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September 3, 2014

Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051
Attn: Ms. Melanie Bachman, Executive Director

Re: 150 Willow Street, Hamden, CT

Dear Ms. Bachman,

On behalf of Sprint Nextel Corporation ("Sprint"), enclosed for filing are an original and two (2) copies of Sprint's Notice of Exempt Modification for Proposed Modifications to an Existing Telecommunications Facility located at the above-referenced site.

I also enclose herewith a check in the amount of $625.00 representing the fee for the Notice of Exempt Modification.

If you have any questions, please feel free to contact me.

Thank you,

By: _____

Name: David Weisman
Vertical Development LLC, an authorized representative of Sprint

Vertical Development LLC
20 Commercial Street
Branford, CT 06405
Phone – 401-743-9011
Fax – 401-633-6202
DWeisman@verticaldevelopmentllc.com

CC: Mr. Scott D. Jackson, Mayor
Hamden Town Hall
2750 Dixwell Avenue
Hamden, CT 06518

siting.council@ct.gov (electronic copy)

Notice of Exempt Modification
150 Willow Street, Hamden, CT

Sprint Corporation ("Sprint") submits this Notice of Exempt Modification to the Connecticut Siting Council ("Council") pursuant to Sections 16-50j-73 and 16-50j-72(b) of the Regulations of Connecticut State Agencies ("Regulations") in connection with Sprint's planned modification of antennas and associated equipment on an existing 160' monopole tower located at 150 Willow Street in the Town of Hamden, CT. More particularly, Sprint plans to upgrade this site by adding 2.5 GHz technology to its facilities. The proposed modifications will not increase the tower height, cause a significant adverse change or alteration in the physical or environmental characteristics of the site, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six (6) decibels, add radio frequency sending or receiving capability which increases the total radio frequency electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996, as amended, and the State Department of Energy and Environmental Protection, pursuant to Section 22a-162 of the Connecticut General Statutes, or impair the structural integrity of the facility, as determined in a certification provided by a professional engineer licensed in Connecticut.

To better meet the growing voice and data demands of its wireless customers, Sprint is upgrading their network nationwide to include 2.5 GHz technology, which will provide faster service and better overall performance. Pursuant to the 2.5 GHz technology upgrade at this site, Sprint add panel antennas, install RRHs, and install related equipment to its equipment area within the fenced tower compound.

The 160' monopole tower located at 150 Willow Street in the Town of Hamden (lat. 41° 26' 57.81", long. -72° 54' 16.46") is owned by Sprint. It is in

a 2,500 square foot fenced compound within a 10,000 square foot area. Sprint currently has six (6) antennas (two (2) per sector) with a centerline of 157' installed on the tower. Sprint's base station equipment is located adjacent to the base of the tower within the fenced compound. A site plan depicting this is attached.

Sprint plans to remove three (3) panel antennas and replace them with three (3) RFS APXVTM14-C-120 antennas, one (1) per sector. Connected to each new RFS antenna will be one (1) ALU TD-RRH8X20 RRH, which will be located behind the antenna. The height of the tower will not need to be increased. Sprint also plans to install four (4) batteries in the existing BBU cabinet, add a new equipment cabinet and one (1) fiber transmission cable on the existing Ice Bridge all within Sprint's leased Premises. The compound's boundaries will not need to be extended. The proposed modifications will not cause a significant adverse change or alteration in the physical or environmental characteristics of the site, since it is already a telecommunications installation and the modifications will be compatible with this. Other than brief, construction-related noise, these modifications will not increase noise levels at the tower site boundary by six (6) decibels.

The proposed modifications will not add radio frequency sending or receives prepared by EBI Consulting indicated that the proposed final configuration (including other carriers on the tower) will emit 25.09% of the allowable FCC established general public limits sampled at the ground level (see the 2nd and the 6th page of Radio Frequency FCC Regulatory Compliance Maximum Permissible Exposure (MPE) Assessment dated August 23, 2014). Emissions values for additional carriers were based upon values listed in Connecticut Siting Council active database (see the 2 and 6 page of Radio Frequency FCC Regulatory Compliance Maximum Permissible Exposure (MPE) Assessment dated August 23, 2014). The information used in the report was analyzed as a percentage of current Maximum Permissible Exposure (%MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C94.1 (see

the 2nd page of the Radio Frequency FCC Regulatory Compliance Maximum Permissible Exposure (MPE) assessment dated August 23, 2014).

The proposed modifications will not impair the structural integrity of the facility. Sprint commissioned Infinigy to perform a structural analysis of the tower to verify that it can support the proposed loading. The structure and foundation were found to meet the specified TIA requirements and deemed adequate to support the existing and proposed loading, and was rated at 47% (see the first page of Tower Analysis Report dated June 27, 2014.)

In conclusion, Sprint's proposed modifications do not constitute a modification subject to the Council's review because Sprint will not change the height of the tower, will not extend the boundaries of the compound, will not cause a significant adverse change or alteration in the physical or environmental characteristics of the site, will not increase the noise levels at the site, will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards, and will not impair the structural integrity of the facility. Therefore, Sprint respectfully requests that the Council acknowledge that this Notice of Exempt Modification meets the Council's exemption criteria.

EBI Consulting
environmental | engineering | due diligence

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

Sprint Existing Facility

Site ID: CT54XC773

Hamden Fish and Game Club

150 Willow Street
Hamden, CT 06518

August 23, 2014

EBI Project Number: 62144366

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

EBI Consulting
environmental | engineering | due diligence

August 23, 2014

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

Re: Radio Frequency Maximum Permissible Exposure (MPE) Assessment for Site:
CT54XC773 - Hamden Fish and Game Club

Site Total: 25.09% - MPE% in full compliance

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at **150 Willow Street, Hamden, 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 **150 Willow Street, Hamden, 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) 2 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)
7) The antennas used in this modeling are the 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 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.

8) The antenna mounting height centerline for the proposed antennas is **157.5 feet** above ground level (AGL).

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

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

Site ID	CT54XC773 - Hamden Fish and Game Club
Site Addresss	150 Willow Street, Hamden, CT, 06518
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	2	40	4.9	157.5	151.5	1/2 "	0.5	0	110.17	0.17%
1a	RFS	APXV9ERR18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	1.9	157.5	151.5	1/2 "	0.5	0	27.61	0.08%
1B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	5.9	157.5	151.5	1/2 "	0.5	0	138.69	0.38%
														Sector total Power Density Value:		0.63%

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	APXV9ERR18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	4.9	157.5	151.5	1/2 "	0.5	0	110.17	0.17%
2a	RFS	APXV9ERR18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	1.9	157.5	151.5	1/2 "	0.5	0	27.61	0.08%
2B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	5.9	157.5	151.5	1/2 "	0.5	0	138.69	0.38%
														Sector total Power Density Value:		0.63%

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	APXV9ERR18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	4.9	157.5	151.5	1/2 "	0.5	0	110.17	0.17%
3a	RFS	APXV9ERR18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	1.9	157.5	151.5	1/2 "	0.5	0	27.61	0.08%
3B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	5.9	157.5	151.5	1/2 "	0.5	0	138.69	0.38%
														Sector total Power Density Value:		0.63%

Site Composite MPE %	
Carrier	MPE %
Sprint	1.90%
MetroPCS	3.63%
Verizon Wireless	19.56%
Total Site MPE %	**25.09%**

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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 **1.90% (0.63% from sector 1, 0.63% from sector 2 and 0.63% 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 **25.09%** 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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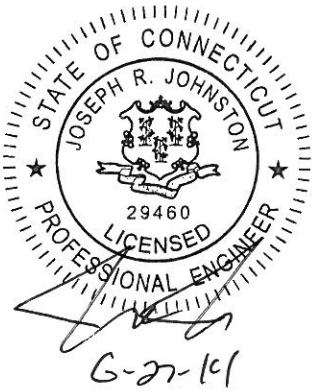
Tower Analysis Report

June 27, 2014

Site Name	CT54XC773
Infinigy Job Number	333-000
Client	Sprint
Carrier	Sprint
Site Location	150 Willow St, Hamden, CT 06518 New Haven County 41° 26' 57.81" N 72° 54' 16.46" W
Structure Type	160' EEI Monopole
Structural Usage Ratio	**47%**
Overall Result	**PASS**

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA code requirements. The tower is therefore deemed adequate to support the existing and proposed loading as listed in this report.



Charles T. Robertson III
Project Engineer - Infinigy

Contents

Introduction

Infinigy Engineering has been requested to perform a structural analysis on the existing 160' EEI Monopole. All supporting documents have been obtained from Sprint and are assumed to be accurate and applicable to this site. The tower was analyzed using tnxTower version 6.1.3.1 tower analysis software.

Supporting Documentation

EEI Tower Drawings	EEI Project No. 14977, dated July 17, 2007
Construction Drawings	Infinigy Engineering Job # 286-064, dated July 16, 2012
PE Letter	Infinigy Engineering Job # 286-064, dated June 15, 2012
Construction Drawings	Infinigy Engineering Job # 333-000, dated June 3, 2014

Analysis Code Requirements

Wind Speed	105 mph (3-Second Gust)
Wind Speed w/ ice	50 mph (3-Second Gust) w/ ¾" ice
TIA Revision	ANSI/TIA-222-G
Adopted IBC	2003 IBC w/ 2005 CT Supplement and 2013 CT Amendment
Structure Class	2
Exposure Category	B
Topographic Category	1
Calculated Crest Height	0 ft

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA code requirements. The tower is therefore deemed adequate to support the existing and proposed loading as listed in this report.

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

Charles T. Robertson III
Project Engineer - Infinigy
2255 Sewell Mill Rd Suite 130
Marietta, GA 30062
Office: 678.444.4463
crobertson@infinigy.com

Existing and Reserved Loading

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax& Lines	Carrier
157.5	3	RFS APXV9ERR18-C-A20 ALU 800 MHz RRH ALU 1900 MHz RRH	Platform w/ Handrails	(3) 1-5/8" Hybriflex	Sprint
147.0	12	Panel Antennas	Platform	*(12) 1-5/8"	Verizon
137.0	3	Panel Antennas	Pipe	*(12) 1-5/8"	--

***Assumed (12) 1-5/8" Coax at 137' and 147' for analysis**

Proposed Loading

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax& Lines	Carrier
157.5	3	RFS APXVTM14-C-120 ALU TD-RRH8X20	Platform w/ Handrails	(1) 1-1/4" Fiber	Sprint

Structure Usages

Pole (L1)	46.9	Pass
Base Plate	26.9	Pass
RATING =	**46.9**	**Pass**

Foundation Reactions

Reaction Data	Design Reactions	Analysis Reactions	Result
Moment (kip-ft)	7151.4	2679.8	38%
Axial (kip)	68.8	50.1	73%
Shear (kip)	61.4	25.3	41%

- Tower base reactions are acceptable when compared to the original design reactions.

Deflection, Twist, and Sway

Antenna Elevation (ft)	Deflection (in)	Sway (^{o})	Twist (^{o})
157.5	9.14	0.03	0.70

*Per ANSI/TIA-222-G Section 2.8.2 maximum serviceability structural deflection limit is 3% of structure height.
*Per ANSI/TIA-222-G Section 2.8.2 maximum serviceability structural twist and sway limit is 4 degrees.
*Per ANSI/TIA-222-G Section 2.8.3 deflection, Twist, and sway values were calculated using a basic 3-second gust wind speed of 60 mph.
*It is the responsibility of the client to ensure their proposed and/or existing equipment will meet ANSI/TIA-222-G Annex D or other appropriate microwave signal degradation limits based on the provided values above.

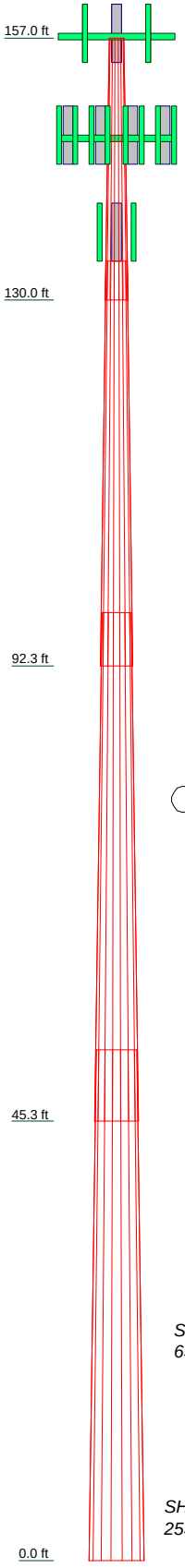
Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. If actual conditions differ from those described in this report we should be notified immediately to complete a revised evaluation.

