August 05, 2014

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

RE: Notice of Exempt Modification
225 Grist Mill Road
Simsbury, CT 06070
T-Mobile #: CTHA531A
N 41° 52' 0.1"
W -72° 48' 56.8"

Dear Mr. Martin and Members of the Siting Council:

On behalf of T-Mobile Northeast LLC, SBA Communications is submitting an exempt modification application to the Connecticut Siting council for modification of existing equipment at a tower facility located at 225 Grist Mill Road, Simsbury CT.

The 225 Grist Mill Road facility consists of a 150' MONOPOLE Tower owned and operated by SBA Towers II, LLC. In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile Northeast LLC 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.

T-Mobile Northeast LLC wishes 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 T-Mobile Northeast LLC, respectfully submits that the 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) 251-0720 x 3807 with any questions you may have concerning this matter.

Thank you,

Peter Nute
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3807 + T
508-251-1755 + F
Pnute@sbasite.com

T-Mobile Northeast LLC
Equipment Modification

225 Grist Mill Road, Simsbury CT
Site number CTHA531A

Tower Owner: SBA Towers II, LLC

Equipment Configuration: MONOPOLE Tower

Current and/or approved:

- (3) Kathrein 742 213
- (6) 1-5/8" Feed Lines

Planned Modifications:

- (3) RFS APX16DWV-16DWVS-C
- (3) RFS ATMAA1412D-1A20
- (3) Ericsson Double TMA 17/21
- (12) 7/8" Feed Lines

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 T-Mobile facility are 0.545% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 56.185% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE %	
Carrier	MPE %
Metro MobilePCS	0.545%
AT&T	18.510%
Verizon Wireless	26.960%
Nextel	4.630%
Sprint	5.540%
Total Site MPE %	56.185%

August 05, 2014

Mary A. Glassman
First Selectman
Town of Simsbury
Town Hall
933 Hopmeadow Street
Simsbury, CT 06070

RE: Telecommunications Facility @ 225 Grist Mill Road, Simsbury CT

Dear Ms. Glassman,

In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile Northeast LLC 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 T-Mobile'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) 251-0720 x 3807.

Thank you,

Peter Nute
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3807 + T
508-251-1755 + F
Pnute@sbasite.com

August 05, 2014

Ensign-Bickford Realty Corporation
P.O. Box 30666
Hartford CT 06150

RE: Telecommunications Facility @ 225 Grist Mill Road, Simsbury CT

To Whom It May Concern,

In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile Northeast LLC 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 T-Mobile'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) 251-0720 x 3807.

Thank you,

Peter Nute
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3807 + T
508-251-1755 + F
Pnute@sbasite.com

PRINT SOLUTIONS (770) 416-6099

4538

BAL. BRO'T FOR'D

DEPOSITS

DATE 08/06/14

TO CSC

FOR ZONING - CSC

CTHA531A

535031

TAX DEDUCTIBLE

TOTAL		
THIS CHECK	625	-
OTHER		
BALANCE		

4538

SBA NETWORK SERVICES, LLC (MASSACHUSETTS)
900 CUMMINGS CENTER, SUITE 316U
BEVERLY, MA 01915-6181
(561) 995-7670

63-2-630

DATE 08/06/14

PAY TO THE ORDER OF Connecticut Siting Council $ 625.00

Six Hundred Twenty Five and 00/100 DOLLARS

Security Features Included Details on Back.

OVER $5,000 REQUIRES TWO SIGNATURES

Wells Fargo, N.A.

