

# Location & Design Guidelines for Infiltration Facilities Fairfax County, Virginia



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## LOCATION & DESIGN GUIDELINES FOR INFILTRATION FACILITIES

Purpose and Scope: With the adoption of the amendments adding soil testing for infiltration facilities to the Public Facilities Manual (§ 4-0700, Testing for Infiltration Facilities) in March, 2013, separate guidelines for soils investigation and reporting are no longer necessary. These location and design guidelines found within the earlier testing guidelines are, however, still applicable. Infiltration facilities include percolation trenches (PFM 6-1303), pervious pavement with full or partial exfiltration (PFM 6-1304) and bioretention basins (PFM 6-1307).

Questions regarding the location and design of infiltration facilities should be directed to a geotechnical or stormwater engineer in the Site Development & Inspections Division (SDID) at 703-324-1720.

### **Infiltration facilities should be located as follows:**

- a. The invert of the proposed infiltration system must be separated from both the SHWT and bedrock by at least 4 feet.
- b. Infiltration systems must be located at least 20 feet (horizontal distance) from the foundations of buildings regardless of whether there is a basement.
- c. No portion of the invert of infiltration systems can be placed in fill soils.
- d. Infiltration systems must not be on finished slopes steeper than 15 percent (6.7H:1V).
- e. Infiltration systems must not be sited at a location which could cause water-related problems or slope instability on downslope properties.
- f. Infiltration systems must be located a minimum of 100 feet (horizontal distance) from any existing and proposed water supply well.
- g. Infiltration systems must be located a minimum of 50 feet (horizontal distance) from septic fields.
- h. Maintenance of infiltration systems is a primary concern of the county and is critical to the long-term operation of these facilities. Maintenance of these systems is the responsibility of the owner. The design professional must consider the maintenance and operational requirements of these facilities, and the resources of the responsible parties, in determining the appropriateness of their use for a specific application. Underground or "buried infiltration systems" utilizing large pipes, manufactured components, modules, chambers or vaults are discouraged due to the difficulty of inspection and maintenance. If an underground infiltration system is proposed, an adequate pretreatment system appropriate for the location and type of development is required to prevent sediments from entering the system. These underground infiltration systems, as described above, should not be used under paved areas if there are other viable options because the pavement significantly increases the cost of repair and replacement.
- i. Infiltration systems may not be utilized in-line with the main conveyance system.
- j. Infiltration systems must be designed in accordance with § 6-0000 *et seq.* of the Fairfax County Public Facilities Manual.