January 15, 2014

David Martin and
Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification
1605 Durham Hill Road
Wallingford, CT 06492
N 41° 28' 10.47"
W -72° 44' 32.10"

Dear Mr. Martin and Members of the Siting Council:

On behalf of Sprint, SBA Communications is submitting an exempt modification application to the Connecticut Siting council for modification of existing equipment at a tower facility located at 1605 Durham Hill Road, Wallingford, CT.

The 1605 Durham Hill Road facility consists of a 162' Monopole owned and operated by SBA Properties, LLC. In order to accommodate technological changes and enhance system performance in the State of Connecticut, Sprint plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

As part of Sprint's modernization project, Sprint desires to upgrade their equipment to meet the new standards of 4G technology. The new equipment will allow customers to download files and browse the internet at a high rate of speed while also allowing their phones to be compatible with the latest 4G technology.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in Sprint's operations at the site along with the required fee of $625.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The overall height of the structure will be unaffected.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than the new equipment cabinets.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

4. The changes in radio frequency power density will not increase the calculated “worst case” power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, SBA Communications on behalf of Sprint, respectfully submits that he proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (508) 614-0389 with any questions you may have concerning this matter.

Thank you,

Rick Woods
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-1691 x 319 + T
508-251-1755 + F
508-614-0389 + C
rwoods@sbasite.com

Sprint

Equipment Modification

1605 Durham Hill Road, Wallingford, CT 06492
Site number CT23XC319

Tower Owner: SBA Properties, LLC

Equipment Configuration: Monopole

Current and/or approved:

- (3) RFS APXVSPP18-C-A20
- (3) Alcatel lucent 1900 MHz RRHs
- (3) Alcatel lucent 800 MHz Filters
- (3) Alcatel lucent 800 MHz RRUs
- (4) RFS ACU-A20-N RETs
- (3) 1-1/4" Feed Line

Planned Modifications:

- (3) RFS APXVTM14-C-I20
- (3) TD-RRH8x20-25 RRHs
- (3) RFS APXVSPP18-C-A20
- (3) Alcatel lucent 1900 MHz RRHs
- (3) Alcatel lucent 800 MHz Filters
- (3) Alcatel lucent 800 MHz RRUs
- (4) RFS ACU-A20-N RETs
- (3) 1-1/4" Feed Line
- (1) 0.7” ALU Fiber

Structural Information:

The attached structural analysis demonstrates that the tower and foundation will have adequate structural capacity to accommodate the proposed modifications.

Power Density:

The anticipated Maximum Composite contributions from the Sprint facility are 15.252% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 57.862% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE %	
Carrier	MPE %
Sprint	15.252%
T-Mobile	1.530%
AT&T	21.600%
Verizon Wireless	16.770%
Nextel	2.710%
Total Site MPE %	57.862%

January 15, 2014

Mayor William W. Dickinson, Jr.
Town of Wallingford
Wallingford Town Hall
45 South Main Street
Room 310
Wallingford, CT 06492

RE: Telecommunications Facility @ 1605 Durham Hill Road, Wallingford, CT

Dear Mayor Dickinson,

In order to accommodate technological changes and enhance system performance in the State of Connecticut, Sprint will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies (R.C.S.A.) Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review Sprint's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes Sprint's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at (508) 614-0389.

Thank you,

Rick Woods
SBA Communications Company
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-1691 x 319 + T
508-251-1755 + F
508-614-0389 + C
rwoods@sbasite.com

EBI Consulting
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RADIO FREQUENCY FCC REGULATORY COMPLIANCE MAXIMUM PERMISSIBLE EXPOSURE (MPE) ASSESSMENT

Sprint Existing Facility

Site ID: CT23XC319

Wallingford SBA
1605 Durham Hill Road
Wallingford, CT 06492

January 10, 2014

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

EBI Consulting
environmental | engineering | due diligence

January 10, 2014

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

Re: Radio Frequency Maximum Permissible Exposure (MPE) Assessment for Site:
CT23XC319– Wallingford SBA

Site Total: 57.862% - MPE% in full compliance

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 1605 Durham Hill Road, Wallingford, CT, for the purpose of determining whether the radio frequency (RF) exposure levels from the proposed Sprint equipment upgrades on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (µW/cm2). The number of µW/cm2 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 public 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 public 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.

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

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed upgrades to the existing Sprint Wireless antenna facility located at 1605 Durham Hill Road, Wallingford, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario. Actual values seen from this site will be dramatically less than those shown in this report. 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 emissions were calculated using the following assumptions:

1) 2 channels in the 1900 MHz Band were considered for each sector of the proposed installation.
2) 1 channel in the 800 MHz Band was considered for each sector of the proposed installation
3) 2 channels in the 2500 MHz Band were considered for each sector of the proposed installation.
4) 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.
5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the antenna manufactures supplied specifications.

6) The antennas used in this modeling are the RFS APXVSPP18-C-A20 and the RFS APXVTMM-C-120. This is based on feedback from the carrier with regards to anticipated antenna selection. The RFS APXVSPP18-C-A20 has a 15.9 dBd gain value at its main lobe at 1900 MHz and 13.4 dBd at its main lobe for 850 MHz. The RFS APXVTMM-C-120 has a 15.9 dBd gain value at its main lobe at 2500 MHz. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario.
7) The antenna mounting height centerlines for the proposed antennas are 1 antenna per sector at **160 feet** above ground level (AGL) **and** 1 antenna per sector at **162.5 feet** above ground level (AGL).
8) 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 calculation were done with respect to uncontrolled / general public threshold limits

Site ID	CT23XC319 - Wallingford SBA
Site Addresss	1605 Durham Hill Road, Wallingford, CT 06492
Site Type	Monopole

Sector 1

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	15.9	162	156	1/2 "	0.5	0	1386.9474	20.48881	2.04888%
1a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	162	156	1/2 "	0.5	0	389.96892	5.760853	1.01602%
1B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	40	1	40	13.4	162.5	156.5	1/2 "	0.5	0	779.93784	11.4482	2.01908%
														Sector total Power Density Value:		5.084%	

