

GEOTECHNICAL REQUIREMENTS FOR STORM WATER FACILITIES

Qualifications

Soil testing by a qualified geotechnical consultant is required when it is necessary to determine the site soil infiltration characteristics and groundwater table. The geotechnical consultant shall be either a registered professional engineer, soil scientist, or geologist licensed in the State of Michigan.

Initial Feasibility Investigation

An initial feasibility investigation may be conducted to screen unsuitable sites. Initial investigation involves making use of any of the following resources:

1. Mecosta County Soil Survey prepared by the NRCS.
2. Existing soil borings or geotechnical report on the site prepared by a qualified geotechnical consultant.
3. Onsite septic percolation testing within 200 feet of the proposed infiltration basin location and on the same contour.

Soil Boring Requirements

One soil boring is required per 5,000 square feet of storm water facility bottom area.

Soil borings shall be located within the perimeter of the proposed storm water facility.

Each boring shall extend a minimum of 5 feet below the proposed bottom elevation of the storm water facility.

Groundwater elevations must be recorded during drilling, and again upon completion of drilling.

Standard penetration testing shall be performed at 2-foot intervals, and changes in soil type noted. Each soil type shall be classified using the Unified Soil Classification System.

Soil boring logs shall be referenced to a top-of-ground elevation, and include the above information .

Field Permeability Testing

A minimum of one test per storm water facility shall be performed, where required, by the following method:

Infiltration Rate of Soils in Field Using Double-Ring Infiltrimeters (ASTM D-3385)