

CROWN CASTLE
APPLICATION FOR A TIER I PERSONAL WIRELESS SERVICE FACILITY AND ASSOCIATED SPECIAL
EXCEPTIONS
STATEMENT OF JUSTIFICATION

Property Details

Address: 2987 Edgehill Drive
Zoning: RA – Rural Areas
Parcel ID: 07900-00-00-01000
Acreage: 684.6
Owner: Albemarle Edgehill Farm LLC

Proposed Telecommunications Facility

Crown Castle ("Crown") is proposing to replace the existing 50' wooden monopole on site with a 70' steel monopole ("replacement monopole"). The height increase will allow AT&T (currently installed at a centerline of 48') to install at a centerline of 67'. The increase is needed to accommodate AT&T's provision of FirstNet services at this site.

Compliance with Albemarle County Zoning Ordinance §5.1.40

§5.1.40(a)

Included with the Application for a Tier I Personal Wireless Service Facility ("Tier I Application") are the following pursuant to §5.1.40(a)(1)-(4), (7) and (12):

- | | |
|---|---|
| ▪ Application form and signatures | ▪ Additions of antennas |
| ▪ Plat or survey of the parcel | ▪ Special exception from flush-mounted requirement and setbacks |
| ▪ Ownership information | ▪ Photosims |
| ▪ Plans and supporting drawings, calculations and documentation | ▪ Tree Conservation Plan |

§5.1.40(b)

In accordance with this Section, the replacement monopole will not have guy wires or be lit. No changes are proposed to the ancillary equipment compound and it will continue to be screened from view by existing vegetation. No whip or grounding rod is proposed. The number of arrays will not exceed three (3) nor will any antenna exceed 1,400 square inches. The antenna shall be painted to match the structure. Crown has submitted a tree conservation plan and no slopes greater than 2:1 will be created. No fencing is proposed.

Crown is requesting special exception relief from (b)(2)(c) of this section that requires the antennas to be flush-mounted. The replacement monopole will accommodate FirstNet at this location and

that equipment cannot be flush-mounted. This FirstNet installation will specifically serve emergency response personnel in this area of Albemarle County as part of the nationwide public safety network.

Crown is requesting special exception relief from the 70' setback required by Section (b)(15) for the northern, eastern and southern setbacks – 12', 37'6" and 46'7", respectively.

12' Setback – Northern Property Line: Crown has worked with VDOT (Adam Moore and Willis Bedsaul) and they have stated that they have no issue with the location of the monopole 12' from the ROW (I-64), but asked that we add the low volume commercial grade entrance and stopping sight distance to the plans which we have done on Sheets A-6 and A-8 of the revised zoning drawings.

37'6"/46'7" Setbacks form Eastern and Southern Property Lines: First, Crown has updated the design for the replacement monopole and it will have a breakpoint at 52.8' – meaning that the actual fall zone for the monopole will be 16.2' which is well within the 37'6"/46'7" from the neighboring church's property lines. In addition, Crown has asked the adjacent property owner, Charlottesville First Church of Nazarene, for a fall zone easement. Crown is awaiting a response.

§5.1.40(c)

The facility is not required to be located within a building site. Vehicular access to the facility is provided via a proposed 30' wide access/ utility easement off of Richmond Road.

§5.1.40(d)

As stated above, a tree conservation plan has been submitted in accordance with subsection (d)(2). Within 30 days of completion of installation, Crown will provide all certifications of compliance required by subsection (d)(3).

Compliance with the Albemarle County Comprehensive Plan

This site has already been providing wireless service to those living, working and visiting Albemarle County. The replacement monopole will allow for improved coverage in this area and will support FirstNet emergency response services.

The replacement monopole will improve service for those working and studying from home and is in keeping with Objective 6 of the Comprehensive Plan that seeks to support entrepreneurial and start-up business. Reliable wireless coverage is critical for local businesses and their patrons. It is especially critical for those businesses run from the home and in the start-up phase.

The improved coverage will also serve those traveling along I-64. For motorists in need of emergency response services, strong wireless service is critical and this replacement monopole supports Objective 5 of the Transportation section of the Comprehensive Plan that sets out to preserve the functionality of the roadway systems in the County.

In support of Objective 2 of the Community Facilities section, this site will support all emergency service personnel, including police. Finally, Objective 10 of this same section, supports the provision of wireless service. The replacement monopole is a minimally intrusive means of improving wireless coverage and ensuring reliable emergency services communications.

Compliance with the Albemarle County Personal Wireless Facility Policy

In accordance with the Wireless Policy, the replacement monopole will:

- Be located within an area of existing vegetation so as to minimize visibility;
- Not be located along a ridgeline or ridgetop and will not be skylined given the surrounding existing vegetation;
- Not be located in an avoidance area or adversely impact any resources identified in the Open Space Plan (ridgeline, agricultural or forestal district, historic district, scenic byway (Louisa Road)); and
- Will utilize an existing site and allow for the provision of FirstNet emergency response services.

