



March 31, 2015

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

RE: Notice of Exempt Modification
383 Torrington Rd, Litchfield, CT 06759
N 41° 45' 58.60"
W 73° 10' 42.70"
T-Mobile Site #: CTNH375E_L700

Members of the Siting Council:

On behalf of T-Mobile, SBA Communications is submitting an exempt modification application to the Connecticut Siting council for modification of existing equipment at a tower facility located at 383 Torrington Rd, Litchfield, CT 06759.

The 383 Torrington Rd, Litchfield, CT facility consists of a 139' Monopole Tower owned and operated by SBA Towers IV, LLC. In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile 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 T-Mobile's L700 project, T-Mobile 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 T-Mobile'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, 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 3804 with any questions you may have concerning this matter.

Thank you,



Kri Pelletier
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3804 + T
508-251-1755 + F
203-446-7700 + C
kpelletier@sbsite.com



T-Mobile Equipment Modification

383 Torrington Rd, Litchfield, CT 06759
Site number CTNH375E_L700

Tower Owner: SBA Towers IV, LLC

Equipment Configuration: Monopole

Current and/or approved:

- (9) RFS APX16PV-16VL-E
- (12) TMAs
- (18) 1-5/8" feed lines

Planned Modifications:

- (3) RFS APX16PV-16VL-E
- (3) RFS APXV18-209014
- (3) Commscope LNX-6515DS
- (12) TMAs
- (3) Kathrein 782 11056
- (18) 1-5/8" 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 8.77% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 52.18% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE%	
Carrier	MPE%
T-Mobile	8.77
AT&T	23.09 %
Sprint	0.16 %
Verizon Wireless	20.16 %
Site Total MPE %:	52.18 %



March 31, 2015

Mr. Leo Paul, Jr.
First Selectman
Town of Litchfield
74 West Street
Litchfield, CT 06759

RE: Telecommunications Facility @ 383 Torrington Rd, Litchfield, CT 06759

Dear Mr. Paul,

In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile 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 T-Mobile's proposal for the above 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 3804.

Thank you,

A handwritten signature in black ink, appearing to read "Kri Pelletier", is written over a light blue horizontal line.

Kri Pelletier
SBA Communications Company
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3804 + T
508-251-1755 + F
203-446-7700 + C
kpelletier@sbsite.com



March 31, 2015

Old Toll Gate Hill, LLC
387 Torrington Road
Litchfield, CT 06759

RE: Telecommunications Facility @ 383 Torrington Rd, Litchfield, CT 06759

To Whom It May Concern:

In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile 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 T-Mobile's proposal for the above 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 3804.

Thank you,

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**Structural Analysis for
SBA Network Services, Inc.**

139' Monopole Tower

**SBA Site Name: Litchfield
SBA Site ID: CT46123-A-03
T-Mobile Site ID: CTNH375E**

FDH Project Number 15BGLG1400

Analysis Results

Tower Components	67.6%	Sufficient
Foundation	78.4%	Sufficient

Prepared By:

Tyler Ferguson
Project Engineer I

Reviewed By:

Dennis D. Abel, PE
Director of Structural Engineering
CT PE License No. 23247

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

March 19, 2015



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EXECUTIVE SUMMARY

At the request of SBA Network Services, Inc., FDH Engineering, Inc. performed a structural analysis of the monopole located in Litchfield, 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*. Information pertaining to the existing/proposed antenna loading, current tower geometry, foundation dimensions, geotechnical data, and member sizes was obtained from:

- Vertical Solutions (Project No. 121427.01, Rev. 0) Rigorous Structural Analysis dated August 17, 2012
- Engineered Endeavors, Inc. (Project No. 14854) foundation design drawing dated April 8, 2008
- Dewberry-Goodkind, Inc. Geotechnical Study for Proposed Sprint Tower Site CT33XC607 dated August 19, 2005
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards and *2005 Connecticut Building Code* is 80 mph without ice and 28 mph with 3/4" radial ice. Ice is considered to increase in thickness with height.

