

**Title 17A**  
**Construction and Infrastructure Regulations – Site Development and Stormwater**  
**Drainage** Revised 6/15 Revised 12/15

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**Chapter 17A.10**  
**GENERAL PROVISIONS** Revised 6/15 Revised 12/15

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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.** Revised 12/15

- 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.

- C. These regulations implement a major component of the County's National Pollution Discharge Elimination System (NPDES) Stormwater Permit.
- D. These regulations intend to make low impact development principles and low impact development best management practices the preferred and commonly used approach by development.

(Ord. 2015-48s § 1 (part), 2015; Ord. 99-24S § 2 (part), 1999)

**17A.10.040 Applicability.** Revised 6/15 Revised 12/15

- 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, road construction, clearing, installation of a storm drainage system, 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 and the Pierce County Stormwater Management and Site Development Manual (referred to as the Manual) incorporated herein by reference.
- C. All proposals for development or redevelopment, whether public or private, must conform to these Regulations.
- D. The requirements of this Title apply to all unincorporated areas of Pierce County.
- 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. 2015-48s § 1 (part), 2015; Ord. 2015-25s § 2 (part), 2015; Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

**17A.10.050 Exemptions.** Revised 12/15

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

- A. 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.
- B. Pavement maintenance practices limited to pothole and square cut patching, overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage, shoulder grading, reshaping/regrading drainage systems, crack sealing, resurfacing with in-kind material without expanding the road prism, pavement preservation activities that do not expand the road prism, and vegetation maintenance.
- C. Agricultural activities for commercial use except in sensitive and/or critical areas.

- D. Agricultural activities for commercial use in sensitive and/or critical areas that commenced prior to June 1998.
- E. 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).
- F. 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 two 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 Chapter 76.09 RCW; and
    - b. Do not result in the conversion of land to a use other than commercial forest product.
  - 2. 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.

(Ord. 2015-48s § 1 (part), 2015; Ord. 2013-85 § 1 (part), 2013; Ord. 2013-30s2 § 12, 2013; Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999)

**17A.10.060 Definitions.** Revised 6/15 Revised 12/15

Definitions that are specific to Title 17A PCC are listed below. These definitions are specifically for the purposes of Title 17A PCC and supersede any definitions for similar terms that may exist in other County Titles. Definitions for terms used with Title 17A PCC that are not listed below can be found in Title 18 PCC, Development Regulations – General Provisions.

"Abbreviated plan" means a plan for small sites to implement temporary best management practices (BMPs) to control pollution generated during the construction phase, primarily erosion, sediment, and post-construction runoff.

"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.

"Alleyway" means a narrow passageway intended for vehicular traffic to serve as rear access to lots or buildings.

"BMP" means best management practice.

"Clearing" means the destruction and/or removal of vegetation by manual, mechanical, or chemical methods.

"County" means the Pierce County Executive or designee; also Pierce County, its duly authorized representatives, and the jurisdictional boundaries of Pierce County.

"Department" means the Pierce County Department of Public Works or the Department of Planning and Land Services as necessary to ensure compliance with these Regulations, unless explicitly referenced otherwise.

"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.

"Director" shall mean the Director of the Public Works 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.

"Grading" means any operation involving excavation, displacement, cutting or filling of material that alters the elevation of the land's surface.

"International Building Code (IBC)" means the most recent version of the International Building Code adopted by Pierce County.

"Logging" means the harvesting or removal of timber. Logging does not include the removal of stumps or under story vegetation.

"Manual" means the Pierce County Stormwater Management and Site Development Manual including all amendments, corrections, and changes made through subsequent County ordinance.

"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.

"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.

"On-site" means the entire property including the proposed development.

"Principal" means an individual, person, or entity primarily liable for an obligation. In the case of a limited liability corporation (LLC), it means the individual or person that has the authority to make financial commitments and/or obligations for the LLC.

"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.

"Project" means the proposed action which requires a site development permit.

"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.

"Regulations" means this Title plus requirements contained in the Pierce County Stormwater Management and Site Development Manual.

"Short plat or short subdivision" means as defined in the Pierce County Subdivision Code, Title 18F PCC or most recent version thereof.

"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.

"Site development permit" means a permit issued by Pierce County giving an applicant permission to: perform land disturbing activity; remove vegetation; construct roads, shared

accesses, alleyways, driveways, parking areas, impervious surfaces or other hard surfaces; perform grading and/or clearing; and construct stormwater facilities.

"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.

"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. (Ord. 2015-48s § 1 (part), 2015; Ord. 2015-25s § 2 (part), 2015; 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.** Revised 12/15

##### **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. Should errors, omissions, or inaccurate data related to the site development permit 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.

