



March 26, 2014

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

RE: Notice of Exempt Modification
3 Edmund Road
Newtown CT 06470
N 41° 25' 15"
W -73° 17' 54"

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 3 Edmund Road, Newtown, CT.

The 3 Edmund Road facility consists of a 140' Monopole Tower owned and operated by SBA Infrastructure, 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 the 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 508.251.0720 x 3804 with any questions you may have concerning this matter.

Thank you,



Kri Pelletier
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3804 + T
508-251-1755 + F
203-446-7700 + C
kpelletier@sbsite.com



T-Mobile Equipment Modification

3 Edmund Road, Newtown, CT
Site number CT11259F

Tower Owner: SBA Infrastructure, LLC

Equipment Configuration: Monopole

Current and/or approved:

- (12) RFS APX18PV-16PVL
- (6) Remec S20057A1 TMAs
- (12) 1-5/8" Coax/Lines
- (1) 1/4" Coax/Lines (Dead)

Planned Modifications:

- (3) Ericsson AIR 21 B2A B4P
- (3) Ericsson AIR 21 B4A B2P
- (3) Ericsson KRY 112 144 TMAs
- (12) 1 5/8" Coax/Lines
- (1) 1 5/8" Fiber

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 .700% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 21.250% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.700%
Nextel	3.880%
AT&T	16.670%
Total Site MPE %	21.250%



March 26, 2014

E. Patricia Llodra
First Selectman
Town of Newtown
3 Primrose Street
Newtown, CT 06470

RE: Telecommunications Facility @ 3 Edmund Road, Newtown, CT

Dear Ms. Llodra,

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 508.251.0720 x 3804.

Thank you,

A handwritten signature in black ink, appearing to read "Kri Pelletier". The signature is fluid and cursive, with a prominent initial "K".

Kri Pelletier
SBA Communications Company
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3804 + T
508-251-1755 + F
203-446-7700 + C
kpelletier@sbsite.com

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

T-Mobile Existing Facility

Site ID: CT11259F

OPT_Newtown_RL#1

3 Edmund Road
Newtown, CT 06470

March 22, 2014

EBI Project Number: 62141651

March 22, 2014

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

Re: Emissions Values for Site: **CT11259F - OPT_Newtown_RL#1**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 3 Edmund Road, Newtown, 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 3 Edmund Road, Newtown, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, the actual antenna pattern gain value in the direction of the sample area was used. For this report the sample point is a 6 foot person standing at the base of the tower

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 GSM channels (1940.000 MHz—to 1950.000 MHz) were considered for each sector of the proposed installation.
- 2) 2 UMTS channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
- 3) 2 LTE channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
- 4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the manufactures supplied specifications.
- 6) The antenna used in this modeling is the Ericsson AIR21 for LTE, UMTS and GSM. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 15.6 dBd gain value at its main lobe. Actual antenna gain values were used for all calculations as per the manufacturers specifications

- 7) The antenna mounting height centerline of the proposed antennas is **128 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	CT11259F - OPT_Newtown_RL#1
Site Address	3 Edmund Road, Newtown, CT 06470
Site Type	Monopole

Sector 1																	
Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBi)	Antenna Height (ft)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	128	122	None	0	0	48.326044	1.16726	0.11673%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	-	0	0	-3.95	128	122	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	128	122	1-5/8"	0	0	24.163022	0.58363	0.05836%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	128	122	1-5/8"	0	0	24.163022	0.58363	0.05836%
														Sector total Power Density Value: 0.233%			
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 (dBi)	Antenna Height (ft)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	128	122	None	0	0	48.326044	1.16726	0.11673%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	-	0	0	-3.95	128	122	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	128	122	1-5/8"	0	0	24.163022	0.58363	0.05836%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	128	122	1-5/8"	0	0	24.163022	0.58363	0.05836%
														Sector total Power Density Value: 0.233%			
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 (dBi)	Antenna Height (ft)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	128	122	None	0	0	48.326044	1.16726	0.11673%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	-	0	0	-3.95	128	122	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	128	122	1-5/8"	0	0	24.163022	0.58363	0.05836%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	128	122	1-5/8"	0	0	24.163022	0.58363	0.05836%
														Sector total Power Density Value: 0.233%			

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.700%
Nextel	3.880%
AT&T	16.670%
Total Site MPE %	21.250%

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 **0.700% (0.233% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously.

The anticipated composite MPE value for this site assuming all carriers present is **21.250%** of the allowable FCC established general public limit. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were within the allowable 100% threshold standard per the federal government.



Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803



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

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

139' Monopole Tower

**SBA Site Name: Newtown 2
SBA Site ID: CT13060-A
T-Mobile Site ID: CT11259F**

FDH Project Number 1424J11400

Analysis Results

Tower Components	81.5%	Sufficient
Foundation	80.7%	Sufficient

Prepared By:

Chip DeVoto, EI
Project Engineer

Reviewed By:

Bradley R. Newman, PE
Senior Project Engineer
CT PE License No. 29630

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



March 14, 2014

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

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EXECUTIVE SUMMARY

At the request of SBA Network Services, Inc., FDH Engineering, Inc. performed a structural analysis of the monopole located in Newtown, 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 the 2005 Connecticut Building Code (CBC)*. Information pertaining to the soil parameters, foundation dimensions, existing/proposed antenna loading, current tower geometry, and member sizes was obtained from:

- Sabre Communications Corp. (Job No. 06-07285) Structural Design Report dated July 28, 2005
- Jaworski Geotech, Inc. (Project No. 04125G) Geotechnical Evaluation dated January 30, 2004
- FDH, Inc. (Job No. 08-07125T) TIA Inspection Report dated September 10, 2008
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards and the *2005 Connecticut Building Code* is 85 mph without ice and 38 mph with 3/4" radial ice. Ice is considered to increase in thickness with height.

