

**JULIE D. KOHLER**

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

November 7, 2014

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

**Re: Notice of Exempt Modification  
Charter Communications/T-Mobile co-location  
Site ID CTNH369A  
125 Ridge Road, New Milford 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, Charter Communications owns the existing telecommunications tower and related facility at 125 Ridge Road, New Milford Connecticut (latitude 41-35-40.73/ longitude -73-22-28.7). T-Mobile intends to add three antennas, relocate six antennas and add related equipment at this existing telecommunications facility in New Milford ("New Milford 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 Mayor Pat Murphy and the property owner, Charter Communications Entertainment 1 LLC.

The existing New Milford Facility consists of a 130 foot tall self supported tower.<sup>1</sup> T-Mobile plans to add three antennas and relocate six existing antennas to proposed pipe mounts at a centerline of 124 feet. (See the plans revised to October 27, 2014 attached hereto as Exhibit A). T-Mobile will also install three RRUs (remote radio units) on a proposed H-frame, install a section of ice bridge, install coax cable, and reuse existing coax cables. The existing New Milford Facility is structurally capable of supporting T-Mobile's proposed modifications, as indicated in the structural analysis dated October 24, 2014 (stamped October 27, 2014) and attached hereto as Exhibit B.

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<sup>1</sup> The online CSC database does not reflect a Docket or Petition for the approval of this facility but T-Mobile was approved to locate on the facility in the tower sharing approval captioned TS-T-MOBILE-096-051201.

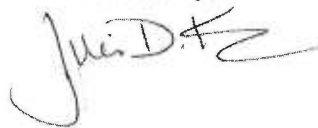
November 7, 2014  
Site ID CTNH369A  
Page 2

The planned modifications to the New Milford 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 proposed and relocated antennas will be installed at a centerline of 124 feet. 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 area.
3. The proposed modification to the New Milford Facility will not increase the noise levels at the existing facility by six decibels or more.
4. The operation of the additional 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 October 31, 2014, T-Mobile's operations would add 9.37% 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 9.37% 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 at the New Milford 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: New Milford Mayor Pat Murphy  
Charter Communications  
Charter Communications Entertainment 1 LLC  
Elizabeth Jamieson, Transcend Wireless

# **EXHIBIT A**

# SITE NAME: CHARTERCOM

## 125 RIDGE ROAD

NEW MILFORD, CT 06776  
LITCHFIELD COUNTY

**SITE NUMBER: CTNH369A**  
**L700 - 704G CONFIGURATION**

### GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE NORTHEAST, LLC REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

### SPECIAL STRUCTURAL NOTES

1. STRUCTURAL DESIGNS AND DETAILS FOR ANTENNA MOUNTS COMPLETED BY HUDSON DESIGN ON BEHALF OF T-MOBILE ARE INCLUSIVE OF THE ENTIRE ANTENNA SUPPORT STRUCTURE (GLOBAL STRUCTURAL STABILITY ANALYSIS BY OTHERS), EXISTING TOWER PLATFORM, EXISTING ANTENNA MOUNTS AND ALL OTHER ASPECTS OF THE STRUCTURE THAT WILL SUPPORT THE T-MOBILE MODERNIZATION EQUIPMENT DEPLOYMENT AS DEPICTED HEREIN.
2. HUDSON DESIGN ASSUMES THAT THE TOWER IS PROPERLY CONSTRUCTED AND MAINTAINED. ALL STRUCTURAL MEMBERS AND THEIR CONNECTIONS ARE ASSUMED TO BE IN GOOD CONDITION AND ARE FREE FROM DEFECTS WITH NO DETERIORATION TO ITS MEMBER CAPACITIES

### T-MOBILE TECHNICIAN SITE SAFETY NOTES

LOCATION	SPECIAL RESTRICTIONS
SECTOR A:	ACCESS NOT PERMITTED
SECTOR B:	ACCESS NOT PERMITTED
SECTOR C:	ACCESS NOT PERMITTED
GPS/LMU:	UNRESTRICTED
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE



CALL  
**BEFORE YOU DIG**

CALL TOLL FREE 800-922-4455  
OR CALL 811

UNDERGROUND SERVICE ALERT

### PROJECT INFORMATION

SCOPE OF WORK: UNMANNED TELECOMMUNICATIONS FACILITY T-MOBILE EQUIPMENT MODERNIZATION

ZONING JURISDICTION: BASED ON INFORMATION PROVIDED BY T-MOBILE, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS AN ELIGIBLE FACILITY UNDER THE TAX RELIEF ACT OF 2012, 47 USC 1455(A), AND IS SUBJECT TO AN EXPEDITED ELIGIBLE FACILITIES REQUEST/REVIEW AND ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW).

SITE ADDRESS: 125 RIDGE ROAD  
NEW MILFORD, CT 06776

LATITUDE: 41° 35' 40.73" N

LONGITUDE: -73° 22' 28.70" W

JURISDICTION: NATIONAL, STATE & LOCAL CODES OR ORDINANCES

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY

### DRAWING INDEX

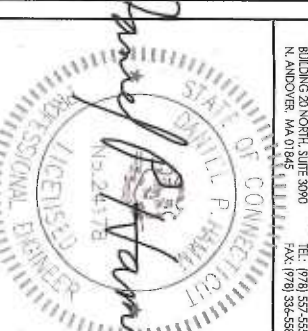
TITLE SHEET	REV
T-1	3
GN-1 GENERAL NOTES	3
A-1 COMPOUND PLAN & ELEVATION	3
A-2 ANTENNA PLAN & DETAILS	3
G-1 GROUNDING DETAILS	3

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

**Transcend Wireless**

TRANSCEND WIRELESS  
10 INDUSTRIAL AVE  
MAHWAH NJ 07430  
TEL: (201) 664-0055  
FAX: (201) 664-0056

**Hudson Design Group**  
1600 OXGROOD STREET  
BUILDING 20 NORTH, SUITE 3000  
NEW MILFORD, MA 01845  
TEL: (978) 357-5533  
FAX: (978) 355-5586



### APPROVALS

CONSTRUCTION	DATE
RF ENGINEERING	DATE
ZONING/SITE ACQ.	DATE
OPERATIONS	DATE
TOWER OWNER	DATE
PROJECT NO:	CTNH369A
DRAWN BY:	KMS
CHECKED BY:	DR

