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Also admitted in Massachusetts

May 21, 2014

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification
651 Paddock Avenue, Meriden, Connecticut**

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains nine (9) antennas flush-mounted at the 107-foot level of the existing 120-foot tower at 651 Paddock Avenue in Meriden, Connecticut (the “Property”). The tower is owned by SBA. The Council approved Cellco’s use of this tower in 2008. Cellco now intends to modify its facility by removing three (3) antennas and replacing them with three (3) model DBXNH-6565A-VTM, 2100 MHz antennas, in the same cluster configuration at the same 107-foot level on the tower. Cellco also intends to install three (3) remote radio heads (“RRHs”) behind its new 2100 MHz antennas and one (1) HYBRIFLEX™ antenna cable inside the monopole. Included in Attachment 1 are specifications for Cellco’s replacement antennas, RRHs and HYBRIFLEX™ cable.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that 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 Manuel A. Santos, Mayor for the City of Meriden. A copy of this letter is also being sent to the First Assembly Church of God, the owner of the Property.

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



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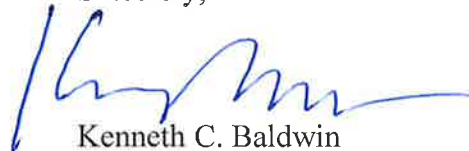
ROBINSON & COLE_{LLP}

Melanie A. Bachman
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1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's three (3) replacement antennas and RRHs will be located at the 107-foot level on the 120-foot tower.
2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included in Attachment 2.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support Cellco's proposed modifications. (See Structural Analysis included in Attachment 3).

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,



Kenneth C. Baldwin

Enclosures
Copy to:

Manuel A. Santos, Meriden Mayor
First Assembly Church of God
Sandy M. Carter



ATTACHMENT 1

Product Specifications



Andrew Solutions DBXNH-6565A-VTM

Andrew® DualPol® Dual Band Teletilt® Antenna, 698–896 MHz and 1710–2180 MHz, 65° horizontal beamwidth, RET compatible

- Ultra wideband capability for LTE 700 MHz and 850 MHz cellular technology
- Interleaved dipole technology providing for attractive, low wind load mechanical package
- The RF connectors are designed for IP67 rating and the radome for IP56 rating

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1710–1880	1850–1990	1920–2180
Gain, dBi	13.4	14.6	16.6	17.6	17.1
Beamwidth, Horizontal, degrees	68	65	65	60	60
Beamwidth, Vertical, degrees	19.0	17.0	7.5	7.0	6.6
Beam Tilt, degrees	0–15	0–15	0–8	0–8	0–8
USLS, typical, dB	16	16	15	16	15
Front-to-Back Ratio at 180°, dB	25	27	30	32	30
Front-to-Back Total Power at 180° ± 20°, dB	18	21	28	29	27
CPR at Boresight, dB	16	15	21	21	24
CPR at Sector, dB	9	6	10	10	7
Isolation, dB	30	28	30	30	30
Isolation, Intersystem, dB	35	33	40	40	40
VSWR Return Loss, dB	1.5:1 14.0	1.5:1 14.0	1.5:1 14.0	1.5:1 14.0	1.5:1 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150
Input Power per Port, maximum, watts	400	400	300	300	300
Polarization	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm
Lightning Protection	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground

Mechanical Specifications

Color Radome Material	Light gray Fiberglass, UV resistant
Connector Interface Location Quantity	7-16 DIN Female Bottom 4
Wind Loading, maximum	402.7 N @ 150 km/h 90.5 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h 149.8 mph

Dimensions

Depth	181.0 mm 7.1 in
Length	1293.00 mm 50.91 in
Width	301.00 mm 11.85 in
Net Weight	15.50 kg 34.17 lb

Remote Electrical Tilt (RET) Information

Model with Factory Installed AISG 1.1 Actuator DBXNH-6565A-R2M

Model with Factory Installed AISG 2.0 Actuator DBXNH-6565A-A2M

Regulatory Compliance/Certifications

Agency RoHS 2011/65/EU	Classification Compliant by Exemption
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Product Specifications

COMMSCOPE®

DBXNH-6565A-VTM



China RoHS SJ/T 11364-2006
ISO 9001:2008

Above Maximum Concentration Value (MCV)
Designed, manufactured and/or distributed under this quality management system



Included Products

DB380 — Pipe Mounting Kit for 2.4"-4.5" (60-115mm) OD round members on wide panel antennas. Includes 2 clamp sets and double nuts.