Conclusions

With the existing and proposed antennas from T-Mobile in place at 108 ft, the tower meets the requirements of the *TIA/EIA-222-F* standards and *2005 Connecticut Building Code* provided the **Recommendations** listed below are satisfied. Furthermore, provided the foundation was designed and constructed to support the original design reactions (see Engineered Endeavors, Inc. Project No. 14854), the foundation should have the necessary capacity to support both the proposed and existing 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 Connecticut Building Code* 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 pole's shaft.
2. The existing TMA's should be installed directly behind the existing and proposed 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
140	(3) Antel BXA-70063/6CF-2 (6) Antel LPA-80063/4CF (3) Antel BXA-171063-8BF-2 (6) RFS FD9R6004/2C-3L Diplexers	(12) 1-5/8"	Verizon	139	(3) T-Arms
128	(6) Decibel 958F85T2E-M	(6) 1-5/8" (4) 1-1/4"	Sprint	128	(3) T-Arms
127	(3) RFS APXVSP18-C-A20 (3) Alcatel Lucent 1900 MHz RRHs (3) Alcatel Lucent 800 MHz RRHs (3) Alcatel Lucent 800 MHz Filters (4) RFS ACU-A20-N RETs (3) RFS APXVTM14-C-I20 w/ Mount Pipe (3) Alcatel Lucent TD-RRH8x20-25				
126	(3) Alcatel Lucent 800 MHz External Notch Filters			126	(3) Collar Mounts
118	(6) Powerwave 7770.00 (12) TMAs	(12) 1-5/8"	AT&T	118	(3) T-Arms
108	(9) RFS APX16PV-16VL-E (12) TMAs	(18) 1-5/8"	T-Mobile	108	(1) Low-Profile Platform

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

Proposed Loading:

Antenna Elevation (ft)	Description	Feed Lines	Carrier	Mount Elevation (ft)	Mount Type
108	(3) RFS APX16PV-16VL-E (3) RFS APXV18-209014 (3) Commscope LNX-6515DS (12) TMAs (3) Kathrein 782 11056	(18) 1-5/8"	T-Mobile	108	(1) Low-Profile Platform

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. *Note: Capacities up to 105% 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	139 - 94.5	Pole	TP31.46x20.5x0.25	53.3	Pass
L2	94.5 - 46.58	Pole	TP42.65x29.8517x0.375	59.7	Pass
L3	46.58 - 0	Pole	TP53.25x40.4766x0.375	67.6	Pass
		Anchor Bolts	(16) 2.25" Ø w/ BC = 62"	57.8	Pass
		Base Plate	PL 72" Ø x 2.75" Thick	39.4	Pass

Table 4 - Maximum Base Reactions

Base Reactions	Current Analysis (TIA/EIA-222-F)	Original Design (TIA/EIA-222-F)
Axial	33 k*	27 k
Shear	23 k	29 k
Moment	2,370 k-ft	3,022 k-ft

* Per our experience with foundations of similar type, the axial loading should not control the foundation analysis.

GENERAL COMMENTS

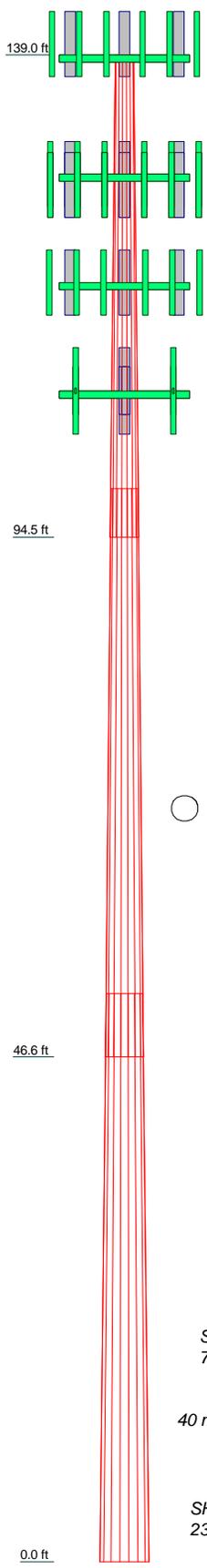
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading 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	1	2	3
Length (ft)	44.50	52.42	52.41
Number of Sides	18	18	18
Thickness (in)	0.2500	0.3750	0.3750
Socket Length (ft)	4.50	5.83	40.4766
Top Dia (in)	20.5000	29.8517	53.2500
Bot Dia (in)	31.4800	42.6500	
Grade	A572-65	A572-65	A572-65
Weight (K)	3.1	7.6	9.9