3	10/27/14	ISSUED FOR REVIEW
2	08/18/14	ISSUED FOR REVIEW
1	08/12/14	ISSUED FOR REVIEW
0	08/07/14	ISSUED FOR REVIEW

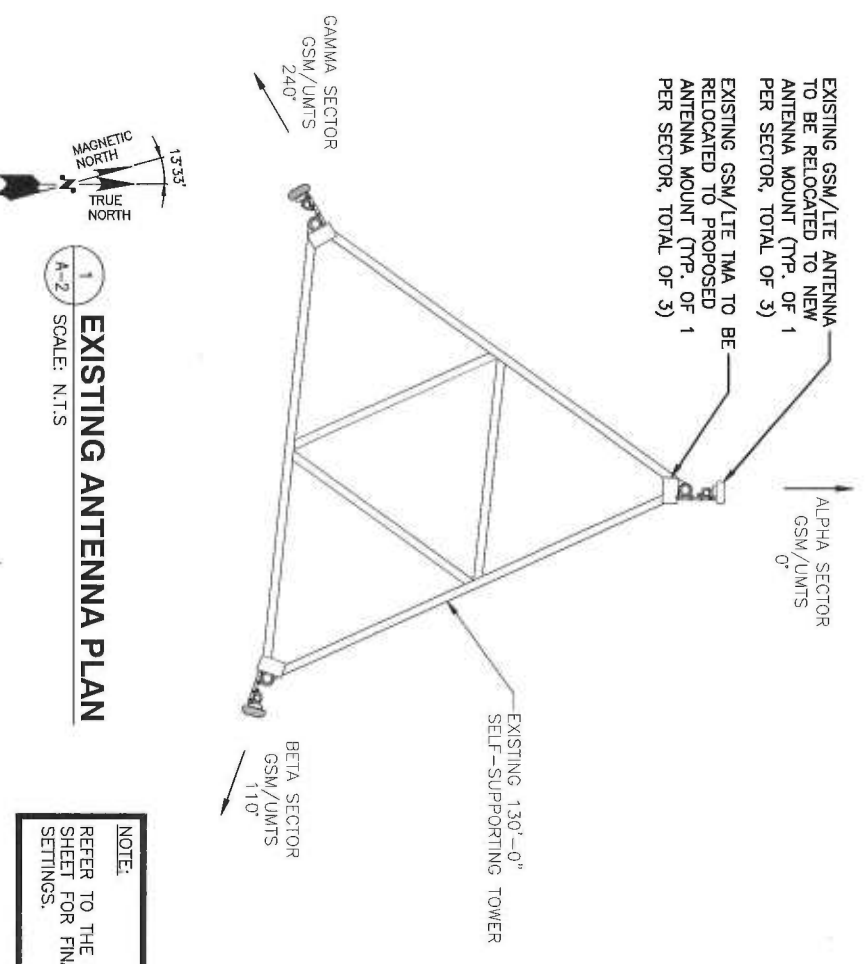
SITE NUMBER: CTNH369A  
SITE NAME:  
**CHARTERCOM**  
125 RIDGE ROAD  
NEW MILFORD, CT 06776  
LITCHFIELD COUNTY

SHEET TITLE  
TITLE SHEET  
SHEET NUMBER  
T-1

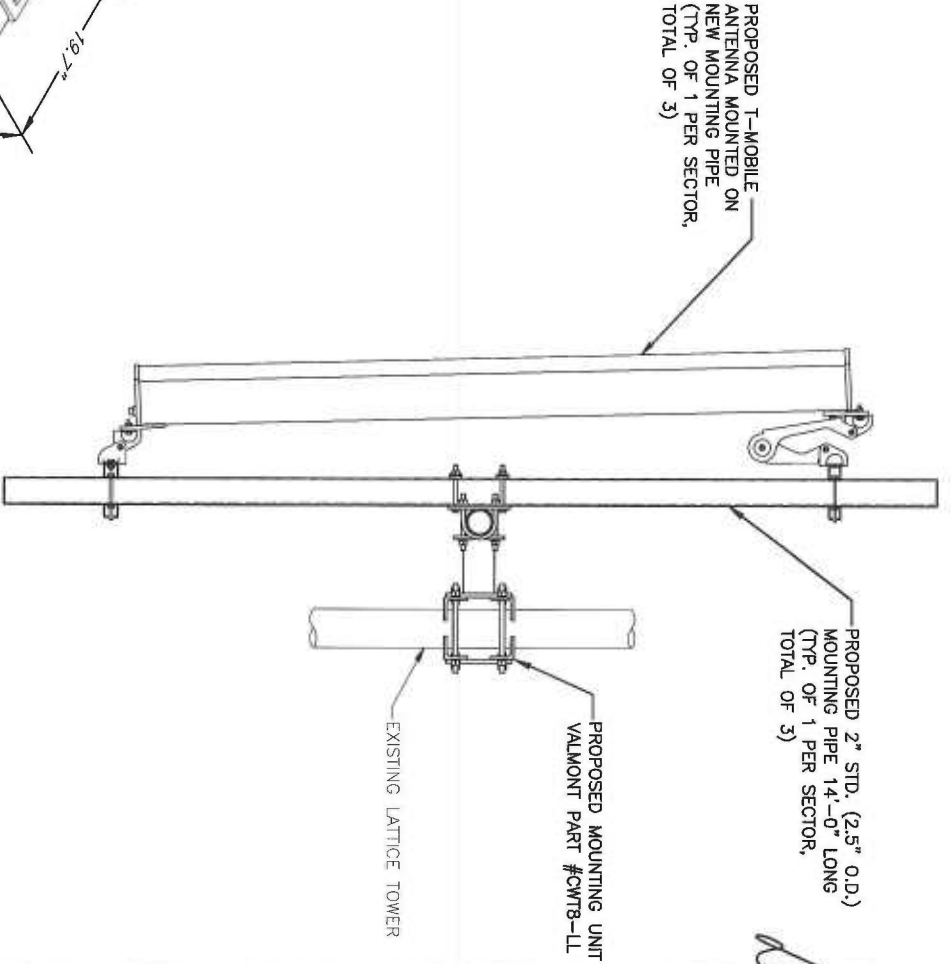
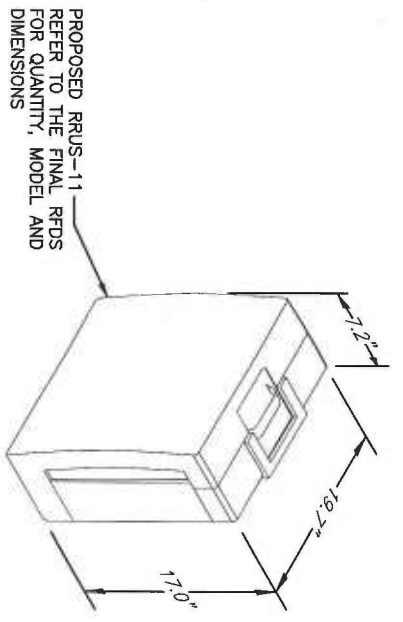
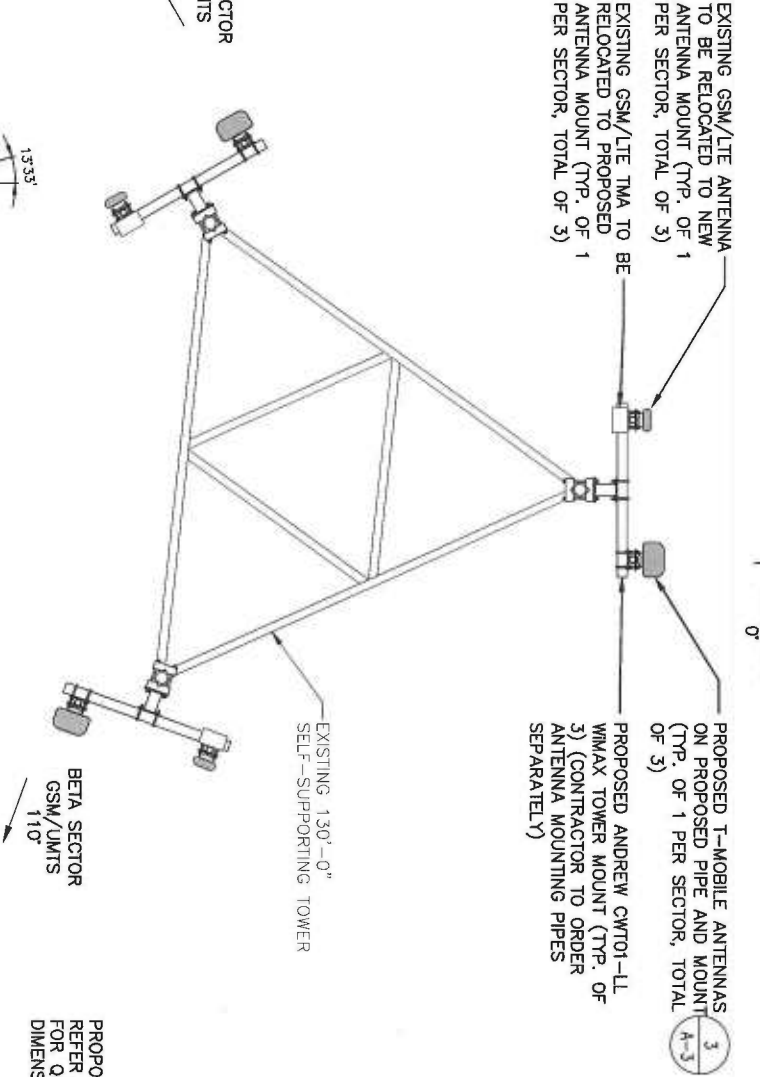


