



Green Infrastructure & Stormwater Management CASE STUDY

Little Sugar Creek Greenway (Between Pearle Park Way and Morehead Street)

Location: Charlotte, NC

Client: Mecklenburg County Park and Recreation and Mecklenburg County Storm Water Services

Design Firm(s): LandDesign, Inc. Wildlands Engineering

Landscape architect/Project contact: Beth Poovey, RLA, ASLA

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ASLA Chapter: North Carolina



Project Specifications

Project Description: LandDesign/Wildlands provided design and construction documents for the development of Little Sugar Creek Greenway and Stream Enhancement Project in the vicinity of midtown Charlotte, NC. The plan included the stream enhancements, greenway development, including uncapping of the urbanized creek. In addition to stream improvements, BMPs were utilized to provide for stormwater managements and improve water quality in this highly urbanized watershed.

Project Type:

Open space/greenway/stream enhancement

A retrofit of an existing property

Design features: Bioretention facility, constructed wetlands, and stream enhancements.

This project was designed to meet the following specific requirements or mandates:

Voluntary BMPs

Impervious area managed: greater than 5 acres

Amount of existing green space/open space conserved or preserved for managing stormwater on site: BMPs designed within the context of the stream section in order to preserve space for greenway improvements.

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? Yes.

Cost & Jobs Analysis

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

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: Not applicable - it is an open space reclamation project.

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: construction jobs

Job hours devoted to project:

Planning and Design: Significant

Construction: Significant

Annual Maintenance: Significant

Performance Measures

Stormwater reduction performance analysis:

Total DA=31.45 AC, 2-year storm event = 3.12" DA 1: 18.2 AC, .11" Rainfall treated (3.5% of 2-year) DA 2: 13.25 AC, 0.69 " rainfall treated (22.1% of 2-year)

Community & economic benefits that have resulted from the project: Urban and mixed-use redevelopment adjacent to greenway and stream project because of project. Bike and pedestrian transportation, environmental education, community connectivity.

Additional Information

Links to images:

Photo from Mecklenburg County, NC website:

<http://www.charmeck.org/mecklenburg/county/publicserviceandinformation/pages/littlesugarcreekgreenwaystreamrestoration.aspx>