

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE: :
: :
A PETITION OF CELLCO PARTNERSHIP : PETITION NO. _____
D/B/A VERIZON WIRELESS FOR A :
DECLARATORY RULING ON THE NEED TO :
OBTAIN A SITING COUNCIL CERTIFICATE :
FOR THE INSTALLATION OF A SMALL :
CELL TELECOMMUNICATIONS FACILITY :
AT 934 BOSTON POST ROAD, GUILFORD, :
CONNECTICUT : JULY 15, 2015

PETITION FOR A DECLARATORY RULING:
INSTALLATION HAVING NO
SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT

I. Introduction

Pursuant to Sections 16-50j-38 and 16-50j-39 of the Regulations of Connecticut State Agencies (“R.C.S.A.”), Cellco Partnership d/b/a Verizon Wireless (“Cellco”) hereby petitions the Connecticut Siting Council (the “Council”) for a declaratory ruling (“Petition”) that no Certificate of Environmental Compatibility and Public Need (“Certificate”) is required under Section 16-50k(a) of the Connecticut General Statutes (“C.G.S.”) to install a new “small cell” telecommunications facility on the roof of a commercial building at 934 Boston Post Road in Guilford, Connecticut (the “Property”). The Property is owned by Sachem Square, LLC. Cellco has designated this site as its “Guilford Center SC Facility”.

II. Factual Background

The Property is a 1.56-acre parcel in Guilford’s Post Road Village (PV) zone district and is surrounded by commercial uses along Boston Post Road and residential uses to the west along State Street. (See Attachment 1 – Site Vicinity Map and Site Schematic (Aerial Photograph)).

Cellco is licensed to provide wireless telecommunications services in the 850 MHz, 1900 MHz, 700 MHz and 2100 MHz frequency ranges in Guilford and throughout the State of Connecticut. Initially, the proposed Guilford Center SC Facility is proposed to provide wireless service in Cellco's 2100 MHz frequency range only. As depicted on the coverage maps included in Attachment 2, the Guilford Center SC Facility will provide 2100 MHz service to existing gaps along portions of Boston Post Road, Route 77 and I-95 in Guilford. The Guilford Center SC Facility will also provide capacity relief to Cellco's network in commercial and residential areas along Boston Post Road (Route 1) in Guilford.

III. Proposed "Small Cell" Facility

The proposed Guilford Center SC Facility would consist of a small tower attached to the roof of the building. The tower would support a single, canister-type "small cell" antenna, remote radio head (RRH) and electric distribution box ("EDB"). The tower, canister antenna, RRH and EDB would be concealed inside an RF transparent cupola structure. The cupola will extend to an overall height of 33 feet above ground level, approximately 10'-2" above the height of the peak of the roof of the building. Cellco's radio equipment will be located on the ground within an 8-foot by 6-foot leased area at the southeast corner of the building. The equipment pad will be surrounded by an 6-foot tall vinyl fence. Project Plans for the proposed Guilford Center SC Facility are included in Attachment 3. Specifications for Cellco's "small cell" antenna and RRH are included in Attachment 4.

IV. Discussion

A. The Proposed Facility Modifications Will Not Have A Substantial Adverse Environmental Effect

The Public Utility Environmental Standards Act (the "Act"), C.G.S. § 16-50g et seq., provides for the orderly and environmentally compatible development of telecommunications

towers in the state to avoid “a significant impact on the environment and ecology of the State of Connecticut.” C.G.S. § 16-50g. To achieve these goals, the Act established the Council, and requires a Certificate of Environmental Compatibility and Public Need for the construction of cellular telecommunication towers “that may, as determined by the council, have a substantial adverse environmental effect”. C.G.S. § 16-50k(a).

1. Physical Environmental Effects

Cellco respectfully submits that the installation of a “small cell” antenna, RRH and EDB on a tower attached to the roof of the building and radio equipment on the ground, will not involve a significant alteration in the physical and environmental characteristics of the Property. The installation of a small concrete equipment pad and security fence will result in minor ground disturbance adjacent to the building, in a portion of the Property previously disturbed. Access to the “small cell” facility equipment would extend from Boston Post Road over the existing paved driveway and parking area on the Property.

2. Visual Effects

The visibility of the proposed “small cell” installation would be limited to locations along Boston Post Road and the adjacent commercial parcel to the south. Views may also exist, through existing trees, from the west along State Road. The planned concealment structure (cupola) will appear as an original design element of the building. Cellco does not, therefore, expect that views of the small cell installation will have any adverse impact on aesthetics in the area. *See* Limited Visual Assessment and Photo-Simulations included in Attachment 5.

3. FCC Compliance

Radio frequency (“RF”) emissions from the proposed installation will be far below the standards adopted by the Federal Communications Commission (“FCC”). Included in

Attachment 6 is a General Power Density table including a worst-case calculation of RF emissions from the proposed facility. This calculation demonstrates that the proposed “small cell” facility will operate well within the RF emission standards adopted by the FCC.

4. FAA Summary Report

Included in Attachment 7 is a Federal Airways & Airspace Summary Report verifying that the small cell facility tower and concealment structure at the Property would not constitute an obstruction or hazard to air navigation and that notification to the FAA is not required.

B. Notice to Town, Property Owner and Abutting Landowners

On July 15, 2015, a copy of this Petition was sent to Guilford’s First Selectman Joseph Mazza, Jr. and Sachem Square, LLC, the owner of the Property. Included in Attachment 8 are copies of the letters sent to Mr. Mazza and Sachem Square, LLC. A copy of this Petition was also sent to the owners of land that abuts the Property. A sample abutter’s letter and the list of those abutting landowners who were sent copies of the Petition are included in Attachment 9.

V. Conclusion

Based on the information provided above, Cellco respectfully requests that the Council issue a determination in the form of a declaratory ruling that the installation of a concealed “small cell” tower and related appurtenances on the roof of the building at the Property will not have a substantial adverse environmental effect and does not require the issuance of a Certificate of Environmental Compatibility and Public Need pursuant to § 16-50k of the General Statutes.

Respectfully submitted,

CELLCO PARTNERSHIP d/b/a VERIZON
WIRELESS

By  _____

Kenneth C. Baldwin, Esq.

Robinson & Cole LLP

280 Trumbull Street

Hartford, CT 06103-3597

(860) 275-8200

Its Attorneys

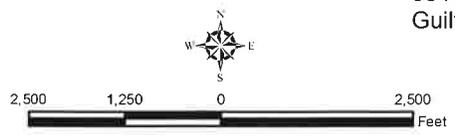
ATTACHMENT 1



- Legend**
- ✕ Proposed Verizon Wireless Small Cell Facility
 - Surrounding Verizon Wireless Facilities

Site Vicinity Map
 Proposed Small Cell Facility
 Guilford Center SC CT
 934 Boston Post Road
 Guilford, Connecticut

Base Map Source: 2012 Aerial Photograph (CTECO)
 Map Scale: 1 inch = 2,500 feet
 Map Date: June 2015





Proposed RF Transparent Cupola Atop Existing Building to House Proposed Antenna and Associated Appurtenances

Proposed 8'x6' Equipment Lease Area

Existing Electrical Room

Sources: Esri, DigitalGlobe, GeoEye, iSat, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, Swisstopo, and the GIS User Community