**NOTE:**  
 GENERAL CONTRACTOR TO REFER TO THE STRUCTURAL ANALYSIS BY: SEMAN ENGINEERING SOLUTIONS, DATED: OCTOBER 24, 2014 AND EQUIPMENT INSTALLATION RECOMMENDATIONS PRIOR TO COMMENCING CONSTRUCTION.

PROPOSED ANTENNA SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	COMMSCOPE	LNX-6515DS-VTM	96.4X11.9X7.1
BETA:	COMMSCOPE	LNX-6515DS-VTM	96.4X11.9X7.1
GAMMA:	COMMSCOPE	LNX-6515DS-VTM	96.4X11.9X7.1



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



**T-MOBILE NORTHEAST LLC**  
 35 GRIFFIN ROAD SOUTH  
 BLOOMFIELD, CT 06002  
 OFFICE: (860) 648-1116

**Transcend Wireless**  
 TRANSCEND WIRELESS  
 10 INDUSTRIAL AVE  
 MAHWAH, NJ 07430  
 TEL: (201) 684-0255  
 FAX: (201) 684-0266

**Hudson Design Group Inc.**  
 1620 OSGOOD STREET  
 BUILDING 20 NORTH, SUITE 3090  
 N. ANDOVER, MA 01845  
 TEL: (978) 557-5533  
 FAX: (978) 356-5886

**APPROVALS**  
 STATE OF CONNECTICUT  
 REGISTERED PROFESSIONAL ENGINEER  
 DANIEL P. SEMAN  
 No. 24176

CONSTRUCTION	DATE
RF ENGINEERING	DATE
ZONING/SITE ACQ.	DATE
OPERATIONS	DATE
TOWER OWNER	DATE
PROJECT NO:	CTNH3699A
DRAWN BY:	KMS
CHECKED BY:	DR

3	10/27/14	ISSUED FOR REVIEW
2	08/18/14	ISSUED FOR REVIEW
1	08/12/14	ISSUED FOR REVIEW
0	08/07/14	ISSUED FOR REVIEW

**SITE NUMBER: CTNH3699A**  
**SITE NAME:**  
**CHARTERCOM**  
 125 RIDGE ROAD  
 NEW MILFORD, CT 06776  
 LITCHFIELD COUNTY

**SHEET TITLE**  
 ANTENNA PLAN  
 & DETAILS

**SHEET NUMBER**  
 A-2

# **EXHIBIT B**



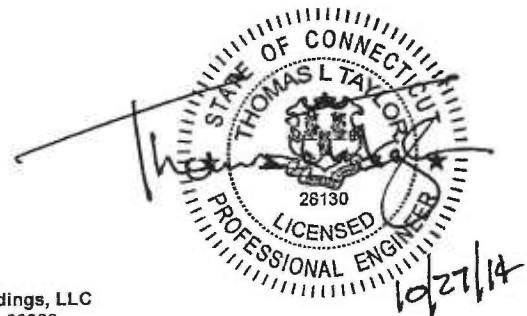
## Structural Analysis Report

Prepared for:

KGI  
805 Las Cimas Parkway  
Building Three, Suite 370  
Austin, TX 78746

ATTN: Ms. Paula Gabriel

Structure : 130 ft Self Supported Tower  
Proposed Carrier : T-Mobile  
Site ID : 11468  
Site Location : New Milford, CT  
County : Litchfield  
Date : October 24, 2014  
Usage : 96.0% Legs, 93.0% Diagonals, 11.0%  
Horizontals.



Semaan Engineering Solutions Holdings, LLC  
1079 N. 205<sup>th</sup> Street, Elkhorn, NE 68022  
Phone: 402-289-1888





## Structural Analysis Report

Prepared for:

**KGI**  
**805 Las Cimas Parkway**  
**Building Three, Suite 370**  
**Austin, TX 78746**

**ATTN: Ms. Paula Gabriel**

**Structure** : 130 ft Self Supported Tower  
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**Site ID** : 11468  
**Site Location** : New Milford, CT  
**County** : Litchfield  
**Date** : October 24, 2014  
**Usage** : 96.0% Legs, 93.0% Diagonals, 11.0% Horizontals.

**Introduction**

The purpose of this report is to summarize results of the structural analysis performed on the 130 ft Self Supported Tower located at New Milford, CT, Litchfield County (site # 11468). The tower original designer and manufacturer are unknown. (Additional information of the tower from HTS mapping dated October 7, 2014).

**Analysis**

The tower was analyzed using Semaan Engineering Solutions, Inc., Software. The analysis assumes that the tower is in good, undamaged, and non-corroded condition. The analysis was performed in conformance with **TIA/EIA-222 Rev F and local building codes for a basic wind speed of 90 mph no ice and 78 mph with 1/2" radial ice (fastest mile)**. This is in conformance with the IBC 2006: Section 1609.1.1, Exception (4) and Section 3108.4.

Basic Wind Speed: 90.0 mph  
 Radial Ice: 78 mph w/ 0.50" ice  
 Code: TIA/EIA-222 Rev F

**Antenna Loads**

The following antenna loads were used in the tower analysis.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
131.7	1	15 ft Omni	Pipe Mount	-	-
128.7	1	20 ft Dipole	Leg Mounted	(1) 1/2"	
124.0	3	APX16PV-16PVL	(3) Pipe mount	(12) 1 5/8"	T-Mobile
	6	12" x 6" x 3" TMA's		(1) .32" Black Cable	
82.8	1	4'5" Yagi	Leg Mounted	(1) .40" Black Cable	Charter Communications
77.0	1	9' Yagi	Pipe mount	(1) .58" Black Cable	
69.0	1	4'5" Yagi	Leg Mounted	(1) .40" Black Cable	
68.7	2	9' Yagi	(2) Pipe mount	(1) .58" Black Cable	
60.0	1	9' Yagi	Pipe mount	(1) .58" Black Cable	
42.5	1	14' Yagi	Leg Mounted	(1) .40" Black Cable	
23.0	1	4 ft Std Dish	Dish Mount	-	

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
124.0	3	LNx-6515DS-VTM4	On existing (3) Pipe mount	(Existing)	T-Mobile

The transmission lines shall be distributed and/or stacked over the tower faces, such that no more than (12) lines are exposed to the wind on any one face.

