

# County of Albemarle COMMUNITY DEVELOPMENT DEPARTMENT

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## Memorandum

**To:** Rebecca Ragsdale, Community Development Planning and Zoning Review **From:** Frank Pohl, PE, County Engineer, Community Development Engineering Review

Date: December 17, 2024

**Subject:** SE202400034 – Innisfree Village Sanitary – Critical Slopes Impact Review

The applicant's critical slope waiver request dated December 16, 2024 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 to install a 2-inch diameter HDPE sanitary sewer force main and two underground electrical conduits on the Innisfree Village site. The force main and conduits are required components of the central sewerage system that is proposed to replace the failing onsite sanitary drainfields. Installation of the force main and conduits would be accomplished by excavating a trench approximately 12- to 24-inches wide through the critical slopes, which are currently maintained as well-established pasture grass. It is estimated that installation of these conduits within the critical slopes could be completed and stabilized within a few days.

Areas	Acres or Square Feet (sf)	
Total site	289.35 acres	
Total critical slopes onsite	93.66 acres	32.37% of total site
Critical slopes disturbed	0.0069 acres (300 sf)	0.0024% of total site 0.0074% 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 Owner 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 will mitigate any soil erosion, sedimentation, water pollution and septic disposal issues through the Water Protection Ordinance application, which will include an erosion and sediment control plan, a stormwater pollution prevention plan, and a pollution prevention plan.

"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."

The applicant would need to submit an Erosion and Stormwater Management (ESM) application if this special exception is approved. Considering the small size of disturbance within critical slopes (300 sf), I have determined that the potential for soil erosion, sedimentation, and water pollution that might result from the disturbance of slopes of 25 percent or greater is negligible when compared to the overall proposed land disturbance. Engineering staff will ensure the application is in accordance with the current provisions of the Commonwealth of Virginia Erosion and Sediment Control Handbook 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 <u>section 4.2</u> would not forward the purposes of this chapter or otherwise serve the public health, safety or welfare;

Staff supports this finding. The force main is a required component of the proposed central sewerage system. The system is intended to replace the failing onsite sanitary drainfields, from which raw sewage is seeping to the surface and polluting surface waters. Considering there are multiple drainfield failures on the site, the Engineer of Record (ER) and Virginia Department of Health (VDH) determined the best solution would be to construct a new central sewerage system to serve the buildings. The ER and VDH studied the site and determined the only area suitable for a drainfield was in the proposed location, which is separated from the rest of the site by critical slopes. Strict application of the requirements of section 4.2 would prevent the installation of the central sewerage system and raw sewage would continue to pollute surface waters.

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 Engineer of Record stated a soils investigation was completed throughout the site and it was determined that the proposed drainfield location is the only location where the soils have adequate hydraulic conductivity (infiltration capacity).

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 that prohibiting the disturbance of critical slopes would prohibit the construction of the central sewerage system, which could jeopardize building occupancy and use of the property as approved in their Special Use Permit (SP-86-25).

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 supports this finding. Approving the disturbance of 300 sf of critical slopes would serve a public purpose of greater import by strict application of the regulations because the new system would eliminate a source of surface water pollution.

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

1. An erosion and stormwater management application must be approved and all erosion control perimeter measures must be installed prior to commencing land disturbing activities.