##### **B. Site Development Permit Required.**

1. Unless fully exempt from Title 17A PCC, no person, party, firm, corporation, or entity shall perform any: grading; clearing; ditching; storm drainage system construction or alteration; drainage course alteration; hard surface creation; or any development/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.

##### **C. Site Development Permit Not Required.** The following exemptions are allowed without obtaining a site development permit if other criteria as listed are met:

1. **Minor Development or Redevelopment Activity.** Certain minor development or redevelopment activity as listed below may be performed by a property owner or project proponent without first obtaining a site development permit when all the criteria listed below are met. The burden of proving that the project falls within this permit exemption will be on the property owner and/or project proponent. The following criteria must be met:
  - a. In accordance with the Stormwater Management and Site Development Manual, Minimum Requirement #2, the property owner and/or project proponent must consider the 13 elements of pollution prevention for the

- construction site, and controls must be developed and implemented for all the elements that pertain to the site. Minimum Requirement #4 protecting natural drainage systems is met.
- b. The minor development or redevelopment work cannot include the removal, deposit, or displacement of material: within a closed depression; within 25 feet of a drainage course, or drainage channel; and on existing slopes that are steeper than 33 percent and 10 feet or more in height.
  - c. The minor development or redevelopment work cannot create slopes that are steeper than 33 percent and 10 feet or more in height.
  - d. The minor development or redevelopment work cannot include the removal, deposit, or displacement of material within the following critical areas and their associated buffers – Wetlands, Regulated Fish and Wildlife Species and Habitat Conservation Areas, Flood Hazard Areas, Landslide Hazard Areas, and Erosion Hazard Areas.
  - e. The minor development or redevelopment work does not include the installation of a new storm drainage system.
  - f. The minor development or redevelopment work must not be located within County right-of-way.
  - g. Public and private utility line work located outside County right-of-way that creates less than 2,000 square feet of new or replaced impervious/hard surface.
  - h. Allowed Minor Development or Redevelopment Activities. The following are the allowed cumulative totals on a parcel of land. The cumulative total resets to zero when the parcel has obtained a site development permit for the activity and achieved final construction approval thereof.
    - (1) Land disturbing activity that does not exceed 7,000 square feet.
    - (2) The creation of less than 500 square feet of new impervious/hard surface.
    - (3) The creation of less than 500 square feet of replaced impervious/hard surface.
    - (4) The conversion of less than 0.75 acres of native vegetation to lawn.
    - (5) The conversion of less than 2.5 acres of native vegetation to pasture.
    - (6) Projects that cause a 0.10 cubic feet per second (cfs) increase in the 100-year discharge flow.
    - (7) Grading of less than 50 cubic yards.
2. Development or Redevelopment Activity Performed by a Pierce County Department or Agency. When the proponent of a development or redevelopment is a County department, agency, or agent thereof, a site development permit (and its related Planning and Land Services Department review, inspections, and fees) is not required. However said proponent must comply with the Stormwater Management and Site Development Manual standards and documentation requirements.
  3. Development or Redevelopment Activity Performed by Other Governmental Agencies. City, County, State, and other governmental agencies performing development and redevelopment activities within unincorporated Pierce County

are not required to obtain a site development permit when the following conditions are met:

- a. The development or redevelopment activities are conducted in accordance with the latest version of the Washington State Department of Ecology's Stormwater Management Manual for Western Washington or a stormwater management manual that has been deemed equivalent by the Department of Ecology; and
  - b. The development or redevelopment activities are not located within existing or proposed County right-of-way, or within properties owned by Pierce County.
4. **Public and Private Utility Line Work.** Public and private utility line work (new construction, maintenance and repair) that is located within County right-of-way and is performed in accordance with the Manual on Accommodating Utilities in Pierce County Rights-of-Way does not require a site development permit.
  5. **Maintenance and Repair Activities for Public Roads and Public Storm Drainage Systems.** Maintenance and repair activities performed by the Pierce County Public Works Department do not require a site development permit.
  6. **Maintenance or Repair Activities for Private Roads, Shared Accesses, Alleyways and Private Storm Drainage Systems.** The maintenance activities listed below may be performed by a property owner or project proponent without first obtaining a site development permit when all of the criteria below are met. The burden of proving that the project falls within this permit exemption will be on the property owner and/or project proponent. The following criteria must be met:
    - a. In accordance with the Stormwater Management and Site Development Manual, Minimum Requirement #2, the property owner and/or project proponent must consider the 13 elements of pollution prevention for the maintenance or repair activity, and controls must be developed and implemented for all the elements that pertain to the activity. Minimum Requirement #4 protecting natural drainage systems is met.
    - b. The repair of a storm drainage system cannot exceed 250 cubic yards of grading.
    - c. Road, shared access, or alleyway maintenance or repair activities cannot expand the roadway prism or cause an expansion of impervious or hard surface.
    - d. Maintenance or repair activities cannot change the original County approved design of a road, shared access, alleyway or storm drainage system.
    - e. **Allowed Minor Maintenance or Repair Activities.**
      - (1) Pavement maintenance and repair activities such as asphalt overlay, pothole repair, square cut patching, chip seal or other asphalt maintenance coating.
      - (2) Sidewalk or pedestrian pathway repair or replacement.
      - (3) Curb repair or replacement.
      - (4) Driveway approach repair and maintenance.
      - (5) Gravel road maintenance and repair.
      - (6) Gravel shoulder maintenance and repair.
      - (7) Storm drainage system repair.



