

Burlington Planning Commission

149 Church Street
Burlington, VT 05401
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www.burlingtonvt.gov/pz

Yves Bradley, Chair
Bruce Baker, Vice-Chair
Lee Buffinton
Emily Lee
Andy Montroll
Harris Roen
Jennifer Wallace-Brodeur
vacant, Youth Member



Burlington Planning Commission

ORGANIZATIONAL MEETING

Tuesday, July 14, 2015 - 6:30 P.M.

Conference Room #12, Ground Floor, City Hall, 149 Church Street

AGENDA

*Note: times given are
approximate unless
otherwise noted.*

I. Agenda

II. Public Forum - Time Certain: 6:35 pm

The Public Forum is an opportunity for any member of the public to address the Commission on any relevant issue.

III. Annual Organizational Meeting (10 min)

- Election of Officers: Chair & Vice-Chair
- Election of Executive Committee At-Large Member
- Appointment of Commission Clerk
- Appointment of Committees

IV. Report of the Chair (5 min)

V. Report of the Director – David White (5 min)

VI. Public Hearing – Time Certain 7:00pm

The Commission will hold a public hearing for the following proposed zoning amendment:

- **ZA-15-06 Performing Arts Center in ELM Zone** – to allow performing arts centers as a conditional use in the Enterprise – Light Manufacturing (ELM) Zone.

VII. Proposed Telecommunications Facility – 86 Lake St

VIII. Major Impact Review

The Commission will continue its discussion on Major Impact Review and how requirements could be changed to better reflect the reality of distinct neighborhoods in the City.

IX. Committee Reports (5 min)

X. Commissioner Items (5 min)

This agenda is available in alternative media forms for people with disabilities. Individuals with disabilities who require assistance or special arrangements to participate in programs and activities of the Dept. of Planning & Zoning are encouraged to contact the Dept. at least 72 hours in advance so that proper accommodations can be arranged. For information, call 865-7188 (865-7144 TTY). Written comments may be directed to the Planning Commission at 149 Church Street, Burlington, VT 05401.

XI. Minutes/Communications (2 min)

The Commission will review communications and approve minutes from the May 26 and June 9 meetings.

XII. Adjourn (8:00 p .m.)

PART 5. CONDITIONAL USE AND MAJOR IMPACT REVIEW

Sec. 3.5.1 Purpose

unchanged

Sec. 3.5.2 Applicability

(a) Conditional Use Review:

unchanged

(b) Major Impact Review:

In addition, Major Impact Review shall be required for the approval of all development involving:

	<u>Zoning Districts</u>			
	<u>Downtown Mixed Use, Institutional Core Campus</u>	<u>Neighborhood Mixed Use, Institutional, Enterprise, Residential – High Density</u>	<u>Residential- Medium Density, Residential- Low Density</u>	<u>RCO-A, RCO-C, RCO-RG</u>
Dwelling Units	<u>NA</u>	<u>Creation of twenty-five (25) or more dwelling units</u>	<u>Creation of five ten (105) or more dwelling units—or—the creation through adaptive reuse, substantial rehabilitation or conversion of ten (10) or more dwelling units;</u>	<u>NA</u>
Land Subdivision	<u>NA</u>	<u>NA</u>	<u>Creation of five ten (105) or more lots;</u>	<u>NA</u>
Non-residential or Mixed Use Development	<u>NA</u>	<u>A development footprint¹ of twenty thousand (20,000) s.f. or more, or the</u>	<u>A development footprint¹ of eight thousand (8,000) s.f. or more, or the</u>	<u>Creation of five thousand (5,000) s.f. or more of gross floor area²</u>

Commented [SG1]: Make it 10 to be consistent with creation of new dwelling units.

Commented [DEW2]: Thresholds must bear some relationship to the types of impact being evaluated and the context of the proposed location

DRAFT: 5/21/15

		creation of forty thousand (40,000) s.f. or more of gross floor area.	construction or substantial rehabilitation of fifteen thousand (15,000) s.f. or more of gross floor area of non-residential development.	
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¹ Development Footprint: total area of impervious coverage – buildings and parking.

² Farm structures are exempt per 10 VSA 6001.

Land disturbance			one acre or more;	
Site improvements involving			fifty (50) or more parking spaces;	
Natural Areas	Site improvements and land development on parcels that contain designated wetlands as regulated pursuant to Article 4, or natural areas of state or local significance as identified in the municipal development plan;			
Brownfields	Site improvements and land development on parcels seeking a waiver under Article 5, Part 4, Sec. 5.4.9 — Brownfields; or			
Cumulative Impact:			Multiple projects by the same applicant or responsible party within any consecutive twelve (12) month period on the same property or on a property within 1000 feet of the subject property that in the aggregate equal or exceed the above criteria.	

Commented [DEW3]: inherent to other development triggers and not by itself a major impact

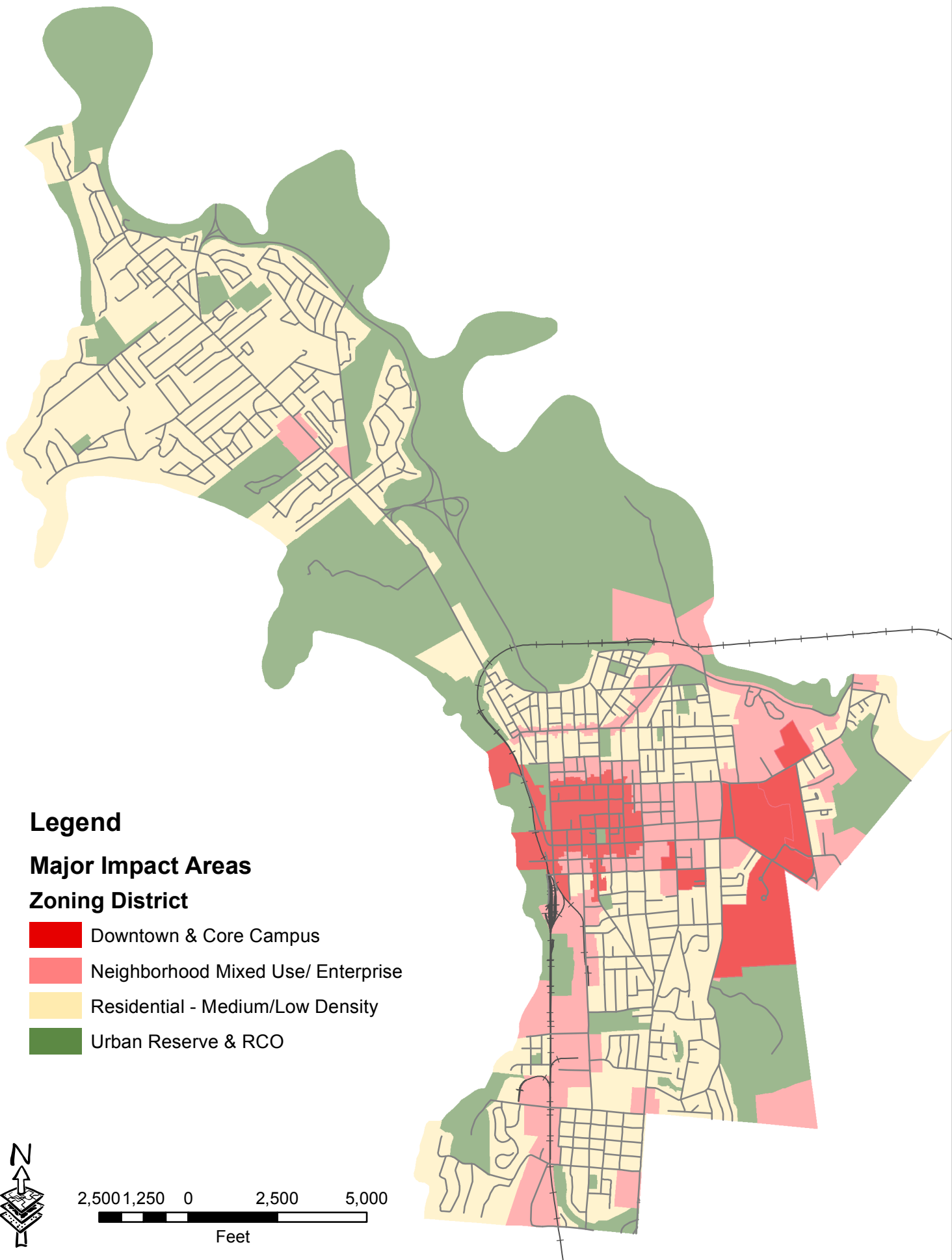
Commented [DEW4]: inherent to non-residential development triggers and not by itself a major impact

Commented [DEW5]: development in these areas is not necessarily major. addressed in other development triggers if it is

Commented [DEW6]: development in these areas is not necessarily major. addressed in other development triggers if it is

Commented [DEW7]: addressed in other development triggers

Major Impact Review shall not be applicable in the Downtown Mixed Use Districts and the Institutional Core Campuses



Legend

Major Impact Areas

Zoning District

-  Downtown & Core Campus
-  Neighborhood Mixed Use/ Enterprise
-  Residential - Medium/Low Density
-  Urban Reserve & RCO





June 2, 2015

Susan Hudson, Clerk
Public Service Board
112 State Street, 4th Floor
Montpelier, VT 05620-2701

Re: Application for a Certificate of Public Good, pursuant to 30 V.S.A. § 248a
(LIMITED SIZE AND SCOPE)
Applicant: NYNEX Mobile Limited Partnership 1 and Cellco Partnership, each
d/b/a Verizon Wireless ("Verizon Wireless")
Project: Co-location of a Wireless Telecommunications Facility
Location: 86 Lake Street, Burlington, Vermont
Landowner: Lake Street Associates, Inc.

Dear Ms. Hudson:

On behalf of Verizon Wireless, enclosed are an original and two copies of an Application for a Certificate of Public Good, pursuant to 30 V.S.A. § 248a; Prefiled Direct Testimony of AJ Lanpher, Louis Hodgetts, and Britta Fenniman Tonn, with supporting exhibits; Notice of Appearance, Certification of Notice, draft of proposed Findings and Order, and Certificate of Public Good, and a copy of the letter mailed to the abutters and other statutory parties notifying them that an Application was filed and of the 21-day deadline for filing comments/requests.

If additional information or documentation is required, please contact me.

Very truly yours,

Brian J. Sullivan, Esq.
BSullivan@mskvt.com

Enclosures

c: As set out on attached Certification of Notice

00124085.DOCX

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Docket No. _____

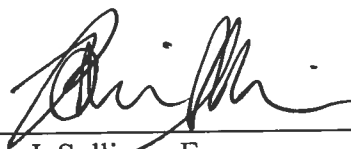
Application of NYNEX Mobile Limited Partnership 1)
and Cellco Partnership, each d/b/a Verizon Wireless,)
for a Certificate of Public Good, pursuant to 30 V.S.A.)
§ 248a, authorizing the co-location of a wireless)
telecommunications facility on an existing building on)
Lake Street in Burlington, Vermont)

NOTICE OF APPEARANCE

Please enter the appearance of the law firm of Murphy Sullivan Kronk on behalf of NYNEX Mobile Limited Partnership 1 and Cellco Partnership, each d/b/a Verizon Wireless, in the above referenced matter.

Dated at Burlington, Vermont, this 3RD day of June, 2015.

NYNEX Mobile Limited Partnership 1 and Cellco
Partnership, each d/b/a Verizon Wireless

By: 

Brian J. Sullivan, Esq.
Murphy Sullivan Kronk
275 College Street
Burlington, VT 05401
(802) 861-7000
BSullivan@mskvt.com

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Docket No. _____

Application of NYNEX Mobile Limited Partnership 1)
and Cellco Partnership, each d/b/a Verizon Wireless,)
for a Certificate of Public Good, pursuant to 30 V.S.A.)
§ 248a, authorizing the co-location of a wireless)
telecommunications facility on an existing building)
on Lake Street in Burlington, Vermont)

**APPLICATION OF NYNEX MOBILE LIMITED PARTNERSHIP 1 AND CELLCO PARTNERSHIP,
EACH D/B/A VERIZON WIRELESS, FOR A CERTIFICATE OF PUBLIC GOOD
PURSUANT TO 30 V.S.A. SECTION 248a**

By this Application, NYNEX Mobile Limited Partnership 1 and Cellco Partnership, each d/b/a Verizon Wireless ("Verizon Wireless" or "Applicant"), represent:

1. The Applicant is a "company" as defined by 30 V.S.A. § 201 and, as such, is subject to the jurisdiction of the Vermont Public Service Board (the "Board") pursuant to 30 V.S.A. § 203.

2. The proposed Project will be a "telecommunications facility" as defined by 30 V.S.A. § 248a(b)(4).

3. As a part of its commitment to improving the quality of the wireless service that it provides to its subscribers in the State of Vermont, Verizon Wireless intends to co-locate a telecommunications facility on the roof and inside an existing building owned by Lake Street Associates, Inc. and located at 86 Lake Street in the City of Burlington, Chittenden County, Vermont. We have the landowner's approval to file this Application.

