

Policy Statement

City of Ann Arbor, Michigan

Stormwater Management Guidelines for Public Street Construction and Reconstruction

Public Streets Construction and Reconstruction projects in the City of Ann Arbor will utilize Green Infrastructure to infiltrate stormwater runoff from impervious areas that are disturbed. At a minimum, infiltration techniques implemented on the project shall be similar to those described in the Low Impact Development Manual for Michigan, Sept. 2008. This policy does not apply to maintenance and/or resurfacing projects.

Based on an analysis of the soil borings, the project manager shall determine the area(s) of the project with the most favorable infiltration potential. Within the potential infiltration area(s), the infiltration rate(s) shall be determined by lab test or field test. The infiltration test location and depth shall be determined by the designers anticipated green infrastructure improvement. The infiltration standard shall be calculated for the entire project area and shall be determined using the following site condition factors:

Site Conditions

Infiltration Standard

<ul style="list-style-type: none">• Within the floodplain, or• Slopes > than 20%, or• Soil infiltration rate < 0.6 in/hr	First 1 inch
<ul style="list-style-type: none">• Not in the floodplain, and• Slopes < than 20%, and• Soil infiltration rate between 0.6 in/hr – 2.0 in/hr	50% annual chance - 24 hour event (2.35")
<ul style="list-style-type: none">• Not in the floodplain, and• Slopes < than 20%, and• Soil infiltration rate >2.0 in/hr	10% annual chance – 24 hour event (3.26")

*Notes: Soil Infiltrations Rates are based on A and B soil classifications in the Soil Survey of Washtenaw County, Michigan (1977).
Rainfall frequency estimates are derived from NOAA Atlas 14 Volume 8 (2013).*

Notes:

- All public street construction and reconstruction projects are required to comply with the stormwater management requirements of Chapter 63 to the maximum extent practicable. Chapter 63 utilizes the Rules of the Washtenaw County Water Resources Commissioner. Within these rules, there is guidance for both detention and infiltration facilities.
- The above infiltration standards are separate from and supplemental to the requirements of Chapter 63. However, the volume of runoff infiltrated would count toward a reduction of the volume required to be detained per Chapter 63 by an equal amount.
- If the site conditions suggest multiple infiltration standards, utilize the highest feasible standard.
- Where site conditions allow, infiltration beyond the minimum standard is encouraged.
- The chosen green infrastructure improvement can be placed at any location within the project area, so long as the total volume to be infiltrated is captured and hydraulically connected to the disturbed area.
- If the project area contains groundwater within 5 feet of the surface, contaminated soil, or other limiting conditions the infiltration standards will have to be examined on a case-by-case basis to determine what infiltration rate and practices are feasible. In situations where the First 1-inch cannot be infiltrated, a lower infiltration standard may be used if approved by the Public Services Administrator.
- All infiltration facilities require the development of maintenance plans that are coordinated with the City of Ann Arbor Field Operations Staff.

Infiltration Standard Flowchart

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