SINGLE FAMILY ABBREVIATED SITE PLAN & STORMWATER POLLUTION PREVENTION STANDARDS IN PIERCE COUNTY
(Rev. 11/7/13)

Purpose: To address storm water runoff and erosion sedimentation impacts caused by the creation of new / replaced impervious surfaces and or grading / clearing activity associated with single family residential construction projects.

Threshold Requirements:

- SFR projects proposing 500 square feet or more new or replaced impervious surfaces must submit an abbreviated plan (AP).
- SFR projects proposing 2,000 square feet or more new or replaced impervious surfaces must also address stormwater pollution prevention plan (SWPPP) elements.
- SFR projects proposing development activity within a critical area, associated buffer, within 25 feet of a drainage course or areas that require special grading controls must submit an “engineered” abbreviated plan (EAP). This type of plan must be prepared by a licensed professional engineer in the State of Washington.
- SFR projects proposing 5,000 square feet or more new or replaced impervious surfaces must submit a drainage sedimentation control plan (DCP). This type of plan must be prepared by a licensed professional engineer in the State of Washington.

For the purposes of this handout only projects which meet the AP & SWPPP threshold will be discussed in the following information.

PLAN ELEMENTS:

Drainage Control:

One of the primary AP & SWPPP elements is selecting appropriate drainage controls for proposed structures and other new impervious surfaces such as driveways, parking areas etc. and locating them on the AP. This is especially important because the AP is used for construction and inspection. Each site is required to have a separate site development permit to ensure compliance with the approved AP. The following standard stormwater control measures are listed by preference for the person(s) preparing the AP;

- Low Impact Development (LID). Common LID measures are; splash blocks, dispersion trenches, dispersion buffers, porous pavers, asphalt or concrete.
- Infiltration systems. Common infiltration systems are; designed trenches (See Residential Infiltration Design Guide & Worksheet handouts available on the Pals Web Page or Development Center).
➢ Pre-approved systems. Previously designed and approved system under a recorded subdivision on or after November 3, 1997. Copies of such systems can be obtained at the Pierce County Development Center.

➢ Connection to offsite system. Typically this entails collecting and routing stormwater from the project site and connecting into a private or *public offsite drainage system. **Connection to some offsite systems may require assistance from a licensed professional engineer to evaluate downstream impacts.

* Connection to a public owned and maintained offsite drainage system shall require a separate permit from the Pierce County Public Works and Utilities Department. For specific information regarding this process contact 253-798-3687.

** Downstream evaluation letters must be stamped and signed by a licensed professional engineer stating that the offsite system has been evaluated for ¼ mile and no significant downstream impacts are anticipated as a result of direct discharging runoff from the project site into the offsite system.

For questions related to the above standard drainage control measures contact Development Engineering Technical Support at 253-798-3749 or 253-798-3150.

Temporary Erosion Sedimentation Control

Another important AP & SWPPP element is selecting appropriate temporary erosion sedimentation control measures and locating them on the AP (See Attachment 9.0 example). This information will assist the contractor or property owner in preventing offsite erosion sedimentation impacts to downstream private properties or environmentally sensitive areas. The following are standard temporary measures which are commonly used on single family residential sites;

➢ Silt Fencing
➢ Construction Entrance
➢ Interceptor Dikes & Swales

Additional AP & SWPPP Element Checklist

The following checklist is provided to assist the person(s) preparing the AP to ensure all MANDATORY elements have been considered and incorporated into the plan. **Two (2) copies of the AP and attachments must be submitted at time of application.

☐ Provide parcel number and site address.
☐ Provide scale and north arrow. For clarity use a scale 1 inch equals 20 feet or larger. Preferred plan sheet size is 11 x 17 inch paper. Minimum paper size is 8.5 x 11.
☐ Provide a legend if symbols are used.
☐ Provide a vicinity map (only required for difficult to locate properties).

Revised: 11/7/13
Locate property boundaries and dimensions.
Show contour/topography lines from best available source (example: Pierce County GIS, septic design or plat/subdivision data etc.).
Show proposed clearing and grading limits.
Show established buffers, easements or open spaces.
Show water bodies including; flood hazard areas, wetlands and drainage channels.
Show all adjacent public or private roads. Include applicable street name(s) or number(s).
Show proposed and existing structures including all retaining walls and security gates (see attached industry notice).
Show all proposed and existing impervious surfaces such as driveways, patios, buildings, parking areas, sport courts etc.
Show proposed temporary erosion sedimentation control measures i.e. silt fencing, construction entrances, interceptor dikes or swales etc.
Show proposed stormwater drainage control measures including but not limited to; pipes, catch basins, driveway grates, splash blocks, dispersion trenches, dispersion buffers, vegetation flow paths, infiltration trenches etc.
Show onsite proposed or existing sewage disposal systems and reserve areas.
Show soil amendment areas (see attached guidelines). Note: This requirement is not applicable to lots created in the last 7-years prior to March 1, 2009 (Effective date Title 17A/Ord. 2008-59s).
Show anticipated soil stockpile location(s).
Stabilize proposed drainage channels or drainage pipe outlets. Typical measures used are rip rap lining or rock splash pads at pipe outlets.
Pollutants must be controlled and disposed in a manner that does not cause contamination to stormwater. Cover and contain all potential pollutants (gas, oil etc.).
Control dewatering. Turbid dewatering water from construction activity must not be discharged offsite.
Downstream drain inlets must be protected from sediment discharge from the project site.
Necessary temporary erosion sedimentation control measures will maintained throughout construction up through permanent stabilization.
Manage the project. Minimize land development activities during the wet season when feasible.

Helpful Tips:
When preparing the AP remember to also address the minimum requirements for a “general site plan”. A copy of a combination site/abbreviated plan example is attached for your convenience.
Listed below are some of the most common “best management practices” (BMP) details and other miscellaneous information used for SFR construction projects. It should be noted that other types of BMP’s maybe more applicable to your site. To view all details and general guidelines related to this handout go to: http://www.co.pierce.wa.us/ArchiveCenter/ViewFile/Item/565.
Most of the information is found in Volume 1, Appendix 1-A and Attachments A & C.

Revised: 11/7/13
Attachments:
1). Attachment 9.0: Typical erosion control practices for SFR: Used to assist plan preparer in choosing and locating appropriate site specific temporary erosion sedimentation controls.

2). Site Plan Example: Shows a combination abbreviated site plan which addresses both general site plan and abbreviated plan standard elements.


4). Attachment 4.0: Standard construction entrance detail (Attach to AP if using).

5). Attachment 17.0: Standard temporary interceptor dike/swale detail (Attach to AP if using).

6). Section A, Attachment 1.0: Flow dispersion trench detail. Used for runoff control from roof areas greater than 700 square feet. Must provide 10 feet of trench for every 700 square feet of roof area. Maximum length = 50 feet. Each trench must have 25 feet of vegetated flow path (see definition) down gradient (Attach to AP if using).

7). Figure 3.3: Typical downspout dispersion trench. Used for runoff control from smaller roof areas of less than 700 square feet. Each downspout must have a vegetated flow path 10 feet in width by 50 feet in length (Attach to AP if using).

8). Typical Sediment Control Structure. Type I catch basin or equivalent.

9). Figure 3.4: Typical downspout splashblock dispersion. Maximum roof area per splash block is 700 square feet (Attach to AP if using).

10). Figure 3.5: Typical concentrated flow dispersion for steep driveways. Used for driveways with a 15 percent or greater gradient (Attach to AP if using).

11). Figure 3.6: Sheet flow dispersion for driveways. Used for driveways with less than a 15 percent gradient (Attach to AP if using).

12). Soil amendment guidelines (Attach to AP if using).

13). Gate permit industry notice.

Vegetation flow path (VFP): Means undisturbed native landscape area(s), recreated vegetated areas covered with well established vegetation, such as sod. In some cases, if the VFP area(s) have been significantly disturbed, soil amendments may be required. All VFP areas or buffers must flow away from the structure, driveway or dispersion trench perpendicular to existing ground contours.

Revised: 11/7/13
**Fees:** See the Planning and Land Services Department web page County Code Sections Administered by Pals Title 2 for SFR abbreviated plan review and inspection fees.
Site Plan Example

See “How to Draw a Site Plan” and “SFR Abbreviated Plan Standards” for further information.

Legend

A. Potential Soil Amendment area(s)
B. Parcel line length (all sides & segments)
C. Break Line
D. Easement boundary and label
D/S. Downspouts (as necessary)
E. Critical Area boundary & buffers
F. Street name and private/public label
G. Parcel boundaries
H. Contour line (at 2’ intervals; specify datum if known)
I. Footprint of existing residence
J. Footprint of proposed residence
K. Drip/cave line
L. Deck footprint
M. Building dimensions
N. Distance between property lines and all proposed structures
O. Septic tank
P. Septic drainfields with setback distances
Q. Reserve/secondary drainfield area
R. Existing building
S. Proposed addition
T. Dimensions of proposed addition
U. Fuel tank
V. North arrow
W. Scale indicator (Engineer’s scale)
X. Site address, parcel number, property owners name & phone number
Y. Existing Right-of-Way (EROW), Future Right-of-Way (FROW), and distance to structures
Z. Gates (existing and proposed)

Note: This combination site/abbreviated plan example is not intended to show all situations. Plan content and information shall vary for each site.

