Green Infrastructure & Stormwater Management CASE STUDY

University of Michigan Law School South Hall

Location: Ann Arbor, MI
Client: University of Michigan
Design Firm(s): Beckett & Raeder, Inc. (LA); Integrated Design Solutions (Architect); Midwestern Consulting, Inc. (PE)
Landscape architect/Project contact: Deb Cooper, ASLA
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ASLA Chapter: Michigan

Project Specifications

Project Description: The redevelopment of campus land (existing parking lot) for construction of a new academic building. Project increases greenspace and includes green infrastructure (permeable pavements, native landscape) and underground detention.

Project Type:
Institutional/education
Part of a redevelopment project

Design features: Porous pavers, and native landscape to reduce runoff and increase infiltration..

This project was designed to meet the following specific requirements or mandates:
Local ordinance, developer/client preference

Impervious area managed: 5,000 sq/ft to 1 acre

Amount of existing green space/open space conserved or preserved for managing stormwater on site: 5,000 sq/ft to 1 acre

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? The client requested an analysis of maintanence costs for the native landscape vs. traditional landscapes.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: $100,000-$500,000 (Public funding: State, 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: The project site was previously a surface parking lot. The project reduced the overall impervious area and increased the amount of green space thereby reducing the quantity and costs of underground storm water storage.

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: Construction jobs were created/maintained. Numbers not available.

Job hours devoted to project:

Planning and Design: 700
Construction: 180
Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:

The project's green infrastructure and underground detention were designed for a 100-year storm event and include three-stage controlled release rates over a 48-hour period. Detailed calculations are available upon request.

Community & economic benefits that have resulted from the project: The new South Hall building and its related green infrastructure improvements are visible evidence to the community of the UM Law School's forward thinking and environmental leadership.

Project Recognition

Project is anticipated to achieve LEED Silver Certification

Additional Information

Links to images: Drawings and photographs may be emailed upon request.