**Results**

The existing Self Supported Tower is structurally capable of supporting the existing and proposed antennas.

The maximum structure usage is: 96.0% Legs, 93.0% Diagonals, and 11.0% Horizontals.

Leg Forces	Original Design Reactions	Current Analysis Reactions
Uplift (Kips)	N/A	94.10
Axial (Kips)	N/A	111.23
Shear (Kips)	N/A	15.30

The foundation was not investigated due to the lack of design drawings and documents and is not part of this analysis.

**Conclusion**

Based on the analysis results, the existing structure meets the requirements per the TIA/EIA-222 Rev F standards for a basic wind speed of 90 mph no ice and 78 mph with 1/2" radial ice.

If you have any questions or require additional information, please call 402-289-1888.

### Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of Semaan Engineering Solutions, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to Semaan Engineering Solutions Holdings and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and Semaan Engineering Solutions, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Semaan Engineering Solutions Holdings is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

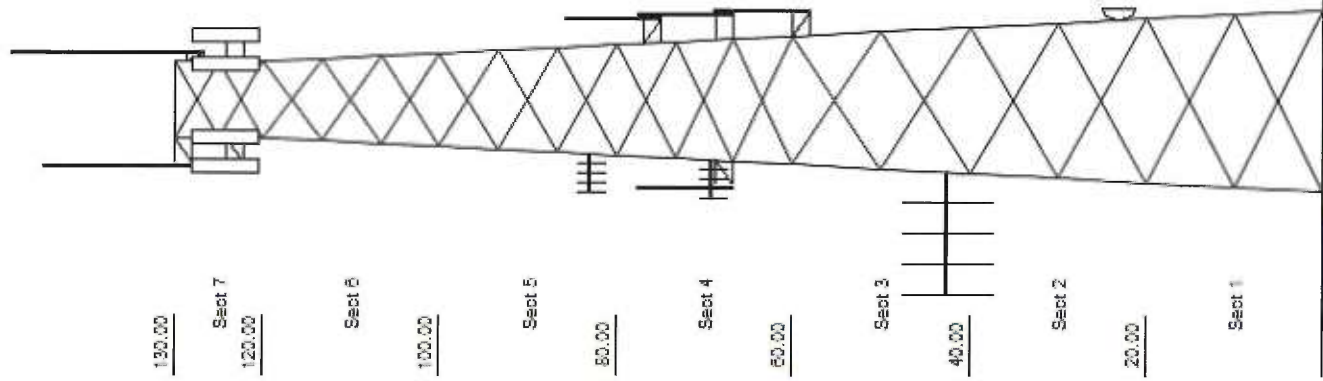
Job Information		
Tower : 11468	Location : New Milford, CT	Base Width : 20.67 ft
Code : TIA/EIA-222 Rev F	Shape : Triangle	Top Width : 8.67 ft
Client : KGI		

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 Loads: 90 mph no ice  
 78 mph w/ 1/2" radial ice

Sections Properties			
Section	Leg Members	Diagonal Members	Horizontal Members
1	PX 50 ksi	4" DIA PIPE	SAE 36 ksi 3.5X3.5X0.25
2	PX 50 ksi	4" DIA PIPE	SAE 36 ksi 3X3X0.25
3	PX 50 ksi	3-1/2" DIA PIPE	SAE 36 ksi 3X3X0.25
4	PST 50 ksi	3" DIA PIPE	SAE 36 ksi 2.5X2.5X0.25
5	PX 50 ksi	2-1/2" DIA PIPE	SAE 36 ksi 2X2X0.1875
6	PX 50 ksi	2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875
7	PST 50 ksi	2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875

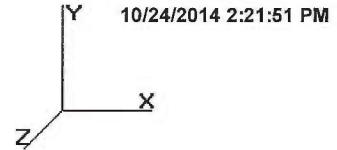
Discrete Appurtenance			
Elev (ft)	Type	Qty	Description
130.00	Straight Arm	1	Pipe mount
130.00	Whip	1	15 ft Omni
128.67	Whip	1	20 ft Dipole
124.00	Straight Arm	3	Pipe mount
124.00	Panel	3	LNX-6515DS-VTM4
124.00	Panel	6	12" x 6" x 3" TMAs
124.00	Panel	3	APX16PV-16PVL
82.75	Yagi	1	45" Yagi
77.00	Straight Arm	1	Pipe mount
77.00	Whip	1	9' Yagi
69.00	Yagi	1	45" Yagi
68.67	Straight Arm	2	Pipe mount
68.67	Whip	2	9' Yagi
60.00	Straight Arm	1	Pipe mount
60.00	Whip	1	9' Yagi
42.50	Yagi	1	14" Yagi
23.00	Dish	1	4 ft Std Dish

Linear Appurtenance			
Elev (ft)	From	To	Description
0.000	128.67	1	1/2" Coax
0.000	124.00	12	1 5/8" Coax
0.000	124.00	1	.32" Black Cable
10.500	120.00	1	W/G Ladder
4.500	120.00	1	W/G Ladder
0.000	82.750	1	.40" Black Cable
0.000	77.000	1	.58" Black Cable
0.000	69.000	1	.40" Black Cable
0.000	68.670	1	.58" Black Cable
0.000	60.000	1	.58" Black Cable
0.000	42.500	1	.40" Black Cable



Uplift 54.10 k Moment 1,594.03 k  
 Vert 111.23 k Tot Down Ice 23.87 k  
 Horiz 15.30 k Tot Shear Ice 25.24 k

Site Number: 11468  
 Location: New Milford, CT  
 Code: TIA/EIA-222 Rev F



Gh : 1.14

**Section Forces**

**LoadCase Normal No Ice 90.00 mph Wind Normal To Face with No Ice**

Allow Stress Inc: 1.333  
 Dead LF: 1.000  
 Wind LF: 1.000

Sect Seq	Height (ft)	Wind qz (psf)	Total			Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Ice		Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Flat Area (sqft)	Round Area (sqft)	Ice Round Area (sqft)							Linear Area (sqft)	Linear Area (sqft)						
7	125.0	30.34	7.64	12.71	0.00	0.23	2.48	1.00	1.00	0.60	15.25	0.00	0.00	586.6	0.0	1,313.62	0.00	1,313.62	3
6	110.0	29.25	15.28	49.20	0.00	0.33	2.21	1.00	1.00	0.63	46.11	0.00	0.00	1,403.2	0.0	3,409.46	0.00	3,409.46	3
5	90.00	27.62	18.44	49.20	0.00	0.29	2.32	1.00	1.00	0.61	48.60	0.00	0.00	1,545.4	0.0	3,565.29	0.00	3,565.29	3
4	70.00	25.71	24.02	51.29	0.00	0.28	2.36	1.00	1.00	0.61	55.23	0.00	0.00	2,079.0	0.0	3,836.37	0.00	3,836.37	3
3	50.00	23.35	23.59	52.96	0.00	0.24	2.45	1.00	1.00	0.60	55.39	0.00	0.00	2,351.9	0.0	3,629.82	0.00	3,629.82	3
2	30.00	20.74	25.31	54.62	0.00	0.23	2.51	1.00	1.00	0.60	57.87	0.00	0.00	2,603.1	0.0	3,444.65	0.00	3,444.65	3
1	10.00	20.74	28.12	54.62	0.00	0.21	2.56	1.00	1.00	0.59	60.49	0.00	0.00	2,855.1	0.0	3,673.82	0.00	3,673.82	3
													13,424.4	0.0			22,873.02		

