AIROSMITH DEVELOPMENT
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June 18th, 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 1375 NORTH ROAD, DAYVILLE CONNECTICUT – CT72XC042 (lat. 41° 52' 17.47" N, long. -71° 49' 17.49" W)

Dear Ms. Bachman:

Sprint Spectrum, LP ("Sprint") currently maintains wireless telecommunications antennas at the (306-foot level) on an existing (287.5-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, add three (3) new antennas, relocate three (3) RRHs from ground level to the tower and add nine (9) new RRHs onto the tower. All the proposed work is contained within the existing fenced area. Please refer to the attached drawings for site plans prepared by Infinigy Engineering.

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 SEAN HENDRICKS, TOWN MANAGER and ANN-MARIE AUBREY, DIRECTOR OF PLANNING & DEVELOPMENT of the Town of KILLINGLY (DAYVILLE). A copy of this letter is also being sent to JUSTINE PAUL the manager for AMERICAN TOWER CORPORATION who manages the site.

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

1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The antennas work is a one-for-one replacement of facility components.
3. The proposed modifications will include the addition of ground base equipment as

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

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

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

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

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

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

Kind Regards,

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

Attachment

CC: SEAN HENDRICKS (TOWN MANAGER / KILLINGLY (DAYVILLE), CT)
JUSTINE PAUL (Manager, AMERICAN TOWER CORPORATION)
ANN-MARIE AUBREY (DIRECTOR OF PLANNING & DEVELOPMENT KILLINGLY (DAYVILLE), CT)

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Sent To Ann-Marie Abery CT72xc042

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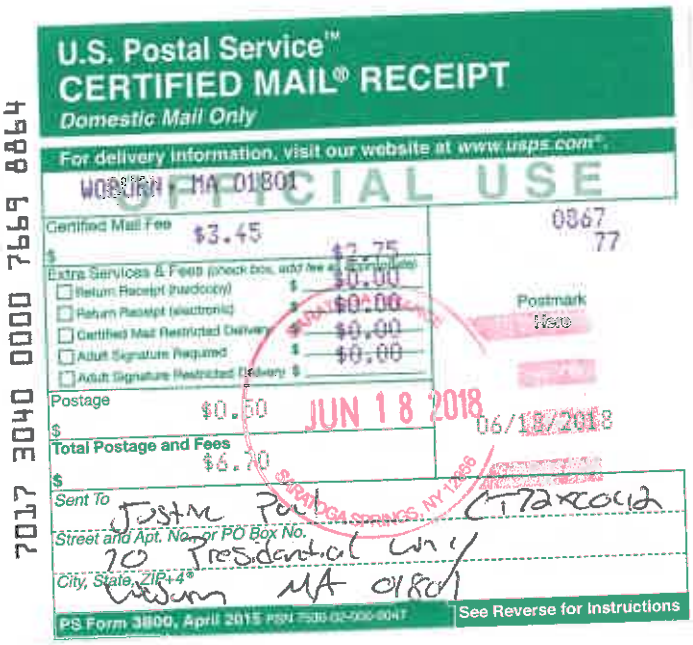

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Sent To Joshua Paul CT72xc042

Street and Apt. No., or PO Box No. 70 Residential Cir

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Sent To Sean Henderson CT72xc042

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tyler clt division

COMMERCIAL PROPERTY RECORD CARD 2017

TOWN OF KILLINGLY

Situs : 1375 NORTH RD	Map ID: 000072	Class: Communication Towers	Card: 1 of 1	Printed: April 27, 2017

CURRENT OWNER

AMERICAN TOWERS INC
PO BOX 723597
ATLANTA GA 31139

GENERAL INFORMATION

Living Units	
Neighborhood	117
Alternate Id	50-3
Vol / Pg	772/5
District	4
Zoning	RURAL DEVELOPMENT
Class	COMMERCIAL

Property Notes

AT&T TRANSFER STATION

Land Information

Type		Size	Influence Factors	Influence %	Value
Primary	AC	2.0700			49,870

Total Acres: 2.07
Spot: Location:

Assessment Information

	Assessed	Appraised	Cost	Income	Market
Land	34,930	49,900	49,900	0	0
Building	188,160	268,800	268,800	0	0
Total	223,090	318,700	318,700	0	0

Value Flag COST APPROACH
Gross Building:
Manual Override Reason
Base Date of Value 10/01/2013
Effective Date of Value 10/01/2017

Entrance Information

Date	ID	Entry Code	Source
05/17/12	DB	Viewed	Other
05/16/12	DB	Viewed	Other
12/11/06	DH	Exterior	Other

Permit Information

Date Issued	Number	Price	Purpose		% Complete
11/30/12	22122	25,000	BLDG	Add 13 New Antennas & 6 Rrh'S (	996
11/12/10	20889	12,000	52 CADD	Build Out Of Rm For Cellular Equip	100
08/31/10	20753	50,000	52 CADD	Addn 6 Antennas & Assoc Equip I	100
06/07/07	18646	25,000	52 CADD	Install Antennas	100
08/27/98	13234	4,000	BLDG	Nvc Tank Out	100

Sales/Ownership History

Transfer Date	Price	Type	Validity	Deed Reference	Deed Type	Grantee
02/16/00	186,528	Land & Bldg	Love And Affection Sale	772/5		AMERICAN TOWERS INC

Inspection Witnessed By _____

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COMMERCIAL PROPERTY RECORD CARD 2017

TOWN OF KILLINGLY

Situs : 1375 NORTH RD	Parcel Id: 000072	Class: Communication Towers	Card: 1 of 1	Printed: April 27, 2017

Building Information

Year Built/Eff Year	1960 /
Building #	1
Structure Type	Radio/Tv Transmitte
Identical Units	1
Total Units	
Grade	B-
# Covered Parking	
# Uncovered Parking	
DBA	AMERICAN TOWER

Building Other Features

Line	Type	+/-	Meas1	Meas2	# Stops	Ident	Units	Line	Type	+/-	Meas1	Meas2	# Stops	Ident	Units

Interior/Exterior Information

Line	Level	From	To	Int Fin	Area	Perim	Use Type	Wall Height	Ext Walls	Construction	Partitions	Heating	Cooling	Plumbing	Physical	Functional
1	01	01		100	2,048	158	Light Manufacturin	16	Concrete Bl	Wood Frame/Joist/B	Normal	None	None	Normal	4	4
2	01	01		100	1,575	151	Light Manufacturin	12	Concrete Bl	Wood Frame/Joist/B	Normal	None	None	Normal	4	4

Interior/Exterior Valuation Detail

Line	Area	Use Type	% Good	% Complete	Use Value/RCNLD
1	2,048	Light Manufacturing	60		73,210
2	1,575	Light Manufacturing	60		54,770

Outbuilding Data

Line	Type	Yr Blt	Meas1	Meas2	Qty	Area	Grade	Phy	Fun	Value
1	Fence Chai	1960	6	240	1	1,440	C	3	3	1,780
2	Asph Pav	1960	1	3,700	1	3,700	C	3	3	4,000
3	Tow er Cell	1960	1	300	1	300	C	3	3	135,000

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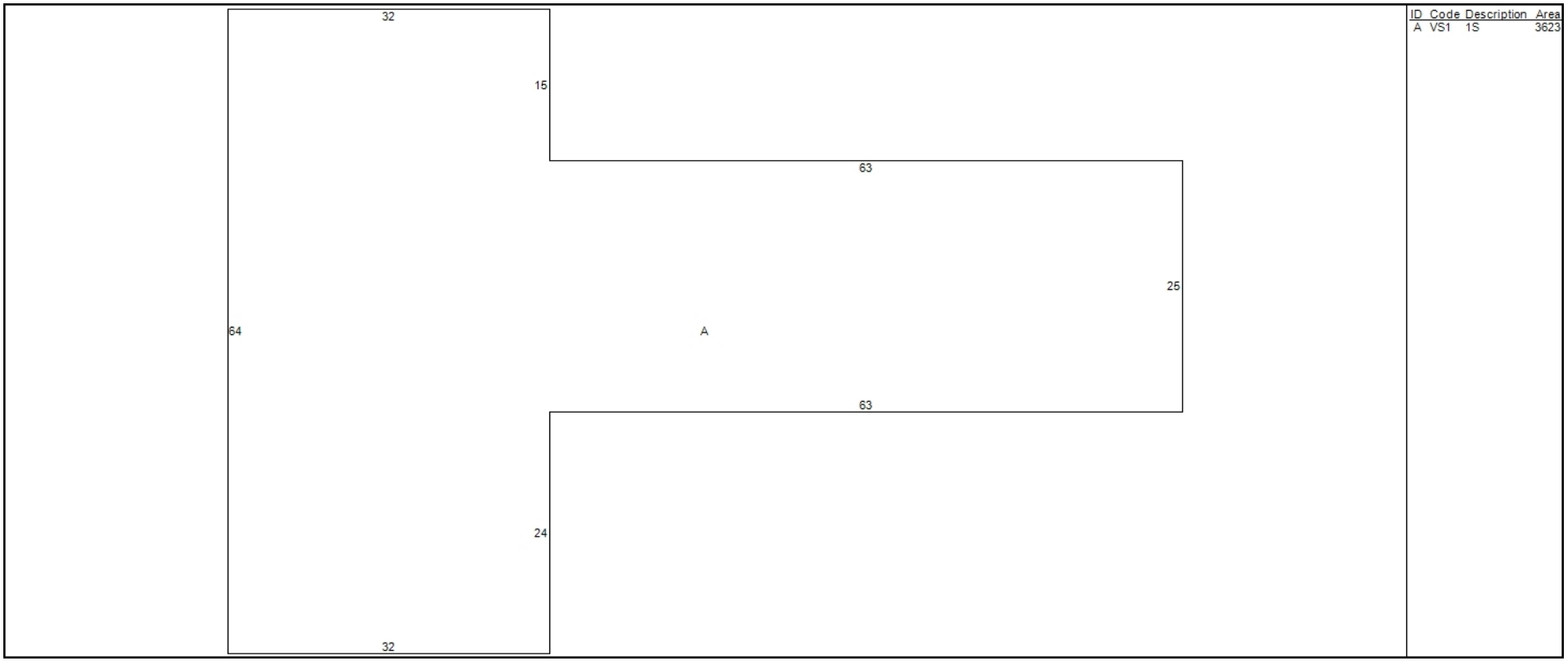
COMMERCIAL PROPERTY RECORD CARD 2017

TOWN OF KILLINGLY

Situs : 1375 NORTH RD	Parcel Id: 000072	Class: Communication Towers	Card: 1 of 1	Printed: April 27, 2017



Addtional Property Photos

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COMMERCIAL PROPERTY RECORD CARD 2017

TOWN OF KILLINGLY

Situs : 1375 NORTH RD	Parcel Id: 000072	Class: Communication Towers	Card: 1 of 1	Printed: April 27, 2017

Income Detail (Includes all Buildings on Parcel)

Use Grp	Mod Type	Inc Mod	Model Description	Units	Net Area	Income Rate	Econ Adjust	Potential Gross Income	Vac Model	Vac Adj	Additional Income	Effective Gross Income	Expense Model %	Expense Adj %	Expense Adj	Other Expenses	Total Expenses	Net Operating Income
07	S		Light Manuf/Warehouse	0	3,623						0							

Apartment Detail - Building 1 of 1

Line	Use Type	Per Bldg	Beds	Baths	Units	Rent	Income

Building Cost Detail - Building 1 of 1

Total Gross Building Area	3,623
Replace, Cost New Less Depr	127,980
Percent Complete	100
Number of Identical Units	1
Economic Condition Factor	
Final Building Value	127,980
Value per SF	35.32

Notes - Building 1 of 1

Income Summary (Includes all Building on Parcel)

Total Net Income	
Capitalization Rate	0.000000
Sub total	
Residual Land Value	
Final Income Value	
Total Gross Rent Area	3,623
Total Gross Building Area	3,623

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

SPRINT Existing Facility

Site ID: CT72XC042

CT0958-Ring to Existing-(R2E)
1375 North Road
Dayville, CT 06241

June 11, 2018

EBI Project Number: 6218004306

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	2.96 %

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

EBI Consulting
environmental | engineering | due diligence

June 11, 2018

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

Emissions Analysis for Site: **CT72XC042 – CT0958-Ring to Existing-(R2E)**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **1375 North Road, Dayville, CT**, for the purpose of determining whether the emissions from the Proposed SPRINT Antenna Installation located on this property are within specified federal limits.

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

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

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

General population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 850 MHz Band is approximately 567 $\mu W/cm^2$. The general population exposure limit for the 1900 MHz (PCS) and 2500 MHz (BRS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed SPRINT Wireless antenna facility located at **1375 North Road, Dayville, 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 50 Watts per Channel.

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

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

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

6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

8) The antennas used in this modeling are the **Commscope NNVV-65B-R4 and the RFS APXVTM14-ALU-I20** 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 **306 feet** above ground level (AGL) for **Sector A**, **306 feet** above ground level (AGL) for **Sector B** and **306 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:	Commscope NNVV-65B-R4	Make / Model:	Commscope NNVV-65B-R4	Make / Model:	Commscope NNVV-65B-R4
Gain:	12.75 / 15.05 dBd	Gain:	12.75 / 15.05 dBd	Gain:	12.75 / 15.05 dBd
Height (AGL):	**306 feet**	Height (AGL):	**306 feet**	Height (AGL):	**306 feet**
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	10	Channel Count	10	Channel Count	10
Total TX Power(W):	280 Watts	Total TX Power(W):	280 Watts	Total TX Power(W):	280 Watts
ERP (W):	7,378.61	ERP (W):	7,378.61	ERP (W):	7,378.61
Antenna A1 MPE%	**0.36 %**	Antenna B1 MPE%	**0.36 %**	Antenna C1 MPE%	**0.36 %**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	RFS APXVTM14-ALU-I20	Make / Model:	RFS APXVTM14-ALU-I20	Make / Model:	RFS APXVTM14-ALU-I20
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	**306 feet**	Height (AGL):	**306 feet**	Height (AGL):	**306 feet**
Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts
ERP (W):	6,224.72	ERP (W):	6,224.72	ERP (W):	6,224.72
Antenna A2 MPE%	**0.25 %**	Antenna B2 MPE%	**0.25 %**	Antenna C2 MPE%	**0.25 %**

Site Composite MPE%	
Carrier	**MPE%**
SPRINT – Max per sector	**0.61 %**
T-Mobile	0.85 %
Verizon Wireless	0.74 %
AT&T	0.76 %
Site Total MPE %:	**2.96 %**

SPRINT Sector A Total:	0.61 %
SPRINT Sector B Total:	0.61 %
SPRINT Sector C Total:	0.61 %
Site Total:	2.96 %

SPRINT _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	376.73	306	0.15	850 MHz	567	0.03%
Sprint 850 MHz LTE	2	941.82	306	0.75	850 MHz	567	0.13%
Sprint 1900 MHz (PCS) CDMA	5	511.82	306	1.02	1900 MHz (PCS)	1000	0.10%
Sprint 1900 MHz (PCS) LTE	2	1,279.56	306	1.02	1900 MHz (PCS)	1000	0.10%
Sprint 2500 MHz (BRS) LTE	8	778.09	306	2.49	2500 MHz (BRS)	1000	0.25%
						Total:	**0.61%**

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:	0.61 %
Sector B:	0.61 %
Sector C:	0.61 %
SPRINT Maximum Total (per sector):	0.61 %
Site Total:	2.96 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **2.96 %** 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.

INFINIGY
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the solutions are endless

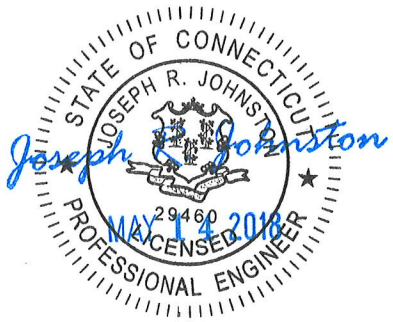
1033 WATERVLIET SHAKER RD, ALBANY, NY 12205

Mount Analysis Report

May 12, 2018

Site Name	CT72XC042
Infinigy Job Number	526-104
Client	Airosmith
Proposed Carrier	Sprint
Site Location	North Road Dayville, CT 06241 41.87150° N NAD83 71.82150° W NAD83
Mount Centerline El.	306.0 ft
Mount Classification	Tag Tower Mounted Sector Frame
Failing Structural Usage	**112.0%**
Passing Structural Usage	**68.6%**
Overall Result	**Contingent Pass- See Required Modification Below.**
Note	**Replace existing mount pipes with (2) new 96" Long 2.875" OD Sch 40 Mount Pipe per sector. See appended documents for modifications detail.**

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA code requirements. The mounts for the proposed carrier are therefore deemed adequate to support the final loading configuration as listed in this report.



Nathaniel R. Ober, E.I.T.
Northeast Structural Region Lead

Contents

Introduction

Infinigy Engineering has been requested to perform a mount analysis on the existing Sprint mounts. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The mount was analyzed using RISA-3D Version 16.0.3 analysis software.

Supporting Documentation

Colo Application	ATC Eng #OAA710428, dated March 9, 2018

Analysis Code Requirements

Wind Speed	101 mph (3-Second Gust,Vasd) / 130 mph (3-Second Gust,Vult)
Wind Speed w/ ice	50 mph (3-Second Gust,Vasd) w/ 1" Ice
TIA Revision	ANSI/TIA-222-G
Adopted IBC	2012 IBC
Jurisdictional Code	2016 Connecticut State Building Code
Structure Class	II
Exposure Category	B
Topographic Category	1
Calculated Crest Height	0 ft.

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA code requirements. The mounts for the proposed carrier are therefore deemed adequate to support the final loading configuration as listed in this report.

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

Nathaniel R Ober E.I.T.
Northeast Structural Region Lead | Infinigy
1033 Watervliet Shaker Road, Albany, NY 12205
(O) (518) 690-0790 | (M) (303) 704-0322
nober@infinigy.com | www.infinigy.com

Final Configuration Loading

Mount CL (ft)	Rad. HT (ft)	Vert. O/S (ft)	Horiz. O/S (ft)*	Qty	Appurtenance	Carrier
306.0	306.0	0.0	1.0	3	Commscope NNVV-65B-R4	Sprint
			13.0	3	RFS APXVTM14-ALU-I20	
			13.0	3	Alcatel Lucent 1900 MHz RRH	
			1.0, 13.0	6	Alcatel Lucent RRH2x50-08	
			1.0	3	Alcatel Lucent TD-RRH8x20-25	

***Horizontal Offset is defined as the distance from the left most edge of the mount face horizontal when viewed facing the tower**

Structure Usages

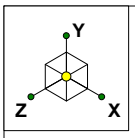
Stand off	68.6	Pass
Horizontal	54.0	Pass
Mount Pipe	59.6	Pass
RATING =	**68.6**	**Pass**

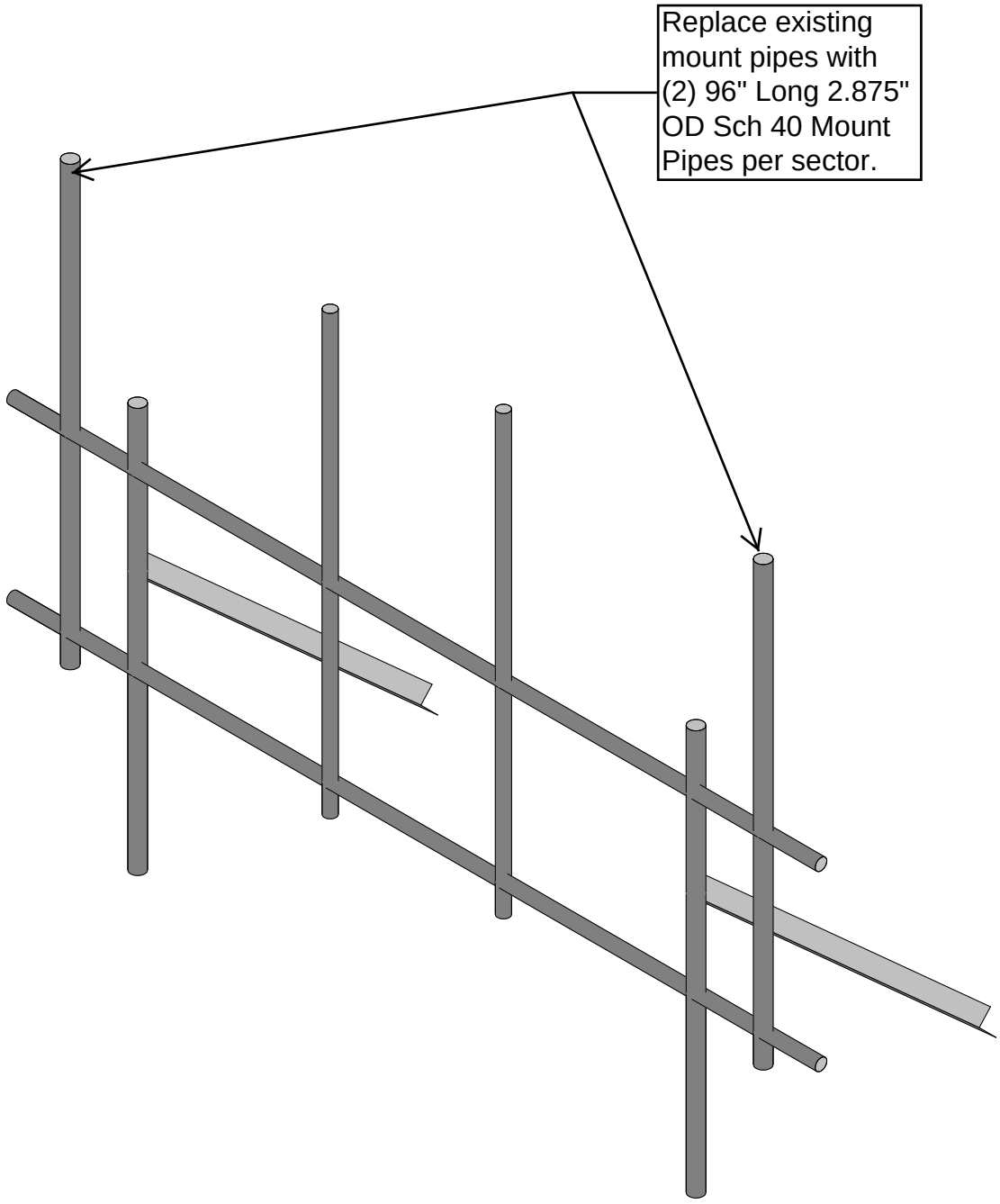
Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of "like new" and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure's condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report Infinigy Engineering should be notified immediately to complete a revised evaluation.

