

New housing construction in Williamsburg

Part I:

Increasing the Housing Supply

New York City faces a major housing shortage. Although the city's population grew by 769,000 from 1990-2002, the city added only 217,000 housing units during that period. Because supply has not kept pace with demand, housing prices are rising. If, as projected, the city adds one million new residents by 2030, the city must build over 400,000 new units in the next 24 years, or else the existing shortage will only worsen and the housing market will become even more expensive. Although an expensive housing market demonstrates a strong economy, such conditions can eventually exclude the middle- and working-class residents upon whom the economy relies.

According to conventional wisdom, large development sites are no longer available in a city as built-up as New York. In fact, there are hundreds of acres of empty or underutilized property throughout the city—more than enough to accommodate the hundreds of thousands of new residents. Potential sites fall into five categories, each requiring little or no residential relocation:

- Vacant and underutilized manufacturing and industrial areas
- Infill at urban renewal sites and public housing projects
- Air rights over transportation infrastructure (highway and rail)
- Waterfronts
- Areas poorly-served by mass transit

The first two categories are already being addressed by various city agencies. The City Planning Commission recently rezoned industrial and

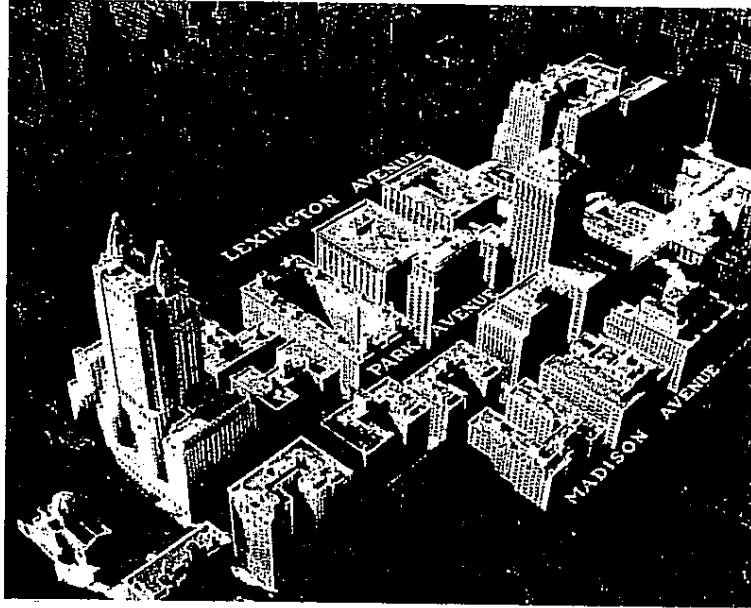
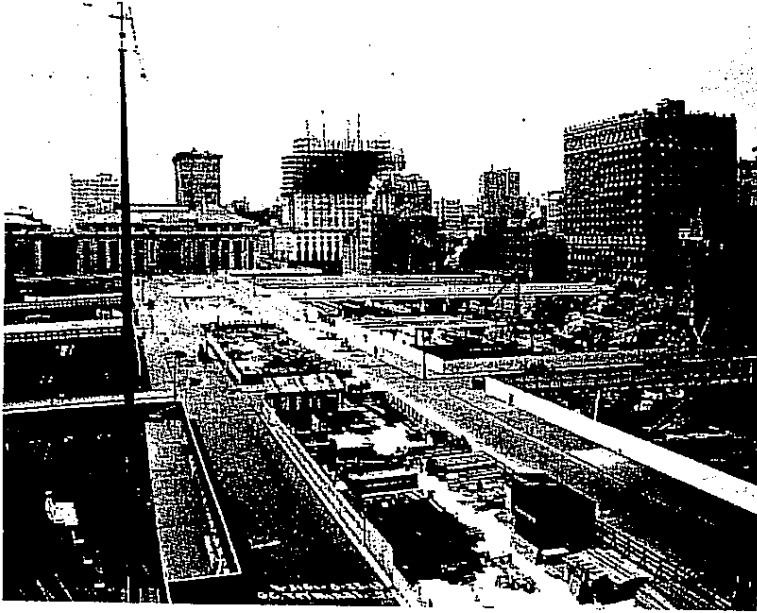
manufacturing areas in Greenpoint-Williamsburg and the Hudson Yards, while other areas are under consideration by the Department of City Planning. The Department of Housing, Preservation, and Development (HPD) and the New York City Housing Authority are both pursuing opportunities for in-fill development on existing city-owned properties in urban renewal and public housing projects. Given the efforts already underway, this report will not focus on these two categories.

Part I of the report identifies opportunities in the latter three categories, namely to:

- Build platforms and new housing over highways, rail yards, and rail corridors
- Develop new communities along the waterfront
- Extend mass transit service to stimulate development

These projects require the city government to negotiate the transfer of development rights, sponsor re-zoning efforts, establish the ground rules for each development, and supervise housing production by the private real estate sector. Such efforts will require collaboration among the Economic Development Corporation (EDC), the Department of Housing Preservation & Development (HPD), and city and state Departments of Transportation (DOT), just to name a few of the key players. The Mayor's office must delegate management for these projects, as doing so is integral to their execution and ultimate success.

Chapter 1

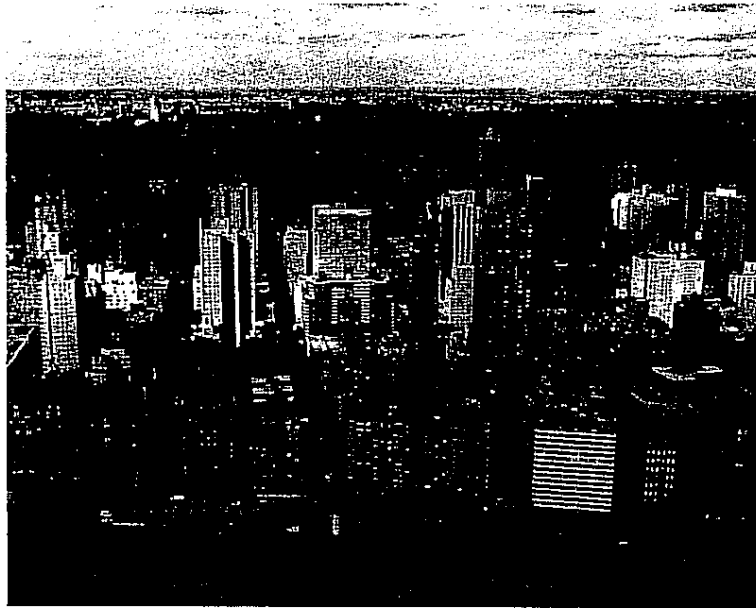


Far Left: At the start of the 20th century, the rail yards around Grand Central Terminal were platformed over to provide sites for development.

