

CHAPTER 5 - HILLSIDE DEVELOPMENT REQUIREMENTS

Sections:

- 7-5-1: Purpose**
- 7-5-2: Applicability**
- 7-5-4: Hillside Development Requirements**
- 7-5-5: Hillside Applicability**
- 7-5-6: Hillside Application Requirements**
- 7-5-7: Hillside Application Process**
- 7-5-8: Hillside Standards**
- 7-5-9: Hillside Required Findings**
- 7-5-10: Waiver of Hillside Standards**
- 7-5-11: Engineer of Record Responsibilities on Projects Involving Hillsides**

Section 7-5-1: Purpose:

The purpose of this Chapter is to protect hillsides from incompatible development and disturbance.

Section 7-5-2: Applicability:

- A. The requirements of this Chapter shall be applicable to those lands situated on hillsides greater than fifteen (15%) percent slope.
- B. No hillside work or grading shall be performed without first receiving written approval from the Director, unless specifically exempt by the Ordinance.

Section 7-5-4: Hillside Development Requirements:

- A. To help protect public safety and welfare in the development and design of building sites, roadways, and other service amenities; and
- B. To preserve and enhance the hillside landscape by encouraging the retention of natural features, such as drainage swales, streams, slopes, ridgelines, crests of hills, rock outcroppings, vistas, and natural formations; and
- C. To provide safe ingress and egress for vehicular, bicycle, and pedestrian traffic to and within the hillside areas, while at the same time minimizing the scarring effects of hillside development; and
- D. To apply the current understanding of the planning, design, and engineering professions and the natural sciences including botany, biology, ecology, soils and geology, to

mitigate potential hazards, and to enhance the existing and future appearance and resources of the hillsides.

Section 7-5-5: Hillside Applicability:

- A. Trail development that does not exceed five (5') feet in width and that does not exceed two (2') feet cut or two (2') feet fill shall be exempt from the provisions of this Chapter.
- B. Except for as allowed in subsection 7-5-5 (A) of this Chapter, the regulations of this Chapter shall apply to any grading, filling, clearing, or excavation of any kind where any of the following is present:
 - 1. Slopes that exceed fifteen (15%) percent; or
 - 2. Adverse conditions associated with slope stability, erosion, or sedimentation is present as determined by the county engineer; or
 - 3. Any grading, filling, clearing, or excavation on those lands between the South Fork of the Boise River and a line at least one hundred (100') feet outside of and parallel to the boundary of the Boise River floodway.
- C. All such grading, filling, clearing, or excavation listed in Subsection 7-5-5 (B), shall be deemed engineered grading subject to the regulations as set forth in this Chapter and the Ordinance.

Section 7-5-6: Hillside Application Requirements:

- A. Application: An application and fee, as set forth in the Ordinance with reports completed by the Engineer of Record, and other consulting engineers and professionals shall be submitted to the Director on forms provided by the Department. No hillside work or grading shall be performed without first receiving written approval from the Director, unless specifically exempt by the Ordinance.
 - 1. All Engineers of Record shall be registered and licensed as professional engineers in the State of Idaho.
- B. Preliminary Grading Plan: The preliminary grading plan shall be designed to ensure that the properties within the development are able to conform to the excavation and engineered grading requirements of the building code as set forth in the Ordinance, and the requirements for a final grading plan as set forth in this Chapter. The preliminary grading plans shall be sealed, signed and dated by the Engineer of Record and submitted with the development application, and shall at a minimum include the following information:
 - 1. Existing and proposed contour lines at five (5') foot minimum intervals; and

2. The location and configuration of all existing and proposed structures and roads; and
 3. The location, extent and calculated slopes for any areas of cut or fill; and
 4. The size, location, and details for any proposed retaining walls; and
 5. The size, location, type of slope of any proposed piping or water channels; and
 6. The size and location of proposed sedimentation ponds; and
 7. The location of existing site features that will be protected from disturbance during construction; and
 8. Any areas with special environmental issues or critical concerns; and
 9. A narrative indicating how the proposed design complies with the purpose statement of the Area of Critical Concern Overlay Zone.
- C. Slope Stabilization and Re-Vegetation Plan and Report: A qualified licensed landscape design professional shall prepare the slope stabilization and re-vegetation plan. The report shall be dated and signed by the design professional, and submitted with the development application, and shall include at a minimum the following information:
1. A complete description and discussion of the suitability development of the existing soils; and
 2. A description of the location, coverage and type of existing vegetation; and
 3. A description of the location and rationale for and of the vegetation that will be removed and the method of disposal; and
 4. A map and narrative showing the location, type and size of vegetation to be planted; and
 5. Any soils amendments and/or pH adjustments; and
 6. A map and narrative showing the location and type of slope stabilization measures to be implemented; and
 7. Analysis of the environmental effects the proposed construction and ongoing operations including the effects on:
 - a. Slope stability; and
 - b. Soil erosion; and

- c. Water quality; and
 - d. Fish and wildlife.
- D. Engineering Hydrology Report: A professional engineer registered in the State of Idaho shall complete an engineering hydrology investigation and report. This individual shall be experienced, and knowledgeable in the science of hydrology and in the techniques of hydrologic investigation. The report shall be sealed, signed and dated by the engineer and submitted with the development application, and shall include at a minimum the following information:
- 1. A description of the hydrology of the site; and
 - 2. Conclusions on suitability of the proposed development and the impact of proposed improvements on existing hydrology; and
 - 3. Opinions and recommendations to minimize the impact on hydrology during design and construction; and
 - 4. Results of field investigations of the site, unless existing information is determined by the county engineer to be sufficient to satisfy the purpose of this Chapter; and
 - 5. The flood and / or rainfall-intensity frequency curves for the area proposed for development; and
 - 6. Design calculations for sizing pipes, water channels, sedimentation ponds and other hydrology features; and
 - 7. All recommendations included in the report shall be incorporated into the design plan and specifications.
- E. Soils Engineering Report: Any area proposed for development shall be investigated to determine the soil characteristics. A professional engineer registered in the State of Idaho shall complete a soils investigation and engineering report. The report shall be sealed, signed and dated, and shall include at a minimum the following information:
- 1. Data regarding the nature, distribution, strength, pH, and nutrients of the soils; and
 - 2. Conclusions on the suitability of the soils for development and recommendations for grading procedures; and
 - 3. Design criteria and recommendations for corrective measures during design and construction; and

4. Professional opinion and recommendations covering the adequacy of sites to be developed; and
 5. The report shall include results of field investigations of the site, unless existing information is determined by the county engineer to be sufficient to satisfy the purpose of this Chapter; and
 6. All recommendations included in the report shall be incorporated into the design plan and specifications.
- F. Engineering Geology Report: Any area proposed for development shall be investigated to determine its geological characteristics. A qualified professional geologist or a professional engineer, whom is registered in the State of Idaho, experienced and knowledgeable in the principles and practices of engineering geology, shall complete the geological characteristics investigation and report. The report shall be dated, signed, submitted with the development application, and shall include at a minimum the following information:
1. A description of the geology of the site; and
 2. Any conclusions and recommendations regarding the effect of geologic conditions on the proposed development; and
 3. Professional opinions and recommendations covering the adequacy of sites to be developed; and
 4. The report shall include results of field investigations of the site, unless existing information is determined by the county engineer to be sufficient to satisfy the purpose of this Chapter; and
 5. Recommendations included in the report shall be incorporated into the design plan and specifications; and
 6. Any area identified in the report, in which the investigation indicates geologic hazards, shall not be developed unless the project engineer can demonstrate conclusively to the county engineer, based on the required engineering reports, that these hazards can be overcome in such a manner as to prevent hazard to life or limb, hazard to property, adverse effects on the safety, use or stability of a public way or waterway, and adverse impacts on the natural environment.
- G. Visual Impact Report: A visual impact report shall be prepared by a design professional, signed and dated, and shall be submitted with the development application. The report shall include at a minimum the following information:
1. Color photos showing the existing views (prior to development) from key vantage points along public roadways, the Boise River floodplain or public viewing areas and

the proposed views from the same key vantage point showing how the property will look after development; and

2. The proposed screening methods which shall include, but not be limited to: architectural design designated building envelopes, height restrictions, landscaping, fencing, construction materials, and colors; and
3. The existing vegetation and the proposed method of preserving and/or replacing such vegetation; and
4. A statement detailing how the proposed development or subdivision minimizes grading through careful site and roadway design.

