

Title 17A

***CONSTRUCTION AND INFRASTRUCTURE REGULATIONS – SITE
DEVELOPMENT AND STORMWATER DRAINAGE***

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Chapter 17A.10

GENERAL PROVISIONS

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17A.10.010 Authority.

This Title is established pursuant to the Clean Water Act, 33 U.S. Code 1251 et seq.; the State Water Pollution Control Act, Chapter 90.48 RCW; and the Puget Sound Water Quality Act, Chapter 90.70 RCW. (Ord. 99-24S § 2 (part), 1999)

17A.10.020 Title.

This Title shall be known as "Title 17A, Construction and Infrastructure Regulations – Site Development and Stormwater Management." (Ord. 99-24S § 2 (part), 1999)

17A.10.030 Purpose.

- A. These Regulations are based on the premise that development should not impact adjacent and/or downstream property owners in a detrimental manner compared to the pre-development condition. It is not the intent of these Regulations to make Pierce County a guarantor or protector of public or private property with respect to development.
- B. These Regulations are intended to assist, but not to substitute, competent work by professional engineers. It is expected that the professional engineers will bring to each project the best of their skills and abilities to see that the project is thoroughly analyzed and designed correctly, accurately, and in compliance with generally accepted engineering practices. These Regulations are not intended to address all situations or to unreasonably limit any innovative or creative effort in design and construction which could result in better quality, cost savings, or improved performance of a project's storm drainage system.

(Ord. 99-24S § 2 (part), 1999)

17A.10.040 Applicability.

- A. These Regulations establish criteria for review and analysis of all development including but not limited to grading, formal subdivision, short subdivision, large lot division, commercial building, binding site plans, planned unit developments, planned development districts, mobile home parks, single family home construction, duplex construction, or other projects when so required by the Pierce County Hearing Examiner or County Council.
 - B. These Regulations include this Title plus the Pierce County Stormwater Management and Site Development Manual (referred to as the Manual) incorporated herein by reference. A copy of the Manual is available for inspection and/or purchase at the Pierce County Public Works and Utilities Department Reprographics Counter.
 - C. All proposals for development or redevelopment, whether public or private, which are submitted to the County for review, unless otherwise specifically exempted, must conform to these Regulations which are to be used as the basis for review, design, and construction.
 - D. The requirements of this Title apply to all unincorporated areas of Pierce County. All entities, public or governmental, such as utilities, port, irrigation, drainage and flood control districts, cities, town, counties, and other local, State, and Federal government entities, except for those entities whose development/redevelopment or stormwater activities are conducted in accordance with an approved stormwater management manual consistent with the Washington Department of Ecology’s Stormwater Management Manual for Western Washington, shall file drainage and erosion/sedimentation control plans or an abbreviated plan according to requirements stated herein and in every way comply with these Regulations where there are cross-jurisdictional projects located totally or in part of the County except as specifically exempted in this Chapter.
 - E. Where requirements in these Regulations are also covered in any other law, ordinance, resolution, rule, or regulation of any kind, the more restrictive shall govern.
- (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.10.050 Exemptions.

The following work is exempt from the requirements of these Regulations:

- A. Complete site development applications submitted prior to the effective date of Ordinance No. 96-46S2 (November 3, 1997) for County review and approval.
- B. Emergency projects which if not performed immediately would substantially endanger life or property. Upon resolution of the emergency, the property owner must either restore the site to its original condition or comply with the requirements of this Title within 60 days. The County may extend the 60-day time limit when the property owner can show reasonable cause for the delay.
- C. Public and private road, shared access, alleyway and storm drainage system maintenance and repair activities as follows:
 1. asphalt repair, pavement overlay, chip seal or other asphalt surface maintenance coating that does not create additional impervious surface.
 2. sidewalk or pedestrian pathway repair or replacement.
 3. curb repair or replacement.
 4. driveway approach maintenance or repair.
 5. shoulder repair or replacement that does not create additional impervious surface.

6. gravel road maintenance or repair that does not create additional impervious surface.
 7. storm drainage system repair that conforms to the original County approved design.
 8. storm drainage maintenance and repair activities performed in accordance with an approved and recorded "Plat or Commercial/Industrial Agreement to Maintain Stormwater Facilities and to Implement a Pollution Source Control Plan."
 9. Other public or private road and storm drainage maintenance and repair activities that do not cause water quality or water quantity impacts and such activities have been pre-approved by the Director.
 10. Maintenance or repair activities that involve the addition of less than 400 square feet of new impervious surface.
- D. Maintenance of flood control facilities by a public agency when the work is in existing public right-of-way or easement dedicated to or on property owned by the County or Inter-County River Improvement Division. To be exempt, the maintenance must be performed in accordance with applicable State, Federal, and all other Pierce County regulations.
- E. Public and private utility line work (new construction, maintenance and repair) that meets all of the following criteria:
1. Creates less than 400 square feet of new impervious surface;
 2. Does not include trenching activities;
 3. Does not include materials placed within or upon closed depressions or materials placed within or upon the following critical areas: Wetlands, Critical Fish and Wildlife Habitat Areas, Flood Hazard Areas, Landslide Hazard Areas, Erosion Hazard Areas, and their associated buffers;
 4. Does not include materials placed within or upon 25 feet of a drainage course, or drainage channel.
 5. Does not include materials placed upon slopes steeper than 33 percent and ten feet in height.
- F. Agricultural activities except in sensitive and/or critical areas.
- G. Agricultural activities in sensitive and/or critical areas that commenced prior to June 1998.
- H. Washington State Department of Transportation (WSDOT) projects in which stormwater management standards, specifications, and practices are conducted in accordance with WSDOT's Highway Runoff Manual as approved by the Department of Ecology.
- I. Projects that are covered under the State of Washington Model Toxics Control Act (MTCA) or the Federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).
- J. The removal, deposit, or displacement of not more than a total of 50 cubic yards of material throughout the life of a development from its existing condition except for: the removal, deposit, or displacement of material within a closed depression; the removal, deposit or displacement of material within the following critical areas-Wetlands, Critical Fish and Wildlife Habitat Areas, Flood Hazard Areas, Landslide Hazard Areas, Erosion Hazard Areas, and their associated buffers; the removal, deposit or displacement of material within 25 feet of a drainage course, or drainage channel, the removal, deposit, or displacement of material, on existing slopes that are steeper than 33 percent and ten feet or more in height; the creation of slopes that are steeper than 33 percent and ten feet or more in height; and the removal, deposit, displacement of material for road construction purposes.

- K. The stockpiling or broadcasting of less than 50 cubic yards per year of topsoil, peat, sawdust, mulch, bark, chips, or solid nutrients on a lot, tract, or parcel of land except when these materials are placed within or upon: a closed depression; Wetland, Critical Fish and Wildlife Habitat, Flood, Landslide or Erosion Critical Areas, and their associated buffers; 25 feet of a drainage course, or drainage channel; and/or slopes steeper than 33 percent and ten feet or more in height.
 - L. Development/redevelopment activities or stormwater activities performed by a governmental agency (utilities, port, irrigation, drainage and flood control districts, cities, towns, counties, and other local, state and federal government entities) that are conducted in accordance with a stormwater management manual technically equivalent with the requirements of the Washington State Department of Ecology Stormwater Management Manual for the Puget Sound Basin, as required in the Pierce County National Pollution Discharge Elimination System (NPDES) permit.
 - M. Forest practice activities (when conducted in accordance with the requirements of the Forest Practice Act Chapter 76.09 RCW and its rules) that meet one of the following three criteria:
 - 1. Forest practice activities that meet all of the following:
 - a. Are located outside the urban growth area and located outside any area designated by Washington Department of Natural Resources as "lands likely to convert" pursuant to RCW 76.09;
 - b. Do not take place on lands platted as of January 1, 1960; and
 - c. Do not result in the conversion of land to a use other than commercial forest product.
 - 2. Forest practices that are conducted in accordance with a ten-year forest management plan approved by the Washington State Department of Natural Resources (DNR).
 - 3. Any other forest practice activity that the DNR has determined is exempt from Pierce County jurisdiction, provided that the DNR has issued a written notice of this determination to Pierce County.
 - N. Clearing less than 6,000 square feet of land throughout the life of a development from its existing condition except for: clearing within Wetland, Critical Fish and Wildlife Habitat, Flood, Landslide, and Erosion Critical Areas and their associated buffers; clearing within 25 feet of a drainage course or drainage channel; and clearing on slopes that are steeper than 33 percent and ten feet or more in height.
- (Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999)

17A.10.060 Definitions.

