AIROSMITH DEVELOPMENT
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January 30th, 2018

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

RE: Notice of Exempt Modification – Antenna Swap for wireless facility located at 253 FISK ROAD, HAMPTON, CONNECTICUT – CT33XC568 (lat. 41° 46' 12.79" N, long. -72° 04' 15.20" W)

Dear Ms. Bachman:

Sprint Spectrum, LP ("Sprint") currently maintains wireless telecommunications antennas at the (155-foot level) on an existing (165-foot Guyed Tower) at the above-referenced address. The property, and the tower are owned by American Tower Corporation.

Sprint's proposed work involves antenna replacement and tower work. Sprint intends to replace three (3) antennas, relocate three (3) RRHs from ground level to the tower and add nine (9) new RRHs onto the tower. All the proposed work is contained within the existing fenced area. Please refer to the attached drawings for site plans prepared by Infinigy Engineering. The Structural Analysis prepared by American Tower Corporation contains "existing" noted contracted equipment which is not on the tower.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to ALLAN CAHILL, FIRST SELECTMAN, and JOHN GUSZKOWSKI, TOWN PLANNER of the Town of HAMPTON. A copy of this letter is also being sent to JUSTINE PAUL the manager for AMERICAN TOWER CORPORATION who manages the site and owns the land.

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

1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The antennas work is a one-for-one replacement of facility components.

32 Clinton Street, Saratoga Springs, NY 12866
Office 518-306-1733 – Fax 518-306-1711
www.airosmithdevelopment.com

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3. The proposed modifications will include the addition of ground base equipment as depicted on the attached drawings; however, the proposed equipment will not require an extension of the site boundaries.

4. The proposed modifications will not increase noise levels at the facility by six decibels or more.

5. The additional ground based equipment will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard.

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

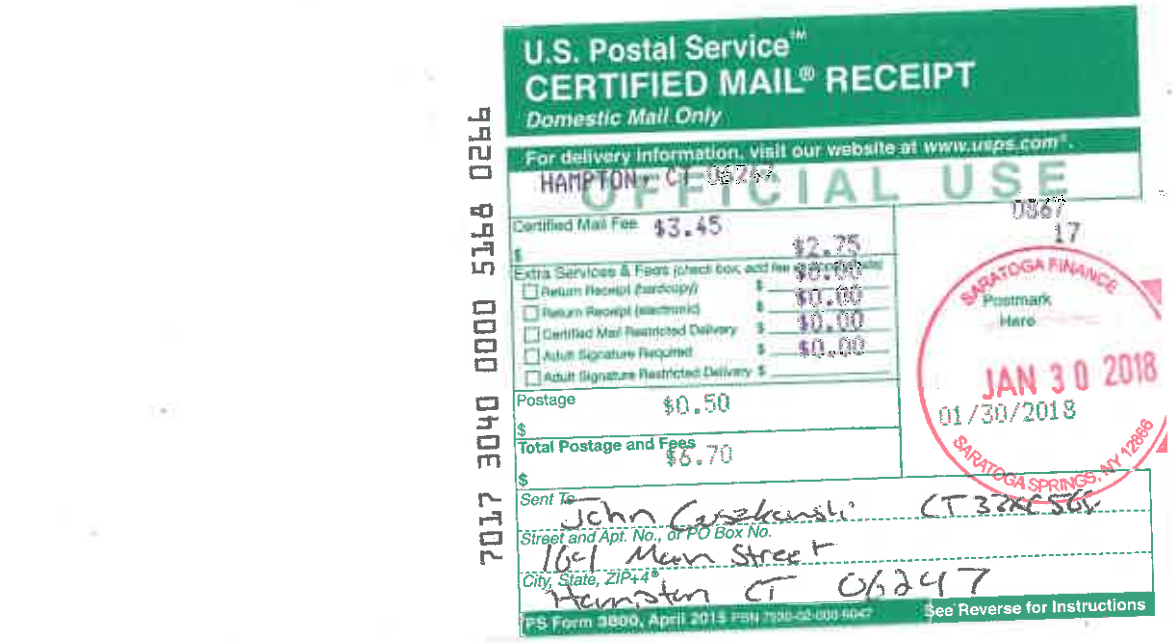
If you have any questions or require any additional information regarding this request, please do not hesitate to give me a call at (518) 350-4222 or email me to aperkowski@airosmithdevelopment.com

Kind Regards,

Arthur Perkowski
Airosmith Development Inc.
32 Clinton Street
Saratoga Springs, NY 12866
518-306-1711 desk & fax
518-871-3707 cell
aperkowski@airosmithdevelopment.com

Attachment

CC: ALLAN CAHILL (First Selectman, HAMPTON, CT)
JUSTINE PAUL (Manager, AMERICAN TOWER CORPORATION)
JOHN GUSZKOWSKI (Town Planner, HAMPTON CT)



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Sent To John Cavakanti CT33XC565

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Total Postage and Fees $6.70

Sent To Allen Cahill 1st Selectmen (CT33XC568)

Street and Apt. No., or PO Box No. 161 Main Street

City, State, ZIP+4® Hampton CT 06247

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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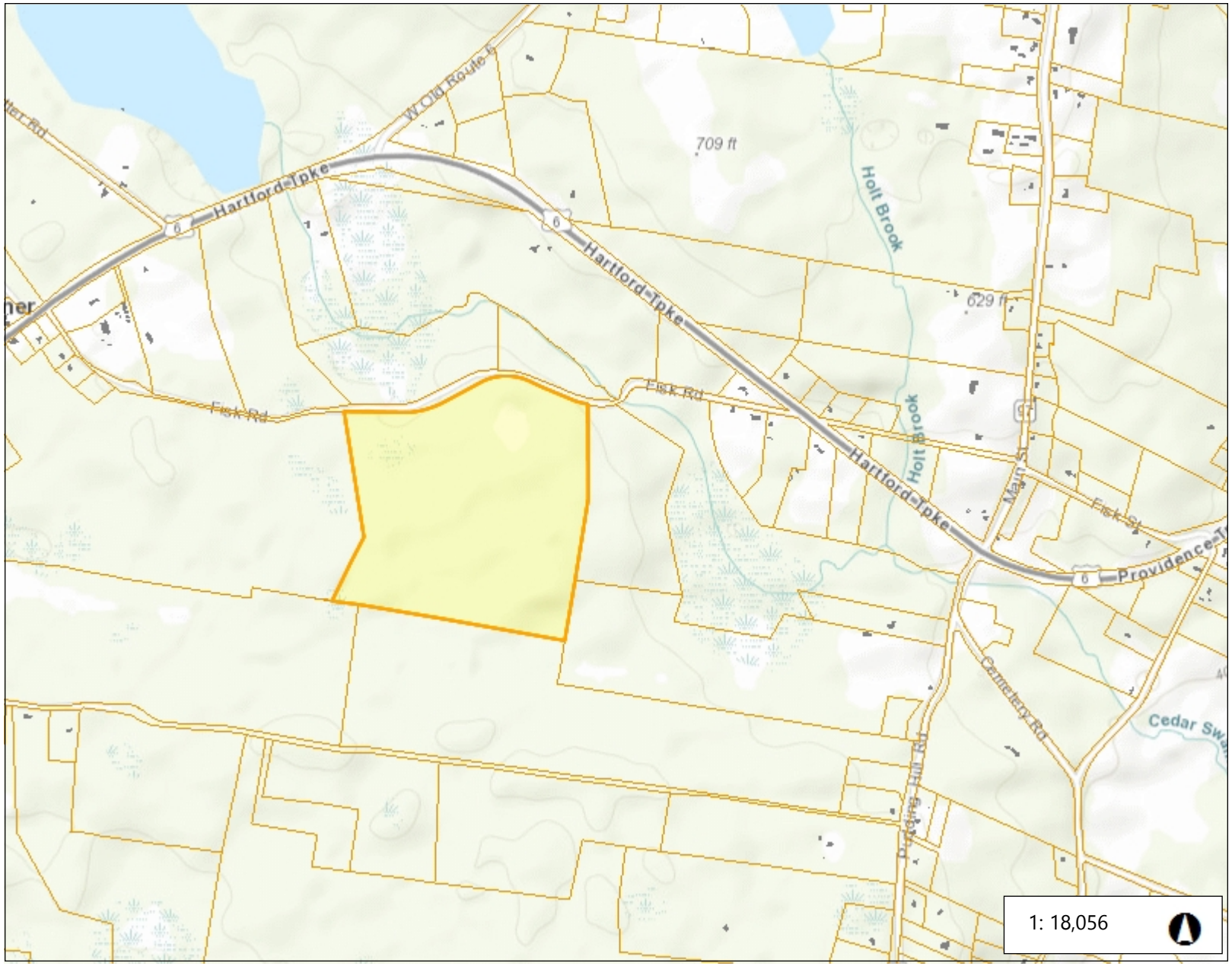
7017 1450 0002 2926 7793

CT33XC568 - "253" Fisk Road, Hampton CT 06247



Legend

- Town
- buildings2012_Clip1
- Parcels

Notes

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neccog

Ashford Brooklyn Canterbury Chaplin Eastford Hampton Killingly Plainfield Pomfret Putnam Scotland Sterling Thompson Union Voluntown Woodstock

Parcel Information:

Report Generated: *1/17/2018 1:14:38 PM*

GIS ID: CT-063-2-9-25-28

Owner Name: ***AMERICAN TOWER CORP***

Street Address: 185 WEST FISK RD #CELL

Mailing Address: P.O. BOX 723597
ATLANTA GA 31139

Assessment: $573,930.00

Appraisal: $819,900.00

Land: 0.00

Buildings: 1.00

	Land Value:	Improvement Value:	Total Value:
Appraised	$648,000.00	$171,900.00	$819,900.00
Assessed		$120,330.00	$573,930.00

Sale Date:

Sale Price: $0

Year Built:

Primary Structure Area: sq. ft.

No Photo Available

Taxlot highlighted in blue

neccog

Ashford Brooklyn Canterbury Chaplin Eastford Hampton Killingly Plainfield Pomfret Putnam Scotland Sterling Thompson Union Voluntown Woodstock

Parcel Information:

Report Generated: *1/17/2018 1:14:38 PM*

GIS ID: CT-063-2-9-25-28

Owner Name: ***HALMORA LLC***

Street Address: 185 WEST FISK RD

Mailing Address: 105-39 MAPLE AVE
VERNON CT 06066

Assessment: $109,050.00

Appraisal: $253,320.00

Land: 70.60

Buildings:

	Land Value:	Improvement Value:	Total Value:
Appraised	$253,320.00	$0.00	$253,320.00
Assessed		$0.00	$109,050.00

Sale Date:

Sale Price: $0

Year Built:

Primary Structure Area: sq. ft.

No Photo Available

Taxlot highlighted in blue

EBI Consulting
environmental | engineering | due diligence

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

SPRINT Existing Facility

Site ID: CT33XC568

Hampton / Chaplin
253 Fisk Road
Hampton, CT 06247

January 17, 2018

EBI Project Number: 6218000236

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	6.74 %

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

EBI Consulting
environmental | engineering | due diligence

January 17, 2018

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

Emissions Analysis for Site: **CT33XC568 – Hampton / Chaplin**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **253 Fisk Road, Hampton, CT**, for the purpose of determining whether the emissions from the Proposed SPRINT Antenna Installation located on this property are within specified federal limits.

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

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

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

General population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 850 MHz Band is approximately 567 $\mu W/cm^2$. The general population exposure limit for the 1900 MHz (PCS) and 2500 MHz (BRS) 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 SPRINT Wireless antenna facility located at **253 Fisk Road, Hampton, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since SPRINT is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

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

1) 1 CDMA channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.

2) 2 LTE channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.

3) 5 CDMA channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 16 Watts per Channel.

4) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

5) 8 LTE channels (2500 MHz (BRS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.

6) 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.

7) For the following calculations, the sample point was the top of a 6-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.

8) The antennas used in this modeling are the **KMW ETCR-654L12H6** for transmission in the 850 MHz, 1900 MHz (PCS) and 2500 MHz (BRS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction. There is also one Decibel DB980H90B-KL per sector that will remain in place per sector but appear to be dormant.

9) The antenna mounting height centerlines of the proposed antennas are **155 feet** above ground level (AGL) for **Sector A**, **155 feet** above ground level (AGL) for **Sector B** and **155 feet** above ground level (AGL) for Sector C.

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

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

SPRINT Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	KMW ETCR-654L12H6	Make / Model:	KMW ETCR-654L12H6	Make / Model:	KMW ETCR-654L12H6
Gain:	13.35 / 15.25 / 15.05 dBd	Gain:	13.35 / 15.25 / 15.05 dBd	Gain:	13.35 / 15.25 / 15.05 dBd
Height (AGL):	**155 feet**	Height (AGL):	**155 feet**	Height (AGL):	**155 feet**
Frequency Bands	850 MHz / 1900 MHz / 2500 MHz (BRS)	Frequency Bands	850 MHz / 1900 MHz / 2500 MHz (BRS)	Frequency Bands	850 MHz / 1900 MHz / 2500 MHz (BRS)
Channel Count	18	Channel Count	18	Channel Count	18
Total TX Power(W):	380 Watts	Total TX Power(W):	380 Watts	Total TX Power(W):	380 Watts
ERP (W):	11,775.31	ERP (W):	11,775.31	ERP (W):	11,775.31
Antenna A1 MPE%	**2.07 %**	Antenna B1 MPE%	**2.07 %**	Antenna C1 MPE%	**2.07 %**

Site Composite MPE%	
Carrier	**MPE%**
SPRINT – Max per sector	**2.07 %**
Nextel	0.24 %
Verizon Wireless	1.79 %
AT&T	2.31 %
T-Mobile	0.33 %
Site Total MPE %:	**6.74 %**

SPRINT Sector A Total:	2.07 %
SPRINT Sector B Total:	2.07 %
SPRINT Sector C Total:	2.07 %
Site Total:	6.74 %

SPRINT _ Frequency Band / Technology (All Sectors)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	432.54	155	0.70	850 MHz	567	0.12%
Sprint 850 MHz LTE	2	432.54	155	1.40	850 MHz	567	0.25%
Sprint 1900 MHz (PCS) CDMA	5	535.94	155	4.34	1900 MHz (PCS)	1000	0.43%
Sprint 1900 MHz (PCS) LTE	2	1,339.86	155	4.34	1900 MHz (PCS)	1000	0.43%
Sprint 2500 MHz (BRS) LTE	8	639.78	155	8.29	2500 MHz (BRS)	1000	0.84%
						Total:	**2.07%**

Summary

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

The anticipated maximum composite contributions from the SPRINT facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

SPRINT Sector	Power Density Value (%)
Sector A:	2.07 %
Sector B:	2.07 %
Sector C:	2.07 %
SPRINT Maximum Total (per sector):	2.07 %
Site Total:	6.74 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **6.74 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

TOWER ENGINEERING PROFESSIONALS

Structural Analysis Report

Structure	:	**160 ft Guyed Tower**
ATC Site Name	:	**Hampton CT, CT**
ATC Site Number	:	**10029**
Engineering Number	:	**OAA710558_C3_02**
Proposed Carrier	:	**Sprint Nextel**
Carrier Site Name	:	**Hampton CT**
Carrier Site Number	:	**CT33XC568**
Site Location	:	**Fisk Road** **Hampton, CT 06247-1305** **41.769900,-72.070600**
County	:	**Windham**
Date	:	**September 28, 2017**
Max Usage	:	**77%**
Result	:	**Pass**

Prepared By:
Warren B. Atkinson
TEP

Reviewed By:

STATE OF CONNECTICUT
NATHAN THOMAS PARKER
32608
LICENSED PROFESSIONAL ENGINEER

9/29/17

COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 160 ft guyed tower to reflect the change in loading by Sprint Nextel.

Supporting Documents

Tower Drawings	Fred A. Nudd Drawing #99-6606-1, dated February 17, 1999
Foundation Drawing	ATC Pier Measurements, dated January 3, 2013 Fred A. Nudd Drawing #99-6606-2, dated February 17, 1999
Geotechnical Report	GEOServices Project #21-07254, dated February 16, 2008

Analysis

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

Basic Wind Speed:	101 mph (3-Second Gust, V_{asd}) / 130 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Spectral Response:	Ss = 0.17, S_1 = 0.06
Site Class:	D - Stiff Soil

Conclusion

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

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

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
160.0	160.0	9	Allgon 7120.16.05.00 / A-800-110-13I-0-N	Sector Frames	(9) 1 1/4" Coax	Sprint Nextel
155.0	155.0	3	Decibel DB980H90B-KL	Sector Frames	(2) 1 5/8" Coax	
144.0	144.0	3	Antel BXA-70063-6CF-EDIN-X	Sector Frames	(12) 1 5/8" Coax	Verizon
		6	Antel LPA-80080-4CF-EDIN-0			
		3	Antel BXA-171085-8BF-EDIN-X			
		6	RFS FD9R6004/2C-3L			
133.0	133.0	2	KMW AM-X-CD-17-65-00T-RET	Sector Frames	(12) 1 1/4" Coax (2) 0.78" 8 AWG (1) 0.39" Cable	AT&T Mobility
		1	Powerwave P65-17-XLH-RR			
		6	Allgon 7770.00			
		3	Ericsson RRUS-11			
		6	Powerwave LGP17201			
		1	Raycap DC6-48-60-18-8F			
		6	Powerwave LGP13519			
77.0	77.0	1	Lucent KS-24019	Side Arm	(1) 7/8" Coax	Verizon

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
155.0	155.0	6	Decibel DB980H90B-KL	-	(7) 1 5/8" Coax	Sprint Nextel

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
155.0	155.0	3	KMW ETCR-654L12H6	Sector Frames	(4) 1 1/4" Hybriflex	Sprint Nextel
		3	Alcatel-Lucent TD-RRH8x20-25 w/ S.S.			
		3	Alcatel-Lucent 1900MHz 4x45 RRH			
		6	Alcatel-Lucent RRH2x50-08			

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

Install proposed coax alongside existing Sprint Nextel coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	55%	Pass
Diagonals	50%	Pass
Horizontals	33%	Pass
Guys	51%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Base Axial (kips)	129.9	48%
Anchor 1 Uplift (kips)	29.7	42%
Anchor 1 Shear (kips)	38.1	77%

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

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
155.0	Alcatel-Lucent RRH2x50-08	Sprint Nextel	0.089	0.002	0.083
	Alcatel-Lucent 1900 MHz 4x45 RRH				
	Alcatel-Lucent TD-RRH8x20-25 w/ S.S.				
	KMW ETCR-654L12H6				

***Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G**

Standard Conditions

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

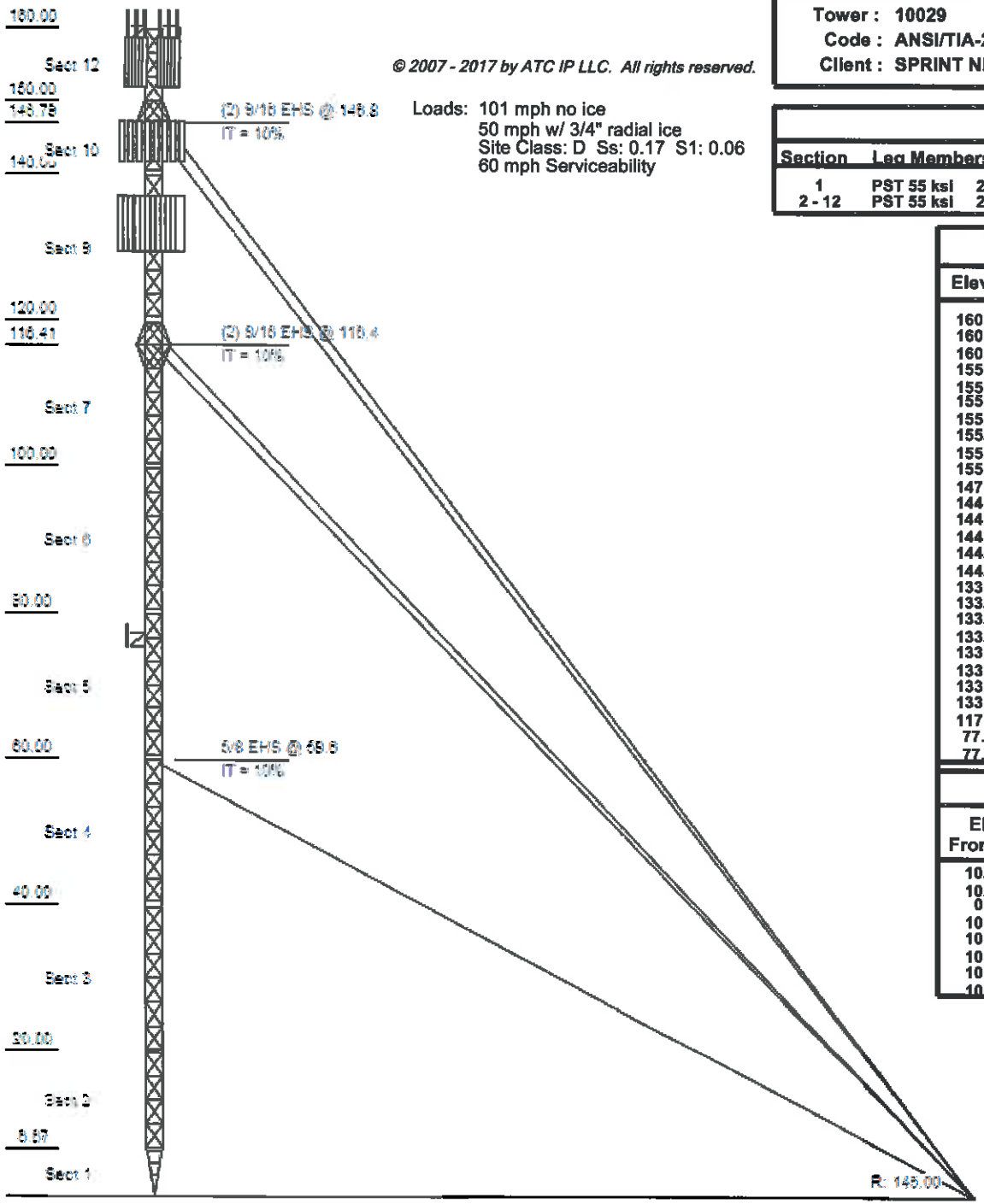
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