Near Left: By 1930, new buildings occupied all the sites that had been created over the rail yards around Grand Central Terminal.

Near Right: The apartment houses on East End Avenue are built over the FDR Drive.

Far Right: Concourse Village in the Bronx was built over the Penn Central rail yards.



1 Platform Opportunities

Transportation infrastructure—especially highways, rail yards, and rail lines—often depresses adjacent property values and creates a barrier between neighborhoods. Over the past century, New York City has periodically built over these types of infrastructure to hide them and to open up surrounding land for development — most notably along Park Avenue in Manhattan. Such a transformation is expensive, but the outcome can be cost-effective and dramatic.

Construction of platforms over highways and railroads is common throughout the city (see photos above). A series of hospital buildings cover the FDR Drive on Manhattan's Upper East Side, as do apartment buildings on Sutton Place and East End Avenue. The Port Authority bus station and four apartment buildings were erected over Interstate-95 at the base of the George Washington Bridge. Concourse Village and a NYCHA tower were built on a platform over the Penn Central

Railroad in the Bronx. Waterside sits on a platform in the East River.

This section presents opportunities to build similar platforms over other highways, rail lines, and rail yards. These platforms can transform areas of noise and pollution into attractive locations for thousands of new residential units, and, in some cases, offer the chance to create entirely new communities.

Chapter 1

Potential platform opportunities are divided into two groups:

Projects for Further Feasibility Analysis

- Sunnyside Yards, Queens
- BQE Cobble Hill, Brooklyn
- Prospect Expressway, Brooklyn
- 36th Street Rail Yards, Brooklyn
- Bay Ridge Freight RR at the northern edge of Bay Ridge, Brooklyn

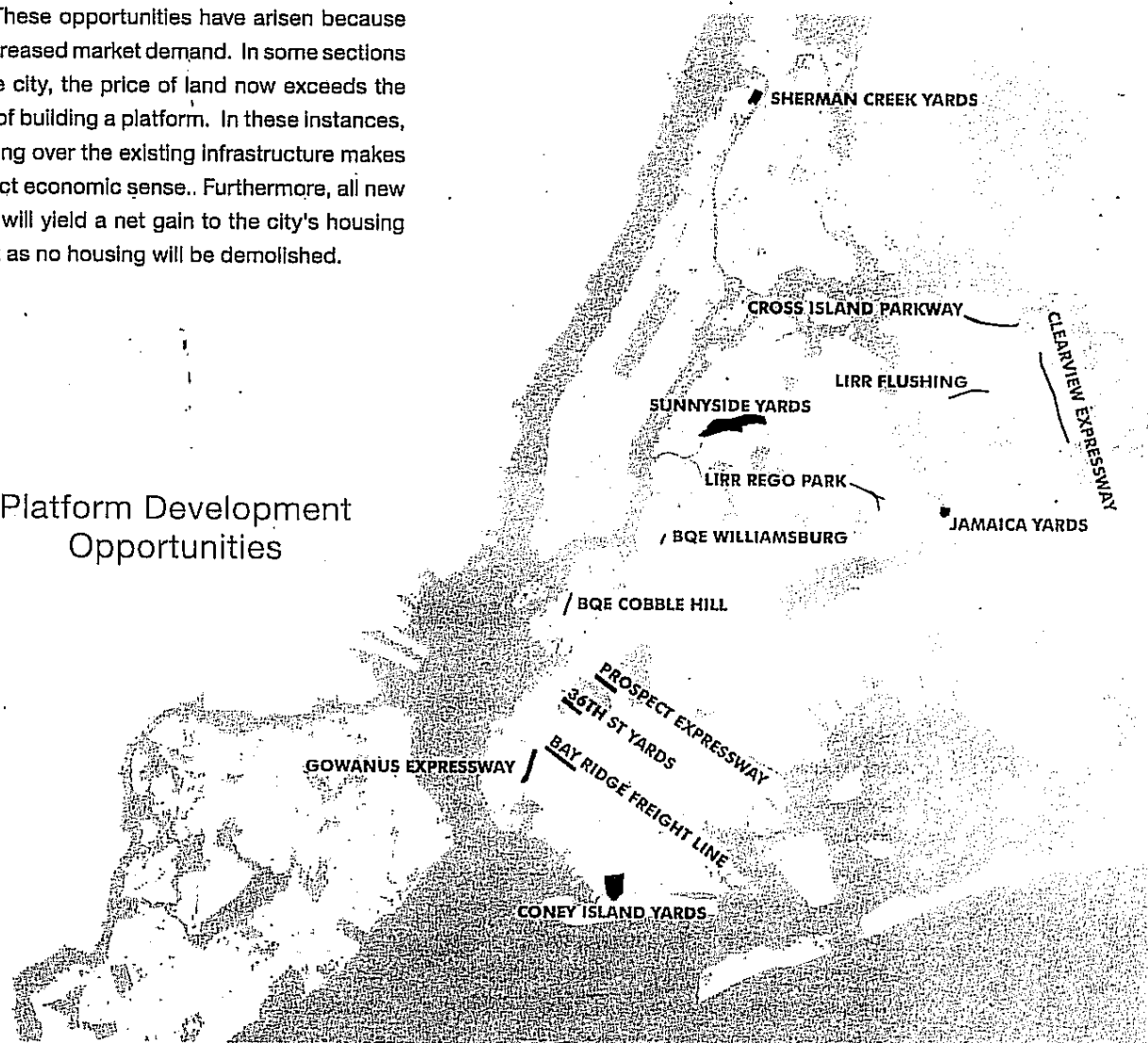
Projects for Future Study

- Gowanus Expressway, Brooklyn
- Brooklyn-Queens Expressway in Williamsburg, Brooklyn
- Clearview Expressway, Queens
- Cross Island Parkway, Queens
- LIRR in Flushing, Queens
- LIRR in Rego Park, Queens
- Coney Island Creek Yards, Brooklyn
- Jamaica IND Yards, Flushing Meadows, Queens
- Sherman Creek Rail Yards, Manhattan

These proposed projects would reconnect long-separated neighborhoods and increase adjacent property values, thus stimulating a private market reaction in the surrounding area. In some cases, the platform would even be large enough to create "new" land, not only for housing, but also for streets, stores, schools, and parks.