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

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





Envelope Only Solution

Infinigy Engineering PLLC	CT72XC042	
NRO		May 12, 2018 at 4:10 PM
526-104		CT72XC042.r3d

Site Name:	CT72XC042
Client:	Airosmith
Carrier:	Sprint
Engineer:	NRO
Date:	5/12/2018

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

INFINIGY WIND LOAD CALCULATOR 3.0.2

Site Information Inputs:

Adopted Building Code:	2012 IBC
Structure Load Standard:	TIA-222-G
Antenna Load Standard:	TIA-222-G
Structure Risk Category:	II
Structure Type:	Mount - Sector
Number of Sectors:	3
Structure Shape 1:	Round

Rooftop Inputs:

Rooftop Wind Speed-Up?:	No

Wind Loading Inputs:

Design Wind Velocity:	101	mph (nominal 3-second gust)
Wind Centerline 1 (z_1):	306.0	ft
Side Face Angle (θ):	60	degrees
Exposure Category:	B	
Topographic Category:	1	

Wind with No Ice		
q_z (psf)	Gh	F_{ST} (psf)
33.75	1.00	**40.50**

Wind with Ice		
q_z (psf)	Gh	F_{ST} (psf)
8.27	1.00	**23.50**

Ice Loading Inputs:

Is Ice Loading Needed?:	Yes	
Ice Wind Velocity:	50	mph (nominal 3-second gust)
Base Ice Thickness:	0.75	in

Input Appurtenance Information and Load Placements:

Appurtenance Name	Elevation (ft)	Total Quantity	Ka	Front Shape	Side Shape	q_z (psf)	EPA (ft^2)	Fz (lbs)	Fx (lbs)	Fz(60) (lbs)	Fx(30) (lbs)
Commscope NNVV-65B-R4	306.0	3	1.00	Flat	Flat	33.75	12.27	414.12	194.05	249.07	359.10
RFS APXVTM14-ALU-I20	306.0	3	1.00	Flat	Flat	33.75	6.34	214.04	121.74	144.82	190.97
TD-RRH8x20-25	306.0	3	1.00	Flat	Flat	33.75	3.70	125.01	43.67	64.00	104.67
RRH2x50-800	306.0	3	1.00	Flat	Flat	33.75	1.70	57.40	43.27	46.80	53.87
Alcatel-Lucent 1900 MHz RRH	306.0	3	1.00	Flat	Flat	33.75	2.31	78.04	80.15	79.62	78.57

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N17	N2			L3.5X3.5X1/4	VBrace	Single Angle	A36 Gr.36	Typical
2	M2	N18	N4			L3.5X3.5X1/4	VBrace	Single Angle	A36 Gr.36	Typical
3	M3	N9	N16			PIPE 2 STD	Beam	Pipe	A53 Gr.B	Typical
4	M4	N19	N26			PIPE 2 STD	Beam	Pipe	A53 Gr.B	Typical
5	M5	N5	N29			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
6	M6	N6	N30			PIPE 2 STD C...	Column	Pipe	A53 Gr.B	Typical
7	M7	N7	N31			PIPE 2 STD C...	Column	Pipe	A53 Gr.B	Typical
8	M8	N8	N32			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
9	M9	N1	N27			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
10	M10	N3	N28			Mount Pipe	Column	Pipe	A53 Gr.B	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[LB]
1	Hot Rolled Steel				
2	A36 Gr.36	L3.5x3.5x4	2	161.4	77.8
3	A53 Gr.B	PIPE_2.0	4	517.8	149.8
4	A53 Gr.B	PIPE_2.5	4	349.8	159.7
5	Total HR Steel		10	1029	387.3

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut..	Area(M...	Surface...
1	Self Weight	DL		-1			8			
2	Wind Load AZI 000	WLZ					8		4	
3	Wind Load AZI 090	WLX					8		1	
4	Ice Weight	OL1					8	10		
5	Wind + Ice Load AZI 000	OL2					8		4	
6	Wind + Ice Load AZI 090	OL3					8		1	
7	Service Live 1	LL					1			
8	Seismic Load AZI 000	ELZ								
9	Seismic Load AZI 090	ELX								
10	BLC 2 Transient Area Loads	None						14		
11	BLC 3 Transient Area Loads	None						6		
12	BLC 5 Transient Area Loads	None						14		
13	BLC 6 Transient Area Loads	None						6		

Load Combinations

	Description	So..	P...	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
1	1.4D	Yes	Y		DL	1.4																		
2	1.2D + 1.6W AZI 000	Yes	Y		DL	1.2	W...	1.6																
3	1.2D + 1.6W AZI 030	Yes	Y		DL	1.2	W...	1.3...	W...	.8														
4	1.2D + 1.6W AZI 060	Yes	Y		DL	1.2	W...	.8	W...	1.3...														
5	1.2D + 1.6W AZI 090	Yes	Y		DL	1.2			W...	1.6														
6	1.2D + 1.6W AZI 120	Yes	Y		DL	1.2	W...	-.8	W...	1.3...														
7	1.2D + 1.6W AZI 150	Yes	Y		DL	1.2	W...	-1.3...	W...	.8														
8	1.2D + 1.6W AZI 180	Yes	Y		DL	1.2	W...	-1.6																
9	1.2D + 1.6W AZI 210	Yes	Y		DL	1.2	W...	-1.3...	W...	-.8														
10	1.2D + 1.6W AZI 240	Yes	Y		DL	1.2	W...	-.8	W...	-1.3...														
11	1.2D + 1.6W AZI 270	Yes	Y		DL	1.2			W...	-1.6														
12	1.2D + 1.6W AZI 300	Yes	Y		DL	1.2	W...	.8	W...	-1.3...														
13	1.2D + 1.6W AZI 330	Yes	Y		DL	1.2	W...	1.3...	W...	-.8														
14	0.9D + 1.6W AZI 000	Yes	Y		DL	.9	W...	1.6																

Load Combinations (Continued)

	Description	So..	P...	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
15	0.9D + 1.6W AZI 030	Yes	Y		DL	.9	W...	1.3...	W...	.8																
16	0.9D + 1.6W AZI 060	Yes	Y		DL	.9	W...	.8	W...	1.3...																
17	0.9D + 1.6W AZI 090	Yes	Y		DL	.9			W...	1.6																
18	0.9D + 1.6W AZI 120	Yes	Y		DL	.9	W...	-.8	W...	1.3...																
19	0.9D + 1.6W AZI 150	Yes	Y		DL	.9	W...	-1.3...	W...	.8																
20	0.9D + 1.6W AZI 180	Yes	Y		DL	.9	W...	-1.6																		
21	0.9D + 1.6W AZI 210	Yes	Y		DL	.9	W...	-1.3...	W...	-.8																
22	0.9D + 1.6W AZI 240	Yes	Y		DL	.9	W...	-.8	W...	-1.3...																
23	0.9D + 1.6W AZI 270	Yes	Y		DL	.9			W...	-1.6																
24	0.9D + 1.6W AZI 300	Yes	Y		DL	.9	W...	.8	W...	-1.3...																
25	0.9D + 1.6W AZI 330	Yes	Y		DL	.9	W...	1.3...	W...	-.8																
26	1.2D + 1.0Di	Yes	Y		DL	1.2	OL1	1																		
27	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1	OL2	1																
28	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1	OL2	.866	OL3	.5														
29	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1	OL2	.5	OL3	.866														
30	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1			OL3	1														
31	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1	OL2	-.5	OL3	.866														
32	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1	OL2	-.866	OL3	.5														
33	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1	OL2	-1																
34	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1	OL2	-.866	OL3	-.5														
35	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1	OL2	-.5	OL3	-.866														
36	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1			OL3	-1														
37	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1	OL2	.5	OL3	-.866														
38	1.2D + 1.0Di + 1.0Wi A...	Yes	Y		DL	1.2	OL1	1	OL2	.866	OL3	-.5														
39	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5	W...	.074																
40	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5	W...	.064	W...	.037														
41	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5	W...	.037	W...	.064														
42	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5			W...	.074														
43	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5	W...	-.037	W...	.064														
44	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5	W...	-.064	W...	.037														
45	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5	W...	-.074																
46	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5	W...	-.064	W...	-.037														
47	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5	W...	-.037	W...	-.064														
48	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5			W...	-.074														
49	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5	W...	.037	W...	-.064														
50	1.2D + 1.5L + 1.0WL (...	Yes	Y		DL	1.2	LL	1.5	W...	.064	W...	-.037														
51	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...	ELZ	1																		
52	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...	ELZ	.866	ELX	.5																
53	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...	ELZ	.5	ELX	.866																
54	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...			ELX	1																
55	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...	ELZ	-.5	ELX	.866																
56	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...	ELZ	-.866	ELX	.5																
57	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...	ELZ	-1																		
58	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...	ELZ	-.866	ELX	-.5																
59	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...	ELZ	-.5	ELX	-.866																
60	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...			ELX	-1																
61	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...	ELZ	.5	ELX	-.866																
62	(1.2+0.2Sds) + 1.0 E A...	Yes	Y		DL	1.2...	ELZ	.866	ELX	-.5																
63	(0.9-0.2Sds) + 1.0E AZ...	Yes	Y		DL	.863	ELZ	1																		
64	(0.9-0.2Sds) + 1.0E AZ...	Yes	Y		DL	.863	ELZ	.866	ELX	.5																
65	(0.9-0.2Sds) + 1.0E AZ...	Yes	Y		DL	.863	ELZ	.5	ELX	.866																
66	(0.9-0.2Sds) + 1.0E AZ...	Yes	Y		DL	.863			ELX	1																
67	(0.9-0.2Sds) + 1.0E AZ...	Yes	Y		DL	.863	ELZ	-.5	ELX	.866																
68	(0.9-0.2Sds) + 1.0E AZ...	Yes	Y		DL	.863	ELZ	-.866	ELX	.5																
69	(0.9-0.2Sds) + 1.0E AZ...	Yes	Y		DL	.863	ELZ	-1																		
70	(0.9-0.2Sds) + 1.0E AZ...	Yes	Y		DL	.863	ELZ	-.866	ELX	-.5																
71	(0.9-0.2Sds) + 1.0E AZ...	Yes	Y		DL	.863	ELZ	-.5	ELX	-.866																

Load Combinations (Continued)

	Description	So..	P...	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
72	(0.9-0.2Sds) + 1.0E AZ..	Yes	Y		DL	.863			ELX	-1														
73	(0.9-0.2Sds) + 1.0E AZ..	Yes	Y		DL	.863	ELZ	.5	ELX	-.866														
74	(0.9-0.2Sds) + 1.0E AZ..	Yes	Y		DL	.863	ELZ	.866	ELX	-.5														

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N3	max	674.031	5	1589.29	9	306.272	8	440.057	8	334.911	20	1389.953	23
2		min	-655.431	23	-955.304	15	-304.901	2	-437.269	2	-334.87	14	-1416.829	5
3	N1	max	611.966	17	2926.924	8	910.453	8	1289.676	8	589.678	14	1361.935	11
4		min	-633.348	11	-2076.469	14	-904.938	2	-1268.373	2	-589.625	20	-1356.342	5
5	N4	max	71.902	5	1154.114	2	1252.208	2	265.643	17	357.722	5	318.172	23
6		min	-70.282	23	-1104.375	20	-1253.575	8	-312.822	11	-350.958	23	-324.344	5
7	N2	max	72.013	5	2468.908	2	2714.765	2	264.092	17	358.321	5	319.374	23
8		min	-70.553	23	-2420.654	20	-2720.284	8	-312.242	11	-352.271	23	-324.877	5
9	Totals:	max	1427.431	5	2733.544	35	2757.133	2						
10		min	-1427.431	11	649.802	63	-2757.133	8						

Envelope AISC 14th(360-10): LRFD Steel Code Checks

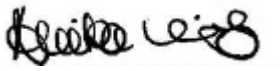
	Member	Shape	Code Check	Lo...	...	Shear C...	Loc[in]	...		LC	phi*Pnc...	phi*Pnt ...	phi*...	phi*...	...	Eqn
1	M9	PIPE_2.5	.686	53...	8	.260	54.25			2	49789....	50715	3596...	3596...	...	H1-...
2	M5	PIPE_2.5	.596	42...	8	.175	41.6...			2	44270....	50715	3596...	3596...	...	H1-...
3	M4	PIPE_2.0	.540	24.5	2	.308	24.5			2	31609.91	32130	1871...	1871...	...	H1-...
4	M6	PIPE_2.0	.416	6.6...	5	.061	6.628			6	28843....	32130	1871...	1871...	...	H1-...
5	M7	PIPE_2.0	.401	6.6...	...	.067	6.628			12	28843....	32130	1871...	1871...	...	H1-...
6	M10	PIPE_2.5	.395	0	5	.129	35.8...			8	47114....	50715	3596...	3596...	...	H1-...
7	M3	PIPE_2.0	.394	24.5	8	.392	24.5			8	31609.91	32130	1871...	1871...	...	H3-6
8	M1	L3.5x3....	.224	80...	4	.015	80.7...		y	13	26413.19	55080	2415...	4730...	...	H2-1
9	M2	L3.5x3....	.185	80...	4	.011	2.523		z	4	26413.19	55080	2415...	4729...	...	H2-1
10	M8	PIPE_2.5	.147	41...	2	.048	41.6...			2	47114....	50715	3596...	3596...	...	H1-...

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**287.5 ft Self Supported AT&T TAG Tower**
ATC Site Name	:	**East Killingly North, CT**
ATC Site Number	:	**88011**
Engineering Number	:	**OAA710428_C3_06**
Proposed Carrier	:	**Sprint Nextel**
Carrier Site Name	:	**CTNL194**
Carrier Site Number	:	**CTNL194**
Site Location	:	**North Road** **Dayville, CT 06241-1404** **41.871500,-71.821500**
County	:	**Windham**
Date	:	**June 5, 2018**
Max Usage	:	**101%**
Result	:	**Pass**

Prepared By:
Annika A. Venning, E.I.
Structural Engineer II



Reviewed By:

COA: PEC.0001553

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Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 287.5 ft self supported tower to reflect the change in loading by Sprint Nextel.

Supporting Documents

Tower Drawings	CSEI Analysis, ATC Eng. #26726321, dated September 13, 2006
Foundation Drawing	CSEI Analysis, ATC Eng. #26726321, dated September 13, 2006
Geotechnical Report	FDH Velocitel Project #17PXNW1600, dated February 27, 2017
Modifications	ATC Project #45432633, dated July 9, 2010 ATC Project #OAA686695_C6_04, dated November 28, 2016

Analysis

The tower was analyzed using Power Line Systems, Inc. tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	101 mph (3-Second Gust, Vasd) / 130 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:	5*
Crest Height:	0 ft

***Wind speed and topographic effects have been adjusted per site specific wind study in accordance with ASCE 7-10 Section 26.5.3, IBC Section 1609.3, and TIA-222-G Section 2.6.6.2.**

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					
287.5	-	-	-	CT72XC042 Mount	(6) 1 5/8" Coax	Sprint Nextel
277.0	277.0	8	Commscope CBC6AE7LQ-DS-43	Sector Frame	(4) 1 5/8" Fiber (1) 1/2" Coax	T-Mobile
		4	Ericsson Radio 4478 B71			
		4	Ericsson RRUS 11 B12			
		4	Ericsson RRUS 11 B4			
		1	Commscope SHP2-13			
		4	Ericsson AIR32 B66Aa/B2a			
		4	RFS APX16DWV-16DWVS-E-A20			
		4	RFS APXVAA24_43-U-A20			
266.0	266.0	6	RFS FD9R6004/2C-3L	Sector Frame	(10) 1 5/8" Coax (2) 1 1/4" Hybriflex	Verizon
		3	Alcatel-Lucent B13 RRH4x30-4R 700U			
		3	Alcatel-Lucent B66A RRH4x45-4R w/ Solar Shield			
		2	Raycap RC3DC-3315-PF-48			
		6	Antel LPA-80063-4CF-EDIN-X			
		6	Commscope SBNHH-1D65B			
246.0	246.0	6	Powerwave TT19-08BP111-001	Sector Frame	(2) 0.78" 8 AWG 6 (12) 2 1/4" Coax (1) 0.39" Fiber Trunk (1) 3" conduit	AT&T Mobility
		3	Raycap DC2-48-60-0-9E			
		1	Raycap FC12-PC6-10E			
		3	Ericsson RRUS-11			
		6	Powerwave P65-15-XLH-RR			
		2	KMW AM-X-CD-17-65-00T-RET			
		1	Kathrein 800 10766			
200.0	210.0	1	Andrew DB264	Side Arm	(1) 7/8" Coax	US Department Of Justice
50.0	50.0	1	MicroPulse GPS-QBW-26N	Stand-Off	(1) 1/2" Coax	Verizon

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
287.5	306.0	9	Decibel DB846G90A-XY	-	(9) 1 5/8" Coax	Sprint Nextel
		3	72" x 8" Panel			

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
287.5	306.0	6	Alcatel-Lucent RRH2x50-08	CT72XC042 Mount	(4) 1 1/4" Hybriflex	Sprint Nextel
		3	Alcatel-Lucent 1900MHz 4X45 RRH			
		3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
		3	RFS APXVTM14-ALU-I20			
		3	Commscope NNVV-65B-R4			

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

Double stack proposed coax alongside of the existing coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	83%	Pass
Diagonals	101%	Pass
Truss Diagonals	101%	Pass
Horizontals	92%	Pass
Truss Horizontals	101%	Pass
Anchor Bolts	54%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	363.5	78%
Axial (Kips)	486.5	10%

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

AMERICAN TOWER®
CORPORATION

Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

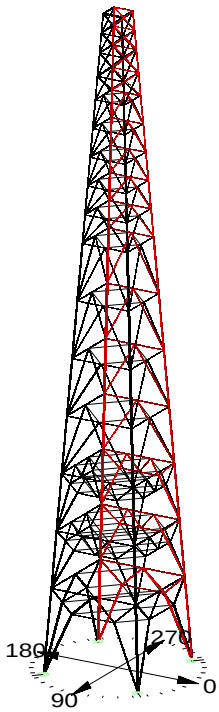
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

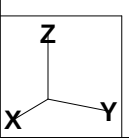
All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

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 supplied herein.

American Tower Corp., Project: "Sprint Nextel-03-21-2018"
Tower Version 15.01, 1:40:57 PM Wednesday, March 21, 2018
Undeformed geometry displayed





Project Name : 88011 - East Killingly North, CT
Project Notes: OAA720744_C3_02 - T-Mobile
Project File : N:\L2 - ATC\88011\18_06-Sprint Nextel-06-05-2018\18_06-Sprint Nextel-06-05-2018.tow
Date run   : 3:30:12 PM Tuesday, June 05, 2018
by   : Tower Version 15.01
Licensed to : American Tower Corp.

Successfully performed nonlinear analysis

The model has 0 warnings.

Member check option: ANSI/TIA 222-G-1
Connection rupture check: Not Checked
Crossing diagonal check: Fixed
Included angle check: None
Climbing load check: None
Redundant members checked with: Actual Force
Loads from file: n:\l2 - atc\88011\18_06-sprint nextel-06-05-2018\18_06-sprint nextel-06-05-2018.eia

*** Analysis Results:

Maximum element usage is 101.48% for Angle "LH 3X" in load case "W -45"   NG

Summary of Joint Support Reactions For All Load Cases:

Load Case	Joint Label	Long. Force (kips)	Tran. Force (kips)	Vert. Force (kips)	Shear Force (kips)	Tran. Moment (ft-k)	Long. Moment (ft-k)	Bending Moment (ft-k)	Vert. Moment (ft-k)	Found. Usage %
W 0	0P	-44.50	-22.77	-349.16	49.98	-1.44	-3.97	4.23	-2.21	0.00
W 0	0X	-43.44	23.12	-344.40	49.21	1.22	-3.80	4.00	2.22	0.00
W 0	0XY	-34.41	-17.80	225.41	38.74	0.29	-4.43	4.44	1.99	0.00
W 0	0Y	-35.14	17.38	224.54	39.20	-0.22	-4.62	4.62	-1.96	0.00
W 180	0P	35.15	17.17	222.36	39.12	-0.22	4.69	4.70	1.97	0.00
W 180	0X	34.40	-17.56	222.57	38.62	0.29	4.50	4.51	-2.00	0.00
W 180	0XY	43.47	23.01	-342.36	49.19	1.21	3.87	4.06	-2.23	0.00
W 180	0Y	44.45	-22.58	-346.19	49.85	-1.43	4.03	4.28	2.22	0.00
W 45	0P	-47.04	-47.07	-486.52	66.55	2.10	-2.09	2.96	-0.00	0.00
W 45	0X	-17.74	-10.80	-60.32	20.77	4.10	-2.87	5.01	3.05	0.00
W 45	0XY	-41.15	-41.12	363.47	58.17	3.30	-3.31	4.67	-0.00	0.00
W 45	0Y	-10.77	-17.71	-60.24	20.72	2.87	-4.09	5.00	-3.05	0.00
W -45	0P	-18.57	11.07	-64.02	21.62	-4.28	-3.00	5.22	-3.05	0.00
W -45	0X	-46.24	47.31	-482.42	66.16	-2.26	-1.97	2.99	0.00	0.00
W -45	0XY	-10.26	17.44	-59.33	20.24	-2.84	-3.95	4.87	3.08	0.00
W -45	0Y	-41.56	40.82	362.16	58.25	-3.27	-3.43	4.74	0.03	0.00
W 90	0P	-22.74	-44.52	-349.20	49.99	3.98	1.45	4.24	2.21	0.00
W 90	0X	17.35	-35.16	224.49	39.21	4.62	0.22	4.63	1.96	0.00
W 90	0XY	-17.82	-34.39	225.38	38.73	4.43	-0.29	4.44	-1.99	0.00
W 90	0Y	23.14	-43.42	-344.28	49.20	3.80	-1.22	3.99	-2.22	0.00
W -90	0P	17.15	35.17	222.40	39.13	-4.70	0.22	4.70	-1.97	0.00
W -90	0X	-22.55	44.47	-346.30	49.86	-4.04	1.44	4.28	-2.22	0.00
W -90	0XY	23.03	43.45	-342.32	49.18	-3.86	-1.21	4.05	2.23	0.00
W -90	0Y	-17.58	34.38	222.62	38.61	-4.49	-0.30	4.50	2.00	0.00
W 0 Ice	0P	-17.03	-12.07	-168.41	20.87	-1.34	0.14	1.35	-0.49	0.00
W 0 Ice	0X	-16.63	12.13	-164.81	20.58	1.23	0.17	1.24	0.48	0.00
W 0 Ice	0XY	-0.90	3.40	-34.83	3.51	0.92	-1.98	2.18	0.48	0.00
W 0 Ice	0Y	-0.91	-3.47	-37.49	3.58	-0.98	-2.03	2.25	-0.46	0.00
W 180 Ice	0P	0.89	-3.76	-40.62	3.87	-0.98	2.11	2.33	0.47	0.00
W 180 Ice	0X	0.91	3.67	-37.97	3.78	0.93	2.06	2.26	-0.49	0.00
W 180 Ice	0XY	16.65	11.96	-161.84	20.50	1.21	-0.08	1.21	-0.49	0.00
W 180 Ice	0Y	17.00	-11.85	-165.11	20.72	-1.33	-0.06	1.33	0.50	0.00
W 45 Ice	0P	-17.82	-17.83	-201.03	25.21	-0.55	0.55	0.78	0.00	0.00
W 45 Ice	0X	-11.37	4.39	-101.15	12.19	1.92	0.28	1.94	0.71	0.00
W 45 Ice	0XY	-1.98	-1.98	-2.30	2.80	1.63	-1.63	2.31	-0.00	0.00
W 45 Ice	0Y	4.39	-11.36	-101.06	12.18	-0.28	-1.91	1.93	-0.71	0.00
W -45 Ice	0P	-11.79	-4.34	-104.52	12.57	-2.02	0.25	2.04	-0.72	0.00
W -45 Ice	0X	-17.48	17.86	-197.57	24.99	0.45	0.57	0.72	-0.01	0.00
W -45 Ice	0XY	4.35	11.32	-98.40	12.13	0.21	-1.87	1.89	0.72	0.00
W -45 Ice	0Y	-1.85	1.94	-5.05	2.68	-1.70	-1.66	2.37	0.02	0.00
W 90 Ice	0P	-12.06	-17.04	-168.41	20.87	-0.14	1.34	1.35	0.49	0.00
W 90 Ice	0X	-3.48	-0.91	-37.57	3.59	2.03	0.98	2.25	0.46	0.00
W 90 Ice	0XY	3.40	-0.90	-34.84	3.51	1.98	-0.92	2.18	-0.48	0.00
W 90 Ice	0Y	12.13	-16.63	-164.72	20.58	-0.17	-1.22	1.23	-0.48	0.00
W -90 Ice	0P	-3.76	0.89	-40.61	3.87	-2.11	0.98	2.33	-0.47	0.00
W -90 Ice	0X	-11.85	17.01	-165.20	20.73	0.06	1.33	1.33	-0.50	0.00
W -90 Ice	0XY	11.96	16.65	-161.84	20.50	0.08	-1.21	1.21	0.49	0.00
W -90 Ice	0Y	3.66	0.91	-37.88	3.77	-2.06	-0.93	2.26	0.49	0.00
S 0	0P	-12.37	-7.71	-109.43	14.58	-0.55	-0.60	0.82	-0.47	0.00
S 0	0X	-12.11	7.75	-107.04	14.38	0.47	-0.59	0.75	0.47	0.00
S 0	0XY	-4.04	0.03	7.61	4.04	0.22	-1.25	1.27	0.46	0.00
S 0	0Y	-4.05	-0.08	5.86	4.05	-0.25	-1.29	1.31	-0.45	0.00
S 180	0P	4.04	-0.27	3.84	4.05	-0.25	1.34	1.37	0.46	0.00
S 180	0X	4.05	0.21	5.53	4.05	0.22	1.31	1.33	-0.47	0.00
S 180	0XY	12.12	7.64	-105.14	14.33	0.46	0.64	0.79	-0.48	0.00
S 180	0Y	12.35	-7.57	-107.23	14.48	-0.54	0.66	0.85	0.48	0.00
S 45	0P	-12.88	-12.89	-137.24	18.22	0.22	-0.21	0.30	0.00	0.00
S 45	0X	-7.26	0.75	-50.59	7.30	1.15	-0.44	1.23	0.69	0.00
S 45	0XY	-4.83	-4.83	35.36	6.83	0.91	-0.91	1.29	-0.00	0.00
S 45	0Y	0.76	-7.25	-50.52	7.29	0.44	-1.14	1.23	-0.69	0.00
S -45	0P	-7.53	-0.73	-52.79	7.57	-1.22	-0.45	1.30	-0.69	0.00
S -45	0X	-12.66	12.91	-134.96	18.08	-0.28	-0.20	0.35	-0.00	0.00
S -45	0XY	0.73	7.22	-48.81	7.26	-0.48	-1.12	1.22	0.70	0.00
S -45	0Y	-4.74	4.80	33.56	6.75	-0.95	-0.93	1.33	0.01	0.00
S 90	0P	-7.71	-12.38	-109.43	14.58	0.61	0.55	0.82	0.47	0.00
S 90	0X	-0.09	-4.05	5.79	4.05	1.29	0.25	1.31	0.45	0.00
S 90	0XY	0.03	-4.04	7.60	4.04	1.25	-0.22	1.27	-0.46	0.00
S 90	0Y	7.75	-12.10	-106.97	14.37	0.59	-0.47	0.75	-0.47	0.00
S -90	0P	-0.27	4.04	3.84	4.05	-1.34	0.25	1.37	-0.46	0.00
S -90	0X	-7.57	12.36	-107.31	14.49	-0.66	0.54	0.85	-0.48	0.00
S -90	0XY	7.65	12.12	-105.13	14.33	-0.64	-0.46	0.79	0.48	0.00
S -90	0Y	0.20	4.05	5.59	4.05	-1.31	-0.22	1.33	0.47	0.00