Sector 2

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
2a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	15.9	162	156	1/2 "	0.5	0	1386.9474	20.48881	2.04888%
2a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	162	156	1/2 "	0.5	0	389.96892	5.760853	1.01602%
2B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	40	1	40	13.4	162.5	156.5	1/2 "	0.5	0	779.93784	11.4482	2.01908%
														Sector total Power Density Value:		5.084%	

Sector 3

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
3a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	15.9	162	156	1/2 "	0.5	0	1386.9474	20.48881	2.04888%
3a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	162	156	1/2 "	0.5	0	389.96892	5.760853	1.01602%
3B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	40	1	40	13.4	162.5	156.5	1/2 "	0.5	0	779.93784	11.4482	2.01908%
														Sector total Power Density Value:		5.084%	

Site Composite MPE %	
Carrier	MPE %
Sprint	15.252%
T-Mobile	1.530%
AT&T	21.600%
Verizon Wireless	16.770%
Nextel	2.710%
Total Site MPE %	**57.862%**

EBI Consulting
environmental | engineering | due diligence

Summary

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

The anticipated Maximum Composite contributions from the Sprint facility are **15.252% (5.084% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **57.862%** of the allowable FCC established general public 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.

Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803

Structural Analysis for SBA Network Services, Inc.

162' Monopole Tower

SBA Site Name: Durham
SBA Site ID: CT01698-S-00
Sprint Site ID: CT23XC319

FDH Project Number 13TFX61400 (R1)

Analysis Results

Tower Components	89.0%	Sufficient
Foundation	91.3%	Sufficient

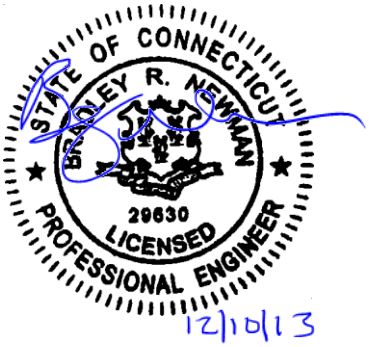
Prepared By:

Bryan D. MacLaren, EI
Project Engineer

Reviewed By:

Bradley Newman, PE
Senior Project Engineer

FDH Engineering, Inc.
6521 Meridien Drive
Raleigh, NC 27616
(919) 755-1012
info@fdh-inc.com



December 10, 2013

Prepared pursuant to TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures and 2005 Connecticut Building Code

TABLE OF CONTENTS

EXECUTIVE SUMMARY

At the request of SBA Network Services, Inc., FDH Engineering, Inc. performed a structural analysis of the monopole located in Wallingford, CT to determine whether the tower is structurally adequate to support both the existing and proposed loads pursuant to the *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, TIA/EIA-222-F* and *2005 Connecticut Building Code (CBC)*. Information pertaining to the existing/proposed antenna loading, current tower geometry, foundation dimensions, geotechnical data, and member sizes was obtained from:

- Paul J. Ford & Company (Job No. 29299-949) original design drawings dated December 22, 1999
- Jaworski Geotech, Inc. (Project No. 99407G) Geotechnical Evaluation dated September 2, 1999
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards is 85 mph without ice and 38 mph with 3/4" radial ice. Ice is considered to increase in thickness with height.

Conclusions

With the existing and proposed antennas from Sprint in place at 162.5 ft, the tower meets the requirements of the *TIA/EIA-222-F* standards and *2005 CBC* provided the **Recommendations** listed below are satisfied. Furthermore, provided the foundation was designed and constructed to support the original design reactions (see Paul J. Ford & Company Job No. 29299-949), the foundation should have the necessary capacity to support the existing and proposed loading. For a more detailed description of the analysis of the tower, see the **Results** section of this report.

Our structural analysis has been performed assuming all information provided to FDH Engineering, Inc. is accurate (i.e., the steel data, tower layout, existing antenna loading, and proposed antenna loading) and that the tower has been properly erected and maintained per the original design drawings.

Recommendations

To ensure the requirements of the *TIA/EIA-222-F* standards and *2005 CBC* are met with the existing and proposed loading in place, we have the following recommendations:

1. Feed lines must be installed as shown in **Figure 1.**
2. RRU/RRH Stipulation: The equipment may be installed in any arrangement as determined by the client.

APPURTENANCE LISTING

The proposed and existing antennas with their corresponding cables/coax lines are shown in **Table 1**. *If the actual layout determined in the field deviates from the layout, FDH Engineering, Inc. should be contacted to perform a revised analysis.*

Table 1 - Appurtenance Loading

Existing Loading:

Antenna Elevation (ft)	Description	Feed lines[1]	Carrier	Mount Elevation (ft)	Mount Type
162	(3) RFS APXVSPP18-C-A20 (3) Alcatel lucent 1900 MHz RRHs (3) Alcatel lucent 800 MHz Filters (3) Alcatel lucent 800 MHz RRUs (4) RFS ACU-A20-N RETs	(3) 1-1/4"	Sprint	162	(1) Low Profile Platform
152	(12) EMS RR90-17-00DP	(12) 1-5/8"	T-Mobile	152	(1) Low Profile Platform
142	(12) Decibel DB844H90	(9) 1-5/8"	Nextel	142	(1) Low Profile Platform
132	(3) Antel BXA-70063-6CF-EDIN (2) Antel BXA-171063-8BF (1) Antel BXA-171063-12BF (2) Antel LPA-80080-4CF (4) Andrew DB846F65ZAXY (6) RFS FD9R6004/2C-3 Diplexers	(12) 1-5/8"	Verizon	132	(1) Low Profile Platform
124.5	(6) Ericsson RRUS-11 RRUs (1) Raycap DC6-48-60-18-8F Surge Arrestors	(12) 1-5/8" (1) 3" Conduit (1) 10 mm (2) DC Cables	AT&T	124.5	(1) Andrew MTC3335 Collar Mount
122	(6) Powerwave 7770.00 (6) Powerwave LGP21401 TMA (6) Powerwave LGP21903 Diplexer (3) KMW AM-X-CD-16-65-00T			122	(1) Low Profile Platform
105	---	---	---	105	(1) Low Profile Platform
95	---	---	---	95	(1) Low Profile Platform
80	(1) Kathrein 738-449	(1) 1/2"	AT&T	80	Flush Mount