These opportunities have arisen because of increased market demand. In some sections of the city, the price of land now exceeds the cost of building a platform. In these instances, building over the existing infrastructure makes perfect economic sense. Furthermore, all new units will yield a net gain to the city's housing stock as no housing will be demolished.

Platform Development Opportunities





Sunnyside Yards

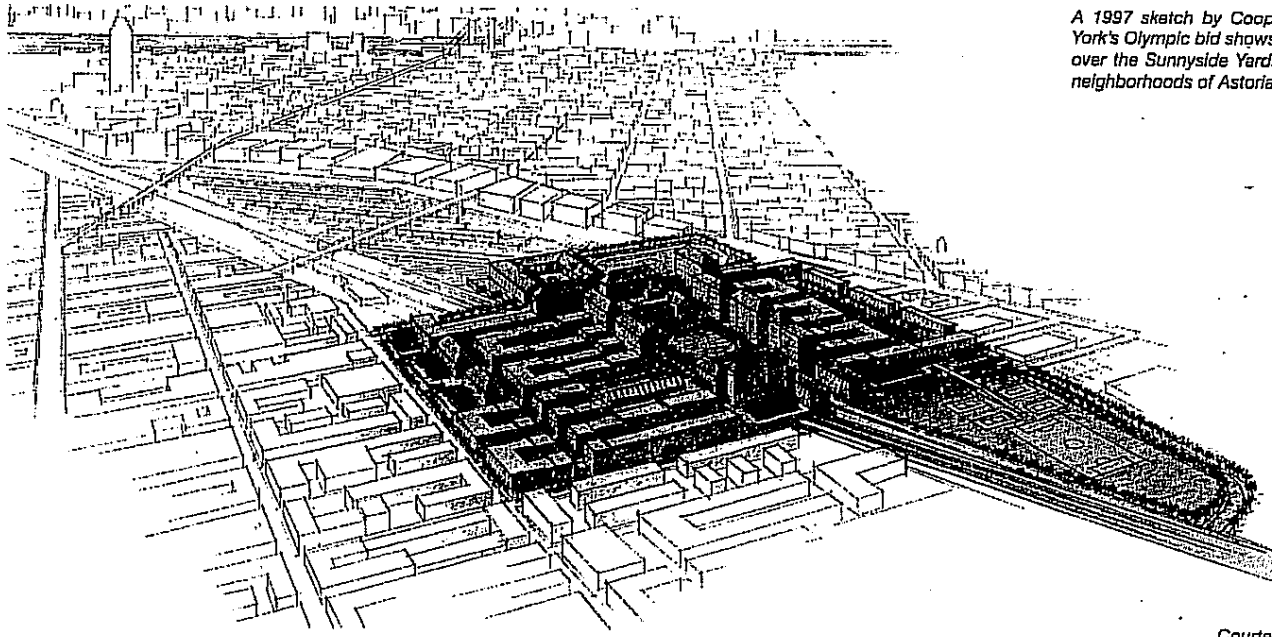
A platform over Sunnyside Yards between Thomson Avenue and 43rd Street would create a development site of approximately 166 acres. Depending on the zoning, the new mixed use neighborhood could add between 18,000 and 35,000 new units—a substantial increase to the city's housing supply. By themselves, the 20,000 to 50,000 residents of this “new-town-in-town” could provide enough customers for an entirely new neighborhood with stores, schools, playing fields, and parks. Because

the added amenities and services would benefit both the adjacent communities and the entire city, Sunnyside Yards is the city's single greatest opportunity to increase the housing supply and simultaneously improve the quality of the public realm.

Besides adding thousands of new housing units, the site could also include an intermodal transportation facility at the intersection of seven subway lines, the Long Island Railroad, and Amtrak. This intermodal

station (an MTA project with a long history) would turn the Sunnyside Yards into a regional sub-center that would justify major retail use and eventually might even support new office space. Furthermore, given the differences in grade between the rail tracks and the existing street overpasses, there is an opportunity to create an underground circulation system for delivery vehicles, several levels of parking, and perhaps even a bus layover yard.

Chapter 1



A 1997 sketch by Cooper, Robertson & Partners for New York's Olympic bid shows a new neighborhood on a platform over the Sunnyside Yards, reconnecting the long-separated neighborhoods of Astoria and Sunnyside.

Courtesy of Cooper, Robertson & Partners

A new neighborhood over the Sunnyside Yards would transform life for the surrounding neighborhoods. Residents of Sunnyside could walk directly and safely to the shopping on Steinway Street in Astoria; residents of Long Island City could commute from an LIRR station within their neighborhood; and children from Astoria could play on new ball fields created over the Yards.

The last time a project of this scale was created occurred in the late 1960s when the United Housing Foundation created the 15,389-unit development Coop City. Coop

City, however, is isolated from the rest of the Bronx and suffers from design flaws common during that era, namely towers without street life. Sunnyside Yards, on the other hand, would connect the neighborhoods of Astoria, Sunnyside, Woodside, and Long Island City; it would be only one stop from either the east side or west side of Midtown Manhattan by subway or LIRR respectively; and it would embody the urban design principles that have made Rockefeller Center and Battery Park City so successful.

Given the high price that waterfront hous-

ing is beginning to command in nearby Hunters Point, Greenpoint, and Williamsburg, the cost of developing the Sunnyside Yards may finally have reached a marketable level. The difficulties and expense of developing a project of this scale, however, should not be minimized. Project planners will have to consider the effect of traffic from the adjacent Queens-Midtown Tunnel and Queensborough Bridge, as well as Queens and Northern Boulevards, in addition to movement from neighboring communities and circulation within the development. Trains run through the yards on a continuous basis,