H. Other Pertinent Data: Any other pertinent data deemed necessary by the Engineer of Record, or County Engineer, or the Director, after consulting with the County Engineer or Engineer of Record, to satisfy the stated purpose of this Chapter and that is reasonably related to the health, safety, and welfare of the general public and persons who might purchase the property being developed shall be required.

Section 7-5-7: Hillside Application Process:

- A. The preliminary grading plan; slope stabilization and re-vegetation plan and report; engineering hydrology report; soils engineering report; engineering geology report; and visual impact report shall be submitted by the Engineer of Record with the development application. The Director shall forward the preliminary grading plan and other documents required by this Chapter and the Ordinance to the County Engineer for review, comment and recommendation.
- B. Upon review of the preliminary grading plan and documents, the County Engineer shall forward a recommendation on the grading plan to the Director. The Director shall apply the standards listed the Ordinance and the required findings listed in this Chapter to determine whether or not to approve, approve with conditions, or deny the preliminary grading plan.
- C. No grading, filling, clearing, or excavation of any kind shall be initiated until the preliminary grading plan receives final approval from the Director.
- D. When required by the Director, other special inspections, reports and/or special testing shall be performed to verify conformance with the Ordinance. The cost of any such special inspections and special testing shall be borne by the applicant.

Section 7-5-8: Hillside Standards:

- A. General Standards:

1. Construction grading, cuts and fills should be scheduled to minimize soil disturbance during wet and / or winter conditions. The Engineer shall provide a construction schedule to the county engineer or Director upon request.
 2. The county engineer or Director may require the grading operation and/or project schedule be modified if delays occur which result in weather-generated problems not anticipated at the time approval was granted.
 3. All development shall take into account land use planning, soil mechanics, engineering geology, hydrology, civil engineering, the environment, architectural and landscape design, and related disciplines as applied to hillside areas.
- B. Development of Special Hazard Areas: Any area that presents one or more of the following limiting factors shall not be permitted to develop unless the engineer of record can demonstrate to the county engineer, based on the required engineering reports, that these limitations can be overcome in such a manner as to prevent hazard to life, hazard to property, adverse effects on the safety, use or stability of a public way or drainage channel, and adverse impact on the natural environment:
1. Landslide areas or scarps, or areas of active landslides and avalanches; or
 2. Lines of active faults; or
 3. Soils with a high shrinkage-expansion potential and hydro-compactable soils, or
 4. Natural slopes greater than fifteen (15%) percent; or
 5. Water table within six (6') feet of the surface at any time of the year; or
 6. Any area of hydrologic or soil hazard as determined by the engineering hydrology or soils report.
- C. Vegetation:
1. Vegetation shall only be removed when absolutely necessary, such as for the construction of structures, filled areas, roadways, firebreaks, or as required by the Ordinance.
 2. The applicant shall conserve and retain topsoil that is removed during construction for later use on areas requiring re-vegetation or landscaping, e.g., cut and fill slopes.
 3. A sufficient stabilization method, such as vegetation, and/or chemical, and/or mechanical shall be used that would sufficiently stabilize the soil. These methods shall be established on all disturbed areas, except for proposed rights of way, as each stage of grading is completed. Areas not contained within property boundaries

shall be protected with adapted, fire-resistant species of perennial vegetative cover after all construction is completed.

4. New plantings shall be protected with organic cover unless determined not to be necessary in the slope stabilization and re-vegetation plan and report.