- (8) Storm drainage system maintenance.
- (9) Vegetation maintenance within private road, shared access or alleyway or other vehicular access easement.

**D. Review.**

1. **Initial Review.** The Department shall conduct a review of the permit application in accordance with the provisions outlined in Chapter 18.60 PCC, Review Process.
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 applicant or Engineer shall show by calculations, plans, and data that the proposed project meets the requirements of this Title.
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.

**E. Application Expiration.** The site development permit application will be deemed null and void if the applicant fails to respond to requests by the Department for additional information, corrections, or studies within an accumulative 360 days from the Department's request or within a time period as specified by the Hearing Examiner.

1. The Director shall have the authority to grant one 60-day extension of time for projects that have received the majority of all required approvals and have submitted documentation that all remaining approvals can be obtained within the 60-day time extension; and
2. The Director or designee shall have the authority to review an application's permit system record and make any necessary corrections to the application's expiration date that may be a result of inaccurate and/or missed data entries.

**F. Application Renewal.** An expired site development application is eligible for renewal under the following conditions:

1. The project is still vested to the standards in place on the date a complete application was filed; and
2. The project is substantially unchanged from the original proposal and the intent of renewing the application is to address previous requests for corrections, additional information and/or studies and obtain approval of the site development permit; and
3. There has not been significant changes in the vicinity of the project, environment surrounding the project, or new information that would substantially change the scope, concept, layout or design of the project.

When the County finds that the above conditions are met the application can be renewed by paying the resubmittal fee.

**G. Site Development Permit 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.

**H. Site Development Permit Approval and Issuance.** The site development permit will be approved and issued when the following items have been addressed:

1. Abbreviated Plan or Drainage Control Plan Is Approved. County staff find that the site development drawings, reports, maintenance covenant, and other project documentation comply with this Title and the Stormwater Management and Site Development Manual.
2. Hearing Examiner Approval and Environmental Determination Completed. Issuance/approval of a site development permit will not occur until necessary land use permit or environmental approvals are obtained in accordance with Title 18 PCC.
3. Payment of Inspection Fees. The Annual Inspection Fee for the site development permit must be paid.
4. Financial Guarantees. Any necessary financial guarantees must be received and approved by the County.
5. Easements and Deeds Completed. Any easements or deeds that have been identified through the review process as being necessary to start construction must be reviewed, approved and executed.

(Ord. 2015-48s § 1 (part), 2015; Ord. 2008-59s § 2 (part), 2008; Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999)

**17A.10.080 Construction.** Revised 12/15

This Section addresses the construction phase of the site development permit process including, but not limited to, construction material requirements, start of construction, inspections, change orders, and permit extensions.

**A. Construction Materials.**

1. 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.

**B. Prior to Starting Construction.** Construction shall not start until:

1. The site development permit has been issued.
2. Construction Stormwater Pollution Prevention Plan Measures. All initial construction stormwater pollution prevention plan measures must be installed (such as but not limited to construction entrance, silt fence, construction limit fencing).
3. Pre-Construction Meeting. When required by the County, an on-site pre-construction meeting must be held with the Department Inspector, the contractor(s) and the Engineer.
4. Right-of-Way Permit Must Be Obtained. Any project that intends to perform construction or improvements within existing County right-of-way shall obtain a right-of-way permit prior to beginning any construction.

**C. Inspections, Right of Entry, Access.**

1. The Director is authorized to make such inspections and take such actions as may be required to enforce the provisions of this Title.
2. 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 or designee 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.

