

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

June 18, 2013

Julie D. Kohler, Esq.  
Cohen and Wolf, P.C.  
1115 Broad Street  
Bridgeport, CT 06604

RE: **EM-T-MOBILE-052-130522** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 319 New Britain Avenue, Farmington, Connecticut.

Dear Attorney Kohler:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated May 20, 2013. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

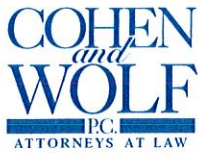
This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Melanie A. Bachman  
Acting Executive Director

MAB/CDM/jb

- c: The Honorable Jeffrey Hogan, Chairman, Town of Farmington  
Kathleen Eagen (via e-mail service), Town Manager, Town of Farmington  
Jeffrey Ollendorf (via e-mail service), Town Planner, Town of Farmington



**JULIE D. KOHLER**

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

May 20, 2013

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

**Re: Notice of Exempt Modification  
Town of Farmington/T-Mobile co-location  
Site ID CTHA149A  
319 New Britain Avenue, Farmington 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, the Town of Farmington ("Farmington" or the "Town") owns the existing telecommunications tower and related facility at 319 New Britain Avenue, Farmington Connecticut (latitude 41.74971 / longitude -72.87251). T-Mobile intends to replace six antennas and related equipment at this existing telecommunications facility in Farmington ("Farmington 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 being sent to Town Manager Kathleen Eagen. The Town of Farmington is also the property owner.

The existing Farmington Facility consists of a 190 foot tall monopole tower. The facility currently supports the equipment of T-Mobile, Sprint, AT&T, MetroPCS, Clearwire, and the Town.

T-Mobile plans to replace six antennas at an elevation of 160 feet. (See the plans revised to April 22, 2013 attached hereto as Exhibit A). T-Mobile will also upgrade one of its equipment cabinets within the existing compound area near the base of the structure, as well as install hybrid line and reuse existing coax cables. The existing Facility is structurally capable of supporting T-Mobile' proposed modifications, as indicated in the structural analysis dated May 10, 2013 and attached hereto as Exhibit B.

1115 BROAD STREET  
PO. BOX 1821  
BRIDGEPORT, CT 06601-1821  
TEL: (203) 368-0211  
FAX: (203) 394-9901

158 DEER HILL AVENUE  
DANBURY, CT 06810  
TEL: (203) 792-2771  
FAX: (203) 791-8149

320 POST ROAD WEST  
WESTPORT, CT 06880  
TEL: (203) 222-1034  
FAX: (203) 227-1373

657 ORANGE CENTER ROAD  
ORANGE, CT 06477  
TEL: (203) 298-4066  
FAX: (203) 298-4068

May 20, 2013  
Site ID CTHA149A  
Page 2

The planned modifications to the Farmington Facility fall squarely within those 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 the 160 foot level. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.

2 . The installation of the T-Mobile replacement equipment in the existing compound, as reflected on the attached site plan, will not require an extension of the site boundaries. T-Mobile's proposed equipment will be located entirely within the existing compound area.

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

4 . The operation of the replacement 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 a Radio Frequency Emissions Analysis Report prepared by EBI dated May 15, 2013 T-Mobile's operations would add 0.440% 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 72.880% of the FCC Standard as calculated for a mixed frequency site as evidenced by the engineering exhibit attached hereto as Exhibit C.