4. The proposed Project, which is referred to by Verizon Wireless as the "Burlington Waterfront" site, is a wireless telecommunications facility consisting of six (6) antennas and ancillary equipment located on the roof and inside an existing building (the "Project").

5. The antennas will be mounted in five (5) locations on the rooftop of 86 Lake Street in the City of Burlington, Vermont. The mounting locations include each of the four (4) corners of the rooftop and the middle of the eastern edge of the rooftop.

6. The proposed project will utilize a 3.5' by 4' by 5' high stealth enclosure located on each corner of the building's roof to conceal a total of four (4) antennas – one (1) antenna in each enclosure. These enclosures will employ a matte gray finish so that they appear as utilitarian, mechanical features that are not part of the historic architecture of the building. The remaining sector, consisting of two (2) antennas will be located along the eastern side of the roof and will not be in a stealth enclosure.

7. The stealth enclosures have been designed to be as small as possible and still accommodate the proposed antennas. In a neighborhood that has historically been occupied by a complex of industrial warehouses, the scale and proportion of the enclosures in relation to the building are appropriate for industrial or mechanical equipment. Because the enclosures will be differentiated from the historic design and materials of the building, their presence will not create a false sense of history. The relatively dense, mature vegetation surrounding the southern and western (primary) façades of the building will limit the visibility of these enclosures. The two antennas along the eastern side of the roof are unlikely to be visible from existing public streets.

8. Fiber optic cables from the antennas will descend from the rooftop via a cable run on the east face of the building to receiving and transmitting equipment located in an approximately 16' x 20' equipment room to be built in the basement of the building. Verizon Wireless will connect to the building's existing power supply and will be metered for electricity, natural gas, telephone and data services. An air conditioning condenser unit will also be installed on the roof.

9. An emergency generator powered by natural gas will be installed in a room adjacent to the equipment room in the basement. Air intake and exhaust vents will be installed on the exterior west-facing façade adjacent to the generator. The generator will be used to provide backup power if needed.

10. The proposed vents connected to the proposed Verizon Wireless equipment room inside of the building will be limited to just one window opening near the northwest corner of the building to reduce direct and visual impacts to the building. A proposed exterior cable run between the equipment and the antennas will be routed along the eastern façade of the building and painted to match existing building accents to complement the building's brick exterior. The cable run will not be visible from public rights-of-way. Finally, the proposed antenna installation is removable and will not become a permanent modern feature of the building.

11. This Project involves the installation of six (6) 2100 MHz AWS antennas, measuring approximately 54.7" long and 12.7" wide. On each corner of the rooftop, a sled-mounted frame will contain one (1) antenna and one (1) remote radio head ("RRH"). Each RRH will measure approximately 36.6" long and 10.6" wide.¹ The RRHs will be installed directly behind the panel antennas. Each corner frame will be concealed behind a 5' high stealth screen of RF transparent material with a matte grey finish. The sector on the eastern edge of the rooftop will contain two (2) antennas, each measuring approximately 54.7" long and 12.7" wide, two (2) RRHs, each approximately 36.6" long and 10.6" wide, and one (1) sector distribution box that measures approximately 20" square. This sector is not visible from public streets. Therefore it will not be enclosed or stealthed in any other way.

¹ Occasionally, due to equipment shortages and other unforeseen factors, it may be necessary to substitute an equivalent model antenna, remote radio head and/or distribution box of similar dimensions.

12. Two (2) additional sector distribution boxes, measuring approximately 20" square, will be mounted flush to the rooftop behind the enclosures - one located in the northeast corner of the rooftop and one on the southern portion of the rooftop, each with the necessary cabling. After the installation is complete, there will be a total of six (6) antennas. The topmost element of the facility will be at 41' above finished grade. The antennas will be white or gray and the mounting frames will have a galvanized finish.

13. The proposed Project will not exceed 140 feet in height; there will be no permanent earth disturbance or impervious area, and the designed Project will comply with the requirements of the Low Risk Site Handbook for Erosion Prevention and Sediment Control. The Project also complies with the applicable Criteria of 10 V.S.A. § 6086(a) and conforms with local and regional plans. Therefore, under the provisions of 30 V.S.A. §§ 248a(b)(3)(A) and (c)(1), the proposed Project qualifies as one of "limited size and scope."

14. Based on the prefiled testimony, the Project provides necessary improvements to wireless service and cannot be co-located on or at an existing telecommunications facility.

15. The Project will promote the general good of the State by expanding wireless telecommunication infrastructure to support modern mobile services in communities; providing high quality services for businesses and residents; providing competitive choices for consumers; and providing the opportunity to improve public safety and economic development within the State, all in conformance with the substantive criteria under Section 248a.

16. On April 18, 2014, Verizon Wireless provided the initial 45-day written notice, as required under 30 V.S.A. § 248a(e), to the following: The City of Burlington City Council and Burlington Planning Commission, Chittenden County Regional Commission, Secretary of the Agency of Natural Resources, Division of Historic Preservation, Commissioner of the

Vermont Agency of Transportation, Commissioner of the Department of Public Service and its Director for Public Advocacy, the Public Service Board and to the landowners of record of properties adjoining the Project site.

17. Over the last year, Verizon Wireless has engaged in extensive discussions with various representatives of the City of Burlington and with the Vermont State Historic Preservation Office (“SHPO”) regarding the plans for this site. SHPO issued a “no adverse effect” letter for the original design which used larger boxes and antennas. *See* Exhibit BT-2 to Prefiled Testimony of Britta Fenniman Tonn. Verizon Wireless has met on more than one occasion with the Burlington Planning Commission, most recently to provide information about other locations that had been considered for the project and the reasons for their unsuitability.

18. Verizon Wireless discussed possible alternative designs for the Project with those entities. Those discussions have resulted in a revised proposal, now presented to the Board. Verizon Wireless agreed to reduce the number of antennas from twelve (12) to six (6) with a 2’ reduction in the height of the stealth enclosures. These compromises have resulted in a reduction in Verizon Wireless’ service objectives for this site.

19. On February 13, 2015, Verizon Wireless provided a new 45-day written notice to the following: The City of Burlington City Council and Planning Commission, Chittenden County Regional Commission, Secretary of the Agency of Natural Resources, Division of Historic Preservation, Commissioner of the Vermont Agency of Transportation, Commissioner of the Department of Public Service and its Director for Public Advocacy, the Public Service Board and to the landowners of record of properties adjoining the Project site.

20. Concurrently with the filing of this Application, Verizon Wireless has provided copies of this Application, and accompanying prefiled testimony and exhibits, to the following:

City of Burlington City Council and Planning Commission, Chittenden County Regional Commission, Secretary of the Agency of Natural Resources, Division of Historic Preservation, Commissioner of the Vermont Agency of Transportation, Commissioner of the Department of Public Service and its Director for Public Advocacy. A notice of the filing of this Application has also been provided to the landowners of record of properties adjoining the Project site.

21. In support of this Application, Verizon Wireless submits the Prefiled Testimony and exhibits sponsored by the following witnesses:

<u>Witness</u>	<u>Subject</u>
AJ Lanpher, RF Engineer	Describes the installation, coverage and the Project's purpose and impact on the existing Verizon Wireless network.
Louis Hodgetts, Project Engineer	Describes the design of the proposed Project, the Project's impact on the applicable Criteria of 10 V.S.A. § 6086(a) and addresses conformance with the applicable local and regional plans.
Britta Fenniman Tonn, Senior Architectural Historian	Describes what impact, if any, the Project will have under 10 V.S.A. § 6086(a)(8), historic sites

WHEREFORE, Applicant respectfully requests that the Board:

1. Find that the Application complies with all applicable filing requirements pursuant to 30 V.S.A. § 248a criteria and does not raise a substantial issue under said Section;
2. Find that the Project will promote the general good of the State of Vermont and authorize the Applicant to undertake the actions as described herein and in its exhibits;
3. Issue an Order and Certificate of Public Good; and

4. Take such other measures as may be required for the expeditious review and approval of this Application.

Dated in Burlington, Vermont this 3RD day of June, 2015.

NYNEX Mobile Limited Partnership 1 and Cellco
Partnership, each d/b/a Verizon Wireless

By: 

Brian J. Sullivan, Esq.
Murphy Sullivan Kronk
275 College Street
Burlington, VT 05401
(802) 861-7000
BSullivan@mskvt.com

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

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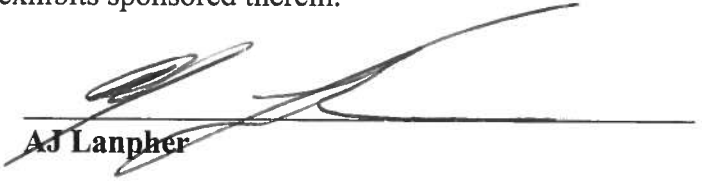
AFFIDAVIT OF AJ LANPHER

**ON BEHALF OF NYNEX MOBILE LIMITED PARTNERSHIP 1 AND CELLCO
PARTNERSHIP, EACH d/b/a VERIZON WIRELESS**

State of Vermont)
) ss:
County of Chittenden)

AJ Lanpher, being duly sworn, hereby states as follows:

1. The information in my prefiled testimony and all exhibits sponsored therein is accurate to the best of my knowledge.
2. I have personal knowledge of and am able to testify as to the validity of the information contained in my prefiled testimony and all exhibits sponsored therein.



AJ Lanpher

Sworn to before me, in the state and county stated above, this 2 day of June, 2015
2015.



Notary Public
My Commission Expires: 2/10/19

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on Lake Street in Burlington, Vermont)

PREFILED DIRECT TESTIMONY OF AJ LANPHER

**ON BEHALF OF NYNEX MOBILE LIMITED PARTNERSHIP 1 AND CELLCO
PARTNERSHIP, each d/b/a VERIZON WIRELESS**

JUNE 1, 2015

Summary:

Mr. Lanpher's testimony will address the proposed telecommunications facility, the specific coverage needs that will be met, the service that will be provided, and how the Project will promote the general good of the State of Vermont.

1 **Q1. Please state your name, employer and current position.**

2 A1. My name is AJ Lanpher and I am a Radio Frequency ("RF") Design Engineer currently
3 working for Celco Partnership d/b/a Verizon Wireless ("Verizon Wireless").

4 **Q2. Please state briefly your educational and professional background.**

5 A2. I have worked in the communications industry for over 25 years and the cellular industry
6 for 21 years. My credentials as an RF engineer include the following:

- 7 • Employed as an RF Engineer for Verizon Wireless for the past 6 years, designing
8 antenna transmitter facilities for the Cellular, Long Term Evolution ("LTE") and
9 Personal Communication Services ("PCS") in Vermont. This entails site selection,
10 antenna layout, regulatory filings, zoning, RF compliance, cell activation and
11 optimization.
- 12 • Prior to Verizon Wireless, I was employed by Rural Cellular Corporation
13 ("Unicel") for 16 years, 4 years as a Network Performance Engineer, which entailed
14 site selection, Cell Optimization, Capacity Engineering and Antenna Design /
15 Optimization; and 12 years as a Cellular Technician where I installed, optimized
16 and maintained Cell Sites for Unicel in the states of Vermont, New York, New
17 Hampshire and Massachusetts.
- 18 • Graduated from Electronic Technician A-School from the US Navy and also
19 graduated from 2 C-Class Schools, Shore Communications C-School and Navmacs
20 V5 Satellite Communications C-School.

21 **Q3. Have you ever testified before the Public Service Board?**

22 A3. Yes. I provided Prefiled Testimony for Verizon Wireless in Docket No. 7651, installation
23 of TMA systems on existing towers throughout the State; Docket No. 7695, antenna

1 modifications at several sites; and Docket No. 7732 (Williston), Docket No. 7826,
2 (Castleton), Docket No. 7841 (Town of St. Albans), Docket No. 7849 (Grand Isle),
3 Docket No. 7853 (Northfield), Docket No. 7878 (Fayston), Docket No. 7893 (Plainfield),
4 Docket No. 7922 (Jericho), Docket No. 7999 (Milton), Docket No. 8005 (Rutland),
5 Docket No. 8134 (South Burlington), Docket No. 8163 (Essex), Docket No. 8169
6 (Duxbury), Docket No. 8219 (West Rutland), Docket No. 8220 (Bradford), Docket Nos.
7 8221 and 8424 (Berlin); all involving the issuance of a CPG authorizing the installation
8 or upgrade of a Verizon Wireless telecommunications facility.

9 **Q4. Please identify the location of the Project that is the subject to this § 248a filing.**

10 A4. The Project will be installed on the rooftop of and inside an existing building located at
11 86 Lake Street, in the City of Burlington, Chittenden County, Vermont. The coordinates
12 for the Project are latitude 44°-28'-41.55" North, longitude 73°-13'-12.50" West.