Conclusions

With the existing and proposed antennas from T-Mobile in place at 128 ft, the tower meets the requirements of the *TIA/EIA-222-F* standards and *2005 CBC* provided the **Recommendations** below are satisfied. Furthermore, provided the foundation was designed and constructed to support the original design reactions (see Sabre Industries Job No. 06-07285), the foundation 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 CBC* are met with the existing and proposed loading in place, we have the following recommendations:

1. The proposed coax should be installed inside the monopole's shaft.
2. Proposed TMAs should be installed behind the proposed panel antennas.

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 ¹	Carrier	Mount Elevation (ft)	Mount Type
138.5	(12) Decibel DB844H90E-XY	(15) 1-5/8"	Nextel	138.5	(1) 12.5' Low Profile Platform
128	(12) RFS APX18PV-16PVL (6) Remec S20057A1 TMAs	(12) 1-5/8" (1) 1/4" (Dead)	T-Mobile	128	(1) 10' Low Profile Platform
119	(9) Powerwave 7770 (3) Powerwave P65-16-XLH-RR (9) Powerwave LGP 2140x TMAs (3) Powerwave TT19-08BP111-001 TMAs (6) Ericsson RRUS-11 RRUs (1) Raycap DC6-48-60-18-8F Surge Suppressor	(24) 1-5/8" (1) Fiber Cable (2) Power Cables	AT&T	119	(1) Low Profile Platform

1. Coax installed inside pole's shaft unless otherwise noted.

Proposed Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
128	(3) Ericsson Air B2A B4P (3) Ericsson Air B4A B2P (3) Ericsson KRY112144 TMAs	(12) 1-5/8" (1) 1-5/8" Fiber	T-Mobile	128	(1) 10' Low Profile Platform

RESULTS

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

Table 2 - Material Strength

Member Type	Yield Strength
Tower Shaft Sections	65 ksi
Flange Plates	60 ksi
Flange Bolts	92 ksi
Base Plate	60 ksi
Anchor Bolts	75 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.

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
L1	139 - 129	Pole	TP22.2x19.85x0.1875	11.7	Pass
		Flange Bolts	(8) 1.00" Ø w/ BC = 25.25"	17.5	Pass
		Flange Plate	29.50" Ø PL x 0.750" thk.	31.0	Pass
L2	129 - 97.75	Pole	TP29.54x22.2x0.1875	67.8	Pass
L3	97.75 - 48	Pole	TP40.86x28.2842x0.3125	68.7	Pass
L4	48 - 0	Pole	TP51.51x39.0009x0.3125	81.5	Pass
		Anchor Bolts	(12) 2.25" Ø w/ BC = 58.00"	74.8	Pass
		Base Plate	56.00" Square PL x 2.75" thk.	60.3	Pass

*Capacities include 1/3 allowable increase for wind.

Table 4 - Maximum Base Reactions

Base Reactions	Current Analysis (TIA/EIA-222-F)	Original Design (TIA/EIA-222-F)
Axial	29 k	33 k
Shear	21 k	24 k
Moment	2,149 k-ft	2,662 k-ft

GENERAL COMMENTS

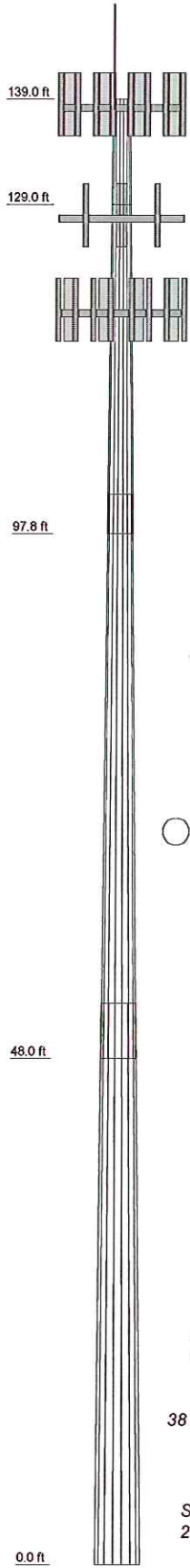
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading 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	1	2	3	4
Length (ft)	10.00	31.25	53.50	53.25
Number of Sides	18	18	18	18
Thickness (in)	0.1875	0.1875	0.3125	0.3125
Socket Length (ft)		3.75	5.25	
Top Dia (in)	19.8500	22.2000	28.2842	39.0009
Bot Dia (in)	22.2000	29.5400	40.8600	51.5100
Grade				A572-65
Weight (K)	0.4	1.6	6.2	8.1



