

Appendix B – Simplified Approach

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Simplified Approach

Installing water quality treatment facilities is a required component of any project that adds or redevelops more than 5,000 square feet of impervious area (asphalt, concrete, roofs, etc). Stormwater pipes generally dump directly into the local creeks and therefore it is important to treat the water for pollutants before it flows off the site.

PROCEDURE OUTLINE:

1. **Impervious Area:** Determine the area (square footage) of the new or redeveloped impervious surfaces associated with the project. Impervious surfaces include roofs, asphalt, concrete, gravel used by vehicles, and other surfaces that prevent rain from soaking in to the ground. This Simplified Approach is only allowed if the project has less than 10,000 square feet of new or redeveloped impervious area.
2. **Treatment Option and Location:** Select one of the treatment options listed below and determine where the facility should be placed so that it can receive and treat all water that runs off the new or redeveloped impervious surface during a rainstorm.
3. **Drainage Area:** Check to make sure that additional water won't drain into the new treatment facility, such as from an existing parking lot or building. If this is the case, work with the local jurisdiction to make sure the treatment facility is sized correctly, or plan on changes to the site so that this water doesn't enter the treatment facility.
4. **Form:** Fill out the form for the treatment facility selected.
5. **Site Plan:** Create the site plan (see requirements on the form).
6. **Operations and Maintenance Plan:** Fill out the Operations and Maintenance Plan for the treatment facility selected.
7. **Submittal:** Submit the Form, Site Plan, Operations and Maintenance plan and Declaration of Covenants to the local jurisdiction for approval.
8. **Declaration of Covenants:** Execute the Declaration of Covenants for continued maintenance of the facility.
9. **Record Documents:** Record the Operations and Maintenance Plan and the Declaration of Covenants on the property.

OPTION DESCRIPTIONS:

Rain Garden.

Rain gardens hold rainwater in low lying areas allowing the water to soak into the ground.



Stormwater Planter.

Stormwater planters may either be in-ground or above-ground and have vertical sides created by curbs, walls, or containers. The planter needs to have an open bottom that allows water to soak into the ground.



Pervious surface.

Pervious surfaces allow water to move through openings within the pavement surface so that the water can soak into the rock and soil below. These surfaces can be porous pavers (stones), pervious concrete, or porous asphalt.



Vegetated Filter Strip.

Vegetated filter strips can be placed alongside impervious surfaces such as roadways, walkways, and patios, where rainwater drains off the pavement, filters through the vegetation and then soaks into the ground. Vegetated filter strips run along the paved surface, are gently sloped away from the surface, and must be completely vegetated.



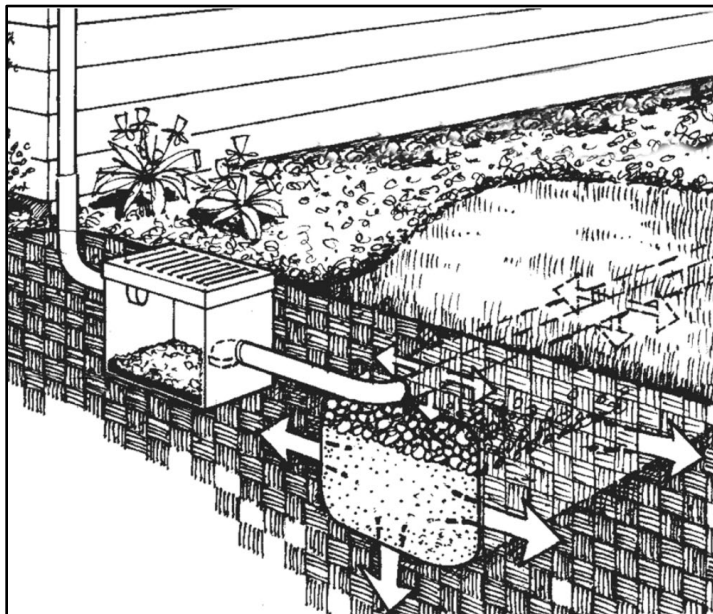
Disconnected Downspouts to Pervious Area.

Rainfall from the roof flows through downspouts or underground drain pipe to a pervious (not paved) area so that the water can soak into the ground instead of draining to the public storm drain system.



Disconnected Downspouts to Infiltration Trench.

Rainfall from the roof flows through downspouts or underground drain pipe to a trench filled with gravel so that the water can soak into the ground instead of draining to the public storm drain system.



RAIN GARDEN – SIMPLIFIED APPROACH

This form should be used when there are no civil plans for the project.

Project Name: _____ Permit / Project #: _____

Address: _____ Map and Taxlot: _____ Building Permit: _____

Property Owner: _____ Phone: _____

Project Description: _____

RAIN GARDEN SIZE

New or Redeveloped Impervious Area = _____ square feet

Rain Garden Size (0.05 x New or Redeveloped Impervious Area) = _____ square feet

RAIN GARDEN LOCATION

Site Description (**attach a site plan**): _____

Proposed Location of Facility (**indicate on attached site plan**): _____

RAIN GARDEN DRAINAGE

How will stormwater enter the rain garden?