13 **Q5. Please describe how and why the proposed site was chosen.**

14 A5. The identification of new sites initiated by Verizon Wireless entails a process known as
15 Search Area Development. This task is assigned to the RF Design Engineer employed by
16 Verizon Wireless. As the RF Engineer for Vermont, I define Search Areas based on the
17 following criteria: drive test analysis, review of statistical data from our existing network,
18 customer feedback and multiple years of industry experience in the State of Vermont.
19 This information, once reviewed, defines the Search Area, which is confirmed with the
20 utilization of Propagation Analysis.

21 Once the search ring is designated, the Verizon Wireless Real Estate Group
22 searches within the defined Search Area for existing buildings, towers and other
23 structures of sufficient height to fill the coverage gaps in the network. After exhausting
24 the existing structures, "raw land" candidates for new towers are investigated. Proposed

1 sites are verified by using a combination of drive test data and computer modeling of a
2 location. The RF Design Engineer determines whether coverage and connectivity
3 objectives with adjacent sites would be met by the proposed site.

4 As a part of its commitment to quality service for its wireless telecommunications
5 subscribers in the State of Vermont, Verizon Wireless strives to provide continuous
6 coverage and avoid call interruptions or "dropped calls." Verizon Wireless also
7 recognizes the rapid growth of demand for high-speed wireless data services.

8 This site has been designed to provide enhanced coverage to portions of
9 Burlington's waterfront area. This location at a minimum will mimic and/or enhance the
10 existing coverage being provided by Verizon Wireless' Burlington Square VT and
11 Medical Center VT sites. With the activation of this new site, Verizon Wireless will be
12 able to perform antenna modifications to the Burlington Square VT and Medical Center
13 VT sites in an effort to control capacity issues currently being experienced at those sites.

14 In addition to addressing capacity issues, the activation of this new site will result
15 in much better throughput speeds on Verizon Wireless' LTE network by reducing signal
16 interference issues. Customers along the waterfront and parts of downtown Burlington
17 will also experience more robust LTE capacity with better throughputs by accessing
18 Verizon Wireless' newly acquired spectrum on the XLTE platform.

19 Verizon Wireless attempts to co-locate whenever possible, either on an existing
20 tower or other structure that has sufficient height to accommodate the "line of sight"
21 needs of a wireless telecommunications facility. The building at 86 Lake Street will
22 provide Verizon Wireless with such a co-location opportunity.¹

¹ See Exhibit LH-8 to the Prefiled Testimony of Louis Hodgetts for a map of sites on the Waterfront that were reviewed and the reasons they were found unsuitable.

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Q6. From a Radio Frequency Engineer's perspective, please describe what site improvements will be necessary for the proposed Project.

A6. A total of six (6) panel antennas will be mounted on rooftop "mounting sleds" in three "sectors;" one sector will consist of two (2) corner mounting sleds facing north (the "Gamma Sector"); another sector will consist of two (2) corner mounting sleds facing south (the "Beta Sector") and a third sector will be one (1) mounting sled in the rear of the rooftop facing east (the "Alpha Sector"). After the installation is complete, each of the Gamma Sector sleds and each of the Beta Sector sleds will have one (1) antenna and one (1) remote radio head ("RRH") and the Alpha Sector sled will have two (2) antennas and one RRH for a total of six (6) antennas and six (6) RRHs. The equipment will consist of 2100 MHz AWS/LTE antennas, measuring approximately 54.7" long by 12.7" wide, RRHs, measuring approximately than 36.6" high x 10.7" wide, and two (2) sector distribution box, each measuring approximately 20" square. There will be one (1) main distribution box in the Alpha Sector. Each RRH will be installed directly behind a panel antenna. The sector distribution boxes will be mounted flush with the rooftop. Full and accurate specifications of the proposed antennas and RRHs are detailed in Exhibit AL-2.²

Each of the four (4) mounting sleds on the corners of the rooftop will be enclosed within an approximately four foot (4') square by five foot (5') high stealth enclosure made of RF transparent material with a matte grey finish.

Verizon Wireless will install its transmitting and receiving base station equipment

² From time to time, equipment manufacturers may slightly alter their products or Verizon Wireless may purchase from different suppliers. Therefore, there is a possibility that the actual antennas, remote radio heads and/or distribution boxes may be a different model than what is described in the attached specifications.

1 in an equipment room to be located in the basement of the building. In an adjacent room,
2 there will be an emergency generator powered by natural gas to provide back-up power
3 should it be needed. The Prefiled Testimony of Louis Hodgetts, Project Engineer with
4 DuBois & King, Inc., filed with this Application, will elaborate on the specifications of
5 the proposed equipment room and emergency generator.

6 **Q7. Please address the level of radiation associated with the proposed equipment.**

7 A7. Under federal law, Verizon Wireless is required to comply with the radiofrequency
8 ("RF") emission levels established by the Federal Communications Commission (FCC").
9 Exhibit AL-3 is a power density calculation illustrating that even using the most extreme
10 assumptions, which could not possibly be duplicated at the site, RF emission levels will
11 still be well below the Maximum Permissible Exposure ("MPE") limits established by the
12 FCC.

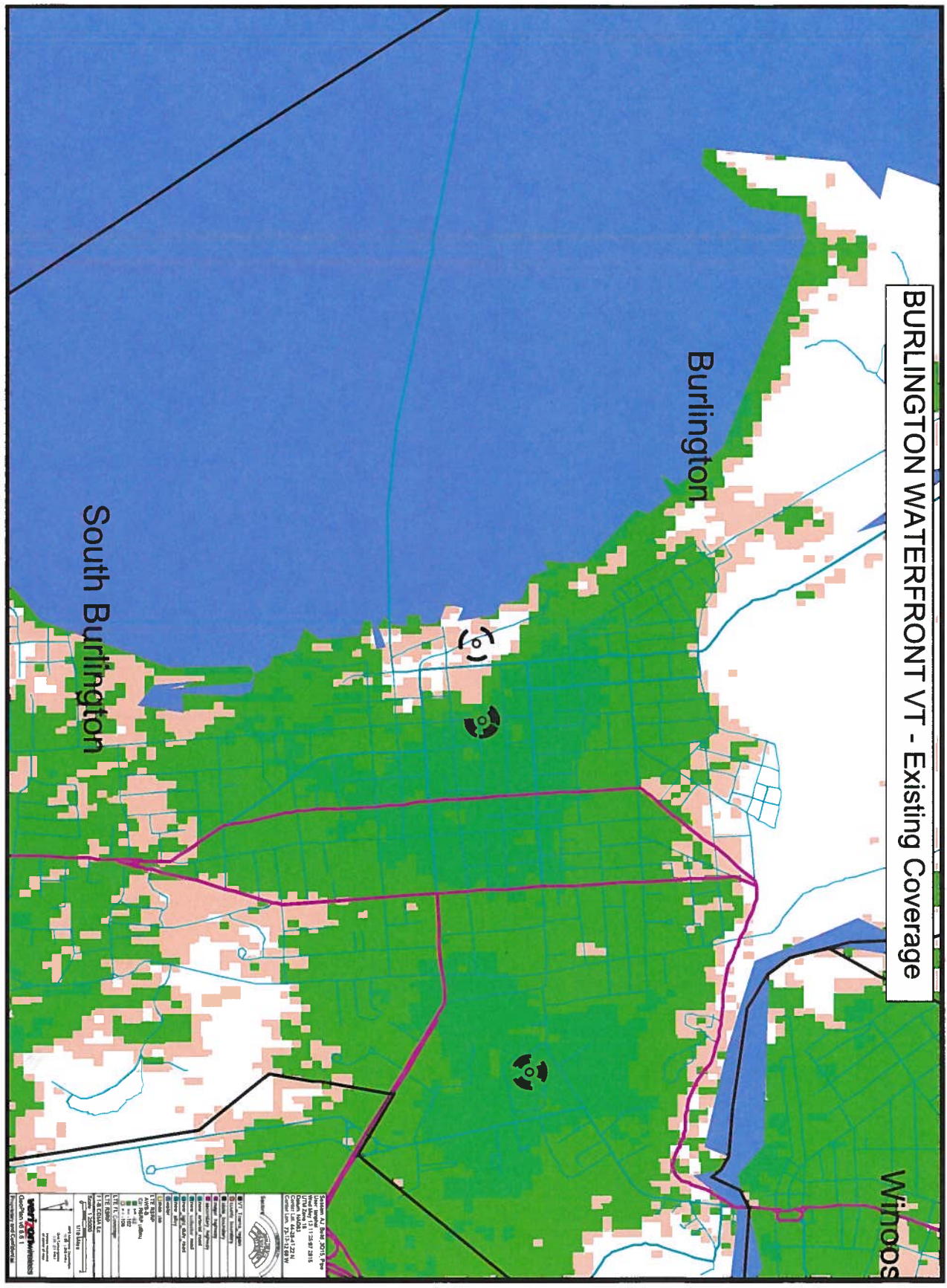
13 **Q8. Does this conclude your Prefiled Direct Testimony?**

14 A8. Yes.

Exhibits to Prefiled Testimony of AJ Lanpher

Exhibit AL-1	Propagation Plots
Exhibit AL-2	Antenna Specifications
Exhibit AL-3	Power Density Calculation/MPE

BURLINGTON WATERFRONT VT - Existing Coverage



BURLINGTON WATERFRONT VT - Proposed Coverage

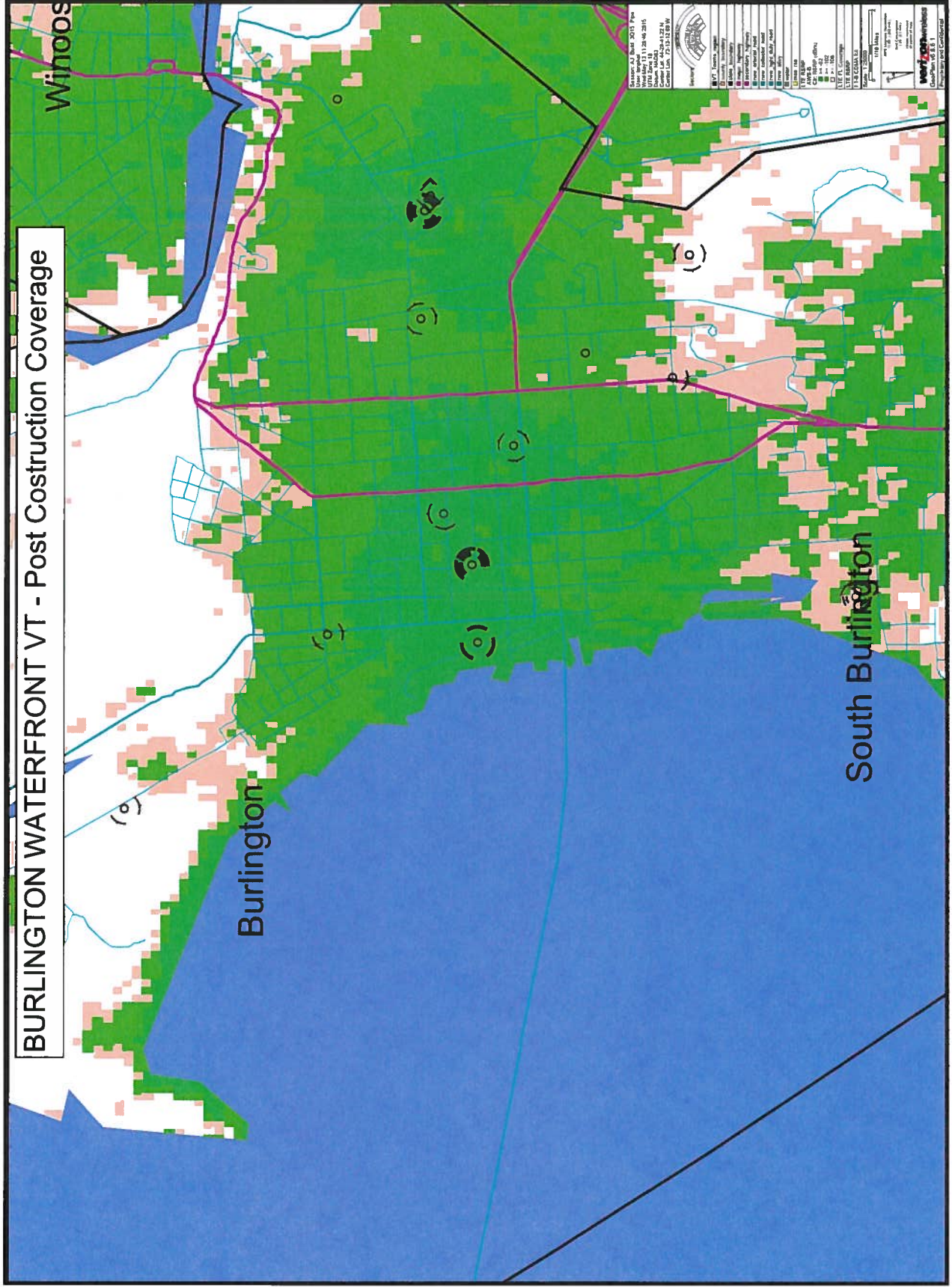
Burlington

South Burlington

Winos



BURLINGTON WATERFRONT VT - Post Construction Coverage





800 10510V

65° Panel Antenn

Enhanced Sidelobe Suppression

Extended Downtilt Range 0°–1

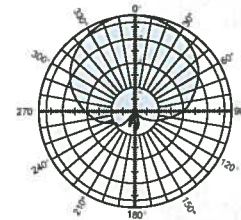
Kathrein panels for AWS feature:

- Heavy-duty construction using the highest quality materials: UV resistant pulltruded fiberglass radomes, stainless steel fasteners and hardware, rigid aluminum reflectors, and low loss coaxial cable power divider harness, all contributing to long, trouble free service life.
- Superior electrical specifications including low VSWR, wide bandwidth, flat frequency response, and superb intermodulation performance.
- Precision continuously adjustable electrical downtilt controls, manual control as standard equipment, with remote control available as an option.

