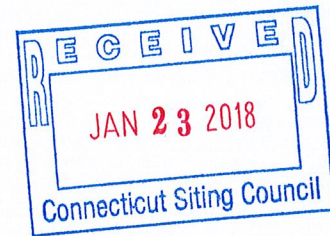




January 3rd, 2018

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

EM-SPRINT-105-180123



RE: Notice of Exempt Modification – Antenna Swap for wireless facility located at 125 Mile Creek Road, Old Lyme, CONNECTICUT – CT54XC701 (lat. 41° 18' 19.98" N, long. -72° 17' 50.46" W)

Dear Ms. Bachman:

Sprint Spectrum, LP ("Sprint") currently maintains wireless telecommunications antennas at the (147.5-foot level) on an existing (170-foot monopole tower) at the above-referenced address. The property is owned by MACHNIK TODD & REBECCA L Q/C/S, and the tower is owned by American Tower Corporation.

Sprint's proposed work involves antenna replacement and tower work. Sprint intends to replace three (3) antennas and add twelve (12) 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 ROBERT MAYNARD, FIRST SELECTMAN of the Town of EAST WINDSOR. A copy of this letter is also being sent to DEAN & CAREN RASMUSSEN the owner of the property on which the tower is located, and 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,

A handwritten signature in blue ink, appearing to read "Arthur Perkowski", enclosed within a large, hand-drawn oval.

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: MACHNIK TODD & REBECCA L Q/C/S (Land Owner)
BONNIE REEMSnyder (1st Selectman, OLD LYME, CT)
JUSTINE PAUL (Manager/American Tower Corporation)

125 MILE CREEK RD

Location 125 MILE CREEK RD

Mblu 13 / / 93 / /

Acct# 00044800

Owner MACHNIK TODD & REBECCA
L Q/C/S

Assessment \$407,000

Appraisal \$813,400

PID 474

Building Count 3

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2014	\$402,800	\$410,600	\$813,400

Assessment			
Valuation Year	Improvements	Land	Total
2014	\$282,100	\$124,900	\$407,000

Owner of Record

Owner MACHNIK TODD & REBECCA L Q/C/S
Co-Owner
Address 126 MILE CREEK RD
OLD LYME, CT 06371

Sale Price \$0
Certificate
Book & Page 309/ 432
Sale Date 01/06/2004

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
MACHNIK TODD & REBECCA L Q/C/S	\$0		309/ 432	01/06/2004
MACHNIK LEON & TODD H & REBECCA L Q/	\$0		291/ 852	01/06/2003
MACHNIK LEON & TODD & REBECCA Q/C/S T	\$0		284/ 764	07/22/2002
MACHNIK LEON & Q/C/S	\$0		267/ 227	01/02/2001
MACHNIK LEON ET AL	\$0		261/ 299	01/19/2000

Building Information

Building 1 : Section 1

Year Built: 1975
Living Area: 678
Replacement Cost: \$75,048

Building Percent 74

Good:

Replacement Cost

Less Depreciation: \$55,500

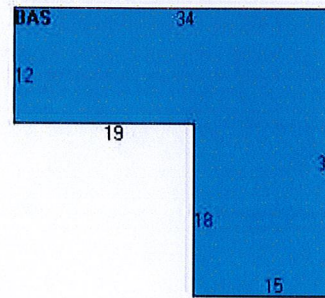
Building Attributes	
Field	Description
STYLE	Commercial
MODEL	Commercial
Grade	Average
Stories:	1
Occupancy	1
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asph/F GlS/Cmp
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Inlaid Sht Gds
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Air-Duc
AC Type	None
Bldg Use	OFFICE BLD MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	3400
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	8
% Comn Wall	0

Building Photo



(http://images.vgsi.com/photos/OldLymeCTPhotos//\00\00\43\44

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	678	678
		678	678

Building 2 : Section 1

Year Built: 1994
Living Area: 1,512
Replacement Cost: \$62,842
Building Percent 87
Good:
Replacement Cost
Less Depreciation: \$54,700

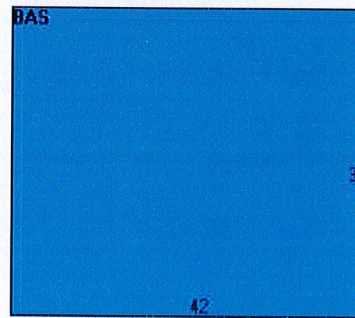
Field	Description
STYLE	Pre-Eng Gar
MODEL	Ind/Comm
Grade	Below Average
Stories:	1
Occupancy	0
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Metal/Tin
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Hot Air-no Duc
AC Type	None
Bldg Use	COM WHS/GAR
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	316I
Heat/AC	NONE
Frame Type	STEEL
Baths/Plumbing	NONE
Ceiling/Wall	NONE
Rooms/Prtns	AVERAGE
Wall Height	12
% Comn Wall	

Building Photo



(<http://images.vgsi.com/photos/OldLymeCTPhotos//\00\00\51\09>)

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	1,512	1,512
		1,512	1,512

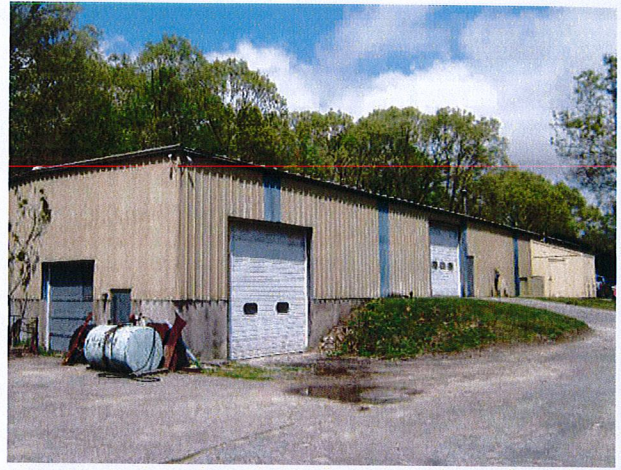
Building 3 : Section 1

Year Built: 1975
Living Area: 7,500
Replacement Cost: \$307,125
Building Percent Good: 74
Replacement Cost Less Depreciation: \$227,300

Building Attributes : Bldg 3 of 3	
Field	Description
STYLE	Pre-Eng Gar
MODEL	Ind/Comm

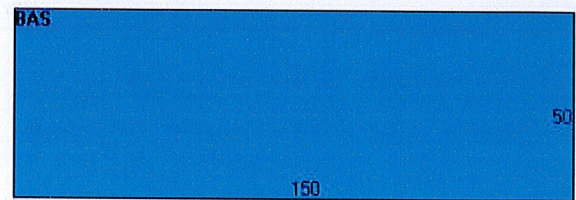
Grade	Average
Stories:	1
Occupancy	1
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Metal/Tin
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Air-Duc
AC Type	None
Bldg Use	AUTO REPR
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	3320
Heat/AC	HEAT/AC SPLIT
Frame Type	STEEL
Baths/Plumbing	LIGHT
Ceiling/Wall	NONE
Rooms/Prtns	AVERAGE
Wall Height	12
% Corn Wall	

Building Photo



(http://images.vgsi.com/photos/OldLymeCTPhotos//\00\00\51\10

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	7,500	7,500
		7,500	7,500

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	3400
Description	OFFICE BLD MDL-94
Zone	RU40
Neighborhood	0060

Land Line Valuation

Size (Acres)	62.00
Frontage	0
Depth	0
Assessed Value	\$124,900

Outbuildings

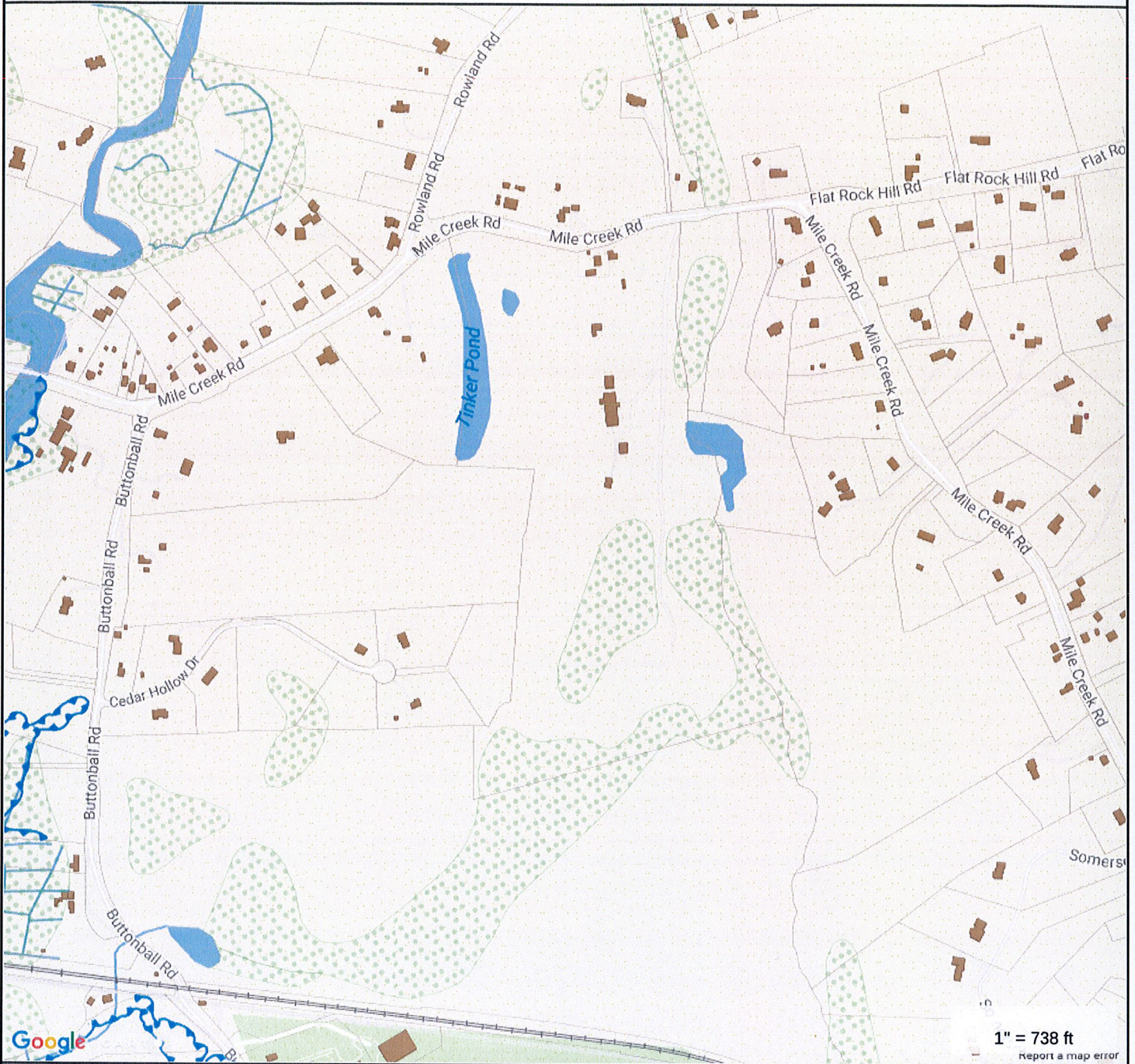
Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
FGR2	GARAGE-GOOD			864 S.F.	\$10,800	1
PAV1	PAVING-ASPHALT			1008 S.F.	\$1,000	2
PAV1	PAVING-ASPHALT			792 S.F.	\$600	3
BRN8	POLE BARN			1092 S.F.	\$7,600	3
BRN8	POLE BARN			792 S.F.	\$4,000	2
SHD2	W/LIGHTS ETC			600 S.F.	\$5,400	1
SHD1	SHED FRAME			100 S.F.	\$800	3
SHD2	W/LIGHTS ETC			572 S.F.	\$5,100	1
PAV1	PAVING-ASPHALT			100 S.F.	\$100	3
LNT	LEAN-TO			300 S.F.	\$600	3
	TOWER			50	\$29,300	3

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2011	\$285,600	\$410,600	\$696,200
2010	\$285,600	\$410,600	\$696,200
2009	\$285,600	\$410,600	\$696,200

Assessment			
Valuation Year	Improvements	Land	Total
2011	\$200,000	\$122,790	\$322,790
2010	\$200,000	\$125,950	\$325,950
2009	\$200,000	\$125,950	\$325,950

125 Mile Creek Road, Old Lyme CT (CT54XC701)



**MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT**

Town of Old Lyme, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 10/1/2016
Properties updated 12/08/2017

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 Return Receipt (electronic) \$ **0.00**
 Certified Mail Restricted Delivery \$ **0.00**
 Adult Signature Required \$ **0.00**
 Adult Signature Restricted Delivery \$ **0.00**
 Postage \$ **0.49**
 Total Postage and Fees \$ **3.84**
 Sent To **John and Rebecca Machnik**
 Street and Apt. No., or PO Box No. **185 Lye Creek Road (CT5158201)**
 City, State ZIP+4® **Old Lyme CT 06371**
 PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 1450 0002 2926 7755

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7017 1450 0002 2926 7755



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

SPRINT Existing Facility

Site ID: CT54XC701

South Old Lyme - Verizon
125 Mile Creek Road
Old Lyme, CT 06070

January 11, 2018

EBI Project Number: 6218000060

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	5.85 %



January 11, 2018

SPRINT

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

Emissions Analysis for Site: **CT54XC701 – South Old Lyme - Verizon**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **125 Mile Creek Road, Old Lyme, CT**, for the purpose of determining whether the emissions from the Proposed SPRINT Antenna Installation located on this property are within specified federal limits.

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

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

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

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



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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed SPRINT Wireless antenna facility located at **125 Mile Creek Road, Old Lyme, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since SPRINT is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

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

- 1) 1 CDMA channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.
- 2) 2 LTE channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.
- 3) 5 CDMA channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 16 Watts per Channel.
- 4) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 5) 8 LTE channels (2500 MHz (BRS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.



- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the **KMW ETCR-654L12H6** for transmission in the 850 MHz, 1900 MHz (PCS) and 2500 MHz (BRS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antenna mounting height centerlines of the proposed antennas are **147.5 feet** above ground level (AGL) for **Sector A**, **147.5 feet** above ground level (AGL) for **Sector B** and **147.5 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.



EBI Consulting

environmental | engineering | due diligence

SPRINT Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	KMW ETCR-654L12H6	Make / Model:	KMW ETCR-654L12H6	Make / Model:	KMW ETCR-654L12H6
Gain:	13.35 / 15.25 / 15.05 dBd	Gain:	13.35 / 15.25 / 15.05 dBd	Gain:	13.35 / 15.25 / 15.05 dBd
Height (AGL):	147.5 feet	Height (AGL):	147.5 feet	Height (AGL):	147.5 feet
Frequency Bands	850 MHz / 1900 MHz (PCS) / 2500 MHz (BRS)	Frequency Bands	850 MHz / 1900 MHz (PCS) / 2500 MHz (BRS)	Frequency Bands	850 MHz / 1900 MHz (PCS) / 2500 MHz (BRS)
Channel Count	18	Channel Count	18	Channel Count	18
Total TX Power(W):	380 Watts	Total TX Power(W):	380 Watts	Total TX Power(W):	380 Watts
ERP (W):	11,775.31	ERP (W):	11,775.31	ERP (W):	11,775.31
Antenna A1 MPE%	2.29 %	Antenna B1 MPE%	2.29 %	Antenna C1 MPE%	2.29 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	2.29 %
Verizon Wireless	2.80 %
T-Mobile	0.01 %
AT&T	0.75 %
Site Total MPE %:	5.85 %

SPRINT Sector A Total:	2.29 %
SPRINT Sector B Total:	2.29 %
SPRINT Sector C Total:	2.29 %
Site Total:	5.85 %

SPRINT _ Frequency Band / Technology (All Sectors)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	432.54	147.5	0.78	850 MHz	567	0.14%
Sprint 850 MHz LTE	2	432.54	147.5	1.55	850 MHz	567	0.27%
Sprint 1900 MHz (PCS) CDMA	5	535.94	147.5	4.81	1900 MHz (PCS)	1000	0.48%
Sprint 1900 MHz (PCS) LTE	2	1,339.86	147.5	4.81	1900 MHz (PCS)	1000	0.48%
Sprint 2500 MHz (BRS) LTE	8	639.78	147.5	9.19	2500 MHz (BRS)	1000	0.92%
						Total:	2.29%



Summary

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

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

SPRINT Sector	Power Density Value (%)
Sector A:	2.29 %
Sector B:	2.29 %
Sector C:	2.29 %
SPRINT Maximum Total (per sector):	2.29 %
Site Total:	5.85 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **5.85 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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



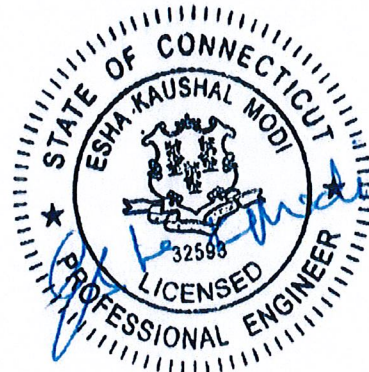
AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 171.5 ft Monopole
ATC Site Name : Old Lyme South CT, CT
ATC Site Number : 411178
Engineering Number : OAA710430_C3_02
Proposed Carrier : Sprint Nextel
Carrier Site Name : South Old Lyme
Carrier Site Number : CT54XC701
Site Location : 129 Mile Creek Road
Old Lyme, CT 06371-1718
41.305700,-72.297400
County : New London
Date : September 7, 2017
Max Usage : 71%
Result : Pass

Prepared By:
Amir H. Tabarestani, E.I.
Structural Engineer II

Reviewed By:



Sep 8 2017 4:53 PM **cosign**

COA: PEC.0001553



Table of Contents

Introduction	1
Supporting Documents	1
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Structure Usages	3
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Standard Conditions	4
Calculations	Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 171.5 ft monopole to reflect the change in loading by Sprint Nextel.

Supporting Documents

Tower Drawings	EI Project #11723, dated September 19, 2003 Mapping by TEP Job #68269-80551, dated April 25, 2016
Foundation Drawing	EI Project #11723, dated October 21, 2003
Geotechnical Report	Clarence Welti Site #CT54XC701, dated October 17, 2003

Analysis

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

Basic Wind Speed:	105 mph (3-Second Gust, V_{ASD}), 135 mph (3-Second Gust, V_{ULT})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	$S_s = 0.16$, $S_1 = 0.06$
Site Class:	D - Stiff Soil

Conclusion

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

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



Existing and Reserved Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
171.0	171.0	3	Andrew ETW200VS12UB	T-Arms	(12) 1 5/8" Coax (8) 1/2" Coax (1) 1 5/8" Fiber	T-Mobile
		1	E-911 GPS			
		6	Ericsson AIR 21			
		3	RFS APX16DWV-16DWVS-E-A20			
	177.0	1	12' Dipole			Town Of Old Lyme, CT
176.0	1	Decibel DB201-A				
160.0	161.0	1	VZW Unused Reserve: 203 sq in	Low Profile Platform	(18) 1 5/8" Coax (2) 1 5/8" Hybriflex	Verizon
		2	ADC CG-1900/800-DB-FB-DIN			
		3	Alcatel-Lucent RRH2X60-1900			
		3	Alcatel-Lucent RRH2x60 700			
		3	Alcatel-Lucent B66 RRH4x45			
		4	RFS APL866513-42T0			
		1	Antel BXA-70063-4CF-EDIN-10			
		2	RFS DB-T1-6Z-8AB-OZ			
		2	Antel BXA-70063/6CF_			
		6	Commscope SBNHH-1D65B			
2	Antel LPA-80080-6CF-EDIN-2					
149.0	149.0	3	Andrew DB980F90E-M	Low Profile Platform	(4) 1 1/4" Hybriflex (2) 1 5/8" Coax	Sprint Nextel
140.0	143.0	1	Raycap DC6-48-60-18-8F ("Squid")	Low Profile Platform	(12) 1 5/8" Coax (2) 0.78" 8 AWG 6 (1) 3" Conduit (1) 0.39" Fiber Trunk	AT&T Mobility
		6	Ericsson RRUS-11			
		6	KMW AM-X-CD-14-65-00T-RET			
		3	Powerwave 7770.00			
	140.0	6	Powerwave TT19-08BP111-001			
111.0	111.0	1	12' Dipole	Flush	(2) 1/2" Coax	Town Of Old Lyme, CT

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
No loading considered as to be removed						

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
149.0	149.0	1	GPS	Low Profile Platform	(1) 1/2" Coax	Sprint Nextel
		6	Alcatel-Lucent RRH2x50-08			
		3	Alcatel-Lucent 1900MHz 4x45 RRH			
		3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
		3	KMW ETCR-654L12H6			

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

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	52%	Pass
Shaft	55%	Pass
Base Plate	71%	Pass
Flanges	10%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	5,261.1	51%
Axial (Kips)	95.0	20%
Shear (Kips)	44.3	20%

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

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
149.0	GPS	Sprint Nextel	1.053	0.843
	Alcatel-Lucent RRH2x50-08			
	Alcatel-Lucent 1900 MHz 4x45 RRH			
	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	KMW ETCR-654L12H6			

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

Standard Conditions

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

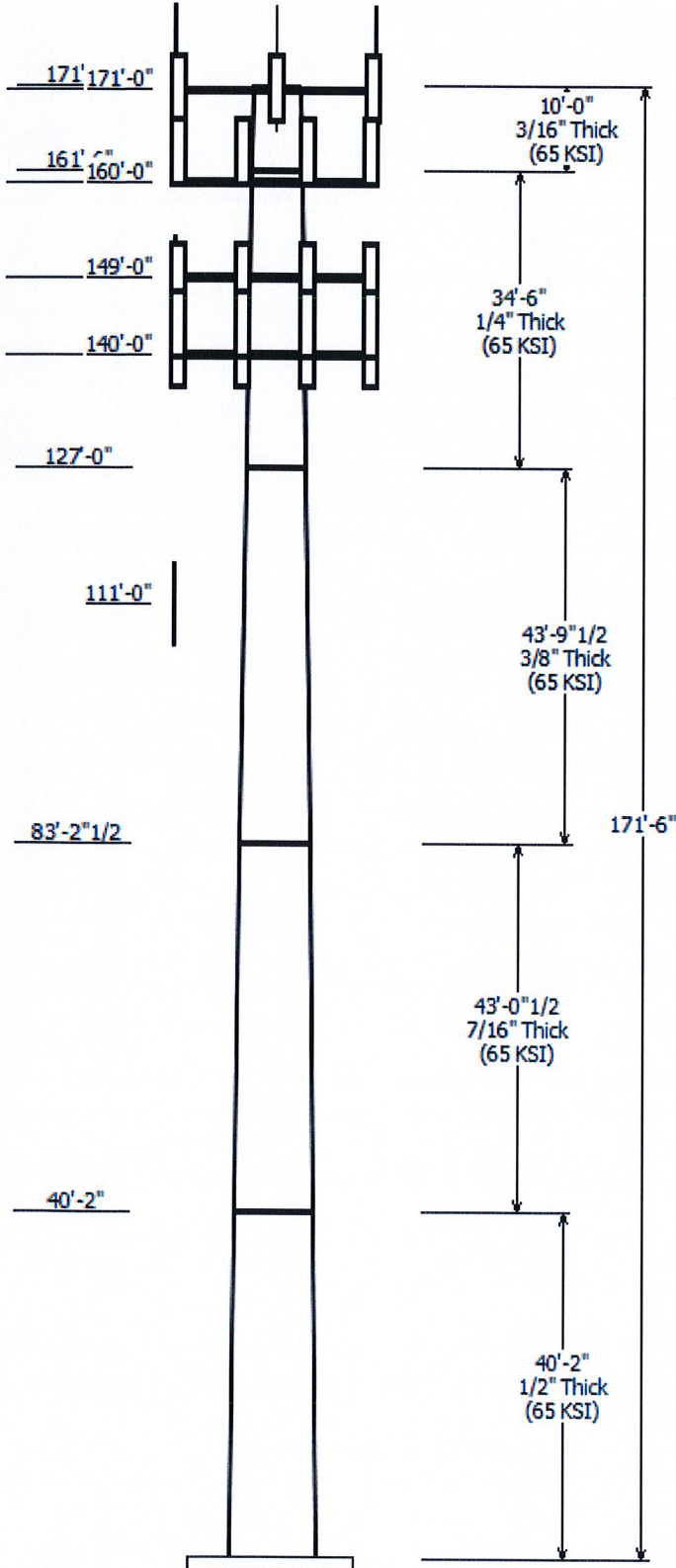
- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements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

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

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

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

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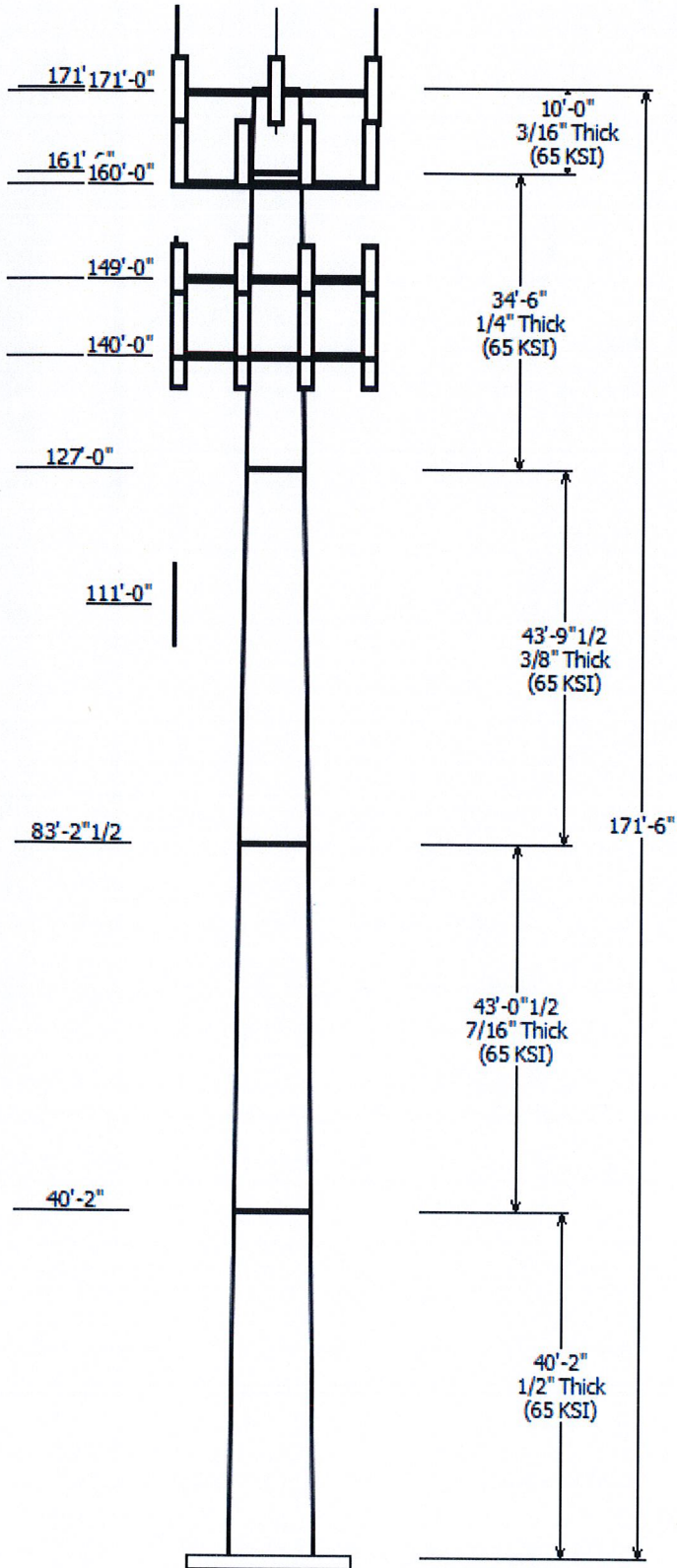


Job Information	
Pole :	411178
Code :	ANSI/TIA-222-G
Description :	171.5 ft Monopole
Client :	SPRINT NEXTEL
Struct Class :	II
Location :	Old Lyme South CT, CT
Shape :	18 Sides
Exposure :	C
Height :	171.50 (ft)
Topo :	1
Base Elev (ft):	0.00
Taper:	0.25072(in/ft)

Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap		Steel Grade (ksi)
		Across Top	Flats Bottom			Length (in)	Taper (in/ft)	
1	40.167	58.92	69.00	0.500		0.000	0.250700	65
2	43.042	48.13	58.92	0.438	Butt Joint	0.000	0.250700	65
3	43.792	37.15	48.13	0.375	Butt Joint	0.000	0.250700	65
4	34.500	28.50	37.15	0.250	Butt Joint	0.000	0.250700	65
5	9.999	26.00	28.50	0.188	Butt Joint	0.000	0.250700	65

Discrete Appurtenance				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	
171.000	171.000	3	Round T-Arm	
171.000	171.000	3	RFS APX16DWV-16DWVS-E-A20	
171.000	171.000	6	Ericsson AIR 21	
171.000	177.000	1	12' Dipole	
171.000	176.000	1	Decibel DB201-A	
171.000	171.000	1	E-911 GPS	
171.000	171.000	3	Andrew ETW200VS12UB	
160.000	161.000	1	VZW Unused Reserve: 203 sq	
160.000	161.000	6	Commscope SBNHH-1D65B	
160.000	161.000	2	Antel BXA-70063/6CF_	
160.000	161.000	2	RFS DB-T1-6Z-8AB-0Z	
160.000	161.000	4	RFS APL866513-42T0	
160.000	161.000	3	Alcatel-Lucent B66 RRH4x45	
160.000	161.000	3	Alcatel-Lucent RRH2x60 700	
160.000	161.000	3	Alcatel-Lucent RRH2X60-1900	
160.000	160.000	1	Flat Low Profile Platform	
160.000	161.000	2	Antel LPA-80080-6CF-EDIN-2	
160.000	161.000	1	Antel BXA-70063-4CF-EDIN-10	
160.000	161.000	2	ADC CG-1900/800-DB-FB-DIN	
149.000	149.000	3	Alcatel-Lucent TD-RRH8x20-25	
149.000	149.000	3	Alcatel-Lucent 1900 MHz 4x45	
149.000	149.000	6	Alcatel-Lucent RRH2x50-08	
149.000	149.000	1	GPS	
149.000	149.000	3	Andrew DB980F90E-M	
149.000	149.000	3	KMW ETCR-654L12H6	
149.000	149.000	1	Flat Low Profile Platform	
140.000	140.000	1	Flat Low Profile Platform	
140.000	143.000	3	Powerwave Allgon 7770.00	
140.000	143.000	6	KMW AM-X-CD-14-65-00T-RET	
140.000	143.000	6	Ericsson RRUS-11	
140.000	143.000	1	Raycap DC6-48-60-18-8F	
140.000	140.000	6	Powerwave TT19-08BP111-001	
111.000	111.000	1	12' Dipole	

Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
0.000	111.0	1/2" Coax	No
0.000	140.0	0.39" Fiber Trunk	No
0.000	140.0	0.78" 8 AWG 6	No



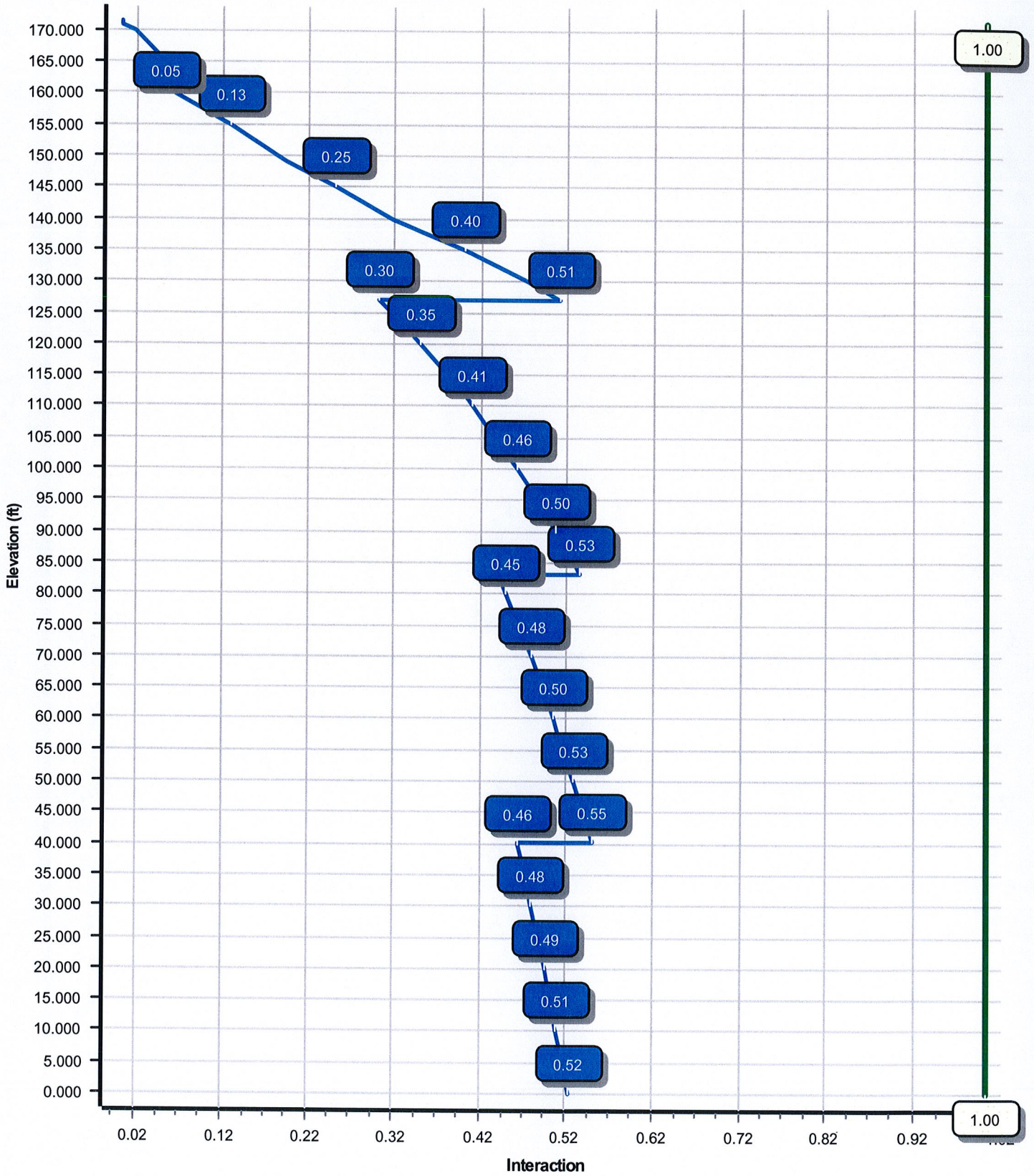
0.000	140.0	1 5/8" Coax	No
0.000	140.0	3" Conduit	No
0.000	149.0	1 1/4" Hybriflex	No
0.000	149.0	1 5/8" Coax	No
0.000	149.0	1/2" Coax	No
0.000	160.0	1 5/8" Coax	Yes
0.000	160.0	1 5/8" Coax	No
0.000	160.0	1 5/8" Hybriflex	No
0.000	171.0	1 5/8" Coax	No
0.000	171.0	1 5/8" Fiber	No
0.000	171.0	1/2" Coax	No
0.000	171.0	1/2" Coax	No
0.000	171.0	1/2" Coax	No

Load Cases	
1.2D + 1.6W	105 mph with No Ice
0.9D + 1.6W	105 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	5261.10	44.34	63.78
0.9D + 1.6W	5225.59	44.32	47.82
1.2D + 1.0Di + 1.0Wi	1238.34	10.76	95.01
(1.2 + 0.2Sds) * DL + E ELFM	292.96	2.26	63.07
(1.2 + 0.2Sds) * DL + E EMAM	302.06	2.47	63.07
(0.9 - 0.2Sds) * DL + E ELFM	290.67	2.26	44.20
(0.9 - 0.2Sds) * DL + E EMAM	299.54	2.47	44.20
1.0D + 1.0W	1069.52	9.05	53.18

