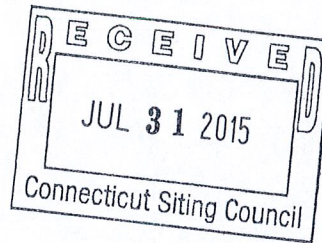


Please Reply To:  
Sam Simons  
35 Griffin Road South  
Bloomfield, CT 06002  
203-482-5156  
[Sam.Simons@T-Mobile.com](mailto:Sam.Simons@T-Mobile.com)

July 27, 2015

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



**EM-TMOBILE-011-131028**  
T-Mobile Site ID CT11162B  
1021 Blue Hills Avenue, Bloomfield CT  
Notice of Compliance with Conditions and 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 November 19, 2013. The Council imposed the following condition in its acknowledgment:

- The feedlines and accessory equipment shall be installed as specified in the Structural Analysis Report prepared by FDH Engineering dated September 25, 2013 and stamped by Christopher Murphy;
- Within 45 days following completion of the antenna installation, T-Mobile shall provide documentation certified by a professional engineer that its installation complied with the recommendations of the structural analysis;
- 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 attached PE Closeout Letter, dated July 24, 2015, provides evidence of compliance with the conditions outlined by the Council.

In addition, T-Mobile hereby notifies the Council that construction of the acknowledged modifications were complete as of August 15, 2014.

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

Sincerely,

*Sam Simons*

Samuel Simons, T-Mobile

CC: Mark Richard, T-Mobile



6521 Meridien Drive  
Raleigh, NC 27616  
(919) 755-1012 P  
(919) 755-1031 F

July 24, 2015

Sam Simons  
Engineering Development - Connecticut  
T-Mobile  
35 Griffin Road South  
Bloomfield, CT 06002  
sam.simons@t-mobile.com

**RE: PE Close Out Letter  
EM-T-MOBILE # 011-131028/T-Mobile  
SBA Site ID #: CT01725-A  
SBA Site Name: Bloomfield  
T-Mobile Site ID #: CT11162-B**

Dear Mr. Simons,

Velocitel, Inc., d.b.a. FDH Velocitel has completed a post-construction review of the above-referenced site to determine whether T-Mobile complied with conditions imposed by the Connecticut Siting Council's acknowledgment letter, dated November 19, 2013. Our compliance review included the Connecticut Siting Council's acknowledgment letter and the approved tower Structural Analysis Report by FDH Engineering, project number 13SCG71400, dated September 25, 2013.

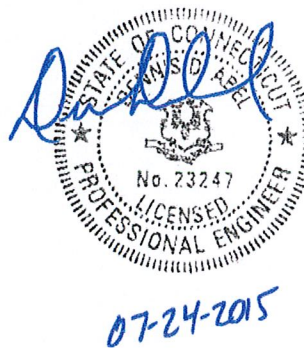
On behalf of FDH Velocitel, based on my review of the information, I, Dennis D. Abel, certify that to the best of my knowledge, the T-Mobile work complies with the recommendations of the approved Structural Analysis.

All observations were performed after the construction was complete and FDH Velocitel was not present during the construction phase. This review is not to determine the adequacy or effectiveness of the modification solution.

We at FDH Velocitel appreciate the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or any other projects please give us a call.

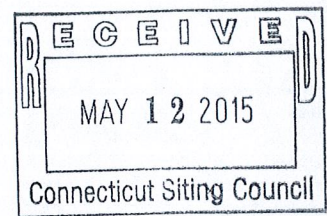
Respectfully submitted,

Dennis D. Abel, PE  
Connecticut License #23247



CC: Mark Appleby, Northeast Site Solutions





Please Reply To:  
Sam Simons  
35 Griffin Road South  
Bloomfield, CT 06002  
203-482-5156  
[Sam.Simons@T-Mobile.com](mailto:Sam.Simons@T-Mobile.com)

May 11, 2015

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

**Re: EM-T-Mobile-011-131028**  
T-Mobile Site ID CT11162B  
1021 Blue Hills Avenue Bloomfield 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 November 19, 2013. T-Mobile hereby notifies the Council that construction of the acknowledged modifications were complete as of August 15, 2014.

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

Sincerely,

*Sam Simons*

Samuel Simons, T-Mobile

cc: Mark Richard, T-Mobile



# 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)

November 19, 2013

Rick Woods  
SBA Communications Corporation  
33 Boston Post Road West  
Suite 320  
Marlborough, MA 01752

RE: **EM-T-MOBILE-011-131028** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 1021 Blue Hills Avenue, Bloomfield, Connecticut.

Dear Mr. Woods:

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:

- The feedlines and accessory equipment shall be installed as specified in the Structural Analysis Report prepared by FDH Engineering dated September 25, 2013 and stamped by Christopher Murphy;
- Within 45 days following completion of the antenna installation, T-Mobile shall provide documentation certified by a professional engineer that its installation complied with the recommendations of the structural analysis;
- 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 October 24, 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.



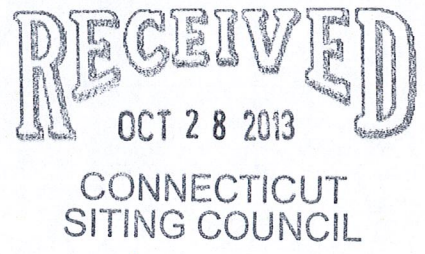




**EM-T-MOBILE-011-131028**

October 24, 2013

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



RE: Notice of Exempt Modification  
1021 Blue Hills Avenue  
Bloomfield, CT 06002  
N 41° 49' 12"  
W -72° 41' 47"

Dear Mr. Martin and Members of the Siting Council:

On behalf of T-Mobile, SBA Communications is submitting an exempt modification application to the Connecticut Siting Council for modification of existing equipment at a tower facility located at 1021 Blue Hills Avenue, Bloomfield, CT.

The 1021 Blue Hills Avenue facility consists of a 125' Self Support Tower owned and operated by SBA Towers LLC. In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

As part of T-Mobile's modernization project, T-Mobile desires to upgrade their equipment to meet the new standards of 4G technology. The new equipment will allow customers to download files and browse the internet at a high rate of speed while also allowing their phones to be compatible with the latest 4G technology.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in T-Mobile's operations at the site along with the required fee of \$625.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be





significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The overall height of the structure will be unaffected.
2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than the new equipment cabinets.
3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.
4. The changes in radio frequency power density will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, SBA Communications on behalf of T-Mobile, respectfully submits that he proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (508) 614-0389 with any questions you may have concerning this matter.

Thank you,

Rick Woods  
SBA Communications Corporation  
33 Boston Post Road West Suite 320  
Marlborough, MA 01752  
508-251-1691 x 319 + T  
508-251-1755 + F  
508-614-0389 + C  
[rwoods@sbsite.com](mailto:rwoods@sbsite.com)





## T-Mobile Equipment Modification

1021 Blue Hills Avenue, Bloomfield, CT  
Site number CT11162B

**Tower Owner:** SBA Towers LLC

**Equipment Configuration:** Self Support Tower

### Current and/or approved:

- (6) EMS RV90-17-00 w/Mount Pipe
- (3) RFS APX16PV-16PVL-C w/Mount Pipe
- (9) Andrew OneBase Twin TMAS
- (18) 1-5/8" Coax

### Planned Modifications:

- (3) Ericsson AIR B2A/B4P w/Mount Pipe
- (3) Ericsson AIR B4A/B2P w/Mount Pipe
- (3) Ericsson KRY 112 144/1 TMDs
- (12) 1-5/8" Coax
- (1) 1-5/8" Fiber
- Cable

### Structural Information:

The attached structural analysis demonstrates that the tower and foundation will have adequate structural capacity to accommodate the proposed modifications.

### Power Density:

The anticipated Maximum Composite contributions from the T-Mobile facility are 0.736% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 54.246% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.736%
AT&T	3.400%
Verizon Wireless	6.740%
Metro PCS	21.610%
Clearwire	1.340%
Nextel	3.960%
XM	1.480%
PageNet	0.740%
Blue Hills Fire Dept.	14.240%
<b>Total Site MPE %</b>	<b>54.246%</b>



October 24, 2013

Mayor Sydney Schulman  
Town of Bloomfield  
Bloomfield Town Hall  
800 Bloomfield Avenue  
Bloomfield, CT 06002

COPY

RE: Telecommunications Facility @ 1021 Blue Hills Avenue, Bloomfield, CT

Dear Mayor Schulman,

In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies (R.C.S.A.) Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review T-Mobile's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes T-Mobile's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at (508) 614-0389.

Thank you,

Rick Woods  
SBA Communications Company  
33 Boston Post Road West Suite 320  
Marlborough, MA 01752  
508-251-1691 x 319 + T  
508-251-1755 + F  
508-614-0389 + C  
[rwoods@sbsite.com](mailto:rwoods@sbsite.com)





FDH Engineering, Inc., 6521 Meridien Drive Raleigh, NC 27616, Ph. 919.755.1012

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

**125' Self-Support Tower**

**SBA Site Name: Bloomfield  
SBA Site ID: CT01725-A-04  
T-Mobile Site Name: Bloomfield**

FDH Project Number 13SCG71400

**Analysis Results**

Tower Components	98.3%	Sufficient
Foundation	83.1%	Sufficient

Prepared By:

Gregory C Clutter  
Project Engineer

Reviewed By:

Christopher M. Murphy, PE  
President  
CT PE License No. 25842

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



September 25, 2013

*Prepared pursuant to TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures and 2005 Connecticut Building Code*

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## EXECUTIVE SUMMARY

At the request of SBA Network Services, Inc., FDH Engineering, Inc. performed a structural analysis of the existing self-supported tower located in Bloomfield, CT to determine whether the tower is structurally adequate to support both the existing and proposed loads pursuant to the *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, TIA/EIA-222-F* and *2005 Connecticut Building Code*. Information pertaining to the existing/proposed antenna loading, current tower geometry, the member sizes, soil parameters, and foundation dimensions was obtained from:

- Fred A. Nudd Corporation (Project No. 5566A) original design drawings dated March 11, 1998
- FDH Engineering, Inc. (Project No. 12-06690E G1) Geotechnical Evaluation of Subsurface Conditions dated August 10, 2012
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards and *2005 Connecticut Building Code* is 80 mph without ice and 28 mph with 1" radial ice. Ice is considered to increase in thickness with height.