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

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

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	27.00	18	0.1875	4.00	18.5000	27.4200		1245.1
2	41.75	18	0.3750	5.50	25.7235	39.3900		5441.8
3	52.42	18	0.4375	7.33	36.8396	54.0200	A572-65	11144.4
4	52.66	18	0.4375		50.7415	68.0000		14665.2
								32496.5



ALL REACTIONS ARE FACTORED

AXIAL 72530 lb

SHEAR 6302 lb — *MOMENT 661017 lb-ft*

TORQUE 3267 lb-ft
50 mph WIND - 0.7500 in ICE

AXIAL 50047 lb

SHEAR 25342 lb — *MOMENT 2679810 lb-ft*

TORQUE 14179 lb-ft
REACTIONS - 105 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Angle Platform w/ Handrails (Sprint)	157.5	TD-RRH8X20 (Sprint)	157.5
APXV9ERR18-C-A20 (Sprint)	157.5	TD-RRH8X20 (Sprint)	157.5
APXV9ERR18-C-A20 (Sprint)	157.5	TD-RRH8X20 (Sprint)	157.5
APXV9ERR18-C-A20 (Sprint)	157.5	Angle Low Profile Platform (Verizon)	147
800 MHz RRH (Sprint)	157.5	(4) 72" x 12" Panel (Verizon)	147
800 MHz RRH (Sprint)	157.5	(4) 72" x 12" Panel (Verizon)	147
800 MHz RRH (Sprint)	157.5	(4) 72" x 12" Panel (Verizon)	147
1900 MHz RRH (Sprint)	157.5	Antenna Pipe Mount	137
1900 MHz RRH (Sprint)	157.5	72" x 12" Panel	137
1900 MHz RRH (Sprint)	157.5	Antenna Pipe Mount	137
APXVTM14-C-120 (Sprint)	157.5	72" x 12" Panel	137
APXVTM14-C-120 (Sprint)	157.5	Antenna Pipe Mount	137
APXVTM14-C-120 (Sprint)	157.5	72" x 12" Panel	137

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 105 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 46.9%

Infinigy Engineering, PLLC.
2255 Sewell Mill Rd
Marietta, GA 30062
Phone: (678) 444-4463
FAX:

Job: ***333-000***			
Project: ***CT54XC773***			
Client: Sprint	Drawn by: Charles T. Robertson III	App'd:	
Code: TIA-222-G	Date: 06/26/14	Scale: NTS	
Path: C:\Users\crobertson\Desktop\CT54XC773.eri		Dwg No. E-1	

Tower Input Data

There is a pole section.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

- Tower is located in New Haven County, Connecticut.
- Basic wind speed of 105 mph.
- Structure Class II.
- Exposure Category B.
- Topographic Category 1.
- Crest Height 0.00 ft.
- Nominal ice thickness of 0.7500 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Treat Feedline Bundles As Cylinder
	Consider Moments - Horizontals		Assume Legs Pinned		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Calculate Redundant Bracing Forces
	Use Moment Magnification	√	Use Clear Spans For Wind Area		Ignore Redundant Members in FEA
√	Use Code Stress Ratios	√	Use Clear Spans For KL/r		SR Leg Bolts Resist Compression
√	Use Code Safety Factors - Guys	√	Retension Guys To Initial Tension	√	All Leg Panels Have Same Allowable
	Escalate Ice		Bypass Mast Stability Checks		Offset Girt At Foundation
	Always Use Max Kz	√	Use Azimuth Dish Coefficients	√	Consider Feedline Torque
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Include Angle Block Shear Check
√	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Poles
	Leg Bolts Are At Top Of Section		SR Members Have Cut Ends		Include Shear-Torsion Interaction
	Secondary Horizontal Braces Leg		Sort Capacity Reports By Component		Always Use Sub-Critical Flow
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Use Top Mounted Sockets
	Add IBC .6D+W Combination		Use TIA-222-G Tension Splice Capacity Exemption		

Tapered Pole Section Geometry

Section	*Elevation* *ft*	*Section Length* *ft*	*Splice Length* *ft*	*Number of Sides*	*Top Diameter* *in*	*Bottom Diameter* *in*	*Wall Thickness* *in*	*Bend Radius* *in*	*Pole Grade*
L1	157.00-130.00	27.00	4.00	18	18.5000	27.4200	0.1875	0.7500	A572-65 (65 ksi)
L2	130.00-92.25	41.75	5.50	18	25.7235	39.3900	0.3750	1.5000	A572-65

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L3	92.25-45.33	52.42	7.33	18	36.8396	54.0200	0.4375	1.7500	(65 ksi) A572-65 (65 ksi)
L4	45.33-0.00	52.66		18	50.7415	68.0000	0.4375	1.7500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	18.7854	10.8982	461.7305	6.5009	9.3980	49.1307	924.0685	5.4501	2.9260	15.605
	27.8430	16.2067	1518.4769	9.6675	13.9294	109.0127	3038.9518	8.1049	4.4959	23.978
L2	27.4499	30.1711	2449.2515	8.9987	13.0675	187.4301	4901.7258	15.0884	3.8673	10.313
	39.9977	46.4376	8930.3910	13.8503	20.0101	446.2937	17872.5328	23.2232	6.2726	16.727
L3	39.2383	50.5489	8462.5773	12.9228	18.7145	452.1929	16936.2898	25.2793	5.7138	13.06
	54.8533	74.4060	26989.2830	19.0218	27.4422	983.4970	54014.0793	37.2101	8.7375	19.971
L4	53.9646	69.8534	22332.1743	17.8579	25.7767	866.3705	44693.7338	34.9334	8.1605	18.653
	69.0490	93.8190	54105.2694	23.9847	34.5440	1566.2711	108281.7319	46.9184	11.1980	25.595

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
L1 157.00-130.00				1	1	1		
L2 130.00-92.25				1	1	1		
L3 92.25-45.33				1	1	1		
L4 45.33-0.00				1	1	1		

Monopole Base Plate Data

Base Plate Data	
Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615-75
Anchor bolt size	2.2500 in
Number of bolts	36
Embedment length	79.2000 in
f'_c	4 ksi
Grout space	2.0000 in
Base plate grade	A572-60
Base plate thickness	3.0000 in
Bolt circle diameter	76.0000 in
Outer diameter	82.0000 in
Inner diameter	58.0000 in
Base plate type	Plain Plate

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
***										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
1 5/8	A	No	Inside Pole	157.00 - 0.00	3	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
***								
1 1/4	A	No	Inside Pole	157.00 - 0.00	1	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66
***								
1 5/8	A	No	Inside Pole	147.00 - 0.00	12	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
***								
1 5/8	A	No	Inside Pole	137.00 - 0.00	12	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
***								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	157.00-130.00	A	0.000	0.000	0.000	0.000	401.58
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L2	130.00-92.25	A	0.000	0.000	0.000	0.000	1084.93
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L3	92.25-45.33	A	0.000	0.000	0.000	0.000	1348.48
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L4	45.33-0.00	A	0.000	0.000	0.000	0.000	1302.78
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	157.00-130.00	A	1.736	0.000	0.000	0.000	0.000	401.58
		B		0.000	0.000	0.000	0.000	0.00

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
		C		0.000	0.000	0.000	0.000	0.00
L2	130.00-92.25	A	1.692	0.000	0.000	0.000	0.000	1084.93
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L3	92.25-45.33	A	1.613	0.000	0.000	0.000	0.000	1348.48
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L4	45.33-0.00	A	1.440	0.000	0.000	0.000	0.000	1302.78
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	157.00-130.00	0.0000	0.0000	0.0000	0.0000
L2	130.00-92.25	0.0000	0.0000	0.0000	0.0000
L3	92.25-45.33	0.0000	0.0000	0.0000	0.0000
L4	45.33-0.00	0.0000	0.0000	0.0000	0.0000

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Angle Platform w/ Handrails (Sprint)	A	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	42.40 48.40 54.40	42.40 48.40 54.40	2000.00 2450.00 2900.00
***									
APXV9ERR18-C-A20 (Sprint)	A	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	5.28 5.74 6.20	8.26 8.81 9.36	57.00 106.52 162.12
APXV9ERR18-C-A20 (Sprint)	B	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	5.28 5.74 6.20	8.26 8.81 9.36	57.00 106.52 162.12
APXV9ERR18-C-A20 (Sprint)	C	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	5.28 5.74 6.20	8.26 8.81 9.36	57.00 106.52 162.12
***									

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
800 MHz RRH (Sprint)	A	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	2.25 2.46 2.68	2.40 2.61 2.83	64.00 86.12 111.30
800 MHz RRH (Sprint)	B	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	2.25 2.46 2.68	2.40 2.61 2.83	64.00 86.12 111.30
800 MHz RRH (Sprint)	C	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	2.25 2.46 2.68	2.40 2.61 2.83	64.00 86.12 111.30
***									
1900 MHz RRH (Sprint)	A	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	2.73 2.96 3.20	1.45 1.64 1.84	44.09 62.32 83.43
1900 MHz RRH (Sprint)	B	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	2.73 2.96 3.20	1.45 1.64 1.84	44.09 62.32 83.43
1900 MHz RRH (Sprint)	C	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	2.73 2.96 3.20	1.45 1.64 1.84	44.09 62.32 83.43
***									
APXVTM14-C-120 (Sprint)	A	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	6.53 6.96 7.40	3.38 3.72 4.07	52.90 90.49 132.96
APXVTM14-C-120 (Sprint)	B	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	6.53 6.96 7.40	3.38 3.72 4.07	52.90 90.49 132.96
APXVTM14-C-120 (Sprint)	C	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	6.53 6.96 7.40	3.38 3.72 4.07	52.90 90.49 132.96
***									
TD-RRH8X20 (Sprint)	A	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	4.32 4.60 4.89	1.41 1.61 1.83	66.14 90.08 117.36
TD-RRH8X20 (Sprint)	B	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	4.32 4.60 4.89	1.41 1.61 1.83	66.14 90.08 117.36
TD-RRH8X20 (Sprint)	C	From Leg	3.00 0.00 0.00	0.0000	157.50	No Ice 1/2" Ice 1" Ice	4.32 4.60 4.89	1.41 1.61 1.83	66.14 90.08 117.36
*** *** ***									
Angle Low Profile Platform (Verizon)	A	From Leg	3.00 0.00 0.00	0.0000	147.00	No Ice 1/2" Ice 1" Ice	26.10 31.60 37.10	26.10 31.60 37.10	1500.00 1700.00 1900.00
***									
(4) 72" x 12" Panel (Verizon)	A	From Leg	3.00 0.00 0.00	0.0000	147.00	No Ice 1/2" Ice 1" Ice	8.40 8.95 9.51	4.70 5.15 5.60	45.00 92.28 145.59
(4) 72" x 12" Panel (Verizon)	B	From Leg	3.00 0.00 0.00	0.0000	147.00	No Ice 1/2" Ice 1" Ice	8.40 8.95 9.51	4.70 5.15 5.60	45.00 92.28 145.59
(4) 72" x 12" Panel (Verizon)	C	From Leg	3.00 0.00 0.00	0.0000	147.00	No Ice 1/2" Ice 1" Ice	8.40 8.95 9.51	4.70 5.15 5.60	45.00 92.28 145.59
*** ***									

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
***									
Antenna Pipe Mount	A	From Leg	1.00	0.0000	137.00	No Ice	0.87	0.87	14.60
			0.00			1/2" Ice	1.12	1.12	25.30
			0.00			1" Ice	1.39	1.39	37.43
72" x 12" Panel	A	From Leg	1.00	0.0000	137.00	No Ice	8.40	4.70	45.00
			0.00			1/2" Ice	8.95	5.15	92.28
			0.00			1" Ice	9.51	5.60	145.59
Antenna Pipe Mount	B	From Leg	1.00	0.0000	137.00	No Ice	0.87	0.87	14.60
			0.00			1/2" Ice	1.12	1.12	25.30
			0.00			1" Ice	1.39	1.39	37.43
72" x 12" Panel	B	From Leg	1.00	0.0000	137.00	No Ice	8.40	4.70	45.00
			0.00			1/2" Ice	8.95	5.15	92.28
			0.00			1" Ice	9.51	5.60	145.59
Antenna Pipe Mount	C	From Leg	1.00	0.0000	137.00	No Ice	0.87	0.87	14.60
			0.00			1/2" Ice	1.12	1.12	25.30
			0.00			1" Ice	1.39	1.39	37.43
72" x 12" Panel	C	From Leg	1.00	0.0000	137.00	No Ice	8.40	4.70	45.00
			0.00			1/2" Ice	8.95	5.15	92.28
			0.00			1" Ice	9.51	5.60	145.59

Force Totals

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Overturning Moments, M_x lb-ft	Sum of Overturning Moments, M_z lb-ft	Sum of Torques lb-ft
Leg Weight	32496.52					
Bracing Weight	0.00					
Total Member Self-Weight	32496.52			-13404.40	0.00	
Total Weight	41705.49			-13404.40	0.00	
Wind 0 deg - No Ice		0.00	-15838.80	-1644258.93	0.00	0.00
Wind 30 deg - No Ice		7919.40	-13716.80	-1425765.85	-815427.26	-4312.63
Wind 60 deg - No Ice		13716.80	-7919.40	-828831.66	-1412361.45	-7469.69
Wind 90 deg - No Ice		15838.80	0.00	-13404.40	-1630854.53	-8625.25
Wind 120 deg - No Ice		13716.80	7919.40	802022.87	-1412361.45	-7469.69
Wind 150 deg - No Ice		7919.40	13716.80	1398957.05	-815427.26	-4312.63
Wind 180 deg - No Ice		0.00	15838.80	1617450.13	0.00	0.00
Wind 210 deg - No Ice		-7919.40	13716.80	1398957.05	815427.26	4312.63
Wind 240 deg - No Ice		-13716.80	7919.40	802022.87	1412361.45	7469.69
Wind 270 deg - No Ice		-15838.80	0.00	-13404.40	1630854.53	8625.25
Wind 300 deg - No Ice		-13716.80	-7919.40	-828831.66	1412361.45	7469.69
Wind 330 deg - No Ice		-7919.40	-13716.80	-1425765.85	815427.26	4312.63
Member Ice	13655.32					
Total Weight Ice	62563.79			-22079.14	0.00	
Wind 0 deg - Ice		0.00	-6302.15	-634323.88	0.00	0.00
Wind 30 deg - Ice		3151.08	-5457.82	-552298.64	-306122.37	-1552.76
Wind 60 deg - Ice		5457.82	-3151.08	-328201.51	-530219.49	-2689.46
Wind 90 deg - Ice		6302.15	0.00	-22079.14	-612244.74	-3105.52
Wind 120 deg - Ice		5457.82	3151.08	284043.22	-530219.49	-2689.46
Wind 150 deg - Ice		3151.08	5457.82	508140.35	-306122.37	-1552.76
Wind 180 deg - Ice		0.00	6302.15	590165.59	0.00	0.00

