



**County of Albemarle
Department of Community Development**

Memorandum

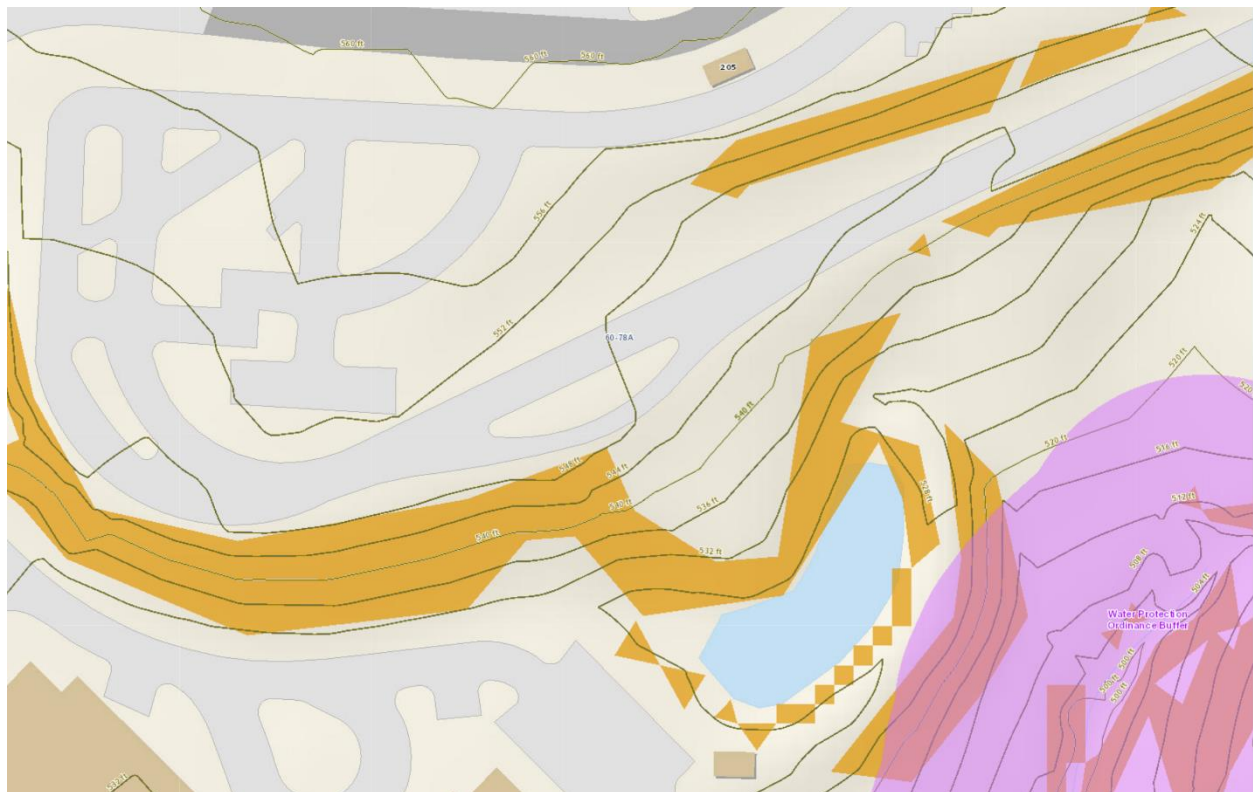
To: Cameron Langille, Community Development Planning and Zoning Review
From: J. E. Anderson, PE, CE-II, Community Development Engineering Review
Date: April 8, 2021
Subject: SE202100012 – Boys & Girls Club/Driver’s Ed – Critical Slopes Impact Review

The critical slope waiver request has been reviewed. The engineering analysis of the request follows:

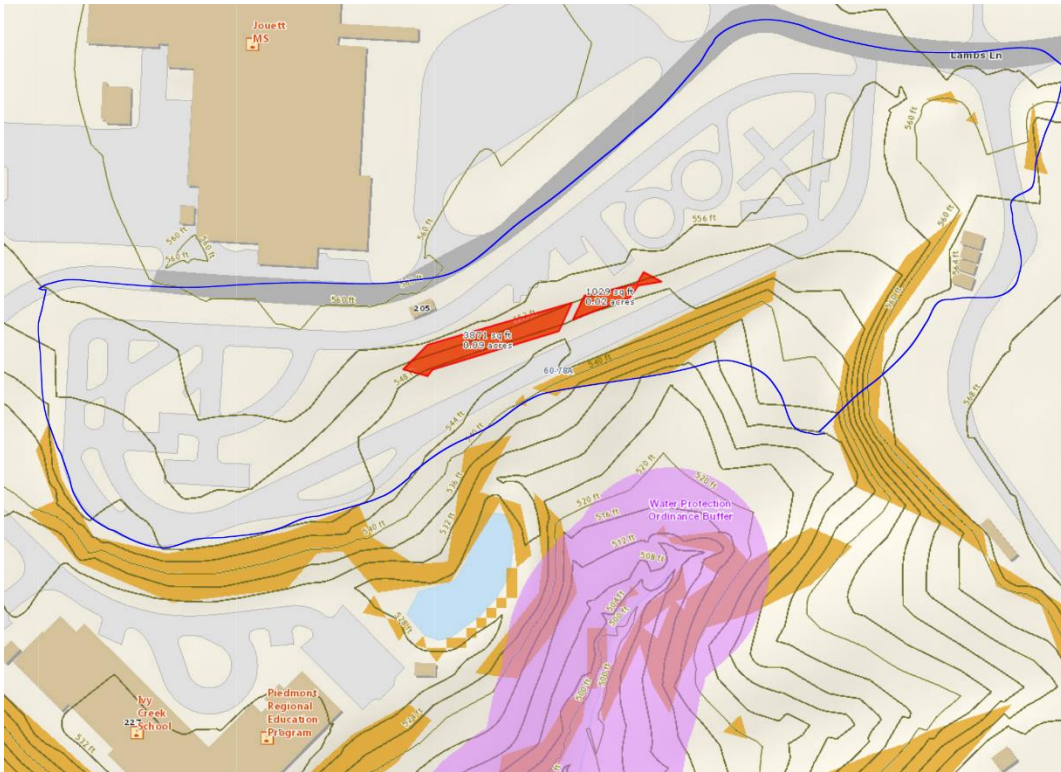
Description of critical slope area and proposed disturbance:

The critical slopes proposed to be impacted lie between Ivy Creek School to the south, and an existing student driver education paved circuit to the north. 0.11 Ac. of critical slopes lie entirely within the driver education course, and there is no impact to critical slopes within stream buffer, temporary or otherwise. The slopes are currently stabilized with understory shrubs, groundcover and trees. The applicant proposes to grade within critical slopes for construction of a building, athletic field, hard courts, stairs, parking and site access. The site is served by public water and sewer. Construction includes a septic pump station that requires applicant coordinate pump station and 4” force main design with VDH.

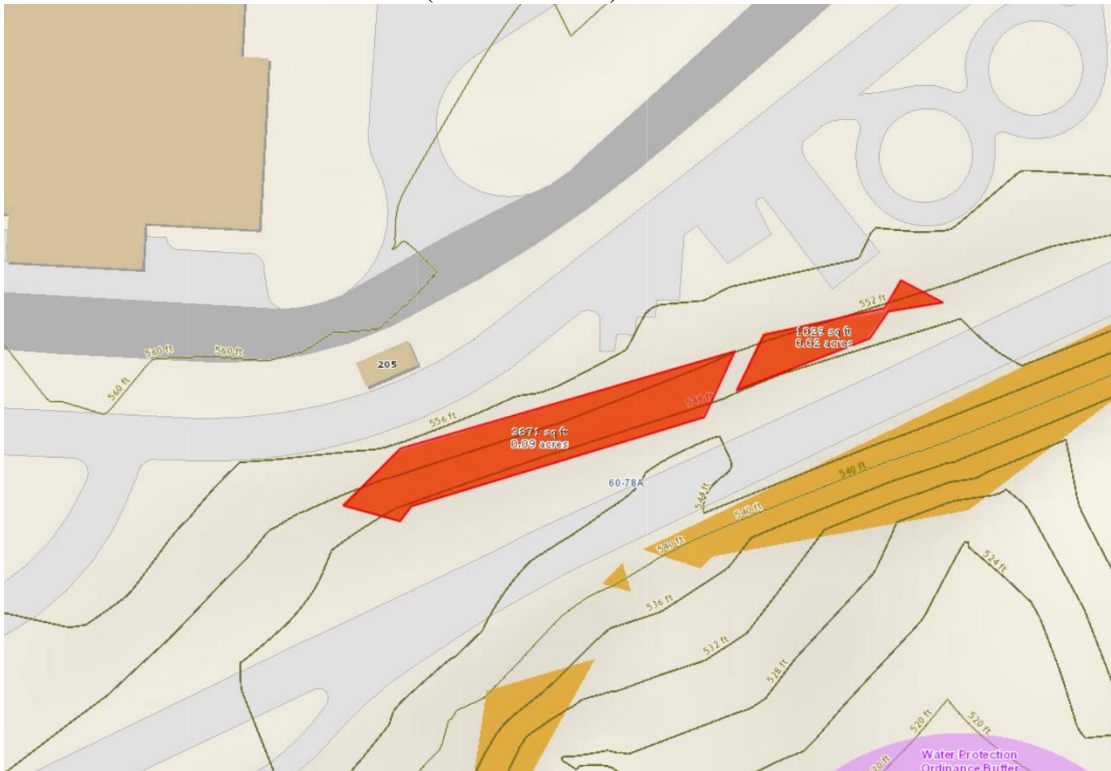
Areas	Acres	
Total site	216.69 Ac.	
Critical slopes disturbed	0.42 Ac.	0.19% of total site



Purple area in image above is WPO (stream) buffer. Yellow-tan areas are critical slopes.



