



Green Infrastructure & Stormwater Management CASE STUDY

Greenstreets - Furmanville Ave, 80th St, & Dry Harbor Rd, Queens

Location: Furmanville Ave, 80th St, &
Dry Harbor Rd, Queens, New York
City, NY

Client: NYC Parks & Recreation

Design Firm(s): NYC Parks &
Recreation

Landscape architect/Project

contact: Adriana Jacykewycz

Email:

Adriana.Jacykewycz@parks.nyc.gov

ASLA Chapter: New York



Project Specifications

Project Description: One of NYC's oldest stormwater Greenstreets was constructed in the spring of 2007 at Furmanville Ave, 80th St, and Dry Harbor Rd. As a bumpout replacing unused asphalt, the Greenstreet intercepts stormwater runoff before it can enter a catch basin on 80th St. After water enters the planting bed via a curb cut inlet, the velocity is reduced by a gravel forebay with grasses, and stormwater flows toward a 12-18" bioswale depression at the middle of the site. The water is then absorbed by hardy vegetation, including Prunus trees, Hemerocallis, Rosa, Spiraea, Liriope, and Yucca, and water finally enters a 1' crushed bluestone reservoir beneath the 2' of soil. Due to high percolation, the 750 sq/ft Greenstreet successfully handles all runoff from an additional impervious catchment area of 6,730 sq/ft. With NY DEC and NY DOS grant funding, Drexel University and our other research partners are monitoring hydrological processes. Monitoring includes the collection of time series data of precipitation, street runoff, and soil moisture content within the bioretention area.

Project Type:

Transportation corridor/streetscape

A retrofit of an existing property

Design features: Bioretention facility, bioswale, gravel reservoir, and curb cuts.

This project was designed to meet the following specific requirements or mandates: Not applicable



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: Not applicable

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? No

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$10,000 - \$50,000 (Public funding: Local - NYC Parks Dept - Capital Budget)

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 – the site was located on existing impervious roadbed.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Not applicable - no existing green space.

Number of jobs created: 0.18

Job hours devoted to project: Not available

Planning and Design: Not available

Construction: Not available

Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:

Disconnected 7,483 sq/ft of impervious surface from sewers

Community & economic benefits that have resulted from the project: Greenstreets not only beautify the urban landscape, but also calm busy traffic, clean the air, cool the city, sequester carbon, increase pedestrian safety, provide environment for wildlife, mitigate flooding, and capture stormwater for irrigation.

Additional Information

Links to images: http://www.nycgovparks.org/sub_your_park/trees_greenstreets.html

http://www.nycgovparks.org/sub_your_park/trees_greenstreets/images/NYC_Greenstreets-Green_Infrastructure_for_Stormwater_Management.pdf