DB5083 — Downtilt Mounting Kit for 2.4"-4.5" (60 - 115 mm) OD round members. Includes a heavy-duty, galvanized steel downtilt mounting bracket assembly and associated hardware. This kit is compatible with the DB380 pipe mount kit for panel antennas that are equipped with two mounting brackets.

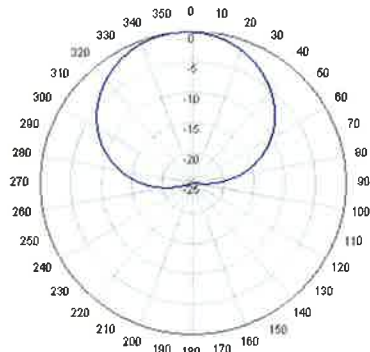
Product Specifications

DBXNH-6565A-VTM

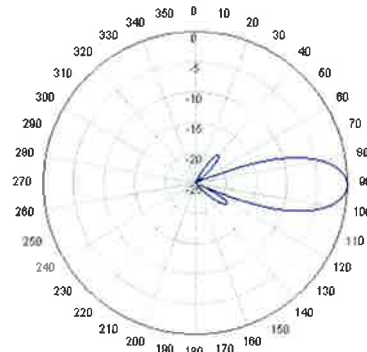


Horizontal Pattern

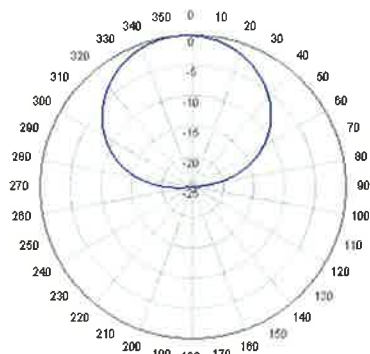
Vertical Pattern



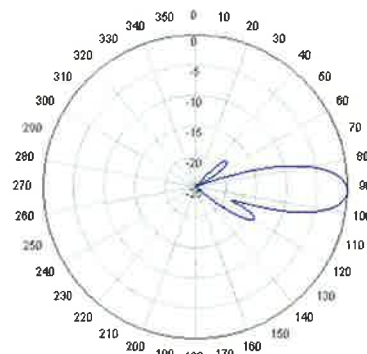
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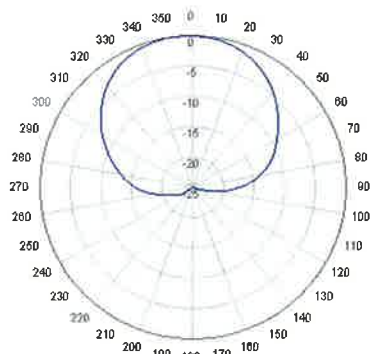
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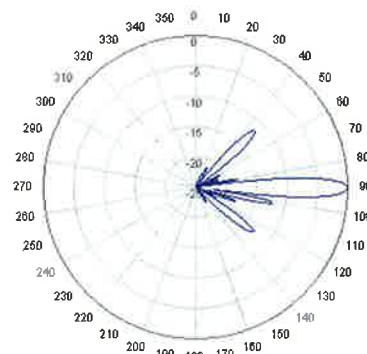
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Freq: 850 MHz, Tilt: 0°