## Conclusions

With the existing and proposed antennas from T-Mobile in place at 125 ft, the tower meets the requirements of the *TIA/EIA-222-F* standards and *2005 Connecticut Building Code* provided the **Recommendations** listed below are satisfied. Furthermore, provided the foundations were constructed per the original design drawings (see Fred A. Nudd Corp. Project No. 5566A) and utilizing the existing soil parameters (see FDH Engineering, Inc. Project No. 12-06690E G1), the foundations should have the necessary capacity to support the existing and proposed loading. For a more detailed description of the analysis of the tower, see the **Results** section of this report.

Our structural analysis has been performed assuming all information provided to FDH Engineering, Inc. is accurate (i.e., the steel data, tower layout, existing antenna loading, and proposed antenna loading) and that the tower has been properly erected and maintained per the original design drawings.

## Recommendations

To ensure the requirements of the *TIA/EIA-222-F* standards and *2005 Connecticut Building Code* are met with the existing and proposed loading in place, we have the following recommendations:

1. The feedlines must be installed as shown in **Figure 1**.
2. RRH/RRU stipulation: the proposed equipment may be installed in any arrangement as determined by the client.

## APPURTENANCE LISTING

The proposed and existing antennas with their corresponding cables/coax lines are shown in **Table 1**. *If the actual layout determined in the field deviates from the layout, FDH Engineering, Inc. should be contacted to perform a revised analysis.*

**Table 1 - Appurtenance Loading**

### Existing Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
135	(3) Celwave PD455 Dipoles (2) 20' Omnis	(1) 1-1/4" (2) 1/2" (2) 7/8"	Blue Hills Fire & PD	125	(1) Platform w/ Handrails
125	(6) EMS RV90-17-00 w/ Mount Pipe (3) RFS APX16PV-16PVL-C w/ Mount Pipe (9) Andrew OneBase Twin TMAS	(18) 1-5/8"	T-Mobile		
120	(9) Decibel DB844H90E-XY w/ Mount Pipe (3) Kathrein 840 10054 w/ Mount Pipe (3) Samsung U-RAS RRUs	(12) 1-1/4" (2) 1/2" (7) 5/16"	Nextel/ Clearwire	120	(3) T-Frames
	(2) Andrew VHLP2.5 Dishes (2) Dragonwave Horizon Duo ODU's				
110	(6) Antel LPA-80063/4CF w/ Mount Pipe (3) Antel LPA-171063/8CF w/ Mount Pipe (1) Antel BXA-70080/4CF w/ Mount Pipe (2) Swedcom SLCP 2x6014F w/ Mount Pipe (2) GPS	(18) 1-5/8" (2) 1/2"	Verizon	107	(3) T-Frames
98	(6) Powerwave 7770.00 w/ Mount Pipe (1) KMW AM-X-CD-16-65-00T-RET w/ Mount Pipe	(12) 7/8" (1) 3" Flex Conduit (2) 3/4" DC Power (1) 3/8" Fiber	New Cingular	98	(3) T-Frames
	(2) Andrew SBNH-1D6565C w/ Mount Pipe (6) Powerwave LGP21401 TMA's (6) Ericsson RRUS-11 RRUs (6) Powerwave LGP21903 Diplexers			96	Direct Mount
87	(3) RFS APXVSP18-C-A20 w/ Mount Pipe (3) ALU 1900 MHz RRHs (3) ALU 800 MHz RRHs (3) ALU 800 MHz Filters (4) RFS ACU-A20-N RETs	(3) 1-1/4" Fiber	Sprint	87	(3) T-Frames
75	(3) RFS APXV18-206517S-C w/ Mount Pipe	(6) 1-5/8"	Pocket	75	Direct Mount
51	(1) 2' Omni	---	---	50	(1) Standoff

### Proposed Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
125	(3) Ericsson AIR B2A/B4P w/ Mount Pipe (3) Ericsson AIR B4A/B2P w/ Mount Pipe (3) Ericsson KRY 112 144/1 TMDs	(12) 1-5/8" (1) 1-5/8" Fiber Cable	T-Mobile	125	(1) Platform w/ Handrails



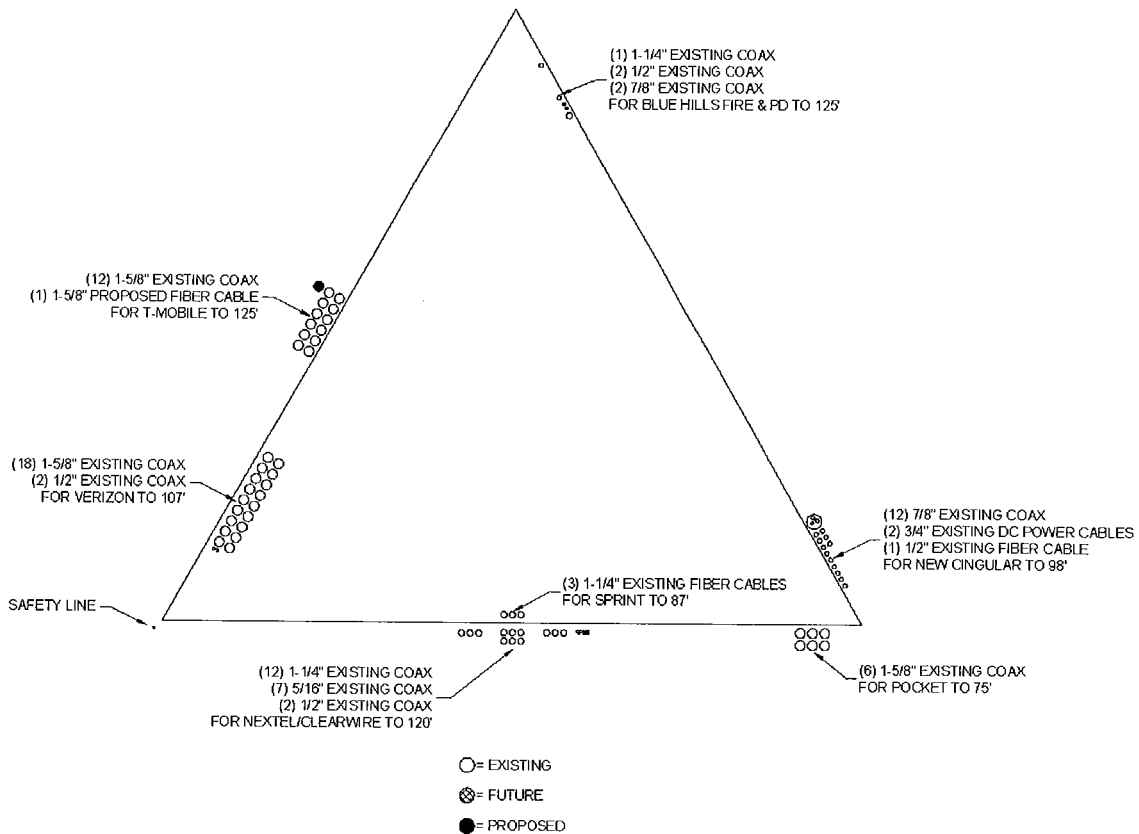


Figure 1 – Feedline Layout

## RESULTS

The following yield strength of steel for individual members was used for analysis:

**Table 2 - Material Strength**

Member Type	Yield Strength
Legs	55 ksi
Bracing	36 ksi

**Table 3** displays the summary of the ratio (as a percentage) of force in the member to their capacities. Values greater than 100% indicate locations where the maximum force in the member exceeds its capacity. *Note: Capacities up to 100% are considered acceptable.* **Table 4** displays the maximum foundation reactions. **Table 5** displays maximum tilt and twist at service wind speed.

If the assumptions outlined in this report differ from actual field conditions, FDH Engineering, Inc. should be contacted to perform a revised analysis. Furthermore, as no information pertaining to the allowable twist and sway requirements for the existing or proposed appurtenances was provided, deflection and rotation were not taken into consideration when performing this analysis.

See the **Appendix** for detailed modeling information

**Table 3 - Summary of Working Percentage of Structural Components**

Section No.	Elevation ft	Component Type	Size	% Capacity*	Pass Fail
T1	125 - 120	Leg	P2.5x.203 (2.88 OD)	12.0	Pass
		Diagonal	5/8	40.1	Pass
		Horizontal	L1 1/2x1 1/2x3/16	37.7 46.8 (b)	Pass
		Top Girt	L1 1/2x1 1/2x3/16	17.9	Pass
T2	120 - 100	Bottom Girt	L1 1/2x1 1/2x3/16	22.3	Pass
		Leg	P2.5x.203 (2.88 OD)	73.2	Pass
		Diagonal	L1 1/2x1 1/2x3/16	61.2 82.7 (b)	Pass
T3	100 - 80	Top Girt	L1 1/2x1 1/2x3/16	9.2 15.3 (b)	Pass
		Leg	P3.5x.226 (4.00 OD)	85.0	Pass
T4	80 - 60	Diagonal	L2x2x3/16	52.7 87.7 (b)	Pass
		Leg	P5x.258 (5.563 OD)	76.9	Pass
T5	60 - 40	Diagonal	L2 1/2x2 1/2x3/16	46.1 98.3 (b)	Pass
		Leg	P6x.28 (6.625 OD)	73.0	Pass
T6	40 - 30	Diagonal	L2 1/2x2 1/2x3/16	55.0 73.7 (b)	Pass
		Leg	P6x.28 (6.625 OD)	84.2	Pass
T7	30 - 20	Diagonal	L3x3x3/16	53.1 75.8 (b)	Pass
		Leg	P6x.28 (6.625 OD)	95.8	Pass
T8	20 - 0	Diagonal	L3x3x3/16	55.5 75.2 (b)	Pass
		Leg	P8x.322 (8.625 OD)	68.2	Pass
		Diagonal	L3 1/2x3 1/2x1/4	33.0	Pass



Section No.	Elevation ft	Component Type	Size	% Capacity*	Pass Fail
				61.8 (b)	

\*Capacities include a 1/3 allowable stress increase for wind.

