

JULIE D. KOHLER

PLEASE REPLY TO: Bridgeport
WRITER'S DIRECT DIAL: (203) 337-4157
E-Mail Address: jkohler@cohenandwolf.com

October 3, 2014

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

**Re: Notice of Exempt Modification
Verizon Wireless/T-Mobile co-location
Site ID CTNH416A
5 Old Farms Road, Barkhamsted, CT**

Dear Attorney Bachman:

This office represents T-Mobile Northeast LLC ("T-Mobile") and has been retained to file exempt modification filings with the Connecticut Siting Council on its behalf.

In this case, Cellco Partnership, d/b/a Verizon Wireless owns the existing monopole telecommunications tower and related facility located at 5 Old Farms Road, Barkhamsted, Connecticut (Latitude:41.914525/ Longitude: -73.022331). T-Mobile intends to add three antennas and related equipment at this existing telecommunications facility in Barkhamsted ("Barkhamsted Facility"). Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is also being sent to the First Selectman, Donald S. Stein, and the property owner, John and Ethel Lavieri.

The existing Barkhamsted Facility consists of a 145 foot tall monopole tower, approved by the Council in Docket No.305.¹ T-Mobile plans to add three antennas on existing pipe masts at a centerline of 125 feet. (See the plans revised to August 26, 2014 attached hereto as Exhibit A). T-Mobile will also replace an equipment cabinet on an existing concrete pad, install 3 remote radio units on a proposed H-frame, install coax cable and reuse existing coax cable. The existing Barkhamsted Facility is structurally capable of supporting T-Mobile's proposed modifications, as indicated in the structural analysis dated September 23, 2014 and attached hereto as Exhibit B.

The planned modifications to the Barkhamsted Facility fall squarely within those

¹ T-Mobile's proposed equipment on the Barkhamsted Facility is consistent with the Decision and Order in this docket (dated May 3, 2005).

October 3, 2014
Site ID CTNH416A
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activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1 . The proposed modification will not increase the height of the tower. T-Mobile's replacement antennas will be installed at a centerline of 125 feet on a tower that is 145 feet in elevation. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.

2 . The proposed modifications will not require an extension of the site boundaries. T-Mobile's equipment will be located entirely within the existing compound and leased area as shown on Sheet 2 of Exhibit A.

3 . The proposed modification to the Barkhamsted Facility will not increase the noise levels at the existing facility by six decibels or more.

4 . The operation of the proposed antennas will not increase the total radio frequency (RF) power density, measured at the base of the tower, to a level at or above the applicable standard. According to an Emissions Analysis Report prepared by EBI dated September 30, 2014 T-Mobile's operations would add 8.92%% of the FCC Standard. Therefore, the calculated "worst case" power density for the planned combined operation at the site including all of the proposed antennas would be 42.20% of the FCC Standard as calculated for a mixed frequency site as evidenced by the engineering exhibit attached hereto as Exhibit C.

For the foregoing reasons, T-Mobile respectfully submits that the proposed antennas and equipment at the Barkhamsted Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Upon acknowledgement by the Council of this proposed exempt modification, T-Mobile shall commence construction approximately sixty days from the date of the Council's notice of acknowledgement.

Sincerely,



Julie D. Kohler, Esq.

cc: Town of Barkhamsted, First Selectman Donald S. Stein
Cellco Partnership, d/b/a Verizon Wireless
John and Ethel Lavieri
Sheldon Freinle, NSS

EXHIBIT A



ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

KEY MAP

SCALE: N.T.S



PROJECT : L700

CONFIGURATION

704BU

SUBMITTALS	
LE REV A	08.19.14
LE REV 0	08.22.14
LE REV 1	08.26.14

ATLANTIS GROUP
 1340 Centre Street
 Suite 203
 Newton, MA 02459
 Office: 617-965-0789
 Fax: 617-213-5056

LEASE EXHIBIT

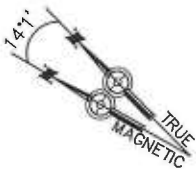
SITE NUMBER:
 CTNH416A
 SITE NAME:
 OLD FARM - VERIZON
 SITE ADDRESS:
 5 OLD FARMS ROAD
 BARKHAMSTED, CT, 06063