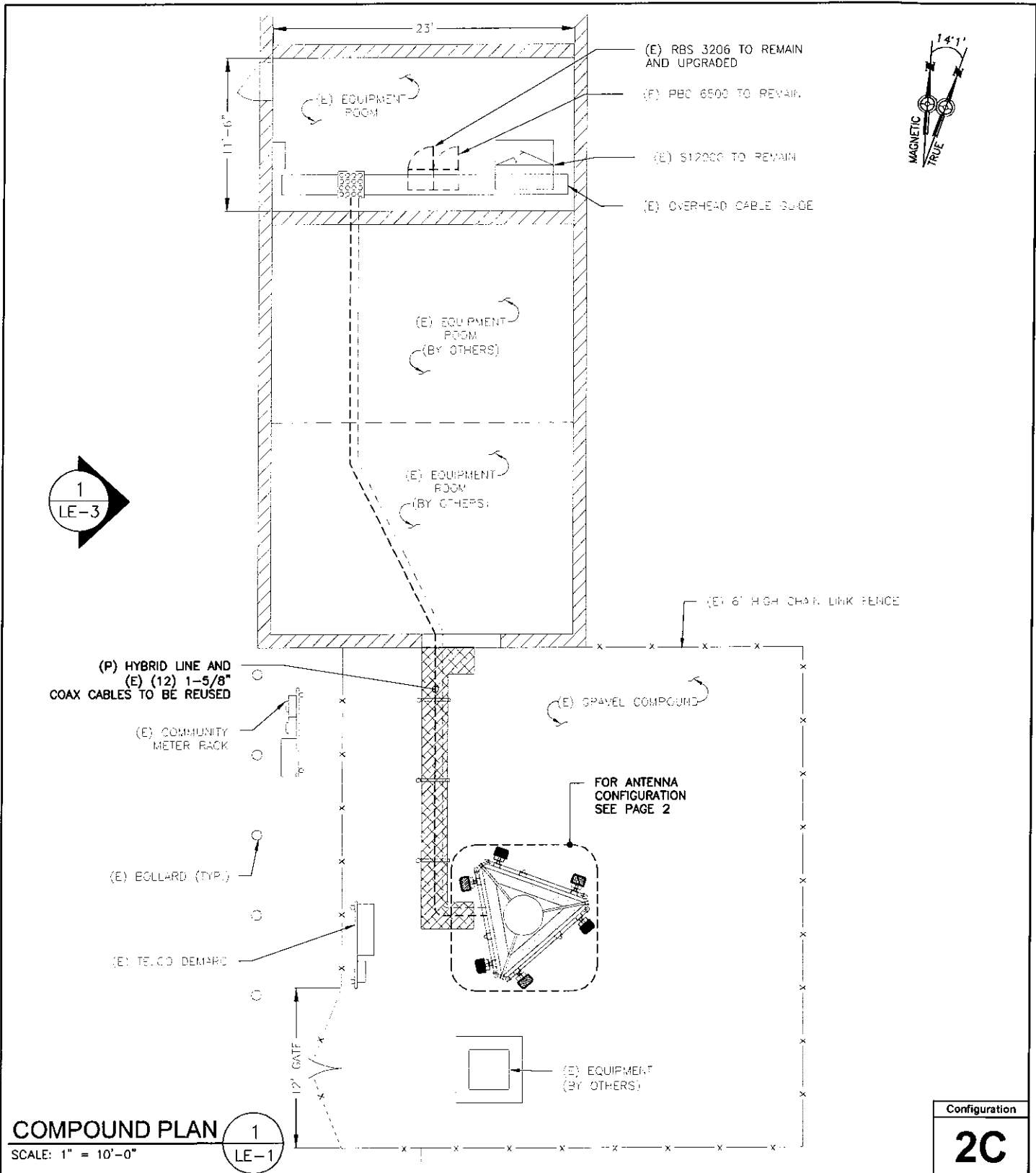
For the foregoing reasons, T-Mobile respectfully submits that the proposed replacement antennas and equipment at the Farmington Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

  
Julie D. Kohler, Esq.

cc: Town of Farmington, Town Manager Kathleen Eagen  
Scott Chase, Northeast Site Solutions

# **EXHIBIT A**



**COMPOUND PLAN**

SCALE: 1" = 10'-0"