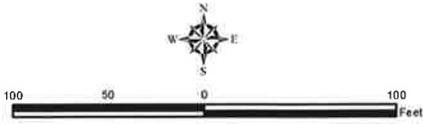
Legend

-  Approximate Subject Property Boundary
-  Proposed Facility Layout
- Approximate Parcel Boundary (CTDEEP GIS)

Site Schematic

Proposed Small Cell Facility
 Guilford Center SC CT
 934 Boston Post Road
 Guilford, Connecticut

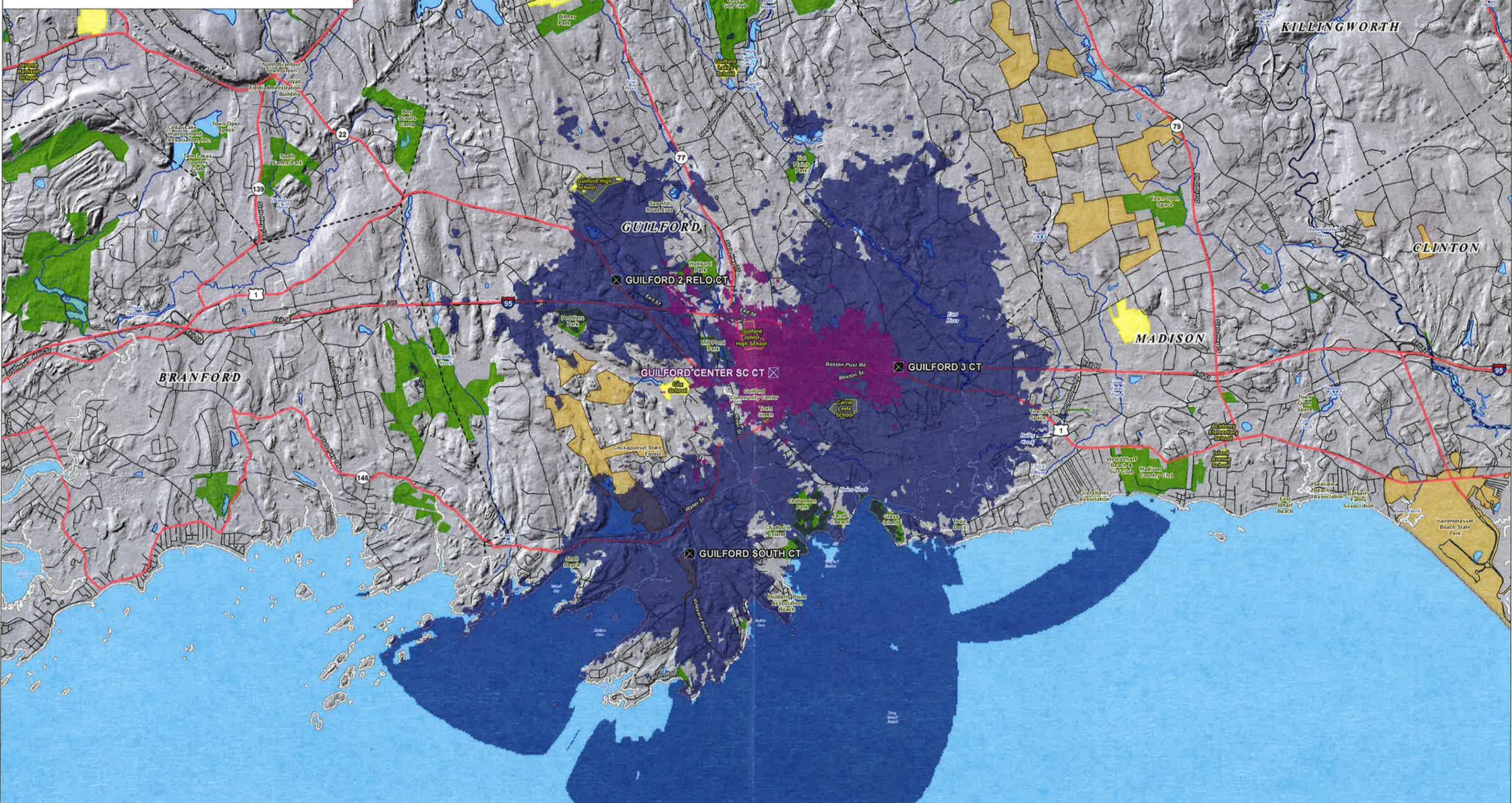
Map Notes:
 Base Map Source: ESRI World Imagery; Microsoft, 3/28/2011
 Map Scale: 1 inch = 100 feet
 Map Date: June 2015



ATTACHMENT 2

**Proposed Verizon Wireless 2100 MHz Coverage
Guilford, Connecticut and Surrounding Area
(*Map Scale is 1:25,000)**

Coverage is depicted at a signal threshold of 120 dB Operational Path Loss



Legend

- Proposed Verizon Wireless Small Cell Facility
- Existing Verizon Wireless Facilities
- Existing Surrounding Wireless 2100 MHz Coverage
- Proposed Facility Wireless 2100 MHz Coverage
- Municipal and Private Open Space
- School
- State Forest/Park
- Open Water
- Town Line
- Major Route

Map Notes
This map was prepared at a map scale of 1:25,000 at 24" by 36" layout. Report copies have been reduced to 11" x 17". Refer to graphic scale. Open Space, Schools, and State Forest/Parks are depicted using available State GIS data, which may be outdated in some areas. Base map: CTECO Hillshade (2009)

0 0.5 1 Miles

© 2010 Verizon Wireless. All rights reserved. C:\GIS\Projects\2100MHz\Map_Scale_1:25,000.mxd

ATTACHMENT 3

SURVEY NOTES

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300B-1 THRU 20-300B-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES - MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPT. 28, 1996. IT IS AN IMPROVEMENT LOCATION SURVEY AND IS BASED UPON A DEPENDENT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS A-2 SURVEY AND IS INTENDED TO BE USED TO DEPICT EXISTING IMPROVEMENTS.

NORTH ORIENTATION REFERS TO CONNECTICUT GRID SYSTEM NAD 83.

PARCEL OWNER OF RECORD: SACHEM SQUARE LLC
934 BOSTON POST ROAD
GUILFORD, CT 06437

PARCEL AREA = 1.6± ACRES.

PARCEL IS IN THE PV ZONE

MAP-BLOCK-Lot 04/70/23

NOT ALL IMPROVEMENTS SHOWN.