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000

Load Case : 1.2D + 1.6W
Max Ratio 54.84% at 40.2 ft



Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:12 AM

Customer: SPRINT NEXTEL

Analysis Parameters

Location:	NEW LONDON County, CT	Height (ft):	171.
Code:	ANSI/TIA-222-G	Base Diameter (in):	69.00
Shape:	18 Sides	Top Diameter (in):	26.00
Pole Type:	Taper	Taper (in/ft) :	0.251
Pole Manufacturer:		Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	105 mph
Exposure Category:	C	Design Wind Speed With Ice:	50 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	1.89		
T _L (sec):	6	p:	1.3
S _s :	0.163	S ₁ :	0.058
F _a :	1.600	F _v :	2.400
S _{ds} :	0.174	S _{d1} :	0.093
		C _s :	0.033
		C _s Max:	0.033
		C _s Min:	0.030

Load Cases

1.2D + 1.6W	105 mph with No Ice
0.9D + 1.6W	105 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2S _{ds}) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2S _{ds}) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2S _{ds}) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2S _{ds}) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

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Customer: SPRINT NEXTEL

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top							
							Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	40.167	0.5000	65		0.00	13,766	69.00	0.00	108.71	64444.5	22.92	138.00	58.92	40.17	92.72	39994.5	19.37	117.86	0.250727	
2-18	43.042	0.4375	65	Butt	0.00	10,798	58.92	40.17	81.22	35107.6	22.34	134.69	48.13	83.21	66.23	19040.1	17.99	110.03	0.250727	
3-18	43.792	0.3750	65	Butt	0.00	7,497	48.13	83.21	56.85	16384.3	21.22	128.37	37.15	127.00	43.78	7483.3	16.06	99.09	0.250727	
4-18	34.500	0.2500	65	Butt	0.00	3,035	37.15	127.00	29.28	5039.9	24.80	148.63	28.50	161.50	22.42	2261.9	18.70	114.03	0.250727	
5-18	9.999	0.1875	65	Butt	0.00	548	28.50	161.50	16.85	1707.7	25.40	152.04	26.00	171.50	15.36	1293.1	23.04	138.67	0.250727	
Shaft Weight						35,644														

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice			Ice			Distance From Face (ft)	Vert Ecc (ft)
			Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor		
171.00	12' Dipole	1	40.00	4.510	1.00	175.34	11.774	1.00	0.000	6.000
171.00	Andrew ETW200VS12UB	3	11.00	0.470	0.50	29.79	0.381	0.50	0.000	0.000
171.00	Decibel DB201-A	1	25.00	3.130	1.00	42.68	5.343	1.00	0.000	5.000
171.00	E-911 GPS	1	5.00	0.580	0.50	42.00	0.949	0.50	0.000	0.000
171.00	Ericsson AIR 21	6	91.00	6.050	0.86	261.83	7.163	0.86	0.000	0.000
171.00	RFS APX16DWV-16DWVS-E-	3	40.70	6.590	0.66	181.23	7.726	0.66	0.000	0.000
171.00	Round T-Arm	3	250.00	9.700	0.67	462.13	18.067	0.67	0.000	0.000
160.00	ADC CG-1900/800-DB-FB-DIN	2	28.70	1.540	0.50	77.58	1.814	0.50	0.000	1.000
160.00	Alcatel-Lucent B66 RRH4x45	3	67.00	2.580	0.67	152.94	3.284	0.67	0.000	1.000
160.00	Alcatel-Lucent RRH2x60 700	3	56.70	2.150	0.67	138.59	2.779	0.67	0.000	1.000
160.00	Alcatel-Lucent RRH2X60-	3	43.00	1.880	0.50	111.10	2.476	0.50	0.000	1.000
160.00	Antel BXA-70063-4CF-EDIN-10	1	9.90	4.710	0.77	131.72	5.673	0.77	0.000	1.000
160.00	Antel BXA-70063/6CF_	2	17.00	7.570	0.75	185.49	8.842	0.75	0.000	1.000
160.00	Antel LPA-80080-6CF-EDIN-2	2	21.00	8.630	0.75	217.13	9.953	0.75	0.000	1.000
160.00	Commscope SBNHH-1D65B	6	50.70	8.170	0.83	255.32	9.484	0.83	0.000	1.000
160.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,152.40	45.325	1.00	0.000	0.000
160.00	RFS APL866513-42T0	4	15.70	4.050	0.95	145.30	4.978	0.95	0.000	1.000
160.00	RFS DB-T1-6Z-8AB-OZ	2	44.00	4.800	0.67	188.56	5.678	0.67	0.000	1.000
160.00	VZW Unused Reserve: 203	1	151.60	1.410	1.00	257.95	2.399	1.00	0.000	1.000
149.00	Alcatel-Lucent 1900 MHz	3	60.00	2.320	0.67	154.93	2.991	0.67	0.000	0.000
149.00	Alcatel-Lucent RRH2x50-08	6	52.90	1.700	0.50	124.26	2.248	0.50	0.000	0.000
149.00	Alcatel-Lucent TD-RRH8x20-	3	70.00	4.050	0.67	180.39	4.872	0.67	0.000	0.000
149.00	Andrew DB980F90E-M	3	9.50	3.750	0.68	100.99	4.799	0.68	0.000	0.000
149.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,147.91	45.192	1.00	0.000	0.000
149.00	GPS	1	10.00	1.000	0.50	48.40	0.940	0.50	0.000	0.000
149.00	KMW ETCR-654L12H6	3	84.90	15.710	0.61	407.18	17.399	0.61	0.000	0.000
140.00	Ericsson RRUS-11	6	55.00	3.790	0.67	159.17	4.576	0.67	0.000	3.000
140.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,143.60	45.065	1.00	0.000	0.000
140.00	KMW AM-X-CD-14-65-00T-	6	36.40	4.990	0.78	166.31	5.966	0.78	0.000	3.000
140.00	Powerwave Allgon 7770.00	3	35.00	5.510	0.77	168.65	6.550	0.77	0.000	3.000
140.00	Powerwave TT19-08BP111-	6	16.00	0.640	0.50	43.47	0.895	0.50	0.000	0.000
140.00	Raycap DC6-48-60-18-8F	1	31.80	1.280	1.00	123.77	2.847	1.00	0.000	3.000
111.00	12' Dipole	1	40.00	4.510	1.00	169.59	11.466	1.00	0.000	0.000
Totals		92	9092.90			21,680.00			Number of Loadings : 33	

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	171.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	T-Mobile
0.00	171.00	1	1 5/8" Fiber	1.63	1.61	N	0.00	N	T-Mobile
0.00	171.00	1	1/2" Coax	0.63	0.15	N	0.00	N	T-Mobile

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:12 AM

Customer: SPRINT NEXTEL

0.00	171.00	1 1/2" Coax	0.63	0.15	N	0.00	N	Town of Old Lyme, CT
0.00	171.00	6 1/2" Coax	0.63	0.15	N	0.00	N	Town of Old Lyme, CT
0.00	160.00	6 1 5/8" Coax	1.98	0.82	N	1.98	Y	Verizon
0.00	160.00	12 1 5/8" Coax	1.98	0.82	N	0.00	N	Verizon
0.00	160.00	2 1 5/8" Hybriflex Cable	1.98	1.30	N	0.00	N	Verizon
0.00	149.00	4 1 1/4" Hybriflex Cable	1.54	1.00	N	0.00	N	Sprint Nextel
0.00	149.00	2 1 5/8" Coax	1.98	0.82	N	0.00	N	Sprint Nextel
0.00	149.00	1 1/2" Coax	0.63	0.15	N	0.00	N	Sprint Nextel
0.00	140.00	1 0.39" Fiber Trunk	0.39	0.06	N	0.00	N	AT&T Mobility
0.00	140.00	2 0.78" 8 AWG 6	0.78	0.59	N	0.00	N	AT&T Mobility
0.00	140.00	12 1 5/8" Coax	1.98	0.82	N	0.00	N	AT&T Mobility
0.00	140.00	1 3" Conduit	3.50	7.58	N	0.00	N	AT&T Mobility
0.00	111.00	2 1/2" Coax	0.63	0.15	N	0.00	N	Town of Old Lyme, CT

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.5000	69.000	108.706	64,444.5	22.92	138.00	74.4	1839.	0.0	0.0
5.00		0.5000	67.746	106.716	60,970.6	22.48	135.49	75.0	1772.	0.0	1,832.6
10.00		0.5000	66.493	104.727	57,623.9	22.04	132.99	75.5	1706.	0.0	1,798.7
15.00		0.5000	65.239	102.737	54,401.9	21.60	130.48	76.0	1642.	0.0	1,764.9
20.00		0.5000	63.985	100.748	51,302.3	21.15	127.97	76.5	1579.	0.0	1,731.0
25.00		0.5000	62.732	98.758	48,322.8	20.71	125.46	77.0	1517.	0.0	1,697.2
30.00		0.5000	61.478	96.769	45,460.9	20.27	122.96	77.6	1456.	0.0	1,663.3
35.00		0.5000	60.225	94.779	42,714.3	19.83	120.45	78.1	1396.	0.0	1,629.5
40.00		0.5000	58.971	92.790	40,080.6	19.39	117.94	78.6	1338.	0.0	1,595.6
40.17	Top - Section 1	0.5000	58.929	92.724	39,994.5	19.37	117.86	78.6	1336.	0.0	52.7
40.17	Bot - Section 2	0.4375	58.929	81.220	35,107.6	22.34	134.69	75.1	1173.	0.0	
45.00		0.4375	57.717	79.537	32,970.5	21.85	131.93	75.7	1125.	0.0	1,321.9
50.00		0.4375	56.464	77.796	30,852.8	21.35	129.06	76.3	1076.	0.0	1,338.4
55.00		0.4375	55.210	76.056	28,827.7	20.84	126.19	76.9	1028.	0.0	1,308.8
60.00		0.4375	53.956	74.315	26,893.2	20.34	123.33	77.5	981.7	0.0	1,279.2
65.00		0.4375	52.703	72.574	25,047.3	19.83	120.46	78.1	936.1	0.0	1,249.6
70.00		0.4375	51.449	70.833	23,287.8	19.33	117.60	78.7	891.5	0.0	1,220.0
75.00		0.4375	50.195	69.093	21,612.7	18.82	114.73	79.3	848.1	0.0	1,190.3
80.00		0.4375	48.942	67.352	20,020.0	18.31	111.87	79.9	805.7	0.0	1,160.7
83.21	Top - Section 2	0.4375	48.137	66.235	19,040.1	17.99	110.03	80.2	779.1	0.0	729.3
83.21	Bot - Section 3	0.3750	48.137	56.847	16,384.3	21.22	128.37	76.4	670.4	0.0	
85.00		0.3750	47.688	56.312	15,926.5	21.01	127.17	76.7	657.8	0.0	344.8
90.00		0.3750	46.435	54.820	14,693.8	20.42	123.83	77.4	623.3	0.0	945.4
95.00		0.3750	45.181	53.328	13,526.4	19.83	120.48	78.1	589.7	0.0	920.0
100.00		0.3750	43.927	51.836	12,422.5	19.24	117.14	78.8	557.0	0.0	894.6
105.00		0.3750	42.674	50.344	11,380.3	18.65	113.80	79.5	525.3	0.0	869.2
110.00		0.3750	41.420	48.852	10,398.1	18.07	110.45	80.2	494.5	0.0	843.9
111.00		0.3750	41.169	48.554	10,208.8	17.95	109.78	80.3	488.4	0.0	165.7
115.00		0.3750	40.166	47.360	9,474.2	17.48	107.11	80.8	464.6	0.0	652.7
120.00		0.3750	38.913	45.868	8,606.6	16.89	103.77	81.5	435.6	0.0	793.1
125.00		0.3750	37.659	44.376	7,793.7	16.30	100.42	82.2	407.6	0.0	767.7
127.00	Top - Section 3	0.3750	37.157	43.779	7,483.3	16.06	99.09	82.5	396.7	0.0	300.1
127.00	Bot - Section 4	0.2500	37.157	29.285	5,039.9	24.80	148.63	72.2	267.2	0.0	
130.00		0.2500	36.405	28.688	4,738.1	24.27	145.62	72.9	256.3	0.0	295.8
135.00		0.2500	35.152	27.694	4,262.1	23.38	140.61	73.9	238.8	0.0	479.6
140.00		0.2500	33.898	26.699	3,819.2	22.50	135.59	74.9	221.9	0.0	462.7
145.00		0.2500	32.645	25.704	3,408.0	21.61	130.58	76.0	205.6	0.0	445.8
149.00		0.2500	31.642	24.908	3,101.2	20.91	126.57	76.8	193.0	0.0	344.4
150.00		0.2500	31.391	24.709	3,027.5	20.73	125.56	77.0	190.0	0.0	84.4
155.00		0.2500	30.137	23.715	2,676.3	19.85	120.55	78.1	174.9	0.0	411.9
160.00		0.2500	28.884	22.720	2,353.5	18.96	115.53	79.1	160.5	0.0	395.0
161.50	Top - Section 4	0.2500	28.507	22.421	2,261.9	18.70	114.03	79.4	156.3	0.0	115.3
161.50	Bot - Section 5	0.1875	28.507	16.853	1,707.7	25.40	152.04	71.5	118.0	0.0	
165.00		0.1875	27.630	16.331	1,553.9	24.57	147.36	72.5	110.8	0.0	197.6
170.00		0.1875	26.376	15.585	1,350.5	23.39	140.67	73.9	100.8	0.0	271.5
171.00		0.1875	26.126	15.436	1,312.1	23.16	139.34	74.2	98.9	0.0	52.8
171.50		0.1875	26.000	15.361	1,293.1	23.04	138.67	74.3	98.0	0.0	26.2
35,644.3											

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:13 AM

Customer: SPRINT NEXTEL

Load Case: 1.2D + 1.6W

105 mph with No Ice

22 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Shaft Segment Forces (Factored)

Seg Top								Ice				Wind	Dead	Tot Dead		
Elev	Description	Kzt	Kz	qz	qzGh	C	Cf	Thick	Tributary	Ap	EPAs	Force X	Load Ice	Load		
(ft)				(psf)	(psf)	(mph-ft)		(in)	(ft)	(sf)	(sf)	(lb)	(lb)	(lb)		
0.00		1.00	0.85	22.791	25.07	565.21	0.650	0.000	0.00	0.000	0.00	377.1	0.0	0.0		
5.00		1.00	0.85	22.791	25.07	560.08	0.650	0.000	5.00	28.928	18.80	747.3	0.0	2,199.1		
10.00		1.00	0.85	22.791	25.07	549.81	0.650	0.000	5.00	28.398	18.46	733.5	0.0	2,158.5		
15.00		1.00	0.85	22.791	25.07	539.54	0.650	0.000	5.00	27.867	18.11	730.9	0.0	2,117.9		
20.00		1.00	0.87	23.512	25.86	537.58	0.650	0.000	5.00	27.337	17.77	747.8	0.0	2,077.2		
25.00		1.00	0.92	24.789	27.26	541.28	0.650	0.000	5.00	26.807	17.42	768.8	0.0	2,036.6		
30.00		1.00	0.96	25.859	28.44	541.89	0.650	0.000	5.00	26.276	17.08	783.1	0.0	1,996.0		
35.00		1.00	0.99	26.785	29.46	540.37	0.650	0.000	5.00	25.746	16.73	792.6	0.0	1,955.4		
40.00		1.00	1.02	27.604	30.36	537.27	0.650	0.000	5.00	25.215	16.39	411.5	0.0	1,914.8		
40.17	Top - Section 1	1.00	1.04	27.994	30.79	535.17	0.650	0.000	0.17	0.833	0.54	400.2	0.0	63.3		
45.00		1.00	1.05	28.352	31.18	532.87	0.650	0.000	4.83	23.852	15.50	787.7	0.0	1,586.3		
50.00		1.00	1.08	29.012	31.91	527.64	0.650	0.000	5.00	24.155	15.70	801.2	0.0	1,606.1		
55.00		1.00	1.10	29.630	32.59	521.52	0.650	0.000	5.00	23.624	15.36	799.4	0.0	1,570.6		
60.00		1.00	1.12	30.203	33.22	514.71	0.650	0.000	5.00	23.094	15.01	795.7	0.0	1,535.0		
65.00		1.00	1.14	30.738	33.81	507.32	0.650	0.000	5.00	22.563	14.67	790.4	0.0	1,499.5		
70.00		1.00	1.16	31.240	34.36	499.43	0.650	0.000	5.00	22.033	14.32	783.8	0.0	1,464.0		
75.00		1.00	1.18	31.713	34.88	491.09	0.650	0.000	5.00	21.503	13.98	775.9	0.0	1,428.4		
80.00		1.00	1.19	32.162	35.37	482.35	0.650	0.000	5.00	20.972	13.63	630.9	0.0	1,392.9		
83.21	Top - Section 2	1.00	1.21	32.513	35.76	474.90	0.650	0.000	3.21	13.181	8.57	381.0	0.0	875.2		
85.00		1.00	1.22	32.720	35.99	470.26	0.650	0.000	1.79	7.261	4.72	511.7	0.0	413.8		
90.00		1.00	1.23	32.994	36.29	463.84	0.650	0.000	5.00	19.911	12.94	745.9	0.0	1,134.5		
95.00		1.00	1.24	33.382	36.72	454.13	0.650	0.000	5.00	19.381	12.60	734.0	0.0	1,104.0		
100.0		1.00	1.25	33.754	37.13	444.15	0.650	0.000	5.00	18.851	12.25	721.4	0.0	1,073.6		
105.0		1.00	1.27	34.112	37.52	433.93	0.650	0.000	5.00	18.320	11.91	708.1	0.0	1,043.1		
110.0		1.00	1.28	34.455	37.90	423.49	0.650	0.000	5.00	17.790	11.56	419.9	0.0	1,012.6		
111.0	Appertunance(s)	1.00	1.29	34.656	38.12	417.12	0.650	0.000	1.00	3.494	2.27	343.4	0.0	198.9		
115.0		1.00	1.29	34.819	38.30	411.76	0.650	0.000	4.00	13.765	8.95	610.1	0.0	783.3		
120.0		1.00	1.30	35.107	38.61	401.98	0.650	0.000	5.00	16.729	10.87	664.1	0.0	951.7		
125.0		1.00	1.32	35.416	38.95	390.95	0.650	0.000	5.00	16.199	10.53	457.2	0.0	921.2		
127.0	Top - Section 3	1.00	1.32	35.627	39.18	383.12	0.650	0.000	2.00	6.334	4.12	320.1	0.0	360.1		
130.0		1.00	1.33	35.774	39.35	377.48	0.650	0.000	3.00	9.334	6.07	502.8	0.0	355.0		
135.0		1.00	1.34	36.006	39.60	368.38	0.650	0.000	5.00	15.138	9.84	615.0	0.0	575.6		
140.0	Appertunance(s)	1.00	1.35	36.288	39.91	356.86	0.650	0.000	5.00	14.607	9.49	597.6	0.0	555.3		
145.0		1.00	1.36	36.562	40.21	345.19	0.650	0.000	5.00	14.077	9.15	523.4	0.0	534.9		
149.0	Appertunance(s)	1.00	1.37	36.802	40.48	334.58	0.650	0.000	4.00	10.880	7.07	285.4	0.0	413.3		
150.0		1.00	1.37	36.933	40.62	328.64	0.650	0.000	1.00	2.667	1.73	332.5	0.0	101.3		
155.0		1.00	1.38	37.088	40.79	321.47	0.650	0.000	5.00	13.016	8.46	542.8	0.0	494.3		
160.0	Appertunance(s)	1.00	1.39	37.340	41.07	309.42	0.650	0.000	5.00	12.486	8.12	344.9	0.0	474.0		
161.5	Top - Section 4	1.00	1.39	37.501	41.25	301.52	0.650	0.000	1.50	3.645	2.37	257.0	0.0	138.3		
165.0		1.00	1.40	37.623	41.38	295.41	0.650	0.000	3.50	8.311	5.40	426.1	0.0	237.1		
170.0		1.00	1.41	37.827	41.61	284.97	0.650	0.000	5.00	11.425	7.43	295.4	0.0	325.8		
171.0	Appertunance(s)	1.00	1.41	37.969	41.76	277.55	0.650	0.000	1.00	2.221	1.44	72.2	0.0	63.3		
171.5		1.00	1.41	38.004	41.80	275.69	0.650	0.000	0.50	1.103	0.72	24.0	0.0	31.4		
Totals:											171.50			24,093.5	0.0	42,773.2

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:16 AM

Customer: SPRINT NEXTEL

Load Case: 1.2D + 1.6W

105 mph with No Ice

22 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		377.1	0.0					0.0	0.0	377.1	0.0	0.0	0.0
5.00		747.3	2,199.1					0.0	328.6	747.3	2,527.7	0.0	0.0
10.00		733.5	2,158.5					0.0	328.6	733.5	2,487.0	0.0	0.0
15.00		730.9	2,117.9					0.0	328.6	730.9	2,446.4	0.0	0.0
20.00		747.8	2,077.2					0.0	328.6	747.8	2,405.8	0.0	0.0
25.00		768.8	2,036.6					0.0	328.6	768.8	2,365.2	0.0	0.0
30.00		783.1	1,996.0					0.0	328.6	783.1	2,324.6	0.0	0.0
35.00		792.6	1,955.4					0.0	328.6	792.6	2,283.9	0.0	0.0
40.00		411.5	1,914.8					0.0	328.6	411.5	2,243.3	0.0	0.0
40.17	Top - Section 1	400.2	63.3					0.0	11.0	400.2	74.2	0.0	0.0
45.00		787.7	1,586.3					0.0	317.6	787.7	1,903.8	0.0	0.0
50.00		801.2	1,606.1					0.0	328.6	801.2	1,934.7	0.0	0.0
55.00		799.4	1,570.6					0.0	328.6	799.4	1,899.1	0.0	0.0
60.00		795.7	1,535.0					0.0	328.6	795.7	1,863.6	0.0	0.0
65.00		790.4	1,499.5					0.0	328.6	790.4	1,828.1	0.0	0.0
70.00		783.8	1,464.0					0.0	328.6	783.8	1,792.5	0.0	0.0
75.00		775.9	1,428.4					0.0	328.6	775.9	1,757.0	0.0	0.0
80.00		630.9	1,392.9					0.0	328.6	630.9	1,721.4	0.0	0.0
83.21	Top - Section 2	381.0	875.2					0.0	210.9	381.0	1,086.1	0.0	0.0
85.00		511.7	413.8					0.0	117.7	511.7	531.5	0.0	0.0
90.00		745.9	1,134.5					0.0	328.6	745.9	1,463.0	0.0	0.0
95.00		734.0	1,104.0					0.0	328.6	734.0	1,432.6	0.0	0.0
100.00		721.4	1,073.6					0.0	328.6	721.4	1,402.1	0.0	0.0
105.00		708.1	1,043.1					0.0	328.6	708.1	1,371.7	0.0	0.0
110.00		419.9	1,012.6					0.0	328.6	419.9	1,341.2	0.0	0.0
111.00	Appertunance(s)	343.4	198.9	275.3	0.0	0.0	48.0	0.0	65.7	618.8	312.6	0.0	0.0
115.00		610.1	783.3					0.0	261.4	610.1	1,044.7	0.0	0.0
120.00		664.1	951.7					0.0	326.8	664.1	1,278.5	0.0	0.0
125.00		457.2	921.2					0.0	326.8	457.2	1,248.0	0.0	0.0
127.00	Top - Section 3	320.1	360.1					0.0	130.8	320.1	490.9	0.0	0.0
130.00		502.8	355.0					0.0	196.0	502.8	551.0	0.0	0.0
135.00		615.0	575.6					0.0	326.8	615.0	902.3	0.0	0.0
140.00	Appertunance(s)	597.6	555.3	4,481.4	0.0	8,128.9	2,737.4	0.0	326.8	5,079.0	3,619.5	0.0	0.0
145.00		523.4	534.9					0.0	214.8	523.4	749.7	0.0	0.0
149.00	Appertunance(s)	285.4	413.3	4,543.2	0.0	0.0	3,000.7	0.0	171.8	4,828.5	3,585.9	0.0	0.0
150.00		332.5	101.3					0.0	36.0	332.5	137.3	0.0	0.0
155.00		542.8	494.3					0.0	180.1	542.8	674.4	0.0	0.0
160.00	Appertunance(s)	344.9	474.0	7,343.5	0.0	5,622.6	3,300.0	0.0	180.1	7,688.4	3,954.1	0.0	0.0
161.50	Top - Section 4	257.0	138.3					0.0	22.8	257.0	161.1	0.0	0.0
165.00		426.1	237.1					0.0	53.1	426.1	290.2	0.0	0.0
170.00		295.4	325.8					0.0	75.9	295.4	401.7	0.0	0.0
171.00	Appertunance(s)	72.2	63.3	3,913.3	0.0	2,875.4	1,825.3	0.0	15.2	3,985.5	1,903.8	0.0	0.0
171.50		24.0	31.4					0.0	0.0	24.0	31.4	0.0	0.0
Totals:										44,650.1	63,823.6	0.00	0.00

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:16 AM

Customer: SPRINT NEXTEL

Load Case: 1.2D + 1.6W

105 mph with No Ice

22 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-63.78	-44.34	0.00	-5,261.10	0.00	5,261.10	7,282.81	3,641.41	20,510.1	10,270.3	0.00	0.00	0.521
5.00	-61.16	-43.71	0.00	-5,039.42	0.00	5,039.42	7,199.47	3,599.74	19,901.7	9,965.65	0.06	-0.11	0.514
10.00	-58.59	-43.09	0.00	-4,820.87	0.00	4,820.87	7,114.27	3,557.13	19,296.8	9,662.76	0.24	-0.23	0.507
15.00	-56.06	-42.46	0.00	-4,605.44	0.00	4,605.44	7,027.20	3,513.60	18,695.8	9,361.83	0.55	-0.35	0.500
20.00	-53.58	-41.80	0.00	-4,393.15	0.00	4,393.15	6,938.27	3,469.13	18,099.0	9,062.99	0.97	-0.46	0.493
25.00	-51.13	-41.12	0.00	-4,184.14	0.00	4,184.14	6,847.47	3,423.74	17,506.7	8,766.39	1.52	-0.58	0.485
30.00	-48.73	-40.41	0.00	-3,978.54	0.00	3,978.54	6,754.82	3,377.41	16,919.2	8,472.18	2.19	-0.70	0.477
35.00	-46.37	-39.69	0.00	-3,776.47	0.00	3,776.47	6,660.30	3,330.15	16,336.7	8,180.49	2.99	-0.82	0.469
40.00	-44.09	-39.29	0.00	-3,578.02	0.00	3,578.02	6,563.93	3,281.96	15,759.5	7,891.49	3.92	-0.95	0.460
40.17	-43.98	-38.94	0.00	-3,571.46	0.00	3,571.46	6,560.67	3,280.34	15,740.3	7,881.88	3.96	-0.95	0.460
40.17	-43.98	-38.94	0.00	-3,571.46	0.00	3,571.46	5,491.49	2,745.75	13,203.3	6,611.51	3.96	-0.95	0.548
45.00	-42.01	-38.21	0.00	-3,383.27	0.00	3,383.27	5,418.84	2,709.42	12,756.7	6,387.88	4.98	-1.07	0.538
50.00	-40.00	-37.47	0.00	-3,192.21	0.00	3,192.21	5,341.85	2,670.93	12,298.2	6,158.26	6.18	-1.21	0.526
55.00	-38.02	-36.73	0.00	-3,004.84	0.00	3,004.84	5,263.00	2,631.50	11,843.4	5,930.54	7.52	-1.35	0.514
60.00	-36.09	-35.98	0.00	-2,821.21	0.00	2,821.21	5,182.29	2,591.14	11,392.8	5,704.87	9.02	-1.50	0.502
65.00	-34.20	-35.22	0.00	-2,641.33	0.00	2,641.33	5,099.71	2,549.86	10,946.5	5,481.40	10.67	-1.64	0.489
70.00	-32.34	-34.47	0.00	-2,465.22	0.00	2,465.22	5,015.27	2,507.64	10,504.9	5,260.27	12.46	-1.79	0.475
75.00	-30.52	-33.71	0.00	-2,292.89	0.00	2,292.89	4,928.97	2,464.49	10,068.2	5,041.62	14.41	-1.93	0.461
80.00	-28.76	-33.08	0.00	-2,124.33	0.00	2,124.33	4,840.81	2,420.41	9,636.89	4,825.61	16.52	-2.08	0.446
83.21	-27.64	-32.70	0.00	-2,018.17	0.00	2,018.17	4,783.25	2,391.62	9,362.93	4,688.42	17.95	-2.17	0.436
83.21	-27.64	-32.70	0.00	-2,018.17	0.00	2,018.17	3,910.73	1,955.36	7,675.09	3,843.25	17.95	-2.17	0.532
85.00	-27.07	-32.22	0.00	-1,959.61	0.00	1,959.61	3,886.54	1,943.27	7,555.36	3,783.30	18.77	-2.23	0.525
90.00	-25.55	-31.49	0.00	-1,798.53	0.00	1,798.53	3,817.77	1,908.89	7,223.47	3,617.10	21.19	-2.39	0.504
95.00	-24.06	-30.76	0.00	-1,641.09	0.00	1,641.09	3,747.13	1,873.57	6,895.30	3,452.77	23.79	-2.56	0.482
100.00	-22.60	-30.04	0.00	-1,487.28	0.00	1,487.28	3,674.64	1,837.32	6,571.13	3,290.45	26.56	-2.72	0.458
105.00	-21.19	-29.33	0.00	-1,337.08	0.00	1,337.08	3,600.28	1,800.14	6,251.25	3,130.27	29.50	-2.89	0.433
110.00	-19.82	-28.87	0.00	-1,190.45	0.00	1,190.45	3,524.05	1,762.03	5,935.96	2,972.39	32.61	-3.04	0.406
111.00	-19.51	-28.26	0.00	-1,161.58	0.00	1,161.58	3,508.59	1,754.29	5,873.48	2,941.11	33.25	-3.08	0.401
115.00	-18.43	-27.64	0.00	-1,048.54	0.00	1,048.54	3,445.97	1,722.99	5,625.55	2,816.95	35.88	-3.20	0.378
120.00	-17.12	-26.95	0.00	-910.34	0.00	910.34	3,366.02	1,683.01	5,320.30	2,664.10	39.31	-3.35	0.347
125.00	-15.86	-26.44	0.00	-775.61	0.00	775.61	3,284.22	1,642.11	5,020.50	2,513.98	42.89	-3.49	0.314
127.00	-15.36	-26.11	0.00	-722.70	0.00	722.70	3,250.95	1,625.48	4,902.12	2,454.70	44.36	-3.54	0.299
127.00	-15.36	-26.11	0.00	-722.70	0.00	722.70	1,903.87	951.93	2,890.39	1,447.34	44.36	-3.54	0.508
130.00	-14.78	-25.61	0.00	-644.40	0.00	644.40	1,881.18	940.59	2,797.37	1,400.77	46.61	-3.62	0.469
135.00	-13.85	-24.98	0.00	-516.36	0.00	516.36	1,841.88	920.94	2,643.30	1,323.62	50.49	-3.79	0.398
140.00	-10.54	-19.69	0.00	-383.36	0.00	383.36	1,800.71	900.35	2,490.74	1,247.22	54.55	-3.94	0.314
145.00	-9.79	-19.13	0.00	-284.92	0.00	284.92	1,757.68	878.84	2,339.97	1,171.72	58.75	-4.07	0.249
149.00	-6.55	-14.06	0.00	-208.39	0.00	208.39	1,721.91	860.95	2,220.84	1,112.07	62.19	-4.15	0.191
150.00	-6.43	-13.73	0.00	-194.33	0.00	194.33	1,712.78	856.39	2,191.28	1,097.27	63.06	-4.17	0.181
155.00	-5.78	-13.14	0.00	-125.69	0.00	125.69	1,666.03	833.01	2,044.98	1,024.01	67.47	-4.24	0.126
160.00	-2.41	-5.18	0.00	-54.35	0.00	54.35	1,617.41	808.70	1,901.34	952.08	71.94	-4.29	0.059
161.50	-2.26	-4.91	0.00	-46.57	0.00	46.57	1,602.45	801.23	1,858.78	930.77	73.29	-4.30	0.051
161.50	-2.26	-4.91	0.00	-46.57	0.00	46.57	1,084.93	542.47	1,264.05	632.97	73.29	-4.30	0.076
165.00	-2.01	-4.47	0.00	-29.38	0.00	29.38	1,065.59	532.79	1,202.80	602.29	76.45	-4.32	0.051
170.00	-1.63	-4.14	0.00	-7.03	0.00	7.03	1,036.36	518.18	1,116.00	558.83	80.98	-4.34	0.014
171.00	-0.03	-0.03	0.00	-0.01	0.00	0.01	1,030.29	515.14	1,098.77	550.20	81.89	-4.34	0.000
171.50	0.00	-0.02	0.00	0.00	0.00	0.00	1,027.22	513.61	1,090.17	545.90	82.34	-4.34	0.000

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:16 AM

Customer: SPRINT NEXTEL

Load Case: 0.9D + 1.6W

105 mph with No Ice (Reduced DL)

