

# BROOKLYN WATERFRONT GREENWAY

Park Node Site Analysis  
Brooklyn Navy Yard Hospital  
Memorial Site  
Summer 2009



---

---

## Table of Contents

BACKGROUND AND INTRODUCTION	
Introduction	4
Greenway Map	5
Brooklyn’s Waterfront: Planning Principles	6
Brooklyn Waterfront Greenway: Park Nodes	7
SITE INTRODUCTION	
Brooklyn Navy Yard Hospital Memorial Site	8
Site History: Highlights	9
SITE ANALYSIS	
Site Context	10
Adjacent Uses	11
Existing Conditions	12
Local Recreation Options	14
Site Analysis	15
Tree Cover and Vegetation	16
SUMMARY	
Opportunities and Constraints	17
Summary of Analysis	18
Questions for Consideration	19
Preliminary Ideas and Precedents	20
SOURCES	22

## Introduction

### THE BROOKLYN WATERFRONT GREENWAY

When complete, the Brooklyn Waterfront Greenway will be a 14-mile, landscaped separated route connecting neighbors and neighborhoods to four major parks and over a dozen local open spaces on Brooklyn's historic waterfront. Separate paths for bicycles and pedestrians will allow cyclists and walkers to commute, exercise, explore, and relax from Newtown Creek to the Shore Parkway. This Brooklyn Waterfront Greenway will also serve as one of the intricate links of New York City's vastly growing greenway network—linking the Queens Greenway to the Shore Park Greenway and Staten Island.

Regional Plan Association (RPA) and Brooklyn Greenway Initiative (BGI) have collaborated on the planning and advocacy for this waterfront amenity over two phases funded by the State's Environmental Protection Fund/Local Waterfront Revitalization Program and sponsored by the Office of the Brooklyn Borough President. Working together with local communities through public planning workshops and other events, RPA and BGI have developed concept plans for the greenway's route and design through Community Boards 1, 2 and 6—from Greenpoint to Red Hook. We have also prepared a distinct stewardship plan to anticipate maintenance costs and responsibilities for the greenway and its amenities. With on-going funding, the next phase of this project will involve the completion and implementation of a business plan for stewardship of the greenway and will facilitate the growth of partnerships necessary to conduct the Brooklyn Waterfront Greenway to the City's growing network of greenways.

# Greenway Map



## Brooklyn's Waterfront: Planning Principles

The Brooklyn Waterfront Greenway should be more than a simple sidewalk or bicycling route. It should provide the means to connect, celebrate, restore and explore Brooklyn's diverse waterfront—its neighborhoods and residents, recreational and industrial users and its unique environment.

The following principles—generated by participants in community workshops—are a framework of physical and programming recommendations:

Create a healthy green edge on the Brooklyn Waterfront. Establish public access to the Harbor waterfront and waters. Improve public health in communities that line this historically industrial waterfront by providing improved recreational amenities and programs. Restore and enhance ecological functions in the shoreline environment.

Connect the waterfront neighborhoods with each other, the rest of Brooklyn and neighboring bikeways in Queens, south Brooklyn and Manhattan. Knit together regional and community parks, unique neighborhood attractions and the transit system.

Explore the complex and rich urban landscape along the Brooklyn waterfront and its neighborhoods. Respect the needs of Brooklyn's successful maritime industries while increasing the public's understanding. Provide a variety of experiences that reflect this dynamic and changing landscape.

Celebrate the diversity of Brooklyn. Showcase neighborhoods, natural environments, culture, art and industry. Accommodate the needs of a wide variety of people from local residents to destination-oriented visitors.

## Brooklyn Waterfront Greenway: Park Nodes

Along the Greenway, a handful of spaces will provide Greenway users and neighbors with small parks and relaxation areas. These “park nodes” will serve a variety of functions, based on their location, size, history and adjacent uses. Each one has its own unique history, use, topography, view and other features. However, they share one key attribute, which is their connection to the Brooklyn Waterfront Greenway.

