

extensive native habitat with an emphasis on waterfowl habitat, open lawns, a kayak storage facility, composting toilet and picnic area.

Project Type:

Open space - park

Part of a new development

Design features: Bioretention facility, bioswale, and porous pavers. Freshwater wetland collects all surface runoff through swales and overland flow. The tidal wetland created to soften shoreline and restore natural shoreline condition.

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

Local ordinance - NYS Department of Environmental Conservation; NYC Department of City Planning Waterfront Guidelines

Impervious area managed: 1 acre to 5 acres

Amount of existing green space/open space conserved or preserved for managing stormwater on site: 1 acre to 5 acres

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? Major concern of the client was to handle contaminated soil on site to reduce construction costs. Client (City of New York) was also interested in supporting the community desire for more public open space.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$1,000,000-\$5,000,000 (Public funding: Federal, local, \$718,000 WCS-NOAA grant; \$3,000,000 Federal stimulus dollars; balance: NYC funding)

Related Information:

- Mobilization: \$1,100,000
- Site construction: \$2,900,000
- Concrete: \$950,000
- Masonry: \$201,000
- Metals: \$800,000
- Specialties: \$126,000
- Electrical: \$120,000
- Plumbing: \$500,000

Was a green vs. grey cost analysis performed? No - not applicable because pre-existing condition was a greyfield over a brownfield.

Cost impact of conserving green/open space to the overall costs of the site design/development project: Not applicable as pre-existing condition was entirely paved roadway

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Not applicable as the site was not a green space nor an open space. All stormwater from the pre-existing use was directed into storm sewer.

Number of jobs created: Local construction workers: 2; Future local maintenance of park: 2-3 seasonal workers

Job hours devoted to project:

Planning and Design: over 2,000 hours

Construction: estimated at 18 months full time construction; project is currently 35% complete construction

Annual Maintenance: estimated at 20 hours per week



Image: Mathew Nielsen Landscape Architects

Performance Measures

Stormwater reduction performance analysis:

The pre-existing condition (based on a storm intensity of 5.95"/hr) resulted in 5.5 cfs of runoff. The post-construction calculation (based on 5.95"/hr) will be 1.75 cfs. A storm event of 5.95-inches per hour is a 5-year storm per NYCDEP.

Community & economic benefits that have resulted from the project: Site is located in an industrial and warehousing district within NYC's food distribution center, therefore property values are not a concern. Extensive outreach was conducted during planing and design with local community groups. In the future, it is hoped that the community will develop a concession for bait and snacks on site as well as educational tours for local school groups. Current local initiatives include Rocking the Boat that conducts kayak and in-water safety training and boat building, a local shoreline maintenance group that helps manage new stormwater and shoreline habitats.

Project Recognition

2006 ASLA Chapter Award; WCS-NOAA Regional Partnership Grant for shoreline reconstruction; Project has been selected for Sustainable Sites Initiative Pilot Project for Brownfield

Additional Information

Links to images:

http://www.mnlandscape.com/in_the_works_projects.php?cat_id=7&pr_id=128

NYC Department of Environmental Protection (agency that had jurisdiction over stormwater) was very supportive of direct discharge of stormwater into river in order to reduce NYC's problem of combined sewer overflows. Our plan calls for this stormwater to be first filtered through native plants and sandy soil prior to discharge into the river.