☐ Flow across ground surface (**show slope direction on the attached site plan**)

☐ Pipe (**show pipes and catch basins on attached site plan**)

Spillway: During heavy rainstorms, when the rain garden fills up, where will any excess water go if the rain garden overflows? (**show drainage path on attached site plan**) _____

REQUIREMENTS

Property Owner to provide initials:

_____ Rain garden will be the size calculated above, or larger

_____ Rain garden will be planted with vegetation

_____ During heavy rainstorms, rain garden will not overflow onto a neighboring property

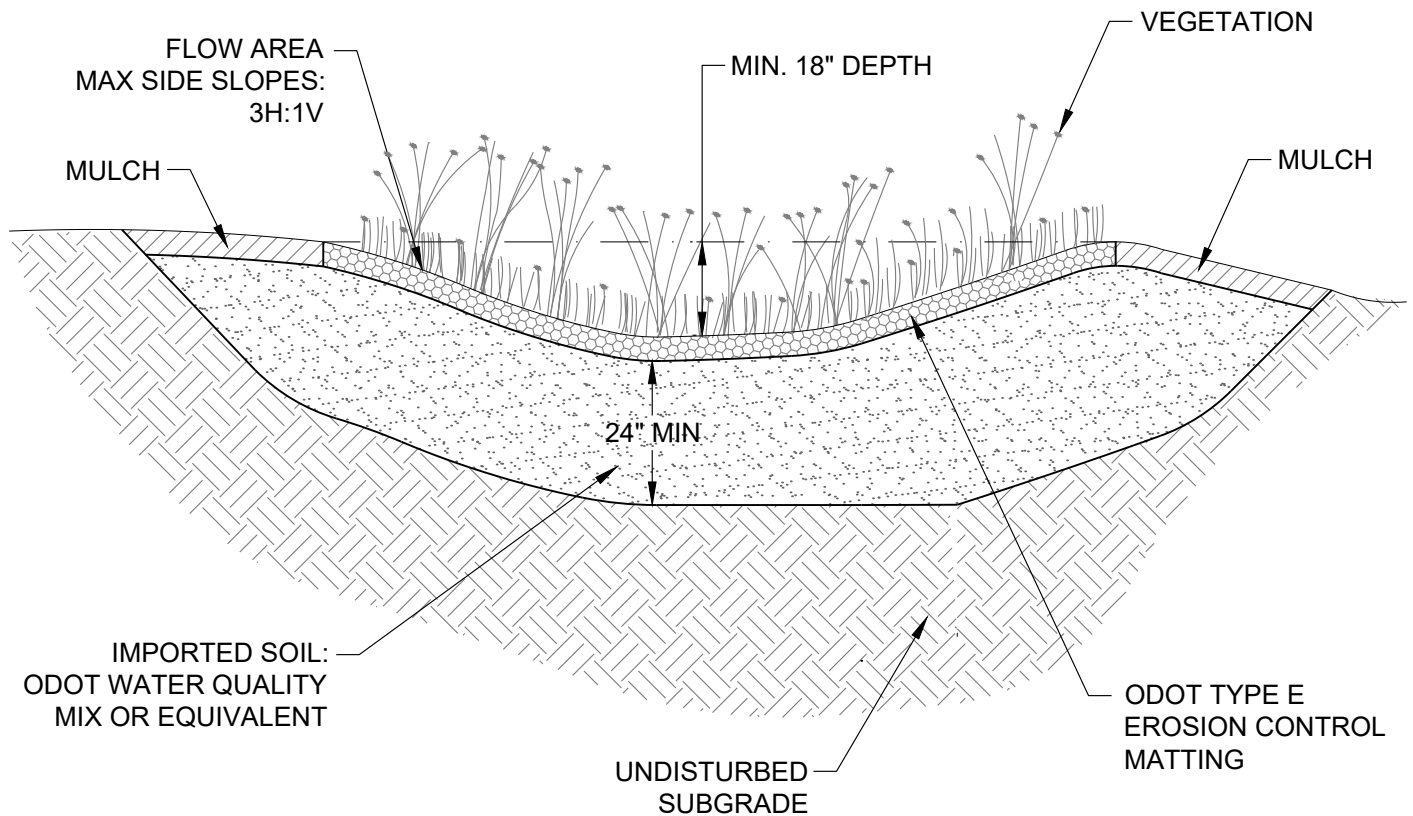
_____ Rain garden will be at least 10 feet away from building foundations

_____ All new or redeveloped impervious area will drain to the rain garden(s)

_____ I have read and understood the following: Even though this approach is allowed without an Oregon registered Professional Engineer (PE) or an Oregon Certified Engineering Geologist (CEG), there may be features of the project that would be best addressed by a PE or CEG to avoid negative results such as poor site drainage, high groundwater, or flooding. The project manager and owner should assess these risks to determine whether a PE or CEG should be hired to develop a site design including a grading, drainage, and or utility plan.

Owner Name: _____ Date: _____

Signature: _____



NOTE: MUST INCLUDE SIMPLIFIED APPROACH FORM

SEE SITE PLAN FOR SIZE AND LOCATION

STORMWATER PLANTER – SIMPLIFIED APPROACH

This form should be used when there are no civil plans for the project.

Project Name: _____ Permit / Project #: _____

Address: _____ Map and Taxlot: _____ Building Permit: _____

Property Owner: _____ Phone: _____

Project Description: _____

STORMWATER PLANTER SIZE

New or Redeveloped Impervious Area = _____ square feet

Stormwater Planter Size (0.05 x New or Redeveloped Impervious Area) = _____ square feet

STORMWATER PLANTER LOCATION

Site Description (**attach a site plan**): _____

Proposed Location of Facility (**indicate on attached site plan**): _____

STORMWATER PLANTER DRAINAGE

How will stormwater enter the stormwater planter?

