48 Spruce Street
Oakland, NJ 07436
Phone: (201)-951-3869
Tom Kincaid
Real Estate Consultant

July 21, 2014

Hand Delivered

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

CC to Property Owner:
777 Realty LLC, 777 Talcotville RD, Vernon, CT 06066

RE: Sprint Spectrum L.P. notice of intent to modify an existing telecommunications facility located at 777 Talcotville Road, Vernon Rockville, CT 06066.

Dear Ms. Bachman:

In order to accommodate technological changes, implement Code Division Multiple Access ("CDMA") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the state of Connecticut, Sprint Spectrum L.P. plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and its attachments is being sent to the chief elected official of the municipality in which affected cell site is located.

CDMA employs Spread-Spectrum technology and special coding scheme to allow multiple users to be multiplexed over the same physical channel.

LTE is a new high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in Sprint's operations at the site. Also included is

documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

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

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

For the foregoing reasons Sprint Spectrum L.P. respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (845)-499-4712 or email JPalumbo@Transcendwireless.com with questions concerning this matter.
Thank you for your consideration.

Sincerely,

Jennifer Palumbo
Real Estate Consultant

EBI Consulting
environmental | engineering | due diligence

RADIO FREQUENCY FCC REGULATORY COMPLIANCE MAXIMUM PERMISSIBLE EXPOSURE (MPE) ASSESSMENT

Sprint Existing Facility

Site ID: CT70XC147

Spectrasite / Vernon

777 Talcotville Road
Vernon, CT 06066

July 18, 2014

EBI Project Number: 62143807

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

EBI Consulting
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July 18, 2014

Sprint
Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Re: Radio Frequency Maximum Permissible Exposure (MPE) Assessment for Site:
CT70XC147 - Spectrasite / Vernon

Site Total: 43.97% - MPE% in full compliance

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 777 Talcotville Road, Vernon, CT, for the purpose of determining whether the radio frequency (RF) exposure levels from the proposed Sprint equipment upgrades 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 µW/cm2 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 cellular band (850 MHz Band) is approximately 567 $\mu W/cm^2$, and the general population exposure limit for the 1900 MHz and 2500 MHz bands 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 upgrades to the existing Sprint Wireless antenna facility located at 777 Talcotville Road, Vernon, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. 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 emissions were calculated using the following assumptions:

1) 5 channels in the 1900 MHz Band were considered for each sector of the proposed installation.
2) 1 channel in the 800 MHz Band was considered for each sector of the proposed installation
3) 2 channels in the 2500 MHz Band were considered for each sector of the proposed installation.
4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The 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.

6) The antennas used in this modeling are the RFS APXVSPP18-C-A20, RFS APXV9ERR18-C-A20 and the RFS APXVTM14-C-I20. This is based on feedback from the carrier with regards to anticipated antenna selection. The RFS APXVSPP18-C-A20 has a 15.9 dBd gain value at its main lobe at 1900 MHz and 13.4 dBd at its main lobe for 850 MHz. The RFS APXV9ERR18-C-A20 has a 14.9 dBd gain value at its main lobe at 1900 MHz and 11.9 dBd at its main lobe for 850 MHz. The RFS APXVTM14-C-I20 has a 15.9 dBd gain value at its main lobe at 2500 MHz. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
7) The antenna mounting height centerline for the proposed antennas is **130 feet** above ground level (AGL).
8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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

Site ID	CT70XC147 - Spectrasite / Vernon
Site Addresss	777 Talcotville Road, Vernon, CT, 06066
Site Type	Monopole

Sector 1

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain (10 db reduction)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss (dB)	ERP	Power Density Percentage
1a	RFS	APXV9ERR18-C-A20	RRH	1900 MHz	CDMA / LTE	20	5	100	4.9	130	124	1/2 "	0.5	0	275.42	0.64%
1a	RFS	APXV9ERR18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	1.9	130	124	1/2 "	0.5	0	27.61	0.11%
1B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	5.9	130	124	1/2 "	0.5	0	138.69	0.57%
														Sector total Power Density Value:		1.33%

Sector 2

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain (10 db reduction)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss (dB)	ERP	Power Density Percentage
2a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	5	100	5.9	130	124	1/2 "	0.5	0	346.74	0.81%
2a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	3.4	130	124	1/2 "	0.5	0	39.00	0.16%
2B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	5.9	130	124	1/2 "	0.5	0	138.69	0.57%
														Sector total Power Density Value:		1.54%

Sector 3

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain (10 db reduction)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss (dB)	ERP	Power Density Percentage
3a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	5	100	5.9	130	124	1/2 "	0.5	0	346.74	0.81%
3a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	3.4	130	124	1/2 "	0.5	0	39.00	0.16%
3B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	5.9	130	124	1/2 "	0.5	0	138.69	0.57%
														Sector total Power Density Value:		1.54%

Site Composite MPE %	
Carrier	MPE %
Sprint	4.42%
Nextel	2.23%
Verizon Wireless	15.98%
AT&T	15.95%
MetroPCS	4.73%
Clearwire	0.66%
Total Site MPE %	**43.97%**

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Summary

All calculations performed for this analysis yielded results that were well within the allowable limits for general public Maximum Permissible Exposure (MPE) to radio frequency energy.

The anticipated Maximum Composite contributions from the Sprint facility are **4.42% (1.33% from sector 1, 1.54% from sector 2 and 1.54% from sector 3)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **43.97%** of the allowable FCC established general public limit sampled at 6 feet above ground level. This total composite site value is based upon MPE 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	:	**170 ft Monopole**
ATC Site Name	:	**Vernon CT 6, CT**
ATC Site Number	:	**302529**
Engineering Number	:	**58882723**
Proposed Carrier	:	**Sprint Nextel**
Carrier Site Name	:	**Vernon CT 6**
Carrier Site Number	:	**CT70XC147**
Site Location	:	**777 Talcotville Road** **Vernon Rockville, CT 06066-2318** **41.863453,-72.483283**
County	:	**Tolland**
Date	:	**May 29, 2014**
Max Usage	:	**60%**
Result	:	**Pass**

Daniel Motter

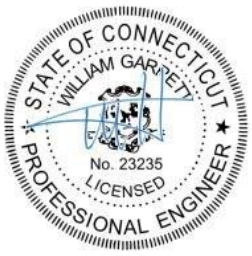

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Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 170 ft monopole to reflect the change in loading by Sprint Nextel.

Supporting Documents

Tower Drawings	Summit, PJF Job #29201-0893, dated July 26, 2001
Foundation Drawing	Summit, PJF Job #29201-0893, dated September 21, 2001
Geotechnical Report	Dr. Clarence Welti Geotechnical Engineering Job #CT-1065, dated January 2, 2001
Modifications	ATC Job #44531032, dated March 3, 2010

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 (4) & 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					
168.0	168.0	2	DragonWave Horizon Compact	Collar	(6) 5/16" Coax (2) 1/2" Coax	Clearwire
		3	NextNet BTS-2500			
		2	DragonWave A-ANT-18G-2-C			
		3	Argus LLPX310R			
160.0	160.0	9	48" x 12" Panel	Low Profile Platform	(12) 1 5/8" Coax	Sprint Nextel
		3	72" x 12" Panel			
150.0	150.0	6	RFS FD9R6004/2C-3L	Low Profile Platform	(12) 1 5/8" Coax	Verizon Wireless
		3	Antel BXA-171063-8BF-Edin-X			
		6	Antel LPA-80063-4CF-Edin-X			
		3	Antel BXA-70063-6CF-Edin-X			
142.0	142.0	3	Powerwave LGP21901	T-Arms	(12) 1 5/8" Coax (2) 0.78" 8 AWG 6 (1) 0.39" Cable (1) 3" Conduit	AT&T Mobility
		1	Raycap DC6-48-60-18-8F (23.5” Height)			
		3	14" x 9" TTA			
		6	Powerwave LGP21401			
		3	36" x 8" x 6" Panel			
		6	Ericsson RRUS 11(Band 12)			
		9	72" x 12" Panel			
130.0	130.0	6	Alcatel-Lucent 4X40W RRH	Low Profile Platform	(3) 1 1/4" Hybriflex	Sprint Nextel
		3	Alcatel-Lucent 800MHz RRH w/ Notch Filter			
		1	RFS APXV9ERR18-C-A20			
		2	RFS APXVSPP18-C-A20			
120.0	121.0	3	RFS APXV18-206517S-C	Flush	(6) 1 5/8" Coax	Metro PCS

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
130.0	130.0	3	RFS IBC1900BB-1	-	(6) 1 5/8" Coax	Sprint Nextel
		3	RFS IBC1900HB-2 (18.7" Length)			
		6	Decibel 980G90T4E-M			

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
130.0	**130.0**	**3**	**Alcatel-Lucent TD-RRH8x20**	**Low Profile Platform**	**(1) 1 1/4" Hybriflex**	**Sprint Nextel**
		3	**RFS APXVTM14-C-I20 (56.2 lbs)**			

[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).

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	51%	Pass
Shaft	53%	Pass
Base Plate	60%	Pass

Foundations

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Moment (Kips-Ft)	8,100.0	4,542.4	56%
Shear (Kips)	61.0	38.5	63%

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

Deflection and Sway*

Antenna Elevation (ft)	Deflection (ft)	Sway (Rotation) (°)
130.0	0.880	0.784

***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:

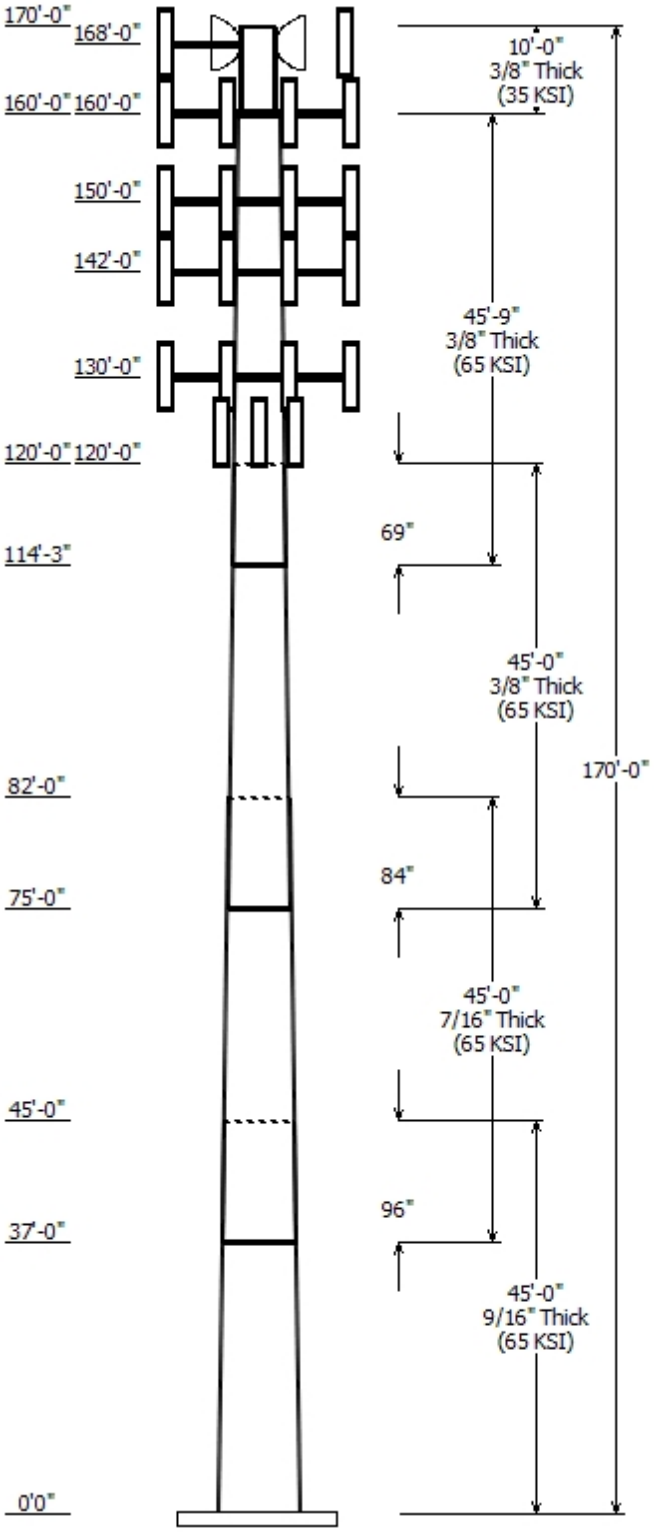
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

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

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

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



Job Information

Pole :	302529 Code: TIA/EIA-222 Rev F
Description :	160 ft Monopole w/10 ft Extension
Client :	Sprint Nextel
Location :	Vernon CT 6, CT
Shape :	18 Sides
Height :	170.00 (ft)
Base Elev (ft):	0.00
Taper:	0.25131 (in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	45.000	60.82	72.13	0.563		0.000	0.251317	65
2	45.000	52.39	63.70	0.438	Slip Joint	96.000	0.251317	65
3	45.000	43.59	54.90	0.375	Slip Joint	84.000	0.251317	65
4	45.750	34.29	45.79	0.375	Slip Joint	69.000	0.251317	65
5	10.000	30.00	30.00	0.375	Butt Joint	0.000	0.000000	35

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
168.000	168.000	1	Collar
168.000	168.000	3	NextNet BTS-2500
168.000	168.000	2	DragonWave A-ANT-18G-2-C
168.000	168.000	3	Argus LLPX310R
168.000	168.000	2	DragonWave Horizon Compact
160.000	160.000	3	72" x 12" Panel
160.000	160.000	9	48" x 12" Panel
160.000	160.000	1	Flat Low Profile Platform
150.000	150.000	3	Antel BXA-171063-8BF-Edin-X
150.000	150.000	3	Antel BXA-70063-6CF-Edin-X
150.000	150.000	6	Antel LPA-80063-4CF-Edin-X
150.000	150.000	6	RFS FD9R6004/2C-3L
150.000	150.000	1	Round Low Profile Platform
142.000	142.000	6	Powerwave LGP21401
142.000	142.000	1	Raycap DC6-48-60-18-8F
142.000	142.000	6	Ericsson RRUS 11(Band 12)
142.000	142.000	3	Round T-Arm
142.000	142.000	3	Powerwave LGP21901
142.000	142.000	9	72" x 12" Panel
142.000	142.000	3	36" x 8" x 6" Panel
142.000	142.000	3	14" x 9" TTA
130.000	130.000	3	RFS APXVTM14-C-I20
130.000	130.000	3	Alcatel-Lucent TD-RRH8x20
130.000	130.000	6	Alcatel-Lucent 4X40W RRH
130.000	130.000	3	Alcatel-Lucent 800 MHz RRH w/
130.000	130.000	1	RFS APXV9ERR18-C-A20
130.000	130.000	2	RFS APXVSPP18-C-A20
130.000	130.000	1	Round Low Profile Platform
120.000	121.000	3	RFS APXV18-206517S-C
120.000	120.000	3	Flush Mounts

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
2.000	120.0	1 5/8" Coax	No
2.000	130.0	1 1/4" Hybriflex	No
2.000	130.0	1 1/4" Hybriflex	No
2.000	142.0	0.39" Cable	No
2.000	142.0	0.78" 8 AWG 6	No
2.000	142.0	1 5/8" Coax	No

2.000	142.0	3" Conduit	No
2.000	150.0	1 5/8" Coax	No
2.000	160.0	1 5/8" Coax	No
2.000	168.0	1/2" Coax	No
2.000	168.0	5/16" Coax	No

Load Cases

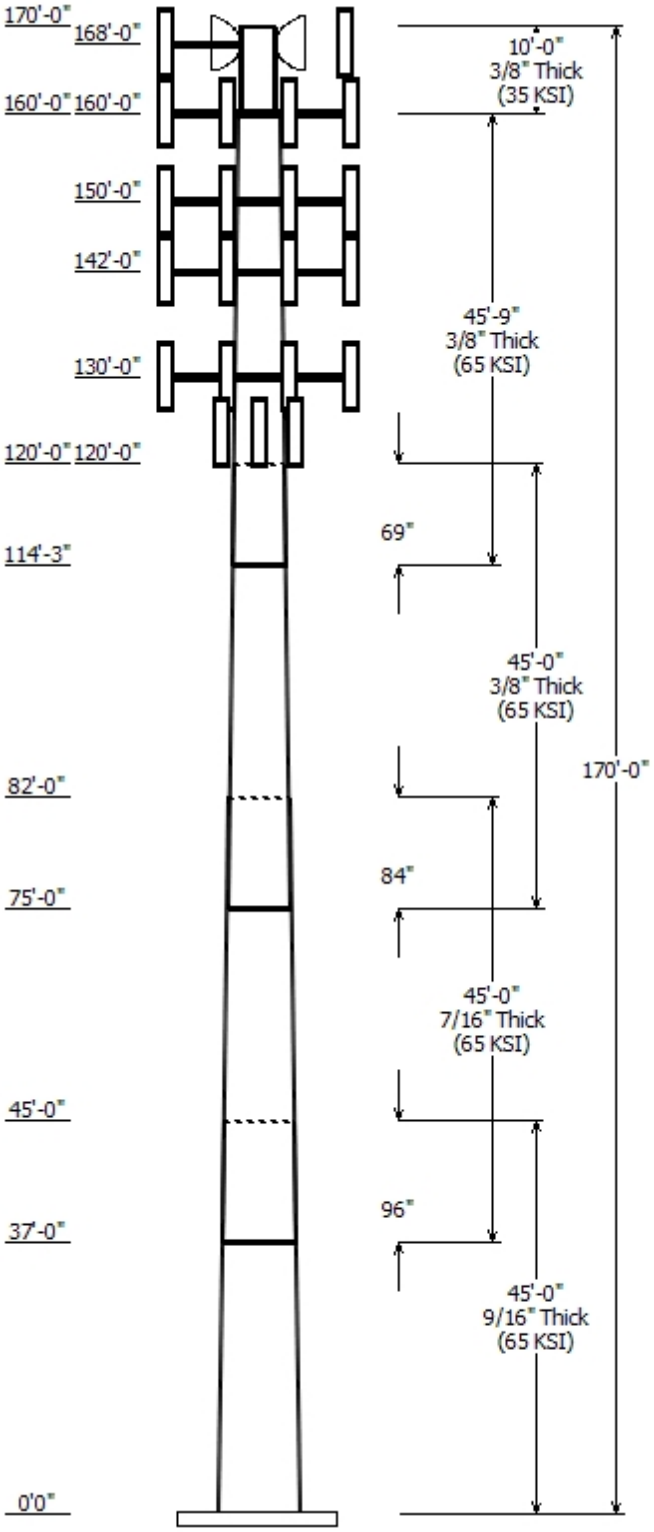
No Ice	85.00 mph Wind with No Ice
Ice	73.61 mph Wind with Ice
Twist/Sway	50.00 mph Wind with No Ice

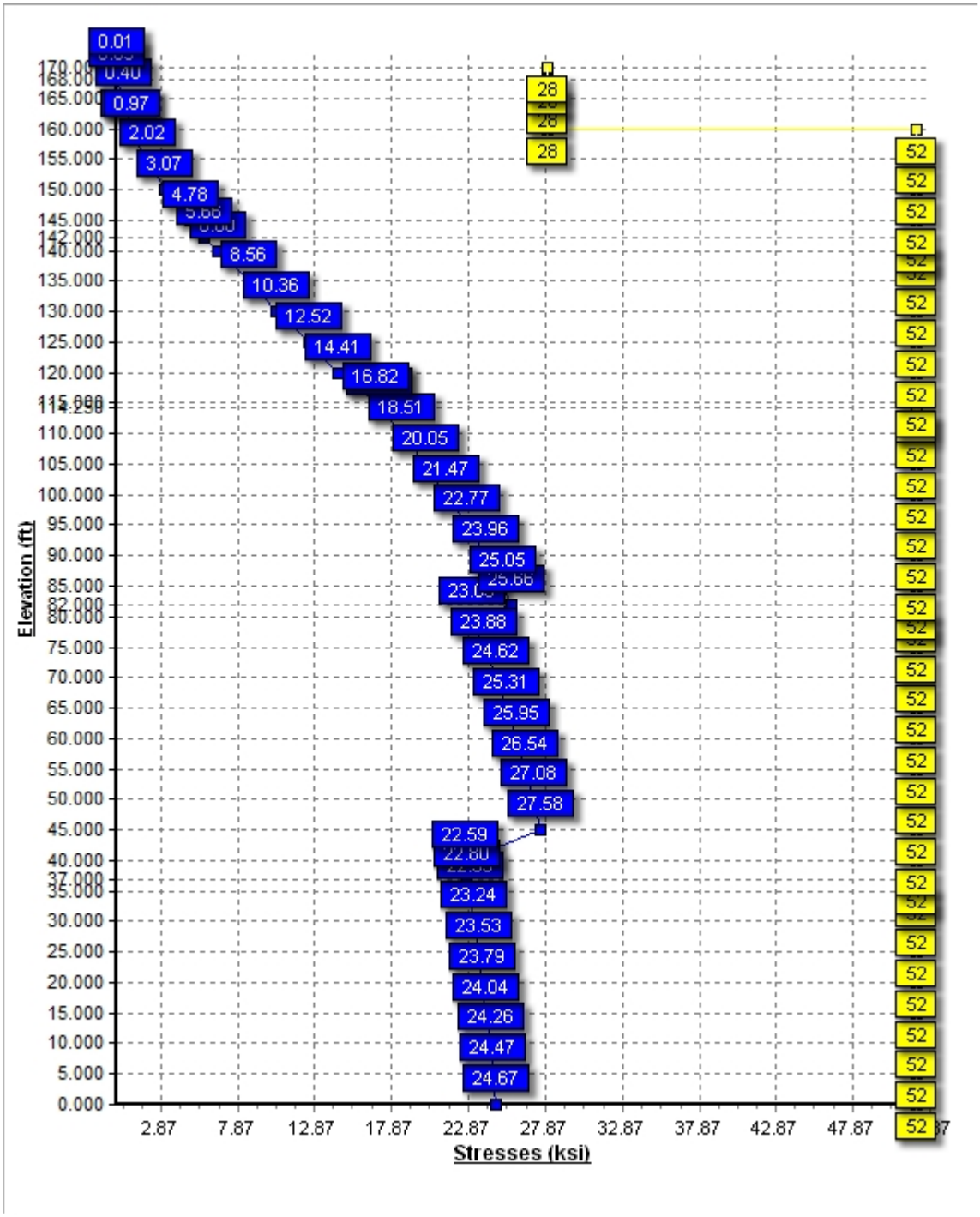
Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
No Ice	4542.45	38.49	64.23
Ice	3759.19	31.23	73.13
Twist/Sway	1572.06	13.32	64.25

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
Twist/Sway	168.00	17.145	0.843

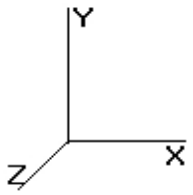



Elevation (ft)
Stresses (ksi)
0.01
0.40
0.97
2.02
3.07
4.78
8.56
10.36
12.52
14.41
16.82
18.51
20.05
21.47
22.77
23.96
25.05
23.88
24.62
25.31
25.95
26.54
27.08
27.58
22.59
23.24
23.53
23.79
24.04
24.26
24.47
24.67
28
52
2.87
7.87
12.87
17.87
22.87
27.87
32.87
37.87
42.87
47.87

Pole : 302529
Location : Vernon CT 6, CT
Height : 170.0 (ft)
Base Dia : 72.13 (in)
Top Dia : 30.00 (in)
Shape : 18 Sides. Sect 5: Round
Taper : 0.251317 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



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Shaft Section Properties

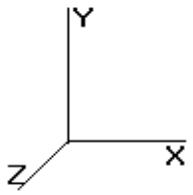
Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (sqin)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (sqin)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	45.000	0.5625	65		0.00	18,019	72.13	0.00	127.77	82681.3	21.20	128.23	60.82	45.00	107.58	49352.3	17.65	108.12	0.251317
2-18	45.000	0.4375	65	Slip	96.00	12,250	63.70	37.00	87.85	44430.6	24.26	145.61	52.39	82.00	72.15	24609.8	19.71	119.76	0.251317
3-18	45.000	0.3750	65	Slip	84.00	8,908	54.90	75.00	64.90	24383.8	24.41	146.42	43.59	120.00	51.44	12141.6	19.09	116.26	0.251317
4-18	45.750	0.3750	65	Slip	69.00	7,350	45.79	114.25	54.06	14087.1	20.12	122.11	34.29	160.00	40.37	5868.1	14.71	91.45	0.251317
5-R	10.000	0.3750	35	Butt	0.00	1,188	30.00	160.00	34.90	3831.8	0.00	80.00	30.00	170.00	34.90	3831.8	0.00	80.00	0.000000
				Shaft Weight		47,714													

