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**TO:** Planning Commission  
**FROM:** Scott Gustin, Principal Planner & Zoning Division Manager  
**DATE:** January 10, 2022  
**RE:** Proposed ZA-22-03: Steep Slopes

**Overview & Background**

The *Comprehensive Development Ordinance* has long-standing provisions to address steep slopes and site topography in two sections: *Sec. 5.2.4* & *Sec. 6.2.2*. *Sec. 5.2.4* essentially deducts steep slopes from lot coverage and residential density calculations in the RCO, RL, and RM zoning districts. *Sec. 6.2.2 (a)* speaks to preserving steep slopes and other significant natural features on a site, and *Sec. 6.2.2. (b)* guides development towards working with existing topography rather than significantly altering it as part of any development proposal. There is nothing addressing slope stability or suitability for development.

A slope failure along Riverside Avenue in October 2019 and a number of prior slope failures have sparked interest among the Conservation Board and some members of the Burlington community to develop standards to assess stability and suitability for development of steep slopes. Note that [Chapter 18: Soils and Foundations](#) of the International Building Code contains standards specifying when geotechnical analysis of development site soils are needed and what is required as part of that analysis. Any new zoning standard should not duplicate or contradict those standards. There is opportunity with a zoning amendment to establish a clear, local threshold for requiring such analysis – where and under what conditions. There is no need to create new technical specifications for what is included in that analysis.

The proposed amendment seeks to establish an overlay zone that identifies steep slopes and outlines criteria for applicants to address when building on or near a steep slope.

The Planning Commission Ordinance Committee discussed this amendment September 2, 2021 and again January 6, 2022. The Committee unanimously recommended forwarding the amendment to the full Planning Commission for consideration.

**Proposed Amendment**

**Amendment Type**

Text Amendment	Map Amendment	Text & Map Amendment
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**Purpose Statement**

The intent of the proposed amendment is to identify areas within the city with 15% or steeper slopes and adjacent upslope lands and to outline criteria for addressing slope stability and suitability for development.

**Proposed Amendment**

Reflecting discussion by the Planning Commission Ordinance Committee, requirement for geotechnical analysis is tied to permit conditions rather than made an upfront application requirement. Similar provision exists in the CDO for development within the Special Flood Hazard Area with a set of required permit conditions.

Deleted language is ~~crossed out~~ and new language is underlined in red.

[Begin text amendment]

#### **Sec. 5.2.4 Buildable Area Calculation & Steep Slopes Overlay District**

The intent of this section is to:

- To protect sensitive natural features;
- To prevent overdevelopment of properties that contain sensitive and unbuildable areas, and
- To minimize the potential for erosion, slope failure, and contamination of surface waters caused by the adverse effects of development on steep slopes, and
- To ensure that new development fits within the existing scale and intensity of the surrounding neighborhood.

##### **(a) Buildable Area Calculation**

For any properties two (2) or more acres in size within any RCO, WRM, RM, WRL, or RL zoning district, the maximum building density or lot coverage shall be calculated using the buildable area only. Buildable area shall be deemed to include only those portions of a property that are not inundated at least six months per year by water including streams, ponds, lakes, wetlands and other bodies of water; and lands with a slope in excess of 30%.

The DRB may under conditional use criteria allow up to 50% of the maximum building density or lot coverage to be calculated on lands with a slope between 15-30% if the applicant can demonstrate that the additional density or lot coverage will be compatible within the existing scale and intensity of the surrounding neighborhood, and not have an undue negative impact on sensitive natural features.

##### **(b) Steep Slopes Overlay District**

This overlay district consists of all lands delineated in Map 5.2.4-1 – Steep Slopes Overlay District. This overlay district contains all lands with an average slope of 15% or greater over 50-foot intervals and adjacent lands within 50 feet of the top of slope.

[Insert map 5.2.4-1 – Steep Slopes Overlay District]

The boundaries shown on the Steep Slopes Overlay Map may be supplemented or modified by examination of one or more of the following sources by the Development Review Board whenever an application is submitted for review.

- Contour maps prepared from the most current orthophotography.
- On-site survey prepared by a registered professional engineer or surveyor.

The Zoning Administrative Officer or Development Review Board shall determine whether or not the Steep Slope Overlay District has been shown accurately on the application plans. The applicant may be required to revise the steep slope boundaries shown on the application plans.

The burden of proving the correct boundary shall be on the applicant, supported by engineering and/or surveying data or mapping.

##### **1. District Specific Regulations**

- A. The Steep Slope Overlay District shall be an overlay on all zoning districts. The regulations in the overlay are in addition to those regulations of the underlying zoning district.
- B. These regulations apply to applications within the Overlay District that include 400 square feet or more of earth disturbance.
- C. Finished slopes of all cuts and fills shall not exceed 30%, unless the applicant can demonstrate that steeper slopes can be stabilized and maintained adequately to the satisfaction of the ZAO or DRB in consultation with the City Engineer.

- D. Any fills placed on a steep slope shall be property stabilized and, when necessary, supported by retaining walls or other appropriate measures as approved by the ZAO or DRB in consultation with the City Engineer.
- E. Finished grades shall be reasonably safe from slide, collapse, or similar failure as determined by the ZAO or DRB in consultation with the City Engineer.
- 2. Additional Application Requirements
  - A. A site plan prepared by a registered professional engineer or surveyor that accurately depicts the proposed development and related land disturbance relative to the Steep Slope Overlay District boundaries, with all pertinent information describing the proposal, and a topographical survey depicting existing and proposed contour lines at no greater than 2-foot intervals. The plan shall depict all proposed cut, fill, and grading.
  - B. A plan depicting the extent of proposed vegetation clearing.
- 3. Approval Condition
  - A. Prior to construction, the applicant shall provide a geotechnical analysis prepared and stamped by a professional geotechnical engineer that determines the suitability of the steep slope for development.

[End text amendment]

**Relationship to planBTV**

*This following discussion of conformance with the goals and policies of planBTV is prepared in accordance with the provisions of 24 V.S.A. §4441(c).*

<b>Theme</b>	<b>Dynamic</b>	Distinctive	Inclusive	Connected
<b>Land Use</b>	<b>Conserve</b>	Sustain		Grow

Compatibility with Proposed Future Land Use & Density

The proposed amendment addresses a gap in present land use standards for steep slope areas. It does not alter density or lot coverage standards. It introduces an overlay map identifying steep slope areas and related criteria to assess slope stability and suitability for development.

Impact on Safe & Affordable Housing

The proposed amendment will not have any direct impact on safe and affordable housing. It will contribute to safety of development within areas containing steep slopes.

Planned Community Facilities

The proposed amendment has no impact on planned community facilities.

**Process Overview**

The following chart summarizes the current stage in the zoning amendment process, and identifies any recommended actions:

<b>Planning Commission Process</b>				
Draft Amendment prepared by: Staff, PC OC	Presentation to & discussion by Commission 2/23/22	Approved for Public Hearing 2/23/22	<b>Public Hearing</b>	Approved & forwarded to Council
				Continue discussion

City Council Process				
First Read & Referral to Ordinance Cmte	Ordinance Cmte discussion	Ordinance Cmte recommend as modified	Second Read & Public Hearing	CCOC Recommends Approval & Adoption
				Rejected