

RACHEL A. SCHWARTZMAN

Please Reply To: Bridgeport
Writer's Direct Dial: (203) 337-4110
E-Mail: rschwartzman@cohenandwolf.com

August 27, 2014

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06501

ORIGINAL

RECEIVED
AUG 29 2014
CONNECTICUT
SITING COUNCIL

**Re: EM-T-MOBILE-158-130207
T-Mobile Site ID CT11612B
880 Post Road East, Westport, CT
Notice of Construction Completion**

Dear Attorney Bachman:

The Connecticut Siting Council ("Council") acknowledged the above referenced T-Mobile Northeast LLC ("T-Mobile") notice of exempt modification on March 12, 2013. T-Mobile hereby notifies the Council that construction of the acknowledged modifications were complete as of June 20, 2013.

Please don't hesitate to contact me with any questions.

Sincerely,



Rachel A. Schwartzman

cc: Samuel Simons, T-Mobile
Mark Richard, T-Mobile
Alex Giannaras, HPC Wireless
Julie Kohler, Esq.



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

www.ct.gov/csc

March 12, 2013

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

RE: **EM-T-MOBILE-158-130207** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 880 Post Road East, Westport, 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 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 February 6, 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,

Linda Roberts
Executive Director

LR/CDM/jb

c: The Honorable Gordon F. Joseloff, First Selectman, Town of Westport
Laurence Bradley, Director, Planning & Zoning, Town of Westport
Connecticut State Police

EM-T-MOBILE-158-130207

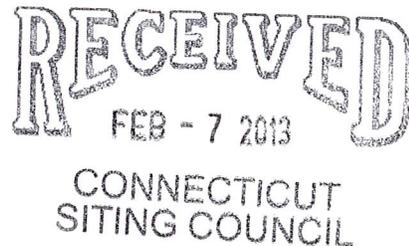
JLIE D. KOHLER

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

February 6, 2013

Ms. Linda Roberts,
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

**Re: Notice of Exempt Modification
State Police/T-Mobile co-location
T-Mobile Site ID CT 11612
880 Post Road East, Westport CT**



Dear Ms. Roberts:

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 Connecticut State Police owns the existing telecommunications tower and related facility at 880 Post Road East, Westport Connecticut (latitude 41 8 15.21/longitude -73 20 3.51). T-Mobile intends to replace six antennas and add related equipment at this existing facility in Westport ("Westport 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 the First Selectman, Gordon F. Joseloff and the State Police.

The existing Westport Facility consists of a 180 foot tower. T-Mobile plans to replace six antennas mounted on the tower at a centerline of 125 feet. T-Mobile will also install two cabinets and install fiber conduit, all within the existing compound area near the base of the tower. (See the plans dated April 13, 2012 attached hereto as Exhibit A). The existing tower is structurally capable of supporting T-Mobile's proposed use, as indicated in the structural analysis report dated August 6, 2012 and attached hereto as Exhibit B.

February 5, 2013
Site ID CT11612
Page 2

The planned modifications to the Westport 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 125 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 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 August 21, 2012 T-Mobile's operations would add 0.736% 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 30.146% 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 Westport Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