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

Load Case	Support Joint	Origin Joint	Leg Member	Force In Leg Dir. (kips)	Residual Shear Perpendicular To Leg (kips)	Residual Shear Horizontal To Leg - Res. (kips)	Residual Shear Horizontal - Long. (kips)	Residual Shear Horizontal - Tran. (kips)	Total Long. Force (kips)	Total Tran. Force (kips)	Total Vert. Force (kips)
W 0	0P	1P	L 1P	351.992	22.652	22.700	22.680	0.952	-44.50	-22.77	-349.16
W 0	0X	1X	L 1X	347.206	21.933	21.982	21.923	-1.603	-43.44	23.12	-344.40
W 0	0XY	1XY	L 1XY	-227.789	20.609	20.663	20.326	3.718	-34.41	-17.80	225.41
W 0	0Y	1Y	L 1Y	-226.938	21.324	21.378	21.115	-3.346	-35.14	17.38	224.54
W 180	0P	1P	L 1P	-224.758	21.454	21.508	-21.257	-3.274	35.15	17.17	222.36
W 180	0X	1X	L 1X	-224.943	20.758	20.812	-20.489	3.653	34.40	-17.56	222.57
W 180	0XY	1XY	L 1XY	345.168	22.094	22.143	-22.083	-1.620	43.47	23.01	-342.36
W 180	0Y	1Y	L 1Y	349.012	22.791	22.839	-22.820	0.934	44.45	-22.56	-346.19
W 45	0P	1P	L 1P	490.493	23.465	23.556	16.640	16.673	-47.04	-47.07	-486.52
W 45	0X	1X	L 1X	60.518	20.183	20.183	13.971	14.565	-17.74	-10.80	-60.32
W 45	0XY	1XY	L 1XY	-367.184	25.952	26.054	18.436	18.409	-41.15	-41.12	363.47
W 45	0Y	1Y	L 1Y	60.433	20.138	20.138	14.532	13.942	-10.77	-17.71	-60.24
W -45	0P	1P	L 1P	64.235	20.960	20.960	14.565	-15.073	-18.57	11.07	-64.02
W -45	0X	1X	L 1X	486.373	23.445	23.536	16.097	-17.171	-46.24	47.31	-482.42
W -45	0XY	1XY	L 1XY	59.547	19.591	19.591	13.971	-13.734	-10.26	17.44	-59.33
W -45	0Y	1Y	L 1Y	-365.886	26.153	26.255	18.931	-18.191	-41.56	40.82	362.16
W 90	0P	1P	L 1P	352.027	22.674	22.721	0.927	22.703	-22.74	-44.52	-349.20
W 90	0X	1X	L 1X	-226.888	21.344	21.398	-3.324	21.138	17.35	-35.16	224.49
W 90	0XY	1XY	L 1XY	-227.754	20.594	20.649	3.737	20.308	-17.82	-34.39	225.38
W 90	0Y	1Y	L 1Y	347.087	21.918	21.967	-1.629	21.906	23.14	-43.42	-344.28
W -90	0P	1P	L 1P	-224.793	21.469	21.523	-3.255	-21.275	17.15	35.17	222.40
W -90	0X	1X	L 1X	349.132	22.807	22.855	0.909	-22.837	-22.55	44.47	-346.30
W -90	0XY	1XY	L 1XY	345.133	22.073	22.122	-1.646	-22.061	23.03	43.45	-342.32
W -90	0Y	1Y	L 1Y	-224.994	20.739	20.793	3.674	-20.466	-17.58	34.38	222.62
W 0 Ice	0P	1P	L 1P	169.565	6.670	6.688	6.507	1.547	-17.03	-12.07	-168.41
W 0 Ice	0X	1X	L 1X	165.961	6.574	6.594	6.335	-1.829	-16.63	12.13	-164.81
W 0 Ice	0XY	1XY	L 1XY	34.853	3.307	3.309	3.076	-1.220	-0.90	3.40	-34.83
W 0 Ice	0Y	1Y	L 1Y	37.500	3.436	3.438	3.248	1.126	-0.91	-3.47	-37.49
W 180 Ice	0P	1P	L 1P	40.641	3.639	3.642	-3.429	1.225	0.89	-3.76	-40.62
W 180 Ice	0X	1X	L 1X	37.989	3.529	3.531	-3.286	-1.294	0.91	3.67	-37.97
W 180 Ice	0XY	1XY	L 1XY	162.995	6.778	6.798	-6.543	-1.843	16.65	11.96	-161.84
W 180 Ice	0Y	1Y	L 1Y	166.264	6.841	6.860	-6.687	1.530	17.00	-11.85	-165.11
W 45 Ice	0P	1P	L 1P	202.470	7.417	7.446	5.261	5.269	-17.82	-17.83	-201.03
W 45 Ice	0X	1X	L 1X	101.734	5.408	5.412	5.054	1.934	-11.37	4.39	-101.15
W 45 Ice	0XY	1XY	L 1XY	-2.047	2.994	3.005	2.126	2.124	-1.98	-1.98	-2.30
W 45 Ice	0Y	1Y	L 1Y	101.645	5.402	5.405	1.926	5.050	4.39	-11.36	-101.06
W -45 Ice	0P	1P	L 1P	105.120	5.694	5.697	5.261	-2.186	-11.79	-4.34	-104.52
W -45 Ice	0X	1X	L 1X	199.004	7.509	7.538	5.134	-5.520	-17.48	17.86	-197.57
W -45 Ice	0XY	1XY	L 1XY	98.990	5.475	5.479	1.800	-5.175	4.35	11.32	-98.40
W -45 Ice	0Y	1Y	L 1Y	4.792	3.115	3.127	2.169	-2.253	-1.85	1.94	-5.05
W 90 Ice	0P	1P	L 1P	169.571	6.674	6.693	1.540	6.513	-12.06	-17.04	-168.41
W 90 Ice	0X	1X	L 1X	37.582	3.442	3.445	1.129	3.255	-3.48	-0.91	-37.57
W 90 Ice	0XY	1XY	L 1XY	34.859	3.306	3.308	-1.220	3.075	3.40	-0.90	-34.84
W 90 Ice	0Y	1Y	L 1Y	165.867	6.575	6.595	-1.836	6.334	12.13	-16.63	-164.72
W -90 Ice	0P	1P	L 1P	40.635	3.640	3.643	1.226	-3.430	-3.76	0.89	-40.61
W -90 Ice	0X	1X	L 1X	166.359	6.840	6.859	1.524	-6.688	-11.85	17.01	-165.20
W -90 Ice	0XY	1XY	L 1XY	162.989	6.773	6.793	-1.850	-6.537	11.96	16.65	-161.84
W -90 Ice	0Y	1Y	L 1Y	37.907	3.522	3.524	-1.291	-3.279	3.66	0.91	-37.88
S 0	0P	1P	L 1P	110.254	5.589	5.604	5.535	0.877	-12.37	-7.71	-109.43
S 0	0X	1X	L 1X	107.863	5.508	5.523	5.420	-1.061	-12.11	7.75	-107.04
S 0	0XY	1XY	L 1XY	-7.828	3.596	3.601	3.566	-0.505	-4.04	0.03	7.61
S 0	0Y	1Y	L 1Y	-6.084	3.702	3.708	3.681	0.447	-4.05	-0.08	5.86
S 180	0P	1P	L 1P	-4.057	3.828	3.833	-3.799	0.510	4.04	-0.27	3.84
S 180	0X	1X	L 1X	-5.743	3.738	3.744	-3.702	-0.553	4.05	0.21	5.53

S 180	0XY	1XY	L 1XY	105.960	5.643	5.658	-5.556	-1.072	12.12	7.64	-105.14
S 180	0Y	1Y	L 1Y	108.053	5.704	5.718	-5.652	0.866	12.35	-7.57	-107.23
S 45	0P	1P	L 1P	138.314	6.074	6.097	4.308	4.315	-12.88	-12.89	-137.24
S 45	0X	1X	L 1X	50.897	4.750	4.751	4.096	2.407	-7.26	0.75	-50.59
S 45	0XY	1XY	L 1XY	-35.820	3.688	3.702	2.618	2.617	-4.83	-4.83	35.36
S 45	0Y	1Y	L 1Y	50.826	4.744	4.745	2.400	4.093	0.76	-7.25	-50.52
S -45	0P	1P	L 1P	53.099	4.951	4.952	4.232	-2.571	-7.53	-0.73	-52.79
S -45	0X	1X	L 1X	136.024	6.132	6.156	4.224	-4.478	-12.66	12.91	-134.96
S -45	0XY	1XY	L 1XY	49.119	4.771	4.773	2.316	-4.173	0.73	7.22	-48.81
S -45	0Y	1Y	L 1Y	-34.019	3.766	3.781	2.648	-2.699	-4.74	4.80	33.56
S 90	0P	1P	L 1P	110.259	5.594	5.608	0.872	5.540	-7.71	-12.38	-109.43
S 90	0X	1X	L 1X	-6.018	3.708	3.713	0.449	3.686	-0.09	-4.05	5.79
S 90	0XY	1XY	L 1XY	-7.823	3.596	3.601	-0.505	3.565	0.03	-4.04	7.60
S 90	0Y	1Y	L 1Y	107.787	5.509	5.523	-1.067	5.419	7.75	-12.10	-106.97
S -90	0P	1P	L 1P	-4.062	3.828	3.834	0.510	-3.800	-0.27	4.04	3.84
S -90	0X	1X	L 1X	108.129	5.703	5.718	0.861	-5.653	-7.57	12.36	-107.31
S -90	0XY	1XY	L 1XY	105.955	5.639	5.654	-1.077	-5.551	7.65	12.12	-105.13
S -90	0Y	1Y	L 1Y	-5.809	3.733	3.738	-0.551	-3.697	0.20	4.05	5.59

Overturning Moment Summary For All Load Cases:

Load Case	Transverse Moment (ft-k)	Longitudinal Moment (ft-k)	Torsional Moment (ft-k)	Resultant Moment (ft-k)	Transverse Force (kips)	Longitudinal Force (kips)	Vertical Force (kips)
W 0	126.551	-25686.803	57.706	25687.114	0.073	157.491	243.605
W 180	90.638	25461.412	-57.708	25461.573	-0.055	-157.469	243.605
W 45	19091.612	-19095.431	-2.761	27002.318	116.693	116.693	243.605
W -45	-18866.678	-19077.251	84.179	26830.823	-116.646	116.627	243.605
W 90	25683.009	-130.376	-61.614	25683.340	157.491	0.073	243.605
W -90	-25465.223	-94.464	61.616	25465.398	-157.469	-0.055	243.605
W 0 Ice	140.405	-5860.598	11.960	5862.280	0.015	35.467	405.537
W 180 Ice	133.006	5579.084	-11.958	5580.669	-0.011	-35.463	405.537
W 45 Ice	4462.069	-4466.030	-0.496	6313.120	26.789	26.789	405.537
W -45 Ice	-4187.056	-4462.245	17.370	6119.074	-26.780	26.776	405.537
W 90 Ice	5856.638	-144.368	-12.660	5858.417	35.467	0.015	405.537
W -90 Ice	-5583.048	-136.970	12.658	5584.728	-35.463	-0.011	405.537
S 0	92.869	-5165.105	7.987	5165.940	0.016	32.568	203.004
S 180	84.903	4980.751	-7.985	4981.475	-0.012	-32.563	203.004
S 45	3875.491	-3878.673	-0.384	5483.023	24.212	24.212	203.004
S -45	-3695.959	-3874.591	11.633	5354.677	-24.201	24.197	203.004
S 90	5161.924	-96.051	-8.529	5162.817	32.568	0.016	203.004
S -90	-4983.934	-88.086	8.527	4984.713	-32.563	-0.012	203.004

EIA Sections Information:

Section Label	Top Z (ft)	Bottom Z (ft)	Joint Count	Member Count	Top Width (ft)	Bottom Width (ft)	Gross Area (ft^2)	Face Af Adjust Factor	Face Ar Adjust Factor	Dead Load Factor
278.9-287.5	287.500	278.917	8	20	9.00	10.07	81.85	1.1220	1.1220	1.346
270.3-278.9	278.917	270.334	8	16	10.07	11.15	91.06	1.2150	1.2150	1.458
260.2-270.3	270.334	260.167	8	16	11.15	12.42	119.77	1.1970	1.1970	1.436
250.0-260.2	260.167	250.000	12	24	12.42	13.69	132.69	1.2030	1.2030	1.444
237.5-250.0	250.000	237.500	16	24	13.69	15.25	180.84	1.2010	1.2010	1.441
225.0-237.5	237.500	225.000	16	24	15.25	16.81	200.36	1.2070	1.2070	1.449
212.5-225.0	225.000	212.500	16	24	16.81	18.37	219.89	1.2130	1.2130	1.456
200.0-212.5	212.500	200.000	16	24	18.37	19.93	239.41	1.2200	1.2200	1.463
187.5-200.0	200.000	187.500	16	24	19.93	21.50	258.94	1.2250	1.2250	1.471
162.5-187.5	187.500	162.500	16	24	21.50	24.62	576.45	1.2550	1.2550	1.506
137.5-162.5	162.500	137.500	16	24	24.62	27.74	654.55	1.2700	1.2700	1.524
112.5-137.5	137.500	112.500	16	24	27.74	30.87	732.65	1.2790	1.2790	1.535
87.50-112.5	112.500	87.500	20	32	30.87	33.99	810.75	1.2930	1.2930	1.552
62.50-87.50	87.500	62.500	36	76	33.99	37.12	888.85	1.2300	1.2300	1.476
37.50-62.50	62.500	37.500	32	68	37.12	40.24	966.95	1.2330	1.2330	1.480
0.000-37.50	37.500	0.000	20	40	40.24	44.93	1596.86	1.2600	1.2600	1.512

Printed capacities do not include the strength factor entered for each load case.
The Group Summary reports on the member and load case that resulted in maximum usage which may not necessarily be the same as that which produces maximum force.

Group Summary (Compression Portion):

Group Label	Group Desc.	Angle Type	Angle Size	Steel Strength (ksi)	Max Usage %	Usage Cont-rol	Max Use In Comp. %	Comp. Control Member	Comp. Force (kips)	Comp. Control Load Case	L/r Capacity (kips)	Comp. Connect. Shear Capacity (kips)	Comp. Connect. Bearing Capacity (kips)	RLX	RLY	RLZ	L/r	KL/r Comp. Member (ft)	Length	Curve No.	No. Of Bolts Comp.	
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	81.39	Comp	81.39	L 1P	-398.118	W 45	489.140	0.000	0.000	0.250	0.250	0.250	72.40	72.40	37.646	1	0	
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	74.43	Comp	74.43	L 2P	-345.457	W 45	464.151	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.097	1	0	
Leg S3	L 8" x 8" x 1"	SAE	8X8X1	36.0	71.57	Comp	71.57	L 3P	-297.855	W 45	416.154	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.097	1	0	
Leg S4	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	83.17	Comp	83.17	L 4P	-287.470	W 45	345.656	0.000	0.000	0.333	0.333	0.333	63.94	63.94	25.097	1	0	
Leg S5	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	70.74	Comp	70.74	L 5P	-244.510	W 45	345.656	0.000	0.000	0.333	0.333	0.333	63.94	63.94	25.097	1	0	
Leg S6	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	67.10	Comp	67.10	L 6P	-201.087	W 45	299.702	0.000	0.000	0.333	0.333	0.333	63.53	63.53	25.097	1	0	
Leg S7	L 8" x 8" x 0.625"	SAE	8X8X0.63	36.0	63.07	Comp	63.07	L 7P	-158.792	W 45	251.760	0.000	0.000	0.333	0.333	0.333	63.53	63.53	25.097	1	0	
Leg S8	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	62.13	Comp	62.13	L 8P	-136.628	W 45	219.890	0.000	0.000	0.500	0.500	0.500	64.35	64.35	12.549	1	0	
Leg S9	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	52.01	Comp	52.01	L 9P	-114.364	W 45	219.890	0.000	0.000	0.500	0.500	0.500	64.35	64.35	12.549	1	0	
Leg S10	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	56.04	Comp	56.04	L 10P	-94.221	W 45	168.140	0.000	0.000	0.500	0.500	0.500	63.81	63.81	12.549	1	0	
Leg S11	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	44.12	Comp	44.12	L 11P	-74.188	W 45	168.140	0.000	0.000	0.500	0.500	0.500	63.81	63.81	12.549	1	0	
Leg S12	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0	47.45	Comp	40.45	L 12P	-53.720	W 45	132.791	0.000	0.000	0.500	0.500	0.500	63.27	63.27	12.549	1	0	
Leg S13	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	38.31	Comp	38.31	L 13P	-42.350	W 45	110.541	0.000	0.000	0.500	0.500	0.500	62.11	62.11	10.207	1	0	
Leg S14	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	25.71	Comp	25.71	L 14P	-28.416	W 45	110.541	0.000	0.000	0.500	0.500	0.500	62.11	62.11	10.207	1	0	
Leg S15	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	16.28	Comp	16.28	L 15P	-13.821	W 45	84.918	0.000	0.000	0.500	0.500	0.500	52.01	52.01	8.616	1	0	
Leg S16	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	6.79	Comp	6.79	L 16P	-5.768	W 45	84.918	0.000	0.000	0.500	0.500	0.500	52.01	52.01	8.616	1	0	
Diag S1	B/B L5"x5"x0.3125"	DAE	DAS 3.5X2.5X0.25	36.0	44.55	Comp	44.55	D 2X	-65.122	W -90	146.192	0.000	0.000	0.316	0.316	0.316	74.36	74.36	30.789	1	0	
Diag S2	B/B L2.5"x3.5"x0.25"	DAS	DAS 3.5X2.5X0.25	36.0	98.97	Comp	98.97	D 4X	-50.178	W -90	50.702	0.000	0.000	0.320	0.320	0.320	107.64	107.64	20.603	1	0	
Diag S3	B/B L2.5"x3.5"x0.25"	DAS	DAS 3.5X2.5X0.25	36.0	96.62	Comp	96.62	D 6X	-50.016	W -90	51.765	0.000	0.000	0.320	0.320	0.320	105.80	105.80	20.250	1	0	
Diag S4	**B/B L2.5"x3"x0.25"**	**DAS**	**3X2.5X0.25**	**36.0**	**101.04**	**Comp**	**101.04**	**D 7X**	**-32.841**	**W -90**	**32.503**	**0.000**	**0.000**	**0.300**	**0.300**	**0.300**	**144.72**	**135.20**	**30.271**	**6**	**0**	**NG**
Diag S5	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	97.78	Comp	97.78	D 9X	-32.968	W -90	33.717	0.000	0.000	0.300	0.300	0.300	140.66	132.71	29.422	6	0	
Diag S6	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	99.46	Comp	99.46	D 11X	-31.949	W -90	32.122	0.000	0.000	0.320	0.320	0.320	146.02	136.00	28.633	6	0	
Diag S7	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	98.66	Comp	98.66	D 13X	-31.181	W -90	31.603	0.000	0.000	0.320	0.640	0.320	147.83	137.11	27.910	6	0	
Diag S8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	75.83	Comp	75.83	D 15X	-18.475	W -90	24.365	0.000	0.000	0.500	1.000	0.500	166.43	148.55	16.504	6	0	
Diag S9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	67.55	Comp	67.55	D 17X	-17.163	W -90	25.409	0.000	0.000	0.500	1.000	0.500	161.41	145.47	16.006	6	0	
Diag S10	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	97.26	Comp	97.26	D 19X	-16.427	W -90	16.889	0.000	0.000	0.500	1.000	0.500	199.34	168.79	15.532	6	0	
Diag S11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	91.67	Comp	91.67	D 21X	-16.152	W -90	17.621	0.000	0.000	0.500	1.000	0.500	193.58	165.25	15.083	6	0	
Diag S12	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	84.57	Comp	84.57	D 23P	-15.520	W 90	18.351	0.000	0.000	0.500	1.000	0.500	188.18	161.93	14.662	6	0	
Diag S13 L 3.5" x 3.5" x 0.25"		SAE	3.5X3.5X0.25	36.0	44.21	Comp	44.21	D 25Y	-8.367	W 180	18.926	0.000	0.000	0.520	0.520	0.520	148.86	142.03	16.556	5	0	
Diag S14 L 3.5" x 3.5" x 0.25"		SAE	3.5X3.5X0.25	36.0	40.49	Comp	40.49	D 28P	-8.444	W 90	20.855	0.000	0.000	0.520	0.520	0.520	140.03	135.30	15.574	5	0	
Diag S15	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	30.62	Comp	30.62	D 29P	-5.209	W 0	17.011	0.000	0.000	0.520	0.520	0.520	143.95	138.29	13.657	5	0	
Diag S16	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	16.29	Comp	16.29	D 31P	-3.047	W 0	18.712	0.000	0.000	0.520	0.520	0.520	135.35	131.74	12.841	5	0	
Horiz 1	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	82.66	Comp	82.66	H 2Y	-40.437	W -45	48.921	0.000	0.000	0.500	0.500	0.500	110.75	110.75	20.120	6	0	
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	85.10	Comp	85.10	H 3P	-34.912	W -90	41.024	0.000	0.000	0.940	0.940	0.940	128.03	124.94	12.372	6	0	
Horiz 3	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	91.68	Comp	91.68	H 5P	-32.365	W -90	35.302	0.000	0.000	0.940	0.940	0.940	135.25	129.38	11.331	6	0	
Horiz 4	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	75.71	Comp	75.71	H 7P	-16.182	W -90	21.373	0.000	0.000	1.000	1.000	1.000	195.99	166.73	15.434	6	0	
Horiz 5	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	61.37	Comp	61.37	H 9P	-15.269	W -90	24.880	0.000	0.000	1.000	1.000	1.000	176.15	154.53	13.872	6	0	
Horiz 6	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	67.61	Comp	67.61	H 11P	-13.461	W -90	19.909	0.000	0.000	1.000	1.000	1.000	192.09	164.34	12.310	6	0	
Horiz 7	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	51.62	Comp	51.62	H 13P	-12.444	W -90	24.106	0.000	0.000	1.000	1.000	1.000	167.72	149.35	10.748	6	0	
Horiz 8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	40.84	Comp	40.84	H 15P	-10.912	W -90	26.721	0.000	0.000	1.000	1.000	1.000	155.53	141.85	9.967	6	0	
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	32.89	Comp	32.89	H 17P	-9.795	W -90	29.785	0.000	0.000	1.000	1.000	1.000	143.34	134.36	9.186	6	0	
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	26.35	Comp	26.35	H 19P	-8.708	W -90	33.049	0.000	0.000	1.000	1.000	1.000	131.16	126.86	8.405	6	0	
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	23.02	Comp	23.02	H 21P	-8.427	W -90	36.603	0.000	0.000	1.000	1.000	1.000	118.97	118.97	7.624	1	0	
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	16.57	Comp	16.57	H 23P	-7.811	W -90	42.308	0.000	0.000	1.000	1.000	1.000	106.78	106.78	6.843	1	0	
Horiz 13	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	8.80	Tens	7.58	H 25Y	-1.212	W 0	15.975	0.000	0.000	0.500	0.500	0.500	141.09	136.11	12.416	5	0	
Horiz 14	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	2.65	Tens	0.72	H 27Y	-0.474	W 0	65.466	0.000	0.000	0.500	0.500	0.500	70.76	70.76	11.145	1	0	
Horiz 15	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	3.12	Tens	0.00	H 30X	0.000		20.588	0.000	0.000	0.500	0.500	0.500	114.46	117.23	10.073	3	0	
Horiz 16	C8x11.5	CHN	C8x11.5	36.0	1.03	Comp	1.03	H 32X	-0.306	W 180	29.726	0.000	0.000	1.000	1.000	1.000	172.80	160.27	9.000	5	0	
LD 1	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	36.0	57.31	Comp	57.31	LD 1X	-25.103	W -90	43.802	0.000	0.000	0.920	0.920	0.920	139.40	131.93	13.764	6	0	
LD 2	B/B L4"x4"x0.3125"	DAE	4X4X0.31	36.0	82.97	Comp	82.97	LD 3X	-59.271	W -90	71.437	0.000	0.000	0.920	0.920	0.920	122.54	121.56	13.764	6	0	
LD 4	**B/B L2.5"x2"x0.25"**	**DAL**	**2.5X2X0.25**	**36.0**	**101.43**	**Comp**	**101.43**	**LD 7X**	**-24.379**	**W -45**	**24.035**	**0.000**	**0.000**	**0.920**	**0.920**	**0.920**	**154.95**	**141.49**	**11.004**	**6**	**0**	**NG**
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	93.19	Comp	93.19	LD 9X	-32.642	W -90	35.026	0.000	0.000	0.920	0.920	0.920	113.50	113.50	8.060	1	0	
LD 6	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	92.34	Comp	92.34	LD 11P	-34.997	W -90	37.901	0.000	0.000	0.920	0.920	0.920	116.15	116.15	9.374	1	0	
LD 7	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	96.01	Comp	96.01	LD 13X	-24.757	W -45	25.785	0.000	0.000	0.920	0.920	0.920	147.01	136.61	10.440	6	0	
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	90.37	Comp	90.37	LD 15X	-32.392	W -90	35.843	0.000	0.000	0.920	0.920	0.920	111.55	111.55	7.922	1	0	
LD 9	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	66.97	Comp	66.97	LD 17P	-34.087	W -90	50.895	0.000	0.000	0.920	0.920	0.920	107.31	107.31	9.039	1	0	
LH 1	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	23.49	Tens	0.00	LH 2X	0.000		0.001	0.000	0.000	100.000	100.000	100.000	31396.62	19355.12	20.120	6	0	
LH 2	**B/B L2.5"x3"x0.25"**	**DAS**	**3X2.5X0.25**	**36.0**	**101.48**	**Comp**	**101.48**	**LH 3X**	**-27.139**	**W -45**	**26.743**	**0.000**	**0.000**	**1.000**	**2.000**	**1.000**	**167.24**	**149.05**	**10.104**	**6**	**0**	**NG**
LH 3	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	88.28	Comp	88.28	LH 5X	-26.469	W -45	29.982	0.000	0.000	1.000	2.000	1.000	153.78	140.77	9.291	6	0	
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00		0.00	BR 9XY	-1.132	W 45	0.324	0.000	0.000	1.000	1.000	1.000	2.35	2.35	19.618	1	0	

Group Summary (Tension Portion):

Group Label	Group Desc.	Angle Type	Angle Size	Steel Strength (ksi)	Max Usage %	Usage Cont-rol	Max Use In Tens. %	Tension Control Member	Tension Force (kips)	Tension Control Load Case	Net Section Capacity (kips)	Tension Connect. Shear Capacity (kips)	Tension Connect. Bearing Capacity (kips)	Tension Connect. Rupture Capacity (kips)	Length Tens. Member (ft)	No. Of Bolts Tens.	No. Of Holes	Hole Diameter (in)
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	81.39	Comp	50.85	L 1XY	275.649	W 45	542.051	0.000	0.000	0.000	37.646	0	0.000	0
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	74.43	Comp	47.84	L 2XY	259.305	W 45	542.051	0.000	0.000	0.000	25.097	0	0.000	0
Leg S3	L 8" x 8" x 1"	SAE	8X8X1	36.0	71.57	Comp	46.12	L 3XY	224.120	W 45	485.999	0.000	0.000	0.000	25.097	0	0.000	0
Leg S4	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	83.17	Comp	51.05	L 4XY	218.847	W 45	428.651	0.000	0.000	0.000	25.097	0	0.000	0
Leg S5	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	70.74	Comp	42.97	L 5XY	184.188	W 45	428.651	0.000	0.000	0.000	25.097	0	0.000	0
Leg S6	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	67.10	Comp	40.27	L 6XY	149.279	W 45	370.655	0.000	0.000	0.000	25.097	0	0.000	0
Leg S7	L 8" x 8" x 0.625"	SAE	8X8X0.63	36.0	63.07	Comp	36.56	L 7XY	113.847	W 45	311.364	0.000	0.000	0.000	25.097	0	0.000	0
Leg S8	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	62.13	Comp	35.39	L 8XY	96.770	W 45	273.456	0.000	0.000	0.000	12.549	0	0.000	0
Leg S9	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	52.01	Comp	29.13	L 9XY	79.647	W 45	273.456	0.000	0.000	0.000	12.549	0	0.000	0
Leg S10	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	56.04	Comp	30.03	L 10XY	62.568	W 45	208.332	0.000	0.000	0.000	12.549	0	0.000	0
Leg S11	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	44.12	Comp	21.93	L 11XY	45.689	W 45	208.332	0.000	0.000	0.000	12.549	0	0.000	0

Leg S12	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0	40.45	Comp	17.76	L 12XY	29.109	W 45	163.944	0.000	0.000	0.000	12.549	0	0.000	0	
Leg S13	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	38.31	Comp	16.58	L 13XY	22.452	W 45	135.432	0.000	0.000	0.000	10.207	0	0.000	0	
Leg S14	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	25.71	Comp	8.04	L 14XY	10.890	W 45	135.432	0.000	0.000	0.000	10.207	0	0.000	0	
Leg S15	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	16.28	Comp	3.36	L 15XY	3.296	W 45	98.172	0.000	0.000	0.000	8.616	0	0.000	0	
Leg S16	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	6.79	Comp	0.00	L 16Y	0.000		98.172	0.000	0.000	0.000	8.616	0	0.000	0	
Diag S1	B/B L5"x5"x0.3125"	DAE	5X5X0.31	36.0	44.55	Comp	29.38	D 2P	57.586	W -90	196.020	0.000	0.000	0.000	30.789	0	0.000	0	
Diag S2	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	98.97	Comp	46.16	D 4P	43.071	W -90	93.312	0.000	0.000	0.000	20.603	0	0.000	0	
Diag S3	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	96.62	Comp	45.55	D 6P	42.504	W -90	93.312	0.000	0.000	0.000	20.250	0	0.000	0	
Diag S4	**B/B L2.5"x3"x0.25"**	**DAS**	**3X2.5X0.25**	**36.0**	**101.04**	**Comp**	**35.73**	**D 7P**	**30.446**	**W -90**	**85.212**	**0.000**	**0.000**	**0.000**	**30.271**	**0**	**0.000**	**0**	**NG**
Diag S5	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	97.78	Comp	35.83	D 9P	30.533	W -90	85.212	0.000	0.000	0.000	29.422	0	0.000	0	
Diag S6	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	99.46	Comp	34.99	D 11P	29.813	W -90	85.212	0.000	0.000	0.000	28.633	0	0.000	0	
Diag S7	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	98.66	Comp	34.85	D 13P	29.694	W -90	85.212	0.000	0.000	0.000	27.910	0	0.000	0	
Diag S8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	75.83	Comp	22.42	D 15P	17.292	W -90	77.112	0.000	0.000	0.000	16.504	0	0.000	0	
Diag S9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	67.55	Comp	20.89	D 17P	16.110	W -90	77.112	0.000	0.000	0.000	16.006	0	0.000	0	
Diag S10	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	97.26	Comp	22.44	D 19P	15.489	W -90	69.012	0.000	0.000	0.000	15.532	0	0.000	0	
Diag S11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	91.67	Comp	22.19	D 21P	15.316	W -90	69.012	0.000	0.000	0.000	15.083	0	0.000	0	
Diag S12	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	84.57	Comp	21.41	D 23X	14.777	W 90	69.012	0.000	0.000	0.000	14.662	0	0.000	0	
Diag S13	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	44.21	Comp	12.18	D 25Y	6.668	W 0	54.756	0.000	0.000	0.000	16.556	0	0.000	0	
Diag S14	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	40.49	Comp	12.07	D 28X	6.607	W 90	54.756	0.000	0.000	0.000	15.574	0	0.000	0	
Diag S15	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	30.62	Comp	8.57	D 29Y	3.997	W 0	46.656	0.000	0.000	0.000	13.657	0	0.000	0	
Diag S16	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	16.29	Comp	4.40	D 31Y	2.053	W 0	46.656	0.000	0.000	0.000	12.841	0	0.000	0	
Horiz 1	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	82.66	Comp	44.83	H 1P	41.828	W 90	93.312	0.000	0.000	0.000	20.120	0	0.000	0	
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	85.10	Comp	42.08	H 3X	39.264	W -90	93.312	0.000	0.000	0.000	12.372	0	0.000	0	
Horiz 3	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	91.68	Comp	41.60	H 5X	35.451	W -90	85.212	0.000	0.000	0.000	11.331	0	0.000	0	
Horiz 4	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	75.71	Comp	19.80	H 7X	16.869	W -90	85.212	0.000	0.000	0.000	15.434	0	0.000	0	
Horiz 5	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	61.37	Comp	18.31	H 9P	15.603	W 90	85.212	0.000	0.000	0.000	13.872	0	0.000	0	
Horiz 6	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	67.61	Comp	17.69	H 11X	13.643	W -90	77.112	0.000	0.000	0.000	12.310	0	0.000	0	
Horiz 7	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	51.62	Comp	16.62	H 13P	12.816	W 90	77.112	0.000	0.000	0.000	10.748	0	0.000	0	
Horiz 8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	40.84	Comp	14.39	H 15X	11.098	W -90	77.112	0.000	0.000	0.000	9.967	0	0.000	0	
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	32.89	Comp	13.07	H 17P	10.079	W 90	77.112	0.000	0.000	0.000	9.186	0	0.000	0	
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	26.35	Comp	11.65	H 19X	8.986	W -90	77.112	0.000	0.000	0.000	8.405	0	0.000	0	
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	23.02	Comp	11.12	H 21P	8.579	W 90	77.112	0.000	0.000	0.000	7.624	0	0.000	0	
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	16.57	Comp	10.47	H 23P	8.075	W 90	77.112	0.000	0.000	0.000	6.843	0	0.000	0	
Horiz 13	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	8.80	Tens	8.80	H 25P	3.736	W 0	42.444	0.000	0.000	0.000	12.416	0	0.000	0	
Horiz 14	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	2.65	Tens	2.65	H 27P	2.262	W 0	85.212	0.000	0.000	0.000	11.145	0	0.000	0	
Horiz 15	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	3.12	Tens	3.12	H 29P	1.323	W 0	42.444	0.000	0.000	0.000	10.073	0	0.000	0	
Horiz 16	C8x11.5	CHN	C8x11.5	36.0	1.03	Comp	0.49	H 32X	0.540	W 0	109.512	0.000	0.000	0.000	9.000	0	0.000	0	
LD 1	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	36.0	57.31	Comp	27.88	LD 2Y	30.531	W -45	109.512	0.000	0.000	0.000	13.764	0	0.000	0	
LD 2	B/B L4"x4"x0.3125"	DAE	4X4X0.31	36.0	82.97	Comp	35.44	LD 3P	55.118	W -90	155.520	0.000	0.000	0.000	13.764	0	0.000	0	
LD 4	**B/B L2.5"x2"x0.25"**	**DAL**	**2.5X2X0.25**	**36.0**	**101.43**	**Comp**	**30.60**	**LD 8Y**	**21.120**	**W -45**	**69.012**	**0.000**	**0.000**	**0.000**	**11.004**	**0**	**0.000**	**0**	**NG**
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	93.19	Comp	41.45	LD 9P	28.605	W -90	69.012	0.000	0.000	0.000	8.060	0	0.000	0	
LD 6	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	92.34	Comp	46.68	LD 11X	35.995	W -90	77.112	0.000	0.000	0.000	9.374	0	0.000	0	
LD 7	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	96.01	Comp	31.75	LD 14Y	21.909	W -45	69.012	0.000	0.000	0.000	10.440	0	0.000	0	
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	90.37	Comp	40.87	LD 15P	28.206	W -90	69.012	0.000	0.000	0.000	7.922	0	0.000	0	
LD 9	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	66.97	Comp	37.40	LD 17X	34.900	W -90	93.312	0.000	0.000	0.000	9.039	0	0.000	0	
LH 1	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	23.49	Tens	23.49	LH 1Y	18.117	W 0	77.112	0.000	0.000	0.000	20.120	0	0.000	0	
LH 2	**B/B L2.5"x3"x0.25"**	**DAS**	**3X2.5X0.25**	**36.0**	**101.48**	**Comp**	**26.73**	**LH 4Y**	**22.779**	**W -45**	**85.212**	**0.000**	**0.000**	**0.000**	**10.104**	**0**	**0.000**	**0**	**NG**
LH 3	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	88.28	Comp	26.82	LH 6Y	22.857	W -45	85.212	0.000	0.000	0.000	9.291	0	0.000	0	
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00		0.00	BR 9X	0.983	W -45	0.324	0.000	0.000	0.000	19.618	0	0.000	0	

*** Maximum Stress Summary for Each Load Case

Summary of Maximum Usages by Load Case:

Load Case	Maximum Usage %	Element Label	Element Type	
W 0	**100.27**	**D 8P**	**Angle**	**NG**
W 180	**100.91**	**D 8Y**	**Angle**	**NG**
W 45	99.05	LH 3P	Angle	
W -45	**101.48**	**LH 3X**	**Angle**	**NG**
W 90	**100.44**	**D 7P**	**Angle**	**NG**
W -90	**101.04**	**D 7X**	**Angle**	**NG**
W 0 Ice	32.45	D 5P	Angle	
W 180 Ice	33.13	D 5Y	Angle	
W 45 Ice	34.85	L 1P	Angle	
W -45 Ice	34.07	L 1X	Angle	
W 90 Ice	32.49	D 6P	Angle	
W -90 Ice	33.14	D 6X	Angle	
S 0	24.81	D 3P	Angle	
S 180	25.27	D 3Y	Angle	
S 45	24.00	LH 3P	Angle	
S -45	24.68	LH 3X	Angle	
S 90	24.84	D 4P	Angle	
S -90	25.27	D 4X	Angle	

*** Weight of structure (lbs):

Weight of Angles*Section DLF:	131305.8
Weight of Equipment:	140.0
Total:	131445.8

*** End of Report

Site #:	88011
Name:	East Killingly North, CT

Engineer:	AAV
Date:	06/05/18

Windspeed:	No Ice:	101 mph	Ice:	50 mph
Carrier	Sprint			

Taper:	-0.12496	
FW @ Base:	44.93	ft

Taper Change:	287.5	ft
FW @ Top:	9	ft

Spreadsheet Version Last Updated: 11/12/2014

Joint Label	Symmetry Code	X Coord. (ft)	Y Coord. (ft)	Z Coord. (ft)	X Disp. Rest.	Y Disp. Rest.	Z Disp. Rest.	X Rot. Rest.	Y Rot. Rest.	Z Rot. Rest.	Drop Sub-Brace (Y or Blank)	# Vert	Drop (ft)	Height (ft)	Type	Count	Z-Elev. (ft)	FW (ft)	# Sub-Brace
0	XY-Symmetry	22.463	22.463	0	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed		3	9.375	37.5	1	1	0	44.926	3
1	XY-Symmetry	20.12	20.12	37.5	Free	Free	Free	Free	Free	Free			7.030	25	2	2	37.5	40.24	3
2	XY-Symmetry	18.558	18.558	62.5	Free	Free	Free	Free	Free	Free			7.030	25	2	3	62.5	37.116	3
3	XY-Symmetry	16.996	16.996	87.5	Free	Free	Free	Free	Free	Free				25	A	4	87.5	33.992	2
4	XY-Symmetry	15.434	15.434	112.5	Free	Free	Free	Free	Free	Free				25	A	5	112.5	30.868	2
5	XY-Symmetry	13.872	13.872	137.5	Free	Free	Free	Free	Free	Free				25	A	6	137.5	27.744	2
6	XY-Symmetry	12.31	12.31	162.5	Free	Free	Free	Free	Free	Free				25	A	7	162.5	24.62	2
7	XY-Symmetry	10.748	10.748	187.5	Free	Free	Free	Free	Free	Free				12.5	A	8	187.5	21.496	1
8	XY-Symmetry	9.967	9.967	200	Free	Free	Free	Free	Free	Free				12.5	A	9	200	19.934	1
9	XY-Symmetry	9.186	9.186	212.5	Free	Free	Free	Free	Free	Free				12.5	A	10	212.5	18.372	1
10	XY-Symmetry	8.405	8.405	225	Free	Free	Free	Free	Free	Free				12.5	A	11	225	16.81	1
11	XY-Symmetry	7.624	7.624	237.5	Free	Free	Free	Free	Free	Free				12.5	A	12	237.5	15.248	1
12	XY-Symmetry	6.843	6.843	250	Free	Free	Free	Free	Free	Free		1		10.167	X	13	250	13.686	1
13	XY-Symmetry	6.20776584	6.20776584	260.167	Free	Free	Free	Free	Free	Free		1		10.167	X	14	260.167	12.41553168	1
14	XY-Symmetry	5.57253168	5.57253168	270.334	Free	Free	Free	Free	Free	Free		1		8.583	X	15	270.334	11.14506336	1
15	XY-Symmetry	5.03626584	5.03626584	278.917	Free	Free	Free	Free	Free	Free				8.583	X	16	278.917	10.07253168	1
16	XY-Symmetry	4.5	4.5	287.5	Free	Free	Free	Free	Free	Free						17	287.5	9	
A1	Y-Symmetry	20.12	0	37.5	Free	Free	Free	Free	Free	Free									
A2	X-Symmetry	0	20.12	37.5	Free	Free	Free	Free	Free	Free									
A3	XY-Symmetry	18.558	6.186	62.5	Free	Free	Free	Free	Free	Free									
A4	XY-Symmetry	6.186	18.558	62.5	Free	Free	Free	Free	Free	Free									
A5	XY-Symmetry	16.996	5.665333333	87.5	Free	Free	Free	Free	Free	Free									
A6	XY-Symmetry	5.665333333	16.996	87.5	Free	Free	Free	Free	Free	Free									
A7	Y-Symmetry	15.434	0	112.5	Free	Free	Free	Free	Free	Free									
A8	X-Symmetry	0	15.434	112.5	Free	Free	Free	Free	Free	Free									
A9	Y-Symmetry	13.872	0	137.5	Free	Free	Free	Free	Free	Free									
A10	X-Symmetry	0	13.872	137.5	Free	Free	Free	Free	Free	Free									
A11	Y-Symmetry	12.31	0	162.5	Free	Free	Free	Free	Free	Free									
A12	X-Symmetry	0	12.31	162.5	Free	Free	Free	Free	Free	Free									
A13	Y-Symmetry	10.748	0	187.5	Free	Free	Free	Free	Free	Free									
A14	X-Symmetry	0	10.748	187.5	Free	Free	Free	Free	Free	Free									
A15	Y-Symmetry	9.967	0	200	Free	Free	Free	Free	Free	Free									
A16	X-Symmetry	0	9.967	200	Free	Free	Free	Free	Free	Free									
A17	Y-Symmetry	9.186	0	212.5	Free	Free	Free	Free	Free	Free									
A18	X-Symmetry	0	9.186	212.5	Free	Free	Free	Free	Free	Free									
A19	Y-Symmetry	8.405	0	225	Free	Free	Free	Free	Free	Free									
A20	X-Symmetry	0	8.405	225	Free	Free	Free	Free	Free	Free									
A21	Y-Symmetry	7.624	0	237.5	Free	Free	Free	Free	Free	Free									
A22	X-Symmetry	0	7.624	237.5	Free	Free	Free	Free	Free	Free									
A23	Y-Symmetry	6.843	0	250	Free	Free	Free	Free	Free	Free									
A24	X-Symmetry	0	6.843	250	Free	Free	Free	Free	Free	Free									
H1	XY-Symmetry	20.70575	10.06	28.125	Free	Free	Free	Free	Free	Free									
H2	XY-Symmetry	10.06	20.70575	28.125	Free	Free	Free	Free	Free	Free									
H5	XY-Symmetry	18.9972344	10.1042408	55.47	Free	Free	Free	Free	Free	Free									
H6	XY-Symmetry	10.1042408	18.9972344	55.47	Free	Free	Free	Free	Free	Free									
H7	Y-Symmetry	18.9972344	0	55.47	Free	Free	Free	Free	Free	Free									
H8	X-Symmetry	0	18.9972344	55.47	Free	Free	Free	Free	Free	Free									
H9	XY-Symmetry	17.4352344	9.2907512	80.47	Free	Free	Free	Free	Free	Free									
H10	XY-Symmetry	9.2907512	17.4352344	80.47	Free	Free	Free	Free	Free	Free									
H11	Y-Symmetry	17.4352344	0	80.47	Free	Free	Free	Free	Free	Free									
H12	X-Symmetry	0	17.4352344	80.47	Free	Free	Free	Free	Free	Free									

NOTES	
Types:	
1:	Built up Horizs. w/ A
2:	Built up Horizs. w/ M
A:	Typical A brace
X:	Typical X brace
Drop:	Use only for types 1 & 2

# Sections:	16

Legs

Site No.:	88011
Engineer:	AAV
Date:	06/05/2018
Carrier:	Sprint

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations *(ft)*	Type of Shape [1]	Diameter or Length *(in)*	Thickness [2] *(in)*	F_Y *(ksi)*
1	0.000-37.50	L	8	1.125	36
2	37.50-62.50	L	8	1.125	36
3	62.50-87.50	L	8	1	36
4	87.50-112.5	L	8	0.875	36
5	112.5-137.5	L	8	0.875	36
6	137.5-162.5	L	8	0.75	36
7	162.5-187.5	L	8	0.625	36
8	187.5-200.0	L	6	0.75	36
9	200.0-212.5	L	6	0.75	36
10	212.5-225.0	L	6	0.5625	36
11	225.0-237.5	L	6	0.5625	36
12	237.5-250.0	L	6	0.4375	36
13	250.0-260.2	L	5	0.4375	36
14	260.2-270.3	L	5	0.4375	36
15	270.3-278.9	L	5	0.3125	36
16	278.9-287.5	L	5	0.3125	36

Notes:

[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifflerized Angle. **L** = Even Leg

[2] For Solid Round Leg Shapes Thickness Equals Zero.