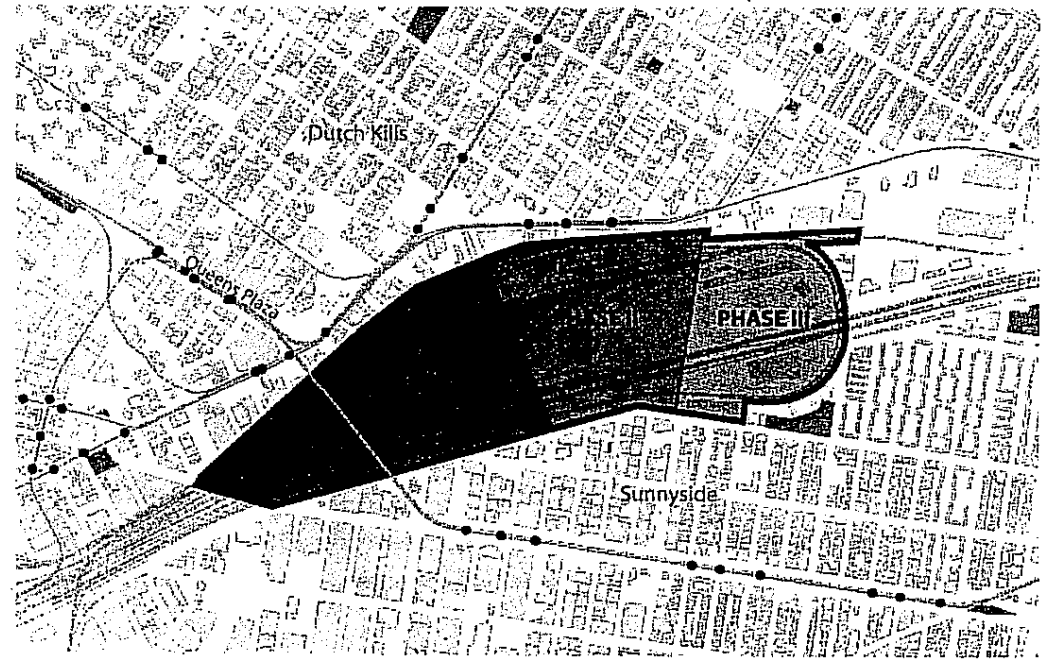
Sunnyside Yards Platform Development

Sunnyside Yards: Total Site Potential

	Area (acres)	Potential Housing Units		
		R7A	R8	R9
FAR		4.00	6.02	7.54
Phase I	75	8,300	12,500	15,700
Phase II	54	5,800	8,800	11,000
Phase III	38	4,600	6,900	8,600
TOTAL	166	18,700	28,200	35,300

Phase I: Estimated Annual Return

Zoning	Return	
	Rental	Sales
R7A	3.3%	-10.4%
R8	12.1%	15.4%
R9	17.2%	30.0%



which will make construction scheduling particularly complicated.

Due to the sheer scale of creating a platform on this site, the process could probably be achieved with the greatest efficiency in three phases: Phase I, a western section of 74 acres, followed by Phases II and III, of 54 acres and 38 acres, respectively.

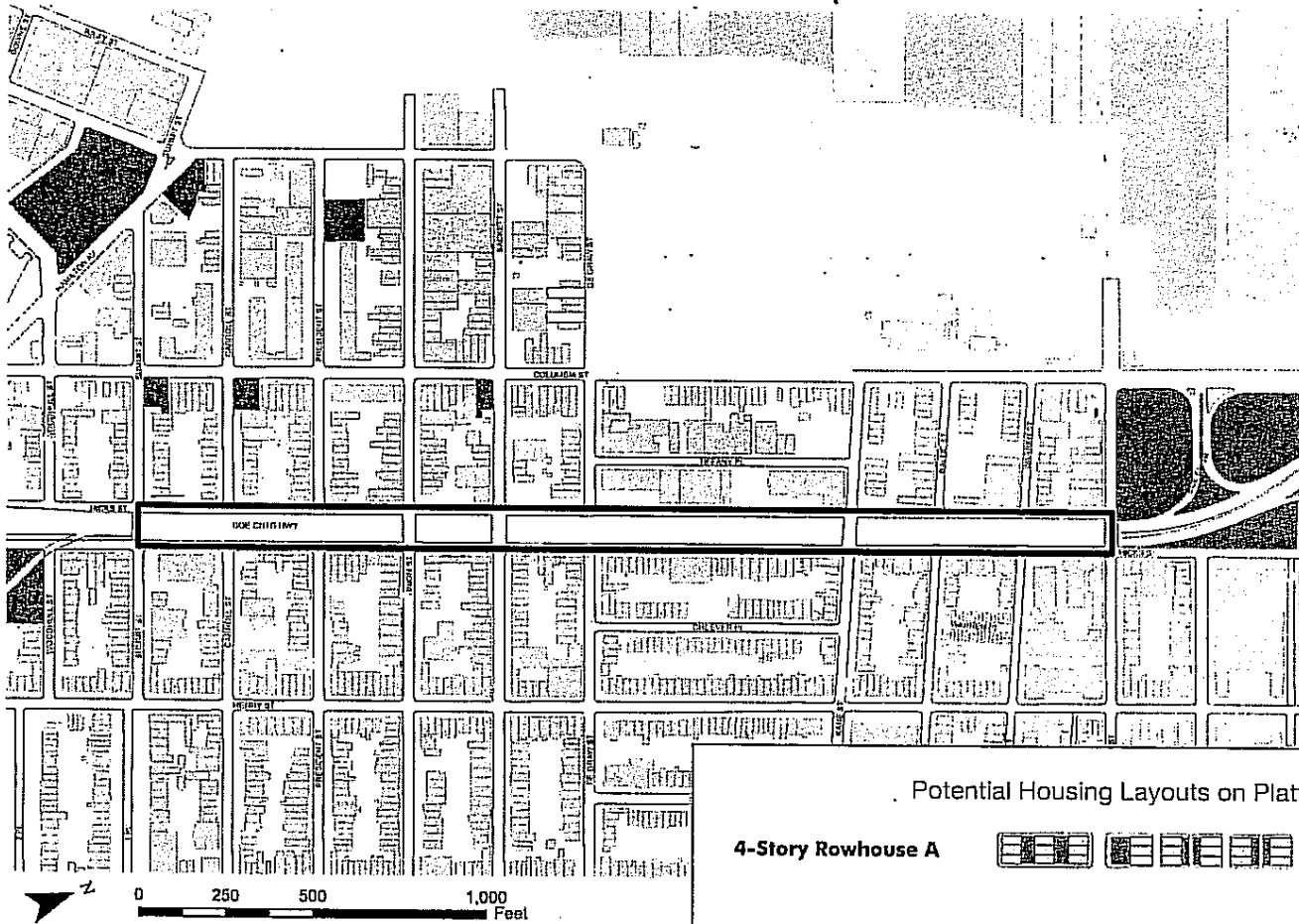
Even with space reserved for multiple uses like a theater, hotel, retail and office space, Phase I alone would produce about 8,000 units of housing if zoned at R7a and nearly 15,000 units nearly if zoned at R9.

