AND NOT THE OTHER, IT SHALL BE DONE THE SAME AS IF SHOWN, INDICATED OR SPECIFIED IN BOTH.
- THE INTENTION OF THE DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN THE CONTRACT.
- THE PURPOSE OF THE SPECIFICATIONS IS TO INTERPRET THE INTENT OF THE DRAWINGS AND TO DESIGNATE THE METHOD OF THE PROCEDURE, TYPE AND QUALITY OF MATERIALS REQUIRED TO COMPLETE THE WORK.
- MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK. NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE MADE OR PERMITTED BY THE OWNER WITHOUT ISSUING A CHANGE ORDER.

### CONFLICTS

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATIONS OF ALL MEASUREMENTS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE OWNER FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS.
- THE BIDDER, IF AWARDED THE CONTRACT, WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING CONCERNING SUCH BIDDER MIGHT HAVE FULLY INFORMED THEMSELVES PRIOR TO THE BIDDING.
- NO PLEA OF IGNORANCE OF CONDITIONS THAT EXIST, OR OF DIFFICULTIES OR CONDITIONS THAT MAY BE ENCOUNTERED, OR OF ANY OTHER RELEVANT MATTER CONCERNING THE WORK TO BE PERFORMED IN THE EXECUTION OF THE WORK WILL BE ACCEPTED AS AN EXCUSE FOR ANY FAILURE OR OMISSION ON THE PART OF THE CONTRACTOR TO FULFILL EVERY DETAIL OF ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS GOVERNING THE WORK.

### CONTRACTS AND WARRANTIES

- CONTRACTOR IS RESPONSIBLE FOR APPLICATION AND PAYMENT OF CONTRACTOR LICENSES AND BONDS.
- SEE MASTER CONTRACTOR SERVICES AGREEMENT FOR ADDITIONAL DETAILS.

### STORAGE

- ALL MATERIALS MUST BE STORED IN A LEVEL AND DRY FASHION AND IN A MANNER THAT DOES NOT NECESSARILY OBSTRUCT THE FLOW OF OTHER WORK. ANY STORAGE METHOD MUST MEET ALL RECOMMENDATIONS OF THE ASSOCIATED MANUFACTURER.

### CLEANUP

- THE CONTRACTORS SHALL, AT ALL TIMES, KEEP THE SITE FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THEIR EMPLOYEES AT WORK AND AT THE COMPLETION OF THE WORK. THEY SHALL REMOVE ALL RUBBISH FROM AND ABOUT THE BUILDING AREA, INCLUDING ALL THEIR TOOLS, SCAFFOLDING AND SURPLUS MATERIALS AND SHALL LEAVE THEIR WORK CLEAN AND READY TO USE.
- EXTERIOR
  - VISUALLY INSPECT EXTERIOR SURFACES AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER.
  - REMOVE ALL TRACES OF SPLASHED MATERIALS FROM ADJACENT SURFACES.
  - IF NECESSARY, TO ACHIEVE A UNIFORM DEGREE OF CLEANLINESS, HOSE DOWN THE EXTERIOR OF THE STRUCTURE.

### INTERIOR

- VISUALLY INSPECT INTERIOR SURFACE AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER FROM WALLS, FLOOR, AND CEILING.
- REMOVE ALL TRACES OF SPLASHED MATERIALS FROM ADJACENT SURFACES.
- REMOVE PAINT DROPPINGS, SPOTS, STAINS, AND DIRT FROM FINISHED SURFACES.

### INSURANCE AND BONDS

- CONTRACTOR, AT THEIR OWN EXPENSE, SHALL CARRY AND MAINTAIN, FOR THE DURATION OF THE PROJECT, ALL INSURANCE, AS REQUIRED AND LISTED, AND SHALL NOT COMMENCE WITH THEIR WORK UNTIL THEY HAVE PRESENTED AN ORIGINAL CERTIFICATE OF INSURANCE STATING ALL COVERAGES TO THE OWNER. REFER TO THE MASTER AGREEMENT FOR REQUIRED INSURANCE LIMITS.
- THE OWNER SHALL BE NAMED AS AN ADDITIONAL INSURED ON ALL POLICIES.
- CONTRACTOR MUST PROVIDE PROOF OF INSURANCE.

### ABBREVIATIONS

ADJ	ADJUSTABLE
AGL	