SURVEY NOTES

REFERENCE IS MADE TO THE FOLLOWING MAPS:

1. PROPERTY/ALTA/ASCM LAND TITLE SURVEY PREPARED FOR SHORELINE PLAZA LLC(LEASEHOLD INTEREST), SCALE 1"=60', DATED MARCH 4, 2011, REV MARCH 21, 2011. PREPARED BY CONKLIN & SORAKA, LLC.
2. RIGHT OF WAY MAP, TOWN OF GUILFORD, BOSTON POST ROAD, FROM RIVER STREET EASTERLY ABOUT 8,400 FEET, ROUT U.S.1, NUMBER 866, SHEET 1 & 2. SCALE 1"=40', DATED MARCH, 29, 1930. REVISED THROUGH JULY 11, 1966, BY CONNECTICUT STATE HIGHWAY DEPARTMENT
3. MAP SHOWING PROPERTY OF RUSSELL S. WHITE, STATE STREET, GUILFORD, CT. SCALE 1"=20', DATED JANUARY, 1974. PREPARED BY BENJAMIN A. SHERRY

SYMBOLS LEGEND

□	Monument
◇	Utility Pole
○	Post
⊙	Manhole
⊕	Monitoring Well
---	Property Line
---	Right of Way Line
---CATV---	TV Line (Buried)
---T---	Telephone Line (Buried)
---OHE---	Eclectic Overhead Wire

N/F
NHL2 LLC
961 BOSTON POST ROAD
MA: 2442 FLAMINGO ROAD
PALM BEACH GARDEN, FL 33410

N/F
WILLIAM PINCHBECK INC.
929 BOSTON POST ROAD
MA: 929 BOSTON POST ROAD
GUILFORD, CT 06437

N/F
RUSSO REAL ESTATE LLC
985 BOSTON POST ROAD
MA: PO BOX 570
NORTH BRANFORD, CT 06471

N/F
FLEET NATIONAL BANK OF MASSACHUSETTS
916 BOSTON POST ROAD
MA: 101 NORTH TRYON STREET
CHARLOTTE, NC 28255

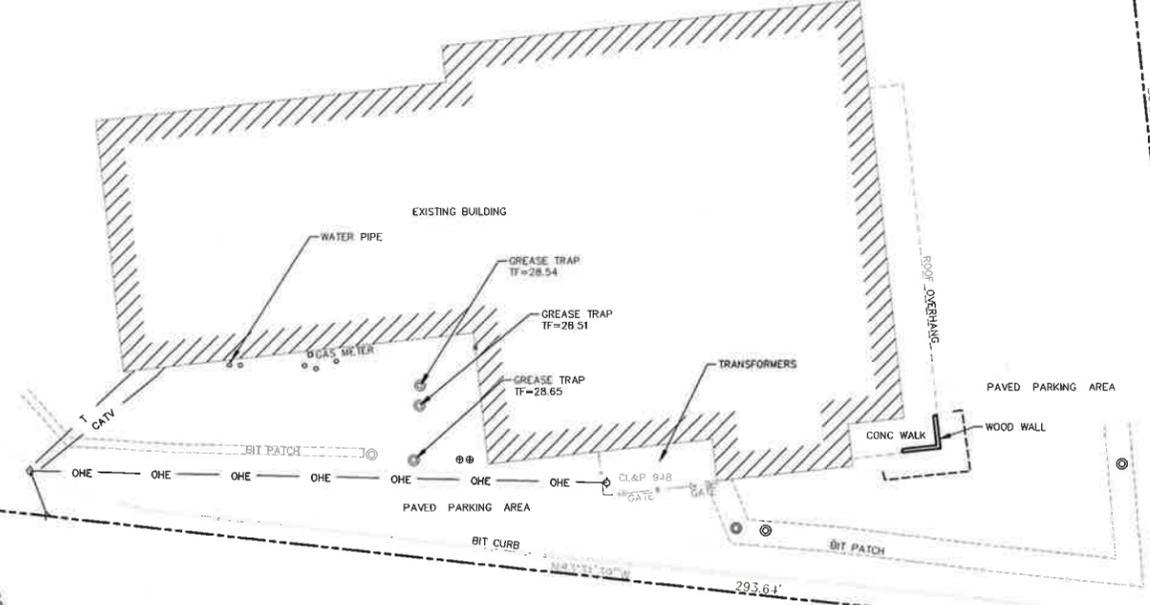
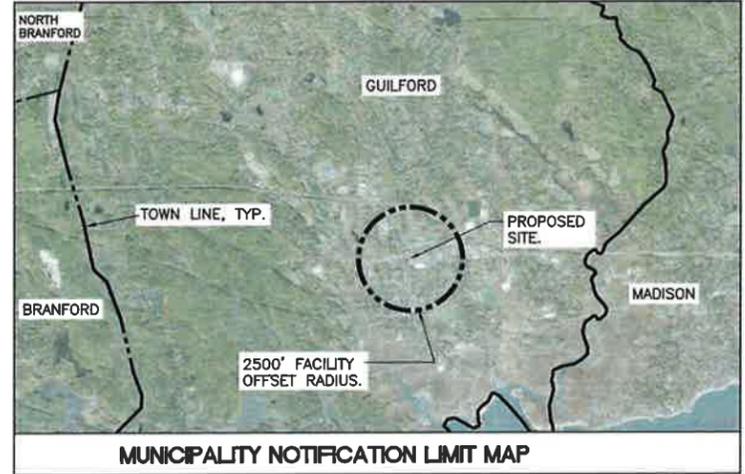
BOSTON POST ROAD U.S. ROUTE 1

N/F
ONE HUNDRED FIFTEEN STATE SQUARE REALTY CO.
115 STATE STREET
MA: 27 FERRY ROAD
CHESTER, CT 06412

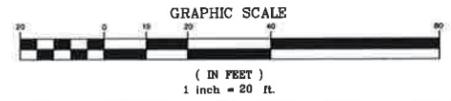
N/F
SACHEM SQUARE, LLC
934 BOSTON POST ROAD
MA: P.O. BOX 381
GUILFORD, CT 06437

N/F
CASA BLANCA PROPERTIES LLC
107 STATE ST
GUILFORD, CT 06437

N/F
ARTHUR G. FONICELLO ET AL, ESTATE OF
RAYMOND P. FC/O NEW YORK URBAN &
GUILFORD PLAZA ASSOCIATES LTD
830 BOSTON POST ROAD
MA: 800 CENTRAL BOULEVARD STE D
CARLSTADT, NJ 07072



1 SITE SURVEY PLAN
C-1 SCALE: 1" = 20'



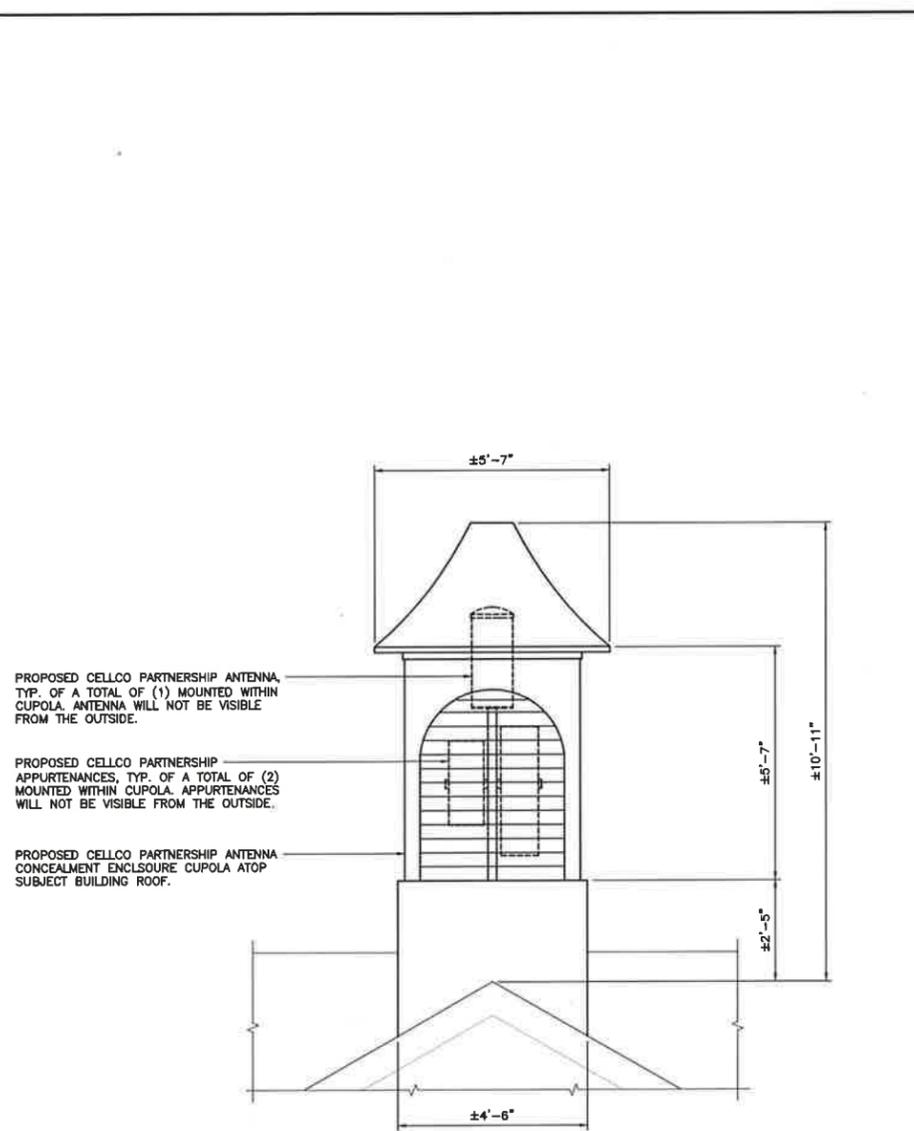
PROFESSIONAL ENGINEER SEAL	
DATE	07/09/15
SCALE	AS NOTED
JOB NO.	14287.000
SITE SURVEY PLAN	
C-1	
Sheet No. 2 of 3	