DESIGNED APPURTENANCE LOADING

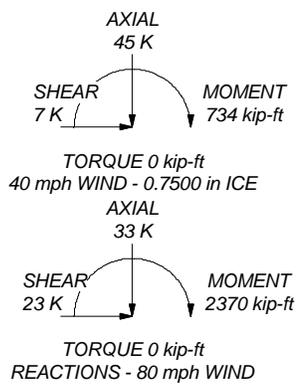
TYPE	ELEVATION	TYPE	ELEVATION
BXA-70063/6CF-2 w/ Mount Pipe	139	APXVTM14-C-I20 w/ Mount Pipe	128
BXA-70063/6CF-2 w/ Mount Pipe	139	APXVTM14-C-I20 w/ Mount Pipe	128
BXA-70063/6CF-2 w/ Mount Pipe	139	TD-RRH8x20-25	128
(2) LPA-80063/4CF w/ Mount Pipe	139	TD-RRH8x20-25	128
(2) LPA-80063/4CF w/ Mount Pipe	139	TD-RRH8x20-25	128
(2) LPA-80063/4CF w/ Mount Pipe	139	800 MHz External Notch Filter	126
BXA-171063-8BF-2 w/ Mount Pipe	139	800 MHz External Notch Filter	126
BXA-171063-8BF-2 w/ Mount Pipe	139	800 MHz External Notch Filter	126
BXA-171063-8BF-2 w/ Mount Pipe	139	(3) Collar Mounts	126
(2) FD9R6004/2C-3L Diplexer	139	(3) T-Arms	118
(2) FD9R6004/2C-3L Diplexer	139	(4) (TMA)	118
(2) FD9R6004/2C-3L Diplexer	139	(2) 7770.00 w/Mount Pipe	118
(3) T-Arms	139	(2) 7770.00 w/Mount Pipe	118
(2) 958F85T2E-M w/ Mount Pipe	128	(2) 7770.00 w/Mount Pipe	118
(2) 958F85T2E-M w/ Mount Pipe	128	(4) (TMA)	118
(2) 958F85T2E-M w/ Mount Pipe	128	(4) (TMA)	118
(3) T-Arms	128	(1) Low-Profile Platform	108
APXVSP18-C-A20 w/Mount Pipe	128	APX16PV-16VL-E w/ Mount Pipe	108
APXVSP18-C-A20 w/Mount Pipe	128	APX16PV-16VL-E w/ Mount Pipe	108
APXVSP18-C-A20 w/Mount Pipe	128	APX16PV-16VL-E w/ Mount Pipe	108
1900 MHz RRH	128	APXV18-209014 w/Mount Pipe	108
1900 MHz RRH	128	APXV18-209014 w/Mount Pipe	108
1900 MHz RRH	128	APXV18-209014 w/Mount Pipe	108
800 MHz RRH	128	LNx-6515DS w/ Mount Pipe	108
800 MHz RRH	128	LNx-6515DS w/ Mount Pipe	108
800 MHz RRH	128	LNx-6515DS w/ Mount Pipe	108
800 MHz Filter	128	(4) (TMA)	108
800 MHz Filter	128	(4) (TMA)	108
800 MHz Filter	128	(4) (TMA)	108
ACU-A20-N RET	128	782 11056	108
ACU-A20-N RET	128	782 11056	108
(2) ACU-A20-N RET	128	782 11056	108
APXVTM14-C-I20 w/ Mount Pipe	128		

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Litchfield 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 40 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: 67.6%



<p>FDH Engineering, Inc. 6521 Meriden Drive, Suite 107 Raleigh, North Carolina 27616 Phone: 9197551012 FAX: 9197551031</p>	Job: Litchfield, CT46123-A-03		
	Project: 15BGLB1400		
	Client: SBA Network Services, Inc.	Drawn by: Tyler Ferguson	App'd:
	Code: TIA/EIA-222-F	Date: 03/19/15	Scale: NTS
	Path:		Dwg No. E-1

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

T-Mobile Existing Facility

Site ID: CTNH375

Sprint 607 FT
383 Torrington Road
Litchfield, CT 06759

March 30, 2015

EBI Project Number: 6215001907

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	52.18 %

March 30, 2015

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Emissions Analysis for Site: **CTNH375 – Sprint 607 FT**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **383 Torrington Road, Litchfield, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile 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 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 ($\mu\text{W}/\text{cm}^2$). The general population exposure limit for the 700 MHz Band is $467 \mu\text{W}/\text{cm}^2$, and the general population exposure limit for the PCS and AWS 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 T-Mobile Wireless antenna facility located at **383 Torrington Road, Litchfield, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile 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) 2 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel
- 2) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 4) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.
- 5) 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.