Rough estimates in the table above, based on current construction costs and market prices, indicate that developing the site is not financially feasible at low densities. However, development may be feasible at medium densities—especially if some of the cost of the platform is absorbed by the Intermodal transit station and commercial developments. These estimates are based on many assumptions, so a more thorough feasibility analysis is required. This analysis should include input from engineers, traffic analysts, site planners, urban designers, and real estate entrepreneurs.

Despite the complexities, Sunnyside Yards provides New York City with a rare opportunity. By developing the site, the city could create an entirely new neighborhood with tens of thousands of new apartments, knit together long-separated communities, eliminate the noise and blight of an exposed rail yard, and provide a transportation hub for anyone traveling to or from Queens and Long Island. This opportunity is so significant that it is worth pursuing now.

Chapter 1

BQE Cobble Hill Platform Development



Potential Housing Layouts on Platform

4-Story Rowhouse A

4-Story Rowhouse B

6 or 12 Story Apartments

BQE Cobble Hill Expressway

PHYSICAL	4-story-A (2-unit walkup)	4-story-B (2-unit walkup)	6-story	12-story
Platform Area (acres)	4.6	4.6	4.6	4.6
FAR as built	2.00	2.51	3.65	7.30
Dwelling Units (DU's)	200	200	700	1,500
Average sq. ft./DU	2,100	2,400	1,000	1,000

FINANCIAL

Development Cost per square foot	\$450	\$389	\$390	\$414
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6-MONTH SALES DATA, Jul-Dec 2005 (per sq. ft. within half mile of site)

1-2 family buildings	\$525
3-6 family building	\$560
condos	\$667



BQE-Cobble Hill

Just south of Atlantic Avenue, the Brooklyn-Queens Expressway dips into a depressed section of roadway bordered on either side by Hicks Street. Continuing straight through to the entrance to the Brooklyn-Battery Tunnel, this sunken highway divides Cobble Hill and Carroll Gardens from land closer to the river—the Columbia Street Waterfront—and has impeded the spread of new development. The cut extends approximately 75 feet from wall to wall. If a platform were built over the entire length of the sunken BQE and cross

streets were extended, the city could create nine new blocks of additional housing and knit together two disparate neighborhoods.

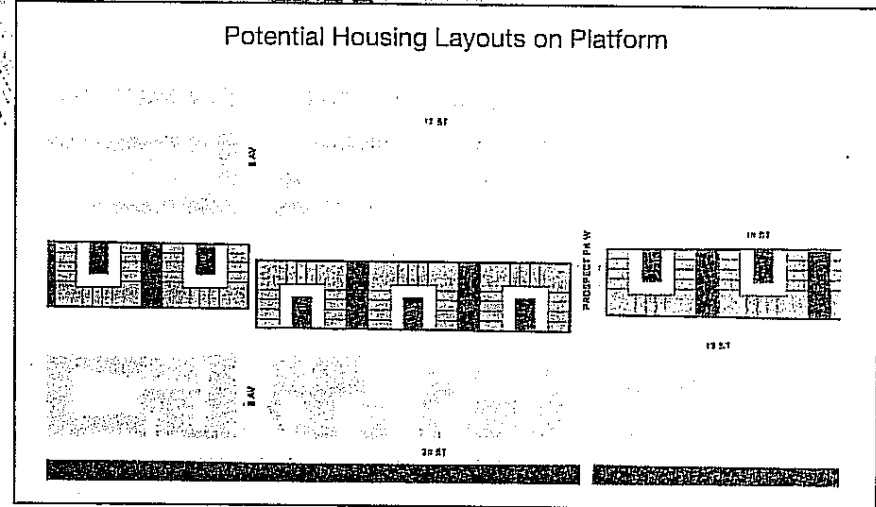
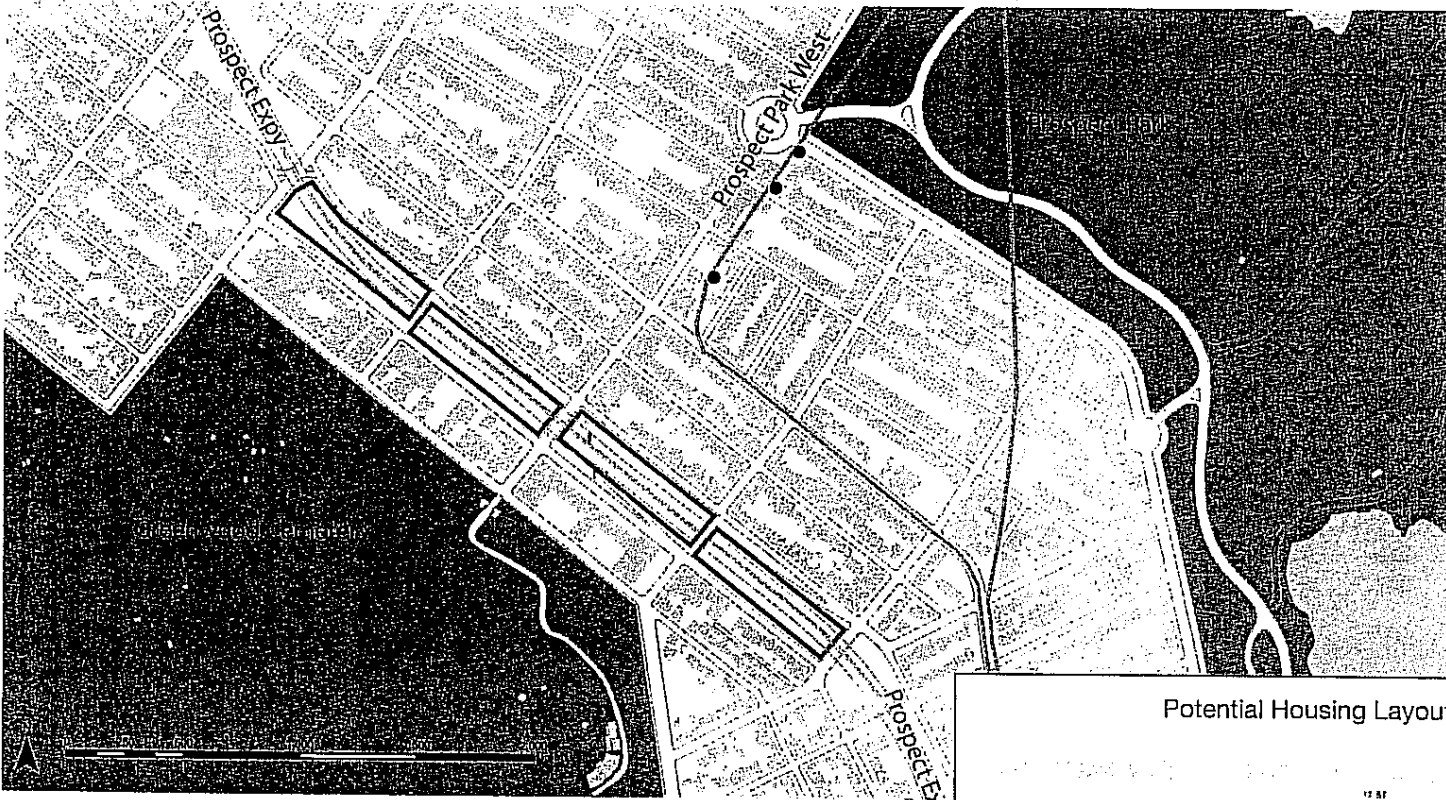
This stretch of the BQE could be developed in three variations: row houses producing 200 units, six-story buildings with about 700 units, or 12-story apartment buildings with nearly 1,500 units (see plans at left and table above). Based on an estimated platform cost of \$500/sq. ft. (including mechanical ventilation), the estimated development cost (\$390-450/sq. ft.) is lower than current market prices (\$525-