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)
168.00	Argus LLPX310R	3	28.60	4.830	0.73	54.50	5.360	0.73	0.000	0.000
168.00	Collar	1	560.00	8.500	1.00	680.00	10.500	1.00	0.000	0.000
168.00	DragonWave A-ANT-18G-2-C	2	27.10	4.690	1.00	55.10	5.050	1.00	0.000	0.000
168.00	DragonWave Horizon	2	10.60	0.430	0.50	17.00	0.580	0.50	0.000	0.000
168.00	NextNet BTS-2500	3	35.00	2.120	0.67	48.30	2.430	0.67	0.000	0.000
160.00	48" x 12" Panel	9	30.00	5.600	0.78	62.50	6.190	0.78	0.000	0.000
160.00	72" x 12" Panel	3	45.00	8.400	0.79	92.20	9.230	0.79	0.000	0.000
160.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
150.00	Antel BXA-171063-8BF-Edin-X	3	10.50	2.940	0.87	29.80	3.370	0.87	0.000	0.000
150.00	Antel BXA-70063-6CF-Edin-X	3	17.00	7.730	0.77	58.00	8.540	0.77	0.000	0.000
150.00	Antel LPA-80063-4CF-Edin-X	6	20.00	7.000	0.94	72.60	7.620	0.94	0.000	0.000
150.00	RFS FD9R6004/2C-3L	6	2.60	0.370	0.50	5.40	0.500	0.50	0.000	0.000
150.00	Round Low Profile Platform	1	1500.00	21.700	1.00	1,700.00	27.200	1.00	0.000	0.000
142.00	14" x 9" TTA	3	10.00	1.230	0.50	18.00	1.460	0.50	0.000	0.000
142.00	36" x 8" x 6" Panel	3	25.00	2.800	0.89	44.54	3.240	0.89	0.000	0.000
142.00	72" x 12" Panel	9	45.00	8.400	0.79	92.20	9.230	0.79	0.000	0.000
142.00	Ericsson RRUS 11(Band 12)	6	50.00	2.990	0.67	69.90	3.340	0.67	0.000	0.000
142.00	Powerwave LGP21401	6	14.10	1.290	0.50	21.26	1.530	0.50	0.000	0.000
142.00	Powerwave LGP21901	3	5.50	0.230	0.50	7.70	0.340	0.50	0.000	0.000
142.00	Raycap DC6-48-60-18-8F	1	20.00	1.110	1.00	35.10	1.460	1.00	0.000	0.000
142.00	Round T-Arm	3	250.00	9.700	0.67	314.00	12.100	0.67	0.000	0.000
130.00	Alcatel-Lucent 4X40W RRH	6	59.50	2.710	0.67	82.60	3.070	0.67	0.000	0.000
130.00	Alcatel-Lucent 800 MHz RRH	3	61.80	2.910	0.67	87.80	3.260	0.67	0.000	0.000
130.00	Alcatel-Lucent TD-RRH8x20	3	66.10	4.320	0.67	82.70	4.430	0.67	0.000	0.000
130.00	RFS APXV9ERR18-C-A20	1	62.00	8.260	0.86	113.90	9.080	0.86	0.000	0.000
130.00	RFS APXVSPP18-C-A20	2	57.00	8.260	0.83	106.50	9.080	0.83	0.000	0.000
130.00	RFS APXVTM14-C-I20	3	52.90	6.900	0.78	92.40	7.580	0.78	0.000	0.000
130.00	Round Low Profile Platform	1	1500.00	21.700	1.00	1,700.00	27.200	1.00	0.000	0.000
120.00	Flush Mounts	3	65.00	2.000	0.67	100.00	2.500	0.67	0.000	0.000
120.00	RFS APXV18-206517S-C	3	26.40	5.160	1.00	53.13	5.850	1.00	0.000	1.000
	Totals	102	8980.00			12,438.27			Number of Loadings :	30

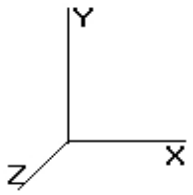
Linear Appurtenance Properties

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
2.00	168.00	(2) 1/2" Coax	0.30	0.00	0.30	0.00	N
2.00	168.00	(6) 5/16" Coax	0.24	0.00	0.24	0.00	N
2.00	160.00	(12) 1 5/8" Coax	12.00	0.00	12.00	0.00	N
2.00	150.00	(12) 1 5/8" Coax	12.00	0.00	12.00	0.00	N



2.00	142.00	(1) 0.39" Cable	0.07	0.00	0.00	0.00	N
2.00	142.00	(2) 0.78" 8 AWG 6	0.59	0.00	0.00	0.00	N
2.00	142.00	(12) 1 5/8" Coax	12.00	0.00	12.00	0.00	N
2.00	142.00	(1) 3" Conduit	7.58	0.00	0.00	0.00	N
2.00	130.00	(3) 1 1/4" Hybriflex	1.00	0.00	12.00	0.00	N
2.00	130.00	(1) 1 1/4" Hybriflex	1.00	0.00	0.00	0.00	N
2.00	120.00	(6) 1 5/8" Coax	6.00	0.00	6.00	0.00	N
		Total Weight	7,559.24 (lb)		7,685.64 (lb)		

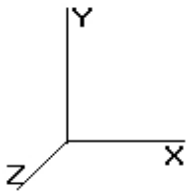
Pole :	**302529**	**Code: TIA/EIA-222 Rev F**	**5/29/2014 6:12:23 PM**
Location :	**Vernon CT 6, CT**		**Page: 3**
Height :	**170.0 (ft)**		
Base Dia :	**72.13 (in)**		
Top Dia :	**30.00 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides. Sect 5: Round**		
Taper :	**0.251317 (in/ft)**		



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		0.5625	72.130	127.770	82,681.3	21.20	128.23	65	52	0.0
5.00		0.5625	70.873	125.526	78,402.1	20.81	126.00	65	52	2,154.8
10.00		0.5625	69.616	123.283	74,273.2	20.41	123.76	65	52	2,116.6
15.00		0.5625	68.360	121.039	70,291.9	20.02	121.53	65	52	2,078.4
20.00		0.5625	67.103	118.796	66,455.4	19.62	119.29	65	52	2,040.3
25.00		0.5625	65.847	116.553	62,761.1	19.23	117.06	65	52	2,002.1
30.00		0.5625	64.590	114.309	59,206.4	18.84	114.83	65	52	1,963.9
35.00		0.5625	63.334	112.066	55,788.4	18.44	112.59	65	52	1,925.8
37.00	Bot - Section 2	0.5625	62.831	111.168	54,459.0	18.28	111.70	65	52	759.6
40.00		0.5625	62.077	109.822	52,504.7	18.05	110.36	65	52	2,019.5
45.00	Top - Section 1	0.4375	61.695	85.061	40,328.1	23.45	141.02	65	52	3,311.5
50.00		0.4375	60.439	83.316	37,896.9	22.95	138.15	65	52	1,432.4
55.00		0.4375	59.182	81.571	35,565.4	22.44	135.27	65	52	1,402.7
60.00		0.4375	57.926	79.827	33,331.6	21.94	132.40	65	52	1,373.0
65.00		0.4375	56.669	78.082	31,193.3	21.43	129.53	65	52	1,343.3
70.00		0.4375	55.412	76.337	29,148.5	20.92	126.66	65	52	1,313.6
75.00	Bot - Section 3	0.4375	54.156	74.592	27,195.1	20.42	123.78	65	52	1,283.9
80.00		0.4375	52.899	72.847	25,330.9	19.91	120.91	65	52	2,345.8
82.00	Top - Section 2	0.3750	53.147	62.809	22,099.2	23.58	141.72	65	52	922.9
85.00		0.3750	52.393	61.912	21,165.5	23.22	139.71	65	52	636.6
90.00		0.3750	51.136	60.416	19,668.4	22.63	136.36	65	52	1,040.6
95.00		0.3750	49.880	58.921	18,243.6	22.04	133.01	65	52	1,015.2
100.0		0.3750	48.623	57.425	16,889.3	21.45	129.66	65	52	989.7
105.0		0.3750	47.366	55.929	15,603.7	20.86	126.31	65	52	964.3
110.0		0.3750	46.110	54.434	14,385.2	20.27	122.96	65	52	938.9
114.2	Bot - Section 4	0.3750	45.042	53.163	13,400.6	19.77	120.11	65	52	778.0
115.0		0.3750	44.853	52.938	13,231.7	19.68	119.61	65	52	273.1
120.0	Top - Section 3	0.3750	44.347	52.335	12,784.7	19.44	118.26	65	52	1,791.1
125.0		0.3750	43.090	50.840	11,719.7	18.85	114.91	65	52	877.7
130.0		0.3750	41.833	49.344	10,715.5	18.26	111.56	65	52	852.3
135.0		0.3750	40.577	47.849	9,770.4	17.67	108.20	65	52	826.8
140.0		0.3750	39.320	46.353	8,882.6	17.08	104.85	65	52	801.4
142.0		0.3750	38.818	45.755	8,543.1	16.84	103.51	65	52	313.4
145.0		0.3750	38.064	44.857	8,050.2	16.49	101.50	65	52	462.5
150.0		0.3750	36.807	43.362	7,271.6	15.90	98.15	65	52	750.5
155.0		0.3750	35.550	41.866	6,544.8	15.31	94.80	65	52	725.0
160.0	Top - Section 4	0.3750	34.294	40.371	5,868.1	14.71	91.45	65	52	699.6
160.0	Bot - Section 5	0.3750	30.000	34.901	3,831.8	0.00	80.00	35	28	
165.0		0.3750	30.000	34.901	3,831.8	0.00	80.00	35	28	593.8
168.0		0.3750	30.000	34.901	3,831.8	0.00	80.00	35	28	356.3
170.0		0.3750	30.000	34.901	3,831.8	0.00	80.00	35	28	237.5
										47,714.3

Pole :	**302529**	**Code: TIA/EIA-222 Rev F**	**5/29/2014 6:12:23 PM**
Location :	**Vernon CT 6, CT**		**Page: 4**
Height :	**170.0 (ft)**		
Base Dia :	**72.13 (in)**		
Top Dia :	**30.00 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides. Sect 5: Round**		
Taper :	**0.251317 (in/ft)**		



Load Case: **No Ice** — **85.00 mph Wind with No Ice** — **20 Iterations**

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

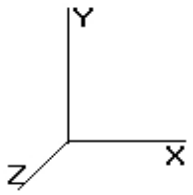
Shaft Segment Forces

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	510.91	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	502.01	0.650	0.000	5.00	29.792	19.36	605.3	0.0	2,154.8
10.00		0.00	1.00	18.496	31.25	493.11	0.650	0.000	5.00	29.269	19.02	594.7	0.0	2,116.6
15.00		0.00	1.00	18.496	31.25	484.21	0.650	0.000	5.00	28.745	18.68	584.0	0.0	2,078.4
20.00		0.00	1.00	18.496	31.25	475.31	0.650	0.000	5.00	28.221	18.34	573.4	0.0	2,040.3
25.00		0.00	1.00	18.496	31.25	466.41	0.650	0.000	5.00	27.698	18.00	562.8	0.0	2,002.1
30.00		0.00	1.00	18.496	31.25	457.51	0.650	0.000	5.00	27.174	17.66	552.1	0.0	1,963.9
35.00		0.00	1.01	18.810	31.78	452.39	0.650	0.000	5.00	26.651	17.32	550.7	0.0	1,925.8
37.00	Bot - Section 2	0.00	1.03	19.111	32.29	452.38	0.650	0.000	2.00	10.514	6.83	220.7	0.0	759.6
40.00		0.00	1.05	19.541	33.02	451.96	0.650	0.000	3.00	15.832	10.29	339.9	0.0	2,019.5
45.00	Top - Section 1	0.00	1.09	20.210	34.15	450.32	0.650	0.000	5.00	25.968	16.88	576.5	0.0	3,311.5
50.00		0.00	1.12	20.827	35.19	454.28	0.650	0.000	5.00	25.445	16.54	582.1	0.0	1,432.4
55.00		0.00	1.15	21.402	36.17	450.94	0.650	0.000	5.00	24.921	16.20	585.9	0.0	1,402.7
60.00		0.00	1.18	21.941	37.08	446.88	0.650	0.000	5.00	24.397	15.86	588.0	0.0	1,373.0
65.00		0.00	1.21	22.449	37.93	442.22	0.650	0.000	5.00	23.874	15.52	588.7	0.0	1,343.3
70.00		0.00	1.24	22.929	38.75	437.01	0.650	0.000	5.00	23.350	15.18	588.1	0.0	1,313.6
75.00	Bot - Section 3	0.00	1.26	23.386	39.52	431.33	0.650	0.000	5.00	22.827	14.84	586.4	0.0	1,283.9
80.00		0.00	1.28	23.821	40.25	425.23	0.650	0.000	5.00	22.616	14.70	591.8	0.0	2,345.8
82.00	Top - Section 2	0.00	1.29	23.989	40.54	422.68	0.650	0.000	2.00	8.900	5.78	234.5	0.0	922.9
85.00		0.00	1.31	24.237	40.96	424.82	0.650	0.000	3.00	13.192	8.58	351.2	0.0	636.6
90.00		0.00	1.33	24.636	41.63	418.03	0.650	0.000	5.00	21.568	14.02	583.7	0.0	1,040.6
95.00		0.00	1.35	25.020	42.28	410.92	0.650	0.000	5.00	21.045	13.68	578.4	0.0	1,015.2
100.0		0.00	1.37	25.389	42.90	403.51	0.650	0.000	5.00	20.521	13.34	572.3	0.0	989.7
105.0		0.00	1.39	25.745	43.51	395.83	0.650	0.000	5.00	19.998	13.00	565.6	0.0	964.3
110.0		0.00	1.41	26.090	44.09	387.90	0.650	0.000	5.00	19.474	12.66	558.1	0.0	938.9
114.2	Bot - Section 4	0.00	1.42	26.374	44.57	380.97	0.650	0.000	4.25	16.141	10.49	467.6	0.0	778.0
115.0		0.00	1.42	26.423	44.65	379.73	0.650	0.000	0.75	2.856	1.86	82.9	0.0	273.1
120.0	Top - Section 3	0.00	1.44	26.747	45.20	371.35	0.650	0.000	5.00	18.740	12.18	550.6	0.0	1,791.1
125.0		0.00	1.46	27.060	45.73	369.18	0.650	0.000	5.00	18.216	11.84	541.5	0.0	877.7
130.0	Appertunance(s)	0.00	1.48	27.365	46.24	360.43	0.650	0.000	5.00	17.692	11.50	531.8	0.0	852.3
135.0		0.00	1.49	27.662	46.74	351.49	0.650	0.000	5.00	17.169	11.16	521.7	0.0	826.8
140.0		0.00	1.51	27.951	47.23	342.38	0.650	0.000	5.00	16.645	10.82	511.1	0.0	801.4
142.0	Appertunance(s)	0.00	1.51	28.064	47.42	338.69	0.650	0.000	2.00	6.511	4.23	200.7	0.0	313.4
145.0		0.00	1.52	28.233	47.71	333.10	0.650	0.000	3.00	9.610	6.25	298.0	0.0	462.5
150.0	Appertunance(s)	0.00	1.54	28.507	48.17	323.67	0.650	0.000	5.00	15.598	10.14	488.5	0.0	750.5
155.0		0.00	1.55	28.776	48.63	314.09	0.650	0.000	5.00	15.074	9.80	476.5	0.0	725.0
160.0	Top - Section 4	0.00	1.57	29.038	49.07	304.36	0.650	0.000	5.00	14.551	9.46	464.1	0.0	699.6
165.0		0.00	1.58	29.294	49.50	267.43	0.590	0.000	5.00	12.500	7.37	365.1	0.0	593.8
168.0	Appertunance(s)	0.00	1.59	29.446	49.76	268.12	0.590	0.000	3.00	7.500	4.42	220.2	0.0	356.3
170.0		0.00	1.59	29.545	49.93	268.57	0.590	0.000	2.00	5.000	2.95	147.3	0.0	237.5
							Totals:		170.00			18,582.8	0.0	47,714.3

Pole : 302529
Location : Vernon CT 6, CT
Height : 170.0 (ft)
Base Dia : 72.13 (in)
Top Dia : 30.00 (in)
Shape : 18 Sides. Sect 5: Round
Taper : 0.251317 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

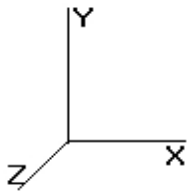


Load Case: No Ice — 85.00 mph Wind with No Ice — 20 Iterations

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)
120.0	Flush Mounts	3	26.747	45.202	0.67	4.02	0.000	0.000	181.71	0.00	0.00	195.00
120.0	RFS APXV18-206517S-	3	26.810	45.309	1.00	15.48	0.000	1.000	701.38	0.00	701.38	79.20
130.0	Round Low Profile Pl	1	27.365	46.247	1.00	21.70	0.000	0.000	1,003.56	0.00	0.00	1,500.00
130.0	RFS APXVSPP18-C-	2	27.365	46.247	0.83	13.71	0.000	0.000	634.13	0.00	0.00	114.00
130.0	RFS APXV9ERR18-C-	1	27.365	46.247	0.86	7.10	0.000	0.000	328.52	0.00	0.00	62.00
130.0	Alcatel-Lucent 800 M	3	27.365	46.247	0.67	5.85	0.000	0.000	270.51	0.00	0.00	185.40
130.0	Alcatel-Lucent 4X40W	6	27.365	46.247	0.67	10.89	0.000	0.000	503.83	0.00	0.00	357.00
130.0	Alcatel-Lucent TD-RR	3	27.365	46.247	0.67	8.68	0.000	0.000	401.58	0.00	0.00	198.30
130.0	RFS APXVTM14-C-I20	3	27.365	46.247	0.78	16.15	0.000	0.000	746.71	0.00	0.00	158.70
142.0	14" x 9" TTA	3	28.064	47.429	0.50	1.85	0.000	0.000	87.51	0.00	0.00	30.00
142.0	36" x 8" x 6" Panel	3	28.064	47.429	0.89	7.48	0.000	0.000	354.58	0.00	0.00	75.00
142.0	72" x 12" Panel	9	28.064	47.429	0.79	59.72	0.000	0.000	2,832.64	0.00	0.00	405.00
142.0	Powerwave LGP21901	3	28.064	47.429	0.50	0.34	0.000	0.000	16.36	0.00	0.00	16.50
142.0	Round T-Arm	3	28.064	47.429	0.67	19.50	0.000	0.000	924.71	0.00	0.00	750.00
142.0	Ericsson RRUS 11(Ban	6	28.064	47.429	0.67	12.02	0.000	0.000	570.09	0.00	0.00	300.00
142.0	Raycap DC6-48-60-18-	1	28.064	47.429	1.00	1.11	0.000	0.000	52.65	0.00	0.00	20.00
142.0	Powerwave LGP21401	6	28.064	47.429	0.50	3.87	0.000	0.000	183.55	0.00	0.00	84.60
150.0	Round Low Profile Pl	1	28.507	48.177	1.00	21.70	0.000	0.000	1,045.45	0.00	0.00	1,500.00
150.0	RFS FD9R6004/2C-3L	6	28.507	48.177	0.50	1.11	0.000	0.000	53.48	0.00	0.00	15.60
150.0	Antel LPA-80063-4CF-	6	28.507	48.177	0.94	39.48	0.000	0.000	1,902.05	0.00	0.00	120.00
150.0	Antel BXA-70063-6CF-	3	28.507	48.177	0.77	17.86	0.000	0.000	860.27	0.00	0.00	51.00
150.0	Antel BXA-171063-8BF	3	28.507	48.177	0.87	7.67	0.000	0.000	369.68	0.00	0.00	31.50
160.0	Flat Low Profile Pla	1	29.038	49.074	1.00	26.10	0.000	0.000	1,280.83	0.00	0.00	1,500.00
160.0	48" x 12" Panel	9	29.038	49.074	0.78	39.31	0.000	0.000	1,929.20	0.00	0.00	270.00
160.0	72" x 12" Panel	3	29.038	49.074	0.79	19.91	0.000	0.000	976.97	0.00	0.00	135.00
168.0	DragonWave Horizon	2	29.446	49.763	0.50	0.43	0.000	0.000	21.40	0.00	0.00	21.20
168.0	Argus LLPX310R	3	29.446	49.763	0.73	10.58	0.000	0.000	526.38	0.00	0.00	85.80
168.0	DragonWave A-ANT-	2	29.446	49.763	1.00	9.38	0.000	0.000	466.78	0.00	0.00	54.20
168.0	NextNet BTS-2500	3	29.446	49.763	0.67	4.26	0.000	0.000	212.05	0.00	0.00	105.00
168.0	Collar	1	29.446	49.763	1.00	8.50	0.000	0.000	422.99	0.00	0.00	560.00
									19,861.52			8,980.00



Load Case: No Ice — 85.00 mph Wind with No Ice — 20 Iterations

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

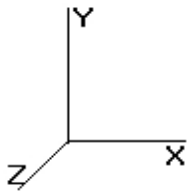
Applied Segment Forces Summary

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	605.31	2,313.11	0.00	0.00
10.00	594.68	2,380.50	0.00	0.00
15.00	584.04	2,342.33	0.00	0.00
20.00	573.40	2,304.17	0.00	0.00
25.00	562.76	2,266.00	0.00	0.00
30.00	552.12	2,227.83	0.00	0.00
35.00	550.67	2,189.66	0.00	0.00
37.00	220.71	865.18	0.00	0.00
40.00	339.85	2,177.80	0.00	0.00
45.00	576.51	3,575.38	0.00	0.00
50.00	582.15	1,696.28	0.00	0.00
55.00	585.91	1,666.59	0.00	0.00
60.00	588.04	1,636.90	0.00	0.00
65.00	588.73	1,607.22	0.00	0.00
70.00	588.14	1,577.53	0.00	0.00
75.00	586.40	1,547.84	0.00	0.00
80.00	591.79	2,609.68	0.00	0.00
82.00	234.53	1,028.44	0.00	0.00
85.00	351.24	794.94	0.00	0.00
90.00	583.70	1,304.54	0.00	0.00
95.00	578.40	1,279.09	0.00	0.00
100.0	572.34	1,253.65	0.00	0.00
105.0	565.56	1,228.20	0.00	0.00
110.0	558.12	1,202.75	0.00	0.00
114.2	467.65	1,002.33	0.00	0.00
115.0	82.90	312.64	0.00	0.00
120.0	1,433.68	2,329.21	0.00	701.38
125.0	541.48	1,111.60	0.00	0.00
130.0	4,420.68	3,661.56	0.00	0.00
135.0	521.70	1,050.71	0.00	0.00
140.0	511.08	1,025.27	0.00	0.00
142.0	5,222.83	2,084.08	0.00	0.00
145.0	298.04	536.12	0.00	0.00
150.0	4,719.38	2,591.27	0.00	0.00
155.0	476.51	787.73	0.00	0.00
160.0	4,651.15	2,667.28	0.00	0.00
165.0	365.12	596.50	0.00	0.00
168.0	1,869.79	1,184.10	0.00	0.00
170.0	147.30	237.52	0.00	0.00
Totals:	38,444.37	64,253.54	0.00	701.38

Pole : 302529
Location : Vernon CT 6, CT
Height : 170.0 (ft)
Base Dia : 72.13 (in)
Top Dia : 30.00 (in)
Shape : 18 Sides. Sect 5: Round
Taper : 0.251317 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: No Ice — 85.00 mph Wind with No Ice — 20 Iterations