The following definitions shall apply in the interpretation and enforcement of this Title:

- A. "Abbreviated plan" means a plan for small sites to implement temporary best management practices (BMP's) to control pollution generated during the construction phase, primarily erosion, sediment, and post-construction runoff.
- B. "Agricultural activities" means the normal actions associated with the production of crops such as: plowing, cultivating, minor drainage, and harvesting, and/or raising or keeping of livestock, including operation and maintenance of farm and stock ponds, drainage ditches, irrigation systems, and normal operation, maintenance, and repair of existing serviceable agricultural structures, facilities, or improved areas. The term "agricultural activities" as used within this Title does not include the practice of aquaculture. Forest practices regulated under Chapter 76.09 RCW and Title 222 WAC are not included in this definition.

- C. "Alleyway" means a narrow passageway intended for vehicular traffic to serve as rear access to lots or buildings.
- D. "Applicant" means the person, party, firm, corporation, or other legal entity that proposes to develop property in unincorporated Pierce County by submitting an application for any of the activities covered by these Regulations on a form furnished by the County and paying the required fees.
- E. "BMP" means best management practice.
- F. "Clearing" means the destruction and/or removal of vegetation by manual, mechanical, or chemical methods.
- G. "County" means the Pierce County Executive or designee; also Pierce County, its duly authorized representatives, and the jurisdictional boundaries of Pierce County.
- H. "Critical areas" means those areas defined as critical areas in Title 18E PCC.
- I. "Department" means the Pierce County Department of Public Works and Utilities or the Department of Planning and Land Services as necessary to ensure compliance with these Regulations, unless explicitly referenced otherwise.
- J. "Development" means any man-made change to improved or unimproved real property including but not limited to construction of buildings or other structures, placement of manufactured home/mobile home, mining, dredging, logging, clearing, filling, grading, paving, excavation, drilling operations, or the subdivision, short plat, and large lot division of property.
- K. "Director" shall mean the Director of the Public Works and Utilities Department or the Director of the Planning and Land Services Department, or their designees, as necessary to ensure compliance with these Regulations, unless explicitly referenced otherwise.
- L. "Drainage channel" means a drainage pathway with well-defined bed and banks indicating frequent conveyance of surface and storm water runoff.
- M. "Drainage course" means a pathway for watershed drainage characterized by wet soil vegetation; often intermittent in flow.
- N. "Earth/earth material" means naturally occurring rock, soil, stone, dirt, or a combination thereof.
- O. "Earthwork" means any operation involving the excavation, grading, filling, or moving of earth materials.
- P. "Easement" means the legal right to use a described piece of land for a particular purpose. It does not include fee ownership, but may restrict the owner's use of the land. All easements granted pursuant to the Manual shall be legally recorded with the County Auditor.
- Q. "Engineer" means a professional civil Engineer, currently licensed by the State of Washington, retained by and acting on behalf of the applicant. The term "Engineer" also means design Engineer or project Engineer.
- R. "Engineered Abbreviated Plan" means a plan and reports required for development in or near: a critical area, a critical area buffer, a critical area management area, an area that has erosion potential, a drainage course or drainage channel, or an area that requires special grading controls, that addresses stormwater quantity, quality, temporary erosion control, permanent stabilization, and critical area standards, which must be prepared by a licensed professional engineer.

- S. "Geotechnical professional" means a person with experience and training in analyzing, evaluating, and mitigating any of the following: landslide, erosion, seismic, and/or mine hazards, or hydrogeology, fluvial geomorphology and river dynamics. A geotechnical professional shall be licensed in the State of Washington as an engineering geologist, hydrogeologist, or professional engineer. In accordance with Washington Administrative Code 308-15-140 and 196-27-020, engineering geologists, hydrogeologists, and professional engineers shall affix their signatures or seals only to plans or documents dealing with subject matter in which they are qualified by training or experience.
- T. "International Building Code (IBC)" means the most recent version of the International Building Code adopted by Pierce County.
- U. "Large lot" means as defined by the Pierce County Subdivision Code, Title 18F Pierce County Code (PCC) or the most recent version thereof.
- V. "Large lot divisions" means as defined by the Pierce County Subdivision Code, Title 18F Pierce County Code (PCC), or the most recent version thereof.
- W. "Logging" means the harvesting or removal of timber. Logging does not include the removal of stumps or under story vegetation.
- X. "Manual" means the Pierce County Stormwater Management and Site Development Manual including all amendments, corrections, and changes made through subsequent County ordinance.
- Y. "Material" means any solid or semi-solid substance that displaces volume.
- Z. "New development" means the following activities: land disturbing activities; external structural development including construction, installation, or expansion of a building or other structure; creation of impervious surfaces; class IV-general forest practices that are conversions from timber land to other uses; and subdivision and short subdivision of land as defined in RCW 58.17.020. All other forest practices and commercial agriculture are not considered new development.
- AA. "Off-site" means any area lying upstream of the site that drains onto the site, and any area lying downstream of the site onto which the site drains.
- AB. "On-site" means the entire property including the proposed development.
- AC. "Parcel" means any portion, piece, or division of land; fractional part or subdivision of block, according to plat or survey; portion of platted territory measured and set apart for individual and private use and occupancy.
- AD. "Plat" means a map or representation of a subdivision showing thereon the division of a tract or parcel of land into lots, blocks, streets and alleys, or other divisions and dedications.
- AE. "Preliminary plat" means a neat and approximate drawing of a proposed subdivision showing the general layout of streets and alleys, lots, blocks, and restrictive covenants to be applicable to the subdivision which shall furnish a basis for the approval or disapproval of the general layout of a subdivision.
- AF. "Private Road" means a roadway facility in private ownership providing private access and used for travel of vehicles by the owner(s) or those having express or implied permission from the owner(s), but not by other persons.
- AG. "Project" means the proposed action of a permit application or an approval which requires a drainage control plan, or erosion/sediment control plan, or abbreviated plan.

- AH. "Redevelopment" means, on an existing developed site, the creation or addition of impervious surfaces, external structural development, including construction, installation, or expansion of a building or other structure, and/or replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities associated with structural or impervious redevelopment.
 - AI. "Regulations" means this Title plus requirements contained in the Pierce County Stormwater Management and Site Development Manual.
 - AJ. "Short plat or short subdivision" means as defined in the Pierce County Subdivision Code, Title 18F PCC or most recent version thereof.
 - AK. "Site" means any parcel or combination of contiguous parcels where grading, filling, clearing, or creation of an impervious surface is proposed, and which may be controlled by more than one property owner.
 - AL. "Site development plan" means inclusion of the following, as specifically required by the County in each instance: site plan, drainage control plan, erosion and sedimentation control plan, grading plan, storm drainage plan, stormwater drainage control report, soils report, flood study, road construction plans, entering sight distance variances and verifications, and other documents required in the review of proposed development of the property.
 - AM. "Site development permit" means a permit issued by Pierce County authorizing the applicant to access the property; fill, grade, and create an impervious surface, or any combination thereof.
 - AN. "Stormwater Drainage System" means constructed and natural features which function together as a system to collect, convey, channel, hold, inhibit, retain, detain, infiltrate, divert, treat or filter stormwater.
 - AO. "Subdivision or final plat" means as defined in the Pierce County Subdivision Code, Title 18F PCC or the most recent version thereof.
 - AP. "Surface mining activity" means the mining or extraction of rock, stone, gravel, sand, earth, and other minerals as defined in RCW 78.44.031(17)(a).
 - AQ. "Technical equivalency" or "technical deviation" means an alternative design option requested by an applicant or the applicant's Engineer which deviates from the stipulated technical design standards or criteria found in the Pierce County Stormwater Management and Site Development Manual.
 - AR. "Tract" means a legally created parcel of property designated for special nonresidential and noncommercial uses.
 - AS. "Utility line" means pipe, conduit, cable, or other similar facility by which services are conveyed to the public or individual recipients. Such services shall include but are not limited to water supply, electric power, gas, communications, and sanitary sewers.
- (Ord. 2008-59s § 2 (part), 2008; Ord. 2005-37 § 1 (part), 2005; Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999)

17A.10.070 Site Development Permits.