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Overturning Moments, M_x lb-ft	Sum of Overturning Moments, M_z lb-ft	Sum of Torques lb-ft
Wind 210 deg - Ice		-3151.08	5457.82	508140.35	306122.37	1552.76
Wind 240 deg - Ice		-5457.82	3151.08	284043.22	530219.49	2689.46
Wind 270 deg - Ice		-6302.15	0.00	-22079.14	612244.74	3105.52
Wind 300 deg - Ice		-5457.82	-3151.08	-328201.51	530219.49	2689.46
Wind 330 deg - Ice		-3151.08	-5457.82	-552298.64	306122.37	1552.76
Total Weight	41705.49			-13404.40	0.00	
Wind 0 deg - Service		0.00	-4627.45	-489873.18	0.00	0.00
Wind 30 deg - Service		2313.72	-4007.49	-426038.46	-238234.39	-1259.97
Wind 60 deg - Service		4007.49	-2313.72	-251638.79	-412634.07	-2182.34
Wind 90 deg - Service		4627.45	0.00	-13404.40	-476468.78	-2519.94
Wind 120 deg - Service		4007.49	2313.72	224829.99	-412634.07	-2182.34
Wind 150 deg - Service		2313.72	4007.49	399229.67	-238234.39	-1259.97
Wind 180 deg - Service		0.00	4627.45	463064.38	0.00	0.00
Wind 210 deg - Service		-2313.72	4007.49	399229.67	238234.39	1259.97
Wind 240 deg - Service		-4007.49	2313.72	224829.99	412634.07	2182.34
Wind 270 deg - Service		-4627.45	0.00	-13404.40	476468.78	2519.94
Wind 300 deg - Service		-4007.49	-2313.72	-251638.79	412634.07	2182.34
Wind 330 deg - Service		-2313.72	-4007.49	-426038.46	238234.39	1259.97

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp

Comb. No.	Description
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
L1	157 - 130	Pole	Max Tension	26	0.00	0.00	-0.04
			Max. Compression	26	-16152.22	0.00	25484.22
			Max. Mx	8	-7200.88	-194850.76	15881.62
			Max. My	2	-7188.37	0.00	211136.50
			Max. Vy	8	12031.08	-194850.76	15881.62
			Max. Vx	2	-12038.60	0.00	211136.50
			Max. Torque	8			14206.71
L2	130 - 92.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-25959.94	0.00	26226.65
			Max. Mx	8	-14249.63	-686007.30	16378.89
			Max. My	2	-14244.06	0.00	702521.12
			Max. Vy	8	15180.72	-686007.30	16378.89
			Max. Vx	2	-15185.98	0.00	702521.12
			Max. Torque	8			14200.34
L3	92.25 - 45.33	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-44432.64	0.00	26775.17
			Max. Mx	8	-28178.54	-1473961.69	16704.49
			Max. My	2	-28176.19	0.00	1490677.45
			Max. Vy	8	19831.27	-1473961.69	16704.49
			Max. Vx	2	-19834.64	0.00	1490677.45
			Max. Torque	8			14188.98
L4	45.33 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-72529.67	0.00	26934.62
			Max. Mx	8	-50039.13	-2662994.26	16813.84
			Max. My	2	-50039.08	0.00	2679810.36
			Max. Vy	8	25356.81	-2662994.26	16813.84
			Max. Vx	2	-25356.91	0.00	2679810.36
			Max. Torque	8			14181.14

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	26	72529.67	0.00	0.01
	Max. H_x	21	37534.94	25342.08	0.00
	Max. H_z	2	50046.59	0.00	25342.08
	Max. M_x	2	2679810.36	0.00	25342.08
	Max. M_z	8	2662994.26	-25342.08	0.00
	Max. Torsion	8	14178.78	-25342.08	0.00
	Min. Vert	17	37534.94	12671.04	-21946.89
	Min. H_x	8	50046.59	-25342.08	0.00
	Min. H_z	14	50046.59	0.00	-25342.08
	Min. M_x	14	-2646172.63	0.00	-25342.08
	Min. M_z	20	-2662994.26	25342.08	0.00
	Min. Torsion	20	-14178.78	25342.08	0.00

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Dead Only	41705.49	0.00	-0.00	-13866.41	0.00	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	50046.59	0.00	-25342.08	-2679810.36	0.00	0.00
0.9 Dead+1.6 Wind 0 deg - No Ice	37534.94	0.00	-25342.08	-2661597.54	0.00	0.00
1.2 Dead+1.6 Wind 30 deg - No Ice	50046.59	12671.04	-21946.89	-2323036.37	-1331499.89	-7088.26
0.9 Dead+1.6 Wind 30 deg - No Ice	37534.94	12671.04	-21946.89	-2306679.94	-1324568.63	-7034.45
1.2 Dead+1.6 Wind 60 deg - No Ice	50046.59	21946.89	-12671.04	-1348310.33	-2306223.43	-12278.06
0.9 Dead+1.6 Wind 60 deg - No Ice	37534.94	21946.89	-12671.04	-1337028.03	-2294218.87	-12184.63
1.2 Dead+1.6 Wind 90 deg - No Ice	50046.59	25342.08	-0.00	-16812.57	-2662994.26	-14178.78
0.9 Dead+1.6 Wind 90 deg - No Ice	37534.94	25342.08	-0.00	-12460.68	-2649133.36	-14070.56
1.2 Dead+1.6 Wind 120 deg - No Ice	50046.59	21946.89	12671.04	1314682.04	-2306217.97	-12280.31
0.9 Dead+1.6 Wind 120 deg - No Ice	37534.94	21946.89	12671.04	1312104.28	-2294214.72	-12186.29
1.2 Dead+1.6 Wind 150 deg - No Ice	50046.59	12671.04	21946.89	2289401.76	-1331494.43	-7090.52
0.9 Dead+1.6 Wind 150 deg - No Ice	37534.94	12671.04	21946.89	2281751.63	-1324564.62	-7036.11
1.2 Dead+1.6 Wind 180 deg - No Ice	50046.59	0.00	25342.08	2646172.63	0.00	0.00
0.9 Dead+1.6 Wind 180 deg - No Ice	37534.94	0.00	25342.08	2636666.60	0.00	0.00
1.2 Dead+1.6 Wind 210 deg - No Ice	50046.59	-12671.04	21946.89	2289401.76	1331494.43	7090.52
0.9 Dead+1.6 Wind 210 deg - No Ice	37534.94	-12671.04	21946.89	2281751.63	1324564.62	7036.11
1.2 Dead+1.6 Wind 240 deg - No Ice	50046.59	-21946.89	12671.04	1314682.04	2306217.97	12280.31
0.9 Dead+1.6 Wind 240 deg -	37534.94	-21946.89	12671.04	1312104.28	2294214.72	12186.29

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
No Ice						
1.2 Dead+1.6 Wind 270 deg - No Ice	50046.59	-25342.08	-0.00	-16812.57	2662994.26	14178.78
0.9 Dead+1.6 Wind 270 deg - No Ice	37534.94	-25342.08	-0.00	-12460.68	2649133.36	14070.56
1.2 Dead+1.6 Wind 300 deg - No Ice	50046.59	-21946.89	-12671.04	-1348310.33	2306223.43	12278.06
0.9 Dead+1.6 Wind 300 deg - No Ice	37534.94	-21946.89	-12671.04	-1337028.03	2294218.87	12184.63
1.2 Dead+1.6 Wind 330 deg - No Ice	50046.59	-12671.04	-21946.89	-2323036.37	1331499.89	7088.26
0.9 Dead+1.6 Wind 330 deg - No Ice	37534.94	-12671.04	-21946.89	-2306679.94	1324568.63	7034.45
1.2 Dead+1.0 Ice+1.0 Temp	72529.67	0.00	-0.01	-26934.62	0.00	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	72529.67	0.00	-6302.20	-661016.86	0.00	0.00
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	72529.67	3151.10	-5457.87	-576076.80	-317000.56	-1633.63
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	72529.67	5457.86	-3151.10	-344016.49	-549060.64	-2829.59
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	72529.67	6302.19	-0.01	-27016.79	-633999.93	-3267.42
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	72529.67	5457.86	3151.09	289982.24	-549059.46	-2829.76
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	72529.67	3151.10	5457.85	522041.20	-316999.38	-1633.80
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	72529.67	0.00	6302.19	606980.59	0.00	0.00
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	72529.67	-3151.10	5457.85	522041.20	316999.38	1633.80
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	72529.67	-5457.86	3151.09	289982.24	549059.46	2829.76
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	72529.67	-6302.19	-0.01	-27016.79	633999.93	3267.42
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	72529.67	-5457.86	-3151.10	-344016.49	549060.64	2829.59
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	72529.67	-3151.10	-5457.87	-576076.80	317000.56	1633.63
Dead+Wind 0 deg - Service	41705.49	0.00	-4627.45	-498644.33	0.00	0.00
Dead+Wind 30 deg - Service	41705.49	2313.72	-4007.49	-433706.32	-242351.99	-1292.11
Dead+Wind 60 deg - Service	41705.49	4007.49	-2313.72	-256292.41	-419765.89	-2238.02
Dead+Wind 90 deg - Service	41705.49	4627.45	-0.00	-13940.57	-484703.82	-2584.28
Dead+Wind 120 deg - Service	41705.49	4007.49	2313.72	228411.17	-419765.74	-2238.08
Dead+Wind 150 deg - Service	41705.49	2313.72	4007.49	405824.90	-242351.83	-1292.17
Dead+Wind 180 deg - Service	41705.49	0.00	4627.45	470762.83	0.00	0.00
Dead+Wind 210 deg - Service	41705.49	-2313.72	4007.49	405824.90	242351.83	1292.17
Dead+Wind 240 deg - Service	41705.49	-4007.49	2313.72	228411.17	419765.74	2238.08
Dead+Wind 270 deg - Service	41705.49	-4627.45	-0.00	-13940.57	484703.82	2584.28
Dead+Wind 300 deg - Service	41705.49	-4007.49	-2313.72	-256292.41	419765.89	2238.02
Dead+Wind 330 deg - Service	41705.49	-2313.72	-4007.49	-433706.32	242351.99	1292.11

Solution Summary

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
1	0.00	-41705.49	0.00	0.00	41705.49	0.00	0.000%
2	0.00	-50046.59	-25342.08	0.00	50046.59	25342.08	0.000%

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
3	0.00	-37534.94	-25342.08	0.00	37534.94	25342.08	0.000%
4	12671.04	-50046.59	-21946.89	-12671.04	50046.59	21946.89	0.000%
5	12671.04	-37534.94	-21946.89	-12671.04	37534.94	21946.89	0.000%
6	21946.89	-50046.59	-12671.04	-21946.89	50046.59	12671.04	0.000%
7	21946.89	-37534.94	-12671.04	-21946.89	37534.94	12671.04	0.000%
8	25342.08	-50046.59	0.00	-25342.08	50046.59	0.00	0.000%
9	25342.08	-37534.94	0.00	-25342.08	37534.94	0.00	0.000%
10	21946.89	-50046.59	12671.04	-21946.89	50046.59	-12671.04	0.000%
11	21946.89	-37534.94	12671.04	-21946.89	37534.94	-12671.04	0.000%
12	12671.04	-50046.59	21946.89	-12671.04	50046.59	-21946.89	0.000%
13	12671.04	-37534.94	21946.89	-12671.04	37534.94	-21946.89	0.000%
14	0.00	-50046.59	25342.08	0.00	50046.59	-25342.08	0.000%
15	0.00	-37534.94	25342.08	0.00	37534.94	-25342.08	0.000%
16	-12671.04	-50046.59	21946.89	12671.04	50046.59	-21946.89	0.000%
17	-12671.04	-37534.94	21946.89	12671.04	37534.94	-21946.89	0.000%
18	-21946.89	-50046.59	12671.04	21946.89	50046.59	-12671.04	0.000%
19	-21946.89	-37534.94	12671.04	21946.89	37534.94	-12671.04	0.000%
20	-25342.08	-50046.59	0.00	25342.08	50046.59	0.00	0.000%
21	-25342.08	-37534.94	0.00	25342.08	37534.94	0.00	0.000%
22	-21946.89	-50046.59	-12671.04	21946.89	50046.59	12671.04	0.000%
23	-21946.89	-37534.94	-12671.04	21946.89	37534.94	12671.04	0.000%
24	-12671.04	-50046.59	-21946.89	12671.04	50046.59	21946.89	0.000%
25	-12671.04	-37534.94	-21946.89	12671.04	37534.94	21946.89	0.000%
26	0.00	-72529.67	0.00	0.00	72529.67	0.01	0.000%
27	0.00	-72529.67	-6302.15	0.00	72529.67	6302.20	0.000%
28	3151.08	-72529.67	-5457.82	-3151.10	72529.67	5457.87	0.000%
29	5457.82	-72529.67	-3151.08	-5457.86	72529.67	3151.10	0.000%
30	6302.15	-72529.67	0.00	-6302.19	72529.67	0.01	0.000%
31	5457.82	-72529.67	3151.08	-5457.86	72529.67	-3151.09	0.000%
32	3151.08	-72529.67	5457.82	-3151.10	72529.67	-5457.85	0.000%
33	0.00	-72529.67	6302.15	0.00	72529.67	-6302.19	0.000%
34	-3151.08	-72529.67	5457.82	3151.10	72529.67	-5457.85	0.000%
35	-5457.82	-72529.67	3151.08	5457.86	72529.67	-3151.09	0.000%
36	-6302.15	-72529.67	0.00	6302.19	72529.67	0.01	0.000%
37	-5457.82	-72529.67	-3151.08	5457.86	72529.67	3151.10	0.000%
38	-3151.08	-72529.67	-5457.82	3151.10	72529.67	5457.87	0.000%
39	0.00	-41705.49	-4627.45	0.00	41705.49	4627.45	0.000%
40	2313.72	-41705.49	-4007.49	-2313.72	41705.49	4007.49	0.000%
41	4007.49	-41705.49	-2313.72	-4007.49	41705.49	2313.72	0.000%
42	4627.45	-41705.49	0.00	-4627.45	41705.49	0.00	0.000%
43	4007.49	-41705.49	2313.72	-4007.49	41705.49	-2313.72	0.000%
44	2313.72	-41705.49	4007.49	-2313.72	41705.49	-4007.49	0.000%
45	0.00	-41705.49	4627.45	0.00	41705.49	-4627.45	0.000%
46	-2313.72	-41705.49	4007.49	2313.72	41705.49	-4007.49	0.000%
47	-4007.49	-41705.49	2313.72	4007.49	41705.49	-2313.72	0.000%
48	-4627.45	-41705.49	0.00	4627.45	41705.49	0.00	0.000%
49	-4007.49	-41705.49	-2313.72	4007.49	41705.49	2313.72	0.000%
50	-2313.72	-41705.49	-4007.49	2313.72	41705.49	4007.49	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00002488
3	Yes	4	0.00000001	0.00001268