**Table 4 - Maximum Base Reactions**

Load Type	Direction	Current Analysis (TIA/EIA-222-F)*	Original Design (EIA/TIA-222-E)
Individual Foundation	Horizontal	17 k	---
	Uplift	194 k	168 k
	Compression	217 k	178 k
Overturning Moment	---	2,238 k-ft	---

\*Foundation determined adequate per independent analysis.

**Table 5 - Maximum Antenna Rotations at Service Wind Speeds**

Centerline Elevation (ft)	Antenna	Tilt (deg)*	Twist (deg)*
120	(2) Andrew VHLP2.5 Dishes	0.4525	0.0076

\*Tilt and Twist to be reviewed by the carrier.

## GENERAL COMMENTS

This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading information) modeled. If there are substantial modifications to be made or the assumptions made in this analysis are not accurate, FDH Engineering, Inc. should be notified immediately to perform a revised analysis.

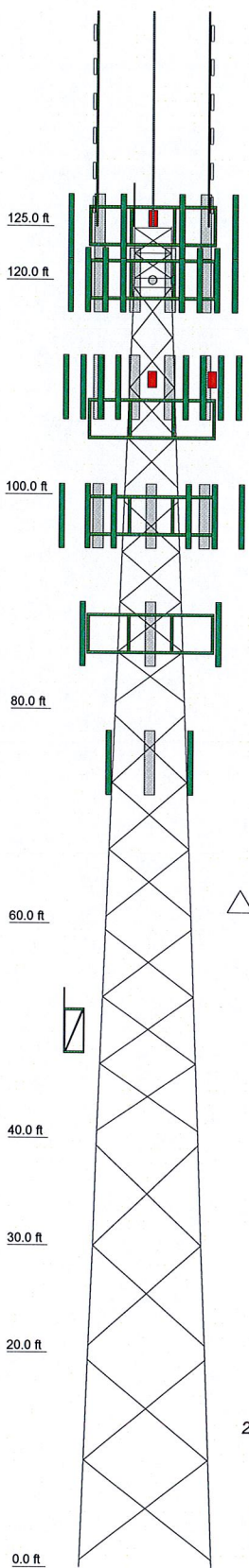
## LIMITATIONS

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of this report. All opinions and conclusions are subject to revision based upon receipt of new or additional/updated information. All services are provided exercising a level of care and diligence equivalent to the standard and care of our profession. No other warranty or guarantee, expressed or implied, is offered. Our services are confidential in nature and we will not release this report to any other party without the client's consent. The use of this engineering work is limited to the express purpose for which it was commissioned and it may not be reused, copied, or distributed for any other purpose without the written consent of FDH Engineering, Inc.

## APPENDIX



Section	T1	T2	T3	T4	T5	T6	T7	T8	
Legs	P2.5x.203 (2.88 OD)		P3.5x.226 (4.00 OD)	P5x.258 (5.563 OD)	P6x.28 (6.625 OD)		P6x.322 (6.625 OD)		
Leg Grade				A572-55					
Diagonals	L1 1/2x1 1/2x3/16		L2x2x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16		L3 1/2x3 1/2x1/4		
Diagonal Grade				A36					
Top Girts									
Bottom Girts	L1 1/2x1 1/2x3/16								
Horizontals				N.A.					
Face Width (ft)				6.5	9.5	10.25	11		12.5
# Panels @ (ft)				8 @ 4.66667	6 @ 6.25	4 @ 9.33333	4 @ 9.33333		4 @ 9.33333
Weight (K)				1.0	1.7	0.9	0.9	2.8	9.5



**DESIGNED APPURTENANCE LOADING**

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod 1/2"x4'	125	GPS	107
Beacon	125	(3) T-Frames MNT	107
PD455 Dipole	125	(2) LGP21903 Diplexer	98
PD455 Dipole	125	(2) LGP21903 Diplexer	98
PD455 Dipole	125	(2) LGP21903 Diplexer	98
20' Omni	125	DC6-48-60-18-8F Surge Arrestor	98
20' Omni	125	(3) T-Frames MNT	98
AIR 21 B2A/B4P w/Mount Pipe	125	(2) 7770.00 w/Mount Pipe	98
AIR 21 B2A/B4P w/Mount Pipe	125	(2) 7770.00 w/Mount Pipe	98
AIR 21 B2A/B4P w/Mount Pipe	125	(2) 7770.00 w/Mount Pipe	98
AIR 21 B4A/B2P w/Mount Pipe	125	AM-X-CD-16-65-00T-RET w/ Mount Pipe	98
AIR 21 B4A/B2P w/Mount Pipe	125	SBNH-1D6565C w/Mount Pipe	98
AIR 21 B4A/B2P w/Mount Pipe	125	SBNH-1D6565C w/Mount Pipe	98
KRY 112 144/1	125	(2) LGP21401 TMA	98
KRY 112 144/1	125	(2) LGP21401 TMA	98
KRY 112 144/1	125	(2) LGP21401 TMA	98
(1) Platform w/ Handrails	125	(2) RRUS-11	98
U-RAS Flexible Radio	120	(2) RRUS-11	98
(3) T-Frames MNT	120	(2) RRUS-11	98
(3) DB844H90E-XY w/ Mount Pipe	120	(2) RRUS-11	98
(3) DB844H90E-XY w/ Mount Pipe	120	ACU-A20-N RET	87
(3) DB844H90E-XY w/ Mount Pipe	120	ACU-A20-N RET	87
840 10054 w/ Mount Pipe	120	ACU-A20-N RET	87
840 10054 w/ Mount Pipe	120	(3) T-Frames MNT	87
840 10054 w/ Mount Pipe	120	APXVSP18-C-A20 w/Mount Pipe	87
Horizon Duo	120	APXVSP18-C-A20 w/Mount Pipe	87
Horizon Duo	120	APXVSP18-C-A20 w/Mount Pipe	87
U-RAS Flexible Radio	120	1900 MHz RRH	87
U-RAS Flexible Radio	120	1900 MHz RRH	87
VHLP2.5 Dish	120	1900 MHz RRH	87
VHLP2.5 Dish	120	800 MHz RRH	87
(2) LPA-80063/4CF w/ Mount Pipe	107	800 MHz RRH	87
(2) LPA-80063/4CF w/ Mount Pipe	107	800 MHz RRH	87
(2) LPA-80063/4CF w/ Mount Pipe	107	800 MHz Filter	87
LPA-171063/8CF w/ Mount Pipe	107	800 MHz Filter	87
LPA-171063/8CF w/ Mount Pipe	107	800 MHz Filter	87
LPA-171063/8CF w/ Mount Pipe	107	APXV18-206517S-C w/Mount Pipe	75
BXA-70080/4CF w/ Mount Pipe	107	APXV18-206517S-C w/Mount Pipe	75
SLCP 2x6014F w/ Mount Pipe	107	APXV18-206517S-C w/Mount Pipe	75
SLCP 2x6014F w/ Mount Pipe	107	2' Omni	50
GPS	107	(1) Standoff MNT	50

**SYMBOL LIST**

MARK	SIZE	MARK	SIZE
A	L1 1/2x1 1/2x3/16	B	2 @ 2.33333

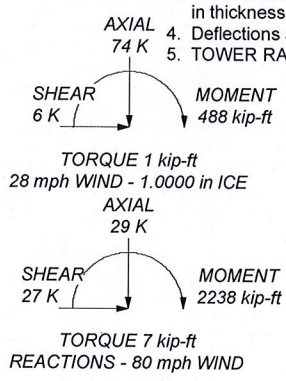
**MATERIAL STRENGTH**

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-55	55 ksi	70 ksi	A36	36 ksi	58 ksi

MAX. CORN DOWN: 2.11 in  
SHEAR: 17 K

**TOWER DESIGN NOTES**

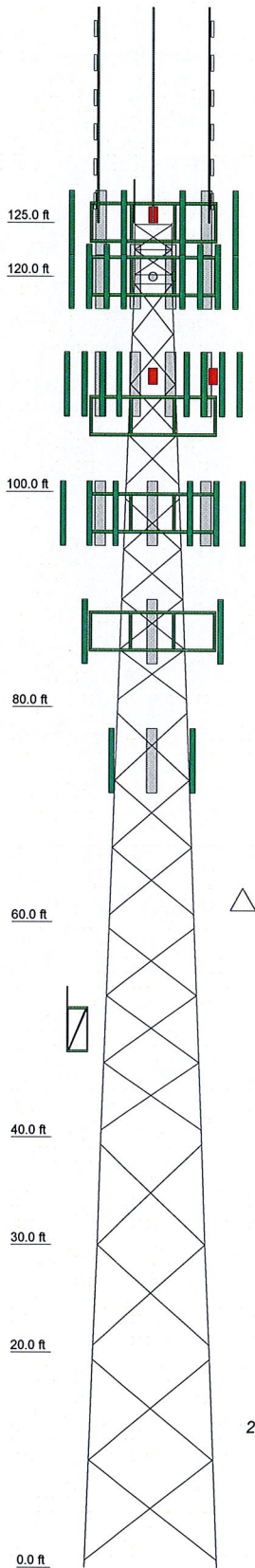
1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 28 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 98.3%



