COHEN and WOLF P.C.
ATTORNEYS AT LAW

JULIE D. KOHLER

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

May 20, 2014

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

Re: Notice of Exempt Modification
Florida Tower Partners/ MetroPCS co-location
Site ID CTNH522A
50 Devine Street, North Haven CT

Dear Attorney Bachman:

This office represents MetroPCS Wireless Inc. ("MetroPCS") and has been retained to file exempt modification filings with the Connecticut Siting Council on its behalf.

In this case, Florida Tower Partners owns the existing monopole telecommunications tower and related facility at 50 Devine Street, North Haven, Connecticut (Latitude: 41.377810, Longitude: -72.8762). MetroPCS intends to replace three existing antennas with six new antennas and related equipment at this existing telecommunications facility in North Haven ("North Haven Facility"). Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the First Selectman Michael J. Freda, and the property owner, 424 Chapel Street LLC.

The existing North Haven Facility consists of a 130 foot monopole tower.[1] MetroPCS plans to replace three existing antennas with six new antennas on T-arm mounts at a centerline of 117 feet. (See the plans revised to May 1, 2014 attached hereto as Exhibit A). MetroPCS will also replace an equipment cabinet and battery backup unit, install fiber cable and reuse existing coax cables. The existing North Haven Facility is structurally capable of supporting MetroPCS' proposed modifications, as indicated in the structural analysis dated May 4, 2014 and attached hereto as Exhibit B.

[1] The North Haven Facility was approved at a height of 120 feet (Docket 384), and subsequently the subject of a Petition to increase the height of the Facility to 130 feet (Petition 1089). The existing/proposed antenna height and configuration is consistent with the February 25, 2010 Docket 384 Decision and Order.

The planned modifications to the North Haven Facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modification will not increase the height of the tower. MetroPCS' replacement and additional antennas will be installed at a centerline of 117 feet, merely replacing existing antennas located at the same 117 foot elevation. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.

2. The proposed modifications will not require an extension of the site boundaries or lease area, as depicted on Sheets 2 and 4 of Exhibit A. MetroPCS' equipment will be located entirely within the existing compound area.

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

4. The operation of the replacement antennas will not increase the total radio frequency (RF) power density, measured at the base of the tower, to a level at or above the applicable standard. According to a Radio Frequency Emissions Analysis Report prepared by EBI dated May 12, 2014, MetroPCS' operations would add 0.846% of the FCC Standard. Therefore, the calculated "worst case" power density for the planned combined operation at the site including all of the proposed antennas would be 48.056% of the FCC Standard as calculated for a mixed frequency site as evidenced by the engineering exhibit attached hereto as Exhibit C.

For the foregoing reasons, MetroPCS respectfully submits that the proposed replacement antennas and equipment at the North Haven Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Upon acknowledgement by the Council of this proposed exempt modification, MetroPCS shall commence construction approximately sixty days from the date of the Council's notice of acknowledgement.

Sincerely,

Julie D. Kohler, Esq.

cc: Town of North Haven, First Selectman Michael J. Freda
424 Chapel Street LLC
Florida Tower Partners
Sheldon Freincle, NSS

EXHIBIT A

KEY PLAN

N.T.S.

CONFIGURATION

5A

SUBMITTALS	
LE REV A	05.01.14

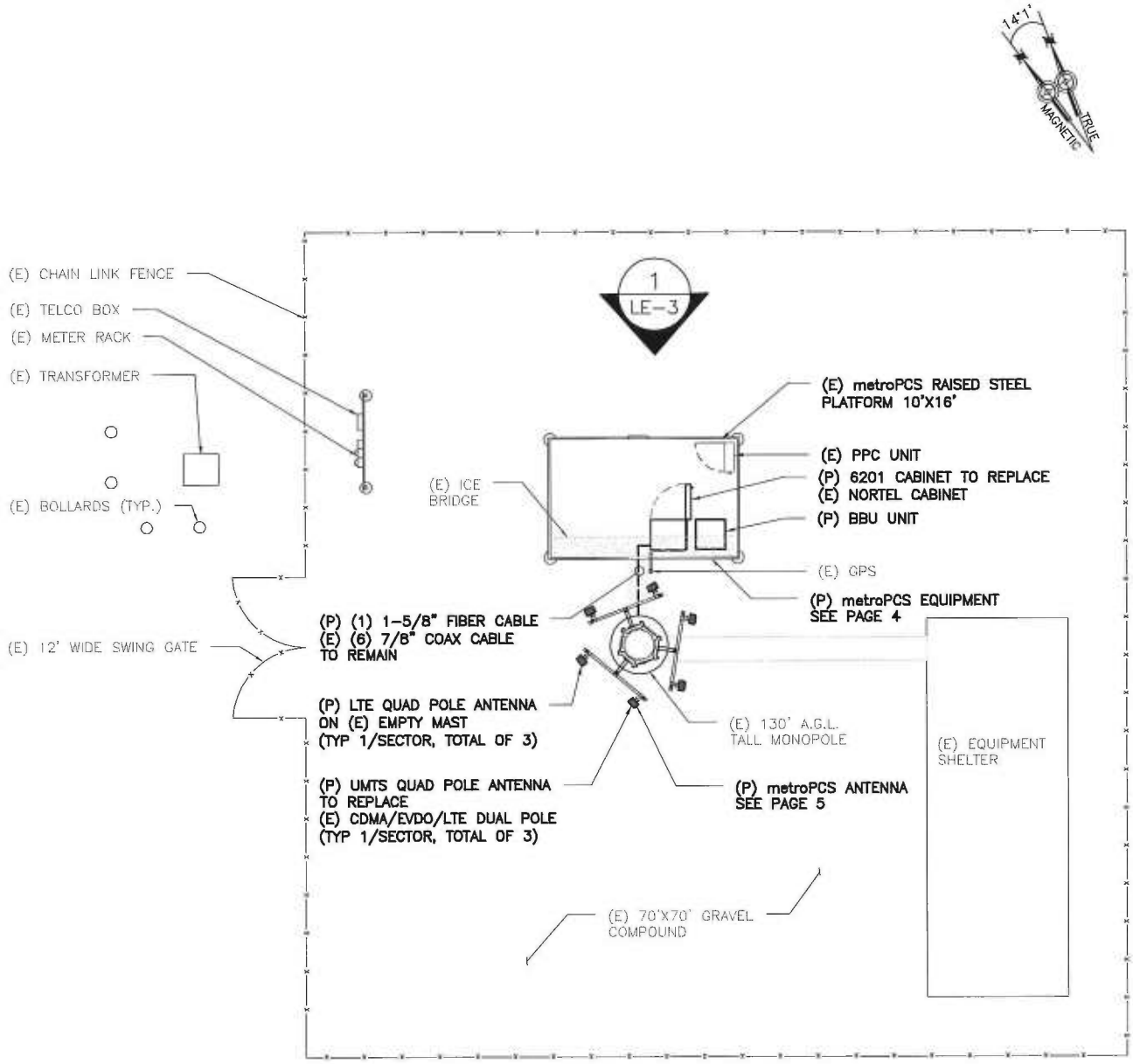
ATLANTIS GROUP
1340 Centre Street
Suite 212
Newton, MA 02459
Office: 617-965-0789
Fax: 617-213-5056

LEASE EXHIBIT

SITE NUMBER:
CTNH522A
SITE NAME:
FLORIDA PARTNERS NORTH HAVEN
MONOPOLE
SITE ADDRESS:
50 DEVINE ST,
NORTH HAVEN, CT

NORTHEAST SITE SOLUTIONS
54 MAIN STREET, UNIT 3
STURBRIDGE, MA 01566
(508) 434-5237
FOR
metroPCS.
metroPCS WIRELESS, INC.
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

DRAWN BY: MB | CHECKED BY: SM



ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

SITE PLAN

SCALE: N.T.S.

1 / LE-2

CONFIGURATION

5A

SUBMITTALS	
LE REV A	05.01.14

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NORTH HAVEN, CT

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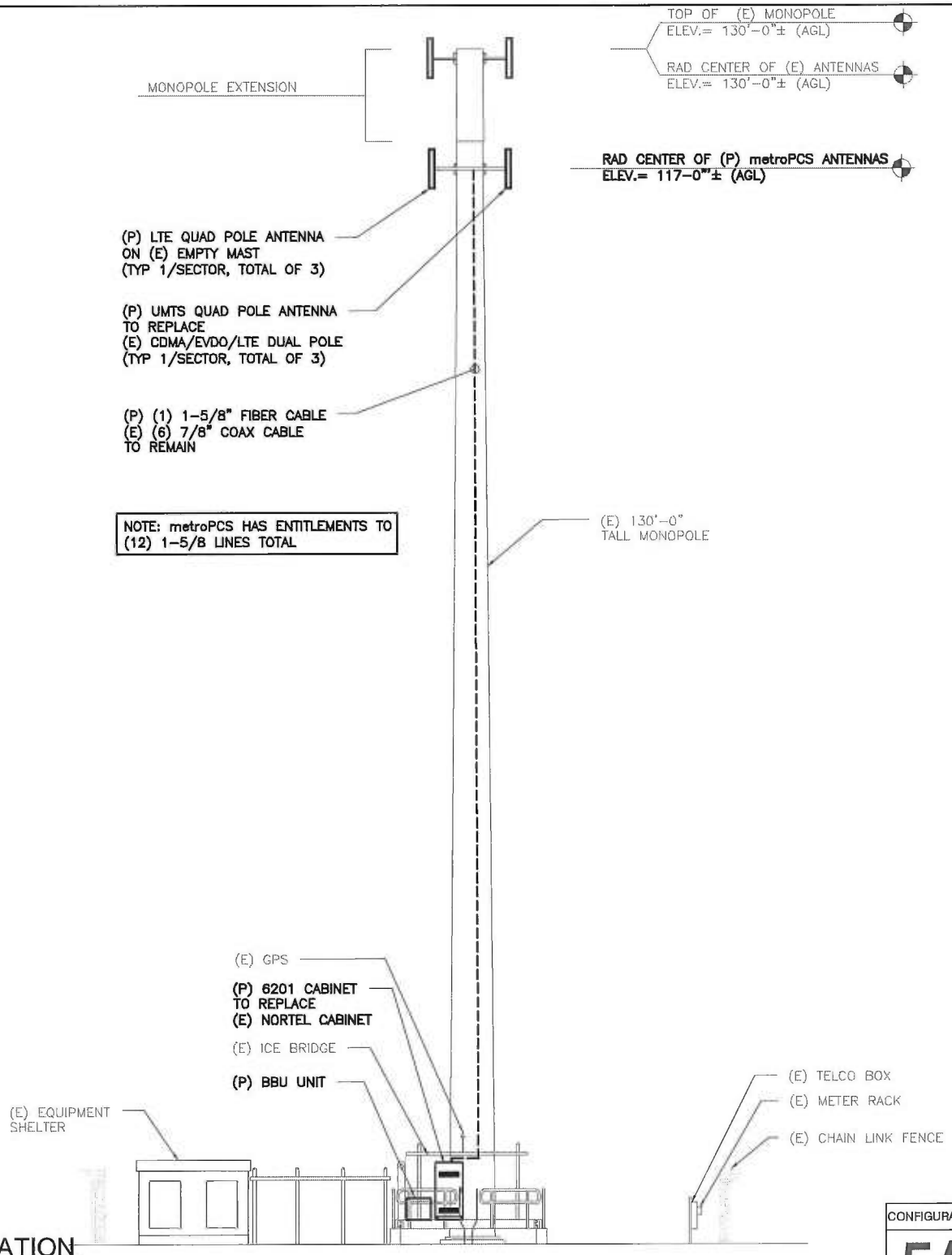
DRAWN BY: MB | CHECKED BY: SM



1 / LE-3 ELEVATION N.T.S.