A. General.

1. Issuance of a site development permit by Pierce County does not in any way imply or signify that the proposal complies with the requirements of or is allowed by other County ordinances, Regulations, or requirements, or State or Federal laws.
2. The applicant is in no way relieved of responsibility and liability for compliance with all State, Federal, and local rules, requirements, laws, ordinances, and regulations. Design errors which are undetected by the County do not relieve the Engineer from

ultimate responsibility. Where these errors are discovered, the plans are subject to revisions by the Engineer and review and approval by the County.

3. The permit issuance, payment of fees, and plan review must be completed prior to plat approval or issuance of building permits.
4. All site development plans submitted to the County for review and approval shall be prepared by an Engineer with the exception of abbreviated plans which may or may not be prepared by an Engineer as set forth in the Pierce County Stormwater Management and Site Development Manual. Should errors, omissions, or inaccurate data related to the submitted work come to the County's attention, the applicant or Engineer, as applicable, shall correct all deficiencies and be responsible for all damages resulting from the defective work.
5. An acceptance of a submittal by the County does not relieve the applicant or project Engineer from responsibility for ensuring that all facilities are completed in accordance with the calculations, plans, change orders, and specifications, and that all of the preceding and as-built (record) drawings comply with current Engineering standards, these Regulations, and applicable Federal, State, and local laws and codes.

B. Permit Required.

1. Unless fully exempt from these Regulations, no person, party, firm, corporation, or entity shall do any grading, filling, clearing, excavating, or ditching, or alter a drainage course, or alter an approved stormwater drainage system, or create an impervious surface, or any development or redevelopment activity unless the work is in accordance with a valid site development permit from the County issued pursuant to the provisions of these Regulations.
2. Each site must have a separate site development permit.

C. Application Procedures.

1. Preliminary Review of Applications. The provisions for conducting a preliminary review of a site development application are set forth in Chapter 18.40, Development Regulations – General Provisions.
2. Application Filing.
 - a. Site development permit applications shall be reviewed for completeness in accordance with Department submittal standards checklists, submittal requirements identified in the Manual, and pursuant to Chapter 18.40, Development Regulations – General Provisions.
 - b. The information required to be shown on site development plans, grading plans, drainage control plans, erosion and sedimentation control plans, and storm drainage plans is set forth in the Manual.
 - c. The applicant may provide additional information, as appropriate, to identify the scope of work.
3. Complete Applications.
 - a. For the purposes of this Chapter, a valid and fully complete development permit or approval application must include:
 - (1) An application form with all sections filled in;
 - (2) Copies of all existing easements, deed restrictions, or other encumbrances restricting the use of the subject property;
 - (3) A completed environmental checklist if required;
 - (4) Record of payment for any application fees specified in Chapter 2.05 PCC, Planning and Land Services Fees;

- (5) Documentation of compliance with the application requirements in the Stormwater Management and Site Development Manual;
 - (6) Completed applications for other required permits or approvals if they are to be processed with the development applications, or copies of issued permits or applications if they have been previously approved; and
 - (7) Any other documents or information required in the Pierce County Code or the Hearing Examiner's Conditions for the specific permit or approval which is the subject of the development application.
- b. Determination that an application is valid and fully complete will be made by the Planning and Land Services Director or designee.
 - c. For the purposes of this Chapter, the date that an application is valid and fully complete shall be determined according to the following specifications:
 - (1) If the application is determined by the Director to be valid and fully complete, the date that the application was submitted and date-stamped at the permit counter shall be the date the application is deemed valid and fully complete.
 - (2) If the application is determined to be invalid and/or incomplete by the Director, and the information requested by the Department to resolve the application's invalid or incomplete status is determined by the Department to be valid and fully complete, then the date the application is deemed valid and fully complete shall be the date the last piece of requested information is submitted and date-stamped at the permit counter.
 - (3) If the applicant does not submit responses to a request from the Department for additional information within 90 days, the application shall be deemed withdrawn by the applicant and no valid and fully complete application rights shall exist.
 - d. Although the Planning and Land Services Department shall determine the validity and completeness of an application for purposes of establishing a valid and fully complete application date, during the review of the completed application, the Department may require submittal of additional information.
4. Compliance with Environmental Regulations. Any application filed pursuant to this Title shall comply with the provisions set forth in Chapter 43.21C RCW, the State Environmental Policy Act, and Title 18D, Development Regulations – Environmental.
 5. Modifications to Applications. The County reserves the right to require a new permit when resubmitted plans are found to have significant design and/or conceptual changes or changes in field conditions from the original submittal.
- D. **Public Notice.** Public notice provisions for notice of application, threshold determination, if applicable, public hearing, and final decision on permit applications filed pursuant to this Title are outlined in Chapter 18.80, Development Regulations – General Provisions.
- E. **Review.**
1. Initial Review. The Department shall conduct an initial review of the permit application in accordance with the provisions outlined in Chapter 18.60, Development Regulations – General Provisions.
 2. Review Criteria. The County shall review the submitted information to determine if it complies with the provisions of these Regulations.

3. **Burden of Proof.** The Engineer shall show by calculations, plans, and Engineering data that the proposed project meets the requirements of these Regulations.
 4. **Director's Authority.** The Director shall have the authority to increase requirements to protect the health, safety, and welfare of the public on the basis of information regarding threatened water quality, erosion problems, habitat destruction, historic flooding, protection of uninterruptable services, endangerment to property, or increases in requirements imposed by State or Federal agencies or other pertinent factors.
 5. **Approval.**
 - a. If the proposed work, as identified by the application and plans, complies with the provisions herein, or as imposed by the County pursuant to these Regulations, or if it is corrected or amended to comply within the specified time limit and all applicable fees have been paid, the County shall issue a site development permit to the applicant.
 - b. Site development permits for clearing, site grading, road construction, creation of impervious surfaces, and installation of storm drainage facilities may not be issued until Hearing Examiner approval of a related preliminary plat, use permit, variance, or shoreline permit has been granted and the associated reconsideration or appeal period of such approval has expired.
 - c. Until the Director approves a site development permit and erosion control devices are in place per the approved plans, the County will not grant any commercial or single family building, or other related structure permit, or allow project clearing, earthwork, demolition, site work, logging activities, or any preconstruction activity or construction activity except as needed to install erosion and sediment control facilities to begin.
 - d. The County will not grant final approval for developments, issue certificates of occupancy, release financial guarantees related to drainage and erosion control, or accept final construction until all of the following have been completed:
 - (1) Construction inspection report(s) and as-built (record) drawings of related drainage and erosion control measures have been prepared by the project Engineer and been accepted by the County;
 - (2) Special requirements on the cover sheet of a plat and a general easement for protection and maintenance have been completed or executed;
 - (3) Filing with the Pierce County Auditor of covenants on lots, property owners' association articles, maintenance easements, agreements with adjacent property owners, and similar documents as required in the drainage and erosion/sedimentation control plan;
 - (4) Conditions of approval fulfilled;
 - (5) Site stabilized and restored, and temporary erosion control measures are removed as required by the County as set forth in Chapter 8 of the Manual; and
 - (6) Completion of County inspections.
 6. **Denial.** The Director shall deny a site development permit if the proposal does not meet or cannot be modified to meet the requirements set forth in this Title.
- F. **Time Period for Final Decision.** The provisions for issuing a notice of final decision on any application filed pursuant to this Title are set forth in Chapter 18.100, Development Regulations – General Provisions.

- G. **Permit Posting.** The permit must be posted by the applicant at the driveway location for the duration of the construction activity. The applicant will be responsible for the weather proofing of the permit, posting apparatus, and maintenance of the permit.
- H. **Time Limitations.**
1. Expiration.
 - a. A site development permit shall be valid for three years from the date of approval or related final plat approval, if applicable, by the County, whichever comes last.
 - b. Unless governed by the provisions of RCW 58.17.140, a new application must be filed and a permit must be obtained for work not completed before the expiration of the previous site development permit within this time period.
 - c. A site development permit for a surface mine shall be valid for the mining timeframe approved by the Pierce County Hearing Examiner.
 2. Extensions. The expiration time period specified pursuant to 17A.10.070 H.1. above may be granted a single one-year time period extension by the Director of Planning and Land Services, provided the Director has received the request in writing at least 30 days prior to the expiration date and deems that such request demonstrates good cause for delay.
- I. **Revisions to Approved Plans.**
1. General. The County may require that contractor- or applicant-initiated plan changes or field revisions to the approved construction plans be done using a change order form established in the Manual or an approved equal.
 2. Procedure. When the change order form is required, the revisions procedure as outlined on the form must be followed or final approval of the project may be withheld by the County.
 3. Approval. When the County has authorized revisions to the approved construction plans, the Engineer shall submit as-built (record) construction plans, stamped and signed, reflecting the approved revisions once the construction is completed.
- (Ord. 2008-59s § 2 (part), 2008; Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999)

17A.10.080 Variances.