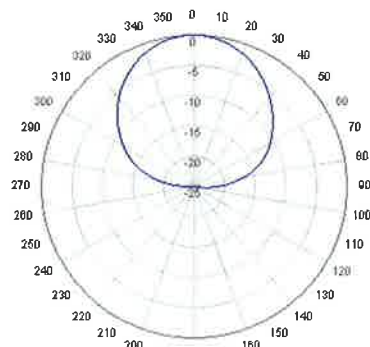
Freq: 1730 MHz, Tilt: 0°



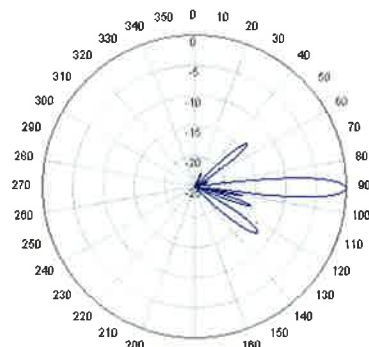
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Product Specifications

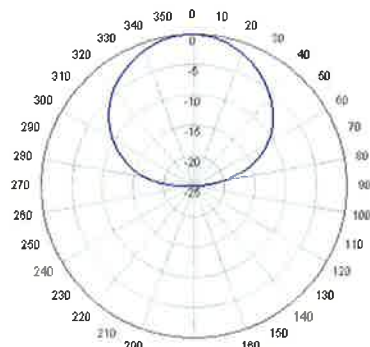
DBXNH-6565A-VTM



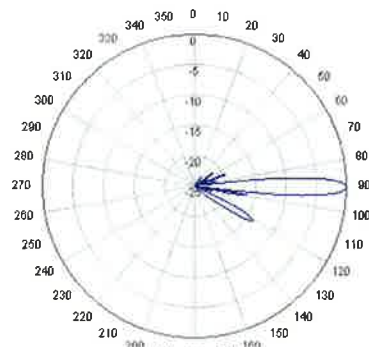
Freq: 1920 MHz, Tilt: 0°



Freq: 1920 MHz, Tilt: 0°



Freq: 2130 MHz, Tilt: 0°



Freq: 2130 MHz, Tilt: 0°

Alcatel-Lucent RRH2x40-AWS

REMOTE RADIO HEAD

The Alcatel-Lucent RRH2x40-AWS is a high-power, small form-factor Remote Radio Head (RRH) operating in the AWS frequency band (1700/2100MHz - 3GPP Band 4). The Alcatel-Lucent RRH2x40-AWS is designed with an eco-efficient approach, providing operators with the means to achieve high quality and capacity coverage with minimum site requirements.



A distributed eNodeB expands deployment options by using two components, a Base Band Unit (BBU) containing the digital assets and a separate RRH containing the radio-frequency (RF) elements. This modular design optimizes available space and allows the main components of an eNodeB to be installed separately, within the same site or several kilometres apart.

The Alcatel-Lucent RRH2x40-AWS is linked to the BBU by an optical-fiber connection carrying downlink and uplink digital radio signals along with operations, administration and maintenance (OA&M) information. The Alcatel-Lucent RRH2x40-AWS has two transmit RF paths, 40 W RF output power per transmit path, and is designed to manage up to four-way receive diversity. The device is ideally suited to support macro coverage, with multiple-input multiple-output (MIMO) 2x2 operation in up to 20 MHz of bandwidth.

The Alcatel-Lucent RRH2x40-AWS is designed to make available all the benefits of a distributed eNodeB, with excellent RF characteristics, with low

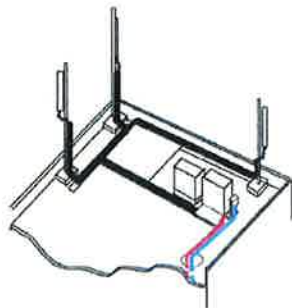
capital expenditures (CAPEX) and low operating expenditures (OPEX). The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment or require costly cranes to be employed, leaving coverage holes. However, many of these sites can host an Alcatel-Lucent RRH2x40-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

Fast, low-cost installation and deployment

The Alcatel-Lucent RRH2x40-AWS is a zero-footprint solution and operates noise-free, simplifying negotiations with site property owners and minimizing environmental impacts. Installation can easily be done by a single person because the Alcatel-Lucent RRH2x40-AWS is compact and weighs less than 20 kg (44 lb), eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day — a fraction of the time required for a traditional BTS.

