AIROSMITH DEVELOPMENT
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March 28th, 2018

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

RE: Notice of Exempt Modification – Antenna Swap for wireless facility located at 100 OLD REDDING ROAD, REDDING, CT 06896 – CT03XC358 (lat. 41° 17' 13.54" N, long. -73° 26' 17.38" W)

Dear Ms. Bachman:

Sprint Spectrum, LP ("Sprint") currently maintains wireless telecommunications antennas at the (157-foot level) on an existing (182-foot Self-Support tower) at the above-referenced address. The property is owned by James and Michelle Lenes, and the tower is owned by American Tower Corporation.

Sprint's proposed work involves antenna replacement and tower work. Sprint intends to replace three (3) antennas and add six (6) 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.

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 JULIA PEMBERTON, First Selectman and AIMEE PARDEE, Zoning Enforcement Officer of the Town of Redding. A copy of this letter is also being sent to JUSTINE PAUL the manager for AMERICAN TOWER CORPORATION who manages the site and to the James and Michelle Lenes who 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.
3. The proposed modifications will include the addition of ground base equipment as

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

depicted on the attached drawings; however, the proposed equipment will not require an extension of the site boundaries.

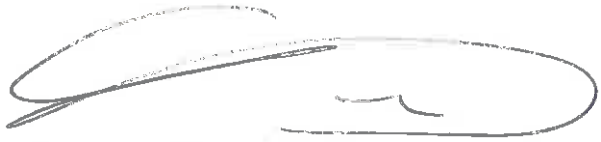
4. The proposed modifications will not increase noise levels at the facility by six decibels or more.

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: JULIA PEMBERTON, (First Selectman, ROCKY HILL CT)
JUSTINE PAUL (Manager, AMERICAN TOWER CORPORATION)
AIMEE PARDEE (Zoning Enforcement Officer / ROCKY HILL CT)
James and Michelle Lenes (Land Owners)

7017 3040 0000 7659 3947

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Total Postage and Fees	$6.70

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03/28/2018

Sent To: James and Michele Lenes CT03XC358
Street and Apt. No., or PO Box No.: 155 Mountain Road
City, State, ZIP+4®: Redding CT 06896

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

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Total Postage and Fees	$6.70

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03/28/2018

Sent To: Foster Paul CT03XC358
Street and Apt. No., or PO Box No.: 10 Presidential Way
City, State, ZIP+4®: Woburn MA 01801

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

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☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.50
Total Postage and Fees	$6.70

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Sent To: Julia Pemberton CT03XC358
Street and Apt. No., or PO Box No.: ~~100 Hill Road~~ P.O Box 1028
City, State, ZIP+4®: Redding CT 06875

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

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☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.50
Total Postage and Fees	$6.70

0867 17
MAR 28 2018
Postmark Here
SARATOGA SPRINGS, NY 12866
03/28/2018

Sent To: Aimee Pirdee CT03XC358
Street and Apt. No., or PO Box No.: 100 Hill Road P.O. Box 1028
City, State, ZIP+4®: Redding CT 06875

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

155 MOUNTAIN RD

Location	155 MOUNTAIN RD	**Mblu**	35/ / 88/ /
Acct#	00351200	**Owner**	LENES JAMES A & MICHELLE K
Assessment	$328,200	**Appraisal**	$468,800
PID	3450	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$231,100	$237,700	$468,800
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$161,800	$166,400	$328,200

Owner of Record

Owner	LENES JAMES A & MICHELLE K	**Sale Price**	$661,000
Co-Owner		**Certificate**	
Address	155 MOUNTAIN RD REDDING, CT 06896-2715	**Book & Page**	332/ 997
		Sale Date	06/05/2006
		Instrument	00

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
LENES JAMES A & MICHELLE K	$661,000		332/ 997	00	06/05/2006
MEDVECKY THOMAS E & PATRICIA	$0	1	243/ 682	XX	11/22/2000
MEDVECKY THOMAS	$0	2	111/ 16	XX	06/16/1981
MEDVECKY THOMAS & PATRICIA	$0	3	92/ 824	XX	11/03/1975

Building Information

Building 1 : Section 1

Year Built:	1976
Living Area:	2,357
Replacement Cost:	$285,284
Building Percent Good:	81

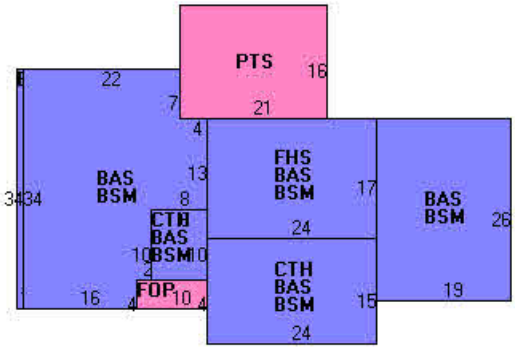
Replacement Cost Less Depreciation: $231,100

Building Attributes	
Field	**Description**
Style	Contemporary
Model	Residential
Grade:	B-
Stories	1 1/2 Stories
Occupancy	1
Exterior Wall 1	Cedar
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Asphalt Shingl
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Forced Air
AC Type:	Central
Total Bedrooms	5 Bedrooms
Full Bathrooms	2
Half Bathrooms	0
Total Xtra Fixtrs	0
Total Rooms	10
Bath Style:	Average
Kitchen Style:	Average
Fireplaces	1
Whirlpool Tubs	
Fin Bsmt Area	
Fin Bsmt Qual	
Bsmt Garages	3

Building Photo

(http://images.vgsi.com/photos/ReddingCTPhotos//\00\01\03/14

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	2,112	2,112
FHS	Finished Half Story	408	245
BSM	Basement Area	2,078	0
CTH	Cathedral Ceiling	440	0
FOP	Framed Open Porch	40	0
PTS	Patio - Stone	336	0
		5,414	2,357

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	101
Description	Single Family Res
Zone	R-2
Neighborhood	110
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	3.38
Frontage	
Depth	
Assessed Value	$166,400
Appraised Value	$237,700

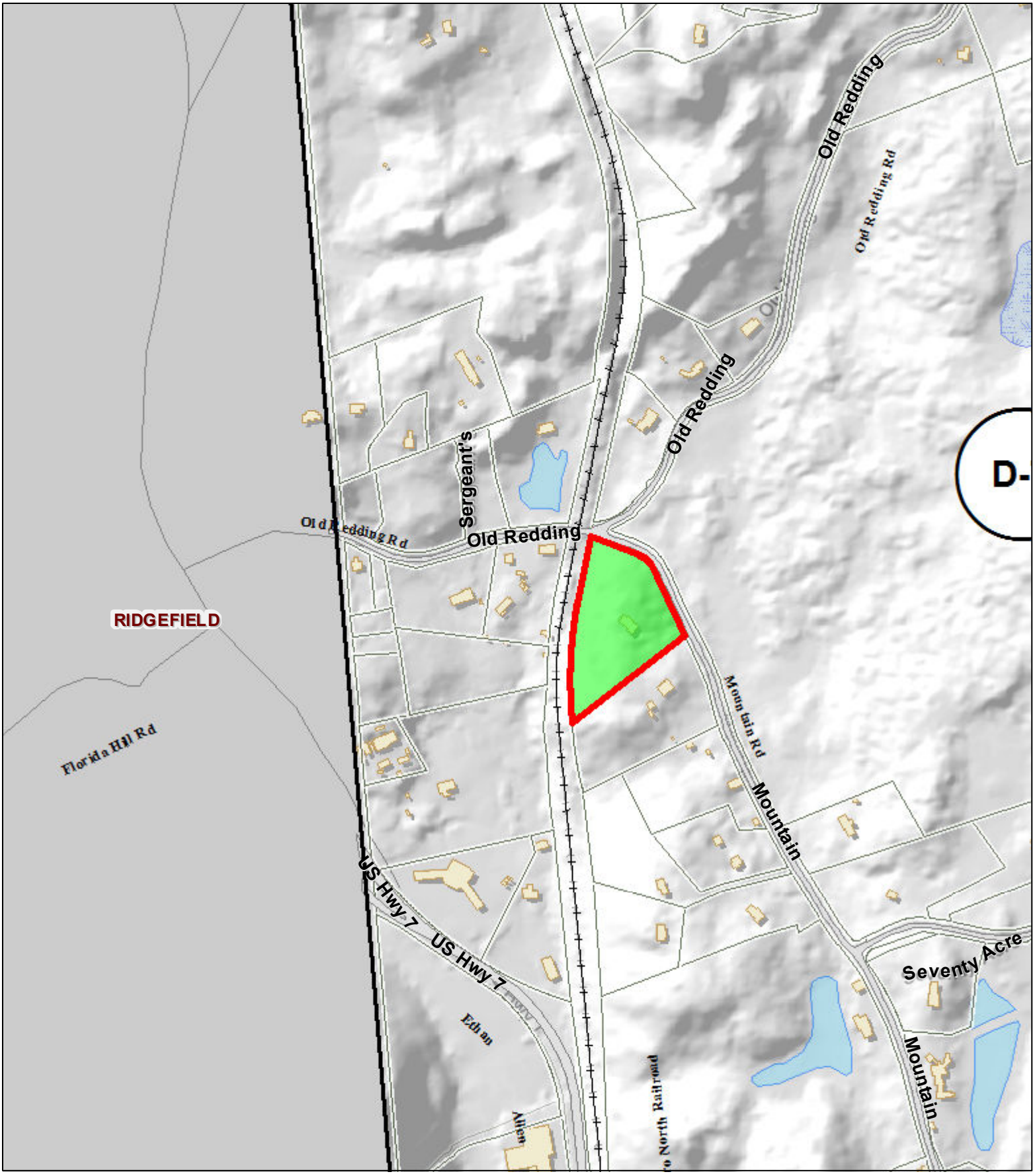
Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$240,900	$238,200	$479,100
2015	$240,900	$238,200	$479,100
2014	$240,900	$238,200	$479,100

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$168,600	$166,700	$335,300
2015	$168,600	$166,700	$335,300
2014	$168,600	$166,700	$335,300



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Feet
0 160 320 640

CT03XC358_100 Old Redding Road

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: CT03XC358

Redding/SNET
100 Old Redding Road
Redding, CT 06896

March 21, 2018

EBI Project Number: 6218002055

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	6.42 %

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

EBI Consulting
environmental | engineering | due diligence

March 21, 2018

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

Emissions Analysis for Site: **CT03XC358 – Redding/SNET**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **100 Old Redding Road, Redding, 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 **100 Old Redding Road, Redding, 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 **RFS APXVSPP18-C-A20 and the Commscope DT465B-2XR** 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.

9) The antenna mounting height centerlines of the proposed antennas are **157 feet** above ground level (AGL) for **Sector A**, **157 feet** above ground level (AGL) for **Sector B** and **157 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:	RFS APXVSPP18-C-A20	Make / Model:	RFS APXVSPP18-C-A20	Make / Model:	RFS APXVSPP18-C-A20
Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd
Height (AGL):	**157 feet**	Height (AGL):	**157 feet**	Height (AGL):	**157 feet**
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	180 Watts	Total TX Power(W):	180 Watts	Total TX Power(W):	180 Watts
ERP (W):	6,662.27	ERP (W):	6,662.27	ERP (W):	6,662.27
Antenna A1 MPE%	**1.10 %**	Antenna B1 MPE%	**1.10 %**	Antenna C1 MPE%	**1.10 %**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Commscope DT465B-2XR	Make / Model:	Commscope DT465B-2XR	Make / Model:	Commscope DT465B-2XR
Gain:	15.05 / 13.35 dBd	Gain:	15.05 / 13.35 dBd	Gain:	15.05 / 13.35 dBd
Height (AGL):	**157 feet**	Height (AGL):	**157 feet**	Height (AGL):	**157 feet**
Frequency Bands	2500 MHz (BRS) / 850 MHz	Frequency Bands	2500 MHz (BRS) / 850 MHz	Frequency Bands	2500 MHz (BRS) / 850 MHz
Channel Count	10	Channel Count	10	Channel Count	10
Total TX Power(W):	200 Watts	Total TX Power(W):	200 Watts	Total TX Power(W):	200 Watts
ERP (W):	5,983.32	ERP (W):	5,983.32	ERP (W):	5,983.32
Antenna A2 MPE%	**1.05 %**	Antenna B2 MPE%	**1.05 %**	Antenna C2 MPE%	**1.05 %**

Site Composite MPE%	
Carrier	**MPE%**
SPRINT – Max per sector	**2.15 %**
AT&T	0.40 %
Verizon Wireless	1.29 %
T-Mobile	2.24 %
Nextel	0.23 %
State Police	0.00 %
DMV	0.00 %
CMED	0.00 %
FBI	0.11 %
Site Total MPE %:	**6.42 %**

SPRINT Sector A Total:	2.15 %
SPRINT Sector B Total:	2.15 %
SPRINT Sector C Total:	2.15 %
Site Total:	6.42 %

SPRINT _ Frequency Band / Technology (All Sectors)	**# Channels**	**Watts ERP (Per Channel)**	**Height (feet)**	**Total Power Density (μW/cm²)**	**Frequency (MHz)**	**Allowable MPE (μW/cm²)**	**Calculated % MPE**
Sprint 850 MHz CDMA	1	437.55	157	0.69	850 MHz	567	0.12%
Sprint 1900 MHz (PCS) CDMA	5	622.47	157	4.91	1900 MHz (PCS)	1000	0.49%
Sprint 1900 MHz (PCS) LTE	2	1,556.18	157	4.91	1900 MHz (PCS)	1000	0.49%
Sprint 2500 MHz (BRS) LTE	8	639.78	157	8.07	2500 MHz (BRS)	1000	0.81%
Sprint 850 MHz LTE	2	432.54	157	1.36	850 MHz	567	0.24%
						Total:	**2.15%**

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:	2.15 %
Sector B:	2.15 %
Sector C:	2.15 %
SPRINT Maximum Total (per sector):	2.15 %
Site Total:	6.42 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **6.42 %** 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

Structural Analysis Report

Structure	:	**180 ft Self Supported Tower**
ATC Site Name	:	**Redding, CT**
ATC Site Number	:	**302522**
Engineering Number	:	**OAA713870_C3_01**
Proposed Carrier	:	**Sprint Nextel**
Carrier Site Name	:	**Redding**
Carrier Site Number	:	**CT03XC358**
Site Location	:	**Old Redding Road** **Redding, CT 06896-2721** **41.287100,-73.438200**
County	:	**Fairfield**
Date	:	**October 20, 2017**
Max Usage	:	**83%**
Result	:	**Pass**

Prepared By:
Timothy Kassakatis
Structural Engineer I

Reviewed By:

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 180 ft self supported tower to reflect the change in loading by Sprint Nextel.

