



Steep slopes in the Bismarck area may be susceptible to erosion and landslides. This is a known issue throughout the Missouri River valley, where soil types are relatively soft and potentially less stable. There are measures property owners must take to protect their own properties, as well as nearby properties and public infrastructure, from damage. The purpose of this information guide is to outline these requirements and best practices.

Defining a Steep Slope

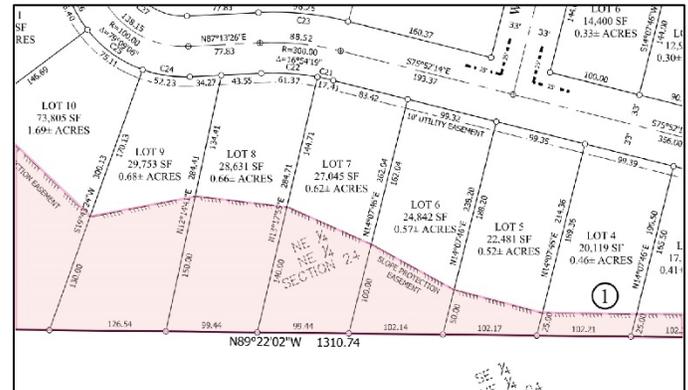
The Bismarck zoning ordinance contains the following definition of a steep slope:

“Land where agricultural activity or development is either not recommended or described as poorly suited due to slope steepness and/or the site’s soil characteristics, as mapped and described in the Burleigh County Soil Survey or other technical reports. Where specific information is not available, steep slopes are defined as lands having an average slope over 12 percent, as measured over horizontal distances of 50 feet or more, that are not bluffs [note: bluffs are defined separately].”

Steep slopes can add scenic value to any property, but they also must be properly managed and

protected, whether or not the slope has been technically documented or not.

Slope Protection Easements



example of a slope protection easement shaded in red

Many subdivisions in areas with known steep slopes contain slope protection easements. Typically, a geotechnical study is performed to identify the areas of the easement, based on a risk of subsidence. The requirements applicable to the easement will be found on the face of the plat, typically contained under the heading “Owner’s Certificate of Dedication.” The absence of an easement does not mean a slope is stable. Many subdivisions, particularly older ones, may not have fully documented topography and soils of the site.

A copy of your official plat may be obtained from the Burleigh County Recorders’ office at 221 N 5th Street.

Slope Protection Requirements

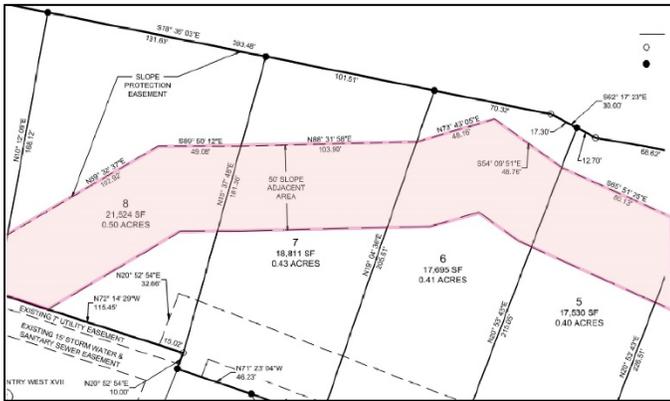
Requirements vary by easement, but generally the following are included:

- Irrigation is not permitted.
- Grading, excavating, filling, terracing, stockpiling of material or equipment, or any other surface alterations are not permitted.
- Buildings, primary or accessory, may not be constructed in this area.

- The natural vegetation in this area must be left undisturbed.

Consult the language on your plat for specific rules.

Areas Adjacent to Slope Protection Easements



example of a slope protection easement shaded in red

For some subdivisions, additional restrictions are applied within an area set back from the slope protection easement. Within this “slope adjacent area,” standard landscaping and certain accessory buildings are appropriate but more disruptive activities, such as excavation for footings or swimming pools, are not.

Consult your subdivision plat for this area. It may be depicted visually on the plat or it may be noted with dimensions in a plat note.

Stormwater Management and Drainage

During initial development, subdivisions are carefully designed to avoid channeling stormwater onto slopes that may erode. As a property owner, if you are making any alterations to the lot that add impervious surface or regrade the land, even outside of an area protected by an easement, you should be aware of how this will impact the drainage on your lot. Just as you would not redirect water toward a neighboring home, you should ensure that the slope is protected. If you have stormwater related questions, you may contact Bismarck Engineering at 355-1505 or engineering@bismarcknd.gov.

Vegetation and Weed Control

Homeowners and businesses may manage landscaping within the protected areas, and they still have the responsibility to control weeds on their property. The requirement to not “disturb” natural vegetation should not be interpreted strictly to prevent

any intervention. The intent is to ensure that the natural vegetation remains healthy and fully intact.

Slope protection areas are exempt from City Ordinance requirements to mow grass over 8” in height, based on mowing safety and erodibility of slopes (City Code 13-03-04.1.) However, the homeowner does have the option to mechanically trim grasses if the health of the vegetation is not compromised.

Watering grasses within the slope protection easement is not allowed. Irrigation of sloped area can increase the moisture content of the soil beyond naturally occurring rainfall. This extra weight may exacerbate erosion.

Weeds must be controlled in this area. There are weed control options that also protect natural grasses, including broadleaf herbicides and biological controls. Use of systemic herbicides or other methods that harm natural vegetation may should be avoided.

Homeowners consult with the NDSU - Burleigh County Extension Office for advice on vegetation at 221-6865 or NDSU.Burleigh.Extension@ndsu.edu.

For additional information, contact the City of Bismarck Planning Division at 355-1840 or visit the City-County Office Building 221 N. 5th Street during standard office hours.