

Bronx Harlem River Waterfront Bicycle and Pedestrian Study

August 2006

**Michael R. Bloomberg, Mayor
City of New York**

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Chapter 1. Introduction

Project Description

The waterfront along the Harlem River in the South Bronx has the potential to be a valuable destination for non-motorized commuting and recreation. There is currently no publicly accessible open space along the waterfront in the South Bronx, and no continuous system of bicycle and pedestrian pathways connecting the waterfront to upland destinations. With many developments and improvements planned for the Bronx Harlem River waterfront and for the South Bronx in general (including the Gateway Center at the Bronx Terminal Market, a new Yankee Stadium, a South Bronx greenway through Hunts Point and mixed use rezoning in Port Morris), the creation of safe and attractive bicycle and pedestrian routes to local destinations and to the waterfront is becoming increasingly important.

The Bronx Harlem River Waterfront Bicycle and Pedestrian Study focuses on a section of the southwest Bronx, approximately 2.3 miles long, which runs along the Harlem River waterfront from the Macombs Dam Bridge to the Triborough Bridge. The study area has been divided into 5 sections to facilitate organized data gathering and route identification (see Figure 1).

The goals of this study are to develop recommendations for the establishment of publicly accessible bicycle and pedestrian facilities throughout the study area, to provide access to the Harlem River waterfront, and to plan for the connection of recommended routes to current and future non-motorized routes and to surrounding destinations. The Department of City Planning (DCP) has consulted closely with a Technical Advisory Committee (TAC) comprised of representatives from local community groups,

civic organizations and state and local governmental organizations. The recommendations of this study have been informed by extensive field work, meetings with the TAC, and feedback from the community.

The funding for this project is provided by the New York Metropolitan Transportation Council through the Unified Planning Work Program.

The steps taken to complete this project include:

1. The establishment of a technical advisory committee (TAC) to provide input, review work and comment on results at various points in the study process.
2. The gathering of data through a literature review and observation of study area existing conditions. Base data gathered includes land ownership, jurisdiction, land use, zoning, and street layout (direction, width and physical conditions) of study area locations. Input from key organizations and constituents has been solicited to supplement base data. Projects adjoining the site have been identified and any relevant information has been analyzed. Field work consisted of various forms of data gathering including measurement of street geometry, counts of non-motorized and motorized traffic, photography of study area, and map generation.
3. Analyzing potential routes for each study area and conceptually designing recommendations. Route alternatives have been identified and evaluated by the DCP in consultation with the TAC. Long- and short-term route designs have been developed based on accessibility, connectivity, directness and continuity.
4. The development of a schematic design of the