Supporting Documents

Tower Drawings	Rohn Drawing #C951762, dated December 26, 1995
Foundation Drawing	Rohn Drawing #A953313-1, dated January 12, 1996
Geotechnical Report	SoilTesting Job #591, dated December 26, 1995

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:	93 mph (3-Second Gust, Vasd) / 120 mph (3-Second Gust, Vult)
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 = 0.22, S_1 = 0.07
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					
180.0	180.0	3	Powerwave P65-16-XLH-RR	Sector Frames	(12) 1 1/4" Coax (2) 0.74" 8 AWG 7 (1) 0.29" Fiber	AT&T Mobility
		6	Powerwave 7770.00			
		3	Ericsson RRUS 11 (Band 12) (55 lb)			
		1	Raycap DC6-48-60-18-8F			
		6	Powerwave LGP21401			
		3	Powerwave TT19-08BP111-001			
172.0	172.0	6	Commscope SBNHH-1D65B	Sector Frames	(12) 1 5/8" Coax (2) 1 5/8" Hybriflex	Verizon
		4	Andrew DB844G65ZAXY			
		2	RFS APL868013-42T0			
		3	Alcatel-Lucent RRH2x60 700			
		3	Alcatel-Lucent B25 RRH4x30			
		3	Alcatel-Lucent RRH2X60-1900			
		2	RFS DB-T1-6Z-8AB-0Z			
		6	RFS FD9R6004/1C-3L			
164.0	164.0	12	Decibel DB844H90E-XY	Sector Frames	(12) 1 5/8" Coax	Sprint Nextel
154.0	157.0	9	RFS ACU-A20-N	Sector Frames	(4) 1 1/4" Hybriflex	
		3	RFS APXVSPP18-C-A20			
		3	Alcatel-Lucent TD-RRH8x20-25 w/ S.S.			
		3	Alcatel-Lucent 1900MHz 4x45 RRH			
		3	Alcatel-Lucent 800MHz RRH			
147.0	147.0	3	Andrew LNX-6515DS-VTM	Sector Frames	(12) 1 5/8" Coax (1) 1 5/8" Hybriflex (1) 1 1/4" Hybriflex	Metro PCS
		3	Ericsson AIR 21, 1.3M, B4A B2P			
		3	Ericsson AIR 21, 1.3M, B2A B4P			
		3	Kathrein Smart Bias Tee			
137.5	137.5	1	Andrew DB810K-XT	Leg	(1) 1 5/8" Coax	Connecticut State Police
137.2	137.2	1	Sinclair SC479-HF1LDF	Side Arm	(1) 1 5/8" Coax	
134.3	134.3	2	Sinclair SE419-SF3P4LDF	Side Arm	(2) 1 5/8" Coax	
133.0	133.0	2	24" x 24" Ice Shield	Leg	-	
131.6	131.6	1	Morad VHF 156-DELUXE	Side Arm	(1) 1/2" Coax	
130.0	130.0	1	Antel WPA-700120-4CF-EDIN-X	Leg	(1) 1/2" Coax (1) 1 5/8" Coax	
		1	Bird 432E-83I-01-T			
129.0	129.0	1	RFS PA6-65AC	Leg	(1) EW63	
128.0	128.0	1	RFS PA6-65AC	Leg	(1) EW63	
127.0	127.0	1	Bird 432-83H-01-T	Side Arm	(1) 3/8" Coax	
125.7	125.7	1	Sinclair SE419-SF3P4LDF	Side Arm	(1) 1 5/8" Coax	
122.8	122.8	3	Sinclair SC479-HF1LDF	Leg	(3) 1 5/8" Coax	
111.0	113.0	1	Decibel DB586	Side Arm	(1) 7/8" Coax	Eversource Energy
105.0	107.0	1	Decibel DB586	Side Arm	(1) 7/8" Coax	
91.0	91.0	1	PCTEL GPS-TMG-HR-26N	Stand-Off	(1) 1/2" Coax	Sprint Nextel
80.0	88.0	1	Sinclair SD210D	Stand-Off	(3) 7/8" Coax	Eversource Energy
	86.0	1	12' Omni			Other
72.0	83.0	1	Andrew DB264-A	Stand-Off	(1) 7/8" Coax	Connecticut State Police
30.0	30.0	1	2" x 4" GPS	Leg	(1) 1/2" Coax	Verizon
18.0	18.0	1	GPS	Leg	(1) 1/2" Coax	AT&T Mobility

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
154.0	157.0	3	RFS RFS APXV9TM14-ALU-I20	-	(1) 1 1/4" Hybriflex	Sprint Nextel

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
154.0	157.0	3	Commscope DT465B-2XR	Sector Frames	-	Sprint Nextel
		3	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).

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	83%	Pass
Diagonals	80%	Pass
Horizontals	23%	Pass
Anchor Bolts	49%	Pass
Leg Bolts	61%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	287.6	388.3	292.4	75%
Axial (Kips)	321.3	433.8	335.5	77%
Shear (Kips)	56.4	76.1	60.8	80%

*** The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1**

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

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
154.0	Alcatel-Lucent RRH2x50-08	Sprint Nextel	0.294	0.097	0.243
	Commscope DT465B-2XR				
129.0	RFS PA6-65AC	CT State Police	0.197	0.048	0.175
128.0	RFS PA6-65AC				

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

AMERICAN TOWER®
CORPORATION

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:

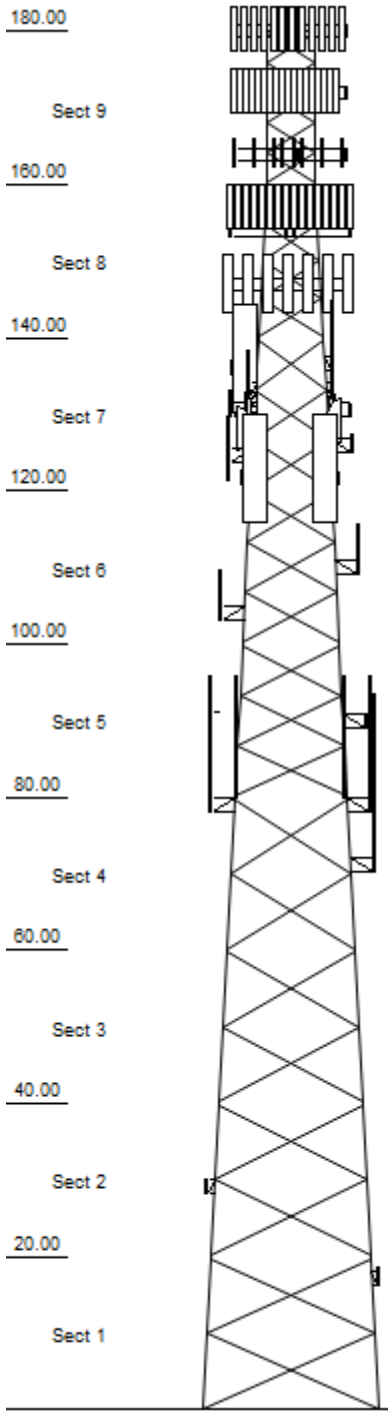
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- 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.



Loads: 93 mph no ice
50 mph w/ 3/4" radial ice
Site Class: D Ss: 0.22 S1: 0.07
60 mph Serviceability

Job Information

Tower :	**302522**	**Location :**	**Redding, CT**
Code :	**ANSI/TIA-222-G**	**Shape :**	**Triangle**
Client :	**SPRINT NEXTEL**		

Base Width : 23.00 ft
Top Width : 6.65 ft

Sections Properties

Section	Leg Members		Diagonal Members	Horizontal Members
1	PSP 50 ksi	ROHN 8 EHS	SAE 50 ksi 4X4X0.3125	
2	PSP 50 ksi	ROHN 8 EHS	SAE 50 ksi 4X4X0.25	
3	PX 50 ksi	6" DIA PIPE	SAE 50 ksi 4X4X0.25	
4	PX 50 ksi	6" DIA PIPE	SAE 50 ksi 3.5X3.5X0.25	
5 - 6	PSP 50 ksi	ROHN 5 EH	SAE 50 ksi 3X3X0.25	
7	PX 50 ksi	4" DIA PIPE	SAE 50 ksi 2.5X2.5X0.25	
8	PST 50 ksi	3" DIA PIPE	SAE 50 ksi 2X2X0.25	SAE 36 ksi 1.75X1.75X0.1875
9	PST 50 ksi	2-1/2" DIA PIPE	SAE 50 ksi 1.75X1.75X0.1875	SAE 36 ksi 1.75X1.75X0.1875

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
180.00	Mounting Frame	3	Round Sector Frames
180.00	Panel	3	Powerwave P65-16-XLH-RR
180.00	Panel	6	Powerwave 7770.00
180.00	Panel	3	Ericsson RRUS 11 (Band 12) (55
180.00	Whip	1	Raycap DC6-48-60-18-8F
180.00	Panel	6	Powerwave LGP21401
180.00	Panel	3	Powerwave TT19-08BP111-001
172.00	Panel	6	Commscope SBNHH-1D65B
172.00	Panel	4	Andrew DB844G65ZAXY
172.00	Panel	2	RFS APL868013-42T0
172.00	Panel	3	Alcatel-Lucent RRH2x60 700
172.00	Panel	3	Alcatel-Lucent B25 RRH4x30
172.00	Panel	3	Alcatel-Lucent RRH2X60-1900
172.00	Panel	2	RFS DB-T1-6Z-8AB-0Z
172.00	Mounting Frame	3	Round Sector Frames
172.00	Panel	6	RFS FD9R6004/1C-3L
164.00	Panel	12	Decibel DB844H90E-XY
164.00	Mounting Frame	3	Round Sector Frame
154.00	Panel	3	Commscope DT465B-2XR
154.00	Panel	3	Alcatel-Lucent RRH2x50-08
154.00	Panel	9	RFS ACU-A20-N
154.00	Panel	3	RFS APXVSPP18-C-A20
154.00	Panel	3	Alcatel-Lucent TD-RRH8x20-25 w
154.00	Panel	3	Alcatel-Lucent 1900 MHz 4x45 R
154.00	Panel	3	Alcatel-Lucent 800 MHz RRH
154.00	Mounting Frame	3	Round Sector Frames
147.00	Mounting Frame	3	Round Sector Frames
147.00	Panel	3	Andrew LNX-6515DS-VTM
147.00	Panel	3	Ericsson AIR 21, 1.3M, B4A B2P
147.00	Panel	3	Ericsson AIR 21, 1.3M, B2A B4P
147.00	Panel	3	Kathrein Scala Smart Bias Tee
137.50	Whip	1	Andrew DB810K-XT
137.20	Straight Arm	1	Round Side Arm
137.20	Panel	1	Sinclair SC479-HF1LDF
134.30	Whip	2	Sinclair SE419-SF3P4LDF
133.00	Panel	1	24" x 24" Ice Shield
133.00	Panel	1	24" x 24" Ice Shield
131.60	Straight Arm	2	Round Side Arms
131.60	Whip	1	Morad VHF 156-DELUXE
130.00	Panel	1	Amphenol Antel WPA-700120-4CF-
130.00	Panel	1	Bird 432E-83I-01-T
129.00	Dish	1	RFS PA6-65AC
128.00	Dish	1	RFS PA6-65AC
127.00	Straight Arm	1	Round Side Arms
127.00	Whip	1	Bird 432-83H-01-T
125.70	Straight Arm	1	Round Side Arm
125.70	Whip	1	Sinclair SE419-SF3P4LDF
122.80	Panel	3	Sinclair SC479-HF1LDF
111.00	Straight Arm	1	Round Side Arm
111.00	Whip	1	Decibel DB586

Job Information

Tower :	**302522**	**Location :**	**Redding, CT**
Code :	**ANSI/TIA-222-G**	**Shape :**	**Triangle**
Client :	**SPRINT NEXTEL**		

Base Width : 23.00 ft
Top Width : 6.65 ft

105.00	Straight Arm	1	Round Side Arm
105.00	Whip	1	Decibel DB586
91.00	Straight Arm	1	Stand-Off
91.00	Panel	1	PCTEL GPS-TMG-HR-26N
80.00	Straight Arm	1	Side Arms
80.00	Whip	1	Sinclair SD210D
80.00	Whip	1	12' Omni
80.00	Straight Arm	1	Stand-Off
72.00	Whip	1	Andrew DB264-A
72.00	Straight Arm	1	Stand-Off
30.00	Whip	1	2" x 4" GPS
18.00	Whip	1	GPS

Linear Appurtenance

Elev (ft) From	To	Qty	Description
0.00	180.00	1	Wave Guide
0.00	180.00	12	1 1/4" Coax
0.00	180.00	2	0.74" 8 AWG 7
0.00	180.00	1	0.29" Fiber
0.00	172.00	1	Wave Guide
0.00	172.00	2	1 5/8" Hybriflex
0.00	172.00	12	1 5/8" Coax
0.00	164.00	1	Wave Guide
0.00	164.00	12	1 5/8" Coax
0.00	154.00	4	1 1/4" Hybriflex
0.00	147.00	1	Wave Guide
0.00	147.00	1	1 5/8" Hybriflex
0.00	147.00	12	1 5/8" Coax
0.00	147.00	1	1 1/4" Hybriflex Cab
0.00	137.50	1	1 5/8" Coax
0.00	137.20	1	1 5/8" Coax
0.00	134.30	2	1 5/8" Coax
0.00	131.60	1	1/2" Coax
0.00	130.00	1	1/2" Coax
0.00	130.00	1	1 5/8" Coax
0.00	129.00	1	EW63
0.00	128.00	1	EW63
0.00	127.00	1	3/8" Coax
0.00	125.70	1	1 5/8" Coax
0.00	122.80	3	1 5/8" Coax
0.00	111.00	1	7/8" Coax
0.00	105.00	1	7/8" Coax
0.00	91.00	1	1/2" Coax
0.00	80.00	1	7/8" Coax
0.00	80.00	2	7/8" Coax
0.00	72.00	1	7/8" Coax
0.00	30.00	1	1/2" Coax
0.00	18.00	1	1/2" Coax

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	6,310.03	56.01	60.84
DL + WL + IL	2,465.82	183.33	24.84

Individual Base Foundation Design Loads

Vertical (kip)	Uplift (kip)	Horizontal (kip)
335.46	292.38	36.87

Job Information

Tower :	**302522**	**Location :**	**Redding, CT**
Code :	**ANSI/TIA-222-G**	**Shape :**	**Triangle**
Client :	**SPRINT NEXTEL**		

Base Width :	**23.00 ft**
Top Width :	**6.65 ft**

Site Number:	302522	Code:	ANSI/TIA-222-G	
Site Name:	Redding, CT	Engineering Number:	OAA713870_C3_01	10/20/2017 1:24:48 PM
Customer:	SPRINT NEXTEL			

Analysis Parameters

Location:	FAIRFIELD County, CT	Height (ft):	180
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	23.00
Tower Manufacturer:	Rohn	Top Face Width (ft):	6.65
Tower Type:	Self Support		

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	93 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):	0.88				
T_L (sec):	16	p:	1.3	C_S:	0.041
S_S:	0.225	S_1:	0.067	C_S, Max:	0.041
F_a:	1.600	F_V:	2.400	C_S, Min:	0.030
S_{ds}:	0.240	S_{d1}:	0.107		

Load Cases

1.2D + 1.6W Normal	93 mph Normal to Face with No Ice
1.2D + 1.6W 60 deg	93 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	93 mph 90 degree with No Ice
1.2D + 1.6W 120 deg	93 mph 120 degree with No Ice
1.2D + 1.6W 180 deg	93 mph 180 degree with No Ice
1.2D + 1.6W 210 deg	93 mph 210 degree with No Ice
1.2D + 1.6W 240 deg	93 mph 240 degree with No Ice
1.2D + 1.6W 300 deg	93 mph 300 degree with No Ice
1.2D + 1.6W 330 deg	93 mph 330 degree with No Ice
0.9D + 1.6W Normal	93 mph Normal to Face with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	93 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	93 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 120 deg	93 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	93 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 210 deg	93 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.6W 240 deg	93 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.6W 300 deg	93 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.6W 330 deg	93 mph 330 deg with No Ice (Reduced DL)
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

Analysis Parameters

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
(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
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 60 deg	Seismic (Reduced DL) 60 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
(0.9 - 0.2Sds) * DL + E 120 deg	Seismic (Reduced DL) 120 deg
(0.9 - 0.2Sds) * DL + E 180 deg	Seismic (Reduced DL) 180 deg
(0.9 - 0.2Sds) * DL + E 210 deg	Seismic (Reduced DL) 210 deg
(0.9 - 0.2Sds) * DL + E 240 deg	Seismic (Reduced DL) 240 deg
(0.9 - 0.2Sds) * DL + E 300 deg	Seismic (Reduced DL) 300 deg
(0.9 - 0.2Sds) * DL + E 330 deg	Seismic (Reduced DL) 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

Site Number: 302522 Code: ANSI/TIA-222-G

Site Name: Redding, CT Engineering Number: OAA713870_C3_01 10/20/2017 1:24:49 PM

Customer: SPRINT NEXTEL

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)
180.0	Powerwave TT19-	3	16	0.6	0.8	6.7	5.4	0.80	0.50	0.0	0.0	22.00	23	69
180.0	Powerwave	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	22.00	79	122
180.0	Raycap DC6-48-60-	1	32	2.2	2.0	11.0	11.0	0.80	1.00	0.0	0.0	22.00	53	46
180.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	22.00	90	238
180.0	Powerwave 7770.00	6	35	5.5	4.6	11.0	5.0	0.80	0.77	0.0	0.0	22.00	609	302
180.0	Powerwave P65-16-	3	53	8.1	6.0	12.0	6.0	0.80	0.79	0.0	0.0	22.00	461	229
180.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	22.00	727	1296
172.0	RFS FD9R6004/1C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	21.72	26	27
172.0	Alcatel-Lucent	3	43	1.9	1.7	11.2	7.2	0.80	0.67	0.0	0.0	21.72	89	186
172.0	Alcatel-Lucent B25	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	21.72	101	229
172.0	Alcatel-Lucent	3	57	2.2	1.8	12.0	9.0	0.80	0.67	0.0	0.0	21.72	102	245
172.0	RFS APL868013-	2	6	3.6	4.0	8.0	6.0	0.80	0.90	0.0	0.0	21.72	154	18
172.0	Andrew	4	12	4.3	4.0	10.0	8.5	0.80	0.94	0.0	0.0	21.72	386	69
172.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	24.0	0.80	1.00	0.0	0.0	21.72	227	127
172.0	Commscope SBNHH-	6	51	8.2	6.1	11.9	7.1	0.80	0.83	0.0	0.0	21.72	961	438
172.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	21.72	718	1296
164.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.92	0.0	0.0	21.42	929	242
164.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	21.42	708	1296
154.0	RFS ACU-A20-N	9	1	0.1	0.3	2.0	3.5	0.80	0.50	3.0	43.5	21.16	15	13
154.0	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	3.0	176.1	21.16	59	229
154.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.67	3.0	295.7	21.16	99	229
154.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	3.0	322.0	21.16	107	259
154.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	3.0	562.2	21.16	187	302
154.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.83	3.0	1379.0	21.16	460	246
154.0	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	3.0	1300.8	21.16	434	251
154.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	21.04	695	1296
147.0	Kathrein Scala	3	3	0.1	0.3	3.1	1.7	0.80	0.50	0.0	0.0	20.76	3	14
147.0	Ericsson AIR 21,	3	92	6.0	4.7	12.0	8.0	0.80	0.85	0.0	0.0	20.76	348	395
147.0	Ericsson AIR 21,	3	90	6.1	4.7	12.1	7.9	0.80	0.85	0.0	0.0	20.76	350	391
147.0	Andrew LNX-	3	51	11.4	8.0	11.9	7.1	0.80	0.84	0.0	0.0	20.76	651	222
147.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	20.76	686	1296
137.5	Andrew DB810K-XT	1	35	4.3	14.5	3.0	3.0	0.90	1.00	0.0	0.0	20.37	108	50
137.2	Sinclair SC479-	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	20.36	139	49
137.2	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.36	144	216
134.3	Sinclair SE419-	2	24	9.6	8.6	2.9	8.5	1.00	1.00	0.0	0.0	20.23	526	69
133.0	24" x 24" Ice Shield	1	50	0.9	0.3	24.0	24.0	1.00	1.00	0.0	0.0	20.18	26	72
133.0	24" x 24" Ice Shield	1	50	0.9	0.3	24.0	24.0	1.00	1.00	0.0	0.0	20.18	26	72
131.6	Morad VHF 156-	1	1	0.3	3.3	0.8	0.8	1.00	1.00	0.0	0.0	20.12	7	1
131.6	Round Side Arms	2	100	5.0	0.0	0.0	0.0	1.00	0.90	0.0	0.0	20.12	246	288
130.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.90	1.00	0.0	0.0	20.05	29	36
130.0	Amphenol Antel	1	7	2.7	4.0	5.6	5.6	1.00	1.00	0.0	0.0	20.05	73	10
129.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	1.00	0.0	0.0	20.00	1280	400
128.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	0.80	0.0	0.0	19.96	1022	400
127.0	Bird 432-83H-01-T	1	25	1.4	1.2	12.0	7.0	0.80	1.00	0.0	0.0	19.91	30	36
127.0	Round Side Arms	1	100	5.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	19.91	91	144
125.7	Round Side Arm	1	100	5.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	19.85	90	144
125.7	Sinclair SE419-	1	24	9.6	8.6	2.9	8.5	0.80	1.00	0.0	0.0	19.85	206	35
122.8	Sinclair SC479-	3	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	19.72	405	147
111.0	Decibel DB586	1	8	0.7	4.9	1.5	1.5	0.90	1.00	2.0	34.9	19.26	17	12
111.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.16	136	216
105.0	Decibel DB586	1	8	0.7	4.9	1.5	1.5	0.90	1.00	2.0	34.3	18.96	17	12
105.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.86	133	216
91.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.90	1.00	0.0	0.0	18.10	2	1
91.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.10	74	72

Site Number: 302522 Code: ANSI/TIA-222-G

Site Name: Redding, CT Engineering Number: OAA713870_C3_01 10/20/2017 1:24:49 PM

Customer: SPRINT NEXTEL

Tower Loading

80.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	17.45	71	72
80.00	12' Omni	1	40	3.6	12.0	3.0	3.0	0.90	1.00	6.0	471.0	17.81	78	58
80.00	Sinclair SD210D	1	40	4.4	16.0	41.0	4.0	0.90	1.00	8.0	781.4	17.93	98	58
80.00	Side Arms	1	150	6.3	0.0	0.0	0.0	1.00	0.90	0.0	0.0	17.45	135	216
72.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	16.93	69	72
72.00	Andrew DB264-A	1	36	5.9	21.5	0.0	0.0	0.90	1.00	11.0	1400.8	17.63	127	52
30.00	2" x 4" GPS	1	5	0.0	0.2	4.0	2.0	0.60	1.00	0.0	0.0	13.19	0	7
18.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	13.17	18	14
	Totals	152	10322	815.1										

Discrete Appurtenance Properties 0.9D + 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)
180.0	Powerwave TT19-	3	16	0.6	0.8	6.7	5.4	0.80	0.50	0.0	0.0	22.00	23	39
180.0	Powerwave	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	22.00	79	69
180.0	Raycap DC6-48-60-	1	32	2.2	2.0	11.0	11.0	0.80	1.00	0.0	0.0	22.00	53	26
180.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	22.00	90	134
180.0	Powerwave 7770.00	6	35	5.5	4.6	11.0	5.0	0.80	0.77	0.0	0.0	22.00	609	170
180.0	Powerwave P65-16-	3	53	8.1	6.0	12.0	6.0	0.80	0.79	0.0	0.0	22.00	461	129
180.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	22.00	727	729
172.0	RFS FD9R6004/1C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	21.72	26	15
172.0	Alcatel-Lucent	3	43	1.9	1.7	11.2	7.2	0.80	0.67	0.0	0.0	21.72	89	104
172.0	Alcatel-Lucent B25	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	21.72	101	129
172.0	Alcatel-Lucent	3	57	2.2	1.8	12.0	9.0	0.80	0.67	0.0	0.0	21.72	102	138
172.0	RFS APL868013-	2	6	3.6	4.0	8.0	6.0	0.80	0.90	0.0	0.0	21.72	154	10
172.0	Andrew	4	12	4.3	4.0	10.0	8.5	0.80	0.94	0.0	0.0	21.72	386	39
172.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	24.0	0.80	1.00	0.0	0.0	21.72	227	71
172.0	Commscope SBNHH-	6	51	8.2	6.1	11.9	7.1	0.80	0.83	0.0	0.0	21.72	961	246
172.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	21.72	718	729
164.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.92	0.0	0.0	21.42	929	136
164.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	21.42	708	729
154.0	RFS ACU-A20-N	9	1	0.1	0.3	2.0	3.5	0.80	0.50	3.0	43.5	21.16	15	7
154.0	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	3.0	176.1	21.16	59	129
154.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.67	3.0	295.7	21.16	99	129
154.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	3.0	322.0	21.16	107	146
154.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	3.0	562.2	21.16	187	170
154.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.83	3.0	1379.0	21.16	460	139
154.0	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	3.0	1300.8	21.16	434	141
154.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	21.04	695	729
147.0	Kathrein Scala	3	3	0.1	0.3	3.1	1.7	0.80	0.50	0.0	0.0	20.76	3	8
147.0	Ericsson AIR 21,	3	92	6.0	4.7	12.0	8.0	0.80	0.85	0.0	0.0	20.76	348	222
147.0	Ericsson AIR 21,	3	90	6.1	4.7	12.1	7.9	0.80	0.85	0.0	0.0	20.76	350	220
147.0	Andrew LNX-	3	51	11.4	8.0	11.9	7.1	0.80	0.84	0.0	0.0	20.76	651	125
147.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	20.76	686	729
137.5	Andrew DB810K-XT	1	35	4.3	14.5	3.0	3.0	0.90	1.00	0.0	0.0	20.37	108	28
137.2	Sinclair SC479-	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	20.36	139	28
137.2	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	20.36	144	122
134.3	Sinclair SE419-	2	24	9.6	8.6	2.9	8.5	1.00	1.00	0.0	0.0	20.23	526	39
133.0	24" x 24" Ice Shield	1	50	0.9	0.3	24.0	24.0	1.00	1.00	0.0	0.0	20.18	26	41
133.0	24" x 24" Ice Shield	1	50	0.9	0.3	24.0	24.0	1.00	1.00	0.0	0.0	20.18	26	41
131.6	Morad VHF 156-	1	1	0.3	3.3	0.8	0.8	1.00	1.00	0.0	0.0	20.12	7	1
131.6	Round Side Arms	2	100	5.0	0.0	0.0	0.0	1.00	0.90	0.0	0.0	20.12	246	162
130.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.90	1.00	0.0	0.0	20.05	29	20
130.0	Amphenol Antel	1	7	2.7	4.0	5.6	5.6	1.00	1.00	0.0	0.0	20.05	73	6
129.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	1.00	0.0	0.0	20.00	1280	225

Site Number: 302522 Code: ANSI/TIA-222-G

Site Name: Redding, CT Engineering Number: OAA713870_C3_01 10/20/2017 1:24:49 PM

Customer: SPRINT NEXTEL

Tower Loading

128.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	0.80	0.0	0.0	19.96	1022	225
127.0	Bird 432-83H-01-T	1	25	1.4	1.2	12.0	7.0	0.80	1.00	0.0	0.0	19.91	30	20
127.0	Round Side Arms	1	100	5.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	19.91	91	81
125.7	Round Side Arm	1	100	5.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	19.85	90	81
125.7	Sinclair SE419-	1	24	9.6	8.6	2.9	8.5	0.80	1.00	0.0	0.0	19.85	206	19
122.8	Sinclair SC479-	3	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	19.72	405	83
111.0	Decibel DB586	1	8	0.7	4.9	1.5	1.5	0.90	1.00	2.0	34.9	19.26	17	7
111.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.16	136	122
105.0	Decibel DB586	1	8	0.7	4.9	1.5	1.5	0.90	1.00	2.0	34.3	18.96	17	7
105.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.86	133	122
91.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.90	1.00	0.0	0.0	18.10	2	0
91.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.10	74	41
80.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	17.45	71	41
80.00	12' Omni	1	40	3.6	12.0	3.0	3.0	0.90	1.00	6.0	471.0	17.81	78	32
80.00	Sinclair SD210D	1	40	4.4	16.0	41.0	4.0	0.90	1.00	8.0	781.4	17.93	98	32
80.00	Side Arms	1	150	6.3	0.0	0.0	0.0	1.00	0.90	0.0	0.0	17.45	135	122
72.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	16.93	69	41
72.00	Andrew DB264-A	1	36	5.9	21.5	0.0	0.0	0.90	1.00	11.0	1400.8	17.63	127	29
30.00	2" x 4" GPS	1	5	0.0	0.2	4.0	2.0	0.60	1.00	0.0	0.0	13.19	0	4
18.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	13.17	18	8
	Totals	152	10322	815.1										

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)
180.0	Powerwave TT19-	3	44	0.9	0.8	6.7	5.4	0.80	0.50	0.0	0.0	6.36	6	171
180.0	Powerwave	6	48	1.6	1.2	9.2	2.6	0.80	0.50	0.0	0.0	6.36	20	368
180.0	Raycap DC6-48-60-	1	126	1.9	2.0	11.0	11.0	0.80	1.00	0.0	0.0	6.36	8	159
180.0	Ericsson RRUS 11	3	137	3.2	1.5	17.0	7.2	0.80	0.50	0.0	0.0	6.36	21	532
180.0	Powerwave 7770.00	6	172	6.6	4.6	11.0	5.0	0.80	0.77	0.0	0.0	6.36	131	1291
180.0	Powerwave P65-16-	3	248	9.4	6.0	12.0	6.0	0.80	0.79	0.0	0.0	6.36	97	929
180.0	Round Sector	3	673	31.2	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.36	285	2640
172.0	RFS FD9R6004/1C-3L	6	17	0.6	0.5	6.5	1.5	0.80	0.50	0.0	0.0	6.28	8	124
172.0	Alcatel-Lucent	3	112	2.5	1.7	11.2	7.2	0.80	0.67	0.0	0.0	6.28	21	433
172.0	Alcatel-Lucent B25	3	127	2.8	1.8	12.0	7.2	0.80	0.67	0.0	0.0	6.28	24	497
172.0	Alcatel-Lucent	3	139	2.8	1.8	12.0	9.0	0.80	0.67	0.0	0.0	6.28	24	543
172.0	RFS APL868013-	2	115	4.5	4.0	8.0	6.0	0.80	0.90	0.0	0.0	6.28	35	280
172.0	Andrew	4	152	5.3	4.0	10.0	8.5	0.80	0.94	0.0	0.0	6.28	85	740
172.0	RFS DB-T1-6Z-8AB-	2	273	5.7	2.0	24.0	24.0	0.80	1.00	0.0	0.0	6.28	49	675
172.0	Commscope SBNHH-	6	257	9.5	6.1	11.9	7.1	0.80	0.83	0.0	0.0	6.28	202	1925
172.0	Round Sector	3	673	31.2	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.28	281	2640
164.0	Decibel DB844H90E-	12	126	3.9	4.0	6.5	8.0	0.80	0.92	0.0	0.0	6.19	183	1861
164.0	Round Sector Frame	3	673	31.2	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.19	277	2640
154.0	RFS ACU-A20-N	9	9	0.2	0.3	2.0	3.5	0.80	0.50	3.0	12.7	6.12	4	103
154.0	Alcatel-Lucent	3	124	2.2	1.3	13.0	9.8	0.80	0.50	3.0	42.1	6.12	14	486
154.0	Alcatel-Lucent 800	3	140	2.7	1.6	13.0	10.8	0.80	0.67	3.0	68.9	6.12	23	544
154.0	Alcatel-Lucent 1900	3	155	3.0	2.1	11.1	10.7	0.80	0.67	3.0	75.1	6.12	25	602
154.0	Alcatel-Lucent TD-	3	162	5.7	2.2	18.6	6.7	0.80	0.67	3.0	143.3	6.12	48	632
154.0	RFS APXVSPP18-C-	3	257	9.3	6.0	11.8	7.0	0.80	0.83	3.0	289.4	6.12	96	965
154.0	Commscope	3	288	10.4	6.0	13.8	8.2	0.80	0.69	3.0	269.5	6.12	90	1079
154.0	Round Sector	3	669	31.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.08	270	2623
147.0	Kathrein Scala	3	10	0.2	0.3	3.1	1.7	0.80	0.50	0.0	0.0	6.00	2	39
147.0	Ericsson AIR 21,	3	261	7.1	4.7	12.0	8.0	0.80	0.85	0.0	0.0	6.00	74	1004
147.0	Ericsson AIR 21,	3	259	7.2	4.7	12.1	7.9	0.80	0.85	0.0	0.0	6.00	75	999
147.0	Andrew LNX-	3	315	13.1	8.0	11.9	7.1	0.80	0.84	0.0	0.0	6.00	135	1170

Tower Loading

147.0	Round Sector	3	669	31.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.00	267	2623
137.5	Andrew DB810K-XT	1	223	9.5	14.5	3.0	3.0	0.90	1.00	0.0	0.0	5.89	43	276
137.2	Sinclair SC479-	1	240	13.5	14.4	3.5	3.5	1.00	1.00	0.0	0.0	5.88	68	296
137.2	Round Side Arm	1	222	7.9	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.88	39	303
134.3	Sinclair SE419-	2	248	30.2	8.6	2.9	8.5	1.00	1.00	0.0	0.0	5.85	301	606
133.0	24" x 24" Ice Shield	1	142	1.9	0.3	24.0	24.0	1.00	1.00	0.0	0.0	5.83	9	182
133.0	24" x 24" Ice Shield	1	142	1.9	0.3	24.0	24.0	1.00	1.00	0.0	0.0	5.83	9	182
131.6	Morad VHF 156-	1	25	1.1	3.3	0.8	0.8	1.00	1.00	0.0	0.0	5.81	5	30
131.6	Round Side Arms	2	148	7.6	0.0	0.0	0.0	1.00	0.90	0.0	0.0	5.81	67	404
130.0	Bird 432E-83I-01-T	1	75	1.7	1.0	12.0	7.5	0.90	1.00	0.0	0.0	5.79	7	95
130.0	Amphenol Antel	1	93	3.5	4.0	5.6	5.6	1.00	1.00	0.0	0.0	5.79	17	114
129.0	RFS PA6-65AC	1	1217	51.9	6.0	72.0	0.0	1.00	1.00	0.0	0.0	5.78	255	1528
128.0	RFS PA6-65AC	1	1217	51.9	6.0	72.0	0.0	1.00	0.80	0.0	0.0	5.77	204	1528
127.0	Bird 432-83H-01-T	1	258	4.4	1.2	12.0	7.0	0.80	1.00	0.0	0.0	5.76	17	316
127.0	Round Side Arms	1	148	7.6	0.0	0.0	0.0	1.00	0.67	0.0	0.0	5.76	25	202
125.7	Round Side Arm	1	148	6.9	0.0	0.0	0.0	1.00	0.67	0.0	0.0	5.74	23	202
125.7	Sinclair SE419-	1	248	30.2	8.6	2.9	8.5	0.80	1.00	0.0	0.0	5.74	118	303
122.8	Sinclair SC479-	3	240	13.5	14.4	3.5	3.5	1.00	1.00	0.0	0.0	5.70	197	889
111.0	Decibel DB586	1	52	2.0	4.9	1.5	1.5	0.90	1.00	2.0	16.7	5.57	8	65
111.0	Round Side Arm	1	221	7.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.54	37	301
105.0	Decibel DB586	1	52	2.0	4.9	1.5	1.5	0.90	1.00	2.0	16.5	5.48	8	65
105.0	Round Side Arm	1	221	7.8	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.45	36	301
91.00	PCTEL GPS-TMG-HR-	1	10	0.3	0.4	3.2	3.2	0.90	1.00	0.0	0.0	5.23	1	13
91.00	Stand-Off	1	106	5.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.23	22	139
80.00	Stand-Off	1	73	4.1	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.04	18	99
80.00	12' Omni	1	183	7.5	12.0	3.0	3.0	0.90	1.00	6.0	176.2	5.15	29	230
80.00	Sinclair SD210D	1	1044	44.5	16.0	41.0	4.0	0.90	1.00	8.0	1412.6	5.18	177	1263
80.00	Side Arms	1	218	8.6	0.0	0.0	0.0	1.00	0.90	0.0	0.0	5.04	33	298
72.00	Stand-Off	1	73	4.1	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.89	17	99
72.00	Andrew DB264-A	1	208	23.6	21.5	0.0	0.0	0.90	1.00	11.0	1012.6	5.10	92	258
30.00	2" x 4" GPS	1	10	0.2	0.2	4.0	2.0	0.60	1.00	0.0	0.0	3.81	0	13
18.00	GPS	1	37	0.8	1.0	9.0	6.0	1.00	1.00	0.0	0.0	3.81	3	47
	Totals	152	32901	1345.4										

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)
180.0	Powerwave TT19-	3	16	0.6	0.8	6.7	5.4	0.80	0.50	0.0	0.0	9.16	6	48
180.0	Powerwave	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	9.16	21	85
180.0	Raycap DC6-48-60-	1	32	2.2	2.0	11.0	11.0	0.80	1.00	0.0	0.0	9.16	14	32
180.0	Ericsson RRUS 11	3	55	2.5	1.5	17.0	7.2	0.80	0.50	0.0	0.0	9.16	24	165
180.0	Powerwave 7770.00	6	35	5.5	4.6	11.0	5.0	0.80	0.77	0.0	0.0	9.16	159	210
180.0	Powerwave P65-16-	3	53	8.1	6.0	12.0	6.0	0.80	0.79	0.0	0.0	9.16	120	159
180.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	9.16	189	900
172.0	RFS FD9R6004/1C-3L	6	3	0.4	0.5	6.5	1.5	0.80	0.50	0.0	0.0	9.04	7	19
172.0	Alcatel-Lucent	3	43	1.9	1.7	11.2	7.2	0.80	0.67	0.0	0.0	9.04	23	129
172.0	Alcatel-Lucent B25	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	9.04	26	159
172.0	Alcatel-Lucent	3	57	2.2	1.8	12.0	9.0	0.80	0.67	0.0	0.0	9.04	27	170
172.0	RFS APL868013-	2	6	3.6	4.0	8.0	6.0	0.80	0.90	0.0	0.0	9.04	40	13
172.0	Andrew	4	12	4.3	4.0	10.0	8.5	0.80	0.94	0.0	0.0	9.04	100	48
172.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	24.0	0.80	1.00	0.0	0.0	9.04	59	88
172.0	Commscope SBNHH-	6	51	8.2	6.1	11.9	7.1	0.80	0.83	0.0	0.0	9.04	250	304
172.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	9.04	187	900
164.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.92	0.0	0.0	8.92	242	168
164.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.92	184	900

Tower Loading

154.0	RFS ACU-A20-N	9	1	0.1	0.3	2.0	3.5	0.80	0.50	3.0	11.3	8.81	4	9
154.0	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	3.0	45.8	8.81	15	159
154.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.67	3.0	76.9	8.81	26	159
154.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	3.0	83.8	8.81	28	180
154.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	3.0	146.2	8.81	49	210
154.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.83	3.0	358.8	8.81	120	171
154.0	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	3.0	338.4	8.81	113	174
154.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.76	181	900
147.0	Kathrein Scala	3	3	0.1	0.3	3.1	1.7	0.80	0.50	0.0	0.0	8.64	1	10
147.0	Ericsson AIR 21,	3	92	6.0	4.7	12.0	8.0	0.80	0.85	0.0	0.0	8.64	91	275
147.0	Ericsson AIR 21,	3	90	6.1	4.7	12.1	7.9	0.80	0.85	0.0	0.0	8.64	91	271
147.0	Andrew LNX-	3	51	11.4	8.0	11.9	7.1	0.80	0.84	0.0	0.0	8.64	169	154
147.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.64	179	900
137.5	Andrew DB810K-XT	1	35	4.3	14.5	3.0	3.0	0.90	1.00	0.0	0.0	8.48	28	35
137.2	Sinclair SC479-	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	8.47	36	34
137.2	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.47	37	150
134.3	Sinclair SE419-	2	24	9.6	8.6	2.9	8.5	1.00	1.00	0.0	0.0	8.42	137	48
133.0	24" x 24" Ice Shield	1	50	0.9	0.3	24.0	24.0	1.00	1.00	0.0	0.0	8.40	7	50
133.0	24" x 24" Ice Shield	1	50	0.9	0.3	24.0	24.0	1.00	1.00	0.0	0.0	8.40	7	50
131.6	Morad VHF 156-	1	1	0.3	3.3	0.8	0.8	1.00	1.00	0.0	0.0	8.37	2	1
131.6	Round Side Arms	2	100	5.0	0.0	0.0	0.0	1.00	0.90	0.0	0.0	8.37	64	200
130.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.90	1.00	0.0	0.0	8.34	8	25
130.0	Amphenol Antel	1	7	2.7	4.0	5.6	5.6	1.00	1.00	0.0	0.0	8.34	19	7
129.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	1.00	0.0	0.0	8.33	333	278
128.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	0.80	0.0	0.0	8.31	266	278
127.0	Bird 432-83H-01-T	1	25	1.4	1.2	12.0	7.0	0.80	1.00	0.0	0.0	8.29	8	25
127.0	Round Side Arms	1	100	5.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	8.29	24	100
125.7	Round Side Arm	1	100	5.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	8.26	24	100
125.7	Sinclair SE419-	1	24	9.6	8.6	2.9	8.5	0.80	1.00	0.0	0.0	8.26	54	24
122.8	Sinclair SC479-	3	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	8.21	105	102
111.0	Decibel DB586	1	8	0.7	4.9	1.5	1.5	0.90	1.00	2.0	9.1	8.02	5	8
111.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.98	35	150
105.0	Decibel DB586	1	8	0.7	4.9	1.5	1.5	0.90	1.00	2.0	8.9	7.89	4	8
105.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.85	35	150
91.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	0.90	1.00	0.0	0.0	7.54	1	1
91.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.54	19	50
80.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.26	19	50
80.00	12' Omni	1	40	3.6	12.0	3.0	3.0	0.90	1.00	6.0	122.5	7.41	20	40
80.00	Sinclair SD210D	1	40	4.4	16.0	41.0	4.0	0.90	1.00	8.0	203.3	7.46	25	40
80.00	Side Arms	1	150	6.3	0.0	0.0	0.0	1.00	0.90	0.0	0.0	7.26	35	150
72.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.05	18	50
72.00	Andrew DB264-A	1	36	5.9	21.5	0.0	0.0	0.90	1.00	11.0	364.4	7.34	33	36
30.00	2" x 4" GPS	1	5	0.0	0.2	4.0	2.0	0.60	1.00	0.0	0.0	5.49	0	5
18.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	5.48	5	10
	Totals	152	10322	815.1										

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
0.00	180.0	0.29" Fiber	1	0.29	0.08	0	2	Individual	0.00	N	0.00	1.00	0.00
0.00	180.0	0.74" 8 AWG 7	2	0.74	0.49	0	2	Individual	0.00	N	0.00	1.00	0.00
0.00	180.0	1 1/4" Coax	12	1.55	0.63	0	2	Individual	0.00	N	0.00	1.00	0.00
0.00	180.0	Wave Guide	1	1.50	6.00	0	2	Individual	0.00	N	0.00	1.00	0.00
0.00	172.0	1 5/8" Coax	12	1.98	0.82	0	1	Individual	0.00	N	0.00	1.00	0.00
0.00	172.0	1 5/8" Hybriflex	2	1.98	1.30	0	1	Individual	0.00	N	0.00	1.00	0.01
0.00	172.0	Wave Guide	1	1.50	6.00	0	1	Individual	0.00	N	0.00	1.00	0.00
0.00	164.0	1 5/8" Coax	12	1.98	0.82	0	1	Individual	0.00	N	0.00	1.00	0.00
0.00	164.0	Wave Guide	1	1.50	6.00	0	1	Individual	0.00	N	0.00	1.00	0.00
0.00	154.0	1 1/4" Hybriflex	4	1.54	1.00	0	1	Individual	0.00	N	0.00	1.00	0.01
0.00	147.0	1 1/4" Hybriflex	1	1.54	1.00	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	147.0	1 5/8" Coax	12	1.98	0.82	50	3	Block	0.00	N	0.00	1.00	0.00
0.00	147.0	1 5/8" Hybriflex	1	1.98	1.30	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	147.0	Wave Guide	1	1.50	6.00	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	137.5	1 5/8" Coax	1	1.98	0.82	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	137.2	1 5/8" Coax	1	1.98	0.82	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	134.3	1 5/8" Coax	2	1.98	0.82	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	131.6	1/2" Coax	1	0.63	0.15	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	130.0	1 5/8" Coax	1	1.98	0.82	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	130.0	1/2" Coax	1	0.63	0.15	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	129.0	EW63	1	2.01	0.51	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	128.0	EW63	1	2.01	0.51	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	127.0	3/8" Coax	1	0.44	0.08	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	125.7	1 5/8" Coax	1	1.98	0.82	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	122.8	1 5/8" Coax	3	1.98	0.82	0	3	Individual	0.00	N	0.00	1.00	0.00
0.00	111.0	7/8" Coax	1	1.09	0.33	0	2	Individual	0.00	N	0.00	1.00	0.00
0.00	105.0	7/8" Coax	1	1.09	0.33	0	2	Individual	0.00	N	0.00	1.00	0.00
0.00	91.00	1/2" Coax	1	0.63	0.15	0	1	Individual	0.00	N	0.00	1.00	0.00
0.00	80.00	7/8" Coax	2	1.09	0.33	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	80.00	7/8" Coax	1	1.09	0.33	0	2	Individual	0.00	N	0.00	1.00	0.00
0.00	72.00	7/8" Coax	1	1.09	0.33	0	2	Individual	0.00	N	0.00	1.00	0.00
0.00	30.00	1/2" Coax	1	0.63	0.15	0	1	Individual	0.00	N	0.00	1.00	0.00
0.00	18.00	1/2" Coax	1	0.63	0.15	0	Lin App	Individual	0.00	N	1.00	1.00	0.00

Force/Stress Summary

Section: 1 SSV Bot Elev (ft): 0.00 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 PSP - ROHN 8 EHS	-326.59	1.2D + 1.6W	9.77	100	100	100	40.1	50.0	388.80	0	0	0.00	0.00	83	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.3125	-11.26	1.2D + 1.6W 90	24.51	50	50	50	188.3	50.0	15.29	1	1	17.89	29.25	73	Member Z

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 PSP - ROHN 8 EHS	293.66	0.9D + 1.6W 60	50	65	437.40	0	0	0.00	0.00		67	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 4X4X0.3125	11.78	1.2D + 1.6W 90	50	65	77.75	1	1	17.89	17.67	38.47	66	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	263.40	0.9D + 1.6W 180	0.00	0	0	
Top Compression	301.63	1.2D + 1.6W	0.00	0		
Bot Tension	294.18	0.9D + 1.6W 180	605.70	49	10	1" A354-BC
Bot Compression	336.53	1.2D + 1.6W	0.00	0		

Section: 2 SSV 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 PSP - ROHN 8 EHS	-290.68	1.2D + 1.6W	9.77	100	100	100	40.1	50.0	388.80	0	0	0.00	0.00	74	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	-11.47	1.2D + 1.6W 90	22.69	50	50	50	171.3	43.5	14.94	1	1	17.89	23.40	76	Member Z

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 PSP - ROHN 8 EHS	263.18	0.9D + 1.6W 60	50	65	437.40	0	0	0.00	0.00		60	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 4X4X0.25	11.44	1.2D + 1.6W 90	50	65	62.93	1	1	17.89	14.14	30.77	80	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	230.60	0.9D + 1.6W 180	0.00	0	0	
Top Compression	263.60	1.2D + 1.6W	0.00	0		
Bot Tension	263.40	0.9D + 1.6W 180	436.16	60	8	1 A325
Bot Compression	301.63	1.2D + 1.6W	0.00	0		

Force/Stress Summary

Section: 3 SSV 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 PX - 6" DIA PIPE	-253.27	1.2D + 1.6W	9.77	100	100	100	53.4	50.0	306.85	0	0	0.00	0.00	82	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	-10.71	1.2D + 1.6W 90	19.95	50	50	50	150.6	43.5	19.33	1	1	17.89	23.40	59	Bolt Shear

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 PX - 6" DIA PIPE	231.04	0.9D + 1.6W 180	50	65	378.00	0	0	0.00	0.00		61	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 4X4X0.25	10.38	1.2D + 1.6W 90	50	65	62.93	1	1	17.89	14.14	30.77	73	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	198.15	0.9D + 1.6W 180	0.00	0	0	
Top Compression	226.16	1.2D + 1.6W	0.00	0		
Bot Tension	230.60	0.9D + 1.6W 180	436.16	53	8	1 A325
Bot Compression	263.60	1.2D + 1.6W	0.00	0		

Section: 4 SSV 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 PX - 6" DIA PIPE	-214.75	1.2D + 1.6W	9.77	100	100	100	53.4	50.0	306.88	0	0	0.00	0.00	69	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	-10.45	1.2D + 1.6W 90	19.03	50	50	50	166.0	50.0	13.86	1	1	17.89	23.40	75	Member Z

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 PX - 6" DIA PIPE	197.73	0.9D + 1.6W 60	50	65	378.00	0	0	0.00	0.00		52	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	10.36	1.2D + 1.6W 90	50	65	53.79	1	1	17.89	14.14	24.68	73	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	161.71	0.9D + 1.6W 180	0.00	0	0	
Top Compression	184.93	1.2D + 1.6W	0.00	0		
Bot Tension	198.15	0.9D + 1.6W 180	327.12	61	6	1 A325
Bot Compression	226.16	1.2D + 1.6W	0.00	0		

Force/Stress Summary

Section: 5 SSV 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 PSP - ROHN 5 EH	-176.66	1.2D + 1.6W	6.51	100	100	100	42.5	50.0	240.99	0	0	0.00	0.00	73	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	-8.91	1.2D + 1.6W 90	15.89	50	50	50	161.1	50.0	12.54	1	1	17.89	23.40	71	Member Z

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 PSP - ROHN 5 EH	159.92	1.2D + 1.6W 180	50	65	274.95	0	0	0.00	0.00		58	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 3X3X0.25	8.92	1.2D + 1.6W 90	50	65	44.65	1	1	17.89	14.14	21.63	63	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	124.76	0.9D + 1.6W 180	0.00	0	0	
Top Compression	143.26	1.2D + 1.6W	0.00	0		
Bot Tension	161.71	0.9D + 1.6W 180	327.12	49	6	1 A325
Bot Compression	184.93	1.2D + 1.6W	0.00	0		

Section: 6 SSV Bot Elev (ft): 100.0 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 PSP - ROHN 5 EH	-134.94	1.2D + 1.6W	6.51	100	100	100	42.5	50.0	240.99	0	0	0.00	0.00	55	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	-8.43	1.2D + 1.6W 90	14.07	50	50	50	142.7	50.0	15.99	1	1	17.89	23.40	52	Member Z

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 PSP - ROHN 5 EH	124.42	0.9D + 1.6W 60	50	65	274.95	0	0	0.00	0.00		45	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 3X3X0.25	8.55	1.2D + 1.6W 90	50	65	44.65	1	1	17.89	14.14	21.63	60	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	85.04	0.9D + 1.6W 180	0.00	0	0	
Top Compression	99.29	1.2D + 1.6W	0.00	0		
Bot Tension	124.76	0.9D + 1.6W 180	327.12	38	6	1 A325
Bot Compression	143.26	1.2D + 1.6W	0.00	0		

Force/Stress Summary

Section: 7 SSV 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 PX - 4" DIA PIPE	-90.85	1.2D + 1.6W	6.51	100	100	100	52.8	50.0	161.86	0	0	0.00	0.00	56	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	-7.47	1.2D + 1.6W 90	12.32	50	50	50	150.6	50.0	11.85	1	1	17.89	23.40	63	Member Z

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 PX - 4" DIA PIPE	83.84	1.2D + 1.6W 180	50	65	198.45	0	0	0.00	0.00		42	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	7.40	1.2D + 1.6W 90	50	65	35.51	1	1	17.89	14.14	17.06	52	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	48.43	0.9D + 1.6W 180	0.00	0	0	
Top Compression	58.28	1.2D + 1.6W	0.00	0		
Bot Tension	85.04	0.9D + 1.6W 180	218.08	39	4	1 A325
Bot Compression	99.29	1.2D + 1.6W	0.00	0		

Section: 8 SSV Bot Elev (ft): 140.0 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 - 3" DIA PIPE	-52.78	1.2D + 1.6W	4.88	100	100	100	50.5	50.0	83.27	0	0	0.00	0.00	63	Member X
HORIZ SAE - 1.75X1.75X0.18	-0.35	1.2D + 1.6W	6.688	100	100	100	234.0	36.0	2.56	1	1	12.43	13.05	13	Member Z
DIAG SAE - 2X2X0.25	-5.13	1.2D + 1.6W 90	9.784	50	50	50	150.1	50.0	9.42	1	1	12.43	19.50	54	Member Z

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 - 3" DIA PIPE	48.60	0.9D + 1.6W 180	50	65	100.35	0	0	0.00	0.00		48	Member
HORIZ SAE - 1.75X1.75X0.18	0.39	1.2D + 1.6W 180	36	58	15.67	1	1	12.43	7.83	8.20	5	Bolt Bear
DIAG SAE - 2X2X0.25	5.09	1.2D + 1.6W 90	50	65	27.51	1	1	12.43	11.70	13.86	43	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	17.83	0.9D + 1.6W 60	0.00	0	0	
Top Compression	22.59	1.2D + 1.6W 120	0.00	0		
Bot Tension	48.43	0.9D + 1.6W 180	166.24	29	4	7/8 A325
Bot Compression	58.28	1.2D + 1.6W	0.00	0		

Force/Stress Summary

Section: 9 SSV Bot Elev (ft): 160.0 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	-18.62	1.2D + 1.6W	3.90	100	100	100	49.4	50.0	64.14	0	0	0.00	0.00	29	Member X
HORIZ SAE - 1.75X1.75X0.18	-0.61	1.2D + 1.6W 60	6.646	100	100	100	232.5	36.0	2.60	1	1	12.43	13.05	23	Member Z
DIAG SAE - 1.75X1.75X0.18	-3.70	1.2D + 1.6W 90	7.738	50	50	50	135.4	50.0	7.66	1	1	12.43	14.63	48	Member Z

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	17.72	0.9D + 1.6W 60	50	65	76.68	0	0	0.00	0.00		23	Member
HORIZ SAE - 1.75X1.75X0.18	0.64	1.2D + 1.6W	36	58	15.67	1	1	12.43	7.83	8.20	8	Bolt Bear
DIAG SAE - 1.75X1.75X0.18	3.63	1.2D + 1.6W 90	50	65	17.56	1	1	12.43	8.77	9.25	41	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	0.00		0.00	0	0	
Top Compression	2.08	1.2D + 1.0Di +	0.00	0		
Bot Tension	17.83	0.9D + 1.6W 60	120.40	15	4	3/4 A325
Bot Compression	22.59	1.2D + 1.6W 120	0.00	0		

Sprint

PROJECT:	DO MACRO UPGRADE
SITE NAME:	REDDING/SNET
SITE CASCADE:	CT03XC358
SITE ADDRESS:	100 OLD REDDING ROAD REDDING, CT 06896
SITE TYPE:	SELF SUPPORT TOWER
MARKET:	SOUTHERN CONNECTICUT

SITE INFORMATION

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

LATITUDE (NAD83):
41° 17' 13.54" N
41.28709444°

LONGITUDE (NAD83):
73° 26' 17.38" W
-73.43816111°

COUNTY:
FAIRFIELD COUNTY

ZONING JURISDICTION:
CONNECTICUT SITING COUNCIL

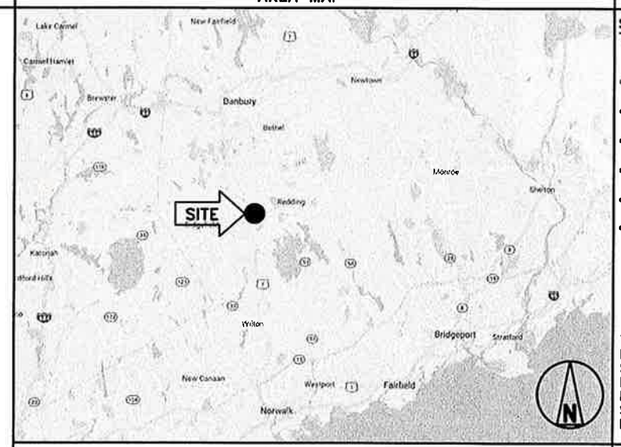
ZONING DISTRICT:
TBD

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

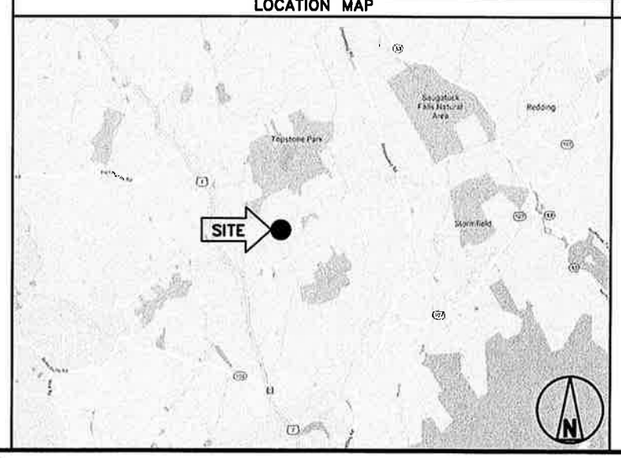
AAV PROVIDER:
AT&T
PHONE: (800) 331-0500

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.

- REMOVE (3) PANEL ANTENNAS, (3) PANEL ANTENNAS TO REMAIN
- INSTALL (3) PANEL ANTENNAS
- INSTALL (6) RRH'S NEAR ANTENNAS
- INSTALL (30) JUMPER CABLES
- INSTALL (1) 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
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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
No. 24105
LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR REVIEW	2/27/18	ETC	0

SITE NAME:
REDDING/SNET

SITE NUMBER:
CT03XC358

SITE ADDRESS:
100 OLD REDDING ROAD
REDDING, CT 06896

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
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
NO. 24705
LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR REVIEW	2/27/18	ETC	0

SITE NAME:

REDDING/SNET

SITE NUMBER:

CT03XC358

SITE ADDRESS:

100 OLD REDDING ROAD
REDDING, CT 06896

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-1

CONTINUE FROM SP-1

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

3.2 GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:

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

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

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

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

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

E. CONDUCT TESTING AS REQUIRED HEREIN.

3.3 DELIVERABLES:

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

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

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

SECTION 01 400 - SUBMITTALS & TESTS

PART 1 - GENERAL

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

1.2 RELATED DOCUMENTS:

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

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

1.3 SUBMITTALS:

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

B. SUBMIT THE FOLLOWING TO COMPANY REPRESENTATIVE FOR APPROVAL.

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

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

1.4 TESTS AND INSPECTIONS:

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

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

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

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

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

1.5 COMMISSIONING: PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPs

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

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 REQUIREMENTS FOR TESTING:

A. THIRD PARTY TESTING AGENCY:

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

3.2 REQUIRED TESTS:

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

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

3.3 REQUIRED INSPECTIONS

A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.

