



January 30th, 2018

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

RE: Notice of Exempt Modification – Antenna Swap for wireless facility located at 153 East Haddam Road (RT 82), SALEM, CONNECTICUT – CT33XC578 (lat. 41° 28' 6.48" N, long. - 72° 16' 23.86" W)

Dear Ms. Bachman:

Sprint Spectrum, LP ("Sprint") currently maintains wireless telecommunications antennas at the (150-foot level) on an existing (191-foot self-support tower) at the above-referenced address. The property and the tower are owned by American Tower Corporation.

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

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

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

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

3. The proposed modifications will include the addition of ground base equipment as depicted on the attached drawings; however, the proposed equipment will not require an extension of the site boundaries.
4. The proposed modifications will not increase noise levels at the facility by six decibels or more.
5. The additional ground based equipment will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard.

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

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

Kind Regards,



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

Attachment

CC: Kevin T. Lyden (1st Selectman, SALEM, CT)
JUSTINE PAUL (Land/Tower Owner - American Tower Corporation)
RICHARD SERRA (Planner / SALEM, CT)

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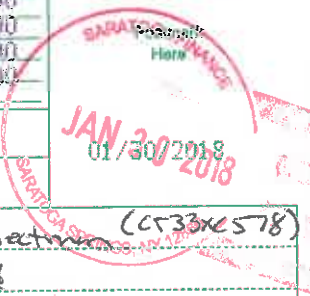
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 Kevin Lydon 1st Selectman (CT33X6578)
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 City, State, ZIP+4®
 Salem CT 06420

PS Form 3800, April 2015 PSN 7530-02-000-0047 See Reverse for Instructions.



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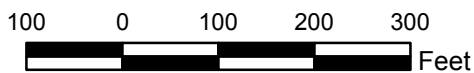
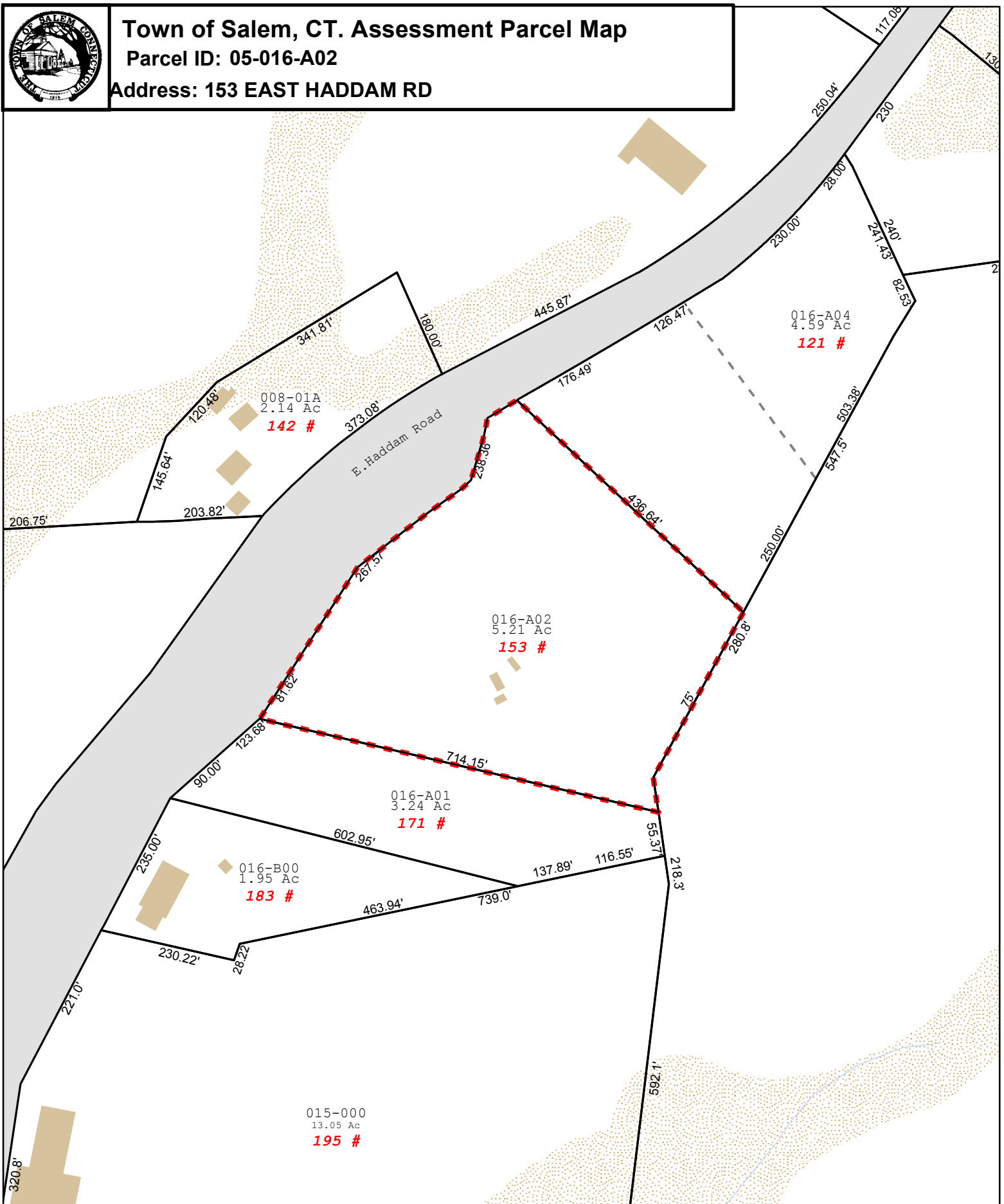
Sent To
 Richard Seira (Planner) (CT33X6578)
 Street and Apt. No., or PO Box No.
 270 Hartford Road
 City, State, ZIP+4®
 Salem CT 06420

PS Form 3800, April 2015 PSN 7530-02-000-0047 See Reverse for Instructions.





Town of Salem, CT. Assessment Parcel Map
Parcel ID: 05-016-A02
Address: 153 EAST HADDAM RD



Map Produced: July 2017

Disclaimer: This map is for informational purposes only. All information is subject to verification by any user. The Town of Salem and its mapping contractors assume no legal responsibility for the information contained herein.



Property Information

Property Location	153 EAST HADDAM RD
Owner	AMERICAN TOWER CORP
Co-Owner	
Mailing Address	P O BOX 723597 ATLANTA GA 31139
Land Use	4331 Cell Tower
Land Class	I
Zoning Code	HC
Census Tract	7151
Neighborhood	C100
Acreage	5.21
Utilities	
Lot Setting/Desc	
Additional Info	

Photo



Sketch

Primary Construction Details

Year Built	
Stories	
Building Style	
Building Use	
Building Condition	
Floors	
Total Rooms	

Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

Exterior Walls	
Interior Walls	
Heating Type	
Heating Fuel	
AC Type	
Gross Bldg Area	
Total Living Area	



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

SPRINT Existing Facility

Site ID: CT33XC578

(R2E) CT4995 To CT33-578
Salem/American Tower
153 East Haddam Road (RT 82)
Salem, CT 06420

January 5, 2018

EBI Project Number: 6217006075

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	4.46 %



January 5, 2018

SPRINT

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

Emissions Analysis for Site: **CT33XC578 – (R2E) CT4995 To CT33-578 Salem/American Tower**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **153 East Haddam Road (RT 82), Salem, 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ 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 ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 850 MHz Band is approximately $567 \mu\text{W}/\text{cm}^2$. The general population exposure limit for the 1900 MHz (PCS) and 2500 MHz (BRS) bands is $1000 \mu\text{W}/\text{cm}^2$. 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 **153 East Haddam Road (RT 82), Salem, 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 antenna used in this modeling is the **KMW ETCR-654L12H6** for transmission in the 850 MHz, 1900 MHz (PCS) and 2500 MHz (BRS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antenna mounting height centerlines of the proposed antennas are **150 feet** above ground level (AGL) for **Sector A**, **150 feet** above ground level (AGL) for **Sector B** and **150 feet** above ground level (AGL) for Sector C.
- 10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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



SPRINT Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	KMW ETCR-654L12H6	Make / Model:	KMW ETCR-654L12H6	Make / Model:	KMW ETCR-654L12H6
Gain:	13.35 / 15.25 / 15.05 dBd	Gain:	13.35 / 15.25 / 15.05 dBd	Gain:	13.35 / 15.25 / 15.05 dBd
Height (AGL):	150 feet	Height (AGL):	150 feet	Height (AGL):	150 feet
Frequency Bands	850 MHz / 1900 MHz (PCS) / 2500 MHz (BRS)	Frequency Bands	850 MHz / 1900 MHz (PCS) / 2500 MHz (BRS)	Frequency Bands	850 MHz / 1900 MHz (PCS) / 2500 MHz (BRS)
Channel Count	18	Channel Count	18	Channel Count	18
Total TX Power(W):	380 Watts	Total TX Power(W):	380 Watts	Total TX Power(W):	380 Watts
ERP (W):	11,775.31	ERP (W):	11,775.31	ERP (W):	11,775.31
Antenna A1 MPE%	2.21 %	Antenna B1 MPE%	2.21 %	Antenna C1 MPE%	2.21 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	2.21 %
T-Mobile	1.20 %
AT&T	1.05 %
Site Total MPE %:	4.46 %

SPRINT Sector A Total:	2.21 %
SPRINT Sector B Total:	2.21 %
SPRINT Sector C Total:	2.21 %
Site Total:	4.46 %

SPRINT _ Frequency Band / Technology (All Sectors)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	432.54	150	0.75	850 MHz	567	0.13%
Sprint 850 MHz LTE	2	432.54	150	1.50	850 MHz	567	0.26%
Sprint 1900 MHz (PCS) CDMA	5	535.94	150	4.65	1900 MHz (PCS)	1000	0.46%
Sprint 1900 MHz (PCS) LTE	2	1,339.86	150	4.65	1900 MHz (PCS)	1000	0.46%
Sprint 2500 MHz (BRS) LTE	8	639.78	150	8.87	2500 MHz (BRS)	1000	0.90%
						Total:	2.21%



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:	2.21 %
Sector B:	2.21 %
Sector C:	2.21 %
SPRINT Maximum Total (per sector):	2.21 %
Site Total:	4.46 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **4.46 %** 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 : 190 ft Self Supported Tower
ATC Site Name : Salem CT, CT
ATC Site Number : 10027
Engineering Number : OAA714423_C3_01
Proposed Carrier : Sprint Nextel
Carrier Site Name : SALEM CT
Carrier Site Number : CT33XC578
Site Location : Intersection of Connecticut Rt. 82 and Rt. 11
Salem, CT 06420-3903
41.468500,-72.273300
County : New London
Date : October 23, 2017
Max Usage : 65%
Result : Pass

Prepared By:
Nathan Haselden, E.I.
Structural Engineer II

Reviewed By:

COA: PEC.0001553



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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 190 ft self supported tower to reflect the change in loading by Sprint Nextel.

Supporting Documents

Tower Drawings	PiRod 204997-B, dated September 21, 1999
Foundation Drawing	PiRod 204997-B, dated September 21, 1999
Geotechnical Report	Tectonic Engineering Consultants P.C 2174.Salem, dated August 27, 1999

Analysis

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

Basic Wind Speed:	105 mph (3-Second Gust, Vasd) / 135 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:	$S_s = 0.17, S_1 = 0.06$
Site Class:	D - Stiff Soil

Conclusion

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

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



Existing and Reserved Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
187.0	189.0	1	Raycap DC6-48-60-18-8F	Sector Frames	(12) 1 5/8" Coax (2) 0.78" 8 AWG 6 (1) 0.39" Fiber Trunk	AT&T Mobility
		3	Ericsson RRUS-11 800MHz			
		1	Andrew SBNH-1D6565C			
		2	Powerwave P65-17-XLH-RR			
		6	LGP LGP21903			
		6	Powerwave LGP21401			
		6	Allgon 7770.00			
175.0	175.0	3	Commscope LNX-6515DS-A1M	Sector Frames	(1) 1 5/8" Fiber	T-Mobile
		3	RFS APX16DWV-16DWVS-E-A20			
		3	Ericsson RRUS 11 B2			
		3	Ericsson RRUS 11 B4			
		3	Ericsson RRUS 11 B12			
150.0	150.0	3	Decibel DB980F65E-M	Sector Frames	(6) 1 5/8" Coax	Sprint Nextel

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	150.0	9	Decibel DB980F65E-M	-	(6) 1 5/8" Coax	Sprint Nextel

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	150.0	3	KMW ETCR-654L12H6	Sector Frames	(4) 1 1/4" Hybriflex Cable	Sprint Nextel
		3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
		3	Alcatel-Lucent 1900MHz 4x45 RRH			
		6	Alcatel-Lucent RRH2x50-08			
75.0	75.0	1	GPS	Stand-Off	(1) 1/2" Coax	

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

Install proposed coax alongside existing Sprint Nextel coax.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	61%	Pass
Diagonals	65%	Pass
Horizontals	41%	Pass
Anchor Bolts	39%	Pass
Leg Bolts	45%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	344.3	464.8	228.7	49%
Axial (Kips)	385.3	520.2	265.2	51%
Shear (Kips)	59.7	80.6	40.0	50%

* 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) (°)
150.0	Alcatel-Lucent RRH2x50-08	Sprint Nextel	0.200	0.011	0.194
	Alcatel-Lucent 1900 MHz 4x45 RRH				
	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield				
75.0	KMW ETCR-654L12H6		0.037	0.003	0.060
	GPS				

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



Standard Conditions

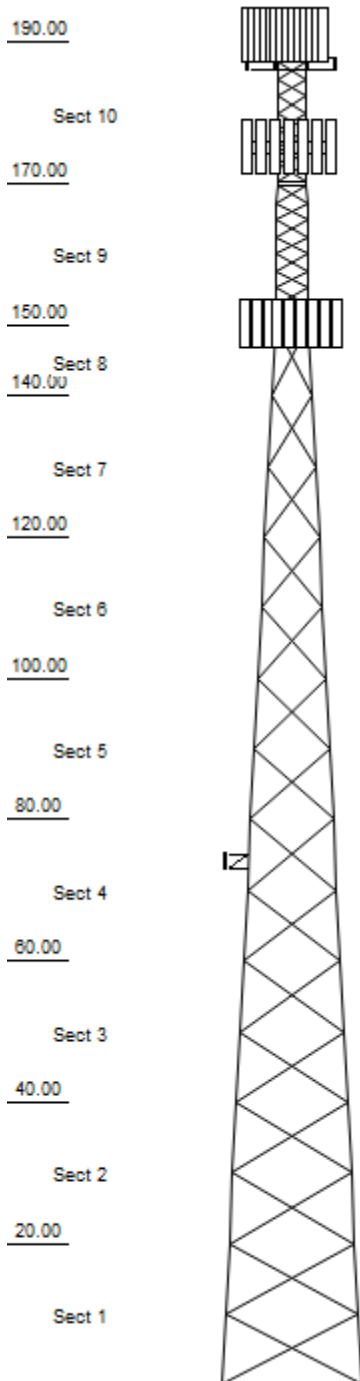
All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