4	Yes	5	0.00000001	0.00003155
5	Yes	4	0.00000001	0.00079809
6	Yes	5	0.00000001	0.00007050
7	Yes	5	0.00000001	0.00003428
8	Yes	5	0.00000001	0.00005400
9	Yes	5	0.00000001	0.00002618
10	Yes	5	0.00000001	0.00004149
11	Yes	5	0.00000001	0.00002068
12	Yes	5	0.00000001	0.00004984
13	Yes	5	0.00000001	0.00002445
14	Yes	4	0.00000001	0.00002409
15	Yes	4	0.00000001	0.00001238
16	Yes	5	0.00000001	0.00004984
17	Yes	5	0.00000001	0.00002445
18	Yes	5	0.00000001	0.00004149
19	Yes	5	0.00000001	0.00002068
20	Yes	5	0.00000001	0.00005400
21	Yes	5	0.00000001	0.00002618
22	Yes	5	0.00000001	0.00007050
23	Yes	5	0.00000001	0.00003428
24	Yes	5	0.00000001	0.00003155
25	Yes	4	0.00000001	0.00079809
26	Yes	4	0.00000001	0.00007191
27	Yes	4	0.00000001	0.00058119
28	Yes	4	0.00000001	0.00062038
29	Yes	4	0.00000001	0.00065614
30	Yes	4	0.00000001	0.00059949
31	Yes	4	0.00000001	0.00053842
32	Yes	4	0.00000001	0.00049209
33	Yes	4	0.00000001	0.00044122
34	Yes	4	0.00000001	0.00049209
35	Yes	4	0.00000001	0.00053842
36	Yes	4	0.00000001	0.00059949
37	Yes	4	0.00000001	0.00065614
38	Yes	4	0.00000001	0.00062038
39	Yes	4	0.00000001	0.00000429
40	Yes	4	0.00000001	0.00003373
41	Yes	4	0.00000001	0.00006773
42	Yes	4	0.00000001	0.00007163
43	Yes	4	0.00000001	0.00005422
44	Yes	4	0.00000001	0.00003543
45	Yes	4	0.00000001	0.00000001
46	Yes	4	0.00000001	0.00003543
47	Yes	4	0.00000001	0.00005422
48	Yes	4	0.00000001	0.00007163
49	Yes	4	0.00000001	0.00006773
50	Yes	4	0.00000001	0.00003373

Maximum Tower Deflections - Service Wind

Section No.	*Elevation*	*Horz. Deflection*	*Gov. Load Comb.*	*Tilt*	*Twist*
	ft	*in*		*°*	*°*
L1	157 - 130	9.141	39	0.6970	0.0334
L2	134 - 92.25	6.173	39	0.5093	0.0115
L3	97.75 - 45.33	3.029	39	0.3159	0.0041
L4	52.6633 - 0	0.833	39	0.1480	0.0013

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
157.50	Angle Platform w/ Handrails	39	9.141	0.6970	0.0334	28784
147.00	Angle Low Profile Platform	39	7.791	0.6112	0.0227	14392
137.00	Antenna Pipe Mount	39	6.524	0.5312	0.0136	7223

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	157 - 130	46.853	2	3.2546	0.1831
L2	134 - 92.25	32.395	2	2.5954	0.0631
L3	97.75 - 45.33	16.101	2	1.6638	0.0225
L4	52.6633 - 0	4.458	2	0.7905	0.0072

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
157.50	Angle Platform w/ Handrails	2	46.853	3.2546	0.1831	7096
147.00	Angle Low Profile Platform	2	40.324	2.9651	0.1243	3547
137.00	Antenna Pipe Mount	2	34.135	2.6797	0.0747	1779

Base Plate Design Data

Plate Thickness in	Number of Anchor Bolts	Anchor Bolt Size in	Actual / Allowable Ratio Bolt Tension lb	Actual / Allowable Ratio Bolt Compression lb	Actual / Allowable Ratio Plate Stress ksi	Actual / Allowable Ratio Stiffener Stress ksi	Controlling Condition	Ratio
3.0000	36	2.2500	45652.26 223654.40 0.20	48404.19 371266.30 0.13	14.501 54.000 0.27		Plate	0.27 ✔

Compression Checks

Pole Design Data

Infinigy Engineering, PLLC.
2255 Sewell Mill Rd
Marietta, GA 30062
Phone: (678) 444-4463
FAX:

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L1	157 - 130 (1)	TP27.42x18.5x0.1875	27.00	157.00	204.8	15.4203	-7188.37	83041.70	0.087
L2	130 - 92.25 (2)	TP39.39x25.7235x0.375	41.75	157.00	142.6	44.2947	-14244.10	492055.00	0.029
L3	92.25 - 45.33 (3)	TP54.02x36.8396x0.4375	52.42	157.00	103.7	71.0685	-28176.20	1493120.00	0.019
L4	45.33 - 0 (4)	TP68x50.7415x0.4375	52.66	157.00	78.6	93.8190	-50039.10	3163880.00	0.016

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} lb-ft	ϕM_{nx} lb-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} lb-ft	ϕM_{ny} lb-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	157 - 130 (1)	TP27.42x18.5x0.1875	211136.67	552396.67	0.382	0.00	552396.67	0.000
L2	130 - 92.25 (2)	TP39.39x25.7235x0.375	702520.83	2512833.33	0.280	0.00	2512833.33	0.000
L3	92.25 - 45.33 (3)	TP54.02x36.8396x0.4375	1490675.00	5317375.00	0.280	0.00	5317375.00	0.000
L4	45.33 - 0 (4)	TP68x50.7415x0.4375	2679808.33	8375166.67	0.320	0.00	8375166.67	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	157 - 130 (1)	TP27.42x18.5x0.1875	12038.60	513075.00	0.023	0.00	1106141.67	0.000
L2	130 - 92.25 (2)	TP39.39x25.7235x0.375	15186.00	1619510.00	0.009	0.00	5031808.33	0.000
L3	92.25 - 45.33 (3)	TP54.02x36.8396x0.4375	19834.60	2503160.00	0.008	0.00	10647750.00	0.000
L4	45.33 - 0 (4)	TP68x50.7415x0.4375	25356.90	2990620.00	0.008	0.00	16770833.33	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	157 - 130 (1)	0.087	0.382	0.000	0.023	0.000	0.469 ✔	1.000	4.8.2 ✔
L2	130 - 92.25 (2)	0.029	0.280	0.000	0.009	0.000	0.309 ✔	1.000	4.8.2 ✔
L3	92.25 - 45.33 (3)	0.019	0.280	0.000	0.008	0.000	0.299 ✔	1.000	4.8.2 ✔
L4	45.33 - 0 (4)	0.016	0.320	0.000	0.008	0.000	0.336 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	157 - 130	Pole	TP27.42x18.5x0.1875	1	-7188.37	83041.70	46.9	Pass
L2	130 - 92.25	Pole	TP39.39x25.7235x0.375	2	-14244.10	492055.00	30.9	Pass
L3	92.25 - 45.33	Pole	TP54.02x36.8396x0.4375	3	-28176.20	1493120.00	29.9	Pass
L4	45.33 - 0	Pole	TP68x50.7415x0.4375	4	-50039.10	3163880.00	33.6	Pass
							Summary	
							Pole (L1) 46.9	Pass
							Base Plate 26.9	Pass
							RATING = **46.9**	**Pass**

Sprint

PROJECT:	2.5 EQUIPMENT DEPLOYMENT
SITE NAME:	HAMDEN FISH & GAME CLUB
SITE CASCADE:	CT54XC773
SITE ADDRESS:	150 WILLOW ST HAMDEN, CT 06518
SITE TYPE:	MONOPOLE TOWER
MARKET:	SOUTHERN CONNECTICUT

SITE INFORMATION

PROPERTY OWNER:
HAMDEN FISH & GAME
PROTECTION ASSOCIATION, INC
150 WILLOW ST
HAMDEN, CT 06518

LATITUDE (NAD83):
41° 26' 57.81" N
41.449392°

LONGITUDE (NAD83):
72° 54' 16.46" W
-72.904572°

COUNTY:
NEW HAVEN

ZONING JURISDICTION:
CONNECTICUT SITING COUNCIL

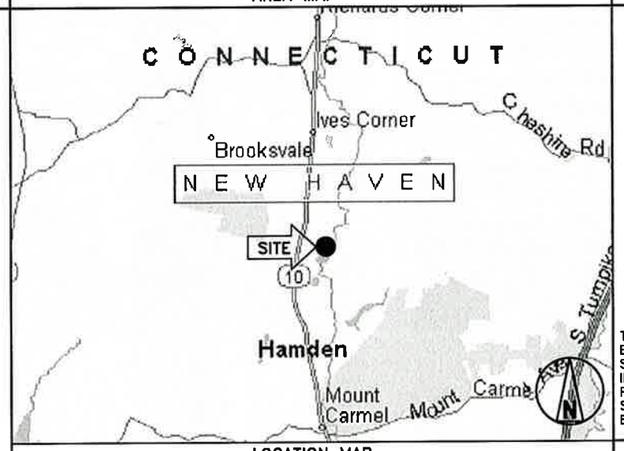
ZONING DISTRICT:
TBD

POWER COMPANY:
UNITED ILLUMINATION COMPANY
(800) 722-5584

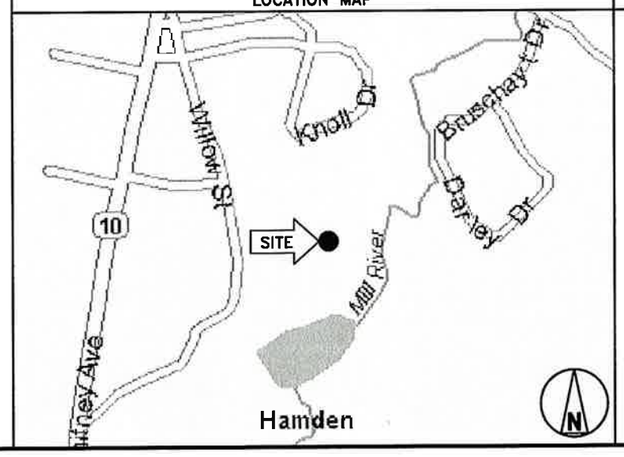
AAV PROVIDER:
AT&T
(800) 246-2020

SPRINT CM:
GARY WOOD
PHONE: (860) 940-9168
gary.wood@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-1A	EXISTING EQUIPMENT 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 333-000

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
FOR PERMIT	7/31/14	SKB	0

SITE NAME:
HAMDEN FISH & GAME CLUB

SITE CASCADE:
CT54XC773

SITE ADDRESS:
150 WILLOW ST
HAMDEN, CT 06518

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 333-000

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
FOR PERMIT	7/31/14	SKB	0

SITE NAME:

HAMDEN FISH & GAME CLUB

SITE CASCADE:

CT54XC773

SITE ADDRESS:

150 WILLOW ST
HAMDEN, CT 06518

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)

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Sprint

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Overland Park, Kansas 66251

PLANS PREPARED BY:

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JOB NUMBER 333-000

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
FOR PERMIT	7/31/14	SKB	0

SITE NAME:

HAMDEN FISH & GAME CLUB

SITE CASCADE:

CT54XC773

SITE ADDRESS:

150 WILLOW ST
HAMDEN, CT 06518

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

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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.