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

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

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Job Information

Tower : 10029		Location : HAMPTON CT, CT	
Code : ANSI/TIA-222-G		Shape : Triangle	Base Width : 3.50 ft
Client : SPRINT NEXTEL			

Sections Properties

Section	Leg Members		Diagonal Members	Horizontal Members
1	PST 55 ksi	2-1/2" DIA PIPE		SAE 36 ksi 2.5X2.5X0.25
2 - 12	PST 55 ksi	2-1/2" DIA PIPE	SOL 36 ksi 5/8" SOLID	SAE 36 ksi 1.5X1.5X0.1875

Discrete Appurtenance

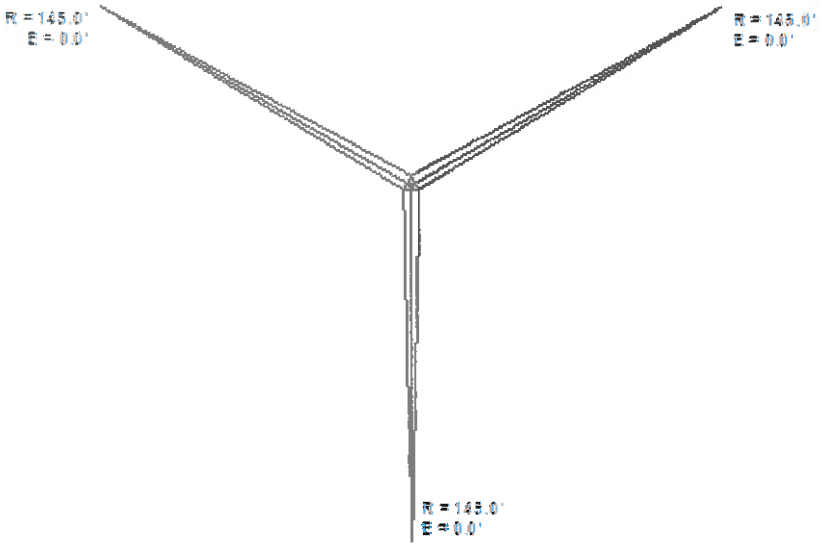
Elev (ft)	Type	Qty	Description
160.00	Mounting Frame	3	Flat Light Sector Frames
160.00	Straight Arm	3	Delta Mount
160.00	Panel	9	Allgon 7120.16.05.00 / A-800-1
155.00	Panel	3	KMW ETCR-654L12H6
155.00	Panel	3	Alcatel-Lucent TD-RRH8x20-25 w
155.00	Panel	3	Alcatel-Lucent 1900 MHz 4x45 R
155.00	Panel	6	Alcatel-Lucent RRH2x50-08
155.00	Mounting Frame	3	Flat Light Sector Frames
155.00	Straight Arm	3	Delta Mount
155.00	Panel	3	Decibel DB980H90B-KL
147.00	Other	1	Torque Arms
144.00	Mounting Frame	3	Flat Light Sector Frames
144.00	Panel	3	Amphenol Antel BXA-70063-6CF-E
144.00	Panel	6	Amphenol Antel LPA-80080-4CF-E
144.00	Panel	3	Amphenol Antel BXA-171085-8BF-
144.00	Panel	6	RFS FD9R6004/2C-3L
133.00	Mounting Frame	3	Flat Light Sector Frames
133.00	Panel	1	Powerwave P65-17-XLH-RR
133.00	Panel	2	KMW AM-X-CD-17-65-00T-RET
133.00	Panel	6	Allgon 7770.00
133.00	Panel	3	Ericsson RRUS-11
133.00	Panel	6	Powerwave LGP17201
133.00	Panel	1	Raycap DC6-48-60-18-8F
133.00	Panel	6	Powerwave LGP13519
117.00	Other	1	Torque Arms
77.00	Straight Arm	1	Flat Side Arm
77.00	Whip	1	Lucent KS-24019

Linear Appurtenance

Elev (ft) From	To	Qty	Description
10.00	160.00	9	1 1/4" Coax
10.00	155.00	2	1 5/8" Coax
0.00	155.00	4	1 1/4" Hybriflex Cab
10.00	144.00	12	1 5/8" Coax
10.00	133.00	12	1 1/4" Coax
10.00	133.00	2	0.78" (19.7mm) 8 AWG
10.00	133.00	1	0.39" (10 mm) Cable
10.00	77.00	1	7/8" Coax

Job Information

Tower :	10029	Location :	HAMPTON CT, CT		
Code :	ANSI/TIA-222-G	Shape :	Triangle	Base Width :	3.50 ft
Client :	SPRINT NEXTEL				



Guy Anchor Design Loads

Radius (ft)	Drop (ft)	Azimuth (°)	Uplift (kip)	Shear (kip)
145.00	0.00	0	29.71	38.15
145.00	0.00	240	29.71	38.15
145.00	0.00	120	29.71	38.15

Global Base Foundation Design Loads

Vertical (kip)	Horizontal (kip)
129.86	1.72

Site Number:	10029	Code:	ANSI/TIA-222-G	
Site Name:	HAMPTON CT, CT	Engineering Number:	OAA710558_C3_02	9/28/2017 3:50:17 PM
Customer:	SPRINT NEXTEL			

Analysis Parameters

Location:	WINDHAM County, CT	Height (ft):	160
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	3.50
Tower Manufacturer:	Nudd Corporation	Top Face Width (ft):	3.50
Tower Type:	Guyed		

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	101 mph
Exposure Category:	B	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	0.66				
T_L (sec):	6	p:	1.3	C_S:	0.060
S_S:	0.172	S_1:	0.062	C_S, Max:	0.060
F_a:	1.600	F_V:	2.400	C_S, Min:	0.030
S_{ds}:	0.183	S_{d1}:	0.099		

Load Cases

1.2D + 1.6W Normal	101 mph Normal to Face with No Ice
1.2D + 1.6W 60 deg	101 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	101 mph 90 degree with No Ice
1.2D + 1.6W 120 deg	101 mph 120 degree with No Ice
1.2D + 1.6W 180 deg	101 mph 180 degree with No Ice
1.2D + 1.6W 210 deg	101 mph 210 degree with No Ice
1.2D + 1.6W 240 deg	101 mph 240 degree with No Ice
1.2D + 1.6W 300 deg	101 mph 300 degree with No Ice
1.2D + 1.6W 330 deg	101 mph 330 degree with No Ice
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 120 deg	50 mph 120 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	50 mph 180 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 210 deg	50 mph 210 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 240 deg	50 mph 240 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 300 deg	50 mph 300 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 330 deg	50 mph 330 deg with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 60 deg	Seismic 60 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg

Analysis Parameters

(1.2 + 0.2Sds) * DL + E 120 deg	Seismic 120 deg
(1.2 + 0.2Sds) * DL + E 180 deg	Seismic 180 deg
(1.2 + 0.2Sds) * DL + E 210 deg	Seismic 210 deg
(1.2 + 0.2Sds) * DL + E 240 deg	Seismic 240 deg
(1.2 + 0.2Sds) * DL + E 300 deg	Seismic 300 deg
(1.2 + 0.2Sds) * DL + E 330 deg	Seismic 330 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 120 deg	Serviceability - 60 mph Wind 120 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 210 deg	Serviceability - 60 mph Wind 210 deg
1.0D + 1.0W Service 240 deg	Serviceability - 60 mph Wind 240 deg
1.0D + 1.0W Service 300 deg	Serviceability - 60 mph Wind 300 deg
1.0D + 1.0W Service 330 deg	Serviceability - 60 mph Wind 330 deg

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
160.0	Allgon 7120.16.05.00	9	15	5.3	4.3	7.9	11.4	0.80	0.71	0.0	0.0	25.09	928	200
160.0	Delta Mount	3	150	6.3	0.0	0.0	0.0	0.75	0.67	0.0	0.0	25.09	324	648
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	25.09	1031	1728
155.0	Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	24.86	138	457
155.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	24.86	126	259
155.0	Decibel DB980H90B-	3	9	3.8	5.0	6.1	2.8	0.80	0.67	0.0	0.0	24.86	207	37
155.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	0.0	0.0	24.86	220	302
155.0	Delta Mount	3	150	6.3	0.0	0.0	0.0	0.75	0.67	0.0	0.0	24.86	321	648
155.0	KMW ETCR-	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.0	24.86	778	367
155.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.86	1021	1728
147.0	Torque Arms	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	24.49	500	720
144.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	24.34	29	22
144.0	Amphenol Antel BXA-	3	11	2.9	4.0	6.0	4.5	0.80	0.71	0.0	0.0	24.34	166	45
144.0	Amphenol Antel LPA-	6	12	5.4	3.9	13.2	5.5	0.80	0.64	0.0	0.0	24.34	549	104
144.0	Amphenol Antel BXA-	3	17	7.6	5.9	11.2	4.5	0.80	0.66	0.0	0.0	24.34	397	73
144.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	24.34	1000	1728
133.0	Powerwave	6	5	0.3	0.7	4.4	2.7	0.80	0.50	0.0	0.0	23.80	26	46
133.0	Raycap DC6-48-60-	1	33	1.3	2.0	11.0	11.0	0.80	1.00	0.0	0.0	23.80	33	47
133.0	Powerwave	6	31	1.7	1.2	13.9	3.7	0.80	0.50	0.0	0.0	23.80	130	268
133.0	Ericsson RRUS-11	3	55	3.8	2.1	18.2	6.7	0.80	0.67	0.0	0.0	23.80	197	238
133.0	Allgon 7770.00	6	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	23.80	556	302
133.0	KMW AM-X-CD-17-	2	60	11.3	8.0	11.8	6.0	0.80	0.68	0.0	0.0	23.80	398	171
133.0	Powerwave P65-17-	1	59	11.5	8.0	12.0	6.0	0.80	0.67	0.0	0.0	23.80	199	85
133.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.80	978	1728
117.0	Torque Arms	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	22.94	468	720
77.00	Lucent KS-24019	1	4	0.9	2.2	3.5	3.2	1.00	1.00	0.0	0.0	20.36	25	6
77.00	Flat Side Arm	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.36	83	72
	Totals	92	8854	580.2										

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
160.0	Allgon 7120.16.05.00	9	169	4.9	4.3	7.9	11.4	0.80	0.71	0.0	0.0	6.15	130	1860
160.0	Delta Mount	3	224	8.8	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.15	69	913
160.0	Flat Light Sector	3	703	33.1	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.15	292	2817
155.0	Alcatel-Lucent	6	125	2.3	1.3	13.0	9.8	0.80	0.50	0.0	0.0	6.09	28	974
155.0	Alcatel-Lucent 1900	3	156	3.0	2.1	11.1	10.7	0.80	0.67	0.0	0.0	6.09	25	603
155.0	Decibel DB980H90B-	3	100	4.9	5.0	6.1	2.8	0.80	0.67	0.0	0.0	6.09	40	365
155.0	Alcatel-Lucent TD-	3	165	5.4	2.2	18.6	6.7	0.80	0.67	0.0	0.0	6.09	45	644
155.0	Delta Mount	3	224	8.8	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.09	68	913
155.0	KMW ETCR-	3	409	17.4	7.1	21.0	6.3	0.80	0.61	0.0	0.0	6.09	132	1534
155.0	Flat Light Sector	3	703	33.1	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.09	289	2817
147.0	Torque Arms	1	847	25.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.00	130	1137
144.0	RFS FD9R6004/2C-3L	6	16	0.6	0.5	6.5	1.5	0.80	0.50	0.0	0.0	5.97	7	117
144.0	Amphenol Antel BXA-	3	95	3.8	4.0	6.0	4.5	0.80	0.71	0.0	0.0	5.97	33	351
144.0	Amphenol Antel LPA-	6	147	6.4	3.9	13.2	5.5	0.80	0.64	0.0	0.0	5.97	100	1074
144.0	Amphenol Antel BXA-	3	183	8.8	5.9	11.2	4.5	0.80	0.66	0.0	0.0	5.97	71	672
144.0	Flat Light Sector	3	700	33.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.97	282	2809
133.0	Powerwave	6	20	0.6	0.7	4.4	2.7	0.80	0.50	0.0	0.0	5.83	7	151
133.0	Raycap DC6-48-60-	1	124	2.8	2.0	11.0	11.0	0.80	1.00	0.0	0.0	5.83	11	157
133.0	Powerwave	6	79	2.2	1.2	13.9	3.7	0.80	0.50	0.0	0.0	5.83	26	611

Site Number: 10029 Code: ANSI/TIA-222-G

Site Name: HAMPTON CT, CT Engineering Number: OAA710558_C3_02 9/28/2017 3:50:17 PM

Customer: SPRINT NEXTEL

Tower Loading

133.0	Ericsson RRUS-11	3	158	4.6	2.1	18.2	6.7	0.80	0.67	0.0	0.0	5.83	36	610
133.0	Allgon 7770.00	6	168	6.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	5.83	101	1258
133.0	KMW AM-X-CD-17-	2	303	12.9	8.0	11.8	6.0	0.80	0.68	0.0	0.0	5.83	70	756
133.0	Powerwave P65-17-	1	305	13.1	8.0	12.0	6.0	0.80	0.67	0.0	0.0	5.83	35	380
133.0	Flat Light Sector	3	697	32.8	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.83	274	2798
117.0	Torque Arms	1	838	25.1	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.62	120	1125
77.00	Lucent KS-24019	1	36	1.0	2.2	3.5	3.2	1.00	1.00	0.0	0.0	4.99	4	44
77.00	Flat Side Arm	1	73	4.1	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.99	17	99
	Totals	92	21220	844.2										

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
160.0	Allgon 7120.16.05.00	9	15	5.3	4.3	7.9	11.4	0.80	0.71	0.0	0.0	8.85	205	139
160.0	Delta Mount	3	150	6.3	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.85	71	450
160.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.85	227	1200
155.0	Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	8.77	30	317
155.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	8.77	28	180
155.0	Decibel DB980H90B-	3	9	3.8	5.0	6.1	2.8	0.80	0.67	0.0	0.0	8.77	46	26
155.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	0.0	0.0	8.77	49	210
155.0	Delta Mount	3	150	6.3	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.77	71	450
155.0	KMW ETCR-	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.0	8.77	172	255
155.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.77	225	1200
147.0	Torque Arms	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.64	110	500
144.0	RFS FD9R6004/2C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	8.59	6	16
144.0	Amphenol Antel BXA-	3	11	2.9	4.0	6.0	4.5	0.80	0.71	0.0	0.0	8.59	37	32
144.0	Amphenol Antel LPA-	6	12	5.4	3.9	13.2	5.5	0.80	0.64	0.0	0.0	8.59	121	72
144.0	Amphenol Antel BXA-	3	17	7.6	5.9	11.2	4.5	0.80	0.66	0.0	0.0	8.59	88	51
144.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.59	221	1200
133.0	Powerwave	6	5	0.3	0.7	4.4	2.7	0.80	0.50	0.0	0.0	8.40	6	32
133.0	Raycap DC6-48-60-	1	33	1.3	2.0	11.0	11.0	0.80	1.00	0.0	0.0	8.40	7	33
133.0	Powerwave	6	31	1.7	1.2	13.9	3.7	0.80	0.50	0.0	0.0	8.40	29	186
133.0	Ericsson RRUS-11	3	55	3.8	2.1	18.2	6.7	0.80	0.67	0.0	0.0	8.40	44	165
133.0	Allgon 7770.00	6	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	8.40	123	210
133.0	KMW AM-X-CD-17-	2	60	11.3	8.0	11.8	6.0	0.80	0.68	0.0	0.0	8.40	88	119
133.0	Powerwave P65-17-	1	59	11.5	8.0	12.0	6.0	0.80	0.67	0.0	0.0	8.40	44	59
133.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.40	216	1200
117.0	Torque Arms	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.10	103	500
77.00	Lucent KS-24019	1	4	0.9	2.2	3.5	3.2	1.00	1.00	0.0	0.0	7.18	6	4
77.00	Flat Side Arm	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.18	18	50
	Totals	92	8854	580.2										

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
10.00	160.0	1 1/4" Coax	9	1.55	0.63	55	2	Block	0.00	N	1.00	0.00	0.00
0.00	155.0	1 1/4" Hybriflex	4	1.54	1.00	0	Lin App	Individual	0.00	N	1.00	0.00	0.00
10.00	155.0	1 5/8" Coax	2	1.98	0.82	0	2	Individual	0.00	N	1.00	0.00	0.00
10.00	144.0	1 5/8" Coax	12	1.98	0.82	50	Lin App	Block	0.00	N	1.00	0.00	0.00
10.00	133.0	0.39" (10 mm)	1	0.39	0.07	0	Lin App	Individual	0.00	N	1.00	0.00	0.00
10.00	133.0	0.78" (19.7mm) 8	2	0.78	0.59	0	Lin App	Individual	0.00	N	1.00	0.00	0.00
10.00	133.0	1 1/4" Coax	12	1.55	0.63	33	Lin App	Block	0.00	N	1.00	0.00	0.00
10.00	77.00	7/8" Coax	1	1.09	0.33	0	1	Individual	0.00	N	1.00	0.00	0.00

Force/Stress Summary

Section: 1 Section 1 Bot Elev (ft): 0.00 Height (ft): 6.667

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-45.86	1.2D + 1.0Di +	1.64	100	100	100	13.5	55.0	83.11	0	0	0.00	0.00	55	Member X
HORIZ SAE - 2.5X2.5X0.25	-0.05	1.2D + 1.6W	0.826	100	100	100	13.1	36.0	38.21	0	0	0.00	0.00	0	Member Z
DIAG	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00		

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00		0	
HORIZ SAE - 2.5X2.5X0.25	3.86	1.2D + 1.0Di +	36	58	38.56	0	0	0.00	0.00	0.00	10	Member
DIAG	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	

Section: 2 Section 2 Bot Elev (ft): 6.67 Height (ft): 13.333

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-44.77	1.2D + 1.0Di +	0.25	100	100	100	2.1	55.0	84.32	0	0	0.00	0.00	53	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SOL - 5/8" SOLID	-1.74	1.2D + 1.6W	4.748	50	50	50	164.4	36.0	2.57	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00		0	
HORIZ SAE - 1.5X1.5X0.1875	5.42	1.2D + 1.0Di +	36	58	17.17	0	0	0.00	0.00	0.00	31	Member
DIAG	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	

Section: 3 Section 3-9 Bot Elev (ft): 20.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-44.60	1.2D + 1.0Di +	0.38	100	100	100	3.1	55.0	84.28	0	0	0.00	0.00	52	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SOL - 5/8" SOLID	-1.39	1.2D + 1.6W	4.748	50	50	50	164.4	36.0	2.57	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00		0	
HORIZ SAE - 1.5X1.5X0.1875	3.49	1.2D + 1.0Di +	36	58	17.17	0	0	0.00	0.00	0.00	20	Member
DIAG	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	

Force/Stress Summary

Section: 4 Section 3-9 Bot Elev (ft): 40.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-42.33	1.2D + 1.0Di +	0.38	100	100	100	3.1	55.0	84.28	0	0	0.00	0.00	50	Member X
HORIZ SAE - 1.5X1.5X0.1875	-1.95	1.2D + 1.6W 90	3.500	100	100	100	93.2	36.0	10.87	0	0	0.00	0.00	17	Member Z
DIAG SOL - 5/8" SOLID	-0.43	1.2D + 1.6W	4.748	50	50	50	164.4	36.0	2.57	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00		0	
HORIZ SAE - 1.5X1.5X0.1875	5.16	1.2D + 1.0Di +	36	58	17.17	0	0	0.00	0.00	0.00	30	Member
DIAG SOL - 5/8" SOLID	2.74	1.2D + 1.6W 90	36	58	9.94	0	0	0.00	0.00	0.00	27	Member

Section: 5 Section 3-9 Bot Elev (ft): 60.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-36.08	1.2D + 1.0Di +	0.38	100	100	100	3.1	55.0	84.28	0	0	0.00	0.00	42	Member X
HORIZ SAE - 1.5X1.5X0.1875	-0.54	1.2D + 1.6W 90	3.500	100	100	100	93.2	36.0	10.87	0	0	0.00	0.00	4	Member Z
DIAG SOL - 5/8" SOLID	-2.43	1.2D + 1.6W	4.748	50	50	50	164.4	36.0	2.57	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00		0	
HORIZ SAE - 1.5X1.5X0.1875	2.76	1.2D + 1.0Di +	36	58	17.17	0	0	0.00	0.00	0.00	16	Member
DIAG SOL - 5/8" SOLID	2.63	1.2D + 1.6W 90	36	58	9.94	0	0	0.00	0.00	0.00	26	Member

Section: 6 Section 3-9 Bot Elev (ft): 80.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-33.95	1.2D + 1.0Di +	0.38	100	100	100	3.1	55.0	84.28	0	0	0.00	0.00	40	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SOL - 5/8" SOLID	-1.10	1.2D + 1.6W	4.748	50	50	50	164.4	36.0	2.57	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00		0	
HORIZ SAE - 1.5X1.5X0.1875	2.70	1.2D + 1.0Di +	36	58	17.17	0	0	0.00	0.00	0.00	15	Member
DIAG	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	

Force/Stress Summary

Section: 7 Section 8 Bot Elev (ft): 100.0 Height (ft): 16.415

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-39.58	1.2D + 1.6W	3.21	100	100	100	26.4	55.0	79.74	0	0	0.00	0.00	49	Member X
HORIZ SAE - 1.5X1.5X0.1875	-2.35	1.2D + 1.6W 90	3.500	100	100	100	93.2	36.0	10.87	0	0	0.00	0.00	21	Member Z
DIAG SOL - 5/8" SOLID	-0.97	1.2D + 1.6W	4.748	50	50	50	164.3	36.0	2.57	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	4.13	1.2D + 1.6W 60	55	70	84.35	0	0	0.00	0.00		4	Member
HORIZ SAE - 1.5X1.5X0.1875	3.43	1.2D + 1.6W 60	36	58	17.17	0	0	0.00	0.00	0.00	19	Member
DIAG SOL - 5/8" SOLID	3.22	1.2D + 1.6W 90	36	58	9.94	0	0	0.00	0.00	0.00	32	Member

Section: 8 Section 8 Bot Elev (ft): 116.4 Height (ft): 3.585

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-37.95	1.2D + 1.6W	0.38	100	100	100	3.1	55.0	84.28	0	0	0.00	0.00	45	Member X
HORIZ SAE - 1.5X1.5X0.1875	-2.18	1.2D + 1.6W	3.500	100	100	100	93.2	36.0	10.87	0	0	0.00	0.00	20	Member Z
DIAG SOL - 5/8" SOLID	-0.60	1.2D + 1.6W	4.749	50	50	50	164.4	36.0	2.56	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	9.87	1.2D + 1.6W 60	55	70	84.35	0	0	0.00	0.00		11	Member
HORIZ SAE - 1.5X1.5X0.1875	2.97	1.2D + 1.6W 60	36	58	17.17	0	0	0.00	0.00	0.00	17	Member
DIAG	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	

Section: 9 Section 3-9 Bot Elev (ft): 120.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-37.81	1.2D + 1.6W	3.21	100	100	100	26.4	55.0	79.74	0	0	0.00	0.00	47	Member X
HORIZ SAE - 1.5X1.5X0.1875	-2.54	1.2D + 1.6W	3.500	100	100	100	93.2	36.0	10.87	0	0	0.00	0.00	23	Member Z
DIAG SOL - 5/8" SOLID	-0.27	1.2D + 1.6W	4.748	50	50	50	164.4	36.0	2.57	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	9.91	1.2D + 1.6W 60	55	70	84.35	0	0	0.00	0.00		11	Member
HORIZ SAE - 1.5X1.5X0.1875	1.85	1.2D + 1.6W 60	36	58	17.17	0	0	0.00	0.00	0.00	10	Member
DIAG SOL - 5/8" SOLID	3.78	1.2D + 1.6W 90	36	58	9.94	0	0	0.00	0.00	0.00	37	Member

Force/Stress Summary

Section: 10 Section 9 Bot Elev (ft): 140.0 Height (ft): 6.792

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-19.66	1.2D + 1.6W	3.21	100	100	100	26.4	55.0	79.74	0	0	0.00	0.00	24	Member X
HORIZ SAE - 1.5X1.5X0.1875	-0.56	1.2D + 1.6W	3.500	100	100	100	93.2	36.0	10.87	0	0	0.00	0.00	5	Member Z
DIAG SOL - 5/8" SOLID	-0.35	1.2D + 1.6W	4.748	50	50	50	164.4	36.0	2.57	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	6.00	1.2D + 1.6W 60	55	70	84.35	0	0	0.00	0.00		7	Member
HORIZ SAE - 1.5X1.5X0.1875	2.03	1.2D + 1.6W 60	36	58	17.17	0	0	0.00	0.00	0.00	11	Member
DIAG SOL - 5/8" SOLID	0.18	1.2D + 1.6W 60	36	58	9.94	0	0	0.00	0.00	0.00	1	Member

Section: 11 Section 9 Bot Elev (ft): 146.7 Height (ft): 3.208

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-17.04	1.2D + 1.6W	3.21	100	100	100	26.4	55.0	79.74	0	0	0.00	0.00	21	Member X
HORIZ SAE - 1.5X1.5X0.1875	-3.13	1.2D + 1.6W	3.500	100	100	100	93.2	36.0	10.87	0	0	0.00	0.00	28	Member Z
DIAG SOL - 5/8" SOLID	-0.18	1.2D + 1.6W	4.748	50	50	50	164.3	36.0	2.57	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	7.09	1.2D + 1.6W 60	55	70	84.35	0	0	0.00	0.00		8	Member
HORIZ SAE - 1.5X1.5X0.1875	3.70	1.2D + 1.6W 60	36	58	17.17	0	0	0.00	0.00	0.00	21	Member
DIAG	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	

Section: 12 Section 9 Bot Elev (ft): 150.0 Height (ft): 10.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-14.18	1.2D + 1.6W	3.21	100	100	100	26.4	55.0	79.74	0	0	0.00	0.00	17	Member X
HORIZ SAE - 1.5X1.5X0.1875	-3.64	1.2D + 1.6W 90	3.500	100	100	100	93.2	36.0	10.87	0	0	0.00	0.00	33	Member Z
DIAG SOL - 5/8" SOLID	-2.33	1.2D + 1.6W	4.748	50	50	50	164.4	36.0	2.57	0	0	0.00	0.00		Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	10.52	1.2D + 1.6W 60	55	70	84.35	0	0	0.00	0.00		12	Member
HORIZ SAE - 1.5X1.5X0.1875	0.50	1.2D + 1.6W	36	58	17.17	0	0	0.00	0.00	0.00	2	Member
DIAG SOL - 5/8" SOLID	5.05	1.2D + 1.6W 90	36	58	9.94	0	0	0.00	0.00	0.00	50	Member

Force/Stress Summary

Maximum Reactions Summary

	Base	Anch1
Vertical (kip)	129.86	-29.71
Horizontal (kip)	1.72	38.15

Force/Stress Summary

Guy Anchor Design Loads

Radius (ft)	Drop (ft)	Azimuth (°)	Uplift (kip)	Shear (kip)
145.00	0.00	0	29.71	38.15
145.00	0.00	240	29.71	38.15
145.00	0.00	120	29.71	38.15

Detailed Cable Forces

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use %
1.2D + 1.6W Normal	59.62	5/8 EHS	A1	27	25.44	0.57	2
		5/8 EHS	A1a	27b	25.44	8.17	32
		5/8 EHS	A1b	27a	25.44	8.17	32
	116.41	9/16 EHS	A1	T2	21.00	0.24	1
		9/16 EHS	A1	T2b	21.00	0.24	1
		9/16 EHS	A1a	T2a	21.00	7.45	35
		9/16 EHS	A1a	T2b	21.00	7.24	34
		9/16 EHS	A1b	T2	21.00	7.24	34
		9/16 EHS	A1b	T2a	21.00	7.45	35
	146.79	9/16 EHS	A1	T3	21.00	0.52	2
		9/16 EHS	A1	T3b	21.00	0.52	2
		9/16 EHS	A1a	T3a	21.00	8.92	42
		9/16 EHS	A1a	T3b	21.00	8.40	40
		9/16 EHS	A1b	T3	21.00	8.40	40
		9/16 EHS	A1b	T3a	21.00	8.92	42
1.2D + 1.6W 60 deg	59.62	5/8 EHS	A1	27	25.44	2.38	9
		5/8 EHS	A1a	27b	25.44	10.07	40
		5/8 EHS	A1b	27a	25.44	2.38	9
	116.41	9/16 EHS	A1	T2	21.00	2.27	11
		9/16 EHS	A1	T2b	21.00	2.23	11
		9/16 EHS	A1a	T2a	21.00	8.91	42
		9/16 EHS	A1a	T2b	21.00	8.91	42
		9/16 EHS	A1b	T2	21.00	2.27	11
		9/16 EHS	A1b	T2a	21.00	2.23	11
	146.79	9/16 EHS	A1	T3	21.00	2.30	11
		9/16 EHS	A1	T3b	21.00	2.33	11
		9/16 EHS	A1a	T3a	21.00	10.70	51
		9/16 EHS	A1a	T3b	21.00	10.70	51
		9/16 EHS	A1b	T3	21.00	2.30	11
		9/16 EHS	A1b	T3a	21.00	2.33	11
1.2D + 1.6W 90 deg	59.62	5/8 EHS	A1	27	25.44	5.16	20
		5/8 EHS	A1a	27b	25.44	9.72	38
		5/8 EHS	A1b	27a	25.44	0.82	3
	116.41	9/16 EHS	A1	T2	21.00	4.95	24
		9/16 EHS	A1	T2b	21.00	4.99	24
		9/16 EHS	A1a	T2a	21.00	8.58	41
		9/16 EHS	A1a	T2b	21.00	8.90	42
		9/16 EHS	A1b	T2	21.00	0.81	4
		9/16 EHS	A1b	T2a	21.00	0.75	4
	146.79	9/16 EHS	A1	T3	21.00	5.34	25
		9/16 EHS	A1	T3b	21.00	5.75	27
		9/16 EHS	A1a	T3a	21.00	10.28	49
		9/16 EHS	A1a	T3b	21.00	10.64	51
		9/16 EHS	A1b	T3	21.00	0.95	5
		9/16 EHS	A1b	T3a	21.00	0.91	4
1.2D + 1.6W 120 deg	59.62	5/8 EHS	A1	27	25.44	8.17	32
		5/8 EHS	A1a	27b	25.44	8.17	32

		5/8 EHS	A1b	27a	25.44	0.57	2
	116.41	9/16 EHS	A1	T2	21.00	7.24	34
		9/16 EHS	A1	T2b	21.00	7.45	35
		9/16 EHS	A1a	T2a	21.00	7.24	34
		9/16 EHS	A1a	T2b	21.00	7.45	35
		9/16 EHS	A1b	T2	21.00	0.24	1
		9/16 EHS	A1b	T2a	21.00	0.24	1
	146.79	9/16 EHS	A1	T3	21.00	8.40	40
		9/16 EHS	A1	T3b	21.00	8.92	42
		9/16 EHS	A1a	T3a	21.00	8.40	40
		9/16 EHS	A1a	T3b	21.00	8.92	42
		9/16 EHS	A1b	T3	21.00	0.52	2
		9/16 EHS	A1b	T3a	21.00	0.52	2
1.2D + 1.6W 180 deg	59.62	5/8 EHS	A1	27	25.44	10.07	40
		5/8 EHS	A1a	27b	25.44	2.38	9
		5/8 EHS	A1b	27a	25.44	2.38	9
	116.41	9/16 EHS	A1	T2	21.00	8.91	42
		9/16 EHS	A1	T2b	21.00	8.91	42
		9/16 EHS	A1a	T2a	21.00	2.27	11
		9/16 EHS	A1a	T2b	21.00	2.23	11
		9/16 EHS	A1b	T2	21.00	2.23	11
		9/16 EHS	A1b	T2a	21.00	2.27	11
	146.79	9/16 EHS	A1	T3	21.00	10.70	51
		9/16 EHS	A1	T3b	21.00	10.70	51
		9/16 EHS	A1a	T3a	21.00	2.30	11
		9/16 EHS	A1a	T3b	21.00	2.33	11
		9/16 EHS	A1b	T3	21.00	2.33	11
		9/16 EHS	A1b	T3a	21.00	2.30	11
1.2D + 1.6W 210 deg	59.62	5/8 EHS	A1	27	25.44	9.72	38
		5/8 EHS	A1a	27b	25.44	0.82	3
		5/8 EHS	A1b	27a	25.44	5.16	20
	116.41	9/16 EHS	A1	T2	21.00	8.90	42
		9/16 EHS	A1	T2b	21.00	8.58	41
		9/16 EHS	A1a	T2a	21.00	0.81	4
		9/16 EHS	A1a	T2b	21.00	0.75	4
		9/16 EHS	A1b	T2	21.00	4.99	24
		9/16 EHS	A1b	T2a	21.00	4.95	24
	146.79	9/16 EHS	A1	T3	21.00	10.64	51
		9/16 EHS	A1	T3b	21.00	10.28	49
		9/16 EHS	A1a	T3a	21.00	0.95	5
		9/16 EHS	A1a	T3b	21.00	0.91	4
		9/16 EHS	A1b	T3	21.00	5.75	27
		9/16 EHS	A1b	T3a	21.00	5.34	25
1.2D + 1.6W 240 deg	59.62	5/8 EHS	A1	27	25.44	8.17	32
		5/8 EHS	A1a	27b	25.44	0.57	2
		5/8 EHS	A1b	27a	25.44	8.17	32
	116.41	9/16 EHS	A1	T2	21.00	7.45	35
		9/16 EHS	A1	T2b	21.00	7.24	34
		9/16 EHS	A1a	T2a	21.00	0.24	1
		9/16 EHS	A1a	T2b	21.00	0.24	1
		9/16 EHS	A1b	T2	21.00	7.45	35
		9/16 EHS	A1b	T2a	21.00	7.24	34
	146.79	9/16 EHS	A1	T3	21.00	8.92	42
		9/16 EHS	A1	T3b	21.00	8.40	40
		9/16 EHS	A1a	T3a	21.00	0.52	2
		9/16 EHS	A1a	T3b	21.00	0.52	2

		9/16 EHS	A1b	T3	21.00	8.92	42
		9/16 EHS	A1b	T3a	21.00	8.40	40
1.2D + 1.6W 300 deg	59.62	5/8 EHS	A1	27	25.44	2.38	9
		5/8 EHS	A1a	27b	25.44	2.38	9
		5/8 EHS	A1b	27a	25.44	10.07	40
	116.41	9/16 EHS	A1	T2	21.00	2.23	11
		9/16 EHS	A1	T2b	21.00	2.27	11
		9/16 EHS	A1a	T2a	21.00	2.23	11
		9/16 EHS	A1a	T2b	21.00	2.27	11
		9/16 EHS	A1b	T2	21.00	8.91	42
		9/16 EHS	A1b	T2a	21.00	8.91	42
	146.79	9/16 EHS	A1	T3	21.00	2.33	11
		9/16 EHS	A1	T3b	21.00	2.30	11
		9/16 EHS	A1a	T3a	21.00	2.33	11
		9/16 EHS	A1a	T3b	21.00	2.30	11
		9/16 EHS	A1b	T3	21.00	10.70	51
		9/16 EHS	A1b	T3a	21.00	10.70	51
1.2D + 1.6W 330 deg	59.62	5/8 EHS	A1	27	25.44	0.82	3
		5/8 EHS	A1a	27b	25.44	5.16	20
		5/8 EHS	A1b	27a	25.44	9.72	38
	116.41	9/16 EHS	A1	T2	21.00	0.75	4
		9/16 EHS	A1	T2b	21.00	0.81	4
		9/16 EHS	A1a	T2a	21.00	4.99	24
		9/16 EHS	A1a	T2b	21.00	4.95	24
		9/16 EHS	A1b	T2	21.00	8.58	41
		9/16 EHS	A1b	T2a	21.00	8.90	42
	146.79	9/16 EHS	A1	T3	21.00	0.91	4
		9/16 EHS	A1	T3b	21.00	0.95	5
		9/16 EHS	A1a	T3a	21.00	5.75	27
		9/16 EHS	A1a	T3b	21.00	5.34	25
		9/16 EHS	A1b	T3	21.00	10.28	49
		9/16 EHS	A1b	T3a	21.00	10.64	51
1.2D + 1.0Di + 1.0Wi Normal	59.62	5/8 EHS	A1	27	25.44	5.77	23
		5/8 EHS	A1a	27b	25.44	7.71	30
		5/8 EHS	A1b	27a	25.44	7.71	30
	116.41	9/16 EHS	A1	T2	21.00	4.87	23
		9/16 EHS	A1	T2b	21.00	4.87	23
		9/16 EHS	A1a	T2a	21.00	6.72	32
		9/16 EHS	A1a	T2b	21.00	6.75	32
		9/16 EHS	A1b	T2	21.00	6.75	32
		9/16 EHS	A1b	T2a	21.00	6.72	32
	146.79	9/16 EHS	A1	T3	21.00	4.59	22
		9/16 EHS	A1	T3b	21.00	4.59	22
		9/16 EHS	A1a	T3a	21.00	7.00	33
		9/16 EHS	A1a	T3b	21.00	7.00	33
		9/16 EHS	A1b	T3	21.00	7.00	33
		9/16 EHS	A1b	T3a	21.00	7.00	33
1.2D + 1.0Di + 1.0Wi 60 deg	59.62	5/8 EHS	A1	27	25.44	6.32	25
		5/8 EHS	A1a	27b	25.44	8.24	32
		5/8 EHS	A1b	27a	25.44	6.32	25
	116.41	9/16 EHS	A1	T2	21.00	5.41	26
		9/16 EHS	A1	T2b	21.00	5.37	26
		9/16 EHS	A1a	T2a	21.00	7.26	35

		9/16 EHS	A1a	T2b	21.00	7.26	35
		9/16 EHS	A1b	T2	21.00	5.41	26
		9/16 EHS	A1b	T2a	21.00	5.37	26
	146.79	9/16 EHS	A1	T3	21.00	5.37	26
		9/16 EHS	A1	T3b	21.00	5.33	25
		9/16 EHS	A1a	T3a	21.00	7.73	37
		9/16 EHS	A1a	T3b	21.00	7.73	37
		9/16 EHS	A1b	T3	21.00	5.37	26
		9/16 EHS	A1b	T3a	21.00	5.33	25
1.2D + 1.0Di + 1.0Wi 90 deg	59.62	5/8 EHS	A1	27	25.44	7.00	28
		5/8 EHS	A1a	27b	25.44	8.13	32
		5/8 EHS	A1b	27a	25.44	5.89	23
	116.41	9/16 EHS	A1	T2	21.00	6.09	29
		9/16 EHS	A1	T2b	21.00	6.02	29
		9/16 EHS	A1a	T2a	21.00	7.14	34
		9/16 EHS	A1a	T2b	21.00	7.15	34
		9/16 EHS	A1b	T2	21.00	4.98	24
		9/16 EHS	A1b	T2a	21.00	4.99	24
	146.79	9/16 EHS	A1	T3	21.00	6.19	29
		9/16 EHS	A1	T3b	21.00	6.15	29
		9/16 EHS	A1a	T3a	21.00	7.54	36
		9/16 EHS	A1a	T3b	21.00	7.56	36
		9/16 EHS	A1b	T3	21.00	4.77	23
		9/16 EHS	A1b	T3a	21.00	4.78	23
1.2D + 1.0Di + 1.0Wi 120 deg	59.62	5/8 EHS	A1	27	25.44	7.70	30
		5/8 EHS	A1a	27b	25.44	7.70	30
		5/8 EHS	A1b	27a	25.44	5.79	23
	116.41	9/16 EHS	A1	T2	21.00	6.75	32
		9/16 EHS	A1	T2b	21.00	6.71	32
		9/16 EHS	A1a	T2a	21.00	6.75	32
		9/16 EHS	A1a	T2b	21.00	6.71	32
		9/16 EHS	A1b	T2	21.00	4.88	23
		9/16 EHS	A1b	T2a	21.00	4.88	23
	146.79	9/16 EHS	A1	T3	21.00	7.00	33
		9/16 EHS	A1	T3b	21.00	6.99	33
		9/16 EHS	A1a	T3a	21.00	7.00	33
		9/16 EHS	A1a	T3b	21.00	6.99	33
		9/16 EHS	A1b	T3	21.00	4.59	22
		9/16 EHS	A1b	T3a	21.00	4.59	22
1.2D + 1.0Di + 1.0Wi 180 deg	59.62	5/8 EHS	A1	27	25.44	8.25	32
		5/8 EHS	A1a	27b	25.44	6.31	25
		5/8 EHS	A1b	27a	25.44	6.31	25
	116.41	9/16 EHS	A1	T2	21.00	7.27	35
		9/16 EHS	A1	T2b	21.00	7.27	35
		9/16 EHS	A1a	T2a	21.00	5.41	26
		9/16 EHS	A1a	T2b	21.00	5.36	26
		9/16 EHS	A1b	T2	21.00	5.36	26
		9/16 EHS	A1b	T2a	21.00	5.41	26
	146.79	9/16 EHS	A1	T3	21.00	7.73	37
		9/16 EHS	A1	T3b	21.00	7.73	37
		9/16 EHS	A1a	T3a	21.00	5.37	26
		9/16 EHS	A1a	T3b	21.00	5.33	25
		9/16 EHS	A1b	T3	21.00	5.33	25
		9/16 EHS	A1b	T3a	21.00	5.37	26