**LoadCase 60 deg No Ice 90.00 mph Wind at 60 deg From Face with No Ice**

Allow Stress Inc: 1.333  
 Dead LF: 1.000  
 Wind LF: 1.000

Sect Seq	Height (ft)	Wind qz (psf)	Total			Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Ice		Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Flat Area (sqft)	Round Area (sqft)	Ice Round Area (sqft)							Linear Area (sqft)	Linear Area (sqft)						
7	125.0	30.34	7.64	12.71	0.00	0.23	2.48	0.80	1.00	0.60	13.72	0.00	0.00	586.6	0.0	1,181.90	0.00	1,181.90	3
6	110.0	29.25	15.28	49.20	0.00	0.33	2.21	0.80	1.00	0.63	43.06	0.00	0.00	1,403.2	0.0	3,183.49	0.00	3,183.49	3
5	90.00	27.62	18.44	49.20	0.00	0.29	2.32	0.80	1.00	0.61	44.91	0.00	0.00	1,545.4	0.0	3,294.65	0.00	3,294.65	3
4	70.00	25.71	24.02	51.29	0.00	0.28	2.36	0.80	1.00	0.61	50.43	0.00	0.00	2,079.0	0.0	3,502.76	0.00	3,502.76	3
3	50.00	23.35	23.59	52.96	0.00	0.24	2.45	0.80	1.00	0.60	50.67	0.00	0.00	2,351.9	0.0	3,320.59	0.00	3,320.59	3
2	30.00	20.74	25.31	54.62	0.00	0.23	2.51	0.80	1.00	0.60	52.81	0.00	0.00	2,603.1	0.0	3,143.37	0.00	3,143.37	3
1	10.00	20.74	28.12	54.62	0.00	0.21	2.56	0.80	1.00	0.59	54.87	0.00	0.00	2,855.1	0.0	3,332.23	0.00	3,332.23	3
													13,424.4	0.0			20,958.98		

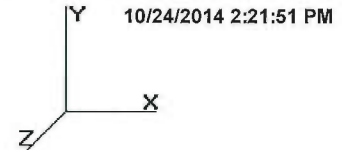
**LoadCase 90 deg No Ice 90.00 mph Wind at 90 deg From Face with No Ice**

Allow Stress Inc: 1.333  
 Dead LF: 1.000  
 Wind LF: 1.000

Sect Seq	Height (ft)	Wind qz (psf)	Total			Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Ice		Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Flat Area (sqft)	Round Area (sqft)	Ice Round Area (sqft)							Linear Area (sqft)	Linear Area (sqft)						
7	125.0	30.34	7.64	12.71	0.00	0.23	2.48	0.85	1.00	0.60	14.10	0.00	0.00	586.6	0.0	1,214.83	0.00	1,214.83	3
6	110.0	29.25	15.28	49.20	0.00	0.33	2.21	0.85	1.00	0.63	43.82	0.00	0.00	1,403.2	0.0	3,239.98	0.00	3,239.98	3
5	90.00	27.62	18.44	49.20	0.00	0.29	2.32	0.85	1.00	0.61	45.83	0.00	0.00	1,545.4	0.0	3,362.31	0.00	3,362.31	3
4	70.00	25.71	24.02	51.29	0.00	0.28	2.36	0.85	1.00	0.61	51.63	0.00	0.00	2,079.0	0.0	3,586.16	0.00	3,586.16	3
3	50.00	23.35	23.59	52.96	0.00	0.24	2.45	0.85	1.00	0.60	51.85	0.00	0.00	2,351.9	0.0	3,397.90	0.00	3,397.90	3
2	30.00	20.74	25.31	54.62	0.00	0.23	2.51	0.85	1.00	0.60	54.07	0.00	0.00	2,603.1	0.0	3,218.69	0.00	3,218.69	3
1	10.00	20.74	28.12	54.62	0.00	0.21	2.56	0.85	1.00	0.59	56.27	0.00	0.00	2,855.1	0.0	3,417.62	0.00	3,417.62	3

Site Number: 11468  
 Location: New Milford, CT

Code: TIA/EIA-222 Rev F



Gh : 1.14

### Section Forces

13,424.4      0.0      21,437.49

#### LoadCase Normal Ice      77.94 mph Wind Normal To Face with Ice

Allow Stress Inc: 1.333  
 Dead LF: 1.000  
 Wind LF: 1.000

Sect Seq	Height (ft)	Wind qz (psf)	Total			Ice Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Flat Area (sqft)	Round Area (sqft)	Round Area (sqft)							Linear Area (sqft)	Total Area (sqft)						
7	125.0	22.75	7.64	22.44	9.73	0.35	2.18	1.00	1.00	0.63	21.81	0.00	0.00	972.0	385.4	1,236.00	0.00	1,236.00	3
6	110.0	21.94	15.28	80.08	30.88	0.49	1.91	1.00	1.00	0.69	70.86	0.00	0.00	2,453.6	1,050.4	3,392.61	0.00	3,392.61	3
5	90.00	20.71	18.44	80.93	31.73	0.43	2.02	1.00	1.00	0.66	72.05	0.00	0.00	2,691.9	1,146.4	3,438.70	0.00	3,438.70	3
4	70.00	19.28	24.02	83.90	32.61	0.39	2.07	1.00	1.00	0.65	78.50	0.00	0.00	3,443.7	1,364.7	3,589.52	0.00	3,589.52	3
3	50.00	17.51	23.59	84.16	31.20	0.34	2.19	1.00	1.00	0.63	76.64	0.00	0.00	3,745.1	1,393.2	3,353.95	0.00	3,353.95	3
2	30.00	15.55	25.31	86.40	31.77	0.32	2.25	1.00	1.00	0.62	78.96	0.00	0.00	4,076.7	1,473.6	3,164.27	0.00	3,164.27	3
1	10.00	15.55	28.12	86.11	31.49	0.29	2.32	1.00	1.00	0.61	80.91	0.00	0.00	4,407.0	1,551.9	3,340.06	0.00	3,340.06	3
														21,790.0	8,365.6			21,515.11	