- 6) For the following calculations the sample point was the top of a six 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.
- 7) The antennas used in this modeling are the **RFS APXV18-209014** for 1900 MHz (PCS) channels and the **Commscope LNX-6515DS-VTM** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **RFS APXV18-209014** has a maximum gain of **14.4 dBd** at its main lobe. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe. 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.
- 8) The antenna mounting height centerline of the proposed antennas is **108 feet** above ground level (AGL).
- 9) 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.

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXV18-209014	Make / Model:	RFS APXV18-209014	Make / Model:	RFS APXV18-209014
Gain:	14.4 dBd	Gain:	14.4 dBd	Gain:	14.4 dBd
Height (AGL):	108	Height (AGL):	108	Height (AGL):	108
Frequency Bands	1900 MHz(PCS)	Frequency Bands	1900 MHz(PCS)	Frequency Bands	1900 MHz(PCS)
Channel Count	6	Channel Count	6	# PCS Channels:	6
Total TX Power:	240	Total TX Power:	240	# AWS Channels:	240
ERP (W):	6,610.15	ERP (W):	6,610.15	ERP (W):	6,610.15
Antenna A1 MPE%	2.28	Antenna B1 MPE%	2.28	Antenna C1 MPE%	2.28
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	108	Height (AGL):	108	Height (AGL):	108
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power:	30	Total TX Power:	30	Total TX Power:	30
ERP (W):	865.21	ERP (W):	865.21	ERP (W):	865.21
Antenna A2 MPE%	0.64	Antenna B2 MPE%	0.64	Antenna C2 MPE%	0.64

Site Composite MPE%	
Carrier	MPE%
T-Mobile	8.77
AT&T	23.09 %
Sprint	0.16 %
Verizon Wireless	20.16 %
Site Total MPE %:	52.18 %

T-Mobile Sector 1 Total:	2.92 %
T-Mobile Sector 2 Total:	2.92 %
T-Mobile Sector 3 Total:	2.92 %
Site Total:	52.18 %

Summary

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

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector 1:	2.92 %
Sector 2:	2.92 %
Sector 3 :	2.92 %
T-Mobile Total:	8.77 %
Site Total:	52.18 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **52.18%** 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

**T-MOBILE
NORTHEAST LLC**

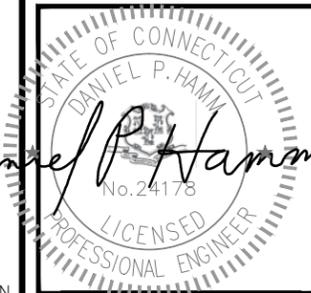
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 648-1116



SBA COMMUNICATIONS CORP.
33 BOSTON POST ROAD WEST, SUITE 320 TEL: (508) 251-0720
MARLBOROUGH, MA 01752 FAX: (508) 251-1755



1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090 TEL: (978) 557-5553
N. ANDOVER, MA 01845 FAX: (978) 336-5586



Daniel P. Hamm

CHECKED BY: KB

APPROVED BY: DPH

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
0	03/02/15	ISSUED FOR CONSTRUCTION	JA

SITE NUMBER:
CTNH375E
SITE NAME:
NH375 /SPRINT
607 FT
SITE ADDRESS:
383 TORRINGTON RD
LITCHFIELD, CT 06759
LITCHFIELD COUNTY

