



CO00019740

SNOHOMISH COUNTY COUNCIL
SNOHOMISH COUNTY, WASHINGTON

AMENDED ORDINANCE NO. 98-056

RELATING TO GRADING;
AMENDING SNOHOMISH COUNTY CODE TITLE 17

BE IT ORDAINED:

Section 1. Snohomish County Code section 17.04.010, last amended by Ordinance 97-059 on July 16, 1997, is hereby amended as follows:

17.04.010 Uniform Building Code (~~((1994 edition))~~) (1997 edition) Volumes 1, 2 and 3 adopted. The Uniform Building Code (UBC), (~~((1994 edition))~~) 1997 edition, Volumes 1, 2 and 3, published by the International Conference of Building Officials, as adopted and amended by the Washington State Building Code Council and included in chapter 19.27 of the Revised Code of Washington (RCW), except as expressly amended by the county, is incorporated and made a part of this chapter by reference and is adopted as the Uniform Building Code of Snohomish County. UBC Appendix Chapter 3 Division II - Agricultural Buildings, Appendix Chapter 12 Division II - Sound Transmission Control, Appendix Chapter 15 - Roofing, Appendix Chapter 31 Division II - Membrane Structures, and Appendix Chapter 31 Division III - Patio Covers (~~(, and Appendix Chapter 33 - Excavation and Grading to the Uniform Building Code)~~) are adopted, incorporated by reference and made a part hereof as if fully set out in this chapter. One copy of the Uniform Building Code of Snohomish County shall be placed on file with the Snohomish county auditor and one copy shall be place on file with the Sno-Isle Regional Library system.

Section 2. Snohomish County Code sections 17.02.105, last amended by Ordinance 96-054 on June 17, 1996; 17.02.110, last amended by Ordinance 97-108 on November 24, 1997; 17.04.280, last amended by Ordinance 97-027 on September 17, 1997; 17.04.290, last amended by Ordinance 97-027 on September 17, 1997; 17.04.295, last amended by Ordinance 96-003 on February 21, 1996; and sections 17.04.300, 17.04.310, 17.04.320 and 17.04.330, last amended by Ordinance 95-111 on January 10, 1996, are repealed in their entirety.

Section 3. Snohomish County Code Section 17.04.260, last amended by Ordinance No. 95-111 on January 10, 1996, is amended to read:

17.04.260 Subsection 1804.7 amended — Drainage.

Subsection 1804.7 is deleted and a new subsection 1804.7 is added, as follows:

~~((Provisions shall be specifically made for the control and drainage of surface water around buildings, to include but not be limited to the following:~~

~~1. When brought to the attention of the building official that a potential water drainage problem may exist on any lot or parcel of land, the building official may require the owner or builder to submit plans showing the proposed method to correct such problem. The plan shall indicate in sufficient detail all pipes, ditches or other means of alleviating the water drainage problem such that water will not damage any public or private property or structure. The building official may require a drainage study by a licensed professional engineer. The administrative authority shall approve such water drainage plan or drainage study in writing prior to approval for any building or structure to begin construction or to continue construction in the area that may be affected by the potential or existing water problem.~~

~~2. Surface and subsurface drainage from construction which does not require a detailed drainage plan as per chapter 24.16 SCC, shall not alter the drainage pattern onto adjoining properties nor result in any adverse effects to any adjoining properties.))~~

~~1((3)). Provision shall be made to prevent water from collecting in crawl spaces and from leaking onto basement floors.~~

~~2((4)). Roof drains shall not be connected to footing drains.~~

~~3((5)). Foundation drains shall not be above footings.~~

~~4((6)). Yards shall be graded to slope away from the building for at least four feet.~~

~~((Before final approval of any building or structure by the building official, where drainage plans or drainage studies are required, the drainage improvement provided for in the approved plan or study shall be completed and in service as approved by the administrative authority.))~~

Section 4. A new chapter 17.05 "grading requirements," is hereby added to the Snohomish county code to read:

**Chapter 17.05
GRADING REQUIREMENTS**

Sections:

Part 000 General Provisions

- 17.05.010 Purpose.
- 17.05.015 Applicability.
- 17.05.020 Exemptions.
- 17.05.025 Director of planning and development services authority.
- 17.05.030 Director of public works authority.
- 17.05.035 Compliance with other laws.
- 17.05.040 Relationship to Snohomish county environmental policy ordinance title 23 SCC.
- 17.05.045 Liability.

Part 100 Grading Permit Procedures and Application Submittals.

- 17.05.110 Grading permit required.
- 17.05.115 Grading in accordance with this chapter and approved permit and plans -- person responsible.
- 17.05.120 Grading permit application and submittal requirements.
- 17.05.125 Notice of application -- grading in excess of 500 cubic yards.
- 17.05.130 Engineered grading.
- 17.05.135 Reports on geotechnical engineering, soils engineering, engineering geology and liquefaction.
- 17.05.140 Bonds.
- 17.05.145 Issuance of grading permits.
- 17.05.150 Grading permit expiration and renewal.
- 17.05.155 Grading inspection.
- 17.05.160 Completion of work.
- 17.05.165 Hazards.
- 17.05.170 Grading permit fees.

Part 200 Requirements and Review Standards

- 17.05.210 Cuts or excavations.
- 17.05.215 Fills or embankments.
- 17.05.220 Setbacks for cuts or fills.
- 17.05.225 Drainage and terracing.
- 17.05.230 Erosion control.
- 17.05.235 Reclamation of quarry or mining sites.
- 17.05.240. Modifications of permit conditions.

Part 300 Definitions

- 17.05.310 Definitions.