NORTHEAST SITE SOLUTIONS
 54 MAIN STREET, UNIT 3
 STURBRIDGE, MA 01566
 (508) 434-5237
 FOR
T-MOBILE NORTHEAST, LLC
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002
 OFFICE: (860) 692-7100
 FAX: (860) 692-7159

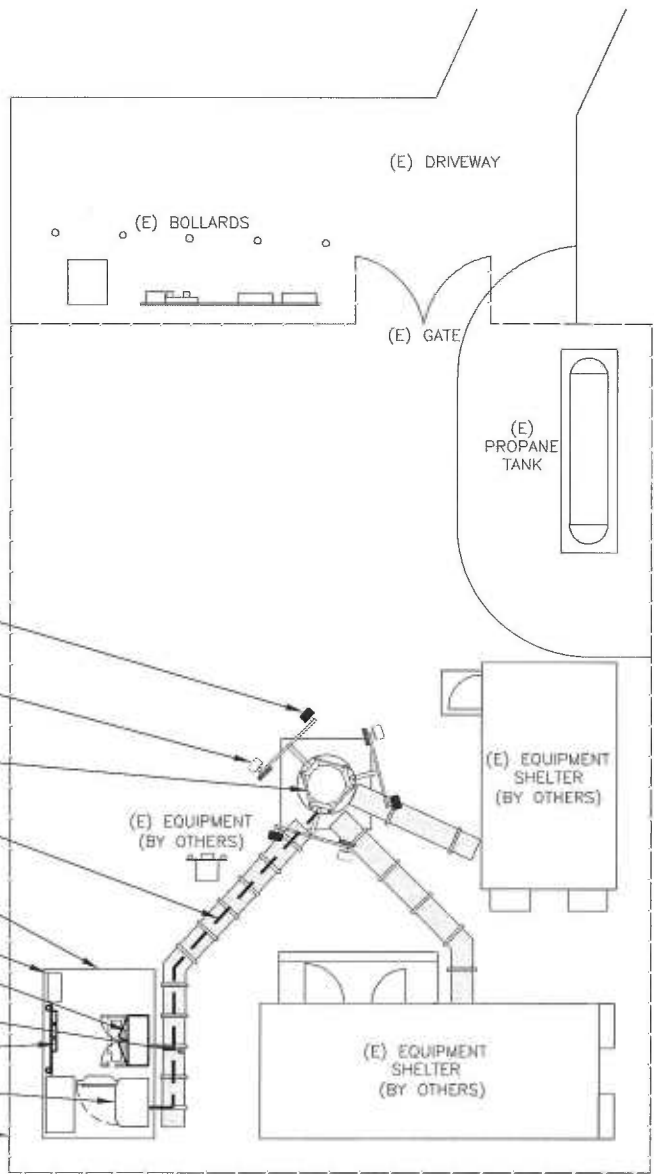
DRAWN BY: FG

CHECKED BY: SM

PAGE 1 OF 3



- (P) COMMSCOPE QUAD POLE ANTENNA ON (E) PIPE MAST (TYP 1/SECTOR, TOTAL OF 3)
- (E) GSM/UMTS QUAD POLE ANTENNA
- (E) (1) ddB4 and (E) (1) ddB2 TMAs (TYP 1/SECTOR, TOTAL OF 3)
- (E) 145' HIGH MONOPOLE TOWER
- (P) (6) 1-5/8" COAX CABLES
- (E) (12) 1-5/8" COAX CABLES ROUTED IN (E) ICE BRIDGE
- (E) 10'-0"X15'-0" T-MOBILE CONCRETE PAD/LEASE AREA
- (E) PPC ON CONCRETE PAD
- (P) 6102 CABINET TO REPLACE (E) S8000 CABINET ON CONCRETE PAD
- (E) GPS ON ICE BRIDGE
- (P) (3) RRUs ON (P) H-FRAME
- (E) 3106 CABINET ON CONCRETE PAD
- (E) CHAIN LINK FENCE



