T-Mobile Northeast, LLC NOTICE OF INTENT TO MODIFY AN EXISTING TELECOMMUNICATIONS FACILITY AT 104 BUNKER HILL ROAD ANDOVER, CT

Pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes § 16-50g et. Seq. ("PUESA"), and Sections 16-50j-72(b) and 16-50j-73 of the Regulations of Connecticut State Agencies ("R.C.S.A") adopted pursuant to the PUESA, by and through T-Mobile Northeast, LLC ("T-Mobile") and as successor in interest to Omnipoint Communications, Inc., hereby notifies the Connecticut Siting Council of its intent to modify an existing facility located at 104 Bunker Hill Road, Andover, CT.

T-Mobile Northeast LLC's Proposed Wireless Modifications

T-Mobile as successor in interest to Omnipoint Communications achieved an initial exempt modification approval from the Siting Council to install antennas and related ground equipment. The facility consists of a One-Hundred and fifty (150') foot high Monopole telecommunications tower (the "Tower") within a fenced compound. T-Mobile now intends to modify the facility as shown on the enclosed plans prepared by Infinigy Engineering group and annexed hereto as Exhibit 1. The modifications will consist of adding three (3) new antennas with RRUS at the existing AGL of 140'. A structural analysis has been completed for the site. Please see report attached in exhibit 3.

T-mobile's Proposed Wireless Modifications Constitutes An "Exempt Modification"

The proposed modification to the 104 Bunker Hill Road, Andover, CT Facility constitutes an exempt modification of an existing facility provided for in R.C.S.A Section 16-50j-72(b)(2) and Council regulations promulgated pursuant thereto.

1) The proposed modifications will be to add three (3) antennas at the same AGL of 140'along with RRUS
2) The proposed modifications will not require expansion of the site boundaries.
3) The proposed modifications will not increase noise levels at the facility by six decibels or more.
4) T-Mobile Northeast LLC's proposed facility will not increase the cumulative radio frequency electromagnetic radiation power density at the Tower site's boundary to or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and MPE limits established by the Federal Communications Commission. A cumulative General Power Density table for T-Mobile's proposed modified facility is included as Exhibit 2.

For all the foregoing reasons, T-Mobile Northeast LLC respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A Section 16-50j-72(b)(2)

Respectfully submitted,

Amber Debole (781) 424-9253
On behalf of T-Mobile Northeast, LLC
c/o Tower Resource Management, Inc.
16 Chestnut Street, Suite 220
Foxboro, MA 02035

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

T-Mobile Existing Facility

Site ID: CT11502A

Spectrasite Andover
104 Bunker Hill Road
Andover, CT 06232

March 20, 2015

EBI Project Number: 6215001704

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	43.39 %

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

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March 20, 2015

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

Emissions Analysis for Site: **CT11502A – Spectrasite Andover**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **104 Bunker Hill Road, Andover, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

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

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

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

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

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at **104 Bunker Hill Road, Andover, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

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

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

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

3) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

4) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.

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

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

7) The antennas used in this modeling are the **EMS RR90_17_02DP** for 1900 MHz (PCS) channels and the **Commscope LNX-6515DS-VTM** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **EMS RR90_17_02DP** has a maximum gain of **14.4 dBd** at its main lobe. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

8) The antenna mounting height centerline of the proposed antennas is **148 feet** above ground level (AGL).

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

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

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T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	EMS RR90_17_02DP	Make / Model:	EMS RR90_17_02DP	Make / Model:	EMS RR90_17_02DP
Gain:	14.4 dBd	Gain:	14.4 dBd	Gain:	14.4 dBd
Height (AGL):	148	Height (AGL):	148	Height (AGL):	148
Frequency Bands	1900 MHz(PCS)	Frequency Bands	1900 MHz(PCS)	Frequency Bands	1900 MHz(PCS)
Channel Count	6	Channel Count	6	# PCS Channels:	6
Total TX Power:	240	Total TX Power:	240	# AWS Channels:	240
ERP (W):	6,610.15	ERP (W):	6,610.15	ERP (W):	6,610.15
Antenna A1 MPE%	1.18	Antenna B1 MPE%	1.18	Antenna C1 MPE%	1.18
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	148	Height (AGL):	148	Height (AGL):	148
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power:	30	Total TX Power:	30	Total TX Power:	30
ERP (W):	865.21	ERP (W):	865.21	ERP (W):	865.21
Antenna A2 MPE%	0.33	Antenna B2 MPE%	0.33	Antenna C2 MPE%	0.33

Site Composite MPE%	
Carrier	**MPE%**
T-Mobile	**4.53**
AT&T	17.13 %
Verizon Wireless	14.17 %
Nextel	1.80 %
Sprint	5.76 %
Site Total MPE %:	**43.39 %**

T-Mobile Sector 1 Total:	1.51 %
T-Mobile Sector 2 Total:	1.51 %
T-Mobile Sector 3 Total:	1.51 %
Site Total:	43.39 %

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Summary

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

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

T-Mobile Sector	Power Density Value (%)
Sector 1:	1.51 %
Sector 2:	1.51 %
Sector 3 :	1.51 %
T-Mobile Total:	4.53 %
Site Total:	43.39 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **43.39%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803

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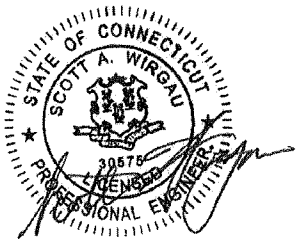
Structural Analysis Report

Structure	:	**178 ft Monopole**
ATC Site Name	:	**Andover-Bunker Hill Road, CT**
ATC Site Number	:	**302472**
Engineering Number	:	**61361921**
Proposed Carrier	:	**T-Mobile**
Carrier Site Name	:	**N/A**
Carrier Site Number	:	**CT11502A**
Site Location	:	**104 Bunker Hill Road** **Andover, CT 06232-1301** **41.737786, -72.349839**
County	:	**Tolland**
Date	:	**March 11, 2015**
Max Usage	:	**91%**
Result	:	**Pass**

Reviewed by:
Scott Wirgau, PE
Structural Team Leader



Prepared By:
John P. Hernandez, E.I.
Structural Engineer I

Mar 13 2015 3:54 PM

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Eng. Number 61361921
March 11, 2015

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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 178 ft monopole to reflect the change in loading by T-Mobile.

Supporting Documents

Tower Drawings	Summit Job #29200-028, dated January 14, 2000
Foundation Drawing	Summit Job #29200-012, dated January 14, 2000
Geotechnical Report	Tectonic Report dated November 30, 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.

Basic Wind Speed:	85 mph (Fastest Mile)
Basic Wind Speed w/ Ice:	74 mph (Fastest Mile)w/ 1/2" radial ice concurrent
Code:	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. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
178.0	180.0	9	Allgon 7120.16.05.00 / A-800-110-13I-0-N	Low Profile Platform	(12) 1 5/8" Coax	Sprint Nextel
		3	72" x 12" Panels			
168.0	168.0	6	Decibel DB980H90A-KL	Low Profile Platform	(6) 1 5/8 Coax	
158.0	158.0	6	RFS FD9R6004/2C-3L	Low Profile Platform	(12) 1 5/8 Coax	Verizon
		3	Antel BXA-171085-8BF-EDIN-X			
		6	Antel LPA-80080/4CF			
		3	Antel BXA-70063/6CF			
148.0	148.0	2	EMS RR90-17-02DP	Low Profile Platform	(12) 1 5/8 Coax	T-Mobile
137.0	137.0	6	Powerwave LGP21903	Low Profile Platform	(12) 1 1/4" Coax (2) 0.78" 8 AWG 6 (1) 0.39" Cable	AT&T Mobility
		6	Powerwave LGP21401			
		1	Raycap DC6-48-60-18-8F			
		6	Ericsson RRUS 11 (Band 12)			
		6	Powerwave 7770.00			
		3	KMW AM-X-CD-16-65-00T-RET			
108.0	108.5	1	GPS	Standoff	(1) 1/2" Coax	Verizon
95.0	95.5	1	GPS	Standoffs	(1) 1/2" Coax	Sprint Nextel
86.0	86.5	1	GPS	Standoff	(1) 1/2" Coax	
12.0	12.0	1	PCTEL GPS-TMG-HR-26N	Standoff	(1) 1/2" Coax	AT&T Mobility

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
148.0	148.0	4	Allgon 7250.02 / XM-1900-65-18.5I-0-D	-	-	T-Mobile

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
148.0	148.0	3	Kathrein Smart Bias Tee	Low Profile Platform	-	T-Mobile
		3	Ericsson KRY 112 144/1			
		1	EMS RR90-17-02DP			
		3	Andrew LNX-6515DS-VTM			

[1]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).

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Shaft	91%	Pass
Anchor Bolts	94%	Pass
Base Plate	96%	Pass

***Safety factor of 2 has been considered for capacities in anchor bolt and baseplate analysis.**

Foundations

Reaction Component	Analysis Reactions	% of Design
Moment (Kips-Ft)	4332.0	49%
Axial (Kips)	48.6	47%
Shear (Kips)	33.8	13%

***Safety factor of 2 has been considered for capacities in foundation analysis.**

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Deflection (ft)	Sway (Rotation) (°)
148.0	2.675	2.172

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

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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 necessary limited, to:

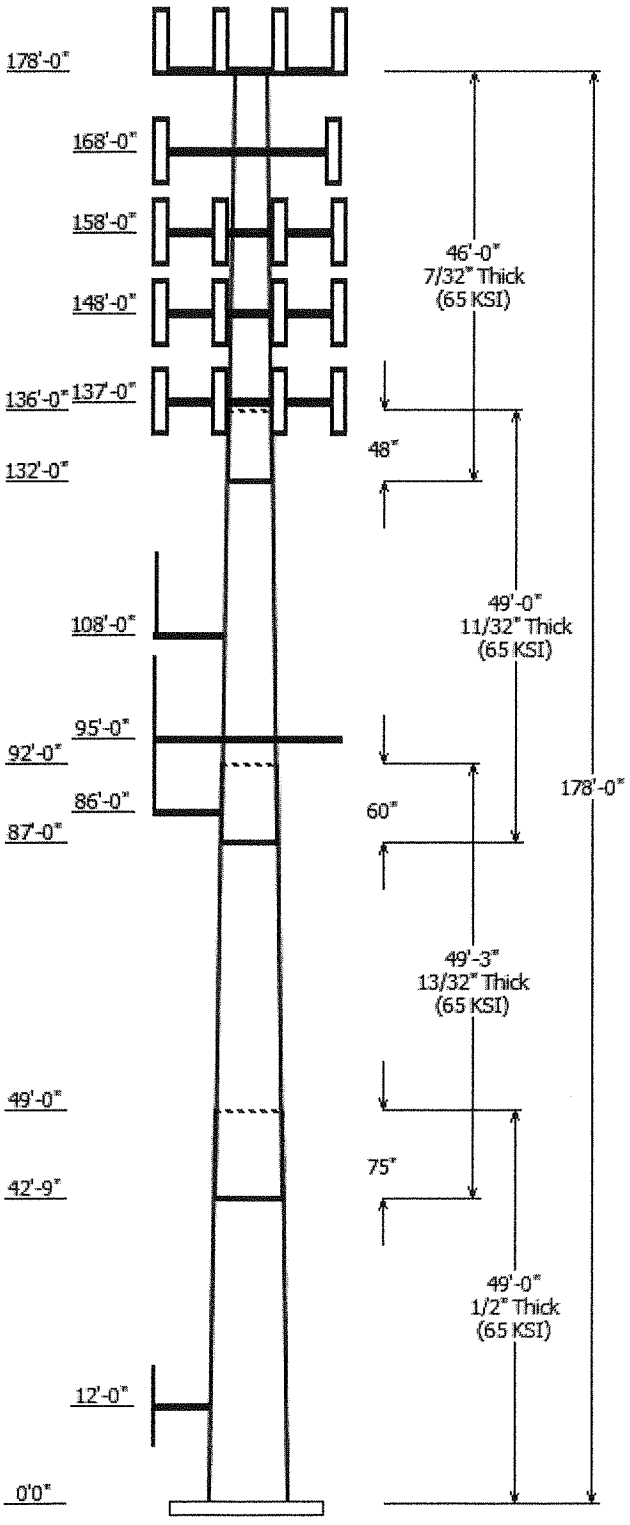
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- 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 A.T. Engineering Service, PLLC 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. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Job Information

Pole :	302472 Code: TIA/EIA-222 Rev F
Description :	178' Summit Monopole
Client :	AT&T Mobility
Location :	Andover-Bunker Hill Road, CT
Shape :	18 Sides
Height :	178.00 (ft)
Base Elev (ft):	0.00
Taper:	0.207008 (in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Across Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	49.000	46.76	56.91	0.500		0.000	0.207008	65
2	49.250	38.67	48.87	0.406	Slip Joint	75.000	0.207008	65
3	49.000	30.25	40.40	0.344	Slip Joint	60.000	0.207008	65
4	46.000	22.00	31.52	0.219	Slip Joint	48.000	0.207008	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
178.000	180.000	3	72" x 12" Panels
178.000	180.000	9	Allgon 7120.16.05.00 / A-800-1
178.000	178.000	1	Flat Low Profile Platform
168.000	168.000	6	Decibel DB980H90A-KL
168.000	168.000	1	Round Low Profile Platform
158.000	158.000	6	Antel LPA-80080/4CF
158.000	158.000	6	RFS FD9R6004/2C-3L
158.000	158.000	3	Antel BXA-70063/6CF
158.000	158.000	1	Flat Low Profile Platform
158.000	158.000	3	Antel BXA-171085-8BF-EDIN-X
148.000	148.000	2	EMS RR90-17-02DP
148.000	148.000	1	EMS RR90-17-02DP
148.000	148.000	3	Andrew LNX-6515DS-VTM
148.000	148.000	3	Ericsson KRY 112 144/1
148.000	148.000	3	Kathrein Smart Bias Tee
148.000	148.000	1	Round Low Profile Platform
137.000	137.000	1	Raycap DC6-48-60-18-8F
137.000	137.000	6	Ericsson RRUS 11 (Band 12)
137.000	137.000	3	KMW AM-X-CD-16-65-00T-RET
137.000	137.000	6	Powerwave 7770.00
137.000	137.000	6	Powerwave LGP21401
137.000	137.000	6	Powerwave LGP21903
137.000	137.000	1	Flat Low Profile Platform
108.000	108.000	1	Standoff
108.000	108.500	1	GPS
95.000	95.000	5	Standoff
95.000	95.500	1	GPS
86.000	86.000	1	Standoff
86.000	86.500	1	GPS
12.000	12.000	1	Standoff
12.000	12.000	1	PCTEL GPS-TMG-HR-26N

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	12.000	1/2" Coax	No
0.000	86.000	1/2" Coax	No
0.000	95.000	1/2" Coax	No
0.000	108.0	1/2" Coax	No
0.000	137.0	0.39" (10mm)	No
0.000	137.0	0.78" 8 AWG 6	No

0.000	137.0	1 1/4" Coax	No
0.000	148.0	1 5/8 Coax	No
0.000	158.0	1 5/8 Coax	No
0.000	168.0	1 5/8 Coax	No
0.000	178.0	1 5/8" Coax	No

Load Cases

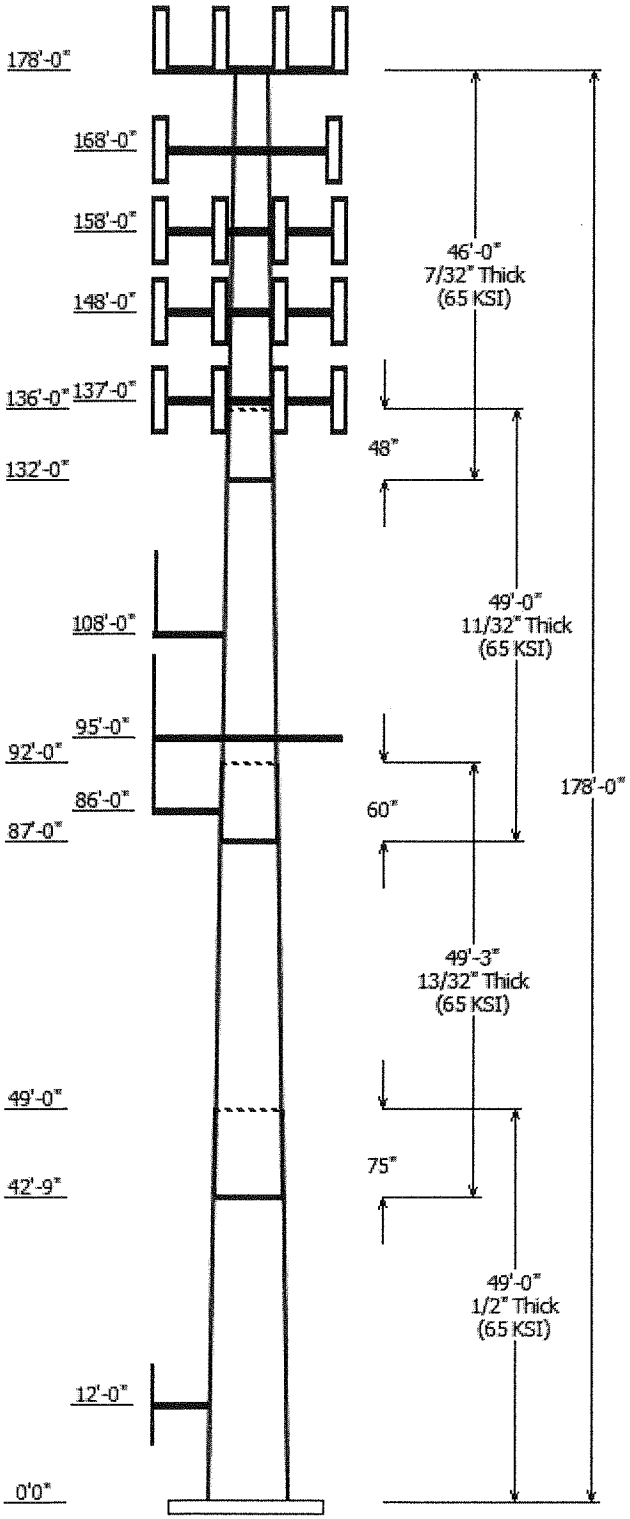
No Ice	85.00 mph Wind with No Ice
Ice	73.61 mph Wind with Ice
Twist/Sway	50.00 mph Wind with No Ice

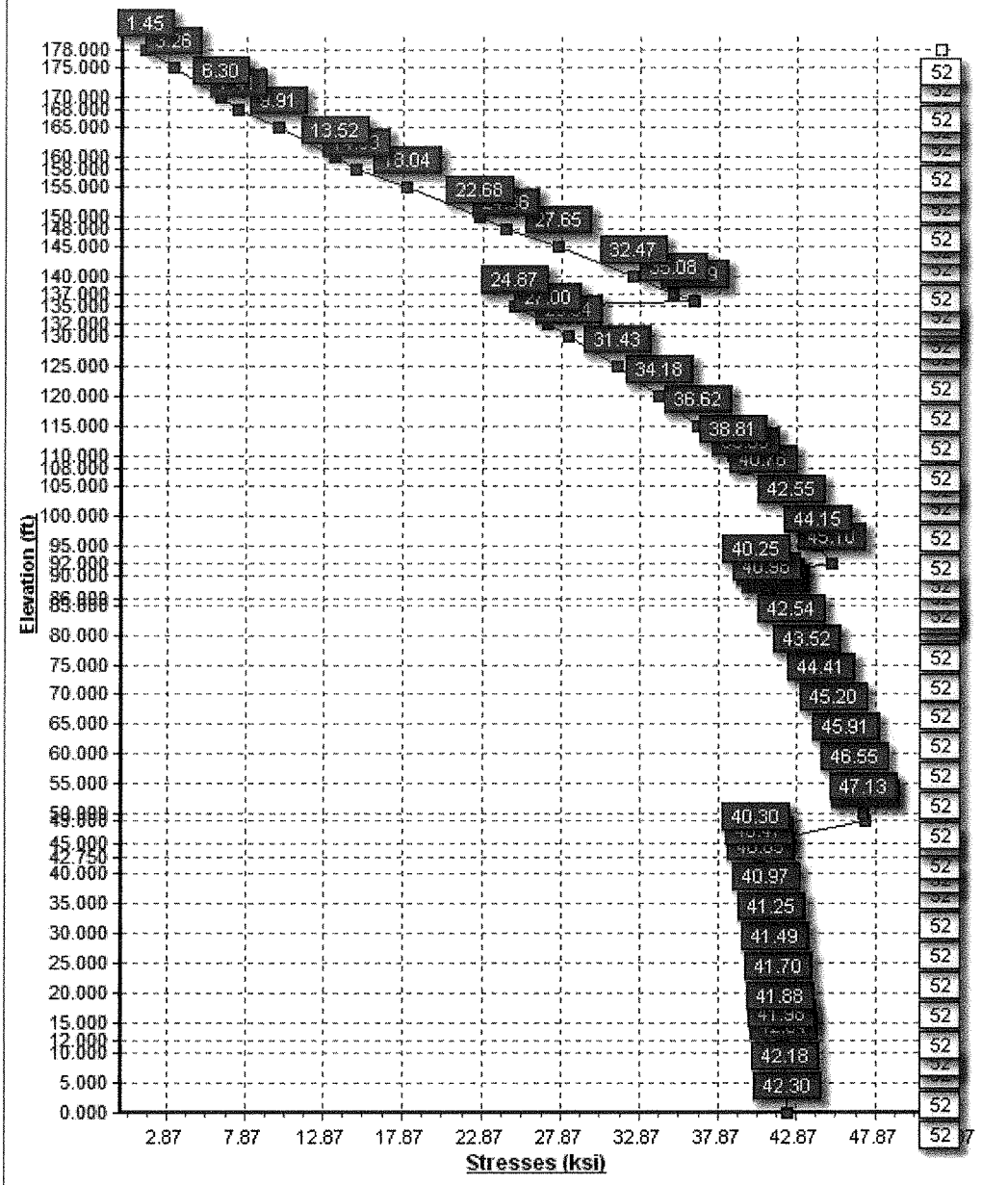
Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
No Ice	4331.97	33.81	48.61
Ice	3624.80	27.18	55.42
Twist/Sway	1501.39	11.70	48.66