FOR CSC - CTHA531A - 535031

MP

⑈00004538⑈ ⑆063000021⑆ 2000017262525⑈

EBI Consulting
environmental | engineering | due diligence

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

Metro MobilePCS Existing Facility

Site ID: CTHA531A

SBA Simsbury Monopole

225 Grist Mill Road
Simsbury, CT 06070

July 23, 2014

EBI Project Number: 62144000

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

EBI Consulting
environmental | engineering | due diligence

July 23, 2014

Metro MobilePCS USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Re: Emissions Values for Site: **CTHA531A - SBA Simsbury Monopole**

EBI Consulting was directed to analyze the proposed Metro MobilePCS facility located at 225 Grist Mill Road, Simsbury, CT, for the purpose of determining whether the emissions from the Proposed Metro MobilePCS Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (µW/cm2). The number of 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 (µW/cm2). The general population exposure limit for the cellular band is 567 µW/cm2, and the general population exposure limit for the PCS and AWS bands is 1000 µW/cm2. 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 Metro MobilePCS Wireless antenna facility located at 225 Grist Mill Road, Simsbury, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since Metro MobilePCS is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, the actual antenna pattern gain value in the direction of the sample area was used. For this report the sample point is a 6 foot person standing at the base of the tower

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

1) 2 GSM channels (1935.000 MHz—to 1945.000 MHz) were considered for each sector of the proposed installation.
2) 2 UMTS channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation.
3) 2 LTE channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) 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 manufactures supplied specifications.
6) The antenna used in this modeling is the RFS APX16DWV-16DWVS-E-A20 for LTE, UMTS and GSM. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 16.3 dBd gain value at its main lobe. Actual antenna gain values were used for all calculations as per the manufacturers specifications.

7) The antenna mounting height centerline of the proposed antennas is **131 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 calculations were done with respect to uncontrolled / general public threshold limits.

Site ID	CTHA531A - SBA Simsbury Monopole
Site Address	225 Grist Mill Road, Simsbury, CT 06070
Site Type	Monopole

Sector 1

Antenna Number	Antenna Make	Antenna Model	Status	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	APX16DWV-16DWVS-E-A20	Passive	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.25	131	125	7/8"	1.2	0	21.535316	0.495493	0.04955%
1B	RFS	APX16DWV-16DWVS-E-A20	Passive	AWS - 2100 MHz	UMTS/LTE	40	4	160	-3.25	131	125	7/8"	1.2	0	57.42751	1.321314	0.13213%
														Sector total Power Density Value:		0.182%	

Sector 2

Antenna Number	Antenna Make	Antenna Model	Status	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	APX16DWV-16DWVS-E-A20	Passive	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.25	131	125	7/8"	1.2	0	21.535316	0.495493	0.04955%
1B	RFS	APX16DWV-16DWVS-E-A20	Passive	AWS - 2100 MHz	UMTS/LTE	40	4	160	-3.25	131	125	1-5/8"	1.2	0	57.42751	1.321314	0.13213%
														Sector total Power Density Value:		0.182%	

Sector 3

Antenna Number	Antenna Make	Antenna Model	Status	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	APX16DWV-16DWVS-E-A20	Passive	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.25	131	125	7/8"	1.2	0	21.535316	0.495493	0.04955%
1B	RFS	APX16DWV-16DWVS-E-A20	Passive	AWS - 2100 MHz	UMTS/LTE	40	4	160	-3.25	131	125	1-5/8"	1.2	0	57.42751	1.321314	0.13213%
														Sector total Power Density Value:		0.182%	

Site Composite MPE %

Carrier	MPE %
Metro MobilePCS	0.545%
AT&T	18.510%
Verizon Wireless	26.960%
Nextel	4.630%
Sprint	5.540%
Total Site MPE %	**56.185%**

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 Metro MobilePCS facility are **0.545% (0.182% 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 **56.185%** 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.

150' Monopole Tower

SBA Site Name: Simsbury 2
SBA Site ID: CT10022-A-06
T-Mobile Site Name: Metro Keep
T-Mobile Site ID: CTHA531A

FDH Project Number 1466XQ1400

Analysis Results

Tower Components	93.2%	Sufficient
Foundation	95.5%	Sufficient

Prepared By:

Mark S. Girgis, EI
Project Engineer

Reviewed By:

Bradley R. Newman, PE
Senior Project Engineer
CT PE License No. 29630

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

STATE OF CONNECTICUT BRADLEY R. NEWMAN 29630 LICENSED PROFESSIONAL ENGINEER 6/10/14

June 10, 2014

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 Simsbury, 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, foundation dimensions, current tower geometry, and member sizes was obtained from:

- Rohn Industries (File No. 50754AE) original design drawings dated February 13, 2002
- FDH Engineering, Inc. (Job No. 07-0321T) TIA Inspection Report dated April 10, 2007
- SBA Network Service, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards and *2005 CBC* is 80 mph without ice and 38 mph with 1" radial ice. Ice is considered to increase in thickness with height.