[3] Adjust for Bent Plate Leg Shapes.

Diagonals

Site No.:	88011
Engineer:	AAV
Date:	06/05/2018
Carrier:	Sprint

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations *(ft)*	Type of Shape [1]	Diameter [2] *(in)*	Web Length [3] *(in)*	Flange Length [3] *(in)*	Thickness *(in)*	F_y *(ksi)*	Is Diag. Tension Only? *(Y/N)*
1	0.000-37.50	2L		5	5	0.3125	36	
2	37.50-62.50	2L		2.5	3.5	0.25	36	
3	62.50-87.50	2L		2.5	3.5	0.25	36	
4	87.50-112.5	2L		2.5	3	0.25	36	
5	112.5-137.5	2L		2.5	3	0.25	36	
6	137.5-162.5	2L		2.5	3	0.25	36	
7	162.5-187.5	2L		2.5	3	0.25	36	
8	187.5-200.0	2L		2.5	2.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2	0.25	36	
11	225.0-237.5	2L		2.5	2	0.25	36	
12	237.5-250.0	2L		2.5	2	0.25	36	
13	250.0-260.2	L		3.5	3.5	0.25	36	
14	260.2-270.3	L		3.5	3.5	0.25	36	
15	270.3-278.9	L		3	3	0.25	36	
16	278.9-287.5	L		3	3	0.25	36	

Notes:

[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

[3] Applies to Single-Angle and Double-Angle Shapes only.

[4] Applies to Double-Angle Shapes only.

[5] Applies to Single-Angle Shapes only.

Horizontals

Site No.:	88011
Engineer:	AAV
Date:	06/05/2018
Carrier:	Sprint

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations *(ft)*	Type of Shape [1]	Diameter [2] *(in)*	Web Length [3] *(in)*	Flange Length [3] *(in)*	Thickness *(in)*	F_y *(ksi)*	
1	0.000-37.50	2L		3.5	2.5	0.25	36	
2	37.50-62.50	2L		3.5	2.5	0.25	36	
3	62.50-87.50	2L		3	2.5	0.25	36	
4	87.50-112.5	2L		3	2.5	0.25	36	
5	112.5-137.5	2L		3	2.5	0.25	36	
6	137.5-162.5	2L		2.5	2.5	0.25	36	
7	162.5-187.5	2L		2.5	2.5	0.25	36	
8	187.5-200.0	2L		2.5	2.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2.5	0.25	36	
11	225.0-237.5	2L		2.5	2.5	0.25	36	
12	237.5-250.0	2L		2.5	2.5	0.25	36	
13	250.0-260.2	L		3	2.5	0.25	36	
14	260.2-270.3	2L		3	2.5	0.25	36	
15	270.3-278.9	L		3	2.5	0.25	36	
16	278.9-287.5	C		8	11.5		36	

Notes:

[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle, **2L** = Double-Angle, **C** = Channel, **W** = W Shape

[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

[3] Applies to Single-Angle and Double-Angle Shapes only.

[4] Applies to Double-Angle Shapes only.

[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

Site No.:	88011
Engineer:	AAV
Date:	06/05/2018
Carrier:	Sprint

When inputting thickness values, include all decimal places.
Input diags. from left to center & from base section upward.

Tower Built-up Diag. #	Section Elevations *(ft)*	Type of Shape [1]	Diameter [2] *(in)*	Web Length [3] *(in)*	Flange Length [3] *(in)*	Thickness *(in)*	F_y *(ksi)*
1	0.000-37.50	2L		3.5	3.5	0.25	36
2	0.000-37.50	2L		4	4	0.3125	36
3	37.50-62.50	2L		2.5	2	0.25	36
4	37.50-62.50	2L		2.5	2	0.25	36
5	37.50-62.50	2L		3	2	0.25	36
6	62.50-87.50	2L		2.5	2	0.25	36
7	62.50-87.50	2L		2.5	2	0.25	36
8	62.50-87.50	2L		3	3	0.25	36

Notes:

[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

[3] Applies to Single-Angle and Double-Angle Shapes only.

[4] Applies to Double-Angle Shapes only.

[5] Applies to Single-Angle Shapes only.

Built-up Horizontals

Site No.:	88011
Engineer:	AAV
Date:	06/05/2018
Carrier:	Sprint

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations *(ft)*	Type of Shape [1]	Diameter [2] *(in)*	Web Length [3] *(in)*	Flange Length [3] *(in)*	Thickness *(in)*	F_y *(ksi)*	Is Horiz. Tension Only? *(Y/N)*
1	0.000-37.50	2L		2.5	2.5	0.25	36	Y
2	37.50-62.50	2L		2.5	3	0.25	36	
3	62.50-87.50	2L		2.5	3	0.25	36	

Notes:

[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

[3] Applies to Single-Angle and Double-Angle Shapes only.

[4] Applies to Double-Angle Shapes only.

[5] Applies to Single-Angle Shapes only.

Coax (p. 1 of 2)

Orig by MED, Improved by ABL. Last update 6/25/13 MED

Site No.:	88011
Engineer:	AAV
Date:	06/05/18
Carrier:	Sprint

Description	From (ft)	To (ft)	Quantity	Shape	Width or Diameter (in)	Perimeter (in)	Unit Weight (lb/ft)	Part of Face Solidity Ratio (Yes/No)	Include in Wind Load (Yes/No)
1 Ladder	0	287.5	1	Flat	1.5	6.0	6	Yes	Yes
2 COAX CAGE	8.3333	33.3333	2	Round	12	72.0	50	Yes	Yes
3 COAX CAGE	8.3333	33.3333	1	Round	12	72.0	50	Yes	Yes
4 WG1	5	266	1	Flat	1.5	6.0	6	Yes	Yes
5 WG2	5	246	1	Flat	1.5	6.0	6	Yes	Yes
6 WG3	5	277	1	Flat	1.5	6.0	6	Yes	Yes
7 SN1	5	287.5	1	Flat	3.06	16.3	4	Yes	Yes
8 SN2	5	287.5	1	Flat	3.72	25.8	4.92	Yes	Yes
9 TMO1	5	277	1	Flat	3.195	17.0	6.44	Yes	Yes
10 TMO2	5	277	1	Round	0.63	2.5	0.15	No	No
11 VZW1	5	266	2	Round	1.54	4.8	1	Yes	Yes
12 VZW2	5	266	10	Round	1.98	6.2	0.82	Yes	Yes
13 ATT1	5	246	1	Round	0.39	1.2	0.17	Yes	Yes
14 ATT2	5	246	2	Round	0.78	2.5	0.59	Yes	Yes
15 ATT3	5	246	1	Round	3.5	11.0	7.58	Yes	Yes
16 ATT4	5	246	1	Flat	14.46	50.1	43.8	Yes	Yes
17 USDOJ	5	200	1	Round	1.09	3.4	0.33	Yes	Yes
18 VZW	5	50	1	Round	0.63	2.0	0.15	Yes	Yes

Coax (p. 2 of 2)

Site No.:	88011
Engineer:	AAV
Date:	06/05/18
Carrier:	Sprint

	Exposure	B	α	7	$k_{z\ max}$	2.01	
Tia Code: TIA-222-G	Topo Cat:	1	z_g	1200	$k_{z\ min}$	0.7	
f			K_e	0.9	K_t		

Description	From (ft)	To (ft)	Quantity	Face # (1-4, A-D)	Coax Width (in)	Coax Shape (Block / Flat / Ind)	% Exposed	Spacing (in)	Shape (Round/Flat)	Block Width (# coax)	Block Depth (# coax)	Perimeter (in)	Unit Weight (lb/ft)	In Face Zone (Yes/No)	Include in Wind Load (Yes/No)
Ladder	0	287.5	1	B	1.50	**Flat**	100	1	**Flat**	**1**	**1**	**6.0**	**6**	Yes	Yes
COAX CAGE	8.3333	33.3333	2	1	12.00	**Ind**	100	1	**Round**	**2**	**1**	**37.7**	**25**	Yes	Yes
COAX CAGE	8.3333	33.3333	2	3	12.00	**Ind**	100	1	**Round**	**2**	**1**	**37.7**	**25**	Yes	Yes
WG1	5	266	1	4	1.50	**Flat**	100	1	**Flat**	**1**	**1**	**6.0**	**6**	Yes	Yes
WG2	5	246	1	2	1.50	**Flat**	100	1	**Flat**	**1**	**1**	**6.0**	**6**	Yes	Yes
WG3	5	277	1	1	1.50	**Flat**	100	1	**Flat**	**1**	**1**	**6.0**	**6**	Yes	Yes
SN1	5	287.5	4	3	1.54	**Block**	50	1	**Flat**	**2**	**2**	**16.3**	**4**	Yes	Yes
SN2	5	287.5	6	3	1.98	**Block**	50	1	**Flat**	**3**	**2**	**25.8**	**4.92**	Yes	Yes
TMO1	5	277	4	1	1.63	**Block**	50	1	**Flat**	**2**	**2**	**17.0**	**6.44**	Yes	Yes
TMO2	5	277	1	1	0.63	**Ind**	100	1	**Round**	**1**	**1**	**2.0**	**0.15**	No	No
VZW1	5	266	2	4	1.54	**Ind**	100	1	**Round**	**2**	**1**	**4.8**	**1**	Yes	Yes
VZW2	5	266	10	4	1.98	**Ind**	100	1	**Round**	**10**	**1**	**6.2**	**0.82**	Yes	Yes
ATT1	5	246	1	2	0.39	**Ind**	100	1	**Round**	**1**	**1**	**1.2**	**0.17**	Yes	Yes
ATT2	5	246	2	2	0.78	**Ind**	100	1	**Round**	**2**	**1**	**2.5**	**0.59**	Yes	Yes
ATT3	5	246	1	2	3.50	**Ind**	100	1	**Round**	**1**	**1**	**11.0**	**7.58**	Yes	Yes
ATT4	5	246	12	2	2.38	**Block**	50	1	**Flat**	**6**	**2**	**50.1**	**43.8**	Yes	Yes
USDOJ	5	200	1	4	1.09	**Ind**	100	1	**Round**	**1**	**1**	**3.4**	**0.33**	Yes	Yes
VZW	5	50	1	4	0.63	**Ind**	100	1	**Round**	**1**	**1**	**2.0**	**0.15**	Yes	Yes
														No	No
								1						No	No
								1						No	No
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								1						No	No

Dishes

Site No.:	88011
Engineer:	AAV
Date:	06/05/18
Carrier:	Sprint

Dish Types	
S	Standard
R	Standard w/ Radome
H	High Performance
G	Grid

Dish Number	Dish Elevation (ft)	Dish Dia. (ft)	Dish Angle (deg)	Dish Type	Joint Orientation	Equipment Staus
1	277	2	45	H	XY	Proposed
2						
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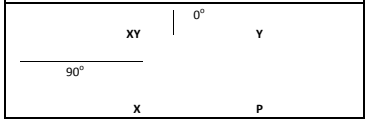
Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle *(deg)*
2' HP 1 @ 277'	15XY	2 ft HP Dish	45

Joint Orientation



Site #:	88011
Name:	Sprint

Engineer:	AAV
Date:	06/05/18

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
L 1	Leg S1		XY-Symmetry	0P	1P	1	4	0.25	0.25	0.25
L 2	Leg S2		XY-Symmetry	1P	2P	1	4	0.2812	0.2812	0.2812
L 3	Leg S3		XY-Symmetry	2P	3P	1	4	0.2812	0.2812	0.2812
L 4	Leg S4		XY-Symmetry	3P	4P	1	4	0.333333333	0.333333333	0.333333333
L 5	Leg S5		XY-Symmetry	4P	5P	1	4	0.333333333	0.333333333	0.333333333
L 6	Leg S6		XY-Symmetry	5P	6P	1	4	0.333333333	0.333333333	0.333333333
L 7	Leg S7		XY-Symmetry	6P	7P	1	4	0.333333333	0.333333333	0.333333333
L 8	Leg S8		XY-Symmetry	7P	8P	1	4	0.5	0.5	0.5
L 9	Leg S9		XY-Symmetry	8P	9P	1	4	0.5	0.5	0.5
L 10	Leg S10		XY-Symmetry	9P	10P	1	4	0.5	0.5	0.5
L 11	Leg S11		XY-Symmetry	10P	11P	1	4	0.5	0.5	0.5
L 12	Leg S12		XY-Symmetry	11P	12P	1	4	0.5	0.5	0.5
L 13	Leg S13		XY-Symmetry	12P	13P	1	4	0.5	0.5	0.5
L 14	Leg S14		XY-Symmetry	13P	14P	1	4	0.5	0.5	0.5
L 15	Leg S15		XY-Symmetry	14P	15P	1	4	0.5	0.5	0.5
L 16	Leg S16		XY-Symmetry	15P	16P	1	4	0.5	0.5	0.5
D 1	Diag S1		XY-Symmetry	0P	H2P	1	6	0.316	0.316	0.316
D 2	Diag S1		XY-Symmetry	0P	H1P	1	6	0.316	0.316	0.316
D 3	Diag S2		XY-Symmetry	1P	H6P	1	6	0.32	0.32	0.32
D 4	Diag S2		XY-Symmetry	1P	H5P	1	6	0.32	0.32	0.32
D 5	Diag S3		XY-Symmetry	2P	H10P	1	6	0.32	0.32	0.32
D 6	Diag S3		XY-Symmetry	2P	H9P	1	6	0.32	0.32	0.32
D 7	Diag S4		XY-Symmetry	3P	A7P	1	6	0.3	0.3	0.3
D 8	Diag S4		XY-Symmetry	3P	A8P	1	6	0.3	0.3	0.3
D 9	Diag S5		XY-Symmetry	4P	A9P	1	6	0.3	0.3	0.3
D 10	Diag S5		XY-Symmetry	4P	A10P	1	6	0.3	0.3	0.3
D 11	Diag S6		XY-Symmetry	5P	A11P	1	6	0.32	0.32	0.32
D 12	Diag S6		XY-Symmetry	5P	A12P	1	6	0.32	0.32	0.32
D 13	Diag S7		XY-Symmetry	6P	A13P	1	6	0.32	0.64	0.32
D 14	Diag S7		XY-Symmetry	6P	A14P	1	6	0.32	0.64	0.32
D 15	Diag S8		XY-Symmetry	7P	A15P	1	6	0.5	1	0.5
D 16	Diag S8		XY-Symmetry	7P	A16P	1	6	0.5	1	0.5
D 17	Diag S9		XY-Symmetry	8P	A17P	1	6	0.5	1	0.5
D 18	Diag S9		XY-Symmetry	8P	A18P	1	6	0.5	1	0.5
D 19	Diag S10		XY-Symmetry	9P	A19P	1	6	0.5	1	0.5
D 20	Diag S10		XY-Symmetry	9P	A20P	1	6	0.5	1	0.5
D 21	Diag S11		XY-Symmetry	10P	A21P	1	6	0.5	1	0.5
D 22	Diag S11		XY-Symmetry	10P	A22P	1	6	0.5	1	0.5
D 23	Diag S12		XY-Symmetry	11P	A23P	1	6	0.5	1	0.5
D 24	Diag S12		XY-Symmetry	11P	A24P	1	6	0.5	1	0.5
D 25	Diag S13		XY-Symmetry	12P	13Y	2	5	0.52	0.52	0.52
D 26	Diag S13		XY-Symmetry	12P	13X	2	5	0.52	0.52	0.52
D 27	Diag S14		XY-Symmetry	13P	14Y	2	5	0.52	0.52	0.52
D 28	Diag S14		XY-Symmetry	13P	14X	2	5	0.52	0.52	0.52
D 29	Diag S15		XY-Symmetry	14P	15Y	2	5	0.52	0.52	0.52
D 30	Diag S15		XY-Symmetry	14P	15X	2	5	0.52	0.52	0.52
D 31	Diag S16		XY-Symmetry	15P	16Y	2	5	0.52	0.52	0.52
D 32	Diag S16		XY-Symmetry	15P	16X	2	5	0.52	0.52	0.52
H 1	Horiz 1		XY-Symmetry	1P	A1P	1	6	0.5	0.5	0.5
H 2	Horiz 1		XY-Symmetry	1P	A2P	1	6	0.5	0.5	0.5
H 3	Horiz 2		XY-Symmetry	2P	A3P	1	6	0.94	0.94	0.94
H 4	Horiz 2		XY-Symmetry	2P	A4P	1	6	0.94	0.94	0.94
H 5	Horiz 3		XY-Symmetry	3P	A5P	1	6	0.94	0.94	0.94
H 6	Horiz 3		XY-Symmetry	3P	A6P	1	6	0.94	0.94	0.94
H 7	Horiz 4		XY-Symmetry	4P	A7P	1	6	1	1	1
H 8	Horiz 4		XY-Symmetry	4P	A8P	1	6	1	1	1
H 9	Horiz 5		XY-Symmetry	5P	A9P	1	6	1	1	1
H 10	Horiz 5		XY-Symmetry	5P	A10P	1	6	1	1	1
H 11	Horiz 6		XY-Symmetry	6P	A11P	1	6	1	1	1
H 12	Horiz 6		XY-Symmetry	6P	A12P	1	6	1	1	1
H 13	Horiz 7		XY-Symmetry	7P	A13P	1	6	1	1	1
H 14	Horiz 7		XY-Symmetry	7P	A14P	1	6	1	1	1

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
H 15	Horiz 8		XY-Symmetry	8P	A15P	1	6	1	1	1
H 16	Horiz 8		XY-Symmetry	8P	A16P	1	6	1	1	1
H 17	Horiz 9		XY-Symmetry	9P	A17P	1	6	1	1	1
H 18	Horiz 9		XY-Symmetry	9P	A18P	1	6	1	1	1
H 19	Horiz 10		XY-Symmetry	10P	A19P	1	6	1	1	1
H 20	Horiz 10		XY-Symmetry	10P	A20P	1	6	1	1	1
H 21	Horiz 11		XY-Symmetry	11P	A21P	1	6	1	1	1
H 22	Horiz 11		XY-Symmetry	11P	A22P	1	6	1	1	1
H 23	Horiz 12		XY-Symmetry	12P	A23P	1	6	1	1	1
H 24	Horiz 12		XY-Symmetry	12P	A24P	1	6	1	1	1
H 25	Horiz 13		Y-Symmetry	13P	13X	3	5	0.5	0.5	0.5
H 26	Horiz 13		X-Symmetry	13P	13Y	3	5	0.5	0.5	0.5
H 27	Horiz 14		Y-Symmetry	14P	14X	1	6	0.5	0.5	0.5
H 28	Horiz 14		X-Symmetry	14P	14Y	1	6	0.5	0.5	0.5
H 29	Horiz 15		Y-Symmetry	15P	15X	3	5	0.5	0.5	0.5
H 30	Horiz 15		X-Symmetry	15P	15Y	3	5	0.5	0.5	0.5
H 31	Horiz 16		Y-Symmetry	16P	16X	3	5	1	1	1
H 32	Horiz 16		X-Symmetry	16P	16Y	3	5	1	1	1
H 35	Horiz 2		Y-Symmetry	A3P	A3X	1	6	1	1	1
H 36	Horiz 2		X-Symmetry	A4P	A4Y	1	6	1	1	1
H 37	Horiz 3		Y-Symmetry	A5P	A5X	1	6	1	1	1
H 38	Horiz 3		X-Symmetry	A6P	A6Y	1	6	1	1	1
LH 1	LH 1		Y-Symmetry	H1P	H1X	1	6	100	100	100
LH 2	LH 1		X-Symmetry	H2P	H2Y	1	6	100	100	100
LH 3	LH 2		XY-Symmetry	H5P	H7P	1	6	1	2	1
LH 4	LH 2		XY-Symmetry	H6P	H8P	1	6	1	2	1
LH 5	LH 3		XY-Symmetry	H9P	H11P	1	6	1	2	1
LH 6	LH 3		XY-Symmetry	H10P	H12P	1	6	1	2	1
LD 1	LD 1		XY-Symmetry	H1P	1P	1	6	0.92	0.92	0.92
LD 2	LD 1		XY-Symmetry	H2P	1P	1	6	0.92	0.92	0.92
LD 3	LD 2		XY-Symmetry	H1P	A1P	1	6	0.92	0.92	0.92
LD 4	LD 2		XY-Symmetry	H2P	A2P	1	6	0.92	0.92	0.92
LD 7	LD 4		XY-Symmetry	H5P	2P	1	6	0.92	0.92	0.92
LD 8	LD 4		XY-Symmetry	H6P	2P	1	6	0.92	0.92	0.92
LD 9	LD 5		XY-Symmetry	H5P	A3P	1	6	0.92	0.92	0.92
LD 10	LD 5		XY-Symmetry	H6P	A4P	1	6	0.92	0.92	0.92
LD 11	LD 6		XY-Symmetry	A3P	H7P	1	6	0.92	0.92	0.92
LD 12	LD 6		XY-Symmetry	A4P	H8P	1	6	0.92	0.92	0.92
LD 13	LD 7		XY-Symmetry	H9P	3P	1	6	0.92	0.92	0.92
LD 14	LD 7		XY-Symmetry	H10P	3P	1	6	0.92	0.92	0.92
LD 15	LD 8		XY-Symmetry	H9P	A5P	1	6	0.92	0.92	0.92
LD 16	LD 8		XY-Symmetry	H10P	A6P	1	6	0.92	0.92	0.92
LD 17	LD 9		XY-Symmetry	A5P	H11P	1	6	0.92	0.92	0.92
LD 18	LD 9		XY-Symmetry	A6P	H12P	1	6	0.92	0.92	0.92
BR 1	DUM 1		XY-Symmetry	A1P	A2P	1	4	1	1	1
BR 3	DUM 1		XY-Symmetry	A3P	A4P	1	4	1	1	1
BR 4	DUM 1		XY-Symmetry	A3P	A4XY	1	4	1	1	1
BR 5	DUM 1		XY-Symmetry	A5P	A6P	1	4	1	1	1
BR 6	DUM 1		XY-Symmetry	A5P	A6XY	1	4	1	1	1
BR 7	DUM 1		XY-Symmetry	A7P	A8P	1	4	1	1	1
BR 9	DUM 1		XY-Symmetry	A9P	A10P	1	4	1	1	1
BR 11	DUM 1		XY-Symmetry	A11P	A12P	1	4	1	1	1
BR 13	DUM 1		XY-Symmetry	A13P	A14P	1	4	1	1	1
BR 15	DUM 1		XY-Symmetry	A15P	A16P	1	4	1	1	1
BR 17	DUM 1		XY-Symmetry	A17P	A18P	1	4	1	1	1

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
BR 19	DUM 1		XY-Symmetry	A19P	A20P	1	4	1	1	1
BR 21	DUM 1		XY-Symmetry	A21P	A22P	1	4	1	1	1
BR 23	DUM 1		XY-Symmetry	A23P	A24P	1	4	1	1	1
BR 61	DUM 1		XY-Symmetry	H1P	H2P	1	4	1	1	1
BR 62	DUM 1		XY-Symmetry	H1P	H2XY	1	4	1	1	1
BR 64	DUM 1		XY-Symmetry	H5P	H6P	1	4	1	1	1
BR 65	DUM 1		XY-Symmetry	H5P	H6XY	1	4	1	1	1
BR 66	DUM 1		XY-Symmetry	H7P	H8P	1	4	1	1	1
BR 67	DUM 1		XY-Symmetry	H9P	H10P	1	4	1	1	1
BR 68	DUM 1		XY-Symmetry	H9P	H10XY	1	4	1	1	1
BR 69	DUM 1		XY-Symmetry	H11P	H12P	1	4	1	1	1