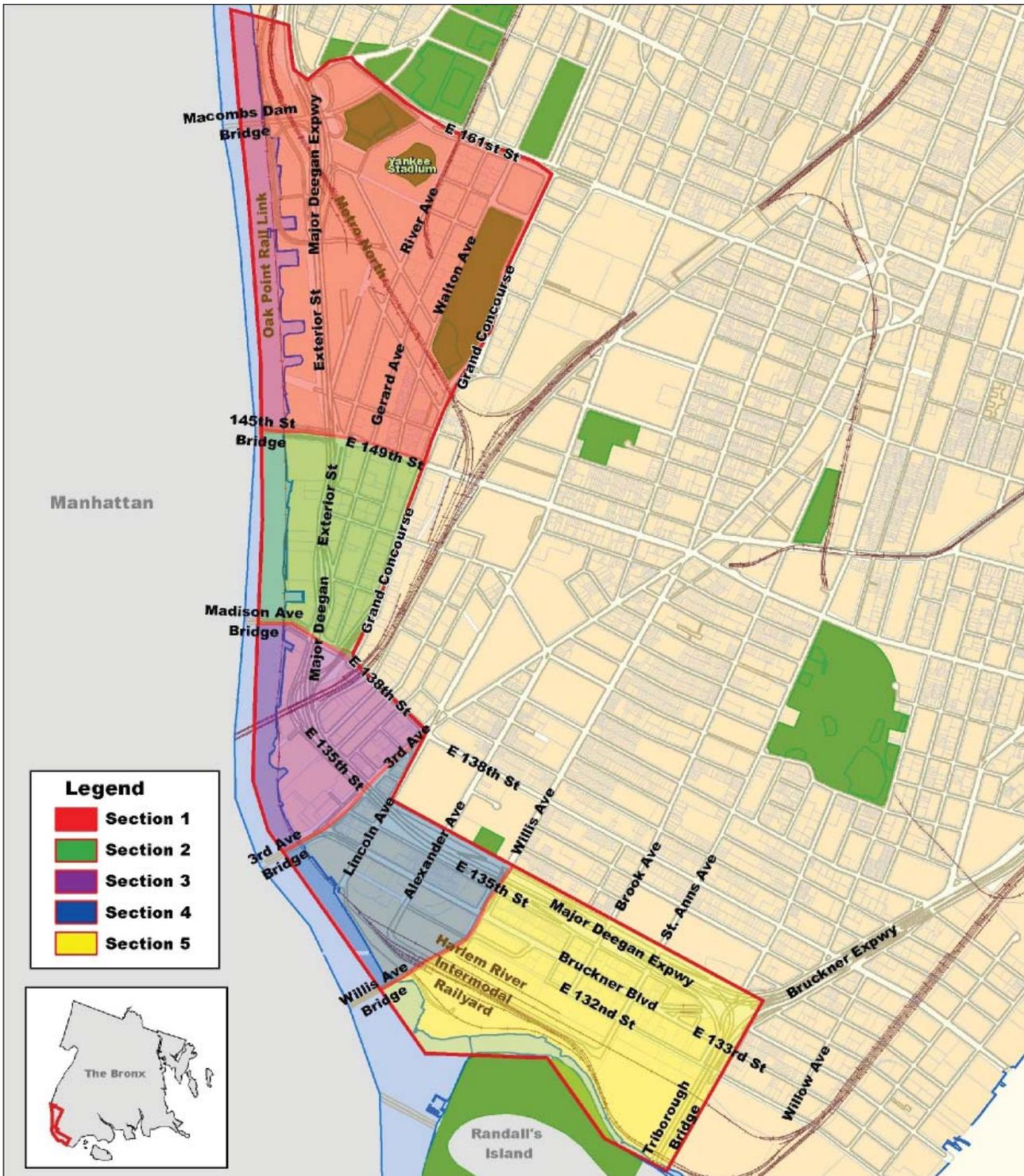


Figure 1. Map of the study area divided in sections

preferred conceptual recommendations. This planning document includes design guidelines identifying typical bicycling and pedestrian path details.

5. The completion of a master plan to outline the finalized plans and recommendations for the selected routes, as detailed above.

Planning Framework

When planning bicycle and pedestrian facilities, it is important to follow guidelines set by The American Association of State Highway and Transportation Officials (AASHTO). For sidewalks, AASHTO recommends a minimum clear width of 4 feet, which does not include the width of any attached curb. In addition, along busy arterials, AASHTO states that the desirable clear width of the sidewalk is 6 to 8 feet, while in a Central Business District (CBD), the desirable clear width of the sidewalk is 10 feet. In AASHTO's *Guide for the Development of Bicycle Facilities* (1999), a minimum width of 10 feet for a bi-directional shared use path is recommended. The guide also suggests that a three-foot wide graded (1:6 slope) area should be established adjacent to a shared-use path in order to provide separation from obstructions such as trees and poles. Also, in areas such as New York City where most on-street bicycle lanes are striped between parking lanes and vehicular travel lanes, the minimum desirable bicycle lane width is 5 feet.

Potential bicycle routes are evaluated using the following criteria:

- Accessibility to origins and destinations.
- Connectivity with bicycle network, public waterfronts, parks, esplanades, points of interest and retail corridors.
- Safety of route: minimize conflicts with vehicular traffic, provide lanes of sufficient width.
- Directness of route: consider constraints including geography, minimizing impacts on natural areas, and community and governmental satisfaction.
- Continuity of cycling conditions: from grade and pavement conditions to scenic qualities.

Pedestrian, Bicycle and Waterfront Planning in the Bronx

The need for the Bronx Harlem River Waterfront Bicycle and Pedestrian Study is apparent in the conclusions and recommendations of past planning projects undertaken in New York City. Specifically:

- The Bronx Harlem River Waterfront Bicycle and Pedestrian Study is part of a larger effort to enact the recommendations of the 1993 Greenway Plan for New York City, which identifies a potential 350 mile network of off-street bicycle and pedestrian paths throughout New York City, and the recommendations of the 1997 New York City Bicycle Master Plan, which further identifies a potential 550 mile citywide on-street network of bicycle facilities. The NYC Cycling Map, which includes existing and proposed bicycle routes citywide, is updated and published yearly as a result of planning and route implementation informed by the above documents (see Figure 2).
- The DCP's 1993 *Plan for the Bronx Waterfront*, part of the overall *New York City Comprehensive Waterfront Plan*, specifically identifies potential greenway/bikeway connectors along Bruckner Boulevard, St. Anns Avenue, Third Avenue, East 138th Street and Grand Concourse in the study area, as well as potential pedestrian waterfront access points at the ends of St. Anns Avenue and Lincoln Avenue.
- The 1997 *New Waterfront Revitalization Program* states, as part of its several policy recommendations, the need to "provide public access to and along New York City's coastal waters," and to "preserve and develop waterfront open space on publicly owned land at suitable locations."
- Two reports by the Bronx Borough President's Office outline the need for extensive greenway and waterfront planning in the borough. The 1993 *Bronx Greenway Plan* identifies the importance of greenway planning as "an

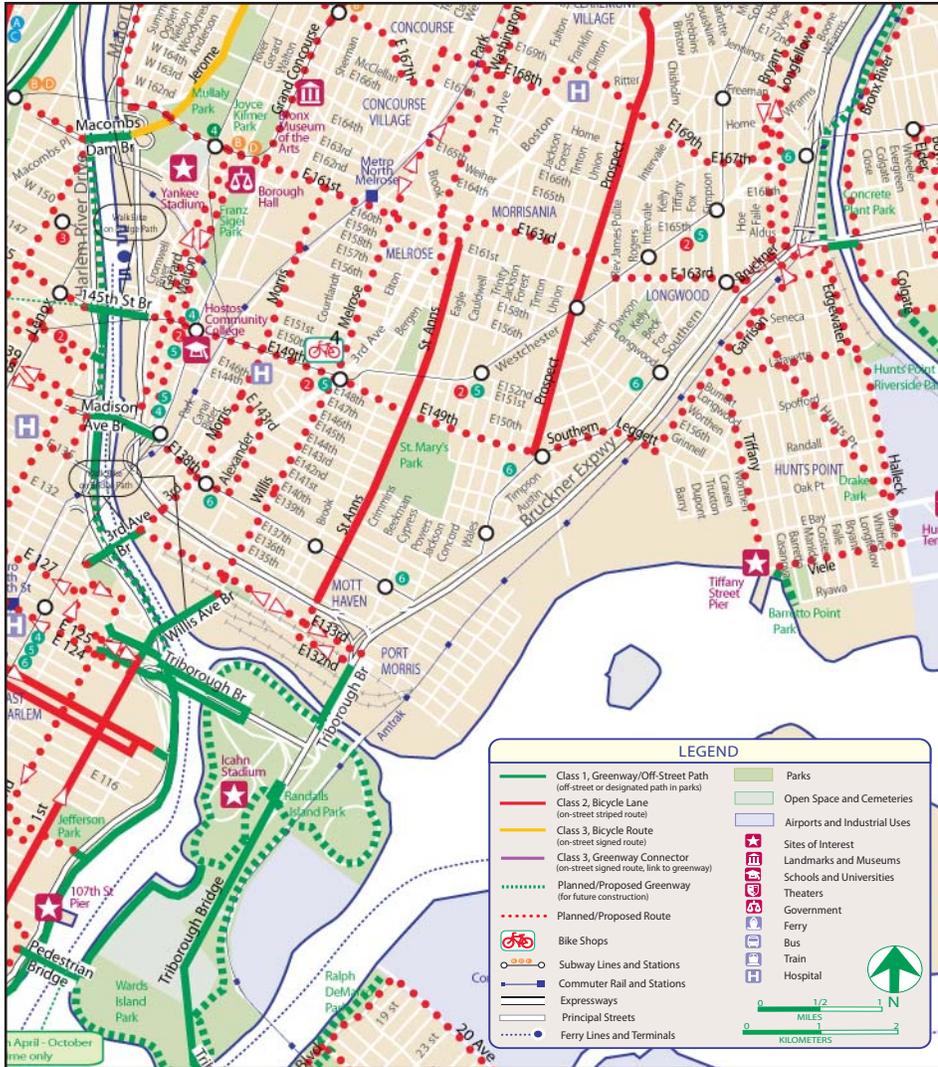
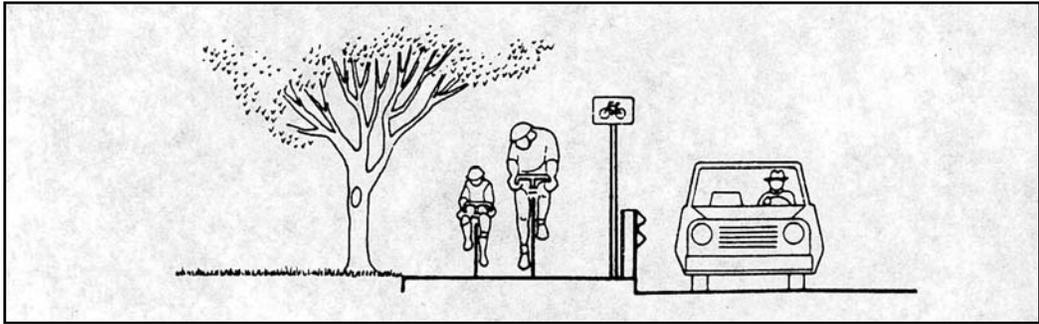