1  
LE-1

Configuration

**2C**

SUBMITTALS	
LE REV A	04.22.13

**ATLANTIS GROUP**  
 1340 Centre Street  
 Suite 203  
 Newton, MA 02459  
 Office: 617-965-0799  
 Fax: 617-213-5056

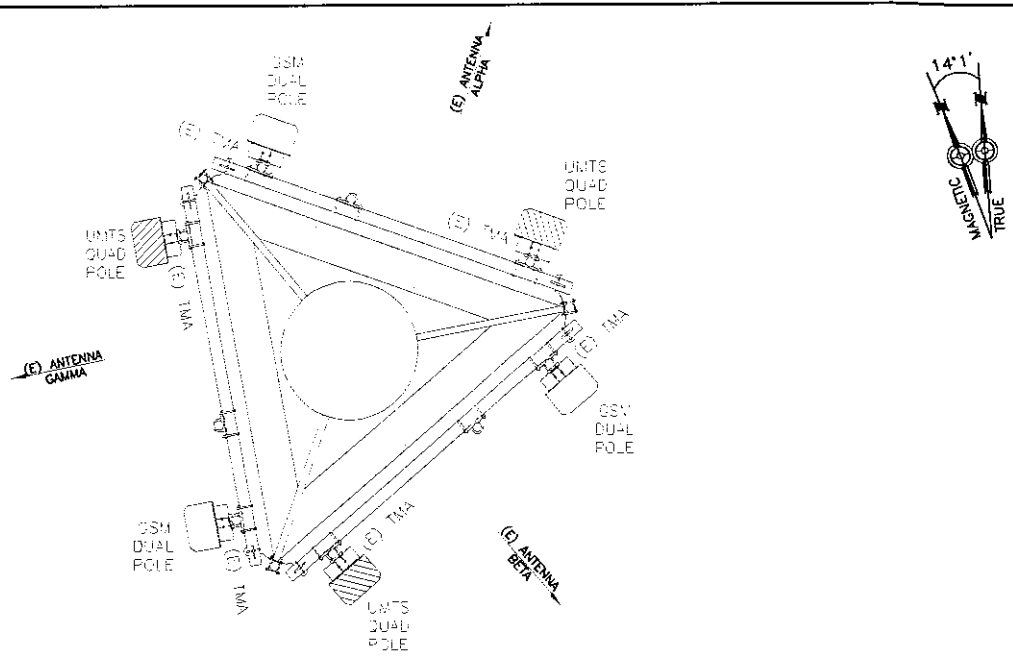
**LEASE EXHIBIT**  
 SITE NUMBER:  
 CTHA149A  
 SITE NAME:  
 FARMINGTON PD MP  
 SITE ADDRESS:  
 319 NEW BRITAIN AVENUE  
 FARMINGTON, CT 06085

**NORTHEAST TOWERS**  
 199 BRICKYARD ROAD  
 FARMINGTON, CT 06032  
 OFFICE: (860) 677-1999  
 FOR  
**T-MOBILE NORTHEAST, LLC**  
 35 GRIFFIN ROAD SOUTH  
 BLOOMFIELD, CT 06002  
 OFFICE: (860) 692-7100  
 FAX: (860) 692-7159