3. 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.
4. The applicant will be responsible for retaining an engineer to conduct inspections and testing during construction. The number, type, and frequency of inspections and testing will need to be of such an extent and nature that the engineer will be able to accurately and thoroughly complete the Engineer's Inspection Report.
5. Engineer's Inspection Report. The County shall create an inspection form that will specify what the project's engineer must inspect, measure, and test. The inspection form must include the following:
  - a. Project name;
  - b. Project description and scope;
  - c. Site development permit no.(s);
  - d. Project location;
  - e. Engineer's name, address, phone and email address;
  - f. Standard inspections for frequently used water quantity, or water quality BMPs;
  - g. Inspection or testing that require special expertise, special certification, or special equipment;
  - h. Inspection items for roads, shared accesses, and alleyways;
  - i. Inspections for work in or near critical areas;
  - j. Review of record drawings for compliance with the approved design;
  - k. County's expectations of engineer for each inspection, review, or test; and
  - l. Certification language for the engineer.

D. **Permit (Construction) Time Limit.** In order to meet the intents and purposes of this Chapter and to minimize construction impacts, site development work must be completed as soon as reasonably possible. A site development permit is therefore valid for one year from the date of issuance.

1. Extensions.
  - a. Second Year. For site development work that is incomplete but actively under construction, the site development permit will be extended for an additional year upon payment of a second Annual Inspection Fee.
  - b. Additional Time Extensions. For site development work that is incomplete but actively under construction, the Director or designee may grant additional one-year time extensions when:

- (1) An applicant can demonstrate that impacts to neighboring properties, downstream receiving waters, and critical areas are not occurring or have been corrected, or will be corrected; and
      - (2) The applicable Annual Inspection Fee has been paid.
    - c. Expired Site Development Permits. When a site development permit has expired, the Director or designee may revive an expired permit and grant additional one-year time extensions when a project has not commenced site development work, or when a project's site development work is incomplete, when the following conditions are shown:
      - (1) An applicant can demonstrate that impacts to neighboring properties, downstream receiving waters, and critical areas are not occurring or have been corrected, or will be corrected; and
      - (2) A project has not lost its vesting rights, or a project has lost its vesting rights, but the Director or designee determines that the current version of this Title will not cause significant changes to the previously approved Abbreviated Plan or Drainage Control Plan; and
      - (3) The applicable Annual Inspection Fee has been paid.
    - d. Expiration of Vesting Rights. When a site development permit has expired and a project has lost its vesting rights and upgrading of the project to the current version of Title 17A PCC will require significant changes to the approved Abbreviated Plan or Drainage Control Plan, the site development permit will not be revived until:
      - (1) The Abbreviated Plan or Drainage Control Plan has been revised to meet the current version of Title 17A PCC; and
      - (2) The appropriate Review and Annual Inspection Fees have been paid; and
      - (3) An applicant can demonstrate that impacts to neighboring properties, downstream receiving waters, and critical areas are not occurring or have been corrected, or will be corrected.
  2. Permits issued for resolution of a site development violation shall be valid for six months unless specified otherwise by the Director. If deemed appropriate by the Director, a single 90-day permit extension may be granted.
  3. All permits issued pursuant to the regulations contained in the 2012 or earlier version of the Stormwater Management and Site Development Manual shall expire on December 5, 2020, except in the following circumstance:
    - a. Approved construction has begun on site before December 5, 2020.  
Beginning construction means, at a minimum, the site work associated with and directly related to the approved project has begun. For example: grading the project site to final grade, or the installation of utilities. Simply clearing the project site does not constitute the beginning of construction.
- E. Changes to Approved Drainage Control Plans or Abbreviated Plans.**
1. Change Order. When the County Inspector or County Review Engineer determines that a contractor- or applicant-initiated plan changes or field revisions are minor, the changes can be approved using a change order process. The County will provide a change order form which will identify the necessary information,

- process and approval. The form must be completed by the project engineer and submitted to the County for approval.
2. **Revision to Approved Plans.** When the County Inspector or County Review Engineer determines that a contractor- or applicant-initiated plan changes or field revisions are major, the changes must follow a formal plan revision process. Major changes will require that the project engineer revise the approved site development drawings and obtain a new approval of each affected sheet(s). A review fee is charged for revision to approved plans.
  3. **Record Drawing.** Any change orders or revisions to the approved plans must be included in the project record drawings.