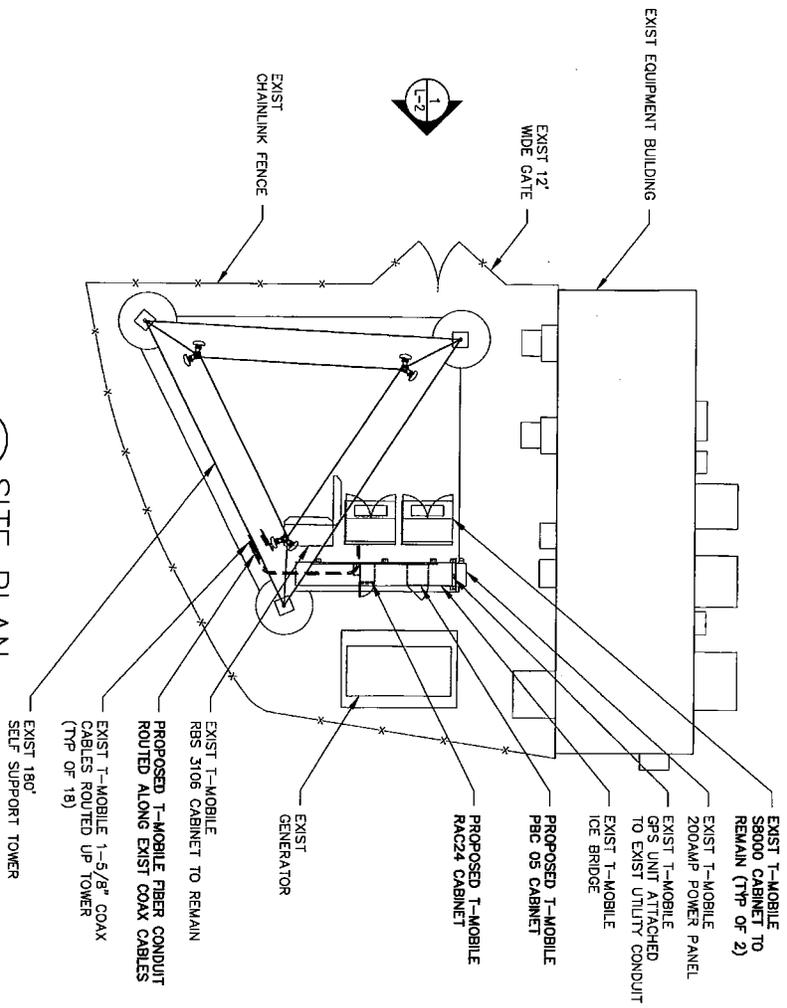
Sincerely,



Julie D. Kohler, Esq.

cc: First Selectman Gordon F. Joseloff, Town of Westport
Connecticut State Police
Jamie Ford, HPC Wireless (via e-mail)

EXHIBIT A



1 SITE PLAN
L-1
SCALE: 1" = 10'

STRUCTURAL NOTE:
EXIST MOUNTS, PLATFORMS AND TOWER STRUCTURE TO BE VERIFIED FOR STRUCTURAL SUITABILITY OF PROPOSED INSTALLATION BY A STATE LICENSED P.E.



UNAUTHORIZED ALTERATION OR ADDITION TO A DOCUMENT BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR IS A VIOLATION OF SECTION 7209 SUBSECTION 2 OF THE NEW YORK STATE EDUCATION LAW.

CONFIGURATION
2C

TECTONIC

- PLANNING
- ENGINEERING
- CONSTRUCTION
- LAND SURVEYING
- CONSULTANTS P.C.

1279 Route 300
NorthEast, NY 12550
Phone: (518) 527-5700
Fax: (518) 527-5703

Mobile

NORTHEAST LLC

17-HIGH WINDMARK, LLC PHONE: (978) 884-4300
A SMALL FIRM WITH BIG IDEAS
1000 W. 10TH ST. WILMINGTON, DE 19804

APPROVALS

T-MOBILE PROJECT NUMBER	ISSUED BY	DATE
0203071812B		

REV. DATE	REVISION	DRAWN BY	SS
04/13/14	FOR COMMENT		

SITE INFORMATION

CT11612B
CT STATE POLICE TOWER
880 POST ROAD EAST
WESTPORT, CT 06880

ROOF PLAN

SHEET TITLE

SHEET NUMBER

L-1

EXHIBIT B

**DETAILED STRUCTURAL ANALYSIS AND
EVALUATION OF AN EXISTING 180' SELF
SUPPORTING LATTICE TOWER AND ITS
FOUNDATION FOR PROPOSED ANTENNA
ARRANGEMENT**

Site Name: Connecticut State Police Tower
Site Address: 880 Post Road East
Westport, Connecticut

prepared for

T-Mobile

35 Griffin Rd
Bloomfield, CT 06002

prepared by

URS

URS CORPORATION
500 ENTERPRISE DRIVE, SUITE 3B
ROCKY HILL, CT 06067
TEL. 860-529-8882

36939373.00000
HPC-049

August 6, 2012

1. EXECUTIVE SUMMARY

This report summarizes the structural analysis of the 180' self-supporting lattice tower located at 880 Post Road East in Westport, Connecticut. The analysis was conducted in accordance with the 2005 Connecticut State Building Code, the TIA/EIA-222-F standard and additional requirements of the Connecticut State Police for wind velocity of 90 mph concurrent with ½" ice design wind load. The antenna loading considered in the analysis consists of all existing and proposed antennas, transmission lines, and ancillary items as outlined in the Analysis Methodology and Loading Condition Section of this report. The proposed T-Mobile modification is as follows:

Antenna and Mount	Carrier	Antenna Center Elevation
Remove: (3) RFS APX16DWV-16DWVS antennas (3) RFS APX16PV-16PVL antennas	T-Mobile (existing)	@ 125'
Install: (6) Ericsson Air 21 antennas (1) Huber Suhner Hybrid Cable	T-Mobile (proposed)	@ 125'

The results of the analysis indicate that the tower structure has sufficient capacity to support the proposed loading conditions. **The tower and its foundation are considered structurally adequate for the proposed antenna loading with the wind load classification specified above.**

The tower deflection (sway) is 0.4466 degrees, and the tower rotation (twist) is 0.1415 degrees with a wind velocity of 90 mph concurrent with 0.5" ice. **The tower deflection and rotation are within the Connecticut State Police specification of 0.75 degrees for deflection (sway) and rotation (twist).**

1. **EXECUTIVE SUMMARY** *(continued)*

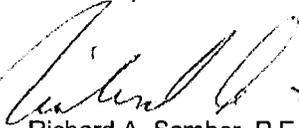
This analysis is based on:

- 1) The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- 2) Original tower report prepared by Rohn Industries, Inc., engineering file 26263DL and drawing C910693 dated February 1, 1991.
- 3) Soil investigation and foundation capacity report prepared by Dr. Clarence Welti, P.E., P.C., dated October 10, 2002.
- 4) Antenna inventory provided by Connecticut State Police via email dated August 6, 2012.
- 5) Proposed T-Mobile antenna modification provided by HPC Wireless Services via e-mail dated July 10, 2012.
- 6) Structural analysis performed by URS Corp., project number VZ5083-36922241, signed and sealed May 19, 2011.
- 7) Antenna and mount configuration as specified on the following page of this report.

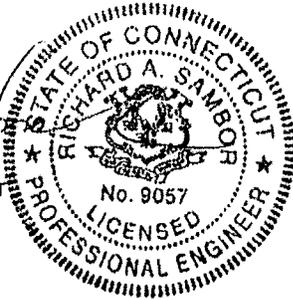
This report is only valid as per the assumptions and data utilized in this report for antenna inventory, mounts and associated cables. The user of this report shall field verify the assumption of the antenna and mount configuration. Notify the engineer in writing immediately if any of the information in this report is found to be other than specified.

If you should have any questions, please call.

Sincerely,
URS Corporation AES



Richard A. Sambor, P.E.
Senior Structural Engineer
RAS/jcf



2. INTRODUCTION

The subject tower is located at 880 Post Road East in Westport, Connecticut. The structure is a 180' self-supporting lattice tower manufactured by Rohn Industries Incorporated. The inventory is summarized in the table below:

Antenna Type	Carrier	Mount	Antenna Centerline Elevation	Cable
(1) Yagi Antenna	CSP-1 (existing)	Standoff	@ 180'	(1) LDF5-50A
(1) Celwave PA6-65 dish	CSP-42 (reserved)	Dish Standoff	@ 177'	(1) EW-63
(2) Scala AP11-850 antenna	CSP-46,47 (existing)	Leg Mount	@ 175'	(2) LDF7-50A
(1) Amphenol BCD806-09 inverted whip	CSP-59 (existing)	Standoff	@ 170'	(1) LDF7-50A
(3) Sinclair SC479-HF1LDF whip antenna (1) TX/RX TTA	CSP-56-58,60 (existing)	Standoff	@ 170'	(3) LDF7-50A (1) LDF4-50A
(1) Andrew HP6-65H dish	Verizon (existing)	Dish Standoff	@ 170'	(1) EW-65
(1) Yagi Antenna	CSP-22 (existing)	Leg Mount	@ 167'	(1) LDF5-50A
(2) Scala OGT9-806 inverted whips	CSP-48,49 (existing)	Standoff	@ 160'	(2) LDF7-50A
(1) Decibel DB536 whip	CSP-45 (existing)	Standoff	@ 160'	(1) LDF4-50A
(1) P65-15-XL-2 (2) LNX-6512DS-T4M (4) DB844G65ZAXY (6) MG D3-800T0 (12) Diplexers	Verizon (existing)	(3) 15' T-Frames	@ 155'	(18) LDF7-50A
(9) Powerwave P65-16-XLH-RR antenna (6) Ericsson RRU diplexer (6) Powerwave TMA (1) Raycap Surge Suppressor	AT&T (existing)	(3) 15' T-Frames	@ 133'	(12) LDF7-50A (1) 3/8" Fiber (2) 5/8" DC Cables
(9) TMAs (1) GPS	T-Mobile (existing)	Leg Mount	@ 125'	(18) LDF7-50A (1) LDF4-50A
(6) Ericsson Air 21 antennas	T-Mobile (proposed)	Leg Mount	@ 125'	(1) Huber Suhner Hybrid cable
(1) Yagi Antenna	CSP-44 (existing)	Leg Mount	@ 110'	(1) LDF4-50A
(2) GPS Antenna	Unknown (existing)	Leg Mount	@ 60'	(2) LDF4-50A