☐ Flow across ground surface (**show slope direction of Drainage Area on the attached site plan**)

☐ Pipe (**show pipes and catch basins on attached site plan**)

Spillway: During heavy rainstorms, when the stormwater planter fills up, where will any excess water go if the stormwater planter overflows? (**show drainage path on attached site plan**) _____

REQUIREMENTS

Property Owner to provide initials:

_____ Planter will be the size calculated above, or larger

_____ Planter will be planted with vegetation

_____ During heavy rainstorms, planter will not overflow onto a neighboring property

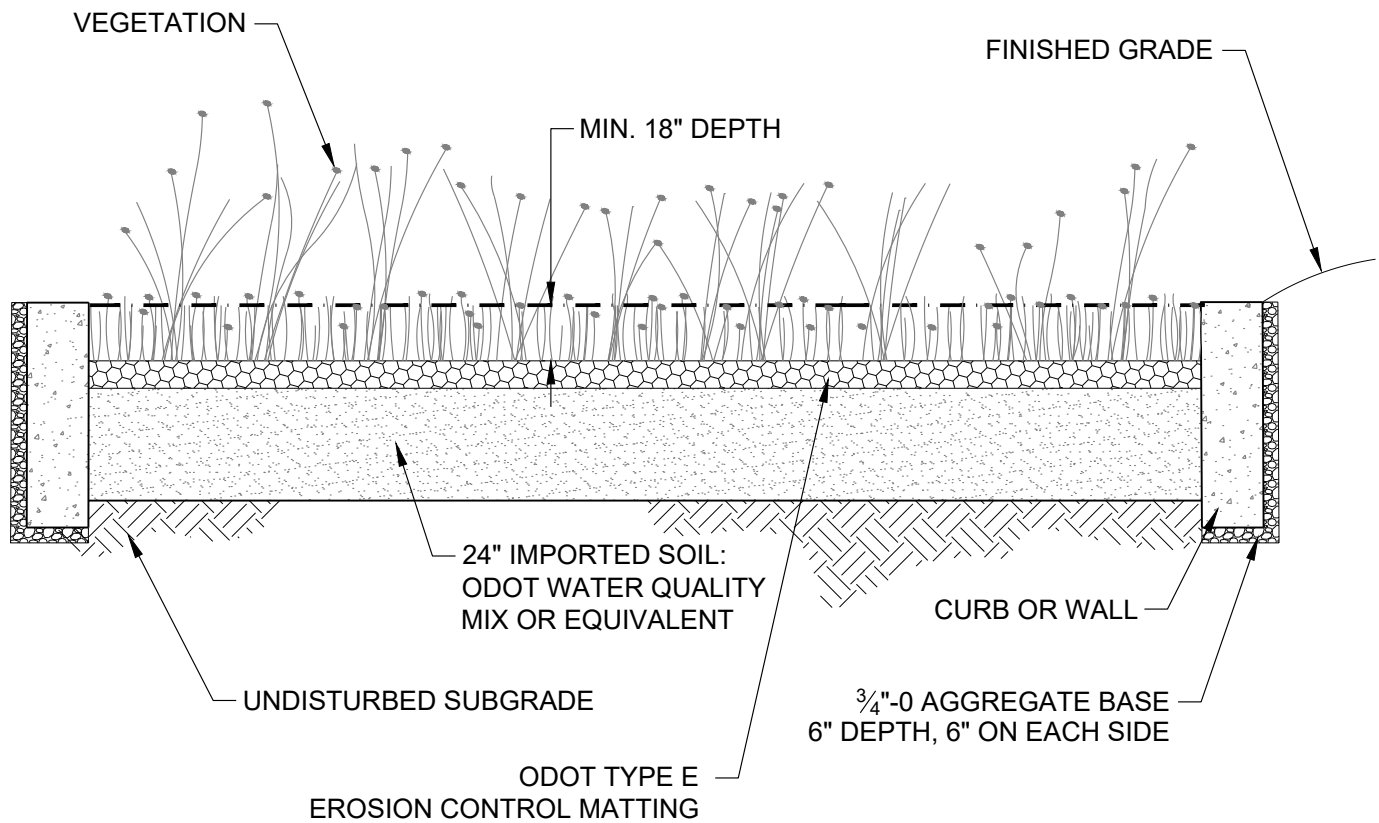
_____ Planter will be at least 10 feet away from building foundations

_____ All new or redeveloped impervious area will drain to the planter(s)

_____ I have read and understood the following: Even though this approach is allowed without an Oregon registered Professional Engineer (PE) or an Oregon Certified Engineering Geologist (CEG), there may be features of the project that would be best addressed by a PE or CEG to avoid negative results such as poor site drainage, high groundwater, or flooding. The project manager and owner should assess these risks to determine whether a PE or CEG should be hired to develop a site design including a grading, drainage, and or utility plan.

Owner Name: _____ Date: _____

Signature: _____



NOTE: MUST INCLUDE SIMPLIFIED APPROACH FORM

SEE SITE PLAN FOR SIZE AND LOCATION

PERVIOUS SURFACE – SIMPLIFIED APPROACH

This form should be used when there are no civil plans for the project.

Project Name: _____ Permit / Project #: _____

Address: _____ Map and Taxlot: _____ Building Permit: _____

Property Owner: _____ Phone: _____

Project Description: _____

PERVIOUS SURFACE LOCATION, USE AND TYPE

Site Description (**attach a site plan**): _____

Proposed Location of Facility (**indicate on attached site plan**): _____

Pervious surface type: ☐ Pavers ☐ Porous Concrete ☐ Porous Asphalt ☐ Gravel/rock

☐ Other: _____

Purposed use of pervious surface (patio, walkway, etc): _____

PERVIOUS SURFACE DRAINAGE

During heavy rainstorms, where will any excess water go if rainwater can't soak into the pervious surface?