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

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

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



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Loads: 105 mph no ice
 50 mph w/ 3/4" radial ice
 Site Class: D Ss: 0.17 S1: 0.06
 60 mph Serviceability

Job Information			
Tower : 10027	Location : SALEM CT, CT		
Code : ANSI/TIA-222-G	Shape : Triangle	Base Width : 20.00 ft	
Client : SPRINT NEXTEL			Top Width : 4.00 ft

Sections Properties				
Section	Leg Members		Diagonal Members	Horizontal Members
1 - 2	12B 50 ksi	12"BD 2.25"	SAE 36 ksi 3.5X3.5X0.3125	
3 - 4	12B 50 ksi	12"BD 2"	SAE 36 ksi 3X3X0.3125	
5	12B 50 ksi	12"BD 1.75"	SAE 36 ksi 3X3X0.1875	
6 - 7	12B 50 ksi	12"BD 1.5"	SAE 36 ksi 3X3X0.1875	
8	12B 50 ksi	12"BD 1.25"	SAE 36 ksi 2.5X2.5X0.1875	
9	SOL 50 ksi	2" SOLID	SOL 50 ksi 1" SOLID	SOL 50 ksi 1" SOLID
10	SOL 50 ksi	1 1/2" SOLID	SOL 50 ksi 3/4" SOLID	SOL 50 ksi 3/4" SOLID

Discrete Appurtenance			
Elev (ft)	Type	Qty	Description
187.00	Panel	1	Raycap DC6-48-60-18-8F
187.00	Panel	3	Ericsson RRUS-11 800 MHz
187.00	Panel	1	Andrew SBNH-1D6565C
187.00	Panel	2	Powerwave P65-17-XLH-RR
187.00	Panel	6	LGP Allgon LGP21903
187.00	Panel	6	Powerwave LGP21401
187.00	Panel	6	Allgon 7770.00
187.00	Mounting Frame	3	Flat Light Sector Frame
175.00	Mounting Frame	3	Flat Light Sector Frame
175.00	Panel	3	Commscope LNX-6515DS-A1M
175.00	Panel	3	RFS APX16DWV-16DWVS-E-A20
175.00	Panel	3	Ericsson RRUS 11 B2
175.00	Panel	3	Ericsson RRUS 11 B4
175.00	Panel	3	Ericsson RRUS 11 B12
150.00	Panel	3	KMW ETCR-654L12H6
150.00	Panel	3	Alcatel-Lucent TD-RRH8x20-25 w
150.00	Panel	3	Alcatel-Lucent 1900 MHz 4x45 R
150.00	Panel	6	Alcatel-Lucent RRH2x50-08
150.00	Mounting Frame	3	Round Sector Frame
150.00	Panel	3	Decibel DB980F65E-M
75.00	Straight Arm	1	Stand-Off
75.00	Whip	1	GPS

Linear Appurtenance			
Elev (ft)		Qty	Description
From	To		
0.00	187.00	1	Waveguide
0.00	187.00	12	1 5/8" Coax
0.00	187.00	2	0.78" 8 AWG 6
0.00	187.00	1	0.39" Fiber Trunk
0.00	175.00	1	1 5/8" Fiber
0.00	150.00	1	Waveguide
0.00	150.00	6	1 5/8" Coax
0.00	150.00	4	1 1/4" Hybriflex Cab
0.00	75.00	1	1/2" Coax

Global Base Foundation Design Loads			
Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	4,315.26	48.26	40.00
DL + WL + IL	1,152.89	105.30	10.70

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Job Information		
Tower : 10027	Location : SALEM CT, CT	
Code : ANSI/TIA-222-G	Shape : Triangle	Base Width : 20.00 ft
Client : SPRINT NEXTEL		Top Width : 4.00 ft

Individual Base Foundation Design Loads		
Vertical (kip)	Uplift (kip)	Horizontal (kip)
265.23	228.72	26.10

Site Number: 10027
Site Name: SALEM CT, CT
Customer: SPRINT NEXTEL

Code: ANSI/TIA-222-G
Engineering Number: OAA714423_C3_01

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Analysis Parameters

Location:	NEW LONDON County, CT	Height (ft):	190
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	20.00
Tower Manufacturer:	Pirod	Top Face Width (ft):	4.00
Tower Type:	Self Support	Anchor Bolt Detail Type	c

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	105 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):	0.96				
T_L (sec):	6	p:	1.3	C_S :	0.033
S_S :	0.169	S_1 :	0.060	C_S , Max:	0.033
F_a :	1.600	F_V :	2.400	C_S , Min:	0.030
S_{ds} :	0.180	S_{d1} :	0.096		

Load Cases

1.2D + 1.6W Normal	105 mph Normal to Face with No Ice
1.2D + 1.6W 60 deg	105 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	105 mph 90 degree with No Ice
1.2D + 1.6W 120 deg	105 mph 120 degree with No Ice
1.2D + 1.6W 180 deg	105 mph 180 degree with No Ice
1.2D + 1.6W 210 deg	105 mph 210 degree with No Ice
1.2D + 1.6W 240 deg	105 mph 240 degree with No Ice
1.2D + 1.6W 300 deg	105 mph 300 degree with No Ice
1.2D + 1.6W 330 deg	105 mph 330 degree with No Ice
0.9D + 1.6W Normal	105 mph Normal to Face with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	105 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	105 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 120 deg	105 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	105 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 210 deg	105 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.6W 240 deg	105 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.6W 300 deg	105 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.6W 330 deg	105 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

Site Number: 10027
Site Name: SALEM CT, CT
Customer: SPRINT NEXTEL

Code: ANSI/TIA-222-G
Engineering Number: OAA714423_C3_01

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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: 10027
 Site Name: SALEM CT, CT
 Customer: SPRINT NEXTEL

Code: ANSI/TIA-222-G
 Engineering Number: OAA714423_C3_01

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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)
187.0	LGP Allgon	6	6	0.3	0.4	6.3	3.0	0.80	0.67	2.0	67.2	28.44	34	48
187.0	Powerwave	6	14	1.1	1.2	9.2	2.6	0.80	0.67	2.0	273.6	28.44	137	122
187.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	2.0	68.7	28.44	34	29
187.0	Ericsson RRUS-11	3	54	2.5	1.5	17.0	7.2	0.80	0.67	2.0	313.4	28.44	157	233
187.0	Allgon 7770.00	6	35	5.5	4.6	11.0	5.0	0.80	0.77	2.0	1575.2	28.44	788	302
187.0	Andrew SBNH-	1	61	11.4	8.0	11.9	7.1	0.80	0.84	2.0	595.2	28.44	298	88
187.0	Powerwave P65-17-	2	59	11.5	8.0	12.0	6.0	0.80	0.80	2.0	1135.6	28.44	568	170
187.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	28.35	1165	1728
175.0	Ericsson RRUS 11	3	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	27.82	170	219
175.0	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	27.82	170	219
175.0	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	27.82	170	219
175.0	RFS APX16DWV-	3	42	7.0	4.7	13.3	3.1	0.80	0.67	0.0	0.0	27.82	426	181
175.0	Commscope LNX-	3	44	11.5	8.0	11.9	7.1	0.80	0.84	0.0	0.0	27.82	875	189
175.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	27.82	1143	1728
150.0	Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	26.62	148	457
150.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	26.62	135	259
150.0	Decibel DB980F65E-	3	10	3.8	5.0	6.0	3.0	0.80	0.68	0.0	0.0	26.62	222	41
150.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	0.0	0.0	26.62	236	302
150.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	26.62	880	1296
150.0	KMW ETCR-	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.0	26.62	833	367
75.00	GPS	1	10	1.0	0.5	9.0	6.0	1.00	1.00	0.0	0.0	21.84	30	14
75.00	Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.84	89	144
Totals		69	5802	407.2										

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)
187.0	LGP Allgon	6	6	0.3	0.4	6.3	3.0	0.80	0.67	2.0	67.2	28.44	34	27
187.0	Powerwave	6	14	1.1	1.2	9.2	2.6	0.80	0.67	2.0	273.6	28.44	137	69
187.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	2.0	68.7	28.44	34	16
187.0	Ericsson RRUS-11	3	54	2.5	1.5	17.0	7.2	0.80	0.67	2.0	313.4	28.44	157	131
187.0	Allgon 7770.00	6	35	5.5	4.6	11.0	5.0	0.80	0.77	2.0	1575.2	28.44	788	170
187.0	Andrew SBNH-	1	61	11.4	8.0	11.9	7.1	0.80	0.84	2.0	595.2	28.44	298	49
187.0	Powerwave P65-17-	2	59	11.5	8.0	12.0	6.0	0.80	0.80	2.0	1135.6	28.44	568	96
187.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	28.35	1165	972
175.0	Ericsson RRUS 11	3	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	27.82	170	123
175.0	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	27.82	170	123
175.0	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	27.82	170	123
175.0	RFS APX16DWV-	3	42	7.0	4.7	13.3	3.1	0.80	0.67	0.0	0.0	27.82	426	102
175.0	Commscope LNX-	3	44	11.5	8.0	11.9	7.1	0.80	0.84	0.0	0.0	27.82	875	106
175.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	27.82	1143	972
150.0	Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	26.62	148	257
150.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	26.62	135	146
150.0	Decibel DB980F65E-	3	10	3.8	5.0	6.0	3.0	0.80	0.68	0.0	0.0	26.62	222	23
150.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	0.0	0.0	26.62	236	170
150.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	26.62	880	729
150.0	KMW ETCR-	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.0	26.62	833	206
75.00	GPS	1	10	1.0	0.5	9.0	6.0	1.00	1.00	0.0	0.0	21.84	30	8
75.00	Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.84	89	81

Site Number: 10027
 Site Name: SALEM CT, CT
 Customer: SPRINT NEXTEL

Code: ANSI/TIA-222-G
 Engineering Number: OAA714423_C3_01

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Tower Loading

Totals 69 5802 407.2

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
187.0	LGP Allgon	6	20	0.5	0.4	6.3	3.0	0.80	0.67	2.0	16.9	6.45	8	148
187.0	Powerwave	6	49	1.6	1.2	9.2	2.6	0.80	0.67	2.0	55.5	6.45	28	370
187.0	Raycap DC6-48-60-	1	102	2.5	2.0	9.7	9.7	0.80	1.00	2.0	22.2	6.45	11	128
187.0	Ericsson RRUS-11	3	136	3.2	1.5	17.0	7.2	0.80	0.67	2.0	56.0	6.45	28	529
187.0	Allgon 7770.00	6	173	6.6	4.6	11.0	5.0	0.80	0.77	2.0	266.6	6.45	133	1297
187.0	Andrew SBNH-	1	330	13.1	8.0	11.9	7.1	0.80	0.84	2.0	96.8	6.45	48	411
187.0	Powerwave P65-17-	2	314	13.2	8.0	12.0	6.0	0.80	0.80	2.0	184.6	6.45	92	783
187.0	Flat Light Sector	3	707	33.3	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.43	307	2834
175.0	Ericsson RRUS 11	3	139	3.5	1.6	17.0	7.2	0.80	0.67	0.0	0.0	6.31	30	537
175.0	Ericsson RRUS 11 B4	3	139	3.5	1.6	17.0	7.2	0.80	0.67	0.0	0.0	6.31	30	537
175.0	Ericsson RRUS 11 B2	3	139	3.5	1.6	17.0	7.2	0.80	0.67	0.0	0.0	6.31	30	537
175.0	RFS APX16DWV-	3	183	7.7	4.7	13.3	3.1	0.80	0.67	0.0	0.0	6.31	67	690
175.0	Commscope LNX-	3	313	13.1	8.0	11.9	7.1	0.80	0.84	0.0	0.0	6.31	142	1158
175.0	Flat Light Sector	3	707	33.3	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.31	301	2834
150.0	Alcatel-Lucent	6	124	2.2	1.3	13.0	9.8	0.80	0.50	0.0	0.0	6.04	28	970
150.0	Alcatel-Lucent 1900	3	155	3.0	2.1	11.1	10.7	0.80	0.67	0.0	0.0	6.04	25	600
150.0	Decibel DB980F65E-	3	101	4.8	5.0	6.0	3.0	0.80	0.68	0.0	0.0	6.04	40	370
150.0	Alcatel-Lucent TD-	3	164	5.4	2.2	18.6	6.7	0.80	0.67	0.0	0.0	6.04	44	642
150.0	Round Sector Frame	3	667	30.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.04	268	2618
150.0	KMW ETCR-	3	407	17.4	7.1	21.0	6.3	0.80	0.61	0.0	0.0	6.04	131	1525
75.00	GPS	1	33	0.5	0.5	9.0	6.0	1.00	1.00	0.0	0.0	4.95	2	42
75.00	Stand-Off	1	145	4.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.95	19	198
Totals		69	15307	600.0										

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)
187.0	LGP Allgon	6	6	0.3	0.4	6.3	3.0	0.80	0.67	2.0	13.7	9.29	7	33
187.0	Powerwave	6	14	1.1	1.2	9.2	2.6	0.80	0.67	2.0	55.8	9.29	28	85
187.0	Raycap DC6-48-60-	1	20	1.1	2.0	9.7	9.7	0.80	1.00	2.0	14.0	9.29	7	20
187.0	Ericsson RRUS-11	3	54	2.5	1.5	17.0	7.2	0.80	0.67	2.0	64.0	9.29	32	162
187.0	Allgon 7770.00	6	35	5.5	4.6	11.0	5.0	0.80	0.77	2.0	321.5	9.29	161	210
187.0	Andrew SBNH-	1	61	11.4	8.0	11.9	7.1	0.80	0.84	2.0	121.5	9.29	61	61
187.0	Powerwave P65-17-	2	59	11.5	8.0	12.0	6.0	0.80	0.80	2.0	231.8	9.29	116	118
187.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	9.26	238	1200
175.0	Ericsson RRUS 11	3	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	9.08	35	152
175.0	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	9.08	35	152
175.0	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	9.08	35	152
175.0	RFS APX16DWV-	3	42	7.0	4.7	13.3	3.1	0.80	0.67	0.0	0.0	9.08	87	126
175.0	Commscope LNX-	3	44	11.5	8.0	11.9	7.1	0.80	0.84	0.0	0.0	9.08	179	131
175.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	9.08	233	1200
150.0	Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	8.69	30	317
150.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	0.0	0.0	8.69	28	180
150.0	Decibel DB980F65E-	3	10	3.8	5.0	6.0	3.0	0.80	0.68	0.0	0.0	8.69	45	29
150.0	Alcatel-Lucent TD-	3	70	4.1	2.2	18.6	6.7	0.80	0.67	0.0	0.0	8.69	48	210
150.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.69	180	900
150.0	KMW ETCR-	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.0	8.69	170	255

Site Number: 10027

Code: ANSI/TIA-222-G

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Site Name: SALEM CT, CT

Engineering Number: OAA714423_C3_01

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Customer: SPRINT NEXTEL

Tower Loading

75.00 GPS	1	10	1.0	0.5	9.0	6.0	1.00	1.00	0.0	0.0	7.13	6	10
75.00 Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.13	18	100
Totals	69	5802	407.2										

Site Number: 10027
 Site Name: SALEM CT, CT
 Customer: SPRINT NEXTEL

Code: ANSI/TIA-222-G
 Engineering Number: OAA714423_C3_01

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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	187.0	0.39" Fiber Trunk	1	0.39	0.06	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	187.0	0.78" 8 AWG 6	2	0.78	0.59	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	187.0	1 5/8" Coax	12	1.98	0.82	50	2	Block	0.00	N	0.50	1.00	0.00
0.00	187.0	Waveguide	1	2.00	6.00	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	175.0	1 5/8" Fiber	1	1.63	1.61	0	3	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	1 1/4" Hybriflex	4	1.54	1.00	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	1 5/8" Coax	6	1.98	0.82	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	150.0	Waveguide	1	2.00	6.00	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	75.00	1/2" Coax	1	0.63	0.15	0	1	Individual	0.00	N	1.00	1.00	0.01

Site Number: 10027
 Site Name: SALEM CT, CT
 Customer: SPRINT NEXTEL

Code: ANSI/TIA-222-G
 Engineering Number: OAA714423_C3_01

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Equivalent Lateral Force Method

(Based on ASCE7-10 Chapters 11, 12 & 15)

Spectral Response Acceleration for Short Period (S_s):	0.17
Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.06
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_p):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.18
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s :	0.03
Lower Limit C_s :	0.03
Period based on Rayleigh Method (sec):	0.96
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.23
Total Unfactored Dead Load:	40.21 k
Seismic Base Shear (E):	1.73 k

LoadCase (1.2 + 0.2Sds) * DL + E

Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
10	180.00	1,050	631,121	0.061	106	1,298
9	160.00	1,775	922,662	0.089	155	2,194
8	145.00	1,238	569,904	0.055	95	1,530
7	130.00	2,959	1,191,10	0.115	200	3,657
6	110.00	3,014	987,674	0.095	165	3,726
5	90.00	3,456	884,259	0.085	148	4,272
4	70.00	4,640	871,074	0.084	146	5,735
3	50.00	4,760	590,284	0.057	99	5,883
2	30.00	5,685	375,709	0.036	63	7,027
1	10.00	5,836	99,614	0.010	17	7,214
LGP Allgon LGP21903	187.00	33	20,792	0.002	3	41
Powerwave LGP21401	187.00	85	53,302	0.005	9	105
Raycap DC6-48-60-18-8F	187.00	20	12,601	0.001	2	25
Ericsson RRUS-11 800 MHz	187.00	162	102,068	0.010	17	200
Allgon 7770.00	187.00	210	132,311	0.013	22	260
Andrew SBNH-1D6565C	187.00	61	38,307	0.004	6	75
Powerwave P65-17-XLH-RR	187.00	118	74,346	0.007	12	146
Flat Light Sector Frame	187.00	1,200	756,061	0.073	127	1,483
Ericsson RRUS 11 B12	175.00	152	88,311	0.009	15	188
Ericsson RRUS 11 B4	175.00	152	88,311	0.009	15	188
Ericsson RRUS 11 B2	175.00	152	88,311	0.009	15	188
RFS APX16DWV-16DWVS-E-A20	175.00	126	72,983	0.007	12	155
Commscope LNX-6515DS-A1M	175.00	131	76,118	0.007	13	162

Site Number: 10027
 Site Name: SALEM CT, CT
 Customer: SPRINT NEXTEL

Code: ANSI/TIA-222-G
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Equivalent Lateral Force Method

Flat Light Sector Frame	175.00	1,200	696,731	0.067	117	1,483
Alcatel-Lucent RRH2x50-08	150.00	317	152,405	0.015	26	392
Alcatel-Lucent 1900 MHz 4x45 RRH	150.00	180	86,430	0.008	14	222
Decibel DB980F65E-M	150.00	29	13,685	0.001	2	35
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	150.00	210	100,835	0.010	17	260
Round Sector Frame	150.00	900	432,149	0.042	72	1,112
KMW ETCR-654L12H6	150.00	255	122,298	0.012	20	315
GPS	75.00	10	2,044	0.000	0	12
Stand-Off	75.00	100	20,439	0.002	3	124
		40,214	10,354,244	1.000	1,735	49,707

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
10	180.00	1,050	631,121	0.061	106	907
9	160.00	1,775	922,662	0.089	155	1,533
8	145.00	1,238	569,904	0.055	95	1,069
7	130.00	2,959	1,191,10	0.115	200	2,556
6	110.00	3,014	987,674	0.095	165	2,604
5	90.00	3,456	884,259	0.085	148	2,986
4	70.00	4,640	871,074	0.084	146	4,009
3	50.00	4,760	590,284	0.057	99	4,112
2	30.00	5,685	375,709	0.036	63	4,912
1	10.00	5,836	99,614	0.010	17	5,042
LGP Allgon LGP21903	187.00	33	20,792	0.002	3	29
Powerwave LGP21401	187.00	85	53,302	0.005	9	73
Raycap DC6-48-60-18-8F	187.00	20	12,601	0.001	2	17
Ericsson RRUS-11 800 MHz	187.00	162	102,068	0.010	17	140
Allgon 7770.00	187.00	210	132,311	0.013	22	181
Andrew SBNH-1D6565C	187.00	61	38,307	0.004	6	53
Powerwave P65-17-XLH-RR	187.00	118	74,346	0.007	12	102
Flat Light Sector Frame	187.00	1,200	756,061	0.073	127	1,037
Ericsson RRUS 11 B12	175.00	152	88,311	0.009	15	131
Ericsson RRUS 11 B4	175.00	152	88,311	0.009	15	131
Ericsson RRUS 11 B2	175.00	152	88,311	0.009	15	131
RFS APX16DWV-16DWVS-E-A20	175.00	126	72,983	0.007	12	109
Commscope LNX-6515DS-A1M	175.00	131	76,118	0.007	13	113
Flat Light Sector Frame	175.00	1,200	696,731	0.067	117	1,037
Alcatel-Lucent RRH2x50-08	150.00	317	152,405	0.015	26	274
Alcatel-Lucent 1900 MHz 4x45 RRH	150.00	180	86,430	0.008	14	156
Decibel DB980F65E-M	150.00	29	13,685	0.001	2	25
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	150.00	210	100,835	0.010	17	181
Round Sector Frame	150.00	900	432,149	0.042	72	778
KMW ETCR-654L12H6	150.00	255	122,298	0.012	20	220
GPS	75.00	10	2,044	0.000	0	9
Stand-Off	75.00	100	20,439	0.002	3	86
		40,214	10,354,244	1.000	1,735	34,743

Site Number: 10027
 Site Name: SALEM CT, CT
 Customer: SPRINT NEXTEL

Code: ANSI/TIA-222-G
 Engineering Number: OAA714423_C3_01

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Equivalent Modal Analysis Method

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_{s1}):	0.17
Spectral Response Acceleration at 1.0 Second Period (S_{s1}):	0.06
Importance Factor (I_p):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.18
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	0.96
Redundancy Factor (ρ):	1.30

LoadCase (1.2 + 0.2Sds) * DL + E

Seismic

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
10	180.00	1,050	1.696	1.108	0.809	0.278	126	1,298
9	160.00	1,775	1.340	0.180	0.373	0.129	99	2,194
8	145.00	1,238	1.101	-0.069	0.187	0.068	37	1,530
7	130.00	2,959	0.885	-0.121	0.082	0.043	55	3,657
6	110.00	3,014	0.633	-0.065	0.019	0.041	53	3,726
5	90.00	3,456	0.424	0.010	0.006	0.045	68	4,272
4	70.00	4,640	0.257	0.054	0.016	0.042	85	5,735
3	50.00	4,760	0.131	0.069	0.033	0.034	70	5,883
2	30.00	5,685	0.047	0.071	0.042	0.026	64	7,027
1	10.00	5,836	0.005	0.045	0.026	0.015	37	7,214
LGP Allgon LGP21903	187.00	33	1.831	1.682	1.031	0.349	5	41
Powerwave LGP21401	187.00	85	1.831	1.682	1.031	0.349	13	105
Raycap DC6-48-60-18-8F	187.00	20	1.831	1.682	1.031	0.349	3	25
Ericsson RRUS-11 800 MHz	187.00	162	1.831	1.682	1.031	0.349	25	200
Allgon 7770.00	187.00	210	1.831	1.682	1.031	0.349	32	260
Andrew SBNH-1D6565C	187.00	61	1.831	1.682	1.031	0.349	9	75
Powerwave P65-17-XLH-RR	187.00	118	1.831	1.682	1.031	0.349	18	146
Flat Light Sector Frame	187.00	1,200	1.831	1.682	1.031	0.349	182	1,483
Ericsson RRUS 11 B12	175.00	152	1.603	0.789	0.675	0.233	15	188
Ericsson RRUS 11 B4	175.00	152	1.603	0.789	0.675	0.233	15	188
Ericsson RRUS 11 B2	175.00	152	1.603	0.789	0.675	0.233	15	188
RFS APX16DWV-16DWVS-E-A20	175.00	126	1.603	0.789	0.675	0.233	13	155
Commscope LNX-6515DS-A1M	175.00	131	1.603	0.789	0.675	0.233	13	162
Flat Light Sector Frame	175.00	1,200	1.603	0.789	0.675	0.233	121	1,483
Alcatel-Lucent RRH2x50-08	150.00	317	1.178	-0.015	0.239	0.084	12	392
Alcatel-Lucent 1900 MHz 4x45	150.00	180	1.178	-0.015	0.239	0.084	7	222
Decibel DB980F65E-M	150.00	29	1.178	-0.015	0.239	0.084	1	35
Alcatel-Lucent TD-RRH8x20-25	150.00	210	1.178	-0.015	0.239	0.084	8	260
Round Sector Frame	150.00	900	1.178	-0.015	0.239	0.084	33	1,112
KMW ETCR-654L12H6	150.00	255	1.178	-0.015	0.239	0.084	9	315
GPS	75.00	10	0.294	0.047	0.013	0.044	0	12
Stand-Off	75.00	100	0.294	0.047	0.013	0.044	2	124
		40,214	38.443	19.476	15.347	5.504	1,244	49,707

Equivalent Modal Analysis Method

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

Section	Height		Seismic (Reduced DL)				S _{az}	Horizontal	Vertical
	Above Base (ft)	Weight (lb)	a	b	c	Force (lb)		Force (lb)	
10	180.00	1,050	1.696	1.108	0.809	0.278	126	907	
9	160.00	1,775	1.340	0.180	0.373	0.129	99	1,533	
8	145.00	1,238	1.101	-0.069	0.187	0.068	37	1,069	
7	130.00	2,959	0.885	-0.121	0.082	0.043	55	2,556	
6	110.00	3,014	0.633	-0.065	0.019	0.041	53	2,604	
5	90.00	3,456	0.424	0.010	0.006	0.045	68	2,986	
4	70.00	4,640	0.257	0.054	0.016	0.042	85	4,009	
3	50.00	4,760	0.131	0.069	0.033	0.034	70	4,112	
2	30.00	5,685	0.047	0.071	0.042	0.026	64	4,912	
1	10.00	5,836	0.005	0.045	0.026	0.015	37	5,042	
LGP Allgon LGP21903	187.00	33	1.831	1.682	1.031	0.349	5	29	
Powerwave LGP21401	187.00	85	1.831	1.682	1.031	0.349	13	73	
Raycap DC6-48-60-18-8F	187.00	20	1.831	1.682	1.031	0.349	3	17	
Ericsson RRUS-11 800 MHz	187.00	162	1.831	1.682	1.031	0.349	25	140	
Allgon 7770.00	187.00	210	1.831	1.682	1.031	0.349	32	181	
Andrew SBNH-1D6565C	187.00	61	1.831	1.682	1.031	0.349	9	53	
Powerwave P65-17-XLH-RR	187.00	118	1.831	1.682	1.031	0.349	18	102	
Flat Light Sector Frame	187.00	1,200	1.831	1.682	1.031	0.349	182	1,037	
Ericsson RRUS 11 B12	175.00	152	1.603	0.789	0.675	0.233	15	131	
Ericsson RRUS 11 B4	175.00	152	1.603	0.789	0.675	0.233	15	131	
Ericsson RRUS 11 B2	175.00	152	1.603	0.789	0.675	0.233	15	131	
RFS APX16DWV-16DWVS-E-A20	175.00	126	1.603	0.789	0.675	0.233	13	109	
Commscope LNX-6515DS-A1M	175.00	131	1.603	0.789	0.675	0.233	13	113	
Flat Light Sector Frame	175.00	1,200	1.603	0.789	0.675	0.233	121	1,037	
Alcatel-Lucent RRH2x50-08	150.00	317	1.178	-0.015	0.239	0.084	12	274	
Alcatel-Lucent 1900 MHz 4x45	150.00	180	1.178	-0.015	0.239	0.084	7	156	
Decibel DB980F65E-M	150.00	29	1.178	-0.015	0.239	0.084	1	25	
Alcatel-Lucent TD-RRH8x20-25	150.00	210	1.178	-0.015	0.239	0.084	8	181	
Round Sector Frame	150.00	900	1.178	-0.015	0.239	0.084	33	778	
KMW ETCR-654L12H6	150.00	255	1.178	-0.015	0.239	0.084	9	220	
GPS	75.00	10	0.294	0.047	0.013	0.044	0	9	
Stand-Off	75.00	100	0.294	0.047	0.013	0.044	2	86	
		40,214	38.443	19.476	15.347	5.504	1,244	34,743	

Site Number: 10027
 Site Name: SALEM CT, CT
 Customer: SPRINT NEXTEL

Code: ANSI/TIA-222-G
 Engineering Number: OAA714423_C3_01

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Force/Stress Summary

Section: 1		U20		Bot Elev (ft): 0.00				Height (ft): 20.000						
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use		
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Boles	Holes	phiRnv	phiRn	% Controls	
Max Compression Member														
LEG	12B - 12"BD 2.25"	-259.01	10.02	100	100	100	0.0	0.0	512.40	0	0	0.00	0.00	50 User Input
HORIZ		0.00	0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3.5X3.5X0.3125	-6.47	21.91	50	50	50	190.6	36.0	13.00	1	1	49.70	43.50	49 Member Z
Max Tension Member														
LEG	12B - 12"BD 2.25"	220.67	50	65	536.80	0	0	0.00	0.00					41 User Input
HORIZ		0.00	0	0	0.00	0	0	0.00	0.00					0
DIAG	SAE - 3.5X3.5X0.3125	6.25	36	58	54.17	1	1	49.70	26.64			27.76		23 Bolt Bear
Max Splice Forces														
		Pu		phiRnt	Use	Num	Bolt Type							
		(kip)	Load Case	(kip)	%	Boles								
	Top Tension	210.28	0.9D + 1.6W 180	0.00	0	0								
	Top Compression	242.73	1.2D + 1.6W	0.00	0									
	Bot Tension	230.23	0.9D + 1.6W 180	697.74	39	6	1 1/4" A687							
	Bot Compression	265.49	1.2D + 1.6W	0.00	0									

Section: 2		U18		Bot Elev (ft): 20.00				Height (ft): 20.000						
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use		
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Boles	Holes	phiRnv	phiRn	% Controls	
Max Compression Member														
LEG	12B - 12"BD 2.25"	-236.55	10.02	100	100	100	0.0	0.0	512.40	0	0	0.00	0.00	46 User Input
HORIZ		0.00	0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3.5X3.5X0.3125	-6.39	20.15	50	50	50	175.3	36.0	15.37	1	1	49.70	43.50	41 Member Z
Max Tension Member														
LEG	12B - 12"BD 2.25"	205.57	50	65	536.80	0	0	0.00	0.00					38 User Input
HORIZ		0.00	0	0	0.00	0	0	0.00	0.00			0.00		0
DIAG	SAE - 3.5X3.5X0.3125	6.17	36	58	54.17	1	1	49.70	26.64			27.76		23 Bolt Bear
Max Splice Forces														
		Pu		phiRnt	Use	Num	Bolt Type							
		(kip)	Load Case	(kip)	%	Boles								
	Top Tension	190.26	0.9D + 1.6W 180	0.00	0	0								
	Top Compression	217.98	1.2D + 1.6W	0.00	0									
	Bot Tension	210.28	0.9D + 1.6W 180	523.32	40	6	1 1/4 A325							
	Bot Compression	242.73	1.2D + 1.6W	0.00	0									

Site Number: 10027
 Site Name: SALEM CT, CT
 Customer: SPRINT NEXTEL

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Force/Stress Summary

Section: 3		U16		Bot Elev (ft): 40.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	12B - 12"BD 2"	-211.17	1.2D + 1.6W	10.02	100	100	100	0.0	0.0	399.90	0	0	0.00	0.00	52 User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.3125	-6.07	1.2D + 1.6W 90	18.44	50	50	50	187.9	36.0	11.39	1	1	49.70	43.50	53 Member Z

		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
Max Tension Member													
LEG	12B - 12"BD 2"	183.00	1.2D + 1.6W 60	50	65	424.10	0	0	0.00	0.00			43 User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00		0
DIAG	SAE - 3X3X0.3125	5.85	0.9D + 1.6W 90	36	58	44.05	1	1	49.70	26.64	24.36		24 Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		169.65	0.9D + 1.6W 180	0.00	0	0	
Top Compression		192.41	1.2D + 1.6W	0.00	0		
Bot Tension		190.26	0.9D + 1.6W 180	523.32	36	6	1 1/4 A325
Bot Compression		217.98	1.2D + 1.6W	0.00	0		

Section: 4		U14		Bot Elev (ft): 60.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	12B - 12"BD 2"	-185.53	1.2D + 1.6W	10.02	100	100	100	0.0	0.0	399.90	0	0	0.00	0.00	46 User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.3125	-5.73	1.2D + 1.6W 90	16.80	50	50	50	171.2	36.0	13.73	1	1	49.70	43.50	41 Member Z

		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
Max Tension Member													
LEG	12B - 12"BD 2"	162.40	1.2D + 1.6W 60	50	65	424.10	0	0	0.00	0.00			38 User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00		0
DIAG	SAE - 3X3X0.3125	5.53	1.2D + 1.6W 90	36	58	44.05	1	1	49.70	26.64	24.36		22 Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		148.03	0.9D + 1.6W 180	0.00	0	0	
Top Compression		166.18	1.2D + 1.6W	0.00	0		
Bot Tension		169.65	0.9D + 1.6W 180	523.32	32	6	1 1/4 A325
Bot Compression		192.41	1.2D + 1.6W	0.00	0		

Site Number: 10027
 Site Name: SALEM CT, CT
 Customer: SPRINT NEXTEL

Code: ANSI/TIA-222-G
 Engineering Number: OAA714423_C3_01

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Force/Stress Summary

Section: 5		U12		Bot Elev (ft): 80.00				Height (ft): 20.000								
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use				
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	12B - 12"BD 1.75"	-159.05	1.2D + 1.6W	10.02	100	100	100	0.0	0.0	300.70	0	0	0.00	0.00	52	User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 3X3X0.1875	-5.28	1.2D + 1.6W 90	15.24	50	50	50	153.4	36.0	10.46	1	1	31.81	20.88	50	Member Z

Max Tension Member		Pu	Load Case	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	
		(kip)		(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls
									(kip)	(kip)	(kip)		
LEG	12B - 12"BD 1.75"	143.08	0.9D + 1.6W 180	50	65	324.70	0	0	0.00	0.00		44	User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 3X3X0.1875	5.02	1.2D + 1.6W 90	36	58	28.68	1	1	31.81	12.72	14.50	39	Bolt Bear

Max Splice Forces		Pu	Load Case	phiRnt	Use	Num	Bolt Type	
		(kip)		(kip)	%	Bolts		
Top Tension		125.98	0.9D + 1.6W 180	0.00	0	0		
Top Compression		140.14	1.2D + 1.6W	0.00	0			
Bot Tension		148.03	0.9D + 1.6W 180	327.12	45	6	1 A325	
Bot Compression		166.18	1.2D + 1.6W	0.00	0			

Section: 6		U10		Bot Elev (ft): 100.0				Height (ft): 20.000								
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use				
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	12B - 12"BD 1.5"	-132.75	1.2D + 1.6W	10.02	100	100	100	0.0	0.0	214.90	0	0	0.00	0.00	61	User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 3X3X0.1875	-5.17	1.2D + 1.6W 90	13.79	50	50	50	138.9	36.0	12.77	1	1	31.81	20.88	40	Member Z

Max Tension Member		Pu	Load Case	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	
		(kip)		(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls
									(kip)	(kip)	(kip)		
LEG	12B - 12"BD 1.5"	119.67	0.9D + 1.6W 60	50	65	238.60	0	0	0.00	0.00		50	User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 3X3X0.1875	4.86	1.2D + 1.6W 90	36	58	28.68	1	1	31.81	12.72	14.50	38	Bolt Bear

Max Splice Forces		Pu	Load Case	phiRnt	Use	Num	Bolt Type	
		(kip)		(kip)	%	Bolts		
Top Tension		101.65	0.9D + 1.6W 180	0.00	0	0		
Top Compression		112.55	1.2D + 1.6W	0.00	0			
Bot Tension		125.98	0.9D + 1.6W 180	327.12	39	6	1 A325	
Bot Compression		140.14	1.2D + 1.6W	0.00	0			

Site Number: 10027
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Force/Stress Summary

Section: 7		U8		Bot Elev (ft): 120.0				Height (ft): 20.000								
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	12B - 12"BD 1.5"	-104.36	1.2D + 1.6W	10.02	100	100	100	0.0	0.0	214.90	0	0	0.00	0.00	48	User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 3X3X0.1875	-5.17	1.2D + 1.6W 90	12.50	50	50	50	125.9	36.0	15.34	1	1	31.81	20.88	33	Member Z

Max Tension Member		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls
LEG	12B - 12"BD 1.5"	93.29	1.2D + 1.6W 60	50	65	238.60	0	0	0.00	0.00		39	User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 3X3X0.1875	5.27	1.2D + 1.6W 90	36	58	28.68	1	1	31.81	12.72	14.50	41	Bolt Bear

Max Splice Forces		Pu		phiRnt	Use	Num	Bolt Type	
		(kip)	Load Case	(kip)	%	Bolts		
Top Tension		73.87	0.9D + 1.6W 180	0.00	0	0		
Top Compression		81.91	1.2D + 1.6W	0.00	0			
Bot Tension		101.65	0.9D + 1.6W 180	327.12	31	6	1 A325	
Bot Compression		112.55	1.2D + 1.6W	0.00	0			

Section: 8		U-6.0		Bot Elev (ft): 140.0				Height (ft): 10.000								
		Pu		Len	Bracing %			F'y	Phic Pn	Num	Num	Shear	Bear	Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	12B - 12"BD 1.25"	-70.40	1.2D + 1.6W	10.02	100	100	100	0.0	0.0	142.50	0	0	0.00	0.00	49	User Input
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 2.5X2.5X0.1875	-6.44	1.2D + 1.6W	11.41	50	50	50	138.4	36.0	10.64	1	1	31.81	20.88	60	Member Z

Max Tension Member		Pu		Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls
LEG	12B - 12"BD 1.25"	63.75	1.2D + 1.6W 180	50	65	165.70	0	0	0.00	0.00		38	User Input
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 2.5X2.5X0.1875	5.85	1.2D + 1.6W 60	36	58	22.55	1	1	31.81	12.72	11.44	51	Blk Shear

Max Splice Forces		Pu		phiRnt	Use	Num	Bolt Type	
		(kip)	Load Case	(kip)	%	Bolts		
Top Tension		58.80	0.9D + 1.6W 180	0.00	0	0		
Top Compression		65.75	1.2D + 1.6W	0.00	0			
Bot Tension		73.87	0.9D + 1.6W 180	327.12	23	6	1 A325	
Bot Compression		81.91	1.2D + 1.6W	0.00	0			

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Force/Stress Summary

Section: 9		H-5.0		Bot Elev (ft): 150.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SOL - 2" SOLID	-61.91	1.2D + 1.6W	2.41	100	100	100	57.8	50.0	110.77	0	0	0.00	0.00	55 Member X
HORIZ	SOL - 1" SOLID	-1.50	1.2D + 1.6W	60	4.509	100	100	140.7	50.0	8.97	0	0	0.00	0.00	16 Member X
DIAG	SOL - 1" SOLID	-3.24	1.2D + 1.6W	90	5.513	50	50	119.1	50.0	12.51	0	0	0.00	0.00	25 Member X

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SOL - 2" SOLID	59.38	1.2D + 1.6W	180	50	65	141.37	0	0	0.00	0.00		42 Member
HORIZ	SOL - 1" SOLID	1.56	1.2D + 1.6W		50	65	35.34	0	0	0.00	0.00	0.00	4 Member
DIAG	SOL - 1" SOLID	3.63	1.2D + 1.6W	90	50	65	35.34	0	0	0.00	0.00	0.00	10 Member

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		22.01	0.9D + 1.6W	180	87.50	25	0
Top Compression		25.46	1.2D + 1.6W		141.40	18	
Bot Tension		58.80	0.9D + 1.6W	180	0.00	0	
Bot Compression		65.75	1.2D + 1.6W		0.00	0	

Section: 10		S-4.5		Bot Elev (ft): 170.0				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SOL - 1 1/2" SOLID	-22.87	1.2D + 1.6W	2.41	100	100	100	77.0	50.0	51.54	0	0	0.00	0.00	44 Member X
HORIZ	SOL - 3/4" SOLID	-1.17	1.2D + 1.6W		4.491	100	100	186.8	50.0	2.86	0	0	0.00	0.00	41 Member X
DIAG	SOL - 3/4" SOLID	-3.06	1.2D + 1.6W	90	5.068	50	50	145.9	50.0	4.69	0	0	0.00	0.00	65 Member X

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SOL - 1 1/2" SOLID	21.66	1.2D + 1.6W	180	50	65	79.52	0	0	0.00	0.00		27 Member
HORIZ	SOL - 3/4" SOLID	1.07	1.2D + 1.6W	60	50	65	19.88	0	0	0.00	0.00	0.00	5 Member
DIAG	SOL - 3/4" SOLID	3.07	1.2D + 1.6W	90	50	65	19.88	0	0	0.00	0.00	0.00	15 Member

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		0.00			0.00	0	0
Top Compression		0.20	(1.2 + 0.2Sds) *		0.00	0	
Bot Tension		22.01	0.9D + 1.6W	180	0.00	0	
Bot Compression		25.46	1.2D + 1.6W		0.00	0	

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:



PLANS PREPARED BY:

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Phone: 518-690-0790 | Fax: 518-690-0793
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JOB NUMBER 526-104

PROJECT MANAGER:

AIRSMITH
DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE# (618) 308-3740

ENGINEERING LICENSE:



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REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR PERMIT	12/22/17	JDL	0

SITE NAME:

(R2E) CT4995 TO CT33-578
SALEM/AMERICAN
TOWER

SITE NUMBER:

CT33XC578

SITE ADDRESS:

153 EAST HADDAM RD
SALEM, CT 06420

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 ANTENNA 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, AASHTO, AND OTHER METHODS IS NEEDED.
4. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASHTO, 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 - ANTENNA ALIGNMENT TOOL (AAT)

PLANS PREPARED FOR:



PLANS PREPARED BY:

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Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 528-104

PROJECT MANAGER:

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

ENGINEERING LICENSE:



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REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR PERMIT	12/22/17	JDL	0

SITE NAME:

(R2E) CT4995 TO CT33-578
SALEM/AMERICAN
TOWER

SITE NUMBER:

CT33XC578

SITE ADDRESS:

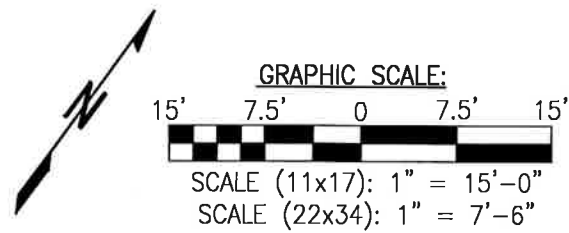
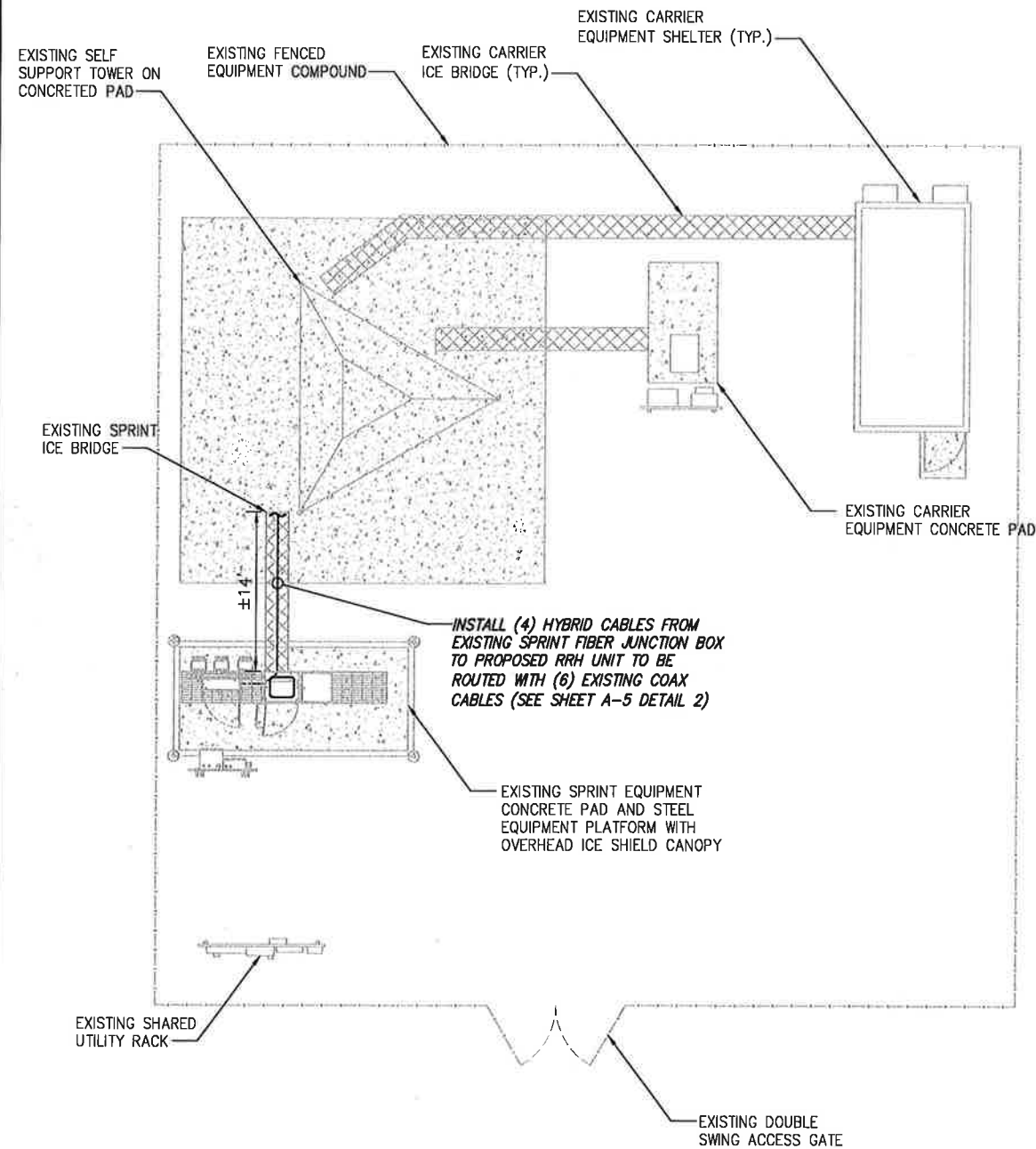
153 EAST HADDAM RD
SALEM, CT 06420

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

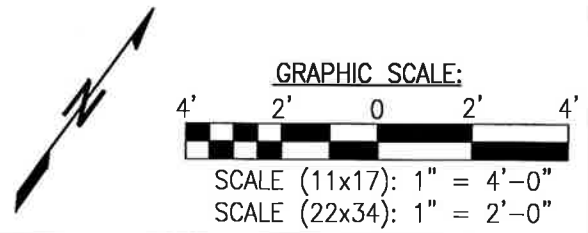
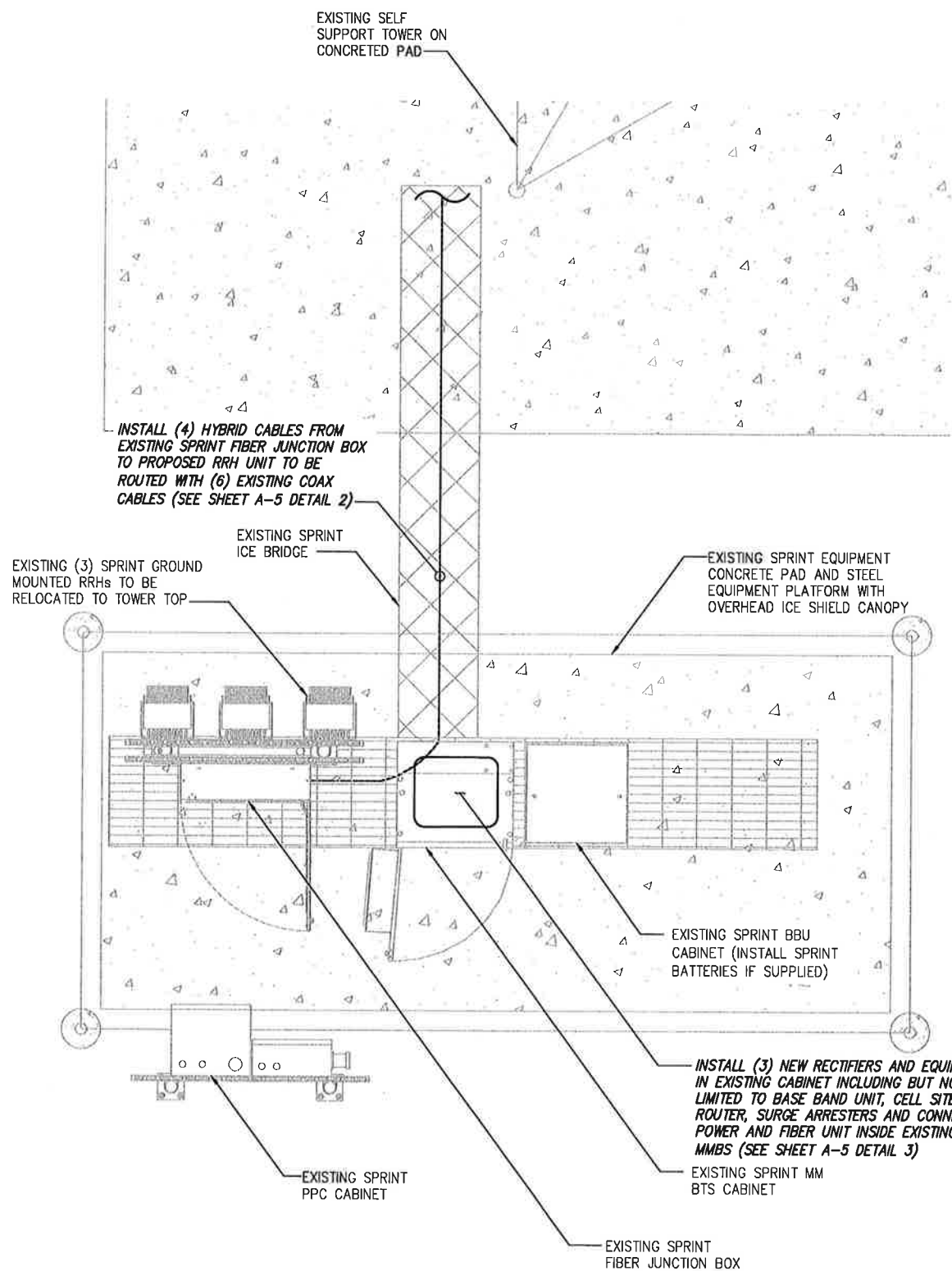
SP-2



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

OVERALL SITE PLAN

SCALE: AS NOTED 1



SPRINT EQUIPMENT PLAN

SCALE: AS NOTED 2

PLANS PREPARED FOR:



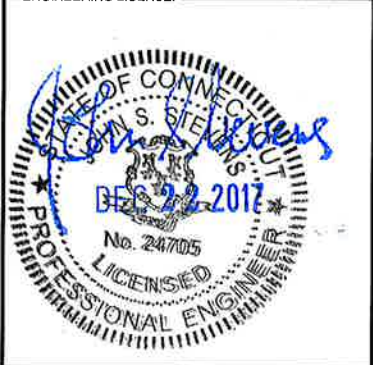
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SALEM/AMERICAN
TOWER

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CT33XC578

SITE ADDRESS:
153 EAST HADDAM RD
SALEM, CT 06420

SHEET DESCRIPTION:
SITE PLAN

SHEET NUMBER:
A-1

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

TOP OF TOWER
ELEV. = ±191' A.G.L.

Q OF EXISTING/TO BE
INSTALLED SPRINT ANTENNAS
ELEV. = 150' A.G.L.

EXISTING (1) SPRINT PANEL TO
REMAIN ANTENNA EACH SECTOR

INSTALL (1) SPRINT 800 MHz
RRH MOUNTED BEHIND EXISTING
ANTENNA EACH SECTOR

EXISTING (1) SPRINT GROUND
MOUNTED 1900 MHz RRH
RELOCATED BEHIND EXISTING
ANTENNA EACH SECTOR

EXISTING CARRIER
PANEL ANTENNA (TYP.)

INSTALL (1) SITEPRO1 STK-U
STIFF ARM KIT, AT EACH END
OF TOP HORIZONTAL (2) PER
SECTOR FRAME SEE DETAIL 3

INSTALL (1) SPRINT TRIBAND
ANTENNA TO REPLACE EXISTING
ANTENNA EACH SECTOR

INSTALL (1) SPRINT 800 MHz
RRH MOUNTED BEHIND PROPOSED
ANTENNA EACH SECTOR

INSTALL (1) SPRINT 2.5 GHz RRH
MOUNTED BEHIND PROPOSED
ANTENNA EACH SECTOR

EXISTING SELF
SUPPORT TOWER

INSTALL (4) HYBRID CABLES FROM
EXISTING SPRINT FIBER JUNCTION BOX
TO PROPOSED RRH UNIT TO BE
ROUTED WITH (6) EXISTING COAX
CABLES (SEE SHEET A-5 DETAIL 2)

GROUND LEVEL

NOTE:
• STRUCTURAL ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "STRUCTURAL ANALYSIS REPORT, CARRIER SITE NUMBER: CT33XC578", DATED: "OCTOBER 23, 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 PROJECT MOUNT ANALYSIS", DATED: "NOVEMBER 19, 2017". ACCORDING TO THE RESULTS OF REVIEW, THE ANTENNA AND RRH SUPPORTS WILL BE ADEQUATE TO SUPPORT THE PROPOSED LOADING WITH THE FOLLOWING MODIFICATION:

CONTRACTOR TO INSTALL SITEPRO1 STK-U STIFF ARM KIT AT EACH END OF TOP HORIZONTAL (2) PER SECTOR FRAME EACH SECTOR FRAME.

TOWER ELEVATION

NO SCALE

1

SITE LOADING CHART

SECTOR	EXISTING/ PROPOSED	ANTENNA MODEL #	VENDOR	AZIMUTH	QTY.	REMAIN/ REMOVED	RRH (QTY/MODEL)	CABLE	CABLE LENGTH	RAD CENTER
ALPHA	PROPOSED	KMW ETCR-654L12H6	KMW	0°	1	-	(2) 800 MHz 2X50W RRH W/ FILTER	SEE SHEET A-5 DETAIL 1	±150' AGL	±150' AGL
	EXISTING	DB980F65E-M	DECIBEL	0°	1	REMOVE	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	---		
	EXISTING	DB980F65E-M	DECIBEL	0°	1	REMAIN	(1) 1900 MHz 4X45 RRH	EXISTING COAX		
BETA	PROPOSED	KMW ETCR-654L12H6	KMW	105°	1	-	(2) 800 MHz 2X50W RRH W/ FILTER	SEE SHEET A-5 DETAIL 1	±190*	±150' AGL
	EXISTING	DB980F65E-M	DECIBEL	105°	1	REMOVE	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	---		
	EXISTING	DB980F65E-M	DECIBEL	105°	1	REMAIN	(1) 1900 MHz 4X45 RRH	EXISTING COAX		
BETA	PROPOSED	KMW ETCR-654L12H6	KMW	240°	1	-	(2) 800 MHz 2X50W RRH W/ FILTER	SEE SHEET A-5 DETAIL 1	±150' AGL	±150' AGL
	EXISTING	DB980F65E-M	DECIBEL	240°	1	REMOVE	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	---		
	EXISTING	DB980F65E-M	DECIBEL	240°	1	REMAIN	(1) 1900 MHz 4X45 RRH	EXISTING COAX		

PROJECT SCOPE:

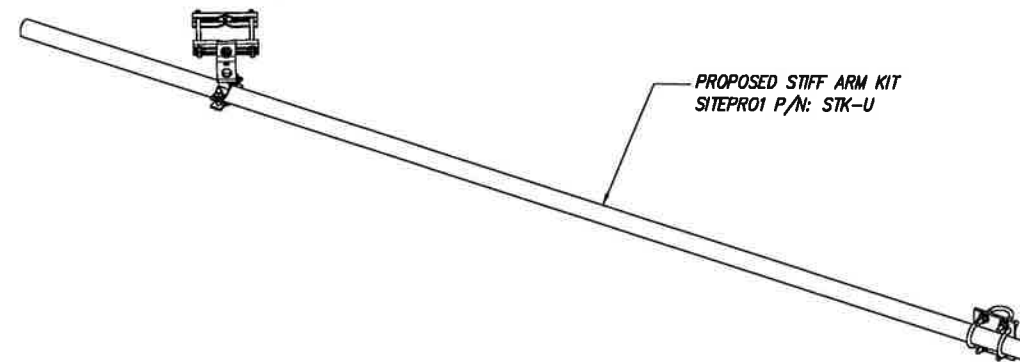
REMOVE: (3) PANEL ANTENNAS INSTALL: (3) PANEL ANTENNAS AND (9) RRH'S RELOCATE: (3) EXISTING RRH'S

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

SITE LOADING CHART

NO SCALE

2



STIFF ARM KIT DETAIL

NO SCALE

3

PLANS PREPARED FOR:



PLANS PREPARED BY:

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TOWER

SITE NUMBER:

CT33XC578

SITE ADDRESS:

153 EAST HADDAM RD
SALEM, CT 06420

SHEET DESCRIPTION:

TOWER ELEVATION

SHEET NUMBER:

A-2



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REVISIONS:	DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT		12/22/17	JDL	0

SITE NAME:
**(R2E) CT4995 TO CT33-578
SALEM/AMERICAN
TOWER**

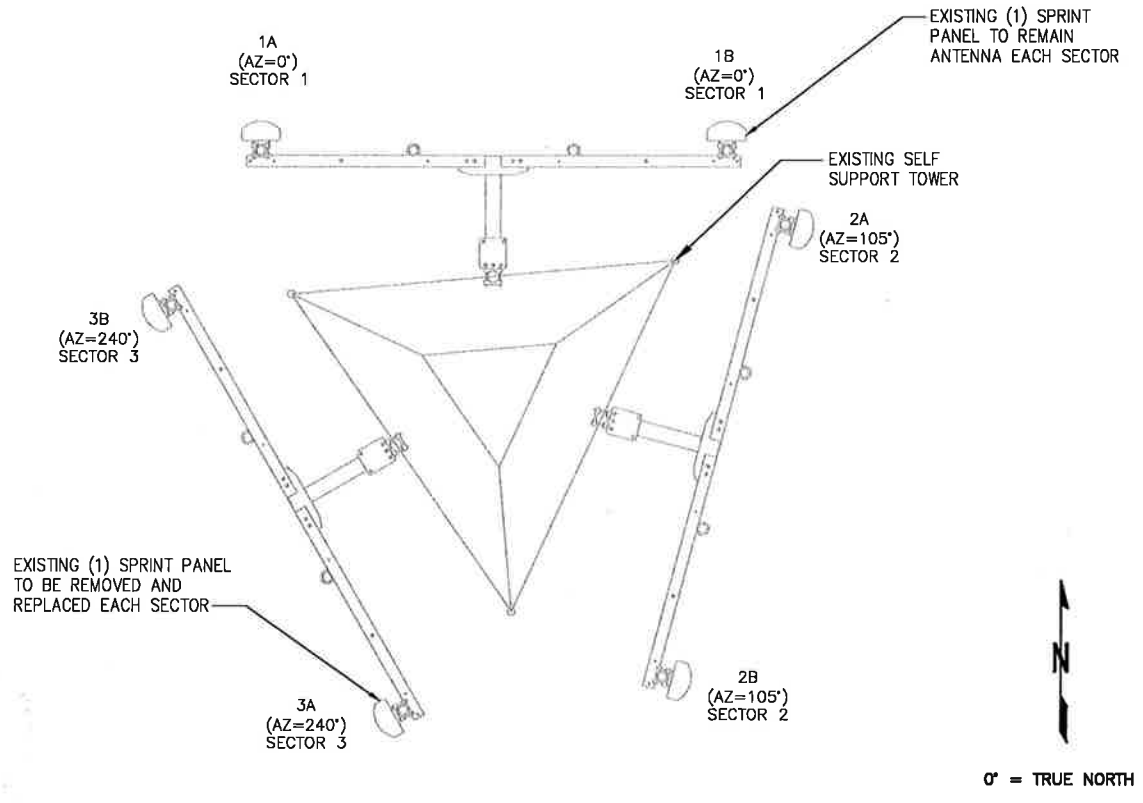
SITE NUMBER:
CT33XC578

SITE ADDRESS:
**153 EAST HADDAM RD
SALEM, CT 06420**

SHEET DESCRIPTION:
**ANTENNA LAYOUT
& MOUNTING DETAILS**

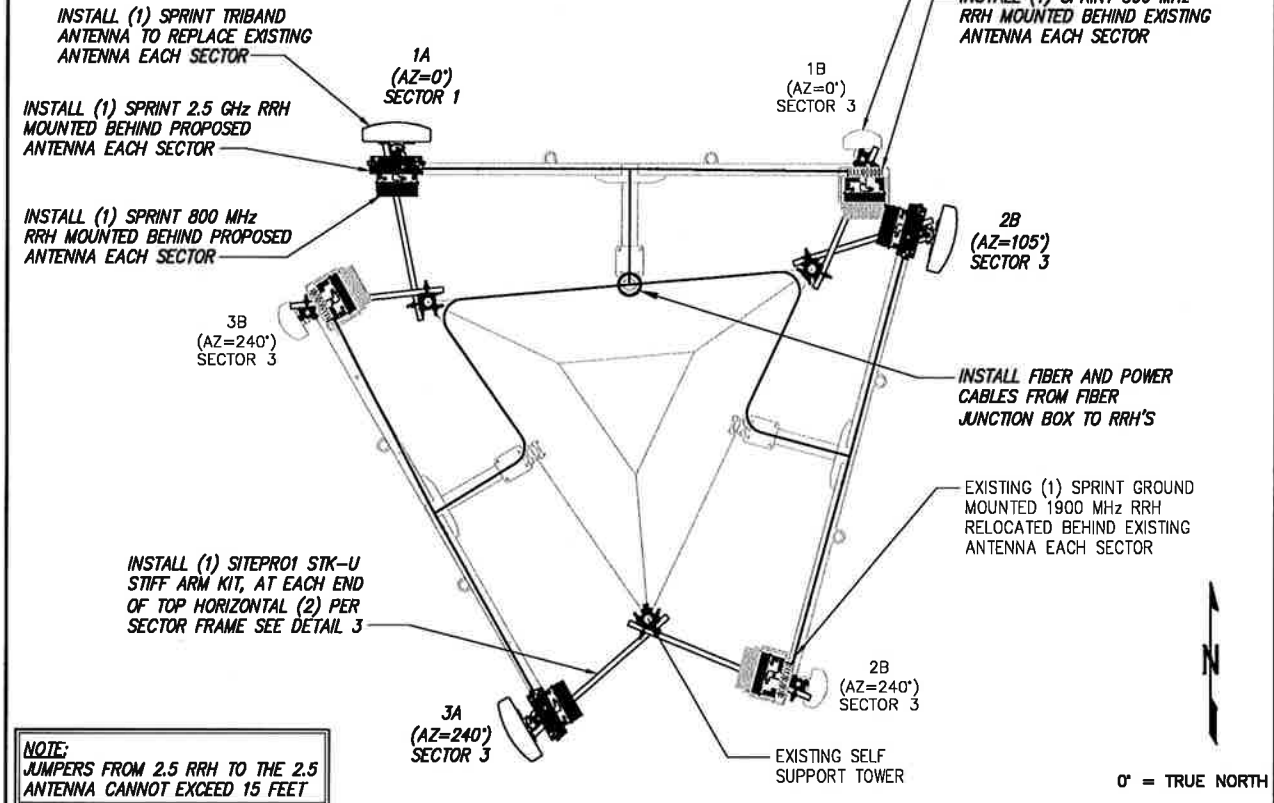
SHEET NUMBER:
A-3

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



EXISTING ANTENNA LAYOUT

NO SCALE 1



FINAL ANTENNA & RRH LAYOUT

NO SCALE 2

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

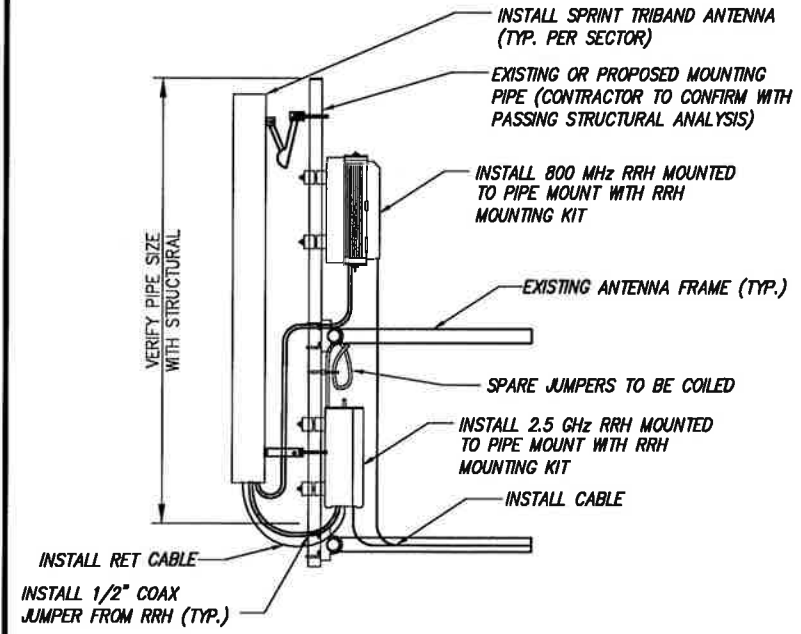
NOTE:
THE DIAGRAM IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO REFER TO PASSING STRUCTURAL ANALYSIS FOR ANTENNA AND RRH MOUNTING DETAILS.

- NOTES:**
1. CUT DC CONDUCTORS TO LENGTH.
 2. COIL FIBER CABLE AND SECURE AT SIDE OF RRH.
 3. DO NOT EXCEED BEND RADIUS.

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

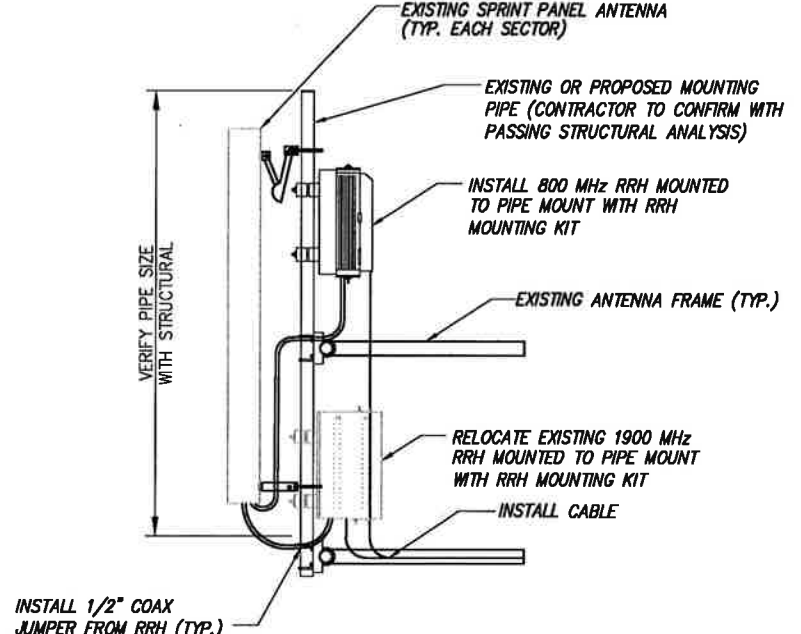
NOTE:
THE DIAGRAM IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO REFER TO PASSING STRUCTURAL ANALYSIS FOR ANTENNA AND RRH MOUNTING DETAILS.

- NOTES:**
1. CUT DC CONDUCTORS TO LENGTH.
 2. COIL FIBER CABLE AND SECURE AT SIDE OF RRH.
 3. DO NOT EXCEED BEND RADIUS.



TYPICAL ANTENNA & RRH MOUNTING DETAILS

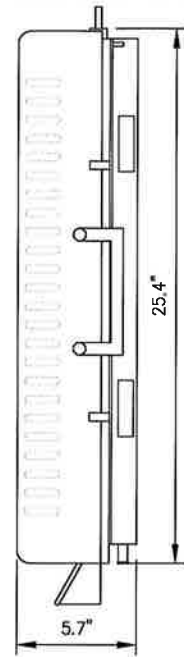
NO SCALE 3



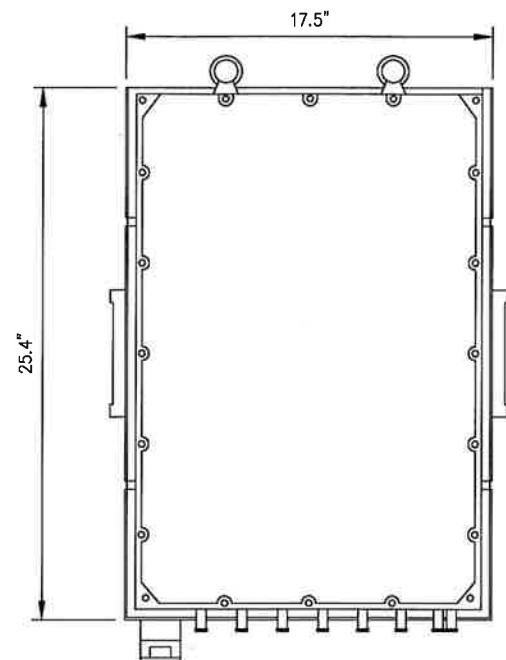
RRH MOUNTING DETAIL

NO SCALE 4

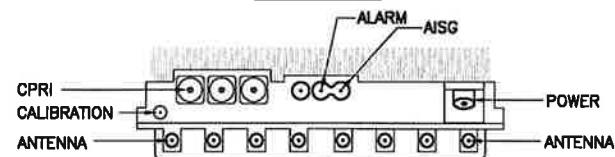
RRH: ALCATEL LUCENT TD-RRH8X20
 COLOR: LIGHT GREY
 WEIGHT: 70 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

NOTES

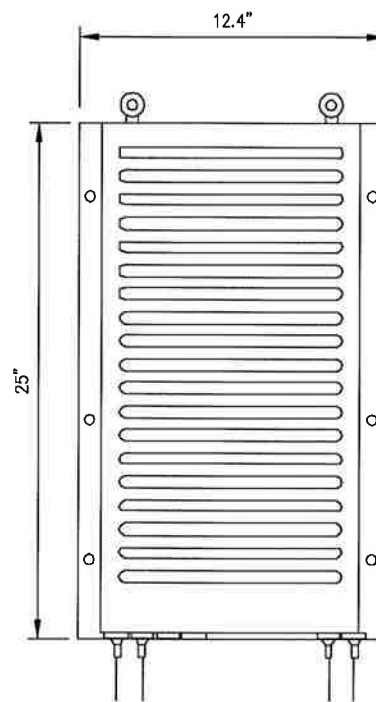
COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRH'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRH PACKAGES IN THE RAIN.