- A. **Purpose.** The purpose of this Section is to provide a means of altering the requirements of this Title in specific instances where the strict application of those requirements would deprive a property of privileges enjoyed by other properties because of special features or constraints unique to the property involved.
- B. **Granting of Variances.** The Examiner shall have the authority to grant a Variance from the provisions of this Title, when, in the opinion of the Examiner, the conditions as set forth in subsection C. herein have been met. In such cases, a Variance may be granted which is in harmony with the general purpose and intent of this Title so that the spirit of this Title shall be observed, public safety and welfare secured, and substantial justice done.
- C. **Required Showings (Findings) for a Variance.** Before any Variance may be granted, it shall be shown:
1. Said requirements impose a severe and unexpected economic hardship on the project applicant, and further, the following has been considered and documented with written findings:
 - a. The current (pre-project) use of the site; and

- b. How the application of the minimum requirement(s) restricts the proposed use of the site compared to the restrictions that existed prior to the adoption of the minimum requirements; and
 - c. The possible remaining uses of the site if the exception were not granted; and
 - d. The uses of the site that would have been allowed prior to the adoption of the minimum requirements; and
 - e. A comparison of the estimated amount and percentage of value loss as a result of the minimum requirements versus the estimated amount and percentage of value loss as a result of requirements that existed prior to adoption of the minimum requirements; and
 - f. The feasibility for the owner to alter the project to apply the minimum requirements.
2. The exception will not increase risk to the public health and welfare, nor injurious to other properties in the vicinity and/or downstream, and to quality of waters of the state; and
 3. The exception is the least possible exception that could be granted to comply with the intent of the Minimum Requirements.
- D. **Conditions on Variances.** When granting a Variance, the Examiner shall determine that the circumstances do exist as required by subsection C. of this Section, and attach specific conditions to the Variance which will serve to accomplish the standards, criteria, and policies established by this Title.
- E. **Procedures.** Modifications to Applications. The County reserves the right to require a new permit when resubmitted plans are found to have significant design and/or conceptual changes or changes in field conditions from the original submittal of the Variance. For public hearing and appeal procedures, see Chapter 1.22; for the review process, see Chapter 18.60; for public notice, see Chapter 18.80; for fees, see Chapter 2.05; and for compliance, see Chapter 18.140.
- (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.10.090 Technical Equivalency.

- A. The Director of Public Works and Utilities may grant technical deviations from the requirements contained in this Chapter provided that all of the following are met:
 1. The granting of technical equivalency will not otherwise result in non-compliance with minimum requirements set forth in the Pierce County Stormwater Management and Site Development Manual;
 2. The granting of technical equivalency will not violate the development conditions imposed upon the project;
 3. The granting of technical equivalency will produce a compensating or comparable result which is in the public interest;
 4. The granting of technical equivalency will meet the objectives of safety, function, appearance, environmental protection, and maintainability based on sound Engineering judgement.
- B. The Director of Public Works and Utilities or designee shall make written findings supporting the determination of technical equivalency.

- C. At the request of either the Director's designee or the applicant, the County will convene an advisory board which will provide a recommendation to the Director. The board will be composed of a representative of the Storm Drainage and Surface Water Utility, a representative from Planning and Land Services, Development Engineering Section, and a representative recommended by the local Chapter of the American Society of Civil Engineers. The advisory board will be convened at the earliest possible date, at no time more than 30 days from date of request. The advisory board shall review proposals for technical equivalency and provide a recommendation and supporting findings for consideration by the Director within 30 days of convening. The board shall be convened only if the County and the applicant's Engineer cannot agree upon a determination of technical equivalency.

(Ord. 99-24S § 2 (part), 1999)

17A.10.100 Hazards.

- A. Whenever the Director determines that any existing construction site, erosion/ sedimentation problem, and/or drainage facility poses a hazard to life and limb, endangers any property, and/or adversely affects the condition or capacity of other drainage facilities, the safety and operation of County right-of-way, utilities, and/or other property owned or maintained by the County, the applicant/person to whom a permit was issued, the owner of the property, the applicant/person responsible for maintenance, and/or other person or agent in control of said property, upon receipt of notice in writing from the Director shall within the period specified therein repair or otherwise address the cause of the hazardous situation in conformance with the requirements of this Chapter.
- B. Should the Director have reasonable cause to believe that the situation is so adverse as to preclude written notice, he/she may take the measures necessary to eliminate the hazardous situation, provided, that he/she shall first make a reasonable effort to locate the owner before acting. In such instances, the applicant, of whom a drainage plan was required pursuant to this Title, owner of the property, and/or person responsible for the maintenance of the facility shall be obligated for payment of all costs incurred. If costs are incurred and a financial guarantee pursuant to this Title or other County requirement has been posted, the Director shall have the authority to collect against the financial guarantee to cover costs incurred.

(Ord. 99-24S § 2 (part), 1999)

17A.10.110 Reconsideration and Appeal Procedures.

Procedures for appeal of an administrative decision and procedures for reconsideration or appeal of a Hearing Examiner decision issued pursuant to this Title are set forth in Chapter 1.22 PCC. (Ord. 99-24S § 2 (part), 1999)

17A.10.120 Fees.

Fees for an application filed pursuant to this Title are set forth in Chapter 2.05 PCC. (Ord. 99-24S § 2 (part), 1999)

17A.10.130 Penalties and Enforcement.

A. General.

1. Failure to comply with this Title and the Manual will be cause for withholding or withdrawing approval of the overall project plans, revocation of the site development permit, suspension of building inspections, forfeiture of the financial guarantee submitted to the County, and/or non-acceptance of the work by the County.
2. The County may require the property owner to remove or replace illegal earthwork and/or restore and reclaim an illegally graded parcel. Earth material brought onto a parcel must be removed to a properly-permitted disposal site.
3. Nothing contained herein supplants or replaces any greater penalty or other remedy provided under State or Federal law.

B. Enforcement Actions.

1. The Director shall be responsible for enforcing this Title. The Director is authorized to issue violation notices, stop work orders, cease and desist orders, levy fines, recover costs, issue notices of civil infraction, and/or institute both civil and criminal actions in the court. The Director may refer cases to the Pierce County Prosecuting Attorney's Office for filing of criminal and civil cases. Recourse to any single remedy shall not preclude recourse to any other remedies available to the County.
2. Prior to acceptance or approval of the development, the County may remove, correct, or replace any improperly constructed facility, structure, or portion thereof which was allowed through an issued site development permit, and all expenses incurred by the County shall be paid by the property owner or applicant. With the exception of emergency situations, the property owner or application shall be given reasonable notice and adequate opportunity by the County to effect repairs to the satisfaction of the County prior to the County taking any action. If Pierce County is required to bring an action to recover such costs, the County will recover reasonable attorney's fees and interest at 12 percent per annum to run from the date the work was completed by the County. Applicants must agree to this provision as a condition of issuance of any permit authorized by these Regulations.

C. Stop Work Orders. Should the County become aware of conditions that invalidate the original design data used to obtain the permit or determine that the applicant is not complying with the conditions of the permit or approved plans, the County may revoke the original permit and/or order work stopped on the project. The County may require the applicant to resubmit information or plans for review and approval and apply for a new permit. The County may order all or part of the permitted work stopped for any period of time for any of the following reasons:

1. The applicant fails to comply with the conditions of the permit.
2. The permit was granted on the basis of erroneous or incomplete information submitted to the County by the applicant or the applicant's agent.
3. The weather or weather-created conditions cause off-site or downstream drainage or water quantity or quality problems.
4. The work has created a condition which is a hazard to life, endangers property, or adversely affects the use or stability of a public way or drainage course.