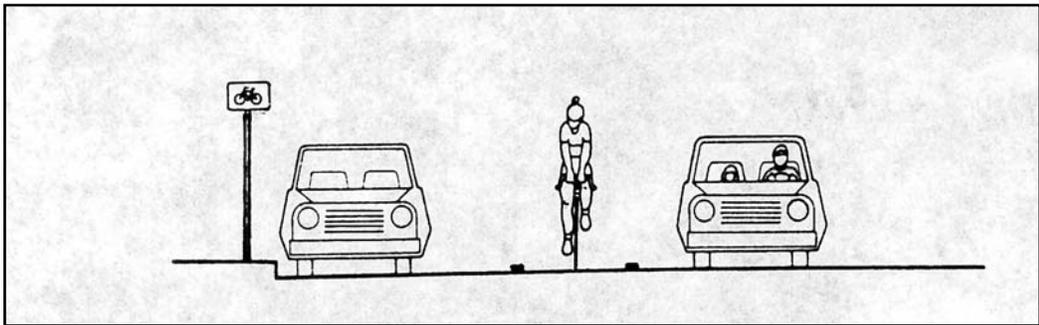
Figure 2. Study area section of the 2006 New York City Cycling Map

opportunity to improve our quality of life. By promoting a greener and more pedestrian- and bicycle-friendly environment, it will help bring us out of our cars and into our parks, along the waterfront, and past famous landmarks and institutions.” The 2004 *Bronx Waterfront Plan* has as one of its strategic objectives to “establish/improve public access to the waterfront,” and identifies specific sections of the study area as sites of recommended public access and waterfront improvement.

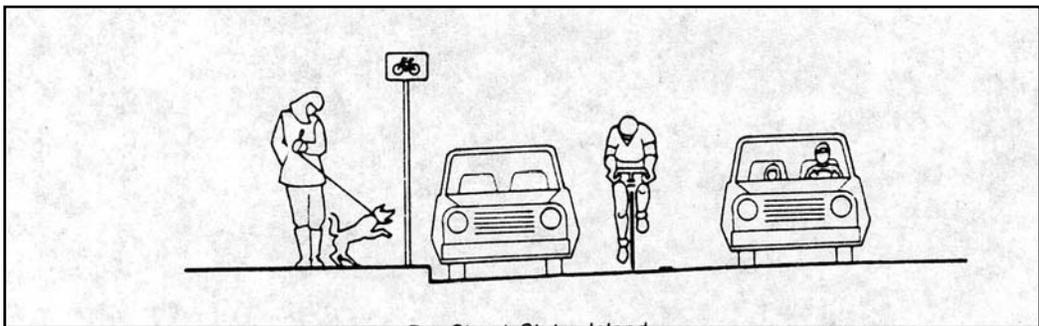
Bikeway Classifications:



Class 1: Multi-use path separated from roadway and delineated by pavement markings and regulatory signage. Bicycle paths are usually shared with multiple users, including pedestrians, runners and skaters. Example: Hudson River Greenway, Manhattan.



Class 2: On-street bicycle lane. Part of the roadway and delineated by pavement markings and regulatory signage. The lane, which can be shared with in-line skaters, is usually located next to curb lane parking, and may include a marked buffer zone. Example: St. Anns Avenue, The Bronx.



Class 3: Signed bicycle route. Shared use of the roadway, typically designated with informational signs. Example: Avenue I, Brooklyn.

