CHAPTER 15.35
GEOLOGICALLY HAZARDOUS AREAS

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15.35.010 APPLICABILITY. This chapter applies to development activities within or adjacent to geologically hazardous areas, including steep slopes or hillsides located in unincorporated Benton County. A steep slope is defined as one with a slope of fifteen (15) percent or more or where Critical Areas Overlay Maps indicate potentially hazardous conditions. [Ord. 257 (1994) ' 57; Ord. 257 (1994) ' 58; Ord. 316 (1997) ' 1]

15.35.020 DEFINITIONS. For the purposes of this chapter, the following words and phrases shall have the indicated meanings unless the context clearly indicates otherwise:

(1) "Geologically Hazardous Areas" are areas which pose potential threats to life or property because of unstable soil, geologic or hydrologic conditions, or steep slopes. Geologically Hazardous Areas shall include, but are not limited to, all landslide and seismic hazard areas.

(2) "Landslide" means episodic downslope movement of a mass of soil or rock.

(3) "Landslide Hazard Area" refers to those areas of Benton County subject to a severe risk of landslide which include the following:
(a) Any areas with a combination of:
   1. Slopes greater than fifteen (15) percent;
   2. Impermeable soils (typically silt and clay) frequently inter-bedded with granular soils (predominately sand and gravel); or,
   3. Springs or ground water seepage.
(b) Any area which has shown movement during the Holocene epoch (from ten thousand 10,000 years ago to present) or which is underlain by mass wastage debris of that epoch;
(c) Any area potentially unstable as a result of rapid stream incision, stream bank erosion or undercutting by water action, or surcharge by upslope irrigation district canals or waterworks;
(d) Any area located on an alluvial fan, presently subject to or potentially subject to inundation by debris flows or deposition of stream-transported sediments.

(4) "Outcrop" refers to a geologic layer exposed at the earth's surface.
(5) "Seismic Hazard Areas" mean those areas of Benton County that are potentially subject to severe risk of earthquake damage as a result of seismically induced ground shaking, slope failure, settlement, soil liquefaction or surface faulting.
(6) "Slide" refers to the downward mass movement of soil, rock, or snow resulting from failure of that material under stress.
(7) "Slope" refers to the inclination of the surface of the land from the horizontal.

15.35.030 DEVELOPMENT PERMITTED. Development in an Area of Project Review as set forth in this chapter is permitted when sited, designed, and operated in a manner which protects life, property, and the public welfare and when such development meets
the requirements of this title.

15.35.040 AREA OF PROJECT REVIEW AND MINIMUM HAZARD SETBACK REQUIREMENTS. For the purposes of this chapter, an Area of Project Review and minimum setback for development within or adjacent to a Geologically Hazardous Area shall be as follows:

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<tr>
<th>Area of Project Review</th>
<th>Point of Measurement For Setback</th>
<th>Width of Setback</th>
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<tr>
<td>All geologically</td>
<td>From the edge of any identified</td>
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<td>the Site Analysis</td>
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<td>areas</td>
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15.35.050 SITE ANALYSIS--GENERAL REQUIREMENTS. A site analysis is required within an Area of Project Review for geologically hazardous areas. In order to complete an analysis, the Planning Director may require any of the following:

(a) the physical features of the site, including identification of surface and subsurface soil types, vegetation, streams, canyons, alluvial fans, and drainage ways. Topography shall be shown in five (5) foot contours unless prior approval is received for contours greater than five (5) feet;

(b) lot and parcel sizes, proposed lot coverage, type of dwelling units, square footage, dimensions, general type of construction and location of all structures, the existing and proposed utility systems including wells, sanitary sewers, electric, gas, and telephone, and other pertinent information requested by the Planning Director;

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(c) the general location and different circumstances that might be expected to precipitate a geological event;

(d) the geologic, topographic, and hydrologic factors that might contribute to slope instability and the location of the site susceptible to instability;

(e) suitable, buildable areas taking into consideration the long term stability and maintenance of access roads and all other permanent infrastructure needs that would be affected by both the underlying geology and soils;

(f) recommended hazard setbacks to protect the geologic and topographic features;

(g) relying on existing data, areas with known or potential for seismic hazard;

(h) the rate and extent of any potential hazards such as erosion, sliding, slumping etc., must be analyzed in light of the potential to impact the public health, safety and welfare;

(i) the potential impact of residential landscape irrigation, drain-fields, upslope and off-site irrigation activities, storm water generation from upslope properties and proposed impervious surfaces on-site, and the influence of street conveyance on slope stability;

(j) proposed access, parking, and basic internal vehicle/pedestrian circulation system;

(k) the proposed system for retention and release (detention) of storm and surface water runoff generated from the site;

(l) general landscaping plan indicating the type and placement of materials used around all structures, parking areas and other cleared portions of the site;

(m) the relationship between the proposed development and existing and proposed adjacent areas;

(n) where development is proposed downslope of lands in, or with the potential for agriculture, analysis of the impact of surface
and subsurface movement of waste irrigation water on the proposed development site shall be provided. The analysis shall include descriptions of the relevant soils, geologic, and hydrologic conditions of the project site and the upslope lands;

(o) for public buildings and facilities: identification of minimum design standards where seismic activity has the potential to occur. [Ord. 257 (1994) § 57; Ord. 257 (1994) § 62; Ord. 316 (1997) § 5]

15.35.060 DEVELOPMENT--PLANS REQUIRED. (a) A site development and grading plan which meets the requirements of BCC 15.35.050 and BCC 15.35.060 shall be developed and submitted to the Planning Director for projects within an Area of Project Review in order to:

(1) assure long term structural integrity of all development;

(2) protect the public health, safety, and welfare by minimizing the potential for public expenditures for post-project geologic, soils, and hydrology hazards remediation;

(3) avoid documented seismic and landslide hazard areas as locations for building construction, roads or utility systems where mitigation is not feasible;

(4) eliminate as completely as practicable, any public or private exposure to landslide hazards or to abnormal maintenance or repair costs through the application of post construction slope stabilization and appropriately upgraded road construction specifications where appropriate;

(5) minimize storm water runoff and soil erosion impacts;

(6) control dust during all construction phases;

(7) achieve maximum feasible retention, in their natural condition, of existing topographic features such as drainage swales, streams, slopes, structurally important ridge lines and rock outcroppings.

(8) minimize grading where it will adversely impact slope stability.
(b) All development and grading plans shall be approved by the appropriate county departments in order to ensure compliance with the current application of the County's Side Hill Development Standards.

(c) All development and grading plans shall adhere to the requirements of the Benton-Franklin Health District.

(d) In areas of steep slopes and natural drainages, when construction will extend into the rainy season and potentially cause eroded sediments to move offsite, the storm and surface water runoff retention and detention system must be completed before other phases of site development are begun so that it can serve as a sediment trap during the remainder of the construction.

15.35.070 SEVERABILITY. If any provision of this chapter is declared unconstitutional, or the applicability thereof to any person or circumstance is held invalid, the constitutionality of the remainder of the chapter and the applicability thereof to other persons and circumstances shall not be affected thereby.

15.35.080 EFFECTIVE DATE. This ordinance shall take effect and be in full force upon its passage and adoption.