Conclusions

With the existing and proposed antennas from T-Mobile in place at 131 ft, the tower meets the requirements of the *TIA/EIA-222-F* standards and the *2005 CBC* provided the **Recommendations** listed below are satisfied. Furthermore, provided the foundation was designed and constructed to support the original design reactions (See Rohn Industries File No. 50754AE), 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 the *2005 CBC* are met with the existing and proposed loading in place, we have the following recommendations:

1. The proposed feed lines should be installed inside the monopole's shaft.
2. The proposed TMAs should be installed directly behind the proposed panel antennas.

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
151	(2) KMW AM-X-CD-16-65-00T-RET (4) Powerwave P65-17-XLH-RR (3) Kathrein 800-10121 (3) CCI DTMABP7819VG12A (12) Kathrein 860-1006 (6) Ericsson RUS-01 (3) Andrew ABT-DRDM-ADBH (1) Raycap DC-6-48-60-18-8F (3) Kathrein 782-10250 (3) CSS DBC-750 (1) LMU	(12) 1-5/8" (1) 3" Conduit (1) 10mm Fiber (2) 12 Gauge DC Cables	Cingular	151	(1) 12.5' Low Profile Platform
143	(1) GPS	(1) 7/8"	Verizon	141	(1) 15' Low Profile Platform
141	(3) Antel BXA 70063-6CF (3) Antel BXA 171085/8BF (3) Antel BXA 70080/4CF (3) BXA 171063/12CF (3) Alcatel Lucent RRH 2X40AWS (6) RFS FD9R6004/2C-3L (1) RFS DB-T1-6Z-8AB-0Z	(12) 1-5/8" (1) 1-5/8" Fiber			
131	(3) Kathrein 742 213	(6) 1-5/8"	Pocket	131	Direct
123	(3) RFS APXVTM14-C-I30 (3) RFS APXVSPP18-C-A20 (3) Alcatel Lucent TD-RRH8x20-25 (3) Alcatel Lucent 1900 MHz (3) Alcatel Lucent 800 MHz (3) Alcatel Lucent 800 MHz (4) RFS ACU-A20-N	(4) 1-1/4" Fiber	Sprint	123	(1) 14' Low Profile Platform
111	(12) Decibel DB844H90E-XY	(12) 1-1/4"	Nextel	111	(1) 14' Low Profile Platform

1. Feed lines installed inside the pole's shaft unless otherwise noted.

Proposed Loading:

Antenna Elevation (ft)	Description	Feed Lines	Carrier	Mount Elevation (ft)	Mount Type
131	(3) RFS APX16DWV-16DWVS-C (3) RFS ATMAA1412D-1A20 (3) Ericsson Double TMA 17/21	(12) 7/8"	T-Mobile	131	Direct

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	60 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. **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	150 - 127.92	Pole	TP33.46x28.3x0.1875	23.9	Pass
L2	127.92 - 84.0867	Pole	TP43.21x32.1113x0.25	64.6	Pass
L3	84.0867 - 41.5033	Pole	TP52.55x41.4575x0.3125	72.1	Pass
L4	41.5033 - 0	Pole	TP61.5x50.4229x0.3125	93.2	Pass
		Anchor Bolts	(14) 2.25"Ø w/ BC = 67.625"	81.3	Pass
		Base Plate	PL 73.5" Ø x 2" thk.	62.8	Pass

*Capacities include a 1/3 allowable stress increase for wind per *TIA/EIA-222-F* standards.

