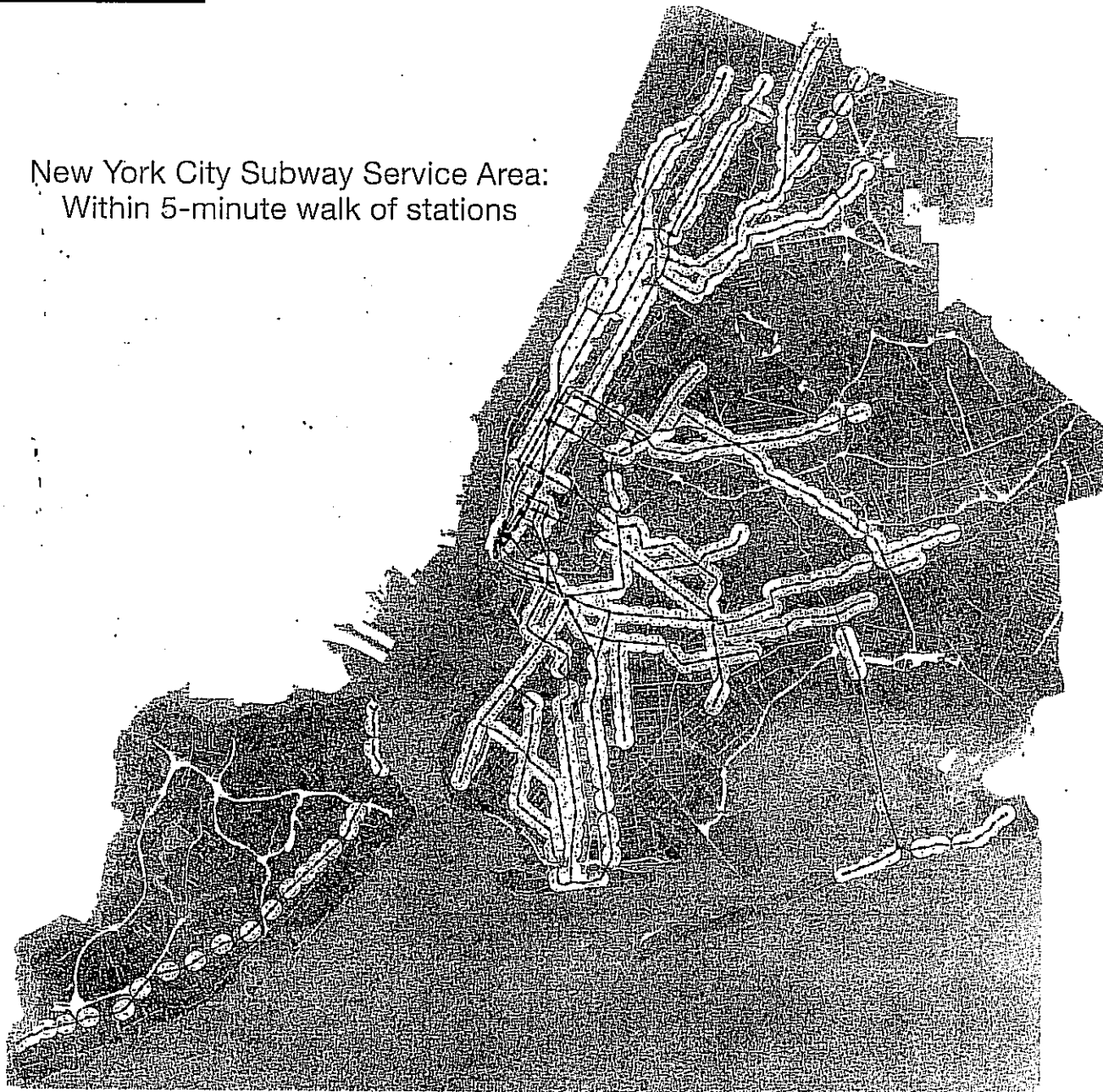


## Chapter 3

New York City Subway Service Area:  
Within 5-minute walk of stations



# 3

## Transit-Oriented Development Opportunities

Every day, millions of people use New York City's subway for quick, inexpensive access to jobs, shopping, recreation, and residences. In such a subway-dependent city, it is no surprise that areas closer to subways are in greater demand. Areas without good access to mass transit are in much lower demand and are often under-developed.

The adjacent map highlights areas of the city within a quarter-mile of a subway station, approximately a 5-minute walk. As is clear from the map, large sections of the city lack service. In some cases, such as in Bayside, Queens or Canarsie, Brooklyn, the low-density development of these areas is well suited to automobile transit. Here, buses do an excellent job filling in the service gaps between subway stations. In a few exceptional cases—the eastern extremities of the Upper East Side and the East Village in Manhattan, for example—other factors have overridden the lack of close transit access, and the neighborhoods have developed despite limited subway service.

There are other areas of the city, however, where a lack of transit service has not been overcome by either market pressures or automobile access, and development has stagnated. In these areas, public investment

in mass transit service could have a significant impact. Transit improvements that increase mobility and create a new public realm framework will stimulate private investment. Similar logic explains recent transit policy decisions, most notably the extension of the #7 subway line to the Far West Side.

Rather than plan service to meet existing demand, New York must plan transit service to meet projected demand in 2015 and 2020. This means both identifying and, to some extent, creating the future market for development. Given the huge amounts of capital already budgeted for the city's subway and rail system (for the #7 extension, the Second Avenue Subway, East Side Access, and the JFK-Lower Manhattan Airlink), it is unrealistic to expect city or state agencies to invest in additional multi-billion dollar projects. At the same time, simply extending traditional bus service to under-served regions will not increase capacity enough to catalyze a neighborhood to change.

This chapter on "transit-oriented development" identifies opportunities where investment in mass transit service improvements will stimulate private development. Projects of intermediate scale and cost were selected

in order to maximize both feasibility and the private market reaction. Projects are restricted to those that require very little property acquisition or relocation, and relatively modest public investment: streetcars, light rail, or specialized buses on dedicated rights-of-way. Each project was selected to link potential residential development areas with centers of employment, retail districts, or pre-existing transit nodes. Although this chapter includes several opportunities for transit-oriented development, it primarily focuses on two opportunities for Further Feasibility Analysis:

- Third Avenue & 161st Street, Bronx
- 21st Street, Queens

When combined with additional planning and rezoning efforts, these transit improvements will create a mixed-use public realm that attracts new residents and businesses. These transit investments will generate new tax revenues from induced development that will justify the debt required to finance the transportation and public realm improvements. Therefore, the goal for each project is to be financially sustainable, but further study is necessary to determine feasibility at a detailed level.