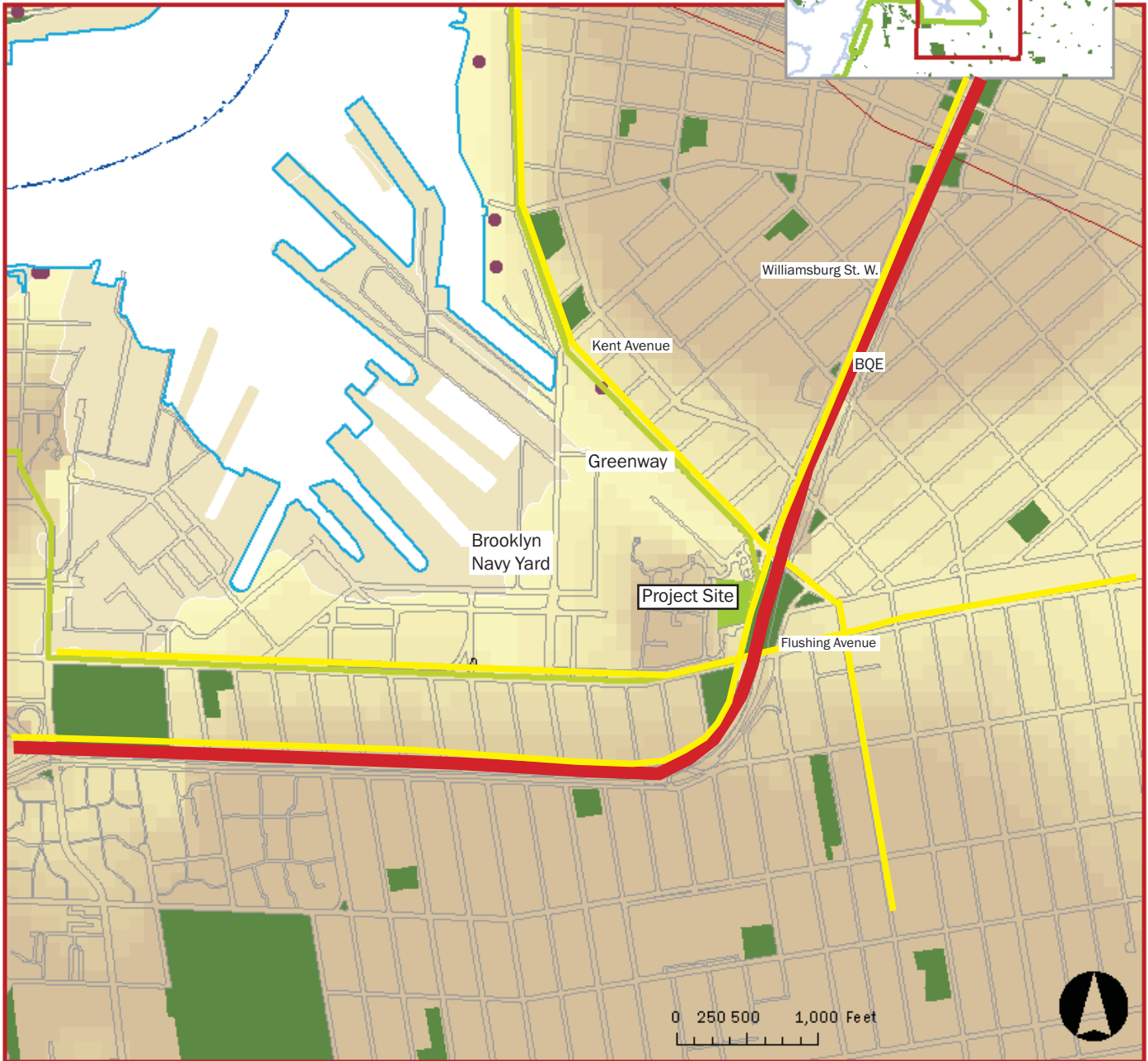
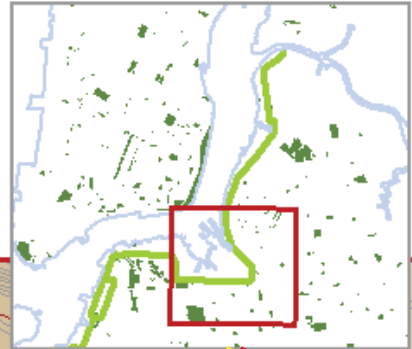
The purpose of this site analysis is to help community members, city agencies and others to determine the best park uses for each site, taking into consideration as many factors as possible. Each analysis includes information about the site, its history, its connection to the Greenway, its neighborhood population and the other recreational amenities in the area. We reviewed topography, sunlight and shadows, as well as existing tree cover and habitat potential. The analyses suggest a group of assets that might inform the park plan and close with examples of parks that could inspire ideas for these sites.