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

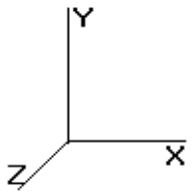
Calculated Shaft Forces and Deflections

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	-38.488	-64.227	0.000	0.000	0.000	-4,542.448	0.000	0.000	0.000	0.000
5.00	-37.964	-61.863	0.000	0.000	0.000	-4,350.010	-0.042	0.000	0.042	-0.076
10.00	-37.445	-59.433	0.000	0.000	0.000	-4,160.192	-0.164	0.000	0.164	-0.154
15.00	-36.931	-57.043	0.000	0.000	0.000	-3,972.969	-0.367	0.000	0.367	-0.232
20.00	-36.422	-54.691	0.000	0.000	0.000	-3,788.316	-0.652	0.000	0.652	-0.310
25.00	-35.918	-52.379	0.000	0.000	0.000	-3,606.208	-1.020	0.000	1.020	-0.389
30.00	-35.419	-50.106	0.000	0.000	0.000	-3,426.620	-1.471	0.000	1.471	-0.469
35.00	-34.896	-47.887	0.000	0.000	0.000	-3,249.526	-2.006	0.000	2.006	-0.549
37.00	-34.701	-46.999	0.000	0.000	0.000	-3,179.735	-2.243	0.000	2.243	-0.582
40.00	-34.389	-44.786	0.000	0.000	0.000	-3,075.635	-2.625	0.000	2.625	-0.631
45.00	-33.829	-41.170	0.000	0.000	0.000	-2,903.695	-3.330	0.000	3.330	-0.712
50.00	-33.287	-39.429	0.000	0.000	0.000	-2,734.554	-4.120	0.000	4.120	-0.793
55.00	-32.742	-37.714	0.000	0.000	0.000	-2,568.124	-5.005	0.000	5.005	-0.893
60.00	-32.189	-36.031	0.000	0.000	0.000	-2,404.418	-5.994	0.000	5.994	-0.992
65.00	-31.631	-34.381	0.000	0.000	0.000	-2,243.474	-7.087	0.000	7.087	-1.091
70.00	-31.068	-32.762	0.000	0.000	0.000	-2,085.322	-8.284	0.000	8.284	-1.190
75.00	-30.501	-31.175	0.000	0.000	0.000	-1,929.986	-9.583	0.000	9.583	-1.288
80.00	-29.882	-28.545	0.000	0.000	0.000	-1,777.483	-10.985	0.000	10.985	-1.385
82.00	-29.646	-27.497	0.000	0.000	0.000	-1,717.719	-11.574	0.000	11.574	-1.424
85.00	-29.313	-26.669	0.000	0.000	0.000	-1,628.783	-12.489	0.000	12.489	-1.482
90.00	-28.740	-25.329	0.000	0.000	0.000	-1,482.222	-14.098	0.000	14.098	-1.587
95.00	-28.167	-24.018	0.000	0.000	0.000	-1,338.524	-15.816	0.000	15.816	-1.689
100.0	-27.596	-22.735	0.000	0.000	0.000	-1,197.688	-17.639	0.000	17.639	-1.788
105.0	-27.026	-21.482	0.000	0.000	0.000	-1,059.711	-19.563	0.000	19.563	-1.883
110.0	-26.457	-20.261	0.000	0.000	0.000	-924.583	-21.585	0.000	21.585	-1.973
114.2	-25.968	-19.257	0.000	0.000	0.000	-812.144	-23.376	0.000	23.376	-2.046
115.0	-25.890	-18.926	0.000	0.000	0.000	-792.668	-23.699	0.000	23.699	-2.059
120.0	-24.393	-16.620	0.000	0.000	0.000	-662.520	-25.899	0.000	25.899	-2.137
125.0	-23.827	-15.503	0.000	0.000	0.000	-540.557	-28.176	0.000	28.176	-2.208
130.0	-19.278	-11.999	0.000	0.000	0.000	-421.422	-30.521	0.000	30.521	-2.266
135.0	-18.723	-10.955	0.000	0.000	0.000	-325.032	-32.922	0.000	32.922	-2.316
140.0	-18.176	-9.943	0.000	0.000	0.000	-231.416	-35.371	0.000	35.371	-2.356
142.0	-12.873	-8.073	0.000	0.000	0.000	-195.065	-36.361	0.000	36.361	-2.370
145.0	-12.556	-7.545	0.000	0.000	0.000	-156.445	-37.856	0.000	37.856	-2.387
150.0	-7.734	-5.151	0.000	0.000	0.000	-93.665	-40.369	0.000	40.369	-2.410
155.0	-7.225	-4.383	0.000	0.000	0.000	-54.996	-42.901	0.000	42.901	-2.424
160.0	-2.466	-1.915	0.000	0.000	0.000	-18.869	-45.444	0.000	45.444	-2.432
165.0	-2.076	-1.335	0.000	0.000	0.000	-6.541	-47.992	0.000	47.992	-2.435
168.0	-0.157	-0.231	0.000	0.000	0.000	-0.314	-49.522	0.000	49.522	-2.436
170.0	-0.147	0.000	0.000	0.000	0.000	0.000	-50.542	0.000	50.542	-2.436

Pole : 302529
Location : Vernon CT 6, CT
Height : 170.0 (ft)
Base Dia : 72.13 (in)
Top Dia : 30.00 (in)
Shape : 18 Sides. Sect 5: Round
Taper : 0.251317 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

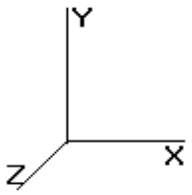


Load Case: No Ice — 85.00 mph Wind with No Ice — 20 Iterations

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	0.50	0.61	0.00	0.00	0.00	24.14	24.67	52.0	0.0	0.475
5.00	0.49	0.61	0.00	0.00	0.00	23.96	24.47	52.0	0.0	0.471
10.00	0.48	0.61	0.00	0.00	0.00	23.76	24.26	52.0	0.0	0.467
15.00	0.47	0.61	0.00	0.00	0.00	23.54	24.04	52.0	0.0	0.462
20.00	0.46	0.62	0.00	0.00	0.00	23.31	23.79	52.0	0.0	0.458
25.00	0.45	0.62	0.00	0.00	0.00	23.05	23.53	52.0	0.0	0.453
30.00	0.44	0.62	0.00	0.00	0.00	22.78	23.24	52.0	0.0	0.447
35.00	0.43	0.63	0.00	0.00	0.00	22.48	22.93	52.0	0.0	0.441
37.00	0.42	0.63	0.00	0.00	0.00	22.35	22.80	52.0	0.0	0.439
40.00	0.41	0.63	0.00	0.00	0.00	22.15	22.59	52.0	0.0	0.435
45.00	0.48	0.80	0.00	0.00	0.00	27.06	27.58	52.0	0.0	0.531
50.00	0.47	0.81	0.00	0.00	0.00	26.57	27.08	52.0	0.0	0.521
55.00	0.46	0.81	0.00	0.00	0.00	26.04	26.54	52.0	0.0	0.510
60.00	0.45	0.81	0.00	0.00	0.00	25.46	25.95	52.0	0.0	0.499
65.00	0.44	0.82	0.00	0.00	0.00	24.83	25.31	52.0	0.0	0.487
70.00	0.43	0.82	0.00	0.00	0.00	24.15	24.62	52.0	0.0	0.474
75.00	0.42	0.82	0.00	0.00	0.00	23.42	23.88	52.0	0.0	0.459
80.00	0.39	0.83	0.00	0.00	0.00	22.62	23.05	52.0	0.0	0.443
82.00	0.44	0.95	0.00	0.00	0.00	25.17	25.66	52.0	0.0	0.494
85.00	0.43	0.95	0.00	0.00	0.00	24.56	25.05	52.0	0.0	0.482
90.00	0.42	0.96	0.00	0.00	0.00	23.48	23.96	52.0	0.0	0.461
95.00	0.41	0.96	0.00	0.00	0.00	22.30	22.77	52.0	0.0	0.438
100.00	0.40	0.97	0.00	0.00	0.00	21.01	21.47	52.0	0.0	0.413
105.00	0.38	0.97	0.00	0.00	0.00	19.60	20.05	52.0	0.0	0.386
110.00	0.37	0.98	0.00	0.00	0.00	18.06	18.51	52.0	0.0	0.356
114.25	0.36	0.98	0.00	0.00	0.00	16.63	17.08	52.0	0.0	0.329
115.00	0.36	0.99	0.00	0.00	0.00	16.37	16.82	52.0	0.0	0.323
120.00	0.32	0.94	0.00	0.00	0.00	14.00	14.41	52.0	0.0	0.277
125.00	0.30	0.94	0.00	0.00	0.00	12.11	12.52	52.0	0.0	0.241
130.00	0.24	0.79	0.00	0.00	0.00	10.02	10.36	52.0	0.0	0.199
135.00	0.23	0.79	0.00	0.00	0.00	8.22	8.56	52.0	0.0	0.165
140.00	0.21	0.79	0.00	0.00	0.00	6.24	6.60	52.0	0.0	0.127
142.00	0.18	0.57	0.00	0.00	0.00	5.40	5.66	52.0	0.0	0.109
145.00	0.17	0.56	0.00	0.00	0.00	4.51	4.78	52.0	0.0	0.092
150.00	0.12	0.36	0.00	0.00	0.00	2.89	3.07	52.0	0.0	0.059
155.00	0.10	0.35	0.00	0.00	0.00	1.82	2.02	52.0	0.0	0.039
160.00	0.05	0.12	0.00	0.00	0.00	0.67	0.75	52.0	0.0	0.014
160.00	0.05	0.14	0.00	0.00	0.00	0.89	0.97	28.0	0.0	0.035
165.00	0.04	0.12	0.00	0.00	0.00	0.31	0.40	28.0	0.0	0.014
168.00	0.01	0.01	0.00	0.00	0.00	0.01	0.03	28.0	0.0	0.001
170.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	28.0	0.0	0.001

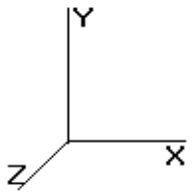


Load Case: Ice — 73.61 mph Wind with Ice — 20 Iterations

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	442.45	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	434.74	0.650	0.500	5.00	30.209	19.64	460.3	220.2	2,375.0
10.00		0.00	1.00	13.871	23.44	427.03	0.650	0.500	5.00	29.685	19.30	452.3	216.4	2,333.0
15.00		0.00	1.00	13.871	23.44	419.33	0.650	0.500	5.00	29.162	18.96	444.4	212.5	2,290.9
20.00		0.00	1.00	13.871	23.44	411.62	0.650	0.500	5.00	28.638	18.61	436.4	208.6	2,248.9
25.00		0.00	1.00	13.871	23.44	403.91	0.650	0.500	5.00	28.115	18.27	428.4	204.7	2,206.8
30.00		0.00	1.00	13.871	23.44	396.20	0.650	0.500	5.00	27.591	17.93	420.4	200.8	2,164.8
35.00		0.00	1.01	14.106	23.84	391.77	0.650	0.500	5.00	27.067	17.59	419.4	197.0	2,122.7
37.00	Bot - Section 2	0.00	1.03	14.332	24.22	391.76	0.650	0.500	2.00	10.680	6.94	168.1	78.2	837.8
40.00		0.00	1.05	14.655	24.76	391.40	0.650	0.500	3.00	16.082	10.45	258.9	117.5	2,136.9
45.00	Top - Section 1	0.00	1.09	15.156	25.61	389.98	0.650	0.500	5.00	26.385	17.15	439.3	191.9	3,503.4
50.00		0.00	1.12	15.620	26.39	393.41	0.650	0.500	5.00	25.861	16.81	443.7	188.0	1,620.4
55.00		0.00	1.15	16.051	27.12	390.51	0.650	0.500	5.00	25.338	16.47	446.8	184.2	1,586.9
60.00		0.00	1.18	16.455	27.80	387.00	0.650	0.500	5.00	24.814	16.13	448.5	180.3	1,553.3
65.00		0.00	1.21	16.836	28.45	382.96	0.650	0.500	5.00	24.291	15.79	449.2	176.4	1,519.7
70.00		0.00	1.24	17.196	29.06	378.45	0.650	0.500	5.00	23.767	15.45	448.9	172.5	1,486.2
75.00	Bot - Section 3	0.00	1.26	17.538	29.64	373.53	0.650	0.500	5.00	23.243	15.11	447.8	168.7	1,452.6
80.00		0.00	1.28	17.865	30.19	368.25	0.650	0.500	5.00	23.032	14.97	452.0	167.1	2,512.9
82.00	Top - Section 2	0.00	1.29	17.991	30.40	366.04	0.650	0.500	2.00	9.066	5.89	179.2	66.2	989.1
85.00		0.00	1.31	18.177	30.71	367.89	0.650	0.500	3.00	13.442	8.74	268.4	97.9	734.5
90.00		0.00	1.33	18.476	31.22	362.01	0.650	0.500	5.00	21.985	14.29	446.2	159.3	1,200.0
95.00		0.00	1.35	18.764	31.71	355.86	0.650	0.500	5.00	21.462	13.95	442.4	155.5	1,170.6
100.0		0.00	1.37	19.041	32.17	349.44	0.650	0.500	5.00	20.938	13.61	437.9	151.6	1,141.3
105.0		0.00	1.39	19.308	32.63	342.79	0.650	0.500	5.00	20.414	13.27	433.0	147.7	1,112.0
110.0		0.00	1.41	19.566	33.06	335.92	0.650	0.500	5.00	19.891	12.93	427.5	143.8	1,082.7
114.2	Bot - Section 4	0.00	1.42	19.779	33.42	329.92	0.650	0.500	4.25	16.496	10.72	358.4	119.4	897.5
115.0		0.00	1.42	19.816	33.49	328.85	0.650	0.500	0.75	2.919	1.90	63.5	21.3	294.4
120.0	Top - Section 3	0.00	1.44	20.059	33.89	321.59	0.650	0.500	5.00	19.156	12.45	422.1	138.4	1,929.5
125.0		0.00	1.46	20.294	34.29	319.71	0.650	0.500	5.00	18.633	12.11	415.4	134.5	1,012.2
130.0	Appertunance(s)	0.00	1.48	20.523	34.68	312.13	0.650	0.500	5.00	18.109	11.77	408.3	130.6	982.9
135.0		0.00	1.49	20.745	35.06	304.39	0.650	0.500	5.00	17.585	11.43	400.7	126.8	953.6
140.0		0.00	1.51	20.962	35.42	296.50	0.650	0.500	5.00	17.062	11.09	392.9	122.9	924.2
142.0	Appertunance(s)	0.00	1.51	21.047	35.57	293.30	0.650	0.500	2.00	6.678	4.34	154.4	48.5	362.0
145.0		0.00	1.52	21.173	35.78	288.47	0.650	0.500	3.00	9.860	6.41	229.3	71.4	533.9
150.0	Appertunance(s)	0.00	1.54	21.379	36.13	280.30	0.650	0.500	5.00	16.015	10.41	376.1	115.1	865.6
155.0		0.00	1.55	21.581	36.47	272.00	0.650	0.500	5.00	15.491	10.07	367.2	111.2	836.3
160.0	Top - Section 4	0.00	1.57	21.777	36.80	263.58	0.650	0.500	5.00	14.968	9.73	358.1	107.4	806.9
165.0		0.00	1.58	21.969	37.12	231.59	0.590	0.500	5.00	12.917	7.62	282.9	93.1	686.9
168.0	Appertunance(s)	0.00	1.59	22.083	37.32	232.19	0.590	0.500	3.00	7.750	4.57	170.6	55.9	412.1
170.0		0.00	1.59	22.158	37.44	232.58	0.590	0.500	2.00	5.167	3.05	114.1	37.2	274.8
							Totals:		170.00			14,213.7	5,440.8	53,155.1



Load Case: Ice — 73.61 mph Wind with Ice — 20 Iterations

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

Discrete Appurtenance Segment Forces

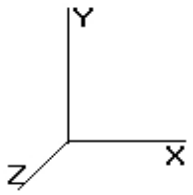
Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
120.0	Flush Mounts	3	20.059	33.899	0.67	5.03	0.000	0.000	170.34	0.00	0.00	300.00
120.0	RFS APXV18-206517S-	3	20.106	33.980	1.00	17.55	0.000	1.000	596.35	0.00	596.35	159.39
130.0	Round Low Profile Pl	1	20.523	34.684	1.00	27.20	0.000	0.000	943.39	0.00	0.00	1,700.00
130.0	RFS APXVSPP18-C-	2	20.523	34.684	0.83	15.07	0.000	0.000	522.78	0.00	0.00	213.00
130.0	RFS APXV9ERR18-C-	1	20.523	34.684	0.86	7.81	0.000	0.000	270.84	0.00	0.00	113.90
130.0	Alcatel-Lucent 800 M	3	20.523	34.684	0.67	6.55	0.000	0.000	227.27	0.00	0.00	263.40
130.0	Alcatel-Lucent 4X40W	6	20.523	34.684	0.67	12.34	0.000	0.000	428.04	0.00	0.00	495.60
130.0	Alcatel-Lucent TD-RR	3	20.523	34.684	0.67	8.90	0.000	0.000	308.83	0.00	0.00	248.10
130.0	RFS APXVTM14-C-I20	3	20.523	34.684	0.78	17.74	0.000	0.000	615.19	0.00	0.00	277.20
142.0	14" x 9" TTA	3	21.047	35.570	0.50	2.19	0.000	0.000	77.90	0.00	0.00	54.00
142.0	36" x 8" x 6" Panel	3	21.047	35.570	0.89	8.65	0.000	0.000	307.71	0.00	0.00	133.62
142.0	72" x 12" Panel	9	21.047	35.570	0.79	65.63	0.000	0.000	2,334.26	0.00	0.00	829.80
142.0	Powerwave LGP21901	3	21.047	35.570	0.50	0.51	0.000	0.000	18.14	0.00	0.00	23.10
142.0	Round T-Arm	3	21.047	35.570	0.67	24.32	0.000	0.000	865.09	0.00	0.00	942.00
142.0	Ericsson RRUS 11(Ban	6	21.047	35.570	0.67	13.43	0.000	0.000	477.59	0.00	0.00	419.40
142.0	Raycap DC6-48-60-18-	1	21.047	35.570	1.00	1.46	0.000	0.000	51.93	0.00	0.00	35.10
142.0	Powerwave LGP21401	6	21.047	35.570	0.50	4.59	0.000	0.000	163.26	0.00	0.00	127.56
150.0	Round Low Profile Pl	1	21.379	36.131	1.00	27.20	0.000	0.000	982.76	0.00	0.00	1,700.00
150.0	RFS FD9R6004/2C-3L	6	21.379	36.131	0.50	1.50	0.000	0.000	54.20	0.00	0.00	32.40
150.0	Antel LPA-80063-4CF-	6	21.379	36.131	0.94	42.98	0.000	0.000	1,552.79	0.00	0.00	435.60
150.0	Antel BXA-70063-6CF-	3	21.379	36.131	0.77	19.73	0.000	0.000	712.76	0.00	0.00	174.00
150.0	Antel BXA-171063-8BF	3	21.379	36.131	0.87	8.80	0.000	0.000	317.80	0.00	0.00	89.40
160.0	Flat Low Profile Pla	1	21.777	36.803	1.00	31.60	0.000	0.000	1,162.99	0.00	0.00	1,700.00
160.0	48" x 12" Panel	9	21.777	36.803	0.78	43.45	0.000	0.000	1,599.25	0.00	0.00	562.50
160.0	72" x 12" Panel	3	21.777	36.803	0.79	21.88	0.000	0.000	805.08	0.00	0.00	276.60
168.0	DragonWave Horizon	2	22.083	37.320	0.50	0.58	0.000	0.000	21.65	0.00	0.00	34.00
168.0	Argus LLPX310R	3	22.083	37.320	0.73	11.74	0.000	0.000	438.08	0.00	0.00	163.50
168.0	DragonWave A-ANT-	2	22.083	37.320	1.00	10.10	0.000	0.000	376.93	0.00	0.00	110.20
168.0	NextNet BTS-2500	3	22.083	37.320	0.67	4.88	0.000	0.000	182.28	0.00	0.00	144.90
168.0	Collar	1	22.083	37.320	1.00	10.50	0.000	0.000	391.86	0.00	0.00	680.00
									16,977.32			12,438.27

Load Case: Ice — 73.61 mph Wind with Ice — 20 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	460.31	2,533.35	0.00	0.00
10.00	452.33	2,596.86	0.00	0.00
15.00	444.35	2,554.82	0.00	0.00
20.00	436.37	2,512.77	0.00	0.00
25.00	428.40	2,470.72	0.00	0.00
30.00	420.42	2,428.68	0.00	0.00
35.00	419.43	2,386.63	0.00	0.00
37.00	168.15	943.34	0.00	0.00
40.00	258.90	2,295.28	0.00	0.00
45.00	439.29	3,767.30	0.00	0.00
50.00	443.73	1,884.32	0.00	0.00
55.00	446.75	1,850.75	0.00	0.00
60.00	448.53	1,817.19	0.00	0.00
65.00	449.23	1,783.62	0.00	0.00
70.00	448.95	1,750.06	0.00	0.00
75.00	447.80	1,716.49	0.00	0.00
80.00	451.99	2,776.77	0.00	0.00
82.00	179.18	1,094.65	0.00	0.00
85.00	268.41	892.86	0.00	0.00
90.00	446.21	1,463.87	0.00	0.00
95.00	442.36	1,434.55	0.00	0.00
100.0	437.94	1,405.23	0.00	0.00
105.0	432.98	1,375.90	0.00	0.00
110.0	427.52	1,346.58	0.00	0.00
114.2	358.41	1,121.78	0.00	0.00
115.0	63.53	333.98	0.00	0.00
120.0	1,188.79	2,652.79	0.00	596.35
125.0	415.38	1,246.11	0.00	0.00
130.0	3,724.59	4,527.99	0.00	0.00
135.0	400.75	1,177.46	0.00	0.00
140.0	392.88	1,148.14	0.00	0.00
142.0	4,450.28	3,016.09	0.00	0.00
145.0	229.33	607.52	0.00	0.00
150.0	3,996.42	3,419.69	0.00	0.00
155.0	367.24	898.97	0.00	0.00
160.0	3,925.37	3,408.75	0.00	0.00
165.0	282.95	689.61	0.00	0.00
168.0	1,581.44	1,546.37	0.00	0.00
170.0	114.15	274.77	0.00	0.00
Totals:	31,191.04	73,152.62	0.00	596.35