2. INTRODUCTION *(continued)*

This structural analysis of the communications tower was performed by URS Corporation, AES (URS) for T-Mobile. The purpose of this analysis was to analyze the existing tower for its existing and proposed antenna loads. This analysis was conducted to evaluate twist (rotation), sway (deflection) and stress on the tower, and the effect of forces to the foundation of the tower resulting from existing and proposed antenna arrangements.

3. ANALYSIS METHODOLOGY AND LOADING CONDITIONS

The structural analysis was done in accordance with the 2005 Connecticut State Building Code, TIA/EIA-222-F - Structural Standard for Steel Antenna Towers and Antenna Supporting Structures, and the American Institute of Steel Construction (AISC) Manual of Steel Construction - Allowable Stress Design (ASD).

The analysis was conducted using TNX Tower 6.0. Two load conditions were evaluated as shown below which were compared to allowable stresses according to AISC and TIA/EIA.

Load Condition 1 = 90 mph (fastest mile) Wind Load + Tower Dead Load

Load Condition 2 = 90 mph (fastest mile) Wind Load (with ice) + Ice Load + Tower Dead Load

The TIA/EIA standard permits a one-third increase in allowable stresses for towers and monopoles less than 700 feet tall. For the purposes of this analysis, in computing the load capacity the allowable stresses of the tower members were increased by one-third.

4. FINDINGS AND EVALUATION

The combined axial and bending stresses on the tower structure were evaluated to compare with the allowable stress in accordance with AISC. The results of the analysis indicate that the calculated stresses under the proposed loading, are below the allowable stresses for the tower structure. The foundation reactions were below the allowable values in the foundation capacity report. The anchor bolts under the proposed loading were found to be within the allowable limits. The tower deflection does not exceed the Connecticut State Police specification of 0.75 degrees for deflection (sway) and rotation (twist).

Tower Base Reactions:

Description	Original	Revised Reactions (Geotech 10/10/2002)	Current	Stress (% capacity)	Pass/ Fail
Pier Compression (kips)	319.9	374	298	79.7	Pass
Pier Uplift (kips)	276.7	324	250	77.2	Pass
Overall Overturning (kip-ft)	7010.3	---	6536	---	---
Overall Shear (kips)	61.5	---	64	---	---
Shear per Leg (kips)	41.0	48	38	79.2	Pass

Tower Component Stress vs. Capacity Summary:

Component / (Section No.)	Controlling Component/ Elevation	Stress (% capacity)	Pass/ Fail	Comments:
Tower Leg (T12)	ROHN 8 EHS / 20'-30'	75.3	Pass	
Diagonal (T6)	ROHN 2.5 EH / 100'-120'	81.7	Pass	
Horizontal (T11)	ROHN 2.5 STD / 30'-40'	62.6	Pass	
Top Girt (T12)	ROHN 2.5 STD / 20'-30'	71.5	Pass	
Redund Horz 1 Bracing (T13)	ROHN 1.5 STD / 0'-20'	26.1	Pass	
Redund Diag 1 Bracing (T13)	ROHN 1.5 STD / 0'-20'	73.2	Pass	
Redund Hip 1 Bracing (T13)	ROHN 2.5 STD / 0'-20'	0.1	Pass	
Inner Bracing (T5)	L2x2x1/8 / 120'-126.667'	4.9	Pass	
Anchor Bolts	1" Dia. / Tension	47.0	Pass	Min area per ASCE @ 50%