Note: Text in *italics* is the same as 1997 UBC Appendix 33
ord98056.doc

Part 000 General Provisions

17.05.010 **Purpose.** The purpose of this chapter shall be to regulate grading to safeguard life, limb, property and the general welfare. The objectives of this chapter are as follows:

- (1) To promote sound, practical, and economical development practices and construction procedures which prevent or minimize impacts to the county's water and adjoining properties;
- (2) To prevent or minimize degradation of water quality and to control the sedimentation of streams, rivers, lakes, wetlands and other surface water;
- (3) To control soil movement originating on developing land;
- (4) To preserve the suitability of water for recreation and fishing;
- (5) To maintain stable earth foundations for structures and to maintain stable earth during site grading operations by using benches, keys, and compaction of soils or other suitable engineering methods;
- (6) To maintain the quality of the county's water resources;
- (7) To prevent or minimize adverse effects caused by alterations in surface water or ground water quality, quantities, locations and flow patterns;
- (8) To maintain the safety of county roads and rights-of-way;
- (9) To protect public safety by reducing slope instability and potential for landslides; and
- (10) To encourage development to locate within urban growth areas, and prevent or minimize grading-related impacts therefrom.

17.05.015 **Applicability.** This chapter applies to all grading which occurs, or if a county grading permit is required, for which a complete grading permit application is submitted to the county, on or after the effective date of this chapter.

17.05.020 Exemptions.

- (1) The following grading is exempt from the requirements of this chapter provided it occurs outside a critical area and is at least 2 feet from a property boundary line:

- (a) Operation of a solid waste disposal site subject to a solid waste permit pursuant to chapter 70.95 RCW, Provided: the expansion, relocation or closure of a solid waste disposal site is not exempt;
 - (b) Commercial operations involving mining, quarrying, excavating, processing or stockpiling of rock, sand, gravel, aggregate or clay if such operations are authorized by a Snohomish county conditional use permit or special use permit as required by title 18. This exemption does not apply to:
 - (i) Reclamation pursuant to SCC 17.05.235.
 - (ii) An operation which the director determines may destabilize or undermine any adjacent or contiguous property; or
 - (iii) An operation which the director determines may result in adverse downstream drainage impacts;
 - (c) Commercial agricultural activities on land designated riverway commercial farmland, upland commercial farmland or local commercial farmland by the Snohomish County GMA Comprehensive Plan General Policy Plan, as follows:
 - (i) Tilling, soil preparation and maintenance; and
 - (ii) Fallow rotation, planting, harvesting;
 - (d) Site investigative work necessary for land use application submittals such as surveys, soil borings and test pits, percolation tests and other related activities, provided the land-disturbing activity is no greater than is necessary to accomplish the work;
 - (e) Excavation of a well for a single family dwelling; and
 - (f) Excavation or filling of cemetery graves.
- (2) The following grading does not require a grading permit pursuant to the requirements of chapter 17.05 SCC provided it occurs outside a critical area and is at least 2 feet from a property boundary line, but shall comply with the minimum erosion control requirements of SCC 24.30.020(1)(a)-(g):
- (a) Grading which does not obstruct or alter an existing drainage course or pattern, and which creates 5,000 square feet or less of impervious surface, and collects or concentrates storm water from 5,000 square feet or less of drainage area, and which:
 - (i) totals 100 cubic yards or less of excavation on a site in any twenty-four consecutive months, or
 - (ii) totals 500 cubic yards or less in any twenty-four consecutive months of excavation on a site for a basement or foundation for a single-family dwelling and accessory structures, provided that excess excavated material shall be disposed of at a permitted site approved by the director, that the excavation shall commence after the building permit is secured by the applicant, and shall comply with the building permit;

- (b) Maintenance or repair on private property of existing commercial agricultural facilities on land designated riverway commercial farmland, upland commercial farmland or local commercial farmland by the Snohomish County GMA Comprehensive Plan General Policy Plan, which may include drainage facilities, ponds, animal stock flood sanctuaries, animal waste management facilities, agricultural buildings, fences, roads, and bridges ; and
 - (c) New construction (including enlargement) of drainage ditches (including 500 cubic yards or less of grading) for commercial agriculture on private property designated riverway commercial farmland, upland commercial farmland or local commercial farmland by the Snohomish County GMA Comprehensive Plan General Policy Plan, which does not adversely impact critical areas, lakes, or upstream or downstream properties, when such ditches do not have a surface connection within 100 feet of a critical area or lake, or contain water on-site for retention, infiltration or evaporation.
- (3) Utility construction and maintenance:
- (a) Minor utility activities in county rights-of-way which, pursuant to title 13 SCC, do not require a Type D permit are exempt from this chapter;
 - (b) Utility construction outside critical areas and within county rights-of-way conducted under a Type D7 blanket utility permit pursuant to title 13 SCC which does not adversely impact critical areas, lakes, or upstream or downstream properties shall comply with the erosion control requirements of SCC 24.30.020(1), and is exempt from all other requirements of this chapter. Utilities applying for a blanket utility construction permit shall propose erosion and sedimentation control best management practices for all permitted activities at the time of application.
 - (c) Major utility construction within impervious surface areas, including trenching or other utility installation or maintenance which cuts and subsequently repairs existing impervious surface outside critical areas and within public rights-of-way conducted under a Type D8 major utility construction permit pursuant to title 13 SCC, which does not adversely impact critical areas, lakes, or upstream or downstream properties, shall comply with the erosion control requirements of SCC 24.30.020(1), and is exempt from all other requirements of this chapter. Utilities applying for a major utility construction permit shall propose erosion and sedimentation control best management practices for the utility construction at the time of application.

- (d) Utility maintenance outside critical areas and outside of public rights-of-way which does not add impervious surface and does not adversely impact critical areas, lakes, or upstream or downstream properties shall comply with the erosion control requirements of SCC 24.30.020(1), and is exempt from all other requirements of this chapter.
 - (e) All utility construction not exempt pursuant to subsections (a)-(d) above shall comply with all applicable requirements this chapter.
 - (f) If a utility must relocate its facility as a direct result of a county department of public works project, it shall be exempt from the fee requirements of 17.05.170 SCC.
- (4) Emergency repairs. In an emergency, repairs may be undertaken without a prior grading permit or associated drainage review to protect existing development, maintain existing utility function, or to prevent channel impairment if insufficient time exists to obtain a grading permit prior to the time necessary to perform the emergency repair and either:
- (a) Damage is occurring as a result of flood waters at or exceeding flood stage as defined by the Snohomish county department of emergency services; or
 - (b) Utility maintenance is necessary to repair a utility facility or line which has been damaged as a direct result of the emergency.
 - (c) Removal and relocation of material relocated onto commercial farmland by flood waters if necessary to protect farming operations.
- An emergency is a situation which the director determines has developed suddenly, constitutes an imminent threat, and demands immediate action to protect property from damage by elements or to protect the public from a serious and imminent threat to health or safety.
- (5) Public works construction projects. County department of public works construction projects shall be exempt from all fee requirements of 17.05.170 SCC.