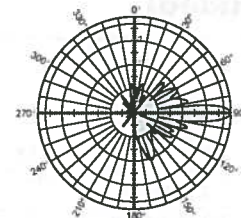
General specifications:

Frequency range	1710–2200 MHz
VSWR	<1.5:1
Impedance	50 ohms
Intermodulation (2x20w)	IM3: <-153 dBc
Polarization	+45° and -45°
Connector	4 x 7-16 DIN female
Isolation	>30 dB
Maximum input power	300 watts (at 50°C) per input
Weight	37.5 lb (17 kg) 41.9 lb (19 kg) clamps included
Dimensions	54.7 x 12.7 x 2.8 inches (1389 x 323 x 71 mm)
Wind load	at 93 mph (150kph)
Front/Side/Rear	158 lbf / 36 lbf / 162 lbf (700 N) / (160 N) / (720 N)
Mounting category	M (Medium)
Wind survival rating*	120 mph (200 kph)
Shipping dimensions	66.4 x 13.3 x 4.4 inches (1686 x 337 x 112 mm)
Shipping weight	46.3 lb (21 kg)
Mounting	Fixed mounts for 2 to 4.6 inch (50 to 115 mm). OD masts are included and tilt options are available.

See reverse for order information.



Horizontal pattern
±45°- polarization



Vertical pattern
±45°- polarization
0°–15° electrical downtilt



Specifications:	1710–1880 MHz	1850–1990 MHz	1920–2170 MHz	2000–2200 MHz
Gain	17.5 dBi	17.6 dBi	17.7 dBi	17.8 dBi
Front-to-back ratio (180° ±30°)	≥30 dB (co-polar)	≥30 dB (co-polar)	≥30 dB (co-polar)	≥28 dB (co-polar)
Horizontal beamwidth	65° (half-power)	63° (half-power)	62° (half-power)	62° (half-power)
Vertical beamwidth	7.9° (half-power)	7.5° (half-power)	7.2° (half-power)	6.9° (half-power)
Electrical downtilt continuously adjustable	0°–15° (manual or optional remote control)	0°–15°	0°–15°	0°–15°
Sidelobe suppression first sidelobe above main beam within 0°–20° sector above horizon	0° 5° 10° 15° T ≥17 20 18 17 dB ≥17 18 18 16 dB	0° 5° 10° 15° T ≥16 20 18 18 dB ≥16 17 17 16 dB	0° 5° 10° 15° T ≥15 19 18 17 dB ≥15 17 17 16 dB	0° 5° 10° 15° T ≥14 18 18 16 dB ≥14 16 16 15 dB
Cross polar ratio				
Main direction	0°	0°	0°	0°
Sector	±60°	±60°	±60°	±60°
	24 dB (typical) ≥9 dB	24 dB (typical) ≥9 dB	24 dB (typical) ≥10 dB	26 dB (typical) ≥10 dB
Null-fill at 0° tilt	23 dB	22 dB	21 dB	20 dB

* Mechanical design is based on environmental conditions as stipulated in TIA-222-G-2 (December 2009) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.



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936.3986/a

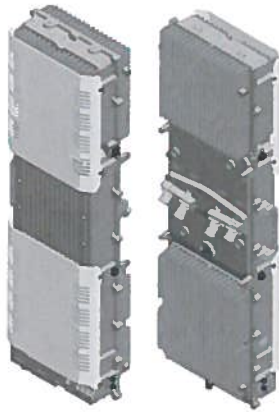


ALCATEL-LUCENT

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.

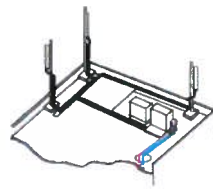
EASY INSTALLATION

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.

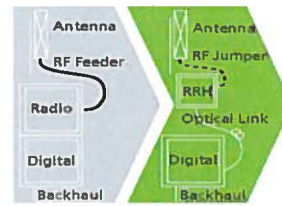
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation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

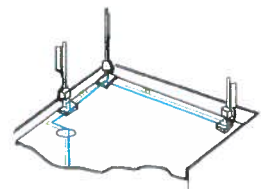
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-AWS is compact and weighs about 25 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



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.

36.6" x 10.6" x 5.75"

Dimensions and weights

- HxWxD : 930x270x146 mm (with solar shield)
- Weight : 25 kg (55 lbs) (with solar shield)

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 (3-6) 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 300m using MM fiber, up to 15km using SM fiber
- TMA/RETA : AISG 2.0 (RS485 connector and internal Bias-Tee)
- Four 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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Calculated Radio Frequency Emissions Report



Burlington Waterfront VT
86 Lake Street, Burlington, VT 05401

May 18, 2015

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed installation of Verizon Wireless antenna arrays on the rooftop of the building located at 86 Lake Street in Burlington, VT. The coordinates of the building are 44 28 41.60 N, -73 13 12.71 W.

Verizon Wireless is proposing the following:

- 1) Install six 2100 MHz LTE antennas (two per sector).

This report uses the proposed antenna configuration for Verizon Wireless to derive the resulting % MPE, once the proposed installation has been completed.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{\text{EIRP}}{\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{H^2 + V^2}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor of 2.0

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the Verizon Wireless antenna configuration.

The percent of MPE values presented in this report reflect levels that one may encounter from one sector of a carrier's antennas. Most carriers use 3 sectors per site with azimuths approximately 120 degrees apart, therefore one could not be standing in the main beam of all 3 sectors at the same time. In cases where antenna models are not uniform across all 3 sectors, the antenna model with the highest gain was used for the calculations. This results in a conservative or "worst case" assumption for percent of MPE calculations.

4. Proposed Antenna Inventory

Table 1 below outlines Verizon's proposed antenna configuration for the site. The associated data sheet and antenna pattern for this specific antenna model is included in Attachment C.

Operator	Sector	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBd)	Power ERP (Watts)	Antenna Model	Beam Width	Mech. Downtilt	Length (ft)	Antenna Centerline Height (ft)
Verizon	Alpha	2100	120	15.7	4458	800 10510V01_3	62	0	4.5	39.0
		2100	120	15.7	4458	800 10510V01_3	62	0	4.5	39.0
	Beta	2100	120	15.7	4458	800 10510V01_3	62	0	4.5	39.0
		2100	120	15.7	4458	800 10510V01_3	62	0	4.5	39.0
	Gamma	2100	120	15.7	4458	800 10510V01_3	62	0	4.5	39.0
		2100	120	15.7	4458	800 10510V01_3	62	0	4.5	39.0

Table 1: Proposed Antenna Inventory^{1 2}

¹ Transmit power assumes 0dB of cable loss.

² Antenna heights are based upon the Dubois & King, Inc., Permit Plans, dated April 22, 2015.

5. Calculation Results

The calculated power density results are shown in Figure 1 below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 2,000 feet horizontal distance from the antennas. In addition to the other worst case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas were completed using a local maximum off beam antenna gain (within ± 5 degrees of the true mathematical angle) to incorporate a realistic worst case scenario.

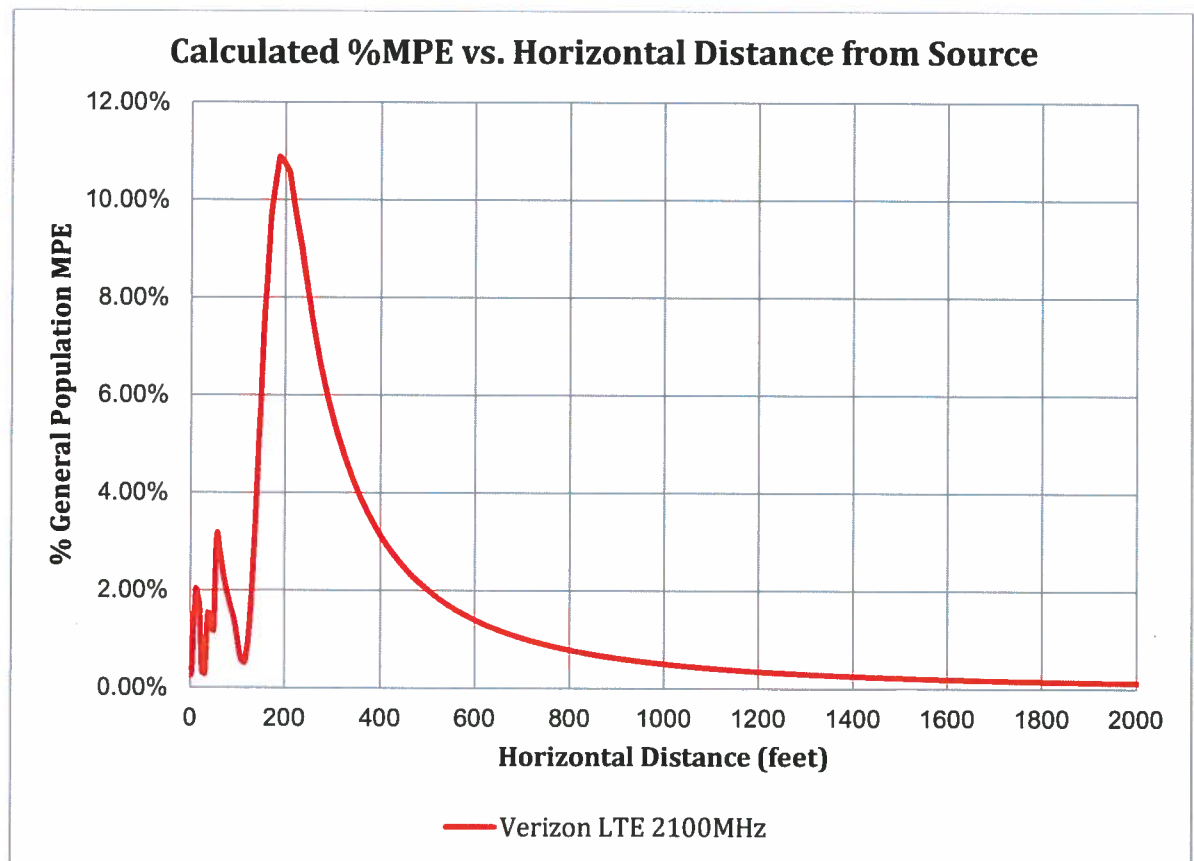


Figure 1: Graph of Percent of General Population MPE vs. Distance

The highest percent of MPE (10.89% of the General Population limit) was calculated to occur at a horizontal distance of 187 feet from the antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 300 feet and beyond, one would now be in the main beam of most antenna patterns and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists the calculated percent of MPE value as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 187 feet from the antennas (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, 6 feet was subtracted from the height of the antennas for this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the Verizon Wireless antenna configuration.

Carrier	Number of Trans.	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm ²)	Limit (mW/cm ²)	%MPE
Verizon LTE 2100MHz	4	60.0	39.0	187	0.108889	1.000	10.89%
						Total	10.89%

Table 2: Maximum Percent of General Population Exposure Value³

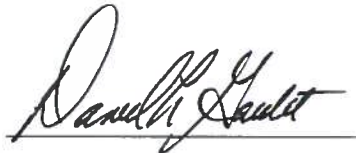
³ Frequencies listed in Table 2 are representative of the operating band of the particular carrier and are not the carriers' specific operating frequency.