The report closes with a set of questions that can help guide planning efforts for the park node. The precedents are meant to spark ideas for the park nodes, and inspire community members to consider how these spaces might best serve their neighborhood and community.

Site Introduction

### Brooklyn Navy Yard Hospital Memorial Site

The project site is located on the eastern edge of the Brooklyn Navy Yard, and is surrounded by Brooklyn Navy Yard property on three sides. The proposed greenway will proceed along the outside perimeter of the Navy Yard.



- Shoreline
- Brooklyn Waterfront Greenway
- Combined Sewer Outfall
- Ferry Routes
- Park\_Nodes
- 100 Year Flood Plain
- New York City Parks

Topography [meters]





## Site History: Highlights

To illuminate the rich history of the site, the Brooklyn Navy Yard Development Corporation is creating the Brooklyn Navy Yard Center at Building 92, which will provide an interpretive experience for visitors. The brief history included here focuses primarily on the hospital and cemetery, located at the eastern edge of the Yard.

The Brooklyn Navy Yard was one of the earliest parts of what is now New York City to be settled by Europeans. The Native American Lenape people referred to this bay as “Rennegachonk.” It is believed that the first European person born in the Nieuw Netherlands colony was born on the Navy Yard bay, later known as Wallabout Bay, in 1625. As European settlement continued, the bay’s strategic location led to the establishment of the original shipyard on site in the 1780s. In 1801, the U.S. Government purchased the land to establish the Naval Yard.

In 1824 the Naval Yard purchased an adjacent family farm, land that includes the current project site. Beginning in 1831, the Naval Yard began using the site as its cemetery. The Naval Yard hospital, located just west of the project site, was completed in 1938. The two-story Greek Revival building was designed by Martin B. Thompson, a prominent architect of other New York City military buildings.

During the Civil War, the Hospital’s Naval laboratory, part of the hospital complex, prepared most of the medicines used by the Union Navy. This effort was led by pharmaceutical specialist Dr. Squibb.

In 1910, the Navy discontinued use of the site as a cemetery. In 1926 the Navy disinterred remains and reinterred them at Cypress Hills National Cemetery in Brooklyn.

During field investigations in 1997, additional remains were discovered and preserved at this location.

In accordance with guidelines provided by the New York State Historic Preservation Office, the Brooklyn Navy Yard Development Corporation has stipulated that this location, as a former cemetery, should not be built upon. Instead, the Corporation intends for the site to become a memorial, dedicated to all those buried here and to all military veterans who bravely served their country.

Over its nearly 90 years as a cemetery, it is estimated that over 2000 military service members of all races and creeds were buried here.

## Site Context



The project site is located on the eastern edge of the Brooklyn Navy Yard, and is surrounded by Brooklyn Navy Yard property on three sides. The proposed greenway will proceed along the outside perimeter of the Navy Yard. The project site is the point where the greenway and the Navy Yard will connect.

To the immediate east of the site, right outside the Navy Yard property, is the high traffic, three-lane Williamsburg Street West, which runs parallel to the Brooklyn-Queens Expressway (BQE). The combination of these two busy roads creates a boundary that separates the site from the neighborhood.

North of the project site are two large parking areas, slated for development by Brooklyn Navy Yard tenants (see pictures, right). Kent Avenue crosses under the BQE near the site, where there is an MTA bus stop. Members of the local Hasidic community also use the MTA stop for local transit.

Immediately south of the project site is additional Brooklyn Navy Yard property, which shares the same fence and Williamsburg Avenue/BQE frontage and views. This site will be developed by a future Navy Yard tenant.