1 See **Figure 1** for feed line layout.

Proposed Loading:

Antenna Elevation (ft)	Description	Feed lines	Carrier	Mount Elevation (ft)	Mount Type
162.5	(3) RFS APXVTM14-C-I20 (3) TD-RRH8x20-25 RRHs	(3) 1-1/4" (1) 0.7" ALU Fiber	Sprint	162	(1) Low Profile Platform
162	(3) RFS APXVSPP18-C-A20 (3) Alcatel lucent 1900 MHz RRHs (3) Alcatel lucent 800 MHz Filters (3) Alcatel lucent 800 MHz RRUs (4) RFS ACU-A20-N RETs				

RESULTS

The following yield strength of steel for individual members was used for analysis:

Table 2 - Material Strength

Member Type	Yield Strength
Tower Shaft Sections	65 ksi
Base Plate	50 ksi
Anchor Bolts	75 ksi

Table 3 displays the summary of the ratio (as a percentage) of force in the member to their capacities. Values greater than 100% indicate locations where the maximum force in the member exceeds its capacity. *Note: Capacities up to 100% are considered acceptable.* **Table 4** displays the maximum foundation reactions.

If the assumptions outlined in this report differ from actual field conditions, FDH Engineering, Inc. should be contacted to perform a revised analysis. Furthermore, as no information pertaining to the allowable twist and sway requirements for the existing or proposed appurtenances was provided, deflection and rotation were not taken into consideration when performing this analysis.

See the **Appendix** for detailed modeling information

Table 3 - Summary of Working Percentage of Structural Components

Section No.	Elevation ft	Component Type	Size	% Capacity	Pass Fail
L1	162 - 119.25	Pole	TP33.406x24x0.25	47.0	Pass
L2	119.25 - 78.5	Pole	TP41.873x31.9709x0.3125	82.7	Pass
L3	78.5 - 38.75	Pole	TP49.994x40.0928x0.375	89.0	Pass
L4	38.75 - 0	Pole	TP57.77x47.8688x0.4375	86.3	Pass
---	0	Anchor Bolts	(20) 2.25" Ø on a 65" BC	61.3	Pass
		Base Plate	PL 3" x 64" Sq.	57.7	Pass

Table 4 - Maximum Base Reactions

Base Reactions	Current Analysis *(TIA/EIA-222-F)*	Original Design *(TIA/EIA-222-F)*
Axial	47 k	36 k
Shear	36 k	37 k
Moment	4,156 k-ft	4,550 k-ft

GENERAL COMMENTS

This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading information) modeled. If there are substantial modifications to be made or the assumptions made in this analysis are not accurate, FDH Engineering, Inc. should be notified immediately to perform a revised analysis.

LIMITATIONS

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of this report. All opinions and conclusions are subject to revision based upon receipt of new or additional/updated information. All services are provided exercising a level of care and diligence equivalent to the standard and care of our profession. No other warranty or guarantee, expressed or implied, is offered. Our services are confidential in nature and we will not release this report to any other party without the client's consent. The use of this engineering work is limited to the express purpose for which it was commissioned and it may not be reused, copied, or distributed for any other purpose without the written consent of FDH Engineering, Inc.

APPENDIX

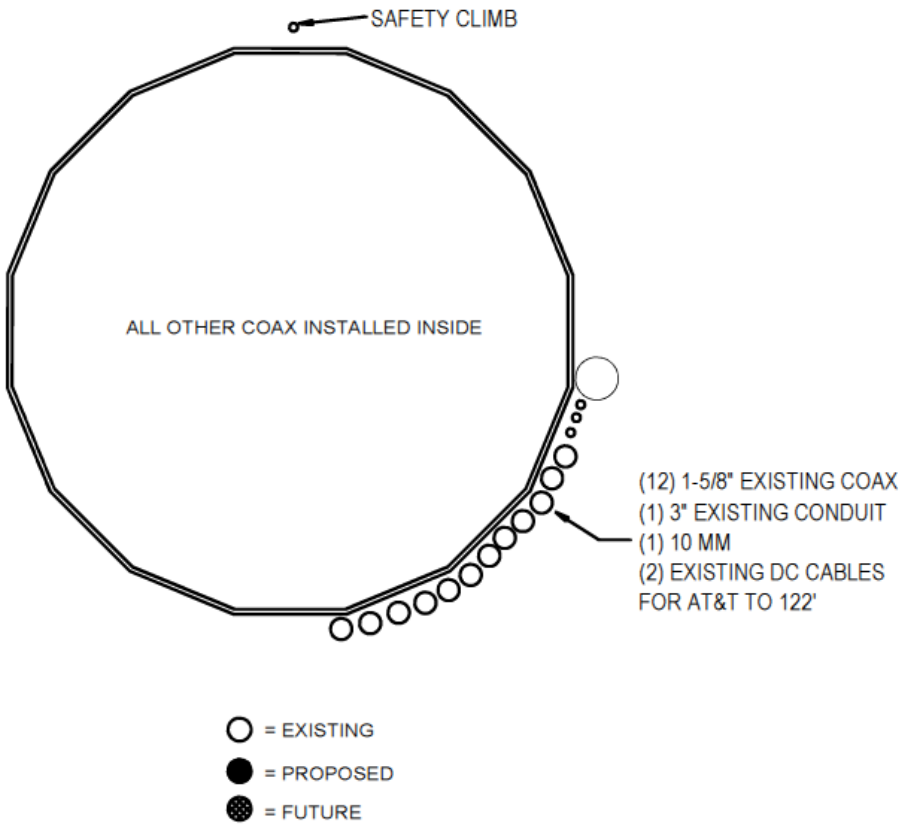
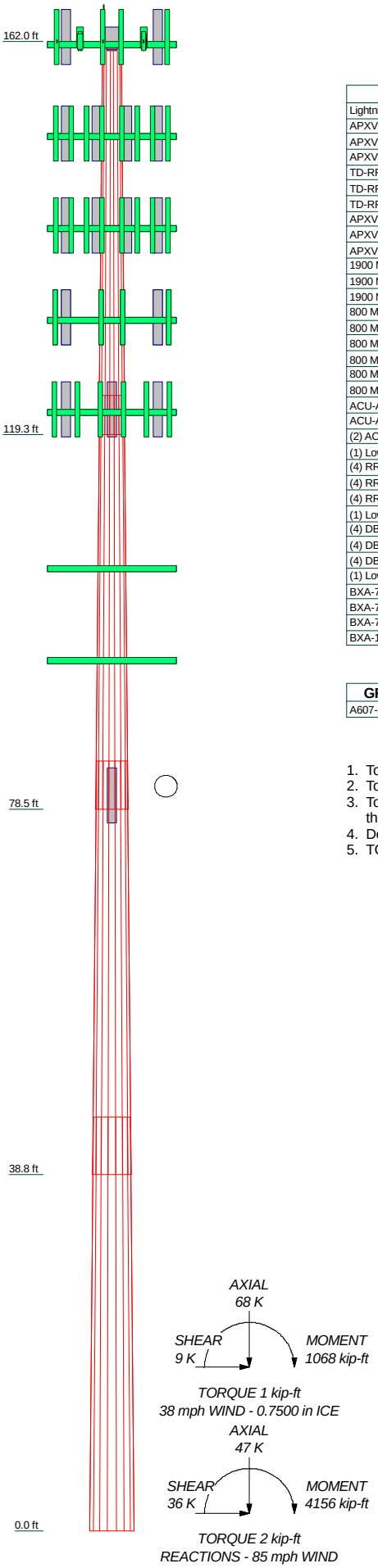