PROJECT : L700
 CONFIGURATION
704BU

SITE PLAN
 SCALE: 1/16" = 1'-0"
 1
 LE-2

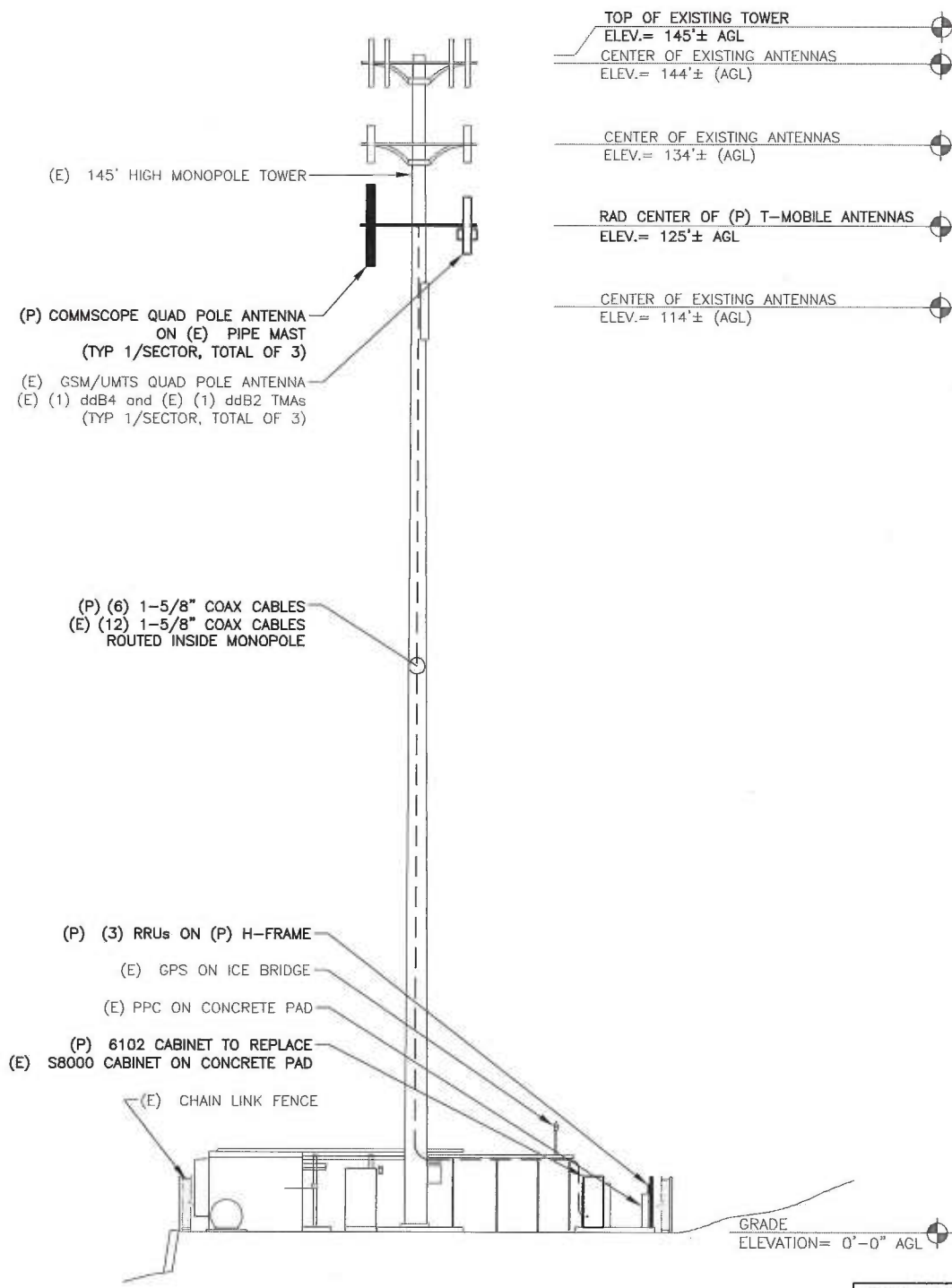
ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

