



Green Infrastructure & Stormwater Management CASE STUDY

UMBC Lot 1 Expansion

Location: University of Maryland Baltimore County, MD

Client: University of Maryland Baltimore County

Design Firm(s): Whitney, Bailey, Cox & Magnani, LLC

Landscape architect/Project contact: Randall W. Hughes

Email: rhughes@wbcm.com

ASLA Chapter: None

Project Specifications

Project Description: New parking lot expansion next to existing parking lot inside the campus loop road. Project involved pedestrian path connections to the existing campus circulation system. The project utilized four micro-bioretenion areas for stormwater management.

Project Type:

Institutional/education

Part of a new development

Design features: Four micro-bioretenion facilities.

This project was designed to meet the following specific requirements or mandates:

State statute, MDE Stormwater Management Act of 2007

Impervious area managed: 1 acre to 5 acres

Amount of existing green space/open space conserved or preserved for managing stormwater on site: 5,000 sq/ft to 1 acre. 3,425 sq/ft of surface stormwater facilities plus additional area of open space, landscape areas, and existing trees were preserved on the project site.

The regulatory environment and regulator was supportive of the project.

Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements? Landscape and appearance.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$10,000-\$50,000 (Public funding: State)

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: No significant change.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Slightly increased. Project was designed to meet current State of Maryland regulations so the open space for stormwater is now a standard / normal type of design for the State. Use of multiple smaller facilities increase cost over a single larger facility.

Number of jobs created: 0

Job hours devoted to project:

Planning and Design: 300

Construction: Not available

Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:

Project was designed and sized to meet Maryland's ESD volume requirements. Project utilizes facility storage and encourages on-site infiltration. The project reduced the runoff curve number to existing conditions and manage only a slight increase in runoff from the 10-year storm event.

Community & economic benefits that have resulted from the project: Development of an non-utilized space within the interior of campus.