Figure 1 – Coax Layout

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	42.75	18	0.2500	4.25	24.0000	33.4060		3.3
2	45.00	18	0.3125	5.25	31.9709	41.8730		5.6
3	45.00	18	0.3750	6.25	40.0928	49.9940		8.1
4	45.00	18	0.4375		47.8688	57.7700		11.1
							A607-65	28.1



AXIAL 68 K
SHEAR 9 K
MOMENT 1068 kip-ft
TORQUE 1 kip-ft
38 mph WIND - 0.7500 in ICE

AXIAL 47 K
SHEAR 36 K
MOMENT 4156 kip-ft
TORQUE 2 kip-ft
REACTIONS - 85 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	162	BXA-171063-8BF w/ Mount Pipe	132
APXVTM14-C-I20 w/ Mount Pipe	162	BXA-171063-12BF w/ Mount Pipe	132
APXVTM14-C-I20 w/ Mount Pipe	162	LPA-80080-4CF	132
APXVTM14-C-I20 w/ Mount Pipe	162	LPA-80080-4CF	132
TD-RRH8x20-25	162	DB846F65ZAXY w/ Mount Pipe	132
TD-RRH8x20-25	162	DB846F65ZAXY w/ Mount Pipe	132
TD-RRH8x20-25	162	(2) DB846F65ZAXY w/ Mount Pipe	132
APXVSPP18-C-A20 w/Mount Pipe	162	(2) FD9R6004/2C-3 Diplexer	132
APXVSPP18-C-A20 w/Mount Pipe	162	(2) FD9R6004/2C-3 Diplexer	132
APXVSPP18-C-A20 w/Mount Pipe	162	(2) FD9R6004/2C-3 Diplexer	132
1900 MHz RRH	162	(1) Low Profile Platform	132
1900 MHz RRH	162	(2) RRUS-11	124.5
1900 MHz RRH	162	(2) RRUS-11	124.5
800 MHz Filter	162	(2) RRUS-11	124.5
800 MHz Filter	162	DC6-48-60-18-8F Surge Arrestor	124.5
800 MHz Filter	162	Andrew MTC3335 Collar Mount	124.5
800 MHz RRH	162	AM-X-CD-16-65-00T w/ Mount Pipe	122
800 MHz RRH	162	(2) LGP21401 TMA	122
800 MHz RRH	162	(2) LGP21401 TMA	122
ACU-A20-N RET	162	(2) LGP21401 TMA	122
ACU-A20-N RET	162	(2) 7770.00 w/ Mount Pipe	122
(2) ACU-A20-N RET	162	(2) 7770.00 w/ Mount Pipe	122
(1) Low Profile Platform	162	(2) 7770.00 w/ Mount Pipe	122
(4) RR90-17-00DP w/ Mount Pipe	152	(2) LGP21903 Diplexer	122
(4) RR90-17-00DP w/ Mount Pipe	152	(2) LGP21903 Diplexer	122
(4) RR90-17-00DP w/ Mount Pipe	152	(2) LGP21903 Diplexer	122
(1) Low Profile Platform	152	AM-X-CD-16-65-00T w/ Mount Pipe	122
(4) DB844H90 w/ Mount Pipe	142	AM-X-CD-16-65-00T w/ Mount Pipe	122
(4) DB844H90 w/ Mount Pipe	142	(1) Low Profile Platform	122
(4) DB844H90 w/ Mount Pipe	142	(3) Empty Mount Pipe	105
(1) Low Profile Platform	142	(3) Empty Mount Pipe	105
BXA-70063-6CF-EDIN w/Mount Pipe	132	(3) Empty Mount Pipe	105
BXA-70063-6CF-EDIN w/Mount Pipe	132	(1) Low Profile Platform	105
BXA-70063-6CF-EDIN w/Mount Pipe	132	(1) Low Profile Platform	95
BXA-171063-8BF w/ Mount Pipe	132	738-449	80

