Green Infrastructure & Stormwater Management CASE STUDY

Milton Union Exempted School

Location: West Milton, OH
Client: Milton Union Exempted Schools
Design Firm(s): Ruetschle Architects, CYP Studios
Landscape architect/Project contact: Eric Sauer, ASLA
Email: eric@cypstudios.com
ASLA Chapter: Ohio

Project Specifications

Project Description: The project includes a series of outdoor courtyards that incorporate an outdoor learning lab that daylight downspouts in a decorative manner into a series of rain gardens. The courtyards feature both permeable pavers and pourous concrete to demonstrate these techniques. The courtyards also collect rain water from about half of the new roofs and store them in a large underground cistern that will be used to flush all of the toilets in the school, saving the disctrict about $13,000 per year in water and sanitary bills. The system will be monitored by an online system that teachers will be able to utilize in the classrooms as a part of the science curriculum.

Project Type:
Institutional/education
Part of a new development

Design features: Rain garden, bioswale, green roof, cistern, downspout removal, porous pavers.

This project was designed to meet the following specific requirements or mandates:
None

Impervious area managed: 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? All were considered and solar panels, wind turbine, LED lighting fixtures and daylighting to name a few were incorporated into the project.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: $100,000-$500,000 (Public funding: State)

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)? Slightly reduced costs (1-9% savings).

Number of jobs created: Not available

Job hours devoted to project:

Planning and Design: 200
Construction: Not available
Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:

The project will significantly reduce the volume of runoff due to the large 75,000 gallon cistern. This system reduced the concern in the neighborhood of current flooding issues experienced downstream of the site.

Community & economic benefits that have resulted from the project: The new school will provide obvious benefits to the community. The use of LID techniques will provide the community and students first hand experiences with these ideas. The school already is planning new classroom integration to teach students abouth the use of these concepts.

Project Recognition

Project on track to receive Platinum LEED Certification

Additional Information

Links to images: http://gallery.me.com/cyperic/100013