DESIGNED APPURTENANCE LOADING

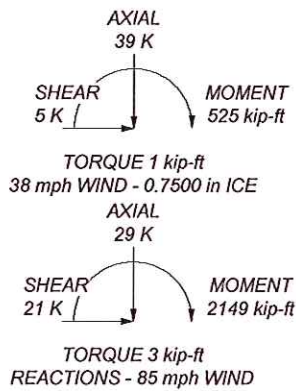
TYPE	ELEVATION	TYPE	ELEVATION
Lighting Rod	139	(1) Low Profile Platform	119
(4) DB844H90E-XY w/Mount Pipe	138.5	Raycap - DC6-48-60-18-8F Surge Suppressor	119
(4) DB844H90E-XY w/Mount Pipe	138.5	(3) Powerwave - 7770.00 w/ mount pipe	119
(1) 12.5' Low Profile Platform	138.5	(3) Powerwave - 7770.00 w/ mount pipe	119
(4) DB844H90E-XY w/Mount Pipe	138.5	(3) Powerwave - 7770.00 w/ mount pipe	119
(1) 10' Low Profile Platform	128	Powerwave - P65-16-XLH-RR w/ mount pipe	119
AIR B2A B4P w/Mount Pipe	128	Powerwave - P65-16-XLH-RR w/ mount pipe	119
AIR B2A B4P w/Mount Pipe	128	Powerwave - P65-16-XLH-RR w/ mount pipe	119
AIR B2A B4P w/Mount Pipe	128	Powerwave - P65-16-XLH-RR w/ mount pipe	119
AIR B4A B2P w/Mount Pipe	128	Powerwave - P65-16-XLH-RR w/ mount pipe	119
AIR B4A B2P w/Mount Pipe	128	Powerwave - P65-16-XLH-RR w/ mount pipe	119
AIR B4A B2P w/Mount Pipe	128	Powerwave - P65-16-XLH-RR w/ mount pipe	119
KRY112144	128	(3) Powerwave - LGP 2140x TMA	119
KRY112144	128	(3) Powerwave - LGP 2140x TMA	119
KRY112144	128	(3) Powerwave - LGP 2140x TMA	119
Powerwave - TT19-08BP111-001 TMA	119	Powerwave - TT19-08BP111-001 TMA	119
Powerwave - TT19-08BP111-001 TMA	119		
(2) RRUS-11	119		
(2) RRUS-11	119		
(2) RRUS-11	119		