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

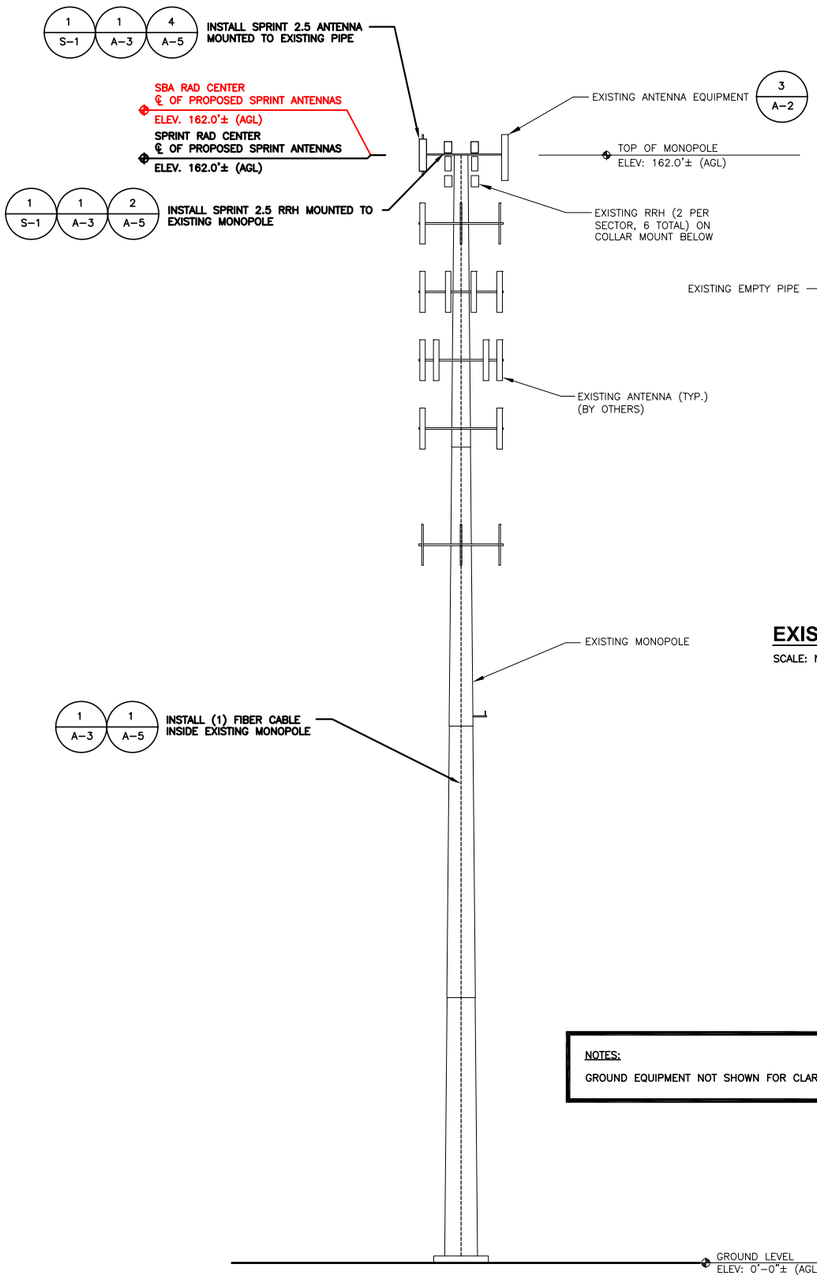
1. Tower is located in New Haven County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 89%

FDH Engineering, Inc.
6521 Meridien Drive, Suite 107
Raleigh, North Carolina 27616
Phone: 9197551012
FAX: 9197551031
Tower Analysis

Job:	Durham, CT01698-S-00
Project:	13TFX61400 (R1)
Client: SBA Network Services, Inc.	Drawn by: BMacLaren / App'd:
Code: TIA/EIA-222-F	Date: 12/10/13 / Scale: NTS
Path:	Dwg No. E-1

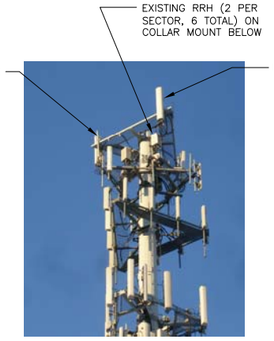
SPECIAL CONSTRUCTION NOTE:
SPRINT TOWER TOP WORK IS CONTINGENT ON THE FOLLOWING:
* COMPLETION OF A GLOBAL STRUCTURAL STABILITY ANALYSIS (PROVIDED BY TOWER OWNER).
* COMPLETION OF AN ANTENNA/RRH MOUNT STRUCTURAL ASSESSMENT (PROVIDED BY A&E VENDOR).
* GC SHALL FURNISH, INSTALL AND COMPLETE ALL REQUIRED STRUCTURAL MODIFICATIONS AS INDICATED IN BEFORE-MENTIONED ANALYSIS AND ASSESSMENT.
* SBA COMMUNICATIONS CORPORATION SHALL PROVIDE WRITTEN ACCEPTANCE/APPROVAL FOR THE COMPLETION OF ALL TOWER/FOUNDATION STRUCTURAL MODIFICATIONS INCLUDING (AS NECESSARY) CONTROLLED CONSTRUCTION INSPECTIONS, SHOP-DRAWING APPROVALS, MATERIALS TEST RESULTS, AND FINAL ENGINEER'S AFFIDAVIT.

NOTE:
SPRINT RAD CENTER SHOWN IN TEXT BASED ON SBA-PROVIDED COLLOCATION APPLICATION, EQUIPMENT DATABASE, AND STRUCTURAL ANALYSIS. THE SBA-PROVIDED ANTENNA RAD CENTER SHALL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM THE SPRINT NV 2.5 RFDS.



ELEVATION
SCALE: 3/32"=1'-0" (1 / A-2)

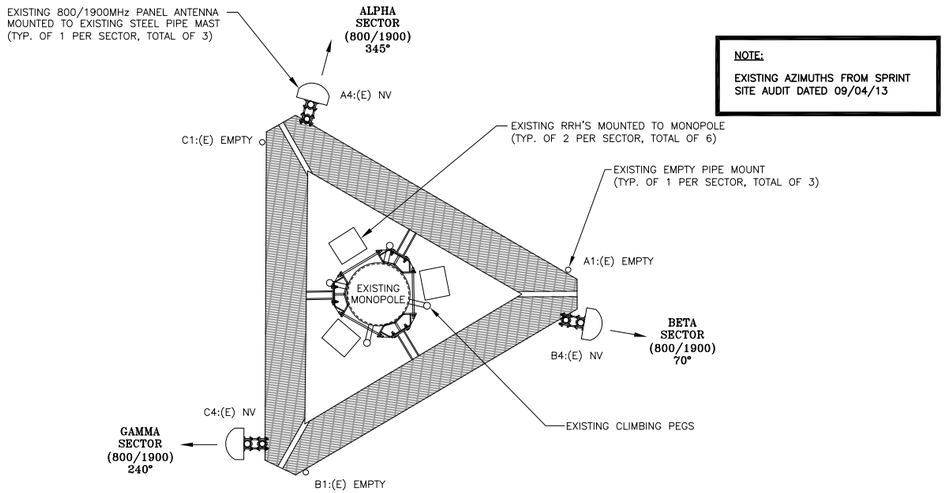
GRAPHIC SCALE
0 5'-4" 10'-8" 21'-6" 32'-0"



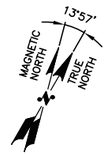
SOURCE: AEG SITE VISIT 12.16.13

EXISTING PARTIAL ELEVATION PHOTO DETAIL
SCALE: N.T.S.