6302 207th Street Ct E
Tax Parcel #0419258023
Bob Smith, 253-798-7200

Pierce County Development Center, 2401 South 35th Street, Tacoma, WA 98409 (253-798-7200) www.piercecountywa.org/pals Revised 1/09/10
NOTE: GEOTEXTILE FABRIC MUST BE PLACED BENEATH QUARRY SPALLS.

R = 25 MIN.
12" MIN. DEPTH
(6" MIN. FOR RESIDENTIAL SINGLE FAMILY LOTS)

4" TO 8" QUARRY SPALLS
(4" TO 6" FOR RESIDENTIAL SINGLE FAMILY LOTS)

PROVIDE FULL WIDTH OF INGRESS/EGRESS AREA

EXISTING ROAD

AS REQUIRED (100' MIN.) EXCEPT MAY BE REDUCED TO 20' MIN.
FOR SITES WITH LESS THAN 1 ACRE OF EXPOSED SOIL.
(A) INTERCEPTOR DIKES

INTERCEPTOR DIKE SPACING - 100', 200' OR 300' DEPENDING ON GRADE

(DIKE MATERIAL COMPACTED TO 90% PROCTOR)

8' MIN.

18' MIN.

2 MIN.

1 MIN.

(B) INTERCEPTOR SWALE

INTERCEPTOR DIKE SPACING 50' TO 300', DEPENDING ON GRADE.

LEVEL BOTTOM

GRASS OR ROCK

Pierce County
Department of Public Works and Utilities
Surface Water Management Division
2702 S 42nd Street, Suite 201
Tacoma, Washington 98409-7332

HANS P. HUNGER, P.E.
C.I.P. MANAGER

TEMPORARY INTERCEPTOR DIKES AND SWALES - SCHEMATIC

(NOT TO SCALE)

17.0

Storm Water Manual Details - Section C
Type 1 catch basin (CB) not required as shown when using sediment control structure (SCS) prior to discharge into dispersion trench. (Ref: Figure 3.3 Typical Downspout Dispersion Trench and Figure No. 8 SCS.)

SECTION A-A

NOTES:
1. THIS TRENCH SHALL BE CONSTRUCTED SO AS TO PREVENT POINT DISCHARGE AND/OR EROSION.
2. TRENCHES MAY BE PLACED NO CLOSER THAN 50 FEET TO ONE ANOTHER. (100 FEET ALONG FLOW LINE.)
3. TRENCH AND GRADE BOARD MUST BE LEVEL. ALIGN TO FOLLOW CONTOURS OF SITE.
4. GRADE BOARD SUPPORT POST SPACING AS REQUIRED BY SOIL CONDITIONS.
5. THE END OF EACH PIPE RUN SHALL HAVE AN ACCESSIBLE CLEAN OUT SWEEP. PIPE END SHOULD BE VISIBLE OR THE LOCATION STAKED.

Flow Dispersion Trench

NOT TO SCALE

Pierce County
Department of Public Works and Utilities
Surface Water Management Division
2702 S 42nd Street, Suite 201
Tacoma, Washington 98409-7322

HANS P. HUNGER, P.E.
C.I.P. MANAGER

Storm Water Manual Details - Section A
Figure 3.3. Typical Downspout Dispersion Trench.

NOTE:
Type 1 catch basin may be substituted with an equivalent type structure which includes a solid lid, 2-foot minimum sump, and T-type outlet with screen. See sediment control structure detail. Plastic catch basins of equivalent size may be used in the following situations; maximum inflow pipe not to exceed 6 inches diameter and maximum inflow slope not to exceed 10%.

Source: King County
Sediment Control Structure Detail

NOTES:


2. SET THE BOTTOM OF THE INLET PIPE AT THE SAME ELEVATION AS THE OUTLET PIPE.

3. INSTALL SOLID LOCKING LID AT OR ABOVE EXPECTED FINAL GRADE ELEVATION TO ALLOW HOMEOWNER ACCESS FOR MAINTENANCE.

4. STRUCTURE MUST HAVE SOLID BOTTOM.

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Diagram:

- **SOLID LOCKING LID**
  - 6” MIN.

- **PIPE SUPPORTS**, BAND TO SIDEWALL (IN 2 PLACES)

- **MESH SCREEN**
  - 1/4” X 1/4” TO 1/2” X 1/2” BAND SCREEN TO PIPE

- **MESH SCREEN**
  - 18” MINIMUM DIAMETER (OR LONG DIMENSION ON RECTANGULAR STRUCTURE)

- **4” DIA. "T"** MIN.