17.05.025 Director of planning and development services authority.

- (1) Administration of grading. The director of planning and development services shall administer and enforce compliance with all grading requirements of this chapter for all grading.
- (2) Policies and procedures. The director of planning and development services may adopt and amend administrative policies and procedures for the purpose of implementing and enforcing the provisions of this chapter. All administrative policies and procedures and any amendments thereto shall be filed with the clerk of the county council, and shall be available to the public at the department of planning and development services.

17.05.030 Director of public works responsibilities. The director of public works shall include a requirement for all applicable grading, drainage, and erosion and sedimentation control plans in any contract documents prepared for county department of public works construction projects.

17.05.035 Compliance with other laws. Approvals and permits granted under this chapter and any policies and procedures promulgated hereunder, do not constitute waivers of the requirements of any other laws or regulations nor do they indicate compliance with any other laws or regulations. Compliance is still required with all applicable federal, state and local laws and regulations.

17.05.040 Relationship to Snohomish county environmental policy ordinance title 23 SCC.

- (1) The grading requirements of this chapter, together with title 21 SCC, title 24 SCC, title 27 SCC, chapter 32.10 SCC, and chapter 32.11 SCC shall be used to determine the impacts of grading and required mitigation for on-site and off-site changes.
- (2) If, in the course of project review, the director, upon consideration of the specific probable adverse environmental impacts on-site and off-site from grading associated with a development activity, determines that the requirements of this chapter and title 21 SCC, title 24 SCC, title 27 SCC, chapter 32.10 SCC, and chapter 32.11 SCC adequately address those impacts, compliance with those requirements shall constitute adequate analysis of and mitigation for the specific adverse or significant adverse environmental impacts on-site and off-site from grading associated with the development activity, as provided by RCW 43.21C.240.
- (3) For purposes of environmental review pursuant to the state environmental policy act, chapter 43.21C RCW, and the Snohomish county environmental policy ordinance, title 23 SCC, subsection (2) shall not apply to complete grading applications submitted to the department prior to the effective date of this chapter.

17.05.045 Liability.

- (1) Administration of this chapter shall not be construed to impose or create a basis for any liability on the part of the county, its appointed and elected officials, officers, agents, or employees, nor shall this chapter be construed to create any special relationship with or otherwise protect any specific person or class of persons.

- (2) Snohomish county is not responsible for the accuracy of grading plans submitted for approval. The county expressly disclaims any responsibility for the design or implementation of a grading plan. The design and implementation of a suitable grading plan is the responsibility of the owner and applicant.

Part 100 Grading Permit Procedures and Grading Application Submittals.

17.05.110 Grading permit required. A grading permit shall be required for all grading, unless exempted by SCC 17.05.020.

17.05.115 Grading in accordance with this chapter and approved permit and plans--- person responsible. The applicant or owner shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this code. Any person performing grading subject to a grading permit shall have a copy of a valid grading permit and plans on the work site at all times and shall also be responsible for compliance with the plans, specifications, and permit requirements.

17.05.120 Grading permit application submittal requirements.

- (1) The purpose of the grading permit submittal is to require sufficient grading engineering and design information to determine compliance with the requirements of this chapter and title 24 SCC as applicable. The submittal requirements of this chapter shall be used to determine whether the grading permit application is complete pursuant to SCC 32.50.040, as applicable.
- (2) The director shall establish and may revise submittal requirements for a complete grading permit application. The list of submittal requirements shall be available at the department of planning and development services. The submittal requirements shall include at least the following:
 - (a) The applicant's name, address and a legal description of the property where grading is proposed;
 - (b) Vicinity map;
 - (c) Grading plan drawn to scale which includes:
 - (i) all proposed grading showing cross-sections or an equivalent method, and grading quantities (amount of cut or fill to be moved);
 - (ii) Existing grade and proposed finish grade contours shall be shown on each grading plan sheet;
 - (iii) Location of all property boundaries, easements, critical areas, lakes, and structures within 15 feet of site boundaries, on-site sewage facilities and location of domestic water supply;
 - (iv) Temporary erosion and sedimentation control plans which meet the requirements of SCC 24.30.020;
 - (v) A targeted drainage plan pursuant to SCC 24.20.040, if required pursuant to title 24 SCC;
 - (vi) A full drainage plan pursuant to SCC 24.20.045, if required pursuant to this chapter or title 24 SCC;

- (vii) A civil engineer shall prepare and stamp the grading plans if they are engineered grading pursuant to SCC 17.05.130;
 - (d) An environmental checklist, if applicable;
 - (e) A geotechnical engineering report, soils engineering report, engineering geology report, or liquefaction report, if required under SCC 17.05.135; and
 - (f) Applicable grading permit application fees per SCC 17.05.170.
- (3) After a site review of the proposed grading, the director or building official may require additional information be submitted to determine compliance with the requirements of this chapter.

17.05.125 Notice of application -- grading in excess of 500 cubic yards.
Public notice of application for a grading permit for grading in excess of 500 cubic yards shall be provided pursuant to SCC 32.50.060.

17.05.130 Engineered grading. The following are engineered grading, and require grading plans stamped by a civil engineer:

- (1) All grading in excess of 5,000 cubic yards. Such grading also requires submittal of a full drainage plan which meets the requirements of SCC 24.20.045.
- (2) All grading within road rights-of-way, whether public or private. Such grading shall comply with county specifications.
- (3) All grading plans for development activities which are subject to environmental review pursuant to title 23 SCC.
- (4) All other grading that requires civil engineering.