22 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	22.791	25.07	565.21	0.650	0.000	0.00	0.000	0.00	377.1	0.0	0.0
5.00		1.00	0.85	22.791	25.07	560.08	0.650	0.000	5.00	28.928	18.80	747.3	0.0	1,649.3
10.00		1.00	0.85	22.791	25.07	549.81	0.650	0.000	5.00	28.398	18.46	733.5	0.0	1,618.9
15.00		1.00	0.85	22.791	25.07	539.54	0.650	0.000	5.00	27.867	18.11	730.9	0.0	1,588.4
20.00		1.00	0.87	23.512	25.86	537.58	0.650	0.000	5.00	27.337	17.77	747.8	0.0	1,557.9
25.00		1.00	0.92	24.789	27.26	541.28	0.650	0.000	5.00	26.807	17.42	768.8	0.0	1,527.5
30.00		1.00	0.96	25.859	28.44	541.89	0.650	0.000	5.00	26.276	17.08	783.1	0.0	1,497.0
35.00		1.00	0.99	26.785	29.46	540.37	0.650	0.000	5.00	25.746	16.73	792.6	0.0	1,466.5
40.00		1.00	1.02	27.604	30.36	537.27	0.650	0.000	5.00	25.215	16.39	411.5	0.0	1,436.1
40.17	Top - Section 1	1.00	1.04	27.994	30.79	535.17	0.650	0.000	0.17	0.833	0.54	400.2	0.0	47.4
45.00		1.00	1.05	28.352	31.18	532.87	0.650	0.000	4.83	23.852	15.50	787.7	0.0	1,189.7
50.00		1.00	1.08	29.012	31.91	527.64	0.650	0.000	5.00	24.155	15.70	801.2	0.0	1,204.6
55.00		1.00	1.10	29.630	32.59	521.52	0.650	0.000	5.00	23.624	15.36	799.4	0.0	1,177.9
60.00		1.00	1.12	30.203	33.22	514.71	0.650	0.000	5.00	23.094	15.01	795.7	0.0	1,151.3
65.00		1.00	1.14	30.738	33.81	507.32	0.650	0.000	5.00	22.563	14.67	790.4	0.0	1,124.6
70.00		1.00	1.16	31.240	34.36	499.43	0.650	0.000	5.00	22.033	14.32	783.8	0.0	1,098.0
75.00		1.00	1.18	31.713	34.88	491.09	0.650	0.000	5.00	21.503	13.98	775.9	0.0	1,071.3
80.00		1.00	1.19	32.162	35.37	482.35	0.650	0.000	5.00	20.972	13.63	630.9	0.0	1,044.7
83.21	Top - Section 2	1.00	1.21	32.513	35.76	474.90	0.650	0.000	3.21	13.181	8.57	381.0	0.0	656.4
85.00		1.00	1.22	32.720	35.99	470.26	0.650	0.000	1.79	7.261	4.72	511.7	0.0	310.3
90.00		1.00	1.23	32.994	36.29	463.84	0.650	0.000	5.00	19.911	12.94	745.9	0.0	850.9
95.00		1.00	1.24	33.382	36.72	454.13	0.650	0.000	5.00	19.381	12.60	734.0	0.0	828.0
100.0		1.00	1.25	33.754	37.13	444.15	0.650	0.000	5.00	18.851	12.25	721.4	0.0	805.2
105.0		1.00	1.27	34.112	37.52	433.93	0.650	0.000	5.00	18.320	11.91	708.1	0.0	782.3
110.0		1.00	1.28	34.455	37.90	423.49	0.650	0.000	5.00	17.790	11.56	419.9	0.0	759.5
111.0	Appertunance(s)	1.00	1.29	34.656	38.12	417.12	0.650	0.000	1.00	3.494	2.27	343.4	0.0	149.2
115.0		1.00	1.29	34.819	38.30	411.76	0.650	0.000	4.00	13.765	8.95	610.1	0.0	587.5
120.0		1.00	1.30	35.107	38.61	401.98	0.650	0.000	5.00	16.729	10.87	664.1	0.0	713.8
125.0		1.00	1.32	35.416	38.95	390.95	0.650	0.000	5.00	16.199	10.53	457.2	0.0	690.9
127.0	Top - Section 3	1.00	1.32	35.627	39.18	383.12	0.650	0.000	2.00	6.334	4.12	320.1	0.0	270.1
130.0		1.00	1.33	35.774	39.35	377.48	0.650	0.000	3.00	9.334	6.07	502.8	0.0	266.2
135.0		1.00	1.34	36.006	39.60	368.38	0.650	0.000	5.00	15.138	9.84	615.0	0.0	431.7
140.0	Appertunance(s)	1.00	1.35	36.288	39.91	356.86	0.650	0.000	5.00	14.607	9.49	597.6	0.0	416.4
145.0		1.00	1.36	36.562	40.21	345.19	0.650	0.000	5.00	14.077	9.15	523.4	0.0	401.2
149.0	Appertunance(s)	1.00	1.37	36.802	40.48	334.58	0.650	0.000	4.00	10.880	7.07	285.4	0.0	310.0
150.0		1.00	1.37	36.933	40.62	328.64	0.650	0.000	1.00	2.667	1.73	332.5	0.0	76.0
155.0		1.00	1.38	37.088	40.79	321.47	0.650	0.000	5.00	13.016	8.46	542.8	0.0	370.7
160.0	Appertunance(s)	1.00	1.39	37.340	41.07	309.42	0.650	0.000	5.00	12.486	8.12	344.9	0.0	355.5
161.5	Top - Section 4	1.00	1.39	37.501	41.25	301.52	0.650	0.000	1.50	3.645	2.37	257.0	0.0	103.8
165.0		1.00	1.40	37.623	41.38	295.41	0.650	0.000	3.50	8.311	5.40	426.1	0.0	177.8
170.0		1.00	1.41	37.827	41.61	284.97	0.650	0.000	5.00	11.425	7.43	295.4	0.0	244.4
171.0	Appertunance(s)	1.00	1.41	37.969	41.76	277.55	0.650	0.000	1.00	2.221	1.44	72.2	0.0	47.5
171.5		1.00	1.41	38.004	41.80	275.69	0.650	0.000	0.50	1.103	0.72	24.0	0.0	23.6
Totals:									171.50			24,093.5	0.0	32,079.9

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:19 AM

Customer: SPRINT NEXTEL

Load Case: 0.9D + 1.6W	105 mph with No Ice (Reduced DL)	22 Iterations
Gust Response Factor : 1.10		Wind Importance Factor : 1.00
Dead Load Factor : 0.90		
Wind Load Factor : 1.60		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		377.1	0.0					0.0	0.0	377.1	0.0	0.0	0.0
5.00		747.3	1,649.3					0.0	246.4	747.3	1,895.7	0.0	0.0
10.00		733.5	1,618.9					0.0	246.4	733.5	1,865.3	0.0	0.0
15.00		730.9	1,588.4					0.0	246.4	730.9	1,834.8	0.0	0.0
20.00		747.8	1,557.9					0.0	246.4	747.8	1,804.4	0.0	0.0
25.00		768.8	1,527.5					0.0	246.4	768.8	1,773.9	0.0	0.0
30.00		783.1	1,497.0					0.0	246.4	783.1	1,743.4	0.0	0.0
35.00		792.6	1,466.5					0.0	246.4	792.6	1,713.0	0.0	0.0
40.00		411.5	1,436.1					0.0	246.4	411.5	1,682.5	0.0	0.0
40.17	Top - Section 1	400.2	47.4					0.0	8.2	400.2	55.7	0.0	0.0
45.00		787.7	1,189.7					0.0	238.2	787.7	1,427.9	0.0	0.0
50.00		801.2	1,204.6					0.0	246.4	801.2	1,451.0	0.0	0.0
55.00		799.4	1,177.9					0.0	246.4	799.4	1,424.4	0.0	0.0
60.00		795.7	1,151.3					0.0	246.4	795.7	1,397.7	0.0	0.0
65.00		790.4	1,124.6					0.0	246.4	790.4	1,371.0	0.0	0.0
70.00		783.8	1,098.0					0.0	246.4	783.8	1,344.4	0.0	0.0
75.00		775.9	1,071.3					0.0	246.4	775.9	1,317.7	0.0	0.0
80.00		630.9	1,044.7					0.0	246.4	630.9	1,291.1	0.0	0.0
83.21	Top - Section 2	381.0	656.4					0.0	158.2	381.0	814.6	0.0	0.0
85.00		511.7	310.3					0.0	88.3	511.7	398.6	0.0	0.0
90.00		745.9	850.9					0.0	246.4	745.9	1,097.3	0.0	0.0
95.00		734.0	828.0					0.0	246.4	734.0	1,074.4	0.0	0.0
100.00		721.4	805.2					0.0	246.4	721.4	1,051.6	0.0	0.0
105.00		708.1	782.3					0.0	246.4	708.1	1,028.7	0.0	0.0
110.00		419.9	759.5					0.0	246.4	419.9	1,005.9	0.0	0.0
111.00	Appertunance(s)	343.4	149.2	275.3	0.0	0.0	36.0	0.0	49.3	618.8	234.4	0.0	0.0
115.00		610.1	587.5					0.0	196.1	610.1	783.5	0.0	0.0
120.00		664.1	713.8					0.0	245.1	664.1	958.8	0.0	0.0
125.00		457.2	690.9					0.0	245.1	457.2	936.0	0.0	0.0
127.00	Top - Section 3	320.1	270.1					0.0	98.1	320.1	368.2	0.0	0.0
130.00		502.8	266.2					0.0	147.0	502.8	413.2	0.0	0.0
135.00		615.0	431.7					0.0	245.1	615.0	676.7	0.0	0.0
140.00	Appertunance(s)	597.6	416.4	4,481.4	0.0	8,128.9	2,053.1	0.0	245.1	5,079.0	2,714.6	0.0	0.0
145.00		523.4	401.2					0.0	161.1	523.4	562.3	0.0	0.0
149.00	Appertunance(s)	285.4	310.0	4,543.2	0.0	0.0	2,250.5	0.0	128.9	4,828.5	2,689.4	0.0	0.0
150.00		332.5	76.0					0.0	27.0	332.5	103.0	0.0	0.0
155.00		542.8	370.7					0.0	135.0	542.8	505.8	0.0	0.0
160.00	Appertunance(s)	344.9	355.5	7,343.5	0.0	5,622.6	2,475.0	0.0	135.0	7,688.4	2,965.6	0.0	0.0
161.50	Top - Section 4	257.0	103.8					0.0	17.1	257.0	120.8	0.0	0.0
165.00		426.1	177.8					0.0	39.8	426.1	217.6	0.0	0.0
170.00		295.4	244.4					0.0	56.9	295.4	301.3	0.0	0.0
171.00	Appertunance(s)	72.2	47.5	3,913.3	0.0	2,875.4	1,369.0	0.0	11.4	3,985.5	1,427.9	0.0	0.0
171.50		24.0	23.6					0.0	0.0	24.0	23.6	0.0	0.0
								Totals:		44,650.1	47,867.7	0.00	0.00

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:19 AM

Customer: SPRINT NEXTEL

Load Case: 0.9D + 1.6W

105 mph with No Ice (Reduced DL)

22 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-47.82	-44.32	0.00	-5,225.59	0.00	5,225.59	7,282.81	3,641.41	20,510.1	10,270.3	0.00	0.00	0.516
5.00	-45.84	-43.66	0.00	-5,003.99	0.00	5,003.99	7,199.47	3,599.74	19,901.7	9,965.65	0.06	-0.11	0.509
10.00	-43.89	-43.01	0.00	-4,785.68	0.00	4,785.68	7,114.27	3,557.13	19,296.8	9,662.76	0.24	-0.23	0.502
15.00	-41.97	-42.36	0.00	-4,570.62	0.00	4,570.62	7,027.20	3,513.60	18,695.8	9,361.83	0.54	-0.34	0.494
20.00	-40.09	-41.68	0.00	-4,358.85	0.00	4,358.85	6,938.27	3,469.13	18,099.0	9,062.99	0.96	-0.46	0.487
25.00	-38.24	-40.97	0.00	-4,150.46	0.00	4,150.46	6,847.47	3,423.74	17,506.7	8,766.39	1.51	-0.58	0.479
30.00	-36.42	-40.25	0.00	-3,945.60	0.00	3,945.60	6,754.82	3,377.41	16,919.2	8,472.18	2.18	-0.70	0.471
35.00	-34.63	-39.50	0.00	-3,744.37	0.00	3,744.37	6,660.30	3,330.15	16,336.7	8,180.49	2.97	-0.82	0.463
40.00	-32.92	-39.10	0.00	-3,546.85	0.00	3,546.85	6,563.93	3,281.96	15,759.5	7,891.49	3.89	-0.94	0.455
40.17	-32.83	-38.74	0.00	-3,540.32	0.00	3,540.32	6,560.67	3,280.34	15,740.3	7,881.88	3.93	-0.94	0.454
40.17	-32.83	-38.74	0.00	-3,540.32	0.00	3,540.32	5,491.49	2,745.75	13,203.3	6,611.51	3.93	-0.94	0.542
45.00	-31.33	-38.00	0.00	-3,353.11	0.00	3,353.11	5,418.84	2,709.42	12,756.7	6,387.88	4.94	-1.06	0.531
50.00	-29.80	-37.24	0.00	-3,163.13	0.00	3,163.13	5,341.85	2,670.93	12,298.2	6,158.26	6.13	-1.20	0.519
55.00	-28.30	-36.48	0.00	-2,976.93	0.00	2,976.93	5,263.00	2,631.50	11,843.4	5,930.54	7.46	-1.34	0.508
60.00	-26.84	-35.72	0.00	-2,794.54	0.00	2,794.54	5,182.29	2,591.14	11,392.8	5,704.87	8.95	-1.49	0.495
65.00	-25.40	-34.95	0.00	-2,615.97	0.00	2,615.97	5,099.71	2,549.86	10,946.5	5,481.40	10.58	-1.63	0.482
70.00	-23.99	-34.19	0.00	-2,441.21	0.00	2,441.21	5,015.27	2,507.64	10,504.9	5,260.27	12.36	-1.77	0.469
75.00	-22.62	-33.43	0.00	-2,270.26	0.00	2,270.26	4,928.97	2,464.49	10,068.2	5,041.62	14.30	-1.92	0.455
80.00	-21.28	-32.80	0.00	-2,103.12	0.00	2,103.12	4,840.81	2,420.41	9,636.89	4,825.61	16.38	-2.06	0.440
83.21	-20.44	-32.41	0.00	-1,997.88	0.00	1,997.88	4,783.25	2,391.62	9,362.93	4,688.42	17.80	-2.15	0.431
83.21	-20.44	-32.41	0.00	-1,997.88	0.00	1,997.88	3,910.73	1,955.36	7,675.09	3,843.25	17.80	-2.15	0.525
85.00	-20.00	-31.92	0.00	-1,939.83	0.00	1,939.83	3,886.54	1,943.27	7,555.36	3,783.30	18.62	-2.21	0.518
90.00	-18.84	-31.19	0.00	-1,780.21	0.00	1,780.21	3,817.77	1,908.89	7,223.47	3,617.10	21.02	-2.37	0.497
95.00	-17.71	-30.46	0.00	-1,624.27	0.00	1,624.27	3,747.13	1,873.57	6,895.30	3,452.77	23.59	-2.54	0.475
100.00	-16.61	-29.74	0.00	-1,471.96	0.00	1,471.96	3,674.64	1,837.32	6,571.13	3,290.45	26.34	-2.70	0.452
105.00	-15.54	-29.03	0.00	-1,323.27	0.00	1,323.27	3,600.28	1,800.14	6,251.25	3,130.27	29.25	-2.86	0.427
110.00	-14.51	-28.58	0.00	-1,178.14	0.00	1,178.14	3,524.05	1,762.03	5,935.96	2,972.39	32.33	-3.02	0.401
111.00	-14.27	-27.97	0.00	-1,149.57	0.00	1,149.57	3,508.59	1,754.29	5,873.48	2,941.11	32.96	-3.05	0.395
115.00	-13.46	-27.35	0.00	-1,037.70	0.00	1,037.70	3,445.97	1,722.99	5,625.55	2,816.95	35.57	-3.17	0.373
120.00	-12.47	-26.66	0.00	-900.97	0.00	900.97	3,366.02	1,683.01	5,320.30	2,664.10	38.97	-3.32	0.342
125.00	-11.52	-26.17	0.00	-767.67	0.00	767.67	3,284.22	1,642.11	5,020.50	2,513.98	42.52	-3.45	0.309
127.00	-11.14	-25.84	0.00	-715.30	0.00	715.30	3,250.95	1,625.48	4,902.12	2,454.70	43.97	-3.51	0.295
127.00	-11.14	-25.84	0.00	-715.30	0.00	715.30	1,903.87	951.93	2,890.39	1,447.34	43.97	-3.51	0.501
130.00	-10.71	-25.34	0.00	-637.81	0.00	637.81	1,881.18	940.59	2,797.37	1,400.77	46.20	-3.58	0.462
135.00	-10.00	-24.71	0.00	-511.14	0.00	511.14	1,841.88	920.94	2,643.30	1,323.62	50.05	-3.76	0.392
140.00	-7.59	-19.48	0.00	-379.48	0.00	379.48	1,800.71	900.35	2,490.74	1,247.22	54.07	-3.91	0.309
145.00	-7.03	-18.93	0.00	-282.10	0.00	282.10	1,757.68	878.84	2,339.97	1,171.72	58.23	-4.03	0.245
149.00	-4.68	-13.92	0.00	-206.39	0.00	206.39	1,721.91	860.95	2,220.84	1,112.07	61.64	-4.11	0.189
150.00	-4.59	-13.59	0.00	-192.47	0.00	192.47	1,712.78	856.39	2,191.28	1,097.27	62.50	-4.13	0.178
155.00	-4.11	-13.01	0.00	-124.53	0.00	124.53	1,666.03	833.01	2,044.98	1,024.01	66.87	-4.20	0.124
160.00	-1.72	-5.13	0.00	-53.83	0.00	53.83	1,617.41	808.70	1,901.34	952.08	71.30	-4.25	0.058
161.50	-1.61	-4.86	0.00	-46.13	0.00	46.13	1,602.45	801.23	1,858.78	930.77	72.63	-4.26	0.051
161.50	-1.61	-4.86	0.00	-46.13	0.00	46.13	1,084.93	542.47	1,264.05	632.97	72.63	-4.26	0.074
165.00	-1.43	-4.42	0.00	-29.11	0.00	29.11	1,065.59	532.79	1,202.80	602.29	75.76	-4.28	0.050
170.00	-1.15	-4.11	0.00	-6.99	0.00	6.99	1,036.36	518.18	1,116.00	558.83	80.25	-4.30	0.014
171.00	-0.02	-0.03	0.00	-0.01	0.00	0.01	1,030.29	515.14	1,098.77	550.20	81.15	-4.30	0.000
171.50	0.00	-0.02	0.00	0.00	0.00	0.00	1,027.22	513.61	1,090.17	545.90	81.60	-4.30	0.000

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:19 AM

Customer: SPRINT NEXTEL

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 in Radial Ice

21 Iterations

Gust Response Factor : 1.10

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.685	0.000	1.200	0.000	0.00	0.000	0.00	102.0	0.0	0.0
5.00		1.00	0.85	5.168	5.685	0.000	1.200	1.159	5.00	29.894	35.87	202.5	500.3	2,699.4
10.00		1.00	0.85	5.168	5.685	0.000	1.200	1.293	5.00	29.476	35.37	199.5	549.3	2,707.8
15.00		1.00	0.85	5.168	5.685	0.000	1.200	1.361	5.00	29.002	34.80	199.2	567.9	2,685.8
20.00		1.00	0.87	5.331	5.865	0.000	1.200	1.408	5.00	28.510	34.21	204.2	576.7	2,654.0
25.00		1.00	0.92	5.621	6.183	0.000	1.200	1.444	5.00	28.010	33.61	210.4	580.4	2,617.0
30.00		1.00	0.96	5.864	6.450	0.000	1.200	1.473	5.00	27.504	33.00	214.6	580.8	2,576.8
35.00		1.00	0.99	6.074	6.681	0.000	1.200	1.498	5.00	26.994	32.39	217.6	579.1	2,534.5
40.00		1.00	1.02	6.259	6.885	0.000	1.200	1.519	5.00	26.482	31.78	113.1	575.7	2,490.5
40.17	Top - Section 1	1.00	1.04	6.348	6.983	0.000	1.200	1.529	0.17	0.876	1.05	110.1	19.3	82.6
45.00		1.00	1.05	6.429	7.072	0.000	1.200	1.539	4.83	25.091	30.11	217.0	552.1	2,138.3
50.00		1.00	1.08	6.579	7.237	0.000	1.200	1.556	5.00	25.451	30.54	221.1	565.4	2,171.5
55.00		1.00	1.10	6.719	7.391	0.000	1.200	1.571	5.00	24.934	29.92	220.9	558.9	2,129.4
60.00		1.00	1.12	6.849	7.534	0.000	1.200	1.586	5.00	24.415	29.30	220.3	551.7	2,086.7
65.00		1.00	1.14	6.970	7.667	0.000	1.200	1.599	5.00	23.896	28.68	219.2	543.9	2,043.3
70.00		1.00	1.16	7.084	7.792	0.000	1.200	1.611	5.00	23.376	28.05	217.8	535.5	1,999.5
75.00		1.00	1.18	7.191	7.910	0.000	1.200	1.623	5.00	22.855	27.43	216.0	526.7	1,955.1
80.00		1.00	1.19	7.293	8.022	0.000	1.200	1.634	5.00	22.334	26.80	175.9	517.5	1,910.4
83.21	Top - Section 2	1.00	1.21	7.373	8.110	0.000	1.200	1.642	3.21	14.059	16.87	106.4	328.6	1,203.8
85.00		1.00	1.22	7.420	8.162	0.000	1.200	1.647	1.79	7.753	9.30	143.1	182.3	596.1
90.00		1.00	1.23	7.482	8.230	0.000	1.200	1.654	5.00	21.289	25.55	208.9	498.1	1,632.5
95.00		1.00	1.24	7.570	8.327	0.000	1.200	1.663	5.00	20.767	24.92	206.0	487.9	1,591.9
100.00		1.00	1.25	7.654	8.419	0.000	1.200	1.672	5.00	20.244	24.29	202.9	477.4	1,551.0
105.00		1.00	1.27	7.735	8.509	0.000	1.200	1.680	5.00	19.720	23.66	199.7	466.7	1,509.8
110.00		1.00	1.28	7.813	8.594	0.000	1.200	1.688	5.00	19.196	23.04	118.6	455.7	1,468.4
111.00	Appertunance(s)	1.00	1.29	7.858	8.644	0.000	1.200	1.693	1.00	3.776	4.53	97.2	90.9	289.7
115.00		1.00	1.29	7.896	8.685	0.000	1.200	1.696	4.00	14.896	17.88	173.0	355.8	1,139.1
120.00		1.00	1.30	7.961	8.757	0.000	1.200	1.703	5.00	18.148	21.78	188.8	433.2	1,384.9
125.00		1.00	1.32	8.031	8.834	0.000	1.200	1.710	5.00	17.624	21.15	130.2	421.7	1,342.9
127.00	Top - Section 3	1.00	1.32	8.079	8.886	0.000	1.200	1.715	2.00	6.906	8.29	91.4	167.1	527.2
130.00		1.00	1.33	8.112	8.923	0.000	1.200	1.718	3.00	10.193	12.23	143.9	246.1	601.0
135.00		1.00	1.34	8.165	8.981	0.000	1.200	1.724	5.00	16.574	19.89	176.5	398.0	973.6
140.00	Appertunance(s)	1.00	1.35	8.229	9.051	0.000	1.200	1.730	5.00	16.049	19.26	172.1	386.0	941.2
145.00		1.00	1.36	8.291	9.120	0.000	1.200	1.736	5.00	15.524	18.63	151.3	373.8	908.7
149.00	Appertunance(s)	1.00	1.37	8.345	9.180	0.000	1.200	1.742	4.00	12.041	14.45	82.7	291.3	704.6
150.00		1.00	1.37	8.375	9.212	0.000	1.200	1.745	1.00	2.958	3.55	96.7	72.4	173.7
155.00		1.00	1.38	8.410	9.251	0.000	1.200	1.748	5.00	14.473	17.37	158.3	349.0	843.3
160.00	Appertunance(s)	1.00	1.39	8.467	9.314	0.000	1.200	1.754	5.00	13.947	16.74	100.9	336.4	810.4
161.50	Top - Section 4	1.00	1.39	8.504	9.354	0.000	1.200	1.757	1.50	4.084	4.90	75.5	100.0	238.3
165.00		1.00	1.40	8.531	9.384	0.000	1.200	1.760	3.50	9.337	11.20	125.6	226.6	463.7
170.00		1.00	1.41	8.578	9.435	0.000	1.200	1.765	5.00	12.895	15.47	87.3	310.9	636.7
171.00	Appertunance(s)	1.00	1.41	8.610	9.471	0.000	1.200	1.768	1.00	2.516	3.02	21.4	61.7	125.1
171.50		1.00	1.41	8.618	9.479	0.000	1.200	1.768	0.50	1.250	1.50	7.1	30.7	62.2
Totals:									171.50			6,746.6	16,429.5	59,202.7

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:22 AM

Customer: SPRINT NEXTEL

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 in Radial Ice

21 Iterations

Gust Response Factor : 1.10

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		102.0	0.0					0.0	0.0	102.0	0.0	0.0	0.0
5.00		202.5	2,699.4					0.0	400.1	202.5	3,099.5	0.0	0.0
10.00		199.5	2,707.8					0.0	408.4	199.5	3,116.1	0.0	0.0
15.00		199.2	2,685.8					0.0	412.6	199.2	3,098.4	0.0	0.0
20.00		204.2	2,654.0					0.0	415.5	204.2	3,069.5	0.0	0.0
25.00		210.4	2,617.0					0.0	417.8	210.4	3,034.8	0.0	0.0
30.00		214.6	2,576.8					0.0	419.7	214.6	2,996.5	0.0	0.0
35.00		217.6	2,534.5					0.0	421.3	217.6	2,955.8	0.0	0.0
40.00		113.1	2,490.5					0.0	422.7	113.1	2,913.1	0.0	0.0
40.17	Top - Section 1	110.1	82.6					0.0	14.1	110.1	96.7	0.0	0.0
45.00		217.0	2,138.3					0.0	409.8	217.0	2,548.1	0.0	0.0
50.00		221.1	2,171.5					0.0	425.0	221.1	2,596.5	0.0	0.0
55.00		220.9	2,129.4					0.0	426.1	220.9	2,555.5	0.0	0.0
60.00		220.3	2,086.7					0.0	427.0	220.3	2,513.7	0.0	0.0
65.00		219.2	2,043.3					0.0	427.9	219.2	2,471.2	0.0	0.0
70.00		217.8	1,999.5					0.0	428.7	217.8	2,428.1	0.0	0.0
75.00		216.0	1,955.1					0.0	429.4	216.0	2,384.6	0.0	0.0
80.00		175.9	1,910.4					0.0	430.2	175.9	2,340.6	0.0	0.0
83.21	Top - Section 2	106.4	1,203.8					0.0	276.4	106.4	1,480.3	0.0	0.0
85.00		143.1	596.1					0.0	154.4	143.1	750.5	0.0	0.0
90.00		208.9	1,632.5					0.0	431.5	208.9	2,064.0	0.0	0.0
95.00		206.0	1,591.9					0.0	432.1	206.0	2,024.0	0.0	0.0
100.00		202.9	1,551.0					0.0	432.7	202.9	1,983.6	0.0	0.0
105.00		199.7	1,509.8					0.0	433.2	199.7	1,943.0	0.0	0.0
110.00		118.6	1,468.4					0.0	433.8	118.6	1,902.1	0.0	0.0
111.00	Appertunance(s)	97.2	289.7	99.2	0.0	0.0	139.4	0.0	86.8	196.4	516.0	0.0	0.0
115.00		173.0	1,139.1					0.0	346.0	173.0	1,485.1	0.0	0.0
120.00		188.8	1,384.9					0.0	433.0	188.8	1,817.9	0.0	0.0
125.00		130.2	1,342.9					0.0	433.5	130.2	1,776.3	0.0	0.0
127.00	Top - Section 3	91.4	527.2					0.0	173.6	91.4	700.8	0.0	0.0
130.00		143.9	601.0					0.0	260.3	143.9	861.4	0.0	0.0
135.00		176.5	973.6					0.0	434.4	176.5	1,408.0	0.0	0.0
140.00	Appertunance(s)	172.1	941.2	898.4	0.0	1,408.2	5,243.3	0.0	434.8	1,070.5	6,619.3	0.0	0.0
145.00		151.3	908.7					0.0	323.2	151.3	1,232.0	0.0	0.0
149.00	Appertunance(s)	82.7	704.6	892.2	0.0	0.0	5,772.5	0.0	258.9	974.8	6,736.0	0.0	0.0
150.00		96.7	173.7					0.0	57.8	96.7	231.5	0.0	0.0
155.00		158.3	843.3					0.0	289.3	158.3	1,132.6	0.0	0.0
160.00	Appertunance(s)	100.9	810.4	1,377.9	0.0	954.3	7,441.2	0.0	289.7	1,478.7	8,541.3	0.0	0.0
161.50	Top - Section 4	75.5	238.3					0.0	22.8	75.5	261.1	0.0	0.0
165.00		125.6	463.7					0.0	53.1	125.6	516.8	0.0	0.0
170.00		87.3	636.7					0.0	75.9	87.3	712.6	0.0	0.0
171.00	Appertunance(s)	21.4	125.1	825.6	0.0	929.1	3,890.4	0.0	15.2	847.0	4,030.7	0.0	0.0
171.50		7.1	62.2					0.0	0.0	7.1	62.2	0.0	0.0
Totals:										10,839.7	95,007.9	0.00	0.00

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:22 AM

Customer: SPRINT NEXTEL

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 in Radial Ice

21 Iterations

Gust Response Factor : 1.10

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-95.01	-10.76	0.00	-1,238.34	0.00	1,238.34	7,282.81	3,641.41	20,510.1	10,270.3	0.00	0.00	0.134
5.00	-91.90	-10.60	0.00	-1,184.54	0.00	1,184.54	7,199.47	3,599.74	19,901.7	9,965.65	0.01	-0.03	0.132
10.00	-88.78	-10.44	0.00	-1,131.55	0.00	1,131.55	7,114.27	3,557.13	19,296.8	9,662.76	0.06	-0.05	0.130
15.00	-85.68	-10.28	0.00	-1,079.35	0.00	1,079.35	7,027.20	3,513.60	18,695.8	9,361.83	0.13	-0.08	0.127
20.00	-82.60	-10.11	0.00	-1,027.97	0.00	1,027.97	6,938.27	3,469.13	18,099.0	9,062.99	0.23	-0.11	0.125
25.00	-79.56	-9.93	0.00	-977.43	0.00	977.43	6,847.47	3,423.74	17,506.7	8,766.39	0.36	-0.14	0.123
30.00	-76.56	-9.75	0.00	-927.78	0.00	927.78	6,754.82	3,377.41	16,919.2	8,472.18	0.51	-0.16	0.121
35.00	-73.60	-9.55	0.00	-879.05	0.00	879.05	6,660.30	3,330.15	16,336.7	8,180.49	0.70	-0.19	0.119
40.00	-70.69	-9.45	0.00	-831.28	0.00	831.28	6,563.93	3,281.96	15,759.5	7,891.49	0.92	-0.22	0.116
40.17	-70.59	-9.36	0.00	-829.70	0.00	829.70	6,560.67	3,280.34	15,740.3	7,881.88	0.93	-0.22	0.116
40.17	-70.59	-9.36	0.00	-829.70	0.00	829.70	5,491.49	2,745.75	13,203.3	6,611.51	0.93	-0.22	0.138
45.00	-68.04	-9.17	0.00	-784.48	0.00	784.48	5,418.84	2,709.42	12,756.7	6,387.88	1.17	-0.25	0.135
50.00	-65.44	-8.97	0.00	-738.65	0.00	738.65	5,341.85	2,670.93	12,298.2	6,158.26	1.45	-0.28	0.132
55.00	-62.88	-8.77	0.00	-693.81	0.00	693.81	5,263.00	2,631.50	11,843.4	5,930.54	1.76	-0.32	0.129
60.00	-60.36	-8.57	0.00	-649.95	0.00	649.95	5,182.29	2,591.14	11,392.8	5,704.87	2.11	-0.35	0.126
65.00	-57.89	-8.37	0.00	-607.09	0.00	607.09	5,099.71	2,549.86	10,946.5	5,481.40	2.49	-0.38	0.122
70.00	-55.45	-8.17	0.00	-565.24	0.00	565.24	5,015.27	2,507.64	10,504.9	5,260.27	2.91	-0.42	0.119
75.00	-53.07	-7.96	0.00	-524.40	0.00	524.40	4,928.97	2,464.49	10,068.2	5,041.62	3.36	-0.45	0.115
80.00	-50.72	-7.79	0.00	-484.58	0.00	484.58	4,840.81	2,420.41	9,636.89	4,825.61	3.85	-0.48	0.111
83.21	-49.24	-7.69	0.00	-459.57	0.00	459.57	4,783.25	2,391.62	9,362.93	4,688.42	4.18	-0.50	0.108
83.21	-49.24	-7.69	0.00	-459.57	0.00	459.57	3,910.73	1,955.36	7,675.09	3,843.25	4.18	-0.50	0.132
85.00	-48.49	-7.56	0.00	-445.79	0.00	445.79	3,886.54	1,943.27	7,555.36	3,783.30	4.38	-0.52	0.130
90.00	-46.42	-7.36	0.00	-407.99	0.00	407.99	3,817.77	1,908.89	7,223.47	3,617.10	4.94	-0.55	0.125
95.00	-44.40	-7.17	0.00	-371.17	0.00	371.17	3,747.13	1,873.57	6,895.30	3,452.77	5.54	-0.59	0.119
100.00	-42.41	-6.97	0.00	-335.34	0.00	335.34	3,674.64	1,837.32	6,571.13	3,290.45	6.18	-0.63	0.113
105.00	-40.47	-6.77	0.00	-300.49	0.00	300.49	3,600.28	1,800.14	6,251.25	3,130.27	6.85	-0.67	0.107
110.00	-38.56	-6.65	0.00	-266.62	0.00	266.62	3,524.05	1,762.03	5,935.96	2,972.39	7.57	-0.70	0.101
111.00	-38.05	-6.46	0.00	-259.98	0.00	259.98	3,508.59	1,754.29	5,873.48	2,941.11	7.72	-0.71	0.099
115.00	-36.56	-6.28	0.00	-234.16	0.00	234.16	3,445.97	1,722.99	5,625.55	2,816.95	8.32	-0.74	0.094
120.00	-34.74	-6.09	0.00	-202.74	0.00	202.74	3,366.02	1,683.01	5,320.30	2,664.10	9.11	-0.77	0.086
125.00	-32.97	-5.95	0.00	-172.29	0.00	172.29	3,284.22	1,642.11	5,020.50	2,513.98	9.93	-0.80	0.079
127.00	-32.26	-5.85	0.00	-160.39	0.00	160.39	3,250.95	1,625.48	4,902.12	2,454.70	10.27	-0.81	0.075
127.00	-32.26	-5.85	0.00	-160.39	0.00	160.39	1,903.87	951.93	2,890.39	1,447.34	10.27	-0.81	0.128
130.00	-31.40	-5.71	0.00	-142.83	0.00	142.83	1,881.18	940.59	2,797.37	1,400.77	10.79	-0.83	0.119
135.00	-29.99	-5.54	0.00	-114.26	0.00	114.26	1,841.88	920.94	2,643.30	1,323.62	11.67	-0.87	0.103
140.00	-23.39	-4.38	0.00	-85.18	0.00	85.18	1,800.71	900.35	2,490.74	1,247.22	12.60	-0.90	0.081
145.00	-22.16	-4.21	0.00	-63.30	0.00	63.30	1,757.68	878.84	2,339.97	1,171.72	13.56	-0.93	0.067
149.00	-15.44	-3.13	0.00	-46.44	0.00	46.44	1,721.91	860.95	2,220.84	1,112.07	14.35	-0.95	0.051
150.00	-15.21	-3.03	0.00	-43.31	0.00	43.31	1,712.78	856.39	2,191.28	1,097.27	14.55	-0.95	0.048
155.00	-14.08	-2.86	0.00	-28.14	0.00	28.14	1,666.03	833.01	2,044.98	1,024.01	15.55	-0.97	0.036
160.00	-5.56	-1.24	0.00	-12.88	0.00	12.88	1,617.41	808.70	1,901.34	952.08	16.57	-0.98	0.017
161.50	-5.30	-1.16	0.00	-11.03	0.00	11.03	1,602.45	801.23	1,858.78	930.77	16.88	-0.98	0.015
161.50	-5.30	-1.16	0.00	-11.03	0.00	11.03	1,084.93	542.47	1,264.05	632.97	16.88	-0.98	0.022
165.00	-4.79	-1.02	0.00	-6.98	0.00	6.98	1,065.59	532.79	1,202.80	602.29	17.60	-0.98	0.016
170.00	-4.08	-0.92	0.00	-1.86	0.00	1.86	1,036.36	518.18	1,116.00	558.83	18.63	-0.99	0.007
171.00	-0.06	-0.01	0.00	0.00	0.00	0.00	1,030.29	515.14	1,098.77	550.20	18.84	-0.99	0.000
171.50	0.00	-0.01	0.00	0.00	0.00	0.00	1,027.22	513.61	1,090.17	545.90	18.94	-0.99	0.000