Excellent RF performance

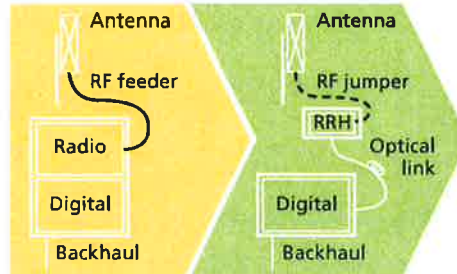
Because of its small size and weight, the Alcatel-Lucent RRH2x40-AWS can be installed close to the antenna. Operators can therefore locate the Alcatel-Lucent RRH2x40-AWS where RF engineering is deemed ideal, minimizing trade-offs between available sites and RF optimum sites. The RF feeder cost and installation costs are reduced or eliminated, and there is no need for a Tower Mounted Amplifier (TMA) because losses introduced by the RF feeder are greatly reduced. The Alcatel-Lucent RRH2x40-AWS provides more RF power while at the same time consuming less electricity.



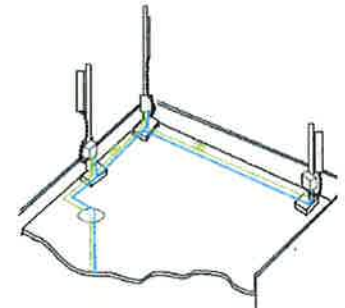
Macro

Features

- Zero-footprint deployment
- Easy installation, with a lightweight unit can be carried and set up by one person
- Optimized RF power, with flexible site selection and elimination of a TMA
- Convection-cooled (fanless)
- Noise-free
- Best-in-class power efficiency, with significantly reduced energy consumption



RRH for space-constrained cell sites



Distributed

Benefits

- Leverages existing real estate with lower site costs
- Reduces installation costs, with fewer installation materials and simplified logistics
- Decreases power costs and minimizes environmental impacts, with the potential for eco-sustainable power options
- Improves RF performance and adds flexibility to network planning

Technical specifications

Physical dimensions

- Height: 620 mm (24.4 in.)
- Width: 270 mm (10.63 in.)
- Depth: 170mm (6.7 in.)
- Weight (without mounting kit): less than 20 kg (44 lb)

Power

- Power supply: -48VDC

Operating environment

- Outdoor temperature range:
 - With solar load: -40°C to +50°C (-40°F to +122°F)
 - Without solar load: -40°C to +55°C (-40°F to +131°F)

- Passive convection cooling (no fans)
- Enclosure protection
 - IP65 (International Protection rating)

RF characteristics

- Frequency band: 1700/2100 MHz (AWS); 3GPP Band 4
- Bandwidth: up to 20 MHz
- RF output power at antenna port: 40 W nominal RF power for each Tx port
- Rx diversity: 2-way or 4-way with optional Rx Diversity module
- Noise figure: below 2.0 dB typical
- Antenna Line Device features
 - TMA and Remote electrical tilt (RET) support via AISG v2.0

Optical characteristics

Type/number of fibers

- Single-mode variant
 - One Single Mode Single Fiber per RRH2x, carrying UL and DL using CWDM
 - Single mode dual fiber (SM/DF)
- Multi-mode variant
 - Two Multi-mode fibers per RRH2x: one carrying UL, the other carrying DL

Optical fiber length

- Up to 500 m (0.31 mi), using MM fiber
- Up to 20 km (12.43 mi), using SM fiber

Digital Ports and Alarms

- Two optical ports to support daisy-chaining
- Six external alarms

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HYBRIFLEX™ RRH Hybrid Feeder Cabling Solution, 1-5/8", Single-Mode Fiber

Product Description

RFS' HYBRIFLEX Remote Radio Head (RRH) hybrid feeder cabling solution combines optical fiber and DC power for RRHs in a single lightweight aluminum corrugated cable, making it the world's most innovative solution for RRH deployments.

It was developed to reduce installation complexity and costs at Cellular sites. HYBRIFLEX allows mobile operators deploying an RRH architecture to standardize the RRH installation process and eliminate the need for and cost of cable grounding. HYBRIFLEX combines optical fiber (multi-mode or single-mode) and power in a single corrugated cable. It eliminates the need for junction boxes and can connect multiple RRHs with a single feeder. Standard RFS CELLFLEX® accessories can be used with HYBRIFLEX cable. Both pre-connectorized and on-site options are available.