17.05.135 Reports on geotechnical engineering, soils engineering, engineering geology, and liquefaction.

- (1) If the building official determines that geologic, hydrologic, or soil conditions may present special grading or drainage conditions which damage a public right of way, county property or pose a substantial threat to public health, safety, or welfare, the building official may require the applicant to submit a geotechnical engineering report which includes a soils engineering report and/or an engineering geology report pursuant to subsections (2) and (3) below. If a geotechnical engineering report is required, the applicant's geotechnical engineer or civil engineer shall inspect and approve the suitability of the prepared ground to receive fills and the stability of cut slopes with respect to soil, hydrologic, and geologic conditions. The geotechnical evaluation shall also address the need for subdrains or other groundwater drainage devices. To verify safety, the

building official may require testing for required compaction, soil bearing capacity, stability of all finished slopes and the adequacy of structural fills as a condition of approval.

- (2) *Soils engineering report. The soils engineering report shall include data regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures and design criteria for corrective measures, including structural fills, when necessary, and an opinion on adequacy for the intended use of sites to be developed by the proposed grading as affected by soils engineering factors, including the stability of slopes. (1997 UBC Appendix chapter 33, section 3309.5)*
- (3) *Engineering geology report. The engineering geology report shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and an opinion on the adequacy for the intended use of sites to be developed by the proposed grading, as affected by geologic factors. (1997 UBC Appendix chapter 33, section 3309.6)*
- (4) *Liquefaction report. The building official may require a geotechnical investigation and report in accordance with the 1997 UBC 1804.2 and 1804.5 which addresses the potential for liquefaction. (1997 UBC Appendix chapter 33, section 3309.7)*

17.05.140 Bonds.

- (1) *The building official may require bonds in such form and amounts as may be deemed necessary to ensure that the work, if not completed in accordance with the approved plans and specifications, will be corrected to eliminate hazardous conditions. (1997 UBC Appendix chapter 33, section 3311)*
- (2) For drainage facilities required pursuant to this chapter, the director may require security and insurance in accordance with chapter 24.50 SCC.

17.05.145 Issuance of grading permits.

- (1) A grading permit shall be issued after all other necessary permits and plan approvals required for site development have been obtained or review indicates that approvals are assured by other affected agencies, all fees have been paid, the grading plans and specifications have been approved, and environmental review under title 23 SCC has been completed, if applicable.

- (2) A grading permit shall not be issued for grading in shorelines or grading that is associated with a project in a shoreline until all required permits and approvals have been granted.
- (3) From October 1 to March 31, grading, requiring a permit under this chapter, shall only be permitted if shown to the satisfaction of the director that erosion control measures will likely prevent significant erosion and discharge to critical areas. In making such a determination, the director shall consider the following:
 - (a) site conditions including vegetation, soil types, slope, and proximity to surface water and critical areas;
 - (b) proposed area and amount of grading;
 - (c) proposed erosion and sediment control measures.

17.05.150 Grading permit expiration and renewal.

- (1) Grading permits shall expire 24 months from the date of issuance, provided that the director may set an earlier expiration date for a permit, or issue a permit that is non-renewable, or both, if the director determines that soil, hydrologic or geologic conditions on the project site necessitate that grading and drainage improvements and site stabilization be completed within less time.
- (2) If a permit has expired, the applicant shall obtain a renewed permit before starting work authorized under the expired permit.
- (3) A permit may be renewed only once for up to 24 additional months, and a request for renewal shall be made no later than 30 days after the date of expiration of the original permit.
- (4) Requirements under this chapter that are not expressly temporary during the grading operations, including but not limited to requirements for erosion control, drainage and slope management, do not terminate with the expiration of the grading permit.

17.05.155 Grading inspection.

- (1) *Grading operations for which a permit is required shall be subject to inspection by the building official. Professional inspection of grading operations shall be provided by the civil engineer, soils engineer or the engineering geologist retained to provide such services in accordance with (5) below for engineered grading and as required by the building official for other grading. (1997 UBC Appendix chapter 33, section 3317.1)*

- (2) *The civil engineer shall provide professional inspection within such engineer's area of technical specialty, which shall consist of observation and review as to the establishment of line, grade, surface drainage and erosion control of the development area. If revised plans are required during the course of the work they shall be prepared by the civil engineer. (1997 UBC Appendix chapter 33, section 3317.2)*
- (3) *The soils engineer shall provide professional inspection within such engineer's area of technical specialty, which shall include observation during grading and testing for required compaction. The soils engineer shall provide sufficient observation during the preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this chapter. Revised recommendations relating to conditions differing from the approved soils engineering and engineering geology reports shall be submitted to the permittee, or building official and the civil engineer. (1997 UBC Appendix chapter 33, section 3317.3)*
- (5) *The applicant or owner shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this code, and shall engage consultants, if required, to provide professional inspections on a timely basis. The applicant or owner shall act as a coordinator between the consultant, the contractor and the building official. In the event of changed conditions, the applicant or owner shall be responsible for informing the building official of such change and shall provide revised plans for approval. (1997 UBC Appendix chapter 33, section 3317.5)*
- (6) The director shall provide grading inspection of subdivisions to assure the future roadways whether public or private are graded in accordance with the approved plans and specifications and in conformance with provisions of this chapter.
- (7) *Building official. The building official shall inspect the project at the various stages of work requiring approval to determine that adequate control is being exercised by the professional consultants. (1997 UBC Appendix chapter, section 3317.6)*
- (8) *If, in the course of fulfilling their respective duties under this chapter, the civil engineer, the soils engineer or the engineering geologist finds that the work is not being done in conformance with this chapter or the approved grading plans, the discrepancies shall be reported immediately in writing to the applicant or owner and to the building official. (1997 UBC Appendix chapter 33, section 3317.6)*

- (9) *The building official shall notify the applicant or owner of any discrepancies that would necessitate plan revisions or corrections by the professional consultants when notified in (8) above. (1997 UBC Appendix chapter 33, section 3317.6)*
- (10) *Transfer of responsibility. If the civil engineer, the soils engineer, or the engineering geologist of record is changed during grading, the work shall be stopped until the replacement has agreed in writing to accept their responsibility within the area of technical competence for approval upon completion of the work in compliance with approved plans. It shall be the duty of the applicant or owner to notify the director or building official in writing of such change prior to the recommencement of such grading. (1997 UBC Appendix chapter 33, section 3317.8)*
- (11) The types of soils inspections and standards recognized as acceptable soils tests are:
- (a) ASTM D 1557, moisture-density relations of soils and soil aggregate mixtures;
 - (b) ASTM D 1556, in place density of soils by the sand-cone method; ASTM D 2167, the rubber-balloon method; or ASTM D 2937, the drive-cylinder method; and
 - (c) ASTM D 2922 and D 3017, in place moisture content and density of soils by nuclear methods.