NOTES:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY

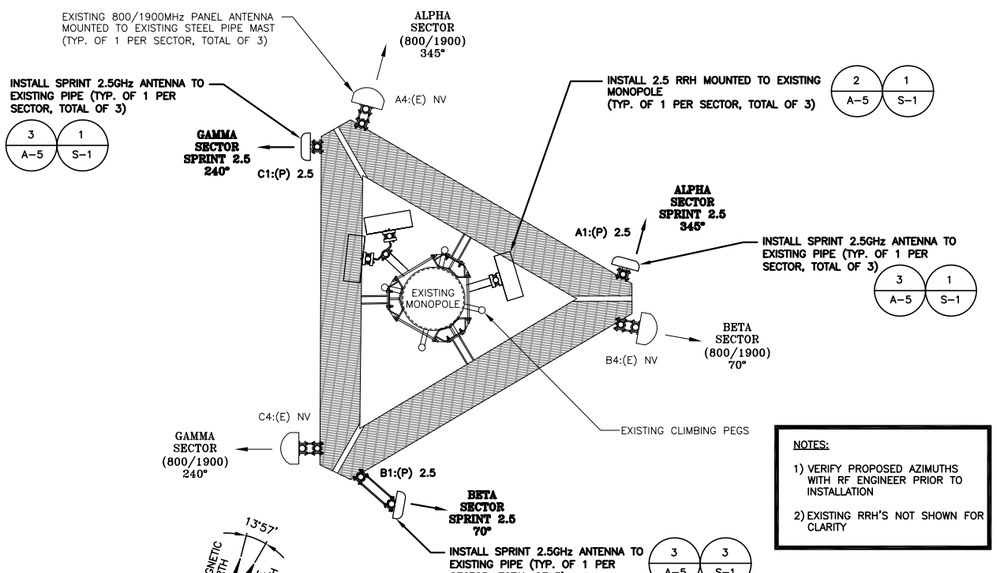


NOTE:
EXISTING AZIMUTHS FROM SPRINT SITE AUDIT DATED 09/04/13

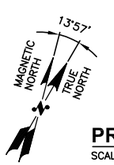


EXISTING ANTENNA PLAN
SCALE: N.T.S. (2 / A-2)

ANTENNA STATUS LEGEND:
EMPTY – EMPTY PIPE
(E) – EXISTING
(P) – INSTALL
NV – SPRINT ANTENNA
2.5 – SPRINT ANTENNA



NOTES:
1) VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION
2) EXISTING RRH'S NOT SHOWN FOR CLARITY



PROPOSED ANTENNA PLAN
SCALE: N.T.S. (3 / A-2)

Sprint
1 INTERNATIONAL BLVD. SUITE 800
MAHWAH, NJ 07495
TEL: (800) 357-7641

SBA
SBA COMMUNICATIONS CORP.
33 BOSTON POST ROAD WEST, SUITE 320
MARLBOROUGH, MA 01752 TEL: (508) 251-1807

PLANS PREPARED BY:
ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development
Surveying - Telecommunications
500 NORTH BROADWAY EAST PROVIDENCE, RI 02914
PH: (401) 354-2403
FAX: (401) 633-6354

STATE OF CONNECTICUT · MARC R. CHRETIEN · NO. 29527 · LICENSED PROFESSIONAL ENGINEER

CHECKED BY: MRC

APPROVED BY: MRC

SUBMITTALS

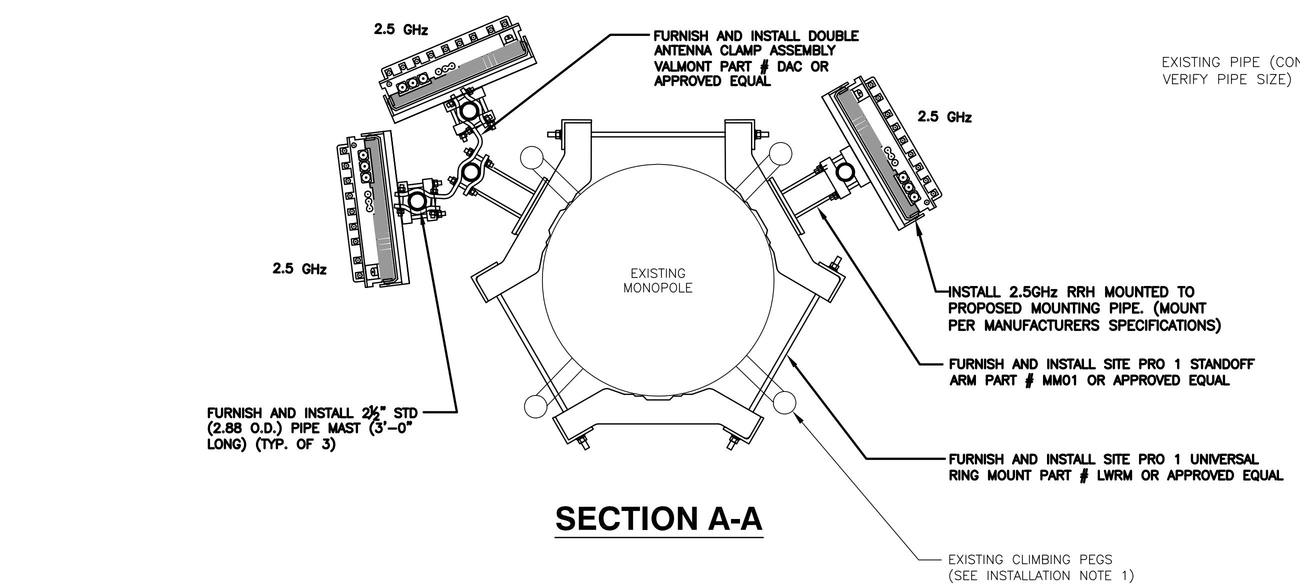
REV.	DATE	DESCRIPTION	BY
1	12/26/13	ISSUED FOR REVIEW	AL
0	12/23/13	ISSUED FOR REVIEW	AL

