



Green Infrastructure & Stormwater Management CASE STUDY

Hinds Community College Multi-Purpose Center

Location: Pearl, MS

Client: Hinds Community College

Design Firm(s): Dean and Dean Associates (Architecture Firm)

Landscape architect/Project contact: Weatherford/ McDade Landscape Architects

Email: pmcdade@weatherfordmcdade.com

ASLA Chapter: Mississippi

Project Specifications

Project Description: Existing site was an old borrow pit with various soil types with young pine trees. North section of site was preserved with the south section of the site prepared for the Multi-Purpose Center and associated parking. Each parking bay was designed to drain to a bioswale to take the initial impurities off. Stormwater is then piped to a detention pond for further cleansing before being released downstream. A lake was designed behind the building to catch a very limited amount of stormwater but is used more for aesthetics. Lake drains into detention pond before being released downstream.

Project Type:

Institutional/education

Part of a new development

Design features: Bioretention facility, bioswale, porous pavers, and curb cuts.

This project was designed to meet the following specific requirements or mandates: Our desire to slow and cleanse runoff from parking lots

Impervious area managed: less than 5,000 sq/ft

Amount of existing green space/open space conserved or preserved for managing stormwater on site: 1 acre to 5 acres

The regulatory environment and regulator was indifferent to the project.

Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements? Client had no such requests.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$100,000-\$500,000 (Public funding: Local)

Was a green vs. grey cost analysis performed? No

Cost impact of conserving green/open space to the overall costs of the site design/development project: Reduction in the amount of storm pipe to detention pond as well as a reduction in curb and gutter throughout the parking lots. Estimation is a net reduction of about 5% of the construction cost of the entire project.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Slightly reduced costs (1-9% savings).

Number of jobs created: ~25 - 30

Job hours devoted to project:

Planning and Design: 35%

Construction: 65%

Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:

Civil engineer performed all performance analysis.

Community & economic benefits that have resulted from the project: Building is a premier facility to hold events such as product shows, local graduations, performing arts, etc. Also has a classroom wing for education of certain programs offered at the Community College.

Additional Information

The Jackson-Metro area has a substantial expansive clay layer (Yazzo clay) that is hard to work with. The biggest challenge was to place bioswales on the downside of parking bays and not allow the water to absorb back underneath the parking lots for the clay to expand. A large amount of time was spent on preventing, creating, and implementing a solution to this problem. This site and project is the only one within the Jackson-Metro area that utilizes bioswales as apart of their stormwater management.