## Chapter 3

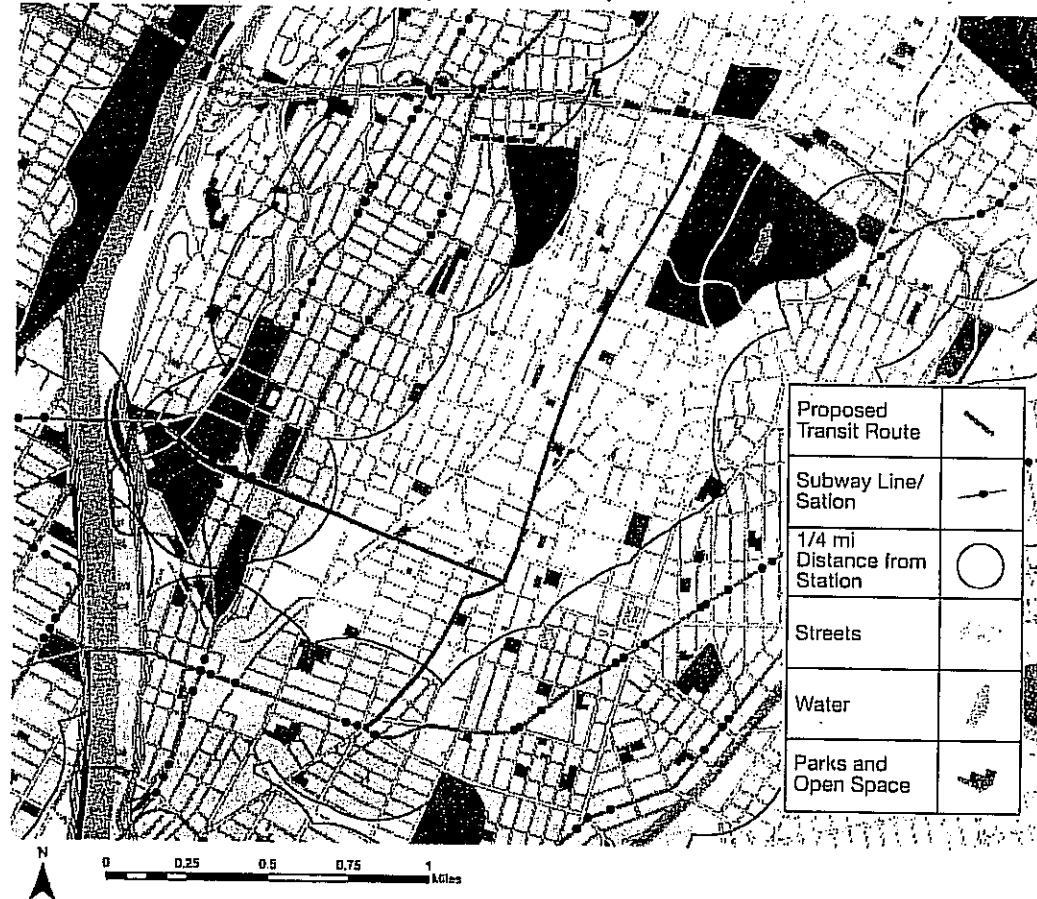
### 3rd Avenue and 161<sup>st</sup> Street, Bronx

3rd Avenue in the Bronx is one area of the city most affected by the lack of subway service. Thousands of Bronx residents once used the elevated subway on 3rd Avenue before it was torn down decades ago. Today, many of the tenements that provided customers for the El are gone, a legacy of the abandonment that swept across the borough during the 1960's and 70's. If apartment buildings replaced the empty lots that remain, it would create more than enough riders to justify reintroducing mass transit service.

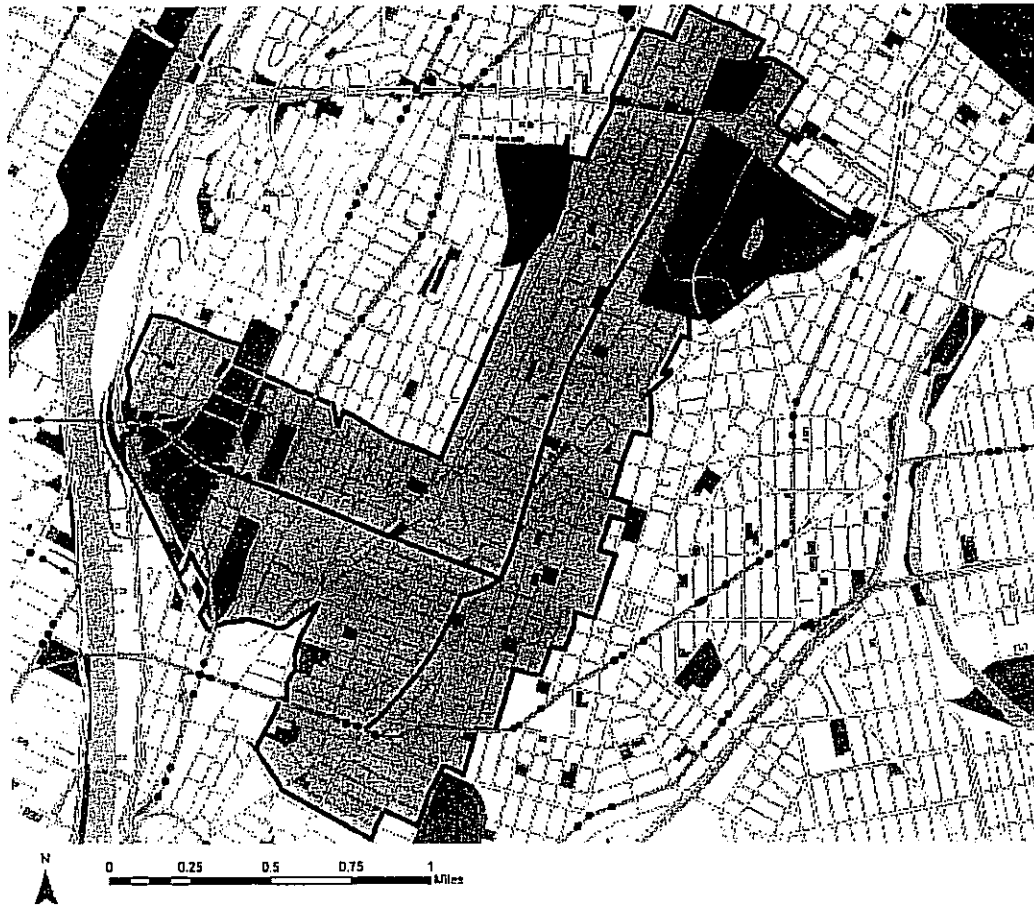
For the first time in decades, private residential developers are beginning to build in the South Bronx, though only in small amounts. Even this small scale development is a huge improvement over the abandonment the area witnessed in the second half of the 20th century. Connecting this region's numerous development sites to Manhattan jobs could stimulate even more development and trigger a renaissance of the South Bronx.