(Ord. 2015-48s § 1 (part), 2015)

**17A.10.090 Construction Completion.** Revised 6/15 Revised 12/15

Prior to final construction approval of site development work the following items must be completed:

- A. **County Inspector's Final Punchlist.** All items identified on the County Inspector's final punchlist must be completed.
- B. **Engineer's Inspection Report Form.** This form must be completed by the engineer and submitted to the County.
- C. **Record Drawings.** Record drawings must be prepared by the engineer and submitted to the County for review and approval.
- D. **Defect and Maintenance Financial Guarantee.** A Defect and Maintenance Financial Guarantee must be submitted to and accepted by the County.
- E. **Performance Monitoring Permit.** An application for this permit must be submitted to the County.
- F. Maintenance Covenant must be approved by the County, executed and recorded with the Pierce County Auditor.
- G. Permanent stabilization of the site soils must be achieved.
- H. All necessary easements and deeds must be approved by the County, executed, and recorded.

(Ord. 2015-48s § 1 (part), 2015)

**17A.10.100 Final Building Inspections for Structures.** Revised 12/15

Final occupancy and/or final inspection approval of residential, commercial, and industrial structures will not be granted until such time that final site development construction approval is achieved in accordance with PCC 17A.10.090. (Ord. 2015-48s § 1 (part), 2015)

**17A.10.110 Issuance of Single-Family Building Permits in Subdivisions.** Revised 12/15

The County will not issue single-family building permits in subdivisions, including short subdivisions, and large lot divisions, until all necessary drainage improvements, roads, shared accesses or alleyways are completed, with the exception that minor items that may be damaged during homebuilding (such as sidewalks, street trees, or street illumination) may be financially guaranteed. (Ord. 2015-48s § 1 (part), 2015)

**17A.10.120 Performance Monitoring Permit.** Revised 12/15

During this phase of the development process the County performs periodic monitoring of completed projects. The intent of this monitoring is to look for defects in the constructed

infrastructure (such as improper infiltration or settling pavement) that may not have been obvious during construction or that may not have appeared until after final construction approval. The duration of the performance monitoring period is from final construction approval until the last remaining financial guarantee associated with the project has been released by the County. Fees for this permit shall be in accordance with Title 2 PCC. (Ord. 2015-48s § 1 (part), 2015)

**17A.10.130 Record Drawing Requirements.** Revised 12/15

Record drawings must be prepared by the engineer based on as-built survey data and must include the following:

- A. Storm drainage detention, retention and water quality facility finished contours, elevations and dimensions such that key aspects of the approved design can be verified such as required detention volume, required retention volume, required volumes based on key elevations, overflow elevations, spillway elevations, invert elevations, orifice elevations, orifice sizes, etc.
- B. Invert and rim elevations of catchbasins and pipe outfalls, pipe sizes, pipe slopes such that verifications can be made that conveyance systems have been built in accordance with this Title.
- C. Finished contours and key spot elevations for areas that require specialized or detailed grading such as areas that will be providing compensatory flood storage, or areas that provide for a stormwater overflow route.
- D. Verification of required vehicle sight distances when requested by the County.

The approved site development drawings shall be used as the base drawing for the record drawings. The record drawings shall be prepared using common drafting standards. It is preferred that the original design dimensions, elevations, etc., are struck through and the actual number is written immediately adjacent to the strike out. The engineer that prepares the record drawings shall mark them as "Record Drawings." (Ord. 2015-48s § 1 (part), 2015)

**17A.10.140 Completion of the Site Development Process.** Revised 12/15

The site development permit process is complete when the County has released any associated financial guarantees and the monitoring phase has been completed. (Ord. 2015-48s § 1 (part), 2015)

**17A.10.150 Acceptance of Public Drainage Facilities.** Revised 12/15

Unless otherwise approved by the Director of Public Works or the County Engineer, the County will not accept a dedication of a tract or an easement until such time that the storm drainage facilities have been constructed and received final construction approval. (Ord. 2015-48s § 1 (part), 2015)

**17A.10.160 Maintenance of Private Drainage Facilities.** Revised 12/15

- 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 PCC, 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.
- 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. 2015-48s § 1 (part), 2015)

**17A.10.170 Issuance of Related Permits.** Revised 12/15

When a project requires a site development permit the County will not issue building permits, forest practice permits or other permits that authorize construction or earth disturbing activities until the site development permit has been issued. (Ord. 2015-48s § 1 (part), 2015)

**17A.10.180 Variances.** Revised 12/15

- 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 Director shall have the authority to grant a Variance from the provisions of this Title, when, in the opinion of the Director, the conditions as set forth in subsection C. of this Section 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 Director 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.