Source: *New York City Bicycle Master Plan, 1997.*

Chapter 2. Existing Conditions

Overview

The study area runs along the Bronx Harlem River waterfront from the Macombs Dam Bridge to the Triborough Bridge, which is approximately 2.3 miles. Initially, it is bounded by East 161st Street to the north, Grand Concourse to the east and the Harlem River to the west. Moving south to the Madison Avenue Bridge, the boundary line then extends along East 138th Street to the east, continues south along 3rd Avenue, and finally follows East 135th Street east until it reaches the Triborough Bridge. We have separated the study area into five sections, each of which spans the space between two of the six bridges within the study area (see Figure 1).

The predominant land uses in the study area are industrial and manufacturing, and transportation and utility, uses which concentrate along the waterfront. Large parking facilities and some vacant lots are also present in this area. Residential uses cluster in the northeastern area, around the intersection of East 161st Street and Grand Concourse, and in a few southeastern blocks in the Port Morris Special Mixed Use District. There are a small number of commercial lots, mainly located close to the blocks of residential use. Figures 3 and 4 show the zoning and land use maps of the study area, respectively.

The study area has extensive motor vehicle transportation access. The Major Deegan Expressway runs along the study area and has on/off ramps at East 161st Street, East 138th Street, Park Avenue, Willis Avenue and Brook Avenue, as well as an off-ramp at East 149th Street. Six bridges in the study area serve as vehicular and pedestrian connections between Manhattan and the Bronx. These bridges are, from north to south: the Macombs Dam Bridge,

the 145th Street Bridge, the Madison Avenue Bridge, the 3rd Avenue Bridge, the Willis Avenue Bridge and the Triborough Bridge. The Macombs Dam Bridge was designated an official New York City landmark in 1992. The Metro North Hudson and Harlem lines run through the study area, but they have no stations inside the area. They connect to Manhattan across the Park Avenue Railroad Bridge, which is located between the Madison Avenue and the 3rd Avenue Bridges. The area is also well served by public transportation. It can be accessed by subway on the 2, 4, 5, 6, B and D lines, and by bus on the Bronx 1, 6, 13, 15, 17, 19, 33 lines (see Figure 5).

One major destination in the study area is Yankee Stadium, which is located at the study area's northern edge. Also located at the northern edge is the Bronx Borough Hall and Court House, and Hostos Community College stands a few blocks further south. The Bronx Terminal Market was, until recently, a major industrial destination. The main open spaces are located in the north of the study area, and include Macombs Dam Park, next to Yankee Stadium, and Franz Sigel and Joyce Kilmer parks, next to the Bronx Borough Hall and Court House (see Figure 6). The remainder of the study area is underserved by parks and open space.

Current features of the overall study area are:

- No waterfront access except at a derelict strip immediately west of the Bronx Terminal Market (BTM).
- No bicycle facilities except one upland class 2 bike lane along St. Anns Avenue that runs between East 135th Street (see Photo 1) and East 161st Street, and one class 3 signed route along