MATERIAL STRENGTH

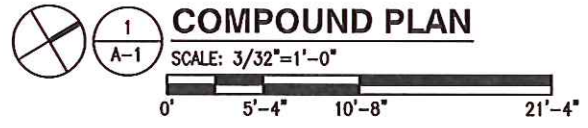
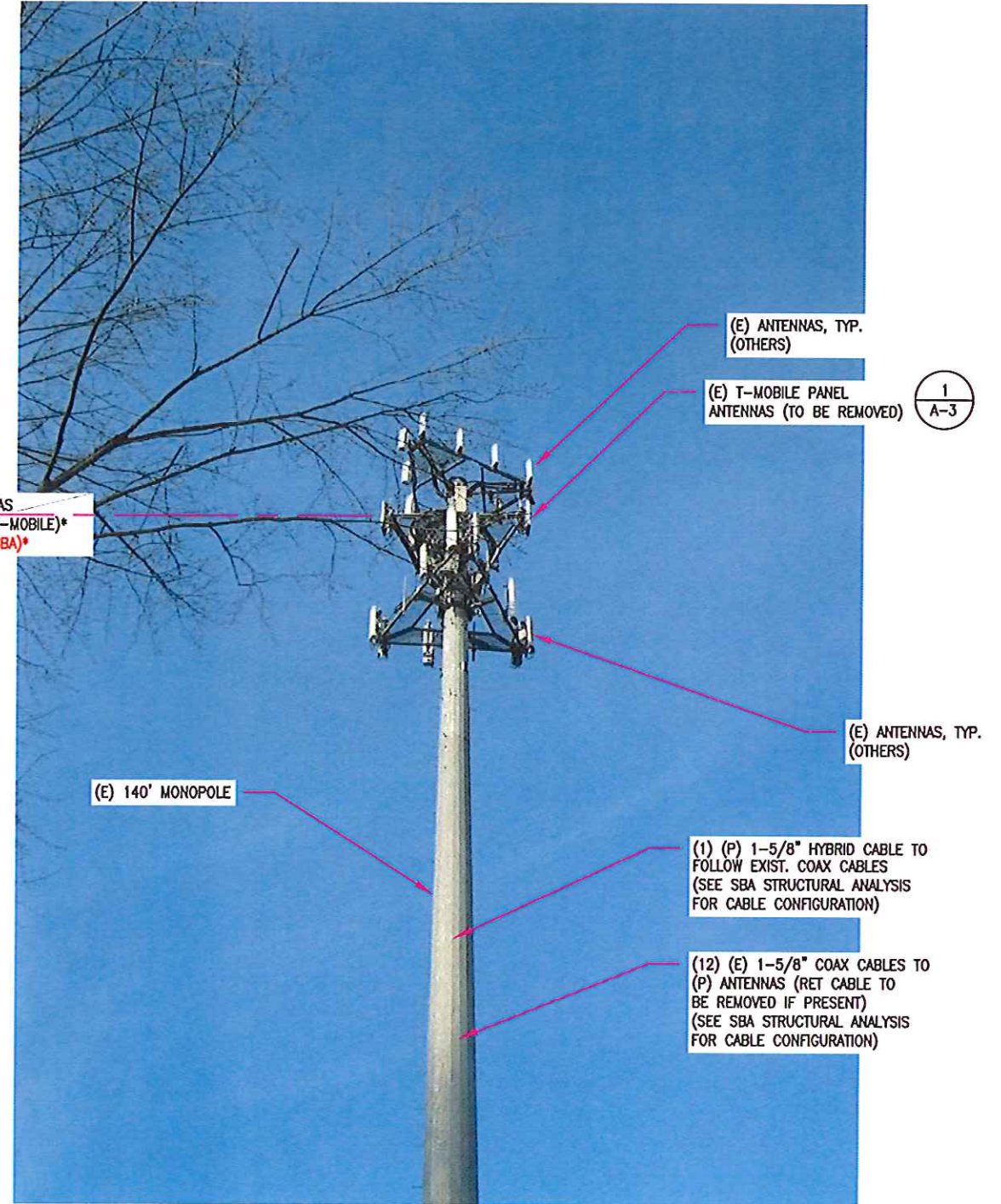
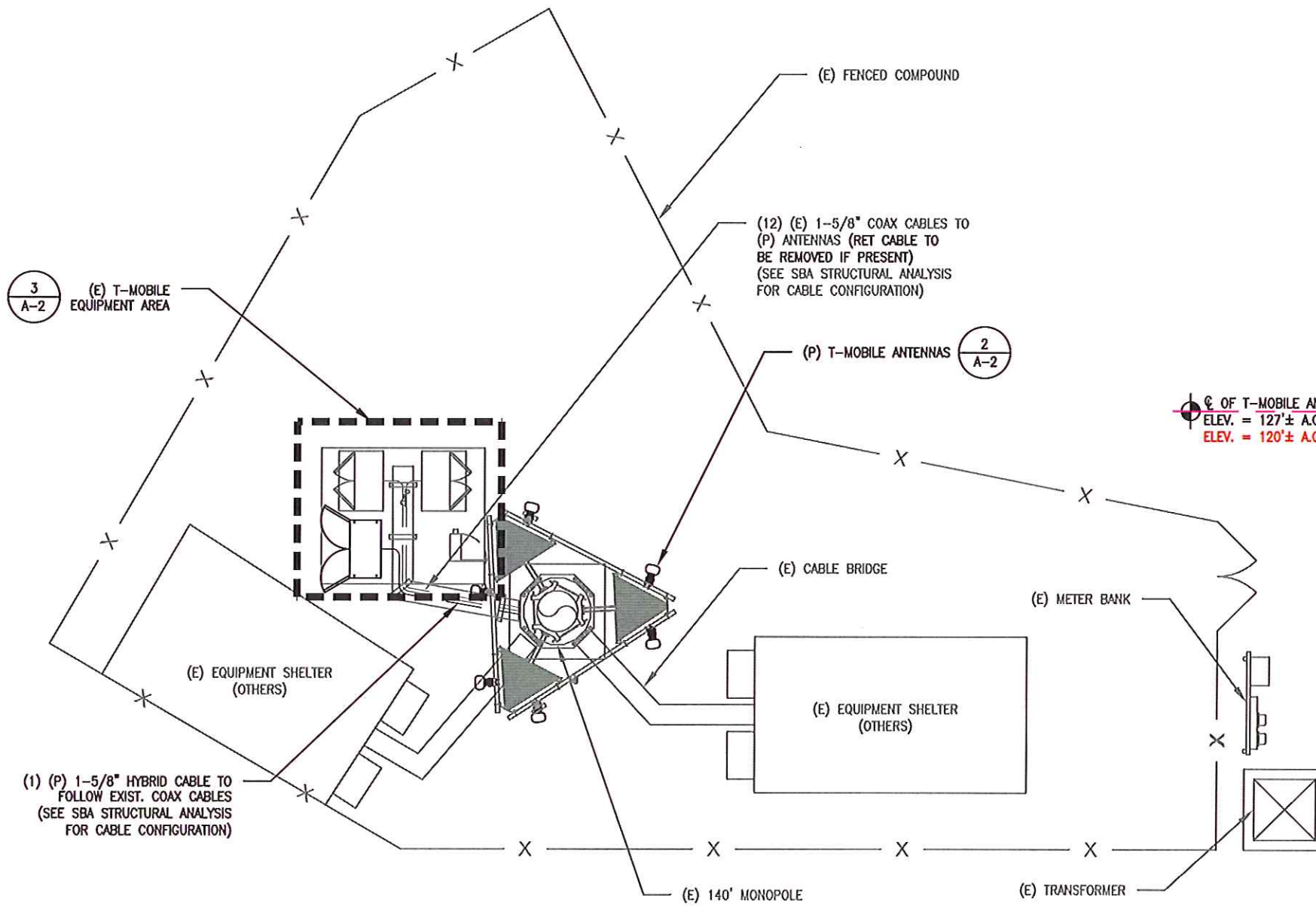
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 81.5%



 FDH Engineering, Inc. 6521 Meridien Drive Raleigh, NC 27616 Phone: (919) 755-1012 FAX: (919) 755-1031 Tower Analysis	Job: Newtown 2, CT13060-A Project: 1424J11400
	Client: SBA Network Services, Inc.
	Code: TIA/EIA-222-F
	Path:
Drawn by: Chip DeVoto, EIT Date: 03/14/14	App'd: Scale: N Dwg No.