ISSUED FOR CSC	CSC	ISSUED FOR CSC	CSC
DRAWN BY	CH'D BY	DESCRIPTION	
07/13/15	DMD		
07/10/15	CTP		
0			
REV.	DATE	DRAWN BY	CHK'D BY

Cellco Partnership d/b/a Verizon Wireless
WIRELESS COMMUNICATIONS FACILITY
GUILFORD CTR SC
934 BOSTON POST ROAD
GUILFORD, CT 06437

CENTEK Engineering
Communications Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership
d.b.a. Verizon Wireless

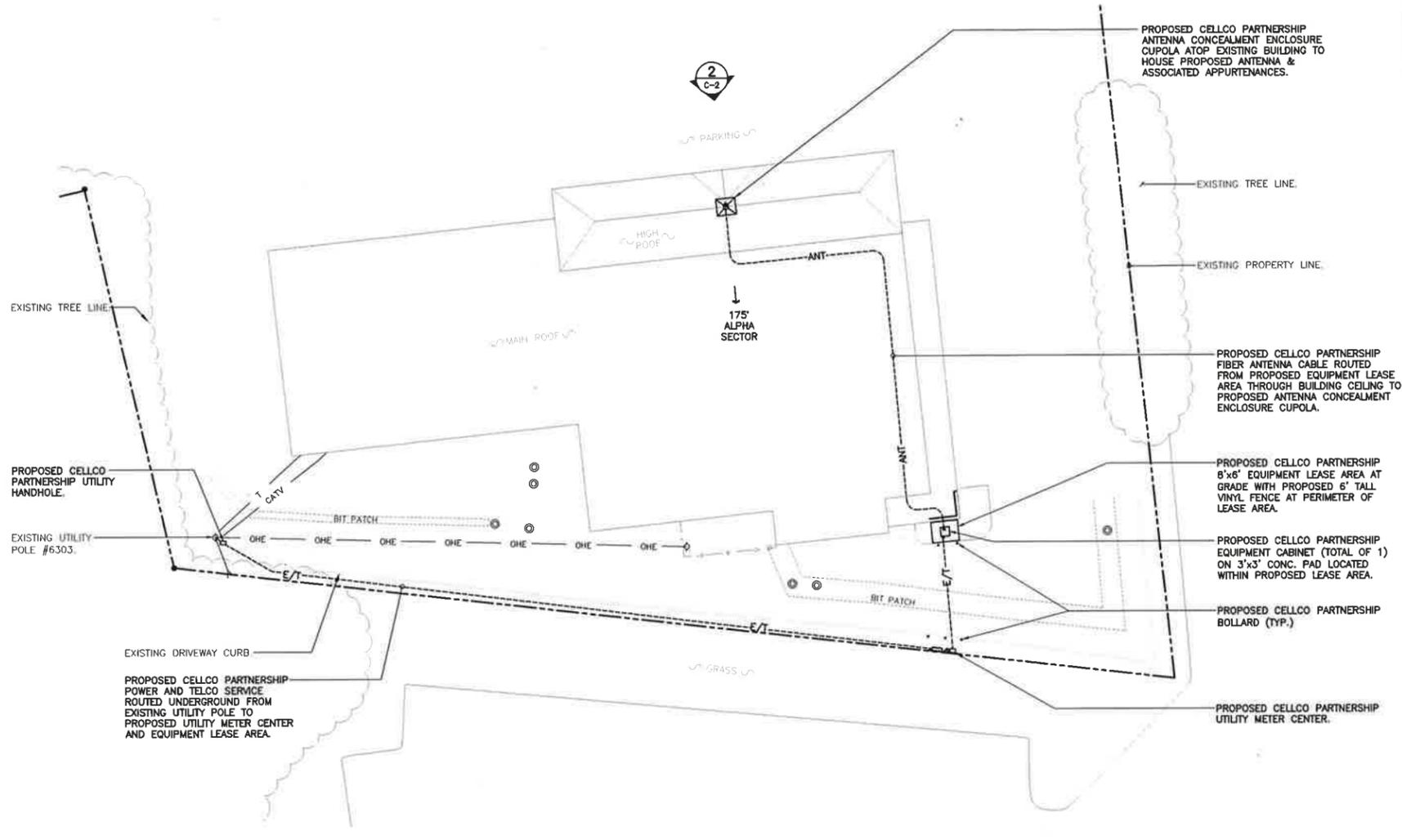
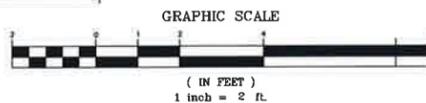


PROPOSED CELCO PARTNERSHIP ANTENNA, TYP. OF A TOTAL OF (1) MOUNTED WITHIN CUPOLA. ANTENNA WILL NOT BE VISIBLE FROM THE OUTSIDE.

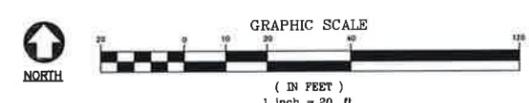
PROPOSED CELCO PARTNERSHIP APPURTENANCES, TYP. OF A TOTAL OF (2) MOUNTED WITHIN CUPOLA. APPURTENANCES WILL NOT BE VISIBLE FROM THE OUTSIDE.

PROPOSED CELCO PARTNERSHIP ANTENNA CONCEALMENT ENCLOSURE CUPOLA ATOP SUBJECT BUILDING ROOF.

