CASE STUDY

Grand Rapids' Redeveloped Park Also Treats Stormwater

Grand Rapids, MI

OWNER
City of Grand Rapids, MI

INSTALLATION DATE
September 2015

ENGINEER
Black & Veatch, Grand Rapids, MI

PRODUCTS
678 StormTech® MC-4500 chambers
6" (150 mm) N-12® pipe
Nyloplast® inline drains
6" (150 mm) Inserta Tee®

DESCRIPTION

The City of Grand Rapids planned to update a city park and decided at the same time to invest in green infrastructure by using the site to treat stormwater runoff and control flooding. Mary Waters Park, ironically, was chosen as the site for the stormwater management system.

The system will hold 750,000 gallons (2,839,058 liters) of stormwater, which will reduce total suspended solids (TSS) flowing into the Grand River and help control flooding. The system, which was Grand Rapids largest stormwater control project, was part of the city eliminating its combined sewer overflow (CSO) pipelines. The contractor was given two choices for the project and chose to use StormTech MC-4500 chambers due to the ease of installation, extended service life and total cost savings.

This project routes stormwater runoff from the surrounding residential and commercial area into the 678 MC-4500 chambers. The chambers were placed in 14 rows inside the 130' x 210' (40 x 64 m) footprint and buried 11'-15' (3.3-4.5 m) deep. Two hydrodynamic separators and a

adspipe.com
800-821-6710

StormTech Isolator® Row were installed to remove TSS, large debris and other floatable pollutants. The stormwater was then allowed to infiltrate into the soil, which eliminates more than 11 million gallons (41,640,000 liters) of untreated stormwater from entering the Grand River.

Perimeter drainage on the site was achieved with 6” (150 mm) N-12 dual wall pipe and 6” (150 mm) Inserta Tee were used to connect the pipe to the system. Nyloplast inline drains were used for inspection ports, which allow for easy system access for inspection and maintenance. The total installation of the system took just five days allowing Grand Rapids to continue with the rebuild of the appropriately named Mary Waters Park.

StormTech chambers are designed to meet the most stringent industry performance standards for superior structural integrity. StormTech chambers come in a variety of sizes to meet each site’s needs. The elliptical arch design transfers loads to the surrounding backfill, and considers long-term and short-term safety factors defined by AASHTO. The chambers are injection molded for uniform wall thickness.

Nyloplast products are more durable and corrosion resistant than precast basins and combine a PVC structure with ductile iron grates. Nyloplast can be easily adjusted in the field to meet the final grade. The structures are shipped with rubber gaskets to ensure a watertight connection.

N-12 dual wall pipe has a corrugated exterior and smooth interior wall that provide exceptional strength and hydraulics. The inert HDPE material is resistant to the effects of chemicals, abrasions and hot soils. N-12 is available in 4”-60” (100-1500 mm) diameters and in 20’ (6 m) lengths. The inline bell design allows for pipe ends to be pushed together for easy installation. The joint requires only a lubricant during installation which leads to faster installation.

adspipe.com
800-821-6710