SUBMITTALS	
LE REV A	08.19.14
LE REV 0	08.22.14
LE REV 1	08.26.14

ATLANTIS GROUP
 1340 Centre Street
 Suite 203
 Newton, MA 02459
 Office: 617-965-0789
 Fax: 617-213-5056

LEASE EXHIBIT
 SITE NUMBER:
 CTNH416A
 SITE NAME:
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 SITE ADDRESS:
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GRADE
ELEVATION= 0'-0" AGL

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ELEVATION
SCALE: 1/16" = 1'-0"
1
LE-3

PROJECT : L700
CONFIGURATION
704BU

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LEASE EXHIBIT
SITE NUMBER:
CTNH416A
SITE NAME:
OLD FARM - VERIZON
SITE ADDRESS:
5 OLD FARMS ROAD
BARKHAMSTED, CT, 06063

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EXHIBIT B

Structural Analysis Report

145-ft Existing EEl Monopole

*Proposed T-Mobile
Antenna Upgrade*

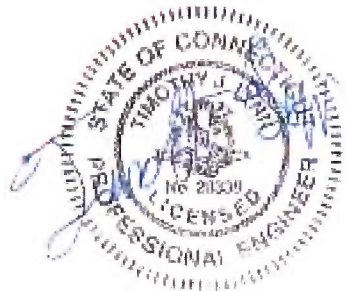
T-Mobile Site Ref: CTNH416A

Verizon Site Ref: Barkhamsted West

*5 Old Farm Road
Barkhamsted, CT*

Centek Project No. 14033.017

Date: September 23, 2014



Prepared for:
T-Mobile USA
35 Griffin Road
Bloomfield, CT 06002

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- FOUNDATION AND ANCHORS.
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- GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM.

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- tnxTower DETAILED OUTPUT.
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Introduction

The purpose of this report is to summarize the results of the non-linear, P- Δ structural analysis of the antenna installation proposed by T-Mobile on the existing monopole (tower) owned and operated by Verizon Wireless, located in Barkhamsted, CT.

The host tower is a 145-ft tall, three-section, eighteen sided, tapered monopine, originally designed and manufactured by Engineered Endeavors Inc., job no; 13841-E01, dated December 6, 2005. The tower geometry, structure member sizes and foundation system information were obtained from the aforementioned EEI design documents. The tower was reinforced per a previous structural report prepared by Centek Engineering job no. 12063.032 dated November 29, 2012

Antenna and appurtenance information were obtained from the aforementioned Centek Engineering structural report, a tower mapping report prepared by Eastern Communications dated September 8, 2014 and a T-Mobile RF data sheet.

The tower consists of three (3) tapered vertical steel sections conforming to ASTM A572-65 (65ksi). The vertical tower sections are slip joint connected. The diameter of the pole (flat-flat) is 17.5-in at the top and 55.0-in at the base.

T-Mobile proposes the installation of three (3) panel antennas mounted to the existing three (3) T-Arms. Refer to the Antenna and Appurtenance Summary below for a detailed description of the proposed antenna and appurtenance configuration.

Antenna and Appurtenance Summary

The existing, proposed and future loads considered in this analysis consist of the following:

- **VERIZON (RESERVED):**
Antennas: Six (6) Antel LPA-80063-6CF panel antennas, six (6) Antel BXA-70063-6CF panel antennas, six (6) LPA-171063-12CF panel antennas and three (3) RRH's mounted on an existing low profile platform with a RAD center elevation of 145-ft above grade.
Coax Cables: Twelve (12) 1-5/8" \varnothing coax cables running on the inside of the existing monopole, six (6) 1-5/8" \varnothing coax cables banded to the exterior of the existing monopole and one (1) 1-1/4" \varnothing fiber cable banded to the exterior of the existing monopole.
- **METROPCS (EXISTING):**
Antennas: Three (3) RFS APXV18-206517S-C panel antennas flush mounted with a RAD center elevation of 115-ft above grade.
Coax Cables: Six (6) 1-5/8" \varnothing coax cables running on the inside of the existing tower.

