Green Infrastructure & Stormwater Management CASE STUDY

Ohiopyle Green Streets

Location: Ohiopyle, PA
Client: Pennsylvania Environmental Council
Design Firm(s): URS
Landscape architect/Project contact: Katherine G. Holmok, ASLA
Email: katherine_holmok@urscorp.com
ASLA Chapter: Pennsylvania/Delaware

Project Specifications

Project Description: Gateway to the Laurel Mountains**,** Ohiopyle borough is located along the Youghiogheny River George within Ohiopyle State Park and just down the road from Frank Lloyd Wright's Falling Water & Kentuck Knob. This small town of 61 residents provides the infrastructure (water, roads, sewer) for 1.4 million anual visitors to this eco-tourism destination. This ARRA grant funded project installed three green complete streets consisting pervious trail, pervious on-street parking stalls, bioswales, rain barrels and planting islands within the commercial corridor. These green infrastructure measures provide stormwater storage to reduce overflows at the sanitary sewer treatment plant.

Project Type:
Transportation corridor/streetscape
A retrofit of an existing property

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

This project was designed to meet the following specific requirements or mandates: To meet funding criteria, local master plan

Impervious area managed: 1 acre to 5 acres

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? No.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: $1,000,000-$5,000,000 (Public funding: Federal, state - Pennsylvania's Green Project Reserve (ARRA funded))

Related Information: Pennsylvania Environmental Council recieved a $1,312,718 Green Project Reserve through ARRA funding to design and constructed three green streets through Ohiopyle's commercial corridor.

Was a green vs. grey cost analysis performed? Yes, alternatives for the removal of stormwater infiltration during peak rain events were explored in the March 13, 2009 study including drip irrigation, expansion of the current treatment facility (which was just upgraded in 2000) and replacement of the entire piping system. These alternatives cost from $2,095,000 to $5,500,000 with an additional $50,000 to $75,000 for annual operating costs.

Cost impact of conserving green/open space to the overall costs of the site design/development project: This project was 100% funded by the Green Project Reserve. Upgrades to the WWTP would not have been fundable by grant funding.

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).

Number of jobs created: 57

Job hours devoted to project:

Planning and Design: 2,000
Construction: Not available
Annual Maintenance: Not available

Performance Measures

Community & economic benefits that have resulted from the project: Design details from this project were used to fund additional green streets within Ohiopyle.

Project Recognition

American Council of Engineering Companies of Pennsylvania

Additional Information

Links to images: www.urs-cleveland.com

This project builds upon the Ohiopyle Master Plan prepared by URS in 2009. This project was constructed in 2010.