D. Cease and Desist Orders. The County may serve a cease and desist order for violations of this Chapter. The order shall include the following:

1. **Description of Violation:** A description of the specific nature, extent, and time of violation. The order may include the damage or potential damage resulting from the violation. A notice that the violation or the potential violation cease and desist may, in appropriate cases, specify corrective action to be taken within a given time. A civil infraction citation may be issued with the order pursuant to the provisions of Chapter 1.16 PCC.
 2. **Effective date:** The cease and desist order issued under this Section shall become effective immediately upon receipt by the person to whom the order is directed.
 3. **Compliance:** Failure to comply with the terms of a cease and desist order can result in enforcement action including but not limited to the issuance of a civil infraction citation.
 4. **Corrective Measures:** The order may include specific corrective measures to be taken to mitigate environmental damage.
 5. **Request for Hearing:** The order shall state that a hearing may be requested by an affected party by sending a written request for a hearing to the Pierce County Hearing Examiner within 10 days of the receipt of said order.
- E. **Civil Infraction.** Any person who fails to comply with a written request of the Director or designee shall be liable to the County for a Class I civil infraction pursuant to Chapter 1.16 PCC, as well as all civil remedies available at law. Each violation and, in the case of a continuing violation, each day of continued violation shall be a separate and distinct violation. Civil penalties shall be assessed at a rate of \$250.00 per day per violation, and statutory assessments will be in addition to this amount pursuant to 1.16.120 PCC.
- F. **Civil Penalty.** The provisions of this section are in addition to and not in lieu of any other penalty, sanction or right of action provided by law. The purpose of this penalty is to encourage compliance with this Title and to obtain redress for ecological, recreational, and economic values lost or damaged due to the unlawful action. Any person who fails to obtain a necessary permit prior to conducting activities governed by the provisions of this Title shall be assessed a civil penalty as follows:
1. The Director may assess the violator a civil penalty not to exceed \$1,000.00 for each violation. Each violation or each day of continued unlawful activity shall constitute a separate violation.
 2. Any person who, through an act of commission or omission, aids in a violation shall be considered to have committed the violation for purposes of the civil penalty.
 3. The penalty provided for in this Section shall be imposed by the Director in writing, either by certified mail with return receipt requested or by personal service, to the person incurring the penalty, describing the violation with reasonable particularity and ordering appropriate corrective action to be taken within a specified time.
 4. Within 30 days after the notice of penalty is received, the person incurring the penalty may apply in writing to the Director for remission or mitigation of such penalty. Upon receipt of the application, the Director may remit or mitigate the penalty upon whatever terms are deemed proper to bring about compliance with this Title.
 5. Any decision(s) regarding remission or mitigation of penalties imposed pursuant to this subsection may be appealed to the Pierce County Hearing Examiner under Chapter 1.22 PCC.
 6. If the penalty is not appealed, the violator will have up to 30 days after receipt of notice for payment of the penalty, unless a written request is made to the Director and granted for a longer payment period.

7. All civil penalties recovered during the enforcement of this Section shall be deposited into a fund of the division taking the enforcement action.

G. Recovery of Costs Incurred by the County.

1. Any person violating any of the provisions of this Title, who discharges or causes a discharge which violates the County's NPDES permit and/or produces a deposit or obstruction or causes damage to or impairs the County's stormwater disposal system or causes damage to physical, chemical, or biological systems of waters of the State or waters of the United States shall be liable to the County for any expense, loss, or damage caused by such violation or discharge, including the costs for bringing the County back into compliance with its NPDES permit associated with the violation of these Regulations, and any fines levied for violations of the County's NPDES permit.
2. A bill issued by the Director or designee for collection of costs incurred under subsection 17A.10.130 F. is appealable within 14 days from the date of the letter. Appeals may be filed by submitting a \$300.00 appeal fee along with a written statement identifying the basis for disputing County claim to the Department initiating the action.

H. Violators Punishable by Fine and Imprisonment.

1. Any person, who without authorization, discharges pollutants into a municipal drainage system, uses an unapproved connection to discharge into a municipal drainage system, submits false information in permitting and reporting requirements, violates the terms and conditions of a permit, violates a cease and desist order issued by the Director or designee, fails to pay a civil penalty or cost recovery assessment, or obstructs or damages a municipal drainage system shall be deemed guilty of a misdemeanor and shall be punished by fine not to exceed \$1,000.00, by imprisonment not to exceed 90 days, or by both such a fine and imprisonment.
2. Each person found guilty of a violation shall be deemed guilty of a separate offense for every day during any portion of which the violation is committed, continued, or permitted by such person and shall be punishable as provided for in this Title. Any person who, through an act of commission or omission procures, aids, or abets in violation shall be considered to have committed a violation for the purpose of this Section.

- I. Injunction and Other Civil Remedies.** In addition to any other penalty or method of enforcement, the Prosecuting Attorney may bring civil actions and suits for damages, injunctive relief, and/or for other civil remedies as necessary. Any violation of this Title shall constitute a public nuisance and may be enjoined as provided by the Statutes of the State of Washington.

- J. Public Nuisance.** Any work carried out contrary to the provisions herein shall constitute a public nuisance and may be enjoined as provided by the statutes of the State of Washington.

(Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999)

17A.10.140 Inspections, Right of Entry, Access.

- A.** The Director is authorized to make such inspections and take such actions as may be required to enforce the provisions of this Title.

- B. Whenever necessary to make an inspection to enforce any of the provisions of this Title, or whenever the Director has reasonable cause to believe that violations of this Title are present or operating on a subject property or portion thereof, the Director may enter such premises at all reasonable times to inspect the same or perform any duty imposed upon the Director by this Title; provided that if such premises or portion thereof is occupied, the Director shall first make a reasonable effort to locate the owner or other person having charge or control of the premises or portion thereof and demand entry.
- C. Proper ingress and egress shall be provided to the Director to inspect or perform any duty imposed upon the Director by this Title. The Director shall notify the responsible party in writing of a failure to provide access. If the responsible party fails to respond within seven days from the receipt of notification, the Director may order the work required completed or otherwise address the cause of improper access. The obligation for the payment of all cost that may be incurred or expended by the County in causing such work to be done shall be imposed on the person holding title to the subject property.

(Ord. 99-24S § 2 (part), 1999)

17A.10.150 Archaeological Sites.

Development of archaeological sites shall be done in accordance with Chapter 14.04 PCC and Washington Administrative Code 25-48, as now adopted or as may be amended, or other applicable County, State, or Federal law. (Ord. 99-24S § 2 (part), 1999)

17A.10.160 Severability.

If any provision of this Title or its application to any person or circumstances is held invalid, the remainder of this Title or the application of the provision to other persons or circumstances shall not be affected. (Ord. 99-24S § 2 (part), 1999)

Chapter 17A.20

GUARANTEES, DEEDS, AND EASEMENTS

Sections:

- 17A.20.010 Financial Guarantees.**
- 17A.20.020 Reclamation Guarantees.**
- 17A.20.030 Construction Guarantees.**
- 17A.20.040 Defect and Maintenance Guarantees.**
- 17A.20.050 Temporary Road Approach Guarantee.**
- 17A.20.060 Deeds and Easements.**

17A.20.010 Financial Guarantees.

- A. Financial guarantees shall be either by bond or assignment of funds (see the Manual).
- B. Financial guarantees shall be on an approved County form.
- C. Financial guarantees under \$5,000.00 must be by an assignment of funds. Financial guarantees greater than or equal to \$5,000.00 may be by assignment of funds or bonds.
- D. All financial guarantees shall run continuously until released by Pierce County and shall not be subject to expirations or cancellations.
- E. In the event that a property is sold, the applicant is responsible for transferring the financial guarantee liability by having the new owner(s) replace any existing financial guarantees that the County is holding.
- F. A completed right of entry form is required prior to acceptance of any financial guarantee covering improvements on private property. A right of entry form (see the Manual) shall be prepared by the property owner in the event that the County must access the property to complete the necessary improvements. The right of entry shall run with the land.

(Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.20.020 Reclamation Guarantees.

Reclamation Guarantees shall be administered per Volume I of the Manual. (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.20.030 Construction Guarantees.

Construction Guarantees shall be administered per Volume I of the Manual. (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.20.040 Defect and Maintenance Guarantees.

Defect and Maintenance Guarantees shall be administered per Volume I of the Manual. (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.20.050 Temporary Driveway Approach Guarantee.

Temporary Driveway Approach Guarantees shall be administered per Volume I of the Manual. (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.20.060 Deeds and Easements.

The following deeds and easements should be used to convey property or rights to Pierce County:

- A. Statutory Warranty Deed (individual, partnership, or corporate). This document is used to convey real property to Pierce County.
- B. Storm Sewer Easement. This document conveys to Pierce County the right to have and maintain a storm sewer system across a specific parcel of property.
- C. Slope and Utility Easement. This document conveys the right to have fill material or a cut slope and utilities on private property.