- **AT&T (EXISTING):**
Antennas: Six (6) Powerwave 7770 panel antennas, twelve (12) Powerwave LGP21401 TMA's, two (2) KMW AM-X-CD-16-65-00T-RET panel antennas, one (1) KWM AM-X-CD-14-65-00T-RET panel antenna, six (6) Ericsson RRUS-11, one (1) Raycap DC6-48-60-18-8F surge arrestor and one (1) Andrew ABT-DFDM-ADBH Bias Tee mounted on an existing low profile platform with a RAD center elevation of 135-ft above grade.
Coax Cables: Twelve (12) 1-5/8" Ø coax cables, one (1) fiber cable and two (2) dc control cables running on the inside of the existing tower.
- **T-MOBILE (EXISTING TO REMAIN):**
Antennas: Three (3) RFS APX16DWV-16DWVS-E-A20 panel antennas, three (3) RFS Twin AWS TMA's and three (3) Andrew Twin PCS TMA's mounted on an three (3) 12-ft T-arms with a RAD center elevation of 125-ft above grade.
Coax Cables: Twelve (12) 1-5/8" Ø coax cables running on the inside of the existing tower.
- **T-MOBILE (Proposed):**
Antennas: **Three (3) Andrew SBNHH-1D65C panel antennas mounted on an three (3) 12-ft T-arms with a RAD center elevation of 125-ft above grade.**
Coax Cable: **Six (6) 1-5/8" Ø coax cables running on the exterior of the existing tower.**

Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents or reinforcement drawings.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All existing coax cables to be installed as indicated in this report.

Analysis

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower shaft, and the model assumes that the shaft members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed (fastest mile) with no ice and a 75% reduction of wind force with ½ inch accumulative ice to determine stresses in members as per guidelines of TIA/EIA-222-F-96 entitled "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures", the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Allowable Stress Design (ASD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix K of the CSBC¹ and the wind speed data available in the TIA/EIA-222-F-96 Standard. The higher of the two wind speeds is utilized in preparation on the tower analysis.

Tower Loading

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA/EIA-222-F, gravity loads of the tower structure and its components, and the application of ½" radial ice on the tower structure and its components.

Basic Wind Speed:	Litchfield; v = 80 mph (fastest mile)	[Section 16 of TIA/EIA-222-F-96]
	Barkhamsted; v = 90 mph (3 second gust) equivalent to v = 75 mph (fastest mile) TIA-EIA-222-F wind speed controls.	[Appendix K of the 2005 CT Building Code Supplement]
Load Cases:	<u>Load Case 1</u> ; 80 mph wind speed w/ no ice plus gravity load – used in calculation of tower stresses and rotation.	[Section 2.3.16 of TIA/EIA-222-F-96]
	<u>Load Case 2</u> ; 69 mph wind speed w/ ½" radial ice plus gravity load – used in calculation of tower stresses. The 69 mph wind speed velocity represents 75% of the wind pressure generated by the 80 mph wind speed.	[Section 2.3.16 of TIA/EIA-222-F-96]
	<u>Load Case 3</u> ; Seismic – not checked	[Section 1614.5 of State Bldg. Code 2005] does not control in the design of this structure type

¹ The 2005 Connecticut State Building Code as amended by the 2009 CT State Supplement. (CSBC)

Tower Capacity

Tower stresses were calculated utilizing the structural analysis software tnxTower. Allowable stresses were determined based on Table 5 of the TIA/EIA code with a 1/3 increase per Section 3.1.1.1 of the same code.

- Calculated stresses were found to be within allowable limits. In Load Case 1, per tnxTower "Section Capacity Table", the maximum tower steel usage was found to be at **98.2%** of its total capacity.

Tower Section	Elevation	Stress Ratio (percentage of capacity)	Result
Pole Shaft (L1)	109.79'-145.00'	98.2%	PASS
Pole Shaft (L2)	94.79'-109.79'	86.2%	PASS
Pole Shaft (L3)	47.00'-94.79'	87.0%	PASS
Pole Shaft (L4)	1.0'-47.00'	97.1%	PASS

Foundation and Anchors

The existing foundation consists of a 7-ft square x 5.5-ft long reinforced concrete pier on a 21.5-ft square x 3.5-ft thick reinforced concrete pad. The sub-grade conditions used in the analysis of the existing foundation were obtained from the aforementioned Centek structural report. The base of the tower is connected to the foundation by means of (14) 2.25"Ø, ASTM A615-75 anchor bolts embedded approximately 7-ft into the concrete foundation structure.