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:23 AM

Customer: SPRINT NEXTEL

Load Case: 1.0D + 1.0W

Serviceability 60 mph

21 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)	
0.00		1.00	0.85	7.442	8.186	322.98	0.650	0.000	0.00	0.000	0.00	77.0	0.0	0.0	
5.00		1.00	0.85	7.442	8.186	320.04	0.650	0.000	5.00	28.928	18.80	152.5	0.0	1,832.6	
10.00		1.00	0.85	7.442	8.186	314.17	0.650	0.000	5.00	28.398	18.46	149.7	0.0	1,798.7	
15.00		1.00	0.85	7.442	8.186	308.31	0.650	0.000	5.00	27.867	18.11	149.2	0.0	1,764.9	
20.00		1.00	0.87	7.677	8.445	307.18	0.650	0.000	5.00	27.337	17.77	152.6	0.0	1,731.0	
25.00		1.00	0.92	8.094	8.904	309.30	0.650	0.000	5.00	26.807	17.42	156.9	0.0	1,697.2	
30.00		1.00	0.96	8.444	9.288	309.65	0.650	0.000	5.00	26.276	17.08	159.8	0.0	1,663.3	
35.00		1.00	0.99	8.746	9.621	308.78	0.650	0.000	5.00	25.746	16.73	161.8	0.0	1,629.5	
40.00		1.00	1.02	9.013	9.915	307.01	0.650	0.000	5.00	25.215	16.39	84.0	0.0	1,595.6	
40.17	Top - Section 1	1.00	1.04	9.141	10.05	305.81	0.650	0.000	0.17	0.833	0.54	81.7	0.0	52.7	
45.00		1.00	1.05	9.258	10.18	304.49	0.650	0.000	4.83	23.852	15.50	160.7	0.0	1,321.9	
50.00		1.00	1.08	9.473	10.42	301.51	0.650	0.000	5.00	24.155	15.70	163.5	0.0	1,338.4	
55.00		1.00	1.10	9.675	10.64	298.01	0.650	0.000	5.00	23.624	15.36	163.1	0.0	1,308.8	
60.00		1.00	1.12	9.862	10.84	294.12	0.650	0.000	5.00	23.094	15.01	162.4	0.0	1,279.2	
65.00		1.00	1.14	10.037	11.04	289.90	0.650	0.000	5.00	22.563	14.67	161.3	0.0	1,249.6	
70.00		1.00	1.16	10.201	11.22	285.39	0.650	0.000	5.00	22.033	14.32	160.0	0.0	1,220.0	
75.00		1.00	1.18	10.355	11.39	280.62	0.650	0.000	5.00	21.503	13.98	158.3	0.0	1,190.3	
80.00		1.00	1.19	10.502	11.55	275.62	0.650	0.000	5.00	20.972	13.63	128.8	0.0	1,160.7	
83.21	Top - Section 2	1.00	1.21	10.617	11.67	271.37	0.650	0.000	3.21	13.181	8.57	77.8	0.0	729.3	
85.00		1.00	1.22	10.684	11.75	268.72	0.650	0.000	1.79	7.261	4.72	104.4	0.0	344.8	
90.00		1.00	1.23	10.774	11.85	265.05	0.650	0.000	5.00	19.911	12.94	152.2	0.0	945.4	
95.00		1.00	1.24	10.900	11.99	259.50	0.650	0.000	5.00	19.381	12.60	149.8	0.0	920.0	
100.0		1.00	1.25	11.022	12.12	253.80	0.650	0.000	5.00	18.851	12.25	147.2	0.0	894.6	
105.0		1.00	1.27	11.138	12.25	247.96	0.650	0.000	5.00	18.320	11.91	144.5	0.0	869.2	
110.0		1.00	1.28	11.251	12.37	241.99	0.650	0.000	5.00	17.790	11.56	85.7	0.0	843.9	
111.0	Appertunance(s)	1.00	1.29	11.316	12.44	238.35	0.650	0.000	1.00	3.494	2.27	70.1	0.0	165.7	
115.0		1.00	1.29	11.370	12.50	235.29	0.650	0.000	4.00	13.765	8.95	124.5	0.0	652.7	
120.0		1.00	1.30	11.463	12.61	229.70	0.650	0.000	5.00	16.729	10.87	135.5	0.0	793.1	
125.0		1.00	1.32	11.564	12.72	223.40	0.650	0.000	5.00	16.199	10.53	93.3	0.0	767.7	
127.0	Top - Section 3	1.00	1.32	11.633	12.79	218.92	0.650	0.000	2.00	6.334	4.12	65.3	0.0	300.1	
130.0		1.00	1.33	11.681	12.85	215.70	0.650	0.000	3.00	9.334	6.07	102.6	0.0	295.8	
135.0		1.00	1.34	11.757	12.93	210.50	0.650	0.000	5.00	15.138	9.84	125.5	0.0	479.6	
140.0	Appertunance(s)	1.00	1.35	11.849	13.03	203.92	0.650	0.000	5.00	14.607	9.49	122.0	0.0	462.7	
145.0		1.00	1.36	11.939	13.13	197.25	0.650	0.000	5.00	14.077	9.15	106.8	0.0	445.8	
149.0	Appertunance(s)	1.00	1.37	12.017	13.21	191.19	0.650	0.000	4.00	10.880	7.07	58.2	0.0	344.4	
150.0		1.00	1.37	12.060	13.26	187.79	0.650	0.000	1.00	2.667	1.73	67.8	0.0	84.4	
155.0		1.00	1.38	12.110	13.32	183.69	0.650	0.000	5.00	13.016	8.46	110.8	0.0	411.9	
160.0	Appertunance(s)	1.00	1.39	12.193	13.41	176.81	0.650	0.000	5.00	12.486	8.12	70.4	0.0	395.0	
161.5	Top - Section 4	1.00	1.39	12.245	13.47	172.29	0.650	0.000	1.50	3.645	2.37	52.5	0.0	115.3	
165.0		1.00	1.40	12.285	13.51	168.81	0.650	0.000	3.50	8.311	5.40	86.9	0.0	197.6	
170.0		1.00	1.41	12.352	13.58	162.84	0.650	0.000	5.00	11.425	7.43	60.3	0.0	271.5	
171.0	Appertunance(s)	1.00	1.41	12.398	13.63	158.60	0.650	0.000	1.00	2.221	1.44	14.7	0.0	52.8	
171.5		1.00	1.41	12.410	13.65	157.53	0.650	0.000	0.50	1.103	0.72	4.9	0.0	26.2	
Totals:									171.50		4,917.0		0.0		35,644.3

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:26 AM

Customer: SPRINT NEXTEL

Load Case: 1.0D + 1.0W

Serviceability 60 mph

21 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		77.0	0.0					0.0	0.0	77.0	0.0	0.0	0.0
5.00		152.5	1,832.6					0.0	273.8	152.5	2,106.4	0.0	0.0
10.00		149.7	1,798.7					0.0	273.8	149.7	2,072.5	0.0	0.0
15.00		149.2	1,764.9					0.0	273.8	149.2	2,038.7	0.0	0.0
20.00		152.6	1,731.0					0.0	273.8	152.6	2,004.8	0.0	0.0
25.00		156.9	1,697.2					0.0	273.8	156.9	1,971.0	0.0	0.0
30.00		159.8	1,663.3					0.0	273.8	159.8	1,937.1	0.0	0.0
35.00		161.8	1,629.5					0.0	273.8	161.8	1,903.3	0.0	0.0
40.00		84.0	1,595.6					0.0	273.8	84.0	1,869.4	0.0	0.0
40.17	Top - Section 1	81.7	52.7					0.0	9.1	81.7	61.9	0.0	0.0
45.00		160.7	1,321.9					0.0	264.7	160.7	1,586.5	0.0	0.0
50.00		163.5	1,338.4					0.0	273.8	163.5	1,612.2	0.0	0.0
55.00		163.1	1,308.8					0.0	273.8	163.1	1,582.6	0.0	0.0
60.00		162.4	1,279.2					0.0	273.8	162.4	1,553.0	0.0	0.0
65.00		161.3	1,249.6					0.0	273.8	161.3	1,523.4	0.0	0.0
70.00		160.0	1,220.0					0.0	273.8	160.0	1,493.8	0.0	0.0
75.00		158.3	1,190.3					0.0	273.8	158.3	1,464.1	0.0	0.0
80.00		128.8	1,160.7					0.0	273.8	128.8	1,434.5	0.0	0.0
83.21	Top - Section 2	77.8	729.3					0.0	175.7	77.8	905.1	0.0	0.0
85.00		104.4	344.8					0.0	98.1	104.4	442.9	0.0	0.0
90.00		152.2	945.4					0.0	273.8	152.2	1,219.2	0.0	0.0
95.00		149.8	920.0					0.0	273.8	149.8	1,193.8	0.0	0.0
100.00		147.2	894.6					0.0	273.8	147.2	1,168.4	0.0	0.0
105.00		144.5	869.2					0.0	273.8	144.5	1,143.0	0.0	0.0
110.00		85.7	843.9					0.0	273.8	85.7	1,117.7	0.0	0.0
111.00	Appertunance(s)	70.1	165.7	56.2	0.0	0.0	40.0	0.0	54.8	126.3	260.5	0.0	0.0
115.00		124.5	652.7					0.0	217.8	124.5	870.6	0.0	0.0
120.00		135.5	793.1					0.0	272.3	135.5	1,065.4	0.0	0.0
125.00		93.3	767.7					0.0	272.3	93.3	1,040.0	0.0	0.0
127.00	Top - Section 3	65.3	300.1					0.0	109.0	65.3	409.1	0.0	0.0
130.00		102.6	295.8					0.0	163.3	102.6	459.1	0.0	0.0
135.00		125.5	479.6					0.0	272.3	125.5	751.9	0.0	0.0
140.00	Appertunance(s)	122.0	462.7	914.6	0.0	1,659.0	2,281.2	0.0	272.3	1,036.5	3,016.2	0.0	0.0
145.00		106.8	445.8					0.0	179.0	106.8	624.8	0.0	0.0
149.00	Appertunance(s)	58.2	344.4	927.2	0.0	0.0	2,500.6	0.0	143.2	985.4	2,988.2	0.0	0.0
150.00		67.8	84.4					0.0	30.0	67.8	114.4	0.0	0.0
155.00		110.8	411.9					0.0	150.1	110.8	562.0	0.0	0.0
160.00	Appertunance(s)	70.4	395.0	1,498.7	0.0	1,147.5	2,750.0	0.0	150.1	1,569.1	3,295.1	0.0	0.0
161.50	Top - Section 4	52.5	115.3					0.0	19.0	52.5	134.3	0.0	0.0
165.00		86.9	197.6					0.0	44.3	86.9	241.8	0.0	0.0
170.00		60.3	271.5					0.0	63.3	60.3	334.8	0.0	0.0
171.00	Appertunance(s)	14.7	52.8	798.6	0.0	586.8	1,521.1	0.0	12.7	813.4	1,586.5	0.0	0.0
171.50		4.9	26.2					0.0	0.0	4.9	26.2	0.0	0.0
Totals:										9,112.28	53,186.3	0.00	0.00

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

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Customer: SPRINT NEXTEL

Load Case: 1.0D + 1.0W

Serviceability 60 mph

21 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-53.18	-9.05	0.00	-1,069.52	0.00	1,069.52	7,282.81	3,641.41	20,510.1	10,270.3	0.00	0.00	0.111
5.00	-51.07	-8.91	0.00	-1,024.30	0.00	1,024.30	7,199.47	3,599.74	19,901.7	9,965.65	0.01	-0.02	0.110
10.00	-49.00	-8.78	0.00	-979.73	0.00	979.73	7,114.27	3,557.13	19,296.8	9,662.76	0.05	-0.05	0.108
15.00	-46.96	-8.65	0.00	-935.82	0.00	935.82	7,027.20	3,513.60	18,695.8	9,361.83	0.11	-0.07	0.107
20.00	-44.95	-8.51	0.00	-892.57	0.00	892.57	6,938.27	3,469.13	18,099.0	9,062.99	0.20	-0.09	0.105
25.00	-42.97	-8.37	0.00	-850.00	0.00	850.00	6,847.47	3,423.74	17,506.7	8,766.39	0.31	-0.12	0.103
30.00	-41.03	-8.22	0.00	-808.14	0.00	808.14	6,754.82	3,377.41	16,919.2	8,472.18	0.45	-0.14	0.101
35.00	-39.13	-8.07	0.00	-767.02	0.00	767.02	6,660.30	3,330.15	16,336.7	8,180.49	0.61	-0.17	0.100
40.00	-37.26	-7.99	0.00	-726.64	0.00	726.64	6,563.93	3,281.96	15,759.5	7,891.49	0.80	-0.19	0.098
40.17	-37.19	-7.92	0.00	-725.31	0.00	725.31	6,560.67	3,280.34	15,740.3	7,881.88	0.80	-0.19	0.098
40.17	-37.19	-7.92	0.00	-725.31	0.00	725.31	5,491.49	2,745.75	13,203.3	6,611.51	0.80	-0.19	0.116
45.00	-35.60	-7.77	0.00	-687.03	0.00	687.03	5,418.84	2,709.42	12,756.7	6,387.88	1.01	-0.22	0.114
50.00	-33.99	-7.62	0.00	-648.18	0.00	648.18	5,341.85	2,670.93	12,298.2	6,158.26	1.26	-0.25	0.112
55.00	-32.40	-7.46	0.00	-610.10	0.00	610.10	5,263.00	2,631.50	11,843.4	5,930.54	1.53	-0.28	0.109
60.00	-30.85	-7.31	0.00	-572.79	0.00	572.79	5,182.29	2,591.14	11,392.8	5,704.87	1.83	-0.30	0.106
65.00	-29.32	-7.15	0.00	-536.24	0.00	536.24	5,099.71	2,549.86	10,946.5	5,481.40	2.17	-0.33	0.104
70.00	-27.82	-7.00	0.00	-500.48	0.00	500.48	5,015.27	2,507.64	10,504.9	5,260.27	2.53	-0.36	0.101
75.00	-26.36	-6.84	0.00	-465.48	0.00	465.48	4,928.97	2,464.49	10,068.2	5,041.62	2.93	-0.39	0.098
80.00	-24.92	-6.72	0.00	-431.26	0.00	431.26	4,840.81	2,420.41	9,636.89	4,825.61	3.36	-0.42	0.095
83.21	-24.01	-6.64	0.00	-409.70	0.00	409.70	4,783.25	2,391.62	9,362.93	4,688.42	3.65	-0.44	0.092
83.21	-24.01	-6.64	0.00	-409.70	0.00	409.70	3,910.73	1,955.36	7,675.09	3,843.25	3.65	-0.44	0.113
85.00	-23.57	-6.54	0.00	-397.82	0.00	397.82	3,886.54	1,943.27	7,555.36	3,783.30	3.81	-0.45	0.111
90.00	-22.35	-6.39	0.00	-365.12	0.00	365.12	3,817.77	1,908.89	7,223.47	3,617.10	4.31	-0.49	0.107
95.00	-21.15	-6.24	0.00	-333.17	0.00	333.17	3,747.13	1,873.57	6,895.30	3,452.77	4.83	-0.52	0.102
100.00	-19.98	-6.10	0.00	-301.95	0.00	301.95	3,674.64	1,837.32	6,571.13	3,290.45	5.40	-0.55	0.097
105.00	-18.84	-5.95	0.00	-271.47	0.00	271.47	3,600.28	1,800.14	6,251.25	3,130.27	5.99	-0.59	0.092
110.00	-17.72	-5.86	0.00	-241.72	0.00	241.72	3,524.05	1,762.03	5,935.96	2,972.39	6.62	-0.62	0.086
111.00	-17.46	-5.74	0.00	-235.86	0.00	235.86	3,508.59	1,754.29	5,873.48	2,941.11	6.75	-0.62	0.085
115.00	-16.59	-5.61	0.00	-212.92	0.00	212.92	3,445.97	1,722.99	5,625.55	2,816.95	7.29	-0.65	0.080
120.00	-15.52	-5.47	0.00	-184.88	0.00	184.88	3,366.02	1,683.01	5,320.30	2,664.10	7.99	-0.68	0.074
125.00	-14.48	-5.37	0.00	-157.53	0.00	157.53	3,284.22	1,642.11	5,020.50	2,513.98	8.71	-0.71	0.067
127.00	-14.07	-5.30	0.00	-146.79	0.00	146.79	3,250.95	1,625.48	4,902.12	2,454.70	9.01	-0.72	0.064
127.00	-14.07	-5.30	0.00	-146.79	0.00	146.79	1,903.87	951.93	2,890.39	1,447.34	9.01	-0.72	0.109
130.00	-13.61	-5.20	0.00	-130.89	0.00	130.89	1,881.18	940.59	2,797.37	1,400.77	9.47	-0.73	0.101
135.00	-12.86	-5.07	0.00	-104.90	0.00	104.90	1,841.88	920.94	2,643.30	1,323.62	10.26	-0.77	0.086
140.00	-9.85	-4.00	0.00	-77.89	0.00	77.89	1,800.71	900.35	2,490.74	1,247.22	11.08	-0.80	0.068
145.00	-9.23	-3.89	0.00	-57.90	0.00	57.90	1,757.68	878.84	2,339.97	1,171.72	11.94	-0.83	0.055
149.00	-6.25	-2.86	0.00	-42.36	0.00	42.36	1,721.91	860.95	2,220.84	1,112.07	12.64	-0.84	0.042
150.00	-6.14	-2.79	0.00	-39.50	0.00	39.50	1,712.78	856.39	2,191.28	1,097.27	12.81	-0.85	0.040
155.00	-5.58	-2.67	0.00	-25.55	0.00	25.55	1,666.03	833.01	2,044.98	1,024.01	13.71	-0.86	0.028
160.00	-2.31	-1.05	0.00	-11.05	0.00	11.05	1,617.41	808.70	1,901.34	952.08	14.62	-0.87	0.013
161.50	-2.17	-1.00	0.00	-9.47	0.00	9.47	1,602.45	801.23	1,858.78	930.77	14.89	-0.87	0.012
161.50	-2.17	-1.00	0.00	-9.47	0.00	9.47	1,084.93	542.47	1,264.05	632.97	14.89	-0.87	0.017
165.00	-1.93	-0.91	0.00	-5.97	0.00	5.97	1,065.59	532.79	1,202.80	602.29	15.53	-0.88	0.012
170.00	-1.60	-0.84	0.00	-1.43	0.00	1.43	1,036.36	518.18	1,116.00	558.83	16.46	-0.88	0.004
171.00	-0.03	-0.01	0.00	0.00	0.00	0.00	1,030.29	515.14	1,098.77	550.20	16.64	-0.88	0.000
171.50	0.00	0.00	0.00	0.00	0.00	0.00	1,027.22	513.61	1,090.17	545.90	16.73	-0.88	0.000

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:26 AM

Customer: SPRINT NEXTEL

Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.16
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.17
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	1.89
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.70
Total Unfactored Dead Load:	53.19 k
Seismic Base Shear (E):	2.26 k

Load Case (1.2 + 0.2Sds) * DL + E ELM

Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
42	171.25	26	161	0.001	3	32
41	170.50	65	399	0.003	8	81
40	167.50	335	1,983	0.017	39	413
39	163.25	242	1,371	0.012	27	299
38	160.75	134	742	0.006	15	166
37	157.50	545	2,908	0.025	57	673
36	152.50	562	2,839	0.025	56	694
35	149.50	114	559	0.005	11	141
34	147.00	488	2,315	0.020	46	602
33	142.50	625	2,813	0.025	56	771
32	137.50	735	3,115	0.027	61	908
31	132.50	752	2,993	0.026	59	928
30	128.50	459	1,735	0.015	34	567
29	126.00	409	1,495	0.013	30	505
28	122.50	1,040	3,623	0.032	72	1,284
27	117.50	1,065	3,458	0.030	68	1,316
26	113.00	871	2,645	0.023	52	1,075
25	110.50	220	645	0.006	13	272
24	107.50	1,118	3,120	0.027	62	1,380
23	102.50	1,143	2,943	0.026	58	1,411
22	97.50	1,168	2,764	0.024	55	1,443
21	92.50	1,194	2,583	0.023	51	1,474
20	87.50	1,219	2,400	0.021	47	1,505

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

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Customer: SPRINT NEXTEL

19	84.10	443	815	0.007	16	547
18	81.60	905	1,583	0.014	31	1,118
17	77.50	1,435	2,299	0.020	45	1,771
16	72.50	1,464	2,095	0.018	41	1,808
15	67.50	1,494	1,894	0.017	37	1,844
14	62.50	1,523	1,695	0.015	33	1,881
13	57.50	1,553	1,500	0.013	30	1,918
12	52.50	1,583	1,310	0.011	26	1,954
11	47.50	1,612	1,126	0.010	22	1,991
10	42.58	1,587	921	0.008	18	1,959
9	40.08	62	32	0.000	1	76
8	37.50	1,869	874	0.008	17	2,308
7	32.50	1,903	698	0.006	14	2,350
6	27.50	1,937	535	0.005	11	2,392
5	22.50	1,971	388	0.003	8	2,434
4	17.50	2,005	257	0.002	5	2,476
3	12.50	2,039	148	0.001	3	2,517
2	7.50	2,073	63	0.001	1	2,559
1	2.50	2,106	10	0.000	0	2,601
Andrew ETW200VS12UB	171.00	33	202	0.002	4	41
E-911 GPS	171.00	5	31	0.000	1	6
Decibel DB201-A	171.00	25	153	0.001	3	31
12' Dipole	171.00	40	245	0.002	5	49
Ericsson AIR 21	171.00	546	3,350	0.029	66	674
RFS APX16DWV-16DWVS-	171.00	122	749	0.007	15	151
Round T-Arm	171.00	750	4,601	0.040	91	926
VZW Unused Reserve:	160.00	152	831	0.007	16	187
ADC CG-1900/800-DB-F	160.00	57	315	0.003	6	71
Alcatel-Lucent RRH2X	160.00	129	707	0.006	14	159
Alcatel-Lucent RRH2x	160.00	170	932	0.008	18	210
Alcatel-Lucent B66 R	160.00	201	1,102	0.010	22	248
RFS APL866513-42T0	160.00	63	344	0.003	7	78
Antel BXA-70063-4CF-	160.00	10	54	0.000	1	12
RFS DB-T1-6Z-8AB-0Z	160.00	88	482	0.004	10	109
Antel BXA-70063/6CF_	160.00	34	186	0.002	4	42
Commscope SBNHH-1D65	160.00	304	1,667	0.015	33	376
Antel LPA-80080-6CF-	160.00	42	230	0.002	5	52
Flat Low Profile Pla	160.00	1,500	8,221	0.072	162	1,852
GPS	149.00	10	49	0.000	1	12
Alcatel-Lucent RRH2x	149.00	317	1,541	0.013	30	392
Alcatel-Lucent 1900	149.00	180	874	0.008	17	222
Andrew DB980F90E-M	149.00	29	138	0.001	3	35
Alcatel-Lucent TD-RR	149.00	210	1,020	0.009	20	259
KMW ETCR-654L12H6	149.00	255	1,237	0.011	24	314
Flat Low Profile Pla	149.00	1,500	7,285	0.064	144	1,852
Powerwave TT19-08BP1	140.00	96	419	0.004	8	119
Raycap DC6-48-60-18-	140.00	32	139	0.001	3	39
Ericsson RRUS-11	140.00	330	1,442	0.013	28	407
KMW AM-X-CD-14-65-00	140.00	218	954	0.008	19	270
Powerwave Allgon 777	140.00	105	459	0.004	9	130
Flat Low Profile Pla	140.00	1,500	6,554	0.057	129	1,852
12' Dipole	111.00	40	118	0.001	2	49
		53,186	114,486	1.000	2,260	65,673

Load Case (0.9 - 0.2Sds) * DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
42	171.25	26	161	0.001	3	23
41	170.50	65	399	0.003	8	57

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:26 AM

Customer: SPRINT NEXTEL

40	167.50	335	1,983	0.017	39	290
39	163.25	242	1,371	0.012	27	209
38	160.75	134	742	0.006	15	116
37	157.50	545	2,908	0.025	57	472
36	152.50	562	2,839	0.025	56	486
35	149.50	114	559	0.005	11	99
34	147.00	488	2,315	0.020	46	422
33	142.50	625	2,813	0.025	56	541
32	137.50	735	3,115	0.027	61	636
31	132.50	752	2,993	0.026	59	651
30	128.50	459	1,735	0.015	34	397
29	126.00	409	1,495	0.013	30	354
28	122.50	1,040	3,623	0.032	72	900
27	117.50	1,065	3,458	0.030	68	922
26	113.00	871	2,645	0.023	52	753
25	110.50	220	645	0.006	13	191
24	107.50	1,118	3,120	0.027	62	967
23	102.50	1,143	2,943	0.026	58	989
22	97.50	1,168	2,764	0.024	55	1,011
21	92.50	1,194	2,583	0.023	51	1,033
20	87.50	1,219	2,400	0.021	47	1,055
19	84.10	443	815	0.007	16	383
18	81.60	905	1,583	0.014	31	783
17	77.50	1,435	2,299	0.020	45	1,241
16	72.50	1,464	2,095	0.018	41	1,267
15	67.50	1,494	1,894	0.017	37	1,292
14	62.50	1,523	1,695	0.015	33	1,318
13	57.50	1,553	1,500	0.013	30	1,344
12	52.50	1,583	1,310	0.011	26	1,369
11	47.50	1,612	1,126	0.010	22	1,395
10	42.58	1,587	921	0.008	18	1,373
9	40.08	62	32	0.000	1	54
8	37.50	1,869	874	0.008	17	1,617
7	32.50	1,903	698	0.006	14	1,647
6	27.50	1,937	535	0.005	11	1,676
5	22.50	1,971	388	0.003	8	1,705
4	17.50	2,005	257	0.002	5	1,735
3	12.50	2,039	148	0.001	3	1,764
2	7.50	2,073	63	0.001	1	1,793
1	2.50	2,106	10	0.000	0	1,822
Andrew ETW200VS12UB	171.00	33	202	0.002	4	29
E-911 GPS	171.00	5	31	0.000	1	4
Decibel DB201-A	171.00	25	153	0.001	3	22
12' Dipole	171.00	40	245	0.002	5	35
Ericsson AIR 21	171.00	546	3,350	0.029	66	472
RFS APX16DWV-16DWVS-	171.00	122	749	0.007	15	106
Round T-Arm	171.00	750	4,601	0.040	91	649
VZW Unused Reserve:	160.00	152	831	0.007	16	131
ADC CG-1900/800-DB-F	160.00	57	315	0.003	6	50
Alcatel-Lucent RRH2X	160.00	129	707	0.006	14	112
Alcatel-Lucent RRH2x	160.00	170	932	0.008	18	147
Alcatel-Lucent B66 R	160.00	201	1,102	0.010	22	174
RFS APL866513-42T0	160.00	63	344	0.003	7	54
Antel BXA-70063-4CF-	160.00	10	54	0.000	1	9
RFS DB-T1-6Z-8AB-0Z	160.00	88	482	0.004	10	76
Antel BXA-70063/6CF_	160.00	34	186	0.002	4	29
Commscope SBNHH-1D65	160.00	304	1,667	0.015	33	263
Antel LPA-80080-6CF-	160.00	42	230	0.002	5	36
Flat Low Profile Pla	160.00	1,500	8,221	0.072	162	1,298
GPS	149.00	10	49	0.000	1	9
Alcatel-Lucent RRH2x	149.00	317	1,541	0.013	30	275
Alcatel-Lucent 1900	149.00	180	874	0.008	17	156
Andrew DB980F90E-M	149.00	29	138	0.001	3	25
Alcatel-Lucent TD-RR	149.00	210	1,020	0.009	20	182

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

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Customer: SPRINT NEXTEL

KMW ETCR-654L12H6	149.00	255	1,237	0.011	24	220
Flat Low Profile Pla	149.00	1,500	7,285	0.064	144	1,298
Powerwave TT19-08BP1	140.00	96	419	0.004	8	83
Raycap DC6-48-60-18-	140.00	32	139	0.001	3	28
Ericsson RRUS-11	140.00	330	1,442	0.013	28	286
KMW AM-X-CD-14-65-00	140.00	218	954	0.008	19	189
Powerwave Allgon 777	140.00	105	459	0.004	9	91
Flat Low Profile Pla	140.00	1,500	6,554	0.057	129	1,298
12' Dipole	111.00	40	118	0.001	2	35
		53,186	114,486	1.000	2,260	46,018

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:26 AM

Customer: SPRINT NEXTEL

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-63.07	-2.26	0.00	-292.96	0.00	292.96	7,282.81	3,641.41	20,510.1	10,270.3	0.00	0.00	0.037
5.00	-60.51	-2.27	0.00	-281.65	0.00	281.65	7,199.47	3,599.74	19,901.7	9,965.65	0.00	-0.01	0.037
10.00	-58.00	-2.27	0.00	-270.31	0.00	270.31	7,114.27	3,557.13	19,296.8	9,662.76	0.01	-0.01	0.036
15.00	-55.52	-2.27	0.00	-258.95	0.00	258.95	7,027.20	3,513.60	18,695.8	9,361.83	0.03	-0.02	0.036
20.00	-53.09	-2.27	0.00	-247.60	0.00	247.60	6,938.27	3,469.13	18,099.0	9,062.99	0.05	-0.03	0.035
25.00	-50.69	-2.26	0.00	-236.25	0.00	236.25	6,847.47	3,423.74	17,506.7	8,766.39	0.09	-0.03	0.034
30.00	-48.34	-2.25	0.00	-224.93	0.00	224.93	6,754.82	3,377.41	16,919.2	8,472.18	0.12	-0.04	0.034
35.00	-46.03	-2.24	0.00	-213.66	0.00	213.66	6,660.30	3,330.15	16,336.7	8,180.49	0.17	-0.05	0.033
40.00	-45.96	-2.24	0.00	-202.46	0.00	202.46	6,563.93	3,281.96	15,759.5	7,891.49	0.22	-0.05	0.033
40.17	-44.00	-2.23	0.00	-202.08	0.00	202.08	6,560.67	3,280.34	15,740.3	7,881.88	0.22	-0.05	0.032
40.17	-44.00	-2.23	0.00	-202.08	0.00	202.08	6,560.67	3,280.34	15,740.3	7,881.88	0.22	-0.05	0.032
45.00	-42.01	-2.21	0.00	-191.33	0.00	191.33	5,491.49	2,745.75	13,203.3	6,611.51	0.22	-0.05	0.039
50.00	-40.05	-2.18	0.00	-180.30	0.00	180.30	5,418.84	2,709.42	12,756.7	6,387.88	0.28	-0.06	0.038
55.00	-38.14	-2.16	0.00	-169.37	0.00	169.37	5,341.85	2,670.93	12,298.2	6,158.26	0.35	-0.07	0.037
60.00	-36.25	-2.13	0.00	-158.59	0.00	158.59	5,263.00	2,631.50	11,843.4	5,930.54	0.42	-0.08	0.036
65.00	-34.41	-2.09	0.00	-147.95	0.00	147.95	5,182.29	2,591.14	11,392.8	5,704.87	0.51	-0.08	0.035
70.00	-32.60	-2.05	0.00	-137.50	0.00	137.50	5,099.71	2,549.86	10,946.5	5,481.40	0.60	-0.09	0.034
75.00	-30.83	-2.01	0.00	-127.24	0.00	127.24	5,015.27	2,507.64	10,504.9	5,260.27	0.70	-0.10	0.033
80.00	-29.71	-1.98	0.00	-117.20	0.00	117.20	4,928.97	2,464.49	10,068.2	5,041.62	0.81	-0.11	0.031
83.21	-29.16	-1.96	0.00	-110.86	0.00	110.86	4,840.81	2,420.41	9,636.89	4,825.61	0.93	-0.12	0.030
83.21	-29.16	-1.96	0.00	-110.86	0.00	110.86	4,840.81	2,420.41	9,636.89	4,825.61	0.93	-0.12	0.030
85.00	-27.66	-1.91	0.00	-107.35	0.00	107.35	4,783.25	2,391.62	9,362.93	4,688.42	1.01	-0.12	0.030
90.00	-26.19	-1.86	0.00	-97.77	0.00	97.77	3,910.73	1,955.36	7,675.09	3,843.25	1.01	-0.12	0.036
95.00	-24.74	-1.81	0.00	-88.45	0.00	88.45	3,886.54	1,943.27	7,555.36	3,783.30	1.06	-0.12	0.035
100.00	-23.33	-1.75	0.00	-79.40	0.00	79.40	3,817.77	1,908.89	7,223.47	3,617.10	1.19	-0.13	0.034
105.00	-21.95	-1.69	0.00	-70.64	0.00	70.64	3,747.13	1,873.57	6,895.30	3,452.77	1.34	-0.14	0.032
110.00	-21.68	-1.68	0.00	-62.20	0.00	62.20	3,674.64	1,837.32	6,571.13	3,290.45	1.49	-0.15	0.030
115.00	-19.24	-1.55	0.00	-54.03	0.00	54.03	3,600.28	1,800.14	6,251.25	3,130.27	1.66	-0.16	0.029
120.00	-17.95	-1.48	0.00	-46.27	0.00	46.27	3,524.05	1,762.03	5,935.96	2,972.39	1.83	-0.17	0.027
125.00	-17.45	-1.45	0.00	-38.88	0.00	38.88	3,508.59	1,754.29	5,873.48	2,941.11	1.86	-0.17	0.026
127.00	-16.88	-1.41	0.00	-35.98	0.00	35.98	3,445.97	1,722.99	5,625.55	2,816.95	2.01	-0.18	0.025
127.00	-16.88	-1.41	0.00	-35.98	0.00	35.98	3,445.97	1,722.99	5,625.55	2,816.95	2.01	-0.18	0.025
130.00	-15.95	-1.35	0.00	-31.74	0.00	31.74	3,366.02	1,683.01	5,320.30	2,664.10	2.20	-0.18	0.023
135.00	-15.05	-1.29	0.00	-24.97	0.00	24.97	3,284.22	1,642.11	5,020.50	2,513.98	2.40	-0.19	0.021
140.00	-11.46	-1.03	0.00	-18.52	0.00	18.52	3,250.95	1,625.48	4,902.12	2,454.70	2.48	-0.19	0.020
145.00	-10.86	-0.98	0.00	-13.39	0.00	13.39	1,903.87	951.93	2,890.39	1,447.34	2.48	-0.19	0.034
149.00	-7.63	-0.72	0.00	-9.47	0.00	9.47	1,881.18	940.59	2,797.37	1,400.77	2.60	-0.20	0.031
150.00	-6.94	-0.66	0.00	-8.75	0.00	8.75	1,841.88	920.94	2,643.30	1,323.62	2.81	-0.21	0.027
155.00	-6.26	-0.60	0.00	-5.46	0.00	5.46	1,800.71	900.35	2,490.74	1,247.22	3.03	-0.21	0.021
160.00	-2.70	-0.27	0.00	-2.47	0.00	2.47	1,757.68	878.84	2,339.97	1,171.72	3.26	-0.22	0.018
161.50	-2.40	-0.24	0.00	-2.06	0.00	2.06	1,721.91	860.95	2,220.84	1,112.07	3.45	-0.22	0.013
161.50	-2.40	-0.24	0.00	-2.06	0.00	2.06	1,712.78	856.39	2,191.28	1,097.27	3.49	-0.22	0.012
165.00	-1.99	-0.20	0.00	-1.21	0.00	1.21	1,666.03	833.01	2,044.98	1,024.01	3.73	-0.23	0.009
170.00	-1.91	-0.20	0.00	-0.19	0.00	0.19	1,617.41	808.70	1,901.34	952.08	3.97	-0.23	0.004
171.00	0.00	0.00	0.00	0.00	0.00	0.00	1,602.45	801.23	1,858.78	930.77	4.04	-0.23	0.004
171.50	0.00	0.00	0.00	0.00	0.00	0.00	1,084.93	542.47	1,264.05	632.97	4.04	-0.23	0.005
							1,065.59	532.79	1,202.80	602.29	4.21	-0.23	0.004
							1,036.36	518.18	1,116.00	558.83	4.45	-0.23	0.002
							1,030.29	515.14	1,098.77	550.20	4.50	-0.23	0.000
							1,027.22	513.61	1,090.17	545.90	4.53	-0.23	0.000

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

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Customer: SPRINT NEXTEL

Load Case (0.9 - 0.2Sds) * DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-44.20	-2.26	0.00	-290.67	0.00	290.67	7,282.81	3,641.41	20,510.1	10,270.3	0.00	0.00	0.034
5.00	-42.40	-2.26	0.00	-279.36	0.00	279.36	7,199.47	3,599.74	19,901.7	9,965.65	0.00	-0.01	0.034
10.00	-40.64	-2.27	0.00	-268.04	0.00	268.04	7,114.27	3,557.13	19,296.8	9,662.76	0.01	-0.01	0.033
15.00	-38.90	-2.27	0.00	-256.70	0.00	256.70	7,027.20	3,513.60	18,695.8	9,361.83	0.03	-0.02	0.033
20.00	-37.20	-2.26	0.00	-245.38	0.00	245.38	6,938.27	3,469.13	18,099.0	9,062.99	0.05	-0.03	0.032
25.00	-35.52	-2.25	0.00	-234.07	0.00	234.07	6,847.47	3,423.74	17,506.7	8,766.39	0.08	-0.03	0.032
30.00	-33.87	-2.24	0.00	-222.80	0.00	222.80	6,754.82	3,377.41	16,919.2	8,472.18	0.12	-0.04	0.031
35.00	-32.26	-2.23	0.00	-211.59	0.00	211.59	6,660.30	3,330.15	16,336.7	8,180.49	0.17	-0.05	0.031
40.00	-32.20	-2.23	0.00	-200.45	0.00	200.45	6,563.93	3,281.96	15,759.5	7,891.49	0.22	-0.05	0.030
40.17	-30.83	-2.21	0.00	-200.08	0.00	200.08	6,560.67	3,280.34	15,740.3	7,881.88	0.22	-0.05	0.030
40.17	-30.83	-2.21	0.00	-200.08	0.00	200.08	5,491.49	2,745.75	13,203.3	6,611.51	0.22	-0.05	0.036
45.00	-29.43	-2.19	0.00	-189.38	0.00	189.38	5,418.84	2,709.42	12,756.7	6,387.88	0.28	-0.06	0.035
50.00	-28.07	-2.17	0.00	-178.42	0.00	178.42	5,341.85	2,670.93	12,298.2	6,158.26	0.34	-0.07	0.034
55.00	-26.72	-2.14	0.00	-167.58	0.00	167.58	5,263.00	2,631.50	11,843.4	5,930.54	0.42	-0.08	0.033
60.00	-25.40	-2.11	0.00	-156.87	0.00	156.87	5,182.29	2,591.14	11,392.8	5,704.87	0.50	-0.08	0.032
65.00	-24.11	-2.07	0.00	-146.33	0.00	146.33	5,099.71	2,549.86	10,946.5	5,481.40	0.59	-0.09	0.031
70.00	-22.84	-2.03	0.00	-135.96	0.00	135.96	5,015.27	2,507.64	10,504.9	5,260.27	0.69	-0.10	0.030
75.00	-21.60	-1.99	0.00	-125.79	0.00	125.79	4,928.97	2,464.49	10,068.2	5,041.62	0.80	-0.11	0.029
80.00	-20.82	-1.96	0.00	-115.85	0.00	115.85	4,840.81	2,420.41	9,636.89	4,825.61	0.92	-0.12	0.028
83.21	-20.44	-1.94	0.00	-109.56	0.00	109.56	4,783.25	2,391.62	9,362.93	4,688.42	1.00	-0.12	0.028
83.21	-20.44	-1.94	0.00	-109.56	0.00	109.56	3,910.73	1,955.36	7,675.09	3,843.25	1.00	-0.12	0.034
85.00	-19.38	-1.90	0.00	-106.09	0.00	106.09	3,886.54	1,943.27	7,555.36	3,783.30	1.05	-0.12	0.033
90.00	-18.35	-1.84	0.00	-96.61	0.00	96.61	3,817.77	1,908.89	7,223.47	3,617.10	1.18	-0.13	0.032
95.00	-17.34	-1.79	0.00	-87.39	0.00	87.39	3,747.13	1,873.57	6,895.30	3,452.77	1.32	-0.14	0.030
100.00	-16.35	-1.73	0.00	-78.43	0.00	78.43	3,674.64	1,837.32	6,571.13	3,290.45	1.48	-0.15	0.028
105.00	-15.38	-1.67	0.00	-69.77	0.00	69.77	3,600.28	1,800.14	6,251.25	3,130.27	1.64	-0.16	0.027
110.00	-15.19	-1.66	0.00	-61.42	0.00	61.42	3,524.05	1,762.03	5,935.96	2,972.39	1.81	-0.17	0.025
111.00	-14.40	-1.60	0.00	-59.76	0.00	59.76	3,508.59	1,754.29	5,873.48	2,941.11	1.85	-0.17	0.024
115.00	-13.48	-1.53	0.00	-53.35	0.00	53.35	3,445.97	1,722.99	5,625.55	2,816.95	1.99	-0.17	0.023
120.00	-12.58	-1.46	0.00	-45.68	0.00	45.68	3,366.02	1,683.01	5,320.30	2,664.10	2.18	-0.18	0.021
125.00	-12.23	-1.43	0.00	-38.38	0.00	38.38	3,284.22	1,642.11	5,020.50	2,513.98	2.37	-0.19	0.019
127.00	-11.83	-1.40	0.00	-35.52	0.00	35.52	3,250.95	1,625.48	4,902.12	2,454.70	2.45	-0.19	0.018
127.00	-11.83	-1.40	0.00	-35.52	0.00	35.52	1,903.87	951.93	2,890.39	1,447.34	2.45	-0.19	0.031
130.00	-11.18	-1.34	0.00	-31.33	0.00	31.33	1,881.18	940.59	2,797.37	1,400.77	2.57	-0.20	0.028
135.00	-10.54	-1.27	0.00	-24.65	0.00	24.65	1,841.88	920.94	2,643.30	1,323.62	2.78	-0.20	0.024
140.00	-8.03	-1.01	0.00	-18.28	0.00	18.28	1,800.71	900.35	2,490.74	1,247.22	3.00	-0.21	0.019
145.00	-7.61	-0.97	0.00	-13.22	0.00	13.22	1,757.68	878.84	2,339.97	1,171.72	3.23	-0.22	0.016
149.00	-5.34	-0.71	0.00	-9.35	0.00	9.35	1,721.91	860.95	2,220.84	1,112.07	3.41	-0.22	0.012
150.00	-4.86	-0.65	0.00	-8.64	0.00	8.64	1,712.78	856.39	2,191.28	1,097.27	3.46	-0.22	0.011
155.00	-4.39	-0.59	0.00	-5.40	0.00	5.40	1,666.03	833.01	2,044.98	1,024.01	3.69	-0.23	0.008
160.00	-1.89	-0.27	0.00	-2.44	0.00	2.44	1,617.41	808.70	1,901.34	952.08	3.93	-0.23	0.004
161.50	-1.68	-0.24	0.00	-2.04	0.00	2.04	1,602.45	801.23	1,858.78	930.77	4.00	-0.23	0.003
161.50	-1.68	-0.24	0.00	-2.04	0.00	2.04	1,084.93	542.47	1,264.05	632.97	4.00	-0.23	0.005
165.00	-1.39	-0.20	0.00	-1.20	0.00	1.20	1,065.59	532.79	1,202.80	602.29	4.17	-0.23	0.003
170.00	-1.34	-0.19	0.00	-0.19	0.00	0.19	1,036.36	518.18	1,116.00	558.83	4.41	-0.23	0.002
171.00	0.00	0.00	0.00	0.00	0.00	0.00	1,030.29	515.14	1,098.77	550.20	4.45	-0.23	0.000
171.50	0.00	0.00	0.00	0.00	0.00	0.00	1,027.22	513.61	1,090.17	545.90	4.48	-0.23	0.000

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:26 AM

Customer: SPRINT NEXTEL

Equivalent Modal Forces Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.16
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.17
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Period Based on Rayleigh Method (sec):	1.89
Redundancy Factor (ρ):	1.30

Load Case (1.2 + 0.2S_{ds}) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	S _{az}	Horizontal Force (lb)	Vertical Force (lb)
42	171.25	26	1.884	1.951	1.130	0.332	8	32
41	170.50	65	1.868	1.866	1.099	0.323	18	81
40	167.50	335	1.803	1.552	0.982	0.286	83	413
39	163.25	242	1.713	1.170	0.834	0.238	50	299
38	160.75	134	1.660	0.978	0.755	0.211	25	166
37	157.50	545	1.594	0.760	0.662	0.179	85	673
36	152.50	562	1.494	0.487	0.536	0.134	65	694
35	149.50	114	1.436	0.356	0.470	0.110	11	141
34	147.00	488	1.389	0.263	0.420	0.092	39	602
33	142.50	625	1.305	0.127	0.340	0.062	34	771
32	137.50	735	1.215	0.019	0.266	0.034	22	908
31	132.50	752	1.128	-0.053	0.205	0.012	8	928
30	128.50	459	1.061	-0.089	0.164	-0.002	-1	567
29	126.00	409	1.020	-0.104	0.142	-0.009	-3	505
28	122.50	1,040	0.964	-0.117	0.114	-0.016	-14	1,284
27	117.50	1,065	0.887	-0.122	0.082	-0.022	-20	1,316
26	113.00	871	0.821	-0.115	0.060	-0.023	-18	1,075
25	110.50	220	0.785	-0.109	0.050	-0.022	-4	272
24	107.50	1,118	0.743	-0.099	0.039	-0.020	-20	1,380
23	102.50	1,143	0.675	-0.079	0.025	-0.014	-13	1,411
22	97.50	1,168	0.611	-0.057	0.016	-0.005	-5	1,443
21	92.50	1,194	0.550	-0.034	0.010	0.005	6	1,474
20	87.50	1,219	0.492	-0.013	0.007	0.015	16	1,505
19	84.10	443	0.455	0.000	0.006	0.022	8	547
18	81.60	905	0.428	0.009	0.006	0.026	20	1,118
17	77.50	1,435	0.386	0.022	0.007	0.031	39	1,771
16	72.50	1,464	0.338	0.036	0.009	0.037	47	1,808
15	67.50	1,494	0.293	0.047	0.013	0.040	52	1,844
14	62.50	1,523	0.251	0.055	0.017	0.042	55	1,881
13	57.50	1,553	0.212	0.061	0.022	0.043	57	1,918
12	52.50	1,583	0.177	0.065	0.026	0.042	58	1,954
11	47.50	1,612	0.145	0.068	0.031	0.042	58	1,991
10	42.58	1,587	0.117	0.070	0.035	0.041	56	1,959
9	40.08	62	0.103	0.071	0.037	0.040	2	76

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:26 AM

Customer: SPRINT NEXTEL

8	37.50	1,869	0.090	0.071	0.038	0.040	64	2,308
7	32.50	1,903	0.068	0.072	0.041	0.039	64	2,350
6	27.50	1,937	0.049	0.071	0.042	0.037	63	2,392
5	22.50	1,971	0.033	0.069	0.041	0.036	61	2,434
4	17.50	2,005	0.020	0.064	0.038	0.033	58	2,476
3	12.50	2,039	0.010	0.055	0.032	0.029	51	2,517
2	7.50	2,073	0.004	0.040	0.022	0.022	39	2,559
1	2.50	2,106	0.000	0.016	0.009	0.009	17	2,601
Andrew ETW200VS12UB	171.00	33	1.879	1.922	1.119	0.329	9	41
E-911 GPS	171.00	5	1.879	1.922	1.119	0.329	1	6
Decibel DB201-A	171.00	25	1.879	1.922	1.119	0.329	7	31
12' Dipole	171.00	40	1.879	1.922	1.119	0.329	11	49
Ericsson AIR 21	171.00	546	1.879	1.922	1.119	0.329	156	674
RFS APX16DWV-	171.00	122	1.879	1.922	1.119	0.329	35	151
Round T-Arm	171.00	750	1.879	1.922	1.119	0.329	214	926
VZW Unused Reserve:	160.00	152	1.645	0.925	0.733	0.204	27	187
ADC CG-1900/800-DB-F	160.00	57	1.645	0.925	0.733	0.204	10	71
Alcatel-Lucent RRH2X	160.00	129	1.645	0.925	0.733	0.204	23	159
Alcatel-Lucent RRH2x	160.00	170	1.645	0.925	0.733	0.204	30	210
Alcatel-Lucent B66 R	160.00	201	1.645	0.925	0.733	0.204	35	248
RFS APL866513-42T0	160.00	63	1.645	0.925	0.733	0.204	11	78
Antel BXA-70063-4CF-	160.00	10	1.645	0.925	0.733	0.204	2	12
RFS DB-T1-6Z-8AB-0Z	160.00	88	1.645	0.925	0.733	0.204	16	109
Antel BXA-70063/6CF_	160.00	34	1.645	0.925	0.733	0.204	6	42
Commscope SBNHH-	160.00	304	1.645	0.925	0.733	0.204	54	376
Antel LPA-80080-6CF-	160.00	42	1.645	0.925	0.733	0.204	7	52
Flat Low Profile Pla	160.00	1,500	1.645	0.925	0.733	0.204	265	1,852
GPS	149.00	10	1.427	0.336	0.460	0.106	1	12
Alcatel-Lucent RRH2x	149.00	317	1.427	0.336	0.460	0.106	29	392
Alcatel-Lucent 1900	149.00	180	1.427	0.336	0.460	0.106	17	222
Andrew DB980F90E-M	149.00	29	1.427	0.336	0.460	0.106	3	35
Alcatel-Lucent TD-RR	149.00	210	1.427	0.336	0.460	0.106	19	259
KMW ETCR-654L12H6	149.00	255	1.427	0.336	0.460	0.106	23	314
Flat Low Profile Pla	149.00	1,500	1.427	0.336	0.460	0.106	138	1,852
Powerwave TT19-	140.00	96	1.259	0.068	0.301	0.047	4	119
Raycap DC6-48-60-18-	140.00	32	1.259	0.068	0.301	0.047	1	39
Ericsson RRUS-11	140.00	330	1.259	0.068	0.301	0.047	14	407
KMW AM-X-CD-14-65-00	140.00	218	1.259	0.068	0.301	0.047	9	270
Powerwave Allgon 777	140.00	105	1.259	0.068	0.301	0.047	4	130
Flat Low Profile Pla	140.00	1,500	1.259	0.068	0.301	0.047	62	1,852
12' Dipole	111.00	40	0.792	-0.110	0.051	-0.023	-1	49
		53,186	81.503	36.707	30.587	8.306	2,484	65,673

Load Case (0.9 - 0.2Sds) * DL + E EMAM

Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
42	171.25	26	1.884	1.951	1.130	0.332	8	23
41	170.50	65	1.868	1.866	1.099	0.323	18	57
40	167.50	335	1.803	1.552	0.982	0.286	83	290
39	163.25	242	1.713	1.170	0.834	0.238	50	209
38	160.75	134	1.660	0.978	0.755	0.211	25	116
37	157.50	545	1.594	0.760	0.662	0.179	85	472
36	152.50	562	1.494	0.487	0.536	0.134	65	486
35	149.50	114	1.436	0.356	0.470	0.110	11	99
34	147.00	488	1.389	0.263	0.420	0.092	39	422
33	142.50	625	1.305	0.127	0.340	0.062	34	541
32	137.50	735	1.215	0.019	0.266	0.034	22	636
31	132.50	752	1.128	-0.053	0.205	0.012	8	651

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

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Customer: SPRINT NEXTEL

30	128.50	459	1.061	-0.089	0.164	-0.002	-1	397
29	126.00	409	1.020	-0.104	0.142	-0.009	-3	354
28	122.50	1,040	0.964	-0.117	0.114	-0.016	-14	900
27	117.50	1,065	0.887	-0.122	0.082	-0.022	-20	922
26	113.00	871	0.821	-0.115	0.060	-0.023	-18	753
25	110.50	220	0.785	-0.109	0.050	-0.022	-4	191
24	107.50	1,118	0.743	-0.099	0.039	-0.020	-20	967
23	102.50	1,143	0.675	-0.079	0.025	-0.014	-13	989
22	97.50	1,168	0.611	-0.057	0.016	-0.005	-5	1,011
21	92.50	1,194	0.550	-0.034	0.010	0.005	6	1,033
20	87.50	1,219	0.492	-0.013	0.007	0.015	16	1,055
19	84.10	443	0.455	0.000	0.006	0.022	8	383
18	81.60	905	0.428	0.009	0.006	0.026	20	783
17	77.50	1,435	0.386	0.022	0.007	0.031	39	1,241
16	72.50	1,464	0.338	0.036	0.009	0.037	47	1,267
15	67.50	1,494	0.293	0.047	0.013	0.040	52	1,292
14	62.50	1,523	0.251	0.055	0.017	0.042	55	1,318
13	57.50	1,553	0.212	0.061	0.022	0.043	57	1,344
12	52.50	1,583	0.177	0.065	0.026	0.042	58	1,369
11	47.50	1,612	0.145	0.068	0.031	0.042	58	1,395
10	42.58	1,587	0.117	0.070	0.035	0.041	56	1,373
9	40.08	62	0.103	0.071	0.037	0.040	2	54
8	37.50	1,869	0.090	0.071	0.038	0.040	64	1,617
7	32.50	1,903	0.068	0.072	0.041	0.039	64	1,647
6	27.50	1,937	0.049	0.071	0.042	0.037	63	1,676
5	22.50	1,971	0.033	0.069	0.041	0.036	61	1,705
4	17.50	2,005	0.020	0.064	0.038	0.033	58	1,735
3	12.50	2,039	0.010	0.055	0.032	0.029	51	1,764
2	7.50	2,073	0.004	0.040	0.022	0.022	39	1,793
1	2.50	2,106	0.000	0.016	0.009	0.009	17	1,822
Andrew ETW200VS12UB	171.00	33	1.879	1.922	1.119	0.329	9	29
E-911 GPS	171.00	5	1.879	1.922	1.119	0.329	1	4
Decibel DB201-A	171.00	25	1.879	1.922	1.119	0.329	7	22
12' Dipole	171.00	40	1.879	1.922	1.119	0.329	11	35
Ericsson AIR 21	171.00	546	1.879	1.922	1.119	0.329	156	472
RFS APX16DWV-	171.00	122	1.879	1.922	1.119	0.329	35	106
Round T-Arm	171.00	750	1.879	1.922	1.119	0.329	214	649
VZW Unused Reserve:	160.00	152	1.645	0.925	0.733	0.204	27	131
ADC CG-1900/800-DB-F	160.00	57	1.645	0.925	0.733	0.204	10	50
Alcatel-Lucent RRH2X	160.00	129	1.645	0.925	0.733	0.204	23	112
Alcatel-Lucent RRH2x	160.00	170	1.645	0.925	0.733	0.204	30	147
Alcatel-Lucent B66 R	160.00	201	1.645	0.925	0.733	0.204	35	174
RFS APL866513-42T0	160.00	63	1.645	0.925	0.733	0.204	11	54
Antel BXA-70063-4CF-	160.00	10	1.645	0.925	0.733	0.204	2	9
RFS DB-T1-6Z-8AB-OZ	160.00	88	1.645	0.925	0.733	0.204	16	76
Antel BXA-70063/6CF_	160.00	34	1.645	0.925	0.733	0.204	6	29
Commscope SBNHH-	160.00	304	1.645	0.925	0.733	0.204	54	263
Antel LPA-80080-6CF-	160.00	42	1.645	0.925	0.733	0.204	7	36
Flat Low Profile Pla	160.00	1,500	1.645	0.925	0.733	0.204	265	1,298
GPS	149.00	10	1.427	0.336	0.460	0.106	1	9
Alcatel-Lucent RRH2x	149.00	317	1.427	0.336	0.460	0.106	29	275
Alcatel-Lucent 1900	149.00	180	1.427	0.336	0.460	0.106	17	156
Andrew DB980F90E-M	149.00	29	1.427	0.336	0.460	0.106	3	25
Alcatel-Lucent TD-RR	149.00	210	1.427	0.336	0.460	0.106	19	182
KMW ETCR-654L12H6	149.00	255	1.427	0.336	0.460	0.106	23	220
Flat Low Profile Pla	149.00	1,500	1.427	0.336	0.460	0.106	138	1,298
Powerwave TT19-	140.00	96	1.259	0.068	0.301	0.047	4	83
Raycap DC6-48-60-18-	140.00	32	1.259	0.068	0.301	0.047	1	28
Ericsson RRUS-11	140.00	330	1.259	0.068	0.301	0.047	14	286
KMW AM-X-CD-14-65-00	140.00	218	1.259	0.068	0.301	0.047	9	189
Powerwave Allgon 777	140.00	105	1.259	0.068	0.301	0.047	4	91
Flat Low Profile Pla	140.00	1,500	1.259	0.068	0.301	0.047	62	1,298
12' Dipole	111.00	40	0.792	-0.110	0.051	-0.023	-1	35

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:26 AM

Customer: SPRINT NEXTEL

53,186

81.503

36.707

30.587

8.306

2,484

46,018

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:26 AM

Customer: SPRINT NEXTEL

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-63.07	-2.47	0.00	-302.06	0.00	302.06	7,282.81	3,641.41	20,510.1	10,270.3	0.00	0.00	0.038
5.00	-60.51	-2.44	0.00	-289.72	0.00	289.72	7,199.47	3,599.74	19,901.7	9,965.65	0.00	-0.01	0.037
10.00	-58.00	-2.39	0.00	-277.53	0.00	277.53	7,114.27	3,557.13	19,296.8	9,662.76	0.01	-0.01	0.037
15.00	-55.52	-2.34	0.00	-265.57	0.00	265.57	7,027.20	3,513.60	18,695.8	9,361.83	0.03	-0.02	0.036
20.00	-53.09	-2.28	0.00	-253.88	0.00	253.88	6,938.27	3,469.13	18,099.0	9,062.99	0.06	-0.03	0.036
25.00	-50.69	-2.23	0.00	-242.46	0.00	242.46	6,847.47	3,423.74	17,506.7	8,766.39	0.09	-0.03	0.035
30.00	-48.34	-2.17	0.00	-231.33	0.00	231.33	6,754.82	3,377.41	16,919.2	8,472.18	0.13	-0.04	0.034
35.00	-46.03	-2.11	0.00	-220.49	0.00	220.49	6,660.30	3,330.15	16,336.7	8,180.49	0.17	-0.05	0.034
40.00	-45.96	-2.11	0.00	-209.96	0.00	209.96	6,563.93	3,281.96	15,759.5	7,891.49	0.23	-0.05	0.034
40.17	-44.00	-2.05	0.00	-209.61	0.00	209.61	6,560.67	3,280.34	15,740.3	7,881.88	0.23	-0.05	0.033
40.17	-44.00	-2.05	0.00	-209.61	0.00	209.61	5,491.49	2,745.75	13,203.3	6,611.51	0.23	-0.05	0.040
45.00	-42.01	-2.00	0.00	-199.69	0.00	199.69	5,418.84	2,709.42	12,756.7	6,387.88	0.29	-0.06	0.039
50.00	-40.05	-1.94	0.00	-189.70	0.00	189.70	5,341.85	2,670.93	12,298.2	6,158.26	0.36	-0.07	0.038
55.00	-38.14	-1.89	0.00	-179.99	0.00	179.99	5,263.00	2,631.50	11,843.4	5,930.54	0.44	-0.08	0.038
60.00	-36.25	-1.84	0.00	-170.55	0.00	170.55	5,182.29	2,591.14	11,392.8	5,704.87	0.52	-0.09	0.037
65.00	-34.41	-1.79	0.00	-161.37	0.00	161.37	5,099.71	2,549.86	10,946.5	5,481.40	0.62	-0.10	0.036
70.00	-32.60	-1.74	0.00	-152.44	0.00	152.44	5,015.27	2,507.64	10,504.9	5,260.27	0.72	-0.11	0.035
75.00	-30.83	-1.70	0.00	-143.73	0.00	143.73	4,928.97	2,464.49	10,068.2	5,041.62	0.84	-0.11	0.035
80.00	-29.71	-1.69	0.00	-135.21	0.00	135.21	4,840.81	2,420.41	9,636.89	4,825.61	0.96	-0.12	0.034
83.21	-29.17	-1.68	0.00	-129.81	0.00	129.81	4,783.25	2,391.62	9,362.93	4,688.42	1.05	-0.13	0.034
83.21	-29.17	-1.68	0.00	-129.81	0.00	129.81	3,910.73	1,955.36	7,675.09	3,843.25	1.05	-0.13	0.041
85.00	-27.66	-1.66	0.00	-126.80	0.00	126.80	3,886.54	1,943.27	7,555.36	3,783.30	1.10	-0.13	0.041
90.00	-26.19	-1.66	0.00	-118.49	0.00	118.49	3,817.77	1,908.89	7,223.47	3,617.10	1.24	-0.14	0.040
95.00	-24.74	-1.66	0.00	-110.20	0.00	110.20	3,747.13	1,873.57	6,895.30	3,452.77	1.40	-0.16	0.039
100.00	-23.33	-1.68	0.00	-101.88	0.00	101.88	3,674.64	1,837.32	6,571.13	3,290.45	1.57	-0.17	0.037
105.00	-21.95	-1.70	0.00	-93.49	0.00	93.49	3,600.28	1,800.14	6,251.25	3,130.27	1.75	-0.18	0.036
110.00	-21.68	-1.70	0.00	-85.00	0.00	85.00	3,524.05	1,762.03	5,935.96	2,972.39	1.94	-0.19	0.035
111.00	-20.55	-1.72	0.00	-83.30	0.00	83.30	3,508.59	1,754.29	5,873.48	2,941.11	1.98	-0.19	0.034
115.00	-19.24	-1.74	0.00	-76.41	0.00	76.41	3,445.97	1,722.99	5,625.55	2,816.95	2.14	-0.20	0.033
120.00	-17.95	-1.75	0.00	-67.71	0.00	67.71	3,366.02	1,683.01	5,320.30	2,664.10	2.36	-0.21	0.031
125.00	-17.45	-1.76	0.00	-58.95	0.00	58.95	3,284.22	1,642.11	5,020.50	2,513.98	2.59	-0.22	0.029
127.00	-16.88	-1.76	0.00	-55.44	0.00	55.44	3,250.95	1,625.48	4,902.12	2,454.70	2.68	-0.23	0.028
127.00	-16.88	-1.76	0.00	-55.44	0.00	55.44	1,903.87	951.93	2,890.39	1,447.34	2.68	-0.23	0.047
130.00	-15.95	-1.75	0.00	-50.17	0.00	50.17	1,881.18	940.59	2,797.37	1,400.77	2.82	-0.23	0.044
135.00	-15.04	-1.73	0.00	-41.43	0.00	41.43	1,841.88	920.94	2,643.30	1,323.62	3.07	-0.24	0.039
140.00	-11.46	-1.58	0.00	-32.81	0.00	32.81	1,800.71	900.35	2,490.74	1,247.22	3.34	-0.26	0.033
145.00	-10.85	-1.54	0.00	-24.88	0.00	24.88	1,757.68	878.84	2,339.97	1,171.72	3.61	-0.27	0.027
149.00	-7.63	-1.29	0.00	-18.70	0.00	18.70	1,721.91	860.95	2,220.84	1,112.07	3.84	-0.28	0.021
150.00	-6.93	-1.22	0.00	-17.41	0.00	17.41	1,712.78	856.39	2,191.28	1,097.27	3.90	-0.28	0.020
155.00	-6.26	-1.13	0.00	-11.31	0.00	11.31	1,666.03	833.01	2,044.98	1,024.01	4.19	-0.28	0.015
160.00	-2.70	-0.61	0.00	-5.65	0.00	5.65	1,617.41	808.70	1,901.34	952.08	4.49	-0.29	0.008
161.50	-2.40	-0.55	0.00	-4.74	0.00	4.74	1,602.45	801.23	1,858.78	930.77	4.58	-0.29	0.007
161.50	-2.40	-0.55	0.00	-4.74	0.00	4.74	1,084.93	542.47	1,264.05	632.97	4.58	-0.29	0.010
165.00	-1.99	-0.47	0.00	-2.80	0.00	2.80	1,065.59	532.79	1,202.80	602.29	4.80	-0.29	0.007
170.00	-1.91	-0.45	0.00	-0.45	0.00	0.45	1,036.36	518.18	1,116.00	558.83	5.10	-0.29	0.003
171.00	0.00	0.00	0.00	0.00	0.00	0.00	1,030.29	515.14	1,098.77	550.20	5.16	-0.29	0.000
171.50	0.00	0.00	0.00	0.00	0.00	0.00	1,027.22	513.61	1,090.17	545.90	5.19	-0.29	0.000

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:26 AM

Customer: SPRINT NEXTEL

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-44.20	-2.47	0.00	-299.54	0.00	299.54	7,282.81	3,641.41	20,510.1	10,270.3	0.00	0.00	0.035
5.00	-42.40	-2.43	0.00	-287.20	0.00	287.20	7,199.47	3,599.74	19,901.7	9,965.65	0.00	-0.01	0.035
10.00	-40.64	-2.39	0.00	-275.04	0.00	275.04	7,114.27	3,557.13	19,296.8	9,662.76	0.01	-0.01	0.034
15.00	-38.90	-2.33	0.00	-263.10	0.00	263.10	7,027.20	3,513.60	18,695.8	9,361.83	0.03	-0.02	0.034
20.00	-37.20	-2.28	0.00	-251.44	0.00	251.44	6,938.27	3,469.13	18,099.0	9,062.99	0.06	-0.03	0.033
25.00	-35.52	-2.22	0.00	-240.06	0.00	240.06	6,847.47	3,423.74	17,506.7	8,766.39	0.09	-0.03	0.033
30.00	-33.87	-2.16	0.00	-228.98	0.00	228.98	6,754.82	3,377.41	16,919.2	8,472.18	0.13	-0.04	0.032
35.00	-32.26	-2.09	0.00	-218.20	0.00	218.20	6,660.30	3,330.15	16,336.7	8,180.49	0.17	-0.05	0.032
40.00	-32.20	-2.09	0.00	-207.73	0.00	207.73	6,563.93	3,281.96	15,759.5	7,891.49	0.22	-0.05	0.031
40.17	-30.83	-2.04	0.00	-207.38	0.00	207.38	6,560.67	3,280.34	15,740.3	7,881.88	0.23	-0.05	0.031
40.17	-30.83	-2.04	0.00	-207.38	0.00	207.38	5,491.49	2,745.75	13,203.3	6,611.51	0.23	-0.05	0.037
45.00	-29.43	-1.98	0.00	-197.53	0.00	197.53	5,418.84	2,709.42	12,756.7	6,387.88	0.28	-0.06	0.036
50.00	-28.07	-1.93	0.00	-187.62	0.00	187.62	5,341.85	2,670.93	12,298.2	6,158.26	0.35	-0.07	0.036
55.00	-26.72	-1.87	0.00	-177.99	0.00	177.99	5,263.00	2,631.50	11,843.4	5,930.54	0.43	-0.08	0.035
60.00	-25.40	-1.82	0.00	-168.63	0.00	168.63	5,182.29	2,591.14	11,392.8	5,704.87	0.52	-0.09	0.034
65.00	-24.11	-1.77	0.00	-159.54	0.00	159.54	5,099.71	2,549.86	10,946.5	5,481.40	0.61	-0.10	0.034
70.00	-22.84	-1.72	0.00	-150.70	0.00	150.70	5,015.27	2,507.64	10,504.9	5,260.27	0.72	-0.10	0.033
75.00	-21.60	-1.68	0.00	-142.09	0.00	142.09	4,928.97	2,464.49	10,068.2	5,041.62	0.83	-0.11	0.033
80.00	-20.82	-1.67	0.00	-133.67	0.00	133.67	4,840.81	2,420.41	9,636.89	4,825.61	0.96	-0.12	0.032
83.21	-20.44	-1.66	0.00	-128.33	0.00	128.33	4,783.25	2,391.62	9,362.93	4,688.42	1.04	-0.13	0.032
83.21	-20.44	-1.66	0.00	-128.33	0.00	128.33	3,910.73	1,955.36	7,675.09	3,843.25	1.04	-0.13	0.039
85.00	-19.38	-1.64	0.00	-125.36	0.00	125.36	3,886.54	1,943.27	7,555.36	3,783.30	1.09	-0.13	0.038
90.00	-18.35	-1.64	0.00	-117.15	0.00	117.15	3,817.77	1,908.89	7,223.47	3,617.10	1.23	-0.14	0.037
95.00	-17.34	-1.64	0.00	-108.96	0.00	108.96	3,747.13	1,873.57	6,895.30	3,452.77	1.39	-0.15	0.036
100.00	-16.35	-1.66	0.00	-100.75	0.00	100.75	3,674.64	1,837.32	6,571.13	3,290.45	1.55	-0.16	0.035
105.00	-15.38	-1.68	0.00	-92.46	0.00	92.46	3,600.28	1,800.14	6,251.25	3,130.27	1.73	-0.18	0.034
110.00	-15.19	-1.68	0.00	-84.08	0.00	84.08	3,524.05	1,762.03	5,935.96	2,972.39	1.92	-0.19	0.033
111.00	-14.40	-1.70	0.00	-82.40	0.00	82.40	3,508.59	1,754.29	5,873.48	2,941.11	1.96	-0.19	0.032
115.00	-13.48	-1.72	0.00	-75.61	0.00	75.61	3,445.97	1,722.99	5,625.55	2,816.95	2.12	-0.20	0.031
120.00	-12.58	-1.73	0.00	-67.01	0.00	67.01	3,366.02	1,683.01	5,320.30	2,664.10	2.34	-0.21	0.029
125.00	-12.22	-1.74	0.00	-58.35	0.00	58.35	3,284.22	1,642.11	5,020.50	2,513.98	2.56	-0.22	0.027
127.00	-11.83	-1.74	0.00	-54.88	0.00	54.88	3,250.95	1,625.48	4,902.12	2,454.70	2.65	-0.22	0.026
127.00	-11.83	-1.74	0.00	-54.88	0.00	54.88	1,903.87	951.93	2,890.39	1,447.34	2.65	-0.22	0.044
130.00	-11.18	-1.73	0.00	-49.67	0.00	49.67	1,881.18	940.59	2,797.37	1,400.77	2.79	-0.23	0.041
135.00	-10.54	-1.71	0.00	-41.04	0.00	41.04	1,841.88	920.94	2,643.30	1,323.62	3.04	-0.24	0.037
140.00	-8.03	-1.57	0.00	-32.51	0.00	32.51	1,800.71	900.35	2,490.74	1,247.22	3.30	-0.25	0.031
145.00	-7.60	-1.53	0.00	-24.67	0.00	24.67	1,757.68	878.84	2,339.97	1,171.72	3.57	-0.27	0.025
149.00	-5.34	-1.28	0.00	-18.55	0.00	18.55	1,721.91	860.95	2,220.84	1,112.07	3.80	-0.27	0.020
150.00	-4.86	-1.21	0.00	-17.28	0.00	17.28	1,712.78	856.39	2,191.28	1,097.27	3.86	-0.27	0.019
155.00	-4.38	-1.12	0.00	-11.23	0.00	11.23	1,666.03	833.01	2,044.98	1,024.01	4.15	-0.28	0.014
160.00	-1.89	-0.60	0.00	-5.61	0.00	5.61	1,617.41	808.70	1,901.34	952.08	4.44	-0.29	0.007
161.50	-1.68	-0.55	0.00	-4.71	0.00	4.71	1,602.45	801.23	1,858.78	930.77	4.53	-0.29	0.006
161.50	-1.68	-0.55	0.00	-4.71	0.00	4.71	1,084.93	542.47	1,264.05	632.97	4.53	-0.29	0.009
165.00	-1.39	-0.47	0.00	-2.78	0.00	2.78	1,065.59	532.79	1,202.80	602.29	4.75	-0.29	0.006
170.00	-1.34	-0.45	0.00	-0.45	0.00	0.45	1,036.36	518.18	1,116.00	558.83	5.05	-0.29	0.002
171.00	0.00	0.00	0.00	0.00	0.00	0.00	1,030.29	515.14	1,098.77	550.20	5.11	-0.29	0.000
171.50	0.00	0.00	0.00	0.00	0.00	0.00	1,027.22	513.61	1,090.17	545.90	5.14	-0.29	0.000

Site Number: 411178

Code: ANSI/TIA-222-G

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Site Name: Old Lyme South CT, CT

Engineering Number: OAA710430_C3_02

9/7/2017 11:02:26 AM

Customer: SPRINT NEXTEL

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	44.34	0.00	63.78	0.00	0.00	5261.10	40.17	0.55
0.9D + 1.6W	44.32	0.00	47.82	0.00	0.00	5225.59	40.17	0.54
1.2D + 1.0Di + 1.0Wi	10.76	0.00	95.01	0.00	0.00	1238.34	40.17	0.14
(1.2 + 0.2Sds) * DL + E ELFM	2.26	0.00	63.07	0.00	0.00	292.96	40.17	0.04
(1.2 + 0.2Sds) * DL + E EMAM	2.47	0.00	63.07	0.00	0.00	302.06	127.00	0.05
(0.9 - 0.2Sds) * DL + E ELFM	2.26	0.00	44.20	0.00	0.00	290.67	40.17	0.04
(0.9 - 0.2Sds) * DL + E EMAM	2.47	0.00	44.20	0.00	0.00	299.54	127.00	0.04
1.0D + 1.0W	9.05	0.00	53.18	0.00	0.00	1069.52	40.17	0.12

Base/Flange Plate	Plate Type	Baseplate
	Pole Diameter	69 in
	Pole Thickness	0.5 in
	Plate Diameter	85 in
	Plate Thickness	2.258 in
	Plate Fy	60 ksi
	Weld Length	0.4375 in
	ϕ_s Resistance	621.68 k-in
	Applied	441.37 k-in
	Stiffeners	#

Bolts	#	24
	Bolt Circle (R)adial / (S)quare	79 in R
	Diameter	2.25 in
	Hole Diameter	2.625 in
	Type	A615
	Fy	75 ksi
	Fu	100 ksi
	ϕ_s Resistance	259.82 k
	Applied	135.81 k
	Reinforcement	#
Extra Bolts	#	0

Code Rev. **G**

Date **9/7/2017**

Engineer **Amir.Tabarestani**

Site # **411178**

Carrier **SPRINT NEXTEL**

Moment **5261.1 k-ft**

Axial **63.8 k**

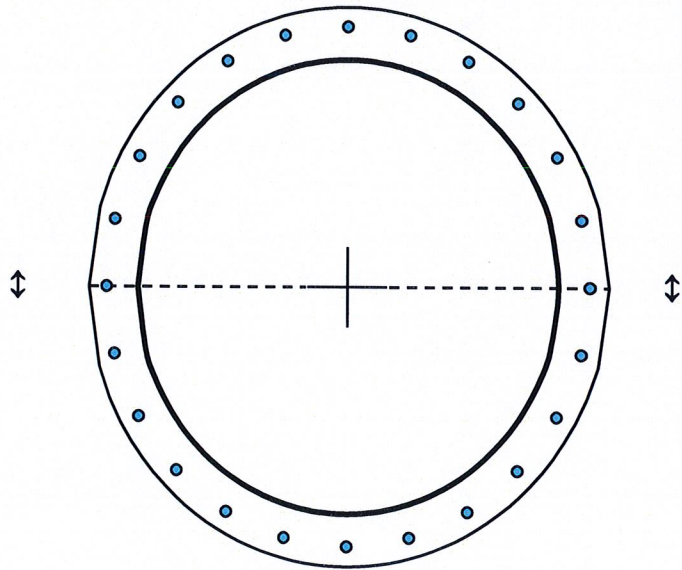


Plate Stress Ratio:

0.71 (Pass)

Bolt Stress Ratio:

0.52 (Pass)

Base/Flange Plate	Plate Type	Flange @ 161.5 ft
	Pole Diameter	28.51 in
	Pole Thickness	0.1875 in
	Plate Diameter	36 in
	Plate Thickness	1.25 in
	Plate Fy	36 ksi
	Weld Length	0.1875 in
	ϕ_s Resistance	90.21 k-in
	Applied	7.98 k-in
Stiffeners	#	0

Code Rev. **G**

Date **9/7/2017**
 Engineer **Amir.Tabarestani**
 Site # **411178**
 Carrier **SPRINT NEXTEL**

Moment **46.6 k-ft**
 Axial **2.3 k**

Required Flange Thickness:

0.37 in OK

Bolts	#	12
	Bolt Circle	33 in
	(R)adial / (S)quare	R
	Diameter	1 in
	Hole Diameter	1.1875 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	ϕ_s Resistance	54.52 k
Applied	5.45 k	
Reinforcement	#	0
	#	0
Extra Bolts	#	0

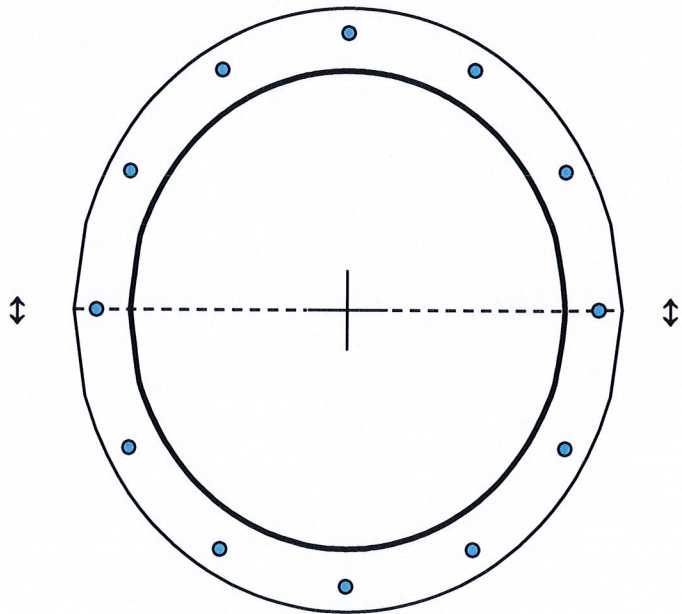
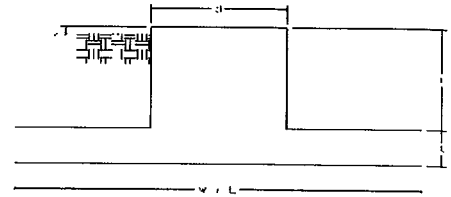


Plate Stress Ratio:
0.09 (Pass)

Bolt Stress Ratio:
0.10 (Pass)

Site Name: Old Lyme South CT, CT
 Site Number: 411178
 Engineering Number: OAA710430
 Engineer: Amir.Tabarestani
 Date: 09/07/17
 Tower Type: MP

Program Last Updated: 5/13/2014



Design Loads (Factored) - Analysis per TIA-222-G Standards

Design / Analysis / Mapping:	Analysis		
Compression/Leg:	63.8 k	Concrete Strength (f'_c):	4000 psi
Uplift/Leg:	0.0 k	Pad Tension Steel Depth:	38.00 in
Total Shear:	44.3 k	ϕ_{Shear} :	0.75
Moment:	5261.1 k-ft	$\phi_{\text{Flexure / Tension}}$:	0.90
Tower + Appurtenance Weight:	63.8 k	$\phi_{\text{Compression}}$:	0.65
Depth to Base of Foundation (l + t - h):	7.00 ft	β :	0.85
Diameter of Pier (d):	8.50 ft	Bottom Pad Rebar Size #:	9
Height of Pier above Ground (h):	1.00	# of Bottom Pad Rebar:	54
Width of Pad (W):	31.00 ft	Pad Bottom Steel Area:	54.00 in ²
Length of Pad (L):	31.00 ft	Pad Steel F_y :	60000 psi
Thickness of Pad (t):	3.50 ft	Top Pad Rebar Size #:	9
Tower Leg Center to Center:	0.00 ft	# of Top Pad Rebar:	54
Number of Tower Legs:	1.0 (1 if MP or GT)	Pad Top Steel Area:	54.00 in ²
Tower Center from Mat Center:	0.00 ft	Pier Rebar Size #:	9
Depth Below Ground Surface to Water Table:	99.00 ft	Pier Steel Area (Single Bar):	1.00 in ²
Unit Weight of Concrete:	150.0 pcf	# of Pier Rebar:	52
Unit Weight of Soil Above Water Table:	125.0 pcf	Pier Steel F_y :	60000 psi
Unit Weight of Water:	62.4 pcf	Pier Cage Diameter:	94.0 in
Unit Weight of Soil Below Water Table:	62.4 pcf	Rebar Strain Limit:	0.008
Friction Angle of Uplift:	15.0 Degrees	Steel Elastic Modulus:	29000 ksi
Ultimate Coefficient of Shear Friction:	0.35	Tie Rebar Size #:	4
Ultimate Compressive Bearing Pressure:	12000.0 psf	Tie Steel Area (Single Bar):	0.20 in ²
Ultimate Passive Pressure on Pad Face:	0.0 psf	Tie Spacing:	12 in
$\phi_{\text{Soil and Concrete Weight}}$:	0.9	Tie Steel F_y :	60000 psi
ϕ_{Soil} :	0.75		

Overturning Moment Usage

Design OTM: 5615.8 k-ft
 OTM Resistance: 14556.7 k-ft
 Design OTM / OTM Resistance: 0.39 Result: OK

Soil Bearing Pressure Usage

Net Bearing Pressure: 1840 psf
 Factored Nominal Bearing Pressure: 9000 psf
 Net Bearing Pressure/Factored Nominal Bearing Pressure: 0.20 Result: OK
 Load Direction Controlling Design Bearing Pressure: Diagonal to Pad Edge

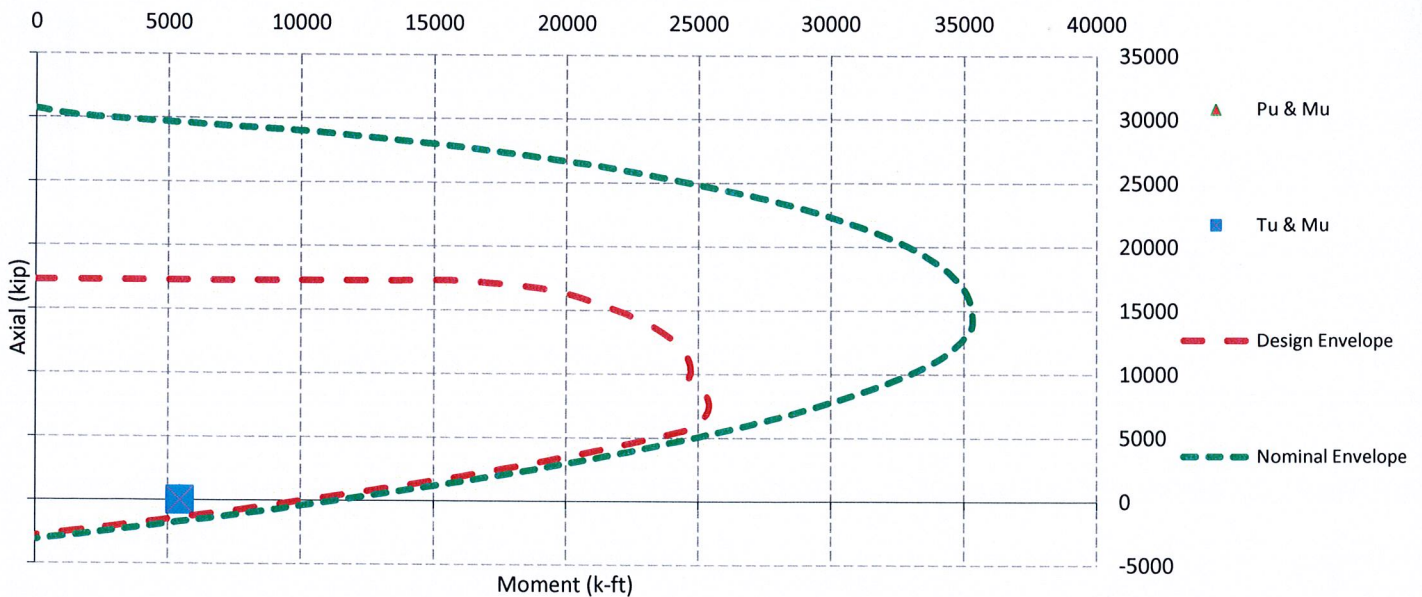
Sliding Factor of Safety

Total Factored Sliding Resistance: 260.3 k
 Sliding Design / Sliding Resistance: 0.17 Result: OK

One Way Shear, Flexural Capacity, and Punching Shear

Factored One Way Shear (V_u):	264.7 k
One Way Shear Capacity (ϕV_c):	1341.1 k - ACI11.3.1.1
$V_u / \phi V_c$:	0.20 Result: OK
Load Direction Controlling Shear Capacity:	Parallel to Pad Edge
Lower Steel Pad Factored Moment (M_u):	2112.6 k-ft
Lower Steel Pad Moment Capacity (ϕM_n):	8969.4 k-ft - ACI10.3
$M_u / \phi M_n$:	0.24 Result: OK
Load Direction Controlling Flexural Capacity:	Parallel to Pad Edge
Upper Steel Pad Factored Moment (M_u):	1402.8 k-ft
Upper Steel Pad Moment Capacity (ϕM_n):	8969.4 k-ft
$M_u / \phi M_n$:	0.16 Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0038 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0038 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Lower Pad Reinforcement Spacing:	7 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Reinforcement Spacing:	7 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Factored Punching Shear (V_u):	0.0 k
Nominal Punching Shear Capacity ($\phi_c V_n$):	3171.1 k - ACI11.12.2.1
$V_u / \phi V_c$:	0.00 Result: OK
Factored Moment in Pier (M_u):	5460.6 k-ft
Pier Moment Capacity (ϕM_n):	10755.0 k-ft
$M_u / \phi M_n$:	0.51 Result: OK
Factored Shear in Pier (V_u):	44.3 k
Pier Shear Capacity (ϕV_n):	778.2 k
$V_u / \phi V_c$:	0.06 Result: OK
Pier Shear Reinforcement Ratio:	0.0002 No Ties Necessary for Shear - ACI11.5.6.1
Factored Tension in Pier (T_u):	0.0 k
Pier Tension Capacity (ϕT_n):	2808.0 k
$T_u / \phi T_n$:	0.00 Result: OK
Factored Compression in Pier (P_u):	63.8 k
Pier Compression Capacity (ϕP_n):	14354.9 k - ACI10.3.6.2
$P_u / \phi P_n$:	0.00 Result: OK
Pier Compression Reinforcement Ratio:	0.006 OK - Reinforcement Ratio Met - ACI10.9.1 & 10.8.4
$M_u / \phi_B M_n + T_u / \phi_T T_n$:	0.51 Result: OK

Nominal and Design Moment Capacity and Factored Design Loads



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

SECTION 01 100 - SCOPE OF WORK

PART 1 - GENERAL

- 1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT CONSTRUCTION STANDARDS FOR WIRELESS SITES, CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.
- 1.2 RELATED DOCUMENTS:
 - A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
 - B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.
- 1.3 PRECEDENCE: SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE. NOTIFY SPRINT CONSTRUCTION MANAGER IF THIS OCCURS.
- 1.4 NATIONALLY RECOGNIZED CODES AND STANDARDS:
 - A. THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL AND LOCAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
 - 1. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
 - 5. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
 - 3. GR-1089 CORE, ELECTROMAGNETIC COMPATIBILITY AND ELECTRICAL SAFETY -GENERIC CRITERIA FOR NETWORK TELECOMMUNICATIONS EQUIPMENT.
 - 4. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE - "NEC") AND NFPA 101 (LIFE SAFETY CODE).
 - 5. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
 - 6. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
 - 7. AMERICAN CONCRETE INSTITUTE (ACI)
 - 8. AMERICAN WIRE PRODUCERS ASSOCIATION (AWPA)
 - 9. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
 - 10. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
 - 11. PORTLAND CEMENT ASSOCIATION (PCA)
 - 12. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
 - 13. BRICK INDUSTRY ASSOCIATION (BIA)
 - 14. AMERICAN WELDING SOCIETY (AWS)
 - 15. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
 - 16. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
 - 17. DOOR AND HARDWARE INSTITUTE (DHI)
 - 18. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
 - 19. APPLICABLE BUILDING CODES INCLUDING UNIFORM BUILDING CODE, SOUTHERN BUILDING CODE, BOCA, AND THE INTERNATIONAL BUILDING CODE.

1.5 DEFINITIONS:

- A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
- B. COMPANY: SPRINT CORPORATION
- C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
- D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
- E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.
- F. OFCI: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT.
- G. CONSTRUCTION MANAGER - ALL PROJECTS RELATED COMMUNICATION TO FLOW THROUGH SPRINT REPRESENTATIVE IN CHARGE OF PROJECT...

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

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

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

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

- A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN RED PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.
- B. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. CONTRACTOR SHALL NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK.
- C. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. SPACING BETWEEN EQUIPMENT IS THE REQUIRED CLEARANCE. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE SPRINT CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH THE WORK.

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

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

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

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

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

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

1.15 USE OF ELECTRONIC PROJECT MANAGEMENT SYSTEMS:

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

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

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

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

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

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

SECTION 01 200 - COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 - GENERAL

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

1.2 RELATED DOCUMENTS:

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 RECEIPT OF MATERIAL AND EQUIPMENT:

- A. A COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE CONSTRUCTION DOCUMENTS.
- B. THE CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
 - 1. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
 - 2. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
 - 3. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
 - 4. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO SPRINT OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
 - 5. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
 - 6. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

3.2 DELIVERABLES:

- A. COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.
- B. IF APPLICABLE, COMPLETE LOST/STOLEN/DAMAGED DOCUMENTATION REPORT AS NECESSARY IN ACCORDANCE WITH COMPANY PRACTICE, AND AS DIRECTED BY COMPANY.
- C. UPLOAD DOCUMENTATION INTO SPRINT SITE MANAGEMENT SYSTEM (SMS) AND/OR PROVIDE HARD COPY DOCUMENTATION AS REQUESTED.

SECTION 01 300 - CELL SITE CONSTRUCTION CO.

PART 1 - GENERAL

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

1.2 RELATED DOCUMENTS:

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 NOTICE TO PROCEED

- A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF THE WORK ORDER.
- B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE SPRINT WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

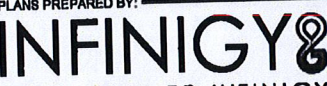
3.1 FUNCTIONAL REQUIREMENTS:

- A. THE ACTIVITIES DESCRIBED IN THIS PARAGRAPH REPRESENT MINIMUM ACTIONS AND PROCESSES REQUIRED TO SUCCESSFULLY COMPLETE THE WORK. THE ACTIVITIES DESCRIBED ARE NOT EXHAUSTIVE, AND CONTRACTOR SHALL TAKE ANY AND ALL ACTIONS AS NECESSARY TO SUCCESSFULLY COMPLETE THE CONSTRUCTION OF A FULLY FUNCTIONING WIRELESS FACILITY AT THE SITE IN ACCORDANCE WITH COMPANY PROCESSES.
- B. SUBMIT SPECIFIC DOCUMENTATION AS INDICATED HEREIN, AND OBTAIN REQUIRED APPROVALS WHILE THE WORK IS BEING PERFORMED.
- C. MANAGE AND CONDUCT ALL FIELD CONSTRUCTION SERVICE RELATED ACTIVITIES
- D. PROVIDE CONSTRUCTION ACTIVITIES TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

PLANS PREPARED FOR:




PLANS PREPARED BY:



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1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-103

PROJECT MANAGER:



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

ENGINEERING LICENSE:



DRAWING NOTICE:

THESE DOCUMENTS ARE CONFIDENTIAL AND ARE THE SOLE PROPERTY OF SPRINT AND MAY NOT BE REPRODUCED, DISSEMINATED OR REDISTRIBUTED WITHOUT THE EXPRESS WRITTEN CONSENT OF SPRINT.

REVISIONS:	DESCRIPTION	DATE	BY	REV
REVISED / ISSUED FOR PERMIT		12/22/17	JDL	1
ISSUED FOR PERMIT		12/18/17	JDL	0

SITE NAME:

SOUTH OLD LYME - VERIZON

SITE NUMBER:

CT54XC701

SITE ADDRESS:

**125 MILE CREEK ROAD
OLD LYME, CT 06070**

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-1

CONTINUE FROM SP-1

1. PERFORM ANY REQUIRED SITE ENVIRONMENTAL MITIGATION.
 2. PREPARE GROUND SITES; PROVIDE DE-GRUBBING; AND ROUGH AND FINAL GRADING, AND COMPOUND SURFACE TREATMENTS.
 3. MANAGE AND CONDUCT ALL ACTIVITIES FOR INSTALLATION OF UTILITIES INCLUDING ELECTRICAL AND TELCO BACKHAUL.
 4. INSTALL UNDERGROUND FACILITIES INCLUDING UNDERGROUND POWER AND COMMUNICATIONS CONDUITS, AND UNDERGROUND GROUNDING SYSTEM.
 5. INSTALL ABOVE GROUND GROUNDING SYSTEMS.
 6. PROVIDE NEW HVAC INSTALLATIONS AND MODIFICATIONS.
 7. INSTALL "H-FRAMES", CABINETS AND SHELTERS AS INDICATED.
 8. INSTALL ROADS, ACCESS WAYS, CURBS AND DRAINS AS INDICATED.
 9. ACCOMPLISH REQUIRED MODIFICATION OF EXISTING FACILITIES.
 10. PROVIDE ANTENNA SUPPORT STRUCTURE FOUNDATIONS.
 11. PROVIDE SLABS AND EQUIPMENT PLATFORMS.
 12. INSTALL COMPOUND FENCING, SIGHT SHIELDING, LANDSCAPING AND ACCESS BARRIERS.
 13. PERFORM INSPECTION AND MATERIAL TESTING AS REQUIRED HEREINAFTER.
 14. CONDUCT SITE RESISTANCE TO EARTH TESTING AS REQUIRED HEREINAFTER
 15. INSTALL FIXED GENERATOR SETS AND OTHER STANDBY POWER SOLUTIONS.
 16. INSTALL TOWERS, ANTENNA SUPPORT STRUCTURES AND PLATFORMS ON EXISTING TOWERS AS REQUIRED.
 17. INSTALL CELL SITE RADIOS, MICROWAVE, GPS, COAXIAL MAINLINE, ANTENNAS, CROSS BAND COUPLERS, TOWER TOP AMPLIFIERS, LOW NOISE AMPLIFIERS AND RELATED EQUIPMENT.
 18. PERFORM, DOCUMENT, AND CLOSE OUT ANY CONSTRUCTION CONTROL DOCUMENTS THAT MAY BE REQUIRED BY GOVERNMENT AGENCIES AND LANDLORDS.
 19. PERFORM ANTENNA AND COAX SWEEP TESTING AND MAKE ANY AND ALL NECESSARY CORRECTIONS.
 20. REMAIN ON SITE MOBILIZED THROUGHOUT HAND-OFF AND INTEGRATION TO ASSIST AS NEEDED UNTIL SITE IS DEEMED SUBSTANTIALLY COMPLETE AND PLACED "ON AIR."
- 3.2 GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:**
- A. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.
 - B. EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.
 - C. CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
 1. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
 2. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.
 - D. CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION
 - E. CONDUCT TESTING AS REQUIRED HEREIN.
- 3.3 DELIVERABLES:**
- A. CONTRACTOR SHALL REVIEW, APPROVE, AND SUBMIT TO SPRINT SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS AS REQUIRED HEREINAFTER
 - B. PROVIDE DOCUMENTATION INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING. DOCUMENTATION SHALL BE FORWARDED IN ORIGINAL FORMAT AND/OR UPLOADED INTO SMS.
 1. ALL CORRESPONDENCE AND PRELIMINARY CONSTRUCTION REPORTS.
 2. PROJECT PROGRESS REPORTS.
 3. CIVIL CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 4. ELECTRICAL SERVICE COMPLETION DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).

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

SECTION 01 400 - SUBMITTALS & TESTS

PART 1 - GENERAL

- 1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.
- 1.2 RELATED DOCUMENTS:
 - A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
 - B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.
- 1.3 SUBMITTALS:
 - A. THE WORK IN ALL ASPECTS SHALL COMPLY WITH THE CONSTRUCTION DRAWINGS AND THESE SPECIFICATIONS.
 - B. SUBMIT THE FOLLOWING TO COMPANY REPRESENTATIVE FOR APPROVAL.
 1. CONCRETE MIX-DESIGNS FOR TOWER FOUNDATIONS, ANCHORS PIERS, AND CONCRETE PAVING.
 2. CONCRETE BREAK TESTS AS SPECIFIED HEREIN.
 3. SPECIAL FINISHES FOR INTERIOR SPACES, IF ANY.
 4. ALL EQUIPMENT AND MATERIALS SO IDENTIFIED ON THE CONSTRUCTION DRAWINGS.
 5. CHEMICAL GROUNDING DESIGN
 - D. ALTERNATES: AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINT'S CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO BEING SHIPPED TO SITE. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE CONSIDERED. SUBMITTAL FOR APPROVAL SHALL INCLUDE A STATEMENT OF COST REDUCTION PROPOSED FOR USE OF ALTERNATE PRODUCT.
- 1.4 TESTS AND INSPECTIONS:
 - A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.
 - B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 1. COAX SWEEPS AND FIBER TESTS PER TS-0200 REV 4 ANTENNA LINE ACCEPTANCE STANDARDS.
 2. AZIMUTH, 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, AZIMUTH, DOWNTILT, AND AGL MUST CONFORM TO THE RF DATA SHEETS. SWEEP AND FIBER TESTS
 2. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
 3. ALL AVAILABLE JURISDICTIONAL INFORMATION
 4. PDF SCAN OF REDLINES PRODUCED IN FIELD

5. ELECTRONIC AS-BUILT DRAWINGS IN AUTOCAD AND PDF FORMATS. ANY FIELD CHANGE MUST BE REFLECTED BY MODIFYING THE PLANS, ELEVATIONS, AND DETAILS IN THE DRAWING SETS. GENERAL NOTES INDICATING MODIFICATIONS WILL NOT BE ACCEPTED. CHANGES SHALL BE HIGHLIGHTED AS "CLOUDS" IDENTIFIED AS THE "AS-BUILT" CONDITION.
 6. LIEN WAIVERS
 7. FINAL PAYMENT APPLICATION
 8. REQUIRED FINAL CONSTRUCTION PHOTOS
 9. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
 10. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).
- 1.5 COMMISSIONING: PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPs
- 1.6 INTEGRATION: PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPs

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

- 3.1 REQUIREMENTS FOR TESTING:
- A. THIRD PARTY TESTING AGENCY:
 1. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
 2. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
 3. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASHTO, AND OTHER METHODS IS NEEDED.
 4. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASHTO, AND OTHER METHODS IS NEEDED.
- 3.2 REQUIRED TESTS:
- A. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 1. CONCRETE CYLINDER BREAK TESTS FOR THE TOWER AND ANCHOR FOUNDATIONS AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
 2. ASPHALT ROADWAY COMPACTED THICKNESS, SURFACE SMOOTHNESS, AND COMPACTED DENSITY TESTING AS SPECIFIED IN SECTION: HOT MIX ASPHALT PAVING.
 3. FIELD QUALITY CONTROL TESTING AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
 4. TESTING REQUIRED UNDER SECTION: AGGREGATE BASE FOR ACCESS ROADS, PADS AND ANCHOR LOCATIONS
 5. STRUCTURAL BACKFILL COMPACTION TESTS FOR THE TOWER FOUNDATION.
 6. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.
 7. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
 8. GROUNDING AT ANTENNA MASTS FOR GPS AND ANTENNAS
 9. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.
- 3.3 REQUIRED INSPECTIONS
- A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.
 - B. CONDUCT INSPECTIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 1. GROUNDING SYSTEM INSTALLATION PRIOR TO EARTH CONCEALMENT DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
 2. FORMING FOR CONCRETE AND REBAR PLACEMENT PRIOR TO POUR DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
 3. COMPACTION OF BACKFILL MATERIALS; AGGREGATE BASE FOR ROADS, PADS, AND ANCHORS; ASPHALT PAVING; AND SHAFT BACKFILL FOR CONCRETE AND WOOD POLES, BY INDEPENDENT THIRD PARTY AGENCY.
 4. PRE- AND POST-CONSTRUCTION ROOFTOP AND STRUCTURAL INSPECTIONS ON EXISTING FACILITIES.
 5. TOWER ERECTION SECTION STACKING AND PLATFORM ATTACHMENT DOCUMENTED BY DIGITAL PHOTOGRAPHS BY THIRD PARTY AGENCY.
 6. ANTENNA AZIMUTH, DOWN TILT AND PER SUNLIGHT TOOL SUNSIGHT INSTRUMENTS - ANTENNA ALIGNMENT TOOL (AAT)

PLANS PREPARED FOR:



PLANS PREPARED BY:

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

1033 Watervliet Shaker Rd | Albany, NY 12209
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JOB NUMBER 526-103

PROJECT MANAGER:

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DEVELOPMENT

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ENGINEERING LICENSE:



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ISSUED FOR PERMIT		12/18/17	JDL	0

SITE NAME:

SOUTH OLD LYME - VERIZON

SITE NUMBER:

CT54XC701

SITE ADDRESS:

**125 MILE CREEK ROAD
OLD LYME, CT 06070**

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-2

CONTINUE FROM SP-2

- 7. VERIFICATION DOCUMENTED WITH THE ANTENNA CHECKLIST REPORT, BY A&E, SITE DEVELOPMENT REP, OR RF REP.
 - 8. FINAL INSPECTION CHECKLIST AND HANDOFF WALK (HOC). SIGNED FORM SHOWING ACCEPTANCE BY FIELD OPS IS TO BE UPLOADED INTO SMS.
 - 9. COAX SWEEP AND FIBER TESTING DOCUMENTS SUBMITTED VIA SMS FOR RF APPROVAL.
 - 10. SCAN-ABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
 - 11. ALL AVAILABLE JURISDICTIONAL INFORMATION
 - 12. PDF SCAN OF REDLINES PRODUCED IN FIELD
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.
- D. CONSTRUCTION INSPECTIONS AND CORRECTIVE MEASURES SHALL BE DOCUMENTED BY THE CONTRACTOR WITH WRITTEN REPORTS AND PHOTOGRAPHS. PHOTOGRAPHS MUST BE DIGITAL AND OF SUFFICIENT QUALITY TO CLEARLY SHOW THE SITE CONSTRUCTION. PHOTOGRAPHS MUST CLEARLY IDENTIFY THE PHOTOGRAPHED ITEM AND BE LABELED WITH THE SITE CASCADE NUMBER, SITE NAME, DESCRIPTION, AND DATE.
- 3.4 DELIVERABLES: TEST AND INSPECTION REPORTS AND CLOSEOUT DOCUMENTATION SHALL BE UPLOADED TO THE SMS AND/OR FORWARDED TO SPRINT FOR INCLUSION INTO THE PERMANENT SITE FILES.
- A. THE FOLLOWING TEST AND INSPECTION REPORTS SHALL BE PROVIDED AS APPLICABLE.
- 1. CONCRETE MIX AND CYLINDER BREAK REPORTS.
 - 2. STRUCTURAL BACKFILL COMPACTION REPORTS.
 - 3. SITE RESISTANCE TO EARTH TEST.
 - 4. ANTENNA AZIMUTH AND DOWN TILT VERIFICATION
 - 5. TOWER ERECTION INSPECTIONS AND MEASUREMENTS DOCUMENTING TOWER INSTALLED PER SUPPLIER'S REQUIREMENTS AND THE APPLICABLE SECTIONS HEREIN.
 - 6. COAX CABLE SWEEP TESTS PER COMPANY'S "ANTENNA LINE ACCEPTANCE STANDARDS".
- B. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES THE FOLLOWING;
- 1. TEST WELLS AND TRENCHES: PHOTOGRAPHS OF ALL TEST WELLS; PHOTOGRAPHS SHOWING ALL OPEN EXCAVATIONS AND TRENCHING PRIOR TO BACKFILLING SHOWING A TAPE MEASURE VISIBLE IN THE EXCAVATIONS INDICATING DEPTH.
 - 2. CONDUITS, CONDUCTORS AND GROUNDING: PHOTOGRAPHS SHOWING TYPICAL INSTALLATION OF CONDUCTORS AND CONNECTORS; PHOTOGRAPHS SHOWING TYPICAL BEND RADIUS OF INSTALLED GROUND WIRES AND GROUND ROD SPACING;
 - 3. CONCRETE FORMS AND REINFORCING: CONCRETE FORMING AT TOWER AND EQUIPMENT/SHELTER PAD/FOUNDATIONS - PHOTOGRAPHS SHOWING ALL REINFORCING STEEL, UTILITY AND CONDUIT STUB OUTS; PHOTOGRAPHS SHOWING CONCRETE POUR OF SHELTER SLAB/FOUNDATION, TOWER FOUNDATION AND GUY ANCHORS WITH VIBRATOR IN USE; PHOTOGRAPHS SHOWING EACH ANCHOR ON GUYED TOWERS, BEFORE CONCRETE POUR.
 - 4. TOWER, ANTENNAS AND MAINLINE: INSPECTION AND PHOTOGRAPHS OF SECTION STACKING; INSPECTION AND PHOTOGRAPHS OF PLATFORM COMPONENT ATTACHMENT POINTS; PHOTOGRAPHS OF TOWER TOP GROUNDING; PHOTOS OF TOWER COAX LINE COLOR CODING AT THE TOP AND AT GROUND LEVEL; INSPECTION AND PHOTOGRAPHS OF OPERATIONAL OF TOWER LIGHTING, AND PLACEMENT OF FAA REGISTRATION SIGN; PHOTOGRAPHS SHOWING ADDITIONAL GROUNDING POINTS FOR TOWERS GREATER THAN 200 FEET.; PHOTOS OF ANTENNA GROUND BAR, EQUIPMENT GROUND BAR, AND MASTER GROUND BAR; PHOTOS OF GPS ANTENNA(S); PHOTOS OF EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA; PHOTOS OF COAX WEATHERPROOFING - TOP AND BOTTOM; PHOTOS OF COAX GROUNDING--TOP AND BOTTOM; PHOTOS OF ANTENNA AND MAST GROUNDING; PHOTOS OF COAX CABLE ENTRY INTO SHELTER; PHOTOS OF PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.
 - 5. ROOF TOPS: PRE-CONSTRUCTION AND POST-CONSTRUCTION VISUAL INSPECTION AND PHOTOGRAPHS OF THE ROOF AND INTERIOR TO DETERMINE AND DOCUMENT CONDITIONS; ROOF TOP CONSTRUCTION INSPECTIONS AS REQUIRED BY THE JURISDICTION; PHOTOGRAPHS OF CABLE TRAY AND/OR ICE BRIDGE; PHOTOGRAPHS OF DOGHOUSE/CABLE EXIT FROM ROOF;
 - 6. SITE LAYOUT - PHOTOGRAPHS OF THE OVERALL COMPOUND, INCLUDING EQUIPMENT PLATFORM FROM ALL FOUR CORNERS.
 - 7. FINISHED UTILITIES: CLOSE-UP PHOTOGRAPHS OF THE PPC BREAKER PANEL; CLOSE-UP PHOTOGRAPH OF THE INSIDE OF THE TELCO PANEL AND NIU; CLOSE-UP PHOTOGRAPH OF THE POWER METER AND DISCONNECT; PHOTOS OF POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE; PHOTOGRAPHS AT METER BOX AND/OR FACILITY DISTRIBUTION PANEL.
 - 8. REQUIRED MATERIALS CERTIFICATIONS: CONCRETE MIX DESIGNS; MILL CERTIFICATION FOR ALL REINFORCING AND STRUCTURAL STEEL; AND ASPHALT PAVING MIX DESIGN.
 - 9. ANY AND ALL SUBMITTALS BY THE JURISDICTION OR COMPANY.

SECTION 01 400 - SUBMITTALS & TESTS

PART 1 - GENERAL

- 1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.
- 1.2 RELATED DOCUMENTS:
 - A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
 - B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.


PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

- 3.1 WEEKLY REPORTS:
 - A. CONTRACTOR SHALL PROVIDE SPRINT WITH WEEKLY REPORTS SHOWING PROJECT STATUS. THIS STATUS REPORT FORMAT WILL BE PROVIDED TO THE CONTRACTOR BY SPRINT. THE REPORT WILL CONTAIN SITE ID NUMBER, THE MILESTONES FOR EACH SITE, INCLUDING THE BASELINE DATE, ESTIMATED COMPLETION DATE AND ACTUAL COMPLETION DATE.
 - B. REPORT INFORMATION WILL BE TRANSMITTED TO SPRINT VIA ELECTRONIC MEANS AS REQUIRED. THIS INFORMATION WILL PROVIDE A BASIS FOR PROGRESS MONITORING AND PAYMENT.
- 3.2 PROJECT CONFERENCE CALLS:
 - A. SPRINT MAY HOLD WEEKLY PROJECT CONFERENCE CALLS. CONTRACTOR WILL BE REQUIRED TO COMMUNICATE SITE STATUS, MILESTONE COMPLETIONS AND UPCOMING MILESTONE PROJECTIONS, AND ANSWER ANY OTHER SITE STATUS QUESTIONS AS NECESSARY.
- 3.3 PROJECT TRACKING IN SMS:
 - A. CONTRACTOR SHALL PROVIDE SCHEDULE UPDATES AND PROJECTIONS IN THE SMS SYSTEM ON A WEEKLY BASIS.
- 3.4 ADDITIONAL REPORTING:
 - A. ADDITIONAL OR ALTERNATE REPORTING REQUIREMENTS MAY BE ADDED TO THE REPORT AS DETERMINED TO BE REASONABLY NECESSARY BY COMPANY.
- 3.5 PROJECT PHOTOGRAPHS:
 - A. FILE DIGITAL PHOTOGRAPHS OF COMPLETED SITE IN JPEG FORMAT IN THE SMS PHOTO LIBRARY FOR THE RESPECTIVE SITE. PHOTOGRAPHS SHALL BE CLEARLY LABELED WITH SITE NUMBER, NAME AND DESCRIPTION, AND SHALL INCLUDE AT A MINIMUM THE FOLLOWING AS APPLICABLE:
 - 1. SHELTER 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.