CONFIGURATION
5A

SUBMITTALS	
LE REV A	05.01.14

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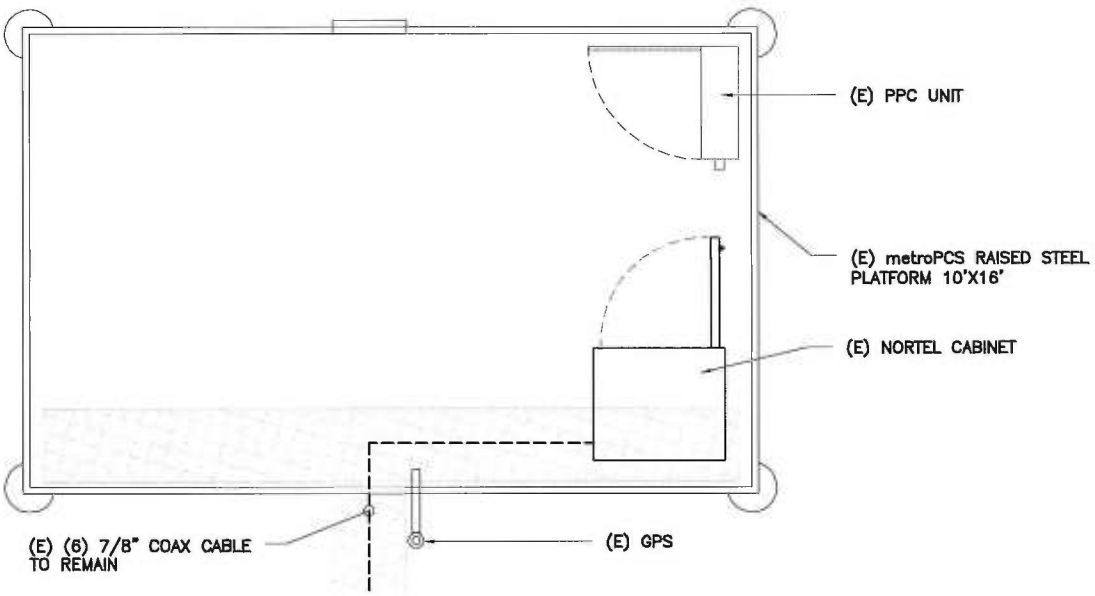
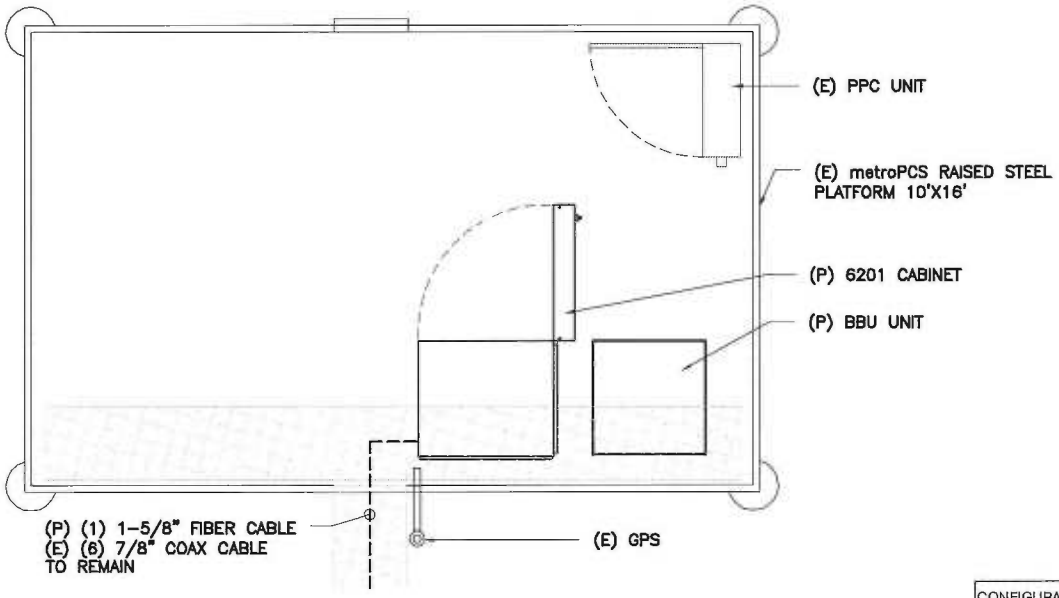


EXISTING EQUIPMENT



PROPOSED EQUIPMENT

CONFIGURATION
5A

SUBMITTALS	
LE REV A	05.01.14

ATLANTIS GROUP
1340 Centre Street
Suite 212
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Office: 617-965-0789
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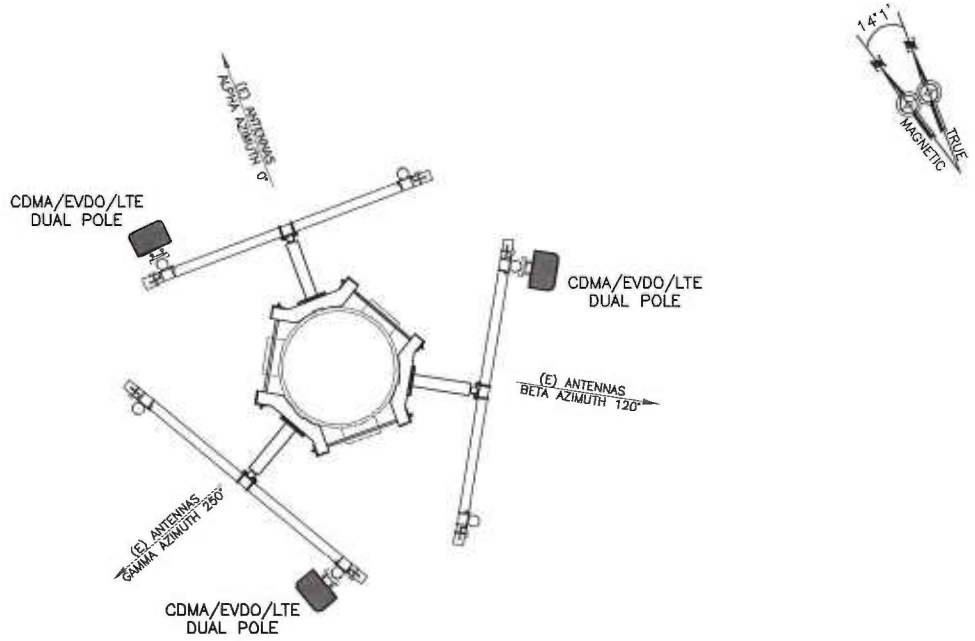
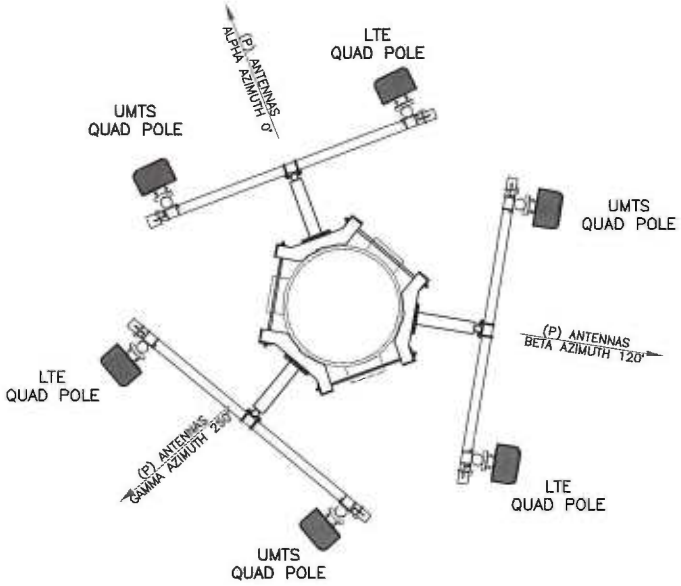


EXISTING ANTENNA CONFIGURATION



PROPOSED ANTENNA CONFIGURATION

CONFIGURATION

5A

SUBMITTALS	
LE REV A	05.01.14

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35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

DRAWN BY: MB | CHECKED BY: SM

EXHIBIT B

Structural Analysis
130-ft Monopole

Prepared For:
Florida Tower Partners, LLC
1001 3rd Ave. West, Suite 420
Bradenton, FL 34205