(**Show drainage path on attached site plan**) _____

REQUIREMENTS

Property Owner to provide initials:

_____ Pervious surface will not be constructed in an area intended for vehicular use

_____ Construction of pervious surfaces will follow all manufactures recommendations/requirements, including base rock and surface thicknesses

_____ During heavy rainstorms, pervious surfaces will not cause water to flow onto a neighboring property

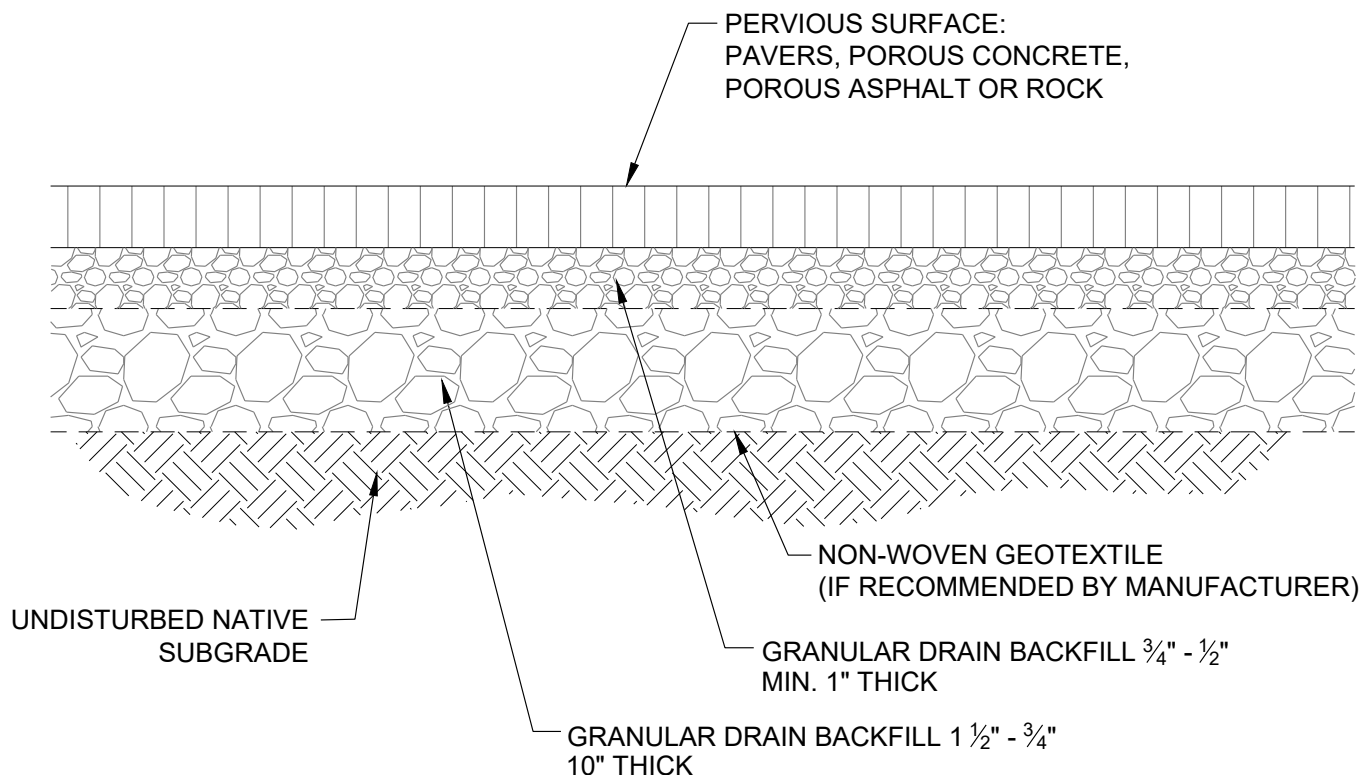
_____ Pervious surfaces will be at least 10 feet away from building foundations

_____ Pervious surface will only receive direct rainfall, runoff from other areas will not flow onto the pervious surface.

_____ I have read and understood the following: Even though this approach is allowed without an Oregon registered Professional Engineer (PE) or an Oregon Certified Engineering Geologist (CEG), there may be features of the project that would be best addressed by a PE or CEG to avoid negative results such as poor site drainage, high groundwater, or flooding. The project manager and owner should assess these risks to determine whether a PE or CEG should be hired to develop a site design including a grading, drainage, and or utility plan.

Owner Name: _____ Date: _____

Signature: _____



NOTES

1. STRUCTURAL AND INSTALLATION SHOULD BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS
2. UNLESS OTHERWISE APPROVED, GRANULAR DRAIN BACKFILL SHALL BE NO LARGER THAN $1\frac{1}{2}$ ".

SEE SITE PLAN FOR SURFACE, LOCATION, AND DIMENSIONS

VEGETATED FILTER STRIP – SIMPLIFIED APPROACH

This form should be used when there are no civil plans for the project.

