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 ft²): ______________________
   - B. Impervious fraction of the contrib. drainage area (post-dev.): __________
   - C. Calculate C, C = 0.858i³ - 0.78i² + 0.774i + 0.04): __________
   - D. Water Quality Volume (ac-ft or ft³): _________________

2) Determine minimum filter bed area (min. FBA)
   - If site > 25% impervious then min. FBA = I.A. x 0.05 (ac or ft²) ___________
     (I.A. = Impervious Area)
   - If site ≤ 25% impervious then WQV ÷ 1 (acres or ft²): _________________

3) Provide dimensions & elevations (below & on diagrams).
   - A. Depth of ponding (max 12”, dponding 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, dsoil_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: _________________

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 ___________ (ft³).
   - E. Is a sump created with an elevated outlet (see figure 2)? _________________
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? _______ (ft³)

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: