Green Infrastructure & Stormwater Management CASE STUDY

Lexus Lancaster

Location: Middleton, WI
Client: Jon Lancaster
Design Firm(s): SAA Design Group, Inc.
Landscape architect/Project contact: Aaron Williams, ASLA
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ASLA Chapter: Wisconsin

Project Specifications

Project Description: Green field development of a car dealership in Middleton, Wisconsin. Stormwater features were naturally designed and implemented to handle 100-year peak flows while effectively cleaning more common smaller rain events. Stormwater management techinques included dry ponds, bioswales, invert risers, flow through areas, and native vegatation. All stormwater and site design features were required to conform to Federal Aviation Agency requirements due to its flight path location.

Project Type:
Commercial
Part of a new development

Design features: Bioretention facility, rain garden, bioswale, and curb cuts.

This project was designed to meet the following specific requirements or mandates:
Federal Aviation Agency requirements on open water, building heights, and lighting

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 in a round

about way of not detracting from merchandise and enhancing user experience of purchasing a vehicle.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: <$10,000 (Public funding: Local)

Related Information: Design Fees: ~$35K Stormwater Ponds & Vegetation: ~$90K Total Construction Costs: ~$410K

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: Existing green space was adjacent to Interstate R/W and therefore not used to any useful degree. Design took advantage of elevated nature of Interstate and views into site creating a more visible open space. Open space design afforded a more coherent 'natural' site design that worked well with rest of design intent.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Slightly increased.

Number of jobs created: Maybe 10

Job hours devoted to project:

Planning and Design: 350
Construction: Not available
Annual Maintenance: 16

Performance Measures

Stormwater reduction performance analysis:
Not available

Community & economic benefits that have resulted from the project: Unknown. Additional development has occurred along this corridor since installation of this project.

Project Recognition

State of Wisconsin

Additional Information

Links to images: Not available