(Ord. 2015-48s § 1 (part), 2015; Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999. Formerly 17A.10.080)

**17A.10.190 Technical Equivalency.** Revised 12/15

- A. The Director or designee may make determinations of technical equivalency regarding the requirements contained in this Chapter; provided, that all of the following are met:
1. The determination 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 determination of technical equivalency will not violate the development conditions imposed upon the project;
  3. The determination of technical equivalency will produce a compensating or comparable result which is in the public interest;
  4. The determination of technical equivalency will meet the objectives of safety, function, appearance, environmental protection, and maintainability based on sound engineering judgment.
- B. The Director or designee shall make written findings supporting the determination of technical equivalency.

(Ord. 2015-48s § 1 (part), 2015; Ord. 2015-25s § 2 (part), 2015; Ord. 99-24S § 2 (part), 1999. Formerly 17A.10.090)

**17A.10.200 Hazards.** Revised 12/15

- 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. 2015-48s § 1 (part), 2015; Ord. 99-24S § 2 (part), 1999. Formerly 17A.10.100)

**17A.10.210 Reconsideration and Appeal Procedures.** Revised 12/15

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. 2015-48s § 1 (part), 2015; Ord. 99-24S § 2 (part), 1999. Formerly 17A.10.110)

**17A.10.220 Penalties and Enforcement.** Revised 12/15

The regulations for compliance with the provisions of this Title are set forth in Chapter 18.140 PCC, Compliance. (Ord. 2015-48s § 1 (part), 2015; Ord. 2010-70s § 5, 2010; Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999. Formerly 17A.10.130)

**17A.10.230 Archaeological Sites.** Revised 12/15

Development of archaeological sites shall be done in accordance with Chapter 14.04 PCC and Chapter 25-48 WAC, as now adopted or as may be amended, or other applicable County, State, or Federal law. (Ord. 2015-48s § 1 (part), 2015; Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999. Formerly 17A.10.150)

**17A.10.240 Severability.** Revised 12/15

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. 2015-48s § 1 (part), 2015; Ord. 99-24S § 2 (part), 1999. Formerly 17A.10.160)

**Chapter 17A.20**  
**GUARANTEES, DEEDS, AND EASEMENTS** Revised 12/15

Sections:

- 17A.20.010 Financial Guarantees. Revised 12/15
- 17A.20.020 Reclamation Guarantees. Revised 12/15
- 17A.20.030 Construction Guarantees. Revised 12/15
- 17A.20.040 Defect and Maintenance Guarantees. Revised 12/15
- 17A.20.050 Temporary Driveway Approach Guarantee. Revised 12/15
- 17A.20.060 Deeds and Easements. Revised 12/15

**17A.20.010 Financial Guarantees.** Revised 12/15

- A. Financial guarantees shall be either by bond or assignment of funds.
- B. Financial guarantees shall be on an approved County form.
- C. Financial guarantees under \$5,000 must be by an assignment of funds. Financial guarantees greater than or equal to \$5,000 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 principal 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 meeting the requirements of Title 18 PCC is required prior to acceptance of any financial guarantee covering improvements on private property.

(Ord. 2015-48s § 1 (part), 2015; Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

**17A.20.020 Reclamation Guarantees.** Revised 12/15

- A. The purpose of this guarantee is to ensure that adequate erosion control measures are employed during the course of construction and that permanent stabilization is achieved at the conclusion of significant activity. The guarantee may be utilized to reduce drainage impacts and permanently stabilize the site in the event that the County determines a site has been abandoned after construction begins. Pierce County will consider a site to be abandoned based on a lack of response by the principal to correct noted deficiencies or non-completion of improvements prior to permit expiration. Permanent stabilization includes reclamation of the site if a project is abandoned after construction begins.
- B. The guarantee shall be for \$1,500 per acre to be disturbed, \$1,500 minimum.
- C. The reclamation guarantee must be accepted by Pierce County prior to approval of a site development permit and will be released after the conclusion of significant activity on the project site and upon the recommendation of the County Inspector. The County Inspector will recommend release of the reclamation guarantee when he/she determines that little potential for erosion, sedimentation, or stormwater impacts remains.
- D. Upon identification by the County of deficiencies relating to erosion control, site stabilization, or project abandonment, the County will provide written notification to the principal identifying the deficiencies. The principal will have 10 calendar days to respond. The County will begin collection proceedings after the 10-calendar-day period

if the deficiencies are not satisfactorily addressed or satisfactory response detailing how the deficiencies will be addressed in a timely fashion has not been received.  
(Ord. 2015-48s § 1 (part), 2015; Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