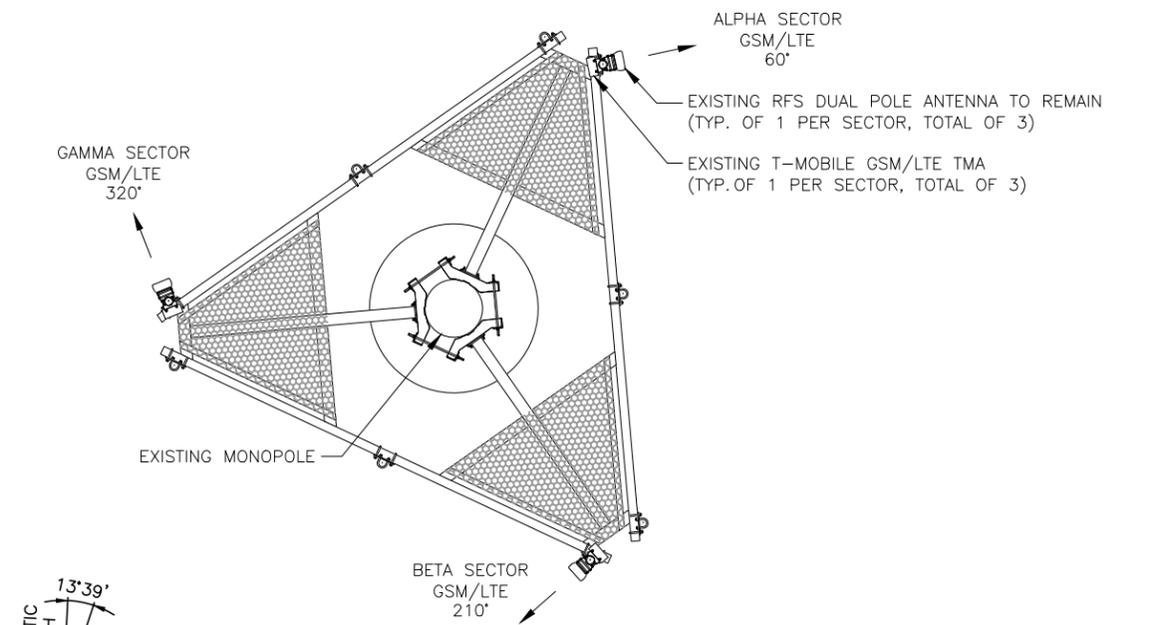
SHEET TITLE
EXISTING &
PROPOSED ANTENNA
PLANS

SHEET NUMBER
A-2

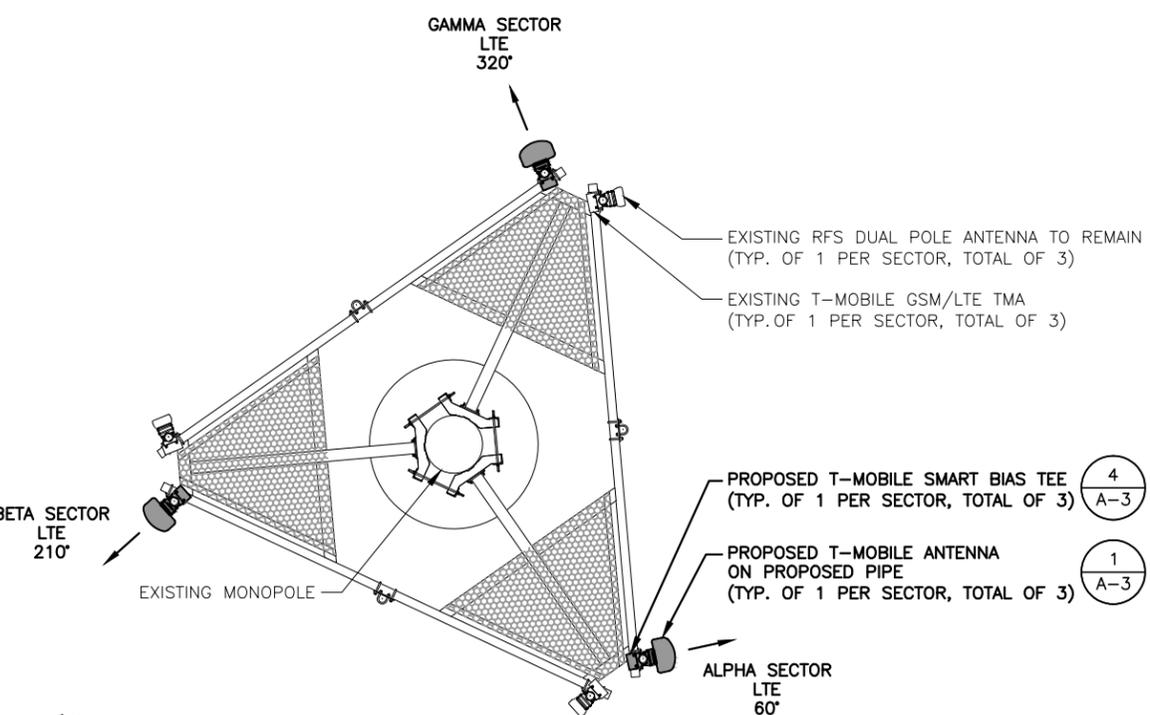
STRUCTURAL NOTES:
1. ADDITIONAL TOWER MAPPING AND STRUCTURAL ANALYSIS ARE REQUIRED PRIOR TO CONSTRUCTION. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF STRUCTURAL ANALYSIS.
2. MOUNT ALL ANTENNAS, COAX, ETC. IN ACCORDANCE WITH STRUCTURAL ANALYSIS.

ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:
ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND DETERMINED THAT THE EXISTING ANTENNA MOUNT IS ADEQUATE TO ACCOMMODATE ADDITIONAL EQUIPMENT LOADS. STRUCTURAL DESIGNS AND DETAILS AS SHOWN HEREIN FOR STRUCTURAL MODIFICATIONS OF THE EXISTING ANTENNA MOUNT ARE PRELIMINARY ONLY AND FINAL CONSTRUCTION DETAILS ARE SUBJECT TO CHANGE PENDING THE COMPLETION OF AN ANTENNA MOUNT STRUCTURAL ASSESSMENT.

SPECIAL WORK NOTE:
VERTICALLY CENTER ON EXISTING MOUNTING RAIL, THE PIPE MAST AND ANTENNA



EXISTING ANTENNA PLAN
SCALE: N.T.S



PROPOSED ANTENNA PLAN
SCALE: N.T.S



SOURCE: HDG 01-23-2015

PROPOSED ANTENNA PHOTO DETAIL
SCALE: N.T.S

1
A-3

4
A-3

3
A-2

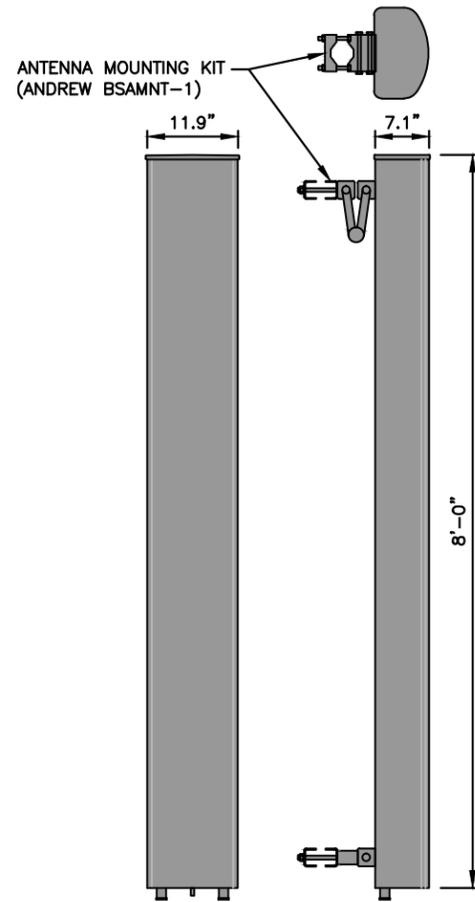
EXISTING RFS DUAL POLE ANTENNA TO REMAIN
(TYP. OF 1 PER SECTOR, TOTAL OF 3)

PROPOSED T-MOBILE ANTENNA ON PROPOSED PIPE
(TYP. OF 1 PER SECTOR, TOTAL OF 3)