MFP Project #40913-015 r4

Site Location:
CT1003 North Haven
New Haven Co., Connecticut
Lat/Long: 41°22'40.1", -72°52'34.1"

Analysis Type:
ANSI/TIA-222-G
Structure Rating: 79.5% Passing

May 4, 2014

Michael F. Plahovinsak, P.E.
18301 State Route 161 W, Plain City, OH 43064
614-398-6250 - mike@mfpeng.com

Project Summary:

We have completed a structural analysis of the existing monopole for the proposed configuration:

MetroPCS – 117' – (6) Ericsson AIR-21 Panel & (12) 1 5/8" on T-Arm Mounts

The pole has been analyzed in accordance with the requirements of the **2006 – 2012 International Building Code**, and the recommendations of the Telecommunications Industry Association *"Structural Standard for Steel Antenna Supporting Structures"* **ANSI/TIA-222-G.**

This analysis may be considered a "Rigorous Structural Analysis" as defined in ANSI/TIA-222-G 15.5.2.

As indicated in the conclusions of this analysis, we have determined that the existing pole and foundation have *sufficient capacity* to support the existing, reserved and proposed antenna loads as detailed herein. Based on the results of our analysis, structural modifications are not required at this time.

Source of Data:

Resource	Source	Job Number	Date
Pole and Foundation Drawings	Sabre Towers	11-05062	05/12/10
Geotechnical Report	Terracon	J2105136	04/20/10

Analysis Criteria:

International Building Code (All Versions) Section 3108.4
Structural Standards for Steel Antenna Supporting Structures **ANSI/TIA-222-G 2**

- Basic Wind Speed 115 mph (3-Sec Gust)
- Basic Wind Speed w/ ¾" Ice 50 mph (3-Sec Gust)
- Operational Wind Speed 60 mph (3-Sec Gust)

Structure Class	Exposure Category	Topographic Category
II (I = 1.0)	C	I

Appurtenance Listing:

Status	Elev.	Antenna / Mounting	Coax	Owner
Existing	130'	(1) Antel BXA-70080/6CF + (1) BXA-80080/6CF (4) Antel BXA-70063/6CF + (6) BXA-171063/12CF (6) Lucent 2x40 RRH's & (1) Distribution Box 12' Low Profile Platform	(12) 1 5/8"	Verizon
Proposed	***117'***	***(6) Ericsson AIR-21 Panel*** ***12' T-Arm Mounts***	*(12) 1 5/8"*	***MetroPCS***
Existing	107'	(12) CCI HPA-65R-BUU-H8 Panel (9) RRUS-11 + (6) RRUS-12 + (6) RRUS-32 + (6) RRUS-A2 (4) Raycap DC6-48-60-18-8F Suppressor 12' T-Arm Mounts	(8) 3/4" + (2) 1/2" + (3) 3/8"	AT&T

All antenna lines assumed internally mounted, not exposed to the wind.

Foundation Analysis:

The existing monopole foundation design was analyzed in conjunction with site specific geotechnical report. The existing foundation has sufficient capacity to support the pole with the proposed antenna configuration.

Conclusion:

We have completed a structural analysis of the existing monopole and foundation in accordance with the project specifics outlined above. Our analysis indicates that the existing monopole and foundation is stressed to a maximum of 79.5% of its usable capacity when considering the existing plus proposed loading. Please refer to the attached calculations for an itemized listing of all member stress ratios. The existing pole is safe and adequate to support the proposed loads, and no structural reinforcing is required to support the above loading.

If you have any questions about the contents of this structural report or require any additional information, please feel free to contact my office.

Sincerely,

Michael F. Plahovinsak, P.E.

mike@mfpeng.com - 614.398-6250

Standard Conditions for Providing Structural Consulting Services on Existing Structures

1. The following standard conditions are a general overview of key issues regarding the work product supplied.

2. If the existing conditions are not as represented in this structural report or attached sketches, we should be contacted to evaluate the significance of the deviation and revise the structural assessment accordingly.

3. The structural analysis has been performed assuming that the structure is in "like new" condition. No allowance was made for excessive corrosion, damaged or missing structural members, loose bolts, etc. If there are any known deficiencies in the structure that potentially compromise structural integrity, we should be made aware of the deficiencies. If we are aware of a deficiency that exists in a structure at the time of our analysis, a general explanation of the structural concern due to the deficiency will be included in the structural report, but the deficiency will not be reflected in capacity calculations.

4. The structural analysis provided is an assessment of the primary load carrying capacity of the structure. We provide a limited scope of service in that we have not verified the capacity of every weld, plate, connection detail, etc. In most cases, structural fabrication details are unknown at the time of our analysis, and the detailed field measurement of this information is beyond the scope of our services. In instances where we have not performed connection capacity calculations, it is assumed that existing manufactured connections develop the full capacity of the primary members being connected.

5. The structural integrity of the existing foundation system can only be verified if exact foundation sizes and soils conditions are known. We will not accept any responsibility for the adequacy of the existing foundations unless this site-specific data is supplied.

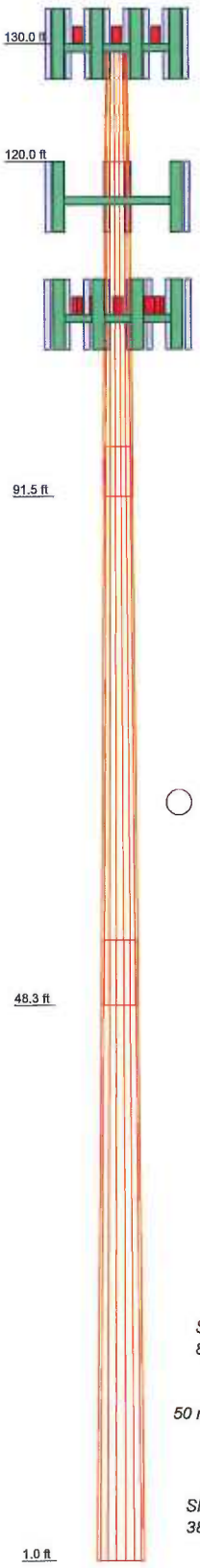
6. Miscellaneous items such as antenna mounts, coax supports, etc. have not been designed, detailed, or specified as part of our work. It is assumed that material of adequate size and strength will be purchased from a reputable component manufacturer. The attached report and sketches are schematic in nature and should not be used to fabricate or purchase hardware and accessories to be attached to the structure. We recommend field measurement of the structure before fabricating or purchasing new hardware and accessories. We are not responsible for proper fit and clearance of hardware and accessory items in the field.

7. The structural analysis has been performed considering minimum code requirements or recommendations. If alternate wind, ice, or deflection criteria are to be considered, then We shall be made aware of the alternate criteria.