Row #	Member Label	Group Label	Design Comp. Capacity (kips)	Comp. Control Criterion	Design Tension Capacity (kips)	Tension Control Criterion	L/r	Length (ft)	L/r Comp. Capacity (kips)	Connection Shear Capacity (kips)	Connection Bearing Capacity (kips)	Net Section Tension Capacity (kips)	Rupture Tension Capacity (kips)	RTE End Dist. Tension Capacity (kips)	RTE Edge Dist. Tension Capacity (kips)	Override Comp. Capacity (kips)
1	L 1P	Leg S1	411.392	L/r	542.051	Net Sect	72	37.639	411.392	0	0	542.051	0	0	0	489.14
2	L 1X	Leg S1	411.392	L/r	542.051	Net Sect	72	37.639	411.392	0	0	542.051	0	0	0	489.14
3	L 1XY	Leg S1	411.392	L/r	542.051	Net Sect	72	37.639	411.392	0	0	542.051	0	0	0	489.14
4	L 1Y	Leg S1	411.392	L/r	542.051	Net Sect	72	37.639	411.392	0	0	542.051	0	0	0	489.14

Task:	Determine Point Loads	
Tower Height:	287.5	ft
Gh:	0.85	
Wind Speed:	100.697567	mph, Vasd
Ice Wind Speed:	50	
Ice Density:	56	
Tower Type:	S	

Ice Thick:	0.75	in
Topographic Category (1-4):	1	
Exposure Category (B-D):	B	
Structure Class (1-3):	2	
Height of Crest (H) if Topo Cat. >1:	0	ft
Load Factor; Wind:	1.6	
Load Factor; Dead:	1.2	

Site No.:	88011
Engineer:	AAV
Date:	06/05/2018
Carrier:	Sprint

No.	Carrier	Elevation (ft)	Quantity	# of Azimuths		Manufacturer	Model	Height (in)	Width (in)	Depth (in)	Weight (lbs/ea)	Flat/Round (F/R)	Reduction	C_AA_C (ft^2)	Weight (k)	Ka
1		287.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		287.5	1	4			Platform w/ HR						1.000	80.00	9.00	1
2		270	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		270	1	4			Catwalk						1.000	70.00	8.00	1
3		237.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		237.5	1	1			Rest Platform						1.000	15.00	0.50	1
4		200	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		200	1	3			Access Platform						1.000	45.00	5.00	1
5		187.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		187.5	1	1			Rest Platform						1.000	15.00	0.50	1
6		137.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		137.5	1	1			Rest Platform						1.000	15.00	0.50	1
7		87.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		87.5	1	3			Access Platform						1.000	45.00	5.00	1
8		37.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		37.5	1	1			Rest Platform						1.000	15.00	0.50	1
9																1
																1
10	Sprint Nextel	287.5	6	3	Proposed	Alcatel-Lucent	RRH2x50-08	15.7	13	9.8	52.9	F	0.500			0.8
	Sprint Nextel	287.5	3	3	Proposed	Alcatel-Lucent	1900 MHz 4X45 RRH						0.500	2.32	0.06	0.8
11	Sprint Nextel	287.5	3	3	Proposed	Alcatel-Lucent	TD-RRH8x20-25 w/ Solar Shield	26.1	18.6	6.7	70	F	0.500			0.8
	Sprint Nextel	287.5	3	3	Proposed	RFS	APXVTM14-ALU-I20						0.660	6.37	0.06	0.8
12	Sprint Nextel	287.5	3	3	Proposed	Commscope	NNVV-65B-R4	72	19.6	7.8	77.4	F	0.640			0.8
	Sprint Nextel	287.5	3	3			Round Sector Frame						0.750	14.40	0.30	0.75
13	T-Mobile	277	8	4		Commscope	CBC6AE7LQ-DS-43	10.5	7.1	7	23.6	F	0.500			0.8
	T-Mobile	277	4	4		Ericsson	Radio 4478 B71						0.500	1.65	0.06	0.8
14	T-Mobile	277	4	4		Ericsson	RRUS 11 B12	19.7	17	7.2	50.7	F	0.500			0.8
	T-Mobile	277	4	4		Ericsson	RRUS 11 B4						0.500	2.79	0.05	0.8
15	T-Mobile	277	4	4		Ericsson	AIR32 B66Aa/B2a	56.6	12.9	8.7	132.2	F	0.780			0.8
	T-Mobile	277	4	4		RFS	APX16DWV-16DWVS-E-A20						0.700	6.59	0.04	0.8
16	T-Mobile	277	4	4		RFS	APXVAA24_43-U-A20	96	24	8.5	101.4	F	0.720			0.8
	T-Mobile	277	4	4			Flat Sector Frame						0.670	17.90	0.40	0.75
17	Verizon Wireless	266	6	3		RFS	FD9R6004/2C-3L	5.8	6.5	1.5	2.6	F	0.500			0.8
	Verizon Wireless	266	3	3		Alcatel-Lucent	B13 RRH4x30-4R 700U						0.500	2.17	0.06	0.8
18	Verizon Wireless	266	3	3		Alcatel-Lucent	B66A RRH4x45-4R w/ Solar Shield	25.8	11.8	7.2	56.8	F	0.500			0.8
	Verizon Wireless	266	2	2		Raycap	RC3DC-3315-PF-48						0.500	3.78	0.03	0.8
19	Verizon Wireless	266	6	3		Amphenol Antel	LPA-80063-4CF-EDIN-X	47.4	15.2	13.1	20	F	0.750			0.8
	Verizon Wireless	266	3	3		Commscope	SBNHH-1D65B						0.690	8.17	0.05	0.8
20	Verizon Wireless	266	3	3		Commscope	SBNHH-1D65B	72.7	11.9	7.1	50.7	F	0.690			0.8
	Verizon Wireless	266	3	3			Flat Sector Frame						0.670	17.90	0.40	0.75
21	AT&T Mobility	246	6	3		Powerwave Allgon	TT19-08BP111-001	9.9	6.7	5.4	16	F	0.500			0.8
	AT&T Mobility	246	3	3		Raycap	DC2-48-60-0-9E						0.500	0.88	0.02	0.8
22	AT&T Mobility	246	1	1		Raycap	FC12-PC6-10E	15.5	16.3	6.6	20.4	F	0.500			0.8
	AT&T Mobility	246	3	3		Ericsson	RRUS-11						0.500	3.79	0.06	0.8
23	AT&T Mobility	246	6	3		Powerwave Allgon	P65-15-XLH-RR	51	12	6	41	F	0.660			0.8
	AT&T Mobility	246	1	1		Kathrein Scala	800 10766						0.680	11.31	0.06	0.8
24	AT&T Mobility	246	2	2		KMW	AM-X-CD-17-65-00T-RET	96	11.8	6	59.5	F	0.680			0.8
	AT&T Mobility	246	3	3			Flat Sector Frame						0.670	17.90	0.40	0.75
25	US DOJ	210	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
	US DOJ	210	1	1		Andrew	DB264						1.000	5.63	0.04	1
26	US DOJ	210	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
	US DOJ	210	1	1			Flat Side Arm						1.000	6.30	0.15	1
27	Verizon Wireless	50	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
	Verizon Wireless	50	1	1		MicroPulse	GPS-QBW-26N						1.000	0.09	0.00	1
28	Verizon Wireless	50	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
	Verizon Wireless	50	1	1			Stand-Off						1.000	2.50	0.08	1
29																1
																1
30																1
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																1

No.	Elevation	C_AA_C	C_AA_C (Ice)	Force	Force (Ice)	Weight	Weight (Ice)	60 Azi	Force	F (Ice)	Height	Sum of Forces (No I	
	(ft)	*(ft^2)*	*(ft^2)*	*(lb)*	*(lb)*	*(lb)*	*(lb)*	Mult.	mean	mean	Flag	60 Azi.	180 Azi.
1	287.5	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**			
	287.5	80.00	108.00	3207.921	667.328	10800	14040	**1.00**	**1764.36**	**367.03**	1.5034783	3207.921154	
2	270	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5034793		
	270	70.00	94.50	2757.015	573.528	9600	12480	**1.00**	**1516.36**	**315.44**	1.5037037	2757.015087	
3	237.5	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5037047		
	237.5	15.00	20.25	569.532	118.477	600	780	**1.00**	**313.24**	**65.16**	1.5042105	569.5318722	
4	200	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5042115		
	200	45.00	60.75	1626.730	338.401	6000	7800	**1.00**	**894.70**	**186.12**	1.5050000	1626.729704	
5	187.5	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5050010		
	187.5	15.00	20.25	532.336	110.739	600	780	**1.00**	**292.78**	**60.91**	1.5053333	532.3361207	
6	137.5	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5053343		
	137.5	15.00	20.25	487.193	101.348	600	780	**1.00**	**267.96**	**55.74**	1.5072727	487.1925388	
7	87.5	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5072737		
	87.5	45.00	60.75	1284.511	267.211	6000	7800	**1.00**	**706.48**	**146.97**	1.5114286	1284.510619	
8	37.5	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5114296		
	37.5	15.00	20.25	336.109	69.919	600	780	**1.00**	**184.86**	**38.46**	1.5266667	336.1090605	
9								**1.00**			1.5266677		
								1.00					
10	287.5	4.08	5.82	163.684	35.957	381	522	**1.00**	**90.03**	**19.78**			
	287.5	3.48	4.70	111.636	23.223	216	281	**1.00**	**61.40**	**12.77**		275.319833	
11	287.5	4.85	6.47	194.665	39.992	252	431	**1.00**	**107.07**	**22.00**			
	287.5	12.61	17.03	404.602	84.167	202	263	**1.00**	**222.53**	**46.29**		874.5867718	
12	287.5	18.85	23.16	755.803	143.101	279	710	**1.00**	**415.69**	**78.71**			
	287.5	32.40	43.74	974.406	202.701	1080	1404	**1.00**	**535.92**	**111.49**	1.5034783	2604.796155	
13	277	2.29	3.21	90.724	19.629	227	300	**1.00**	**49.90**	**10.80**	1.5034793		
	277	3.30	4.46	104.742	21.789	288	374	**1.00**	**57.61**	**11.98**	1.5034793	195.4655759	
14	277	4.47	6.10	177.162	37.299	243	383	**1.00**	**97.44**	**20.51**	1.5034803		
	277	5.58	7.53	177.109	36.843	243	316	**1.00**	**97.41**	**20.26**	1.5036101	549.7370135	
15	277	16.25	20.30	644.665	124.122	635	985	**1.00**	**354.57**	**68.27**	1.5036111		
	277	18.45	24.91	585.667	121.833	195	254	**1.00**	**322.12**	**67.01**	1.5036101	1780.068928	
16	277	46.69	55.69	1852.601	340.480	487	1179	**1.00**	**1018.93**	**187.26**	1.5036111		
	277	47.97	64.76	1427.467	296.949	1920	2496	**1.00**	**785.11**	**163.32**	1.5036101	5060.137347	
17	266	0.75	1.36	29.571	8.235	19	34	**1.00**	**16.26**	**4.53**	1.5036111		
	266	3.26	4.39	102.125	21.244	216	281	**1.00**	**56.17**	**11.68**	1.5037594	131.695143	
18	266	3.04	4.24	119.396	25.600	204	337	**1.00**	**65.67**	**14.08**	1.5037604		
	266	3.78	5.10	118.596	24.671	72	94	**1.00**	**65.23**	**13.57**	1.5037594	369.6876401	
19	266	22.11	28.58	867.096	172.729	144	407	**1.00**	**476.90**	**95.00**	1.5037604		
	266	16.91	22.83	530.605	110.379	180	234	**1.00**	**291.83**	**60.71**	1.5037594	1767.389083	
20	266	13.53	16.01	530.809	96.740	183	477	**1.00**	**291.95**	**53.21**	1.5037604		
	266	35.98	48.57	1058.277	220.148	1440	1872	**1.00**	**582.05**	**121.08**	1.5037594	3356.47533	
21	246	1.33	2.18	50.878	12.890	115	161	**1.00**	**27.98**	**7.09**	1.5037604		
	246	1.32	1.78	40.500	8.425	72	94	**1.00**	**22.27**	**4.63**	1.5040650	91.37790467	
22	246	0.84	1.18	32.299	6.955	24	97	**1.00**	**17.76**	**3.82**	1.5040660		
	246	5.69	7.67	174.426	36.285	216	281	**1.00**	**95.93**	**19.96**	1.5040650	298.1025482	
23	246	17.20	21.83	659.811	129.008	295	528	**1.00**	**362.90**	**70.95**	1.5040660		
	246	7.69	10.38	235.967	49.087	72	94	**1.00**	**129.78**	**27.00**	1.5040650	1193.880616	
24	246	12.31	13.82	471.981	81.702	143	496	**1.00**	**259.59**	**44.94**	1.5040660		
	246	35.98	48.57	1034.905	215.286	1440	1872	**1.00**	**569.20**	**118.41**	1.5040650	2700.766116	
25	210	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5040660		
	210	5.63	7.60	206.379	42.932	48	62	**1.00**	**113.51**	**23.61**	1.5047619	206.3789333	
26	210	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5047629		
	210	6.30	8.51	230.939	48.041	180	234	**1.00**	**127.02**	**26.42**	1.5047619	437.3180594	
27	50	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5047629		
	50	0.09	0.12	2.189	0.455			**1.00**	**1.20**	**0.25**	1.5200000	2.189415822	
28	50	0.00	0.00	0.000	0.000	0	0	**1.00**	**0.00**	**0.00**	1.5200010		
	50	2.50	3.38	60.817	12.651	96	125	**1.00**	**33.45**	**6.96**	1.5200000	63.00652198	
29					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	1.5200010		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
30					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
31					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
32					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
33					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
34					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
35					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
36					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
37					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
38					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
39					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
40					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
41					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
42					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
43					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
44					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
45					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
46					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
47					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
48					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
49					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	
50					#VALUE!			**1.00**	**#VALUE!**	**#VALUE!**	#DIV/0!		
								1.00	**#VALUE!**	**#VALUE!**	#DIV/0!	#VALUE!	

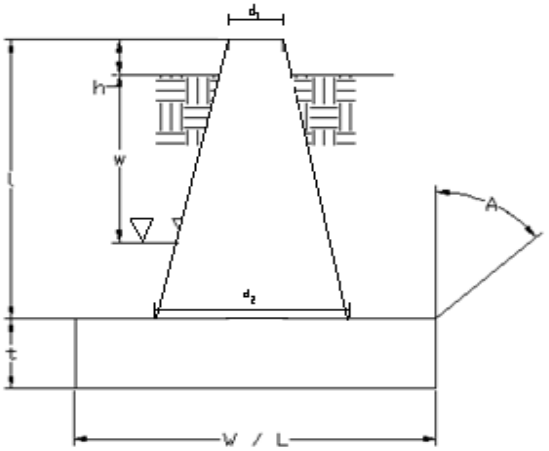
Foundation

Site No.:	88011
Engineer:	AAV
Date:	06/05/18
Carrier:	Sprint

Design Loads (Factored)

Compression/Leg:	486.52	k
Uplift/Leg:	363.47	k
Shear/Leg	66.55	k

Face Width @ Top of Pier (d_1):	3.50	ft
Face Width @ Bottom of Pier (d_2):	7.50	ft
Total Length of Pier (l):	8.50	ft
Height of Pedestal Above Ground (h):	0.50	ft
Width of Pad (W):	14.75	ft
Length of Pad (L):	14.75	ft
Thickness of Pad (t):	3.25	ft
Water Table Depth (w):	99.00	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil (Above Water Table):	120.0	pcf
Unit Weight of Soil (Below Water Table):	57.6	pcf
Friction Angle of Uplift (A):	30	°
Ultimate Compressive Bearing Pressure:	30000	psf
Ultimate Skin Friction:	1007	psf



Volume Pier (Total):	268.46	ft³
Volume Pad (Total):	707.08	ft³
Volume Soil (Total):	2747.35	ft³
Volume Pier (Buoyant):	0.00	ft³
Volume Pad (Buoyant):	0.00	ft³
Volume Soil (Buoyant):	0.00	ft³
Weight Pier:	40.27	k
Weight Pad:	106.06	k
Weight Soil:	329.68	k
Uplift Skin Friction:	144.82	k

Uplift Check

ϕs Uplift Resistance (k)	Ratio	Result
465.62	0.78	**OK**

Axial Check

ϕs Axial Resistance (k)	Ratio	Result
4895.16	0.10	**OK**

Anchor Bolt Check

Bolt Diameter (in)	2.25
# of Bolts	6
Steel Grade	A36
Steel Fy	36
Steel Fu	58
Detail Type	C

Usage Ratio	Result
0.54	**OK**

Sprint

PROJECT:	DO MACRO UPGRADE
SITE NAME:	CT0958-RING TO EXISTING-(R2E) PH 1A
SITE CASCADE:	CT72XC042
SITE ADDRESS:	1375 NORTH ROAD DAYVILLE, CT 06241
SITE TYPE:	SELF-SUPPORT TOWER
MARKET:	NORTHERN CONNECTICUT

SITE INFORMATION

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

LATITUDE (NAD83):
41° 52' 17.47" N
41.87151944°

LONGITUDE (NAD83):
71° 49' 17.49" W
-71.82152499°

COUNTY:
WINDHAM

ZONING JURISDICTION:
CONNECTICUT SITING COUNCIL

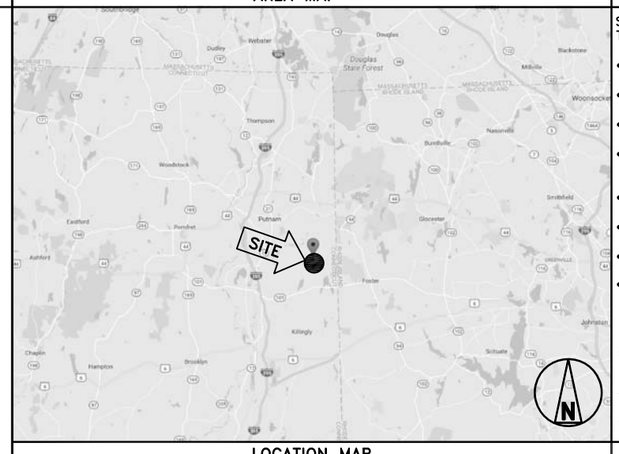
ZONING DISTRICT:
TBD

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

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

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

AREA MAP



LOCATION MAP

PROJECT DESCRIPTION

SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.

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

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

APPLICABLE CODES

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

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

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

DRAWING INDEX

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

PLANS PREPARED FOR:
Sprint

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

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

ENGINEERING LICENSE:

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	05/29/18	ETC	0

SITE NAME:
CT0958-RING TO EXISTING-(R2E) PH 1A

SITE NUMBER:
CT72XC042

SITE ADDRESS:
1375 NORTH ROAD
DAYVILLE, CT 06241

SHEET DESCRIPTION:
TITLE SHEET & PROJECT DATA

SHEET NUMBER:
T-1

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

SECTION 01 100 – SCOPE OF WORK

PART 1 – GENERAL

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

1.2 RELATED DOCUMENTS:

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

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

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

1.4 NATIONALLY RECOGNIZED CODES AND STANDARDS:

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

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

1.5 DEFINITIONS:

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

B. COMPANY: SPRINT CORPORATION

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

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

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

F. OFCI: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1.15 USE OF ELECTRONIC PROJECT MANAGEMENT SYSTEMS:

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

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

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

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

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

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

SECTION 01 200 – COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 – GENERAL

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

1.2 RELATED DOCUMENTS:

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

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

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 RECEIPT OF MATERIAL AND EQUIPMENT:

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

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

1 ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.

2. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.

3. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.

4. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO SPRINT OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.

5. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.

6. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

3.2 DELIVERABLES:

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

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

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

SECTION 01 300 – CELL SITE CONSTRUCTION CO.

PART 1 – GENERAL

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

1.2 RELATED DOCUMENTS:

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

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

1.3 NOTICE TO PROCEED

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

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

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 FUNCTIONAL REQUIREMENTS:

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

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

C. MANAGE AND CONDUCT ALL FIELD CONSTRUCTION SERVICE RELATED ACTIVITIES

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

PLANS PREPARED FOR:

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PLANS PREPARED BY:

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

PROJECT MANAGER:

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

ENGINEERING LICENSE:

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	05/29/18	ETC	0

SITE NAME:

CT0958-RING TO EXISTING-(R2E) PH 1A

SITE NUMBER:

CT72XC042

SITE ADDRESS:

1375 NORTH ROAD
DAYVILLE, CT 06241

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-1

CONTINUE FROM SP-1

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

3.2 GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:

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

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

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

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

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

E. CONDUCT TESTING AS REQUIRED HEREIN.

3.3 DELIVERABLES:

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

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

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

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

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

1.2 RELATED DOCUMENTS:

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

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

1.3 SUBMITTALS:

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

B. SUBMIT THE FOLLOWING TO COMPANY REPRESENTATIVE FOR APPROVAL.

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

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

1.4 TESTS AND INSPECTIONS:

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

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

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

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

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

1.5 COMMISSIONING: PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPs

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

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 REQUIREMENTS FOR TESTING:

A. THIRD PARTY TESTING AGENCY:

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

3.2 REQUIRED TESTS:

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

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

3.3 REQUIRED INSPECTIONS

A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.

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

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

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SHEET DESCRIPTION:

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SP-2

CONTINUE FROM SP-2

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

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

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

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

11. ALL AVAILABLE JURISDICTIONAL INFORMATION

12. PDF SCAN OF REDLINES PRODUCED IN FIELD

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

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

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

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

1. CONCRETE MIX AND CYLINDER BREAK REPORTS.

2. STRUCTURAL BACKFILL COMPACTION REPORTS.

3. SITE RESISTANCE TO EARTH TEST.

4. ANTENNA AZIMUTH AND DOWN TILT VERIFICATION

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

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

B. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES THE FOLLOWING;

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

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

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

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

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

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

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

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

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

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

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

1.2 RELATED DOCUMENTS:

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

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

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 WEEKLY REPORTS:

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

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

3.2 PROJECT CONFERENCE CALLS:

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

3.3 PROJECT TRACKING IN SMS:

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

3.4 ADDITIONAL REPORTING:

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

3.5 PROJECT PHOTOGRAPHS:

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

1. 1SHELTER AND TOWER OVERVIEW.

