

CASE STUDY

StormTech® System Saves Space on MUW Campus

Columbus, MS

OWNER

Mississippi University for Women, Columbus, MS

ENGINEER

Neel-Schaffer, Inc., Columbus, MS

CONTRACTOR

Burns Dirt Construction, Inc., Columbus, MS

INSTALLATION DATE

August 2024

PRODUCTS

356 MC-3500 StormTech Chambers
36 MC-3500 StormTech End Caps
Two 30" (750 mm) Nyloplast® Basins
Two Inserta Tee® Inspection Ports

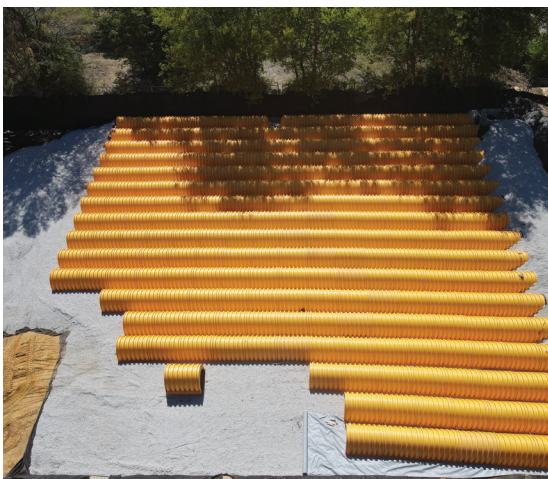
CHALLENGE

To address stormwater management requirements without sacrificing usable space, Mississippi University for Women implemented a subsurface stormwater detention system beneath a parking lot.

SOLUTION

Neel-Schaffer, Inc., the project engineer, partnered with Advanced Drainage Systems (ADS) to develop an efficient stormwater detention solution. Although the engineer had not previously utilized StormTech chambers, Neel-Schaffer came to ADS as StormTech is specified on most Central Mississippi detention systems.

ADS generated multiple project layout options to demonstrate how a StormTech system could fit into the shall area. ADS also worked with the project's contractor, Burns Dirt Construction, Inc., to provide cost estimates, which allowed the project to come in under the budget.



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The original design called for StormTech SC-740 chambers due to the site's shallow burial depth. However, achieving the required detention volume would have required a large footprint. After identifying additional available burial depth, Neel-Schaffer and ADS quickly optimized the design by transitioning to StormTech MC-3500 chambers to meet storage requirements within the available space.

The final system incorporated 356 StormTech MC-3500 chambers. With prior StormTech installation experience, Burns Dirt Construction completed the installation efficiently and on schedule.

Two 30" (750 mm) Nyloplast Basins captured the stormwater run-off, while two Inserta Tee inspection ports were utilized for the Isolator® Row, which captures the initial runoff of Total Suspended Solids (TSS). In addition, a weir structure was used on the outfall to regulate the rate of release downstream.

Beyond system design and layout support, ADS delivered onsite training and follow-up inspections throughout construction to help ensure a smooth installation process. The result was a cost-effective, high-performance stormwater management solution for this prominent Columbus, MS project.

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 specification 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. The StormTech Isolator Row utilizes a layer of ADS Plus fabric in a designated inlet row to provide enhanced suspended solids and pollutant removal. Isolator Row is a NJCAT-tested and NJDEP-approved practice for stormwater pre-treatment.

Nyloplast Engineered Surface Drainage products provide dependable, project-specific solution for stormwater management. The heavy-duty PVC structures and ductile iron grates deliver the strength and durability needed to meet site demands. With a range of structures from 8"-36" (200-900 mm), Nyloplast is tailored to project requirements. Seamless compatibility with plastic underground storm drain systems allow for smooth transitions between pipe sizes and materials, as well as adjustments in elevation and direction, supporting efficient installation and long-term performance.



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