1.2D + 1.0Di + 1.0Wi 210 deg	59.62	5/8 EHS	A1	27	25.44	8.13	32
		5/8 EHS	A1a	27b	25.44	5.89	23
		5/8 EHS	A1b	27a	25.44	7.00	28
	116.41	9/16 EHS	A1	T2	21.00	7.15	34
		9/16 EHS	A1	T2b	21.00	7.14	34
		9/16 EHS	A1a	T2a	21.00	4.98	24
		9/16 EHS	A1a	T2b	21.00	4.99	24
		9/16 EHS	A1b	T2	21.00	6.02	29
		9/16 EHS	A1b	T2a	21.00	6.09	29
	146.79	9/16 EHS	A1	T3	21.00	7.56	36
		9/16 EHS	A1	T3b	21.00	7.54	36
		9/16 EHS	A1a	T3a	21.00	4.77	23
		9/16 EHS	A1a	T3b	21.00	4.78	23
		9/16 EHS	A1b	T3	21.00	6.15	29
		9/16 EHS	A1b	T3a	21.00	6.19	29
1.2D + 1.0Di + 1.0Wi 240 deg	59.62	5/8 EHS	A1	27	25.44	7.70	30
		5/8 EHS	A1a	27b	25.44	5.79	23
		5/8 EHS	A1b	27a	25.44	7.70	30
	116.41	9/16 EHS	A1	T2	21.00	6.71	32
		9/16 EHS	A1	T2b	21.00	6.75	32
		9/16 EHS	A1a	T2a	21.00	4.88	23
		9/16 EHS	A1a	T2b	21.00	4.88	23
		9/16 EHS	A1b	T2	21.00	6.71	32
		9/16 EHS	A1b	T2a	21.00	6.75	32
	146.79	9/16 EHS	A1	T3	21.00	6.99	33
		9/16 EHS	A1	T3b	21.00	7.00	33
		9/16 EHS	A1a	T3a	21.00	4.59	22
		9/16 EHS	A1a	T3b	21.00	4.59	22
		9/16 EHS	A1b	T3	21.00	6.99	33
		9/16 EHS	A1b	T3a	21.00	7.00	33
1.2D + 1.0Di + 1.0Wi 300 deg	59.62	5/8 EHS	A1	27	25.44	6.32	25
		5/8 EHS	A1a	27b	25.44	6.32	25
		5/8 EHS	A1b	27a	25.44	8.24	32
	116.41	9/16 EHS	A1	T2	21.00	5.37	26
		9/16 EHS	A1	T2b	21.00	5.41	26
		9/16 EHS	A1a	T2a	21.00	5.37	26
		9/16 EHS	A1a	T2b	21.00	5.41	26
		9/16 EHS	A1b	T2	21.00	7.26	35
		9/16 EHS	A1b	T2a	21.00	7.26	35
	146.79	9/16 EHS	A1	T3	21.00	5.33	25
		9/16 EHS	A1	T3b	21.00	5.37	26
		9/16 EHS	A1a	T3a	21.00	5.33	25
		9/16 EHS	A1a	T3b	21.00	5.37	26
		9/16 EHS	A1b	T3	21.00	7.73	37
		9/16 EHS	A1b	T3a	21.00	7.73	37
1.2D + 1.0Di + 1.0Wi 330 deg	59.62	5/8 EHS	A1	27	25.44	5.91	23
		5/8 EHS	A1a	27b	25.44	7.00	28
		5/8 EHS	A1b	27a	25.44	8.11	32
	116.41	9/16 EHS	A1	T2	21.00	4.99	24
		9/16 EHS	A1	T2b	21.00	4.99	24
		9/16 EHS	A1a	T2a	21.00	6.02	29
		9/16 EHS	A1a	T2b	21.00	6.09	29
		9/16 EHS	A1b	T2	21.00	7.13	34
		9/16 EHS	A1b	T2a	21.00	7.14	34

	146.79	9/16 EHS	A1	T3	21.00	4.78	23
		9/16 EHS	A1	T3b	21.00	4.78	23
		9/16 EHS	A1a	T3a	21.00	6.15	29
		9/16 EHS	A1a	T3b	21.00	6.19	29
		9/16 EHS	A1b	T3	21.00	7.53	36
		9/16 EHS	A1b	T3a	21.00	7.55	36
(1.2 + 0.2Sds) * DL + E Normal M1	59.62	5/8 EHS	A1	27	25.44	3.94	15
		5/8 EHS	A1a	27b	25.44	4.02	16
		5/8 EHS	A1b	27a	25.44	4.02	16
	116.41	9/16 EHS	A1	T2	21.00	2.82	13
		9/16 EHS	A1	T2b	21.00	2.82	13
		9/16 EHS	A1a	T2a	21.00	3.13	15
		9/16 EHS	A1a	T2b	21.00	3.10	15
		9/16 EHS	A1b	T2	21.00	3.10	15
		9/16 EHS	A1b	T2a	21.00	3.13	15
	146.79	9/16 EHS	A1	T3	21.00	2.55	12
		9/16 EHS	A1	T3b	21.00	2.55	12
		9/16 EHS	A1a	T3a	21.00	3.19	15
		9/16 EHS	A1a	T3b	21.00	3.14	15
		9/16 EHS	A1b	T3	21.00	3.14	15
		9/16 EHS	A1b	T3a	21.00	3.19	15
(1.2 + 0.2Sds) * DL + E Normal M2	59.62	5/8 EHS	A1	27	25.44	4.03	16
		5/8 EHS	A1a	27b	25.44	3.97	16
		5/8 EHS	A1b	27a	25.44	3.97	16
	116.41	9/16 EHS	A1	T2	21.00	2.80	13
		9/16 EHS	A1	T2b	21.00	2.80	13
		9/16 EHS	A1a	T2a	21.00	3.16	15
		9/16 EHS	A1a	T2b	21.00	3.10	15
		9/16 EHS	A1b	T2	21.00	3.10	15
		9/16 EHS	A1b	T2a	21.00	3.16	15
	146.79	9/16 EHS	A1	T3	21.00	2.30	11
		9/16 EHS	A1	T3b	21.00	2.30	11
		9/16 EHS	A1a	T3a	21.00	3.36	16
		9/16 EHS	A1a	T3b	21.00	3.25	15
		9/16 EHS	A1b	T3	21.00	3.25	15
		9/16 EHS	A1b	T3a	21.00	3.36	16
(1.2 + 0.2Sds) * DL + E 60 deg M1	59.62	5/8 EHS	A1	27	25.44	3.96	16
		5/8 EHS	A1a	27b	25.44	4.05	16
		5/8 EHS	A1b	27a	25.44	3.96	16
	116.41	9/16 EHS	A1	T2	21.00	2.91	14
		9/16 EHS	A1	T2b	21.00	2.94	14
		9/16 EHS	A1a	T2a	21.00	3.21	15
		9/16 EHS	A1a	T2b	21.00	3.21	15
		9/16 EHS	A1b	T2	21.00	2.91	14
		9/16 EHS	A1b	T2a	21.00	2.94	14
	146.79	9/16 EHS	A1	T3	21.00	2.73	13
		9/16 EHS	A1	T3b	21.00	2.78	13
		9/16 EHS	A1a	T3a	21.00	3.36	16
		9/16 EHS	A1a	T3b	21.00	3.36	16
		9/16 EHS	A1b	T3	21.00	2.73	13
		9/16 EHS	A1b	T3a	21.00	2.78	13
(1.2 + 0.2Sds) * DL + E 60 deg M2	59.62	5/8 EHS	A1	27	25.44	4.01	16
		5/8 EHS	A1a	27b	25.44	3.96	16

		5/8 EHS	A1b	27a	25.44	4.01	16
	116.41	9/16 EHS	A1	T2	21.00	2.89	14
		9/16 EHS	A1	T2b	21.00	2.94	14
		9/16 EHS	A1a	T2a	21.00	3.23	15
		9/16 EHS	A1a	T2b	21.00	3.23	15
		9/16 EHS	A1b	T2	21.00	2.89	14
		9/16 EHS	A1b	T2a	21.00	2.94	14
	146.79	9/16 EHS	A1	T3	21.00	2.58	12
		9/16 EHS	A1	T3b	21.00	2.68	13
		9/16 EHS	A1a	T3a	21.00	3.63	17
		9/16 EHS	A1a	T3b	21.00	3.63	17
		9/16 EHS	A1b	T3	21.00	2.58	12
		9/16 EHS	A1b	T3a	21.00	2.68	13
(1.2 + 0.2Sds) * DL + E 90 deg M1	59.62	5/8 EHS	A1	27	25.44	3.99	16
		5/8 EHS	A1a	27b	25.44	4.04	16
		5/8 EHS	A1b	27a	25.44	3.94	16
	116.41	9/16 EHS	A1	T2	21.00	3.00	14
		9/16 EHS	A1	T2b	21.00	3.03	14
		9/16 EHS	A1a	T2a	21.00	3.18	15
		9/16 EHS	A1a	T2b	21.00	3.19	15
		9/16 EHS	A1b	T2	21.00	2.84	14
		9/16 EHS	A1b	T2a	21.00	2.86	14
	146.79	9/16 EHS	A1	T3	21.00	2.93	14
		9/16 EHS	A1	T3b	21.00	2.98	14
		9/16 EHS	A1a	T3a	21.00	3.30	16
		9/16 EHS	A1a	T3b	21.00	3.33	16
		9/16 EHS	A1b	T3	21.00	2.59	12
		9/16 EHS	A1b	T3a	21.00	2.61	12
(1.2 + 0.2Sds) * DL + E 90 deg M2	59.62	5/8 EHS	A1	27	25.44	3.99	16
		5/8 EHS	A1a	27b	25.44	3.96	16
		5/8 EHS	A1b	27a	25.44	4.02	16
	116.41	9/16 EHS	A1	T2	21.00	2.99	14
		9/16 EHS	A1	T2b	21.00	3.05	15
		9/16 EHS	A1a	T2a	21.00	3.18	15
		9/16 EHS	A1a	T2b	21.00	3.22	15
		9/16 EHS	A1b	T2	21.00	2.82	13
		9/16 EHS	A1b	T2a	21.00	2.85	14
	146.79	9/16 EHS	A1	T3	21.00	2.90	14
		9/16 EHS	A1	T3b	21.00	3.02	14
		9/16 EHS	A1a	T3a	21.00	3.51	17
		9/16 EHS	A1a	T3b	21.00	3.58	17
		9/16 EHS	A1b	T3	21.00	2.36	11
		9/16 EHS	A1b	T3a	21.00	2.42	12
(1.2 + 0.2Sds) * DL + E 120 deg M1	59.62	5/8 EHS	A1	27	25.44	4.02	16
		5/8 EHS	A1a	27b	25.44	4.02	16
		5/8 EHS	A1b	27a	25.44	3.94	15
	116.41	9/16 EHS	A1	T2	21.00	3.10	15
		9/16 EHS	A1	T2b	21.00	3.13	15
		9/16 EHS	A1a	T2a	21.00	3.10	15
		9/16 EHS	A1a	T2b	21.00	3.13	15
		9/16 EHS	A1b	T2	21.00	2.83	13
		9/16 EHS	A1b	T2a	21.00	2.83	13
	146.79	9/16 EHS	A1	T3	21.00	3.13	15
		9/16 EHS	A1	T3b	21.00	3.18	15
		9/16 EHS	A1a	T3a	21.00	3.13	15
		9/16 EHS	A1a	T3b	21.00	3.18	15

		9/16 EHS	A1b	T3	21.00	2.55	12
		9/16 EHS	A1b	T3a	21.00	2.55	12
(1.2 + 0.2Sds) * DL + E 120 deg M2	59.62	5/8 EHS	A1	27	25.44	3.97	16
		5/8 EHS	A1a	27b	25.44	3.97	16
		5/8 EHS	A1b	27a	25.44	4.03	16
	116.41	9/16 EHS	A1	T2	21.00	3.10	15
		9/16 EHS	A1	T2b	21.00	3.15	15
		9/16 EHS	A1a	T2a	21.00	3.10	15
		9/16 EHS	A1a	T2b	21.00	3.15	15
		9/16 EHS	A1b	T2	21.00	2.80	13
		9/16 EHS	A1b	T2a	21.00	2.80	13
	146.79	9/16 EHS	A1	T3	21.00	3.25	15
		9/16 EHS	A1	T3b	21.00	3.35	16
		9/16 EHS	A1a	T3a	21.00	3.25	15
		9/16 EHS	A1a	T3b	21.00	3.35	16
		9/16 EHS	A1b	T3	21.00	2.30	11
		9/16 EHS	A1b	T3a	21.00	2.30	11
(1.2 + 0.2Sds) * DL + E 180 deg M1	59.62	5/8 EHS	A1	27	25.44	4.05	16
		5/8 EHS	A1a	27b	25.44	3.96	16
		5/8 EHS	A1b	27a	25.44	3.96	16
	116.41	9/16 EHS	A1	T2	21.00	3.21	15
		9/16 EHS	A1	T2b	21.00	3.21	15
		9/16 EHS	A1a	T2a	21.00	2.91	14
		9/16 EHS	A1a	T2b	21.00	2.93	14
		9/16 EHS	A1b	T2	21.00	2.93	14
		9/16 EHS	A1b	T2a	21.00	2.91	14
	146.79	9/16 EHS	A1	T3	21.00	3.37	16
		9/16 EHS	A1	T3b	21.00	3.37	16
		9/16 EHS	A1a	T3a	21.00	2.73	13
		9/16 EHS	A1a	T3b	21.00	2.77	13
		9/16 EHS	A1b	T3	21.00	2.77	13
		9/16 EHS	A1b	T3a	21.00	2.73	13
(1.2 + 0.2Sds) * DL + E 180 deg M2	59.62	5/8 EHS	A1	27	25.44	3.96	16
		5/8 EHS	A1a	27b	25.44	4.01	16
		5/8 EHS	A1b	27a	25.44	4.01	16
	116.41	9/16 EHS	A1	T2	21.00	3.23	15
		9/16 EHS	A1	T2b	21.00	3.23	15
		9/16 EHS	A1a	T2a	21.00	2.89	14
		9/16 EHS	A1a	T2b	21.00	2.94	14
		9/16 EHS	A1b	T2	21.00	2.94	14
		9/16 EHS	A1b	T2a	21.00	2.89	14
	146.79	9/16 EHS	A1	T3	21.00	3.63	17
		9/16 EHS	A1	T3b	21.00	3.63	17
		9/16 EHS	A1a	T3a	21.00	2.58	12
		9/16 EHS	A1a	T3b	21.00	2.68	13
		9/16 EHS	A1b	T3	21.00	2.68	13
		9/16 EHS	A1b	T3a	21.00	2.58	12
(1.2 + 0.2Sds) * DL + E 210 deg M1	59.62	5/8 EHS	A1	27	25.44	4.04	16
		5/8 EHS	A1a	27b	25.44	3.95	16
		5/8 EHS	A1b	27a	25.44	3.99	16
	116.41	9/16 EHS	A1	T2	21.00	3.19	15
		9/16 EHS	A1	T2b	21.00	3.17	15
		9/16 EHS	A1a	T2a	21.00	2.85	14

		9/16 EHS	A1a	T2b	21.00	2.86	14
		9/16 EHS	A1b	T2	21.00	3.03	14
		9/16 EHS	A1b	T2a	21.00	3.00	14
	146.79	9/16 EHS	A1	T3	21.00	3.32	16
		9/16 EHS	A1	T3b	21.00	3.29	16
		9/16 EHS	A1a	T3a	21.00	2.59	12
		9/16 EHS	A1a	T3b	21.00	2.62	12
		9/16 EHS	A1b	T3	21.00	2.98	14
		9/16 EHS	A1b	T3a	21.00	2.93	14
(1.2 + 0.2Sds) * DL + E 210 deg M2	59.62	5/8 EHS	A1	27	25.44	3.96	16
		5/8 EHS	A1a	27b	25.44	4.02	16
		5/8 EHS	A1b	27a	25.44	3.99	16
	116.41	9/16 EHS	A1	T2	21.00	3.22	15
		9/16 EHS	A1	T2b	21.00	3.18	15
		9/16 EHS	A1a	T2a	21.00	2.82	13
		9/16 EHS	A1a	T2b	21.00	2.85	14
		9/16 EHS	A1b	T2	21.00	3.05	15
		9/16 EHS	A1b	T2a	21.00	2.99	14
	146.79	9/16 EHS	A1	T3	21.00	3.58	17
		9/16 EHS	A1	T3b	21.00	3.51	17
		9/16 EHS	A1a	T3a	21.00	2.36	11
		9/16 EHS	A1a	T3b	21.00	2.42	12
		9/16 EHS	A1b	T3	21.00	3.02	14
		9/16 EHS	A1b	T3a	21.00	2.90	14
(1.2 + 0.2Sds) * DL + E 240 deg M1	59.62	5/8 EHS	A1	27	25.44	4.02	16
		5/8 EHS	A1a	27b	25.44	3.94	15
		5/8 EHS	A1b	27a	25.44	4.02	16
	116.41	9/16 EHS	A1	T2	21.00	3.13	15
		9/16 EHS	A1	T2b	21.00	3.10	15
		9/16 EHS	A1a	T2a	21.00	2.83	13
		9/16 EHS	A1a	T2b	21.00	2.83	13
		9/16 EHS	A1b	T2	21.00	3.13	15
		9/16 EHS	A1b	T2a	21.00	3.10	15
	146.79	9/16 EHS	A1	T3	21.00	3.18	15
		9/16 EHS	A1	T3b	21.00	3.13	15
		9/16 EHS	A1a	T3a	21.00	2.55	12
		9/16 EHS	A1a	T3b	21.00	2.55	12
		9/16 EHS	A1b	T3	21.00	3.18	15
		9/16 EHS	A1b	T3a	21.00	3.13	15
(1.2 + 0.2Sds) * DL + E 240 deg M2	59.62	5/8 EHS	A1	27	25.44	3.97	16
		5/8 EHS	A1a	27b	25.44	4.03	16
		5/8 EHS	A1b	27a	25.44	3.97	16
	116.41	9/16 EHS	A1	T2	21.00	3.15	15
		9/16 EHS	A1	T2b	21.00	3.10	15
		9/16 EHS	A1a	T2a	21.00	2.80	13
		9/16 EHS	A1a	T2b	21.00	2.80	13
		9/16 EHS	A1b	T2	21.00	3.15	15
		9/16 EHS	A1b	T2a	21.00	3.10	15
	146.79	9/16 EHS	A1	T3	21.00	3.35	16
		9/16 EHS	A1	T3b	21.00	3.25	15
		9/16 EHS	A1a	T3a	21.00	2.30	11
		9/16 EHS	A1a	T3b	21.00	2.30	11
		9/16 EHS	A1b	T3	21.00	3.35	16
		9/16 EHS	A1b	T3a	21.00	3.25	15

(1.2 + 0.2Sds) * DL + E 300 deg M1	59.62	5/8 EHS	A1	27	25.44	3.96	16
		5/8 EHS	A1a	27b	25.44	3.96	16
		5/8 EHS	A1b	27a	25.44	4.05	16
	116.41	9/16 EHS	A1	T2	21.00	2.94	14
		9/16 EHS	A1	T2b	21.00	2.91	14
		9/16 EHS	A1a	T2a	21.00	2.94	14
		9/16 EHS	A1a	T2b	21.00	2.91	14
		9/16 EHS	A1b	T2	21.00	3.21	15
		9/16 EHS	A1b	T2a	21.00	3.21	15
	146.79	9/16 EHS	A1	T3	21.00	2.78	13
		9/16 EHS	A1	T3b	21.00	2.73	13
		9/16 EHS	A1a	T3a	21.00	2.78	13
		9/16 EHS	A1a	T3b	21.00	2.73	13
		9/16 EHS	A1b	T3	21.00	3.36	16
		9/16 EHS	A1b	T3a	21.00	3.36	16
(1.2 + 0.2Sds) * DL + E 300 deg M2	59.62	5/8 EHS	A1	27	25.44	4.01	16
		5/8 EHS	A1a	27b	25.44	4.01	16
		5/8 EHS	A1b	27a	25.44	3.96	16
	116.41	9/16 EHS	A1	T2	21.00	2.94	14
		9/16 EHS	A1	T2b	21.00	2.89	14
		9/16 EHS	A1a	T2a	21.00	2.94	14
		9/16 EHS	A1a	T2b	21.00	2.89	14
		9/16 EHS	A1b	T2	21.00	3.23	15
		9/16 EHS	A1b	T2a	21.00	3.23	15
	146.79	9/16 EHS	A1	T3	21.00	2.68	13
		9/16 EHS	A1	T3b	21.00	2.58	12
		9/16 EHS	A1a	T3a	21.00	2.68	13
		9/16 EHS	A1a	T3b	21.00	2.58	12
		9/16 EHS	A1b	T3	21.00	3.63	17
		9/16 EHS	A1b	T3a	21.00	3.63	17
(1.2 + 0.2Sds) * DL + E 330 deg M1	59.62	5/8 EHS	A1	27	25.44	3.95	16
		5/8 EHS	A1a	27b	25.44	3.99	16
		5/8 EHS	A1b	27a	25.44	4.04	16
	116.41	9/16 EHS	A1	T2	21.00	2.86	14
		9/16 EHS	A1	T2b	21.00	2.85	14
		9/16 EHS	A1a	T2a	21.00	3.03	14
		9/16 EHS	A1a	T2b	21.00	3.00	14
		9/16 EHS	A1b	T2	21.00	3.17	15
		9/16 EHS	A1b	T2a	21.00	3.19	15
	146.79	9/16 EHS	A1	T3	21.00	2.62	12
		9/16 EHS	A1	T3b	21.00	2.59	12
		9/16 EHS	A1a	T3a	21.00	2.98	14
		9/16 EHS	A1a	T3b	21.00	2.93	14
		9/16 EHS	A1b	T3	21.00	3.29	16
		9/16 EHS	A1b	T3a	21.00	3.32	16
(1.2 + 0.2Sds) * DL + E 330 deg M2	59.62	5/8 EHS	A1	27	25.44	4.02	16
		5/8 EHS	A1a	27b	25.44	3.99	16
		5/8 EHS	A1b	27a	25.44	3.96	16
	116.41	9/16 EHS	A1	T2	21.00	2.85	14
		9/16 EHS	A1	T2b	21.00	2.82	13
		9/16 EHS	A1a	T2a	21.00	3.05	15
		9/16 EHS	A1a	T2b	21.00	2.99	14
		9/16 EHS	A1b	T2	21.00	3.18	15
		9/16 EHS	A1b	T2a	21.00	3.22	15