Table 4 - Maximum Base Reactions

Base Reactions	Current Analysis *(TIA/EIA-222-F)*	Original Design *(TIA/EIA-222-F)*
Axial	36 k	66 k
Shear	29 k	26 k
Moment	3,175 k-ft	3,324 k-ft

GENERAL COMMENTS

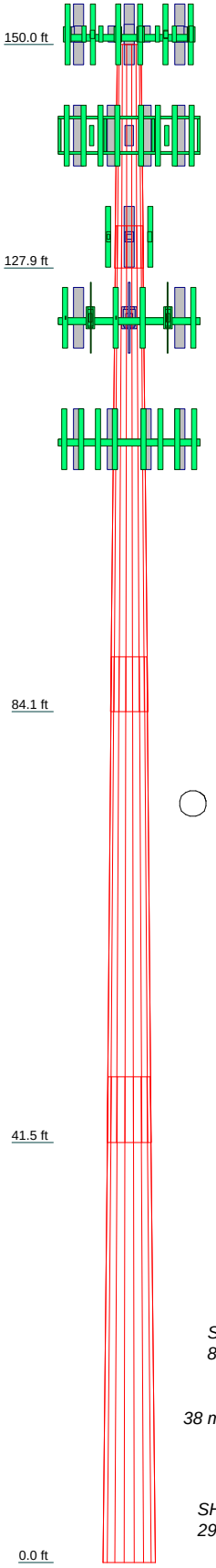
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading 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

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	22.08	18	0.1875	4.17	28.3000	33.4600		1.4
2	48.00	18	0.2500	5.42	32.1113	43.2100		4.8
3	48.00	18	0.3125	6.50	41.4575	52.5500	A572-65	7.6
4	48.00	18	0.3125		50.4229	61.5000		9.0
								22.8



AXIAL
57 K
SHEAR
8 K
MOMENT
939 kip-ft

TORQUE 0 kip-ft
38 mph WIND - 1.0000 in ICE

AXIAL
36 K
SHEAR
29 K
MOMENT
3175 kip-ft

TORQUE 1 kip-ft
REACTIONS - 80 mph WIND

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

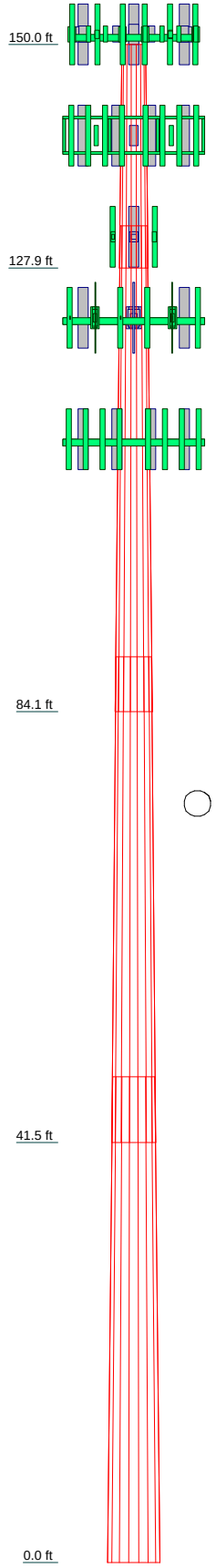
TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 93.2%

FDH Engineering, Inc.
6521 Meridien Drive
Raleigh, NC 27616
Phone: (919) 755-1012
FAX: (919) 755-1031

Job: Simsbury 2, CT10022-A-06			
Project: 1466XQ1400			
Client: SBA Network Services, Inc.	Drawn by: Mark S. Girgis	App'd:	
Code: TIA/EIA-222-F	Date: 06/10/14	Scale: NTS	
Path:		Dwg No. E-1	

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	22.08	18	0.1875	4.17	28.3000	33.4600		1.4
2	48.00	18	0.2500	5.42	32.1113	43.2100		4.8
3	48.00	18	0.3125	6.50	41.4575	52.5500		7.6
4	48.00	18	0.3125		50.4229	61.5000		9.0
							A572-65	