**17A.20.030 Construction Guarantees.** Revised 12/15

- A. The purpose of this guarantee is to ensure the completion of proposed improvements as required by this manual, other ordinances, Hearing Examiner conditions, SEPA mitigation, etc. The construction guarantee will also ensure completion of an improvement in County right-of-way or on County property in the event that a project is abandoned after construction has begun.
- B. The construction guarantee amount can be determined by submitting a scope of work to be accomplished and an engineer's estimate for the cost thereof. The estimate shall be based on current construction cost data. The County will review the estimate and, if acceptable, establish the financial guarantee at 125 percent of the estimate to allow for inflation and administrative expenses should the County have to complete the work. Alternatively, the amount can be determined by using the same percentage of an executed construction contract for all of the work to be guaranteed.
- C. When work is proposed in the County right-of-way, a construction guarantee must be accepted by Pierce County prior to approval of the site development and right-of-way permits for the project. The financial guarantee may be in lieu of construction of required improvements within public rights-of-way except in situations where the work involves a safety or public welfare issue. A construction guarantee for work on private property is required when the project principal desires to obtain final approval of the development project (final plat, short plat, large lot, etc.) prior to construction of some or all of the necessary improvements.
- D. The following conditions must be met prior to release of the construction guarantee:
  - 1. Completion of the necessary improvements;
  - 2. Submittal to and acceptance by the County of the Engineer's Inspection Report Form;
  - 3. Acceptance by the County of the completed construction; and
  - 4. Submittal to and acceptance by the County of the Defect and Maintenance Guarantee.
- E. All improvements covered under a construction financial guarantee must be completed prior to the expiration of the site development permit. The County may begin collection proceedings after expiration of the site development permit.

(Ord. 2015-48s § 1 (part), 2015; Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

**17A.20.040 Defect and Maintenance Guarantees.** Revised 12/15

- A. For all road, access, and storm drainage facilities, the purpose of this guarantee is to ensure that until such time that the Defect and Maintenance Guarantee is released:
  - 1. The principal will correct any defects in design, construction, or storm drainage facility performance.
  - 2. Problems caused by or related to inadequate storm drainage facility performance will be corrected by the principal.
  - 3. The principal will correct any violations of County regulations and standards.

4. The principal demonstrates that the storm drainage facilities function properly in the final built-out condition of the project.
  5. The principal will thoroughly clean the storm drainage facilities at the conclusion of the defect and maintenance guarantee time period.
  6. The public is not responsible for correcting problems caused by or related to defects in design, construction, or storm drainage facility performance.
- B. In addition, for road, access, and storm drainage facilities that will be privately owned, maintained, and operated, the purpose of this guarantee is to also ensure that until such time that the Defect and Maintenance Guarantee is released:
1. Problems caused by or related to improper maintenance, improper operation, vandalism, damage from vehicle accidents, or damage from felled trees will be corrected by the principal.
  2. The principal performs all necessary maintenance, operation and associated O&M recordkeeping as specified in the project's approved maintenance manual.
- C. The guarantee amount shall be for 15 percent of the total cost of the road, access, and storm drainage system construction. The total cost can be based on an estimate by the project engineer, or an executed construction contract. The minimum amount of the guarantee is \$5,000.
- D. The defect and maintenance guarantee must be submitted to and accepted by the County prior to final construction approval.
- E. For all road, access, and storm drainage facilities, the defect and maintenance guarantee time period will be 24 months (two years) unless modified by the County. The defect and maintenance guarantee time period will begin when final construction approval is granted. Final construction approval will be granted by the County when: the guarantee has been submitted and accepted, all punch list items have been completed (including sidewalks and final asphalt lift), approval has been granted by the County Inspector, the record drawings have been approved, the engineer's inspection report form has been approved, and the maintenance manual/maintenance schedule has been accepted.
- F. The County may extend the 24-month time period in the following situations:
1. Defects in design, faulty construction, insufficient storm drainage facility performance, or violations of County regulations and standards are discovered.
  2. The principal is unable to demonstrate that the storm drainage facilities function properly in the final built-out condition of the project.
  3. The principal has not performed the required maintenance or is unable to provide adequate documentation of their maintenance and operation activities.
- G. The time period will only be extended if it is necessary to ensure adequate performance and/or compliance with County requirements. The length of any time extension will be determined by the County.
- H. The principal may request in writing a reduction in the 24-month time period for projects that have met all the criteria listed below. The intent is to give the principal a method to reduce the standard 24-month time period on projects that can be built and stabilized quickly. This option does not change the terms for releasing the financial guarantee. In no event shall the time period be less than 18 months.
1. All site construction has been completed (including but not limited to houses on lots, paving, sidewalks, buildings, impervious surfaces, pervious surfaces, grading, clearing, vegetation removal, and landscaping). The County must accept

that permanent erosion control measures have been fully established prior to the beginning of the wet season.