2.5 RRH'S

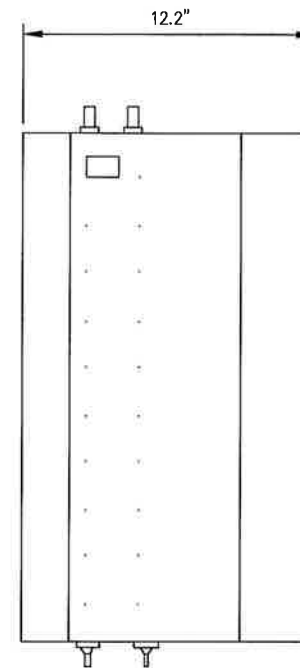
NO SCALE

1

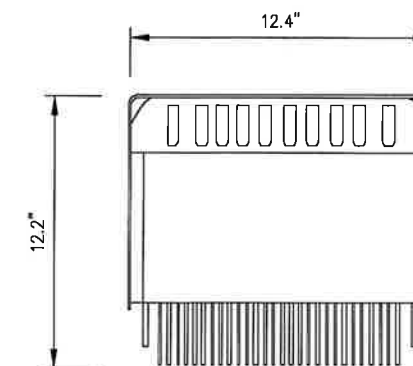
RRH: ALCATEL LUCENT 1900 MHz
 COLOR: LIGHT GREY
 WEIGHT: 70 LBS.
 (INCLUDING OPTIONAL SOLAR SHIELD)



FRONT VIEW



SIDE VIEW



TOP VIEW

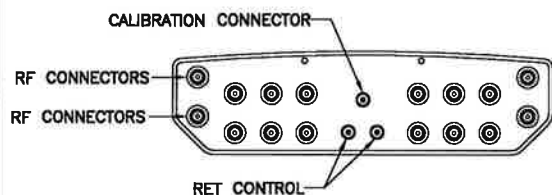
EXISTING 1900 MHz RRH

NO SCALE

2

ANTENNA KMW ETCR-654L12H6

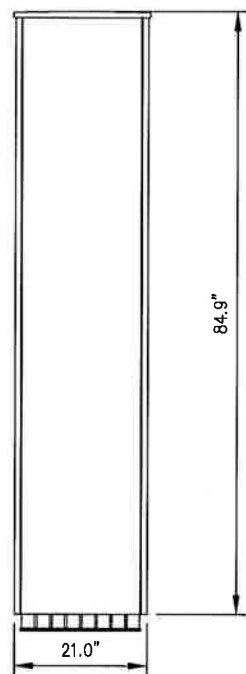
RADOME MATERIAL: ASA
 RADOME COLOR: LIGHT GREY
 DIMENSIONS, HxWxD.in(m/m): 84.9"x21.0"x6.3" (2158x533x160mm)
 WEIGHT: 84.9 lbs
 CONNECTORS: (8) 7/16" DIN FEMALE
 (8) MINI DIN FEMALE
 (1) N TYPE(CAL PORT, FEMALE)



PLAN VIEW



SIDE VIEW



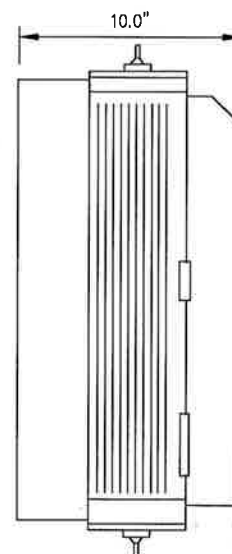
FRONT VIEW

2.5 ANTENNA

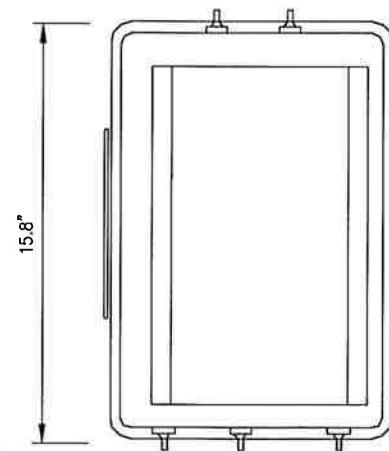
NO SCALE

3

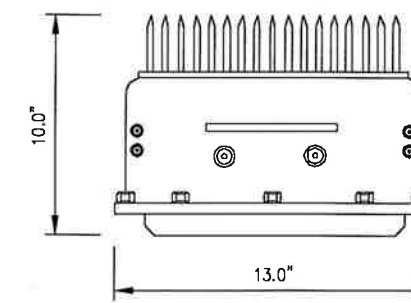
RRH: ALCATEL LUCENT RRH 800 MHz 2x50W
 COLOR: LIGHT GREY
 WEIGHT: 53 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

NOTES

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

800 MHz RRH

NO SCALE

4

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AIRSMITH
 DEVELOPMENT

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 SALEM/AMERICAN
 TOWER

SITE NUMBER:
 CT33XC578

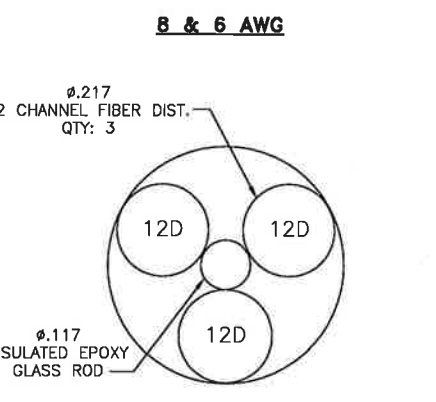
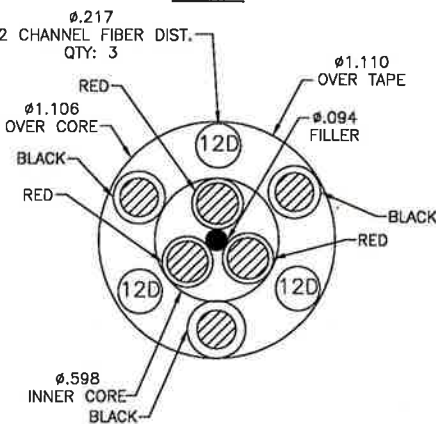
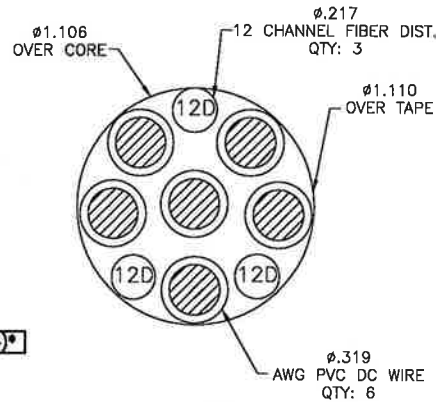
SITE ADDRESS:
 153 EAST HADDAM RD
 SALEM, CT 06420

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	
6 AWG Power	Hybrid cable MN: HB114-13U3M12-225F 3x 6 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 225 ft	225 ft
	MN: HB114-13U3M12-250F	250 ft
	MN: HB114-13U3M12-275F	275 ft
	MN: HB114-13U3M12-300F	300 ft
4 AWG Power	Hybrid cable MN: HB114-21U3M12-325F 3x 4 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 325 ft	325 ft
	MN: HB114-21U3M12-350F	350 ft
MN: HB114-21U3M12-375F	375 ft	

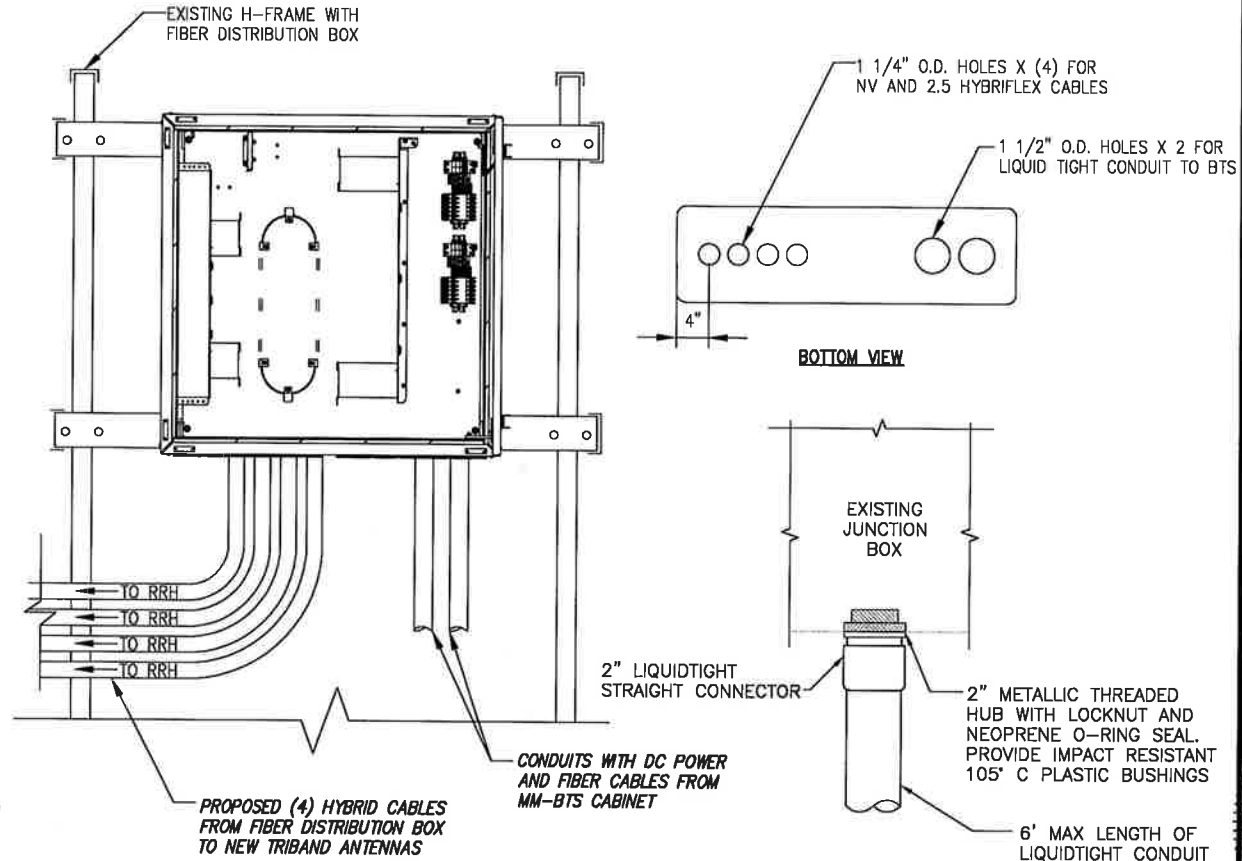


RFS HYBRIFLEX JUMPER CABLE SCHEDULE

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

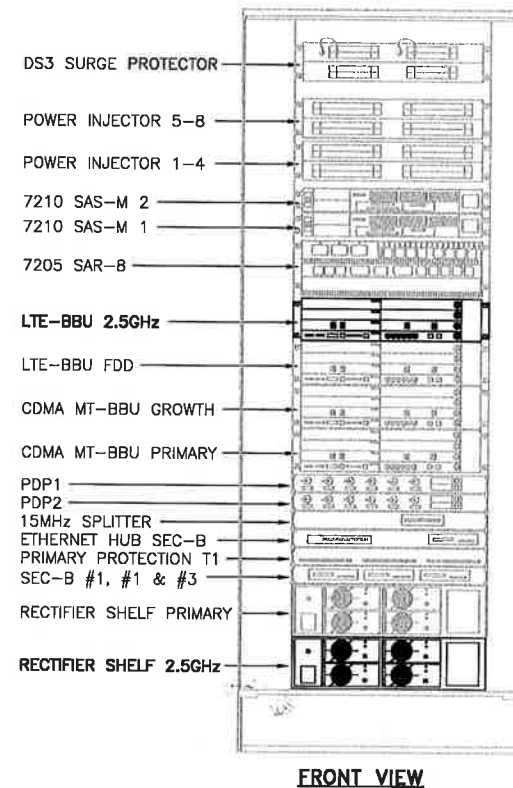
NOTE:
SPRINT CM TO CONFIRM HYBRID OR FIBER RISER CABLE AND HYBRID OR FIBER JUMPER CABLE MODEL NUMBERS IF HYBRID CABLES ARE REQUIRED BEFORE PREPARING BOM.

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



FIBER JUNCTION BOX PENETRATION

NO SCALE 2



FRONT VIEW

NEW EQUIPMENT IN EXISTING CABINET

NO SCALE 3

800/1900/2500 CROSS SECTION DATA

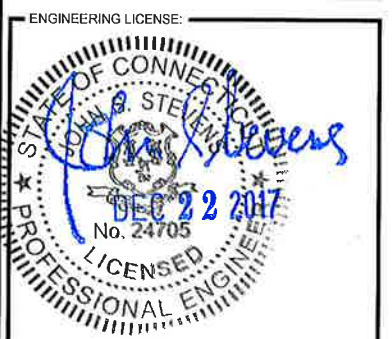
NO SCALE 1

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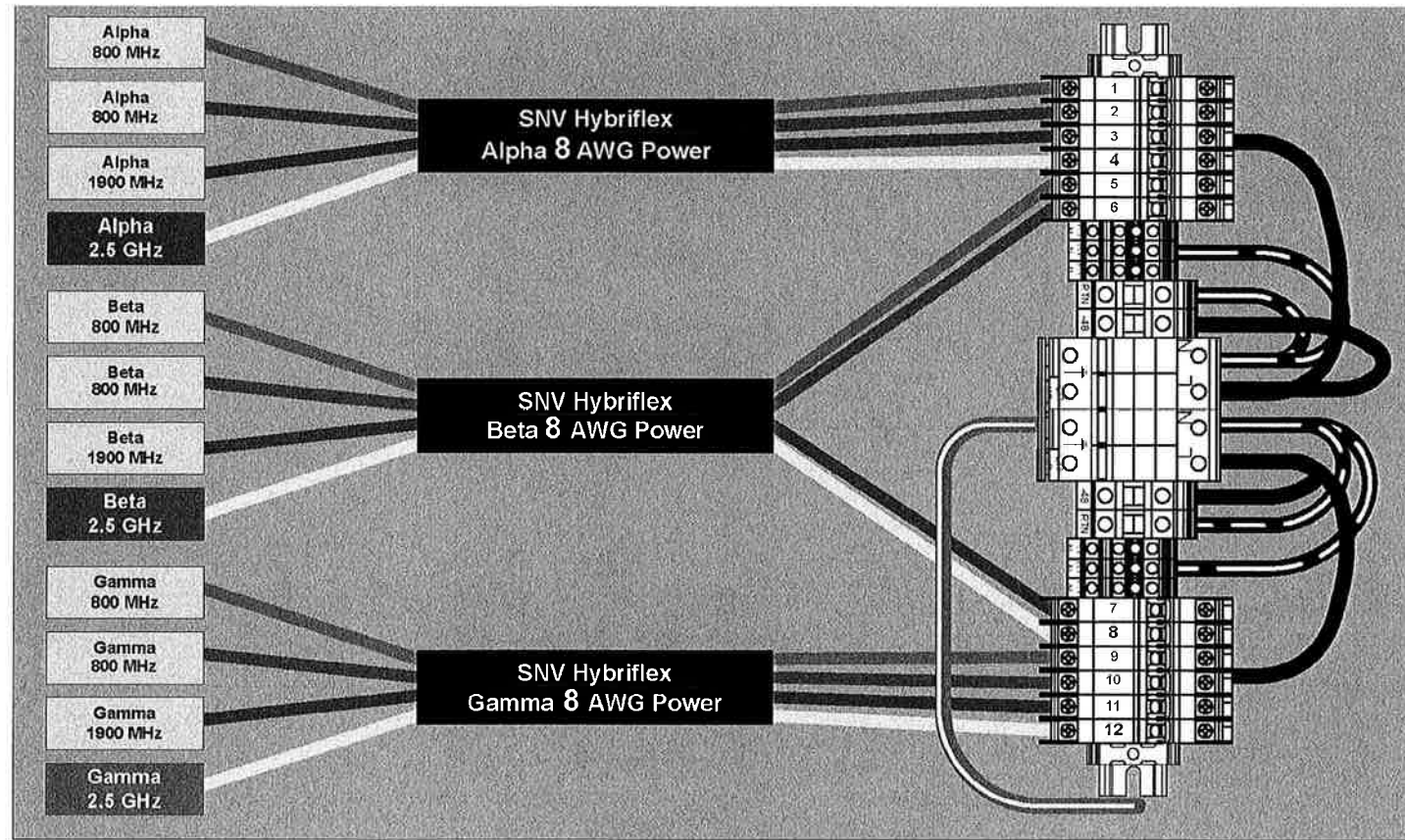
SITE NAME:
(R2E) CT4995 TO CT33-578 SALEM/AMERICAN TOWER