Dish Deflections

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




Elevation (ft)
178.000
175.000
170.000
165.000
155.000
145.000
140.000
125.000
120.000
115.000
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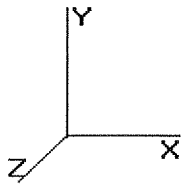
100.000
95.000
80.000
75.000
70.000
65.000
60.000
55.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
5.000
0.000
2.87
7.87
12.87
17.87
22.87
27.87
32.87
37.87
42.87
47.87
Stresses (ksi)
1.45
6.30
13.52
22.68
27.65
32.47
24.87
31.43
34.18
36.62
38.81
42.55
44.15
40.25
42.54
43.52
44.41
45.20
45.91
46.55
47.13
40.30
40.97
41.25
41.49
41.70
41.88
42.18
42.30
52

Pole : 302472
Location : Andover-Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



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Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (sqin)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (sqin)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	49.000	0.5000	65		0.00	13,584	56.91	0.00	89.52	35989.9	18.31	113.82	46.76	49.00	73.42	19857.0	14.73	93.53	0.207008
2-18	49.250	0.4063	65	Slip	75.00	9,371	48.87	42.75	62.49	18546.6	19.45	120.30	38.67	92.00	49.35	9131.9	15.02	95.21	0.207008
3-18	49.000	0.3438	65	Slip	60.00	6,364	40.40	87.00	43.70	8859.4	18.96	117.53	30.25	136.00	32.64	3689.5	13.76	88.02	0.207008
4-18	46.000	0.2188	65	Slip	48.00	2,884	31.52	132.00	21.73	2690.7	23.65	144.10	22.00	178.00	15.12	906.4	15.97	100.57	0.207008
				Shaft Weight		32,204													

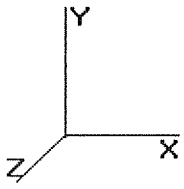
Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor	Distance From Face (ft)	Vert Ecc (ft)
178.00	72" x 12" Panels	3	45.00	8.400	0.78	87.00	9.230	0.78	0.000	2.000
178.00	Allgon 7120.16.05.00 / A-800-	9	15.40	5.760	0.85	53.00	6.390	0.85	0.000	2.000
178.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
168.00	Decibel DB980H90A-KL	6	8.50	3.800	0.79	29.00	4.500	0.79	0.000	0.000
168.00	Round Low Profile Platform	1	1500.00	21.700	1.00	1,700.00	27.200	1.00	0.000	0.000
158.00	Antel BXA-171085-8BF-EDIN-X	3	10.50	2.940	0.87	63.00	6.190	0.87	0.000	0.000
158.00	Antel BXA-70063/6CF	3	17.00	7.730	0.74	58.00	8.540	0.74	0.000	0.000
158.00	Antel LPA-80080/4CF	6	12.00	6.060	0.72	45.12	6.650	0.72	0.000	0.000
158.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
158.00	RFS FD9R6004/2C-3L	6	3.10	0.370	0.50	5.40	0.500	0.50	0.000	0.000
148.00	Andrew LNX-6515DS-VTM	3	51.30	11.430	0.84	117.10	12.360	0.84	0.000	0.000
148.00	EMS RR90-17-02DP	1	13.50	4.360	0.73	40.42	4.990	0.73	0.000	0.000
148.00	EMS RR90-17-02DP	2	13.50	4.360	0.73	40.42	4.990	0.73	0.000	0.000
148.00	Ericsson KRY 112 144/1	3	11.00	0.410	0.50	14.10	0.550	0.50	0.000	0.000
148.00	Kathrein Smart Bias Tee	3	3.31	0.090	0.50	4.30	0.160	0.50	0.000	0.000
148.00	Round Low Profile Platform	1	1500.00	21.700	1.00	1,700.00	27.200	1.00	0.000	0.000
137.00	Ericsson RRUS 11 (Band 12)	6	55.00	2.940	0.67	74.30	3.290	0.67	0.000	0.000
137.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
137.00	KMW AM-X-CD-16-65-00T-	3	48.50	8.260	0.78	95.00	9.080	0.78	0.000	0.000
137.00	Powerwave 7770.00	6	35.00	5.880	0.75	67.63	6.530	0.75	0.000	0.000
137.00	Powerwave LGP21401	6	14.10	1.290	0.50	21.26	1.530	0.50	0.000	0.000
137.00	Powerwave LGP21903	6	5.50	0.270	0.50	7.90	0.380	0.50	0.000	0.000
137.00	Raycap DC6-48-60-18-8F	1	31.80	1.470	1.00	49.50	1.670	1.00	0.000	0.000
108.00	GPS	1	10.00	1.000	1.00	18.24	1.210	1.00	0.000	0.500
108.00	Standoff	1	75.00	3.500	1.00	150.00	4.500	1.00	0.000	0.000
95.00	GPS	1	10.00	1.000	1.00	0.00	0.000	1.00	0.000	0.500
95.00	Standoff	5	75.00	3.500	1.00	0.00	0.000	1.00	0.000	0.000
86.00	GPS	1	10.00	1.000	1.00	0.00	0.000	1.00	0.000	0.500
86.00	Standoff	1	75.00	3.500	1.00	0.00	0.000	1.00	0.000	0.000
12.00	PCTEL GPS-TMG-HR-26N	1	0.60	0.090	1.00	1.90	0.140	1.00	0.000	0.000
12.00	Standoff	1	75.00	3.500	1.00	0.00	0.000	1.00	0.000	0.000
	Totals	93	9700.53			12,137.06			Number of Loadings :	31

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	No Ice Weight (lb/ft)	No Ice CaAa (sf/ft)	Ice Weight (lb/ft)	Ice CaAa (sf/ft)	Exposed To Wind
0.00	178.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
0.00	168.00	(6) 1 5/8 Coax	4.92	0.00	0.00	0.00	N
0.00	158.00	(12) 1 5/8 Coax	9.84	0.00	0.00	0.00	N
0.00	148.00	(12) 1 5/8 Coax	9.84	0.00	0.00	0.00	N

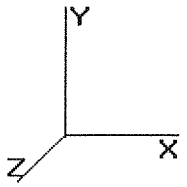
Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:46 AM
Location :	Andover-Bunker Hill Road, CT		Page: 2
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



0.00	137.00	0.39" (10mm) Cable	0.07	0.00	0.00	0.00	N
0.00	137.00	(2) 0.78" 8 AWG 6 Cable	0.59	0.00	0.00	0.00	N
0.00	137.00	(12) 1 1/4" Coax	7.56	0.00	0.00	0.00	N
0.00	108.00	(1) 1/2" Coax	0.15	0.00	0.00	0.00	N
0.00	95.00	(1) 1/2" Coax	0.15	0.00	0.00	0.00	N
0.00	86.00	(1) 1/2" Coax	0.15	0.00	0.00	0.00	N
0.00	12.00	(1) 1/2" Coax	0.15	0.00	0.00	0.00	N
		Total Weight	6,760.41 (lb)		0.00 (lb)		

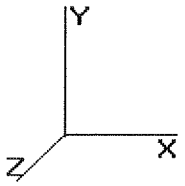
Pole : 302472
Location : Andover-Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F
Base Elev : 0.000 (ft)



Segment Properties (Max Len : 5 ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)
0.00		0.5000	56.910	89.519	35,989.9	18.31	113.82	65	52	0.0
5.00		0.5000	55.875	87.877	34,044.9	17.94	111.75	65	52	1,509.1
10.00		0.5000	54.840	86.234	32,171.3	17.58	109.68	65	52	1,481.2
12.00		0.5000	54.426	85.577	31,441.6	17.43	108.85	65	52	584.6
15.00		0.5000	53.805	84.592	30,367.8	17.21	107.61	65	52	868.6
20.00		0.5000	52.770	82.949	28,632.9	16.85	105.54	65	52	1,425.3
25.00		0.5000	51.735	81.307	26,965.4	16.48	103.47	65	52	1,397.3
30.00		0.5000	50.700	79.664	25,363.9	16.12	101.40	65	52	1,369.4
35.00		0.5000	49.665	78.021	23,827.1	15.75	99.33	65	52	1,341.4
40.00		0.5000	48.630	76.379	22,353.7	15.39	97.26	65	52	1,313.5
42.75	Bot - Section 2	0.5000	48.060	75.475	21,569.9	15.19	96.12	65	52	710.5
45.00		0.5000	47.595	74.736	20,942.4	15.02	95.19	65	52	1,051.2
49.00	Top - Section 1	0.4063	47.579	60.824	17,100.6	18.89	117.12	65	52	1,843.5
50.00		0.4063	47.372	60.557	16,876.4	18.80	116.61	65	52	206.5
55.00		0.4063	46.337	59.223	15,785.1	18.35	114.06	65	52	1,019.0
60.00		0.4063	45.302	57.888	14,741.8	17.90	111.51	65	52	996.3
65.00		0.4063	44.267	56.553	13,745.5	17.45	108.96	65	52	973.5
70.00		0.4063	43.232	55.219	12,795.2	17.00	106.42	65	52	950.8
75.00		0.4063	42.197	53.884	11,889.7	16.55	103.87	65	52	928.1
80.00		0.4063	41.162	52.550	11,028.0	16.10	101.32	65	52	905.4
85.00		0.4063	40.127	51.215	10,208.9	15.65	98.77	65	52	882.7
86.00		0.4063	39.920	50.948	10,050.1	15.56	98.26	65	52	173.8
87.00	Bot - Section 3	0.4063	39.713	50.681	9,893.0	15.47	97.75	65	52	172.9
90.00		0.4063	39.092	49.881	9,431.5	15.20	96.23	65	52	956.0
92.00	Top - Section 2	0.3438	39.365	42.573	8,190.2	18.43	114.52	65	52	628.9
95.00		0.3438	38.744	41.896	7,805.4	18.11	112.71	65	52	431.1
100.0		0.3438	37.709	40.766	7,191.1	17.58	109.70	65	52	703.2
105.0		0.3438	36.674	39.637	6,609.9	17.05	106.69	65	52	684.0
108.0		0.3438	36.053	38.960	6,276.7	16.73	104.88	65	52	401.2
110.0		0.3438	35.639	38.508	6,060.9	16.52	103.68	65	52	263.6
115.0		0.3438	34.604	37.379	5,543.1	15.99	100.67	65	52	645.6
120.0		0.3438	33.569	36.249	5,055.8	15.46	97.65	65	52	626.3
125.0		0.3438	32.534	35.120	4,597.8	14.93	94.64	65	52	607.1
130.0		0.3438	31.499	33.991	4,168.4	14.39	91.63	65	52	587.9
132.0	Bot - Section 4	0.3438	31.085	33.539	4,004.4	14.18	90.43	65	52	229.8
135.0		0.3438	30.464	32.862	3,766.6	13.86	88.62	65	52	558.6
136.0	Top - Section 3	0.2188	30.694	21.159	2,482.8	22.98	140.32	65	52	183.7
137.0		0.2188	30.487	21.015	2,432.6	22.81	139.37	65	52	71.8
140.0		0.2188	29.866	20.584	2,285.9	22.31	136.53	65	52	212.3
145.0		0.2188	28.831	19.865	2,054.7	21.48	131.80	65	52	344.1
148.0		0.2188	28.210	19.434	1,923.8	20.98	128.96	65	52	200.6
150.0		0.2188	27.796	19.147	1,839.7	20.64	127.07	65	52	131.3
155.0		0.2188	26.761	18.428	1,640.3	19.81	122.34	65	52	319.6
158.0		0.2188	26.140	17.997	1,527.8	19.31	119.50	65	52	185.9
160.0		0.2188	25.726	17.709	1,455.7	18.97	117.60	65	52	121.5
165.0		0.2188	24.691	16.991	1,285.6	18.14	112.87	65	52	295.2
168.0		0.2188	24.070	16.560	1,190.2	17.64	110.03	65	52	171.2
170.0		0.2188	23.656	16.272	1,129.3	17.31	108.14	65	52	111.7
175.0		0.2188	22.621	15.554	986.2	16.47	103.41	65	52	270.7
178.0		0.2188	22.000	15.122	906.4	15.97	100.57	65	52	156.6
										32,204.2



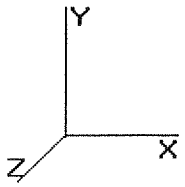
Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

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	403.11	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	18.496	31.25	395.78	0.650	0.000	5.00	23.497	15.27	477.4	0.0	1,509.1
10.00		0.00	1.00	18.496	31.25	388.44	0.650	0.000	5.00	23.066	14.99	468.6	0.0	1,481.2
12.00	Appertunance(s)	0.00	1.00	18.496	31.25	385.51	0.650	0.000	2.00	9.105	5.92	185.0	0.0	584.6
15.00		0.00	1.00	18.496	31.25	381.11	0.650	0.000	3.00	13.529	8.79	274.9	0.0	868.6
20.00		0.00	1.00	18.496	31.25	373.78	0.650	0.000	5.00	22.203	14.43	451.1	0.0	1,425.3
25.00		0.00	1.00	18.496	31.25	366.45	0.650	0.000	5.00	21.772	14.15	442.4	0.0	1,397.3
30.00		0.00	1.00	18.496	31.25	359.12	0.650	0.000	5.00	21.340	13.87	433.6	0.0	1,369.4
35.00		0.00	1.01	18.810	31.78	354.76	0.650	0.000	5.00	20.909	13.59	432.0	0.0	1,341.4
40.00		0.00	1.05	19.541	33.02	354.05	0.650	0.000	5.00	20.478	13.31	439.6	0.0	1,313.5
42.75	Bot - Section 2	0.00	1.07	19.916	33.65	353.25	0.650	0.000	2.75	11.079	7.20	242.4	0.0	710.5
45.00		0.00	1.09	20.210	34.15	352.40	0.650	0.000	2.25	9.120	5.93	202.5	0.0	1,051.2
49.00	Top - Section 1	0.00	1.12	20.708	34.99	350.50	0.650	0.000	4.00	15.998	10.40	363.9	0.0	1,843.5
50.00		0.00	1.12	20.827	35.19	356.07	0.650	0.000	1.00	3.956	2.57	90.5	0.0	206.5
55.00		0.00	1.15	21.402	36.17	353.06	0.650	0.000	5.00	19.523	12.69	459.0	0.0	1,019.0
60.00		0.00	1.18	21.941	37.08	349.49	0.650	0.000	5.00	19.091	12.41	460.1	0.0	996.3
65.00		0.00	1.21	22.449	37.93	345.44	0.650	0.000	5.00	18.660	12.13	460.2	0.0	973.5
70.00		0.00	1.24	22.929	38.75	340.95	0.650	0.000	5.00	18.229	11.85	459.1	0.0	950.8
75.00		0.00	1.26	23.386	39.52	336.08	0.650	0.000	5.00	17.798	11.57	457.2	0.0	928.1
80.00		0.00	1.28	23.821	40.25	330.88	0.650	0.000	5.00	17.366	11.29	454.4	0.0	905.4
85.00		0.00	1.31	24.237	40.96	325.36	0.650	0.000	5.00	16.935	11.01	450.9	0.0	882.7
86.00	Appertunance(s)	0.00	1.31	24.318	41.09	324.22	0.650	0.000	1.00	3.335	2.17	89.1	0.0	173.8
87.00	Bot - Section 3	0.00	1.31	24.399	41.23	323.08	0.650	0.000	1.00	3.318	2.16	88.9	0.0	172.9
90.00		0.00	1.33	24.636	41.63	319.57	0.650	0.000	3.00	10.022	6.51	271.2	0.0	956.0
92.00	Top - Section 2	0.00	1.34	24.791	41.89	317.18	0.650	0.000	2.00	6.595	4.29	179.6	0.0	628.9
95.00	Appertunance(s)	0.00	1.35	25.020	42.28	319.18	0.650	0.000	3.00	9.764	6.35	268.3	0.0	431.1
100.0		0.00	1.37	25.389	42.90	312.94	0.650	0.000	5.00	15.928	10.35	444.2	0.0	703.2
105.0		0.00	1.39	25.745	43.51	306.48	0.650	0.000	5.00	15.496	10.07	438.3	0.0	684.0
108.0	Appertunance(s)	0.00	1.40	25.953	43.86	302.50	0.650	0.000	3.00	9.091	5.91	259.2	0.0	401.2
110.0		0.00	1.41	26.090	44.09	299.81	0.650	0.000	2.00	5.974	3.88	171.2	0.0	263.6
115.0		0.00	1.42	26.423	44.65	292.96	0.650	0.000	5.00	14.634	9.51	424.8	0.0	645.6
120.0		0.00	1.44	26.747	45.20	285.93	0.650	0.000	5.00	14.203	9.23	417.3	0.0	626.3
125.0		0.00	1.46	27.060	45.73	278.74	0.650	0.000	5.00	13.771	8.95	409.4	0.0	607.1
130.0		0.00	1.48	27.365	46.24	271.39	0.650	0.000	5.00	13.340	8.67	401.0	0.0	587.9
132.0	Bot - Section 4	0.00	1.48	27.485	46.45	268.40	0.650	0.000	2.00	5.215	3.39	157.5	0.0	229.8
135.0		0.00	1.49	27.662	46.74	263.89	0.650	0.000	3.00	7.803	5.07	237.1	0.0	558.6
136.0	Top - Section 3	0.00	1.49	27.720	46.84	262.37	0.650	0.000	1.00	2.566	1.67	78.2	0.0	183.7
137.0	Appertunance(s)	0.00	1.50	27.778	46.94	264.65	0.650	0.000	1.00	2.549	1.66	77.8	0.0	71.8
140.0		0.00	1.51	27.951	47.23	260.06	0.650	0.000	3.00	7.544	4.90	231.6	0.0	212.3
145.0		0.00	1.52	28.233	47.71	252.31	0.650	0.000	5.00	12.229	7.95	379.3	0.0	344.1
148.0	Appertunance(s)	0.00	1.53	28.398	47.99	247.60	0.650	0.000	3.00	7.130	4.63	222.4	0.0	200.6
150.0		0.00	1.54	28.507	48.17	244.43	0.650	0.000	2.00	4.667	3.03	146.2	0.0	131.3
155.0		0.00	1.55	28.776	48.63	236.43	0.650	0.000	5.00	11.366	7.39	359.3	0.0	319.6
158.0	Appertunance(s)	0.00	1.56	28.934	48.89	231.58	0.650	0.000	3.00	6.613	4.30	210.2	0.0	185.9
160.0		0.00	1.57	29.038	49.07	228.32	0.650	0.000	2.00	4.322	2.81	137.9	0.0	121.5
165.0		0.00	1.58	29.294	49.50	220.10	0.650	0.000	5.00	10.504	6.83	338.0	0.0	295.2
168.0	Appertunance(s)	0.00	1.59	29.446	49.76	215.12	0.650	0.000	3.00	6.095	3.96	197.2	0.0	171.2
170.0		0.00	1.59	29.545	49.93	211.77	0.650	0.000	2.00	3.977	2.59	129.1	0.0	111.7
175.0		0.00	1.61	29.791	50.34	203.35	0.650	0.000	5.00	9.641	6.27	315.5	0.0	270.7
178.0	Appertunance(s)	0.00	1.61	29.936	50.59	198.25	0.650	0.000	3.00	5.578	3.63	183.4	0.0	156.6

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 5
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		

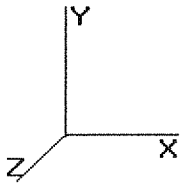


Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	178.00	14,967.8	0.0	32,204.2

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 6
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



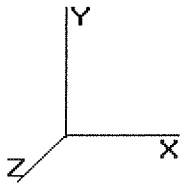
Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

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)
12.00	PCTEL GPS-TMG-HR-	1	18.496	31.258	1.00	0.09	0.000	0.000	2.81	0.00	0.00	0.60
12.00	Standoff	1	18.496	31.258	1.00	3.50	0.000	0.000	109.40	0.00	0.00	75.00
86.00	GPS	1	24.358	41.166	1.00	1.00	0.000	0.500	41.17	0.00	20.58	10.00
86.00	Standoff	1	24.318	41.098	1.00	3.50	0.000	0.000	143.84	0.00	0.00	75.00
95.00	GPS	1	25.057	42.347	1.00	1.00	0.000	0.500	42.35	0.00	21.17	10.00
95.00	Standoff	5	25.020	42.283	1.00	17.50	0.000	0.000	739.96	0.00	0.00	375.00
108.0	GPS	1	25.988	43.919	1.00	1.00	0.000	0.500	43.92	0.00	21.96	10.00
108.0	Standoff	1	25.953	43.861	1.00	3.50	0.000	0.000	153.51	0.00	0.00	75.00
137.0	Flat Low Profile Pla	1	27.778	46.946	1.00	26.10	0.000	0.000	1,225.28	0.00	0.00	1,500.00
137.0	Powerwave LGP21903	6	27.778	46.946	0.50	0.81	0.000	0.000	38.03	0.00	0.00	33.00
137.0	Powerwave LGP21401	6	27.778	46.946	0.50	3.87	0.000	0.000	181.68	0.00	0.00	84.60
137.0	Powerwave 7770.00	6	27.778	46.946	0.75	26.46	0.000	0.000	1,242.18	0.00	0.00	210.00
137.0	KMW AM-X-CD-16-65-	3	27.778	46.946	0.78	19.33	0.000	0.000	907.38	0.00	0.00	145.50
137.0	Ericsson RRUS 11 (Ba	6	27.778	46.946	0.67	11.82	0.000	0.000	554.84	0.00	0.00	330.00
137.0	Raycap DC6-48-60-18-	1	27.778	46.946	1.00	1.47	0.000	0.000	69.01	0.00	0.00	31.80
148.0	Round Low Profile Pl	1	28.398	47.993	1.00	21.70	0.000	0.000	1,041.44	0.00	0.00	1,500.00
148.0	Kathrein Smart Bias	3	28.398	47.993	0.50	0.14	0.000	0.000	6.48	0.00	0.00	9.93
148.0	Ericsson KRY 112 144	3	28.398	47.993	0.50	0.62	0.000	0.000	29.52	0.00	0.00	33.00
148.0	Andrew LNX-6515DS-	3	28.398	47.993	0.84	28.80	0.000	0.000	1,382.37	0.00	0.00	153.90
148.0	EMS RR90-17-02DP	1	28.398	47.993	0.73	3.18	0.000	0.000	152.75	0.00	0.00	13.50
148.0	EMS RR90-17-02DP	2	28.398	47.993	0.73	6.37	0.000	0.000	305.50	0.00	0.00	27.00
158.0	Antel BXA-171085-8BF	3	28.934	48.898	0.87	7.67	0.000	0.000	375.21	0.00	0.00	31.50
158.0	Flat Low Profile Pla	1	28.934	48.898	1.00	26.10	0.000	0.000	1,276.24	0.00	0.00	1,500.00
158.0	Antel BXA-70063/6CF	3	28.934	48.898	0.74	17.16	0.000	0.000	839.12	0.00	0.00	51.00
158.0	RFS FD9R6004/2C-3L	6	28.934	48.898	0.50	1.11	0.000	0.000	54.28	0.00	0.00	18.60
158.0	Antel LPA-80080/4CF	6	28.934	48.898	0.72	26.18	0.000	0.000	1,280.11	0.00	0.00	72.00
168.0	Round Low Profile Pl	1	29.446	49.763	1.00	21.70	0.000	0.000	1,079.85	0.00	0.00	1,500.00
168.0	Decibel DB980H90A-	6	29.446	49.763	0.79	18.01	0.000	0.000	896.33	0.00	0.00	51.00
178.0	Flat Low Profile Pla	1	29.936	50.592	1.00	26.10	0.000	0.000	1,320.45	0.00	0.00	1,500.00
178.0	Allgon 7120.16.05.00	9	30.032	50.754	0.85	44.06	0.000	2.000	2,236.41	0.00	4,472.81	138.60
178.0	72" x 12" Panels	3	30.032	50.754	0.78	19.66	0.000	2.000	997.61	0.00	1,995.23	135.00
									18,769.04			9,700.53

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 7
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



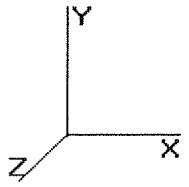
Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

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	477.41	1,725.40	0.00	0.00
10.00	468.64	1,697.45	0.00	0.00
12.00	297.22	746.76	0.00	0.00
15.00	274.88	997.90	0.00	0.00
20.00	451.12	1,640.81	0.00	0.00
25.00	442.36	1,612.86	0.00	0.00
30.00	433.59	1,584.92	0.00	0.00
35.00	432.03	1,556.97	0.00	0.00
40.00	439.58	1,529.02	0.00	0.00
42.75	242.38	829.05	0.00	0.00
45.00	202.47	1,148.18	0.00	0.00
49.00	363.90	2,015.89	0.00	0.00
50.00	90.52	249.63	0.00	0.00
55.00	458.99	1,234.51	0.00	0.00
60.00	460.15	1,211.80	0.00	0.00
65.00	460.16	1,189.10	0.00	0.00
70.00	459.14	1,166.39	0.00	0.00
75.00	457.20	1,143.68	0.00	0.00
80.00	454.43	1,120.98	0.00	0.00
85.00	450.89	1,098.27	0.00	0.00
86.00	274.10	301.93	0.00	20.58
87.00	88.93	215.87	0.00	0.00
90.00	271.23	1,084.84	0.00	0.00
92.00	179.61	714.84	0.00	0.00
95.00	1,050.65	945.02	0.00	21.17
100.0	444.22	917.25	0.00	0.00
105.0	438.26	898.04	0.00	0.00
108.0	456.61	614.60	0.00	21.96
110.0	171.22	348.92	0.00	0.00
115.0	424.77	858.86	0.00	0.00
120.0	417.29	839.65	0.00	0.00
125.0	409.37	820.44	0.00	0.00
130.0	401.02	801.22	0.00	0.00
132.0	157.46	315.11	0.00	0.00
135.0	237.11	686.56	0.00	0.00
136.0	78.15	226.34	0.00	0.00
137.0	4,296.19	2,449.31	0.00	0.00
140.0	231.64	315.65	0.00	0.00
145.0	379.25	516.30	0.00	0.00
148.0	3,140.50	2,041.24	0.00	0.00
150.0	146.15	180.48	0.00	0.00
155.0	359.28	442.65	0.00	0.00
158.0	4,035.13	1,932.82	0.00	0.00
160.0	137.87	151.02	0.00	0.00
165.0	338.00	368.99	0.00	0.00
168.0	2,173.33	1,766.53	0.00	0.00
170.0	129.08	131.40	0.00	0.00
175.0	315.51	319.94	0.00	0.00
178.0	4,737.89	1,959.70	0.00	6,468.04

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 8
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

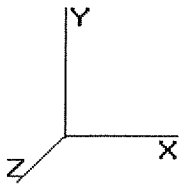
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	33,736.87	48,665.11	0.00	6,531.76

Pole : 302472
Location : Andover-Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

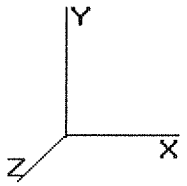
Calculated Shaft Forces and Deflections

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	-33.809	-48.614	0.000	0.000	0.000	-4,331.966	0.000	0.000	0.000	0.000
5.00	-33.467	-46.791	0.000	0.000	0.000	-4,162.926	-0.090	0.000	0.090	-0.168
10.00	-33.085	-45.027	0.000	0.000	0.000	-3,995.594	-0.357	0.000	0.357	-0.338
12.00	-32.851	-44.231	0.000	0.000	0.000	-3,929.425	-0.514	0.000	0.514	-0.408
15.00	-32.674	-43.156	0.000	0.000	0.000	-3,830.874	-0.805	0.000	0.805	-0.514
20.00	-32.334	-41.420	0.000	0.000	0.000	-3,667.507	-1.437	0.000	1.437	-0.689
25.00	-31.994	-39.713	0.000	0.000	0.000	-3,505.841	-2.255	0.000	2.255	-0.868
30.00	-31.655	-38.036	0.000	0.000	0.000	-3,345.873	-3.260	0.000	3.260	-1.048
35.00	-31.309	-36.387	0.000	0.000	0.000	-3,187.601	-4.456	0.000	4.456	-1.231
40.00	-30.922	-34.790	0.000	0.000	0.000	-3,031.057	-5.845	0.000	5.845	-1.417
42.75	-30.715	-33.917	0.000	0.000	0.000	-2,946.022	-6.693	0.000	6.693	-1.522
45.00	-30.550	-32.711	0.000	0.000	0.000	-2,876.914	-7.431	0.000	7.431	-1.608
49.00	-30.178	-30.656	0.000	0.000	0.000	-2,754.715	-8.844	0.000	8.844	-1.761
50.00	-30.150	-30.340	0.000	0.000	0.000	-2,724.537	-9.217	0.000	9.217	-1.800
55.00	-29.764	-29.005	0.000	0.000	0.000	-2,573.788	-11.222	0.000	11.222	-2.024
60.00	-29.369	-27.695	0.000	0.000	0.000	-2,424.970	-13.462	0.000	13.462	-2.249
65.00	-28.965	-26.411	0.000	0.000	0.000	-2,278.129	-15.938	0.000	15.938	-2.476
70.00	-28.554	-25.153	0.000	0.000	0.000	-2,133.306	-18.653	0.000	18.653	-2.704
75.00	-28.137	-23.921	0.000	0.000	0.000	-1,990.537	-21.607	0.000	21.607	-2.933
80.00	-27.715	-22.715	0.000	0.000	0.000	-1,849.852	-24.801	0.000	24.801	-3.163
85.00	-27.254	-21.579	0.000	0.000	0.000	-1,711.278	-28.236	0.000	28.236	-3.393
86.00	-26.980	-21.271	0.000	0.000	0.000	-1,684.004	-28.951	0.000	28.951	-3.440
87.00	-26.913	-21.017	0.000	0.000	0.000	-1,657.024	-29.677	0.000	29.677	-3.487
90.00	-26.615	-19.897	0.000	0.000	0.000	-1,576.288	-31.912	0.000	31.912	-3.627
92.00	-26.429	-19.142	0.000	0.000	0.000	-1,523.059	-33.451	0.000	33.451	-3.720
95.00	-25.381	-18.181	0.000	0.000	0.000	-1,443.752	-35.832	0.000	35.832	-3.859
100.0	-24.949	-17.189	0.000	0.000	0.000	-1,316.851	-40.006	0.000	40.006	-4.111
105.0	-24.502	-16.241	0.000	0.000	0.000	-1,192.108	-44.441	0.000	44.441	-4.359
108.0	-24.033	-15.612	0.000	0.000	0.000	-1,118.582	-47.225	0.000	47.225	-4.508
110.0	-23.880	-15.207	0.000	0.000	0.000	-1,070.518	-49.134	0.000	49.134	-4.607
115.0	-23.444	-14.291	0.000	0.000	0.000	-951.122	-54.082	0.000	54.082	-4.844
120.0	-23.008	-13.400	0.000	0.000	0.000	-833.905	-59.273	0.000	59.273	-5.073
125.0	-22.573	-12.537	0.000	0.000	0.000	-718.866	-64.698	0.000	64.698	-5.292
130.0	-22.127	-11.723	0.000	0.000	0.000	-606.005	-70.345	0.000	70.345	-5.497
132.0	-21.959	-11.387	0.000	0.000	0.000	-561.752	-72.661	0.000	72.661	-5.576
135.0	-21.669	-10.700	0.000	0.000	0.000	-495.876	-76.197	0.000	76.197	-5.689
136.0	-21.576	-10.468	0.000	0.000	0.000	-474.207	-77.391	0.000	77.391	-5.726
137.0	-17.070	-8.433	0.000	0.000	0.000	-452.631	-78.593	0.000	78.593	-5.762
140.0	-16.834	-8.087	0.000	0.000	0.000	-401.422	-82.256	0.000	82.256	-5.911
145.0	-16.425	-7.565	0.000	0.000	0.000	-317.252	-88.560	0.000	88.560	-6.135
148.0	-13.093	-5.853	0.000	0.000	0.000	-267.977	-92.449	0.000	92.449	-6.257
150.0	-12.940	-5.662	0.000	0.000	0.000	-241.792	-95.081	0.000	95.081	-6.332
155.0	-12.544	-5.236	0.000	0.000	0.000	-177.093	-101.790	0.000	101.790	-6.494
158.0	-8.320	-3.766	0.000	0.000	0.000	-139.461	-105.890	0.000	105.890	-6.576
160.0	-8.170	-3.621	0.000	0.000	0.000	-122.822	-108.649	0.000	108.649	-6.625
165.0	-7.796	-3.284	0.000	0.000	0.000	-81.971	-115.629	0.000	115.629	-6.725
168.0	-5.431	-1.782	0.000	0.000	0.000	-58.584	-119.861	0.000	119.861	-6.772
170.0	-5.288	-1.663	0.000	0.000	0.000	-47.723	-122.697	0.000	122.697	-6.797
175.0	-4.938	-1.381	0.000	0.000	0.000	-21.281	-129.825	0.000	129.825	-6.841
178.0	-4.738	0.000	0.000	0.000	0.000	-6.468	-134.119	0.000	134.119	-6.853

Pole : 302472
Location : Andover-Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



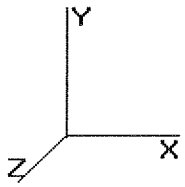
Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.54	0.76	0.00	0.00	0.00	41.73	42.30	52.0	0.0	0.814
5.00	0.53	0.77	0.00	0.00	0.00	41.63	42.18	52.0	0.0	0.811
10.00	0.52	0.77	0.00	0.00	0.00	41.50	42.04	52.0	0.0	0.809
12.00	0.52	0.77	0.00	0.00	0.00	41.44	41.98	52.0	0.0	0.808
15.00	0.51	0.78	0.00	0.00	0.00	41.35	41.88	52.0	0.0	0.806
20.00	0.50	0.79	0.00	0.00	0.00	41.18	41.70	52.0	0.0	0.802
25.00	0.49	0.79	0.00	0.00	0.00	40.98	41.49	52.0	0.0	0.798
30.00	0.48	0.80	0.00	0.00	0.00	40.75	41.25	52.0	0.0	0.794
35.00	0.47	0.81	0.00	0.00	0.00	40.48	40.97	52.0	0.0	0.788
40.00	0.46	0.82	0.00	0.00	0.00	40.17	40.65	52.0	0.0	0.782
42.75	0.45	0.82	0.00	0.00	0.00	39.99	40.47	52.0	0.0	0.778
45.00	0.44	0.82	0.00	0.00	0.00	39.83	40.30	52.0	0.0	0.775
49.00	0.50	1.00	0.00	0.00	0.00	46.70	47.23	52.0	0.0	0.909
50.00	0.50	1.00	0.00	0.00	0.00	46.59	47.13	52.0	0.0	0.907
55.00	0.49	1.01	0.00	0.00	0.00	46.03	46.55	52.0	0.0	0.896
60.00	0.48	1.02	0.00	0.00	0.00	45.40	45.91	52.0	0.0	0.883
65.00	0.47	1.03	0.00	0.00	0.00	44.70	45.20	52.0	0.0	0.870
70.00	0.46	1.04	0.00	0.00	0.00	43.91	44.41	52.0	0.0	0.854
75.00	0.44	1.05	0.00	0.00	0.00	43.04	43.52	52.0	0.0	0.837
80.00	0.43	1.06	0.00	0.00	0.00	42.07	42.54	52.0	0.0	0.818
85.00	0.42	1.07	0.00	0.00	0.00	40.98	41.44	52.0	0.0	0.797
86.00	0.42	1.07	0.00	0.00	0.00	40.75	41.21	52.0	0.0	0.793
87.00	0.41	1.07	0.00	0.00	0.00	40.53	40.98	52.0	0.0	0.788
90.00	0.40	1.08	0.00	0.00	0.00	39.81	40.25	52.0	0.0	0.774
92.00	0.45	1.25	0.00	0.00	0.00	44.60	45.10	52.0	0.0	0.868
95.00	0.43	1.22	0.00	0.00	0.00	43.66	44.15	52.0	0.0	0.849
100.00	0.42	1.23	0.00	0.00	0.00	42.07	42.55	52.0	0.0	0.819
105.00	0.41	1.25	0.00	0.00	0.00	40.30	40.76	52.0	0.0	0.784
108.00	0.40	1.24	0.00	0.00	0.00	39.15	39.60	52.0	0.0	0.762
110.00	0.39	1.25	0.00	0.00	0.00	38.35	38.81	52.0	0.0	0.747
115.00	0.38	1.26	0.00	0.00	0.00	36.17	36.62	52.0	0.0	0.705
120.00	0.37	1.28	0.00	0.00	0.00	33.73	34.18	52.0	0.0	0.657
125.00	0.36	1.30	0.00	0.00	0.00	30.99	31.43	52.0	0.0	0.605
130.00	0.34	1.31	0.00	0.00	0.00	27.90	28.34	52.0	0.0	0.545
132.00	0.34	1.32	0.00	0.00	0.00	26.57	27.00	52.0	0.0	0.520
135.00	0.33	1.33	0.00	0.00	0.00	24.43	24.87	52.0	0.0	0.478
136.00	0.49	2.06	0.00	0.00	0.00	35.72	36.39	52.0	0.0	0.700
137.00	0.40	1.64	0.00	0.00	0.00	34.56	35.08	52.0	0.0	0.675
140.00	0.39	1.65	0.00	0.00	0.00	31.95	32.47	52.0	0.0	0.625
145.00	0.38	1.67	0.00	0.00	0.00	27.12	27.65	52.0	0.0	0.532
148.00	0.30	1.36	0.00	0.00	0.00	23.94	24.36	52.0	0.0	0.469
150.00	0.30	1.36	0.00	0.00	0.00	22.26	22.68	52.0	0.0	0.436
155.00	0.28	1.37	0.00	0.00	0.00	17.60	18.04	52.0	0.0	0.347
158.00	0.21	0.93	0.00	0.00	0.00	14.54	14.83	52.0	0.0	0.285
160.00	0.20	0.93	0.00	0.00	0.00	13.22	13.52	52.0	0.0	0.260
165.00	0.19	0.92	0.00	0.00	0.00	9.59	9.91	52.0	0.0	0.191
168.00	0.11	0.66	0.00	0.00	0.00	7.22	7.41	52.0	0.0	0.143
170.00	0.10	0.65	0.00	0.00	0.00	6.09	6.30	52.0	0.0	0.121
175.00	0.09	0.64	0.00	0.00	0.00	2.97	3.26	52.0	0.0	0.063
178.00	0.00	0.63	0.00	0.00	0.00	0.96	1.45	52.0	0.0	0.028

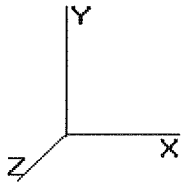
Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 11
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 12
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



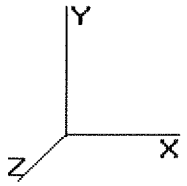
Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

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	349.09	0.650	0.500	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	13.871	23.44	342.74	0.650	0.500	5.00	23.913	15.54	364.4	174.0	1,683.1
10.00		0.00	1.00	13.871	23.44	336.39	0.650	0.500	5.00	23.482	15.26	357.8	170.8	1,651.9
12.00	Appertunance(s)	0.00	1.00	13.871	23.44	333.85	0.650	0.500	2.00	9.272	6.03	141.3	67.8	652.4
15.00		0.00	1.00	13.871	23.44	330.04	0.650	0.500	3.00	13.779	8.96	210.0	100.5	969.1
20.00		0.00	1.00	13.871	23.44	323.69	0.650	0.500	5.00	22.620	14.70	344.7	164.4	1,589.6
25.00		0.00	1.00	13.871	23.44	317.34	0.650	0.500	5.00	22.188	14.42	338.1	161.2	1,558.5
30.00		0.00	1.00	13.871	23.44	311.00	0.650	0.500	5.00	21.757	14.14	331.5	158.0	1,527.4
35.00		0.00	1.01	14.106	23.84	307.22	0.650	0.500	5.00	21.326	13.86	330.5	154.8	1,496.2
40.00		0.00	1.05	14.655	24.76	306.61	0.650	0.500	5.00	20.895	13.58	336.4	151.6	1,465.1
42.75	Bot - Section 2	0.00	1.07	14.936	25.24	305.91	0.650	0.500	2.75	11.308	7.35	185.5	82.4	792.9
45.00		0.00	1.09	15.156	25.61	305.17	0.650	0.500	2.25	9.307	6.05	155.0	67.9	1,119.1
49.00	Top - Section 1	0.00	1.12	15.530	26.24	303.54	0.650	0.500	4.00	16.331	10.62	278.6	118.7	1,962.1
50.00		0.00	1.12	15.620	26.39	308.35	0.650	0.500	1.00	4.040	2.63	69.3	29.5	236.1
55.00		0.00	1.15	16.051	27.12	305.75	0.650	0.500	5.00	19.939	12.96	351.6	144.5	1,163.5
60.00		0.00	1.18	16.455	27.80	302.66	0.650	0.500	5.00	19.508	12.68	352.6	141.3	1,137.6
65.00		0.00	1.21	16.836	28.45	299.15	0.650	0.500	5.00	19.077	12.40	352.8	138.1	1,111.7
70.00		0.00	1.24	17.196	29.06	295.26	0.650	0.500	5.00	18.646	12.12	352.2	134.9	1,085.8
75.00		0.00	1.26	17.538	29.64	291.05	0.650	0.500	5.00	18.214	11.84	350.9	131.8	1,059.9
80.00		0.00	1.28	17.865	30.19	286.54	0.650	0.500	5.00	17.783	11.56	349.0	128.6	1,034.0
85.00		0.00	1.31	18.177	30.71	281.76	0.650	0.500	5.00	17.352	11.28	346.5	125.4	1,008.1
86.00	Appertunance(s)	0.00	1.31	18.238	30.82	280.78	0.650	0.500	1.00	3.419	2.22	68.5	24.9	198.8
87.00	Bot - Section 3	0.00	1.31	18.298	30.92	279.78	0.650	0.500	1.00	3.401	2.21	68.4	24.8	197.7
90.00		0.00	1.33	18.476	31.22	276.74	0.650	0.500	3.00	10.272	6.68	208.5	74.6	1,030.5
92.00	Top - Section 2	0.00	1.34	18.592	31.42	274.67	0.650	0.500	2.00	6.762	4.40	138.1	49.2	678.1
95.00	Appertunance(s)	0.00	1.35	18.764	31.71	276.41	0.650	0.500	3.00	10.014	6.51	206.4	72.7	503.8
100.0		0.00	1.37	19.041	32.17	271.01	0.650	0.500	5.00	16.344	10.62	341.9	117.9	821.1
105.0		0.00	1.39	19.308	32.63	265.41	0.650	0.500	5.00	15.913	10.34	337.5	114.7	798.7
108.0	Appertunance(s)	0.00	1.40	19.464	32.89	261.97	0.650	0.500	3.00	9.341	6.07	199.7	67.7	468.8
110.0		0.00	1.41	19.566	33.06	259.64	0.650	0.500	2.00	6.141	3.99	132.0	44.6	308.2
115.0		0.00	1.42	19.816	33.49	253.70	0.650	0.500	5.00	15.051	9.78	327.6	108.3	753.9
120.0		0.00	1.44	20.059	33.89	247.62	0.650	0.500	5.00	14.619	9.50	322.1	105.1	731.5
125.0		0.00	1.46	20.294	34.29	241.39	0.650	0.500	5.00	14.188	9.22	316.3	101.9	709.1
130.0		0.00	1.48	20.523	34.68	235.02	0.650	0.500	5.00	13.757	8.94	310.1	98.7	686.7
132.0	Bot - Section 4	0.00	1.48	20.613	34.83	232.44	0.650	0.500	2.00	5.382	3.50	121.9	39.0	268.8
135.0		0.00	1.49	20.745	35.06	228.52	0.650	0.500	3.00	8.053	5.23	183.5	58.1	616.7
136.0	Top - Section 3	0.00	1.49	20.789	35.13	227.21	0.650	0.500	1.00	2.650	1.72	60.5	19.3	202.9
137.0	Appertunance(s)	0.00	1.50	20.833	35.20	229.18	0.650	0.500	1.00	2.633	1.71	60.2	19.1	90.9
140.0		0.00	1.51	20.962	35.42	225.21	0.650	0.500	3.00	7.794	5.07	179.5	56.2	268.5
145.0		0.00	1.52	21.173	35.78	218.50	0.650	0.500	5.00	12.645	8.22	294.1	90.5	434.6
148.0	Appertunance(s)	0.00	1.53	21.297	35.99	214.42	0.650	0.500	3.00	7.380	4.80	172.7	53.2	253.7
150.0		0.00	1.54	21.379	36.13	211.68	0.650	0.500	2.00	4.834	3.14	113.5	34.9	166.2
155.0		0.00	1.55	21.581	36.47	204.75	0.650	0.500	5.00	11.783	7.66	279.3	84.1	403.8
158.0	Appertunance(s)	0.00	1.56	21.699	36.67	200.55	0.650	0.500	3.00	6.863	4.46	163.6	49.3	235.2
160.0		0.00	1.57	21.777	36.80	197.73	0.650	0.500	2.00	4.489	2.92	107.4	32.4	153.9
165.0		0.00	1.58	21.969	37.12	190.61	0.650	0.500	5.00	10.920	7.10	263.5	77.7	372.9
168.0	Appertunance(s)	0.00	1.59	22.083	37.32	186.29	0.650	0.500	3.00	6.345	4.12	153.9	45.5	216.7
170.0		0.00	1.59	22.158	37.44	183.40	0.650	0.500	2.00	4.144	2.69	100.9	29.8	141.5
175.0		0.00	1.61	22.342	37.75	176.10	0.650	0.500	5.00	10.058	6.54	246.8	71.3	342.1
178.0	Appertunance(s)	0.00	1.61	22.451	37.94	171.68	0.650	0.500	3.00	5.828	3.79	143.7	41.7	198.2

Pole :	302472	Code: TIA/EIA-222 Rev F	
Location :	Andover-Bunker Hill Road, CT		3/13/2015 11:22:47 AM
Height :	178.0 (ft)		Page: 13
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	178.00	11,520.7	4,353.5	36,557.7

Pole : 302472 Code: TIA/EIA-222 Rev F

Location : Andover-Bunker Hill Road, CT

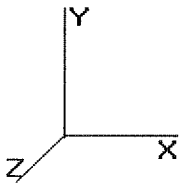
Height : 178.0 (ft)

Base Dia : 56.91 (in)

Top Dia : 22.00 (in) Base Elev : 0.000 (ft)

Shape : 18 Sides

Taper : 0.207008 (in/ft)



Load Case: Ice 73.61 mph Wind with Ice 26 Iterations

Gust Response Factor : 1.69

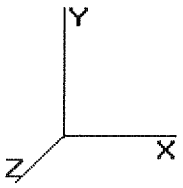
Dead Load Factor : 1.00

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)
12.00	PCTEL GPS-TMG-HR-	1	13.871	23.442	1.00	0.14	0.000	0.000	3.28	0.00	0.00	1.90
12.00	Standoff	1	13.871	23.442	1.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00
86.00	GPS	1	18.268	30.873	1.00	0.00	0.000	0.500	0.00	0.00	0.00	0.00
86.00	Standoff	1	18.238	30.821	1.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00
95.00	GPS	1	18.792	31.758	1.00	0.00	0.000	0.500	0.00	0.00	0.00	0.00
95.00	Standoff	5	18.764	31.711	1.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00
108.0	GPS	1	19.490	32.937	1.00	1.21	0.000	0.500	39.85	0.00	19.93	18.24
108.0	Standoff	1	19.464	32.894	1.00	4.50	0.000	0.000	148.02	0.00	0.00	150.00
137.0	Flat Low Profile Pla	1	20.833	35.207	1.00	31.60	0.000	0.000	1,112.55	0.00	0.00	1,700.00
137.0	Powerwave LGP21903	6	20.833	35.207	0.50	1.14	0.000	0.000	40.14	0.00	0.00	47.40
137.0	Powerwave LGP21401	6	20.833	35.207	0.50	4.59	0.000	0.000	161.60	0.00	0.00	127.56
137.0	Powerwave 7770.00	6	20.833	35.207	0.75	29.39	0.000	0.000	1,034.56	0.00	0.00	405.78
137.0	KMW AM-X-CD-16-65-	3	20.833	35.207	0.78	21.25	0.000	0.000	748.05	0.00	0.00	285.00
137.0	Ericsson RRUS 11 (Ba	6	20.833	35.207	0.67	13.23	0.000	0.000	465.64	0.00	0.00	445.80
137.0	Raycap DC6-48-60-18-	1	20.833	35.207	1.00	1.67	0.000	0.000	58.80	0.00	0.00	49.50
148.0	Round Low Profile Pl	1	21.297	35.993	1.00	27.20	0.000	0.000	979.00	0.00	0.00	1,700.00
148.0	Kathrein Smart Bias	3	21.297	35.993	0.50	0.24	0.000	0.000	8.64	0.00	0.00	12.90
148.0	Ericsson KRY 112 144	3	21.297	35.993	0.50	0.83	0.000	0.000	29.69	0.00	0.00	42.30
148.0	Andrew LNX-6515DS-	3	21.297	35.993	0.84	31.15	0.000	0.000	1,121.06	0.00	0.00	351.30
148.0	EMS RR90-17-02DP	1	21.297	35.993	0.73	3.64	0.000	0.000	131.11	0.00	0.00	40.42
148.0	EMS RR90-17-02DP	2	21.297	35.993	0.73	7.29	0.000	0.000	262.22	0.00	0.00	80.84
158.0	Antel BXA-171085-8BF	3	21.699	36.671	0.87	16.16	0.000	0.000	592.46	0.00	0.00	189.00
158.0	Flat Low Profile Pla	1	21.699	36.671	1.00	31.60	0.000	0.000	1,158.81	0.00	0.00	1,700.00
158.0	Antel BXA-70063/6CF	3	21.699	36.671	0.74	18.96	0.000	0.000	695.24	0.00	0.00	174.00
158.0	RFS FD9R6004/2C-3L	6	21.699	36.671	0.50	1.50	0.000	0.000	55.01	0.00	0.00	32.40
158.0	Antel LPA-80080/4CF	6	21.699	36.671	0.72	28.73	0.000	0.000	1,053.49	0.00	0.00	270.72
168.0	Round Low Profile Pl	1	22.083	37.320	1.00	27.20	0.000	0.000	1,015.10	0.00	0.00	1,700.00
168.0	Decibel DB980H90A-	6	22.083	37.320	0.79	21.33	0.000	0.000	796.04	0.00	0.00	174.00
178.0	Flat Low Profile Pla	1	22.451	37.942	1.00	31.60	0.000	0.000	1,198.96	0.00	0.00	1,700.00
178.0	Allgon 7120.16.05.00	9	22.522	38.063	0.85	48.88	0.000	2.000	1,860.65	0.00	3,721.30	477.00
178.0	72" x 12" Panels	3	22.522	38.063	0.78	21.60	0.000	2.000	822.09	0.00	1,644.18	261.00
									15,592.07			12,137.06

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 15
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



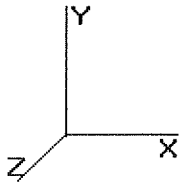
Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

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	364.38	1,899.36	0.00	0.00
10.00	357.81	1,868.21	0.00	0.00
12.00	144.57	740.85	0.00	0.00
15.00	209.95	1,098.44	0.00	0.00
20.00	344.67	1,805.18	0.00	0.00
25.00	338.10	1,774.04	0.00	0.00
30.00	331.52	1,742.90	0.00	0.00
35.00	330.46	1,711.76	0.00	0.00
40.00	336.37	1,680.62	0.00	0.00
42.75	185.54	911.47	0.00	0.00
45.00	154.96	1,216.10	0.00	0.00
49.00	278.60	2,134.58	0.00	0.00
50.00	69.31	279.17	0.00	0.00
55.00	351.57	1,379.04	0.00	0.00
60.00	352.62	1,353.14	0.00	0.00
65.00	352.80	1,327.24	0.00	0.00
70.00	352.21	1,301.34	0.00	0.00
75.00	350.91	1,275.44	0.00	0.00
80.00	348.98	1,249.54	0.00	0.00
85.00	346.46	1,223.63	0.00	0.00
86.00	68.49	241.87	0.00	0.00
87.00	68.37	240.69	0.00	0.00
90.00	208.49	1,159.41	0.00	0.00
92.00	138.11	764.05	0.00	0.00
95.00	206.40	632.68	0.00	0.00
100.0	341.86	1,035.15	0.00	0.00
105.0	337.51	1,012.75	0.00	0.00
108.0	387.60	765.52	0.00	19.93
110.0	131.99	393.53	0.00	0.00
115.0	327.63	967.18	0.00	0.00
120.0	322.13	944.78	0.00	0.00
125.0	316.30	922.37	0.00	0.00
130.0	310.14	899.96	0.00	0.00
132.0	121.86	354.09	0.00	0.00
135.0	183.52	744.70	0.00	0.00
136.0	60.51	245.59	0.00	0.00
137.0	3,681.58	3,194.58	0.00	0.00
140.0	179.47	371.87	0.00	0.00
145.0	294.11	606.81	0.00	0.00
148.0	2,704.38	2,584.83	0.00	0.00
150.0	113.52	215.41	0.00	0.00
155.0	279.32	526.77	0.00	0.00
158.0	3,718.59	2,675.16	0.00	0.00
160.0	107.38	183.39	0.00	0.00
165.0	263.54	446.73	0.00	0.00
168.0	1,965.06	2,135.02	0.00	0.00
170.0	100.86	161.21	0.00	0.00
175.0	246.84	391.28	0.00	0.00
178.0	4,025.42	2,665.75	0.00	5,365.49

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 16
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

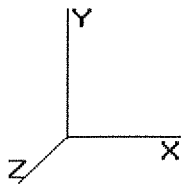
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	27,112.79	55,455.17	0.00	5,385.41

Pole : 302472
Location : Andover-Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

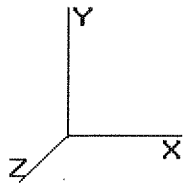
Calculated Shaft Forces and Deflections

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	-27.181	-55.421	0.000	0.000	0.000	-3,624.796	0.000	0.000	0.000	0.000
5.00	-26.947	-53.456	0.000	0.000	0.000	-3,488.893	-0.075	0.000	0.075	-0.141
10.00	-26.673	-51.542	0.000	0.000	0.000	-3,354.161	-0.299	0.000	0.299	-0.284
12.00	-26.589	-50.768	0.000	0.000	0.000	-3,300.817	-0.431	0.000	0.431	-0.342
15.00	-26.475	-49.616	0.000	0.000	0.000	-3,221.050	-0.675	0.000	0.675	-0.431
20.00	-26.238	-47.746	0.000	0.000	0.000	-3,088.679	-1.205	0.000	1.205	-0.579
25.00	-26.001	-45.907	0.000	0.000	0.000	-2,957.490	-1.892	0.000	1.892	-0.729
30.00	-25.764	-44.100	0.000	0.000	0.000	-2,827.486	-2.737	0.000	2.737	-0.881
35.00	-25.520	-42.325	0.000	0.000	0.000	-2,698.669	-3.743	0.000	3.743	-1.036
40.00	-25.238	-40.597	0.000	0.000	0.000	-2,571.070	-4.912	0.000	4.912	-1.194
42.75	-25.089	-39.655	0.000	0.000	0.000	-2,501.667	-5.626	0.000	5.626	-1.283
45.00	-24.975	-38.398	0.000	0.000	0.000	-2,445.218	-6.249	0.000	6.249	-1.356
49.00	-24.695	-36.236	0.000	0.000	0.000	-2,345.322	-7.440	0.000	7.440	-1.486
50.00	-24.689	-35.910	0.000	0.000	0.000	-2,320.628	-7.755	0.000	7.755	-1.520
55.00	-24.414	-34.460	0.000	0.000	0.000	-2,197.186	-9.449	0.000	9.449	-1.710
60.00	-24.130	-33.037	0.000	0.000	0.000	-2,075.120	-11.342	0.000	11.342	-1.902
65.00	-23.839	-31.642	0.000	0.000	0.000	-1,954.471	-13.439	0.000	13.439	-2.097
70.00	-23.542	-30.275	0.000	0.000	0.000	-1,835.276	-15.739	0.000	15.739	-2.293
75.00	-23.238	-28.935	0.000	0.000	0.000	-1,717.570	-18.246	0.000	18.246	-2.490
80.00	-22.929	-27.623	0.000	0.000	0.000	-1,601.382	-20.960	0.000	20.960	-2.689
85.00	-22.578	-26.371	0.000	0.000	0.000	-1,486.739	-23.882	0.000	23.882	-2.888
86.00	-22.516	-26.117	0.000	0.000	0.000	-1,464.162	-24.491	0.000	24.491	-2.929
87.00	-22.472	-25.848	0.000	0.000	0.000	-1,441.646	-25.109	0.000	25.109	-2.970
90.00	-22.247	-24.662	0.000	0.000	0.000	-1,374.230	-27.014	0.000	27.014	-3.092
92.00	-22.109	-23.867	0.000	0.000	0.000	-1,329.737	-28.327	0.000	28.327	-3.173
95.00	-21.937	-23.181	0.000	0.000	0.000	-1,263.411	-30.359	0.000	30.359	-3.295
100.0	-21.619	-22.086	0.000	0.000	0.000	-1,153.727	-33.926	0.000	33.926	-3.515
105.0	-21.282	-21.032	0.000	0.000	0.000	-1,045.634	-37.722	0.000	37.722	-3.732
108.0	-20.883	-20.254	0.000	0.000	0.000	-981.769	-40.109	0.000	40.109	-3.863
110.0	-20.776	-19.817	0.000	0.000	0.000	-940.005	-41.745	0.000	41.745	-3.950
115.0	-20.448	-18.802	0.000	0.000	0.000	-836.126	-45.992	0.000	45.992	-4.159
120.0	-20.118	-17.815	0.000	0.000	0.000	-733.887	-50.453	0.000	50.453	-4.360
125.0	-19.786	-16.855	0.000	0.000	0.000	-633.297	-55.119	0.000	55.119	-4.553
130.0	-19.439	-15.942	0.000	0.000	0.000	-534.368	-59.981	0.000	59.981	-4.733
132.0	-19.311	-15.570	0.000	0.000	0.000	-495.492	-61.977	0.000	61.977	-4.804
135.0	-19.082	-14.822	0.000	0.000	0.000	-437.560	-65.025	0.000	65.025	-4.903
136.0	-19.009	-14.572	0.000	0.000	0.000	-418.478	-66.055	0.000	66.055	-4.935
137.0	-15.082	-11.685	0.000	0.000	0.000	-399.470	-67.091	0.000	67.091	-4.967
140.0	-14.904	-11.287	0.000	0.000	0.000	-354.224	-70.251	0.000	70.251	-5.099
145.0	-14.584	-10.671	0.000	0.000	0.000	-279.707	-75.694	0.000	75.694	-5.296
148.0	-11.663	-8.333	0.000	0.000	0.000	-235.956	-79.053	0.000	79.053	-5.403
150.0	-11.544	-8.107	0.000	0.000	0.000	-212.632	-81.328	0.000	81.328	-5.470
155.0	-11.229	-7.590	0.000	0.000	0.000	-154.911	-87.128	0.000	87.128	-5.612
158.0	-7.271	-5.287	0.000	0.000	0.000	-121.224	-90.673	0.000	90.673	-5.684
160.0	-7.151	-5.106	0.000	0.000	0.000	-106.683	-93.060	0.000	93.060	-5.726
165.0	-6.849	-4.681	0.000	0.000	0.000	-70.926	-99.096	0.000	99.096	-5.813
168.0	-4.679	-2.755	0.000	0.000	0.000	-50.378	-102.756	0.000	102.756	-5.853
170.0	-4.564	-2.602	0.000	0.000	0.000	-41.020	-105.209	0.000	105.209	-5.875
175.0	-4.279	-2.236	0.000	0.000	0.000	-18.202	-111.374	0.000	111.374	-5.912
178.0	-4.025	0.000	0.000	0.000	0.000	-5.365	-115.086	0.000	115.086	-5.923

Pole : 302472
Location : Andover-Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



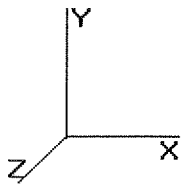
Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.62	0.61	0.00	0.00	0.00	34.92	35.56	52.0	0.0	0.684
5.00	0.61	0.62	0.00	0.00	0.00	34.89	35.51	52.0	0.0	0.683
10.00	0.60	0.62	0.00	0.00	0.00	34.83	35.45	52.0	0.0	0.682
12.00	0.59	0.63	0.00	0.00	0.00	34.81	35.42	52.0	0.0	0.681
15.00	0.59	0.63	0.00	0.00	0.00	34.77	35.37	52.0	0.0	0.681
20.00	0.58	0.64	0.00	0.00	0.00	34.68	35.27	52.0	0.0	0.679
25.00	0.56	0.64	0.00	0.00	0.00	34.57	35.15	52.0	0.0	0.676
30.00	0.55	0.65	0.00	0.00	0.00	34.43	35.01	52.0	0.0	0.673
35.00	0.54	0.66	0.00	0.00	0.00	34.27	34.83	52.0	0.0	0.670
40.00	0.53	0.67	0.00	0.00	0.00	34.08	34.63	52.0	0.0	0.666
42.75	0.53	0.67	0.00	0.00	0.00	33.96	34.50	52.0	0.0	0.664
45.00	0.51	0.67	0.00	0.00	0.00	33.86	34.39	52.0	0.0	0.662
49.00	0.60	0.82	0.00	0.00	0.00	39.76	40.38	52.0	0.0	0.777
50.00	0.59	0.82	0.00	0.00	0.00	39.69	40.30	52.0	0.0	0.775
55.00	0.58	0.83	0.00	0.00	0.00	39.30	39.90	52.0	0.0	0.768
60.00	0.57	0.84	0.00	0.00	0.00	38.85	39.45	52.0	0.0	0.759
65.00	0.56	0.85	0.00	0.00	0.00	38.35	38.94	52.0	0.0	0.749
70.00	0.55	0.86	0.00	0.00	0.00	37.78	38.36	52.0	0.0	0.738
75.00	0.54	0.87	0.00	0.00	0.00	37.14	37.71	52.0	0.0	0.725
80.00	0.53	0.88	0.00	0.00	0.00	36.42	36.97	52.0	0.0	0.711
85.00	0.51	0.89	0.00	0.00	0.00	35.60	36.15	52.0	0.0	0.695
86.00	0.51	0.89	0.00	0.00	0.00	35.43	35.98	52.0	0.0	0.692
87.00	0.51	0.89	0.00	0.00	0.00	35.26	35.80	52.0	0.0	0.689
90.00	0.49	0.90	0.00	0.00	0.00	34.70	35.23	52.0	0.0	0.678
92.00	0.56	1.05	0.00	0.00	0.00	38.94	39.54	52.0	0.0	0.761
95.00	0.55	1.06	0.00	0.00	0.00	38.21	38.80	52.0	0.0	0.747
100.00	0.54	1.07	0.00	0.00	0.00	36.86	37.45	52.0	0.0	0.720
105.00	0.53	1.08	0.00	0.00	0.00	35.35	35.93	52.0	0.0	0.691
108.00	0.52	1.08	0.00	0.00	0.00	34.36	34.93	52.0	0.0	0.672
110.00	0.51	1.09	0.00	0.00	0.00	33.68	34.24	52.0	0.0	0.659
115.00	0.50	1.10	0.00	0.00	0.00	31.80	32.36	52.0	0.0	0.623
120.00	0.49	1.12	0.00	0.00	0.00	29.69	30.24	52.0	0.0	0.582
125.00	0.48	1.14	0.00	0.00	0.00	27.30	27.85	52.0	0.0	0.536
130.00	0.47	1.15	0.00	0.00	0.00	24.60	25.15	52.0	0.0	0.484
132.00	0.46	1.16	0.00	0.00	0.00	23.43	23.98	52.0	0.0	0.461
135.00	0.45	1.17	0.00	0.00	0.00	21.56	22.11	52.0	0.0	0.425
136.00	0.69	1.81	0.00	0.00	0.00	31.52	32.36	52.0	0.0	0.623
137.00	0.56	1.45	0.00	0.00	0.00	30.50	31.16	52.0	0.0	0.599
140.00	0.55	1.46	0.00	0.00	0.00	28.20	28.86	52.0	0.0	0.555
145.00	0.54	1.48	0.00	0.00	0.00	23.91	24.58	52.0	0.0	0.473
148.00	0.43	1.21	0.00	0.00	0.00	21.08	21.61	52.0	0.0	0.416
150.00	0.42	1.22	0.00	0.00	0.00	19.57	20.11	52.0	0.0	0.387
155.00	0.41	1.23	0.00	0.00	0.00	15.40	15.95	52.0	0.0	0.307
158.00	0.29	0.81	0.00	0.00	0.00	12.64	13.01	52.0	0.0	0.250
160.00	0.29	0.81	0.00	0.00	0.00	11.49	11.86	52.0	0.0	0.228
165.00	0.28	0.81	0.00	0.00	0.00	8.30	8.69	52.0	0.0	0.167
168.00	0.17	0.57	0.00	0.00	0.00	6.21	6.45	52.0	0.0	0.124
170.00	0.16	0.57	0.00	0.00	0.00	5.24	5.48	52.0	0.0	0.105
175.00	0.14	0.55	0.00	0.00	0.00	2.54	2.85	52.0	0.0	0.055
178.00	0.00	0.54	0.00	0.00	0.00	0.79	1.22	52.0	0.0	0.024

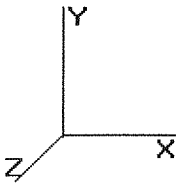
Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 19
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Pole : 302472 Code: TIA/EIA-222 Rev F
Location : Andover-Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in) Base Elev : 0.000 (ft)
Shape : 18 Sides
Taper : 0.207008 (in/ft)



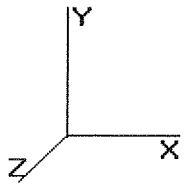
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

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	237.12	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	6.400	10.81	232.81	0.650	0.000	5.00	23.497	15.27	165.2	0.0	1,509.1
10.00		0.00	1.00	6.400	10.81	228.49	0.650	0.000	5.00	23.066	14.99	162.2	0.0	1,481.2
12.00	Appertunance(s)	0.00	1.00	6.400	10.81	226.77	0.650	0.000	2.00	9.105	5.92	64.0	0.0	584.6
15.00		0.00	1.00	6.400	10.81	224.18	0.650	0.000	3.00	13.529	8.79	95.1	0.0	868.6
20.00		0.00	1.00	6.400	10.81	219.87	0.650	0.000	5.00	22.203	14.43	156.1	0.0	1,425.3
25.00		0.00	1.00	6.400	10.81	215.56	0.650	0.000	5.00	21.772	14.15	153.1	0.0	1,397.3
30.00		0.00	1.00	6.400	10.81	211.24	0.650	0.000	5.00	21.340	13.87	150.0	0.0	1,369.4
35.00		0.00	1.01	6.509	10.99	208.68	0.650	0.000	5.00	20.909	13.59	149.5	0.0	1,341.4
40.00		0.00	1.05	6.762	11.42	208.26	0.650	0.000	5.00	20.478	13.31	152.1	0.0	1,313.5
42.75	Bot - Section 2	0.00	1.07	6.891	11.64	207.79	0.650	0.000	2.75	11.079	7.20	83.9	0.0	710.5
45.00		0.00	1.09	6.993	11.81	207.29	0.650	0.000	2.25	9.120	5.93	70.1	0.0	1,051.2
49.00	Top - Section 1	0.00	1.12	7.165	12.10	206.18	0.650	0.000	4.00	15.998	10.40	125.9	0.0	1,843.5
50.00		0.00	1.12	7.207	12.17	209.45	0.650	0.000	1.00	3.956	2.57	31.3	0.0	206.5
55.00		0.00	1.15	7.406	12.51	207.68	0.650	0.000	5.00	19.523	12.69	158.8	0.0	1,019.0
60.00		0.00	1.18	7.592	12.83	205.58	0.650	0.000	5.00	19.091	12.41	159.2	0.0	996.3
65.00		0.00	1.21	7.768	13.12	203.20	0.650	0.000	5.00	18.660	12.13	159.2	0.0	973.5
70.00		0.00	1.24	7.934	13.40	200.56	0.650	0.000	5.00	18.229	11.85	158.9	0.0	950.8
75.00		0.00	1.26	8.092	13.67	197.69	0.650	0.000	5.00	17.798	11.57	158.2	0.0	928.1
80.00		0.00	1.28	8.242	13.93	194.63	0.650	0.000	5.00	17.366	11.29	157.2	0.0	905.4
85.00		0.00	1.31	8.387	14.17	191.39	0.650	0.000	5.00	16.935	11.01	156.0	0.0	882.7
86.00	Appertunance(s)	0.00	1.31	8.415	14.22	190.72	0.650	0.000	1.00	3.335	2.17	30.8	0.0	173.8
87.00	Bot - Section 3	0.00	1.31	8.442	14.26	190.04	0.650	0.000	1.00	3.318	2.16	30.8	0.0	172.9
90.00		0.00	1.33	8.525	14.40	187.98	0.650	0.000	3.00	10.022	6.51	93.9	0.0	956.0
92.00	Top - Section 2	0.00	1.34	8.578	14.49	186.57	0.650	0.000	2.00	6.595	4.29	62.1	0.0	628.9
95.00	Appertunance(s)	0.00	1.35	8.657	14.63	187.75	0.650	0.000	3.00	9.764	6.35	92.9	0.0	431.1
100.0		0.00	1.37	8.785	14.84	184.08	0.650	0.000	5.00	15.928	10.35	153.7	0.0	703.2
105.0		0.00	1.39	8.908	15.05	180.28	0.650	0.000	5.00	15.496	10.07	151.6	0.0	684.0
108.0	Appertunance(s)	0.00	1.40	8.980	15.17	177.94	0.650	0.000	3.00	9.091	5.91	89.7	0.0	401.2
110.0		0.00	1.41	9.028	15.25	176.36	0.650	0.000	2.00	5.974	3.88	59.2	0.0	263.6
115.0		0.00	1.42	9.143	15.45	172.33	0.650	0.000	5.00	14.634	9.51	147.0	0.0	645.6
120.0		0.00	1.44	9.255	15.64	168.19	0.650	0.000	5.00	14.203	9.23	144.4	0.0	626.3
125.0		0.00	1.46	9.363	15.82	163.96	0.650	0.000	5.00	13.771	8.95	141.6	0.0	607.1
130.0		0.00	1.48	9.469	16.00	159.64	0.650	0.000	5.00	13.340	8.67	138.8	0.0	587.9
132.0	Bot - Section 4	0.00	1.48	9.510	16.07	157.88	0.650	0.000	2.00	5.215	3.39	54.5	0.0	229.8
135.0		0.00	1.49	9.572	16.17	155.23	0.650	0.000	3.00	7.803	5.07	82.0	0.0	558.6
136.0	Top - Section 3	0.00	1.49	9.592	16.21	154.33	0.650	0.000	1.00	2.566	1.67	27.0	0.0	183.7
137.0	Appertunance(s)	0.00	1.50	9.612	16.24	155.67	0.650	0.000	1.00	2.549	1.66	26.9	0.0	71.8
140.0		0.00	1.51	9.672	16.34	152.97	0.650	0.000	3.00	7.544	4.90	80.2	0.0	212.3
145.0		0.00	1.52	9.769	16.51	148.41	0.650	0.000	5.00	12.229	7.95	131.2	0.0	344.1
148.0	Appertunance(s)	0.00	1.53	9.826	16.60	145.64	0.650	0.000	3.00	7.130	4.63	77.0	0.0	200.6
150.0		0.00	1.54	9.864	16.67	143.78	0.650	0.000	2.00	4.667	3.03	50.6	0.0	131.3
155.0		0.00	1.55	9.957	16.82	139.08	0.650	0.000	5.00	11.366	7.39	124.3	0.0	319.6
158.0	Appertunance(s)	0.00	1.56	10.012	16.92	136.22	0.650	0.000	3.00	6.613	4.30	72.7	0.0	185.9
160.0		0.00	1.57	10.048	16.98	134.30	0.650	0.000	2.00	4.322	2.81	47.7	0.0	121.5
165.0		0.00	1.58	10.136	17.13	129.47	0.650	0.000	5.00	10.504	6.83	117.0	0.0	295.2
168.0	Appertunance(s)	0.00	1.59	10.189	17.21	126.54	0.650	0.000	3.00	6.095	3.96	68.2	0.0	171.2
170.0		0.00	1.59	10.223	17.27	124.57	0.650	0.000	2.00	3.977	2.59	44.7	0.0	111.7
175.0		0.00	1.61	10.308	17.42	119.62	0.650	0.000	5.00	9.641	6.27	109.2	0.0	270.7
178.0	Appertunance(s)	0.00	1.61	10.358	17.50	116.61	0.650	0.000	3.00	5.578	3.63	63.5	0.0	156.6

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 21
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	178.00	5,179.2	0.0	32,204.2

Pole : 302472 Code: TIA/EIA-222 Rev F

Location : Andover-Bunker Hill Road, CT

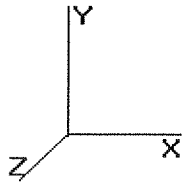
Height : 178.0 (ft)

Base Dia : 56.91 (in)

Top Dia : 22.00 (in) Base Elev : 0.000 (ft)

Shape : 18 Sides

Taper : 0.207008 (in/ft)



3/13/2015 11:22:47 AM

Load Case: Twist/Sway 50.00 mph Wind with No Ice 25 Iterations

Gust Response Factor : 1.69

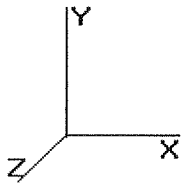
Dead Load Factor : 1.00

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)
12.00	PCTEL GPS-TMG-HR-	1	6.400	10.816	1.00	0.09	0.000	0.000	0.97	0.00	0.00	0.60
12.00	Standoff	1	6.400	10.816	1.00	3.50	0.000	0.000	37.86	0.00	0.00	75.00
86.00	GPS	1	8.429	14.244	1.00	1.00	0.000	0.500	14.24	0.00	7.12	10.00
86.00	Standoff	1	8.415	14.221	1.00	3.50	0.000	0.000	49.77	0.00	0.00	75.00
95.00	GPS	1	8.670	14.653	1.00	1.00	0.000	0.500	14.65	0.00	7.33	10.00
95.00	Standoff	5	8.657	14.631	1.00	17.50	0.000	0.000	256.04	0.00	0.00	375.00
108.0	GPS	1	8.992	15.197	1.00	1.00	0.000	0.500	15.20	0.00	7.60	10.00
108.0	Standoff	1	8.980	15.177	1.00	3.50	0.000	0.000	53.12	0.00	0.00	75.00
137.0	Flat Low Profile Pla	1	9.612	16.244	1.00	26.10	0.000	0.000	423.97	0.00	0.00	1,500.00
137.0	Powerwave LGP21903	6	9.612	16.244	0.50	0.81	0.000	0.000	13.16	0.00	0.00	33.00
137.0	Powerwave LGP21401	6	9.612	16.244	0.50	3.87	0.000	0.000	62.86	0.00	0.00	84.60
137.0	Powerwave 7770.00	6	9.612	16.244	0.75	26.46	0.000	0.000	429.82	0.00	0.00	210.00
137.0	KMW AM-X-CD-16-65-	3	9.612	16.244	0.78	19.33	0.000	0.000	313.97	0.00	0.00	145.50
137.0	Ericsson RRUS 11 (Ba	6	9.612	16.244	0.67	11.82	0.000	0.000	191.99	0.00	0.00	330.00
137.0	Raycap DC6-48-60-18-	1	9.612	16.244	1.00	1.47	0.000	0.000	23.88	0.00	0.00	31.80
148.0	Round Low Profile Pl	1	9.826	16.607	1.00	21.70	0.000	0.000	360.36	0.00	0.00	1,500.00
148.0	Kathrein Smart Bias	3	9.826	16.607	0.50	0.14	0.000	0.000	2.24	0.00	0.00	9.93
148.0	Ericsson KRY 112 144	3	9.826	16.607	0.50	0.62	0.000	0.000	10.21	0.00	0.00	33.00
148.0	Andrew LNX-6515DS-	3	9.826	16.607	0.84	28.80	0.000	0.000	478.33	0.00	0.00	153.90
148.0	EMS RR90-17-02DP	1	9.826	16.607	0.73	3.18	0.000	0.000	52.86	0.00	0.00	13.50
148.0	EMS RR90-17-02DP	2	9.826	16.607	0.73	6.37	0.000	0.000	105.71	0.00	0.00	27.00
158.0	Antel BXA-171085-8BF	3	10.012	16.920	0.87	7.67	0.000	0.000	129.83	0.00	0.00	31.50
158.0	Flat Low Profile Pla	1	10.012	16.920	1.00	26.10	0.000	0.000	441.60	0.00	0.00	1,500.00
158.0	Antel BXA-70063/6CF	3	10.012	16.920	0.74	17.16	0.000	0.000	290.35	0.00	0.00	51.00
158.0	RFS FD9R6004/2C-3L	6	10.012	16.920	0.50	1.11	0.000	0.000	18.78	0.00	0.00	18.60
158.0	Antel LPA-80080/4CF	6	10.012	16.920	0.72	26.18	0.000	0.000	442.94	0.00	0.00	72.00
168.0	Round Low Profile Pl	1	10.189	17.219	1.00	21.70	0.000	0.000	373.65	0.00	0.00	1,500.00
168.0	Decibel DB980H90A-	6	10.189	17.219	0.79	18.01	0.000	0.000	310.15	0.00	0.00	51.00
178.0	Flat Low Profile Pla	1	10.358	17.506	1.00	26.10	0.000	0.000	456.90	0.00	0.00	1,500.00
178.0	Allgon 7120.16.05.00	9	10.392	17.562	0.85	44.06	0.000	2.000	773.84	0.00	1,547.69	138.60
178.0	72" x 12" Panels	3	10.392	17.562	0.78	19.66	0.000	2.000	345.19	0.00	690.39	135.00
									6,494.48			9,700.53

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 23
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



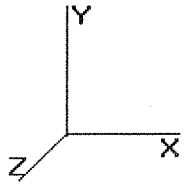
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

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	165.19	1,725.40	0.00	0.00
10.00	162.16	1,697.45	0.00	0.00
12.00	102.84	746.76	0.00	0.00
15.00	95.11	997.90	0.00	0.00
20.00	156.10	1,640.81	0.00	0.00
25.00	153.06	1,612.86	0.00	0.00
30.00	150.03	1,584.92	0.00	0.00
35.00	149.49	1,556.97	0.00	0.00
40.00	152.10	1,529.02	0.00	0.00
42.75	83.87	829.05	0.00	0.00
45.00	70.06	1,148.18	0.00	0.00
49.00	125.92	2,015.89	0.00	0.00
50.00	31.32	249.63	0.00	0.00
55.00	158.82	1,234.51	0.00	0.00
60.00	159.22	1,211.80	0.00	0.00
65.00	159.22	1,189.10	0.00	0.00
70.00	158.87	1,166.39	0.00	0.00
75.00	158.20	1,143.68	0.00	0.00
80.00	157.24	1,120.98	0.00	0.00
85.00	156.02	1,098.27	0.00	0.00
86.00	94.85	301.93	0.00	7.12
87.00	30.77	215.87	0.00	0.00
90.00	93.85	1,084.84	0.00	0.00
92.00	62.15	714.84	0.00	0.00
95.00	363.55	945.02	0.00	7.33
100.0	153.71	917.25	0.00	0.00
105.0	151.65	898.04	0.00	0.00
108.0	158.00	614.60	0.00	7.60
110.0	59.25	348.92	0.00	0.00
115.0	146.98	858.86	0.00	0.00
120.0	144.39	839.65	0.00	0.00
125.0	141.65	820.44	0.00	0.00
130.0	138.76	801.22	0.00	0.00
132.0	54.48	315.11	0.00	0.00
135.0	82.04	686.56	0.00	0.00
136.0	27.04	226.34	0.00	0.00
137.0	1,486.57	2,449.31	0.00	0.00
140.0	80.15	315.65	0.00	0.00
145.0	131.23	516.30	0.00	0.00
148.0	1,086.68	2,041.24	0.00	0.00
150.0	50.57	180.48	0.00	0.00
155.0	124.32	442.65	0.00	0.00
158.0	1,396.24	1,932.82	0.00	0.00
160.0	47.71	151.02	0.00	0.00
165.0	116.96	368.99	0.00	0.00
168.0	752.02	1,766.53	0.00	0.00
170.0	44.66	131.40	0.00	0.00
175.0	109.17	319.94	0.00	0.00
178.0	1,639.41	1,959.70	0.00	2,238.08

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 24
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

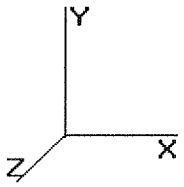
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	11,673.66	48,665.11	0.00	2,260.12

Pole : 302472
Location : Andover-Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 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	-11.698	-48.659	0.000	0.000	0.000	-1,501.394	0.000	0.000	0.000	0.000
5.00	-11.580	-46.922	0.000	0.000	0.000	-1,442.907	-0.031	0.000	0.031	-0.058
10.00	-11.448	-45.216	0.000	0.000	0.000	-1,385.009	-0.124	0.000	0.124	-0.117
12.00	-11.367	-44.464	0.000	0.000	0.000	-1,362.114	-0.178	0.000	0.178	-0.142
15.00	-11.306	-43.457	0.000	0.000	0.000	-1,328.015	-0.279	0.000	0.279	-0.178
20.00	-11.189	-41.804	0.000	0.000	0.000	-1,271.486	-0.498	0.000	0.498	-0.239
25.00	-11.072	-40.180	0.000	0.000	0.000	-1,215.545	-0.782	0.000	0.782	-0.301
30.00	-10.955	-38.584	0.000	0.000	0.000	-1,160.188	-1.130	0.000	1.130	-0.363
35.00	-10.836	-37.016	0.000	0.000	0.000	-1,105.415	-1.545	0.000	1.545	-0.427
40.00	-10.703	-35.479	0.000	0.000	0.000	-1,051.236	-2.026	0.000	2.026	-0.491
42.75	-10.631	-34.645	0.000	0.000	0.000	-1,021.804	-2.320	0.000	2.320	-0.528
45.00	-10.575	-33.490	0.000	0.000	0.000	-997.884	-2.576	0.000	2.576	-0.558
49.00	-10.447	-31.469	0.000	0.000	0.000	-955.586	-3.066	0.000	3.066	-0.611
50.00	-10.438	-31.211	0.000	0.000	0.000	-945.139	-3.196	0.000	3.196	-0.624
55.00	-10.305	-29.965	0.000	0.000	0.000	-892.952	-3.891	0.000	3.891	-0.702
60.00	-10.170	-28.741	0.000	0.000	0.000	-841.427	-4.668	0.000	4.668	-0.780
65.00	-10.031	-27.541	0.000	0.000	0.000	-790.580	-5.527	0.000	5.527	-0.859
70.00	-9.891	-26.363	0.000	0.000	0.000	-740.424	-6.468	0.000	6.468	-0.938
75.00	-9.748	-25.209	0.000	0.000	0.000	-690.970	-7.493	0.000	7.493	-1.017
80.00	-9.604	-24.078	0.000	0.000	0.000	-642.230	-8.602	0.000	8.602	-1.097
85.00	-9.445	-22.975	0.000	0.000	0.000	-594.211	-9.794	0.000	9.794	-1.177
86.00	-9.351	-22.672	0.000	0.000	0.000	-584.759	-10.042	0.000	10.042	-1.193
87.00	-9.328	-22.452	0.000	0.000	0.000	-575.409	-10.294	0.000	10.294	-1.210
90.00	-9.226	-21.363	0.000	0.000	0.000	-547.425	-11.070	0.000	11.070	-1.258
92.00	-9.163	-20.643	0.000	0.000	0.000	-528.973	-11.604	0.000	11.604	-1.291
95.00	-8.801	-19.696	0.000	0.000	0.000	-501.479	-12.430	0.000	12.430	-1.339
100.0	-8.654	-18.770	0.000	0.000	0.000	-457.475	-13.879	0.000	13.879	-1.426
105.0	-8.500	-17.866	0.000	0.000	0.000	-414.208	-15.420	0.000	15.420	-1.512
108.0	-8.339	-17.249	0.000	0.000	0.000	-388.700	-16.387	0.000	16.387	-1.564
110.0	-8.287	-16.894	0.000	0.000	0.000	-372.023	-17.049	0.000	17.049	-1.599
115.0	-8.139	-16.028	0.000	0.000	0.000	-330.587	-18.768	0.000	18.768	-1.681
120.0	-7.990	-15.182	0.000	0.000	0.000	-289.894	-20.572	0.000	20.572	-1.761
125.0	-7.841	-14.356	0.000	0.000	0.000	-249.946	-22.457	0.000	22.457	-1.837
130.0	-7.688	-13.554	0.000	0.000	0.000	-210.742	-24.420	0.000	24.420	-1.908
132.0	-7.630	-13.236	0.000	0.000	0.000	-195.368	-25.225	0.000	25.225	-1.936
135.0	-7.531	-12.549	0.000	0.000	0.000	-172.477	-26.454	0.000	26.454	-1.975
136.0	-7.498	-12.322	0.000	0.000	0.000	-164.946	-26.869	0.000	26.869	-1.988
137.0	-5.933	-9.923	0.000	0.000	0.000	-157.448	-27.287	0.000	27.287	-2.000
140.0	-5.853	-9.604	0.000	0.000	0.000	-139.649	-28.561	0.000	28.561	-2.052
145.0	-5.713	-9.087	0.000	0.000	0.000	-110.384	-30.753	0.000	30.753	-2.130
148.0	-4.554	-7.085	0.000	0.000	0.000	-93.246	-32.105	0.000	32.105	-2.172
150.0	-4.502	-6.903	0.000	0.000	0.000	-84.138	-33.021	0.000	33.021	-2.199
155.0	-4.365	-6.463	0.000	0.000	0.000	-61.629	-35.354	0.000	35.354	-2.255
158.0	-2.895	-4.585	0.000	0.000	0.000	-48.533	-36.781	0.000	36.781	-2.284
160.0	-2.844	-4.435	0.000	0.000	0.000	-42.743	-37.741	0.000	37.741	-2.301
165.0	-2.714	-4.070	0.000	0.000	0.000	-28.524	-40.170	0.000	40.170	-2.335
168.0	-1.891	-2.335	0.000	0.000	0.000	-20.383	-41.642	0.000	41.642	-2.352
170.0	-1.841	-2.205	0.000	0.000	0.000	-16.602	-42.629	0.000	42.629	-2.360
175.0	-1.719	-1.890	0.000	0.000	0.000	-7.396	-45.110	0.000	45.110	-2.376
178.0	-1.639	0.000	0.000	0.000	0.000	-2.238	-46.604	0.000	46.604	-2.380

Pole : 302472 Code: TIA/EIA-222 Rev F

Location : Andover-Bunker Hill Road, CT

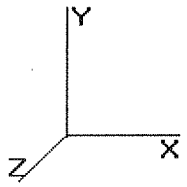
Height : 178.0 (ft)

Base Dia : 56.91 (in)

Top Dia : 22.00 (in) Base Elev : 0.000 (ft)

Shape : 18 Sides

Taper : 0.207008 (in/ft)



Load Case: Twist/Sway 50.00 mph Wind with No Ice 25 Iterations

Gust Response Factor : 1.69

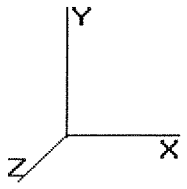
Dead Load Factor : 1.00

Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.54	0.26	0.00	0.00	0.00	14.46	15.01	52.0	0.0	0.289
5.00	0.53	0.27	0.00	0.00	0.00	14.43	14.97	52.0	0.0	0.288
10.00	0.52	0.27	0.00	0.00	0.00	14.38	14.92	52.0	0.0	0.287
12.00	0.52	0.27	0.00	0.00	0.00	14.37	14.89	52.0	0.0	0.286
15.00	0.51	0.27	0.00	0.00	0.00	14.34	14.86	52.0	0.0	0.286
20.00	0.50	0.27	0.00	0.00	0.00	14.28	14.79	52.0	0.0	0.284
25.00	0.49	0.27	0.00	0.00	0.00	14.21	14.71	52.0	0.0	0.283
30.00	0.48	0.28	0.00	0.00	0.00	14.13	14.62	52.0	0.0	0.281
35.00	0.47	0.28	0.00	0.00	0.00	14.04	14.52	52.0	0.0	0.279
40.00	0.46	0.28	0.00	0.00	0.00	13.93	14.41	52.0	0.0	0.277
42.75	0.46	0.28	0.00	0.00	0.00	13.87	14.34	52.0	0.0	0.276
45.00	0.45	0.29	0.00	0.00	0.00	13.82	14.27	52.0	0.0	0.275
49.00	0.52	0.35	0.00	0.00	0.00	16.20	16.73	52.0	0.0	0.322
50.00	0.52	0.35	0.00	0.00	0.00	16.16	16.69	52.0	0.0	0.321
55.00	0.51	0.35	0.00	0.00	0.00	15.97	16.49	52.0	0.0	0.317
60.00	0.50	0.35	0.00	0.00	0.00	15.75	16.26	52.0	0.0	0.313
65.00	0.49	0.36	0.00	0.00	0.00	15.51	16.01	52.0	0.0	0.308
70.00	0.48	0.36	0.00	0.00	0.00	15.24	15.73	52.0	0.0	0.303
75.00	0.47	0.36	0.00	0.00	0.00	14.94	15.42	52.0	0.0	0.297
80.00	0.46	0.37	0.00	0.00	0.00	14.60	15.08	52.0	0.0	0.290
85.00	0.45	0.37	0.00	0.00	0.00	14.23	14.69	52.0	0.0	0.283
86.00	0.45	0.37	0.00	0.00	0.00	14.15	14.61	52.0	0.0	0.281
87.00	0.44	0.37	0.00	0.00	0.00	14.07	14.53	52.0	0.0	0.280
90.00	0.43	0.37	0.00	0.00	0.00	13.82	14.27	52.0	0.0	0.274
92.00	0.48	0.43	0.00	0.00	0.00	15.49	15.99	52.0	0.0	0.308
95.00	0.47	0.42	0.00	0.00	0.00	15.17	15.65	52.0	0.0	0.301
100.00	0.46	0.43	0.00	0.00	0.00	14.62	15.09	52.0	0.0	0.290
105.00	0.45	0.43	0.00	0.00	0.00	14.00	14.47	52.0	0.0	0.278
108.00	0.44	0.43	0.00	0.00	0.00	13.60	14.07	52.0	0.0	0.271
110.00	0.44	0.43	0.00	0.00	0.00	13.33	13.79	52.0	0.0	0.265
115.00	0.43	0.44	0.00	0.00	0.00	12.57	13.02	52.0	0.0	0.251
120.00	0.42	0.44	0.00	0.00	0.00	11.73	12.17	52.0	0.0	0.234
125.00	0.41	0.45	0.00	0.00	0.00	10.78	11.21	52.0	0.0	0.216
130.00	0.40	0.46	0.00	0.00	0.00	9.70	10.13	52.0	0.0	0.195
132.00	0.39	0.46	0.00	0.00	0.00	9.24	9.67	52.0	0.0	0.186
135.00	0.38	0.46	0.00	0.00	0.00	8.50	8.92	52.0	0.0	0.172
136.00	0.58	0.71	0.00	0.00	0.00	12.42	13.06	52.0	0.0	0.251
137.00	0.47	0.57	0.00	0.00	0.00	12.02	12.53	52.0	0.0	0.241
140.00	0.47	0.57	0.00	0.00	0.00	11.12	11.63	52.0	0.0	0.224
145.00	0.46	0.58	0.00	0.00	0.00	9.44	9.94	52.0	0.0	0.191
148.00	0.36	0.47	0.00	0.00	0.00	8.33	8.73	52.0	0.0	0.168
150.00	0.36	0.47	0.00	0.00	0.00	7.75	8.15	52.0	0.0	0.157
155.00	0.35	0.48	0.00	0.00	0.00	6.13	6.53	52.0	0.0	0.126
158.00	0.25	0.32	0.00	0.00	0.00	5.06	5.34	52.0	0.0	0.103
160.00	0.25	0.32	0.00	0.00	0.00	4.60	4.88	52.0	0.0	0.094
165.00	0.24	0.32	0.00	0.00	0.00	3.34	3.62	52.0	0.0	0.070
168.00	0.14	0.23	0.00	0.00	0.00	2.51	2.68	52.0	0.0	0.052
170.00	0.14	0.23	0.00	0.00	0.00	2.12	2.29	52.0	0.0	0.044
175.00	0.12	0.22	0.00	0.00	0.00	1.03	1.22	52.0	0.0	0.023
178.00	0.00	0.22	0.00	0.00	0.00	0.33	0.50	52.0	0.0	0.010

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 27
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Pole :	302472	Code: TIA/EIA-222 Rev F	3/13/2015 11:22:47 AM
Location :	Andover-Bunker Hill Road, CT		Page: 28
Height :	178.0 (ft)		
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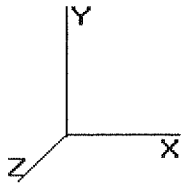


Analysis Summary

	Reactions						Max Stresses			
Load Case	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	33.8	0.00	48.61	0.00	0.00	4331.97	47.23	52.0	49.00	0.909
Ice	27.2	0.00	55.42	0.00	0.00	3624.80	40.38	52.0	49.00	0.777
Twist/Sway	11.7	0.00	48.66	0.00	0.00	1501.39	16.73	52.0	49.00	0.322

Base/Flange Plate	Plate Type	***Baseplate***	
	Pole Diameter	56.91	in
	Pole Thickness	0.5	in
	Plate Length	64	in
	Plate Thickness	3	in
	Plate Fy	50	ksi
	Weld Length	0.3125	in
	Allowable	1648.73	k-in
	Applied	1581.88	k-in
Stiffeners	#	***0***	

Bolts	#	***20***	
	Bolt Circle	64	in
	(R)adial / (S)quare	S	
	Bolt Gap	6	in
	Diameter	2.25	in
	Hole Diameter	2.625	in
	Type	A615-75	
	Fy	75	ksi
	Fu	100	ksi
	Allowable	174.95	k
	Applied	164.78	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

Code Rev.	***F***	**Date**	3/11/2015
A.S.I.	1.33	**Engineer**	JPH
		Site #	302472
Moment	4332.0 k-ft	**Carrier**	T-Mobile
Axial	48.6 k		

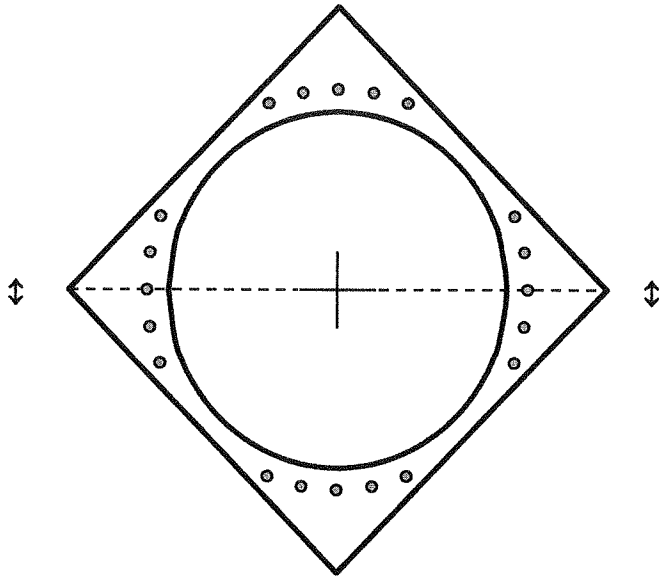
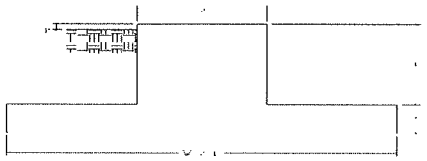


Plate Stress Ratio:
0.96 (Pass)

Bolt Stress Ratio:
0.94 (Pass)

Site Name:	Andover-Bunker Hill	*Program Last Updated:*	*5/13/2014*
Site Number:	302472		
Engineering Number:	61361921		
Engineer:	J. Hernandez		
Date:	03/12/15		
Tower Type:	MP		



Design Loads (Unfactored)

Design / Analysis / Mapping:	Analysis		Concrete Strength (f'_c):	3000	psi
Compression/Leg:	48.6	k	Pad Tension Steel Depth:	44.00	in
Uplift/Leg:	0.0	k	Wind Load Factor:	1.3	
Total Shear:	33.8	k	ϕ_{Shear}:	0.75	
Moment:	4332.0	k-ft	$\phi_{Flexure\ /\ Tension}$:	0.90	
Tower + Appurtenance Weight:	49.0	k	$\phi_{Compression:}$	0.65	
Depth to Base of Foundation:	9.50	ft	β:	0.85	
Diameter of Pier (d):	8.00	ft	Bottom Pad Rebar Size #:	11	
Height of Pier above Ground (h):	0.50		# of Bottom Pad Rebar:	22	
Width of Pad (W):	24.00	ft	Pad Bottom Steel Area:	34.32	in^2
Length of Pad (L):	24.00	ft	Pad Steel F_y:	60000	psi
Thickness of Pad (t):	4.00	ft	Top Pad Rebar Size #:	11	
Tower Leg Center to Center:	0.00	ft	# of Top Pad Rebar:	22	
Number of Tower Legs:	1.0	(1 if MP or GT)	Pad Top Steel Area:	34.32	in^2
Tower Center from Mat Center:	0.00	ft	Pier Rebar Size #:	11	
Depth Below Ground Surface to Water Table:	15.00	ft	Pier Steel Area (Single Bar):	1.56	in^2
Unit Weight of Concrete:	150.0	pcf	# of Pier Rebar:	40	
Unit Weight of Soil Above Water Table:	100.0	pcf	Pier Steel F_y:	60000	psi
Unit Weight of Water:	62.4	pcf	Pier Cage Diameter:	88.0	in
Unit Weight of Soil Below Water Table:	50.0	pcf	Rebar Strain Limit:	0.008	
Friction Angle of Uplift:	15.00	Degrees	Steel Elastic Modulus:	29000	ksi
Ultimate Coefficient of Shear Friction:	0.35		Tie Rebar Size #:	5	
Allowable Compressive Bearing Pressure:	6000.0	psf	Tie Steel Area (Single Bar):	0.31	in^2
Ultimate Passive Pressure on Pad Face:	0.0	psf	Tie Spacing:	6	in
Allowable Capacity Increase:	1.33		Tie Steel F_y:	60000	psi

Overturning Factor of Safety

Design OTM:	4670.0	k-ft
OTM Resistance:	9469.0	k-ft
OTM Resistance / Design OTM Factor of Safety:	2.03	Result: OK

Soil Bearing Pressure Usage:

Net Bearing Pressure:	3771	psf
Allowable Bearing Pressure:	7980	psf
Net Bearing Pressure/Allowable Bearing Pressure:	0.47	Result: OK
Load Direction Controling Design Bearing Pressure:	Diagonal to Pad Edge	

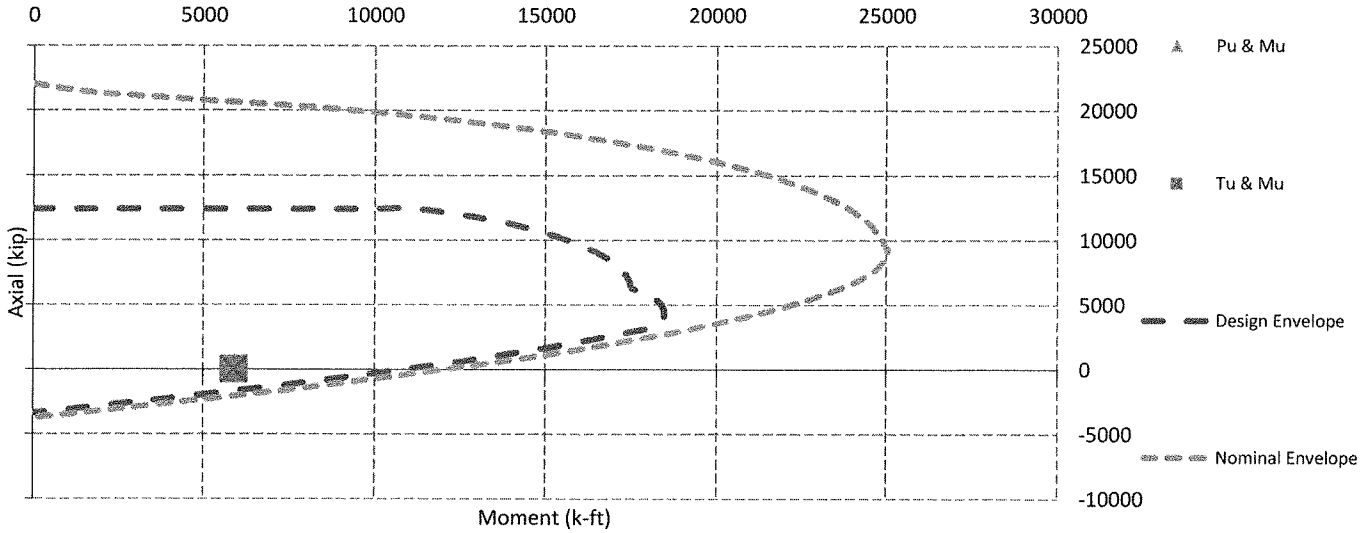
Sliding Factor of Safety

Total Ultimate Sliding Resistance:	255.1	k
Sliding Resistance/Sliding Design Factor of Safety:	7.55	Result: OK

One Way Shear, Flexual Capacity, and Punching Shear

Factored One Way Shear (V_u):	272.9	k
One Way Shear Capacity (ϕV_c):	807.2	k - ACI11.3.1.1
$V_u / \phi V_c$:	0.34	Result: OK
Load Direction Controling Shear Capacity:	Diagonal to Pad Edge	
Lower Pad Steel Factored Moment (M_u):	2234.9	k-ft
Lower Steel Pad Moment Capacity (ϕM_n):	6777.3	k-ft - ACI10.3
$M_u / \phi M_n$:	0.33	Result: OK
Load Direction Controling Flexural Capacity:	Diagonal to Pad Edge	
Upper Steel Pad Factored Moment (M_u):	1514.7	k-ft
Upper Steel Pad Moment Capacity (ϕM_n):	6611.3	k-ft
$M_u / \phi M_n$:	0.23	Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0027	OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0027	OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Lower Pad Reinforcement Spacing:	13	in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Reinforcement Spacing:	13	in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Factored Punching Shear (V_u):	0.0	k
Nominal Punching Shear Capacity ($\phi_c V_n$):	3179.9	k - ACI11.12.2.1
$V_u / \phi V_c$:	0.00	Result: OK
Factored Moment in Pier (M_u):	5895.2	k-ft
Pier Moment Capacity (ϕM_n):	12085.4	k-ft
$M_u / \phi M_n$:	0.49	Result: OK
Factored Shear in Pier (V_u):	43.9	k
Pier Shear Capacity (ϕV_n):	596.7	k
$V_u / \phi V_c$:	0.07	Result: OK
Pier Shear Reinforcement Ratio:	0.0005	No Ties Necessary for Shear - ACI11.5.6.1
Factored Tension in Pier (T_u):	0.0	k
Pier Tension Capacity (ϕT_n):	3369.6	k
$T_u / \phi T_n$:	0.00	Result: OK
Factored Compression in Pier (P_u):	63.2	k
Pier Compression Capacity (ϕP_n):	9515.1	k - ACI10.3.6.2
$P_u / \phi P_n$:	0.01	Result: OK
Pier Compression Reinforcement Ratio:	0.009	OK - Reinforcement Ratio Met - ACI10.9.1 & 10.8.4
$M_u/\phi_B M_n + T_u/\phi_T T_n$:	0.49	Result: OK

Nominal and Design Moment Capacity and Factored Design Loads



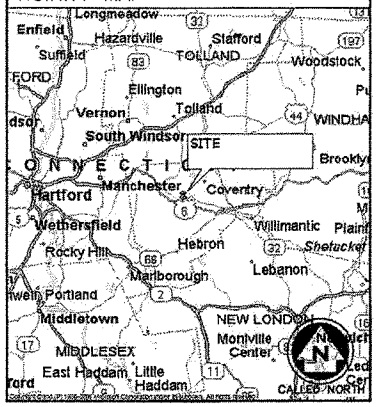
T-MOBILE NORTHEAST LLC

CT11502A
SPECTRASITE ANDOVER

104 BUNKER HILL ROAD
ANDOVER, CT 06232

(704G CONFIGURATION)

VICINITY MAP



DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL:

"CALL BEFORE YOU DIG"
WWW.CBYD.COM
CALL 811, OR 1-800-922-4455

CALL THREE WORKING DAYS PRIOR TO DIGGING

SAFETY PRECAUTIONS SHALL BE IMPLEMENTED BY CONTRACTOR(S) AT ALL TRENCHING IN ACCORDANCE WITH CURRENT OSHA STANDARDS.

COLOR CODE FOR UTILITY LOCATIONS

ELECTRIC	– RED	SEWER	– GREEN
GAS/OIL	– YELLOW	SURVEY	– PINK
TEL/CATV	– ORANGE	PROPOSED EXCAVATION	– WHITE
WATER	– BLUE	RECLAIMED WATER	– PURPLE

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONSTRUCT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE T–MOBILE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF THE CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES, THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXPENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING OF ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUM OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS AND INSPECTIONS WHICH ARE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY, OR LOCAL GOVERNMENT AUTHORITY.
11. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC., DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
12. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
13. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS, AS WELL AS THE LATEST EDITIONS OF ANY PERTINENT STATE SAFETY REGULATIONS.
14. THE CONTRACTOR SHALL NOTIFY THE T–MOBILE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE T–MOBILE REPRESENTATIVE.
15. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC., ON THE JOB.
16. THE CONTRACTOR SHALL RETURN ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITION AT THE COMPLETION OF WORK.

PROJECT SUMMARY

SITE NUMBER:	CT11502A	APPLICANT:	T–MOBILE NORTHEAST LLC 400 STREET RD BENSALEM, PA 19020
SITE NAME:	SPECTRASITE ANDOVER		
SITE ADDRESS:	104 BUNKER HILL ROAD ANDOVER, CT 06232		
PROPERTY OWNER:	TBD	PROJECT MANAGER:	AMERICAN TOWER CORPORATION 319 QUARRY ROAD SPRING CITY, PA 19475
PARCEL:	TBD	CONTACT:	BRUCE HOFFMASTER 484–942–6339
CURRENT ZONING:	TBD		
JURISDICTION:	TBD	ARCHITECT/ENGINEER:	INFINIGY ENGINEERING 1033 WATERVLIET SHAKER ROAD ALBANY, NY 12205
ATC SITE NUMBER:	302472		
LAT./LONG.:	N 41.737838° / W –72.349655°		
CONSTRUCTION TYPE:	–	CONTACT:	ALEX WELLER 518–690–0790
USE GROUP:	–		

PROJECT DESCRIPTION

☒ EXISTING MONOPOLE	☒ EXISTING CABINET(S)	☒ OUTDOOR
☐ EXISTING LATTICE TOWER	☐ EXISTING RBS 2106	☐ INDOOR
☐ EXISTING TRANSMISSION TOWER	☐ EXISTING RBS 3106	☒ EXISTING CONCRETE PAD
☐ EXISTING WATER TANK	☒ EXISTING RBS 6201	☐ EXISTING STEEL PLATFORM
☐ EXISTING BUILDING	☐ SITE SUPPORT KIT	☒ EXISTING PPC
☐ EXISTING FLAGPOLE	☐ SITE SUPPORT CABINET	☐ PANELBOARD
☐ EXISTING FORT WORTH	☒ GPS	

T–MOBILE NORTHEAST LLC PROPOSES THE MODIFICATION OF AN UNMANNED WIRELESS BROADBAND FACILITY. ADDITION OF PROPOSED LTE 700 PANEL ANTENNAS, GROUND MOUNTED RRU'S AND COAX. REUSE, GPS ANTENNA AND EXISTING EQUIPMENT CABINETS.

SHEET INDEX

SHEET	DESCRIPTION	REVISION
T–1	TITLE SHEET	0
C–1	SITE PLAN	0
C–2	COMPOUND PLAN & ELEVATION	0
C–3	ANTENNA DETAIL & RF SCHEDULE	0
C–4	EQUIPMENT SPECIFICATIONS	0
E–1	GROUNDING AND POWER DIAGRAMS	0
E–2	COAX/FIBER PLUMBING DIAGRAM	0
N–1	GENERAL AND ELECTRICAL NOTES	0

T-Mobile
T-MOBILE NORTHEAST LLC
400 STREET ROAD
BENSALEM, PA 19020

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

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/01/15	FOR PERMIT	0

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

PROJECT NO:	317-000
DRAWN BY:	JLM
CHECKED BY:	ASW

STATE OF CONNECTICUT
JOHN L. STEVENS
No. 24705
LICENSED
PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

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

SITE NUMBER:
CT11502A

SITE NAME:
SPECTRASITE ANDOVER

104 BUNKER HILL ROAD
ANDOVER, CT 06232

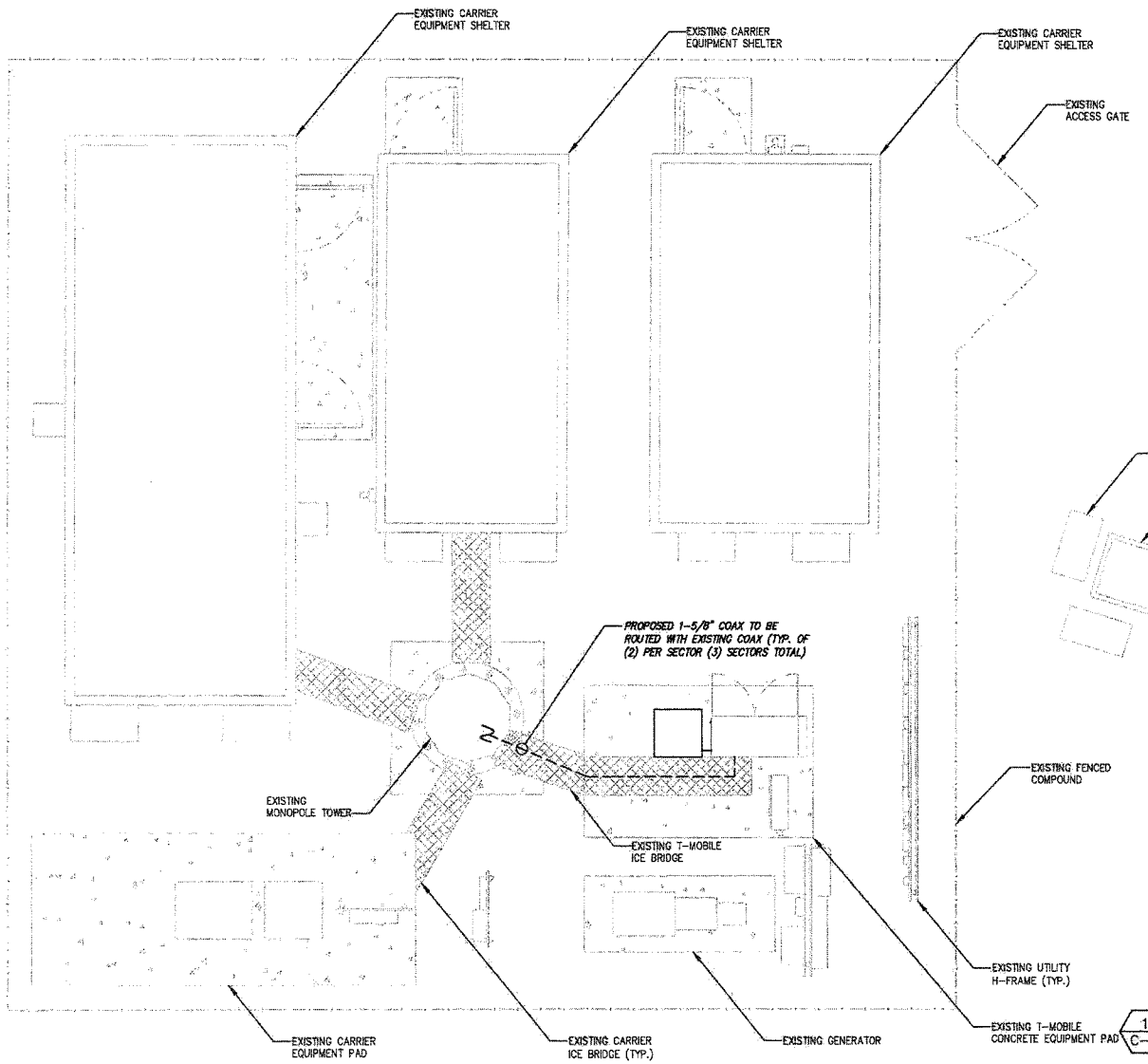
SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

SHEET 1 OF 8 SHEETS



GENERAL SITE NOTES:

1. A COMPLETE BOUNDARY SURVEY OF THE HOST PARCEL HAS NOT BEEN PERFORMED BY INFINIGY. BOUNDARY INFORMATION IF SHOWN 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 CESSATION OF OPERATIONS.