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

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

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

5. PHOTOS OF TOWER SECTION STACKING.

6. CONCRETE TESTING / SAMPLES.

7. PLACING OF ANCHOR BOLTS IN TOWER FOUNDATION.

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

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

10. SHELTER FOUNDATION POUR WITH VIBRATOR IN USE.

11. COAX CABLE ENTRY INTO SHELTER.

12. PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.

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

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

15. PHOTOS OF ALL APPROPRIATE COMPANY OR REGULATORY SIGNAGE.

16. PHOTOS OF EQUIPMENT BOLT DOWN INSIDE SHELTER.

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

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

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

20. TELCO TRENCH WITH TELEPHONE / CONDUIT BEFORE BACKFILL.

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

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

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

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

25. ALL BTS GROUND CONNECTIONS.

26. ALL GROUND TEST WELLS.

27. ANTENNA GROUND BAR AND EQUIPMENT GROUND BAR.

28. ADDITIONAL GROUNDING POINTS ON TOWERS ABOVE 200'.

29. HVAC UNITS INCLUDING CONDENSERS ON SPLIT SYSTEMS.

30. GPS ANTENNAS.

31. CABLE TRAY AND/OR WAVEGUIDE BRIDGE.

32. DOGHOUSE/CABLE EXIT FROM ROOF.

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

34. MASTER BUS BAR.

35. TELCO BOARD AND NIU.

36. ELECTRICAL DISTRIBUTION WALL.

37. CABLE ENTRY WITH SURGE SUPPRESSION.

38. ENTRANCE TO EQUIPMENT ROOM.

39. COAX WEATHERPROOFING-TOP AND BOTTOM OF TOWER.

40. COAX GROUNDING -TOP AND BOTTOM OF TOWER.

41. ANTENNA AND MAST GROUNDING.

42. LANDSCAPING – WHERE APPLICABLE.

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

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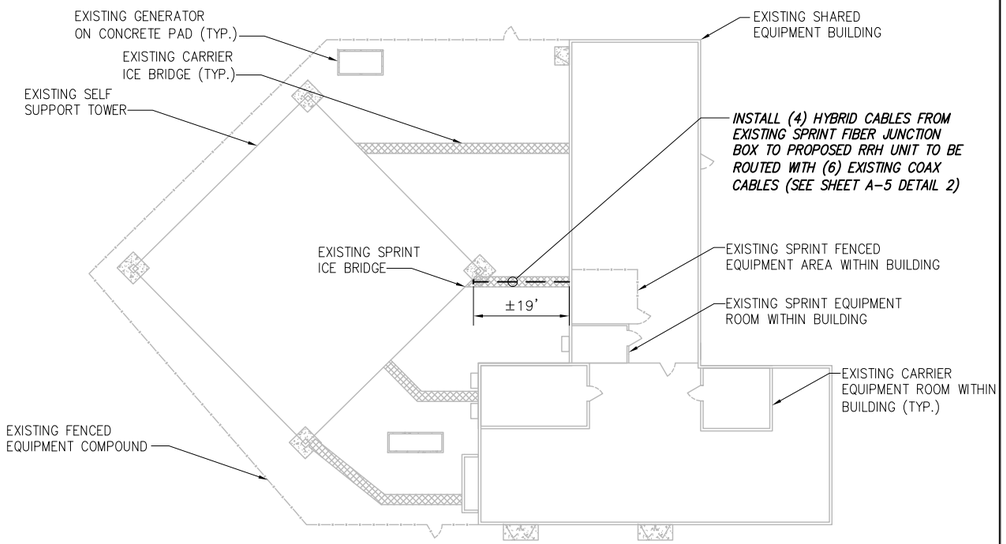
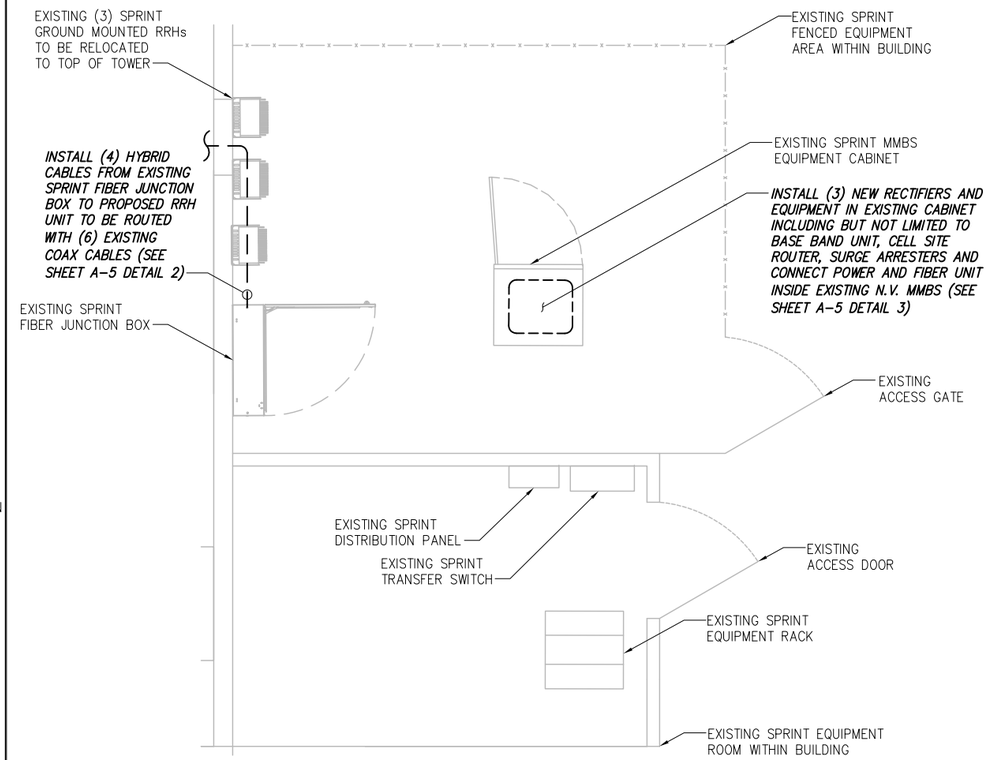
SHEET NUMBER:

SP-3





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

N

GRAPHIC SCALE:
15' 7.5' 0 7.5' 15'
SCALE (11x17): 1" = 15'-0"
SCALE (22x34): 1" = 7'-6"

OVERALL SITE PLAN | SCALE: AS NOTED | 1

N

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

SPRINT EQUIPMENT PLAN | SCALE: AS NOTED | 2

PLANS PREPARED FOR:
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PLANS PREPARED BY:
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www.infinigy.com
JOB NUMBER 526-104

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

ENGINEERING LICENSE:

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	05/29/18	ETC	0

SITE NAME:
CT0958-RING TO EXISTING-(R2E) PH 1A

SITE NUMBER:
CT72XC042

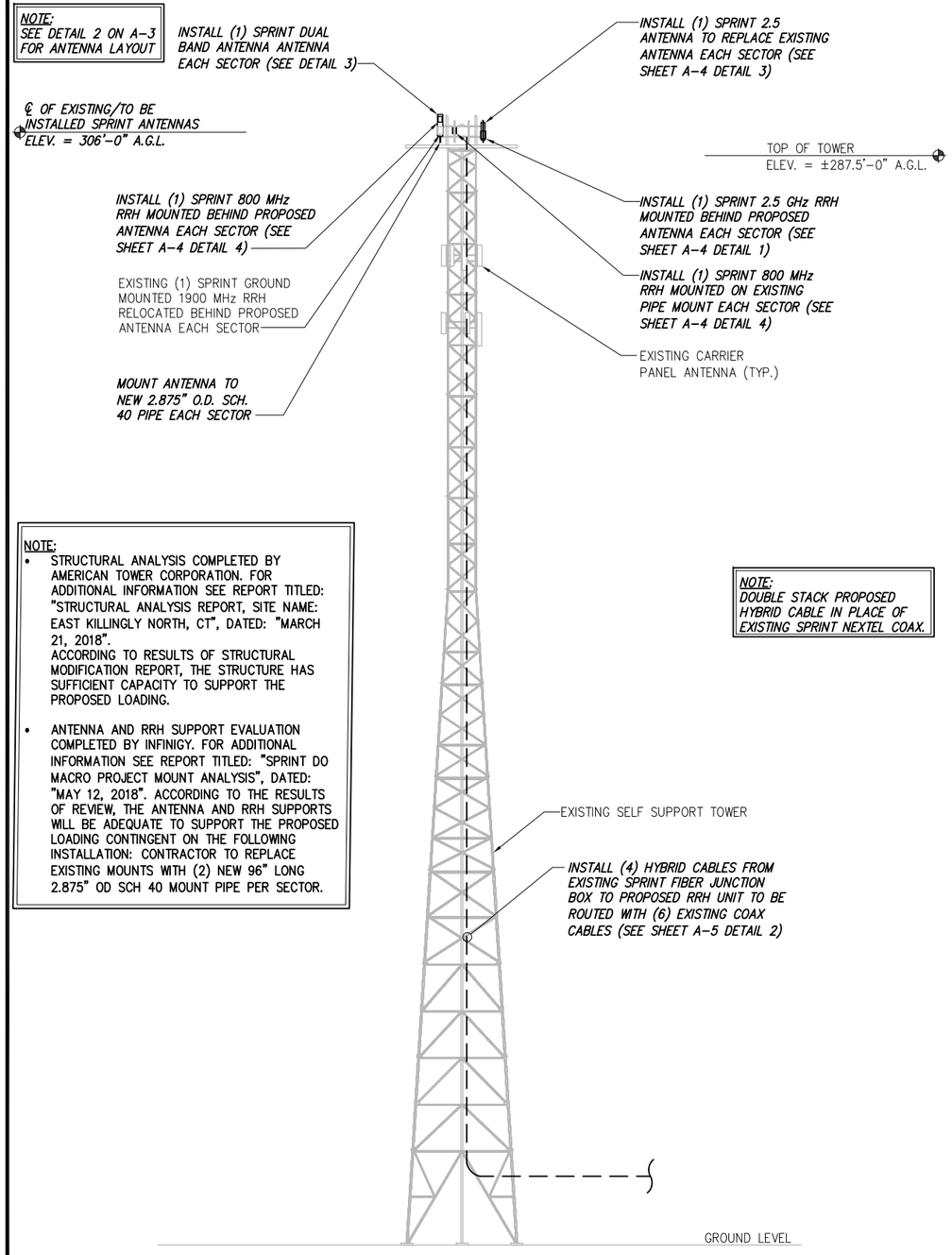
SITE ADDRESS:
1375 NORTH ROAD
DAYVILLE, CT 06241

SHEET DESCRIPTION:
SITE PLAN

SHEET NUMBER:
A-1

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

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



NOTE:
DOUBLE STACK PROPOSED HYBRID CABLE IN PLACE OF EXISTING SPRINT NEXTEL COAX.

NOTE:
- STRUCTURAL ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "STRUCTURAL ANALYSIS REPORT, SITE NAME: EAST KILLINGLY NORTH, CT", DATED: "MARCH 21, 2018".
  ACCORDING TO RESULTS OF STRUCTURAL MODIFICATION REPORT, THE STRUCTURE HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED LOADING.
- ANTENNA AND RRH SUPPORT EVALUATION COMPLETED BY INFINIGY. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "SPRINT DO MACRO PROJECT MOUNT ANALYSIS", DATED: "MAY 12, 2018". ACCORDING TO THE RESULTS OF REVIEW, THE ANTENNA AND RRH SUPPORTS WILL BE ADEQUATE TO SUPPORT THE PROPOSED LOADING CONTINGENT ON THE FOLLOWING INSTALLATION: CONTRACTOR TO REPLACE EXISTING MOUNTS WITH (2) NEW 96" LONG 2.875" OD SCH 40 MOUNT PIPE PER SECTOR.

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	APXVTM14-ALU-120	RFS	0°	1	–	(2) 800 MHZ 2X50W RRH	SEE SHEET A-5 DETAIL 1	±351'*	±306' AGL
	PROPOSED	NNVV-65B-R4	COMMSCOPE	0°	1	–	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	SEE SHEET A-5 DETAIL 1		
	EXISTING	RR65-18-V02DPL2-R	ANDREW	0°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING COAX		
BETA	PROPOSED	APXVTM14-ALU-120	RFS	140°	1	–	(2) 800 MHZ 2X50W RRH	SEE SHEET A-5 DETAIL 1		±306' AGL
	PROPOSED	NNVV-65B-R4	COMMSCOPE	140°	1	–	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	SEE SHEET A-5 DETAIL 1		
	EXISTING	RR65-18-V02DPL2-R	ANDREW	140°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING COAX		
GAMMA	PROPOSED	APXVTM14-ALU-120	RFS	240°	1	–	(2) 800 MHZ 2X50W RRH	SEE SHEET A-5 DETAIL 1		±306' AGL
	PROPOSED	NNVV-65B-R4	COMMSCOPE	240°	1	–	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	SEE SHEET A-5 DETAIL 1		
	EXISTING	RR65-18-V02DPL2-R	ANDREW	240°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING COAX		

PROJECT SCOPE:

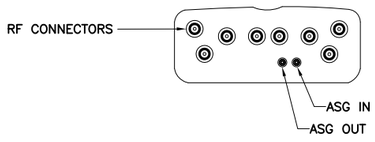
REMOVE: (3) PANEL ANTENNAS INSTALL: (6) PANEL ANTENNAS AND (9) RRH'S RELOCATE: (3) EXISTING RRH'S

* 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

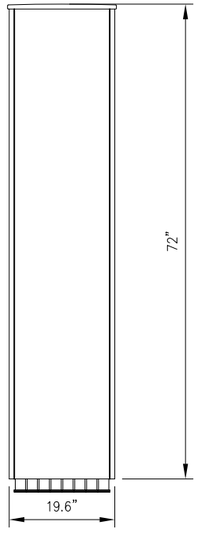
ANTENNA COMMSCOPE NNVV-65B-R4

RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GREY
DIMENSIONS, HxWxD.in(mim):	72"x19.6"x7.8" (1829x498x198mm)
WEIGHT:	77.4 lbs
CONNECTORS:	(8) PIN DIN FEMALE
	(8) 8 PIN DIN MALE



PLAN VIEW

SIDE VIEW



FRONT VIEW

DUAL BAND ANTENNA DETAIL | NO SCALE | 3

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JOB NUMBER 526-104

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

ENGINEERING LICENSE:

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	05/29/18	ETC	0

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SITE ADDRESS:
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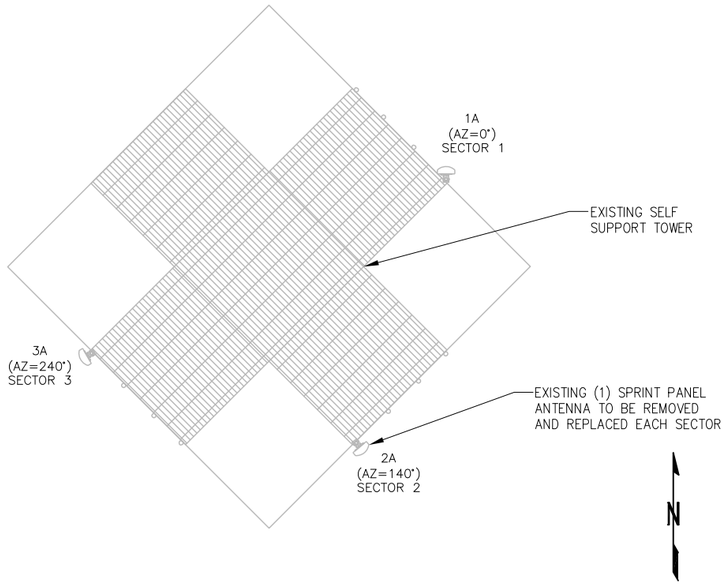
DAYVILLE, CT 06241

SHEET DESCRIPTION:
TOWER ELEVATION

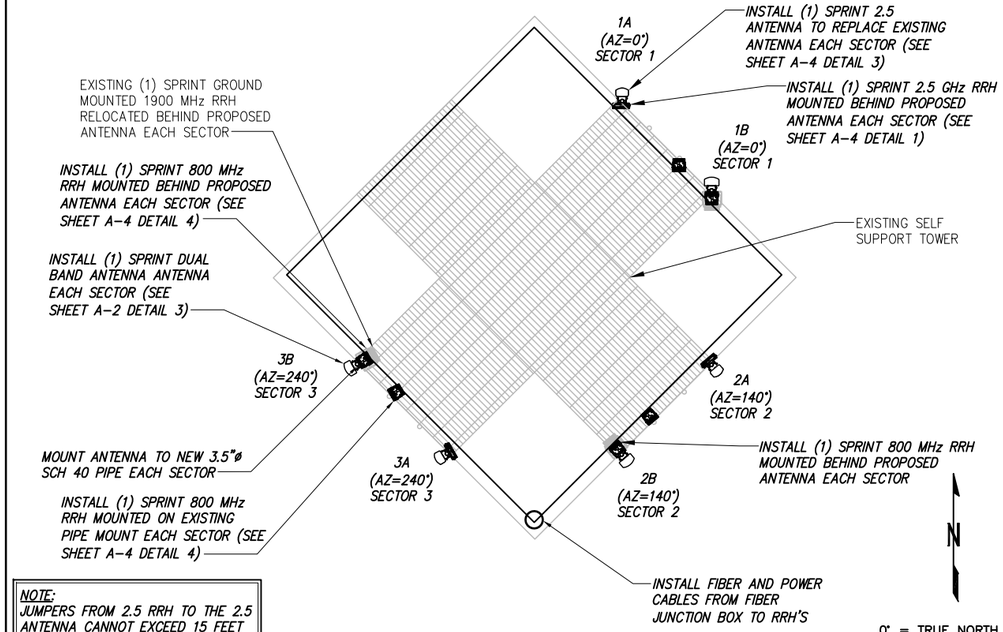
SHEET NUMBER:
A-2



0° = TRUE NORTH

EXISTING ANTENNA LAYOUT | NO SCALE | 1

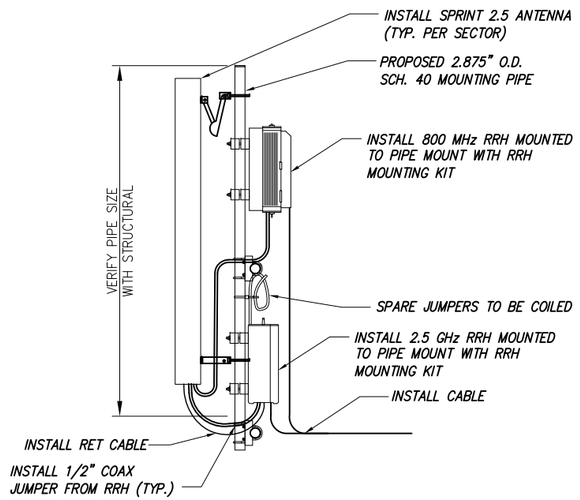
THE CONFIGURATION PLANS ARE BASED ON PROVIDED INFORMATION AND ARE FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO CONSTRUCTION.



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

0° = TRUE NORTH

FINAL ANTENNA & RRH LAYOUT | NO SCALE | 2



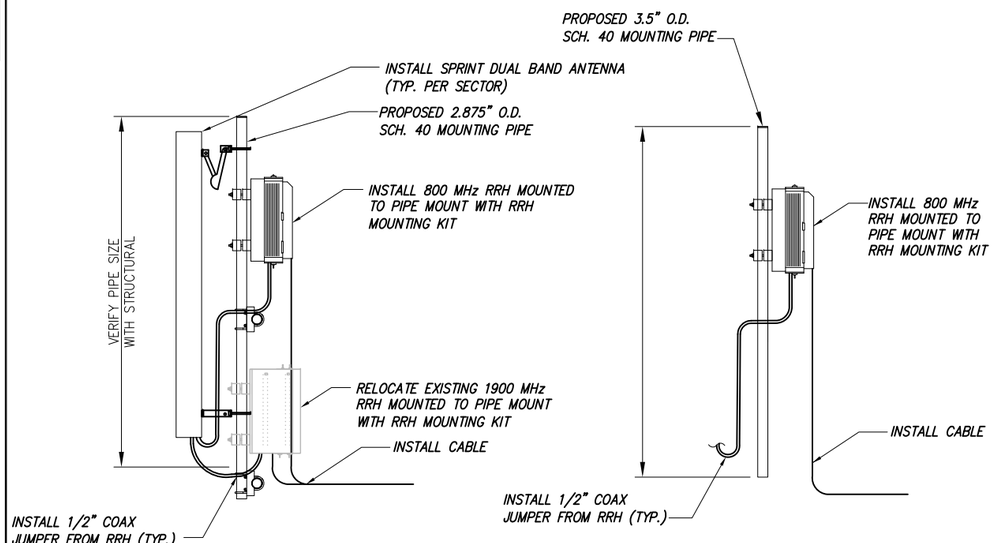
NOTE:
CONTRACTOR TO POSITION RRH ON MOUNT BEHIND ANTENNA SUCH THAT THE RRH DOES NOT INTERFERE WITH THE EXISTING PLATFORM/T-ARM MOUNTING HARDWARE.

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 NO EXCEED BEND RADIUS.

TYPICAL 2.5 ANTENNA & RRH MOUNTING DETAILS | NO SCALE | 3



NOTE:
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NOTE:
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NOTES:

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

DUAL BAND ANTENNA & RRH MOUNTING DETAIL | NO SCALE | 4

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SARATOGA SPRINGS, NY 12866
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DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	05/29/18	ETC	0

SITE NAME:

CT0958-RING TO EXISTING-(R2E) PH 1A

SITE NUMBER:

CT72XC042

SITE ADDRESS:

1375 NORTH ROAD
DAYVILLE, CT 06241

SHEET DESCRIPTION:

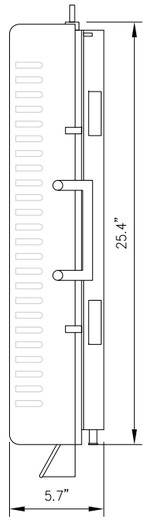
ANTENNA LAYOUT & MOUNTING DETAILS

SHEET NUMBER:

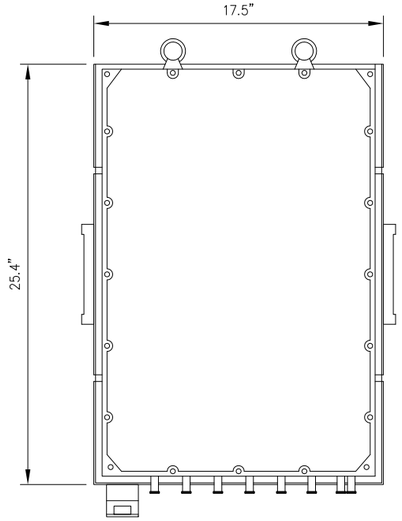
A-3

RRH: ALCATEL LUCENT TD-RRH8X20

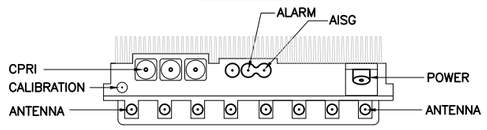
COLOR: LIGHT GREY
WEIGHT: 70 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

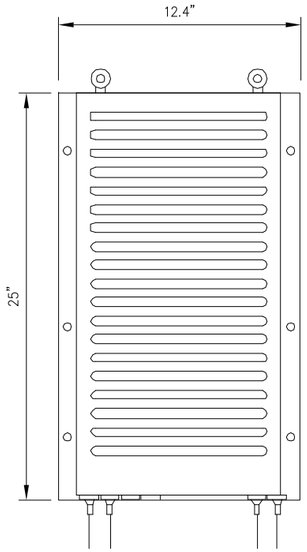
NOTES

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

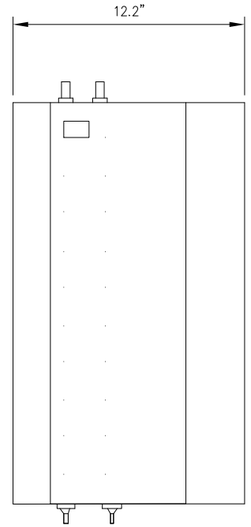
2.5 GHz RRH | NO SCALE | 1

RRH: ALCATEL LUCENT 1900 MHz

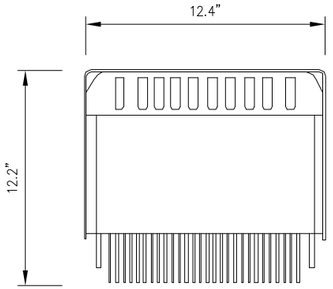
COLOR: LIGHT GREY
WEIGHT: 70 LBS.
(INCLUDING OPTIONAL SOLAR SHIELD)



FRONT VIEW



SIDE VIEW

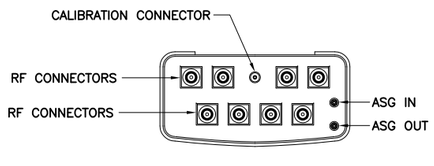


TOP VIEW

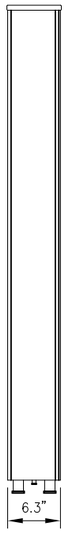
EXISTING 1900 MHz RRH | NO SCALE | 2

ANTENNA RFS APXVTM14-ALU-I20

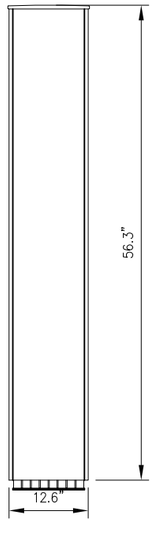
RADOME MATERIAL:	ASA
RADOME COLOR:	LIGHT GREY
DIMENSIONS, HxWxD.in(mim):	56.3"x12.6"x6.3" (1549x439x300mm)
WEIGHT:	56.2 lbs
CONNECTORS:	(8) 4.1/9.5 DIN FEMALE (1) NF – CALIBRATION CONNECTOR



PLAN VIEW



SIDE VIEW

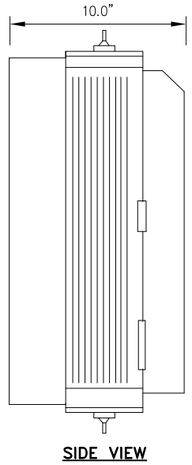


FRONT VIEW

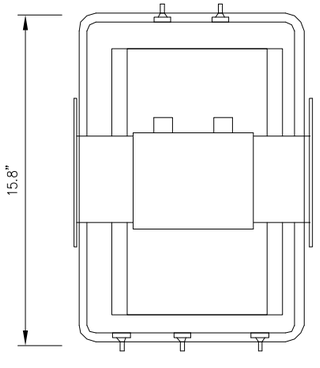
2.5 ANTENNA DETAIL | NO SCALE | 3

RRH: ALCATEL LUCENT RRH 800 MHz 2x50W

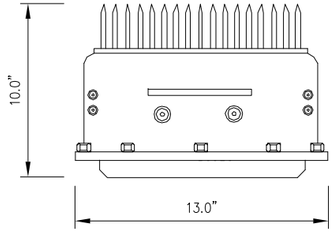
COLOR: LIGHT GREY
WEIGHT: 53 LBS.