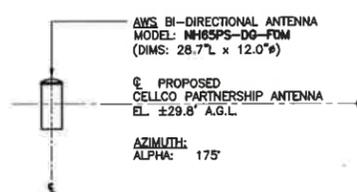
3 CUPOLA ELEVATION
C-2 SCALE: 1/2" = 1'



1 SITE PLAN - PROPOSED
C-2 SCALE: 1" = 20'



PROPERTY LINE REFERENCE NOTE:
PROPERTY LINES, STRUCTURES AND SITE FEATURES DEPICTED HEREIN ARE BASED ON SITE SURVEY AS PREPARED FOR CENTEK ENGINEERING BY MARTINEZ COUCH AND ASSOCIATES (JUNE 2015).

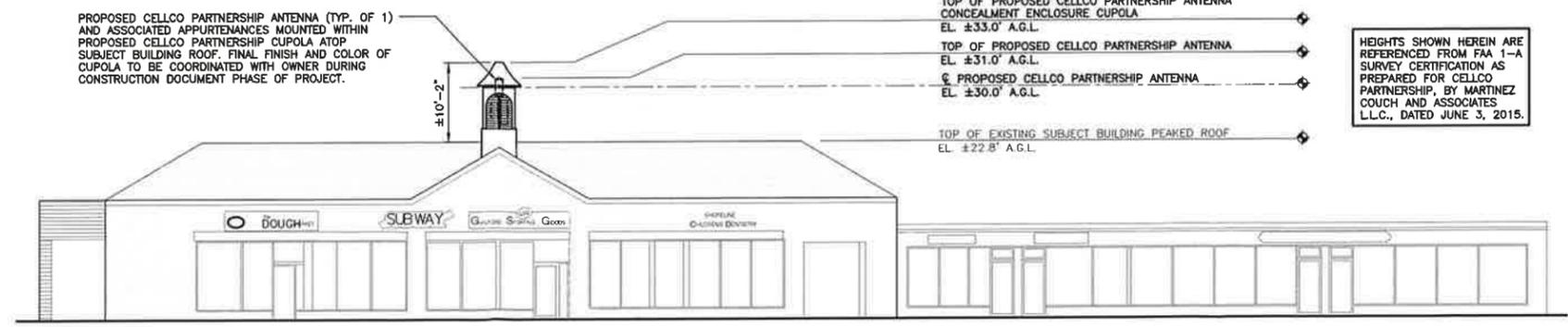


REMOTE RADIO HEAD MOUNTING NOTE

- AWS RRH MODEL: ALJ_RRH_2X60-AWS (DIMS: 36.7" L x 10.6" W x 5.8" D) (TOTAL OF 1)
- AWS MAIN DISTRIBUTION BOX (MODEL: DB-T1-6Z-8AB-0Z) (DIMS: 24.0" L x 24.0" W x 10.0" D) (TYP. OF 1)

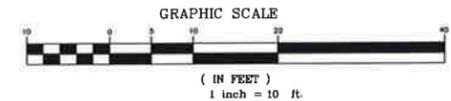
MOUNTED TO WITHIN ANTENNA CONCEALMENT REPLACEMENT CUPOLA. SEE PLAN AND ELEVATION FOR LOCATION.

4 TYP. ANTENNA MOUNTING CONFIGURATION
C-2 NOT TO SCALE



HEIGHTS SHOWN HEREIN ARE REFERENCED FROM FAA 1-A SURVEY CERTIFICATION AS PREPARED FOR CELCO PARTNERSHIP, BY MARTINEZ COUCH AND ASSOCIATES L.L.C., DATED JUNE 3, 2015.

2 NORTH ELEVATION - PROPOSED
C-2 SCALE: 1" = 10'



PROFESSIONAL ENGINEER SEAL	ISSUED FOR CSC	CFC	DMD	CTP	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
	1	07/13/15	DMD	CTP	07/10/15			CLIENT REVIEW
	0							

Cellco Partnership
d.b.a. Verizon Wireless

CENTEK ENGINEERING
Centek on Solutions
(203) 868-0880
(203) 868-8887 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless
WIRELESS COMMUNICATIONS FACILITY
GUILFORD CTR SC
934 BOSTON POST ROAD
GUILFORD, CT 06437

DATE: 07/09/15
SCALE: AS NOTED
JOB NO. 14287.000

ROOF / PART. SITE PLAN, ELEVATION & ANTENNA CONFIG.

C-2
Sheet No. 3 of 3

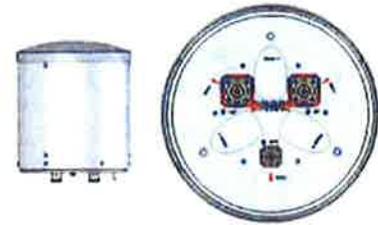
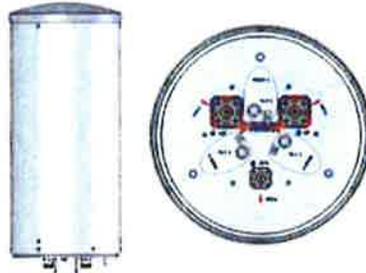
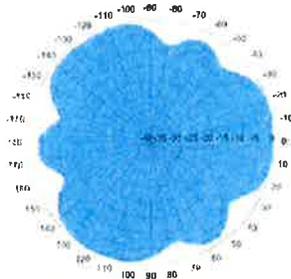
ATTACHMENT 4

Metro Cell Antennas with Internal Diplexer and GPS Antenna

Dualband Quasi-Omni (360°), Metro Cell Antenna

NH360QS-DG-F0M

NH360QT-DG-F0



ELECTRICAL SPECIFICATIONS

Operating Frequency Range	698 - 896 and 1710 - 2170 MHz					698 - 896 and 1710 - 2170 MHz				
	698 - 806	806 - 896	1710 - 1880	1850 - 1990	1920 - 2170	698 - 806	806 - 896	1710 - 1880	1850 - 1990	1920 - 2170
Frequency Bands, MHz	698 - 806	806 - 896	1710 - 1880	1850 - 1990	1920 - 2170	698 - 806	806 - 896	1710 - 1880	1850 - 1990	1920 - 2170
Polarization	±15°	±45°	±45°	±15°	±45°	±45°	±45°	±45°	±45°	±45°
Gain, dBi	4.3	5.3	8.0	8.1	8.5	1.3	2.3	4.0	4.2	4.5
Beamwidth, Horizontal, degrees	360	360	360	360	360	360	360	360	360	360
Beamwidth, Vertical, degrees	30.0	24.0	16.0	15.0	14.0	60.0	55.0	32.5	30.0	28.5
USLS, dB	12	12	14	13	13	-	-	14	12	11
Beam Tilt, degrees	0	0	0-16	0-16	0-16	0	0	0	0	0
Isolation, dB	25	25	25	25	25	25	25	25	25	25
VSWR (Return Loss, dB)	1.5 (14.0)	1.5 (14.0)	1.5 (14.0)	1.5 (14.0)	1.5 (14.0)	1.5 (14.0)	1.5 (14.0)	1.5 (14.0)	1.5 (14.0)	1.5 (14.0)
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150	-150	-150	-150	-150
Input Power per Port, maximum, watts	250	250	250	250	250	250	250	250	250	250

MECHANICAL SPECIFICATIONS

Connector Interface	7 - 16 DIN Female	7 - 16 DIN Female
Connector Quantity, Location	2, Bottom	2, Bottom
GPS Connector Interface	4.1/9.5 DIN Female	4.1/9.5 DIN Female
GPS Connector Quantity, Location	1, Bottom	1, Bottom
Length, mm (inch)	730 (28.7)	360 (14.2)
Outer Diameter, mm (inch)	305 (12.0)	305 (12.0)
Wind Speed, maximum, km/h (mph)	241.4 (150)	241.4 (150)
Net Weight, kg (lb)	20.0 (44.1)	12.0 (26.5)