667/sq. ft.) within ½ mile of the highway. Thus, the question is not whether to build, but rather, how much to build, and of what character.

Further engineering, design, and market studies are required to verify these preliminary findings. Nonetheless, it appears to be financially feasible—at no net cost to the government—to reconnect neighborhoods that have been separated for more than half a century.

Chapter 1

Prospect Expressway Platform Development



Prospect Expressway

PHYSICAL	4-story (2-unit walkup)	6-story (3-unit walkup)
Platform Area (acres)	10.8	10.8
FAR	2.19	3.28
DU's	600	800
Average sq. ft./DU	1,800	1,800

FINANCIAL

Development Cost/sq.ft	\$424	\$409
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6-MONTH SALES DATA, Jul-Dec 2005 (per sq. ft. within half mile of site)

1-2 family buildings	\$467
3-6 family building	\$345
condos	\$642



Prospect Expressway

The Prospect Expressway is another Brooklyn highway appropriate for platform development. This highway runs through Windsor Terrace and southern Park Slope, areas where demand for housing is growing. Building a platform over the four "blocks" from 7th Avenue to 11th Avenue could provide sites for 600 to 800 units and connect Park Slope with neighborhoods to the south.

The highway's comparatively wide right-of-

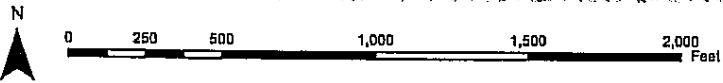
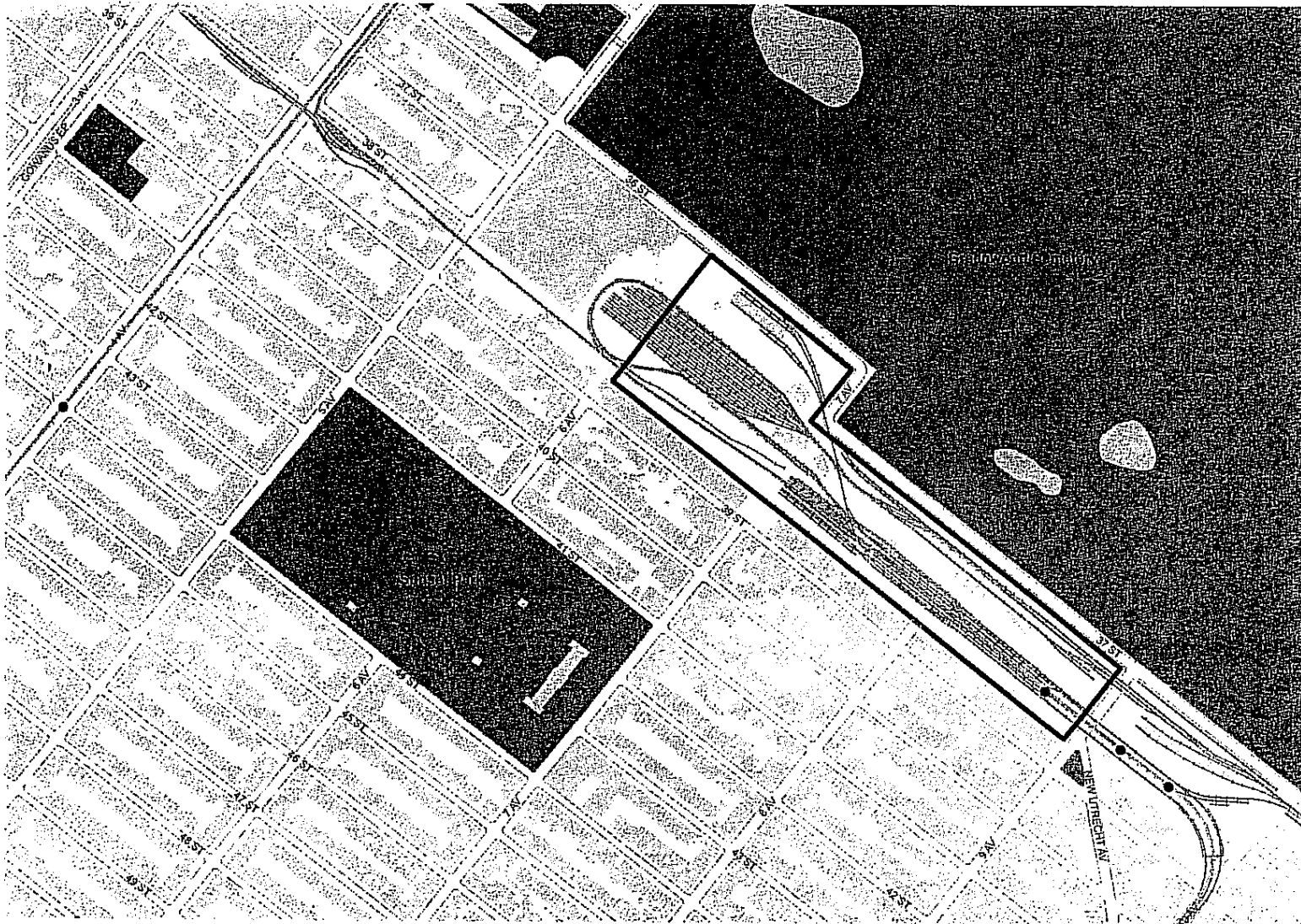
way and its on- and off-ramps currently prevent development from reaching southward to the edge of Greenwood Cemetery. An innovative site design, however, could overcome these obstacles without disrupting the highway exits and entrances (see map at left).