	146.79	9/16 EHS	A1	T3	21.00	2.42	12
		9/16 EHS	A1	T3b	21.00	2.36	11
		9/16 EHS	A1a	T3a	21.00	3.02	14
		9/16 EHS	A1a	T3b	21.00	2.90	14
		9/16 EHS	A1b	T3	21.00	3.51	17
		9/16 EHS	A1b	T3a	21.00	3.58	17
1.0D + 1.0W Service Normal	59.62	5/8 EHS	A1	27	25.44	2.94	12
		5/8 EHS	A1a	27b	25.44	4.61	18
		5/8 EHS	A1b	27a	25.44	4.61	18
	116.41	9/16 EHS	A1	T2	21.00	2.14	10
		9/16 EHS	A1	T2b	21.00	2.14	10
		9/16 EHS	A1a	T2a	21.00	3.57	17
		9/16 EHS	A1a	T2b	21.00	3.57	17
		9/16 EHS	A1b	T2	21.00	3.57	17
		9/16 EHS	A1b	T2a	21.00	3.57	17
	146.79	9/16 EHS	A1	T3	21.00	1.79	9
		9/16 EHS	A1	T3b	21.00	1.79	9
		9/16 EHS	A1a	T3a	21.00	3.69	18
		9/16 EHS	A1a	T3b	21.00	3.64	17
		9/16 EHS	A1b	T3	21.00	3.64	17
		9/16 EHS	A1b	T3a	21.00	3.69	18
1.0D + 1.0W Service 60 deg	59.62	5/8 EHS	A1	27	25.44	3.48	14
		5/8 EHS	A1a	27b	25.44	5.13	20
		5/8 EHS	A1b	27a	25.44	3.48	14
	116.41	9/16 EHS	A1	T2	21.00	2.62	12
		9/16 EHS	A1	T2b	21.00	2.61	12
		9/16 EHS	A1a	T2a	21.00	4.04	19
		9/16 EHS	A1a	T2b	21.00	4.04	19
		9/16 EHS	A1b	T2	21.00	2.62	12
		9/16 EHS	A1b	T2a	21.00	2.61	12
	146.79	9/16 EHS	A1	T3	21.00	2.42	12
		9/16 EHS	A1	T3b	21.00	2.46	12
		9/16 EHS	A1a	T3a	21.00	4.30	20
		9/16 EHS	A1a	T3b	21.00	4.30	20
		9/16 EHS	A1b	T3	21.00	2.42	12
		9/16 EHS	A1b	T3a	21.00	2.46	12
1.0D + 1.0W Service 90 deg	59.62	5/8 EHS	A1	27	25.44	4.03	16
		5/8 EHS	A1a	27b	25.44	5.00	20
		5/8 EHS	A1b	27a	25.44	3.08	12
	116.41	9/16 EHS	A1	T2	21.00	3.09	15
		9/16 EHS	A1	T2b	21.00	3.08	15
		9/16 EHS	A1a	T2a	21.00	3.91	19
		9/16 EHS	A1a	T2b	21.00	3.92	19
		9/16 EHS	A1b	T2	21.00	2.26	11
		9/16 EHS	A1b	T2a	21.00	2.27	11
	146.79	9/16 EHS	A1	T3	21.00	3.03	14
		9/16 EHS	A1	T3b	21.00	3.07	15
		9/16 EHS	A1a	T3a	21.00	4.10	20
		9/16 EHS	A1a	T3b	21.00	4.14	20
		9/16 EHS	A1b	T3	21.00	1.96	9
		9/16 EHS	A1b	T3a	21.00	1.99	9
1.0D + 1.0W Service 120 deg	59.62	5/8 EHS	A1	27	25.44	4.61	18
		5/8 EHS	A1a	27b	25.44	4.61	18

		5/8 EHS	A1b	27a	25.44	2.94	12
	116.41	9/16 EHS	A1	T2	21.00	3.57	17
		9/16 EHS	A1	T2b	21.00	3.57	17
		9/16 EHS	A1a	T2a	21.00	3.57	17
		9/16 EHS	A1a	T2b	21.00	3.57	17
		9/16 EHS	A1b	T2	21.00	2.14	10
		9/16 EHS	A1b	T2a	21.00	2.14	10
	146.79	9/16 EHS	A1	T3	21.00	3.64	17
		9/16 EHS	A1	T3b	21.00	3.69	18
		9/16 EHS	A1a	T3a	21.00	3.64	17
		9/16 EHS	A1a	T3b	21.00	3.69	18
		9/16 EHS	A1b	T3	21.00	1.79	9
		9/16 EHS	A1b	T3a	21.00	1.79	9
1.0D + 1.0W Service 180 deg	59.62	5/8 EHS	A1	27	25.44	5.13	20
		5/8 EHS	A1a	27b	25.44	3.48	14
		5/8 EHS	A1b	27a	25.44	3.48	14
	116.41	9/16 EHS	A1	T2	21.00	4.04	19
		9/16 EHS	A1	T2b	21.00	4.04	19
		9/16 EHS	A1a	T2a	21.00	2.62	12
		9/16 EHS	A1a	T2b	21.00	2.61	12
		9/16 EHS	A1b	T2	21.00	2.61	12
		9/16 EHS	A1b	T2a	21.00	2.62	12
	146.79	9/16 EHS	A1	T3	21.00	4.30	20
		9/16 EHS	A1	T3b	21.00	4.30	20
		9/16 EHS	A1a	T3a	21.00	2.42	12
		9/16 EHS	A1a	T3b	21.00	2.46	12
		9/16 EHS	A1b	T3	21.00	2.46	12
		9/16 EHS	A1b	T3a	21.00	2.42	12
1.0D + 1.0W Service 210 deg	59.62	5/8 EHS	A1	27	25.44	5.00	20
		5/8 EHS	A1a	27b	25.44	3.08	12
		5/8 EHS	A1b	27a	25.44	4.03	16
	116.41	9/16 EHS	A1	T2	21.00	3.92	19
		9/16 EHS	A1	T2b	21.00	3.91	19
		9/16 EHS	A1a	T2a	21.00	2.26	11
		9/16 EHS	A1a	T2b	21.00	2.27	11
		9/16 EHS	A1b	T2	21.00	3.08	15
		9/16 EHS	A1b	T2a	21.00	3.09	15
	146.79	9/16 EHS	A1	T3	21.00	4.14	20
		9/16 EHS	A1	T3b	21.00	4.10	20
		9/16 EHS	A1a	T3a	21.00	1.96	9
		9/16 EHS	A1a	T3b	21.00	1.99	9
		9/16 EHS	A1b	T3	21.00	3.07	15
		9/16 EHS	A1b	T3a	21.00	3.03	14
1.0D + 1.0W Service 240 deg	59.62	5/8 EHS	A1	27	25.44	4.61	18
		5/8 EHS	A1a	27b	25.44	2.94	12
		5/8 EHS	A1b	27a	25.44	4.61	18
	116.41	9/16 EHS	A1	T2	21.00	3.57	17
		9/16 EHS	A1	T2b	21.00	3.57	17
		9/16 EHS	A1a	T2a	21.00	2.14	10
		9/16 EHS	A1a	T2b	21.00	2.14	10
		9/16 EHS	A1b	T2	21.00	3.57	17
		9/16 EHS	A1b	T2a	21.00	3.57	17
	146.79	9/16 EHS	A1	T3	21.00	3.69	18
		9/16 EHS	A1	T3b	21.00	3.64	17
		9/16 EHS	A1a	T3a	21.00	1.79	9
		9/16 EHS	A1a	T3b	21.00	1.79	9

		9/16 EHS	A1b	T3	21.00	3.69	18
		9/16 EHS	A1b	T3a	21.00	3.64	17
1.0D + 1.0W Service 300 deg	59.62	5/8 EHS	A1	27	25.44	3.48	14
		5/8 EHS	A1a	27b	25.44	3.48	14
		5/8 EHS	A1b	27a	25.44	5.13	20
	116.41	9/16 EHS	A1	T2	21.00	2.61	12
		9/16 EHS	A1	T2b	21.00	2.62	12
		9/16 EHS	A1a	T2a	21.00	2.61	12
		9/16 EHS	A1a	T2b	21.00	2.62	12
		9/16 EHS	A1b	T2	21.00	4.04	19
		9/16 EHS	A1b	T2a	21.00	4.04	19
	146.79	9/16 EHS	A1	T3	21.00	2.46	12
		9/16 EHS	A1	T3b	21.00	2.42	12
		9/16 EHS	A1a	T3a	21.00	2.46	12
		9/16 EHS	A1a	T3b	21.00	2.42	12
		9/16 EHS	A1b	T3	21.00	4.30	20
		9/16 EHS	A1b	T3a	21.00	4.30	20
1.0D + 1.0W Service 330 deg	59.62	5/8 EHS	A1	27	25.44	3.08	12
		5/8 EHS	A1a	27b	25.44	4.03	16
		5/8 EHS	A1b	27a	25.44	5.00	20
	116.41	9/16 EHS	A1	T2	21.00	2.27	11
		9/16 EHS	A1	T2b	21.00	2.26	11
		9/16 EHS	A1a	T2a	21.00	3.08	15
		9/16 EHS	A1a	T2b	21.00	3.09	15
		9/16 EHS	A1b	T2	21.00	3.91	19
		9/16 EHS	A1b	T2a	21.00	3.92	19
	146.79	9/16 EHS	A1	T3	21.00	1.99	9
		9/16 EHS	A1	T3b	21.00	1.96	9
		9/16 EHS	A1a	T3a	21.00	3.07	15
		9/16 EHS	A1a	T3b	21.00	3.03	14
		9/16 EHS	A1b	T3	21.00	4.10	20
		9/16 EHS	A1b	T3a	21.00	4.14	20

Maximum Cable Forces Summary

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use %
1.2D + 1.6W 60 deg	59.62	5/8 EHS	A1a	27b	25.44	10.07	40
1.2D + 1.6W 60 deg	116.41	9/16 EHS	A1a	T2a	21.00	8.91	42
1.2D + 1.6W 60 deg	146.79	9/16 EHS	A1a	T3a	21.00	10.70	51

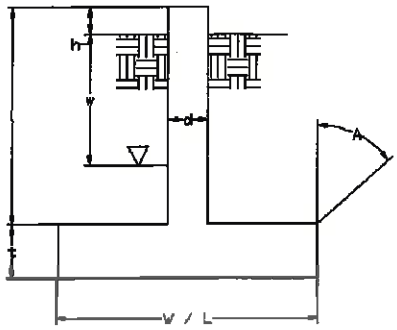
Site Name:	Hampton CT, CT	*Program Last Updated: 5/13/2014*
Site Number:	10029	*American Tower Corporation*
Engineering Number:	OAA710558	
Engineer:	Warren.Atkinson	
Date:	09/28/17	

Design Base Loads (Factored) per TIA-222-G

Foundation Mapped:	Y	
Moment (M_u):	0.0	k-ft
Shear/Leg (V_u):	1.7	k
Compression/Leg (P_u):	129.9	k
Uplift/Leg (T_u):	0.0	k
Tower Type (GT / SST):	GT	
Diameter of Prismatic Portion of Pier (d):	5.8	ft
Depth to Base of Foundation:	6.0	ft
Pier Height Above Ground (h):	2.00	ft
Length / Width of Pad (w):	5.8	ft
Thickness of Pad (t):	6.0	ft
Depth Below Ground Surface to Water Table (w):	4.0	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Water:	62.4	pcf
Unit Weight of Soil Above Water Table:	120.0	pcf
Unit Weight of Soil Below Water Table:	57.6	pcf
Friction Angle of Uplift from Top of Pad:	35	Degrees
Friction Angle of Uplift from Base of Pad:	35	Degrees
Uplift Angle Started at Top or Base of Pad (T/B):	T	
Ultimate Skin Friction:	0	psf
Ultimate Compressive Bearing Pressure:	15000	psf
Capacity Increase (Due to Transient Loads):	1.00	
Bearing Strength Reduction Factor (ϕ_s):	0.60	
Uplift Strength Reduction Factor (ϕ_s):	0.75	

Axial Capacities and Design Moment

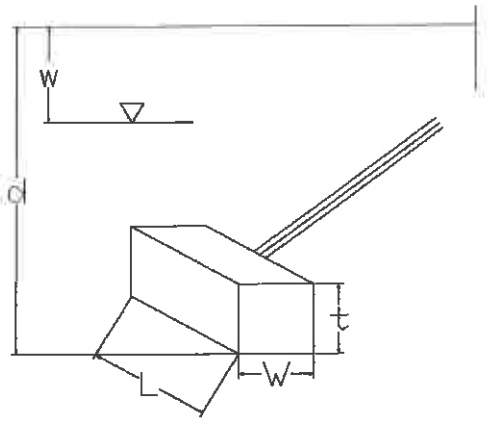
Weight of Concrete (Bouyancy Considered):	33.9	k
Weight of Soil (Bouyancy Considered):	0.0	k
Ultimate Skin Friction Resistance:	0.0	k
Controlling Failure Mode (Top / Base):	Top	
Nominal Uplift Capacity per Leg ($\phi_s T_n$):	25.4	k
Nominal Compressive Capacity per Leg ($\phi_s P_n$):	302.8	k
P_u:	146.5	k
$T_u/\phi_s T_n$:	0.00	Result: OK
$P_u/\phi_s P_n$:	0.48	Result: OK



Depth (ft) Top	Depth (ft) Bottom	Ultimate Lateral Bearing Pressure (psf)	Increment (psf/ft)	γ_{Soil} (pcf)	Cohesion (psf)	ϕ (degree)
0.0	2.0	0.0	120.0	120	0	0
2.0	0.0	885.6	442.8	120	0	35

Inflection Point (Below Ground Surface):	0.0	ft
Factored Design Moment At Inflection Point (M_u):	-1.2	k-ft

Site Name:	Hampton CT, CT	*Program Last Updated:*	*5/13/2014*
Site Number:	10029	*American Tower Corporation*	
Engineering Number:	OAA710558		
Engineer:	Warren.Atkinson		
Date:	09/28/17		



Design Standard per TIA-222-G

Anchor Radius:	230.0	ft
Uplift (Factored - P_u):	29.7	k
Shear (Factored - V_u):	38.2	k
Berm Present:	N	
Design Anchor Rod:	N	
Mapped Foundation:	N	
Anchor Base Depth (d):	8.0	ft
Width of Anchor (W):	5.0	ft
Length of Anchor (L):	11.5	ft
Thickness of Anchor (t):	2.0	ft
Depth Below Ground Surface to Water Table (w):	4.0	ft
Soil Uplift at Base / Top of Anchor (B/T):	T	
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil Above Water Table:	120.0	pcf
Unit Weight of Water:	62.4	pcf
Submerged Soil Unit Weight:	57.6	pcf
Internal Angle of Friction:	35	Degrees
Cohesion:	0	psf
Ultimate Skin Friction of Pad Sides to Soil:	0	psf
Ultimate Coefficient of Shear Friction:	0.30	
Maximum Top Conical Failure Angle:	30	Degrees
Maximum Base Conical Failure Angle:	30	Degrees
Allowable Capacity Increase:	1.00	(Due to Transient Loads)
Uplift Strength Reduction Factor (ϕ_u):	0.75	
Shear Strength Reduction Factor (ϕ_v):	0.75	
Concrete Uplift Strength Reduction Factor (ϕ_u):	0.90	

Uplift

Weight of Concrete (Buoyancy Effect Considered):	10.1	k
Weight of Soil (Buoyancy Effect Considered):	81.9	k
Ultimate Uplift Resistance from Skin Friction:	0.0	k
Nominal Factored Uplift Resistance ($\phi_u P_n$):	70.5	k
P_u / $\phi_u P_n$:	0.42	Result: OK

Shear

Ultimate Shear Friction Resistance Due to Normal Force - Uplift:	10.7	k
Passive Pressure:	2409	psf
Ultimate Passure Pressure Resistance:	55.4	k
Nominal Shear Resistance ($\phi_v V_n$):	49.6	k
V_u / $\phi_v V_n$:	0.77	Result: OK

Strength Analysis of Reinforced Concrete

Concrete Compressive Srength (f'_c):	4000	psi
Longitudinal Rebar Yield Strength:	60000	psi
# Longitudinal Rebar (Top):	8	
# Longitudinal Rebar (1 Side):	5	
Rebar Size:	4	
Strength Reduction Factor for Shear (ϕ_v):	0.75	
Strength Reduction Factor for Flexure (ϕ_b):	0.9	
Compression Zone Factor (β_1):	0.85	
Area of Single Rebar:	0.20	in^2
One Way Shear due to Shear Load (V_u):	11.3	k
Nominal One Way Shear Capacity for Shear Load ($\phi_c V_n$):	127.5	k
$V_u/\phi_v V_n$:	0.09	Result: OK
One Way Shear due to Uplift (V_u):	12.7	k
Nominal One Way Shear Capacity for Uplift ($\phi_c V_n$):	113.8	k
$V_u/\phi_v V_n$:	0.11	Result: OK
Pad Flexure due to Shear Load (M_u):	54.8	k-ft
Nominal Flexural Capacity for Shear Load ($\phi_b M_n$):	252.0	k-ft
Pad Flexure due to Uplift (M_u):	42.7	k-ft
Nominal Flexural Capacity for Uplift ($\phi_b M_n$):	143.9	k-ft
$M_u/\phi_b M_n$ (Max.):	0.30	Result: OK

Sprint

PROJECT:	DO MACRO UPGRADE
SITE NAME:	HAMPTON / CHAPLIN
SITE CASCADE:	CT33XC568
SITE ADDRESS:	253 FISK ROAD HAMPTON, CT 06247
SITE TYPE:	GUYED TOWER
MARKET:	NORTHERN CONNECTICUT

SITE INFORMATION

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

LATITUDE (NAD83):
41° 46' 12.79" N
41.77022°

LONGITUDE (NAD83):
72° 04' 15.20" W
-72.07089°

COUNTY:
WINDHAM COUNTY

ZONING JURISDICTION:
CONNECTICUT SITING COUNCIL

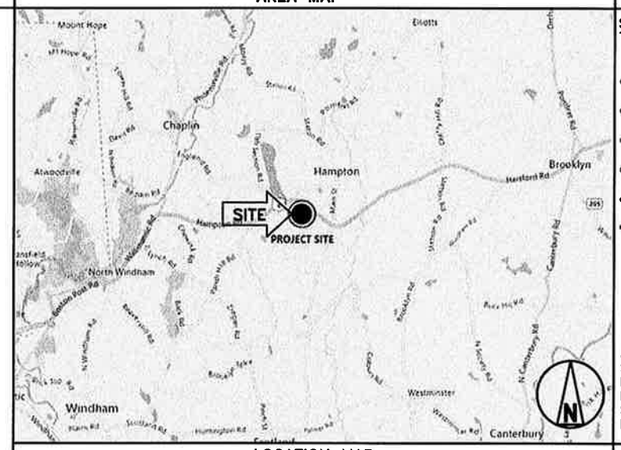
ZONING DISTRICT:
TBD

POWER COMPANY:
CL&P
PHONE: (800) 286-2000

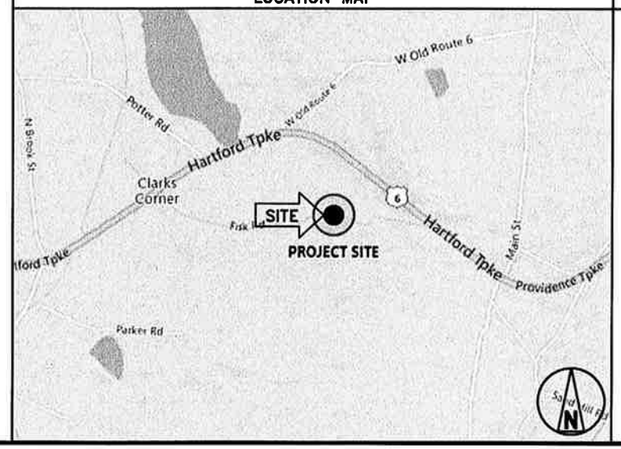
AAV PROVIDER:
AT&T
(800) 288-2020

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
TERRI BURKHOLDER
(315) 719-2928
TBURKHOLDER@AIROSMITHDEVELOPMENT.COM

AREA MAP



LOCATION MAP



PROJECT DESCRIPTION

SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.