- **2’**

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Revised 5-14-13
Figure 3.4. Typical Downspout Splashblock Dispersion.
Figure 3.5. Typical Concentrated Flow Dispersion for Steep Driveways.
Figure 3.6. Sheet Flow Dispersion for Driveways.
TYPICAL SOIL AMENDMENT GUIDE FOR SINGLE FAMILY CONSTRUCTION

Option 1 - Amend Existing Soils in Place

Landscape Areas:
1). Scarify or till existing subgrade 4-6 inches. (Do not scarify or till within drip line of existing trees to be retained).

2). Place and rototill 3 inches of composted material (10% organic content) into 5 inches of soil for a finished depth of 12 inches (4-6 inch scarification + 8 inches compost/soil = 12 inches) of un-compacted soil. Rake and remove rocks larger than 2 inches in diameter and mulch areas with 2 inches of organic mulch.

Lawn Areas:
1). Scarify or till existing subgrade 4-6 inches. (Do not scarify or till within drip line of existing trees to be retained).

2). Place and rototill 2 inches of composted material (5% organic content) into 6 inches of soil for a finished depth of 12 inches of un-compacted soil. Water or roll to compact soil 85% of maximum. Rake to level, and remove surface woody debris and rocks larger than 1 inch in diameter.

OPTION 2 – Import Topsoil Meeting Organic Content Standards

Landscape Areas:
1). Scarify or till existing subgrade in two directions to 6 inch depth. (Do not scarify within drip line of existing trees to be retained).

2). Use imported top soil mix containing 10 % organic matter (typically around 40% compost). Soil portion must be sand or sandy loam. Place 3 inches of imported top soil mix on surface and till into 2 inches of sandy soil. Place additional 3 inches of imported topsoil mix on the surface. Rake smooth and remove surface rocks over 2 inches in diameter. Mulch landscape beds with 2 inches of organic mulch.

Lawn Areas:
1). Scarify or till existing subgrade in two directions to 6 inch depth. (Do not scarify within drip line of existing trees to be retained).

2). Use imported top soil mix containing 5% organic matter (typically around 25% compost). Soil portion must be sand or sandy loam. Place 3 inches of imported topsoil mix on surface and till into 2 inches of sandy soil. Water or roll to compact soil to 85% maximum. Rake to level, and remove surface rocks larger than 1 inch in diameter.
NOTICE TO INDUSTRY

Pierce County
Planning & Land Services
2401 South 35th Street
Tacoma, WA  98409-7460

June 19, 2009

ALL FENCE & GATE CONTRACTORS:

Subject:  Gate Permits for Houses, Roads, Apartments, and Businesses

The intent of this notice is to remind contractors of the permitting requirements in Pierce County for the installation of gates.

Since January 1, 1992, gate permits have been required in Pierce County when placed across driveways, private roads, and EVA access lanes. The requirements for gate permitting are driven by access for emergency responders. Gate design and permitting requirements are located in Title 17B, Design Guidelines and Specifications for Road and Bridge Construction, and Title 17C, Construction and Infrastructure Regulations – Building and Fire Codes.

The Pierce County Gate Guide was prepared to clarify when a permit is required and what the requirements are. The second reason is the fire districts have, and are still experiencing, difficulty accessing through gates, and sometimes they have been blocked because of the location of keypads, gate center posts, or inoperable or non-existing rapid entry systems.

The design portion of the Guide is intended to ensure emergency vehicles can quickly access through gates, minimize vehicle backups onto roads, and to ensure gates are structurally and electrically sound. Please note we are open to alternative designs from what is shown in the Guide as long as the design meets the ordinances and ensures emergency vehicle access. A copy of the Gate Guide may be picked up at the Pierce County Annex in the Development Center located at 2401 South 35th Street, or be viewed on line by going to Google and inputting “Pierce County Gate Guide.”

Gates installed prior to January 1, 1992 are exempt from the permitting process, although it is highly recommended that gates exempt from regulations have or install emergency rapid entry systems. Contact your local fire district for information on the systems they support.

PALS Development Engineering reviews, issues, and inspects gate permits. The fee for each on-site gate is $325.00, which includes review and inspection. Applications for gate permits may be made at the Pierce County Annex in the Development Center located at 2401 South 35th Street.

Questions concerning existing, unpermitted gates and gate design requirements should be directed to Debra Mershon, Development Engineer, (253) 798-3150, or dmershon@co.pierce.wa.us.