Tower Twist & Sway at Top:

Description	Current	Total Allowable
Tower Twist (degrees)	0.1415	
Tower Sway (degrees)	0.4466	
Total Deflection (degrees)	0.5881	0.75

5. CONCLUSIONS

The results of the analysis indicate that the tower superstructure steel stresses are within the allowable limits. Also, the loading to the tower foundation is less than the design reactions utilized in the *Evaluation of Existing Foundation for Increased Design Loads*, prepared by Dr. Clarence Welti, P.E., P.C, signed and sealed October 10, 2002. **Therefore, the overall tower structure and its foundation are deemed structurally adequate for the proposed antenna loading for the wind load classification specified above.**

The tower deflection (sway) is 0.4466 degrees, and the tower twist is 0.1415 degrees with a wind velocity of 90 mph concurrent with 0.5" ice. **The tower deflection and twist are within the Connecticut State Police specification of 0.75 degrees for deflection (sway) and twist.**

Limitations/Assumptions:

This report is based on the following:

1. Tower inventory as listed in this report.
2. Tower is properly installed and maintained.
3. All members are as specified in the original design documents and are in good condition.
4. All required members are in place.
5. All bolts are in place and are properly tightened.
6. Tower is in plumb condition.
7. All member protective coatings are in good condition.
8. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
9. Foundations were properly constructed to support original design loads as specified in the original design documents.

URS is not responsible for any modifications completed prior to or hereafter in which URS is not or was not directly involved. Modifications include but are not limited to:

- A. Adding antennas
- B. Removing/replacing antennas
- C. Adding coaxial cables

URS hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact URS. URS disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

After the Contractor has successfully completed the installation and the work has been accepted, the owner will be responsible for the ongoing and periodic inspection and maintenance of the tower.

The owner shall refer to TIA/EIA-222-F for recommendations for maintenance and inspection. The frequency of the inspection and maintenance intervals is to be determined by the owner based upon actual site and environmental conditions. It is recommended that a complete and thorough inspection of the entire tower structural system be performed at least yearly and more frequently as conditions warrant. According to TIA/EIA-222-F section 14.1, Note 1: It is recommended that the structure be inspected after severe wind and/or ice storms or other extreme loading condition.

EXHIBIT C

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

T-Mobile Existing Facility

Site ID: CT11612G

CT State Police Tower
880 Post Road East
Westport, CT 06880

August 14, 2012

August 14, 2012

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

Re: Emissions Values for Site CT11612B -- CT State Police Tower

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 880 Post Road East, Westport, 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 880 Post Road East, Westport, 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 (1940.000 MHz—to 1950.000 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 **125 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	CT116128 - CT State Police Tower
Site Address	880 Post Road East, Westport, CT 06880
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 Size	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	125	119	None	0	0	48.326044	1.226855	0.12269%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	125	119	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	125	119	1-5/8"	0	0	24.163022	0.613428	0.06134%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	125	119	1-5/8"	0	0	24.163022	0.613428	0.06134%
Sector total Power Density Value:														0.245%			

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 Size	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	125	119	None	0	0	48.326044	1.226855	0.12269%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	125	119	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	125	119	1-5/8"	0	0	24.163022	0.613428	0.06134%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	125	119	1-5/8"	0	0	24.163022	0.613428	0.06134%
Sector total Power Density Value:														0.245%			

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 Size	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	125	119	None	0	0	48.326044	1.226855	0.12269%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	125	119	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	125	119	1-5/8"	0	0	24.163022	0.613428	0.06134%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	125	119	1-5/8"	0	0	24.163022	0.613428	0.06134%
Sector total Power Density Value:														0.245%			

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.736%
AT&T	16.940%
Verizon Wireless	10.540%
State Police	1.950%
Total Site MPE %	
30.146%	

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 **0.736% (0.245% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously.

The anticipated composite MPE value for this site assuming all carriers present is **30.146%** of the allowable FCC established general public limit. 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 within the allowable 100% threshold standard per the federal government