D. Grading and Stabilization:

1. All retaining walls with a total vertical height of four (4') feet or more, including footing, shall be designed in accordance with the regulations of the building code as set forth in the Ordinance.
2. All slopes that are stabilized by mechanical or chemical means shall conform to the surrounding terrain and shall be given aesthetic treatment that is consistent with the purpose of this Chapter.
3. Large tracts shall be divided into smaller workable units on which construction can be completed within one construction season so that large areas are not left bare and exposed during the winter-spring runoff period.
4. All disturbed soil surfaces shall be stabilized or covered as soon as practical. If the planned design impervious surfaces (e.g., roadways, driveways, etc.) and pervious surfaces (e.g., vegetation, landscape rock, etc.) cannot be established immediately, a temporary treatment adequate to prevent erosion shall be installed on those surfaces to stabilize them until the permanent stabilization features can be installed.

E. Hydrologic Controls:

1. Curb and gutter, pavement, and other appurtenant roadway drainage facilities shall be designed to control roadway runoff to such a point that it is contained within the natural watercourse system.
2. Watercourses shall be rip rapped or otherwise stabilized below drainage and culvert discharge points for a distance sufficient to convey the discharge without channel erosion.
3. Any material from construction, including soil and other material, shall not be deposited within any floodway or watercourse.
4. Hydraulic structures in major watercourses shall be designed to conform with the flood regulations of the Ordinance.
5. With the exception of roadway crossings, approved drainage structures, and recreation and open space uses that do not involve the destruction of vegetative cover, development shall comply with the flood regulations and other applicable regulations of the Ordinance.

F. Sediment:

1. Sediment catchment ponds shall be constructed and maintained by the owner at the downstream property line of each development or at other appropriate locations to protect downstream properties and watercourses from the adverse impacts of sediment generated on-site due to development construction work. All sediment catchment ponds shall be designed to provide a minimum of forty-five (45) minutes detention time at a velocity not greater than two (2') feet per second and shall provide for the removal of surface debris and surface contaminants.
2. The overall drainage system shall be completed and made operational at the earliest possible time during construction. No certificate of occupancy or compliance shall be issued on the property until the drainage system is complete.
3. Alterations of major watercourses shall be prohibited, except for approved roadway crossings and drainage structures.
4. Natural or improved open channels shall be preserved, or provided for, in watercourses, except that at roadway crossings, conduits may be permitted.

G. Roadways and Circulation:

1. Roadway alignments shall be designed to minimize the amounts of land coverage and disturbance of the soil.
2. Roadway alignments shall be designed to minimize removal of existing deep-rooted perennial vegetation.
3. Roadway alignments shall be designed to follow natural terrain.
4. Roadway and parking areas shall comply with all other applicable regulations of the Ordinance.

H. Alternatives: The Director, in consultation with the County Engineer, may approve, or recommend approval of, an alternative development proposal when the overall design, as proposed by the applicant, meets or exceeds the intent and the requirements of this Chapter and the Ordinance and shall not be detrimental to the public health, safety, or welfare.

I. Maintenance: The owner of any private property on which grading or other work has been performed pursuant to a grading plan approved subject to the regulations of this Chapter, shall maintain in perpetuity and repair all graded surfaces and erosion-prevention devices, retaining walls, drainage structures, means, and devices not subject to the jurisdiction of the applicable transportation authority, and plantings and ground

cover installed or completed. Such requirements shall be incorporated into the protective covenants for a subdivision and the conditions of approval for development applications.

Section 7-5-9: Hillside Required Findings:

A. Required Findings:

1. The site, as determined by the engineering plans and reports is physically suitable for the design and siting of the proposed development; and
2. The proposed development was designed in a manner that minimizes disturbance of hillside areas; and
3. The grading and excavation proposed in connection with the development shall not result in soil erosion, silting of lower slopes, slide damage, flooding, severe scarring, or any other geological instability or fire hazard that would adversely affect the public health, safety, and welfare; and
4. Areas not suited for development, as identified in the reports submitted because of soil, geology, vegetation, or hydrology limitations shall be designated as open space use; and
5. Disruption of existing native vegetation and wildlife habitat has been minimized or mitigated; and
6. The proposed plans and engineering reports sets forth sufficient and adequate mitigation for the identified visual impacts beyond the normally expected impact of hillside development.

