Green Infrastructure & Stormwater Management CASE STUDY

211th Street

Location: Shoelace Park at 211th St., The Bronx, New York City, NY
Client: NYC Parks & Recreation
Design Firm(s): NYC Parks NRG, Greenstreets & Capital; EDAW, Inc.
Landscape architect/Project contact: Marit Larson
Email: marit.larson@parks.nyc.gov
ASLA Chapter: New York

Project Specifications

Project Description: Stormwater runoff from the intersectionis channeled to the Park through curb cuts to rain gardens and a bioswale. The remaining stormwater entering catchbasins is diverted to an underground storage tank where it is allowed to infiltrated into the soil.

Project Type:
Open space - park
A retrofit of an existing property

Design features: Rain garden, bioswale, porous pavers, curb cuts, and a porous sub-surface storage tank.

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

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: less than 5,000 sq/ft

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? Accessibility by maintenance vehicles, site

lines for safety, species selection for aesthetics and biodiversity, tree protection, maintenance, constructability and cost were concerns.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: $1,000,000-$5,000,000 (Public funding: Regional, local - via non-profit grant funding.)

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 probably increased the construction and design costs, compared to a traditional design, since the long-term incremental costs of traditional designs are not assessed.

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: 4 on average for 4-year project duration

Job hours devoted to project:

Planning and Design: 640
Construction: 2,080
Annual Maintenance: 35

Performance Measures

Stormwater reduction performance analysis:

The project was designed to capture at least the 1-year storm from 400 sq/ft of street impervious area.

Community & economic benefits that have resulted from the project: Benefits include increased green space, improved traffic flow, aesthetics, improved accessibility for healthy recreational activities.

Additional Information

Links to images:

http://www.nfwf.org/AM/Template.cfm?Section=Home&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=18394