

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 ROOF-TOP	:	
WIRELESS TELECOMMUNICATIONS	:	
FACILITY AT 4 PRIMROSE STREET,	:	
NEWTOWN, CONNECTICUT	:	JANUARY 4, 2016

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 telecommunications tower on the roof of the Newtown Youth Academy Sports and Fitness Center (“NYA”) building at 4 Primrose Street in Newtown, Connecticut (the “Property”). The Property is owned by Newtown Youth Academy, Inc. Cellco has designated this site as its “Newtown SC5 Facility”.

II. Factual Background

The Property is a 2.6- acre parcel in Newtown’s Fairfield Hills Adaptive Reuse (“FHAR”) zone. The Property is surrounded by the Newtown Municipal Center, open space and

residential land uses. *See* Attachment 1 – Site Vicinity and Site Schematic Maps (Aerial Photograph).

Cellco is licensed to provide wireless telecommunications services in the 850 MHz, 1900 MHz, 700 MHz and 2100 MHz frequency ranges in Newtown and throughout the State of Connecticut. Initially, the proposed Newtown SC5 Facility described above will provide wireless service in Cellco’s 2100 MHz frequency range only.

III. Proposed Newtown SC5 Facility

The proposed Newtown SC5 Facility would consist of a small tower attached to the roof of the existing NYA building on the Property. The tower will support a single canister antenna (Model NH360QM-DG-2XR) and a remote radio head (“RRH”) (Model RRH2x60-AWS). The tower and antenna will extend to a height of approximately 40’-5” above ground level; approximately 12’ above the roof; and approximately 4’-6” above an existing screen wall on the front of the NYA building. Equipment associated with the Newtown SC5 Facility will be located on a 8’ x 8’ concrete pad on the east side of the building adjacent to two (2) existing air conditioning condensers. The equipment will be surrounded by an 8’ tall vinyl stockade fence. Power and telephone service to the Newtown SC5 Facility will extend from existing service on the Property. (*See* Cellco’s Project Plans included in Attachment 2). Specifications for the Newtown SC5 Facility antenna and RRH are included in Attachment 3.

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 tower supporting a single canister antenna and a RRH and the placement of associated radio equipment cabinets on the ground along the east side of the building behind a fenced enclosure, will not involve a significant alteration in the physical and environmental characteristics of the Property.

2. Visual Effects

The installation of a small tower, antenna and RRH on the roof of the building would have minimal visual effects on the Property and the surrounding area. (See Limited Visual Assessment and Photo-Simulations (“Visual Assessment”) included in Attachment 4). As concluded in the Visual Assessment, the visibility of the proposed roof-top tower and antenna described above is limited to locations immediately in front of the building (to the west) within the Property’s parking lot. Views of the tower and antenna structure from other portions of the Property are obstructed by the building itself.

3. FCC Compliance

Radio frequency (“RF”) emissions from the proposed installation will be well below the standards adopted by the Federal Communications Commission (“FCC”). Included in Attachment 5 is a General Power Density table, which demonstrates that Cellco’s Newtown SC5 Facility will operate well within the FCC safety standard (19.71% of the Standard).

4. FAA Summary Report

Included in Attachment 6 is a Federal Airways & Airspace Summary Report (the “FAA Report”) verifying that the tower and antenna on the roof of the building 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 the Town, Property Owner and Abutting Landowners

On January 4, 2016, a copy of this Petition was sent to Newtown’s First Selectman E. Patricia Llodra and to Newtown Youth Academy, Inc., the owner of the Property. Copies of the letters sent to the First Selectman and the Property owner are included in Attachment 7. A copy of Cellco’s 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 notice of the filing of the Petition is included in Attachment 8.

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 an approximately 12’ tall tower supporting a single canister antenna and associated equipment on the roof of the building and the installation of ground-mounted equipment cabinets 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.

