

# Young / Sommer LLC

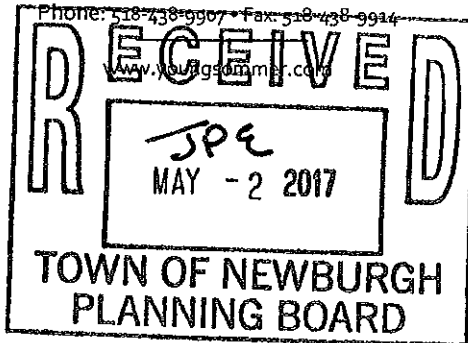
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JEFFREY S. BAKER  
DAVID C. BRENNAN  
JOSEPH F. CASTIGLIONE  
JAMES A. MUSCATO II  
J. MICHAEL NAUGHTON  
ROBERT A. PANASCI  
ALLYSON M. PHILLIPS  
DEAN S. SOMMER  
KEVIN M. YOUNG

LAURA K. BOMYEA  
E. HYDE CLARKE  
JESSICA ANSERT KLAMI  
KRISTINA M. MAGNE  
KRISTIN LAVIOLETTE PRATT  
JESSICA R. VIGARS

COUNSELORS AT LAW

EXECUTIVE WOODS, FIVE PALISADES DRIVE, ALBANY, NY 12205



SENIOR COUNSEL  
MICHAEL J. MOORE  
KENNETH S. RITZENBERG  
DOUGLASH H. WARD

OF COUNSEL  
SUE H.R. ADLER  
LAUREN L. HUNT  
ELIZABETH M. MORSS  
SCOTT P. OLSON  
STEPHEN C. PRUDENTE  
KRISTIN CARTER ROWE

PARALEGALS  
ALLYSSA T. MOODY  
AMY S. YOUNG

Writer's Telephone Extension: 264  
hclarke@youngsommer.com

April 28, 2017

*Via Electronic Mail*

Michael P. Musso  
HDR Inc.  
One International Boulevard 10<sup>th</sup> Floor  
Mahwah, New Jersey 07495

RE: Application of Orange County-Poughkeepsie Limited Partnership d/b/a Verizon Wireless Proposed Public Utility/Personal Wireless Service Facility on Property Located at 181 S. Plank Road

Dear Mr. Musso:

As you are aware, we represent Orange County-Poughkeepsie Limited Partnership d/b/a Verizon Wireless with respect to approvals for a small cell wireless communications facility proposed to be located at 181 South Plank Road. This letter is in response to your email dated April 22, 2017.

In that email, you requested additional materials related to RF and surrounding Verizon Wireless facilities. The Verizon Wireless RF Engineer has prepared a supplemental analysis and that analysis is attached to this letter as TAB 1. This should address all the RF related questions in your email. An earlier email also requested an RF safety compliance letter which we have requested and will provide as soon as that is available.

You also asked for additional information on the whether any existing parking spaces will be lost to accommodate the proposed ground-based equipment. In the event the dumpster has to be moved to accommodate the equipment, the dumpster would be relocated to the other side of the building (also in the rear of the building) and it is anticipated that location would not eliminate any parking spaces.

This letter will confirm that there is no emergency back-up generator proposed as this is a small cell installation.

An alternate site analysis was not performed for this small cell installation. A small cell is placed based on the center location of need, and in this case, a lease was negotiated with a willing and interested landlord. The proposed rooftop is well suited for telecommunications equipment. The facility's micro cell antenna and equipment will not be noticeable to the traveling public, or nearby property owners. Given the commercial nature of the surrounding area and the size of the equipment, the facility proposed has been sited to have the least practical adverse visual effect on the environment, and any resulting impact may properly be considered as minimal in nature and scope. Based on this, we suggest that the traditional alternate site analysis that is performed for macro cell facilities is not applicable and need not be applied to this small cell proposal.

Thank you for your consideration.

Very truly yours,

A handwritten signature in black ink, appearing to read "Scott P. Olson".

Scott P. Olson, Esq.  
E. Hyde Clarke, Esq.