AVAILABILITY

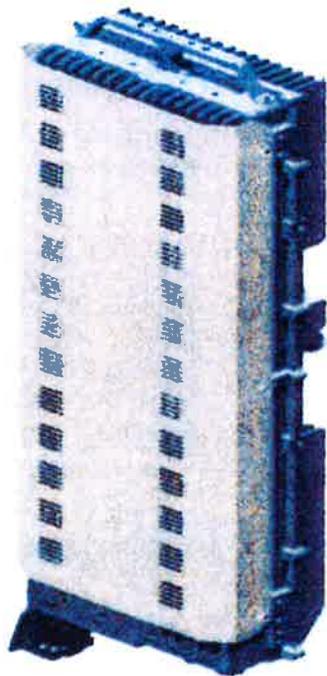
Expected Ready Date for Manufacturing

March 2014

June 2014

ALCATEL-LUCENT WIRELESS PRODUCT DATA SHEET RRH2x60-AWS

The Alcatel-Lucent RRH2x60-AWS is a high power, small form factor Remote Radio Head operating in the AWS frequency band (3GPP Band 4) for LTE technology. It is designed with an eco-efficient approach, providing operators with the means to achieve high quality and high capacity coverage with minimum site requirements and efficient operation.



A distributed Node B expands the 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 a Node B to be installed separately, within the same site or several kilometers apart.

The Alcatel-Lucent RRH2x60-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 RRH2x60-AWS integrates all the latest technologies. This allows to offer best-in-class characteristics.

It delivers an outstanding 120 watts of total RF power thanks to its two transmit RF paths of 60 W each.

It is ideally suited to support multiple-input multiple-output (MIMO) 2x2 operation.

It includes four RF receivers to natively support 4-way uplink reception diversity. This improves the radio uplink coverage and this can be used to extend the cell radius commensurate with 2x2MIMO 2x60 W for the downlink.

It supports multiple discontinuous LTE carriers within an instantaneous bandwidth of 45 MHz corresponding to the entire AWS B4 spectrum.

The latest generation power amplifiers (PA) used in this product achieve high efficiency (>40%), resulting in improved power consumption figures.

The Alcatel-Lucent RRH2x60-AWS is designed to make available all the benefits of a distributed Node B, with excellent RF characteristics, with low capital expenditures (CAPEX) and low operating expenditures (OPEX).

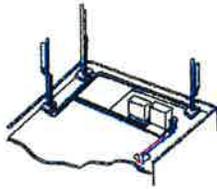
The Alcatel-Lucent RRH2x60-AWS is a very cost-effective solution to deploy LTE MIMO.

The RRH2x60-AWS includes a reversible mounting bracket which allows for ease of installation behind an antenna, or on a rooftop knee wall while providing easy access to the mid body RF connectors.

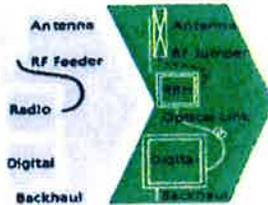
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

The Alcatel-Lucent RRH2x60-AWS is a zero-footprint solution and is convection cooled without fans for silent operation, simplifying negotiations with site property owners and minimizing environmental impacts.

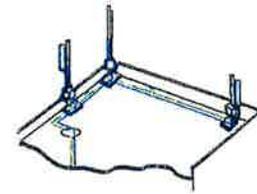
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

- RRH2x60-AWS integrates two power amplifiers of 60W rating (at each antenna connector)
- Support multiple carriers over the entire 3GPP band 4
- RRH2x60-AWS is optimized for LTE operation
- RRH2x60-AWS is a very compact and lightweight product
- Advanced power management techniques are embedded to provide power savings, such as PA bias control

- MIMO LTE operation with only one single unit per sector
- Improved uplink coverage with built-in 4-way receive diversity capability
- RRH can be mounted close to the antenna, eliminating nearly all losses in RF cables and thus reducing power consumption by 50% compared to conventional solutions
- Distributed configurations provide easily deployable and cost-effective solutions, near zero footprint and

- silent solutions, with minimum impact on the neighborhood, which ease the deployment
- RETA and TMA support without additional hardware thanks to the AISG v2.0 port and the integrated Bias-Tees. Bias-Tees support AISG DC supply and signaling.

Specifications listed are hardware capabilities. Some capabilities depend on support in a specific software release or future release.

Dimensions and weights

- HxWxD : 510x285x186mm (27 l with solar shield)
- Weight : 20 kg (44 lbs)

Electrical Data

- Power Supply : -48V DC (-40.5 to -57V)
- Power Consumption (ETSI average traffic load reference) : 250W @2x60W

RF Characteristics

- Frequency band: 1710-1755, UL / 2110-2155 MHz, DL (3GPP band 4)
- Output power: 2x60W at antenna connectors
- Technology supported: LTE
- Instantaneous bandwidth: 45 MHz
- Rx diversity: 2-way and 4-way uplink reception
- Typical sensitivity without Rx diversity: -105 dBm for LTE

Connectivity

- Two CPRI optical ports for daisy chaining and up to six RRHs per fiber
- Type of optical fiber: Single-Mode (SM) and Multi-Mode (MM) SFPs
- Optical fiber length: up to 500m using MM fiber, up to 20km using SM fiber
- TMA/RETA : AISG 2.0 (RS485 connector and internal Bias-Tee)
- Six external alarms
- Surge protection for all external ports (DC and RF)

Environmental specifications

- Operating temperature: -40°C to 55°C including solar load
- Operating relative humidity: 8% to 100%
- Environmental Conditions : ETS 300 019-1-4 class 4.1E
- Ingress Protection : IEC 60529 IP65
- Acoustic Noise : Noiseless (natural convection cooling)

Safety and Regulatory Data

- EMC : 3GPP 25113, EN 301 489-1, EN 301 489-23, GR 1089, GR 3108, OET-65
- Safety : IEC60950-1, EN 60825-1, UL, ANSI/NFPA 70, CAN/CSA-C22.2
- Regulatory : FCC Part 15 Class B, CE Mark – European Directive : 2002/95/EC (ROHS); 2002/96/EC (WEEE); 1999/5/EC (R&TTE)
- Health : EN 50385

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AT THE SPEED OF IDEAS™

Alcatel-Lucent 

ATTACHMENT 5

Limited Visual Assessments and Photo-Simulations

GUILFORD CENTER SC
934 BOSTON POST ROAD
GUILFORD, CT



Prepared in July 2015 by:
All-Points Technology Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06141

Prepared for Verizon Wireless



LIMITED VISUAL ASSESSMENT & PHOTO-SIMULATIONS

At the request of Cellco partnership LLC d/b/a Verizon Wireless, All-Points Technology Corporation, P.C. ("APT") completed a limited visual assessment and prepared computer-generated photo-simulations depicting the proposed installation of a small cell wireless telecommunications Facility at 934 Boston Post Road (U.S. Highway 1) in Guilford, Connecticut (the "Property").