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

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

PLANS PREPARED FOR:

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

ENGINEERING LICENSE:

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR REVIEW	2/27/18	ETC	0

SITE NAME:

REDDING/SNET

SITE NUMBER:

CT03XC358

SITE ADDRESS:

100 OLD REDDING ROAD
REDDING, CT 06896

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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JOB NUMBER 526-104

PROJECT MANAGER:

AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 308-3740

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR REVIEW	2/27/18	ETC	0

SITE NAME:

REDDING/SNET

SITE NUMBER:

CT03XC358

SITE ADDRESS:

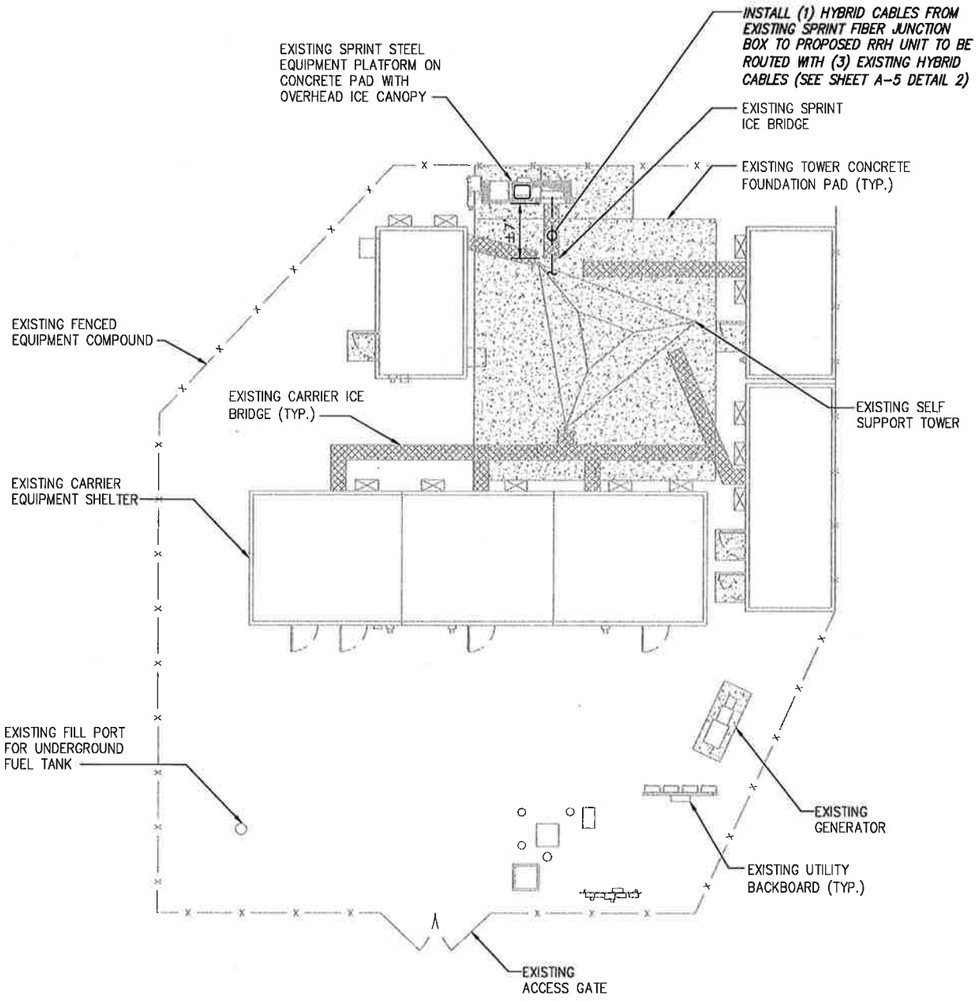
100 OLD REDDING ROAD
REDDING, CT 06896

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.

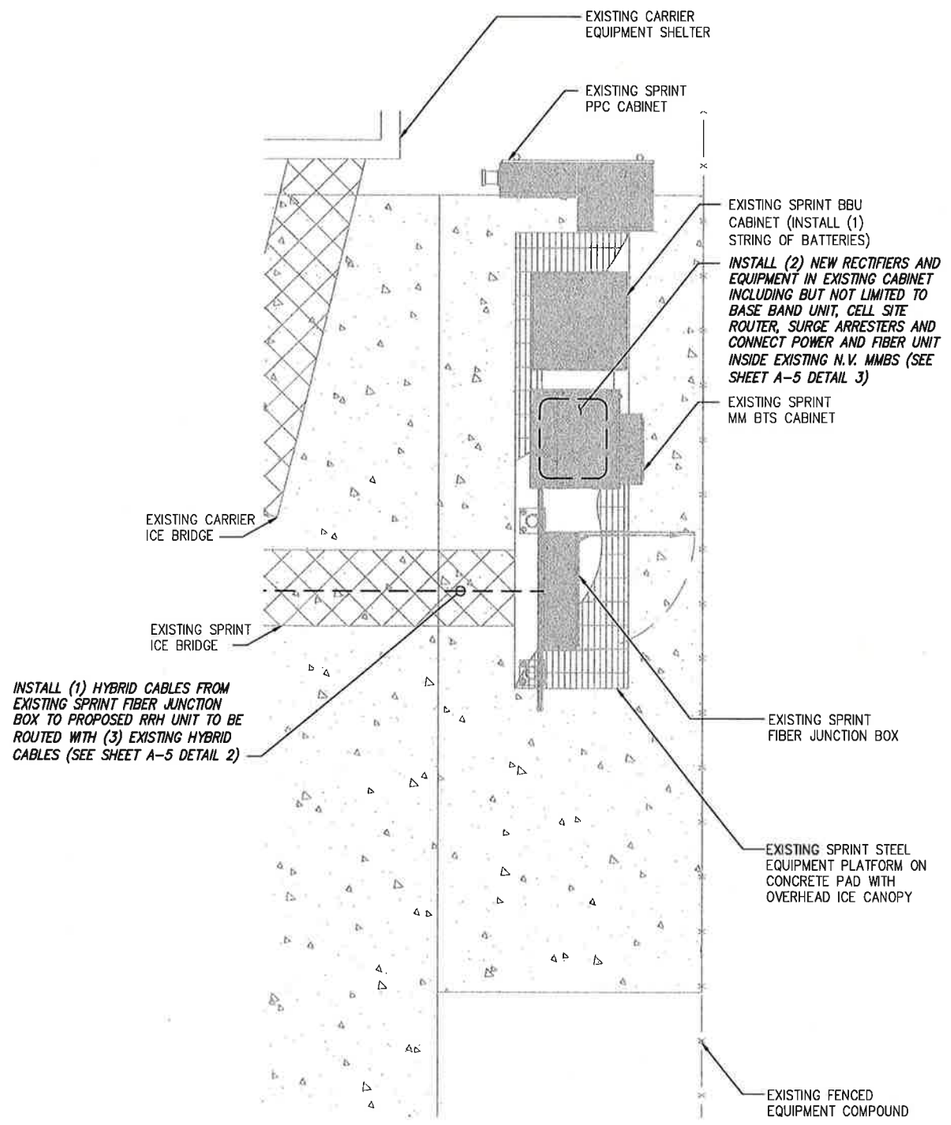
N

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

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CT03XC358

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100 OLD REDDING ROAD
REDDING, CT 06896

SHEET DESCRIPTION:

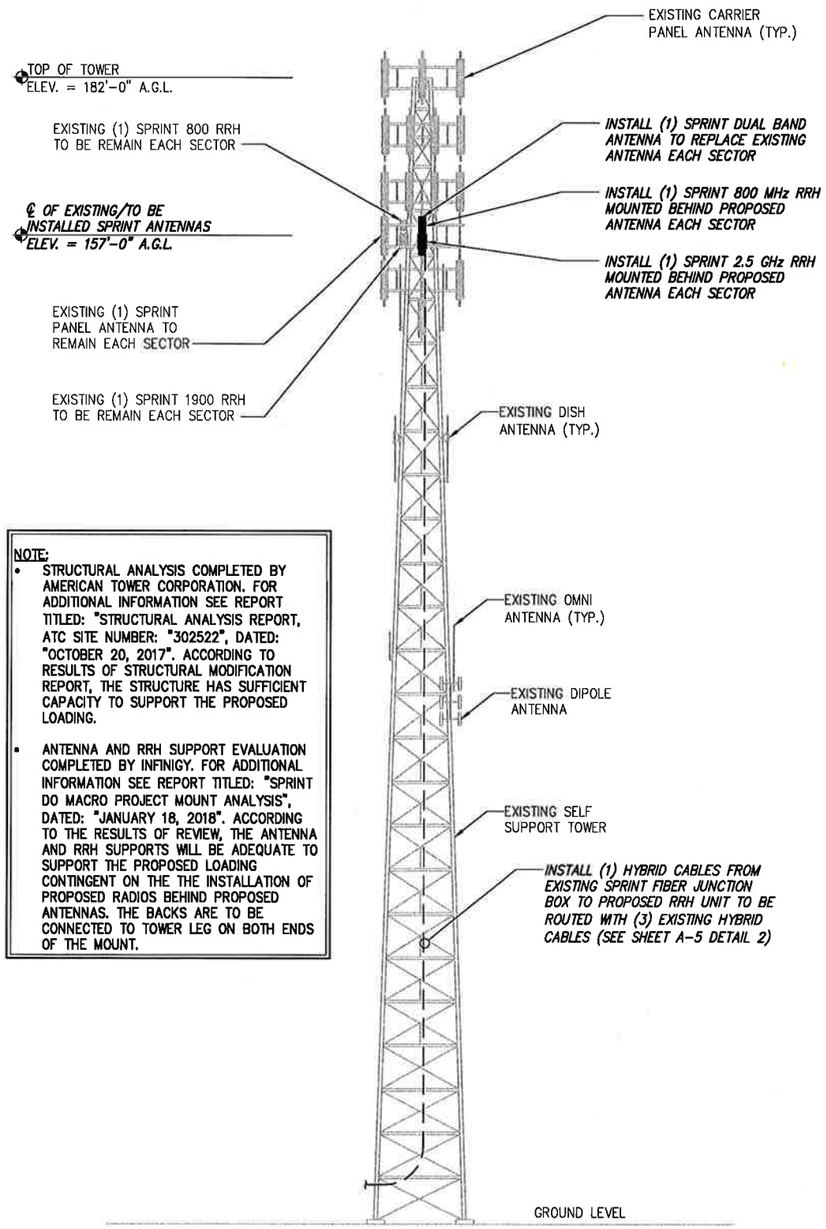
SITE PLAN

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 AMERICAN TOWER CORPORATION. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "STRUCTURAL ANALYSIS REPORT, ATC SITE NUMBER: "302522", DATED: "OCTOBER 20, 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: "SPRINT DO MACRO PROJECT MOUNT ANALYSIS", DATED: "JANUARY 18, 2018". ACCORDING TO THE RESULTS OF REVIEW, THE ANTENNA AND RRH SUPPORTS WILL BE ADEQUATE TO SUPPORT THE PROPOSED LOADING CONTINGENT ON THE THE INSTALLATION OF PROPOSED RADIOS BEHIND PROPOSED ANTENNAS. THE BACKS ARE TO BE CONNECTED TO TOWER LEG ON BOTH ENDS OF THE MOUNT.

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*	*DT465B-2XR*	*COMMSCOPE*	*320°*	1	–	*(2) 800 MHZ 2X50W RRH W/ FILTER*	*SEE SHEET A-5 DETAIL 1*	*±187'**	*±157' AGL*
	EXISTING	*APXVSPP18-C-A20*	*RFS*	*320°*	1	*REMAIN*	*(1) TD-RRH8X20-25 W/ SOLAR SHIELD*	*EXISTING COAX*		
	EXISTING	*APXV9TM14-ALU-I20*	*RFS*	*320°*	1	*REMOVE*	*(1) 1900 MHz 4X45 RRH*	*EXISTING COAX*		
BETA	*PROPOSED*	*DT465B-2XR*	*COMMSCOPE*	*70°*	1	–	*(2) 800 MHZ 2X50W RRH W/ FILTER*	*SEE SHEET A-5 DETAIL 1*		*±157' AGL*
	EXISTING	*APXVSPP18-C-A20*	*RFS*	*70°*	1	*REMAIN*	*(1) TD-RRH8X20-25 W/ SOLAR SHIELD*	*EXISTING COAX*		
	EXISTING	*APXV9TM14-ALU-I20*	*RFS*	*70°*		*REMOVE*	*(1) 1900 MHz 4X45 RRH*	*EXISTING COAX*		
GAMMA	*PROPOSED*	*DT465B-2XR*	*COMMSCOPE*	*210°*	1	–	*(2) 800 MHZ 2X50W RRH W/ FILTER*	*SEE SHEET A-5 DETAIL 1*		*±157' AGL*
	EXISTING	*APXVSPP18-C-A20*	*RFS*	*210°*	1	*REMAIN*	*(1) TD-RRH8X20-25 W/ SOLAR SHIELD*	*EXISTING COAX*		
	EXISTING	*APXV9TM14-ALU-I20*	*RFS*	*210°*		*REMOVE*	*(1) 1900 MHz 4X45 RRH*	*EXISTING COAX*		

PROJECT SCOPE:

INSTALL: (3) PANEL ANTENNAS AND (6) RRH'S REMOVE: (3) PANEL ANTENNAS

* 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

DETAIL NOT USED | NO SCALE | 3

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OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 21705
LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

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ISSUED FOR REVIEW	2/27/18	ETC	0