Two sections of Third Avenue and 161st Street may justify new mass transit service, whether in the form of light rail, streetcar, or

Current Subway Service & Proposed Transit Lines



Bronx Transit Study Area



Length of Transit Line on 3rd Avenue		2.2 mi
Length of Transit Line on 161st Street		1.1 mi
1/4 mi Corridor	Area	990 acres
	Existing Dwelling Units	39,000
	2000 Population	106,000

bus rapid transit (see page 46). Specifically, Third Avenue between 149th Street and the Cross Bronx Expressway and 161st Street between Third Avenue and Jerome Avenue offer tremendous development potential. Third Avenue service would connect residents with shopping at the Hub and the #2 and #5 subway lines that would carry them to work in Manhattan or to Lincoln Hospital and Hostos Community College. 161st Street service would bring them to the B and D lines at the Grand Concourse for transfer to the West Side of Manhattan, to the #4 line that would bring them to work on the East Side of Manhattan, and the US Courthouse, Borough Hall, and Yankee Stadium in the Bronx.

## Types of Transit Service

New York's public transportation network consists of two primary modes: high-speed, high-cost heavy rail subways and low-cost, traffic-bound buses. This report suggests adding an intermediate transit mode to stimulate development in specific areas of the city. In analyzing potential intermediate modes, it is important to keep in mind two key distinctions: vehicle type and corridor type.

Vehicles: buses v. trams

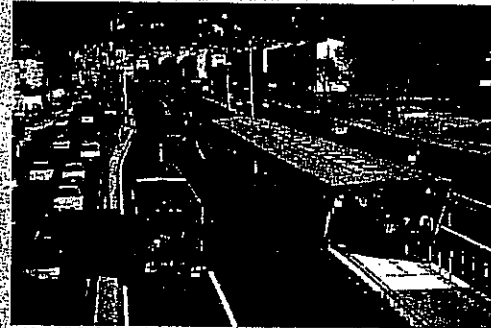
Modern buses are clean-burning, accessible, and larger than before when "articulated" into two sections. Electric trams are quiet and clean but have higher capital costs and less flexibility when re-routing.

Corridors: on-street v. dedicated right-of-way

On-street transit is prone to unpredictable schedules and slow service. Dedicated rights-of-way, on the other hand, offer unimpeded routes for high-speed service. However, dedicated rights-of-way are more challenging to create and can interfere with established traffic patterns.

APPROXIMATE TRAVEL IN 30 MINUTES			
Mode of Transport	Distance	Speed	Capacity
SUBWAY	15 miles	30+ mph	20,000
LIGHT RAIL (dedicated right-of-way)	15 miles	30 mph	5,000
LIGHT RAIL (on-street right-of-way)	7.5 miles	15 mph	2,500
BUS (dense city traffic)	1.5 miles	3 mph	750
BUS (suburban streets)	4 miles	8 mph	1,200
BUS (express)	7.5 miles	15 mph	3,000
BRT (dedicated right-of-way)	15 miles	30 mph	5,000