Project Setting

The Property is located on the south side of Boston Post Road in a mixed commercial and residential area. The Property is currently developed with a single-story, multi-unit retail/commercial building. The proposed Facility would include the installation of a pipe-mounted single panel antenna and remote radio head/distribution box concealed within a new cupola on the building's roof behind RF-transparent louvers. The antenna, pipe mast and associated mounting equipment would not be visible from the outside. The cupola has been designed to match the existing building architecture and colors. It would extend approximately 10 feet above the roof peak (and about 33 feet above the ground level). Exterior ground equipment would be located within an 8-foot by 6-foot fence-enclosure adjacent to the building's southeast corner; the 6-foot tall vinyl fence-enclosure would be protected by two concrete bollards.

Methodology

On March 13, 2015, APT personnel conducted field reconnaissance and photo-documented existing conditions. Five (5) nearby locations were selected to depict existing and proposed conditions with the new installation. At each photo location, the geographic coordinates of the camera's position were logged using global positioning system ("GPS") technology. Photographs were taken with a Canon EOS 6D digital camera body and Canon EF 24 to 105 millimeter ("mm") zoom lens, with the lens set to 50 mm.

"The lens that most closely approximates the view of the unaided human eye is known as the normal focal-length lens. For the 35 mm camera format, which gives a 24x36 mm image, the normal focal length is about 50 mm."¹

Three-dimensional computer models were developed for the building and proposed small cell components from AutoCAD information. Photographic simulations were then generated to portray scaled renderings of the proposed installation. Using field data, site plan information and image editing software, the proposed Facility was scaled to the correct location and height, relative to the existing structure and surrounding area. For

¹ Warren, Bruce. *Photography*, West Publishing Company, Eagan, MN, c. 1993, (page 70).

presentation purposes in this report, all of the photographs were produced in an approximate 7-inch by 10.5-inch format². A photolog map and copies of the existing conditions and photo-simulations are attached.

Conclusions

The visibility of the proposed installation would be limited primarily to nearby locations along Boston Post Road and parking lots surrounding the Property and adjacent retail stores. Views of the cupola may also be achieved from select locations to the west along State Street where the building can be seen today. The small cell's concealment within a cupola results in no antenna or supporting equipment being visible from exterior locations. The cupola's design will be consistent with the style and colors of the building such that it would appear to be an original design element. The equipment enclosure will be located behind the building, where limited access is allowed. Although it would be visible from some locations in the parking lot to the south, the vinyl clad screening prohibits direct views of the ground equipment. Based on the results of this assessment, it is our opinion that the proposed installation of Verizon Wireless equipment at the Property would have little to no adverse effect on existing views.

² When viewing in this format size, we believe it is important to provide the largest representational image while maintaining an accurate relation of sizes between objects within the frame of the photograph and depicting the subject in a way similar to what an observer might see, to the greatest extent possible.

ATTACHMENTS



PHOTO LOG

Legend

-  Site
-  Photo Location





EXISTING

PHOTO

1

LOCATION

BOSTON POST ROAD

ORIENTATION

SOUTHWEST

DISTANCE TO SITE

+/- 163 FEET



PROPOSED

PHOTO

1

LOCATION

BOSTON POST ROAD

ORIENTATION

SOUTHWEST

DISTANCE TO SITE

+/- 163 FEET





PROPOSED

PHOTO

1

LOCATION

BOSTON POST ROAD

ORIENTATION

SOUTHWEST

DISTANCE TO SITE

+/- 163 FEET



EXISTING

PHOTO

2

LOCATION

BOSTON POST ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 285 FEET



PROPOSED

PHOTO

2

LOCATION

BOSTON POST ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 285 FEET



PROPOSED

PHOTO

2

LOCATION

BOSTON POST ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 285 FEET



EXISTING

PHOTO

3

LOCATION

HOST PROPERTY

ORIENTATION

WEST

DISTANCE TO SITE

+/- 45 FEET



PROPOSED

PHOTO
3

LOCATION
HOST PROPERTY

ORIENTATION
WEST

DISTANCE TO SITE
+/- 45 FEET





PROPOSED

PHOTO
3

LOCATION
HOST PROPERTY

ORIENTATION
WEST

DISTANCE TO SITE
+/- 45 FEET



EXISTING

PHOTO

4

LOCATION

BANK OF AMERICA PARKING LOT

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 216 FEET



PROPOSED

PHOTO

4

LOCATION

BANK OF AMERICA PARKING LOT

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 216 FEET



PROPOSED

PHOTO

4

LOCATION

BANK OF AMERICA PARKING LOT

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 216 FEET





EXISTING

PHOTO
5

LOCATION

WALMART PARKING LOT

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 372 FEET





PROPOSED

PHOTO
5

LOCATION
WALMART PARKING LOT

ORIENTATION
NORTHWEST

DISTANCE TO SITE
+/- 372 FEET



PROPOSED

PHOTO
5

LOCATION
WALMART PARKING LOT

ORIENTATION
NORTHWEST

DISTANCE TO SITE
+/- 372 FEET



ATTACHMENT 6

Site Name: **GUILFORD CTR SC 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 700	746	1	0	0	30	0.0000	0.4973	0.00%
VZW Cellular	869	9	0	0	30	0.0000	0.5793	0.00%
VZW PCS	1970	7	0	0	30	0.0000	1.0000	0.00%
VZW AWS	2145	1	552	552	30	0.2206	1.0000	22.06%
Total Percentage of Maximum Permissible Exposure								22.06%

*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 7

* Federal Airways & Airspace *
* Summary Report: New Construction *
* Antenna Structure *

*

Airspace User: Jaime Laredo

File: GUILFORD_CTR_SC_CT

Location: New Haven, CT

Latitude: 41°-17'-17.07" Longitude:
72°-40'-49.22"

SITE ELEVATION AMSL.....9 ft.
STRUCTURE HEIGHT.....33 ft.
OVERALL HEIGHT AMSL.....42 ft.

NOTICE CRITERIA

- FAR 77.9(a): NNR (DNE 200 ft AGL)
- FAR 77.9(b): NNR (DNE Notice Slope)
- FAR 77.9(c): NNR (Not a Traverse Way)
- FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for HVN
- FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for SNC
- FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required
NNR = Notice Not Required
PNR = Possible Notice Required (depends upon actual IFR procedure)
For new construction review Air Navigation Facilities at

bottom

of this report.

Notice to the FAA is not required at the analyzed location and height for slope, height or Straight-In procedures. Please review the 'Air Navigation' section for notice requirements for offset IFR procedures and EMI.

OBSTRUCTION STANDARDS

- FAR 77.17(a)(1): DNE 499 ft AGL
- FAR 77.17(a)(2): DNE - Airport Surface
- FAR 77.19(a): DNE - Horizontal Surface
- FAR 77.19(b): DNE - Conical Surface
- FAR 77.19(c): DNE - Primary Surface
- FAR 77.19(d): DNE - Approach Surface
- FAR 77.19(e): DNE - Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: HVN: TWEED-NEW HAVEN

Type: A RD: 55906.04 RE: 4.4
 FAR 77.17(a)(1): DNE
 FAR 77.17(a)(2): DNE - Greater Than 5.99 NM.
 VFR Horizontal Surface: DNE
 VFR Conical Surface: DNE
 VFR Approach Slope: DNE
 VFR Transitional Slope: DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: SNC: CHESTER

Type: A RD: 58927.02 RE: 408
 FAR 77.17(a)(1): DNE
 FAR 77.17(a)(2): Does Not Apply.
 VFR Horizontal Surface: DNE
 VFR Conical Surface: DNE
 VFR Approach Slope: DNE
 VFR Transitional Slope: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)

FAR 77.17(a)(3) Departure Surface Criteria (40:1)
 DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)