- INSTALL (3) PANEL ANTENNAS
- RELOCATE (3) 1900 MHz RRHS BEHIND ANTENNAS
- INSTALL (3) 2.5 GHz & (6) 800 MHz RRH'S BEHIND ANTENNAS
- INSTALL (48) JUMPER CABLES
- INSTALL (4) HYBRID CABLE
- INSTALL 2.5 EQUIPMENT INSIDE EXISTING N.V. MMBS CABINET

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 (2015 IBC)
2. TIA-222-G OR LATEST EDITION
3. NFPA 780 – LIGHTNING PROTECTION CODE
4. 2011 NATIONAL ELECTRIC CODE OR LATEST EDITION
5. ANY OTHER NATIONAL OR LOCAL APPLICABLE CODES, MOST RECENT EDITIONS
6. CT BUILDING CODE
7. LOCAL BUILDING CODE
8. CITY/COUNTY ORDINANCES

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

DRAWING INDEX

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

PLANS PREPARED FOR:
Sprint

PLANS PREPARED BY:
INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
JAN 03 2018
No. 24705
LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	01/03/18	JDL	0

SITE NAME:
HAMPTON / CHAPLIN

SITE NUMBER:
CT33XC568

SITE ADDRESS:
253 FISK ROAD
HAMPTON, CT 06247

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

PLANS PREPARED BY:

INFINIGY
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Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:

AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
JAN 03 2018
No. 24705
LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	01/03/18	JDL	0

SITE NAME:

HAMPTON / CHAPLIN

SITE NUMBER:

CT33XC568

SITE ADDRESS:

253 FISK ROAD
HAMPTON, CT 06247

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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PROJECT MANAGER:
AIROSMITH DEVELOPMENT
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SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

STATE OF CONNECTICUT JOHN S. STEVENS No. 24705 LICENSED PROFESSIONAL ENGINEER
DATE 01/03/2018

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	01/03/18	JDL	0

SITE NAME:

HAMPTON / CHAPLIN

SITE NUMBER:

CT33XC568

SITE ADDRESS:

253 FISK ROAD
HAMPTON, CT 06247

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-2

CONTINUE FROM SP-2

7. VERIFICATION DOCUMENTED WITH THE ANTENNA CHECKLIST REPORT, BY A&E, SITE DEVELOPMENT REP, OR RF REP.
8. FINAL INSPECTION CHECKLIST AND HANDOFF WALK (HOC.). SIGNED FORM SHOWING ACCEPTANCE BY FIELD OPS IS TO BE UPLOADED INTO SMS.
9. COAX SWEEP AND FIBER TESTING DOCUMENTS SUBMITTED VIA SMS FOR RF APPROVAL.
10. SCAN-ABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
11. ALL AVAILABLE JURISDICTIONAL INFORMATION
12. PDF SCAN OF REDLINES PRODUCED IN FIELD

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

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

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

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

1. CONCRETE MIX AND CYLINDER BREAK REPORTS.
2. STRUCTURAL BACKFILL COMPACTION REPORTS.
3. SITE RESISTANCE TO EARTH TEST.
4. ANTENNA AZIMUTH AND DOWN TILT VERIFICATION
5. TOWER ERECTION INSPECTIONS AND MEASUREMENTS DOCUMENTING TOWER INSTALLED PER SUPPLIER'S REQUIREMENTS AND THE APPLICABLE SECTIONS HEREIN.
6. COAX CABLE SWEEP TESTS PER COMPANY'S "ANTENNA LINE ACCEPTANCE STANDARDS".

B. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES THE FOLLOWING;

1. TEST WELLS AND TRENCHES: PHOTOGRAPHS OF ALL TEST WELLS; PHOTOGRAPHS SHOWING ALL OPEN EXCAVATIONS AND TRENCHING PRIOR TO BACKFILLING SHOWING A TAPE MEASURE VISIBLE IN THE EXCAVATIONS INDICATING DEPTH.
2. CONDUITS, CONDUCTORS AND GROUNDING: PHOTOGRAPHS SHOWING TYPICAL INSTALLATION OF CONDUCTORS AND CONNECTORS; PHOTOGRAPHS SHOWING TYPICAL BEND RADIUS OF INSTALLED GROUND WIRES AND GROUND ROD SPACING;
3. CONCRETE FORMS AND REINFORCING: CONCRETE FORMING AT TOWER AND EQUIPMENT/SHELTER PAD/FOUNDATIONS – PHOTOGRAPHS SHOWING ALL REINFORCING STEEL, UTILITY AND CONDUIT STUB OUTS; PHOTOGRAPHS SHOWING CONCRETE POUR OF SHELTER SLAB/FOUNDATION, TOWER FOUNDATION AND GUY ANCHORS WITH VIBRATOR IN USE; PHOTOGRAPHS SHOWING EACH ANCHOR ON GUYED TOWERS, BEFORE CONCRETE POUR.
4. TOWER, ANTENNAS AND MAINLINE: INSPECTION AND PHOTOGRAPHS OF SECTION STACKING; INSPECTION AND PHOTOGRAPHS OF PLATFORM COMPONENT ATTACHMENT POINTS; PHOTOGRAPHS OF TOWER TOP GROUNDING; PHOTOS OF TOWER COAX LINE COLOR CODING AT THE TOP AND AT GROUND LEVEL; INSPECTION AND PHOTOGRAPHS OF OPERATIONAL OF TOWER LIGHTING, AND PLACEMENT OF FAA REGISTRATION SIGN; PHOTOGRAPHS SHOWING ADDITIONAL GROUNDING POINTS FOR TOWERS GREATER THAN 200 FEET.; PHOTOS OF ANTENNA GROUND BAR, EQUIPMENT GROUND BAR, AND MASTER GROUND BAR; PHOTOS OF GPS ANTENNA(S); PHOTOS OF EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA; PHOTOS OF COAX WEATHERPROOFING – TOP AND BOTTOM; PHOTOS OF COAX GROUNDING--TOP AND BOTTOM; PHOTOS OF ANTENNA AND MAST GROUNDING; PHOTOS OF COAX CABLE ENTRY INTO SHELTER; PHOTOS OF PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.
5. ROOF TOPS: PRE-CONSTRUCTION AND POST-CONSTRUCTION VISUAL INSPECTION AND PHOTOGRAPHS OF THE ROOF AND INTERIOR TO DETERMINE AND DOCUMENT CONDITIONS; ROOF TOP CONSTRUCTION INSPECTIONS AS REQUIRED BY THE JURISDICTION; PHOTOGRAPHS OF CABLE TRAY AND/OR ICE BRIDGE; PHOTOGRAPHS OF DOGHOUSE/CABLE EXIT FROM ROOF;
6. SITE LAYOUT – PHOTOGRAPHS OF THE OVERALL COMPOUND, INCLUDING EQUIPMENT PLATFORM FROM ALL FOUR CORNERS.
7. FINISHED UTILITIES: CLOSE-UP PHOTOGRAPHS OF THE PPC BREAKER PANEL; CLOSE-UP PHOTOGRAPH OF THE INSIDE OF THE TELCO PANEL AND NIU; CLOSE-UP PHOTOGRAPH OF THE POWER METER AND DISCONNECT; PHOTOS OF POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE; PHOTOGRAPHS AT METER BOX AND/OR FACILITY DISTRIBUTION PANEL.
8. REQUIRED MATERIALS CERTIFICATIONS: CONCRETE MIX DESIGNS; MILL CERTIFICATION FOR ALL REINFORCING AND STRUCTURAL STEEL; AND ASPHALT PAVING MIX DESIGN.
9. ANY AND ALL SUBMITTALS BY THE JURISDICTION OR COMPANY.

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

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

1.2 RELATED DOCUMENTS:

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

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

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 WEEKLY REPORTS:

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

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

3.2 PROJECT CONFERENCE CALLS:

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

3.3 PROJECT TRACKING IN SMS:

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

3.4 ADDITIONAL REPORTING:

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

3.5 PROJECT PHOTOGRAPHS:

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

1. 1SHELTER AND TOWER OVERVIEW.
2. TOWER FOUNDATION(S) – FORMS AND STEEL BEFORE POUR (EACH ANCHOR ON GUYED TOWERS).
3. TOWER FOUNDATION(S) POUR WITH VIBRATOR IN USE (EACH ANCHOR ON GUYED TOWERS).
4. TOWER STEEL AS BEING INSTALLED INTO HOLE (SHOW ANCHOR STEEL ON GUYED TOWERS).
5. PHOTOS OF TOWER SECTION STACKING.
6. CONCRETE TESTING / SAMPLES.
7. PLACING OF ANCHOR BOLTS IN TOWER FOUNDATION.
8. BUILDING/WATER TANK FROM ROAD FOR TENANT IMPROVEMENTS OR COMMENTS.
9. SHELTER FOUNDATION--FORMS AND STEEL BEFORE POURING.
10. SHELTER FOUNDATION POUR WITH VIBRATOR IN USE.
11. COAX CABLE ENTRY INTO SHELTER.
12. PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.
13. ROOFTOP PRE AND POST CONSTRUCTION PHOTOS TO INCLUDE PENETRATIONS AND INTERIOR CEILING.
14. PHOTOS OF TOWER TOP COAX LINE COLOR CODING AND COLOR CODING AT GROUND LEVEL.
15. PHOTOS OF ALL APPROPRIATE COMPANY OR REGULATORY SIGNAGE.
16. PHOTOS OF EQUIPMENT BOLT DOWN INSIDE SHELTER.
17. POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE AND POWER AND TELCO SUPPLY LOCATIONS INCLUDING METER/DISCONNECT.
18. ELECTRICAL TRENCH(S) WITH ELECTRICAL / CONDUIT BEFORE BACKFILL.
19. ELECTRICAL TRENCH(S) WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.
20. TELCO TRENCH WITH TELEPHONE / CONDUIT BEFORE BACKFILL.
21. TELCO TRENCH WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.
22. SHELTER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).
23. TOWER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).
24. FENCE GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).
25. ALL BTS GROUND CONNECTIONS.
26. ALL GROUND TEST WELLS.
27. ANTENNA GROUND BAR AND EQUIPMENT GROUND BAR.
28. ADDITIONAL GROUNDING POINTS ON TOWERS ABOVE 200'.
29. HVAC UNITS INCLUDING CONDENSERS ON SPLIT SYSTEMS.
30. GPS ANTENNAS.
31. CABLE TRAY AND/OR WAVEGUIDE BRIDGE.
32. DOGHOUSE/CABLE EXIT FROM ROOF.
33. EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA.
34. MASTER BUS BAR.
35. TELCO BOARD AND NIU.
36. ELECTRICAL DISTRIBUTION WALL.
37. CABLE ENTRY WITH SURGE SUPPRESSION.
38. ENTRANCE TO EQUIPMENT ROOM.
39. COAX WEATHERPROOFING-TOP AND BOTTOM OF TOWER.
40. COAX GROUNDING -TOP AND BOTTOM OF TOWER.
41. ANTENNA AND MAST GROUNDING.
42. LANDSCAPING – WHERE APPLICABLE.

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

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32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
JAN 09 2018
No. 24705
LICENSED PROFESSIONAL ENGINEER

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	01/03/18	JDL	0

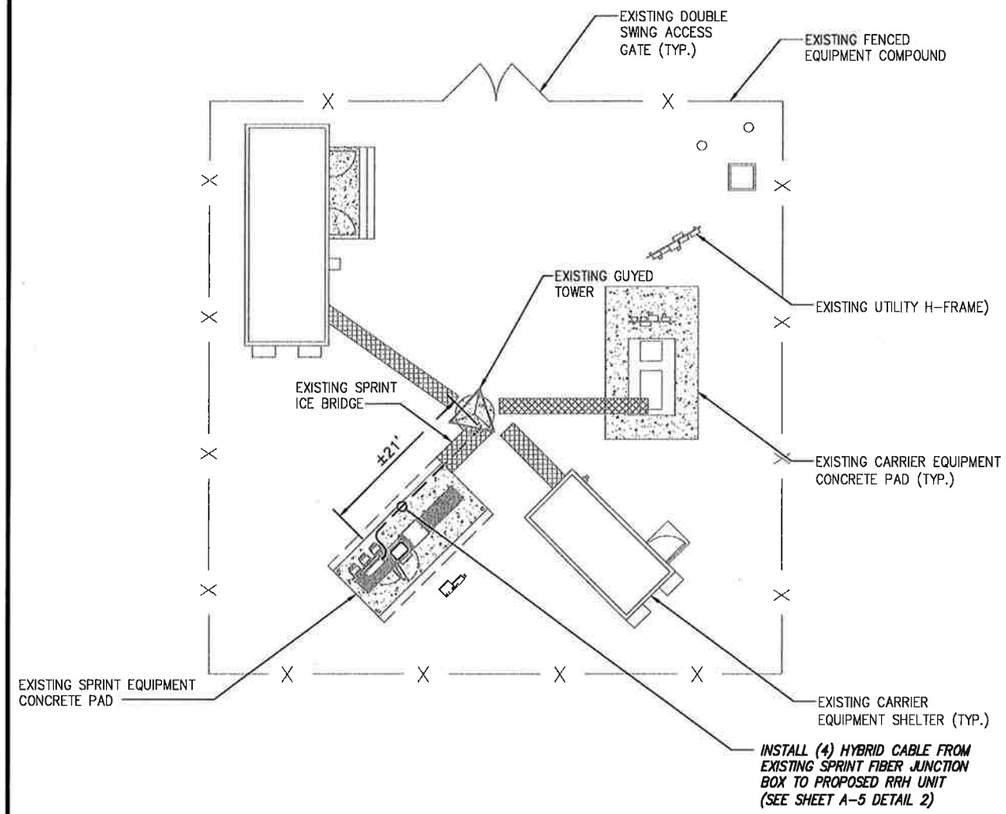
SITE NAME:
HAMPTON / CHAPLIN

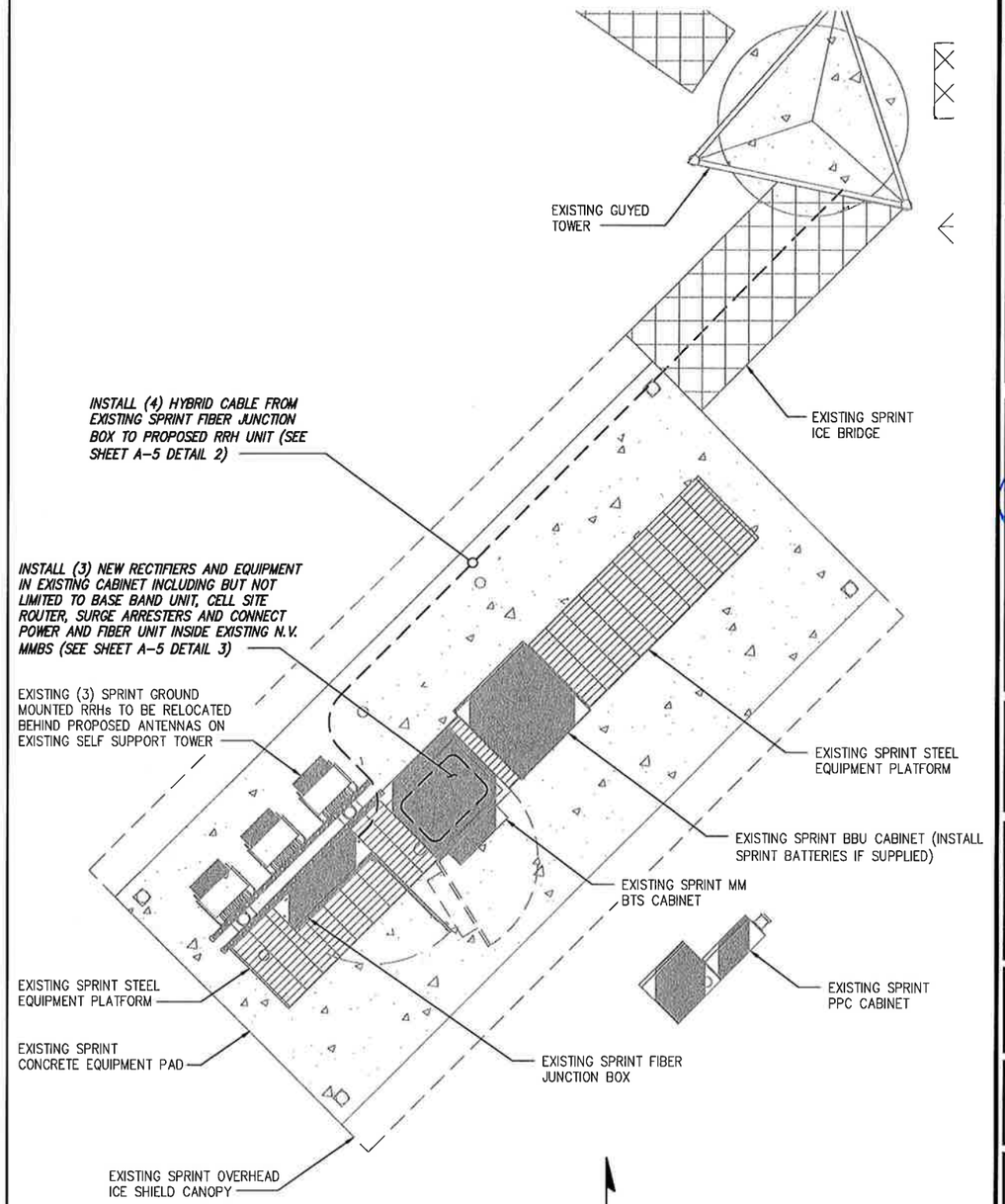
SITE NUMBER:
CT33XC568

SITE ADDRESS:
253 FISK ROAD
HAMPTON, CT 06247

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.

N

GRAPHIC SCALE:
20' 10' 0 10' 20'
SCALE (11x17): 1" = 20'-0"
SCALE (22x34): 1" = 10'-0"

OVERALL SITE PLAN | SCALE: AS NOTED | 1

N

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

SPRINT EQUIPMENT PLAN | SCALE: AS NOTED | 2

PLANS PREPARED FOR:
Sprint

PLANS PREPARED BY:
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Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
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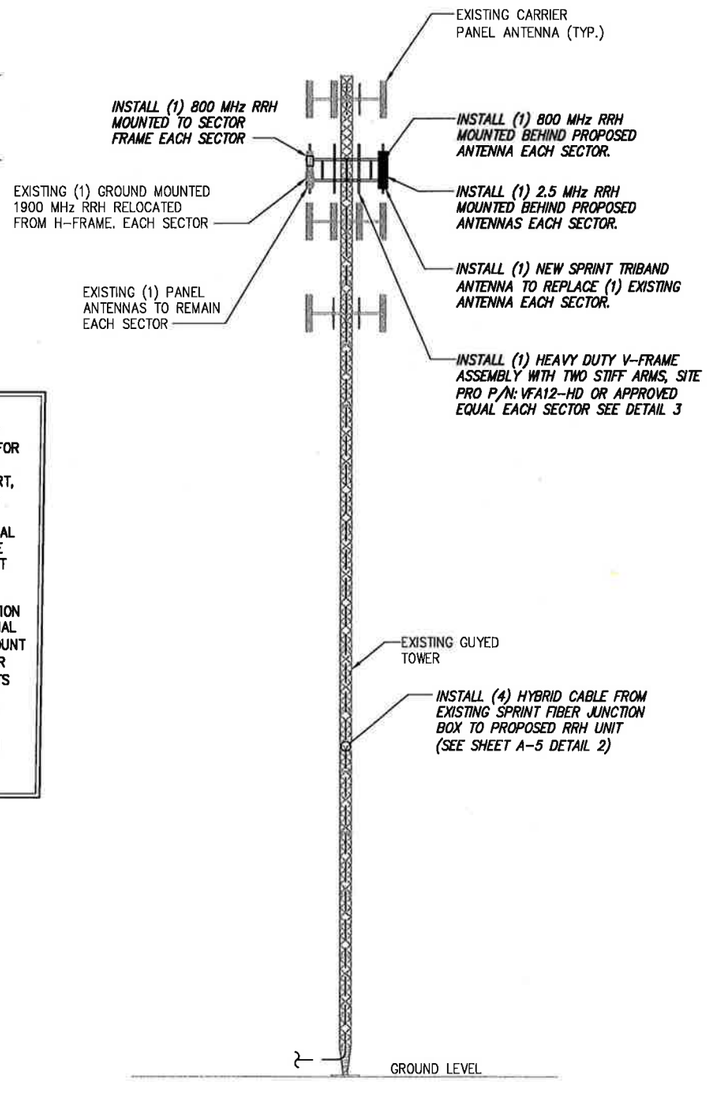
HAMPTON, CT 06247

SHEET DESCRIPTION:
SITE PLAN

SHEET NUMBER:
A-1

NOTE:
INFINIGY ENGINEERING HAS NOT EVALUATED THE EXISTING STRUCTURE FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY. REFER TO STRUCTURAL ANALYSIS BY OTHERS PRIOR TO ANY CONSTRUCTION.