(Ord. 99-24S § 2 (part), 1999)

Chapter 17A.30

EARTHWORK

Sections:

- 17A.30.010 Excavation Standards.**
- 17A.30.020 Fill Standards.**
- 17A.30.030 Soil Engineering – Stability.**
- 17A.30.040 Creation of Building Pads within Subdivisions.**
- 17A.30.050 Surface Mines.**

17A.30.010 Excavation Standards.

A. Cut Slopes.

1. Slopes shall be no steeper than is safe for the intended use and shall not be steeper than 2 horizontal to 1 vertical, or as recommended by a soils Engineer.
2. The catch point of the top of the slope shall be set back from the site boundary line in accordance with the following table, unless a retaining wall is designed by the Engineer and constructed for the project.

B. Setback from Property Lines.

<u>Cut Depth</u>	<u>Setback Distance</u>
Under 5 Feet	2 Feet
5 - 20 Feet	Height/2
Over 20 Feet	10 Feet

- C. Cut slopes shall be constructed in a manner such that a factor of safety of at least 1.5 is achieved for static conditions and at least 1.2 for seismic dynamic conditions. Analysis of dynamic (seismic) conditions shall be based on a minimum horizontal acceleration as established by the most current version of the Building Code as adopted by Title 17C PCC.
- D. The proposed cut slopes shall not create the need for landslide hazard buffers or setbacks on neighboring properties unless approved through a notarized written agreement with the property owner.
- E. Interior cut slopes for surface mining projects which are part of an active mining operation are exempt from the 2:1 maximum cut slope angle requirement as long as access to the mine is controlled via fencing or other security measures to discourage entrance by unauthorized persons. Interior slopes are those slopes that do not impact the theoretical slope face that is created by applying a 2 horizontal to 1 vertical angle and the required setbacks to the property line. Cut slopes along the mine's property boundaries are allowed to be steeper than 2:1 if the applicant can show through the submittal of a stability study that there will not be a negative impact to neighboring properties in the form of stability impacts, increased setback requirements or increased buffer distances.

(Ord. 2006-103s § 5, 2006; Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999)

17A.30.020 Fill Standards.

- A. Fills which are intended for building sites shall be constructed in conformance with the requirements of the latest edition of the I.B.C., as adopted by Pierce County, and an assignment of allowable soil-bearing pressures will be under the jurisdiction of the Pierce County Building Official in accordance with the I.B.C.
- B. Slopes shall be no steeper than is safe for the intended use and shall not be steeper than one and one half horizontal to one vertical, or as recommended by a soils Engineer. Fill sites must be approved by the Engineer as suitable locations for the proposed fill.
- C. The ground surface for fills over five feet in height shall be prepared by removing vegetation, noncomplying fill, topsoil, and other unsuitable materials; scarifying to provide a bond with the new fill; and, where existing slopes are steeper than five horizontal to one vertical, by benching into competent material as determined by the Engineer. The bench under the toe of a fill on a slope steeper than 5 horizontal to 1 vertical shall be at least 10 feet wide or as recommended by a soils Engineer.
- D. Except as permitted by the County, no material other than earth material shall be buried or placed in fills. Placement of other than earth material is regulated by State statutes or Federal laws, and additional permits may be required.
- E. Fills shall be constructed using earth materials, compaction methods, and construction techniques so that stable fills are created.
- F. The toe or catch point of fill slopes shall be set back from the site boundary line in accordance with the following table unless a retaining wall is designed by the Engineer and constructed for the project:

<u>Fill Depth</u>	<u>Setback Distance</u>
Under 5 Feet	2 Feet
5 - 40 Feet	Height of Fill/2
Over 40 Feet	20 Feet

- G. Slopes constructed with fill shall be created in a manner such that a factor of safety of at least 1.5 is achieved for static conditions and at least 1.2 for seismic dynamic conditions. Analysis of dynamic (seismic) conditions shall be based on a minimum horizontal acceleration as established by the most current version of the Building Code as adopted by Title 17C PCC.
- H. The proposed fill slopes shall not create the need for landslide hazard buffers or setbacks on neighboring properties unless approved through a notarized written agreement with the property owner.
- I. Interior fill slopes for surface mining projects which are part of an active mining operation are exempt from the 1.5:1 maximum fill slope angle requirement as long as access into the mine is controlled via fencing or other security measures to discourage entrance to unauthorized persons. Interior slopes are those slopes that do not impact the theoretical slope face that is created by applying a 1:5 horizontal to 1 vertical angle and the required setbacks to the property line.

(Ord. 2008-59s § 2 (part), 2008; Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999)

17A.30.030 Soil Engineering – Stability.

- A. When an applicant proposes to clear, grade, cut, or fill on existing slopes steeper than 33 percent and ten feet or more in height, or when an applicant proposes to construct slopes steeper than 50 percent and ten or more feet in height, or is directed by the Manual, the County may require any of the following:
1. The applicant retain a geotechnical professional to submit design and construction recommendations.
 2. The applicant retain a geotechnical professional and /or testing company to perform special inspections of the proposed clearing, grading, and filling.
 3. The applicant retain a geotechnical professional to prepare a stability report.
 4. The geotechnical professional's recommendations be incorporated into the construction plans, construction specifications, and if applicable, the subdivision documents.
 5. The applicant retain a geotechnical professional to review construction plans and specifications or subdivision documents for conformance with the geotechnical professional's recommendations and requirements.
 6. The applicant retain a professional engineer to prepare an engineered abbreviated plan in accordance with Section 4.9 of the Manual.
- B. At a minimum, a stability report shall include the following:
1. The first page of the document shall clearly identify the submittal as a "Stability Report."
 2. The date when the stability report was prepared.
 3. The parcel number(s) of the site.
 4. Site address if one has been assigned by the County.
 5. A detailed description of the project and a description of the project area.
 6. A description of the surface and subsurface geology, hydrology, soils, and vegetation of the site.
 7. An accurate site plan drawn at a scale of 1" = 20', 1" = 30', 1" = 50' (or other scale deemed appropriate by the Department) is required. The Department may require that the site plan information listed below be based on a field survey by a licensed surveyor. The site plan shall include:
 - a. The location of any existing and proposed structures, utilities, on-site septic systems, wells, and stormwater management facilities.
 - b. The full geographical limits of the proposed project area.
 - c. Extent of cross-section(s) used in the evaluation of slope stability.
 - d. Existing topography on the site presented in two-foot contours.
 - e. Property lines for the site.
 - f. North arrow and plan scale.
 - g. Location and unique identifier of geotechnical borings, CPT soundings, or other surveys or explorations used to characterize subsurface conditions.
 - h. Extent of cross-section(s) used to evaluate the three-dimensional subsurface geologic and groundwater conditions at the site.
 8. Subsurface characterization data must be provided. The data shall be based on both existing and new information that may include soil borings (SPT or other appropriate driven sample collection methods), test pits, geophysical surveys, or other appropriate subsurface exploration methods, development of site-specific soil and/or rock stratigraphy, and measurement of groundwater levels including variability resulting from seasonal changes, alterations to the site, etc.

- a. Conventional geotechnical boring data shall be reported as a graphic log utilizing the following standards:
- (1) The vertical scale of the graphic log shall be such that 5 ft. of drilled depth is scaled to range of 1" to 2" (1:60- or 1:30-scale), and shall include vertical columns that record depth in 1 ft. increments, SPT value or equivalent value, and incremental blow counts, a graphic pattern representation of the soil type encountered during drilling, and sample descriptions and other comments regarding drilling.
 - (2) The graphic log shall have a header on the first page that includes a unique identifier for the boring, the times and dates of the start and completion of drilling, the manufacturer and model of the drilling rig, the company name of the drilling contractor, the name(s) of the site geologist(s) or engineer(s) overseeing the drilling activities, the details of the method used to advance the borehole (e.g., 4" i.d. hollow-stem auger), the type of drilling fluid used to stabilize the borehole, indication that the SPT was completed in accordance with applicable ASTM standards or other appropriate driven sample collection methods are specified including a description of the sampler, hammer weight, drop height, the type of hammer used to drive the sampler, number of turns of rope if a cathead is used to raise the hammer, condition of rope (i.e., new, used, frayed, oily, etc.), and the depth of static groundwater measured immediately prior to abandonment of the boring and the time and date of this measurement.
 - (3) All subsequent pages of the graphic log shall have the unique identifier for the boring, the times and dates of the start and completion of drilling, and the number of the page and the total number of pages comprising the log.
 - (4) Each SPT value or equivalent value will be reported in the appropriate column showing the blow counts recorded at each 6" interval, and the sum of the blow counts between penetration distances of 6" to 18," unless refusal conditions (50 or more blows with less than 6" of sampler penetration) are met anywhere in this interval. At refusal, the blow count shall be recorded as the number of blows with the corresponding sampler penetration, in inches.
 - (5) SPT tests shall be performed every 5 feet during drilling, at a minimum.
 - (6) The soil sample descriptions will include the total length of the recovered sample, the soil color, odor, the density or consistency (loose to very dense, very soft to very stiff), degree of water saturation (dry, moist, wet, saturated), and dilatancy. For granular (sand and gravel) soils, the description shall include a physical description of the soil sample, including size distribution (poorly or well graded), angularity, composition, amount and plasticity of the fines fraction. For fine soils (silt and clay), the description shall include a qualitative estimate of the proportion of the silt and clay size particles (e.g., silty clay, clay with some silt, etc.), plasticity, and amount and type of organic material. The sample description shall include a description of any bedding, laminations, slickensides, or other textural or deposition features, including contact between dissimilar soil types. The sample description shall also include a field classification of the soil sample using the Unified Soil Classification System where the