FirstNet Public Safety Mobile Broadband Network Overview

FirstNet was created due to communications challenges during the response to the 9/11 terrorist attacks, the 9/11 Commission recommended the establishment of a single, interoperable network for public safety. For years, public safety organizations lobbied Congress to make this recommendation a reality. Therefore, when Congress established the First Responder Network Authority (FirstNet) in 2012, it based its mission on public safety's express concerns and desires.

To truly design the FirstNet network for public safety by public safety – a distinction that makes it unique in American telecommunications history – FirstNet continuously consults with local, state/territory, tribal and federal public safety agencies across the country.

Over the past several years, FirstNet has collaborated with public safety stakeholders and leadership from each state and territory. Never before has the public safety community had the opportunity to provide input towards the creation of a nationwide broadband network tailored specifically to meet their needs as they save lives and protect communities across the nation.

AT&T won the contract to build FirstNet in 2017 and launched the FirstNet network with its own separate advanced network core for FirstNet users in early 2018. FirstNet users get priority access to the Band 14 wireless spectrum provided to FirstNet by the US government and get priority and preemption capabilities over all of AT&T's commercial wireless spectrum, so First Responders calls, texts, data, and video sessions will not fail due to network capacity issues. FirstNet is the nationwide public safety mobile broadband network for First Responder users only, you must be in public safety or a partner to public safety to be allowed on the network.

Some of the local and state public safety agencies that are using FirstNet and would benefit from have the Band 14 spectrum added to the Keswick tower which would broadcast the Band 14 wireless spectrum along I-64 are as follows: Albemarle County Police, Albemarle County Fire, Charlottesville Albemarle 911, UVA Police, UVA Health Medical Center, UVA Health Telemedicine, Virginia Department of Transportation, Virginia Department of Emergency Management, Virginia State Police, Virginia Department of Corrections, Henrico County Police, Henrico County Sheriff's, Orange County Sheriff's, Orange County Fire, City of Richmond Police, City of Richmond 911 and Emergency Management, City of Richmond Fire.

Michael F. Plahovinsak, P.E.

18301 State Route 161, Plain City, Ohio 43064

(614) 398-6250 - mike@mfpeng.com

August 25, 2021

Crown Castle

Re: Proposed 70-ft Monopole
Located in Albemarle Co., VA: 842590 Union Run
MFP Project #: 23520-444 / TAPP Project Number: TP-19895

I understand that there may be some concern on the part of local building officials regarding the potential for failure of the proposed communication monopole. Communication structures are designed in accordance with the Telecommunications Industry Association ANSI/TIA-222-G, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures". This Structure is to be fabricated by TransAmerican Power Products

I have designed this monopole to withstand a 3-sec. gusted wind speed of 90 mph as recommended by ANSI/TIA-222-G for Albemarle Co., VA. The design also conforms to the requirements of the 2015 Virginia Uniform Statewide Building Code for an equivalent ultimate wind speed of 116 mph (Vult).

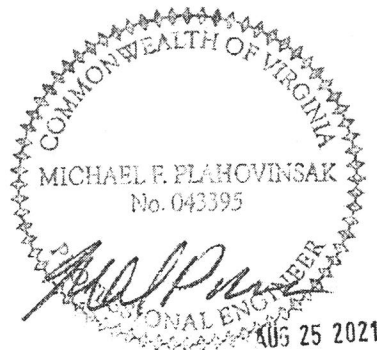
This monopole has been designed to accommodate a theoretical fall radius. The upper 16.25' of the pole has been designed to meet the wind loads of the design, however, the lower portion of the pole has been designed with a minimum 10% extra capacity. Assuming the pole has been designed according to my design, and well maintained, in the event of a failure due to extreme wind and comparable appurtenance antenna load (winds in excess of the design wind load), it would yield/buckle at the 53.75' elevation. The yielded section would result in a maximum 16.25' fall radius, but would most likely remain connected and hang from the standing section.

The structure has been designed with all of the applicable factors as required by the code. A properly designed, constructed and maintained pole has never collapsed; monopoles are safe structures with a long history of reliable operation.

I hope this review of the monopole design has given you a greater degree of comfort regarding the design capacity inherent in pole structures. If you have any additional questions please call me at 614-398-6250 or email mike@mfpeng.com.

Sincerely,

Michael F. Plahovinsak, P.E.



Michael F. Plahovinsak, P.E.
Sole Proprietor - Independent Engineer
P.E. Licensed in 48 Jurisdictions



