Green Infrastructure & Stormwater Management CASE STUDY

Southwest Missouri Office of Aging - Phase 1

Location: 1735 South Fort Avenue, Springfield, MO
Client: KenMar Construction
Design Firm(s): (Lead) Phase 2 Site Planning & Design, (Sub) White River Engineering
Landscape architect/Project contact: Matt Boehner, RLA, ASLA
Email: matt@phase2spd.com
ASLA Chapter: Prairie Gateway

Project Specifications

Project Description: A three phase development to allow for future building additions to existing facility.

- Phase 1: Parking lot addition on west side of existing building. Utilizing rain gardens, zero curb construction, and native plants. (currently under construction)
- Phase 2: (Awaiting funding) Eliminate existing parking on east side of building to provide space for future building addition. Construct outdoor plaza and additional rain gardens to collect 100% of future runoff.
- Phase 3: (Estimated start 2014) Addition to existing facility. Green roof is proposed.

Project Type:
Non-profit
Part of a new development

Design features: Bioretention facility, rain garden, and zero curbs for landscape islands in parking lot.

This project was designed to meet the following specific requirements or mandates:
Developer/client preference - project was less than 1 acre, thus did not meet mandatory water quality requirements.

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? The client was in favor of the progressive nature of the concept presented during the preliminary planning stages and that it would make future phased development less costly.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: $10,000-$50,000 (Public funding: Not available)

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: Eliminating concrete curb/gutters reduce costs, as site grading could follow the natural terrain.

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: Not available

Job hours devoted to project:
- Planning and Design: 45
- Construction: 80
- Annual Maintenance: 10 (estimated)

Performance Measures

Stormwater reduction performance analysis:
100% of all stormwater runoff will pass through green space prior to entering regional storm water system.

Project Recognition

State of Missouri