Bogota, Colombia



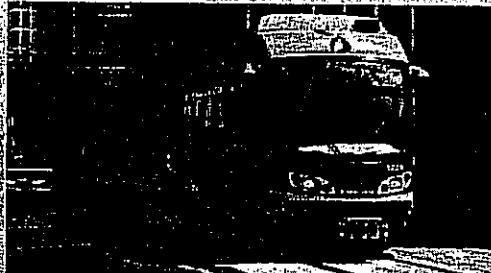
Peter Danielsson

Tacoma, Washington



Tom McCann

Minneapolis, Minnesota



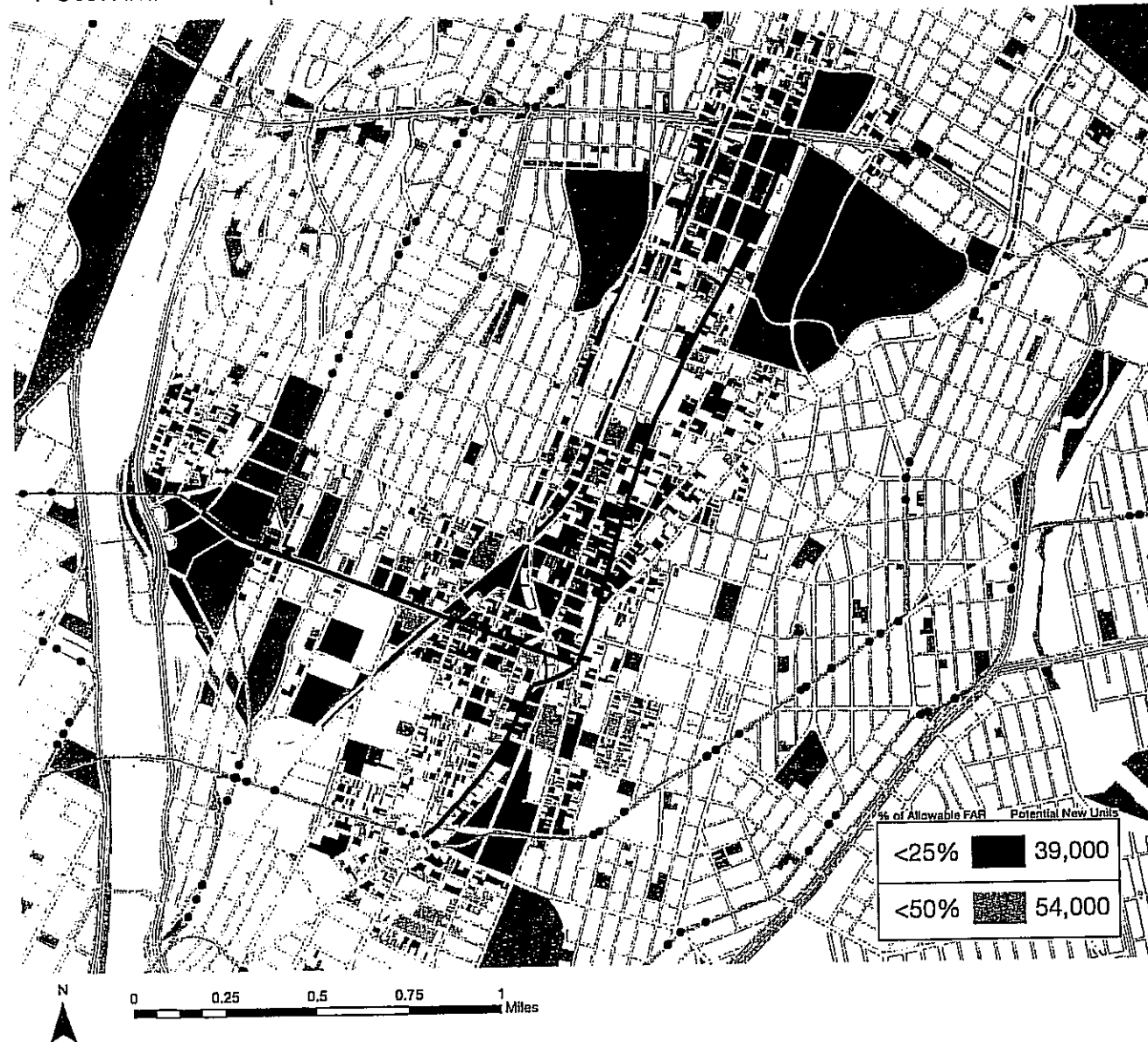
Alex Garvin

**Bus Rapid Transit (BRT):** In the BRT system, buses operate on dedicated rights-of-way to achieve higher operating speeds and, accordingly, higher line capacities. Utilizing stations instead of stops, BRT systems increase efficiency and capacity by allowing passengers to pay at stations instead of when they board the vehicle.

**Streetcars/Trolleys:** Electric trams in mixed-traffic offer greater capacity and higher operating efficiency than traditional buses. When well-designed, they can also add character to a streetscape and contribute to a sense of place. A traffic-bound streetcar, however, will sometimes move no faster than a traditional traffic-bound bus.

**Light Rail Transit (LRT):** LRT systems combine the efficiency of an electric tram with the speed of a dedicated right-of-way. However, establishing a dedicated right-of-way and laying track contribute to higher capital costs.

## Potential Development with Manufacturing Rezoned to Contextual Densities



Currently, the 106,000 residents of these corridors walk or take the bus to reach the aforementioned destinations. While the bus service may adequately meet existing demand, more reliable service with greater capacity is necessary to attract developers, investors, and future residents. Increased accessibility will generate future demand, and, at the same time, increased tax revenue from the new development will justify the capital investment.

The combined development potential in these two corridors is substantial. Under existing zoning, developing the vacant and underutilized sites would add as many as 36,000 units to the housing stock. Rezoning underutilized manufacturing zones to R7-2 could add an additional 18,000 units, for a development potential of up to 54,000 units (see map at left). If the area is rezoned to R8, new development would add up to 114,000 new units. The property tax of these new units alone would justify new service, not to mention the increased income and sales tax revenue that the city would gain.

Should the city choose to retain the proposed Bathgate Industrial Business Zone in the far north of the study area as a manufacturing area, the transportation connections will aid local businesses in attracting workers.

Due to their great potential, these two corridors warrant further feasibility analysis. Such work would include real estate market analysis, transit studies, civil engineering (including dimensional requirements for each potential mode of mass transit), land use and zoning studies, and cost estimates. Because the Bronx offers the greatest return on investment for transit-oriented development, this study should begin as soon as possible.

## Chapter 3

### 21st Street, Queens

Along the Queens waterfront north of the Queensboro Bridge, residential development lags behind comparable neighborhoods in the borough. To the south, Long Island City is witnessing residential and commercial development along the waterfront as well as further inland near Sunnyside Yards. To the north and east, Astoria is growing from a historical destination for new immigrants into a vibrant and attractive community for diverse populations. Overall, the population of Community District 1, which contains these neighborhoods, grew 12% between 1990 and 2000, yet the waterfront section of this district remains largely unchanged. With so much growth in the surrounding area, why are developers ignoring western Queens?

The reason that development in western Queens is stagnant is simple: the area is too far from mass transit. Within a quarter-mile of the elevated N and W trains, housing densities are high, but they rapidly drop off as the distance from stations increases (see map on facing page). The key to stimulating development in this area is to improve access to mass transit service. Increased transit access would help attract residents to the waterfront area, whether they commute to jobs in Manhattan or elsewhere in Queens.

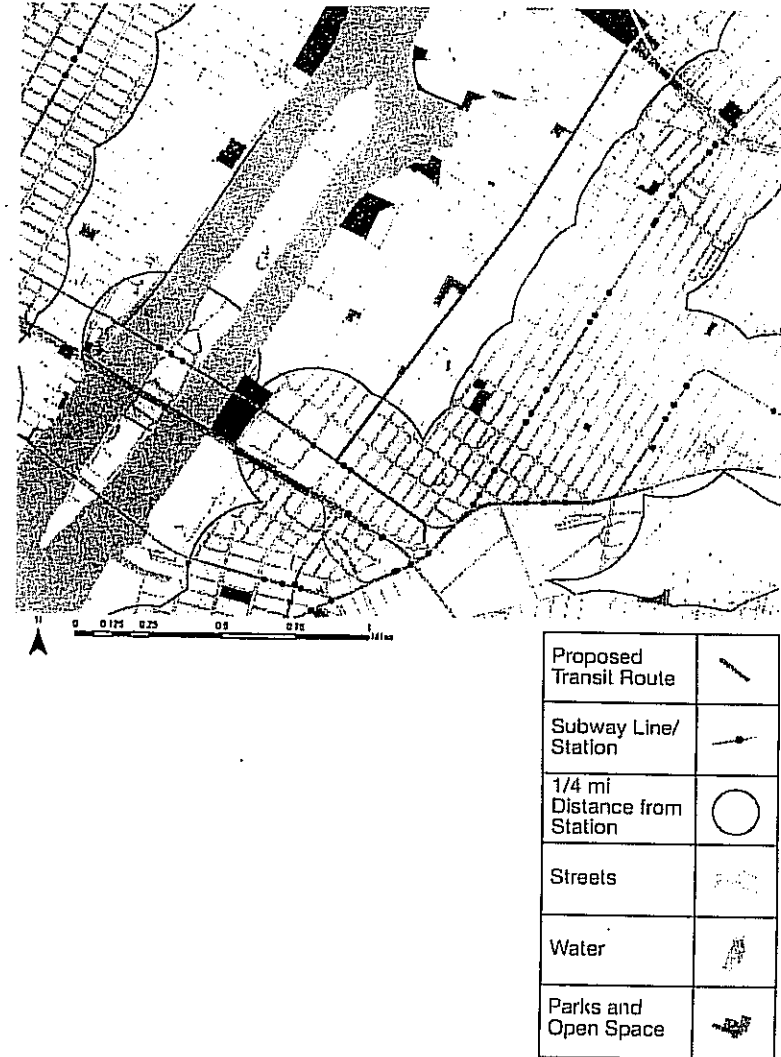
The most effective means to introduce mass transit service is to run a light rail, streetcar, or BRT line down 21st Street in a dedicated right-

of-way lane, terminating at the Queens Plaza subway station in Long Island City (see map at right). The route would connect the underserved neighborhoods of Ravenswood and Astoria to an important transit hub and center of regional development. Furthermore, the street's width provides ample room for mass transit without dramatically reducing existing traffic capacity.