6. Conclusion

The above analysis verifies that RF exposure levels from the proposed Verizon Wireless antennas will be below the maximum levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the cumulative maximum percent of MPE calculated at 6 feet above ground level is **10.89% of the FCC General Population limit**. This maximum percent of MPE value is calculated to occur 187 feet away from the site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Daniel L. Goulet
C Squared Systems, LLC

May 18, 2015

Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure⁴

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure⁵

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 3: FCC Limits for Maximum Permissible Exposure

⁴ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

⁵ General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

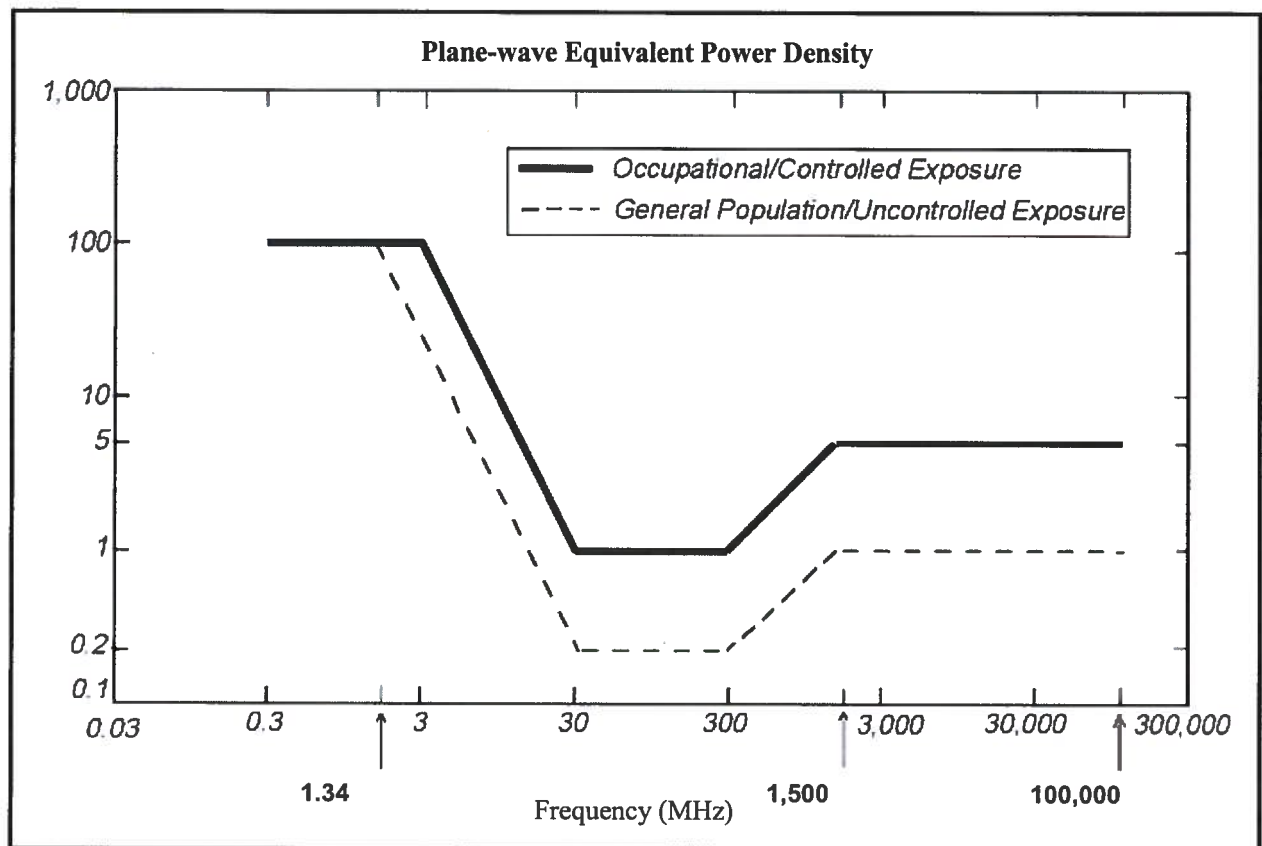
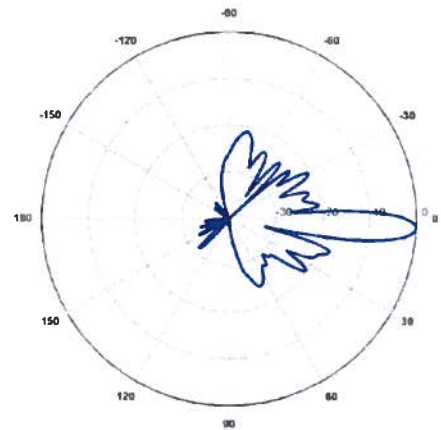


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Antenna Model Data Sheet and Electrical Pattern**2100 MHz**

Manufacturer: Kathrein-Scala
Model #: 800 10510V01_3
Frequency Band: 2000-2200 MHz
Gain: 15.7 dBd
Vertical Beamwidth: 6.9°
Horizontal Beamwidth: 62°
Polarization: $\pm 45^\circ$
Size L x W x D: 54.7" x 12.7" x 2.8"



**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Docket No. _____

Application of NYNEX Mobile Limited Partnership 1)
and Cellco Partnership, each d/b/a Verizon Wireless,)
for a Certificate of Public Good, pursuant to 30 V.S.A.)
§ 248a, authorizing the co-location of a wireless)
telecommunications facility on an existing building)
on Lake Street in Burlington, Vermont)

AFFIDAVIT OF BRITTA FENNIMAN TONN

**ON BEHALF OF NYNEX MOBILE LIMITED PARTNERSHIP 1 AND CELLCO
PARTNERSHIP, EACH D/B/A VERIZON WIRELESS**

State of Vermont)
) ss:
County of Chittenden)

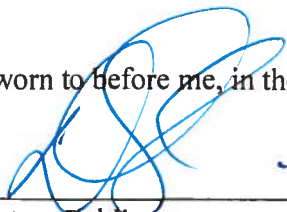
Britta Fenniman Tonn, Senior Architectural Historian, being duly sworn, hereby states as follows:

1. The information in my prefiled testimony and all exhibits sponsored therein are accurate to the best of my knowledge.
2. I have personal knowledge of and am able to testify as to the validity of the information contained in my prefiled testimony and all exhibits sponsored therein.



Britta Fenniman Tonn

Sworn to before me, in the state and county stated above, this 28th day of May, 2015.



Notary Public
My Commission Expires: 2/10/19

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Docket No. _____

Application of NYNEX Mobile Limited Partnership 1)
and Cellco Partnership, each d/b/a Verizon Wireless,)
for a Certificate of Public Good, pursuant to 30 V.S.A.)
§ 248a, authorizing the co-location of a wireless)
telecommunications facility on an existing building)
on Lake Street in Burlington, Vermont)

**PREFILED DIRECT TESTIMONY OF
BRITTA FENNIMAN TONN, ARCHITECTURAL HISTORIAN

ON BEHALF OF NYNEX MOBILE LIMITED PARTNERSHIP 1 AND
CELLCO PARTNERSHIP, EACH D/B/A VERIZON WIRELESS**

May 27, 2015

Summary:

Ms. Tonn's testimony will address what impact, if any, the Project will have under 10 V.S.A. § 6086(a)(8), historic sites.

Q1. Please state your name, employer and current position.

A1. My name is Britta Fenniman Tonn, and I am a Senior Architectural Historian with EBI Consulting ("EBI").

Q2. Please state briefly your educational and professional background.

A2. I received a B.A in History of Art and Architecture from Middlebury College in 2002 and an M.S. in Historic Preservation from the University of Vermont in 2009. I meet the Secretary of the Interior Professional Qualification Standards in the areas of Architectural History and Historic Preservation, as specified by 36 CFR Part 61.

Before joining EBI, I prepared Vermont Historic Sites and Structure Surveys on a number of buildings in Vermont, which served as nominations to the Vermont State Historic Register, and evaluated each building's eligibility for listing on the National Register. I also completed archival research on several downtown Burlington properties, preparing detailed historical reports for each building.

As an Architectural Historian with EBI, my focus is on the preparation of Federal Communications Commission Section 106 analyses for EBI's wireless industry clients. My duties include conducting cultural resources surveys, assessing National Register eligibility of historic structures and sites and writing telecommunications reports as part of the National Environmental Policy Act compliance process.

Q3. Have you ever testified before the Public Service Board?

A3. Yes, I provided Prefiled Testimony on behalf of Verizon Wireless in Docket No. 7826 (Castleton), Docket No. 7849 (Grand Isle), Docket No. 7878 (Fayston), Docket No. 7893 (Plainfield) and Docket No. 7922 (Jericho); all involving the issuance of a CPG authorizing the installation of telecommunications facilities.

Q4. Please describe the historic resources analysis that you undertook for this project.

A4. On April 22, 2014, EBI Consulting completed a review of the available records as required per Section VI.D.2 of the Federal Communications Commission's 2004 Nationwide Programmatic Agreement to identify historic properties in the Area of Potential Effects (APE) of a proposed antenna co-location on the building at 86 Lake Street in Burlington, Vermont. EBI identified that the Subject Property building is listed on the Vermont State Register as part of the Pioneer Mechanics' Shops industrial complex (#0402-1, building 7). In addition, several buildings within the Pioneer Mechanics' Shops industrial complex (buildings 2, 5 and 6) are located to the north and east and within 250 feet of the subject property building.

On July 11 and October 22, 2014, several Verizon Wireless personnel and I met with James Duggan, Historic Preservation Review Coordinator with the Vermont Division for Historic Preservation, to discuss the design of this proposed project.

Q5. Based on the foregoing, have you reached a conclusion as to whether the Project will have an undue, adverse impact on historic sites?

A5. Yes. The proposed project will utilize four, 3.5' by 4' by 5' high stealth enclosures on each corner of the building's roof to conceal two sectors of antenna. These enclosures will employ a matte gray finish such that they appear as utilitarian, mechanical features that are not related to the historic architecture of the building. Thus, the enclosures will not create a false sense of history as they will be differentiated from the historic design and materials of the building. In addition, the proposed enclosures will be as small as possible to accommodate the proposed antennas; their scale and proportion in relation to the building is appropriate for industrial or mechanical equipment, particularly in a

neighborhood that has historically been occupied by industrial uses. In addition, due to the building's setting and intervening vegetation, the visibility of these antenna enclosures will be minimized. The one sector of antennas left unconcealed will be located along the eastern side of the roof where it will hardly be visible, if at all, from existing public rights-of-way.

The proposed vents connected to the proposed Verizon Wireless equipment room inside of the building will be limited to just one window opening near the northwest corner of the building to reduce direct and visual impacts to the building. A proposed exterior cable run between the equipment and the antennas will be routed along the eastern façade of the building and painted to match the building's brick exterior and therefore will not be visible from public rights-of-way. Finally, the proposed antenna installation is a temporary installation that will not become a permanent modern feature of the building.

Based upon the discussions with James Duggan, as well as my review of the project plans and photo simulations, along with the characteristics of the Subject Property building and the surrounding area, it is my professional opinion that the proposed project will have "No Adverse Effect" on identified historic properties within the APE-DE and APE-VE.

In addition, on March 9, 2015, James Duggan from SHPO, submitted his formal review of the Project in which he determined that the original proposal for twelve antennas instead of six would result in "No adverse effect" on historic resources. *See* Exhibit BT-2.

Q6. Does this conclude your Prefiled Direct Testimony?

A6. Yes.

Exhibits to Prefiled Testimony of Britta Fenniman Tonn

Exhibit BT-1

Review of Historic Resources, dated November 12, 2014

Exhibit BT-2

Letter from James Duggan, SHPO, stating “No adverse effect” on historic resources, dated March 9, 2015

November 12, 2014

Memorandum

Re: Section 106 Review Determination of Effects
Burlington Waterfront, VT
86 Lake Street, Burlington, Chittenden County, VT 05401
EBI Project Number: 61143896

On April 22, 2014, EBI Consulting completed a review of the available records as required per Section VI.D.2 of the Federal Communications Commission's 2004 Nationwide Programmatic Agreement to identify historic properties in the Area of Potential Effects (APE) of a proposed antenna collocation on the building at 86 Lake Street in Burlington, Vermont. EBI identified that the Subject Property building is listed on the Vermont State Register as part of the Pioneer Mechanics' Shops industrial complex (#0402-1, building 7). In addition, several buildings within the Pioneer Mechanics' Shops industrial complex (buildings 2, 5 and 6) are located to the north and east and within 250 feet of the Subject Property building.

Britta Fenniman Tonn, Senior Architectural Historian of EBI Consulting and several Verizon Wireless personnel met with Mr. James Duggan, Historic Preservation Review Coordinator with the Vermont Division for Historic Preservation on July 11, 2014 and October 22, 2014 to discuss the design of this proposed project. Based upon the discussions with Mr. Duggan (see attached), as well as a review of the project plans and photo simulations along with the characteristics of the Subject Property building and the surrounding area, it is Ms. Tonn's professional opinion that the proposed project will have "No Adverse Effect" on identified historic properties within the APE-DE and APE-VE.