#### LoadCase 60 deg Ice      77.94 mph Wind at 60 deg From Face with Ice

Allow Stress Inc: 1.333  
 Dead LF: 1.000  
 Wind LF: 1.000

Sect Seq	Height (ft)	Wind qz (psf)	Total			Ice Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Flat Area (sqft)	Round Area (sqft)	Round Area (sqft)							Linear Area (sqft)	Total Area (sqft)						
7	125.0	22.75	7.64	22.44	9.73	0.35	2.18	0.80	1.00	0.63	20.28	0.00	0.00	972.0	385.4	1,149.36	0.00	1,149.36	3
6	110.0	21.94	15.28	80.08	30.88	0.49	1.91	0.80	1.00	0.69	67.80	0.00	0.00	2,453.6	1,050.4	3,246.27	0.00	3,246.27	3
5	90.00	20.71	18.44	80.93	31.73	0.43	2.02	0.80	1.00	0.66	68.36	0.00	0.00	2,691.9	1,146.4	3,262.65	0.00	3,262.65	3
4	70.00	19.28	24.02	83.90	32.61	0.39	2.07	0.80	1.00	0.65	73.70	0.00	0.00	3,443.7	1,364.7	3,369.90	0.00	3,369.90	3
3	50.00	17.51	23.59	84.16	31.20	0.34	2.19	0.80	1.00	0.63	71.92	0.00	0.00	3,745.1	1,393.2	3,147.44	0.00	3,147.44	3
2	30.00	15.55	25.31	86.40	31.77	0.32	2.25	0.80	1.00	0.62	73.90	0.00	0.00	4,076.7	1,473.6	2,961.43	0.00	2,961.43	3
1	10.00	15.55	28.12	86.11	31.49	0.29	2.32	0.80	1.00	0.61	75.28	0.00	0.00	4,407.0	1,551.9	3,107.88	0.00	3,107.88	3
														21,790.0	8,365.6			20,244.93	

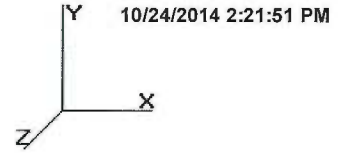
#### LoadCase 90 deg Ice      77.94 mph Wind at 90 deg From Face with Ice

Allow Stress Inc: 1.333  
 Dead LF: 1.000  
 Wind LF: 1.000

Sect Seq	Height (ft)	Wind qz (psf)	Total			Ice Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Flat Area (sqft)	Round Area (sqft)	Round Area (sqft)							Linear Area (sqft)	Total Area (sqft)						
7	125.0	22.75	7.64	22.44	9.73	0.35	2.18	0.85	1.00	0.63	20.66	0.00	0.00	972.0	385.4	1,171.02	0.00	1,171.02	3
6	110.0	21.94	15.28	80.08	30.88	0.49	1.91	0.85	1.00	0.69	68.57	0.00	0.00	2,453.6	1,050.4	3,282.85	0.00	3,282.85	3
5	90.00	20.71	18.44	80.93	31.73	0.43	2.02	0.85	1.00	0.66	69.29	0.00	0.00	2,691.9	1,146.4	3,306.66	0.00	3,306.66	3
4	70.00	19.28	24.02	83.90	32.61	0.39	2.07	0.85	1.00	0.65	74.90	0.00	0.00	3,443.7	1,364.7	3,424.81	0.00	3,424.81	3
3	50.00	17.51	23.59	84.16	31.20	0.34	2.19	0.85	1.00	0.63	73.10	0.00	0.00	3,745.1	1,393.2	3,199.07	0.00	3,199.07	3

Site Number: 11468  
Location: New Milford, CT

Code: TIA/EIA-222 Rev F



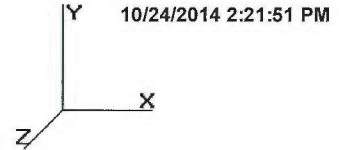
Gh : 1.14

### Section Forces

2	30.00	15.55	25.31	86.40	31.77	0.32	2.25	0.85	1.00	0.62	75.16	0.00	0.00	4,076.7	1,473.6	3,012.14	0.00	3,012.14	3
1	10.00	15.55	28.12	86.11	31.49	0.29	2.32	0.85	1.00	0.61	76.69	0.00	0.00	4,407.0	1,551.9	3,165.92	0.00	3,165.92	3
														21,790.0	8,365.6			20,562.48	



Site Number: 11468  
 Location: New Milford, CT  
 Code: TIA/EIA-222 Rev F



### Tower Loading

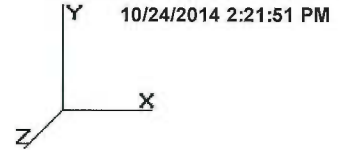
#### Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Weight (lb)	No Ice CaAa (sf)	CaAa Factor	Weight (lb)	Ice CaAa (sf)	CaAa Factor	Distance From Face (ft)	X Angle (deg)	Vert Ecc (ft)
130.0	Pipe mount	1	53.32	3.500	1.00	84.00	5.790	1.00	0.000	0.00	0.000
130.0	15 ft Omni	1	26.00	4.500	1.00	58.48	6.033	1.00	0.000	0.00	7.500
128.6	20 ft Dipole	1	32.00	4.920	1.00	74.00	9.080	1.00	0.000	0.00	11.000
124.0	Pipe mount	3	53.32	3.500	1.00	84.00	5.790	1.00	0.000	0.00	0.000
124.0	LNx-6515DS-VTM4	3	48.50	11.389	0.80	114.11	12.316	0.80	0.000	0.00	0.000
124.0	12" x 6" x 3" TMAs	6	13.20	0.690	0.80	18.25	0.870	0.80	0.000	0.00	0.000
124.0	APX16PV-16PVL	3	18.00	6.760	0.62	49.62	7.420	0.62	0.000	0.00	0.000
82.75	4'5" Yagi	1	20.00	1.840	1.00	39.00	2.200	1.00	0.000	0.00	2.165
77.00	Pipe mount	1	53.32	3.500	1.00	84.00	5.790	1.00	0.000	0.00	0.000
77.00	9' Yagi	1	38.00	3.471	1.00	70.00	4.500	1.00	0.000	0.00	4.950
69.00	4'5" Yagi	1	20.00	1.840	1.00	39.00	2.200	1.00	0.000	0.00	2.165
68.67	Pipe mount	2	53.32	3.500	1.00	84.00	5.790	1.00	0.000	0.00	0.000
68.67	9' Yagi	2	38.00	3.471	1.00	70.00	4.500	1.00	0.000	0.00	4.950
60.00	Pipe mount	1	53.32	3.500	1.00	84.00	5.790	1.00	0.000	0.00	0.000
60.00	9' Yagi	1	38.00	3.471	1.00	70.00	4.500	1.00	0.000	0.00	4.950
42.50	14' Yagi	1	15.00	3.000	1.00	40.00	5.000	1.00	0.000	0.00	0.000
23.00	4 ft Std Dish	1	188.00	20.910	1.00	277.00	21.790	1.00	0.000	0.00	0.000
<b>Totals</b>		<b>30</b>	<b>1158.26</b>			<b>2080.17</b>			<b>Number of Appurtenances : 17</b>		

#### Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Wind	Spread On Faces	Bundling Arrangement
0.00	128.6	1/2" Coax	1	0.65	0.16	100.00	2	Separate
0.00	124.0	.32" Black Cable	1	0.44	0.08	100.00	2	Separate
0.00	124.0	1 5/8" Coax	12	1.98	1.04	100.00	3	Separate
4.50	120.0	W/G Ladder	1	3.00	6.00	100.00	2	Separate
10.50	120.0	W/G Ladder	1	3.00	6.00	100.00	3	Separate
0.00	82.75	.40" Black Cable	1	0.44	0.08	100.00	2	Separate
0.00	77.00	.58" Black Cable	1	0.65	0.16	100.00	2	Separate
0.00	69.00	.40" Black Cable	1	0.44	0.08	100.00	2	Separate
0.00	68.67	.58" Black Cable	1	0.65	0.16	100.00	2	Separate
0.00	60.00	.58" Black Cable	1	0.65	0.16	100.00	2	Separate
0.00	42.50	.40" Black Cable	1	0.44	0.08	100.00	2	Separate