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



NOTE:
- STRUCTURAL ANALYSIS COMPLETED BY TOWER ENGINEERING PROFESSIONALS. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "STRUCTURAL ANALYSIS REPORT, SITE NAME: HAMPTON CT, CT", DATED: "SEPTEMBER 28, 2017". ACCORDING TO RESULTS OF STRUCTURAL MODIFICATION REPORT, THE STRUCTURE HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED LOADING.
- ANTENNA AND RRH SUPPORT EVALUATION COMPLETED BY INFINIGY. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "MOUNT ANALYSIS REPORT", DATED: "DECEMBER 26, 2017". ACCORDING TO THE RESULTS OF REVIEW, THE ANTENNA AND RRH SUPPORTS WILL NOT BE ADEQUATE TO SUPPORT THE PROPOSED LOADING. CONTRACTOR TO INSTALL (3) SITEPRO1 VFA12-HD PRIOR TO INSTALLATION OF PROPOSED APPURTENANCES.

TOWER ELEVATION | NO SCALE | 1

SITE LOADING CHART

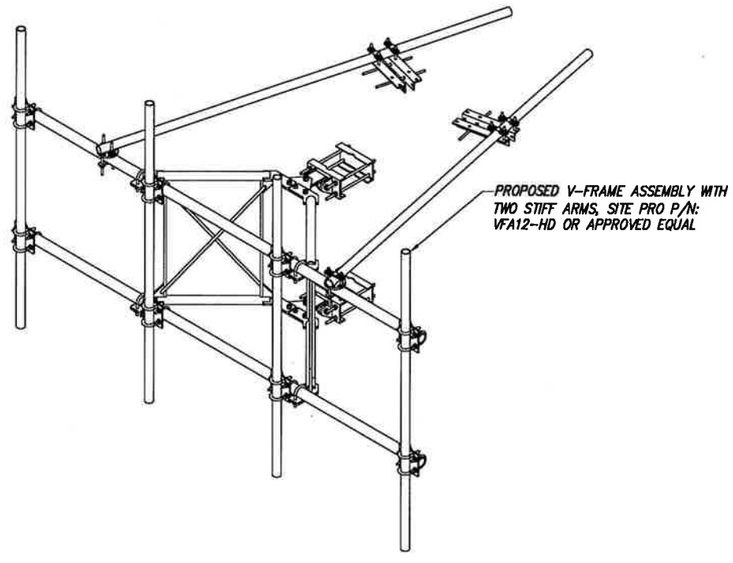
SECTOR	EXISTING/ PROPOSED	ANTENNA MODEL #	VENDOR	AZIMUTH	QTY.	REMAIN/ REMOVED	RRH (QTY/MODEL)	CABLE	CABLE LENGTH	RAD CENTER
ALPHA	PROPOSED	KMW ETCR-654L12H6	KMW	75°	1	–	(2) 800 MHZ 2X50W RRH W/ FILTER (1) TD-RRH8X20-25 W/ SOLAR SHIELD (1) 1900 MHz 4X45 RRH	SEE SHEET A-5 DETAIL 1	±194'*	±155' AGL
	EXISTING	DB980H90E-M	DECIBEL	75°	1	REMOVE		--		
	EXISTING	DB980H90E-M	DECIBEL	75°	1	REMAIN		EXISTING COAX		
BETA	PROPOSED	KMW ETCR-654L12H6	KMW	165°	1	–	(2) 800 MHZ 2X50W RRH W/ FILTER (1) TD-RRH8X20-25 W/ SOLAR SHIELD (1) 1900 MHz 4X45 RRH	SEE SHEET A-5 DETAIL 1		±155' AGL
	EXISTING	DB980H90E-M	DECIBEL	165°	1	REMOVE		--		
	EXISTING	DB980H90E-M	DECIBEL	165°	1	REMAIN		EXISTING COAX		
GAMMA	PROPOSED	KMW ETCR-654L12H6	KMW	270°	1	–	(2) 800 MHZ 2X50W RRH W/ FILTER (1) TD-RRH8X20-25 W/ SOLAR SHIELD (1) 1900 MHz 4X45 RRH	SEE SHEET A-5 DETAIL 1		±155' AGL
	EXISTING	DB980H90E-M	DECIBEL	270°	1	REMOVE		--		
	EXISTING	DB980H90E-M	DECIBEL	270°	1	REMAIN		EXISTING COAX		

PROJECT SCOPE:

REMOVE: (3) PANEL ANTENNAS INSTALL: (3) PANEL ANTENNAS AND (9) RRH'S RELOCATE: (3) EXISTING RRH'S

* PROPOSED CABLE LENGTH WAS DETERMINED USING THE SUM OF THE RAD CENTER OF ANTENNAS, AND DISTANCE FROM EXISTING EQUIPMENT AREA TO TOWER BASE WITH AN ADDITIONAL 20' BUFFER. LENGTH TO BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

SITE LOADING CHART | NO SCALE | 2



V-FRAME ASSEMBLY WITH STIFF ARM DETAIL | NO SCALE | 3

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ENGINEERING LICENSE:
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DRAWING NOTICE:

REVISIONS:

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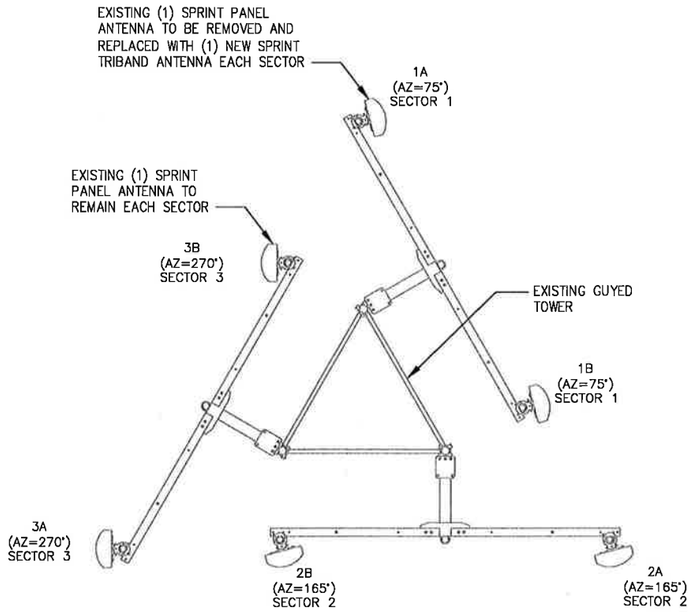
253 FISK ROAD
HAMPTON, CT 06247

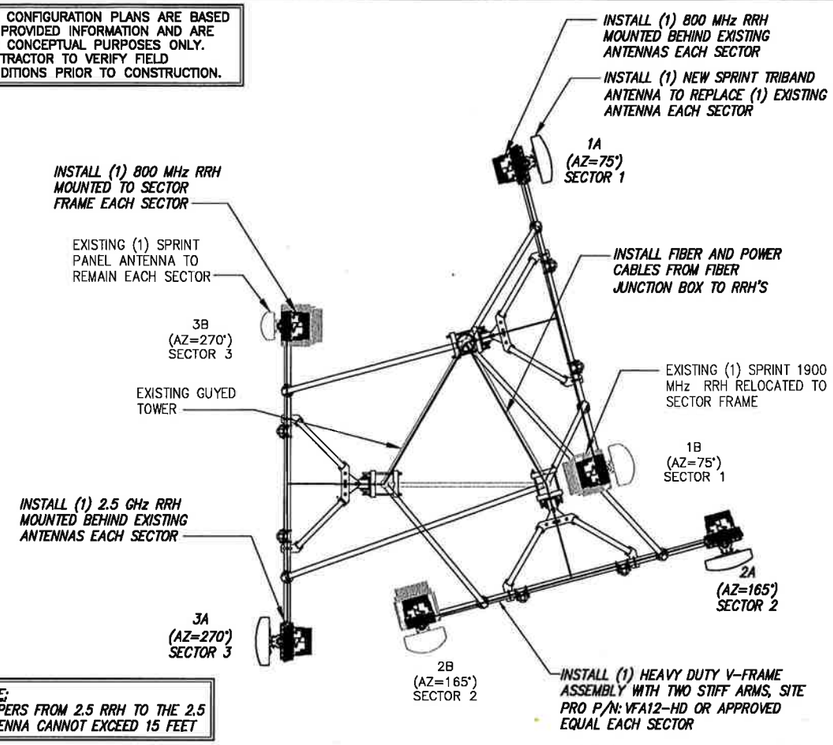
SHEET DESCRIPTION:
TOWER ELEVATION

SHEET NUMBER:
A-2



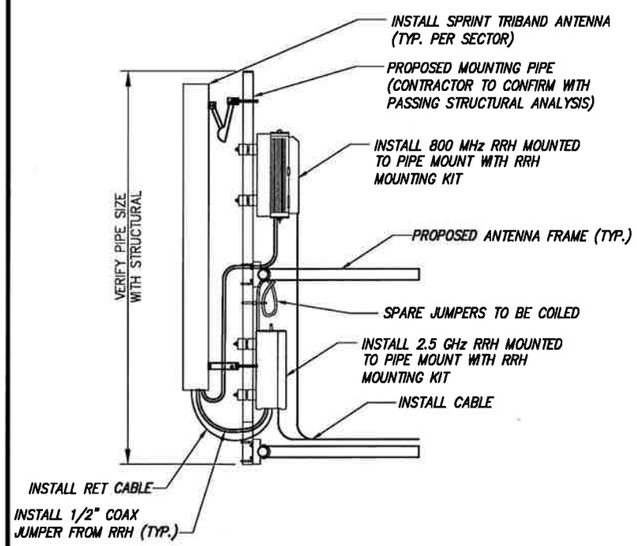
EXISTING ANTENNA LAYOUT | NO SCALE | 1

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 AND RRH LAYOUT | NO SCALE | 2



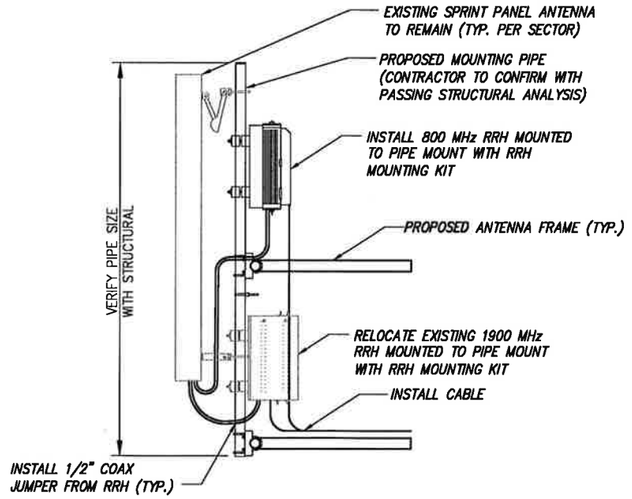
NOTE:
CONTRACTOR TO POSITION RRH ON MOUNT BEHIND ANTENNA SUCH THAT THE RRH DOES NOT INTERFERE WITH THE EXISTING PLATFORM/T-ARM MOUNTING HARDWARE.

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

NOTES:

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

TYPICAL ANTENNA & RRH MOUNTING DETAILS | NO SCALE | 3



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

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NOTES:

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

TYPICAL RRH MOUNTING DETAILS | NO SCALE | 4

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3/29/2018
No. 24705
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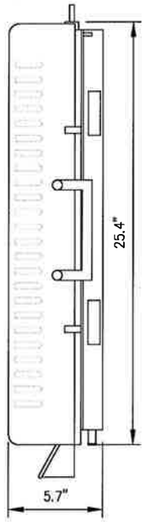
HAMPTON, CT 06247

SHEET DESCRIPTION:
ANTENNA LAYOUT & MOUNTING DETAILS

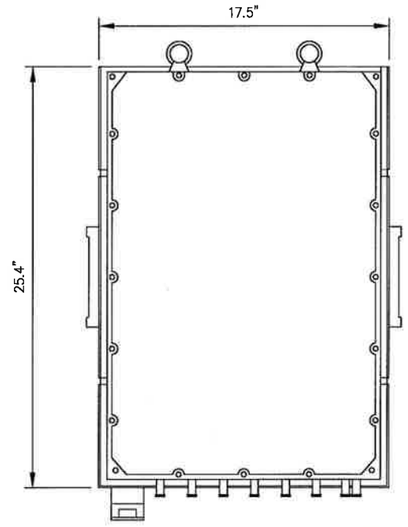
SHEET NUMBER:
A-3

RRH: ALCATEL LUCENT TD-RRH8X20

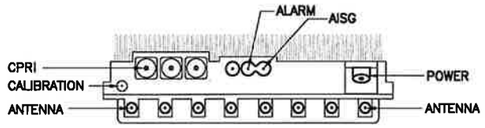
COLOR: LIGHT GREY
WEIGHT: 70 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

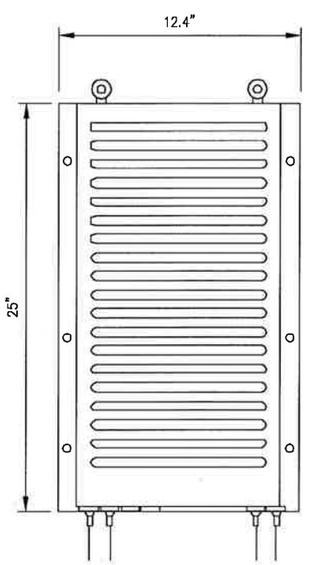
NOTES

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

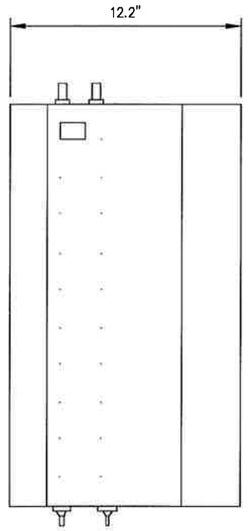
2.5 RRH'S	NO SCALE	1

RRH: ALCATEL LUCENT 1900 MHz

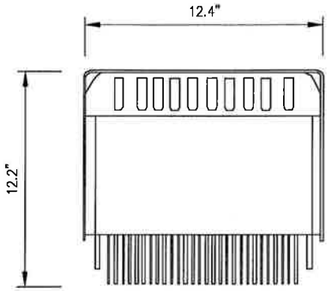
COLOR: LIGHT GREY
WEIGHT: 70 LBS.
(INCLUDING OPTIONAL SOLAR SHIELD)



FRONT VIEW



SIDE VIEW

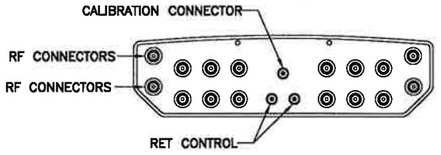


TOP VIEW

1900 MHz RRH	NO SCALE	2

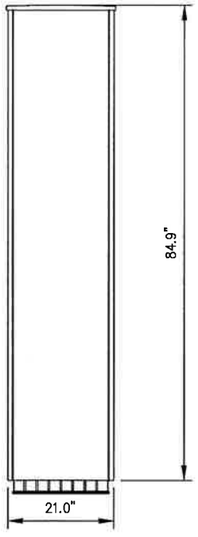
ANTENNA KMW ETCR-654L12H6

RADOME MATERIAL:	ASA
RADOME COLOR:	LIGHT GREY
DIMENSIONS, HxWxD.in(mim):	84.9"x21.0"x6.3" (2156x533x160mm)
WEIGHT:	84.9 lbs
CONNECTORS:	(8) 7/16" DIN FEMALE (8) MINI DIN FEMALE (1) N TYPE(CAL PORT, FEMALE)



PLAN VIEW

SIDE VIEW

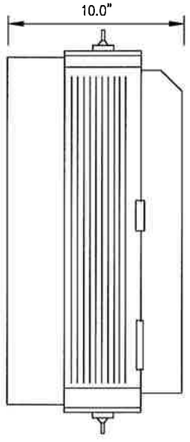


FRONT VIEW

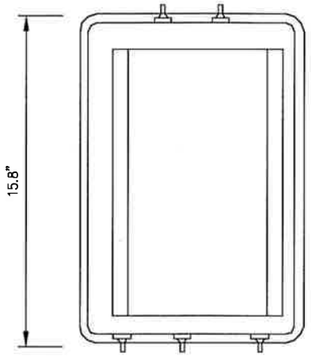
TRIBAND ANTENNA	NO SCALE	3

RRH: ALCATEL LUCENT RRH 800 MHz 2x50W

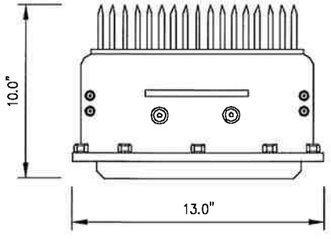
COLOR: LIGHT GREY
WEIGHT: 53 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

NOTES

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

800 MHz RRH	NO SCALE	4

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Sprint

PLANS PREPARED BY:

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CT33XC568

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HAMPTON, CT 06247

SHEET DESCRIPTION:

EQUIPMENT & MOUNTING DETAILS

SHEET NUMBER:

A-4

RFS HYBRIFLEX RISER CABLE SCHEDULE

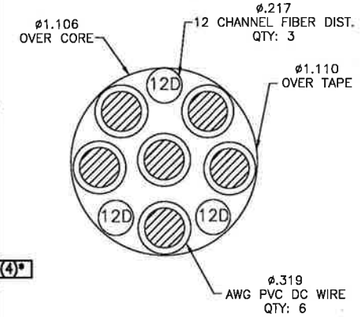
Fiber Only (Existing DC Power)	**Hybrid cable** MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F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

RFS HYBRIFLEX JUMPER CABLE SCHEDULE

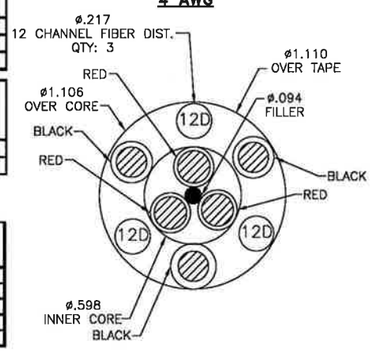
Fiber Only	**Hybrid Jumper cable** MN: HBF012-M3-5F1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: HBF012-M3-10F1	10 ft
	MN: HBF012-M3-15F1	15 ft
	MN: HBF012-M3-20F1	20 ft
	MN: HBF012-M3-25F1	25 ft
	MN: HBF012-M3-30F1	30 ft
8 AWG Power	**Hybrid Jumper cable** MN: HBF058-08U1M3-5F1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

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

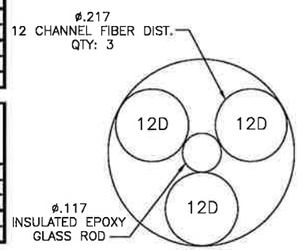
* PROPOSED CABLE LENGTH WAS DETERMINED USING THE SUM OF THE RAD CENTER OF ANTENNAS, AND DISTANCE FROM EXISTING EQUIPMENT AREA TO TOWER BASE WITH AN ADDITIONAL 20' BUFFER. LENGTH TO BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.