Thus at the present time, there are few active uses adjacent to the project site.

## Adjacent Uses

The primary adjacent use and neighbor is the Brooklyn Navy Yard, which is undergoing a redevelopment process. The nearest Navy Yard tenant is Steiner Studios, located to the north of the project site. East of the project site is the historic Naval Yard Hospital and buildings associated with the hospital, which the Navy Yard plans to develop as a media campus. As the Navy Yard redevelopment proceeds in the coming years, additional tenants will change the nature of the area. Presently, much of the adjacent land is used for parking. Immediately north of the site is a former service station. Vegetation has overgrown much of the paved surface.



Parking areas located to the north of the project site

## Around the BQE

Directly east of the project site, a wedge of Parks Department property extends up a steep hill to the BQE. As part of the Department of Transportation's "Adopt-A-Highway" Program, the Brooklyn Greenway Initiative (BGI) has "adopted" that stretch of hillside up to the BQE and has pledged to maintain that site as an improvement to the area (pictured above). BGI has been removing overgrown and invasive plants from the eastern hillside. Moving eastward down from the BQE, the densely vegetated land is behind chain-link fences that extend directly to the sidewalk (pictured, right).



Low-rise commercial buildings on Flushing Avenue, east of the BQE (below).



## Existing Conditions



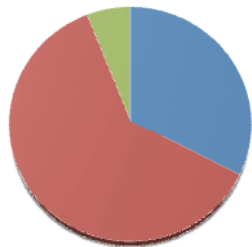
### Demographic Information by Census Tract

Data reflects census tracts 539, 537, 191, 189, and 237

Approximately ¼ mile around the site

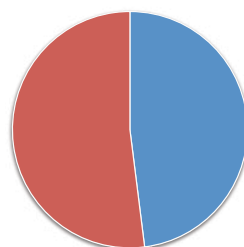
Total population of this area: 10,230

#### Age



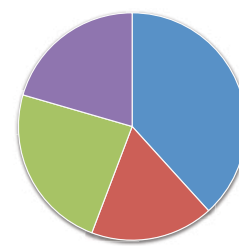
32% 0 - 14 years  
61% 14 - 65  
6% 65 and over

#### Income



48% below Federal poverty level  
52% above Federal poverty level  
Poverty is defined as \$17,000/year for a family of four

#### Income Detail



0 to \$14,999  
\$15,000 to \$29,999  
\$30,000 to \$49,999  
\$50,000 and up



Census data demonstrates that the communities immediately adjacent to the memorial site are exceptionally low-income, with 48% of households living below the poverty line. In addition, the breakdown of income in the area indicates that most families are living on less than \$50,000 per year. Meanwhile a large proportion of the residents of this area are children. In 2000, 32% of the population was younger than 14 years old, compared to the national average of 21.4%.

Most of the nearby population, however, resides on the opposite side of the Brooklyn-Queens Expressway from the location of the Greenway and memorial site. Thus the site is isolated from neighborhood pedestrian activity, as well as from the potential for “eyes on the park” to encourage park safety.



Flushing Avenue and the BQE separate the park site from the local neighborhood.

Subway access is limited in this area; motor vehicles provide the primary access. The area is well-served by MTA bus lines, however, which run frequently on Kent, Wythe, and Flushing Avenues.



## Local Recreation

Three small New York City Department of Parks and Recreation parks are located near the site, offering programmed space for active recreation, from children's play areas to basketball and handball courts. The southern end of Steuben Playground has a large area for passive recreation.



(Above) Steuben Playground: 1.17 acres.  
Asphalt ballfield, renovated in 2000, playground,  
fitness equipment, handball courts, open lawn at  
southern end

(Upper Left) Penn Triangle: .18 acres.  
Playground directly visible to BQE

(Left) Classon Playground: 3.15 acres  
Directly under the BQE.  
Handball courts, playground

## Topography



Nestled against the edge of the Brooklyn-Queens Expressway, this 1.7-acre site is relatively flat, with the exception of a slight rise of approximately 15 feet at the northwest corner.

## Views

Vegetation is most dense around the perimeter of the site, while a central portion appears to have been mown at various stages. From within the site, the BQE is visible above the treetops along the eastern edge of the site, where the Greenway will also be located.