Encl.

cc: John P. Ewasutyn, Chairperson Town of Newburgh Planning Board



May 3, 2017  
File: 147 10052324

Mr. John P. Ewasutyn, Chairman  
Town of Newburgh Planning Board  
Old Town Hall  
308 Gardnertown Road  
Newburgh, New York 12550

Re: Verizon Permit Application for Small Cell Installation  
181 South Plank Road (Tax Map #60-3-14.1)  
Town of Newburgh, New York, 12250  
Verizon Site Name: RT300-RT52 Micro  
Technical Review Memo  
Planning Board Case No. 2017-15

Dear Mr. Ewasutyn and Members of the Planning Board:

This technical memorandum (Tech Memo) was prepared to summarize HDR's technical review of an application prepared by Young / Sommer LLC, an agent of Orange County – Poughkeepsie Limited Partnership d/b/a Verizon Wireless (Verizon), to install a new wireless telecommunication facility on an existing commercial building at the above-referenced location (the site) in the Town of Newburgh. The site is in a "Business" zoning district.

Verizon is proposing the installation of one (1) cylinder "small cell" antenna and one (1) small GPS antenna at the peak of an existing 32 foot tall building, along with ancillary equipment on the ground behind the building. The purpose of the facility is to improve network capacity and service in the immediate area of the site and to increase efficiency in Verizon's local wireless network.

This review includes a general assessment of Verizon's small cell application and consists of an analysis of the application materials HDR received in January 2017 and supplemental materials furnished in April and May 2017. The applicant is seeking a Special Use Permit (SUP) for the proposed small cell installation. This Tech Memo is written for the review and comment of the Town of Newburgh Planning Board. Aside from the SUP, the applicant has not identified the need for variances, but has requested waivers from items contained in Chapter 168 (Town wireless code). The requested application waivers include:

- SEQRA EAF – Short Form EAF was submitted (instead of Long Form). *This appears to be appropriate based on the nature of the application, but should be confirmed by the Planning Board. It is noted that photo examples and project photosimulations were furnished by the applicant (with exhibits included below in this Tech Memo as reference).*

- RF Report and Site Selection / Alternatives analysis – proposed summary narrative was provided, but no alternative site analysis was prepared. *This waiver appears to be appropriate based on the nature of the proposed site, and since siting antennas on an existing structure (as opposed to construction of a new tower) in a Business zone (as opposed to a residential zone) are preferred options per the Town’s wireless code. Planning Board should confirm.*
- Topographic and Geomorphologic Study. *Waiving this appears to be appropriate based on the nature of the proposed site (as opposed to construction of a new tower).*
- Public hearing requirement. *Upon hearing from the applicant representative on May 4, 2017, the Planning Board will decide on this proposed waiver*
- Annual NIER Certification. *It is recommended that all maintenance, certification, and reporting provisions of Chapter 168 be required for all active cell sites in the Town, including the proposed small cell (if approved).*

### **1. Application Review and Nature of Proposed Verizon Installation**

The following information was reviewed for this Tech Memo, including original and supplemental materials furnished by Verizon:

- Town of Newburgh building permit application, including checklist, drawings dated 10/27/16, and insurance certificates. *This was a preliminary applicant submittal.*
- Application for Special Use Permit and project narrative, dated March 31, 2017 including application for subdivision/site plan review; fee acknowledgement; planning board disclaimer statement to applicants; disclosure addendum statement to application, petition and request; checklist for major/minor subdivision and/or site plan; project narrative; FCC licenses; drawings dated 03/08/2017; micro cell communications facility radio frequency analysis; non-interference certification; short EAF; lease agreement and exhibits; documentation of public utility status and overview of Rosenberg decision; documentation of personal wireless service facility status and Federal Telecommunications Act of 1996; March 9, 2017 Structural Analysis certification; Visual Analysis; and compliance statement.
- Supplemental information dated April 28 and May 1, 2017, including responses to and clarifications of items identified by HDR.

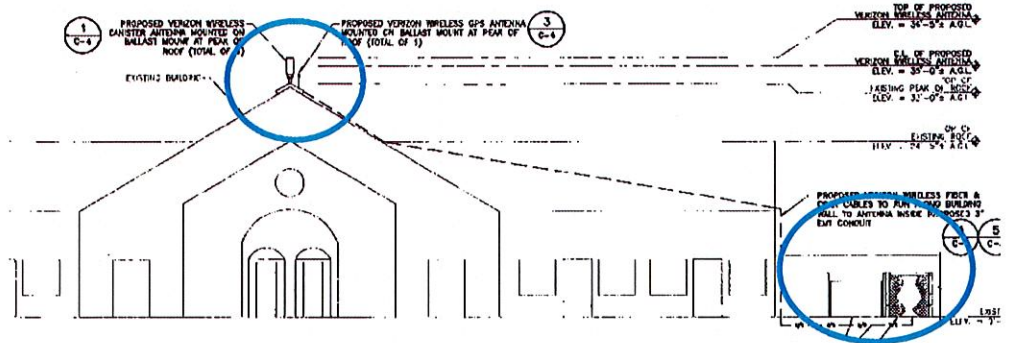
The small cell application filings appear to be complete and in general accordance with the Town’s SUP requirements.