Load Case: Ice — 73.61 mph Wind with Ice — 20 Iterations

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

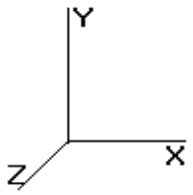
Calculated Shaft Forces and Deflections

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	-31.232	-73.135	0.000	0.000	0.000	-3,759.190	0.000	0.000	0.000	0.000
5.00	-30.849	-70.567	0.000	0.000	0.000	-3,603.031	-0.034	0.000	0.034	-0.063
10.00	-30.469	-67.937	0.000	0.000	0.000	-3,448.789	-0.135	0.000	0.135	-0.127
15.00	-30.091	-65.350	0.000	0.000	0.000	-3,296.449	-0.304	0.000	0.304	-0.192
20.00	-29.717	-62.805	0.000	0.000	0.000	-3,145.996	-0.540	0.000	0.540	-0.257
25.00	-29.345	-60.302	0.000	0.000	0.000	-2,997.416	-0.845	0.000	0.845	-0.323
30.00	-28.977	-57.843	0.000	0.000	0.000	-2,850.692	-1.219	0.000	1.219	-0.389
35.00	-28.585	-55.436	0.000	0.000	0.000	-2,705.811	-1.663	0.000	1.663	-0.456
37.00	-28.442	-54.477	0.000	0.000	0.000	-2,648.642	-1.860	0.000	1.860	-0.483
40.00	-28.212	-52.157	0.000	0.000	0.000	-2,563.318	-2.177	0.000	2.177	-0.524
45.00	-27.793	-48.362	0.000	0.000	0.000	-2,422.260	-2.763	0.000	2.763	-0.592
50.00	-27.390	-46.446	0.000	0.000	0.000	-2,283.296	-3.419	0.000	3.419	-0.659
55.00	-26.986	-44.562	0.000	0.000	0.000	-2,146.347	-4.155	0.000	4.155	-0.743
60.00	-26.574	-42.713	0.000	0.000	0.000	-2,011.421	-4.978	0.000	4.978	-0.826
65.00	-26.157	-40.898	0.000	0.000	0.000	-1,878.552	-5.888	0.000	5.888	-0.909
70.00	-25.736	-39.119	0.000	0.000	0.000	-1,747.768	-6.884	0.000	6.884	-0.991
75.00	-25.310	-37.375	0.000	0.000	0.000	-1,619.092	-7.967	0.000	7.967	-1.074
80.00	-24.839	-34.583	0.000	0.000	0.000	-1,492.543	-9.136	0.000	9.136	-1.155
82.00	-24.661	-33.474	0.000	0.000	0.000	-1,442.867	-9.627	0.000	9.627	-1.188
85.00	-24.413	-32.558	0.000	0.000	0.000	-1,368.885	-10.390	0.000	10.390	-1.237
90.00	-23.981	-31.068	0.000	0.000	0.000	-1,246.822	-11.733	0.000	11.733	-1.325
95.00	-23.549	-29.610	0.000	0.000	0.000	-1,126.918	-13.167	0.000	13.167	-1.410
100.0	-23.115	-28.183	0.000	0.000	0.000	-1,009.178	-14.690	0.000	14.690	-1.494
105.0	-22.682	-26.788	0.000	0.000	0.000	-893.603	-16.299	0.000	16.299	-1.574
110.0	-22.248	-25.428	0.000	0.000	0.000	-780.194	-17.989	0.000	17.989	-1.650
114.2	-21.871	-24.303	0.000	0.000	0.000	-685.644	-19.487	0.000	19.487	-1.712
115.0	-21.814	-23.956	0.000	0.000	0.000	-669.241	-19.757	0.000	19.757	-1.722
120.0	-20.568	-21.319	0.000	0.000	0.000	-559.574	-21.598	0.000	21.598	-1.789
125.0	-20.132	-20.067	0.000	0.000	0.000	-456.735	-23.504	0.000	23.504	-1.848
130.0	-16.274	-15.651	0.000	0.000	0.000	-356.074	-25.467	0.000	25.467	-1.897
135.0	-15.844	-14.477	0.000	0.000	0.000	-274.704	-27.478	0.000	27.478	-1.939
140.0	-15.417	-13.337	0.000	0.000	0.000	-195.486	-29.529	0.000	29.529	-1.973
142.0	-10.868	-10.474	0.000	0.000	0.000	-164.652	-30.358	0.000	30.358	-1.985
145.0	-10.620	-9.872	0.000	0.000	0.000	-132.050	-31.611	0.000	31.611	-2.000
150.0	-6.508	-6.593	0.000	0.000	0.000	-78.949	-33.716	0.000	33.716	-2.018
155.0	-6.110	-5.706	0.000	0.000	0.000	-46.409	-35.837	0.000	35.837	-2.031
160.0	-2.067	-2.439	0.000	0.000	0.000	-15.858	-37.968	0.000	37.968	-2.038
165.0	-1.759	-1.760	0.000	0.000	0.000	-5.525	-40.103	0.000	40.103	-2.040
168.0	-0.124	-0.271	0.000	0.000	0.000	-0.248	-41.385	0.000	41.385	-2.041
170.0	-0.114	0.000	0.000	0.000	0.000	0.000	-42.240	0.000	42.240	-2.041

Pole : 302529
Location : Vernon CT 6, CT
Height : 170.0 (ft)
Base Dia : 72.13 (in)
Top Dia : 30.00 (in)
Shape : 18 Sides. Sect 5: Round
Taper : 0.251317 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: Ice — 73.61 mph Wind with Ice — 20 Iterations

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

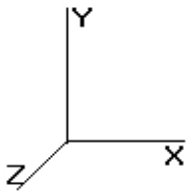
Calculated Stresses

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	0.57	0.49	0.00	0.00	0.00	19.98	20.57	52.0	0.0	0.396
5.00	0.56	0.50	0.00	0.00	0.00	19.84	20.42	52.0	0.0	0.393
10.00	0.55	0.50	0.00	0.00	0.00	19.69	20.26	52.0	0.0	0.390
15.00	0.54	0.50	0.00	0.00	0.00	19.53	20.09	52.0	0.0	0.387
20.00	0.53	0.50	0.00	0.00	0.00	19.35	19.90	52.0	0.0	0.383
25.00	0.52	0.51	0.00	0.00	0.00	19.16	19.70	52.0	0.0	0.379
30.00	0.51	0.51	0.00	0.00	0.00	18.95	19.47	52.0	0.0	0.375
35.00	0.49	0.51	0.00	0.00	0.00	18.71	19.23	52.0	0.0	0.370
37.00	0.49	0.52	0.00	0.00	0.00	18.62	19.13	52.0	0.0	0.368
40.00	0.47	0.52	0.00	0.00	0.00	18.46	18.96	52.0	0.0	0.365
45.00	0.57	0.66	0.00	0.00	0.00	22.58	23.17	52.0	0.0	0.446
50.00	0.56	0.66	0.00	0.00	0.00	22.19	22.77	52.0	0.0	0.438
55.00	0.55	0.67	0.00	0.00	0.00	21.76	22.34	52.0	0.0	0.430
60.00	0.54	0.67	0.00	0.00	0.00	21.30	21.86	52.0	0.0	0.421
65.00	0.52	0.68	0.00	0.00	0.00	20.79	21.35	52.0	0.0	0.411
70.00	0.51	0.68	0.00	0.00	0.00	20.24	20.79	52.0	0.0	0.400
75.00	0.50	0.68	0.00	0.00	0.00	19.64	20.18	52.0	0.0	0.388
80.00	0.47	0.69	0.00	0.00	0.00	18.99	19.50	52.0	0.0	0.375
82.00	0.53	0.79	0.00	0.00	0.00	21.14	21.72	52.0	0.0	0.418
85.00	0.53	0.79	0.00	0.00	0.00	20.64	21.22	52.0	0.0	0.408
90.00	0.51	0.80	0.00	0.00	0.00	19.75	20.31	52.0	0.0	0.391
95.00	0.50	0.81	0.00	0.00	0.00	18.77	19.32	52.0	0.0	0.372
100.00	0.49	0.81	0.00	0.00	0.00	17.70	18.25	52.0	0.0	0.351
105.00	0.48	0.82	0.00	0.00	0.00	16.53	17.06	52.0	0.0	0.328
110.00	0.47	0.82	0.00	0.00	0.00	15.24	15.77	52.0	0.0	0.303
114.25	0.46	0.83	0.00	0.00	0.00	14.04	14.57	52.0	0.0	0.280
115.00	0.45	0.83	0.00	0.00	0.00	13.82	14.35	52.0	0.0	0.276
120.00	0.41	0.79	0.00	0.00	0.00	11.83	12.31	52.0	0.0	0.237
125.00	0.39	0.80	0.00	0.00	0.00	10.23	10.72	52.0	0.0	0.206
130.00	0.32	0.66	0.00	0.00	0.00	8.47	8.86	52.0	0.0	0.170
135.00	0.30	0.67	0.00	0.00	0.00	6.95	7.34	52.0	0.0	0.141
140.00	0.29	0.67	0.00	0.00	0.00	5.27	5.68	52.0	0.0	0.109
142.00	0.23	0.48	0.00	0.00	0.00	4.56	4.86	52.0	0.0	0.093
145.00	0.22	0.48	0.00	0.00	0.00	3.80	4.11	52.0	0.0	0.079
150.00	0.15	0.30	0.00	0.00	0.00	2.43	2.64	52.0	0.0	0.051
155.00	0.14	0.29	0.00	0.00	0.00	1.54	1.75	52.0	0.0	0.034
160.00	0.06	0.10	0.00	0.00	0.00	0.56	0.65	52.0	0.0	0.013
160.00	0.07	0.12	0.00	0.00	0.00	0.74	0.84	28.0	0.0	0.030
165.00	0.05	0.10	0.00	0.00	0.00	0.26	0.36	28.0	0.0	0.013
168.00	0.01	0.01	0.00	0.00	0.00	0.01	0.02	28.0	0.0	0.001
170.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	28.0	0.0	0.000

Pole : 302529
Location : Vernon CT 6, CT
Height : 170.0 (ft)
Base Dia : 72.13 (in)
Top Dia : 30.00 (in)
Shape : 18 Sides. Sect 5: Round
Taper : 0.251317 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

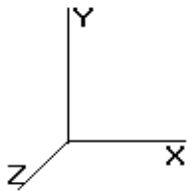


Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 19 Iterations

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	300.54	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	295.30	0.650	0.000	5.00	29.792	19.36	209.5	0.0	2,154.8
10.00		0.00	1.00	6.400	10.81	290.06	0.650	0.000	5.00	29.269	19.02	205.8	0.0	2,116.6
15.00		0.00	1.00	6.400	10.81	284.83	0.650	0.000	5.00	28.745	18.68	202.1	0.0	2,078.4
20.00		0.00	1.00	6.400	10.81	279.59	0.650	0.000	5.00	28.221	18.34	198.4	0.0	2,040.3
25.00		0.00	1.00	6.400	10.81	274.36	0.650	0.000	5.00	27.698	18.00	194.7	0.0	2,002.1
30.00		0.00	1.00	6.400	10.81	269.12	0.650	0.000	5.00	27.174	17.66	191.0	0.0	1,963.9
35.00		0.00	1.01	6.509	10.99	266.11	0.650	0.000	5.00	26.651	17.32	190.5	0.0	1,925.8
37.00	Bot - Section 2	0.00	1.03	6.613	11.17	266.10	0.650	0.000	2.00	10.514	6.83	76.4	0.0	759.6
40.00		0.00	1.05	6.762	11.42	265.86	0.650	0.000	3.00	15.832	10.29	117.6	0.0	2,019.5
45.00	Top - Section 1	0.00	1.09	6.993	11.81	264.89	0.650	0.000	5.00	25.968	16.88	199.5	0.0	3,311.5
50.00		0.00	1.12	7.207	12.17	267.22	0.650	0.000	5.00	25.445	16.54	201.4	0.0	1,432.4
55.00		0.00	1.15	7.406	12.51	265.26	0.650	0.000	5.00	24.921	16.20	202.7	0.0	1,402.7
60.00		0.00	1.18	7.592	12.83	262.87	0.650	0.000	5.00	24.397	15.86	203.5	0.0	1,373.0
65.00		0.00	1.21	7.768	13.12	260.13	0.650	0.000	5.00	23.874	15.52	203.7	0.0	1,343.3
70.00		0.00	1.24	7.934	13.40	257.07	0.650	0.000	5.00	23.350	15.18	203.5	0.0	1,313.6
75.00	Bot - Section 3	0.00	1.26	8.092	13.67	253.72	0.650	0.000	5.00	22.827	14.84	202.9	0.0	1,283.9
80.00		0.00	1.28	8.242	13.93	250.13	0.650	0.000	5.00	22.616	14.70	204.8	0.0	2,345.8
82.00	Top - Section 2	0.00	1.29	8.301	14.02	248.63	0.650	0.000	2.00	8.900	5.78	81.2	0.0	922.9
85.00		0.00	1.31	8.387	14.17	249.89	0.650	0.000	3.00	13.192	8.58	121.5	0.0	636.6
90.00		0.00	1.33	8.525	14.40	245.90	0.650	0.000	5.00	21.568	14.02	202.0	0.0	1,040.6
95.00		0.00	1.35	8.657	14.63	241.72	0.650	0.000	5.00	21.045	13.68	200.1	0.0	1,015.2
100.0		0.00	1.37	8.785	14.84	237.36	0.650	0.000	5.00	20.521	13.34	198.0	0.0	989.7
105.0		0.00	1.39	8.908	15.05	232.84	0.650	0.000	5.00	19.998	13.00	195.7	0.0	964.3
110.0		0.00	1.41	9.028	15.25	228.18	0.650	0.000	5.00	19.474	12.66	193.1	0.0	938.9
114.2	Bot - Section 4	0.00	1.42	9.126	15.42	224.10	0.650	0.000	4.25	16.141	10.49	161.8	0.0	778.0
115.0		0.00	1.42	9.143	15.45	223.37	0.650	0.000	0.75	2.856	1.86	28.7	0.0	273.1
120.0	Top - Section 3	0.00	1.44	9.255	15.64	218.44	0.650	0.000	5.00	18.740	12.18	190.5	0.0	1,791.1
125.0		0.00	1.46	9.363	15.82	217.16	0.650	0.000	5.00	18.216	11.84	187.4	0.0	877.7
130.0	Appertunance(s)	0.00	1.48	9.469	16.00	212.01	0.650	0.000	5.00	17.692	11.50	184.0	0.0	852.3
135.0		0.00	1.49	9.572	16.17	206.76	0.650	0.000	5.00	17.169	11.16	180.5	0.0	826.8
140.0		0.00	1.51	9.672	16.34	201.40	0.650	0.000	5.00	16.645	10.82	176.8	0.0	801.4
142.0	Appertunance(s)	0.00	1.51	9.711	16.41	199.23	0.650	0.000	2.00	6.511	4.23	69.5	0.0	313.4
145.0		0.00	1.52	9.769	16.51	195.94	0.650	0.000	3.00	9.610	6.25	103.1	0.0	462.5
150.0	Appertunance(s)	0.00	1.54	9.864	16.67	190.39	0.650	0.000	5.00	15.598	10.14	169.0	0.0	750.5
155.0		0.00	1.55	9.957	16.82	184.76	0.650	0.000	5.00	15.074	9.80	164.9	0.0	725.0
160.0	Top - Section 4	0.00	1.57	10.048	16.98	179.04	0.650	0.000	5.00	14.551	9.46	160.6	0.0	699.6
165.0		0.00	1.58	10.136	17.13	157.31	0.590	0.000	5.00	12.500	7.37	126.3	0.0	593.8
168.0	Appertunance(s)	0.00	1.59	10.189	17.21	157.71	0.590	0.000	3.00	7.500	4.42	76.2	0.0	356.3
170.0		0.00	1.59	10.223	17.27	157.98	0.590	0.000	2.00	5.000	2.95	51.0	0.0	237.5
							Totals:		170.00			6,430.1	0.0	47,714.3



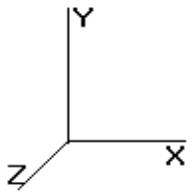
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 19 Iterations

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)
120.0	Flush Mounts	3	9.255	15.641	0.67	4.02	0.000	0.000	62.88	0.00	0.00	195.00
120.0	RFS APXV18-206517S-	3	9.277	15.678	1.00	15.48	0.000	1.000	242.69	0.00	242.69	79.20
130.0	Round Low Profile Pl	1	9.469	16.003	1.00	21.70	0.000	0.000	347.25	0.00	0.00	1,500.00
130.0	RFS APXVSPP18-C-	2	9.469	16.003	0.83	13.71	0.000	0.000	219.42	0.00	0.00	114.00
130.0	RFS APXV9ERR18-C-	1	9.469	16.003	0.86	7.10	0.000	0.000	113.68	0.00	0.00	62.00
130.0	Alcatel-Lucent 800 M	3	9.469	16.003	0.67	5.85	0.000	0.000	93.60	0.00	0.00	185.40
130.0	Alcatel-Lucent 4X40W	6	9.469	16.003	0.67	10.89	0.000	0.000	174.34	0.00	0.00	357.00
130.0	Alcatel-Lucent TD-RR	3	9.469	16.003	0.67	8.68	0.000	0.000	138.95	0.00	0.00	198.30
130.0	RFS APXVTM14-C-I20	3	9.469	16.003	0.78	16.15	0.000	0.000	258.38	0.00	0.00	158.70
142.0	14" x 9" TTA	3	9.711	16.411	0.50	1.85	0.000	0.000	30.28	0.00	0.00	30.00
142.0	36" x 8" x 6" Panel	3	9.711	16.411	0.89	7.48	0.000	0.000	122.69	0.00	0.00	75.00
142.0	72" x 12" Panel	9	9.711	16.411	0.79	59.72	0.000	0.000	980.15	0.00	0.00	405.00
142.0	Powerwave LGP21901	3	9.711	16.411	0.50	0.34	0.000	0.000	5.66	0.00	0.00	16.50
142.0	Round T-Arm	3	9.711	16.411	0.67	19.50	0.000	0.000	319.97	0.00	0.00	750.00
142.0	Ericsson RRUS 11(Ban	6	9.711	16.411	0.67	12.02	0.000	0.000	197.26	0.00	0.00	300.00
142.0	Raycap DC6-48-60-18-	1	9.711	16.411	1.00	1.11	0.000	0.000	18.22	0.00	0.00	20.00
142.0	Powerwave LGP21401	6	9.711	16.411	0.50	3.87	0.000	0.000	63.51	0.00	0.00	84.60
150.0	Round Low Profile Pl	1	9.864	16.670	1.00	21.70	0.000	0.000	361.75	0.00	0.00	1,500.00
150.0	RFS FD9R6004/2C-3L	6	9.864	16.670	0.50	1.11	0.000	0.000	18.50	0.00	0.00	15.60
150.0	Antel LPA-80063-4CF-	6	9.864	16.670	0.94	39.48	0.000	0.000	658.15	0.00	0.00	120.00
150.0	Antel BXA-70063-6CF-	3	9.864	16.670	0.77	17.86	0.000	0.000	297.67	0.00	0.00	51.00
150.0	Antel BXA-171063-8BF	3	9.864	16.670	0.87	7.67	0.000	0.000	127.92	0.00	0.00	31.50
160.0	Flat Low Profile Pla	1	10.048	16.981	1.00	26.10	0.000	0.000	443.19	0.00	0.00	1,500.00
160.0	48" x 12" Panel	9	10.048	16.981	0.78	39.31	0.000	0.000	667.54	0.00	0.00	270.00
160.0	72" x 12" Panel	3	10.048	16.981	0.79	19.91	0.000	0.000	338.05	0.00	0.00	135.00
168.0	DragonWave Horizon	2	10.189	17.219	0.50	0.43	0.000	0.000	7.40	0.00	0.00	21.20
168.0	Argus LLPX310R	3	10.189	17.219	0.73	10.58	0.000	0.000	182.14	0.00	0.00	85.80
168.0	DragonWave A-ANT-	2	10.189	17.219	1.00	9.38	0.000	0.000	161.51	0.00	0.00	54.20
168.0	NextNet BTS-2500	3	10.189	17.219	0.67	4.26	0.000	0.000	73.37	0.00	0.00	105.00
168.0	Collar	1	10.189	17.219	1.00	8.50	0.000	0.000	146.36	0.00	0.00	560.00
									6,872.50			8,980.00

Pole :	**302529**	**Code: TIA/EIA-222 Rev F**	**5/29/2014 6:12:24 PM**
Location :	**Vernon CT 6, CT**		**Page: 16**
Height :	**170.0 (ft)**		
Base Dia :	**72.13 (in)**		
Top Dia :	**30.00 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides. Sect 5: Round**		
Taper :	**0.251317 (in/ft)**		

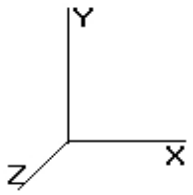


Load Case: **Twist/Sway** **50.00 mph Wind with No Ice** **19 Iterations**

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	209.45	2,313.11	0.00	0.00
10.00	205.77	2,380.50	0.00	0.00
15.00	202.09	2,342.33	0.00	0.00
20.00	198.41	2,304.17	0.00	0.00
25.00	194.73	2,266.00	0.00	0.00
30.00	191.05	2,227.83	0.00	0.00
35.00	190.54	2,189.66	0.00	0.00
37.00	76.37	865.18	0.00	0.00
40.00	117.60	2,177.80	0.00	0.00
45.00	199.48	3,575.38	0.00	0.00
50.00	201.43	1,696.28	0.00	0.00
55.00	202.74	1,666.59	0.00	0.00
60.00	203.47	1,636.90	0.00	0.00
65.00	203.71	1,607.22	0.00	0.00
70.00	203.51	1,577.53	0.00	0.00
75.00	202.91	1,547.84	0.00	0.00
80.00	204.77	2,609.68	0.00	0.00
82.00	81.15	1,028.44	0.00	0.00
85.00	121.54	794.94	0.00	0.00
90.00	201.97	1,304.54	0.00	0.00
95.00	200.14	1,279.09	0.00	0.00
100.0	198.04	1,253.65	0.00	0.00
105.0	195.70	1,228.20	0.00	0.00
110.0	193.12	1,202.75	0.00	0.00
114.2	161.82	1,002.33	0.00	0.00
115.0	28.69	312.64	0.00	0.00
120.0	496.08	2,329.21	0.00	242.69
125.0	187.36	1,111.60	0.00	0.00
130.0	1,529.65	3,661.56	0.00	0.00
135.0	180.52	1,050.71	0.00	0.00
140.0	176.84	1,025.27	0.00	0.00
142.0	1,807.21	2,084.08	0.00	0.00
145.0	103.13	536.12	0.00	0.00
150.0	1,633.00	2,591.27	0.00	0.00
155.0	164.88	787.73	0.00	0.00
160.0	1,609.39	2,667.28	0.00	0.00
165.0	126.34	596.50	0.00	0.00
168.0	646.99	1,184.10	0.00	0.00
170.0	50.97	237.52	0.00	0.00
Totals:	13,302.55	64,253.54	0.00	242.69



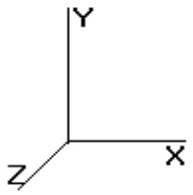
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 19 Iterations

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	-13.317	-64.250	0.000	0.000	0.000	-1,572.063	0.000	0.000	0.000	0.000
5.00	-13.136	-61.931	0.000	0.000	0.000	-1,505.480	-0.014	0.000	0.014	-0.026
10.00	-12.956	-59.545	0.000	0.000	0.000	-1,439.803	-0.057	0.000	0.057	-0.053
15.00	-12.778	-57.197	0.000	0.000	0.000	-1,375.025	-0.127	0.000	0.127	-0.080
20.00	-12.602	-54.887	0.000	0.000	0.000	-1,311.135	-0.226	0.000	0.226	-0.107
25.00	-12.428	-52.615	0.000	0.000	0.000	-1,248.125	-0.353	0.000	0.353	-0.135
30.00	-12.255	-50.382	0.000	0.000	0.000	-1,185.986	-0.509	0.000	0.509	-0.162
35.00	-12.074	-48.189	0.000	0.000	0.000	-1,124.711	-0.694	0.000	0.694	-0.190
37.00	-12.007	-47.321	0.000	0.000	0.000	-1,100.562	-0.776	0.000	0.776	-0.201
40.00	-11.899	-45.139	0.000	0.000	0.000	-1,064.542	-0.909	0.000	0.909	-0.218
45.00	-11.705	-41.559	0.000	0.000	0.000	-1,005.048	-1.152	0.000	1.152	-0.246
50.00	-11.518	-39.857	0.000	0.000	0.000	-946.522	-1.426	0.000	1.426	-0.275
55.00	-11.330	-38.185	0.000	0.000	0.000	-888.932	-1.732	0.000	1.732	-0.309
60.00	-11.139	-36.542	0.000	0.000	0.000	-832.284	-2.074	0.000	2.074	-0.343
65.00	-10.946	-34.930	0.000	0.000	0.000	-776.590	-2.453	0.000	2.453	-0.378
70.00	-10.752	-33.347	0.000	0.000	0.000	-721.860	-2.867	0.000	2.867	-0.412
75.00	-10.556	-31.795	0.000	0.000	0.000	-668.104	-3.317	0.000	3.317	-0.446
80.00	-10.342	-29.183	0.000	0.000	0.000	-615.326	-3.802	0.000	3.802	-0.479
82.00	-10.260	-28.152	0.000	0.000	0.000	-594.643	-4.006	0.000	4.006	-0.493
85.00	-10.145	-27.353	0.000	0.000	0.000	-563.862	-4.323	0.000	4.323	-0.513
90.00	-9.948	-26.044	0.000	0.000	0.000	-513.137	-4.880	0.000	4.880	-0.549
95.00	-9.750	-24.761	0.000	0.000	0.000	-463.400	-5.474	0.000	5.474	-0.585
100.0	-9.552	-23.504	0.000	0.000	0.000	-414.652	-6.106	0.000	6.106	-0.619
105.0	-9.356	-22.273	0.000	0.000	0.000	-366.891	-6.772	0.000	6.772	-0.652
110.0	-9.159	-21.068	0.000	0.000	0.000	-320.114	-7.472	0.000	7.472	-0.683
114.2	-8.990	-20.066	0.000	0.000	0.000	-281.190	-8.092	0.000	8.092	-0.708
115.0	-8.963	-19.751	0.000	0.000	0.000	-274.447	-8.204	0.000	8.204	-0.713
120.0	-8.445	-17.424	0.000	0.000	0.000	-229.390	-8.965	0.000	8.965	-0.740
125.0	-8.250	-16.312	0.000	0.000	0.000	-187.165	-9.754	0.000	9.754	-0.764
130.0	-6.675	-12.669	0.000	0.000	0.000	-145.916	-10.566	0.000	10.566	-0.784
135.0	-6.483	-11.619	0.000	0.000	0.000	-112.543	-11.397	0.000	11.397	-0.802
140.0	-6.293	-10.596	0.000	0.000	0.000	-80.128	-12.245	0.000	12.245	-0.816
142.0	-4.457	-8.537	0.000	0.000	0.000	-67.542	-12.588	0.000	12.588	-0.820
145.0	-4.348	-8.002	0.000	0.000	0.000	-54.170	-13.105	0.000	13.105	-0.826
150.0	-2.678	-5.435	0.000	0.000	0.000	-32.432	-13.975	0.000	13.975	-0.834
155.0	-2.502	-4.649	0.000	0.000	0.000	-19.042	-14.852	0.000	14.852	-0.839
160.0	-0.854	-2.006	0.000	0.000	0.000	-6.533	-15.733	0.000	15.733	-0.842
165.0	-0.719	-1.411	0.000	0.000	0.000	-2.265	-16.615	0.000	16.615	-0.843
168.0	-0.054	-0.237	0.000	0.000	0.000	-0.109	-17.145	0.000	17.145	-0.843
170.0	-0.051	0.000	0.000	0.000	0.000	0.000	-17.498	0.000	17.498	-0.843