Similar to the opportunity in the Bronx, Queens' 21st Street has strong development potential that would justify the capital investment. Although the 21st Street corridor does not have as much vacant land as Bronx's Third Avenue corridor, opportunities are still abundant, as highlighted in the map and table on page 51. Under existing zoning with residential use permitted on all sites, developing the vacant and underutilized sites would add as many as 32,000 units within a 1/4 mile of the route. If the area is rezoned to R7A, new development would add up to 54,000 new units.

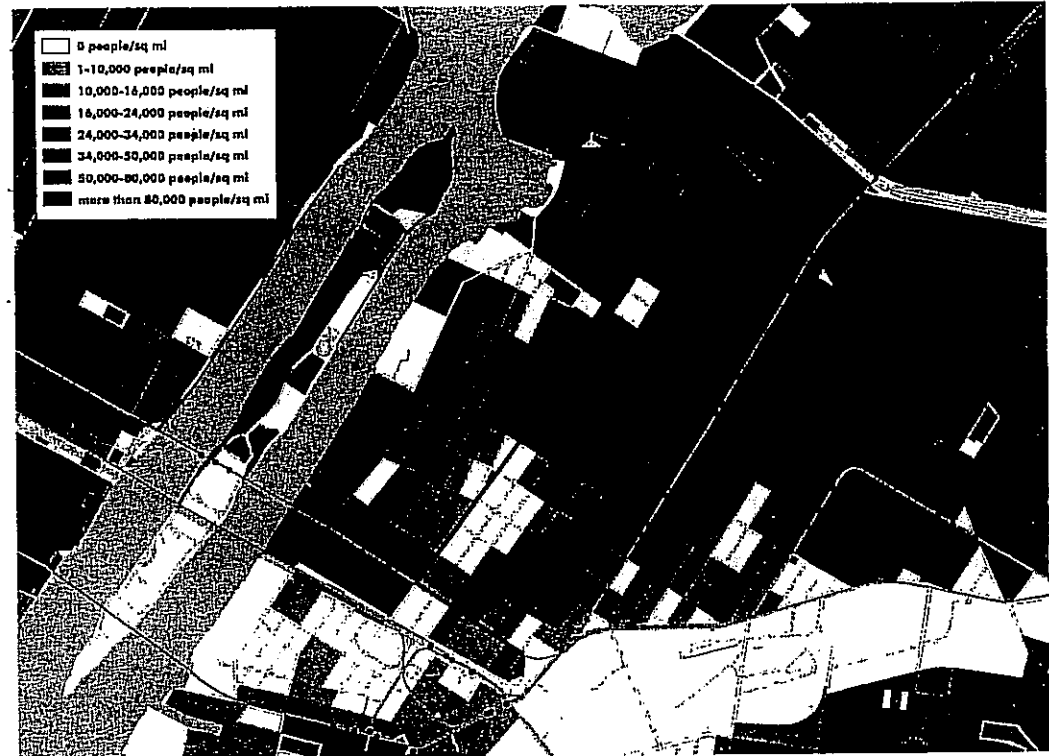
This potential development would be different at different places along the corridor. The southern section the corridor, between the Queensboro Bridge and the Ravenswood Houses at 36th Street, is currently an underutilized manufacturing area. Linking the businesses in this area to transit could provide easier access for workers commuting to this area, helping to boost the area's activity. At the same time, permitting residential use in this

### Current Subway Service & Proposed Transit Lines



Current Population Densities

Proposed Transit Line & Study Area



Length of Transit Line on 3rd Avenue		2.15 mi
1/4 mi Corridor	Area	530 acres
	Existing Dwelling Units	20,000
	2000 Population	50,000

manufacturing area may promote even more development, as seen in the Queens Plaza sub-district of the LIC mixed-use district and the Dutch Kills area just north of it (zoned M1-3D)—two adjacent areas where residential use is permitted in manufacturing districts.

The area north of 36th Avenue has a more residential, low-density character (generally R5 with a maximum FAR of 1.25). Even along Broadway and 21st Street itself (zoned R7a and R7x, respectively), many properties have not developed to the maximum allowable

density. With increased demand from mass transit along 21st Street, many property owners would renovate or rebuild their buildings to maximize the FAR and increase the number of units.

In the predominantly residential district closer to the Triboro Bridge, simply expanding the R7A zone that already exists in parts of the area could encourage developers to build new residential buildings. In addition, extending the R7-X zone south along 21st Street would have a similar impact on the housing market.