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Sprint

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Overland Park, Kansas 66251

PLANS PREPARED BY:

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

JOB NUMBER 333-000

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
FOR PERMIT	7/31/14	SKB	0

SITE NAME:

HAMDEN FISH & GAME CLUB

SITE CASCADE:

CT54XC773

SITE ADDRESS:

150 WILLOW ST
HAMDEN, CT 06518

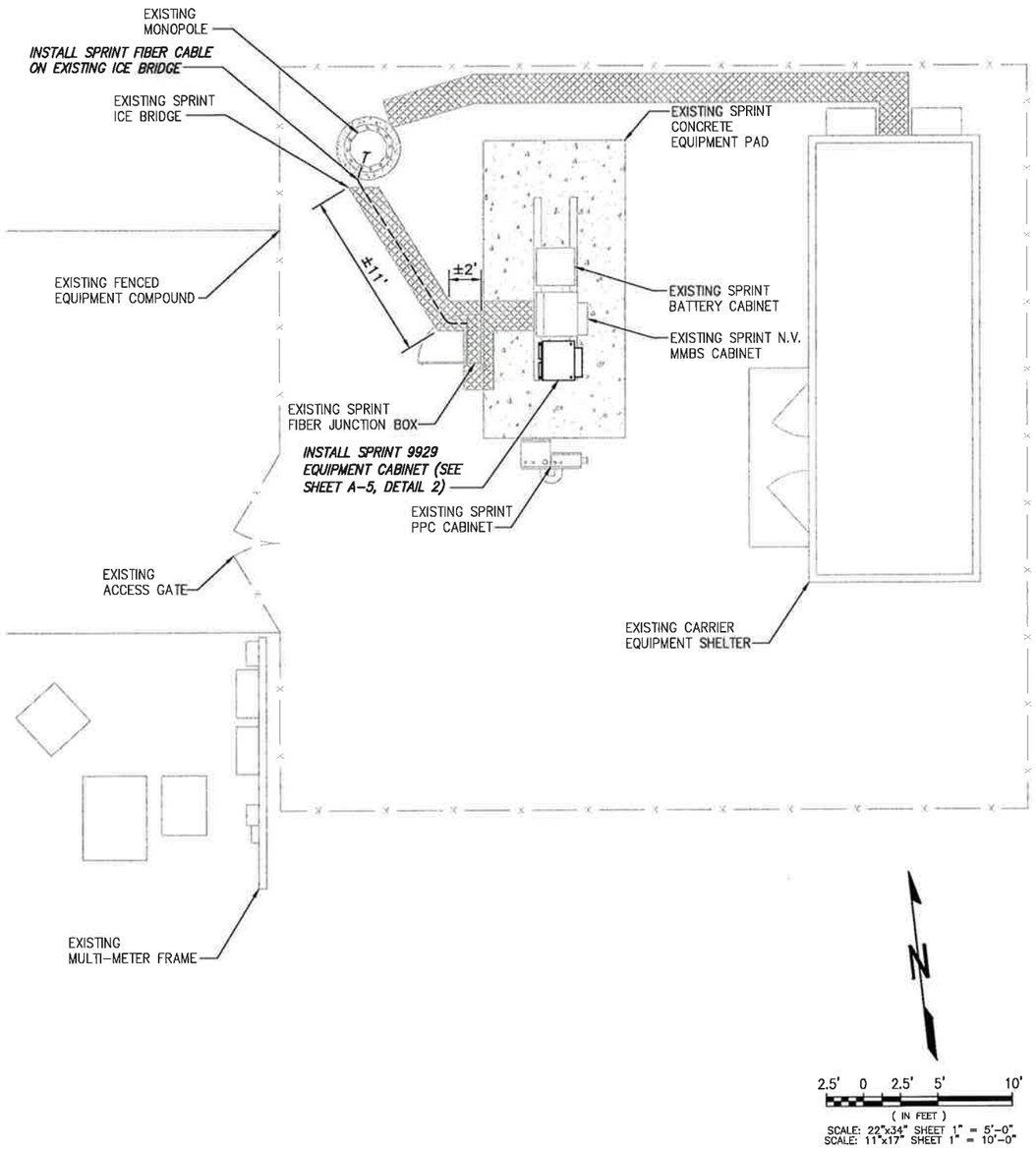
SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

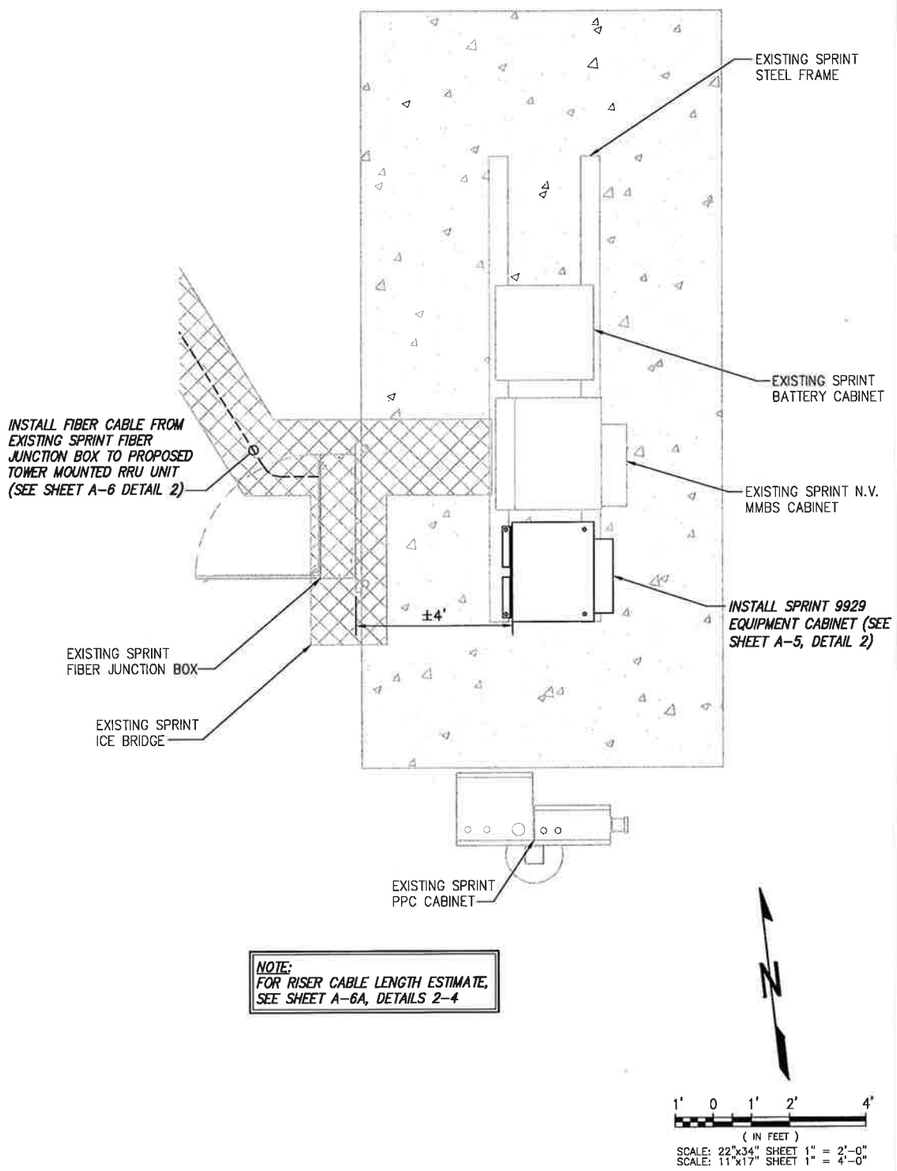
SHEET NUMBER:

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

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SITE ADDRESS:

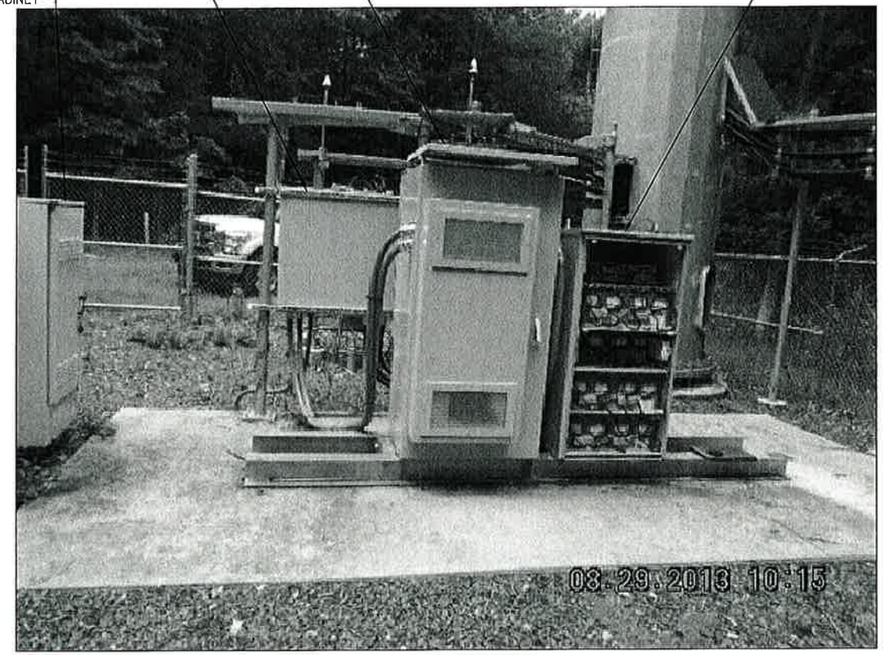
150 WILLOW ST
HAMDEN, CT 06518

SHEET DESCRIPTION:

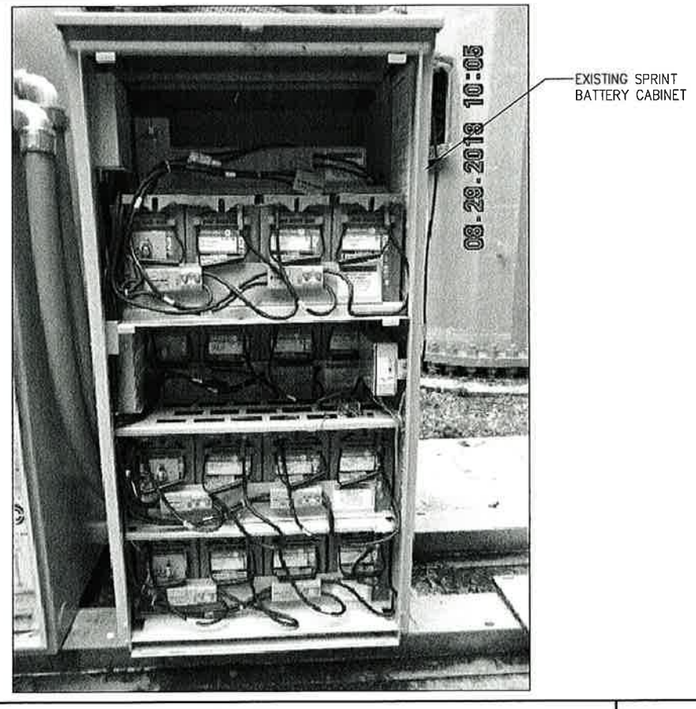
SITE PLAN

SHEET NUMBER:

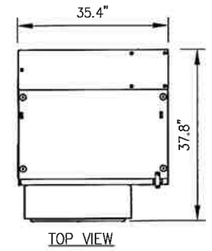
A-1



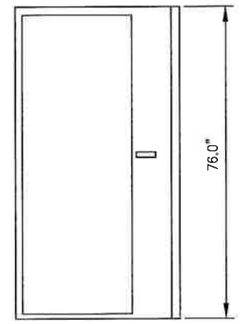
CABINET LINEUP PHOTO | SCALE: AS NOTED | 1



EXISTING BATTERY CABINET PHOTO | SCALE: AS NOTED | 2



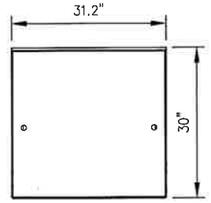
TOP VIEW



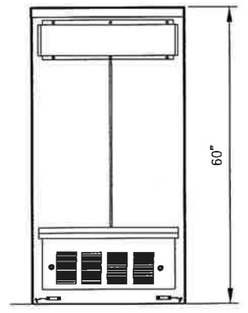
FRONT VIEW

MANUFACTURER: ALU
MODEL: 9928

N.V. MMBS CABINET



TOP VIEW



REAR VIEW

MANUFACTURER: TBD
MODEL: 60ECv2

BATTERY CABINET

EXISTING EQUIPMENT DETAIL | SCALE: AS NOTED | 3

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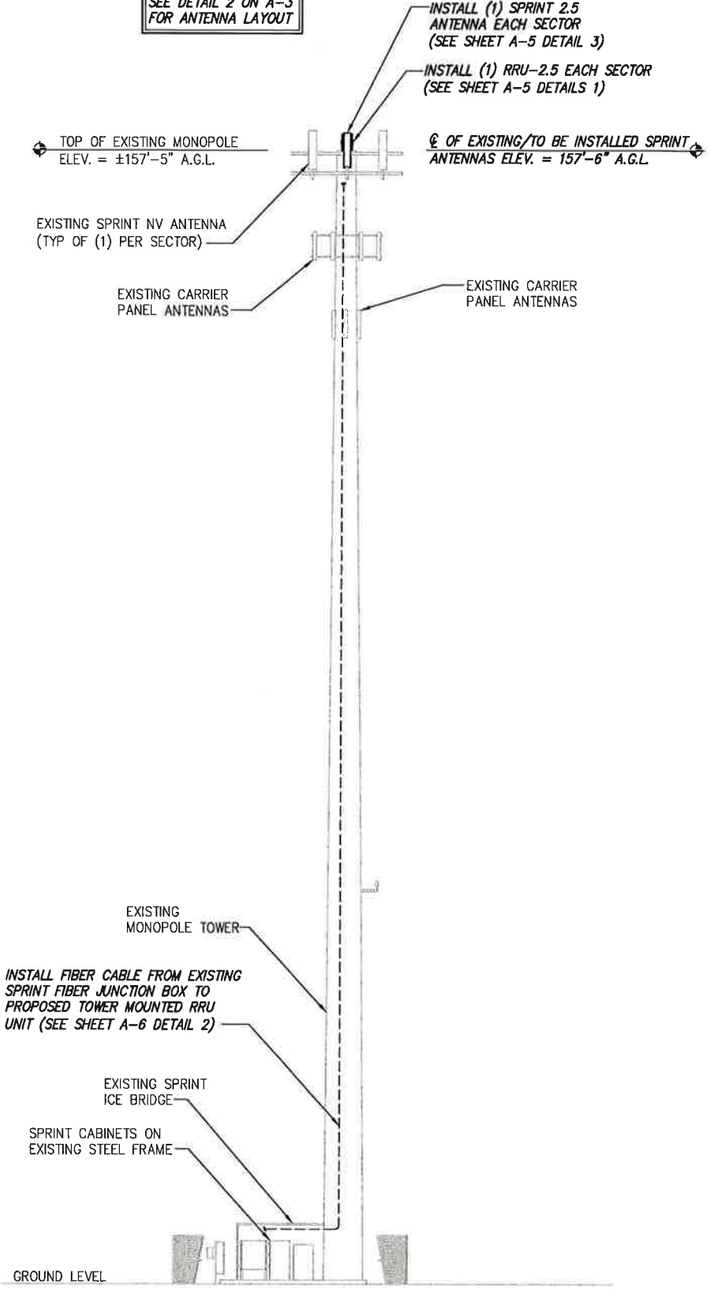
EXISTING EQUIPMENT DETAILS

SHEET NUMBER:

A-1A

STRUCTURAL REVIEW COMPLETED BY INFINIGY. FOR ADDITIONAL INFORMATION SEE REPORT COMPLETED BY: INFINIGY TITLED: TOWER ANALYSIS REPORT, DATED: JULY 27, 2014. ACCORDING TO RESULTS OF STRUCTURAL REVIEW, THE EXISTING INSTALLATION HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED LOADING.

