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 1930 WEST MAIN STREET,	:	
STAMFORD, CONNECTICUT	:	DECEMBER 23, 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 two (2) small telecommunications towers on the roof of an existing commercial building at 1930 West Main Street in Stamford, Connecticut (the "Property"). The Property is owned by Premier Entertainment Services, LLC. Cellco has designated this site as its "Stamford West 4 Facility".

II. Factual Background

The Property is a 0.78-acre parcel located at the southwest corner of West Main Street and Harvard Avenue, in Stamford's Light Industrial – M-L zone. The Property is surrounded by commercial and industrial uses to the north, south and west and residential uses to the east. *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 Stamford and throughout the State of Connecticut. Initially, the proposed Stamford West 4 Facility described above will provide wireless service in Cellco's 1900 MHz and 2100 MHz frequency ranges only.

III. Proposed Stamford West 4 Facility

The proposed Stamford West 4 Facility would consist of two small towers attached to the building in the northwest and southwest corners of the roof. Each tower will support two (2) panel type antennas (one (1) Model No. HBXX 6513DS, 1900 MHz antenna and one (1) Model No. HBXX 6513DS, 2100 MHz antenna), and a two (2) remote radio heads ("RRHs") (one (1) Model No. RRH2x60-AWS and one (1) Model No. RRH2x60-PCS). The towers, antennas and RRHs will be concealed by an RF transparent screening panel, designed to appear as mechanical penthouses and match the color and texture of the building. The top of the screening panels will extend seven (7) feet above the building façade. Equipment associated with the Stamford West 4 Facility will be located inside the building. Cables connecting the equipment to the antennas would be routed from the equipment room to the roof, then across the roof to the two (2) tower locations. Power and telephone service to the Stamford West 4 Facility will extend from existing service inside the building. (*See* Cellco's Project Plans included in Attachment 2). Specifications for the Stamford West 4 Facility antennas and RRHs are included in Attachment 3. Included in Attachment 4 is a Structural Feasibility Letter confirming that the building is capable of supporting Cellco's proposed wireless installation.

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 two (2) concealed towers, antennas, RRHs and related equipment on the roof of this commercial building and the placement of associated radio equipment inside the building, will not involve a significant alteration in the physical and environmental characteristics of the Property.

2. Visual Effects

The installation of the proposed Stamford West 4 Facility on the roof of the existing commercial at the Property as described above, would have minimal visual effects on the Property and the surrounding area. (*See* Visual Assessment and Photo-Simulations ("Visual Assessment") included in Attachment 5). As concluded in the Visual Assessment, the visibility of the proposed roof-top installation described above would be limited to locations around the building within 0.25 miles, where the building itself is visible today. The antenna concealment structures are consistent with the style and colors of the existing building and the Stamford West 4 facility will have no adverse effects on existing views in the area.

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 6 is a General Power Density table, which demonstrates that the Stamford West 4 Facility will operate well within the FCC safety standard (41.76% of the Standard).

4. FAA Summary Report

Included in Attachment 7 is a Federal Airways & Airspace Summary Report (the "FAA Report") verifying that the towers and antenna screening structures on the roof of the building 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 December 23, 2015, a copy of this Petition was sent to Stamford's Mayor David Martin and to Premier Entertainment Services, LLC, the Property owner. Copies of the letters sent to Mayor Martin and the Property owner are included in Attachment 8. 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 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 two (2) tall towers on the roof of the building, each supporting two (2) panel antennas and two (2) RRHs behind antenna screen walls and the installation of equipment inside the building 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.