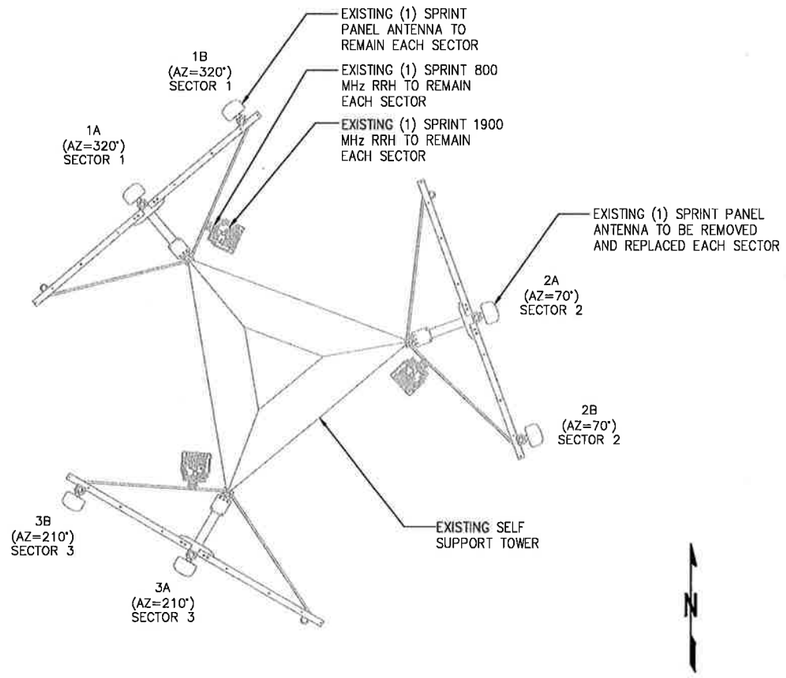
SITE NAME:
REDDING/SNET

SITE NUMBER:
CT03XC358

SITE ADDRESS:
100 OLD REDDING ROAD
REDDING, CT 06896

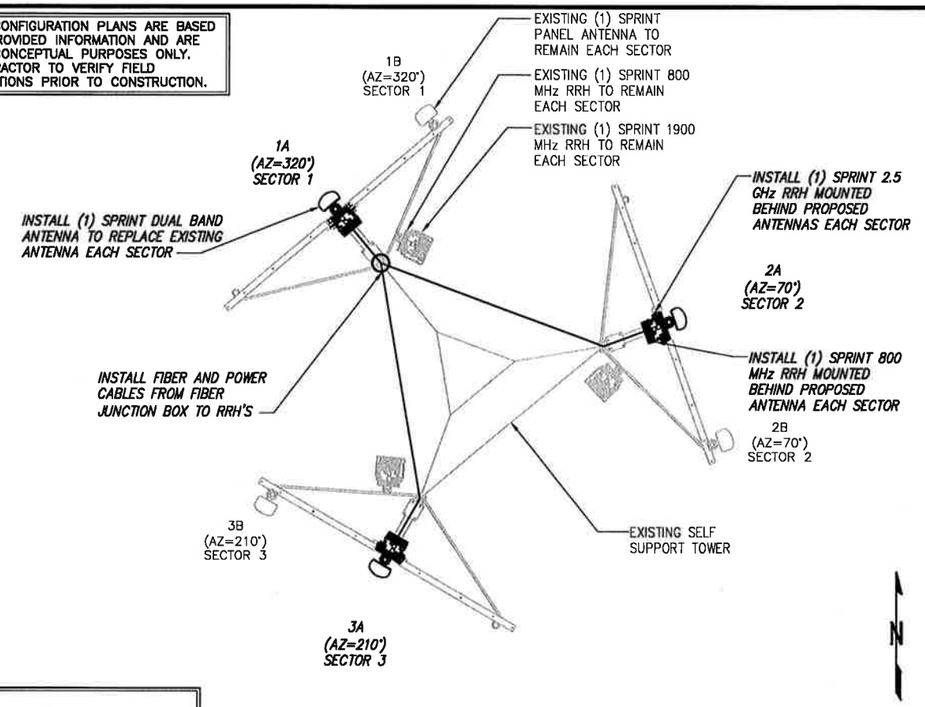
SHEET DESCRIPTION:
TOWER ELEVATION

SHEET NUMBER:
A-2



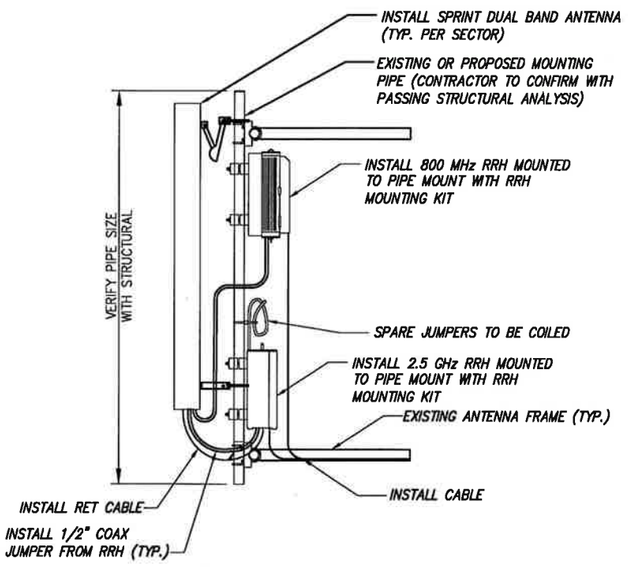
EXISTING ANTENNA & RRH LAYOUT | NO SCALE | 1

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



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

FINAL ANTENNA LAYOUT | NO SCALE | 2



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

DETAIL NOT USED | NO SCALE | 4

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REDDING/SNET

SITE NUMBER:
CT03XC358

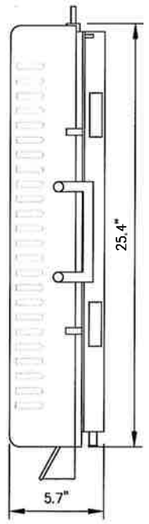
SITE ADDRESS:
100 OLD REDDING ROAD
REDDING, CT 06896

SHEET DESCRIPTION:
ANTENNA LAYOUT & MOUNTING DETAILS

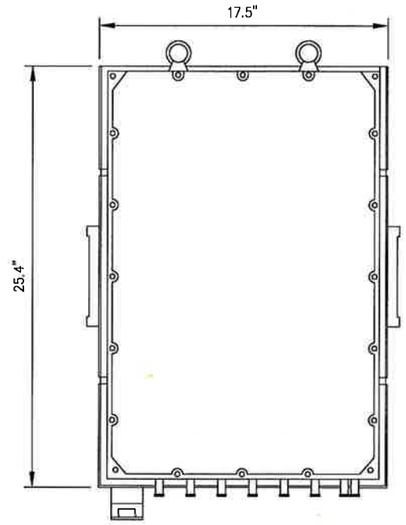
SHEET NUMBER:
A-3

RRH: ALCATEL LUCENT TD-RRH8X20

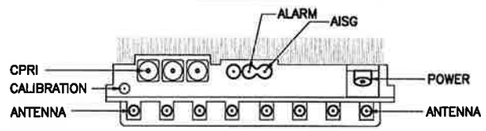
COLOR: LIGHT GREY
WEIGHT: 70 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

NOTES

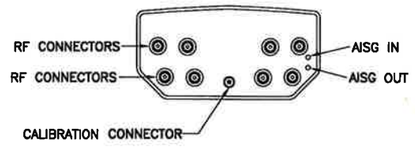
COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRH'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRH PACKAGES IN THE RAIN.

2.5 GHz RRH | NO SCALE | 1

DETAIL NOT USED | NO SCALE | 2

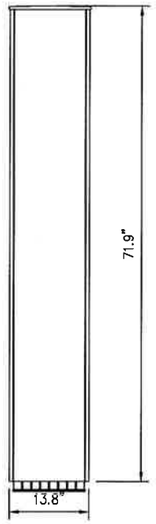
ANTENNA COMMSCOPE DT465B-2XR

RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GREY
DIMENSIONS, HxWxD.In(mm):	71.9"x13.8"x8.2" (1825x350x209mm)
WEIGHT:	58 lbs
CONNECTORS:	(2) 7/16" DIN FEMALE
	(8) 4.1/9.5 DIN FEMALE



PLAN VIEW

SIDE VIEW



FRONT VIEW

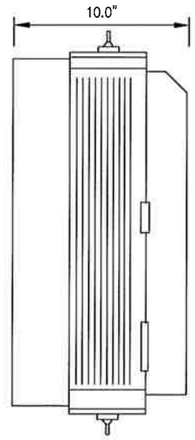
DUAL BAND ANTENNA | NO SCALE | 3

RRH: ALCATEL LUCENT RRH 800 MHz 2x50W

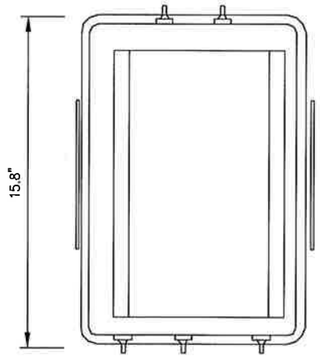
COLOR: LIGHT GREY
WEIGHT: 53 LBS.

NOTES

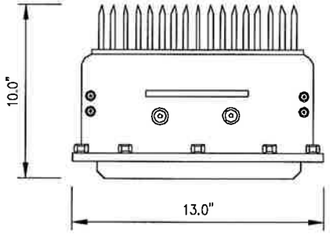
COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRH'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRH PACKAGES IN THE RAIN.



SIDE VIEW



FRONT VIEW



PLAN VIEW

800 MHz RRH | NO SCALE | 4

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100 OLD REDDING ROAD
REDDING, CT 06896

SHEET DESCRIPTION:
EQUIPMENT & MOUNTING DETAILS

SHEET NUMBER:
A-4

RFS HYBRIFLEX RISER CABLE SCHEDULE

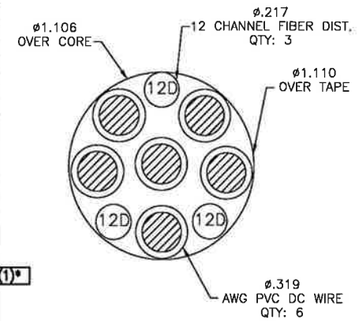
Fiber Only (Existing DC Power)	**Hybrid cable** MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F	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 (1)*
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

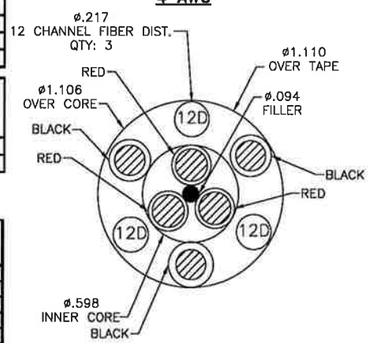
Fiber Only	**Hybrid Jumper cable** MN: HBF012-M3-5F1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: HBF012-M3-10F1	10 ft
	MN: HBF012-M3-15F1	15 ft
	MN: HBF012-M3-20F1	20 ft
	MN: HBF012-M3-25F1	25 ft
	MN: HBF012-M3-30F1	30 ft
8 AWG Power	**Hybrid Jumper cable** MN: HBF058-08U1M3-5F1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

* 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.

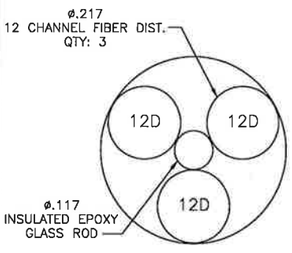
NOTE:
SPRINT CM TO CONFIRM HYBRID OR FIBER RISER CABLE AND HYBRID OR FIBER JUMPER CABLE MODEL NUMBERS IF HYBRID CABLES ARE REQUIRED BEFORE PREPARING BOM.



4 AWG

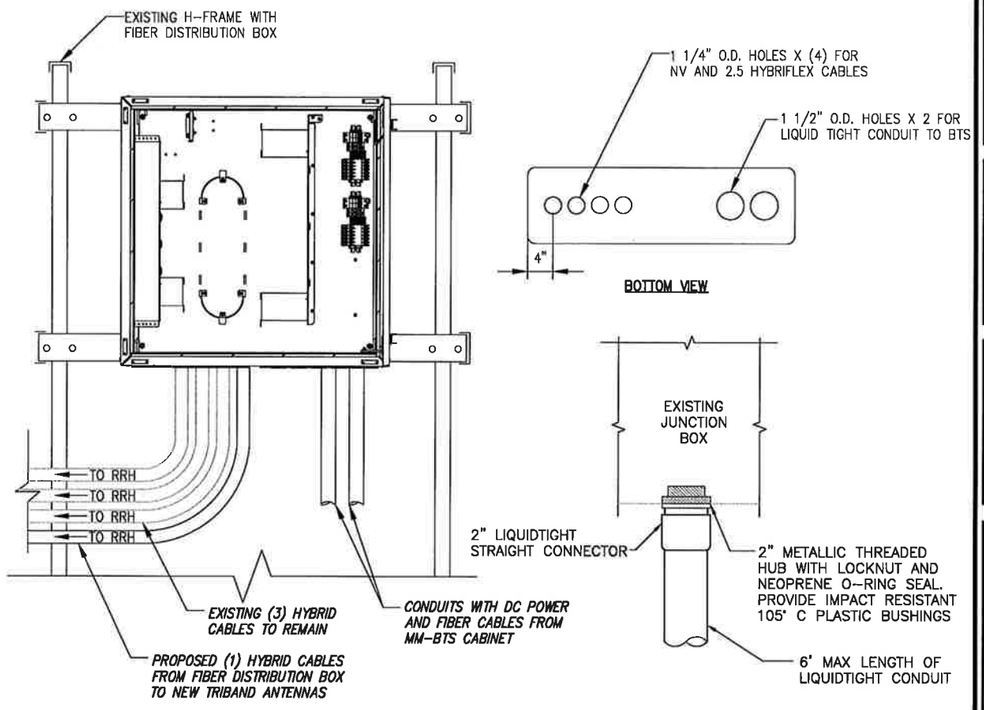


8 & 6 AWG



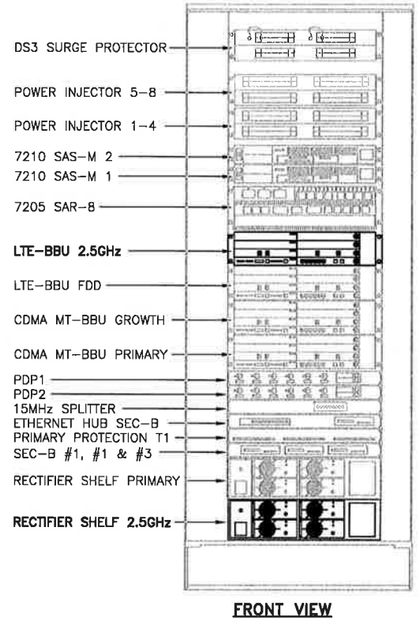
FIBER ONLY

2.5 CABLE CROSS SECTION DATA | NO SCALE | 1



FRONT VIEW

FIBER JUNCTION BOX & PENETRATION | NO SCALE | 2



FRONT VIEW

NEW EQUIPMENT IN EXISTING CABINET | NO SCALE | 3

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32 CLINTON ST.
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OFFICE#. (518) 306-3740

ENGINEERING LICENSE:


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SITE ADDRESS:
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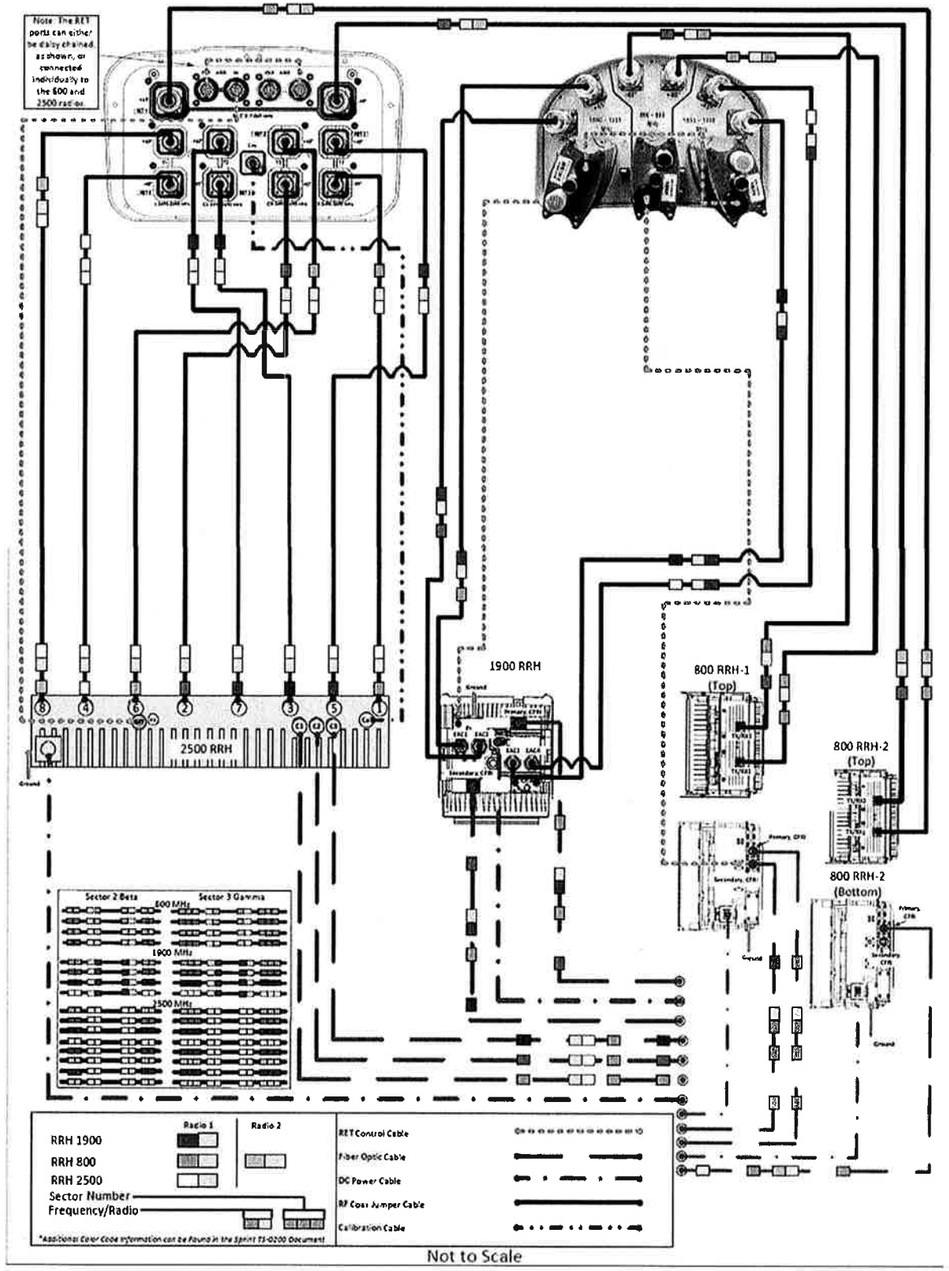
CIVIL DETAILS

SHEET NUMBER:
A-5

ALU 211 DT465B-2XR & APXVSPP18-C-A20 wo Filters



Not to Scale

PLUMBING DIAGRAM | NO SCALE | 1

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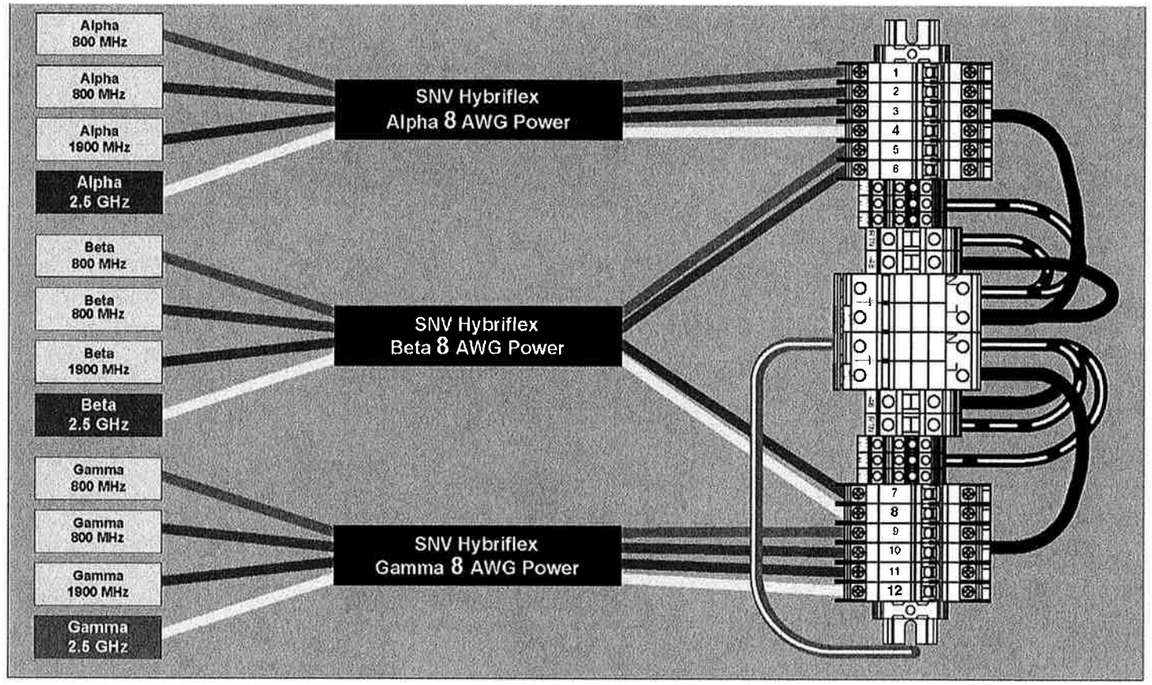
PLUMBING DIAGRAM

SHEET NUMBER:

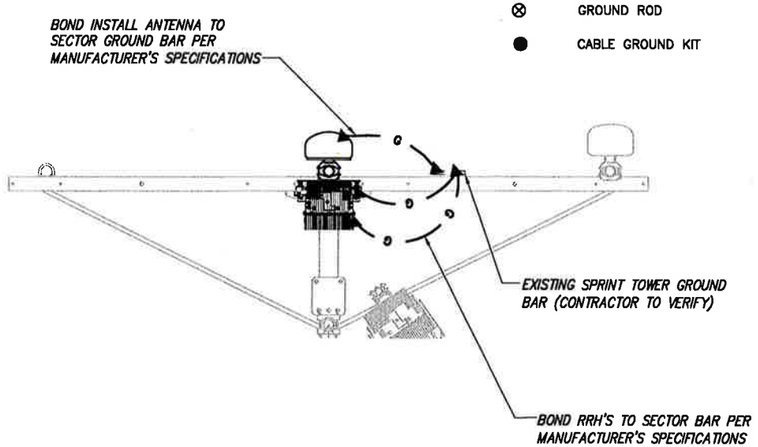
A-6



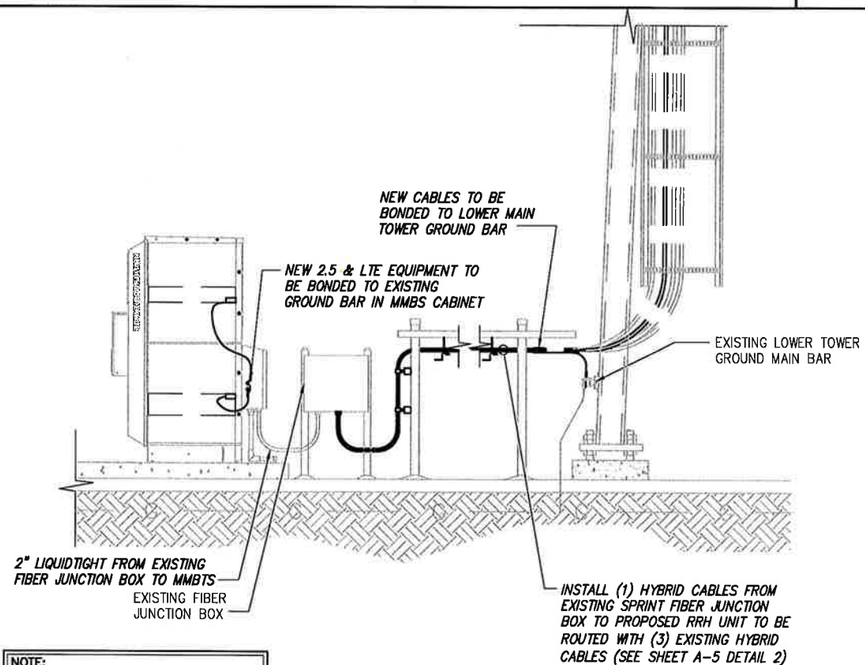
RRH TO DISTRIBUTION BOX POWER CONNECTIVITY | NO SCALE | 1

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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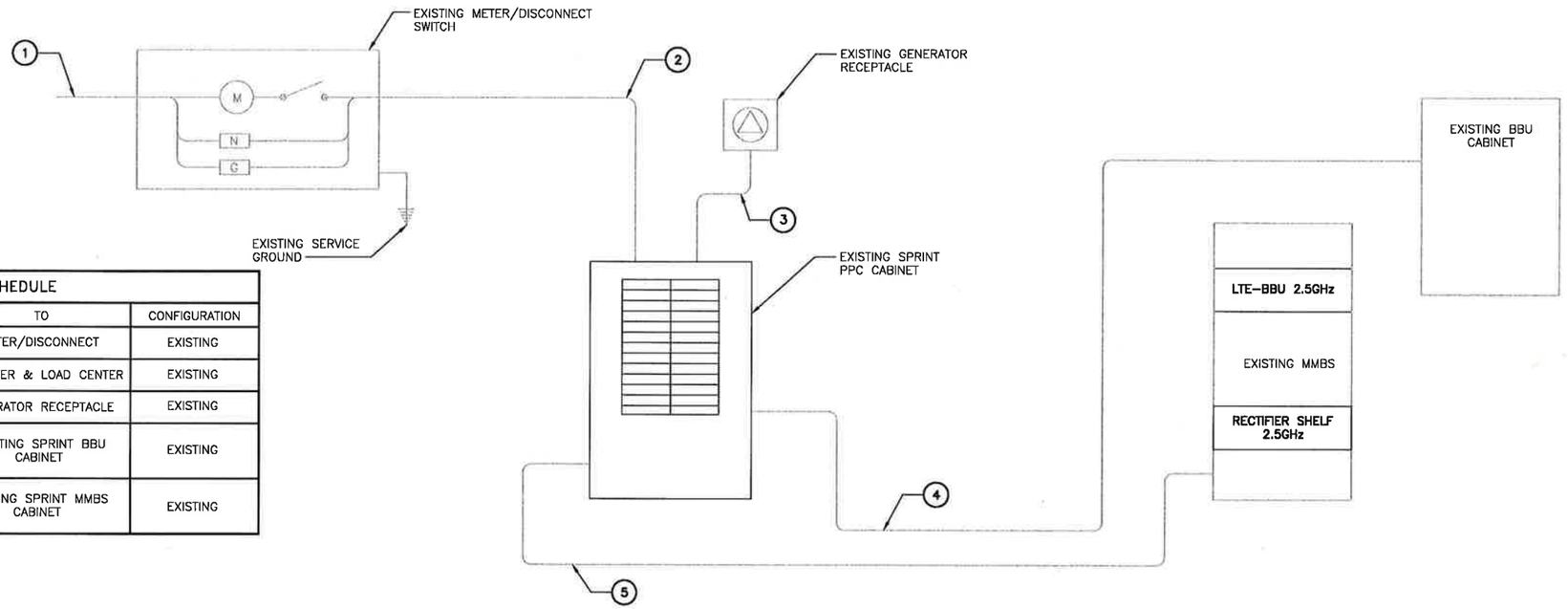
ELECTRICAL & GROUNDING PLAN

SHEET NUMBER:
E-1

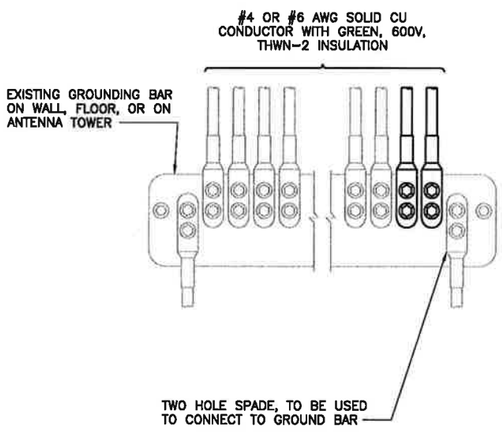
NOTES

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

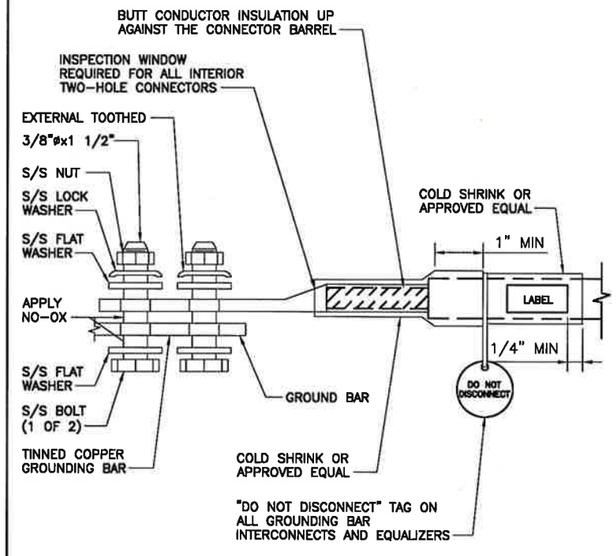
ELECTRICAL ONE–LINE DIAGRAM — NO SCALE — 1



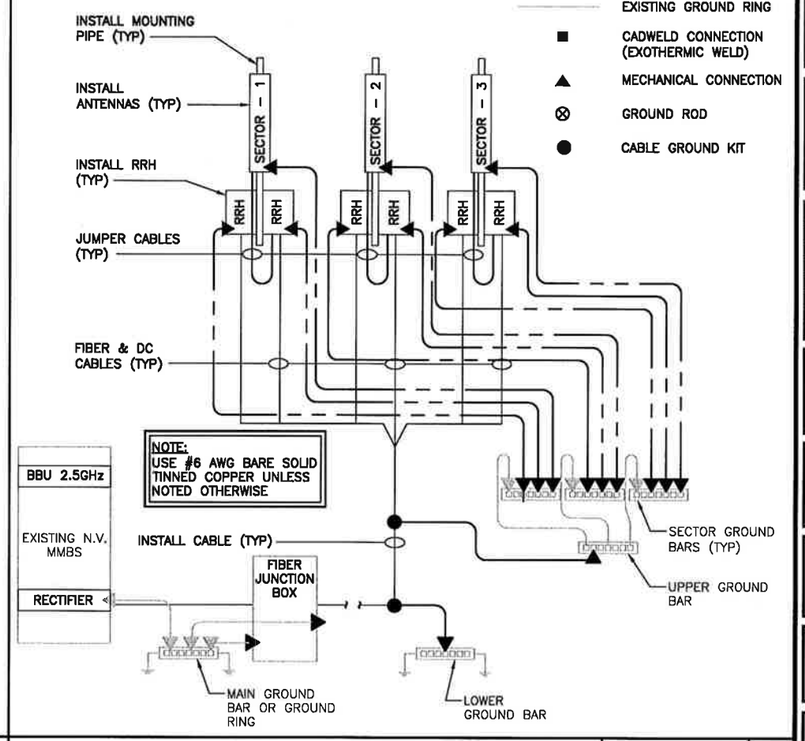
NOTES

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



GROUNDING RISER DIAGRAM — NO SCALE — 4

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E-2