Pole :	**302529**	**Code: TIA/EIA-222 Rev F**	**5/29/2014 6:12:24 PM**
Location :	**Vernon CT 6, CT**		**Page: 18**
Height :	**170.0 (ft)**		
Base Dia :	**72.13 (in)**		
Top Dia :	**30.00 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides. Sect 5: Round**		
Taper :	**0.251317 (in/ft)**		

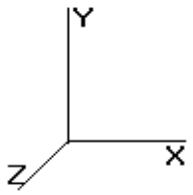


Load Case: **Twist/Sway** **50.00 mph Wind with No Ice** **19 Iterations**

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

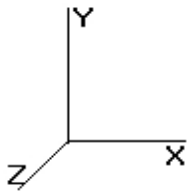
Calculated Stresses

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	0.50	0.21	0.00	0.00	0.00	8.36	8.87	52.0	0.0	0.171
5.00	0.49	0.21	0.00	0.00	0.00	8.29	8.79	52.0	0.0	0.169
10.00	0.48	0.21	0.00	0.00	0.00	8.22	8.71	52.0	0.0	0.168
15.00	0.47	0.21	0.00	0.00	0.00	8.15	8.63	52.0	0.0	0.166
20.00	0.46	0.21	0.00	0.00	0.00	8.07	8.54	52.0	0.0	0.164
25.00	0.45	0.21	0.00	0.00	0.00	7.98	8.44	52.0	0.0	0.162
30.00	0.44	0.22	0.00	0.00	0.00	7.88	8.33	52.0	0.0	0.160
35.00	0.43	0.22	0.00	0.00	0.00	7.78	8.22	52.0	0.0	0.158
37.00	0.43	0.22	0.00	0.00	0.00	7.74	8.17	52.0	0.0	0.157
40.00	0.41	0.22	0.00	0.00	0.00	7.67	8.09	52.0	0.0	0.156
45.00	0.49	0.28	0.00	0.00	0.00	9.37	9.87	52.0	0.0	0.190
50.00	0.48	0.28	0.00	0.00	0.00	9.20	9.69	52.0	0.0	0.186
55.00	0.47	0.28	0.00	0.00	0.00	9.01	9.49	52.0	0.0	0.183
60.00	0.46	0.28	0.00	0.00	0.00	8.81	9.28	52.0	0.0	0.179
65.00	0.45	0.28	0.00	0.00	0.00	8.60	9.06	52.0	0.0	0.174
70.00	0.44	0.28	0.00	0.00	0.00	8.36	8.81	52.0	0.0	0.170
75.00	0.43	0.29	0.00	0.00	0.00	8.11	8.55	52.0	0.0	0.164
80.00	0.40	0.29	0.00	0.00	0.00	7.83	8.24	52.0	0.0	0.159
82.00	0.45	0.33	0.00	0.00	0.00	8.71	9.18	52.0	0.0	0.177
85.00	0.44	0.33	0.00	0.00	0.00	8.50	8.96	52.0	0.0	0.172
90.00	0.43	0.33	0.00	0.00	0.00	8.13	8.58	52.0	0.0	0.165
95.00	0.42	0.33	0.00	0.00	0.00	7.72	8.16	52.0	0.0	0.157
100.00	0.41	0.34	0.00	0.00	0.00	7.27	7.70	52.0	0.0	0.148
105.00	0.40	0.34	0.00	0.00	0.00	6.79	7.21	52.0	0.0	0.139
110.00	0.39	0.34	0.00	0.00	0.00	6.25	6.66	52.0	0.0	0.128
114.25	0.38	0.34	0.00	0.00	0.00	5.76	6.16	52.0	0.0	0.119
115.00	0.37	0.34	0.00	0.00	0.00	5.67	6.07	52.0	0.0	0.117
120.00	0.33	0.33	0.00	0.00	0.00	4.85	5.21	52.0	0.0	0.100
125.00	0.32	0.33	0.00	0.00	0.00	4.19	4.55	52.0	0.0	0.088
130.00	0.26	0.27	0.00	0.00	0.00	3.47	3.76	52.0	0.0	0.072
135.00	0.24	0.27	0.00	0.00	0.00	2.85	3.13	52.0	0.0	0.060
140.00	0.23	0.27	0.00	0.00	0.00	2.16	2.44	52.0	0.0	0.047
142.00	0.19	0.20	0.00	0.00	0.00	1.87	2.08	52.0	0.0	0.040
145.00	0.18	0.20	0.00	0.00	0.00	1.56	1.77	52.0	0.0	0.034
150.00	0.13	0.12	0.00	0.00	0.00	1.00	1.15	52.0	0.0	0.022
155.00	0.11	0.12	0.00	0.00	0.00	0.63	0.77	52.0	0.0	0.015
160.00	0.05	0.04	0.00	0.00	0.00	0.23	0.29	52.0	0.0	0.006
160.00	0.06	0.05	0.00	0.00	0.00	0.31	0.37	28.0	0.0	0.013
165.00	0.04	0.04	0.00	0.00	0.00	0.11	0.16	28.0	0.0	0.006
168.00	0.01	0.00	0.00	0.00	0.00	0.01	0.01	28.0	0.0	0.000
170.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	28.0	0.0	0.000



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	38.5	0.00	64.23	0.00	0.00	4542.45	27.58	52.0	45.00	0.531
Ice	31.2	0.00	73.13	0.00	0.00	3759.19	23.17	52.0	45.00	0.446
Twist/Sway	13.3	0.00	64.25	0.00	0.00	1572.06	9.87	52.0	45.00	0.190



Base Summary

Reactions

Original Design			Analysis			
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment Design %
8,100.00	72.00	61.00	4,542.45	73.13	38.49	56.08

Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Moment (kip-in)	Allow Stress (ksi)	Applied Stress (ksi)	Stress Ratio
55.0	3.250	81.000	Square	0	0.00	8.176	471.99	55.00	32.79	0.60

Anchor Bolts

								Start	Compression			Tension		
Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Angle (deg)	Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
80.00	28	2.25" 18J	2.25	75.00	100.00	Clustered	6.00	45.0	99.95	195.00	0.51	94.73	195.00	0.49

Sprint

AMERICAN TOWER CORPORATION

PROJECT:	2.5 EQUIPMENT DEPLOYMENT
SITE NAME:	SPECTRASITE/VERNON
SITE CASCADE:	CT70XC147
SITE NUMBER:	302529
SITE ADDRESS:	777 TALCOTVILLE ROAD VERNON ROCKVILLE, CT 06066
SITE TYPE:	MONOPOLE TOWER
MARKET:	NORTHERN CONNECTICUT

SITE INFORMATION

TOWER OWNER:
AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN, MA 01801

LATITUDE (NAD83):
41° 51' 48.43" N
41.863453°

LONGITUDE (NAD83):
72° 28' 59.82" W
-72.483283°

COUNTY:
TOLLAND

ZONING JURISDICTION:
CONNECTICUT SITING COUNCIL

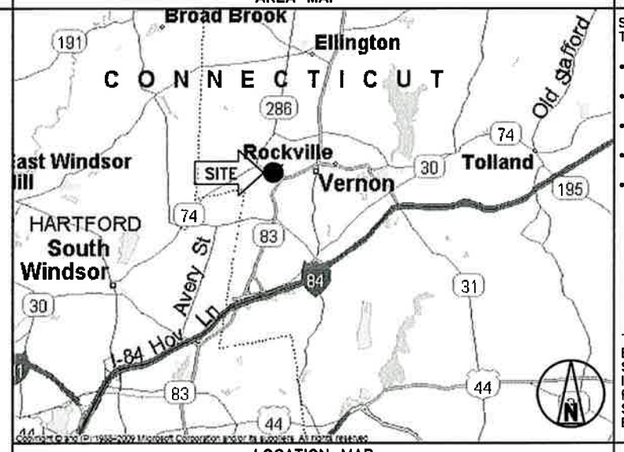
ZONING DISTRICT:
TBD

POWER COMPANY:
CL&P
(800) 322-3223

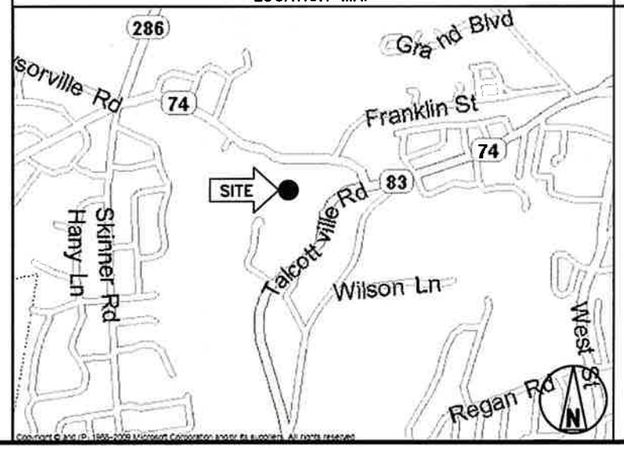
AAV PROVIDER:
AT&T
(800) 246-2020

SPRINT CM:
MIKE DELIA
(781) 316-6348
MICHAEL.DELIA@SPRINT.COM

AREA MAP



LOCATION MAP



PROJECT DESCRIPTION

SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.

- INSTALL (1) 9929 EQUIPMENT CABINET IN EXISTING LEASE SPACE
- INSTALL (3) PANEL ANTENNAS
- INSTALL (3) RRU'S TO TOWER
- INSTALL (27) JUMPER CABLES
- INSTALL (1) FIBER CABLE

THESE PLANS HAVE BEEN DEVELOPED FOR THE MODIFICATION OF AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY OWNED OR LEASED BY SPRINT IN ACCORDANCE WITH THE SCOPE OF WORK PROVIDED BY SPRINT. INFINIGY HAS INCORPORATED THIS SCOPE OF WORK IN THE PLANS. THESE PLANS ARE NOT FOR CONSTRUCTION UNLESS ACCOMPANIED BY A PASSING STRUCTURAL STABILITY ANALYSIS PREPARED BY A LICENSED STRUCTURAL ENGINEER. STRUCTURAL ANALYSIS MUST INCLUDE BOTH TOWER AND MOUNT.

APPLICABLE CODES

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALL IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (2012 IBC)
2. TIA-EIA-222-G OR LATEST EDITION
3. NFPA 780 – LIGHTNING PROTECTION CODE
4. 2011 NATIONAL ELECTRIC CODE OR LATEST EDITION
5. ANY OTHER NATIONAL OR LOCAL APPLICABLE CODES, MOST RECENT EDITIONS
6. CT BUILDING CODE
7. LOCAL BUILDING CODE
8. CITY/COUNTY ORDINANCES

811 Know what's below. Call before you dig. www.call811.com

DRAWING INDEX

SHEET NO.	SHEET TITLE	REV.
T-1	TITLE SHEET & PROJECT DATA	0
SP-1	SPRINT SPECIFICATIONS	0
SP-2	SPRINT SPECIFICATIONS	0
SP-3	SPRINT SPECIFICATIONS	0
A-1	SITE PLAN	0
A-2	TOWER ELEVATION & CABLE PLAN	0
A-3	ANTENNA LAYOUT & MOUNTING DETAILS	0
A-4	COLOR CODING & NOTES	0
A-5	EQUIPMENT & MOUNTING DETAILS	0
A-6	CIVIL DETAILS	0
A-7	PLUMBING DIAGRAM	0
E-1	ELECTRICAL & GROUNDING PLAN	0
E-2	ELECTRICAL & GROUNDING DETAILS	0

PLANS PREPARED FOR:
Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:
INFINIGY Design. Build. Deliver.
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 340-XXXX

MLA PARTNER:
AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN, MA 01801

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	06/05/14	JLN	0

SITE NAME:
SPECTRASITE/VERNON

SITE CASCADE:
CT70XC147

SITE ADDRESS:
777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

SHEET DESCRIPTION:
TITLE SHEET
& PROJECT DATA

SHEET NUMBER:
T-1

THESE OUTLINE SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

SECTION 01 100 – SCOPE OF WORK

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT CONSTRUCTION STANDARDS FOR WIRELESS SITES, CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 PRECEDENCE: SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE. NOTIFY SPRINT CONSTRUCTION MANAGER IF THIS OCCURS.

1.4 NATIONALLY RECOGNIZED CODES AND STANDARDS:

A. THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL AND LOCAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:

1. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
5. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
3. GR-1089 CORE, ELECTROMAGNETIC COMPATIBILITY AND ELECTRICAL SAFETY –GENERIC CRITERIA FOR NETWORK TELECOMMUNICATIONS EQUIPMENT.
4. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC") AND NFPA 101 (LIFE SAFETY CODE).
5. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
6. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
7. AMERICAN CONCRETE INSTITUTE (ACI)
8. AMERICAN WIRE PRODUCERS ASSOCIATION (AWPA)
9. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
10. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
11. PORTLAND CEMENT ASSOCIATION (PCA)
12. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
13. BRICK INDUSTRY ASSOCIATION (BIA)
14. AMERICAN WELDING SOCIETY (AWS)
15. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
16. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
17. DOOR AND HARDWARE INSTITUTE (DHI)
18. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
19. APPLICABLE BUILDING CODES INCLUDING UNIFORM BUILDING CODE, SOUTHERN BUILDING CODE, BOCA, AND THE INTERNATIONAL BUILDING CODE.

1.5 DEFINITIONS:

A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.

B. COMPANY: SPRINT CORPORATION

C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.

D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.

E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.

F. OFCI: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT.

G. CONSTRUCTION MANAGER – ALL PROJECTS RELATED COMMUNICATION TO FLOW THROUGH SPRINT REPRESENTATIVE IN CHARGE OF PROJECT...

1.6 SITE FAMILIARITY: CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE SPRINT CONSTRUCTION MANAGER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OR FIELD CONDITIONS.

1.7 POINT OF CONTACT: COMMUNICATION BETWEEN SPRINT AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE SPRINT CONSTRUCTION MANAGER APPOINTED TO MANAGE THE PROJECT FOR SPRINT.

1.8 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.

1.9 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.

A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN RED PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.

B. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. CONTRACTOR SHALL NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK.

C. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. SPACING BETWEEN EQUIPMENT IS THE REQUIRED CLEARANCE. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE SPRINT CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH THE WORK.

1.10 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.

1.11 UTILITIES SERVICES: WHERE NECESSARY TO CUT EXISTING PIPES, ELECTRICAL WIRES, CONDUITS, CABLES, ETC., OF UTILITY SERVICES, OR OF FIRE PROTECTION OR COMMUNICATIONS SYSTEMS, THEY SHALL BE CUT AND CAPPED AT SUITABLE PLACES OR WHERE SHOWN. ALL SUCH ACTIONS SHALL BE COORDINATED WITH THE UTILITY COMPANY INVOLVED:

1.12 PERMITS / FEES: WHEN REQUIRED THAT A PERMIT OR CONNECTION FEE BE PAID TO A PUBLIC UTILITY PROVIDER FOR NEW SERVICE TO THE CONSTRUCTION PROJECT, PAYMENT OF SUCH FEE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

1.13 CONTRACTOR SHALL TAKE ALL MEASURES AND PROVIDE ALL MATERIAL NECESSARY FOR PROTECTING EXISTING EQUIPMENT AND PROPERTY.

1.14 METHODS OF PROCEDURE (MOPS) FOR CONSTRUCTION: CONTRACTOR SHALL PERFORM WORK AS DESCRIBED IN THE FOLLOWING INSTALLATION AND COMMISSIONING MOPS.

NOTE: IN SHORT-FORM SPECIFICATIONS ON THE DRAWINGS, A/E TO INSERT LIST OF APPLICABLE MOPS INCLUDING EN-2012-001, EN-2013-002, EL-0568, AND TS-0193

1.15 USE OF ELECTRONIC PROJECT MANAGEMENT SYSTEMS:

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.

3.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.

3.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

3.4 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

3.5 EXISTING CONDITIONS: NOTIFY THE SPRINT CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

SECTION 01 200 – COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 RECEIPT OF MATERIAL AND EQUIPMENT:

A. A COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE CONSTRUCTION DOCUMENTS.

B. THE CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:

1 ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.

2. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
3. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
4. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO SPRINT OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
5. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
6. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

3.2 DELIVERABLES:

A. COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.

B. IF APPLICABLE, COMPLETE LOST/STOLEN/DAMAGED DOCUMENTATION REPORT AS NECESSARY IN ACCORDANCE WITH COMPANY PRACTICE, AND AS DIRECTED BY COMPANY.

C. UPLOAD DOCUMENTATION INTO SPRINT SITE MANAGEMENT SYSTEM (SMS) AND/OR PROVIDE HARD COPY DOCUMENTATION AS REQUESTED.

SECTION 01 300 – CELL SITE CONSTRUCTION CO.

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 NOTICE TO PROCEED

A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF THE WORK ORDER.

B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE SPRINT WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 FUNCTIONAL REQUIREMENTS:

A. THE ACTIVITIES DESCRIBED IN THIS PARAGRAPH REPRESENT MINIMUM ACTIONS AND PROCESSES REQUIRED TO SUCCESSFULLY COMPLETE THE WORK. THE ACTIVITIES DESCRIBED ARE NOT EXHAUSTIVE, AND CONTRACTOR SHALL TAKE ANY AND ALL ACTIONS AS NECESSARY TO SUCCESSFULLY COMPLETE THE CONSTRUCTION OF A FULLY FUNCTIONING WIRELESS FACILITY AT THE SITE IN ACCORDANCE WITH COMPANY PROCESSES.

B. SUBMIT SPECIFIC DOCUMENTATION AS INDICATED HEREIN, AND OBTAIN REQUIRED APPROVALS WHILE THE WORK IS BEING PERFORMED.

C. MANAGE AND CONDUCT ALL FIELD CONSTRUCTION SERVICE RELATED ACTIVITIES

D. PROVIDE CONSTRUCTION ACTIVITIES TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY Design. Build. Deliver.

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

JOB NUMBER 340-XXXX

MLA PARTNER:

AMERICAN TOWER CORPORATION

10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	06/05/14	JLM	0

SITE NAME:

SPECTRASITE/VERNON

SITE CASCADE:

CT70XC147

SITE ADDRESS:

777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-1

CONTINUE FROM SP-1

1. PERFORM ANY REQUIRED SITE ENVIRONMENTAL MITIGATION.
2. PREPARE GROUND SITES; PROVIDE DE-GRUBBING; AND ROUGH AND FINAL GRADING, AND COMPOUND SURFACE TREATMENTS.
3. MANAGE AND CONDUCT ALL ACTIVITIES FOR INSTALLATION OF UTILITIES INCLUDING ELECTRICAL AND TELCO BACKHAUL.
4. INSTALL UNDERGROUND FACILITIES INCLUDING UNDERGROUND POWER AND COMMUNICATIONS CONDUITS, AND UNDERGROUND GROUNDING SYSTEM.
5. INSTALL ABOVE GROUND GROUNDING SYSTEMS.
6. PROVIDE NEW HVAC INSTALLATIONS AND MODIFICATIONS.
7. INSTALL "H-FRAMES", CABINETS AND SHELTERS AS INDICATED.
8. INSTALL ROADS, ACCESS WAYS, CURBS AND DRAINS AS INDICATED.
9. ACCOMPLISH REQUIRED MODIFICATION OF EXISTING FACILITIES.
10. PROVIDE ANTENNA SUPPORT STRUCTURE FOUNDATIONS.
11. PROVIDE SLABS AND EQUIPMENT PLATFORMS.
12. INSTALL COMPOUND FENCING, SIGHT SHIELDING, LANDSCAPING AND ACCESS BARRIERS.
13. PERFORM INSPECTION AND MATERIAL TESTING AS REQUIRED HEREINAFTER.
14. CONDUCT SITE RESISTANCE TO EARTH TESTING AS REQUIRED HEREINAFTER
15. INSTALL FIXED GENERATOR SETS AND OTHER STANDBY POWER SOLUTIONS.
16. INSTALL TOWERS, ANTENNA SUPPORT STRUCTURES AND PLATFORMS ON EXISTING TOWERS AS REQUIRED.
17. INSTALL CELL SITE RADIOS, MICROWAVE, GPS, COAXIAL MAINLINE, ANTENNAS, CROSS BAND COUPLERS, TOWER TOP AMPLIFIERS, LOW NOISE AMPLIFIERS AND RELATED EQUIPMENT.
18. PERFORM, DOCUMENT, AND CLOSE OUT ANY CONSTRUCTION CONTROL DOCUMENTS THAT MAY BE REQUIRED BY GOVERNMENT AGENCIES AND LANDLORDS.
19. PERFORM ANTENNAL AND COAX SWEEP TESTING AND MAKE ANY AND ALL NECESSARY CORRECTIONS.
20. REMAIN ON SITE MOBILIZED THROUGHOUT HAND-OFF AND INTEGRATION TO ASSIST AS NEEDED UNTIL SITE IS DEEMED SUBSTANTIALLY COMPLETE AND PLACED "ON AIR."

3.2 GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:

A. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

B. EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.

C. CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.

1. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
2. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.

D. CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION

E. CONDUCT TESTING AS REQUIRED HEREIN.

3.3 DELIVERABLES:

A. CONTRACTOR SHALL REVIEW, APPROVE, AND SUBMIT TO SPRINT SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS AS REQUIRED HEREINAFTER

B. PROVIDE DOCUMENTATION INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING. DOCUMENTATION SHALL BE FORWARDED IN ORIGINAL FORMAT AND/OR UPLOADED INTO SMS.

1. ALL CORRESPONDENCE AND PRELIMINARY CONSTRUCTION REPORTS.
2. PROJECT PROGRESS REPORTS.
3. CIVIL CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
4. ELECTRICAL SERVICE COMPLETION DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
5. LINES AND ANTENNA INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
6. POWER INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
7. TELCO READY DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
8. PPC (OR SHELTER) INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
9. TOWER CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
10. TOWER CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
11. BTS AND RADIO EQUIPMENT DELIVERED AT SITE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
12. NETWORK OPERATIONS HANDOFF CHECKLIST (HOC WALK) COMPLETE (UPLOAD FORM IN SMS)
13. CIVIL CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
14. SITE CONSTRUCTION PROGRESS PHOTOS UNLOADED INTO SMS.

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 SUBMITTALS:

A. THE WORK IN ALL ASPECTS SHALL COMPLY WITH THE CONSTRUCTION DRAWINGS AND THESE SPECIFICATIONS.

B. SUBMIT THE FOLLOWING TO COMPANY REPRESENTATIVE FOR APPROVAL.

1. CONCRETE MIX-DESIGNS FOR TOWER FOUNDATIONS, ANCHORS PIERS, AND CONCRETE PAVING.
2. CONCRETE BREAK TESTS AS SPECIFIED HEREIN.
3. SPECIAL FINISHES FOR INTERIOR SPACES, IF ANY.
4. ALL EQUIPMENT AND MATERIALS SO IDENTIFIED ON THE CONSTRUCTION DRAWINGS.
5. CHEMICAL GROUNDING DESIGN

D. ALTERNATES: AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINT'S CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO BEING SHIPPED TO SITE. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE CONSIDERED. SUBMITTAL FOR APPROVAL SHALL INCLUDE A STATEMENT OF COST REDUCTION PROPOSED FOR USE OF ALTERNATE PRODUCT.