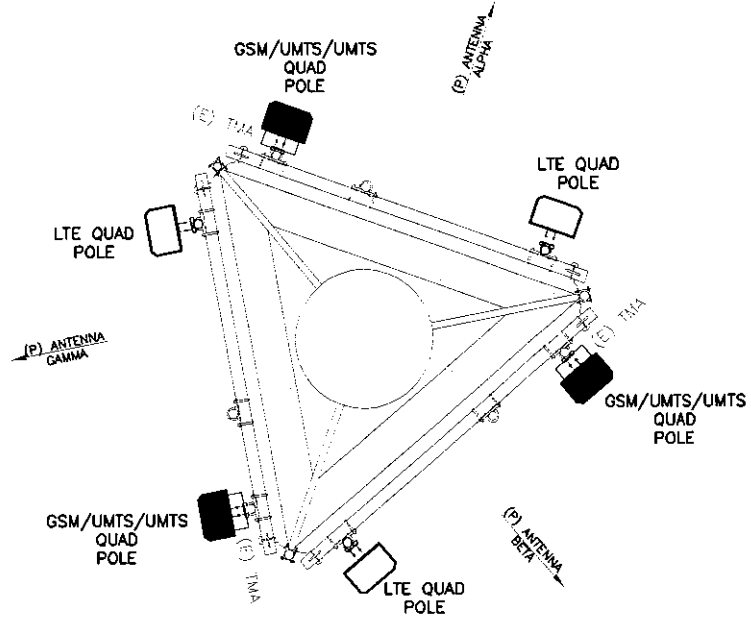
DRAWN BY: SB

CHECKED BY: SM

PAGE 1 OF 3



**EXISTING ANTENNA PLAN**



**FINAL ANTENNA PLAN**

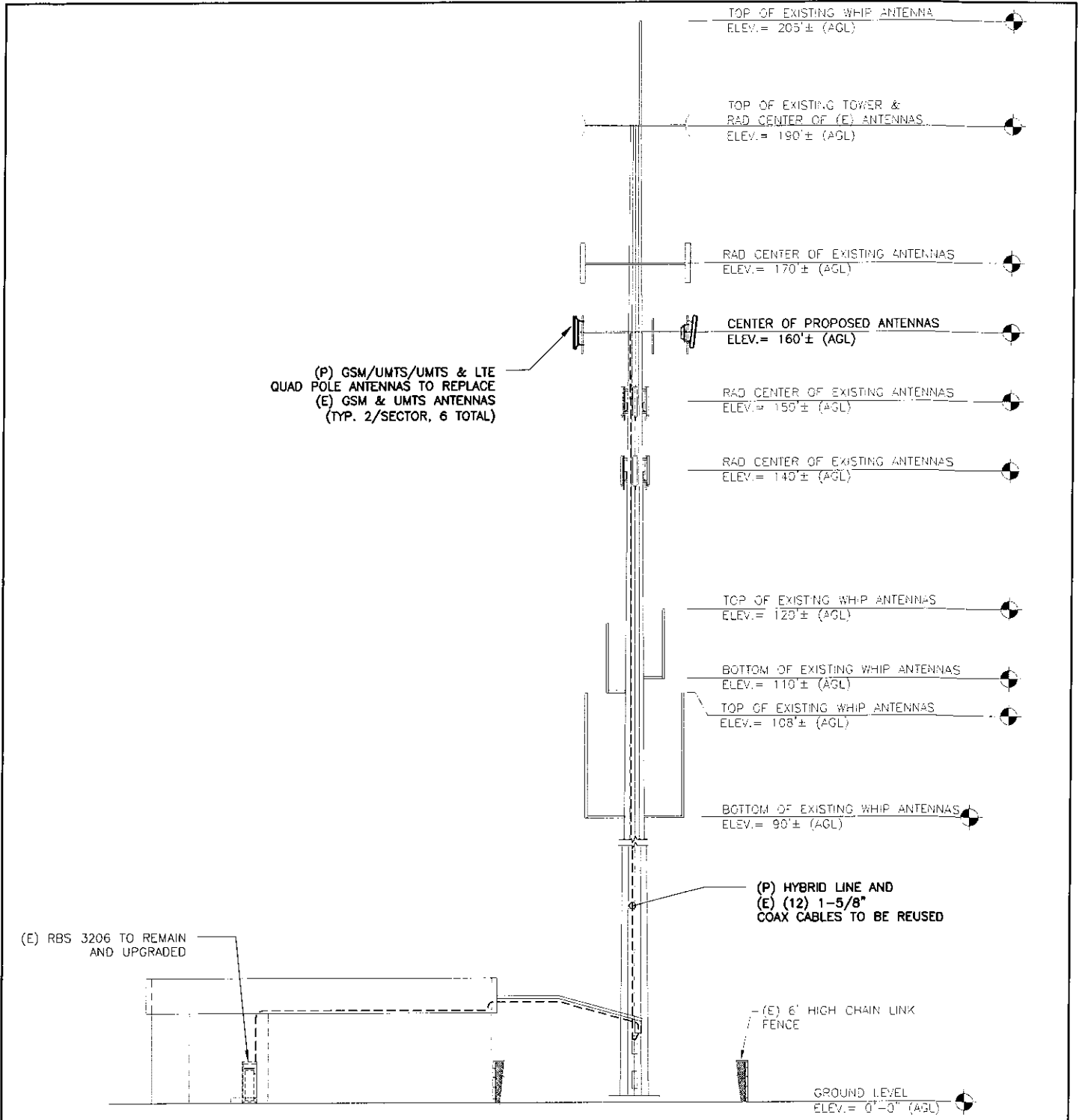
Configuration  
**2C**

SUBMITTALS	
LE REV A	04.22.13

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

**LEASE EXHIBIT**  
 SITE NUMBER:  
 CTHA149A  
 SITE NAME:  
 FARMINGTON PD MP  
 SITE ADDRESS:  
 319 NEW BRITAIN AVENUE  
 FARMINGTON, CT 06085

**NORTHEAST TOWERS**  
 199 BRICKYARD ROAD  
 FARMINGTON, CT 06032  
 OFFICE: (860) 677-1999  
 FOR  
**T-MOBILE NORTHEAST, LLC**  
 35 GRIFFIN ROAD SOUTH  
 BLOOMFIELD, CT 06002  
 OFFICE: (860) 692-7100  
