Green Infrastructure & Stormwater Management
CASE STUDY

Syncline Residence

Location: Boulder, CO
Client: Private client
Design Firm(s): K. Dakin Design
Landscape architect/Project contact: Karla Dakin
Email: karla@kdakindesign.com
ASLA Chapter: None

Project Specifications

Project Description: The project is at the base of the Colorado Rockies, in the foothills, adjacent to open space, designated wetlands, and a natural drainage coming from above. The site is tiny and collects a lot of water. In addition to sump pumps in the basement, the surface drainage terminates in a detention area at the street. This detention area is designed to be a rain garden or beautiful amenity, the highlight of a small entry court. In addition, a small green roof above the garage collects and filters drainage from the roof before exiting the property.

Project Type:
Single family residential
Part of a new development

Design features: Rain garden, green roof, porous pavers.

This project was designed to meet the following specific requirements or mandates:
County ordinance, local ordinance, developer/client preference, LEED certification

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 supportive of the project.

Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements? Property value enhancements and design aesthetics.
Cost & Jobs Analysis

Estimated Cost of Stormwater Project: $10,000-$50,000 (Public funding: None)

Related Information: Green roof: $6,000  Rain gardens: $6,000

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: It did not change pricing, in fact it enhance the entire project.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Did not influence costs.

Number of jobs created: Not available

Job hours devoted to project:
- Planning and Design: 100
- Construction: 100
- Annual Maintenance: 100

Performance Measures

Community & economic benefits that have resulted from the project: The community benefits are mostly to show that we can deal with stormwater in beautiful ways, turning problems into artful amenities that not serve to enhance the value of stormwater but enhance the overall look of the landscape. If we can do more prototypes for others to see, they will imitate and try their own solution. These designs also give landscape contractors the experience to repeat these design moves with other clients, to spread the word, so to speak.