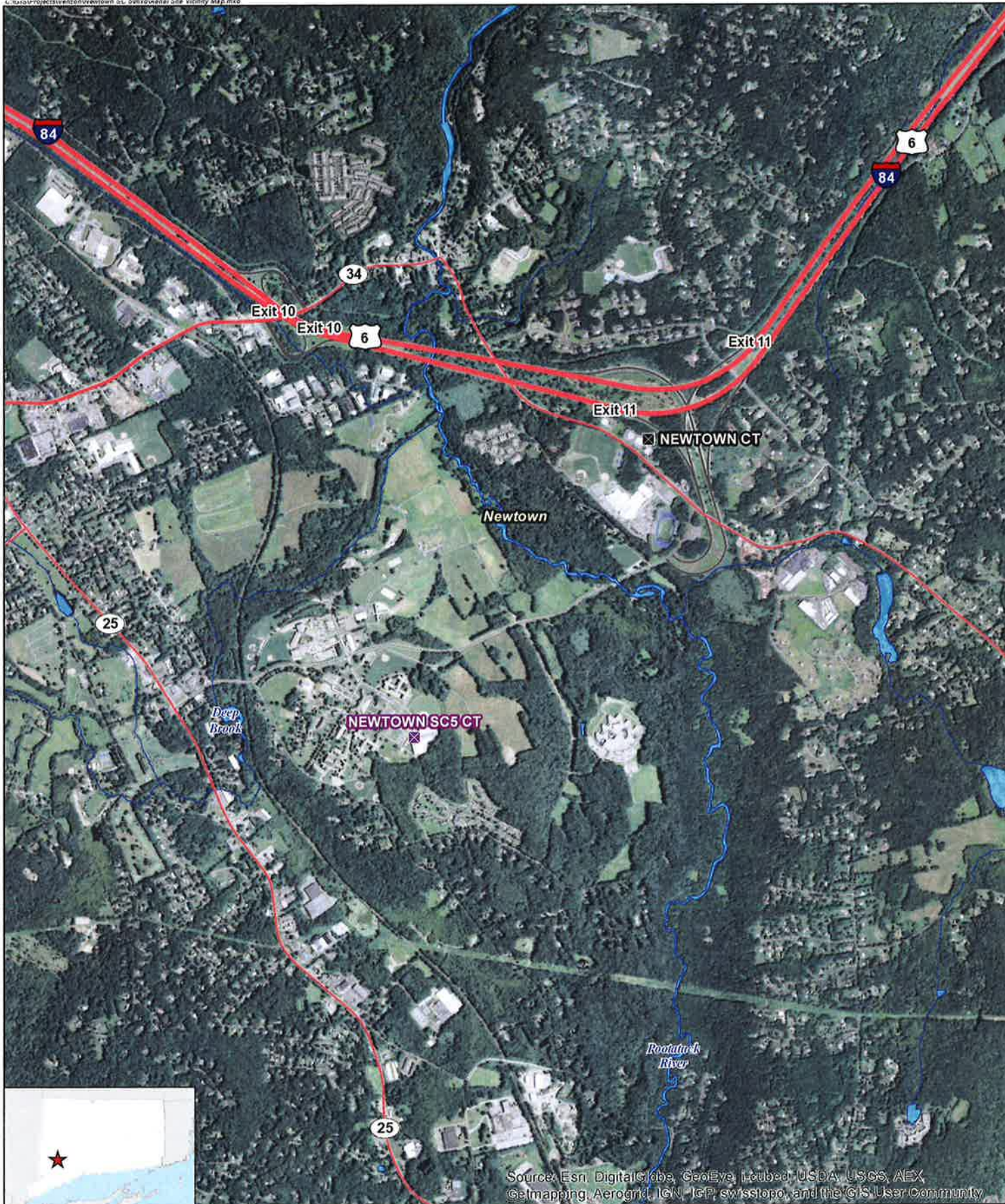
Respectfully submitted,

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



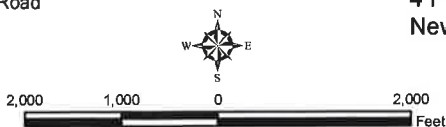
Source: Esri, DigitalGlobe, GeoEye, iSatcom, USDA, USGS, AEX, Geomapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

- Proposed Verizon Wireless Facility
- Surrounding Verizon Wireless Facilities
- Municipal Boundary
- Watercourse
- Waterbody
- Major Road



Site Vicinity Map

Proposed Small Cell Facility
 Newtown SC5 CT
 4 Primrose Street
 Newtown, Connecticut





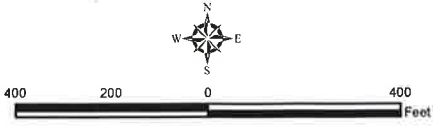
Legend

-  Subject Property
-  Approximate Parcel Boundary (CTDEEP GIS)

Site Schematic

Proposed Small Cell Facility
 Newtown SC5 CT
 4 Primrose Street
 Newtown, Connecticut

Map Notes:
 Base Map Source: 2012 Aerial Photograph (CTECO)
 Map Scale: 1 inch = 400 feet
 Map Date: November 2015



ATTACHMENT 2

Cellco Partnership



d.b.a. **verizon** wireless

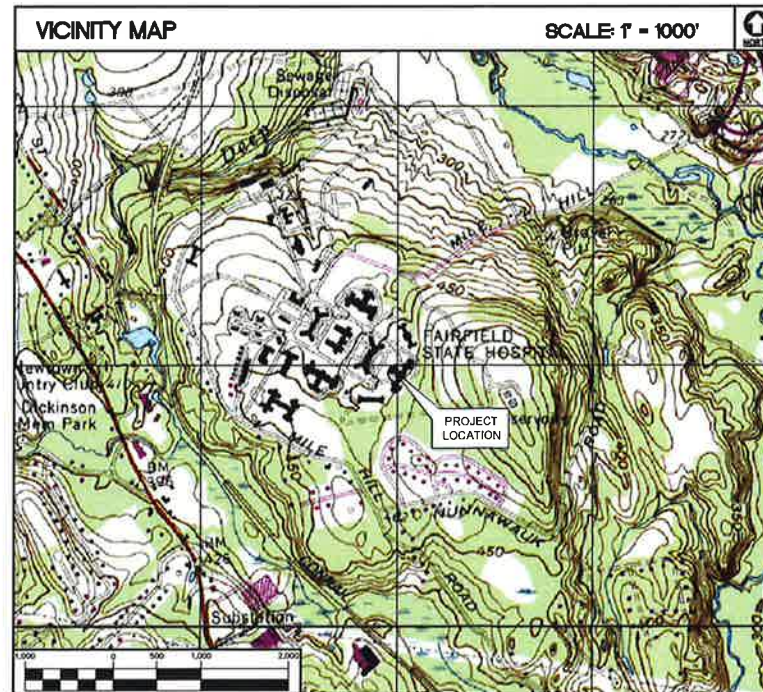
WIRELESS COMMUNICATIONS FACILITY

NEWTOWN SC5 CT
4 PRIMROSE STREET
NEWTOWN, CT 06614

SITE DIRECTIONS	
FROM: 99 EAST RIVER DRIVE EAST HARTFORD, CONNECTICUT	TO: 4 PRIMROSE STREET NEWTOWN, CONNECTICUT
1. Start out going northeast on E River DR toward Darlin St.	0.32 mi
2. Turn left to stay on E River Dr	0.08 mi
3. Take the first left onto Connecticut Blvd/US-44 W.	0.14 mi
4. Merge onto I-84 W via the ramp on the left toward Hartford.	46.32 mi
5. Take EXIT 11 toward CT-34/Derby/New Haven.	0.91 mi
6. Turn left onto Wasserman Way.	1.02 mi
7. Turn left onto Trades Ln.	0.08 mi
8. Turn right onto Keating Farms Ave.	0.10 mi
9. Turn left onto Simpson St. (Destination is at the end of Simpson St.)	0.14 mi

GENERAL NOTES
1. PROPOSED ANTENNA LOCATIONS AND HEIGHTS PROVIDED BY CELCO PARTNERSHIP.