 FAX: (860) 692-7159



**WEST ELEVATION**  
SCALE: 1" = 20'-0"

1  
LE-3

Configuration  
**2C**

SUBMITTALS	
LE REV A	04.22.13

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

**LEASE EXHIBIT**  
SITE NUMBER:  
CTHA149A  
SITE NAME:  
FARMINGTON PD MP  
SITE ADDRESS:  
319 NEW BRITAIN AVENUE  
FARMINGTON, CT 06085

**NORTHEAST TOWERS**  
199 BRICKYARD ROAD  
FARMINGTON, CT 06032  
OFFICE: (860) 677-1999  
FOR  
**T-MOBILE NORTHEAST, LLC**  
35 GRIFFIN ROAD SOUTH  
BLOOMFIELD, CT 06002  
OFFICE: (860) 692-7100  
FAX: (860) 692-7159

# **EXHIBIT B**



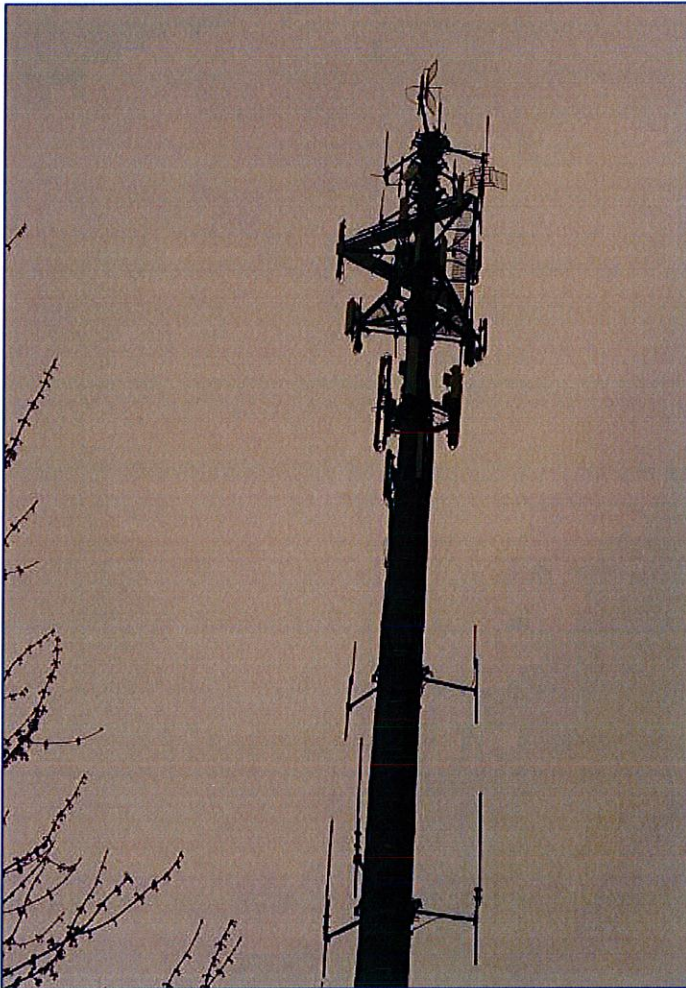
**STRUCTURAL ANALYSIS REPORT  
MONOPOLE**