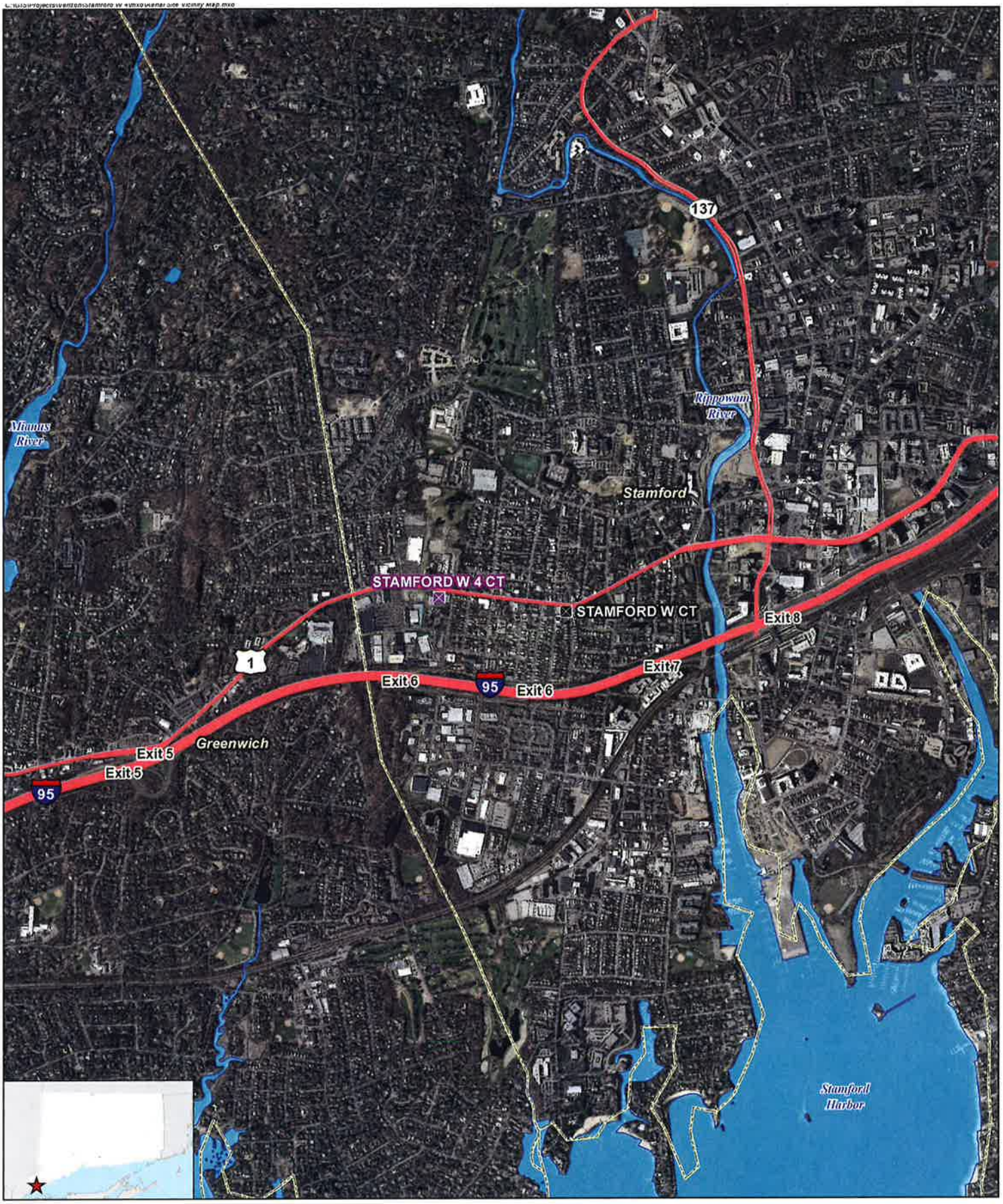
Respectfully submitted,

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

Site Vicinity Map

Proposed Wireless
Telecommunications Facility
Stamford W 4 CT
1930 West Main Street
Stamford, Connecticut

verizon

ALL-POINTS TECHNOLOGY CORPORATION

Base Map Source: 2012 Aerial Photograph (CTECO)
Map Scale: 1 inch = 2,000 feet
Map Date: December 2015

2,000 1,000 0 2,000 Feet

Legend

- Subject Property
- Proposed Equipment
- Approximate Parcel Boundary (CTDEEP GIS)

Site Schematic

Proposed Wireless
Telecommunications Facility
Stamford W 4 CT
1930 West Main Street
Stamford, Connecticut

verizon

ALL-POINTS TECHNOLOGY CORPORATION

N
W E
S

150 75 0 150
Feet

Map Notes:
Base Map Source: 2012 Aerial Photograph (CTECO)
Map Scale: 1 inch = 150 feet
Map Date: December 2015

ATTACHMENT 2

Cellco Partnership

d.b.a. verizon wireless

WIRELESS COMMUNICATIONS FACILITY

STAMFORD W 4

1930 WEST MAIN STREET

STAMFORD, CONNECTICUT 06902

SITE DIRECTIONS

FROM: 99 EAST RIVER DRIVE, EAST HARTFORD, CONNECTICUT **TO:** 1930 WEST MAIN STREET, STAMFORD, CONNECTICUT

1. Head south on E River Dr toward Pitkin St	0.9 mi
2. Stay straight to go on E River Dr. Ext.	0.3 mi
3. Merge onto US-5 towards I-91 South	1.1 mi
4. Merge onto I-91 South (exit 86)	17.1 mi
5. Merge onto CT-15 S, exit 17	30.2 mi
6. Merge onto CT-8 S, exit 52	5.9 mi
7. Merge onto I-95 South	22.3 mi
8. Take exit 6.	0.2 mi
9. Take second right onto Harvard Ave.	0.2 mi
10. Turn left onto W Main St. Destination is on the left	158 ft

GENERAL NOTES

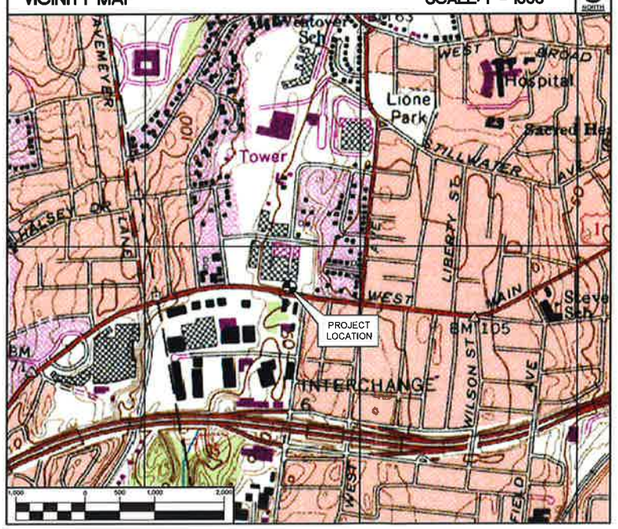
1. PROPOSED ANTENNA LOCATIONS AND HEIGHTS PROVIDED BY CELLCO PARTNERSHIP.

PROJECT SCOPE

1. THE PROPOSED SCOPE OF WORK GENERALLY INCLUDES THE INSTALLATION OF A TOTAL OF (4) ANTENNAS, (4) REMOTE RADIO HEADS, ASSOCIATED CABLES AND APPURTENANCES MOUNTED WITHIN PROPOSED ANTENNA CONCEALMENT SCREENING ROUTED FROM PROPOSED EQUIPMENT LOCATION.
2. LOCATION OF PROPOSED CELLCO PARTNERSHIP ANTENNAS, EQUIPMENT AND ASSOCIATED SCREENING ARE SUBJECT TO STRUCTURAL REVIEW OF HOST BUILDING CONSIDERING EXISTING AND PROPOSED LOADING CONDITIONS.
3. POWER & TELCO UTILITIES SHALL BE ROUTED FROM EXISTING DEMARCS WITHIN OR ADJACENT TO THE SUBJECT BUILDING. ALL EQUIPMENT SHALL BE GROUNDED TO EXISTING EXPOSED BUILDING STEEL AND/OR AT EXISTING WATER MAIN LOCATION. 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.