NOTE:
GROUND EQUIPMENT NOT SHOWN FOR
CLARITY

2
A-1 EXISTING ELEVATION
SCALE: NTS

*NOTE:
ANTENNA ELEVATION BASED ON
CLIENT-PROVIDED INFORMATION



EG ADVANCED
ENGINEERING GROUP, P.C.
Civil Engineering - Site Development Surveying - Telecommunications
500 NORTH BROADWAY
EAST PROVIDENCE, RI 02914
PHE (401) 354-2403
FAX: (401) 833-8394

SBA
SBA COMMUNICATIONS CORPORATION
33 BOSTON POST ROAD WEST, SUITE 320
MARLBOROUGH, MA 01752
PHONE: 508-251-0720

SITE NUMBER: CT11259F
SITE NAME: SBA NEWTOWN 2
3 EDMUND ROAD
NEWTOWN, CT 06470

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

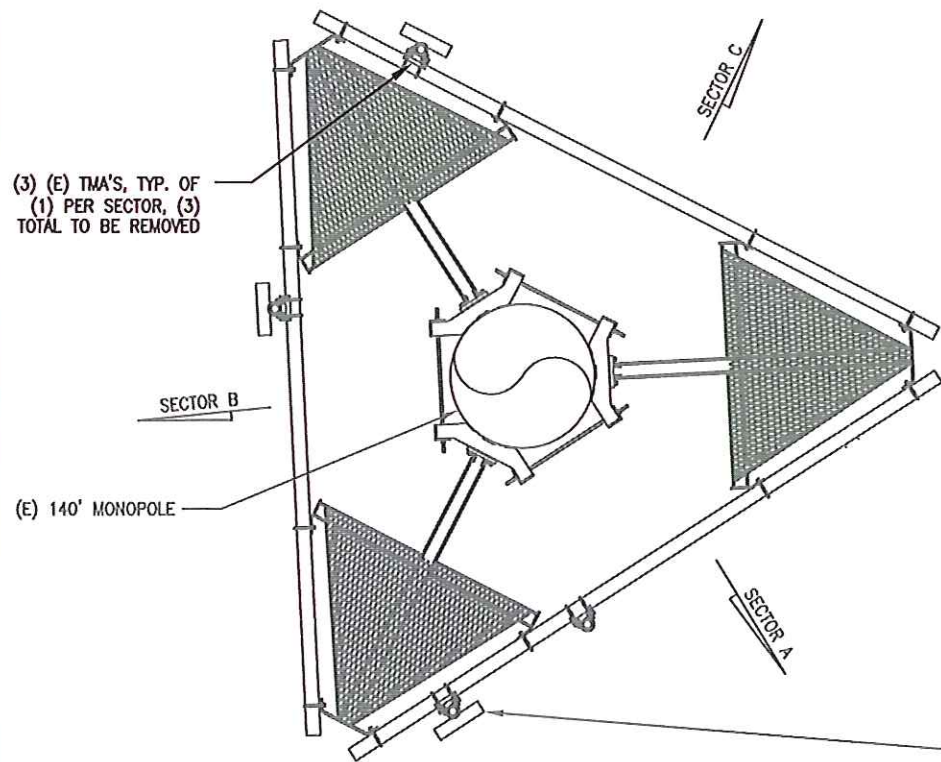
NO.	DATE	REVISIONS	BY	CHK	APP'D
0	03/12/14	CONSTRUCTION	SOS	MRC	MRC