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
AM-X-CW-16-65-00T-RET w/Mount Pipe	151	DB-T1-6Z-8AB-0Z	141
AM-X-CW-16-65-00T-RET w/Mount Pipe	151	(2) FD9R6004/2C-3L	141
(2) P65-17-XLH-RR w/Mount Pipe	151	(2) FD9R6004/2C-3L	141
P65-17-XLH-RR w/Mount Pipe	151	(2) FD9R6004/2C-3L	141
P65-17-XLH-RR w/Mount Pipe	151	GPS	141
800 10121 w/ Mount Pipe	151	15' Low Profile Platform	141
800 10121 w/ Mount Pipe	151	APX16DWV-16DWVS-C w/ Mount Pipe	131
800 10121 w/ Mount Pipe	151	APX16DWV-16DWVS-C w/ Mount Pipe	131
DTMABP7819VG12A TMA	151	APX16DWV-16DWVS-C w/ Mount Pipe	131
DTMABP7819VG12A TMA	151	ATMAA1412D-1A20 TMA	131
DTMABP7819VG12A TMA	151	ATMAA1412D-1A20 TMA	131
(4) 860 10006 CCU	151	ATMAA1412D-1A20 TMA	131
(4) 860 10006 CCU	151	Double TMA 17/21	131
(4) 860 10006 CCU	151	Double TMA 17/21	131
(2) RRUS-11	151	Double TMA 17/21	131
(2) RRUS-11	151	APXVTM14-C-I20 w/ Mount Pipe	123
(2) RRUS-11	151	APXVTM14-C-I20 w/ Mount Pipe	123
ABT-DRDM-ADBH	151	APXVTM14-C-I20 w/ Mount Pipe	123
ABT-DRDM-ADBH	151	APXVSPP18-C-A20 w/Mount Pipe	123
ABT-DRDM-ADBH	151	APXVSPP18-C-A20 w/Mount Pipe	123
DC6-48-60-18-8F Surge Arrestor	151	APXVSPP18-C-A20 w/Mount Pipe	123
782 10250 Diplexer	151	TD-RRH8x20-25	123
782 10250 Diplexer	151	TD-RRH8x20-25	123
782 10250 Diplexer	151	TD-RRH8x20-25	123
DBC-750	151	1900 MHz RRH	123
DBC-750	151	1900 MHz RRH	123
DBC-750	151	1900 MHz RRH	123
LMU	151	800 MHz RRH	123
12.5 Low Profile Platform	151	800 MHz RRH	123
Lightning Rod	150	800 MHz RRH	123
BXA-70063/6CF w/Mount Pipe	141	800 MHz Filter	123
BXA-70063/6CF w/Mount Pipe	141	800 MHz Filter	123
BXA-70063/6CF w/Mount Pipe	141	800 MHz Filter	123
BXA-171085-8BF w/ Mount Pipe	141	ACU-A20-N RET	123
BXA-171085-8BF w/ Mount Pipe	141	ACU-A20-N RET	123
BXA-171085-8BF w/ Mount Pipe	141	(2) ACU-A20-N RET	123
BXA-70080/4CF w/ Mount Pipe	141	(2) Empty Mount Pipe	123
BXA-70080/4CF w/ Mount Pipe	141	(2) Empty Mount Pipe	123
BXA-70080/4CF w/ Mount Pipe	141	(2) Empty Mount Pipe	123
BXA-171063/12CF w/ Mount Pipe	141	14' Low Profile Platform	123
BXA-171063/12CF w/ Mount Pipe	141	(4) DB844H90E-XY w/Mount Pipe	111
BXA-171063/12CF w/ Mount Pipe	141	(4) DB844H90E-XY w/Mount Pipe	111
RRH2X40-AWS	141	(4) DB844H90E-XY w/Mount Pipe	111
RRH2X40-AWS	141	14' Low Profile Platform	111
RRH2X40-AWS	141		