The proposed small cell installation is part of Verizon’s 700 and 2100 MHz (4G/LTE) licensed network roll out to provide enhanced voice and data services in the immediate site area (around the intersection of Route 300 and S. Plank Road). The reported signal range for the small cell antenna proposed is typically 500 – 1,000 ft.

Verizon is proposing the installation of one (1) small canister antenna measuring 23.6" tall with a diameter of 7.9" on the peak of the 32-ft high roof. The antenna centerline height is proposed to be approximately 35 ft above surrounding grade level (agl) and the antenna top reaches 36 ft 5" agl. The antenna will be mounted on a ballast mount, measuring 79" long and 48.5" wide, with the mast pipe a maximum of 5 ft tall. One GPS antenna will also be mounted on the ballast mount, with the GPS antenna located on top of a 2 ft tall steel mounting pipe. Small FCC warning and notification signage is proposed on the antenna mount.



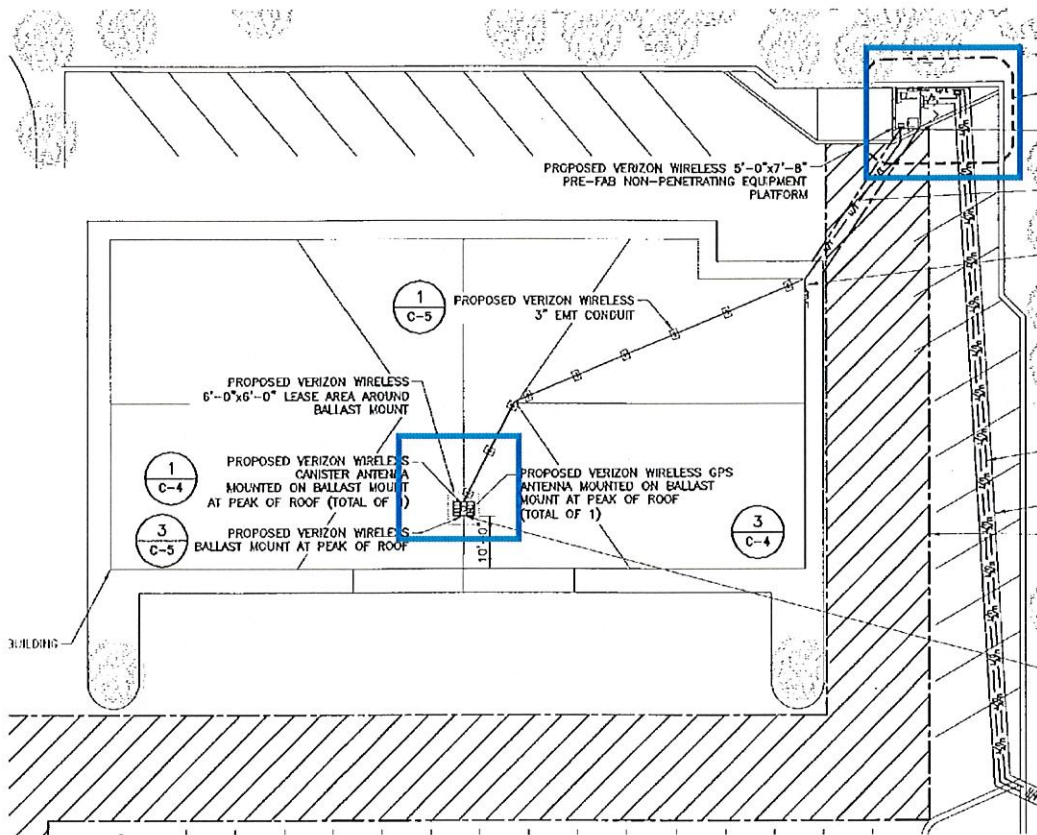
View of existing building.



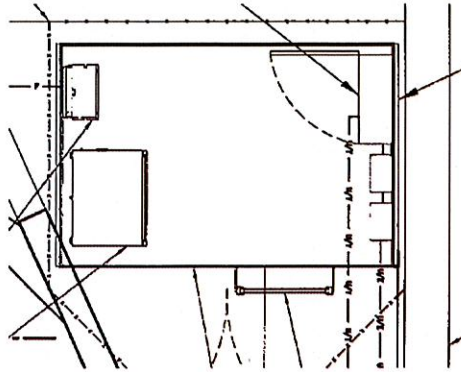
Cross-section view of proposed installation (antenna at roof peak and equipment area at right).