Again estimating a platform cost of \$500/sq. ft, the total development cost for these four blocks (\$409-424/sq. ft.) is around current market prices (\$345-642/sq. ft.) within ½ mile

of this site. Thus, if market trends continue, the city could recoup its investment in a platform while knitting together a neighborhood currently divided by the highway.

Chapter 1

36th Street Yards Platform Development



36th Street Yards

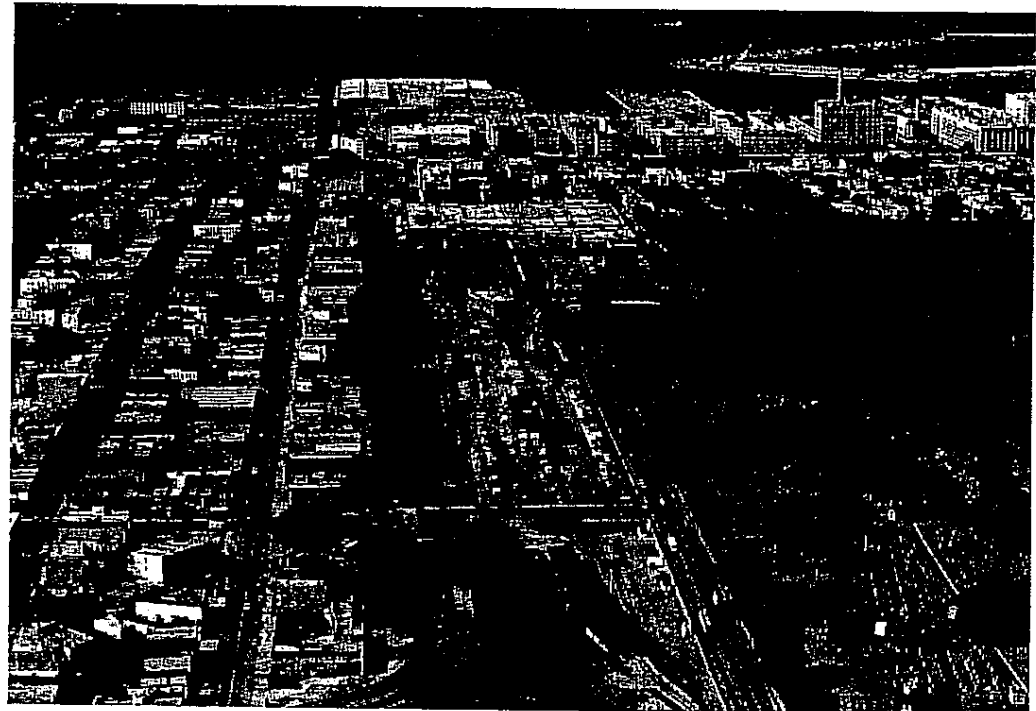
PHYSICAL	R6	R7A	R8
Platform Area (acres)	23.1	23.1	23.1
FAR	2.43	4.00	6.02
Dwelling Units (DU)	2,400	4,000	6,000
Average sq. ft./DU	1,000	1,000	1,000

FINANCIAL

Development Cost/sq.ft	\$495	\$473	\$466
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6-MONTH SALES DATA, Jul-Dec 2005 (per sq. ft. w/in half mile of site)

1-2 family buildings	\$305
3-6 family building	\$212
condos	\$349



36th Street Yards

Brooklyn's 36th Street Rail Yards, between the southern edge of Greenwood Cemetery and the burgeoning neighborhood of Sunset Park, presents another development opportunity. This MTA rail yard is used to store and maintain subway trains running on Brooklyn's 4th Avenue line. This site offers views of Greenwood Cemetery and access to Sunset Park, and it is surrounded by areas with a growing demand for housing. All of these

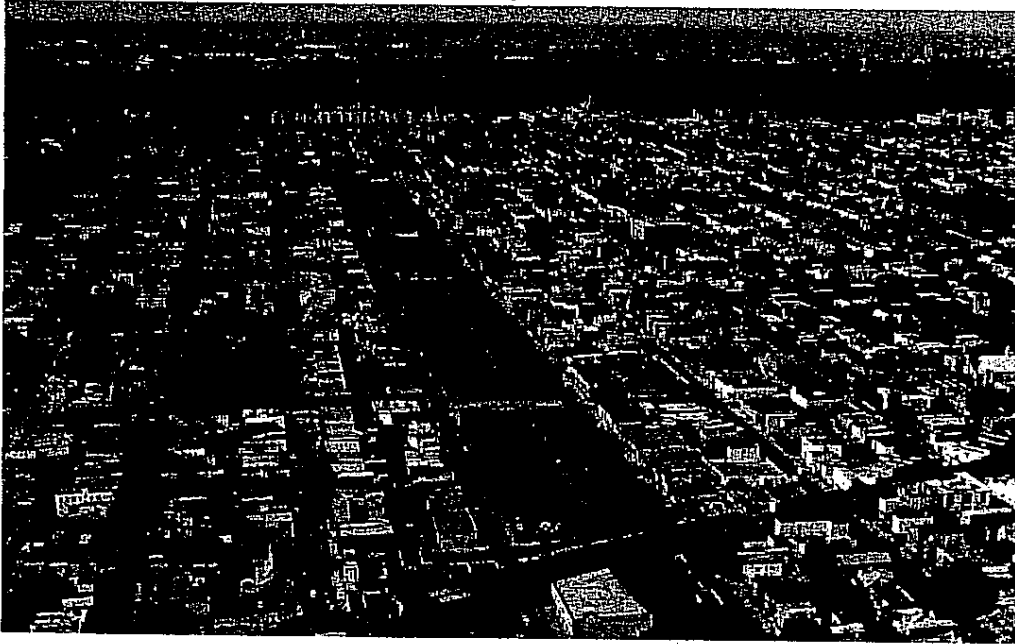
factors make the 36th Street Yards a desirable site for platform investment.