SITE NUMBER:
CT23XC319
SITE NAME:
DURHAM

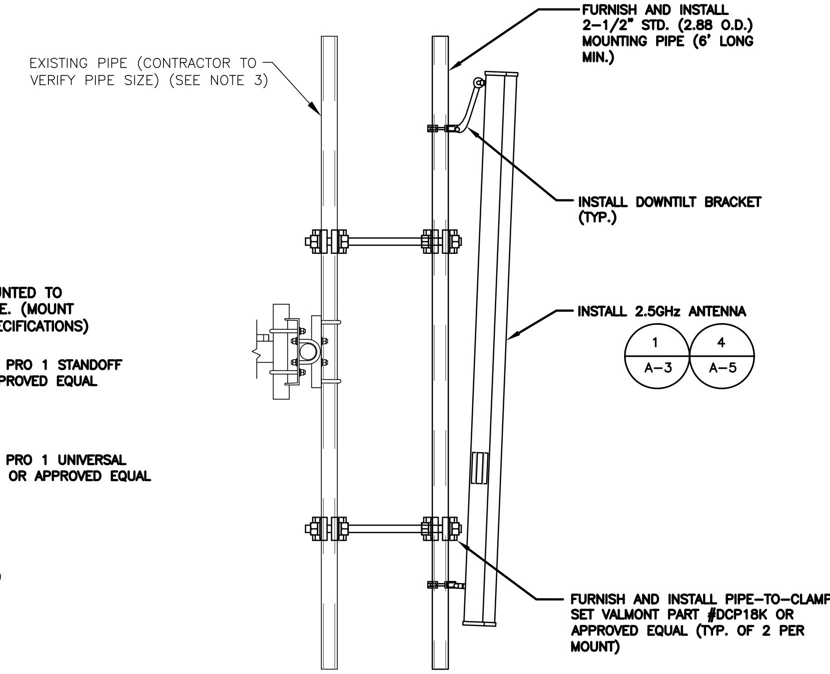
SITE ADDRESS:
1605 DURHAM HILL ROAD
WALLINGFORD, CT 06492

SHEET TITLE
ELEVATION AND ANTENNA PLANS

SHEET NUMBER
A-2



SECTION A-A



SECTOR B 2.5 ANTENNA MOUNT DETAIL (3 / S-1)

SCALE: N.T.S.

INSTALLATION NOTES:

1. CONTRACTOR TO ENSURE THAT RRH MOUNTING DOES NOT INTERFERE WITH CLIMBING LADDER, CABLE CLIMB, OR COAX PORTS. MONOPOLE: COLLAR-MOUNT RRH CLUSTER SHALL PROVIDE OPENING BETWEEN ADJACENT RRH AT LEAST 30" WIDE CENTERED ON THE EXISTING SAFETY-CLIMB AND 30" DEEP FROM THE FACE OF THE POLE. SELF-SUPPORT: RRH LEG-MOUNT OR FACE-MOUNT SHALL PROVIDE AN UNOBSTRUCTED VERTICAL CLIMBING PASSAGE AT LEAST 30" WIDE AND 30" DEEP CENTERED ON THE LEG WITH THE CLIMBING PEGS.
2. CONTRACTOR TO VERIFY DIAMETER OF EXISTING MONOPOLE BEFORE ORDERING PARTS.
3. CONTRACTOR TO VERIFY IN FIELD SIZE OF EXISTING MOUNTING PIPE TO BE 2½" STD (2.88 O.D.) PIPE MAST (6'-0" LONG).
4. VERIFY EXACT RRH AND ANTENNA MODEL & AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.
5. ROTATE EXISTING ANTENNA FRAME AS NEEDED TO ACCOMMODATE INSTALL ANTENNAS.
6. RRH PLACEMENT FOR REFERENCE ONLY. CONTRACTOR SHALL PLACE RRH IN CORRECT ORDER MATCHING INSTALL ANTENNA PLACEMENT AND ENSURE THAT THERE IS ENOUGH CLEARANCE FOR RRHS TO BE PLACED ON THE INSIDE ON THE ANTENNA FRAME.
7. INSTALL EQUIPMENT TO BE MOUNTED PER MANUFACTURERS SPECIFICATIONS.