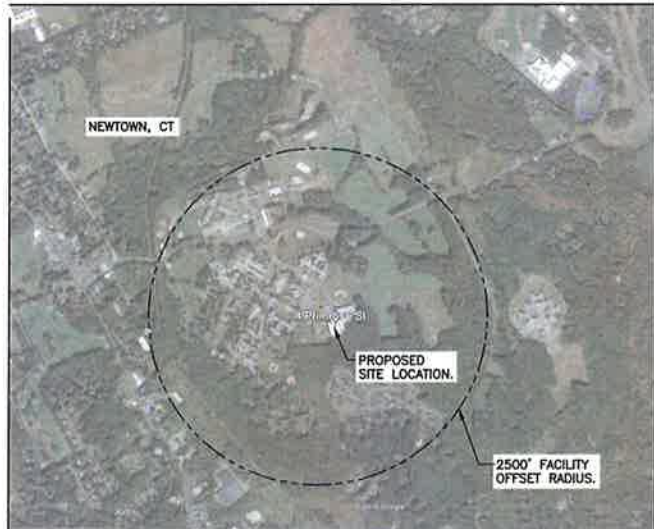
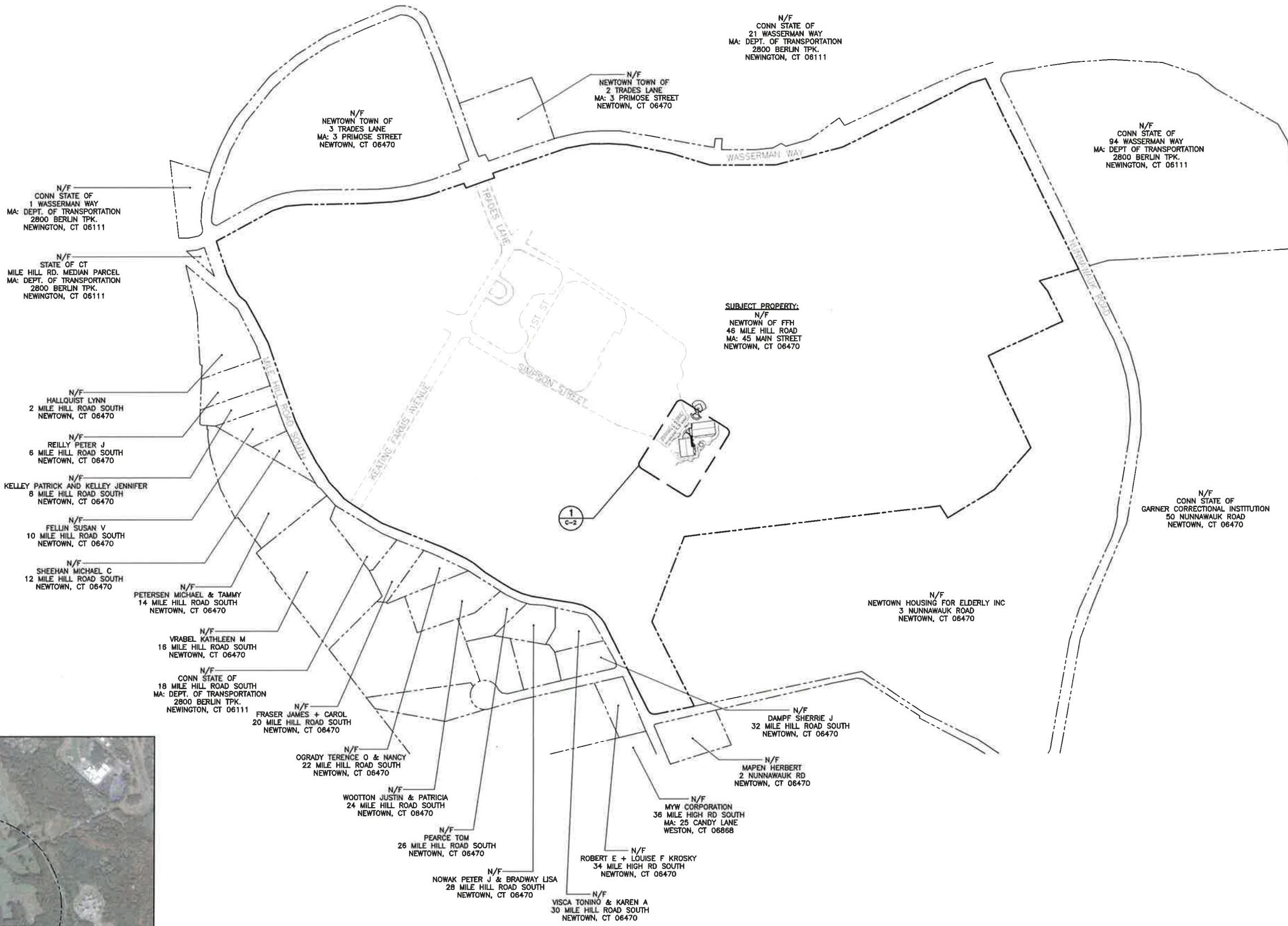
PROJECT SCOPE
1. THE PROPOSED SCOPE OF WORK GENERALLY INCLUDES THE INSTALLATION OF A TOTAL OF (1) ANTENNA, (1) REMOTE RADIO HEAD, AND ASSOCIATED CABLES ROUTING FROM PROPOSED EQUIPMENT.
2. A CELCO PARTNERSHIP EQUIPMENT CABINET IS PROPOSED AT GRADE DIRECTLY ADJACENT TO THE EXISTING BUILDING.
3. POWER & TELCO UTILITIES SHALL BE ROUTED FROM EXISTING DEMARCS WITHIN OR ADJACENT TO THE SUBJECT BUILDING. FINAL UTILITY DEMARC LOCATIONS AND ROUTING TO BE DETERMINED DURING CONSTRUCTION DOCUMENT PHASE OF THE PROJECT, AND WILL BE COORDINATED WITH BUILDING OWNER AND LOCAL UTILITY COMPANY REQUIREMENTS.
4. THE PROPOSED WIRELESS FACILITY INSTALLATION WILL BE DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2009 CONNECTICUT SUPPLEMENT.



PROJECT SUMMARY	
SITE NAME:	NEWTOWN SC5 CT
SITE ADDRESS:	4 PRIMROSE STREET NEWTOWN, CT 06614
CELLCO PARTNERSHIP/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
VERIZON SITE ACQUISITION CONTACT:	CHRIS BISSON CELLCO PARTNERSHIP (203) 217-6200
LEGAL/REGULATORY COUNSEL:	KENNETH C. BALDWIN, ESQ. ROBINSON & COLE LLP (860) 275-8345
SITE COORDINATES:	LATITUDE: 41°-24'-00.25"N LONGITUDE: 73°-16'-59.64"W GROUND ELEVATION: ±465' A.M.S.L.
	COORDINATES AND GROUND ELEVATION REFERENCED FROM GOOGLE EARTH PRO.

