Rochester Hills Engineering Design Standards

Proposed Revision to Chapter 4 – Stormwater Management

DECEMBER 5, 2022

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

- The Michigan Department of Environment, Great Lakes, and Energy (EGLE) is responsible for reviewing and approving MS4 permits

- The MS4 program goal is to reduce the discharge of pollutants to the surface waters of the State

PROPOSED CHANGES TO THE STORMWATER SECTION OF THE ENGINEERING DESIGN STANDARDS

- **Current Version of RH Engineering Standards**
  - 0.5-inch water quality treatment
  - 1.87-inch rainfall event for channel protection

- **Proposed Revision to RH Engineering Standards**
  - 1-inch water quality treatment
  - 2.39-inch rainfall event for channel protection

PROPOSED CHANGES TO THE STORMWATER SECTION OF THE ENGINEERING DESIGN STANDARDS

- **Water Quality Treatment Equation**

  (1,815)(Site Area in Acres)(Weighted Runoff Coefficient) - Current Version

  (3,630)(Site Area in Acres)(Weighted Runoff Coefficient) - Proposed Change

- **Channel Protection Equation**

  (6,788)(Site Area in Acres)(Weighted Runoff Coefficient) - Current Version

  (8,676)(Site Area in Acres)(Weighted Runoff Coefficient) - Proposed Change

PROPOSED CHANGES TO THE STORMWATER SECTION OF THE ENGINEERING DESIGN STANDARDS

The text of Item D.1.b. on page 4-4 shall be revised as:

The bankfull storm event or the ~~1-year~~ 2-year 24-hour event shall be attenuated for at least 24 hours (i.e. the stormwater will be released over a minimum of 24 hours) as described in chapter pages 4-6 to 4-7 for Channel Protection (Bankfull).

The text of Item D.3.b.ii on page 4-6 shall be revised as:

Existing text shall be deleted and replaced with, “The post development water quality stormwater Practice (SMP) shall be achieved through the inclusion of a mechanical separator, a sediment forebay, or an infiltration trench(es) designed to remove at least 80% Total Suspended Solids.

The text of Item D.3.c.i on page 4-7 shall be revised as:

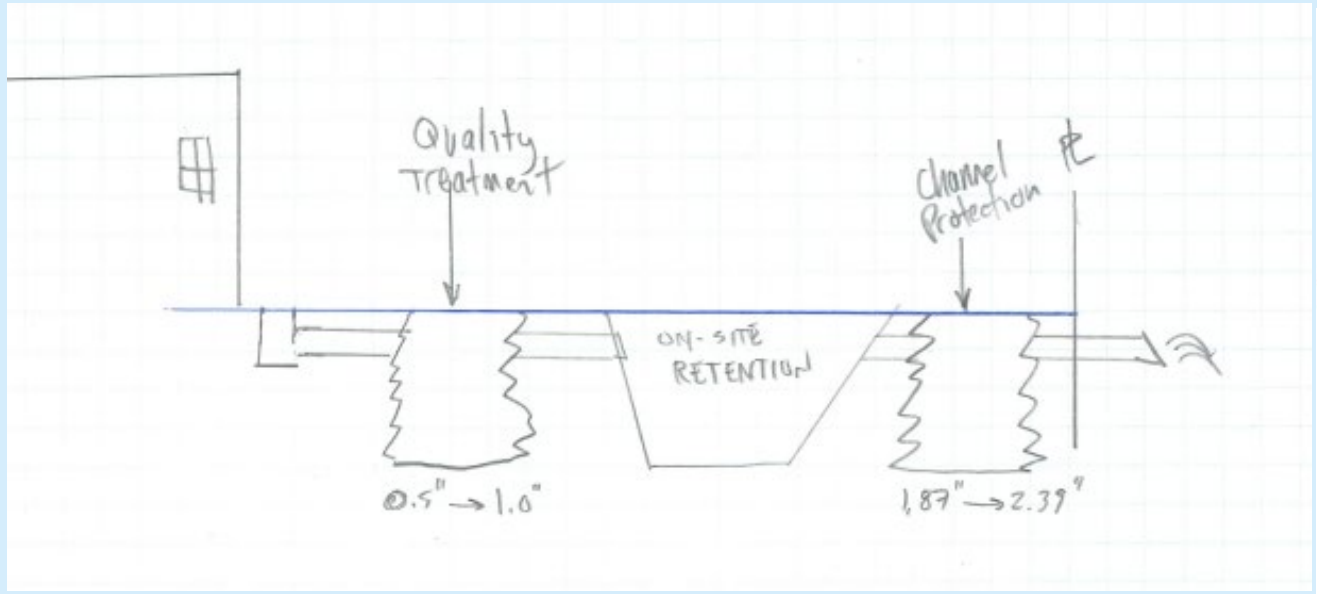
The volume of storage provided for controlling the bank full flood will be equal to or in excess of the runoff from a ~~1-year~~ 2-year 24-hour storm, which can be determined by:

PROPOSED CHANGES TO THE STORMWATER SECTION OF THE ENGINEERING DESIGN STANDARDS

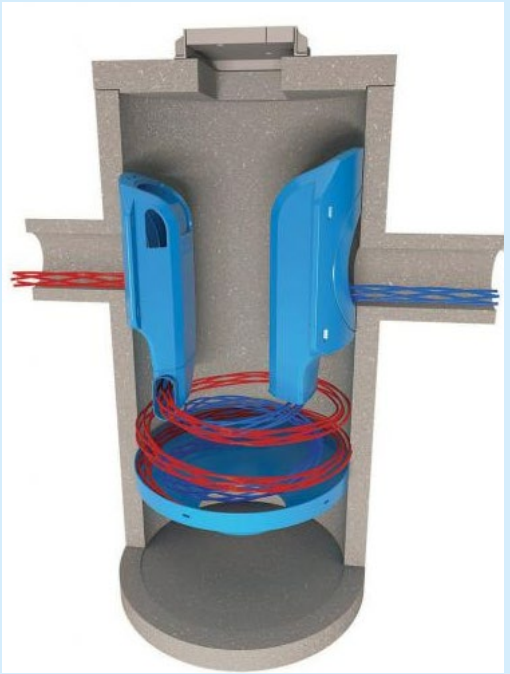
The text of Item D.7.a.i on page 4-24 shall be revised as:

If a manufactured treatment device (MTD) is proposed to help achieve better stormwater quality, it must be capable of treating the peak stormwater quality flow rate, which is, the ~~one year, one half inch (0.5~~") one-inch (1.0") rain event which occurs within 15 minutes using the rational method.

PROPOSED CHANGES TO THE STORMWATER SECTION OF THE ENGINEERING DESIGN STANDARDS



Three components of On-Site Stormwater Management



Quality Treatment Device Examples

Any Questions or Comments?