17.05.160 Completion of work *Upon completion of the rough grading work and at the final completion of the work, the following final reports and drawings and supplements thereto are required for engineered grading or when professional inspection is performed for grading, as applicable. (1997 UBC Appendix chapter 33, section 3318.1)*

- (1) *An as-built grading plan prepared by the civil engineer retained to provide such services in accordance with SCC 17.05.155(2) showing original ground surface elevations, as-graded ground surface elevations, lot drainage patterns, and the locations and elevations of surface drainage facilities and of the outlets of subsurface drains. As-constructed locations, elevations and details of subsurface drains shall be shown as reported by the soils engineer. Civil engineers shall state that to the best of their knowledge the work within their area of responsibility was done in accordance with the final approved grading plan which is part of an approved grading permit. (1997 UBC Appendix chapter 33, section 3318.1)*
- (2) *A report prepared by the soils engineer retained to provide such services in accordance with SCC 17.05.155 (3), including locations and elevations of field density tests, summaries of field and laboratory tests, other substantiating data, and comments on any changes made during grading*

and their effect on the recommendations made in the approved soils engineering investigation report. Soils engineers shall submit a statement that, to the best of their knowledge, the work within their area of responsibilities is in accordance with the approved soils engineering report and applicable provisions of this chapter. (1997 UBC Appendix chapter 33, section 3318.1)

- (3) *A report prepared by the engineering geologist retained to provide such services in accordance with the SCC 17.05.155 (4), including a final description of the geology of the site and any new information disclosed during the grading and the effect of same on recommendations incorporated in the approved grading plan. Engineering geologists shall submit a statement that, to the best of their knowledge, the work within their area of responsibility is in accordance with the approved engineering geologist report and applicable provisions of this chapter. (1997 UBC Appendix chapter 33, section 3318.1)*
- (4) *The grading contractor shall submit, in a form prescribed by the building official, a statement of conformance to said as-built plan and the specifications. The applicant or owner shall notify the director or building official when the grading operation is ready for final inspection. Final approval shall not be given until all work, including installation of all drainage facilities and their protective devices, and all erosion-control measures have been completed in accordance with the final approved grading and drainage plans, and the required reports have been submitted. (1997 UBC Appendix chapter 33, section 3318.1)*

17.05.165 Hazards.

- (1) Whenever the building official determines that any existing cut or excavation, fill or embankment on private property creates a present or imminent hazard, or is likely to create a hazard to the public safety, health or welfare, the environment, or public or private property, the director may declare such condition a public nuisance and may direct the property owner or persons causing or contributing to the hazardous condition to abate the hazard within a specified period, or the director may take action to abate the hazard and recover all costs incurred from the responsible parties. Payments shall be made within ninety days of the day the county submits a bill for costs. In the event of nonpayment, the county may bring suit to recover such costs, including its attorney's fees, and upon obtaining a judgment, such amount shall become a lien against the property of the owner as provided in RCW 4.56.190. A requirement or action to abate the hazard which is appealed pursuant to this or any other title of this code shall not be subject to a stay.

- (2) Where the director determines that hazardous conditions exist, warning signs shall be affixed at locations as required by the director, and the site shall be enclosed by fencing with lockable gates that shall be closed and locked when personnel are not present at the site. The fence shall be no less than five feet in height and the fence material shall have no horizontal opening larger than two inches.

17.05.170 Grading permit fees.

- (1) Purpose. This section establishes the fees required for all grading reviews, approvals and inspections conducted by Snohomish county in order to compensate the department of planning and development services for the costs of administering this chapter. Such fees are in addition to any other fees required by law.

- (2) Grading Fee Table.

PRE-APPLICATION SITE REVIEW FEE ⁽¹⁾	\$250
SITE REVIEW FEE	\$100
BASE FEE	\$200
PLAN REVIEW AND INSPECTION FEE	\$0.33/cubic yard of total cut or fill amount, whichever is greater, not to exceed \$23,000.
CRITICAL AREA REVIEW FEE (Pursuant to SCC 32.10.280) ⁽²⁾	\$250 for 500 cubic yards of grading or less
INVESTIGATION FEE (Grading without a permit/pursuant to UBC Section 107.5.1)	\$200 plus \$0.33/cubic yard of earth moved
PERMIT RENEWAL FEE	50% of normal permit fee
⁽¹⁾ \$200 shall be applied towards site review/permit fees at the time of application.	
⁽²⁾ This fee is established for earthwork proposed within "Critical Areas" as determined pursuant to SCC 32.10.210, and as noted in SCC 17.05.210(4) and 17.05.215(6)	

- (3) Grading permit applications prepared by the Snohomish Conservation District for commercial agricultural activities shall not be subject to the plan review and inspection fee.
- (4) Grading permits for dike or levee construction or reconstruction, when implementing a Snohomish county approved floodplain management plan, shall be subject to a plan review and inspection fee of \$60.00/hour.

Part 200 Requirements and Review Standards

17.05.210 Cuts or excavations.

- (1) Unless otherwise recommended in the approved soils engineering or engineering geology report, cuts shall conform to the provisions of this section. These provisions shall not apply to minor cuts which are less than four feet in height when such cuts do not pose a threat to adjoining property.
- (2) *The slope of cut surfaces shall be no steeper than is safe for the intended use and shall be no steeper than 1 unit vertical in 2 units horizontal (50% slope) unless the applicant furnishes a soils engineering report or an engineering geology report, or both, stating that the site has been investigated and giving an opinion that a cut at a steeper slope will be stable and not create a hazard to public or private property. (1997 UBC Appendix chapter 33, section 3312.2)*
- (3) Slopes after being cut shall be stabilized. The soils engineering or an engineering geology report, or both, shall verify that the slopes shall not be subject to on-going erosion that would adversely impact public or private property. Erosion hazard areas as defined in chapter 32.10 SCC shall be described and shown in the soils engineering report.
- (4) Cuts or excavations within critical areas shall not occur unless a critical area study and mitigation is provided consistent with requirements of chapter 32.10 SCC Critical Areas Regulations.