Site Number: 11468  
 Location: New Milford, CT  
 Code: TIA/EIA-222 Rev F

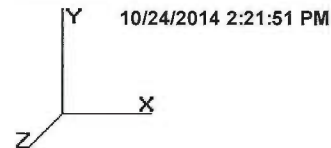


### Force/Stress Summary

Section: 1		2BAY2		Bot Elev (ft): 0.00				Height (ft): 20.000								
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			Fa (ksi)	Member Cap (kip)		Num	Num	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
					X	Y	Z	KL/R	(kip)	Bolts	Holes	(kip)	(kip)			
LEG	PX - 4" DIA PIPE	-106.08	Normal No Ice	10.02	100	100	100	81.2	25.0	110.35	0	0	0.00	0.00	96	Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 3.5X3.5X0.25	-5.68	Normal No Ice	22.51	50	75	50	194.7	5.3	8.88	1	1	8.59	14.50	66	Bolt Shear
Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls					
LEG	PX - 4" DIA PIPE	90.00	60 deg No Ice	50	176.40	0	0	0.00	0.00	51	Member					
	HORIZ	0.00		0	0.00	0	0	0.00	0.00	0						
DIAG	SAE - 3.5X3.5X0.25	5.59	60 deg Ice	36	44.02	1	1	8.59	9.06	65	Bolt Shear					
Section: 2		2BAY2		Bot Elev (ft): 20.00				Height (ft): 20.000								
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			Fa (ksi)	Member Cap (kip)		Num	Num	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
					X	Y	Z	KL/R	(kip)	Bolts	Holes	(kip)	(kip)			
LEG	PX - 4" DIA PIPE	-86.15	Normal Ice	10.02	100	100	100	81.2	25.0	110.35	0	0	0.00	0.00	78	Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 3X3X0.25	-5.38	Normal No Ice	20.74	50	75	50	210.2	4.5	6.49	1	1	8.59	14.50	82	Member Z
Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls					
LEG	PX - 4" DIA PIPE	72.55	60 deg No Ice	50	176.40	0	0	0.00	0.00	41	Member					
	HORIZ	0.00		0	0.00	0	0	0.00	0.00	0						
DIAG	SAE - 3X3X0.25	5.26	90 deg No Ice	36	36.77	1	1	8.59	9.06	61	Bolt Shear					
Section: 3		2BAY2		Bot Elev (ft): 40.00				Height (ft): 20.000								
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			Fa (ksi)	Member Cap (kip)		Num	Num	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
					X	Y	Z	KL/R	(kip)	Bolts	Holes	(kip)	(kip)			
LEG	PX - 3-1/2" DIA PIPE	-66.11	Normal Ice	10.02	100	100	100	91.8	22.1	81.24	0	0	0.00	0.00	81	Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 3X3X0.25	-4.82	Normal No Ice	19.01	50	75	50	192.7	5.4	7.72	1	1	8.59	14.50	62	Member Z
Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls					
LEG	PX - 3-1/2" DIA PIPE	55.18	60 deg No Ice	50	147.20	0	0	0.00	0.00	37	Member					
	HORIZ	0.00		0	0.00	0	0	0.00	0.00	0						
DIAG	SAE - 3X3X0.25	4.86	60 deg Ice	36	36.77	1	1	8.59	9.06	56	Bolt Shear					

Site Number: 11468  
 Location: New Milford, CT

Code: TIA/EIA-222 Rev F



### Force/Stress Summary

Section: 4		3BAY		Bot Elev (ft): 60.00				Height (ft): 20.000								
		Force		Len		Bracing %		Member		Shear Bear		Use				
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	Fa (ksi)	Cap (kip)	Num Bolts	Num Holes	(kip)	(kip)	%	Controls
LEG	PST - 3" DIA PIPE	-47.82	Normal Ice	6.68	100	100	100	69.1	28.1	62.76	0	0	0.00	0.00	76	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 2.5X2.5X0.25	-3.75	Normal No Ice	15.81	50	75	50	193.2	5.3	6.35	1	1	5.49	11.60	68	Bolt Shear
Max Tension Member		(kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls					
LEG	PST - 3" DIA PIPE	39.55	60 deg No Ice	50	89.20	0	0	0.00	0.00	44	Member					
HORIZ		0.00		0	0.00	0	0	0.00	0.00	0						
DIAG	SAE - 2.5X2.5X0.25	3.98	60 deg Ice	36	30.43	1	1	5.49	7.25	72	Bolt Shear					

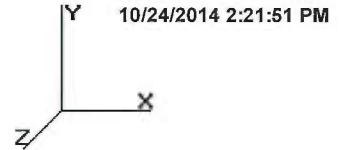
  

Section: 5		3BAY		Bot Elev (ft): 80.00				Height (ft): 20.000								
		Force		Len		Bracing %		Member		Shear Bear		Use				
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	Fa (ksi)	Cap (kip)	Num Bolts	Num Holes	(kip)	(kip)	%	Controls
LEG	PX - 2-1/2" DIA PIPE	-29.64	Normal Ice	6.68	100	100	100	86.7	23.5	52.90	0	0	0.00	0.00	56	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 2X2X0.1875	-2.90	90 deg No Ice	14.02	50	75	50	213.6	4.4	3.10	1	1	5.49	8.70	93	Member Z
Max Tension Member		(kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls					
LEG	PX - 2-1/2" DIA PIPE	24.62	60 deg No Ice	50	90.00	0	0	0.00	0.00	27	Member					
HORIZ		0.00		0	0.00	0	0	0.00	0.00	0						
DIAG	SAE - 2X2X0.1875	2.94	90 deg No Ice	36	17.53	1	1	5.49	5.44	54	Bolt Bear					

Section: 6		3BAY		Bot Elev (ft): 100.0				Height (ft): 20.000								
		Force		Len		Bracing %		Member		Shear Bear		Use				
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	Fa (ksi)	Cap (kip)	Num Bolts	Num Holes	(kip)	(kip)	%	Controls
LEG	PX - 2-1/2" DIA PIPE	-14.82	Normal Ice	6.68	100	100	100	86.7	23.5	52.90	0	0	0.00	0.00	28	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 1.75X1.75X0.18	-2.25	90 deg No Ice	12.30	50	75	50	215.2	4.3	2.67	1	1	5.49	8.70	84	Member Z
Max Tension Member		(kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls					
LEG	PX - 2-1/2" DIA PIPE	11.60	60 deg No Ice	50	90.00	0	0	0.00	0.00	12	Member					
HORIZ		0.00		0	0.00	0	0	0.00	0.00	0						
DIAG	SAE - 1.75X1.75X0.18	2.14	90 deg No Ice	36	14.92	1	1	5.49	5.44	39	Bolt Bear					