4 AWG

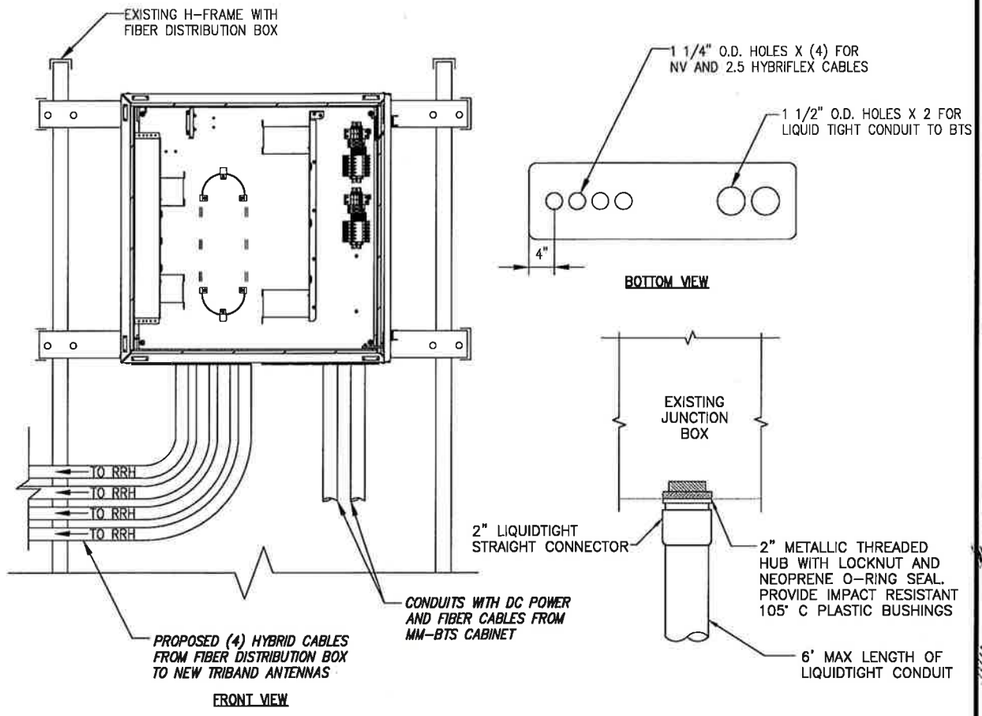


8 & 6 AWG



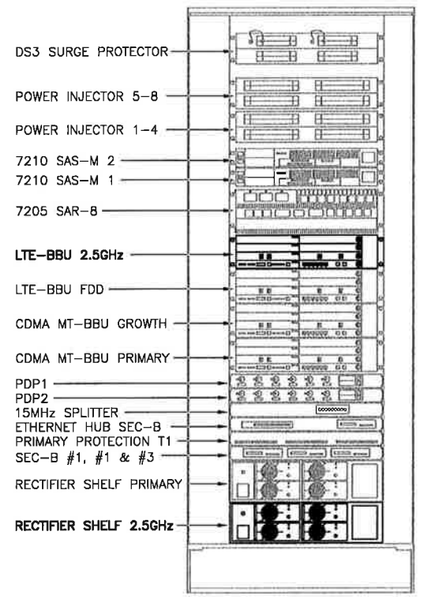
FIBER ONLY

800/1900/2500 CABLE CROSS SECTION DATA | NO SCALE | 1



FRONT VIEW

FIBER JUNCTION BOX & PENETRATION | NO SCALE | 2



FRONT VIEW

NEW EQUIPMENT IN EXISTING CABINET | NO SCALE | 3

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JOB NUMBER 526-104

PROJECT MANAGER:

AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:


DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	01/03/18	JDL	0

SITE NAME:
HAMPTON / CHAPLIN

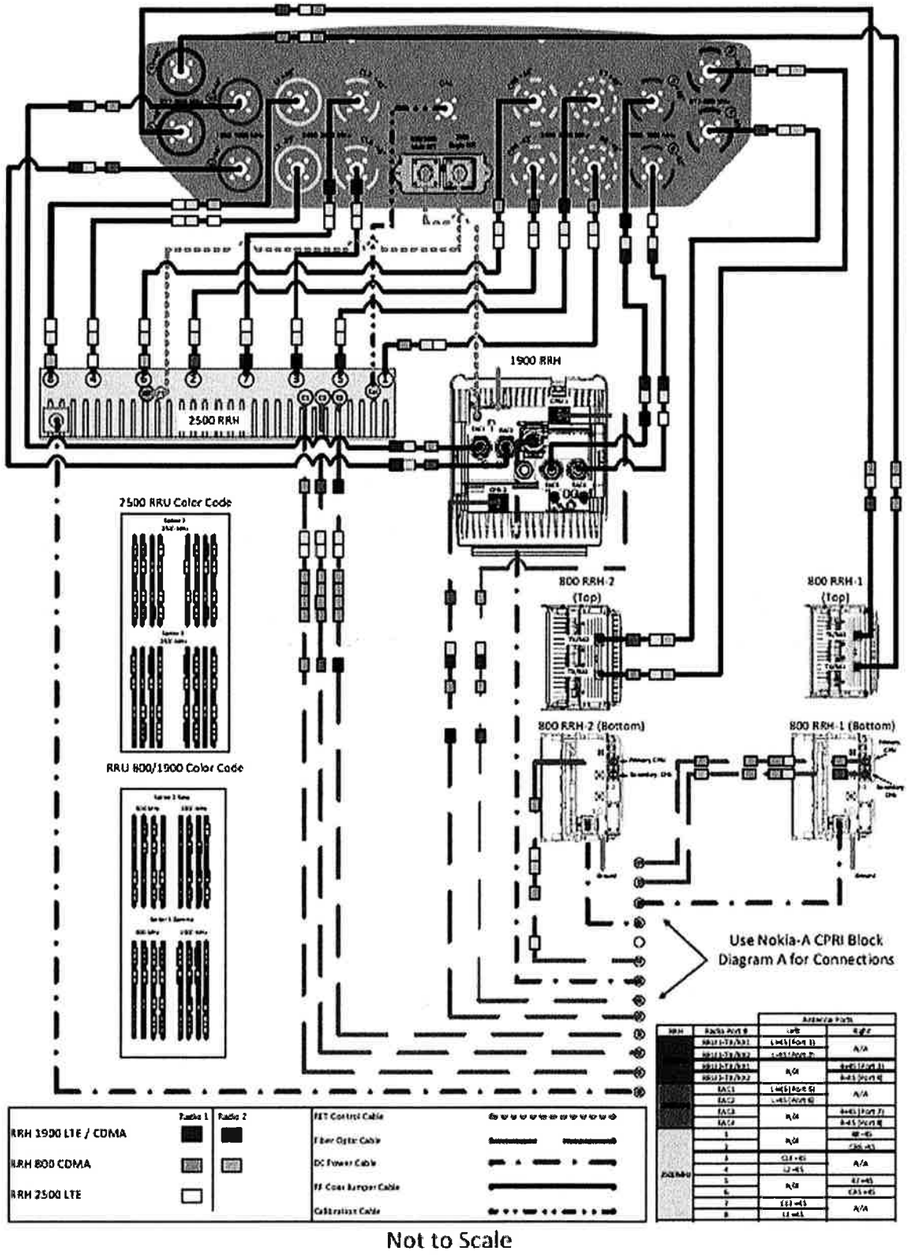
SITE NUMBER:
CT33XC568

SITE ADDRESS:
253 FISK ROAD
HAMPTON, CT 06247

SHEET DESCRIPTION:
CIVIL DETAILS

SHEET NUMBER:
A-5

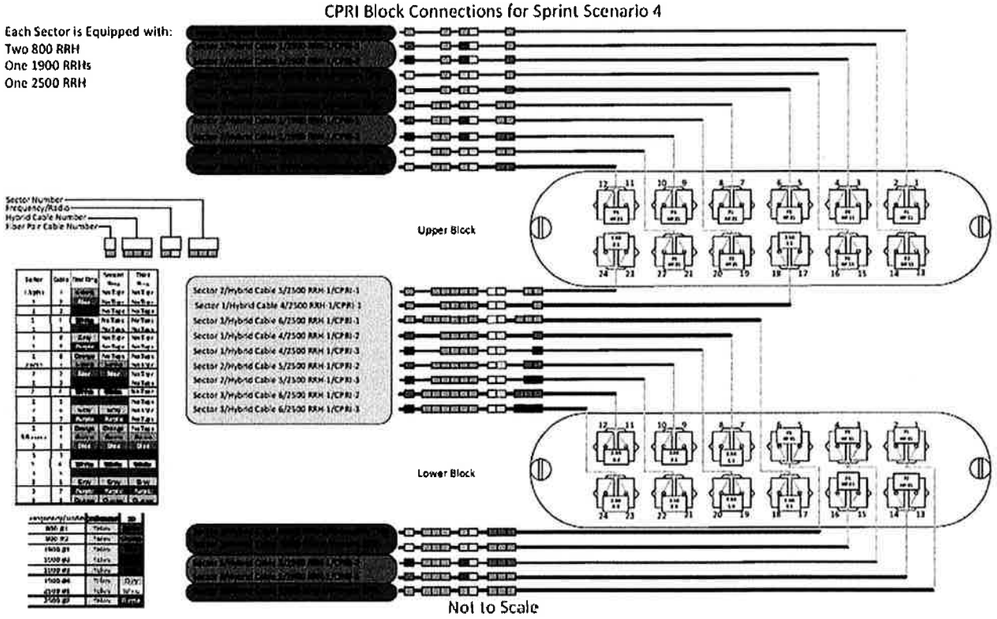
KMW 16 Port Nokia-A RRH 800, 1900, and 2500 (Sprint Scenario 4)



Not to Scale

CPRI Block Connections for Sprint Scenario 4

Each Sector is Equipped with:
Two 800 RRH
One 1900 RRHs
One 2500 RRH



Not to Scale

PLUMBING DIAGRAM | NO SCALE | 1

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OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN D. STEVENS
JAN 2018
No. 24705
LICENSED PROFESSIONAL ENGINEER

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SITE NAME:
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CT33XC568

SITE ADDRESS:
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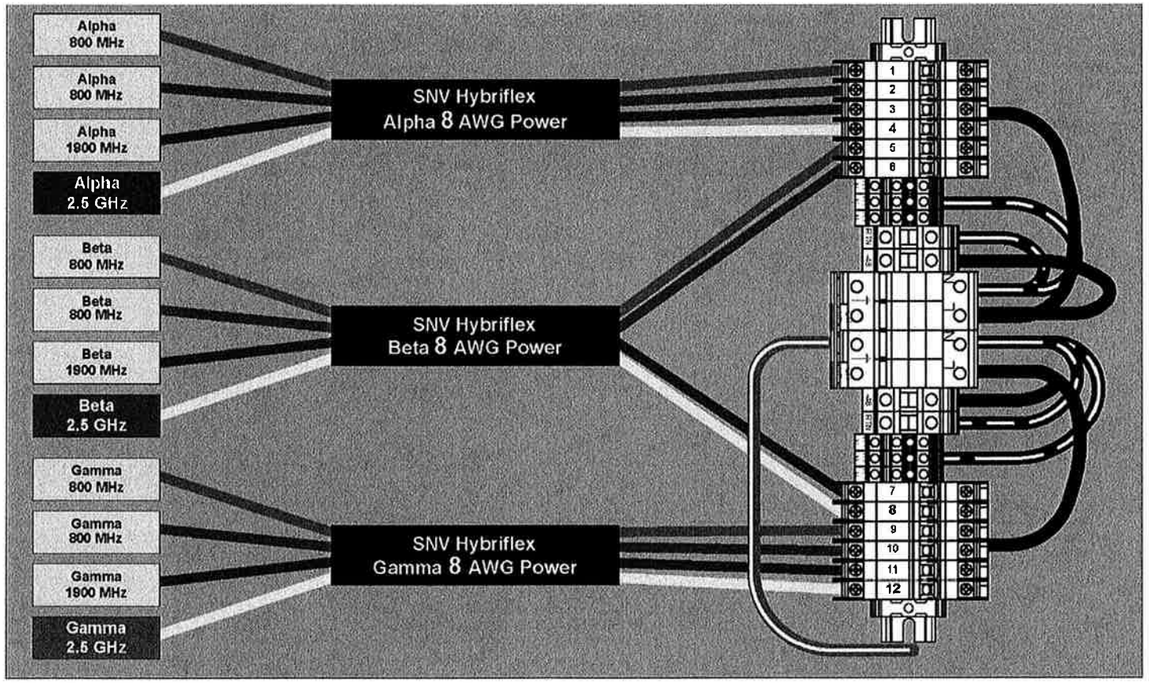
HAMPTON, CT 06247

SHEET DESCRIPTION:
PLUMBING DIAGRAM

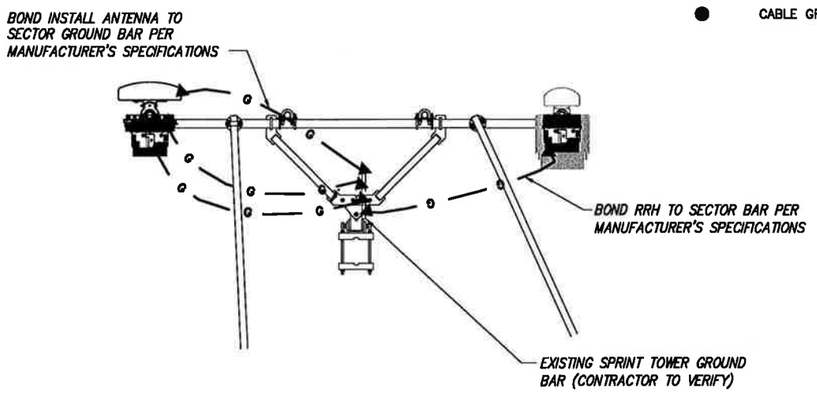
SHEET NUMBER:
A-6



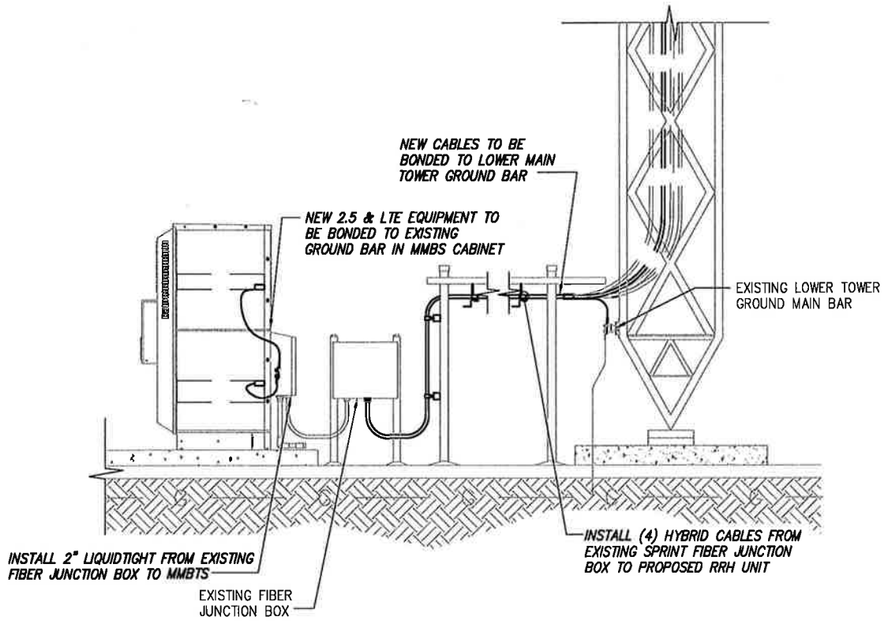
RRH TO DISTRIBUTION BOX POWER CONNECTIVITY | NO SCALE | 1

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

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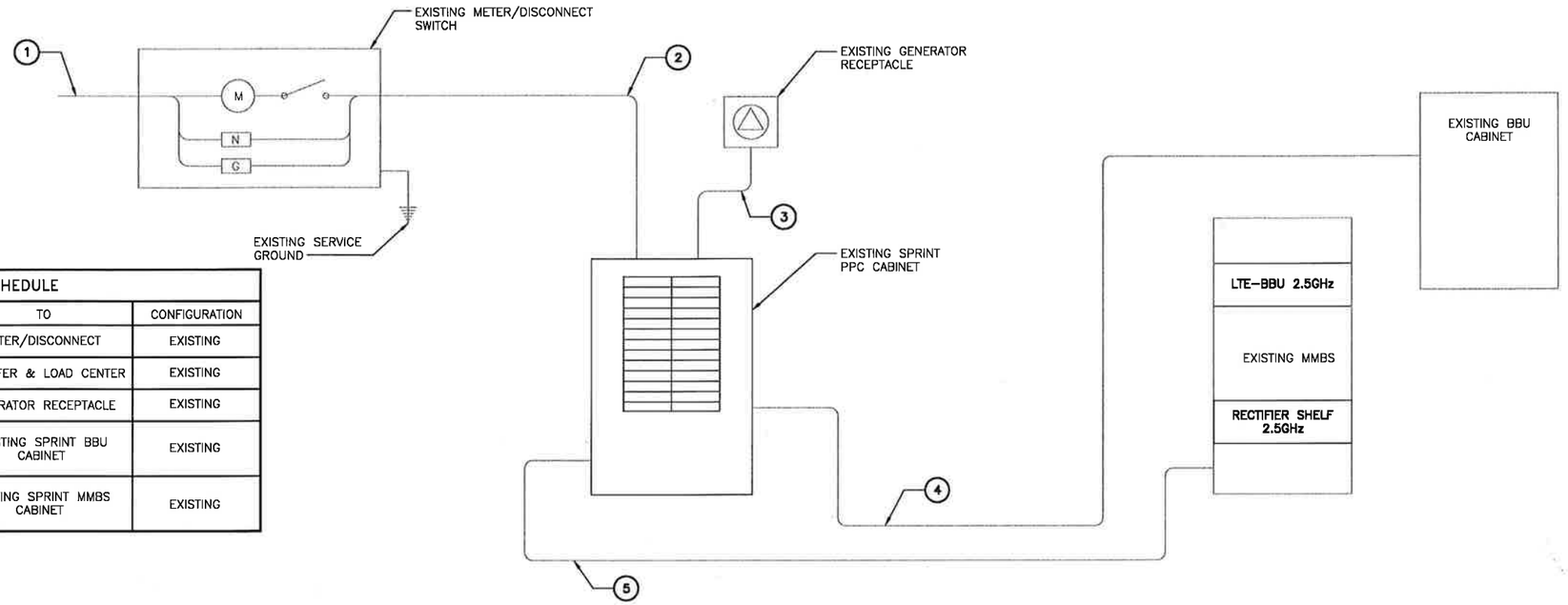
HAMPTON, CT 06247

SHEET DESCRIPTION:
ELECTRICAL & GROUNDING PLAN

SHEET NUMBER:
E-1

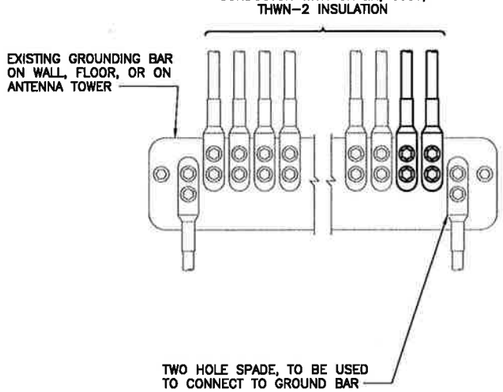
NOTES

CG 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 SPRINT BBU CABINET	EXISTING
5	TRANSFER & LOAD CENTER	EXISTING SPRINT MMBS CABINET	EXISTING

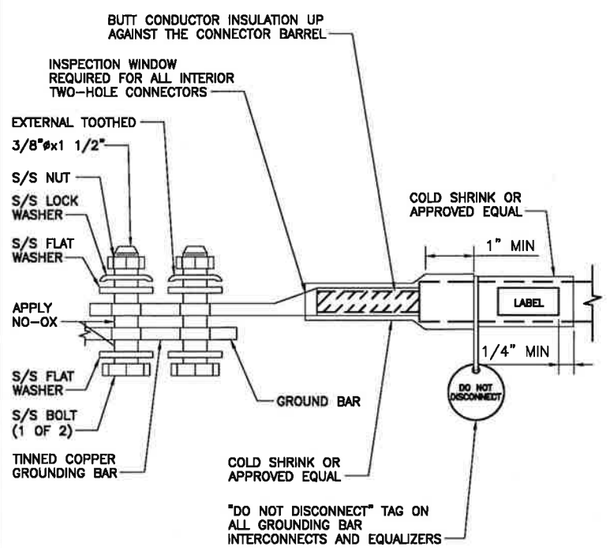
ELECTRICAL ONE–LINE DIAGRAM | NO SCALE | 1



NOTES

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

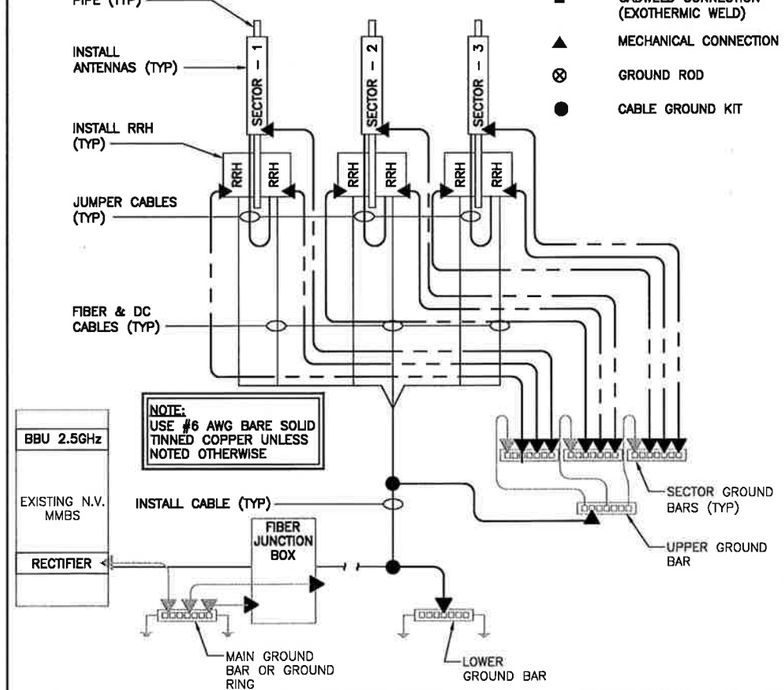
INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR | NO SCALE | 2



TWO HOLE LUG | NO SCALE | 3

LEGEND:

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



GROUNDING RISER DIAGRAM | NO SCALE | 4

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HAMPTON, CT 06247

SHEET DESCRIPTION:

ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:

E-2