1.4 TESTS AND INSPECTIONS:

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.

B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. COAX SWEEPS AND FIBER TESTS PER TS-0200 REV 4 ANTENNA LINE ACCEPTANCE STANDARDS.
2. AGL, AZIMUTH AND DOWNTILT USING ELECTRONIC COMMERCIAL MADE-FOR-THE-PURPOSE ANTENNA ALIGNMENT TOOL.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.

C. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING;

1. AZIMUTH, DOWNTILT, AGL – UPLOAD REPORT FROM ANTENNA ALIGNMENT TOOL TO SITERRA TASK 465. INSTALLED AZIMUTH, DOWNTILT, AND AGL MUST CONFORM TO THE RF DATA SHEETS. SWEEP AND FIBER TESTS
2. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
3. ALL AVAILABLE JURISDICTIONAL INFORMATION
4. PDF SCAN OF REDLINES PRODUCED IN FIELD
5. ELECTRONIC AS-BUILT DRAWINGS IN AUTOCAD AND PDF FORMATS. ANY FIELD CHANGE MUST BE REFLECTED BY MODIFYING THE PLANS, ELEVATIONS, AND DETAILS IN THE DRAWING SETS. GENERAL NOTES INDICATING MODIFICATIONS WILL NOT BE ACCEPTED. CHANGES SHALL BE HIGHLIGHTED AS "CLOUDS" IDENTIFIED AS THE "AS-BUILT" CONDITION.
6. LIEN WAIVERS
7. FINAL PAYMENT APPLICATION
8. REQUIRED FINAL CONSTRUCTION PHOTOS
9. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
10. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).

1.5 COMMISSIONING: PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPs

1.6 INTEGRATION: PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPs

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 REQUIREMENTS FOR TESTING:

A. THIRD PARTY TESTING AGENCY:

1. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
2. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
3. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.
4. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.

3.2 REQUIRED TESTS:

A. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. CONCRETE CYLINDER BREAK TESTS FOR THE TOWER AND ANCHOR FOUNDATIONS AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
2. ASPHALT ROADWAY COMPACTED THICKNESS, SURFACE SMOOTHNESS, AND COMPACTED DENSITY TESTING AS SPECIFIED IN SECTION: HOT MIX ASPHALT PAVING.
3. FIELD QUALITY CONTROL TESTING AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
4. TESTING REQUIRED UNDER SECTION: AGGREGATE BASE FOR ACCESS ROADS, PADS AND ANCHOR LOCATIONS
5. STRUCTURAL BACKFILL COMPACTION TESTS FOR THE TOWER FOUNDATION.
6. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.
7. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
8. GROUNDING AT ANTENNA MASTS FOR GPS AND ANTENNAS
9. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

3.3 REQUIRED INSPECTIONS

A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.

B. CONDUCT INSPECTIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. GROUNDING SYSTEM INSTALLATION PRIOR TO EARTH CONCEALMENT DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
2. FORMING FOR CONCRETE AND REBAR PLACEMENT PRIOR TO POUR DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
3. COMPACTION OF BACKFILL MATERIALS; AGGREGATE BASE FOR ROADS, PADS, AND ANCHORS; ASPHALT PAVING; AND SHAFT BACKFILL FOR CONCRETE AND WOOD POLES, BY INDEPENDENT THIRD PARTY AGENCY.
4. PRE- AND POST-CONSTRUCTION ROOFTOP AND STRUCTURAL INSPECTIONS ON EXISTING FACILITIES.
5. TOWER ERECTION SECTION STACKING AND PLATFORM ATTACHMENT DOCUMENTED BY DIGITAL PHOTOGRAPHS BY THIRD PARTY AGENCY.
6. ANTENNA AZIMUTH , DOWN TILT AND PER SUNLIGHT TOOL SUNSIGHT INSTRUMENTS – ANTENNALIGN ALIGNMENT TOOL (AAT)

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY Design. Build. Deliver.

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

JOB NUMBER 340-XXXX

MLA PARTNER:

AMERICAN TOWER CORPORATION

10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	06/05/14	JLN	0

SITE NAME:

SPECTRASITE/VERNON

SITE CASCADE:

CT70XC147

SITE ADDRESS:

777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-2

CONTINUE FROM SP-2

7. VERIFICATION DOCUMENTED WITH THE ANTENNA CHECKLIST REPORT, BY A&E, SITE DEVELOPMENT REP, OR RF REP.

8. FINAL INSPECTION CHECKLIST AND HANDOFF WALK (HOC.). SIGNED FORM SHOWING ACCEPTANCE BY FIELD OPS IS TO BE UPLOADED INTO SMS.

9. COAX SWEEP AND FIBER TESTING DOCUMENTS SUBMITTED VIA SMS FOR RF APPROVAL.

10. SCAN-ABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT

11. ALL AVAILABLE JURISDICTIONAL INFORMATION

12. PDF SCAN OF REDLINES PRODUCED IN FIELD

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.

D. CONSTRUCTION INSPECTIONS AND CORRECTIVE MEASURES SHALL BE DOCUMENTED BY THE CONTRACTOR WITH WRITTEN REPORTS AND PHOTOGRAPHS. PHOTOGRAPHS MUST BE DIGITAL AND OF SUFFICIENT QUALITY TO CLEARLY SHOW THE SITE CONSTRUCTION. PHOTOGRAPHS MUST CLEARLY IDENTIFY THE PHOTOGRAPHED ITEM AND BE LABELED WITH THE SITE CASCADE NUMBER, SITE NAME, DESCRIPTION, AND DATE.

3.4 DELIVERABLES: TEST AND INSPECTION REPORTS AND CLOSEOUT DOCUMENTATION SHALL BE UPLOADED TO THE SMS AND/OR FORWARDED TO SPRINT FOR INCLUSION INTO THE PERMANENT SITE FILES.

A. THE FOLLOWING TEST AND INSPECTION REPORTS SHALL BE PROVIDED AS APPLICABLE.

1. CONCRETE MIX AND CYLINDER BREAK REPORTS.

2. STRUCTURAL BACKFILL COMPACTION REPORTS.

3. SITE RESISTANCE TO EARTH TEST.

4. ANTENNA AZIMUTH AND DOWN TILT VERIFICATION

5. TOWER ERECTION INSPECTIONS AND MEASUREMENTS DOCUMENTING TOWER INSTALLED PER SUPPLIER'S REQUIREMENTS AND THE APPLICABLE SECTIONS HEREIN.

6. COAX CABLE SWEEP TESTS PER COMPANY'S "ANTENNA LINE ACCEPTANCE STANDARDS".

B. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES THE FOLLOWING;

1. TEST WELLS AND TRENCHES: PHOTOGRAPHS OF ALL TEST WELLS; PHOTOGRAPHS SHOWING ALL OPEN EXCAVATIONS AND TRENCHING PRIOR TO BACKFILLING SHOWING A TAPE MEASURE VISIBLE IN THE EXCAVATIONS INDICATING DEPTH.

2. CONDUITS, CONDUCTORS AND GROUNDING: PHOTOGRAPHS SHOWING TYPICAL INSTALLATION OF CONDUCTORS AND CONNECTORS; PHOTOGRAPHS SHOWING TYPICAL BEND RADIUS OF INSTALLED GROUND WIRES AND GROUND ROD SPACING;

3. CONCRETE FORMS AND REINFORCING: CONCRETE FORMING AT TOWER AND EQUIPMENT/SHELTER PAD/FOUNDATIONS – PHOTOGRAPHS SHOWING ALL REINFORCING STEEL, UTILITY AND CONDUIT STUB OUTS; PHOTOGRAPHS SHOWING CONCRETE POUR OF SHELTER SLAB/FOUNDATION, TOWER FOUNDATION AND GUY ANCHORS WITH VIBRATOR IN USE; PHOTOGRAPHS SHOWING EACH ANCHOR ON GUYED TOWERS, BEFORE CONCRETE POUR.

4. TOWER, ANTENNAS AND MAINLINE: INSPECTION AND PHOTOGRAPHS OF SECTION STACKING; INSPECTION AND PHOTOGRAPHS OF PLATFORM COMPONENT ATTACHMENT POINTS; PHOTOGRAPHS OF TOWER TOP GROUNDING; PHOTOS OF TOWER COAX LINE COLOR CODING AT THE TOP AND AT GROUND LEVEL; INSPECTION AND PHOTOGRAPHS OF OPERATIONAL OF TOWER LIGHTING, AND PLACEMENT OF FAA REGISTRATION SIGN; PHOTOGRAPHS SHOWING ADDITIONAL GROUNDING POINTS FOR TOWERS GREATER THAN 200 FEET.; PHOTOS OF ANTENNA GROUND BAR, EQUIPMENT GROUND BAR, AND MASTER GROUND BAR; PHOTOS OF GPS ANTENNA(S); PHOTOS OF EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA; PHOTOS OF COAX WEATHERPROOFING – TOP AND BOTTOM; PHOTOS OF COAX GROUNDING--TOP AND BOTTOM; PHOTOS OF ANTENNA AND MAST GROUNDING; PHOTOS OF COAX CABLE ENTRY INTO SHELTER; PHOTOS OF PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.

5. ROOF TOPS: PRE-CONSTRUCTION AND POST-CONSTRUCTION VISUAL INSPECTION AND PHOTOGRAPHS OF THE ROOF AND INTERIOR TO DETERMINE AND DOCUMENT CONDITIONS; ROOF TOP CONSTRUCTION INSPECTIONS AS REQUIRED BY THE JURISDICTION; PHOTOGRAPHS OF CABLE TRAY AND/OR ICE BRIDGE; PHOTOGRAPHS OF DOGHOUSE/CABLE EXIT FROM ROOF;

6. SITE LAYOUT – PHOTOGRAPHS OF THE OVERALL COMPOUND, INCLUDING EQUIPMENT PLATFORM FROM ALL FOUR CORNERS.

7. FINISHED UTILITIES: CLOSE-UP PHOTOGRAPHS OF THE PPC BREAKER PANEL; CLOSE-UP PHOTOGRAPH OF THE INSIDE OF THE TELCO PANEL AND NIU; CLOSE-UP PHOTOGRAPH OF THE POWER METER AND DISCONNECT; PHOTOS OF POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE; PHOTOGRAPHS AT METER BOX AND/OR FACILITY DISTRIBUTION PANEL.

8. REQUIRED MATERIALS CERTIFICATIONS: CONCRETE MIX DESIGNS; MILL CERTIFICATION FOR ALL REINFORCING AND STRUCTURAL STEEL; AND ASPHALT PAVING MIX DESIGN.

9. ANY AND ALL SUBMITTALS BY THE JURISDICTION OR COMPANY.

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 WEEKLY REPORTS:

A. CONTRACTOR SHALL PROVIDE SPRINT WITH WEEKLY REPORTS SHOWING PROJECT STATUS. THIS STATUS REPORT FORMAT WILL BE PROVIDED TO THE CONTRACTOR BY SPRINT. THE REPORT WILL CONTAIN SITE ID NUMBER, THE MILESTONES FOR EACH SITE, INCLUDING THE BASELINE DATE, ESTIMATED COMPLETION DATE AND ACTUAL COMPLETION DATE.

B. REPORT INFORMATION WILL BE TRANSMITTED TO SPRINT VIA ELECTRONIC MEANS AS REQUIRED. THIS INFORMATION WILL PROVIDE A BASIS FOR PROGRESS MONITORING AND PAYMENT.

3.2 PROJECT CONFERENCE CALLS:

A. SPRINT MAY HOLD WEEKLY PROJECT CONFERENCE CALLS. CONTRACTOR WILL BE REQUIRED TO COMMUNICATE SITE STATUS, MILESTONE COMPLETIONS AND UPCOMING MILESTONE PROJECTIONS, AND ANSWER ANY OTHER SITE STATUS QUESTIONS AS NECESSARY.

3.3 PROJECT TRACKING IN SMS:

A. CONTRACTOR SHALL PROVIDE SCHEDULE UPDATES AND PROJECTIONS IN THE SMS SYSTEM ON A WEEKLY BASIS.

3.4 ADDITIONAL REPORTING:

A. ADDITIONAL OR ALTERNATE REPORTING REQUIREMENTS MAY BE ADDED TO THE REPORT AS DETERMINED TO BE REASONABLY NECESSARY BY COMPANY.

3.5 PROJECT PHOTOGRAPHS:

A. FILE DIGITAL PHOTOGRAPHS OF COMPLETED SITE IN JPEG FORMAT IN THE SMS PHOTO LIBRARY FOR THE RESPECTIVE SITE. PHOTOGRAPHS SHALL BE CLEARLY LABELED WITH SITE NUMBER, NAME AND DESCRIPTION, AND SHALL INCLUDE AT A MINIMUM THE FOLLOWING AS APPLICABLE:

1. 1SHELTER AND TOWER OVERVIEW.

2. TOWER FOUNDATION(S) – FORMS AND STEEL BEFORE POUR (EACH ANCHOR ON GUYED TOWERS).

3. TOWER FOUNDATION(S) POUR WITH VIBRATOR IN USE (EACH ANCHOR ON GUYED TOWERS).

4. TOWER STEEL AS BEING INSTALLED INTO HOLE (SHOW ANCHOR STEEL ON GUYED TOWERS).

5. PHOTOS OF TOWER SECTION STACKING.

6. CONCRETE TESTING / SAMPLES.

7. PLACING OF ANCHOR BOLTS IN TOWER FOUNDATION.

8. BUILDING/WATER TANK FROM ROAD FOR TENANT IMPROVEMENTS OR COMMENTS.

9. SHELTER FOUNDATION--FORMS AND STEEL BEFORE POURING.

10. SHELTER FOUNDATION POUR WITH VIBRATOR IN USE.

11. COAX CABLE ENTRY INTO SHELTER.

12. PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.

13. ROOFTOP PRE AND POST CONSTRUCTION PHOTOS TO INCLUDE PENETRATIONS AND INTERIOR CEILING.

14. PHOTOS OF TOWER TOP COAX LINE COLOR CODING AND COLOR CODING AT GROUND LEVEL.

15. PHOTOS OF ALL APPROPRIATE COMPANY OR REGULATORY SIGNAGE.

16. PHOTOS OF EQUIPMENT BOLT DOWN INSIDE SHELTER.

17. POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE AND POWER AND TELCO SUPPLY LOCATIONS INCLUDING METER/DISCONNECT.

18. ELECTRICAL TRENCH(S) WITH ELECTRICAL / CONDUIT BEFORE BACKFILL.

19. ELECTRICAL TRENCH(S) WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.

20. TELCO TRENCH WITH TELEPHONE / CONDUIT BEFORE BACKFILL.

21. TELCO TRENCH WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.

22. SHELTER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

23. TOWER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

24. FENCE GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

25. ALL BTS GROUND CONNECTIONS.

26. ALL GROUND TEST WELLS.

27. ANTENNA GROUND BAR AND EQUIPMENT GROUND BAR.

28. ADDITIONAL GROUNDING POINTS ON TOWERS ABOVE 200'.

29. HVAC UNITS INCLUDING CONDENSERS ON SPLIT SYSTEMS.

30. GPS ANTENNAS.

31. CABLE TRAY AND/OR WAVEGUIDE BRIDGE.

32. DOGHOUSE/CABLE EXIT FROM ROOF.

33. EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA.

34. MASTER BUS BAR.

35. TELCO BOARD AND NIU.

36. ELECTRICAL DISTRIBUTION WALL.

37. CABLE ENTRY WITH SURGE SUPPRESSION.

38. ENTRANCE TO EQUIPMENT ROOM.

39. COAX WEATHERPROOFING--TOP AND BOTTOM OF TOWER.

40. COAX GROUNDING –TOP AND BOTTOM OF TOWER.

41. ANTENNA AND MAST GROUNDING.

42. LANDSCAPING – WHERE APPLICABLE.

3.6 FINAL PROJECT ACCEPTANCE: COMPLETE ALL REQUIRED REPORTING TASKS PER CONTRACT, CONTRACT DOCUMENTS OR THE SPRINT INTEGRATED CONSTRUCTION STANDARDS FOR WIRELESS SITES AND UPLOAD INTO SITERRA.

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY Design. Build. Deliver.

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

JOB NUMBER 340-XXXX

MLA PARTNER:

AMERICAN TOWER CORPORATION

10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	06/05/14	JLM	0

SITE NAME:

SPECTRASITE/VERNON

SITE CASCADE:

CT70XC147

SITE ADDRESS:

777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

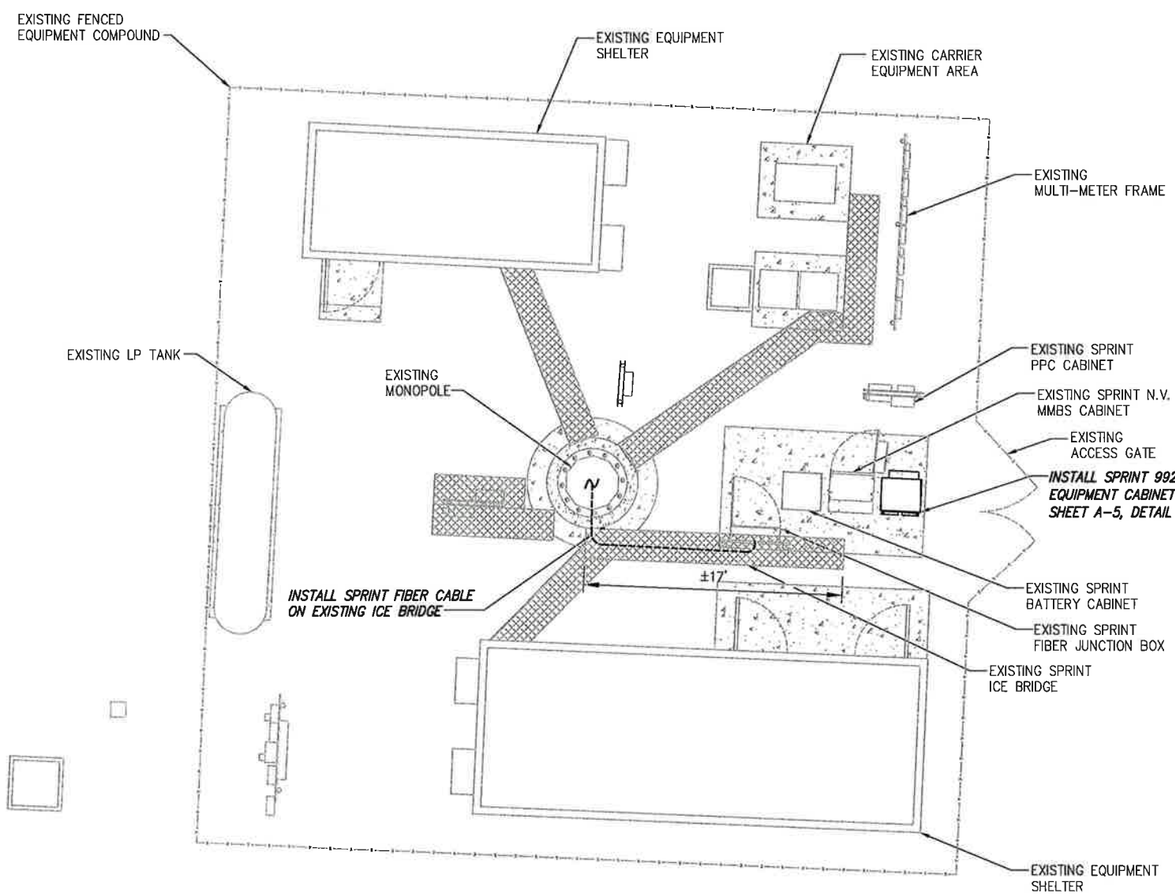
SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

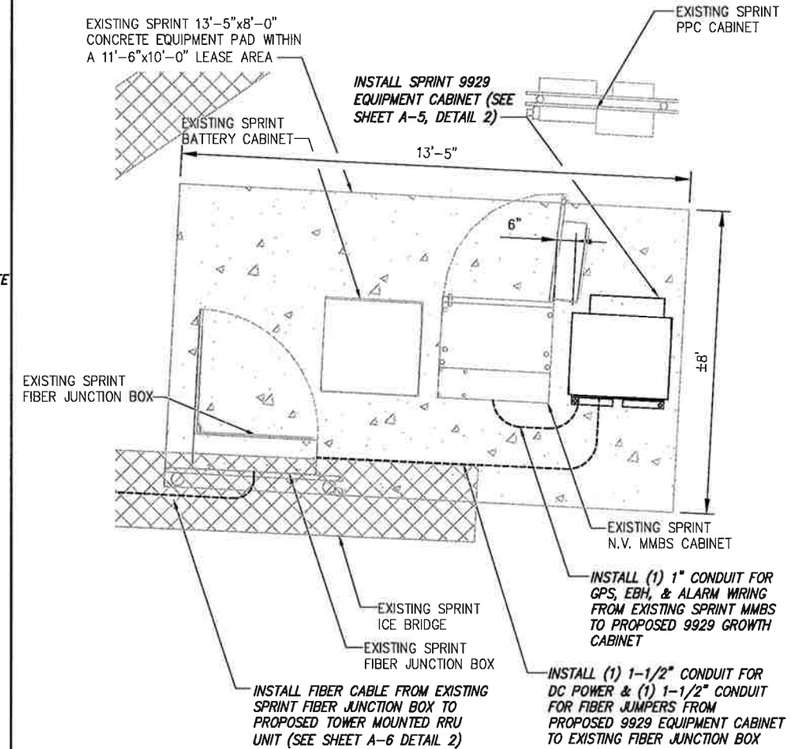
SHEET NUMBER:

SP-3

INFORMATION CONTAINED WITHIN DRAWINGS ARE BASED ON PROVIDED INFORMATION AND ARE NOT THE RESULT OF A FIELD SURVEY.