SCALE: AS SHOWN DESIGNED BY: MRC DRAWN BY: SOS

JOB NUMBER		DRAWING NUMBER		REV
CT11259F		A-1		0

T-MOBILE

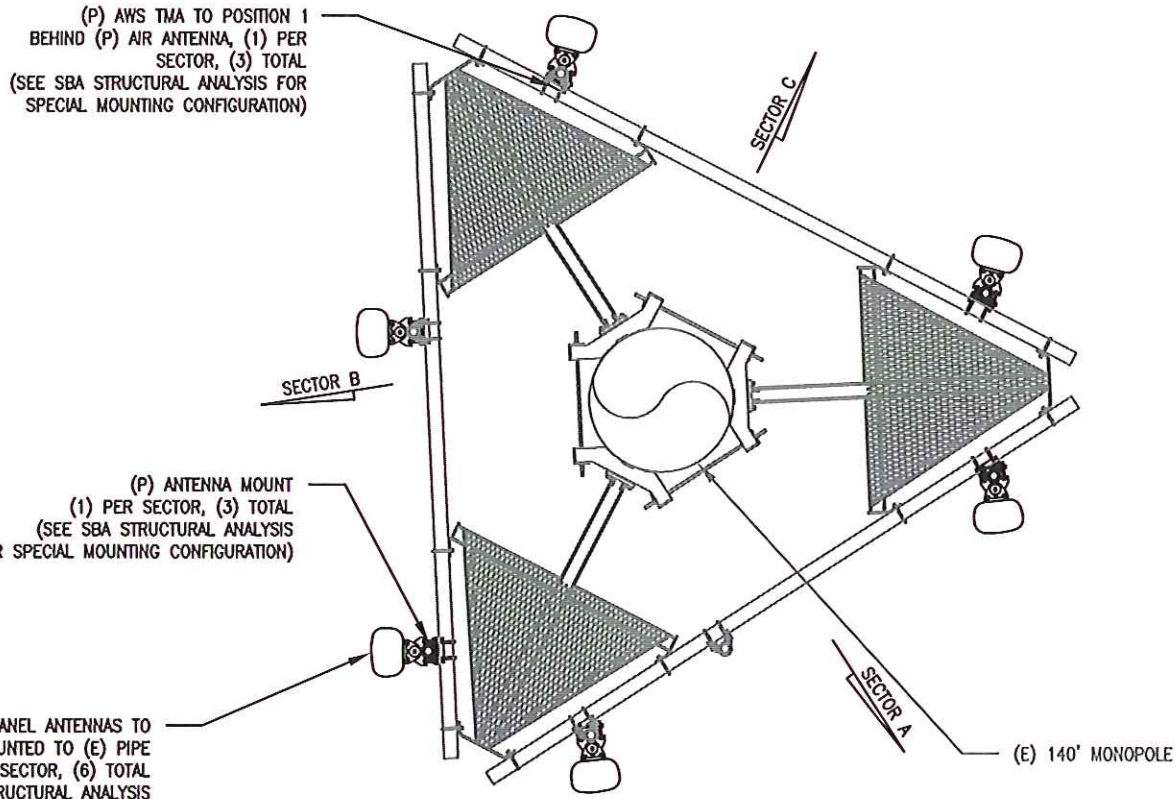
COMPOUND PLAN AND ELEVATION



EXISTING ANTENNA SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
SECTOR A:	RFS	APX16DWW-16DWVS-A20	13x3.15x55.9
SECTOR B:	RFS	APX16DWW-16DWVS-A20	13x3.15x55.9
SECTOR C:	RFS	APX16DWW-16DWVS-A20	13x3.15x55.9

PROPOSED ANTENNA SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
SECTOR A:	ERICSSON	AIR21 B2A/B4P	12x8x56
	ERICSSON	AIR21 B4A/B2P	12x8x56
SECTOR B:	ERICSSON	AIR21 B2A/B4P	12x8x56
	ERICSSON	AIR21 B4A/B2P	12x8x56
SECTOR C:	ERICSSON	AIR21 B2A/B4P	12x8x56
	ERICSSON	AIR21 B4A/B2P	12x8x56

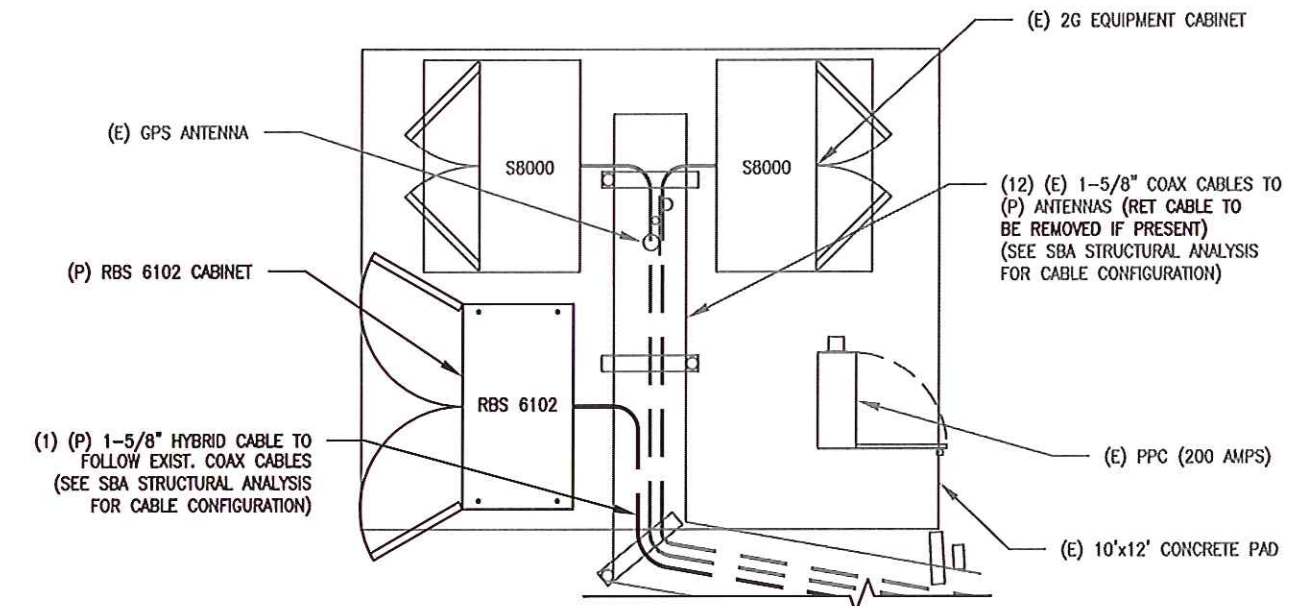
NOTE:
1. REFER TO FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