Prepared For:

**.. T .. Mobile ..**

**35 Griffin Road South  
Bloomfield, CT 06002**



**Monopole Rating**

**Monopole: Pass (97.7 %)**

**Foundation: Pass**

Sincerely,  
Atlantis Group, Inc.  
5-10-2013



Ahmet Colakoglu, PE  
CT Professional Engineer  
License No: 27057

**Site ID: CTHA149A  
Site Name: Farmington PD MP  
319 New Britain Avenue,  
Farmington, CT 06085**

Prepared By:  
Atlantis Group, Inc.  
1340 Centre Street, Suite 203  
Newton, Massachusetts 02459  
Phone: 617-965-0789, Fax: 617-965-0103  
May 10, 2013

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5.0 - ANALYSIS AND ASSUMPTIONS

6.0 – RESULTS AND CONCLUSION

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A – CALCULATIONS

## 1.0 SUBJECT AND REFERENCES

The purpose of this analysis is to evaluate the structural capacity of the existing 190 feet tall monopole, located at 319 New Britain Avenue, Farmington, CT 06085, for the additions and alterations proposed by T-Mobile.

The structural analysis of the site is based on the following documents provided to us:

1. Structural Analysis Report prepared by Armor Tower, Inc., dated 11/17/2009.
2. Structural Analysis Report prepared by Malouf Engineering Intl., Inc., dated 10/08/2008.
3. Structural Analysis Report prepared by URS Corporation dated 03/13/2002.
4. Existing and proposed antenna information provided by T-Mobile.

## 1.1 STRUCTURE

The structure is a 190 feet high, 18- sided monopole, which is attached to the foundation with a base plate and anchor bolts. It is formed by the following sections:

SECTION LENGTH (FEET)	LAP SPLICE (IN)	SHAFT THICKNESS (IN)	TOP DIAMETER (IN)	BOTTOM DIAMETER (IN)	YIELD STRENGTH (KSI)
25.75	35	0.250	19.56	25.45	65
37.50	46	0.3125	24.28	33.35	65
37.50	56	0.375	31.80	41.04	65
37.50	66	0.375	39.14	48.55	65
37.50	75	0.375	46.42	55.86	65
37.50	-	0.375	53.54	63.00	65

**2.0 PROPOSED CONFIGURATION**
**Antennas and Appurtenances:**
**Existing Configuration of T-MOBILE Appurtenances:**

SECTOR	RAD CENTER (FT)	ANTENNA & TMA		MOUNT	FEED LINES
ALPHA	160	UMTS Antenna GSM Antenna TMA	(1) APX16DWV_16DWVS (1) APXV18-209014 (1) d B2 & (1) dd B4	(1) Low Profile Platform	(4) 1½"
BETA	160	UMTS Antenna GSM Antenna TMA	(1) APX16DWV_16DWVS (1) APXV18-209014 (1) d B2 & (1) dd B4	(1) Low Profile Platform	(4) 1½"
GAMMA	160	UMTS Antenna GSM Antenna TMA	(1) APX16DWV_16DWVS (1) APXV18-209014 (1) d B2 & (1) dd B4	(1) Low Profile Platform	(4) 1½"

**Proposed Configuration of T-MOBILE Appurtenances:**

SECTOR	RAD CENTER (FT)	ANTENNA & TMA		MOUNT	FEED LINES
ALPHA	160	GSM/UMTS Antenna LTE Antenna TMA	(1) AIR21 B2A/B4P (1) AIR21 B4A/B2P (1) dd B4	(1) Low Profile Platform	(4) 1½" On Shaft Face + (1) Hybrid Cable On Shaft Face
BETA	160	GSM/UMTS Antenna LTE Antenna TMA	(1) AIR21 B2A/B4P (1) AIR21 B4A/B2P (1) dd B4	(1) Low Profile Platform	(4) 1½" On Shaft Face
GAMMA	160	GSM/UMTS Antenna LTE Antenna TMA	(1) AIR21 B2A/B4P (1) AIR21 B4A/B2P (1) dd B4	(1) Low Profile Platform	(4) 1½" On Shaft Face