SHEET INDEX		
SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	1
C-1	ABUTTERS MAP	1
C-2	PARTIAL SITE PLANS, ELEVATIONS AND ANTENNA CONFIG.	1

PROFESSIONAL ENGINEER SEAL	ISSUED FOR CSC	DMD	CHK'D BY	DESCRIPTION
	1	12/29/15	HMR	
	0	12/23/15	KAWLR	
			DATE	
			REV.	
 (203) 469-0580 (203) 469-6387 Fax 63.7 North Branford Road Branford, CT 06405 www.CentekEng.com				
Cellco Partnership d/b/a Verizon Wireless WIRELESS COMMUNICATIONS FACILITY NEWTOWN SC5 CT 4 PRIMROSE STREET NEWTOWN, CT 06614				
DATE: 12/16/15				
SCALE: AS NOTED				
JOB NO. 15150.000				
TITLE SHEET				
T-1				
Sheet No. 1 of 3				



MUNICIPALITY NOTIFICATION LIMIT MAP

N/F
CONN STATE OF
21 WASSERMAN WAY
MA: DEPT. OF TRANSPORTATION
2800 BERLIN TPK.
NEWINGTON, CT 06111

N/F
NEWTOWN TOWN OF
2 TRADES LANE
MA: 3 PRIMROSE STREET
NEWTOWN, CT 06470

N/F
NEWTOWN TOWN OF
3 TRADES LANE
MA: 3 PRIMROSE STREET
NEWTOWN, CT 06470

N/F
CONN STATE OF
94 WASSERMAN WAY
MA: DEPT. OF TRANSPORTATION
2800 BERLIN TPK.
NEWINGTON, CT 06111

N/F
CONN STATE OF
1 WASSERMAN WAY
MA: DEPT. OF TRANSPORTATION
2800 BERLIN TPK.
NEWINGTON, CT 06111

N/F
STATE OF CT
MILE HILL RD. MEDIAN PARCEL
MA: DEPT. OF TRANSPORTATION
2800 BERLIN TPK.
NEWINGTON, CT 06111

SUBJECT PROPERTY:
N/F
NEWTOWN OF FFH
46 MILE HILL ROAD
MA: 45 MAIN STREET
NEWTOWN, CT 06470

N/F
HALLQUIST LYNN
2 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
REILLY PETER J
6 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
KELLEY PATRICK AND KELLEY JENNIFER
8 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
FELLIN SUSAN V
10 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
SHEEHAN MICHAEL C
12 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
PETERSEN MICHAEL & TAMMY
14 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
VRABEL KATHLEEN M
16 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
CONN STATE OF
18 MILE HILL ROAD SOUTH
MA: DEPT. OF TRANSPORTATION
2800 BERLIN TPK.
NEWINGTON, CT 06111

N/F
FRASER JAMES + CAROL
20 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
OGRADY TERENCE O & NANCY
22 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

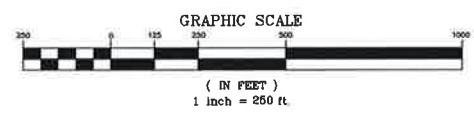
N/F
WOOTTON JUSTIN & PATRICIA
24 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
PEARCE TOM
26 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
NOWAK PETER J & BRADWAY LISA
28 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

N/F
VISCA TONINO & KAREN A
30 MILE HILL ROAD SOUTH
NEWTOWN, CT 06470

1
C-1
SCALE: 1" = 250'



MAP REFERENCE NOTE:
PROPERTY LINES AND PROPERTY
OWNERSHIP INFORMATION SHOWN
HEREIN ARE REFERENCED FROM THE
TOWN OF NEWTOWN ASSESSORS
MAPPING AND ASSESSORS DATABASE.

REV.	DATE	DRAWN BY	CHECK'D BY	DESCRIPTION
1	12/30/15	KAWLR	DMD	ISSUED FOR CSC
0	12/23/15	KAWLR	DMD	ISSUED FOR CSC-CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership
d.b.a. Verizon Wireless

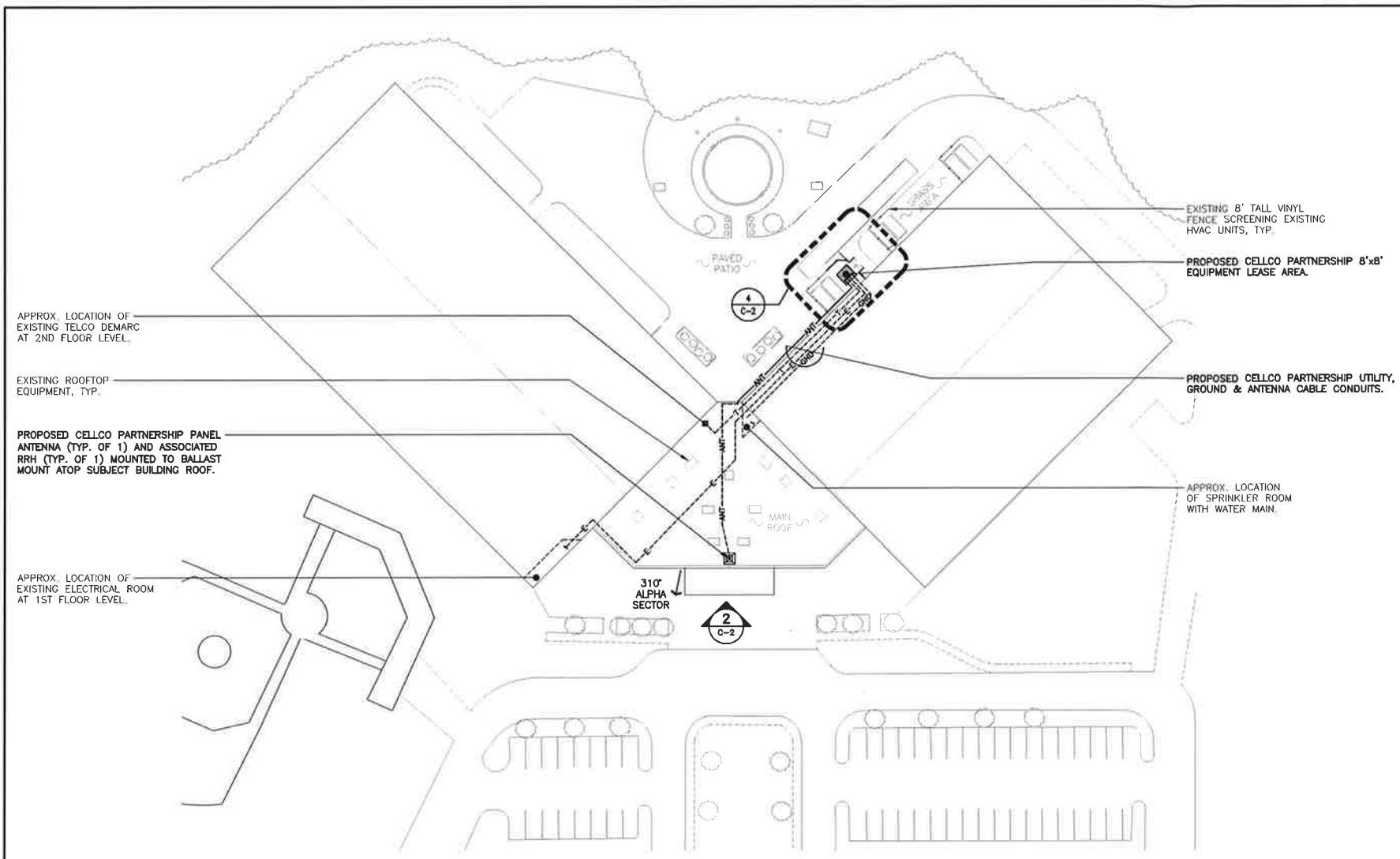
CENTEK engineering
Centek on Solutions®
(203) 468-0580
(203) 468-8887 Fax
652 North Ironside Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless
WIRELESS COMMUNICATIONS FACILITY
NEWTOWN SC5 CT
4 PRIMROSE STREET
NEWTOWN, CT 06614