<p><b>FDH Engineering, Inc.</b> 6521 Meridien Drive Raleigh, NC 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p>Job: <b>Bloomfield, CT01725-A-04</b></p>
	<p>Project: <b>13SCG71400</b></p>
	<p>Client: <b>SBA Network Services, Inc.</b> Drawn by: <b>Greg Clutter</b> App'd:</p>
	<p>Code: <b>TIA/EIA-222-F</b> Date: <b>09/25/13</b> Scale: <b>NTS</b></p>
	<p>Path: <b>C:\Users\Greg.Clutter\Desktop\Bloomfield, CT\Analysis\Bloomfield, CT Tower.ed</b> Dwg No. <b>E-1</b></p>



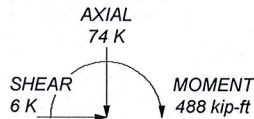
Section	T1	T2	T3	T4	T5	T6	T7	T8
Legs	P2.5x.203 (2.88 OD)	P2.5x.203 (2.88 OD)	P3.5x.226 (4.00 OD)	P5x.256 (5.563 OD)	P6x.28 (6.625 OD)	P6x.28 (6.625 OD)	P8x.322 (8.625 OD)	P8x.322 (8.625 OD)
Leg Grade	L1 1/2x1 1/2x3/16	L1 1/2x1 1/2x3/16	L2x2x3/16	A572-55	L2 1/2x2 1/2x3/16	L3x3x3/16	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4
Diagonals	L1 1/2x1 1/2x3/16	L1 1/2x1 1/2x3/16	L2x2x3/16	A36	L2 1/2x2 1/2x3/16	L3x3x3/16	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4
Diagonal Grade	L1 1/2x1 1/2x3/16	L1 1/2x1 1/2x3/16	L2x2x3/16	A36	L2 1/2x2 1/2x3/16	L3x3x3/16	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4
Top Girts	L1 1/2x1 1/2x3/16	L1 1/2x1 1/2x3/16	L2x2x3/16	A36	L2 1/2x2 1/2x3/16	L3x3x3/16	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4
Bottom Girts	L1 1/2x1 1/2x3/16	L1 1/2x1 1/2x3/16	L2x2x3/16	A36	L2 1/2x2 1/2x3/16	L3x3x3/16	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4
Horizontals	L1 1/2x1 1/2x3/16	L1 1/2x1 1/2x3/16	L2x2x3/16	A36	L2 1/2x2 1/2x3/16	L3x3x3/16	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4
Face Width (ft)	3.5	3.5	5	6.5	9.5	10.25	11	11
# Panels @ (ft)	B	B	8 @ 4.66667	1.4	1.7	0.9	0.9	2.8
Weight (K)	0.2	0.6	1.0	1.4	1.7	0.9	0.9	2.8



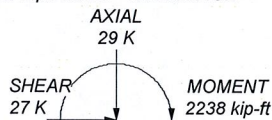
MAX. CORNER REACTIONS AT BASE:

DOWN: 217 K  
SHEAR: 17 K

UPLIFT: -194 K  
SHEAR: 16 K



TORQUE 1 kip-ft  
28 mph WIND - 1.0000 in ICE



TORQUE 7 kip-ft  
REACTIONS - 80 mph WIND

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L1 1/2x1 1/2x3/16	B	2 @ 2.33333

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-55	55 ksi	70 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 28 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 98.3%

**FDH Engineering, Inc.**  
6521 Meridien Drive  
Raleigh, NC 27616  
Phone: (919) 755-1012  
FAX: (919) 755-1031

Job: **Bloomfield, CT01725-A-04**  
Project: **13SCG71400**  
Client: **SBA Network Services, Inc.** Drawn by: **Greg Clutter** App'd:  
Code: **TIA/EIA-222-F** Date: **09/25/13** Scale: **NTS**  
Path: **C:\Users\Greg Clutter\Desktop\Bloomfield, CT\Analysis\Bloomfield, CT Tower.dwg** Dwg No. **E-1**



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

T-Mobile Existing Facility

Site ID: CT11162B

Bloomfield Fire Department  
1021 Blue Hills Avenue  
Bloomfield, CT 06002

**October 23, 2013**

**EBI Project Number: 69131692**

October 23, 2013

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

Re: Emissions Values for Site: **CT11162B - Bloomfield Fire Department**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 1021 Blue Hills Avenue, Bloomfield, 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 1021 Blue Hills Avenue, Bloomfield, 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



# EBI Consulting

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- 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	CT111628 - Bloomfield Fire Department
Site Address	1021 Blue Hills Avenue, Bloomfield, CT 06002
Site Type	Self Support Tower

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	125	119	None	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	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	125	119	1.5/8"	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	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 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	48.326044	1.226855	0.12269%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	125	119	None	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	125	119	1.5/8"	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	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 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	48.326044	1.226855	0.12269%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	125	119	None	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	125	119	1.5/8"	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	24.163022	0.613428	0.06134%
Sector total Power Density Value:													0.245%			

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.736%
AT&T	3.400%
Verizon Wireless	6.740%
Metro PCS	21.610%
Clearwire	1.340%
Nextel	3.960%
XM	1.480%
PageNet	0.740%
Blue Hills Fire Dept.	14.240%
<b>Total Site MPE %</b>	<b>54.246%</b>





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## 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 sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **54.246%** 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



PROJECT INFORMATION	
SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS T-MOBILE EQUIPMENT MODERNIZATION
SITE ADDRESS:	1021 BLUE HILLS AVENUE BLOOMFIELD, CT 06002
LATITUDE:	41° 49' 12" N (GOOGLE EARTH)
LONGITUDE:	-72° 41' 47" W (GOOGLE EARTH)
JURISDICTION:	NATIONAL, STATE & LOCAL CODES OR ORDINANCES
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).
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY
DESIGN GUIDELINE:	2C(LITE) EXTRA FIBER (BOM)
TOWER OWNER:	SBA TOWERS LLC
SBA SITE ID:	CT01725-A
SBA NAME:	BLOOMFIELD

CONFIGURATION  
**2C**

# SITE NAME: BLOOMFIELD FIRE DEPARTMENT

1021 BLUE HILLS AVENUE  
BLOOMFIELD, CT 06002

SITE NUMBER: CT11162B

DRAWING INDEX	REV
T-1 TITLE SHEET	0
GN-1 GENERAL NOTES	0
A-1 COMPOUND PLAN AND ELEVATION	0
A-2 PLANS AND ANTENNA SCHEDULES	0
A-3 DETAILS	0
G-1 GROUNDING, ONE-LINE DIAGRAM & DETAILS	0



GENERAL NOTES
1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE NORTHEAST, LLC. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION 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 REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SIGNATURES			
CONSTRUCTION	DATE	OPERATIONS	DATE
RF ENGINEERING	DATE	TOWER OWNER	DATE
ZONING / SITE ACQ.	DATE		

**SPECIAL STRUCTURAL NOTES:**  
 1. TOWER OWNER SHALL PROVIDE GLOBAL STRUCTURAL STABILITY ANALYSIS OF EXISTING ANTENNA SUPPORT STRUCTURE. GENERAL CONTRACTOR SCOPE OF WORK SHALL INCLUDE ALL REQUIRED STRUCTURAL MODIFICATIONS, RE-BUNDLING OF COAXIAL CABLES OR OTHER SPECIAL MODIFICATIONS AS OUTLINED THEREIN.  
 2. STRUCTURAL DESIGNS AND DETAILS FOR ANTENNA MOUNTS COMPLETED BY ADVANCED ENGINEERING GROUP, P.C. 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 OR BE RESPONSIBLE FOR SAME.

CALL

BEFORE YOU DIG

CALL TOLL FREE 811 OR 922-4455

**UNDERGROUND SERVICE ALERT**

**EG ADVANCED**  
ENGINEERING GROUP, P.C.  
Civil Engineering - Site Development Surveying - Telecommunications  
500 NORTH BROADWAY  
EAST PROVIDENCE, RI 02914  
PH: (401) 354-2403  
FAX: (401) 633-6354

**SBA**  
SBA COMMUNICATIONS CORPORATION  
33 BOSTON POST ROAD WEST, SUITE 320  
MARLBOROUGH, MA 01752  
PHONE: 508-366-5505

**SITE NUMBER: CT11162B**  
**SITE NAME: BLOOMFIELD FIRE DEPARTMENT**  
 1021 BLUE HILLS AVENUE  
 BLOOMFIELD, CT 06002

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

		T-MOBILE		
		TITLE SHEET		
0	09/09/13	CONSTRUCTION	BDJ	MRC
NO.	DATE	REVISIONS	BY	CHK APP'D
SCALE: AS SHOWN		DESIGNED BY: MRC	DRAWN BY: BDJ	JOB NUMBER: CT11162B
		DRAWING NUMBER: T-1		REV: 0



## GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.

2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.

3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE LESEE/LICENSEE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.

4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.

5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.

7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.

9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.

12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.

13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.

14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.

15. THE CONTRACTOR SHALL NOTIFY THE LESEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESEE/LICENSEE REPRESENTATIVE.

16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.

17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233 CALL BEFORE YOU DIG (CT): 1-800-922-4455

18. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS SHOWN HEREIN.

19. ALL DIMENSIONS SHOWN THUS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECT THE CONTRACTOR'S WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH PROJECT OWNER PRIOR TO CONSTRUCTION.

20. NORTH ARROW SHOWN ON PLANS REFERS TO APPROXIMATE TRUE NORTH. PRIOR TO THE START OF CONSTRUCTION, ORDERING OR FABRICATING OF ANTENNA MOUNTS, CONTRACTOR SHALL CONSULT WITH PROJECT OWNER'S RF ENGINEER AND FIELD VERIFY ALL ANTENNA SECTOR LOCATIONS AND ANTENNA AZIMUTHS.

21. THE CONTRACTOR AND OR HIS SUB CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.

22. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.

23. COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE PROJECT OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF PROJECT OWNER SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE EXHIBIT 3). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.

24. WHEN "PAINT TO MATCH" IS SPECIFIED FOR ANTENNA CONCEALMENT, PAINT PRODUCT FOR ANTENNA RADOME SHALL BE SHERWIN WILLIAMS COROTHANE II. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND PROJECT OWNER'S GUIDELINE'S.

25. COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

26. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.

27. ALL (E)ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

28. ALL (E)INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF UTILITY COMPANY ENGINEERING. THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT, DRIVEWAY OR

29. GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED AND COVERED WITH MULCH UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES

30. DURING CONSTRUCTION. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS

31. FOR WIRELESS COMMUNICATIONS SYSTEMS. PROJECT OWNER'S IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. PROJECT OWNER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.

32. APPLICABLE BUILDING CODES:

SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.  
BUILDING CODE: CONNECTICUT STATE BUILDING CODE 2005 EDITION AND AMENDMENTS  
ELECTRICAL CODE: NEC 2011 AND AMENDMENTS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

## ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.

2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.

3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.

4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.

5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.

6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.

7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION.

8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.

9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE AND GREENLEE CONDUIT MEASURING TAPE IN EACH INSTALLED TELCO CONDUIT.

10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.

11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.

12. PPC SUPPLIED BY PROJECT OWNER.

13. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".

14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.

15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.

16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.

17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.

18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.

19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.

20. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.

21. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ (E) MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.

22. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MAXIMUM RESISTANCE REQUIRED.

23. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.



## ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	(P)	PROPOSED/NEW	TBR	TO BE REMOVED
(E)	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE		
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED	TYP	TYPICAL



**SBA COMMUNICATIONS CORPORATION**  
33 BOSTON POST ROAD WEST, SUITE 320  
MARLBOROUGH, MA 01752  
PHONE: 508-366-5505

**SITE NUMBER: CT11162B**  
**SITE NAME: BLOOMFIELD FIRE DEPARTMENT**  
1021 BLUE HILLS AVENUE  
BLOOMFIELD, CT 06002

**T-MOBILE NORTHEAST LLC**

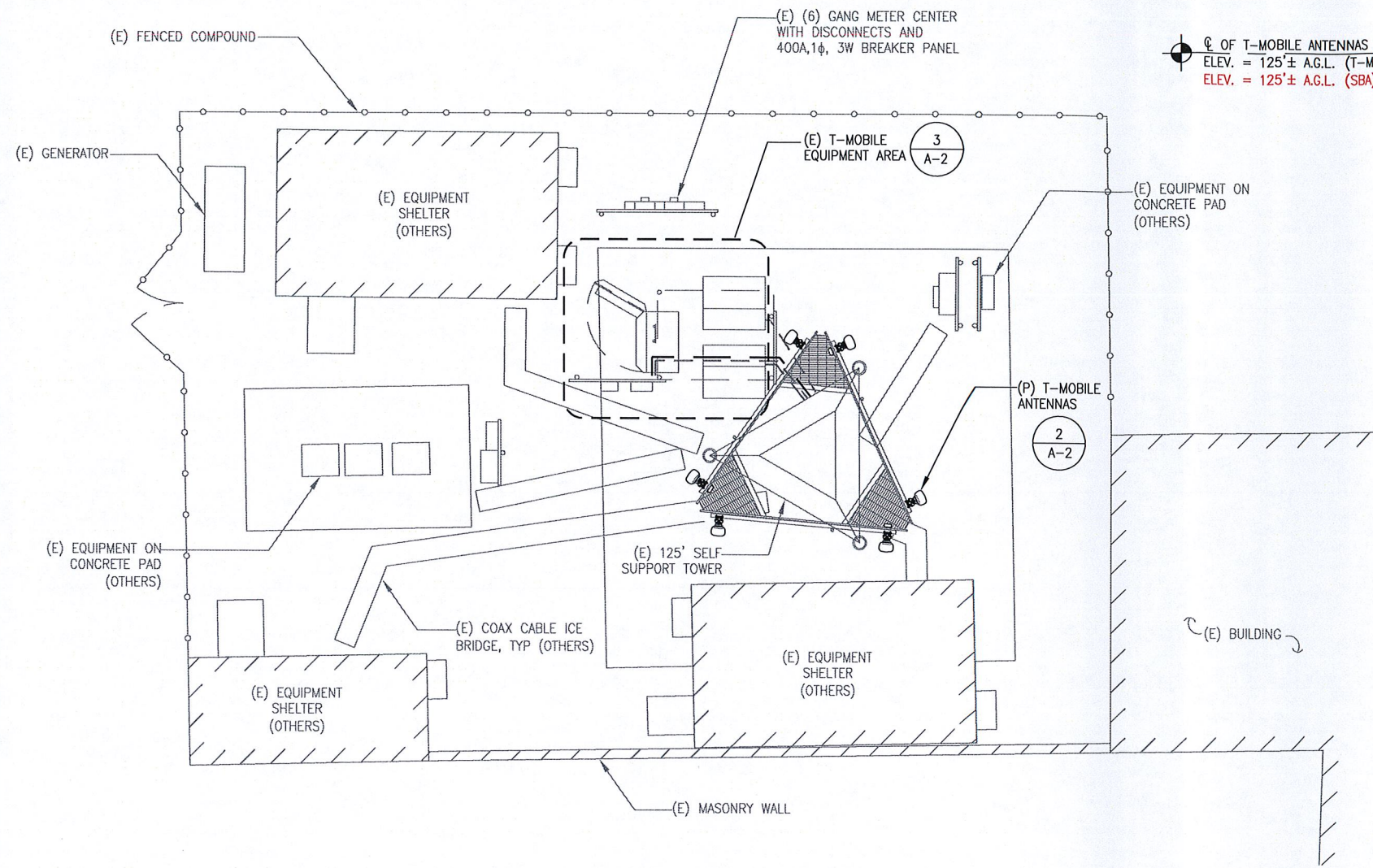
35 GRIFFIN ROAD SOUTH  
BLOOMFIELD, CT 06002  
OFFICE: (860) 648-1116

**T-MOBILE**

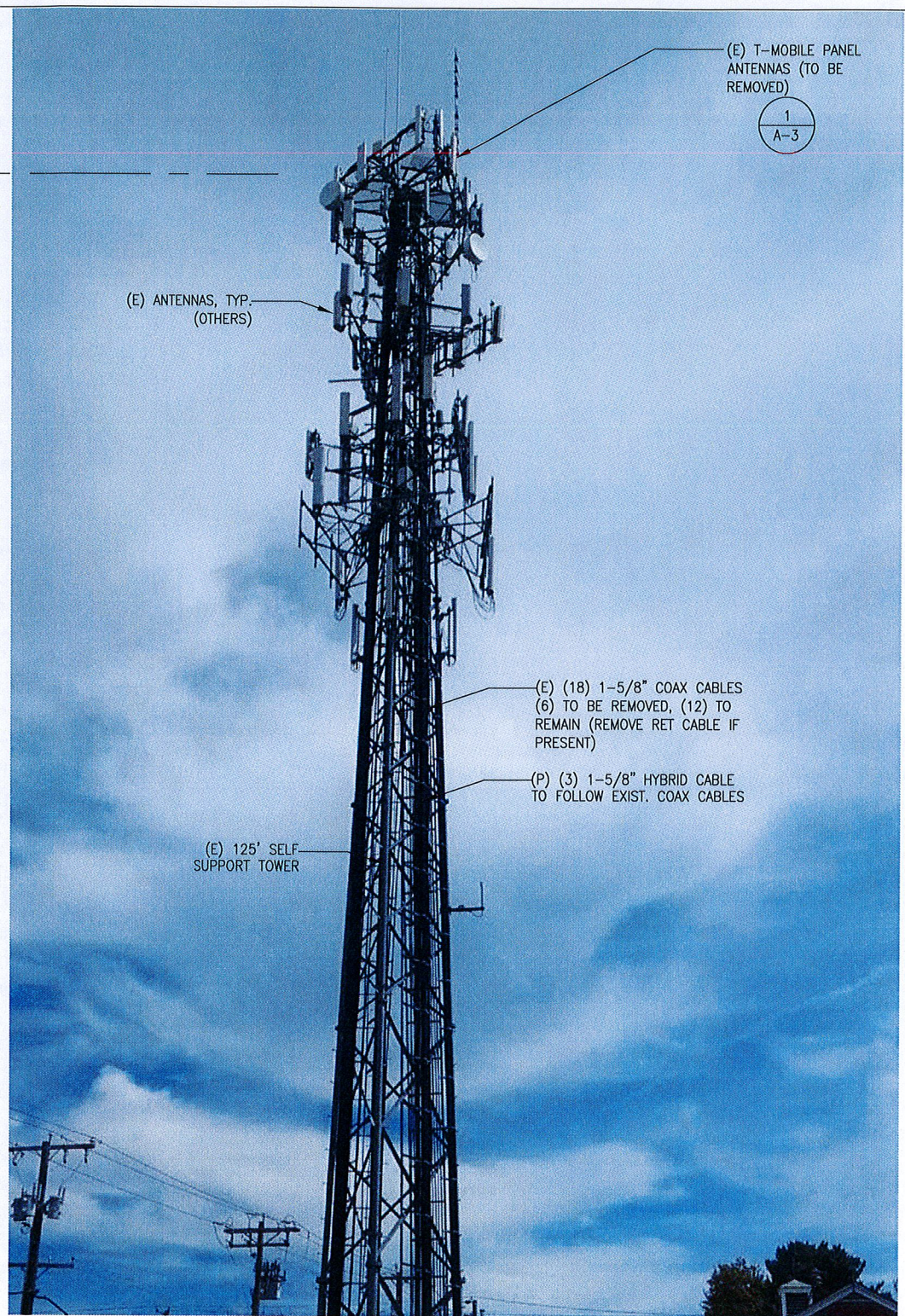
GENERAL NOTES

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NO.	DATE	REVISIONS	BY	CHK	APP'D	JOB NUMBER	DRAWING NUMBER	REV	
SCALE: AS SHOWN			DESIGNED BY: MRC		DRAWN BY: BDJ		CT11162B	GN-1	0