The proposed project will utilize four, 3.5' by 4' by 7' high stealth enclosures on each corner of the building's roof to conceal two sectors of antenna. These enclosures will employ a matte gray finish such that they appear as utilitarian, mechanical features that are not related to the historic architecture of the building. Thus, the enclosures will not create a false sense of history as they will be differentiated from the historic design and materials of the building. In addition, the proposed enclosures will be as small as possible to accommodate the proposed antennas; their scale and proportion in relation to the building is appropriate for industrial or mechanical equipment, particularly in a neighborhood that has historically been occupied by industrial uses. In addition, due to relatively dense, mature vegetation surrounding the southern and western (primary) facades of the building, the visibility of these antenna enclosures will be minimized. The one sector of antennas left unconcealed will be located along the eastern side of the roof where it will hardly be visible, if at all, from existing public right-of-ways. The proposed vents connected to the proposed Verizon Wireless equipment room inside of the building will be limited to just one window opening near the northwest corner of the building to reduce direct and visual impacts to the building. A proposed exterior cable run between the equipment and the antennas will be routed along the eastern façade of the building and painted to match the building's brick exterior and therefore will not be visible from public right-of-ways. Finally, the proposed antenna installation is a temporary installation that will not become a permanent modern feature of the building.

The above statements should not be construed as evidence of SHPO concurrence with EBI's findings on this project. This is merely the opinion of EBI based on past experience and knowledge of this specific building and neighborhood, informal discussions with the Vermont SHPO, and a review of the proposed site development along with the characteristics of the area. Without an official response from SHPO regarding EBI's submittal, the above opinion cannot be validated and the Section 106 consultation process will not be concluded.

EBI Consulting
RECORD OF COMMUNICATION

JOB: 61143896

Contact Name: James Duggan Date: July 11, 2014

Contact Title: Historic Preservation Review Coordinator Time: 10:30 am

Organization: Vermont Division for Historic Preservation Phone: (802) 477-2288

EBI CONTACT: BRITTA FENNIMAN TONN

RESULTS:

Mr. Duggan offered feedback on several of Verizon Wireless' proposed building collocation designs in the greater Burlington, VT area. 86 Lake Street was discussed, and Mr. Duggan expressed concerns with the faux brick stealth antenna enclosures because they would create a false sense of history. Several different design options were discussed, and Mr. Duggan stated that he would prefer that the stealth enclosures be of a neutral matte finish so that they would appear as mechanical equipment that would be distinguished from the historic architecture of the building. Mr. Duggan expressed his concerns with the proposed vents on the northwest corner of the building and stated that he would prefer these vents to either be located on the eastern (i.e. less visible) façade of the building or be smaller than proposed.

FOLLOW-UP ACTION REQUIRED:

NA



Vermont Division for Historic Preservation
Agency of Commerce and Community Development
One National Life Drive
Davis Building, 6th Floor
Montpelier, VT 05620
http://accd.vermont.gov/strong_communities/preservation/

[phone] 802-828-3211
[fax] 802-828-3206

March 9, 2015

Ms. Nicole Castro
Project Manager/GIS Analyst
All-Points Technology Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06419

Re: Proposed Wireless Telecommunications Facility Burlington Waterfront
86 Lake Street, Burlington, Vermont
FCC

Dear Ms. Castro:

Thank you for the opportunity to comment on the above project (DHP #CH14-052) involving Verizon Wireless (the "Applicant".) The Vermont Division for Historic Preservation (the "Division") received All-Points Technology's ("APT") initial submittal packet on December 18, 2014, via email from Stacey Vairo, Architectural Historian at APT. The Division originated consultation on this project with Britta Fenniman-Tonn of EBI Consulting, Inc., with informal discussion during design development early in 2014 and more formally providing feedback with representatives from Verizon Wireless, through meetings held on July 11, 2014 and October 22, 2014. In addition, these interested parties met again on December 18, 2015 with the City of Burlington, represented by Senior Planner Mary O'Neil and others.

The Division has reviewed this proposed undertaking pursuant to 36 CFR 800.4, regulations established by the Advisory Council on Historic Preservation to implement Section 106 of the National Historic Preservation Act. Project review consists of identifying the project's potential impacts to historic buildings and structures, historic districts, historic landscapes and settings, and to known or potential archeological resources.

The project as proposed involves the installation of communications antennas on the rooftop of the building at 86 Lake Street by Verizon Wireless. The installation would include four (4) 3.5' by 4' by 7' high stealth enclosures on each corner of the building's roof to conceal two antennas per enclosure. The two enclosures (each enclosure containing two (2) antennas and two (2) RRH's, two (2) enclosures per sector, for a total of four (4) antennas/RRH's per sector) on the north end of the building will serve the Gamma sector, the two enclosures on the south end will serve the Beta sector, and Alpha sector will be served by four (4) antennas and four (4) RRH's to remain unconcealed, and located along the eastern side of the roof. In addition, the Applicant proposes to install vents in one bay on the northwest corner of the structure to provide ventilation for the proposed equipment room in the basement.



March 9, 2015

Proposed Wireless Telecommunications Facility Burlington Waterfront

86 Lake Street, Burlington, Vermont

Page 2 of 3

The subject building is listed in the Vermont State Register of Historic Places as part of the Pioneer Mechanic's Shop Complex and has been recommended eligible for listing in the National Register by both consulting Architectural Historians [S. Vairo and B. Tonn.] The Division concurs, finding this property eligible for inclusion in the National Register.

The Division and the Applicant have engaged in extensive discussions regarding the project's effect on historic resources for both Direct and Indirect Effects. The consultation that has transpired included a number of requests from the Division for the Applicant to consider alternatives that would avoid the potential adverse effects. In this effort, it is our understanding that the Applicant has researched the options and inquired with numerous adjacent property owners but could not find a suitable alternate location within the project's focus area. The Division then requested the Applicant seek a design solution that would minimize the adverse effects on this National Register-eligible building.

Originally, the design called for the stealth enclosures to be designed to look like chimneys, which would create a false sense of history and look out of place on a building of this type and period of construction. To minimize this effect, the Applicant has agreed to have the stealth enclosures finished in a matte gray, similar to other service apparatus on the roof, and give the appearance of mechanical equipment and not faux building elements.

The Division also requested the Applicant move the stealth enclosures away from the corners of the building to reduce the visual effects. The Applicant informed the Division of the issues surrounding the relocation of the antenna. First and foremost, for every foot the antennas are moved away from the edge of the building, they will need to be increased approximately one foot in height in order to provide the same signal dispersion. Further, there are certain FCC safety guidelines that will not allow the antennas to be placed in a location where people can walk in front of them without additional safety markings and other visually distracting identifiers. The Division accepts that there are no feasible alternatives for relocating the antennas on this particular roof.

Finally, the Division and the Applicant have worked together to minimize the adverse effects of the venting needed for the equipment room in the basement. The original design included two separate vent systems, one for intake and one for exhaust that were to be drilled through the foundation. The updated design includes one vent that will penetrate the northern window in the foundation for access to the equipment room.

The City has expressed their lack of support for the project through the submittal of comments provided by Mary O'Neil. Due to the fact that the Division is reviewing this project under Section 106, we will not respond to the City's concerns of non-compliance with the Comprehensive Development Ordinance. However, we do not concur with the City's determination of effect because of the efforts to minimize the adverse effects stated above.



March 9, 2015

Proposed Wireless Telecommunications Facility Burlington Waterfront
86 Lake Street, Burlington, Vermont
Page 3 of 3

Therefore, based on the materials submitted for review, our understanding of the Applicant's program goals, particular limitations of this project installation, it is our opinion and recommendation that the current proposed project will result in No Adverse Effect on historic resources.

If you have any questions or need clarification regarding any of the above, please do not hesitate to contact James Duggan, Historic Preservation Review Coordinator at james.duggan@state.vt.us or 802-477-2288. Mr. Duggan reviewed this project and prepared this letter. I concur with the findings and conclusions described above.

Sincerely,

VERMONT DIVISION FOR HISTORIC PRESERVATION

E-SIGNED by Laura Trieschmann
on 2015-03-09 16:37:39 GMT

Laura V. Trieschmann
State Historic Preservation Officer



STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No.

Application of NYNEX Mobile Limited Partnership 1)
and Cellco Partnership, each d/b/a Verizon Wireless,)
for a Certificate of Public Good, pursuant to 30 V.S.A.)
§ 248a, authorizing the co-location of a wireless)
telecommunications facility on an existing building on)
Lake Street in Burlington, Vermont)

Order entered:

I. INTRODUCTION

In this Order, the Vermont Public Service Board ("Board") approves the application filed by NYNEX Mobile Limited Partnership 1 and Cellco Partnership, each d/b/a Verizon Wireless ("Verizon Wireless" or the "Petitioner"), pursuant to 30 V.S.A. § 248a, and the Board's Procedures Order ("Procedures Order"),¹ and grants Petitioner a certificate of public good ("CPG") authorizing the installation of a wireless telecommunications facility in Burlington, Vermont (the "Project").

II. BACKGROUND

This case involves a petition and prefiled testimony filed by the Petitioner on June 2, 2015, requesting that the Board issue a CPG, pursuant to 30 V.S.A. § 248a, authorizing the installation of a telecommunications facility in Burlington, Vermont.

On _____, the Vermont Department of Public Service filed a letter with the Board recommending that the Board issue an order approving the petition without additional hearings or investigation.

No other comments regarding the Project were filed with the Board.

The Board has determined that the petition and prefiled testimony have effectively addressed the substantive criteria of 30 V.S.A. § 248a. Consequently, we find that the procedure authorized by § 248a is sufficient to satisfy the public interest, and no hearings are required.

III. FINDINGS

1. The objective of the Project is to improve and enhance wireless coverage in the City of Burlington. Lanpher pf. at 3.

2. The Project is to be located on the rooftop and inside an existing building at 86 Lake Street in the City of Burlington, Vermont, Hodgetts pf. at 1-2.

3. The Project involves the installation of six (6) antennas mounted in five locations on the building roof with the tops of the antennas extending to 41' above finish grade. The Project includes an approximately 16' by 20' equipment room in the basement of the building which will house transmitting and receiving equipment. A natural gas-powered generator will be installed adjacent to the equipment room and used to provide backup power if needed.

Hodgetts pf. at 2-3; Exhibit LH-1.

4. The Project will not create temporary or permanent earth disturbance. Hodgetts pf. at 3.

5. The Project will not have an undue adverse impact on floodways, the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas. This finding is supported by findings 6-9, below.

6. The Project will not have an undue adverse effect on aesthetics. The Project will utilize 3.5' x 4' x 5' high stealth enclosures located on each corner of the building's roof to

¹ Amended Order implementing standards and procedures for issuance of a certificate of public good for communications facilities pursuant to 30 V.S.A. 248a; Order issued August 10, 2011.

conceal a total of four (4) antennas – one (1) 4½' tall antenna in each enclosure. These enclosures will employ a matte gray finish so that they appear as utilitarian, mechanical features that are not part of the historic architecture of the building. The remaining sector, consisting of two (2) 4 ½ antennas will be located along the eastern side of the roof. These antennas are unlikely to be visible from existing public rights-of-way and will not be in a stealth enclosure. Hodgetts pf. at 4.

7. The Project will have no impact on rare or irreplaceable natural areas, wildlife habitat, or endangered species within the vicinity of the Project. Hodgetts pf. at 4.

8. The Project will have no adverse effect on historic sites. Fenniman Tonn pf. at 3; Exhibits BT-1 and BT-2.

9. The Project is not located in a floodway. Hodgetts pf. at 4; Exhibit LH-4.

10. There are no existing permits Act 250 or local permits that could impact the proposed Project. Hodgetts pf. at 6.

11. The Project is consistent with the applicable local and regional plans. Hodgetts pf. at 5-6.

IV. DISCUSSION AND CONCLUSION

The procedures governing Board approval of communications facilities are set forth in 30 V.S.A. § 248a. Section 248a(l) provides that the Board:

may issue rules or orders implementing and interpreting this section. In developing such rules or orders, the board shall seek to simplify the application and review process as appropriate. . . .

In order to implement the statute the Board adopted the Procedures Order. In accordance with § 248a(b)(3), the Procedures Order, at Section II, defines a project of "limited size and scope" as:

a new telecommunications facility, including ancillary improvements, that does not exceed 140 feet in height; or an addition, modification, replacement, or removal of equipment at an existing telecommunications facility or support structure, and ancillary improvements, that would result in a total facility height of less than 200 feet and does not increase the width of the existing support structure by more than 20 feet. In order to qualify as a project of limited size and scope, construction of the project shall not result in earth disturbance of more than 10,000 square feet of earth, excluding temporary earth disturbance associated with construction activities,

As required by § 248a (c)(1), and set forth in Section IV(H) of the Procedures Order, in reviewing projects of limited size and scope the Board conditionally waives:

all criteria under 30 V.S.A. § 248a (c)(1), with the exception of 10 V.S.A. §§ 6086(a)(1)(D) (floodways) and 6086(a)(8) (aesthetics, historic sites, rare and irreplaceable natural areas, endangered species, necessary wildlife).

