Green Infrastructure & Stormwater Management CASE STUDY

City of Madison Engineering Services Building Addition

Location: Madison, WI
Client: Ayers Associates
Design Firm(s): Ken Saiki Design
Landscape architect/Project contact: Pat Saiki, ASLA
Email: psaiki@ksd-la.com
ASLA Chapter: Wisconsin

Project Specifications

Project Description: The Madison Engineering Service Building (MESB) is one of the city's first sustainable buildings. Ken Saiki Design provided design and construction services for site and landscape design, including green roof installations. Both extensive and intensive green roof areas were included in the building design. On the ground, rain gardens collect and treat parking lot runoff for gray water use. Ken Saiki Design also assisted the city with landscape recommendations for the new salt storage building at this site.

Project Type:
Government complex
A retrofit of an existing property

Design features: Rain garden, green roof, and underground storage through gravel and storm chambers.

This project was designed to meet the following specific requirements or mandates:
County ordinance, local ordinance

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: less than 5,000 sq/ft

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? City followed principles of LEED green

building design throughout the building addition project both in the landscape and within the building footprint.

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 for stormwater management over traditional site design/site development approaches (grey infrastructure)? Significantly reduced costs (10% or greater savings). To meet stormwater managment criteria, the project would have had to acquire or purchase more property to fit a conventional grey infrastructure practice to manage runoff on site

Number of jobs created: Not available

Job hours devoted to project:

Planning and Design: 300 for stormwater/landscape portion
Construction: 80 for stormwater/landscape portion
Annual Maintenance: 20

Performance Measures

Stormwater reduction performance analysis:

Filter and infiltrate the first 1/2" from average annual rainfall event.