Project Name: _____ Permit / Project #: _____

Address: _____ Map and Taxlot: _____ Building Permit: _____

Property Owner: _____ Phone: _____

Project Description: _____

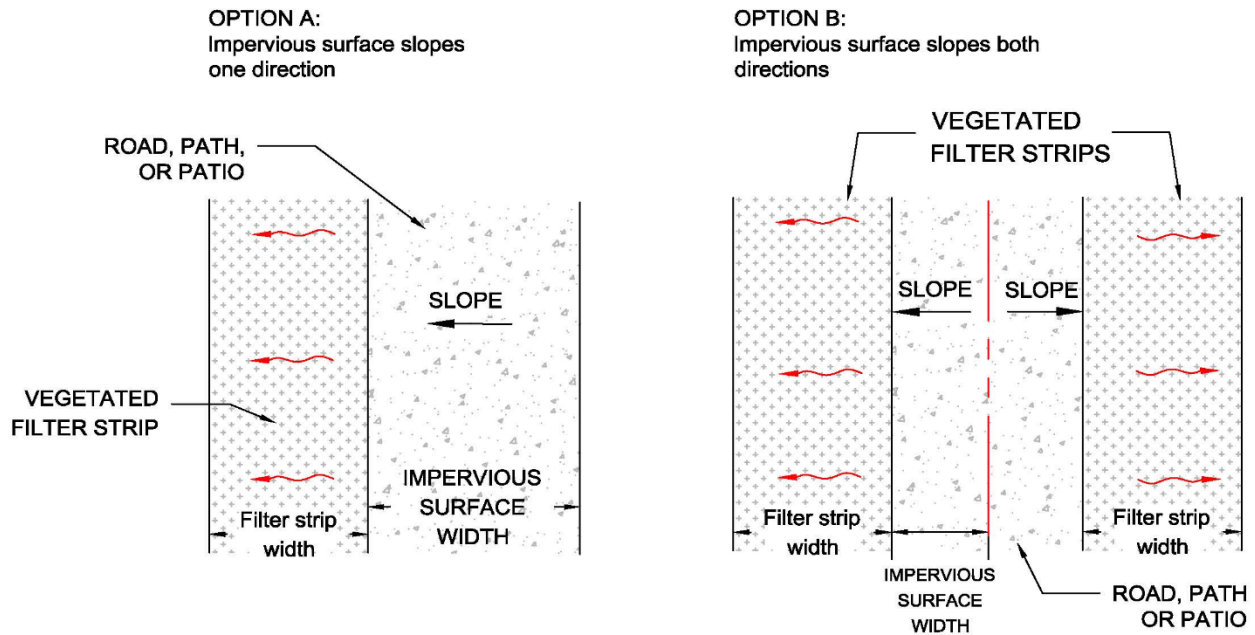
VEGETATED FILTER STRIP LOCATION AND USE

Site Description (**attach a site plan**): _____

Vegetated filter strips are installed alongside impervious surfaces such as roadways, walk ways, and patios. What type of surface is being built? ☐ Road ☐ Path ☐ Patio ☐ Other: _____

Proposed Location of Facility (**indicate on attached site plan**): _____

VEGETATED FILTER STRIP SIZE



Impervious surface width: _____ feet (**Maximum of 75 feet**)

Impervious surface slope to Filter Strip: _____ (**Max 5%**)

Filter strip slope away from impervious surface _____ (**Max 10%**)

Maximum longitudinal slope of impervious surface and filter strip _____ (**Max 4%**)

Vegetated filter strip width Calculation: Impervious surface width _____ feet x 0.5 = _____ feet

REQUIREMENTS

Property Owner to provide initials:

_____ Vegetated filter strip will be the size calculated above, or larger

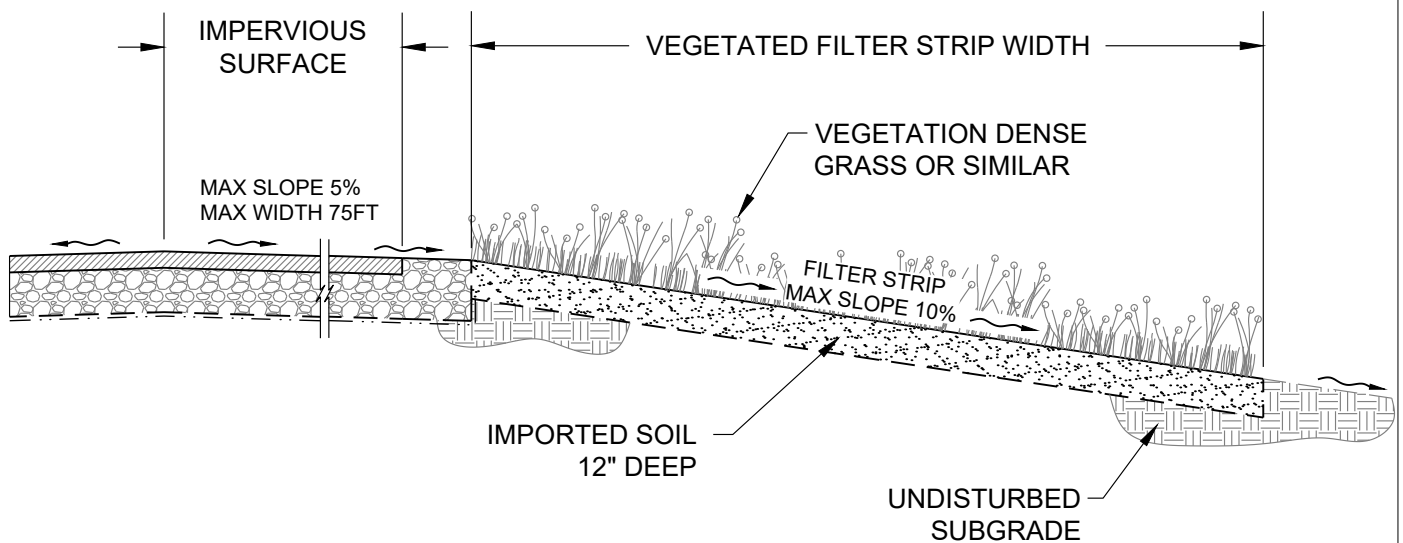
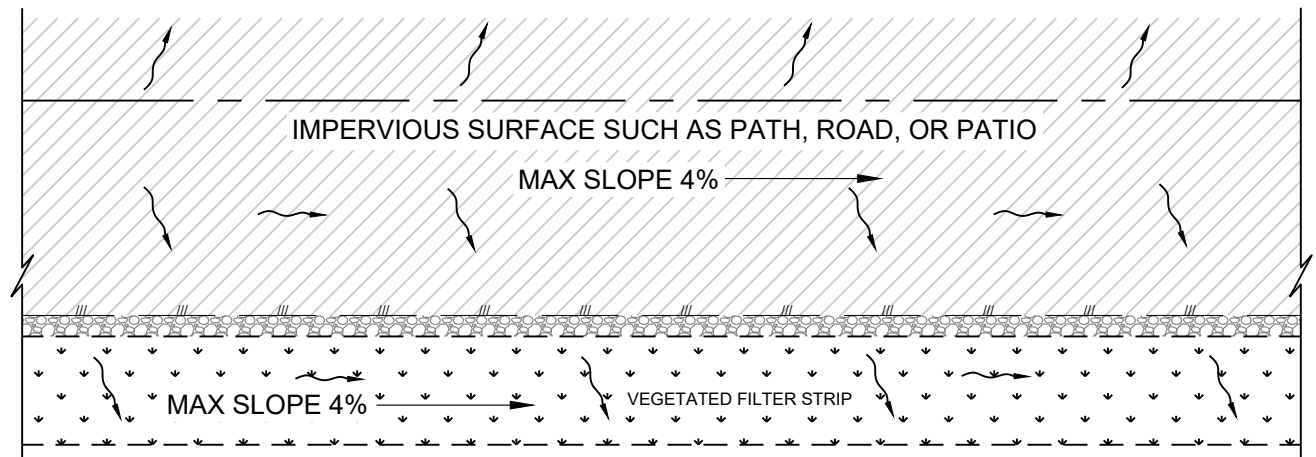
_____ Vegetated filter strip will not slope toward building foundations