SITE LEGEND

————	SITE PROPERTY LINE
————	STREET OR ROAD
—x—x—	CHAIN LINK FENCE
—o—o—	OPAQUE WOODEN FENCE
	TREES/SHRUBS
	TREE LINE
	UTILITY POLE
(E)	EXISTING
(N)	NEW
(P)	PROPOSED
(F)	FUTURE

GRAPHIC SCALE

6' 3' 0 3' 6'

SCALE (11x17): 1" = 6'-0"
SCALE (22x34): 1" = 3'-0"

T-Mobile

T-MOBILE NORTHEAST LLC
400 STOCKTON ROAD
WARMINSTER, PA 18929

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

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/01/13	FOR PERMIT	0

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

PROJECT NO:	317-000
DRAWN BY:	JLM
CHECKED BY:	ASW

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

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

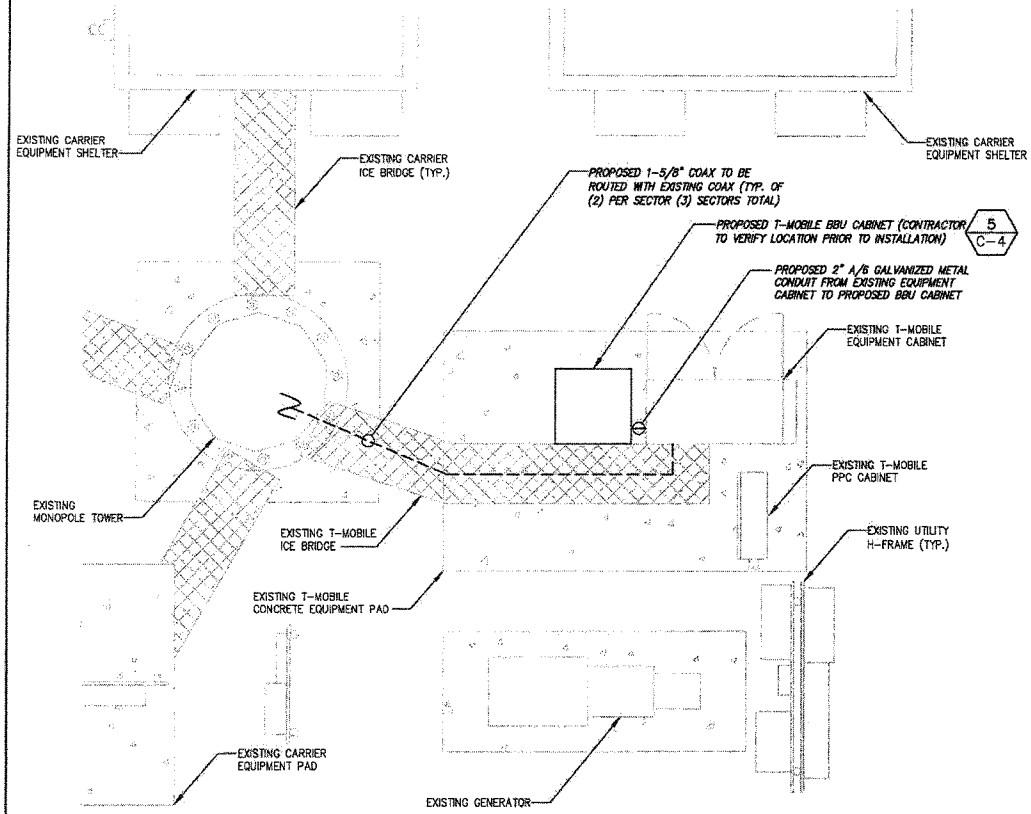
SITE NUMBER:
CT11502A

SITE NAME:
SPECTRASITE ANDOVER

104 BUNKER HILL ROAD
ANDOVER, CT 06232

SHEET TITLE
SITE PLAN

SHEET NUMBER
C-1
SHEET 2 OF 8 SHEETS



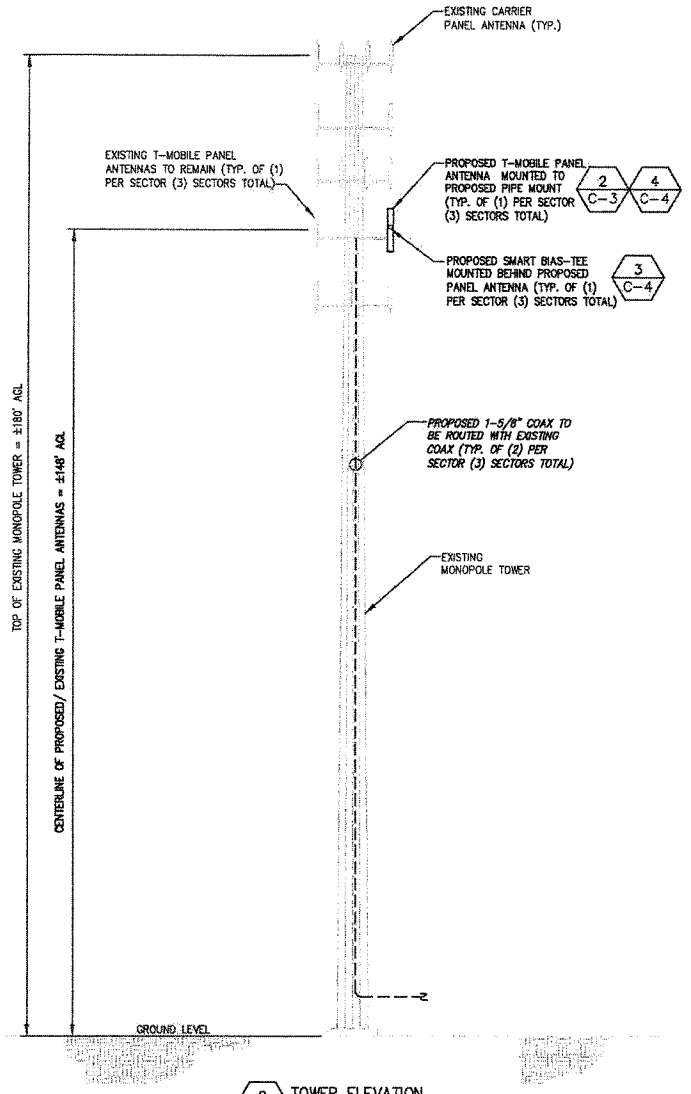
1 COMPOUND PLAN
SCALE: AS NOTED

GRAPHIC SCALE

4' 2' 0 2' 4'

SCALE (11x17): 1" = 4'-0"
SCALE (22x34): 1" = 2'-0"

NOTE:
INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER OR LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY WITH RESULTS OF PASSING STRUCTURAL ANALYSIS.



2 TOWER ELEVATION
NOT TO SCALE

T-Mobile
T-MOBILE NORTHEAST LLC
450 STATE ST ROMO
DEVELAND, PA 19000

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

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/01/13	FOR PERMIT	0

DEPT.	DATE	APP'D	REVISIONS
RE			
RF MGR.			
ZONING			
OPS.			
CONSTR.			
SITE AC.			

PROJECT NO: 317-000
DRAWN BY: JLM
CHECKED BY: ASW

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER

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

SITE NUMBER:
CT11502A

SITE NAME:
SPECTRASITE ANDOVER

104 BUNKER HILL ROAD
ANDOVER, CT 06232

SHEET TITLE
COMPOUND PLAN & ELEVATION

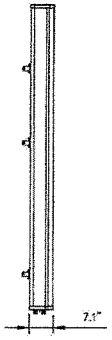
SHEET NUMBER
C-2

RF SYSTEM SCHEDULE (704G CONFIGURATION)

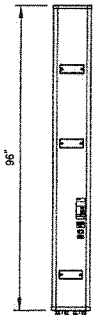
SECTOR	TECHNOLOGY	ANTENNA PORT	BAND	ANTENNA MODEL #	VENDOR	QTY (REMOVED)	QTY (NEW)	AZIMUTH	M-TILT	E-TILT	ANTENNA CENTERLINE	TMA MODEL #	VENDOR	RRU MODEL #	VENDOR	CABLE LENGTH	CABLE DIAMETER	CABLE TYPE	CABLE MODEL #	VENDOR	CABLE TAGGING	COLOR CODING	JUMPER TYPE	JUMPER TAGGING	COLOR CODING
A	GSM/LTE AWS	OPTICAL #1	B2P	RR90_17_02DP	EMS	0	0	60°	0°	2°	148'-0"	KRY 112 144/1	ERICSSON	–	–	(2) EXISTING	1⅝"	COAX	EXISTING	N/A	–	–	COAX	–	–
	LTE 700	TBD	B12P	LNX-6515DS-VTM	COMMSCOPE	0	1	60°	0°	2°	148'-0"	–	–	–	–	(2)±160'	1⅝"	COAX	TBD	N/A	LTE 700 COAX	–	COAX	LTE 700 COAX	–
B	GSM/LTE AWS	OPTICAL #1	B2P	RR90_17_02DP	EMS	0	0	180°	0°	2°	148'-0"	KRY 112 144/1	ERICSSON	–	–	(2) EXISTING	1⅝"	COAX	EXISTING	N/A	–	–	COAX	–	–
	LTE 700	TBD	B12P	LNX-6515DS-VTM	COMMSCOPE	0	1	180°	0°	2°	148'-0"	–	–	–	–	(2)±160'	1⅝"	COAX	TBD	N/A	LTE 700 COAX	–	COAX	LTE 700 COAX	–
G	GSM/LTE AWS	OPTICAL #1	B2P	RR90_17_02DP	EMS	0	0	300°	0°	2°	148'-0"	KRY 112 144/1	ERICSSON	–	–	(2) EXISTING	1⅝"	COAX	EXISTING	N/A	–	–	COAX	–	–
	LTE 700	TBD	B12P	LNX-6515DS-VTM	COMMSCOPE	0	1	300°	0°	2°	148'-0"	–	–	–	–	(2)±160'	1⅝"	COAX	TBD	N/A	LTE 700 COAX	–	COAX	LTE 700 COAX	–

KEY	
EXISTING	R – RED – GSM
PROPOSED	G – GREEN – UMTS 1900
FIBER CONNECTION	B – BLUE – UMTS AWS
	Y – YELLOW – LTE
	O – ORANGE – FIBER CABLE

1 RF SYSTEM SCHEDULE
NOT TO SCALE



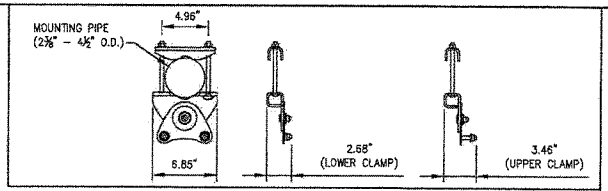
SIDE



REAR

TOP

2 ANTENNA DETAIL
NOT TO SCALE



COMMSCOPE MODEL NO.:	LNX-6515DS-VTM
RADOME MATERIAL:	FIBERGLASS, UV RESISTANT
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	96"x11.9"x7.1" (2438 x 301 x 181 mm)
WEIGHT, W/ PRE-MOUNTED BRACKETS:	43.7 LBS (19.8 kg)
CONNECTOR:	7-16 DIN FEMALE

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 ACCOMODATE ALL CONFIGURATIONS.

3 METALLIC TAG DETAIL
NOT TO SCALE

T-Mobile
T-MOBILE NORTHEAST LLC
500 STATE ST 2ND
BRIDGEPORT, PA 19009

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

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/21/16	FOR PERMIT	0

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

PROJECT NO:	317-000
DRAWN BY:	JLM
CHECKED BY:	ASW

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED
PROFESSIONAL ENGINEER

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

SITE NUMBER:
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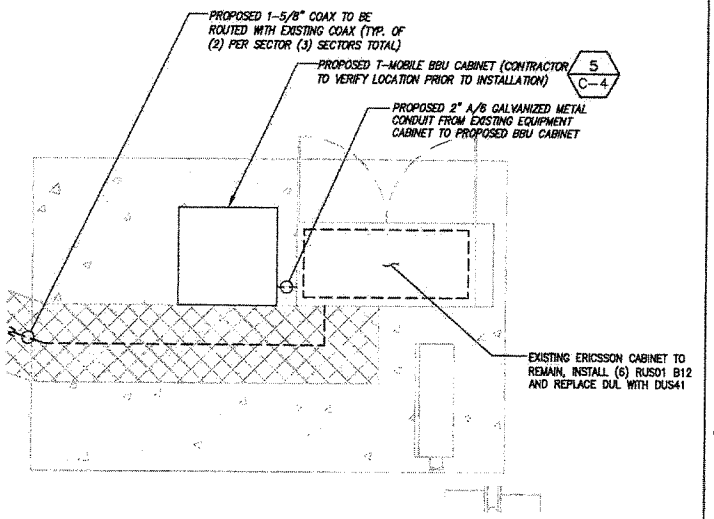
SITE NAME:
SPECTRASITE ANDOVER

104 BUNKER HILL ROAD
ANDOVER, CT 06232

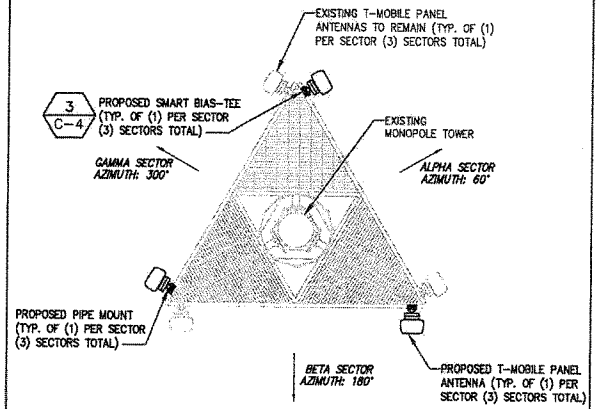
SHEET TITLE
ANTENNA DETAIL & RF SCHEDULE

SHEET NUMBER
C-3

SHEET 4 OF 8 SHEETS



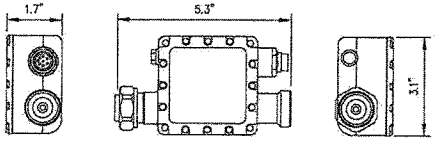
1 EQUIPMENT PAD LAYOUT PLAN
NOT TO SCALE



2 ANTENNA ORIENTATION PLAN
NOT TO SCALE

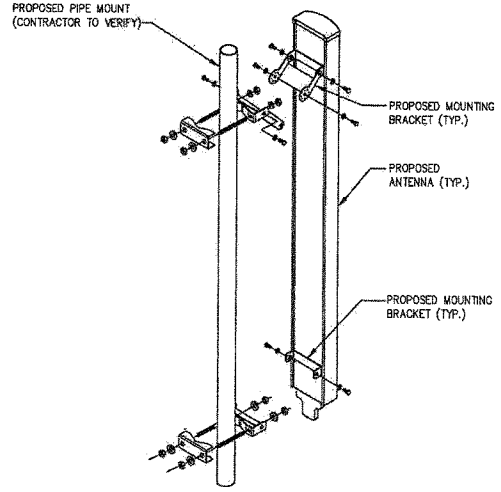
STRUCTURAL NOTES:

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: 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"Øx4 3/4" EMBEDMENT OR AN APPROVED EQUAL.

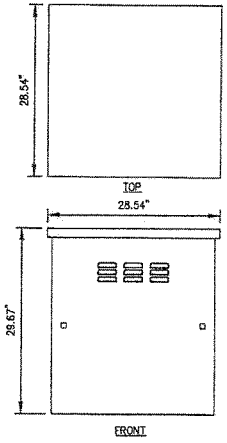


KATHREIN SCALA SMART BIAS TEE
WEIGHT: 3.3 LBS

3 SMART BIAS-TEE DETAIL
NOT TO SCALE



4 MOUNTING DETAIL
NOT TO SCALE



DUAL VOLTAGE BATTERY BASE MODULE CABINET
MANUFACTURER: MSF DATA SERVICES
MODEL#: DVBBM-2ALM

5 BBU CABINET DETAIL
NOT TO SCALE

T-Mobile

T-MOBILE NORTHEAST LLC
400 STREET ROAD
BENSALEM, PA 19020

INFINIGY

Design, Build, Deliver.

1603 Washington Heights Rd
Albany, NY 12203
Office # (518) 690-0793
Fax # (518) 690-0793

SUBMITTALS		
DATE	DESCRIPTION	REVISION
4/01/15	FOR PERMIT	0

SCPT.	DATE	APP'D	REVISIONS
RFE			
RF MAP			
ZONING			
GPS			
CONSTR.			
SITE ACQ.			

PROJECT NO:	317-000
DRAWN BY:	JLM
CHECKED BY:	ASW

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER

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

SITE NUMBER:
CT11502A

SITE NAME:
SPECTRASITE ANDOVER

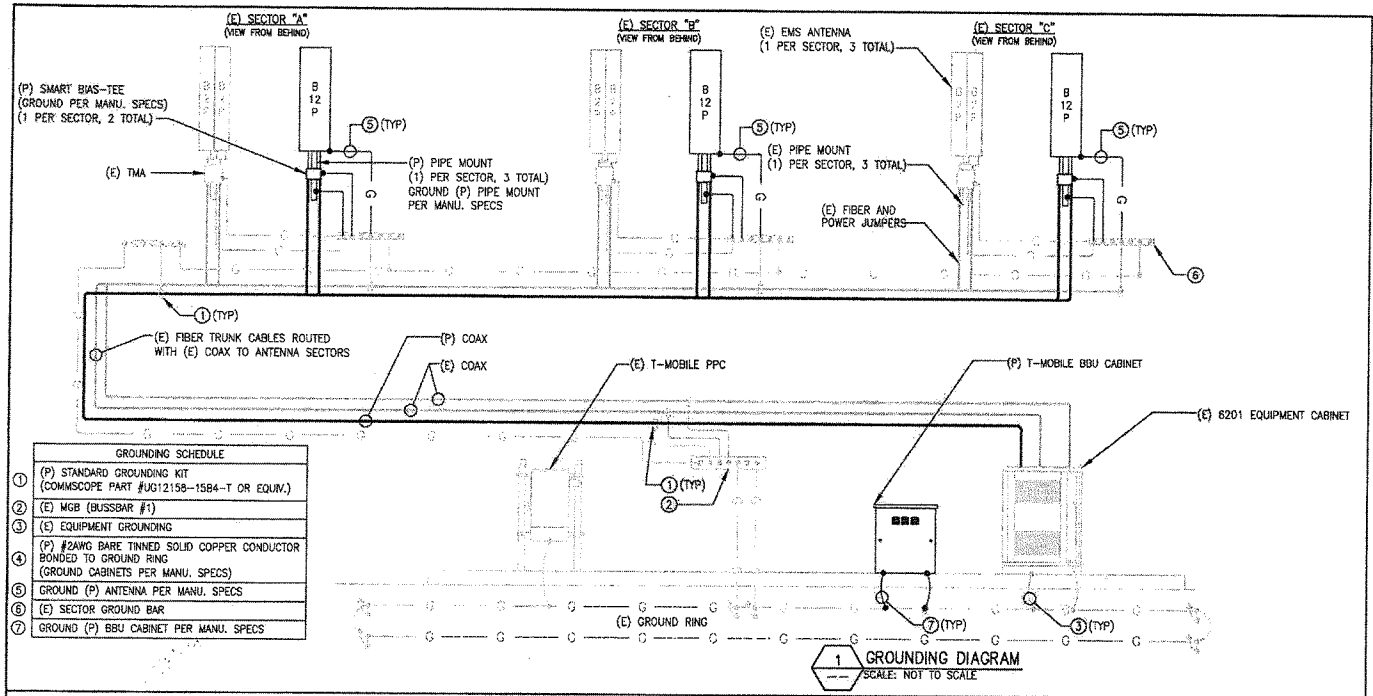
104 BUNKER HILL ROAD
ANDOVER, CT 06232

SHEET TITLE

EQUIPMENT SPECIFICATIONS

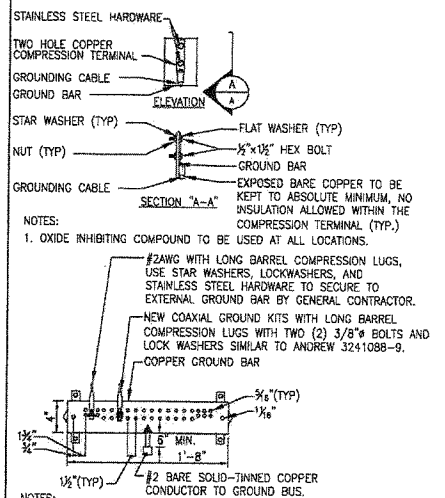
SHEET NUMBER

C-4



GROUNDING SCHEDULE	
①	(P) STANDARD GROUNDING KIT (COMMSCOPE PART #UG12158-15B4-T OR EQUIV.)
②	(E) MGB (BUSSBAR #1)
③	(E) EQUIPMENT GROUNDING
④	(P) #2AWG BARE TINNED SOLID COPPER CONDUCTOR BONDED TO GROUND RING (GROUND CABINETS PER MANU. SPECS)
⑤	GROUND (P) ANTENNA PER MANU. SPECS
⑥	(E) SECTOR GROUND BAR
⑦	GROUND (P) BBU CABINET PER MANU. SPECS

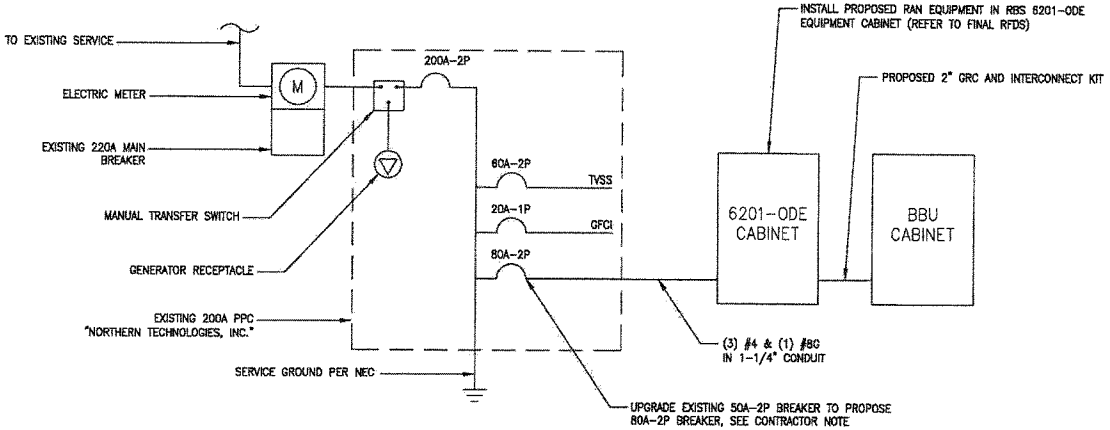
1 GROUNDING DIAGRAM
SCALE: NOT TO SCALE



NOTES:
1. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

NOTES:
1. ALL HARDWARE STAINLESS STEEL COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
2. FOR GROUND BOND TO STEEL ONLY: INSERT A TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH KOPR-SHIELD.
3. ALL HOLES ARE COUNTERSUNK ⅛".