VICINITY MAP

SCALE: 1" = 1000'



PROJECT SUMMARY

SITE NAME:	STAMFORD W 4
SITE ADDRESS:	1930 WEST MAIN STREET STAMFORD, CONNECTICUT 06902
CELLCO PARTNERSHIP/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
VERIZON SITE ACQUISITION CONTACT:	SHELBY DOCKER CELLCO PARTNERSHIP (860) 549-3739
LEGAL/REGULATORY COUNSEL:	KENNETH C. BALDWIN, ESQ. ROBINSON & COLE LLP (860) 275-8345
SITE COORDINATES:	LATITUDE: 41°-02'-54.114"N LONGITUDE: 73°-33'-38.920"W GROUND ELEVATION: ±49.0' A.M.S.L. COORDINATES AND GROUND ELEVATION REFERENCED FROM FAA 1-A SURVEY CERTIFICATION AS PREPARED FOR VERIZON WIRELESS, BY MARTINEZ COUCH AND ASSOCIATES L.L.C., DATED MARCH 10, 2015.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	1
C-1	ABUTTERS MAP	1
C-2	ROOF PLAN, ELEVATION AND ANTENNA CONFIG.	1

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	12/02/15	JTD	DMD	ISSUED FOR CSC-CLIENT REVIEW
0	09/25/15	JTD	DMD	ISSUED FOR CSC-CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d.b.a. verizon wireless

CENTEK engineering
Centered on 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

WIRELESS COMMUNICATIONS FACILITY

STAMFORD W 4

1930 WEST MAIN STREET
STAMFORD, CONNECTICUT 06902

DATE: 09/22/15

SCALE: AS NOTED

JOB NO. 15032.000

TITLE SHEET

T-1

Sheet No. 1 of 3

N/F
CYTEC INDUSTRIES INC
1937 WEST MAIN ST
MA: 5 GARRET MOUNTAIN PLAZA
WOODLAND PARK, NJ 07424

WEST MAIN STREET

N/F
PHILIP J
TUCCIARONE
522 WEST
MAIN ST
STAMFORD, CT
06902

SUBJECT PROPERTY:
N/F
PREMIER ENTERTAINMENT SERVICES LLC
1930 WEST MAIN ST
MA: 27 FIFTH ST
STAMFORD, CT 06905

N/F
PHILIP J TUCCIARONE
10 HARVARD AVE.
MA: 522 WEST MAIN ST
STAMFORD, CT 06902

N/F
NICHOLAS M DEMAIO JR
14 HARVARD AVE.
MA: 7 RED CEDAR DRIVE
DARIEN, CT 06820

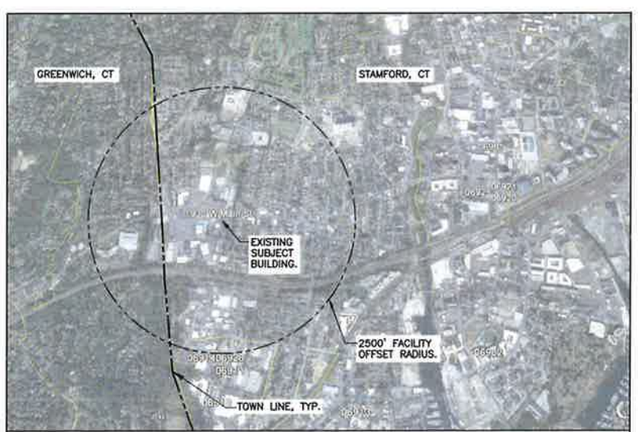
HARVARD AVE.

N/F
ESS PRISA LLC
35 COMMERCE ROAD
MA: PTA-EX #460
P O BOX 320099
ALEXANDRIA, VA 22320

1 / C-1 ABUTTERS MAP
SCALE: 1" = 40'

APPROXIMATE NORTH

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.



MUNICIPALITY NOTIFICATION LIMIT MAP

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	12/02/15	JTD	DMD	ISSUED FOR CSC-CLIENT REVIEW
0	09/25/15	JTD	DMD	ISSUED FOR CSC-CLIENT REVIEW

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Cellco Partnership d/b/a Verizon wireless

CENTEK engineering
Centered on Solutions
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Branford, CT 06405
www.CentekEng.com

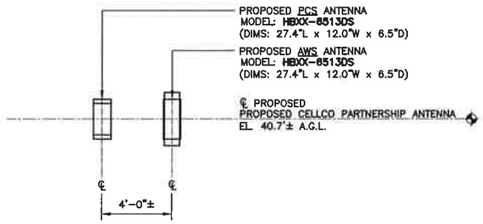
Cellco Partnership d/b/a Verizon Wireless
WIRELESS COMMUNICATIONS FACILITY
STAMFORD W 4
1930 WEST MAIN STREET
STAMFORD, CONNECTICUT 06902