SITE NUMBER:
CT33XC578

SITE ADDRESS:
153 EAST HADDAM RD SALEM, CT 06420

SHEET DESCRIPTION:
CIVIL DETAILS

SHEET NUMBER:
A-5



RRH TO DISTRIBUTION BOX POWER CONNECTIVITY

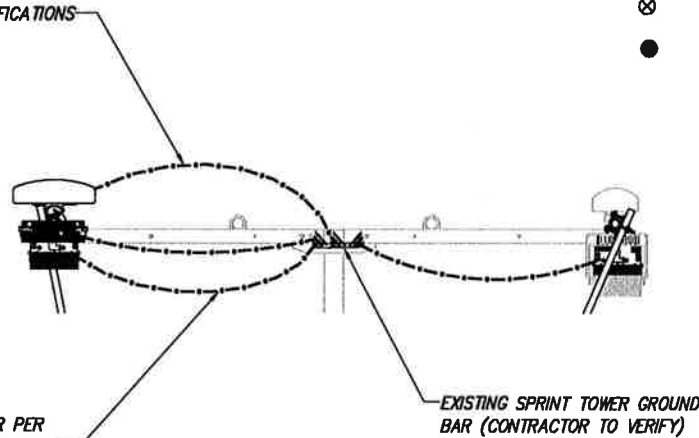
NO SCALE

1

LEGEND:

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

BOND INSTALL ANTENNA TO SECTOR GROUND BAR PER MANUFACTURER'S SPECIFICATIONS

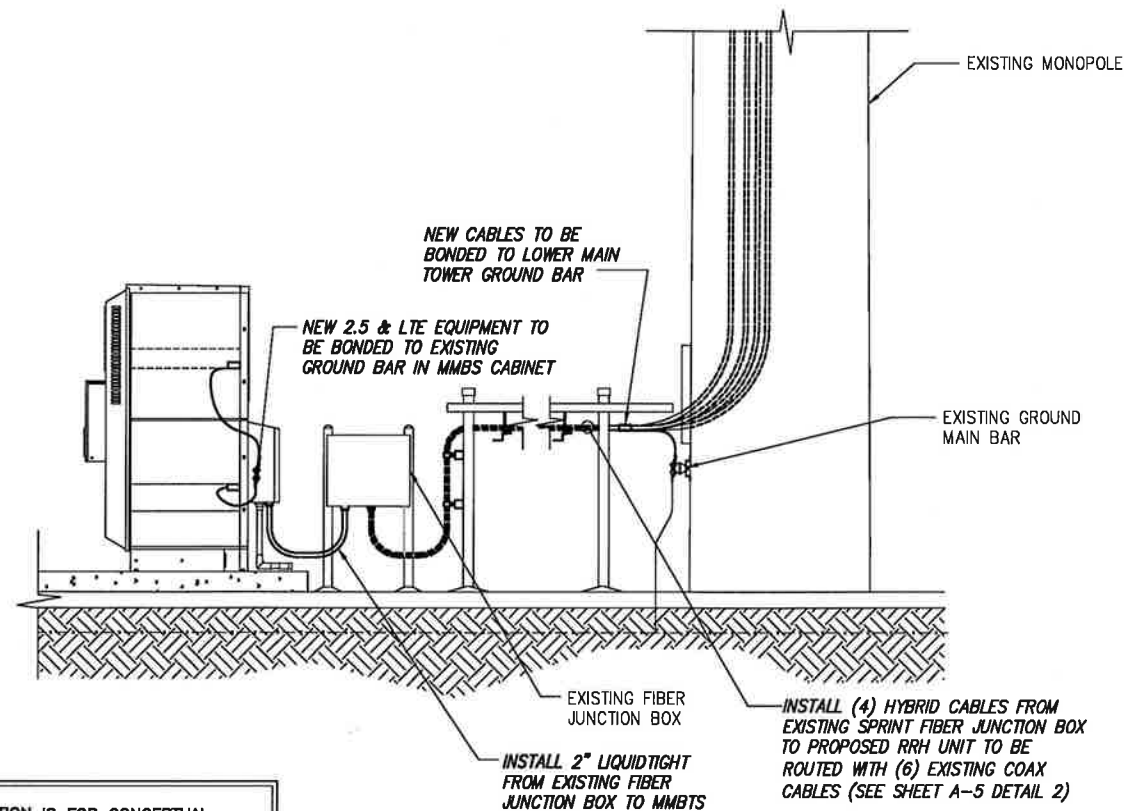


BOND RRH TO SECTOR BAR PER MANUFACTURER'S SPECIFICATIONS

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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ISSUED FOR PERMIT		12/22/17	JDL	0

SITE NAME:
(R2E) CT4995 TO CT33-578
SALEM/AMERICAN
TOWER

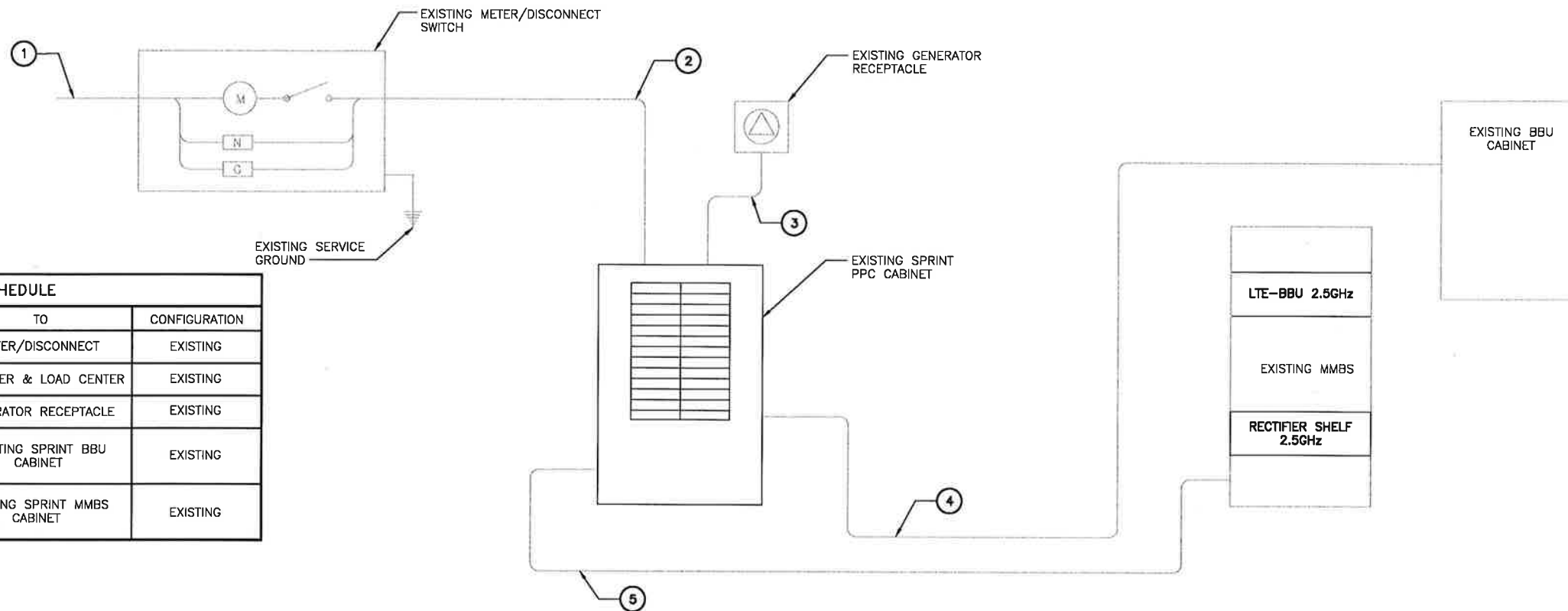
SITE NUMBER:
CT33XC578

SITE ADDRESS:
153 EAST HADDAM RD
SALEM, CT 06420

SHEET DESCRIPTION:
ELECTRICAL &
GROUNDING PLAN

SHEET NUMBER:
E-1

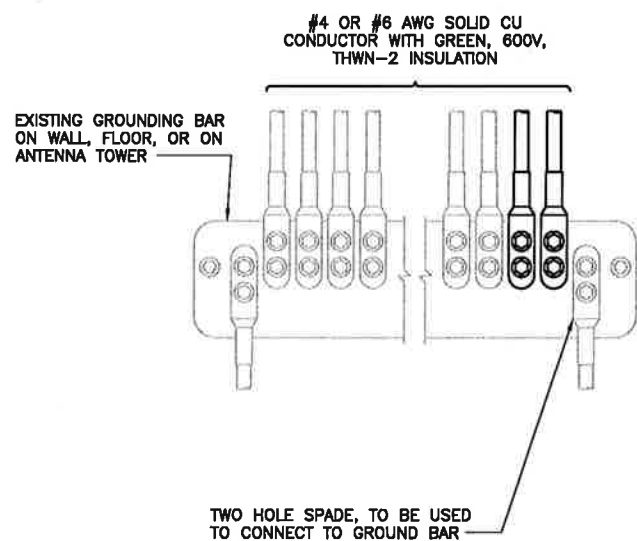
NOTES
 CG SHALL REFERENCE ALL SPECS FOR "CONNECTING THE POWER SUPPLY" OF THE NEW INSTALLATION DOCUMENTS, FOR ALL CONNECTION SPECIFICATIONS.



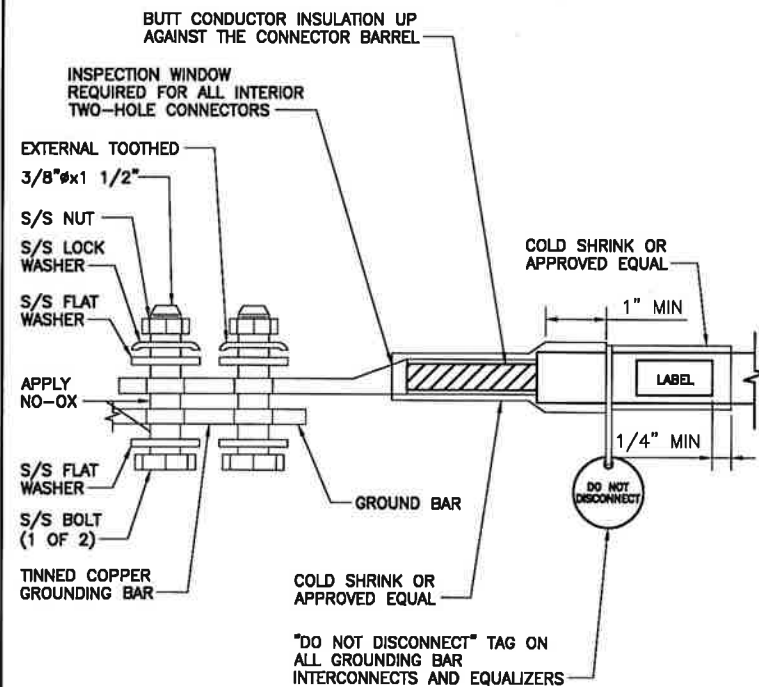
CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
1	UTILITY SOURCE	METER/DISCONNECT	EXISTING
2	METER/DISCONNECT	TRANSFER & LOAD CENTER	EXISTING
3	TRANSFER & LOAD CENTER	GENERATOR RECEPTACLE	EXISTING
4	TRANSFER & LOAD CENTER	EXISTING SPRINT BBU CABINET	EXISTING
5	TRANSFER & LOAD CENTER	EXISTING SPRINT MMBS CABINET	EXISTING

ELECTRICAL ONE-LINE DIAGRAM

NO SCALE 1

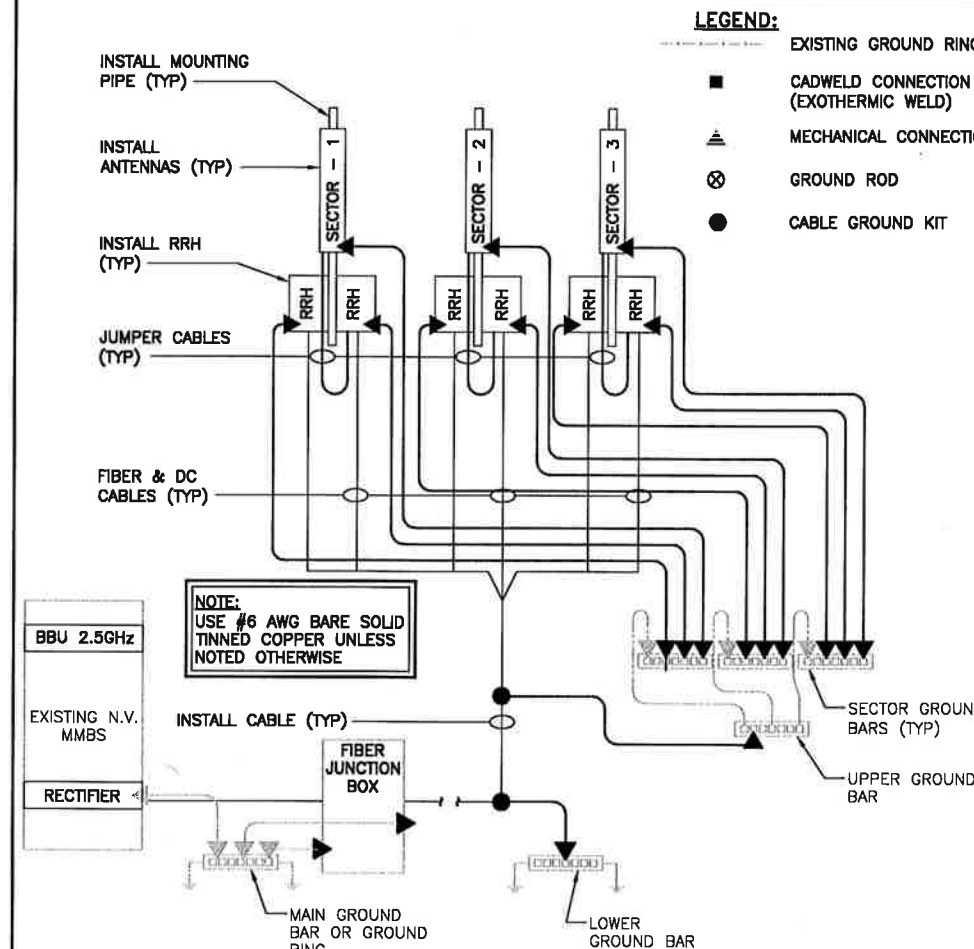


NOTES
 1. APPLY NO-OX TO LUG AND BAR CONTACT SURFACE. DO NOT COAT INLINE LUG.
 2. IF STOLEN GROUND BARS ARE ENCOUNTERED, CONTACT SPRINT CM FOR REPLACEMENT THREADED ROD KIT.



TWO HOLE LUG

NO SCALE 3



GROUNDING RISER DIAGRAM

NO SCALE 4

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PLANS PREPARED BY:

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SITE NUMBER:
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SITE ADDRESS:
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 SALEM, CT 06420

SHEET DESCRIPTION:
 ELECTRICAL &
 GROUNDING DETAILS

SHEET NUMBER:
 E-2

INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR

NO SCALE 2