A cable tray will be mounted on the rooftop, with the cables running down the rear corner of the building's exterior wall and underground to the ground-based equipment area (see below image). Fiber and power lines are to run underground from the equipment area to a utility pole (near S.Plank Road).

The ground-based equipment will be situated within a 6 ft by 8 ft fenced lease area, adjacent to the existing dumpster area at the rear of the property. The applicant confirmed that no parking spaces will be lost as part of the proposed construction. A 6 ft tall chain link fence with privacy slats and access gate is proposed for the area. A weed barrier with 6 inches of ¾-inch crushed stone is proposed within the equipment compound.



Plan view of 181 S. Plank Road rooftop, with proposed antenna and utility conduits. Ground-based equipment area at upper right.



Zoom-in of ground-based equipment area (6 ft x 8 ft).



View of existing dumpster area and proposed equipment compound area (SW area of site).

A 5 ft by 7 ft pre-fabricated non-penetrating equipment platform and access ladder are proposed within the fenced equipment compound to support the ground-based equipment. One equipment cabinet, measuring 54" high by 26" wide by 20" deep is proposed. A disconnect and fiber cabinet (24"x24"x8") on a 4'-2" utility backboard will be attached to the equipment platform, along with a work light and weatherproof light switch, service meter, and load center. One remote radiohead (RRH) unit is proposed on a 3 ft high utility backboard on the equipment platform. The RRH measures 15.7 inches x 15 inches x 7.9 inches, and will be mounted on a unistrut frame. An emergency back-up generator is not proposed for this project.

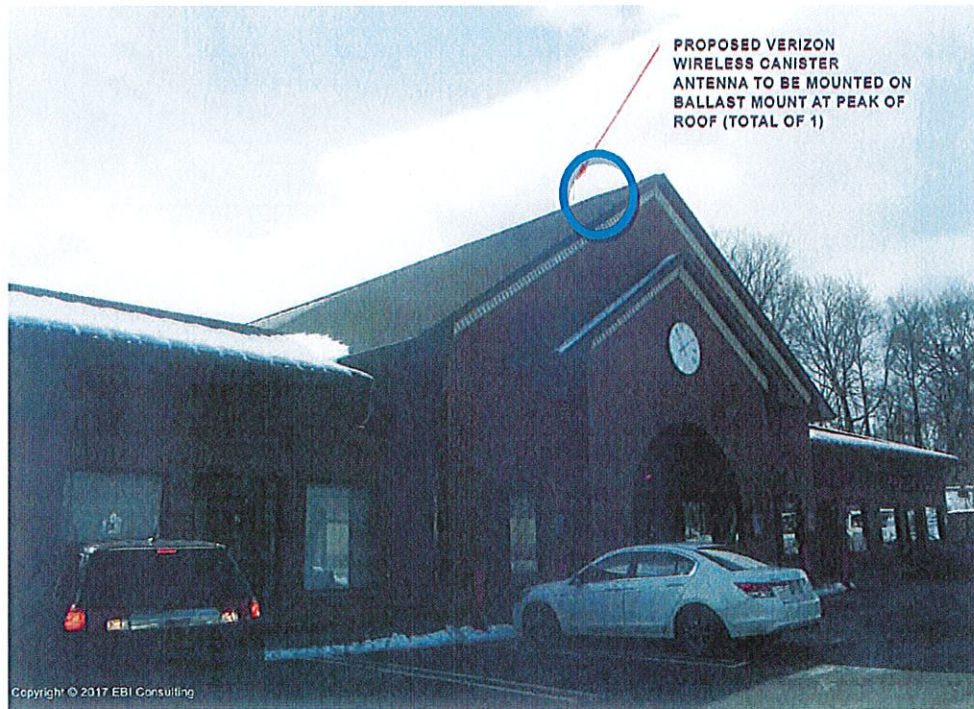
HDR reviewed the RF Design Engineer's narrative that describe the need for additional coverage and capacity in the local Verizon wireless network. The proposed small cell installation at 181 South Plank Road will remedy LTE capacity deficits that currently exist (and that are anticipated to increase) in the Route 300 / S. Plank Road area. Service will be enhanced for mobile users in vehicles, and at commercial / residential properties. The proposed small cell will provide additional capacity to the network for purposes of "off loading" call and data traffic from existing Verizon cell sites ("macro sites"), in particular from the nearby installation at the Newburgh Mall monopole.