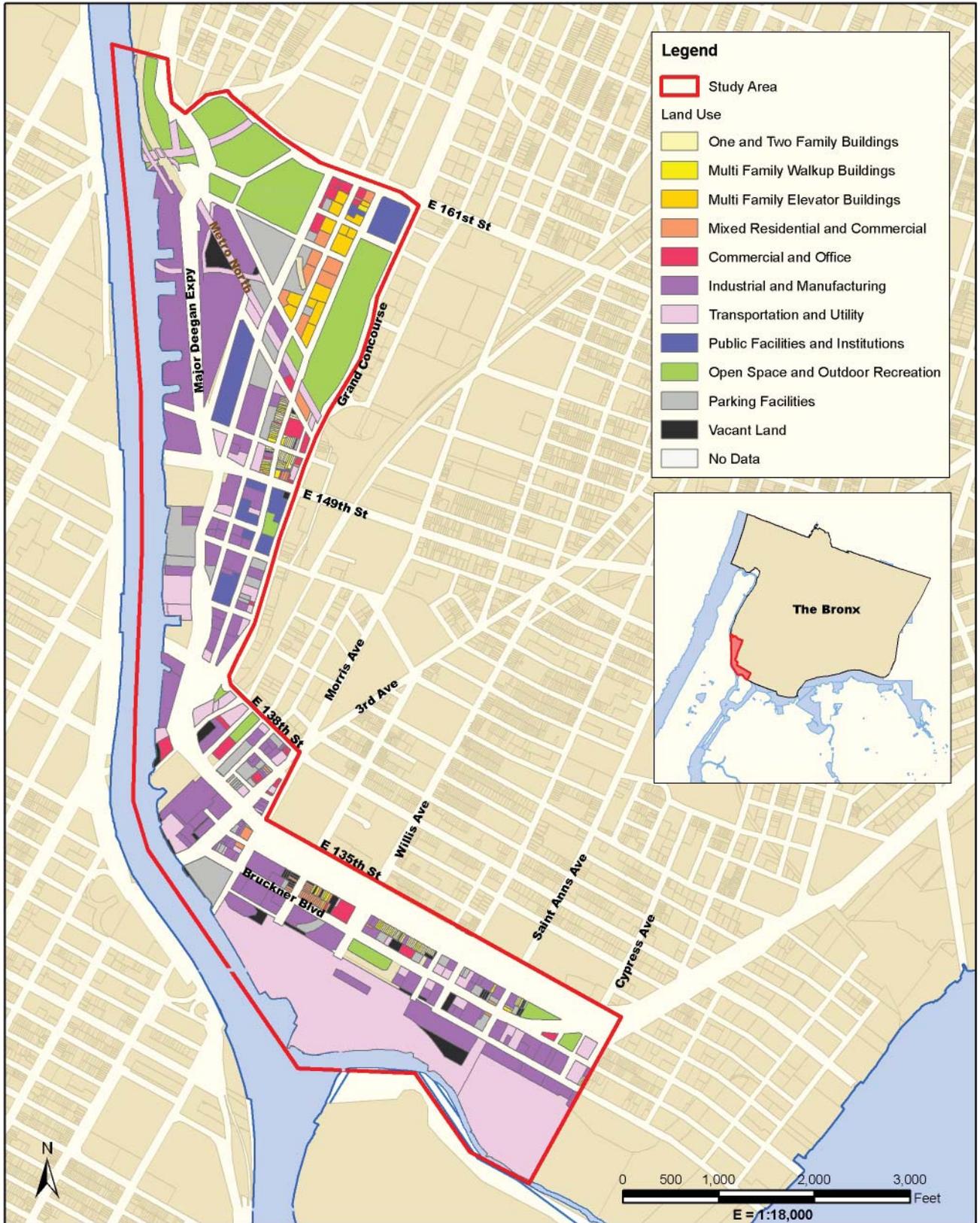
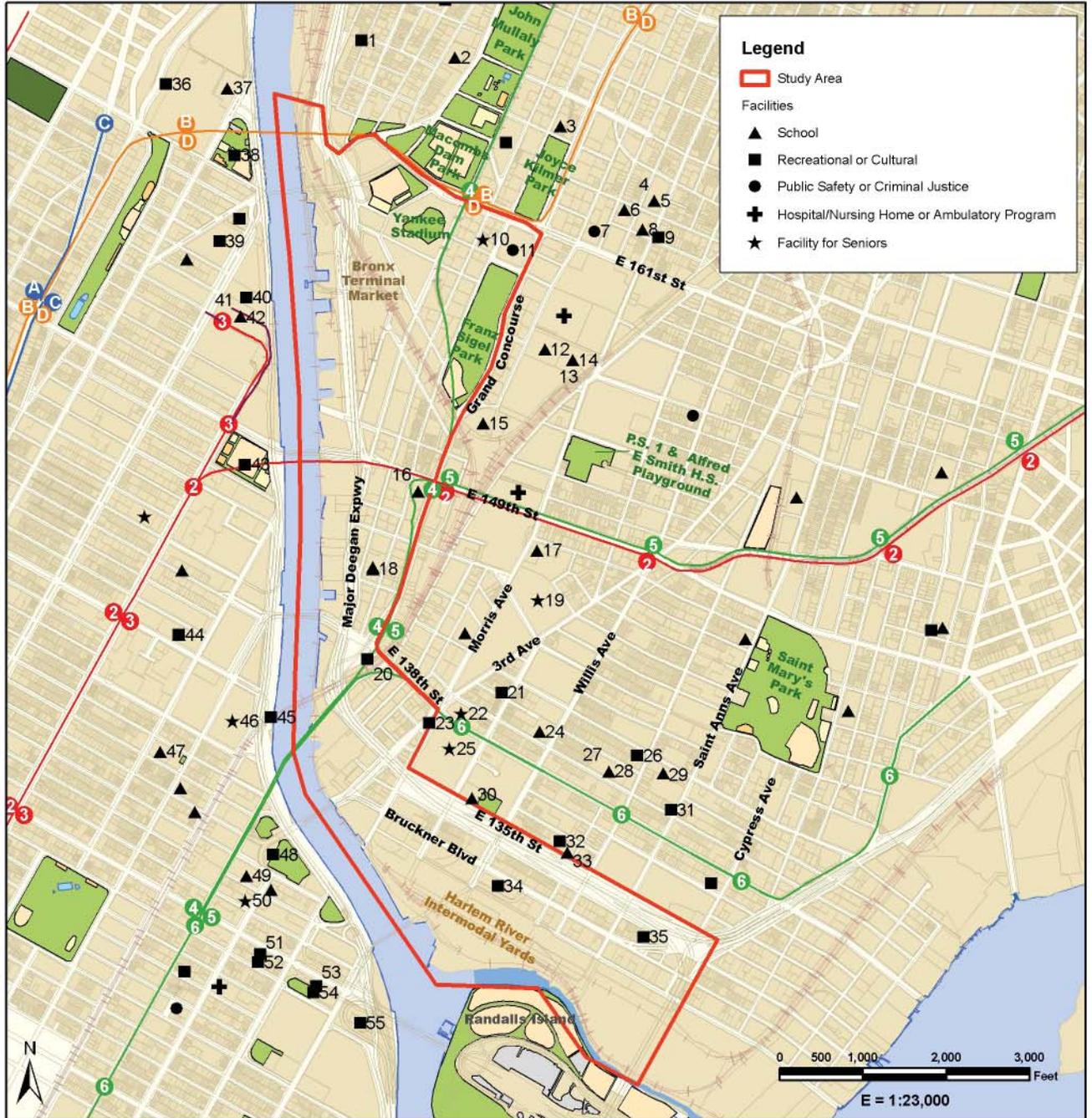