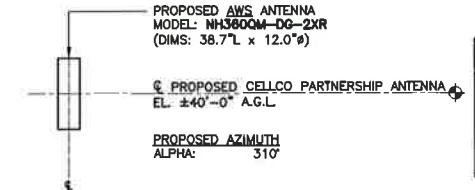
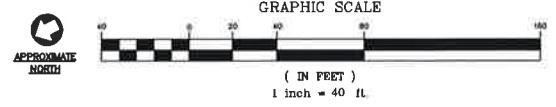
DATE: 12/16/15
SCALE: AS NOTED
JOB NO. 15150.000

ABUTTERS MAP

C-1
Sheet No. 2 of 3



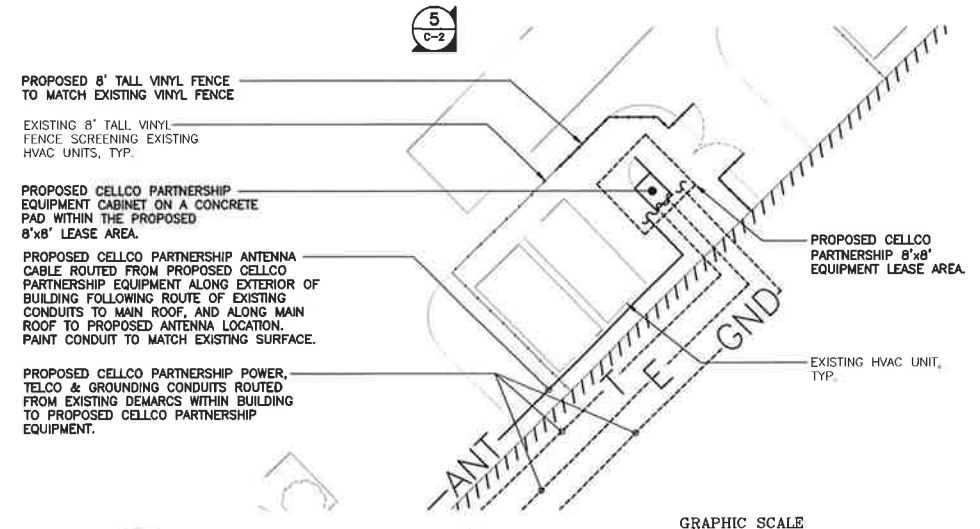
1 PARTIAL SITE PLAN
C-2 SCALE: 1" = 40'



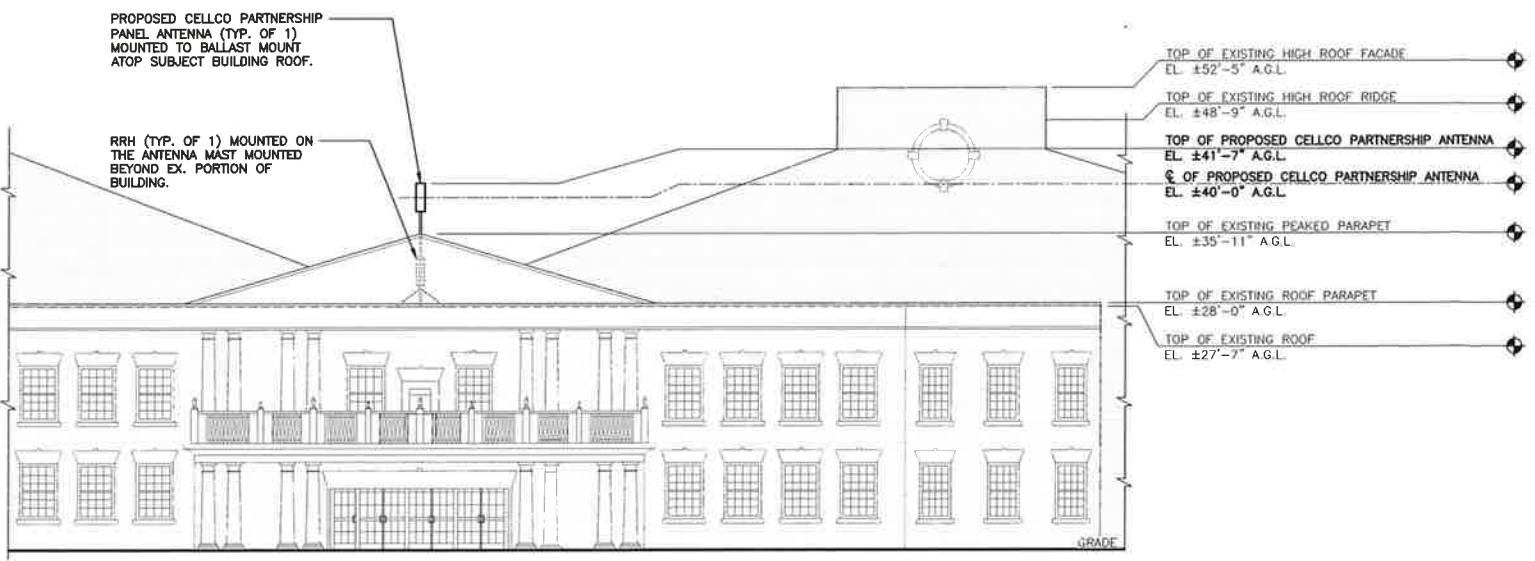
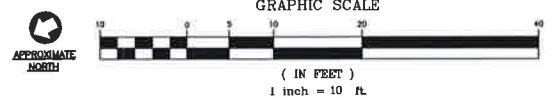
RRH BOX MOUNTING NOTE:

- RRH (MODEL: ALU RRH2x60-AWS (DIMS: 36.7"L x 10.6"W x 5.8"D) (TYP. OF 1)
- RRH (TYP. OF 1) MOUNTED ON THE ANTENNA MAST MOUNTED BEYOND PORTION OF EXISTING BUILDING.