_____ Maximum slopes of the impervious surfaces and filter strips do not exceed maximums stated.

_____ I have read and understood the following: Even though this approach is allowed without an Oregon registered Professional Engineer (PE) or an Oregon Certified Engineering Geologist (CEG), there may be features of the project that would be best addressed by a PE or CEG to avoid negative results such as poor site drainage, high groundwater, or flooding. The project manager and owner should assess these risks to determine whether a PE or CEG should be hired to develop a site design including a grading, drainage, and or utility plan.

Owner Name: _____ Date: _____

Signature: _____



SEE SITE PLAN FOR SIZE AND LOCATION

DISCONNECTED DOWNSPOUTS – TO PERVIOUS AREA

SIMPLIFIED APPROACH

This form should be used when there are no civil plans for the project.

Project Name: _____ Permit / Project #: _____

Address: _____ Map and Taxlot: _____ Building Permit: _____

Property Owner: _____ Phone: _____

Project Description: _____

Site Description (**attach a site plan**): _____

PERVIOUS AREA(S) SIZE AND LOCATION(S)

Total roof area = _____

Number of downspouts = _____ (**maximum roof area per downspout = 700 square feet**)

Pervious area required (roof area x 0.05) = _____

Describe downspout location and pervious surface locations:

PROJECT SITE DRAINAGE

Average lot slope: _____ (**must be less than 10%**)

Spillway: During heavy rainstorms, if water can't soak into the ground, where will any excess water go? (**show drainage path on attached site plan**) _____

REQUIREMENTS

Property Owner to provide initials:

_____ Discharge from downspouts will not flow over an impervious surface (such as pavement)

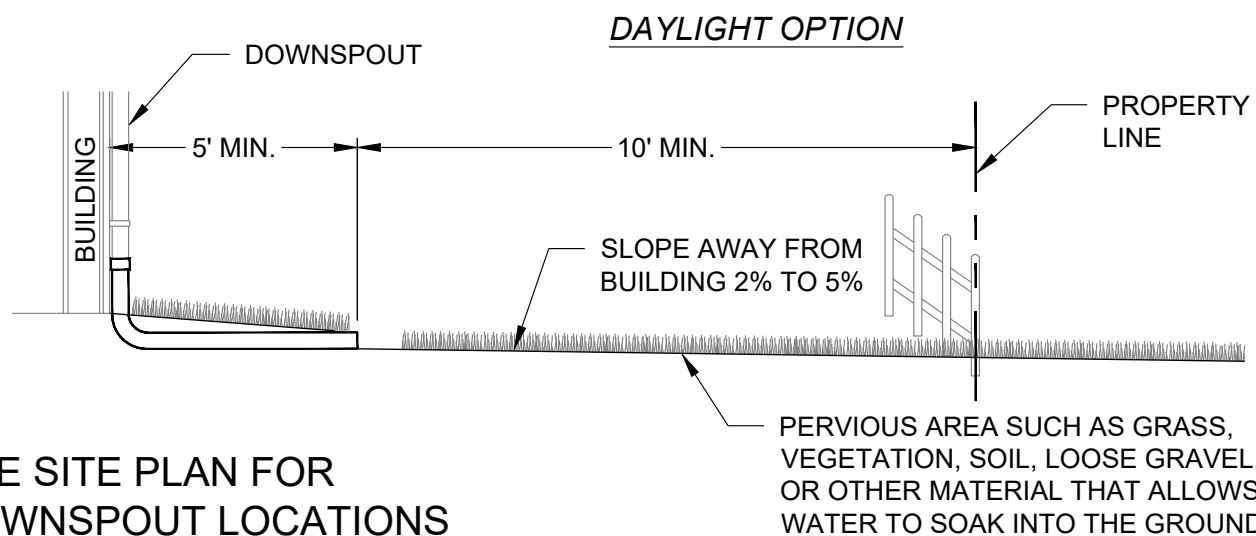
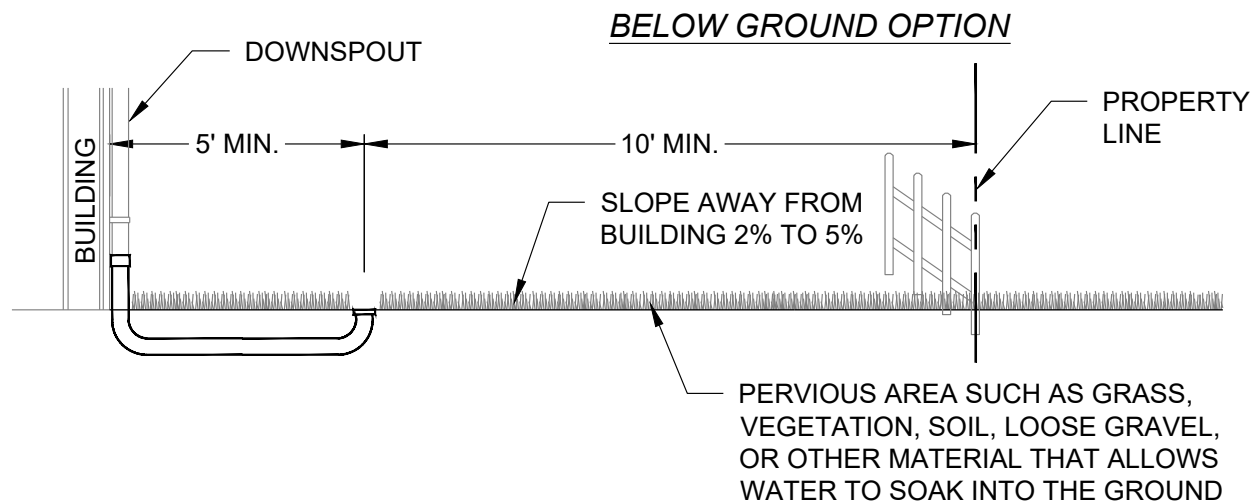
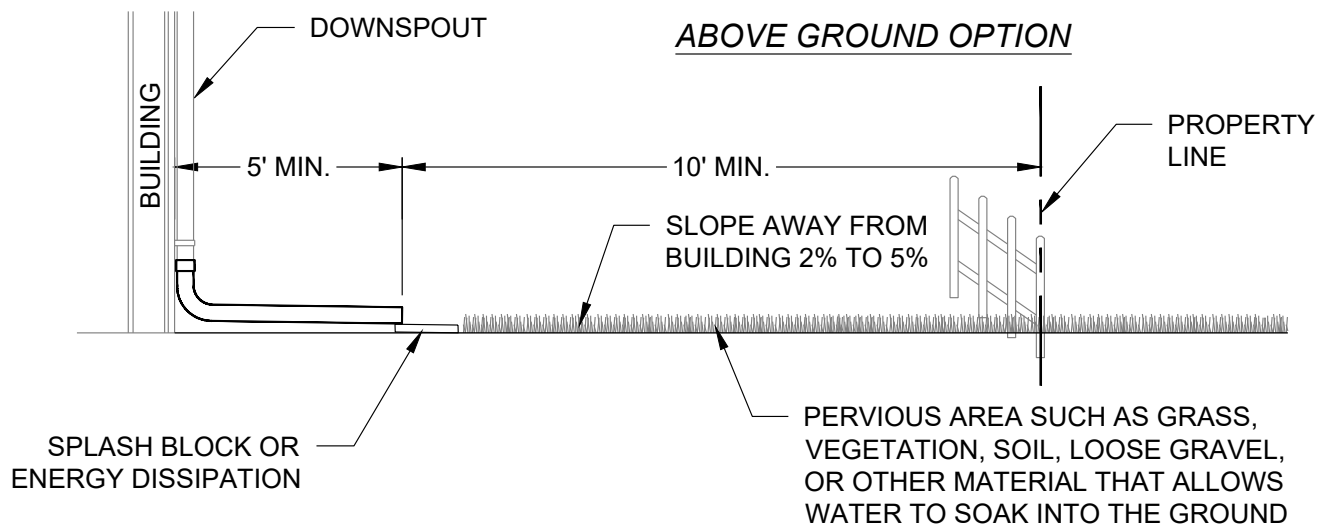
_____ Downspouts will discharge at least five feet away from building foundations and property lines

_____ Downspouts and pervious area will be installed per the attached detail

_____ I have read and understood the following: Even though this approach is allowed without an Oregon registered Professional Engineer (PE) or an Oregon Certified Engineering Geologist (CEG), there may be features of the project that would be best addressed by a PE or CEG to avoid negative results such as poor site drainage, high groundwater, or flooding. The project manager and owner should assess these risks to determine whether a PE or CEG should be hired to develop a site design including a grading, drainage, and or utility plan.

Owner Name: _____ Date: _____

Signature: _____



SEE SITE PLAN FOR
DOWNSPOUT LOCATIONS

DISCONNECTED DOWNSPOUTS – TO INFILTRATION TRENCH

SIMPLIFIED APPROACH

This form should be used when there are no civil plans for the project.