17.05.215 Fills or embankments.

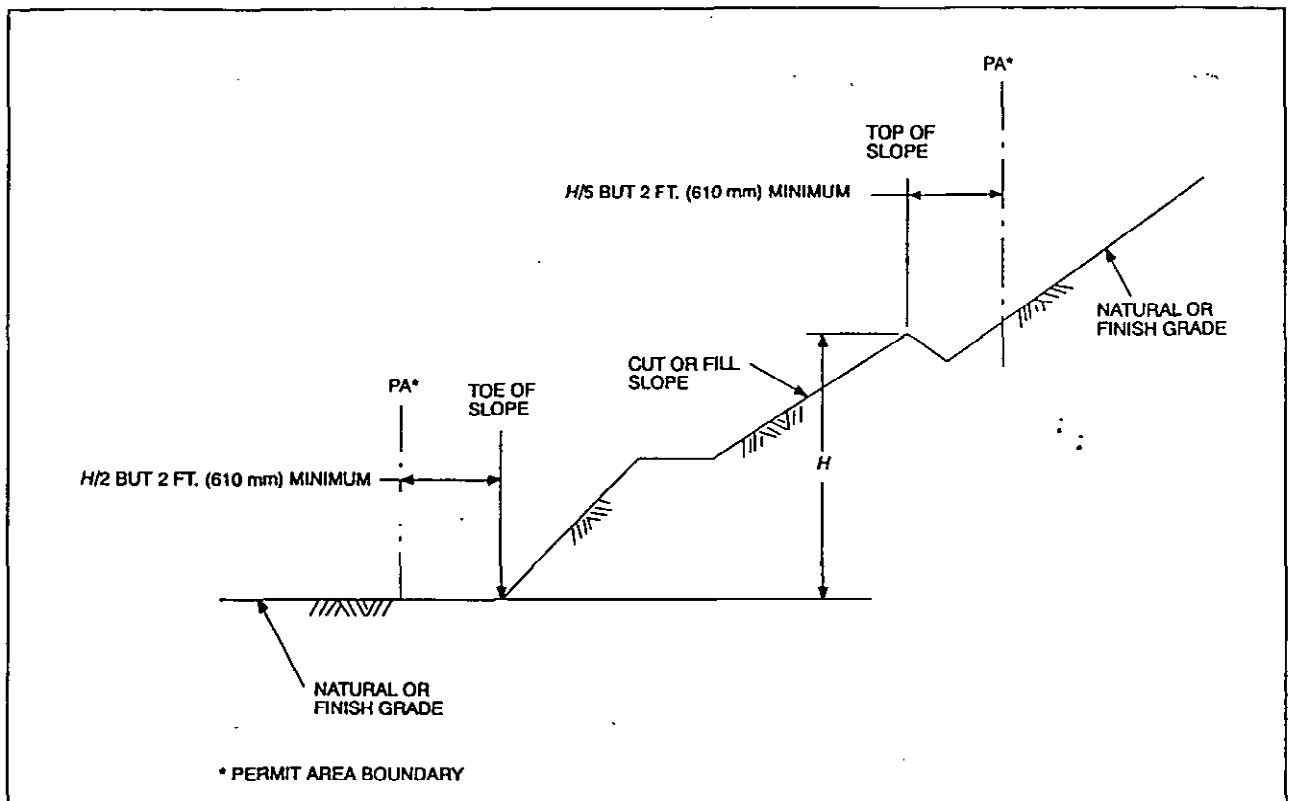
- (1) **General.** Unless otherwise recommended in the approved soils engineering report, fills shall conform to the provisions of this section. These provisions shall not apply to minor fills not intended to support structures, and which are less than 4 feet in height when such fills do not pose a threat to adjoining property.
- (2) *Preparation of ground. Fill slopes shall not be constructed on natural slopes steeper than 1 unit vertical in 2 units horizontal (50% slope). (1997 UBC Appendix chapter 33, section 3312.2)*
- (3) *Fill material.*
 - (a) *Detrimental amounts of organic material shall not be permitted in fills. Except as permitted by the building official, no rock or similar irreducible material with a maximum dimension greater than 12 inches (305 mm) shall be buried or placed in fills.*

- (b) *Exception: The building official may permit placement of larger rock when the soils engineer properly devises a method of placement, and continuously inspects its placement and approves the fill stability. The following conditions shall also apply:*
- (i) *Prior to issuance of the grading permit, potential rock disposal areas shall be delineated on the grading plan;....*
 - (ii) *Rock sizes greater than 12 inches (305 mm) in maximum dimension shall be 10 feet (3048 mm) or more below grade, measured vertically; and,*
 - (iii) *Rocks shall be placed so as to assure filling of all voids with well-graded soil. (1997 UBC Appendix chapter 33, section 3313.3)*
- (4) **Compaction.** All fills intended to support structures or private roads shall be compacted to a minimum of 90% of maximum density. All fills within public or private rights of way shall be compacted in accordance with county specifications.
- (5) **Slope.** *The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes shall be no steeper than 1 unit vertical in 2 units horizontal (50% slope). (1997 UBC Appendix chapter 33, section 3313.5)*
- (6) Fills shall not be placed in critical areas unless a critical area study is performed and mitigation is provided in a manner consistent with the requirements of chapter 32.10 SCC Critical Areas Regulations.

17.05.220 Setbacks for cuts or fills.

- (1) **Field marking.** Before performing any grading or clearing subject to a grading permit pursuant to this chapter, the applicant shall mark, in the field, the limits of all proposed clearing and grading, sensitive and critical areas and their buffers, trees to be retained, and drainage courses.
- (2) *Cut and fill slopes shall be set back from site boundaries in accordance with this section. Setback dimensions shall be horizontal distances measured perpendicular to the site boundary. (1997 UBC Appendix chapter 33, section 3314.1)*
- (3) The top of cut slopes shall not be made nearer to a site boundary line than one fifth of the vertical height of cut, but in no event nearer than 2 feet (610 mm) from the boundary line. The setback shall be increased as necessary for stability of any required subsurface drainage or surcharge.
- (4) The toe of fill slope shall not be made nearer to the site boundary line than one half the height of the slope, but in no event nearer than 2 feet (610 mm) from the boundary line.