Features/Benefits

- Aluminum corrugated armor with outstanding bending characteristics - minimizes installation time and enables mechanical protection and shielding
- Same accessories as 1 5/8" coaxial cable
- Outer conductor grounding - Eliminates typical grounding requirements and saves on installation costs
- Lightweight solution and compact design - Decreases tower loading
- Robust cabling - Eliminates need for expensive cable trays and ducts
- Installation of tight bundled fiber optic cable pairs directly to the RRH - Reduces CAPEX and wind load by eliminating need for interconnection
- Optical fiber and power cables housed in single corrugated cable - Saves CAPEX by standardizing RRH cable installation and reducing installation requirements
- Outdoor polyethylene jacket - Ensures long-lasting cable protection



Figure 1: HYBRIFLEX Series

Technical Specifications

Outer Conductor Armor	Corrugated Aluminum	[mm (in)]	46.5 (1.83)
Jacket	Polyethylene, PE	[mm (in)]	50.3 (1.98)
UV-Protection	Individual and External Jacket		Yes
Mechanical Properties			
Weight, Approximate		[kg/m (lb/ft)]	1.9 (1.30)
Minimum Bending Radius, Single Bending		[mm (in)]	200 (8)
Minimum Bending Radius, Repeated Bending		[mm (in)]	500 (20)
Recommended/Maximum Clamp Spacing		[m (ft)]	1.0 / 1.2 (3.25 / 4.0)
Electrical Properties			
DC-Resistance Outer Conductor Armor		[Ω/km (Ω/1000ft)]	0.68 (0.205)
DC-Resistance Power Cable, 8 4mm ² (8AWG)		[Ω/km (Ω/1000ft)]	2.1 (0.307)
Other Properties			
Version			Single-mode OM3
Quantity, Fiber Count			16 (8 pairs)
Core/Clad		[μm]	50/125
Primary Coating (Acrylate)		[μm]	245
Buffer Diameter, Nominal		[μm]	900
Secondary Protection, Jacket, Nominal		[mm (in)]	2.0 (0.08)
Minimum Bending Radius		[mm (in)]	104 (4.1)
Insertion Loss @ wavelength 850nm		dB/km	3.0
Insertion Loss @ wavelength 1310nm		dB/km	1.0
Standards (Meets or exceeds)			UL34-V0 UL1666 RoHS Compliant
Optical Cable Properties			
Size (Power)		[mm (AWG)]	8.4 (8)
Quantity, Wire Count (Power)			16 (8 pairs)
Size (Alarm)		[mm (AWG)]	0.8 (18)
Quantity, Wire Count (Alarm)			4 (2 pairs)
Type			UV protected
Strands			19
Primary Jacket Diameter, Nominal		[mm (in)]	6.8 (0.27)
Standards (Meets or exceeds)			NFPA 130, IEC 60332-3 UL Type XHHW-2, UL 44 UL-LS Limited Smoke, UL VW-1 IEEE-383 (1974), IEEE1202/FT4 RoHS Compliant
Operating Range			
Installation Temperature		[°C (°F)]	-40 to +65 (-40 to 149)
Operation Temperature		[°C (°F)]	-40 to +65 (-40 to 149)

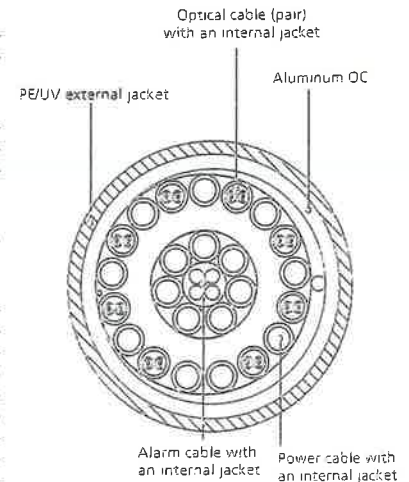


Figure 2: Construction Detail

All information contained in the present datasheet is subject to confirmation at time of ordering.