DATE: 09/22/15
SCALE: AS NOTED
JOB NO. 15032.000

ABUTTERS MAP

C-1

Sheet No. 2 of 3

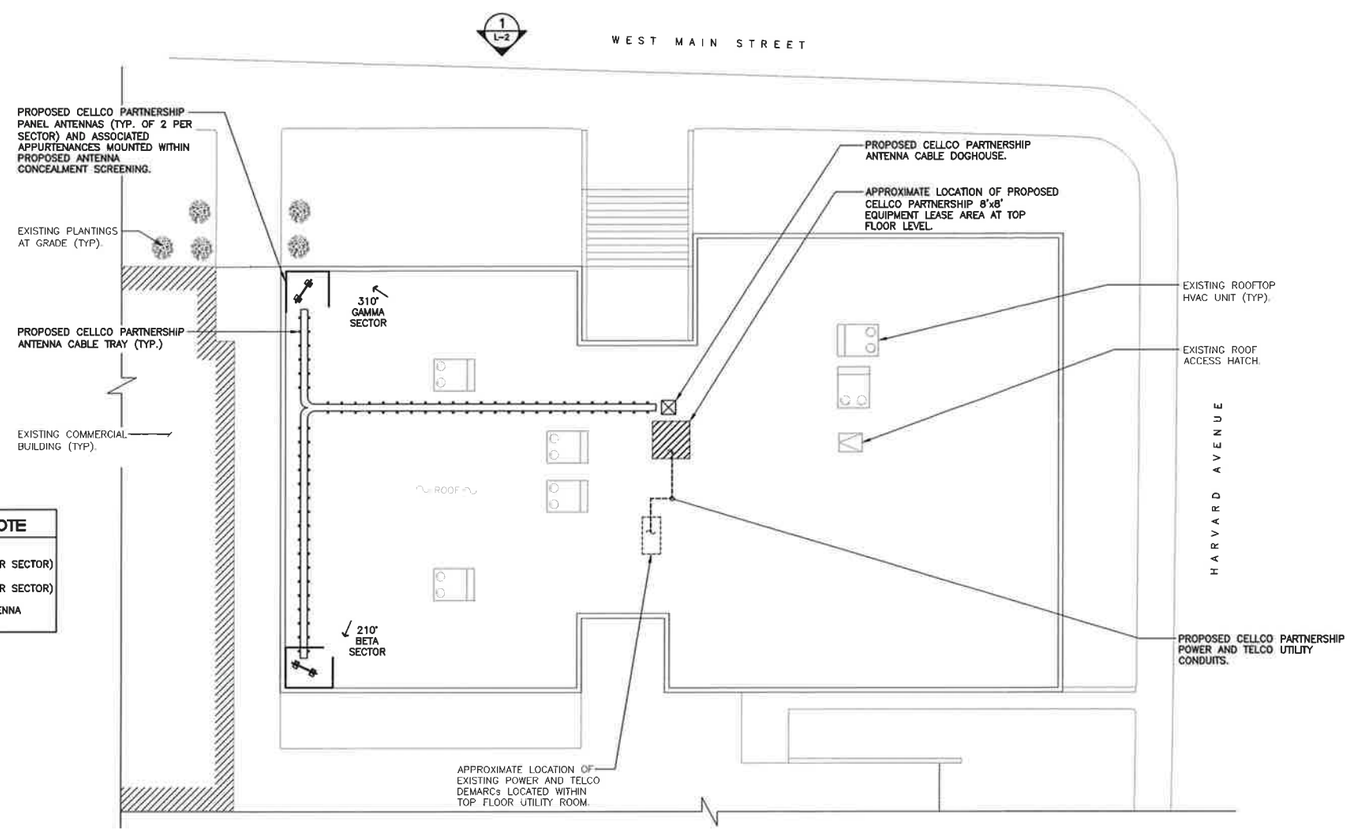


RRH/DISTRIBUTION BOX MOUNTING NOTE

- AWS RRH (MODEL: **ALU RRH2x60-PCS**
  (DIMS: 21.5"L x 12.0"W x 7.4"D) (TYP. OF 2 PER SECTOR)
- PCS RRH (MODEL: **ALU RRH2x60-AWS**
  (DIMS: 36.7"L x 10.6"W x 5.8"D) (TYP. OF 2 PER SECTOR)

ANTENNA AND RRH MOUNTED WITHIN PROPOSED ANTENNA CONCEALMENT SCREENING.

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

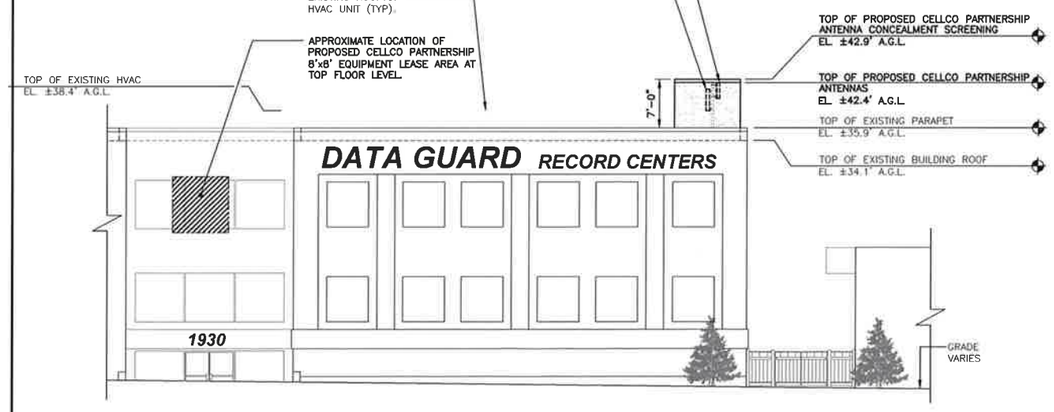


HEIGHTS SHOWN HEREIN ARE REFERENCED FROM FAA 1-A SURVEY CERTIFICATION AS PREPARED FOR VERIZON WIRELESS, BY MARTINEZ COUCH AND ASSOCIATES L.L.C., DATED MARCH 10, 2015.

1 / C-2 **ROOF PLAN - PROPOSED**
SCALE: 1" = 15'

APPROXIMATE NORTH

GRAPHIC SCALE
15 0 7.5 15 30 60
(IN FEET)
1 inch = 15 ft.



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

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	12/02/15	JTD	DMD	ISSUED FOR CSC-CLIENT REVIEW
0	09/25/15	JTD	DMD	ISSUED FOR CSC-CLIENT REVIEW

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WIRELESS COMMUNICATIONS FACILITY
STAMFORD W 4
1930 WEST MAIN STREET
STAMFORD, CONNECTICUT 06902

DATE:	09/22/15
SCALE:	AS NOTED
JOB NO.	15032.000

ROOF PLAN ELEVATION & ANTENNA CONFIG.

C-2

Sheet No. 3 of 3

ATTACHMENT 3

Product Specifications

COMMSCOPE®

HBXX-6513DS-VTM

Andrew® Quad Port Antenna, 1710–2170 MHz, 65° horizontal beamwidth, RET compatible

POWERED BY ANDREW.