The 36th Street Yards could accommodate 2,400 to 6,000 units, depending on the density permitted by rezoning. Unfortunately, the cost of development here (\$466-495/sq. ft.) is still significantly higher than current market prices (\$212-349/sq. ft.). The rail yard itself may be depressing these market prices, and the views from the developed site towards Greenwood

Cemetery and the harbor may command prices high enough to cover development costs. Nonetheless, development of the 36th Street Yards is risky given today's market conditions. The city should study this area further. If it concludes that the project is not currently feasible, the city should monitor the area in case future market conditions make the opportunity feasible.

Chapter 1

Bay Ridge Line Platform Development



Bay Ridge Line

PHYSICAL	4-story (2-unit walkup)	6-story (3-unit walkup)
Platform Area	20.2	20.2
FAR as built	2.16	3.23
DU's	800	1,300
Average sq. ft./DU	2,200	2,200

FINANCIAL

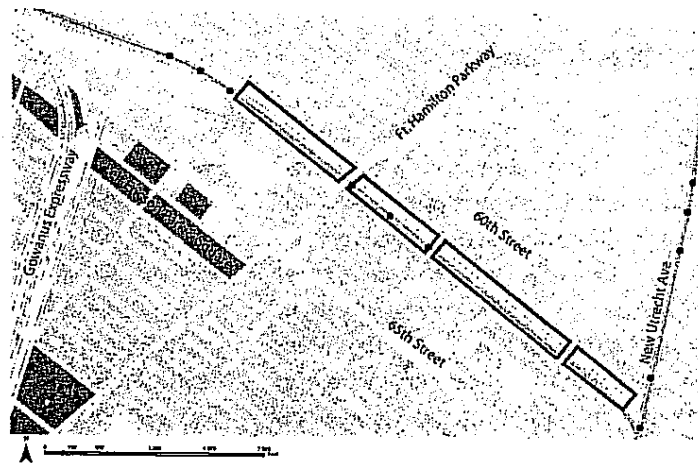
Development Cost/sq.ft	\$428	\$412
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6-MONTH SALES DATA, Jul-Dec 2005 (per square foot within half mile of site)

1-2 family buildings	\$314
3-6 family building	\$262
condos	\$319

Bay Ridge Line

The Bay Ridge freight line in Brooklyn extends for several miles. Between 8th Avenue and 14th Avenue, it consists of a 200-foot wide section within an area of recent growth that is well served by public transportation. Even if necessary zoning changes from manufacturing to R5 or R6 were secured, the development cost would exceed housing prices in the neighborhood. Nevertheless, changing market conditions may justify further feasibility analysis.



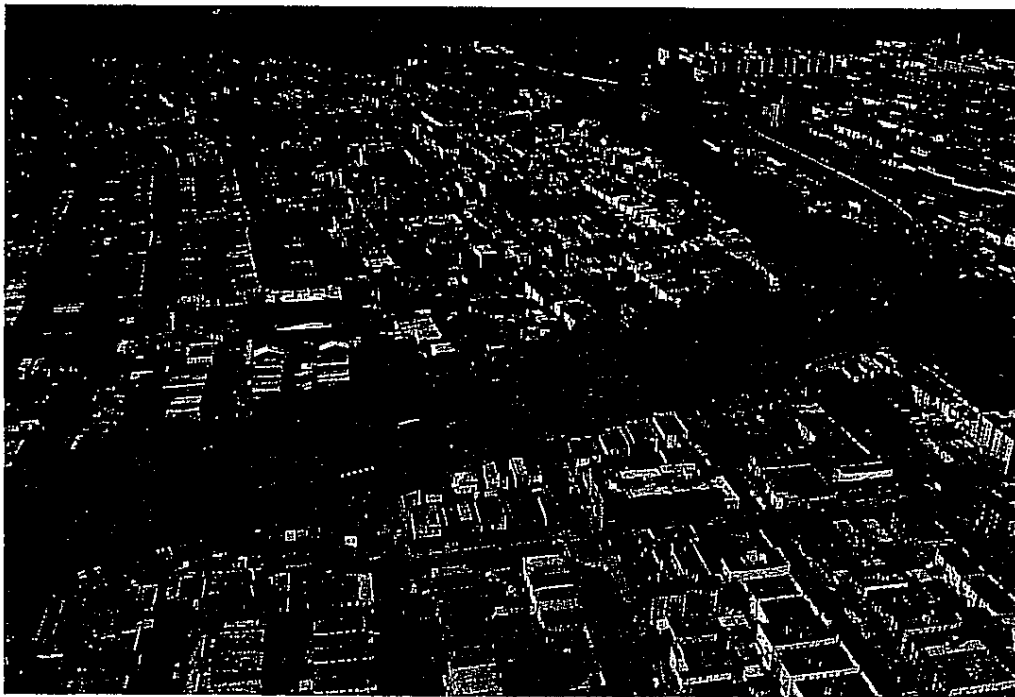
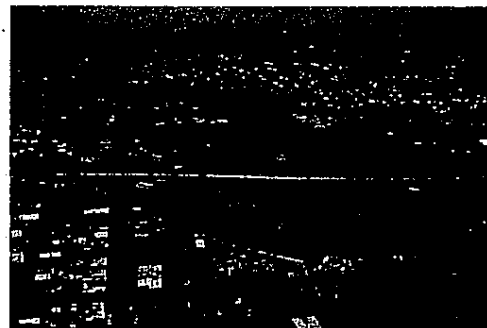
Projects for Later Study

Like the 36th Street Yards, most rail yards, highway cuts, and rail corridors in New York City are located in areas where current market prices in surrounding communities may not justify unsubsidized development. Nonetheless, there are sites with great potential that warrant careful monitoring in coming years. A shift in the residential market or an advance in platform construction technology could make these sites financially feasible. Promising sites include the following (see map on page 14):

- Gowanus Expressway, Brooklyn
- Brooklyn-Queens Expressway in Williamsburg, Brooklyn
- Clearview Expressway, Queens
- Cross Island Parkway, Queens
- LIRR in Flushing, Queens
- LIRR in Rego Park, Queens
- Coney Island Creek and Yards, Brooklyn
- Jamaica IND Yards, Flushing Meadows, Queens
- Sherman Creek Rail Yards, Manhattan

Near Right: NYC Transit Shops and Rail Yard, Sherman Creek, Manhattan

Far Right: NYC Transit Shops and Rail Yard, Coney Island, Brooklyn



Right: Gowanus Expressway, Bay Ridge, Brooklyn