- The tower base reactions developed from the governing Load Case 1 were used in the verification of the foundation and its anchors:

Location	Vector	Proposed Reactions
Base	Shear	26 kips
	Compression	31 kips
	Moment	2828 kip-ft

- The foundation was found to be within allowable limits.

Foundation	Design Limit	IBC 2003/2005 CT State Building Code Section 3108.4.2 (FS) ⁽¹⁾	Proposed Loading (FS) ⁽¹⁾	Result
Reinforced Concrete Pad and Pier	OTM ⁽²⁾	2.0	2.26	PASS

Note 1: FS denotes Factor of Safety.

Note 2: OTM denotes Overturning Moment

CEN TEK Engineering, Inc.
Structural Analysis – 145' EEI Monopole
T-Mobile Antenna Upgrade – CTNH416A
Barkhamsted, CT
September 23, 2014

- The anchor bolts and base plate were found to be within allowable limits.

Tower Component	Design Limit	Stress Ratio (percentage of capacity)	Result
Anchor Bolts	Combined Axial and Bending	78.9%	PASS
Base Plate	Bending	98.6%	PASS

Conclusion

This analysis shows that the subject tower **is adequate** to support the proposed modified antenna configuration.

The analysis is based, in part, on the information provided to this office by T-Mobile. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:



Timothy J. Lynn, PE
Structural Engineer



EXHIBIT C

September 30, 2014

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

Emissions Analysis for Site: **CTNH416A – Old Farms Verizon Colo**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **5 Old Farms Road, Barkhamstead, 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 **5 Old Farms Road, Barkhamstead, 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 (AWS Band – 2100 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 (AWS Band – 2100 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 APX16DWV-16DWVS-E-A20** for 1900 MHz (PCS) and 2100 MHz (AWS) channels and the **Commscope SBNHH-1D65C** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **RFS APX16DWV-16DWVS-E-A20** has a maximum gain of **16.3 dBd** at its main lobe. The **Commscope SBNHH-1D65C** has a maximum gain of **13.6 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 **125 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 APX16DWV-16DWVS-E-A20	Make / Model:	RFS APX16DWV-16DWVS-E-A20	Make / Model:	RFS APX16DWV-16DWVS-E-A20
Gain:	16.3 dBd	Gain:	16.3 dBd	Gain:	16.3 dBd
Height (AGL):	125	Height (AGL):	125	Height (AGL):	125
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	6	Channel Count	6	# PCS Channels:	6
Total TX Power:	240	Total TX Power:	240	# AWS Channels:	240
ERP (W):	3,833.82	ERP (W):	3,833.82	ERP (W):	3,833.82
Antenna A1 MPE%	2.60	Antenna B1 MPE%	2.60	Antenna C1 MPE%	2.60
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Commscope SBNHH-1D65C	Make / Model:	Commscope SBNHH-1D65C	Make / Model:	Commscope SBNHH-1D65C
Gain:	13.6 dBd	Gain:	13.6 dBd	Gain:	13.6 dBd
Height (AGL):	125	Height (AGL):	125	Height (AGL):	125
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):	405.54	ERP (W):	405.54	ERP (W):	405.54
Antenna A2 MPE%	0.37	Antenna B2 MPE%	0.37	Antenna C2 MPE%	0.37

Site Composite MPE %	
Carrier	MPE %
T-Mobile	8.92
Verizon Wireless	15.64 %
AT&T	17.64 %
Site Total MPE %:	42.20 %

T-Mobile Sector 1 Total:	2.97 %
T-Mobile Sector 2 Total:	2.97 %
T-Mobile Sector 3 Total:	2.97 %
Site Total:	42.20 %

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:	2.97 %
Sector 2:	2.97 %
Sector 3 :	2.97 %
T-Mobile Total:	8.92 %
Site Total:	42.20 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **42.20%** 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.



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