



**County of Albemarle
Department of Community Development**

Memorandum

To: Rebecca Ragsdale, Community Development Planning and Zoning Review
From: Frank Pohl, PE, County Engineer, Community Development Engineering Review
Date: June 25, 2021
Subject: SE2021-00011 – VPM Site Name: Carters Mountain – Critical Slopes Impact Review

The applicant's critical slope waiver request dated May 12, 2021 has been reviewed. The engineering analysis of the request follows:

Description of critical slope area and proposed disturbance:

The proposed critical slope impacts would occur on an existing tower site located on Carters Mountain. The critical slopes were previously cleared, graded and stabilized as a result of the original tower installation and the proposed impacts would improve the site and expand the tower pad slightly to accommodate the new tower. The existing wooden retaining wall that was cut into the slope to create the tower pad would be replaced with a slightly taller gabion basket retaining wall. A taller wall would reduce slopes above the wall and would replace slopes that are eroding. A 'field of riprap,' including a filter fabric underlayment, would be installed over critical slopes located between the tower and equipment shelter/generator pads to reinforce and prevent erosion of the slope. The proposed disturbance of roughly 2,100 sf beyond the wall and riprap improvements appears required to complete the work and tower installation.

Areas	Acres (sf)	
Total site	33.66 acres	
Total critical slopes onsite	29.78 acres (1,296,230 sf)	88.47% of total site
Critical slopes disturbed	8,550 sf (0.2 acres)	0.58% of total site 0.66% of total preserved slopes

Exemptions to critical slopes waivers for driveways, roads and utilities without reasonable alternative locations [County Code § 18-4.2.6]: The proposed disturbance is not a listed exemption and therefore a waiver is required.

Compliance with Zoning Ordinance 18-4.2.5(a):

County Code § 18-4.2.5(a)(1) – Request

The developer or subdivider has filed a written request in accordance with *County Code* § 18-32.3.10(d) that identifies and states how the request would satisfy one or more of the findings set forth in subsection 4.2.5(a)(3).

County Code § 18-4.2.5(a)(2) – Considerations

Engineering staff offers the following analysis of the factors to be considered under *County Code* § 18-4.2.5(a)(2):

- “If the request pertains to a modification or waiver of the prohibition of disturbing critical slopes, the commission shall consider the determination by the county engineer as to whether the developer or subdivider will address each of the public health, safety and welfare factors so that the disturbance of the critical slopes will not pose a threat to the public drinking water supplies and flood plain areas, and that soil erosion, sedimentation, water pollution and septic disposal issues will be mitigated to the satisfaction of the county engineer.”

I have determined that the applicant has addressed each of the public health, safety and welfare factors so that disturbance of critical slopes will not pose a threat to the public drinking water supplies and floodplain areas. The applicant has also mitigated any soil erosion, sedimentation, water pollution and septic disposal issues to my satisfaction.

- “The county engineer shall evaluate the potential for soil erosion, sedimentation and water pollution that might result from the disturbance of slopes of 25 percent or greater in accordance with the current provisions of the Virginia Department of Transportation Drainage Manual, the Commonwealth of Virginia Erosion and Sediment Control Handbook and Virginia State Water Control Board best management practices, and where applicable, Chapter 17 , Water Protection, of the Code.”

I have evaluated the potential for soil erosion, sedimentation, and water pollution that might result from the disturbance of slopes of 25 percent or greater and find the application is in accordance with the current provisions of the Virginia Department of Transportation Drainage Manual, the Commonwealth of Virginia Erosion and Sediment Control Handbook, the Virginia State Water Control Board best management practices, and Chapter 17, Water Protection Ordinance, of the County Code.

County Code § 18-4.2.5(a)(3) – Findings

Based on the findings required under County Code § 18-4.2.5(a)(3) for the granting of a critical slopes modification or waiver, Engineering staff offers the following analysis:

the Board may grant a modification or waiver if it finds that the modification or waiver:

- 1) would not be detrimental to the public health, safety or welfare, to the orderly development of the area, or to adjacent properties;

Staff finds that the waiver would not be detrimental to the public health, safety or welfare, to the orderly development of the area, or to adjacent properties.

- 2) would not be contrary to sound engineering practices; and

Staff finds that this request would not be contrary to sound engineering practices.

- 3) at least one of the following:

- a. Strict application of the requirements of [section 4.2](#) would not forward the purposes of this chapter or otherwise serve the public health, safety or welfare;

Staff is unable to support this finding.

- b. Alternatives proposed by the developer or subdivider would satisfy the intent and purposes of [section 4.2](#) to at least an equivalent degree;

Staff supports this finding. The tower location is restricted as approved in application SP1988-00014. The current application proposes a new tower in the same location as the existing tower. Alternative locations were not provided but would result in greater impacts to critical slopes if the new location were restricted to the lease area.

- c. Due to the property's unusual size, topography, shape, location or other unusual conditions, excluding the proprietary interest of the developer or subdivider, prohibiting the disturbance of critical slopes would effectively prohibit or unreasonably restrict the use of the property or would result in significant degradation of the property or adjacent properties; or

Staff supports this finding. Staff believes prohibiting the disturbance of critical slopes would prohibit or unreasonably restrict the owner from upgrading the existing tower. Furthermore, the proposal would stabilize and improve the stability of slopes directly adjacent this facility.

- d. Granting the modification or waiver would serve a public purpose of greater import than would be served by strict application of the regulations sought to be modified or waived.

Staff is unable to support this finding. If strict application of the regulations resulted in the tower needing to be decommissioned, the owner could potentially find another site to serve the public.

Based on the review above, engineering staff recommends approval of the Critical Slopes waiver request with the following recommended condition of approval:

1. The erosion and sediment control measures shown on the included drawings must be installed prior to commencing land disturbing activities.