ATTACHMENT 2

General Power Density

Site Name: MERIDEN SE, CT
 Cumulative Power Density

Operator	Operating Frequency (MHz)	Number of Trans.	ERP Per Trans. (watts)	Total ERP (watts)	Distance to Target (feet)	Calculated Power Density (mW/cm ²)	Maximum Permissible Exposure* (mW/cm ²)	Fraction of MPE (%)
VZW PCS	1970	7	466.9388	3268.572	107	0.1027	1.0	10.27%
VZW Cellular	869	9	419.8469	3778.622	107	0.1187	0.5793333333	20.49%
VZW AWS	2145	1	1486.141	1486.141	107	0.0467	1.0	4.67%
VZW 700	698	1	598.0259	598.0259	107	0.0188	0.4653333333	4.04%

Total Percentage of Maximum Permissible Exposure

39.46%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz

mW/cm² = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used.

ATTACHMENT 3



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

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

119' Monopole Tower

**SBA Site Name: Meriden
SBA Site ID: CT13069-A-00
Verizon Site Name: Meriden SE**

FDH Project Number 1462J31400

Analysis Results

Tower Components	76.6%	Sufficient
Foundation	92.4%	Sufficient

Prepared By:

Jarel Duncan

Jarel Duncan, EI
Project Engineer

Reviewed By:

Bradley R. Newman

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



April 15, 2014

Prepared pursuant to TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures and the 2005 Connecticut State 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 monopole located in Meriden, 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 State Building Code (CSBC)*. Information pertaining to the existing/proposed antenna loading, current tower geometry, geotechnical data, and member sizes was obtained from:

- Sabre Communications Corporation (Job No. 08-10201) original design drawings dated November 9, 2007
- Sabre Communications Corporation (Job No. 08-10201) Stamped Permit Drawings dated November 7, 2007
- FDH, Inc. (Job No. 08-07134T) TIA Inspection Report dated October 7, 2008
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards and the *2005 CSBC* 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 Verizon in place at 107 ft, the tower meets the requirements of the *TIA/EIA-222-F* standards and the *2005 CSBC* provided the **Recommendations** listed below are satisfied. Furthermore, provided the foundation was designed and constructed to support the original design reactions (see Sabre Job No. 08-10201), 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 the *2005 CSBC* are met with the existing and proposed loading in place, we have the following recommendation:

1. Proposed coax should be installed inside the monopole's shaft.
2. The existing diplexers should be installed directly behind the existing/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
117	(3) Ericsson Air B2A B4P (3) Ericsson KRY 112 144 TMAs	(12) 1-5/8" (1) 1-5/8" Fiber	T-Mobile	117	(3) 7' x 2.39" Pipe Mounts
107	(3) Antel BXA-70063-6BF (3) Antel BXA-80063-6BF (3) Antel BXA-171063-12BF (6) RFS FD9R6004/2C-3L Diplexers	(12) 1-5/8"	Verizon	107	(1) Site Pro Ring Mount (Part # 801068)
97	(3) Argus LLPX310R (2) Andrew VHLP2-18 Dishes (1) Andrew VHLP1-23 Dish (3) Samsung 2.5 Ghz RRHs	(9) 5/16" (3) 1/2"	Clearwire	97	(3) T-Arms (CaAa = 2.78 ft ² each)

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

Proposed Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
107	(3) Antel BXA-171063-12BF (3) Antel BXA-80063-6BF (3) Commscope DBXNH-6565B-VTM (3) Alcatel Lucent RRH 2x40 AWS RRHs (6) RFS FD9R6004/2C-3L Diplexers (1) RFS DB-T1-6Z-8AB-0Z Distribution Box	(12) 1-5/8" (1) 1-5/8" Hybriflex	Verizon	107	(1) Site Pro Ring Mount (Part # 801068)

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
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. **Table 5** displays the maximum antenna rotations at service wind speeds (dishes only).