PLANS PREPARED FOR:



PLANS PREPARED BY:

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SITE NUMBER:

CT54XC701

SITE ADDRESS:

**125 MILE CREEK ROAD
OLD LYME, CT 06070**

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-3



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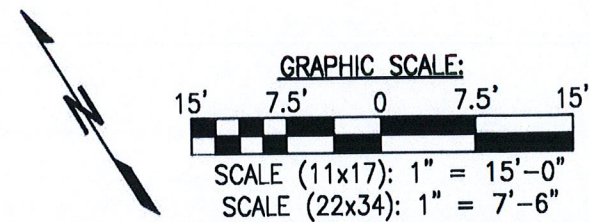
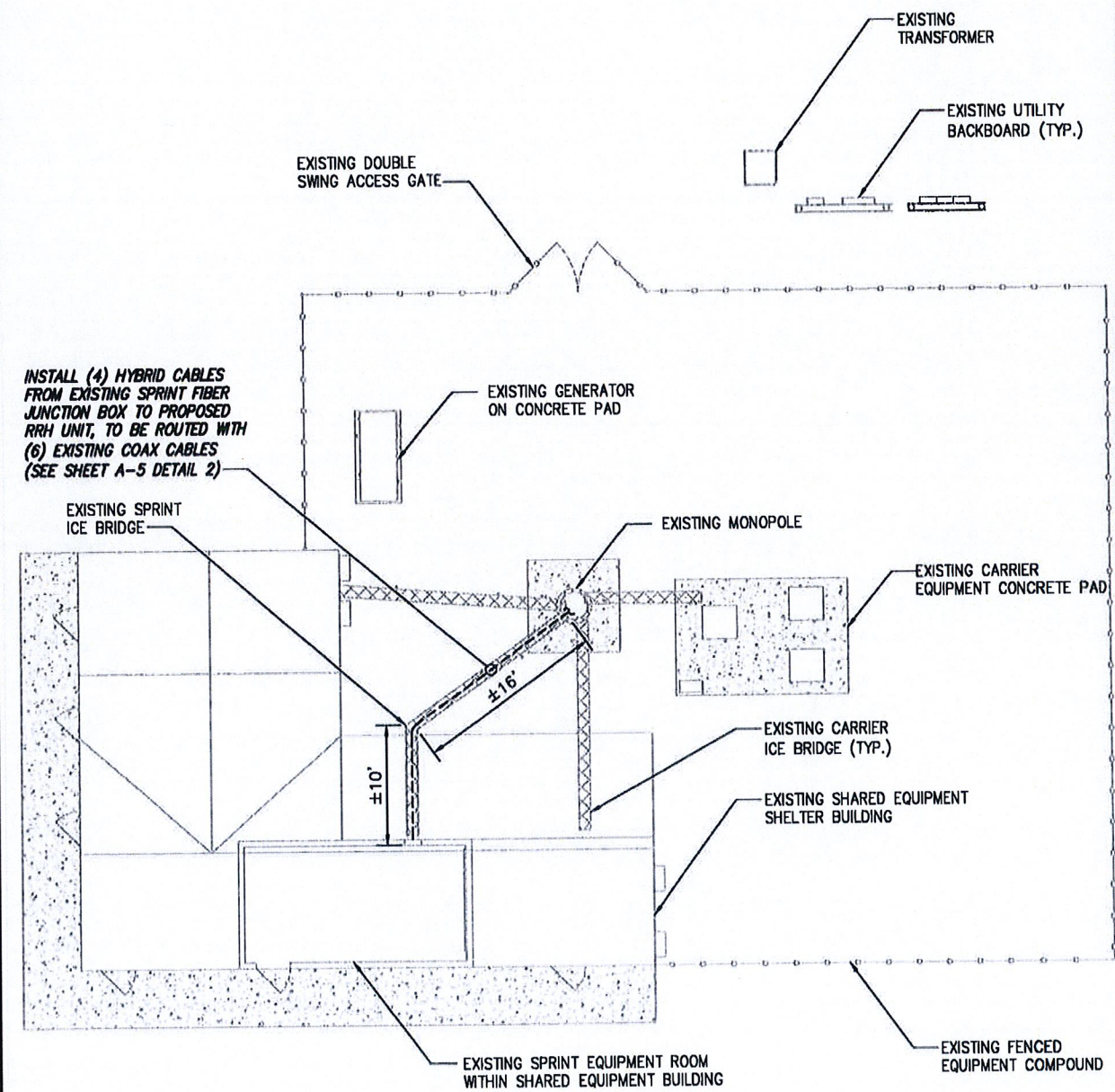
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SITE NUMBER:
CT54XC701

SITE ADDRESS:
**125 MILE CREEK ROAD
 OLD LYME, CT 06070**

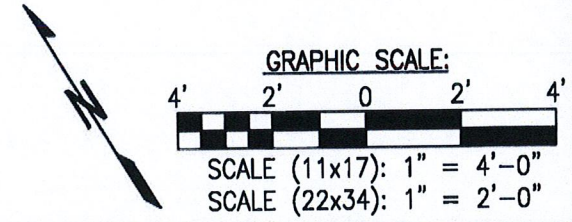
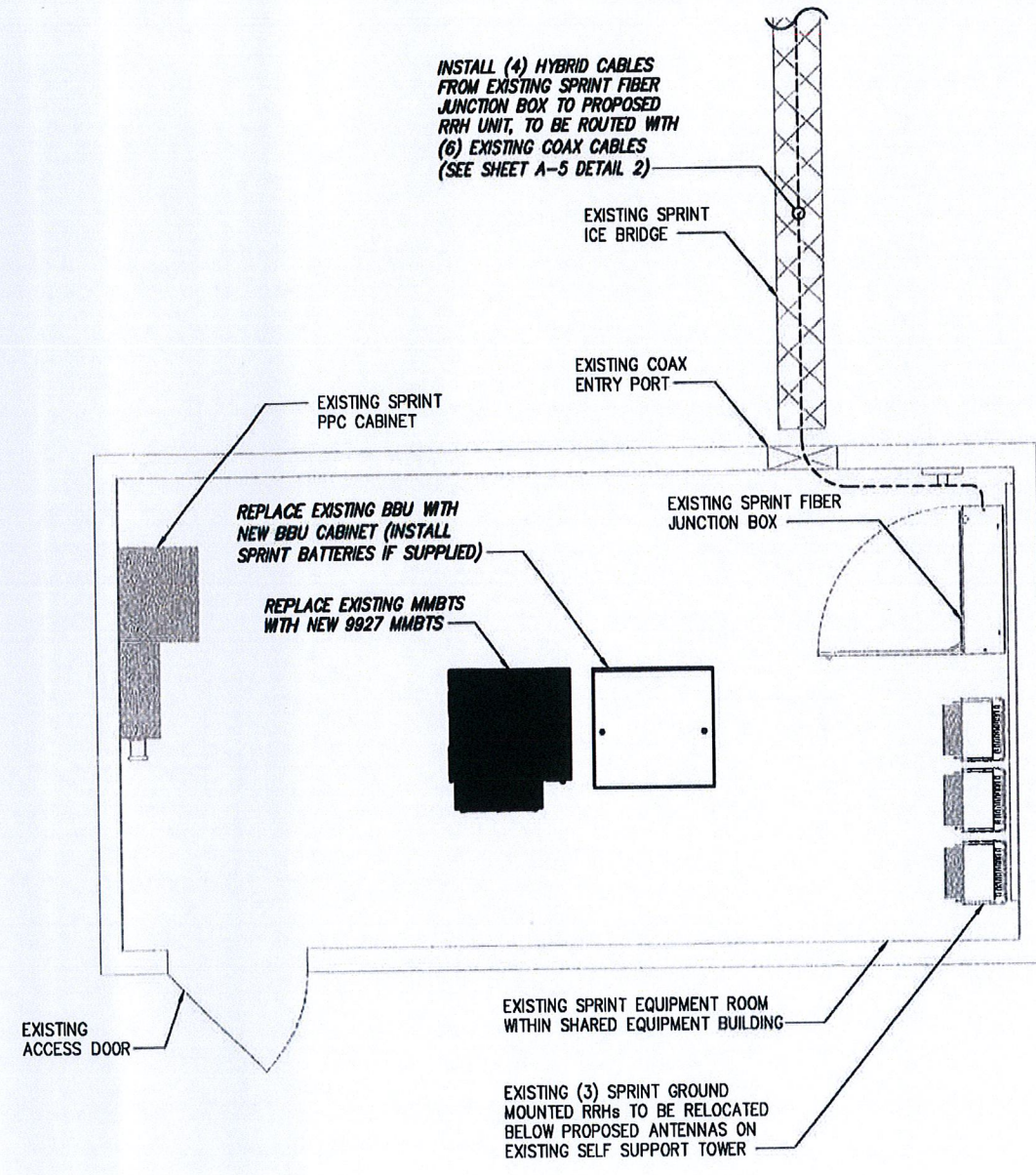
SHEET DESCRIPTION:
SITE PLAN

SHEET NUMBER:
A-1



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

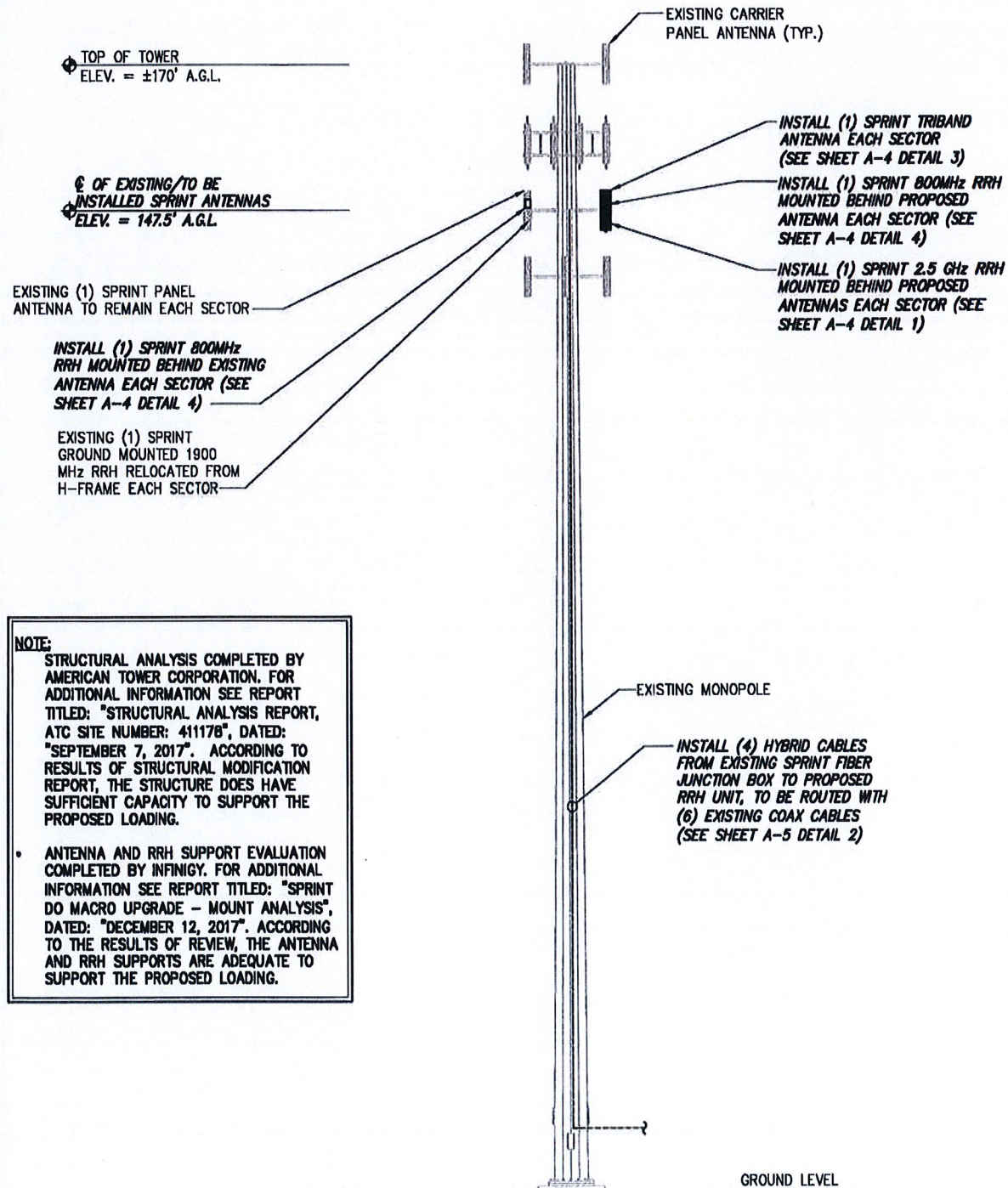
OVERALL SITE PLAN SCALE: AS NOTED 1



SPRINT EQUIPMENT PLAN SCALE: AS NOTED 2

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

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



NOTE:
 STRUCTURAL ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "STRUCTURAL ANALYSIS REPORT, ATC SITE NUMBER: 411178", DATED: "SEPTEMBER 7, 2017". ACCORDING TO RESULTS OF STRUCTURAL MODIFICATION REPORT, THE STRUCTURE DOES HAVE SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED LOADING.
 • ANTENNA AND RRH SUPPORT EVALUATION COMPLETED BY INFINIGY. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "SPRINT DO MACRO UPGRADE - MOUNT ANALYSIS", DATED: "DECEMBER 12, 2017". ACCORDING TO THE RESULTS OF REVIEW, THE ANTENNA AND RRH SUPPORTS ARE ADEQUATE TO SUPPORT THE PROPOSED LOADING.

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	ETCR-854L12H6	KMW	0°	1	-	(2) 800 MHZ 2X50W RRH W/ FILTER	SEE SHEET A-5 DETAIL 1	±147.5' AGL	±147.5' AGL
	EXISTING	DB980F90E-M	ANDREW	0°	1	REMAIN	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	EXISTING COAX		
	EXISTING	DB980F90E-M	ANDREW	0°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING COAX		
BETA	PROPOSED	ETCR-854L12H6	KMW	120°	1	-	(2) 800 MHZ 2X50W RRH W/ FILTER	SEE SHEET A-5 DETAIL 1	±195'	±147.5' AGL
	EXISTING	DB980F90E-M	ANDREW	120°	1	REMAIN	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	EXISTING COAX		
	EXISTING	DB980F90E-M	ANDREW	120°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING COAX		
GAMMA	PROPOSED	ETCR-854L12H6	KMW	240°	1	-	(2) 800 MHZ 2X50W RRH W/ FILTER	SEE SHEET A-5 DETAIL 1	±147.5' AGL	±147.5' AGL
	EXISTING	DB980F90E-M	ANDREW	240°	1	REMAIN	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	EXISTING COAX		
	EXISTING	DB980F90E-M	ANDREW	240°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING COAX		

PROJECT SCOPE:

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

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

SITE LOADING CHART

NO SCALE

2

DETAIL NOT USED

NO SCALE

2

PLANS PREPARED FOR:



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SHEET DESCRIPTION:

TOWER ELEVATION

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PLANS PREPARED FOR:



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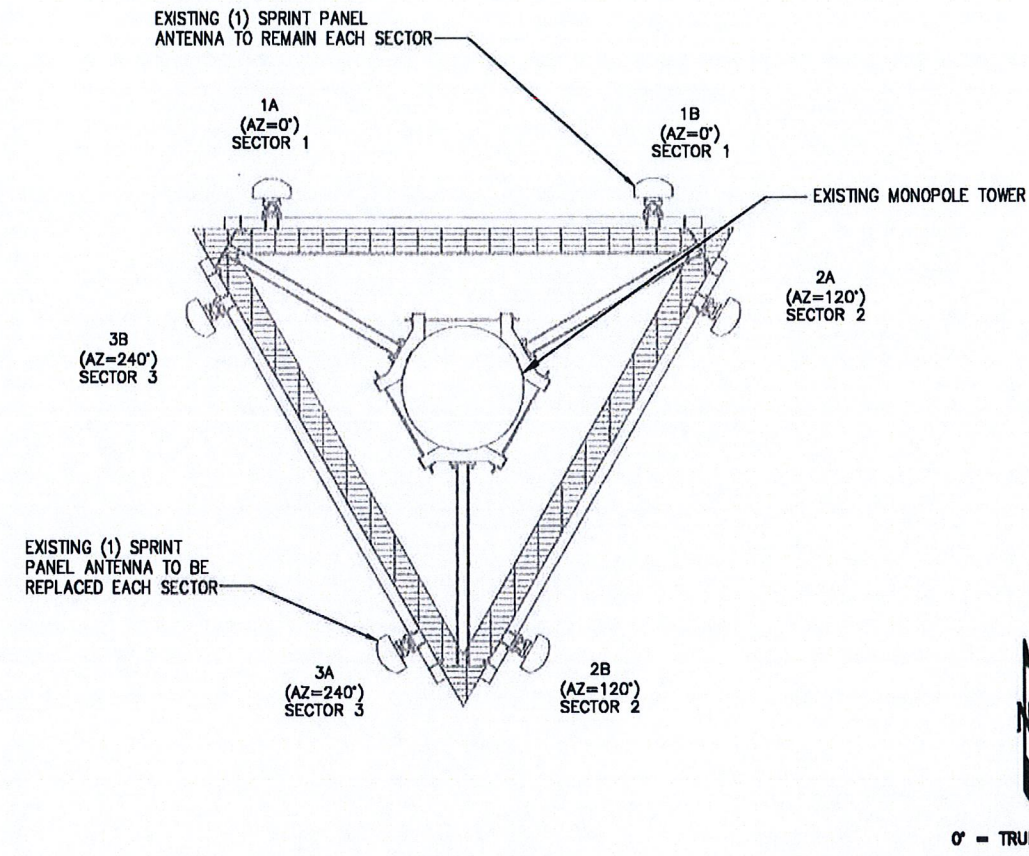
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SHEET DESCRIPTION:
**ANTENNA LAYOUT
 & MOUNTING DETAILS**

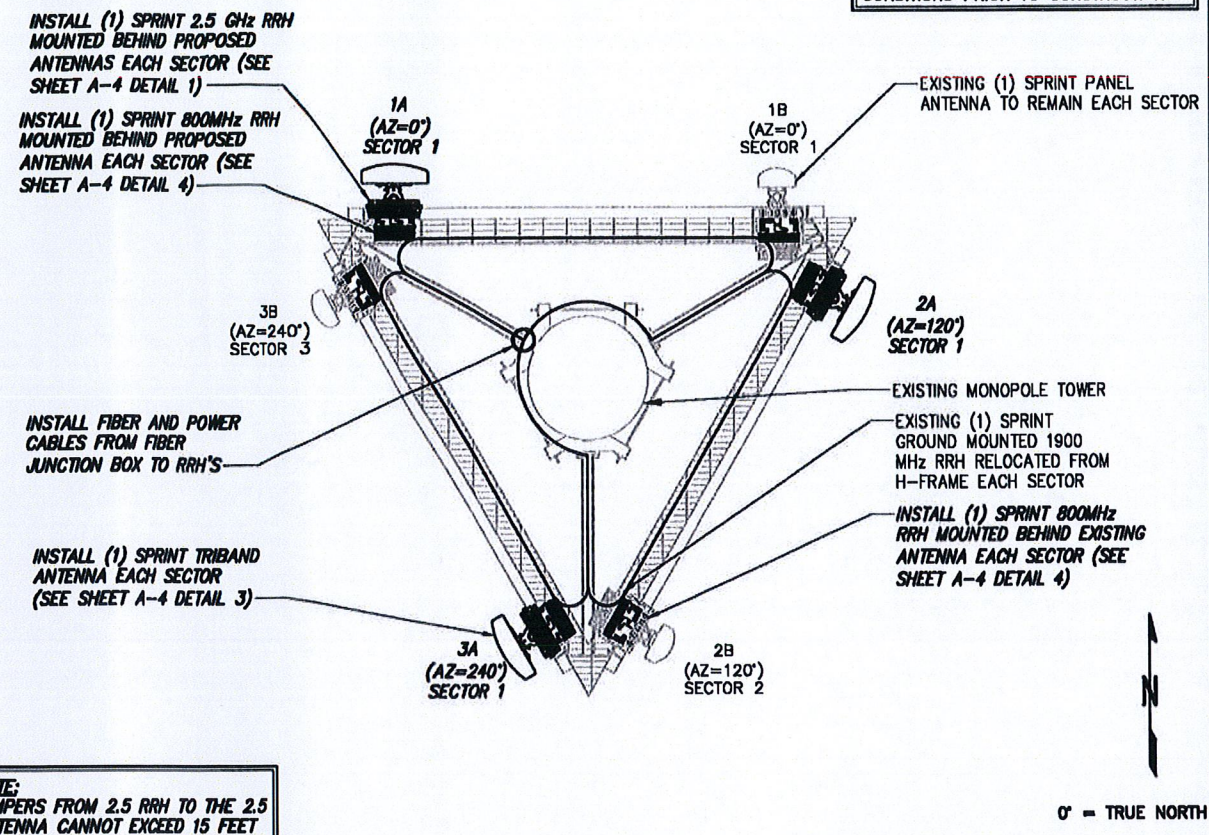
SHEET NUMBER:
A-3

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



EXISTING ANTENNA LAYOUT

NO SCALE 1



FINAL ANTENNA & RRH LAYOUT

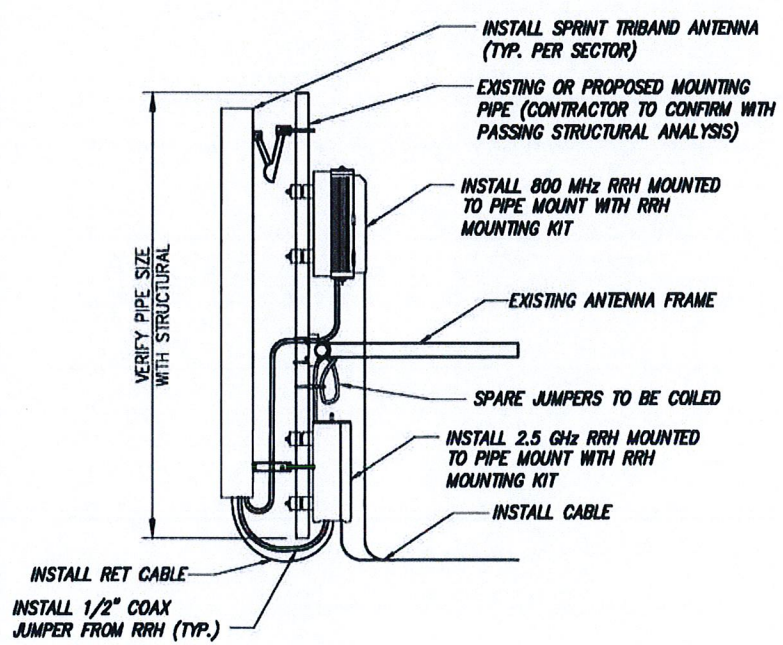
NO SCALE 2

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

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



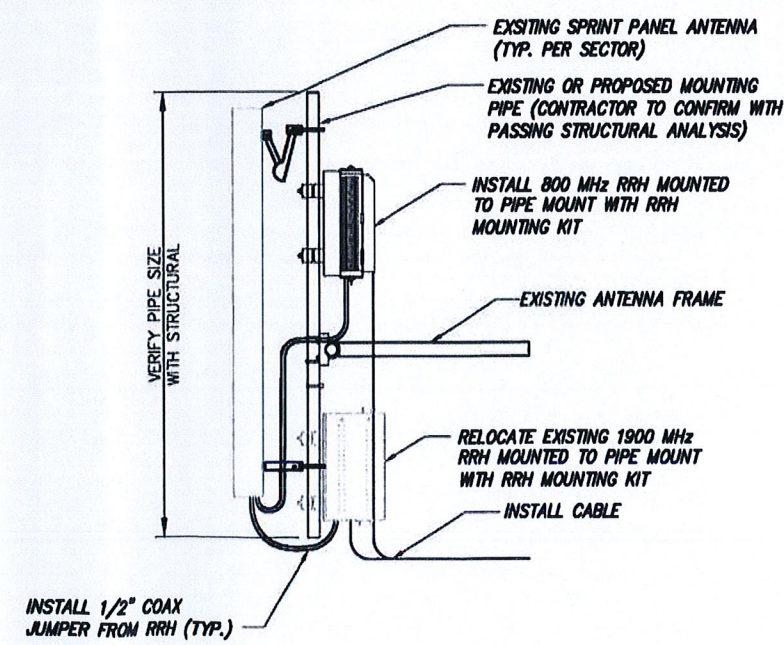
TYPICAL ANTENNA & RRH MOUNTING DETAILS

NO SCALE 3

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

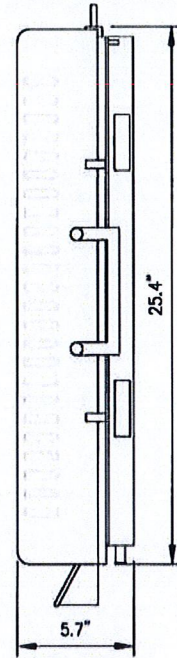


RRH MOUNTING DETAIL

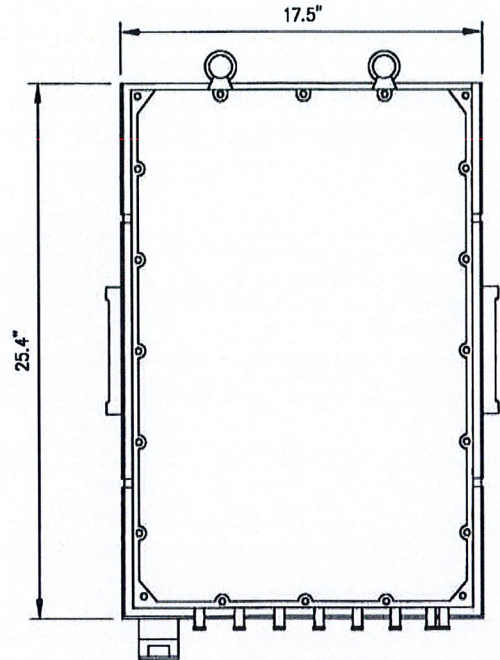
NO SCALE 4

RRH: ALCATEL LUCENT TD-RRH8X20

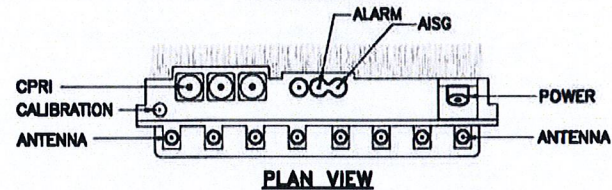
COLOR: LIGHT GREY
WEIGHT: 70 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

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

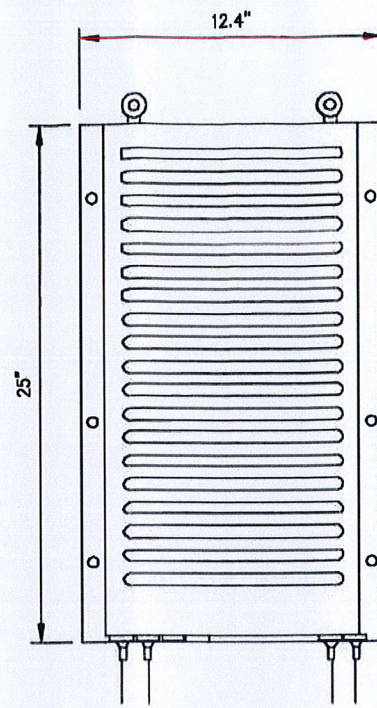
2.5 RRH'S

NO SCALE

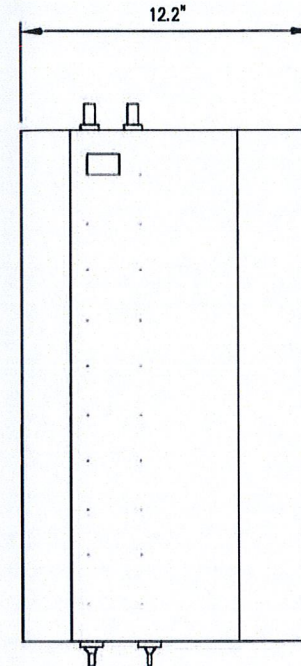
1

RRH: ALCATEL LUCENT 1900 MHz

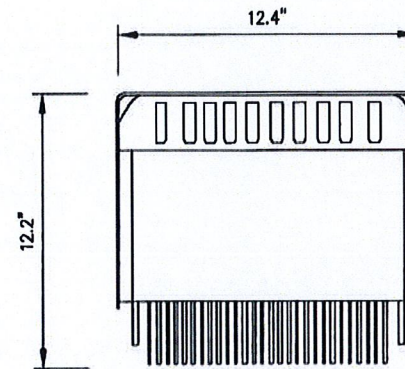
COLOR: LIGHT GREY
WEIGHT: 70 LBS.
(INCLUDING OPTIONAL SOLAR SHIELD)



FRONT VIEW



SIDE VIEW



TOP VIEW

EXISTING 1900 MHz RRH

NO SCALE

2

PLANS PREPARED FOR:



PLANS PREPARED BY:

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1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-103

PROJECT MANAGER:

AIRSMITH
DEVELOPMENT

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

ENGINEERING LICENSE:



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ISSUED FOR PERMIT	12/18/17	JDL	0

SITE NAME:

**SOUTH OLD LYME -
VERIZON**

SITE NUMBER:

CT54XC701

SITE ADDRESS:

**125 MILE CREEK ROAD
OLD LYME, CT 0670**

SHEET DESCRIPTION:

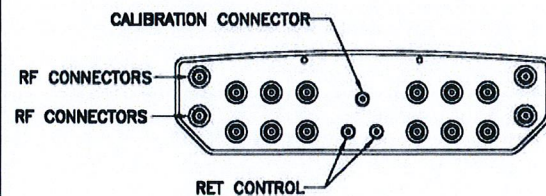
**EQUIPMENT &
MOUNTING DETAILS**

SHEET NUMBER:

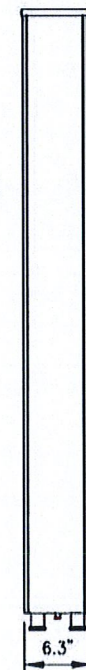
A-4

ANTENNA KMW ETCR-654L12H6

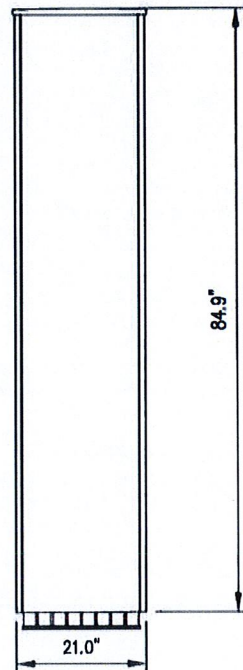
RADOME MATERIAL: ASA
RADOME COLOR: LIGHT GREY
DIMENSIONS, HxWxD.in(mim): 84.9"x21.0"x6.3" (2156x533x160mm)
WEIGHT: 84.9 lba
CONNECTORS: (8) 7/16" DIN FEMALE
(8) MINI DIN FEMALE
(1) N TYPE(CAL PORT, FEMALE)



PLAN VIEW



SIDE VIEW



FRONT VIEW

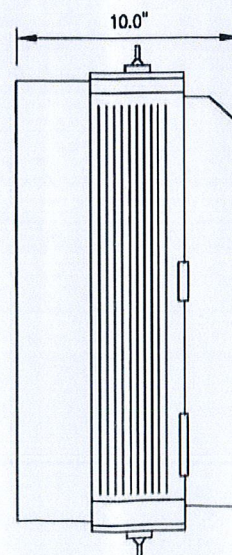
TRIBAND ANTENNA

NO SCALE

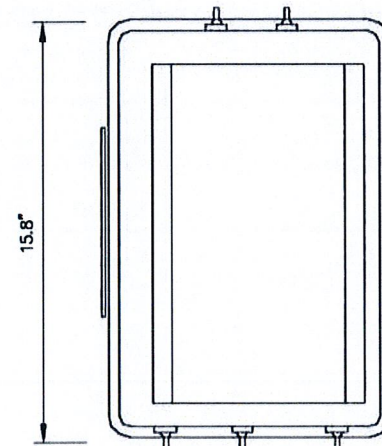
3

RRH: ALCATEL LUCENT RRH 800 MHz 2x50W

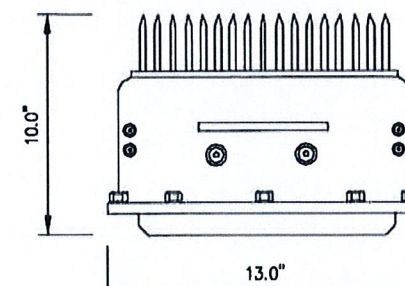
COLOR: LIGHT GREY
WEIGHT: 53 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

800 MHz RRH

NO SCALE

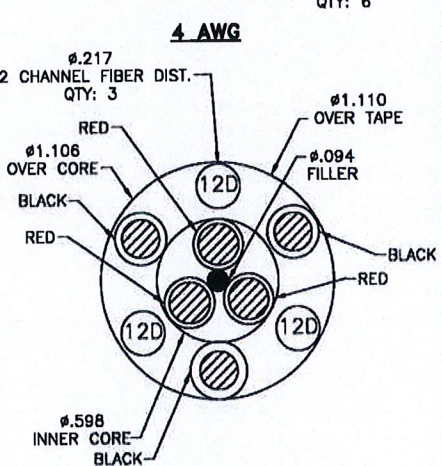
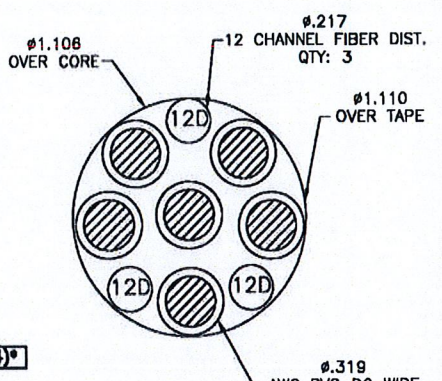
4

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.