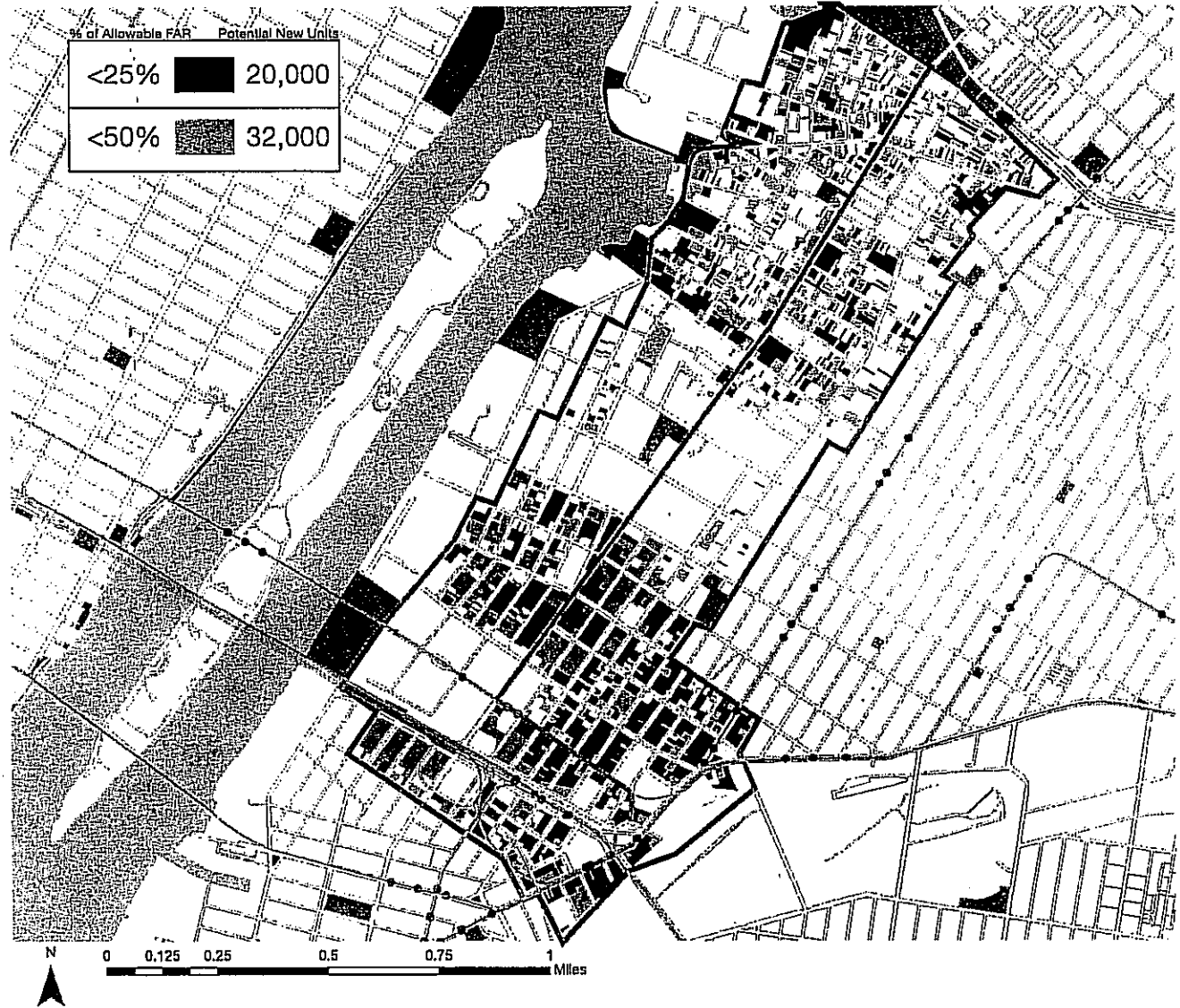


## Chapter 3

### Route of Proposed 21st St. Transit Line

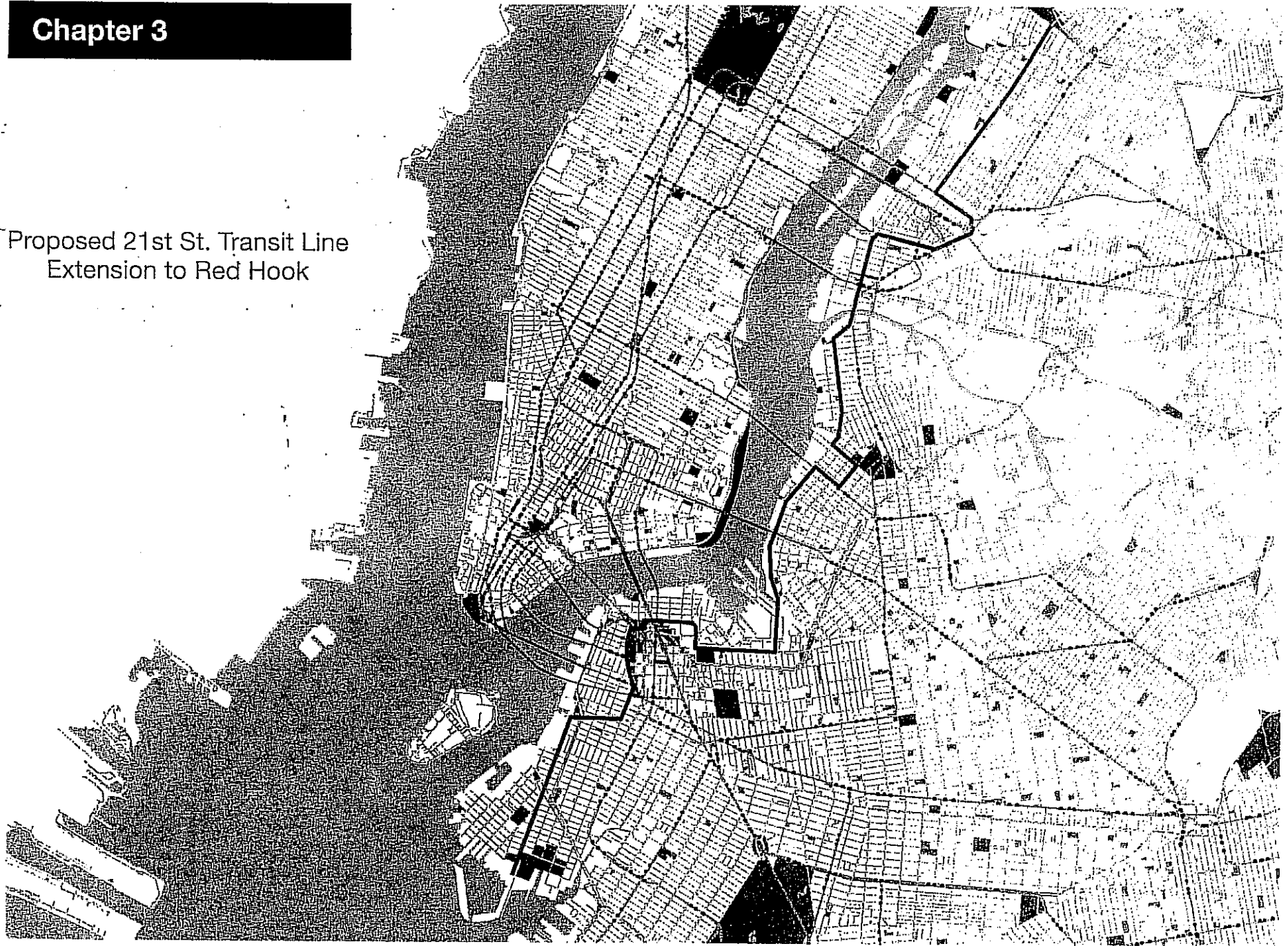


Potential Development with Manufacturing Rezoned to Contextual Densities



## Chapter 3

### Proposed 21st St. Transit Line Extension to Red Hook



### Brooklyn-Queens Extension

If successful, the new transit service along 21st Street could potentially extend south from Queens Plaza past the Williamsburg Bridge to the Brooklyn Navy Yard, thus providing mass transit access to the Greenpoint-Williamsburg waterfront. Such improvements would further accelerate housing development, which was recently made possible by an area-wide rezoning at the City Planning Commission. However, long-term sustainability of this area may be limited by poor subway access.