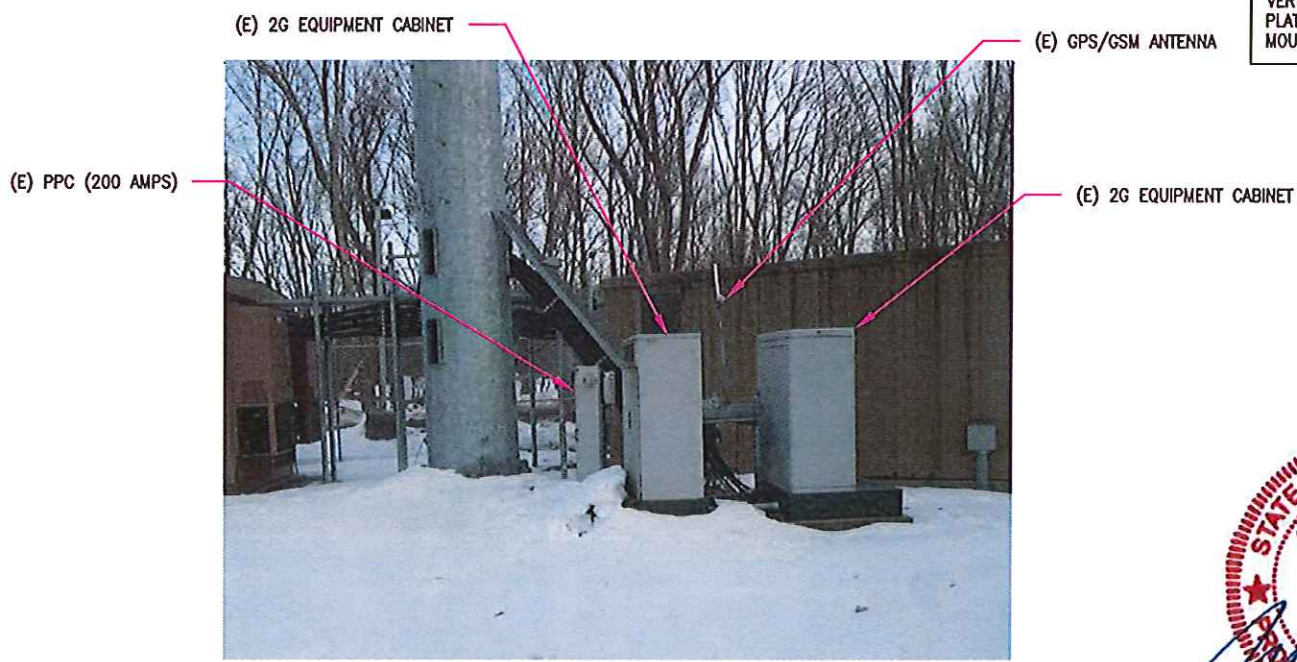
EXISTING ANTENNA PLAN
SCALE: 1/4"=1'-0"
0' 2'-0" 4'-0"

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

*** SPECIAL INSTALLATION NOTE:**
PROPOSED ANTENNAS SHALL BE VERTICALLY CENTERED ON EXISTING PLATFORM RAIL. ADJUST ANTENNA MOUNTING PIPE AS REQUIRED.



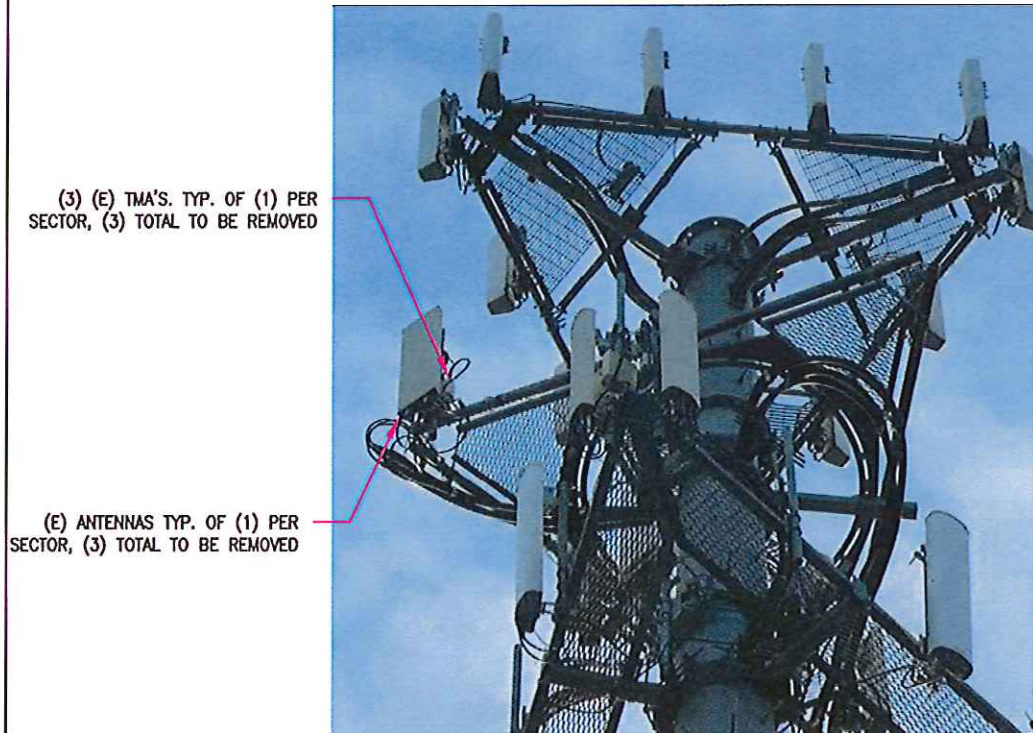
EQUIPMENT PLAN
SCALE: 1/4"=1'-0"
0' 2'-0" 4'-0"



EXISTING EQUIPMENT AREA.
N.T.S.