The Project will be no more than 140' in height and will result no permanent earth disturbance. Therefore, the Project qualifies as a project of limited size and scope.

Based upon all of the above evidence, we conclude that the petition does not raise a significant issue with respect to the relevant substantive criteria of 30 V.S.A. § 248a, the public interest is satisfied by the procedures authorized in 30 V.S.A. § 248a, and the proposed Project will promote the general good of the State.

V. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that the installation and operation of communications facilities at the location specified in the above findings, by NYNEX Mobile Limited Partnership 1 and Cellco Partnership, each d/b/a Verizon Wireless, in accordance with the evidence and plans submitted in this proceeding, will promote the general good of the State of Vermont in accordance with 30 V.S. A. § 248a(a), and a certificate of public good to that effect shall be issued in this matter.

Signatures on following page

DATED at Montpelier, Vermont, this ____ day of _____, 2015.

_____))
_____)) PUBLIC SERVICE
_____)) BOARD
_____)) OF VERMONT

OFFICE OF THE CLERK

Filed: _____, 2015

Attest: _____
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Docket No.

Application of NYNEX Mobile Limited Partnership 1)
 and Cellco Partnership, each d/b/a Verizon Wireless,)
 for a Certificate of Public Good, pursuant to 30 V.S.A.)
 § 248a, authorizing the installation of a wireless)
 telecommunications facility on Lake Street)
 in Burlington, Vermont)

Entered:

CERTIFICATE OF PUBLIC GOOD ISSUED
PURSUANT TO 30 V.S.A. SECTION 248a

IT IS HEREBY CERTIFIED that the Public Service Board of the State of Vermont ("Board") this day found and adjudged that the installation and operation of the wireless telecommunications facility proposed by NYNEX Mobile Limited Partnership 1 and Cellco Partnership, each d/b/a Verizon Wireless ("Applicant"), to be located at 86 Lake Street in Burlington, Vermont (the "Project") will promote the general good of the State, subject to the following conditions:

1. Operation and maintenance of the Project shall be in accordance with the plans and evidence submitted in this proceeding. Any material or substantial change in the Project is prohibited without prior Board approval.
2. The Project shall comply with all applicable existing statutory requirements and Board Rules and Orders.
3. The Certificate of Public Good shall not be transferred without approval of the Board.

Signatures on following page

Dated at Montpelier, Vermont, this ____ day of _____, 2015.

)
)
)
)
)
)
)
)

PUBLIC SERVICE
BOARD
OF VERMONT

OFFICE OF THE CLERK

FILED: _____

ATTEST: _____
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)



June 2, 2015

To: Parties on attached Certification of Notice

Re: Application for a Certificate of Public Good, pursuant to 30 V.S.A. § 248a
(LIMITED SIZE AND SCOPE)

Applicant: NYNEX Mobile Limited Partnership 1 and Cellco Partnership, each
d/b/a Verizon Wireless ("Verizon Wireless")

Project: Co-location of a Wireless Telecommunications Facility

Location: 86 Lake Street, Burlington, Vermont

Landowner: Lake Street Associates, Inc.

To Whom It May Concern:

On February 13, 2015, you were sent an advance notice that Verizon Wireless would be filing an Application for a Certificate of Public Good, pursuant to 30 V.S.A. § 248a, with the Public Service Board ("Board"). Please be advised that the Application was filed with the Public Service Board today, June 2, 2015 with copies provided to the entities listed on the first page of the attached Certification of Notice.

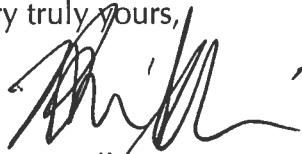
You will have 21 days from receipt of this notice to file comments, a motion to intervene or a request for a hearing on the proposed Project with Susan Hudson, Clerk of the Public Service Board, 112 State Street, Montpelier, Vermont 05620-2701.

If you would like to request a hearing, you must make a showing that the project raises a significant issue with respect to the applicable criteria under 30 V.S.A. § 248a(c)(1) and pursuant to the Amended Order Implementing Standards and Procedures for Issuance of a Certificate of Public Good for Communications Facilities Pursuant to 30 V.S.A. § 248a, which was issued by the Board on August 10, 2011 ("Amended Order"). A copy of the Amended Order is available from the Public Service Board's offices, located on the 4th Floor of the Peoples United Bank Building at 112 State Street, Montpelier, Vermont 05620-2701; or on the Board's website at <http://psb.vermont.gov>.

Parties on attached Certification of Notice
June 2, 2015
Page 2 of 2

If you file comments, a motion to intervene or a request for hearing, copies of your filing should be provided to me and to Daniel Burke, Esq., at the Department of Public Service.

Very truly yours,

A handwritten signature in black ink, appearing to read 'B. Sullivan', with a stylized flourish at the end.

Brian J. Sullivan, Esq.
BSullivan@mskvt.com

Enclosures

c: Parties on attached Certification of Notice

00124086 DOC

MSK | MURPHY
SULLIVAN
KRONK

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Docket No. _____

Application of NYNEX Mobile Limited Partnership 1
and Cellco Partnership, each d/b/a Verizon Wireless,
for a Certificate of Public Good, pursuant to 30 V.S.A.
§ 248a, authorizing the co-location of a wireless
telecommunications facility on an existing building)
in Burlington, Vermont.

CERTIFICATION OF NOTICE

I, Brian J. Sullivan, Esq., attorney for NYNEX Mobile Limited Partnership 1 and Cellco
Partnership, each d/b/a Verizon Wireless, do hereby certify that on June 3, 2015,
I served a complete copy of the Application for a Certificate of Public Good, as filed, by U.S.
mail, on the following parties:

Susan Hudson, Clerk
Vermont Public Service Board
112 State Street, 4th Floor
Montpelier, VT 05620-2701

Karin McNeill
ANR Office of Planning and Legal Affairs
1 National Life Drive, Davis 2
Montpelier, VT 05620-3901

Jane Knodell, President
Burlington City Council
149 Church Street
Burlington, VT 05401

James Duggan
Vermont Division for Historic Preservation
National Life Building, 6th Floor
Montpelier, VT 05620-1201

Yves Bradley, Chair
City of Burlington Planning Commission
149 Church Street
Burlington, VT 05401

Chris Recchia, Commissioner
Vermont Department of Public Service
112 State Street, Drawer 20
Montpelier, VT 05620-2601

Charlie Baker, Executive Director
Chittenden County Reg'l Planning Comm'n
110 West Canal Street, Suite 202
Winooski, VT 05404-2109

Geoff Commons, Dir. for Public Advocacy
c/o Daniel Burke, Esq.
Vermont Department of Public Service
112 State Street, Drawer 20
Montpelier, VT 05620-2601

Sue Minter, Secretary
Vermont Agency of Transportation
One National Life Drive
Montpelier, VT 05633-5001

Lake Street Associates, Inc.
86 Lake Street
Burlington, VT 05401

I certify that I further complied with the Notice requirement of 30 V.S.A. § 248a(e) by causing a notice of the filing of the Application for a Certificate of Public Good to be served, by U.S. mail, on the following landowners of record of properties adjoining the Project site:

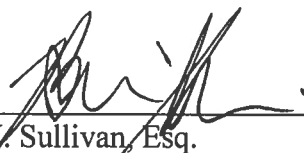
Burlington Parks & Recreation
645 Pine Street
Burlington, VT 05401

Haigh Mill Associates
86 Lake Street
Burlington, VT 05401

Lake and College, LLC
1 Main Street
Burlington, VT 05401

Kim Sturtevant, Esq.
Burlington City Attorney's Office
City Hall
149 Church Street
Burlington, VT 05401

For information only:
Kiersten Bourgeois, Sr. Project Manager
Vermont ACCD
1 National Life Drive
Montpelier, VT 05620-5001



Brian J. Sullivan, Esq.
Murphy Sullivan Kronk
275 College Street
Burlington, VT 05401
(802) 861-7000
BSullivan@mskvt.com

Conditional Use and Major Impact Review Standards

Sec. 3.5.6 Review Criteria (excerpt only)

The application and supporting documentation submitted for proposed development involving Conditional Use and/or Major Impact Review, including the plans contained therein, shall indicate how the proposed use and associated development will comply with the review criteria specified below:

(a) Conditional Use Review Standards:

Approval shall be granted only if the DRB, after public notice and public hearing, determines that the proposed conditional use and associated development shall not result in an undue adverse effect on the following general standards:

1. The character of the area affected as defined by the purpose or purposes of the zoning district(s) within which the project is located, and specifically stated policies and standards of the municipal development plan;
2. The proposed use will not have nuisance impacts from noise, odor, dust, heat, and vibrations greater than typically generated by other permitted uses allowed by right in the same zoning district;
3. The transportation system is capable of supporting the proposed use in addition to the existing uses in the area. Evaluation factors include street designations and capacity; level of service and other performance measures; access to arterial roadways; connectivity; transit availability; parking and access; impacts on pedestrian, bicycle and transit circulation; safety for all modes; and adequate transportation demand management strategies; and,
4. The capacity of existing or planned public community utilities, facilities or services are capable of supporting the proposed use in addition to the existing uses in the area.;
5. Traffic on roads and highways in the vicinity evaluated in terms of increased demand for parking, travel during peak commuter hours, safety, contributing to congestion, as opposed to complementing the flow of traffic and/or parking needs; if not in a commercial district, the impact of customer traffic and deliveries must be evaluated;
6. The utilization of renewable energy resources; and,
7. Any standards or factors set forth in existing City bylaws and city and state ordinances;

(b) Major Impact Review Standards:

Before a major impact development may receive approval, the DRB must be satisfied, based on documentation provided by appropriate city agencies, experts, interested parties and/or the applicant that the proposed development, in addition to meeting the review standards for conditional use review above, shall:

1. Not result in undue water, air or noise pollution;
2. Have sufficient water available for its needs;
3. Not unreasonably burden the city's present or future water supply or distribution system;
4. Not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result;
5. Not cause unreasonable congestion or unsafe conditions on highways, streets, waterways, railways, bikeways, pedestrian pathways or other means of transportation, existing or proposed;
6. Not cause an unreasonable burden on the city's ability to provide educational services;
7. Not place an unreasonable burden on the city's ability to provide municipal services;
8. Not have an undue adverse effect on rare, irreplaceable or significant natural areas, historic or archaeological sites, nor on the scenic or natural beauty of the area or any part of the city;
9. Not have an undue adverse effect on the city's present or future growth patterns nor on the city's fiscal ability to accommodate such growth, nor on the city's investment in public services and facilities;
10. Be in substantial conformance with the city's municipal development plan and all incorporated plans;
11. Not have an undue adverse impact on the present or projected housing needs of the city in terms of amount, type, affordability and location; and/or
12. Not have an undue adverse impact on the present or projected park and recreation needs of the city.

Burlington Planning Commission

149 Church Street
Burlington, VT 05401
Telephone: (802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7144 (TTY)

www.burlingtonvt.gov/pz

Yves Bradley, Chair
Bruce Baker, Vice Chair
Lee Buffinton
Andy Montroll
Harris Roen
Andrew Saba
Jennifer Wallace-Brodeur
Holly Ransom, Youth Member



PUBLIC HEARING NOTICE

Burlington Comprehensive Development Ordinance

PROPOSED

ZA-15-06 – Performing Arts Center in ELM Zone

Pursuant to 24 V.S.A. §4441 and §4444, notice is hereby given of a public hearing by the Burlington Planning Commission to hear comments on proposed amendments to the City of Burlington's *Comprehensive Development Ordinance* (CDO). The public hearing will take place on **Tuesday, July 14, 2015** beginning at **7:00pm** in room #12, on the ground floor of Burlington City Hall, 149 Church Street, Burlington VT.

Pursuant to the requirements of 24 V.S.A. §4444(b):

Statement of purpose: This amendment is proposed to the Burlington CDO to:

- **ZA-15-06** – to allow performing arts centers as a conditional use in the Enterprise – Light Manufacturing (ELM) Zone.

Geographic areas affected: the proposed amendments are applicable to the following areas in the City of Burlington:

ZA-15-06 – Enterprise Light Manufacturing zoning district.

List of section headings affected:

ZA-15-06 - Burlington CDO Appendix A – Use Table.

The full text of the *Burlington Comprehensive Development Ordinance* and the proposed amendments are available for review at the Department of Planning and Zoning, City Hall, 149 Church Street, Burlington Monday through Friday 8:00 a.m. to 4:30 p.m. or on the department's website at www.burlingtonvt.gov/pz.