1  
A-1 **COMPOUND PLAN**  
SCALE: 3/32"=1'-0"  
0' 5'-4" 10'-8" 21'-4"



2  
A-1 **EXISTING ELEVATION**  
SCALE: NTS

NOTE:  
GROUND EQUIPMENT NOT SHOWN FOR CLARITY

\*NOTE:  
ANTENNA ELEVATION BASED ON CLIENT-PROVIDED INFORMATION



**EG ADVANCED**  
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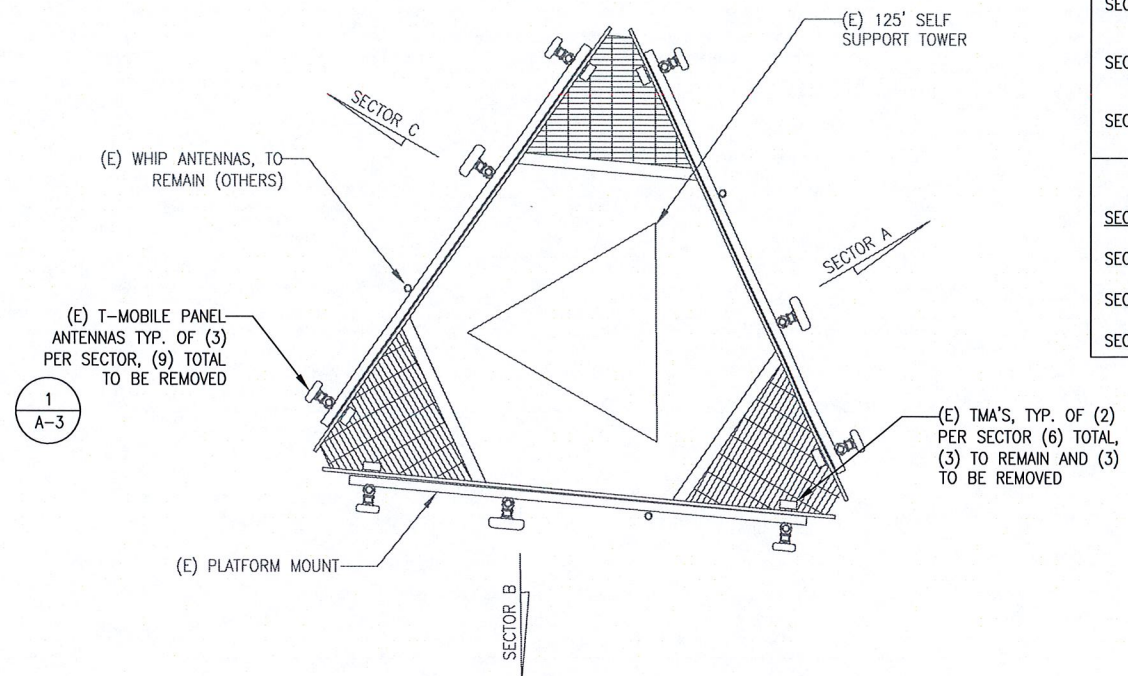
**SITE NUMBER: CT11162B**  
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1021 BLUE HILLS AVENUE  
BLOOMFIELD, CT 06002

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	09/09/13	CONSTRUCTION	BDJ	MRC	MRC
SCALE: AS SHOWN					
DESIGNED BY: MRC			DRAWN BY: BDJ		

<b>T-MOBILE</b>		
COMPOUND PLAN AND ELEVATION		
JOB NUMBER	DRAWING NUMBER	REV
CT11162B	A-1	0



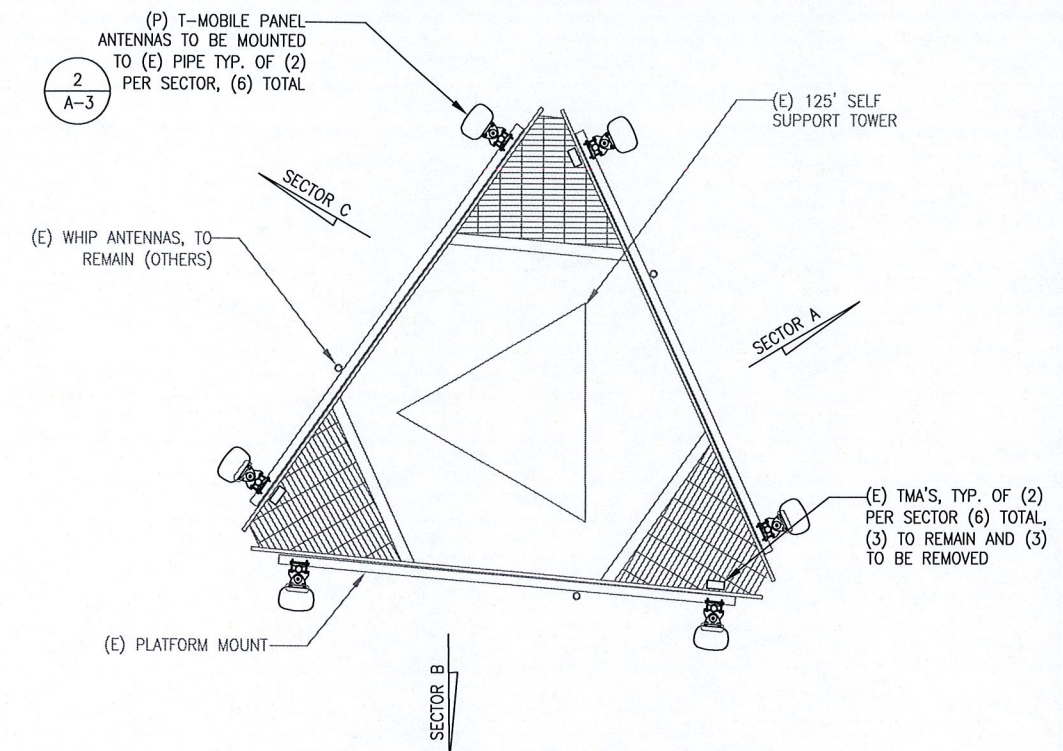


EXISTING ANTENNA SCHEDULE				
SECTOR	MAKE	MODEL#	SIZE (INCHES)	QUAN
SECTOR A:	RFS	APX16DWV-16DWV-S	13x3.15x59.9	1
	EMS	RR90-17-02DP	8x2.8x56	2
SECTOR B:	RFS	APX16DWV-16DWV-S	13x3.15x59.9	1
	EMS	RR90-17-02DP	8x2.8x56	2
SECTOR C:	RFS	APX16DWV-16DWV-S	13x3.15x59.9	1
	EMS	RR90-17-02DP	8x2.8x56	2

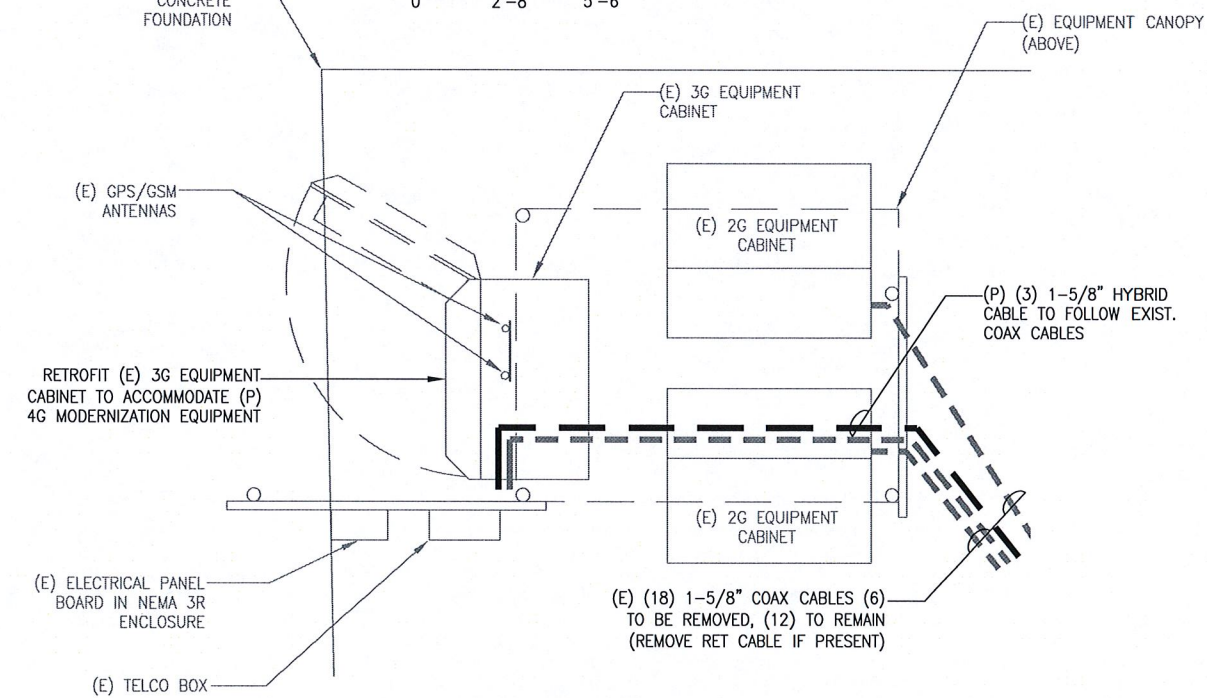
PROPOSED ANTENNA SCHEDULE				
SECTOR	MAKE	MODEL#	SIZE (INCHES)	QUAN
SECTOR A:	ERICSSON	AIR21 B2A/B4P	12x8x56	2
SECTOR B:	ERICSSON	AIR21 B2A/B4P	12x8x56	2
SECTOR C:	ERICSSON	AIR21 B2A/B4P	12x8x56	2