The extension to serve the Greenpoint-Williamsburg waterfront could use several alternate routes. These include Kent Avenue, Wythe Ave, or Berry Street—all of which would require a new bridge over the Newtown Creek between Vernon Boulevard and Manhattan Avenue.

As the Brooklyn waterfront continues to grow, additional transit service could be extended past the Navy Yard and through downtown Brooklyn before terminating at the site of the new Ikea in Red Hook. Such an extension would open entire areas to development. As a connector, this line would link numerous districts lacking mass transit, such as Vinegar Hill and Red Hook, to pre-existing transit hubs. As a direct service route, this line would help to support manufacturing in the Brooklyn Navy Yard and commercial activity in downtown Brooklyn.



*Routes of Proposed Transit Line Extension Along Kent St. In Brooklyn*

## Chapter 3

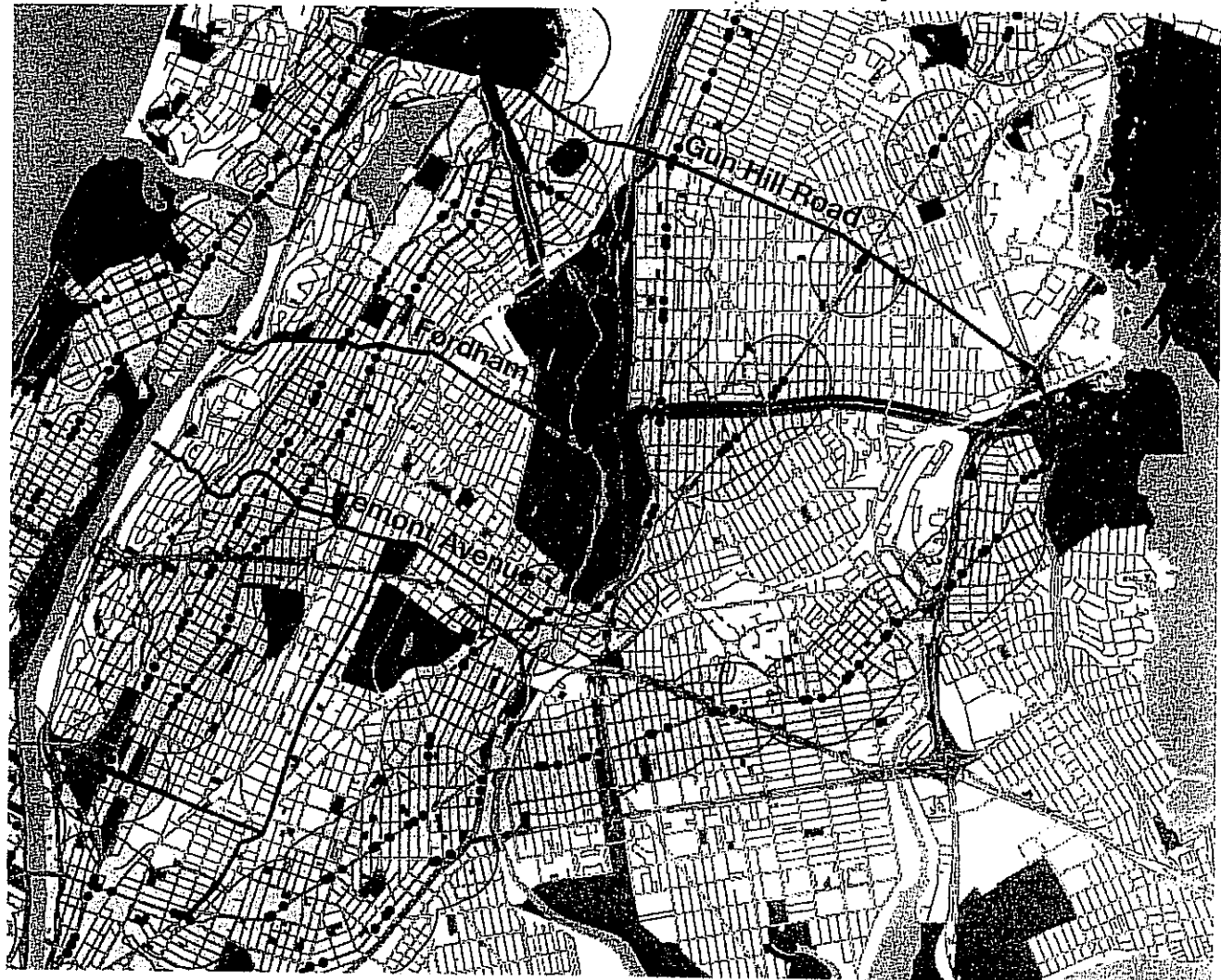
### Projects for Later Study

#### Bronx

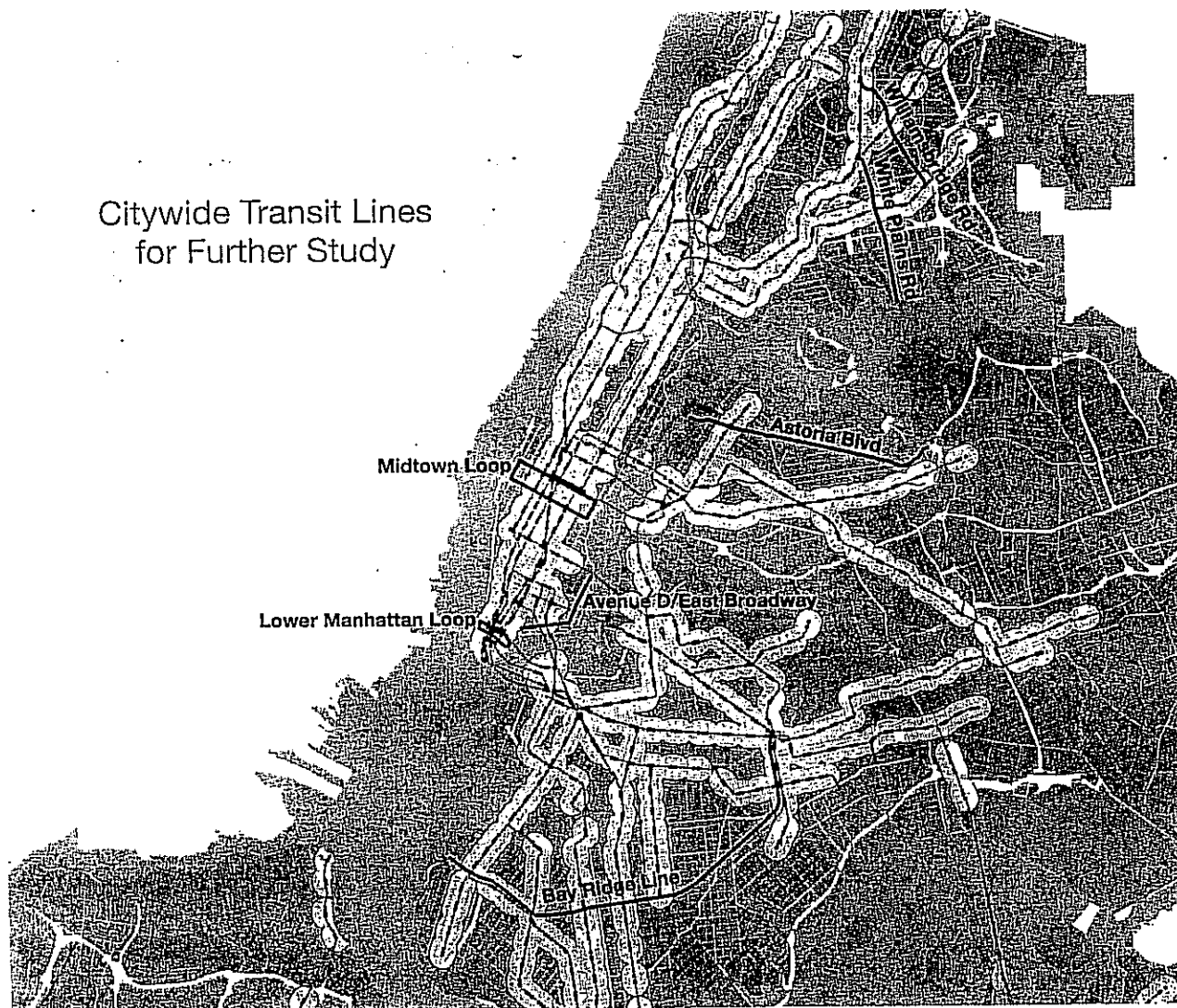