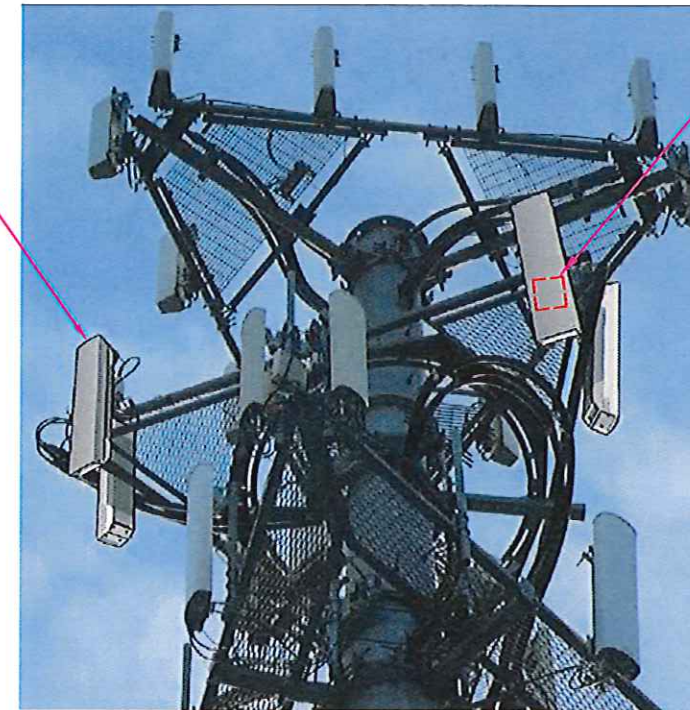
T-MOBILE				PLANS AND ANTENNA SCHEDULES		
0	03/12/14	CONSTRUCTION	SOS	MRC	MRC	
NO.	DATE	REVISIONS	BY	CHK	APP'D	REV
SCALE: AS SHOWN			DESIGNED BY: MRC	DRAWN BY: SOS		
JOB NUMBER			DRAWING NUMBER			
CT11259F			A-2		0	



(3) (E) TMA'S. TYP. OF (1) PER SECTOR, (3) TOTAL TO BE REMOVED

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

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

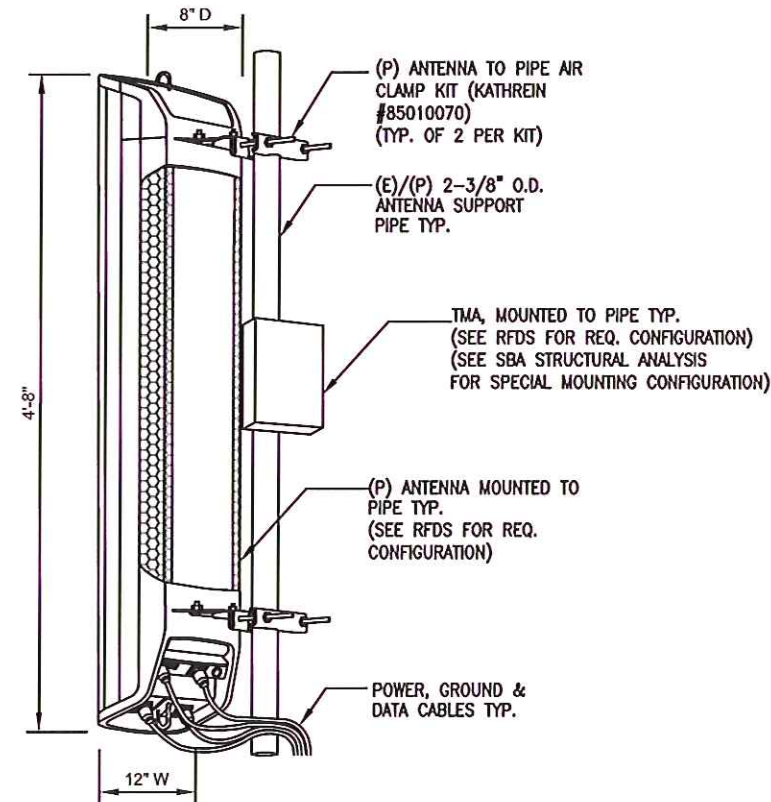


(P) AWS TMA TO POSITION 1 BEHIND (P) AIR ANTENNA, (1) PER SECTOR, (3) TOTAL (SEE SBA STRUCTURAL ANALYSIS FOR SPECIAL MOUNTING CONFIGURATION)

3
A-3
*(P) ANTENNA TYP. OF (2) PER SECTOR, (6) TOTAL (SEE SBA STRUCTURAL ANALYSIS FOR SPECIAL MOUNTING CONFIGURATION)

*** SPECIAL INSTALLATION NOTE:**
PROPOSED ANTENNAS SHALL BE VERTICALLY CENTERED ON EXISTING PLATFORM RAIL. ADJUST ANTENNA MOUNTING PIPE AS REQUIRED.

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



3
A-3
ANTENNA MOUNT TYP.
SCALE: NTS



EG ADVANCED
ENGINEERING GROUP, P.C.
Civil Engineering - Site Development Surveying - Telecommunications
500 NORTH BROADWAY
EAST PROVIDENCE, RI 02914
P/E: (401) 354-2403
FAX: (401) 633-8354

SBA

SBA COMMUNICATIONS CORPORATION
33 BOSTON POST ROAD WEST, SUITE 320
MARLBOROUGH, MA 01752
PHONE: 508-251-0720

SITE NUMBER: CT11259F
SITE NAME: SBA NEWTOWN 2
3 EDMUND ROAD
NEWTOWN, CT 06470

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OFFICE: (860) 648-1116

										T-MOBILE	
										DETAILS	
0	03/12/14	CONSTRUCTION		SOS	MRC	MRC					
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								CT11259F	A-3	0	
SCALE: AS SHOWN			DESIGNED BY: MRC			DRAWN BY: SOS					