Michael F. Plahovinsak, P.E. - 2014

mike@mfpeng.com

Section	1	2	3	4
Length (ft)	10.00	28.50	47.50	52.75
Number of Sides	18	18	18	18
Thickness (in)	0.1875	0.2500	0.3750	0.4375
Socket Length (ft)		4.25	5.50	
Top Dia (in)	20.9000	23.1600	28.1396	36.8775
Bot Dia (in)	23.1600	29.6000	38.8700	48.6000
Grade	A572-65			
Weight (K)	0.4	2.0	6.4	10.6



ALL REACTIONS ARE FACTORED

AXIAL 58 K
SHEAR 8 K
MOMENT 786 kip-ft
TORQUE 0 kip-ft
50 mph WIND - 0.7500 in ICE

AXIAL 36 K
SHEAR 38 K
MOMENT 3585 kip-ft
TORQUE 1 kip-ft
REACTIONS - 115 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) Antel BXA-70063/6CF w/ mount pipe (Verizon)	130	12' T-Arm Mounts (MetroPCS)	117
(2) Antel BXA-171063/12CF w/ mount pipe (Verizon)	130	(4) CCI HPA-65R-BUU-H8 w/ mount pipe (ATT)	107
(2) Lucent 2x40 RRH (Verizon)	130	(3) Ericsson RRUS-11 (ATT)	107
(2) Antel BXA-70063/6CF w/ mount pipe (Verizon)	130	(2) Ericsson RRUS 12 (ATT)	107
(2) Antel BXA-171063/12CF w/ mount pipe (Verizon)	130	(2) Ericsson RRUS-32 (ATT)	107
(2) Lucent 2x40 RRH (Verizon)	130	(2) Ericsson RRUS A2 (ATT)	107
Antel BXA-80080-6CF w/ mount pipe (Verizon)	130	(4) CCI HPA-65R-BUU-H8 w/ mount pipe (ATT)	107
Antel BXA-80080/6CF w/ mount pipe (Verizon)	130	(3) Ericsson RRUS-11 (ATT)	107
(2) Antel BXA-171063/12CF w/ mount pipe (Verizon)	130	(2) Ericsson RRUS 12 (ATT)	107
(2) Lucent 2x40 RRH (Verizon)	130	(2) Ericsson RRUS-32 (ATT)	107
RFS DB-T1-6Z-8AB-OZ Box (Verizon)	130	(2) Ericsson RRUS A2 (ATT)	107
12' Low Profile Platform (Verizon)	130	(4) CCI HPA-65R-BUU-H8 w/ mount pipe (ATT)	107
(2) Ericsson AIR 21 w/ mount pipe (MetroPCS)	117	(3) Ericsson RRUS-11 (ATT)	107
(2) Ericsson AIR 21 w/ mount pipe (MetroPCS)	117	(2) Ericsson RRUS 12 (ATT)	107
(2) Ericsson AIR 21 w/ mount pipe (MetroPCS)	117	(2) Ericsson RRUS-32 (ATT)	107
		(2) Ericsson RRUS A2 (ATT)	107
		(4) Raycap DC6-48-60-18-8F Supressor (ATT)	107
		12' T-Arm Mounts (ATT)	107

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 115 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 75.1%

Michael F. Plahovinsak, P.E.
18301 State Route 161 W
Plain City, OH 43064
Phone: 614-398-6250
FAX: mike@mfpeng.com

Job:	***130-ft Monopole (Prop. 130-ft) - MFP #40913-015 r4***
Project:	***CT1003, North Haven***
Client: Florida Tower Partners	Drawn by: Mike / App'd:
Code: TIA-222-G	Date: 05/04/14 / Scale: NTS
Path: J:\Projects\409-Misc\40913-015\40913-015 r4.eri	Dwg No. E-1

Tower Input Data

This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in New Haven County, Connecticut.
Basic wind speed of 115 mph.
Structure Class II.
Exposure Category C.
Topographic Category 1.
Crest Height 0.00 ft.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	130.00-120.00	10.00	0.00	18	20.9000	23.1600	0.1875	0.7500	A572-65 (65 ksi)
L2	120.00-91.50	28.50	4.25	18	23.1600	29.6000	0.2500	1.0000	A572-65 (65 ksi)
L3	91.50-48.25	47.50	5.50	18	28.1396	38.8700	0.3750	1.5000	A572-65 (65 ksi)
L4	48.25-1.00	52.75		18	36.8775	48.8000	0.4375	1.7500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	21.2224	12.3265	668.1027	7.3529	10.6172	62.9264	1337.0845	6.1644	3.3484	17.858
	23.5173	13.6715	911.5289	8.1552	11.7653	77.4762	1824.2571	6.8371	3.7462	19.98
L2	23.5173	18.1791	1205.4790	8.1331	11.7653	102.4607	2412.5442	9.0913	3.6362	14.545
	30.0566	23.2892	2534.5957	10.4193	15.0368	168.5595	5072.5265	11.6468	4.7696	19.078
L3	29.5486	33.0469	3218.4903	9.8565	14.2949	225.1489	6441.2155	16.5266	4.2926	11.447
	39.4696	45.8187	8578.0508	13.6657	19.7460	434.4205	17167.3888	22.9137	6.1811	16.483
L4	38.7087	50.6015	8489.0461	12.9362	18.7338	453.1409	16989.2624	25.3056	5.7204	13.075
	49.5528	67.1574	19844.8883	17.1687	24.7904	800.5070	39715.8890	33.5851	7.8188	17.872

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
1 5/8" (Verizon)	C	No	Inside Pole	130.00 - 1.00	12	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
***								
1 5/8" (MetroPCS)	C	No	Inside Pole	117.00 - 1.00	12	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
**								
3/4" (ATT)	C	No	Inside Pole	107.00 - 1.00	8	No Ice	0.00	0.33
						1/2" Ice	0.00	0.33
						1" Ice	0.00	0.33
1/2" (ATT)	C	No	Inside Pole	107.00 - 1.00	2	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
3/8" (ATT)	C	No	Inside Pole	107.00 - 1.00	3	No Ice	0.00	0.08
						1/2" Ice	0.00	0.08
						1" Ice	0.00	0.08