Electrical Specifications

Frequency Band, MHz	1710–1880	1850–1990	1920–2170
Gain, dBi	14.5	14.6	14.9
Beamwidth, Horizontal, degrees	67	66	64
Beamwidth, Vertical, degrees	14.8	14.0	13.4
Beam Tilt, degrees	0–12	0–12	0–12
USLS, dB	15	15	15
Front-to-Back Ratio at 180°, dB	30	30	30
Front-to-Back Total Power at 180° ± 30°, dB	26	27	27
CPR at Boresight, dB	22	22	22
CPR at Sector, dB	7	8	8
Isolation, dB	30	30	30
VSWR | Return Loss, dB	1.4 | 15.6	1.4 | 15.6	1.4 | 15.6
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150
Input Power per Port, maximum, watts	350	350	350
Polarization	±45°	±45°	±45°

Electrical Specifications, BASTA*

Frequency Band, MHz	1710–1880	1850–1990	1920–2170
Gain by all Beam Tilts, average, dBi	14.2	14.3	14.6
Gain by all Beam Tilts Tolerance, dB	±0.8	±0.7	±0.7
Gain by Beam Tilt, average, dBi	0 ° | 14.6 6 ° | 14.4 12 ° | 13.5	0 ° | 14.7 6 ° | 14.5 12 ° | 13.7	0 ° | 15.0 6 ° | 14.7 12 ° | 13.8
Beamwidth, Horizontal Tolerance, degrees	±3.7	±3.3	±3.5
Beamwidth, Vertical Tolerance, degrees	±1.4	±0.9	±1.1
USLS, dB	15	15	16
CPR at Boresight, dB	22	22	22
CPR at Sector, dB	7	8	8

* 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.

Mechanical Specifications

Color | Radome Material	Light gray | PVC, UV resistant
Connector Interface | Location | Quantity	7-16 DIN Female | Bottom | 4
Wind Loading, maximum	223.0 N @ 150 km/h 50.1 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph
Antenna Dimensions, L x W x D	695.0 mm x 305.0 mm x 166.0 mm | 27.4 in x 12.0 in x 6.5 in
Net Weight	7.9 kg | 17.4 lb
Model with factory installed AISG 2.0 RET	HBXX-6513DS-A2M

PCS RF MODULES

RRH1900 2X60 - HW CHARACTERISTICS

LA6.0.1/13.3

	RRH2x60
RF Output Power	2x60W
Instantaneous Bandwidth	20MHz
Transmitter	2 TX
Receiver 1900 HW version 1900A HW version	2 Branch RX – LA6.0.1 4 Branch RX – LR13.3
Features	AISG 2.0 for RET/TMA
	Internal Smart Bias-T
Power	-48VDC
CPRI Ports	2 CPRI Rate 3 Ports
External Alarms	4 External User Alarms
Monitor Ports	TX
Environmental	GR487 Compliance
RF Connectors	7/16 DIN (top mounted)

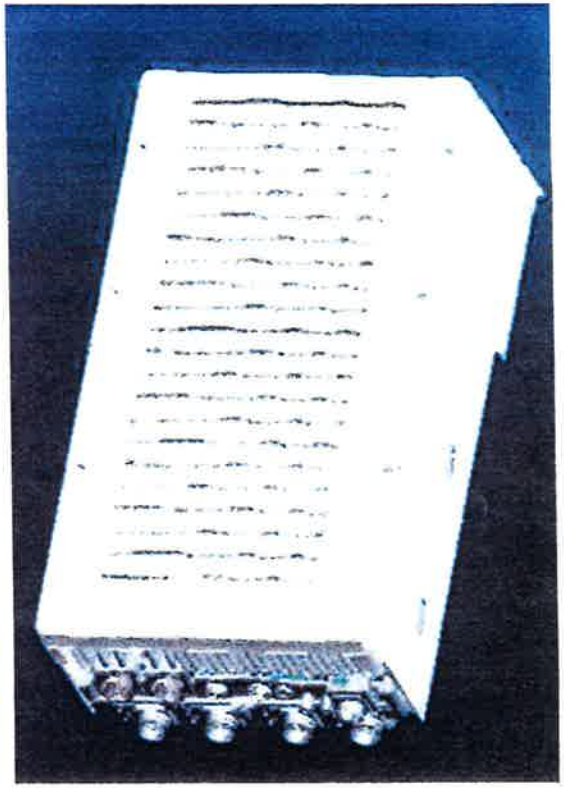
** Not a Verizon Wireless deployed product

NEW PCS RF MODULES FOR VZW

RRH2X60 - HW CHARACTERISTICS

LR14.3

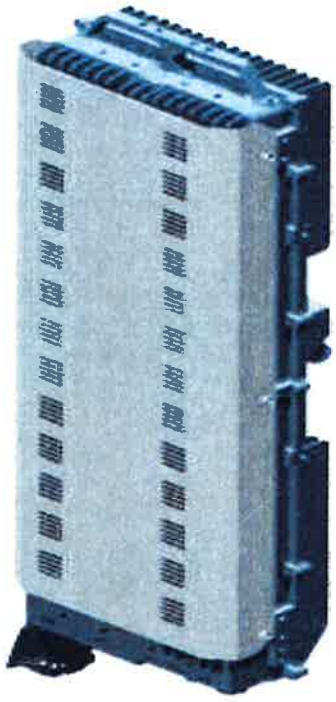
	RRH2x60
RF Output Power	2x60W (4x30W HW Ready)
Instantaneous Bandwidth	60MHz
Target Reliability (Annual Return Rate)	<2%
Receiver	4 Branch Rx
Features	AISG 2.0 for RET/TMA
Power	-48VDC
	Internal Smart Bias-T
CPRI Ports	2 CPRI Rate 5 Ports
External Alarms	4 External User Alarms
Monitor Ports	TX, RX
Environmental	GR487 Compliance
RF Connectors	7/16 DIN (downward facing)
Dimensions	22"(h) x 12"(w)x 9.4" (d)**
Weight	55lb**



**- Includes solar shield but not mounting brackets (8 lbs.)

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.