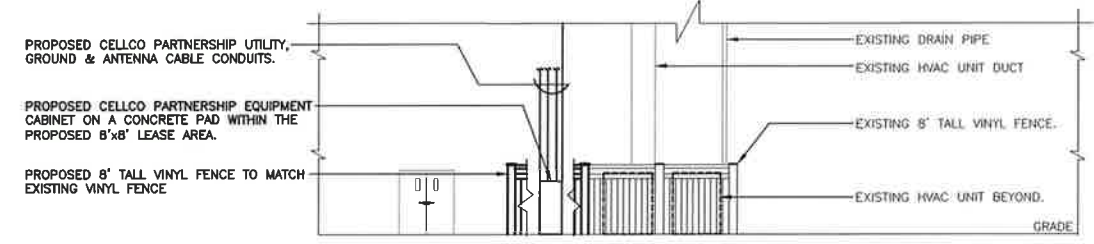
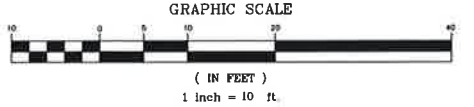
3 TYP. ANTENNA MOUNTING CONFIGURATION
C-2 NOT TO SCALE



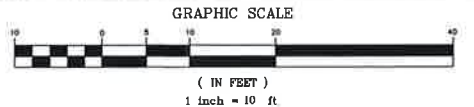
4 PARTIAL SITE PLAN
C-2 SCALE: 1" = 10'



2 PARTIAL NORTHWEST ELEVATION
C-2 SCALE: 1" = 10'



5 PARTIAL EAST ELEVATION
C-2 SCALE: 1" = 10'



ISSUED FOR CSC	DMD	DATE	DESCRIPTION
ISSUED FOR CSC-CLIENT REVIEW	DMD	12/16/15	
	DATE	12/16/15	
	REV.	0	
	DATE		
	REV.		
 Cellco Partnership d.b.a. Verizon Wireless			
 CENTEK Engineering Wireless Communications Facility (203) 468-0580 (203) 468-8587 Fax 65-2 North Branch Road Stamford, CT 06405 www.CentekEng.com			
Cellco Partnership d/b/a Verizon Wireless NEWTOWN SC5 CT 4 PRIMROSE STREET NEWTOWN, CT 06614			
DATE: 12/16/15			
SCALE: AS NOTED			
JOB NO. 15150.000			
PARTIAL SITE PLANS, ELEVATIONS AND ANTENNA CONFIG.			
C-2			
Sheet No. 3 of 3			

ATTACHMENT 3



NH360QM-DG-2XR

Andrew® Dualband Quasi Omni Metro Cell Antenna, 698-896 and 1695-2200 MHz, internal RETs with manual override, internal diplexer and active GPS L1 band antenna

Electrical Specifications

Frequency Band, MHz	698-806	806-896	1695-1880	1850-1990	1920-2200
Gain, dBi	6.1	7.1	9.7	9.9	9.9
Beamwidth, Horizontal, degrees	360	360	360	360	360
Beamwidth, Vertical, degrees	28.6	25.4	11.2	10.6	10.1
Beam Tilt, degrees	0-20	0-20	0-14	0-14	0-14
USLS (First Lobe), dB	16	15	14	13	13
Isolation, dB	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
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	125	125	125	125	125
Polarization	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	698-806	806-896	1695-1880	1850-1990	1920-2200
Gain by all Beam Tilts, average, dBi	5.4	6.3	9.3	9.4	9.4
Gain by all Beam Tilts Tolerance, dB	±1	±0.7	±0.5	±0.7	±0.7
	0° 5.1	0° 6.3	0° 9.2	0° 9.3	0° 9.4
Gain by Beam Tilt, average, dBi	10° 5.4	10° 6.3	7° 9.3	7° 9.5	7° 9.6
	20° 5.6	20° 6.0	14° 9.2	14° 9.1	14° 9.1
Beamwidth, Vertical Tolerance, degrees	±3.7	±3.2	±0.9	±1.1	±1.1
USLS, beampeak to 20° above beampeak, dB			13	13	13

* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, [download the whitepaper Time to Raise the Bar on BSAs.](#)

General Specifications

Antenna Brand	Andrew®
Antenna Type	Metro Cell
Band	Multiband
Brand	DualPol®
Operating Frequency Band	1695 - 2200 MHz 698 - 896 MHz
Internal GPS frequency band	1575.42 MHz
Internal GPS VSWR	2.0
Performance Note	Outdoor usage

Mechanical Specifications

Color	Light gray
GPS Connector Interface	4.1-9.5 DIN Female
GPS Connector Quantity	1

Product Specifications

COMMSCOPE®

NH360QM-DG-2XR

POWERED BY



Lightning Protection	dc Ground
Radiator Material	Aluminum Low loss circuit board
Radome Material	ASA
Reflector Material	Aluminum
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	2
Wind Loading, maximum	225.0 N @ 150 km/h 50.6 lbf @ 150 km/h
Wind Speed, maximum	241 km/h 150 mph

Dimensions

Length	982.0 mm 38.7 in
Outer Diameter	305.0 mm 12.0 in
Net Weight, without mounting kit	15.3 kg 33.7 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
Power Consumption, idle state, maximum	2.0 W
Power Consumption, normal conditions, maximum	13.0 W
Protocol	3GPP/AISG 2.0 (Single RET)
RET Interface	8-pin DIN Male
RET Interface, quantity	1 male

Packed Dimensions

Depth	407.0 mm 16.0 in
Length	1251.0 mm 49.3 in
Width	427.0 mm 16.8 in
Shipping Weight	20.6 kg 45.4 lb

Regulatory Compliance/Certifications

Agency

RoHS 2011/65/EU
China RoHS SJ/T 11364-2006
ISO 9001:2008

Classification

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

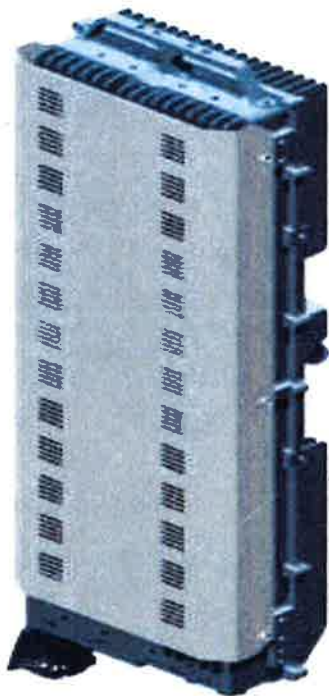


* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance

ALCATEL-LUCENT WIRELESS PRODUCT DATASHEET RRH2X60-AWS FOR BAND 4 APPLICATIONS

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.

SUPERIOR RF PERFORMANCE

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.

OPTIMIZED TCO

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.

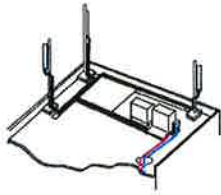
EASY INSTALLATION

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.

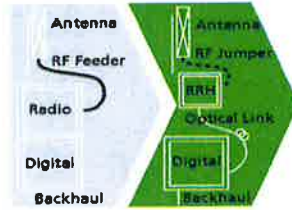
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation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

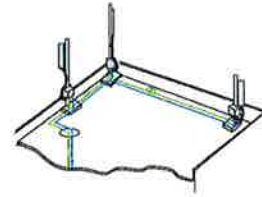
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

FEATURES

- 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

BENEFITS

- 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.

TECHNICAL SPECIFICATIONS

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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ATTACHMENT 4

Limited Visual Assessment and Photo-Simulations

NEWTOWN SC5 CT
4 PRIMROSE STREET
NEWTOWN, CT



Prepared in December 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 4 Primrose Street in Newtown, Connecticut (the "Property").

Project Setting

The Property is located at the east end of a campus-style development, remote from surrounding land uses, in Newtown. The proposed Facility would include the installation of a single panel antenna and associated appurtenances on a pipe-mast to be ballast mounted atop the building roof. The top of the new Facility would extend to an overall height of approximately 40.5 feet above grade, rising less than five (5) feet above the peak of the west central roof. Exterior ground equipment would be located at grade on the east (rear) side of the building and surrounded by a vinyl privacy fence.

Methodology

On October 6, 2015, APT personnel conducted a field reconnaissance to photo-document existing conditions. Four (4) nearby locations were selected to depict a representation of existing and proposed conditions. 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 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.

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

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.

Conclusions

The visibility of the proposed antenna installation would be limited locations immediately in front of the building (to the west) within the Property's parking lots. Views to the east, north and south would be obstructed by taller wings of the building. The supporting ground equipment's location at the rear of the building is accessible to service vehicles and is adjacent to existing mechanical systems associated with the structure. The proposed vinyl fencing would match existing screening in this area.

Based on the results of this assessment, it is our opinion that the proposed installation of the Verizon Wireless small cell Facility would have little, if any, impact on existing views in the general area beyond the Property.

ATTACHMENTS



PHOTO LOG

- Legend
- Site
 - Photo Location





EXISTING

PHOTO

1

LOCATION

HOST PROPERTY

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 312 FEET





PROPOSED

PHOTO

1

LOCATION

HOST PROPERTY

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 312 FEET





EXISTING

PHOTO

2

LOCATION

HOST PROPERTY

ORIENTATION

EAST

DISTANCE TO SITE

+/- 234 FEET





PROPOSED

PHOTO

2

LOCATION

HOST PROPERTY

ORIENTATION

EAST

DISTANCE TO SITE

+/- 234 FEET





EXISTING

PHOTO

3

LOCATION

HOST PROPERTY

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 276 FEET



PROPOSED

PHOTO
3

LOCATION
HOST PROPERTY

ORIENTATION
NORTHEAST

DISTANCE TO SITE
+/- 276 FEET



EXISTING

PHOTO

4

LOCATION

HOST PROPERTY

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 45 FEET



PROPOSED

PHOTO

4

LOCATION

HOST PROPERTY

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 45 FEET



ATTACHMENT 5

General Power Density

Site Name: NEWTOWN SC5, 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 AWS	2145	1	855	855	39.5	0.1971	1.0	19.71%

Total Percentage of Maximum Permissible Exposure

*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 6

NEWTOWN_SC5_CT_FAA_Analysis.txt

* Federal Airways & Airspace *
* Summary Report: Verify Existing Structure *
* Non-Antenna Structure *

Airspace User: Your Name

File: NEWTOWN_SC5_CT

Location: Newtown, CT

Latitude: 41°-23'-59.70"

Longitude: 73°-16'-58.44"

SITE ELEVATION AMSL.....469 ft.

STRUCTURE HEIGHT.....53 ft.

OVERALL HEIGHT AMSL.....522 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 OXC
FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for DXR
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: OXC: WATERBURY-OXFORD

Type: A RD: 48359.52 RE: 679.2

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: DXR: DANBURY MUNI

Type: A RD: 53802.53 RE: 453.9

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

NEWTOWN_SC5_CT_FAA_Analysis.txt
 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 600 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT TYP NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAA IFR
CT52 AIR FLYING RIDGE AIRSTRIP No Impact to Private Landing Facility. DNE 200 ft AGL within 3 NM of Airport.	190.98	1.95	-88	

AIR NAVIGATION ELECTRONIC FACILITIES

APCH BEAR	FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRND ANGLE
	JWE	NDB	I	36	97.85	47201	-49	CT	CLERA	-.06
	CMK	VOR/DME	I	116.6	241.85	92853	-172	NY	CARMEL	-.11
	BDR	VOR/DME	R	108.8	153.51	97444	+513	CT	BRIDGEPORT	.30
	HVN	VOR/DME	R	109.8	114.79	120196	+516	CT	NEW HAVEN	.25
	PWL	VOR/DME	I	114.3	327.29	160348	-728	NY	PAWLING	-.26
	MAD	VOR/DME	R	110.4	101.14	165188	+302	CT	MADISON	.10
	HPN	RADAR	ON	2735.	224.8	168400	+12	NY	WESTCHESTER COUNT	0.00
	IGN	VOR/DME	R	117.6	303.41	176542	-60	NY	KINGSTON	-.02
	ISP	RADAR	ON	2735.	166.63	222304	+340	NY	LONG ISLAND MacAR	.09
	OKX	RADAR WXL	Y		149.48	226350	+301	NY	BRENTWOOD	.08
	SWF	RADAR	Y	2765.	278.6	227987	-199	NY	STEWART INTERNATI	-.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.

Nearest AM Station: WLAD @ 13925 meters.

Airspace® Summary Version 15.9.401

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12-01-2015
 10:53:02

ATTACHMENT 7

January 4, 2016

Via Certificate of Mailing

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

**Re: Proposed Installation of a Roof-Top Wireless Telecommunications Facility at
4 Primrose Street, Newtown, Connecticut**

Dear First Selectman Llodra:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install a new telecommunications facility on the roof of the Newtown Youth Academy Sports and Fitness Center building at 4 Primrose Street in Newtown (the “Property”). The facility will consist of a single roof-top tower supporting one (1) canister antenna and one (1) remote radio head (RRH). The tower and antenna will extend to a height of 40’-5” above ground level, approximately 4’-6” above an existing screen wall on the front of the building. Equipment associated with the facility will be located on an 8’ x 8’ concrete pad along the east side of the building, adjacent to two (2) existing air conditioning condensers.

A copy of the Petition is attached for your review. Landowners whose property abuts the Property were also sent notice of this filing along with a copy of the Petition.


14397079-v1

Robinson + Cole

E. Patricia Llodra
January 4, 2016
Page 2

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

Sincerely,



Kenneth C. Baldwin

Attachment

January 4, 2016

Via Certificate of Mailing

Newtown Youth Academy, Inc.
4 Primrose Street
Newtown, CT 06470

Re: **Proposed Installation of a Roof-Top Wireless Telecommunications Facility at
4 Primrose Street, Newtown, Connecticut**

Dear Sir or Madam:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install a new telecommunications facility on the roof of the Newtown Youth Academy Sports and Fitness Center building at 4 Primrose Street in Newtown (the “Property”). The facility will consist of a single roof-top tower supporting one (1) canister antenna and one (1) remote radio head (RRH). The tower and antenna will extend to a height of 40’-5” above ground level, approximately 4’-6” above an existing screen wall on the front of the building. Equipment associated with the facility will be located on an 8’ x 8’ concrete pad along the east side of the building, adjacent to two (2) existing air conditioning condensers.

A copy of the Petition is attached for your review. Landowners whose property abuts the Property were also sent notice of this filing along with a copy of the Petition.


14397096-v1

Robinson + Cole

Newtown Youth Academy, Inc.
January 4, 2016
Page 2

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

Sincerely,



Kenneth C. Baldwin

Attachment

ATTACHMENT 8

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

January 4, 2016

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 Roof-Top Wireless Telecommunications Facility at 4 Primrose Street, Newtown, Connecticut

Dear «Salutation»:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install a new telecommunications facility on the roof of the Newtown Youth Academy Sports and Fitness Center building at 4 Primrose Street in Newtown (the “Property”). The facility will consist of a single roof-top tower supporting one (1) canister antenna and one (1) remote radio head (RRH). The tower and antenna will extend to a height of 40’-5” above ground level, approximately 4’-6” above an existing screen wall on the front of the building. Equipment associated with the facility will be located on an 8’ x 8’ concrete pad along the east side of the building, adjacent to two (2) existing air conditioning condensers. A copy of Cellco’s Petition is attached for your review.

This notice is being sent to you because you are listed on the Town Assessor’s records 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.

January 4, 2016
Page 2

Sincerely,

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

Kenneth C. Baldwin

Attachment

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

ABUTTING PROPERTY OWNERS

**4 PRIMROSE STREET
NEWTOWN, CONNECTICUT**

	Property Address	Owner's and Mailing Address
1.	2 Nunnawauk Road	Herbert Mapen 2 Nunnawauk Road Newtown, CT 06470
2.	36 Mile Hill Road South	MYW Corporation 25 Cindy Lane Weston, CT 06886
3.	34 Mile Hill Road South	Robert E. and Louise F. Krosky 34 Mile Hill Road South Newtown, CT 06470
4.	32 Mile Hill Road South	Sherrie J. Dampf 32 Mile Hill Road South Newtown, CT 06470
5.	30 Mile Hill Road South	Tonino and Karen A. Visca 30 Mile Hill Road South Newtown, CT 06470
6.	28 Mile Hill Road South	Peter J. Nowak and Lisa Bradway 28 Mile Hill Road South Newtown, CT 06470
7.	26 Mile Hill Road South	Tom Pearce 26 Mile Hill Road South Newtown, CT 06470
8.	24 Mile Hill Road South	Justin and Patricia Wootton 24 Mile Hill Road South Newtown, CT 06470
9.	22 Mile Hill Road South	Terence and Nancy O'Grady 22 Mile Hill Road South Newtown, CT 06470

	Property Address	Owner's and Mailing Address
10.	20 Mile Hill Road South	James and Carol Fraser 20 Mile Hill Road South Newtown, CT 06470
11.	18 Mile Hill Road South	State of Connecticut Department of Transportation 2800 Berlin Turnpike Newington, CT 06111
12.	16 Mile Hill Road South	Kathleen M. Vrabel 16 Mile Hill Road South Newtown, CT 06470
13.	14 Mile Hill Road South	Michael and Tammy Petersen 14 Mile Hill Road South Newtown, CT 06470
14.	12 Mile Hill Road South	Michael C. Sheehan 12 Mile Hill Road South Newtown, CT 06470
15.	10 Mile Hill Road South	Susan V. Fellin 10 Mile Hill Road South Newtown, CT 06470
16.	8 Mile Hill Road South	Patrick and Jennifer Kelly 8 Mile Hill Road South Newtown, CT 06470
17.	6 Mile Hill Road South	Peter J. Reily 26 Queen Street Newtown, CT 06470
18.	2 Mile Hill Road South	Lynne Hallquist 2 Mile Hill Road South Newtown, CT 06470
19.	Mile Hill Road Median Parcel	State of Connecticut Department of Transportation 2800 Berlin Turnpike Newington, CT 06111

	Property Address	Owner's and Mailing Address
20.	1 Wasserman Way	State of Connecticut Department of Transportation 2800 Berlin Turnpike Newington, CT 06111
21.	3 Trades Lane	Town of Newtown 3 Primrose Street Newtown, CT 06470
22.	2 Trades Lane	Town of Newtown 3 Primrose Street Newtown, CT 06470
23.	21 Wasserman Way	State of Connecticut Department of Transportation 2800 Berlin Turnpike Newington, CT 06111
24.	94 Wasserman Way	State of Connecticut Department of Transportation 2800 Berlin Turnpike Newington, CT 06111
25.	3 Nunnawauk Road	Newtown Housing for Elderly Inc. 3 Nunnawauk Road Newtown, CT 06470
26.	50 Nunnawauk Road	State of Connecticut Garner Correctional Institution 50 Nunnawauk Road Newtown, CT 06470