2 GROUND BAR CONNECTION DETAILS
SCALE: NOT TO SCALE



3 POWER DIAGRAM
SCALE: NOT TO SCALE

CONTRACTOR NOTE:
CONTRACTOR TO VERIFY THAT THE EXISTING CONDUITS AND WIRE SIZES ARE ADEQUATE FOR THE PROPOSE LOADING IN ACCORDANCE WITH NEC AND INCLUDE ELECTRICAL UPGRADES IN THE SCOPE OF WORK AS REQUIRED.

T-Mobile
T-MOBILE NORTHEAST LLC
450 WINKS ROAD
BENSALEM, PA 19020

INFINIGY
Design, Build, Deliver.
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0793
Fax # (518) 690-0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/24/15	FOR PERMIT	0

DEPT.	DATE	APP'D	REMARKS
RFE			
RF MAN.			
ZONING			
RFC			
CONSTR.			
SITE ACQ.			

PROJECT NO:	317-000
DRAWN BY:	JLM
CHECKED BY:	ASW

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED
PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

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CT11502A

SITE NAME:
SPECTRASITE ANDOVER

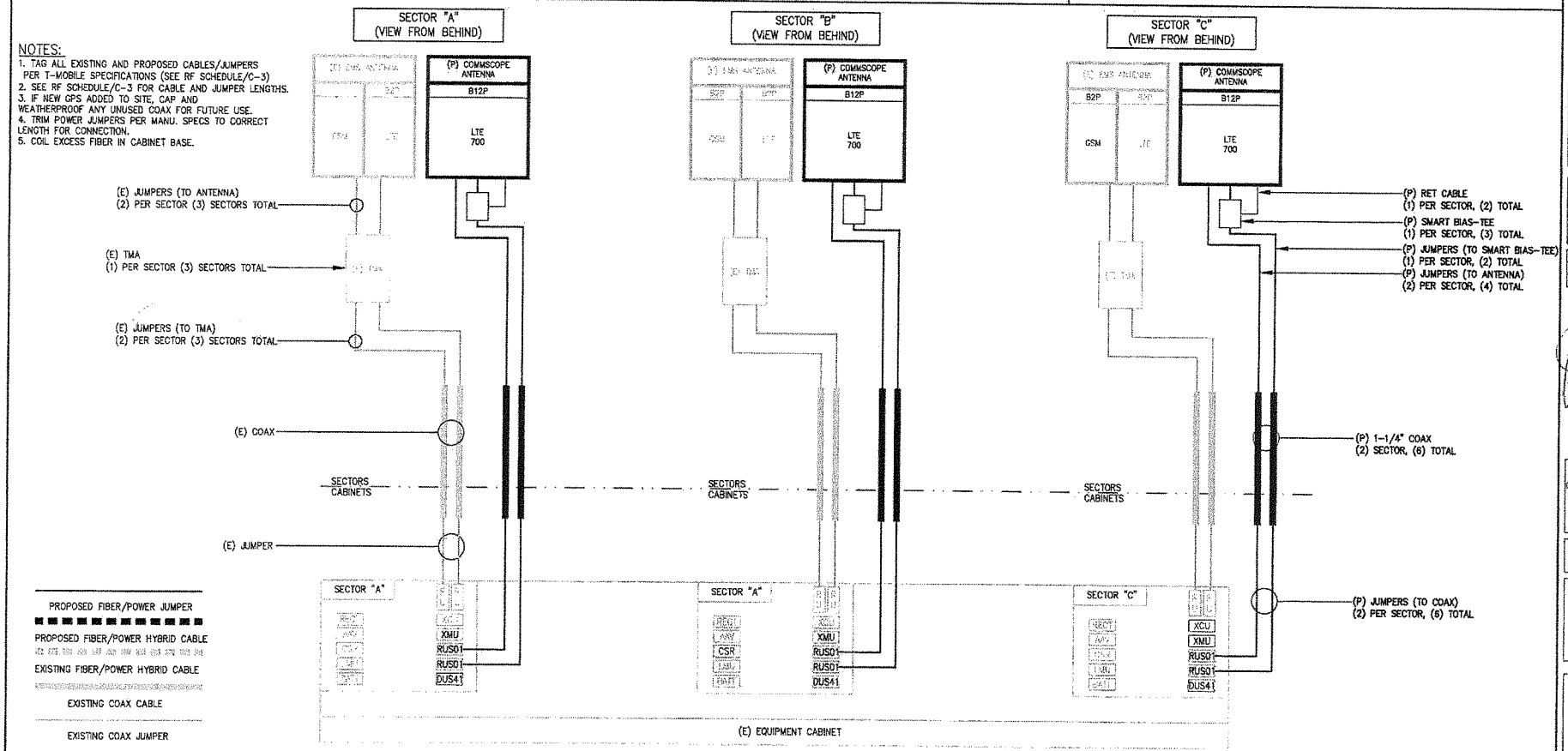
104 BUNKER HILL ROAD
ANDOVER, CT 06232

SHEET TITLE
GROUNDING & POWER DIAGRAMS

SHEET NUMBER
E-1

SHEET 5 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.



2 704G CONFIGURATION COAX/FIBER PLUMBING DIAGRAM
NOT TO SCALE

T-Mobile
T-MOBILE NORTHEAST LLC
450 STREET ROAD
BENSALEM, PA 19020

INFINIGY
Design. Build. Deliver.
1030 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/01/15	FOR PERMIT	0

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

PROJECT NO: 317-000
DRAWN BY: JLM
CHECKED BY: ASW

STATE OF CONNECTICUT
JOHN L. STEVENS
No. 24705
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104 BUNKER HILL ROAD
ANDOVER, CT 06232

SHEET TITLE
COAX/FIBER PLUMBING DIAGRAM

SHEET NUMBER
E-2

SHEET 7 OF 8 SHEETS

ELECTRICAL NOTES:

WORK INCLUDED

1. 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:
   - A. PREPARE AND SUBMIT SHOP DRAWINGS, DIAGRAMS AND ILLUSTRATIONS.
   - B. PROCURE ALL NECESSARY PERMITS AND APPROVALS AND PAY ALL REQUIRED FEES AND CHARGES IN CONNECTION WITH THE WORK OF THIS CONTRACT.
   - C. SUBMIT AS-BUILT DRAWINGS, OPERATING AND MAINTENANCE INSTRUCTIONS AND MANUALS.
   - D. 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. COORDINATE ALL X-RAY WORK WITH BUILDING ENGINEER.
   - E. 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.
   - F. MAINTAIN 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.
2. 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

1. PROVIDE ALL WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND LOCAL AND STATE ELECTRICAL CODES.
2. THE ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT DIMENSIONS OF THE BUILDING.
3. 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.
4. 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.
5. GENERAL
   - A. 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.
   - B. VERIFY ALL MEASUREMENTS AT THE SITE AND BE RESPONSIBLE FOR CORRECTNESS OF SAME.
6. QUALITY, WORKMANSHIP, MATERIALS AND SAFETY
   - A. 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.
   - B. 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.
   - C. 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.
   - D. 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.
   - E. 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

1. 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

1. REMOVE ALL CONSTRUCTION DEBRIS RESULTING FROM THE WORK.
2. CLEAN EQUIPMENT AND SYSTEMS FOLLOWING THE COMPLETION OF THE PROJECT TO THE SATISFACTION OF THE ENGINEER.

COORDINATION AND SUPERVISION

1. 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

1. AS-BUILT DRAWINGS:
   - A. UPON COMPLETION OF THE WORK, FURNISH TO THE OWNER "AS-BUILT" DRAWINGS.
2. SERVICE MANUALS:
   - A. UPON COMPLETION OF THE WORK, FULLY INSTRUCT T-MOBILE AS TO THE OPERATION AND MAINTENANCE OF ALL MATERIAL, EQUIPMENT AND SYSTEMS.
   - B. PROVIDE 3 COMPLETE BOUND SETS OF INSTRUCTIONS FOR OPERATING AND MAINTAINING ALL SYSTEMS AND EQUIPMENT.

CUTTING AND PATCHING

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

TESTS, INSPECTION AND APPROVAL

1. 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, OPERATING CONDITION.
2. 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

1. DO NOT LEAVE ANY WORK INCOMPLETE NOR ANY HAZARDOUS SITUATIONS CREATED WHICH WILL AFFECT THE LIFE OR SAFETY OF THE PUBLIC OR THE BUILDING OCCUPANTS. DO NOT INTERFERE WITH OR CUTOFF ANY OF THE EXISTING SERVICES WITHOUT THE OWNER'S WRITTEN PERMISSION.
2. 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.

GROUNDING

1. ROUTE ALL GROUNDING CONDUCTORS AS SHOWN ON CONDUIT/GROUNDING RISER.
2. 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 GROUNDING ELECTRODE CONDUCTOR (GEC).
3. MAKE ALL GROUND CONNECTIONS FROM MGB TO ELECTRICAL EQUIPMENT WITH 2 HOLE, CRIMP TYPE, BURNDY COMPRESSION TERMINATIONS, SIZED AS REQUIRED.
4. USE 1 HOLE, CRIMP TYPE, BURNDY COMPRESSIONS TERMINATIONS, SIZED AS REQUIRED, AT EQUIPMENT GROUND CONNECTIONS.
5. 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

1. ALL WIRING TO BE INSTALLED IN CONDUIT SYSTEMS IN ACCORDANCE WITH THE FOLLOWING:
   - A. EXTERIOR FEEDERS AND CONTROL, WHERE UNDERGROUND, TO BE IN SCH 40 PVC.
   - B. EXTERIOR, ABOVE GROUND POWER CONDUITS TO BE GALVANIZED RIGID STEEL (RGS).
   - C. ALL TELECOMMUNICATION CONDUITS, INTERIOR/EXTERIOR, TO BE EMT.
   - D. INSTALL PULL ROPES IN ALL NEW EMPTY CONDUITS INSTALLED ON THIS PROJECT.
   - E. ALL TELECOM CONDUITS AND PULL BOXES INSTALLED ON THIS PROJECT TO BE LABELED "T-MOBILE". OWNER WILL PROVIDE LABELS FOR CONTRACTOR TO INSTALL.
   - F. INTERIOR FEEDERS TO BE INSTALLED IN E.M.T. WITH STEEL COMPRESSION FITTINGS.
   - G. MINIMUM SIZE CONDUIT TO BE ¾" TRADE SIZE UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
   - H. FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT TO BE INSTALLED IN LIQUID-TIGHT FLEXIBLE METAL CONDUIT.
   - I. CONDUIT TO BE RUN CONCEALED IN CEILINGS, FINISHED AREAS OR DRYWALL PARTITIONS, UNLESS OTHERWISE NOTED.
   - J. THE 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.
   - K. ALL EXTERIOR MOUNTING HARDWARE TO BE GALVANIZED STEEL. COORDINATE WITH BUILDING ENGINEER PRIOR TO ATTACHING TO BUILDING STRUCTURE.

RACEWAYS CONT'D

   - L. 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.
   - M. PROVIDE ALL CONDUIT ENDS WITH INSULATED METALLIC GROUNDING BUSHINGS.
   - N. CONDUIT TO BE SUPPORTED AT MAXIMUM DISTANCE OF 8'-0", OR AS REQUIRED BY NEC, IN HORIZONTAL AND VERTICAL DIRECTIONS.
   - O. 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.
   - P. WHERE APPLICABLE, PROVIDE ROOFTOP CONDUIT SUPPORT SYSTEM, CONFORMING TO ROOFTOP WARRANTY REQUIREMENTS, PER BUILDING.

WIRES AND CABLES

1. 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.
2. ALL EQUIPMENT/DEVICES TO BE PROVIDED WITH INSULATED GROUND CONDUCTOR.
3. ALL WIRE AND CABLE TO BE 600VOLT, COPPER, WITH THWN/THHN INSULATION, EXCEPT AS NOTED.
4. WIRE FOR POWER AND LIGHTING WILL NOT BE LESS THAN NO. 12AWG. ALL WIRE NO. 8 AND LARGER TO BE STRANDED.
5. 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 600VOLT RATED.
6. WIRE PREVIOUSLY PULLED INTO CONDUIT IS CONSIDERED USED AND IS NOT TO BE RE-PULLED.
7. 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

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

WIRING DEVICES

1. 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

1. DISCONNECT SWITCHES TO BE VOLTAGE-RATED TO SUIT THE CHARACTERISTICS OF THE SYSTEM FROM WHICH THEY ARE SUPPLIED.
2. 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.
3. PROVIDE NEMA 1 DISCONNECT SWITCHES FOR INTERIOR INSTALLATION, NEMA 3R FOR EXTERIOR INSTALLATION.
4. DISCONNECT SWITCHES TO BE MANUFACTURED BY:
   - A. GENERAL ELECTRIC COMPANY
   - B. SQUARE-D
5. PROVIDE RK-1 TYPE FUSES, UNLESS NOTED OTHERWISE.

INSTALLATION

1. INSTALL DISCONNECT SWITCHES WHERE INDICATED ON DRAWINGS.
2. INSTALL FUSES IN FUSIBLE DISCONNECT SWITCHES. FUSES MUST MATCH IN TYPE AND RATING.
3. FUSES TO BE MOUNTED SO THAT THE LABELS SHOWING THEIR RATINGS CAN BE READ WITHOUT REQUIRING FUSE REMOVAL.
4. FURNISH AND DEPOSIT SPARE FUSES AT THE JOB SITE AS FOLLOWS:
   - A. THREE SPARES FOR EACH TYPE AND SIZE, IN EXCESS OF 60A, USED FOR INITIAL FUSING.
   - B. TEN PERCENT SPARES FOR EACH TYPE AND SIZE, UP TO AND INCLUDING 60A, USED FOR INITIAL FUSING, IN NO CASE WILL LESS THAN THREE FUSES OF ONE PARTICULAR TYPE AND SIZE BE FURNISHED.

GENERAL NOTES:

INTENT

1. THESE SPECIFICATIONS AND CONSTRUCTION DRAWINGS ACCOMPANYING THEM DESCRIBE THE WORK TO BE DONE AND THE MATERIALS TO BE FURNISHED FOR CONSTRUCTION.
2. 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
3. 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.
4. 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.
5. 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

1. 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.
2. 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.
3. 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

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

STORAGE

1. 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

1. 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.
2. EXTERIOR
   - A. VISUALLY INSPECT EXTERIOR SURFACES AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER.
   - B. REMOVE ALL TRACES OF SPLASHED MATERIALS FROM ADJACENT SURFACES.
   - C. IF NECESSARY, TO ACHIEVE A UNIFORM DEGREE OF CLEANLINESS, HOSE DOWN THE EXTERIOR OF THE STRUCTURE.
3. INTERIOR
   - A. VISUALLY INSPECT INTERIOR SURFACE AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER FROM WALLS, FLOOR, AND CEILING.
   - B. REMOVE ALL TRACES OF SPLASHED MATERIALS FROM ADJACENT SURFACES.
   - C. REMOVE PAINT DROPPINGS, SPOTS, STAINS, AND DIRT FROM FINISHED SURFACES.

CHANGE ORDER PROCEDURE

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

RELATED DOCUMENTS AND COORDINATION

1. 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

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

PRODUCTS AND SUBSTITUTIONS

1. 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.
2. 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.

QUALITY ASSURANCE

1. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. THESE SHALL INCLUDE, BUT NOT BE LIMITED TO THE APPLICABLE CODES SET FORTH BY THE LOCAL GOVERNING BODY. SEE "CODE COMPLIANCE" T-1.

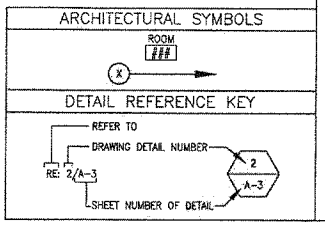
ADMINISTRATION

1. BEFORE THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR WILL ASSIGN A PROJECT MANAGER WHO WILL ACT AS A SINGLE POINT OF CONTACT FOR ALL PERSONNEL INVOLVED IN THIS PROJECT. THIS PROJECT MANAGER WILL DEVELOP A MASTER SCHEDULE FOR THE PROJECT WHICH WILL BE SUBMITTED TO THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK.
2. SUBMIT A BAR TYPE PROGRESS CHART, NOT MORE THAN 3 DAYS AFTER THE DATE ESTABLISHED FOR COMMENCEMENT OF THE WORK ON THE SCHEDULE, INDICATING A TIME BAR FOR EACH MAJOR CATEGORY OR UNIT OF WORK TO BE PERFORMED AT THE SITE, PROPERLY SEQUENCED AND COORDINATED WITH OTHER ELEMENTS OF WORK AND SHOWING COMPLETION OF THE WORK SUFFICIENTLY IN ADVANCE OF THE DATE ESTABLISHED FOR SUBSTANTIAL COMPLETION OF THE WORK.
3. PRIOR TO COMMENCING CONSTRUCTION, THE OWNER SHALL SCHEDULE AN ON-SITE MEETING WITH ALL MAJOR PARTIES. THIS WOULD INCLUDE, BUT NOT LIMITED TO, THE OWNER, PROJECT MANAGER, CONTRACTOR, LAND OWNER REPRESENTATIVE, LOCAL TELEPHONE COMPANY, TOWER ERECTION FOREMAN (IF SUBCONTRACTED).
4. CONTRACTOR SHALL BE EQUIPPED WITH SOME MEANS OF CONSTANT COMMUNICATIONS, SUCH AS A MOBILE PHONE OR A BEEPER. THIS EQUIPMENT WILL NOT BE SUPPLIED BY THE OWNER, NOR WILL WIRELESS SERVICE BE ARRANGED.
5. DURING CONSTRUCTION, CONTRACTOR MUST ENSURE THAT EMPLOYEES AND SUBCONTRACTORS WEAR HARD HATS AT ALL TIMES. CONTRACTOR WILL COMPLY WITH ALL OSHA SAFETY REQUIREMENTS IN THEIR AGREEMENT.
6. PROVIDE WRITTEN DAILY UPDATES ON SITE PROGRESS TO THE OWNER.
7. COMPLETE INVENTORY OF CONSTRUCTION MATERIALS AND EQUIPMENT IS REQUIRED PRIOR TO START OF CONSTRUCTION.
8. NOTIFY THE OWNER/PROJECT MANAGER IN WRITING NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, TOWER ERECTIONS, AND EQUIPMENT CABINET PLACEMENTS.

INSURANCE AND BONDS

1. 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.
2. THE OWNER SHALL BE NAMED AS AN ADDITIONAL INSURED ON ALL POLICIES.
3. CONTRACTOR MUST PROVIDE PROOF OF INSURANCE.

ARCHITECTURAL SYMBOLS



ABBREVIATIONS

ADJ	ADJUSTABLE
AGL	ABOVE GROUND LINE
&	AND
APPROX	APPROXIMATE
@	AT
BTS	BASE TRANSMISSION STATION
CAB	CABINET
CLG	CEILING
CONC	CONCRETE
CONT	CONTINUOUS
DIA OR ø	DIAMETER
DWG	DRAWING
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
EGB	EQUIPMENT GROUND BAR
(E)	EXISTING
EXT	EXTERIOR
FF	FINISHED FLOOR
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GRND	GROUND
LG	LONG
MAX	MAXIMUM
MECH	MECHANICAL
MW	MICROWAVE DISH
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
MTL	METAL
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OPP	OPPOSITE
(P)	PROPOSED
PCS	PERSONAL COMMUNICATION SYSTEM
PPC	POWER PROTECTION CABINET
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SS	STAINLESS STEEL
STL	STEEL
TOC	TOP OF CONCRETE
TOM	TOP OF MASONRY
TYP	TYPICAL
VIF	VERIFY IN FIELD
UON	UNLESS OTHERWISE NOTED
WWF	WELDED WIRE FABRIC
W/	WITH

T-Mobile

T-MOBILE NORTHEAST LLC
400 SYLVAN ROAD
SAUGUS, MA 01906

INFINIGY
Design. Build. Deliver.
1003 Watervliet Shaker Rd
Albany, NY 12205
Phone: (518) 690-0790
Fax #: (518) 690-0792

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/01/13	FOR PERMIT	0

DEPT.	DATE	APP'D	REVISIONS
RFE			
RF MAN.			
ZONING			
O/S			
CONSTR.			
SITE AC.			

PROJECT NO:	317-000
DRAWN BY:	JLM
CHECKED BY:	ASW

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

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

SITE NUMBER:
CT11502A

SITE NAME:
SPECTRASITE ANDOVER

104 BUNKER HILL ROAD
ANDOVER, CT 06232

SHEET TITLE
GENERAL AND ELECTRICAL NOTES

SHEET NUMBER
N-1

SHEET 8 OF 8 SHEETS