2. All storm drainage facilities must have gone through one full wet season (October 1 to April 30) after permanent erosion control establishment has been accepted.
  3. The project is not being phased.
  - I. The County will perform regular monitoring inspections during the defect and maintenance guarantee time period.
  - J. At the end of the defect and maintenance guarantee time period, it is the principal's responsibility to request a financial guarantee release inspection by the County. This request shall be submitted to the County in writing.
  - K. For road, access, and storm drainage facilities that will be privately owned, maintained, and operated, the request to release the financial guarantee must include copies of all maintenance logs and documentation that show compliance with the approved maintenance manual.
  - L. Projects will be inspected on a first-come, first-served basis. If no deficiencies are noted, the County will release the financial guarantee. If deficiencies are noted, the principal will be notified of the specific deficiencies to be corrected. The principal will have 30 days to respond. The County may begin collection proceedings after the 30-day period if the deficiencies are not satisfactorily addressed. The guarantee will not be released until the County finds that the deficiencies have been corrected.
- (Ord. 2015-48s § 1 (part), 2015; Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

**17A.20.050 Temporary Driveway Approach Guarantee.** Revised 12/15

- A. The purpose of this guarantee is to ensure the removal of the temporary driveway approach and restoration of the County right-of-way. Removal of the temporary driveway approach means to permanently close the approach by blocking, berming, fencing, or other method suitable to the County. Restoration of the County right-of-way means to restore the County road, shoulder, and storm drainage system to its condition prior to construction of the temporary driveway approach.
  - B. The amount shall be \$2,000 for each temporary driveway approach to a paved County road, or \$1,500 for each temporary driveway approach to a gravel County road. The temporary driveway approach guarantee must be accepted by Pierce County prior to approval of the site development permit for the temporary driveway approach.
  - C. Upon removal of the temporary driveway approach and restoration of the County right-of-way, the principal will contact the County Inspector and request inspection. The inspection will be completed on a first-come, first-serve basis. If the removal and restoration work is found to be acceptable, the financial guarantee will be released. If the work is not found to be acceptable, the principal will be notified of the deficiencies to be corrected, the guarantee will not be released until the work is found to be acceptable.
  - D. The County will provide written notice to the principal of deficiencies in the removed or constructed temporary driveway approach or the need to remove the temporary driveway approach. The principal will have 30 days to respond. The County will begin collection proceedings after the 30-day period if the deficiencies are not satisfactorily addressed and/or the temporary driveway approach is not properly removed.
- (Ord. 2015-48s § 1 (part), 2015; Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)

**17A.20.060 Deeds and Easements.** Revised 12/15

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.
- D. Quit Claim Deed. This document is used to release ownership interest when ownership is uncertain and a statutory warranty deed cannot be provided.

(Ord. 2015-48s § 1 (part), 2015; Ord. 99-24S § 2 (part), 1999)

**Chapter 17A.30**  
**GRADING** Revised 12/15

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. Revised 12/15

**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.**

Cut Depth	Setback Distance
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:

Fill Depth	Setback Distance
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.** Revised 12/15

- 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 in the Maintenance and Source Control Report. The long-term stormwater pollution controls that are necessary for this continuous, earth disturbing activity must also be identified in the Maintenance and Source Control Report.
- (Ord. 2015-48s § 1 (part), 2015; Ord. 2004-56s § 1 (part), 2004; Ord. 99-24S § 2 (part), 1999)

**Chapter 17A.40**  
**STORMWATER DRAINAGE** Revised 6/15 Revised 12/15

Sections:

- 17A.40.010 Off-Site Mitigation.
- 17A.40.020 Pre-Existing Stormwater Facilities.
- 17A.40.030 Acceptance of Pre-Existing Stormwater Facilities. Revised 6/15 Revised 12/15
- 17A.40.070 County Regional Drainage Facilities. Revised 6/15 Revised 12/15
- 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 (R/D) Facilities.  
Revised 6/15 Revised 12/15

**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.** Revised 6/15 Revised 12/15

- 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 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 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 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. 2015-48s § 1 (part), 2015; Ord. 2015-25s § 2 (part), 2015; Ord. 99-24S § 2 (part), 1999)

**17A.40.070 County Regional Drainage Facilities.** Revised 6/15 Revised 12/15

- 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, 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. 2015-48s § 1 (part), 2015; Ord. 2015-25s § 2 (part), 2015; 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.**

Revised 6/15 Revised 12/15

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 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. 2015-48s § 1 (part), 2015; Ord. 2015-25s § 2 (part), 2015; Ord. 2008-59s § 2 (part), 2008; Ord. 99-24S § 2 (part), 1999)