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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DAYVILLE, CT 06241

SHEET DESCRIPTION:
EQUIPMENT & MOUNTING DETAILS

SHEET NUMBER:
A-4

RFS HYBRIFLEX RISER CABLE SCHEDULE

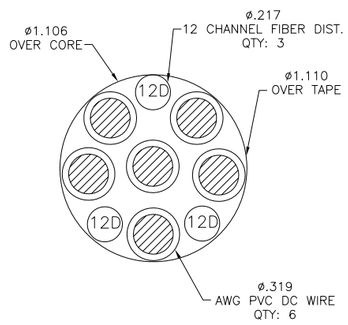
Fiber Only (Existing DC Power)	**Hybrid cable** MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F	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 (4)*

RFS HYBRIFLEX JUMPER CABLE SCHEDULE

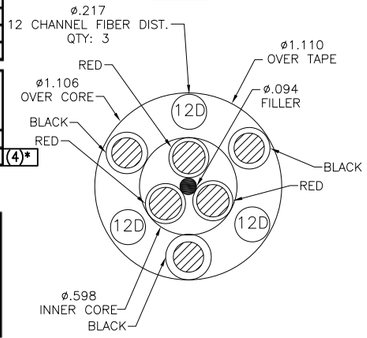
Fiber Only	**Hybrid Jumper cable** MN: HBF012-M3-5F1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: HBF012-M3-10F1	10 ft
	MN: HBF012-M3-15F1	15 ft
	MN: HBF012-M3-20F1	20 ft
	MN: HBF012-M3-25F1	25 ft
	MN: HBF012-M3-30F1	30 ft
8 AWG Power	**Hybrid Jumper cable** MN: HBF058-08U1M3-5F1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

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

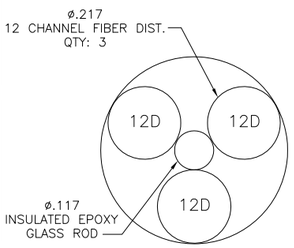
* PROPOSED CABLE LENGTH WAS DETERMINED USING THE SUM OF THE RAD CENTER OF ANTENNAS, AND DISTANCE FROM EXISTING EQUIPMENT AREA TO TOWER BASE WITH AN ADDITIONAL 20' BUFFER. LENGTH TO BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.



4 AWG

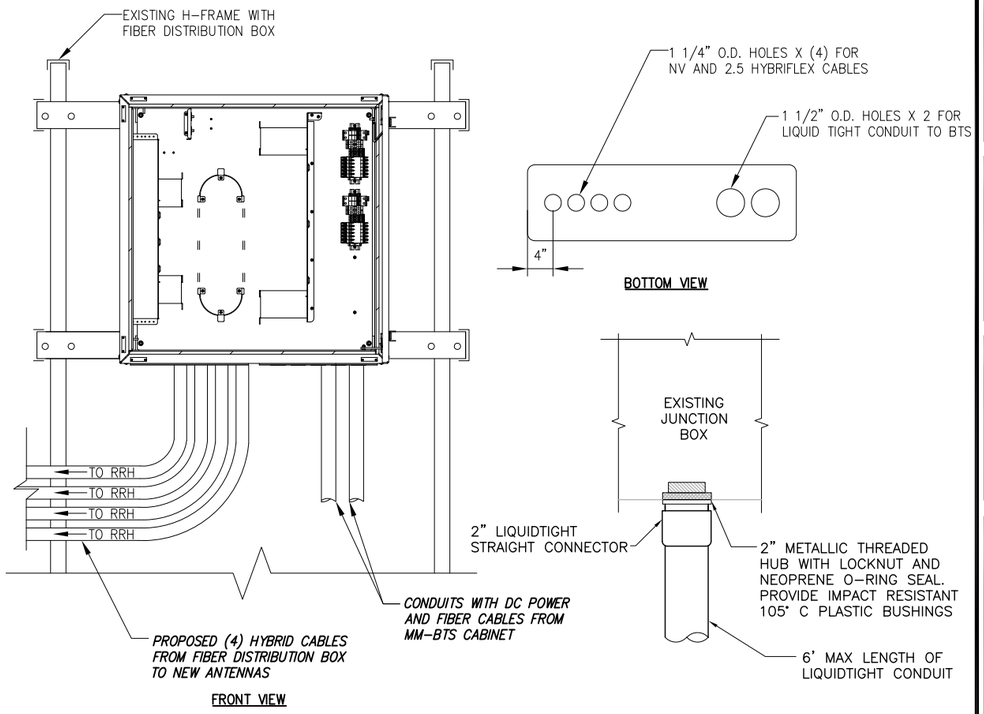


8 & 6 AWG



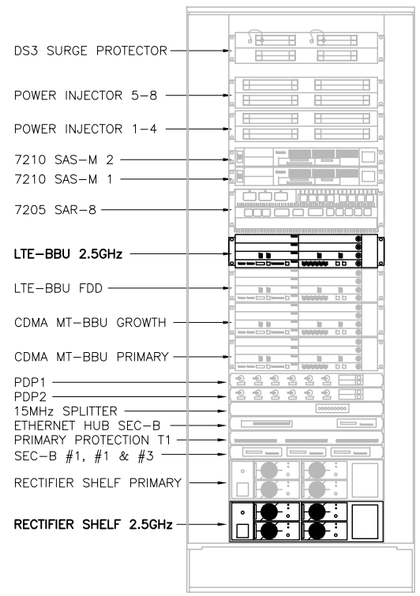
FIBER ONLY

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



FRONT VIEW

FIBER JUNCTION BOX & PENETRATION | NO SCALE | 2



FRONT VIEW

NEW EQUIPMENT IN EXISTING CABINET | NO SCALE | 3

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

ENGINEERING LICENSE:

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	05/29/18	ETC	0

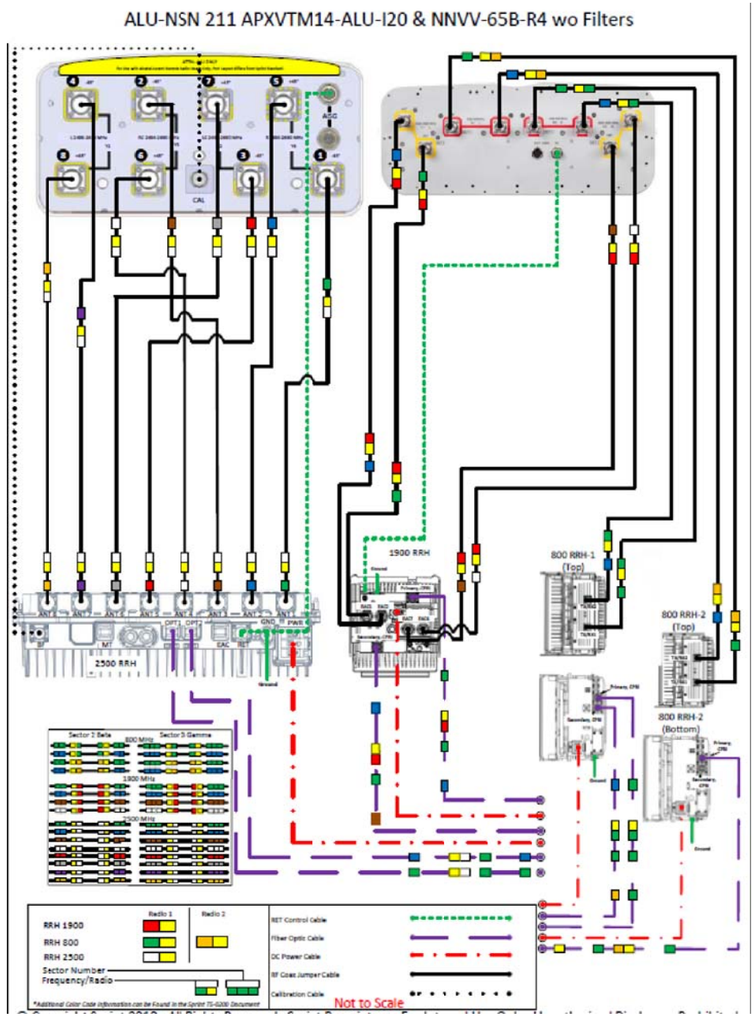
SITE NAME:
CT0958-RING TO EXISTING-(R2E) PH 1A

SITE NUMBER:
CT72XC042

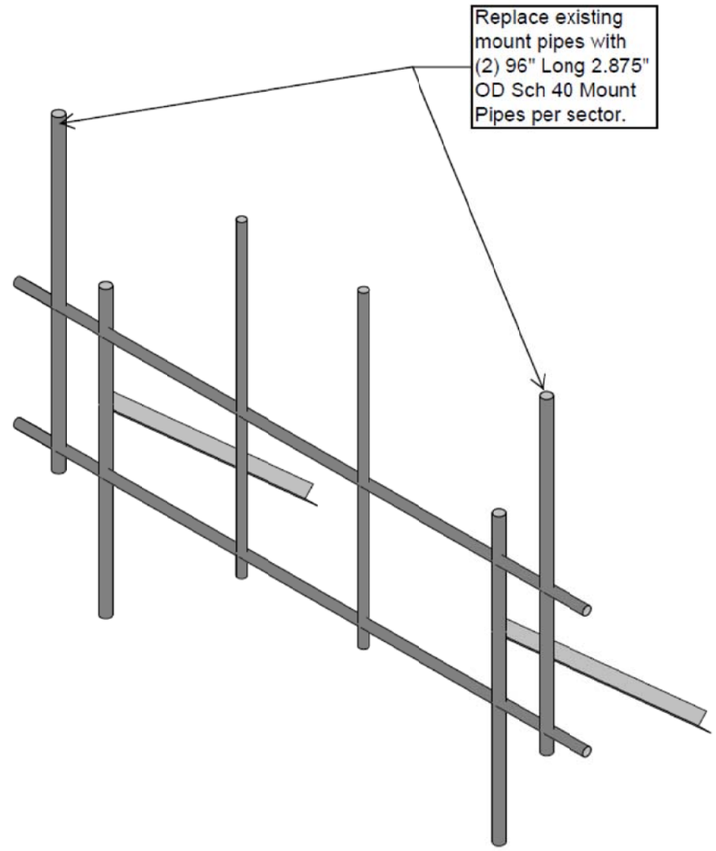
SITE ADDRESS:
1375 NORTH ROAD
DAYVILLE, CT 06241

SHEET DESCRIPTION:
CIVIL DETAILS

SHEET NUMBER:
A-5



PLUMBING DIAGRAM | NO SCALE | 1



MOUNT MODIFICATION DETAIL | NO SCALE | 2

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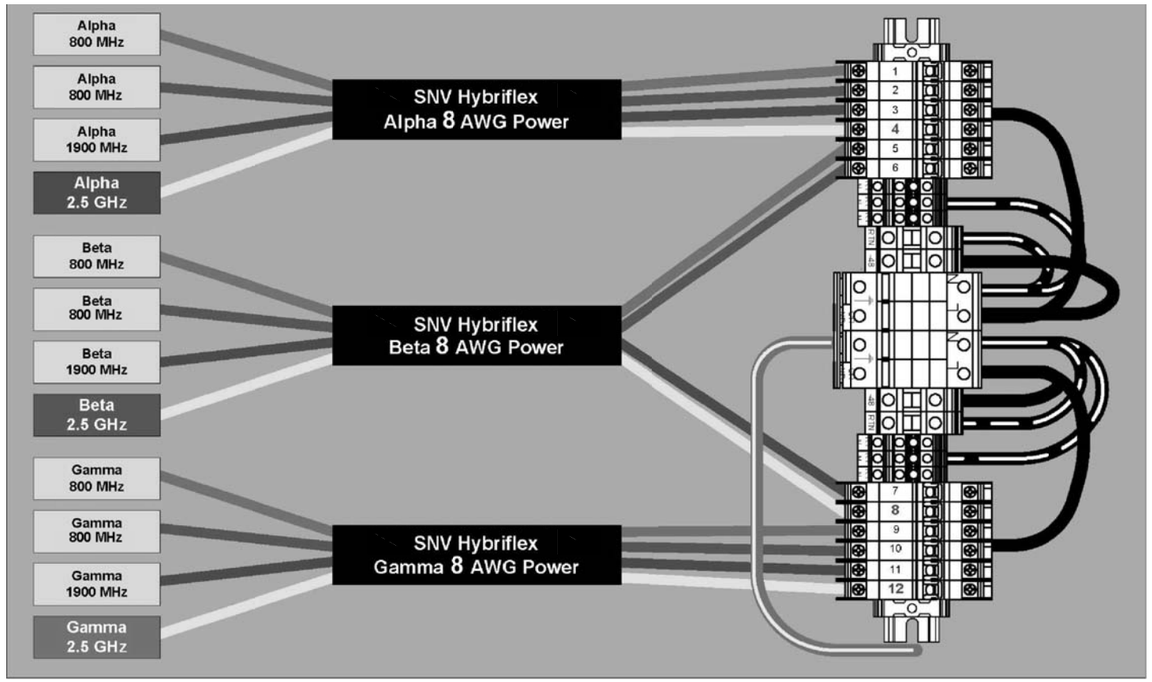
SHEET DESCRIPTION:

PLUMBING DIAGRAM

SHEET NUMBER:

A-6

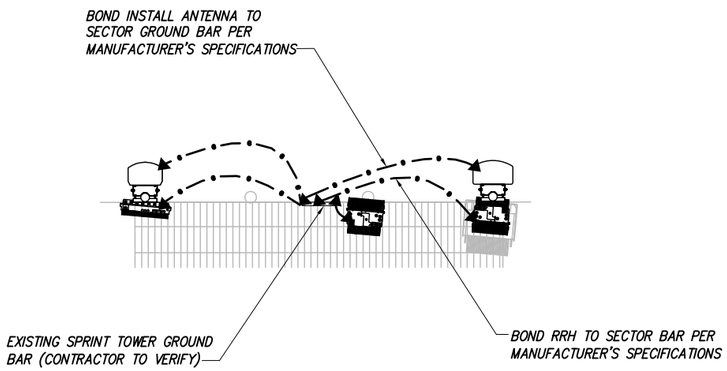


RRH TO DISTRIBUTION BOX POWER CONNECTIVITY

NO SCALE | 1

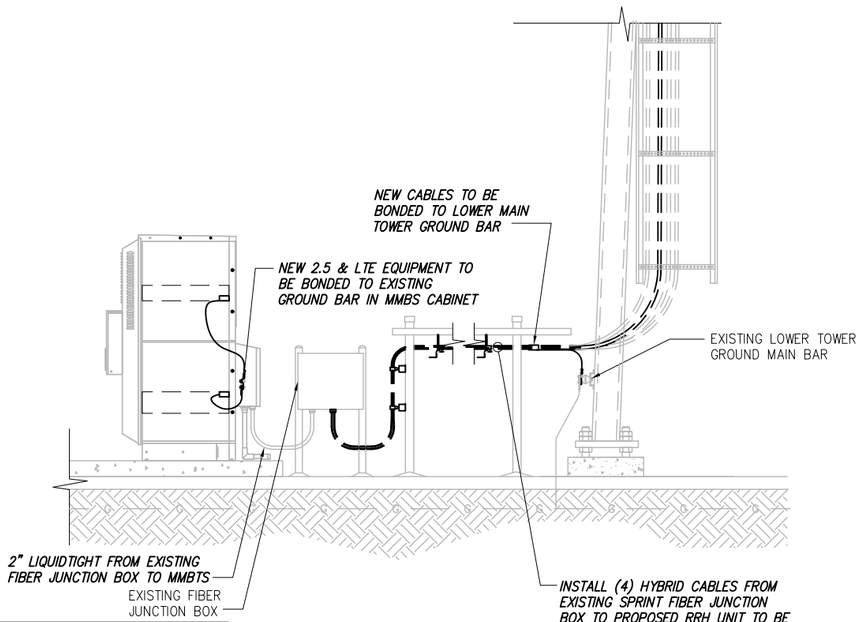
LEGEND:

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



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE | 2



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

TYPICAL EQUIPMENT GROUNDING PLAN (ELEVATION)

NO SCALE | 3

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ISSUED FOR PERMIT	05/29/18	ETC	0

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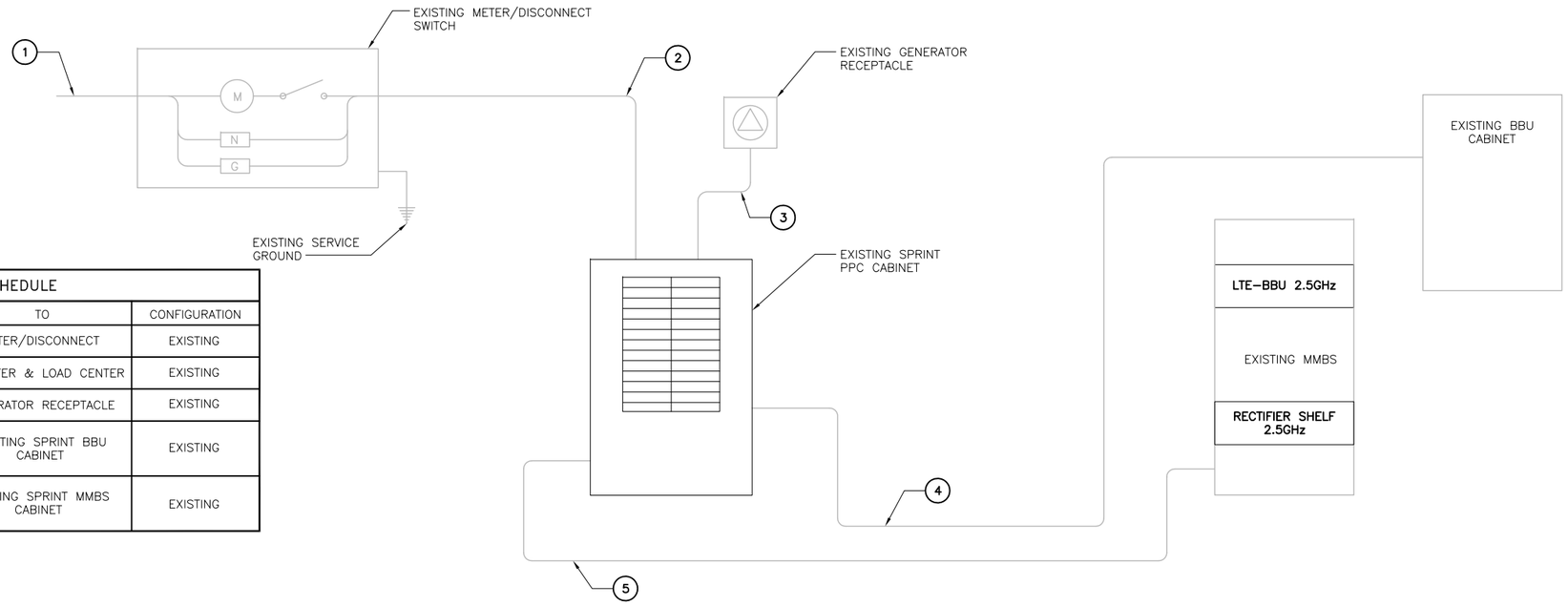
SHEET DESCRIPTION:
ELECTRICAL & GROUNDING PLAN

SHEET NUMBER:
E-1

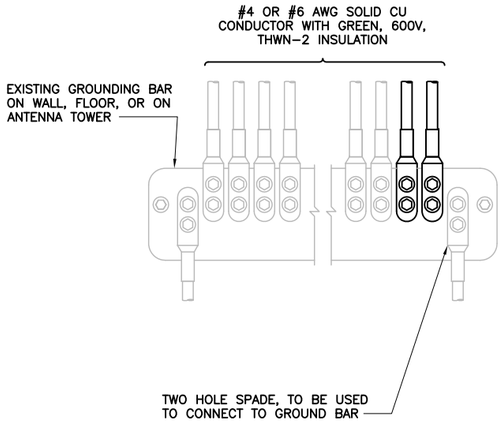
NOTES

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



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

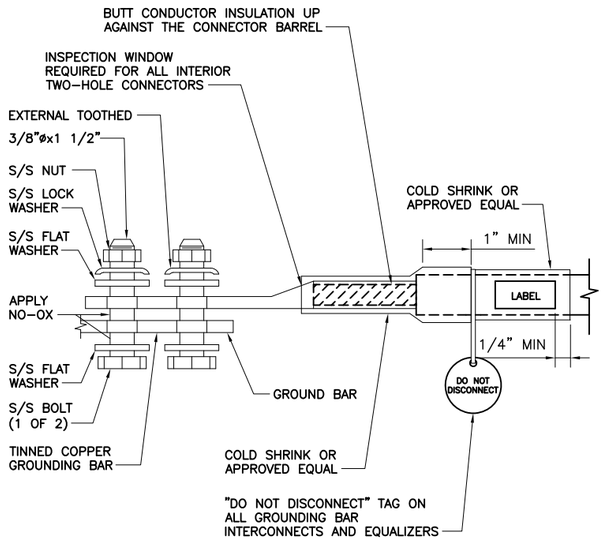
ELECTRICAL ONE–LINE DIAGRAM — NO SCALE — 1



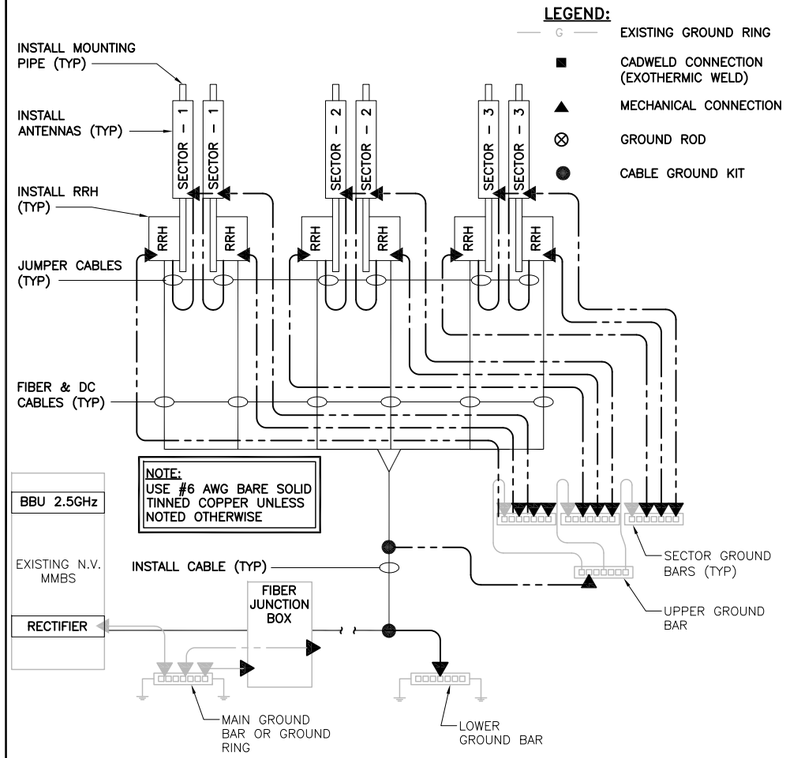
NOTES

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

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



TWO HOLE LUG — NO SCALE — 3



GROUNDING RISER DIAGRAM — NO SCALE — 4

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SHEET DESCRIPTION:

ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:

E-2