MATERIAL STRENGTH

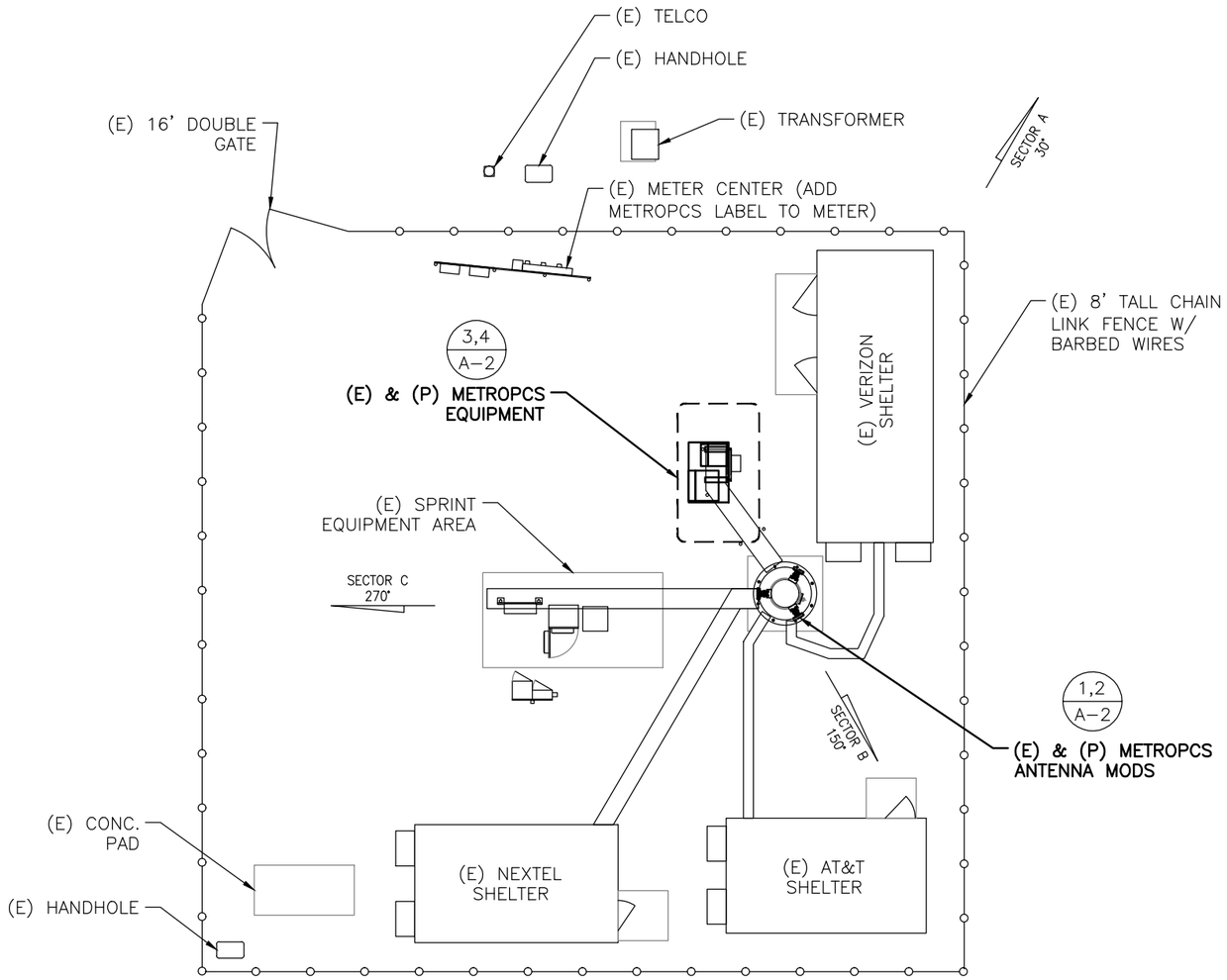
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.

FDH Engineering, Inc.
6521 Meridien Drive
Raleigh, NC 27616
Phone: (919) 755-1012
FAX: (919) 755-1031

Job: Simsbury 2, CT10022-A-06			
Project: 1466XQ1400			
Client: SBA Network Services, Inc.	Drawn by: Mark S. Girgis	App'd:	
Code: TIA/EIA-222-F	Date: 06/10/14	Scale: NTS	
Path:		Dwg No. E-1	



N

COMPOUND PLAN

1 / A-1

SCALE: 1"=15' (11x17)
1"=7.5' (22x34)

15 7.5 0 15

IMAGE SOURCE: PROTERRA 6/03/14

EXISTING ELEVATION

2 / A-1

SCALE: N.T.S.

