Bioretention Data Sheet

Bioretention (identifying name or number): _____ **Designer** _____

1) Determine Water Quality Volume (WQv = C 0.75 A/12)

A. Contributing drainage area (DA acres or ft^2): _____

B. Impervious fraction of the contrib. drainage area (post-dev.): _____

C. Calculate C, $C = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$): _____

D. Water Quality Volume (ac-ft or ft^3): _____

2) Determine minimum filter bed area (min. FBA)

If site > 25% impervious then min. FBA = I.A. x 0.05 (ac or ft^2) _____
(I.A. = Impervious Area)

If site ≤ 25% impervious then WQv ÷ 1 (acres or ft^2): _____

3) Provide dimensions & elevations (below & on diagrams).

A. Depth of ponding (max 12", $d_{Ponding\ Area}$ = WQv ÷ min FBA) (ft): _____

B. Side slopes (maximum 3:1, ft horizontal: ft vertical): _____

C. Width and length of area (attach a sketch for irregular shapes) W=_____ L=_____

D. Depth of soil media (2' minimum, $d_{Soil\ Media}$ ft): _____

E. Depth and type of filter layers ($d_{Clean\ sand}$ft/ODOT #): _____

($d_{Clean\ Pea\ Gravel}$ ft/ODOT #): _____

F. Depth and type of gravel ($d_{Clean\ No.\ 57}$ft/ODOT#): _____

G. Size of underdrain (inches): _____

H. Bottom elevation of bioretention: _____

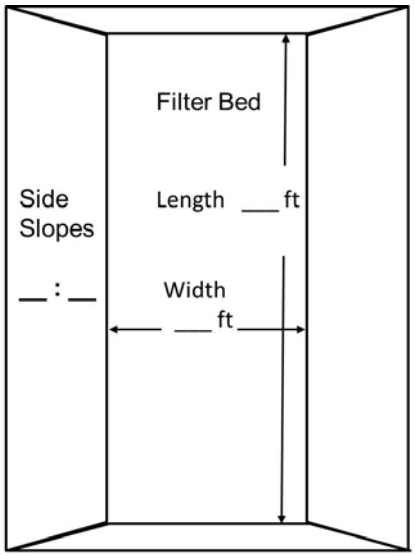
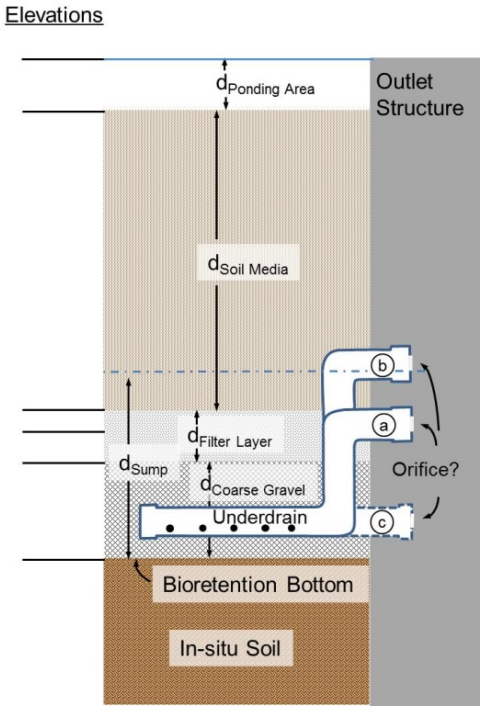


Figure 1 Filter Bed and Side slopes

Figure 2 Bioretention Depths and Elevations



4) Check that area drains within allowable time period.

A. Depth of Ponding (ft) _____

B. Infiltration rate of settled soil media (0.5 in/hr) _____

C. Time to drain through soil media (hours) _____

D. Will an orifice be used to control underdrain flow (yes or no)? _____

E. If yes, what size orifice will be used? _____

5) Optimize runoff reduction through infiltration.

A. In-situ soil – soil survey series name: _____

B. In-situ infiltration test results (infiltration rate in/hr): _____

C. Hydrologic Soil Group (HSG) and target site runoff to infiltrate:

☐ A 2" runoff ☐ B 1.5" runoff ☐ C 0.75" runoff ☐ D <35% clay 0.5" runoff

☐ D > 35% clay 0.25" runoff ☐ Other:_____" runoff

D. Infiltration sump depth (d_{sump}) _____ (ft) and volume _____ (ft^3).

E. Is a sump created with an elevated outlet (see figure 2)? _____

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6) Pretreat runoff depending upon type of flow (Specify type of flow and practices).

□ Sheet flow (gravel verge and grass filter strip):

_____

□ Concentrated flow (grass swale, forebay, other):

_____

7) Outlet and overflow

A. □ Bioretention is in-line (overflow & inflow have the same route)?

B. □ Bioretention is off-line (inflow and overflow exit by different routes)?

C. Type of overflow or outlet structure (drop Inlet, weir, spillway, other):

_____

D. Are peak discharge requirements managed with the bioretention outlet (yes or no)? _____

E. Local peak discharge requirements: □ **1)** None □ **2)** Offsite & downstream □ **3)** Over bioretention

If 3) is checked, describe outlet configuration for peak discharge control:_____

If 3) is checked, what additional volume (to WQv) is managed on the bioretention area? _____ (ft^3)

8) Other bioretention features

A. Are perimeter drains used to lower water table (yes or no): _____

Approximate perimeter drain elevation (mark on diagram as well): _____

B. Outfall of pipe spillway from overflow outlet if appropriate (invert elevation): _____

C. Liner (yes or no; state reason, e.g. high groundwater, high pollution potential or other reasons): _____

_____

_____

D. Vegetation planned:

_____

_____

_____

E. Other notes:

_____

_____

_____