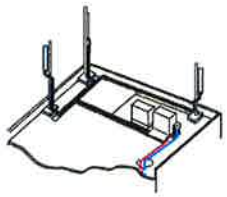
EASY INSTALLATION

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.

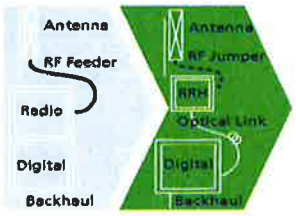
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation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

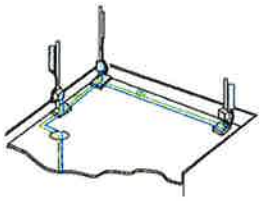
Installation can easily be done by a single person as the Alcatel–Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



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 daisychaining 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

Alcatel·Lucent

AT THE SPEED OF IDEAS™

ATTACHMENT 4

CENTEK engineering

Centered on Solutions℠

November 25, 2015

Mr. John Tierney
Verizon Wireless
99 East River Drive
East Hartford, Connecticut 06108

Re: Structural Feasibility Letter
Verizon Wireless Site – *Stamford W4*
1930 West Main Street
Stamford, Connecticut

CENTEK Project No. 15032.000

Dear Mr. Tierney,

This letter is to confirm the structural feasibility of constructing the proposed wireless communications facility at the referenced property. No structural documentation of the existing building was available. A site visit by Centek personnel was conducted on 03/17/2015 for the purpose of documenting existing structural member sizes and configurations. A preliminary structural analysis was prepared for use in making a final recommendation.

The host building is a 2-story structure currently utilized as a storage facility that was constructed circa 1986. The first level is at grade. The 2nd floor level through roof level was confirmed to be steel beams and columns supporting open web steel joists. Of particular concern was the existing perimeter steel girder and column to be utilized for the support of the proposed antenna concealment enclosure platform. The results of our initial analysis found that the existing girder and column have adequate structural capacity to support the proposed superimposed loading from the proposed antenna concealment enclosure. For the purposes of this evaluation, the steel girder was taken as a W24x55 and the existing column as W8x31. The assumed steel grade was conservatively taken as ASTM A36 steel.

The weight of the Verizon antenna concealment enclosure, platform, and associated appurtenances, along with applicable wind, snow and occupant loadings will be transferred to the structural bearing of the host building through the aforementioned existing framing structure. The existing roof framing was confirmed during the aforementioned site visit and was used to determine the host building's structural capacity for the proposed scope of work.

In conclusion, our preliminary analysis finds that the proposed Verizon Wireless facility will not adversely affect the structural integrity of the host building. Centek Engineering, Inc. will prepare sealed design documents for the proposed unmanned wireless communications facility located on the existing roof level of the 2-story (± 34.1 ft. Finished Roof) host building. The final design will comply with the requirements of the 2005 Connecticut State Building Code with most current supplements. Should modifications to the existing structure be warranted to accommodate the proposed installation, it is our opinion that they may be achieved with little to no impact of the existing facility operations.

Respectfully Submitted:

Carlo F. Centore, PE
Principal ~ Structural Engineer

Prepared By:

Camilo A. Gaviria, PE
Project Structural Engineer

63-2 North Branford Road, Branford, CT 06405 203.488.0580 Fax 203.488.8587 www.CentekEng.com

ATTACHMENT 5

Visual Assessment and Photo-Simulations

STAMFORD W 4
1930 WEST MAIN STREET
STAMFORD, CT 06902

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

Prepared for Verizon Wireless

ALL-POINTS
TECHNOLOGY CORPORATION

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 1930 West Main Street in Stamford, Connecticut (the "Property").

Project Setting

The Property is located south of West Main Street and east of Harvard Avenue and in a mixed commercial and residential area. The Property is currently developed with a three-story, irregularly shaped office building. The proposed Facility would include the installation of two (2) separate antenna array sectors, each consisting of two (2) panel antennas and two (2) remote radio heads affixed to a pipe mast mounted to the southwest and northwest corners of the roof, respectively. Each of the arrays would be located within radio frequency transparent screening enclosures designed to resemble the existing building facade. The enclosures would extend approximately seven (7) feet above the top of the building's roof parapet. Multiple HVAC roof-top units currently extend almost three (3) feet above the parapet. Supporting equipment will be located within the building.

Methodology

On December 14, 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 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]"*

Photographic simulations were generated to portray scaled renderings of the proposed installation from representative locations where it would be visible. Using field data, site plan information, and 3D modeling software, the spatially referenced models of the project area, the existing structure and the proposed installation were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo simulations were then created using a combination of renderings generated in the 3D model and photo-rendering software programs, depicting the proposed installation scaled to the correct location and height, relative to the existing structure and surrounding area. For presentation

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

purposes in this report, all of the photographs were produced in an approximate 7-inch by 10.5-inch format[2]. A photolog map and copies of the existing conditions and photo-simulations are attached.