NOTE:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY

* NOTE:
ANTENNA ELEVATION BASED ON CLIENT-PROVIDED INFORMATION

STATE OF CONNECTICUT
JESSE M. MORENO
No. 24389
LICENSED PROFESSIONAL ENGINEER
6-27-14

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1 Short Street
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Fax:(413)320-4917

SBA COMMUNICATIONS CORPORATION
33 BOSTON POST ROAD WEST, SUITE 320
MARLBOROUGH, MA 01752
PHONE: 508-251-0720

SITE NUMBER: CTHA531A
SITE NAME: SBA SIMSBURY MONOPOLE

225 GRIST MILL ROAD
SIMSBURY, CT 06070

metroPCS
Unlimit Yourself.
35 GRIFFIN ROAD
SOUTH BLOOMFIELD, CT 06002

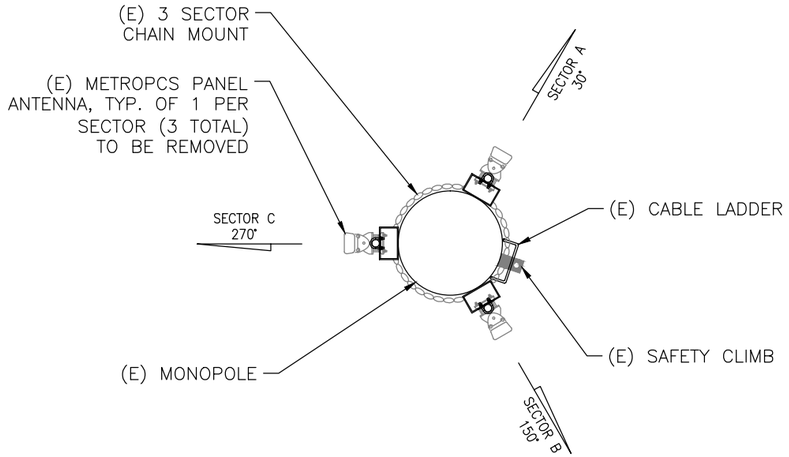
NO.	DATE	REVISIONS	BY	CHK	APP'D
1	6/27/14	CONSTRUCTION FINAL	TBD	TEJ	JMM
0	6/13/14	CONSTRUCTION	TBD	TEJ	JMM

SCALE: AS SHOWN | DESIGNED BY: JMM/TEJ | DRAWN BY: TBD

METROPCS

COMPOUND PLAN AND ELEVATION

JOB NUMBER	SHEET	REV
#13-062	A-1	0



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EXISTING ANTENNA PLAN

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

1 / A-2

4 2 0 4

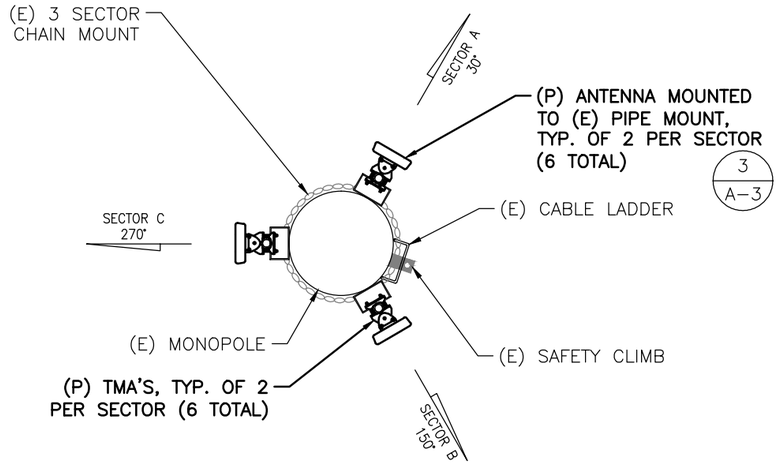
EXISTING ANTENNA SCHEDULE

SECTOR	MAKE	MODEL#	SIZE (INCHES)
SECTOR A:	RFS	APXV18-206517S-C	6.8x3.2x72.0
SECTOR B:	RFS	APXV18-206517S-C	6.8x3.2x72.0
SECTOR C:	RFS	APXV18-206517S-C	6.8x3.2x72.0