## Light and Shadows

Abundant sunshine illuminates the site; there are no significant sources of shadow from the built environment.

## Sound

Traffic sounds from the BQE and Flushing Avenue are audible, but not overwhelming.



Views showing the enclosed, densely vegetated nature of the site.

### Tree Cover and Vegetation



Abundant vegetation on site creates a sense of peaceful enclosure, a small oasis on the edge of the hectic urban environment. Several plant species have established, creating a miniature woodland.



**Storm Water and Drainage**  
Because of the dense vegetation that characterizes the area, the site probably retains most, if not all, of the rain that falls there. A tall curb runs along the eastern edge of the site, along the bottom of the current chain-link fence.





---

---

## Opportunities and Constraints

### Opportunities:

- Extensive vegetation on site
- Existing habitat for birds and insects
- Sense of enclosure, peacefulness, privacy
- Rich history as part of Naval Yard Hospital site
- Brooklyn Navy Yard Center at Building 92
- Proximity to Brooklyn Waterfront Greenway
- Proximity to other parks along the Greenway
- Provision from State Historic Preservation Office that site remain unbuilt; should be maintained as a memorial to those buried on site

### Constraints:

- BQE separates the site from nearby neighborhoods
- Noise from BQE and Flushing Avenue
- Possible air pollution from the BQE and Flushing Avenue
- Blind spots in sightlines due to shape of site
- Potentially dangerous speeding traffic on Flushing Avenue
- Provision from New York State Historic Preservation Office that site remain unbuilt; should be maintained as a memorial to those buried on site
- Site is adjacent on three sides to the Brooklyn Navy Yard, which is one large private entity.

## Management and Maintenance Possibilities

The site will most likely remain the property of the Brooklyn Navy Yard, which will design, build, and manage the site in partnership with other entities. The organizations most likely to take a leading role in maintaining the site are:

### Brooklyn Greenway Initiative (BGI)

BGI is interested in maintaining the greenway, but would require a dedicated funding stream to maintain this public amenity. BGI is gaining experience in maintaining green spaces through their participation in “Adopt-A-Highway” site maintenance at different locations along the Greenway.

### Brooklyn Navy Yard Development Corporation

As owner of the site, the Development Corporation might lead the maintenance efforts, in partnership with nearby tenants, which might include Steiner Studios or other future tenants of the adjacent parcels.

## Questions for Consideration

The main challenge for this site is to strike a balance between its physical surroundings and its dedicated purpose as a memorial. The site needs to welcome neighbors and greenway users, while maintaining a peaceful memorial atmosphere. To create a safe and inviting place, it will be helpful to consider some of the key questions that illustrate the challenges of this site.

### Visitors:

A variety of people will visit this site: greenway cyclists and pedestrians, veterans and their families, neighbors, Brooklyn Navy Yard employees, and passersby on Flushing, Williamsburg and Kent Avenues. There is great potential for a well-used public space. The site must also be a memorial location, on which no structures can be built and the ground only minimally disturbed. Therefore, active uses will not be appropriate.

Questions: Who are the user groups for this site? How can the site meet the needs of the many user groups, while also serving as a memorial?

### Amenities:

The site's location, history and purpose present challenges as to what types of construction and building will be possible. Plumbing and construction projects are not possible, and active recreation is not appropriate.

Question: What are the highest priority amenities for this site, considering the constraints on this site?

### Connections to the Greenway:

Because of its irregular shape on the eastern corner of the Navy Yard, with only one of its four sides open to the greenway, the site presents a challenge for its connection to the greenway.

Questions: What is the optimal relationship of the site to the greenway? Should the design preserve the current enclosed, separate nature of the site, or should the memorial site open out to the greenway?

### Connections to the Neighborhood:

The site design should help connect this location to the surrounding neighborhood, whether through location of access points or boundary features such as fences or gates.

Questions: What pedestrian and streetscape improvements can improve access to this site from the neighborhood? Should the neighboring bus stop be integrated into the design for this site?