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

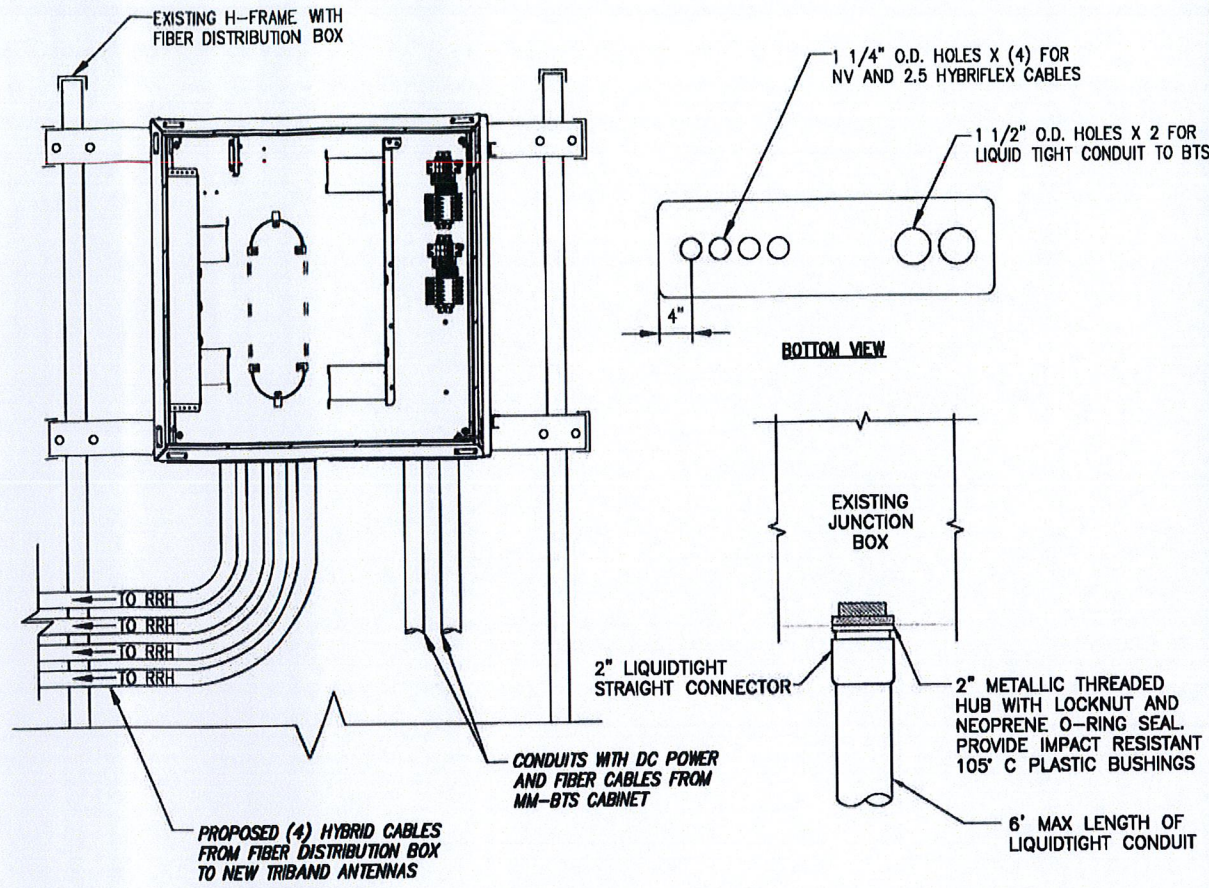


RFS HYBRIFLEX JUMPER CABLE SCHEDULE

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

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

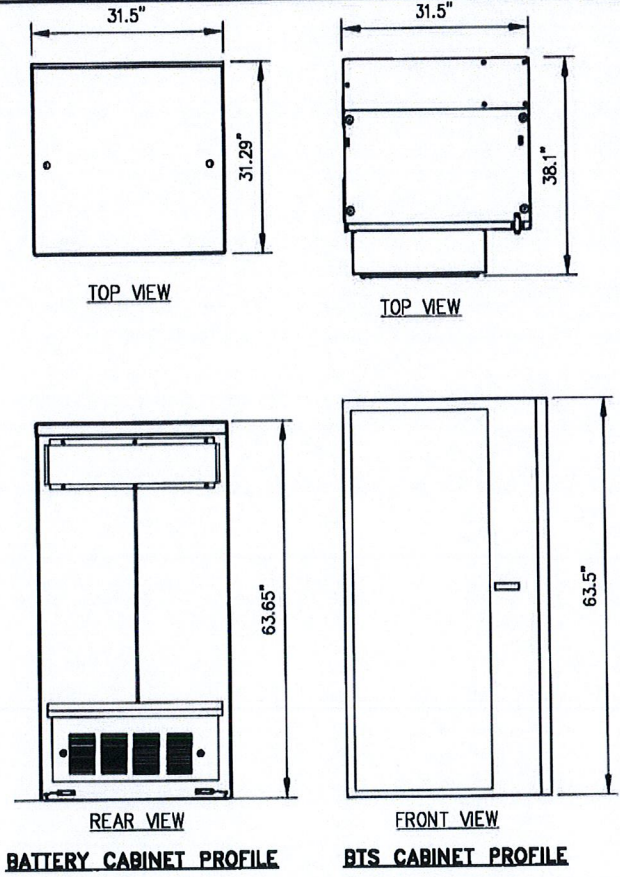
* PROPOSED CABLE LENGTH WAS DETERMINED USING THE SUM OF THE RAD CENTER OF ANTENNAS, AND DISTANCE FROM EXISTING EQUIPMENT AREA TO TOWER BASE WITH AN ADDITIONAL 20' BUFFER. LENGTH TO BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.



FIBER JUNCTION BOX & PENETRATION

NO SCALE 2

DESIGN CRITERIA:
2009 INTERNATIONAL BUILDING CODE W/ STATE MODIFICATION
WIND SPEED (ASCE-7-05) 90 MPH
EXPOSURE B
IMPORTANCE FACTOR 1.0
SEISMIC SITE CLASS D
S_s=0.152 S_w=0.050
SEISMIC IMPORTANCE FACTOR 1.0
SEISMIC DESIGN CATEGORY B
9927 MM BTS CABINET WEIGHT: 594 LBS.
EMERSON BATTERY CABINET SPECIFICATIONS:
(31.29"x31.5"x63.65")
WEIGHTS:
SHIPPING WEIGHT: 600 LBS.
LIFT WEIGHT: 540 LBS.
TOTAL WEIGHT: 2640 LBS (WITH BATTERIES)
INDIVIDUAL BATTERY WEIGHT: 105 LBS
(DO NOT LIFT WITH BATTERIES IN CABINET)
MATERIAL SPECIFICATIONS
C-, M-, AND ANGLE SHAPES: ASTM A36
HIGH-STRENGTH BOLTS: ASTM A325SS OR (A325N)
STRUCTURAL WF SHAPES: ASTM A572-GR50
TUBE STEEL & PIPE COLUMNS: ASTM A500, GRADE B
WELDING ELECTRODES: E70XX
W - SHAPES: ASTM A992, GRADE 50
U-BOLTS: ASTM A36



BATTERY CABINET PROFILE BTS CABINET PROFILE

NO SCALE 3

800/1900/2500 CABLE CROSS SECTION DATA

NO SCALE 1

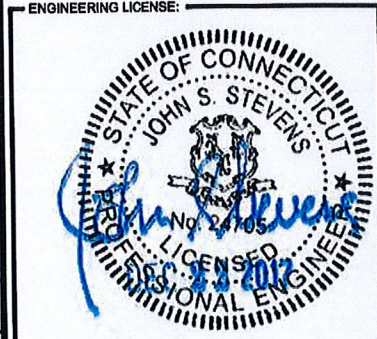
NEW CABINET DETAILS

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Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-103

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



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SITE NAME:
SOUTH OLD LYME - VERIZON

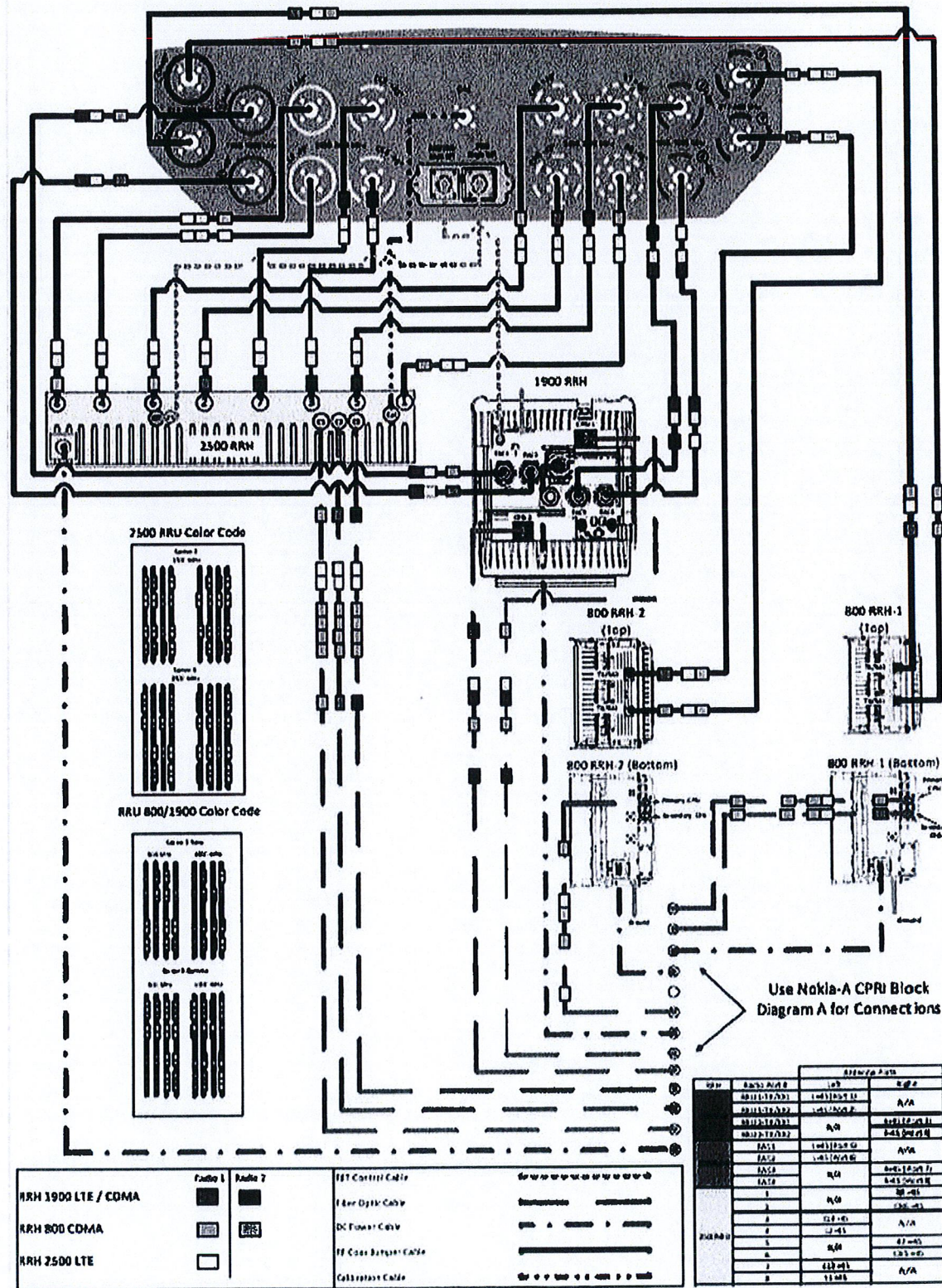
SITE NUMBER:
CT54XC701

SITE ADDRESS:
**125 MILE CREEK ROAD
OLD LYME, CT 06070**

SHEET DESCRIPTION:
CIVIL DETAILS

SHEET NUMBER:
A-5

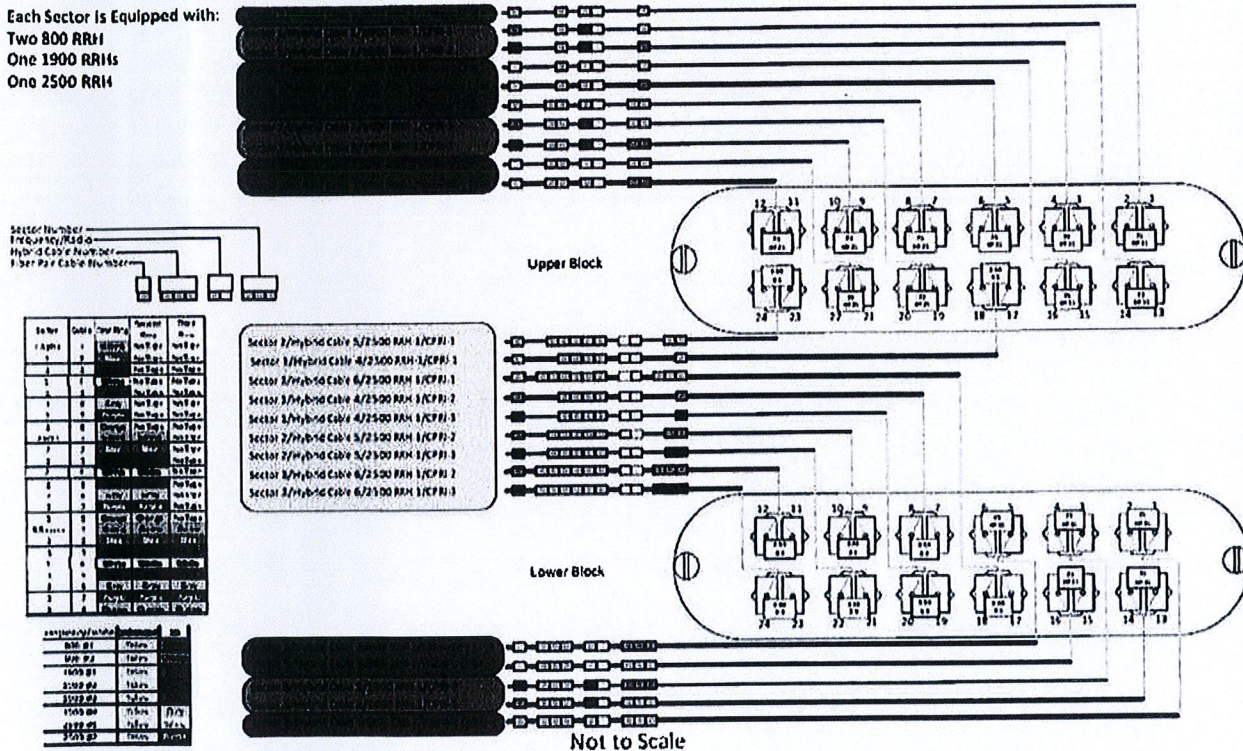
KMW 16 Port Nokia-A RRH 800, 1900, and 2500 (Sprint Scenario 4)



Not to Scale

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

CPRI Block Connections for Sprint Scenario 4



Not to Scale

SP	RRH	Port	Block	Port
1	800	1	Upper	1
1	800	2	Upper	2
1	1900	1	Upper	3
1	1900	2	Upper	4
1	2500	1	Upper	5
1	2500	2	Upper	6
2	800	1	Upper	7
2	800	2	Upper	8
2	1900	1	Upper	9
2	1900	2	Upper	10
2	2500	1	Upper	11
2	2500	2	Upper	12
3	800	1	Upper	13
3	800	2	Upper	14
3	1900	1	Upper	15
3	1900	2	Upper	16
3	2500	1	Upper	17
3	2500	2	Upper	18
4	800	1	Upper	19
4	800	2	Upper	20
4	1900	1	Upper	21
4	1900	2	Upper	22
4	2500	1	Upper	23
4	2500	2	Upper	24
5	800	1	Lower	1
5	800	2	Lower	2
5	1900	1	Lower	3
5	1900	2	Lower	4
5	2500	1	Lower	5
5	2500	2	Lower	6
6	800	1	Lower	7
6	800	2	Lower	8
6	1900	1	Lower	9
6	1900	2	Lower	10
6	2500	1	Lower	11
6	2500	2	Lower	12
7	800	1	Lower	13
7	800	2	Lower	14
7	1900	1	Lower	15
7	1900	2	Lower	16
7	2500	1	Lower	17
7	2500	2	Lower	18
8	800	1	Lower	19
8	800	2	Lower	20
8	1900	1	Lower	21
8	1900	2	Lower	22
8	2500	1	Lower	23
8	2500	2	Lower	24

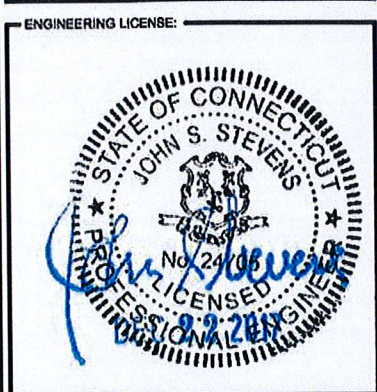
Use Nokia-A CPRI Block Diagram A for Connections

PLANS PREPARED FOR:



PLANS PREPARED BY:
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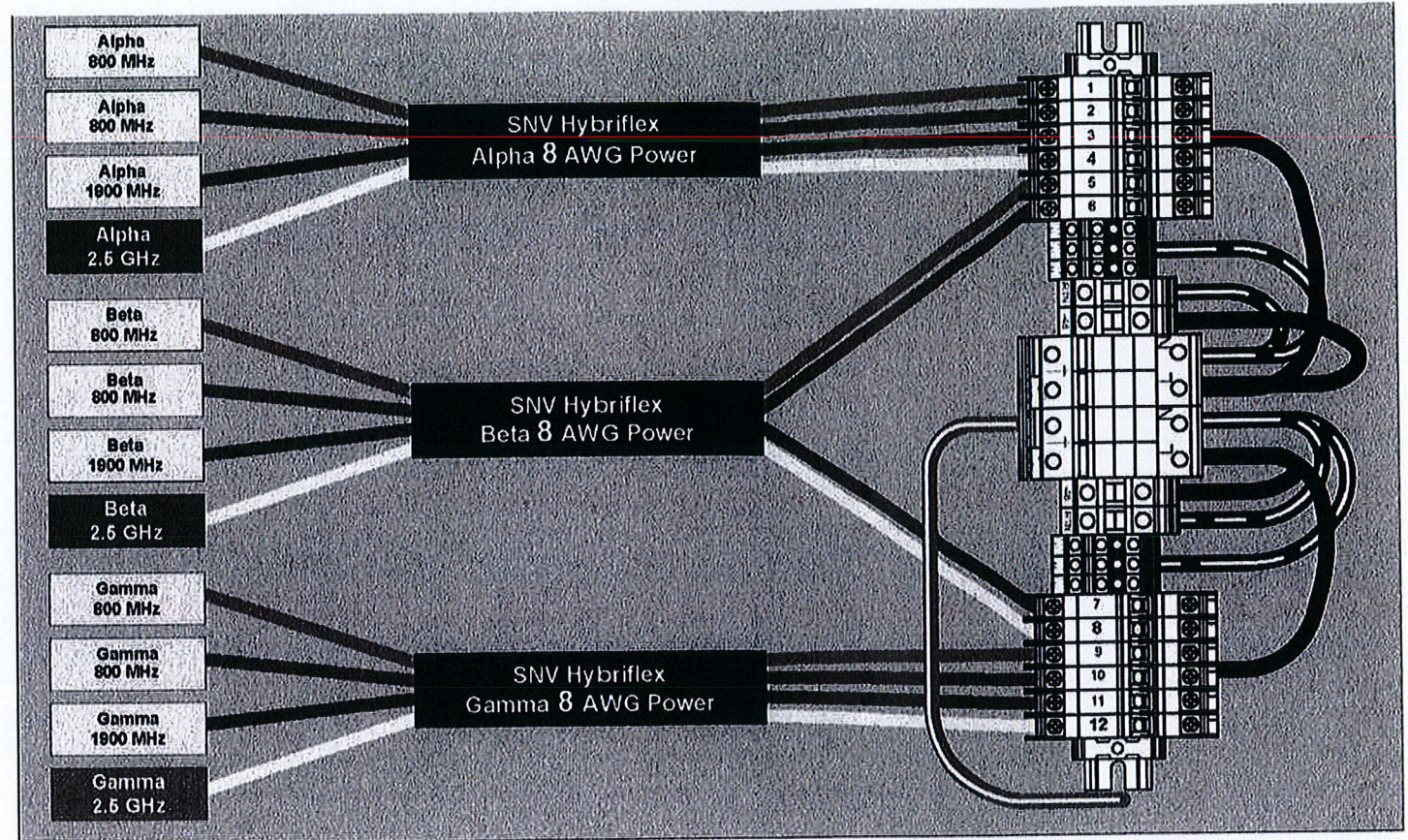
SITE NAME:
SOUTH OLD LYME - VERIZON

SITE NUMBER:
CT54XC701

SITE ADDRESS:
**125 MILE CREEK ROAD
OLD LYME, CT 06070**

SHEET DESCRIPTION:
PLUMBING DIAGRAM

SHEET NUMBER:
A-6



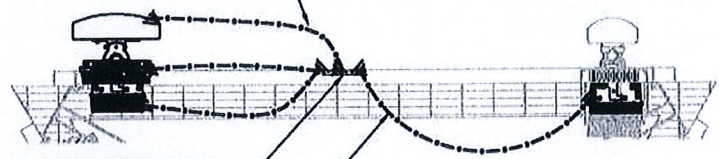
RRH TO DISTRIBUTION BOX POWER CONNECTIVITY

NO SCALE 1

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

EXISTING SPRINT TOWER GROUND BAR (CONTRACTOR TO VERIFY)

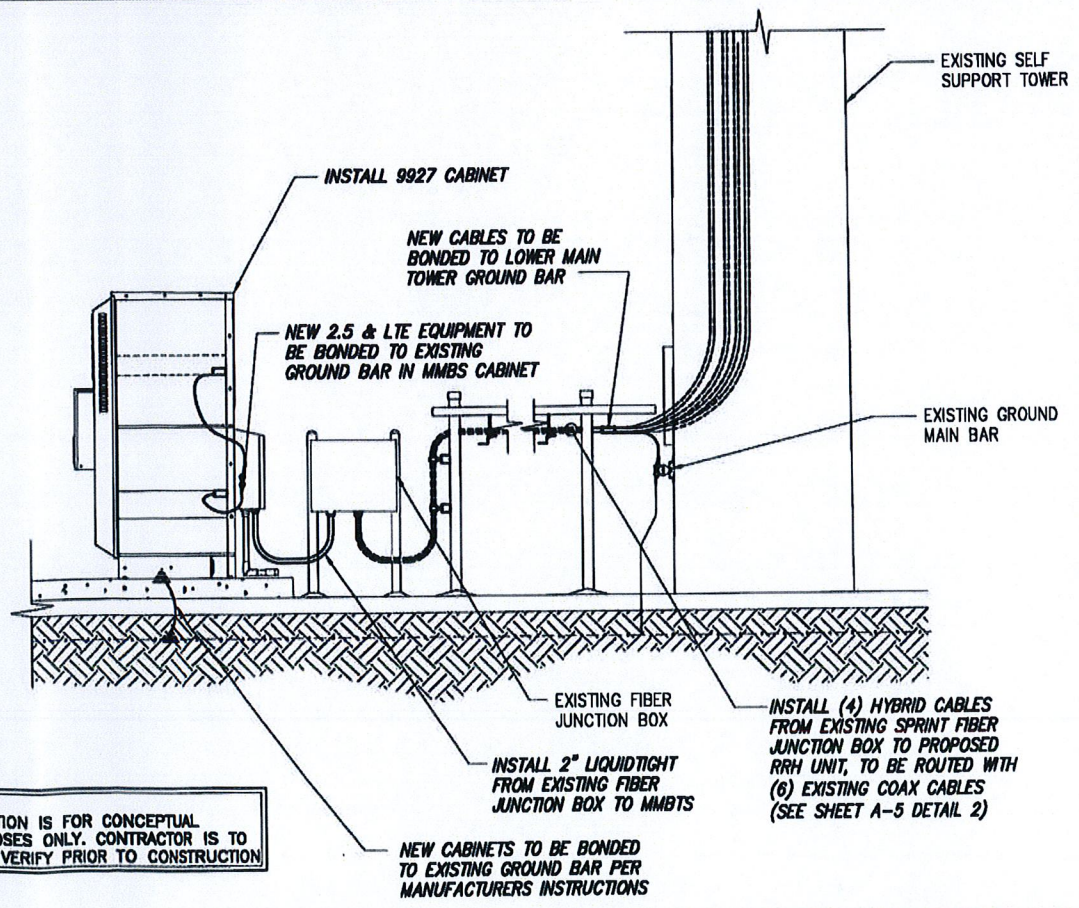
BOND RRH TO SECTOR BAR PER MANUFACTURER'S SPECIFICATIONS



- LEGEND:**
- EXISTING GROUND RING
 - CADWELD CONNECTION (EXOTHERMIC WELD)
 - ▲ MECHANICAL CONNECTION
 - ⊗ GROUND ROD
 - CABLE GROUND KIT

TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 2



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

TYPICAL EQUIPMENT GROUNDING PLAN (ELEVATION)

NO SCALE 3

PLANS PREPARED FOR:



PLANS PREPARED BY:

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 DEVELOPMENT
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SITE NAME:

SOUTH OLD LYME - VERIZON

SITE NUMBER:

CT54XC701

SITE ADDRESS:

**125 MILE CREEK ROAD
 OLD LYME, CT 06070**

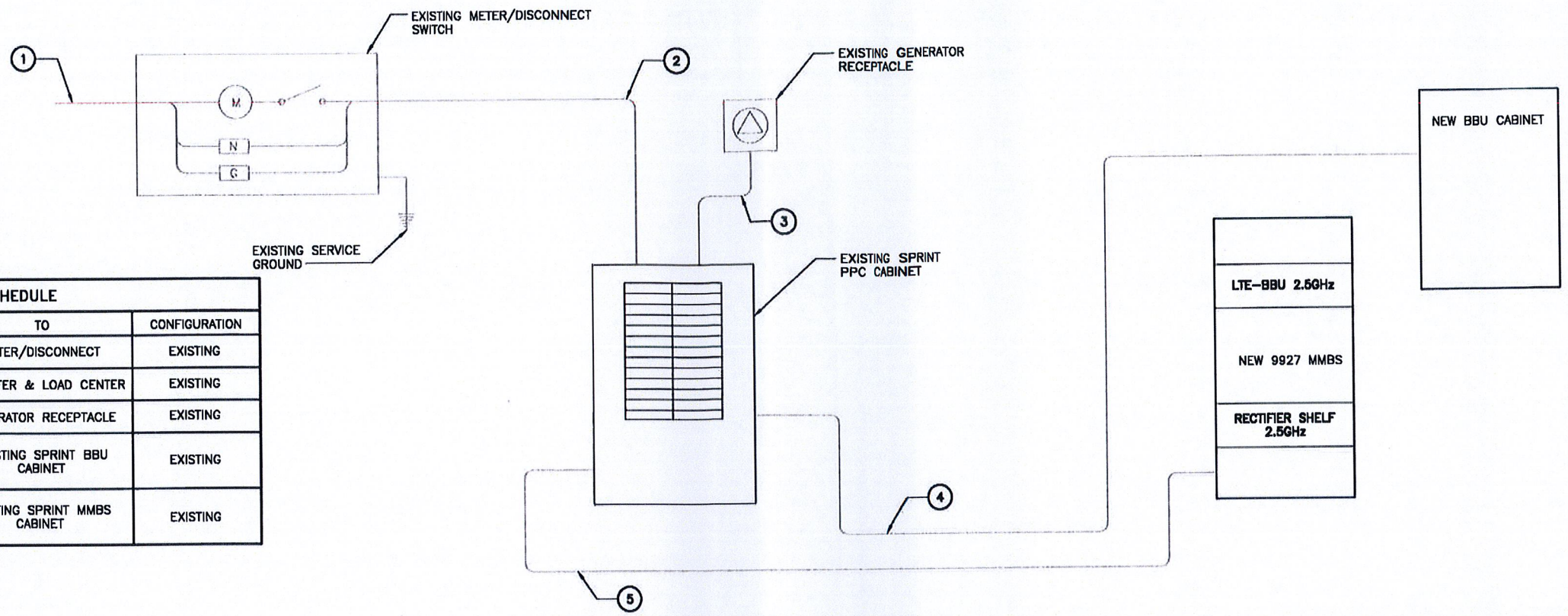
SHEET DESCRIPTION:

ELECTRICAL & GROUNDING PLAN

SHEET NUMBER:

E-1

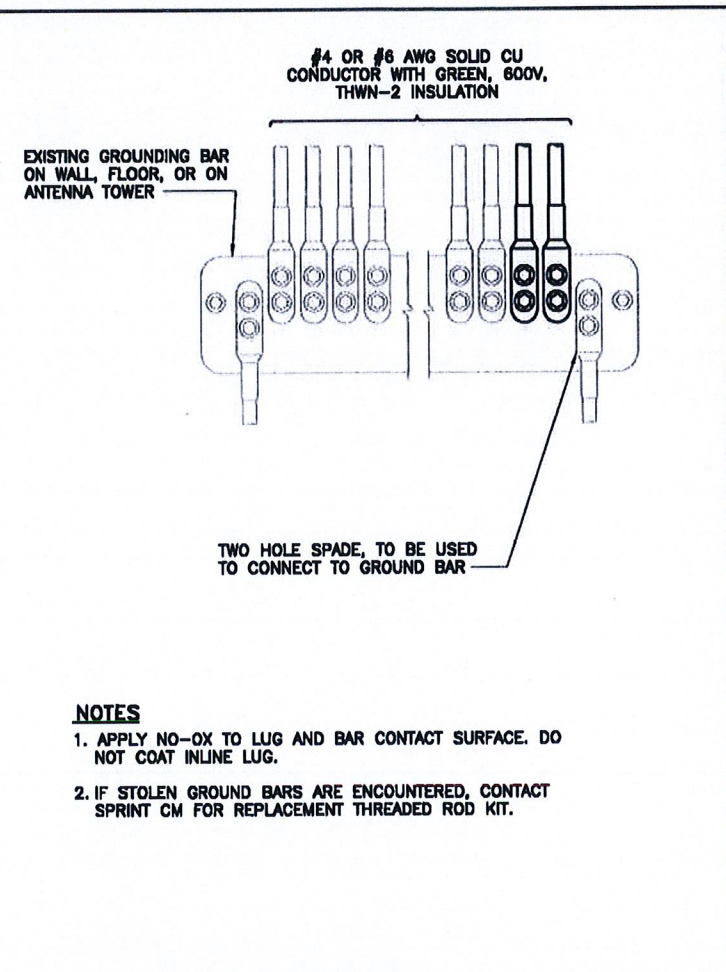
NOTES
 CG SHALL REFERENCE ALL SPECS FOR "CONNECTING THE POWER SUPPLY" OF THE NEW INSTALLATION DOCUMENTS, FOR ALL CONNECTION SPECIFICATIONS.



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

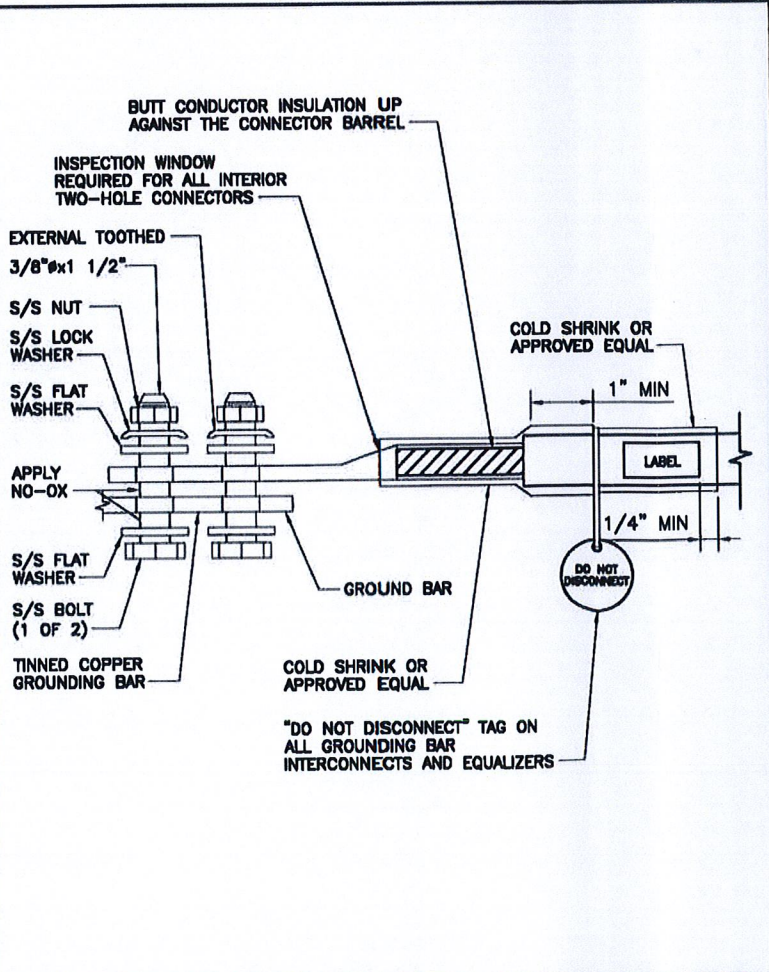
ELECTRICAL ONE-LINE DIAGRAM

NO SCALE 1



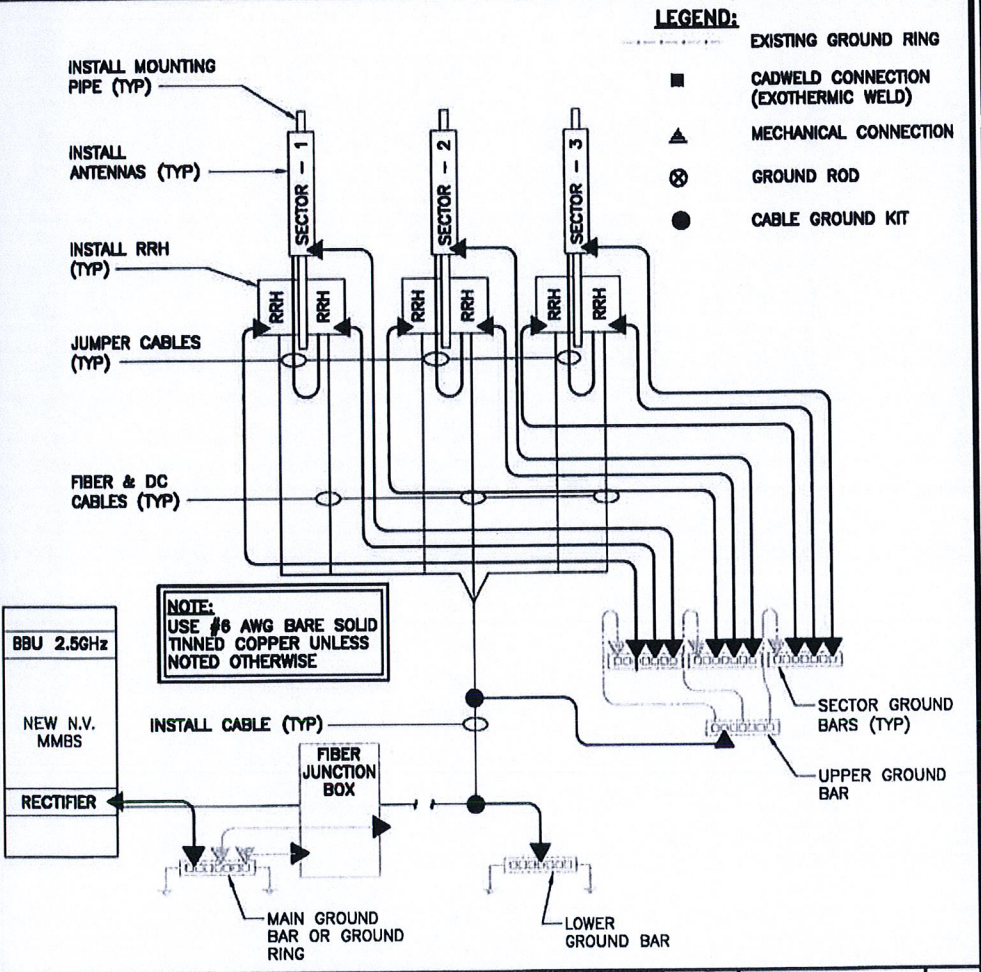
INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR

NO SCALE 2



TWO HOLE LUG

NO SCALE 3



GROUNDING RISER DIAGRAM

NO SCALE 4

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PROJECT MANAGER:
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 32 CLINTON ST.
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ENGINEERING LICENSE:

 JOHN S. STEVENS
 No. 24700
 LICENSED PROFESSIONAL ENGINEER
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 OLD LYME, CT 06070**

SHEET DESCRIPTION:
ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:
E-2