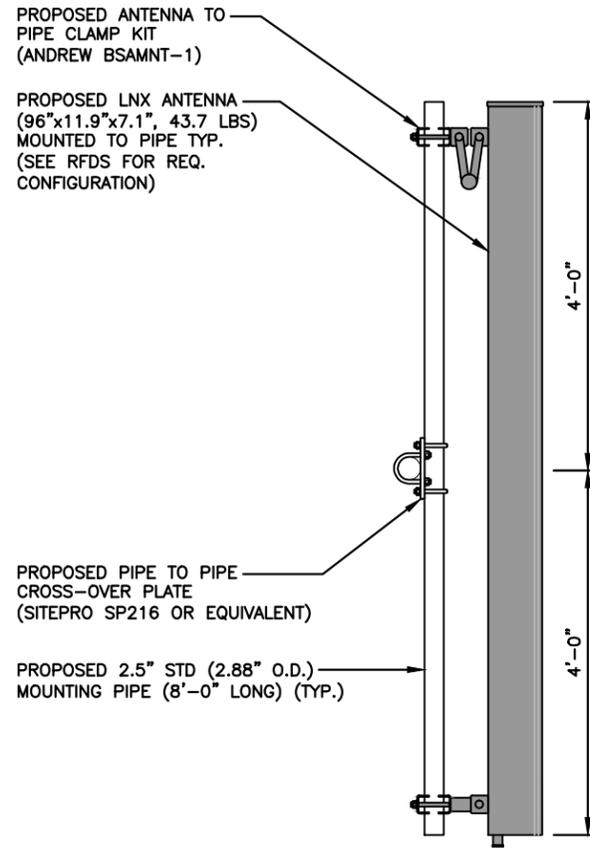
PROPOSED T-MOBILE SMART BIAS TEE
(TYP. OF 1 PER SECTOR, TOTAL OF 3)

PROPOSED T-MOBILE SMART BIAS TEE
(TYP. OF 1 PER SECTOR, TOTAL OF 3)

PROPOSED T-MOBILE ANTENNA ON PROPOSED PIPE
(TYP. OF 1 PER SECTOR, TOTAL OF 3)



LNx ANTENNA DETAIL (1)
SCALE: N.T.S. (A-3)

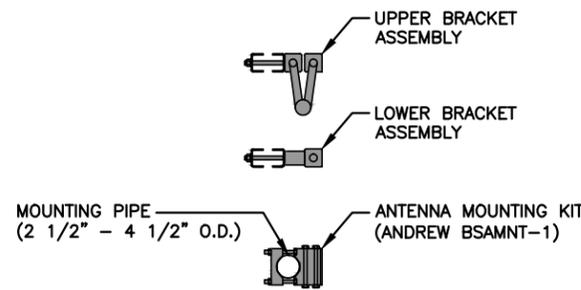


PROPOSED ANTENNA MOUNTING DETAIL (2)
SCALE: N.T.S. (A-3)

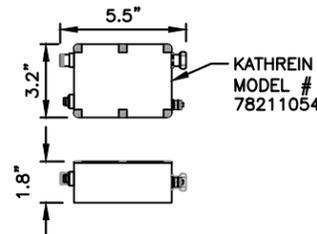
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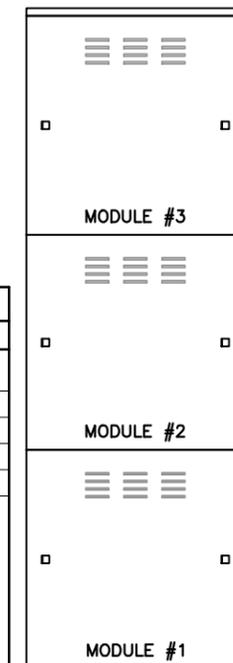
ANTENNA MOUNTING BRACKET (3)
SCALE: N.T.S. (A-3)



SMART BIAS TEE (SBT) (4)
SCALE: N.T.S. (A-3)

BBU DIMENSIONS

MODEL #	DVBBM-2ALM
MANUF.	MSF DATA SERVICES
WIDTH	28.45"
DEPTH	28.45"
HEIGHT	29.67"
WEIGHT	1,264 LBS
MOUNT BASE WITH (4) 1/2" DROP IN ANCHOR'S WITH 2" MINIMUM EMBEDMENT (INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES)	



BATTERY CABINET (BBU) (5)
SCALE: N.T.S. (A-3)

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DETAILS

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