FIGURE 1--SETBACK DIMENSIONS



17.05.225 Drainage and terracing.

- (1) *Unless otherwise indicated on the approved grading plan, drainage facilities and terracing shall conform to the provisions of this section for cut or fill slopes steeper than 1 unit vertical in 3 units horizontal (33.3% slope). (1997 UBC Appendix chapter 33, section 3315.1)*
- (2) *Terraces at least 6 feet (1,829 mm) in width shall be established at not more than 30-foot (9,144 mm) vertical intervals on all cut or fill slopes to control surface drainage and debris, except that where only one terrace is required, it shall be at midheight. For cut or fill slopes greater than 60 feet (18,288 mm) and up to 120 feet (36,576 mm) in vertical height, one terrace at approximately midheight shall be 12 feet (3,658 mm) in width. Terrace widths and spacing for cut and fill slopes greater than 120 feet (36,576 mm) in height shall be designed by the civil engineer and approved by the director or building official. Suitable access shall be provided to permit proper cleaning and maintenance. (1997 UBC chapter 33, section 3315.2)*

Note: Text in *italics* is the same as 1997 UBC Appendix 33
ord98056.doc

- (3) *Swales or ditches on terraces shall have a minimum gradient of 0.5%.*
- (4) *Cut or fill slopes shall be provided with subsurface drainage as necessary for stability and proper conveyance of groundwater. (1997 UBC Appendix chapter 33, section 3315.3)*
- (5) All drainage facilities shall be designed to carry waters to the nearest practicable drainage way in a safe manner approved by the director or building official, and shall comply with provisions of title 24 SCC, if applicable. Outfalls or points of discharge shall be designed using best management practices and construction procedures which prevent or minimize erosion.
- (6) *Building pads shall have a drainage gradient of 2 percent toward approved drainage facilities, unless waived by the building official. Exception: The gradient from the building pad may be 1 percent if all of the following conditions exist throughout the permit area:*
 - (a) *No proposed fills are greater than 10 feet (3048 mm) in maximum depth.*
 - (b) *No proposed finish cut or fill slope faces have a vertical height in excess of 10 feet (3048 mm).*
 - (c) *No existing slope faces steeper than 1 unit vertical in 10 units horizontal (10% slope) have a vertical height in excess of 10 feet (3,048 mm). (1997 UBC Appendix chapter 33, section 3315.4)*
- (7) *Paved interceptor drains shall be installed along the top of all cut slopes where the tributary drainage area above slopes toward the cut and has a drainage path greater than 40 feet (12,192 mm) measured horizontally. Interceptor drains, if required, shall be paved with a minimum of 3 inches (76 mm) of concrete or gunite and reinforced. They shall have a minimum depth of 12 inches (305 mm) and a minimum paved width of 30 inches (762 mm) measured horizontally across the drain. The slope of drain shall be approved by the building official. (1997 UBC Appendix chapter 33, section 3315.5)*
- (8) All grading which requires a grading permit pursuant to this chapter shall comply with title 24 SCC.

17.05.230 Erosion control.

- (1) *The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting, hydroseeding or mulching. The protection for the slopes shall be installed as soon as practicable in accordance with SCC 24.30.020, and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.*

- (2) Where necessary to provide safety to adjoining properties, check dams, cribbing, riprap, silt fences or other devices and methods shall be employed.
- (3) All grading shall comply with applicable drainage and erosion control requirements of SCC 24.20.015, 24.30.010 and 24.30.020.

17.05.235 Reclamation of quarry or mining sites. Upon completion or abandonment of quarrying or mining operations, the owner or operator of sites not regulated by Washington State Department of Natural Resources pursuant to chapter 78.44 RCW shall obtain a grading permit under this chapter for reclamation and an approved full drainage plan pursuant to title 24 SCC, and comply with the following reclamation standards:

- (1) Grading or backfilling shall be done with clean earth material (i.e., non-toxic, nonflammable, noncombustible and nonputrescible solids);
- (2) Such graded or backfilled areas, except for roads, shall be sodded or surfaced with soil of a quality at least equal to the topsoil of the immediately surrounding land areas, and to a depth equal to that of the topsoil of immediately surrounding land areas, provided that all sod and soil shall be at least 4 inches in depth;
- (3) Final grading shall be such as to encourage the uses permitted within the underlying zone classification;
- (4) Bare topsoil shall be planted with trees, shrubs, legumes and grasses which are indigenous to the region and compatible with the surrounding area;
- (5) Graded or backfilled areas shall be reclaimed in a manner which will not allow water to collect nor permit stagnant water to remain, and which will not adversely affect the groundwater aquifer or maximum seasonal high groundwater table; and
- (6) Non-harmful tailings consisting of earth material and soil piles shall be graded to near-level contour matching the surrounding natural topography. The leveled and graded area shall be sodded or surfaced and planted as required in subsections (2) and (4).

17.05.240 Modifications of permit conditions. Before and after issuance of a grading permit, the director may require modifications of grading plans, specifications and operations or impose additional or more stringent standards and requirements than those specified in this chapter or in any approved grading permit, to the extent necessary to protect public health, safety and welfare. Such modifications, standards or requirements may be necessary because of unusual or newly discovered site conditions including, but not limited to, soil type, topography, and weather conditions. Such modifications, standards and requirements may include, but are not limited to, scheduling, phasing or time restrictions.

Part 300 Definitions

17.05.310 **Definitions.** Unless the context clearly requires otherwise, the definitions in this chapter apply to all grading in unincorporated Snohomish county. The definitions of the latest WSDOT-adopted edition of the Standard Specifications for Road, Bridge and Municipal Construction shall also apply for grading within proposed or existing public rights-of-way.