FAR 77.17(a)(4) MOCA Altitude Enroute Criteria
 The Maximum Height Permitted is 400 ft AMSL

PRIVATE LANDING FACILITIES

No Private Landing Facilities Are Within 6 NM

AIR NAVIGATION ELECTRONIC FACILITIES

GRND	FAC	ST	DIST	DELTA	ST	LOCATION			
ANGLE	IDNT	TYPE	AT	FREQ	VECTOR	(ft)	ELEVA	ST	LOCATION
BEAR	-----								
-1.03	MAD	VOR/DME	R	110.4	340.9	9932	-178	CT	MADISON
	No Impact. Does Not Exceed Navaid EMI Notice Height Criteria.								
.04	HVN	VOR/DME	R	109.8	260.46	57082	+36	CT	NEW HAVEN
.01	BDR	VOR/DME	R	108.8	249.05	130703	+33	CT	BRIDGEPORT
-.35	HFD	VOR/DME	R	114.9	15.77	133686	-807	CT	HARTFORD
-.02	CCC	VOR/DME	R	117.2	194.00	134626	-43	NY	CALVERTON
-.12	QVH	RADAR ARSR	Y	1326.9	180.73	149169	-309	NY	RIVERHEAD
	OKX	RADAR WXL	Y		198.14	162059	-179	NY	BRENTWOOD

- .06	FOK	TACAN	R	NA	175.35	164619	-8	NY SUFFOLK CO
0.00	HTO	VORTAC	I	113.6	143.42	167720	+20	NY HAMPTON
.01	GON	VOR/DME	R	110.8	84.69	173328	+33	CT GROTON
.01	ISP	RADAR	ON	2735.	212.99	209533	-140	NY LONG ISLAND
MacAR		-.04						
	ORW	VOR/DME	I	110.0	62.15	210819	-268	CT NORWICH
-.07	BDL	RADAR	ON		359.86	237024	-194	CT BRADLEY INTL
-.05								

CFR Title 47, §1.30000-§1.30004

AM STUDY NOT REQUIRED: Structure is not near a FCC licensed AM station.

Movement Method Proof as specified in §73.151(c) is not required. Please review 'AM Station Report' for details.

No AM Stations were located within 3.0 km.

Airspace® Summary Version 15.5.391

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06-19-2015
 15:40:15

ATTACHMENT 8

July 15, 2015

Via Certificate of Mailing

Joseph Mazza, Jr., First Selectman
Town Hall
31 Park Street
Guilford, CT 06437-2629

Re: **Installation of a Small Cell Telecommunications Facility at 934 Boston Post Road,
Guilford, Connecticut**

Dear Mr. Mazza:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Cellco intends to file a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install a “small cell” telecommunications facility on a parcel at 934 Boston Post Road in Guilford (the “Property”).

The proposed “small cell” would consist of a small tower, supporting a single canister-type antenna, a remote radio head (RRH) and an electric distribution box (EDB) on the roof of a building. The tower, antenna, RRH and EDB will be concealed inside an RF transparent cupola. Cellco’s radio equipment will be located on the ground on a concrete pad near the southeast corner of the building.

A copy of Cellco’s Petition is attached for your review. Landowners whose property abuts the Property were also sent a copy of the Petition.

Robinson + Cole

Joseph Mazza, Jr.

July 15, 2015

Page 2

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

KCB/kmd
Attachment

July 15, 2015

Via Certificate of Mailing

Sachem Square, LLC
934 Boston Post Road
Guilford, CT 06437

Re: **Installation of a Small Cell Telecommunications Facility at 934 Boston Post Road,
Guilford, Connecticut**

Dear Sir or Madam:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Cellco intends to file a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install a “small cell” telecommunications facility on a parcel at 934 Boston Post Road in Guilford (the “Property”).

The proposed “small cell” would consist of a small tower, supporting a single canister-type antenna, a remote radio head (RRH) and an electric distribution box (EDB) on the roof of a building. The tower, antenna, RRH and EDB will be concealed inside an RF transparent cupola. Cellco’s radio equipment will be located on the ground on a concrete pad near the southeast corner of the building.

A copy of Cellco’s Petition is attached for your review. Landowners whose property abuts the Property were also sent a copy of the Petition.

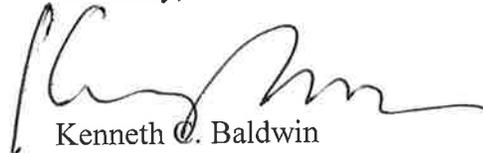
13935727-v1

Robinson + Cole

Sachem Square, LLC
July 15, 2015
Page 2

Please contact me if you have any questions regarding this proposal.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kenneth C. Baldwin', written in a cursive style.

Kenneth C. Baldwin

KCB/kmd
Attachment

ATTACHMENT 9

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts

July 15, 2015

Via Certificate of Mailing

«Name_and_Address»

Re: Notice of Intent to File a Petition for Declaratory Ruling with the Connecticut Siting Council for the Installation of a “Small Cell” Telecommunications Facility at 934 Boston Post Road, Guilford, Connecticut

Dear «Salutation»:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Cellco intends to file a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install a “small cell” telecommunications facility on a parcel at 934 Boston Post Road in Guilford (the “Property”).

The proposed “small cell” would consist of a small tower, supporting a single canister-type antenna, a remote radio head (RRH) and an electric distribution box (EDB) on the roof of a building. The tower, antenna, RRH and EDB will be concealed inside an RF transparent cupola. Cellco’s radio equipment will be located on the ground on a concrete pad near the southeast corner of the building. A copy of the full Petition is attached for your review.

July 15, 2015
Page 2

This notice is being sent to you because you are listed as an owner of land that abuts the Property. If you have any questions regarding the Petition, the Council's process for reviewing the Petition or the details of the filing itself, please feel free to contact me at the number listed above. You may also contact the Council directly at 860-827-2935.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin". The signature is written in a cursive style with a long horizontal flourish at the end.

Kenneth C. Baldwin

Attachment

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

ABUTTERS LIST

MAP 047/LOT 023

**934 BOSTON POST ROAD
GUILFORD, CONNECTICUT**

	<u>Map/Lot</u>	<u>Property Address</u>	<u>Owner and Mailing Address</u>
1.	047/002	961 Boston Post Road	NHL2 LLC 2442 Flamingo Road Palm Beach Garden, FL 33410
2.	047/003	929 Boston Post Road	William Pinchbeck Inc. 929 Boston Post Road Guilford, CT 06437
3.	047/022A	916 Boston Post Road	Fleet National Bank of MA Corp RE Assessments BOA NC10010381 101 N. Tryon Street Charlotte, NC 28255
4.	047/022B (Land)	830 Boston Post Road	Arthur G. Fanicello and Estate of Raymond P. FC/0 NY Urban. 800 Central Boulevard, Suite D Carlstad, NJ 07072
5.	047/022B (Buildings)	830 Boston Post Road	Guilford Plaza Associates Ltd. 800 Central Boulevard, Suite D Carlstad, NJ 07072
6.	047/025	107 State Street	Casa Blanca Properties LLC 107 State Street Guilford, CT 06437
7.	047/024	115 State Street	One Hundred Fifteen State Square Realty 27 Ferry Road Chester, CT 06412
8.	046/124A	965 Boston Post Road	Russo Real Estate LLC P.O. Box 570 North Branford, CT 06471