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	119 - 98.75	Pole	TP28.14x24.86x0.1875	8.8	Pass
L2	98.75 - 48.75	Pole	TP35.87x27.1981x0.25	45.4	Pass
L3	48.75 - 0	Pole	TP43.26x34.6406x0.25	76.6	Pass
		Anchor Bolts	(8) 2.25" Ø w/ BC = 49.125" Ø	51.6	Pass
		Base Plate	47" square PL x 2.25" thk.	64.1	Pass

*Capacities include 1/3 allowable stress increase for wind per TIA/EIA-222-F Standards.

Table 4 - Maximum Base Reactions

Base Reactions	Current Analysis (TIA/EIA-222-F)	Original Design (ANSI/TIA-222-G)
Axial	16 k	19 k
Shear	14 k	27 k
Moment	1,114 k-ft	1,627 k-ft

*Current analysis reactions are within an allowable factor of 1.35 per the ANSI/TIA-222-G standard when the original design reactions are based on an allowable stress design.

Table 5 - Maximum Antenna Rotations at Service Wind Speeds (Dishes Only)

Centerline Elevation (ft)	Antenna	Tilt (deg)*	Twist (deg)*
97	(2) Andrew VHLP2-18 Dishes (1) Andrew VHLP1-23 Dish	0.9870	0.0005

*Allowable tilt and twist values to be reviewed by the carrier.

GENERAL COMMENTS

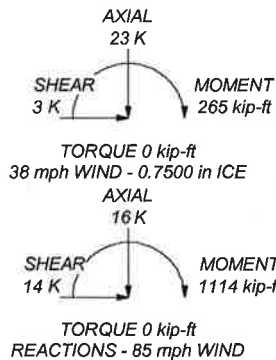
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading 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	1	2	3	4.5	5.6	11.2
Length (ft)	20.25	53.50	53.25			
Number of Sides	18	18	18			
Thickness (in)	0.1875	0.2500	0.2500			
Socket Length (ft)	3.50	4.50				
Top Dia (in)	24.8600	27.1981	34.6406			
Bot Dia (in)	28.1400	35.8700	43.2800			
Grade				A572-65		
Weight (K)	1.1	4.5	5.6			



DESIGNED APPURTENANCE LOADING


TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	119	RRH2X40-AWS	107
AIR 21 B2A/B4P w/Mount Pipe	117	RRH2X40-AWS	107
AIR 21 B2A/B4P w/Mount Pipe	117	(2) FD9R6004/2C-3L Diplexer	107
AIR 21 B2A/B4P w/Mount Pipe	117	(2) FD9R6004/2C-3L Diplexer	107
KRY 112 144 TMA	117	(2) FD9R6004/2C-3L Diplexer	107
KRY 112 144 TMA	117	DB-T1-6Z-8AB-0Z Distribution Box	107
KRY 112 144 TMA	117	(1) Site Pro Ring Mount (P/N 801068)	107
BXA-80063/6BF w/ Mount Pipe	107	LLPX310R w/ Mount Pipe	97
BXA-80063/6BF w/ Mount Pipe	107	LLPX310R w/ Mount Pipe	97
BXA-80063/6BF w/ Mount Pipe	107	LLPX310R w/ Mount Pipe	97
BXA-171063/12BF w/ Mount Pipe	107	2.5 Ghx RRH	97
BXA-171063/12BF w/ Mount Pipe	107	2.5 Ghx RRH	97
BXA-171063/12BF w/ Mount Pipe	107	2.5 Ghx RRH	97
DBXNH-6565B-VTM w/ Mount Pipe	107	(3) T-Arms	97
DBXNH-6565B-VTM w/ Mount Pipe	107	VHLP2-18	97
DBXNH-6565B-VTM w/ Mount Pipe	107	VHLP2-18	97
RRH2X40-AWS	107	VHLP1-23	97

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 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: 76.6%

 Tower Analysis	FDH Engineering, Inc. 6521 Meridien Drive Raleigh, NC 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	Job: MERIDEN - CT13069-A-00 Project: 1462J31400	Client: SBA Network Services, Inc. Code: TIA/EIA-222-F Path:	Drawn by: Jarel Duncan Date: 04/15/14	App'd: Scale: NTS Dwg No. E-1
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