OVERALL SITE PLAN | SCALE: AS NOTED | 1



SPRINT EQUIPMENT PLAN | SCALE: AS NOTED | 2

PLANS PREPARED FOR:

Sprint

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AMERICAN TOWER CORPORATION

10 PRESIDENTIAL WAY
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SITE CASCADE:

CT70XC147

SITE ADDRESS:

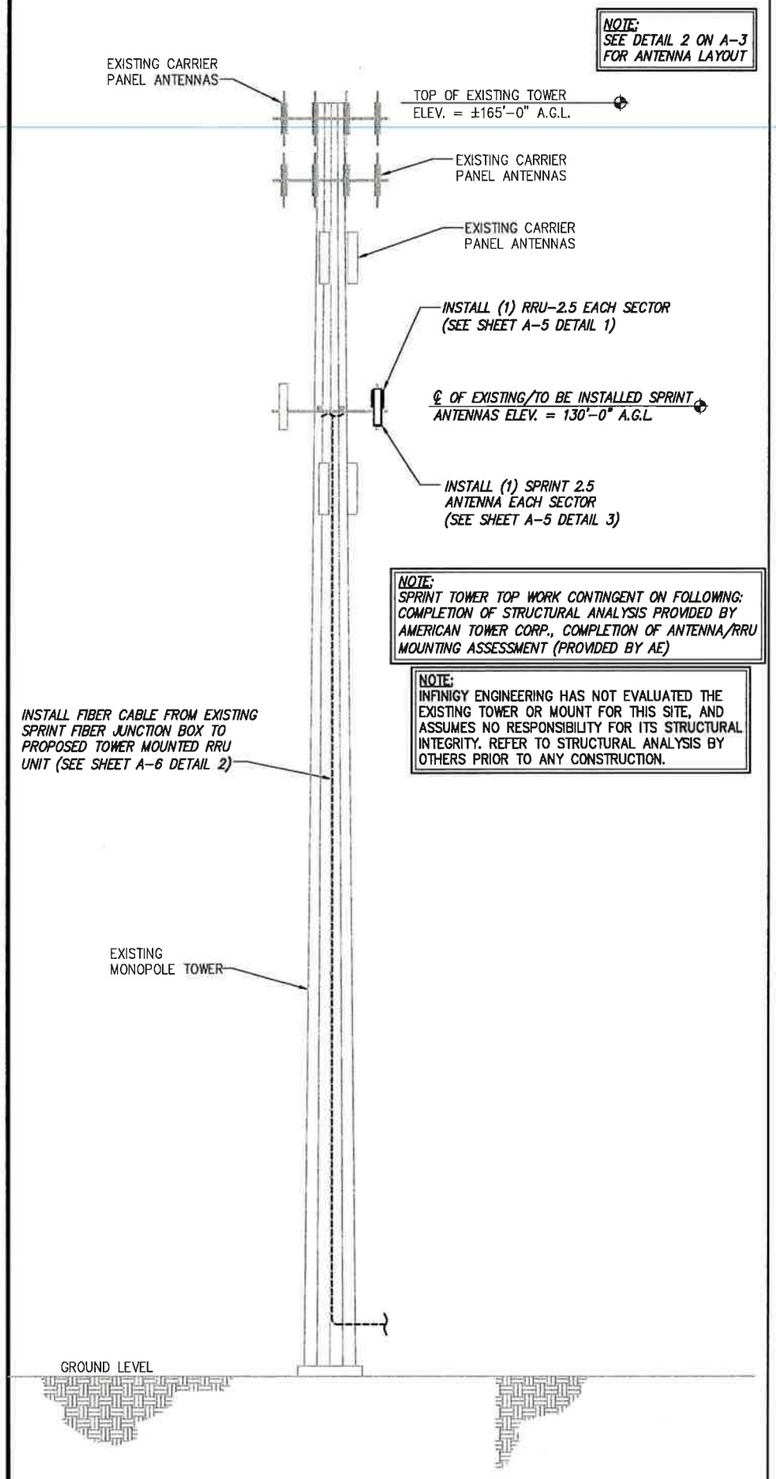
777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

SHEET DESCRIPTION:

SITE PLAN

SHEET NUMBER:

A-1



TOWER ELEVATION | NO SCALE | 1

Sprint

RFDS Sheet

General Site Information

Site ID	CT70XC147	Equipment Vendor	ALU
Market	NORTHERN CT	Lattitude	41.863453
Region	NEW ENGLAND	Longitude	-72.483283
MLA	ATC	LL SITE ID	N/A
Structure Type	MONOPOLE		
BTS Type	MMBTS		
Solution ID	N/A	Siterra SR Equipment type	N/A
		Equipment Vendor	ALU

Incremental Power Draw needed by added Equipment: 100

Base Equipment

BBU Kit	ALU BBU Kit	Top Hat	N/A
BBU Kit Qty	0 - IN 9929	Top Hat Qty	N/A
		Top Hat Dimenstions	N/A
Growth Cabinet	ALU 9929 Expansion Cabinet	Top Hat Weight (lbs)	N/A
Growth Cabinet Qty	1		
Growth Cabinet Dimensions	63.65" X 31.5" X 35.5"		
Growth Cabinet Weight	1600		

RF Path Information

RRH	TD-RRH 8X20-25	
RRH Qty	3	
RRH Dimensions	26.1 in X 18.6 X 6.7 in	
RRH Weight. lbs.	70	
RRH Mount Weight. Lbs.	TBD	
Power and Fiber Cable	ALU Fiber Only	
Cable Qty	1	
Weight per foot. Lbs.	0.12	
Diameter. Inches.	7/8"	
Length Ft.	180	(calculated as antenna height plus 20%)
Coax Jumper	Coax Jumper Mfg TBD	
Coax Jumper Qty	27	
Coax Jumper Length. Feet.	10	
Coax Jumper Weight	TBD	
Coax Jumper Diameter. Inches	0.5	
AISG Cable	Commscope ATCB-B001-006	
AISG Cable Qty	3	
AISG Diameter. Inches.	0.315	
AISG Cable length.	8	
Weight of entire AISG cable. Lbs.	1.3	

Antenna Sector Information

	Sector 1	Sector 2	Sector 3
Antenna make/model	RFS APXVTM14-C-120	RFS APXVTM14-C-120	RFS APXVTM14-C-120
Antenna qty	1	1	1
Antenna Dimensions. Inches	56.3 X 12.6 X 6.3	56.3 X 12.6 X 6.3	56.3 X 12.6 X 6.3
Antenna Weight. Lbs	56	56	56
Antenna Mounting Kit Weight. Lbs.	11	11	11
CL Height	130	130	130
Antenna Azimuth	70	190	320
Antenna Mechanical Downtilt	0	0	0
Antenna etilt	-2	-2	-2

RFDS | NO SCALE | 2

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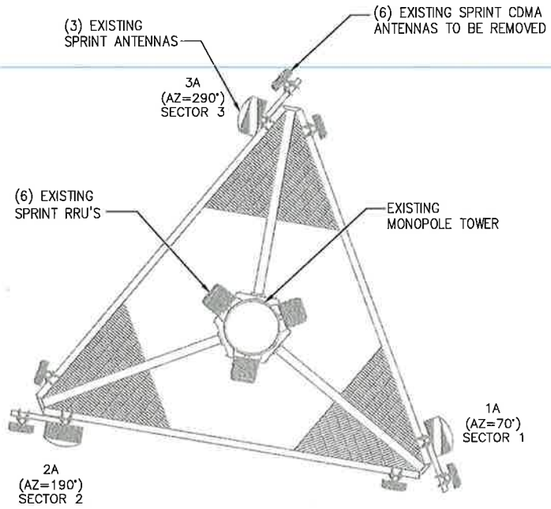
SITE CASCADE:
CT70XC147

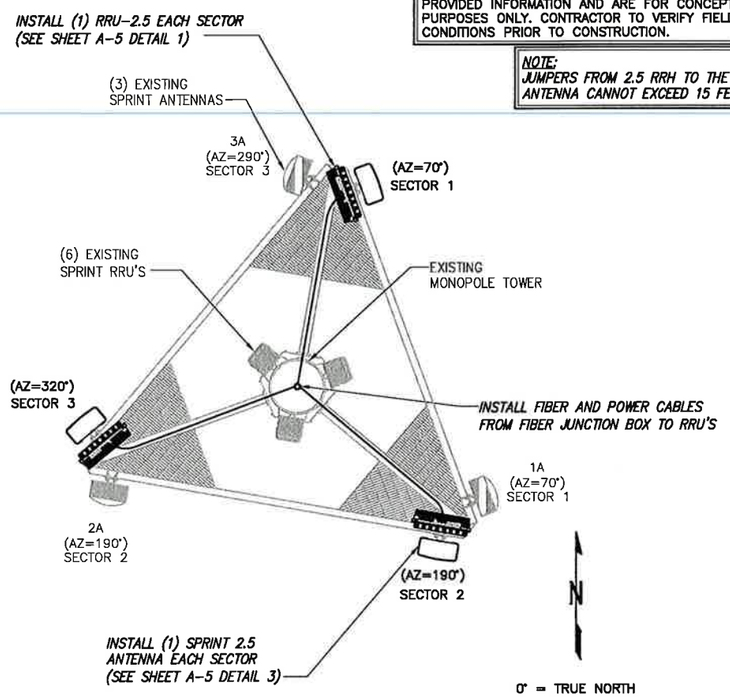
SITE ADDRESS:
777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

SHEET DESCRIPTION:
TOWER ELEVATION
& CABLE PLAN

SHEET NUMBER:
A-2



EXISTING ANTENNA & RRU LAYOUT | NO SCALE | 1

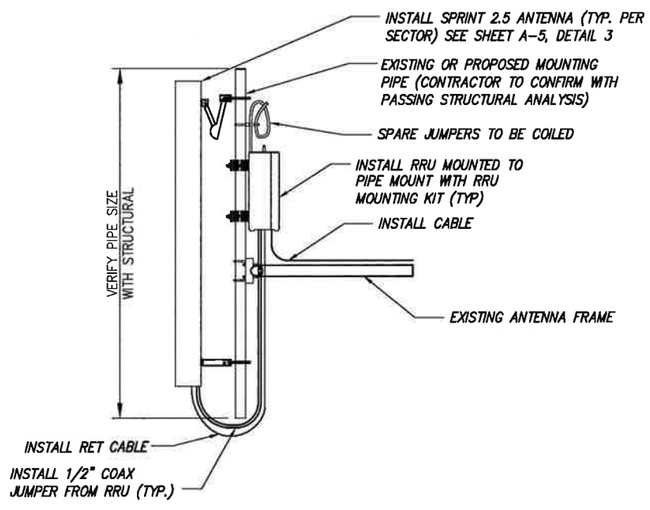


THE CONFIGURATION PLANS ARE BASED ON PROVIDED INFORMATION AND ARE FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO CONSTRUCTION.

NOTE: JUMPERS FROM 2.5 RRH TO THE 2.5 ANTENNA CANNOT EXCEED 15 FEET

FINAL ANTENNA LAYOUT | NO SCALE | 2

DETAIL NOT USED | NO SCALE | 3



NOTES:

1. CUT DC CONDUCTORS TO LENGTH.
2. COIL FIBER CABLE AND SECURE AT SIDE OF RRU.
3. DO NO EXCEED BEND RADIUS.

NOTE: CONTRACTOR TO POSITION RRU ON MOUNT BEHIND ANTENNA SUCH THAT THE RRU DOES NOT INTERFERE WITH THE EXISTING PLATFORM/T-ARM MOUNTING HARDWARE.

NOTE: SPARE DC CABLES ARE COILED UP ON NV RRHS AT SPRINT ARRAY. THESE ARE TO BE USED TO POWER UP THE 2.5 RRHS AND TIED INTO EXISTING DC BREAKERS INSIDE THE FIBER JUNCTION BOX LOCATED AT EQUIPMENT.

NOTE: THE DIAGRAM IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO REFER TO PASSING STRUCTURAL ANALYSIS FOR ANTENNA AND RRU MOUNTING DETAILS

TYPICAL ANTENNA & RRU MOUNTING DETAILS | NO SCALE | 4

PLANS PREPARED FOR:

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Overland Park, Kansas 66251

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Office # (518) 690-0790
Fax # (518) 690-0793

JOB NUMBER 340-XXXX

MLA PARTNER:

AMERICAN TOWER CORPORATION

10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	06/05/14	JLM	0

SITE NAME:

SPECTRASITE/VERNON

SITE CASCADE:

CT70XC147

SITE ADDRESS:

777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

SHEET DESCRIPTION:

ANTENNA LAYOUT & MOUNTING DETAILS

SHEET NUMBER:

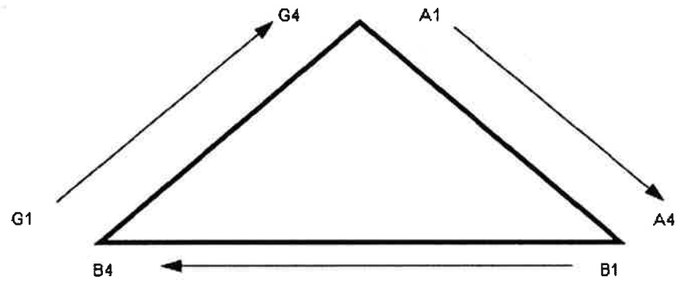
A-3

NV CABLES				
BAND	INDICATOR		PORT	COLOR
800-1	YEL	GRN	NV-1	GRN
1900-1	YEL	RED	NV-2	BLU
1900-2	YEL	BRN	NV-3	BRN
1900-3	YEL	BLU	NV-4	WHT
1900-4	YEL	SLT	NV-5	RED
800-2	YEL	ORG	NV-6	SLT
SPARE	YEL	WHT	NV-7	PPL
2500	YEL	PPL	NV-8	ORG

HYBRID	
HYBRID	COLOR
1	GRN
2	BLU
3	BRN
4	WHT
5	RED
6	SLT
7	PPL
8	ORG

2.5 Band			
2500 Radio 1			COLOR
YEL	WHT		GRN
YEL	WHT		BLU
YEL	WHT		BRN
YEL	WHT		WHT
YEL	WHT		RED
YEL	WHT		SLT
YEL	WHT		PPL
YEL	WHT		ORG

Figure 1: Antenna Orientation



NOTES:

1. ALL CABLES SHALL BE MARKED WITH 2" WIDE, UV STABILIZED, UL APPROVED TAPE.

2. THE FIRST RING SHALL BE CLOSEST TO THE END OF THE CABLE AND SPACED APPROXIMATELY 2" FROM THE END CONNECTOR, WEATHERPROOFING, OR BREAK-OUT CYLINDER. THERE SHALL BE A 1" SPACE BETWEEN EACH RING FOR THE CABLE IDENTIFIER, AND NO SPACES BETWEEN THE FREQUENCY BANDS.

3. A 2" GAP SHALL SEPARATE THE CABLE COLOR CODE FROM THE FREQUENCY COLOR CODE. THE 2" COLOR RINGS FOR THE FREQUENCY CODE SHALL BE PLACED NEXT TO EACH OTHER WITH NO SPACES.

4. THE 2" COLORED TAPE(S) SHALL EACH BE WRAPPED A MINIMUM OF 3 TIMES AROUND THE INDIVIDUAL CABLES, AND THE TAPE SHALL BE KEPT IN THE SAME LOCATION AS MUCH AS POSSIBLE.

5. SITES WITH MORE THAN FOUR (4) SECTORS WILL REQUIRE ADDITIONAL RINGS FOR EACH SECTOR, FOLLOWING THE PATTERN. HIGH CAPACITY SITES WILL USE THE NEXT COLOR IN THE SEQUENCE FOR ADDITIONAL CABLES IN EACH SECTOR.

6. HYBRID FIBER CABLE SHALL BE SECTOR IDENTIFIED INSIDE THE CABINET ON FREQUENCY BUNDLES, ON THE SEALTITE, ON THE MAIN LINE UPON EXIT OF SEALTITE, AND BEFORE AND AFTER THE BREAKOUT UNIT (MEDUSA), AS WELL AS BEFORE AND AFTER ANY ENTRANCE OR EXIT.

7. HFC "MAIN TRUNK" WILL NOT BE MARKED WITH THE FREQUENCY CODES, AS IT CONTAINS ALL FREQUENCIES.

8. INDIVIDUAL POWER PAIRS AND FIBER BUNDLES SHALL BE LABELED WITH BOTH THE CABLE AND FREQUENCY.

Sector	Cable	First Ring	Second Ring	Third Ring
1 Alpha	1	Green	No Tape	No Tape
1	2	Blue	No Tape	No Tape
1	3	Brown	No Tape	No Tape
1	4	White	No Tape	No Tape
1	5	Red	No Tape	No Tape
1	6	Grey	No Tape	No Tape
1	7	Purple	No Tape	No Tape
1	8	Orange	No Tape	No Tape
2 Beta	1	Green	Green	No Tape
2	2	Blue	Blue	No Tape
2	3	Brown	Brown	No Tape
2	4	White	White	No Tape
2	5	Red	Red	No Tape
2	6	Grey	Grey	No Tape
2	7	Purple	Purple	No Tape
2	8	Orange	Orange	No Tape
3 Gamma	1	Green	Green	Green
3	2	Blue	Blue	Blue
3	3	Brown	Brown	Brown
3	4	White	White	White
3	5	Red	Red	Red
3	6	Grey	Grey	Grey
3	7	Purple	Purple	Purple
3	8	Orange	Orange	Orange

NV FREQUENCY	INDICATOR	ID
800-1	YEL	GRN
1900-1	YEL	RED
1900-2	YEL	BRN
1900-3	YEL	BLU
1900-4	YEL	SLT
800-1	YEL	ORG
RESERVED	YEL	WHT
RESERVED	YEL	PPL

2.5 FREQUENCY	INDICATOR		ID
2500 -1	YEL	WHT	GRN
2500 -2	YEL	WHT	RED
2500 -3	YEL	WHT	BRN
2500 -4	YEL	WHT	BLU
2500 -5	YEL	WHT	SLT
2500 -6	YEL	WHT	ORG
2500 -7	YEL	WHT	WHT
2500 -8	YEL	WHT	PPL

Example – Sector 2, Cable 2, 800mhz Radio #1

Example – Sector 3, Cable 1, 1900mhz Radio #1

Example – Sector 1, Cable 4, 800 mhz Radio #1 and 1900mhz Radio #1

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Overland Park, Kansas 66251

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10 PRESIDENTIAL WAY
WOBURN, MA 01801

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

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	06/05/14	JM	0

SITE NAME:
SPECTRASITE/VERNON

SITE CASCADE:
CT70XC147

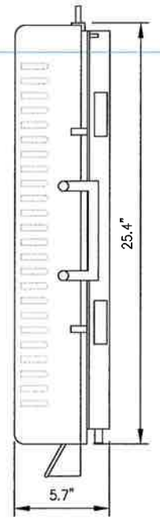
SITE ADDRESS:
777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

SHEET DESCRIPTION:
COLOR CODING AND NOTES

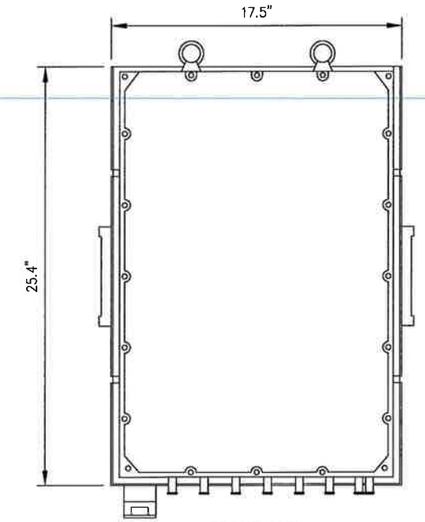
SHEET NUMBER:
A-4

RRU: ALCATEL LUCENT TD-RRH8X20

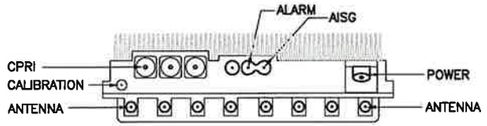
COLOR: LIGHT GREY
WEIGHT: 70 LBS.



SIDE VIEW



FRONT VIEW

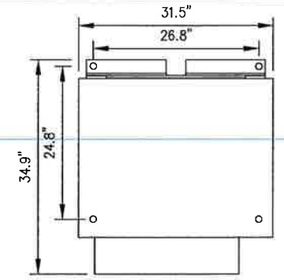


PLAN VIEW

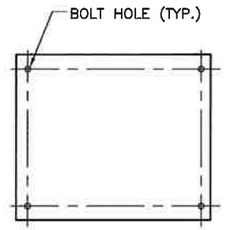
NOTES

COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRU'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRU PACKAGES IN THE RAIN.

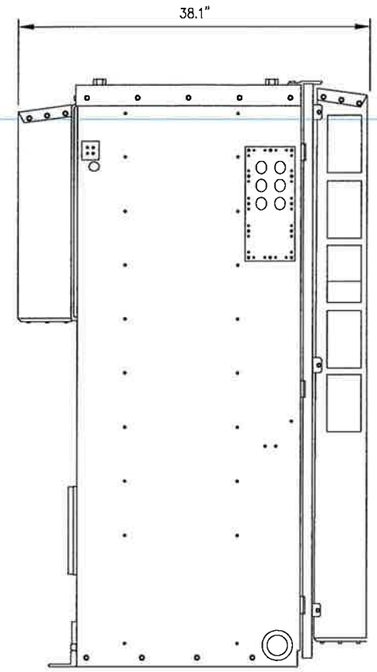
2.5 RRU	NO SCALE	1



BOTTOM VIEW



1. VERIFY BOLT HOLE SPACING WITH EQUIPMENT CUT SHEETS.
2. NEW EQUIPMENT CABINET TO BE MOUNTED TO EXISTING SUPPORT SURFACE WITH BOLT-DOWN SYSTEM PER MANUFACTURER'S SPECIFICATION AND FIELD DRILL HOLES THROUGH EXISTING STEEL BEAMS AS REQUIRED.
3. MAINTAIN A MINIMUM OF 1" DISTANCE FROM CENTER OF BOLT HOLE TO EDGE OF FLANGE.

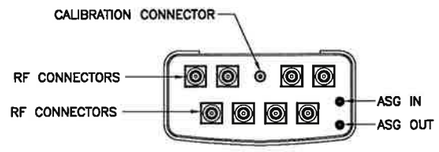


SIDE VIEW

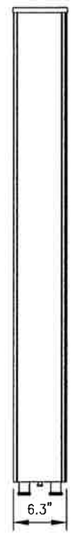
9929 GROWTH CABINET	NO SCALE	2

ANTENNA: RFS APXVTM14-C-I20

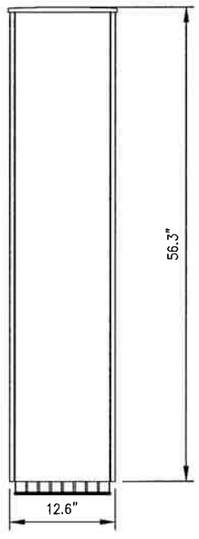
RADOME MATERIAL:	ASA
RADOME COLOR:	LIGHT GREY
DIMENSIONS, HxWxD.in(mim):	56.3"x12.6"x6.3" (1430x320x160mm)
WEIGHT:	52.9 lbs
CONNECTORS:	(8) 4.1/9.5 DIN FEMALE (1) NF – CALIBRATION CONNECTOR



PLAN VIEW



SIDE VIEW



FRONT VIEW

2.5 ANTENNA	NO SCALE	3

DETAIL NOT USED	NO SCALE	4

PLANS PREPARED FOR:

Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

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

JOB NUMBER 340-XXXX

MLA PARTNER:

AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	06/05/14	JM	0

SITE NAME:

SPECTRASITE/VERNON

SITE CASCADE:

CT70XC147

SITE ADDRESS:

777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

SHEET DESCRIPTION:

EQUIPMENT & MOUNTING DETAILS

SHEET NUMBER:

A-5

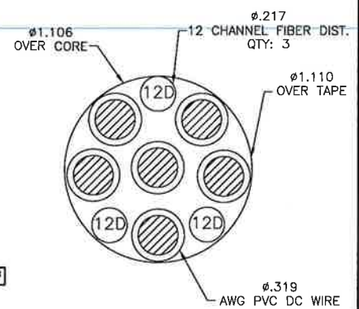
RFS HYBRIFLEX RISER CABLE SCHEDULE

Fiber Only (Existing DC Power)	**Hybrid cable** MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F	175 ft
	MN: HB058-M12-200F	200 ft
8 AWG Power	**Hybrid cable** MN: HB114-08U3M12-050F 3x 8 AWG power pairs, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 50 ft	50 ft
	MN: HB114-08U3M12-075F	75 ft
	MN: HB114-08U3M12-100F	100 ft
	MN: HB114-08U3M12-125F	125 ft
	MN: HB114-08U3M12-150F	150 ft
	MN: HB114-08U3M12-175F	175 ft
	MN: HB114-08U3M12-200F	200 ft *
6 AWG Power	**Hybrid cable** MN: HB114-13U3M12-225F 3x 6 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 225 ft	225 ft
	MN: HB114-13U3M12-250F	250 ft
	MN: HB114-13U3M12-275F	275 ft
	MN: HB114-13U3M12-300F	300 ft
4 AWG Power	**Hybrid cable** MN: HB114-21U3M12-325F 3x 4 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 325 ft	325 ft
	MN: HB114-21U3M12-350F	350 ft
	MN: HB114-21U3M12-375F	375 ft

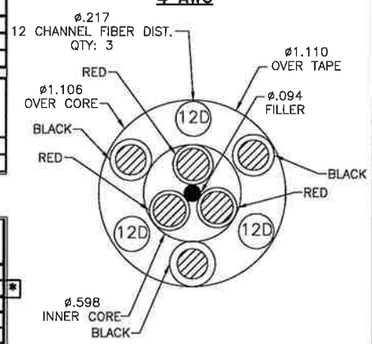
RFS HYBRIFLEX JUMPER CABLE SCHEDULE

Fiber Only	**Hybrid Jumper cable** MN: HBF012-M3-5F1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: HBF012-M3-10F1	10 ft
	MN: HBF012-M3-15F1	15 ft *
	MN: HBF012-M3-20F1	20 ft
	MN: HBF012-M3-25F1	25 ft
	MN: HBF012-M3-30F1	30 ft
8 AWG Power	**Hybrid Jumper cable** MN: HBF058-08U1M3-5F1 5 ft, 1x 8 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-08U1M3-10F1	10 ft
	MN: HBF058-08U1M3-15F1	15 ft
	MN: HBF058-08U1M3-20F1	20 ft
	MN: HBF058-08U1M3-25F1	25 ft
	MN: HBF058-08U1M3-30F1	30 ft
6 AWG Power	**Hybrid Jumper cable** MN: HBF058-13U1M3-5F1 5 ft, 1x 6 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-13U1M3-10F1	10 ft
	MN: HBF058-13U1M3-15F1	15 ft
	MN: HBF058-13U1M3-20F1	20 ft
	MN: HBF058-13U1M3-25F1	25 ft
	MN: HBF058-13U1M3-30F1	30 ft
4 AWG Power	**Hybrid Jumper cable** MN: HBF078-21U1M3-5F1 5 ft, 1x 4 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 7/8 cable	5 ft
	MN: HBF078-21U1M3-10F1	10 ft
	MN: HBF078-21U1M3-15F1	15 ft
	MN: HBF078-21U1M3-20F1	20 ft
	MN: HBF078-21U1M3-25F1	25 ft
	MN: HBF078-21U1M3-30F1	30 ft

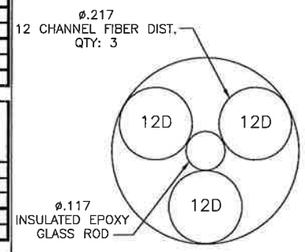
NOTE:
SPRINT CM TO CONFIRM HYBRID OR FIBER RISER CABLE AND HYBRID OR FIBER JUMPER CABLE MODEL NUMBERS IF HYBRID CABLES ARE REQUIRED BEFORE PREPARING BOM.