**Existing and Remaining Appurtenances by Others:**

RAD CENTER (FT) CARRIER	ANTENNA & TMA	MOUNT	FEED LINES
190	(1) Lightning Rod	Leg Mount	
190	(2) 10' Omni	(2) Standoffs	(2) 7/8" Inside Shaft

190	(1) PR-460 Grid Dish	(1) Standoff	(1) 7/8" Inside Shaft
185	(1) 10' Omni	(1) Standoff	(1) 7/8" Inside Shaft
185	(1) PR-460 Grid Dish	(1) Standoff	(1) 7/8" Inside Shaft
180	(1) 10' Omni	(1) Standoff	(1) 7/8" Inside Shaft
178	Empty	(1) Standoff	
170 Sprint	(6) 5' Panel Antennas	(1) Low Profile Platform	(6) 1-5/8" Inside Shaft
150 AT&T	(3) Allgon 7770 (3) TMAs	(3) Standoffs	(6) 1-5/8" Inside Shaft
140 Pocket	(3) Kathrein 742 213	(3) Standoffs	(4) 1-5/8" Inside Shaft (2) 1-5/8" On Shaft Face
113	(3) 10' Omni	(3) Standoffs	(3) 1/2" Inside Shaft
90	(3) 20' Omni	(3) Standoffs	(3) 1/2" Inside Shaft

### 3.0 CODES AND LOADING

The monopole was analyzed per ANSI/TIA-222-F as referenced by the 2005 Connecticut Building Code with 2009 Supplement, which is the adopted building code in the county. The following wind loading was used in compliance with the standard for Hartford County, CT.

- Basic wind speed 80 mph (W) without ice.
- Basic wind speed 69.3 mph ( $W_i$ ) with 1/2" radial and escalating ice.

The following load combinations were used with wind blowing at 0°, 60° and 90°, measured from a line normal to the face of the monopole.

- D + W
- D +  $W_i$  + I

D: Dead Load of structure and appurtenances  
 W: Wind Load, without ice

W<sub>i</sub>: Wind Load, with ice

I: Ice Gravity Load

#### 4.0 **STANDARD CONDITIONS FOR ENGINEERING SERVICES ON EXISTING STRUCTURES**

The analysis is based on the information provided to Atlantis Group and is assumed to be current and correct. Unless otherwise noted, the structure and the foundation system are assumed to be in good condition, free of defects and can achieve theoretical strength.

It is assumed that the structure has been maintained and shall be maintained during its service. The superstructure and the foundation system are assumed to be designed with proper engineering practice and fabricated, constructed and erected in accordance with the design documents. Atlantis Group will accept no liability which may arise due to any existing deficiency in design, material, fabrication, erection, construction, etc. or lack of maintenance. Contractor should inspect the condition of the existing structure, mounts and connections and notify Atlantis Group for any discrepancies and deficiencies before proceeding with the construction.

The analysis does not include a qualification of the mounts attached on the structure or their connections. The analysis is performed to verify the capacity of the main structural members, which is the current practice in the tower industry.

The evaluation results presented in this report are only applicable for the previously mentioned existing and proposed additions and alterations. Any deviation of the proposed equipment and placement, etc., will require Atlantis Group to generate an additional structural evaluation.

#### 5.0 **ANALYSIS and ASSUMPTIONS**

The monopole was analyzed by utilizing tnxTower, a non-linear 3-Dimensional finite element software, a product of Tower Numerics, Inc. Software output for this analysis is provided in Appendix-A of this report.

**6.0 RESULTS and CONCLUSION**

The existing monopole is found to have **adequate** structural capacity for the proposed loading by T-mobile. For the aforementioned load combinations and as a maximum, the monopole anchor bolts to the foundation will be stressed to **97.7%** of capacity. Maximum usage of monopole shafts is 88.8%.