In the Bronx, several East-West corridors could potentially supplement mass transit along Third Avenue and 161st Street. Although these opportunities are not ripe today, they may warrant consideration if housing development continues to grow in the borough. As always, these projects must be evaluated in terms of the private market reaction that they would stimulate. These corridors include:

1. Gun Hill Road
2. Fordham Road
3. Tremont Avenue

Bronx Transit Lines for Further Study



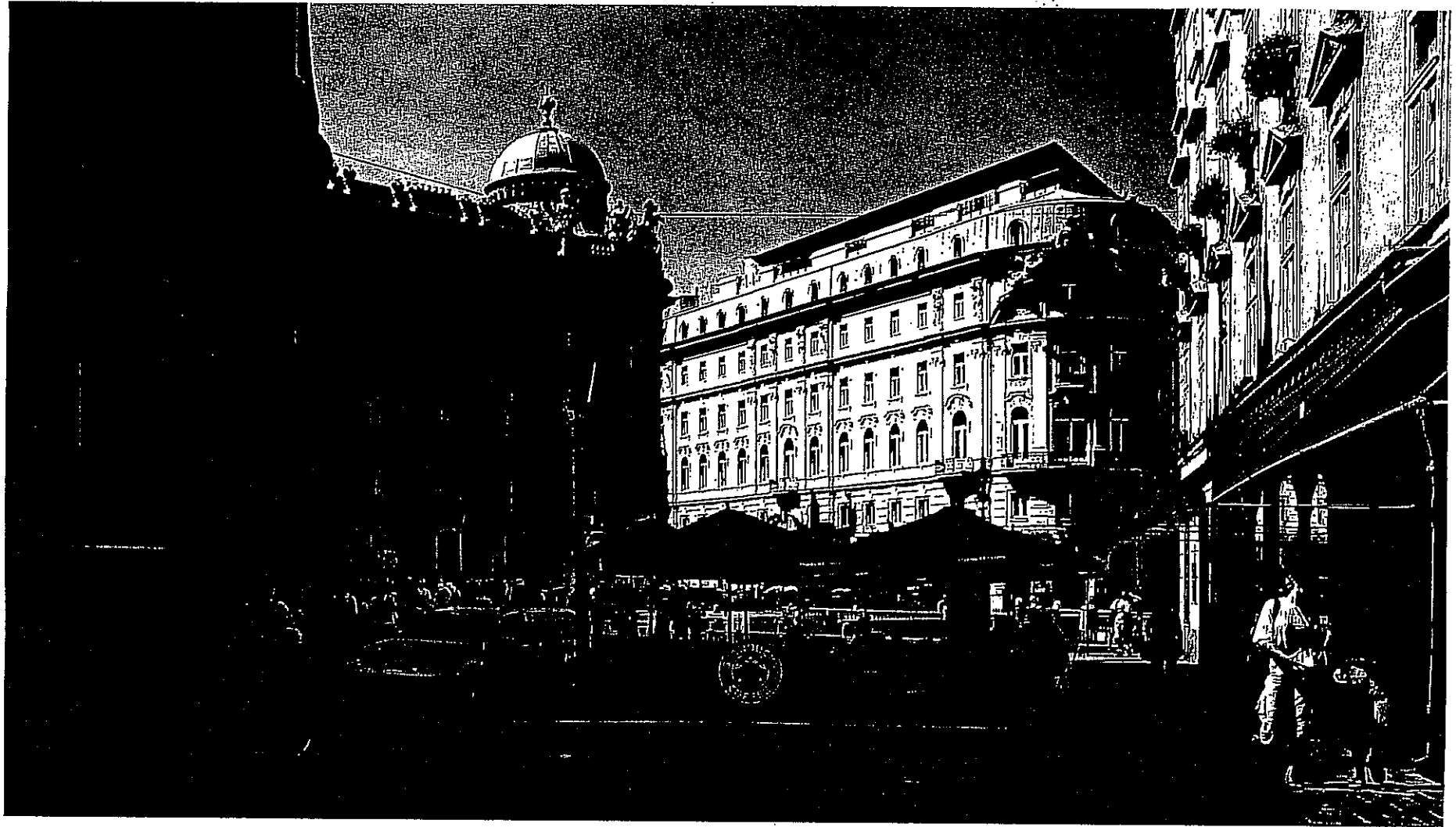
## Citywide Transit Lines for Further Study



## Citywide

Finally, a series of additional corridors throughout the city may eventually justify mass transit routes in the future. These projects are worth monitoring in the coming years, and they may merit study in the future.

1. White Plains Rd., Bronx
2. Williamsbridge Rd., Bronx
3. Astoria Blvd, Queens
4. Bay Ridge Line, Brooklyn
5. Midtown Loop: 34th Street/42nd Street, Manhattan
6. Lower Manhattan Loop: Fulton St./ Liberty St., Manhattan
7. Avenue D/East Broadway, Manhattan



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