4 AWG

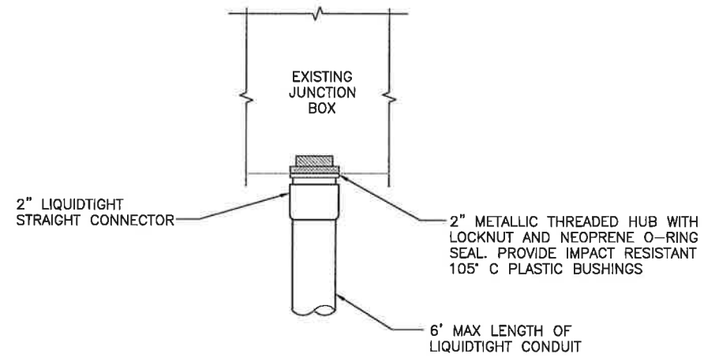


8 & 6 AWG



FIBER ONLY

2.5 CABLE CROSS SECTION DATA | NO SCALE | 1



FIBER JUNCTION BOX PENETRATION | NO SCALE | 2

DETAIL NOT USED | NO SCALE | 3

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Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 340-XXXX

MLA PARTNER:
AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN, MA 01801

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	06/05/14	JLW	0

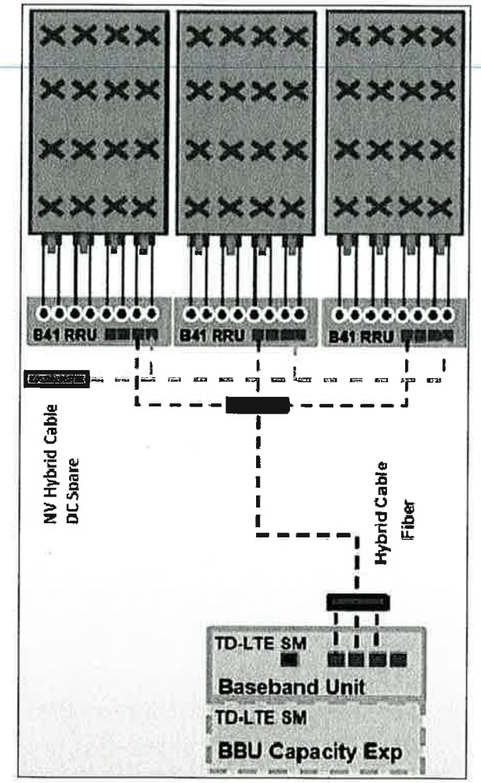
SITE NAME:
SPECTRASITE/VERNON

SITE CASCADE:
CT70XC147

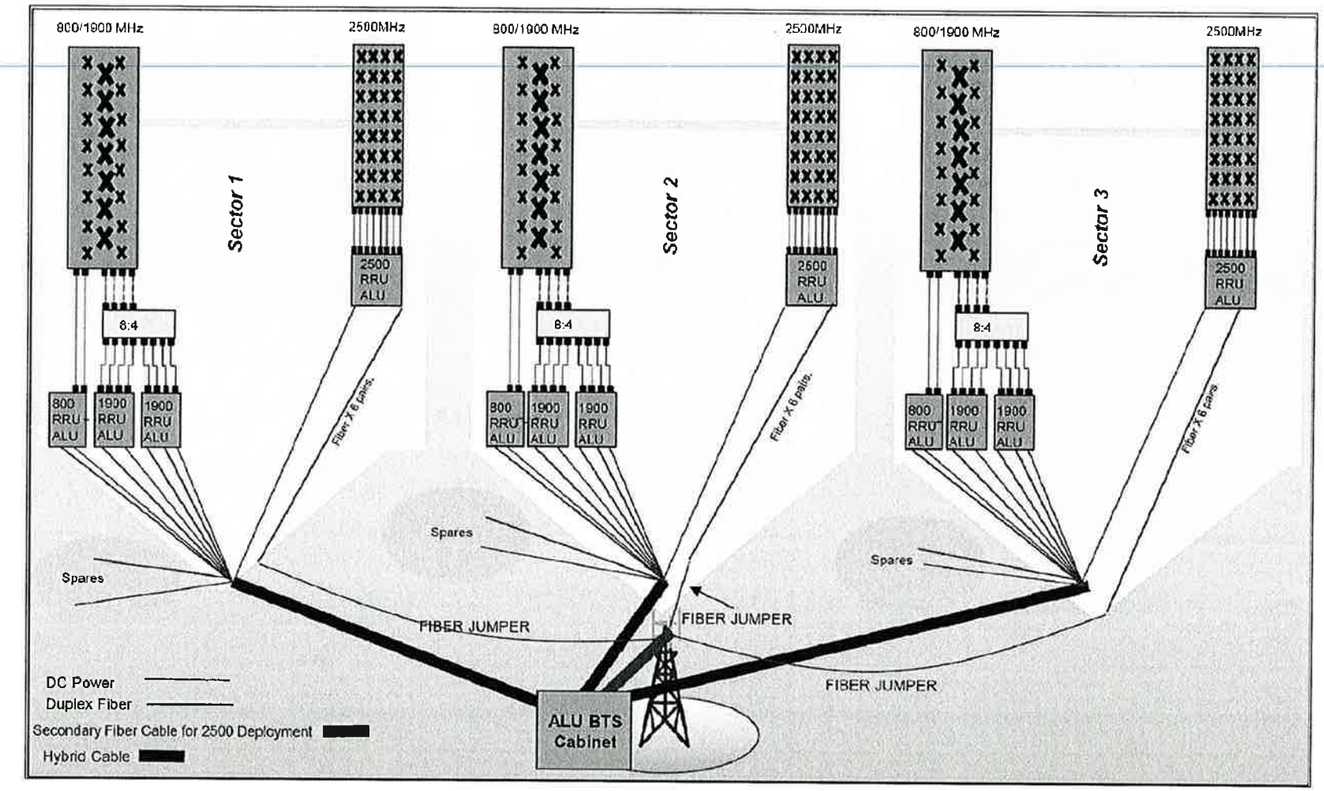
SITE ADDRESS:
777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

SHEET DESCRIPTION:
CIVIL DETAILS

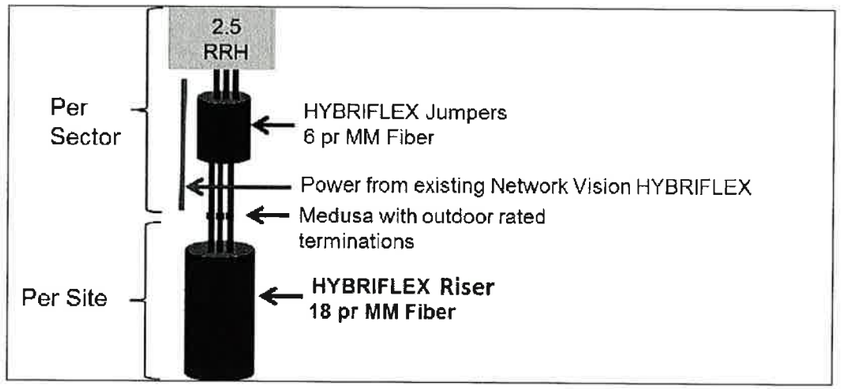
SHEET NUMBER:
A-6



ALU 2.5 ALU SCENARIO 1



RAN WIRING DIAGRAM



RF 2.5 ALU SCENARIO 1

PLUMBING DIAGRAM | NO SCALE | 1

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VERNON ROCKVILLE, CT 06066

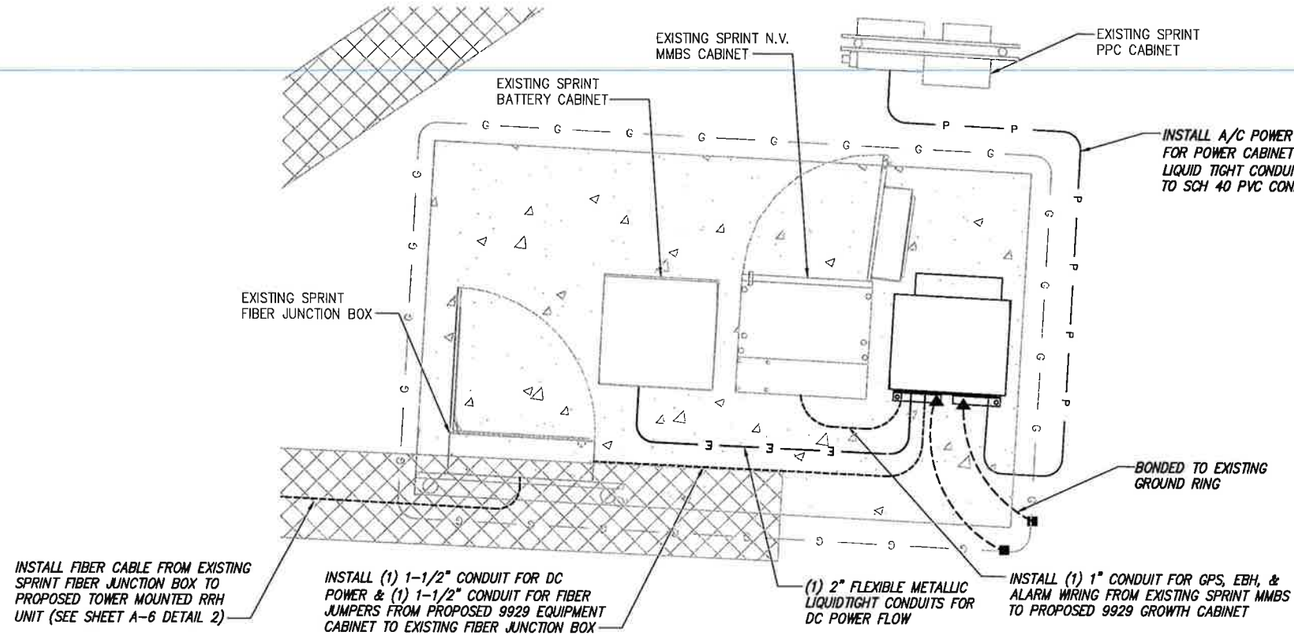
SHEET DESCRIPTION:

PLUMBING DIAGRAM

SHEET NUMBER:

A-7

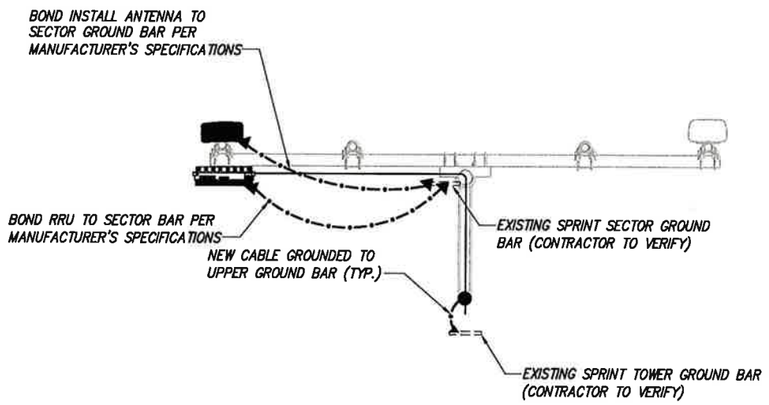
NOTE:
CONTRACTOR IS TO ENSURE THE INSTALLATION INSTRUCTIONS FOR EACH CABINET ARE FOLLOWED AND THAT THE MANUFACTURER'S REQUIREMENTS ARE MET.



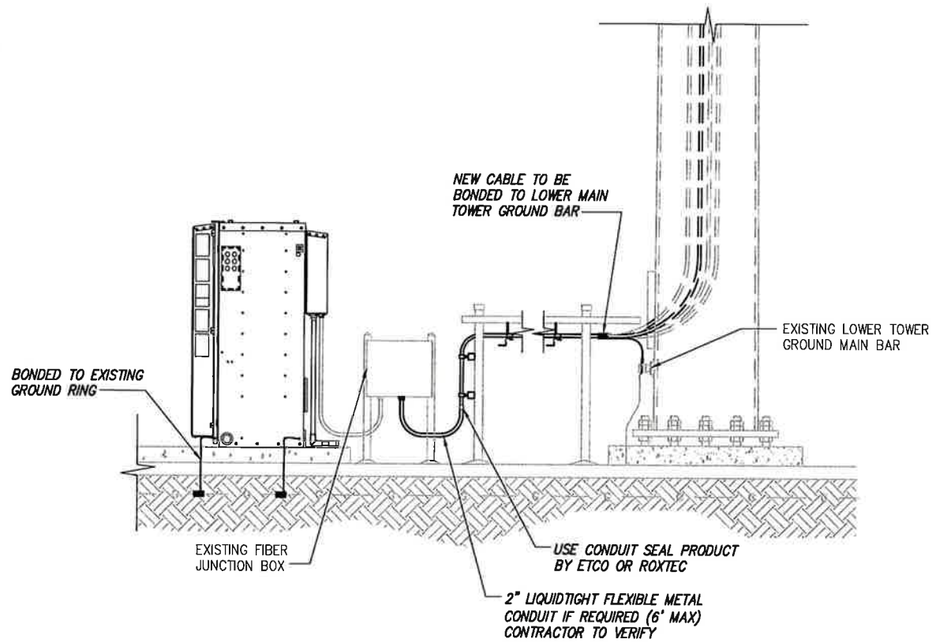
LEGEND:

- G — EXISTING GROUND RING
- ■ CADWELD CONNECTION (EXOTHERMIC WELD)
- ▲ MECHANICAL CONNECTION
- ⊗ GROUND ROD
- ● CABLE GROUND KIT

ELECTRICAL AND GROUNDING PLAN — NO SCALE — 1



TYPICAL ANTENNA GROUNDING PLAN — NO SCALE — 2



TYPICAL EQUIPMENT GROUNDING PLAN (ELEVATION) — NO SCALE — 3

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SITE ADDRESS:

777 TALCOTVILLE ROAD
VERNON ROCKVILLE, CT 06066

SHEET DESCRIPTION:

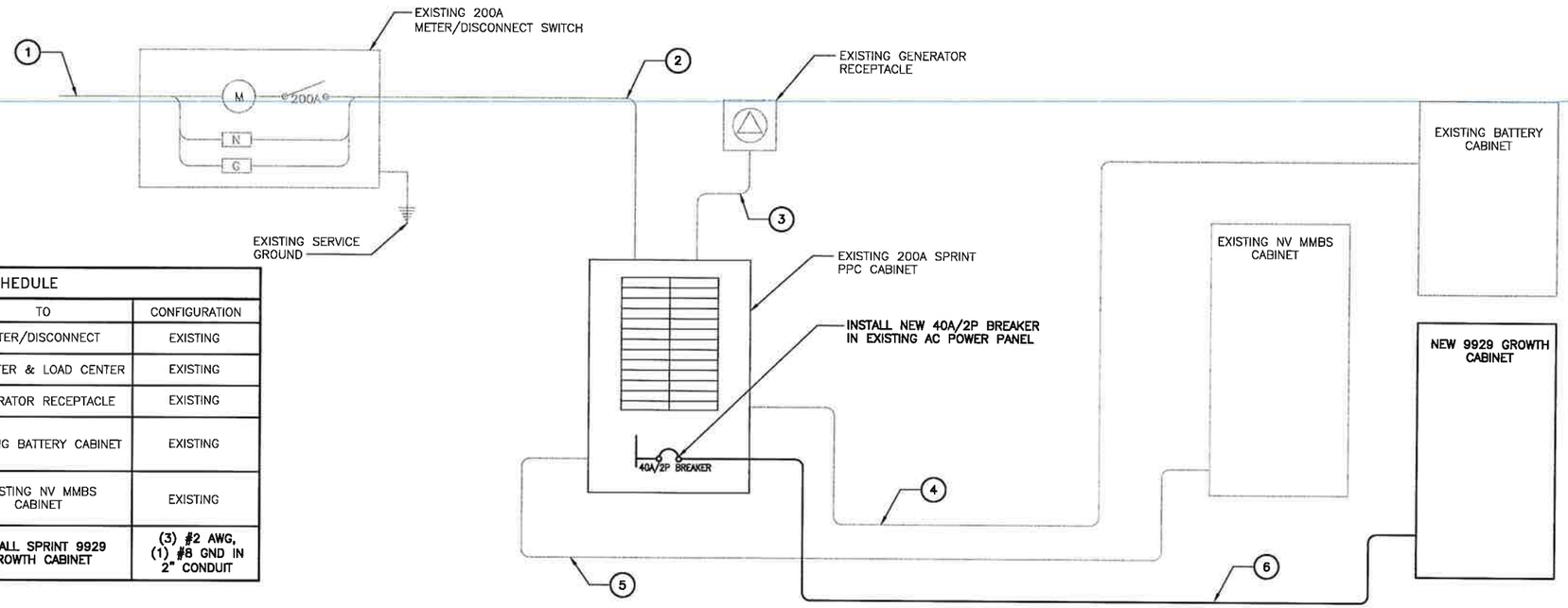
ELECTRICAL & GROUNDING PLAN

SHEET NUMBER:

E-1

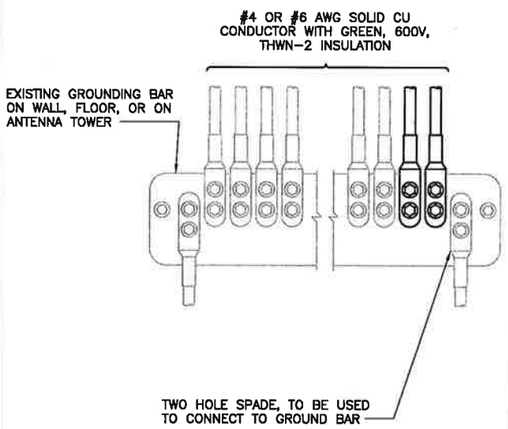
NOTES

GC SHALL REFERENCE ALL SPECS FOR "CONNECTING THE POWER SUPPLY" OF THE NEW INSTALLATION DOCUMENTS, FOR ALL CONNECTION SPECIFICATIONS.



CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
1	UTILITY SOURCE	METER/DISCONNECT	EXISTING
2	METER/DISCONNECT	TRANSFER & LOAD CENTER	EXISTING
3	TRANSFER & LOAD CENTER	GENERATOR RECEPTACLE	EXISTING
4	TRANSFER & LOAD CENTER	EXISTING BATTERY CABINET	EXISTING
5	TRANSFER & LOAD CENTER	EXISTING NV MMBS CABINET	EXISTING
6	TRANSFER & LOAD CENTER	INSTALL SPRINT 9929 GROWTH CABINET	(3) #2 AWG, (1) #8 GND IN 2" CONDUIT

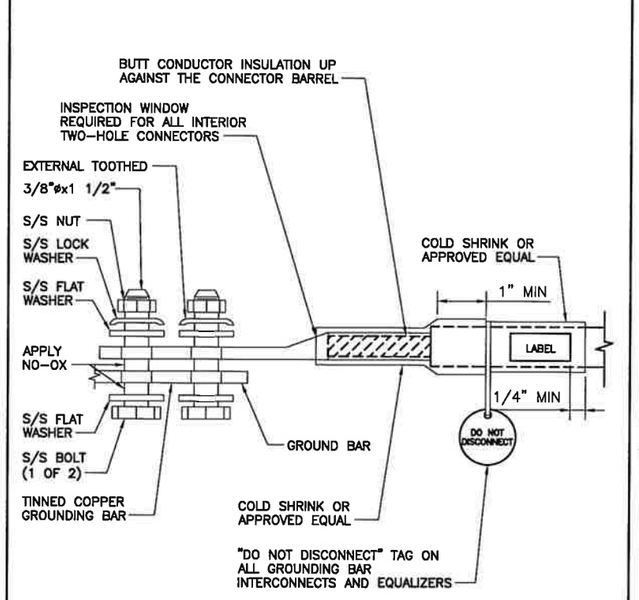
ELECTRICAL ONE-LINE DIAGRAM | NO SCALE | 1



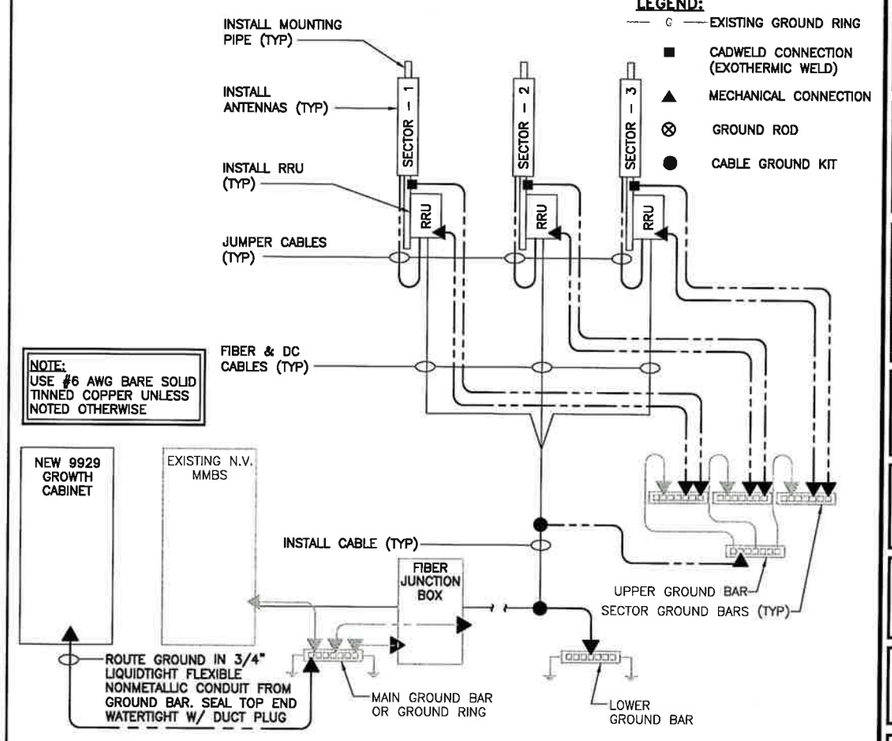
NOTES

1. APPLY NO-OX TO LUG AND BAR CONTACT SURFACE. DO NOT COAT INLINE LUG.
2. IF STOLEN GROUND BARS ARE ENCOUNTERED, CONTACT SPRINT CM FOR REPLACEMENT THREADED ROD KIT.

INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR | NO SCALE | 2



TWO HOLE LUG | NO SCALE | 3



GROUNDING RISER DIAGRAM | NO SCALE | 4

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SHEET DESCRIPTION:

ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:

E-2