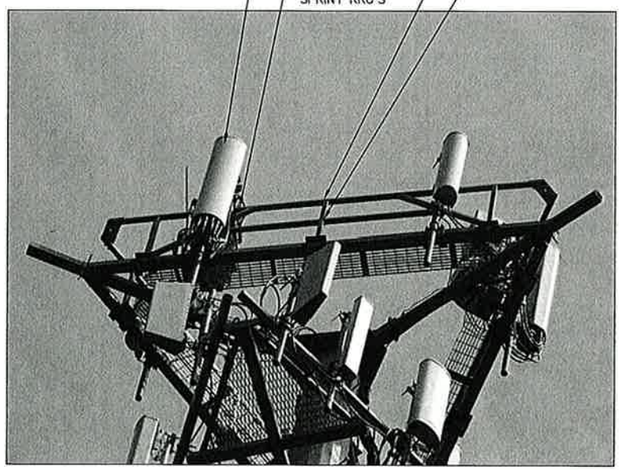
NOTE:
SEE DETAIL 2 ON A-3 FOR ANTENNA LAYOUT



TOWER ELEVATION | NO SCALE | 1

ALPHA

BETA



GAMMA

PHOTOS | NO SCALE | 2

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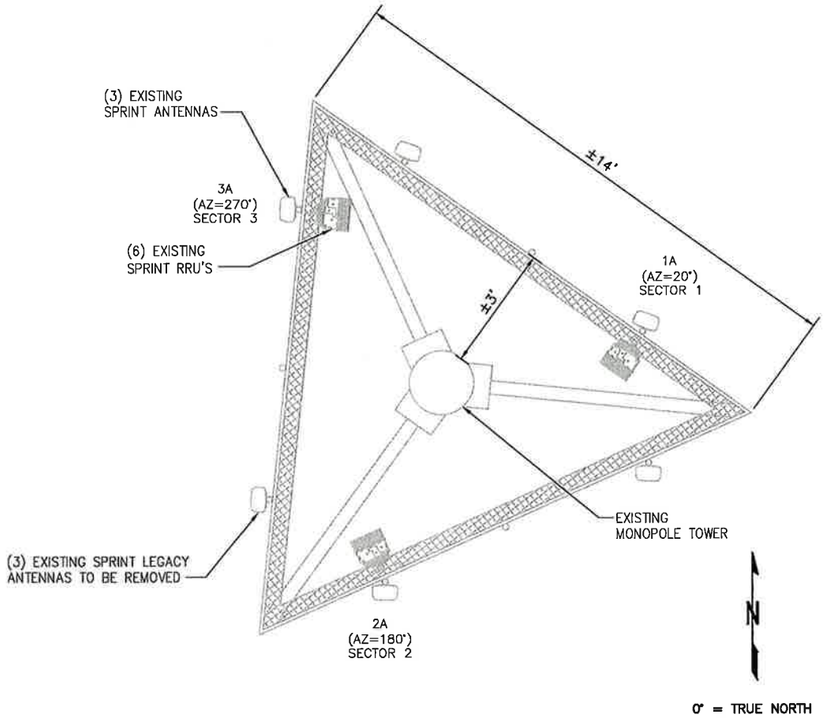
HAMDEN, CT 06518

SHEET DESCRIPTION:

TOWER ELEVATION & CABLE PLAN

SHEET NUMBER:

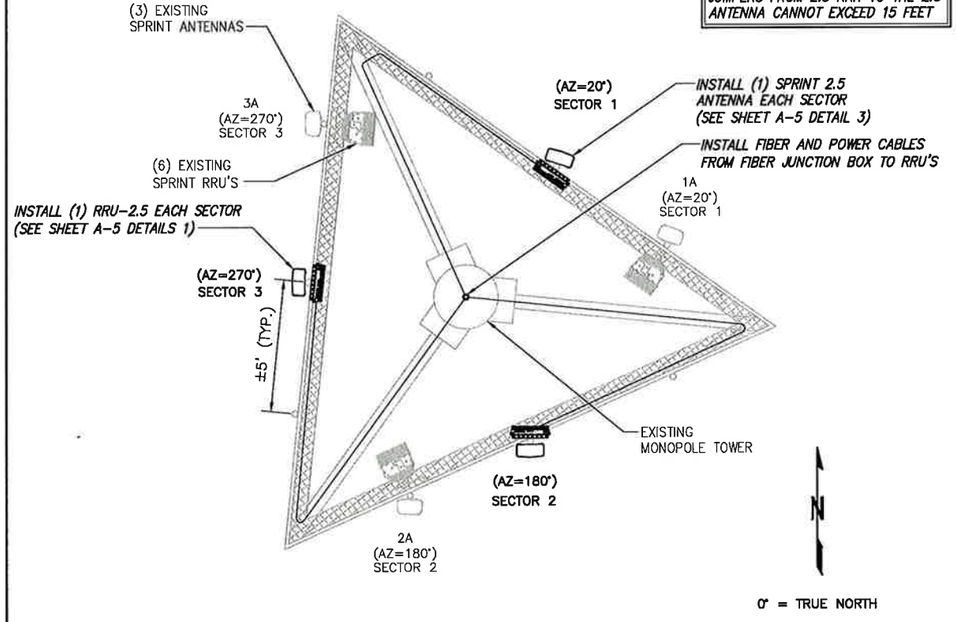
A-2



EXISTING ANTENNA & RRU LAYOUT | NO SCALE | 1

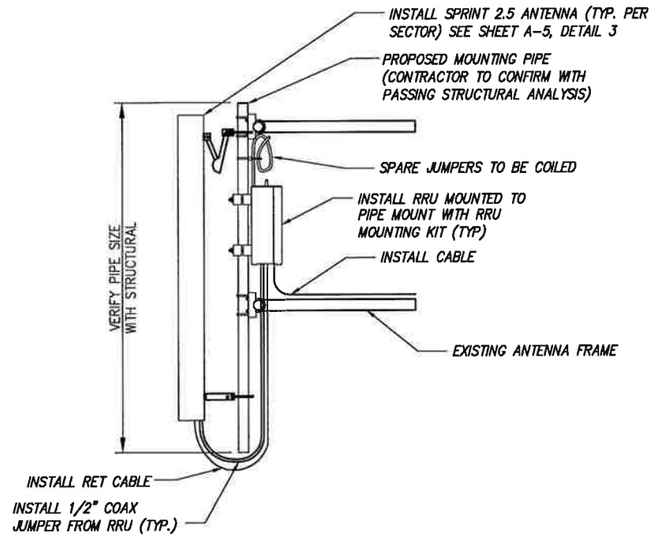
THE CONFIGURATION PLANS ARE BASED ON PROVIDED INFORMATION AND ARE FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO CONSTRUCTION.

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 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:

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 333-000

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
FOR PERMIT	7/31/14	SKB	0

SITE NAME:

HAMDEN FISH & GAME CLUB

SITE CASCADE:

CT54XC773

SITE ADDRESS:

150 WILLOW ST
HAMDEN, CT 06518

SHEET DESCRIPTION:

ANTENNA LAYOUT & MOUNTING DETAILS

SHEET NUMBER:

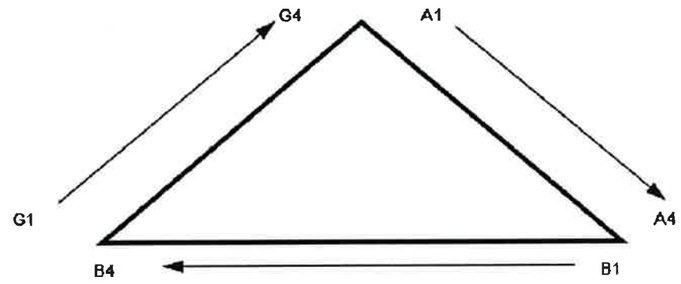
A-3

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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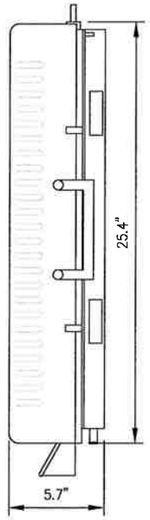
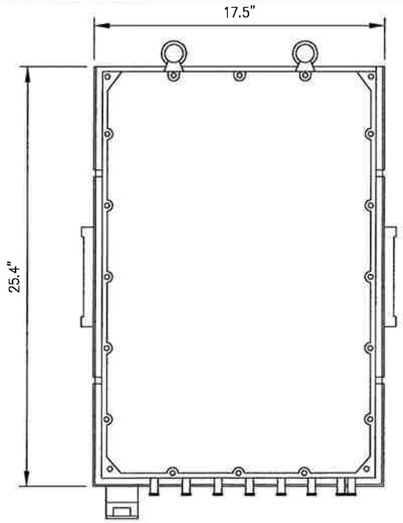
SHEET DESCRIPTION:
COLOR CODING AND NOTES

SHEET NUMBER:
A-4

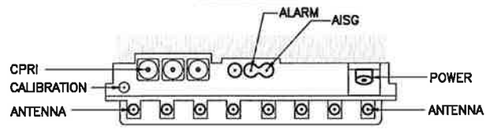
RRU: ALCATEL LUCENT TD-RRH8X20
COLOR: LIGHT GREY
WEIGHT: 70 LBS.



SIDE VIEW



FRONT VIEW

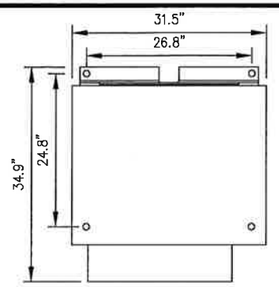


PLAN VIEW

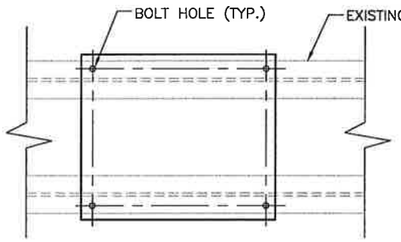
NOTES

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.

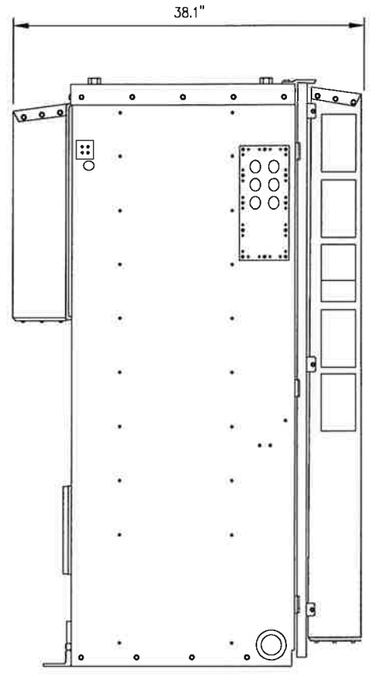
2.5 RRU'S | NO SCALE | 1



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.

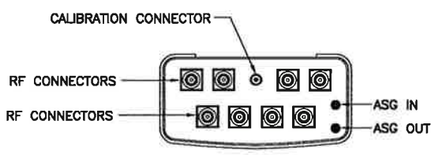


SIDE VIEW

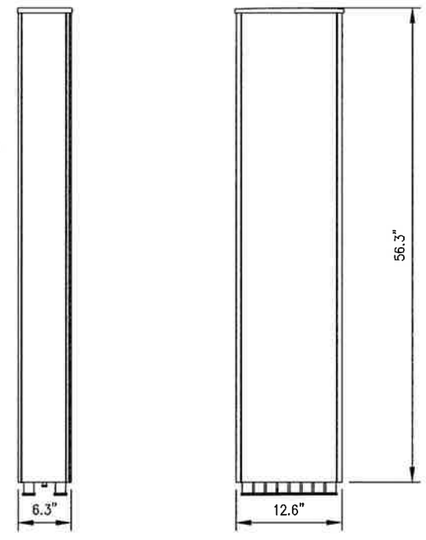
2.5 9929 GROWTH CABINET | NO SCALE | 2

ANTENNA RFS APXVTM14-C-I20

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

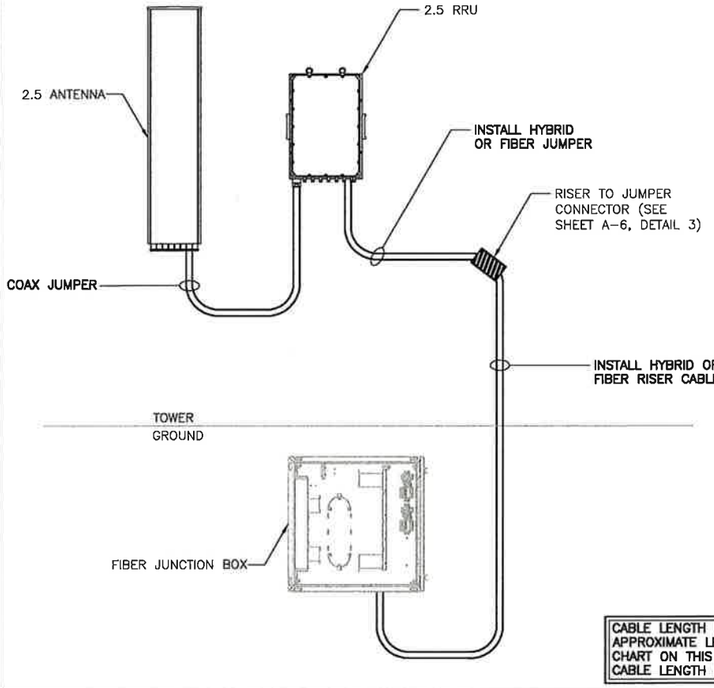


PLAN VIEW



SIDE VIEW FRONT VIEW

2.5 ANTENNA | NO SCALE | 3



INFINIGY ESTIMATES

*	*Riser Cable Length Estimate		
			Units
	At Grade	158	Feet
	Vertical Rise	13	Feet
	At Sprint Centerline	26	Feet
	Sub-Total	197	Feet
	15% Buffer	30	Feet
	Total	227	Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

**	Hybrid/Fiber Jumper Length Estimate		
			Units
	From Connector To RRU	20	Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

Coax Jumper Length Estimate		
		Units
From RRU to Antenna	5	Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

NOTE:
* & **: REFERENCE SHEET A-6, DETAIL 1 FOR CORRESPONDING PART NUMBERS.