## 2. Additional Application Issues and Considerations

### *Aesthetics*

Two photographic renderings were provided by the applicant that depict the antenna mounted to the peak of the roof. The simulations include two vantage points on S. Plank Road with "before" and "after" views of the proposed rooftop installation (see below images). Visual impacts from the proposed facility do not appear to be significant.

Based on a review of the application materials, no modification to the access driveway, parking areas, or landscaping are proposed. New fencing and one small light fixture are proposed for the Verizon equipment area at the rear of the site.



PROPOSED CONDITIONS | LOOKING SOUTH WEST FROM S PLANK ROAD





Existing View of rear of existing building from cinema property (looking N-NE).

### *Conformance with NIER and Other Radiation Hazard Criteria*

In order to comply with the Non-Ionizing Electromagnetic Radiation (NIER) hazard criteria, Millennium Engineering, P.C. (on behalf of the applicant) calculated radio frequency [RF] levels for the proposed installation (April 25, 2017 RF analysis). For general public exposures both within the building and at “ground level” areas in proximity to the installation, the maximum RF levels were calculated to be less than 1% of the general public maximum permissible exposure (MPE) limit, and thus in compliance with FCC regulations. RF levels were also assessed for occupational workers at 3 feet in front of the antenna (“near field region”), and were reported to be below the FCC occupational limits. With the FCC signage proposed, the small cell facility will be compliant with FCC criteria.

### *Structural Assessment*

A Structural Analysis Letter prepared by EBI Consulting, a NYS P.E., was provided and concludes that the building can accommodate the proposed Verizon antennas and ballast mount. The analysis was performed in conformance with ANSI/TIA-222 Rev G. **It is understood that the Applicant maintains full responsibility for the accuracy and adequacy of all aspects of the Verizon small cell design, construction, operations, and maintenance.**

### 3. Recommendations

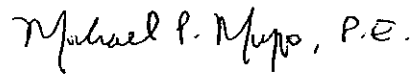
The following recommendations were identified based on HDR's technical review of the Verizon application materials. These recommendations can be considered as conditions of the special use and/or building permit.

- The applicant should confirm to the Town Building Department that the 181 S. Plank Road rooftop facility will comply with the FCC definition of a "Controlled Exposure Environment". Security fencing around the ground-based equipment and FCC warning signage on the rooftop (in proximity to the antennas) should be routinely inspected and maintained at the site. It is the applicant's responsibility to comply with all FCC rules and regulations that are applicable to the site and its operations.
- The proposed antennas (1 canister and 1 GPS on the roof), mounting structures and cable runs shall be color matched to the existing building colors. A matte finish is recommended for all proposed equipment. For the antennas and mounts, an off-white color appears to be a reasonable option to match the building clock and front building trim. For the ground-based equipment fencing, a standard grey chain link (as proposed) appears reasonable. Privacy slats (tan or grey) are recommended to better shield this equipment from view.
- It should be verified that no new utility pole near S. Plank Road is required or proposed as part of this application. DWG C-1 indicates a 45-ft utility pole as "proposed"; however, based on the 2016 lease exhibits, an 'existing' utility pole is noted. The HDR site visit notes existing utility poles in the immediate site area (near or along S. Plank Road) which are assumed to be feasible for Verizon's use.
- Any building roof maintenance or inspection activities by persons not trained in RF exposures should be coordinated appropriately between the owner/operator of the building and Verizon to eliminate the potential for RF exposures at levels above the general public MPE. As noted above, appropriate FCC warning signage should be maintained at the site.
- Operations should be maintained in accordance with the Town's Wireless Ordinance and all other relevant Town codes. Any proposed increase in Verizon's number of antennas, antenna sizes, or number/sizes of ground-based equipment cabinets shall be approved by the Town prior to any modifications.
- The Town Code Compliance Department should review the insurance and workers' compensation submittals to verify they are adequate. Fees and escrow should be submitted to the Town prior to issuance of the Special Use permit.

- The Planning Board attorney should confirm requirements for removal bond, if any are deemed to be required for a rooftop cell site.

Please feel free to contact us should you have any questions on this report.

Sincerely,  
Henningson, Durham & Richardson  
Architecture and Engineering, P.C.  
in association with HDR Engineering Inc.



Michael P. Musso, P.E.  
Senior Project Engineer

cc: Pat Hines  
Jerry Canfield  
Mike Donnelly  
Young/Sommer, LLC