

**STATE OF VERMONT  
PUBLIC UTILITY COMMISSION**

Case No. 25-\_\_\_\_-PET

**Limited Size and Scope Application** )  
of Bell Atlantic Mobile Systems, LLC d/b/a )  
Verizon Wireless and The Towers, LLC d/b/a )  
Vertical Bridge, for a Certificate of Public Good, )  
pursuant to 30 V.S.A. § 248a, authorizing the construction )  
of a telecommunications facility in Marshfield, Vermont )

**PREFILED DIRECT TESTIMONY OF MARTIN J. LAVIN**

**ON BEHALF BELL ATLANTIC MOBILE SYSTEMS, LLC, D/B/A VERIZON  
WIRELESS AND THE TOWERS, LLC, D/B/A VERTICAL BRIDGE**

**July 23, 2025**

Summary:

Mr. Lavin's testimony will address the proposed installation 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 Martin J. Lavin, and I am a Senior Radio Frequency ("RF") Engineer currently  
3 working for C Squared Systems, LLC.

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

5 A2. I have worked as an RF engineer for C Squared Systems, LLC since June of 2008. I have worked as  
6 an RF Engineer since November of 1987. My responsibilities as an RF engineer at C Squared  
7 Systems include the following:

- 8 • Zoning Hearing Expert Testimony
- 9 • Advanced Wireless Services RF System Design
- 10 • Wireless Broadband Access Systems Engineering
- 11 • RF Drive Test Services
- 12 • Intermodulation Studies
- 13 • RF Exposure and FCC Compliance Studies

14 I have a Bachelor of Science Degree in Electrical Engineering from Rensselaer Polytechnic Institute  
15 and a Master of Business Administration Degree from University of New Hampshire.

16 **Q3. Have you ever testified before the Public Service Board or Public Utility Commission?**

17 A3. Yes. Yes. I have submitted prefiled testimony and given oral testimony in Case No. 23- 4087-PET  
18 (Granville) and submitted prefiled testimony in Case No. 24-3345-PET (Manchester), Case No. 25-  
19 0066-PET (Williamstown) and Case No. 25-0407-PET (Readsboro).

20 I have testified before Planning and Zoning Boards in Maine, New Hampshire, Rhode Island,  
21 Massachusetts, New York and New Jersey. I have also testified on more than 20 occasions before  
22 the Connecticut Siting Council, which has jurisdiction over telecommunications facilities.

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

1 A4. The Towers, LLC d/b/a Vertical Bridge (“VB”) intends to construct a telecommunications facility  
2 on an existing 78.73-acre parcel (“Parcel”) located at 2264 U.S. Route 2, Marshfield, VT, for the  
3 initial use of Bell Atlantic Mobile Systems, LLC d/b/a Verizon Wireless (“Verizon”) and  
4 subsequent use by other communications providers. Verizon refers to the project as "Marshfield."  
5 The property owner has given Verizon and VB permission to proceed with this Application. The  
6 coordinates for the Project are latitude 44°-20'-51.01"± North and Longitude 72°-21'-55.74"± West.  
7 *See Permit Plans (Exhibit LH-1) for a visual depiction of the Project’s Location.*

8 **Q5. From a Radio Frequency Engineer's perspective, please describe what site improvements will**  
9 **be necessary for the proposed Project.**

10 A5. VB will create a 50' x 50' compound (“Compound”) enclosed by an 8’ high chain link fence with a  
11 locked gate. VB will construct a 140’ above ground level (“AGL”) galvanized steel monopole tower  
12 ("Monopole") within the Compound.

13 Verizon will place three (3) sectors of three (3) panel antennas (“Antennas”) each on the Tower for  
14 a total of nine (9) Antennas. Each of the Antennas will be mounted at a centerline height of 137’  
15 AGL. Six (6) of the Antennas will measure approximately 72” long and 11.9” wide each. The  
16 remaining three (3) Antennas will measure approximately 28.90” long and 15.75” wide each. The  
17 topmost height of the Antennas will be approximately 140’ AGL.

18 At each sector, Verizon will install two (2) Remote Radio Heads (“RRHs”) per sector for a total of  
19 six (6) RRHs at a centerline height of 137’ AGL. All six (6) of the RRHs will measure  
20 approximately 14.96” long and 14.96” wide. The RRHs will be mounted next to the Antennas and  
21 will be visible. The topmost points of the RRHs will not exceed the topmost points of the Antennas.

1 On the Alpha sector, Verizon will install one (1) OVP distribution box (“OVP”). The topmost point  
2 of the OVP will not exceed the topmost points of the Antennas. The OVP measures approximately  
3 29.5” long by 16.5” wide.<sup>1</sup>

4 Full and accurate specifications of the proposed Antennas, RRHs and OVP are detailed in Exhibit  
5 ML-1. The Prefiled Testimony of Louis Hodgetts, P.E. discusses the location of the other equipment  
6 at the Site.

7 **Q6. Describe Verizon’s efforts to collocate the Project on an existing telecommunications facility.**

8 **A6.** Verizon has been working since 2010 to locate a site in the Town of Marshfield to improve  
9 coverage. As part of our analysis of this Project, we searched publicly available databases (see  
10 Exhibit ML-3) for existing telecommunications facilities and existing structures for possible  
11 collocation opportunities. No such facilities or structures that would allow Verizon to meet its  
12 coverage and capacity needs for the Marshfield search ring were identified.

13 The propagation plots that I have created for this site illustrate these difficulties. See Exhibit ML-2.

14 In particular, intervening terrain causes a sharp drop off in coverage as illustrated in those plots.

15 The existing facilities within a radius of ten (10) miles from the proposed site cannot provide  
16 adequate coverage to the area being served by this project. They are much too far away to provide  
17 coverage to the identified gap and the topography along US Route 2 further limits the applicable  
18 coverage to the area, especially around Marshfield Village. The closest existing facility suitable  
19 for a wireless installation (#4 in Exhibit ML-3) is approximately 4.4 miles from the Proposed  
20 Facility, and it is a co-location on a silo which would not provide adequate coverage to the targeted  
21 area. The propagation plots produced for this alternative site, included as Exhibit ML-4, clearly  
22 illustrate that this alternative site would not be suitable to achieve the coverage goals of this project,

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<sup>1</sup> From time to time, equipment manufacturers may 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 slightly different from but of similar dimensions as those described in this notice.

1 in particular, along the Route 2 corridor. The next closest facility is 5.9 miles from the Proposed  
2 Facility (#5 in Exhibit ML-3) and Verizon is already located on this tower. See Existing Tower  
3 Analysis (Exhibit ML-3).

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

5 A7. Under federal law, Verizon is required to comply with the radiofrequency ("RF") emission levels  
6 established by the Federal Communications Commission ("FCC"). Calculations using the most  
7 extreme assumptions, which could not possibly be duplicated at the site, demonstrate that RF  
8 emission levels for this site will still be well below the Maximum Permissible Exposure ("MPE")  
9 limits established by the FCC. See MPE Report (Exhibit ML-5).

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

11 A8. Yes.

## **Exhibits to Prefiled Testimony of Martin J. Levin**

Exhibit ML-1	Antenna, Remote Radio Head and OVP Specifications
Exhibit ML-2	Propagation Plots
Exhibit ML-3	Existing Tower Analysis
Exhibit ML-4	Alternative Site Propagation Plots
Exhibit ML-5	MPE Report