CABLE LENGTH NOTE:
APPROXIMATE LENGTH OF NEW CABLE IS SHOWN IN CHART ON THIS SHEET. CONTRACTOR TO CONFIRM EXACT CABLE LENGTH REQUIRED PRIOR TO ORDERING MATERIALS.

CABLING SCHEMATIC | NO SCALE | 4

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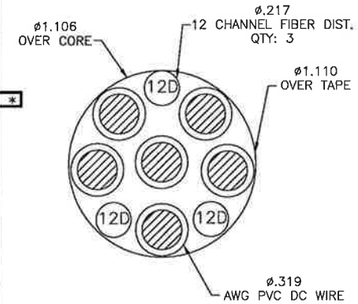
EQUIPMENT & MOUNTING DETAILS

SHEET NUMBER:
A-5

RFS HYBRIFLEX RISER CABLE SCHEDULE

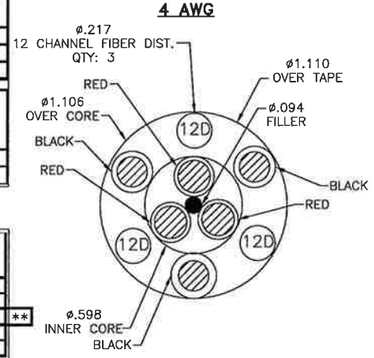
Fiber Only (Existing DC Power)	Hybrid cable MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft	
	MN: HB058-M12-075F	75 ft	
	MN: HB058-M12-100F	100 ft	
	MN: HB058-M12-125F	125 ft	
	MN: HB058-M12-150F	150 ft	
	MN: HB058-M12-175F	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	



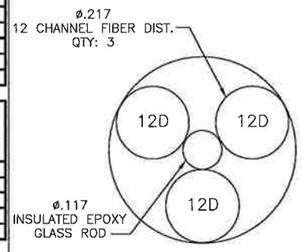
4 AWG

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	



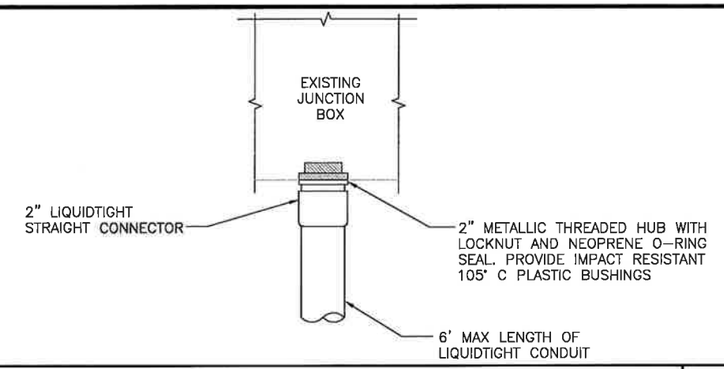
8 & 6 AWG



FIBER ONLY

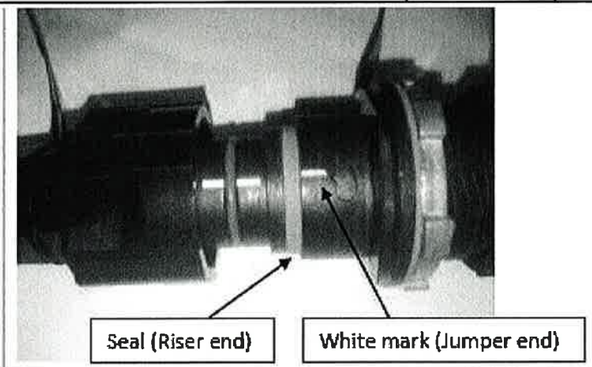
NOTE:
SPRINT CM TO CONFIRM HYBRID OR FIBER RISER CABLE AND HYBRID OR FIBER JUMPER CABLE MODEL NUMBERS IF HYBRID CABLES ARE REQUIRED BEFORE PREPARING BOM.

2.5 CABLE CROSS SECTION DATA | NO SCALE | 1

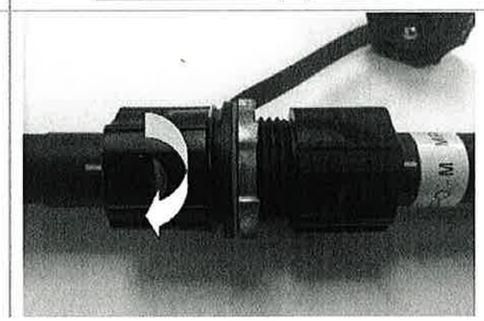


FIBER JUNCTION BOX PENETRATION | NO SCALE | 2

IMPORTANT!! Line up white markings on jumper and riser IP-MPO connectors and slide the riser connector to the jumper connector. Push the white mark on the jumper connector flush again the red seal on the riser connector.

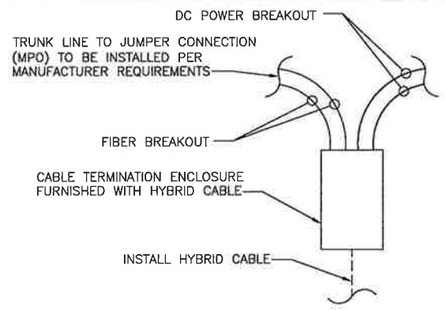


IMPORTANT!! Rotate the bayonet housing clock wise until you hear a click sound (means a good connection is in place).

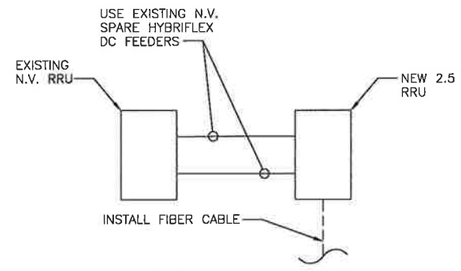


INFORMATION BASED ON PROVIDED INFORMATION FROM ALCATEL-LUCENT 2.5 GHz UPGRADE INSTALLATION GUIDE.

HYBRIFLEX RISER/JUMPER CONNECTION DETAIL | NO SCALE | 3



2.5 HYBRID RISER CABLE (FIBER AND DC FEEDERS)



FIBER ONLY RISER CABLE

TRUNK LINE DETAIL (TYP.) | NO SCALE | 4

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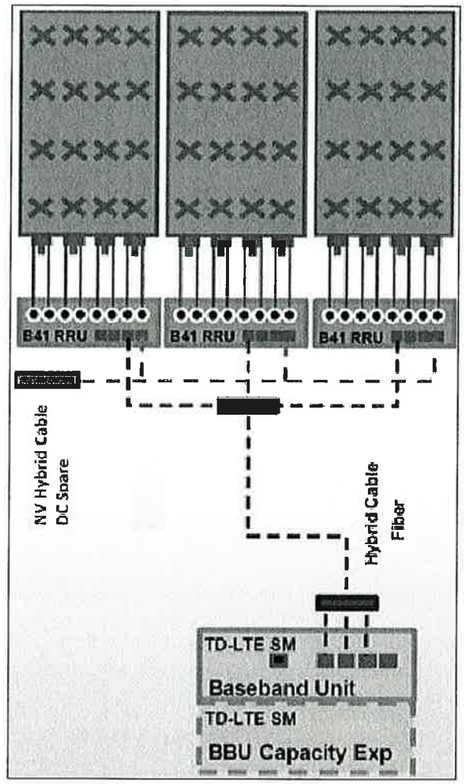
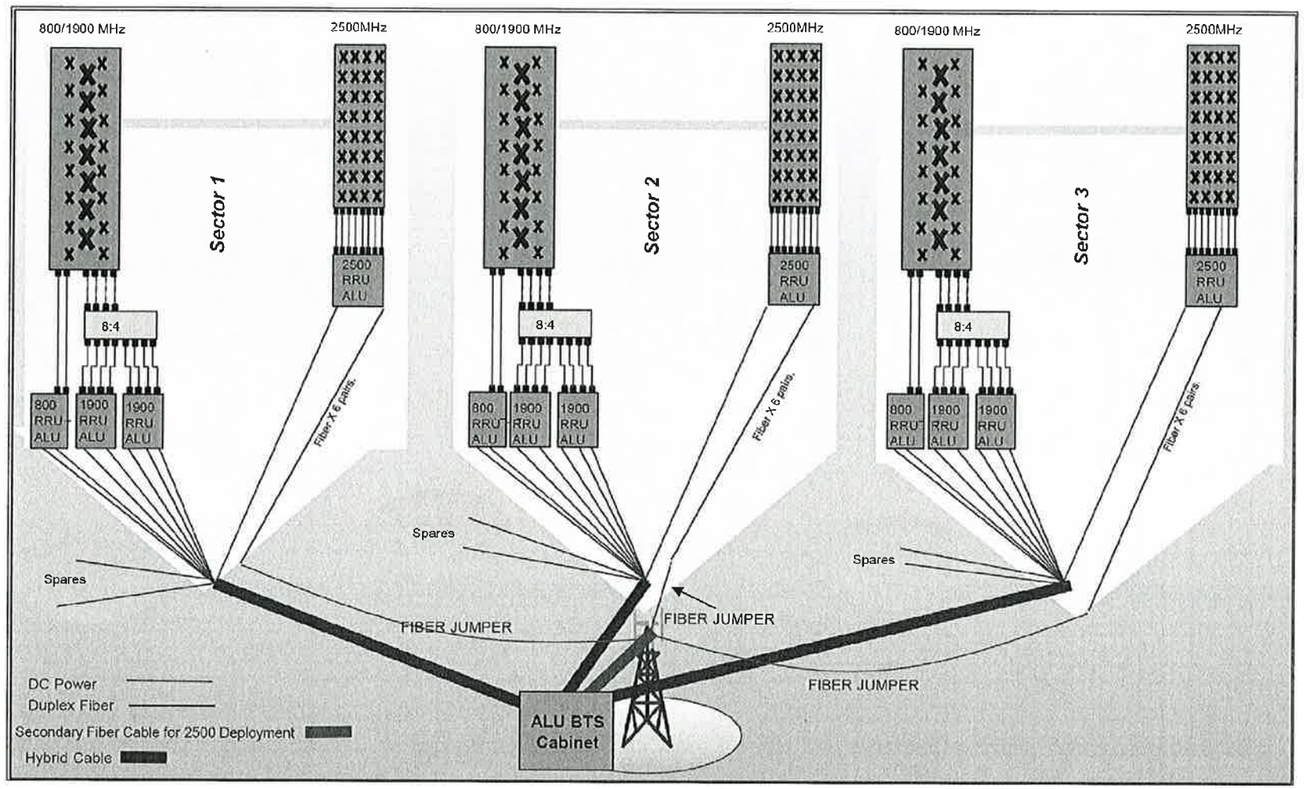
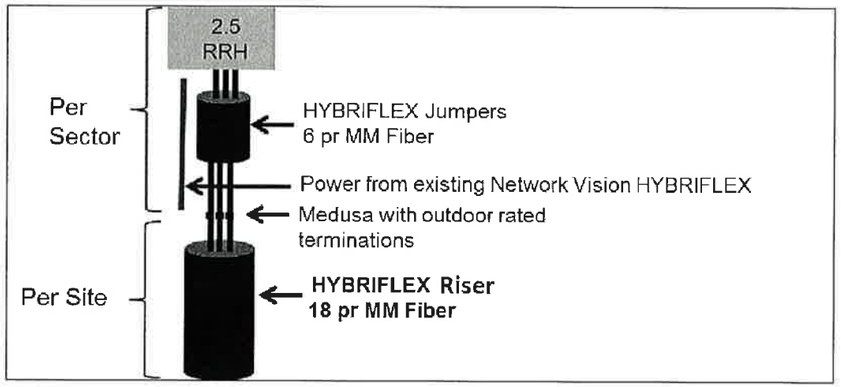