Site Number: 11468  
 Location: New Milford, CT  
 Code: TIA/EIA-222 Rev F

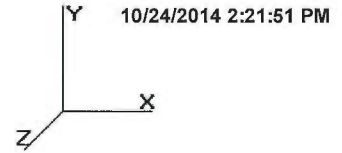


### Force/Stress Summary

Section: 7	10FT-STR	Bot Elev (ft): 120.0	Height (ft): 10.000												
		Force	Len	Bracing %			Fa	Member		Shear Bear		Use			
		(kip)	(ft)	X	Y	Z	(ksi)	Cap (kip)	Num Bolts	Num Holes	Cap (kip)	Cap (kip)	%	Controls	
<b>Max Compression Member</b>															
LEG	PST - 2-1/2" DIA PIP	-3.12	5.00	100	100	100	63.4	29.5	50.29	0	0	0.00	0.00	6	Member X
HORIZ	SAE - 2.5X2.5X0.25	-0.63	8.670	100	100	100	211.9	4.4	5.28	0	0	0.00	0.00	11	Member Z
DIAG	SAE - 1.75X1.75X0.18	-1.31	10.00	50	75	50	175.1	6.5	4.03	1	1	5.49	8.70	32	Member Z
<b>Max Tension Member</b>															
LEG	PST - 2-1/2" DIA PIP	0.79	50	68.16	0	0	0.00	0.00	0.00	1					Member
HORIZ	SAE - 2.5X2.5X0.25	0.45	36	34.27	0	0	0.00	0.00	0.00	1					Member
DIAG	SAE - 1.75X1.75X0.18	1.37	36	14.92	1	1	5.49	5.44	25						Bolt Bear

Site Number: 11468  
 Location: New Milford, CT

Code: TIA/EIA-222 Rev F

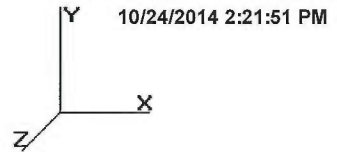


### Support Forces Summary

Load Case	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
90 deg Ice	1b	-11.01	-77.16	-5.27	
	1a	-10.58	92.75	5.00	
	1	-2.70	8.27	0.27	
60 deg Ice	1b	-11.89	-89.29	-7.10	
	1a	-6.57	56.10	1.64	
	1	-2.30	57.05	-6.53	
Normal Ice	1b	-5.39	-43.28	-5.57	
	1a	5.35	-43.21	-5.63	
	1	0.04	110.36	-14.04	
90 deg No Ice	1b	-10.98	-82.25	-5.11	
	1a	-11.46	91.79	5.36	
	1	-2.83	5.04	-0.25	
60 deg No Ice	1b	-11.78	-94.10	-7.00	
	1a	-7.28	53.99	1.85	
	1	-2.39	54.70	-7.24	
Normal No Ice	1b	-5.16	-48.34	-5.66	
	1a	5.11	-48.30	-5.72	
	1	0.05	111.23	-15.30	

Max Uplift:	94.10 (kip)	Moment:	1,904.03 (ft-kip)	Normal No Ice
Max Down:	111.23 (kip)	Total Down:	14.58 (kip)	
Max Shear:	15.30 (kip)	Total Shear:	26.69 (kip)	

Site Number: 11468  
 Location: New Milford, CT  
 Code: TIA/EIA-222 Rev F



### Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
77.94 mph Wind at 60 deg From Face with Ice	20.00	0.0181	0.0048	0.0869
	40.00	0.0580	-0.1027	0.1451
	60.00	0.1194	-0.1799	0.1956
	66.67	0.1449	0.0139	0.2265
	80.00	0.2055	0.0174	0.2751
	125.00	0.4695	0.0357	0.4841
	130.00	0.4991	0.0407	0.6511
77.94 mph Wind at 90 deg From Face with Ice	20.00	0.0178	0.0055	0.0864
	40.00	0.0591	-0.1450	0.1410
	60.00	0.1211	-0.2540	0.1849
	66.67	0.1473	0.0208	0.2219
	80.00	0.2082	0.0244	0.2663
	125.00	0.4734	0.0135	0.5574
	130.00	0.5025	0.0133	0.4062
77.94 mph Wind Normal To Face with Ice	20.00	0.0184	-0.0002	0.0891
	40.00	0.0605	-0.0004	0.1560
	60.00	0.1245	-0.0007	0.2298
	66.67	0.1530	-0.0009	0.3289
	80.00	0.2167	-0.0015	0.3592
	125.00	0.4950	-0.0044	0.3788
	130.00	0.5277	-0.0049	1.1041
90.00 mph Wind at 60 deg From Face with No Ice	20.00	0.0181	0.0049	0.0862
	40.00	0.0593	-0.1058	0.1429
	60.00	0.1214	-0.1853	0.1958
	66.67	0.1476	0.0146	0.2296
	80.00	0.2088	0.0183	0.2788
	125.00	0.4747	0.0379	0.4469
	130.00	0.5048	0.0429	0.4778
90.00 mph Wind at 90 deg From Face with No Ice	20.00	0.0183	0.0061	0.0880
	40.00	0.0604	-0.1476	0.1437
	60.00	0.1235	-0.2584	0.1877
	66.67	0.1499	0.0232	0.2271
	80.00	0.2119	0.0273	0.2734
	125.00	0.4813	0.0170	0.5081
	130.00	0.5112	0.0168	0.1941
90.00 mph Wind Normal To Face with No Ice	20.00	0.0194	-0.0002	0.0946
	40.00	0.0636	-0.0004	0.1533
	60.00	0.1298	-0.0007	0.2343
	66.67	0.1583	-0.0009	0.3415
	80.00	0.2236	-0.0016	0.3739
	125.00	0.5091	-0.0053	0.3879
	130.00	0.5427	-0.0052	0.9108
		0.0000	0.0000	0.0000

# **EXHIBIT C**

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

T-Mobile Existing Facility

Site ID: CTNH369A

NH369 / Charter Communications SST  
125 Ridge Road  
New Milford, CT 06776

**October 31, 2014**

**EBI Project Number: 62145919**

<b>Site Compliance Summary</b>	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general public allowable limit:	<b>9.37 %</b>



October 31, 2014

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

Emissions Analysis for Site: **CTNH369A – NH369 / Charter Communications SST**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **125 Ridge Road, New Milford, 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 **125 Ridge Road, New Milford, 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 LNX-6515DS-VTM** 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 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 **124 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):	124	Height (AGL):	124	Height (AGL):	124
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%	2.64	Antenna B1 MPE%	2.64	Antenna C1 MPE%	2.64
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):	124	Height (AGL):	124	Height (AGL):	124
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):	445.37	ERP (W):	445.37	ERP (W):	445.37
Antenna A2 MPE%	0.48	Antenna B2 MPE%	0.48	Antenna C2 MPE%	0.48

Site Composite MPE %	
Carrier	MPE%
T-Mobile	9.37
No Additional Carrier Values Listed in CSC Database	
<b>Site Total MPE %:</b>	<b>9.37 %</b>

T-Mobile Sector 1 Total:	3.12 %
T-Mobile Sector 2 Total:	3.12 %
T-Mobile Sector 3 Total:	3.12 %
<b>Site Total:</b>	<b>9.37 %</b>

## 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:	3.12 %
Sector 2:	3.12 %
Sector 3 :	3.12 %
T-Mobile Total:	9.37 %
Site Total:	9.37 %
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite MPE value for this site assuming all carriers present is **9.37%** 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

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