Section 7-5-10: Waiver of Hillside Standards:

- A. The Director, upon the recommendation of the county engineer, has the authority to grant a waiver if the engineer of record can demonstrate conclusively that any of the standards required by this Chapter are not necessary in the proposed development, and that the omission of such requirements would not result in any of the following:
1. Hazard to life or limb; and
 2. Hazard to property; and
 3. Adverse effects on the safety, use, or stability of a public way or drainage channel; and
 4. Adverse impact on the natural environment.

- B. The request for a waiver of standards shall be in writing and shall state the reason for the request. The justification for the waiver shall be based on the engineering reports required in this Chapter.

Section 7-5-11: Engineer of Record Responsibilities on Projects Involving Hillsides:

- A. To ensure that the intent of this Chapter is attained through the principles and practices of civil engineering, the applicant shall retain a professional engineer currently registered in the state of Idaho to serve as the engineer of record.

- B. The Engineer of Record shall:

1. Prepare the preliminary grading plan and grading permit application.
2. Incorporate into the grading plans, all recommendations contained in the soils, geology and hydrology reports, and the slope stabilization and revegetation plan and other reports as required in this Chapter, the county engineer or Director.
3. To inspect and certify all work within the project.
4. To act as coordinating agent for liaison between other professionals, the owner or applicant, the county engineer and the Director.
5. Prior to and during grading operations, the engineer of record shall submit all necessary reports, compaction data, soils, and geology and hydrology recommendations to the Director. Failure to comply with this requirement may result in the County being unable to issue an occupancy permit or other approval.

- C. The Engineer of Record shall:

1. In the course of fulfilling their responsibilities report any discoveries or discrepancies where the quality of work being accomplished was performed to a substantially lesser standard than required by the Ordinance. Any substandard work or noncompliance with the Ordinance or approval granted shall be reported in writing to the Director within three (3) working days with recommendations for corrective measures, if applicable. The Director may require corrective action within a specified period of time. Any deficiency deemed by the Director to be an imminent threat to the public health, safety, or welfare, shall be stopped immediately until such deficiencies are corrected.

- D. If the engineer of record, the soils engineer, the geologist, the professional landscape architect, or the hydrologist of record is replaced during the course of work, the work shall be stopped until the requirements of this subsection are satisfied and the owner/applicant or engineer of record have received a letter from the Director granting permission to proceed with work. It shall be the responsibility of the engineer of record, or in his replacement the applicant to notify the Director of any professional

replacements. Work may resume only when the replacement individual(s) have agreed to accept the responsibility for certifications of the work within the areas of their individual technical competence, and have submitted a dated and signed letter stating their acceptance of these requirements, their responsibilities, along with proof of their qualification. This letter and applicable documents shall be submitted to the Director for approval, prior to commencement of work.

- E. In the event work is stopped during inclement weather, all open, and/or unfinished work on the project shall be stabilized and protected to the satisfaction of the county engineer or Director.
- F. At the conclusion of the approved work, the engineer of record shall submit a report to the Director stating that the work has been executed in compliance with the approved plans. The report shall have the signature and professional seal of the engineer of record. Conclusion of approved work shall be defined as the day in which the grading, as permitted was completed or as determined by the Director, or upon expiration of the grading permit.
 - 1. The engineer of record shall also provide the following for all work that deviated from the original grading and hillside permit or plan that was altered or redirected by the engineer of record or other professional during the course of work:
 - a. Submit revised as-built plans to the Director within ninety (90) calendar days of the conclusion of work.
 - b. Failure by the engineer of record to submit as-built drawings shall as required by this Chapter and the Ordinance shall be a violation of the Ordinance.
 - c. The Ultimate responsibility to ensure that the engineer of record submits as-built drawings shall be borne by the owner/applicant. The Director may withhold building permits or take any other actions as necessary to obtain as-built drawings and fines as required by the Ordinance.