ALU 2.5 ALU SCENARIO 1



RAN WIRING DIAGRAM



RF 2.5 ALU SCENARIO 1

PLUMBING DIAGRAM

NO SCALE

1

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PLUMBING DIAGRAM

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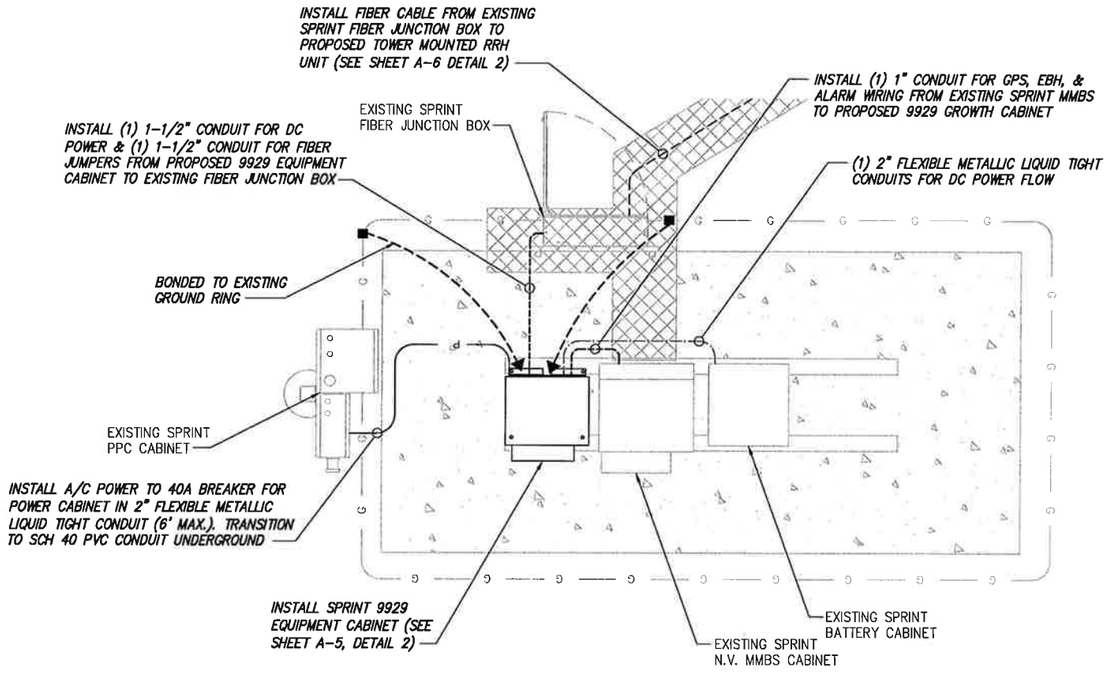


NOTE:
CONTRACTOR IS TO ENSURE THE INSTALLATION INSTRUCTIONS FOR EACH CABINET ARE FOLLOWED AND THAT THE MANUFACTURER'S REQUIREMENTS ARE MET.

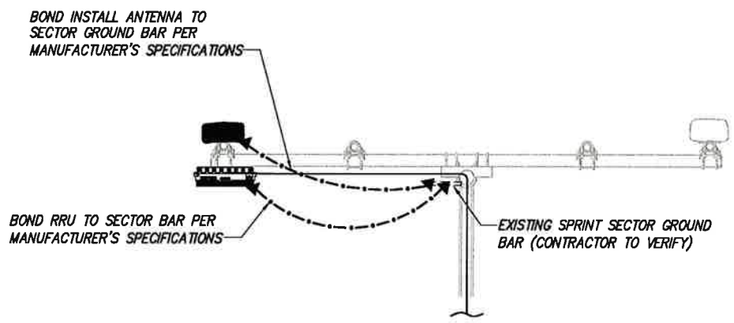
LEGEND:

- EXISTING GROUND RING
- CADWELD CONNECTION (EXOTHERMIC WELD)
- MECHANICAL CONNECTION
- GROUND ROD
- CABLE GROUND KIT

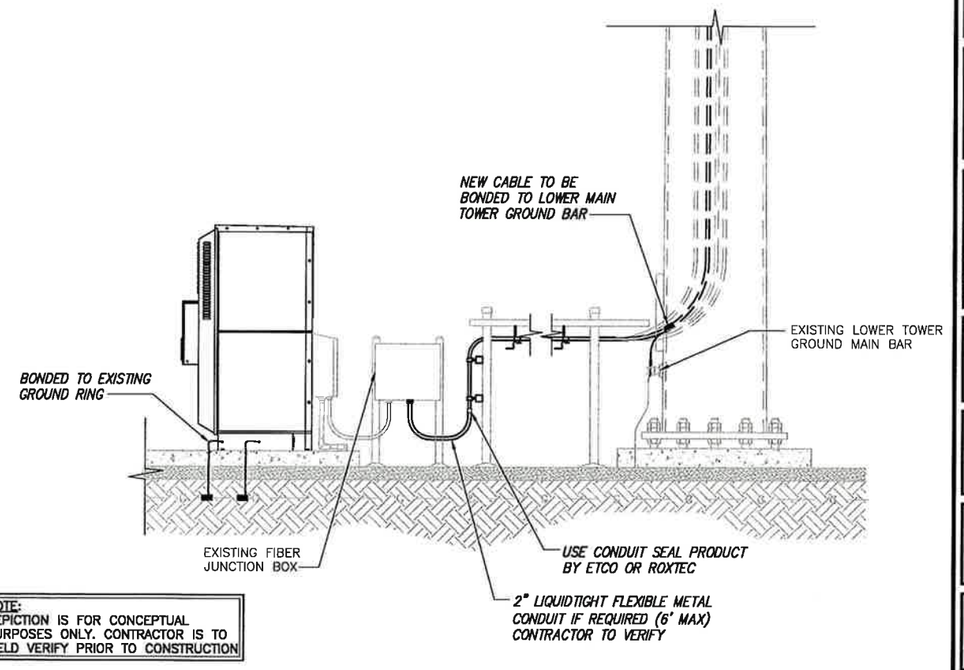
ELECTRICAL AND GROUNDING PLAN | NO SCALE | 1

LEGEND:

- EXISTING GROUND RING
- CADWELD CONNECTION (EXOTHERMIC WELD)
- MECHANICAL CONNECTION
- GROUND ROD
- CABLE GROUND KIT



TYPICAL ANTENNA GROUNDING PLAN | NO SCALE | 2



NOTE:
DEPICTION IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO FIELD VERIFY PRIOR TO CONSTRUCTION

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

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 333-000

ENGINEERING LICENSE:

STATE OF CONNECTICUT · JOHN S. STEVENS · No. 24706 · LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
FOR PERMIT	7/31/14	SKB	0

SITE NAME:

HAMDEN FISH & GAME CLUB

SITE CASCADE:

CT54XC773

SITE ADDRESS:

150 WILLOW ST
HAMDEN, CT 06518

SHEET DESCRIPTION:

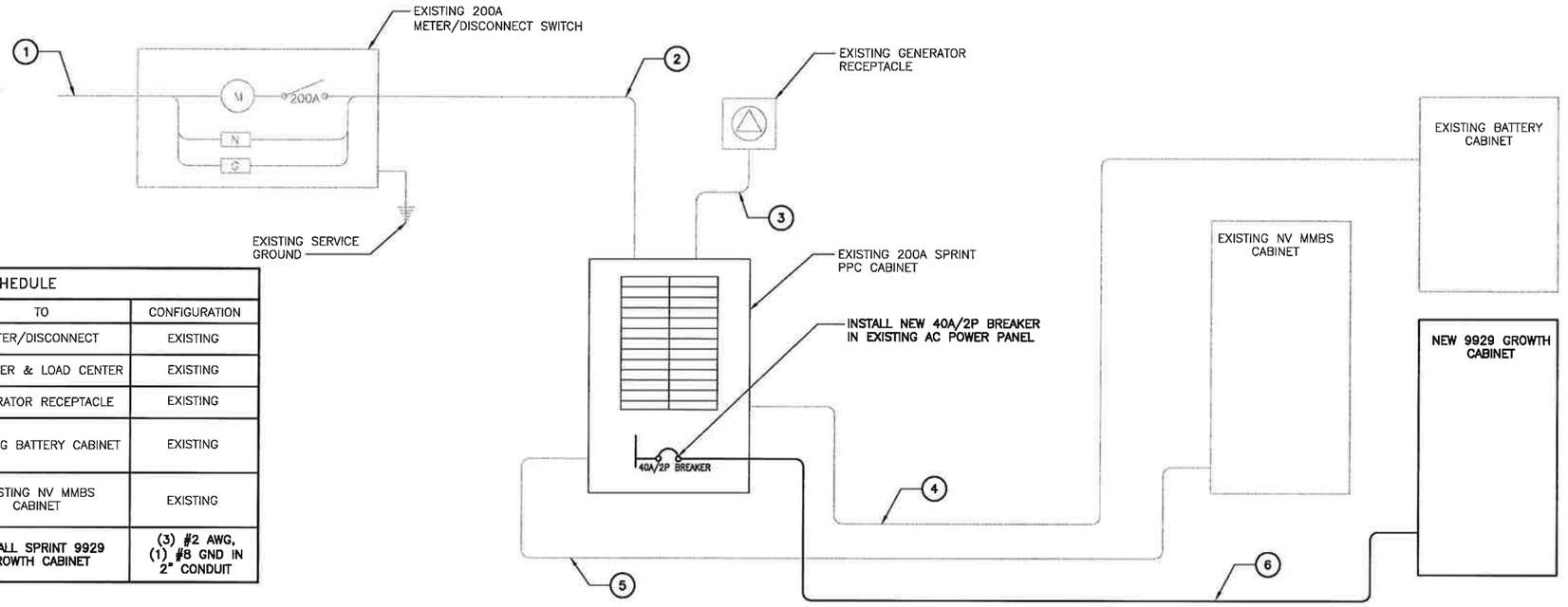
ELECTRICAL & GROUNDING PLAN

SHEET NUMBER:

E-1

NOTES

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



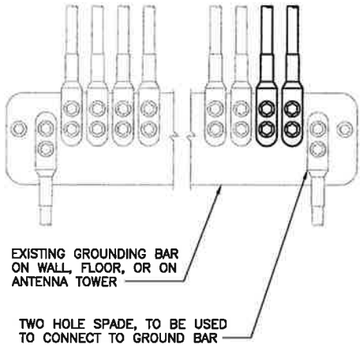
CIRCUIT SCHEDULE

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

#4 OR #6 AWG SOLID CU CONDUCTOR WITH GREEN, 600V, THWN-2 INSULATION



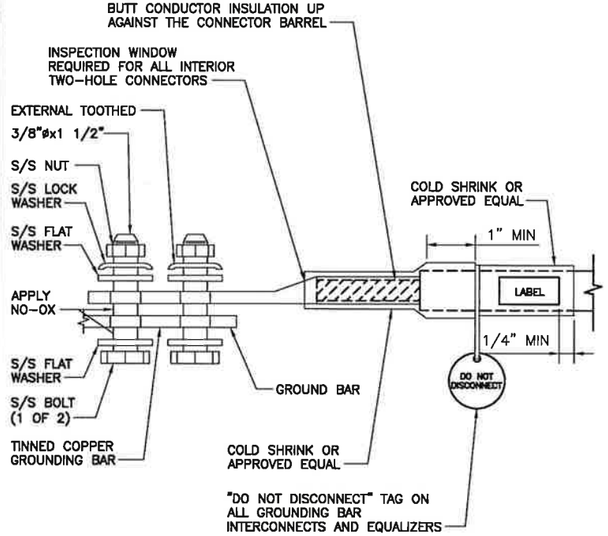
NOTES

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

BUTT CONDUCTOR INSULATION UP AGAINST THE CONNECTOR BARREL



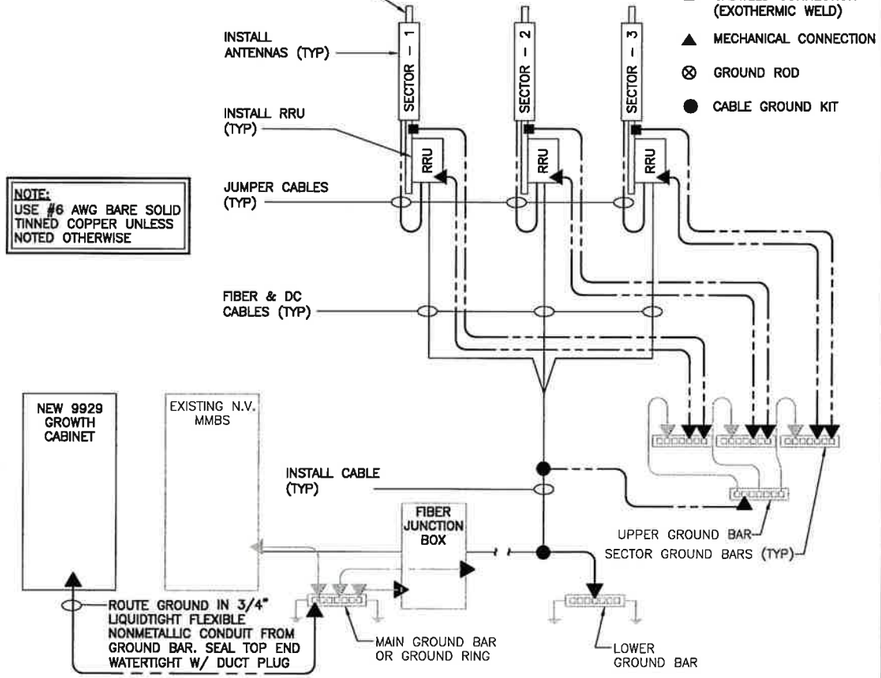
TWO HOLE LUG

NO SCALE | 3

LEGEND:

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

NOTE:
USE #6 AWG BARE SOLID TINNED COPPER UNLESS NOTED OTHERWISE



GROUNDING RISER DIAGRAM

NO SCALE | 4

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Sprint

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Overland Park, Kansas 66251

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ENGINEERING LICENSE:

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SITE CASCADE:

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SITE ADDRESS:

150 WILLOW ST
HAMDEN, CT 06518

SHEET DESCRIPTION:

ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:

E-2