Figure 4. Study area land use map



Figure 5. Study area transportation map



- | | | | |
|---|--|--------------------------------------|---|
| 1-Summit Avenue Park | 14-J.H.S. 151 Henry Lou Gehrig School | 28-IS 222 | 42-Frederick Douglass Academy |
| 2-P.S. 73-Bronx School | 15-Cardinal Hayes High School | 29-PS. 30 Wilton School | 43-Col Charles Young Playground |
| 3-All Hallows Institute | 16-Hostos Community College (CUNY) | 30-PS. 154 Jonathan D. Hyatt School | 44-PS. 197 John B. Russwurm School |
| 4-P.S. 35 Franz Siegel School | 17-P.S. 18 John Peter Zenger School | 31-Padre Plaza | 45-Harlem River Dr |
| 5-JHS 166 Roberto Clemente School | 18-Health Opportunities Secondary School | 32-Peoples Park Exchange | 46-Lincoln Senior Center |
| 6-Bronx School for Law Government and Justice | 19-Patterson Houses | 33-PS. 43 Jonas Bronck School | 47-P.S. 133 Fred R. Moore School |
| 7-Bronx Criminal / Family Court | 20-Grass Strip (Memorial) | 34-Pulaski Park | 48-Harlem River Park |
| 8-Saint Angela Merici School | 21-Mott Haven Library | 35-134th St Playground | 49-PS. 30 R. Hernandez/L. Hugues School |
| 9-Melrose Library | 22-Borinquen CT Senior Center | 36-Highbridge Park | 50-U.B.A. Beatrice Lewis Senior Center |
| 10-Hope of Israel Senior Citizen Center | 23-Graham Square Park (Triangle) | 37-PS. 46 Arthur Tappan School | 51- 125th St Library |
| 11-Bronx County Courthouse | 24-P.S. 49 Willis Avenue School | 38-PS 156 Holcombe Rucker Playground | 52-Dream Street Park |
| 12-P.S. 156 Benjamin Banneker School | 25-Mitchell Houses | 39-Macombs Bridge Library | 53-Triboro Bridge Park |
| 13-P.S. 31 William Lloyd Garrison School | 26-Brook Park | 40-Frederick Johnson Park | 54-Wagner Houses Pool |
| | 27-P.S. 220 Mott Haven Village School | 41-PS. 200 James M. Smith School | 55-Louis Cuvillier Park |

Figure 6. Community facilities map