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) Antel BXA-70063/6CF w/ mount pipe (Verizon)	A	From Face	3.00	0.0000	130.00	No Ice	7.75	5.18	0.04
			0.00			1/2" Ice	8.29	6.11	0.09
			0.00			1" Ice	8.85	6.92	0.16
(2) Antel BXA-171063/12CF w/ mount pipe (Verizon)	A	From Face	3.00	0.0000	130.00	No Ice	4.98	5.93	0.04
			0.00			1/2" Ice	5.43	6.87	0.08
			0.00			1" Ice	5.89	7.69	0.14
(2) Lucent 2x40 RRH (Verizon)	A	From Face	3.00	0.0000	130.00	No Ice	1.20	2.25	0.01
			0.00			1/2" Ice	1.35	2.45	0.03
			0.00			1" Ice	1.51	2.66	0.05
(2) Antel BXA-70063/6CF w/ mount pipe (Verizon)	B	From Face	3.00	0.0000	130.00	No Ice	7.75	5.18	0.04
			0.00			1/2" Ice	8.29	6.11	0.09
			0.00			1" Ice	8.85	6.92	0.16
(2) Antel BXA-171063/12CF w/ mount pipe (Verizon)	B	From Face	3.00	0.0000	130.00	No Ice	4.98	5.93	0.04
			0.00			1/2" Ice	5.43	6.87	0.08
			0.00			1" Ice	5.89	7.69	0.14
(2) Lucent 2x40 RRH (Verizon)	B	From Face	3.00	0.0000	130.00	No Ice	1.20	2.25	0.01
			0.00			1/2" Ice	1.35	2.45	0.03
			0.00			1" Ice	1.51	2.66	0.05
Antel BXA-70080-6CF w/ mount pipe (Verizon)	C	From Face	3.00	0.0000	130.00	No Ice	5.79	5.99	0.04
			0.00			1/2" Ice	6.25	6.93	0.09
			0.00			1" Ice	6.71	7.74	0.15
Antel BXA-80080/6CF w/ mount pipe (Verizon)	C	From Face	3.00	0.0000	130.00	No Ice	5.79	5.99	0.08
			0.00			1/2" Ice	6.25	6.93	0.13
			0.00			1" Ice	6.71	7.74	0.19
(2) Antel BXA-171063/12CF w/ mount pipe (Verizon)	C	From Face	3.00	0.0000	130.00	No Ice	4.98	5.93	0.04
			0.00			1/2" Ice	5.43	6.87	0.08
			0.00			1" Ice	5.89	7.69	0.14
(2) Lucent 2x40 RRH (Verizon)	C	From Face	3.00	0.0000	130.00	No Ice	1.20	2.25	0.01
			0.00			1/2" Ice	1.35	2.45	0.03

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1" Ice	1.51	2.66	0.05
RFS DB-T1-6Z-8AB-OZ Box (Verizon)	C	None		0.0000	130.00	No Ice	5.60	2.33	0.04
						1/2" Ice	5.92	2.56	0.08
						1" Ice	6.24	2.79	0.12
12' Low Profile Platform (Verizon)	C	None		0.0000	130.00	No Ice	14.00	14.00	1.10
						1/2" Ice	16.00	16.00	1.70
						1" Ice	18.00	18.00	2.30
***									
(2) Ericsson AIR 21 w/ mount pipe	A	From Face	3.00	0.0000	117.00	No Ice	6.61	5.50	0.11
			0.00			1/2" Ice	7.08	6.22	0.16
(MetroPCS)			0.00			1" Ice	7.55	6.95	0.22
(2) Ericsson AIR 21 w/ mount pipe	B	From Face	3.00	0.0000	117.00	No Ice	6.61	5.50	0.11
			0.00			1/2" Ice	7.08	6.22	0.16
(MetroPCS)			0.00			1" Ice	7.55	6.95	0.22
(2) Ericsson AIR 21 w/ mount pipe	C	From Face	3.00	0.0000	117.00	No Ice	6.61	5.50	0.11
			0.00			1/2" Ice	7.08	6.22	0.16
(MetroPCS)			0.00			1" Ice	7.55	6.95	0.22
12' T-Arm Mounts (MetroPCS)	C	None		0.0000	117.00	No Ice	12.00	12.00	1.14
						1/2" Ice	18.00	18.00	1.27
						1" Ice	24.00	24.00	0.47
***									
(4) CCI HPA-65R-BUU-H8 w/ mount pipe	A	From Face	3.00	0.0000	107.00	No Ice	13.62	9.18	0.10
			0.00			1/2" Ice	14.35	10.58	0.19
(ATT)			0.00			1" Ice	15.09	11.83	0.29
(3) Ericsson RRUS-11	A	From Face	3.00	0.0000	107.00	No Ice	2.55	0.92	0.05
(ATT)			0.00			1/2" Ice	2.77	1.07	0.06
			0.00			1" Ice	2.99	1.23	0.08
(2) Ericsson RRUS 12	A	From Face	2.50	0.0000	107.00	No Ice	3.67	1.46	0.06
(ATT)			0.00			1/2" Ice	3.92	1.64	0.08
			0.00			1" Ice	4.19	1.84	0.11
(2) Ericsson RRUS-32	A	From Face	2.00	0.0000	107.00	No Ice	3.87	2.76	0.08
(ATT)			0.00			1/2" Ice	4.15	3.02	0.10
			0.00			1" Ice	4.44	3.29	0.14
(2) Ericsson RRUS A2	A	From Face	1.50	0.0000	107.00	No Ice	1.87	0.50	0.03
(ATT)			0.00			1/2" Ice	2.05	0.62	0.04
			0.00			1" Ice	2.24	0.75	0.05
(4) CCI HPA-65R-BUU-H8 w/ mount pipe	B	From Face	3.00	0.0000	107.00	No Ice	13.62	9.18	0.10
			0.00			1/2" Ice	14.35	10.58	0.19
(ATT)			0.00			1" Ice	15.09	11.83	0.29
(3) Ericsson RRUS-11	B	From Face	3.00	0.0000	107.00	No Ice	2.55	0.92	0.05
(ATT)			0.00			1/2" Ice	2.77	1.07	0.06
			0.00			1" Ice	2.99	1.23	0.08
(2) Ericsson RRUS 12	B	From Face	2.50	0.0000	107.00	No Ice	3.67	1.46	0.06
(ATT)			0.00			1/2" Ice	3.92	1.64	0.08
			0.00			1" Ice	4.19	1.84	0.11
(2) Ericsson RRUS-32	B	From Face	2.00	0.0000	107.00	No Ice	3.87	2.76	0.08
(ATT)			0.00			1/2" Ice	4.15	3.02	0.10
			0.00			1" Ice	4.44	3.29	0.14
(2) Ericsson RRUS A2	B	From Face	1.50	0.0000	107.00	No Ice	1.87	0.50	0.03
(ATT)			0.00			1/2" Ice	2.05	0.62	0.04
			0.00			1" Ice	2.24	0.75	0.05
(4) CCI HPA-65R-BUU-H8 w/ mount pipe	C	From Face	3.00	0.0000	107.00	No Ice	13.62	9.18	0.10
			0.00			1/2" Ice	14.35	10.58	0.19
(ATT)			0.00			1" Ice	15.09	11.83	0.29
(3) Ericsson RRUS-11	C	From Face	3.00	0.0000	107.00	No Ice	2.55	0.92	0.05
(ATT)			0.00			1/2" Ice	2.77	1.07	0.06
			0.00			1" Ice	2.99	1.23	0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) Ericsson RRUS 12 (ATT)	C	From Face	2.50 0.00 0.00	0.0000	107.00	No Ice 1/2" Ice 1" Ice	3.67 3.92 4.19	1.46 1.64 1.84	0.06 0.08 0.11
(2) Ericsson RRUS-32 (ATT)	C	From Face	2.00 0.00 0.00	0.0000	107.00	No Ice 1/2" Ice 1" Ice	3.87 4.15 4.44	2.76 3.02 3.29	0.08 0.10 0.14
(2) Ericsson RRUS A2 (ATT)	C	From Face	1.50 0.00 0.00	0.0000	107.00	No Ice 1/2" Ice 1" Ice	1.87 2.05 2.24	0.50 0.62 0.75	0.03 0.04 0.05
(4) Raycap DC6-48-60-18-8F Supressor (ATT)	C	None		0.0000	107.00	No Ice 1/2" Ice 1" Ice	1.47 1.67 1.88	1.47 1.67 1.88	0.03 0.05 0.07
12' T-Arm Mounts (ATT)	C	None		0.0000	107.00	No Ice 1/2" Ice 1" Ice	12.00 18.00 24.00	12.00 18.00 24.00	1.14 1.27 0.47

