Construction Criteria for Infiltration Facilities

Initial basin excavation should be conducted to within 1-foot of the final elevation of the basin floor. Excavate infiltration trenches and basins to final grade only after all disturbed areas in the upgradient project drainage area have been permanently stabilized. The final phase of excavation should remove all accumulation of silt in the infiltration facility before putting it in service. After construction is completed, prevent sediment from entering the infiltration facility by first conveying the runoff water through an appropriate pretreatment system such as a pre-settling basin, wet pond, or sand filter.

Infiltration facilities should generally not be used as temporary sediment traps during construction. If an infiltration facility is to be used as a sediment trap, it must not be excavated to final grade until after the upgradient drainage area has been stabilized. Any accumulation of silt in the basin must be removed before putting it in service.

Traffic Control: Relatively light–tracked equipment is recommended for this operation to avoid compaction of the basin floor. The use of draglines and trackhoes should be considered for constructing infiltration basins. The infiltration area should be flagged or marked to keep heavy equipment away.
MEDIA FILTER DRAIN; SHEET FLOW CONFIGURATION
HIP BMP "C.1", TYPICAL

SECTION VIEW

MEDIA FILTER DRAIN MIX

RIVER ROCK (3" MIN)

PAVEMENT RUNOFF

15" MIN

GEOTEXTILE FOR DRAINAGE

WASHED DRAIN ROCK

PERFORATED PIPE

GEOTEXTILE FOR DRAINAGE

LAWN RUNOFF

NATIVE
MEDIA FILTER DRAIN END-OF-PIPE CONFIGURATION

HIP BMP "C.2", TYPICAL NTS
(1) 25' Recommended Shoreline Setback. Maybe reduced to 15' if soil investigation demonstrates bottom of MFD is above high groundwater elevation.

(2) Match existing slope to greatest extent feasible. Recommended maximum slope is 7:1 (4:1 slope may be stable on certain sites).
MEDIA FILTER DRAIN
30% CLEAN BEACH

NOTES

1. INFLOW VIA SHEET OR PIPED FLOW.

2. DIRECT OUTFLOW FROM MFD TOWARDS CLEAN BEACH TO GREATEST EXTENT POSSIBLE. SURFACE GRADED AND SLOPING MFD TRENCH (2% MAX) ALLOWED.

3. SHORELINE NATIVE LANDSCAPING. PROVIDE MINIMUM PLANTED AREA EQUAL TO TOTAL PARCEL SHORELINE LENGTH X 15’. MINIMUM 5’ PLANTING BUFFER WIDTH AT SHORELINE.

4. 25’ STANDARD MFD SETBACK. REDUCED TO 15’ WITH SUBSURFACE SOIL INVESTIGATION AND ADEQUATE GROUNDWATER CLEARANCE.

5. PROVIDE MAXIMUM 30% CLEAN BEACH AT SHORELINE FOR WHATCOM COUNTY PROJECTS.

* PLAN VIEW SHOWN IS FOR CONCEPTUAL PURPOSES ONLY. MFD CONFIGURATIONS SHALL MEET ALL MINIMUM REQUIREMENTS IN HIP DESIGNER MANUAL AND MUST BE APPROVED BY PLANNING DEPARTMENT.
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SECTION VIEW

OVERFLOW STRUCTURE WITH GRATE INLET

RIVER ROCK

LAWN RUNOFF

OVERFLOW

PERMEABLE PAVER JOINT FILLER

RIGID SOLID PIPE

UNCOMPACTED SUBGRADE

GEO TEXTILE FOR DRAINAGE (ONLY ON SIDES)

ROCK TRENCH OR MEDIA FILTER DRAIN

PERMEABLE PAVERS

<-- PAVEMENT RUNOFF

CASCADE STONE OR EQUIVALENT

CURB OR RIGID EDGE RESTRAINT
Design Guidance

Erosion and Sediment Control

GENERAL CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN

PURPOSE
To prevent the discharge of sediment and other pollutants to the maximum extent practicable from small construction projects.

DESIGN AND INSTALLATION
Plan and implement proper clearing and grading of the site. It is most important only to clear the areas needed keeping exposed areas to a minimum. Phase clearing so that only those areas that are actively being worked are uncovered.

NOTE: Clearing limits shall be flagged on the lot or project area prior to initiating clearing.

- From October 1 through May 31, no soils shall be exposed and from June 1 to September 30, no soils shall remain exposed and unworked for more than seven days.
- Soils shall be managed in a manner that does not permanently compact or deteriorate the final soil and landscape system. If disturbance and/or compaction occurs, the impact must be corrected at the end of the construction activity. This shall include restoration of soil depth, soil quality, permeability, and percent organic matter. Construction practices must not cause damage to or compromise the depth of permanent landscape or infiltration areas.
- Locate any soil piles away from drainage systems. Soil piles should be capped with mulched until the soil is either used or removed. Piles should be situated so that runoff does not run into the street or adjoining yards.
- Backfill walls as soon as possible after backfilling. This will eliminate any sediment loss from surplus fill.
- The construction entrance shall be stabilized where traffic will be leaving the construction site and traveling on paved roads or other paved surfaces.
- Provide for periodic street cleaning to remove any sediment that may have been tracked out. Sediment should be removed by shoveling or sweeping and carefully removed to a suitable disposal area where it will not be re-eroded. Street washing is prohibited.

QUARRY SPALL CROSSECTION

- Quarry Spalls
- Hog Fuel

GEOTEXTILE FOR SEPARATION

OVERFLOW BYPASS FOR PEAK STORM VOLUMES

SILT FENCE SEDIMENT BARRIER

NTS

ADAPTOR SKIRT TRIM TO WITHIN 3'-5' OF GRATE

RETRIEVAL STRAP

OVERFLOW BYPASS FOR PEAK STORM VOLUMES

SEDIMENT ACCUMULATION

CATCH BASIN INSERT (INLET PROTECTION) DETAIL

NTS

NOTES:
1. Insert shall be installed prior to clearing and grading activity, or upon placement of a new catch basin.
2. Sediment shall be removed from the unit when it becomes half full
3. Sediment removal shall be accomplished by removing the insert, emptying, and reinserting it into the catch basin.
Design Guidance

Conveyance

FLOW TO SECOND DISPERSION TRENCH IF NECESSARY

FLOW TO OTHER BRANCHING CATCH BASINS AS NECESSARY

GROUND

TO TRENCH

FROM ROOF/YARD

FINE MESH SCREEN

JUNCTION BOX

3" MIN

PEA GRAVEL
TOP SOIL

FILTER FABRIC
FOR TOP SOIL COVER ONLY

WASHED DRAIN ROCK
OR BALLAST

4" PERFORATED PIPE

18" MIN

SECTION VIEW

HIP PIPE TRENCH CONVEYANCE DETAIL (TYPICAL)

NTS
NOTES:
1. UNLESS OTHERWISE INDICATED ON PLAN, SIDE SERVICE SHALL BE LOWER THAN THE LOWEST LOT ELEVATION.
2. WHEN REPLACING EXISTING SIDE SERVICE, CONTRACTOR SHALL VERIFY POSITIVE FALL, OTHER EXISTING CONNECTIONS, AND SAGS OR DEFLECTIONS IN PIPE, AS PER ASTM F 1743 8.6.