

CASE STUDY

Whataburger Stormwater Detained by StormTech® System

Cypress, TX

OWNER

Whataburger, San Antonio, TX

ENGINEER

Halff Associates Inc., Richardson, TX

CONTRACTOR

ACP Equipment Services, Conroe, TX

INSTALLATION DATE

June 2020

PRODUCTS

117 MC-3500 StormTech Chambers
220' (67 m) of 6" (150 mm) N-12® Perforated Pipe
80' (24 m) of 12" (300 mm) HP Storm Pipe
40' (12 m) of 24" (600 mm) HP Storm Pipe

CHALLENGE

Whataburger, a fast-food chain found in 16 states, built a new restaurant in Cypress. The site had a limited footprint, but required a stormwater detention system to handle the parking lot and roof runoff.

SOLUTION

Advanced Drainage Systems had an established working relationship with Halff Associates Inc., the project engineer. Halff determined that MC-3500 StormTech chambers were the ideal solution for the site's detention needs. The chambers could be installed beneath the restaurant's parking lot and meet all local stormwater requirements. Once in place, the StormTech system would temporarily store runoff and release it gradually into the municipal stormwater network.

At each inlet structure StormTech Isolator® Row Plus were used to capture the stormwater's "First Flush". Isolator Row Plus enhances removal of suspended solids and pollutant removal.



adspipe.com



To move water in and out of the chamber system, the design incorporated HP Storm pipe in 12" (300 mm) and 24" (600 mm) diameters. Additionally, 220' (67 m) of 6" (150 mm) perforated N-12 pipe was used as the system's under drain. N-12 manifolds were utilized to connect the StormTech chambers.

For ACP Equipment Services, this was the company's first time installing StormTech chambers and the process went smoothly. The lightweight nature of both the chambers and the pipe contributed to a fast installation, with excavation completed in just six days.

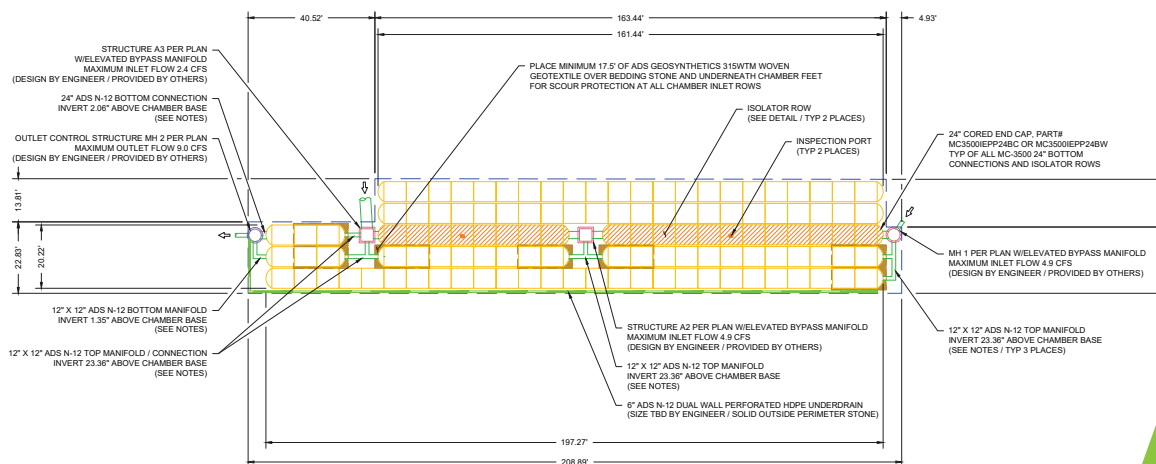
PRODUCT DESCRIPTIONS

StormTech chambers are designed to save valuable land, reduce flooding risks and protect water resources. The chambers provide a durable structural system and are designed in accordance with AASHTO LRFD Bridge Design specifications for HS-20 Live loads. StormTech chambers are available in a variety of sizes to meet any project need and are injection molded for uniform wall thickness.

Isolator Row Plus enhances Total Suspended Solids (TSS) and Total Phosphorus (TP) removal with easy access for inspection and maintenance. The Isolator Row Plus is a row of StormTech chambers that has a continuous layer of ADS Plus fabric between the foundation stone and chambers and is connected to a closely located manhole for easy access.

N-12 is a high-density polyethylene pipe for gravity-flow storm drainage applications. N-12, which is available in diameters from 4"-60" (100-1500 mm), offers exceptional hydraulics and strength. N-12 provides superior corrosion and abrasion resistance in a lightweight, corrugated design. A polyethylene bell minimizes joint distortion and eliminates chipping and cracking that is common to concrete bells. Available in 20' (6 m) lengths, N-12 provides lower installation costs and faster installation than traditional materials. N-12 can be utilized for storm drains, culverts, cross drains, ditch enclosures and retention/detention.

HP Storm polypropylene pipe provides superior pipe stiffness, longer bells and spigots and a premium joint performance for a longer service life. The smooth interior wall offers additional strength and high flow capacity. HP Storm pipe meets or exceeds the standards specified in ASTM F2881 and AASHTO M330 and the extended bell and spigot meets ASTM D3212. Polypropylene is an inert material and is resistant to the effects of chemicals, abrasion, hot soils and effluent. The lightweight product is easy to deliver and is readily available in convenient locations across North America to service local projects.



adspipe.com