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 90 deg - No Ice
5	0.9 Dead+1.6 Wind 90 deg - No Ice
6	1.2 Dead+1.6 Wind 180 deg - No Ice
7	0.9 Dead+1.6 Wind 180 deg - No Ice
8	1.2 Dead+1.0 Ice+1.0 Temp
9	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
10	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
11	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
12	Dead+Wind 0 deg - Service
13	Dead+Wind 90 deg - Service
14	Dead+Wind 180 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	130 - 120	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-8.42	0.00	-0.08
			Max. Mx	4	-1.90	-73.83	-0.09
			Max. My	6	-1.95	0.00	-70.58
			Max. Vy	4	7.88	-73.83	-0.09
			Max. Vx	6	7.53	0.00	-70.58
			Max. Torque	4			-1.09
L2	120 - 91.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-26.12	0.00	-0.08
			Max. Mx	4	-9.89	-511.93	-0.13
			Max. My	6	-9.96	0.00	-500.18
			Max. Vy	4	26.80	-511.93	-0.13
			Max. Vx	6	26.45	0.00	-500.18
			Max. Torque	4			-1.09
L3	91.5 - 48.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-37.64	0.00	-0.08
			Max. Mx	4	-19.01	-1744.18	-0.18
			Max. My	6	-19.05	0.00	-1717.46
			Max. Vy	4	31.88	-1744.18	-0.18
			Max. Vx	6	31.52	0.00	-1717.46
			Max. Torque	4			-1.09
L4	48.25 - 1	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-57.59	0.00	-0.08
			Max. Mx	4	-35.82	-3585.20	-0.19
			Max. My	6	-35.82	0.00	-3539.95
			Max. Vy	4	37.62	-3585.20	-0.19
			Max. Vx	6	37.28	0.00	-3539.95
			Max. Torque	4			-1.09

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	130 - 120	14.178	13	0.9418	0.0024
L2	120 - 91.5	12.220	13	0.9228	0.0016
L3	95.75 - 48.25	7.815	13	0.7826	0.0007
L4	53.75 - 1	2.389	13	0.4214	0.0002

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
130.00	(2) Antel BXA-70063/6CF w/ mount pipe	13	14.178	0.9418	0.0024	33731
117.00	(2) Ericsson AIR 21 w/ mount pipe	13	11.642	0.9126	0.0014	14850
107.00	(4) CCI HPA-65R-BUU-H8 w/ mount pipe	13	9.777	0.8618	0.0010	10538

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	130 - 120	93.361	4	6.2068	0.0156
L2	120 - 91.5	80.477	4	6.0819	0.0105
L3	95.75 - 48.25	51.491	4	5.1593	0.0047
L4	53.75 - 1	15.751	4	2.7786	0.0015

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
130.00	(2) Antel BXA-70063/6CF w/ mount pipe	4	93.361	6.2068	0.0156	5248
117.00	(2) Ericsson AIR 21 w/ mount pipe	4	76.680	6.0151	0.0093	2307
107.00	(4) CCI HPA-65R-BUU-H8 w/ mount pipe	4	64.402	5.6808	0.0065	1632

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	130 - 120 (1)	TP23.16x20.9x0.1875	10.00	0.00	0.0	13.6715	-1.90	958.52	0.002
L2	120 - 91.5 (2)	TP29.6x23.16x0.25	28.50	0.00	0.0	22.5272	-9.89	1617.01	0.006
L3	91.5 - 48.25 (3)	TP38.87x28.1396x0.375	47.50	0.00	0.0	44.3398	-19.01	3294.23	0.006
L4	48.25 - 1 (4)	TP48.8x36.8775x0.4375	52.75	0.00	0.0	67.1574	-35.82	4858.33	0.007

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	130 - 120 (1)	TP23.16x20.9x0.1875	73.83	452.66	0.163	0.00	452.66	0.000
L2	120 - 91.5 (2)	TP29.6x23.16x0.25	511.93	943.10	0.543	0.00	943.10	0.000
L3	91.5 - 48.25 (3)	TP38.87x28.1396x0.375	1744.18	2517.97	0.693	0.00	2517.97	0.000
L4	48.25 - 1 (4)	TP48.8x36.8775x0.4375	3585.20	4825.88	0.743	0.00	4825.88	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	130 - 120 (1)	TP23.16x20.9x0.1875	7.88	479.26	0.016	1.09	906.43	0.001
L2	120 - 91.5 (2)	TP29.6x23.16x0.25	26.80	808.51	0.033	1.09	1888.51	0.001
L3	91.5 - 48.25 (3)	TP38.87x28.1396x0.375	31.88	1647.11	0.019	1.09	5042.12	0.000
L4	48.25 - 1 (4)	TP48.8x36.8775x0.4375	37.62	2429.16	0.015	1.08	9663.58	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	130 - 120 (1)	0.002	0.163	0.000	0.016	0.001	0.165 ✔	1.000	4.8.2 ✔
L2	120 - 91.5 (2)	0.006	0.543	0.000	0.033	0.001	0.550 ✔	1.000	4.8.2 ✔
L3	91.5 - 48.25 (3)	0.006	0.693	0.000	0.019	0.000	0.699 ✔	1.000	4.8.2 ✔
L4	48.25 - 1 (4)	0.007	0.743	0.000	0.015	0.000	0.751 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	130 - 120	Pole	TP23.16x20.9x0.1875	1	-1.90	958.52	16.5	Pass
L2	120 - 91.5	Pole	TP29.6x23.16x0.25	2	-9.89	1617.01	55.0	Pass
L3	91.5 - 48.25	Pole	TP38.87x28.1396x0.375	3	-19.01	3294.23	69.9	Pass
L4	48.25 - 1	Pole	TP48.8x36.8775x0.4375	4	-35.82	4858.33	75.1	Pass
							Summary	
						Pole (L4)	75.1	Pass
						RATING =	**75.1**	**Pass**