Based on the stress level of the shaft and assuming the foundation system was designed to have at least the capacity of the superstructure, monopole foundation system is considered to have adequate structural strength.

**Reactions:**

Maximums	Atlantis Analysis	Armor Tower Analysis	Malouf Eng. Analysis	URS Analysis
Base Shear (kips)	36.6	28.5	27.3	33
Base Compression (kip)	54.6	55.6	58.2	62
Base Moment (kip*ft)	4,170	3,281	3,291	4,221

Therefore, the proposed additions and alterations by T-Mobile can be implemented as intended with the conditions outlined in this report.

Should you have any questions or need any clarifications about this report, please contact Ahmet Colakoglu at (617) 965-0789.

Sincerely,  
Atlantis Group, Inc.

# **EXHIBIT C**



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

**T-Mobile Existing Facility**

**Site ID: CTHA149A**

**Farmington PD MP  
319 New Britain Avenue  
Farmington, CT 06085**

**May 15, 2013**

**EBI Project Number: 62136361**

May 15, 2013

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

Re: Emissions Values for Site: **CTHA149A - Farmington PD MP**

EBCI Consulting was directed to analyze the proposed T-Mobile facility located at 319 New Britain Avenue, Farmington, 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 cellular band is  $567 \mu\text{W}/\text{cm}^2$ , and the general population exposure limit for the PCS band 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 319 New Britain Avenue, Farmington, 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, 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 Ericsson AIR21 for LTE, UMTS and GSM. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 15.6 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 **160 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	CTH14149A - Farmington PD MP
Site Address	319 New Britain Avenue, Farmington, CT 06085
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)	Antenna analysis height (ft)	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	160	154	0	0	48.326044	0.732564	0.07326%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	160	154	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	160	154	0	0	24.163022	0.366282	0.03665%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	160	154	0	0	24.163022	0.366282	0.03665%
Sector total Power Density Value:														0.147%		
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)	Antenna analysis height (ft)	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	160	154	0	0	48.326044	0.732564	0.07326%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	160	154	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	160	154	0	0	24.163022	0.366282	0.03665%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	160	154	0	0	24.163022	0.366282	0.03665%
Sector total Power Density Value:														0.147%		
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)	Antenna analysis height (ft)	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	160	154	0	0	48.326044	0.732564	0.07326%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	160	154	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	160	154	0	0	24.163022	0.366282	0.03665%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	160	154	0	0	24.163022	0.366282	0.03665%
Sector total Power Density Value:														0.147%		

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.440%
Town	2.190%
Emergency	8.020%
Public Works	35.670%
Sprint	2.580%
Clearwire	0.630%
MetroPCS	6.200%
AT&T	17.150%
<b>Total Site MPE %</b>	<b>72.880%</b>

## 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 T-Mobile facility are **0.440% (0.147% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

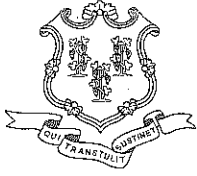
The anticipated composite MPE value for this site assuming all carriers present is **72.880%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions

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



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051  
Phone: (860) 827-2935 Fax: (860) 827-2950  
E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)  
[www.ct.gov/csc](http://www.ct.gov/csc)

May 23, 2013

The Honorable Jeffrey Hogan  
Chairman  
Town of Farmington  
Town Hall  
1 Monteith Drive  
Farmington, CT 06032-1053

RE: **EM-T-MOBILE-052-130522** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 319 New Britain Avenue, Farmington, Connecticut.

Dear Chairman Hogan:

The Connecticut Siting Council (Council) received a request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72, a copy of which has already been provided to you.

If you have any questions or comments regarding the proposal, please call me or inform the Council by June 7, 2013.

Thank you for your cooperation and consideration.

Very truly yours,

Melanie A. Bachman  
Acting Executive Director

MAB/jb

c: Kathleen Eagen (via e-mail service), Town Manager, Town of Farmington  
Jeffrey Ollendorf (via e-mail service), Town Planner, Town of Farmington