- (1) **Applicant** means the person who has applied for, or is requesting, a land use or development permit, license or approval from Snohomish county. (1997 UBC Appendix chapter 33, section 3308)
- (2) **Approval** means that the proposed work or completed work conforms to this chapter in the opinion of the director or building official. (1997 UBC Appendix chapter 33, section 3308)
- (3) **As-graded** means the extent of surface conditions on completion of grading, also known as finish grade.
- (4) **Bedrock** means in-place solid rock. (1997 UBC Appendix chapter 33, section 3308)
- (5) **Bench** means a relatively level step excavated into earth material on which fill is to be placed. (1997 UBC Appendix chapter 33, section 3308)
- (6) **Civil engineer** means a professional engineer licensed by the State of Washington to practice in the field of civil engineering.
- (7) **Civil engineering** means the application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design and construction of civil works. (1997 UBC Appendix chapter 33, section 3308)
- (8) **Compaction** means the densification of a fill by mechanical means. (1997 UBC Appendix chapter 33, section 3308)
- (9) **Critical areas** shall have the meaning as defined in SCC 32.10.110(7).
- (10) **Development activity** means any construction, development, earth movement, clearing, or other site disturbance which either requires a permit, approval or authorization from the county or is proposed by a public agency.
- (11) **Director** means, the director of the department of planning and development services or the director of the department of public works, whichever has jurisdiction to administer a provision of this title, or a designee.

- (12) **Earth material** means any rock, natural soil or fill or any combination thereof. (1997 UBC Appendix chapter 33, section 3308)
- (13) **Engineering design and development standards (EDDS)**. Engineering design and development standards means the standards adopted by the director of public works under the authority of chapters 13.05 SCC and 24.10 SCC.
- (14) **Engineering geologist** means a geologist experienced and knowledgeable in engineering geology. (1997 UBC Appendix chapter 33, section 3308)
- (15) **Engineering geology** means the application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works. (1997 UBC Appendix chapter 33, section 3308)
- (16) **Erosion** means the removal and loss of soil by the action of water, ice or wind.
- (17) **Excavation** means the mechanical removal of earth material. (1997 UBC Appendix chapter 33, section 3308)
- (18) **Fill** means a deposit of earth material placed by artificial means. (1997 UBC Appendix chapter 33, section 3308)
- (19) **Geotechnical engineer** means a licensed civil engineer experienced and knowledgeable in the theory of soil mechanics, geology and geotechnical engineering.
- (20) **Grade** means the vertical location of the ground surface.
- (a) *Existing grade* means the grade prior to grading.
 - (b) *Rough grade* means the stage at which the grade approximately conforms to the approved plan.
 - (c) *Finish grade* means the final grade of the site that conforms to the approved plan. (1997 UBC Appendix chapter 33, section 3308)
- (21) **Grading** means any excavating or filling or combination thereof. (1997 UBC Appendix chapter 33, section 3308)
- (22) **Key** means a designed compacted fill placed in a trench excavated in earth material beneath the toe of a proposed fill slope. (1997 UBC Appendix chapter 33, section 3308)
- (23) **Maintenance** includes those usual acts to prevent or repair a decline, lapse, or cessation from a lawfully established condition and to restore a facility to a state comparable to its original condition within a reasonable period after decay or partial destruction. This does not include expansion in physical dimension, capacity or use.

- (24) **Owner** means the owner of a site according to the records of the Snohomish county auditor.
- (25) **Professional inspection** means the inspection required by this code to be performed by the civil engineer, soils engineer or engineering geologist. Such inspections include that performed by persons supervised by such engineers or geologists and shall be sufficient to form an opinion relating to the conduct of the work. (1997 UBC Appendix chapter 33, section 3308)
- (26) **Site** means any lot or parcel of land or contiguous combination thereof under the same ownership or control, where a development activity is performed or permitted.
- (27) **Site review** means the inspection by a Snohomish county employee of a site where development activity has been proposed, including, but not limited to, examination and comparison of site conditions and erosion control with proposed plans, and applicable Snohomish county codes, standards and administrative policies and procedures. A site review may include review of a critical area site plan pursuant to chapter 32.10 SCC.
- (28) **Slope** means an inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance. (1997 UBC Appendix chapter 33, section 3308)
- (29) **Soil** means naturally occurring superficial deposits overlying bedrock. (1997 UBC Appendix chapter 33, section 3308)
- (30) **Soils engineer** means an engineer or geologist experienced and knowledgeable in the practice of soils engineering.
- (31) **Soils engineering** means the application of the principles of soils mechanics in the investigation, evaluation and testing of soils on site.
- (32) **Specifications** means technical standards for construction. They may include, but are not limited to, standards contained in the latest edition of the Standards and Specifications for Road, Bridge and Municipal Construction adopted by the Washington State Department of Transportation, and the Engineering and Design and Development Standards for Snohomish county.
- (33) **Terrace** means a relatively level step constructed in the face of a graded slope surface for drainage and maintenance purposes. (1997 UBC Appendix chapter 33, section 3308)

Section 5. Severability. If any provision of this ordinance or its application to any person or circumstance is held invalid, the remainder of this ordinance or its application to other persons or circumstances is not affected.

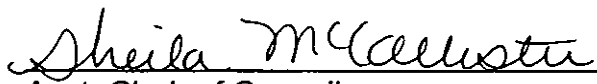
Section 6. Effective Date. The effective date of this ordinance is September 19, 1998.

DATED this 3rd day of August, 1998.

SNOHOMISH COUNTY COUNCIL
Snohomish County, Washington

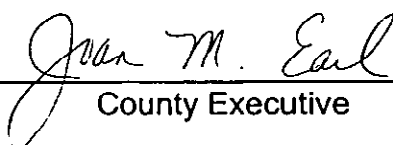

Chairman

ATTEST:

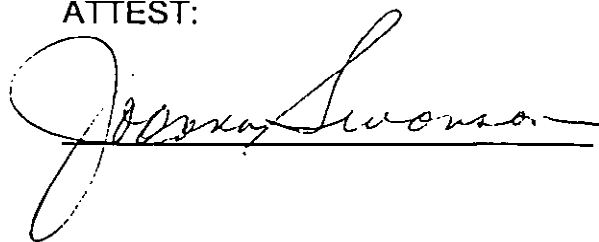

Asst. Clerk of Council

- APPROVED
- VETOED
- EMERGENCY

DATE 8-5-98


County Executive

ATTEST:



JOAN M. EARL
Deputy Executive