Michael F. Plahovinsak, P.E.
18301 State Route 161 W
Plain City, OH 43064
Phone: 614-398-6250
email: mike@mfpeng.com

Job	Page
130-ft monopole - MFP #40913-015	BP-G
Project	**Date**
CT1003, North Haven	5/4/2014
Client	**Designed by**
FLORIDA TOWER PARTNERS	Mike

Anchor Rod and Base Plate Calculation

ANSI/TIA-222-G-2

Factored Base Reactions:		*Pole Shape:*	*Anchor Rods:*	*Base Plate:*
Moment:	3585 ft-kips	18-Sided	(20) 2.25 in. A615 GR. 75	2.75 in. x 58 in. Round
Shear:	38 kips	*Pole Dia. (D_f):*	Anchor Rods Evenly Spaced	fy = 50 ksi
Axial:	36 kips	48.80 in	On a 55.25 in Bolt Circle	

Anchor Rod Calculation According to TIA-222-G section 4.9.9

ϕ = 0.80 TIA 4.9.9

I_{bolts} = 7631.41 in^2 Momet of Inertia

P_u = 156 kips Tension Force

V_u = 2 kips Shear Force

R_{nt} = 325.00 kips Nominal Tensile Strength

η = 0.50 for detail type (d)

The following Interation Equation Shall Be Satisfied:

$$\left(\frac{P_u + \frac{V_u}{\eta}}{\phi R_{nt}} \right) \leq 1.0$$

$$0.614 \leq 1$$

Base Plate Calculation According to TIA-222-G

ϕ = 0.90 TIA 4.7

M_{PL} = 330.8 in-kip Plate Moment

L = 7.7 in Section Length

Z = 14.5 Plastic Section Modulus

M_P = 724.6 in-kip Plastic Moment

ϕM_n = 652.2 in-kip Factored Resistance

Calculated Moment vs Factored Resistance

330.81 in-kip $\leq$ 652 in-kip

Anchor Rods Are Adequate	**61.4%** ☑
Base Plate is Adequate	**50.7%** ☑

Monopole Spread Footing Calculation

ANSI/TIA-222-G-2

Factored Base Reactions:		**Footing Dimensions:**		**Concrete:**	
Moment:	3585 ft-kips	24 ft x 24 ft	7 ft Square Pier	f'c = 4000 psi	
Shear:	38 kips	x 2 ft thick	w/6 in Reveal	Steel fy = 60 ksi	
Axial:	36 kips	Bearing 8 ft B.G.	54.5 Yd3 Concrete	f = 0.75	
Soil Backfill	120 pcf	Ultimate Bearing:	6000 psf	Water Table	5.5

Foundation Weight

Weight of Pole	36.0 kips
Weight of Concrete	220.575 kips
Weight of Soil	379.44 kips
Bouyancy of Water	-89.9 kips
Total	546.2 kips

Overturning Resistance:

Overturning Moment (M_u)	3908 ft-kips	ft-kips + (1.05 kips x 0 ft)
Resisting Moment (R_s)	6553.908 ft-kips	546.159 kips x 24 ft / 2
$\phi \times R_s > M_u$	$M_{overturning} / f M_{resist}$	**79.5%** **OK**

Soil Bearing Pressure:

Eccentricity (e)	7.16 ft	3908 ft-kips / 546.159 kips
6(e)	42.9 ft >	24.0 ft 6e > 24
Maximum Soil Bearing	3423.6533 psf	Calculated across corners
Soil Overburden	-804 psf	Overburden - Bouyancy
Net Soil Bearing	2619.6533 psf	
Resisting Soil Bearing (R_s)	6000 psf	
Net Soil Bearing < $\phi \times R_s$	Net Bearing / f R_s	**58.2%** **OK**

Bending Moment in Pier:

Bending Moment	3832 ft-kips	3585 ft-kips + (38 kips x 6.5 ft)

Bending Moment in Footing:

Max Bending Moment	2185.7652 ft-kips	Σ Moments about pier face
Min. Footing Steel	0.52 in^2/ft	0.18%

EXHIBIT C

EBI Consulting
environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CTNH522A

Florida Tower Partners North Haven
50 Devine Street
North Haven, CT 06473

May 12, 2014

EBI PROJECT NUMBER: 62142824

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

May 12, 2014

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

Re: Emissions Values for Site: **CTNH522A Florida Tower Partners North Haven**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 50 Devine Street, North Haven, 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 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of μW/cm2 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 (μW/cm2). The general population exposure limit for the cellular band is 567 μW/cm2, and the general population exposure limit for the PCS and AWS bands is 1000 μW/cm2. 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 50 Devine Street, North Haven, 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 / 1980.000 MHz—to 1985.000 MHz) were considered for each sector of the proposed installation.
2) 2 UMTS channels (2110.000 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 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 **117 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 calculations were done with respect to uncontrolled / general public threshold limits.

Site ID	CTNH522A Florida Tower Partners North Haven
Site Addresss	50 Devine Street, North Haven, CT 06473
Site Type	Monopole

Sector 1

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	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	117	111	None	0	0	48.326044	1.410072	0.14101%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	117	111	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	117	111	1-5/8"	0	0	24.163022	0.705036	0.07050%
2B	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	117	111	1-5/8"	0	0	24.163022	0.705036	0.07050%
														Sector total Power Density Value:		0.282%	

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)	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	117	111	None	0	0	48.326044	1.410072	0.14101%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	117	111	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	117	111	1-5/8"	0	0	24.163022	0.705036	0.07050%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	117	111	1-5/8"	0	0	24.163022	0.705036	0.07050%
														Sector total Power Density Value:		0.282%	

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)	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	117	111	None	0	0	48.326044	1.410072	0.14101%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	117	111	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	117	111	1-5/8"	0	0	24.163022	0.705036	0.07050%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	117	111	1-5/8"	0	0	24.163022	0.705036	0.07050%
														Sector total Power Density Value:		0.282%	

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.846%
AT&T	13.430%
MetroPCS	8.880%
Verizon Wireless	24.900%
Total Site MPE %	**48.056%**

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environmental | engineering | due diligence

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 **0.846% (0.282% 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 **48.056%** 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 within the allowable 100% threshold standard per the federal government.

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