Conclusions

The visibility of the proposed installation would be limited to locations surrounding the building within less than 0.25 mile of the Property, areas where the northern top of the building can be seen today. The proposed installation's concealment within the screening enclosures results in no antennas or appurtenances being directly visible from exterior locations. The design of the concealment structure will be consistent with the style and colors of the existing building. 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

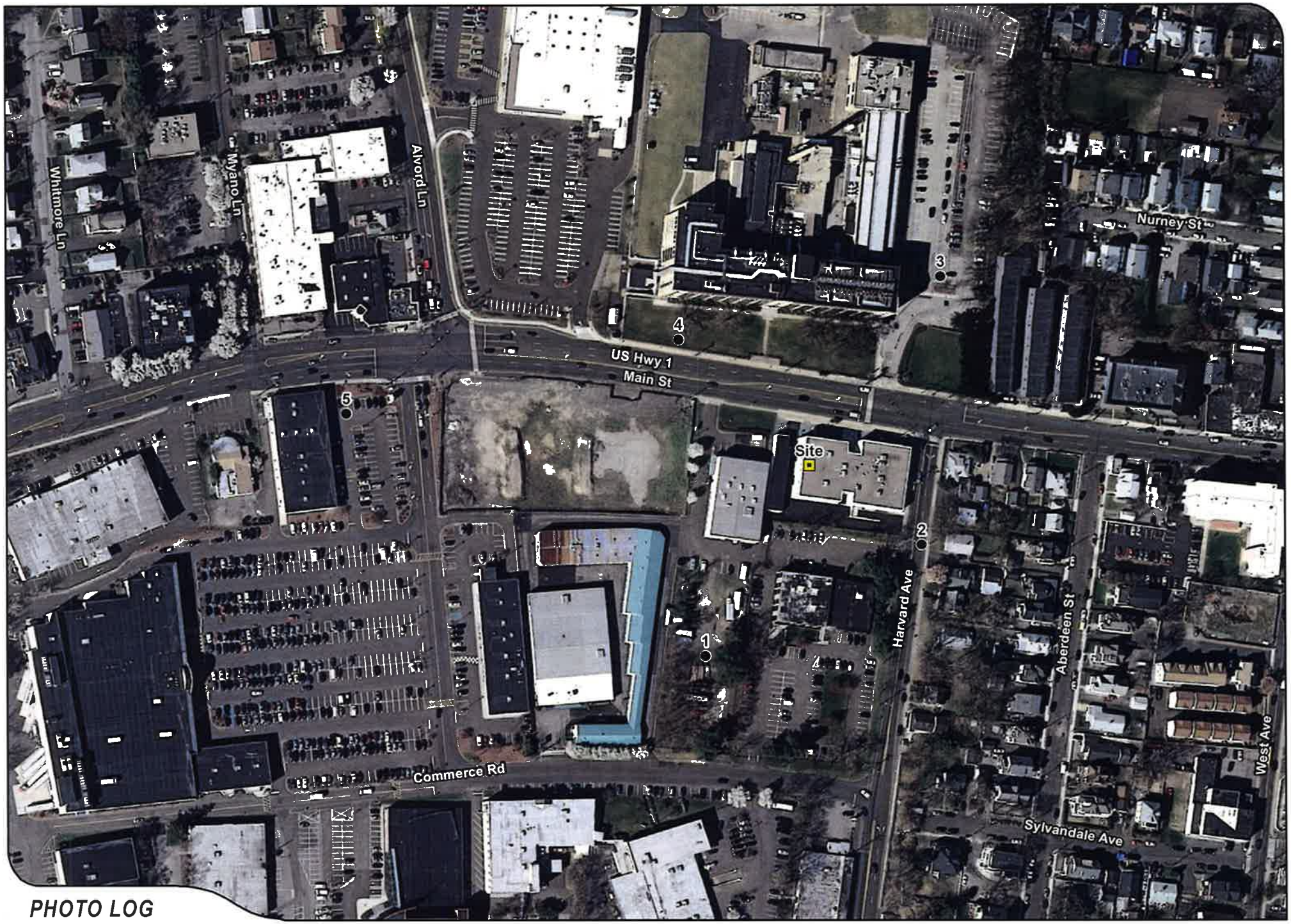


PHOTO LOG

Legend

Site ● Photo Location

200 100 0 200 Feet

1 inch = 200 feet

ALL-POINTS TECHNOLOGY CORPORATION

verizon

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
1	**ADJACENT TO HOST PROPERTY**	**NORTHEAST**	**+/- 289 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
1	**ADJACENT TO HOST PROPERTY**	**NORTHEAST**	**+/- 289 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	**HARVARD AVENUE**	**NORTHWEST**	**+/- 234 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	**HARVARD AVENUE**	**NORTHWEST**	**+/- 234 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
3	**CYTEK INDUSTRIES INC. PARKING LOT**	**SOUTHWEST**	**+/- 366 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
3	**CYTEK INDUSTRIES INC. PARKING LOT**	**SOUTHWEST**	**+/- 366 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
4	WEST MAIN STREET	SOUTHEAST	+/- 261 FEET

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
4	**WEST MAIN STREET**	**SOUTHEAST**	**+/- 261 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
5	**SLEEPY'S PARKING LOT**	**EAST**	**+/- 0.14 MILE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
5	**SLEEPY'S PARKING LOT**	**EAST**	**+/- 0.14 MILE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

ATTACHMENT 6

Site Name: STAMFORD W 4, CT
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissable Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW PCS	1970	1	942	942	41	0.2015	1.0	20.15%
VZW AWS	2145	1	1010	1010	41	0.2161	1.0	21.61%
Total Percentage of Maximum Permissible Exposure								41.76%

*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/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case maximum values used.

ATTACHMENT 7

```
**********************************************************
*              Federal Airways & Airspace                *
* Summary Report: Alteration Of Existing Structure       *
*                  Non-Antenna Structure                 *
**********************************************************

Airspace User: Your Name

File: STAMFORD_W_4_CT

Location:  Stamford, CT

Latitude:  41°-02'-54.11"
Longitude: 73°-33'-38.92"

SITE ELEVATION AMSL.....49 ft.
STRUCTURE HEIGHT.........43 ft.
OVERALL HEIGHT AMSL.....92 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 HPN
  FAR 77.9:    NNR (No Expected TERPS® impact 7N3)
  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.

  If the proposed construction is an alteration to an existing structure,
  notice requirements may be superceded by the item exemptions listed below.

  The location and analysis were based upon an existing structure. However,
  no existing aeronautical study number was identified. If the 'existing'
  structure penetrates an obstruction surface defined by CFR 77.17, 77.19,
  77.21 or 77.23 (see below) it is strongly recommended the FAA be notified
  of the 'existing' structure to determine obstruction marking or lighting
  requirements. It is not uncommon for the FAA to issue a Determination of
  No Hazard (DNH) for an existing structure and modify the airspace to
  accommodate the structure, should that be required. If the FAA issues a
  DNH enter the aeronautical study number (ASN) in the space provided on the
  Airspace Analysis Window Form and re-run Airspace.

  No frequencies were identified in this alteration are included in the FAA's
  Co-Location Policy published in the Federal Register November 15, 2007.
  Therefore, application of the Co-Location Policy notice exemption rule can
  not be applied.


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: HPN: WESTCHESTER COUNTY
```

Type: A RD: 38832.29 RE: 387.7
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: 7N3: SANDS POINT
Type: S RD: 88296.98 RE: 6.6
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

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 700 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT	TYP	NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAA IFR
5CT8	HEL	CANAL STREET	101.47	1.35	+42	

No Impact to Private Landing Facility
Structure is beyond notice limit by 3203 feet.