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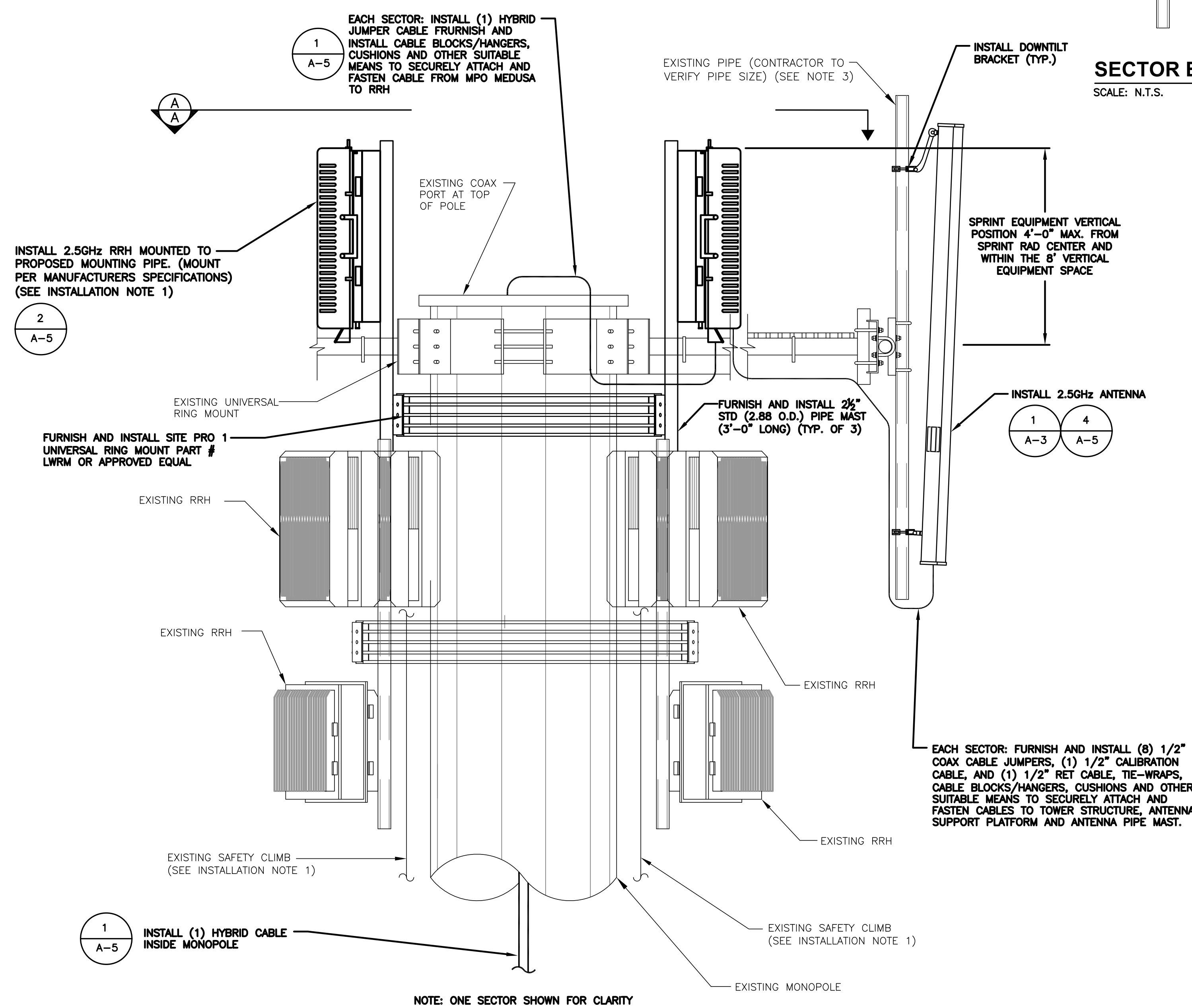
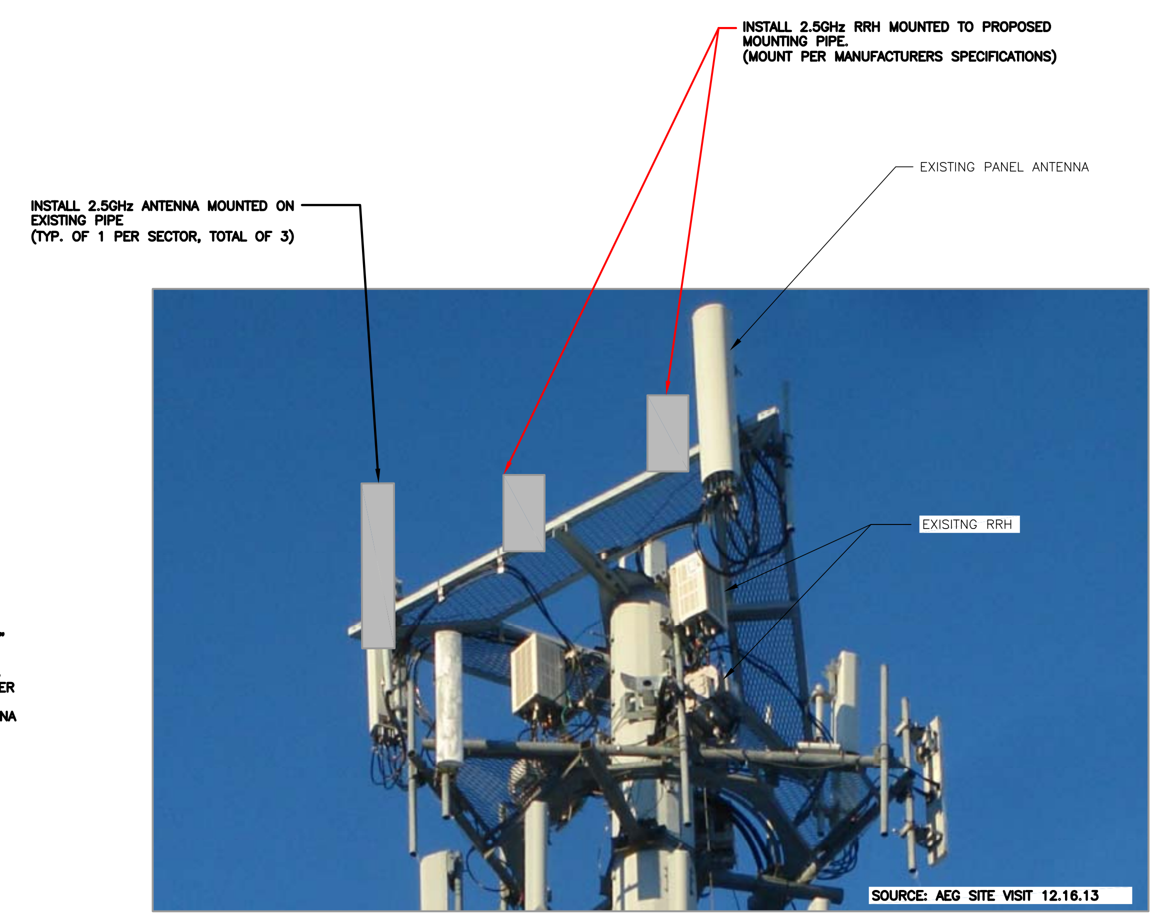


NOTE: ONE SECTOR SHOWN FOR CLARITY

2.5 ANTENNA AND RRH MOUNTING DETAIL (1 / S-1)

SCALE: N.T.S.



NOTE: ONE SECTOR SHOWN FOR CLARITY

2.5 ANTENNA AND RRH PHOTO DETAIL (2 / S-1)

SCALE: N.T.S.

Sprint

1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
TEL: (800) 357-7641

SBA

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STRUCTURAL DETAILS

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