PROPOSED ANTENNA SCHEDULE

SECTOR	MAKE	MODEL#	SIZE (INCHES)
SECTOR A:	RFS	APX16DWV-16DWVS-C	13.3x3.2x55.9
SECTOR B:	RFS	APX16DWV-16DWVS-C	13.3x3.2x55.9
SECTOR C:	RFS	APX16DWV-16DWVS-C	13.3x3.2x55.9

NOTE:
1. REFER TO FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



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PROPOSED ANTENNA PLAN

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

2 / A-2

4 2 0 4

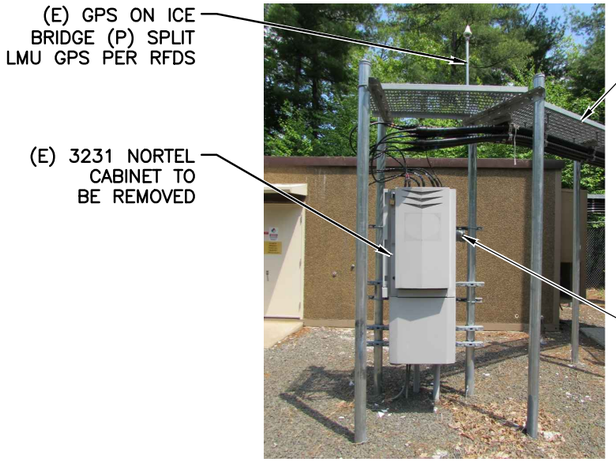
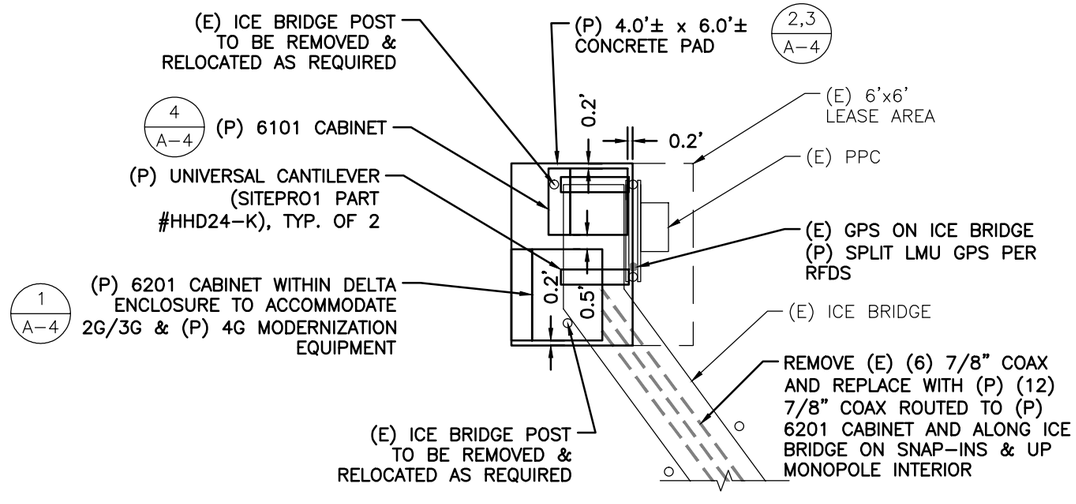


IMAGE SOURCE: PROTERRA 6/03/14

EXISTING EQUIPMENT AREA

SCALE: N.T.S.

3 / A-2



N

PROPOSED EQUIPMENT AREA

SCALE: 1"=5' (11x17)
1"=2.5' (22x34)

4 / A-2

5 2.5 0 5

STATE OF CONNECTICUT
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No. 24389
LICENSED PROFESSIONAL ENGINEER
6-27-14

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0	6/13/14	CONSTRUCTION	TBD	TEJ	JMM

SCALE: AS SHOWN | DESIGNED BY: JMM/TEJ | DRAWN BY: TBD

METROPCS

PLANS AND ANTENNA SCHEDULES

JOB NUMBER	SHEET	REV
#13-062	A-2	0