CITY OF BURLINGTON

In the Year Two Thousand Fifteen

An Ordinance in Relation to

COMPREHENSIVE DEVELOPMENT ORDINANCE --
Performing Arts Centers In ELM Zone
ZA #15-06

ORDINANCE _____

Sponsor: Planning Department

Public Hearing Dates: _____

First reading: 03/23/15

Referred to: _____

Rules suspended and placed in a
stages of passage: 03/23/15

Second reading: _____

Action: Send to Planning

Date: for its statute

Signed by Mayor: Car

Published: _____

Effective: _____

It is hereby Ordained by the City Council of the City of Burlington as follows:

- 1 That Appendix A, Comprehensive Development Ordinance, of the Code of Ordinances of the City of
2 Burlington be and hereby is amended by amending the Use Table – All Zoning Districts thereof to read a
3 follows:

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5 *See proposed changes on attached table.

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11 ** Material stricken out deleted.

12 *** Material underlined added.

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lb/KS/c: Ordinances 2015/Zoning Amendment – Performing Arts Centers in ELM Zone, App. A, Use Table – All Zoning Districts, ZA #15-
3/13/15

USES	Urban/Roadway		Recreation/Conservation & Open Space			Institutional	Residential			Downtown Mixed Use				Neighborhood Mixed Use				Enterprise	
	UR	URP	RCO-A	RCO-RG	RCO-G	I	RGW	RMW	RH	D	DW	DWPTC	DT	BST	NMU	NAC	NAC-RC	EAE	ELM
NON-RESIDENTIAL USES	URP		RCO-A	RCO-RG	RCO-G	I	RGW	RMW	RH	D	DW	DWPTC	DT	BST	NMU	NAC	NAC-RC	EAE	ELM
Performing Arts Center	N		N	N	N	Y	N	N	N	Y	Y	(See Sec. 4.4.1(d)2)	CU	CU	CU	Y	N	N	NCU ^{pa}

1. Residential uses are not permitted except only as an accessory use to an agricultural use.
2. Duplexes may be constructed, or a single unit may be converted into a duplex, on lots existing as of January 1, 2007 and which meet the minimum lot size of 10,000 square feet.
3. Duplexes shall only be allowed as a result of a conversion of an existing single family home. New duplexes are prohibited.
4. No more than 5 rooms permitted to be let in any district where bed and breakfast is a conditional use. No more than 3 rooms permitted to be let in the RL district.
5. An existing fraternity, sorority, or other institutional use may be converted to dormitory use subject to conditional use approval by the DRB.
6. Must be owner-occupied.
7. Must be located on a major street.
8. Reserved.
9. Automobile sales not permitted other than as a separate principal use subject to obtaining a separate zoning permit.
10. Exterior storage and display not permitted.
11. All repairs must be contained within an enclosed structure.
12. No fuel pumps shall be allowed other than as a separate principal use subject to obtaining a separate zoning permit.
13. Permitted hours of operation 5:30 a.m. to 11:00 p.m.
14. Such uses not to exceed ten thousand (10,000) square feet per establishment.
15. Excludes storage of uncured hides, explosives, and oil and gas products.
16. See Sec.4.4.1(d) 2 for more explicit language regarding permitted and conditional uses in the Downtown Waterfront – Public Trust District.
17. Allowed only as an accessory use.
18. A permitted use in the Shelburne Rd Plaza and Ethan Allen Shopping Center.
19. Cafes not permitted as an accessory use. Retail sales and tasting are permitted as an accessory use.
20. Accepted agricultural and silvicultural practices, including the construction of farm structures, as those practices are defined by the secretary of agriculture, food and markets or the commissioner of forests, parks and recreation, respectively, under 10 VSA § 1021(f) and 1259(f) and 6 VSA §4810 are exempt from regulation under local zoning.
21. See Sec. 4.4.7 (c) for specific allowances and restrictions regarding uses in the Urban Reserve District.
22. See Sec. 4.4.5 (d) 6 for specific allowances and restrictions regarding Neighborhood Commercial Uses in Residential districts.
23. Allowed only on properties with frontage on Pine Street.
24. Such uses shall not exceed 4,000 square feet in size.
25. Dormitories are only allowed on properties contiguous to a school existing as of January 1, 2010.
26. Performing arts centers in the ELM zone shall be limited to a total of 5,000 square feet in size and to properties with frontage on Pine Street. Performing arts centers may contain accessory spaces for preparation and serving food and beverages, including alcohol, provided this accessory space comprises less than 50% of the entire establishment.

Legend:	
Y	Permitted Use in this district
CU	Conditional Use in this district
N	Use not permitted in this district
Abbreviation Zoning District	
RCO – A	RCO - Agriculture
RCO – RG	RCO – Recreation/Greenspace
RCO – C	RCO - Conservation
I	Institutional
RLW	Residential Low Density, Waterfront Residential Low Density
RMW	Residential Medium Density, Waterfront Residential Medium Density
RH	Residential High Density
D	Downtown
DW	Downtown Waterfront
DT	Downtown Transition
BST	Battery Street Transition
NMU	Neighborhood Mixed Use
NAC	Neighborhood Activity Center
NAC-RC	NAC – Riverside Corridor
E-AE	Enterprise – Agricultural Processing and Energy
E-LM	Enterprise – Light Manufacturing

Burlington Planning Commission

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*Yves Bradley, Chair
Bruce Baker, Vice-Chair
Lee Buffinton
Emily Lee
Andy Montroll
Harris Roen
Jennifer Wallace-Brodeur
Holly Ransom, Youth Member*



Burlington Planning Commission

REGULAR MEETING

Tuesday, June 09, 2015 - 6:30 P.M.

Conference Room #12, Ground Floor, City Hall, 149 Church Street

MINUTES

Present: B. Baker, A. Montroll, H. Roen, E. Lee, J. Wallace-Brodeur

Absent: Y Bradley, L Buffinton

I. Agenda 6:33

No changes. B Baker initiates meeting.

II. Public Forum

No speakers

III. Report of the Chair

The Chair was absent, no report from the Vice Chair.

IV. Report of the Director

The Director presented the following report:

- He is working on a process for S Thibault's position and hoping to schedule interviews the last of June.
- He has been busy gathering comments for Planbtv South End.
- The Draft release party is scheduled a week from tonight at Arts Riot and again the following morning. An on line commenting tool will be available to the public and as well, he will take the presentation on the road to different groups. There will be public discussion until the middle of August.
- The FBC group meets tomorrow, 7:00 pm at DPW. They are discussing process and have finished the review of district 6 zoning.

V. Residential Parking Study

Nicole Loesch from the Department of Public Works speaks about the residential parking study.

During the past year her department has been undertaking a study of residential parking. She has heard from numerous sources that program is not meeting the needs of the public. There are a lot of issues. She also felt that it was important to coordinate her work with the Downtown/Waterfront study.

As approved by the Planning Commission on XXXXX, 2015.

Tuesday, June 9, 2015

This has never been done before, it was previously a reactive process.

She has picked three different neighborhoods and have been collecting and analyzing. She has held a couple of public forum which have included the draft plan.

There is a clear need for more technologically informative information and physical changes affecting signage, administration, pricing. They are improving the external processes for both the city and neighborhoods, recognizing that there are different sorts of neighborhoods where different strategies will need to be offered.

They will work to improve sustainable parking/student/commuter parking/ residential parking, with hours adjusted based on demand. There will be limitation of the number of passes per dwelling unit.

Potential new strategies: coordinating the residential parking passes database with campus databases, enable satellite parking by making it easier to get permits.

H Roen: In the past the number of permits issued has been a problem.

N Loesch: They will track with permits with an on line system which will charge for residential visitor parking. There is a possibility that approved landlords could issue permits to tenants and commuters. They are considering establishing regulations by areas, not streets. There are some problems trying to rebalance the parking available. One method of being pro active could be having permit dates follow the academic calendar.

She has tried to interact by meeting with some smaller neighborhoods which has provided very good information. Parking is a quality of life issue. Flexibility in strategy is important, she is work with the campuses but it is clear that a blanket policy will not fit. There is one final advisory committee meeting. When it comes to addressing the zoning portion, she wants to work with the Planning Commission.

B Baker: There are lots of empty parking spaces on weekends.

N Loesch: Oakledge Park is one area which may present opportunities for improvement.

A Montroll: He attended Ward 6 NPA meeting and one at a church in April and observed a lot of push back. It seems one thing that was not articulated is defining the goals of the study. It appears some neighborhoods have enough parking and some not enough (for residents). Good availability helps calm people.

N Loesch: Agrees that they haven't achieved buy in on the goals. She needs a better way to present this concept. The message did get lost. She has concern about block specific strategies

J Wallace-Brodeur: Are you going to try to get to more micro level, addressing different issues/areas?

N Loesch: She didn't plan to define particular areas for the study but now will try to match strategies and neighborhoods.

E Lee: This is an important conversation for the Planning Commission and DPW to have around parking on lawns which needs to be addressed with enforcement and prevention.

D White: We need to change the way the City enforces the rules and have to acknowledge grandfathering with new policies. One question; In presentations did you or DPW address the purpose of the public right of way, what does the City's need? There need to be protocols established about how the public right of way is managed.

N Loesch: The City's intent is stated in the Climate Action Plan. The transportation plan must meet the City's interest and the citizens' interests.

A Montroll: It appears that the wants and needs could be conflicting.

E Lee: There is a conversation to be had about fairness.

H Roen: He would hope this process would create fairness.

Nathan Wildfire, CEDO: Frames residential parking as a black and white issue, going through the toolkit in each neighborhood is the way to figure out a solution. Just at Brookes Avenue, the number one program is driveways being blocked. There are specific issues for specific situations which require specific solutions. It is a very nuanced and complicated situation.

A Montroll: The system seem to be haphazard, the project has proposed good solutions.

VI. Downtown Parking Study

Nate Wildfire, CEDO Office and Kelley Devine, Burlington Business Association.

The Goals:

- deliver great customer service
- achieve a sustainable parking system
- maximize parking and transportation resources for downtown vibrant downtown.
-

Principles: Establish collaborative governments, a unified parking system. There are over 1000 empty spaces during peak times, there will need to be measured implementations to make changes keeping in mind that it will not be right the first time.

Burlington Town has garage eliminated two hour free parking. Employers need access to a flat rate for employees.

H Roen: It seems as if there are empty spaces, there should be a way to offer reduced fee and establish parking plans.

K Devine: The study is still in bits and pieces but is coming together.

N Wildfire: Patterns are not changing much but more parking is available. Wayfinding presently stinks, there is a new system coming, private parking is being studied, conferences, and on-going work.

Parking was the number one complaint when he started work in Burlington, but as time goes on it will be possible to invest in alternatives.

Sometimes our zoning code creates a rule for unneeded spaces. Seventh Generation is a good example; they actively encourage employees to get out of cars.

The Parking Management District and Go Burlington! are good tools.

The ultimate goal is to create a public/private collaborative to meet the needs of downtown. There are only five meter checkers in the city, with two on duty at any given time.

A lot of their study findings support the proposed zoning policies about parking. They are now going back to arts communities, businesses, etc to follow up with facts and ideas and gather thoughts and ideas from these entities with which they will go to the DPW Commission, the City Council, and the Planning Commission.

Some clarification relative to the PMD management district big picture is needed, essentially, who does what? The public is concerned about the operation of a parking system which can be defined by the zoning ordinance.

K Devine: These are good transportation options and this is the time to get the system working.

N Wildfire: All of this is an experiment. A lot will work, a lot will need to be killed or tweaked.

D White: This project couldn't have happened without public/private partnership.

J Wallace-Brodeur: A discussion about implementing the parking policy would seem necessary. How will two plans interact? The physical location of meters is bad in winter, it is just about impossible to clear the sidewalks.

VII. Assistant Administrative Officer Appointment Recommendation

D White: Zoning Administrator, Ken Lerner, will be resigning at end of month. He would like the interim Chief Administrative Officer to be Senior Planner Scott Gustin. He is looking to the Planning Commission to recommend that the City Council endorse this interim appointment. In the meantime, he is examining some possible restructuring of responsibilities for the office.

On a motion by E Lee, seconded by H Roen, the Commission unanimously voted to accept the recommendations and forward them to the City Council.

VIII. Committee Reports

Tuesday, June 9, 2015

- Long Range Planning Committee: hasn't met since the Capital Improvement Plan presentation, and should meet after the Planbtv South End draft meeting.
- Form Based Code sub committee has a meeting tomorrow, they have made a lot of progress but yet there is lots to do.
- Executive Committee
- Ordinance Committee: Examining the possibility of changing the meeting time.

IX. Commissioner Items

None.

X. Minutes/Communications

Minutes of the May 26, 2015 meeting are incomplete so **on a motion by E Lee, seconded by A Montroll, the Commission unanimously voted to defer the minutes to the next meeting.**

XI. Adjourn

On a motion by J Wallace-Brodeur, seconded by A Montroll, the Commission unanimously adjourned at 8:24 pm.

B Baker, Vice Chair

Date



E. Tillotson, Recording Secretary