Project Name: _____ Permit / Project #: _____

Address: _____ Map and Taxlot: _____ Building Permit: _____

Property Owner: _____ Phone: _____

Project Description: _____

Site Description (**attach a site plan**): _____

PERVIOUS AREA(S) SIZE AND LOCATION(S)

Total roof area = _____

Number of downspouts = _____ (**maximum roof area per downspout = 700 square feet**)

PROJECT SITE DRAINAGE

Average lot slope: _____ (**must be less than 10%**)

Spillway: During heavy rainstorms, if water can't soak into the ground, where will any excess water go? (**show drainage path on attached site plan**) _____

REQUIREMENTS

Property Owner to provide initials:

_____ Downspouts and infiltration trench will be installed per the attached detail

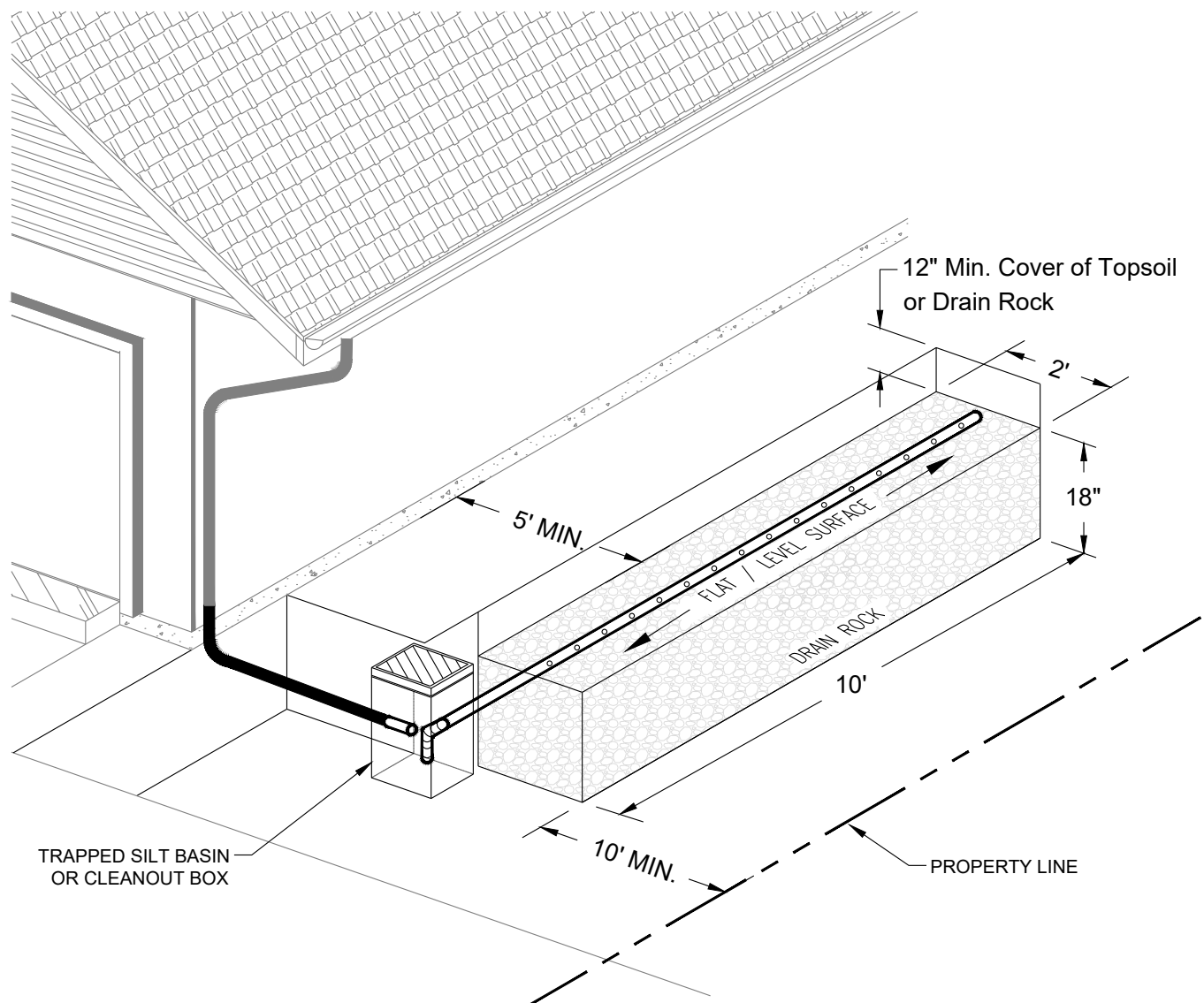
_____ Downspouts will discharge into the infiltration trench at least 10 feet away from building foundations and property lines

_____ A clean out box will be added near the building

_____ I have read and understood the following: Even though this approach is allowed without an Oregon registered Professional Engineer (PE) or an Oregon Certified Engineering Geologist (CEG), there may be features of the project that would be best addressed by a PE or CEG to avoid negative results such as poor site drainage, high groundwater, or flooding. The project manager and owner should assess these risks to determine whether a PE or CEG should be hired to develop a site design including a grading, drainage, and or utility plan.

Owner Name: _____ Date: _____

Signature: _____



NOTES

1. Without prior approval, rock shall be clean 3/4" to 2" uniformly graded drain rock.
2. Non-woven geotextile required around infiltration trench.

SEE SITE PLAN FOR LOCATION