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

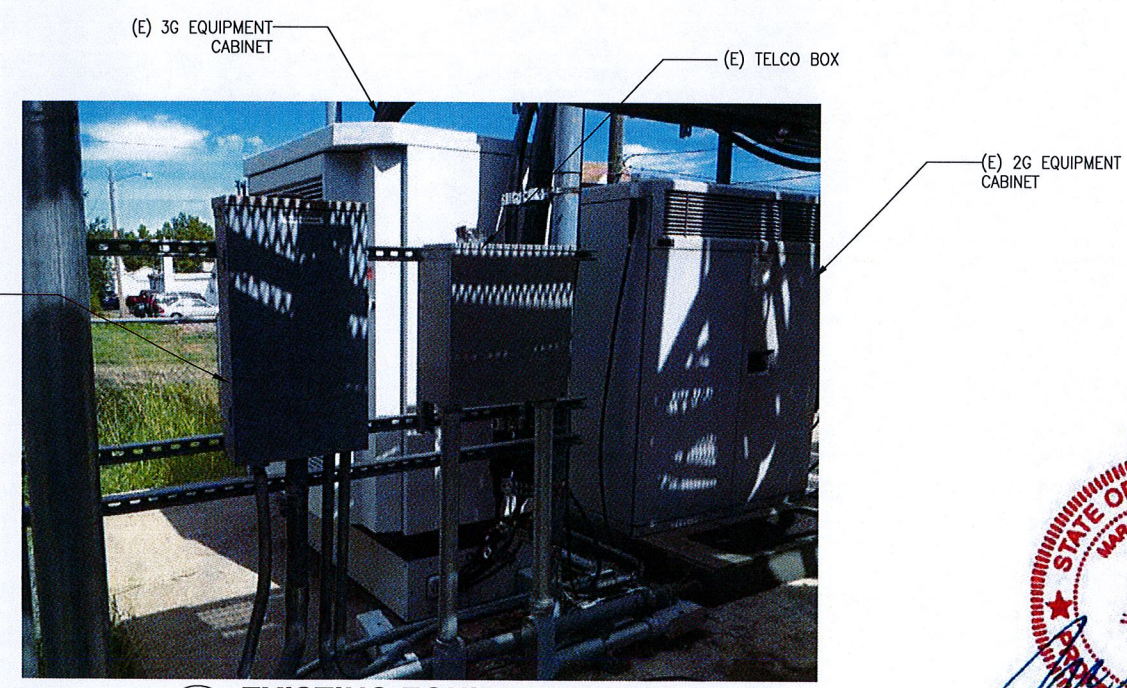


**EXISTING ANTENNA PLAN**  
SCALE: 3/16"=1'-0"  
0' 2'-8" 5'-6"

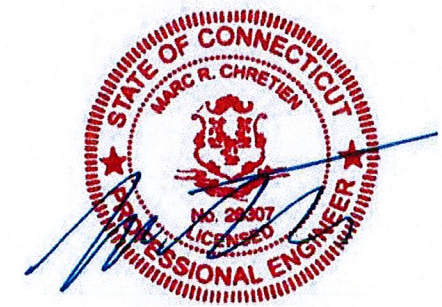
**PROPOSED ANTENNA PLAN**  
SCALE: 3/16"=1'-0"  
0' 2'-8" 5'-6"



**PROPOSED EQUIPMENT PLAN**  
SCALE: 1/4"=1'-0"  
0' 2'-0" 4'-0"



**EXISTING EQUIPMENT AREA.**  
N.T.S.



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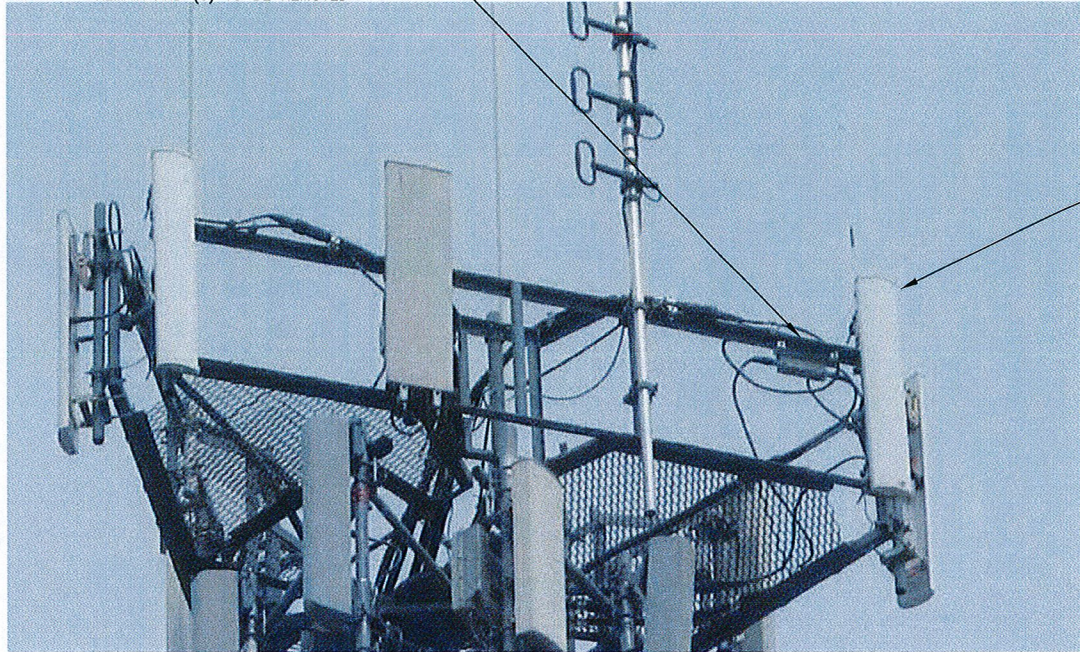
**T-MOBILE NORTHEAST LLC**  
35 GRIFFIN ROAD SOUTH  
BLOOMFIELD, CT 06002  
OFFICE: (860) 648-1116

0	09/09/13	CONSTRUCTION	BDJ	MRC	MRC
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: MRC	DRAWN BY: BDJ	JOB NUMBER: CT11162B	

**T-MOBILE**  
PLANS AND ANTENNA SCHEDULES  
DRAWING NUMBER: A-2  
REV: 0



(E) TMA'S, TYP. OF (2) PER SECTOR (6) TOTAL, (3) TO REMAIN AND (3) TO BE REMOVED



(E) T-MOBILE PANEL ANTENNAS TYP. OF (3) PER SECTOR, (9) TOTAL TO BE REMOVED

(E) TMA'S, TYP. OF (2) PER SECTOR (6) TOTAL, (3) TO REMAIN AND (3) TO BE REMOVED



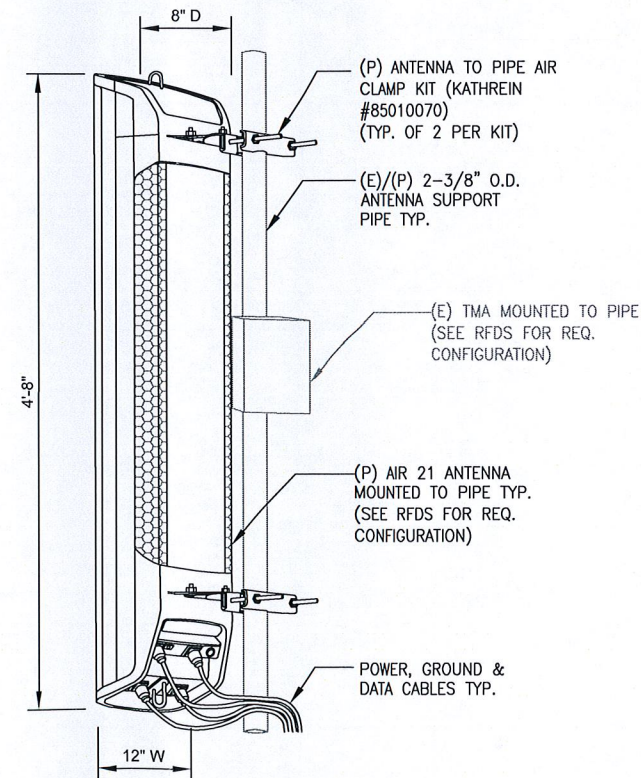
(P) AIR21 ANTENNA TYP. OF (2) PER SECTOR, (6) TOTAL

3  
A-3

(E) T-MOBILE PANEL ANTENNAS TYP. OF (1) PER SECTOR, (3) TOTAL TO BE REMOVED

1  
A-3  
**EXISTING ANTENNA MOUNT TYP.**  
N.T.S.

2  
A-3  
**PROPOSED ANTENNA MOUNT TYP.**  
N.T.S.



3  
A-3  
**AIR21 ANTENNA MOUNT TYP.**  
SCALE: NTS



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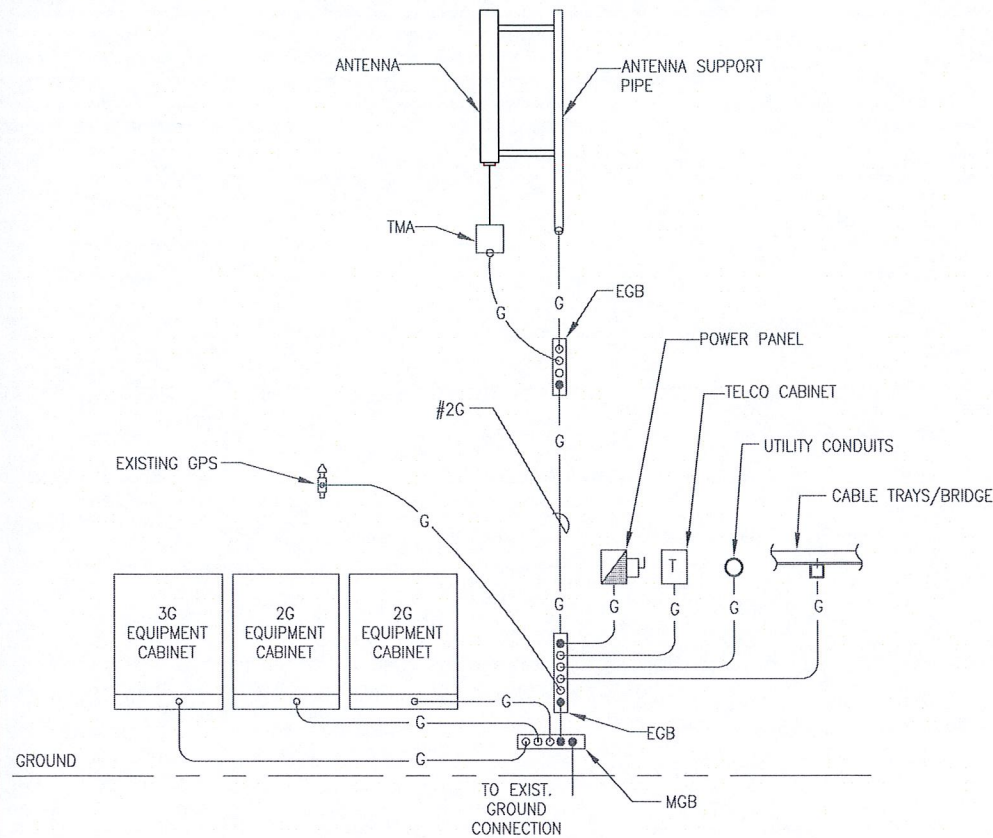
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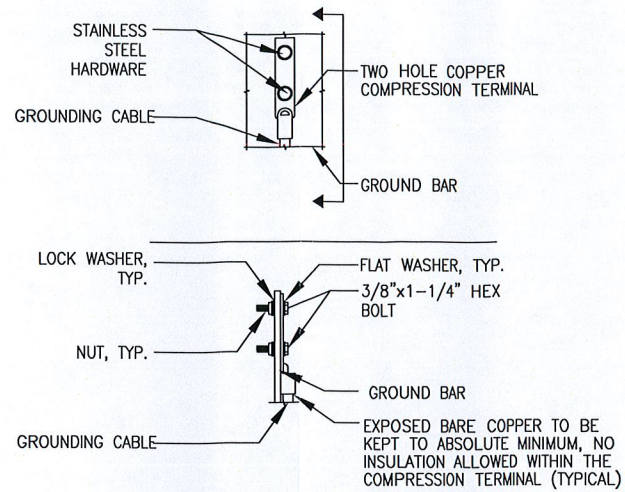
**T-MOBILE NORTHEAST LLC**  
35 GRIFFIN ROAD SOUTH  
BLOOMFIELD, CT 06002  
OFFICE: (860) 648-1116

				T-MOBILE				
				DETAILS				
NO.	DATE	REVISIONS	BY	CHK	APP'D	JOB NUMBER	DRAWING NUMBER	REV
0	09/09/13	CONSTRUCTION	BDJ	MRC	MRC	CT11162B	A-3	0
SCALE: AS SHOWN			DESIGNED BY: MRC		DRAWN BY: BDJ			



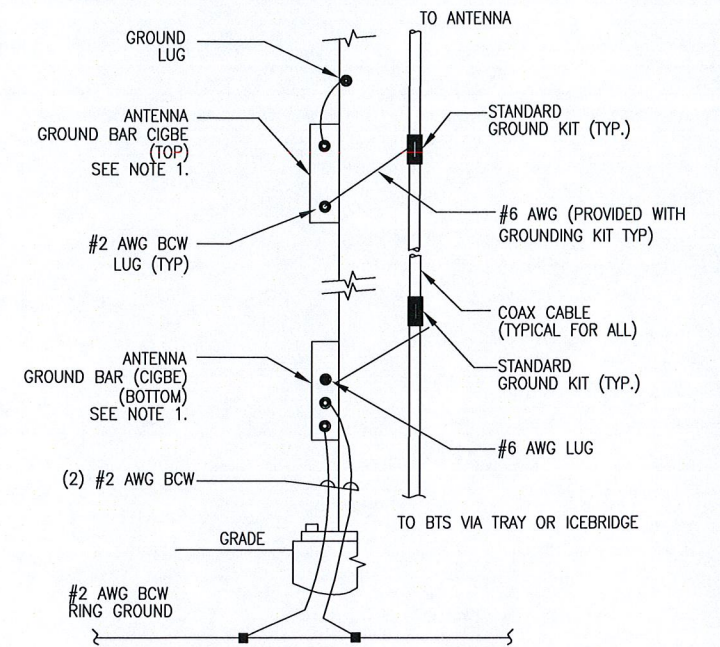


**1**  
G-1  
**TYPICAL GROUND RISER DIAGRAM**  
SCALE: N.T.S.



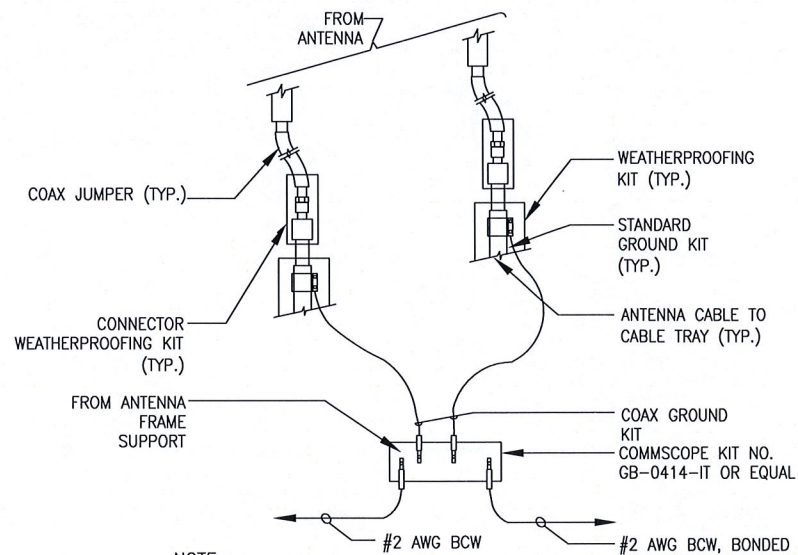
- NOTES:  
 1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.  
 2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.  
 3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.  
 4. ALL GROUND LUGS MUST BE HEAT SHRUNK AT WIRE/LUG CONNECTION

**2**  
G-1  
**TYPICAL GROUND BAR CONNECTION DETAIL**  
SCALE: N.T.S.



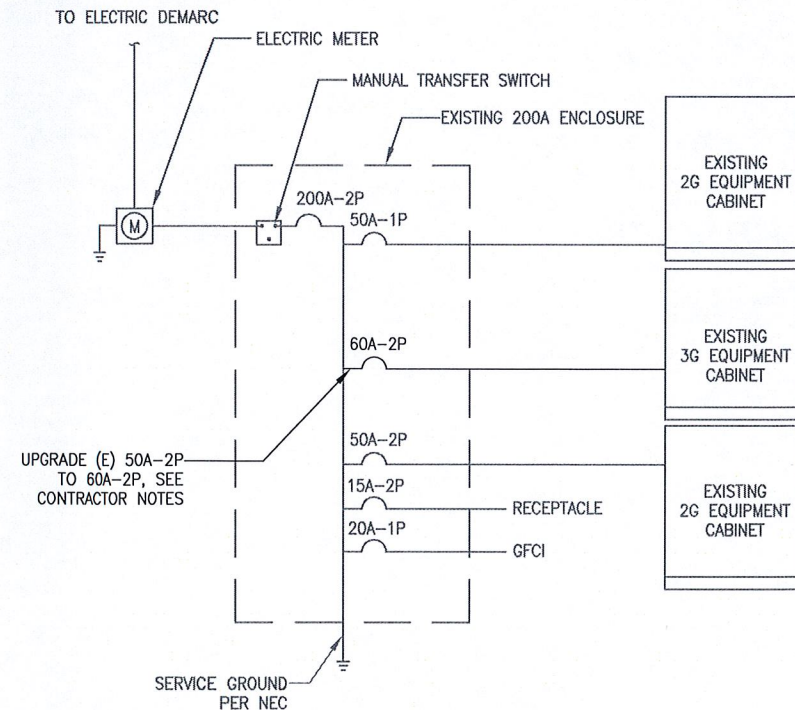
- NOTE:  
 1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION AND CONNECTION ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.  
 2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

**3**  
G-1  
**ANTENNA CABLE GROUNDING**  
SCALE: N.T.S.



- NOTE:  
 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

**4**  
G-1  
**GROUND WIRE TO GROUND BAR CONNECTION DETAIL**  
SCALE: N.T.S.



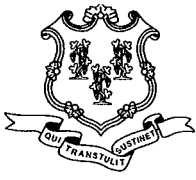
- CONTRACTOR NOTES:  
 1. PROVIDE ALL CONDUIT & CONDUCTORS REQUIRED.  
 2. RE-WIRE CIRCUIT TO EXISTING 3G EQUIPMENT CABINET TO ACCOMMODATE (P) 4G MODERNIZATION EQUIPMENT.

RETROFIT (E) 3G EQUIPMENT CABINET TO ACCOMMODATE (P) 4G MODERNIZATION EQUIPMENT

**5**  
G-1  
**ONE LINE POWER DIAGRAM**  
SCALE: N.T.S.







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)

October 29, 2013

The Honorable Sydney Schulman  
Mayor  
Town of Bloomfield  
Town Hall  
800 Bloomfield Avenue  
P. O. Box 337  
Bloomfield, CT 06002-0337

RE: **EM-T-MOBILE-011-131028** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 1021 Blue Hills Avenue, Bloomfield, Connecticut.

Dear Mayor Schulman:

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 November 12, 2013.

Thank you for your cooperation and consideration.

Very truly yours,

Melanie Bachman  
Acting Executive Director

MB/jb

c: Philip K. Schenck, Jr., Town Manager, Town of Bloomfield  
Thomas B. Hooper, Director of Planning, Town of Bloomfield