Approximate limits of project site shown by blue outline, above. ~0.11 Ac. critical slopes lie within paved circuit of the driver education course (red-shaded area).



Exemptions to critical slopes waivers for driveways, roads and utilities without reasonable alternative locations: The proposed disturbance is not one of the listed exemptions and therefore a waiver is required.

Compliance with Zoning Ordinance 18-4.2.5(a)(1):

“rapid and/or large-scale movement of soil and rock”

Existing critical slopes are stable. Disturbance of critical slopes will entail cutting/excavating earth to perform final grading, with sections of stairs, storm line and very limited portions of a building and hard surface courts proposed to be constructed on critical slopes. Without precise calculation, and excepting grading of critical slopes (no proposed grade is steeper than 2.5:1), Engineering estimates design avoids 85-90% of critical slopes in the vicinity of buildings, parking, access, hard surface courts, grass athletic field, and utility installation (sheets C4.1, C4.2). Avoidance strategies are evident at a glance with final site plan sheets C4.0, C4.1, C4.2. Retaining walls are used sparingly. In March 2020, Engineering supported a waiver request for 0.79 Ac. impact to critical slopes for this project. Under relocated /redesigned project, impact to critical slopes is cut by half. 2.5:1 final slopes may be stabilized with permanent ground cover that does not require mowing. During construction, proper ESC measures (nearly approved with WPO202000051) are deemed adequate to minimize chances of rapid and large-scale movement of soil and/or rock.

“excessive stormwater run-off”

The impacted critical slopes will be replaced with a combination of building, hard surface courts, paved parking /site access, terrace, stairs (impervious), and athletic field, slopes, and landscape areas (pervious). The existing driver education course (substantial pavement) will be demolished to make way for boys and girls club improvements. Additional runoff resulting from the change in land cover is mitigated by the extent of existing impervious driving circuit pavement to be demolished. A net impervious increase of 0.26 Ac. increases storm runoff. New impervious areas are virtually all (flat) rooftop, pavilion/decking or parking/access areas. The majority of runoff from these areas is detained in two underground detention systems to ensure post-development runoff meets minimum standards for channel and flood protection.

“siltation of natural and man-made bodies of water”

There are no nearby man-made bodies of water. A WPO buffer is in close proximity, and during construction, a temporary ESC measure (ST3) encroaches approximately 25’ within the buffer, but remains 75-ft from stream centerline. This temporary ESC measure is designed for construction phase. No permanent improvements except required storm discharge pipe are proposed for critical slopes. The floodplain does not extend to this site. Grading of critical slopes results in disturbed areas that would otherwise remain undisturbed. However, slopes to be impacted are approximately 0.42 Ac., or half the 0.79 Ac. impact recommended for approved in March 2020. Temporary, phased ESC measures provide perimeter containment of sediment transport, and minimize exposure and potential for sediment release from areas of disturbance.

“loss of aesthetic resources”

The critical slopes to be impacted are primarily located behind and downslope of a proposed building, hard courts, terrace, athletic field, and areas presently woods. GIS shows critical slopes within the paved student driver education course. This development presents higher aesthetic value than the existing driver education course.

“in the event of septic system failure, a greater travel distance of septic effluent”

The development proposes a septic effluent pump station, though not on critical slopes. Septic effluent is designed to flow by gravity to the pump station, then by 4” force main (FM) to an existing FM. VDH review is required. VDH “may revoke or modify any [state] permit if, at a later date, it finds that the system would threaten public health or the environment”. Staff does not believe disturbance of critical slopes would result in a greater travel distance of septic effluent in the event of system failure, since the station serves only the boys and girls club and any upset condition requiring offline repair may reasonably be addressed by temporarily removing restrooms, etc., from service.

The following are additional factors to be considered by the commission for this application (§18-4.2.5(a)(3)):

The commission 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 does not find the waiver would 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 does not find this request to 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 supports this finding because slopes impacted are not integrated with a more extensive slope network, are isolated, and are outside the WPO buffer. Also, the boys and girls club will serve the public welfare, especially given the pandemic's devastating impact on adolescent socializing and learning opportunities.

- 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 as an alternative design west on the same school-owned parcel was reviewed and recommended for approval with 0.79 Ac. critical slope impact. This redesign reduces critical slope impact fifty percent.

- 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

The developer and this design sought alternative location that minimizes impacts to critical slopes. To limit impact to slopes to a lesser degree or prohibit any impact would, in staff's opinion, unreasonably restrict ACPS partnership ability to team with Boys and Girls Club of Central Virginia to provide facilities that advance educational opportunities for the youth of Albemarle County.

- 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. Quoting Applicant's 2/10/21 letter: 'The proposed Boys and Girls Club facility would serve the public and students who attend the surrounding public schools. The site layout is designed to prioritize both the safety of the students and staff, as well as the maintenance of the existing character and topography of the land.'

Based on the review above, there are no engineering concerns which should prohibit the disturbance of the critical slopes as shown and engineering staff recommends approval of the Critical Slopes waiver request.

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