Green Infrastructure & Stormwater Management CASE STUDY

Lyon Residence

Location: Birmingham, AL
Client: John Lyon
Design Firm(s): Holcombe Norton Partners
Landscape architect/Project contact: Tommy Holcombe, ASLA
Email: tommy@hnpsiteplan.com
ASLA Chapter: Alabama

Project Specifications

Project Description: Designed and installed a combination of rain garden, pervious paving, and underground detention for single family home.

Project Type:
Single family residential
A retrofit of an existing property

Design features: Rain garden, porous pavers, and underground storm storage in gravel-filled sump.

This project was designed to meet the following specific requirements or mandates:
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: 5,000 sq/ft to 1 acre

The regulatory environment and regulator was indifferent to 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: <$10,000 (Public funding: None)

Related Information: Only significant cost was pervious paving for drive. Had we not used pervious pavement, the owner would have used solid pavers so true added cost was near zero.

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: Reduced amount of pervious paving required.

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). No storm sewer existed adjacent to property. Traditional approach would have required installing storm sewer nearly 300 feet across developed property, aquisition of easements, etc.

Number of jobs created: 0

Job hours devoted to project:

Planning and Design: 20
Construction: 24
Annual Maintenance: 0

Performance Measures

Stormwater reduction performance analysis:
Estimated at 95%

Community & economic benefits that have resulted from the project: Project eliminated overall runoff from adjacent property. Project greatly reduced runoff from site onto public street.