AIR NAVIGATION ELECTRONIC FACILITIES

FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRND APCH ANGLE	BEAR
HPN	RADAR	ON	2735.	281.83	43539	-418	NY	WESTCHESTER COUNT	-.55	

No Impact. Alteration does not require Notice based upon EMI.
The studied location is within 20 NM of a Radar facility.
The calculated Radar Line-Of-Sight (LOS) distance is: 39 NM.
This location and height is within the Radar Line-Of-Sight.

CMK	VOR/DME	I	116.6	356.18	84616	-602	NY	CARMEL	-.41	
DPK	VOR/DME	I	117.7	142.84	117451	-31	NY	DEER PARK	-.02	
BDR	VOR/DME	R	108.8	71.07	127027	+83	CT	BRIDGEPORT	.04	
LGA	VOR/DME	R	113.1	221.32	128587	+83	NY	LA GUARDIA	.04	
ISP	RADAR	ON	2735.	124.58	155888	-90	NY	LONG ISLAND MacAR	-.03	
TEB	VOR/DME	R	108.4	242.13	156458	+89	NJ	TETERBORO	.03	
JFK	RADAR	ON	2755.	200.84	159439	+5	NY	JOHN F KENNEDY IN	0.00	
JFK	VOR/DME	I	115.9	200.98	162198	+81	NY	KENNEDY	.03	

CRI	VOR/DME	R	112.3	210.06	183699	+82	NY	CANARSIE .03
JFK	RADAR WXL	Y	05647.	207.74	189346	-32	NY	FLOYD BENNETT -.01
HVN	VOR/DME	R	109.8	67.05	201734	+86	CT	NEW HAVEN .02
OKX	RADAR WXL	Y		109.32	203703	-129	NY	BRENTWOOD -.04
EWR	RADAR	Y		231.58	211168	-58	NJ	NEWARK ASDE -.02
SWF	RADAR	Y	2765.	317.27	219995	-629	NY	STEWART INTERNATI -.16
EWR	RADAR	ON	2715.	231.46	220373	-14	NY	NEWARK INTERNATIO 0.00

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: WSTC @ 2922 meters.

Airspace® Summary Version 15.9.401

12-01-2015
10:19:35

ATTACHMENT 8

Robinson + Cole

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

December 23, 2015

Via Certificate of Mailing

David Martin, Mayor
City of Stamford
Stamford Government Center
888 Washington Boulevard
Stamford, CT 06901

Re: **Proposed Installation of a Roof-Top Wireless Telecommunications Facility at 1930 West Main Street, Stamford, Connecticut**

Dear Mayor Martin:

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 building at 1930 West Main Street in Stamford (the "Property"). The facility will consist of two (2) small roof-top towers, each supporting two (2) panel antennas and two (2) remote radio heads (RRHs). The towers, antennas and RRHs will be concealed by screening panels, which will extend approximately seven (7) feet above the building facade. Equipment associated with the facility will be located inside the building.

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.

14316006-v1

Robinson+Cole

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

Sincerely,

Kenneth C. Baldwin

Attachment

Robinson+Cole

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

December 23, 2015

Via Certificate of Mailing

Premier Entertainment Services LLC
27 Fifth Street
Stamford, CT 06905

Re: **Proposed Installation of a Roof-Top Wireless Telecommunications Facility at 1930 West Main Street, Stamford, 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 building at 1930 West Main Street in Stamford (the "Property"). The facility will consist of two (2) small roof-top towers, each supporting two (2) panel antennas and two (2) remote radio heads (RRHs). The towers, antennas and RRHs will be concealed by screening panels, which will extend approximately seven (7) feet above the building facade. Equipment associated with the facility will be located inside the building.

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.

14325421-v1

Robinson+Cole

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

Sincerely,

Kenneth C. Baldwin

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

December 23, 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 Roof-Top Wireless Telecommunications Facility at 1930 West Main Street, Stamford, 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 building at 1930 West Main Street in Stamford (the "Property"). The facility will consist of two (2) small roof-top towers, each supporting two (2) panel antennas and two (2) remote radio heads (RRHs). The towers, antennas and RRHs will be concealed by screening panels, which will extend approximately seven (7) feet above the building facade. Equipment associated with the facility will be located inside the building. 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.

Sincerely,

Kenneth C. Baldwin

Attachment

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

ABUTTING PROPERTY OWNERS
1930 WEST MAIN STREET, STAMFORD, CT

	Property Address	Owners and Mailing Address
1.	1937 West Main Street	Cytec Industries, Inc. 5 Garret Mountain Plaza Woodland Park, NJ 07424
2.	522 West Main Street	Philip J. Tucciarone 522 West Main Street Stamford, CT 06902-5518
3.	10 Harvard Avenue	Philip J. Tucciarone 522 West Main Street Stamford, CT 06902-5518
4.	14 Harvard Avenue	Nicholas M. Demaio, Jr. 7 Red Cedar Drive Darien, CT 06820
5.	35 Commerce Road	Ess Prisa LLC PTA – Ex # 46 P.O. Box 320099 Alexandria, VA 22320