- classification is expressed in lower case letters (e.g., sp, ml, etc.). The sample classification shall be expressed in upper case letters (e.g., SP, ML, etc.) where subsequent laboratory testing has been performed. This column of the graphic log will also include any other information relevant to the subsurface investigation, such as loss of drilling fluid, heaving, churning of the drill in gravelly soils, etc.
- b. CPT sounding data shall be reported as a graphic log utilizing the following standards:
 - (1) The vertical scale of the graphic log shall be such that 5 ft. of penetrated depth is scaled to range of 1" to 2" (1:60- or 1:30-scale), and shall include vertical columns that record depth in 1 ft. increments.
 - (2) The graphic log shall have a header on the first page that includes a unique identifier for the boring, the times and dates of the start and completion of the CPT sounding, the manufacturer and model of the CPT system, the company name of the CPT service contractor, the name(s) of the site geologist(s) or engineer(s) overseeing the CPT sounding, and any comments regarding the conduct of the testing, reaction of the CPT system during sounding, etc.
 - (3) All subsequent pages of the graphic log shall have the unique identifier for the boring, the times and dates of the start and completion of drilling, and the number of the page and the total number of pages comprising the log.
 - (4) The graphic log shall display, at a minimum, a continuous depth plot of the uncorrected tip resistance, the friction (sleeve) resistance, the friction ratio, and the measured pore pressure with an overlay of the calculated hydrostatic pore pressure. These curves shall be plotted so as to show the full variation of the measured quantities within the depth range of the sounding, and each curve shall have a visible scale with the minimum and maximum ranges labeled.
 - (5) All of the CPT data recorded for each sounding shall also be provided in either electronic or hardcopy format. Electronic data will be presented in an ASCII text file format.
 - c. Geotechnical borings or CPT soundings will be advanced to a depth sufficient to characterize geologic conditions within and below the existing or potential landslide mass.
 - d. Other methods used for subsurface characterization shall be assigned a unique identifier, and the basic data presented in appropriate graphical and/or tabular format.
 - e. The three-dimensional subsurface conditions at the site shall be presented using one or more cross-sections showing location and depth penetration of geotechnical borings, CPT soundings, or other subsurface characterization methods, interpretation of the geometry of major soil units, and projected location of the static groundwater surface determined from the subsurface exploration. The cross-sections shall be presented at a scale of 1" = 20', 1" = 30', 1" = 50' (or other scale deemed appropriate by the Department). Each cross-section shall have a legend with a description of the various major soil units.

9. Soil strength and index properties (i.e., unit weight, cohesion, etc.) shall be provided for each soil unit interpreted from the subsurface characterization of the site, and shall be presented in tabular format. Justification for the presented values of these soil parameters shall be based on one or more of the following approaches:
 - a. Back analysis based on pre-landslide stability conditions.
 - b. Laboratory measurement of strength or other index properties made on soil samples.
 - c. Correlation of soil strength index properties to other geotechnical indices (e.g., SPT blow counts, etc.), where the correlation relations are documented (e.g., published literatures, in-house empirical data set, etc.).
 - d. Soil strength and indices based on generic values must provide a clear justification for their use.
10. Assessments and conclusions regarding slope stability for the developed conditions shall be presented and documented. These assessments and conclusions shall include:
 - a. Determination of the potential types of landslide failure mechanisms (e.g., debris flow, rotational slump, translational slip, etc.) that may affect the site.
 - b. Quantitative stability evaluation of slope conditions of the various failure mechanisms using state-of-the-practice modeling techniques. Limiting equilibrium methods of analysis shall state the stability conditions as a factor of safety. The most unstable failure geometry(ies) shall be presented in the form of a cross-section(s), with the least stable failure geometry for each failure mechanism clearly indicated. The stability evaluation shall also consider dynamic (earthquake) loading, and shall use a minimum horizontal acceleration as established by the current version of the Building Code as adopted by Title 17C PCC.
 - c. Static and dynamic factors of safety for the developed conditions.
 - d. Potential landslide hazard buffer and setback impacts to neighboring properties.
11. Mitigation recommendations using engineered measures to protect any proposed structure(s) and any adjacent structures, infrastructure, downstream receiving waters, adjacent wetlands, or critical fish and wildlife habitat from damage or destruction as a result of proposed construction activities. The recommendations shall contain:
 - a. Requirements pertaining to the handling of surface and subsurface runoff in the developed condition.
 - b. Identification of necessary geotechnical inspections to assure conformance with the report mitigation and recommendations.
 - c. Proposed angles of cut and fill slopes, site grading requirements, final site topography (shown as 2' contours), and the location of any proposed structures, on-site septic systems, wells, and stormwater management features or facilities associated with the development detailed within the body of the report and shown on a site map at the same scale as that required in number 7. above.
 - d. Soil compaction criteria and compaction inspection requirements.
 - e. Structural foundation requirements and estimated foundation settlements if structures are proposed.
 - f. Lateral earth pressures.
 - g. Suitability of onsite soil for use as fill.

- h. Erosion protection measures.
 - i. Permanent stabilization measures.
- C. The stability report must be prepared under the responsible charge of a geotechnical professional.
- D. The geotechnical professional(s) who prepared the stability report shall stamp the report with his or her license stamp/seal.
- E. The Department may request a geotechnical professional to provide additional information in the stability report based upon existing conditions, changed conditions, or unique circumstances occurring on a case by case basis.
- F. Stability reports shall be in conformance with a format that is pre-approved by the Department.

(Ord. 2008-59s § 2 (part), 2008; Ord. 2004-56s § 1 (part), 2004)

17A.30.040 Creation of Building Pads within Subdivisions.

A grading plan with existing and proposed contours must be provided for all short plats, large lots, or formal plat that identifies the earthwork required for the construction of the subdivision. The storm drainage runoff patterns that will result from the proposed grading plan must be consistent with the stormwater design contained within the project's drainage report. Grading per the approved plans must be completed and accepted for the entire subdivision prior to issuance of building permits on individual lots except where the subdivision was approved to be constructed in phases. The grading plan must include grading of individual lots when it is necessary to ensure consistency with the storm drainage runoff patterns contained within the project's drainage report. Approved grading plans may or may not include grading of building pads at the discretion of the developer. (Ord. 2004-56s § 1 (part), 2004)

17A.30.050 Surface Mines.

- A. For surface mines, the following items must be constructed prior to creating impacts, but no later than three years from the date of site development permit issuance:
 - 1. Permanent/long-term stormwater facilities.
 - 2. Other facilities necessary to control stormwater quality or quantity (such as parking lot pavement).
 - 3. Access driveway/road connecting the operation/processing area to the off-site private or public roads.
- B. Construction of additional permanent/long-term stormwater facilities that will not be needed until a later phase in the mining activity, or modifications to the original stormwater facility to accommodate a future phase in the mining activity, shall require the submittal of a new site development permit application. Construction of the additional stormwater facilities or modifications to the original facilities must be completed in the timeframes stated above.
- C. The storm drainage controls (temporary swales, temporary berms, etc.) that are necessary to control stormwater runoff in areas being mined must be identified on the construction documents and in the Maintenance Plan. The erosion and sedimentation controls that are necessary for this continuous, long term, earth disturbing activity must be identified on the construction documents and in the erosion control report.

(Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999)

Chapter 17A.40

STORMWATER DRAINAGE

Sections:

- 17A.40.010 Off-Site Mitigation.**
- 17A.40.020 Pre-Existing Stormwater Facilities.**
- 17A.40.030 Acceptance of Pre-Existing Stormwater Facilities.**
- 17A.40.040 Acceptance of New Stormwater Facilities.**
- 17A.40.050 Maintenance of Private Drainage Facilities.**
- 17A.40.060 Public Drainage Facilities.**
- 17A.40.070 County Regional Drainage Facilities.**
- 17A.40.080 Discharge to Privately Owned Property.**
- 17A.40.090 Discharge to Publicly Owned Regional Retention and/or Detention Facilities.**
- 17A.40.100 Privately Constructed Regional Retention and/or Detention Facilities.**
- 17A.40.110 Construction Materials.**

17A.40.010 Off-Site Mitigation.

The County recognizes that application of the design standards set forth in the Manual does not always fully prevent any impacts downstream and in these extreme cases, the applicant may be required to provide off-site mitigation as determined by the County. (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.40.020 Pre-Existing Stormwater Facilities.

The applicant/person required to construct a stormwater facility pursuant to older or replaced site development or stormwater drainage Regulations, which is covered by a maintenance or defect financial guarantee or which has been released from all required financial guarantees prior to the effective date of this Title, and all persons holding title to the property for which a facility was required shall be responsible for the continual operation and maintenance of the facility in accordance with standards and requirements that were the basis of approval of the site development permit and for any liability as a result of breach of these duties. (Ord. 99-24S § 2 (part), 1999)

17A.40.030 Acceptance of Pre-Existing Stormwater Facilities.

- A. The County may assume maintenance of pre-existing facilities only after the following conditions have been met:
 - 1. All necessary easements or dedications entitling the County to properly maintain the stormwater facility have been conveyed to the County;
 - 2. The Director of Public Works and Utilities has determined maintenance of the facility will contribute to protecting or improving the health, safety, and welfare of the community based upon review of the following factors:
 - a. Existence of or potential for flooding,
 - b. Existence of or potential for downstream erosion,
 - c. Existence of or potential for property damage due to improper function of the facility,

- d. Existence of or potential for safety hazard associated with the facility,
 - e. Existence of or potential for degradation of surface or groundwater quality or in-stream resources,
 - f. Existence of or potential for degradation to the general welfare of the community,
 - g. Improvements in residential plats/PDDs have been completed on at least 80 percent of the lots,
 - h. An inspection by the Director has determined that the stormwater facilities are functioning as designed,
 - i. The stormwater facilities have had at least two years of satisfactory operation and maintenance, unless otherwise waived by the Director,
 - j. The person or persons holding title to the properties served by the stormwater facilities submit a petition containing the signatures of the title holders of more than 50 percent of the lots served by the stormwater facilities requesting that the County maintain the stormwater facilities,
 - k. All easements and/or dedicated tracts required under this Chapter, entitling the County to properly operate and maintain the subject stormwater facilities, have been conveyed to Pierce County and have been recorded with the Pierce County Auditor,
 - l. The person or persons holding title to the properties served by the stormwater facilities show proof of the correction of any defects in the drainage facilities, as required by the Director;
3. The Director of Public Works and Utilities has declared in writing acceptance of maintenance responsibility by the County. Copies of this document will be kept on file in the Pierce County Public Works and Utilities record center and the Public Works Road Maintenance main office.

- B. A stormwater facility which does not meet the criteria of this Section shall remain the responsibility of the applicant/person required to construct the facility and persons holding title to the property for which the facility was required. The decision of the Director is final and is not appealable.

(Ord. 99-24S § 2 (part), 1999)

17A.40.040 Acceptance of New Stormwater Facilities.

The County may accept for maintenance those new residential stormwater facilities constructed under an approved site development permit that meet all of the conditions in the Manual for the release of financial guarantees and acceptance. (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.40.050 Maintenance of Private Drainage Facilities.

- A. If a project's drainage facilities are not dedicated to and accepted by the County, and if the project is a subdivision, short subdivision, or large lot division established pursuant to Title 18F, the applicant shall form a Property Owners' Association. The document creating the Property Owners' Association shall at a minimum make provision for all of the following:
1. Members of the Property Owners' Association shall be responsible for maintenance of storm drainage facilities;
 2. Inclusion by reference of the operation and maintenance manual prepared by the project Engineer in accordance with the Manual;

3. Power to assess fees to maintain storm drainage facilities; and
 4. Responsibility for payment of financial sanctions/repayments should the County have to conduct repairs/activities due to hazardous conditions.
- B. A maintenance covenant will be recorded with the Pierce County Auditor for the plat and recorded against each lot within the subdivision, short subdivision, or large lot division (refer to the Manual).
 - C. If the project is other than a subdivision, short subdivision, or large lot division the applicant will describe the organization or persons that will own and maintain the facility and show how maintenance activities will be financed (refer to the Manual).
- (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.40.060 Public Drainage Facilities.

- A. Drainage facilities conceived, designed, or constructed by or through an agent of the County shall be exempted from the submittal and permitting requirements of this Title. This exclusion from the submittal and permitting requirements applies only to this Title and does not relax any requirements of other applicable ordinances, regulations, or legislation except those superseded by this Title.
 - B. The County shall meet the intent and specific requirements of the Manual on all projects relative to drainage or incorporating drainage components and shall maintain records adequate to reflect such compliance. These records shall be available upon request pursuant to the State Public Disclosure of Information Act, Chapter 42.17 RCW.
 - C. The County shall incorporate the provisions of the Manual into the design calculations, drawings, and specifications of all projects released for public bid. These provisions shall also apply to projects constructed by County personnel.
- (Ord. 99-24S § 2 (part), 1999)

17A.40.070 County Regional Drainage Facilities.

- A. Due to the nature of County regional drainage facilities to control surface water runoff from large tracts of land, it is recognized that it may not be feasible, both fiscally and physically, to control runoff as stipulated in the Manual for new or retrofit facilities. The County shall make every effort reasonable to control runoff to the discharge, storage, and quality criteria established in the Manual. Where determined impractical by the Director of Public Works and Utilities, the County will be allowed to modify the criteria for regional facilities and design for maximization of the available land space for control of stormwater. In this case, the County shall design the facility for the primary function of stormwater control and any other multi-use functions shall be considered only after maximizing the stormwater aspects of the facility. Facilities that do not meet the Manual's Volume I minimum requirements will not accept excess discharge flows from new developments.
 - B. Drainage facilities constructed by private development to mitigate for the impacts of new development or re-development will not be viewed as regional drainage facilities and shall meet all provisions of this Title.
- (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.40.080 Discharge to Privately Owned Property.

If the project site discharges to a privately owned closed depression, the applicant must obtain written permission/easements from the owner(s) of record for both the closed depression and potential overflow routes receiving the runoff. The applicant shall record the information with the Pierce County Auditor. This information shall be recorded with all affected property titles including those for the depression, overflow route, and the applicant's property. If easements cannot be obtained, discharge to the pothole may be allowed on a case by case basis to match the predeveloped rates, increase the pond size and meet additional protective criteria described in Volume III of the Manual. (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.40.090 Discharge to Publicly Owned Regional Retention and/or Detention (R/D) Facilities.

As determined by the County on a site-by-site basis, the developer shall have the option of paying to the County the anticipated costs for designing and constructing an on-site stormwater retention/detention facility including land costs as required above in-lieu-of constructing such a facility. The Manual describes the standards and conditions of this option in Volume III. (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.40.100 Privately Constructed Regional Retention and/or Detention (R/D) Facilities.

In lieu of individual systems, applicants may design and build regional facilities in accordance with the design requirements of Category A or B set forth in Volume III of the Manual, as applicable and with excess capacity which, when completed, may be dedicated to the County. Such a facility may be on-site or off-site. Upon County approval of the facility, the County may:

- A. Accept the dedicated facility; and
- B. If funds are available as determined by the Director of Pierce County Public Works and Utilities and the facility is constructed in a location within a basin studied by Pierce County Surface Water Management and is currently budgeted for in the approved six-year capital facilities plan, reimburse the developer for the excess capacity provided by the facility at a rate mutually agreed upon; or
- C. Enter into a latecomers agreement with the developer for reimbursement as other properties are developed which opt to discharge to the regional facility.

(Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

17A.40.110 Construction Materials.

All materials used in construction of private and County drainage facilities shall meet the current WSDOT standard specifications, AASHTO, and ASTM standards as amended or supplemented by the State or County. The applicant is responsible for contacting the County to obtain any modifications or supplements. (Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)