### Connections to Nearby Recreational Facilities:

Local recreation facilities include a children's play area (Penn Triangle), and sports playgrounds (Steuben and Classon), and a passive recreation area at the southern end of Steuben Playground. These active areas present a good balance to the memorial requirements of the project site.

Question: How can the project site design facilitate connections for greenway users and neighbors to move easily to and from nearby recreational areas?

### Connections to the Navy Yard:

There will be potential to connect the memorial site to the Navy Yard redevelopments to the north, west, and south of the project site. Planning for the memorial site should include provisions for these connections.

Questions: What approach will ensure that the site can be integrated into the Navy Yard's redevelopment strategies?

## Preliminary Ideas and Precedents

### Cafe with Meadow Overlook:

Create an open meadow in the former cemetery grounds, and activate the space by creating a Greenway cafe, adjacent and overlooking the meadow.



### Bradner Gardens

This similarly-sized park located in Seattle includes many uses, from wildlife habitat to a community gathering space, and a kids' garden. Its many types of uses keep a wide group of people coming to the site.



Images this page: Upper: GrowWildFlowers.com  
Lower: Justin Martin; Seattle Parks and Recreation, XXX

### Garden of Healing in the Staten Island Botanical Garden

When Staten Island community members were considering how to remember those who were lost on September 11th, the living memorial project presented a chance to redevelop a site and create a space with a feeling of enclosure, direction, flow, journey, privacy, and opportunity, interacting with all of the senses throughout. The Garden of Healing will include a sun-dappled central allee, and visitors will walk down gently graded switchbacks leading to an artesian well and “gazing sphere” (made from World Trade Center scrap materials). Their plans are still in progress, but their goals are clear: to create a natural space that offers solace, beauty, and a destination for remembrance and healing.



### Yonkers American Patriot Garden

This 200 square foot site honors the 23 Yonkers residents who were lost on September 11. The Hudson River is the key viewpoint of the site, which is part of a larger waterfront park. Planners intend for this to become a meditative location for visitors.



Images this page: Living Memorials project

## Summary

The planning goal for the Brooklyn Waterfront Greenway is to separate the greenway from traffic, and to create separate paths for bikes and pedestrians, in a continuous, landscaped route. A necklace of green spaces--“park nodes”--will enhance the Greenway experience for cyclists, pedestrians, neighbors, and families.

Experientially, parks along the greenway should offer maximum possible relief from the built environment, while providing spaces for greenway users to rest, relax and recharge during their journey. Each park node will provide a different landscape, history and potential for a unique design and experience.



The Navy Yard hospital memorial site is a small segment of the much larger Brooklyn Navy Yard, and its long, rich history encompassing significant moments of national, military, medical and technological history. The Navy Yard impacted multiple wars and the lives of thousands of workers, Navy personnel, and their families.

The Brooklyn Navy Yard Development Corporation is creating the Brooklyn Navy Yard Center at Building 92, which will provide an interpretive experience for visitors and illuminate the Yard's rich and illustrious history.

In contrast to the interpretive center, the memorial site can serve as a contemplative, restful space honoring those who were buried on the site. This goal will also help the site serve as the memorial space intended by the New York State Historic Preservation Office.

---

---

## Sources

Brooklyn Navy Yard Development Corporation, "The History of BNY."  
<http://www.brooklynnavyyard.org/history.html>

New York City Department of City Planning, New York City Census  
FactFinder, 2000 Census Profiles for New York City, <http://gis.nyc.gov/dcp>

United States Forest Service, Living Memorials Project, "Garden of Healing  
in the Staten Island Botanical Garden."  
[http://www.livingmemorialsproject.net/registry\\_results.  
asp?myID=822200245859PM\\_1130](http://www.livingmemorialsproject.net/registry_results.asp?myID=822200245859PM_1130)

United States Census Bureau, *2000 Census of Population and Housing,  
Profiles of General Demographic Characteristics*, 2000, p. 1.

United States Office of the Federal Register, National Archives and Records  
Administration, *Federal Register*, Vol. 65, No. 31, February 15, 2000, pp.  
7555-7557. Source of information on poverty definitions.

## Images

All images are by Regional Plan Association or Brooklyn Greenway Initiative  
staff members, unless otherwise noted.